

Exhibit B – Standard Subcontract Terms, Conditions and Associated Exhibits

SUBCONTRACT AGREEMENT TERMS & CONDITIONS

Direct Contractor has entered into a contract with the “Owner” for the performance of certain work according to the terms and conditions of said contract, including the plans, specifications, general conditions, special provisions drawings, specifications, addenda, amendments, modifications, exhibits, and all other documents forming or by reference made a part thereof, all of which are available for Subcontractor’s review and are herein collectively referred to as the “Direct Contract.” In consideration of the covenants, conditions and undertakings set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Contractor and Subcontractor agree as follows:

SECTION 1. SCOPE OF WORK AND CONTRACT DOCUMENTS

Subcontractor agrees to provide all labor, materials, equipment, and services necessary and incidental to completion of all work described in Exhibit A to this Agreement (the “Work”) for compensation described in Exhibit A (the “Contract Price”). Subcontractor shall perform the Subcontract Work in accordance with the Contract Documents which include, but are not limited to: this Agreement, Exhibit A to this Agreement (Scope of Work and Contract Price), Exhibit B to this Agreement (Summary of Documents Required per Agreement), Exhibit C to this Agreement (Insurance Requirements), and any other attachments or documents referenced in said exhibits; and the Direct Contract and any documents referenced therein. This Agreement incorporates by reference the other Contract Documents, and Subcontractor agrees to be bound to the Direct Contractor by the terms and provisions of the Contract Documents, in the same manner that Direct Contractor is bound to Owner.

This Agreement and the other Contract Documents are a fully integrated agreement and represent the entire agreement between Direct Contractor and Subcontractor, and supersedes any prior oral or written agreements or representations. The Contract Documents are incorporated in this Agreement by reference, and Subcontractor agrees to bind its subcontractors and suppliers to the Contract Documents insofar as they relate in any way, directly or indirectly, to the Work covered by this Agreement. Where, in the Contract Documents, reference is made to “Contractor” and the Work or specifications therein pertain to Subcontractor’s trade, craft or type of work, such work or specifications shall be interpreted to apply to Subcontractor instead of to Direct Contractor. The parties intend that all terms of this Agreement and other Contract Documents be considered as complementary. However, in the event of a conflict between or among the terms of the Contract Documents, the higher standard or greater responsibility for Subcontractor shall prevail. In the event of a conflict between the Contract Documents on the one hand, and the laws applicable to this Agreement, the Contract Documents shall be enforceable to the maximum extent permitted by applicable law.

Subcontractor shall perform, finish, and pay for all work, supervision, labor, materials, equipment, tools, applicable taxes, freight, insurance, and any other things necessary, required, incidental, or related to the construction, improvement, installation, and completion of their scope of work as detailed in the Description above. (Herein after known as the "Work") described below and made a part hereof, all in strict accordance with the terms and provisions of the Contract Documents and all to the satisfaction of the Direct Contractor, the Owner and the Engineer. All Work covered by this

Agreement shall be performed in a skillful and workmanlike manner and, unless otherwise expressly provided in the Contract Documents, with materials and equipment being both new and of the best kind and grade for the purpose intended.

SECTION 2. PAYMENT

- (a) Subject to this Section 2, Direct Contractor agrees to pay Subcontractor the Contract Price as full satisfaction for the performance of this Agreement, subject to additions and deductions for changes agreed upon or determined, as hereinafter provided.

As a condition to payment, by the 22nd of each month, Subcontractor must deliver an application for payment. Subcontractor's application should be based upon the Subcontractor's Work performed and materials and equipment in place up to the day just prior to submittal of the application for payment and should in no event forecast billing beyond the 25th of the month. Subcontractor acknowledges that timely submission of applications for payment is a critical aspect of payment hereunder and is material consideration on Direct Contractor's part in entering into this Agreement. If Subcontractor fails to timely submit its application for payment in form and content satisfactory to Direct Contractor, such application may not be included in Direct Contractor's application for payment to Owner, and in such case Subcontractor shall not be entitled to payment until Direct Contractor receives payment from Owner for the next payment application cycle if Subcontractor then has provided a properly-supported application for payment.

After receipt from Owner of progress payments for Work completed by Subcontractor, Direct Contractor agrees to pay to Subcontractor monthly progress payments on account of Work actually and satisfactorily completed by Subcontractor, in sums equal to ninety five percent (95%) of the labor, equipment, services, and materials that have been placed in position, as reflected in Direct Contractor's application for payment and as approved by Owner. The foregoing percentage shall be ninety five percent (95%) unless otherwise stated under this Agreement or required by applicable law. Payment shall be made from funds received from Owner within seven (7) days of receipt of such funds paid on account of Subcontractor's Work, provided all other conditions hereof have been satisfied and there are no grounds for withholding.

As a condition to payment, Subcontractor agrees to provide waivers and releases of bond and lien rights for itself and its subcontractors and suppliers regardless of tier, as well as other evidence of payment to such persons, in a form satisfactory to Direct Contractor, demonstrating that Subcontractor has paid for all labor, equipment, materials, services, taxes or other charges in any way relating to Subcontractor's Work and obligations in connection with the Project. Upon complete performance of this Agreement by Subcontractor, and after the entire work required by the Direct Contract has been fully completed in conformity with the Contract Documents and has been delivered to and accepted by the Owner, Architect, and Direct Contractor, Direct Contractor will make final payment to Subcontractor of the balance due him under this Agreement from funds paid in final payment for work under the Direct Contract, within seven (7) days in the case of a public work of improvement, and ten (10) days in the case of a private work of improvement, with funds received by Direct Contractor from Owner in final payment for work under the Direct Contract.

Notwithstanding anything to the contrary in this Agreement or elsewhere, Direct Contractor

shall have no obligation to pay Subcontractor for any Work performed under the Contract Documents if Direct Contractor has not been paid for such Work by Owner in at least the amounts payable to Subcontractor on account of the Work completed by Subcontractor. Such payment by Owner is an express condition precedent to any obligation owing by Direct Contractor to Subcontractor to pay for any Work, including changed or extra work performed by Subcontractor.

- (b) Payments made to Subcontractor shall be deemed to be held in trust for benefit of Direct Contractor and of all persons who furnished labor, equipment, and materials for or on behalf of Subcontractor, as well as for the benefit of trust funds and apprenticeship programs owed money in connection with the Project by Subcontractor or its lower tier subcontractors.

SECTION 3. CHANGES

Subcontractor shall make no changes in the Work described in the Contract Documents and this Agreement except as directed by Direct Contractor in writing. Such change or written direction shall not invalidate this Agreement. Direct Contractor is authorized to make changes in the Work, including deletion, additions, and other modifications.

