



CONTRACT PROVISIONS

FOR

CITY OF FIFE

AQUATICS CENTER FAÇADE IMPROVEMENTS

September 2017

**CITY OF FIFE
PUBLIC WORKS DEPARTMENT
5411 23RD STREET EAST
FIFE, WA 98424**

**CONTRACT PROVISIONS
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AQUATICS CENTER FAÇADE IMPROVEMENTS**

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INVITATION FOR BIDS

Notice is hereby given that sealed bids will be received by the City of Fife at City Hall up to the hour of **10:00 a.m. on September 21, 2017**, for the City of Fife AQUATICS CENTER FAÇADE IMPROVEMENTS and will then be opened and publicly read. City Hall is located at **5411 23rd Street East, Fife, Washington**. Proposals received after **10:00 a.m. on September 21, 2017**, will not be considered.

A non-mandatory **pre-bid meeting** will be held at the **Aquatics Center at 1:00 pm on September 14, 2017**.

PROJECT DESCRIPTION: The City of Fife Aquatics Center building is a one-story, cinder block, wood sided building approximately thirty-two years old. Generally described, the exterior of the building is being enhanced with the installation of expanded metal screens on HSS steel posts and brackets (north side), installation of recessed ground mounted LED light fixtures (north side), replacement of wood lap siding with new metal shingle system (west side), installation of new LED light fixtures above new metal shingle siding (west side), replacement of five existing 'Globe' site lighting fixtures and poles and new acrylic building numbers.

ESTIMATED BASE BID COST RANGE: \$105,000-135,000

Pierce County prevailing wage requirements are in effect.

The City of Fife is an Affirmative Action/Equal Opportunity Employer and hereby notifies all Bidders that it will affirmatively ensure that in any Contract entered into pursuant to this advertisement disadvantaged business enterprises will be given the full opportunity to submit Bids in response to this invitation. Minority and/or Women Owned Businesses are encouraged to submit bids and all bidders are encouraged to consider minority and women owned businesses as potential subcontractors and material suppliers for this project. The City of Fife does not discriminate on the basis of race, color, national origin, sex, religion, age, or disability in employment or the provisions of services.

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 at www.bxwa.com and clicking on "Posted Projects", "Public Works", and "City of Fife". It is recommended that Bidders "Register" in order to receive automatic e-mail 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.

The plans are also available on the City of Fife website.

The contacts are **Asst. Public Works Director Steve Worley, (253) 896-8203 or email at sworley@CityofFife.org** and **Public Works Director Russ Blount, (253) 896-8677 or email at rblount@CityofFife.org**.

TECHNICAL QUESTIONS: Please direct questions regarding this Project in writing to Lee Davenport, Helix Design Group, Inc.: Leed@HelixDesignGroup.net

All bids shall be submitted on the prescribed Bid Forms and in the manner as stated in this invitation and in the Bid Document and said bids shall be accompanied by a bid deposit in the form of cash, cashier's check, certified check, postal money order, or a surety bond to the City of Fife in the amount of five percent (5%) of the total amount of the bid for Schedule A. **Bid Bonds submitted on other than the bond form provided by the City may be subject to rejection. Faxed bids and/or surety bond will not be accepted.**

Bids must be submitted in a sealed envelope with the outside clearly marked "sealed bid" with the bid opening date and time, and the project name as it appears in this invitation and the name and address of the bidder. Bids shall be addressed to the **City Clerk, City of Fife-5411 23rd Street, Fife, WA 98424.**

The City of Fife reserves the right to reject any or all bids and to waive irregularities in the bid or in the bidding.

No Bidder may withdraw his proposal after **10:00 a.m. on September 21, 2017**, or before award of Contract, unless said award is delayed for a period exceeding sixty (60) days.

TIME OF COMPLETION: 40 Calendar Days to Physical Completion

Liquidated Damages: The Project must be physically completed within 40working days. Liquidated damages of \$1000.00 will be assessed for each calendar day of delay in physical completion of the Project.

Published:

Small Works Roster

Angela Woods
City Clerk

INSTRUCTION TO BIDDERS

I. Execution of Contract

A. Execution of Contract:

1. Within 10 days after the date the lowest qualified Bidder receives notification of award, the lowest qualified Bidder shall execute and return the Contract and the required number of copies and shall furnish a performance and payment bond and insurance.
2. At the time the Contract is executed and returned, the Contractor shall notify the City in writing of the names of all subcontractors and materials suppliers the Contractor intends to use for the work.

B. Performance Bond/Payment Bond:

1. To be furnished at the time of delivery of the executed Contract.
2. To be in full amount of Contract price.
3. The surety must be authorized to do business in the State of Washington and be satisfactory to the City. Each bond must be approved in writing by the City Attorney.

C. Contract Insurance:

1. Work under the Contract shall not commence until the City has approved the Contractor's insurance. No subcontractors shall commence work until the City has approved subcontractor's insurance. Insurance shall be as required per the contract.
2. The Contractor and subcontractors shall obtain and maintain Workman's Compensation Insurance during the life of this Contract.
3. Contractor specifically waives its immunity under Title 51 of the Revised Code of Industrial Insurance Act for injuries to its employees, and indemnifies the City from liability for the action brought by those employees.

II. Legal Wages on Public Works

A. Statement of Intent to Pay Prevailing Wages:

1. The Contractor shall submit a Statement for the Contractor and each and every subcontractor to the Industrial Statistician of the Department of Labor and Industries for approval. A \$40.00 fee payable to the Department of Labor and Industries shall be included for each statement submitted. Should force account work be authorized by the City, the Contractor shall, at his/her own expense, provide the City with a new statement of Intent to Pay Prevailing Wages if any changes have occurred since the issuance of the original Intent to Pay Prevailing Wages was filed.

2. For contracts in excess of \$10,000, the Contractor shall post in a location readily visible to workers at the job site:
 - a. A copy of the approved statement of Intent to Pay Prevailing Wages (Labor and Industries [L & I] Form F700-029-000).
 - b. The address and telephone number of the Industrial Statistician of the Department of Labor and Industries.
 3. The statement of Intent to Pay Prevailing Wages shall include the Contractor's registration certificate number or UBI number and prevailing rate of wage for each classification of workers entitled to prevailing wages. Self-employed or owner/operator contractors or subcontractors who perform the actual work will be required to submit a statement regardless of the method of payment.
- B. Affidavit of Wages Paid: Following final acceptance of the Project, the Contractor shall submit, for the Contractor and each and every subcontractor, an Affidavit of Wages Paid (L & I Form F700-007-000) form to the Industrial Statistician of the Department of Labor and Industries for approval. A \$40.00 fee payable to the Department of Labor and Industries shall be included for each statement submitted. Self-employed or owner/operator contractors or subcontractors who perform the actual work will be required to submit an affidavit regardless of the method of payment.

BIDDER'S CHECKLIST

The following forms and information must be turned in at the time of the Bid opening:

1. Proposal (page 7), certify receipt of addenda (if any) in the space provided in the second paragraph.
2. Non-collusion Certificate (page 9), notary required.
3. Certificate as to Corporate Principal (page 11), notary required.
4. Bid Bond Form (page 13), attach Power of Attorney.
5. Bidders Proposed Subcontractors (page 15 to page 16)
6. Certification of Compliance with Wage Payment Statutes

Proposal

City of Fife -Project: Aquatics Center Façade Improvements
5411 23rd Street E
Fife, Washington 98424 Date: _____

Total Contract Price Including Tax (LUMP SUM) : \$ _____

The undersigned, as Bidder, declare that we have personally examined the Project site in the City of Fife, and all of the plans, specifications, and Contract Documents herein contained, and that we will contract with the City of Fife on the form of agreement provided herewith to do everything necessary to perform and complete construction called for in the Contract for the construction of the Project listed above, at the price and on the terms and conditions herein contained in the Contract Documents. Total price for the Contract has been written in words followed by numbers in parentheses.

We agree that the following shall form a part of this proposal: Proposed Subcontractors, Non-Collusion Certificate, and Certificate as to Corporate Principal. We acknowledge that addenda numbers ____ to ____ have been provided to us and have been examined as part of the Contract Documents.

Attached is a proposal guaranty bond duly completed by a guaranty company authorized to carry on business in the state of Washington in the amount of at least five percent (5%) of the total amount of our proposal.

If our proposal is accepted, we agree to sign the Contract and to furnish the performance bond and the required evidence of insurance within ten (10) calendar days after receiving written notice of the award of the Contract. We acknowledge that the City of Fife may forfeit our bid deposit as liquidated damages in the event of our non-compliance with the requirements of this paragraph.

The Bidder agrees to prosecute the work in accordance with this Document and the Contract Documents. Bidder further agrees to complete the Project within the allotted time as specified in the Contract.

The Bidder understands that there are Bid Additives and that the owner has the right to select any or all additives. The additives selected shall be added to the base bid and the Contract award will be made based upon the lowest and most acceptable total bid including selected additives.

The Bidder understands that the Owner reserves the right to reject any and all proposals, as well as increase or decrease the scope of work.

Bidder	Telephone
By Authorized Official	
Date	
Contractor's Registration No.	Business Address

All blank lines must be filled in to constitute a completed Bid Form.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ of the corporation named as Contractor in Agreement attached hereto; that _____ who signed said Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

By: _____

Title: _____

State of: _____

County of: _____

being duly sworn deposes and says that he is _____ of _____.
(Name of Organization)

Subscribed and sworn before me this
_____ day of _____, _____.

(Notary Public)

My commission expires: _____, _____.

BID BOND FORM

Herewith find deposit in the form of a certified check, cashier's check, cash or bid bond, in the amount of \$ _____ (\$ _____), which is not less than five percent (5%) of the total bid.

Sign here _____

BID BOND

KNOW ALL PEOPLE BY THESE PRESENTS:

That I/we, _____ as Principal, and that I/we, _____ as Surety, are held firmly bound unto the City of Fife, Washington, as Obligee, in the penal sum of \$ _____ (\$ _____), for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for the Aquatics Center Façade Improvements according to the terms of the proposal or bid made by the Principal thereto, and the Principal shall duly make and enter into a Contract with the Obligee in accordance with 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 to do so, 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 _____, _____.

Principal

Surety

Note: Power of Attorney shall be attached.

Attorney in Fact

Received return deposit in the sum of \$ _____ (\$ _____)

Bond No.: _____

BIDDER'S PROPOSED SUBCONTRACTORS

Project: Aquatics Center Façade Improvements

The bidder shall provide names of the subcontractors with whom the bidder will directly subcontract for performance of the following work. If the bidder intends to perform the work itself, the bidder must enter its name for that category of work. If there is no work to be performed by a listed subcontractor, the bidder should insert "None" or "N/A" on the applicable line item.

