Appendix A

Required Forms

- 1. Design Build Proposal Form and Signature Pages
- 2. Baseline Lump Sum Price Form
- 3. Payment Bond
- 4. Performance Bond
- 5. Schedule of Values
- 6. Safety Program Questionnaire

Design Build Proposal Form and Signature Pages

Design Build Proposal Form/Signature Page

The undersigned Proposer proposes and agrees, if this proposal is accepted, to enter a contract with City in the form included in the Proposal Documents to perform all Work as specified or indicated in the Proposal Documents for the prices and within the times indicated in this Proposal and in accordance with the other terms and conditions of the Proposal Documents.

1. PROPOSER'S ACKNOWLEDGEMENTS

Proposer accepts all of the terms and conditions of the Instructions to Proposers including without limitation. This Proposal will remain subject to acceptance for 60 days after the evaluation of the proposals, or for such longer period of time that Proposer may agree to in writing upon request of City.

2. PROPOSER'S REPRESENTATIONS

In submitting this Proposal, Proposer represents that

A. Proposer has examined and carefully studied the Proposal Documents, other related data identified in the Proposal Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum Number	Addendum Date

- B. The proposer is responsible to 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. Proposer is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work
- D. Proposer has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- E. Proposer has considered the information known to Proposer; information commonly known to contractors doing business in the locality of the Site; the Request for Proposal Documents; and the Site-related reports and drawings identified in the Request for Proposal Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Proposal, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Request for Proposal Documents; and (3) Proposal's safety precautions and programs

- F. Based on the information and observations referred to in Paragraph E above, Proposer does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Proposal for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Pr Proposal Documents
- G. Proposer is aware of the general nature of work to be performed by City and others at the Site that relates to the Work as indicated in the Request for Proposal Documents
- H. Proposer has given City written notice of all conflicts, errors, ambiguities, or discrepancies that Proposer has discovered in the Proposal Documents, and the written resolution thereof by OWNER is acceptable to Proposer.
- I. The Proposal Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Proposal is submitted
- J. Proposer agrees not to withdraw its Proposal within 60 days after the actual date of the Proposal Due Date

3. PROPOSAL SUBMITTAL

This Proposal is submitted by:

If Proposer is:

A. INDIVIDUAL

Individual's Signature

Name Typed or Printed

Address

B. DOING BUSINESS AS A PARTNERSHIP

Partnership Name
BY:
Signature of the general partner
Attach evidence of authority to sign
Name typed or printed
Address

C. CORPORATION

Corporation Name and Seal

State of Incorporation:

Type: (General Business, Professional Service, Limited Liability)

Signature and Title (Attach Evidence of Authority)

Name and Title (Typed or printed)

Attest

Date of qualification to do business in Alaska (month/Day/Year)

Address

D. JOINT VENTURE

Name of Joint Venture
Address
BY:
Individual's Signature
BY:
Individual's Signature
BY:
Individual's Signature
BY:
Individual's Signature
BY:
Individual's Signature

4. PROPOSER'S CERTIFICATION

Proposer certifies that:

- A. This Proposal 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 collusive agreement or rules of any group, association, organization, or Corporation
- B. The proposer has not directly or indirectly induced or solicited any other proposer to submit a false or sham Proposal.
- C. The proposer has not solicited or induced any individual or entity to refrain from submitting a proposal

- D. Proposer has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made:
 - a) to influence the bidding process to the detriment of City,
 - b) to establish bid prices at artificial non-competitive levels, or
 - c) to deprive OWNER of the benefits of free and open competition.
 - d) "collusive practice" means a scheme or arrangement between two or more Proposers, with or without the knowledge of City, a purpose of which is to establish bid prices at artificial, non-competitive levels.
- E. Proposer will complete the Work in accordance with the Contract Documents for the prices in Price Form.
- F. Proposer agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 13.08 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- G. Proposer accepts the provisions of the Agreement as to liquidated damages.

5. ATTACHMENTS TO THIS PROPOSAL

The following documents are submitted with and made a condition of the Bid:

- A. Required Bid security in the form of a 5% Bid Bond, certified check, or cashier's check (check amount to be 5% of Baseline Lump Sum Price) and any required power of attorney for a bond.
- B. Evidence of authority to do business in the State of Alaska; or a written covenant to obtain such license within the time for acceptance of Proposal.
- C. Contractor's Certificate of Registration No.: _____ in compliance with AS 08.IS [or] Evidence of Proposer's ability to obtain a State Contractor's Certificate of Registration and a covenant by Proposer to obtain said Certificate within the time for Award of Contract.
- D. Proposal, as outlined in the RFP.

6. DEFINED TERMS

The terms used in this Proposal with initial capital letters have the meanings stated in the Instructions to Proposers, the General Conditions, and the Supplementary Conditions

7. BID BOND FORM

Any singular reference to Bidder, Surety, Owner or other parties shall be considered plural where applicable.

A. BIDDER (Name and Address):

B. SURETY (Name and Address of Principal Place of Business):

C. OWNER (Name and Address):

Bid Due Date: Description (Project Name and Include Location):

Bond Number:

Date (Not earlier than Bid due date):

Penal sum

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	SURETY
Bidder Name and Corporate Seal	Surety Name and Corporate Seal
BY:	BY:
Signature (Attach Power of Attorney)	Signature (Attach Power of Attorney)
Print or type Name and Title	Print or type Name and Title
Attest:	Attest:
Signature and Title	Signature and Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

- Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder any difference between the total amount of Bidder's Bid and the total amount of the Bid of the next lowest, responsible Bidder who submitted a responsive Bid as determined by Owner for the work required by the Contract Documents, provided that:
 - a) If there is no such next Bidder, and Owner does not abandon the Project, then Bidder and Surety shall pay to Owner the penal sum set forth on the face of this Bond, and
 - b) In no event shall Bidder's and Surety's obligation hereunder exceed the penal sum set forth on the face of this Bond.
 - c) Recovery under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
- Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

- 3. This obligation shall be null and void if:
 - a. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - b. All Bids are rejected by Owner, or
 - c. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
- 4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project, and including a statement of the amount due.
- 5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
- 6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
- 7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
- 8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
- 9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
- 10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
- 11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Baseline Lump Sum Price Form

Baseline Lumpsum Price Form

Baseline Lump Sum

Fixed Price of Design and Construction of the Baseline Lump Sum Scope of Work:

\$

Supplemental Bulkhead Option

Proposer hereby certifies the validity of Supplemental Bulkhead Option prices, as presented by the Proposer.

Fixed Price for design and construction for Supplemental Bulkhead Option

Alternative Options

Alternative Option

Pricing shall be provided for any Alternative Options included in the Proposal. Proposer hereby certifies the validity of Alternative Options prices, as presented by the Proposer.

Fixed Price for design and construction Alternative Options

\$

This Price Form is submitted by:

This Proposal is submitted by:

If Proposer is:

AN INDIVIDUAL

Individual's Signature

Name Typed or Printed

DOING BUSINESS AS A PARTNERSHIP

Partnership Name

BY:

Signature of the general partner

Attach evidence of authority to sign

Name typed or printed

A CORPORATION

Corporation Name and Seal

State of Incorporation:

Type: (General Business, Professional Service, Limited Liability)

Signature and Title (Attach Evidence of Authority)

Name and Title (Typed or printed)

Attest

Date of qualification to do business in Alaska (month/Day/Year)

A JOINT VENTURE

Name of Joint Venture
Address
BY:
Individual's Signature
BY:
Individual's Signature

BY:
Individual's Signature
BY:
Individual's Signature
BY:
Individual's Signature

Payment Bond

PAYMENT BOND

A payment bond on the part of the contractor for 100 percent of the contract price. Any singular reference to Contractor, Surety, Owner, or other parties shall be considered plural where applicable.

Contractor	Surety
Name and Address	Name, Address of Principal Place of Business

Owner
Name and Address

BOND

Bond Number	
Date (Not earlier than Effective Date ofAgreement)	
Amount	

Modifications to this Bond Form Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	SURETY
Bidder Name and Corporate Seal	Surety Name and Corporate Seal
BY:	BY:
Signature (Attach Power of Attorney)	Signature (Attach Power of Attorney)
Print or type Name and Title	Print or type Name and Title
Attest:	Attest:
Signature and Title	Signature and Title

Note: Provide execution by additional parties, such as joint venturers, if necessary

- 1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference
- 2. With respect to Owner, this obligation shall be null and void if Contractor
 - a. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - b. Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
- 3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due
- 4. Surety shall have no obligation to Claimants under this Bond until
 - a. Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim

- b. Claimants who do not have a direct contract with Contractor
 - 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 - 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 - 3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
- 5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, which is sufficient compliance.
- 6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:
 - a. Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - b. Pay or arrange for payment of any undisputed amounts
- 7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
- 8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfying obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work
- 9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond and shall have under this Bond no obligations to make payments to give notices on behalf of, or otherwise have obligations to Claimants under this Bond
- 10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations
- 11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after

the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.c, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (I) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

- 12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page
- 13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted here from and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond
- 14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made
- 15. Definitions
 - a. Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished
 - b. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - c. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof

For Information Only – (Name, Address, and Telephone

Surety Agency Broker

Performance Bond

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other parties shall be considered plural where applicable

Contract

Effective Date of Agreement	
Amount	
Description (Name and Location)	

Bond

Bond Number	
Date (Not earlier than Effective Date of Agreement)	
Amount	

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative

CONTRACTOR AS PRINCIPAL	SURETY
Bidder Name and Corporate Seal	Surety Name and Corporate Seal
BY:	BY:
Signature (Attach Power of Attorney)	Signature (Attach Power of Attorney)
Print or type Name and Title	Print or type Name and Title
Attest:	Attest:
Signature and Title	Signature and Title

Note: Provide execution by additional parties, such as joint venturers, if necessary

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference

- 1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1
- 2. If there is no Owner Default, Surety's obligation under this Bond shall arise after
 - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
 - 2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1: and
 - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
 - 1. Surety in accordance with the terms of the Contract; or
 - 2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.
- 3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
 - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
 - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
 - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or

2. Deny liability in whole or in part and notify Owner citing reasons therefor.

- 4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner shall be entitled to enforce owner shall be entitled to enforce any remedy available to Owner shall be entitled to enforce any remedy available to Owner shall be entitled to enforce any remedy available to Owner
- 5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for
 - 5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract
 - 5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
 - 5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor
- 6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.
- 7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.
- 8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable
- 9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page

10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted here from and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond

11. Definitions

11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any

amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.

11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

For Information Only – (Name, Address, and Telephone

Surety Agency Broker

Schedule of Values

Schedule of Values

Baseline Lump Sum

Item	Description	Quantity	Unit	
1	Mobilization & Construction Management	1	LS	
2	Removal & Disposal of Existing Structures	1	LS	
3	Minimal Bulkhead and Backfill	1	LS	
4	Uplands, Including parking and walkway	1	LS	
5	Pilings	1	LS	
6	Floating Structures	1	LS	
7	Transfer Bridge and Drive down Float	1	LS	
8	Gangways & Trestles	1	LS	
9	Utilities Water, electric, sewer, Fire Suppression	1	LS	
10	Safety Systems & Features	1	LS	
11	Demobilization	1	LS	
12	Quality Management	1	LS	
13	Marine Mammal Monitoring	1	LS	
	То	otal Baseline Lu	mp Sum Price	

Supplemental Full Bulkhead Option

Item	Description	Quantity	Unit	
1	Mobilization & Construction Management	1	LS	
2	Removal & Disposal of Existing Structures	1	LS	
3	Minimal Bulkhead and Backfill	1	LS	
4	Uplands, Including parking and walkway	1	LS	
5	Pilings	1	LS	
6	Floating Structures	1	LS	
7	Transfer Bridge and Drive down Float	1	LS	
8	Gangways & Trestles	1	LS	
9	Utilities Water, electric, sewer Fire Suppression	1	LS	
10	Safety Systems & Features	1	LS	
11	Demobilization	1	LS	
12	Quality Management	1	LS	
13	Marine Mammal Monitoring	1	LS	
	Total Suppler	mental Full Bul	khead Option Price	

Safety Program Questionnaire

SAFETY QUESTIONNAIRE/SAFETY PLAN

Required form; Proposer shall complete all fields

1. **GENERAL INFORMATION**

Company Name
Safety Contact name and title
Address
Phone Number:
Email:

Injury, Illness, and Incident Frequency Rate

Total Employee-hours Worked	CALENDAR YEAR 2021	CALENDAR YEAR 2020
Total number of lost work-daycases Injuries/Illnesses (Total of column H of the OSHA 300 log)		
Lost work-day Incidence Rate (seeformula below)		
Total Recordable Injury/Illnesses (Totals in columns H, I & J of the OSHA 300 log)		
Recordable Incidence Rate (see formula below)		

The formula for either rate is

Number of (lost workday or total recordable cases) * 200.000/Total Employee hours worked

2. CHECKLIST - PROGRAM ASSESSMENT

Please indicate by placing an "X" in the appropriate box as to whether or not your company includes the following items in your accident prevention program. If items do not apply to your company mark the N/ A response. Provide an explanation in the notes section at the end of the checklist for any NO or N/A responses

A. PRINCIPAL COMMITMENT

YES	NO	N/A	
			Written Safety & Health Policy signed by a company principal withan emphasis on company commitment to Safety & Health
			Designated Safety Administrator/Coordinator trained in Safety & Health hazard recognition and management/risk control Consider safety and health issues as an overriding factor
			Have an annual safety and health budget, and budgets for each job. Funds available to support the safety program on companywide and project specific basis
			Company policy gives employees authority to shut down operations because of a safety hazard that presents an imminent danger to employees
			Have safety and health policy requirements written into contracts to require subcontractors to meet your safety requirements
			Utilize a pre-qualification safety & health screening method to select subcontractors, suppliers, or vendors

B. ACCIDENT PREVENTION PLAN & PROCEDURES

YES	NO	N/A	
			Provide safety and health rules that equal to OSHA standards.
			Provide safety and health rules that exceed OSHA standards.
			Require JHA's (Job Hazard Analysis)
			Have a written Hazard Communication Program?
			Have new hire orientation procedures
			Emergency Action Plan
			Disciplinary Procedures
			Employee Training & Documentation
			Written Policy & Procedures to cover tasks associated to your typeof
			business

C. DESIGNATED SAFETY COORDINATOR/MANAGER/COMMITTEE

YES	NO	N/A	
			Safety responsibilities clearly defined
			Reports to executive management.
			Conducts safety inspection or audits.
			Investigates injuries and accidents

YES	NO	N/A	
			First Aid and CPR Certifications (Current and up to date)
			Written emergency procedure plan for evacuation
			Crisis Management Plan
			Appropriate First Aid Supplies available
			Emergency Rescue plan in place for a fall and caught-in-betweenvictim (i.e., falls, excavations, confined spaces, etc.)

D. EMERGENCY PROCEDURES AND FIRST AID/CPR

E. INSPECTIONS/ ACCIDENT INVESTIGATION/REPORTS

YES	NO	N/A	
			Maintain safety and health recordkeeping requirements
			Provide safety inspection and accident investigation procedures
			Injury accidents are investigated promptly after an occurrence and a report is presented
			Accident reports are reviewed regularly to determine corrections
			Weekly safety and health inspections by a supervisor
			Safety and health issues are discussed and addressed
			An investigation procedure for near misses
			Site inspections conducted by a competent person and documented

F. CONSISTENT USE OF SAFETY POSTERS & POSTED INFORMATION

YES	NO	N/A	
			All required Federal and State forms & notices are posted
			Injury and illness records (OSHA 300 log) are posted as required
			Use warning signs to alert workers to hazards
			Safe work practices and rules posted
			Crane and material handling hand signals posted

G. SUBSTANCE ABUSE POLICY & PROCEDURES

YES	NO	N/A	
			Written Drug & Alcohol Policy
			Drug testing protocol
			Alcohol testing protocol

YES	NO	N/A	
			Documented preplanning process or list
			Weekly safety meetings (toolbox safety discussions)
			Written site-specific plans (fall protection, scaffold erection, confined space, etc.

H. SITE SPECIFIC SAFETY PLANS

3. DESCRIPTION OF SAFETY PROGRAM

The proposer may provide additional pages describing the overall safety program.

Appendix B

Required Forms

- **1. State Business Licenses & Registrations**
- 2. City Business Licenses & Registration

State Business Licenses

& Registrations

Certification for Alaska Business Licenses/ Registrations

Contractor and all Subcontractors must comply with the following applicable requirements of Alaska Statutes at time of Award:

1. Alaska Business License (Form 08-070 issued under AS 43.70) issued prior to submittal of proposals as required by AS 36.30.210(e) for Contractor; and not later than five (5) days after a Notice of Intent to Award as required by AS 36.30.210(a) and AS 36.30.250(a) for all Subcontractors.

2. Certificate of Registration (Form 08-2407) as required by AS 08.18.011 for Construction Contractors, including General Contractors, Specialty Contractors (AS 08.18.024), Residential Contractors (AS 08.18.025), Electrical Contractors (AS 08.18.026), and Mechanical Contractors (AS 08.18.028).

3. Certificate of Registration for each individual to be in "responsible charge" (AS 08.48.341(14)) for Architecture, Engineering or Land Surveying (Form 08-2407 issued under AS 08.48.21 1) issued prior to submittal of proposal. Associates, consultants, specialists under the supervision of a registered individual in "responsible charge" are exempt from registration requirements (AS 08.48.331).

4. Certificate of Authorization for Corporate Practice for incorporated Contractors and incorporated Subcontractors for architecture, Engineering or Land Surveying (Form 08-2407 issued under AS 08.48.241). Corporations offering to provide Architectural, Engineering or Land Surveying services do not need to be registered for such disciplines at the time proposal is submitted provided they obtain corporate registration before contract award (AS 08.48.241).

5. Certificate of Incorporation (Alaska firms) or Certification of Authorization for Foreign Firm ("Out of State" firms). All corporations, regardless of type of services provided, must have one of the certificates (AS 10.06.218 and other sections of Title 10.06 - Alaska Corporations Code).

6. Current Board of Director's Resolution for incorporated Contractors and incorporated Subcontractors for Architecture, Engineering or Land Surveying (reference AS 08.48.241) which names the person(s) designated in "responsible charge" for each discipline. Such persons shall be licensed in Alaska and shall participate as project staff in the Contract / Subcontracts.

7. All partners in a Partnership to provide Architectural, Engineering, or Land Surveying must be legally registered in Alaska prior to submittal of proposal for at least one of those disciplines (AS 08.48.251) which the Partnership offers.

8. Partnerships and Joint-Ventures, regardless of type of services provided, must be licensed/registered in the legal name of the Partnership or Joint Venture as used in this proposal (AS 43.70.020 and 43.70.110(4)).

CERTIFICATION - COST AND PRICING DATA

In accordance with AS 36.30.400, any cost and pricing data submitted herewith, or in any future price proposals for the proposed contract will be accurate, complete and current as of the date submitted and will continue to be accurate and complete during the performance of the contract, if awarded.

COVENANT AGAINST CONTINGENT FEES

The Contractor warrants that he has not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage, or contingent fee. Breach of this warranty shall give the Contracting Agency the right to annul the contract, or, at its discretion, to deduct from the contract price, the amount of such commission, percentage, brokerage, or contingent fee. This warranty shall not apply to commissions payable by the Contractor upon contracts or sales secured or made through bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business.
City Business Licenses & Registration

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Title 6 - BUSINESS TAXES, LICENSES AND REGULATIONS

Chapter 6.05 - CITY BUSINESS LICENSE6.05.010 Definitions.

As used in this chapter:

- A. "Engage in business" means engaging or offering to engage in a trade, a service, a profession, or an activity with the goal of receiving a financial benefit in exchange for the provision of services, or goods or other property, and includes, but is not limited to, any activity that is subject to sales tax under Section 5.40.010.
- B. "Finance director" means the director of the finance department of the city.
- C. "Itinerant merchant" means a person engaging in business in the city for less than sixty days in a calendar year, or without a permanent business location in the city.
- D. "Special annual public event" means a special event offering entertainment and sales of goods and services to the public that is scheduled annually in the city, not exceeding seven consecutive days' duration, such as the Shorebird Festival and the Bidarki Christmas Bazaar.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.020 License required; exemptions; additional licensing requirements.

- A. Except as provided in subsection B of this section, no person, including without limitation an itinerant merchant:
 - 1. May engage in business in the city other than at a special annual public event without a current business license issued by the city under this chapter; and
 - 2. May engage in business at a special annual public event without either a current business license or a current special annual public event business license issued under this chapter.
- B. A person who engages in business in the city only as described in this subsection is exempt from obtaining a city business license:
 - 1. Casual, occasional or isolated sales which are easily identified as the sale of personal goods or property at such private functions as moving, garage, yard, food and bake sales, sales of private vehicles when the seller is not a dealer in used vehicles, or services such as babysitting or house-sitting.
 - 2. As a charitable, educational, religious or civic organization that the Internal Revenue Service recognizes as an organization described in Section 501(c)(3) or 501(c)(4) of the Internal Revenue Code; provided that the organization does not engage in an "unrelated trade or business" as that term is defined in the Internal Revenue Code.
 - 3. Under a permit issued by the Alaska Commercial Fisheries Entry Commission under AS 16.43.
 - 4. Rendering services to an employer as an employee.
- C. The requirement of any other provision of this code for the licensing of any business, and any fee therefor, applies to that business in addition to the provisions of this chapter.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.030 Term and scope of business license.

- A. A business license issued to a person commencing business in the city on or before October 1 in a calendar year expires on December 31 of the calendar year. A business license issued to a person commencing business in the city after October 1 in a calendar year expires on December 31 of the following calendar year.
- B. A business license issued to renew a current business license shall expire one year after the expiration of the current business license.
- C. A single business license is required for all locations at which the licensee engages in business in the city.
- D. A business license is required for each separate line of business in which a person engages in the city.
- E. A special annual public event business license is issued for the duration of the special annual public event. A single annual public event business license is required for each person engaging in business at a special annual public event.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.040 Application for business license; fees.

- A. An application for a business license is submitted to the finance director on a form approved by the finance director, and shall be accompanied by the fee required under subsection C of this section. The application shall include the following information, and any additional information that the finance director may reasonably require:
 - 1. The name of the applicant.
 - 2. The name under which the applicant will engage in business in the city.
 - 3. The applicant's mailing address, telephone number and email address.
 - 4. The street address and legal description of each location in the city where the applicant will engage in business.
 - 5. If the applicant is not a natural person, the applicant's type of organization, and the jurisdiction under whose laws the applicant was organized.
 - 6. A description of each line of business in which the applicant will engage in the city.
 - 7. Proof that the applicant has a current business license issued by the State of Alaska for each line of business in which the applicant will engage in the city.
- B. An application for a special annual public event business license is submitted to the finance director on a form approved by the finance director, and shall be accompanied by the fee required under subsection C of this section. The application shall include the following information, and any additional information that the finance director may reasonably require:
 - 1. The name of the applicant.
 - 2. The name under which the applicant will engage in business in the city.
 - 3. The applicant's mailing address, telephone number and email address.
 - 4. The name of the special annual public event at which the applicant will engage in business.
 - 5. If the applicant is not a natural person, the applicant's type of organization, and the jurisdiction under whose laws the applicant was organized.

(Supp. No. 80)

C. The fee for a business license is thirty-five dollars; provided, that the fee for a business license for each line of business in which an applicant engages in excess of one shall be twenty-five dollars. Fees are not prorated if the business license is issued after the calendar year commences. The fee for a special annual public event business license is twenty-five dollars.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.050 Review of application.

- A. The finance director shall issue a business license to an applicant upon finding that the application includes all required information, the applicant has paid the required fee, and the applicant has satisfied the requirements of subsections B and C of this section.
- B. The finance director shall refer a business license application for review by the finance department to determine whether the applicant is delinquent in paying to the city any tax or assessment or any fee or charge for city utility service, or in filing any tax return. The finance department shall notify the applicant in writing of any delinquency that it finds. In response to the notice, the applicant shall either:
 - 1. Provide evidence satisfactory to the finance director that the delinquency has been cured; or
 - 2. Provide a plan for curing the delinquency that is satisfactory to the finance director, with security satisfactory to the finance director for the payment of any delinquent amount.
- C. The finance director may refer a business license application for the inspection of each building or structure or part thereof occupied by the business by the building official to determine if the building or structure is in compliance with the applicable type and class of use and occupancy requirements of the building safety codes; and the fire department to determine if the building or structure is in compliance with the applicable type applicant in writing of any noncompliance. In response to the notice, the applicant shall either:
 - 1. Provide evidence satisfactory to the inspector that the noncompliance has been corrected; or
 - 2. Provide a plan for correction of the noncompliance satisfactory to the inspector, with security satisfactory to the inspector for the performance of the plan.
- D. The finance director may investigate the financial condition and credit history of a business license applicant, and if the finance director finds that the financial condition or credit history of the applicant indicates a substantial risk that the applicant will not make full and timely payment of sales tax as required under Chapter 5.40, the finance director may require the applicant to post a bond or other security for such full and timely payment.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.060 Information on business license; display of license.

- A. A business license shall state the information concerning the licensee that the finance director may reasonably require.
- B. A licensee shall notify the finance director promptly in writing of any change in the required information on the business license. In response to the notice, and upon the surrender of the prior business' license, the finance director shall issue a new business license with the same expiration date bearing the current required information. There shall be no charge for the issuance of a new business license under this subsection.

C. The licensee shall display each original business license prominently at the licensee's principal business location in the city, and a copy of the business license at each other business location of the licensee in the city. If the licensee has no regular business location in the city, the licensee shall keep the license where the licensee engages in business and produce the license for examination upon the request of the finance director or the finance director's designee.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.070 Business license not transferable.

No business license shall be assignable or transferable in any manner, authorize any person other than the named licensee to engage in business, or authorize any person to engage in business at a location that is not identified in the license.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.080 Suspension or revocation of business license; civil penalty.

- A. The finance director may suspend or revoke a business license when the finance director determines that the licensee:
 - 1. Has made any false or misleading statement in its application for a business license;
 - 2. Is engaging in business in the city other than as permitted by the business license;
 - 3. Has attempted to transfer the business license or the business conducted under the business license;
 - 4. Has failed to comply with any provision of law or ordinance applicable to the business conducted under the business license, including without limitation failure to collect or remit sales tax or file a sales tax return, or failure to maintain the building or structure in which the business is conducted in conformity with applicable building safety and fire codes.
- B. The finance director may impose a civil penalty of one hundred dollars for each violation of this chapter or any regulation adopted under this chapter.
- C. The finance director shall not suspend or revoke a business license under subsection A of this section, or impose a civil penalty under subsection B of this section, without first providing notice and an opportunity for a hearing on the suspension, revocation or civil penalty under this subsection.
 - 1. At least ten days before suspending or revoking a business license or imposing a civil penalty, the finance director shall mail notice of the proposed suspension, revocation or civil penalty by certified mail, return receipt requested, to the last-known address of the person who is the subject of the proposed suspension, revocation or civil penalty.
 - 2. The notice of proposed suspension, revocation or civil penalty shall identify the person who is the subject of the proposed suspension, revocation or civil penalty, state any other name under which the person engages in business in the city, describe the cause for the suspension, revocation or civil penalty, state that unless a hearing is requested, the finance director will suspend or revoke the licensee's business license or impose a civil penalty under this section upon the expiration of ten days after the date of the notice, state that the right to a hearing will be waived if not timely requested, and state the name, address and the telephone number of the finance director or other city representative to be contacted concerning the proposed suspension, revocation or civil penalty.

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- 3. The person who is the subject of the proposed suspension, revocation or civil penalty may obtain a hearing on the proposed suspension, revocation or civil penalty by requesting the hearing in writing at the office of the finance director not more than ten days after the date of the notice.
- D. The finance director may rescind a notice of suspension or revocation of a business license if the licensee provides the finance director with evidence satisfactory to the finance director that all violations described in the notice have been cured, and the licensee does not have a history of prior violations.
- E. Upon written request of the person who is the subject of the proposed suspension, revocation or civil penalty, a hearing officer designated by the finance director shall conduct a hearing on the proposed suspension, revocation or civil penalty within seven days after the request for hearing. The sole issue before the hearing officer shall be whether one or more of the grounds stated in subsection A of this section for suspending or revoking the business license has occurred, or one or more of the grounds stated in subsection B of this section for imposing a civil penalty has occurred. The hearing officer shall conduct the hearing in an informal manner and shall not be bound by the technical rules of evidence. The person who is the subject of the proposed suspension, revocation or civil penalty may appear, present evidence, and cross-examine witnesses. The hearing shall be recorded. Within seven days after the conclusion of the hearing, the hearing officer shall prepare a written decision whether to suspend or revoke the business license or impose a civil penalty, and provide a copy of the decision to the person who is the subject of the proposed suspension, revocation or civil penalty.
- F. A hearing officer's decision suspending or revoking a business license shall include an order that the licensee immediately cease and desist from engaging in business in the city unless and until the business license is reinstated or reissued.
- G. Any person aggrieved by the hearing officer's decision under subsection E of this section to suspend or revoke a business license or impose a civil penalty may appeal the decision to the superior court within thirty days after the date the decision was mailed or delivered to the parties. Unless the court orders otherwise, a decision to suspend or revoke a business license or impose a civil penalty takes effect immediately upon its issuance.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.090 Violations; remedies.

No person may:

- A. Engage in business in the city without a current business license required by this chapter.
- B. Knowingly submit false information in a document filed with the city under this chapter.

(Ord. No. 1021, § 2, 5-21-2008)

6.05.100 Regulations.

The finance director may promulgate regulations and adopt forms to implement, interpret or make specific the provisions of this chapter.

(Ord. No. 1021, § 2, 5-21-2008)

Appendix C

Required Forms

- 1. General Conditions of the Contract between Owner and Design Builder
- 2. Owner & Design Builder Agreement

General Conditions of the Contract between Owner and Design Builder

MODIFIED STANDARD GENERAL CONDITIONS OF THE CONTRACT BETWEEN OWNER AND DESIGN/BUILDER

GENERAL CONDITIONS OF THE CONTRACT BETWEEN OWNER AND DESIGN/BUILDER

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

- A. Wherever used in the Contract Documents and printed with initial capital letters, the following terms have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
 - 1. *Addenda*: Written or graphic instruments issued prior to the opening of Proposals which clarify, correct or change the Request for Proposals or the Contract Documents.
 - 2. *Application for Payment*: The Owner approved form to be used by Design/Builder in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 - 3. *Asbestos*: Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 - 4. *Bonds*: Performance and payment bonds and other instruments of security.
 - 5. *Change Order*: A written agreement signed by Design/Builder and Owner which authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Contract.
 - 6. *Claim*: A demand or assertion by Owner or Design/Builder seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract.
 - 7. *Conceptual Documents*: The drawings and specifications and/or other graphic or written materials, criteria and information concerning Owner's requirements for the Project, such as design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, including those items enumerated in the Request for Proposals which show or describe the character and scope of, or relate to, the Work to be performed or furnished and which have been prepared by or for Owner.
 - 8. *Construction*: The part of the Work that is the result of performing or furnishing of labor, the furnishing and incorporating of materials and equipment into the Work and the furnishing of services (other than Design Professional Services) and documents, all as required by the Contract Documents.

- 9. *Owner's Representative*: _______ is the Owner's Representative, and as such is the Owner's duly authorized agent and representative for the Owner. The Owner's Representative shall be the point of contact for Design/Builder's communications with the Owner. _____ and Mob. ______ Email: ______.
- 10. *Subcontract*: A written agreement between Design/Builder and a construction Subcontractor for provision of Construction.
- 11. *Contract*: The entire and integrated written agreement between Owner and Design/Builder concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
- 12. *Contract Documents*: The Contract Documents are defined in Article 8 of the Agreement. Unless specifically enumerated, the Contract Documents do not include the Request for Proposals, proposal instructions, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Design/Builder's bid or Proposal, or portions of Addenda relating to bidding or proposal requirements.
- 13. *Contract Price*: The total amount of money payable by Owner to Design/Builder for completion of the Work in accordance with the Contract Documents.
- 14. *Contract Times*: The numbers of days or the dates stated in the Contract to (i) achieve Substantial Completion, and (ii) to complete the Work so it is ready for final payment in accordance with Paragraph 13.08. Contract Times are of the essence of the Contract.
- 15. Design/Builder: The individual or entity with whom Owner has entered into the Contract.
- 16. *Design Subagreement*: A written agreement between Design/Builder and a design professional Subcontractor for provision of Design Professional Services.
- 17. *Design Professional Services*: That part of the Work comprised of services relating to the preparation of Drawings, Specifications, and other design submittals specified by the Contract Documents and required to be performed by licensed design professionals, as well as other services provided by or for licensed design professionals during bidding/negotiating, Construction, or operational phases.
- 18. *Drawings*: Those portions of the Contract Documents prepared by or for Design/Builder and approved by Owner consisting of drawings, diagrams, illustrations, schedules and other data which show the scope, extent, and character of the Work.
- 19. *Effective Date of the Contract*: The date indicated in the Contract on which it becomes effective, but if no such date is indicated it means the date on which the Contract is signed and delivered by the last of the two parties to sign and deliver.
- 20. *Field Order*: A written order issued by Owner which orders minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times. Field Orders shall be binding on the Design/Builder who shall carry out the written orders promptly.

- 21. *Hazardous Environmental Condition*: The presence at the Site of Asbestos, Hazardous Waste, PCB's, Petroleum Products or Radioactive Materials in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto on connection with the Work.
- 22. *Hazardous Waste*: The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.23. *Laws or Regulations*: Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.
- 24. *Liens*: Charges, security interests or encumbrances upon real property or personal property.
- 25. *Milestone*: A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
- 26. *Notice of Award*: The written notice by Owner to the successful proposer stating that upon compliance by the successful proposer with the conditions precedent included therein, within the time specified, Owner will sign and deliver the Contract.
- 27. *Notice to Proceed*: A written notice given by Owner to Design/Builder fixing the date on which the Contract Times shall commence to run and on which Design/Builder shall start to perform the Work.
- 28. *Owner*: The individual or entity with whom Design/Builder has entered into the Contract and for whom the Work is to be performed. City of Cordova is the Owner of the Project.
- 29. *Owner's Consultant*: Owner's Consultant, also called the Construction Manager, will report directly to the Owner's Representative and be included on all correspondence to the Owner's Representative.
- 30. *Partial Utilization*: Use by Owner of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.
- 31. PCBs: Polychlorinated biphenyls.
- 32. *Petroleum*: Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.
- 33. *Project*: The total design and construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents, and which may include design and construction by Owner or Owner's separate contractors.

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- 34. *Project Manager*: The Project Manager is the Design/Builder's duly authorized agent and representative for the Project with full power to perform, supervise and coordinate the services of Design/Builder under the Contract.
- 35. *Quality Manger*: The Quality Manager shall be the Design Builders designated representative responsible for maintaining records and reports and issuing correspondence, reviewing errors and their causes and assuring the correction such errors.
- 36. *Quality Program:* The Design Builders methods and procedures for assuring the design and construction are completed in accordance with the contract requirements and associated standards.
- 37. *Radioactive Material*: Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
- 38. *Project Superintendent*: The Project Superintendent is the authorized representative and agent of Design/Builder who shall be assigned to the Site during all phases on Construction.
- 39. *Schedule of Values*: A schedule prepared by Design/Builder and acceptable to Owner indicating that portion of the Contract Price to be paid for each major component of the Work. The Schedule of Values shall be provided in the form and supported by such data to substantiate its accuracy as the Owner may require. The Schedule of values may be updated periodically to reflect agreed changes in the allocation of the Contract Price.
- 40. *Site*: Lands or other areas designated in the Contract Documents as being furnished by Owner upon which Construction is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for use of Design/Builder. The site is depicted in the attached Appendix D.
- 41. *Specifications*: The part of the Contract Documents prepared by the Design/Builder and approved by Owner consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.
- 42. *Subcontractor*: An individual or entity other than a Supplier having a direct contract with Design/Builder or with any other Subcontractor for the performance of a part of the Work.
- 43. *Submittal*: A written or graphic document prepared by or for Design/Builder which is required by the Contract Documents to be submitted to Owner by Design/Builder. Submittals may include Drawings, Specifications, progress schedules, shop drawings, samples, cash flow projections, and Schedules of Values. Submittals other than Drawings and Specifications are not Contract Documents.
- 44. *Substantial Completion*: The time at which the Work (or a specified part) is sufficiently complete, in accordance with the Contract Documents, so the Work (or a specified part) can be utilized for its intended purpose(s). The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

- 45. *Supplementary Conditions*: The part of the Contract Documents which amends, supplements or supersedes these General Conditions.
- 46. *Supplier*: A manufacturer, fabricator, supplier, distributor, materialman or vendor having a direct contract with Design/Builder or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Design/Builder or any Subcontractor.
- 47. Unit Price Work: Work to be paid for on the basis of unit prices.
- 48. *Work.* Work includes and is the result of performing or furnishing Design Professional Services and Construction required by the Contract Documents, and includes all other labor, materials, equipment and services provided or to be provided by the Design/Builder to fulfill the Design/Builder's obligations. The Work may constitute the whole or a part of the Project.
- 49. *Work Change Directive*: A written directive to Design/Builder, issued on or after the Effective Date of the Contract and signed by Owner ordering an addition, deletion or revision in the Work, or responding to differing site conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times, but is evidence the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times. When the Owner and Design/Builder reach agreement concerning the adjustments in the Contract Price or the Contract Times, such agreement shall be effective immediately and shall be recorded by an appropriate Change Order. If the parties are not able to reach agreement on a Change Order, a Claim may be made for an adjustment in the Contract Price or Contract Times as provided in Article 15.
- 1.02 Terminology
 - A. The words and terms discussed in Paragraph 1.02.B are not defined terms, but when used in the Contract Documents have the indicated meanings.
 - B. Intent of Certain Terms or Adjectives:
 - 1. The word "day" shall mean a calendar day unless otherwise specifically defined.
 - 2. The word "defective," when modifying the word "Construction" refers to Construction that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Owner's final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion) provided that the defect was not caused by Owner.
 - 3. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

- 4. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials or equipment or equipment complete and ready for intended use.
- 5. The words "perform" or "provide" when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
- 6. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Design/Builder, "provide" is implied.
- 7. Unless stated otherwise in the Contract Documents, words or phrases that have a wellknown technical or construction industry or trade meaning are used in the Contract Documents in accordance with that meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 Delivery of Bonds

- A. Within ten (10) business days after the Owner, provide the Design/Builder the full Notice to Proceed, Design/Builder shall also deliver to Owner such Bonds as Design/Builder may be required to furnish in accordance with Paragraph 5.01.A.
- B. *Evidence of Insurance:* Within ten (10) days of execution of this Agreement, Design/Builder and Owner shall each deliver to the other those certificates of insurance that Design/Builder and Owner respectively are required to purchase and maintain in accordance with Article 5.
- 2.02 Commencement of Contract Times; Notice to Proceed
 - A. The Contract Times shall commence to run on the day indicated in the Notice to Proceed. A Limited Notice to Proceed may be given at any time within thirty (30) days after the Effective Date of the Contract with the full Notice to Proceed no later than May 15, 2022.
- 2.03 Starting the Work
 - A. Design/Builder shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.
- 2.04 *Before Starting the Work*
 - A. Preliminary Schedules: Within ten (10) days after commencement of the Contract Times (unless otherwise specified in the Contract Documents), Design/Builder shall submit the following to Owner's Representative for its timely review:
 - 1. A preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

- 2. A preliminary schedule of Submittals which will list each required Submittal and the times for submitting, reviewing and processing each Submittal; and
- 3. A preliminary Schedule of Values for all of the Work which will include quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.
- 4. A preliminary cash flow projection estimating that portion of the Contract Price to be due during each month of performance.
- B. Schedule Format: All preliminary, progress and other schedules (including any updates thereto) shall be produced by Design/Builder in both hard copy format and in an electronic format utilizing Primavera Microsoft Project or another format mutually agreed to by Owner's Representative and Design/Builder.

2.05 Initial Conference

A. Within thirty (30) days after the Contract Times start to run, Design/Builder shall arrange a conference attended by Owner's Representative and others as appropriate to establish a working understanding among the parties as to the Work and to discuss the design concepts, schedules referred to in Paragraph 2.04.B, procedures for handling Submittals, processing Applications for Payment, maintaining required records and other matters.

2.06 Initial Acceptance of Schedules

- A. At least ten (10) days before submission of the first Application for Payment (unless otherwise provided in the Contract Documents), Design/Builder shall submit for review the schedule submitted in accordance with Paragraph 2.04.B. Design/Builder shall have an additional ten (10) days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Design/Builder until acceptable schedules are submitted to Owner's Representative.
 - 1. The progress schedule will be acceptable to Owner's Representative if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance shall not impose on Owner or Owner's Representative any responsibility for the progress schedule, for sequencing, scheduling or progress of the Work nor interfere with nor relieve Design/Builder from Design/Builder's full responsibility therefore.
 - 2. Design/Builder's schedule of Submittals will be acceptable to Owner's Representative if it provides a workable arrangement for reviewing and processing the required Submittals.

2. Design/Builder's Schedule of Values will be acceptable to Owner's Representative as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

2.07 Liquidated Damages

1. Contractor acknowledges that Owner will foreseeably suffer damages in the event the Contractor delays in obtaining Substantial Completion by the Substantial Completion date. Such damages would foreseeably include, but may not be limited to loss of income, impacts to the local fishing industry which is a critical component of the local economy to name a few. The parties agree that it would be extremely difficult and impractical under the presently known and anticipated facts and circumstances to establish the actual damages which Owner would incur should the Contractor fail to achieve Substantial Completion within the Contract Time as defined in, and as may be extended pursuant to applicable sections of the Contract. Accordingly, the parties hereby agree that if the Contractor fails to achieve Substantial Completion by the Substantial Completion Date as adjusted liquidated damages may be assessed by the Owner against the Contractor in the amount of \$5,000 per calendar day for each day the Work is completed late. The parties specifically agree that the liquidated damages set forth herein are intended as a reasonable estimate or approximation of Owner's actual damages for delay in completion of the project by Contractor (not as a penalty), and are in lieu of all actual damages for delay in completion of any nature or cause whatsoever. The parties further agree that the Owner may withhold from the Design/Builder progress payments otherwise due and that the Payment Bond is likewise responsible for the pay of all liquidated damages so assessed.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

- A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
- B. It is the intent of the Contract Documents including but not limited to the Conceptual Documents, the Drawings, and the Specifications to describe a functionally complete Project (or part thereof) to be designed and constructed in accordance with the Contract Documents. Design/Builder shall furnish or perform all labor, documentation, services, materials, and equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result whether or not specifically called, for at no additional cost to Owner.

3.02 Reference Standards

- A. Standards, Specifications, Codes, Laws or Regulations.
 - 1. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect on the Effective Date except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or instruction of a Supplier, shall be effective to change the duties and responsibilities of Owner, Design/Builder, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Owner or its officers, directors, members, partners, employees, agents, consultants, or subcontractors any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Resolving Discrepancies

- A. In the event of a discrepancy between the Conceptual Documents on the one hand and the Drawings or Specifications on the other hand, the Drawings or Specifications will control except when Owner's Representative has approved a Submittal pursuant to Paragraph 6.17.B.
- B. Except as otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - 1. The provisions of any such standard, specification, manual or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
 - 2. The provisions of any such Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Laws or Regulations).

3.04 Amending and Supplementing Contract Documents

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:
 - 1. Owner's Representative's approval of required Submittals (pursuant to Paragraph 6.17.B);
 - 2. A Work Change Directive;
 - 3. A Change Order;
 - 4. A Field Order.

3.05 Reuse of Documents

A. Design/Builder shall retain an ownership and property interest in all documents including Drawings and Specifications prepared or furnished by Design/Builder pursuant to this Contract ("Instruments of Service") whether or not the Project is completed. Owner may make and retain copies for information and reference in connection with the use and occupancy of the Project by Owner and others. However, such documents are not intended or represented to be suitable for reuse by Owner on any other project.

- B. Upon execution of the Contract, the Design/Builder grants to the Owner a non-exclusive irrevocable license to reproduce and use the Instruments of Service solely in connection with the Project, including the Project's further development by the Owner and others retained by the Owner for such purposes. Such license shall extend to those parties retained by the Owner for such purposes, including other design professionals. The Design/Builder shall obtain similar non-exclusive irrevocable licenses from its design professional Subcontractors. The Owner shall not otherwise assign or transfer any license herein to another party without prior written agreement of the Design/Builder, which will not be unreasonably withheld, delayed or conditioned. Any unauthorized reproduction or use of the Instruments of Service by the Owner or others shall be at the Owner's sole risk and expense without liability to the Design/Builder and its design professional Subcontractors.
- C. Prior to any electronic exchange by the parties of the Instruments of Service or any other documents or materials to be provided by one party to the other, the Owner and the Design/Builder shall agree in writing on the specific conditions governing the format thereof, including any special limitations or licenses not otherwise provided in the Contract Documents.
- D. If this Contract is terminated for any reason, each of the Design/Builder's design professional Subcontractors shall be contractually required to convey to the Owner a non-exclusive irrevocable license to use that design professional Subcontractor's Instruments of Service for the completion, use and/or maintenance of the Project, conditioned upon the Owner's written notice to that design professional Subcontractor of the Owner's assumption of the Design/Builder's remaining contractual duties. If the Owner does not assume the remaining duties of the Design/Builder to that design professional Subcontractor under this Contract, then the Owner shall indemnify and hold harmless that design professional Subcontractor from all claims and any expense, including legal fees, which that design professional Subcontractor's Instruments of Service. The Design/Builder shall incorporate the requirements of this Paragraph 3.05.D in all agreements with its design professional Subcontractors.
- E. Submission or distribution of the Design/Builder's documents to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of any rights reserved in this Paragraph 3.05.

3.06 Electronic Data

- A. The data furnished by Owner to Design/Builder or Design/Builder to Owner that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it shall perform acceptance tests or procedures within sixty (60) days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the sixty (60) day acceptance period shall be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; DIFFERING SITE CONDITIONS; REFERENCE POINTS; HAZARDOUS ENVIRONMENTAL CONDITIONS

4.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Design/Builder of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Design/Builder will have to comply in performing the Work. Unless otherwise provided in the Contract Documents, Owner shall obtain in a timely manner and pay for easements to access the site. If Design/Builder and Owner are unable to agree on entitlement to or the amount or extent of any adjustments in the Contract Price or the Contract Times as a result of any delay in Owner's furnishing the Site, Design/Builder may make a Claim therefore as provided in Article 15.
- B. Upon reasonable written request, Owner shall furnish Design/Builder with a current statement of record legal title and legal description of the lands upon which the Construction is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction Lien against such lands in accordance with applicable Laws or Regulations.

4.02 Differing Site Conditions

A. Within ten (10) days of first becoming aware of any differing site conditions, and before the conditions are disturbed, Design/Builder shall give a written notice to Owner of (unknown physical conditions at the Site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character called for by the Contract Documents.

B. Owner shall investigate the Site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Design/Builder's cost of, or the time required for, performing any part of the Work, whether or not changed as a result of the conditions, an equitable adjustment shall be made and the Contract Price or Times shall be modified in writing by Change Order in accordance with Article 9.

C. No request by Design/Builder for an equitable adjustment under Paragraph 4.02 shall be allowed unless Design/Builder has given the timely written notice required; provided that the time prescribed in Paragraph 4.02.A for giving written notice may be extended by Owner in writing.

D. The provisions of this Paragraph 4.02 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

4.03 Reference Points

A. Design/Builder shall be responsible for laying out the Work and shall protect and preserve the reference points and property monuments established by Owner pursuant to Paragraph 8.01.A.5.e, and shall make no changes or relocations without the prior written approval of Owner's Representative. Design/Builder shall report to Owner's Representative whenever any reference

point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 Hazardous Environmental Condition at Site

- A. Design/Builder shall not be responsible for any Hazardous Environmental Condition encountered at the Site which was not identified in the Contract Documents to be within the scope of the Work. Design/Builder shall be responsible for materials creating a Hazardous Environmental Condition created by any materials brought to the Site by Design/Builder, Subcontractors, Suppliers or anyone else for whom Design/Builder is responsible.
- B. If Design/Builder encounters a Hazardous Environmental Condition, Design/Builder shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Construction in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16); and (iii) notify Owner's Representative (and thereafter confirm such notice in writing). Owner, through the Owner's Representative, shall promptly determine the necessity of retaining a qualified expert to evaluate such condition or take corrective action, if any.
- C. Design/Builder shall not be required to resume Construction in connection with such Hazardous Environmental Condition or in any such affected area until after Owner has obtained any required permits related thereto and delivered to Design/Builder written notice (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Construction, or (ii) specifying any special conditions under which such Construction may be resumed safely. If Owner and Design/Builder cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of such Construction stoppage or such special conditions under which Construction is agreed to be resumed by Design/Builder, either party may make a Claim therefore as provided in Article 15.
- D. If after receipt of such special written notice Design/Builder does not agree to resume Construction based on a reasonable belief it is unsafe, or does not agree to resume such Construction under such special conditions, then Owner may order such portion of the Work that is related to such Hazardous Environmental Condition to be deleted from the Work. If Owner and Design/Builder cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefore as provided in Article 15. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- E. To the fullest extent permitted by Laws or Regulations, Owner shall indemnify and hold harmless Design/Builder, Subcontractors, Suppliers and the officers, directors, partners, employees, agents, other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from such Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Contract Documents to be included in the scope of the Work, and (iii) was not created or exacerbated by Design/Builder or by anyone for whom Design/Builder is responsible. Nothing in this Paragraph 4.04.E shall obligate Owner to indemnify any individual or entity from and against the consequences of that

individual's or entity's own negligence or from the negligence of those for whom that individual or entity is responsible.