Allowance for extra work and deductions for omissions shall be by mutual written agreement between Direct Contractor and Subcontractor or determined in accordance with procedures specified in the Direct Contract. The requested change in Subcontractor's price must be submitted to Direct Contractor for review within the earlier of five (5) working days of the written order, or within such time as may be required for Direct Contractor to provide timely information to the Owner in accordance with the requirements of the Direct Contract. Failure to provide such pricing within the time specified shall result in a waiver of claims and in nonpayment. Direct Contractor shall not be held liable to Subcontractor for any extra labor, materials, or equipment furnished without such written order.

If necessary, the Contract Price and the time for Subcontractor's performance shall be adjusted by appropriate additions or deductions mutually agreed upon before the Subcontractor performs the changed work. Subcontractor shall supply Direct Contractor with all documentation necessary to substantiate the amount of the addition to or deduction from the price or time. If Direct Contractor and Subcontractor cannot agree on the amount of the addition or deletion, Subcontractor shall nonetheless timely perform the Work as changed by Direct Contractor's written direction. Once Subcontractor receives Direct Contractor's written direction, Subcontractor is solely responsible for timely performance of the Work as changed by the written direction.

Payment for changed Work shall be made in accordance with Section 2.

If Subcontractor makes any changes in the Work without written direction from Direct Contractor, such change constitutes an agreement by Subcontractor that it will not be paid for that changed Work. In addition, Subcontractor shall be liable for any and all losses, costs, expenses, and liability of any nature whatsoever associated with or in any way arising out of any such change it makes without written direction from Direct Contractor. If a dispute arises between Direct Contractor and Subcontractor about whether particular Work is a change in the Work described in Section 1, Subcontractor shall timely perform the disputed Work. If Subcontractor intends to submit a claim for the disputed Work, it shall give prompt written notice to Direct Contractor before proceeding with the Work. In addition, Subcontractor shall submit its written claim for additional compensation for

that work within ten (10) days after such work is performed in sufficient detail for Direct Contractor to make an evaluation of the merits of the claim. Subcontractor's failure to either give the written notice before proceeding with the Work or to submit the written claim within the ten (10) days constitutes an agreement by it that it will not be paid for the disputed Work.

Daily Tags must be submitted to and signed by Direct Contractor for all extra work on the day the extra work is performed. Signed Daily Tags are for verifying labor hours and materials used and not a commitment by Direct Contractor for payment until final change order is agreed upon. Subcontractor agrees that its failure to do so shall result in and constitutes a waiver of claims, and that no payment shall be due for such work.

SECTION 4. PROSECUTION OF THE WORK

- (a) **Time is of the essence.** Subcontractor shall prosecute the Work undertaken in a prompt and diligent manner, in strict accordance with the Direct Contractor's directives and Direct Contractor's schedule, revised if necessary, as the work progresses, including, without limitation, whenever such Work, or part of it, becomes available, or at such other time(s) as Direct Contractor may direct, and so as to promote the general progress of the entire construction, and shall not by delay or otherwise interfere with or hinder the work of Direct Contractor or any other subcontractor. Subcontractor shall comply with Direct Contractor's schedule, and should Subcontractor fail to complete the Work within the time specified in the contract schedule, Subcontractor agrees to reimburse Direct Contractor for any and all liquidated or actual damages that may be assessed against and collected from Direct Contractor which are attributable to or caused by Subcontractor's failure to perform the Work required by this Agreement within the time fixed or in the manner provided for herein, and in addition, agrees to pay to Direct Contractor such other additional damages as Direct Contractor may sustain by reason of such delay by Subcontractor.
- (b) **Submittals** Subcontractor shall timely prepare and submit to Direct Contractor all information including, but not limited to, shop drawings, manufactures literature, samples, material lists and operation and maintenance manuals as may be necessary to describe completely the details and construction of its Work under the Contract Documents. Such submittals shall be made in sufficient time and number of copies required so as to not delay or hinder the progress of work at the Project and shall meet the requirements as outlined in the project specifications. Any deviation from the requirements of the Contract Documents shall be clearly identified in the shop drawings and other required submittals, and so stated in a separate written correspondence from Subcontractor to Direct Contractor. Review and approval of such shop drawings or other information by Contractor, Owner and/or Engineer shall not relieve Subcontractor of its obligation to perform the Work in strict accordance with the Contract Documents, nor of its responsibility for the proper matching and fitting of its work with contiguous work. Incomplete submittals will be returned without review, if the required numbers of copies are not submitted by the Subcontractor and the Direct Contract has to make additional copies. The Direct Contractor reserves the right to back-charge the subcontractor for time and material costs to make the number of additional submittal copies required. In the event that resubmittals are required, such resubmittal shall be provided by Subcontractor to Direct Contractor, but in no event later than within two (2) weeks of return by Direct Contractor. Direct Contractor reserves the right to back charge Subcontractor if Submittals are deficient, do not conform to the contract specifications or require unnecessary resubmitting. If requested by Direct Contractor, Subcontractor shall furnish periodic progress

reports on the status of its Work including information on the status of materials and equipment required under the Contract Documents which may be in the course of preparation or manufacture. Failure of Subcontractor to provide such information within five (5) calendar days shall be deemed a material breach of this Agreement.

It is the Subcontractor's responsibility to note any deviations or exceptions from the Contract Documents clearly on the front of all submittals. Failure to note deviations renders the Subcontractor liable for furnishing its labor, equipment, and/or material as originally specified in the Contract Documents. In addition to requirements of the Contract Documents and those set forth herein, all submittals shall include:

1. A copy of the applicable section(s), with addendum updates included as appropriate, with each paragraph check marked to indicate specification compliance or marked to indicate requested deviations from specification requirements.
 - a. A check mark shall denote full compliance with a paragraph as a whole.
 - b. If deviations from the specifications are indicated, and therefore requested by the Subcontractor, each deviation shall be underlined and denoted by a number in the margin to the right of the identified paragraph, referenced to a detailed written explanation of the reasons for requesting the deviation. The Engineer is the final authority for determining acceptability of requested deviations. The remaining portions of the paragraph not underlined will signify compliance on the part of the Subcontractor with the specifications.
 - c. Where required, partial submittals shall include similar markups. Each paragraph outside of Subcontractor's scope or necessary to be addressed under separate cover shall be underlined and denoted by a number in the margin to the right of the identified paragraph, referenced to an appropriate explanation of the reason for exclusion.
 - d. Failure to include a copy of the marked-up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.

SECTION 5. DELAYS

Should Subcontractor delay Contractor, or anyone else on the Project, Subcontractor will indemnify Contractor and hold Contractor harmless for any damages, claims, demands, liens, stop notices, lawsuits, attorney's fees, and other costs or liabilities imposed on Contractor connected with said delay by Subcontractor. Among other remedies for Subcontractor's delay, Contractor may supplement Subcontractor's work and deduct associated costs at Contractor's election.

SECTION 6. COMMUNICATIONS

All communications between Subcontractor and the Architect, Engineer or Owner with respect to the Work shall be transmitted through Direct Contractor.