The bidder shall not list more than one (1) entity for each category of work identified unless subcontractors vary with bid additives, in which case the Bidder must indicate which subcontractor will be used for which additive.

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

The Bidder, if awarded the Contract, will subcontract with the listed Subcontractor for performance of the portion of the Work designated, subject to the provisions of the Contract for Construction and RCW 39.30.060. The Bidder shall not substitute a listed Subcontractor in furtherance of bid shopping or bid peddling.

If a listed Subcontractor is unable to comply with any requirement of the Contract or Bidding Documents, the Bidder may be required to replace the Subcontractor with an acceptable Subcontractor at no cost to the Owner.

Subcontractor shall meet contractual and technical qualifications standards, and provide specialized certification, licensing, and/or performance and payment bonding where specified.

Name of Business Performing Mechanical Work:

Name of Business Performing Structural Work:

Name of Business Performing Electrical Work:

BIDDER

Respectfully submitted, this _____ day of _____, 2017

Legal Name of Firm, Partnership, Person or Corporation

Signature of Person Authorized To Sign

Print Name of Person Authorized To Sign

Title of Person Authorized To Sign (Official Capacity)

END OF FORM

Certification of Compliance with Wage Payment Statutes

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date _____(INSERT DATE), the bidder is not a “willful” violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Bidder’s Business Name

Signature of Authorized Official*

Printed Name

Title

Date

City

State

Check One:

Sole Proprietorship Partnership Joint Venture Corporation

State of Incorporation, or if not a corporation, State where business entity was formed:

If a co-partnership, give firm name under which business is transacted:

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

The following forms have been provided for information, and are not required to be submitted with the bid

CONTRACT

THIS Agreement, made effective as of the _____ day of _____, 2017, between

CITY OF FIFE, WASHINGTON (“CITY”)
5411 23rd Street East
Fife, WA 98424

Contact: Steve M. Worley, P.E.

and

_____ (“CONTRACTOR”)

Contact: _____ Tel: _____

for the following Project:

Fife Aquatic Center Façade Improvements (“PROJECT”)

The City and Contractor agree as follows:

- 1. Contract Documents.** The Contractor shall complete the Project in accordance with the Contract Documents. The Contract Documents consist of the following in order of precedence:
 - a. Written change orders or orders for changes in the work issued after execution of this Agreement;
 - b. This Contract signed by City and Contractor;
 - c. Project Specifications;
 - d. Project Plans

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the work by the Contractor. These Contract Documents complement each other in describing a complete work. Any requirement in one document binds as if stated in all. The Contractor shall provide any work or materials clearly implied in the Contract even if the Contract does not mention it specifically.

2. Date of Commencement and Completion Date. Work shall commence upon execution of this Contract and the Project shall be physically completed within 40 working days (“Physical Completion Date”).

3. Liquidated Damages. Timely performance and completion of the Project is essential to City and time limits are of the essence. In the event Contractor fails to physically complete the work in 40 working days, plus any authorized extensions thereof, the Contractor shall pay the City liquidated damages of \$1000.00 for each calendar day of delay in completion of the Project. No deduction or payment of liquidated damages will, in any degree, release the Contractor from further obligations and liabilities to complete the entire contract. “Substantial Completion” mean day the architect determines the City has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract. “Physical Completion” means the day all of the work is physically completed on the project, but all documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

4. Contract Sum. The contract sum is the total bid amount of \$ _____, including applicable sales tax. The contract sum shall include all materials, equipment, and labor necessary for the proper execution and completion of the Project.

5. Changes. After execution of the Contract, changes in the Project may be accomplished by change order. The City, without invalidating the Contract, may order changes in the Project within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract completion date being adjusted accordingly. Change orders shall be in writing signed by the parties.

6. Retainage. Pursuant to RCW 60.28, a sum of 5 percent of the monies earned by the Contractor will be retained from payment. Such retainage shall be used as a trust fund for the protection and payment (1) to the State with respect to taxes imposed pursuant to Title 82, RCW, and (2) the claims of any person arising under the Contract. Retainage shall be released in accordance with RCW 60.28.

7. Payment. Each month after commencement of the Project, Contractor shall make a request for payment for work done during the preceding month, on invoices in a format acceptable to the City. Failure to perform any of the obligations under the Contract by the Contractor may be decreed by City to be adequate reason for withholding any payments until compliance is achieved. Progress payments for work performed shall not be evidence of acceptable performance or an admission by City that any work has been satisfactorily completed. Progress payments shall be deemed advances and are subject to adjustment at any time prior to final payment for errors, overpayment or City's good faith determination that the remaining balance of payment may be insufficient to insure completion of work covered by this Contract or to pay bond or retainage claims. Payment shall be made within 30 days of receipt of invoice, provided retention in the amount of 5% of the contract amount shall be released in accordance with RCW 60.28. Failure to perform any of the obligations under the Contract by the Contractor may be decreed by City to be adequate reason for withholding any payments until compliance is achieved. Payments received on account of work performed by a subcontractor are subject to the provisions of RCW 39.04.250.

8. Review of Contract Documents and Field Conditions. Contractor has satisfied itself as to the nature and location of the work, the character, kind and quantity of material to be encountered, the character, kind and quantity of equipment needed, the location, conditions and other matters which can in any manner

affect the work under this Contract, and acknowledges that Contractor has had a reasonable opportunity to examine the site and all of the Contract Documents. Prior to commencing work, Contractor shall examine the site and any surfaces upon which work is to be performed, and shall notify City in writing of any conditions which might adversely affect its work; failure to do so will constitute a waiver of entitlement to any additional compensation or contract time arising out of such conditions.

9. Payment and Performance Bond. Contractor shall make, execute, and deliver, in the form provided by the City, a good and sufficient bond equal to the amount of the full contract price with a surety company as surety, for the faithful performance of all the provisions of this contract, including the three year warranty, maintenance and irrigation provisions, and payment of all laborers, mechanics, and subcontractors and material men and all persons who supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such work. This bond shall be filed with the City. The surety must agree to be bound by the laws of the State of Washington and subject to the jurisdiction of the State of Washington.

10. Permits, Fees, Notices, and Compliance with Laws.

10.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for all permits, fees, licenses and inspections by governmental agencies necessary for the proper execution and completion of the work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

10.2 Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules, and regulations, and lawful orders of public authorities applicable to performance of the Work.

11. Prevailing Wages. This Contract is subject to the requirements of Chapter 39.12 RCW, and as it may be amended, relating to prevailing wages. **NO ON-SITE WORKER, LABORER OR MECHANIC EMPLOYED IN THE PERFORMANCE OF ANY PART OF THIS CONTRACT SHALL BE PAID LESS THAN THE PREVAILING RATE OF WAGE** as determined by the Industrial Statistician of the Department of Labor and Industries for the State of Washington. Prior to making any payment under this Contract, the City must receive an approved copy of the "Statement of Intent to Pay Prevailing Wages on Public Works Contracts" from the Department of Labor & Industries. It is the Contractor's responsibility to obtain and file the "Statement of Intent to Pay Prevailing Wage". The Contractor shall be responsible for all filing fees. Each invoice may include a signed statement that prevailing wages have been paid by the Contractor and all subcontractors.

12. Insurance. The Contractor shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, their agents, representatives, employees or subcontractors.

A. Minimum Scope of Insurance

Contractor shall obtain insurance of the types described below:

1. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing

equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.

2. Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, independent contractors, products-completed operations, stop gap liability, personal injury and advertising injury, and liability assumed under an insured contract. The Commercial General Liability insurance shall be endorsed to provide the Aggregate Per Project Endorsement ISO form CG 25 03 11 85. There shall be no endorsement or modification of the Commercial General Liability insurance for liability arising from explosion, collapse or underground property damage. The City shall be named as an insured under the Contractor's Commercial General Liability insurance policy with respect to the work performed for the City using ISO additional insured endorsement CG 20 10 10 01 and Additional Insured-Completed Operations endorsement CG 20 37 10 01 or a substitute endorsement providing equivalent coverage.

3. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

B. Minimum Amounts of Insurance

Contractor shall maintain the following insurance limits:

1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident.

2. Commercial General Liability insurance shall be written with limits no less than \$1,000,000 each occurrence, \$2,000,000 general aggregate and a \$2,000,000 products-completed operations aggregate limit.

C. Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions for Automobile Liability and Commercial General Liability insurance:

1. The Contractor's insurance coverage shall be primary insurance as respect the City. Any Insurance, self-insurance, or insurance pool coverage maintained by the City shall be excess of the Contractor's insurance and shall not contribute with it.

2. The Contractor's insurance shall be endorsed to state that coverage shall not be cancelled by either party, except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City.

D. Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

E. Verification of Coverage

Contractor shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the Contractor before commencement of the work.

F. Subcontractors

Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the same insurance requirements as stated herein for the Contractor.

13. Termination of Contract. This Contract may be terminated by City at any time upon the default of the Contractor or upon public convenience, in which Contractor shall be entitled to just and equitable compensation for any satisfactory work completed prior to the date of termination. Contractor shall not be entitled to any reallocation of cost, profit or overhead. Contractor shall not in any event be entitled to anticipated profit on work not performed because of such termination. Contractor shall use its best efforts to minimize the compensation payable under this Contract in the event of such termination. If the contract is terminated for default, the Contractor shall not be entitled to receive any further payments under the contract until all work called for has been fully performed. Any extra cost or damage to City resulting from such default(s) shall be deducted from any money due or coming due to the Contractor. The Contractor shall bear any extra expenses incurred by City in completing the work, including all increased costs for completing the work, and all damage sustained, or which may be sustained by City by reason of such default.

14. Warranty. In addition to any manufacture or vendor warranties, Contractor warrants that: (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required and permitted by the Contract Documents; (2) the work will be free from defects not inherent in the quality required or permitted; and (3) the work will conform to the requirements of the Contract. The Contractor further agrees to correct any defects in materials or workmanship which shall develop or be discovered within one (1) year after completion and acceptance of the Project.