F. To the fullest extent permitted by Laws or Regulations, Design/Builder shall indemnify and hold harmless Owner, Owner's Representative, Owner's Consultant and the officers, directors, partners, employees, agents, other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from such Hazardous Environmental Condition created by Design/Builder or anyone for whom Design/Builder is responsible. Nothing in this Paragraph 4.04.F shall obligate Design/Builder to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or from the negligence of those for whom that individual or entity is responsible.

ARTICLE 5 – BONDS AND INSURANCE

5.01 Performance, Payment and Other Bonds

- A. Design/Builder shall furnish a Design/Build Contract Performance Bond and Payment Bond consistent with Appendix A attached to the contract, equal to the Contract Price as security for the faithful performance and payment of all Design/Builder's obligations to furnish, provide and pay for Work, design and related materials under the Contract Documents. These Bonds shall remain in effect for a minimum of six years after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. Design/Builder shall also furnish such other Bonds as are required by the Contract Documents.
- B. The Bonds shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any Bond furnished by Design/Builder is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B and 5.02, Design/Builder shall within twenty (20) days thereafter substitute another Bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Design/Builder shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 Certificates of Insurance

- A. Design/Builder shall deliver to Owner, with copies to each additional insured and loss payee, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured or loss payee) which Design/Builder is required to purchase and maintain.
- B. Owner shall deliver to Design/Builder, with copies to each additional insured and loss payee, certificates of insurance (and other evidence of insurance requested by Design/Builder or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Design/Builder's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Design/Builder's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Design/Builder.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Design/Builder's liability to Owner or to others, including liability under the indemnities granted to Owner and others in the Contract Documents.
- 5.04 Design/Builder's Insurance
 - A. Design/Builder shall purchase and maintain such insurance as follows:
 - C. The Design/Builder shall furnish, prior to start of Construction, evidence satisfactory to Owner and to all Additional Insureds that insurance in the following kinds and minimum amounts has been secured, through insurance companies authorized to do business in the state of Alaska and which maintains an A.M. Best rating of A:X or better. Evidence of insurance shall be provided on ACORD certificate of insurance(or its substantial equivalent) in conjunction other evidence of insurance required by Owner or any other additional insured or loss payee.

Summary of Insurance Requirements				
Coverage Item	Limits			
Comprehensive Marine Liability including Wharfinger's Legal, Stevedore's Legal Liability	\$ 1,000,000			
Commercial General Liability - Occurrence Form				
General Aggregate	\$ 2,000,000			
Products/Completed Operations	\$ 2,000,000			
Personal and Advertising Injury	\$ 1,000,000			
Per Occurrence	\$ 1,000,000			
Damage to Premises Rented to You (any one premise)	\$ 100,000			
Medical Payments (any one person)	\$ 10,000			
Name as Additional Insureds as respects premises, operations, products and completed operations:				
Add Waiver of Subrogation				

Summarv	of]	[nsurance	Rec	uirements
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Contractors Insurance is Primary and Non-Contributory	
Severability of Interest (Separation of Insureds)-should be provided	
under GL Policy	
COMMERCIAL AUTO	
Combined Single Limit per accident - Owned, Non-owned and	
Hired Auto	\$ 1,000,000
Liability	
Symbol "1" or "Any Auto"	
Name as Additional Insureds:	
Bear Valley Development Corporation	
Add Waiver of Subrogation	
Protection and Indemnity – Combined Single Limit	\$ 1,000,000
Including Crew (if any)	
Pollution Liability – Contractors Pollution Legal – both Land and	\$ 1,000,000
Water limit per loss applicable to bodily injury, property damage,	
including loss of use of damaged property or of property that has	
not been physically injured or destroyed; cleanup costs; and	
defense, including costs and expenses incurred in the investigation,	
defense or settlement of claims. Coverage shall apply to sudden and	
non-sudden pollution conditions resulting from the escape or	
release of petroleum products, smoke, vapors, fumes, acids, alkalis,	
toxic chemicals, liquids or gases, waste materials, or other irritants,	
contaminants, or pollutants.	
BUMBERSHOOT (Excess) Liability	\$10,000,000
Over Primary Marine Liability Commercial General Liability,	
Protection and Indemnity, Commercial Auto Liability, Employers'	
Liability, Pollution Liability Pollution Liability.	
WORKERS' COMPENSATION	
Statutory Coverage for project/work as required by AS 23.30.045	
Broad Form All States Endorsement	
Add Waiver of Subrogation	
-	

/Marine Employers' Liability	
Any One Person and Any One Accident	\$ 1,000,000
Employer's Liability	
Per occurrence for bodily injury	\$ 1,000,000
Per employee for bodily injury by occupational disease	\$1,000,000
Policy limit for bodily injury by disease	\$ 1,000,000
USL & H (Longshore and Harbor Workers' Compensation Act) –	\$ 1,000,000
as needed	
Outer Continental Shelf Act (as needed)	
Each required insurance policy shall provide for 30 days written	
notice to Owner prior to cancellation. The Design-Builder agrees	
to provide 30 days written notice to Owner of any material change	
in required insurance coverage.	

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Design-Builder shall ensure a Certificate of Insurance and other evidence of insurance required by Owner or any other additional insured or loss payee are on file at Owner prior to starting work/project.		
Design Insurance Requirements		
 Professional Liability Insurance ("E & O"). The Design-Builder or its engineer shall provide E & O coverage for claims arising from their respective negligent performance of professional services under this Agreement with limits not less than \$2,000,000. The E & O policy shall contain a rider extending coverage for a period of three (3) years after substantial completion of the Work. 		

- B. The policies of insurance required by paragraph 5.04.A shall:
 - 1. Include as additional insureds the Owner and Owner's Representative all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, and employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 - 2. Include at least the specific overages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 - 3. Include contractual liability insurance covering Design/Builder's indemnity obligations under Paragraphs 4.04.F., 6.07.B., 6.11.A.3. and 6.21;
 - 4. Contain a provision or endorsement that the coverage afforded shall not be canceled, materially changed or renewal refused until at least thirty (30) days' prior written notice has been given to Owner and each other additional insured to whom a certificate of insurance has been or was required to have been issued (and the certificates of insurance furnished by the Design/Builder pursuant to Paragraph 5.03 shall so provide); if such provision or endorsement is not available, Design-Builder shall provide such notice subject to the same terms;
 - 5. Remain in effect at least until final payment and at all times thereafter when Design/Builder may be correcting, removing or replacing defective Construction in accordance with Paragraphs 12.06 and 12.07; and
 - 6. Include completed operations coverage:
 - a. Such insurance shall remain in effect for ten (10) years after final payment.
 - b. Design/Builder shall furnish Owner and each other additional insured to whom a certificate of insurance has been or was required to be issued evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and three years thereafter.

5.05 Owner's Liability Insurance

A. Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 Property Insurance

- A. Owner shall purchase and maintain property insurance upon the Construction at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws or Regulations) for the limits set forth in the Supplementary Conditions. This insurance shall:
 - 1. Include the interests of Owner, Owner's Representative, Owner's Consultant Design/Builder and Subcontractors, and the officers, directors, members, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 - 2. Be written on a Builder's Risk Causes of Loss-Special Form" (ISO CP 10 30 or the substantial equivalent)policy form that shall at least include insurance for physical loss and damage to the Construction, temporary buildings, false work, and all materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, wind, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws or Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;
 - 3. Cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 - 4. Cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Construction, provided that such materials and equipment have been included in an Application for Payment approved by Owner;
 - 5. Allow for partial utilization by Owner of the Work;
 - 6. Include coverage during testing and start-up; and
 - 7. Be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner and Design/Builder with thirty (30) days' written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained by Owner in accordance with this Paragraph 5.06 shall contain a provision or endorsement that the coverage afforded shall not be canceled or materially changed or renewal refused until at least thirty (30) days prior written notice has been given to Design/Builder and to each other loss payee to whom a certificate of insurance has been issued (if

such provision or endorsement is not available, Design-Builder shall provide such notice subject to the same terms) and shall contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance to protect the interests of Design/Builder, Subcontractors, Suppliers, or others in the Work to the extent of any deductible amounts. The risk of loss within such identified deductible amount shall be borne by Design/Builder, Subcontractor, Supplier or others suffering any such loss and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

5.07 Waiver of Rights

- A. Owner and Design/Builder intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner and Owner's Representative, Owner's Consultant, Design/Builder, Subcontractors and Suppliers (and the officers, directors, members, partners, employees, agents, and other consultants and subcontractors of each and any of them) and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers shall have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Design/Builder waive all rights against each other and their respective officers, directors, members, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Design/Builder Owner, Owner's Consultant, Owner's Representative, Subcontractors and Suppliers each other for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Design/Builder, Subcontractors, and Suppliers and the officers, directors, members, employees and agents of any of them for:
 - 1. Loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property caused by, arising out of or resulting from fire or other natural peril whether or not insured by Owner; and
 - 2. Loss or damage to the completed Project or any part thereof caused by, arising out of or resulting from fire or other insured peril or cause or loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 13.06, after Substantial Completion pursuant to Paragraph 13.05, or after final payment pursuant to Paragraph 13.08.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers shall have no rights of recovery against Design/Builder, Subcontractors, Suppliers, Owner's Representative, Owner's Consultant, Owner, and the officers, directors, members, partners, employees, agents, and other consultants and subcontractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 shall be adjusted with Owner and made payable to Owner not as a fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached the damaged Construction shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen (15) days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 Acceptance of Bonds and Insurance; Option to Replace

A. If either Owner or Design/Builder has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of their not complying with the Contract Documents, the objecting party shall so notify the other party in writing within twenty (20) days after receipt of the certificates (or other evidence requested) required by Paragraph 5.03. Owner and Design/Builder shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds or insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was supposed to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 Partial Utilization, Acknowledgment of Property Insurance

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 13.06, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – DESIGN/BUILDER'S RESPONSIBILITIES

6.01 Design Professional Services

- A. *Standard of Care:* The standard of care for all Design/Builder and all Design Professional Services performed or furnished by Design/Builder under this Contract shall be the standard of care and skill used by members of the subject profession practicing under similar conditions at the same time and in the same locality.
- B. Preliminary Design Phase:
 - 1. Preliminary design—Design-builder will submit with this contract, a preliminary Basis of Design which defines the design specifications of the final delivered facility which shall serve as the final deliverable of the preliminary design phase.
- C. *Final* Design *Phase*: After written acceptance by Owner of the preliminary design phase documents Design/Builder shall:
 - 1. On the basis of the accepted Preliminary Design Phase documents, prepare final Drawings showing the scope, extent, and character of the Construction to be performed and furnished by Design/Builder and Specifications.
 - 2. Provide technical criteria, written descriptions, and design data required for obtaining approvals of such governmental authorities as have jurisdiction to review or approve the final design of the Project, and assist Owner's Representative in consultations with appropriate authorities;
 - 3. Furnish the above documents, Drawings, and Specifications to and review them with Owner's Representative and Owner's Consultant within the times indicated in the schedules described in Paragraphs 2.06.A.1 and 2.06.A.2; and
- 6.02 Supervision and Superintendence of Construction.
 - A.Design/Builder shall, through its Project Manager and Project Superintendent supervise, inspect, and direct the Construction competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to provide the Construction in accordance with the Contract Documents. Design/Builder shall be solely responsible for the means, methods, techniques, sequences, and procedures of Construction. Design/Builder shall be responsible to see that the completed Construction complies fully with the Contract Documents and shall keep Owner advised as to the quality and progress of the Construction. Contractor acknowledges that a major consideration in its selection for this Project was the Contractor committing to assign to be the Project Manager and Resident Project and Superintendent, respectively. Contractor reaffirms that and shall be assigned to the Project as the respective Project Manager and Resident Project Superintendent and shall devote all, or substantially all, of their time to the Project through the Substantial Completion of the Project. Contractor shall not substitute another person for without the express written consent of the Owner, or which will not be unreasonably withheld. In the event Contractor replaces either of these persons without the express written consent of the Owner, Contractor shall pay the Owner as liquidated

damages (but not as a penalty), the sum of Fifty Thousand and No/100 Dollars (\$50,000.00) for each person replaced.

- B. Design/Builder accepts the obligations of the special trust given by the Owner. Design/Builder will act in a fiduciary manner to protect Owner's interests. Design/Builder shall provide detailed review of plans, submittals, and changes and shall advise Owner's Representative of any changes that might advance Owner's interests of quality, cost, and schedule. Design/Builder shall maintain ongoing value engineering effort, and shall provide quality assurance at all levels, from drawing review through submittal review, to inspection of materials and Work. Design/Builder shall review all cost proposals for Change Orders from Subcontractors and Suppliers, identify errors or costs higher than standard, and obtain revised pricing as appropriate prior to submittal to Owner's Representative. Design/Builder shall keep Owner's Representative fully informed concerning progress of the Work, potential problems, and potential opportunities to improve the Project.
- C. Design/Builder shall have direct control, management, and supervision while on Site of all Construction operations, shall be responsible for the satisfactory performance of its Subcontractors and Suppliers, and shall ensure that the entire Work is properly coordinated and supervised. Design/Builder shall coordinate access to the Project and Work schedules relating to the Work with Owner's Representative. Design/Builder expressly agrees that it is the "employer" within the meaning of OSHA and local regulations for Construction as they apply to Design/Builder's obligations under this Contract for the Project.
- 6.03 Labor, Working Hours
 - A. Design/Builder shall provide competent, suitably qualified personnel to perform the Work as required by the Contract Documents. Design/Builder shall at all times maintain good discipline and order at the Site.
 - B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Construction at the Site shall be performed during regular working hours, which may include the performance of Construction on a Saturday, Sunday, or any legal holiday.
- 6.04 Services, Materials, and Equipment
 - A. Unless otherwise specified in the Contract Documents, Design/Builder shall furnish or cause to be furnished and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
 - B. All materials and equipment incorporated into the Work shall be as specified by Owner, or in the Drawings or Specifications, or if not specified shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Contract Documents shall expressly run to the benefit of Owner. If required by Owner, Design/Builder shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.
- 6.05 Progress Schedule
 - A. Design/Builder shall adhere to the progress schedule established in accordance with Paragraph 2.06.A as it may be adjusted from time to time as provided below:
 - 1. Design/Builder shall submit to Owner's Representative for acceptance proposed adjustments in the progress schedule that will not change the Contract Times (or Milestones). Such adjustments shall conform generally to the progress schedule then in effect.
 - 2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Paragraph 11.02. Such adjustments may only be made by a Change Order.
- 6.06 Concerning Subcontractors, Suppliers, and Others
 - A. Prior to the commencement of any Work, Design/Builder shall provide Owner's Representative with written notice of the Subcontractors, Suppliers and any other individual it proposes to perform any portion of the Work. Design/Builder shall not employ any Subcontractor, Supplier, or other individual or entity against whom Owner's Representative may have reasonable objection, and Design/Builder shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Design/Builder has reasonable objection.
 - B. Design/Builder shall be fully responsible to Owner, Owner's Representative and/or Owner's Consultant for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Design/Builder is responsible for Design/Builder's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner, Owner's Representative and/or Owner's Consultant, and any such Subcontractor, Supplier, or other individual or entity;
 - 2. shall create any obligation on the part of Owner, Owner's Representative or Owner's Consultant to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws or Regulations.
 - C. Design/Builder shall be solely responsible for scheduling and coordinating Subcontractors, Suppliers, and other individuals and entities performing or furnishing any of the Work under a direct or indirect contract with Design/Builder.

- D. Design/Builder shall require all Subcontractors, Suppliers, and such other individuals and entities performing or furnishing any of the Work to communicate with the Owner and/or Owner's Representative through Design/Builder.
- E. All Work performed for Design/Builder by a Subcontractor or Supplier shall be pursuant to an appropriate Design Subagreement or Subcontract between Design/Builder and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Design/Builder and the Subcontractor or Supplier shall contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Owner's Representative, Design/Builder, Owner's Consultant, and all other loss payees (and their officers, directors, members, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by any of the perils or causes of loss covered by such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Design/Builder shall obtain the same.

6.07 Patent Fees and Royalties

- A. Design/Builder shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Conceptual Documents for use in the performance of the Construction and if to the actual knowledge of Owner its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Conceptual Documents.
- B. To the fullest extent permitted by Laws or Regulations, Design/Builder shall indemnify and hold harmless Owner, Owner's Representative and Owner's Consultant, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the specification or incorporation in the Work of any invention, design, process, product or device except those required by the Conceptual Documents.
- C. To the fullest extent permitted by Laws or Regulations, Owner shall indemnify and hold harmless Design/Builder and its officers, directors, members, partners, employees or agents, Subcontractors and Suppliers from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device required by the Conceptual Documents, but not identified by Owner as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

6.08 Permits

- A. Unless otherwise provided in the Contract Documents, Design/Builder shall obtain and pay for all necessary permits, licenses, and approvals of governmental authorities having jurisdiction over the Work. Owner's Representative shall assist Design/Builder, when necessary, in obtaining such permits, licenses and approvals. Design/Builder shall pay all governmental charges and testing and inspection fees necessary for the performance of the Work, which are applicable on the last day for receipt of Proposals. Design/Builder shall pay all charges of utility owners for connections for providing permanent service to the Work, and Owner shall pay all charges of such utility owners for capital costs related thereto. Owner shall pay for any mitigation cost if such expenditure is required by a governing agency.
- B. Owner shall obtain the tidelands lease or permission from tideland owner to access the tideland area.

6.09 Laws or Regulations

- A. It is Design/Builder's responsibility to ascertain that the Work is in accordance with, and shall give all notices required by, all applicable Laws and Regulations. Except where otherwise expressly required by applicable Laws and Regulations, Owner, Owner's Representative and Owner's Consultant shall not be responsible for monitoring Design/Builder's compliance with any Laws or Regulations.
- B. If Design/Builder performs any Work contrary to Laws or Regulations, Design/Builder shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work without any increase in the Contract Price or adjustment in the Contract Times..
- C. Changes in Laws or Regulations not enacted or otherwise known on the Effective Date having an effect on the cost or time of performance may be the subject of a change in Contract Price or Contract Times.

6.10 Taxes

- A. Design/Builder shall pay all sales, consumer, use, and other similar taxes required to be paid by Design/Builder in accordance with the Laws or Regulations of the place of the Project which are applicable during the performance of the Work. Owner shall reimburse Contractor for any sales tax paid.
- 6.11 Use of Site and Other Areas
 - A. Limitation on Use of Site and Other Areas.
 - 1. Design/Builder shall confine construction equipment, the storage of materials and equipment, and the operations of construction workers to the Site and other areas permitted in writing by Owner's Representative and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Design/Builder shall assume full responsibility for any damage to any such land or area, or to the owner

or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work.

- 2. Should any claim be made by any such owner or occupant because of the performance of Work, Design/Builder shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws or Regulations, Design/Builder shall indemnify and hold harmless Owner, Owner's Representative, Owner's Consultant and anyone directly or indirectly employed by any of them from and against all claims, costs, losses and damages (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration or other dispute resolution costs) arising out of or resulting from any claim brought by any such owner or occupant against Owner, or any other party indemnified hereunder to the extent caused by or based upon Design/Builder's performance of the Construction.
- B. *Removal of Debris:* During the performance of the Construction, Design/Builder shall keep the Site free from accumulations of waste materials, rubbish, and other debris resulting from the Construction. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws or Regulations.
- C. *Cleaning:* Prior to Substantial Completion, Design/Builder shall clean the Site and make it ready for utilization by Owner. At completion of Construction, Design/Builder shall remove all tools, appliances, construction equipment, temporary construction and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures*: Design/Builder shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Design/Builder subject any part of the Construction or adjacent property to stresses or pressures that will endanger it.
- E. *Access*. Design/Builder shall provide the Owner, Owner's Representative and Owner's Consultant with access to the Site and to the Work in preparation and progress wherever located.

6.12 Record Documents

- A. Design/Builder shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Field Orders and Work Change Directives in good order and annotated to show all changes made during performance of the Work. These record documents together with all approved Submittals shall be available to Owner, Owner's Representative and Owner's Consultant for reference. Upon completion of the Work, Design/Builder shall deliver these record documents to Owner in both electronic and printed copy. Final payment will not be issued until the project record documents have been accepted by the Owner.
- 6.13 Safety and Protection
 - A. Design/Builder shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work, and shall provide Owner's Representative with Design/Builder's written Site-specific safety plan prior to commencing construction. Such

responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Design/Builder shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

- 1. All persons on the Site or who may be affected by the Work;
- 2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
- 3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Design/Builder shall comply with applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary warning signs and safeguards for such safety and protection. Design/Builder shall notify owners of adjacent property and of underground facilities, and utility owners, when prosecution of the Work may affect them, and shall cooperate with them and with public authorities in the protection, removal, relocation, and replacement of their property.
- C. Design/Builder shall comply with the applicable requirements of Owner's safety programs, if any.
- D. Design/Builder shall inform Owner's Representative of the specific requirements of Design/Builder's safety program with which Owner, Owner's Representative and Owner's Consultant and their respective employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraphs 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Design/Builder, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Design/Builder at Design/Builder's expense and without any adjustment in the Contract Times..
- F. Design/Builder's duties and responsibilities for safety and for protection of the Construction shall continue until such time as all the Work is completed and Owner has issued a notice to Design/Builder in accordance with Paragraph 13.08.B that the Work is finally acceptable.

6.14 Safety Representative

A. Design/Builder shall designate in writing to Owner's Representative a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.
6.15 Quality Manager

A. Design Builder shall designate in writing to the Owner's Representative a qualified and experienced Quality Manager whose duties and responsibilities shall be the implementation and management of the Design Builder's Quality Program.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Design/Builder is obligated to act to prevent threatened damage, injury or loss. Design/Builder shall give Owner prompt written notice if Design/Builder believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If a change in the Contract Documents is required because of the action taken by Design/Builder in response to such an emergency for which Design/Builder is not responsible, a Work Change Directive or Change Order shall be issued.

6.17 Submittals

- A. Owner's Representative shall review and approve Submittals in accordance with the schedule of required Submittals accepted by Owner as required by Paragraph 2.06.A. Owner's Representative's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the construction, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Owner's Representative's review and approval shall not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such shall not indicate approval of the assembly in which the item functions.
- B. Owner's Representative's review and approval of Submittals shall not relieve Design/Builder from responsibility for any variation from the requirements of the Contract Documents unless Design/Builder has in a separate written communication at the time of submission called Owner's Representative's attention to each such variation and Owner has given written approval.
- C. Construction prior to Owner's Representative's review and approval of any required Submittal shall be at the sole risk of Design/Builder.
- 6.18 Continuing the Work
 - A. Design/Builder shall continue the Work and adhere to the progress schedule during all Claims, disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any Claims, disputes or disagreements, except as Design/Builder and Owner may otherwise agree in writing.

6.19 Post-Construction Phase

A. Design/Builder shall:

- 1. Provide assistance in connection with the start-up, testing, refining and adjusting of any equipment or system.
- 2. Assist Owner in training staff to operate and maintain the Work.
- 3. Assist Owner in developing systems and procedures for control of the operation and maintenance of and record keeping for the Work.
- 4. Provide Owner with as-constructed (aka as-built) drawings and specifications for the completed Construction associated with the Project.
- 6.20 Design/Builder's General Warranty and Guarantee
 - A. Design/Builder warrants and guarantees to Owner that all Construction shall be in accordance with the Contract Documents and shall not be defective.
 - B. Design/Builder's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification or improper maintenance or operation by persons other than Design/Builder, Subcontractors, or Suppliers or any other individual for whom Design/Builder is responsible; or
 - 2. normal wear and tear under normal usage.
 - C. Design/Builder shall cause all of the guarantees and warranties provided by all Suppliers and Subcontractors to be issued directly to Owner. Unless specifically allowed by Owner, said guarantees and warranties shall not become effective until after Substantial Completion. If, despite the foregoing, any such guarantees or warranties are issued to Design/Builder, Design/Builder shall assign such guarantees and warranties to Owner by a written instrument acceptable to Owner. D. Design/Builder's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following shall constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Design/Builder's obligation to perform the Work in accordance with the Contract Documents:
 - 1. Observations by Owner, Owner's Representative or Owner's Consultant;
 - 2. The making of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Submittal;
 - 6. Any inspection, test, or approval by others; or
 - 7. Any correction of defective Construction by Owner.

6.21 Indemnification

- A. To the fullest extent permitted by Laws or Regulations, Design/Builder shall indemnify and hold harmless Owner, Owner's Representative, Owner's Consultant, and the officers, members, directors, partners, employees, agents, other consultants and subcontractors of each from and against all claims, damages, losses, penalties, costs and expenses (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss, penalty, cost or expense is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom), but only to the extent caused by any negligent act or omission of Design/Builder, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform or furnish any of the Work, regardless of whether such claim, damage, loss, penalty or expense is caused in part by an entity or person indemnified hereunder. Such obligation shall not be construed to negate, abridge or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Paragraph 6.21.A.
- B. In any and all claims against Owner, Owner's Representative ,Owner's Consultant, or any of their respective consultants, agents, officers, members, directors, partners or employees by any employee (or the survivor or personal representative of such employee) of Design/Builder, any Subcontractor, any Supplier, any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.21.A shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Design/Builder or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts or other employee benefit acts.
- 6.21Hazard Communication Programs
- A. Design/Builder shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

ARTICLE 7 – OTHER CONSTRUCTION

- 7.01 Related Work at Site and Adjacent to Site
 - A. Owner reserves the right to perform Work or other construction or operations related to the Project at the Site with Owner's employees, or through other direct contracts therefore, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. Written notice thereof shall be given to Design/Builder prior to starting any such other work; and

- 3. If Owner and Design/Builder are unable to agree on entitlement to or on the extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, Design/Builder may make a Claim therefore as provided in Article 15.
- B. Design/Builder shall afford each other contractor who is a party to such a direct contract and each utility owner (and Owner, if Owner is performing the additional work with Owner's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly connect and coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, Design/Builder shall do all cutting, fitting, and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Design/Builder shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Design/Builder may cut or alter others' work with the written consent of Owner's Representative and the others whose work will be affected. The duties and responsibilities of Design/Builder under this Paragraph 7.01B are for the benefit of such utility owners and other contractors.
- C If the proper execution or results of any part of Design/Builder's Work depends upon work performed or services provided by others under this Article 7, Design/Builder shall inspect such other work and appropriate instruments of service and promptly report to Owner's Representative in writing any delays, defects or deficiencies in such other work or services that render it unavailable or unsuitable for the proper execution and results of Design/Builder's Work. Design/Builder's failure so to report shall constitute an acceptance of such other work as fit and proper for integration with Design/Builder's Work except for latent or non-apparent defects and deficiencies in such other work.
- D Design/Builder shall reimburse and indemnify Owner for costs Owner incurs or that are payable by Owner to a separate contractor because of the Design/Builders' delays, improperly timed activities or defective construction. Owner shall be responsible to the Design/Builder for costs the Design/Builder incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction of the separate contractor. If such a separate contractor sues or initiates any proceeding against Owner on account of any damages or delays alleged to have been caused by the Design/Builder, Owner shall notify Design/Builder. Design/Builder shall defend all such proceedings at its own expense, and shall defend, indemnify, and hold Owner harmless from any damages awarded on such claims, including all attorneys' fees and other costs incurred by Owner.
- E Design/Builder shall promptly remedy damage caused by the Design/Builder to completed or partially completed construction by Owner or its separate contractors on the Site or on property adjacent to the Site.
- F Should Design/Builder or any of its Subcontractors of any tier cause damage of any kind, including but not limited to delay, to any separate contractor or subcontractor of Owner, Design/Builder shall, upon due notice, promptly attempt to settle with such other separate contractor or subcontractor by agreement or otherwise to resolve the dispute.

7.02 Coordination

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following shall be set forth in Supplementary Conditions:
 - 1. The individual or entity who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified;
 - 2. The specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility in respect of such coordination.
- 7.03 Legal Relationships
 - A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
 - B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Design/Builder for the reasonable direct delay and disruption costs incurred by Design/Builder as a result of the other contractor's wrongful actions or inactions.
 - C. Design/Builder shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Design/Builder's wrongful actions or inactions or the wrongful actions or inactions of Subcontractors or Suppliers or others for whom Design/Builder is responsible.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 General

- A. Owner shall do the following in a timely manner so as not to delay the services of Design/Builder:
 - 1. Provide such legal services as Owner may require with regard to legal issues pertaining to the Project including any that may be raised by Design/Builder;
 - 2. If requested in writing by Design/Builder, furnish reasonable evidence satisfactory to Design/Builder that sufficient funds are available and committed for the entire cost of the Project. Unless such reasonable evidence is furnished, Design/Builder is not required to commence or continue any Work, or may, if such evidence is not presented within a reasonable time, stop Work upon fifteen (15) days' notice to the Owner;
 - 3. Make payments to Design/Builder promptly when they are due as provided in Paragraphs 13.03 and 13.08;
 - 4. Furnish the Site as set forth in Paragraph 4.01.A;

- 5. Furnish to Design/Builder, as required for performance of Design/Builder's Services the following, all of which Design/Builder may use and rely upon in performing services under this Contract:
- a. Environmental assessment and impact statements;
- b. Property, boundary, easement, right-of-way, topographic, and utility surveys;
- c. Property descriptions;
- d. Zoning, deed, and other land use restrictions;
- e. Engineering surveys to establish reference points for design and construction which in Owner's judgment are necessary to enable Design/Builder to proceed with the Work;
- f. Assistance to Design/Builder in filing documents required to obtain necessary permits, licenses, and approvals of governmental authorities having jurisdiction over the Project;
- g. Permits, licenses, and approvals of government authorities Owner is specifically required to obtain by the Contract Documents; and
- h. Identify all reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site, all drawings known to owner of physical conditions relating to existing surface or subsurface structures at the Site, and any information or data known to Owner concerning underground facilities at the Site.
- 6. Review Submittals through the Owner's Representative pursuant to Paragraph 6.17.A; and
- 7. Provide information known to Owner relating to the presence of materials and substances at the Site which could create a Hazardous Environmental Condition.

8.02 Insurance

- A. Owner's responsibilities in respect of purchasing and maintaining liability and property insurance are set forth in Article 5.
- 8.03 Limitations on Owner's Responsibilities
 - A. The Owner, Owner's Representative and Owner' Consultant shall not supervise, direct, or have control or authority over, nor be responsible for, Design/Builder's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, or for any failure of Design/Builder to comply with Laws or Regulations applicable to the furnishing or performance of the Work. Owner, Owner's Representative and Owner's Consultant shall not be responsible for Design/Builder's failure to perform the Work in accordance with the Contract Documents.
- 8.04 Undisclosed Hazardous Environmental Condition

- A. Owner's responsibility in respect of undisclosed Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Materials uncovered or revealed at the Site is set forth in Paragraph 4.04.
- 8.05 Owner's Consultant
 - A. Owner's Consultant, if any, has no duties, responsibilities, or authorities with respect to Design/Builder.
- 8.06 Compliance with Safety Program
 - A. While at the Site, Owner, Owner's Representative and Owner's Consultant and their respective employees and representatives shall comply with the specific applicable requirements of Design/Builder's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – CHANGES IN THE WORK

- 9.01 Authorized Changes in the Work
 - A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, a Work Change Directive or a Field Order. Upon receipt of any such document, Design/Builder shall promptly proceed with the Work addressed in the Change Order, Work Change Directive or Field Order which shall be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided in such document).
- 9.02 Unauthorized Changes in the Work
 - A. Design/Builder shall not be entitled to an increase in the Contract Price or to an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Construction as provided in Paragraph 12.04.
- 9.03 Execution of Change Orders
 - A. Owner and Design/Builder shall execute appropriate Change Orders covering:
 - 1. Changes in the Work which are (i) ordered by Owner pursuant to Paragraph 9.01, (ii) required because of acceptance of defective Construction under Paragraph 12.08 or Owner's correction of defective Work under Paragraph 12.09 or (iii) agreed to by the parties; and
 - 2. Changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive.
- 9.04 Notice to Sureties

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice shall be Design/Builder's responsibility. The amount of each applicable Bond shall be adjusted to reflect the effect of any such change.

ARTICLE 10 – COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

10.01 Cost of the Work

- A. Costs Included: The term Cost of the Work means the sum of all costs necessarily incurred and paid by Design/Builder in the proper performance of the Work. The value of Work covered by a Change Order or a Claim for an adjustment in Contract Price will be determined based on the Cost of the Work, and the costs to be reimbursed to Design/Builder shall be only those additional or incremental costs required because of the change of the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, and shall not include any of the costs itemized in Paragraph 10.01.B, and shall include only the following items:
 - 1. Payroll costs for employees in the direct employ of Design/Builder in the performance of the Work under schedules of job classifications agreed upon by Owner and Design/Builder.
 - a. Such employees shall include without limitation superintendents, foremen, and other personnel employed full-time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by Owner.
 - b. Such employees shall also include engineers, engineering technicians, architects, and others providing Design Professional Services. For purposes of this Paragraph 10.01.A.1, Design/Builder shall be entitled to payment for such employees an amount equal to salary costs times a factor, both as designated in the Contract, for all services performed or furnished by such employees engaged on the Project.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Design/Builder unless Owner deposits funds with Design/Builder with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from

sale of surplus materials and equipment shall accrue to Owner, and Design/Builder shall make provisions so that they may be obtained.

- 3. Payments made by Design/Builder to Subcontractors (excluding payments for Design Professional Services pursuant to Paragraph 10.01.A.4) for Work performed or furnished by Subcontractors. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Design/Builder's Cost of the Work and fee.
- 4. Payments made by Design/Builder for Design Professional Services provided or furnished under a Design Subagreement.
- 5. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
- 6. Supplemental costs including the following items:
 - a. The proportion of necessary transportation, travel and subsistence expenses of Design/Builder's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the Site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Design/Builder.
 - c. Rentals of all construction or engineering equipment and machinery and the parts thereof whether rented from Design/Builder or others in accordance with rental agreements approved by Owner, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Design/Builder is liable, imposed by Laws or Regulations.
 - e. Deposits lost for causes other than negligence of Design/Builder, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses, damages, and related expenses caused by damage to the Work not compensated by insurance or otherwise, sustained by Design/Builder in connection with the furnishing and performance of the Work provided they have resulted from causes other than the negligence of Design/Builder, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and

approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Design/Builder's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services,, and similar petty cash items in connection with the Work.
- i. Cost of premiums for all Bonds and insurance Design/Builder is required by the Contract Documents to purchase and maintain.
- B. *Costs Excluded:*

The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Design/Builder's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks and other personnel employed by Design/Builder whether at the Site or in Design/Builder's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 10.01.A.1, all of which are to be considered administrative costs covered by the Design/Builder's fee.
- 2. Expenses of Design/Builder's principal and branch offices other than Design/Builder's office at the Site.
- 3. Any part of Design/Builder's capital expenses, including interest on Design/Builder's capital employed for the Work and charges against Design/Builder for delinquent payments.
- 4. Costs due to the negligence of Design/Builder, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 10.01.A.
- C. Design/Builder's Fee: When the value of the Work covered by a Change Order is determined on the basis of Cost of the Work, the Design/Builder's fee shall be determined as set forth in Paragraph 11.01.C.
- D. Documentation: Whenever the cost of any Work is to be determined pursuant to Paragraph 10.01.A and 10.01.B, Design/Builder shall establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Owner an itemized cost breakdown together with all supporting data.

10.02 Cash Allowances

- A. The Contract Price includes all allowances, if any, specifically identified in the Contract Documents. Design/Builder shall cause the Work so covered to be performed for such sums as may be acceptable to Owner. Design/Builder agrees that:
 - 1. The allowances include the cost to Design/Builder (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Except as set forth in the Contract Documents, Design/Builder's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing shall be valid.
- B. Prior to final payment, an appropriate Change Order shall be issued to reflect actual amounts due Design/Builder on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.
- 10.03 Unit Prices
 - A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price shall be deemed to include for all of Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Contract. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Design/Builder shall be made by Owner.
 - B. Each unit price will be deemed to include an amount considered by Design/Builder to be adequate to cover Design/Builder's overhead and profit for each separately identified item.
 - C. Design/Builder or Owner may make a Claim for an adjustment in the Contract Price in accordance with Article 15 if:
 - 1. the quantity of any item of Unit Price Work performed by Design/Builder differs materially and significantly (i.e., more than twenty-five percent (25%) from the estimated quantity of such item indicated in the Contract Documents;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Design/Builder believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes it is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 11 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

- 11.01 Change of Contract Price
 - A. The Contract Price may only be changed by a Change Order or through the disposition of a Claim. Any Claim for an adjustment in the Contract Price shall be based on timely written notice delivered by the party making the Claim to the other party in accordance with Article 15.
 - B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price shall be determined as follows:
 - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 10.03); or
 - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit in accordance with Paragraph 11.01.C.1); or
 - 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 11.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 10.01) plus a Design/Builder's Fee for overhead and profit (determined as provided in Paragraph 11.01.C).
 - C. *Design/Builder's Markup:* The Design/Builder's markup for overhead and profit on Change Orders shall be determined as follows:
 - 1. The markup based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Article 10, the design builder shall apply __% for overhead and profit.
 - b. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the Subcontractor who actually performs or furnishes Work, at whatever tier, shall be paid a markup of fifteen percent (15%) of the costs incurred by such Subcontractor and that any higher tier Subcontractor and Design/Builder will each be paid a markup of ten percent (10%) of the amount paid to the next lower tier Subcontractor;
 - c. The amount of credit to be allowed by Design/Builder to Owner for any change which results in a net decrease in cost shall be the amount of the actual net decrease in cost plus a deduction in Design/Builder's markup by an amount equal to ten percent (10%) of such markup decrease; and
 - d. When both additions and credits are involved in any one change, the adjustment in Design/Builder's fee shall be computed on the basis of the net change.

11.02 Change of Contract Times

- A. The Contract Times (or Milestones) may only be changed by a Change Order. Any Claim for an adjustment of the Contract Times (or Milestones) shall be based on written notice pursuant to Paragraph 9.03.A.
- B. *Delays Beyond Design/Builder's Control:* Where Design/Builder is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of Design/Builder, the Contract Times (or Milestones) shall be extended in an amount equal to the time lost due to such delay if a Claim is made therefore as provided in Paragraph 11.02.A. Delays beyond the control of Design/Builder shall include, but not be limited to, acts or neglect by Owner, governmental agencies, acts or neglect of utility owners or other contractors performing other construction work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- C. If Owner or other contractor or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Design/Builder shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Design/Builder's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Design/Builder's ability to complete the Work within the Contract Times.
- D. If Design/Builder is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Design/Builder, then Design/Builder shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Design/Builder's ability to complete the Work within the Contract Times. Such an adjustment shall be Design/Builder's sole and exclusive remedy for the delays described in this Paragraph 11.02.D.
- E. Owner shall not be liable to Design/Builder for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Design/Builder on or in connection with any other project or anticipated project.
- F. Design/Builder shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Design/Builder. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Design/Builder.

ARTICLE 12 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE CONSTRUCTION

12.01 Notice of Defects

A. Owner shall give Design/Builder prompt written notice of all defective Construction of which Owner has actual knowledge. All defective Construction may be rejected, corrected, or accepted as provided in this Article 12.

12.02 Access to Construction

A. Owner, Owner's Representative, Owner's Consultant, other representatives and personnel of Owner, independent testing laboratories and governmental agencies with jurisdictional interests shall have access to the Site and the Construction at reasonable times for their observation, inspecting, and testing. Design/Builder shall provide them proper and safe conditions for such access and advise them of Design/Builder's Site safety procedures and programs so that they may comply therewith as applicable.

12.03 Tests and Inspections

- A. If the Contract Documents or Laws or Regulations of any public body having jurisdiction require any part of the Construction specifically to be inspected, tested or approved, Design/Builder shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, pay all costs in connection therewith, and furnish Owner's Representative the required certificates of inspection or approval. Design/Builder shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's acceptance of materials or equipment to be incorporated in the Work or of materials, mix designs, or equipment submitted for approval prior to Design/Builder's purchase thereof for incorporation in the Work.
- B. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. Design/Builder shall give Owner's Representative and Owner's Consultant reasonable notice of the planned schedule for all required inspections, tests, or approvals so they may be present.
- C. If tests or inspections reveal a failure of the portions of the Work to comply with requirements of the Contract Documents, all costs made necessary by such failure, including those of repeated tests, inspections or other procedures, shall be at the Design/Builder's expense and without any adjustment in the Contract Times.
- D. The results of all tests or inspections, and required certificates of testing, inspection or approval, shall, unless otherwise required by the Contract Documents, be secured by Design/Builder and promptly delivered to Owner's Representative.
- E. If any Construction (or the construction work of others) that is required to be inspected, tested, or approved is covered by Design/Builder without written concurrence of Owner's Representative, then Design/Builder shall, if requested by Owner's Representative, uncover such Construction for observation.
- F. Uncovering Construction as provided in Paragraph 13.03.E shall be at Design/Builder's expense unless Design/ Builder has given Owner's Representative timely notice of Design/Builder's intention to cover the same and Owner's Representative has not acted with reasonable promptness in response to such notice.

12.04 Uncovering Construction

A. If any Construction is covered contrary to requirements specifically expressed in the Contract Documents or contrary to the written request of Owner's Representative, it must, if requested by

Owner's Representative, be uncovered for Owner's Representative's observation and recovered at Design/Builder's expense without any change in the Contract Times.

- B. If Owner's Representative otherwise considers it necessary or advisable that covered Construction be observed by Owner's Representative or inspected or tested by others, Design/Builder, at Owner's Representative's request, shall uncover, expose or otherwise make available for observation, inspection or testing as Owner's Representative may require, that portion of the Construction in question, furnishing all necessary labor, material and equipment. If it is found that such Construction is defective, Design/Builder shall pay all costs and damages caused by or resulting from such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction, (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs, and all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a Claim therefore as provided in Article 15. If, however, such Construction is not found to be defective, Design/Builder shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Design/Builder may make a Claim therefore as provided in Article 15.
- 12.05 Owner May Stop Construction
 - A. If Construction is defective, or Design/Builder fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform Construction in such a way that the completed Construction will conform to the Contract Documents, Owner's Representative may order Design/Builder to stop Construction or any portion thereof until the cause for such order has been eliminated; however, this right of Owner to stop Construction shall not give rise to any duty on the part of Owner or Owner's Representative to exercise this right for the benefit of Design/Builder or any other party.
- 12.06 Correction or Removal of Defective Construction
 - A. Owner's Representative shall have authority to disapprove or reject defective Construction and shall have authority to require special inspection or testing of the Construction whether or not the Construction is fabricated, installed or completed. If required by Owner's Representative, Design/Builder shall promptly, as directed, either correct all defective Construction, whether or not fabricated, installed or completed, or, if the Construction has been rejected by Owner's Representative, remove it from the Site and replace it with non-defective Construction at Design/Builder's expense and without any adjustment in the Contract Times. Design/Builder shall bear all direct, indirect, and consequential costs of such correction or removal (including but not limited to all inspection and testing fees and fees and charges of engineers, architects, attorneys and other professionals and all court, arbitration, or other dispute resolution costs) arising out of or relating to such correction or removal.
- 12.07 Correction Period
 - A. If within one (1) year after the date of Substantial Completion of the entire Work or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable

special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Construction is found to be defective, Design/Builder shall promptly, without cost to Owner and in accordance with Owner's or Owner's Representative's written instructions, (i) correct such defective Construction, or, if it has been rejected by Owner or Owner's Representative, remove it from the Site and replace it with Construction that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other Construction or the work of others resulting therefrom. If Design/Builder does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Construction corrected or the rejected Construction removed and replaced, and all costs, losses, and damages caused by or resulting from such removal and replacement (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs, and all costs of repair or replacement of work of others) shall be paid by Design/Builder.

- B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Conceptual Documents.
- C. Where defective Construction (and damage to other Construction resulting therefrom) has been corrected, removed or replaced under this Paragraph 12.07, the correction period hereunder with respect to such Construction shall be extended for an additional period of one (1) year after such correction or removal and replacement has been satisfactorily completed.
- 12.08 Acceptance of Defective Construction
 - A. If, instead of requiring correction or removal and replacement of defective Construction, Owner prefers to accept it, Owner may do so. Design/Builder shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Construction. If any such acceptance occurs prior to final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, and Owner shall be entitled to an appropriate decrease in the Contract Price reflecting the diminished value of the Construction so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefore as provided in Article 15. If the acceptance occurs after final payment, an appropriate amount shall be paid by Design/Builder to Owner.
- 12.09 Owner May Correct Defective Construction.
 - A. If Design/Builder fails within seven (7) days after receipt of written notice from Owner to carry out the Work in accordance with the Contract Documents, to correct defective Construction or to remove and replace rejected Construction as required by Owner in accordance with Paragraphs 12.06.A or 12.07.A, or if Design/Builder fails to perform the Construction in accordance with the Contract Documents, or if Design/Builder fails to comply with any other provision of the Contract Documents, Owner may, without prejudice to other remedied the Owner may have, and after and an additional seven (7) days written notice to Design/Builder, carry out the Work, correct and remedy any such defective Construction, and/or remove and replace rejected Construction. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Design/Builder the Owner's actual cost of carrying out the Work, correcting any such

deficiencies and/or removing and replacing any rejected Construction. If payments due the Design/Builder are not sufficient to cover such amounts, the Design/Builder shall pay the difference to the Owner.

- B. In exercising the rights and remedies under this Paragraph 12.09 Owner shall proceed expeditiously. In connection with such corrective and remedial action, Owner may exclude Design/Builder from all or part of the Site, take possession of all or part of the Construction, and suspend Design/Builder's services related thereto, take possession of Design/Builder's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Construction all materials and equipment stored at the Site or for which Owner has paid Design/Builder but which are stored elsewhere. Design/Builder shall allow Owner, Owner's Representative, Owner's Consultant, Owner's representatives, agents, employees, and other contractors' access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All costs, losses, and damages (included but not limited to fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs and all costs of repair or replacement of work of others) incurred or sustained by Owner in exercising such rights and remedies under this Paragraph 12.09 shall be charged against Design/Builder and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefore as provided in Article 15.
- D. Design/Builder shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 12.09.

ARTICLE 13 – PAYMENTS TO DESIGN/BUILDER AND COMPLETION

- 13.01 Schedule of Values
 - A. The Schedule of Values established as provided in Paragraph 2.06.A shall serve as the basis for progress payments. Progress payments on account of Unit Price Work shall be based on the number of units completed.
- 13.02 Application for Progress Payment
 - A. On or about the date established in the Contract for submission of each application for progress payment (but not more often than once a month), Design/Builder shall submit to Owner's Representative for review an Application for Payment filled out and signed by Design/Builder covering the Work completed as of the date indicated on the Application and accompanied by supporting documentation substantiating the Design/Builder's right to payment as required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner. Such applications may not include requests for payment for portions of

the Work for which the Design/Builder does not intend to pay to a Subcontractor or Supplier or other parties providing services for the Design/Builder, unless such Work has been performed by others whom the Design/Builder does intend to pay.

- B. Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the Site for subsequent incorporation in the Work. Payment will similarly be made for materials and equipment suitably stored off the Site at a location agreed upon in writing. Payment for materials and equipment stored on or off the Site shall be conditioned upon compliance by the Design/Builder with procedures satisfactory to Owner's Representative to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest and shall include the costs of applicable insurance, storage and transportation to the Site for such materials and equipment stored off the Site.
- C. Beginning with the second Application for Payment, each Application shall include an affidavit of Design/Builder stating that all previous progress payments received on account of the Work have been applied on account to discharge Design/Builder's legitimate obligations associated with prior Applications for Payment, and shall be accompanied by conditional and unconditional waivers and releases of Liens as the Construction Manger may require.
- D. Retainage shall not be withheld.