SECTION 7. INSURANCE

Unless otherwise stated in the Prime Contract, Subcontractor and its lower tier subcontractors and suppliers shall comply with the insurance requirements and provisions stated in Exhibit C. Direct Contractor's delay or failure to enforce in a timely manner any of the provisions of this Agreement,

including with respect to insurance, shall not act as a waiver of any of these provisions at a later date in the performance of this Agreement.

SECTION 8. INDEMNIFICATION AND DEFENSE OBLIGATIONS

To the greatest extent permitted by law, Subcontractor shall defend, indemnify and hold harmless Direct Contractor, Owner, and Owner's architect and engineer, and any of their respective directors, officers, agents, employees, parents, affiliates, subsidiaries, partners, and representatives, and any other persons or entities designated by any of them (collectively, the "Indemnitees") from and against all causes of action, penalties, assessments, fines, actions by governmental authorities, demands, liabilities, claims, damages, costs, losses and expenses, including but not limited to attorney's fees, consultant fees, and other legal costs ("Claims"), which arise out of or are in any way related (i) to this Agreement; (ii) to actual or alleged actions or omissions by Subcontractor or any of its subcontractors, suppliers, vendors, employees, or persons for whom it is responsible, or (iii) Subcontractor's presence at the Project site and/or its Work. Notwithstanding the foregoing, if any of the Contract Documents impose more stringent defense, indemnity, contribution or hold harmless obligations than are set forth herein, then the more stringent provisions shall apply, and Subcontractor shall owe the same defense, indemnity, contribution, and hold harmless obligations to Direct Contractor as Direct Contractor owes to Owner. Subcontractor's duty to defend Indemnitees shall apply, and Subcontractor shall be required to furnish a defense, notwithstanding that there has not yet been a determination, adjudication or finding of liability or fault on the part of Subcontractor or any party or person to be indemnified.

To the greatest extent permitted by law, the obligations of this Section 8 shall apply regardless of whether the Claims were caused in part or contributed to by Indemnitees; however, obligations specified above shall not extend to: (a) any liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the indemnified party or its agents or employees, or indemnities, (b) to defects in design furnished by the Indemnitee, or (c) to the extent Claims do not arise out of the scope of work of Subcontractor. Items (a) through (c) in the preceding sentence shall be referred to in this provision as "Indemnity Limitations."

To the greatest extent permitted by law, if Subcontractor fails timely and adequately to perform its indemnity obligations under this Section 8, the party tendering the Claim shall have the right to recover from Subcontractor for any resulting compensatory damages, consequential damages, reasonable attorney's fees, consultant fees, and other legal costs. To the greatest extent permitted by law, if Subcontractor fails to timely perform its defense obligations under this Section 8, the party tendering the Claim shall have the right to recover from Subcontractor for any resulting compensatory damages, interest accruing from the date incurred at a rate of 8% per annum on defense and indemnity costs, consequential damages, and reasonable attorney's fees incurred to recover these amounts. In addition to the foregoing remedies, and without limitation or derogation of them, Subcontractor agrees to pay liquidated damages of \$100 per each day that Subcontractor fails to perform its obligations under this Section 8, which are intended to compensate the tendering party for loss of reputation, administrative costs, and other losses that are difficult to quantify and that are not adequately compensated under this provision and Subcontractor agrees that the sum of \$100 per day constitutes a reasonable estimate of such damages or losses.

The obligations under this Section 8 are in no way limited or relieved by Subcontractor having obtained insurance, by the Insurance or other provisions of this Agreement, and/or to the extent permitted by law, by the provisions of any workers compensation law, regulation or arrangement. The obligations of Section 8 shall survive the expiration or termination of this Agreement, as well as Subcontractor's completion of its other obligations.

SECTION 9. LIENS AND CLAIMS

Subcontractor shall, as and when requested, furnish evidence satisfactory to Direct Contractor and the Owner that claims for labor and materials furnished by Subcontractor in connection with performance of this Subcontract have been paid, including payroll taxes and employee benefits. Subcontractor shall furnish to Direct Contractor releases of bond rights and lien rights by persons who have furnished labor, materials or other things in the performance of this Subcontract, it being agreed that payment of money otherwise due Subcontractor need not be made by Direct Contractor until such releases are furnished. Subcontractor shall take all necessary steps to ensure that no claims, liens, or lawsuits are asserted in connection with the Project by any of its subcontractors or suppliers (regardless of tier), it's or their employees, trust funds, taxing authorities or other creditors, and pursuant to the duties set forth herein shall fully defend, hold harmless and indemnify Owner and Direct Contractor against all such claims at Subcontractor's sole expense. At Subcontractor's sole expense, upon Direct Contractor's request, Subcontractor shall within a reasonable period not to exceed five (5) calendar days, bond around any claims of lien in accordance with Idaho law, so that the job and any funding therefor shall remain free from encumbrances and liens, and Subcontractor shall take such other and further steps as may be necessary to remove the effect of any liens or claims from the Project or any funds for the Project.

SECTION 10. DEFAULT

- (a) If Subcontractor fails to supply sufficient qualified workers and/or proper materials, or fails to prosecute its work diligently and properly, or fails to make prompt payment to its workers, sub-subcontractors or suppliers, or becomes delinquent with respect to contributions or payments to any benefit, apprenticeship or other employee program or trust, or fails to provide adequate assurances, or is otherwise guilty of a material breach of a provision of this Agreement or the law, and fails within forty- eight (48) hours after receipt of written notice to commence and continue satisfactory correction of such default with diligence and promptness, and to complete the cure of such default within the time period stated in Direct Contractor's default notice, then Direct Contractor, without prejudice to any rights or remedies, shall have the right to any or all of the following remedies:
- i. supply such workers and quantity of materials, equipment and other facilities as Direct Contractor deems necessary to complete Subcontractor's Work;
 - ii. contract with other contractors to perform such part of Subcontractor's Work as Direct Contractor shall deem appropriate;
 - iii. terminate Subcontractor's right to perform and use any materials, equipment, or tools furnished by or belonging to Subcontractor Work without any further compensation to Subcontractor for such use; and
 - iv. withhold payment of any monies due Subcontractor pending corrective action; provided, however, that Direct Contractor may withhold payment without giving

such notice to the greatest extent permitted by law.

In such an event, Direct Contractor shall be entitled to recover from Subcontractor, back charge against Subcontractor, and/or set off against amounts owed to Subcontractor, the actual direct and indirect costs that Direct Contractor has incurred (including attorney's fees and litigation costs) plus markup of fifteen percent (15%) for overhead and ten percent (10%) for profit. In an emergency, Direct Contractor may proceed under this subsection (a) without providing notice to Subcontractor. In addition to any other remedies available, upon written notice Direct Contractor shall be entitled to perform using its own or other forces those cleanup duties that Subcontractor has failed to perform, to remedy safety deficiencies, or otherwise to remedy Subcontractor's failure to have complied with requirements of this Agreement or directives by Direct Contractor. To secure performance by Subcontractor and the prompt payment of any funds expended by Direct Contractor, Direct Contractor shall have a lien upon all materials, tools, appliances, and equipment of Subcontractor at the Project or used in connection with Subcontractor's Work.