15. Indemnification/Hold Harmless. The Contractor shall defend, indemnify and hold City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or in connection with the performance of this Agreement, except for injuries and damages caused by the sole negligence of City. Should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Contractor and City, its officers, officials, employees, and volunteers, the Contractor's liability hereunder shall be only to the extent of the Contractor's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Contractor's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

16. Assigning or Subcontracting. Contractor shall not assign, transfer, subcontract or encumber any rights, duties, or interests accruing from this Agreement without the express prior written consent of the City. Each subcontractor, to the extent of the Work to be performed by the subcontractor, shall be bound to the Contractor by the terms of the Contract Documents, and shall assume toward the Contractor all the obligations and responsibilities which the Contractor by the Contract Documents, assumes toward the City.

17. Independent Contractor. Contractor is and shall be at all times during the term of this Agreement an independent contractor.

18. Disputes. Any action for claims arising out of or relating to this Agreement shall be governed by the laws of the State of Washington. Venue shall be in Pierce County Superior Court.

19. Attorneys' Fees. In any suit or action instituted to enforce any right granted in this Agreement, the substantially prevailing party shall be entitled to recover its costs, disbursements, and reasonable attorneys' fees from the other party.

20. Extent of Agreement/Modification. The Contract Documents, together with attachments or addenda, represent the entire and integrated Agreement between the parties hereto and supersede all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended, modified or added to only by written instrument properly signed by both parties.

CITY:
CITY OF FIFE

CONTRACTOR:

By: _____
City Manager

By: _____

Name: _____

Title: _____

Date: _____

Date: _____

Approved as to form:

Gregory F. Amann
Assistant City Attorney

CITY OF FIFE
PERFORMANCE AND PAYMENT BOND WITH GUARANTY
(PUBLIC WORKS CONTRACTS)

Name of Project _____
Contractor (Principal) _____
Project/Contract # _____
Surety _____
Bond Amount \$ _____
Bond # _____

1. Date and Parties

This performance and payment bond with guaranty is dated, for reference purposes only, the _____ day of _____, 2017 and is executed by _____, as Principal(s), and _____, as Surety.

2. General Recitals

A. Principal has entered into a public works contract (the "Contract") with the City of Fife for certain work described as follows:

(the "Work").

B. This bond is furnished in accordance with RCW 39.08 to secure faithful performance of the Contract and payment of all persons covered under RCW 39.08.010.

3. Bond Amount

The Principal and the Surety agree and do jointly and severally bind themselves, their heirs, executors, administrators, and assigns, unto the City in the sum of _____ dollars (\$ _____).

4. Agreement to Perform

A. Principal, his or its heirs, executors, administrators, successors, or assigns, shall abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract, and shall faithfully perform all the provisions of the Contract and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that may hereafter be made, at the time and in the manner therein specified.

B. Principal shall pay all laborers, mechanics, and subcontractors and material suppliers, and all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such Work.

C. Principal shall pay the taxes, increases, and penalties incurred on the Work under Titles 50, 51, and 82 RCW.

D. The Principal further agrees to correct any defects in materials, workmanship, or installation of the Work which shall develop or be discovered within one (1) year after final acceptance of the Work.

5. Indemnity Agreement

A. The Principal hereby agrees to indemnify and hold the City harmless from any and all claims that may be made against the City resulting directly or indirectly from any action or inaction of the Principal or his agents, employees or independent contractors relating directly or indirectly to work performed or to be performed under the terms of this agreement. This indemnity and hold harmless shall include City Costs related to defending against said claims, or in enforcing the terms of this agreement.

B. For purposes of this document, the term “City Costs” shall mean all City expenditures, obligations or debt incurred, including, but not limited to: construction, labor, equipment and material costs; City staff time; legal consultant fees; taxes and penalties; engineering consultant fees; financial consultant fees; publication, service or process and filing fees; mailing fees; cost of right-of way, real property and easement acquisition; and fees and costs to other governmental jurisdictions, that are made or incurred by the City, whether or not legal action is commenced.

6. Obligation of Surety

A. If the Principal (or any of the employees, subcontractors, or lower tier subcontractors of the Principal) fails to abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract, or fails to faithfully perform any of the provisions of the Contract or fails to well and truly perform and fulfill any of the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that may hereafter be made, at the time and in the manner therein specified, then the Surety shall be liable to the City for City Costs resulting from said failure to perform, but not to exceed the Bond amount.

B. If the Principal (or any subcontractors or lower tier subcontractors of the Principal) fails to pay any laborers, mechanics, or subcontractors or material suppliers, and all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such Work, then the Surety shall be liable to the City for City Costs resulting from such failure to pay and to the persons covered by RCW 39.08.010, but not to exceed the Bond amount.

C. If the Principal (or any subcontractors or lower tier subcontractors of the Principal) fails to pay the taxes, increases, and penalties incurred on the Work under Titles 50, 51, and 82 RCW, then the Surety shall be liable to the City for City Costs resulting from such failure to pay and to the State of Washington, but not to exceed the Bond amount.

D. If the Principal fails to correct any defects in materials, workmanship, or installation of the Work which shall develop or be discovered within one (1) year after final acceptance of the Work, then the

Surety shall be liable to the City for City Costs resulting from such failure, but not to exceed one tenth of the Bond amount.

E. The Surety agrees that no change, extension of time, alteration or addition to the terms of the contract or to the Work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any change, extension of tie, alterations or additions to the terms of the Contract or the Work or to the specifications.

F. The Surety agrees that modifications and changes may be made in the terms and provisions of the Contract without notice to Surety, and any such modifications or changes increasing the total amount to be paid to the Principal shall automatically increase the obligation of the Surety on this Bond in a like amount. However, such increase shall not exceed twenty-five percent (25%) of the original amount of this Bond without the consent of the Surety.

7. Address for Notices

All notices required hereunder shall be considered properly delivered when personally delivered, when received by facsimile, or on the third day following mailing, postage prepaid, certified mail, return receipt requested, to:

Principal:	Surety:
_____	_____
Name	Name
_____	_____
Street address	Street address
_____	_____
City, State and zip code	City, state and zip code
_____	_____
Facsimile number	Facsimile number

8. Default

A. If the Principal (or any of the employees, subcontractors, or lower tier subcontractors of the Principal) fails to faithfully, fully, and timely perform the Contract or any amendments thereto as required hereunder, fails to pay any laborers, mechanics, or subcontractors or material suppliers, or any persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such Work, or fails to pay the taxes, increases, and penalties incurred on the Work under Titles 50, 51, and 82 RCW, then the City shall notify the Principal and the Surety that such failures must be cured to the satisfaction of the City Public Works Department within seven days from the date of the Notice, or such longer time as may be determined by the City Public Works Director. If the failures are not so cured and approved within the period stated in the notice then the Surety, upon written demand by the City, shall immediately tender to the City the full amount of the Bond (less any amount previously paid to claimants in accordance with RCW 39.08) and the City will complete the Work and/or make the payments, as the case may be, deduct from the amount tendered the City Costs, and refund the remainder, if

any, to the Surety.

B. If the Principal fails to correct any defects in materials, workmanship, or installation of the Work, as required hereunder, then the City shall notify the Principal and Surety that the Work must be corrected to the satisfaction of the City Public Works Department within seven days from the date of the Notice, or such longer time as may be determined by the City Public Works Director. If the Work is not corrected and approved within the period stated in the notice, then the Surety, upon written demand by the City, shall immediately tender to the City one tenth of the Bond amount (or the total amount remaining on the Bond whichever is less), and the City will correct the Work, and deduct from the amount tendered the City Costs. The City shall retain the remainder until the end of the warranty period. If at the end of the warranty period the tendered monies have not been expended for City Costs associated with correction of Work, then the remaining amount shall be refunded to the Surety.

C. If the amount of the Bond is inadequate to pay for City Costs, either because the City Costs exceed the Bond amounts or the Surety is no longer solvent or fails to timely tender the appropriate amount, then the City shall forthwith notify the Principal and he shall tender the deficiency to the City within five days of said notification. If the City commences legal action to collect said deficiency then the prevailing party in said legal action shall be entitled to judgment for their reasonable costs and attorney fees incurred therein. Each Principal is jointly and severally liable for the obligations set forth herein.

9. Action by Claimants.

A. All such persons mentioned in RCW 39.08.010 shall have a right of action in his, her, or their own name or names on the Bond for work done by such laborers or mechanics, and for materials furnished or provisions and goods supplied and furnished in the prosecution of the Work: PROVIDED, That such persons shall not have any right of action on this Bond for any sum whatever, unless within thirty days from and after the completion of the Contract with an acceptance of the Work by the City Council, the laborer, mechanic or subcontractor, or material supplier, or person claiming to have supplied materials, provisions or goods for the prosecution of such Work, shall present to and file with the City a notice in writing in accordance with RCW 39.08.030.

B. Every person, firm or corporation furnishing materials, supplies or provisions to be used in the construction, performance, carrying on, prosecution or doing of any of the Work, shall, not later than ten days after the date of the first delivery of such materials, supplies or provisions to any subcontractor or agent of any person, firm or corporation having a subcontract for the construction, performance, carrying on, prosecution or doing of such Work, deliver or mail to the Principal a notice in writing stating in substance and effect that such person, firm or corporation has commenced to deliver materials, supplies or provisions for use thereon, with the name of the subcontractor or agent ordering or to whom the same is furnished and that the Principal and the Bond will be held for the payment of the same, and no suit or action shall be maintained in any court against the Principal or this Bond to recover for such material, supplies or provisions or any part thereof unless the provisions of this section and RCW 39.08.065 have been complied with.

C. The State of Washington shall have a right of action on the Bond for taxes, increases, and penalties incurred on the Work under Titles 50, 51, and 82 RCW.

10. Modification.

This document cannot be modified, nor the obligations created hereunder terminated, without the City's express written consent.

11. Governing Law--Venue.

Any action for claims arising out of or relating to this Agreement shall be governed by the laws of the State of Washington. Venue shall be in Pierce County Superior Court.

PRINCIPAL:

SURETY:

By: _____
Title _____

By: _____
Title _____

PRINCIPAL:

By: _____
Title _____

Accepted by the City this _____ day of
_____, 20__.
By: _____
Title _____

[Power of Attorney must be attached to Bond]

PROJECT SPECIFICATIONS

SECTION 01 33 00 SUBMITTALS

PART 1 - GENERAL

1.01 SUBMITTAL PROCEDURES

- A. Identify Project, Contractor, Subcontractor or Supplier; pertinent drawing and detail number, and specification section number.
- B. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Submittals without Contractor's stamp and signature will be rejected.
- C. Schedule submittals to expedite the Project and deliver to Designer.
- D. For each submittal for review, allow seven (7) days excluding delivery time to and from the Contractor.
- E. Notify Designer in writing of any variations from Contract Documents.
- F. Provide space for Contractor and Designer review stamp.
- G. When revised for resubmission, identify all changes made since previous submission.
- H. Submittals not requested will not be recognized or processed.
- I. Submit all items requiring color selections as a group within ten (10) days of contract award.

