# PROJECT MANUAL

March 5, 2025

# 10TH & FRONT GARAGE
# STRUCTURAL REPAIRS – PHASE 3

## BIDS DUE: March 26, 2025 3:00 P.M. local time

OWNER'S REPRESENTATIVES / PROJECT CONSULTANTS

---


**OWNER'S REPRESENTATIVE**
AARON NELSON, PARKING & FACILITIES MGR
CAPITAL CITY DEVELOPMENT CORP.
121 N. 9TH STREET, SUITE 501
BOISE, IDAHO 83702
208-384-4264

**PROJECT ENGINEER**
ERIC BODENSTAB, PE
DESMAN, INC.
7900 EAST UNION AVENUE, SUITE 925
DENVER, CO 80237
303-740-1700

**OWNER'S CONTRACTS SPECIALIST**
RYAN STRONG, CONTRACTS SPECIALIST - PARALEGAL
CAPITAL CITY DEVELOPMENT CORP.
121 N. 9TH STREET, SUITE 501
BOISE, IDAHO 83702
208-384-4264

**SECTION 00 01 10 - TABLE OF CONTENTS**

CAPITAL CITY DEVELOPMENT CORPORATION
10TH & FRONT STRUCTURAL REPAIRS – PHASE 3
ENGINEERS PROJECT NUMBER: 60-24113-2

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**



**DIVISION 01 – GENERAL REQUIREMENTS**



**DIVISION 02 – EXISTING CONDITIONS**



**DIVISION 03 – CONCRETE**

**DIVISION 07 – THERMAL AND MOISTURE PROTECTION**



**DRAWINGS – CCDC 10TH & FRONT STREET PARKING GARAGE PHASE 3 STRUCTURAL CONCRETE REPAIRS – Plans and Drawings by Desman dated February 26, 2025. Project No: 60-24113-2**

**SECTION 00 11 16 INVITATION TO BID**

**March 5, 2025**

Capital City Development Corporation (CCDC) invites submission of sealed bids for the **10TH & FRONT STRUCTURAL REPAIRS – PHASE 3** project, in accordance with the formal bid process outlined in Idaho Code § 67-2805(2)(a). A Public Works Contractors License issued by the State of Idaho is required to bid on this work.

In accordance with the plans and specifications, the work shall consist of structural repairs to concrete in the 10th and Front Street Garage.

Bids will be prepared per the specifications detailed within the Project Manual. The Project Manual and the Drawings shall be provided electronically.

Bids must be delivered **electronically** prior to 3:00 pm, **March 26, 2025,** at this email address: bids@ccdcboise.com. A public bid opening will be held live via ZOOM. Following the Bid Opening, the bid results will be posted on the CCDC website.

CCDC reserves the right to reject any and all proposals, to waive any irregularities in the proposals received, and to accept the proposal that is in the best interest of CCDC. The issuance of the Invitation to Bid and the receipt and evaluation of sealed bids does not obligate CCDC to award a contract. CCDC will pay no costs incurred by Bidders in responding to this Invitation to Bid. CCDC may in its discretion cancel this process at any time prior to execution of a contract without liability.

A **Pre-Bid Meeting** will be held at 2:00 p.m. on March 13, 2025, at the CCDC office, 121 N 9th Street, Suite 501, Boise. A Site Tour will follow. CCDC strongly recommends attendance by the Bidders.

CCDC appreciates your interest in meeting the needs of the agency and the citizens of Boise.

Ryan Strong

Ryan Strong | Contracts Specialist - Paralegal

CAPITAL CITY DEVELOPMENT CORP

END OF SECTION 00 11 16

## SECTION 00 21 13 INSTRUCTIONS TO BIDDERS

### 1. BID SUBMISSION

Please follow these instructions for submitting a sealed bid.

**DUE DATE: March 26, 2025** no later than 3:00 p.m. local time

**a. Submit Bid by Email**
The bid must be submitted electronically by email to: bids@ccdcboise.com
Please include this subject line on the email:

**"BID SUBMITTAL: 10th & Front Structural Repairs – Phase 3"**

All required bid submittal documents must be ***signed and dated*** and must be submitted via email either in one PDF or a separate PDF of each required document. Late or incomplete submittals will not be accepted; CCDC takes no responsibility for bids received after the deadline or incomplete in any way. Bidder assumes full responsibility for the timely submittal of all bid documents via the email process.

Bidder assumes full responsibility for the timely delivery of its bid to CCDC.

The Bidder will be responsible for all costs (including site visits where needed) incurred in preparing or responding to this bid invitation. All materials and documents submitted in response to this bid invitation become the property of CCDC and will not be returned.

**b. Attend the Live Bid Opening**
The Public Bid Opening will be held live via ZOOM on **March 26, 2025,** at 3:00 p.m. local time. Attendance is encouraged but not mandatory. Please log on to Zoom and join the meeting by entering the Meeting ID shown below.

Join Zoom Meeting
https://ccdcboise.zoom.us/j/88109370608?pwd=r4BmSCVpjp4YW4Hebb0UzVbppXHOBp.1
Meeting ID: 881 0937 0608
Passcode: 0l691s
One tap mobile
+16469313860,,88109370608# US
+19292056099,,88109370608# US (New York)

### 2. GENERAL CONDITIONS

**2.1 Intent of Bid/Proposal**
It is the intent of this Invitation to Bid to define requirements in sufficient detail to secure comparable Bids. Bids shall be in accordance with Bid document requirements. Bids not conforming to the requested format or not in compliance with the specifications will be considered non-responsive.

CCDC reserves the right to act in the public best interest and in furtherance of the purposes of the Idaho Code Title 50, Chapter 20 (Idaho Urban Renewal Law) and Idaho Code Title 67,

Chapter 28 (Purchasing by Political Subdivisions). CCDC reserves the right to waive any formalities or defects as to form, procedure, or content with respect to its Bid Invitation and any irregularities in the Bids received, to request additional data and information from any and all Bidders, to reject any submissions based on real or apparent conflict of interest, to reject any submissions containing inaccurate or misleading information, and to accept the proposal that is in the best interest of CCDC. The issuance of this Bid Invitation and the receipt and evaluation of electronic bids does not obligate CCDC to award a contract. CCDC may in its discretion cancel this process at any time prior to execution of a contract without liability.

**2.2 Public Records**

CCDC is a public agency. All documents in its possession are public records subject to disclosure under the Idaho Public Records Act, Title 74, Chapter 1, Idaho Code, and will be available for inspection and copying by any person.

If any Respondent claims any part of its submission is exempt from disclosure under the Idaho Public Records Act, Respondent must: A.) Indicate by marking the pertinent document "CONFIDENTIAL"; and B.) Include the specific basis for the position that it be treated as exempt from disclosure. Marking the entire submission as "Confidential" is not in accordance with the Idaho Public Records Act and will not be honored. CCDC, to the extent allowed by law and in accordance with these Instructions, will honor a designation of nondisclosure. By claiming material to be exempt from disclosure under the Idaho Public Records Act, Respondent expressly agrees to defend, indemnify, and hold CCDC harmless from any claim or suit arising from CCDC's refusal to disclose such materials. Any questions regarding the applicability of the Public Records Act should be addressed to your own legal counsel prior to submission.

**2.3 Form of Agreement**

Unless otherwise specified in the bid documents, the form of the Contract will be a Standard Agreement and General Conditions Between Owner and Constructor, as modified by CCDC.

**2.4 Performance and Payment Bond**

A performance bond and payment bond are required for this Project, each in an amount of not less than one hundred percent (100%) of the Contract Price. The performance and payment bonds shall be AIA Document A312, 2010 or the most recent Edition, or a standard surety form certified approved to be the same as the AIA A312 form and shall be executed by a surety or sureties reasonably acceptable to CCDC and authorized to do business in the State of Idaho. Bonds must be provided within ten (10) calendar days following receipt of a Notice of Intent to Award.

**2.5 Taxes**

CCDC is exempt from Federal and State taxes and will execute the required exemption certificates for items purchased and used by CCDC. Items purchased by CCDC and used by a contractor are subject to Use Tax. All other taxes are the responsibility of the Contractor and are to be included in the Contractor's Bid pricing.

## 3. SUBMISSION PROCESS

### 3.1 All Forms to be Submitted

Bidders must submit the following completed forms via email to bids@ccdcboise.com by the Bid Due Date and Time. Failure to submit all forms will render any Bid unresponsive and void.

00 41 13 Bid Form
00 43 10 Supplement to Bid Form
00 45 46 Contractor's Affidavit Concerning Taxes

### 3.2 Preparation of Bids

Fill in all blanks. All blank spaces on the Bid Form and Supplement to Bid Form must be filled in by the Bidder. Bidder must submit a bid amount for all alternates, additives, deductives, unit prices, and other prices as indicated on the forms. When submitting pricing on items for which there is no charge, Bidder shall write the words, "no charge," "zero," or "0.00" in the space provided on the Form. If a Bidder fails to submit a bid price for any item or does not fill in all blank spaces on the Forms, the bid may be rejected as non-responsive.

### 3.3 Request for Clarification; Objections to Specifications or Process;

Any Bidder who wishes to request clarifications or object to specifications or bidding procedures outlined in this Invitation to Bid may submit a written notification to Ryan Strong, CCDC Contracts Specialist - Paralegal: rstrong@ccdcboise.com. The notification will state the exact nature of the clarification or protest, describing the location of the protested portion or clause in the Bid/Proposal documents, and explaining why the provision should be struck, added, or altered, and contain suggested corrections. CCDC may deny the objection, modify the Project Manual, and/or reject all or part of the objection. Changes to these specifications will be made by written addendum. Verbal responses will not be binding on CCDC or the Bidder.

| | |
|---|---|
| Deadline for Questions and Clarifications: | 5:00 p.m. March 17, 2025 |
| Deadline for Objections to Specs / Procedures: | 5:00 p.m. March 20, 2025 |

### 3.4 Addenda

In the event it becomes necessary to revise any part of the bid documents, written addenda will be issued. Information given to one bidder will be available to all other bidders if such information is necessary for purposes of submitting a bid or if failure to give such information would be prejudicial to uninformed bidders. Addenda will be made available by way of the CCDC website: www.ccdcboise.com It is the bidder's responsibility to check for addenda prior to submitting a bid. Bidders are required to acknowledge receipt of all addenda in the space provided on the bid proposal form. Failure to do so may result in the bid being declared non-responsive. No addenda will be issued fewer than four (4) business days before the submission deadline unless the deadline is extended.

### 3.5 Time for Submission

Bids must be submitted by the time specified in the Invitation to Bid. Late bids will be rejected.

### 3.6 Bid and Price Guarantee

A submitted Bid must remain open for sixty (60) days.

### 3.7 Bid Modification; Bid Withdrawal
A Bid may be modified or withdrawn by the Bidder prior to the set date and time for the opening of Bids. Bids may not be modified or withdrawn after the bid opening.

### 3.8 Legal Residency Requirement
By submitting a bid, the bidder attests, under penalty of perjury, that he (the bidder) is a United States citizen or legal permanent resident or that it is otherwise lawfully present in the United States pursuant to federal law. Prior to being issued a contract, the bidder will be required to submit proof of lawful presence in the United States in accordance with Idaho Code § 67-7903.

### 3.9 Public Works Contractor's License Requirements
This Project is not financed in whole or in part by federal funds. Bids will be accepted from those Contractors only (prime contractors, subcontractors and/or specialty contractors) who, prior to the bid opening, hold current valid licenses as public works contractors in the State of Idaho. Idaho Code § 54-1902 requires that public works contractors and subcontractors have the appropriate Public Works License for the particular type of construction work involved, and the prime contractor must perform at least 20% of the work under contract. CCDC uses the Idaho Division of Building Safety's (DBS) online license database to verify that Bidders meet all PWC License requirements.

The Contractor will, in the space provided in the Bid Form, provide the names and addresses and Idaho Public Works Contractor's license number of each subcontractor that the Contractor will utilize for the construction, alteration or repair of the public works here involved, as required by Idaho Code § 67-2310. Failure to name subcontractors for plumbing, heating, air-conditioning, and electrical as required will render any Bid submitted by a general Contractor unresponsive and void.

## 4. BID SECURITY
A bid bond is not required.

CCDC reserves the right, on the refusal or failure of the Successful Bidder to execute the CCDC contract or furnish the required proof of insurance and bonds, to award the contract for the Project to the next lowest qualified Bidder.

## 5. SELECTION CRITERIA
Selection will be based on the procurement rules set forth in Idaho Code § 67-2805(2)(a). CCDC has the right to waive or alter submission requirements or to reject any or all submissions, including without limitation, nonconforming, nonresponsive, unbalanced or conditional bids consistent with Idaho law. It is the bidder's responsibility to conform to all applicable federal, state and local statutes or other applicable legal requirements. The information provided herein is intended to assist bidders in meeting applicable requirements but is not exhaustive, and CCDC will not be responsible for any failure by any bidder to meet applicable requirements.

## 6. OBJECTION TO CONTRACT AWARD
If any participating Bidder objects to CCDC's award of the contract for the Project, that Bidder shall respond in writing to the notice of the bid award from CCDC within seven (7) calendar days of the date of transmittal of the notice, stating the express reason(s) that the CCDC's governing board's award decision is in error. Upon receipt of such objection, the CCDC Board of Commissioners shall review the award and determine whether to affirm, modify, or re-bid,

setting forth the reason(s) for its decision. At completion of the review process, CCDC may proceed as it deems to be in the public interest.

END OF SECTION 00 21 13

**SECTION 00 25 13  PRE BID MEETING**

A Pre-Bid Meeting will be held March 13, 2025, at 2:00 p.m. at the CCDC office located at 121 N. 9th Street, Suite 501, Boise, Idaho. A site tour will follow. CCDC strongly recommends attendance by bidders.

END OF SECTION 00 25 13

**SECTION 00 41 13 BID FORM**

# BID FORM

PROJECT: **10TH & FRONT STRUCTURAL REPAIRS – PHASE 3**

THIS BID IS SUBMITTED TO:

Capital City Development Corporation
Attn: 10th & Front Structural Repairs – Phase 3
Via email: bids@ccdcboise.com

1.01 The undersigned Bidder proposes and agrees to enter into a Contract with CCDC in the form included in the Project Manual to perform all the Work as specified or indicated in the Project Manual for the prices indicated in this Bid and in accordance with the other terms and conditions of the Project Manual.

1.02 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. The Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of CCDC.

1.03 Within thirty (30) days from receiving a written notice of acceptance of this Bid, Bidder shall execute the Contract and shall deliver evidence of required insurance coverages and bonds in the amounts required by the Contract.

1.04 In submitting this Bid, Bidder represents, as set forth in the Contract and Project Manual, that:

a. Bidder has examined and understands the Project Manual and the following Addenda:

| Addendum No. | Addendum Date |
|---|---|
| _____ | _____ |
| _____ | _____ |

b. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

c. Bidder is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

d. Bidder has carefully studied: 1.) all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site which have been identified in the Project Manual; and 2.) all reports and drawings of a Hazardous Environmental Condition, if any, which has been identified in the Project Manual.

e. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Project Manual to be employed by Bidder, and safety precautions and programs incident thereto.

f. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Project Manual.

g. Bidder is aware of the general nature of work to be performed by CCDC and others at the Site that relates to the Work as indicated in the Project Manual.

h. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Project Manual, and all additional examinations, investigations, explorations, tests, studies, and data with the Project Manual.

i. Bidder has given CCDC written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovered in the Project Manual, and the written resolution thereof by CCDC is acceptable to Bidder.

j. The Project Manual is generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

k. Bidder is responsible for ascertaining the existence of any addenda and the contents thereto.

1.5 Bidder represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over CCDC.

1.6 Bidder will complete the Work in accordance with the Contract Documents for the lump sum given, which includes all taxes. Unit prices have been computed in accordance with the General Conditions. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Work Item Quantities listed in the Supplement to Bid Form will be based on actual quantities provided, determined as provided in the Contract Documents.

1.7 Bidder agrees that the Work will be substantially completed and fully completed ready for final payment in accordance with General Conditions on or before the dates or within the number of calendar days indicated in the Contract Documents. Bidder accepts the provisions of the Contract as to liquidated damages in the event of failure to complete the Work within the times specified.

1.8 Bidder agrees to comply with Idaho Code § 44-1001 through 44-1006 regarding employment of Idaho residents.

1.9 The following documents are attached to and made a condition of this Bid: 1.) Supplement to Bid Form; and 2.) Contractor's Affidavit Concerning Taxes.

Bidder agrees to include with the Bid the names and addresses and Idaho Public Works Contractor License numbers of the Subcontractors who shall, in the event the Bidder secures the Contract, subcontract the plumbing, heating and air-conditioning work, and electrical work under the general Contract.

1.10 WAIVER & RELEASE: Bidder has read and fully accepts CCDC's discretion and non-liability as stipulated herein, expressly for, but not limited to, CCDC's decision to proceed with a selection process in response to the Invitation to Bid, including the right in its sole discretion and judgment for whatever reason it deems appropriate, at any time unless contrary to applicable state law, to:

a. Modify or suspend any and all aspects of the process seeking a contractor to construct Project.

b. Obtain further information from any person, entity, or group, including, but not limited to, any person, entity, or group responding to CCDC's Bid Invitation (any such person, entity, or group responding is, for convenience, hereinafter referred to as "Bidder"), and to ascertain the depth of Bidder's capability and experience for construction of Project and in any and all other respects to meet with and consult with any Bidder or any other person, entity, or group.

c. Waive any formalities or defects as to form, procedure, or content with respect to its Bid Invitation and any responses by any Bidder thereto.

d. Accept or reject any sealed Bid received in response to the Bid Invitation, including any sealed Bid submitted by the undersigned; or select any one submission over another.

e. Accept or reject all or any part of any materials, plans, drawings, implementation programs, schedules, phrasings and proposals or statements, including, but not limited to, the nature and type of Bid.

Bidder agrees that CCDC shall have no liability whatsoever, of any kind or character, directly or indirectly, by reason of all or any decision made at the discretion of CCDC as identified above.

## SUBCONTRACTORS

Pursuant to Idaho Code § 67-2310, commonly known as the naming law, the names and addresses of subcontractors to whom work will be awarded, subject to approval of CCDC and Architect, are as listed below. If such work is not required, Bidder will indicate "Not Applicable" in the list below. In the event that the general (Trade) contractor intends to self-perform the plumbing, HVAC, or electrical work, the general contractor must be properly licensed by the state of Idaho to perform such work. The general (Trade) contractor shall demonstrate compliance with this requirement by listing the valid contractor's license number for the plumbing, HVAC, or electrical work to be self-performed by the general contractor on the bid form.

**FAILURE TO NAME SUBCONTRACTORS AS REQUIRED BY IDAHO CODE SHALL RENDER ANY BID SUBMITTED NON-RESPONSIVE AND VOID.**

**Plumbing** _____

Address: _____

_____

Public Works License No. _____

Idaho Plumbing Contractors License No. _____

**Heating & Air Conditioning** _____

Address: _____

_____

Public Works License No. _____

Idaho HVAC Contractors License No. _____

**Electrical** _____

Address: _____

_____

Public Works License No. _____

Idaho Electrical Contractors License No. _____

**BASE BID - OFFER**

Bidder agrees to perform all the work for the 10th & Front Structural Repairs -Phase 3 Project as described in the Project Manual, including but not limited to the General Requirements, Technical Specifications and Drawings prepared by Desman, Inc. and dated February 26, 2025, for the Work; and having examined the Project Location and being familiar with all of the conditions surrounding the proposed Work including availability of materials and labor the undersigned hereby proposed to furnish all labor, materials and supplies as specified, including all expenses incurred in bonding, obtaining insurance; mobilization/demobilization, general conditions and to perform the Work in accordance with the Contract Documents within the times set forth therein for the total Lump Sum Amount of:

_____

($_____) Dollars, lawful money of the United States.

[Show amounts in both words and figures; in event of discrepancy, the amount in words shall govern.]

**BID FORM SIGNATURE**

SUBMITTED on _____, 2025.

X_____ _____

SIGNATURE | Idaho Public Works Contractor License No.

_____ _____

Print Name and Title | License Expiration Date

_____ _____

Contractor / Company | Federal Tax ID #

_____ _____

Address | E-mail Address

_____ _____

City, State, Zip | Phone No.

_____ _____

Fax No.

**ATTENTION**: Did you remember your Supplement to Bid Form and Contractor's Affidavit Concerning Taxes? Supplement to Bid Form and Contractor's Affidavit Concerning Taxes are **REQUIRED**.

**IF SUPPLEMENT TO BID FORM, AND CONTRACTOR'S AFFIDAVIT ARE NOT INCLUDED, YOUR BID WILL BE CONSIDERED NON-RESPONSIVE.**

END OF SECTION 00 41 13

**SECTION 00 43 10 SUPPLEMENT TO BID FORM**
**EXECUTE AND SUBMIT WITH BID**

*Note: The Base Bid shall include all of the extended prices of the Work Items listed below.*

All Bidders must provide unit prices for the items listed below. If the actual quantities, as measured by Owner's third party inspector, are above/below those shown below, then the unit price will be used for addition/credit to the Contract amount. These unit prices apply to and shall be the same for Base Bid and any subsequent and approved Change Orders.

| Schedule A: Work Item and Change Order Schedule | | | | | |
|---|---|---|---|---|---|
| **Item No.** | **Work Items (Refer to Sheet G-02 for Description)** | **Unit of Measure** | **Est. Quantity** | **Unit Price ($/Unit)** | **Extension** |
| 1 | 0200 Partial Depth Slab Repair | SF | 6,630 | | |
| 2 | 0250 Sacrificial Anodes | EA | 55 | | |
| 3 | 0300 Full Depth Slab Repair | SF | 150 | | |
| 4 | 0400 Rout and Seal Construction Joints | LF | 3,520 | | |
| 5 | 0500 Supplemental Reinforcement | LBS | 600 | | |
| 6 | 0600 One Shot Waterproof Membrane | SF | 31,400 | | |

SF=square foot, LF=lineal foot, LBS=pounds, EA=each

NOTE: QUANTITIES PROVIDED ARE FOR GUIDANCE ONLY. CONTRACTOR SHALL DETERMINE QUANTITIES ON WHICH TO BASE THE LUMP SUM BID. SEE G-02 FOR SCOPE OF WORK.

SUBMITTED on _____, 2025.

X_____ _____
SIGNATURE — Idaho Public Works Contractor License No.

_____ _____
Print Name and Title — License Expiration Date

_____ _____
Contractor / Company — Federal Tax ID #

_____ _____
Address — E-mail Address

_____ _____
City, State, Zip — Phone No.

_____ _____
Fax No.

END OF SECTION 00 43 10

## SECTION 00 43 25 REQUEST FOR APPROVAL OF COMPARABLE PRODUCTS FORM

**For use during bidding process only.**

TO: _____ DATE: _____

TIME: _____

PROJECT NAME AND LOCATION: **10TH & FRONT STRUCTURAL REPAIRS - PHASE 3**

We hereby submit for your consideration the following product instead of the specified item for the above project:

| SECTION | PARAGRAPH | SPECIFIED ITEM |
|---|---|---|
| _____ | _____ | _____ |

Proposed Comparable Product:

_____

Reason for Request:

_____

Provide the following information either below or as attachments:

A. Include complete information on changes to Drawings and/or Specifications that the proposed comparable product would require for its proper installation. Include complete technical data, including laboratory tests, if applicable.

B. Provide evidence that the proposed product does not require substantive revisions to the Project Manual, that it is consistent with the Project Manual and will produce the indicated results, and that it is compatible with the other portions of the Work.

C. Will the undersigned Bidder or interested individual pay for changes to the Project design, including engineering and detailing costs caused by the requested comparable product? Yes _____ No _____

D. Provide description of differences between comparable product and specified item. Include detailed comparison of significant qualities of proposed product with those named in the Specifications. See Section 01 60 00 for more information.)

E. What effect does comparable product have on other trades?

F. Provide evidence that proposed product provides specified warranty.

G. List similar installations for completed projects. For each project, provide the project name; contact information for key person responsible for project including name, address, telephone number and email address; and names, telephone numbers and email addresses for the owner and project Engineer. Completed projects used as examples shall be accessible to Project Engineer and Owner.

H. Provide Samples, if requested.

I. Quantify the different in product cost, product delivery time and time of installation.

**The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.**

Submitted By: _____

Firm: _____

Address: _____

Telephone: _____ Email: _____

Remarks:

Instructions/Information for Person Completing this Form (continues on following page)

Bidder's request for comparable product approval shall be in writing and shall be accompanied by a completed "Request for Approval of Comparable Product" Form.

1. Requests shall be submitted to the Project Engineer no later than 5:00 p.m., seven (7) days prior to bid due date.
2. Requests that are incomplete will be rejected.
3. Project Engineer shall make the determination whether to allow a comparable product no later than the last day for issuing addenda for project and shall issue an addendum notifying bidders that a comparable product has been approved.
4. Project Engineer and/or Owner may determine, in their sole discretion that there is insufficient information or time to analyze a product given the time allowed for a decision by the Project Engineer.

---

**For Use by Project Engineer:**

□ Recommended □ Recommended at noted By: _____

□ Not recommended □ Received too late Date: _____

---

**For Use by Owner:**

_____ Approved _____ Rejected

Owner's Representative: _____ Date: _____

END OF SECTION 00 43 25

**SECTION 00 45 46 CONTRACTOR'S AFFIDAVIT CONCERNING TAXES**
**MUST EXECUTE AND SUBMIT WITH BID**

# CONTRACTOR'S AFFIDAVIT CONCERNING TAXES

STATE OF _____

COUNTY OF _____

Pursuant to Chapter 15, Title 63, Idaho Code, I the undersigned, being duly sworn, depose and certify that all taxes, excises and license fees due to the State of Idaho and its taxing units, for which I or my property is liable, then due or delinquent, have been paid, or arrangements have been made, before entering into a contract for construction of any public works in the State of Idaho.

_____ X_____
Contractor / Company — Authorized Representative Signature

_____ _____
Address — Print Name and Title

_____ _____
City, State, Zip

Subscribed and sworn to before me this _____ day of _____, 2025.

_____
Notary Public
Residing at: _____
Commission Expires: _____

END OF SECTION 00 45 46

# STANDARD AGREEMENT AND GENERAL CONDITIONS BETWEEN OWNER AND CONSTRUCTOR

## 10TH & FRONT STRUCTURAL REPAIRS – PHASE 3

**($000,000)**

**TABLE OF ARTICLES**

## ARTICLE 1 AGREEMENT

This Agreement is made this ____ day of _____ in the year 2025, by and between the

**OWNER:** Capital City Development Corporation (CCDC)
121 N. 9th Street, Suite 501
Boise, Idaho 83702

and the

**CONSTRUCTOR:** _____

Tax identification number (TIN): _____

Idaho Public Works Contractor License No.: _____

for construction services in connection with the following PROJECT:

**Project Identification: 10TH & FRONT STRUCTURAL REPAIRS – PHASE 3**

Work Area: 10th and Front Parking Garage, 234 S. 10th Street, Boise, Idaho.

Notice to the Parties shall be given at the above addresses.

The Owner's Project Engineer is Desman, Inc., Eric Bodenstab, P.E.

The Owner's Representative is Aaron Nelson, Parking and Facilities Manager

The Parties agree as set forth herein:

## ARTICLE 2 GENERAL PROVISIONS

2.1 RELATIONSHIP OF PARTIES The Parties each agree to proceed with the Project on the basis of mutual trust, good faith, and fair dealing.

2.1.1 The Constructor shall furnish construction administration and management services and use the Constructor's diligent efforts to perform the Work in an expeditious manner consistent with the Contract Documents. The Parties shall each endeavor to promote harmony and cooperation among all Project participants.

2.1.2 The Constructor represents that it is an independent contractor and that in its performance of the Work it shall act as an independent contractor. Owner will have no right to control or direct the details, manner, or means by which Constructor accomplishes the results of the services performed hereunder.

2.1.3 The Constructor has no obligation to work any particular hours or days or any particular number of hours or days. Constructor agrees, however, that its other contracts and services shall not interfere with the performance of its services under this Agreement.

2.1.4 Neither the Constructor nor any of its agents or employees shall act on behalf of or in the name of the Owner except as provided in this Agreement or unless authorized in writing by the Owner's Representative.

2.1.5 The Parties shall perform their obligations with integrity, ensuring at a minimum that each: (a) avoids conflicts of interest and promptly discloses any to the other Party; and (b) warrants that it has not and shall not pay or receive any contingent fees or gratuities to or from the other Party, including its agents, officers, and employees, subcontractors, or others for whom they may be liable, to secure preferential treatment.

2.2 DESIGN PROFESSIONAL Owner's Design Professional is **DESMAN, INC.** The Owner, through its Design Professional, shall provide all design services necessary for the completion of the Work. The Constructor shall not be required to provide professional services which constitute the practice of architecture, landscape architecture, or engineering.

2.2.1 The Owner shall obtain from the Design Professional either a license for Constructor and Subcontractors to use the design documents prepared by the Design Professionals or ownership of the copyrights for such design documents, and shall indemnify and hold harmless the Constructor against any suits or claims of infringement of any copyrights or licenses arising out of the use of the design documents for the Project.

2.3 DEFINITIONS

2.3.1 "Agreement" means this Standard Agreement and General Conditions Between Owner and Constructor, as modified, and exhibits and attachments made part of this agreement upon its execution. For purposes of this Agreement, the terms "Agreement" and "Contract" are equivalent.

2.3.2 "Business Day" means all Days, except weekends and official federal or state holidays where the Project is located.

2.3.3 "Change Order" is a written order signed by the Owner and the Constructor after execution of this Agreement, indicating changes in the scope of the Work, the Contract Price, or Contract Time, including substitutions proposed by the Constructor and accepted by the Owner.

2.3.4 "Contract Documents" consist of this Agreement, the existing Contract Documents listed in Section 14.1, drawings, specifications, addenda issued and acknowledged prior to execution of this Agreement, information furnished by the Owner pursuant to subsection 3.13.4, and modifications issued in accordance with this Agreement.

2.3.5 "Contract Price" is the amount indicated in section 7.1 of this Agreement.

2.3.6 "Contract Time" is the period between the Date of Commencement and Final Completion.

2.3.7 "Constructor" is the person or entity identified in ARTICLE 1 and includes the Constructor's Project Manager, designated by Constructor as having authority to represent, make decisions, and act on behalf of Constructor. For purposes of this Agreement, the terms Constructor and Contractor with the capitalized "C" are equivalent.

2.3.8 "Construction Period" is the period of time between the Date of Commencement stated in the Notice to Proceed and the date of Final Completion stated in the Certificate of Final Completion.

2.3.9 "Cost of the Work" means the costs and discounts specified in section 8.3.2.

2.3.10 “Date of Commencement” is as set forth in section 6.1.

2.3.11 “Day” means a calendar day.

2.3.12 “Defective Work” is any portion of the Work that does not conform with the Contract Documents.

2.3.13 “Design Professional” means the licensed architect or engineer, and its consultants, retained by the Owner to perform design services for the Project.

2.3.14 “Final Completion” occurs on the date when the Constructor’s obligations under this Agreement are complete and accepted by the Owner and final payment becomes due and payable. This date shall be confirmed by a Certificate of Final Completion signed by the Owner and the Constructor.

2.3.15 “Interim Directed Change” is a change to the Work directed by the Owner pursuant to section 8.2.

2.3.16 “Laws” mean federal, state, and local laws, ordinances, codes, rules, and regulations applicable to the Work with which the Constructor must comply that are enacted as of the Agreement date.

2.3.17 “Material Supplier” is a person or entity retained by the Constructor to provide material and equipment for the Work.

2.3.18 “Others” means other contractors/constructors, material suppliers, and persons at the Worksite who are not employed by the Constructor or Subcontractors.

2.3.19 “Overhead” means (a) payroll costs and other compensation of Constructor employees in the Constructor's principal and branch offices; (b) general and administrative expenses of the Constructor's principal and branch offices including charges against the Constructor for delinquent payments; and (c) the Constructor's capital expenses, including interest on capital used for the Work.

2.3.20 “Owner” is the person or entity identified in ARTICLE 1 and includes the Owner's Representative.

2.3.21 “Owner’s Representative” is the individual employed by the Owner who shall be fully acquainted with the Project, shall act as the prime point of contact between Owner and Owner’s Project Engineer, shall provide the Owner’s instructions to Owner’s Project Engineer, and shall have authority to bind the Owner in all matters requiring the Owner's approval, authorization, or written notice.

2.3.22 “Parties” are collectively the Owner and the Constructor.

2.3.23 “Project,” as identified in ARTICLE 1, is the construction, installation, repair or other improvements for which the Constructor is to perform Work under this Agreement. It may also include construction by the Owner or Others.

2.3.24 “Project Engineer” is the individual retained by the Owner to perform day-to-day field observations of the Project on Owner’s behalf and shall be the prime point of contact for Constructor. The Project Engineer shall possess full authority to receive instructions from Owner and to act on those instructions.

2.3.25 “Schedule of the Work” is the document prepared by the Constructor that specifies the dates on which the Constructor plans to begin and complete various parts of the Work, including dates on which information and approvals are required from the Owner.

2.3.26 “Subcontractor” is a person or entity retained by the Constructor as an independent contractor to provide the labor, materials, equipment, or services necessary to complete a specific portion of the Work. The term Subcontractor does not include the Design Professional or Others. All subcontractors shall hold valid Public Works Contractor licenses pursuant to Idaho Code § 54-1902.

2.3.27 “Substantial Completion” of the Work occurs on the date when the Work is sufficiently complete in accordance with the Contract Documents so that the Owner may occupy or utilize the Project, or a designated portion, for the use for which it is intended, without unscheduled disruption. This date shall be confirmed by a Certificate of Substantial Completion signed by the Owner and Constructor.

2.3.28 “Subsubcontractor” is a person or entity who has an agreement with a Subcontractor or another Subsubcontractor to perform a portion of the Subcontractor's Work.

2.3.29 “Terrorism” means a violent act, or an act that is dangerous to human life, property, or infrastructure, that is committed by an individual or individuals and that appears to be part of an effort to coerce a civilian population or to influence the policy or affect the conduct of any government by coercion. Terrorism includes, but is not limited to, any act certified by the United States government as an act of terrorism pursuant to the Terrorism Risk Insurance Act, as amended.

2.3.30 “Work” means the construction and services necessary or incidental to fulfill the Constructor's obligations for the Project in conformance with this Agreement and the other Contract Documents. The Work may refer to the whole Project or only a part of the Project if work is also being performed by the Owner or Others.

2.3.30.1 “Changed Work” means work that is different from the original scope of Work; or work that changes the Contract Price or Contract Time.

2.3.31 “Worksite” means the geographical area of the Project Location as identified in ARTICLE 1 where the Work is to be performed.

## ARTICLE 3 CONSTRUCTOR'S RESPONSIBILITIES

### 3.1 GENERAL RESPONSIBILITIES

3.1.1 The Constructor shall provide all labor, materials, equipment, and services (except those items specifically identified in the Contract Documents as products, equipment, systems or materials that Owner shall provide) necessary to complete the Work, all of which shall be provided in full accord with and reasonably inferable from the Contract Documents.

3.1.2 The Constructor shall be responsible for the supervision and coordination of the Work, including the construction means, methods, techniques, sequences, and procedures utilized, unless the Contract Documents give other specific instructions. In such case, the Constructor shall not be liable to the Owner for damages resulting from compliance with such instructions unless the Constructor recognized and failed to timely report to the Project Engineer any error, inconsistency, omission, or unsafe practice that it discovered in the specified construction means, methods, techniques, sequences, or procedures.

3.1.3 The Constructor shall perform Work only within locations allowed by the Contract Documents, Laws, and applicable permits.

3.2 COOPERATION WITH WORK OF OWNER AND OTHERS

3.2.1 The Owner may perform work at the Worksite directly or by Others. Any agreements with Others to perform construction or operations related to the Project shall include provisions pertaining to insurance, indemnification, waiver of subrogation, consequential damages, coordination, interference, cleanup, and safety that are substantively the same as the corresponding provisions of this Agreement.

3.2.2 If the Owner elects to perform work at the Worksite directly or by Others, the Constructor and the Owner shall coordinate the activities of all forces at the Worksite and agree upon fair and reasonable schedules and operational procedures for Worksite activities. The Owner shall require each separate contractor to cooperate with the Constructor and assist with the coordination of activities and the review of construction schedules and operations. The Contract Price and Contract Time shall be equitably adjusted, as mutually agreed by the Parties, for changes made necessary by the coordination of construction activities, and the Schedule of the Work shall be revised accordingly. The Constructor, the Owner, and Others shall adhere to the revised construction schedule.

3.2.3 With regard to the work of the Owner and Others, the Constructor shall: (a) proceed with the Work in a manner that does not hinder, delay, or interfere with the work of the Owner or Others or cause the work of the Owner or Others to become defective; (b) afford the Owner or Others reasonable access for introduction and storage of their materials and equipment and performance of their activities; and (c) coordinate the Constructor's Work with theirs.

3.2.4 Before proceeding with any portion of the Work affected by the construction or operations of the Owner or Others, the Constructor shall give the Owner prompt written notification of any defects the Constructor discovers in their work which will prevent the proper execution of the Work. The Constructor's obligations in this subsection do not create a responsibility for the work of the Owner or Others, but are for the purpose of facilitating the Work. If the Constructor does not notify the Owner of defects interfering with the performance of the Work, the Constructor acknowledges that the work of the Owner or Others is not defective and is acceptable for the proper execution of the Work. Following receipt of written notice from the Constructor of defects, the Owner shall promptly inform the Constructor what action, if any, the Constructor shall take with regard to the defects.

3.3 RESPONSIBILITY FOR PERFORMANCE

3.3.1 Prior to commencing the Work, the Constructor shall examine and compare the drawings and specifications with information furnished by the Owner that are Contract Documents, relevant field measurements made by the Constructor, and any visible conditions at the Worksite affecting the Work.

3.3.2 Should the Constructor discover any errors, omissions, or inconsistencies in the Contract Documents, the Constructor shall promptly report them to Owner’s Project Engineer and Owner’s Representative. It is recognized, however, that the Constructor is not acting in the capacity of a licensed design professional, and that the Constructor's examination is to facilitate construction and does not create an affirmative responsibility to detect errors, omissions, or inconsistencies or to ascertain compliance with applicable laws, building codes, or regulations. Following receipt of written notice from the Constructor of defects, the Owner shall promptly inform the Constructor what action, if any, the Constructor shall take with regard to the defects.

3.3.3 The Constructor shall have no liability for errors, omissions, or inconsistencies discovered under this section 3.3 unless the Constructor knowingly fails to report a recognized problem to the Owner's Project Engineer and Owner's Representative.

3.3.4 The Constructor may be entitled to additional costs or time because of clarifications or instructions arising out of the Constructor's reports described in this section 3.3.

3.3.5 Nothing in this section 3.3 shall relieve the Constructor of responsibility for its own errors, inconsistencies, and omissions.

3.4 CONSTRUCTION PERSONNEL AND SUPERVISION

3.4.1 The Constructor shall provide competent supervision for the performance of the Work. Before commencing the Work, the Constructor shall notify the Project Engineer and Owner's Representative in writing of the name and qualifications of its proposed Constructor's Project Manager so the Project Engineer and Owner's Representative may review the individual's qualifications. If, for reasonable cause, the Project Engineer and/or Owner's Representative refuses to approve the individual or withdraws its approval after once giving it, the Constructor shall name a different Constructor's Project Manager for the Owner's review. Any disapproved Project Manager shall not perform in that capacity thereafter at the Worksite.

3.4.2 The Constructor shall be responsible to the Owner for acts or omissions of parties or entities performing portions of the Work for or on behalf of the Constructor or any of its Subcontractors.

3.4.3 The Constructor shall permit only qualified persons to perform the Work. The Constructor shall enforce safety procedures, strict discipline, and good order among persons performing the Work. If the Owner determines that a particular person does not follow safety procedures, or is unfit or unskilled for the assigned Work, the Constructor shall immediately reassign the person upon receipt of the Owner's written notice to do so.

3.4.4 CONSTRUCTOR'S PROJECT MANAGER The Constructor's authorized Project Manager is _____. The Constructor's Project Manager shall possess full authority to receive instructions from the Owner directly or through Owner's Project Engineer and to act on those instructions. If the Constructor changes the Constructor's Project Manager or his/her authority, the Constructor shall immediately notify the Project Engineer in writing.

3.5 WORKMANSHIP The Work shall be executed in accordance with the Contract Documents in a workmanlike manner. All materials used in the Work shall be furnished in sufficient quantities to facilitate the proper and expeditious execution of the Work and shall be new except such materials as may be expressly provided in the Contract Documents to be otherwise.

3.6 MATERIALS FURNISHED BY THE OWNER OR OTHERS If the Work includes installation of materials or equipment furnished by the Owner or Others, it shall be the responsibility of the Constructor to examine the items so provided and thereupon handle, store, and install the items, unless otherwise provided in the Contract Documents, with such skill and care as to provide a satisfactory and proper installation. Loss or damage due to acts or omissions of the Constructor shall be the responsibility of the Constructor and may be deducted from any amounts due or to become due the Constructor. Any defects discovered in such materials or equipment shall be reported at once to the Project Engineer. Following receipt of written notice from the Constructor of defects, the Project Engineer shall promptly inform the Constructor what action, if any, the Constructor shall take with regard to the defects.

3.7 TESTS AND INSPECTIONS

3.7.1 The Constructor shall schedule all required tests, approvals, and inspections of the Work or portions thereof at appropriate times so as not to delay the progress of the Work or other work related to the Project. The Constructor shall give proper notice to all required parties of such tests, approvals, and inspections. If feasible, the Project Engineer, Owner's Representative and Others may timely observe the tests at the normal place of testing. Except as provided in subsection 3.7.3 and the Drawings and Specifications, the Owner shall bear all expenses associated with tests, inspections, and approvals required by the Contract Documents, which, unless otherwise agreed to, shall be conducted by an independent testing laboratory or entity retained by the Owner. Unless otherwise required by the Contract Documents, required certificates of testing, approval, or inspection shall be secured by the Constructor and promptly delivered to the Project Engineer, with copies to the Owner's Representative.

3.7.2 If the Owner or appropriate authorities determine that tests, inspections, or approvals in addition to those required by the Contract Documents will be necessary, the Constructor shall arrange for the procedures and give timely notice to the Owner and Others who may observe the procedures. Costs of the additional tests, inspections, or approvals are at the Owner's expense except as provided in subsection 3.7.3.

3.7.3 If the procedures described in the two subsections above indicate that portions of the Work fail to comply with the Contract Documents due to negligence of the Constructor, the Constructor shall be responsible for costs of correction and retesting.

3.8 WARRANTY

3.8.1 The Constructor warrants that all materials and equipment shall be new unless otherwise specified, of good quality, in conformance with the Contract Documents, and free from defective workmanship and materials. At the Owner's request, the Constructor shall furnish satisfactory evidence of the quality and type of materials and equipment furnished. The Constructor further warrants that the Work shall be free from material defects not intrinsic in the design or materials required in the Contract Documents. The Constructor's warranty does not include remedies for defects or damages caused by normal wear and tear during normal usage, use for a purpose for which the Project was not intended, improper or insufficient maintenance, modifications performed by the Owner or Others, or abuse. The Constructor's warranty shall commence on the Date of Substantial Completion of the Work, or of a designated portion.

3.8.2 To the extent products, equipment, systems or materials incorporated in the Work are specified and purchased by the Owner, they shall be covered exclusively by the warranty of the manufacturer. There are no warranties which extend beyond the description on the face of any such warranty.

3.8.3 The Constructor shall obtain from its Subcontractors and Material Suppliers any special or extended warranties required by the Contract Documents. All such warranties shall be listed in an attached exhibit to this Agreement. After that period, the Constructor shall provide reasonable assistance to the Owner in enforcing the obligations of Subcontractors or Material Suppliers for such extended warranties.

3.9 CORRECTION OF WORK WITHIN TWO YEARS

3.9.1 If, prior to Substantial Completion and within two years after the date of Substantial Completion of the Work, any Defective Work is found, the Owner shall promptly notify the Constructor in writing. Unless the Owner provides written acceptance of the condition, the Constructor shall promptly correct the Defective Work at its own cost and time and bear the expense of additional services required for correction of any Defective Work for which it is responsible. If within the two-year correction period the Owner discovers and does not promptly

notify the Constructor or give the Constructor an opportunity to test or correct Defective Work as reasonably requested by the Constructor, the Owner waives the Constructor's obligation to correct that Defective Work as well as the Owner's right to claim a breach of the warranty with respect to that Defective Work.

3.9.2 With respect to any portion of Work first performed after Substantial Completion, the two-year correction period shall be extended by the period of time between Substantial Completion and the actual performance of the later Work. Correction periods shall not be extended by corrective work performed by the Constructor.