(b) Recourse against Direct Contractor. If Direct Contractor wrongfully terminates Subcontractor, Direct Contractor shall be liable to Subcontractor for the costs Direct Contractor would have paid if Direct Contractor would have terminated Subcontractor for convenience pursuant to Section 11 hereof. Subcontractor expressly understands and agrees that its remedy hereunder shall be exclusive, and expressly waives any and all other rights and remedies which it may have whether at law or in equity. Nothing hereunder shall be construed to prevent Direct Contractor from withholding monies from Subcontractor under other provisions of this Agreement.

SECTION 11. TERMINATION FOR CONVENIENCE

On written notice, Direct Contractor may terminate all or part of this Agreement or Subcontractor's Work for Direct Contractor's convenience. Upon such termination, Subcontractor shall be entitled to: (1) the reasonable cost of the work completed in conformity with the Contract Documents; plus, (2) such other reasonable costs actually incurred by Subcontractor as are permitted by the Direct Contract and approved by Owner; plus (3) fifteen percent (15%) of the cost of the work referred to in item (1) for overhead and profit. Subcontractor shall not be entitled to lost profits on work not performed or any claim or claim of lien against Direct Contractor or Owner for any additional compensation or damages in the event of such termination. Upon any termination, whether for cause or convenience, Direct Contractor shall have the right to take immediate possession of, utilize for any purpose, inspect, and copy any and all of Subcontractor's documents or information related to the project, and the obligations of Subcontractor and rights and remedies of Direct Contractor that would continue after substantial completion in the absence of a termination, including without limitation, Subcontractor's duties with regard to indemnity, payment of creditors, compliance with laws, insurance, warranty, and defective work, shall remain in full force and effect.

SECTION 12. POSSESSION PRIOR TO COMPLETION

Whenever it may be useful or necessary for Direct Contractor to do so, Direct Contractor shall be permitted to occupy and/or use any portion of the Work which has been partially or fully completed by Subcontractor before final inspection and acceptance thereof by the Owner, but such use and/or occupation shall not relieve Subcontractor of its guarantee of said Work nor of its obligation to make good at its own expense any defects in material and/or workmanship which may occur or develop

prior to Contractors release from responsibility to the Owner.

SECTION 13. OTHER CONTRACTS

It is understood and agreed that the Work provided for in this Agreement constitutes only a part of the work being performed for the Owner by Direct Contractor and other subcontractors. Subcontractor, therefore, agrees to perform the Work called for in this Agreement in such a manner that Subcontractor will not injure, damage or delay any work performed by Direct Contractor or other subcontractors. Subcontractor further agrees to pay or reimburse Direct Contractor for any additional costs, damage or delay that may be caused to such other work of Direct Contractor, subcontractors or suppliers, by Subcontractor or its agents or employees.

SECTION 14. LABOR COMPLIANCE

NOT USED

SECTION 15. COMPLIANCE WITH LAWS AND SAFETY REQUIREMENTS

- (a) Subcontractor agrees to fully comply with all Federal, State and local laws, ordinances and regulations.

- (b) At its sole expense, Subcontractor shall investigate and comply with, and agrees to be bound by, all applicable laws and regulations, including without limitation, laws regarding licensing of contractors, the Fair Labor Standards Act, the Americans with Disability Act, the federal Family and Medical Leave Act, federal, state and local family rights and medical leave laws, civil rights and fair employment laws, and all other construction, environmental, workplace and safety laws. Subcontractor accepts exclusive liability for compliance with such laws, including the Federal Social Security Act with respect to its employees, sales and use tax laws, and any other laws and regulations.

Subcontractor shall also comply, at its sole expense, with all DBE, MBE, UDBE, WBE, DVBE, LBE, local hiring and similar requirements pertaining to the Project. In the event of a termination as a result of any misrepresentation of facts relating to Subcontractor's status as a DBE, MBE, UDBE, WBE, DVBE, and/or LBE, Subcontractor shall not be entitled to any compensation not already paid.

- (c) On all projects subject to federal prevailing wage requirements, Subcontractor acknowledges that it has conducted its own independent investigation of the wage rates to be paid and whether its Work will be subject to prevailing wage requirements or the requirements of the Davis-Bacon Act and that it has not relied upon any statements or representations by Direct Contractor with respect to such matters. Subcontractor agrees that the Subcontract Price shall be deemed to be full compensation for compliance with such laws, regulations, or requirements, including payment of all applicable wage rates, and that no additional compensation will be owed to Subcontractor in the event that Subcontractor is required thereunder to pay higher wages or incur additional costs that Subcontractor contends that it did not anticipate.

- (d) On all projects subject to federal prevailing wage requirements, upon request, Subcontractor shall submit certified payroll records to Direct Contractor no later than three (3) working days after Direct Contractor's request and further agrees to cooperate fully in any effort by Direct Contractor to verify compliance with labor laws and regulations, including requirements under the Davis-Bacon Act. Such cooperation shall include, without limitation, furnishing copies and

originals of records and providing access to employees or witnesses for interviews and statements. In addition to and without derogation of any other rights that Direct Contractor may enjoy, Direct Contractor may withhold sufficient funds to protect Direct Contractor against any claims related to labor requirements, including without limitation, requirements under the Davis-Bacon Act.

(e) NOT USED

(f) NOT USED

(g) At its sole expense, Subcontractor shall institute and maintain a reasonable and adequate safety program that fully complies with the law, and shall fully cooperate with and adhere to any safety program or requirements of Direct Contractor and/or Owner. All personnel of Subcontractor, its subcontractors, and suppliers shall wear hard hats, safety vests, and any other necessary safety equipment, while visiting or working at a construction site. Subcontractor shall provide material data sheets and other submittals or items necessary to comply with applicable laws. Subcontractor agrees to obtain and pay for all permits, licenses and official inspections necessary for proper completion of its Work.

(h) If hazardous or toxic substances, of a type of which an employer is required by law to notify its employees, are being used on the site by Subcontractor, its subcontractors or anyone directly or indirectly employed by them, Subcontractor shall, prior to exposure of any employees on the site to such substance, give written notice of the chemical composition thereof to Direct Contractor in sufficient detail and time to permit compliance with such laws by Direct Contractor, other subcontractors and employers on the site.