1.02 PROPOSED PRODUCTS AND SUBCONTRACTOR'S LIST

- A. Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product. Provide list of vendors with company name, address, phone number, and contact person.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.03 PRODUCT DATA

- A. Product Data For Review:

- a. Submitted to Designer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
 - b. After review, provide copies and distribute in accordance with Submittal Procedures article above and for record documents purposes described in Section 01 77 00 –Closeout Procedures.
- B. Product Data For Information:
- a. Submitted for the Designer's knowledge as contract administrator or for the Owner.
- C. Product Data For Project Close-out:
- a. Submitted for the Owner's benefit during and after project completion.
- D. Submit the number of copies that the Owner requires, plus one (1) copy that will be retained by the Designer.
- E. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- F. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- G. After review distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01 77 00 –Closeout Procedures.

1.04 SHOP DRAWINGS

- A. Shop Drawings For Review:
- 1. Title each drawing with project name and number.
 - 2. Submitted to Designer for review for the limited purpose of checking for conformance with the Contract Documents.
 - 3. After review, produce copies and distribute in accordance with Submittal Procedures article above and for record documents purposes described in Section 01 77 00 – Closeout Procedures.
- B. Shop Drawings For Information:

1. Submitted for the Designer's knowledge as contract administrator for the Owner.
- C. Shop Drawings For Project Close-out:
1. Submitted for the Owner's benefit during and after project completion.
- D. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.05 SAMPLES

- A. Samples For Review:
1. Submitted to Designer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- B. Samples For Information:
1. Submitted for the Designer's knowledge as contract administrator or for the Owner.
- C. Submit samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- D. Include identification on each sample, with full Project information.
- E. Submit the number of samples specified in individual specification sections.
- F. Reviewed samples that may be used in the Work are indicated in individual specification sections.

1.06 CERTIFICATES AND WARRANTIES

- A. When specified in individual specification sections, submit certificates and/or warranties by the manufacturer, installation/application subcontractor, or the Contractor to Owner.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications.
- C. Certificate or warranty shall name the project number, location, date, contractor, contractor's address, manufacturer and manufacturer's address.

1.07 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing to Owner.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria.

1.08 ERECTION DRAWINGS

- A. **Submit drawings for the Designer's benefit as contract administrator or for the Owner.**
- B. **Submit for information for the limited purpose of assessing conformance with the information given and the design concept expressed in the Contract Drawings.**

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01 45 00
QUALITY CONTROL

PART 1 - GENERAL

1.01 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Designer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement as recommended by manufacturer.

1.02 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Designer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.03 REFERENCES AND STANDARDS

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.

- D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Designer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 PRODUCTS

- A. All materials to be new material, equipment, fixtures, and systems. Include all trim, accessories and incidental items to complete the Work.

1.02 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.

- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.03 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturers' instructions.

- B. Provide off-site storage and protection when site does not permit on-site storage or protection.

- C. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.04 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.

- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.

- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named in accordance with the following article.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Designer review.

1.02 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.

- B. Clean surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces.

- C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

- D. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.03 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.04 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 x 11 in. text pages, three ring binders with durable plastic covers.

- B. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

- C. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:
 - 1. Part 1: Directory: listing names, addresses, and telephone numbers of Contractor, Subcontractors, and major equipment suppliers.

 - 2. Part 2: Operation and maintenance instructions, arranged by item. For each category, identify names, addresses, and telephone numbers of vendors and suppliers. Identify the following:
 - a. Significant design criteria.

 - b. List of equipment.

 - c. Parts list for each component.

- d. Operating instructions.
- e. Maintenance instructions for equipment and systems.
- f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.

3. Part 3: Project documents and certificates, including the following:

- a. Certificates.
- b. Originals of warranties and bonds.

D. Submit one (1) set of final volume, within ten (10) days after final inspection to Owner.

1.05 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra products in quantities specified.
- B. Deliver to Project site and place in location as directed by Owner.

1.06 WARRANTIES AND BONDS

- A. Execute and assemble transferable warranty documents from vendors, suppliers, and manufacturers.
- B. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- C. Submit prior to final Application for Payment.
- D. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten (10) days after acceptance, listing date of acceptance as start of warranty period.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 03 11 00
CONCRETE FORMING

PART 1 - GENERAL

1.1 REFERENCES

- A. ACI 347 - Recommended Practice For Concrete Formwork.
- B. PS 1 - Construction and Industrial Plywood.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI347.

PART 2 - PRODUCTS

2.1 WOOD FORM MATERIALS

- A. Conform to ACI 347.
- B. Form panels shall be B-B Grade formplywood.

2.2 FORMWORK ACCESSORIES

- A. Form Release Agent: Colorless mineral oil that will not stain concrete or absorb moisture, or form release agent compatible with form liner materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify lines, levels, and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.2 ERECTION - FORMWORK

- A. Provide bracing to ensure stability of formwork.
- B. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principalshores.
- C. Align joints and make watertight. Keep form joints to a minimum.
- D. Provide 3/4 inch chamfer at all external corners.

3.3 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.

3.4 FORMWORK TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI 301.

3.5 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
- B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.

END OF SECTION

Section 03.20.00
CONCRETE REINFORCING

PART 1 - GENERAL

1.1 REFERENCES

- A. ACI 301 - Structural Concrete for Buildings.
- B. ACI 315 – Details and Detailing of Concrete Reinforcement.
- C. CRSI - Concrete Reinforcing Steel Institute - Manual of Practice.
- D. CRSI 63 - Recommended Practice For Placing Reinforcing Bars.
- E. CRSI 65 - Recommended Practice For Placing Bar Supports, Specifications and Nomenclature.

PART 2 - PRODUCTS

2.1 REINFORCEMENT

- A. All concrete reinforcement materials shall be new and free from rust, and shall comply with the following reference standards:
 - 1. Bars for reinforcement shall comply with the requirements of "Specifications for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement," ASTM Designation A615, Grade 40 or Grade 60, unless noted otherwise.

2.2 ACCESSORIES

- A. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions.
- B. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather Exposed Concrete Surfaces: Plastic coated steel type; size, and shape as required.

PART 3 - EXECUTION

3.1 PLACEMENT (REINFORCING STEEL)

- A. Place in accordance with CRSI. Place, support and secure reinforcement against displacement. Do not deviate from required position.
- B. Place in accordance to ACI 315 and ACI 318.
- C. Unless shown otherwise, maintain minimum 3/4-inch space between all formwork and reinforcement.

D. Provide concrete cover over reinforcement as follows; unless noted otherwise:

1. Concrete cast against Earth: 3 inches.
2. Concrete exposed to Weather or Earth: 2 inches.

END OF SECTION

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 REFERENCES

- A. ACI 117 – Tolerances for Concrete Construction and Materials
- B. ACI 301 – Structural Concrete for Buildings.
- C. ACI 303R – Guide to Cast-In-Place Architectural Concrete Practice.
- D. ACI 304 – Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.
- E. ACI 305R – Hot Weather Concreting.
- F. ACI 306R – Cold Weather Concreting.
- G. ACI 308 – Standard Practice for Curing Concrete.
- H. ACI 315 – Details and Detailing of Concrete Reinforcement.

1.5 SUBMITTALS FOR REVIEW

- A. Section 01 33 00 - Submittals: Procedures for submittals.
- B. Concrete Mix Data: Provide data on concrete mix.

1.6 QUALITY ASSURANCE

- A. Quality Control: Conform to requirements of Section 01 45 00.
- B. Concrete and Formwork: Performed by company experienced for five (5) years (minimum) in construction of top quality, site cast concrete work, familiar with and capable of producing concrete work in accordance with referenced standards listed in Paragraph 1.01 (above) and these specifications and drawings.
- C. Architectural Concrete: Perform Work in accordance with ACI 301 and ACI 303R.

PART 2 - PRODUCTS

2.1 CONCRETE MATERIALS AND MIX

- A. Quality:
 - 1. Concrete of the tabulated classes shall have the following minimum compressive strengths at twenty-eight (28) days. Concrete shall be proportioned within the

following limits unless approved otherwise after submittal of a mix design.

<u>Class</u>	<u>Minimum of psi @ 28 days</u>	<u>Maximum Slump</u>
E	4000	3-1/2"
B.	Cement:	
1.	All cement shall be Portland cement conforming to ASTM Designation C150, Type I or Type II, and shall be the product of one (1) manufacturer.	
C.	Aggregates:	
1.	Aggregates for standard Portland cement concrete shall conform to the quality requirements of the State of Washington Standard Specifications for Road, Bridge, and Municipal Construction.	
D.	Water: Water used for mixing concrete shall conform to the quality requirements of Paragraph 9-25.1 of the Washington State Standards.	

2.2 CONCRETE REINFORCING

- A. Concrete Reinforcing: Refer to Section 03 20 00 Concrete Reinforcing.

2.4 ADMIXTURES

- A. Air Entertainment Admixture: ASTM C260 at all exterior concrete.

2.8 CURING MATERIALS

- A. Water: Clean and drinkable.
- B. Curing Membrane: White 4 mil polyethylene film or a combination sheet plastic and paper, 20 ft minimum roll width.
- C. Concrete Curing Compound: A transparent curing, sealing, and dust proofing compound for interior and exterior concrete.
1. No oils, saponifiable resins waxes or chlorinated rubbers.
 2. Coordinate work with 07 92 00 -Sealants.
 3. Apply to concrete as recommended by manufacturer's product data.
- D. Absorptive Mat: Burlap-polyethylene minimum 8 oz./sq yd., bonded to prevent separation during use.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify requirements for concrete cover over reinforcement.

3.2 PREPARATION

3.3 PLACING CONCRETE

- A. Place concrete in conformance with ACI 304. Conform to ACI 305R for hot weather concreting and ACI 306R for cold weather concreting. Conform to ACI 303R for Architectural concreting.
- B. Ensure reinforcement is not displaced during concrete placement.

3.4 CONCRETE FINISHING

- A. Finish concrete floor surfaces in accordance with ACI 301.
- B. Steel trowel surfaces that are scheduled to be exposed.