13.03 Progress Payments

- A. *Procedure:* Progress payments shall be made by the Owner to the Design/Builder according to the following procedure:
 - Owner shall, within fifteen (15) days of receipt of each Application for Payment, either indicate in writing its acceptance of the Application and state that the Application is being processed for payment, or return the Application to Design/Builder indicating in writing its reasons for refusing to accept the Application in whole or in part. Not more than thirty (30) days after accepting such Application the amount will become due and when due shall be paid by Owner to Design/Builder.
 - 2. If Owner should fail to pay Design/Builder at the time the payment of any amount becomes due, then Design/Builder may, at any time thereafter, upon serving written notice that it will stop the Work within twenty (20) days after receipt of the notice by Owner and Owner's Representative, and after such twenty (20) day period, stop the Work until payment of the amount owing has been received. Written notice shall be deemed to have been duly served if sent by certified mail to the last known business address of Owner and Owner's Representative.
 - 3. Payments due but unpaid shall bear interest at the rate specified in the Contract.
 - 4. No Progress Payment nor any partial or entire use or occupancy of the Project by Owner shall constitute an acceptance of any Work not in accordance with the Contract Documents.
- B. *Reduction in or Refusal to Make Payment:* The Owner may withhold a payment in whole or in part to the extent reasonably necessary to protect the Owner due to the Owner's determination that

the Work is not in accordance with the Contract Documents. Owner may also refuse to make the whole or any part of any such payment, or because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any previous payment, to the extent that is reasonably necessary to protect Owner from loss because:

- 1. The Construction is defective, or completed Construction has been damaged requiring correction or replacement; or
- 2. The Contract Price has been reduced by Change Order; or
- 3. Owner has been required to correct defective Construction or complete Work in accordance with Paragraph 12.09.A; or
- 4. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.A.; or
- 5. Claims have been made against Owner on account of Design/Builder's performance or furnishing of the Work; or
- 6. Liens have been filed in connection with the Work, except where Design/Builder has delivered a specific Bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
- 7. The Work has not progressed to the point indicated in the Application for Payment; or
- 8. There are other items entitling Owner to a set off against the amount for which application is made.
- C. If Owner refuses to make payment of the full amount requested by Design/Builder, Owner must give Design/Builder immediate written notice stating the reasons for such action and promptly pay Design/Builder any amount remaining after deduction of the amount withheld. Owner shall promptly pay Design/Builder the amount withheld or any adjustment thereto agreed to when Design/Builder remedies the reason for such action.
- D. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be subject to interest as provided in the Contract.
- 13.04 Design/Builder's Warranty of Title
 - A. Design/Builder warrants and guarantees that title to all Construction, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.
- 13.05 Substantial Completion
 - A. When Design/Builder considers the Work ready for its intended use Design/Builder shall notify Owner's Representative in writing that the Work is substantially complete (except for items specifically listed by Design/Builder as incomplete) and request that Owner issue a certificate of Substantial Completion. Promptly thereafter, Owner, Owner's Representative and Design/Builder

shall make an inspection of the Work to determine the status of completion. If Owner does not consider the Work substantially complete, Owner shall notify Design/Builder in writing giving the reasons therefore. In such case, Design/Builder shall complete or correct such items, and shall then submit a request for another inspection to determine whether Design/Builder's Work is substantially complete. When Owner considers the Work substantially complete, Owner shall prepare and deliver to Design/Builder a certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a list of items to be completed or corrected before final payment. Failure to include an item on such list does not alter the responsibility of the Design/Builder to complete all Work in accordance with the Contract Documents. At the time of delivery of the certificate of Substantial Completion, Owner shall also deliver to Design/Builder a written determination on the division of responsibilities pending final payment between Owner and Design/Builder with respect to security, operation, safety, protection of Construction, maintenance, heat, utilities, insurance and warranties and guarantees.

- B. Owner shall have the right to exclude Design/Builder from the Site after the date of Substantial Completion, but Owner shall allow Design/Builder reasonable access to complete or correct items on the list of items to be completed.
- C. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of Milestone No. 2 unless otherwise provided in the certificate of Substantial Completion.
- 13.06 Partial Utilization
 - A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Construction which (i) has specifically been identified in the Contract Documents, or (ii) Owner and Design/Builder agree constitute a separately functioning and usable part of the Construction that can be used by Owner for its intended purpose without significant interference with Design/ Builder's performance of the remainder of the Construction, subject to the following:
 - 1. Owner at any time may request Design/Builder in writing to permit Owner to use or occupy any such part of the Construction which Owner believes to be ready for its intended use and substantially complete. If Design/Builder agrees that such part of the Work is substantially complete, Design/Builder and Owner will follow the procedures of Paragraph 13.05 for that part of the Construction.
 - 2. Design/Builder at any time may notify Owner in writing that Design/Builder considers any such part of the Work ready for its intended use and substantially complete and request Owner to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner and Design/Builder shall make an inspection of that part of the Work to determine its status of completion. If Owner does not consider that part of the Work to be substantially complete, Owner shall notify Design/Builder in writing giving the reasons therefore. If Owner considers that part of the Work to be substantially complete, the provisions of Paragraph 13.05 shall apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

- 4. There shall be no use or occupancy of part of the Construction prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.
- 5. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

13.07 Final Inspection

A. Upon written notice from Design/Builder that the entire Work or an agreed portion thereof is complete, Owner and Owner's Representative shall make a final inspection with Design/Builder and Owner shall notify Design/Builder in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Design/Builder shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies. In such case, Design/Builder shall complete or correct such items, and shall then submit a request for another inspection to determine whether Design/Builder's Work is complete. If Owner prefers to accept Work not in accordance with the requirements of the Contract Documents, Owner may do so instead of requiring its removal or correction, in which case the Contract Price shall be equitably adjusted by Change Order whether or not final payment has been made.

13.08 Final Payment

- A. Application for Payment.
 - 1. After Design/Builder has completed all such corrections to the satisfaction of Owner and delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance, certificates of inspection, record documents (as provided in Paragraph 6.12) and other documents, Design/Builder may make application for final payment following the procedure for progress payments.
 - The final Application for Payment shall be accompanied (unless previously delivered) by: 2. (i) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (ii) a certificate evidencing that insurance required by the Contract Documents will remain in force after final payment is currently in effect and will not be cancelled or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner, (iii) a written statement that the Design/Builder knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (iv) consent of surety, if any, to final payment, and (v) if required by Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of Liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by Owner. If a Subcontractor refuses to furnish a release or waiver required by Owner, Design/Builder may furnish a bond satisfactory to Owner to indemnify Owner against such Lien. If such Lien remains unsatisfied after payments are made, Design/Builder shall refund to Owner all money that Owner may be liable to pay in connection with the discharge of such Lien, including all costs and reasonable attorneys' fees.

3. In lieu of such releases or waivers of Liens specified in Paragraph 13.08.A.2 and as approved by Owner, Design/Builder may furnish receipts or releases in full and an affidavit of Design/Builder that: (i) the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and (ii) all payrolls, material and equipment bills and other indebtedness connected with the Work for which Owner might in any way be responsible, or which in any way might result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Design/Builder may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Final Payment and Acceptance:* If Owner is satisfied that the Work has been completed and Design/Builder's other obligations under the Contract Documents have been fulfilled, Owner shall, within fifteen (15) days after receipt of the final Application for Payment, give written notice to Design/Builder that the Work is acceptable. Otherwise, Owner shall return the Application to Design/Builder, indicating in writing the reasons for refusing to process final payment, in which case Design/Builder shall make the necessary corrections and resubmit the Application.

C. *Payment Becomes Due:* Thirty (30) days after the presentation to Owner of an acceptable final Application and accompanying documentation, in appropriate form and substance and with Owner's notice of acceptability, the remaining unpaid Contract Price shall become due and shall be paid by Owner to Design/Builder.

- 13.09 Final Completion Delayed
 - A. If, through no fault of Design/Builder, final completion of the Work is significantly delayed, Owner shall, upon receipt of Design/Builder's final Application for Payment, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Contract, and if Bonds have been furnished as required in Paragraph 5.01.A, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Design/Builder to Owner with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

13.10 Waiver of Claims

- A. The making and acceptance of final payment shall constitute:
 - 1. A waiver of all Claims by Owner against Design/Builder, except Claims arising from unsettled Liens, from defective Construction appearing after final inspection pursuant to Paragraph 13.07, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Design/Builder's continuing obligations under the Contract Documents, including its indemnity and hold harmless obligations; and
 - 2. A waiver of all Claims by Design/Builder against Owner, Owner's Representative and Owner's Consultant other than those previously made in writing and still unsettled.

ARTICLE 14 – SUSPENSION OF WORK AND TERMINATION

- 14.01 Owner May Suspend Work.
 - A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than ninety (90) days by notice in writing to Design/Builder which will fix the date on which Work will be resumed. Design/Builder shall resume the Work on the date so fixed. Unless the Work is, was or would have been suspended by cause for which Design/Builder is responsible, Design/Builder shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Design/Builder makes a Claim therefore as provided in Article 15.
- 14.02 Owner May Terminate for Cause.
 - A. The occurrence of any one or more of the following events justifies the termination of the Design/Builder's services for cause:
 - 1. Design/Builder's persistent or repeated failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, failure to adhere to the progress schedule established under Paragraph 2.06.A as adjusted from time to time pursuant to Paragraph 6.05, or failure to make payment to Contractors for services, materials or labor in accordance with the respective agreements between the Design/Builder and Subcontractors or Suppliers).
 - 2. Design/Builder's disregard of Laws or Regulations of any public body having jurisdiction.
 - 3. Design/Builder's violation or breach of the Contract Documents.
 - B. If one or more of the events identified in Paragraph 14.02.A occur, Owner may, after giving Design/Builder seven (7) days' written notice, terminate the services of Design/Builder, take possession of any completed Drawings and Specifications prepared by or for Design/Builder (subject to the indemnification provisions of Paragraph 3.05.D), exclude Design/Builder from the Site, and take possession of the Work and of all Design/Builder's tools, appliances, construction equipment and machinery at the Site and use the same to the full extent they could be used by Design/Builder (without liability to Design/Builder for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Design/Builder but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case Design/Builder shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all costs losses and damages sustained by Owner arising out of or resulting from completing the Work (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) such excess shall be paid to Design/Builder. If such costs, losses and damages exceed such unpaid balance, Design/Builder shall pay the difference to Owner. Such costs, losses and damages incurred by Owner shall be incorporated in a Change Order. When exercising any rights or remedies under this paragraph Owner shall not be required to obtain the lowest price for the Work performed.

- C. Notwithstanding Paragraph 14.02.B, Design/Builder's services will not be terminated if Design/Builder begins, within seven (7) days of receipt of notice of intent to terminate, to correct its failure to perform and proceeds diligently to cure such failure within no more than thirty (30) days of receipt of said notice.
- D. Where Design/Builder's services have been so terminated by Owner, the termination shall not affect any rights or remedies of Owner against Design/Builder then existing or which may thereafter accrue. Design/Builder's warranty, guaranty and indemnity obligations, both under the Contract and as may otherwise exist under the Laws and Regulations, shall survive termination of the Design/Builder's services. Any retention or payment of moneys due Design/Builder by Owner shall not release Design/Builder from liability.
- E. If it is determined that the Owner wrongfully terminated the Design/Builder for Cause, the termination shall be converted into one of Convenience as provided in Section 14.03 which provisions shall act as the Design/Builder's sole remedy.
- 14.03 Owner May Terminate for Convenience
 - A. Upon seven (7) days' written notice to Design/Builder, Owner may, without cause and without prejudice to any other right or remedy of Owner, elect to terminate the Contract. In such case, Design/Builder shall be paid (without duplication of any items) for:
 - 1. Completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. Amounts paid in settlement of terminated contracts with Subcontractors, Suppliers and others; and
 - 4. Reasonable expenses directly attributable to termination.
 - B. Design/Builder shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.
 - C. Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Design/Builder shall: (1) cease operations as directed by in the notice; (2) take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and (3) except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing contracts and purchase orders and enter into no further contracts and purchase orders.
 - D. When the Contract has been so terminated by Owner, the termination shall not affect any rights or remedies of Owner against Design/Builder then existing or which may thereafter accrue. Design/Builder's warranty, guaranty and indemnity obligations, both under the Contract and as

may otherwise exist under the Laws and Regulations, shall survive termination of the Contract. Any retention or payment of moneys due Design/Builder by Owner shall not release Design/Builder from liability.

- 14.04 Design/Builder May Stop Work or Terminate.
 - A. If, through no act or fault of Design/Builder, the Work is suspended for a period of more than ninety (90) days by Owner or under an order of court or other public authority through no act or fault of Design/Builder, or Owner fails to act on any Application for Payment within thirty (30) days after it is submitted, then Design/Builder may, upon seven (7) days' written notice to Owner, and provided Owner does not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 14.03.A. If Owner has failed for thirty (30) days to pay Design/Builder any sum finally determined to be due, Design/Builder may upon seven (7) days' written notice to Owner stop the Work until payment is made of all such amounts due Design/Builder, including interest thereon. The provisions of this Paragraph 14.04.A are not intended to preclude Design/Builder from making a Claim under Article 15 for an increase in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Design/Builder's stopping Work as permitted by this paragraph.

ARTICLE 15 – DISPUTE RESOLUTION

15.01 Claims and Disputes.

- A. *Time Limits on Claims*. Claims by either party must be initiated by written notice to the other party within ten (10) days after occurrence of the event giving rise to such Claim or within ten (10) days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Substantiating documentation shall be submitted by the claiming party with the Claim. Any failure to strictly comply with the time limits on initiating or making a Claim constitutes a full and complete waiver of the Claim.
- B. *Continuing Performance*. Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Paragraph 14.04.A, the Design/Builder shall proceed diligently with performance of the Design/Build Contract and the Owner shall continue to make payments in accordance with the Contract Documents.
- C. *Claims for Concealed or Unknown Conditions*. If conditions are encountered at the site which are (1) unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then the observing party shall give notice to the other party promptly before conditions are disturbed and in no event later than ten (10) days after first observance of the conditions. The Owner's Representative shall promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Design/Builder's cost of, or time required for, performance of any part of the Work, shall negotiate with the Design/Builder an equitable adjustment in the Contract Price or Contract Times, or both. If the Owner's Representative determines the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Owner's Representative shall so notify the Design/Builder in writing, stating the reasons. Claims by the Design/Builder in opposition to such determination must be made within ten (10) days after the Owner's Representative has given notice of the decision. If the conditions

encountered are materially different, the Contract Price and/or Contract Times shall be equitably adjusted, but if the Owner's Representative and Design/Builder cannot agree on an adjustment in the Contract Price or Contract Times, the adjustment shall proceed pursuant to Paragraph 15.02.

- D. Claims for Additional Cost. If the Design/Builder wishes to make a Claim for an increase in the Contract Price, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph 6.16.A. If the Design/Builder believes additional cost is involved for reasons including but not limited to (1) an order by the Owner's Representative to stop the Work where the Design/Builder was not at fault, (2) a written order for the Work issued by the Owner's Representative, (3) failure of payment by the Owner, (4) termination of the Contract, (5) the suspension of Work or (6) other reasonable grounds, a Claim shall be filed in accordance with this Paragraph 15.01.
- E. *Claims for Additional Time*. If the Design/Builder wishes to make a Claim for an increase in the Contract Times, written notice as provided herein shall be given. The Design/Builder's Claim shall include an estimate of the time and its effect on the progress of the Work. In the case of a continuing delay, only one Claim is necessary. If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled Construction.
- F. *Injury or Damage to Person or Property*. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding ten (10) days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.
- G. *Unit Prices*. If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Work Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Design/Builder, the applicable unit prices shall be equitably adjusted.
- H. *Claims for Consequential Damages.* Design/Builder and Owner waive Claims against each other for consequential damages arising out of or relating to the Contract. This mutual waiver includes, without limitation: (1) damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and damages incurred by the Design/Builder for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Paragraph 15.01.H shall be deemed to preclude an award of direct damages or liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.
- I. *Changes in Laws or Regulations*. If the enactment or revision of Laws or Regulations or official interpretations which govern the Project cause an increase or decrease of the Design/Builder's cost

of, or time required for, performance of the Work, the Design/Builder shall be entitled to an equitable adjustment in Contract Price and/or Contract Times. If the Owner and Design/Builder cannot agree upon an adjustment in the Contract Price or Contract Times, the Design/Builder shall submit a Claim pursuant to this Paragraph 15.01.

- J. *Claims involving Sureties*. In the event of a Claim against the Design/Builder, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Design/Builder's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.
- K. *Lien Claims*. If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to the Owner's Representative's initial decision pursuant to Paragraph 15.02.A, or any subsequent mediation or arbitration of the Claim as provided in Paragraphs 15.02.B and 15.02.C.

15.02 Resolution of Claims and Disputes.

- A. *Initial Decision by Owner*. An initial decision by the Owner's Representative shall be required as a condition precedent to mediation of all Claims between the Owner and Design/Builder arising prior to the date final payment is due, *unless* thirty (30) days have passed after the Claim has been referred to the Owner's Representative with no decision having been rendered by the Owner's Representative. The Owner's Representative's initial decision shall be in writing, shall state the reasons therefore and shall notify the parties of any change in the Contract Price or Contract Times or both. The initial decision shall be final and binding on the parties subject only to the right to mediation pursuant to Paragraph 15.02.B and thereafter to binding arbitration pursuant to Paragraph 15.02.C.
- B. *Mediation*. Any Claim arising out of or related to the Contract, except those waived as provided for in Paragraphs 13.10 and 15.01.H shall, after the Owner's Representative's initial decision of the Claim or thirty (30) days after submission of the Claim for the Owner's Representative's initial decision, be subject to mediation as a condition precedent to binding arbitration.
 - 1. A request for mediation shall be made in writing and delivered to the other party to the Contract. The mediation shall be conducted, to the extent practicable, within sixty (60) days of the date the request for mediation is delivered to the other party. The request may be made concurrently with the filing of a demand for arbitration, but, in such event the mediation shall proceed in advance of the arbitration, which shall be stayed pending mediation for a period of sixty (60) days from the date of the mediation request, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for the arbitration.
 - 2. If the parties are not able to agree on a mediator, the parties shall each submit the names of three attorneys with at least twenty (20) years of experience in construction law to a court of competent jurisdiction which shall then select a mediator. The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in Juneau, Alaska, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof. The parties shall each pay fifty

percent (50%) of the mediator's fee, and shall each bear their own costs and expenses, including attorneys' fees, incurred in the mediation.

- C. *Binding Arbitration*. Claims, except those waived as provided for in Paragraphs 13.10 and 15.01.H for which initial decisions have not become final and binding, and which have not been resolved by mediation shall be decided by binding arbitration which, unless the parties mutually agree otherwise, shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association ("AAA") in effect on the date of the Contract; however, unless the parties agree otherwise, the arbitration shall not be administered by the AAA. The arbitration shall be conducted and administered by a single arbitrator regardless of the amount of any Claim or controversy. A demand for arbitration shall be made in writing and delivered to the other party to the Contract. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.
 - 1. A demand for arbitration may be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.
 - 2. If the parties are unable to agree upon the arbitrator, the parties shall each submit the names of three attorneys (any person who served as a mediator is not eligible) with at least twenty (20) years of experience in construction law to a court of competent jurisdiction which shall then select the arbitrator.
 - 3. An arbitration pursuant to this Paragraph 15.02.C may be joined with another arbitration involving common issues of law or fact between the Owner or Design/Builder and any person or entity with whom the Owner or Design/Builder has a contractual obligation to arbitrate disputes which does not prohibit consolidation or joinder. No other arbitration arising out of or relating to the Contract shall include, by consolidation, joinder or in any other manner, an additional person or entity not a party to the Contract or not a party to an agreement with the Owner or Design/Builder, except by written consent containing a specific reference to the Contract signed by the Owner and Design/Builder and any other person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent or with a person or entity not named or described therein. The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by the parties to the Contract shall be specifically enforceable in accordance with applicable law in any court having jurisdiction thereof.
 - 4. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

5. Unless the parties otherwise agree in writing, the arbitrator shall render a reasoned written award within thirty (30) days of the close of the arbitration hearing. The arbitrator shall award the substantially prevailing party its attorneys' fees, costs, and any expert witness fees along with all arbitrator fees and administrative costs. Venue for the arbitration shall be in Juneau, Alaska, unless the parties agree otherwise in writing. The award rendered by the arbitrator shall be final, and

judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof. The court shall award the substantially prevailing party its attorneys' fees, costs and any expert witness fees incurred with the confirmation of the arbitration award and entry of judgment thereon, including attorneys' fees and costs incurred in connection with any appeal of the award, confirmation order or judgment, and further including attorneys' fees and costs incurred in connection with the enforcement and collection of judgment.

ARTICLE 16 – MISCELLANEOUS

16.01 Giving Notice

A. Whenever any provision of the Contract Documents requires the giving of written notice, it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if sent by certified mail, postage prepaid, to the last business address known to the party giving notice or if sent to the email addresses identified in the Contract Documents.

16.02 Computation of Times

A. When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

16.03 Cumulative Remedies

- A. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder to the parties hereto are in addition to, and are not a limitation on, any rights and remedies available to any or all of them which are otherwise imposed or available by:
 - 1. Laws or Regulations; or
 - 2. any special warranty or guarantee; or
 - 3. other provisions of the Contract Documents.
- B. The provisions of Paragraph 16.03.A will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.
- 16.04 Survival of Obligations
 - A. All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Contract.

16.05 Controlling Law

A. The Contract Documents shall be construed and interpreted in accordance with the law of the State of Alaska.

This Agreement will be effective on ______, 2022 which is the Effective Date of the Agreement.

OWNER:

CITY OF CORDOVA

DESIGN/BUILDER:

By: Its: President AK Cont. Lic. #

By: _____ Its:

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Owner & Design Builder Agreement

MODIFIED AGREEMENT BETWEEN OWNER AND DESIGN/BUILDER ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is by and between the City of Cordova (Owner) and _____ (Design/Builder).

Owner and Design/Builder hereby agree as follows:

ARTICLE 1 – THE PROJECT

1.01. The Project, of which the Work under the Contract Documents may be the whole or only a part, is generally described as follows:

The Project consists of the renovation and modernization of the Cordova South Harbor.

ARTICLE 2 – WORK

2.01. Design/Builder shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Demolition of existing piles, floats, and docks for all South Harbor slips; and design and construction of new piles, floats, and docks, a drive down ramp and service float, and utility service and safety upgrades.

ARTICLE 3 – CONTRACT TIME

3.01. Time of the Essence

All time limits for milestones, if any, substantial completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

3.02. Time for Completion

Design/Builder shall begin Work within fifteen (15) days after receipt of a written Notice to Proceed from Owner.

Physical demolition and construction Work shall begin after the end of the 2023 fishing season. The Work shall be substantially complete before the beginning of the 2024 fishing season.

- 3.03. Liquidated Damages
 - A. Liquidated Damages. Design/Builder and Owner recognize that time is of the

essence as stated in paragraph 3.01 above, and that Owner will suffer financial loss if the Work is not completed on or before the dates specified in Paragraph 3.02, plus any extensions thereof allowed in accordance with Article 9 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal, arbitration, or similar proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Design/Builder agree that as liquidated damages for delay (but not as a penalty), Design/Builder shall pay Owner the sum of:

Five Thousand Dollars (\$5,000) per calendar day after the date specified in paragraph 3.02 until Substantial Completion for the Work (as adjusted per the Contract).

- B. Design/Builder acknowledges that a major consideration in its selection for this Project was the Design/Builder committing to assign and to be the Project Manager and Superintendent, respectively. Design/Builder reaffirms that and shall be assigned to the Project as the respective Project Manager and Superintendent and shall devote all, or substantially all, of their time to the Project through the Substantial Completion of the Project. Design/Builder shall not substitute another person for or without the express written consent of the Owner, which will not be unreasonably withheld. In the event Design/Builder replaces either of these persons without the express written consent of the Owner, Design/Builder shall pay the Owner as liquidated damages (but not as a penalty), the sum of Fifty Thousand Dollars (\$50,000) for each person replaced.
 - 1. Design/Builder agrees the Project Manager shall be available, as necessary, throughout the Project.
 - 2. Design/Builder agrees the Superintendent shall be assigned to the Site during all phases of Construction.
- C. Design/Builder and Owner acknowledge and agree that (1) the liquidated amounts set forth in paragraphs 3.03.A above represent a reasonable and genuine estimate of Owner's anticipated damages considering all of the circumstances existing on the date of the execution of this Contract, including the relationship of the amounts to the range of harm to Owner that reasonably could be anticipated; (2) proof of Owner's actual damages for such losses would be impractical or extremely difficult; and (3) said amounts are compensation for actual injuries that will be suffered by Owner, and are not a penalty.

ARTICLE 4 – CONTRACT PRICE

4.01. Owner shall pay Design/Builder for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts

determined pursuant to paragraphs 4.01.A and 4.01.B below (the "Contract Price"):

A. For all Work other than Unit Price Work, a Lump Sum of:

The specific cash allowances, if any, are included in the above price and have been computed in accordance with paragraph 10.02 of the General Conditions.

4.02. The hourly fees for employees in the direct employ of Design/Builder performing Design Professional Services for design services beyond the scope of work are set forth in Appendix H

ARTICLE 5 – PAYMENT PROCEDURES

- 5.01. Design/Builder shall submit and Owner will process Applications for Payment in accordance with Article 13 of the General Conditions.
 - A. Progress Payments; Retainage: Owner shall make progress payments on account of the Contract Price on the basis of Design/Builder's Applications for Payment, which are to be submitted on or about the 25th day of each month during performance of the Work as provided in paragraphs 5.01.A.1 and A.2 below. All such payments will be measured by the Schedule of Values established in paragraph 2.06.A.3 of the General Conditions (and in the case of Unit Price Work based on the number of units completed).
 - 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold in accordance with paragraph 13.03.B of the General Conditions.
 - a. Ninety-five percent (95%) of Work completed (with the balance being retainage); and
 - b. However, the Owner shall pay One Hundred percent (100%) of the cost of materials and equipment not incorporated in the Work (but fabricated, suitably stored, and accompanied by documentation satisfactory to Owner as provided in Paragraph 13.02.A of the General Conditions.
 - B. Final Payment. Upon final completion and acceptance of the Work in accordance with paragraph 13.08 of the General Conditions, Owner shall pay the remainder of the Contract Price.

ARTICLE 6 – INTEREST

6.01. All moneys not paid when due as provided in Article 13 of the General Conditions shall bear interest at the rate of six percent (6%) per annum.

ARTICLE 7 – DESIGN/BUILDER'S REPRESENTATIONS

- 7.01. To induce Owner to enter into this Agreement, Design/Builder makes the following representations:
 - A. Design/Builder has examined and carefully studied the Contract Documents and the other related data identified in the Request for Proposals.
 - B. Design/Builder has visited the Site and become familiar with and is satisfied as to the general and local Site conditions that may affect cost, progress, and performance of the Work.
 - C. Design/Builder 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. Design/Builder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified or made available by Owner and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified or made available by Owner.
 - E. Design/Builder is aware of the general nature of work to be performed by Owner and others at the Site and at Property adjacent to the Site that relates to the Work as indicated in the Contract Documents.
 - F. Design/Builder has considered the information known to Design/Builder; information commonly known to design/builders doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Design/Builder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Design/Builder's safety precautions and programs.
 - G. Based on the information and observations referred to above, Design/Builder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for it to enter into this Contract for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

 H. Design/Builder has given Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Design/Builder has discovered in the Contract Documents, and the written resolution thereof by Owner is acceptable to Design/Builder.

The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

K. Design/Builder and all Subcontractors providing Design Professional Services are properly licensed in the State of Alaska to provide the Design Professional Services they have been contracted to provide for the Project and are authorized to do business in the State of Alaska.

ARTICLE 8 – CONTRACT DOCUMENTS

- 8.01. The Contract Documents consist of the following:
 - A. This Agreement
 - B. Performance Bond, attached hereto as Appendix A
 - C. Design-Build Payment Bond attached hereto as Appendix A
 - D. Design/Builder's Labor and Equipment Rates, attached hereto as Appendix H
 - E. Modified Standard General Conditions of the Contract between Owner and Design/Builder
 - F. Supplementary Conditions
 - G. Conceptual Documents identified in the Supplementary Conditions.
 - H. Drawings and Specifications
 - I. Addenda numbers _____
 - J. Design/Builder's Proposal dated _____
 - K. Price and Payment Procedures
 - L. The following, which may be delivered, prepared, or issued after the Effective Date of this Agreement and are not attached hereto:
 - 1. Notice to Proceed;
- 2. All Work Change Directives and Change Orders amending, modifying, or supplementing the Contract Documents pursuant to paragraph 3.04.A of the General Conditions;
- 3. Specifications as defined in paragraph 1.01.A.41 of the General Conditions; and
- 4. Drawings as defined in paragraph 1.01.A.18 of the General Conditions.
- 8.02. There are no Contract Documents other than those listed above in this Article 8.
- 8.03. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04 of the General Conditions.

ARTICLE 9 – MISCELLANEOUS

- 9.01. The Modified Standard General Conditions of the Contract between Owner and Design/Builder are referred to herein as the General Conditions.
- 9.02. Terms used in this Agreement shall have the meanings indicated in the General Conditions.
- 9.03. No assignment by a party hereto of any rights under or interests in the Contract Documents shall be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 9.04. Owner and Design/Builder each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.
- 9.05. Any provision or part of the Contract Documents held to be void or unenforceable under any law or regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Design/Builder, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- 9.06. No action or failure to act by the Owner, Construction Manager, or Design/Builder shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.
- 9.07. The Project may being funded, in part, through grants from the State of Alaska. If the Project is funding through a State grant(s), a copy of the grant(s) shall be made available

to Design/Builder on request. Design/Builder shall fully comply and timely comply with all requirements of the grant(s) (including, without limitation, the provisions addressing access to records, reporting, record keeping, record retention, audits, prevailing wages, and subcontract requirements). The Design/Builder shall incorporate the grant requirements in all of its Construction Sub-agreements and Design Professional Sub-agreements.

9.08 The Buy American Act is not applicable to this Project unless required due to grant requirements.

IN WITNESS WHEREOF, Owner and Design/Builder have signed this Agreement in duplicate. One counterpart each has been delivered to Owner and Design/Builder. All portions of the Contract Documents have been signed, initialed, or identified by Owner and Design/Builder.

This Agreement will be effective on ____ Day of _____, ___ (which is the Effective Date of the Agreement).

OWNER: City of Cordova

	:	
T.	0.1	

Its: City Manager

Address for giving notices:

Email:

DESIGN/BUILDER:	

By: ______ Its: _____

Address for giving notices:

____, AK _____

Email:

Contractor License No.: ______ State: Alaska

Appendix D

- **1. Conformed Plan Set Nicoloff**
- 2. Cordova Electric Utility Map for Uplands
- **3. Staging Areas**
- 4.2016 South Harbor Condition Assessment
- **5. USACE**
 - a. Ownership Map
 - b. Cordova Harbor Bathymetry 2020
 - c. Cordova Harbor Silt Barrier Email

Conformed Plan Set Nicholoff Street



CORDOVA CITY STREETS IMPROVEMENTS CORDOVA, ALASKA

SHEET INDEX

SHEET NO.	TITLE
1	COVER SHEET
2	KEY MAP, LEGEND, ABBREVIATIONS & NOTES
3-4	TYPICAL SECTIONS NICHOLOFF WAY & HARBOR LOOP ROAD
5-6	TYPICAL SECTIONS ADDITIVE ALTERNATES No. 1 AND No. 2
7	DETAILS & SIGN SUMMARY TABLES
8-9	STRUCTURE & PIPE SUMMARY TABLES
10-17	PLAN & PROFILE DRAWINGS
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21	TEMPORARY TRAFFIC CONTROL PLAN



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LEGEND

PROPOSED	EXISTING	REMOVE
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486-8060

ndividually. Water/Sewer/Storm Utilities Cordova Public Works...

PROPERTY LINE CONTROL LINE BUILDING EDGE OF PAVEMENT
CURB & GUTTER VALLEY GUTTER, TYPE III
FENCE LIMIT OF CUT LIMIT OF FILL EDGE OF GRAVEL
CONCRETE
WATER LINE
WATER PROFILE LINE FIRE HYDRANT WATER VALVE WATER METER SANITARY SEWER LINE SANITARY SEWER PROFILE LINE SANITARY SEWER MANHOLE COVER STORM DRAIN LINE STORM DRAIN NOFILE LINE STORM DRAIN PROFILE LINE STORM DRAIN PROFILE LINE STORM DRAIN CATCH BASIN UNDERGROUND CABLE OVERHEAD ELECTRIC POWER POLE GUY WIRE ANCHOR LIGHT POLE SIGN SLOPE DIRECTION & PERCENTAGE CONIFEROUS TREE POUND SURVEY MONUMENT SURVEY POINT NUMBER SAWCUT

CONFORMED SET

ABBREVIATIONS

A.C. –	ASPHALT CONCRETE	LF –
ADD. – ALT.	ADDITIVE ALTERNATE	MAX – MAT'L–
ADEC-	ALASKA DEPARTMENT OF	MTE —
	ENVIRONMENTAL CONSERVATION	MFR - MILS -
ADOT- &PF	ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES	MIN —
© –	AT	MON - NIC -
BVCE-		NO. –
BVCS- CG -	BEGIN VERTICAL CURVE STATION CURB AND GUTTER	NTS - OC -
CIP -	CAST-IN-PLACE	ÖD –
CBJ - CBJSS-		OF - OSHA-
00000	STANDARD SPECIFICATIONS FOR	
	CIVIL ENGINEERING PROJECTS AND SUBDIVISION IMPROVEMENTS, 2003 EDITION, AS CURRENTLY AMMENDED CLASS CONTROL LINE	PC - PCC -
	2003 EDITION, AS CURRENTLY	PCC - PSI -
CL –	AMMENDED	PT -
¢ –	CONTROL LINE	PVC – PVI –
ČLR –	CLEAR CORRUGATED METAL PIPE	RT –
COC -	CITY OF CORDOVA	REQ'D- RET -
CONC-	CONCRETE CORRUGATED POLYETHYLENE PIPE	ROW -
DIA –		SDCB -
DI –		SDMH- SQ -
EG – ELEV –	EDGE OF GRAVEL ELEVATION	SSMH-
EP _	EDGE OF PAVEMENT	SSCO- STA-
ESMI-	EASEMENT END VERTICAL CURVE ELEVATION	TBC – TBG –
EVCS-	END VERTICAL CURVE STATION	TRW -
	FINISH GRADE FLOW LINE	TYP – UN –
FRM —	FRAME	USPS-
	GALLON GALVANIZED	VB – VC –
GB —	GRADE BREAK	VERT -
H – ID –	HORIZONTAL INSIDE DIAMETER	VG - W/ -
INV –	INVERT	₩v –
IN – K –	INCH RATE OF VERTICAL CURVATURE	
ĹΤ –	LEFT	
LBS –	POUNDS	



LINEAR FEET

MILLIMETERS MINIMUM

MONUMENT

MATCH TO EXISTING MANUFACTURER

NOT IN CONTRACT NOT TO SCALE ON CENTER

OUTSIDE DIAMETER

POLYVINYL CHLORIDE

RIGHT REQUIRED

RETAINING RIGHT-OF-WAY

TYPICAL

WITH

VALVE BOX VERTICAL CURVE VERTICAL VALLEY GUTTER

WATER VALVE

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

POINT OF CURVE PORTLAND CEMENT CONCRETE POUNDS PER SQUARE INCH POINT OF TANGENCY

STORM DRAIN CATCH BASIN STORM DRAIN MANHOLE

SOUARE SANITARY SEWER MANHOLE SANITARY SEWER CLEANOUT STATION TOP BACK OF CURB

TOP BACK OF GUTTER TOP BACK OF RETAINING WALL

UNKNOWN UNITED STATES POSTAL SERVICE

POINT OF VERTICAL INTERSECTION

MATERIAL

- CURRENTLY AMENDED.
- 2. CONTRACTOR SHALL VERIFY SITE CONDITIONS.
- 3.
- 4. PROJECT
- 5. CONTRACTOR SHALL RECORD ALL DEVIATIONS FROM THE PLANS.
- 6. JOB SITE.
- UTILITIES AND SHALL EXERCISE CAUTION DURING CONSTRUCTION.
- 8. OTHERWISE.
- 9. OTHERWISE
- THE CONTRACTOR SHALL FOLLOW ALL COC DIRECTIONS AND REGULATIONS FOR NOISE, HOURS OF OPERATIONS, AND DUST CONTROL. 11.
- 12. CBJSS AND APPROVED BY THE ENGINEER.
- 13. AFFECTED PROPERTY OWNER.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CBJ STANDARD DETAILS AND SPECIFICATIONS AS

EXISTING GROUND CONTOURS ARE BASED ON DOWL TOPOGRAPHIC SURVEY PERFORMED MARCH 2015.

A GEOTECHNICAL INVESTIGATION WAS NOT PERFORMED AS PART OF THE DESIGN FOR THIS PROJECT.

SECTION 02702, CONSTRUCTION SURVEYING, SHALL GOVERN ALL SURVEYING ACTIVITIES. CONTRACTOR AND CONTRACTOR'S SURVEYOR SHALL SCHEDULE A MEETING WITH ENGINEER FOR DISCUSSIONS TO INCLUDE, BUT NOT LIMITED TO, SURVEYING METHODS AND PROCEDURES, FIELD NOTES, REPORTING, AND AS-BUILT SURVEYS. THIS MEETING MUST BE HELD PRIOR TO ANY SURVEYING ACTIVITIES TAKING PLACE ON THE

CONTRACTOR SHALL AS-BUILD ALL UTILITIES ENCOUNTERED IN THE FIELD BY ACTUAL SURVEY METHODS AND PROVIDE FIELD NOTES TO THE ENGINEER WHICH INCLUDE HORIZONTAL AND VERTICAL LOCATIONS OF EACH.

CONTRACTOR SHALL MAINTAIN "AS-BUILT" RECORD DRAWINGS ON A CLEAN SET OF CONSTRUCTION DRAWINGS IN ACCORDANCE WITH, SECTION 02702, CONSTRUCTION SURVEY. THE "AS-BUILTS" SHALL BE KEPT CURRENT ON A DAILY BASIS AND SHALL BE AVAILABLE TO THE ENGINEER FOR INSPECTION ON THE

7. LOCATIONS DEPICTED FOR THE UTILITIES AND OTHER EXISTING FEATURES ARE APPROXIMATE. SOME UTILITIES HAVE BEEN LOCATED FROM AS-BUILT DRAWINGS AND SOME FROM UTILITY COMPANY LOCATES, AND THEREFORE MAY NOT BE VISIBLE. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING ALL

ELEVATIONS SHOWN ARE TO PIPE INVERT, FLOW LINE, OR FINISH PAVEMENT SURFACE UNLESS NOTED

DIMENSIONS SHOWN ARE TO EDGE OF PAVEMENT, GRADE BREAK, EDGE OF CONCRETE, TOP BACK OF WALL, OR TOP BACK OF CURB UNLESS NOTED OTHERWISE. ALL DIMENSIONS ARE IN FEET UNLESS NOTED

10. ALL CURB RADII ARE MEASURED AT BACK OF GUTTER, BACK OF CURB OR EDGE OF CONCRETE.

PIPE BEDDING SHALL BE INSTALLED PER CBJSS, AND SHALL BE INCIDENTAL TO TRENCH EXCAVATION AND BACKFILL - STORM DRAIN, WATER, AND SEWER. TRENCH BACKFILL SHALL BE COMPACTED ACCORDING TO

ALL CONSTRUCTION OPERATIONS REQUIRED FOR THIS PROJECT SHALL REMAIN WITHIN EXISTING COC ROW AND ACQUIRED EASEMENTS, UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER AND THE

CORDOVA CITY	STREETS IMPROVEMENTS
	ITB # 16-01

KEY MAP, LEGEND, ABBREVIATIONS & NOTES

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CORDOVA, ALASKA



TYPICAL SECTION NOTES

ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED, IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE FOUND AT OR NEAR THE PLANNED SUBCUT LEVEL, AS DIRECTED BY THE ENGINEER. USABLE MATERIAL FROM EXCAVATION SHALL BE USED TO BACKFILL THE ADDITIONAL AREAS OF EXCAVATION. THE BACKFILLING WITH USABLE MATERIAL FROM EXCAVATION WILL BE CONSIDERED INCIDENTAL TO OTHER WORK.

2. SEE HORIZONTAL AND VERTICAL CONTROL, CURB AND GUTTER LAYOUT AND GRADE DRAWINGS FOR GRADING DETAILS.

3. UNDERGROUND ELECTRICAL AND WATER AND SEWER SERVICES NOT SHOWN. SEE PLAN SHEETS FOR APPROXIMATE LOCATIONS.

4. ALL FILL AREAS BEYOND SUBCUT LIMITS SHALL BE BACKFILLED WITH SUITABLE MATERIAL FROM EXCAVATION AND GRADED TO DRAIN. THE TYPICAL SECTIONS SHOW GENERAL GRADING BEYOND THE SUBCUT LIMITS AND DO NOT SHOW EVERY POSSIBLE SCENARIO.

DRIVEWAYS DISTURBED DURING CONSTRUCTION SHALL BE RECONSTRUCTED TO EQUAL, OR BETTER CONDITION WITH SUBGRADE REPLACED IN LAYERS TO MATCH THOSE REMOVED EXCEPT:

A) ORGANICS, ROOTS, WOOD OR OTHER DELETERIOUS MATERIALS ENCOUNTERED IN THE DRIVEWAYS DURING EXCAVATION OPERATIONS SHALL NOT BE REPLACED, BUT SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE. BACKFILL VOIDS BELOW THE REQUIRED SUBBASE LAYER WITH USABLE MATERIAL FROM EXCAVATION.

6. TOP OF A.C. PAVEMENT SHALL BE $\cancel{1}$ INCH TO $\cancel{1}$ INCH ABOVE THE TOP EDGE OF CONCRETE GUTTER.

7. SANITARY SEWER AND STORM DRAIN SERVICE LOCATIONS ARE UNKNOWN AND THEREFORE NOT SHOWN ON THE THE PLANS. WATER SERVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL TAKE CARE DURING CONSTRUCTION TO AVOID DAMAGE TO THE EXISTING SEWER AND WATER SYSTEMS. ANY SANITARY SEWER, WATER, OR STORM SERVICE ENCOUNTERED DURING CONSTRUCTION SHALL BE REFERENCED BY THE CONTRACTOR AND REPORTED TO THE ENGINEER. ANY UNKNOWN SERVICES DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS DIRECTED BY THE ENGINEER.

8. REGRADE AND COMPACT THE EXISTING BASE COURSE MATERIAL IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS APPROVED BY THE ENGINEER PRIOR TO INSTALLING THE NEW A.C. PAVEMENT.

9. CATCH LINE FOR USABLE MATERIAL AND TOPSOIL WILL VARY IN DISTANCE FROM RIGHT-OF-WAY LINES. PLACE AND GRADE THESE MATERIALS TO PROVIDE A SMOOTH, WELL DRAINED TRANSITION TO EXISTING GRADES, AS DIRECTED BY THE ENGINEER. SEE PLAN DRAWINGS FOR APPROXIMATE CATCH LINES.

10. ASPHALT THICKNESS FOR DRIVEWAY APPROACHES AND DRIVEWAYS SHALL BE 2 1/2".

11. LOCATION VARIES. SEE PLAN SHEETS.

12. ONE TO TWO INCHES OF BASE COURSE, GRADING D-1 SHALL BE PLACED UNDER THE NEW VALLEY GUTTERS AS A LEVELING COURSE.

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TYPICAL SECTION NOTES

ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED, IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE FOUND AT OR NEAR THE PLANNED SUBCUT LEVEL, AS DIRECTED BY THE ENGINEER. USABLE MATERIAL FROM EXCAVATION SHALL BE USED TO BACKFILL THE ADDITIONAL AREAS OF EXCAVATION. THE BACKFILLING WITH USABLE MATERIAL FROM EXCAVATION WILL BE CONSIDERED INCIDENTAL TO OTHER WORK.

2. SEE HORIZONTAL AND VERTICAL CONTROL, CURB AND GUTTER LAYOUT AND GRADE DRAWINGS FOR GRADING DETAILS.

3. UNDERGROUND ELECTRICAL AND WATER AND SEWER SERVICES NOT SHOWN. SEE PLAN SHEETS FOR APPROXIMATE LOCATIONS.

4. ALL FILL AREAS BEYOND SUBCUT LIMITS SHALL BE BACKFILLED WITH SUITABLE MATERIAL FROM EXCAVATION AND GRADED TO DRAIN. THE TYPICAL SECTIONS SHOW GENERAL GRADING BEYOND THE SUBCUT LIMITS AND DO NOT SHOW EVERY POSSIBLE SCENARIO

DRIVEWAYS DISTURBED DURING CONSTRUCTION SHALL BE RECONSTRUCTED TO EQUAL, OR BETTER CONDITION WITH SUBGRADE REPLACED IN LAYERS TO MATCH THOSE REMOVED EXCEPT:

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6. SANITARY SEWER AND STORM DRAIN SERVICE LOCATIONS ARE UNKNOWN AND THEREFORE NOT SHOWN ON THE THE PLANS. WATER SERVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL TAKE CARE DURING CONSTRUCTION TO AVOID DAMAGE TO THE EXISTING SEWER AND WATER SYSTEMS. ANY SANITARY SEWER, WATER, OR STORM SERVICE ENCOUNTERED DURING CONSTRUCTION SHALL BE REFERENCED BY THE CONTRACTOR AND REPORTED TO THE ENGINEER. ANY UNKNOWN SERVICES DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS DIRECTED BY THE ENGINEER.

REGRADE AND COMPACT THE EXISTING BASE COURSE MATERIAL IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS APPROVED BY THE ENGINEER PRIOR TO INSTALLING THE NEW A.C. PAVEMENT.

8. CATCH LINE FOR USABLE MATERIAL AND TOPSOIL WILL VARY IN DISTANCE FROM RIGHT-OF-WAY LINES. PLACE AND GRADE THESE MATERIALS TO PROVIDE A SMOOTH, WELL DRAINED TRANSITION TO EXISTING GRADES, AS DIRECTED BY THE ENGINEER. SEE PLAN DRAWINGS FOR APPROXIMATE CATCH LINES.

9. ASPHALT THICKNESS FOR DRIVEWAY APPROACHES AND DRIVEWAYS SHALL BE 2 1/2".

10. LOCATION VARIES. SEE PLAN SHEETS.

11. WHERE COLD JOINTS ARE REQUIRED DURING PAVING OPERATIONS. THEY SHALL BE SAWCUT, CLEANED AND HAVE A TACK COAT APPLIED PRIOR TO PLACING HOT ASPHALT AGAINST THE EDGE IN ACCORDANCE WITH CBJSS.

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TYPICAL SECTION NOTES

ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED, IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE FOUND AT OR NEAR THE PLANNED SUBCUT LEVEL, AS DIRECTED BY THE ENGINEER. USABLE MATERIAL FROM EXCAVATION SHALL BE USED TO BACKFILL THE ADDITIONAL AREAS OF EXCAVATION. THE BACKFILLING WITH USABLE MATERIAL FROM EXCAVATION WILL BE CONSIDERED INCIDENTAL TO OTHER WORK.

2. IF EXISTING SOILS WITHIN THE PLANNED SUBCUT LAYER ARE FOUND TO BE SUITABLE, AS DETERMINED BY THE ENGINEER, THE DEPTH OF EXCAVATION AND BACKFILL MAY BE DECREASED.

SEE HORIZONTAL AND VERTICAL CONTROL, CURB AND GUTTER LAYOUT AND GRADE DRAWINGS FOR GRADING DETAILS.

4. UNDERGROUND ELECTRICAL AND WATER AND SEWER SERVICES NOT SHOWN. SEE PLAN SHEETS FOR LOCATIONS.

ALL FILL AREAS BEYOND SUBCUT LIMITS SHALL BE BACKFILLED WITH SUITABLE MATERIAL FROM EXCAVATION AND GRADED TO DRAIN. THE TYPICAL SECTIONS SHOW GENERAL GRADING BEYOND THE SUBCUT LIMITS AND DO NOT SHOW EVERY POSSIBLE SCENARIO.

 DRIVEWAYS DISTURBED DURING CONSTRUCTION SHALL BE RECONSTRUCTED TO EQUAL, OR BETTER CONDITION WITH SUBGRADE REPLACED IN LAYERS TO MATCH THOSE REMOVED EXCEPT:

A) PAVED DRIVEWAYS AND SIDEWALKS SHALL BE SUBCUT TO 9" INCHES BELOW FINISH GRADE AND REPLACED WITH 6 INCHES OF 2-INCH MINUS SHOT ROCK W/ BASE COURSE, AND 3 INCHES OF A.C. PAVEMENT.

B) ORGANICS, ROOTS, WOOD OR OTHER DELETERIOUS MATERIALS ENCOUNTERED IN THE DRIVEWAYS DURING EXCAVATION OPERATIONS SHALL NOT BE REPLACED, BUT SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE. BACKFILL VOIDS BELOW THE REQUIRED SUBBASE LAYER WITH USABLE MATERIAL FROM EXCAVATION.