3.9.3 If the Constructor fails to correct Defective Work within a reasonable time after receipt of written notice from the Owner prior to final payment, the Owner may correct it in accordance with the Owner's right to carry out the Work. In such case, an appropriate Change Order shall be issued deducting the cost of correcting the Defective Work from payments then or thereafter due the Constructor. If payments then or thereafter due the Constructor are not sufficient to cover such amounts, the Constructor shall pay the difference to the Owner within forty-five (45) days.

3.9.4 The Constructor’s obligations and liability, if any, with respect to any Defective Work discovered after the two-year correction period shall be determined by the Law. If, after the two-year correction period but before the applicable limitation period has expired, the Owner discovers any Work which the Owner considers Defective Work, the Owner shall, unless the Defective Work requires emergency correction, promptly notify the Constructor and allow the Constructor an opportunity to correct the Work if the Constructor elects to do so. If the Constructor elects to correct the Work, it shall provide written notice of such intent within fourteen (14) Days of its receipt of notice from the Owner and shall complete the correction of Work within a mutually agreed timeframe. If the Constructor does not elect to correct the Work, the Owner may have the Work corrected by itself or Others, and, if the Owner intends to seek recovery of those costs from the Constructor, the Owner shall promptly provide the Constructor with an accounting of the correction costs it incurs.

3.9.5 If the Constructor's correction or removal of Defective Work causes damage to or destroys other completed or partially completed Work or existing buildings, the Constructor shall be responsible for the cost of correcting the destroyed or damaged property.

3.9.6 The two-year period for correction of Defective Work does not constitute a limitation period with respect to the enforcement of the Constructor's other obligations under the Contract Documents.

3.9.7 Prior to final payment, at the Owner's option and with the Constructor's agreement, the Owner may elect to accept Defective Work rather than require its removal and correction. In such case, the Contract Price shall be equitably adjusted for any diminution in the value of the Project caused by such Defective Work.

3.10 CORRECTION OF COVERED WORK

3.10.1 On request of the Project Engineer, Work that has been covered without a requirement that it be inspected prior to being covered may be uncovered for the Project Engineer’s and, if desired the Owner's inspection. The Owner shall pay for the costs of uncovering and replacement if the Work proves to be in conformance with the Contract Documents, or if the defective condition was caused by the Owner or Others. If the uncovered Work proves to be defective, the Constructor shall pay the costs of uncovering and replacement.

3.10.2 If, contrary to specific requirements in the Contract Documents or contrary to a specific request from the Project Engineer or Owner, a portion of the Work is covered, the Project Engineer

or Owner, by written request, may require the Constructor to uncover the Work for the Project Engineer's and, if desired the Owner's observation. In this circumstance, the Work shall be replaced at the Constructor's expense and with no adjustment to the Contract Time.

3.11 SAFETY OF PERSONS AND PROPERTY

3.11.1 SAFETY PRECAUTIONS AND PROGRAMS The Constructor shall have overall responsibility for safety precautions and programs in the performance of the Work. However, such obligation does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work or for compliance with Laws.

3.11.2 The Constructor shall seek to avoid injury, loss, or damage to persons or property by taking reasonable steps to protect: (a) its employees and other persons at the Worksite; (b) materials and equipment stored at onsite or offsite locations for use in the Work; and (c) property located at the Worksite and adjacent to Work areas, whether or not the property is part of the Worksite.

3.11.3 CONSTRUCTOR'S SAFETY REPRESENTATIVE The Constructor's Worksite safety representative is _____, who shall act as the Constructor's Worksite safety representative with a duty to prevent accidents. If no individual is identified in this subsection, the Constructor's safety representative shall be the Constructor's Project Manager. The Constructor shall report promptly in writing to the Project Engineer, with a copy to the Owner's Representative, all recordable accidents and injuries occurring at the Worksite. When the Constructor is required to file an accident report with a public authority, the Constructor shall furnish a copy of the report to the Project Engineer and Owner's Representative.

3.11.4 The Constructor shall provide the Project Engineer and Owner's Representative with copies of all notices required of the Constructor by law or regulation. The Constructor's safety program shall comply with the requirements of governmental and quasi-governmental authorities having jurisdiction.

3.11.5 Damage or loss not insured under property insurance which may arise from the Work, to the extent caused by the negligent acts or omissions of the Constructor, or anyone for whose acts the Constructor may be liable, shall be promptly remedied by the Constructor.

3.11.6 If the Project Engineer deems any part of the Work or Worksite unsafe, the Project Engineer, without assuming responsibility for the Constructor's safety program, may require the Constructor to stop performance of the Work or take corrective measures satisfactory to the Project Engineer, or both. If the Constructor does not adopt corrective measures, the Owner may perform them and deduct their cost from the Contract Price. The Constructor agrees to make no claim for damages, for an increase in the Contract Price or for a change in the Contract Time based on the Constructor's compliance with the Project Engineer's or Owner's reasonable request.

3.12 EMERGENCIES In an emergency affecting the safety of persons or property, the Constructor shall act in a reasonable manner to prevent threatened damage, injury, or loss. If appropriate, an equitable adjustment in the Contract Price or Contract Time resulting from the actions of the Constructor in an emergency situation shall be determined as provided for in ARTICLE 8.

3.13 HAZARDOUS MATERIALS

3.13.1 A Hazardous Material is any substance or material identified now or in the future as hazardous under Laws, or any other substance or material that may be considered hazardous or otherwise subject to statutory or regulatory requirement governing handling, disposal, or cleanup. The Constructor shall not be obligated to commence or continue work until any Hazardous Material discovered at the Worksite has been removed, rendered, or determined to be harmless by the

Owner as certified by an independent testing laboratory and approved by the appropriate governmental agency.

3.13.2 If after commencing the Work, Hazardous Material is discovered at the Worksite, the Constructor shall be entitled to immediately stop Work in the affected area. The Constructor shall promptly report the condition to the Project Engineer and Owner's Representative and, if required, the governmental agency with jurisdiction.

3.13.3 The Constructor shall not be required to perform any Work relating to or in the area of Hazardous Material without written mutual agreement.

3.13.4 The Owner shall be responsible for retaining an independent testing laboratory to determine the nature of the material encountered and whether the material requires corrective measures or remedial action. Such measures shall be the sole responsibility of the Owner, and shall be performed in a manner minimizing any adverse effect upon the Work. The Constructor shall resume Work in the area affected by any Hazardous Material only upon written agreement between the Parties after the Hazardous Material has been removed or rendered harmless and only after approval, if necessary, of the governmental agency with jurisdiction.

3.13.5 If the Constructor incurs additional costs or is delayed due to the presence or remediation of Hazardous Material, the Constructor shall be entitled to an equitable adjustment in the Contract Price or the Contract Time.

3.13.6 To the extent permitted by section 6.9 and to the extent not caused by the negligent acts or omissions of the Constructor, its Subcontractors and Subsubcontractors, and the agents, officers, directors, and employees of each of them, the Owner shall defend, indemnify, and hold harmless the Constructor, its Subcontractors and Subsubcontractors, and the agents, officers, directors, and employees of each of them, from and against all claims, damages, losses, costs, and expenses, including but not limited to reasonable attorneys' fees, costs, and expenses incurred in connection with any dispute resolution process, arising out of or relating to the performance of the Work in any area affected by Hazardous Material.

3.13.7 MATERIALS BROUGHT TO THE WORKSITE

3.13.7.1 Material Safety Data (MSD) sheets as required by law and pertaining to materials or substances used or consumed in the performance of the Work, whether obtained by the Constructor, Subcontractors, the Owner, or Others, shall be maintained at the Worksite by the Constructor and made available to the Project Engineer, Subcontractors, and Others.

3.13.7.2 The Constructor shall be responsible for the proper delivery, handling, application, storage, removal, and disposal of all materials and substances brought to the Worksite by the Constructor, its Subcontractors, or both, in accordance with the Contract Documents and used or consumed in the performance of the Work.

3.13.7.3 To the extent caused by the negligent acts or omissions of the Constructor, its agents, officers, directors, and employees, the Constructor shall indemnify and hold harmless the Owner, its agents, officers, directors, and employees, from and against any and all claims, damages, losses, costs, and expenses, including but not limited to attorneys' fees, costs, and expenses incurred in connection with any dispute resolution procedure, arising out of or relating to the delivery, handling, application, storage, removal, and disposal of all materials and substances brought to the Worksite by the Constructor, its Subcontractors, or both, in accordance with the Contract Documents.

3.13.7.4 This section 3.13.7 shall survive the completion of the Work or any termination of this Agreement.

3.14 SUBMITTALS

3.14.1 The Constructor shall submit to the Project Engineer all shop drawings, samples, product data, and similar submittals required by the Contract Documents for review and approval. The Constructor shall be responsible for the accuracy and conformity of its submittals to the Contract Documents. At no additional cost, the Constructor shall prepare and deliver its submittals in a manner consistent with the Schedule of the Work and in such time and sequence so as not to delay the performance of the Work or the work of the Owner and Others. Constructor submittals shall identify in writing for each submittal all changes, deviations, or substitutions from the requirements of the Contract Documents. The approval of any Constructor submittal shall not be deemed to authorize changes, deviations or substitutions from the requirements of the Contract Documents unless express written approval is obtained from the Project Engineer specifically authorizing such deviation, substitution or change. To the extent a change, deviation or substitution causes an impact to the Contract Price or Contract Time, such approval shall be promptly memorialized in a Change Order. Neither the Project Engineer nor Owner shall make any change, deviation or substitution through the submittal process without specifically identifying and authorizing such deviation to the Constructor.

3.14.2 The Constructor agrees upon request to submit in a timely fashion to the Project Engineer, with copies to the Owner's Representative, for review any shop drawings, samples, product data, manufacturers' literature or similar submittals as may reasonably be required by the Project Engineer.

3.14.3 The Constructor shall perform all Work strictly in accordance with approved submittals. Approval of shop drawings is not an authorization to perform changed work, unless the procedures of ARTICLE 8 are followed. Approval does not relieve the Constructor from responsibility for Defective Work resulting from errors or omissions on the approved shop drawings.

3.14.4 No substitutions shall be made in the Work unless permitted in the Contract Documents and then only after the Constructor obtains approvals required under the Contract Documents for substitutions. All such substitutions shall be promptly memorialized in a Change Order no later than seven (7) Days following approval by the Project Manager and the Owner and, if applicable, Design Professional provide for an adjustment in the Contract Price or Contract Time.

3.14.5 As-Built Documents: The Constructor shall maintain at the Worksite for the Owner one (1) copy of each of the Drawings and Specifications, Addenda, Change Orders, and other modifications, in good order and marked to indicate field changes and selections made during construction; and one (1) copy or sample of approved shop Drawings, Product Data, Samples, and similar required submittals.

3.15.5.1 General: Retain copy of each submittal made and each Addenda, Change Order, and Contract amendment issued affecting Contract Documents during the Construction Period for Project As-Built Document purposes. Post changes and modifications to Project As-Built Documents as they occur; do not wait until the end of the Project.

3.15.5.2 Maintenance of As-Built Documents: Store Project As-Built Documents in the field apart from the Contract Documents used for construction. Do not use Project As-Built Documents for construction purposes. Maintain Project As-Built Documents in good order and in clean, dry, legible condition, protected from deterioration and loss. Provide

access to Project As-Built Documents for Project Engineer's reference during normal working hours.

(a) Project Engineer shall evaluate As-Built Drawings for document condition, order, legibility, accuracy and completeness. Project Engineer shall notify Constructor of acceptance or request revisions or replacements and resubmittal. Constructor shall supply acceptable As-Built Drawings within seven (7) Days and prior to Final Payment for the Project.

(b) Project Engineer shall be responsible for creating digital Record Drawings incorporating the mark-ups on the As-Built Drawings submitted by the Constructor. Project Engineer will issue digital Record Drawings to the Constructor and Owner within fourteen (14) Days following Final Payment and distribute a minimum of one (1) copy each of Record Drawings to Owner, Project Engineer and Constructor.

3.15.8.4 As Built Specifications and Record Specifications: Maintain at the Worksite for the Owner a copy of Contract Documents for purposes of annotating where the actual product installation varies from that indicated. Submit the annotated portions of the Contract Documents to Project Engineer prior to requesting a Substantial Completion Inspection. Project Engineer may request corrections from the Constructor to make the submittal more legible and complete. Project Engineer shall be responsible for maintaining its own records on variations in product installations, assembling Record Specifications for the Project in a digital format and for distributing them to the Owner and Constructor at the conclusion of the Project. In preparing the Record Specifications, Project Engineer shall:

(a) Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

(b) Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.

(c) Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

(d) Note related Change Orders and Record Drawings where applicable.

3.15 WORKSITE CONDITIONS

3.15.1 WORKSITE VISIT The Constructor acknowledges that it has visited, or has had the opportunity to visit, the Worksite to visually inspect the general and local conditions which could affect the Work.

3.15.2 CONCEALED OR UNKNOWN SITE CONDITIONS If the conditions encountered at the Worksite are (a) subsurface or other physical conditions materially different from those indicated in the Contract Documents, or (b) unusual and unknown physical conditions materially different from conditions ordinarily encountered and generally recognized as inherent in Work provided for in the Contract Documents, the Constructor shall stop affected Work after the condition is first observed and give prompt written notice of the condition to the Project Engineer. The Constructor shall not be required to perform any Work relating to the unknown condition without the written mutual agreement of the Parties. Any change in the Contract Price or the Contract Time as a result of the unknown condition shall be determined as provided in ARTICLE 8.

3.16 PERMITS AND TAXES

3.16.1 The Constructor shall give public authorities all notices required by law and shall obtain and pay for all necessary permits, licenses, and renewals pertaining to the Work. The Constructor shall provide to the Project Engineer and the Owner's Representative copies of all notices, permits, licenses, and renewals required under this Agreement.

3.16.2 The Constructor shall pay all applicable taxes enacted when bids are received or negotiations concluded for the Work provided by the Constructor.

3.16.3 If, in accordance with the Owner's direction, the Constructor claims an exemption for taxes, the Owner shall indemnify and hold the Constructor harmless from any liability, penalty, interest, fine, tax assessment, attorneys' fees, or other expense or cost incurred by the Constructor as a result of any such action.

3.17 CUTTING, FITTING, AND PATCHING

3.17.1 The Constructor shall perform cutting, fitting and patching necessary to coordinate the various parts of the Work and to prepare its Work for the work of the Owner or Others.

3.17.2 Cutting, patching or altering the work of the Owner or Others shall be done with the prior written approval of the Owner. Such approval shall not be unreasonably withheld.

3.18 CLEANING UP

3.18.1 The Constructor shall regularly remove debris and waste materials at the Worksite resulting from the Work. Prior to discontinuing Work in an area, the Constructor shall clean the area and remove all rubbish and its construction equipment, tools, machinery, waste, and surplus materials. The Constructor shall minimize and confine dust and debris resulting from construction activities. At the completion of the Work, the Constructor shall remove from the Worksite all construction equipment, tools, surplus materials, waste materials, and debris.

3.18.2 If the Constructor fails to commence compliance with cleanup duties within two (2) Business Days after written notification from the Project Engineer of non-compliance, the Project Engineer may implement appropriate cleanup measures without further notice and shall deduct the reasonable costs from any amounts due or to become due the Constructor in the next payment period.

3.19 ACCESS TO WORK The Constructor shall facilitate the access of the Project Engineer, Owner, and Others to Work in progress.

3.20 COMPLIANCE WITH LAWS The Constructor shall comply with all Laws at its own costs. The Constructor shall be liable to the Owner for all loss, cost, or expense attributable to any acts or omissions by the Constructor, its employees, subcontractors, and agents for failure to comply with Laws, including fines, penalties, or corrective measures. However, liability under this section shall not apply if notice to the Project Engineer was given, and advance approval by appropriate authorities, including the Owner, is received.

3.20.1 The Contract Price or Contract Time shall be equitably adjusted by Change Order for additional costs resulting from any changes in Laws, including increased taxes, which were not reasonably anticipated and then enacted after the date of this Agreement.

3.21 CONFIDENTIALITY Unless compelled by law, a governmental agency or authority, an order of a court of competent jurisdiction, or a validly issued subpoena, the Constructor shall treat as confidential and not disclose to third-persons, except Subcontractors, Subsubcontractors, and Material Suppliers as is necessary for the performance of the Work, or use for its own benefit, any of the Owner's confidential information, know-how, discoveries, production methods, and the like that may be disclosed to the Constructor or which the Constructor may acquire in connection with the Work. The Owner shall treat as confidential information, all of the Constructor's estimating systems and historical and parameter cost data that may be disclosed to the Owner in connection with the performance of this Agreement. The Owner and the Constructor shall each specify those items to be treated as confidential and shall mark them as "Confidential." In the event of a legal compulsion or other order seeking disclosure of any Confidential Information, the Constructor or Owner, as the case may be, shall promptly notify the other Party to permit that Party's legal objection, if necessary.

## ARTICLE 4 OWNER'S RESPONSIBILITIES

4.1 INFORMATION AND SERVICES Any information or services to be provided by Owner shall be fulfilled with reasonable detail and in a timely manner.

4.2 WORKSITE INFORMATION To the extent the Owner has obtained, or is required elsewhere in the Contract Documents to obtain, the following Worksite information, the Owner shall provide at the Owner's expense and with reasonable promptness:

4.2.1 Information describing the physical characteristics of the Worksite, including surveys, Worksite evaluations, legal descriptions, data or drawings depicting existing conditions, subsurface conditions, and environmental studies, reports, and investigations. Legal descriptions shall include easements, title restrictions, boundaries, and zoning restrictions. Worksite descriptions shall include existing buildings and other construction and all other pertinent Worksite conditions. Adjacent property descriptions shall include structures, streets, sidewalks, alleys, and other features relevant to the Work. Utility details shall include available services, lines at the Worksite and adjacent thereto, and connection points. The information shall include public and private information, subsurface information, grades, contours, and elevations, drainage data, exact locations and dimensions, and benchmarks that can be used by the Constructor in laying out the Work;

4.2.2 Tests, inspections, and other reports dealing with environmental matters, Hazardous Material and other existing conditions, including structural, mechanical, and chemical tests, required by the Contract Documents or by Law; and

4.2.3 Any other information or services requested in writing by the Constructor which are required for the Constructor's performance of the Work and under the Owner's control.

4.3 OWNER'S CUTTING AND PATCHING Cutting, patching, or altering the Work by the Owner or Others shall be done with the prior written approval of the Constructor, which approval shall not be unreasonably withheld.

4.4 OWNER'S RIGHT TO CLEAN UP In case of a dispute between the Constructor and Others with regard to respective responsibilities for cleaning up at the Worksite, the Owner may implement appropriate cleanup measures after two (2) Business Days' notice and allocate the cost among those responsible during the following pay period.

4.5 COST OF CORRECTING DAMAGED OR DESTROYED WORK With regard to damage or loss attributable to the acts or omissions of the Owner or Others and not to the Constructor, the Owner may either (1) promptly remedy the damage or loss or (2) accept the damage or loss. If the Constructor incurs

additional costs or is delayed due to such loss or damage, the Constructor shall be entitled to an equitable adjustment in the Contract Price or Contract Time.

## ARTICLE 5 SUBCONTRACTS

5.1 SUBCONTRACTORS The Work not performed by the Constructor with its own forces shall be performed by Subcontractors holding valid Public Works Contractor licenses pursuant to Idaho Code § 54-1902. All subcontracts shall be issued on a lump sum basis unless the Owner has given prior written approval of a different method of payment to the Subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK Promptly after the award of this Agreement, the Constructor shall provide the Project Engineer and Owner's Representative with a written list of the proposed Subcontractors and significant Material suppliers.

5.3 BINDING OF SUBCONTRACTORS AND MATERIAL SUPPLIERS The Constructor agrees to bind every Subcontractor and Material Supplier (and require every Subcontractor to so bind its subcontractors and material suppliers) to all the provisions of this Agreement and the Contract Documents as they apply to the Subcontractor's or Material Supplier's portions of the Work.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.4.1 If this Agreement is terminated, each subcontract and supply agreement shall be assigned by the Constructor to the Owner, subject to the prior rights of any surety, provided that:

5.4.1.1 this Agreement is terminated by the Owner pursuant to sections 11.3 or 11.4; and

5.4.1.2 the Owner accepts such assignment after termination by notifying the Subcontractor and Constructor in writing, and assumes all rights and obligations of the Constructor pursuant to each subcontract agreement.

5.4.2 If the Owner accepts such an assignment, and the Work has been suspended for more than thirty (30) consecutive Days, following termination, if appropriate, the Subcontractor's compensation shall be equitably adjusted as a result of the suspension.

## ARTICLE 6 TIME

6.1 DATE OF COMMENCEMENT The Constructor shall not commence the Work until it receives a written notice to proceed from the Owner. The notice to proceed shall identify the Date of Commencement.

6.2 SUBSTANTIAL/FINAL COMPLETION Substantial Completion of the Work shall be achieved in **ONE HUNDRED EIGHTY-FIVE (185) DAYS** from the Date of Commencement. Unless otherwise specified in the Certificate of Substantial Completion, the Constructor shall achieve Final Completion within TWENTY-ONE (21) Days after the date of Substantial Completion. The deadlines for Substantial and Final Completion are subject to adjustments as provided for in the Contract Documents.

6.3 Time is of the essence for this Agreement and the Contract Documents.

6.4 Unless instructed by the Owner in writing, the Constructor shall not knowingly commence the Work before the effective date of insurance and bonds to be provided by the Constructor or the Owner as required by the Contract Documents.

6.5 SCHEDULE OF THE WORK

6.5.1 Before submitting the first application for payment, the Constructor shall submit to the Project Engineer and Owner's Representative for approval a Schedule of the Work showing the dates on which the Constructor plans to commence and complete various parts of the Work, including dates on which information and approvals are required from the Project Engineer. The Constructor shall comply with the approved Schedule of the Work, unless directed by the Project Engineer to do otherwise or the Constructor is otherwise entitled to an adjustment in the Contract Time. The Constructor shall update the Schedule of the Work on a monthly basis or at appropriate intervals as required by the conditions of the Work and the Project.

6.5.2 The Project Engineer may determine the sequence in which the Work shall be performed, provided it does not unreasonably interfere with the Schedule of the Work. The Owner may require the Constructor to make reasonable changes in the sequence at any time during the performance of the Work in order to facilitate the performance of work by the Owner or Others. To the extent such changes increase the Constructor's costs or time, the Contract Price and Contract Time shall be equitably adjusted.

6.6 DELAYS AND EXTENSIONS OF TIME

6.6.1 If the Constructor is delayed at any time in the commencement or progress of the Work by any cause beyond the control of the Constructor, the Constructor shall be entitled to an equitable extension of the Contract Time. Examples of causes beyond the control of the Constructor include, but are not limited to, the following: (a) acts or omissions of the Project Engineer, Owner, or Others; (b) changes in the Work or the sequencing of the Work ordered by the Project Engineer or Owner, or arising from decisions of the Project Engineer or Owner that impact the time of performance of the Work; (c) encountering Hazardous Materials, or concealed or unknown conditions; (d) delay authorized by the Project Engineer or Owner pending dispute resolution or suspension by the Owner under section 11.1; (e) transportation delays not reasonably foreseeable; (f) labor disputes not involving the Constructor; (g) general labor disputes impacting the Project but not specifically related to the Worksite; (h) fire; (i) Terrorism; (j) epidemics; (k) adverse governmental actions; (l) unavoidable accidents or circumstances; (m) adverse weather conditions not reasonably anticipated. The Constructor shall submit any requests for equitable extensions of Contract Time in accordance with the provisions of ARTICLE 8.

6.6.2 In addition, if the Constructor incurs additional costs as a result of a delay that is caused by items (a) through (m) immediately above, the Constructor shall be entitled to an equitable adjustment in the Contract Price subject to section 6.9.

6.6.3 NOTICE OF DELAYS If delays to the Work are encountered for any reason, the Constructor shall provide prompt written notice to the Project Engineer with a copy to the Owner's Representative of the cause of such delays after the Constructor first recognizes the delay. The Owner and the Constructor agree to take reasonable steps to mitigate the effect of such delays.

6.7 NOTICE OF DELAY CLAIMS If the Constructor requests an equitable extension of the Contract Time or an equitable adjustment in the Contract Price as a result of a delay described in the section above, the Constructor shall give the Owner written notice of the claim in accordance with section 8.4. If the Constructor causes delay in the completion of the Work, the Owner shall be entitled to recover its additional costs subject to section 6.9. The Owner shall process any such claim against the Constructor in accordance with ARTICLE 8.

6.8 LIQUIDATED DAMAGES

6.8.1 SUBSTANTIAL COMPLETION The Owner and the Constructor agree that this Agreement shall provide for the imposition of liquidated damages based on the Date of Substantial Completion.

6.8.1.1 The Constructor understands that if the Date of Substantial Completion established by this Agreement, as may be amended by subsequent Change Order, is not attained, the Owner will suffer damages which are difficult to determine and accurately specify. The Constructor agrees that if the Date of Substantial Completion is not attained, the Constructor shall pay the Owner FIVE HUNDRED DOLLARS ($500.00) as liquidated damages and not as a penalty for each Day that Substantial Completion extends beyond the Date of Substantial Completion. The liquidated damages provided herein shall be in lieu of all liability for any and all extra costs, losses, expenses, claims, penalties, and any other damages of whatsoever nature incurred by the Owner which are occasioned by any delay in achieving the Date of Substantial Completion.

6.8.2 FINAL COMPLETION The Owner and the Constructor agree that this Agreement shall provide for the imposition of liquidated damages based on the Date of Final Completion.

6.8.2.1 The Constructor understands that if the Date of Final Completion established by this Agreement, as may be amended by subsequent Change Order, is not attained, the Owner will suffer damages which are difficult to determine and accurately specify. The Constructor agrees that if the Date of Final Completion is not attained, the Constructor shall pay the Owner FIVE HUNDRED DOLLARS ($500.00) as liquidated damages and not as a penalty for each Day that Final Completion extends beyond the Date of Final Completion. The liquidated damages provided herein shall be in lieu of all liability for any and all extra costs, losses, expenses, claims, penalties, and any other damages of whatsoever nature incurred by the Owner which are occasioned by any delay in achieving the Date of Final Completion.

6.8.3 OTHER LIQUIDATED DAMAGES The Owner and the Constructor may agree upon the imposition of liquidated damages based on other project milestones or performance requirements. Such agreement shall be included as an exhibit to this Agreement.

6.9 LIMITED MUTUAL WAIVER OF CONSEQUENTIAL DAMAGES Except for damages mutually agreed upon by the Parties as liquidated damages in subsections 6.8 and excluding losses covered by insurance required by the Contract Documents, the Owner and the Constructor agree to waive all claims against each other for any consequential damages that may arise out of or relate to this Agreement, except for those specific items of damages excluded from this waiver as mutually agreed upon by the Parties and identified below. The Owner agrees to waive damages, including but not limited to the Owner's rental expenses incurred, loss of financing related to the Project, as well as the loss of financing not related to this Project, loss of reputation, or insolvency. The Constructor agrees to waive damages, including but not limited to loss of business, loss of financing, loss of profits not related to this Project, loss of bonding capacity, loss of reputation, or insolvency. The provisions of this section shall also apply to the termination of this Agreement and shall survive such termination.

6.9.1 The Owner and the Constructor shall require similar waivers in contracts with Subcontractors and Others retained for the Project.

## ARTICLE 7 PRICE

7.1 LUMP SUM As full compensation for performance by the Constructor of the Work in conformance with the Contract Documents, the Owner shall pay the Constructor the lump sum price of **DOLLAR AMOUNT IN WORDS** (**$000,000**). The lump sum price is hereinafter referred to as the Contract Price, which shall be subject to increase or decrease as provided in Section 7.1.1 and ARTICLE 8.

7.1.1 The unit prices set forth in Division 00 Section 00 43 10, the Constructor's submitted Supplement to Bid Form Proposal dated March 5, 2025 shall be the basis for the contract price. Payment at the unit price will be based on actual measured quantities in accordance with the Contract Documents.

## ARTICLE 8 CHANGES

Changes in the Work that are within the general scope of this Agreement shall be accomplished, without invalidating this Agreement, by Change Order and Interim Directed Change.

8.1 CHANGE ORDER

8.1.1 The Constructor may request or the Owner may order, at any time before completion of the Project, changes in the Work or the timing or sequencing of the Work that impacts the Contract Price or the Contract Time. All such changes in the Work that affect Contract Time or Contract Price shall be formalized in a Change Order. All terms and conditions of the original contract shall become a part of each Change Order.

8.1.1.1 Owner-Initiated Proposal Requests: Before any change is made or work done, the Owner will issue a detailed written description of proposed changes in the Work. Proposal requests issued by the Owner are for information only. The Constructor shall not consider them instructions either to stop Work in progress or to execute the proposed change. Promptly after receipt of such instructions, the Constructor shall submit to the Owner within ten (10) days a proposal with a detailed estimate showing the cost of the proposed change in the Work, including a detailed breakdown of costs for the additional work as well as the credit for the original Work, and a revised schedule showing the extension of time, if any. The revised schedule showing any time extension shall be submitted in writing under separate cover and approved by Owner. The Owner shall promptly notify the Constructor in writing whether the estimate is acceptable and, if it is, in writing authorize the change to be made or Work to be done. The Owner reserves the right to reject any such proposal and to have the work done by others.

8.1.1.2 Constructor-Initiated Proposals: If the Constructor contends that it has encountered conditions, changes, or occurrences entitling it to a change in the Contract or an adjustment in the contract schedule or price, the Constructor shall propose changes by submitting a written request for a change to the Owner. The proposal shall include a statement outlining reasons for the change and the effect of the change on the Work, the effect of the proposed change on the Contract Sum including a detailed breakdown of costs for the additional work as well as the credit for the original Work, list of quantities of products required or eliminated, applicable taxes, delivery charges, equipment rental, and amounts of trade discounts and a revised schedule showing any time extension. The proposal shall be submitted to the Owner within ten (10) days of the discovery of the condition, changes, or occurrences for review and approval. Except in an emergency, the proposal shall be given before proceeding with the Work. The failure of the Constructor to provide the written proposal as provided herein within such time period shall constitute a waiver by the Constructor of any claim for compensation or time extension, notwithstanding any purposed knowledge or lack of prejudice of the Owner. This written proposal requirement may not be waived, except explicitly and in writing by the Owner.

8.1.2 NO OBLIGATION TO PERFORM The Constructor shall not be obligated to perform changes in the Work that impact Contract Price or Contract Time until a Change Order has been executed or a written Interim Directed Change has been issued.

8.2 INTERIM DIRECTED CHANGE

8.2.1 The Owner may issue a written Interim Directed Change directing a change in the Work prior to reaching agreement with the Constructor on the adjustment, if any, in the Contract Price or the Contract Time. The Constructor shall proceed with the change in the Work when indicated in writing by Owner, for subsequent inclusion in a Change Order.

8.2.2 The Owner and the Constructor shall negotiate expeditiously and in good faith for appropriate adjustments, as applicable, to the Contract Price or the Contract Time arising out of an Interim Directed Change. As the changed Work is performed, the Constructor shall submit its costs for such Work with its application for payment beginning with the next application for payment within thirty (30) Days of the issuance of the Interim Directed Change. If there is a dispute as to the cost to the Owner, the Owner shall pay the Constructor fifty percent (50%) of its estimated cost to perform such Work. In such event, the Parties reserve their rights as to the disputed amount, subject to the requirements of ARTICLE 12.

8.2.3 When the Owner and the Constructor agree upon the adjustment in the Contract Price or the Contract Time, for a change in the Work directed by an Interim Directed Change, such agreement shall be the subject of a Change Order. The Change Order shall include all outstanding Interim Directed Changes on which the Owner and Constructor have reached agreement on Contract Price or Contract Time issued since the last Change Order.

8.3 DETERMINATION OF COST OR CREDIT

8.3.1 An increase or decrease in the Contract Price or the Contract Time resulting from a change in the Work shall be determined by one or more of the following methods:

8.3.1.1 Unit prices set forth in this Agreement or as subsequently agreed;

8.3.1.2 A mutually accepted, itemized lump sum;

8.3.2 “Cost of the Work” shall include the following costs necessary and reasonably incurred by Constructor to perform a change in the Work. For Constructor self-performed Changes in the Work, Change Order markup costs for Constructor are limited to 10% for Overhead and profit on direct costs of the Constructor. For Subcontractor performed Work, any Change Order markup costs for Constructor are limited to 5% for Overhead and profit on direct costs of the Constructor and any markup costs for Subcontractors are limited to 10% for Overhead and profit on direct costs of the Subcontractors.

8.3.2.1 Wages paid for labor in the direct employ of the Constructor in the performance of the Work.

8.3.2.2 Salaries of the Constructor's employees when stationed at the field office or branch office to the extent necessary to complete the applicable Work and employees engaged on the road expediting the production or transportation of material and equipment;

8.3.2.3 Cost of applicable employee benefits and taxes, including but not limited to, workers' compensation, unemployment compensation, social security, health, welfare, retirement and other fringe benefits as required by law, labor agreements, or paid under the Constructor's standard personnel policy, insofar as such costs are paid to employees of the Constructor who are included in the Cost of the Work in subsections .1 and .2 immediately above;

8.3.2.4 Reasonable transportation, travel, and hotel expenses of the Constructor's personnel incurred in connection with the Work;

8.3.2.5 Cost of all materials, supplies, and equipment incorporated in the Work, including costs of inspection and testing if not provided by the Owner, transportation, storage, and handling.

8.3.2.6 Payments made by the Constructor to Subcontractors for Work performed under this Agreement;

8.3.2.7 Cost, including transportation and maintenance of all materials, supplies, equipment, temporary facilities, and hand tools not owned by the workers that are used or consumed in the performance of the Work, less salvage value or residual value; and cost less salvage value of such items used, but not consumed that remain the property of the Constructor;

8.3.2.8 Rental charges of all necessary machinery and equipment, exclusive of hand tools owned by workers, used at the Worksite, whether rented from the Constructor or Others, including installation, repair and replacement, dismantling, removal, maintenance, transportation, and delivery costs. Rental from unrelated third parties shall be reimbursed at actual cost. Rentals from the Constructor or its affiliates, subsidiaries, or related parties shall be reimbursed at the prevailing rates in the locality of the Worksite up to eighty-five percent (85%) of the value of the piece of equipment;

8.3.2.9 Cost of the premiums for all insurance and surety bonds which the Constructor is required to procure or deems necessary, and approved by the Owner including any additional premium incurred as a result of any increase in the cost of the Work;

8.3.2.10 Sales, use, gross receipts or other taxes, tariffs, or duties related to the Work for which the Constructor is liable;

8.3.2.11 Permits, fees, licenses, tests, and royalties;

8.3.2.12 Reproduction costs, photographs, facsimile transmissions, long-distance telephone calls, data processing costs and services, postage, express delivery charges, data transmission, telephone service, and computer-related costs at the Worksite to the extent such items are used and consumed in the performance of the Work or are not capable of use after completion of the Work;

8.3.2.13 All water, power, and fuel costs necessary for the Work;

8.3.2.14 Cost of removal of all nonhazardous substances, debris, and waste materials;

8.3.2.15 All costs directly incurred to perform a change in the Work which are reasonably inferable from the Contract Documents for the Changed Work.

8.3.3 DISCOUNTS All discounts for prompt payment shall accrue to the Owner. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment, shall be credited to the Cost of the Work.

8.3.4 COST REPORTING The Constructor shall maintain in conformance with generally accepted accounting principles a complete and current set of records that are prepared or used by the Constructor to calculate the Cost of Work. The Owner shall be afforded access to the Constructor’s records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda and similar

data relating to requested payment for Cost of the Work. The Constructor shall preserve all such records for a period of three (3) years after the final payment or longer where required by law.

8.3.5 COST AND SCHEDULE ESTIMATES The Constructor shall use reasonable skill and judgment in the preparation of a cost estimate or schedule for a change to the Work, but does not warrant or guarantee their accuracy.

8.3.6 If an increase or decrease in the Contract Price or Contract Time cannot be agreed to as set forth in subsection 8.3.1, and the Owner issues an Interim Directed Change, the cost of the change in the Work shall be determined by the reasonable actual expense incurred and savings realized in the performance of the Work resulting from the change. If there is a net increase in the Contract Price, the Constructor's Overhead and profit shall be adjusted accordingly. In case of a net decrease in the Contract Price, the Constructor's Overhead and profit shall not be adjusted unless ten percent (10%) or more of the Project is deleted. The Constructor shall maintain a documented, itemized accounting evidencing the expenses and savings.

8.3.7 UNIT PRICES If unit prices are set forth in the Contract Documents or are subsequently agreed to by the Parties, but the character or quantity of such unit items as originally contemplated is so different in a proposed Change Order that the original unit prices will cause substantial inequity to the Owner or the Constructor, such unit prices shall be equitably adjusted.

8.3.8 If the Owner and the Constructor disagree as to whether work required by the Owner is within the scope of the Work, the Constructor shall furnish the Owner with an estimate of the costs to perform the disputed work in accordance with the Owner's interpretations. If the Owner issues a written order for the Constructor to proceed, the Constructor shall perform the disputed work and the Owner shall pay the Constructor fifty percent (50%) of its estimated cost to perform the work. In such event, both Parties reserve their rights as to whether the work was within the scope of the Work, subject to the requirements of ARTICLE 12. The Owner's payment does not prejudice its right to be reimbursed should it be determined that the disputed work was within the scope of the Work. The Constructor's receipt of payment for the disputed work does not prejudice its right to receive full payment for the disputed work should it be determined that the disputed work is not within the scope of the Work.

8.4 CLAIMS FOR ADDITIONAL COST OR TIME

8.4.1 Suspension of Work: Constructor shall not proceed with work which would alter, cover, damage or destroy evidence in support of Constructor’s Claim. If Constructor proceeds to perform Work, with or without notice to Project Engineer, that alters, covers, damages or destroys evidence in support of Constructor’s Claim, Constructor is indicating by proceeding its acceptance and agreement that the work performed does not add to the Contract Sum or Contract Time.

8.4.2 Action on Change Order: Project Engineer shall review the Claim and shall forward recommendations to Owner regarding the Claim within five (5) business days. Negotiation of changes to the Contract Sum and/or Contract Time between the Owner and Contractor shall follow the procedures set forth in the Contract Documents.

8.4.3 Owner and Project Engineer shall respond in writing approving or denying the Constructor's claim no later than fourteen (14) Days after receipt of the Constructor's claim. Owner's failure to so respond shall be deemed a denial of the claim. Any change in the Contract Price or the Contract Time resulting from such claim shall be authorized by Change Order.

8.5 INCIDENTAL CHANGES The Project Engineer may direct the Constructor to perform incidental changes in the Work, upon concurrence with the Constructor that such changes do not involve adjustments in the Contract Price or Contract Time. Incidental changes shall be consistent with the scope

and intent of the Contract Documents. The Project Engineer shall initiate an incidental change in the Work by issuing a written order to the Constructor. Such written notice shall be carried out promptly and is binding on the Parties.

## ARTICLE 9 PAYMENT

9.1 SCHEDULE OF VALUES In accordance with requirements in Division 01 Section 01 29 00 for "Schedule of Values," the Constructor shall prepare and submit to the Project Engineer a Schedule of Values apportioned to the various divisions or phases of the Work. Each line item contained in the Schedule of Values shall be assigned a value such that the total of all items shall equal the Contract Price. Maintain the Schedule of Values during the construction period. If the Schedule of Values is revised, submit the updated Schedule of Values for Project Engineer's review and approval after each meeting or other activity where revisions have been recognized or made.

9.2 APPLICATIONS FOR PAYMENT

9.2.1 PROGRESS PAYMENTS In accordance with requirements in Division 01 Section 01 29 00 for "Applications for Payment", the Constructor shall submit to the Project Engineer a monthly application for payment no later than the 5th Business Day of the calendar month for the preceding thirty (30) Days. Constructor's applications for payment shall be itemized and supported by the Constructor's Schedule of Values and any other substantiating data as required by this Agreement. Applications for payment shall include payment requests on account of properly authorized Change Orders or Interim Directed Changes. The Owner shall pay the amount otherwise due on any payment application, as certified by the Project Engineer, no later than thirty (30) Days after the Constructor has submitted a complete and accurate payment application and the Owner has approved the Constructor's payment application, or such shorter time period as required by applicable state statute. The Owner may deduct from any progress payment amounts that may be retained pursuant to subsection 9.2.4. The initial Application for Payment and the Applications for Payment at Substantial Completion and Final Completion have additional requirements as stated in Division 01 Section 01 29 00 "Applications for Payment".

9.2.2 STORED MATERIALS AND EQUIPMENT Unless otherwise provided in the Contract Documents, applications for payment may include materials and equipment not yet incorporated into the Work but delivered to and suitably stored onsite or offsite including applicable insurance, storage, and costs incurred in transporting the materials to an offsite storage facility. Approval of payment applications for stored materials and equipment stored offsite shall be conditioned on a submission by the Constructor of bills of sale and proof of required insurance, or such other documentation satisfactory to the Owner to establish the proper valuation of the stored materials and equipment, the Owner's title to such materials and equipment, and to otherwise protect the Owner's interests therein, including transportation to the Worksite.

9.2.3 LIEN WAIVERS AND LIENS Constructor acknowledges Owner is a public entity, that any property owned by Owner is considered public property, and that liens on public property are not enforceable. Constructor agrees that it shall not file any liens against property owned or controlled by Owner or by Ada County Highway District ("ACHD") which is a part of the Worksite (the "Property"). Constructor agrees that no lien will be at any time be filed against the Property, or any part thereof, by any of Constructor's subcontractors or other person employed by or furnishing labor, services, equipment, or materials to Constructor or any of its subcontractors for, in, or about the performance of the Work. The preceding clause will be inserted in all of the Constructor's or any of its subcontractor's purchase orders and material agreements. Subject to Owner's payment of the compensation in accordance with the terms of this Agreement, Constructor will promptly discharge all liens, if any, filed against the Property by Constructor's subcontractors, suppliers and materialmen, and agents and persons employed by any of such persons.

9.2.4 RETAINAGE From each progress payment made prior to Substantial Completion, the Owner may retain FIVE percent (5%) of the amount otherwise due after deduction of any amounts as provided in section 9.3, and in no event shall such percentage exceed any applicable statutory requirements. If the Owner chooses to use this retainage provision:

9.2.4.1 the Owner may, in its sole discretion, reduce the amount to be retained at any time;

9.2.4.2 the Owner may release retainage on that portion of the Work a Subcontractor has completed in whole or in part, and which the Owner has accepted. In lieu of retainage, the Constructor may furnish a retention bond or other security interest acceptable to the Owner, to be held by the Owner.

9.3 ADJUSTMENT OF CONSTRUCTOR'S PAYMENT APPLICATION The Owner may adjust or reject a payment application or nullify a previously approved payment application, in whole or in part, as may reasonably be necessary to protect the Owner from loss or damage based upon the following, to the extent that the Constructor is responsible under this Agreement:

9.3.1 the Constructor's repeated failure to perform the Work as required by the Contract Documents;

9.3.2 Except as accepted by the insurer providing builders risk or other property insurance covering the project, loss or damage arising out of or relating to this Agreement and caused by the Constructor to the Owner or to Others to whom the Owner may be liable;

9.3.3 the Constructor's failure to properly pay Subcontractors and Material Suppliers following receipt of such payment from the Owner;

9.3.4 rejected, nonconforming or Defective Work not corrected in a timely fashion;

9.3.5 reasonable evidence of delay in performance of the Work such that the Work will not be completed within the Contract Time;

9.3.6 reasonable evidence demonstrating that the unpaid balance of the Contract Price is insufficient to fund the cost to complete the Work; and

9.3.7 uninsured third-party claims involving the Constructor, or reasonable evidence demonstrating that third-party claims are likely to be filed unless and until the Constructor furnishes the Owner with adequate security in the form of a surety bond, letter of credit, or other collateral or commitment sufficient to discharge such claims if established.

No later than seven (7) Days after receipt of an application for payment, the Project Engineer shall give written notice to the Constructor, at the time of disapproving or nullifying all or part of an application for payment, stating its specific reasons for such disapproval or nullification, and the remedial actions to be taken by the Constructor in order to receive payment. When the above reasons for disapproving or nullifying an application for payment are removed, payment will be promptly made for the amount previously withheld.

9.4 ACCEPTANCE OF WORK Neither the Owner's payment of progress payments nor its partial or full use or occupancy of the Project constitutes acceptance of Work not complying with the Contract Documents.

9.5 PAYMENT DELAY If for any reason not the fault of the Constructor, the Constructor does not receive a progress payment from the Owner within seven (7) Days after the time such payment is due, then the

Constructor, upon giving seven (7) Days' written notice to the Owner, and without prejudice to and in addition to any other legal remedies, may stop Work until payment of the full amount owing to the Constructor has been received. Interest shall not accrue on any unpaid amounts. The Contract Price and Contract Time shall be equitably adjusted by a Change Order for reasonable cost and delay resulting from shutdown, delay and start-up.