3.5 CURING AND PROTECTION

- A. Cure floor surfaces in accordance with ACI 308.
- B. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- C. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- D. Spraying: Spray water over floor slab areas and maintain wet for seven (7) days.

3.6 PATCHING

- A. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Architect/Engineer upon discovery.
- B. Patch imperfections in accordance with ACI 301 and ACI 303R.

3.7 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Architect/Engineer.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect/Engineer for each individual area.

3.8 PROTECTION

- A. Protect all concrete from mechanical damage or contamination by any substance which would adversely affect the strength, integrity, appearance, usefulness or successful performance of coatings, finishes, or floor coverings applied to the concrete.
- B. Contractor is solely responsible for the means and methods employed to afford this protection.

END OF SECTION

SECTION 05 50 00
METAL FABRICATIONS

PART 1 - GENERAL

1.1 REFERENCES

- A. AESS – Architecturally Exposed Structural Steel (AESS) – AISC Code of Standard Practice for Steel Buildings and Bridges – Section 10.
- B. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- D. ASTM A283 - Carbon Steel Plates, Shapes, and Bars.
- E. ASTM A385 - Standard Practice for Providing High Quality Zinc Coatings (Hot Dip)
- F. ASTM A500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.
- G. ASTM A501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
- H. AWS A2.0 - Standard Welding Symbols.
- I. AWS D1.1 - Structural Welding Code.
- J. SSPC (Steel Structures Painting Council) - Steel Structures Painting Manual.
- K. PCI – Powder Coating Institute.

1.2 SUBMITTALS

- A. Section 01 33 00 - Submittals: Procedures for submittals.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable. Shop drawings shall identify AESS components.
- C. Indicate welded connections using standard AWS A2.0 welding symbols. Indicate net weld lengths.
- D. PCI 3000 Certification: The powder coating applicator shall submit current documentation illustrating PCI 3000 Certification.

1.3 QUALITY ASSURANCE

- A. Fabricate steel members in accordance with AISC Code of Standard Practice.

- B. Fabricate (AESS) steel members in accordance with AISC Code of Standard Practice, Section 10.
- C. Fabricator: Company specializing in performing the work of this Section with minimum five (5) years documented experience.

1.4 DELIVERY, STORAGE AND PROTECTION

- A. Protect products and fabrications under provisions of Section 01 60 00.

PART 2 - PRODUCTS

2.1 MATERIALS - STEEL

- A. AESS Steel Members: Refer to structural notes on structural drawings and architectural notes on architectural drawings.
- B. Steel Tubing: ASTM A500, Grade B.
- C. Steel Plates: ASTM A283.

2.2 MATERIALS - DECORATIVE EXPANDED METAL

- A. Specification standard: McNichols Company.
- B. General: Expanded flattened metal panels, factory fabricated, fastened with exposed fasteners.
- C. Expanded Metal Panel:
 - 1. Panel Size: As indicated (maximum 48 inches by 96 inches).
 - 2. Material: Aluminum 3003-H14.
 - 3. Gauge (Aluminum): 0.050 gauge minimum.
 - 4. Pattern: Lancet, 3/16. Pattern number 367F-.051. 60 percent open area. Lancet bar size 0.065 inch, opening 0.1875 inch, 0.394 inch lancet centers. Flattened.
 - 5. Edge: 1 inch wide aluminum "U"-shaped edging @ all sides of panels. 0.125 inch gap. Factory installed.
- D. Exposed Fasteners: Self-tapping stainless steel fasteners and washers.
- E. Substitutions: Under provisions of Section 01 60 00.

2.3 FABRICATION - MISCELLANEOUS ITEMS

- A. Field verify actual dimensions and conditions at site prior to shop fabrication.
- B. Fit and shop assemble items in largest practical sections for delivery to site.
- C. Fabricate items with joints tightly fitted and secured.

- D. Continuously seal joined members by continuous welds. Grind exposed welds smooth.
- E. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- F. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- G. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- H. Eased edges to be smooth, straight and uniform in appearance.
- I. Welding shall conform to AWS D1.1.

2.4 ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) FABRICATION

- A. Field verify actual dimensions and conditions on site prior to shop fabrication.
- B. Fabricate in accordance with AISC Code of Standard Practice, Section 10 - Architecturally Exposed Structural Steel (AESS).
- C. Fabricate and assemble AESS in the shop to the greatest extent possible.
- D. No field welding of shop-applied powder coated finished components permitted. Field assembled components with bolted connections in accordance to Contract Documents.
- E. Locate field joints in AESS assemblies at concealed locations or as approved by Architect.
- F. Detail AESS assemblies to minimize field handling and expedite erection.
- G. Continuously seal joined members by continuous welds of uniform size and profile. Grind exposed welds smooth.
- H. Welding shall conform to AWS D1.1.
- I. Fabricate AESS with exposed surfaces smooth, square and of surface quality consistent with the approved mock-up. Use special care in handling and shipping of AESS both before and after shop painting.
- J. Welds ground smooth. For groove welds, the weld shall be made flush to the surface of each side to be within 1/16 inch of plate thickness. Fillet welds to be ground contoured, or blended, oversize welds as required and grind to provide smooth transition and to match profile on approved mock-up.
- K. Minimize weld show through at locations where welding on the far side of an exposed connection occurs, grind distortion and marking of the steel to a smooth profile with adjacent material.

- L. Joint gap tolerance; maintain a uniform gap of 1/8 inch.
- M. Fabricate such that piece marks are fully hidden in the final structure or made with such media to permit full removal after erection.
- N. Fabricator shall deliver steel with no mill marks (stenciled, stamped, raised, etc) in exposed locations. Mill marks shall be omitted by cutting of mill material to appropriate lengths where possible. Where not possible, the fabricator shall fill and/or grind to a surface finish consistent with the approved mock-up.
- O. Fabricator shall grind all edges of sheared, punched or flame-cut steel to match approved mock-up. Eased edges to be smooth, straight and uniform in appearance.
- P. Members to be rolled to a final curved shape shall be fully shaped in the shop and tied during shipping to prevent stress relieving.
- Q. Assemble and weld built-up sections by methods that will maintain alignment of members without warp exceeding specified tolerances.
- R. Seal weld open ends of round and rectangular hollow structural sections with 3/8 inch closure plates. Provide continuous, sealed welds at angle to gusset-plate connections and similar locations where AESS is exposed to weather.
- S. Special care in shipping, unloading, handling and erecting to protection shop applied paint finishes of steel surfaces shall be taken to avoid damage.
- T. Erect pre-painted finish pieces using padded slings or other methods such they are not damaged. Provide padding as required to protect while rigging and aligning member's frames.

2.5 FINISH – STEEL TUBE AND BRACKETS

- A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- B. Clean surfaces to SSPC SP-6 prior to finishing.
- C. Do not prime surfaces in direct contact with concrete or where field welding is required.
- D. Protective Coatings:
 - 1. Galvanized Coating: All metal exposed to outdoor atmosphere or shown on drawings shall be hot-dipped galvanized coated to minimum 2.0 oz/sq. ft. zinc coating in accordance with ASTM A385 and ASTM A123.
- E. Shop-Applied Finish: Powder Coated Polyester (UV Stable) Metallic Finish as indicated in Colors and Materials Schedule.
 - 1. Substitution Requests: Submit for approval under provisions of Section 01 60 00.

2.6 FINISH – ALUMINUM EXPANDED METAL PANELS

- A. Shop-Applied Finish: Two-component catalyzed acrylic polyurethane paint finish as indicated in Colors and Materials Schedule. Prepare and prime aluminum substrate in accordance with coating manufacturer’s recommendations. Obtain Artwork for panel patterns from Architect.
 - 1. Substitution Requests: Submit for approval under provisions of Section 01 60 00.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Beginning of installation means erector accepts existing conditions.

3.2 INSTALLATION - MISCELLANEOUS ITEMS

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. No field welding of shop-applied powder coated finished components permitted. Field assembled components with bolted connections in accordance to Contract Documents.
- C. Obtain approval prior to site cutting or making adjustments not scheduled. No field cutting of AESS steel components permitted.

3.3 ERECTION TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

3.4 SCHEDULE

- A. Provide and install items listed or shown on drawings with anchorage and attachments necessary for installation.

END OF SECTION

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SECTION 06 20 13
EXTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 REFERENCES

- A. AWS - Architectural Woodwork Standards. AWI - Architectural Woodwork Institute.
- B. PS 20 - American Softwood Lumber Standard.
- C. WCLIB - West Coast Lumber Inspection Bureau. Standard Grading Rules for West Coast Lumber.
- D. WWPA - Western Wood Products Association.

1.3 QUALITY ASSURANCE

- A. Lumber Grading: Certified by WWPA.
- B. Perform work in accordance with AWS/AWI Premium Grade quality standards.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store and protect products under provisions of Section 01 60 00.
- B. Store in ventilated areas with constant minimum temperature of 60 degrees F and maximum relative humidity of 55 percent.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Exterior Trim (Solid Lumber): Western Red Cedar, A and better. Maximum moisture content 19%.

2.2 ACCESSORIES

- A. Nails, Screws and Fasteners: Use stainless steel, corrosion resistant, type 316; non-staining, of size, length and strength to securely and rigidly retain the work.
- B. Sheet Metal Flashing and Trim: As specified in Section 07 62 00.
- C. Weather Resistive Barrier: As specified in Section 07 25 00.
- D. Membrane Flashing (Self-Adhered): As specified in Section 07 25 00.

PART 3 - EXECUTION

3.5 INSTALLATION OF TRIM

- A. Securely fasten in place, aligned, level, and plumb.
- B. Place fasteners no closer than 3/8 inch from edges and 2 inches from corners.
- C. Arrange for orderly, aligned and evenly spaced fastener pattern. Allow horizontal and vertical expansion and contraction of siding material.
- D. Install sealant at all joints.

3.8 PREPARATION FOR FIELD FINISHING

- A. Set exposed nails.
- B. Field Finishing: Provide paint compatible with existing coating system and substrate. Finish coat shall match existing siding color.
- C. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

END OF SECTION

SECTION 07 25 00
WEATHER RESISTIVE BARRIER

PART 1 – GENERAL

1.1 REFERENCES

- A. ASTM – American Society of Testing Materials

1.2 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 2 years production of similar products.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
- C. Preparation instructions and recommendations.
- D. Storage and handling requirements and recommendations.
- E. Installation methods.
- F. Manufacturer standard installation details.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.