(i) Subcontractor acknowledges that the EPA and Idaho regulatory authorities have mandated certain requirements for permits under the National Pollutant Discharge Elimination System (NPDES), including Storm Water Pollution Prevention Plan (SWPPP) requirements. Subcontractor agrees, at its sole cost, to conform to any and all requirements of any environmental, air and water pollution statutes, regulations and measures, and/or permits, including NPDES permits, and Subcontractor also shall conform to any and all SWPPP requirements applicable to the Project, as further set forth in this Agreement and the Contract Documents.

(k) NOT USED

(l) Subcontractor shall be responsible for holding weekly safety toolbox meetings as required by law on its own time at its own expense. If requested, records of such meetings shall be submitted to Direct Contractor. Failure to provide such minutes may be reason for withholding payment for the work performed.

(m) Hardhats and appropriate safety clothing and equipment are required on the Project site.

SECTION 16. PROTECTION OF THE WORK

Subcontractor shall effectually secure and protect the Work done hereunder and assumes full responsibility and risk of all loss or damage to its Work, material, or equipment until final acceptance by Architect, Owner and Direct Contractor. Subcontractor further agrees to provide such protection as necessary to protect the Work and the workmen of Direct Contractor, Owner and other subcontractors from its operations.

Subcontractor shall be liable for any loss or damage to work in place or to any equipment and materials on the job site caused by it or its agents, employees or guests.

SECTION 17. ALTERNATIVE DISPUTE RESOLUTION

Any dispute resolution procedure in the Contract Documents shall be deemed incorporated in this Agreement, and shall apply to any disputes arising hereunder that involve the Direct Contractor or Owner, including, without limitation, "pass through" claims relating to Subcontractor or the Work. Subcontractor shall cooperate in such procedures and shall participate in them when requested. Any claims not involving the Direct Contractor or Owner may be resolved, at Direct Contractor's sole option, through binding arbitration administered by a provider to be determined by Direct Contractor, under Judicial Arbitration and Mediation Service or American Arbitration Association Construction Industry Rules in effect as of the date of any arbitration demand made by Direct Contractor or Subcontractor.

Prior to the filing of any lawsuit or demand for arbitration, the parties shall meet informally to attempt to resolve the dispute and, if requested by Direct Contractor, shall participate in non-binding mediation, with each party to bear its own fees and costs.

The award rendered by the arbitrator(s) shall be final and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction.

Notwithstanding any dispute, and to the greatest extent permitted by law, Subcontractor agrees to continue with its performance of the Work and maintain Direct Contractor's schedule pending resolution of any and all disputes, including disputes regarding payment or whether work is within Subcontractor's scope. The foregoing sentence constitutes an advance waiver by Subcontractor, to the greatest extent permitted by law, of any actual or alleged right to stop work, rescind, or abandon the Project.

Subcontractor, and its subcontractors and suppliers (regardless of tier), agree upon request by Direct Contractor to join in and be bound by proceedings involving Direct Contractor, including those involving Owner or other parties. It shall be the responsibility of Subcontractor to prepare Direct Contractor's case, to the extent the proceedings are related to this Agreement.

Nothing herein shall be deemed to waive rights or remedies that by law may not be waived.

SECTION 18. WAIVER OF ATTORNEY'S FEES

Notwithstanding any other provision of this Agreement, the Contract Documents or applicable law, neither Subcontractor nor Direct Contractor shall be permitted to recover attorney's fees or costs in any dispute or litigation and Subcontractor expressly waives the right to recover attorney's fees and costs from Direct Contractor, in any lien foreclosure action relating to the Work, and from Direct Contractor's sureties. This waiver of the right to fees and costs, to the extent permitted by law, shall be effective as to statutory rights such as those relating to lien or bond claims. This provision shall not limit, impair or waive Direct Contractor's rights to be defended by, to be indemnified by, to be held harmless by, to receive contribution from, and to receive the benefits of insurance furnished by Subcontractor or any other persons, with regard to attorney's fees, expert costs and other expenses.

SECTION 19. INDEPENDENT CONTRACTOR; TAXES

Subcontractor is an independent contractor and shall, at its sole cost and expense, and without increase in the Contract Price: (1) comply with all laws, rules, ordinances and regulations of all governing bodies having jurisdiction over the Work; (2) obtain all necessary permits, registrations and licenses for the Work; and (3) pay all manufacturers' taxes, sales taxes, use taxes, processing taxes, and all federal and state taxes, insurance and contributions for social security and unemployment which are measured by wages, salaries, or other remunerations paid to Subcontractor's employees, whether levied under existing or subsequently enacted laws, rules or regulations. Subcontractor upon request shall furnish evidence satisfactory to Direct Contractor that any or all of the foregoing obligations have been fulfilled.

SECTION 20. EQUAL OPPORTUNITY / AFFIRMATIVE ACTION

- (a) If the Direct Contract contains any provision which prohibits discrimination on the basis of race, color, religion, sex, or national origin, hereinafter referred to as Equal Opportunity, or if any law, regulation or order has any application thereto and is applicable to this Subcontract, then Subcontractor hereby agrees to comply with such provision, law, regulation or order.
- (b) Subcontractor hereby acknowledges that Direct Contractor is an Equal Opportunity Employer / Affirmative Action, and is bound by the clauses and conditions identified in Executive order 11246, as amended by, the Vietnam Era Veterans Readjustment Assistance Act of 1974, as amended, 38 USC 4212, and Section 503 of the Rehabilitation Act of 1973, as amended, and their implementing regulations and which by this clause are incorporated herein.

SECTION 21. ASSIGNMENT

Without first giving written notice and then obtaining Direct Contractor's written consent, Subcontractor shall not assign, hypothecate, transfer or subcontract: (1) any portion or part of the Work required or the obligations hereunder; (2) payments to Subcontractor; or (3) any cause of action related to this Agreement. Subcontractor acknowledges and stipulates that its performance constitutes a unique and personal obligation. Any assignment, hypothecation, transfer, or subcontracting by Subcontractor without Direct Contractor's written consent shall be void and invalid, notwithstanding actual or constructive knowledge by Direct Contractor of the purported assignment, hypothecation, transfer or subcontracting.

SECTION 22. PRIOR UNDERSTANDING OR REPRESENTATIONS

The Direct Contractor assumes no responsibility for any understanding or representations made by any of its directors, officers, employees, or agents prior to the execution of this Agreement, unless such understanding or representations by Direct Contractor are expressly stated in this Agreement. The terms and conditions of this Agreement shall take precedence over any conflicting conditions or statements.

SECTION 23. ADDITIONAL PROVISIONS

Layout: Direct Contractor shall establish principal axis lines and levels, and Subcontractor shall lay out and shall be strictly responsible for the accuracy of Subcontractor's Work. Subcontractor shall exercise prudence so that actual final conditions and details shall result in perfect alignment of finished surfaces.