7. TOP OF A.C. PAVEMENT SHALL BE $\frac{1}{4}$ INCH TO $\frac{1}{2}$ INCH ABOVE THE TOP EDGE OF CONCRETE GUTTER.

8. SANITARY SEWER, WATER AND STORM DRAIN SERVICES ARE NOT SHOWN ON THE TYPICAL SECTION. SEE PLAN VIEW DRAWINGS FOR LOCATIONS.

9. THE BASE COURSE LAYER SHALL BE 4" TO 5" OF 2-INCH MINUS SHOT ROCK WITH 1" TO 2" TOP LAYER OF BASE COURSE, GRADING D-1 FOR A TOTAL THICKNESS OF 6". THE 2" MINUS SHOT ROCK SHALL BE WELL COMPACTED PRIOR TO PLACING THE BASE COURSE, GRADING D-1.

10. BASE COURSE, GRADING D-1, MAY BE USED FOR THE FULL DEPTH OF THE BASE COURSE UNDER THE SIDEWALKS AND DRIVEWAYS AS A NO COST SUBSTITUTION.

11. CATCH LINE FOR USABLE MATERIAL AND TOPSOIL WILL VARY IN DISTANCE FROM RIGHT-OF-WAY LINES. PLACE AND GRADE THESE MATERIALS TO PROVIDE A SMOOTH, WELL DRAINED TRANSITION TO EXISTING GRADES, AS DIRECTED BY THE ENGINEER. SEE PLAN DRAWINGS FOR APPROXIMATE CATCH LINES.

12. ASPHALT THICKNESS FOR DRIVEWAY APPROACHES AND DRIVEWAYS SHALL BE 2-1/2".

13. ONE TO TWO INCHES OF BASE COURSE, GRADING D-1 SHALL BE PLACED UNDER THE NEW CURB AND GUTTERS AND VALLEY GUTTERS AS A LEVELING COURSE OVER THE 2-INCH MINUS SHOT ROCK.

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TYPICAL SECTION NOTES

ADDITIONAL EXCAVATION BELOW THE NEATLINE SUBCUT LEVEL MAY BE REQUIRED, IF ORGANIC OR OTHER UNSUITABLE MATERIALS ARE FOUND AT OR NEAR THE PLANNED SUBCUT LEVEL, AS DIRECTED BY THE ENGINEER. USABLE MATERIAL FROM EXCAVATION SHALL BE USED TO BACKFILL THE ADDITIONAL AREAS OF EXCAVATION. THE BACKFILLING WITH USABLE MATERIAL FROM EXCAVATION WILL BE CONSIDERED INCIDENTAL TO OTHER WORK.

2. IF EXISTING SOILS WITHIN THE PLANNED SUBCUT LAYER ARE FOUND TO BE SUITABLE, AS DETERMINED BY THE ENGINEER, THE DEPTH OF EXCAVATION AND BACKFILL MAY BE DECREASED.

SEE HORIZONTAL AND VERTICAL CONTROL, CURB AND GUTTER LAYOUT AND GRADE DRAWINGS FOR GRADING DETAILS.

4. UNDERGROUND ELECTRICAL AND WATER AND SEWER SERVICES NOT SHOWN. SEE PLAN SHEETS FOR LOCATIONS.

ALL FILL AREAS BEYOND SUBCUT LIMITS SHALL BE BACKFILLED WITH SUITABLE MATERIAL FROM EXCAVATION AND GRADED TO DRAIN. THE TYPICAL SECTIONS SHOW GENERAL GRADING BEYOND THE SUBCUT LIMITS AND DO NOT SHOW EVERY POSSIBLE SCENARIO.

6. DRIVEWAYS DISTURBED DURING CONSTRUCTION SHALL BE RECONSTRUCTED TO EQUAL, OR BETTER CONDITION WITH SUBGRADE REPLACED IN LAYERS TO MATCH THOSE REMOVED EXCEPT:

A) PAVED DRIVEWAYS AND SIDEWALKS SHALL BE SUBCUT TO 9" INCHES BELOW FINISH GRADE AND REPLACED WITH 6 INCHES OF 2-INCH MINUS SHOT ROCK W/ BASE COURSE, AND 3 INCHES OF A.C. PAVEMENT.

B) ORGANICS, ROOTS, WOOD OR OTHER DELETERIOUS MATERIALS ENCOUNTERED IN THE DRIVEWAYS DURING EXCAVATION OPERATIONS SHALL NOT BE REPLACED, BUT SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE. BACKFILL VOIDS BELOW THE REQUIRED SUBBASE LAYER WITH USABLE MATERIAL FROM EXCAVATION.

7. TOP OF A.C. PAVEMENT SHALL BE $\frac{1}{4}$ INCH TO $\frac{1}{2}$ INCH ABOVE THE TOP EDGE OF CONCRETE GUTTER.

8. SANITARY SEWER, WATER AND STORM DRAIN SERVICES ARE NOT SHOWN ON THE TYPICAL SECTION. SEE PLAN VIEW DRAWINGS FOR LOCATIONS.

9. THE BASE COURSE LAYER SHALL BE 4" TO 5" OF 2-INCH MINUS SHOT ROCK WITH 1" TO 2" TOP LAYER OF BASE COURSE, GRADING D-1 FOR A TOTAL THICKNESS OF 6". THE 2" MINUS SHOT ROCK SHALL BE WELL COMPACTED PRIOR TO PLACING THE BASE COURSE, GRADING D-1.

10. BASE COURSE, GRADING D-1, MAY BE USED FOR THE FULL DEPTH OF THE BASE COURSE UNDER THE SIDEWALKS AND DRIVEWAYS AS A NO COST SUBSTITUTION.

11. CATCH LINE FOR USABLE MATERIAL AND TOPSOIL WILL VARY IN DISTANCE FROM RIGHT-OF-WAY LINES. PLACE AND GRADE THESE MATERIALS TO PROVIDE A SMOOTH, WELL DRAINED TRANSITION TO EXISTING GRADES, AS DIRECTED BY THE ENGINEER. SEE PLAN DRAWINGS FOR APPROXIMATE CATCH LINES.

12. ASPHALT THICKNESS FOR DRIVEWAY APPROACHES AND DRIVEWAYS SHALL BE $2-1/2^n$.

13. ONE TO TWO INCHES OF BASE COURSE, GRADING D-1 SHALL BE PLACED UNDER THE NEW CURB AND GUTTERS AND VALLEY GUTTERS AS A LEVELING COURSE OVER THE 2-INCH MINUS SHOT ROCK.

ADDENDUM No. 1	
CORDOVA CITY STREETS IMPROVEMENTS ITB # 16-01	PROJECT 70736.01 DATE 01/08/2016
TYPICAL SECTIONS	
RAILROAD AVENUE	SHEET
DITIVE ALTERNATES No. 1 AND No. 2 CORDOVA, ALASKA	6 _{OF} 21



NICHOLOFF WAY STORM DRAIN STRUCTURE TABLE						
STRUCTURE NAME	STRUCTURE DETAILS	STATION & OFFSET	TYPE	FRAM & GRATE		
S-1	FG RIM = 19.97 SUMP = 16" MIN P-1 INV OUT = 16.98	"N" 12+04.7 MATCH CURB	III	OF SM18DI-P		
S-2	FG RIM = 19.97 SUMP = 16" MIN P-1 INV IN = 16.46 P-2 INV OUT = 16.38	"N" 12+04.7 MATCH CURB	111	OF SM18DI-P		
S-3	FG RIM = 20.68 SUMP = 16" MIN P-3 INV OUT = 18.25	"N" 13+24.7 MATCH CURB	III	OF SM18DI-P		
S-4	FG RIM = 20.73 SUMP = 16" MIN P-3 INV IN = 17.98 P-4 INV OUT = 17.90	"N" 13+24.7 MATCH CURB	IV	OF SM18DI-P		
S-5	FG RIM = 20.64 SUMP = 16" MIN P-5 INV IN = 18.22 P-6 INV OUT = 18.02 P-5A INV OUT = 18.10	"N" 16+99.3 MATCH CURB	IV	OF SM18DI-P		
S-6	FG RIM = 20.64 SUMP = 16" MIN P-6 INV IN = 17.76 P-7 INV OUT = 17.68	"N" 16+99.3 MATCH CURB	IV	OF SM18DI-P		
S-7	FG RIM = 20.59 SUMP = 16" MIN P-10 INV IN = 17.69 P-8 INV OUT = 17.61	"N" 20+65 MATCH CURB	111	OF SM18DI-P		
S-8	FG RIM = 20.59 SUMP = 16" MIN P-8 INV IN = 17.48 P-9 INV OUT = 16.30	"N" 20+65 MATCH CURB	IV	OF SM18DI-P		
S-9	FG RIM = 20.63 SUMP = 16" MIN P-10 INV OUT = 18.17 P-11 INV OUT = 18.25	"N" 21+61.7 MATCH CURB	111	OF SM18DI-P		
S-10	FG RIM = 20.63 SUMP = 16" MIN P-11 INV IN = 18.38	"N" 21+61.7 MATCH CURB	Ш	OF SM18DI-P		

NICHOL	OFF WAY EXISTING SANITARY	SEWER STRUCTURE	TABLE
STRUCTURE NAME	STRUCTURE DETAILS	STATION & OFFSET	NOTES
MH-1	FG RIM EL = 20.83 EXIST RIM EL = 20.21 12" or 18"DI INV IN = 6.08 12" or 18"DI INV OUT = 8.12	"N" 11+64.1, 5.9 L	ADJUST MANHOLE TO GRADE
MH-2	FG RIM EL = 20.74 EXIST RIM EL = 20.74 8"DI INV IN = 12.49 12" or 18"DI INV OUT = 6.00	"N" 11+70.4, 25.1 L	ADJUST MANHOLE TO GRADE
MH-3	FG RIM EL = 20.59 EXIST RIM EL = 20.55 8"DI INV IN = 13.22 8"DI INV OUT = 12.67	"N" 12+14.5, 5.8 L	ADJUST MANHOLE TO GRADE
MH-4	FG RIM EL = 21.17 EXIST RIM EL = 21.22 8"DI INV IN = 15.03 8"DI INV OUT = 14.93	"N" 16+64.2, 5.6 L	ADJUST MANHOLE TO GRADE
MH-5	FG RIM EL = 21.62 EXIST RIM EL = 21.22 8"DI INV OUT = 16.70	"N" 21+07.7, 5.1 L	ADJUST MANHOLE TO GRADE

NICHOLOFF WAY STORM DRAIN PIPE SUMMARY TABLE						
PIPE NAME	SIZE	TYPE	LENGTH	SLOPE		
P-1	12"	CPP	26.0	0.020		
P-2	12"	CPP	4.9	0.043		
P-3	12"	CPP	26.6	0.010		
P-4	18"	CPP	4.6	0.024		
P-5	18"	CPP	4.2	0.014		
P-5A	18"	CPP	11.8	0.005		
P-6	12"	CPP	26.0	0.010		
P-7	18"	CPP	4.5	0.021		
P-8	12"	CPP	26.2	0.005		
P-9	18"	CPP	5.2	0.005		
P-10	12"	CPP	96.8	0.005		
P-11	12"	CPP	26.0	0.005		

	HARBOR LOOP	ROAD STORM DRAIN	STRL	JCTURE TABLE	
STRUCTURE NAME	STRUCTURE DETAILS	STATION & OFFSET	TYPE	FRAME & GRATE	NOTES
S-10	FG RIM = 22.64 SUMP = 18.29 P-11 INV IN = 19.62	"H" 14+20, 13.0 L	111	OF SM18DI-P	

HARBOR LOOP ROAD STORM DRAIN PIPE SUMMARY TABLE							
PIPE NAME	SIZE	TYPE	LENGTH	SLOPE			
P-11	12"	CPP	26.0	0.010			

HARBOR LOO	HARBOR LOOP ROAD EXISTING SANITARY SEWER STRUCTURE TABLE						
STRUCTURE NAME	STRUCTURE DETAILS	STATION & OFFSET	NOTES				
MH-6	FG RIM EL = 23.53 EXIST RIM EL = 23.09 8"DI INV IN = 16.65 8"DI INV OUT = 16.49	"H" 13+29.3, 7.2 R	ADJUST MANHOLE TO GRADE				
MH-7	FG RIM EL = 24.38 EXIST RIM EL = 23.95 8"DI INV IN = 18.05 8"DI INV OUT = 17.95	"H" 17+04.3, 8.1 R	ADJUST MANHOLE TO GRADE				
MH-8	FG RIM EL = 23.57 EXIST RIM EL = 23.08 8"DI INV OUT = 19.04	"H" 20+77.8, 4.2 R	ADJUST MANHOLE TO GRADE				
MH-9	FG RIM EL = 22.63 EXIST RIM EL = 23.34 8"DI INV OUT = 17.63	"H" 22+16, 7.7 R	VERIFY EXISTING RIM ELEV. ADJUST TO GRADE.				





VERTICAL CONTROL - NICHOLOFF WAY & HARBOR LOOP ROAD						
TBM NO.	ELEVATION	STATION & OFFSET	NOTES			
А	EL = 21.76	"N" 12+86.7, 42.9 R	BRASS CAP			
В	EL = 26.06	"H" 16+80.4, 20.8 L	NORTH BOLT TOP FLANGE OF FH			
С	EL = 24.69	"H" 21+41.5, 18.5 L	NORTH BOLT TOP FLANGE OF FH			
D	EL = 22.46	"N" 19+65.4, 46.2 R	NORTH BOLT TOP FLANGE OF FH			

NO	TES	
1.	STATIONS AND OFFSETS ARE GIVEN TO THE CENT STORM DRAIN AND EXISTING SANITARY SEWER MA STRUCTURES.	
2.	PIPE LENGTHS ARE MEASURED ALONG THE SLOPE, CENTER TO CENTER OF STRUCTURES. SLOPES AF CALCULATED TO ENDS OF PIPE.	
CORDOVA CI	TY STREETS IMPROVEMENTS ITB # 16-01	PROJECT 70736.01 DATE 01/08/2016
	RUCTURE & PIPE	SHEET
	MMARY TABLES AY & HARBOR LOOP ROAD cordova, alaska	8 OF 21

RAIL	RAILROAD AVENUE STORM DRAIN STRUCTURE TABLE					
1	NOTES	FRAME & GRATE	TYPE	STATION & OFFSET	STRUCTURE DETAILS	STRUCTURE NAME
				"R" 11+92.7, MATCH	FG RIM = 50.73	
P-12		OF SM18DI-P		CURB	SUMP = 16" MIN P-12 INV IN = 48.23	S-11
P-13				"R" 13+42, MATCH	FG RIM = 42.94	
P-14		OF SM18DI-P		CURB	SUMP = 16" MIN P-13 INV IN = 40.59	S-12
P-15					FG RIM = 42.03	
P-16		OF SM18DI-P	111	"R" 14+55.7, MATCH CURB	SUMP = 16" MIN P-15 INV IN = 40.03	S-13
P-17	INSTALL				FG/EG RIM = 41.55	
P-18	AREA DRAIN.	REUSE EXISTING	SEE	 "R" 14+57.5, 18.22 RT	P-15 INV IN = 39.80	S-14
	P-16A IS EXISTING	GRATE	NOTES		P-16 INV IN = 39.80 P-16A INV OUT = 39.80	
1		EJIW 7701	ш	"R" 16+56.4, MATCH	FG RIM = 34.46	S–15
		T2 HOOD W/ 7700 M2 GRATE		CURB	SUMP = 16" MIN P-17 INV IN = 31.96	5-15
1				"D" 16 57 0 MATCH	FG RIM = 34.32 SUMP = 16" MIN	
		OF SM18DI-P		"R" 16+57.2, MATCH CURB	P-17 INV IN = 25.10 P-18 INV OUT = 25.10	S-16
]	S-17 IS EXISTING. ELEV FOR OTHER EXISTING PIPES	REUSE EXISTING FRAME AND	SEE	"R" 17+55.9, 69.3 RT	FG RIM = 27.58 EG RIM = 26.08	S-17
	NOT SHOWN. RECONSTRUCT EXISTING STRUCTURE TO GRADE.	GRATE	NOTES		P-18 INV IN = 23.00	

RAILROAD AVENUE STORM DRAIN PIPE SUMMARY TABLE							
PIPE NAME	SIZE	TYPE	LENGTH	SLOPE			
P-12	12"	CPP	41.9	0.018			
P-13	12"	CPP	45.6	0.007			
P-14	12"	CPP	15.5	0.004			
P-15	12"	CPP	29.1	0.008			
P-16	12"	CPP	25.0	0.004			
P-17	12"	CPP	23.0	0.010			
P-18	12"	CPP	104.6	0.020			

VERTICAL CONTROL- RAILROAD AVENUE						
TBM NO.	ELEVATION	STATION & OFFSET	NOTES			
E	EL = 45.08	"R" 13+51.4, 13.2 R	NORTH BOLT TOP FLANGE OF FH			
F	EL = 35.21	"R" 20+07.1, 278.2 R	CARVED "X" IN CONC RAILING ON NE CORNER OF LOWER STAIRS ON CONVENTION CENTER.			
G	EL = 27.84	"R" 20+67.0, 20.0 L (APPROXIMATE LOCATION)	TOP FLANGE OF FH ACROSS RAILROAD AVE FROM POST OFFICE NORTH OF WATER ST AND RAILROAD INTERSECTION. TRUE HORIZ LOCATION UNKNOWN			

STRUCTURE NAME	STRUCTURE DETAILS	STATION & OFFSET	NOTES
MH-10	FG RIM EL = 60.54 EXISTING RIM EL =60.37 PIPES UNKNOWN	"R" 10+70.2, 36.7 LT	WATER VAULT. ADJUST MANHOLE TO GRADE.
MH-11	FG RIM EL = 50.62 EXISTING RIM EL = 49.78 SEE NOTES	"R" 12+00.9, 17.8, LT	ADJUST MANHOLE TO GRADE. VERIFY EXISTING PIPE ELEVATIONS. MANHOLE DEPTH = 15.5'/17.
MH-12	EXISTING RIM EL = 52.93 SEE NOTES	"R" 11+69, 15.8 RT	VERIFY EXISTING PIPE ELEVATIONS MANHOLE DEPTH = 13.5'/14.
MH-13	FG RIM EL = 42.37 EXISTING RIM EL =42.43 12"DI INV IN (EAST) = 36.84 12"DI INV IN (SOUTH) = 34.11 12" OR 14"DI INV OUT (NORTH) = 33.78	"R" 14+73.5, 0.7, LT	ADJUST MANHOLE TO GRADE
MH-14	FG RIM EL = 37.27 EXISTING RIM EL = 36.93 12" OR 14"DI INV IN (SOUTH) = 31.06 12" OR 14"DI INV OUT (NE) = 26.08	"R" 16+22.3, 7.9 LT	ADJUST MANHOLE TO GRADE
MH-15	EXISTING RIM EL = 28.12 18"DI INV IN (SOUTH) = 19.85	"R" 17+37.9, 22.0 RT	
MH-16	FG RIM EL = 23.54 EXISTING RIM EL = 23.77 SEE NOTES	"R" 20+20.7, 7.7 R	VERIFY EXISTING PIPE ELEVATIONS MANHOLE DEPTH = 10.5'/10.

RAILROAD AVENUE STORM DRAIN STRUCTURE TABLE								
STRUCTURE NAME	STRUCTURE DETAILS	STATION & OFFSET	TYPE	FRAME & GRATE	NOTES			
S–18	FG RIM = 23.05 SUMP = 16" MIN P-19 INV IN = 20.55	"R" 20+07.6, MATCH CURB	Ш	OF SM18DI-P				
S-19	FG RIM = 23.13 SUMP = 16" MIN P-20 INV OUT = 20.63	"R" 20+48.9, MATCH CURB	Ш	OF SM18DI-P				
S-20	FG RIM = 23.05 SUMP = 16° MIN P-19 INV IN = 20.14 P-20 INV IN = 20.35 P-21 INV OUT = 20.06	"R" 20+48.9, MATCH CURB	III	OF SM18DI-P				
S-21	FG RIM = 22.00 P-21 INV IN = 19.82 24"CMP INV OUT = 18.82	"R" 20+72.6, 25.8 RT	SEE NOTES	OF MH34SC	RECONSTRUCT EXISTING STRUCTURE. INSTALL AREA DRAIN. 24"CMP IS EXISTING			

CONFORMED SET

RAILROAD AVENUE STORM DRAIN PIPE SUMMARY TABLE SIZE PIPE NAME TYPE LENGTH SLOPE P-19 12" CPP 40.8 0.010 P-20 12" CPP 27.8 0.010 P-21 12" CPP 23.6 0.010



<u>NOTES</u>

- STATIONS AND OFFSETS ARE GIVEN TO THE CENTER OF NEW STORM DRAIN AND EXISTING SANITARY SEWER MANHOLE STRUCTURES.
- PIPE LENGTHS ARE MEASURED ALONG THE SLOPE, FROM CENTER TO CENTER OF STRUCTURES. SLOPES ARE CALCULATED TO ENDS OF PIPE.
- 3. MANHOLE DEPTHS WERE OBTAINED FROM AVAILABLE AS-BUILT DRAWINGS.

CORDOVA CITY STREETS IMPROVEMENTS ITB # 16-01	PROJECT DATE	70736.01 01/08/2016
STRUCTURE & PIPE SUMMARY TABLES		
RAILROAD AVENUE - ADD. ALT. No. 1	S	HEET
AND No. 2 CORDOVA, ALASKA	9	OF 21















1. PROVIDE ALL ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS AND DEPTHS. CONNECT TO EXISTING.

2. EXISTING 6"DI WATER MAIN NOT SHOWN IN PROFILE VIEW. ASSUME APPROXIMATE BURY DEPTH OF 6 FEET FROM EXISTING GROUND SURFACE. 3. SEE SHEET 19 FOR GRADING INFORMATION AT INTERSECTION



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CORDOVA CI	TY STREETS IMPROVEMENTS ITB # 16-01	PROJECT DATE	70736.01 01/08/2016
AN & PROF STA ["] H" 21	SH	EET	
	CORDOVA, ALASKA	15	OF 21







DE BR	S23*19'01"E OOP ROAD	0. <u>030</u>	0.05	14. ELE	A "H" 10+58.16 T 00' RT EV 22.11 STA "N" 14.00' LT ELEV 20.5	13+31.91 TB	C	
10+00 00029	.00-	0.030					<u>0.03</u> 0	
WAY	_	0.030		13	3+00 +	• • • · · ·	0. <u>030</u>	
					-			
	Curve #	Length	Radius	C u r ve ⁻ Delta	Chord Direction	Chord Leng	ıth	
	C4	66.68	43.00	88.85	S21° 06' 28"W	60.20	,	
•	C5	68.41	43.00	91.15	N68° 53' 33"W	61.42		
	REFERENCE OF	57555g	2000	<u>ا</u>		# 2222 # 22 2	*******	THE W
6 30R	LOO	P RC	***	твм ₍ а	CHOLOFF	<u></u>	sı.	<u></u>
СО	RDOVA				ROVEMENTS		PROJECT DATE	70736.01 01/08/2016
		TI	B # 16-	-01			DATE	01/08/2016
ا AILF	NTERS	דו SECTIC AVENI	B#16- NGR JE&C	01 RADIN NICH	IG PLAN HOLOFF WA		DATE	
AILF	NTERS	IT SECTIO AVENI LOOP	B#16- NGR JE&C	01 ADIN NICH D &	IG PLAN		DATE	01/08/2016

NOTES





TBG	
	
22+C	
<u>u</u>	
100 102 SCALE IN FEET	20
CORDOVA CITY STREETS IMPROVEMENTS ITB # 16-01	PROJECT 70736.01 DATE 01/08/2016
INTERSECTION GRADING PLAN HARBOR LOOP ROAD & NICHOLOFF WAY	SHEET 19 OF 21
CORDOVA, ALASKA	II



\70736-01\65CAD\MC14-CT-GR-70736.dwg PLOT DATE 2016-3-31 10:52 SAVED DATE 2016-01-07 17

ſ	
	200'
	35'
	1/2 L TAPER
	ROAL
	1/2 L TAPER 1/2 L TAPER RAILROAD RAILROAD
	G20-2 48" x 24"
	TRAFFIC CONTROL DEVICES (TYP)
	SPACED APPROXIMATELY 10 FT
	$\left(\begin{array}{c} A B \\ B \\ C \\ A \\ B \\ C \\ S \\ S$
	APPROXIMATE LOCATION OF
	EXISTING ROADWAY CENTERLINE
	EXISTING ROADWAY CENTERLINE
	CW20-100F 36" × 36" APPROXIMATE LOCATION OF EXISTING ROADWAY CENTERLINE APPROXIMATE LOCATION OF EXISTING ROADWAY CENTERLINE APPROXIMATE LOCATION OF HIGHWAY APPROXIMATE LOCATION OF EXISTING ROADWAY CENTERLINE APPROXIMATE LOCATION OF APPROXIMATE LOCATION OF EXISTING ROADWAY CENTERLINE APPROXIMATE LOCATION OF APPROXIMATE APPROXIMATE APPROXIMATE APPROXIMATE APPROXIMATE APPROXIMATE APPROXIMATE
	TRAFFIC FLOW
greng	CONSTRUCTION SYMBOL LEGEND
NER:	
- 4-	R3-2 CHANNELIZING DEVICE
51 08	WORK AREA
100-	$L = \frac{WS^2}{60}; S = SPEED (MPH); W = OFFSET (FEET)$
910Z .	NOTES
DAIE	1. THIS PLAN SHEET DETAILS PROPOSED TEMPORARY TRAFFIC CONTROL (TTC) MEASURES FOR WORK REQUIRED FOR THE RECONSTRUCTION OF RAILROAD AVENUE AT COPPER RIVER HIGHWAY. OTHER TEMPORARY TTC MEASURES MAY BE REQUIRED FOR INTERMITTENT CONSTRUCTION OPERATIONS. THESE OPERATIONS SHALL BE SIGNED IN ACCORDANCE WITH THE LATEST EDITION OF
SAVED	THE ALASKA TRAFFIC MANUAL AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE CONTRACTOR SHALL PREPARE AND SUBMIT A FINAL TTC PLAN TO DOT&PF AND COC FOR APPROVAL. THE CONTRACTOR MAY NOT BEGIN WORK IN THIS AREA PRIOR TO RECEIVING WRITTEN APPROVAL TO CONSTRUCT FROM BOTH ADOT&PF AND COC.
	2. ALL SIGNS SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ALASKA SIGN SPECIFICATIONS AND THE MUTCD.
	3. TYPE "B" WARNING LIGHTS SHALL PLACED ON THE "ROAD WORK AHEAD" (CW20-100F) SIGNS DURING NIGHT-TIME WORK.
2-0-0	4. TYPE "A" FLASHING WARNING LIGHTS SHALL BE USED TO MARK TYPE III BARRICADES, TYPE II BARRICADES, DRUMS, AND ROAD CLOSURE ADVANCED WARNING SIGNS AT NIGHT. WHEN BARRICADES OR DRUMS ARE USED FOR CHANNELIZING TRAFFIC, TYPE "C" STEADY BURN WARNING LIGHTS SHALL BE USED.
VIE ZU	5. PEDESTRIAN CROSSINGS WITHIN THE PROJECT LIMITS SHALL BE FLAGGED AT ALL TIMES.
	6. ANY TEMPORARY TRAFFIC LANES SHALL BE MINIMUM OF 12' WIDE.
5 1	7. THE CONTRACTOR SHALL SUBMIT A DETAIL WORK SCHEDULE TO ADDT&PF AND COC A MINIMUM TEN DAYS BEFORE BEGINNING ANY WORK.
MD.OC.	8. CONSTRUCTION ZONE SPEED SHALL BE APPROVED BY THE DOT&PF.
/ O / - N	9. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH DOT&PF PERSONNEL AND IN ACCORDANCE WITH THE ADOT&PF APPROVED TEMPORARY TRAFFIC CONTROL PLAN AS PREVIOUSLY SUBMITTED TO ADOT&PF.
L-NEV	10. THE WORK IN THIS AREA IS WITHIN THE EXISTING SHOULDER. THE CONTRACTOR SHALL NOT CLOSE COPPER RIVER HIGHWAY AT RAILROAD AVENUE. THE CONTRACTOR MAY CLOSE RAILROAD AVENUE AT COPPER RIVER HIGHWAY AS APPROVED BY THE ENGINEER. OTHERWISE, THE CONTRACTOR SHALL MAINTAIN RAILROAD AVENUE OPEN TO LOCAL TRAFFIC.
) +	11. TRAFFIC CONTROL PLANS ARE SCHEMATIC BY NATURE. THE CONTRACTOR SHALL SUPPLY BARRIERS, MARKERS, AND SIGNAGE FOR TRAFFIC CONTROL OPERATIONS AS REQUIRED BY THE LATEST EDITION OF THE ALASKA TRAFFIC MANUAL AND MUTCO. ALL MATERIALS ARE SUBSIDIARY TO THE WORK.
- MCI	
ODCAL	REVISIONS REV DATE DESCRIPTION BY
10-0	T Agent R. Hebbs
10/0/	
- 174 r	



Cordova Electric Utility Map for Uplands



Staging Areas



	CURVE DATA							
CURVE NO.	RADIUS	Δ	ARC	TANGENT	CHORD	CHORD BEARING		
	25.00'	90° 00' 00''	39. 27'	25.00'	35.36'	N 69° 23' 22" W		
2	25.00'	90°00'00"	39.27'	25.00'	35.36'	N 20° 36' 38" E		
3	25.00'	90°00'00"	39.27'	25.00'	35.3 6 '	N 69º 23'22" W		
4	25.00'	90° 00'00"	39.27'	25.00'	35.36'	N 20° 36' 38" E		
5	25.00'	65° 36' 38"	28.63'	16.11	27.09'	N 32º 48' 19" E		
6	70.00'	13°31'34"	16.53'	8.30'	16.49'	N 6° 45' 47"W		
$\overline{\mathcal{T}}$	45.00'	92°39'46"	72.78'	47. 14'	65.10'	N 32°48'19"E		
8	70.00	13º 31' 34"	16.5 3'	8.30'	i6.4 9 '	N 72º 22'26"E		
9	70.00'	18° 21'59"	22.44	11. 32'	22.34'	N 56°25'39"E		
	25.00'	90°00'00"	39.27'	25.00'	35. 36 '	N 69° 23' 22"W		
	45.00'	126° 43' 58"	99.54'	89.73	80.4 5 '	N 69° 23' 22"W		
l	70.00'	18°21'59"	22.44	II. 32 ¹	22.34'	N 15º 12' 22" W		

CUDVE DATA

GENERAL NOTES

I. The BASIS OF BEARING for this plat is derived from a field tie between recovered monumented position at the intersection of Railroad Avenue and C Street and at the intersection of Railroad Avenue and A Street. Record Bearing S 5° 41' 05"E. Record Distance 964. 43'. Measured Distance 964.57'.

2. Center-line street monumentation to be set upon completion of street surfacing and paving improvements.

3. This drawing represents a replat of lots 6 & 7 blk. I. All other data remains the same as shown on original plat file no. 85-9, dated 12-26-85.

18

2 887 S.F.

39.27

3 15,557 5.F.

2

LEGEND

- Existing Monument of Record Recovered
- O Existing Monument of Record Not Recovered

SEE DETAIL

- Existing Corp of Engineer Monument Recovered
- Bronze Plug Marker in Monument Case and Cover (See note 2 above)
- O 2" Aluminum Cap on 5/8" & Rebar set this survey
- Corner not set.
- (MEAS) Measured
- (REC) Record
- (C) Computed
- (NR) Non Radiai
- (R) Radial



2016 South Harbor Condition Assessment



SOUTH HARBOR CONDITION ASSESSMENT



Prepared for: The City of Cordova P.O. Box 1210 Cordova, AK 99574

Prepared by:



ENGINEERS, INC.

September 2016

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SECTION 1

INSPECTION REPORT





EXECUTIVE SUMMARY

This report summarizes the findings of condition inspection of the Cordova South Harbor system which consists of various moorage floats, access trestles and gangways, and a boat grid. Work was completed by PND Engineers, Inc. (PND) during the period of July 5th through July 7th, 2016. The South Harbor float system was found to be in generally poor to serious condition with observed issues requiring immediate repair. At over 30 years old, the float system has surpassed its intended design life as evidenced by areas of severe damage that may limit the structural adequacy of the system. South Harbor boat grid was observed to be in satisfactory condition with limited areas of minor to moderate damage that do not require immediate repair. The access trestles were found to be in satisfactory to fair condition with localized areas of moderate to advanced deterioration/damage that do not significantly reduce the load capacity of the structures.

INTRODUCTION

The following report is a summary of the condition assessment of the Cordova South Harbor performed by PND for the City of Cordova. The purpose of this report is to provide the City and of Cordova with a general overview of the current condition of the South Harbor and to identify specific areas and components of the facility that need repair and/or replacement in order to maintain a safe, structurally competent facility. The report includes recommendations to address the conditions noted and provides a budgetary cost estimates for recommended near term repairs and future, in-kind replacement of the harbor infrastructure. Inspection was performed in general accordance with the ASCE *Waterfront Facilities Inspection and Assessment (2015)* Manual of Practice as a 'Routine Inspection' to assess the general condition of the existing Harbor, assign condition ratings and provide recommendations for maintenance. In addition to this the condition assessment will evaluate ROM replacement and/or repair costs for the existing facility.

A representative condition assessment was assigned to each individual element (i.e. piles, walers, bullrails, etc.) to provide a qualitative description of the as-inspected condition of the components. The damage rating includes five rating levels, of increasing severity, as follows: No Defects, Minor, Moderate, Major and Severe. In addition to damage ratings, an overall rating was developed for each structure. Specific designs or engineering analysis of the harbor system are not included in the scope of work for this condition assessment.

BACKGROUND

The Cordova South Harbor was designed by PND in 1982 and was constructed in 1983. The harbor consists of a large moorage float system with 5 mainwalk floats connected to a single headwalk, three access trestles with gangways, a seaplane float and a boat grid.

The harbor provides moorage for over 500 vessels with stall lengths ranging from 20-ft to 60-ft. The moorage system consists of an 8-ft wide concrete headwalk float (designated 'L Float') which provides access to five mainwalk floats (G through K) and an seaplane float. A boat grid is located adjacent to the harbor float system upland of G float. Mainwalk floats H, I, J and K consist of 8-ft wide modular concrete main floats with concrete finger floats of various lengths (20-ft to 50-ft). Mainwalk float G consists of a timber main float with 5-ft x 60-ft concrete finger floats. The float system is anchored primarily by treated timber piles. Steel piles anchor the fingers of G float and on H floats. Access to the headwalk float is provided by three, 16-ft x 80-ft timber approach docks, each of which supports a nominally 5-ft x 60-ft long steel gangway. All floats are equipped with power, lighting, and water utilities.

The concrete headwalk and mainwalks floats are constructed of nominally 8-ft x 10-ft concrete encased polystyrene float units. The float units are joined together by double 4 x 12 timber walers (4 x 8's on the



headwalk) that run lengthwise on each side of the floats which provide vertical and lateral rigidity. The timber waler system is the primary structural component for this type of float system. Steel thru-rods pass transversely through PVC sleeves in the float are used to connect the float units to the walers. $2 \ge 8$ rubboards are attached to the outside of the walers to cover the structural hardware. The rubboards provide protection to the structural walers and to moored boats by covering the ends of the thru-rods and nuts that protrude from the face of the walers. The gangway landing floats and finger floats are constructed in a similar fashion, but with different float unit dimensions.

The existing mainwalk float 'G' and adjacent timber approach trestle were existing structures that were moderately rehabilitated and reused during the 1983 construction of the South Harbor, the original construction date of these components is unkown. The timber float consists of a framework of structural sawn lumber members supported by polystyrene floatation. Concrete finger floats were added to the timber mainwalk as part of the 1983 project.

INSPECTION

The condition assessment field work was performed by PND Engineers, Inc. during the period of July 5th through 7th, 2016. Prior to field investigations, available design documents were acquired and reviewed. A base map was developed to organize and identify specific areas of the harbor (See Section 2 – Inspection Drawings). The inspection consisted of an above-water, visual examination of all major float system components. The facility was examined for structural and mechanical damage, including rot, corrosion and other evidence of deterioration. Non-destructive testing using an ultrasonic testing (UT) instrument was performed to assess the remaining wall thickness of approximately 80% of the steel piles.

OBSERVATIONS

In general, the current overall condition of the various harbor components varies from satisfactory to serious condition but appears to be functioning as a competent facility. The following conditions were observed:

Timber Approach Trestles:

The timber approach trestles are in satisfactory to fair condition with localized areas of moderate to advanced deterioration that do not significantly reduce the load capacity of the structures. The observed conditions of the individual elements constituting the trestles are as follows:

- Timber Piles The timber pile generally have a minor damage rating, exhibiting minor checks, splits and gouges, algae growth and loss of preservative treatment.
- Pile Caps and Cross Bracing The majority of the pile caps exhibit no defects; some members were observed to have minor damage as indicated by minimal checks and splits. The cross bracing connected to the timber bearing piles, in general, have a minor damage rating. Severe damage was observed on cross bracing located on the second shoreward pier of the trestle located near Mainwalk Floats K and several locations on the trestle located near Mainwalk G. Photos of the observed damage are included in the appendix.
- Connections Above water connections exhibited minor damage rating with below water connections containing a moderate damage due to corrosion.


- Timber Stringers The damage rating for the timber stringers ranged from no defects to minor damage. The stringers exhibited sound surface material with some individual members containing checks and splits.
- Timber Decking The timber decking was observed to have a minor damage rating. The deck members were observed to have surface wear reflective of the age of the system. The members generally exhibited sound surface material with some individual members containing checks, splits, and an overall loss of preservative treatment.
- Bullrails The bullrails on the trestles located near Mainwalk Floats I and K exhibited no defects to minor damage. The members contained sound surface material with some members showing minor checks and splits, and loss of preservative treatment. The bullrail on the trestle located near Mainwalk G contained moderate to major damage, with large cross sectional loss observed near the shoreward ends of the railing.
- Gangways The gangways were observed to have minor damage with little to no observable defects. Spot rust is visible in many locations, most notably at welded connections. The primary concern regarding the gangways is their length. 65-ft gangways are no longer permitted in new construction due to the steep gradient that results during low tides. 80-ft long gangways are required to meet current American Disabilities Act (ADA) standards. Gangway landing skids appear too narrow, allowing for contact and wear of the concrete float surface.

Concrete Moorage Floats:

The concrete moorage float system was observed to be in poor to serious condition with advanced deterioration occurring over a widespread portion of the structures. Areas of serious to critical condition were observed that require repairs to be made with high-priority. The observed conditions of the individual elements constituting the float are as follows:

- Gangway Landing Floats The gangway landing floats are in serious condition. Freeboard measurements were observed as low as 0-in on the shoreward side of the floats and 8-in on the seaward side. The freeboard difference creates an incline across the floats, indicating a low level of buoyancy available from the landing float to support vertical loads applied from the gangway; the load is consequently supported by the adjacent headwalk (L Float). A visible bow was observable during low tide through the transverse direction headwalk float, causing undue stress on various connections throughout the float system. In addition, the low freeboard has resulted in rubboards and walers along the back edge of the landing floats to be submerged, allowing for accelerated deterioration. At a minimum, additional supplemental floatation should be added below the landing floats to increase freeboard and provide reserve buoyancy to support the gangway landing loads. Alternative replacement gangway landing floats should be considered. Wear on the concrete deck caused by tidal movement of the gangway was also observed near the gangway slides.
- Timber Walers The timber walers were observed to have predominately moderate to major damage as demonstrated by cross sectional loss and checks and splits. However, areas of severe damage consisting of large splits, significant deterioration or complete breakage were observed, primarily occurring at the ends of the finger floats and in areas where the walers are submerged. The timber walers located on the concrete headwalk/mainwalk floats (H through L) were observed to be partially submerged (typically between 1" to 3") allowing for accelerated deterioration of the members. Because the walers are the main structural element for this type of float system,



deterioration of the walers will result in reduced structural capacity and eventual areas of structural failure within the float system. Areas of excessive vegetative growth were observed on many of the walers, which is an indication of more advanced deterioration. As the timber further deteriorates and softens, the movement of the floats will cause the thru-rods to wear and enlarge the connection holes in the walers. As a result, the concrete float units will be begin to shift relative to each other, both horizontally and vertically. Several locations of this already occurring were identified.

- Rubstrips The rubstrips were observed to have damage rating ranging between minor to severe. Most of the rubstrips observed are worn from normal wear that can be expected from years of vessels berthing and moorage. In some locations, the rubstrips were observed to be significantly more damaged or completely broken off. In locations where they have broken off completely, the ends of the thru-rods and nuts have been exposed which presents a hazard to vessels.
- Thru Rods The majority of the ends of the thru-rods and nuts, that are visible through countersunk holes in the rubboards, are corroded. Of primary concern are apparent missing thru-rods. The project design drawings specified thru-rods at each PVC chase location (nominally 12" on-center). As observed, thru-rods were only present at each side of the concrete module joints, at approximately mid-span of the modules and at finger float to mainwalk connection locations. Based on discussions with Harbor staff, the floats were originally constructed as currently observed with the missing thru-rods. The reason for missing thru-rods is unknown.
- Bullrails The timber bullrails were predominately observed to have minor to moderate damage rating as demonstrated by minor checks and splits. Isolated areas of major to severe damage were observed, most likely caused by vessel impact or extreme line loads from moored vessels.
- Concrete Deck Surface The concrete deck surfaces of the float units were observed to have a predominately minor to moderate damage rating. Many isolated areas with moderate to severe damage and wear, as indiciated by large cracks, spalls and exposed reinforcing were observed. There are several locations of spalls throughout the facility, many of which have been patched with grout or epoxy. However, patch repairs are usually temporary and require recurring maintenance.
- Finger Floats Many of the finger floats have reduced freeboard at the outboard end of the float, predominately observed at fingers with pile hoops at the ends (Mainwalks G, H and I). The loss of freeboard is typically caused by saturated foam and heavy marine growth on the submerged portion of the float. The reduced freeboard has caused submersion of many of the pile hoops and timber walers, allowing for increased deterioration of the members. The reduced freeboard also reduces the live load capacity of the float. Many of the floats were observed to have some twist and/or list from side to side.
- Timber Float Support Piles The timber piles observed above the tidal zone appear to be in moderate condition. Creosote treatment is still visible and the piles appear to be sound with little rot or decay. In the upper range of the tidal zone, the piles are mechanically worn from rubbing against the steel pile hoops. This rubbing has resulted in only slightly reduced pile diameter, but the creosote treatment has been completely worn off in these areas. Many of the piles have splits and cracks on their surface, which will lead to more rapid deterioration over time.
- Steel Pipe Float Support Piles The steel pipe piles observed above the tidal zone appear to be in moderate condition. In the range of the tidal zone, the epoxy coatings are worn from rubbing against the steel pile hoops. UT measurement indicate a maximum measured cross sectional of



nominally 0.140-inches or 28-percent of the original cross section in the above water accessible areas measured. A dive inspection is recommended to verify the condition of the piles below water line.

- Pile Hoops The steel components of the external pile hoops generally exhibit major to severe damage due to corrosion loss and wear. Areas of complete through thickness corrosion and cross sectional loss were observed on a large portion of the pile hoops, primarily in areas where loss of float freeboard has caused submersion of hoops. Several missing pile hoops were also observed. The condition of the pile hoops are of specific concern as they provide load transfer from the floats to the supporting restraint piles. Without adequate connection, loads are redistributed to other portions of the float system, creating undo stress on the float structural members and can, in extreme cases, cause failure of supporting members. Missing or severely damaged pile hoops should be repaired or replaced.
- Tri-Braces The damage rating of the fabricated steel triangular braces that attach the sides of the finger floats to the mainwalks ranged from minor to severe, depending on location. These members provide lateral load transfer from the finger float to the mainwalk. Complete through-thickness corrosion was observed on many of the braces, primarily occurring near the location of the electrical pedestals connected to the center of the braces. Plywood covers were observed installed over the surface of many of the tri-braces as a repair where advanced corrosion has occurred. These temporary repairs provide for user safety but do not allow for adequate load transfer through the tribrace connections. Tri-braces with severe corrosion should be repaired or replaced with in-kind materials.

<u>Timber Moorage Float (G Float):</u>

The condition of the timber moorage float system was observed to be in poor condition with overall advanced deterioration occurring over a widespread portion of the structure. The observed conditions of the individual elements constituting the float are as follows:

- Timber Decking The timber decking was observed to have a predominately minor damage rating. The deck members were observed to have surface wear reflective of the age of the system. The members generally exhibited sound surface material with some individual members containing checks, splits, and an overall loss of preservative treatment.
- Timber Walers The timber walers were observed to have predominately moderate damage as demonstrated by cross sectional loss and checks and splits. However, areas of severe damage consisting of large splits, significant deterioration or complete breakage were observed, primarily occurring at the ends of the finger floats and in areas where the walers are submerged. Areas of excessive vegetative growth were observed on many of the walers, which is an indication of advanced deterioration.
- Bullrails The timber bullrails were predominately observed to have minor to moderate damage rating as demonstrated by minor checks and splits. Isolated areas of major to severe damage were observed, most likely caused by vessel impact or extreme line loads from moored vessels. Areas of excessive vegetative growth were observed on many of the bullrails, which is an indication of advanced deterioration.



- Rubboards The rubboards were observed to have damage rating ranging between minor to severe. Most of the rubboards observed are worn from normal wear that can be expected from years of vessels berthing and moorage. In some locations, the rubboards were observed to be significantly more damaged or completely broken off.
- Timber Float Support Piles The timber piles observed above the tidal zone appear to be in moderate condition. Creosote treatment is still visible and the piles appear to be sound with little rot or decay found. In the upper range of the tidal zone, the piles are mechanically worn from rubbing against the steel pile hoops. This rubbing has resulted in only slightly reduced pile diameter, but the creosote treatment has been completely worn off in these areas. Many of the piles have splits and cracks on their surface, which will lead to more rapid deterioration over time.

Seaplane Float:

The seaplane float was observed to be in poor condition with areas of moderate to advanced deterioration that do not significantly reduce the load capacity of the structure. The observed conditions of the individual elements constituting the float are as follows:

- Concrete Deck Surface The concrete deck surfaces of the float units were observed to have a predominately minor to moderate damage rating. Isolated areas with major damage (cracks) was observed.
- Timber Walers The timber walers were observed to have predominately major damage as demonstrated by cross sectional loss and checks and splits and impact damage. Areas of severe damage consisting of large splits, or complete breakage were observed, primarily occurring at the corner connections. The exterior walers located on the were observed to have major wear due to vessel impact.
- Timber Bullrails A large portion of the timber bullrails were observed to have severe damage with a significant portion of the bullrail missing or broken. In areas with missing bullrails, connection bolts were observed protruding from the supporting walers, presenting a potential hazard to vessels.
- Timber Decking The timber decking were observed to have minor to moderate damage. The deck members were observed to have surface wear reflective of the age of the system. The members generally exhibited sound surface material with some individual members containing checks, splits, and an overall loss of preservative treatment.
- Steel Pipe Support Piles The steel pipe piles observed above the tidal zone were observed to have a moderate damage rating. In the range of the tidal zone, the epoxy coatings are worn from rubbing against the steel pile hoops. General corrosion of the unprotected steel was observed without significant cross sectional loss.

Boat Grid:

The boat grid was observed to be in satisfactory condition with limited areas of minor to moderate damage that do not require immediate repair. The observed conditions of the individual elements constituting the boat grid are as follows:



- Steel Pipe Support Piles The steel pipe piles were observed to have minor damage with general surface corrosion and no significant pitting or cross sectional loss observed.
- Steel Grid Beams The steel grid beams were observed to have moderate damage with minor corrosion covering the entirety of the members. Connections to the supporting piles were observed to be in sound condition. The original timber bearing members located on top of the steel beams have been replaced with composite materials and appear to have little to no defects.
- Steel Walkways The steel walkways were observed to have little to no damage. The steel materials have sufficient remaining galvanized coating and exhibit only moderate rust blooming.
- Appurtenances (ladders, mooring posts, timber breasting fenders, etc.) The ladders attached to the boat grid were observed to have areas of moderate damaged due to vessel impact. However, this damage does not affect the usability of the structure. The steel mooring posts were observed to have little to no damage. The timber fenders attached to the breasting piles exhibited moderate damage due to normal wear.

RECOMMENDATIONS

The general overall condition of the South Harbor float system is poor to serious. At over 30 years old, the float system has reached or exceeded its intended design life, deterioration will likely accelerate. As float systems age, connections become more loose, timber treatment and protective coatings diminish, and deterioration will occur at a more rapid rate. Based on the current condition of the harbor float system, the recurring costs for continued maintenance and repairs necessary to keep up with the deterioration of the harbor have likely reached a point where the net return from repairs are no longer cost effective. Without significant and major renovations/repairs to the harbor float system, it is recommend that the City begin planning for the eventual replacement of the floats. These efforts should include upfront budgeting, permitting, design efforts and potential grant applications required for the replacement.