PRODUCTS

2.1 MATERIALS – MEMBRANE FLASHING (SELF-ADHERING)

- A. Membrane Flashing (Self-Adhering): Grace Construction Products or approved equal.
 - 1. Grace Vycor Plus: 25 mil thickness. Use: Sealing joints, seams, holes and unwanted openings in vertical surfaces.
 - 2. Grace Perm-A-Barrier Wall Flashing: 40 mil thickness. Use: Base of wall detail areas, foundation detail areas, parapet wall detail areas, vertical leg of metal flashings.
- B. Substitution Requests: Submit for approval under provisions of Section 01 60 00.

2.2 MATERIALS – WEATHER RESISTIVE BARRIER

- A. Weather Resistive Barrier (Sheet-Applied Membrane):

1. Weather Resistive Barrier (Vapor Permeable Air Barrier): Grace Construction Products. Perm-A-Barrier VPS (Vapor Permeable Sheet). Sheet-applied, self-adhering, vapor-permeable, water-resistant, flexible air barrier membrane consisting of a breathable carrier film with specially designed adhesive which permits the transfusion of water vapor. Impermeable to liquid water. Provide related primers, transition membrane flashings, tapes, membrane flashings, sealants and other accessory components for complete system.
- B. Substitution Requests: Submit for approval under provisions of Section 01 60 00.

2.3 ACCESSORIES

- A. Provide Stainless Steel fasteners.
- B. Manufacturer's tape compatible with exterior plywood sheathing, weather resistive barrier and membrane flashing materials.
- C. Metal Flashing and Trim: As specified in Section 07 6200.
- D. Joint Sealants: Silicone sealant as specified in Section 07 9200.
- E. Adhesives: Manufacturer's recommended adhesives.
- F. Primers: Manufacturer's recommended primers.

EXECUTION

3.1 INSTALLATION WEATHER RESISTIVE BARRIER

- A. Do not use materials with defects that impair quality of product.
- B. Tape exterior sheathing butt joints prior to installation of weather resistive barrier.
- C. Cover exterior sheathing with weather resistive barrier.
- D. Coordinate weather resistive barrier installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Install in accordance with manufacturer's application instructions.

3.2 INSTALLATION MEMBRANE FLASHING AND ACCESSORIES

- A. Install membrane flashing at all wall penetrations. Comply with manufacturer's standard installation details and in accordance to drawings.

3.3 INSTALLATION MEMBRANE UNDERLAYMENT

- A. Install membrane underlayment in accordance with manufacturer's instructions.

***END OF SECTION**

SECTION 07 31 16
METAL SHINGLES

PART 1 – GENERAL

1.1 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA 2605 Voluntary Specification Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- B. ASTM International (ASTM):
 - 1. ASTM B209 Aluminum-Alloy Sheet and Plate.
 - 2. ASTM E 84 Test Method for Surface Burning Characteristics of Building Materials.

1.2 SUBMITTALS

- A. Submit under provisions of Section **01 33 00**.
- B. Shop Drawings: Show thickness and dimensions of panels, panel profile, layout, fastening and anchoring methods, details, and locations of joints and gaskets.
- C. Product Data: Manufacturer's panel profiles, dimensions, characteristics, structural properties, and fire-rating performance criteria.
- D. Color Samples: Panel material finished to specified color and finish.
- E. Fabricator Instructions:
 - 1. Include installation instructions, technical bulletins, and other product data.
 - 2. Include instructions for substrate requirements, special handling criteria, installation Sequence, perimeter conditions, cleaning procedures, and conditions requiring special attention.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Conform to manufacturer's instructions.
- B. Deliver in manufacturer's protective packaging.
- C. Store in well ventilated space under cover, off ground, protected from direct sunlight, weather, moisture, soiling, and marring of surface.
- D. Protect shingles from temperatures exceeding 120 degrees F.
- E. Slope stored shingles for positive drainage of water and condensation.
- F. Handle to prevent twisting, bending, and abrasion. Prevent contact with materials which may cause discoloration or staining.

1.4 PROJECT CONDITIONS

- A. Field Measurements: Verify actual conditions prior to fabrication.

PART 2 – PRODUCTS

2.1 MANUFACTURERS AND FABRICATORS

- A. Metal Shingle Manufacturers:
 - 1. ATAS International, Inc.
 - a. Tel (610) 395-8445, Fax (610) 395-9342, Email info@atas.com.
 - b. Web Site: <http://www.atas.com>
- B. Substitution Requests: Submit for approval under provisions of Section 01 60 00.

2.2 MATERIALS

- A. Backer: Expanded polystyrene backer board.
- B. Face Sheet: ASTM B 209, aluminum alloy, 0.032 inch thick.
- C. Fire Rating: Tested to ASTM E 84.
- D. Shingle Size and Profile: Diamond-shaped shingles, 15 3/4" x 15 3/4". Shingles shall have a turned down edge on lower front sides with interlocking tab, and turned up edge on upper front sides.

2.3 ACCESSORIES

- A. Edge Trim: As provided by manufacturer to match finish of shingles. Base trim shall terminate in a drip edge.
- B. Screw Fasteners: Type S, self drilling, self tapping framing screws, stainless steel with carbide head, as instructed by manufacturer to suit application.
- C. Joint Sealant: Non-exposed areas only. Silicone sealant and backer rod as specified Section 07 92 00 as instructed by manufacturer to contact metal to metal, metal to concrete and metal to masonry.
- D. Isolation Accessories: Isolation tape, pads, or coatings as necessary to prevent galvanic action between dissimilar metals.
- E. Weather Resistive Barrier: As specified Section 07 25 00.
- F. Membrane Flashing: As specified Section 07 25 00.

2.4 FINISH

- A. Exposed Aluminum: PVDF, minimum 70 percent Kynar 500, or Hylar 5000 resin content, factory applied baked-on finish, conforming to AAMA 2605.

B. Uncoated exposed metal not accepted. Touch up uncoated metal for smooth, finished Appearance matching color and gloss level of adjacent finish.

C. Field Touch-up Paint: air-dry system, fluorocarbon resin coating matching color and texture of finish coating.

D. Color: As specified in Colors and Materials Schedule on drawings.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify conditions ready to receive work of this Section before beginning installation.

3.2 PREPARATION

A. Weather Resistive Barrier: Install over exterior sheathing as specified in Section 07 25 00.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and provisions of Contract Documents.

B. Install shingles aligned, level, and plumb, within specified tolerances.

C. Use concealed fasteners and manufacturer's standard edge trim.

D. Install backer rod and silicon joint sealant as necessary for permanent, watertight joints at interface with adjacent construction as specified Section 07 9200.

E. Isolate aluminum from dissimilar metal, as required to prevent galvanic action.

3.4 TOLERANCES

A. Maximum Offset from Alignment Between Adjacent Wall Panels: 1/16 inch.

B. Maximum Variation from Horizontal and Vertical Plane: 1/4 inch in 20 foot, non-accumulative.

3.6 ADJUSTING

A. Make adjustments to wall panel installations not conforming to specified tolerances.

B. Field touch-up damaged finishes to match color and finish of factory applied panel finish.

C. Replace work which cannot be repaired so that repairs are not discernable at distance of 10 feet.

3.7 CLEANING

A. Dry-wipe panels as work progresses.

B. Leave installation clean, free from residue and debris resulting from work of this Section.

END OF SECTION

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 REFERENCES

- A. ASTM B209 - Aluminum and Alloy Sheet and Plate.
- B. SMACNA - Architectural Sheet Metal Manual.
- C. AAMA – American Architectural Manufacturers Association.
- D. AAMA 2605 – Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Architectural Extrusions and Panels.

1.2 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Samples: Submit two (2) samples, illustrating typical material, color and finish.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products to site under provisions of Section 01 60 00.
- B. Stack preformed material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials that may cause discoloration or staining.

1.6 COLORS

- A. Colors are specified on Colors and Materials Schedule on the drawings.

PART 2 - PRODUCTS

2.1 MATERIALS – SHEET METAL

- A. Aluminum Sheet: ASTM B209, alloy 5005 aluminum sheet, minimum 0.0320-inch (20 gauge) thickness if not specified under components. Factory Finish.

2.2 COMPONENTS

- A. Flashing, Trim and Break Shapes: Aluminum sheet material. Minimum thickness as indicated under Materials.

2.3 ACCESSORIES

- A. Fasteners: Stainless steel screws with soft neoprene washers. Stainless steel rivets.
- B. Sealant: As specified in Section 07 92 00.
- C. Membrane Flashing: As specified in Section 07 25 00.
- D. Isolation Tape (Dissimilar Metal Tape): Kelcom Inc or equal. Separation tape.
- E. Butyl Tape (Sealing): Kelcom Inc or equal. Butyl tape. Used for watertight seal between two substrates.

2.4 FABRICATION

- A. Shop-fabricate work to greatest extent possible and comply with details shown and with applicable requirements of SMACNA Architectural Sheet Metal Manual.
- B. Field measure site conditions prior to fabricating work.
- C. Form the work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material.
- D. Fabricate with required connection pieces.
- E. Form sections square, true, and accurate in size and shape, in maximum possible lengths but not less than 10 feet in length and free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints where required by SMACNA recommendations. Keep joints to minimum, but any joint that is required, shall be provided with butt seam with concealed backup plate at joints unless specified otherwise.
- F. Hem exposed edges of metal.
- G. Mitered and soldered or welded fabricated components.
- H. Seam and install sealant at metal joints watertight.
- I. Form exposed sheet metal work without excessive oil-canning, buckling and tool marks, true to line and levels indicated with exposed edges folded back to form hems.
- J. Fabricate sheet metal flashing, trim and components of specified profiles and shapes such that all visible exposed surfaces shall be of color and finish as specified. Conditions where both sides of the sheet metal material surface is visibly exposed to view; Contractor has option to provide single-piece of sheet metal material with specified color and finish on both visibly exposed surfaces or provide 2-pieces of sheet metal material with specified color and finish on one surface, fabricate the item with the two sheet metal material pieces back-to-back such that all visible exposed surfaces are of color and finish specified.

2.5 FINISH – ALUMINUM

- A. All visible exposed surfaces shall be of color and finish as specified.
- B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mils.
- C. Factory Finish: Kynar 500 / Hylar 5000 High-Performance (PVDF) Fluoropolymer Resin Finish (minimum 70% Polyvinylidene Fluoride (PVDF) resins) complying with AAMA 2605 specification requirements. Color as specified in Colors and Materials Schedule. Provide custom color when specified.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces are ready to receive work.