Provisions for Inspections: Subcontractor at all times shall furnish to Direct Contractor, Owner, and any representatives of them, safe and ample facilities for inspecting materials and Work at the site of construction, shops, factories, yards or any other places of business of Subcontractor, its subcontractors or suppliers, wherever materials under this Agreement may be in the course of preparation, processing, manufacture, painting or treatment. Subcontractor shall furnish to Direct Contractor, as often as Direct Contractor requires, full reports of the progress of the Work at any place materials may be in the course of construction, treatment or manufacture. Such reports shall show the progress of such construction, treatment, and manufacture in such detail as may be required by Direct Contractor, including but not limited to, any plans, drawings, or diagrams in the course of preparation.



C O N S T R U C T I O N

DOCUMENTS TO BE RETURNED WITH EXECUTED SUBCONTRACT AGREEMENT

The following list is a summary of possible documents required to be returned with the executed Subcontract Agreement. This summary is for convenience of the Subcontractor and is not an exhaustive list of potentially required and/or requested documents by the Direct Contractor and Owner.

1. Certificates of Liability Insurance
2. Certificates of Workers Compensation Insurance
3. Certificates of Commercial Auto Insurance
4. Federal ID number or Social Security Number. This is required under Section 6041A of the Internal Revenue Code.
5. Submittals as required by the Plans and Specifications. Please provide us with a digital copy and hardcopies as required by the Contract Documents.
6. Breakdown of your Subcontract Price. This breakdown will serve as the basis for progress payments.
7. Safety Documentation:
 - a) Sample of Subcontractor's Safety Toolbox Meeting.
 - b) Company Health, Safety and Environmental (HSE) program** to be used during this project. Please refer to SECTION 15 of the Subcontract Agreement.
 - c) Copy of company IIPP if you employ more than 10 employees. If you have less than 10 employees please sign the attached sheet (Subcontractor Use of GSE IIPP)
8. Copy of your contractor's license & W9.
9. Payment and Performance Bonds (If requested)

INSURANCE REQUIREMENTS

Subcontractor shall, at its expense, procure and maintain insurance on all of its operations, with companies acceptable to Direct Contractor, as follows:

Workers' Compensation and Employer's Liability Insurance. Workers' Compensation insurance shall be provided as required by any applicable law or regulation. Employer's Liability insurance shall be provided in amounts not less than:

- \$1,000,000 each accident for bodily injury by accident
- \$1,000,000 policy limit for bodily injury by disease
- \$1,000,000 each employee for bodily injury by disease

If there is an exposure of injury to Subcontractor's employees under the U.S. Longshoreman and Harbor Workers' Compensation Act, the Jones Act or under laws, regulations, or statutes applicable to maritime employees, coverage shall be included for such injuries or claims.

A waiver of subrogation endorsement must be obtained and provided, and the following coverages must be noted on any evidence of insurance: workers' compensation -statutory; employer's liability; excess liability (to the extent required by Owner or the Contract Documents). Renewal certificates shall be provided at the end of the policy period.

General Liability Insurance. Subcontractor shall carry primary Commercial General Liability insurance covering all operations by or on behalf of Subcontractor providing insurance for bodily injury and property damage liability for the limits of liability indicated below and including, but not limited to, coverage for:

- (1) premises and operations;
- (2) products and completed operations will be maintained for three years following project completion;
- (3) contractual liability insuring tort obligations assumed by Subcontractor in this Contract;
- (4) broad form property damage (including completed operations);
- (5) explosion, collapse and underground hazards (including subsidence and any other earth movement); and
- (6) personal injury liability.

The limits of liability shall be not less than the amounts required of Subcontractor under the Contract Documents, but in no event less than:

- \$1,000,000 each occurrence (combined single limit for bodily injury and property damage);
- \$1,000,000 for personal injury liability;
- \$2,000,000 aggregate for products-completed operations;

\$2,000,000 general aggregate.

The general aggregate limit shall apply separately to Subcontractor's work under this Contract. If either defense costs are included in the General Aggregate limit or if the General Aggregate limit does not apply separately to this project, then the required General Aggregate limit is to be \$5,000,000.

Direct Contractor, its officers, directors and employees, and Owner shall be named as additional insureds under the Commercial General Liability policy and Excess Liability policy and such insurance afforded the additional insureds shall apply as primary insurance. Any other insurance maintained by Direct Contractor or Owner shall not be called upon to contribute with this insurance.

Coverage for the Direct Contractor, its officers, directors and employees and the Owner as additional insureds shall be provided by an endorsement providing coverage at least as broad as Additional Insured (Form B) endorsement form CG 2010 1185 as published by the Insurance Services Office (ISO) (or equivalent). Coverage for additional insureds must include all of the coverages required under items 1-6 above, including products/completed operations coverage for the additional insureds. Additional insured endorsement will be provided for three years following project completion.

Subcontractor on behalf of itself and its insurers waives all rights against Direct Contractor and any construction manager, including subrogation rights, for loss, liability, costs, expense or damage to the extent such loss or damage is covered by insurance.

Claims Made/Self Insurance Provisions. Subcontractor shall not provide general liability insurance under any Claims Made General Liability form without the express prior written consent of Direct Contractor. Any self-insurance program providing coverage in excess of \$25,000 per occurrence requires the prior written consent of Direct Contractor.

Automobile Liability Insurance. Subcontractor shall carry automobile liability insurance, including coverage for all owned, hired, and non-owned automobiles. The limits of liability shall be not less than \$1,000,000 combined single limit each accident for bodily injury and property damage. Coverage shall not be provided on a "modified occurrence" or a "claims made" basis. Coverage shall be provided on Accord (01/95 or later). Direct Contractor, its officers, directors and employees, and Owner shall be named as additional insureds under the policies required by this paragraph.

Additional Requirements. All insurance under this provision (including, but not limited to, general liability, automobile liability, and workers' compensation and employer's liability insurance, shall be provided by a Licensed or Authorized carrier in the State in which the work is being completed with an A.M. Best's Rating of A- or better, financial capacity VII or greater or as approved by Direct Contractor. General liability insurance shall be written on a form at least as broad as ISO occurrence form CG 0001; Automobile Liability Insurance shall be provided pursuant to a coverage form at least as broad as ISO form CA 0001. Direct Contractor reserves the right, in its sole and subjective discretion, to reject an insurer and require Subcontractor to obtain policies from another insurer.

Certificates of insurance, as evidence of the insurance required by this Contract and including the required "additional insured" endorsement(s) shall be furnished by Subcontractor to Direct Contractor prior to the time that Subcontractor first performs any work in connection with the Project or enters into this Agreement, whichever is earlier. Certificates shall set forth deductible amounts applicable to each policy and all exclusions or limitations not set forth in ISO Commercial General Liability Form CG 00

01. The Direct Contractor may allow deductible provisions if Subcontractor is willing to increase retentions accordingly. Standard ISO Form CG 0001 exclusions will also be allowed. Allowance of any additional exclusions or coverage limiting endorsements is at the discretion of the Direct Contractor and Subcontractor's bid shall be subject to upward adjustment to compensate for the existence of such exclusions.