9.6 SUBSTANTIAL COMPLETION

9.6.1 CLOSEOUT PROCEDURES The Constructor shall comply with the requirements stated in Division 01 Section 01 77 00 CLOSEOUT PROCEDURES, in conjunction with Constructor's compliance with the requirements in sections 9.6 and 9.7.

9.6.2 The Constructor shall notify the Project Engineer and, if directed, the Owner, when it considers Substantial Completion of the Work or a designated portion to have been achieved. The Project Engineer and Owner's Representative shall promptly conduct an inspection to determine whether the Work or designated portion can be occupied or used for its intended use by the Owner without excessive interference in completing any remaining unfinished Work. If the Project Engineer determines that the Work or designated portion has not reached Substantial Completion, the Project Engineer shall promptly compile a list of items ("Punch List") to be completed or corrected so the Owner may occupy or use the Work or designated portion for its intended use. The Constructor shall promptly complete all items on the Punch List and the list compiled by the Project Engineer.

9.6.3 When Substantial Completion of the Work or a designated portion is achieved, the Owner shall prepare a Certificate of Substantial Completion establishing the date of Substantial Completion and the respective responsibilities of the Owner and Constructor for interim items such as security, maintenance, utilities, insurance, and damage to the Work. In the absence of a clear delineation of responsibilities, the Owner shall assume all responsibilities for items such as security, maintenance, utilities, insurance, and damage to the Work. The Certificate of Substantial Completion shall also list any items to be completed or corrected, and establish the time for their completion or correction. The Certificate of Substantial Completion shall be submitted first to the Project Engineer for written concurrence that Substantial Completion has been achieved and then to the Constructor for written acceptance of responsibilities assigned in the Certificate of Substantial Completion. The Certificate of Substantial Completion with signatures from the Project Engineer and the Constructor shall be submitted to the Owner for Owner's signature indicating Owner's acceptance of responsibilities assigned to the Owner in the Certificate of Substantial Completion and approval of the Certificate. A copy of the signed Certificate of Substantial Completion shall be provided to the Constructor.

9.6.4 Unless otherwise provided in the Certificate of Substantial Completion, warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or a designated portion.

9.6.5 Upon the Owner's written acceptance and issuance of the Certificate of Substantial Completion, the Owner shall pay to the Constructor the remaining retainage held by the Owner for the Work described in the Certificate of Substantial Completion, less a sum equal to two hundred percent (200%) of the estimated cost of completing or correcting remaining items on that part of the Work, as agreed to by the Owner and Constructor as necessary to achieve Final Completion. Uncompleted items shall be completed by the Constructor in a mutually agreed upon timeframe. The Owner shall pay the Constructor monthly the amount retained for unfinished items as each item is completed.

9.7 PARTIAL OCCUPANCY OR USE

9.7.1 The Owner may occupy or use completed or partially completed portions of the Work when: (a) the portion of the Work is designated in a Certificate of Substantial Completion; (b) appropriate

insurer(s) consent to the occupancy or use; and (c) appropriate public authorities authorize the occupancy or use. Such partial occupancy or use shall constitute Substantial Completion of that portion of the Work.

9.8 FINAL COMPLETION AND FINAL PAYMENT

9.8.1 CLOSEOUT PROCEDURES The Constructor shall comply with the requirements in Division 01 Section 01 77 00 CLOSEOUT PROCEDURES, in conjunction with Constructor's compliance with the requirements in this section.

9.8.2 INSPECTION Upon notification from the Constructor that the Work is complete and ready for final inspection and acceptance, the Project Engineer and Owner's Representative shall promptly conduct an inspection to determine if the Work has been completed and is acceptable under the Contract Documents.

9.8.3 If the Project Engineer and Owner's Representative determine that the Project has attained Final Completion, the Project Engineer shall request the following submissions from the Constructor:

(a) an affidavit declaring any indebtedness connected with the Work, *e.g.* payrolls or invoices for materials or equipment, to have been paid, satisfied, or to be paid with the proceeds of final payment, so as not to encumber the Owner's property;

(b) as-built drawings and specifications, manuals, copies of warranties, and all other close-out documents required by the Contract Documents;

(c) release of any liens, conditioned on final payment being received;

(d) consent of any surety;

(e) any outstanding known and unreported accidents or injuries experienced by the Constructor or its Subcontractors at the Worksite; and

(f) any other submissions required by Section 01 77 00 CLOSEOUT PROCEDURES.

9.8.4 When Final Completion has been achieved, the Constructor shall prepare for the Owner's written acceptance a final application for payment stating that to the best of the Constructor's knowledge, and based on the Owner's inspections, the Work has reached Final Completion in accordance with the Contract Documents.

9.8.5 Upon receipt of a final application for payment and Constructor's satisfactory completion of closeout procedures stated in sections 9.6 and 9.8, the Project Engineer shall prepare a Certificate of Final Completion establishing the date of Final Completion. Upon signature by the Project Engineer, the Certificate of Final Completion shall be submitted to the Constructor for signature. The Certificate of Final Completion with signatures from the Project Engineer and the Constructor shall be returned to the Owner for Owner's signature indicating Owner's approval of the Certificate of Final Completion. A copy of the signed Certification of Final Completion shall be provided to the Constructor. The Project Engineer's signature on the Final Completion Certificate shall signify the following: (a) Final Completion has been achieved; (b) Project has been inspected and complies with the requirements of the Contract Documents; and (c) Constructor has submitted all required closeout submittals and completed all required closeout procedures.

9.8.6 Final payment of the balance of the Contract Price shall be made to the Constructor within thirty (30) Days after the Constructor has submitted a complete and accurate application for final

payment, has satisfactorily completed the requirements as set forth in sections 9.6 and 9.8 above, and a Certificate of Final Completion has been executed by the Owner and the Constructor.

9.8.7 If, after Substantial Completion of the Work, the Final Completion of a portion of the Work is materially delayed through no fault of the Constructor, the Owner shall pay the balance due for portion(s) of the Work fully completed and accepted. If the remaining contract balance for Work not fully completed and accepted is less than the retained amount prior to payment, the Constructor shall submit to the Project Engineer the written consent of any surety to payment of the balance due for portions of the Work that are fully completed and accepted. Such payment shall not constitute a waiver of claims, but otherwise shall be governed by these final payment provisions.

9.8.8 OWNER RESERVATION OF CLAIMS Claims not reserved in writing by the Owner with the making of final payment shall be waived except for claims relating to liens or similar encumbrances, warranties, Defective Work, and latent defects.

9.8.9 ACCEPTANCE OF FINAL PAYMENT Unless the Constructor provides written identification of unsettled claims with an application for final payment, its acceptance of final payment constitutes a waiver of such claims.

9.9 LATE PAYMENT Payments due but unpaid shall bear interest from the date payment is due at the rate allowed by the State of Idaho.

## ARTICLE 10 INDEMNITY, INSURANCE, AND BONDS

10.1 INDEMNITY

10.1.1 To the fullest extent permitted by law, the Constructor shall indemnify and hold harmless the Owner, the Owner's officers, directors, members, consultants, agents, and employees, the Design Professionals and the Design Professionals' officers, directors, members, consultants, agents, and employees and Others (the Indemnitees) from all claims for bodily injury and property damage, other than to the Work itself and other property insured, including reasonable attorneys' fees, costs and expenses, that may arise from the performance of the Work, but only to the extent caused by the negligent or intentional acts or omissions of the Constructor, Subcontractors, or anyone employed directly or indirectly by any of them or by anyone for whose acts any of them may be liable. The Constructor shall be entitled to reimbursement of any defense costs paid above the Constructor's percentage of liability for the underlying claim to the extent provided for by the subsection 10.1.2 below.

10.1.2 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Constructor, its officers, directors, members, consultants, agents, and employees, Subcontractors, or anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable from all claims for bodily injury and property damage, other than property insured, including reasonable attorneys' fees, costs and expenses, that may arise from the performance of work by the Owner, Owner's Representative, the Project Engineer, and Others, but only to the extent caused by the negligent acts or omissions of the Owner, Owner's Representative, the Project Engineer, or Others. The Owner shall be entitled to reimbursement of any defense costs paid above the Owner's percentage of liability for the underlying claim to the extent provided for by the subsection 10.1.1 above.

10.1.3 NO LIMITATION ON LIABILITY In any and all claims against the Indemnitees by any employee of the Constructor, anyone directly or indirectly employed by the Constructor or anyone for whose acts the Constructor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by

or for the Constructor under workers' compensation acts, disability benefit acts, or other employment benefit acts.

10.2 INSURANCE

Constructor's insurance obligations are set forth in Division 00 Section 00 73 16 INSURANCE AND BONDING REQUIREMENTS.

10.3 BONDS

Constructor's bond obligations are set forth Division 00 Section 00 73 16 INSURANCE AND BONDING REQUIREMENTS.

## ARTICLE 11 SUSPENSION, NOTICE TO CURE, AND TERMINATION

11.1 SUSPENSION BY OWNER FOR CONVENIENCE

11.1.1 OWNER SUSPENSION Should the Project Engineer and/or Owner order the Constructor in writing to suspend, delay, or interrupt the performance of the Work for the convenience of the Owner and not due to any act or omission of the Constructor or any person or entity for whose acts or omissions the Constructor may be liable, then the Constructor shall immediately suspend, delay or interrupt that portion of the Work for the time period ordered by the Project Engineer and/or Owner. Constructor shall take the actions necessary (or that the Owner may direct) for the protection and preservation of the Work and strive to minimize any further costs. Any suspension will be for such period of time as the Owner may determine, but in no event more than 14 consecutive days or 30 cumulative days, without the written agreement of the Constructor. The Contract Price and the Contract Time shall be equitably adjusted by Change Order for the cost and delay resulting from any such suspension.

11.1.2 Any action taken by the Project Engineer and/or Owner that is permitted by any other provision of the Contract Documents and that result in a suspension of part or all of the Work does not constitute a suspension of Work under this section 11.1.

11.2 NOTICE TO CURE A DEFAULT If the Constructor persistently fails to supply enough qualified workers, proper materials, or equipment to maintain the approved Schedule of the Work, or fails to make prompt payment to its workers, Subcontractors, or Material Suppliers, disregards Laws or orders of any public authority having jurisdiction, or is otherwise guilty of a material breach of a provision of this Agreement, the Constructor may be deemed in default by Owner.

11.2.1 In the event of an emergency affecting the safety of persons or property, the Owner may immediately commence and continue satisfactory correction of such default without first giving written notice to the Constructor, but shall give prompt written notice of such action to the Constructor following commencement of the action.

11.3 OWNER'S RIGHT TO TERMINATE FOR DEFAULT

11.3.1 TERMINATION BY OWNER FOR DEFAULT If, within seven (7) Days of receipt of a notice to cure pursuant to section 11.2, the Constructor fails to commence and satisfactorily continue correction of the default set forth in the notice to cure, the Owner may notify the Constructor and, if applicable, the surety, that it intends to terminate this Agreement for default absent appropriate corrective action within seven (7) additional Days. After the expiration of the additional seven (7) Day period, the Owner may, subject to any prior rights of the surety: (a) terminate this Agreement by

written notice; b.) exclude the Constructor from the site and take possession of the site and of all materials previously paid for by Owner; c.) accept assignment of subcontracts; and d.) finish the Work by a reasonable method the Owner may deem expedient. Upon written request of the Constructor, the Owner shall furnish to the Constructor an accounting of the costs incurred by the OWNER in finishing the Work. If the Owner terminates the Agreement for one of the reasons stated above, the Constructor shall not be entitled to receive further payment until the Work is finished. If the unpaid balance of the contract price exceeds costs of finishing the Work, including compensation for consultant services and expenses made necessary thereby, and other damages incurred by the Owner, such excess shall be paid to the Constructor. If such costs and damages exceed the unpaid balance, the constructor shall pay the difference to the Owner. The remedies in this Section are in addition to any other remedies at law or in equity available to Owner.

11.3.2 USE OF CONSTRUCTOR'S MATERIALS, SUPPLIES, AND EQUIPMENT If the Owner or Others perform work under this section 11.3, the Owner shall have the right to take and use any materials, supplies, and equipment belonging to the Constructor and located at the Worksite for the purpose of completing any remaining Work. Immediately upon completion of the Work, any remaining materials, supplies, or equipment not consumed or incorporated in the Work shall be returned to the Constructor in substantially the same condition as when they were taken, reasonable wear and tear excepted.

11.3.3 If the Constructor files a petition under the Bankruptcy Code, this Agreement shall terminate if the Constructor or the Constructor's trustee rejects the Agreement, or if there has been a default and the Constructor is unable to give adequate assurance that the Constructor will perform as required by this Agreement or otherwise is unable to comply with the requirements for assuming this Agreement under the applicable provisions of the Bankruptcy Code.

11.3.4 The Owner shall make reasonable efforts to mitigate damages arising from Constructor default, and shall promptly invoice the Constructor for all amounts due pursuant to sections 11.2 and 11.3.

11.3.5 If the Owner terminates this Agreement for default, and it is later determined that the Constructor was not in default, or that the default was excusable under the terms of the Contract Documents, then, in such event, the termination shall be deemed a termination for convenience, and the rights of the Parties shall be as set forth in section 11.4.

11.4 TERMINATION BY OWNER FOR CONVENIENCE

11.4.1 Upon written notice to the Constructor, the Owner may, without cause, terminate this Agreement. The Constructor shall immediately stop the Work, follow the Owner's instructions regarding shutdown and termination procedures, and strive to minimize any further costs.

11.4.2 If the Owner terminates this Agreement for Convenience, the Constructor shall be paid: (a) for the Work performed to date including Overhead and profit; and (b) for all demobilization costs and costs incurred as a result of the termination but not including Overhead or profit on Work not performed.

11.4.3 If the Owner terminates this Agreement, the Constructor shall:

11.4.3.1 Execute and deliver to the Owner all papers and take all action required to assign, transfer, and vest in the Owner the rights of the Constructor to all materials, supplies and equipment for which payment has been or will be made in accordance with the Contract Documents and all subcontracts, orders and commitments which have been made in accordance with the Contract Documents;

11.4.3.2 Exert reasonable effort to reduce to a minimum the Owner's liability for subcontracts, orders, and commitments that have not been fulfilled at the time of the termination;

11.4.3.3 Cancel any subcontracts, orders, and commitments as the Owner directs; and

11.4.3.4 Sell at prices approved by the Owner any materials, supplies, and equipment as the Owner directs, with all proceeds paid or credited to the Owner.

11.5 CONSTRUCTOR'S RIGHT TO TERMINATE

11.5.1 Upon seven (7) Days' written notice to the Owner, the Constructor may terminate this Agreement if the Work has been stopped for a thirty (30) Day period through no fault of the Constructor for any of the following reasons:

11.5.1.1 under court order or order of other governmental authorities having jurisdiction;

11.5.1.2 as a result of the declaration of a national emergency or other governmental act during which, through no act or fault of the Constructor, materials are not available; or

11.5.1.3 suspension by the Owner for convenience pursuant to section 11.1

11.5.2 In addition, upon seven (7) Days' written notice to the Owner, the Constructor may terminate this Agreement if the Owner:

11.5.2.1 assigns this Agreement over the Constructor's reasonable objection; or

11.5.2.2 fails to pay the Constructor in accordance with this Agreement and the Constructor has complied with section 9.5; or

11.5.2.3 otherwise materially breaches this Agreement.

11.5.3 Upon termination by the Constructor in accordance with section 11.5, the Constructor shall be entitled to recover from the Owner payment for all Work executed and for any proven loss, cost, or expense in connection with the Work, including all demobilization costs plus reasonable Overhead and profit on Work not performed.

11.6 OBLIGATIONS ARISING BEFORE TERMINATION Even after termination, the provisions of this Agreement still apply to any Work performed, payments made, events occurring, costs charged or incurred or obligations arising before the termination date.

## ARTICLE 12 DISPUTE MITIGATION AND RESOLUTION

12.1 WORK CONTINUANCE AND PAYMENT Unless otherwise agreed in writing, the Constructor shall continue the Work and maintain the Schedule of the Work during any dispute mitigation or resolution proceedings. If the Constructor continues to perform, the Owner shall continue to make payments in accordance with this Agreement.

12.2 DIRECT DISCUSSIONS In the event that a dispute arises between Owner and Constructor regarding application or interpretation of any provision of this Agreement, the aggrieved Party shall promptly notify the other Party to this Agreement of the dispute within ten (10) days after such dispute arises. If the Parties shall have failed to resolve the dispute within thirty (30) days after delivery of such notice, the Parties may first endeavor to settle the dispute in an amicable manner by mediation. If the

Parties elect to mediate their dispute, the Parties will select a mediator by mutual agreement and agree to each pay half of the mediator's costs and fees. The mediation will take place in Boise, Idaho, unless otherwise agreed by the Parties in writing. Should the Parties be unable to resolve the dispute to their mutual satisfaction within thirty (30) days after such completion of mediation, each Party shall have the right to pursue any rights or remedies it may have at law or in equity. If the Parties do not mutually agree to mediate the dispute, either Party may pursue any rights or remedies it may have at law.

## ARTICLE 13 MISCELLANEOUS

13.1 EXTENT OF AGREEMENT Except as expressly provided, this Agreement is for the exclusive benefit of the Parties, and not for the benefit of any third party. This Agreement represents the entire and integrated agreement between the Parties, and supersedes all prior negotiations, representations, or agreements, either written or oral.

13.2 ASSIGNMENT Except as to the assignment of proceeds, the Parties shall not assign their interest in this Agreement without the written consent of the other. The terms and conditions of this Agreement shall be binding upon both Parties, their partners, successors, assigns, and legal representatives. Neither Party shall assign the Agreement as a whole without written consent of the other except that the Owner may assign the Agreement to a wholly owned subsidiary of the Owner when the Owner has fully indemnified the Constructor or to an institutional lender providing construction financing for the Project as long as the assignment is no less favorable to the Constructor than this Agreement. If such assignment occurs, the Constructor shall execute any consent reasonably required. In such event, the wholly owned subsidiary or lender shall assume the Owner's rights and obligations under the Contract Documents. If either Party attempts to make such an assignment, that Party shall nevertheless remain legally responsible for all obligations under this Agreement, unless otherwise agreed in writing by the other Party.

13.3 GOVERNING LAW This Agreement shall be governed by the laws of the State of Idaho.

13.4 SEVERABILITY The partial or complete invalidity of any one or more provisions of this Agreement shall not affect the validity or continuing force and effect of any other provision.

13.5 NO WAIVER OF PERFORMANCE The failure of either Party to insist, in any one or more instances, on the performance of any of the terms, covenants, or conditions of this Agreement, or to exercise any of its rights, shall not be construed as a waiver or relinquishment of such term, covenant, condition, or right with respect to further performance or any other term, covenant, condition, or right.

13.6 TITLES The titles given to the articles are for ease of reference only and shall not be relied upon or cited for any other purpose.

13.7 JOINT DRAFTING The Parties expressly agree that this Agreement was jointly drafted, and that both had opportunity to negotiate its terms and to obtain the assistance of counsel in reviewing its terms prior to execution. Therefore, this Agreement shall be construed neither against nor in favor of either Party, but shall be construed in a neutral manner.

13.8 RIGHTS AND REMEDIES The Parties' rights, liabilities, responsibilities and remedies with respect to this Agreement, whether in contract, tort, negligence or otherwise, shall be exclusively those expressly set forth in this Agreement.

13.9 ANTI-BOYCOTT AGAINST ISRAEL CERTIFICATION In accordance with Idaho Code Section 67-2346, Constructor, by entering into this Agreement, hereby certifies that it is not currently engaged in, or for the duration of this Agreement will not engage in, a boycott of goods or services from the State of Israel or territories under its control. This provision does not apply to the following agreements: 1.) Those

with a total potential dollar value of less than $100,000; or 2.) Those with any Consultant or Contractor having fewer than 10 employees.

13.10 CERTIFICATION REGARDING GOVERNMENT OF CHINA. In accordance with Idaho Code Section 67-2359, Constructor, by entering into this Agreement, hereby certifies that it is not currently owned or operated by the government of China and will not, for the duration of the Agreement, be owned or operated by the government of China.

13.11 PROHIBITION ON CONTRACTS WITH COMPANIES BOYCOTTING CERTAIN SECTORS. In accordance with Idaho Code Section 67-2347A, effective July 1, 2024, CONSTRUCTOR by entering into this Agreement, hereby certifies that it is not currently engaged in, and will not for the duration of the contract engage in, a boycott of any individual or company because the individual or company: (a) engages in or supports the exploration, production, utilization, transportation, sale, or manufacture of fossil fuel-based energy, timber, minerals, hydroelectric power, nuclear energy, or agriculture; or (b) Engages in or supports the manufacture, distribution, sale, or use of firearms, as defined in section 18-3302(2)(d), Idaho Code. This section applies only to a contract that is between a public entity and a company with ten (10) or more fulltime employees and has a value of one hundred thousand dollars ($100,000) or more that is to be paid wholly or partly from public funds of the public entity.

## ARTICLE 14 CONTRACT DOCUMENTS

14.1 EXISTING CONTRACT DOCUMENTS This Contract expressly incorporates the following documents, together with any amendments that may be agreed to in writing by both parties:

Project Manual dated **March 5, 2025** including:

PROJECT MANUAL COVER PAGE
00 01 10 TABLE OF CONTENTS
00 11 16 INVITATION TO BID
00 21 13 INSTRUCTIONS TO BIDDERS
00 25 13 PRE BID MEETING
00 41 13 BID FORM
00 43 10 SUPPLEMENT TO BID FORM
00 43 25 REQUEST FOR APPROVAL OF COMPARABLE PRODUCTS FORM
00 45 46 CONTRACTOR'S AFFIDAVIT CONCERNING TAXES
00 52 13 SAMPLE AGREEMENT BETWEEN OWNER AND CONTRACTOR
00 62 76 APPLICATION FOR PAYMENT FORM
00 63 13 REQUEST FOR INFORMATION FORM
00 63 49 WORK CHANGE DIRECTIVE FORM
00 73 00 SUPPLEMENTARY CONDITIONS
00 73 16 INSURANCE AND BONDING REQUIREMENTS
00 73 73 STATUTORY REQUIREMENTS – TAX COMMISSION
00 85 00 ELECTRONIC FILES AND CAD RELEASE FORM

01 10 00 SUMMARY
01 25 00 SUBSTITUTION PROCEDURES
01 25 01 PRODUCT SUBSTITUTION FORM
01 26 00 CONTRACT MODIFICATION PROCEDURES
01 29 00 PAYMENT PROCEDURES
01 31 00 PROJECT MANAGEMENT AND COORDINATION
01 33 00 SUBMITTAL PROCEDURES
01 42 00 REFERENCE STANDARDS AND DEFINITIONS
01 45 00 QUALITY CONTROL SERVICES
01 50 00 TEMPORARY FACILITIES AND CONTROLS

01 60 00 MATERIALS AND EQUIPMENT
01 73 00 EXECUTION
01 77 00 CLOSEOUT PROCEDURES
01 78 36 WARRANTIES

DIVISION 02 – EXISTING CONDITIONS
02 41 00 SELECTIVE DEMOLITION

DIVISION 03 – CONCRETE
03 20 00 CONCRETE REINFORCEMENT
03 30 00 CONCRETE WORK
03 31 24.16 CONCRETE REPAIR USING HIGH-STRENGTH, FAST SETTING MATERIALS
03 37 15.11 CONCRETE REPAIR USING TROWEL APPLIED MORTAR
03 37 16.16 CONCRETE REPAIR USING FORM AND PUMP MATERIALS
03 93 10 EMBEDDED SACRIFICIAL ANODES

DIVISION 07 – THERMAL AND MOISTURE PROTECTION
07 18 16 TRAFFIC BEARING WATERPROOFING MEMBRANE
07 92 00 SEALANTS AND CAULKING

DRAWINGS – CCDC 10TH & FRONT STREET PARKING GARAGE PHASE 3 STRUCTURAL CONCRETE REPAIRS – Plans and Drawings by Desman dated February 26, 2025. Project No: 60-24113-2
G-01 COVER SHEET & SHEET NOTES
G-02 SHEET NOTES
R-03 THIRD LEVEL FLOOR PLAN
R-05 FIFTH LEVEL FLOOR PLAN
R-06 CONCRETE REPAIR DETAILS
R-07 CONCRETE REPAIR DETAILS
R-10 PHOTOGRAPHS

Constructor's Bid Proposal dated *xxxxxxxx*
Payment and Performance Bonds dated *xxxxxxxxxx*
Insurance Certificates dated *xxxxxxxxxxxxx*

14.2 INTERPRETATION OF CONTRACT DOCUMENTS

14.2.1 The drawings and specifications are complementary. If Work is shown only on one but not on the other, the Constructor shall perform the Work as though fully described on both, consistent with the Contract Documents and reasonably inferable from them.

14.2.2 In case of conflicts between the drawings and specifications, the specifications shall govern. In any case of omissions or errors in figures, drawings, or specifications, the Constructor shall immediately submit the matter to the Project Engineer for clarification. The Project Engineer shall confer with the Owner's Representative, and shall issue a clarification to the Constructor. Owner's clarifications are final and binding on all Parties, subject to an equitable adjustment in Contract Time or Contract Price or dispute mitigation and resolution.

14.2.3 Where figures are given, they shall be preferred to scaled dimensions.

14.2.4 Unless otherwise specifically defined in this Agreement, any terms that have well-known technical or trade meanings shall be interpreted in accordance with their well-known meanings.

14.2.5 ORDER OF PRECEDENCE In case of any inconsistency, conflict, or ambiguity among the Contract Documents, the documents shall govern in the following order: (a) Change Orders and written amendments to this Agreement; (b) this Agreement; (c) subject to subsection 14.2.2, the drawings (large scale governing over small scale), specifications, and addenda issued prior to the execution of this Agreement or signed by both Parties; (d) information furnished by the Owner pursuant to subsection 3.13.4 or designated as a Contract Document in section 14.1; (e) other documents listed in this Agreement. Among categories of documents having the same order of precedence, the term or provision that includes the latest date shall control. Information identified in one Contract Document and not identified in another shall not be considered a conflict or inconsistency.

End of Agreement | *Signatures appear on the following page.*

IN WITNESS WHEREOF, OWNER AND CONSTRUCTOR have executed this Agreement with an effective date as first written above.

OWNER: Capital City Development Corporation

BY: _____
John Brunelle, Executive Director

Date: _____

Approved as to Form

_____
Mary Watson, General Counsel

CONSTRUCTOR: [insert company name]

BY: _____
[Insert name of person who can sign contract and Title]

Date: _____

**END OF DOCUMENT**



| Budget Info / For Office Use | |
|---|---|
| Fund / District | |
| Account | |
| Activity Code | |
| PO # | |
| Project Completion | |
| Contract Term | |

**SECTION 00 62 76 APPLICATION FOR PAYMENT FORM**

**APPLICATION FOR PAYMENT NO. _____**

To: Capital City Development Corporation (OWNER)
From: _____
Contract: _____
Project: _____
OWNER's Contract No. _____
PROJECT ENGINEER's Project No._____

For Work accomplished through the date of:

| | | |
|---|---|---|
| 1. | Original Contract Price: | $ _____ |
| 2. | Net change by Change Orders and Written Amendments (+/-): | $ _____ |
| 3. | Current Contract Price (1 plus 2): | $ _____ |
| 4. | Total completed and stored to date: | $ _____ |
| 5. | Retainage (per Agreement): _____% of completed Work: | $_____ |
| | _____% of stored material: | $_____ |
| | Total Retainage: | $_____ |
| 6. | Total completed and stored to date less retainage (4 minus 5): | $_____ |
| 7. | Less previous Application for Payments: | $_____ |
| **8.** | **DUE THIS APPLICATION (6 MINUS 7):** | **$_____** |

*Accompanying Documentation:*

CONTRACTOR'S Certification: The undersigned CONTRACTOR certifies that: 1.) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied on account to discharge CONTRACTOR's legitimate obligations incurred in connection with Work covered by prior Applications for Payment numbered 1 through _____ inclusive; 2.) title of all Work, materials, and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to OWNER indemnifying OWNER against any such Lien, security interest or encumbrance); and 3.) all Work covered by this Application for Payment is in accordance with the Contract Documents and not defective.

Dated: _____ _____
CONTRACTOR

Notarized By:
State of _____
County of _____
Subscribed and sworn to before me this _____ day of _____, _____.

_____
Notary Public
My Commission expires: _____

**Payment of the above AMOUNT DUE THIS APPLICATION is recommended.**

Dated: _____ _____
PROJECT ENGINEER / OWNER'S PROJECT MANAGER

## APPLICATION FOR PAYMENT – INSTRUCTIONS

### A. GENERAL INFORMATION

The sample Schedule of Values (next page) is intended as a guide only. Many projects require a more extensive form with space for numerous items, descriptions of Change Orders, identification of variable quantity adjustments, summary of materials and equipment stored at the site and other information. It is expected that a separate form will be developed by Project Engineer and Contractor at the time Contractor's Schedule of Values is finalized. Note also that the format for retainage must be changed if the Contract permits (or the law provides), and Contractor elects to deposit securities in lieu of retainage. *See* Division 01 Section 01 29 00 “Payment Procedures” for provisions concerning payments to Contractor.

### B. COMPLETING THE FORM

The Schedule of Values, submitted and approved as provided in the General Conditions, should be reproduced as appropriate in the space indicated on the Application for Payment form. Note that the cost of materials and equipment is often listed separately from the cost of installation. Also, note that each Unit Price is deemed to include Contractor's overhead and profit.

All Change Orders affecting the Contract Price should be identified and included in the Schedule of Values as required for progress payments.

The form is suitable for use in the Final Application for Payment as well as for Progress Payments; however, the required accompanying documentation is usually more extensive for final payment. All accompanying documentation should be identified in the space provided on the form.

### C. LEGAL REVIEW

All accompanying documentation of a legal nature, such as Lien waivers, should be reviewed by an attorney, and Project Engineer should so advise Owner.

END OF SECTION 00 62 76

**SECTION 00 63 13 REQUEST FOR INFORMATION FORM**

**REQUEST FOR INFORMATION**

PROJECT: _____ RFI#: _____

ITEM: _____

REF. DWG. OR SPEC.: _____

SCHEDULE IMPACT? YES ☐ NO ☐ COST IMPACT? YES ☐ NO ☐

REQUEST RETURN BY: _____

DESCRIPTION/REQUEST: _____

_____

_____

_____

_____

ORIGINATOR: _____ FIRM: _____ DATE: _____

**RESPONSE**

_____

_____

_____

_____

BY: _____ FIRM: _____ DATE: _____

This is not an authorization to proceed with work involving additional costs and/or time. Notification must be given in accordance with the Contract Documents if any response causes any changes to the Contract Documents.

END OF SECTION 00 63 13

**SECTION 00 63 49 WORK CHANGE DIRECTIVE FORM**

## WORK CHANGE DIRECTIVE FORM

No. _____

DATE OF ISSUANCE _____ EFFECTIVE DATE _____

OWNER _____
CONTRACTOR _____
Contract: _____
Project: _____

You are directed to proceed promptly with the following change(s):
Description:

Purpose of Work Change Directive:

Attachments: (List documents supporting change)

If OWNER or CONTRACTOR believe that the above change has affected Contract Price, any Claim for a Change Order based thereon will involve one or more of the following methods as defined in the Contract Documents.

Method of determining change in Contract Price:

☐ Unit Prices
☐ Lump Sum
☐ Cost of the Work_____

Estimated increase (decrease) in Contract Price:
$_____.
If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Estimated increase (decrease) in Contract Times:

Substantial Completion: _____ days;

Ready for final payment: _____ days.

RECOMMENDED:

_____
PROJECT ARCHITECT
By:
_____

AUTHORIZED:

_____
OWNER
By:
_____

## WORK CHANGE DIRECTIVE – INSTRUCTIONS

### A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work which, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Times. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order. See Division 01 General Requirements for procedures regarding issuance of Work Change Directives by Project Architect.

For supplemental instructions and minor changes not involving a change in the Contract Price or the Contract Times a Field Order should be used.

### B. COMPLETING THE FORM

Project Manager/Architect initiates the form, including a description of the items involved and attachments.

Based on conversations between Project Architect and Contractor, Project Architect completes the following:

> METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT PRICE: Mark the method to be used in determining the final cost of Work involved and the estimated net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or changed Work is completed, another Work Change Directive must be issued to change the estimated price or Contractor may stop the changed Work when the estimated time is reached. If the Work Change Directive is not likely to change the Contract Price, the space for estimated increase (decrease) should be marked "Not Applicable."

Once Project Architect has completed and signed the form, all copies should be sent to Owner for authorization – the Project Architect alone does not have authority to authorize changes in Price or Times. Once authorized by Owner, a copy should be sent by Project Architect to Contractor. Price and Times may only be changed by Change Order signed by Owner and Contractor with Project Architect's recommendation.

Once the Work covered by this directive is completed or final cost and times are determined, Contractor should submit documentation for inclusion in a Change Order. Division 01 General Requirements requires that a Change Order be initiated and processed to cover any undisputed sum or amount of time for Work actually performed pursuant to this Work Change Directive.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR CONTRACT TIMES. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

END OF SECTION 00 63 49

**SECTION 00 73 00 SUPPLEMENTARY CONDITIONS**

1. FEDERAL, STATE, AND LOCAL PAYROLL TAXES: Neither federal, state or local income taxes, nor payroll taxes of any kind shall be withheld and paid by Owner on behalf of Contractor or the employees of Contractor. Contractor shall not be treated as an employee with respect to the services performed hereunder for federal or state tax purposes. Contractor understands that Contractor is responsible to pay, according to law, Contractor's income tax. Contractor further understands that Contractor may be liable for self employment (Social Security) tax to be paid by Contractor according to law.

2. LICENSES AND LAW: Contractor represents that it possesses the requisite skill, knowledge, and experience necessary, as well as all licenses required to perform the services under this Agreement. Contractor further agrees to comply with all applicable laws, ordinances, and codes of Federal, State and local governments in the performance of the services hereunder.

3. FRINGE BENEFITS: Because Contractor is engaged in its own independently established business, Contractor is not eligible for, and shall not participate in, any employee pension, health, or other fringe benefit plans of Owner.

4. AMENDMENTS: This Agreement, including the amount of compensation and the Scope of Work, may be amended only in writing, upon mutual agreement of both Owner and Contractor.

5. DISCRIMINATION PROHIBITED: In performing the services required herein, Contractor shall not discriminate against any person on the basis of race, color, religion, sex, sexual orientation, gender identity, national origin or ancestry, age or handicap. Violation of this section shall constitute a material breach of this Agreement and be deemed grounds for cancellation, termination or suspension of the Agreement by Owner, in whole or in part, and may result in ineligibility for further work for Owner.

6. NUMERATION: Owner and Contractor acknowledge the Agreement may contain gaps in the numbering of the provisions. Despite the gaps in the numbering, Owner and Contractor acknowledge the Agreement is the complete Agreement between them.

7. SILENCE OF SPECIFICATION: The apparent silence of this specification and supplemental specifications as to any detail, or the apparent omission from it of a detailed description concerning any point shall be regarded as meaning that only best commercial practice is to be used. Any exception to this specification shall be cause for rejection. Owner reserves the right to verify specification compliance and other information with published sources as deemed necessary.

8. ACCIDENT PREVENTION: The Contractor shall provide and maintain work environments and procedures which will:

A. Safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities.

B. Comply with all local, County, State, or other applicable legal requirements and will exercise all legally required safety precautions at all times.

C. Ensure that all Contractor employees who are performing work in the streets wear an appropriate safety vest.

D. Avoid interruptions of Government operations and delays in Project completion dates; and will exercise due care during the performance of work to protect from damage all existing facilities, structures, landscaping and utilities on local jurisdiction and private property.

E. For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall:
   i) Provide appropriate safety barricades, signs, and signal lights;
   ii) Ensure that any additional measures the Owner determines to be reasonably necessary for the purposes are taken.
   iii) Take every reasonable effort to keep sidewalks, vehicle travel lanes, driveways and crosswalks open at all times.
   v) Report to Owner immediately any Contractor caused damages.
   vi) Effect the prompt repair any damage to any public property incurred while installing the required items. Repairs to be completed as quickly as is reasonably possible and as required by local ordinance.

9. EMPLOYMENT OF IDAHO RESIDENTS IN PUBLIC WORKS CONSTRUCTION. Contractor shall comply with Idaho Code § 44-1001 in performing the Work on the Project. **This Code provision is reproduced below for convenience from the State of Idaho website and shall be verified by Contractor.**

> 44-1001. EMPLOYMENT OF RESIDENTS OF IDAHO -- WAGE SCALE -- FEDERAL FUNDS. In all state, county, municipal, and school construction, repair, and maintenance work under any of the laws of this state the contractor, or person in charge thereof must employ ninety-five percent (95%) bona fide Idaho residents as employees on any such contracts except for procurement authorized in section 67-2808(2), Idaho Code, or where under such contracts fifty (50) or less persons are employed the contractor may employ ten percent (10%) nonresidents, provided however, in such a case employers must give preference to the employment of bona fide Idaho residents in the performance of such work; provided, that in work involving the expenditure of federal aid funds this act shall not be enforced in such a manner as to conflict with or be contrary to the federal statutes prescribing a labor preference to honorably discharged members of the United States armed forces, including airmen, soldiers, sailors, and marines, prohibiting as unlawful any other preference or discrimination among the citizens of the United States.

END OF SECTION 00 73 00

SECTION 00 73 16 INSURANCE AND BONDING REQUIREMENTS

**Insurance**

Upon execution of the Contract and prior to commencing any Work under the Contract, Contractor shall obtain at its sole cost and expense and thereafter maintain, for the duration of the Contract, at least the minimum insurance coverages set forth below:

(a) Worker's compensation insurance as required by applicable law or regulation;

(b) Employer's liability insurance in the minimum amount of $500,000 each accident for bodily injury, $500,000 each employee for bodily injury by disease and $500,000 policy limit for bodily injury by disease;

(c) Commercial General Liability ("CGL") insurance covering all operations by or on behalf of Contractor with minimum limits of liability of $1,000,000 for each occurrence and $2,000,000 aggregate for both bodily injury and property damage. Contractor may provide insurance up to the required limits through a CGL policy or through a CGL policy and an umbrella policy.

The aggregate limits shall apply separately to the Project, or the Contractor shall obtain separate insurance to provide the required limit which shall not be subject to depletion because of claims arising out of any other project or activity of the Contractor.

The CGL insurance policy shall name Owner as Additional Insured and shall protect its officers, agents and employees from and against claims for bodily injury, property damage, personal injury and advertising injury that shall be no less comprehensive and no more restrictive than the coverage provided by Insurance Services Office (ISO) form for Commercial General (CG 00 01 04 13).

By its terms or appropriate endorsements such insurance shall include the following coverage, to wit: Bodily Injury, Property Damage, Fire Legal Liability (not less than the replacement value of the portion of the premises occupied), Personal Injury, Blanket Contractual, Independent Contractors, Premises Operations, Products and Completed Operations for a minimum of two (2) years following Final Completion of the Project. The policy cannot be endorsed to exclude the perils of explosion (x), collapse (c) and underground (u) exposures without the specific written approval of the Owner. Owner shall be named as an Additional Insured by the terms of the policy or by an endorsement issued by the insurer; and

(d) Automobile liability insurance including coverage for owned, hired, and non-owned automobiles. The limits of liability shall not be less than $1,000,000 combined single limit each accident for bodily injury and property damage combined. Contractor shall require each of its subcontractors to include in their liability insurance policies coverage for automobile contractual liability. The automobile liability insurance policy shall name Owner as Additional Insured and shall protect its officers, agents and employees from and against claims.

(e) Builder's Risk. Unless Owner carries or waives such coverage, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the Work and all existing structures owned by

Owner within the project on a replacement cost basis. This property insurance coverage shall be no less than the amount of the initial contract price, plus the value of subsequent modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until the Work is substantially completed (as evidenced by a Certificate of Occupancy, Certificate of Substantial Completion, or other documentation acceptable to both parties), unless otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, subcontractors, and sub-subcontractors in the Work as insureds. This insurance shall include the interests of mortgagees as loss payees. The insurance required by this Section shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials.

(f) Cyber liability insurance: Contractor shall maintain throughout the term of this Agreement cyber liability Insurance, with limits not less than $1,000,000 per occurrence or claim, $1,000,000 aggregate. Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by Contractor in this Agreement and shall include, but not be limited to, claims involving security breach, system failure, data recovery, business interruption, cyber extortion, social engineering, infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, and alteration of electronic information. The policy shall provide coverage for breach response costs, regulatory fines and penalties as well as credit monitoring expenses.

All insurance required in the Contract shall be occurrence-based coverage as opposed to claims-based coverage and shall be procured from companies which are authorized to do business in Idaho.

To the extent commercially available to the Contractor from its current insurance company, insurance policies required under the Contract shall contain a provision that the insurance company or its designee must give the Owner written notice transmitted in paper or electronic format: (a) 30 Days before coverage is non-renewed by the insurance company and (b) within 10 Business Days after cancelation of coverage by the insurance company. Prior to commencing the Work and upon renewal or replacement of the insurance policies, the Contractor shall furnish the Owner with certificates of insurance until two years after Substantial Completion or longer if required by the Contract. In addition, if any insurance policy required under the Contract is not to be immediately replaced without lapse in coverage when it expires, exhausts its limits, or is to be cancelled, the Contractor shall give Owner prompt written notice upon actual or constructive knowledge of such condition.

Contractor may include all subcontractors as insureds under the Contractor’s policies in lieu of separate policies by each subcontractor.

Contractor shall furnish Owner with copies of the CGL policies or endorsement naming Owner as an Additional Insured and certificates of insurance including the required endorsements for

Contractor and all subcontractors not included under Contractor's policy prior to execution of the contract by Owner and prior to any work being performed.

All insurance provided by Contractor under the Contract shall include a waiver of subrogation by the insurers in favor of Owner. Contractor hereby releases CCDC, including its respective affiliates, directors, and employees, for losses or claims for bodily injury, property damage covered by Contractor's insurance or other insured claims arising out of Contractor's performance under the Contract.

The foregoing insurance coverage shall be primary and noncontributing with respect to any other insurance or self-insurance that may be maintained by Owner. The fact that the Contractor has obtained the insurance required shall in no manner lessen or affect the Contractor's other obligations or liabilities set forth in the Contract.

**Payment and Performance Bonds**

Payment and Performance Bonds are required of the Contractor. Such bonds shall be issued by a surety admitted in the state of Idaho, payable to Owner, and must be acceptable to the Owner to be valid. The Owner's acceptance shall not be withheld without a reasonable cause. The penal sum of the bonds shall each be one hundred percent (100%) of the original Contract Price. Any increase in the Contract Price that exceeds ten percent (10%) in the aggregate shall require a rider to the Bonds increasing penal sums accordingly. Up to such ten percent (10%) amount, the penal sum of the bond shall remain equal to one hundred percent (100%) of the Contract Price. The Contractor shall endeavor to keep its surety advised of changes potentially impacting the Contract Price and Contract Time, though the Contractor shall require that its surety waives any requirement to be notified of any alteration or extension of time within the scope of the initial Agreement. The performance bond shall include coverage in favor of Owner for correction of Defective Work by the Contractor for two years following Substantial Completion of the Work.

END OF SECTION 00 73 16

SECTION 00 73 73  STATUTORY REQUIREMENTS – TAX COMMISSION

Contractor shall complete the WH-5 PUBLIC WORKS CONTRACT REPORT and provide to Owner at the time of execution of the Contract.  See WH-5 report on next page.

Do not file with the State Tax Commission; Owner will file the Report.

Idaho Code § 54-1904A and § 63-3624(g) require all public works contracts to be reported to the Tax Commission within thirty (30) days after a contract is awarded.

END OF SECTION 00 73 73

IDAHO State Tax Commission

# Form WH-5
# Public Works Contract Report

Contractors awarded Idaho public works contracts must submit this form to the Tax Commission within 30 days of receiving the award. (Idaho Code sections 54-1904A and 63-3624(g)).