3.2 INSTALLATION

- A. Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations and with SMACNA Architectural Sheet Metal Manual.
- B. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- C. Install isolation tape between dissimilar metals.
- D. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Install work with laps, joints and seams that will be permanently watertight and weatherproof.
- F. Trim, flashing and break shapes shall be provided with butt seam with concealed backup plate at joints; form trim, flashing and break shapes in sections as long as possible, but not less than 10 feet in length. Coordinate joint layout with Architect prior to installation of trim, flashing and break shapes.
- G. Join lengths with seams of joint type allowing flush alignment of adjacent lengths, sealed watertight and allowing for thermal movement.
- H. Install L-shaped metal flashing at base of exterior framed walls. Minimum 4-inch vertical leg. Install metal base flashing after weather resistive barrier installed over exterior gypsum sheathing. Seal vertical leg of metal base flashing to weather resistive barrier with membrane flashing. Set bottom leg of metal base flashing in beads of sealant.
- I. Seal and seal metal joints watertight. Coordinate with Section 07 92 00 for sealants.
- J. Secure flashings in place using concealed fasteners and cleats.

END OF SECTION

SECTION 07 92 00
JOINT SEALANTS

PART 1 - GENERAL

1.1 REFERENCES

- A. ASTM C920 - Elastomeric Joint Sealants.
- B. ASTM C1330 - Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
- C. SWRI (Sealant, Waterproofing and Restoration Institute) - Sealant and Caulking Guide Specification.

1.2 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability. Colors will be selected by Architect from manufacturer's full line of available colors.
- C. Samples for Color Selection: For each joint sealant type.

1.3 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum five (5) years documented experience.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.5 WARRANTY

- A. Provide one (1) year warranty under provisions of Section 01 77 00.
- B. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal and exhibit loss of adhesion or cohesion, or do not cure.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General:

1. Compatibility: Provide joint sealants and accessory materials that are compatible with one another and with materials in close proximity under use conditions, as demonstrated by sealant manufacturer using ASTM C1087 testing and related experience.

B. Liquid Joint Sealants:

1. Single-Component, Nonsag, Neutral-Curing Sealant:

ASTM C 920, Type S, Grade NS, Class 50, for Use NT, G, M, A, and O; SWRI validation. Hardness, ASTM D 2240: 35 durometer Shore A, minimum.

Dow Corning Corporation, 756 SMS Building Sealant.

Use in the following locations:

- a. Exterior joints in metal panel cladding systems.

2. Paintable Urethane Acrylic Sealant:

OSI Pro Series H2U Acrylic Urethane.

Benjamin Moore Moorlastic Urethane Acrylic Sealant 465.

Use in the following locations:

Exterior joints in wood or fiber cement siding to be painted.

3. Single-Component, Nonsag, Non-Staining, Neutral-Curing Silicone Sealant:

ASTM C920, Type S, Grade NS, Class 100/50, for Use NT, G, M, A, and O; SWRI validation. Hardness, ASTM D2240: 15 durometer Shore A.

Staining, ASTM C1248: None on concrete, granite, limestone, and brick.

Dow Corning 790 Silicone Building Sealant. Tremco Spectrem 3.

Use in the following locations:

- a. Exterior joints between different materials. Above-grade.

4. Single-Component, Nonsag, Neutral-Curing Silicone Sealant:

ASTM C 920, Type S, Grade NS, Class 25, for Use NT; SWRI validation. Hardness, ASTM D 2240: 45 durometer Shore A, minimum.

Dow Corning Corporation, 758 Silicone Building Sealant.

Use in the following locations:

- a. Exterior concealed watertight joints in cladding systems.

- C. Sealant Color: As selected by Architect.

- D. Substitution Requests: Submit for approval under provisions of Section 01 60 00.

2.2 ACCESSORIES

- A. Joint Substrate Primers: Substrate primer recommended by sealant manufacturer for application.
- B. Cylindrical Sealant Backing: ASTM C 1330, Type B non-absorbent, bi-cellular material with surface skin, Type C closed cell polyethylene or Type O open-cell polyurethane, as recommended by sealant manufacturer for application. Diameter 1/3 to 1/2 greater than width of joint where it is to be installed.
 - 1. Polystyrene foam not acceptable.
- C. Bond Breaker Tape: Polymer tape compatible with joint sealant materials and recommended by sealant manufacturer.
- D. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that substrate surfaces and joint openings are ready to receive work.
- B. Verify that joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

- A. Remove loose materials and foreign matter that might impair adhesion of sealant.
- B. Clean joints in accordance with manufacturer's instructions.
- C. Verify that joint backing and release tapes are compatible with sealant.
- D. Protect elements surrounding the work of this Section from damage or disfiguration.

3.3 PRIMER APPLICATION

- A. General: Install primer wherever recommended by sealant manufacturer for conditions/materials being sealed to achieve manufacturer's published joint performance criteria including applicable federal specifications.

3.4 INSTALLATION

- A. Install sealant in accordance with manufacturer's instructions.
- B. Measure joint dimensions and size materials to achieve required width/depth ratios. Minimum joint width for exterior joints not indicated otherwise shall be 1/4in.

- C. Install joint backing to achieve a neck dimension no greater than 1/3 of the joint width.
- D. Install bond breaker where joint backing is not used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- G. Tool joints concave, unless noted otherwise.
- H. Remove improperly applied sealant and replace with new.

3.5 CLEANING

- A. Clean work under provisions of Section 01 7700.
- B. Clean adjacent soiled surfaces.

3.6 PROTECTION OF FINISHED WORK

- A. Protect sealants until cured.
- B. Repair or replace defaced or disfigured finishes caused by work of this Section.

END OF SECTION

SECTION 26 00 01
GENERAL DESIGN-BUILD LIGHTING SYSTEM REQUIREMENTS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The scope of the Lighting System work consists of but is not limited to the following:
1. Lighting system required for this work includes all labor, materials, equipment, and services necessary to complete installation of lighting system as designed by Contractor and specified herein or required for a complete operable facility and not specifically described in other areas of these documents.
 2. Coordination with all utilities and trades as necessary to design and install electrical lighting connections.
 3. Contractor shall be responsible for all field locating and as-built of the existing lighting system, as well as all calculations, documents, and drawings necessary to obtain the permits required by the local authority having jurisdiction to complete the scope of this project as described in Contract Documents.
 4. Contractor shall be responsible for providing adequate information of the existing building lighting system to the Electrical Engineer in order to produce design documents which comply with the requirements of this section as well as all electrical codes enforced by the local authority having jurisdiction. From these the Electrical Engineer shall provide a set of lighting drawings for review and permit submittal. Once approved by the Owner, Architect, General Contractor and local permit authorities, the Contractor shall supply, install, and test the lighting system as described in Contract Documents.
 5. It is the intent of this section to direct the Contractor to provide a complete and compliant commercial lighting system design. It is the Electrical Contractor's responsibility to investigate all other lighting requirements and provide a complete lighting system design that includes all coordination requirements.
 6. Any items not mentioned in these specifications or not indicated on the Drawings, but necessary for successful and efficient operation of the Work shall be held to be implied and shall be furnished and installed as part of the Contract at no additional cost to the Owner.

1.2 DESIGN RESPONSIBILITIES

- A. Contractor is responsible for all lighting system design and engineering necessary to perform all work of the Project. This engineering and design shall be provided by an Electrical Engineer licensed in the State of Washington. Drawings shall be submitted in accordance with Specification Section 01 33 00 and in accordance to the following submittal requirements prior to constructing the work;

1. Submit complete set of drawings to Owner, Architect and General Contractor at following milestone submittals: Quality Assurance (QA) Set, Permit Set, Final Construction Set and Final Record Set.
- B. Checking and acceptance of drawings by the Architect is for general conformance with design intent and Contract requirements and does not relieve Contractor of the responsibility to verify accuracy of dimensions, obtain field dimensions, coordinate dimensions with the work of others, and prevent interference with other equipment and other features of work. If a drawing as submitted is in accordance with Contract requirements, or has specifically indicated deviation from Contract requirements which the Architect finds to be in best interest of Owner and to be so minor as not to involve a change in contract price or impact the scheduled completion of the project, the Architect will accept drawings.
- C. Acceptance of drawings will be general and, except as otherwise provided in the preceding paragraph, shall not be construed as: (1) permitting any departure from Contract requirements, (2) relieving Contractor of responsibility from errors in details, dimensions, or otherwise that may exist, (3) accepting departures from additional details or instructions previously furnished by Engineer and, (4) confirming clearance or lack of interference.
- D. Checking and acceptance by the Architect shall not relieve Contractor of responsibility for deviations from drawings and specifications unless such deviation is specifically called to the Architect's attention by a specific indication of "note deviation" or similar clear and bold indication at time of submission, nor shall it relieve the Contractor of responsibility for errors or omissions in drawings.
- E. Electrical Contractor's Electrical Engineer shall serve as the Electrical Engineer of record for the project.
- F. Electrical Contractor shall verify all existing facilities and site conditions necessary to perform all work of the Project.

1.3 SHUTDOWN OF EXISTING SYSTEMS

- A. Any shutdowns of existing lighting system shall be approved by the Owner. Advance written notice of at least 14 days prior to the shutdown must be provided to the Owner.

1.4 REFERENCES

- A. International Building Code (IBC).
- B. International Existing Building Code (IEBC).
- C. 2015 Washington State Energy Code (WSEC).
- D. Local electrical codes and ordinances.

1.5 QUALITY ASSURANCE

- A. Requirements of regulatory agencies:
 - 1. Contractor shall perform the work in accordance with applicable provisions of electrical codes applicable to the project. Contractor shall provide the materials and labor necessary to comply with rules, regulations, and ordinances. Contractor shall obtain all necessary permits from local authorities.
 - 2. In the case of differences between building codes, laws, local ordinances, utility company regulations, and Contract Documents, the most stringent shall govern. Contractor shall notify Owner in writing of such differences before performing work affected by such differences.