Subcontractor's insurance and additional insured coverage shall not include the following exclusions or provisions: cross-suits and/or cross-insureds exclusion of coverage, mold/water damage/earth movement exclusions, requirements by the insurer that subcontractors or suppliers maintain insurance or agree to defend or indemnify Direct Contractor or owner. Subcontractor shall cause its policies to be amended or endorsed to remove any such exclusions, provisions, or limitations.

Notation on an "Acord" form is NOT acceptable as evidence of compliance with requirements, including without limitation, requirements with respect to additional insureds, notice of cancellation, completed operations, etc.

Regardless of the allowance of exclusions, coverage limitations or deductibles by the Subcontractor, Subcontractor shall be responsible for any deductible amount or any loss arising out of coverage denials by its insurance carrier(s). Certificates of insurance shall provide that there will be no cancellation or reduction of coverage without first giving thirty (30) days prior written notice to Direct Contractor. Any acceptance of insurance certificates by Direct Contractor shall in no way limit or relieve Subcontractor of its duties and responsibilities under this Agreement, including the duty to defend, indemnify, and hold harmless Owner.

Subcontractor shall take such steps as are necessary to assure Subcontractor's compliance with its obligations. Should any insurance policy lapse or be cancelled during the contract period, Subcontractor shall, prior to the effective expiration or cancellation date, furnish the Direct Contractor with evidence of renewal or replacement of the policy. Failure to continuously satisfy insurance requirements as herein provided is a material breach of contract. In the event Subcontractor fails to maintain any insurance coverage required, Direct Contractor may, but is not required to, maintain such coverage and charge the expense to Subcontractor or terminate this contract.

Any acceptance of insurance certificates by Direct Contractor shall in no way limit or relieve Subcontractor of its duties and responsibilities under this Contract including the duty to indemnify, defend and hold harmless Direct Contractor and other persons as set forth in the Contract Documents.

No work shall be performed by Subcontractor at the project site until certificates and endorsements have been furnished and approved. Payment may be withheld, at the option of the Direct Contractor, until required coverage has been obtained, and certificates and endorsements have been furnished, or if upon receipt of a cancellation notice on a policy, until withdrawal of the notice or the reinstatement of the cancelled policy.

Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Subcontractor for liability in excess of such coverage nor shall it preclude the Direct Contractor from taking such other actions as is available to it under any other provision of the contract or law. If higher limits or other forms of insurance are required in the Contract Documents, Subcontractor will comply with such requirements.

Additional insured endorsements shall be obtained and furnished to Direct Contractor up to and through the end of the limitations periods under Code of Civil Procedure Section 337.15, and shall include all coverage required hereunder, including completed operations coverage. Failure by Direct Contractor to request such endorsements or to give notice of their not having been filed shall not waive this requirement.

Subcontractor shall not provide any liability coverage under a "wasting" policy or other form of policy that reduces the amount of coverage, in whole or in part, by amounts expended on defense of claims.

The following additional requirements shall also be satisfied:

- (a) **Hazardous Materials.** If Subcontractor and/or its subcontractors or suppliers, regardless of tier, perform remediation of hazardous materials or if their operations create an exposure to hazardous materials as those terms are defined in federal, state or local law, Subcontractor and its subcontractors and suppliers must obtain a "Contractor's Pollution Liability" policy with limits not less than \$1,000,000 per occurrence and not less than \$2,000,000 aggregate for Bodily Injury, Personal Injury and Property Damage, naming Direct Contractor as an additional insured. If Subcontractor or its subcontractors or suppliers haul hazardous material (including, without limitation, waste), the policy must extend pollution coverage to the transportation of hazardous materials or pollutants by waste hauling vehicles. If Subcontractor is subject to the Motor Carrier Act of 1980, the Motor Carrier Act endorsement MCS-90 must be obtained and attached to the policy.
- (b) **Professional Liability.** If Subcontractor (or its subcontractors or suppliers, regardless of tier) performs any design/build work or services, or any other services of a professional nature, such as those requiring an engineering or architectural license, it shall obtain a Professional Liability Insurance Policy. Design/build work includes, without limitation, design/build work with respect to mechanical, electrical, structural, plumbing and fire sprinkler systems. Professional liability insurance shall be for a minimum of \$1 million, or such greater amount as Direct Contractor may require. Evidence of coverage in the form of a Certificate of Insurance shall be provided prior to the start of the project. Subcontractor shall obtain coverage for a minimum of three years following completion of the project, either through continued purchase of policies for such years or through purchase of an extended reporting period. If Owner or Direct Contractor elects to purchase a project design policy, Subcontractor's policy shall be endorsed to indicate that Subcontractor's policy shall provide coverage once the project design policy has been exhausted.
- (c) **Riggers Liability.** Should Subcontractor's work involve the moving, lifting, lowering, rigging, or hoisting of property or equipment, Subcontractor shall carry Rigger's Liability Insurance to insure against physical loss or damage to the property or equipment.
- (d) **Cargo Insurance (Required for Truckers).** If Subcontractor provides trucking or similar transportation services, it shall obtain and maintain all risk coverage including shift of load and unidentified trailers. Limit should be no less than \$250,000 with a \$2,500 deductible.
- (e) **Equipment and Property Coverage.** Subcontractor shall procure and maintain at its own expense property and equipment insurance for Subcontractor's tools, equipment, temporary structures, work in progress, work in transit and/or in temporary storage, as well as those of its lower tier subcontractors and suppliers. If builder's risk insurance is not provided by Owner or Direct

Contractor, Subcontractor shall purchase and maintain installation floater coverage written to cover all risks of physical loss except those specifically excluded in the policy, and shall insure at least against the perils of fire and extended coverage, theft, vandalism, malicious mischief, and collapse. This insurance shall be written in an amount to provide full protection for Subcontractor's work and equipment. This insurance shall apply on a replacement cost basis. Any deductible shall be the full responsibility of Subcontractor. If builder's risk insurance purchased by Owner(s) or Direct Contractor provides coverage for Subcontractor for loss or damage to Subcontractor's work, Subcontractor shall be responsible for the insurance policy deductible amount applicable to damage to Subcontractor's work and/or damage to other work caused by Subcontractor.

- (h) **Waiver of Subrogation.** Subcontractor waives all rights against Direct Contractor and any construction manager for loss, liability, costs, expense or damage to the extent reimbursed by any insurance applicable to the work, except such rights as they may have to the proceeds of such insurance. If any applicable policies of insurance referred to in this Section require an endorsement or consent of the insurance company to provide for continued coverage where there is a waiver of subrogation, the owners of such policies will cause them to be so endorsed or obtain such consent.
- (i) **Requirements for Sub-subcontractors, Vendors, and Suppliers.** Subcontractor shall ensure that all tiers of its subcontractors, vendors and suppliers shall maintain insurance in like form and amounts, shall comply with the additional insured requirements as set forth above, shall waive subrogation as set forth above, shall otherwise comply with all requirements of this Section 8, and shall provide Direct Contractor with evidence of insurance prior to commencing work.