Contract awarded by (public body and address)

Contract awarded to (contractor's name and address)

| State of incorporation | Federal Employer Identification Number (EIN) | Date qualified to do business in Idaho |
|---|---|---|
| Business operates as ☐ Sole Proprietorship ☐ Partnership ☐ Corporation ☐ LLC | | Public works contractor license number |
| Sole proprietor's Social Security number | Idaho sellers permit number | Idaho withholding tax permit number |
| Awarding agency project number | | Amount of contract $ |

Description and location of work to be performed

## Project Dates

Scheduled project start date: _____ Completion date: _____

If the following information isn't available at this time, please enter date it will be: _____

## All Subcontractors

| Name | | | Federal EIN |
|---|---|---|---|
| Address | | | Public works contractor license number |
| City | State | ZIP Code | Amount of subcontract $ |
| Description of work | | | |

| Name | | | Federal EIN |
|---|---|---|---|
| Address | | | Public works contractor license number |
| City | State | ZIP Code | Amount of subcontract $ |
| Description of work | | | |

| Name | | | Federal EIN |
|---|---|---|---|
| Address | | | Public works contractor number |
| City | State | ZIP Code | Amount of subcontract $ |
| Description of work | | | |

| Name | | | Federal EIN |
|---|---|---|---|
| Address | | | Public works contractor license number |
| City | State | ZIP Code | Amount of subcontract $ |
| Description of work | | | |

## All Subcontractors (*continued*)

| Name | | | Federal EIN |
|---|---|---|---|
| Address | | | Public works contractor license number |
| City | State | ZIP Code | Amount of subcontract $ |
| Description of work | | | |

| Name | | | Federal EIN |
|---|---|---|---|
| Address | | | Public works contractor license number |
| City | State | ZIP Code | Amount of subcontract $ |
| Description of work | | | |

| Name | | | Federal EIN |
|---|---|---|---|
| Address | | | Public works contractor license number |
| City | State | ZIP Code | Amount of subcontract $ |
| Description of work | | | |

## Suppliers

List your major suppliers of materials, equipment, and supplies. Include items removed from inventory and items provided to you by the government agency for use in this project.

| Name | | Federal EIN | Total value $ |
|---|---|---|---|
| Address | | Materials and equipment purchased and used | |
| City, State, ZIP Code | Phone number | Please select how sales or use tax was paid. ☐ Tax paid to supplier ☐ Tax paid to state* ☐ No tax was paid | |

| Name | | Federal EIN | Total value $ |
|---|---|---|---|
| Address | | Materials and equipment purchased and used | |
| City, State, ZIP Code | Phone number | Please select how sales or use tax was paid. ☐ Tax paid to supplier ☐ Tax paid to state* ☐ No tax was paid | |

| Name | | Federal EIN | Total value $ |
|---|---|---|---|
| Address | | Materials and equipment purchased and used | |
| City, State, ZIP Code | Phone number | Please select how sales or use tax was paid. ☐ Tax paid to supplier ☐ Tax paid to state* ☐ No tax was paid | |

*If you're reporting any untaxed materials, equipment, or supplies as "items subject to use tax" on your Idaho return, provide the period when you did or will report it: _____

If you paid tax to a state other than Idaho, write the name state next to "total value" boxes, above. For any tax due that you haven't reported yet, include payment with this form. You can make copies of this form is you need more room.

| **Sign Here** | Authorized signature | Print name | Phone number | Date |
|---|---|---|---|---|

File with the Idaho State Tax Commission, PO Box 36, Boise ID 83722-0410

For more information, call (208) 334-7618 | Fax: (208) 332-6619 | Email: **contractdesk@tax.idaho.gov**

**SECTION 00 85 00 - ELECTRONIC FILES AND CAD RELEASE FORM**

**Project:** 10th & Front Structural Repairs – Phase 3
**Desman Project Number:** 60-24113-2

DESMAN, Inc., dba DESMAN Associates ("DESMAN") is the Structural Engineer of Record for the referenced Project. As per your request, and approval of our client, DESMAN will provide certain electronic files (including CAD, BIM) for your convenience and use in preparing for your specific work related to the above referenced project. The signee below, hereinafter referred to as "the User", has hereby requested electronic files of DESMAN's drawings. By executing this agreement, the User acknowledges that providing the digital data in CAD/BIM makes it possible for inadvertent changes to be made to drawings and designs prepared by DESMAN which may be mistakenly attributed to DESMAN. The use of provided digital data in whole or in part, constitutes an Agreement in which the User agrees with the following terms:

1. DESMAN and User fully understand that the data contained in these CAD drawings are part of DESMAN's Instruments of Service, DESMAN shall be deemed the author of the drawings and data, and shall retain all common law, statutory law and other rights, including copyrights.

2. User understands and accepts that electronic files deteriorate or can be modified inadvertently or otherwise without authorization by DESMAN. Furthermore, DESMAN makes no representations as to compatibility, usability or readability of the files resulting from the use of software, application packages, operating systems, or computer hardware differing from those of DESMAN. User understands that these electronic files are not contract documents. DESMAN makes no representations as to the accuracy or completeness of these electronic files. User understands and agrees that in the event of a conflict, printed hard copy drawings and specifications issued by DESMAN shall take precedence over electronic files. User understands and agrees that User alone is completely responsible, without limitation, to check and otherwise confirm the accuracy of all data on these electronic files.

3. Digital data being provided is as a courtesy to the addresses under the terms and conditions contained herein. Use of information contained in the electronic files is at the sole risk of the user and without liability to DESMAN. User agrees to make no claims and hereby waives, to the fullest extent permitted by law, any claims or causes of action of any nature whatsoever against DESMAN, it's officers, directors, employees, agents or sub-consultants which may arise out of or in connection with the use of the electronic files. The user further agrees to indemnify, defend and hold DESMAN and its consultants harmless from and against any and all claims, damages or costs whatsoever that might arise from the use or misuse of the information provided herein. Receipt and or use of this media shall constitute acceptance of the terms and conditions contained herein.

4. The User together with any and all sub-contractors which may be permitted to use the digital data by the User, agree not to use the digital data or the designs or concepts shown therein on any other project or design. Data provided by DESMAN is provided for the limited purpose described above at the sole risk of the User and its sub-contractor(s).

5. The User together with any and all sub-contractors which may be permitted to use the digital data by the User, agree not to modify the designs and details of the Project prepared by DESMAN in any manner whatsoever.

**ELECTRONIC FILES AND CAD RELEASE FORM – Page 2 of 2:**

6. The User together with any and all sub-contractors which may be permitted to use the digital data by the User, agree to release, indemnify and hold harmless DESMAN and its successors and assigns, from any loss, costs, expense, claim, suit or liability arising out of any use or reuse of the data and designs contained in the digital data except in strict conformance with the terms of this Agreement. Such indemnification shall include all cost of litigation, arbitration, mediation or negotiation of claims, including the time and expenses of personnel of DESMAN, and reasonable attorney's fees and expenses.
7. The User together with any and all sub-contractors which may be permitted to use the digital data by the User, agree to add the User's company name and the respective sub-contractor's company name, address telephone number and contact information to modified digital data and remove any and all reference to DESMAN which may remain.
8. The User together with any and all sub-contractors which may be permitted to use the digital data by the User, must field verify actual project conditions. DESMAN does not imply or guarantee that the digital data is accurate or complete.

DESMAN makes no warranties, expressed or implied of merchantability of the data provided, or of fitness for a particular purpose. This shall constitute an agreement under seal and be governed by the laws of the State of Illinois.

By execution of this Electronic File Use Agreement in the space provided below, the undersigned represents that he/she is duly authorized to do so on behalf of your firm and you agree as follows:

Company _____

Signature _____

Printed Name _____

Title _____ Corporate Seal _____

Date _____

Please return the executed original of this agreement to DESMAN at your earliest convenience. The digital data requested as indicated hereinabove shall be delivered to the User upon DESMAN's receipt of this executed document.

## SECTION 01 10 00 – SUMMARY

## PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

B. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Definitions.
4. Access to site.
5. Coordination with occupants & other parties affected by construction.
6. Work restrictions.
7. Construction Schedule.
8. Unit Prices for Change Orders.

C. Related Requirements: See Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's and adjacent public and/or private facilities.

1.2 PROJECT INFORMATION

A. Project Identification: 10th & Front Structural Repairs – Phase 3 (“Project”). Engineer’s Project No. 60-24113-2.

1. Project Location: 10th & Front Garage, 234 S. 10th Street, Boise, Idaho.

B. Owner: Capital City Development Corporation (CCDC).

1. Owner's Representative: Aaron Nelson, Parking & Facilities Manager
Telephone: 208-384-4264
anelson@ccdcboise.com

C. Project Engineer: Desman, Inc., Denver, Colorado.

1. Eric Bodenstab, P. E., Engineer of Record
Telephone: 303.740.1700
ebodenstab@desman.com

D. Parking Operator: The Car Park, Inc.

1. Contact: Eric Selekof, General Manager.
Telephone: 208-368-7944

1.3 WORK COVERED BY CONTRACT DOCUMENTS (PROJECT SCOPE OR WORK)

A. The Project Scope or Work is defined by the Contract Documents and is summarized below:

1. The Work includes partial-depth, and full-depth strip repair of concrete slab over precast beams on the 3rd and 5th level of the garage. Work includes removal of scaling, deteriorating concrete, corroded reinforcing steel in slabs over the beams, and miscellaneous vertical/overhead concrete repairs. All repairs to be performed with high quality air entrained concrete and epoxy coated reinforcement. Strip and miscellaneous repairs to be coated with traffic resistant water proofing membrane; replacement of control joints sealants with elastomeric material, application of silane sealer to supported floor slab; and restriping of parking stalls.

a. General Mobilization (including de-mobilization): This work consists of all labor, materials, tools and equipment required for setting-up, storage/staging areas and facilities required by authorities having jurisdiction; and the general mobilization of equipment required for the completion of the work shown on the Contract Documents. The cost of this item shall include all permits and fees required to perform the project, unless otherwise noted in the Contract Documents, and all expenses for the de-mobilization to a 'broom clean or better' condition after the work has been completed; mobilization will also encompass multiple sub-phases and staging of construction and/or off-hours work scheduling to meet site constraints of the work itself. If a building permit is required, it will be the contractor's responsibility to get the necessary permit to perform the repair work, unless noted otherwise in the documents. This work shall also include the following items:

1) Reviewing existing electrical plans, if available, and existing conditions for each phase of the work to identify the likelihood of embedded conduits/wiring in the floor slabs. All existing mechanical and electrical services shall be maintained/restored by the Contractor for all work areas.

2) Provide effective ventilation system to safely remove all dust and hazardous fumes generated from the concrete demolition and any surface treatment applications.

3) Protection of overhead fire protection system to be maintained in-place, if any.

4) Protection of existing overhead mechanical and electrical systems, if any, to be maintained in-place.

5) Removal of loose overhead concrete from the structural concrete members in areas adjoining work locations within the structure prior to the start of any demolition work.

6) Coordinate and assist the security and property management personnel with respect to the security of spaces during the repair work.

7) Electricity (power) and water are available at existing fixtures and outlets. (The Owner will not provide any temporary pipes, cables, etc.) The contractor shall provide temporary lighting in the work areas, as required, during the restoration work. If the existing capacity is insufficient for the contractor's use, the contractor is responsible for supplementing existing capacity as needed.

b. Concrete Work: Partial-depth and full-depth strip repairs over beams as shown on the drawings, localized partial depth concrete repairs, and vertical and overhead concrete repairs.

c. Moisture Protection: Installation of a new waterproofing membrane over beam repair strips, restoration of any waterproofing membrane removed during concrete repair activities, installation of new waterproofing membrane to previous repairs within existing membrane limits not already protected by a waterproofing membrane. Installation of new cove joint sealant at shear walls, and the application of a clear penetrating concrete sealer to supported concrete slabs not protected or scheduled to be protected by a waterproofing membrane.

d. Miscellaneous Items: This work consists of items not otherwise specifically indicated or shown on the plans, but which are ancillary to the specified scope of work. This work shall also include the following:

1) The contractor shall furnish, install, maintain, relocate and remove all signs, barricades, cones, warning lights, and other safety control devices and temporary signage required for the proper execution of the project. The Project Engineer and the Owner shall review the safety control device placement before work begins and also prior to the beginning of work on any subsequent construction stages. Any deficiencies in the location or arrangement of devices shall be corrected by the contractor before starting work.

2) The miscellaneous work shall include documentation of any non-functioning electrical/mechanical systems within work areas prior to contractor’s activities. This documentation should be based on the contractor's condition survey performed immediately prior to the scheduled mobilization. The contractor shall not start the mobilization until the Owner approves the submittal.

3) The miscellaneous work shall also include cleaning and repairs to the existing drainage system in work areas of each parking structure, as required.

4) The miscellaneous work shall also include the dismantling of any existing mechanical, fire protection and electrical installations in the repair areas in order to perform the overhead repairs to the deck soffit,

as required. The temporarily dismantled installations shall be reinstalled immediately after the repairs are completed.

5) At other locations of repair areas, the contractor shall provide adequate protection systems, as required, for the existing mechanical, plumbing and electrical installations to remain in-place.

6) The miscellaneous work shall include re-striping areas affected by waterproofing membrane installation as reasonably necessary, chipping down of existing top of concrete slab ½" min, saw cutting the edges of extent and preparing the surface as indicated in the technical specifications and drawings.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.4 DEFINITIONS

A. Substantial Completion: Point in execution of Contract in which the Contractor believes scope of work is complete and Project Engineer has reviewed the Work and provided written approval to the Contractor. Refer to Division 01 Section 017700 "Closeout Procedures" for Substantial Completion procedures.

1. The Contractor shall substantially complete the Work within one hundred eighty-five (185) days from the Date of Commencement.

1.5 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated by the following requirements.

B. Use of Site: Limit use of Project site to work in areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits: Confine construction operations to work areas as shown on Drawings.

2. Driveways, Entrances and Adjacent Sidewalks: Keep Garage driveways, entrances and adjacent sidewalks always serving premises clear and available to access. Do not use these areas for parking or storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

3. No separate storage (staging) areas will be allowed within the garage beyond the work area. Storage of equipment, materials and supplies shall occur within

the area closed off for the work area. Storage of materials, equipment and supplies shall not interfere with Owner's operations. Limits of storage area shall be marked by fencing, barricades or similar methods. Contractor accepts responsibility for the security of any materials or equipment kept in Contractor's storage areas as part of Contract.

1) The Owner and Parking Operator may allow up to eighty (80) parking stalls to be closed off or impacted at any given time for the work area (including areas necessary for storage, staging and for shoring). Contractor to coordinate with Owner prior to any closures.

1.6 COORDINATION WITH OCCUPANTS & OTHER PARTIES AFFECTED BY CONSTRUCTION

A. Partial Owner Occupancy: Owner will occupy the premises during the entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. 10th & Front Garage Operations

a. Garage is open 24 hours per day, 7 days per week.

b. Traffic Patterns:

1) Monday through Friday daytime – 7:00 a.m. to 6:00 p.m.: traffic volumes peak during typical morning arrival (8:00 a.m.), and end of business day (5:00 p.m.) departure times.
2) Monday through Friday nights – 6:00 p.m. to 7:00 a.m.: traffic volume is typically low.
3) Weekends: traffic volumes are light and activity is relatively calm.
4) Events at nearby venues may impact traffic patterns.

c. Garage has a one-way drive aisle connecting Ground Level through Level 5. On Ground Level, the drive aisle provides pedestrian access to doors connecting the Parking Garage to Hotel 43.

d. Maintain a one-way traffic route through all levels of the Work Area at all times so parking customers can travel from street level entrances/exits to the Garage Levels 1 through 5 and vice versa.

e. Maintain access and use by the public of at least one entire stair tower, and at least one elevator, at all times.

2. Temporary Closures:

a. At all times, the Garage shall be open to vehicular and pedestrian traffic, parking customers, and the general public on all levels of the Garage, except as otherwise provided in this Section.

b. Institute temporary closures to protect safety of parking customers, motorists, pedestrians and the general public from construction activity and to protect the Work from damage in coordination with the Parking Operator approval.
c. Notice of Closures: Submit list of proposed closures and method of implementing closures to Parking Operator, Project Engineer and Owner's Representative one week prior to Contractor's need for closures. Parking Operator shall indicate its approval or request revisions within two (2) business days of receipt of list.
d. Partial Closures: Maintain one-way traffic route through all levels at all times so vehicular traffic can travel from street level entrances/exits to the Garage to Levels 1 through 5 and vice versa.

    1) The existing drive aisle may be relocated, and parking stalls may be cordoned off and/or used as a temporary drive aisle to facilitate and protect the Work, as long as the vehicular route through the Garage from Ground Level to Level 5 is maintained.
    2) The Owner and Parking Operator may allow up to eighty (80) parking stalls to be closed off or impacted at any given time. Contractor to coordinate with Owner prior to any closures.

3. Traffic Management Plan:

    a. Initial Plan: Submit a plan to Owner and Parking Operator for how traffic will be managed during construction operations prior to or at the preconstruction meeting. Obtain approval from Owner and Parking Operator for the traffic management plan prior to commencement of the Work.
    b. Weekly Updates: Provide Parking Operator with a schedule of work to be performed in each upcoming week no later than Wednesday of the preceding week. Include in the schedule any requests for the following items in the upcoming week.

        1) Temporary closures of parking stalls.
        2) Temporary closure of pedestrian entrances/exits to parking levels.
        3) Rerouting of drive aisles and/or reduction of drive aisles to one lane with flagger operation.

    c. Coordinate with and obtain approval from Parking Operator prior to implementing any temporary closures and/or re-routing of drive aisles.

4. Traffic Safety: Provide directional and warning signage, barriers, fencing, cones or other markers delineating drive aisle locations and widths, and/or flaggers as needed to assure safe movement of vehicles through the Work Areas. Contractor shall assume responsibility for traffic safety of motorists and pedestrians within Work Areas and in any location where the Contractor implements changes to the normal vehicular flow in the Garage. Owner and Parking Operator reserve the right to evaluate if Contractor's traffic control measures are adequate once these measures are in operation and to request additional or alternative traffic controls to maintain public safety in the Garage.

5. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.

6. Provide no fewer than three (3) business days' notice to Owner of activities that will affect Owner's operations.

B. Contractor Responsibilities for Community Relations:

1. Prior to commencement of construction, participate with Owner in development of a communication and community relations plan and problem-solving approach for resolving day-to-day issues, concerns and complaints raised by parking customers, nearby businesses and their customers, condominium residents, and the general public who may be affected by construction activities during the construction period (“Other Parties Affected by Construction”). Contractor shall:
   a. Assume responsibility for communicating the importance of maintaining good community relations during the Project to employees, subcontractors, and other construction personnel.
   b. Enlist employees, subcontractors and other construction personnel in implementing the community relations plan.
   c. Identify a point person employed by the Contractor who will represent the Contractor in taking calls from and meeting with Other Parties Affected by Construction.
   d. Provide contact information for the point person which can be given to the general public.
   e. Attend meetings with the Owner, Project Engineer, Parking Operator and Other Parties Affected by Construction to address community relations issues as needed.

C. Owner and Parking Operator as Liaison: Owner and Parking Operator will act as liaison between Contractor and the Hotel 43 owner and monthly parkers regarding temporary closures.

## 1.7 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and sidewalks and with other requirements of authorities having jurisdiction.

B. On-Site Work Hours:

1. Work such as chipping and grinding which creates noticeable noise levels for Other Parties Affected by Construction shall be limited to 8:00 a.m. to 4:00 p.m. Monday through Friday and 10:00 a.m. to 6:00 p.m. Saturday and Sunday.
2. All other work on unrestricted days shall have unrestricted hours.

C. Restricted Days: As of the date of these Specifications, there are no known events in downtown Boise that will create work restrictions during the construction period. Special events may arise during the construction period that will create work restrictions. Owner and Contractor will coordinate any work restrictions at that time.

D. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others.

E. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner's operations. Notify Project Engineer and the appropriate parties not fewer than two (2) business days in advance of proposed disruptive operations.

F. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

G. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

## 1.8 CONSTRUCTION SCHEDULE

A. Contractor shall submit a tentative Construction Schedule including all activities, locations, and dates to Project Engineer at or before the Preconstruction Meeting. Submit a detailed Construction Schedule for Project Engineer's review and approval prior to commencement of Work.

B. Contractor shall not begin any surface demolition or work until receipt of a written Notice to Proceed. Contractor shall diligently maintain progress and complete the work by the required Substantial and Final Completion dates.

C. Construction Schedule shall provide for a minimum of disruption to adjacent residents and businesses.

D. Contractor shall update the Construction Schedule as the Work progresses and provide a copy of schedule revisions to the Project Engineer as they occur. At a minimum, Contractor shall provide an updated schedule no later than the first business day of each month. Schedule revisions which would affect Contractor's ability to complete the Work by the established Substantial Completion or Final Completion date require Project Engineer and Owner approval through issuance of an approved Change Order.

## 1.9 UNIT PRICES FOR CHANGE ORDERS

A. Unit Prices Offered by Contractor and Accepted by Owner:

1. As Indicated in Section 00 43 10 SUPPLEMENT TO BID FORM.

B. Application of Unit Prices during Contract Time: The unit prices which were provided by the Contractor and accepted by the Owner as part of the bidding process, will be used during the Contract Time if changes in the Scope of Work occur which would add

or subtract square footage, lineal footage, cubic feet, or lump sum units included in the Work Item and Change Order Schedule to or from the Project.

1. Owner's third party inspector will verify quantities in real time and document the information for the Owner and Project Engineer. Contractor must notify the Owner's and Project Engineer for authorization before proceeding past the quantities listed in the Contract Documents.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

END OF SECTION 01 10 00

# SECTION 01 25 00 - SUBSTITUTION PROCEDURES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling requests for substitutions made after award of the Contract.

### 1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract are considered to be requests for substitutions. The following are not considered to be requests for substitutions:

1. Substitutions requested during the bidding period, and accepted by Addendum prior to award of the Contract, are included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.
2. Revisions to the Contract Documents requested by the Owner or Project Engineer.
3. Specified options of products and construction methods included in the Contract Documents.
4. The Contractor’s determination of and compliance with governing regulations and orders issued by governing authorities.

### 1.4 SUBMITTALS

A. Substitution Requests: The Owner and/or the Project Engineer will consider requests for substitution if received within 45 days after commencement of the Work. Requests received more than 45 days after commencement of the Work may be considered or rejected at the discretion of the Owner and/or Project Engineer.

1. Submit 3 copies of each request for substitution for consideration. Submit requests according to procedures required for change-order proposals.
2. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers.
3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:

a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate contractors, that will be necessary to accommodate the proposed substitution.
b. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements, such as performance, weight, size, durability, visual effect, and LEED material requirements.
c. Product Data, including Drawings and descriptions of products and fabrication and installation procedures.
d. Samples, where applicable or requested.
e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
f. Cost information, including a proposal of the net change, if any in the Contract Sum.
g. The Contractor's certification that the proposed substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated.
h. The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.

4. The Owner and/or Project Engineer's Action: If necessary, the Owner and/or Project Engineer will request additional information or documentation for evaluation within one week of receipt of a request for substitution. The Owner and/or Project Engineer will notify the Contractor of acceptance or rejection of the substitution within 2 weeks of receipt of the request, or within one week of receipt of additional information or documentation, whichever is later. Acceptance will be in the form of a Change Order.

## PART 2 - PRODUCTS

### 2.1 SUBSTITUTIONS

A. Conditions: The Owner and/or Project Engineer will receive and consider the Contractor's request for substitution when one or more of the following conditions are satisfied, as determined by the Owner and/or Project Engineer. If the following conditions are not satisfied, the Owner and/or Project Engineer will return the requests without action except to record noncompliance with these requirements.

1. Extensive revisions to the Contract Documents are not required.
2. Proposed changes are in keeping with the general intent of the Contract Documents.
3. The request is timely, fully documented, and properly submitted.
4. The request is directly related to an "or-equal" clause or similar language in the Contract Documents.

5. The requested substitution offers the Owner a substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additional responsibilities the Owner must assume. The Owner's additional responsibilities may include compensation to the Project Engineer for redesign and evaluation services, increased cost of other construction by the Owner, and similar considerations.
6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
7. The specified product or method of construction cannot be provided in a manner that is compatible with other materials and where the Contractor certifies that the substitution will overcome the incompatibility.
8. The specified product or method of construction cannot be coordinated with other materials and where the Contractor certifies that the proposed substitution can be coordinated.
9. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provides the required warranty.

B. The Contractor's submittal and the Owner and/or Project Engineer’s acceptance of Shop Drawings, Product Data, or Samples for construction activities not complying with the Contract Documents do not constitute an acceptable or valid request for substitution, nor do they constitute approval.

**PART 3 - EXECUTION (NOT USED)**

**END OF SECTION 01 25 00**

**SECTION 01 25 01 – PRODUCT SUBSTITUTION FORM**

PART 1 - GENERAL INFORMATION

1.1 Name and Scope of Material, Product Specified:

_____

_____

Specification Section Number: _____

Specification Section Title: _____

1.2 Name and Scope of Material, Product Substituted:

_____

_____

1.3 Name of Manufacturer of Substitution:

Name: _____

Telephone/Email: _____

1.4 Reasons for requesting substitution:

☐ Substitution for Cause
☐ Substitution for Convenience

_____

_____

1.5 Does this substitution affect other materials or systems, such as dimensional revisions, redesign of structure, or modifications to other work?

☐ No
☐ Yes. If yes, describe impact of substitution on other products or systems:

_____

_____

PART 2 - SUBSTANTIATING DOCUMENTATION

2.1 Requests for Substitution shall be accompanied by substantiating documentation per requirements of Section 01 25 00.

PART 3 - CONTRACT COORDINATION

3.1 Savings or Credit to Contract Sum for accepting:

_____ Dollars ($ _____)

3.2 Other benefit accruing to Owner for accepting substitute:

_____

_____

3.3 In making a request for substitution installer and the Contractor each represents that:

A. It has examined the Drawings and Specifications and has determined that, to the best of his/her knowledge, the proposed substitution is appropriate for the use intended in the Contract Documents.

B. It shall coordinate the installation of accepted substitution into the Work, making such changes as may be required for the Work to be complete.

C. It waives claims for additional costs related to substitution which consequently become apparent.

3.4 The undersigned certifies:

A. The proposed substitution has been fully investigated and is equal or superior to specified products or systems.

B. The same or better warranty will be furnished for proposed substitution as for specified material, product or equipment.

C. The cost data as stated above is complete and includes all related costs under the Contract.

D. The coordination, installation, and changes in the Work as necessary for substitution, if approved, will be complete in all respects at no additional costs, or as credit to Contract Amount as stated above.

Contractor: _____

By (Print/Sign): _____

**END OF FORM**

ENGINEER'S ACTION

## ENGINEERS RESPONSE TO CONTRACTOR

Specification Section Number: _____

Specification Section Title: _____

Article/Paragraph: _____

Contractor: _____

Request Number: _____

Acceptance of this Substitution is based upon the Contractor's representation that he has checked and approved this submittal and has verified the dimensions, quantities, and field dimension criteria related thereto. Acceptance of this Substitution does not relieve the contractor of responsibility for any deviation from the requirements of the contract documents unless the contractor has specifically informed the engineer in writing of such deviation at the time of submission. The contractor shall not be relieved from responsibility for errors or omissions in the shop drawings, product data or samples by the engineer's approval thereof.

**Signed:** _____ **Date:** _____

☐ No Exception Taken
☐ Make Corrections Noted; Revise and Resubmit
☐ Rejected

Notes:

1. Clarifications to or changes of project schedule or time shall be processed using Change Order Forms or as otherwise required by the Contract.
2. Properly prepared and processed Substitution Requests do not constitute a replacement for Submittals as required by the Specifications.

**END OF SECTION 01 25 01**

# SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1. Division 01 Section 01 25 00 “Substitution Procedures” for administrative procedures for handling requests for substitutions made after award of the contract.

### 1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

### 1.3 MINOR CHANGES IN THE WORK

A. Owner or Project Engineer will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

### 1.4 REQUESTS FOR INFORMATION (RFIs).

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI to the Project Engineer, with a copy to Owner. All RFIs shall be submitted by Contractor.

1. RFI Form: Use the RFI Form provided in the Project Manual or an alternative form acceptable to the Project Engineer; follow the format and submit complete information as indicated on the provided form.
2. Project Engineer will return without review any RFIs submitted to Project Engineer by any other entity, whether controlled by Contractor or not.
3. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Project Engineer’s Action: Project Engineer will review each RFI, determine action required, and respond within 48 hours, not including weekends.

1. Project Engineer’s response may include a request for additional information, in which case Project Engineer's time for response will date from time of receipt of additional information.

2. Project Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit a Change Order Proposal according to the procedures set forth herein.
3. If Contractor believes the Project Engineer's RFI response warrants a change in the Contract Time or the Contract Sum, Contractor must notify Project Engineer in writing within 48 hours (weekends omitted) of receipt of the RFI response.

## 1.5 CHANGE ORDER PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Owner or Project Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Proposal requests issued by Owner or Project Engineer are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
2. Within five (5) days of receipt of a proposal request, submit an estimate of cost necessary to execute the change to the Owner or Project Engineer for the Owner's review.

    a. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's construction schedule that indicates the effect of the change on the Contract Time, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Owner.

1. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change on the Contract Time, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

6. Comply with requirements in Division 01 Section “Substitution Procedures” if the proposed change requires substitution of one product or system for product or system specified.

1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Work Change Directive: When the Owner and the Contractor disagree on the terms of a Proposal Request, the Owner and Project Engineer may issue a Work Change Directive. A Work Change Directive instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Work Change Directive contains a complete description of change in the Work. It also designates the method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.7 CHANGE ORDER PROCEDURES

A. Upon the Owner’s approval of a Proposal Request, the Owner or Project Engineer will issue a Change Order for signatures.

1.8 UNIT PRICES FOR CHANGE ORDERS

A. Unit Prices Offered by Contractor and Accepted by Owner are those listed on 00 43 10 SUPPLEMENT TO BID FORM, submitted by Contractor with Contractor’s Bid.

B. Application of Unit Prices during Contract Time: The unit prices which were provided by the Contractor and accepted by the Owner as part of the bidding process, will be used during the Contract Time if changes in the Scope of Work occur which would add or subtract square footage, lineal footage or lump sum units include in the Work Item and Change Order Schedule to or from the Project.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

END OF SECTION 01 26 00

# SECTION 01 29 00 - PAYMENT PROCEDURES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Special Provisions, and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. This Section specifies administrative and procedural requirements governing the Contractor’s Applications for Payment.

### 1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1. Coordinate the Schedule of Values and Applications for Payment with Contractor’s Construction Schedule, Submittal Schedule, and List of Subcontracts.

### 1.4 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules.
2. Submit the Schedules of Values for Project Architect’s review and approval no later than the date for the Preconstruction Meeting.

B. Format and Content: Use a Schedule of Values similar to the sample (associated with Section 00 62 76 APPLICATION FOR PAYMENT FORM) provided in the Project Manual, or use an alternate form acceptable to the Project Engineer; follow the format and submit complete information as indicated in the sample.

1. Provide a breakdown of the Contact Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
2. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
3. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

4. Each item in the Schedules of Values and Payment Applications shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

    a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

5. Schedule Updating: Update and resubmit the Schedule of Values before the next Application for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

## 1.5 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by and paid for by Owner.

    1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: The period covered by each Application for Payment is one month, ending on the last day of the month. Contractor shall submit the Application for Payment by the fifth business day following the last day of the month. Applications received after the fifth business day following the last day of the month shall be reviewed the following month, without exception.

C. Forms of Payment: Owner may make payment in the form of paper check or Electronic Funds Transfer (EFT). It is the Contractor’s responsibility to confirm payment choice and verify correct banking information has been provided.

D. Application for Payment Forms: Use Application for Payment form provided or an equivalent form acceptable to the Project Architect.

E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Project Architect will return incomplete applications without action.

    1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
    2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

F. Information on Mechanic's Liens: Contractor acknowledges that Owner is a public entity and that any property owned by Owner is considered public property, and that liens on public property are not enforceable. Contractor agrees that it shall not file any liens against property owned or controlled by Owner which is a part of the Worksite (the "Property"). Subject to Owner's payment of the compensation in accordance with the terms of this Agreement, Contractor will promptly discharge all liens, if any, filed

against the Property by Contractor's subcontractors, suppliers and materialmen, and agents and persons employed by any of such persons.

G. Initial Application for Payment: Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. List of principal suppliers and fabricators.
3. Schedule of Values.
4. Contractor's Construction Schedule.
5. Schedule of unit prices.
6. Submittal Schedule (preliminary if not final).
7. Copies of building permits.
8. Copies of authorizations and licenses from governing authorities for performance of the Work.
9. Certificates of insurance and insurance policies.
10. Performance and payment bonds.
11. Data needed to acquire the Owner's insurance.
12. Report of preconstruction.

H. Application for Payment at Substantial Completion: After the Project Architect issues the Certificate of Substantial Completion, submit an Application for Payment.

1. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
2. Administrative actions and submittals that shall precede or coincide with this application include:

    a. Occupancy permits and similar approvals.
    b. Warranties (guarantees) and maintenance agreements.
    c. Test/adjust/balance records.
    d. Maintenance instructions.
    e. Changeover information related to Owner's occupancy, use, operation, and maintenance.
    f. Final cleaning.
    g. Application for reduction of retainage and consent of surety.
    h. List of incomplete Work, recognized as exceptions to Project Architect's Certificate of Substantial Completion.

I. Final Payment Application: Administrative actions and submissions that must precede or coincide with submittal of the final Application for Payment include the following:

1. Completion of Project closeout requirements.
2. Completion of items specified for completion after Substantial Completion.
3. Transmittal of required Project construction records to the Owner.
4. Insurance certificates for products and completed operations where required.
5. Proof that taxes, fees, and similar obligations were paid.
6. Removal of temporary facilities and services.
7. Removal of surplus materials, rubbish, and similar elements.
8. Updated final statement, accounting for final changes to the Contract Sum.

9. Tax Release from the Idaho State Tax Commission.
10. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
11. Evidence that claims have been settled, if applicable.
12. Final liquidated damages settlement statement, if applicable.

J. Contractor shall execute an Acknowledgment of Final Payment Form provided to Contractor by Owner in exchange for the Final Payment.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

END OF SECTION 01 29 00

# SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. General Coordination Procedures
2. Requests for Information (RFI's)
3. Project Meetings
4. Submittals
5. General Installation Provisions
6. Cleaning and protection

### 1.3 DEFINITIONS

A. RFI: Request from Owner, Project Engineer, or Contractor seeking information required by or clarifications of the Contract Documents.

### 1.4 GENERAL COORDINATION PROCEDURES.

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation, connection and operation of each part of the Work.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to:

1. Preparation of Contractor's Construction Schedule.

2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress Meetings
6. Project closeout activities.

1.5 REQUESTS FOR INFORMATION (RFIs).

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI to the Project Engineer in the format specified.

1. Use the RFI Form provided in the Project Manual or an alternative form acceptable to the Project Engineer; follow the format and submit complete information as indicated on the provided form.
2. Project Engineer will return RFIs submitted to Project Engineer by other entities controlled by Contractor with no response.
3. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Project Engineer’s Action: Project Engineer will review each RFI, determine action required, and respond. Allow seven working days for Project Engineer’s response for each RFI.

1. Project Engineer’s action may include a request for additional information, in which case Project Engineer's time for response will date from time of receipt of additional information.
2. Project Engineer’s action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Contract Modification Procedures.

a. If Contractor believes the Project Engineer’s RFI response warrants a change in the Contract Time or the Contract Sum, notify Project Engineer in writing within 48 hours (weekends omitted) of receipt of the RFI response.

1.6 PROJECT MEETINGS

A. General: Conduct progress meetings at regular intervals.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Project Engineer of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda; distribute to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Project Engineer, within three (3) business days of the meeting.

B. Preconstruction Meeting: Owner shall schedule and conduct a Preconstruction Meeting to review responsibilities and personnel assignments at a time convenient to Contractor and Project Engineer, but no later than seven (7) Days after execution of the Agreement and prior to start of construction.

1. Attendees: Authorized representatives of Owner, Project Engineer, Parking Operator, Contractor, and Contractor's Project Manager; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to make decisions related to the Work.
2. Agenda: Discuss items of significance that could affect progress, including:

    a. Designation of key personnel and their duties.
    b. Lines of communications.
    c. Distribution of the Contract Documents.
    d. Tentative Construction Schedule.
    e. Construction phasing.
    f. Access & Security Plan.
    g. Communication and community relations strategy.
    h. Procedures for RFIs.
    i. Submittal procedures.
    j. Procedures for processing field decisions and Change Orders.
    k. Procedures for testing and inspecting.
    l. Procedures for processing Applications for Payment.
    m. Use of premises and existing building.
    n. Owner's occupancy requirements.
    o. Work restrictions (days and hours); events that may create restrictions.
    p. Limits on use of elevators and stairwells.
    q. Traffic controls and temporary closures (includes Procedures).
    r. Parking availability.
    s. Work and storage areas.
    t. Equipment deliveries and priorities.
    u. First aid.
    v. Progress cleaning.

3. Minutes: Owner or designee will record and distribute meeting minutes.

C. Progress Meetings: Contractor shall conduct a weekly Progress Meeting with Project Engineer and Owner's Representative each week during the construction period in order to coordinate construction activities and to identify and resolve issues arising during construction.

4. Location: Progress Meetings are typically held in the field but may be held at Owner's offices if an office location is needed.
5. Attendees: Contractor, Project Engineer, Owner's Representative and any subcontractors or subconsultants needed in attendance to better coordinate the work. Contractor shall be responsible for notifying subcontractors, and Project Engineer shall be responsible for notifying subconsultants needed in attendance.
6. Agenda: Items to be discussed not limited to the following:

a. Project Schedule.
b. Status of Work, including any specific field issues or questions.
c. Review present and future needs of Attendees, including:

1) Interface requirements.
2) Status of submittals.
3) Deliveries.
4) Site utilization and access.
5) Quality and work standards.
6) Status of correction of deficient items.
7) Field observations.
8) Testing results.
9) Status of RFIs.
10) Pending changes.

7. Minutes: Project Engineer shall be responsible for preparing and distributing meeting minutes to Owner, Contractor, and any subcontractors or subconsultants that have work assignments resulting from the meeting.

1.7 SUBMITTALS

A. Coordination Drawings: Prepare and submit coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
8. Show the interrelationship of components shown on separate Shop Drawings.
9. Indicate required installation sequences.
10. Comply with requirements contained in Section "Submittals."

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

3.1 GENERAL INSTALLATION PROVISIONS

A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Engineer for final decision.

F. Recheck measurements and dimensions, before starting each installation.

G. Install each component during weather conditions and project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Engineer for final decision.

3.02 CLEANING AND PROTECTION

A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

1. Excessive static or dynamic loading.
2. Excessively high or low temperatures.
3. Air contamination or pollution.
4. Water or ice.
5. Dust
6. Solvents.
7. Chemicals.
8. Puncture.
9. Abrasion.
10. Heavy traffic.
11. Soiling, staining and corrosion.
12. Bacteria.
13. Combustion.
14. Electrical current.

15. Unusual wear or other misuse.
16. Contact between incompatible materials.
17. Destructive testing.
18. Misalignment.
19. Excessive weathering.
20. Unprotected storage.
21. Improper shipping or handling.
22. Theft.
23. Vandalism.

END OF SECTION 01 31 00

## SECTION 01 33 00 - SUBMITTAL PROCEDURES

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including;

1. Contractor's construction schedule.
2. Submittal schedule.
3. Daily construction reports.
4. Shop Drawings.
5. Product Data.
6. Samples.

B. Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

1. Permits.
2. Applications for payment.
3. Performance and payment bonds.
4. Insurance certificates.
5. List of Subcontractors.

C. The Schedule of Values submittal is included in Section "Applications for Payment."

D. Inspection and test reports are included in Section "Quality Control Services."

1.03 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.

a. The Engineer reserves the right to withhold action on a submittal

requiring coordination with other submittals until related submittals are received.

3. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for re-submittals.

    a. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Engineer will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
    b. If an intermediate submittal is necessary, process the same as the initial submittal.
    c. Allow two weeks for reprocessing each submittal.
    d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the Work to permit processing.

B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

1. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.

2. Include the following information on the label for processing and recording action taken.

    a. Project name.
    b. Date.
    c. Name and address of Engineer.
    d. Name and address of Contractor.
    e. Name and address of subcontractor.
    f. Name and address of supplier.
    g. Name of manufacturer.
    h. Number and title of appropriate Specification Section.
    i. Drawing number and detail references, as appropriate.

C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Engineer using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.

1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

2. Transmittal Form: Use AIA Document G 810 or alternate form acceptable to the Engineer.

1.04 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by requirements for phased completion to permit Work by separate Contractors and partial occupancy by the Owner prior to Substantial Completion.

B. Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.

C. Distribution: Following response to the initial submittal, print and distribute copies to the Engineer, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

1.05 SUBMITTAL SCHEDULE

A. After development and acceptance of the Contractor's construction schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for establishment of the Contractor's construction schedule.

1. Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products as well as the Contractor's construction schedule.

2. Prepare the schedule in chronological order; include submittals required during the first 90 days of construction. Provide the following information:

a. Scheduled date for the first submittal.
b. Related Section number.
c. Submittal category.
d. Name of subcontractor.
e. Description of the part of the Work covered.
f. Scheduled date for re-submittal.
g. Scheduled date the Engineer's final release or approval.

B. Distribution: Following response to initial submittal, print and distribute copies to the Engineer's, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction

activities.

C. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.06 DAILY CONSTRUCTION REPORTS

A. Prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Engineer at weekly intervals:

1. List of subcontractors at the site.
2. Approximate count of personnel at the site.
3. High and low temperatures, general weather conditions.
4. Accidents and unusual events.
5. Meetings and significant decisions.
6. Stoppages, delays, shortages, losses.
7. Meter readings and similar recordings.
8. Emergency procedures.
9. Orders and requests of governing authorities.
10. Change Orders received, implemented.
11. Services connected, disconnected.
12. Equipment or system tests and start-ups.
13. Partial Completions, occupancies.
14. Substantial Completions authorized.

1.07 SHOP DRAWINGS

A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

1. Dimensions.
2. Identification of products and materials included.
3. Compliance with specified standards.
4. Notation of coordination requirements.
5. Notation of dimensions established by field measurement.
6. Sheet Size: Except for templates, patterns and similar full- size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 36" x 48".
7. Initial Submittal: Submit one correctable translucent reproducible print and one blue- or black-line print for the Engineer's review; the reproducible print will be returned.
8. Initial Submittal: Submit 2 blue- or black-line prints for the Engineer's

review; one will be returned.

9. Final Submittal: Submit 3 blue- or black-line prints; submit 5 prints where required for maintenance manuals. 2 prints will be retained; the remainder will be returned.
10. Final Submittal: Submit 3 blue- or black-line prints and 2 additional prints where required for maintenance manuals, plus the number of prints needed by the Engineer for distribution. 2 prints will be retained; the remainder returned.

    a. One of the prints returned shall be marked-up and maintained as a "Record Document."

11. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

C. Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.

1. Preparation of coordination Drawings is specified in section "Project Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
2. Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

1.08 PRODUCT DATA

A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

    a. Manufacturer's printed recommendations.
    b. Compliance with recognized trade association standards.
    c. Compliance with recognized testing agency standards.
    d. Application of testing agency labels and seals.
    e. Notation of dimensions verified by field measurement.
    f. Notation of coordination requirements.

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

3. Preliminary Submittal: Submit a preliminary single-copy of Product Data where selection of options is required.

4. Submittals: Submit 2 copies of each required submittal; submit 4 copies where required for maintenance manuals. The Engineer will retain one, and will return the other marked with action taken and corrections or modifications required.

   a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

5. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

   a. Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession.
   b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.09 SAMPLES

A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.

   1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Engineer's Sample. Include the following:

      a. Generic description of the Sample.
      b. Sample source.
      c. Product name or name of manufacturer.
      d. Compliance with recognized standards.
      e. Availability and delivery time.

   2. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

      a. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.

      b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of

assembly, connections, operation and similar construction characteristics.

c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.

3. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.

a. Preliminary submittals will be reviewed and returned with the Engineer's mark indicating selection and other action.

4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken.

5. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.

a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

b. Sample sets may be used to obtain final acceptance of the construction associated with each set.

B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

1. Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.

a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.10 ENGINEER'S ACTION

A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Engineer will review each submittal, mark to indicate action taken, and return promptly.

1. Compliance with specified characteristics is the Contractor's responsibility.

B. Action Stamp: The Engineer will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to

indicate the action taken:

1. Final Unrestricted Release: Where submittals are marked "Accepted," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.

2. Final-But-Restricted Release: When submittals are marked "Accepted as Noted," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.

3. Returned for Re-submittal: When submittal is marked "Not Accepted, Revise and Resubmit," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.

    a. Do not permit submittals marked "Not Accepted, Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.

4. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required."

**PART 2 - PRODUCTS** (Not Applicable).

**PART 3 - EXECUTION** (Not Applicable).

**END OF SECTION 01 33 00**

## SECTION 01 42 00 - REFERENCE STANDARDS AND DEFINITIONS

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 DEFINITIONS:

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. Indicated: The term "indicated" refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on location is intended.

C. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Engineer," "requested by the Engineer," and similar phrases.

D. Approve: The term "approved," where used in conjunction with the Engineer's action on the Contractor's submittals, applications, and requests, is limited to the Engineer's duties and responsibilities as stated in the Conditions of the Contract.

E. Regulation: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

F. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

G. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."

H. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

I. Installer: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.

1. The term "experienced," when used with the term "Installer," means having a minimum of five previous projects similar in size and scope to this Project,

being familiar with the special requirements indicated, and having complied with requirements of the authority having jurisdiction.

2. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.

3. Assignment of Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.

   a. This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.

J. Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

K. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.03 SPECIFICATION FORMAT AND CONTENT EXPLANATION:

A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 16-Division format and MASTER FORMAT numbering system.

B. Specification Content: This Specification uses certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1. Abbreviated Language: Language used in Specifications and other Contract Documents is the abbreviated type. Words and meanings shall be interpreted as appropriate. Words that are implied, but not stated shall be interpolated as the sense required. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the context of the Contract Documents so indicates.

2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the

Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.

a. The words "shall be" shall be included by inference wherever a colon (:) is used within a sentence or phrase.

1.04 INDUSTRY STANDARDS

A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with the standard in effect as of the date of the Contract Documents.

C. Conflicting Requirements: Where compliance with two or more standards is specified, and the standards may establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different, but apparently equal, and uncertainties to the Engineer for a decision before proceeding.

1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum, as appropriate for the context of the requirements. Refer uncertainties to the Engineer for a decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

F. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations, as referenced in Contract Documents, are defined to mean the associated names. Names and

addresses are subject to change and are believed to be, but are not assured to be, accurate and up to date as of date of Contract Documents.

AA Aluminum Association
900 19th St., NW, Suite 300
Washington, DC 20006 (202) 862-5100

AASHTO American Association of State Highway and Transportation Officials
444 North Capitol St., Suite 225
Washington, DC 20001 (202) 624-5800

ACI American Concrete Institute
P.O. Box 19150
Detroit, MI 48219 (313) 532-2600

ACIL American Council of Independent Laboratories
1725 K St., NW
Washington, DC 20006 (202) 887-5872

AI Asphalt Institute
P.O. Box 14052
Lexington, KY 40512-4052 (606) 288-4960

AIA American Institute of Architects
1735 New York Ave., NW
Washington, DC 20006 (202) 626-7300

AISC American Institute of Steel Construction
One East Wacker Drive Suite 700
Chicago, IL 60601 (312) 670-2400

APA American Plywood Assoc.
P.O. Box 11700
Tacoma, WA 98411 (206) 565-6600

ARMA Asphalt Roofing Manufacturers Assoc.
6288 Montrose Rd.
Rockville, MD 20852 (301) 231-9050

ASC Adhesive and Sealant Council
1627 K Street, NW, Suite 1000
Washington, DC 20006 (202) 452-1500

ASPEAmerican Society of Plumbing Engineers
3617 Thousand Oaks Blvd., Suite 210
Westlake, CA 91362 (805) 495-7120

ASTM American Society for Testing and Materials
1916 Race St.
Philadelphia, PA 19103 (215) 299-5400

AWS American Welding Society
550 LeJeune Road, NW
P.O. Box 351040
Miami, FL 33135 (305) 443-9353

BANC Brick Association of North Carolina
P.O. Box 13290
Greensboro, NC 27415-3290 (919) 273-5566

BHMA Builders' Hardware Manufacturers Assoc.
355 Lexington Ave., 17th Floor
New York, NY 10017 (212) 661-4261

BIA Brick Institute of America
11490 Commerce Park Drive, Suite 300
Reston, VA 22091 (703) 620-0010

CRSI Concrete Reinforcing Steel Institute
933 Plum Grove Rd.
Schaumburg, IL 60173 (847) 517-1200

EJMA Expansion Joint Manufacturers Assoc.
25 N. Broadway
Tarrytown, NY 10591 (914) 332-0040

HPMA Hardwood Plywood Manufacturers Assoc.
1825 Michael Farraday Drive
P.O. Box 2789
Reston, VA 22090 (703) 435-2900

IEEE Institute of Electrical and
Electronic Engineers
345 E. 47th St.
New York, NY 10017 (212) 705-7900

NAPA National Asphalt Pavement Assoc.
Calvert Building, Suite 620
6811 Kenilworth Ave.
Riverdale, MD 20737 (301) 779-4880

NCMA National Concrete Masonry Assoc.
P.O. Box 781
Herndon, VA 22070 (703) 435-4900

NEC National Electric Code (from NFPA)

NECA National Electrical Contractors Assoc.
7315 Wisconsin Ave.
Bethesda, MD 20814 (301) 657-3110

NFPANational Fire Protection Assoc.
One Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9101 (617) 770-3000

NPCA National Paint and Coatings Assoc.
1500 Rhode Island Ave., NW
Washington, DC 20005 (202) 462-6272

NRCA National Roofing Contractors Assoc.
One O'Hare Centre
6250 River Road, Suite 8030
Rosemont, IL 60018 (708) 318-6722

PCA Portland Cement Assoc.
5420 Old Orchard Road
Skokie, IL 60077 (847) 966-6200

PCI Prestressed Concrete Institute
175 W. Jackson Blvd.
Chicago, IL 60604 (312) 786-0300

PDI Plumbing and Drainage Institute
c/o Sol Baker
1106 W. 77th St., South Dr.
Indianapolis, IN 46260 (317) 251-6970

RMA Rubber Manufacturers Assoc.
1400 K St., NW
Washington DC 20005 (202) 682-4800

SSPC Steel Structures Painting Council
4400 Fifth Ave.
Pittsburgh, PA 15213 (412) 268-3327

WRI Wire Reinforcement Institute
1760 Reston Parkway, Suite 403
Reston, VA 22090 (703) 790-9790

G. Federal Government Agencies: Names and titles of federal government standard or Specification producing agencies are often abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard or Specification producing agencies of the federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up to date as of the date of the Contract Documents.

CE Corps of Engineers
(U.S. Department of the Army)
Chief of Engineers - Referral
Washington, DC 20314 (202) 272-0660

CFR Code of Federal Regulations
Available from the Government Printing Office
N. Capitol St. between G and H St. NW
Washington, DC 20402 (202) 783-3238
(Material is usually first published
in the "Federal Register")

CPSC Consumer Product Safety Commission
5401 Westbard Ave.
Bethesda, MD 20816 (800) 638-2772

CS Commercial Standard
(U.S. Department of Commerce)
Government Printing Office
Washington, DC 20402 (202) 377-2000

DOC Department of Commerce
14th St. and Constitution Ave., NW
Washington, DC 20230 (202) 377-2000

DOT Department of Transportation
400 Seventh St., SW
Washington, DC 20590 (202) 366-4000

EPA Environmental Protection Agency
401 M St., SW
Washington, DC 20460 (202) 382-2090

FAA Federal Aviation Administration
(U.S. Department of Transportation)
800 Independence Ave., SW
Washington, DC 20590 (202) 366-4000

NIST National Institute of Standards and Technology
(U.S. Department of Commerce)
Gaithersburg, MD 20899 (301) 975-2000

OSHA Occupational Safety and Health Administration
(U.S. Department of Labor)
Government Printing Office
Washington, DC 20402 (202) 523-6091

PS Product Standard of NBS
(U.S. Department of Commerce)
Government Printing Office
Washington, DC 20402 (202) 783-3238

1.05 GOVERNING REGULATIONS/AUTHORITIES:

A. The Engineer has contacted authorities having jurisdiction where necessary to obtain information necessary for preparation of Contract Documents. Contact

authorities having jurisdiction directly for information and decisions having a bearing on the Work.

B. Copies of Regulations: Obtain copies of the applicable regulations and retain at the Project Site, available for reference by parties who have a reasonable need for such reference.

1.06 SUBMITTALS:

A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

**PART 2 PRODUCTS** (Not Applicable)

**PART 3 EXECUTION** (Not Applicable)

**END OF SECTION 01 42 00**

## SECTION 01 45 00 - QUALITY CONTROL SERVICES

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section specifies administrative and procedural requirements for quality control services.

B. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include contract enforcement activities performed by the Consultant.

C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.

1. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.

2. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.

3. Requirements for the Contractor to provide quality control services required by the Consultant, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.03 RESPONSIBILITIES

A. Contractor Responsibilities: The Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the Owner's responsibility, or are provided by another identified entity; these services include those specified to be performed by an independent agency and not by the Contractor. Costs for these services shall be included in the Contract Sum.

1. The Contractor shall employ and pay an independent agency, to perform specified quality control services.

2. The Owner will engage and pay for the services of an independent agency to perform inspections and tests specified as the Owner's responsibilities.

    a. Where the Owner has engaged a testing agency or other entity for testing and inspection of a part of the Work, and if the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner, unless otherwise agreed in writing with the Owner.

3. Retesting: The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.

    a. Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.

4. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:

    a. Providing access to the Work and furnishing labor and facilities necessary to facilitate inspections and tests.

    b. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.

    c. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.

    d. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.

    e. Security and protection of samples and test equipment at the Project site.

B. Owner Responsibilities: The Owner will provide inspections, tests and similar quality control services specified to be performed by independent agencies and not by the Contractor, except where they are specifically indicated as the Contractor's responsibility or are provided by another identified entity.

1. The Owner will employ and pay for the services of an independent agency, testing laboratory or other qualified firm to perform services which are the Owner's responsibility from the allowance set aside for testing in the contract sum.

C. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Consultant and Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.

1. The agency shall notify the Consultant and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

2. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.

3. The agency shall not perform any duties of the Contractor.

D. Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition, the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1. The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

2. The contractor shall schedule pre-installation coordination meetings for key elements in this project:
   a. Pre-Concrete Coordination meeting, including owner, engineer, concrete supplier, testing agency, and other specialty contractors/manufacturers such as the membrane manufacturer and installer.

1.04 SUBMITTALS:

A. The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Consultant, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate.

1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

2. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

   a. Date of issue.
   b. Project title and number.
   c. Name, address and telephone number of testing agency.
   d. Dates and locations of samples and tests or inspections.
   e. Names of individuals making the inspection or test.

f. Designation of the Work and test method.
g. Identification of product and Specification Section.
h. Complete inspection or test data.
i. Test results and an interpretations of test results.
j. Ambient conditions at the time of sample-taking and testing.
k. Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
l. Name and signature of laboratory inspector.
m. Recommendations on retesting.

1.05 QUALITY ASSURANCE

A. Qualification for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.

1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

**PART 2 - PRODUCTS** (Not Applicable)

**PART 3 - EXECUTION**

3.01 REPAIR AND PROTECTION

A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements “Execution” for cutting and patching.

B. Protect construction exposed by or for quality control service activities and protect repaired construction.

C. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

**END OF SECTION 01 45 00**

# SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

1. Temporary utilities may include but are not limited to:

   a. Water service and distribution subject to the scope of work.
   b. Temporary electric power and light subject to the scope of work.
   c. Telephone service if full-time project representation is required.

2. Temporary construction and support facilities may include but are not limited to:

   a. Temporary heat.
   b. Field offices and storage sheds.
   c. Sanitary facilities, including drinking water.
   d. Temporary enclosures, including noise abatement to meet local ordinances, and authorities having jurisdiction.
   e. Temporary Project identification signs and bulletin boards.
   f. Waste disposal services.
   g. Rodent and pest control
   h. Construction aids and miscellaneous services and facilities.

3. Security and protection facilities may include but are not limited to:

   a. Temporary fire protection.
   b. Barricades, warning signs, lights.
   c. Sidewalk bridge or enclosure fence for the site.
   d. Environmental protection.

1.3 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated in this Section.

1.4 QUALITY ASSURANCE

A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction.

B. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use, if applicable. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

A. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

**PART 2 - PRODUCTS**

2.1 MATERIALS

A. Contractor shall be responsible to select appropriate materials and methods for the following temporary installations and for advising the Parking Operator of the materials and methods to be used prior to installation:

1. Securing each Work Area such that the general public does not enter a Work Area during the duration of construction in that Work Area. Contractor is responsible for the safety of each Work Area and protection of the Work from damage.
2. Delineating and securing temporary storage areas.
3. Delineating drive aisles that have been relocated through Work Areas or otherwise in the Garage in a manner that assures safe movement of vehicles.
4. Establishing temporary closures.

2.2 EQUIPMENT

A. General: Provide equipment suitable for use intended.

B. Water Hoses: Provide 3/4" heavy-duty, abrasion-resistant, flexible rubber hoses 100 ft. long, with pressure rating greater than the maximum pressure of the water distribution system; provide adjustable shut-off nozzles at hose discharge.

C. Electrical Outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.

D. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.

E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.

F. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.

G. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows and serviceable finishes. Provide heated and air- conditioned units on foundations adequate for normal loading.

H. Temporary Toilet Units: Provide self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material.

I. First Aid Supplies: Comply with governing regulations.

J. Fire Extinguishers: Provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.

1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

## 3.2 TEMPORARY UTILITY INSTALLATION

A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.

2. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.

3. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.

4. Obtain easements to bring temporary utilities to the site, where the Owner's easements cannot be used for that purpose.

B. Water Service: Water supply is available for Contractor’s use. Contractor is responsible for verifying capacity needs prior to bidding. If the existing capacity is insufficient for the contractor's use, the contractor is responsible for supplementing existing capacity as needed.

C. Wastewater: Dispose of any wastewater from construction operations at an approved off-site location. Do not dispose of wastewater into Owner’s sanitary sewer system, public storm drains, or tree wells. Disposal of wastewater into any storm sewer is strictly prohibited under Title 10, Chapter 6 of the Boise City Code. Contractor is responsible for proper off-site disposal in a legal manner of all wastewater generated by the Work and for any associated disposal fees.

D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Temporary toilets shall be secured when construction personnel are not present in the adjacent Work Area. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

E. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.

F. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.

2. Provide ventilation of elevator vestibule and stairwells as required for installation of coating systems. Ventilation shall be adequate to confine vapors resulting from coating system application to Work Areas and prevent intrusion into occupied spaces and adjacent properties.
3. Use dust partitions as necessary to prevent windblown debris from entering workspace and noxious fumes from entering public areas or occupied areas.

G. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low or high temperatures. Select equipment that will not have a harmful effect on completed installations or elements being installed.

H. Electric Power Service: Electric power from Owner's existing system may be used if outlets are readily available to Work Area without payment of use charges. Provide connections and extensions of services as required for construction operations. Maintain equipment in a condition acceptable to Owner. Electric extensions crossing pedestrian and vehicular traffic areas shall be protected and taped securely to avoid creating hazards. Parking Operator reserves the right to disallow the use of electrical extensions if deemed a safety hazard.

I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

## 3.3 SUPPORT FACILITIES INSTALLATION

A. Parking: Owner will provide parking spaces for a limited number of construction personnel at no charge on garage Level 5 when work is being performed. Contractor shall submit list of personnel working on the Project that will be authorized to use designated parking areas. Authorized construction personnel will be issued parking passes. Contractor shall coordinate with the Parking Operator on parking logistics.

B. Traffic Control: See Section 01 10 00 for requirements related to traffic control in the Garage when Work is being performed.

C. Waste Disposal Facilities:

1. Provide waste collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress and final cleaning requirements in Section 01 73 00.
2. Care shall be taken not to overload the existing slab structure during waste removal operations.
3. Remove trash, waste and construction debris from Project site and legally dispose of them in a legal and lawful manner. Comply with the requirements of authorities having jurisdiction. Owner advises that Owner does not own any trash or recycling dumpsters in the Garage, and dumpsters are not available for Contractor's use.

D. Existing Elevator Use: Use of elevators by construction personnel will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. If floors or walls become dirty, clean them at least weekly. Use of Owner's existing elevators shall not be used to move equipment, construction materials, or supplies. Carrying tool belts and light hand tools by construction personnel when using elevators is acceptable. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.

1. Do not load elevators beyond their rated weight capacity.
2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage authorized elevator technician to restore damaged work so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.
3. Maintain normal elevator operation and public access to elevators and elevator landings in the Garage at all times.

E. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use. If stairs become damaged from use by construction personnel, restore damaged areas so no evidence remains of correction work.

1. Do not damage handrails guardrails walls, ceiling, stair tread, landing surfaces, or other fixtures and surfaces in the stairwells.
2. Maintain normal stairwell operation and public access to stairs and stair landings in the Garage at all times.
3. Public access from the stair landings to parking decks on Level 3 may be closed with approval of the Parking Operator.

F. Existing Smoke Alarms: Protect existing smoke alarms from damage. A smoke alarm in an elevator lobby or on an elevator landing shall remain in operation when the elevator lobby is open for public use. A smoke alarm in an elevator lobby may be disabled when work is being performed in the lobby and/or the lobby is closed to public use. Coordinate disabling of smoke alarms with the Parking Operator.

## 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

C. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Secure Work Areas to protect public safety and to prevent unauthorized entrance, vandalism, theft, and damage to the Work whenever construction personnel are absent from the Work Area.

D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

E. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

F. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.

1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.

G. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner and tenants from fumes and noise.

## 3.5 OPERATION, TERMINATION, AND REMOVAL

A. Maintenance: Maintain facilities in good operating condition until removal.

B. Termination and Removal: Remove each temporary facility when needed for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor.
2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

**END OF SECTION 01 50 00**

## SECTION 01 60 00 MATERIALS AND EQUIPMENT

### PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

B. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals."

C. Standards: Refer to Section "Reference Standards and Definitions" for applicability of industry standards to products specified.

D. Administrative procedures for handling requests for substitutions made after award of the Contract are included under Section "Product Substitutions."

1.03 DEFINITIONS

A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms such are self-explanatory and have well recognized meanings in the construction industry.

1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. Note that some product specifications require job specific purchase of the materials versus use from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

a. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.

2. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.

3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

1.04 SUBMITTALS

A. Product List Schedule: Prepare a schedule showing products specified in a tabular form acceptable to the Engineer. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.

1. Coordinate the product list schedule with the Contractor's Construction Schedule and the Schedule of Submittals.

2. Form: Prepare the product listing schedule with information on each item tabulated under the following column headings:

a. Related Specification Section number.
b. Generic name used in Contract Documents.
c. Proprietary name, model number and similar designations.
d. Manufacturer's and name and address.
e. Supplier's name and address.
f. Installer's name and address.
g. Projected delivery date, or time span of delivery period.

3. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of an initial product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements.

a. At the Contractor's option, the initial submittal may be limited to product selections and designations that must be established early in the Contract period.

4. Completed Schedule: Within 90 days after date of commencement of the Work, submit 3 copies of the completed product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements.

5. Engineer's Action: The Engineer will respond in writing to the Contractor within 2 weeks of receipt of the completed product list schedule. No response within this time period constitutes no objection to listed manufacturers or products, but does not constitute a waiver of the requirement that products comply with Contract Documents. The Engineer's response will include the following:

a. A list of unacceptable product selections, containing a brief explanation of reasons for this action.

1.05 QUALITY ASSURANCE

A. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.

1. When specified products are available only from sources that do not or cannot

produce a quantity adequate to complete project requirements in a timely manner, consult with the Engineer for a determination of the most important product qualities before proceeding. Qualities may include attributes relating to visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources that produce products that possess these qualities, to the fullest extent possible.

B. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.

1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.

2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.

3. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.

4. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.

5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.

6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.

7. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

**PART 2 - PRODUCTS**

2.01 PRODUCT SELECTION

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time

of installation.

1. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.

2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

B. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:

1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.

2. Semi-proprietary Specification Requirements: Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted.

    a. Where products or manufacturers are specified by name, accompanied by the term "or equal," or "or approved equal" comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.

3. Non-Proprietary Specifications: When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.

4. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.

5. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.

    a. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.

6. Compliance with Standards, Codes and Regulations: Where the

Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.

7. Visual Matching: Where Specifications require matching an established Sample, the Engineer's decision will be final on whether a proposed product matches satisfactorily.

    a. Where no product available within the specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category, or for noncompliance with specified requirements.

8. Visual Selection: Where specified product requirements include the phrase"...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Engineer will select the color, pattern and texture from the product line selected.

**PART 3 - EXECUTION**

3.01 INSTALLATION OF PRODUCTS:

A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

**END OF SECTION 01 60 00**

# SECTION 01 73 00 - EXECUTION

## PART 1 – GENERAL

### 1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

### 1.02 SUMMARY

A. This Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction Layout
2. Installation of the Work
3. Progress cleaning
4. Protection of installed construction

B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1. Requirements of this Section apply to existing plumbing and electrical installations.

C. Demolition of selected portions of the building for repair is included in Section "Selective Demolition."

### 1.03 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work

### 1.04 SUBMITTALS

A. Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:

1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.

2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.

3. List products to be used and firms or entities that will perform Work.

4. Indicate dates when cutting and patching is to be performed.

5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.

7. Approval by the Engineer to proceed with cutting and patching does not waive the Engineer's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.05 QUALITY ASSURANCE

A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:

a. Foundation construction.
b. Bearing and retaining walls.
c. Structural concrete.
d. Structural steel.
e. Lintels.
f. Timber and primary wood framing
g. Structural decking.
h. Stair systems.
i. Miscellaneous structural metals.
j. Exterior curtain wall construction.
k. Equipment supports.
l. Piping, ductwork, vessels and equipment.

B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:

a. Shoring, bracing, and sheeting.
b. Primary operational systems and equipment.
c. Air or smoke barriers.
d. Water, moisture, or vapor barriers.
e. Membranes and flashings.
f. Fire protection systems.
g. Noise and vibration control elements and systems.
h. Control systems.
i. Communication systems.
j. Conveying systems.
k. Electrical wiring systems.

C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Engineer's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

1. If possible retain the original installer or fabricator to cut and patch the following categories of exposed Work, or if it is not possible to engage the original installer or fabricator, engage another recognized experienced and specialized firm:

a. Processed concrete finishes.
b. Stonework and stone masonry.
c. Ornamental metal.
d. Matched veneer woodwork.
e. Preformed metal panels.
f. Window wall system.
g. Stucco and ornamental plaster
h. Acoustical ceilings.
i. Terrazzo.
j. Finished wood flooring.
k. Fluid-applied flooring.
l. Carpeting.
m. Aggregate wall coating.
n. Wall covering.
o. Swimming pool finishes.
p. HVAC enclosures, cabinets, or covers.

**PART 2 - PRODUCTS**

2.01 MATERIALS

A. General: Comply with requirement specified in other Sections.

B. In-Place Materials: Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

## PART 3 - EXECUTION

3.01 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

1. Before proceeding, meet at the site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine floors for suitable conditions where products and systems are to be installed.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.02 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information (RFI) to Project Engineer. Temporary Support: Provide temporary support of Work to be cut.

D. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

E. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

F. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

3.03 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Project Engineer promptly.

3.04 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produces harmful noise levels.

G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

3.05 CUTTING AND PATCHING

A. Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

3. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.

4. Comply with requirements of applicable Sections of Division-2 where cutting and patching requires excavating and backfilling.

5. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3. Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even

surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.

a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken containing the patch, after the patched area has received primer and second coat.

4. Patch, repair or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.06 PROGRESS CLEANING

A. General: Clean Project site and Work Areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.

2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.

3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

a. Use containers intended for holding waste materials of type to be stored.

4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire Work Area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

F. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sanitary or storm sewers, tree wells, or into waterways.

G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

H. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.07 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.08 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.

B. Restore permanent facilities used during construction to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

**END OF SECTION 01 73 00**

# SECTION 01 77 00 - CLOSEOUT PROCEDURES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
   a. Contractors List of incomplete items (punch list).
   b. Submittals Prior to Substantial Completion Inspection
   c. Procedures Prior to Substantial Completion
   d. Inspection
2. Final Completion procedures.
3. Warranties – Refer to Division 01 78 36
4. Project Record Documents.
5. Materials.
6. Closeout procedures
7. Final cleaning.
8. Repair of the Work.

B. Closeout requirements for specific construction activities are included in the appropriate Sections.

### 1.3 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor’s List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor’s punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

1. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

2. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.

3. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

4. Include the following information at the top of each page:
   a. Project Name
   b. Date
   c. Name of Project Engineer
   d. Name of Contractor
   e. Page number

B. Submittals Prior to Substantial Completion Inspection: Deliver the following submittals to the Project Engineer a minimum of five (5) business days prior to requesting Substantial Completion Inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.

2. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

3. Submit closeout submittals specified in other Division 01 Sections, including project record documents, record drawings, operation and maintenance manuals, final project photographs, and similar final record information.

4. Submit closeout submittals specified in individual Specification Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

5. Deliver tools, spare parts, extra stock, and similar items.

6. Submit test/adjust/balance records.

7. Submit changeover information related to Owner's use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of five (5) business days prior to requesting inspection for determining date of the Substantial Completion. List items below that are incomplete at time of request.

1. Terminate and remove temporary facilities from Project Site, along with mockups, construction tools, and similar elements.

2. Complete final cleaning requirements.

3. Repair and restore existing buildings and improvements if damaged and/or defaced by construction activity whether inside or outside Project Site to match existing condition prior to commencement of construction.

4. Touch up and otherwise repair and restore marred exposed finished to eliminate visual defects including touchup painting.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of three (3) business days prior to date the Work will be completed and ready for inspection. On receipt of request, Project Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Project Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Project Engineer, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections is completed or corrected.

2. Results of completed inspection will form the basis for requirements for Final Completion.

## 1.4 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment with releases and supporting documentation not previously submitted and accepted, and according to Contract requirements.

2. Certified List of Incomplete Items: submit certified copy of Project Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by the Project Engineer. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.

4. Submit consent of surety to final payment.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of two (2) business days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Project Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Project Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete or defective is completed or corrected.

C. Acknowledgement of Final Payment: Contractor shall execute an Acknowledgment of Final Payment Form provided by Owner in exchange for Final Payment.

1.5 WARRANTIES

A. Refer to Division 01 78 36

1.6 PROJECT RECORD DOCUMENTS

A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Project Engineer's reference during normal working hours.

B. As-Built Drawings and Record Drawings:

1. As Built Drawings: Submit one set of original, clean Drawings issued by Owner as part of the Contract Documents ("Contract Drawings") marked-up to show any changes made in the field during the course of construction such as design changes approved by Owner, actual installations, component relocations required for coordination, rerouting of distribution system, etc. which differ from the original Drawings ("As-Built Drawings"). Deliver As-Built Drawings to the Project Engineer at the time the Substantial Completion Inspection is requested. Project Engineer will indicate whether general scope of changes, additional information recorded and quality of drafting are acceptable. If the submittal is not acceptable to Project Engineer it will be returned to Contractor for corrections.

2. Record Drawings: Maintain a clean, undamaged set of blue or black line white prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
    a. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
    b. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
    c. Note related Change Order numbers where applicable.
    d. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
    e. Project Engineer shall be responsible for creating digital Record Drawings incorporating the mark-ups on the As-Built Drawings submitted by the Contractor. Project Engineer will issue digital Record Drawings to the Contractor and Owner with upon Final Completion of the Project.

C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.

1. Upon completion of the Work, submit record Specifications to the Project Engineer for the Owner's records.

2. Project Engineer shall be responsible for creating digital Record Specifications incorporating the mark-ups on the As-Built Drawings submitted by the Contractor. Project Engineer will issue digital Record Specifications to the Contractor and Owner with upon Final Completion of the Project.

D. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.

1. Upon completion of mark-up, submit complete set of record Product Data to the Project Engineer for the Owner's records.

E. Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Project Engineer and the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.

F. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Project Engineer for the Owner's records.

G. Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Identify the binder on the front and spine with the typed or printed title “MAINTENANCE MANUALS,” Project name, and name of Contractor. Include the following types of information:
1. Emergency instructions.
2. Spare parts list.
3. Copies of warranties.
4. Wiring diagrams.
5. Recommended "turn around" cycles.

6. Inspection procedures.
7. Shop Drawings and Product Data.
8. Fixture lamping schedule.

H. Submit maintenance manuals available from manufacturers and suppliers for concrete, traffic coatings, water repellant, joint sealants and other products, if applicable, to Project Engineer in PDF format and paper copies at the time the Substantial Completion Inspection is requested.

1. PDF documents shall be submitted as a digital folder by flash drive or disk and shall include the Project name in the folder name. Each manufacturer's or supplier's maintenance documentation shall be in a separate digital file within the digital folder. The digital folder shall also include a PDF document with the following information:

a. Name of Project
b. Project Location
c. Name and contact information for Contractor
d. Contact information for each manufacturer and supplier providing maintenance information.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

## PART 3 - EXECUTION

### 3.1 CLOSEOUT PROCEDURES

A. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:
1. Maintenance manuals.
2. Record documents.
3. Spare parts and materials.
4. Tools.
5. Lubricants.

6. Fuels.
7. Identification systems.
8. Control sequences.
9. Hazards.
10. Cleaning.
11. Warranties and bonds.
12. Maintenance agreements and similar continuing commitments.

B. As part of instruction for operating equipment, demonstrate the following procedures:
1. Start-up.
2. Shutdown.
3. Emergency operations.
4. Noise and vibration adjustments.
5. Safety procedures.
6. Economy and efficiency adjustments.
7. Effective energy utilization.

## 3.2 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

a. Clean Project site in areas disturbed by construction activities of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Remove tools, construction equipment, machinery, and surplus material from Project site.
d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
e. Clean elevators and stair treads, and elevator vestibule and stair towers to remove construction residue and debris, and foreign substances.
f. Remove debris and surface dust from limited access spaces affected by construction.
g. Sweep concrete floors broom clean in unoccupied spaces.
h. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
i. Remove labels that are not permanent.

j. Wipe surfaces of mechanical and electrical equipment**,** elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
k. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
l. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
m. Leave Project clean and ready for occupancy.

C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

1. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

## 3.3 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces and touching up with matching materials. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.

2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

4. Repair and restore existing building surfaces if damaged and/or defaced by construction activity whether inside or outside Project Site to match existing condition prior to commencement of construction.

END OF SECTION 01 77 00

# SECTION 01 78 36 - WARRANTIES

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section specifies general administrative and procedural requirements for warranties required by the Contract Documents, including manufacturer’s standard warranties on products and special warranties.

1. Refer to the General Conditions and Contract Documents for terms of the Contractor's special warranty of workmanship and materials.

2. General closeout requirements are included in Section "Project Closeout."

3. Specific requirements for warranties for the Work and products and installations that are specified to be warranted, may be included in the individual Sections.

4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.03 DEFINITIONS

A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.

B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.04 WARRANTY REQUIREMENTS

A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

E. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.05 SUBMITTALS

A. Submit written warranties to the Engineer prior to the date certified for Substantial Completion. If the Engineer's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Engineer.

1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Engineer within fifteen days of completion of that designated portion of the Work.

B. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Engineer for approval prior to final execution.

C. Prepare a written document utilizing an appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier or manufacturer. Submit a draft to the Owner through the Engineer for approval prior to final execution.

1. Refer to individual Sections for specific content requirements, and particular

requirements for submittal of special warranties.

D. Form of Submittal: At Final Completion compile two copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

E. Bind warranties in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.

2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES, the Project title or name, and the name of the Contractor.

3. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

4. Warranty Electronic File: Scan warranties and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

**PART 2 - PRODUCTS** (Not Applicable)

**PART 3 – EXECUTION** (Not Applicable)

**END OF SECTION 01 78 36**

# SECTION 02 41 00
# SELECTIVE DEMOLITION

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. DESCRIPTION

1. Furnish labor, materials, equipment and transportation necessary to do all concrete demolition, as shown on drawings and as specified herein, including but not necessarily limited to the following:

   a. Removal of existing deteriorated concrete as noted on plans or directed by the Engineer.
   b. Removal of existing vertical and overhead concrete where directed by the Engineer.
   c. Dust and water control.
   d. Removal and disposal of all debris.
   e. Disconnecting and relocating/reinstalling any existing utility lines on the site which interfere with the repairs.
   f. Protection of all existing electrical systems, mechanical equipment, light fixtures, overhead piping, fire protection system etc. scheduled to remain.

2. Contractor shall provide barricades with warning lights, enclose the construction area and take all precautions necessary to ensure public and employee safety.

3. All work shall be done in accordance with the requirements of all local and state agencies.

B. QUALITY ASSURANCE

1. Demolition Contractor's Qualifications: Minimum of 5 years experience on comparable projects.

2. Comply with all pertinent codes and regulations which apply to this type of work and with requirements of insurance carriers providing coverage for this work. Dispose of debris in a legal manner off site daily. Do not allow to accumulate on site.

C. JOB CONDITIONS

1. Dust and Water Control: Contractor shall contain particular debris generated by his work activities from polluting the atmosphere, adjacent businesses, or waterways.

2. On-site burning shall not be permitted.

3. Use all means necessary to protect existing facilities, utilities, and appurtenances within the project areas.

1.03 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Schedule indicating proposed sequence of operations for selective demolition work to Owner's Representative for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.

1. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.

2. Coordinate with Owner's continuing use of portions of existing building and/or with Owner's partial occupancy of completed new addition.

C. Photographs of existing conditions of structure surfaces, equipment, and adjacent improvements that might be misconstrued as damage related to removal operations. File with Owner's Representative prior to start of work.

1.04 JOB CONDITIONS

A. Occupancy: Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities that will affect Owner's normal operations.

B. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.

1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner insofar as practicable. However, minor variations within structure may occur prior to start of selective demolition work.

C. Partial Demolition and Removal: Items indicated to be removed but of salvageable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.

1. Storage or sale of removed items on site will not be permitted.

D. Protections: Provide temporary barricades and other forms of protection to protect Owner's

personnel and general public from injury due to selective demolition work.

1. Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to occupied portions of the project.

2. Erect temporary covered passageways as required by authorities having jurisdiction.

3. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished and adjacent facilities or work to remain.

4. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.

5. Protect floors with suitable coverings when necessary.

6. Construct temporary insulated dust resistant partitions where required to separate areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dust resistant doors and security locks.

7. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure that no water leakage or damage occurs to structure or interior areas of existing building.

8. Remove protections at completion of work.

E. Damages: Promptly repair damages caused to adjacent facilities by demolition work.

F. Traffic: Conduct selective demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

1. Do not close, block, or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

G. Flame Cutting: Do not use cutting torches for removal until work area is cleared of flammable materials. At concealed spaces, such as interior of ducts and pipe spaces, verify condition of hidden space before starting flame-cutting operations. Maintain portable fire suppression devices during flame-cutting operations.

H. Utility Services: Maintain existing utilities in service and protect them against damage during demolition operations.

1. Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.

2. Maintain fire protection services during selective demolition operations.

I. Environmental Controls: Use water sprinkling, temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.

1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

**PART 2 - PRODUCTS**

2.01 MATERIALS AND EQUIPMENT

A. Use appropriate materials and proper equipment to complete the work of this Section. Provide all necessary barricades, warning devices, enclosures, etc. as required to comply with governing safety regulations.

**PART 3 - EXECUTION**

3.01 PREPARATION

A. General: Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to be demolished and adjacent facilities to remain.

1. Cease operations and notify Owner's Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.

2. Cover and protect equipment, and fixtures from soilage or damage when demolition work is performed in areas where such items have not been removed.

3. Erect and maintain dust resistant partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.

a. Where selective demolition occurs immediately adjacent to occupied portions of the building, construct dust resistant partitions of minimum 4-inch studs and ½-inch fire-retardant plywood on demolition side.

b. Provide weatherproof closures for exterior openings resulting from demolition work.

4. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.

a. Provide bypass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72 hours advance notice to Owner if shutdown of service is necessary during changeover.

3.02 DEMOLITION

A. General: Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.

1. Demolish concrete in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.

2. Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floors, or framing.

3. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.

B. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Engineer written, accurate detail. Pending receipt of directive from Owner's Representative, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.

3.03 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove from building site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose off site.

1. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

2. Burning of removed materials is not permitted on project site.

3.04 CLEANUP AND REPAIR

A. General: Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.

1. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start operations. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

**END OF SECTION**

# SECTION 03 20 00
# CONCRETE REINFORCEMENT

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 DESCRIPTION

A. Furnish, fabricate and install reinforcement and associated items required or indicated on the drawings for cast-in-place concrete, including, but not necessarily limited to, conventional and epoxy-coated bars, welded wire fabric, ties, and supports.

1.03 WORK SPECIFIED ELSEWHERE

A. Furnishing and placement of inserts, anchorages, and other embedded items as specified in other sections.

1.04 QUALITY ASSURANCE

A. Unless otherwise shown or specified, fabrication and placement of all concrete reinforcement and related items shall conform to the following codes and standards:

1. American Concrete Institute, ACI 318, "Building Code Requirement for Reinforced Concrete."

2. American Concrete Institute, ACI 315, "Manual of Standard Practice for Detailing Reinforced Concrete Structures."

3. Concrete Reinforcing Steel Institute, "Manual of Standard Practice."

1.05 SUBMITTALS

A. Shop Drawings: Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with the ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures." Show bar schedule, stirrup spacing, diagrams of bent bars, arrangements and assemblies, for the fabrication and placement of concrete reinforcement.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver reinforcement to the Project Site bundled, tagged, and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings

shown on placement diagrams.

Protection: Use all means necessary to protect concrete reinforcement before, during, and after installation and to protect the materials and installed work of all trades. Take all necessary precautions to maintain identification of fabricated bars after bundles are broken.

Storage: Store concrete reinforcement materials at the site to prevent damage and accumulation of dirt or excessive rust. Epoxy-coated reinforcing bars shall be stored on protective cribbing.

Epoxy-coated reinforcing bars: Coating damage due to handling, shipment and placing need not be repaired where the damaged area is 0.1 square inches or smaller; damaged areas larger than 0.1 square inches shall be repaired with Section 2.01 C; the maximum amount of damage including repaired and unrepaired areas shall not exceed 2 percent of the surface area of each bar.

**PART 2 - PRODUCTS**

2.01 MATERIALS

A. Reinforcing Bars: ASTM A615, Grade 60, deformed.

B. Welded Wire Fabric: ASTM A82 and ASTM A185. (EPOXY COATED)

C. Epoxy-Coated Reinforcing Bars: ASTM A775. When required, damaged epoxy coating shall be repaired with patching material conforming to ASTM A775 and done in accordance with the material manufacturer's recommendations. Reinforcing bars to be coated shall conform to Section 2.01-A.

D. Bar Supports: Bar supports and spacing of same shall be per recommendations set forth by Chapter 3 of the "CRSI Manual of Standard Practice." Epoxy coated reinforcing bars supported from formwork shall rest on coated wire bar supports, or on bar supports made of dielectric material or other acceptable materials. Wire bar supports shall be coated with dielectric material, compatible with concrete, for a minimum distance of 2 inches from the point of contact with epoxy-coated reinforcing bars. Reinforcing bars used as support bars shall be epoxy-coated.

E. Tie Wire: Wire shall be 16 gauge or heavier, black-annealed. Epoxy-coated reinforcing bars shall be tied with plastic coated, epoxy coated, or nylon-coated tie wire or other acceptable materials.

F. For epoxy grouting reinforcing steel use the Hilti “HIT RE 500 System” supplied by Hilti Fastening Systems, “Dowel Fast” System by Powers Fasteners, or approved equal. Follow manufacturer's directions for installation and required surface preparation.

2.02 FABRICATION

A. General Requirements: Fabricate reinforcing bars to conform to required shapes and dimensions, with fabrication to tolerances complying with CRSI Manual of Standard Practice. In case of fabricating errors, do not rebend or straighten reinforcement in a manner that will injure or weaken the material.

B. Unacceptable Workmanship: Reinforcement with any of the following defects will not be permitted in the work:

1. Bar lengths, depths and bends exceeding specified fabrication tolerances.

2. Bends or kinks not indicated on drawings or final shop drawings.

3. Bars with reduced cross-section due to excessive rusting or other cause.

C. When epoxy-coated reinforcing bars are cut in the field, the ends of the bars shall be coated with the same material used for repair of coating damage.

**PART 3 - EXECUTION**

3.01 PLACING REINFORCEMENT

A. General Requirements:

1. All reinforcing bars shall be placed in accordance with CRSI "Recommended Practice for Placing Reinforcing Bars."

2. Bars shall be placed to the tolerance specified in ACI 318.

3. Place all reinforcement according to the approved placement drawings. Use sufficient bar supports, tie anchors, additional reinforcing bars, if required, and other accessories to hold all bars securely in place.

B. Concrete Coverage: Place reinforcement to obtain the minimum coverages specified on the drawings for concrete protection. Arrange, space, and securely tie bars and bar supports together with 16 gauge wire to hold reinforcement accurately in position during concrete placement operation. Set wire ties so that twisted ends are directed away from exposed concrete surfaces.

C. Cleaning Reinforcement: Steel reinforcement, at the time concrete is placed around it, shall be free from loose rust and mill scale, oil, grease, paint, earth, ice and all coatings, which would reduce or destroy bond between steel and concrete. Clean reinforcement as necessary prior to, during, or after placement to achieve this result. When bars project from construction joints, all cement mortar clinging to the bars from previous concreting shall be removed before the ensuing enveloping concrete is placed.

3.02 REINFORCING BAR LAP SPLICES

A. New slab reinforcing bars may be spliced to existing bars by lapped splices if adequate lengths of exposed existing bars are available. Provide reinforcement lap splices by placing bars in contact and tying with wire tightly. Comply with the requirements of Engineering Data Report Number 45, 'Tension Development and Lap Splice Lengths of Reinforcing Bars Under ACI 318-08' for minimum required length of bar for lap splices. Alternatively, the contractor can follow the values provided below for lap splice lengths based on the following guidelines:

LAP SPLICE LENGTHS FOR BARS IN TENSION (IN INCHES)

| Bar Size | Uncoated Reinforcement | Epoxy-Coated Reinforcement |
|---|---|---|
| 3 | 17 | 25 |
| 4 | 22 | 33 |
| 5 | 28 | 41 |
| 6 | 33 | 50 |
| 7 | 48 | 72 |
| 8 | 55 | 83 |
| 9 | 62 | 93 |

Note 1. Based on Class B splice = 1.3 ld (ld = tensile development length)
Normal weight concrete
f'c= 5,000 psi min.
Grade 60 reinforcement
Concrete cover = 1.00 in. or greater
Bars have less than 12 in. concrete cast below them.

Note 2. Lap splice lengths for epoxy-coated steel based on concrete cover equal to or greater than 3 bar diameters and clear spacing between bars equal to or greater than 6 bar diameters.

Note 3. For lightweight aggregate concrete, multiply the tabulated values by 1.3.

B. Do not make splices at points of maximum stress if possible.

C. Stagger top splices, and in horizontal wall reinforcement separate at least five feet longitudinally in alternate bars of opposite tiers.

D. Stubs and dowels required to receive and engage subsequent work shall extend a sufficient length to develop the strength of the bar. Place dowel and stub bars in the forms and secure against displacement during the placing of concrete. Where stub steel and dowels extend through construction joints in walls, they shall be thoroughly cleaned of adhering particles of concrete, before continuing the placing of any subsequent concrete.

E. Where splicing length is insufficient either additional concrete removal or mechanical bar splicing shall be implemented at the direction of the Engineer.

3.03 REINFORCING BAR MECHANICAL SPLICES

A. Bars to be spliced by the mechanical splicing process shall be free of paint, oil, rust, scale or other foreign material. The splice shall be done in accordance with the manufacturer's recommendations which shall be submitted to the Engineer for approval.

The mechanical splice shall meet full tension requirement of 100% of the yield strength (fy). The mechanical splices shall be performed using the Quick Wedge system manufactured by Erico Products, Inc. (800)248-2677, MBT Bar Lock System (800) 755-4888, or approved equal.

Test assemblies shall include the same bars, couplers and anchors. The same equipment shall be used to make these assemblies as to be used on the project.

B. Unskilled operators must be trained and indoctrinated by an authorized representative of the system manufacturer. Upon satisfactory completion of the training, a certificate will be issued by the system manufacturer to show the splicer's name, badge, number/Social Security Number and date certified.

C. Test splices should be made on the size, type and grade of rebar to be used in production. If a change of size, type of grade or rebar occurs, new test results should be obtained.

Minimum rebar deformation heights and spacing within the splice must conform to the requirements of ASTM A625, or ASTM A706 as appropriate. If minimum deformation heights and spacing requirements cannot be satisfied, the system's manufacturer may at its option offer and get an approval for alternate splicing procedure to meet the specified splicing strength requirements.

D. The frequency of test splices shall be as follows:

First Fifty (50) - One Test
Next Fifty (50) - One Test
Thereafter, every one hundred (100) - One Test

The test splice shall be a SISTER SPLICE (removable splice made in-place and in sequence adjacent to production splices by the same operator and under same conditions.)

Separate test frequencies are not necessary to horizontal, vertical and diagonal splices.