The timber approach trestles are in fair condition. It is estimated that, with adequate maintenance and repairs, the timber approaches have a remaining safe and useful service life of approximately 10 years. The overall condition of the boat grid is satisfactory and, with adequate maintenance, has an estimated remaining safe and useful service life of approximately 15-20 years.

Below is a list of deficiencies and recommended action items that were developed as a result of the inspection. Each item is categorized into immediate, short term or long term action items based on the timing recommended for the required action. Below each deficiency is the recommended action in *italics*.

Immediate Action Items – (3-6 months)

Missing or severely corroded pile hoops identified throughout the harbor float system.

- Required Action - All missing or severely damaged pile hoops as indicated on the inspection drawings (See Section 2) should be replaced.

Severely corroded tri-braces identified throughout the harbor float system.

- Required Action - All severely damaged or corroded tri-braces as indicated on the inspection drawings (See Section- 2) should be replaced.



Gangway landing floats observed to have inadequate floatation/freeboard on the shore ends of the floats

- Required Action – At a minimum, supplemental floatation should be installed on the shore ends of the floats to provide additional buoyancy. Replacement of walers and connections between the landing float and headwalk or replacement of the landing float with an alternative float should be considered.

Loose finger to mainwalk connections observed in several locations

Required Action – All loose or disconnected finger to mainwalk connections as indicated on the inspection drawings (See Section 2) should be tightened and/or replaced as required.

Broken cross bracing observed on timber approach trestles.

Required Action – All broken cross bracing as indicated on the inspection drawings (See Section 2) and site photos (Section 3) should be replaced.

Short Term Action Items – (1-2 years)

Missing, disconnected or damaged rubstrips observed throughout the float system

- Recommended Action - It is recommended that the damaged rubstrips be replaced or repaired.

Missing end walers and rubstrips observed on numerous finger floats (Floats J, K and L)

- Recommended Action - It is recommended that the missing walers and rubstrips be replaced. At a minimum, protruding connection bolts should be removed to reduce the potential for vessel damage.

Damaged and/or deteriorated walers observed at numerous locations

- Recommended Action - It is recommended that walers with greater than major damage be replaced.

Concrete deck spalls, cracks and exposed reinforcing observed throughout float system

- Recommended Action - It is recommended that damaged portions of the concrete deck be repaired and/or resurfaced to prolong the life of the float system.

Long Term Action Items – (3-5 years)

Submerged walers observed throughout mainwalk float system.

No action is required at this time. Addition of supplemental floatation billets should be considered to raise the walers above water and to prolong the life of the float members.

COST ESTIMATES

Cost estimates for the above recommended action items are contained in Section 4 of this document. Three estimates were prepared including: estimated maintenance/repair costs to address identified deficiencies, replacement of the float system using the existing restraint piles and access trestles/gangways, and complete replacement of the harbor float system.

If the City desires to use the existing harbor restraint piles to support a new replace float system, it is recommend that additional below water inspection be performed to confirm the structural adequacy of the below water portions of the piles.



SECTION 2

INSPECTION DRAWINGS















NI	NOT INSPECTED
ND	NO DEFECTS
MN	MINOR DEFECTS
MD	MODERATE DAMAGE
MJ	MAJOR DAMAGE
SV	SEVERE DAMAGE



SECTION 3

PHOTOGRAPHS



Photograph No. 1-G
Description: Timber approach trestle adjacent to Mainwalk G.
Photograph No. 2-G <u>Description:</u> Broken cross brace observed on G trestle.
Photograph No. 3-G <u>Description:</u> Broken cross brace observed on G trestle.



Photograph No. 4-G
Description: Mainwalk G gangway landing float at low tide. Note submerged waler on shore end.
Photograph No. 5-G <u>Description:</u> Mainwalk G gangway landing skid. Note gangway does not rest on steel skid member.
Photograph No. 6-G <u>Description:</u> Mainwalk G gangway viewed from near headwalk (L Float) intersection. Note: deck condition as shown is typical throughout G float.



Photograph No. 7-G <u>Description:</u> Replaced pile hoop at end of finger float (stalls 3/4). Note excessive 'slop' in hoop allows for significant float movement before restraint.
Photograph No. 8-G <u>Description:</u> Disconnected finger to mainwalk connection. (Stalls 5/6).
Photograph No. 9-G Description: Exposed wire mesh on concrete deck surface. (Stalls 7/8)



Photograph No. 10-G <u>Description:</u> Disconnected finger to mainwalk connection. (Stall 11/12)
Photograph No. 11-G <u>Description:</u> Exposed rebar on concrete deck. (Stalls 15/16)
Photograph No. 12-G <u>Description:</u> Exposed rebar on concrete deck. (Stalls 15/16). Note pile hoop in background not centered on finger.







of float.

Photograph No. 16-G <u>Description</u> : West side of mainwalk float viewed from stall 24. Note excessive vegetative growth on bullrail.
Photograph No. 17-G <u>Description:</u> Pile hoop at end of finger float (Stalls 25/26). Note excessive wear on interior faces of hoop.
Photograph No. 18-G <u>Description:</u> Finger float deck (Stalls 27/28). Note spalling exposing rebar on deck surface.



Photograph No. 19-G <u>Description:</u> Timber pile near stall 28. Note pile is out-of-plumb.
Photograph No. 20-G Description: Seaplane float overview
Photograph No. 21-G <u>Description:</u> North side of seaplane float. Note missing bullrails and exposed connection bolts.



Photograph No. 22 C
Photograph No. 22-G <u>Description:</u> South side of seaplane float. Note missing bullrails and exposed connection bolts.
Photograph No. 23-G <u>Description:</u> Cracks observed on north side deck of seaplane float.
Photograph No. 24-G <u>Description:</u> Damaged waler and exposed connection. Northeast corner of seaplane float.



Photograph No. 1-H Description: East side H float viewed near headwalk intersection. Note waler partially submerged- typical for entire mainwalk float.
Photograph No. 2-H <u>Description:</u> Major corrosion on finger float pile hoop (stalls 5/7). Note loss of coating on pile.
Photograph No. 3-H <u>Description:</u> Cracks on concrete deck of finger float (stalls 5/7).



	Photograph No. 4-H
	Description: Twist in finger float (stalls 6/8)
	Photograph No. 5-H <u>Description:</u> Severe corrosion on finger float pile hoop (stalls 13/15). Note loss of coating on pile.
Or Official 2016	Photograph No. 6-H <u>Description:</u> Western side of mainwalk between stalls 15 and 17. Note bullrail and rubstrip impact damage and partial submersion of walers.



Photograph No. 7-H <u>Description:</u> Finger float pile hoop (stalls 17/19). Note severe cross sectional loss.
Photograph No. 8-H <u>Description:</u> Concrete spall on finger float with exposed rebar (stalls 18/20).
Photograph No. 9-H <u>Description:</u> Major corrosion damage finger float pile hoop (stalls 21/23)



Photograph No. 10-H <u>Description:</u> Severe corrosion on finger float pile hoop (stalls 25/27).
Photograph No. 11-H <u>Description</u> : Finger float (stalls 26/28) with visible twist. Movement between floats felt upon traversing float, indicating potential loose thru-rods. Note cracks at end of float.
Photograph No. 12-H <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 26/28).



Photograph No. 13-H Description: Mainwalk float overview.
Photograph No. 14-H Description: Severe twist in finger float (stalls 30/32).
Photograph No. 15-H <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 30/32). Note hoop is submerged and connection bolts are loose.



Photograph No. 16-H <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 37/39).
Photograph No. 17-H <u>Description:</u> Severe corrosion and wear on mainwalk pile hoop located between stalls 39 and 41.
Photograph No. 18-H <u>Description:</u> Large deck spall on finger float (stalls 38/40).



Photograph No. 19-H <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 38/40).
Photograph No. 20-H <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 41/43).
Photograph No. 21-H <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 45/47).



Photograph No. 22-H
Description: Mainwalk float viewed from stall 44. Note missing finger floats on eastern side of float (even numbered stalls 46 to 76)
Photograph No. 23-H
Description:
Finger float (stalls 45/47). Note partially submerged waler.
Photograph No. 24-H
Description:
Severe corrosion and wear on finger float pile hoop (stalls 53/55).



DI DE ZOIB 14:10	Photograph No. 25-H <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 57/59).
	Photograph No. 26-H <u>Description:</u> Twist in finger float (stalls 61/63)
	Photograph No. 27-H <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 61/63).



Photograph No. 28-H <u>Description:</u> Finger float (stalls 73/75). Note twist in float and broken bullrail.
Photograph No. 29-H <u>Description:</u> Detached mainwalk pile hoop. Located between stalls 75 and 77. Note pile hoop is submerged
Photograph No. 30-H <u>Description</u> : North end of mainwalk H. Note missing finger float (stalls 77/79) on western side of float.



Cordova South Harbor Condition Assessment

	Photograph No. 1-I
	Description: Timber trestle adjacent to I float viewed from east side.
	Photograph No. 2-I Description: Typical trestle pile cap.
Image: constraint of the second sec	Photograph No. 3-I <u>Description:</u> Trestle stringers viewed from below deck.







Photograph No. 7-I Description: Shoreside end of gangway landing float at low tide. Note complete submersion of waler and lack of reserve freeboard.
Photograph No. 8-I Description: Gangway landing float to headwalk connection. Note deflection (bow) of connecting walers running transversely across headwalk.
Photograph No. 9-I <u>Description:</u> West side gangway landing skid. Additional cover plate appears to have been added to protect concrete deck surface


Photograph No. 10-I <u>Description:</u> I float overview from south end of mainwalk.
Photograph No. 11-I <u>Description:</u> Finger float (stalls 2/4) Note loose finger to mainwalk connection, twist/list in float.
Photograph No. 12-I <u>Description:</u> Concrete deck spalls with exposed wire mesh and rebar on finger float (stalls 5/7).



	Photograph No. 13-I Description:
	Severe wear on finger float pile hoop – through thickness (stalls 10/12).
07.05.2016	Photograph No. 14-I <u>Description:</u> Large spalls/failed grout patches on mainwalk float near stall 13.
	Photograph No. 15-I <u>Description:</u> Cracks on concrete deck , finger float (stalls 18/20).



<image/>	Photograph No. 16-I <u>Description:</u> Severe wear on finger float pile hoop – through thickness (stalls 25/27). Note wear on timber pile.
	Photograph No. 17-I <u>Description:</u> Finger float (stalls 30/32). Crack in concrete deck and severe corrosion on pile hoop.
	Photograph No. 18-I <u>Description:</u> Severe corrosion and wear on finger float pile hoop (stalls 37/39). Note wear on timber pile



	Photograph No. 19-I <u>Description:</u> Exposed rebar on concrete deck. Finger float (stalls 45/47).
	Photograph No. 20-I <u>Description:</u> Broken mainwalk pile hoop. Located between stalls 48 and 50.
AK 8503 40 Science 7a Science 7a O No 2018 15 17	Photograph No. 21-I <u>Description:</u> Listing/twisted finger float (stalls 50/52). Potential loose finger to mainwalk connection.



Photograph No. 22-I <u>Description:</u> Severe corrosion on finger float pile hoop (stalls 50/52).
Photograph No. 23-I <u>Description:</u> Severe corrosion on finger float pile hoop (stalls 57/59).
Photograph No. 24-I <u>Description:</u> Listing/twisted finger float (stalls 58/60). Potential loose finger to mainwalk connection.



07. DS. 2016 18:24	Photograph No. 25-I Description: Severe corrosion on finger float pile hoop (stalls 65/67). Note hoop is submerged and wear/loss of cross section on pile.
	Photograph No. 26-I Description: Exposed wire mesh and rebar on concrete deck. Finger float (stalls 62/64).
	Photograph No. 27-I <u>Description:</u> Spall in concrete deck. Finger float (stalls 66/68).



	Photograph No. 28-I
07 09 2016 18:28	Description: Severe corrosion on finger float pile hoop (stalls 66/68). Note hoop is submerged and wear/loss of cross section on pile.
	Photograph No. 29-I <u>Description:</u> Detached/loose finger to mainwalk connection. Finger float stalls 70/72.
	Photograph No. 30-I Description: Cracked tri-brace connection. Finger float stalls 74/76.



Photograph No. 31-I <u>Description:</u> Finger float concrete deck spalls (stalls 74/76) with exposed wire mesh.
Photograph No. 32-I <u>Description</u> : Severe corrosion on finger float pile hoop (stalls 74/76). Note wear/loss of cross section on pile.
Photograph No. 33-I <u>Description:</u> Large spalls on concrete deck of finger float (stalls 82/84)



Photograph No. 34-I <u>Description:</u> Missing pile hoop located between stalls 84 and 86.
Photograph No. 35-I <u>Description:</u> Cracks and large spalls with exposed rebar on concrete deck of finger float (stalls 86/88).



Photograph No. 1-J <u>Description:</u> Severe waler deterioration at end of finger float (stalls 14/15). Missing end waler.
Photograph No. 2-J <u>Description:</u> Missing end waler and rubstrip on finger float (stalls 21/23). Note similar condition is present on numerous other finger floats.
Photograph No. 3-J <u>Description:</u> Western side of mainwalk float viewed at stall 19. Note partially submerged waler and major corrosion on tri-brace.



Photograph No. 4-J <u>Description:</u> Major waler deterioration on finger float (stalls 25/27).
Photograph No. 5-J <u>Description:</u> Exposed wire mesh on concrete surface. Finger float – stalls 33/35.
Photograph No. 6-J <u>Description:</u> Major tri-brace corrosion. Finger float – stalls 38/40.



	Photograph No. 7-J Description: Concrete deck spalls with exposed wire mesh. Finger float (stalls 45/47). Note missing end waler and rubstrip.
HORIZONS BOOKING	Photograph No. 8-J <u>Description:</u> Plywood cover installed over severely corroded tri-brace. Note: Similar condition observed at numerous locations on the float system.
	Photograph No. 9-J <u>Description:</u> Severe waler deterioration at end of finger float (stalls 54/56).



Photograph No. 10-J <u>Description:</u> Major waler deterioration on finger float (stalls 57/59).
Photograph No. 11-J <u>Description:</u> Spalled concrete surface of finger float (stalls 61/63). Note missing end waler and rubstrip at end of float with exposed bolts.
Photograph No. 12-J <u>Description:</u> Severe tri-brace corrosion. Finger float – stalls 65/67.



<image/>	Photograph No. 13-J <u>Description:</u> Broken rubstrip on finger float (stalls 69/71). Note partial length waler repair near end of float.
<image/>	Photograph No. 14-J <u>Description:</u> Plywood covers over severely corroded tri-braces (stalls 70/72)
	Photograph No. 15-J <u>Description:</u> Broken/missing finger float (stalls 73/75)



Photograph No. 16-J <u>Description:</u> Severe tri-brace corrosion on finger float (stalls 77/79)
Photograph No. 17-J <u>Description:</u> Severe mainwalk pile hoop wear (thru-thickness). Located between stalls 80/82.
Photograph No. 18-J <u>Description:</u> Missing end waler and rubstrip on finger float (stalls 78/80). Note protruding connection bolts. Similar condition was observed on numerous finger floats on J float.



Photograph No. 19-J <u>Description:</u> Thru-thickness tri-brace corrosion (stalls 81/83)
Photograph No. 20-J <u>Description:</u> Plywood covers over severely corroded tri-braces (stalls 90/92).
Photograph No. 21-J <u>Description:</u> Thru-thickness tri-brace corrosion (stalls 98/100)



Photograph No. 22-J
Description: Broken finger float rubstrip (stalls 101/103).
Photograph No. 23-J <u>Description:</u> Advanced waler deterioration. Finger float – stalls 102/104.
Photograph No. 24-J <u>Description:</u> Exposed rebar on deck surface and major waler deterioration on finger float (stalls 105/107).



Photograph No. 25-J <u>Description:</u> Severe tri-brace corrosion on finger float (stalls 110/112).
Photograph No. 26-J <u>Description:</u> Twist/listing finger float. Float modules move/translate when traversing float. Walers severely deteriorated.
Photograph No. 27-J <u>Description:</u> Thru-thickness corrosion on figner float tri-brace (stalls 117/119)



	Photograph No. 28-J <u>Description:</u> Missing finger float and leaning light pole mounted on finger float tri-brace (stalls 121/123).
	Photograph No. 29-J <u>Description:</u> Plywood covers over severely corroded tri-braces (stalls 122/124).
<image/>	Photograph No. 30-J <u>Description:</u> Broken bullrail on end of mainwalk float.



	Photograph No. 1-K
	Description: Surface view of timber access trestle near K float.
	Photograph No. 2-K
OT de 2016 D7 57	Description: Timber access trestle viewed from west.
	Photograph No. 3-K Description: Typical pile cap on timber trestle



Photograph No. 4-K <u>Description:</u> Broken cross brace and exposed connection on second shoreward pier.
Photograph No. 5-K <u>Description:</u> Timber stringers viewed from below deck.
Photograph No. 6-K <u>Description:</u> Gangway viewed from east. Note superficial rust bloom and



Photograph No. 7-K <u>Description:</u> Western gangway landing skid. Note wear from gangway nosing. Landing skid/angle appears too narrow allowing for wear of concrete deck.
Photograph No. 8-K Description: Eastern gangway landing skid. Note wear from gangway nosing. Landing skid/angle appears too narrow allowing for wear of concrete deck.
Photograph No. 9-K <u>Description</u> : Gangway landing float viewed at low tide. Note lack of freeboard on shore end of float.



	Photograph No. 10-K <u>Description:</u> Shore end of gangway landing float viewed at low tide. No feeboard remaining under gangway deadload only.
LIAR LIAR LIAR LIAR LIAR LIAR LIAR LIAR	Photograph No. 11-K <u>Description:</u> Gangway landing float to headwalk connection viewed at low tide. Note bow in connecting walers transversely across headwalk float.
	Photograph No. 12-K <u>Description:</u> Deflection of headwalk to gangway landing float waler observed during low tide.



Photograph No. 13-K <u>Description:</u> Mainwalk K viewed from headwalk float.
Photograph No. 14-K <u>Description:</u> Missing pile hoop located between stalls 0 and 2.
Photograph No. 15-K <u>Description:</u> Broken bullrail located adjacent to stall 3.



Photograph No. 16-K <u>Description:</u> Missing rubstrip and broken end waler on finger float (stalls 10/12).
Photograph No. 17-K <u>Description:</u> Waler damage/missing cleat on finger float (stalls 34/36)
Photograph No. 18-K <u>Description:</u> Detatched/broken rubstrip on finger float (stalls 57/59).



Photograph No. 19-K <u>Description:</u> Eastern side of mainwalk float. Note partial submersion of waler, observed on entire mainwalk float.
Photograph No. 20-K <u>Description:</u> Tri-brace thru-thickness corrosion (stall 56).
Photograph No. 21-K Description: Missing end waler and rubstrip on finger float (stalls 54/56). Note protruding connection bolts. Similar damage observed on numerous finger floats.



Photograph No. 22-K <u>Description:</u> Deck cracks observed on finger float (stalls 58/60).
Photograph No. 23-K Description: Plywood cover installed over severely corroded tri-brace (stall 60). Similar repairs were observed at many locations on the float system.
Photograph No. 24-K <u>Description:</u> Missing end waler and rubstrip, side waler damage on finger float (stalls 81/83). Note protruding connection bolts.



Photograph No. 25-K <u>Description:</u> Broken bullrail (stall 74).
Photograph No. 26-K Description: Detatched/broken rubstrip on finger float (stall 93)
Photograph No. 27-K <u>Description:</u> Broken/missing finger float (stalls 97/99)



Photograph No. 28-K <u>Description:</u> Missing end waler and rubstrip on finger float (stalls 82/84). Note protruding connection bolts. Similar damage observed on numerous finger floats.
Photograph No. 29-K <u>Description:</u> Severe tri-brace corrosion (stall 113)
Photograph No. 30-K <u>Description:</u> broken rubstrip on finger float (stalls 113/115).



Photograph No. 31-K Description: Exposed wire mesh on concrete deck surface of finger float (stalls 98/100)
Photograph No. 32-K <u>Description:</u> Broken bullrail adjacent to stall 125. Note mainwalk float freeboard and partially submerged walers.
Photograph No. 33-K <u>Description:</u> Concrete deck spall on mainwalk float adjacent to stall 112.



Trade zone of state	Photograph No. 34-K <u>Description:</u> Missing finger float (stalls 114/116)
	Photograph No. 35-K <u>Description:</u> Broken/missing finger float (stalls 141/143).
OT 106 2016 DB :39	Photograph No. 36-K <u>Description:</u> Tri-brace corrosion (stall 133). Note previously installed concrete patch on mainwalk and adjacent spall with vegetation.







Photograph No. 1-L <u>Description:</u> L float viewed near K float intersection. Note waler partially submerged- typical for entire headwalk float.
Photograph No. 2-L <u>Description:</u> Pile hoop located adjacent to stall 1. Note thru-thickness wear on hoop.
Photograph No. 3-L <u>Description:</u> Typical finger float condition on L float. Note moderate corrosion on tri-braces and vegetative growth on walers.



Photograph No. 4-L <u>Description:</u> Missing pile hoop located between stalls 12 and 13.
Photograph No. 5-L <u>Description:</u> Missing pile hoop located between stalls 30 and 31.
Photograph No. 6-L <u>Description:</u> Advanced waler deterioration and vegetative growth on finger float. (stalls 33/34)



Photograph No. 7-L
Description: Disconnected tri-brace and listing finger float (stalls 43/44).
Photograph No. 8-L <u>Description:</u> Large deck spall on headwalk float near stall 45.
Photograph No. 9-L <u>Description:</u> Large deck spalls on headwalk float near stall 53.



En de 2016 19:54	Photograph No. 10-L <u>Description:</u> Missing finger float (stalls 55/56).
	Photograph No. 11-L Description: Large deck spalls and cracks on headwalk float near stall 57.
	Photograph No. 12-L <u>Description:</u> L to G float transition.


Photograph No. 1-BG <u>Description:</u> Boat grid overview viewed from west.
Photograph No. 2-BG Description: Boat grid timber approach
Photograph No. 3-BG <u>Description:</u> Timber approach piles, cap and stringers viewed from below deck.



Photograph No. 4-BG
Description: Bullrail damage on western corner of timber approach.
Photograph No. 5-BG <u>Description:</u> Grid walkway. Note minor superficial rust bloom and remaining galvanized coating.
Photograph No. 6-BG <u>Description:</u> Typical steel grid beam. Original timber bearing members have been replaced with composite sections.



Photograph No. 7-BG
Description: Steel support pile with timber fender. Minor damage/wear observed on timber sections due to vessel impact.
Photograph No. 8-BG <u>Description:</u> Support pile and walkway viewed from below.
Photograph No. 9-BG <u>Description:</u> Support pile with mooring post.



Photograph No. 10-BG
Description: Moderate corrosion observed on support piles near mudline.
Photograph No. 11-BG Description: Damaged ladder.
 Photograph No. 12-BG Description: Steel support beams. Note moderate corrosion of members.



SECTION 4

COST ESTIMATES



					Р	N D
No. Item Description	Unit	Quantity	l	Jnit Cost		Total Cost
1 MOB/DEMOB					\$	100,000
Contractor Mob/Demob	LS	1	\$	100,000	\$	100,000
2 FLOAT REPAIRS					\$	475,000
Provide and Install Pile Hoops	EA	60	\$	600	\$	36,000
Provide and Install New Tri-Braces	EA	50	\$	800	\$	40,000
Replace Damaged Walers and Thru-Rods	LF	500	\$	150	\$	75,000
Replace Damaged Bullrail	LF	400	\$	60	\$	24,000
Replace Damaged Rubstrip	LF	800	\$	25	\$	20,000
Provide and Install Floatation Billets on Concrete Mainwalks	EA	400	\$	500	\$	200,000
Resurface Concrete Float Modules (as needed)	EA	40	\$	2,000	\$	80,000
3 GANGWAY LANDING FLOATS					\$	68,000
Proivde and Install Floatation Leveling Billets	EA	75	\$	500	\$	38,000
Replace Walers, Thru-Rods and Connections	LS	1	\$	30,000	\$	30,000
3 TIMBER ACCESS TRESTLE REPAIRS					\$	6,000
Replace Damaged Cross Bracing	LF	100	\$	50	\$	5,000
Replace Damaged Bullrail	LF	10	\$	60	\$	1,000

ROM Construction Subtotal \$ 649,000

Design Engineering, Permitting \$ 40,000 Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) \$ 15,000 Construction Administration (Estimated 1 Months) \$ 60,000

Post Construction Support & As-Built Drawings (Estimated) \$ 5,000

98,000

15% Construction Contingency \$
Total Cost Including Engineering \$ 867,000

Notes:

- 1) Cost estimate is based on conceptual design.
- Costs are presented in current (September 2016) dollars and do not include escalation.

3) Repair quantities approximate based on condition assessment findings and assuming major to severely damaged components require repair/replacement

CORDOVA SOUTH HARBOR IN-KIND REPLACEMENT W/ EXISTING PILES ROM COST ESTIMATE

o.Item Description	Unit	Quantity		Jnit Cost		Total Cost
	Olim	Quantity				
1 MOB/DEMOB Mob/Demob	LS	1	\$	600,000	\$ \$	600,00 600,00
2 NEW G FLOAT					\$	1,007,00
G Mainwalk Float - 8'x950' Concrete	SF	7,600	\$	80	\$	608,00
Finger Floats (14) (5' x 60')	SF	4,200	\$	95	\$	399,00
3 NEW H FLOAT					\$	1,465,0
H Mainwalk Float - 8'x1130' Concrete	SF	9,040	\$	80	\$	724,0
Finger Floats (39) (4' x 50')	SF	7,800	\$	95	\$	741,0
4 NEW I FLOAT					\$	1,350,0
I Mainwalk Float - 8'x1040' Concrete	SF	8,320	\$	80	\$	666,0
Finger Floats (45) (4' x 40')	SF	7,200	\$	95	\$	684,0
5 NEW J FLOAT		_			\$	1,139,0
J Mainwalk Float - 8'x950' Concrete	SF	7,600	\$	80	\$	608,0
Finger Floats (62) (3' x 30')	SF	5,580	\$	95	\$	531,0
7 NEW K FLOAT					\$	1,090,0
K Mainwalk Float - 8'x910' Concrete	SF	7,280	\$	80	\$	583,0
Finger Floats (36) (3' x 30')	SF	3,240	\$	95	\$	307,8
Finger Floats (29) (3' x 24')	SF	2,088	\$	95	\$	198,3
8 NEW L FLOAT			•		\$	827,0
L Mainwalk Float - 8'x740' Concrete	SF	5,920	\$	80	\$	473,6
Finger Floats (32) (3' x 20') Gangway Landing Floats (3) (20'x30')	SF SF	1,920 1,800	\$ \$	95 95	\$ \$	182,4 171,0
9 New Airplane Float					\$	513,0
New Airplane Float - 40'x135' Concrete	LS	5,400	\$	95		513,0
	LO	3,400	ψ	55	Ψ	515,0
0 On-Float Water and Fire Water System Potable Water System	LS	1	\$	480,000	\$ \$	910,0 480,0
Fire Water System	LS	1	\$	430,000	\$	430,0
1 Electrical					\$	2,275,0
Electrical Service	LS	1	\$	2,150,000	\$	2,150,0
Uplands Upgrades	LS	1	\$	125,000	\$	125,0
2 Construction Survey					\$	50,0
Construction Survey	LS	1	\$	50,000	\$	50,0
	R	OM Constru	ictio	n Subtotal	\$	11,226,0
Desiar	n Engineering, l	Permittina (A	ssur	ned at 5%)	\$	562,0
Shop Drawing, Submittal						100,0
	uction Administ					250,0
Post Constructio						20,0
	159	% Constructi	on C	ontingency	\$	1,684,0

15% Construction Contingency \$
Total Cost Including Engineering \$ 13,842,000

Notes:

Cost estimate is based on conceptual design.
 Costs are presented in current (September 2016) dollars and do not include escalation.

CORDOVA SOUTH HARBOR IN-KIND REPLACEMENT ROM COST ESTIMATE

Item Description	Unit	Quantity	l	Jnit Cost	Total Cost
MOB/DEMOB					\$ 600,0
Mob/Demob	LS	1	\$	600,000	\$ 600,0
NEW G FLOAT					\$ 1,371,0
G Mainwalk Float - 8'x950' Concrete	SF	7,600	\$	80	\$ 608,0
Finger Floats (14) (5' x 60')	SF	4,200	\$	95	\$ 399,0
Provide and Install Float Piles (Assumed 70' - 16"x0.5")	EA	28	\$	13,000	\$ 364,0
NEW H FLOAT					\$ 2,017,0
H Mainwalk Float - 8'x1130' Concrete	SF	9,040	\$	80	\$ 724,0
Finger Floats (39) (4' x 50')	SF	7,800	\$	95	\$ 741,0
Provide and Install Float Piles (70' - 16"x0.5")	EA	46	\$	12,000	\$ 552,0
NEW I FLOAT					\$ 1,986,0
I Mainwalk Float - 8'x1040' Concrete	SF	8,320	\$	80	\$ 666,0
Finger Floats (45) (4' x 40')	SF	7,200	\$	95	\$ 684,0
Provide and Install Float Piles (70' - 12"x0.5")	EA	53	\$	12,000	\$ 636,0
NEW J FLOAT					\$ 1,355,0
J Mainwalk Float - 8'x950' Concrete	SF	7,600	\$	80	\$ 608,0
Finger Floats (62) (3' x 30')	SF	5,580	\$	95	\$ 531,0
Provide and Install Float Piles (70' - 12"x0.5")	EA	18	\$	12,000	\$ 216,0
NEW K FLOAT					\$ 1,294,0
K Mainwalk Float - 8'x910' Concrete	SF	7,280	\$	80	\$ 583,0
Finger Floats (36) (3' x 30')	SF	3,240	\$	95	\$ 307,8
Finger Floats (29) (3' x 24')	SF	2,088	\$	95	\$ 198,3
Provide and Install Float Piles (70' - 12"x0.5")	EA	17	\$	12,000	\$ 204,0
NEW L FLOAT					\$ 983,0
L Mainwalk Float - 8'x740' Concrete	SF	5,920	\$	80	\$ 473,0
Finger Floats (32) (3' x 20')	SF	1,920	\$	95	\$ 182,4
Gangway Landing Floats (3) (20'x30')	SF	1,800	\$	95	\$ 171,0
Provide and Install Float Piles (70' - 12"x0.5")	EA	13	\$	12,000	\$ 156,
New Airplane Float					\$ 573,
New Airplane Float - 40'x135' Concrete	LS	5,400	\$	95	\$ 513,0
Provide and Install Float Piles (70' - 12"x0.5")	EA	5	\$	12,000	\$ 60,0
On-Float Water and Fire Water System					\$ 910,0
Potable Water System	LS	1	\$	480,000	\$ 480,0
Fire Water System	LS	1	\$	430,000	\$ 430,0
Electrical					\$ 2,275,0
Electrical Service	LS	1	\$	2,150,000	\$ 2,150,0
Uplands Upgrades	LS	1	\$	125,000	\$ 125,0
Construction Survey			•	FO	\$ 50,
Construction Survey	LS	1	\$	50,000	\$ 50,0

671,000

Design Engineering, Permitting (Assumed at 5%) \$ Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) \$ Construction Administration (Estimated 4 Months) \$ Post Construction Support & As-Built Drawings (Estimated) \$ 100,000

250,000

20,000

15% Construction Contingency \$
Total Cost Including Engineering \$ 2,013,000

16,468,000

Notes:

1) Cost estimate is based on conceptual design.

2) Costs are presented in current (September 2016) dollars and do not include escalation.

USACE

- a. Ownership Map
- b. Cordova Harbor Bathymetry 2020
- c. Cordova Harbor Silt Barrier Email







From:	West, Donna L CIV USARMY CEPOA (USA)
To:	Curtis Fincher; Sam Greenwood; Tony Schinella
Cc:	Epps, Lewis N CIV USARMY CEPOA (USA); Kloster, Rebecca E CIV USARMY CEPOA (USA); McCoy, Shane M CIV USARMY CEPOA (USA)
Subject:	Cordova Harbor Silt Barrier
Date:	Tuesday, March 29, 2022 2:35:46 PM
Attachments:	<u>Cordova Harbor Expansion.pdf</u> EC 1165-2-220 Dated 20180910.pdf

Hello Everyone,

It was a pleasure speaking with you last week. The silt barrier is a federal feature that separates the uplands from the harbor basin. There was an original silt barrier for the northern portion of the harbor that was extended in the early 1980's for the harbor expansion. Attached are some drawings from a 1979 Corps of Engineers Detailed Project Report that include a cross-section of the silt barrier.

According to engineers in our Hydraulics and Hydrology Branch, the stone armor on the slope of the silt barrier helps to dissipate and absorb inner harbor wave energy. If you plan to replace the current silt barrier with a bulkhead, or any structure that would result in a more fully reflective surface, it could create a more agitated water surface inside the harbor. This type of project would require a hydrodynamic analysis of the harbor in its existing condition and with the proposed changes to show how much of an increase in wave height would be expected and also if the change creates a harbor resonance issue with reflected waves combining with incoming waves at a natural period of the harbor basin. We would be happy to discuss the modeling requirements should you choose to pursue this type of project. (Note that replacing the north breakwater with a sheet pile structure would require the same type of analysis if you pursue that project in the future.)

If the proposed project were to use a pile supported dock design that does not significantly alter the wave dissipation and absorption characteristics of the silt barrier structure, the above level of hydrodynamic analysis would not be required.

Bottom line is that any proposed alteration, occupation or use of the silt barrier will require a Section 408 permit. Additionally, since you'll be replacing floats and dredging adjacent to the west breakwater, we'll also want to take a look at the plan for that work to ensure the integrity of the breakwater isn't compromised.

Information on the Section 408 process available at

<u>https://www.poa.usace.army.mil/Business-With-Us/Section-408/</u> and specifically in Engineering Circular 1165-2-220. We're available for pre-application coordination at your request to help answer any questions you may have prior to submitting your Section 408 application. Your Section 408 and Regulatory (Section 404/10) permit applications should be submitted concurrently as the two actions are synchronized.

Please keep us in the loop as your harbor revitalization plans for float replacement, dredging and new docks develop and feel free to contact me anytime.

Regards, Donna

Donna West, Operations Project Manager

Operations Branch Engineering-Construction Division U.S. Army Corps of Engineers, AK District (907) 753-2761 Telework: 907-753-5180 CECW-ZB

Circular No. 1165-2-220

10 September 2018

EXPIRES 30 SEPTEMBER 2020 Water Resource Policies and Authorities POLICY AND PROCEDURAL GUIDANCE FOR PROCESSING REQUESTS TO ALTER US ARMY CORPS OF ENGINEERS CIVIL WORKS PROJECTS PURSUANT TO 33 USC 408

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DEPARTMENT OF THE ARMY US Army Corps of Engineers Washington, DC 20314-1000

CECW-ZB

Circular No. 1165-2-220

10 September 2018

EXPIRES 30 SEPTEMBER 2020 Water Resource Policies and Authorities POLICY AND PROCEDURAL GUIDANCE FOR PROCESSING REQUESTS TO ALTER US ARMY CORPS OF ENGINEERS CIVIL WORKS PROJECTS PURSUANT TO 33 USC 408

1. <u>Purpose</u>. The purpose of this Engineer Circular (EC) is to provide policy and procedural guidance for processing requests by private, public, tribal, or other federal entities to make alterations to, or temporarily or permanently occupy or use, any US Army Corps of Engineers (USACE) federally authorized Civil Works project under 33 USC 408 (Section 408). Proposed alterations must not be injurious to the public interest or impair the usefulness of the USACE project.

a. This EC contains guidance applicable to all types of USACE projects that can be tailored to the appropriate level of detail for a specific Section 408 request. Supplemental guidance for specific infrastructure types (i.e., dams, hydropower, levee systems, and navigation) and other procedures can be found in the appendices.

b. This EC will serve as the most current comprehensive guidance for Section 408 reviews until it is supplemented, replaced, or expires. This EC applies to requests for alterations received by districts on or after the date of issuance. All requests submitted prior to the effective date of this EC can be processed consistent with the previous policy or this EC, at the requester's discretion.

c. This EC contains guidance related to interaction between USACE Section 408 decisions and other USACE processes, such as real estate decisions and permits under the USACE Regulatory Program.

2. <u>Applicability</u>. This EC is applicable to all headquarters USACE elements, divisions, districts, laboratories, and field operating activities related to USACE Civil Works projects.

3. <u>Distribution Statement</u>. Approved for public release; distribution is unlimited.

4. <u>References</u>. References for the main EC are in Appendix A. Other references are specified in specific appendices as appropriate.

5. <u>Authority</u>. See Appendix B.

EC 1165-2-220

6. <u>Basic Definitions</u>. For the purposes of this EC, the following terms are used:

a. "District" refers to a USACE district office and "division" refers to a USACE division office.

b. "USACE project" refers to a USACE federally authorized Civil Works project, including those operated and/or maintained by USACE and those operated and maintained by a non-federal sponsor.

c. "Alteration" refers to any action by any entity other than USACE that builds upon, alters, improves, moves, obstructs, or occupies an existing USACE project. Unless otherwise stated, for ease of reference, the use of the term "alteration" in this document also includes "occupation" and "use."

d. "Requester" refers to an entity other than USACE that is requesting permission to alter a USACE project. A request for Section 408 permission can originate from a non-federal sponsor (see definition in next paragraph) or an independent requester.

e. "Non-federal sponsor" refers to a non-federal interest, as defined in the Flood Control Act of 1970, as amended (42 USC 1962d-5b(b)), that has provided assurances or executed a binding agreement for the provision of items of local cooperation for a USACE project, including, as applicable, operation and maintenance.

f. "Regulatory Program" or "Regulatory" is the USACE program responsible for oversight and implementation of permits under Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (Section 10/404/103).

g. "Shoreline use permit" refers to the written permission issued by USACE under Part 327 of Title 36 of the Code of Federal Regulations to authorize certain structures, facilities, and uses in or adjacent to waters that are managed by USACE at Civil Works projects.

h. "Outgrant" refers to a real estate instrument which conveys or grants the right to use real property and is usually in the form of a lease, license, or easement. A consent is not an outgrant.

i. "Consent" refers to a written agreement between the holder of an easement and the owner of the underlying fee estate, that allows the owner of the underlying fee estate to use (or authorize another to use) their land in a manner that the easement holder has determined will not interfere with the easement holder's rights. A consent does not grant an interest in real estate and is not an outgrant.

j. "Real property" refers to any interest in land, including leaseholds, easements, and rightsof-way, together with the improvements, structures, and fixtures located thereon.

k. "Real property of the United States" refers to real property owned by the United States that is under the administrative jurisdiction of USACE.

7. <u>Program Governance</u>. USACE will maintain a three-level decentralized organization to implement this EC, comprising Headquarters USACE (HQUSACE), division, and district levels. The Commanders at each level – HQUSACE, division, and district – have ultimate responsibility for ensuring that Section 408 decisions comply with current policy and procedures. Each level is required to establish and maintain personnel and procedures to implement this EC.

a. Program Oversight. HQUSACE will designate a HQUSACE proponent to oversee the execution of this EC and monitor progress. Each fiscal year, HQUSACE will lead an audit. The audit will be coordinated through appropriate Division and District Commanders and will result in an audit report to be submitted to the Director of Civil Works. At a minimum, the audit report will include a review of a sampling of district and division Section 408 decisions, an assessment of the consistency of documentation of decisions and compliance with policy agency-wide, use of streamlining processes (e.g., categorical exclusions, categorical permissions, and procedural review plans), and lessons learned and corrective actions needed in order to improve the process agency-wide. The audit will also evaluate the timeliness of decisions.

b. Section 408 Coordinator. Each District and Division Commander will designate a Section 408 Coordinator with the appropriate professional expertise and experience to manage and coordinate (both internally and externally to USACE) Section 408 activities. Section 408 Coordinators must have management and communication abilities and have knowledge and experience with the Section 408 procedures. District Section 408 Coordinators will ensure proper coordination occurs among all the necessary elements internally and externally, including but not limited to regulatory, tribal liaisons, real estate, counsel, planning, engineering and construction, programs and project management, and operations. Division Section 408 Coordinators will ensure proper coordination among other districts if the USACE project or proposed alteration crosses more than one district's area of responsibility, reference paragraph 7.h.(3), and consistency in implementation within the divisions' areas of responsibility. In addition, Section 408 Coordinators are responsible for data management in the Section 408 database, reference paragraph 7.d, and appropriate webpages, reference paragraph 7.e, to ensure information and status of Section 408 requests are current. Section 408 Coordinators will ensure budgetary information and resource needs to accomplish USACE Section 408 activities are coordinated and submitted during the budgeting process.

c. Administrative Record. The district will be responsible for maintaining an administrative record for each Section 408 request in their area of responsibility. The administrative record should include all documents and materials directly or indirectly considered by the decision-maker. It should include documents, materials, and a record of the offices and staff that are pertinent to the merits of the decision, as well as those that are relevant to the decision-making process. Record documents will be uploaded to the Section 408 database, reference paragraph

7.d, as appropriate.

d. Section 408 Database. HQUSACE will establish and maintain a Section 408 database to serve as the database system of record for all Section 408 requests. The database system will be created in a manner to ensure information can be shared and synchronized with other USACE database systems as appropriate. The database will adhere to standards established for the Civil Works Business Intelligence (CWBI) and be managed under the CWBI Automated Information System, which is part of the Civil Works information technology portfolio. Database entry and quality control/quality assurance of entered data is the responsibility of districts and divisions. A subset of fields from this database will be made publicly available to provide information on the current status of Section 408 requests received.

e. Public Webpages. HQUSACE will establish and maintain a publicly available Section 408 webpage to provide basic information on Section 408, and viewable access to a subset of the Section 408 database fields related to status of requests. Each USACE district, and division if necessary, will ensure information on how a requester can submit a Section 408 request to the district is available on district-specific public webpages. District webpages will include contact information and a link to the HQUSACE Section 408 public webpage and database.

f. Funding for USACE Section 408 Responsibilities. USACE-led Section 408 activities that require funding include those on a programmatic level (e.g., data management, program management, coordination, generating categorical permissions, developing procedural review plans, and creating funding agreements) and those activities related to processing Section 408 requests (e.g., reviewing requests, development of environmental and cultural resource final documents, construction oversight, approving updates to Operation and Maintenance manuals related to the alteration, and alteration-specific review plans).

(1) See guidance on funding for Section 408 in the current Civil Works Program Development Guidance.

(2) Districts will ensure requesters are aware of the opportunity to use funding agreements to expedite activities related to processing Section 408 requests, see paragraph 7.g.

(3) Enforcement activities, reference paragraph 18, associated with completed and in-place Section 408 alterations or unapproved encroachments, will be funded from the appropriate source associated with the inspection and oversight procedures for that specific USACE project.

(4) Regulatory Program funds can only be used for a Section 10/404/103 action, which may include those actions with an associated Section 408 request. Regulatory staff can use Regulatory funds to participate in joint meetings and internally coordinate portions of shared documents when a Section 408 request also requires a Section 10/404/103 action.

g. Funding Agreements. The following are the three main authorities through which

USACE may accept and expend funds to expedite the review and evaluation of a Section 408 request. Districts should choose the funding agreement option that is most appropriate to provide the most efficiency. See Appendix I for detailed procedures.

(1) Section 1156(a)(2) of the Water Resources Development Act (WRDA) 2016 amended Section 14 of the Rivers and Harbors Act of 1899 (33 USC 408) to authorize the acceptance and expenditure of funds received from non-federal public or private entities to evaluate requests under Section 408. This authority is the most flexible and streamlined authority for accepting funding for Section 408 reviews.

(2) Funds may be accepted under the authority of Section 214 of WRDA 2000, as amended, (33 USC 2352) to expedite the review and evaluation of a Section 408 request for a public purpose. Funds may be accepted from non-federal public entities; public utility companies; natural gas companies; or railroad carriers. This authority requires a public notice before receipt of funds and has other limitations.

(3) Funds may be accepted under the authority of 23 USC 139(j) to expedite the review and evaluation of a Section 408 request associated with a federal-aid transportation project. Funds may be accepted from certain public entities that receive financial assistance from the U.S. Department of Transportation (USDOT). This authority requires USDOT approval of the agreement and has other restrictions and requirements. This authority may be more appropriate for projects for which the Federal Highway Administration (FHWA) and/or Federal Transit Administration (FTA) are the lead agency and the transportation project sponsor is seeking or receiving financial assistance from USDOT for permitting.

(4) To accept funds from another federal agency, a specific statutory authority must be identified that authorizes the transfer of funds for such a purpose.

h. Coordination.

(1) Effective communication and coordination, both internally and externally, is critical to achieve efficient decision-making on Section 408 requests. Districts will ensure that internal and external coordination is conducted as necessary to ensure timely and efficient reviews and decision-making. In addition, districts will seek opportunities to integrate or align internal procedures, leverage information between processes, and eliminate redundancy, while ensuring appropriate laws and policies are being met. Early and frequent coordination between USACE, the requester, and/or non-federal sponsor, if applicable, is strongly recommended. Coordination, notification and subsequent tribal government-to-government consultation should occur at the earliest stages and should be pre-decisional with interested federally recognized tribes, including tribes whose aboriginal territories extend into the lands where the proposed activity may occur. Coordination with tribes should happen prior to or concurrent with coordination with State Historic Preservation Officers. The most effective way to determine whether an area has tribal cultural, historic or spiritual significance is to work with representatives from each tribal nation

that either resides or has ancestral ties to the area proposed for the Section 408 request. Coordination will aid in early identification of potential issues and help to focus efforts, thereby minimizing costs to the requester and USACE.

(2) Districts will provide a copy of this EC to non-federal sponsors of USACE projects. This EC is not intended to replace existing coordination processes districts may have with non-federal sponsors for efficient reviews of alterations to the USACE project. Districts are encouraged to adapt existing coordination processes or develop new standard operating procedures to reflect requirements in this EC and to support effective and efficient reviews.

(3) One lead district, and its' associated division office, will be designated for any single non-USACE project that crosses district or state boundaries (e.g., pipelines, highway projects, electrical transmission projects) and requires either Section 10/404/103 review(s), Section 408 review(s), or a combination of both consistent with reference A.41. The lead district will be responsible for maintaining situational awareness on the status of all Section 10/404/103 and Section 408 reviews; serving as a primary point of contact for the requester; and coordinating schedules and requirements to meet review and decision milestones.

(4) In cases in which a Section 408 permission (except for Section 408 decisions that must be made by the Division Commander, per paragraph 8.c.) and a Regulatory standard individual permit are both required for the same proposed alteration/activity, the district will conduct these evaluations in a coordinated and concurrent manner resulting in a single decision document. Although each mission area (between Section 408 and Regulatory) is responsible for the review requirements specific to its respective authorities, the environmental compliance to cover both the Section 408 permission and Regulatory permit decisions will be coordinated by a single office. Consideration should be given to the scale and scope of the activities subject to each authority when designating the lead office for environmental compliance. The district Regulatory Chief and the Section 408 Coordinator will jointly decide which office will be the lead for environmental compliance. If agreement cannot be reached, then the District Commander will decide. The single decision document will contain documentation for the final decisions for both the Section 408 permission and the Regulatory permit. Note that implementing regulations and policies for the Regulatory permit require the evaluation of proposed activities and their compatibility with the purposes of a federal project. The Section 408 analysis informs the compatibility with the purposes of a federal project for Regulatory purposes. In addition, there will be a single transmittal letter to the requester that includes as attachments both the Section 408 decision letter and the Regulatory permit. The District Commander is the deciding official for the single decision document for these cases, although he or she may further delegate these combined decisions following the same requirements as in paragraph 8.d. As a result, in these cases, the Section 408 permission and Regulatory individual permit will be reviewed and finalized at the same decision level and by the same deciding official. See Appendix G for alternative procedures related to Section 10 and Section 408.

(5) In cases in which an alteration requiring a Section 408 permission and a Regulatory

permit decision other than a standard individual permit, the district will conduct these evaluations in a coordinated and concurrent manner to the maximum extent practicable. For these cases, there will be a single transmittal letter to the requester that includes as attachments both the Section 408 decision letter and the Regulatory permit. A single decision document, single office lead for environmental compliance, or the same deciding official is not required. However, the Section 408 decision must be finalized before or concurrent with, but not after, the Regulatory decision. Implementing regulations and policies for the Regulatory decisions require the evaluation of proposed activities and their compatibility with the purposes of a federal project. The Section 408 decision informs the compatibility with the purposes of a federal project for Regulatory purposes.

(6) In cases in which a proposed Section 408 alteration may affect the formulation, evaluation, or selection of alternatives for a current Investigation or other USACE study, (for example, when approval or denial of a proposed alteration would materially affect the completeness, effectiveness, efficiency, and/or acceptability of one or more alternatives being evaluated as part of a feasibility study), district staff reviewing the Section 408 request will coordinate with the district study team to identify, track, and ensure vertical awareness of the interdependencies between the Section 408 request and the USACE study. Study and implementation risks associated with the decision (approval or denial) on the Section 408 request will be managed and discussed with the vertical team through the study milestones.