SUBCONTRACTOR INVOICING INSTRUCTIONS

To ensure prompt processing of Subcontractor progress payments, please be sure the following items are completed with each payment application:

1. Submit copies of Conditional waivers for Subcontractor and Subcontractors subs and/or suppliers (*Joint checks will be processed on waivers from Subcontractors subs/suppliers*)
2. Submit Unconditional waiver for previous billing for Subcontractor and Subcontractors subs and/or suppliers
3. Submit your invoice, schedule of values and waivers via e-mail to:

Joeti Klein – Project Manager at jklein@gseconstruction.com

Karla Brower – Project Administrator at kbrower@gseconstruction.com

4. Please provide email address of person who will be submitting the monthly invoice.
5. Billings should be received no later than the 25th of each month to ensure adequate time for GSE to review and incorporate in our Owner monthly billing.



C O N S T R U C T I O N

SUBCONTRACTOR USE OF GSE IIPP

PROJECT NAME:

GSE PROJECT NUMBER:

SUBCONTRACTOR:

I, (SUBCONTRACTOR) _____, do NOT have an Injury & Illness Prevention Plan (IIPP) due to the fact that I have less than TEN employees for this project. I therefore agree to:

- Use GSE's IIPP plan

AND

- Meet with GSE jobsite superintendent and/or GSE management to review the GSE IIPP plan

Subcontractor will thoroughly adhere to GSE's IIPP for the duration of this project unless subcontractor presents their own IIPP.

SUB REP & TITLE: _____

SIGNATURE: _____

DATE: _____



Contact Information

Sub/Vendor Name:

Federal Tax Identification Number (FEIN #):

PWCR #:

Billing Contact (name, email,
address, phone number):

Certified Payroll Contact (name,
email address, phone number)

Submittal Contact (name,
email, phone number):

Field Contact (name, email,
phone number):

SECTION 03 11 00

CONCRETE FORMWORK

PART 1 - GENERAL



1.01 SCOPE OF WORK

- A. The scope of work for this section includes furnishing, installing and removing formwork for cast-in-place concrete, including shoring and form supports, and installation of embedded items.



1.02 RELATED SECTIONS

- A. Section 31 20 00– Earth Moving
- B. Section 03 20 00 - Concrete Reinforcement
- C. Section 03 30 00 - Cast-in-Place Concrete



1.03 REFERENCES

- A. ACI 347 - Earthwork
- B. ACI 301 - Standard Specifications for Structural Concrete
- C. ACI 318 - Building Code Requirements for Structural Concrete
- D. PS-1 -83 - U.S. Department of Commerce, U.S. Product Standards for Construction and Industrial Plywood

1.04 SUBMITTALS

Future Submittal

- A. Submit shop drawings and product data in accordance with Section 01 33 00. The design and engineering of formwork as well as its construction shall be the complete responsibility of the Contractor. City Representative's review of forms and/or drawings in no way relieves the Contractor of his/her responsibility for adequately designing, constructing, and maintaining the forms so that they will function properly.

Future Submittal

- B. Shop Drawings: Indicate locations of construction joints, locations and sizes of openings and blockouts, and identify the following items: materials, bracing, shoring and reshoring, and arrangement of ties and other accessories.



- C. Product Data: Provide manufacturers' data and installation requirements for form materials, form coatings, form ties and other accessories.



1.05 QUALITY CONTROL

- A. Design formwork under direct supervision of a professional civil or structural engineer experienced in design of this work and licensed in the State of California.
- B. Allowable tolerances shall be in accordance with requirements of ACI 347 for Class A surfaces, unless otherwise specified or noted on Drawings.
- C. Maintain one copy of ACI 347 and ACI 301 on site.
- D. Conform to requirements of the Division of Industrial Safety, the State of California, and all other codes and regulations.

By Others

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, protect, and handle products in accordance with manufacturer's instruction.
- B. Store materials in a manner that will prevent any damage or deterioration and allow easy access for inspection and identification of each item.

PART 2 - PRODUCTS

2.01 FORM MATERIALS



- A. General: Forms shall be constructed of sound material, which shall be straight, rigid, mortar-tight, and of the correct shape and dimensions. The inside surfaces of forms shall be cleaned of all dirt, mortar, and foreign materials.



- B. Form Materials for Exposed Surfaces: APA grade-stamped "B-B plyform, Class 1, Exterior" Douglas fir plywood; minimum 3/4 inch thick; each piece grade marked; clean, smooth, uniform in size and free of raised grain, torn surfaces, worn edges, patches or other defects; no mill oiling permitted.



- C. Form Materials for Unexposed Surfaces: Made of wood, metal, or other acceptable material. Wood forms shall be constructed of sound lumber or plywood of suitable dimensions, free from knotholes and loose knots; plywood shall be sanded smooth and fitted with tight joints between panels. Metal forms shall be of an acceptable type for the class of work involved and of the thickness and design required for rigid construction.

N/A

- D. Curved Surfaces: Form with metal, plywood, or adequately supported, surfaced and matched Douglas fir boards which are not more than 4-inches wide.

N/A

E. Styrofoam: Construction Grade.

2.02 FORMWORK ACCESSORIES



A. Form Ties: Metal, removable to a depth of at least 1½ inches below the surface of the concrete. At locations of each removal, a uniform and circular hole shall be made and patched. Ties shall be of sufficient strength to prevent the spreading of the forms during concrete placement. The use of wire ties will not be permitted.



B. Form Coatings: Use an approved non-staining coating which will permit the ready release of forms and which will not affect the application of applied finishes. Form coatings containing mineral oils or petroleum solvents such as paraffin or other non-drying materials will not be permitted. Use specially formulated coatings for metal forms to prevent rust stains on concrete.



C. Chamfer Strips: Except as noted on Drawings and at flush joints between concrete and other construction, provide 3/4 inch triangular wood or plastic strips. Place and secure strips in forms at external corners.



D. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required; of strength and character to maintain formwork in place while placing concrete.



E. All other materials not specifically described, but required for proper completion of the concrete formwork, shall be as selected by the Contractor and subjected to approval by the City Representative.

By Others

PART 3 - EXECUTION

3.01 PREPARATION

A. Contractor shall conform to the considerations and recommendations in ACI 318, Chapter 6.

B. Vertical and Horizontal Controls: Establish and maintain necessary benchmarks, lines, or controls throughout construction.

C. Obtain necessary information and provide for openings, sleeves,

chases, pipes, recesses, nailers, anchors, ties, inserts, and similar embedded items. Coordinate with concrete and other related work for requirements governing embedment and sleeving of pipes and conduit.

- D. Obtain approval from City Representative before framing openings not shown on Structural Drawings.