E. If any splice used for testing fails to meet the design code strength requirements, two splices in-place shall be cut from the previous lot and tested. If these sister splices fail, the contractor shall at his own expense, test as many splices as directed by the Engineer and re-splice all test and failed splices.

**END OF SECTION**

# SECTION 03 30 00
# CONCRETE WORK

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section specifies cast-in-place concrete, including formwork, mix design, placement procedures, and finishes.

1.03 SCOPE OF WORK

A. This work shall consist of full/partial depth removal (using acceptable methods) of deteriorated concrete at locations indicated on the drawings and placing new, low water-cementitious materials ratio, micro fiber-reinforced, air-entrained structural concrete according to the specifications.

1.04 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Product data for proprietary materials and items, including forming accessories, admixtures, patching compounds, bonding grout/agent, joint systems, curing compounds, and others as requested by Consultant.

C. The Contractor shall submit ACI 318 concrete mix proportioning data with compressive strength test results to the Consultant for approval.

D. The Testing Agency shall submit test results of cylinders for each day's testing.

E. The Contractor shall submit the proposed pouring sequence and construction joint layout for approval by the Consultant.

F. Minutes of pre-concrete conference.

1.05 QUALITY ASSURANCE:

A. Codes and Standards: Comply with provisions of following codes, specifications, and standards, except where more stringent requirements are shown or specified:

1. ACI 318-11, "Building Code Requirements for Structural Concrete," or AASHTO specifications.
2. ACI 562-16, “Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures and Commentary”

B. Materials and installed work may require testing and retesting at any time during progress of work. Retesting of rejected materials for installed work, shall be done at Contractor's expense.

C. Pre-Concrete Conference: Conduct coordination meeting at Project site to comply with requirements of Division 1 Section 01 33 00 - Submittals, and Section 01 45 00 - Quality Control Services.

D. At the onset of the project start or at least 30 days prior to the first concrete pour, the contractor shall conduct a meeting to review the proposed mix designs and to discuss the required methods and procedures necessary to achieve the required concrete quality. The meeting will review requirements for submittals, status of coordinating work, and availability of materials. It will also establish preliminary work progress schedule and procedures for materials inspection, testing, and certifications. Representatives of each entity directly concerned with cast-in-place concrete should attend the meeting, including, but not limited to, the following:

1. Contractor's superintendent.
2. Laboratory responsible for concrete design mixes.
3. Laboratory responsible for field quality control.
4. Ready-mix concrete producer.
5. Concrete subcontractor, if any.
6. Primary admixture manufacturers.
7. Consultant or Owner's representative.

The minutes shall include a statement by the concrete contractor indicating that the proposed mix design and placing techniques will produce the concrete quality required by these specifications.

E. Placement of concrete during cold weather is to be in accordance with the latest version ACI 306. Cold weather concreting is required when a period for more than three successive days the average daily air temperature drops below 40 degrees Fahrenheit and stays below 50 degrees Fahrenheit for more than one-half of any 24 hour period.

1.06 APPLICATOR'S QUALIFICATIONS:

A. The Contractor shall have a minimum of five years of experience in performing work similar to that shown in the drawings and specifications.

B. The Contractor may be requested to submit a list of five projects in which similar work to that specified was successfully completed. This list shall contain the following for each of the five projects.

1. Project Name
2. Owner of Project
3. Owner's Representative, Address and Telephone Number
4. Brief Description of Work
5. Cost of Portion of Work Similar to that Specified in this Section
6. Total Restoration Cost of Project
7. Date of Completion

**PART 2 - PRODUCTS**

2.01 FORM MATERIALS:

A. Forms for Exposed Finish Concrete: N/A

B. Forms for Unexposed Finish Concrete: Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.

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

D. Form Ties: Factory-fabricated, adjustable-length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent spalling concrete upon removal. Provide units that will leave no metal closer than 1-1/2 inches to exposed surface.

1. Provide ties that, when removed, will leave holes not larger than 1-inch diameter in concrete surface.

2.02 CONCRETE MATERIALS:

A. Portland Cement: ASTM C 150, Type I, non air-entraining, of recent manufacture and free of lumps.

1. Use one brand of cement throughout project unless otherwise acceptable to Consultant.

2. Pozzolanic materials (fly ash or slag) may be substituted for a portion of the cement when reviewed and approved by the Consultant or Owner's representative. Submittals must indicate testing to prove its suitability in

combination with the intended cement and aggregate.

3. Additional, sustained moist curing of the concrete is required when pozzolans are used.

B. Normal Weight Aggregates: ASTM C-33 class 4S and as herein specified. Provide aggregates from a single source for exposed concrete. Coarse aggregates shall be clean, sound crushed stone or crushed gravel. Maximum size of coarse aggregate shall be 3/4 inch. No chert shall be permitted.

C. Water: Potable water

D. Power: Power to the site must be provided by the Contractor, for power tools such as hammers, mixers, etc.

E. Sand: ASTM C-33. Sand shall be clean and sharp.

F. Admixtures, General: Provide admixtures for concrete that are free from chloride ions.

G. Air-Entraining Admixture: ASTM C-260, certified by manufacturer to be compatible with other required admixtures.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:

2. Products: Subject to compliance with requirements, provide one of the following:

a. "Air-Mix" or "AEA-92," Euclid Chemical Co.
b. "Darex AEA" or "Daravair," W.R. Grace & Co.
c. "MB-VR" or "Micro-Air," Master Builders, Inc.
d. "Sealtight AEA," W.R. Meadows, Inc.
e. "Sika AER," Sika Corp.

H. Water-Reducing Admixture: ASTM C 494, Type A.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:

2. Products: Subject to compliance with requirements, provide one of the following:

a. "Eucon WR-75," “WAR-91” or “Eucon MR,” Euclid Chemical Co.
b. "WRDA with Hycol," or “Daracem 65,” W.R. Grace & Co.
c. "Pozzolith 322” or “Polyheed 997,” Master Builders, Inc.
d. "Plastocrete 161," Sika Corp.

I. High-Range Water-Reducing Admixture (Super Plasticizer):

ASTM C 494, Type F or Type G.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:

2. Products: Subject to compliance with requirements, provide one of the following:

   a. "Eucon 37," "Eucon 1037," or "Plastol 5000," Euclid Chemical Co.
   b. "WRDA 19" or "Daracem 100," GCP Applied Technologies
   c. "Rheobuild 1000," BASF Building Systems
   d. "Sikament 300," Sika Corp.

J. Water-Reducing, Retarding Admixture: ASTM C 494, Type D.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:

2. Products: Subject to compliance with requirements, provide one of the following:

   a. "Eucon Retarder 75," Euclid Chemical Co.
   b. "Daratard-17," GCP Applied Technologies.
   d. "MasterSet–R-100" BASF Building Systems
   e. "Plastiment," Sika Corporation.

K. Certification: Written conformance to the above-mentioned requirements and the chloride ion content of admixtures will be required from the admixture manufacturer prior to mix design review by the Engineer.

L. Synthetic Micro-Fiber Reinforcement:

1. Subject to compliance with requirements, provide fibrous reinforcement as per specification Section 03 24 00.

2.03 RELATED MATERIALS:

A. Reglets: Where resilient or elastomeric sheet flashing or bituminous membranes are terminated in reglets, fill reglet or cover face opening to prevent intrusion of concrete or debris.

B. Moisture-Retaining Cover: Burlap and plastic complying with ASTM C 171.

C. Moist Curing: Curing shall be accomplished by wet curing only. A curing membrane shall only be used in floor areas if approved in writing by the Consultant or Owner's representative.

D. Liquid Curing and Sealing Compound (VOC compliant, 350 g/l): The compound shall have

30% solids content minimum and will have a maximum moisture loss of 0.039 grams/cm2 when applied at a coverage rate of 250 ft2/gallon. Product shall be "Super Aqua-Cure VOX," or "Super Diamond Clear VOX" by the Euclid Chemical Co.

or

Curing and Sealing Compound (VOC compliant, 700 g/l): Liquid type membrane-forming curing compound, clear styrene acrylate type, complying with ASTM C1315, Type I, Class B, 25% solids content minimum. Moisture loss shall be not more than 0.30 Kg/m2 when applied at 300 sq. ft./gal. Manufacturer's certification is required. Subject to project requirements provide one of the following products: "Super Rez Seal" by the Euclid Chemical Company, "MasterKure CC 1315" by Master Builders or "MasterKure CC 300 XS" by BASF Building Systems.

2.04 PROPORTIONING AND DESIGN OF MIXES

A. Prepare design mixes for concrete by laboratory trial batch or field experience methods as specified in ACI 301, Section 4.2.3. Use an independent testing facility acceptable to the Consultant for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing.

B. Submit written reports to the Consultant of each proposed mix at least 15 days prior to start of work. Do not begin concrete production until proposed mix designs have been reviewed and approved by the Consultant. All mix designs shall be submitted on a Mix Design Submittal Form.

C. Design mix to provide structural concrete with the following properties;

**1. 5000-psi, 28-day compressive strength, structural normal weight 145 pcf; W/C ratio: 0.38 maximum; air entrained, micro fiber reinforced per specification section 03 24 00.**

2.05 ADMIXTURES

A. Use high-range water-reducing admixture (Superplasticizer) in concrete for placement and workability.

B. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content of 6.0% with a tolerance of plus or minus 1.0 percent.

C. Use admixtures for water reduction and set control in strict compliance with manufacturer's directions.

D. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:

1. 3 inches plus or minus ½ inch, prior to addition of superplasticizing admixture.
2. Not more than 8 inches final slump after addition of superplasticizing admixture.

2.06 CONCRETE MIXING

A. Provide batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mix type, mix time, quantity, and amount of water introduced.

B. Ready-Mix Concrete: Comply with requirements of ASTM C 94, and as specified.

1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

**PART 3 - EXECUTION**

3.01. PREPARATION

A. Remove concrete members as indicated on the drawing. The removal of concrete shall be performed using approved methods and prepare the concrete surfaces to receive new concrete as shown on plans and as directed by the engineer in the field.

3.02 FORMS

A. General:

1. The Contractor shall submit detailed drawings for form work for examination by the Consultant. If such drawings are not satisfactory to the Consultant, the Contractor shall make such changes in them as may be required, but it is understood that the Consultant's examination of the drawings as submitted or corrected shall in no way relieve the Contractor of responsibility for obtaining satisfactory results.

2. All forms shall be so constructed and maintained that the finished concrete will be true to line and grade and of the shape and dimensions shown on the Plans. The forms shall be constructed so that they can be removed without injury to the concrete.

3. Forms shall be mortar-tight, sufficiently rigid to prevent distortion due to the wet concrete mix and other loads incident to construction operations, including vibration, and so constructed and maintained to prevent warping and opening of the joints due to shrinkage of the form material. Molding strips shall be placed in the corners of forms so as to produce beveled edges on permanently exposed

concrete corners.

4. The interior of forms shall be treated with a non-staining form oil before concrete is placed to prevent adhesion of the concrete to the form.

5. All lumber in contact with concrete shall be free from knot holes, loose knots, cracks, splits, warps or any other defects which would mark the appearance of the finished structure. Any lumber which had defects affecting its strength shall not be used.

6. In designing forms, concrete shall be considered as a liquid weighing 150 pounds per cubic foot for vertical loads and for computing the hydrostatic head for horizontal pressure. In addition, a live load allowance of 50 pounds per square foot shall be used on horizontal projections of surfaces. Forms shall be designed so that no member will develop a dead load deflection of more than 1/270th of the span.

7. Spreader blocks and non "stay-in-place" bracing shall be removed from forms before concrete is placed. In no case, shall any portion of wood be left in the concrete.

B. Forms for Permanently Exposed Surfaces:

1. Forms for concrete surfaces that will be permanently exposed to view shall be constructed of plywood or of metal panels. Wood or metal linings for forms shall be of such kind and quality, or shall be so treated or coated, that there will be no chemical deterioration or discoloration of the formed concrete surface. The type and condition of form linings, and the construction of the forms, shall be such that form surfaces will be even and uniform.

2. Plywood sheets less than five-eighth inch in thickness shall be placed against a solid wood backing of three-quarter inch sheathing. Plywood sheets five-eighth inch or more in thickness may be used without backing, provided the forms are constructed to withstand pressure developed during placing of concrete without producing visible waviness between studs. Plywood sheets shall be placed so that joints are tight and with the long dimension horizontal.

3. Metal for forms shall be of such thickness that the forms will remain true to shape. Clamps, pins, or other connecting devices shall be such that they will hold the forms rigidly together in place and allow removal without injury to the concrete. Metal forms which do not present a smooth surface or line up properly shall not be used. All metal forms shall be kept free from rust, grease, or other foreign material which would discolor the concrete.

4. Form panels, either of wood or metal, shall be constructed and assembled so as to result in tight joints between the panels.

C. Form Anchorage:

1. Forms shall be securely tied together with approved rods, and braced in a substantial and unyielding manner. In general, tie rods shall be designed to also act as struts or spreader. Wood struts will not be permitted to remain in the concrete.

2. For concrete surfaces that will be permanently exposed to view, metal ties or anchorages within the forms shall be constructed so as to permit their removal to a depth of at least one and one-half inches from the face without injury to the concrete. The cavities on both sides of the concrete resulting from the removal of the end of form ties shall be filled with dry-pack Portland cement mortar having the same proportions of cement and sand as the mortar in the body of the concrete. The surface of the filling shall be left sound, smooth and even and shall match, insofar as practicable, the color of the surrounding concrete.

3. Devices which, when removed, will leave an opening entirely through the concrete will not be permitted. Wire ties shall not be used. Any parts of metal supports or spacers for reinforcement that are left in place within one and one-half inches of an exposed surface of the concrete shall be of non-rusting metal or have a non-rusting coating. If such parts are galvanized, the weight of zinc coating shall average not less than two ounces per square foot of actual surface.

D. Inspection of Forms:

1. All dimensions of forms in place shall be carefully checked before concrete is placed. Immediately prior to placing concrete, any warpings or bulging shall be corrected and all dirt, sawdust, shavings or other debris removed. In narrow walls where the bottom of the forms are otherwise inaccessible, the lower boards or panels shall be left loose on the back side so that extraneous material can be removed just prior to placing concrete.

2. If during placing of the concrete, the forms show signs of bulging or sagging, they shall be properly realigned and securely braced, and, if necessary to make proper correction, the portion of the concrete affected shall be removed.

3. When forms are unsatisfactory in any way, either before or during the placing of concrete, the placing shall be suspended until the defects are corrected.

4. If the forms develop any defects, such as bulging, sagging, leakage or irregular surfaces after the concrete has been poured, that portion of the work shall be removed, reconstructed or repaired as directed by the Consultant without additional compensation to the Contractor.

3.03 PLACING FINISHING AND CURING:

A. Bonding Grout:

1. After the existing concrete surface has been cleaned, it shall be uniformly saturated by pre-wetting for 2 hours minimum. Surface must be wet to saturated surface dry (SSD) condition, and any freestanding water shall be completely removed prior to placing the bonding grout. Immediately before placing concrete, a thin coating of bonding grout shall be scrubbed into the properly prepared surface of the existing concrete. Proper workmanship shall be exercised to insure that all existing surfaces receive a thorough, even coating and that no excess grout is permitted to collect in pockets. The rate of progress in applying grout shall be limited so that the grout does not become dry before it is covered with new concrete.

2. Bonding grout for patching concrete to existing concrete shall consist of equal parts by weight of Portland Cement and sand mixed in a portable mechanical mixer with sufficient water to form a stiff slurry. The consistency of this slurry shall be such that it can be applied with a stiff brush or broom to the old concrete in a thin, even coating that will not run or puddle in low spots.

3. Should the bonding grout dry before the concrete is placed, the Contractor will remove the dried grout and sandblast clean the grouted surface, at his expense, before placing fresh bonding grout.

4. When the method of concrete removal includes hydromilling or hydrodemolition, the requirements for the use of bonding grout may be waived. Prepared surfaces shall be clean and free of laitance, foreign material and any debris encountered during surface preparation. Do not allow cement to dry and re-adhere on the surfaces. The surface shall be uniformly saturated by wetting for 4 hours (min.) Surface will be saturated surface dry (SSD) condition, and any free-standing water shall be completely removed prior to concrete placement. No free moisture or puddles on the surface will be permitted or accepted.

B. Placing and finishing: After the bonding grout has been applied, concrete shall be placed, consolidated by vibration, and shall be finished by screening and bull floating to bring the finished surface to specified elevation. The surface shall then receive a light broom finish, as directed by the Engineer. The reinforcing steel shall have a minimum concrete cover as shown on plans. The finished concrete shall be suitably protected, until the completion of the required curing period. Provide tooled joints between new and existing concrete surfaces.

C. Curing: The recommendations of ACI 308 Standard Practice for Curing Concrete, shall be followed. When water is required to wet the surface of the newly placed concrete, it shall be applied as a fine spray so that it will not mark or pond on the surface. Except where otherwise specified, the curing period shall be at least 72 hours. If high early strength concrete is approved by the Consultant, the curing period may be reduced as directed by

the Consultant. If fly ash or slag is approved in the mix by the Consultant, the curing time will be extended. Curing shall be accomplished by wet curing only. The curing and sealing compound shall only be used on floor and slab areas approved by the Consultant.

1. The surface of the newly poured concrete shall be covered with wetted burlap as soon as the concrete has hardened sufficiently to prevent marring of the surface. The burlap shall overlap six inches. At least two layers of wetted burlap shall be placed on the finished surface. The burlap shall be kept saturated by means of a mechanically operated sprinkling system. In place of the sprinkling system, two layers of burlap may be substituted for one layer of burlap and impermeable covering.

   The burlap sheets shall be placed so that they are in contact with the vertical faces of concrete slabs after removal of slab forms, and that portion of the material in contact with those faces shall be kept saturated with water.

2. Membrane Curing Method. Membrane curing will not be permitted unless approved in writing by the Consultant. Concrete at these locations shall be cured by another method as specified above.

   After the concrete has been finished, the surface shall be cured with the specified curing compound. The seal shall be maintained for the specified curing period. The vertical faces of concrete slabs shall, likewise, be sealed immediately after the forms are removed. This high solids curing and sealing compound shall be applied at a maximum coverage rate of 250 square feet per gallon. These applications shall be made with mechanical equipment.

   At locations where the coating is discontinuous or where pin holes show or where the coating is damaged due to any cause and on areas adjacent to sawed joints, immediately after sawing is completed, an additional coating of membrane curing compound shall be applied at the rate of one gallon per 250 square feet.

3. The Consultant may order curing by another method specified herein if unsatisfactory results are obtained with a curing compound. Prior to starting The Work, the Contractor shall have available, at the site of The Work, supply of one of the other approved curing materials sufficient for curing one day's production.

4. The Contractor's construction operations including the management of traffic, shall be such as to avoid damage to the coatings of curing compound for period of not less than the curing period specified. Any curing compound that is damaged or that peels from the concrete surface within the curing period specified, shall be repaired by the Contractor without delay and in an approved manner. No additional compensation will be allowed to the Contractor for performance of this work.

3.04 REMOVAL OF FORMS:

A. General: Formwork may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 72 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form-removal operations, and provided curing and protection operations are maintained.

3.05 REUSE OF FORMS

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

B. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use "patched" forms for exposed concrete surfaces except as acceptable to Consultant.

3.06 CONCRETE SURFACE REPAIRS

A. Patching Defective Areas: Repair and patch defective areas with bonding grout or proprietary repair products immediately after removal of forms, when acceptable to Consultant.

1. Cut out honeycomb, rock pockets, voids over 1/4 inch in any dimension, and holes left by tie rods and bolts, down to solid concrete but in no case to a depth of less than 1 inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with specified bonding agent. Place patching mortar before bonding grout has dried.

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

B. Repair of Concrete Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Consultant. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets, fins and other projections on surface, and stains and other discolorations that cannot be removed by cleaning. Flush out form tie holes, fill with dry-pack mortar, or precast cement cone plugs secured in place with bonding agent.

1. Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete.

3.07 QUALITY CONTROL TESTING DURING CONSTRUCTION

A. General: The Owner will employ a testing laboratory to perform tests and to submit test reports.

B. Sampling and testing for quality control during placement of concrete may include the following, as directed by Consultant.

C. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94.

1. Slump: ASTM C 143; one test at point of discharge for each truck delivering the concrete; additional tests when concrete consistency seems to have changed.

2. Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure method for normal weight concrete; one for each truck of air-entrained concrete.

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

4. Compression Test Specimen: ASTM C 31; one set of 6 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory-cured test specimens except when field-cure test specimens are required.

5. Compressive Strength Tests: ASTM C 39; one set for each day's pour exceeding 5 cu. yds. plus additional sets for each 50 cu. yds. more than the first 25 cu. yds. of each concrete class placed in any one day; one specimen tested at 3 days, two specimen tested at 7 days, 2 specimens tested at 28 days, and one specimen retained in reserve for later testing if required.

6. When frequency of testing will provide fewer than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.

7. When total quantity of a given class of concrete is less than 50 cu. yds., Consultant may waive strength test if adequate evidence of satisfactory strength is provided.

8. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.

9. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive

strength, and no individual strength test result falls below specified compressive strength by more than 500 psi.

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

E. Nondestructive 3-day Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection.

F. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Consultant. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Contractor shall pay for such tests when unacceptable concrete is verified.

**END OF SECTION**

# SECTION 03 31 24.16
# CONCRETE REPAIR USING HIGH STRENGTH, FAST-SETTING MATERIALS

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections apply to the work of this section.

1.02 SCOPE OF WORK

A. This work shall consist of the removal of existing delaminated concrete and the installation of a fast-setting, high-strength concrete at locations to be re-opened to traffic the following morning or designated by the Engineer. Materials in this specification may also be appropriate when the scope of concrete work is limited and it is not practical to use ready-mixed concrete.

## PART 2 - PRODUCTS

2.01 MATERIALS

A. The fast-setting concrete repairs must achieve a compressive strength of 3,500 psi or safely accept vehicular traffic within 3 hours of placement.

B. The concrete shall resist freeze/thaw damage and scaling in compliance with ASTM Test Procedures C-666 and C-672. The products approved under this section shall be:

1. "SikaEmaco T1060 or T1061" manufactured by Sika Corporation (www.sikausa.com)

2. “VersaSpeed 100” as manufactured by the Euclid Chemical Company (www.EuclidChemical.com)

3. “SikaQuick 1000 or 2500” as manufactured by Sika Corporation (www.sikausa.com)

4. “HP Deck Mix AE” as manufactured by U.S. Concrete Products (https://uscproducts.com/) (410-561-8770).

Note: Products related to those above with extended working times may be acceptable at the discretion of the Engineer.

**PART 3 - EXECUTION**

3.01 SURFACE PREPARATION

A. The exact location of spalled concrete to be repaired will be determined in the field by tapping of slab with a sounding rod, chain drag or hammer. An outline of the area to be repaired will be marked with chalk.

B. The areas of the spalled concrete to be removed will be outlined by making a sawcut around the perimeter of the spalled area. The nominal depth of sawcut shall be 1/2 inch. Do not, under any circumstances, cut existing reinforcing bars or post-tensioning strands.

C. All loose unsound concrete shall be removed with pneumatic or electric jack hammer weighing no more than 15 lbs. may be used for removing concrete around mild steel reinforcement. Where unsound concrete is below reinforcement, removal to 3/4 inch below reinforcement is required.

D. All deteriorated reinforcing steel bars which have lost more than 20% (or more) of their cross-sectional areas or selected by the Engineer shall be replaced. New reinforcing steel bars shall be furnished and placed in accordance with Section 03200 of the technical specifications and under the directions of the Engineer.

E. The deck surface shall be blown clean with compressed air to assure that all loose or hollow concrete is removed. The reinforcing steel shall be sand blasted to remove all rust.

3.02 PLACING, FINISHING AND CURING

A. Place and properly mixed concrete into the prepared area from one side to the other. Do not place concrete in lifts. Work the material firmly into the bottom and sides of the patch to assure good bond. Do not re-temper or finish material after initial set.

B. For maximum performance and minimal shrinkage, wet curing shall be performed for a minimum of 3 hours followed by the application of an approved curing compound.

3.03 METHOD OF MEASUREMENT

This work will be measured for payment in square feet. The quantity of repair area will be computed from areas marked by the Contractor and approved by the Engineer.

**END OF SECTION**

**SECTION 03 37 15.11**
**CONCRETE REPAIR USING TROWEL APPLIED MORTAR**

**PART 1 - GENERAL**

1.01 RELATED DOCUMENTS:

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SCOPE OF WORK:

A. This work shall consist of the removal of existing unsound concrete to required depth and the installation of a trowel applied, fast-setting cement repair material at locations indicated on drawings and/or at other locations designated by the Engineer.

**PART 2 - PRODUCTS**

2.01 MATERIALS:

A. The fast-setting polymer repair mortar shall achieve a compressive strength of 5,000 psi in 28 days. The products approved under this section are as follows.

1. “SikaEmaco 425 Gel Patch” as manufactured by Sika Corporation (www.sikausa.com)

2. "SikaTop-123 Plus or SikaQuick VOH" as manufactured by Sika Corporation (www.sikausa.com)

3. “Verticoat or Verticoat Supreme” as manufactured by the Euclid Chemical Company (www.euclidchemical.com)

4. “CT-40” as manufactured by J.E. Tomes & Associates (www.jetomes.com)

5. “Thin Patch VO” as manufactured by U. S. Concrete Products (https://uscproducts.com/) (410) 561-8770

**PART 3 - EXECUTION**

3.01 SURFACE PREPARATIONS:

A. All loose and unsound concrete shall be removed with small chipping hammers. Remove concrete a minimum of 3/4" beyond the reinforcing steel.

B. The surface shall be blown clean with compressed air to assure that all loose and hollow concrete is removed. The reinforcing steel shall be sandblasted to remove all rust.

3.02 PLACING, FINISHING AND CURING (Trowel Applied Mortar):

A. Apply patching material as follows and in accordance with manufacturer's recommendations.

B. Saturate the surface with water and allow to dry so that there is no standing water and the surface maintains a dark gray color one half hour before placing.

C. Scratch a base coat firmly into the dampened surface and apply the balance of the patch before base coat is allowed to dry. Consolidate the mortar for density. For deep patches, add recommended filler and apply the material in lifts, allowing it to stiffen enough between lifts to support its own weight. For repairs over 4 inches deep, steel ties shall be provided to aid in weight support. Maximum filler addition to be 1 part filler to 2 parts by volume. The surface shall be troweled and brushed to match surrounding concrete.

D. The finished patch shall be cured for at least forty-eight hours. Keep damp with water or coat with a water-based curing and sealing compound conforming to ASTM C1315 as recommended by the polymer repair mortar manufacturer.

E. In hot weather, the surface shall be kept cool by shading. Use cold liquid for mixing. Work material rapidly since heat accelerates set. Cure immediately. In cold weather, do not make repair if temperature is expected to fall below freezing within 48 hours of placing. The patches must be kept at a minimum of 60 degrees F. for seventy-two hours for proper curing.

3.03 TESTING:

A. The patched areas shall be sounded with a chain drag and/or hammer after 7 days after concrete placement; any hollowness detected shall be corrected by the Contractor by removing and replacing the patch at no extra cost to the Owner.

**END OF SECTION**

# SECTION 03 37 16.16
# CONCRETE REPAIR USING FORM AND PUMP MATERIALS

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and all Divisions of the Specifications apply to this Section.

1.02 SCOPE OF WORK

A. This work shall consist of the removal of existing unsound concrete to required depth and the installation of a prepackaged pump and pour repair material at locations indicated on drawings and/or at other locations designated by the Engineer.

## PART 2 - PRODUCTS

2.01 MATERIALS

A. The pump and pour repair material shall achieve a minimum compressive strength of 5,000 psi in 28 days. The products approved under this section are as follows.

1. "MasterEmaco S477 CI, MasterEmaco S440 and S440 CI" as manufactured by BASF Building Systems (www.buildingsystems.basf.com).

2. "Sikacrete 211 SCC Plus or SikaTop 111 Plus" as manufactured by Sika Corporation (www.sikausa.com).

3. "FormFlo P-38 or FormFlo P-51" as manufactured by J.E. Tomes & Associates (www.jetomes.com).

## PART 3 - EXECUTION

3.01 SURFACE PREPARATIONS

A. Saw cut the perimeter of the repair area to a nominal depth of 1/2". Take precautions in areas likely to contain top reinforcing not to cut any reinforcing steel or post-tensioning strands.

B. All loose and unsound concrete shall be removed with small chipping hammers to provide a minimum ¼" substrate profile. Remove concrete a minimum of 3/4" beyond the reinforcing steel.

C. The surface shall be blown clean with compressed air to assure that all loose and hollow concrete is removed. The reinforcing steel shall be sandblasted to remove all rust. All

measures must be taken to prevent flash rusting from occurring to the reinforcing steel.

D. Forms shall be watertight. Apply a suitable form release to the forms.

3.02 PLACING, FINISHING, AND CURING

A. Apply repair material as follows and in accordance with manufacturer's recommendations.

B. Mix the repair material according to manufacturer's recommendations. Follow the manufacturer's guidelines for extending the repair mortar by adding aggregate if required.

C. Saturate the surface with water and allow to dry so that there is no standing water and the surface maintains a dark gray color one half hour before placing.

D. Vibrate form while pumping repair material using a variable pressure pump. Do not overpump so that the forms deflect.

E. Cure the repaired area as recommended by the repair mortar manufacturer.

3.03 TESTING

A. The patched areas shall be sounded with a hammer after 7 days after concrete placement; any hollowness detected shall be corrected by the Contractor by removing and replacing the patch at no extra cost to the Owner. The contractor shall provide access, at their expense, for the Engineer to sound all repaired areas.

**END OF SECTION**

# SECTION 03 93 10
# EMBEDDED SACRIFICIAL ANODES

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SCOPE OF WORK

A. This Section covers sacrificial anode corrosion inhibitors. The sacrificial anodes shall be furnished and installed in concrete repair areas indicated on the drawings and/or as determined by the Engineer.

1.03 QUALITY CONTROL

A. Codes and Standards:

1. Specified products shall comply with local and state regulations regarding health and safety regulations.

2. The sacrificial anode shall deliver beneficial current protection to reduce corrosion for a period of 10 to 20 years.

3. Embedded sacrificial anodes shall have demonstrated current output of 0.4 milliamps or more after 90 days of operation when laboratory tested at room temperature and 55% relative humidity in a concrete block containing not more than 0.3 sf of reinforcing steel.

4. All corrosion data must be performed by a qualified independent laboratory.

B. Product Coordination:

1. Review other sections of these specifications in which bonding grouts or corrosion inhibitors are to be provided on concrete surfaces to be sealed to ensure compatibility with the sacrificial anodes. Concrete repair materials shall have resistivity below 15,000 ohm-cm as measured after 28-day cure.

C. Warranty:

1. The system manufacturer shall furnish the Owner a written single-source performance warranty that the concrete reinforcement sacrificial anodes will provide a beneficial flow of protective current for up to five years.

1.04 SUBMITTALS

A. Submit manufacturer's product, data sheet, product sample, installation instructions, test data for each batch of material submitted and warranty for approval prior to application.

B. As a condition for payment of the sacrificial anode installation, the contractor must submit an invoice indicating the delivery and site receipt of the quantity of material calculated and designated for this project. In addition to the calculated quantity, the invoice shall also reflect the project address, or be designated for use on this project, if delivered to the contractor's address. No leftover material from previous projects will be permitted for use on this project.

1.05 JOB CONDITIONS

A. Environmental Requirements:

1. Do not proceed with installation of anodes beyond 24 hours prior to concrete placement. Anodes installed prior to this time shall be protected from the weather by plastic bags or similar device.

**PART 2 - PRODUCTS**

2.01 SACRIFICIAL ANODES MATERIAL

A. Provide a clean, ready-to-use, product that will provide localized cathodic protection of existing rebar. Anodes shall not be visible after concrete placement.

B. Sacrificial anodes shall be one of the products offered by the manufacturer's listed below. Substitute materials or manufacturers will not be allowed.

1. Euclid Chemical Company – Sentinel GL (www.euclidchemical.com)
2. Vector Corrosion Technologies – Galvashield XP (www.vector-corrosion.com)
3. BASF Building Systems – MasterProtect 8065 CP, 8105 CP and 8150 CP (www.buildingsystemsBASF.com)

**PART 3 - EXECUTION**

3.01 PREPARATION

A. Examine surfaces to receive anodes to assure that conditions are acceptable for installation of materials. Concrete shall be placed around anodes within 24 hours of installation.

B. The immediate area surrounding galvanic anode installation shall have surface prepared according to project requirements.

3.02 APPLICATION

A. Product shall be installed with spacing between adjacent anodes and at distances from edge of patch based on density of rebar and manufacturer's written guidelines for product. Galvanic anodes shall be tie wired to existing rebar securely so that they are not damaged or dislodged during concrete placement operation.

B. Exposed reinforcing steel where anodes are to be installed shall be cleaned to bright metal by removing rust, mortar, etc. Anodes shall be installed according to manufacturer's instructions. Electrical connection of anode wires to steel shall be verified by measuring DC resistance (< 1 ohm) with a digital multi-meter. Ensure Electrical continuity of all exposed bars within repair areas shall be verified by measuring potential difference between bars with a digital multi-meter on the mV scale ($\leq$ 1.0 mV) Isolated bars shall be tightly wired to surrounding bars.

C. Do not connect galvanic anode to epoxy-coated rebars.

D. Ensure proper consolidation of concrete around galvanic anodes to ensure no rock pockets or honeycombs are present.

E. Provide at least 1-inch cover of new concrete top and bottom over galvanic anodes.

**END OF SECTION**

# SECTION 07 18 16
# TRAFFIC BEARING WATERPROOFING MEMBRANE

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SCOPE OF WORK

This work must consist of shotblasting or other approved methods of cleaning on horizontal concrete surfaces, cleaning of vertical surfaces and installation of a thin waterproofing membrane system as specified on floor slabs at locations shown on plans. No substitutions to proposed systems in bid proposals other than the waterproofing membranes specified hereinafter must be allowed unless approved in writing by the Consultant.

1.03 GENERAL

A. The work of this Section includes, but is not limited to, surface preparation, installation of a liquid applied elastomeric membrane system to provide a waterproof, chemical and abrasion resistant non-skid traffic bearing topping.

B. Examine existing surfaces and verify existing conditions. Determine acceptability of the concrete surfaces and notify, in writing, the General Contractor and the Consultant of acceptance. Verify dimensions as no extras will be allowed for inconsistency in dimensions.

C. Cleaning and preparation of existing surfaces to receive materials must be the Contractor's responsibility. Prepare surfaces as specified hereinafter and as recommended by manufacturer of the material selected.

D. Provide and maintain barricades and traffic control at special coating areas during installation and curing period for vehicular and pedestrian traffic.

1.04 QUALIFICATIONS

A. Work specified herein must be performed by and be the responsibility of the Installation Contractor authorized, trained, approved and qualified by the manufacturer of materials used; having necessary equipment and facilities to fulfill requirements of the manufacturer and this section.

B. Manufacturer Qualifications: Manufacturer must provide evidence showing that the specified materials have been manufactured by the same source and successfully

installed on a yearly basis for a minimum of ten years on projects of similar scope and complexity. Manufacturer to be ISO 9001 certified.

C. Installer Qualifications: Waterproofing installer must demonstrate qualifications to perform the work of this Section by submitting the following documentation:

1. Licensing by the waterproofing manufacturer as an applicator of the product to be used in order to provide a warranty as described in Section 1.08 A.

2. List of at least five projects (with reference names and phone numbers) satisfactorily completed under the current company name within the last 3 years, of similar scope and complexity to this project. Previous experience submittal must correspond to specific membrane system proposed for use by applicator.

3. A minimum of five (5) years in business under the same name.

1.05 SUBMITTALS

A. Manufacturer's Data: Submit specifications, installation instructions and general recommendations by the manufacturer of fluid applied waterproofing materials. Include manufacturer's certified test data showing compliance with the requirements. Provide copy of license agreement between manufacturer and installer indicating division of warranty responsibility.

B. Shop Drawings: Submit shop drawings showing large scale details of all edge terminations, joint treatments, penetration or projections and flashing conditions.

C. Samples: Submit complete samples of each membrane system to be used. Sample must be applied to plywood or similar rigid material.

D. As-Built Information: Upon completion of the work and prior to final payment, submit two (2) maintenance manuals identified with the project name, location and date, types of coating systems applied and drawings indicating the types of coating systems and their location in the structure. Include a schematic drawing of each membrane type which clearly identified the successive coats or layers of the membrane system. Identify each coat or layer by dry film thickness or application rate and by manufacturer's reference number or name which specifically identifies the product used for each coat. Include recommendations for routine care and maintenance. Provide list of contractors nearest the project location who are qualified to perform repairs to the membrane. Identify common causes of damage and include instructions for temporary patching until permanent repairs can be made by qualified personnel.

E. VOC Requirements: Where applicable, the manufacturers must ensure that all components of specified products do not exceed volatile organic compound (VOC) limits of 400 g/l. Projects in the following locations are affected by this requirement.

Maricopa County (Arizona), California (excluding LA, Orange, San Bernadino and Riverside Counties), Connecticut, Delaware, Illinois, Indiana, Maine, Maryland, Massachusetts, New York, New Jersey, New Hampshire, Ohio, Pennsylvania, Vermont, Rhode Island, Washington DC and Arlington County, Alexandria, Fairfax County, Fairfax, Loudoun County, Falls Church, Prince William County, Manassas, Manassas Park, Stafford County (all northern Virginia).

1.06 DELIVERY AND STORAGE

A. Deliver materials to project site in sealed, original packages or containers bearing name and brand of manufacturer. Each container must have manufacturer's printed label. Materials must be stored in the area designated by the General Contractor or Consultant.

B. Upon delivery, notify the Consultant. Only materials brought to area and approved may be used.

C. Store materials in single place designated by Owner and/or Consultant. Keep storage place neat and clean. Cleaning rags and waste materials must be deposited in metal containers having tight covers or removed from the garage each night. Every precaution must be taken to avoid danger of fire. Provide dry chemical or CO2 fire extinguishers in areas. Allow no smoking or open containers or solvents. Store solvents in safety cans.

D. Empty containers used on job must have labels canceled and must be marked as to reuse.

1.07 JOB CONDITIONS

A. A specified coating must not be applied if weather is too cold, raining, snowing or if any other conditions exist that will not permit proper application or curing of coating. Follow manufacturer's written directions. Humidity should not deviate from acceptable ranges during application and curing. Protection required for proper installation and curing must be the responsibility of the Coating Contractor and must be reflected in Bid.

B. Protect adjacent surfaces and materials with covering, duct tape and drop cloths as required to keep adjacent surfaces free of coating. Upon completing, remove protection and clean. Surfaces soiled or damaged by special coating must be cleaned or replaced at no extra cost to Owner.

C. Proceed with the installation of waterproofing only after the substrate construction has been completed and cured and after penetrating components have been installed, so that the membrane will not be penetrated or damaged by subsequent work.

D. When payment for elastomeric deck coating is based on area of application, the area used in calculations must be horizontal surfaces only.

1.08 WARRANTY

A. Materials Manufacturer and Installation Contractor must be jointly and severally responsible and must submit an affidavit signed by both parties warranting the installed system for a minimum period of five years from date of final completion. The Installer must repair or replace membrane which leaks water, deteriorates excessively, wears prematurely or otherwise fails to perform as required within the guarantee period, due to failure of materials or workmanship. The guarantee must include an agreement to remove and reinstall other work which has been superimposed on elastomeric waterproofing work as required to repair or replace the waterproofing system if known at time of installation.

**PART 2 - PRODUCTS**

2.01 SOURCE OF MATERIALS

A. The waterproofing membrane system must be a complete system of compatible materials, designed by the manufacturer to produce a waterproofing, traffic-bearing and chemical resistance surface. Systems approved for use under this section must be one of the following or an approved equivalent:

Category A - Standard Applications

Application of systems within this category are designed for stand alone parking structures and/or other structures where the presence of odors due to solvents contained in the membrane materials are not expected to create a disruption to adjacent areas, etc. Precautions should be taken during the installation and for a period of approximately one week thereafter to reduce the risk for fire due to the presence of solvents.

1. “Auto-Gard” as manufactured by Neogard (www.neogard.com).

The system consists of an epoxy or urethane primer applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon no more than 24 hours prior to base coat application; when cured, apply 70410 or 7430 urethane base coat will be a polyurethane applied to an average thickness of 20 mils dry (25 mils wet). When cured, apply 7430 urethane top coat at an average thickness of 20 mils

dry (25 mils wet) and broadcast aggregate at a rate of approximately 15 pounds per 100 square feet and backroll. For heavy traffic areas such as drive aisles, steep or spiraling ramps, ticket booths and turning areas, prior to applying top coat, apply 7430 urethane at an average thickness of 12 mils dry (15 mils wet) with aggregate broadcast at the rate of 10 to 15 pounds per 100 square feet.

2. "Iso-Flex 780 or 750U Coating System," as manufactured by Lym-Tal (www.lymtal.com).

   The system consists of a solvent-based primer applied to the cleaned concrete surface at a rate of 250 feet per gallon no more than 7 hours prior to base coat application; the base coat will be a 750 polyurethane applied to an average thickness of 25 mils dry (26 mils wet) or a 780 polyurethane applied to an average thickness of 25 mils dry (29 mils wet). The wearing coat in parking stall areas is a polymer, applied at an average thickness of 15 mils dry (20 mils wet) with aggregate, broadcast at the rate of 8 to 10 pounds per 100 square feet. In drive aisles and heavy traffic areas, a second top coat of urethane at 15 mils dry (20 mils wet) with aggregate, broadcast at the rate of 8 to 10 pounds per 100 square feet with aggregate is applied.

3. "Sikalastic Traffic 1500," as manufactured by Sika (www.sikausa.com).

   The system consists of a solvent based primer applied at a minimum rate of 300 square feet per gallon, per the manufacturer's recommendations. The Sikalastic M200 base coat is a solvent-based, polyurethane applied to the cleaned concrete surface at a rate of 20 mils dry (25 mils wet). The Sikalastic TC225 top (mid) coat is a solvent-based aliphatic polyurethane applied at 20 mils dry (25 mils wet), then broadcast and backroll with 16/30 mesh silica sand at a rate of 20-25 pounds per 100 square feet in parking stall areas. In drive aisles and heavy traffic areas, the mid coat of Sikalastic TC225 urethane is applied at 15 mils dry (20 mils wet) and broadcast with silica sand at a rate of 50-60 pounds per 100 square feet and a second top coat of MasterSeal TC225 is applied at 15 mils dry (20 mils wet). At cashier booths and steep ramps, an additional 8 mils dry (12 mils wet) top coat is required.

4. "Sikalastic 710/715" as manufactured by Sika Corporation (www.sikausa.com).

   The system consists of Sikalastic Primer polyurethane primer applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon no more than 72 hours prior to base coat application; when tack free, apply Sikalastic 710 basecoat at a nominal thickness of 23 mils dry

(32 mils wet). When tack free, apply Sikalastic 715 topcoat at a nominal thickness of 8 mils dry (11 mils wet) and seed with 10-15 lbs/100 sf of oven dried quartz sand with a minimum gradation of 16/30 mesh and backroll. In drive aisles and heavy traffic areas, a second top coat of Sikalastic 715 at a nominal thickness of 8 mils dry (11 mils wet) and seeded with 10-15 lbs/100 sf of oven dried quartz sand with a minimum gradation of 16/30 mesh is applied and backrolled. When tack free, apply Sikalastic 715 topcoat at a nominal thickness of 12 mils dry (16 mils wet).

5. "Qualideck" as manufactured by Advanced Polymer Technology (www.qualideck.com).

   The system consists of a 100% solids polyurethane primer Qualipur 152 applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon. The base coat application is a low/no odor polyurethane Qualipur 282 that is applied a nominal thickness of 25 mils dry (26 mils wet). In drive aisles and heavy traffic areas, apply an intermediate coat of Qualipur 382 polyurethane at 15-20 mils dry (16-21 mils wet) saturated with angular sand and backrolled. The topcoat is the Qualipur 382 polyurethane applied at 15 mils dry (16 mils wet) then broadcast with 12/20 or 16/30 angular sand at a rate of 20-25 lbs/100 sf.

6. "Kelmar T.E. System," as manufactured by Technical Barrier Systems www.tbsproducts.com

   The system consists of a solvent or water based epoxy primer applied to the cleaned surface at a rate of 250-300 square feet per gallon. The base coat is the NEO V II C latex neoprene applied to the primed concrete surface at a rate of 20 mils dry (32 mils wet). The wearing coat is 100% solids coal tar epoxy applied at 23 mils wet/dry in parking stalls then broadcast with sand to saturation. In all areas other than parking stalls, apply a second layer of wearing coat at 23 mils wet/dry coat with aggregate broadcast to saturation. Finally, apply top finish coat of single component, water based acrylic latex emulsion at 125 square feet per gallon.