(7) In cases in which a proposed Section 408 alteration changes how the USACE project will meet its authorized purpose, district staff reviewing the Section 408 request will coordinate vertically with the division to the appropriate Regional Integration Team (RIT) and Office of Counsel to confirm that Section 408 is being appropriately applied. An example is a proposed alteration to permanently breach a levee system for ecosystem restoration purposes and raise all structures behind the levee to achieve the same flood risk management benefits. This USACE project still meets the authorized flood risk management purpose but in a different manner.

(8) A proposed alteration may also be subject to other laws or requirements that involve additional coordination, prioritization, and/or transparency (e.g., Title 41 of the Fixing America's Surface Transportation Act (FAST-41), Federal-aid highway and transit projects subject to 23 USC 139, priority projects under an existing Executive Order, etc.). Districts should be aware of, and actively participate in, any additional coordination required for the Section 408 request, including supporting development of schedules and updating any non-USACE databases (e.g., FAST-41 Coordinated Project Plans and Dashboard), if required. Districts should coordinate vertically, through the division, to the appropriate Regional Integration Team (RIT), if upward reporting on status is required for these Section 408 requests. Reporting for Section 408 should be accomplished in a concurrent and coordinated manner with any other required USACE actions for that project (e.g., pending Regulatory permit decisions or real estate decisions, etc.).

(9) Requesters seeking sensitive information about an existing USACE project to develop a proposed alteration will submit requests for that information in writing to the district. Sensitive

information includes information that could pose a security risk or aid those intending to do harm to a USACE project. Examples include, but are not limited to, design analyses, as-builts or other drawings, specifications, location of deficiencies, operational information, and contingency plans. The district office that generated or is responsible for the information requested will review the request in coordination with the district operational security officer to determine whether it is sensitive. Districts should limit the distribution of sensitive information to only the information that is necessary for the proposed alteration. Districts will advise requesters that the information to be provided is sensitive and direct requesters to provide a list of individuals with whom the information will be shared. Districts will advise requesters that the sensitive information will not be shared with individuals not on the list. Reviewers should work with their District Office of Counsel to determine if a non-disclosure statement is needed. In some cases, districts may have to withhold sensitive information regardless of its necessity for the development of a proposed alteration. Requests to USACE for other agency data will be referred to the other agency for a release determination. Information provided by federally recognized tribes during consultation may be sensitive and not publicly available. Districts must ensure sensitive information provided by federally recognized tribes is not disclosed to the extent allowable by law and that the administrative record pertaining to this sensitive information is general in nature.

(10) Vertical coordination among district, division, and HQUSACE must occur when there is any question related to the appropriate course of action; the nature of the Section 408 request is without precedent; or the review of the Section 408 request requires deviation from policy.

8. <u>Decision Authority</u>. All final Section 408 decisions will comply with the following:

a. All Section 408 decision-makers must ensure accountability and consistency with federal law and policy. Section 408 decision-makers must also ensure the appropriate and requisite expertise has reviewed each Section 408 request.

b. A categorical permission may be created at the district, division, or HQUSACE level, but must be approved and signed by a District Commander, Division Commander, or the Director of Civil Works, depending upon the region in which it is applicable. Validation that a Section 408 request is consistent with the terms and conditions of a categorical permission and subsequent authorization of the activity under the categorical permission may be delegated. The delegation should be established through the process used to create the categorical permission. Reference Appendix C for additional information for categorical permissions.

c. Division Review and Decision. The following are the Section 408 requests that will require a final decision by the Division Commander and cannot be further delegated. Division Commander decisions will consider the analysis and recommendation by the District Commander. For Section 408 requests that require approval by the Division Commander and uses the multi-phased review option (reference paragraph 10.c.), Division Commanders have discretion to render a decision on any or all milestones, but must render the decision for the final

milestone. Districts will keep divisions informed of the progress throughout the multi-phased review process, including any issues and concerns that would be pertinent to the Division Commander's decision for level of involvement and rendering the final decision. The Division Commander can delegate milestone decisions, except for the final milestone, to District Commanders or the District Commanders' designee.

(1) Proposed alterations that require a Safety Assurance Review (SAR), see paragraph 12.c.(4).

(2) Proposed alterations for the installation of hydropower facilities. Coordination and concurrence with the division Dam Safety Officer and the division Hydropower Coordinator is required prior to the final Section 408 decision.

(3) Proposed alterations for which the non-federal sponsor for a USACE project is seeking potential credit under Section 221 of the Flood Control Act of 1970, as amended. A decision on a Section 408 request is separate from any decision on potential credit for in-kind contributions. See paragraph 9.g.

(4) Proposed alterations that affect the formulation, evaluation, or selection of alternatives for a current study under the Investigations account or other USACE study. Coordination with the division Chief of Planning is required prior to the final Section 408 decision. See paragraph 7.h.(6).

(5) Proposed alterations that change how the USACE project will meet its authorized purpose. See paragraph 7.h.(7).

(6) Proposed navigation alterations for which federal assumption of operation and maintenance under Section 204(f) of Water Resources Development Act of 1986, as amended, is also being sought. See paragraph 9.f.(5).

d. District Review and Decision. All other decisions for Section 408 requests not included in paragraphs 8.c.(1) through 8.c.(6) may be rendered by the District Commander. A District Commander may further delegate authority for such decisions to his or her designees. The delegation must be in writing and signed by the District Commander, with the delegation identifying the name and title of the individual to whom authority is being delegated and what limitations, if any, are being imposed. District Commanders may not delegate Section 408 decisions below a supervisory Division Chief level. No further re-delegation by a designee is authorized. A copy of the delegation must be maintained in the office where the authority is held.

e. At any time, the Director of Civil Works, Division Commanders, and District Commanders have discretion to elevate decision-making authority for the final decision for a specific Section 408 request based on the unique or special circumstances involved. The following are examples of the types of considerations for elevating a Section 408 decision level:

(1) The nature of the Section 408 request is without precedent;

(2) The review of the Section 408 request may require variation from regional or national policy; or,

(3) A proposed alteration of a USACE project crosses more than one district's or division's area of responsibility.

f. The appropriate National Environmental Policy Act (NEPA) decision document (Record of Decision or Finding of No Significant Impact) will be signed by the USACE official making the decision for the corresponding Section 408 request, if it is not already integrated into the Summary of Findings document reference paragraph 15.b. Documentation of the applicability of a categorical exclusion may be signed by the Section 408 decision-maker or other appropriate district staff.

9. <u>Determining When Procedures in this EC Apply</u>. The following describes when the procedures in this EC apply, along with exceptions. The following does not affect the requirement for a Regulatory permit or any other applicable permits. Note, however, paragraphs 7.h.(4) and 7.h.(5) and Appendix G outline how Regulatory and Section 408 reviews must be either consolidated or effectively aligned depending on certain circumstances.

a. Geographical Limitations.

(1) This EC must be applied to alterations proposed within the real property identified and acquired for the USACE project, with exceptions further described in this section. An activity affecting a USACE project not yet constructed or under construction is considered to be an alteration, occupation, or use of a USACE project requiring permission under Section 408 if the activity will occur on real property that the Federal Government has acquired for the USACE project or that the non-federal sponsor has provided for the USACE project under the terms of a Project Partnership Agreement (PPA).

(2) This EC must be applied to alterations proposed to submerged lands occupied or used by a USACE project.

(3) This EC must be applied to alterations that cross over or under a federal navigation channel when the alteration is also subject to either Section 9 or 10 of the Rivers and Harbors Act of 1899.

(4) At the USACE district office's discretion, this EC may be applied to alterations to submerged lands proposed in the vicinity of a USACE project that occur in an area subject to the navigation servitude, when it is determined that the alterations have the potential to impair the

usefulness of the USACE project. Navigation servitude is defined as the dominant right of the Government under the Commerce Clause of the U.S. Constitution (U.S. Const. art. I, sec. 8, cl. 3) to use, control, and regulate the navigable waters of the United States and the submerged lands thereunder for various commerce-related purposes, including navigation and flood control. In tidal areas, the servitude extends to all lands below the mean high water mark. In non-tidal areas, the servitude extends to all lands within the beds and banks of a navigable stream that lie below the ordinary high water mark.

(5) This EC should not be applied to proposed alterations occurring outside of the areas specified in paragraphs 9.a.(1) to 9.a.(4). If there is a case in which a proposed alteration occurring outside of the areas specified could impair the usefulness of a USACE project, such cases should be coordinated vertically through the appropriate Regional Integration Team (RIT) to determine the course of action.

b. Emergency alterations or emergency activities performed by USACE on USACE projects under Public Law (PL) 84-99, reference A.29, do not require Section 408 permission. Alterations by others that are considered an emergency and/or urgent, which may include interim risk reduction measures, but not implemented under PL 84-99, may require Section 408 permission and this EC would apply. Districts will consider if the alteration meets other criteria defined under this paragraph 9. If this EC applies, districts can reprioritize and expedite reviews as appropriate given the urgency required for each specific situation. Reference Appendix D on expediting environmental compliance in emergency situations.

c. Non-federal Sponsor Maintenance and Repair Activities. Maintenance and repair activities conducted by non-federal sponsors on the USACE project for which they have operation and maintenance responsibilities do not require Section 408 permission, but may require coordination or concurrence from the USACE district, as further specified below.

(1) Operations and Maintenance (O&M) activities, including any floodfighting and/or other emergency activities, specified in a USACE-issued O&M manual do not require Section 408 permission.

(2) Activities to restore the USACE project to the physical dimensions and design of the constructed project, without any changes to the real property, existing design features, or physical dimensions or performance of the USACE project do not require Section 408 permission. USACE districts may at any time require the non-federal sponsor to coordinate with the district to verify the design or construction approach of such activities based on scope and scale. USACE districts should proactively coordinate with the non-federal sponsor to identify, if any, the types of activities that may need this verification.

(3) Geotechnical exploration drilling by the non-federal sponsor associated with activities described in paragraphs 9.c.(1) and (2) does not require Section 408 permission. However, drilling in embankment dams and levees must comply with requirements in reference A.31,

including a drilling plan. Districts will coordinate with non-federal sponsors to develop the drilling plan.

d. Improvements, excavations, construction, or changes to local flood protection works referenced in 33 Code of Federal Regulations (CFR) 208.10(a)(4) and (5) do not negate nor replace the requirement for approval from USACE under Section 408 as specified for such activities in this EC.

e. When a proposed alteration will be carried out entirely within the boundaries of real property of the United States or reservoirs managed by USACE, a separate evaluation under the procedures in this EC is not required, so long as the alteration is either consistent with an approved project master plan developed according to references A.34 and A.39, or subject to a Report and Determination of Availability under chapter 8 of reference A.28. In such cases, the project master planning process or the procedure for preparing the Report and Determination of Availability satisfies the requirements for Section 408 for the proposed alteration. No separate Section 408 permission is required to support issuance of the associated shoreline use permit or outgrant. Note, in these instances, Regulatory can render a permit decision before USACE issues the shoreline use permits or outgrants, as long as Regulatory has received the Determination of Availability or confirmation of consistency with the approved project master plan, whichever is applicable to the proposed alteration.

(1) When a federal agency other than USACE is responsible for issuing the permit or outgrant authorizing a proposed alteration that will be carried out within the boundaries of real property of the United States or reservoirs managed by the USACE (e.g., pipeline rights-of-way issued by the Bureau of Land Management under 30 USC 185, or hydropower licenses issued by the Federal Energy Regulatory Commission (FERC) under the Federal Power Act), a separate Section 408 permission is not required if USACE provides the other federal agency with a Report and Determination of Availability or confirmation of consistency with the approved project master plan prior to the other federal agency's issuance of the permit or outgrant. In cases where a Report or Determination of Availability is not required by chapter 8 of reference A.28, and the proposed alteration has not been evaluated during the project master planning process, a Section 408 permission is required prior and in addition to, the permit or outgrant issued by the other federal agency. In all cases, USACE will advise the other agency of any special conditions that must be incorporated into the permit or outgrant issued by the other federal agency.

(2) If a proposed alteration requires use of both real property of the United States and real property owned by other entities or non-federal sponsors, then the processes in this EC will apply. In these cases, USACE will incorporate the decisions associated with the USACE required shoreline use permit, outgrant, or consent as part of the comprehensive Section 408 evaluation and decision.

(3) In cases in which a USACE real estate decision and Section 408 decision are both

needed, the district will conduct these evaluations in a coordinated and concurrent manner to the maximum extent practicable. Although reviews for both Section 408 and the real estate decisions can be conducted concurrently, final decision-making requires that the Section 408 decision be rendered before or concurrent with, but not after, the USACE real estate decisions. Implementing regulations and policies for the real estate decisions require the evaluation of proposed activities and their compatibility with the purposes of a federal project. The Section 408 decision informs this element of the evaluation for shoreline use permits, outgrants, and consents. The required shoreline use permit, outgrant, or consent must still be issued before the alteration can be carried out on real property of the United States.

(4) Fees for administrative processing of outgrants issued by USACE will be determined by applicable regulations and policy promulgated under the authority of 10 USC 2695 and 30 USC 185(1). Evaluation of a USACE project alteration requiring the issuance of a permit or outgrant by another federal agency will be funded using Operation and Maintenance funds provided for the USACE project or appropriate funding associated for coordination for non-federal hydropower development, if applicable. If a Section 408 permission is required refer to paragraph 7.f. for funding related to Section 408 reviews.

f. Non-Federal Construction of a Water Resources Development Project.

(1) Section 204 of WRDA 1986, as amended, authorizes non-federal interests to undertake construction of certain water resources development projects, or separable elements, with potential credit or reimbursement of the federal share of that construction, subject to several requirements, including obtaining all necessary permits. If the proposed work under Section 204 would alter an existing USACE project, then the non-federal interest must obtain Section 408 permission under this EC, unless the proposed work has been authorized for construction by Congress, or the USACE real estate policies and process applies (reference paragraph 9.e). Further guidance on Section 204 of WRDA 1986 is included in reference A.38.

(2) If a Section 408 permission is needed to implement work under Section 204, conducted consistent with a feasibility study, the procedures and process in reference A.38 will be followed in lieu of the review and decision process in this EC, and the district report that is required for approval for construction will also serve as the documentation and basis for the Section 408 permission decision. The Section 204 report will specifically address any impacts to the usefulness of the existing USACE project and the public interest.

(3) Districts should ensure that, to the maximum extent practicable, information from the feasibility study, including technical analyses, NEPA documentation, National Historic Preservation Act (NHPA) documentation, and other environmental and cultural resources compliance is used for the Section 204 report. Districts must determine whether physical or environmental circumstances have changed since the feasibility study was completed and supplement those analyses if necessary.

(4) If the Section 204 report is approved by the Assistant Secretary of the Army for Civil Works (ASA(CW)), this approval will also constitute approval of the Section 408 permission. The District Commander will document that the Section 408 permission is granted and reference the Section 204 report approval.

(5) For alterations for which the non-federal interest is seeking federal assumption of maintenance under Section 204(f) of WRDA 1986, as amended, Section 408 permission will be required unless the modification to the USACE navigation project has already been specifically authorized by Congress. In order to avoid duplication of documentation for these two authorities, districts should ensure that requirements for both are coordinated and leveraged to the maximum extent practicable. Reference A.37 for the approval process and requirements for a Section 204(f) request. In general, the Section 204(f) report will not be submitted to the ASA(CW) for approval unless and until the Section 408 permission and any Section 10/404/103 permits have been approved.

g. In-kind Contribution Credit under Section 221 of the Flood Control Act of 1970, as amended (Section 221). There may be cases in which a non-federal sponsor wishes to undertake alterations to an existing USACE project for which there is an ongoing USACE feasibility study and the non-federal sponsor seeks credit eligibility for those alterations toward its cost share for the USACE project that is not yet authorized for construction. In such cases, any proposed alteration for which the non-federal sponsor is seeking credit cannot be initiated until the draft feasibility report is released for public review, an in-kind Memorandum of Understanding (MOU) for the work is executed, and Section 408 permission is issued.

(1) In those cases where a non-federal sponsor is undertaking work as an in-kind contribution on an authorized USACE project per an executed project partnership agreement that provides credit for such work, Section 408 permission is not required.

(2) Detailed guidance on crediting can be found in reference A.36.

h. Actions conducted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The portions of any removal or remedial action conducted entirely onsite (as that term is used in CERCLA) in a manner consistent with CERCLA and the National Contingency Plan (40 CFR Part 300) are not subject to the procedural requirements in this EC. USACE will work with the United States Environmental Protection Agency (EPA) or other federal agency undertaking or overseeing the CERCLA response during the investigation and during the process of developing the removal or remedial action to ensure that the remedy implemented does not impair the usefulness of the USACE project and is not injurious to the public interest.

10. <u>Options for Seeking Section 408 Permission</u>. Early coordination between USACE, the requester, and/or non-federal sponsor, if applicable, is recommended in order to determine the optimal option below. All information must be submitted in writing to USACE.

a. Categorical Permission. The district, division, and/or HQUSACE have the ability to create a "categorical permission" in order to expedite and streamline the review and decisions of Section 408 requests that are similar in nature and that have similar impacts to the USACE project and environment. An assessment of impacts to the usefulness of the USACE project, environmental compliance, and a public interest determination is conducted ahead of time for a common category of activities. For those individual Section 408 requests that are consistent with the terms and conditions of an established categorical permission, the Section 408 request can be granted with a simplified validation process. See Appendix C for details.

b. Single-Phased Review. Requesters may submit all information needed for a Section 408 request, reference paragraph 11, at one time for USACE to review and render a decision.

c. Multi-Phased Review. This option provides a formalized process for requesters to pursue Section 408 permission in milestones. In other words, there is a proposed alteration in which interim reviews are conducted as the level of detail of the information is progressively developed. However, the multi-phased review approach cannot be used to piecemeal the evaluation of effects of the proposed alteration. Assessing effects to the environment, public interest, and the USACE project must consider the proposed alteration as a whole. This approach will require the district, the requester, and non-federal sponsor, if applicable, to establish pre-determined milestones at which the requester will submit specified information to the district. The district will review the information at each milestone to identify any concerns. Based on the information provided at each milestone, the district will provide a written response providing feedback and a determination as to whether or not the requester can proceed to the next milestone. This approval to the next milestone means that USACE has not identified any critical items that would preclude the eventual approval of the Section 408 based on the information reviewed, but does not guarantee an approval of the final Section 408 request. Information submitted for a specific milestone is not required to meet all of the basic requirements for a complete Section 408 request; however, information for each milestone will be cumulative and result in a complete Section 408 request with the information submitted for the final milestone. The following are additional considerations for this multi-phased review approach:

(1) Submittal for the initial milestone must contain enough information at a conceptual or master plan level for USACE to understand the scope and scale of the complete Section 408 alteration. The initial submittal must also have the Statement of No Objection, if one is required, reference paragraph 11.a.

(2) For the multi-phased review approach, the district must develop an alteration-specific review plan for the complete alteration, reference paragraph 12.c., and is encouraged to initiate development of the review plan, as soon as possible, including determining if a SAR is required. Milestones will be managed, monitored, and adapted, if necessary, in the district review plan. If a SAR is required, there may be additional review milestones required for design and

construction activities.

d. If there is a situation that involves a long-term or large-scale plan, such as a watershedbased master plan, comprised of the construction of multiple alterations occurring over time, this case should be coordinated vertically through the appropriate RIT to the HQUSACE Section 408 proponent to determine the most efficient process to manage such a request.

11. Basic Requirements for a Complete Section 408 Request. All costs associated with information required for obtaining a Section 408 permission, constructing the alteration if approved, and complying with any conditions associated with the Section 408 permission is at 100 percent cost to the requester. This does not include costs for USACE to conduct the review of the request. Costs associated with USACE review is addressed paragraph 7.f. If submitting information for a categorical permission, reference the process in Appendix C. If the multiphased review approach is used, then the information needed for a complete Section 408 request may be provided at different milestones for review. Because proposed alterations vary in size, level of complexity, and potential impacts, the procedures and required information to make such a determination are intended to be scalable. Requirements for data, analyses, and documentation may be subject to change as additional information about the Section 408 proposal is developed and reviewed. Determination for the required information for each Section 408 submittal is led by the district. Supplemental information specific to dams, levees, hydropower, and navigation can be found in the appendix appropriate to the type of infrastructure (Appendices E-G). Note, identification of whether or not the proposed alteration also requires Section 10/103/404 authorization should be done up front, and districts should encourage requesters to submit any required Section 10/103/404 request in a manner to facilitate concurrent and efficient reviews with the Section 408 permission request, to the maximum extent practicable. Basic requirements for a complete Section 408 request include the following:

a. Statement of No Objection. For USACE projects with a non-federal sponsor, a written "Statement of No Objection" from the non-federal sponsor is required if the requester is not the non-federal sponsor. Non-federal sponsors typically have operation and maintenance responsibilities; have a cost-share investment in the USACE project; and/or hold the real property for the USACE project. The purpose of the Statement of No Objection is to document that the non-federal sponsor is aware of the scope of the Section 408 request and does not object to the request being submitted to USACE to initiate the evaluation of the request. Districts must coordinate with non-federal sponsors throughout the review process and ensure feedback from non-federal sponsors is considered prior to USACE rendering a final decision on the Section 408 request. Requesters can ask the USACE district office to facilitate coordination with, and seek to obtain the Statement of No Objection from, the non-federal sponsor. If a Statement of No Objection cannot be obtained, the district will not proceed with the Section 408 review with the following exceptions:

(1) A Statement of No Objection is not required if the requester is the non-federal sponsor.

(2) A Statement of No Objection is not required when USACE has all operation and maintenance responsibilities for the portion of the USACE project proposed to be altered.

(3) If a USACE project has multiple non-federal sponsors and potential impacts of the proposed alteration are limited to the location of the alteration, Statements of No Objection are required only from the non-federal sponsors associated with the locations with potential impacts. However, if the proposed alteration may impact the usefulness of the USACE project as a whole, Statements of No Objection must be obtained from all non-federal sponsors.

(4) A Statement of No Objection from the non-federal sponsor is not required if the requester could obtain the real property necessary to undertake the alteration through eminent domain without the consent of the non-federal sponsor, and the alteration will not be integral to the functioning of the USACE project. An alteration would be considered integral to the USACE project if the alteration must be complete, functional, and in-place in order for the USACE project to function and meet its authorized purpose. In cases in which the alteration is not considered integral to the USACE project, if the requester makes reasonable efforts, but is unable to obtain a Statement of No Objection from the non-federal sponsor, the requester may submit a Section 408 request with a written statement documenting the efforts to obtain a Statement of No Objection, and cite the authority and process through which the requester will have the sufficient authority to condemn all real property required for the alteration in the event the Section 408 request is approved by USACE. For these cases, USACE will independently seek input from the non-federal sponsor on the potential impacts of the proposed alteration relative to the non-federal sponsor's responsibilities, and will take that input into consideration in making the Section 408 decision. Within 30 days of notification by USACE, the non-federal sponsor must provide its input or may propose a timeline for providing feedback commensurate with the complexity of the proposed alteration. If the non-federal sponsor provides no response within 30 days of USACE's notification, USACE may proceed with the review of the alteration request without such input. Throughout the USACE review phase, USACE will continue to provide the nonfederal sponsor opportunities to provide input on the Section 408 request up until and just before USACE renders a final decision. For these subsequent opportunities for input, districts can use judgment as to the appropriate time in which to provide non-federal sponsors to respond. Approval of the Section 408 under these circumstances does not negate the process the requester must follow in order to obtain the real property needed to construct the alteration, nor provides the requester with eminent domain authority.

(5) A Statement of No Objection is not required if, after a good faith effort, neither the requester nor USACE can locate the non-federal sponsor or the non-federal sponsor's successor. If a requester is able to secure the necessary real property to execute the alteration but cannot identify the non-federal sponsor or successor, the requester should document the measures taken to locate the non-federal sponsor or successor and request that USACE determine if there is a viable non-federal sponsor or successor. USACE should document their efforts and decision for the administrative record and notify the requester.

b. USACE Project and Alteration Description. Basic requirements for a complete Section 408 submittal include the identification of the USACE project and a complete description of the proposed alteration(s), including necessary drawings, sketches, maps, and plans.

c. Technical Analysis and Design.

(1) The requester is responsible for ensuring a proposed alteration meets current USACE design and construction standards. However, a requester is not required to bring those portions or features of the existing USACE project that are not impacted by the alteration up to current USACE design standards. The district will work closely with the requester to determine the applicable USACE standards to be applied and the specific level of detail necessary to be provided in order for USACE to make a decision for a particular alteration request. The district determination of the appropriate level of detail will be risk-informed and documented in the USACE review plan.

(2) Districts will inform the requester if a hydrologic and hydraulic system analysis is required. The purpose of a hydrologic and hydraulics system analysis is to determine the potential hydrologic and hydraulic changes of proposed alterations. Districts will determine if such an analysis is needed and, if so, the appropriate scope of analysis based on the complexity of the proposed alteration. See Appendix H for more details regarding the requirements of a hydrologic and hydraulics system analysis.

(3) For alterations involving professional design services, the requester will be required to submit a certification that the design underwent a quality control process.

(4) If the district determines a SAR is required, a SAR review plan must be developed by the requester and the requester will be required to cover the costs of the SAR. A SAR is required for design and construction activities where potential hazards pose a significant threat to life safety. Districts will work with requesters to coordinate the development of the SAR review plan. See paragraph 12.c.(4).

d. Environmental and Cultural Resources Compliance. A decision on a Section 408 request is a federal action subject to NEPA and other federal environmental and cultural resources compliance requirements, such as Section 7 of the Endangered Species Act (ESA), Section 106 of the NHPA, essential fish habitat (EFH) consultation, tribal consultation, etc. When applicable, government-to-government tribal consultation is inherently a federal obligation and must be conducted in a meaningful, collaborative and effective communication process working toward mutual consensus, to the extent practicable and permitted by law, and begins at the earliest planning stages. Ensuring and conducting environmental and cultural resources compliance for a Section 408 request is the responsibility of USACE. However, the requester is responsible for providing all supporting information and documentation that the district identifies as necessary to assess compliance, such as species surveys, habitat assessments, and/or cultural resource surveys. Requesters may, but are not required to, draft the NEPA environmental

assessment or fund a contractor to prepare an environmental impact statement for a Section 408 request consistent with 40 CFR 1506.5. However, the district must ensure that any NEPA documentation drafted by a requester or contractor is accurate and compliant with USACE and Council on Environmental Quality (CEQ) requirements prior to accepting it for use with the Section 408 request. A final Section 408 request cannot be rendered until the requester has provided all information necessary for the district to complete its assessment for environmental and cultural resources compliance. The district will work with the requester to determine the requirements for the information the requester is required to submit to constitute a complete request. The information required of the requester to facilitate the completion of environmental compliance will be scaled to be commensurate with the degree of potential environmental effects of the activity within the scope of the Section 408 analysis. Environmental and cultural resources for Section 408 requests will typically not require the same level of detailed analysis as needed for feasibility reports or other planning studies. See Appendix D for further information.

(1) Alterations that are expected to not result in significant effects to the environment, both individually and cumulatively, should be evaluated for applicability with the approved categorical exclusions at 33 CFR 230.9. However, activities that qualify for a NEPA categorical exclusion must still satisfy compliance requirements under other statutes such as NHPA and ESA, and must fulfill consultation obligations with federally recognized tribes. Documentation of applicability of a categorical exclusion may be signed by the Section 408 decision-maker or other appropriate district staff.

(2) For categorical permissions, the district will inform the requester if additional documentation is necessary to complete environmental compliance.

(3) Districts are strongly encouraged to adopt and/or incorporate by reference any NEPA documentation that may already exist for the USACE project.

(4) For those alterations in which another federal agency is the NEPA lead agency (e.g. such as when FERC is the lead agency for private hydropower licensing, reference Appendix F), districts will participate in the NEPA review as a cooperating agency to the maximum extent practicable. Districts will typically adopt or incorporate by reference that federal agency's Environmental Impact Statement (EIS) or Environmental Assessment (EA) and consider it to be adequate for NEPA compliance for a Section 408 permission, unless the district finds substantial doubt as to the technical or procedural adequacy or omission of factors important to the Section 408 permission decision. Districts also have discretion to adopt/use another lead federal agency's environmental compliance documentation (ESA, NHPA, EFH, etc.) as allowable and appropriate for the Section 408 permission decision. Districts should ensure that the lead agency is informed of all needs to determine technical adequacy and environmental and cultural resources compliance for the purposes of Section 408 early in the process.

(5) Districts have discretion and are encouraged to develop new or use existing

programmatic NEPA documents (consistent with 40 CFR Part 1500.4(i)) and/or programmatic environmental consultations for Section 408 requests, when appropriate.

(6) Clean Water Act, Section 401 Water Quality Certification. If the requirement for a state water quality certification (33 USC 1341) applies to the alteration that is subject to a Section 408 review, as determined by USACE, then Section 408 authorization cannot be granted until the certification has been obtained or waived, as provided for by statute.

(7) Per USACE tribal consultation policy, federally recognized tribes have the right to request government-to-government consultation with the district. All requests by a tribe for government-to-government consultation with USACE will be honored.

e. Real Estate Requirements. A description of the real property required to support the proposed alteration must be provided. Non-federal sponsors issuing permits, outgrants, or consents for alterations undertaken by others will ensure that the terms of the instrument or agreement are consistent with the terms and conditions of the Section 408 permission, if applicable. If additional real property is required for an alteration that will be integral to the functioning of the USACE project, the district must follow the normal procedures to request approval of any non-standard estates under the guidance in chapter 12 of reference A.28. Maps clearly depicting both existing real property and the additional real property required must also be provided.

f. Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R). Requesters must identify any projected requirements for OMRR&R needed throughout the life of the proposed alteration and the responsible entity. For instances when there may be a desire for USACE to assume or incorporate operations and maintenance of the proposed alteration as part of its responsibilities for the USACE project being modified, a justification must be provided. See paragraph 9.f.(5) for federal assumption of maintenance associated with navigation features. If operation and maintenance of the USACE project is affected by the alteration, the requester, if not the non-federal sponsor, must provide written documentation that the non-federal sponsor agrees to assume responsibility for the changed OMRR&R of the USACE project at no cost to the federal government. This written documentation must be received prior to USACE issuing the Section 408 decision. If the Section 408 request is approved and an update to the USACE issued O&M manual is needed as the result of the alteration, the requester will be required to provide the district with sufficient information to update the portion of the O&M manual related to the approved alteration. As part of this update, as-builts may be required. See paragraph 17.

g. If applicable, a written statement regarding whether credit under Section 221 of the Flood Control Act of 1970, as amended, or other law or whether approval under Section 204 of WRDA 1986, as amended is being or will be sought must be provided.

12. <u>USACE Review Requirements</u>. In general, each Section 408 request will be reviewed by USACE consistent with the following:

a. Main Determinations.

(1) Impacts to the Usefulness of the USACE Project. The objective of this determination is to ensure that the proposed alteration will not limit the ability of the USACE project to function as authorized and will not compromise or change any authorized project conditions, purposes or outputs. All appropriate technical analyses including geotechnical, structural, hydraulic and hydrologic, real estate, construction, and operations and maintenance requirements, must be conducted, and the technical adequacy of the design must be reviewed. In addition, the district will determine whether or not the alteration is an integral component of the USACE project and therefore, will be treated as a federal component of the USACE project once constructed, including for purposes of the USACE Rehabilitation Program, reference A.29. An alteration would be considered integral to the USACE project function and meet its authorized purpose. If at any time it is concluded that the usefulness of the authorized project will be negatively impacted, any further evaluation should be terminated and the requester notified. Section 408 permission will not be granted for a proposed alteration that would have an effect of deauthorizing a USACE project or eliminating an authorized project purpose.

(2) Injurious to the Public Interest. Proposed alterations will be reviewed to determine the probable impacts, including cumulative impacts, on the public interest. Evaluation of the probable impacts that the proposed alteration to the USACE project may have on the public interest requires a careful weighing of all those factors that are relevant in each particular case. The benefits that reasonably may be expected to accrue from the proposal must be compared against its reasonably foreseeable detriments. The decision whether to approve an alteration will be determined by the consideration of whether benefits are commensurate with risks. If the potential detriments are found to outweigh the potential benefits, then it may be determined that the proposed alteration is injurious to the public interest. Factors that may be relevant to the public interest depend upon the type of USACE project being altered and may include, but are not limited to, such things as conservation, economic development, historic properties, cultural resources, environmental impacts, water supply, water quality, flood hazards, floodplains, residual risk, induced damages, navigation, shore erosion or accretion, and recreation. This evaluation should consider information received from key stakeholders, interested parties, tribes, agencies, and the public. As a general rule, proposed alterations that will result in substantial adverse changes in water surface profiles will not be approved. The Regulatory Program also conducts a public interest review and cannot authorize activities that are "contrary to the public interest." When an activity requires both a Regulatory review and Section 408 review, Regulatory and the office conducting the Section 408 review should closely coordinate and leverage any information to inform their respective analyses to ensure efficiency and consistency, to the extent appropriate.

(3) Legal and Policy Compliance. A determination will be made by the appropriate Office of Counsel as to whether the request meets all legal and policy requirements.
b. Public Notice. Districts must make diligent efforts to solicit public input as part of the decision-making process for a Section 408 request. Except for requests that meet an established categorical permission (where a public notice is issued as part of the establishment of the categorical permission), districts should issue a public notice for all Section 408 requests advising interested parties of the proposed alteration for which permission is sought and soliciting information necessary to inform USACE's evaluation and review. At a minimum, public notices should contain the requester, a description of the alteration being proposed, and the location of the alteration. As such, this public notice must be circulated to the public by methods deemed appropriate by the district (e.g., websites, email, social media, or media outlets) as early in the evaluation of a proposed alteration as possible to generate meaningful public and agency input to inform the evaluation and decision-making processes. Because input solicited through the public notice process can inform various aspects of the Section 408 review, such as the public interest determination, environmental compliance, Executive Order 11988, informing navigation stakeholders of alterations located in inland and intracoastal waterways, Section 214 funding agreements, and corresponding Regulatory standard individual permit applications, all effort should be made to ensure the public notice is developed and coordinated in a manner that helps maximize the value and use of the input received, and reduces the potential for issuing multiple public notices for different purposes. Likewise, for those Section 408 requests in which another federal agency is the lead federal agency, districts should coordinate with the lead agency to issue concurrent or joint public notices, when feasible and appropriate. The comment period associated with the public notice should generally be no more than 30 calendar days, but the comment period may deviate from this guideline in order to satisfy multiple purposes (i.e., 60-day comment period for a draft EIS) or to facilitate a joint public notice with another federal agency. Section 408 requests for which an environmental assessment (EA) is prepared or a categorical exclusion is used, draft NEPA compliance documents should not be circulated for public comment, except in rare circumstances. Instead, this public notice soliciting input will serve as the method of involving the public in the NEPA process that is required by 40 CFR 1501.4(e)(1). Environmental compliance may require other consultation and public engagement activities beyond a basic public notice. See Appendix D for more information on environmental compliance.

c. USACE Review Plan. The review of each Section 408 request will be conducted in conjunction with a review plan. Districts should ensure requesters understand the review requirements as early in the process as possible. A review plan will define the USACE resource requirements and procedures of how the review and decision for the Section 408 request will be conducted and rendered, respectively. The USACE review team will be subject matter experts based on expertise, experience, and skills, from multiple disciplines as necessary to ensure a comprehensive review. If the requester is not the non-federal sponsor, the review plan must also include opportunities for the non-federal sponsor to provide input on potential impacts to their responsibilities throughout the review plan is being finalized, but no final Section 408 decision will be rendered without an approved review plan in place. Section 408 review plans do not

have to be posted on the internet. If a SAR is required, districts and divisions may use discretion to post the SAR report on the district or division website. If the decision is made to post the SAR report, districts and/or divisions will ensure appropriate protection of sensitive or security related information when posting the SAR report.

(1) For categorical permissions, the review and validation process is established and documented as part of the creation of the categorical permission; therefore, no separate review plan is needed. Reference Appendix C for additional information for categorical permissions.

(2) Districts have the option to develop an overarching review plan, called a Procedural Review Plan, that establishes the review procedures to be used for Section 408 requests similar in nature and that have similar impacts and do not require a Safety Assurance Review (SAR), reference paragraph 12.c.(4). Procedural Review Plans are approved by the Division Commander; however, the Division Commander may delegate signature authority for the Procedural Review Plan to either the Division Regional Programs Director or the Division Regional Business Director. Districts must review and update approved Procedural Review Plans on an annual basis. The division must reapprove the Procedural Review Plans if there are any significant changes in scope or process.

(3) Districts must develop alteration-specific review plans for Section 408 requests that are not covered by a categorical permission or Procedural Review Plan. Section 408 requests using the multi-phased review approach, reference paragraph 10.c., or requiring a SAR, must have an alteration-specific review plan. If the multi-phased review approach is being used, documentation of established milestones will be managed in the district's review plan for the Section 408 request. Milestones can be adjusted as part of the process for updating the review plan. The decision-maker for the Section 408 request, reference paragraph 8, will be the approver of alteration-specific review plans. For example, if the decision-maker is the Division Commander, the Division Commander or the Division Commander's designee must approve the review plan. The Division Commander may delegate signature authority for the review plan to either the Division Programs Director or the Division Regional Business Director. If the Section 408 is to be approved by the District Commander, the District Commander must approve the review plan and so on. The division may choose to approve alteration-specific review plans that could be approved at the district level. Approved alteration-specific review plans must be updated as needed; however, if there are any significant changes in scope or process of the review, then the review plan must be reapproved at the appropriate approval level. The Review Management Organization (RMO) responsibilities can be at the level in which the Section 408 decision is made, with the exception of Section 408 requests that require a SAR, reference paragraph 12.c.(4). See reference A.40 for RMO responsibilities.

(4) The district Chief of Engineering will refer to reference A.40, or subsequent policy, to determine if a SAR is required for a proposed alteration. For alterations involving a levee or dam, this decision will be made in consultation with the district Dam Safety Officer or Levee Safety Officer when they are not the same person as the Chief of Engineering. If the district

determines a SAR is required, an alteration-specific review plan must be developed and the Risk Management Center (RMC) will be assigned as the RMO for the entire Section 408 review including the SAR. The final alteration-specific review plan and SAR review plan must be endorsed by the RMC and approved by the Division Commander or the Division Commander's designee. The Division Commander may delegate signature authority for the review plan to either the Division Regional Programs Director or the Division Regional Business Director. The district will work with the requester in the development of the review plan for the SAR. The district will include the requester's SAR review plan as an appendix to the USACE alterationspecific review plan.

13. <u>Overall Process</u>. The overall USACE review process for Section 408 requests involves four main steps: completeness determination (reference paragraph 14); review and decision (reference paragraph 15); final decision notification (reference paragraph 16); and construction oversight (reference paragraph 17). All information submitted by the requesters should be transmitted to the appropriate USACE district office having jurisdiction over the USACE project being altered.

a. The first submittal of information to the USACE district office should have a cover letter signed by the entity requesting the Section 408 permission.

b. Submittals may be accepted electronically (such as by email or file transfer) or by hard copy. When the initial submittal is received, the district will create a database entry for that request, including the assignment of a unique identifier (to be automatically generated by the Section 408 database). The unique identifier will be used for tracking purposes throughout the entire Section 408 request process and will be referenced in all correspondence with the requester.

c. USACE will provide timely responses to requesters regardless of the type of Section 408 request or the stage of the review. Districts and divisions should prioritize work in a manner to support timely responses and decisions (and within the timelines specified in paragraphs 14 and 15) to the maximum extent practicable.

d. Written notifications by districts to requesters can be provided by the district electronically or by hardcopy, depending on the preference of the requester. Districts will tailor content of the written notifications to each given situation. See Appendix J for example letters to requesters.

e. At any time in the process, a requester may choose to withdraw their Section 408 request in writing. In this case, the district will record the date of withdrawal in the Section 408 database.

f. For Section 408 requests involving funding agreements, the time required to develop and execute funding agreements, reference paragraph 7.g., themselves will not be subject to the

notification timelines referenced in paragraphs 14 and 15. The districts will ensure timely responses and engagement in developing and executing funding agreements.

g. The written notifications to requesters may be issued and signed by the Section 408 Coordinator or other signatory designated by the District Commander, except for final decision notifications. Final decision notifications for validation of categorical permissions, singlephased decisions, or multi-phased review decisions will follow appropriate decision processes as specified in paragraph 8.

14. <u>Step 1: Completeness Determination</u>. This first part of the process involves the requester providing information to the district in one or more submittals in order to satisfy all the basic requirements of a complete Section 408 request as indicated in paragraph 11. When a requester submits information to a district office, districts are expected to provide a written completeness determination within 30 days of receipt. If the district determines a submittal is not complete, the district will provide the requester a written notification within 30 days of receipt, providing a description of what information is required in order for the submittal to be complete. The 30 day timeline for a completeness determination is then restarted upon any subsequent submittals of information. A submittal will be determined complete and therefore initiating the 90-day review and decision step (reference paragraph 15) when it meets one of the following scenarios:

a. For categorical permissions, information submitted by the requester will be considered complete when the information provided demonstrates the proposed alteration appears to meet the conditions of an established categorical permission. If the district can validate the use of the categorical permission based on the information in the submittal of information within 30 days of receipt, then the district can proceed and grant permission under the categorical permission and notify the requester in lieu of providing a completeness determination letter. If not, then the 90-day review and decision step will be initiated with the district providing a written notification that the submittal seeking authorization under a categorical permission is complete.

b. For requests using the multi-phased review approach, a completeness determination will be done on each milestone submittal. The requirements to determine what information is required for each milestone should be pre-determined and planned by agreement between the district and requester. When a district issues a written notification that a milestone is complete, that will initiate the 90-day review and decision step for that milestone.

c. For requests intended for a single-phased review, a submittal will be determined complete when all the basic requirements, reference paragraph 11, has been submitted. When a district issues a written notification that all basic requirements have been submitted, that will initiate the 90-day review and decision step for that Section 408 request.

d. If after evaluating the information provided by a requester the district determines that processes in this EC do not apply, the district will provide the requester a written notification within 30 days of receipt of the information with a description of why this EC would not apply

and any other recommendations for the requester's next course of action, if needed.

15. <u>Step 2: USACE Review and Decision</u>. During this step, USACE will evaluate the information provided for the completeness determination following the review requirements in paragraph 12. This second step of the process results in USACE providing a final decision for either validating use of a categorical permission; a specific milestone; or a complete Section 408 request. Approval of the use of a categorical permission or a complete single-phase Section 408 request means that the requester can proceed to construction of the alteration, subject to specified conditions. Approval of a specific milestone results in the requester proceeding to the next milestone, unless the submittal is the final milestone. Approval of the final milestone constitutes approval of the entire Section 408 request; must be render by the appropriate Section 408 decision-maker (reference paragraph 8); and results in the requester being able to proceed to construction of the alteration, subject to specified conditions. Approved alterations for construction must result in a fully functional element once construction is complete.

a. Timeline for Review and Final Decision. A final decision will be provided by USACE to the requester within 90 days from the date the completeness determination was made by the district, unless one of the following stipulations apply. This 90-day timeframe is inclusive of the time needed for division review and decision, if required, and issuance of the final notification (reference paragraph 16).

(1) If a final decision cannot be made within 90 days, the district will provide a written notification to the requester with an estimated decision date. If the decision date extends beyond 120 days from a completeness determination, the district will send a memorandum through the Division Commander to the Director of Civil Works with a description of the Section 408 request and a justification for the decision extending beyond 120 days. HQUSACE will provide this information to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

(2) There may be cases during the USACE review and decision phase in which it is identified that more information is needed to render a final decision. If the additional information is needed to support or clarify the pending Section 408 request, the coordination for obtaining the additional information can be done informally between the district and requester. The 90-day timeframe for the final decision is not paused during this informal coordination. If this coordination causes the USACE review and decision timeframe to extend beyond 90 days, follow procedures in paragraph 15.a.(1). If the need for additional information is triggered by a change in the scope or scale of the alteration to the extent that it would require significant new information, such as new technical analyses, development of supplemental/re-initiation of environmental compliance, and/or additional real estate review, the USACE review and decision timeline. The district then must provide written notification to the requester that a new request should be submitted to reflect the change in scope of the alteration. When the requester submits all of the required information, a new completeness determination will be made (subject to the

30-day timeline in paragraph 14) and the 90-day timeline will be restarted from the date of the new completeness determination.

b. Summary of Findings. The district will create a Summary of Findings (content and format scalable to the request) to serve as the decision document to summarize the administrative record, including the review findings and the basis for the final Section 408 decision. A Summary of Findings does not have to be developed for each individual milestone for the multiphased review approach, but is required when the final milestone is reviewed and must summarize the entire Section 408 decision collectively. The Summary of Findings must include the following, as a minimum:

(1) USACE project description and authorization;

(2) Brief description of the request;

(3) Description and reference to the review plan process followed, including SAR determination;

(4) Summary of rationale and conclusions for recommending approval or denial, including determinations for the impact to the usefulness of the USACE project; whether or not the alteration is considered integral to the USACE project; and impacts to the public interest;

(5) Certification of legal sufficiency by Office of Counsel;

(6) Certification by the District Chief of Real Estate Division that all real property required for the proposed alteration has been identified; the identified real property is sufficient to support the alteration; and the proposed alteration will not adversely affect the USACE project's real property. If the proposed alteration will be integral to the functioning of the USACE project, the District Chief of Real Estate Division must also certify that standard estates are being used for the acquisition of any new real property that will become or may become a part of the USACE project, or that the requester is seeking approval to use non-standard estates (see paragraph 11.e.);

(7) Description of any related, ongoing USACE studies (if applicable), including how the proposed alteration may impact those studies;

(8) Summary of input from the non-federal sponsor, if the non-federal sponsor is not the requester demonstrating that the district provided opportunity for the non-federal sponsor to review and evaluate the proposed alteration along with the technical analysis and design, environmental effects, real estate requirements, and potential O&M effects and that the district sought to incorporate the non-federal sponsors feedback and concerns into the decision-making process;

(9) Summary of any changes to the O&M manual;

(10) If the district has determined that USACE would assume O&M responsibilities as part of its responsibilities for the USACE project, include the rationale and any anticipated increase in USACE O&M costs or if changes to O&M requirements would have to be implemented by the non-federal sponsor, documentation that the non-federal sponsor has agreed to those changes to their responsibilities;

(11) The NEPA Finding of No Significant Impact or Record of Decision, if the NEPA decision has not already been documented (such as applicability of a categorical exclusion, validation of a categorical permission, or an EIS led by another federal agency); and,

(12) Any additional final conclusions or information, including any associated controversial issues.

16. <u>Step 3: Final Decision Notification</u>. The district is responsible for providing a written decision signed by the USACE deciding official to the requester for all final Section 408 decisions, regardless of the decision level. This written decision must be issued within the 90-day review and decision timeline.

a. For those requests in which the non-federal sponsor is not the requester, USACE will coordinate the final decision with the non-federal sponsor.

b. If the final decision is to deny the request, the requester will be advised in writing as to the reason(s) for denial.

c. If the final decision is to approve the Section 408 request, the district will provide a written approval document. For cases involving a categorical permission, the written approval will be validation that the categorical permission is applicable.

d. In situations in which the district is evaluating a Regulatory standard individual permit application and Section 408 combined, reference paragraph 7.h.(4) and 7.h.(5), the district will ensure the final Section 408 decision letter and associated conditions be part of the single transmittal letter with the Regulatory permit.

e. Standard Terms and Conditions. At a minimum, the standard terms and conditions in Appendix K, except where noted as optional, must be included in all Section 408 approval notifications, including validation of use of a categorical permission. Districts and divisions may include any necessary special conditions as requirements for approval.

17. <u>Step 4: Construction Oversight</u>. District costs for construction oversight and closeout should be incorporated as part of review costs for the Section 408 request.

a. Construction oversight. The district should develop procedures for monitoring construction activities, including reviewing construction documentation at different phases if necessary, for the approved Section 408 request scaled to the complexity of the alteration to ensure the alteration is constructed in a manner consistent with the permission conditions. If a SAR was required, there may be SAR activities that carry through during construction. Any concerns regarding construction should be directed to the Section 408 requester (and the non-federal sponsor if applicable) for resolution.

b. As-builts. Plans and specifications with amendments during construction showing alterations as finally constructed will be furnished by the Section 408 requester after completion of the work if required by the district. As-builts must be provided to the district and the non-federal sponsor (if the requester is not the non-federal sponsor) within 180 days of construction completion.

c. O&M Manual Updates. The Section 408 requester is required to provide the district with sufficient information to update the portions of the USACE issued O&M manual to reflect changes as a result of the constructed alteration if necessary. If the requester was not the non-federal sponsor, the non-federal sponsor must be given must an opportunity to review all proposed changes to the O&M manual. O&M manual updates may range from simple removal and replacement of paragraphs or entirely new manuals depending on the scope and complexity of the alteration. The district is responsible for reviewing and approving any updates needed to the O&M manual as a result of the alteration. At a minimum, the update should include a description of the new features, reference to the Section 408 approvals, as-builts, and instructions regarding O&M of any new features not included in the existing manual. Reference A.32 and A.34 for information on O&M manuals.

d. Post Construction Closeout. District may need to conduct a post construction on-site inspection of the completed alteration to document final condition of the USACE project.