1.6 SUBMITTALS

- A. Contractor shall submit drawings, product data, and operations and maintenance manuals as required by this section in conformance with Section 01 33 00.
- B. Product data:
 - 1. Contractor shall submit manufacturer's catalog data for each manufactured item.
 - a. Contractor shall provide a section in the Lighting submittal for each type of light fixture. Contractor shall include the manufacturer's catalog data for each light fixture and enough information to show compliance with Contract Document requirements. Literature shall show fixture type and style, model, accessories, finish, lamp type of each light fixtures used and shall be marked indicating each specific item with applicable data underlined.
 - b. Submittals shall include the name, address, and phone number of each supplier.
- C. Construction Drawings:
 - 1. The Contractor shall submit Final Construction Drawings to the Owner, Architect and the General Contractor prior to ordering material, fabrication or installation of related work. Refer to paragraph 1.02 Design Responsibilities for additional submittal requirements.
- D. Closeout:
 - 1. Operation and Maintenance Manual data: Contractor shall modify and add to the requirements of Section 01 77 00 as follows:
 - a. At the beginning of the Lighting section of the Operations and Maintenance Manual, Contractor shall provide a master index showing the items included.
 - b. Contractor shall provide the name, address, and phone number of the Architect, Electrical Engineer, the General Contractor, and the Electrical

Contractor.

- c. Contractor shall provide operating instructions to include the following:
 - 1) A general description of the lighting system.
 - 2) Step-by-step procedures to follow in putting each component of lighting system into operation.
- d. Contractor shall identify maintenance instructions for each type of fixture and for lighting system components.
- e. Submit a final list of light fixtures installed in project indicating make, model and type.
- f. Manufacturer's maintenance instructions for each component of the lighting system installed in the project. Instructions shall include name of vendor, installation instructions, parts numbers and lists, operation instructions for the component and maintenance instructions.
- g. Contractor shall include copies of all warranties.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Acceptance at site:
 - 1. Do not use scratched, marred or deformed fixtures or materials.
 - 2. Do not use fixtures, materials or components in wet cartons or boxes, stored in or exposed to rain, water, dust, dirt or snow.

1.8 SAFETY

- A. In accordance with generally accepted construction practices, the Contractor is solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement applies continuously and is not limited to normal working hours.

1.9 WARRANTY

- A. General Warranty: Without additional charge, replace any work or material, which develops defects, except from abuse, within one (1) year from date of substantial completion unless otherwise noted.
 - 1. Lamps: Lamp warranty is from date of Owner occupancy or acceptance: twelve (12) months for LED lamps. Provide labor for lamp installation for thirty (30) days after final acceptance.

2. Ballasts: Ballasts covered by a two-year warranty, based upon manufacturer's Code dates embossed on ballast cover with installation date. Warranty includes nominal payment toward normal cost of labor for replacement of ballast.
 3. LED Drivers: Minimum 36-month manufacturer's warranty. If any driver fails before final completion of project, replace entire luminaire. Replace drivers which fail within manufacturer's warranty period.
- B. Contractor shall guarantee lighting system to be free from noise in operation that may develop from failure to construct the lighting system in accordance with the Contract Documents.
 - C. Contractor shall provide certificates of warranty for fixtures made out in favor of the Owner.
 - D. If an Electrical Contractor with offices located more than 150 miles from the project site is used, Electrical Contractor shall provide a service/warranty work agreement for the warranty period with a local electrical subcontractor approved by the Owner. Contractor shall include a copy of this service/warranty agreement in the Warranty section of the Operation and Maintenance Manual.

1.10 OWNER'S INSTRUCTIONS

- A. Contractor shall instruct building maintenance personnel in the operation and maintenance of lighting system, utilizing the Operation and Maintenance Manual when so doing. Contractor shall conduct the instruction period after the Substantial Completion inspection, when the lighting system is properly working, and before final payment is made.

1.11 COLORS AND FINISHES

- A. Refer to Architectural Drawings.

PART 2 - PRODUCTS

2.1 COMPONENTS

- A. Provide commercial grade lighting materials and components including: fixtures, drivers, ballasts, controls, switches, conduit, wiring, accessories, etc. for a complete and functional commercial lighting system.
 1. Scope of work shall include cutting and patching of existing materials and components to accommodate work.

2.2 MATERIALS

- A. Provide lighting materials of commercial quality, new, listed by the Underwriters' Laboratories, bearing their label wherever standards have been established and label service is regularly furnished by them. Indicated brand names and catalog numbers used to establish standards of performance and quality. The description of materials listed herein governs in the event

that catalog numbers do not correspond to the materials described herein.

2.3 ACCESSORIES

- A. Special Features and Incidentals: Include special features, finishes, accessories, trim pieces or requirements indicated in the Contract Documents for particular items, components or equipment, that are not included by or in the item's listed catalog number.
- B. Provide and install as part of the Contract Work all incidentals, trim pieces, covers, access panels, accessories, hangers, brackets, supports, framing, backing, ballasts, power supplies, relays, etc., not specifically mentioned herein or noted on the Contract Drawings, but required to complete the system or systems, in a safe and satisfactory working condition, as part of the Contract Work.

2.4 FABRICATION AND FINISHES

- A. Shop Finishing / Factory Finishing: Modify manufacturer's products at the factory to comply with the special color and finish requirements noted. Contractor's responsibility to verify compliance.
- B. Exposed Conduit, Junction boxes, Brackets and Supports: Field paint, color to match adjacent material and surface.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Site Inspection:
 - 1. Contractor shall visit site of proposed construction. Verify and inspect the existing site to determine the conditions that affect this work, including existing circuits, walls and ceilings to be removed and any impact these conditions will have on lighting system installation.
 - 2. Include all costs in the bid price for the work and/or material required to comply with the Contract Documents, based on the actual existing conditions and the information indicated on the Contract Documents.
 - 3. Failure to visit the site and verify conditions affecting work of this Division does not relieve Contractor from the necessity of doing any and all work which is necessary to make lighting system complete.
 - 4. No subsequent allowance for time or money will be considered for any consequence related to failure to examine site conditions.
- B. Contractor shall investigate structural and finish conditions affecting this work and arrange the work accordingly, providing such items, components and accessories as are required to meet conditions.

- C. Contractor shall ensure that items to be furnished fit the space available. Contractor shall make the necessary field measurements to ascertain the space requirements, including those for connections, and furnish and install equipment of a size and shape so that final installation shall suit the true intent and meaning of Contract Documents. If approval is received by Addendum or Change Order to use other than the originally specified items, Contractor shall be responsible for specified capacities and for ensuring that items to be furnished will fit the space available.

3.2 PREPARATION

- A. Contractor shall check that openings through walls and ceilings are properly located. Contractor shall perform cutting and patching at no additional cost to Owner.

3.3 INSTALLATION

- A. Codes and Permits:
 - 1. Comply with the latest Rules and Regulations of the Codes of the State and local Authorities Having Jurisdiction (AHJ). Contractor responsible for apprising himself of the pertinent Codes prior to commencing work.
 - 2. Furnish all materials and labor required for compliance with these Rules and Regulations.
 - 3. Items in excess of Code requirements take precedence. Obtain and pay for all required permits, plan check charges and certificates. Deliver Certificates of Acceptance from the Code-Enforcing Authorities to Architect.
 - 4. Conform to local Utility company regulations.
- B. Interface with other Work:
 - 1. Contractor shall install lighting system such that conduits, fixtures, ballasts, drivers and other related components maintain a minimum of 1-inch clear from mechanical, fire suppression and plumbing system components.
 - 2. All lighting fixtures and related system components shall be installed a neat and workmanlike manner.
 - 3. Contractor shall not cut structural beams, columns, joists or trusses.
- C. Contractor shall cut carefully to minimize the necessity for repairs to previously installed Work.
- D. Contractor shall seal and flash openings watertight through the exterior building assemblies caused by penetrations of elements of the lighting systems.

3.4 TESTS

A. Conduct tests of fixtures, components and of complete system to demonstrate compliance with specified lighting requirements.

B. Provide journeyman electrician with tools, meters, instruments and other test equipment required. Remove and replace trims, covers, fixtures, etc., and test materials, systems, methods and workmanship in the presence of the Owner for final review at completion of the work.

3.5 CLEANING

A. Tools and Materials:

1. Keep tools and materials in an orderly manner throughout the construction period.
2. Upon completion of the work, remove all supplies, materials, tools, etc., furnished by Division 26.

B. Dirt, Debris and Dust:

1. Remove dirt and debris of whatever nature caused by the execution of the work from job site at frequent periods appropriate to the progress of the work, or as directed by the Owner or Architect.
2. Leave the entire lighting system installed under this Contract in clean, dust-free and proper working order.

3.6 REPAIR AND RESTORATION

A. Contractor shall bear the expense of cutting, patching, repairing, or replacing of existing construction.

1. Contractor shall patch and repair walls, floors, ceilings, and roofs with materials of the same quality and appearance as adjacent surfaces unless otherwise shown.
2. Surface finishes shall exactly match the existing finishes of the same materials.

3.7 MOUNTING HEIGHTS

A. Leave center of outlet boxes, unless otherwise noted, the following distance above the floor:

1. Controls and Switches: 48" height. Must comply with the current edition of the American's with Disabilities Act (ADA).
2. Contractor must place device boxes, controls and switches rough-in for Owner and Architect review and approval BEFORE cabling to these devices. Lighting devices not approved before cabling is installed will be relocated (if necessary) at the contractor's

expense. Contractor shall schedule on-site meeting with Owner and Architect to review device rough-in locations.

3.8 TRENCHING AND BACKFILLING

- A. Provide trenching, backfilling, for lighting systems conduits, cables and ducts.
- B. For conduit, a minimum 4" cover of sand or clean earth fill shall be placed all around the conduit on leveled trench bottom. Lay all conduits on a smooth level trench bottom, so that contact is made for its entire length. Water shall be removed from trench while electrical conduit is being laid.
- C. Place backfill in layers not exceeding 8" deep and compact to 95% of maximum density at optimum moisture to preclude settlement. Where higher compaction is called for on the civil drawings or other sections of the specifications, they shall prevail. Under paved areas, sidewalks, and interior slabs use pea gravel. Exterior use excavated material, if suitable to obtain compaction with final 8" soil without rocks.
- D. Following back-filling, grade all trenches to the level of surrounding soil. All excess soil shall be disposed of at the site as directed.
- E. Saw cut all concrete and paving prior to trenching.

3.9 INSTRUCTION PERIODS

- A. The Contractor shall demonstrate the lighting system and instruct the Owner's designated operating and maintenance personnel in the operation and maintenance of the lighting system. The Contractor shall arrange scheduled instruction periods with the Owner and Architect. The Contractor's representatives shall be superintendents or foremen knowledgeable of the system and suppliers representatives when so specified.

3.10 FINAL ACCEPTANCE REQUEST

- A. The Contractor shall submit to the Architect, with a copy to the Owner, a Job Completion Letter prior to the time final acceptance of the lighting system work is requested. At this time also submit copies of final inspection certificates and receipts for loose materials turned over to the Owner.

END OF SECTION