<u>Category B – Fast Cure and Odor Sensitive Applications</u>

The following systems have been designed to accept vehicular traffic after an application time typically involving a three-day period, most often associated with weekends and on associated holiday the day before or after a weekend. Check with manufacturer and installer regarding specific size areas and time frames which are possible with these systems. Application of systems within this category are also

designed for locations where the release of solvents with strong odors would be objectionable.

1. "Auto-Gard FC," as manufactured by Neogard (www.neogard.com).

   The system consists of an epoxy or urethane primer applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon no more than 24 hours prior to base coat application; when cured, apply FC7500/7960 urethane base coat at an average thickness of 20 mils dry (20 mils wet). When cured, apply FC7510/7961 (interior) or FC7540/7964 (exterior) urethane top coat at an average thickness of 20 mils dry (20 mils wet) and immediately broadcast aggregate at a rate of 15 pounds per 100 square feet and backroll. For heavy traffic areas such as drive aisles, ticket booths and turning areas prior to top coat application, apply FC7510/7961 polyurethane at an average thickness of 12 mils dry (12 mils wet) with aggregate broadcast at a rate of 10 to 15 pounds per 100 square feet.

2. "Iso-Flex 760 U Low Odor Coating System," as manufactured by Lym-Tal (www.lymtal.com).

   The system consists of a solvent-free epoxy primer applied to the cleaned concrete surface at a rate of 250 feet per gallon no more than 24 hours prior to base coat application; the base coat will be a polyurethane applied to an average thickness of 25 mils dry (26 mils wet). The wearing coat is a polyurethane, applied at an average thickness of 15 mils dry (15 mils wet) with aggregate, broadcast at the rate of 8 to 10 pounds per 100 square feet. In drive aisles and heavy traffic areas, a second top coat with aggregate is applied.

3. "Sikalastic Traffic 2500 Deck Coating," as manufactured by Sika (www.sikausa.com).

   The system consists of the 100% solids polyurethane primer (Sikalastic P 255 Primer) applied at a minimum rate of 300 square feet per gallon. Apply Sikalastic M 265 Base Coat (2 component polyurethane 100% solids) at a rate of 25 mils dry (25 mils wet). Allow base to cure and then apply Sikalastic TC 295 Top Coat (2 component polyurethane 100% solids) at a rate of 15 mils dry (15 mils wet) and broadcast 16/30 mesh silica sand at a rate of 20 to 25 pounds per 100 square feet in parking stall areas. In drive aisles and heavy traffic areas, the Sikalastic TC 275 Top Coat is applied at 15 mils dry (15 mils wet) and broadcast with silica sand at a rate of 50 to 60 pounds per 100 square feet, then apply Sikalastic TC 295 top coat at 10 mils dry (10 mils wet).

4. "Sikalastic 720/745" as manufactured by Sika Corporation (www.sikausa.com).

   The system consists of Sikalastic Primer polyurethane primer applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon no more than 72 hours prior to base coat application; when tack free, apply Sikalastic 720 basecoat at a nominal thickness of 23 mils dry (23 mils wet). When tack free, apply Sikalastic 745 topcoat at a nominal thickness of 18 mils dry (18 mils wet) and seed with 10-15 lbs/100 sf of oven dried quartz sand with a minimum gradation of 16/30 mesh and backroll. In drive aisles and heavy traffic areas, a second top coat of Sikalastic 745 at a nominal thickness of 18 mils dry (18 mils wet) and seeded with 10-15 lbs/100 sf of oven dried quartz sand with a minimum gradation of 16/30 mesh is applied.

5. "Qualideck" as manufactured by Advanced Polymer Technology (www.qualideck.com).

   The system consists of a 100% solids polyurethane primer Qualipur 152 applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon. The base coat application 100% solids, low/no odor Qualipur 252 polyurethane that is applied a nominal thickness of 25 mils dry (25 mils wet). In drive aisles and heavy traffic areas, apply an intermediate coat of Qualipur 372 polyurethane at 15-20 mils dry (15-20 mils wet) saturated with angular sand and backrolled. The topcoat is a 100% solids Qualipur 372 aromatic for interior or Qualipur 512 aliphatic polyurethane for exterior (UV exposure) applied at 15 mils dry (15 mils wet) then broadcast with 12/20 or 16/30 angular sand at a rate of 20-25 lbs/100 sf.

6. "Kelmar FWC 111" as manufactured by Technical Barrier Systems www.tbsproducts.com

   The system consists of a solvent or water-based epoxy primer applied to the cleaned surface at a rate of 250-300 square feet per gallon. The base coat is the NEO V II C latex neoprene applied to the primed concrete surface at a rate of 20 mils dry (32 mils wet). The wearing coat is 100% solids epoxy applied at 23 mils wet/dry in all areas then broadcast with sand to saturation. In drive aisles, cashier booths and steep helix type ramps, apply second layer of wearing coat at 23 mils wet/dry with aggregate broadcast to saturation. Finally, apply top finish coat of single component, water based acrylic latex emulsion at 125 square feet per gallon.

Category C - Fast Cure Applications for Highest Wear Resistance Locations

The following systems have been designed for loading docks, steep or spiraling ramps that require the highest level of wear resistance and/or where closure of the areas present and future presents a major disruption to the operation of the facility and must be minimized. Check with manufacturer and installer regarding specific size areas and time frames which are possible with these systems.

1. "Auto-Gard E," as manufactured by Neogard (www.neogard.com).

   The system consists of an epoxy or urethane primer applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon no more than 24 hours prior to base coat application; when cured, apply FC7500/7960 urethane base coat at an average thickness of 20 mils dry (20 mils wet). When cured, apply 70714/70715-09 epoxy wear coat at an average thickness of 16 mils dry (16 mils wet) and immediately broadcast 12/20 mesh aggregate at a rate of 15 to 20 pounds per 100 square feet. For interior (no UV exposure) ramps, apply 70714/70715-09 epoxy top coat at an average thickness of 14 mils dry (14 mils wet). For exterior (UV exposure) ramps, apply FC7540/7964 urethane top coat at an average thickness of 14 mils dry (16 mils wet).

2. "Iso-Flex 750/760EU-HVT Flint Coating High Load System," as manufactured by Lym-Tal (www.lymtal.com).

   The system consists of a solvent-free epoxy primer applied to the cleaned concrete surface at a rate of 250 feet per gallon no more than 24 hours prior to base coat application; the 750 base coat will be a polyurethane applied to an average thickness of 25 mils dry (26 mils wet). The wearing coat is Epoxy 200, applied at an average thickness of 20 mils dry (20 mils wet) with #4 crushed flint aggregate broadcast at the rate of 50 pounds per 100 square feet or to excess. Apply a 760 AR top coat at an average thickness of 18 mils dry (18 mils wet) and backroll.

3. "Sikalastic Traffic 2530 Traffic System," as manufactured by Sika (www.sikausa.com).

   The system consists of the 100% solids polyurethane primer (Sikalastic P 255 Primer) applied at a minimum rate of 300 square feet per gallon. Apply Sikalastic M 265 Base Coat (2 component polyurethane 100% solids) at a rate of 25 mils dry (25 mils wet). Allow base to cure and then apply Sikalastic 350 epoxy at a rate of 20-25 mils dry and

broadcast Sikalastic 941 DR aggregate to saturation at a rate of about 10 pounds per 100 square feet in all areas. Remove excess aggregate.

4. "Sikalastic 22 Lo-Mod Traffic System" as manufactured by Sika Corporation (www.sikausa.com).

   The system consists of Sikalastic Primer polyurethane primer applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon no more than 72 hours prior to base coat application; when tack free, apply Sikalastic 720 basecoat at a nominal thickness of 23 mils dry (23 mils wet). When tack free, apply Sikadur 22 Lo-Mod bindercoat at a nominal thickness of 32 mils dry (32 mils wet) and seed with 15 lbs/100 sf of #16 aluminum oxide to refusal. When tack free, apply a final topcoat of Sikalastic 391 (interior) or Sikalastic 395 (exterior) at a nominal thickness of 18 mils dry (18 mils wet).

5. "Qualideck Qualipur" as manufactured by Advanced Polymer Technology (www.qualideck.com).

   The system consists of a 100% solids polyurethane primer Qualipur 152 applied to the cleaned concrete surface at a minimum rate of 300 square feet per gallon. The base coat application is Qualipur 252 polyurethane that is applied a nominal thickness of 20 mils dry (20 mils wet). When cured apply Qualipur 372 polyurethane intermediate coat at 15 mils dry (15 mils wet) and broadcast 20-30 lbs/100 sf of angular silica aggregate and backroll. For interior (no UV exposure) ramps, apply Qualipur 552-E top coat at an average thickness of 15 mils dry (15 mils wet). For exterior (UV exposure) ramps, apply Qualipur 512 polyurethane top coat at an average thickness of 15 mils dry (15 mils wet).

6. "Kelmar T.E. System," as manufactured by Technical Barrier Systems www.tbsproducts.com

   The system consists of a solvent or water based epoxy primer applied to the cleaned surface at a rate of 250-300 square feet per gallon. The base coat is the NEO V II C latex neoprene applied to the primed concrete surface at a rate of 20 mils dry (32 mils wet). The wearing coat is 100% solids coal tar epoxy applied at 23 mils wet/dry with 16/30 mesh silica sand broadcast with sand to saturation. When dry, apply second layer of wear coat using 100% solids coal tar epoxy applied at 23 mils wet/dry with aggregates broadcast to saturation. When dry, for loading docks and/or only if noted on the drawings, apply a third layer of wear coat using 100% solids coat tar epoxy applied neat at 18 mils wet/dry with no aggregate broadcast. Finally, apply top finish coat of

single component, water based acrylic latex emulsion at 125 square feet per gallon.

Category D - High Performance, Zero Solvent, Zero VOC, PUMA Traffic Coating

The following systems are designed for loading docks, steep or spiraling ramps balconies and commercial walkways requiring the highest level of wear resistance. These systems are used where extreme winter service conditions are anticipated and where closure of trafficked areas may tolerate no more than several hours of down time. Check with manufacturer and installer regarding specific size areas and disruption time frames which are possible with these systems.

1. "Pumadeq" Traffic Coating Systems, as manufactured by the Henry Company (www.henry.com).

   Pumadeq is used for quick-cure Vehicular or Pedestrian traffic coating where limited disruption is required. The unreinforced traffic coating system consists of a solvent-free, 100% solids self-leveling and medium-viscosity elastic waterproofing membrane based on modified polyurethane methyl methacrylate technology. Apply GC (green concrete) Epoxy Primer to green concrete not less than 24 hours after removal of casting forms. Alternately, catalyzed PMMA-based Pumadeq Primer 20 is applied to cleaned substrates. PUMA shall be applied to concrete surfaces with a CSP of 3-5 in accordance with ICRA requirements. Pre-flash penetrations, curbs, transitions and post bases with Pumadeq Flex 31MV Medium Viscosity or Flex 32TX per current details and Tech Talk Bulletins. Apply the self-leveling Pumadeq Flex 30SL gray base coat to cured, primed substrates at a rate of 30sf/gal. and white top coat at a rate of 50sf./gal. Do not install membrane beyond primed areas. Upon setting of white Pumadeq Flex 30SL coating, apply elastic but hard wearing coat Pumadeq Grip 40 at 30-40 wet/dry with 16/30 mesh silica sand aggregates broadcast to rejection. Where exposed UV conditions occur, apply the hard, color-stable Deqcoat 50 wearing coat onto cured Pumadeq Grip 40 in two coats, the first at 20 mils wet/dry and the second at 12 wet/dry.

2. "RTS Vehicular System" Traffic Coating System, as manufactured by NeoGard Construction Coatings (www.neogard.com).

   Add appropriate dosage of NEOGARD® 600 RTS BPO Initiator to all materials and mix thoroughly before applying. Refer to NEOGARD® BPO Initiator Dosage Chart for correct amounts. BPO Initiator Dosage Chart also available in NEOGARD® PMMA/PUMA Product Data Sheets. Apply 100 RTS Primer at a rate of 90 sf/gal to yield 17 mils to all surfaces. To apply membrane mix 200 RTS with 700 RTS series pigment at 0.25

lbs/gallon. Apply 200 RTS at a rate of 26 sf/gal to yield 60 dry mils. Extend base coat over cracks and control joints which have received detail treatment. To apply the body coat mix 300 RTS with 900 RTS PMMA Filler at 10 lbs/gallon. Apply mixture at a rate of 32 sf/gal to yield 50 dry mils. Immediately broadcast aggregate, evenly distributed, to refusal into wet coating. When dry, remove excess aggregate. For the top coat Mix 400 RTS with 700 RTS series pigment at 0.25 lbs/gallon. Apply mixture at a rate of 64 sf/gal to yield 25 dry mils.

3. "Sikalastic Pronto RB-5700 PUMA" Traffic Coating System, as manufactured by Sika (https://usa.sika.com/).

   The system consists of the Sikalastic 511 Pronto Primer applied at rate of 100 sf/gal to yield a 16mil w.f.t., an optional levelling mortar comprised of Sikalastic 511 Pronto Primer and Sikalastic 1 Pronto Filler (mixed at 2:1 by weight) to yield 13-40 sf/gal and 40-120 mil w.f.t, a Base coat of Sikalastic 532 Pronto applied at 25 sf/gal to yield a 64 mil w.f.t., a Wear course composed of Sikalastic 532 Pronto (filled 1:2 by weight of Sikalastic 1 Pronto Filler) at a rate of 20 sf/gal yielding a 83 mil w.f.t. broadcast to excess with aggregate (the wear course shall be applied in two layers of roughly 40 mil w.f.t. on ramps and inclines per Sika requirements), and Top Coat of Sikalastic 518 Pronto Topcoat applied at 57 sf/gal yielding a 28 mil w.f.t.

4. "BASF MasterSeal Traffic 2900" (Masterseal Traffic 2850 for recoating projects) Traffic Coating System, as manufactured by Sika (https://usa.sika.com/).

   The system consists of the Masterseal M280FS primer applied at rate of 100 SF/Gal, the Masterseal TC290FS base coat applied at a thickness of 40 mils, the Masterseal 297 FS applied to a thickness of 20 mils and aggregate added to refusal, and the Mastseal 299FS aliphatic top coat applied to at thickness of 28 mils.

   Recoating Applications: Utilize Masterseal 2850
   System shall consist of the Masterseal M270 primerless base coat (only over exposed concrete), the Masterseal TC 275 topcoat applies to thickness of 20 mills and aggregate added to refusal, and the Masterseal TC299 FS aliphatic Topcoat applied to thickness of 28 mils.

5. "Vulkem EWS with PUMA Technology" Traffic Coating System, as manufactured by Tremco (www.tremcosealants.com).

   The system consists of the Tremco PUMA Primer applied at a rate of 90 SF/Gal to yield a 17 mil w.f.t., Tremco PUMA BC (or BC LS) basecoat applied at a rate of 20 SF/Gal to yield a 80 mil w.f.t., a Tremco PUMA

WC wear course applied at a rate of 16 SF/Gal yielding 100 mil w.f.t. and aggregate to refusal (wear course shall be split into 3 applications of 20 mil, 28 mil, and 28 mil thickness on ramps), and a Tremco PUMA TC top course applied at a rate of 53-90 SF/Gal yielding a 17-30 mil w.f.t.

B. WATERPROOFING MEMBRANE (Base Coat)

(1) The base coat (membrane) must meet the following minimum performance criteria:

(a) Minimum Tensile Strength (ASTM D412):
Base Coat - 1,000 psi
Top Coat – 2,000 psi

(b) Minimum Elongation (ASTM D412):
Base Coat - 350%

(c) Minimum Adhesion – one of the following:

ASTM D903:Base Coat - 20 psi
ASTM C794: Base Coat – 25 psi
ASTM D4541: Base Coat – 250 psi
ACI 503: Failure occurs in concrete when fc<6000 psi

(d) A light application of primer compatible with the elastomeric seal coat must be applied onto the clean, dry concrete surface. The elastomeric coating must be applied uniformly to the primed surface. The elastomeric base coat must be applied in strict accordance with manufacturer's requirements for the system and verified by wet mil thickness testing (minimum one test per 500 square feet). The coating must be allowed to cure adequately. Special treatment must be provided at all construction joints, cove joints and at all cracks over 1/16" in width. This special treatment must be included in the bid price for the waterproofing membrane installation. The coating must also be applied at base of columns, walls and curbs to produce a 4" minimum high base.

(2) Minimum System Thickness (Dry Mils): 20 mils

C. WEARING COURSE

(1) A compatible wearing course must be applied over the base coat in accordance with the manufacturer's instructions. A selected aggregate must be broadcast

evenly over the surface and fall on the surface in vertical direction so as not to displace uncovered coating.

(2) Aggregates should be spread to an excess thickness until surface appears dry. After the coating has sufficiently cured, the excess aggregates must be removed and the tie coat must be applied to the surface.

D. LEVELING COURSE (IF REQUIRED)

(1) A compatible leveling course must be applied directly onto the concrete surface after cleaning and prior to application of the primer. The leveling course is intended to fill and smooth pop-outs, scaling, depressions and pitting in the concrete surface due to abrasion, finishing problems or other existing conditions. Products listed below should be confirmed with the manufacturer's instructions.

Neogard - Leveling of the concrete surface prior to membrane system application in order to achieve a suitable substrate must be performed using a Neogard 70714/70715-09 epoxy and sand mixture or FC base coat, depending on profile of concrete.

Lym-Tal - Leveling of the concrete surface prior to membrane system application in order to achieve a suitable substrate must be performed using Iso-Flex 750 base coat extended with sand.

MasterSeal - Traffic 1500 / 2500 / 2530 - Leveling of the concrete surface prior to membrane system application in order to achieve a suitable substrate must be performed using MasterSeal 350 two component, fast-setting 100% solids epoxy, extended with 16 - 30 sieve aggregate as needed.

Sika - Leveling of the concrete surface prior to membrane system application in order to achieve a suitable substrate must be performed using either the Sikalastic 390 base coat with a mixture of sand, or by using the Sikadur 21 Lo-Mod or Sikadur 22 Lo-Mod with a mixture of sand as needed.

Qualideck - Leveling of the concrete surface prior to membrane system application in order to achieve a suitable substrate must be performed using Qualipur 152, a two component, 100% solids polyurethane with a mixture of angular sand as needed.

Kelmar - Leveling of the concrete surface prior to membrane system application in order to achieve a suitable substrate must be

performed using Kelmar RC, a two component, low modulus, 100% solids epoxy and sand mixture.

D. TOTAL SYSTEM REQUIREMENTS

(1) Minimum System Thickness without Aggregate (Dry mils) in parking areas: 40 mils

(2) Minimum System Thickness without Aggregate (Dry mils) in heavy wear areas: 50 mils

(3) All systems must be wear balanced for parking stall and drive aisle applications according to the manufacturer's recommendations.

(4) Color of Wearing Course/Wearing Surface must be as selected by the Consultant/Owner.

## PART 3 - EXECUTION

3.01 CONDITION OF SUBSTRATE

A. Examine the substrate and the conditions under which the elastomeric waterproofing work is to be applied. Do not proceed with the work until unsatisfactory conditions have been corrected and approved by the manufacturer's representative.

(1) Installation of products constitutes Installers and Manufacturer's acceptance of existing construction.

3.02 PREPARATION OF SUBSTRATE

A. Clean the substrate of protrusions, dust, debris, oily materials and other substances detrimental to the work, as recommended by the waterproofing system's manufacturer.

(1) Shot blast horizontal surfaces to remove contaminants and to provide a clean uniform textured surface. Any other proposed cleaning methods must be submitted and approved by the Engineer.

(2) Clean vertical surfaces of column bases, spandrels, walls, protrusions, etc., to provide a clean uniform textured surface.

B. Install cant strips and similar accessories as shown and as recommended by the waterproofing manufacturer (even though not shown) in the manner recommended by the manufacturer.

3.03 FLASHINGS, PRIMERS AND JOINT CONTROL

A. Cracks/Construction Joints: At locations of possible movement in the substrate construction, including cracks which have developed and construction joints, prepare the substrate to increase the fluid applied waterproofing capability for bridging the movement without failure. Use only products which have been determined to be compatible with the elastomeric waterproofing.

B. Fill voids and non-moving cracks and joints in the substrate with sealant or other compounds as recommended by the waterproofing manufacturer for compatibility. Fill rough areas of substrate (rough within limitations specified by the manufacturer) with a feathered-out coating of elastomeric waterproofing, squeegee-applied to form a smooth top surface.

C. Prime substrate as recommended by the waterproofing system's manufacturer.

D. Mask off adjoining surfaces not to receive fluid applied waterproofing, to effectively prevent the spillage or migration of materials outside the membrane area.

3.04 INSTALLATION

A. Manufacturer's Technical Representative: Start the installation of elastomeric waterproofing membrane, only in the presence and with the advice of the manufacturer's technical representative. A series of four (4) wet mill gauge tests must be conducted for every 1000 sq. ft. on the first day of installation in the presence of the representative to ensure proper coverage rate.

B. General: Comply with manufacturer's instruction, except where more stringent requirements are shown or specified, and except where project conditions require extra precautions or provisions to ensure satisfactory performance of the work.

C. Mix separately packaged components in accordance with manufacturer's instructions.

D. Apply the elastomeric membrane to the primed deck within the time specified by the manufacturer.

E. Apply a uniform coating of cold applied elastomeric waterproofing to the substrate and adjoining surfaces indicated to receive the membrane.

(1) Apply coating by hand, complying with manufacturer's recommendations regarding horizontal and vertical surfaces.

(2) Provide waterproof membrane at base of columns, spandrels, to produce a 4" minimum high base. Curb surfaces must be considered floors and waterproofed unless otherwise noted.

F. Wearing Surface: Apply top coat in one or two applications to achieve the specified dry film thicknesses.

(1) While coating is still fluid, uniformly broadcast aggregate over the surface at the rate specified.

(2) After top coat has cured, remove all excess aggregate from the deck surface.

(3) Apply a tie coat to the cured surface to encapsulate the top layer of aggregate.

G. Permit cold applied membrane to cure without delay, and under conditions which will not contaminate or deteriorate the fluid applied waterproofing material. Block off traffic and protect membrane from physical damage.

3.05 CLEAN-UP

A. Upon completion of work, carefully examine entire installation. Correct all defective or damaged work.

B. Upon completion, or at such other times as directed, remove all surplus materials, cartons, rubbish and debris resulting from these operations and legally dispose of off-site.

3.06 PERFORMANCE REQUIREMENTS

A. It is required that traffic topping be watertight and not deteriorate excessively under normal weather exposure and for normal traffic conditions in applications indicated, not under manufacturer-recommended cleaning procedures, for period of warranty.

B. It is required that traffic topping work not deteriorate under spillage of motor oil, transmission fluids, and other motor vehicle operating compounds, nor for exposure to normal ice/snow melting substances not specifically excluded by manufacturer's product information.

3.07 PROTECTION

A. Provide protection to ensure that work will be without damage or deteriorations at time of final acceptance.

**END OF SECTION**

# SECTION 07 92 00
# SEALANTS AND CAULKING

## PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SCOPE OF WORK:

A. Furnish labor, materials (including backer rods when required) and equipment for sealing and caulking of cracks, construction or control joints and cove in the reinforced concrete structural slabs as shown on drawings or designated by the Consultant. Where applicable, the sealant shall be compatible with any specified waterproofing membrane base coat material.

1.03 JOB CONDITIONS:

A. The sealant shall be installed in floor cracks, construction and/or control joints in the areas shown on drawings or designated by the Consultant. In the case of repair of existing cracks which are sealed or filled with other materials, the existing sealant material shall be raked out and the exposed concrete cleaned by sandblasting or grinding at those locations designated for repair.

1.04 FULL RESPONSIBILITY:

A. System manufacturer will have the full responsibility for: (1) Instructing the Contractor on the required configuration of joints and (2) Reviewing and approving tooled joints constructed as a part of surface preparation prior to installing the sealant.

1.05 GUARANTEE:

A. The Contractor shall provide a single source performance guarantee that the joint system repaired, including related work in the slab installed by the Contractor, will not leak water or de-bond from adjacent concrete for a 5 year period starting from the date of substantial completion. Any repairs required during the guarantee period starting from the date of substantial completion shall be performed by the Contractor at no additional cost to the Owner.

1.06 APPLICATOR QUALIFICATIONS:

A. The Contractor shall have a minimum of three years of experience in performing work similar to that shown in the drawings and specifications.

B. The Contractor shall submit a list of five projects in which similar work to that specified hereinbefore was successfully completed. The list shall contain the following for each of the five projects:

1. Project Name
2. Owner of Project
3. Owner's Representative, Address and Telephone Number
4. Brief Description of Work
5. Cost of Portion of Work Similar to that Specified in this Section
6. Total Restoration Cost of Project
7. Date of Completion of Work

The sum of the costs of the five projects provided shall be a minimum of $50,000.

C. A full time on-site supervisor shall be provided by the contractor for the duration of the sealant and caulking work. This supervisor shall have had a minimum of 2 years documented supervisory experience with the products to be used.

**PART 2 - PRODUCTS**

2.01 MATERIALS:

A. The joint sealant to be used for cracks and construction joints shall be two component polyurethane sealants of the chemically curing type containing no asphalt, coal tar, or plasticizers. The sealant shall be used with a compatible primer specified by the manufacturer. Approved products for use are:

1. "Sikaflex-SL-2" as manufactured by Sika Corporation (www.sikausa.com)

2. "Vulkem 245/255 or THC-900" as manufactured by Tremco (www.tremcosealants.com)

3. "Iso-Flex 880GB Sealant" as manufactured by LymTal International, Inc. (www.lymtal.com)

4. "Sikaflex-2C-SL," as manufactured by Sika Corporation (www.sikausa.com)

B. The sealant to be used shall meet or exceed the requirements of Interim Federal Specification TT-S0027-E, Sealants Class A, Type 1 and 2. The sealant shall not de-bond

or fail while elongated 25 percent in a water immersion test, according to Federal Specification TT-S-0027-E. When tested according to Paragraph 4.3.5. of Federal Specification TT-S-0027-E, weight loss shall not be greater than 5 percent. Shore A hardness under standard conditions shall be 25-30.

C. The cove sealant to be used shall be a non-sag, two component polyurethane sealants of the chemically curing type containing no asphalt, coal tar, or plasticizers. The cove joint sealant shall comply with Federal Specification TT-S-00227E, Type II, Class A, Corporation of Consultants CRD-C-506-72; ASTM C-920-79, Type M, Grade NS, Class 25.

Approved Cove Sealants are as follows:

1. "Sikaflex-NP-2" as manufactured by Sika Corporation (www.sikausa.com)

2. "THC-901" as manufactured by Tremco (www.tremcosealants.com)

3. "Iso-Flex 881 NS Sealant" as manufactured by LymTal International, Inc. (www.lymtal.com)

4. “Sikaflex-2C-NS,” as manufactured by Sika Corporation (www.sikausa.com)

D. The joint sealant to be used on the exterior, vertical control joints shall be a one-part, fast curing, non-sag, silyl-terminated polyether elastomeric sealant. If necessary, the sealant shall be used with a compatible primer specified by the manufacturer. Approved products for use are:

1. “Iso-Flex 825” as manufactured by LymTal International, Inc. (www.lymtal.com) or approved equal.

Note: Color selection shall be by the Owner from standard choices available.

E. The manufacturer of the sealant system used in this project shall share responsibility for all sealant work and joint preparation work in slab.

**PART 3 - EXECUTION**

3.01 TYPICAL SURFACE PREPARATION:

The Contractor shall either grind the surface of all cracks and construction joints designated for repair with sealant to the shape of 1/2" x 1/2" v-groove, or sawcut a square ½" x ½" groove, grind sharp corner of groove and apply bond breaker to bottom horizontal surface. Edges of cracks or joints to be sealed shall be of sound concrete. Prior to installing sealant, surfaces shall be cleaned of foreign materials and debris, V-groove ground and primed.

3.02 RECORD OF SEALED CRACK AND JOINT LOCATIONS AND TYPES:

A. After determining the cracks and joints to be sealed and the detail types required, the Contractor shall prepare scale shop drawings showing the sealed crack and/or joint locations and submit them to the Consultant for his approval. The Shop Drawings submitted shall be reviewed by the Consultant for the condition of the existing cracks/joints, the size/shape of the routed crack, and the type of detail selected.

B. The Shop Drawings submitted shall be used as a record of the detail types used and the measured number of linear feet of each sealed crack. Quantities of work done on a unit price basis shall be recorded on the document and submitted to the Consultant with Request for Payment.

**END OF SECTION**

ENGINEER CONTACT INFORMATION

CONTACT: HOSHI J. ENGINEER, PE, SE
PROJECT MANAGER
DESMAN, INC.
EMAIL: hengineer@desman.com
PHONE: (303) 740-1700

# CCDC 10TH AND FRONT STREET PARKING GARAGE
# PHASE 3 STRUCTURAL CONCRETE REPAIRS

BOISE, IDAHO

FEBRUARY 2025

OWNER CONTACT INFORMATION

OWNER: CAPITAL CITY DEVELOPMENT CORPORATION
CONTACT: AARON NELSON
PARKING & FACILITIES MANAGER
EMAIL: anelson@ccddboise.com
PHONE: (208) 585-1584

## CONSTRUCTION NOTES

1. CODES AND STANDARDS: ALL STRUCTURAL REPAIR WORK SHALL BE PERFORMED WITH PERTINENT PROVISIONS OF THE FOLLOWING CODES AND STANDARDS:

   A. ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE"
   B. ACI 304R "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
   C. ACI 305R "HOT WEATHER CONCRETING"
   D. ACI 306.1 "STANDARD SPECIFICATIONS FOR COLD WEATHER CONCRETING"
   E. ACI 309R "GUIDE FOR CONSOLIDATION OF CONCRETE"
   F. ACI 311.1R "ACI MANUAL OF CONCRETE INSPECTION"
   G. ACI 318 "ACI 318 BUILDING REQIREMENTS FOR STRUCTURAL CONCRETE"
   H. ACI 347 "GUIDE TO FORMWORK FOR CONCRETE"
   I. AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
   J. AWS D1.1 "STRUCTURAL WELDING CODE - STEEL"

2. ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.

3. THE ENGINEER SHALL HAVE AUTHORITY TO REJECT WORK WHICH DOES NOT CONFORM TO THE CONTRACT DOCUMENTS. THE ENGINEER AND OWNER WILL HAVE AUTHORITY TO REQUIRE SPECIAL INSPECTION OR TESTING OF THE WORK. HOWEVER, NEITHER THE ENGINEER'S AUTHORITY TO ACT UNDER THIS SUBPARAGRAPH NOR ANY DECISION MADE BY HIM/HER IN GOOD FAITH TO EXERCISE OR NOT TO EXERCISE SUCH AUTHORITY, SHALL GIVE RISE TO ANY DUTY OR RESPONSIBILITY OF THE ENGINEER TO THE CONTRACTOR, ANY SUBCONTRACTOR, ANY OF THEIR AGENTS OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK.

4. THE CONTRACTOR SHALL MAINTAIN, ONE COMPLETE SET OF DRAWINGS (WHITE PRINTS) AND SPECIFICATIONS FURNISHED BY THE OWNER AT THE CONTRACTORS EXPENSE, AN ACCURATE RECORD OF THE INSTALLATION OF ALL MATERIALS AND SYSTEMS COVERED BY THE CONTRACT. THE "AS-BUILT" RECORD SHALL INDICATE THE EXACT LOCATION AND AMOUNT OF ALL REPAIR WORK. THE COMPLETED SET OF "AS-BUILT" DRAWINGS MUST BE DELIVERED TO THE OWNER AND ENGINEER AS SOON AS THE PROJECT IS FINISHED.

5. REPAIRS SHALL BE IN A MANNER THAT ENSURES THE FACILITY REMAINS OPERATIONAL DURING THE COURSE OF THE REPAIR WORK. CONSTRUCTION PHASING AND TRAFFIC MANAGEMENT TO INSURE SAFE OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

6. REQUIREMENTS FOR SHORING OF EXISTING CONSTRUCTION SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW OF THE CONTRACTOR'S PROPOSED SEQUENCE OF WORK, ACCESS AND EQUIP[MENT USE. CONSIDERATION SHALL BE GIVEN TO THE FACILITY OPERATIONS DURING REPAIR AND SPECIFIC OWNER REQUIREMENTS AS TO OVERALL FUNCTIONING OF THE FACILITY AND OTHER COMPONENTS OF THE PROPERTY. ANY EQUIPMENT WITH OPERATING WEIGHT GREATER THAN 6,000 LBS SHALL REQUIRE SPECIALIZED SHORING.

7. THE ENGINEER SHALL REVIEW AND APPROVE SHORING PRIOR TO STARTING WORK. ALL LOOSE CONCRETE ON THE UNDERSIDE OF THE PARKING DECK SHALL BE REMOVED PRIOR TO STARTING WORK. ALL NOISE AND DUST PRODUCING OPERATIONS SHOULD BE BASED ON THE OWNER'S SATISFACTION AND THE SPECIFIC REQUIREMENTS BY THE AUTHORITY HAVING JURISDICTION, WHICHEVER IS MORE STRINGENT.

8. THE NEW CONCRETE SHALL BE PLACED, CONSOLIDATED AND FINISHED TO MATCH EXISTING FINISH FLOOR ELEVATIONS. THE SHORING AND FALSE WORK CAN BE REMOVED AFTER THE NEW CONCRETE HAS ACHIEVED 0.75 F'c. THE NEW CONCRETE CAN BE OPENED TO TRAFFIC AFTER IT ACHIEVES 28 DAY COMPRESSIVE STRENGTH OF F'c.

9. THE NEW CONCRETE SHALL BE PLACED, CONSOLIDATED AND FINISHED TO MATCH EXISTING FINISH FLOOR ELEVATIONS. THE REPAIR AREAS MAY BE OPENED TO GARAGE OPERATION AFTER THE NEW CONCRETE HAS ACHIEVED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI. THE SHORING AND FALSEWORK SHALL BE LEFT IN-PLACE UNTIL THE NEW CONCRETE ACHIEVES AT LEAST 70% OF THE DESIGN COMPRESSIVE STRENGTH. THE CONTRACTOR SHALL COOPERATE WITH THE TESTING AGENCY REPRESENTATIVE DURING THE PLACEMENT TO INSPECT AND MAKE CYLINDERS OF NEW CONCRETE DELIVERED TO THE SITE.

10. CONCRETE TESTING WILL BE PERFORMED BY THE TESTING LABORATORY SELECTED BY THE OWNER IN ACCORDANCE WITH ACI 301 SUBSECTION 1.6. SEE THE SPECIFICATION FOR CONCRETE TEST REQUIREMENTS.

## SCOPE OF WORK (SUMMARY)

0100 MOBILIZATION & GENERAL CONDITIONS (1000)
0200 PARTIAL DEPTH SLAB REPAIRS & 0250 SACRIFICIAL ANODES
0300 FULL DEPTH SLAB REPAIRS
0400 ROUT & SEAL CONSTRUCTION JOINTS
0500 SUPPLEMENTAL REINFORCEMENT
0600 WATERPROOFING MEMBRANE(S)

**PHASING NOTES:**

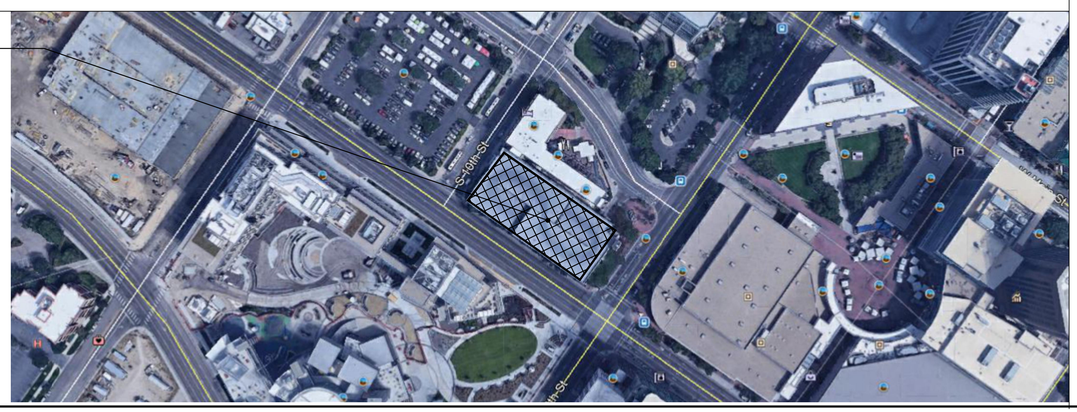
- CONTRACTOR IS PERMITTED TO TEMPORARILY REMOVE UP TO 80 PARKING SPACES AT A TIME FOR CONCRETE REPAIRS, WATERPROOFING, AND SHORING.
- STORAGE OF MATERIALS & EQUIPMENT IS NOT PERMITTED MORE THAN 5 DAYS AHEAD OF THE ANTICIPATED START DATE.
- CONTINUOUS FENCING (WITHOUT GAPS) AS WELL AS SCREENING SHALL BE PROVIDED FOR EVERY WORK ZONE PRIOR TO BEGINNING.
- TRAFFIC CONTROL DEVICES AND DIRECTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR
- ACCESS TO STAIRS AND EGRESS SHALL BE MAINTAINED AT ALL TIMES

## SHEET INDEX



## KEY PLAN

SITE LOCATION




## GENERAL NOTES

The following general notes shall apply unless noted otherwise on plans.

1. All design and construction shall be in accordance with the 2018 International Building Code (IBC), 2018 International Existing Building Code (IEBC), AISC 7-16, and City of Boise local amendments. The garage is classified as Occupancy Category S2
2. Do not scale dimensions from drawings.
3. Contractor is responsible to verify all floor elevations and dimension shown on plans with existing conditions prior to commencing work.
4. Contractor shall report immediately to the Engineer any discrepancies or incorrect information with drawings based on existing conditions. After reporting the discrepancies verbally, a written report should then follow. Contractor shall be directed by the Engineer regarding the above matter.
5. The Contractor shall provide methods and equipment for protecting the building, all materials, and personnel from fire damage prior to starting work. Methods and equipment are subject to approval by the local Fire Department. The Contractor shall submit the methods and equipment in writing and obtain the Owner and Engineer's approval prior to starting work. Fire protection and prevention during the construction period shall be in accordance with all laws and regulations including, but not limited to, the latest N.F.P.A. Regulations, OSHA, State of Idaho, and local requirements.
6. The Contractor shall comply with all safety and health laws and regulations including, but not limited to, provisions and requirements of the Occupational Safety and Health Act of 1970, as amended and/or the Construction Safety Act of 1969, as amended (whichever is applicable) and with all most recent applicable laws, ordinances, rules, regulations, and orders of any public authority having jurisdiction, and safety of persons or property or to protect them from damage, injury, or loss. He/She shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warning against hazards, promulgating safety regulations, and notifying the Owner and users of adjacent utilities. The Contractor shall employ and ascertain continuing presence on the job of a person competent in issues of safety in construction. This individual shall be recently trained or re-trained (within 12 months of the work commencement on this project) within an OSHA outreach training program and additionally certified in first aid by the American Red Cross.
7. The contractor shall provide all shoring, bracing, sheeting required for safety, and proper execution of work.
8. The Contractor shall not attempt to demolish any existing concrete slab of the garage prior to installation of proper shoring members approved by the Engineer. The Contractor shall not attempt to bring any vehicle or equipment into the parking facility prior to installation of proper shoring members approved by the Engineer, and of which the requirements are shown on Plans. Any vehicle and/or equipment to brought on the parking facility shall by approved by the Engineer. Contractor is solely responsible to prepare shop drawings for the shoring members and to submit them to the Engineer for approval.
9. When the plans include information pertaining to surface observation, material testing, and other preliminary investigations, such information represents only the opinion of the Engineer as to the location, character, or quality of the materials encountered and is only included for convenience of the bidder. The neither the Owner nor the Engineer assumes any responsibility whatever in respect to the sufficiency or accuracy of the information. Neither the Owner nor the Engineer guarantee, either expressed or implied, that the conditions indicated are representative of those existing throughout the work, or that unanticipated developments may not occur. The above information shall not be considered by the parties as a basis for the contract award amount.
10. Any extra work beyond the scheduled quantities requiring additional cost to the Owner shall be approved by the Owner prior to taking such action. Claims for extra work which have not been authorized in writing by the Owner and approved by the Engineer will be rejected and the Contractor shall not be entitled to payment. The Contractor shall promptly submit the proposal for extra work, in writing, as additional work is discovered.
11. The plans may be supplemented by standard and working drawings as are necessary to adequately describe the work. In the event, a change becomes necessary due to circumstances not known by the Engineer until after the bid documents were submitted to the Owner or arising thereafter, the Engineer may alter the plans, as may be necessary and increase or decrease the quantities of work to be performed in accordance with such changes. The Owner shall be informed with a copy of all submittals and correspondence as the changes may occur.
12. Execution of the work will involve consideration for allowing the Owner to continue operations in the subject facility in the areas outside of the repair area and shoring area for each phase. Prior to the award of the contract, the construction schedule prepared by the Contractor shall be submitted to the Owner and coordinated with the facility management. Owner's approval of the proposed schedule shall precede the contract amount.
13. The Contractor shall review all existing conditions to identify all utilities affected by the repair work, if any. The contractor shall be solely responsible for maintaining the operation of existing services (utilities) to all areas of the subject facility or other areas (not in contract) affected by the work. The Contractor shall submit the methods and schedule of construction for the Owner's approval prior to the commencement of work.
14. As the work progresses, the Contractor shall produce "As-Built" drawings for the installation of all repair items under the contract. The Engineer will provide the general contractor with a set of reproducibles for this purpose. The Contractor is responsible to maintain the As-Built drawings updated according to the job progress. For each pay-request by the Contractor, the Owner and Engineer shall receive a copy of the updated As-Built drawings.

DESIGN LOADS:
LIVE LOADS: 40 PSF
CONCENTRATED VERTICAL LOAD: 3,000 LBS ON 20 SQ. IN. OF SURFACE AREA

DESMAN Design Management

CCDC 10TH AND FRONT STREET PARKING GARAGE
PHASE 3 STRUCTURAL CONCRETE REPAIRS
BOISE, IDAHO

PROFESSIONAL ENGINEER LICENSED 15271 STATE OF IDAHO HOSHI J. ENGINEER
2/26/2025

| ISSUE | | |
|---|---|---|
| 3 | BID SET | 02/25 |
| 2 | 90% SUBMITTAL | 01/25 |
| 1 | 50% SUBMITTAL | 12/24 |
| NO. | DESCRIPTION | DATE |

DRAWING TITLE: COVER SHEET & SHEET NOTES
SCALE: N.T.S
DATE: FEBRUARY 2025
DRAWING NO. G-01
PROJECT NO : 60-24113-2

| DES. | DRWN. | CK'D. |
|---|---|---|
| HE | SM | EB |

# SCOPE OF WORK

0100 **Mobilization** (including de-mobilization) will encompass multiple sub-phases and staging of construction and/or off-hours work scheduling to meet site constraints of the work itself.

0200 **Partial Depth Concrete Slab Strip Repairs (PDR)**, nominally 4.0' wide section centered over the beams, at shear walls and columns on Level 3 (L3) as outlined in DET 1, 2, 5 & 6 on R-06. Work includes sawcutting along perimeter of squared off area, removing & disposing of concrete, cleaning and epoxy painting existing rebar (to remain in place), providing supplemental rebar and sacrificial anodes, placing concrete (with heated blankets for curing in temperature less than 40°), and tooling of joints and proper curing. Assume concrete removal depth of 3.0 inches on average.

0250 Pursuant to WI 0200 above, contractor to provide **Sacrificial Anodes** according to DET 5/R-06.

0300 (As Required) **Full Depth Concrete Repair** includes removal and replacement of deteriorated concrete in or around the PDR. Work follows DET 3 on R-06. Also includes sawcutting along perimeter of squared off area, removal & disposal of concrete, cleaning and epoxy painting existing rebar (to remain in place), providing supplemental rebar and sacrificial anodes, concrete placement (heated curing where required under 40°), tooling of joints and proper curing.

0400 **Route & Seal Control/Construction Joints** at the perimeter of the concrete repair areas on L3, as outlined in DET 1/R-06 & 3/R-07.

0500 **Supplemental Reinforcement** replacement, part of the above repair items, but cannot be quantified, should be provided at a unit price. This occurs at regions of existing reinforcement where rebar has lost 20% or more of the original cross section area. The cost includes labor + material.

0600 **One Shot Waterproofing Membrane** for the entire L3 deck. This should be an approved equivalent of the Specification 07 18 16, and as shown in R-07. The work should be completed after the appropriate curing of the PDR and Full-depth above.