18. Enforcement.

a. Inspection and monitoring of approved and in-place alterations will be incorporated into the inspection and oversight procedures for that specific USACE project.

b. The policy of USACE is to pursue enforcement and correction of unauthorized alterations. If an unauthorized alteration is discovered, the district, after consulting with the Offices of Counsel and Real Estate, will take the appropriate steps to remedy the unauthorized alteration. Coordination with the district Regulatory office should also occur so it can be determined if any action should be taken with respect to Section 10/404/103. Regulatory funds cannot be used for enforcement and correction of unauthorized alterations. Specific enforcement steps the district takes will depend on the particular nature of the unauthorized alteration and whether the unauthorized alteration is located on project boundaries where a non-federal sponsor holds the land rights for operations and maintenance. Non-federal sponsors with operations and

maintenance responsibilities for the USACE project remain responsible for ensuring no unauthorized alterations are occurring within the project boundaries.

FOR THE COMMANDER:

JAMES C. DALTON, P.E.

JAMES C. DALTON, P.E. Director of Civil Works

APPENDIX A

References*

*Other appendices in this EC have additional references listed.

- A.1. Rivers and Harbors Act of 1899, https://www.gpo.gov
- A.2. Federal Power Act of 1920, https://www.gpo.gov
- A.3. Section 106 of the National Historic Preservation Act of 1966, https://www.gpo.gov
- A.4. Flood Control Act of 1970, as amended, https://www.gpo.gov
- A.5. National Environmental Policy Act of 1970, https://www.gpo.gov
- A.6. Section 103 of the Marine Protection, Research, and Sanctuaries Act, https://www.gpo.gov
- A.7. Section 404 of the Clean Water Act of 1972, https://www.gpo.gov
- A.8. Section 7 of the Endangered Species Act of 1973, https://www.gpo.gov
- A.9. Section 204 of Water Resources Development Act of 1986, as amended, https://www.gpo.gov
- A.10. Section 214 of Water Resources Development Act of 2000, as amended, https://www.gpo.gov
- A.11. Section 2036 of Water Resources Development Act of 2007, https://www.gpo.gov
- A.12. Section 1005(b) of Water Resources Reform and Development Act of 2014, https://www.gpo.gov
- A.13. Title 41 of the Fixing America's Surface Transportation Act (FAST-41), https://www.gpo.gov
- A.14. Section 1156(a)(2) of Water Resources Development Act of 2016, https://www.gpo.gov
- A.15. 10 USC 2695 Acceptance of funds to cover administrative expenses relating to certain real property transactions, https://www.gpo.gov
- A.16. 23 USC 139 Efficient environmental reviews for project decision making, https://www.gpo.gov
- A.17. 30 USC 185 Rights-of-way for pipelines through federal lands, https://www.gpo.gov
- A.18. 33 USC 408 Taking possession of, use of, or injury to harbor or river improvements, https://www.gpo.gov
- A.19. 33 CFR 208.10 Local Flood Protection Works; Maintenance and Operation of Structures and Facilities, https://www.gpo.gov
- A.20. 33 CFR 230 Procedures for Implementing NEPA, https://www.gpo.gov
- A.21. 33 CFR 329 Definition of Navigable Waters of the United States, https://www.gpo.gov
- A.22. 36 CFR 327 Rules and Regulations Governing Public Use of Water Resources Development Projects Administered by the Chief of Engineers, https://www.gpo.gov
- A.23. 36 CFR 800 Protection of Historic Properties, https://www.gpo.gov
- A.24. 40 CFR 1500-1508 CEQ Regulations for Implementing the Procedural Provisions of NEPA, https://www.gpo.gov
- A.25. 50 CFR 402 Interagency Cooperation Endangered Species Act of 1973, as amended, https://www.gpo.gov

- A.26. Executive Order 11988 Floodplain management, https://www.archives.gov
- A.27. AR 405-80, Management of Title and Granting Use of Real Property, http://www.aschq.army.mil
- A.28. ER 405-1-12, Real Estate Handbook, https://www.publications.usace.army.mil
- A.29. ER 500-1-1, Emergency Employment of Army and Other Resources Civil Emergency Management Program, https://www.publications.usace.army.mil
- A.30. ER 1105-2-100, Planning Guidance Notebook, https://www.publications.usace.army.mil
- A.31. ER 1110-1-1807, Drilling in Earth Embankment Dams and Levees, https://www.publications.usace.army.mil
- A.32. ER 1110-2-401, Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for Projects and Separable Elements Managed by Project Sponsors, https://www.publications.usace.army.mil
- A.33. ER 1130-2-500, Partners and Support (Work Management Policies), https://www.publications.usace.army.mil
- A.34. ER 1130-2-550, Recreation Operations and Maintenance Policies, https://www.publications.usace.army.mil
- A.35. ER 1165-2-26, Implementation of Executive Order 11988 on Floodplain Management, https://www.publications.usace.army.mil
- A.36. ER 1165-2-208, In-Kind Contribution Credit Provisions of Section 221(a)(4) of the Flood Control Act of 1970, as amended, https://www.publications.usace.army.mil
- A.37. ER 1165-2-211, Operation and Maintenance of Improvements Carried Out by Non-Federal Interests to Authorized Harbor or Inland Harbor Projects, https://www.publications.usace.army.mil
- A.38. ER 1165-2-504, Construction of Water Resource Development Projects by Non-Federal Interests, https://www.publications.usace.army.mil
- A.39. EP 1130-2-550, Recreation Operations and Maintenance Guidance and Procedures, https://www.publications.usace.army.mil
- A.40. EC 1165-2-217, Review Policy for Civil Works, https://www.publications.usace.army.mil
- A.41. Director's Policy Memorandum, Civil Works Programs, No. DPM CW 2018-06, Designation of a Lead USACE District for Permitting of Non-USACE Projects Crossing Multiple Districts or States, dated 15 May 2018
- A.42. Council on Environmental Quality, *Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act*, dated 6 March 2012, https://ceq.doe.gov
- A.43. Council on Environmental Quality, *Establishing, Applying and Revising Categorical Exclusions under the National Environmental Policy Act*, dated 23 November 2010, https://ceq.doe.gov

APPENDIX B

33 USC 408

Below is the direct language of 33 USC 408.

§408. Taking possession of, use of, or injury to harbor or river improvements

(a) Prohibitions and permissions

It shall not be lawful for any person or persons to take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, obstruct by fastening vessels thereto or otherwise, or in any manner whatever impair the usefulness of any sea wall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the United States, or any piece of plant, floating or otherwise, used in the construction of such work under the control of the United States, in whole or in part, for the preservation and improvement of any of its navigable waters or to prevent floods, or as boundary marks, tide gauges, surveying stations, buoys, or other established marks, nor remove for ballast or other purposes any stone or other material composing such works: *Provided*, That the Secretary of the Army may, on the recommendation of the Chief of Engineers, grant permission for the temporary occupation or use of any of the aforementioned public works when in his judgment such occupation or use will not be injurious to the public interest: *Provided further*, That the Secretary may, on the recommendation of the Chief of Engineers, grant permission for the alteration or permanent occupation or use of any of the aforementioned public works when in the judgment of the Secretary such occupation or use will not be injurious to the public interest and will not impair the usefulness of such work.

(b) Concurrent review

(1) NEPA review

(A) In general

In any case in which an activity subject to this section requires a review under the National Environmental Policy Act of 1969 (42 USC 4321 et seq.), review and approval of the activity under this section shall, to the maximum extent practicable, occur concurrently with any review and decisions made under that Act.

(B) Corps of Engineers as a cooperating agency

If the Corps of Engineers is not the lead Federal agency for an environmental review described in subparagraph (A), the Corps of Engineers shall, to the maximum extent practicable and consistent with Federal laws-

(i) participate in the review as a cooperating agency (unless the Corps of Engineers does not intend to submit comments on the project); and

(ii) adopt and use any environmental document prepared under the National Environmental Policy Act of 1969 (42 USC 4321 et seq.) by the lead agency to the same extent that a Federal agency could adopt or use a document prepared by another Federal agency under-

(I) the National Environmental Policy Act of 1969 (42 USC 4321 et seq.); and

(II) parts 1500 through 1508 of title 40, Code of Federal Regulations (or successor regulations).

(2) Reviews by Secretary

In any case in which the Secretary must approve an action under this section and under another authority, including sections 401 and 403 of this title, section 1344 of this title, and section 1413 of this title, the Secretary shall-

(A) coordinate applicable reviews and, to the maximum extent practicable, carry out the reviews concurrently; and

(B) adopt and use any document prepared by the Corps of Engineers for the purpose of complying with the same law and that addresses the same types of impacts in the same geographic area if such document, as determined by the Secretary, is current and applicable.

(3) Contributed funds

The Secretary may accept and expend funds received from non-Federal public or private entities to evaluate under this section an alteration or permanent occupation or use of a work built by the United States.

(c) Timely review

(1) Complete application

On or before the date that is 30 days after the date on which the Secretary receives an application for permission to take action affecting public projects pursuant to subsection (a), the Secretary shall inform the applicant whether the application is complete and, if it is not, what items are needed for the application to be complete.

(2) Decision

On or before the date that is 90 days after the date on which the Secretary receives a complete application for permission under subsection (a), the Secretary shall-

(A) make a decision on the application; or

(B) provide a schedule to the applicant identifying when the Secretary will make a decision on the application.

(3) Notification to Congress

In any case in which a schedule provided under paragraph (2)(B) extends beyond 120 days from the date of receipt of a complete application, the Secretary shall provide to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives an explanation justifying the extended timeframe for review.

APPENDIX C

Categorical Permissions

C-1. <u>Purpose</u>. The purpose of this appendix is to provide supplemental information on categorical permissions including the process to establish categorical permissions and the use of a categorical permission with a Section 408 request. This appendix should be used in conjunction with the guidance in the main EC.

C-2. <u>References</u>. See Appendix A for a list of relevant references.

C-3. <u>Policy</u>. Categorical permissions are intended to be a flexible tool for districts, divisions, and HQUSACE to use in order to streamline the approval of "categories" of alterations that are similar in nature and that have similar effects to a USACE Civil Works project and impacts to the environment. The premise behind a categorical permission is that a USACE office identifies a specific and commonly occurring set of activities that require Section 408 permissions within a specified geographic area that, both individually and cumulatively, have been determined not to impact the usefulness of the USACE project(s); associated environmental impacts are less than significant; and the activities would not be injurious to the public interest.

a. A categorical permission is not the same as a NEPA categorical exclusion. The analysis of potential effects to the USACE project, public interest, and NEPA and other environmental and cultural resources compliance for the identified activities is done in advance to establish the categorical permission, and then individual Section 408 requests are reviewed for compliance with the established categorical permission. For those individual Section 408 requests that are consistent with the terms and conditions of a categorical permission, Section 408 permission can be granted with an abbreviated validation process to determine that the terms and conditions are met. The decision letter used to document the use of a categorical permission can include any additional clarifying environmental documentation necessary, likely avoiding the need for a separate NEPA document.

b. A categorical permission may be created at the district, division, or HQUSACE level, but must be approved by a District Commander, Division Commander, or the Director of Civil Works depending upon the region in which it is applicable. Validation that a Section 408 request is consistent with the terms and conditions of a categorical permission and subsequent authorization of the activity under the categorical permission may be delegated. The delegation should be established through the process used to create the categorical permission.

c. A categorical permission can be developed at any geographic scale so long as the effects can be meaningfully generalized across that scale. The use of terms and conditions to limit what activities can proceed under a categorical permission may be essential to successfully establishing a categorical permission. For example, it may be necessary to limit a categorical permission to actions that occur outside of areas designated under the Endangered Species Act

(ESA) as critical habitat or outside of areas subject to tribal treaty rights. Categorical permissions can be limited to not apply at all in those circumstances, or they can require the resolution of ESA consultation requirements or tribal coordination on a project-specific basis before validation of the categorical permission can be granted.

d. Potential categorical permissions should be coordinated with those non-federal sponsors with responsibility for the USACE projects that would be covered. Non-federal sponsors should be given opportunity to provide input on all aspects of the proposed categorical permission, with specific attention to concerns regarding impacts on their O&M responsibilities and public interest considerations. The categorical permission may include terms and conditions to address issues associated with the non-federal sponsor O&M responsibility. For example, a categorical permission could require requesters, if the requester is not the non-federal sponsor, to obtain a Statement of No Objection and/or require review by the non-federal sponsor prior to submitting the request to USACE.

C-4. Establishing Categorical Permissions.

a. Categorical permission development follows similar steps as the process to develop a programmatic NEPA document, but requires an evaluation of the potential effects to the USACE Civil Works project (such as structural and operational effects), public interest, and the potential environmental and cultural resources effects of the covered activities. The basic process will include:

(1) scoping;

(2) conducting an initial assessment of potential impacts to the USACE project to ensure the scope is appropriate for a categorical permission;

(3) development of the draft categorical permission with special conditions;

(4) soliciting non-federal sponsor input;

(5) making the draft categorical permission available for public comment and tribal government-to-government consultation. In addition, there will be opportunities for a public hearing afforded;

(6) developing a final categorical permission and decision document after taking into consideration all input and making necessary revisions; and

(7) making the final categorical permission publicly available on appropriate USACE websites.

b. All proposed and final categorical permissions should explicitly state that a categorical

permission satisfies the Section 408 requirements only and that landowner permission and any other applicable federal, state, or local permits need to be secured before work can begin, including any applicable and required Regulatory Program authorization. Appropriate district staff should ensure the categorical permission decision is coordinated with the Section 10/404/103 permit decision if both are required.

c. When establishing a categorical permission, the district, division, or HQUSACE should develop:

(1) the detailed description and scope of the activities that are proposed to be covered by the categorical permission;

(2) the geographic area in which the categorical permission applies;

(3) the specific USACE project(s) or types of USACE projects to which the categorical permission applies;

(4) a list of circumstances that, if present, would disqualify an otherwise in-scope activity from using the categorical permission (such as the possibility for adverse effects to endangered species in the area);

(5) a summary of findings that supports the determination that all activities within the defined parameters of the categorical permission do not impair the usefulness of the applicable USACE project(s) and are not injurious to the public interest, as well as the NEPA decision document (categorical exclusion, finding of no significant impact (FONSI), or ROD, as appropriate) for the categorical permission;

(6) a description of what documentation is to be submitted to USACE by the entity requesting Section 408 permission in order to validate the applicability of the categorical permission for a specific activity;

(7) an appropriate period of validity for the categorical permission (i.e., expiration date), if appropriate; and

(8) the process for USACE staff to use to validate the applicability of the categorical permission and inform the requester of whether the activity is authorized under the categorical permission, including the identification of the decision level for the validation.

C-5. Implementing Categorical Permissions.

a. For individual Section 408 requests involving the validation of use of a categorical permission, a written decision will be provided to the requester. The written approval should attach or include any terms and conditions of the categorical permission with the approval letter.

b. The organizational level that developed the categorical permission should also develop a process to periodically conduct a review or audit of the categorical permission itself to ensure that its use continues to meet its intended purpose to not impair the usefulness of the applicable USACE project(s) and not be injurious to the public interest. Should the review or audit demonstrate that the categorical permission is not meeting its intended purpose, the District Commander, Division Commander, or Director of Civil Works, as appropriate, has the authority to suspend or revoke the categorical permission.

APPENDIX D

Environmental and Cultural Resources Compliance

D-1. <u>Purpose</u>. The purpose of this appendix is to provide supplemental policy guidance on conducting environmental and cultural resources compliance inclusive of NEPA compliance for Section 408 permission requests. This appendix should be used in conjunction with the guidance in the main EC.

D-2. <u>References</u>. The following are the primary references that are most relevant to environmental and cultural resources compliance for Section 408 permissions. There are multiple other federal statutes, Executive Orders, and regulations that potentially may be applicable to a specific Section 408 permission request. Districts should consult with environmental staff and/or counsel to determine which laws and regulations are applicable to a given request.

- a. Rivers and Harbors Act of 1899
- b. National Environmental Policy Act
- c. Endangered Species Act of 1973
- d. National Historic Preservation Act
- e. Clean Water Act of 1972
- f. 33 CFR Part 230 Procedures for Implementing NEPA
- g. 40 CFR Part 1500-1508 Council on Environmental Quality (NEPA)

h. Establishing, Applying and Revising Categorical Exclusions under the National Environmental Policy Act, Council on Environmental Quality (2010)

i. Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act, Council on Environmental Quality (2012)

j. Council on Environmental Quality CEQ Information Memorandum to Agencies Containing Answers to 40 Most Asked Question on NEPA Regulations (46 FR 34263-68, July 28, 1983)

D-3. Policy.

a. A decision on a Section 408 request is a federal action subject to NEPA and other federal environmental and cultural resources compliance requirements such as Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, essential fish habitat consultation, and tribal consultation, etc. Environmental and cultural resources compliance efforts should be conducted concurrently with the Section 408 review process to the maximum extent practicable. Environmental and cultural resources compliance, except those prepared for Regulatory permit decisions, must be completed prior to rendering a Section 408 permission decision.¹ Environmental and cultural resources compliance efforts should be commensurate with the degree of potential environmental and cultural effects of the activity within the scope of the Section 408 analysis.

b. Ensuring and conducting environmental and cultural resources compliance for a Section 408 request is the responsibility of USACE. However, the requester is responsible for providing all supporting information and documentation that the district identifies as necessary to assess compliance, such as species surveys, habitat assessments, and/or cultural resource surveys. Requesters may, but are not required to, draft the NEPA environmental assessment or fund a contractor to prepare an environmental impact statement for a Section 408 request consistent with 40 CFR 1506.5. The district must ensure that any NEPA documentation drafted by a requester or contractor is accurate and compliant with USACE and CEQ requirements prior to accepting it for use with the Section 408 request. A final Section 408 decision cannot be rendered until the requester has provided all information necessary for the district to complete its assessment for environmental and cultural resources compliance. The district will work with the requester to determine the requirements, which will be scaled to be commensurate with the degree of potential environmental effects of the activity within the scope of the Section 408 analysis.

c. USACE has jurisdiction under Section 408 only over the specific activities or portions of activities that have the potential to alter, occupy, or use a USACE project. Therefore, if a proposed alteration is part of a larger project that extends beyond the USACE project boundaries, the district should focus its analysis for environmental and cultural resources compliance on only those portions or features of the larger project that USACE has sufficient federal control and responsibility to review. The scope of analysis for environmental and cultural resources compliance for the Section 408 review should be limited to the area of the alteration and those adjacent areas that are directly or indirectly affected by the alteration. For example, a pipeline or highway can extend for many miles on either side of a USACE project boundary. In this example, the scope of analysis for Section 408 review should be limited to the effects of the pipeline or highway construction within the USACE project boundary and limited adjacent area to the extent that the location of the impacts are determined by the route within the USACE project boundary, but would not address those portions of the pipeline or highway construction that are sufficiently removed from the USACE project boundary. In contrast, a proposed

¹ Compliance and decision-making under Regulatory authorities (Section 10/404/103) is conducted by the Regulatory component within the applicable district. All final Regulatory permit decisions will be made concurrent with or after the corresponding Section 408 decision.

alteration that would increase the design level throughout a federally authorized levee system would likely significantly overlap the footprint of the USACE project such that the scope of analysis for environmental and cultural resources compliance would include all of the requester's activities. As a general rule, if there are features of a larger project occurring outside of the USACE project boundaries that are integral to the features of the larger project altering a USACE project that they cannot be meaningfully distinguished (e.g., a setback levee that is located outside of the original project boundary of the levee being replaced), the USACE Section 408 scope of analysis should be broad enough to address all those features/activities. Generally, elements of the larger project that are not integral to the features that would alter the USACE project should not be included in the USACE environmental and cultural resources compliance analysis. The scope of analysis should generally be similarly limited to include operations and maintenance of a proposed alteration only to the extent that the operation and maintenance of the alteration would affect the USACE project. However, in some cases the scope of analysis for operational effects may be broader than the scope of analysis for construction effects and may extend beyond the USACE project boundary. Note that the scope of analysis for a Section 408 request may be different than the scope of analysis for a Regulatory permit review (Sections 10/404/103) for the same proposal because the geographic extent of jurisdiction under each authority may be different.

d. Programmatic Compliance. Districts have discretion and are encouraged to develop new or use existing programmatic NEPA documents and/or programmatic environmental consultations for Section 408 permission requests, when appropriate. Programmatic NEPA documents and other environmental consultations (e.g., Programmatic or Regional Biological Opinions, Section 106 Programmatic Agreements, and Standard Local Operating Procedures for Endangered Species [SLOPES]) provide a way to efficiently conduct environmental compliance for categories of activities that have similar environmental effects.

e. Historic, Cultural, and Archaeological Resources. Districts should follow the regulations within 36 CFR 800 for complying with Section 106 of the NHPA when acting as the lead agency as outlined in 36 CFR 800.2(a)(2) for Section 106 compliance. The undertaking within the context of 36 CFR 800.16(y) is limited to the activity within the jurisdiction of USACE that requires permission under Section 408 (see paragraph D-3.c. above). The area of potential effects for a Section 408 request should therefore, be limited to the areas directly or indirectly affected by the limited scope of the undertaking. Section 106 compliance will be satisfied using Regulatory's compliance when the Regulatory element is the lead for environmental compliance on an action that requires both Section 408 and Regulatory authorization and activities and impacts within the scope of each review are the same. For Section 408 requests, the section on cultural resources within Appendix C of reference A.30 does not apply.

f. Tribal Consultation.

(1) USACE recognizes the sovereign status of federally recognized tribes and its obligations for pre-decisional government-to-government consultation. USACE also recognizes that

working with representatives from tribal nations, it can determine whether an area has tribal cultural, historic or spiritual significance. USACE further recognizes that tribes possess their own individual culture, histories, languages, customs and that tribal traditional knowledge is unique to each tribe and it will be used to inform the Section 408 review process. As a result, consultation may occur with individual tribes in bi-lateral engagement or with multiple tribes that have consented to consult in a multi-lateral engagement.

(2) Districts are required to ensure that meaningful government-to-government consultation occurs early in the review process of a Section 408 request. Consistent with the USACE tribal consultation policy, districts should involve the tribes in open, timely, meaningful, collaborative, and deliberative communication process that emphasizes trust and respect throughout review and decision-making process. During consultation districts should, to the extent practicable and permitted by law, work toward mutual consensus during consultation in an active and respectful dialogue concerning actions that may significantly affect tribal resources, tribal rights (including Treaty rights) or Indian lands. Tribal consultation is not bound nor limited to specific timelines. Districts must ensure early coordination with district tribal liaisons to identify any tribal issues (i.e., tribal holidays, timing of Tribal Council meetings, etc.) that could impact timelines prescribed in this EC. Per the USACE tribal consultation policy, federally recognized tribes have the right to request government-to-government consultation with the district. All requests by a tribe for government-to-government consultation with USACE will be honored.

g. Fish and Wildlife Coordination Act. If the proposed alteration would impound, divert, or otherwise control or modify any stream or other body of water (including channel deepening), consultation under the Fish and Wildlife Coordination Act is required. Districts must ensure that the US Fish and Wildlife Service (USFWS) and applicable state wildlife resources agency have an opportunity to provide input and recommendations regarding the impact of the action on wildlife resources. Districts should document the outreach to the wildlife resource agencies. Districts must integrate any reports or recommendations received in the documentation for the Section 408 decision along with an explanation of how that input was considered. However, districts should not be providing funds to USFWS to conduct this consultation for Section 408 requests.

h. Mitigation. Mitigation may include avoiding, minimizing, rectifying, reducing, and/or compensating for adverse impacts to resources and may include, but is not limited to, fish and wildlife mitigation, cultural resources mitigation, noise mitigation, and air quality mitigation.

(1) Districts have discretion to require mitigation for a Section 408 request for a mitigated FONSI for NEPA purposes, to ensure the proposed alteration is not injurious to the public interest, or as required under other applicable federal environmental law.

(2) Mitigation associated with Section 408 requests does not need to be incrementally cost justified and does not need to comply with requirements in Section 2036 of WRDA 2007, as amended.

(3) If the proposed alteration also requires Regulatory authorization, the review conducted by the Regulatory element within the district will determine if compensatory mitigation for losses to aquatic resources is appropriate under its applicable authorities. Therefore, the Section 408 request will not include an evaluation of mitigation for those resources subject to Regulatory's jurisdiction.

i. Emergency Situations. The district has discretion to use the emergency procedures provided for in environmental statutes to process Section 408 requests.

(1) NEPA. The regulations implementing NEPA provide for flexibility in the NEPA compliance process in circumstances of an emergency after coordination with CEQ.² NEPA documentation should be accomplished prior to initiation of emergency work if time constraints render this practicable. Such documentation may also be accomplished concurrent with or after the completion of emergency work, if appropriate.³ Districts should be aware of categorical exclusions, including the categorical exclusion for emergencies at Section 1005(b) of Water Resources Reform and Development Act of 2014, to expedite NEPA compliance in these situations.

(2) Endangered Species. The regulations implementing ESA provide that where emergency circumstances mandate the need to consult in an expedited manner, consultation may be conducted informally through alternative procedures that the Service(s) determine to be consistent with the requirements of Section 7(a)-(d) of the Endangered Species Act.⁴ Formal consultation, if required, should be initiated as soon as practicable after the emergency is under control.

(3) Historic and Cultural Resources. Specific procedures to comply with Section 106 of the NHPA during a disaster or emergency are located at 36 CFR 800.12, "Emergency Situations." Districts and divisions may develop, in consultation with the Advisory Council on Historic Preservation and others, standard procedures during a disaster and/or emergency; they may follow provisions of programmatic agreements that contain specific provisions for addressing historic properties in emergencies; or, in the absence of specific procedures, provide opportunities to comment as specified in 36 CFR 800.12(b)(2).

D-4. <u>NEPA</u>.

a. The NEPA compliance process should be completed in an efficient, effective and timely manner consistent with guidance issued by CEQ on March 6, 2012 entitled *Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act.* Controlling guidance for NEPA compliance is set forth in CEQ's

² 40 CFR 1506.11

³ 33 CFR 230.8

^{4 50} CFR 402.05

regulations at 40 CFR Parts 1500-1508 and the USACE Civil Works NEPA implementing regulations found at 33 CFR Part 230.

b. NEPA documentation for Section 408 requests will typically not require the same level of detailed analysis as needed for feasibility reports or other planning studies. In addition, portions of 33 CFR 230, such as Appendix A, that are applicable to feasibility, continuing authority, and/or special planning reports are not applicable to Section 408 permissions. However, districts are expected to comply with all basic requirements of NEPA.

c. Alternatives Analysis. For NEPA compliance for Section 408 requests, reasonable alternatives required by 40 CFR Part 1502.14 should focus on two scenarios: 1) no action (i.e., no proposed alteration in place) and 2) action (i.e., proposed alteration in place). Only reasonable alternatives need to be considered in detail. Reasonable alternatives must be those that are feasible, considering those that satisfy the underlying purpose and need (of the requester) that would be satisfied by the proposed federal action (granting of permission for the alteration). Thus, examination of alternative forms of a proposed alteration that the requester has not proposed should only be included to the extent necessary to allow a complete and objective evaluation of the public interest and informed decision regarding the alteration request.

(1) Because USACE is not the proponent for the alteration requested under Section 408, all environmental compliance documentation will refer to the requester's proposal as the "requester's preferred alternative."

(2) For NEPA compliance led by another entity such as another federal agency, that agency may include additional alternatives to comply with their specific requirements. District should be actively coordinating with the lead agency as a cooperating agency to ensure any information needed for NEPA compliance for the Section 408 request is included in the lead agency's NEPA document to maximize the ability to fully adopt that NEPA document.

(3) For NEPA compliance for Section 408 requests that also require Regulatory authorization, additional alternatives and additional detail may be included the NEPA document to comply with Section 404(b)(1) guidelines for the Clean Water Act (CWA). The various offices within the district should be coordinating to ensure appropriate alternatives and detail are included in any NEPA document to maximize the ability for one NEPA document to be prepared to satisfy NEPA compliance for both purposes.

(4) When Regulatory is conducting its alternatives analysis under the CWA Section 404(b)(1) guidelines, an alternative cannot be considered practicable if Section 408 permission cannot be granted. However, the need to seek a Section 408 permission does not make an alternative impracticable.

d. Public Involvement. Involving the public is a critical component to NEPA compliance. For Section 408 alteration requests that are expected to have a significant effect on the human or

natural environment, the district must make diligent efforts to involve the public throughout the NEPA scoping and EIS process including the required comment periods. For those Section 408 requests for which an environmental assessment (EA) is prepared or a categorical exclusion is used, draft NEPA compliance documents should not be circulated for public comment, except for in rare circumstances. Instead, a public notice soliciting input will serve as the method of involving the public in the NEPA process required by 40 CFR 1501.4(e)(1). See paragraph 12.b. of the main EC for information on public notices. In circumstances where a proposed alteration is associated with a current study or other uncommon circumstances, a decision to circulate the draft Section 408 EA may be approved by the Division Commander or the Division Commander's designee. Any decision to circulate draft EA and/or draft FONSI for a Section 408 request that also requires a Section 10/404/103 permit decision must be coordinated with the Regulatory Program to ensure that no pre-decisional or deliberative information related to Regulatory decision making (e.g., Section 404(b)(1) guidelines analysis) is included in the document to be circulated.

e. Categorical Exclusions. Alterations that are expected to not result in significant effects on the environment, both individually and cumulatively should be evaluated to determine if an approved categorical exclusion at 33 CFR 230.9 applies. For example, the categorical exclusions at 33 CFR 230.9(b) and (i) may have applicability to some of the smaller scale alterations that may be in a Section 408 request. Real estate grants for rights-of-way as referenced in 33 CFR 230.9(i) should be broadly interpreted to include grants of rights-of-way by either USACE or the non-federal sponsor. Prior to using a categorical exclusion, the district must ensure that the proposed alteration is within the intended scope of the specific categorical exclusion and that no extraordinary circumstances exist that would merit the preparation of an EIS or EA. Applicability and use of approved USACE categorical exclusions for Section 408 permissions should be documented in a manner consistent with the CEQ guidance memorandum titled, *Establishing, Applying and Revising Categorical Exclusions under the National Environmental Policy Act*, dated 23 November 2010.

f. Adoption and Incorporation by Reference. Districts are strongly encouraged to adopt and/or incorporate by reference any NEPA documentation that may already exist or may already be in development for the federal project, or other relevant NEPA documentation. This may include recent NEPA documents from a feasibility study, operations study, dam safety modification study, and/or Regulatory actions. Districts must ensure that the information contained in these other NEPA documents is appropriate and applicable to the anticipated effects of the alteration, paying particular attention to re-evaluate information that is greater than 5 years old, prior to adoption or incorporation by reference for the Section 408 permission decision. Districts should provide supplemental NEPA documentation, to only cover those environmental impacts associated with the Section 408 alteration that were not considered in these previous NEPA documents. Districts may also adopt another agency's EA. When adopting all or portions of another agency's EIS or EA, the district is still responsible for developing a Record of Decision (ROD) or FONSI, as applicable, to document NEPA compliance for the Section 408 permission decision. The ROD or FONSI may be integrated with the Summary of Findings for purposes of efficiency.

g. Cooperating Agencies.

(1) As provided for in 40 CFR 1501.6, upon request of another federal agency that is the lead agency for NEPA, any other federal agency that has jurisdiction by law shall be a cooperating agency. This may include USACE when a Section 408 permission is required. For those alterations in which another Federal agency is the NEPA lead agency, districts will participate in the NEPA review as a cooperating agency to the maximum extent practicable.⁵ When USACE is a cooperating agency, USACE will provide comments on another federal agency's draft EIS even if the response is no comment.⁶ Districts will normally adopt that federal agency's EIS and consider it to be adequate for NEPA compliance for a Section 408 permission unless the district finds substantial doubt as to the technical or procedural adequacy or omission of factors important to the Section 408 permission decision,⁷ particularly those that were raised by USACE during the development of the EA or EIS but rejected by the lead agency for inclusion. Districts may also adopt portions of an EIS under 40 CFR 1506.3, and supplement with any information necessary to comply with NEPA for the Section 408 permission decision. For hydropower alterations, USACE and FERC have entered into an MOU for meeting NEPA requirements (see Appendix F).

(2) Tribal governments may have special expertise with respect to alternatives and can participate as a cooperating agency. Meaningful coordination with tribal entities, and analysis of a proposed action's potential effect on tribal lands, resources, or areas of historic significance is an important part of federal agency decision-making. In addition to provisions in 40 CFR 1501.2 and 1501.7 which call for the involvement of tribes that may be affected by a federal proposal, CEQ issued a Memorandum to the Heads of Federal agencies (July 28, 1999) encouraging more active solicitation of tribal entities for participation as cooperating agencies in NEPA documents. Per the CEQ Memorandum, the benefits of granting cooperating agency status include "disclosure of relevant information early in the analytical process, receipt of technical expertise" which is consistent with the USACE tribal consultation policy.

h. Multi-phase Reviews and Tiering. Districts have discretion to use tiering to efficiently conduct NEPA compliance for a multi-phased review of a Section 408 request. In this case, a broad or programmatic EIS or EA, as appropriate, would be completed in the first milestone of a multi-phased review of a Section 408 request. The district may then supplement, or tier off of, the original NEPA document, as appropriate, for each subsequent milestone of the Section 408 request. When tiering, the initial broad or programmatic EIS or EA must present sufficient information regarding overall impacts of the proposed alteration so that decision-makers can make a reasoned judgment on the merits of the action at the present stage of planning or

⁵ 33 USC 408(b)(1)(B)

⁶ 33 CFR 230.19(e)

⁷ 33 CFR 230.21

development and exclude from consideration issues already decided or not ready for decision. The initial broad EIS or EA should also identify data gaps and discuss future plans to supplement the data and prepare and circulate phase-specific NEPA documents.⁸

⁸ 33 CFR 230.13(c)

APPENDIX E

Dams and Levees

E-1. <u>Purpose</u>. The purpose of this appendix is to provide supplemental guidance to be used in conjunction with guidance in the main EC for proposed alterations by others to federally authorized dams and reservoirs, (including dams associated with navigation locks) and levee systems.

E-2. Applicability.

a. Dams and Reservoirs (including Navigation Dams). A dam is an artificial barrier, usually crossing a watercourse and including appurtenant structures, constructed for the purpose of storage, control, or diversion of water. This definition applies whether the dam has a permanent reservoir or is a detention dam for temporary storage of floodwaters. This appendix is applicable to federally authorized dams, and associated appurtenant structures, operated and maintained by USACE or those constructed by USACE, but which are operated and maintained by non-federal sponsors and may also be included under the jurisdiction of a State Dam Safety Agency defined by the National Dam Safety Program. This appendix may also be applicable to lands required to ensure reservoir integrity up to the project maximum flood (PMF), in addition to structures and canals where breach would release pool. See Appendix F for additional information concerning hydropower facilities. Below further describes applicability related to water supply at USACE dams and reservoirs.

(1) Water supply users entering into an agreement under Section 6 of the Flood Control Act (FCA) of 1944 (33 USC 708) or the Water Supply Act (WSA) of 1958, as amended (43 USC 390b) generally will not need a separate Section 408 permission.

(2) For currently authorized Municipal and Industrial (M&I) water supply storage, Section 408 considerations will be taken into account in the drafting of an M&I water storage agreement and associated outgrants or consents. Any requirements related to the user's facilities (intake structures, etc.) will be included in the agreement and related outgrants or consents.

(3) For reallocated M&I water supply storage under the 1958 WSA authority, the water supply user must be advised that the reallocation study itself will not specifically address the Section 408 considerations but that Section 408 considerations will be taken into account in the drafting of a water storage agreement and associated outgrants or consents. Any requirements for water supply user's facilities (intake structures, etc.) will be included in the agreement and associated outgrants or consents.

(4) For surplus water under the authority of Section 6 of the 1944 FCA, Section 408 considerations will be taken into account in the drafting of the surplus water agreement and

associated outgrants or consents and any requirements for water supply user's facilities (intake structures, etc.) will be included in the agreement and associated outgrants or consents.

(5) For M&I water supply intakes of any size to be placed in USACE-operated projects that do not fall within the scope of either Section 6 of the 1944 FCA or of the1958 WSA, e.g., intakes placed at projects not meeting the definition of "reservoir" projects for purposes of those two statutes, the guidance in paragraph 9.e. must be followed to determine if a separate Section 408 permission is required.

b. Levee Systems. A levee system (or sometimes referred to as "levee" in this document), is comprised of one or more components which collectively provide flood risk reduction to a defined area, referred to as a leveed area. A levee is inclusive of all components that are interconnected and necessary to exclude floods from the leveed area. Levees do not usually cross a watercourse. Common components and associated features for levee systems include sheetpile walls, berms, relief wells, cutoff walls, foundation, drainage structures, ponding areas, channels, closure structures, pump stations, transitions, and erosion protection. This appendix applies to federally authorized levee systems including those operated and/or maintained by USACE and those federally authorized levee systems operated and maintained by a non-federal sponsor.

E-3. <u>References</u>. The following is a list of references containing evaluation processes, design standards, and operations and maintenance procedures that may be relevant to consider for alterations to dams and levees.

- a. Section 6 of the Flood Control Act (FCA) of 1944 (P.L. 78-534), Contracts for safe of surplus water at Army projects Disposition of revenues
- b. Water Supply Act (WSA) of 1958 (P.L. 85-500, as amended)
- c. 44 CFR 65.10, Mapping of areas protected by levee systems
- d. ER 1110-2-1150, Engineering and Design for Civil Works Projects
- e. ER 1110-2-1156, Safety of Dams, Policy, and Procedures
- f. ER 1110-2-1806, Earthquake Design and Evaluation of Civil Works Projects
- g. ER 1110-2-1942, Inspection, Monitoring, and Maintenance of Relief Wells
- h. EM 1110-1-1005, Control and Topographic Surveying
- i. EM 1110-1-1804, Geotechnical Investigations

- j. EM 1110-1-1904, Settlement Analysis
- k. EM 1110-1-2908, Rock Foundations
- 1. EM 1110-2-1418, Channel Stability Assessment for Flood Control Projects
- m. EM 1110-2-1601, Hydraulic Design of Flood Control Channels
- n. EM 1110-2-1902, Slope Stability
- o. EM 1110-2-1906, Laboratory Soils Testing
- p. EM 1110-2-1913, Design and Construction of Levees
- q. EM 1110-2-1914, Design, Construction, and Maintenance of Relief Wells
- r. EM 1110-2-2002, Evaluation and Repair of Concrete Structures
- s. EM 1110-2-2007, Structural Design of Concrete-Lined Flood Control Channels
- t. EM 1110-2-2100, Stability Analysis of Concrete Structures
- u. EM 1110-2-2104, Strength Design for Reinforced-Concrete Hydraulic Structures
- v. EM 1110-2-2200, Gravity Dam Design
- w. EM 1110-2-2502, Retaining and Flood Walls
- x. EM 1110-2-2504, Sheet Pile Walls
- y. EM 1110-2-2902, Conduits, Culverts, and Pipes
- z. EC 1110-2-6066, Design of I-Wall
- aa. ETL 1110-2-583, Engineering and Design: Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures
- bb. ETL 1110-2-575, Evaluation of I-Walls
- cc. U.S. Army Corps of Engineers, Policy for Development and Implementation of System-Wide Improvement Frameworks (SWIFs), CECW-HS memorandum, 29 November 2011

- dd. U.S. Department of Interior Bureau of Reclamation and US Army Corps of Engineers, Best Practices in Dam and Levee Safety Risk Analysis, 1 July 2015 (or most recent version)
- ee. See Appendix A for other applicable references.

E-4. Coordination.

a. For levee alterations, ensure involvement of the district Levee Safety Officer (LSO) and Levee Safety Program Manager (LSPM). For dam and reservoir alterations, ensure involvement of the district Dam Safety Officer (DSO) and Dam Safety Program Manager (DSPM). In addition, the district should inform the requester of any current USACE assessments, modifications, or other studies that are ongoing or are being considered that may have compatible objectives with the potential proposed alteration. These may include semiquantitative or quantitative risk assessments, dam safety modification studies, interim risk reduction measures, or cost-shared studies.

b. Coordination with State Dam Safety Agencies. When the request is for the alteration of a dam operated by a non-federal sponsor, the alteration will be reviewed by the State Dam Safety Agency. In these cases, the requester must obtain written concurrence of the proposed alteration from the State Dam Safety Agency prior to USACE issuing the final Section 408 decision.

c. DSOG/LSOG Review. If the district determines a Safety Assurance Review (SAR) is required for a proposed alteration to a dam or levee, the RMC will determine if the Dam Senior Oversight Group (DSOG) or Levee Senior Oversight Group (LSOG) will review the proposed alteration. If it is determined that the DSOG or LSOG review is required, the RMC will inform the division and district and it will be documented in the review plan. If the DSOG review is required, the district should contact the HQUSACE DSPM to schedule a briefing with the DSOG as soon as possible. If the LSOG review is required, the district should contact the HQUSACE LSPM to schedule a briefing with the LSOG as soon as possible. Information to be presented should include available risk assessment (screening-level or higher-level risk assessments) information and a description of the proposed alteration. DSOG or LSOG will provide feedback, recommendations and concurrence or non-concurrence with proceeding with the Section 408 to the division and district safety officers. The DSOG or LSOG will consider the following when reviewing the Section 408 proposed alteration:

(1) whether the benefits of the alteration are generally commensurate with the risks

(2) whether the alteration potentially worsens or creates new failure modes or risk drivers for the USACE project; and

(3) whether the alteration is exceptionally complex or high risk.

E-5. <u>Potential Considerations for Section 408 Submittals</u>. The information below supplements the main EC. The list below is only a guide for information and/or analyses that may be needed to review alterations to dams and levees. It is not intended to list every analysis or design consideration that may be needed for all proposals.

a. Risk Assessment. Depending on the complexity and associated impacts of the proposed alternation on life safety as determined by the district DSO or LSO, the requester may be required to provide a risk assessment showing risk estimates associated potential failure modes with and without the proposed alteration in place. The district must also inform the requester if there is a change in the risk characterization of the dam or levee during the Section 408 review process and how or if the change in risk will require changes to the alteration being requested.

b. Discussion of Executive Order 11988 Considerations. The district may require the requester to submit sufficient data in order that the district may conduct its analysis required by reference A.35 to ensure that the proposed alteration is compliant with Executive Order (EO)11988. The request should be assessed as to whether there would be induced development in the floodplain, as defined in A.35, as a result of the proposed alteration and address the positive and negative impacts to the natural floodplain functions.

c. Civil. Each request should clearly identify the existing condition of the portion of the USACE project being altered and include plan, profile, and design details of the proposed alteration in relation to the existing USACE project. Below are examples of information that may be necessary to understand the existing and proposed conditions:

(1) Alteration location (Vicinity map and specific alteration location in station or river mile and/or decimal degrees)

(2) Applicable datum

(3) Real property, existing and to be acquired, needed for the proposed alteration

(4) Grading plans

(5) Layout plan, profiles, and cross-sections of proposed alteration

(6) Previous inspection reports to assist in identifying existing deficiencies and their proximity to the proposed alteration.

(7) Temporary measures required during construction (bypasses, cofferdams, etc.)

d. Geotechnical. The following is a list of analyses or information that may be necessary to consider for geotechnical considerations and assessing their impacts if proposed alterations alter the USACE project cross-section or penetrate the natural blanket or foundation.

- (1) Erosion control (changes in erosive forces on a slope)
- (2) Material usage/borrow/waste/transport/hauling
- (3) Liquefaction susceptibility
- (4) Placement of stockpiles, heavy equipment, or other surcharges
- (5) Drilling plan, reference A.31
- (5) Results of subsurface investigation boring logs, test pit logs, laboratory test results, etc.
- (6) Seepage analysis
- (7) Settlement analysis
- (8) Stability analysis
- (9) Vegetation

e. Structural. The following is a list of analyses or information that may be necessary to evaluate the impacts of proposed alterations to concrete, floodwalls, or drainage structures:

(1) Bridges and related abutments

(2) Design analysis for retaining walls and excavation support system

(3) Design of shallow or deep foundations, including bearing capacity and settlement analysis if the construction is located within the line of protection or right-of-way and creates potential seepage problems

(4) Design recommendations for foundations on expansive soils

- (5) Diaphragm walls
- (6) Gates or other operable features
- (7) Other structural components integral to the USACE project

(8) Pier penetrations of embankments

(9) Stability analysis including sliding, overturning, bearing, flotation, uplift and any seismic load effects for any alteration to the channel walls and/or flood walls

- (10) Structural drainage control methods
- (11) Water stops and contraction/expansion joints

f. Hydrology and Hydraulics. Refer to Appendix H for details on when and how a hydrology and hydraulic system analysis should be conducted. Refer to the list below for examples of factors that should be considered when evaluating hydrology and hydraulics impacts.

(1) Changes in inflow

(2) Changes in velocity

(3) Changes in water surface profiles and flow distribution

(4) Consideration of impacts to energy dissipation measures; hydropower generation; sedimentation; or navigation

(5) Scour analysis

(6) Sediment transport analysis

g. Water Control Management Plan. Alterations may have impacts on how water control structures are operated. In these cases, the alterations should consider any impacts or changes to water control plans that may be necessary. If a change to a water control manual is required, the NEPA document developed for the Section 408 alteration should incorporate appropriate analysis for updating the water control manual. Alterations that will work in conjunction with an existing Federal Water Control Manual (WCM) should be documented and incorporated into that WCM. Items to be considered are:

(1) Effects on existing Biological Opinions, Water Quality Certifications, Coastal Zone Management Concurrences, etc. should evaluate project impacts on any legal document, agreement, or requirement that informs water control management by the USACE

(2) Impacts/revisions to the operation of USACE facilities or other projects within the basin

h. Operations, Maintenance and Flood Fighting. Alterations may change how a dam, levee, floodwall, or channel project is to be operated or maintained. They may also require special

flood fighting procedures. Reviews should consider the factors below to determine potential effects.

- (1) Project and maintenance access
- (2) Special inspection requirements
- (3) Maintenance practices
- (4) Flood fighting requirements and practices

(5) Flood contingency plan during construction, measures proposed to protect area under construction, monitoring of river level, river stage at which plan will be activated, materials and equipment to be used to activate plan, and personnel contact and telephone number to activate plan

E-6. USACE Review Considerations.

a. The district (and division, if applicable) LSO is required to review any Section 408 request that modifies a levee system. The district (and division, if applicable) DSO is required to review any Section 408 request that modifies a dam.

b. Risk. Districts will consider the effects of the proposed alteration on the risk associated with the USACE project as part of the review process.

c. National Flood Insurance Program (NFIP). The criteria related to NFIP mapping purposes (44 CFR 65.10, Mapping of areas protected by levee systems) are not USACE design standards and should not be a consideration in the technical analysis or design review. However, the impacts associated with mapping dams and levee systems for the NFIP, such as influences on floodplain management, should be discussed as part of compliance with EO 11988 and considered when discussing potential impacts to associated risks. For Section 408 requests that include an objective of achieving levee accreditation for the NFIP, if the Section 408 is approved, a statement in the written approval document will specify that approval does not constitute, nor should it be construed as, an evaluation to determine if NFIP criteria have been met.

d. Rehabilitation Program. Proposed alterations to federally authorized dams, levees, and floodwalls must also be evaluated to determine whether the alteration will become an integral component of the USACE project. If it is determined that the proposed alteration will become an integral component of the USACE project that is necessary for proper functioning of the USACE project for its authorized purpose, the completed alteration will be included as a USACE project feature eligible for rehabilitation assistance and treated as a federal project component under PL 84-99. The district is responsible for making a determination as to whether or not a proposed

alteration will become an integral component of the USACE project. Factors to consider will vary depending on the type of infrastructure and the proposed alteration. This determination must be made for all proposed alterations to federally authorized dams and levees , regardless of their status in the Rehabilitation Program at the time of the Section 408 request, to ensure that the proposed alteration is appropriately considered in future decisions about project eligibility for rehabilitation assistance. Examples of such alterations include stability or seepage berms, and changes to the structure type or geometry. In addition, districts should identify if the alteration is part of an approved System Wide Improvement Framework (SWIF), see reference E-3.bb, and consider any information specified for the alteration in the SWIF. For more information on USACE emergency activities and the Rehabilitation Program, see reference A.29.

e. Alterations Within the Reservoir Area. These proposed alterations require the same level of technical review as alterations to dams. Generally, alterations within the reservoir areas will be requested by the water supply non-federal sponsor for intake facilities. These alterations should be reviewed for impacts to life safety, inundation, and intake levels. When reviewing the intake levels, consideration will be given to drought conditions and also to lake level drawdowns for dam safety water control purposes. When alterations are proposed along the reservoir, the alteration will be reviewed for constructability and for potential failure modes related to misoperation, overtopping, foundation failures, alteration-induced subsidence, and other possible incidents that could cause the uncontrolled loss of pool.