1000 **General Conditions** includes any general or work permits, licenses, bonds, etc., if any, required to perform the repairs. This item may be included in Mobilization on the Bid Form.

## REINFORCED CONCRETE NOTES

1. ALL REINFORCED CONCRETE WORK SHALL BE IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 318
2. MATERIALS:
   - A. THE 28-DAY COMPRESSIVE STRENGTH OF NEW NORMAL WEIGHT CONCRETE SHALL BE A MINIMUM OF 5,000 PSI, W/C RATIO = 0.4 AND MAXIMUM SLUMP = 4". THE CONCRETE SHALL BE FIBER REINFORCED IN ACCORDANCE WITH THE SPECIFICATIONS.
   - B. CONCRETE MIX(ES) SHALL BE DESIGNED BY AN APPROVED LABORATORY AND SHALL BE SUBMITTED TO THE OWNER AND THE ENGINEER FOR REVIEW AND APPROVAL BEFORE USE.
   - C. FINE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C33.
   - D. PORTLAND CEMENT SHALL BE TYPE I OR III CONFORMING TO ASTM C150.
   - E. ALL NEW REINFORCING STEEL SHALL CONFORM TO ASTM A615 (GRADE 60). ALL NEW SLAB REINFORCING STEEL SHALL BE EPOXY COATED REBAR.
   - F. AIR ENTRAINMENT FOR ALL CONCRETE SHALL BE 6%±1% OF THE VOLUME OF FRESHLY MIXED CONCRETE.
3. UNLESS SPECIFICALLY NOTED, CONCRETE COVER TO NEW EPOXY COATED REINFORCING STEEL IN THE SUPPORTED SLABS SHALL BE AS FOLLOWS:

   | | |
   |---|---|
   | TOP BARS | 1 ½ INCH |
   | BOTTOM BARS | 1 INCH |

4. UNLESS DIRECTED OTHERWISE BY THE ENGINEER, ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315. BAR SUPPORTS FOR EPOXY COATED BARS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED.
5. SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
6. ALL REINFORCING SPLICES SHALL BE CLASS B LAP SPLICE AND CONFORM TO SPEC SECTION 03 20 00.
7. FORMS FOR SLAB/BEAM SOFFITS IF USED, SHALL BE TIGHT LEAKPROOF AND PROVIDE THE NECESSARY RIGIDITY TO SUPPORT THE IMPOSED LOADS WITHOUT ANY SETTLEMENT OR DEFORMATION.
8. THE SURFACE OF THE NEW FLOOR SLAB SHALL BE FINISHED USING A MEDIUM BROOM FINISH PERPENDICULAR TO THE FLOW OF TRAFFIC. SEE SPECS FOR MORE INFORMATION.
9. FOR TEMPERATURES UNDER 40°, CONCRETE INSTALLATION MUST BE SUPPLEMENTED BY COVERS AND HEATING BLANKETS TO ENSURE PROPER CURING.
10. SCREEN CONCRETE SLAB PATCHES TO A UNIFORM THICKNESS.
11. ALL EXISTING CONCRETE SURFACES SHALL BE ROUGHENED TO ¼" AMPLITUDE BEFORE PLACEMENT OF NEW CONCRETE.
12. CLEAN REINFORCEMENT OF LOOSE RUST AND LAITANCE, GREASE, ETC. TO ACHIEVE PROPER BOND.
13. STORE MATERIALS IN A MANNER NOT TO EXCEED LIVE LOADS ON G-01.

## SPECIAL INSPECTION REQUIREMENTS (BY INSPECTION AGENCY CONTRACTED BY OWNER)

1. ITEMS SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER AND OWNER. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION TO THE ENGINEER. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS. INSPECTION AND TESTING REQUIREMENTS FOR SYSTEMS DESIGNED BY OTHERS SHALL BE DEFINED BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN.
2. SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR PER IBC SECTION 1704.2.5.2.

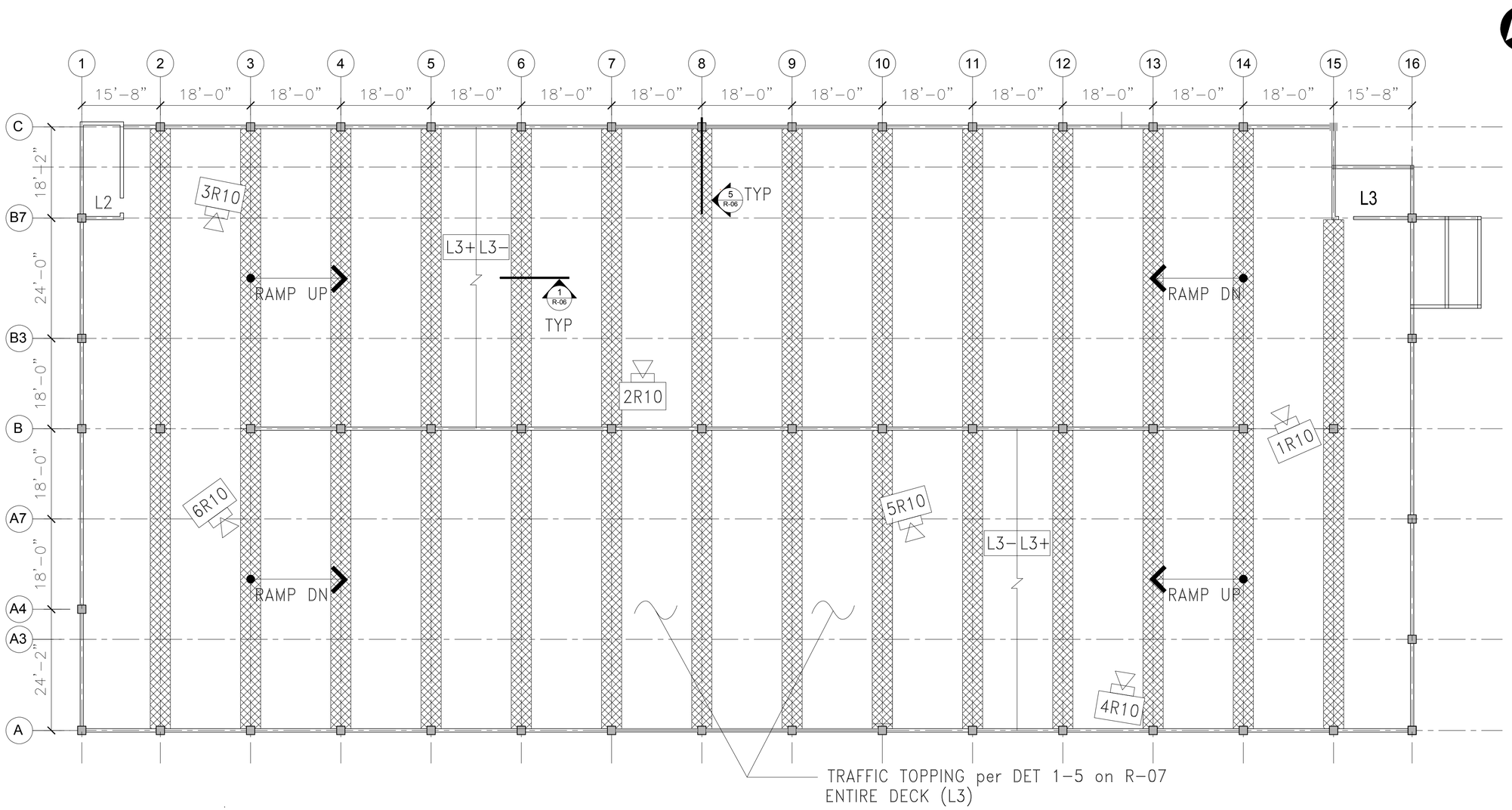
DESMAN Design Management

CCDC 10TH AND FRONT STREET PARKING GARAGE
PHASE 3 STRUCTURAL CONCRETE REPAIRS
BOISE, IDAHO

PROFESSIONAL ENGINEER LICENSED 15271 STATE OF IDAHO STRUCTURAL ENGINEER
2/26/2025

| ISSUE | | |
|---|---|---|
| 3 | BID SET | 02/25 |
| 2 | 90% SUBMITTAL | 01/25 |
| 1 | 50% SUBMITTAL | 12/24 |
| NO. | DESCRIPTION | DATE |

DRAWING TITLE: SHEET NOTES
SCALE: N.T.S
DATE: FEBRUARY 2025
PROJECT NO : 60-24113-2
DRAWING NO. G-02
DES. HE | DRWN. SM | CK'D. EB




THIRD LEVEL FLOOR PLAN

SCALE: 3/32" = 1'-0"

LEGEND:

- PARTIAL DEPTH STRIP REPAIRS (PDR) PERFORM PARTIAL DEPTH CONCRETE REPAIRS IN A NOMINAL 48" WIDE STRIP CENTERED OVER THE BEAM, AS SHOWN ON DRAWINGS AND DETAIL 1 R-06

1R10 - PHOTOGRAPH # (SEE SHEET) R-10

NOTE: MAXIMUM PARKING SPACE CLOSURE DURING CONSTRUCTION = 80

DESMAN Design Management

CCDC 10TH AND FRONT STREET PARKING GARAGE
PHASE 3 STRUCTURAL CONCRETE REPAIRS
BOISE, IDAHO

PROFESSIONAL ENGINEER LICENSED 15271 STATE OF IDAHO HEATHER ANNE ELLER
2/26/2025

| ISSUE | | |
|---|---|---|
| 3 | BID SET | 02/25 |
| 2 | 90% SUBMITTAL | 01/25 |
| 1 | 50% SUBMITTAL | 12/24 |

| NO. | DESCRIPTION | DATE |
|---|---|---|

DRAWING TITLE: THIRD LEVEL FLOOR PLAN

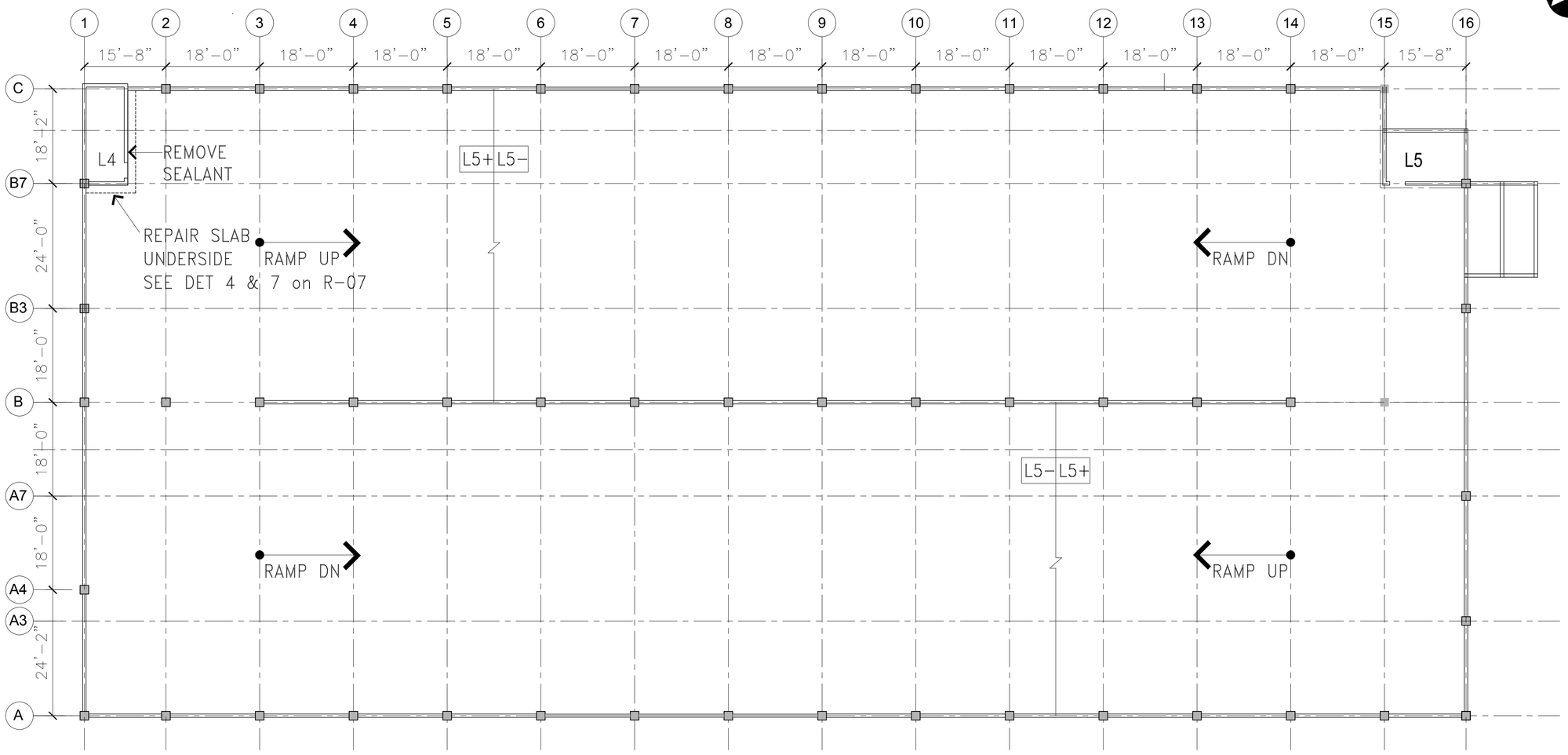
SCALE: N.T.S

DATE: FEBRUARY 2025

PROJECT NO : 60-24113-2

DRAWING NO. **R-03**

| DES. | DRWN. | CK'D. |
|---|---|---|
| HE | SM | EB |




FIFTH LEVEL FLOOR PLAN

SCALE: 3/32" = 1'-0"

DESMAN Design Management

CCDC 10TH AND FRONT STREET PARKING GARAGE
PHASE 3 STRUCTURAL CONCRETE REPAIRS
BOISE, IDAHO

PROFESSIONAL ENGINEER LICENSED 15271 STATE OF IDAHO HOWARD E. ELLIOTT
2/26/2025

| ISSUE | | |
|---|---|---|
| 3 | BID SET | 02/25 |
| 2 | 90% SUBMITTAL | 01/25 |
| 1 | 50% SUBMITTAL | 12/24 |

| NO. | DESCRIPTION | DATE |
|---|---|---|
| SCALE: | | N.T.S |
| DATE: | | FEBRUARY 2025 |
| PROJECT NO : | | 60-24113-2 |

| DES. | DRWN. | CK'D. |
|---|---|---|
| HE | SM | EB |

DRAWING TITLE: FIFTH LEVEL FLOOR PLAN

DRAWING NO. **R-05**

HORIZONTAL SURFACE CONCRETE REPAIR PROCEDURE NOTES:

1. THE CONTRACTOR SHALL SOUND AND VERIFY LOCATION AND EXTENT OF ALL REPAIR AREAS. ENGINEER SHALL VERIFY REPAIR LOCATIONS PRIOR TO CONCRETE DEMOLITION.

2. ISOLATE WORK AREA AND AREAS DIRECTLY BELOW FROM THE REMAINING PORTIONS OF THE PARKING STRUCTURE. ERECT APPROPRIATE BARRICADES AND PARTITIONS TO MINIMIZE DUST AND DEBRIS MIGRATION TO ADJACENT AREAS.

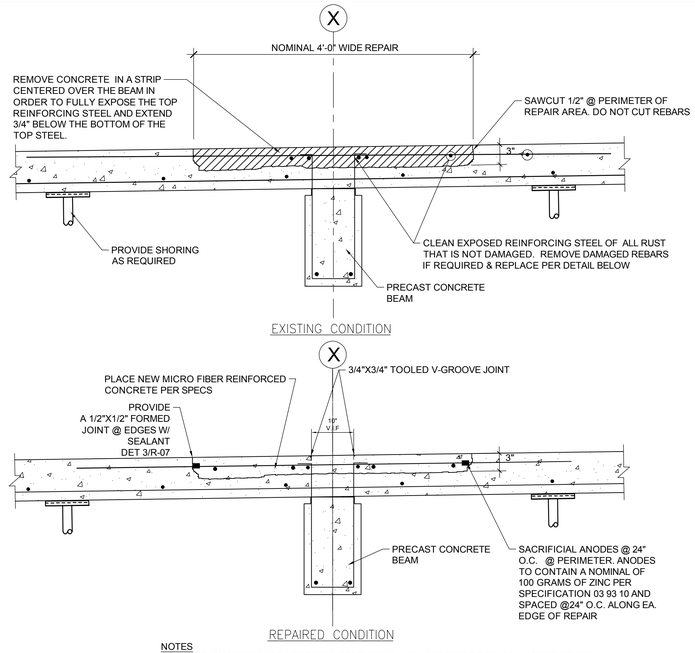
3. PROVIDE SHORING DESIGNED FOR DEAD AND CONSTRUCTION LIVE LOADS.

4. ONCE THE EXTENT OF CONCRETE REMOVAL AND CONDITION OF EXISTING PT (IF PRESENT) IN THE REPAIR AREA HAS BEEN DETERMINED, CAREFULLY SAWCUT PERIMETER OF REPAIR AREA MIN. ¾". DO NOT DAMAGE STEEL REINFORCING OR PT DURING SAWCUTTING OPERATIONS.

5. CAREFULLY REMOVE ALL UNSOUND AND DELAMINATED CONCRETE BY APPROVED METHODS TO A DEPTH OF 3/4" BEHIND STEEL REINFORCING, TAKING CARE NOT TO DAMAGE REBARS. NOTIFY THE ENGINEER OF ANY BROKEN, DAMAGED, OR HEAVILY CORRODED TENDONS, ANCHORAGE STEEL REINFORCING, OR PT COMPONENTS REVEALED UPON CONCRETE REMOVAL.

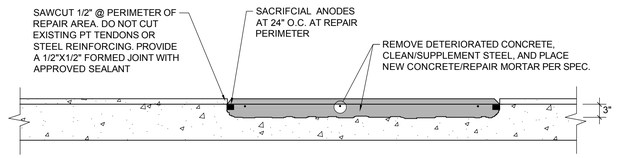
6. SANDBLAST CLEAN ALL EXPOSED STEEL REINFORCING, PT, AND PT ANCHORS (IF PRESENT). SUPPLEMENT EXISTING STEEL REINFORCING WHICH HAS LOST MORE THAN 20% OF ITS CROSS-SECTIONAL AREA WITH NEW EPOXY-COATED BARS. NEW REINFORCING BARS SHALL BE PROPERLY LAP SPLICED TO EXISTING BARS.

7. PLACE, FINISH, CURE, AND PROTECT CONCRETE/REPAIR MORTAR PER SPECIFICATIONS. MAINTAIN OR IMPROVE THE EXISTING SLOPE TO PROVIDE POSITIVE DRAINAGE ON THE FINISHED DECK SURFACE.

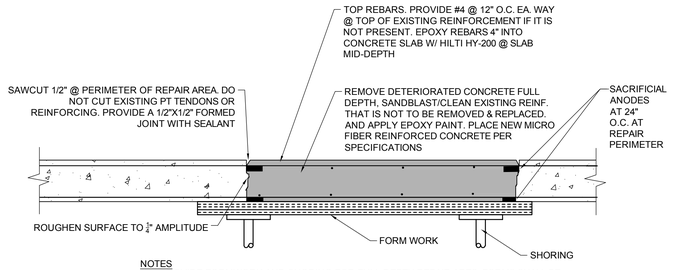



NOTES
1. SUPPLEMENT ANY REINFORCING STEEL THAT HAS LOST MORE THAN 20% OF THE CROSS SECTION WITH NEW EPOXY COATED REBARS WITH CLASS B LAP SLICE. THIS MAY REQUIRE ADDITIONAL CONCRETE REMOVAL AS DIRECTED BY ENGINEER.
2. EPOXY PAINT ALL EXISTING REMAINING STEEL

1 PARTIAL DEPTH "STRIP" REPAIR OVER BEAMS
SCALE: N.T.S.

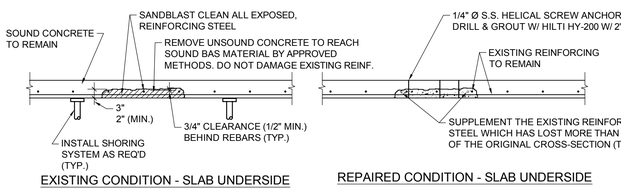



2 LOCAL PARTIAL DEPTH REPAIR
SCALE: N.T.S.




NOTES
1. PROVIDE FORMWORK AND SHORING FOR FULL DEPTH REPAIR ARES. FORMS SHALL BE TIGHT, LEAKPROOF, AND SHALL NOT DISPLACE UPON CONCRETE PLACEMENT.
2. CONCRETE REMOVAL AS NECESSARY FOR SPLICING SUPPLEMENTING REINFORCING BARS THAT HAVE LOST 20% OR MORE OF THEIR CROSS SECTION.

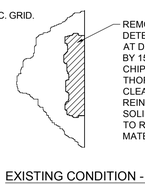
3 LOCAL FULL DEPTH REPAIR
SCALE: N.T.S.



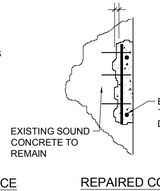

EXISTING CONDITION - SLAB UNDERSIDE




REPAIRED CONDITION - SLAB UNDERSIDE




EXISTING CONDITION - VERTICAL SURFACE




REPAIRED CONDITION - VERTICAL SURFACE

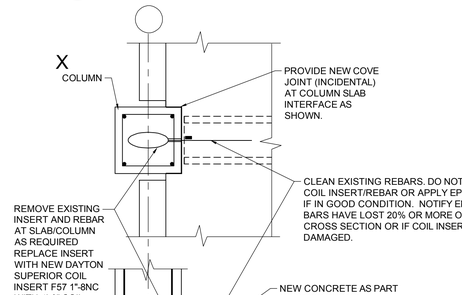
NOTES:

1. THE CONTRACTOR SHALL LOCATE AREAS OF SPALLED, LOOSE, AND DELAMINATED CONCRETE USING A SOUNDING HAMMER AS DIRECTED BY THE ENGINEER OR INSPECTION AGENCY. THE EXACT LOCATIONS AND BOUNDARIES FOR CONCRETE REMOVAL SHALL BE APPROVED BY THE ENGINEER.
2. INSTALL SHORING AS REQUIRED.
3. CLEAN EXPOSED REINFORCING STEEL BY SANDBLASTING AND COAT THE REINFORCING STEEL WITH EPOXY PAINT.
4. SUPPLEMENT EXISTING BARS WHICH HAVE LOST MORE THAN 20% OF THEIR ORIGINAL CROSS-SECTIONAL WITH NEW EPOXY COATED BARS AS EXISTING REINFORCING WITH LAP SPLICES PER NOTES ON R-02. THIS MAY REQUIRE ADDITIONAL CONCRETE REMOVAL AS DIRECTED BY THE ENGINEER

REPAIR PROCEDURES:

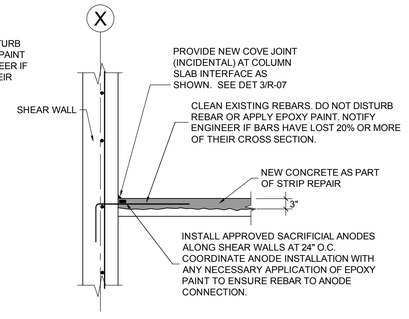
1. REMOVE ANY PERMANENT ATTACHMENTS TO THE CONCRETE MEMBERS THAT MAY INTERFERE WITH THE REPAIR PROCESS AND PROVIDE TEMPORARY SUPPORT FOR DRAIN LINES, ETC. IF REQUIRED. STORE THE DISMANTLED ATTACHMENTS, IF ANY, IN A DESIGNATED, SAFE PLACE FOR RE-INSTALLATION.
2. REMOVE ALL LOOSE, BROKEN, AND DELAMINATED CONCRETE FROM THE PRECAST OR CAST-IN-PLACE MEMBERS AS SHOWN ON THE DRAWINGS OR MARKED BY THE ENGINEER BY APPROVED METHODS. AVERAGE DEPTH OF REMOVAL SHALL BE ASSUMED TO BE 3 INCHES. EXPOSED PORTIONS OF EMBEDDED STRUCTURAL STEEL AND REINFORCEMENT SHALL BE SANDBLASTED CLEAN TO REMOVE ALL EVIDENCE OF RUST AND CORROSION. REPORT ANY CONDITION WHERE THE EXISTING REINFORCING STEEL HAS LOST MORE THAN 20% OF ITS CROSS-SECTIONAL AREA DUE TO CORROSION TO THE ENGINEER FOR DISPOSITION.
3. CLEAN AND PREPARE THE CONCRETE SURFACE FOR APPLICATION OF APPROVED REPAIR MATERIAL.
4. FINISH, CURE, AND PROTECT OVERHEAD/VERTICAL REPAIRS.
5. RESTORE EXISTING CONTROL JOINTS IN REPAIR AREAS WHERE APPLICABLE.
6. AFTER THE REPAIRS ARE COMPLETE, RE-INSTALL ANY TEMPORARILY REMOVED ATTACHMENTS TO RESTORE THE EXISTING CONDITIONS.

4 OVERHEAD/VERTICAL CONCRETE REPAIR
SCALE: 1/2" =1'-0"

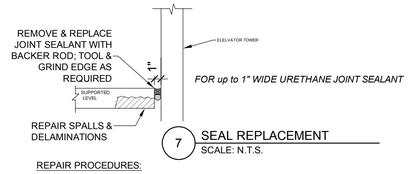



REPAIR ON BOTH SIDES OF COLUMN AT INERIOR RAMP COLS.

5 PARTIAL DEPTH STRIP REPAIR AT COLUMN INTERFACE
SCALE: N.T.S.




6 PARTIAL DEPTH STRIP REPAIR AT SHEAR WALL INTERFACE
SCALE: N.T.S.




7 SEAL REPLACEMENT
SCALE: N.T.S.

REPAIR PROCEDURES:

1. REMOVE THE EXISTING DETERIORATED SEALANT BY APPROVED METHOD.
2. PREPARE THE CONCRETE SUBSTRATE BY MANUFACTURER'S WRITTEN GUIDELINES.
3. INSTALL AN APPROVED SEALANT MATERIAL WITH BACKER ROD IN STRICT ACCORDANCE WITH THE MANUFACTURER'S GUIDELINES.

DESMAN Design Management

CCDC 10TH & FRONT STREET PARKING GARAGE
PHASE 3 STRUCTURAL CONCRETE REPAIRS
BOISE, IDAHO

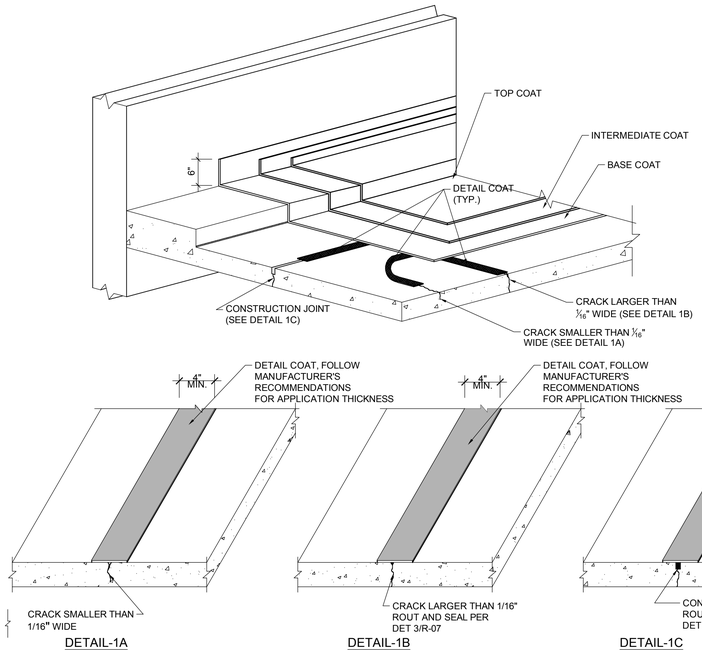
PROFESSIONAL ENGINEER LICENSED 15271 STATE OF IDAHO
2/26/2025

| ISSUE | | |
|---|---|---|
| 3 | BID SET | 2/25 |
| 2 | 90% SUBMITTAL | 1/25 |
| 1 | 50% SUBMITTAL | 12/24 |

| NO. | DESCRIPTION | DATE |
|---|---|---|

DRAWING TITLE: CONCRETE REPAIR DETAILS
SCALE: AS NOTED
DATE: FEBRUARY 2024
DRAWING NO. R-06
PROJECT NO 60-24113-2

| DES. | DRWN. | CK'D. |
|---|---|---|
| EB | SM | HE |




DETAIL-1A DETAIL-1B DETAIL-1C

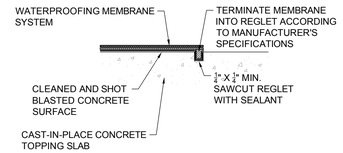
REPAIR PROCEDURE

1. AFTER CONCRETE REPAIRS HAVE PROPERLY CURED, SHOTBLAST CLEAN HORIZONTAL AND VERTICAL SURFACES SCHEDULED TO RECEIVE TRAFFIC BEARING MEMBRANE. STAINS, PAINT AND OTHER SURFACE CONTAMINANTS SHALL BE REMOVED AS RECOMMENDED BY THE SYSTEM MANUFACTURER. SURFACE PREPARATION SHALL INCLUDE DETAILING OF THE DECK WITH EPOXY BASE FILLER ACCEPTABLE TO THE MEMBRANE SYSTEM MANUFACTURER, GRINDING HIGH RIDGES IN THE NEWLY REPAIRED AREAS WHICH MAY BE DETRIMENTAL TO MEMBRANE SYSTEM PERFORMANCE. MEMBRANE SYSTEM MANUFACTURER WILL BE EXPECTED TO SIGN OFF ON FINAL DECK PREPARATION PRIOR TO MEMBRANE APPLICATION, AS WILL THE ENGINEER.
2. ALL CRACKS GREATER THEN 1/16" SHALL BE PREPARED PER DETAIL 1B. ALL CRACKS LESS THAN 1/16" SHALL BE PREPARED PER DETAIL 1A AT NO ADDITIONAL COST TO THE OWNER. ALL CONSTRUCTION JOINTS SHALL BE PREPARED PER DETAILS 1B. ALL COVE JOINTS SHALL PREPARED PER DETAIL 4/R-13.
3. THE SYSTEM MANUFACTURER AND COATING APPLICATOR SHALL PERFORM THE FOLLOWING TO ASSURE SYSTEM PERFORMANCE:
   A. VERIFY MOISTURE CONTENT OF THE EXISTING CONCRETE AND NEW CONCRETE REPAIR AREAS.
   B. PERFORM ADHESION TESTING ON EXISTING CONCRETE AND CONCRETE REPAIRS AREAS TO VERIFY COMPLIANCE WITH SYSTEM PERFORMANCE. DECK PREPARATION OF TEST AREAS SHALL BE PER SPECIFICATIONS.
   C. SYSTEM MANUFACTURER AND COATING APPLICATOR SHALL SUBMIT A JOINT LETTER STATING THAT THE ABOVE TESTING HAS BEEN PERFORMED AND THAT THE SURFACE PREPARATION IS ACCEPTABLE AND THE MEMBRANE SYSTEM WILL PERFORM AS SPECIFIED.
4. APPLY CONCRETE PRIMER PER MANUFACTURER'S RECOMMENDATIONS.
5. DETAIL CRACKS AND CONSTRUCTION JOINTS WITH BASE COAT AS PER DETAILS 1A, 1B, AND 1C.
6. APPLY BASE COAT TO THE SPECIFIED THICKNESS.
7. APPLY THE WEARING COURSE TO THE SPECIFIED THICKNESS. INSTALL IN LAYERS, IF REQUIRED, AS PER MANUFACTURER'S RECOMMENDATIONS.
8. INSTALL SYSTEM LOCK COAT OR TOP COAT PER MANUFACTURER'S RECOMMENDATIONS.
9. PARKING STALLS SHALL HAVE A MEDIUM DUTY WEAR COURSE INSTALLED AS SPECIFIED IN SYSTEM DESCRIPTIONS.
10. DRIVING LANES AND TURNING AREAS SHALL HAVE A HEAVY DUTY WEAR COURSE INSTALLED AS SPECIFIED IN SYSTEM DESCRIPTIONS.
11. SEE DETAIL 5/R-13 FOR MEMBRANE SPLICING DETAILS (WHERE APPLICABLE)

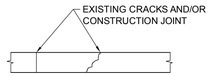
1 WATERPROOFING MEMBRANE APPLICATION DETAIL
SCALE: N.T.S.

NOTE:

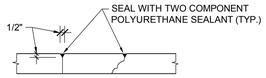
THE GENERAL CONTRACTOR AND WATERPROOFING MEMBRANE APPLICATOR SHALL CAREFULLY REVIEW ALL ADJACENT FACILITY'S VENTILATION CHARACTERISTICS, PARTICULARLY IN REGARD TO AIR INTAKE LOCATIONS. ALL ADJACENT PROPERTY OWNERS SHALL BE PROVIDED WITH A SAFE ENVIRONMENT DURING ALL COATING OPERATIONS.




2 MEMBRANE TERMINATION AT HORIZONTAL SURFACE
SCALE: N.T.S.

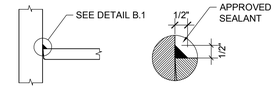



EXISTING CONDITION




REPAIRED CONDITION

A CRACK/CONSTRUCTION JOINT REPAIR



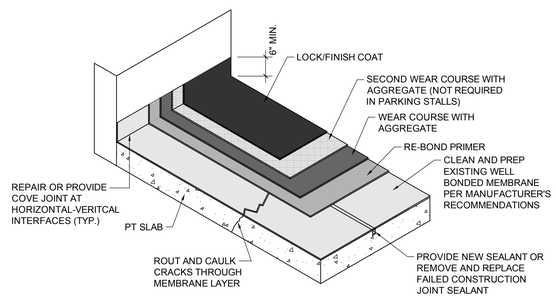

DETAIL B.1

B COVE JOINT INSTALLATION

REPAIR PROCEDURES:

1. PRIOR TO ANY CRACK/JOINT REPAIR WORK, THE EXACT SCOPE OF CRACK/CONSTRUCTION JOINT REPAIRS SHALL BE DETERMINED BY THE CONTRACTOR. THE SURFACE SHALL BE SHOTBLASTED CLEAN FOR INSPECTION.
2. ROUT AND CLEAN ALL CRACKS AND CONSTRUCTION JOINTS IN DESIGNATED AREAS. REMOVE EXISTING DETERIORATED SEALANT MATERIAL, IF ANY, DIRT, DEBRIS, ETC. BY APPROVED METHODS. THE CRACKS/JOINTS SHALL BE ROUTED TO THE SHAPE OF A 1/2"x1/2" V-GROOVE. CLEAN CONCRETE SURFACES USING COMPRESSED AIR OR OTHER MEANS TO REMOVE DUST OR OTHER EXISTING FOREIGN MATERIAL WHICH WOULD IMPAIR THE BOND OF NEW SEALANT MATERIAL.
3. PRIME THE SURFACES AND SEAL WITH APPROVED SEALANT MATERIAL.
4. PROHIBIT VEHICULAR TRAFFIC ON SEALED CRACKS/JOINTS UNTIL THE MATERIAL HAS CURED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
5. CONTRACTOR SHALL NOT REPAIR ANY PREVIOUSLY SEALED CRACKS/CONSTRUCTION JOINTS UNLESS DESIGNATED BY THE ENGINEER.

3 CRACK,CONSTRUCTION, AND COVE JOINT SEALANT REPAIR




TYPICAL MEMBRANE RE-COAT PROCEDURE:

1. REMOVE LOOSE OR DEBONDED EXISTING MEMBRANE.
2. CLEAN THE EXISTING MEMBRANE, WORN AREAS, AND BARE CONCRETE AREAS PER THE MEMBRANE SYSTEM MANUFACTURER'S RECOMMENDATIONS.
3. REPLACE FAILED/DE-BONDED CRACK AND CONSTRUCTION JOINT SEALANTS.
4. PRIME EXISTING BARE CONCRETE.
5. APPLY MEMBRANE BASE COAT TO BARE CONCRETE AREAS.
6. PRIME EXISTING MEMBRANE SYSTEM TO REMAIN.
7. APPLY INTERMEDIATE AND FINISH COATS.
8. RE-STRIPE ALL AREAS AFFECTED BY THE MEMBRANE RE-COATING.

NOTES:

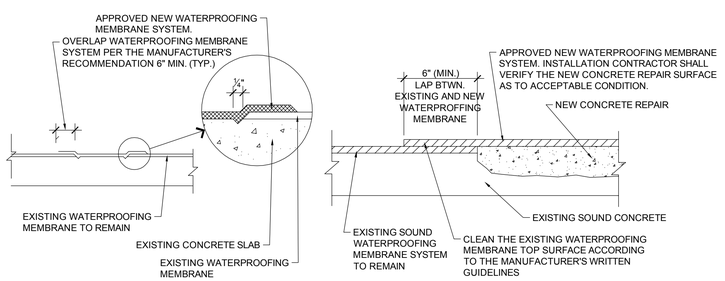
1. THE CONTRACTOR SHALL VERIFY THAT CONCRETE SUBSTRATES ARE SOUND.

2. PAYMENT TO CONTRACTOR SHALL BE MADE FOR BASED ON HORIZONTAL SURFACE APPLICATION AREAS ONLY. MEMBRANE SHALL BE TURNED UP A MINIMUM OF 6" AT ALL VERTICAL SURFACES ARE CONSIDERED ANCILLARY AND SHALL NOT BE INCLUDED IN PAYMENT APPLICATIONS.

3. FOR THE AREA TO BE RE-COATED, ALL CRACK AND CONSTRUCTION JOINT SEALANT REPLACEMENT, CRACK REPAIRS, AND COVE JOINT INSTALLATION REQUIRED SHALL BE INCLUDED IN THE SCOPE OF WORK FOR THE EXISTING WATERPROOFING MEMBRANE SYSTEM RECOATING.

4. WATERPROOFING MEMBRANE COLOR SHALL BE SELECTED BY OWNER.

5. SEE DETAIL 5/R-13 FOR DETAILS ON SPLICING NEW MEMBRANE TO EXISTING MEMBRANE (WHERE APPLICABLE)




4 WATERPROOFING MEMBRANE SYSTEM SPLICE DETAILS
SCALE: N.T.S.

5 WATERPROOFING MEMBRANE DETAIL
SCALE: N.T.S.

DESMAN Design Management

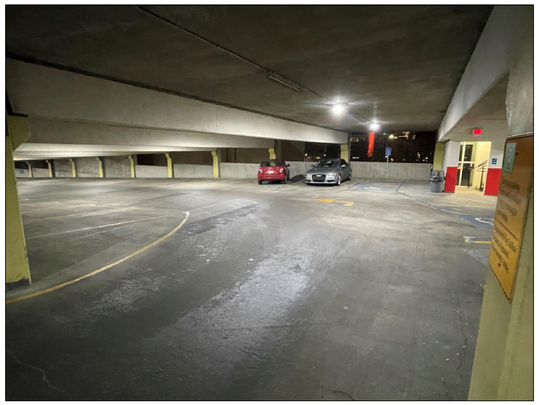
CCDC 10TH & FRONT STREET PARKING GARAGE
PHASE 3 STRUCTURAL CONCRETE REPAIRS
BOISE, IDAHO

PROFESSIONAL ENGINEER LICENSED 15271 STATE OF IDAHO REGISTERED
2/26/2025

| ISSUE | | |
|---|---|---|
| 3 | BID SET | 2/25 |
| 2 | 90% SUBMITTAL | 1/25 |
| 1 | 50% SUBMITTAL | 12/24 |
| NO. | DESCRIPTION | DATE |

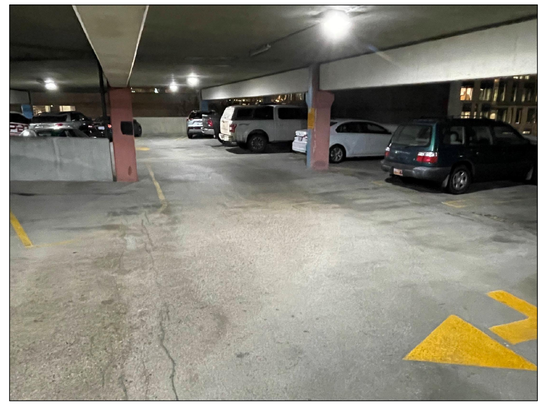
DRAWING TITLE: CONCRETE REPAIR DETAILS
SCALE: AS NOTED
DATE: FEBRUARY 2025
DRAWING NO. R-07
PROJECT NO 60-24113-2

| DES. | DRWN. | CK'D. |
|---|---|---|
| EB | SM | HE |

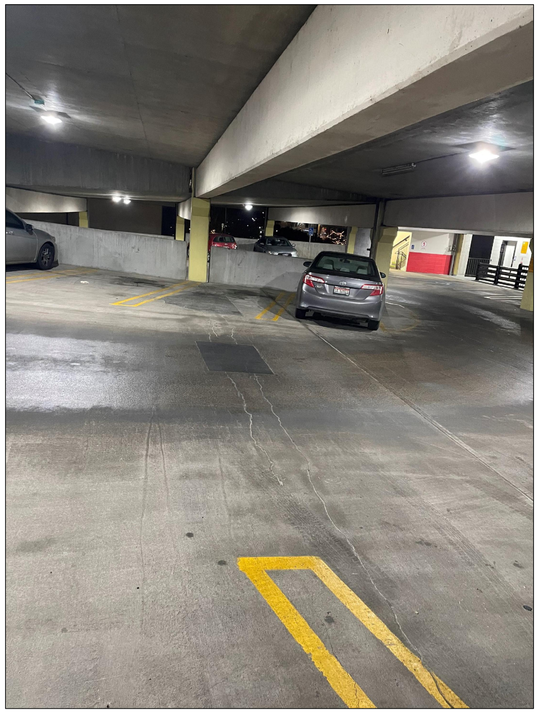


1 R-10 REPAIR ZONE PHOTO 1 - LEVEL 3 N

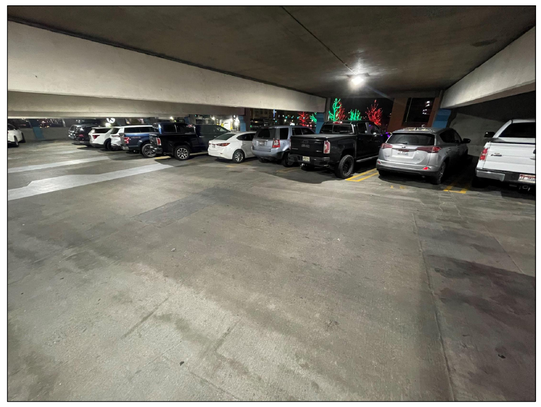
2 R-10 REPAIR ZONE PHOTO 2 - LEVEL 3 N



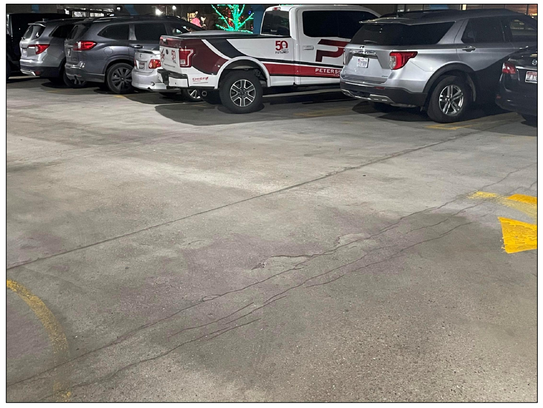
3 R-10 REPAIR ZONE PHOTO 2 - LEVEL 3 S



4 R-10 REPAIR ZONE PHOTO 4 - LEVEL 3 S



5 R-10 REPAIR ZONE PHOTO 5 - LEVEL 3 S



6 R-10 REPAIR ZONE PHOTO 6 - LEVEL 3 S

DESMAN Design Management

CCDC 10TH & FRONT STREET PARKING GARAGE
PHASE 3 STRUCTURAL CONCRETE REPAIRS
BOISE, IDAHO

PROFESSIONAL ENGINEER LICENSED 15271 STATE OF IDAHO HEATHER S. ENGLER
2/26/2025

| ISSUE | | |
|---|---|---|
| 3 | BID SET | 2/25 |
| 2 | 90% SUBMITTAL | 1/25 |
| 1 | 50% SUBMITTAL | 12/24 |

DRAWING TITLE: PHOTOGRAPHS

| NO. | DESCRIPTION | DATE |
|---|---|---|

SCALE: N.T.S.
DATE: FEBRUARY 2025
PROJECT NO 60-24113-2

DRAWING NO. **R-10**

| DES. | DRWN. | CK'D. |
|---|---|---|
| EB | EB | HE |