E-7. Post-Permission Oversight.

a. Inspections. Inspections conducted by USACE should document whether approved alterations are being operated and maintained consistent with the approved Section 408 and/or updated O&M manual.

b. National Levee Database (NLD). Districts should ensure that the NLD is updated to capture new or changed features of a levee system constructed as part of a Section 408 permission. The district will provide the requester with the requirements for any needed surveys, including updated centerline information and cross sections, in order to update the project information in the NLD to capture the alterations.

c. National Inventory of Dams (NID). Districts should ensure that the NID is updated to capture new or changed features of a dam, including appurtenant structures, constructed as part of a Section 408 permission. The district will provide the requester with the requirements to update the project information in the NID to capture the alterations.
APPENDIX F

Non-federal Hydropower Development at USACE Facilities

F-1. <u>Purpose</u>. The purpose of this appendix is to provide supplemental guidance to be used in conjunction with guidance in the main EC and Appendix E for requests for alterations of USACE projects by adding hydroelectric power generation and requiring a preliminary permit or license by the Federal Energy Regulatory Commission (FERC). In these cases, the main EC, this appendix, and the current Memorandum of Understanding (MOU) between the FERC and USACE, reference F-2.h (or most current version), will govern the Section 408 review process. The MOU contains the process to be used for the environmental and cultural resources compliance where FERC is the lead federal agency and USACE would be a cooperating agency. USACE is responsible for developing an understanding of the concept proposal and for responding to FERC inquiries regarding jurisdiction and conflict with USACE project purposes. USACE will also share, as appropriate, information regarding risks to the USACE project.

F-2. References.

a. Federal Power Act, as amended

b. ER 1110-2-401, Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for Projects and Separable Elements Managed by Project Sponsors

c. ER 1110-2-1150, Engineering and Design for Civil Works Projects

d. ER 1110-2-1454, Corps Responsibilities for Non-Federal Hydroelectric Power Development under the Federal Power Act

e. ER 1110-2-1462, Water Quality and Water Control Considerations for Non-Federal Hydropower Development at Corps of Engineers Projects

f. ECB 2008-8, Sharing Technical Information in Support of Non-Federal Hydropower Development

g. US Army Corps of Engineers, Charging and Retaining Fees Charged to FERC Licensees, CECC-G memorandum, 6 June 2006

h. Memorandum of Understanding Between the United States Army Corps of Engineers and the Federal Energy Regulatory Commission on Non-Federal Hydropower Projects, 20 July 2016, with attachments.

i. See Appendix A of this EC for other applicable references.

F-3. USACE and FERC Coordination.

a. Under the default two-phase process established under reference F-2.h, USACE and FERC have agreed to work with each other and with other participating agencies or entities, as appropriate, to ensure that timely decisions are made and that the responsibilities of each agency are met. Specifically, subject to the availability of resources and consistent with applicable laws, regulations, Army policies and FERC policies, each agency agrees to: commit to early involvement; participate proactively; share data; communicate informally; attend public meetings; and coordinate on studies of hydropower potential.

b. Each district and division that operates non-powered dams or other facilities with the potential for generating hydroelectric power has a FERC Coordinator for coordination with FERC regarding the licensing process and all aspects of non-federal hydropower development on a USACE dam or facility. The FERC Coordinator will be responsible for working with the Section 408 Coordinator to ensure timely completion of the Section 408 review process consistent with reference F-2.h. The FERC Coordinator should also ensure coordination occurs with Regulatory, as appropriate.

c. When a USACE district receives a written request to alter a USACE project for the addition of hydroelectric generation, the district will confirm that the requester has applied or intends to apply for a FERC preliminary permit to investigate the potential for adding hydroelectric power facilities to the USACE project. Initial coordination should consist of a meeting to discuss the proposed project and inform the requester of any known issues that would impact their proposal, such as any dam safety or water supply issues.

d. For projects with an existing FERC permit or license, reference F-2.h should be utilized to the greatest extent possible.

e. USACE will seek to streamline processes to the maximum extent possible, such as through programmatic approaches or adoption of reviews conducted by others (Appendix D) or use of categorical permissions as described in Appendix C.

f. The public notice requirements for non-federal hydropower Section 408 requests must be closely coordinated with FERC's public notice requirements for the licensing process, and where feasible the FERC public notice process must be relied upon if sufficient to reduce redundancy.

g. Design documentation within the FERC license application Exhibit F generally satisfies the design and information requirements for environmental reviews for phase I when addressing non-federal hydropower proposals.

h. Where FERC license requirements are duplicative with Section 408 permission requirements in the EC, if feasible, the FERC requirements must be relied upon to inform the

USACE Section 408 permission and other related USACE decisions as encouraged by reference F-2.h to ensure streamlining and reduction of duplicative efforts.

i. Phase II of reference F-2.h allows for requesters to employ either the single-phased or multi-phased Section 408 process, as best suits the technical nature of the proposed project.

APPENDIX G

Navigation Channels, Harbors, Locks, Jetties, Bridges, and Features

G-1. <u>Purpose</u>. The purpose of this appendix is to provide supplemental information to be used in conjunction with guidance in the main EC for alterations proposed by others to USACE navigation projects, including channels, harbors, locks, jetties, bridges, and other associated features (upland dredged material containment facilities). The mission of the USACE navigation program is to provide safe, reliable, efficient, effective, and environmentally sustainable waterborne transportation systems for movement of commerce, national security needs, and recreation. This mission is accomplished by ensuring adequate project dimensions to provide safe passage of commercial navigation through the federally authorized navigation project, while minimizing environmental impacts. Accordingly, any proposed alterations to an authorized USACE navigation project must be evaluated to determine that such alteration will not impair the usefulness of the project and will not be injurious to the public interest. Refer to Appendix E for proposed alterations to navigation dams.

G-2. <u>References</u>. The following is a list of references that may be relevant to consider for alterations to navigation features.

- a. Section 204 of Water Resources Development Act of 1986, Public Law (PL) 99-662
- b. 33 USC 565, River and Harbor Improvement by Private or Municipal Enterprise
- c. ER 1110-2-1403, Studies by Coastal, Hydraulic, and Hydrologic Facilities and Others
- d. ER 1110-2-1404, Hydraulic Design of Deep Draft Navigation Projects
- e. ER 1130-2-520, Navigation and Dredging Operations and Maintenance Policies
- f. ER 1140-1-211, Non-Department of Defense Reimbursable Services

g. ER 1165-2-211, Water Resource Policies and Authorities – Operation and Maintenance of Improvements Carried Out By Non-Federal Interests to Authorized Harbor or Inland Harbor Projects

h. EM 1110-2-1611, Layout and Design of Shallow-Draft Waterways

i. EM 1110-2-1613, Hydraulic Design of Deep Draft Navigation Projects

j. EP 1130-2-520, Navigation and Dredging Operations and Maintenance Guidance and Procedures

k. COMDTPUB P16591.3D, Office of Bridge Programs, U.S. Coast Guard Bridge Permit Application Guide, July 2016

1. See Appendix A for other applicable references.

G-3. <u>Project Specific Setbacks</u>. Once it has been determined that Section 408 permission is required, districts are encouraged to use any project-specific setbacks as a guideline in evaluating whether a structure or activity is at a sufficient distance from the USACE project so not to impact the usefulness of the USACE navigation project. For those USACE navigation projects that do not have established setbacks, districts may elect to establish setbacks to delineate the minimum distances a structure or feature should be located from a navigation feature (adjacent, over, and/or below) to avoid impacting the usefulness of the project. Districts may consider project specific setbacks as a criterion when establishing a categorical permission. At a minimum, the following should be considered when developing setbacks:

a. Maximum dredging depth and width, to include advanced maintenance, allowable overdepth, and non-pay overdepth

b. Top edge of the navigation channel, including appropriate side slopes and overdepth

c. Sufficient clearances of equipment needed for dredging the navigation channel to its full depth and width, including side slopes

- d. Minimum low sag clearance required for lines or structures crossing above the channel
- e. Weather, tides, flow rates, velocities, and other factors related to the region
- f. Dredged Material Placement Facility availability

G-4. Proposed Alterations in which the Scope of Analysis Completely Aligns Between Section 10 and Section 14 (33 USC 408) of the Rivers and Harbors Act of 1899. Activities proposed in, over, or under navigable waters within a USACE Navigation project typically require authorization under both Section 10 and Section 408. The scope of what USACE must evaluate to make a decision under each authority will be different for many activities due to the different nature of the jurisdiction of each authority. The scope of analysis for Section 10 is generally limited to jurisdictional waters (see 33 CFR Part 325 Appendix B Paragraph 7.b.), whereas the scope of analysis for Section 408 is defined in relation to the limits of the Civil Works project and can include operations and maintenance and/or emergency response considerations to the extent those activities have an effect on the USACE project. In cases in which there are different scopes of analysis for Section 10 and Section 408, USACE will issue separate authorizations under each authority after sharing and levering information and analysis to the maximum extent practicable. However, for many activities altering navigation projects, the scope of analysis for Section 408 will be identical. In those cases where the scope of analysis for

Section 10 and Section 408 is identical, a single authorization will be issued following the following procedures.

a. The district will use information provided by the applicant/requester for activities occurring within navigable waters and within the boundaries of a USACE Navigation project and make a determination as to whether or not the scope and information needs would be the same for both a Section 10 and Section 408 decision. The typical type of proposed activities within USACE Navigation projects in which it may be likely that the jurisdiction and scope would be the same for both Section 10 and Section 408 include proposals for electric transmission lines, boat docks, boat lifts, bulkheads, revetments, minor dredging, mooring buoys, mooring pilings, and other similar activities. In cases when the scope and jurisdiction of Section 10 and Section 408 do not completely align, separate authorizations under Section 10 and Section 404 of the Clean Water Act outside the boundary of the activity that triggers Section 10 jurisdiction will require a separate Section 408 permission if one is needed. Districts should coordinate with the appropriate Regulatory office and Section 408 staff for clarification on jurisdiction.

b. For cases in which the scope and jurisdiction between Section 10 and Section 408 align, appropriate district staff for Regulatory will review the information submitted for the purposes of environmental compliance and the public interest review. Appropriate district staff for the USACE Navigation project will review the information for the purposes of determining impacts to the usefulness of the USACE Navigation project (e.g., compare the proposal to approved setback policies and/or overdepths). The district will ensure there is coordination between the Regulatory and Navigation staff in cases in which additional information may be needed from the requester to promote efficiency and reduce the burden on the requester.

c. The district staff evaluating impacts to the usefulness of the USACE Navigation project will document their findings in a Memorandum for Record (MFR) that will be provided to the district Regulatory staff for their use in the Section 10 permit evaluation and determination. The MFR will contain the rationale and basis for the impacts to the usefulness determination of the proposed activity on the USACE Navigation project, including any conditions that the applicant would be required to adhere to in order to ensure the continuance of no impacts to the usefulness of the USACE Navigation project. A determination that the alteration will not impair the usefulness of the project satisfies the requirement to ensure that the alteration is "compatible" with the purposes of the project set forth at 33 CFR 320.4(g)(5). Funding for district staff for the impact to the usefulness of the project determination and development of the MFR should come from project appropriated funds associated with the specific USACE Navigation project. Regulatory funds cannot be used for the development of the MFR. The USACE Navigation office is responsible for determining that the conditions in the MFR are enforceable and for enforcing such conditions in the Section 10 permit.

d. If the Section 10 authorization is approved, the Regulatory staff will ensure that any conditions specified in the MFR are included as conditions in the Section 10 permit document.

Note, the required standard terms and conditions in Appendix K will be the minimum conditions that will need to be included in the MFR and incorporated into the Section 10 permit. Also, Regulatory staff must include in the Section 10 permit document that is provided to the applicant the following statement: "It has been determined that the activities authorized do not impair the usefulness of the USACE Navigation project and is not injurious to the public interest."

G-5. Construction or Modification of Bridges over USACE Navigation Projects.

a. Federal law prohibits the construction of bridges over navigable waters of the United States unless first authorized by the U.S. Coast Guard (USCG) under one of its authorities within Title 33 of the U.S. Code, including Section 9 of the Rivers and Harbors Act of 1899. As part of its permit review process, the USCG will evaluate whether the construction or modification of a bridge will obstruct commercial and recreational navigation within the waterway. For bridges that cross a USACE navigation channel, the USCG bridge permit decision will be informed by USACE's determination under Section 408 whether the bridge will impact the usefulness of the navigation project.

b. In order to minimize duplication of effort among USACE and USCG's authorities, USACE districts should coordinate closely with the appropriate USCG personnel throughout the respective reviews, including issuance of concurrent or joint public notices (see paragraph 12.b) when feasible, and sharing information when a Navigation Impact Analysis is required for the USCG bridge permit review. USACE districts may use information provided to USCG as part of the bridge permit application package (see reference G-2.k.) to satisfy the basic requirements of a complete Section 408 request. When additional information is required from the requester to evaluate the Section 408 request, USACE districts should coordinate with the USCG to align, and not duplicate, those information needs.

c. For environmental compliance for bridges crossing USACE navigation channel, there is often another federal agency other than USACE or USCG that is the federal lead agency (such as the Federal Highway Administration). In those situations, USACE will assume a cooperating agency role as indicated in paragraph D-4.g. For situations in which either USCG or USACE is the lead agency, USACE and USCG will coordinate to conduct joint environmental compliance to the extent allowable, including the preparation of one NEPA document to inform both the USCG permit decision and the USACE Section 408 permission decision.

APPENDIX H

Hydrologic and Hydraulic System Analysis

H-1. <u>Purpose</u>. This appendix is intended to outline the requirements for a hydrologic and hydraulic (H&H) system analysis as referenced in paragraph 11.c.(2) of the main EC. The purpose of an H&H system analysis is to determine the potential hydrologic and hydraulic changes resulting from proposed Section 408 alterations. In general, these procedures focus on riverine situations, but analysis requirements can be tailored appropriately for interior systems, navigation systems, and coastal situations. Districts will determine whether an H&H system analysis is needed and, if so, the appropriate scope of analysis based on the complexity of the proposed alteration. The requester will be responsible for the analysis. This appendix describes how to perform an analysis and display the results when it has been determined that an H&H analysis is required.

H-2. References.

a. ER 1105-2-101, Risk Analysis for Flood Damage Reduction Studies.

b. EM 1110-2-1619, Risk-Based Analysis for Flood Damage Reduction Studies.

c. U.S. Army Corps of Engineers (USACE) Hydrologic Engineering Center (HEC), Hydrologic Modeling System HEC-HMS User's Manual, CPD-74A, Hydrologic Engineering Center, Davis, CA.

d. U.S. Army Corps of Engineers (USACE) Hydrologic Engineering Center (HEC), HEC-RAS River Analysis System User's Manual, CPD-68, Hydrologic Engineering Center, Davis, CA.

e. U.S. Army Corps of Engineers (USACE) Hydrologic Engineering Center (HEC), *HEC-ResSim Reservoir System Simulation, User's Manual*, CPD-82, Hydrologic Engineering Center, Davis, CA.

f. U.S. Army Corps of Engineers (USACE) Hydrologic Engineering Center (HEC), *HEC-FDA Flood Damage Reduction Analysis, User's Manual*, CPD-72, Hydrologic Engineering Center, Davis, CA.

g. U.S. Army Corps of Engineers (USACE) Hydrologic Engineering Center (HEC), *HEC-WAT Watershed Analysis Tool, User's Manual*, CPD-88, Hydrologic Engineering Center, Davis, CA.

H-3. Basic Requirements and Assumptions.

a. For the purposes of this appendix, the word "system" is an integrated combination of features, property, and environment that are influenced by the proposed alteration due to changes in the frequency, depth, duration, or extent of flooding. This includes hydrologic and hydraulic connections upstream, downstream, within a navigation system, or along the coast.

b. H&H system analyses will be applied to proposed alterations of federally authorized USACE projects that change the hydrologic and/or hydraulic conditions (e.g., changing the location or dimensions of levees or channels, changing reservoir operations, constructing bridges or roadways, etc.). Districts will determine the appropriate scope of the H&H analysis based on the complexity of the proposed alteration.

c. The H&H system analysis will consider flood events and hydraulic loading only. Infrastructure measures (dams, levee and floodwall systems, jetties, and channels) will be assumed to be stable and functional up to the top of containment, and no breaching will be assumed. Based on this assumption, system response curves are not required. Other factors such as changes in performance and consequences due to the H&H changes identified by this analysis will be determined based on other information and analyses beyond this H&H system analysis. All factors and information will be considered comprehensively to make the final Section 408 decision.

d. The hydraulic analysis will consider the full range of hydrologic loading conditions.

e. For loading conditions where flood waters exceed the system capacity, the analysis must include overtopping.

f. System impacts will be determined by comparing H&H results for the existing, authorized purpose, and with proposed alteration conditions. The district should try to identify and ensure that the analysis considers the effects of reasonably foreseeable and known future alterations and/or projects throughout the system in conjunction with the proposed alteration.

H-4. <u>Evaluation Metrics</u>. Results of the H&H system analysis must be presented in a way to assist the Section 408 decision-makers in understanding the impacts (i.e., consequences) of the H&H changes as a result of the proposed alteration. Results can be evaluated using either changes in median or expected values of various hydrologic and hydraulic parameters, or changes in assurance (i.e., uncertainty) about those values. To improve the understanding of the H&H changes of the proposed alteration, floodplain inundation maps showing flood depths and extent should be provided. The following are various H&H outputs that may be useful to display and determine H&H changes. Specific requirements will vary depending on the particular project and proposed modification.

a. Changes in water surface elevation.

b. Changes in Annual Exceedance Probability (AEP), where AEP is defined as the likelihood of a target water surface elevation being exceeded in any given year, based on the full range of possible flood events.

c. Changes in flow, velocity, frequency, and duration.

d. Changes in flood depth and flooding extent displayed on inundation maps.

H-5. Process.

a. The H&H system analysis will assess changes at the proposed alteration site and at all locations reasonably considered to be affected by the proposed alteration. The procedures described in this appendix are, in general, appropriate, with some adaptation to reflect the effects of hydraulic connectivity. Pre-approved software for analyses can be used, which include HEC-HMS (Ref. H-2.c), HEC-RAS (Ref. H-2.d), HEC-ResSim (Ref. H-2.e), HEC-FDA (Ref. H-2.f) and HEC-WAT (Ref. H-2.g). Use of any other software must be approved prior to application.

b. Methods for performing the H&H system analysis are flexible. One possible approach is described here, and follows the procedures outlined in EM 1110-2-1619 (Ref. H-2b).

(1) Step 1: Define the spatial extent of the system for which potential hydrologic and hydraulic changes must be assessed and select index locations within that extent for the H&H system analysis.

(a) The extent of the hydraulically interconnected system must be defined as the first step in an H&H system analysis. This extent must be broad enough to include channel reaches and floodplains downstream and upstream of the proposed alteration site that a reasonable analyst would expect to be influenced by changes in discharge or corresponding water surface elevation at the proposed alteration site. Within that extent, impact areas should be identified and index locations selected to allow assessment and reporting of changes. If initial findings show significant change at the outer extents represented by the selection of index locations, additional index points may be required out to the locations showing no change. Guidance for identifying impact areas and selecting index locations is included in the user's manual for the HEC-FDA (Ref. H-2.f) software and in EM 1110-2-1619 (Ref. H-2.b).

(b) Review of hydraulic model results will aid in determining the appropriate extent. For example, examination of computed water surface profiles will identify locations upstream or downstream of a proposed alteration site at which changes in the geometry at the site will have an impact on water surface elevations. Care must be exercised and results scrutinized to judge if changes in computed elevations are logically related to the changes in the geometry, or if changes seen in the model results are artifacts of computational precision limits or model instabilities. In some cases, downstream flows at a confluence will increase for a proposed

alteration, but the increase will be due to a change in timing between contributing hydrographs. Consideration should be given to whether the change in timing would be expected to be reflected in historical events, or whether the change in timing is an artifact of the synthetic hydrology developed.

(2) Step 2: Identify the existing, authorized purpose, and with proposed alteration conditions for all features (e.g. levee, floodwall, channel, jetties, and/or dams) of that system to serve as the basis for assessing H&H changes of proposed alterations.

(3) Step 3: Collect or develop the necessary functions and transforms to compute existing, authorized purpose, and with proposed alteration conditions all index locations within the system. In addition to the various functions required for the H&H system analysis, the uncertainty about each function must be described. This task is completed following the general guidance presented in this appendix and EM 1110-2-1619 (Ref. H-2.b). However, current policy does not cover how to describe the uncertainty about functions that represent accumulated impacts. For example, the uncertainty about the unregulated to regulated discharge transform at a location downstream of multiple reservoirs must reflect the accumulated uncertainty about joint operation of those reservoirs. If the district needs assistance in determining accumulated impacts, districts should consult experts at Engineer and Research Development Center Hydrologic Engineering Center (HEC), or engage the division and HQUSACE. All three conditions should be evaluated as part of the H&H system analysis.

(4) Step 4: Assess the H&H results, reference paragraph H-3.f, of the existing, authorized purpose, and with proposed alteration conditions at all index locations. H&H results are computed location by location within the extent of the system. Analysis needed in this step will depend upon the proposed alteration. For example, if the alteration includes the addition of flood storage or changes to the manner in which available storage is operated, a reservoir system simulation model such as HEC-ResSim (reference H-2.e) may be developed and run with a period of record or selected hypothetical events. Through this model, a new unregulated to regulated discharge transform can be developed. Similarly, if the proposed alteration includes changes to the project geometry, for example through levee setbacks, these changes must be simulated to derive new transforms for downstream locations. Those transforms may change as a result of the project geometry changes. Results may be reported as described in paragraph H-4.

(5) Step 5: Determine the changes in H&H conditions by comparing hydrologic and hydraulic results system-wide for the existing, authorized, and with proposed alteration cases. Once various results of hydrologic and hydraulic conditions are computed and reported, system-wide H&H changes of a proposed alteration can be assessed. For proposed alterations that reduce the likelihood of inundation, the AEP will be less and confidence in reduction in likelihood of inundation will be greater. However, outcomes may vary across all index locations within the system; therefore, all index locations must be assessed.

APPENDIX I

Funding Agreements

I-1. <u>Purpose</u>. The purpose of this appendix is to provide guidance on the establishment, management, and oversight of funding agreements under applicable statutory authorities that allow the US Army Corps of Engineers (USACE) to accept and expend funds to expedite requests to alter USACE Civil Works projects pursuant Section 408. This appendix describes the specific requirements applicable to acceptance of contributed funds and development of funding agreements under each authority.

I-2. <u>References</u>.

- a. 25 USC 479a, Publications of List of Recognized Tribes
- b. Section 1156(a)(2) of WRDA 2016, Contributed Funds (33 USC 408(b)(3))
- c. 23 USC 139(j), Efficient Environmental Reviews for Project Decision-Making
- d. Section 214 of WRDA 2000 (Public Law 106-541), as amended (33 USC 2352)
- e. Section 404 of the Clean Water Act, Permits for Dredged or Fill Material (33 USC 1344)

f. Section 10 of the Rivers and Harbors Act of 1899, Obstruction of Navigable Waters, Generally; Wharves, Piers, and Excavations and Filling In (33 USC 403)

g. 10 USC 2695, Acceptance of Funds to Cover Administrative Expenses Relating to Certain Real Property Transactions

h. US Army Corps of Engineers, Implementation Guidance for Section 1125 of the Water Resources Development Act of 2016 - Use of Funding Agreements within the Regulatory Program, Memorandum, 19 January 2018.

I-3. Policies for All Authorities.

a. The provision of funds for a Section 408 review by USACE under any of these authorities is voluntary, and all requesters will receive a fair and timely review of their Section 408 request regardless of whether they have contributed funds to USACE for the evaluation or not.

b. The acceptance and expenditure of funds will not impact impartial decision making at any level with respect to the evaluation and any final decision, either substantively or procedurally. The USACE review of the Section 408 request must comply with all applicable

laws, regulations, and procedures.

c. In general, funds should be accepted under one authority only. In the event that funds will be accepted under more than one authority, separate agreements should be executed and there should be no duplication of activities to be funded between the agreements.

d. Acceptable Uses of Funds. In general, except as noted in paragraph I-3.e., the funds can be used for all activities related to the USACE review of a Section 408 request, including precoordination and review activities. Prior to expending funds on any activity, the district must determine that the activity contributes to meeting the specific purpose of the appropriate authority as indicated in this appendix.

e. General Limitations for Funds Accepted for Reviews Under 33 USC 408.

(1) In order to preserve impartial decision making, the funds cannot be used by the final decision-maker for his or her review, recommendations, or decision concerning a Section 408 request.

(2) The funds cannot be used for compliance and enforcement activities. Enforcement activities must be charged to the applicable appropriations account based on the USACE Civil Works project.

(3) The funds cannot be used for Section 408 review activities related to non-federal hydropower development.

(4) The funds cannot be used to cover the administrative expenses incurred in processing a Covered Transaction (such as an easement, or a lease or a license of real property of the United States) under 10 USC 2695 or cost incurred for activities outlined in 30 USC 185(1). Costs associated with these administrative expenses will be recovered under 10 USC 2695 and 30 USC 185(1).

(5) The funds cannot be used to prepare documents or products for the Section 408 requester.

f. Acceptance of Contributed Funds and Accountability.

(1) The funds accepted and expended under a funding agreement, regardless of authority, must be accounted for and tracked to ensure that they are expended for their intended purpose. Receipt and expenditure of funds will be tracked by a separate account in the Corps of Engineers Financial Management System.

(2) Contributed funds will be recorded in 096X8862 as a cost-share control record (CSCR) and collect type code LCSA. The cost share advance account will cite AMSCO 190093 and CCS 408. The cost share control record must link to a zero dollar federal funding account citing

appropriation 096X3123 and CCS 408. Funding agreements for Regulatory permits are processed differently. There may be cases when there is one funding agreement that covers Section 408 and Regulatory actions. In these cases, the two different processes should still be followed for the funding amount pertaining to each program. In other words, the funding associated with Section 408 activities will use the process described above, and the funding associated with Regulatory permit actions will be processed using different procedures.

(3) Section 408 Coordinators must maintain copies of all funding agreements in the Section 408 database even after completion or closure.

(4) Section 408 Coordinators will be accountable for reporting to HQUSACE annually on the status of any active funding agreements within their area of responsibility when requested. Requirements for reporting are specific to the authority for the funding agreement and are outlined in the paragraphs below for each authority.

I-4. Section 1156(a)(2) of WRDA 2016.

a. Section 1156(a)(2) of WRDA 2016, among other things, further amends Section 14 of the Rivers and Harbors Act of 1899 (33 USC 408; referred to as Section 408) to authorize the Secretary of the Army to accept and expend funds received from non-federal public or private entities to evaluate requests under Section 408 for an alteration or permanent occupation or use of a work built by the United States.

b. Following the process in this appendix, District and Division Commanders may accept and expend funds from non-federal public or private entities to expedite the evaluation of Section 408 requests. Expediting the review process could include generally shorter review times as compared to prior to the agreement and the facilitation of a smoother review process through improved coordination and communication or through the development or use of programmatic agreements or standard operating procedures.

c. The template agreement for the acceptance of funds for the evaluation of Section 408 requests is posted on the USACE agreements website, under "Agreement Templates." The template agreement may be modified as appropriate to address case-specific circumstances. In addition, it may be modified to cover multiple Section 408 requests by a single requester. Following district counsel or division counsel review and concurrence that the negotiated agreement is acceptable, the District Commander or Division Commander, respectively, may approve and sign the agreement.

d. Authority under Section 1156(a)(2) is limited to the acceptance of funds from non-federal public and private entities. Other federal agencies cannot provide USACE with funding under this authority. If the non-federal public or private entity is providing funds that it received from another federal agency, it must provide written confirmation from that federal agency that the funds are authorized to be used for the Section 408 evaluation.

e. Funds accepted under Section 1156(a)(2) cannot be used to cover the review of related Section 10/404/103 permit decisions.

f. Section 408 Coordinators will be accountable for reporting to HQUSACE when requested on the status of any active Section 1156(a)(2) agreements within their area of responsibility.

I-5. Section 214 of WRDA 2000.

a. Section 214, as amended (33 USC 2352) provides that the Secretary of the Army, after public notice, may accept and expend funds contributed by a non-federal public entity, natural gas company, public utility company, or railroad carrier to expedite the permit review process for that entity, company, or carrier for projects or activities that have a public purpose. The authority to accept and expend funds from non-federal public entities does not expire, unless modified by law. The authority to accept and expend funds from public-utility companies, natural gas companies, and railroad carriers expires on June 10, 2024, unless otherwise extended or revoked by law.

b. District and Division Commanders have delegated authority to accept and expend funds under Section 214. These delegations of authority remain in effect until 10 June 2024, unless revoked or superseded.

c. Acceptable Entities. Funding agreements under to Section 214 may be executed with the following entities. Further information on acceptable entities under Section 214 is available in reference I-2.h.

(1) Non-Federal Public Entities. The term "non-federal public entity" is limited to governmental agencies or governmental public authorities, including governments of federally recognized Indian tribes, i.e., any Indian or Alaska Native Tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe under the Federally Recognized Indian Tribe List Act of 1994 [25 USC 479(a)].

(2) Public-Utility Companies. Public-utility companies include the following two subcategories: (i) electric utility companies, which are companies that own or operate facilities used for the generation, transmission, or distribution of electric energy for sale; and (ii) gas utility companies, which are companies that own or operate facilities used for distribution at retail of natural or manufactured gas for heat, light, or power (other than the distribution only in enclosed portable containers or distribution to tenants or employees of the company operating such facilities for their own use and not for resale.

(3) Natural Gas Companies. Section 214 also allows for funding agreements to be entered into with a natural gas company. A natural gas company is a company engaged in the

transportation of natural gas in intrastate or interstate commerce or the sale of such gas in interstate commerce for resale.

(4) Railroad Carriers. The term "railroad carriers," is defined at Title 49 USC 20102 as a person providing railroad transportation, or, as approved by the Secretary of Transportation, a group of commonly controlled railroad carriers operating within the United States as a single, integrated rail system. "Railroad" means any form of non-highway ground transportation that runs on rails or electromagnetic guideways, including: a) commuter or other short-haul railroad passenger service in a metropolitan or suburban area; and b) high speed ground transportation systems that connect metropolitan areas, without regard to the technologies used for the system; but c) does not include rapid transit operations in an urban area that are not connected to the general railroad system of transportation. Districts may consult with the regional Federal Railroad Administration office if there is uncertainty as to whether a particular entity qualifies as a railroad carrier.

(5) There is no expiration of the authority to accept and expend funding from entities that meet the definition of non-federal public entity, unless modified by law. The authority to accept and expend funding from entities that meet the definition of public utility company, natural gas company, and railroad carrier expires on June 10, 2024, unless otherwise extended or revoked by law.

d. General Guidance. Activities conducted under a Section 214 agreement must expedite the Section 408 review process. Expediting the review process could include generally shorter review times as compared to prior to the agreement and the facilitation of a smoother review process through improved coordination and communication or through the development or use of programmatic agreements or standard operating procedures. The expedited review cannot result in an adverse effect on the timeframes for review of other Section 408 requests within the same district, when considered collectively.

e. Public Purpose. Funding can only be accepted and expended through Section 214 funding agreements to expedite a Section 408 review if the proposed alteration serves a public purpose. Districts must evaluate proposed agreements from non-federal public entities to ensure that the proposed activities needing Section 408 permission serve a public purpose, and districts have discretion in making that determination. It is recognized and allowable that funds provided under a Section 214 agreement with a non-federal public entity may potentially originate from a private entity or a combination of public and private entities, so long as it is verified that the proposed alteration would serve a public purpose.

- f. Agreement Development and Decision.
- (1) Initial Public Notice for Intent to Accept Funds.
- i. Prior to accepting and expending funds, the division or district must issue a public notice,

post the public notice in a clearly identified and easily accessible area (e.g., "Acceptance of Funds for Expediting Section 408 Requests") on its webpage, and distribute the notice to concerned agencies, organizations, and the interested public. Further information on public purpose within the context of Section 214 is available in reference I-2.h. The district or division should consider if the purpose of this public notice can be combined with the purposes of other public notices that may be also be required, reference paragraph 12.b. of the main EC.

ii. The public notice will describe the entity providing such funds, the USACE authority to accept and expend such funds, the reason for such contributions, how acceptance of the funds is expected to expedite the Section 408 review process, what types of activities the funds will be expended on, what procedures will be in place to ensure that the funds will not impact the division or district's impartial decision making, and information on the impacts, if any, to the review process for Section 408 requests within that division or district. Further, if funds are also intended to be accepted or have been accepted to expedite the evaluation of Section 10/404/103 permit applications for the same proposed alteration and/or by the same non-federal public entity, such intention should be clearly stated in the public notice or a joint public notice developed, if feasible. The public notice must also include information on the impacts of the proposed funding agreement on the division or district's ability to review other Section 408 requests.

(2) Basis for Acceptance of Funds.

i. Following the review of the comments received in response to the public notice, the Division or District Commander will determine if the acceptance and expenditure of funds is appropriate in consideration of the requirements under the applicable statutory authority, if the division or district will be able to preserve impartial decision making, and if the acceptance and expenditure of funds will not adversely affect review timeframes for other Section 408 requests. A final draft of a funding agreement, see paragraph I-5.f.(3), must be completed to inform this decision.

ii. If the Division or District Commander determines, after considering public comments, that the acceptance and expenditure of the funds is appropriate, the funds may be accepted and expended. This decision will be documented in a Memorandum for Record (MFR). An informational public notice will be issued regarding the Division or District Commander's decision. The division or district will post the informational public notice on its webpage in the same, easily identifiable and accessible area used for the initial public notice and distribute the notice to concerned agencies, organizations, and the interested public.

(3) Acceptance of Funds.

i. Funds may only be accepted after the finalization of the decision MFR and issuance of the public notice of the execution of the funding agreement. Funding agreements will typically be executed in the format of a Memorandum of Agreement (MOA). At a minimum, the

agreement must include a scope of work and an itemized budget estimate, address the provision of additional funds if needed, as well as the return of unused funds, and must identify the total annual cost for each federal fiscal year covered by the term of the MOA. The itemized budget estimate must include identification of personnel, hourly rates, indirect labor costs, estimated hours of work, and travel costs related to the MOA scope of work.

ii. Issuance of a new public notice is not required for renewal or modification of a funding agreement if the purpose of the agreement remains the same. For example, a new public notice would not be required if the MOA is amended to extend the term of the agreement, modify the proposed alteration identified in the MOA, or adjust the terms of the advance payment contemplated under the MOA. The decision and basis for the renewal or modification should be documented in the MFR described in paragraph I-5.f.(2).

g. No funds provided by a federal agency to a non-federal public entity may be accepted by USACE under Section 214 unless the non-federal public entity forwards to USACE a written confirmation from the federal agency that the use of the funds to expedite the review of the Section 408 request is acceptable.

h. Transparency. Legal requirements under Section 214 require making certain information publicly available on the internet including final decisions and copies of funding agreements. Section 408 Coordinators must ensure timely data entry on Section 408 decisions and maintain copies of all funding agreements in the Section 408 database, even after completion or closure, to facilitate these transparency requirements.

i. Annual Reporting. On an annual basis, HQUSACE will provide an annual report to the Assistant Secretary of the Army for Civil Works (ASA(CW)), including a summary of the use of funding agreements executed under Section 214 and 22 USC 139(j), see paragraph I-6. The ASA(CW) will submit the combined annual report to the specified Congressional committees. Within 30 calendar days of the conclusion of each fiscal year, district and division Section 408 Coordinators will provide to the HQUSACE Section 408 proponent the following:

(1) A list of all active Section 214 and Section 139(j) funding agreements during the subject fiscal year, including the date in which the agreement was initiated and whether Section 214 or Section 139(j)was used;

(2) An accounting of the total funds accepted and total funds expended per funding agreement; and,

(3) A list of all Section 408 decisions issued for the subject fiscal year under each funding agreement.

(4)

I-6. 23 USC 139(j).

a. Section 139(j) provides that the Secretary of Transportation may approve a request by certain public entities that receive financial assistance from the USDOT to provide funds to affected federal agencies participating in the environmental review process to support activities that directly and meaningfully contribute to expediting and improving permitting and review processes.

b. Acceptable Entities. Section 139(j) allows USACE to enter into agreements with public entities receiving financial assistance from the Department of Transportation under Title 23 or chapter 53 of Title 49, which are typically administered by the FHWA and the Federal Transit Administration (FTA), respectively. Section 139(j) agreements require approval by the Secretary of Transportation, as public entities are eligible to receive reimbursement with federal aid funds for these agreements. The Secretary of Transportation has delegated approval of funding agreements down to the division level of FHWA and FTA. The USDOT has not interpreted Section 139(j) as allowing other modal administrations (such as Federal Aviation Administration or Maritime Administration) to support agreements with public entities. If there is any uncertainty regarding whether an entity is eligible for a funding agreement under Section 139(j), the entity and/or the district should consult the USDOT operating administration from which the entity receives financial assistance.

c. General Guidance. Activities conducted under a Section 139(j) agreement must directly and meaningfully contribute to expediting and improving permitting and review processes, including planning, approval, and consultation processes, for the transportation project or program. In addition, Section 139(j) funds may only be used for activities beyond USACE's normal and ordinary capabilities under its general appropriations. Because transportation project planning and delivery encompasses a variety of activities and reviews, participation in the transportation planning (pre-NEPA) process and streamlining initiatives such as NEPA/Section 408 synchronization efforts are encouraged under Section 139(j), so long as those activities result in review times that are less than the customary time necessary for such a review. FHWA has provided guidance that the development of programmatic agreements and initiatives satisfies the requirement to reduce time limits as long as the results of those efforts are designed to provide a a reduction in review time. Section 139(j) puts the onus on FHWA and FTA to interpret allowable activities under the statute. Districts will consider FHWA or FTA's approval of a funding agreement as certification that the agreement is compliant with Section 139(j). Section 139(j) agreements must also meet USACE's standards and requirements contained in this appendix.

(1) FHWA or FTA may require documentation of the "customary time" necessary for a review and/or establishment of performance metrics for the agreement to demonstrate it is contributing to expediting and improving transportation project planning and delivery. Districts have discretion on the number and type of performance metrics within an agreement, including which milestones to use to determine time in review (receipt of request, date determined complete, etc.). When considering the quantity and content of any performance metrics for an

agreement, the district must consider the potential effect of those metrics on performance management within the whole district. Districts must be cautious to not agree to any performance metrics that would be so onerous or stringent that achieving them comes at the cost of decreased performance for other Section 408 requests in the district.

(2) A Section 139(j) funding agreement between the district(s) or division(s) and the funding transportation agency must include the projects and priorities to be addressed by the agreement. If the funding transportation agency does not know a list of projects and/or priorities at the time of the agreement, then the funding agreement should describe the process to identify or change projects and/or priorities for the agreement.

d. Agreement Development and Decision. Districts will follow the same policy and procedures for establishing agreements under Section 139(j) as what is used for agreements under Section 214.

e. Annual Reporting. Districts will follow the same procedures for annual reporting for funding agreements under Section 139(j) as what is used for agreements under Section 214, reference paragraph I-5.i.

APPENDIX J

Example Letters

J-1. <u>Purpose</u>. This appendix contains example response letters and an example decision letter. These letters can be modified as necessary to fit each Section 408 request.

J-2. <u>Completeness Determination Letter</u>. This letter is sent to a requester no later than 30 days of receipt of a submittal of information supporting a Section 408 request to inform the requester whether the Section 408 request or a specific milestone for the Section 408 request (for multiphased reviews) is complete or not. This letter can also be used and modified as necessary to inform the requester of completeness for validation under a categorical permission.

(District Letterhead) (Date here)

(Name and address of requester here)
[Mr./Ms.] (Full Name of Requester)
(Title of Requester)
(Requester Address)
(City, State Abbreviation, and Zip Code)

Section 408 Request Number: <u>(Database ID)</u>

Dear [Mr./Ms.] (Last Name of Requester),

The <u>(district name here)</u> District ("District") of the U.S. Army Corps of Engineers (USACE) has received your request to <u>(brief description of proposed alteration)</u> the <u>(name of USACE project to be altered)</u> operated and maintained by <u>(name (s) of non-federal sponsor</u> (s) and/or USACE) under Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408).

(*If incomplete include the following.*) The District has reviewed your submittal consistent with Engineer Circular (EC) 1165-2-220, to determine whether the Section 408 (*insert "milestone"* for multi-phased reviews) request is complete and is ready for USACE review and decision. We have determined that your Section 408 (*insert "milestone" for multi-phased reviews*) request is incomplete and request that you submit the following additional information:

(Describe required information needed in bullet point format using the below basic requirements

from paragraph 11 of this EC as a framework. Districts can delete those bullet point categories that have been satisfied or are not applicable. Districts can add supplemental information as enclosures if needed to help clarify what information is needed.)

- Statement of No Objection –
- USACE Project and Alteration Description -
- Technical Analysis and Design –
- Environmental and Cultural Resource Compliance -
- Real Estate Requirements –
- Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) -
- Crediting

Please submit the above information to <u>(Insert appropriate contact information such as</u> <u>organization code and address</u>) and include the Section 408 Request Number: <u>(Insert Database</u> <u>ID for this request)</u> with your information. For questions regarding your Section 408 request, please contact <u>(name and title of district Section 408 point of contact here)</u> at <u>(contact information here)</u>.

(*If complete, include the following.*) The District has reviewed your submittal consistent with Engineer Circular (EC) 1165-2-220 and has determine that you your Section 408 (*insert* "*milestone*" for multi-phased reviews) request is complete and will proceed to USACE review and decision. The District expects to render a decision on your Section 408 (*insert* "*milestone*" for multi-phased reviews) request within 90 days (*provide new timeline and explanation if 90 days cannot be met*) of the date on this letter. You will be notified if additional information is needed to complete the review and decision and/or if the review and decision to exceed the 90 day timeline. If you have questions regarding your Section 408 request, please contact (*name and title of district Section 408 point of contact here*) at (*contact information here*).

Sincerely, (*Name of signatory*)

(district name here) U.S. Army Corps of Engineers

Enclosures (Attach supplemental documentation as needed).

J-3. <u>Potential Multi-phased Review Option</u>. This letter is sent to a requester no later than 30 days of receipt of a submittal of information supporting a Section 408 request that would benefit from the multi-phased review option. This response letter is to inform the requester that they will be contacted for further discussion and planning.

(District Letterhead) (Date here)

(Name and address of requester here) [Mr./Ms.] (Full Name of Requester) (Title of Requester) (Requester Address) (City, State Abbreviation, and Zip Code)

Section 408 Request Number: <u>(Database ID)</u>

Dear [Mr./Ms.] (Last Name of Requester),

The <u>(district name here)</u> District ("District") of the U.S. Army Corps of Engineers (USACE) has received your request to <u>(brief description of proposed alteration) the</u> <u>(name of federal project to be altered)</u> operated and maintained by <u>(name (s) of non-federal sponsor</u> <u>(s) and/or USACE)</u> under Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408).

Based on the scope, scale, or complexity of the proposed alteration, the District recommends a multi-phased review approach for processing your request. This option allows for information to be submitted with different levels of detail at pre-determined milestones progressing to a Section 408 decision. You will be contacted by *(insert anticipated timeframe)* to further discuss this option.

For any questions regarding this letter, please contact (*name and title of district Section 408 point* of contact here) at (contact information here).

Sincerely, (Name of signatory)

(district name here) U.S. Army Corps of Engineers

J-4. <u>Multi-Phased Review Milestone Approval Letter</u>. This letter is used to communicate a conditional approval of a milestone within a multi-phased review proves with the exception of the final decision milestone. Note that the language in boldface is needed for legal sufficiency of a conditional approval and should not be substantively modified or deleted. If the decision is to deny a milestone, then a Section 408 final decision letter expressing denial of permission may be used.

(District Letterhead) (Date here)

(Name and address of requester here) [Mr./Ms.] (Full Name of Requester) (Title of Requester) (Requester Address) (City, State Abbreviation, and Zip Code)

Section 408 Request Number: <u>(Database ID)</u>

Dear [Mr./Ms.] (Last Name of Requester),

The <u>(district name here)</u> District ("District") of the U.S. Army Corps of Engineers (USACE) has completed an evaluation of the milestone of your request to <u>(brief description of proposed alteration)</u> to <u>(name of USACE project to be altered)</u> operated and maintained by <u>(name (s) of non-federal sponsor (s) and/or USACE</u> under Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408).

The District has reviewed your submittal consistent with Engineer Circular (EC) 1165-2-220. Based on the information provided to date, it appears that (*describe the work that is being conditionally approved*) is consistent with the requirements under Section 408. The District hereby grants conditional approval to advance to the next milestone of the Section 408 request. (*Insert any special conditions or additional requirements the requester needs to comply with to*

proceed to the next milestone.)

Note that this milestone approval is based on the information you provided for this milestone submittal. If the information you provided in support of this milestone proves to have been false, incomplete, or inaccurate, or if significant new information surfaces which USACE did not consider in reaching this milestone decision, USACE reserves the right to reevaluate, and potentially revoke, this conditional approval. Further, this conditional approval does not comprise permission under Section 408 to alter the USACE project. USACE reserves the right to approve or deny future milestones of this Section 408 request based on further evaluation.

For any questions regarding this decision, please contact (*name and title of district Section 408 point of contact here*) at (*contact information here*).

Sincerely, (*Name of signatory*)

(*district name here*) U.S. Army Corps of Engineers

Enclosures (Attach supplemental documentation as needed).

J-5. <u>Decision Delay Letter</u>. This letter is used to communicate to the requester when USACE will be unable to render a decision on the Section 408 request within 90 days of the completeness determination. This letter can be used with single-phase reviews, multi-phase reviews, and categorical permissions, and should be sent as soon as the District anticipates that the 90-day timeline cannot be achieved and has determined an alternate target date for rendering a decision. If the district knows at the time of the completion determination that the 90-day timeline cannot be met, then notifications should be combined versus sending multiple letters. For those Section 408 requests that require division level review and decision, the letter can be modified accordingly.

(District Letterhead) (Date here)

(Name and address of requester here) [Mr./Ms.] (Full Name of Requester) (Title of Requester) (Requester Address) (City, State Abbreviation, and Zip Code)

Section 408 Request Number: <u>(Database ID)</u>

Dear [Mr./Ms.] (Last Name of Requester),

The <u>(district name here)</u> District ("District") of the U.S. Army Corps of Engineers (USACE) is reviewing your request to <u>(brief description of proposed alteration)</u> to <u>(name of federal project to be altered)</u> operated and maintained by <u>(name (s) of non-federal sponsor (s)</u> <u>and/or USACE)</u> under Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408). This evaluation is being performed according to Engineer Circular (EC) 1165-2-220.

The District anticipates it will be unable to render a decision on your Section 408 request within 90 days of receipt of the completion determination dated (*insert date of the completion determination*). Additional time is needed to <u>(summarize rationale for exceeding 90 day decision timeline)</u>. The District anticipates rendering a decision (*insert either* "within xx days of this letter" or "by date").

For any questions regarding your Section 408 request, please contact <u>(name and title of district</u> <u>Section 408 point of contact here)</u> at <u>(contact information here)</u>.

Sincerely, (*Name of signatory*)

(district name here) U.S. Army Corps of Engineers

Enclosures (Attach supplemental documentation as needed).

J-6. <u>Section 408 Final Decision Letter</u>. This letter is used to communicate the decision to grant or deny permission under Section 408. It can be used with a single-phase review or for the final milestone of a multi-phased review.

(District Letterhead or Division Letter) (Date here)

(Name and address of requester here) [Mr./Ms.] (Full Name of Requester) (Title of Requester) (Requester Address) (City, State Abbreviation, and Zip Code)

Section 408 Request Number: ___(Database ID)____

Dear [Mr./Ms.] (Last Name of Requester),

The <u>(district or division name here)</u> [District or Division] of the U.S. Army Corps of Engineers (USACE) has completed its review of your request to <u>(brief description of proposed alteration)</u> to <u>(name of federal project to be altered)</u> operated and maintained by <u>(name (s) of non-federal sponsor (s) and/or USACE)</u> under Section 14 of the Rivers and Harbors Act of 1899, 33 U.S.C. 408 (Section 408). This evaluation was performed consistent with Engineer Circular (EC) 1165-2-220.

(*If granting permission, use the following*) Based on this evaluation, the [District or Division] is granting permission to (*describe the approved alteration work in detail*) as specified in your request and subject to compliance with the terms and conditions below and attached.

(Insert any additional special conditions necessary to ensure the alteration is not injurious to the public interest; does not impair the usefulness of the authorized project; and/or for environmental compliance purposes. Also attach a copy of the standard terms and conditions in Appendix K.)

(If denying permission, use the following). Based on this evaluation, the District or Division is denying your request to (describe the rejected alteration work in detail). Your request cannot be approved at this time because (Simply describe the main reason(s) why we are unable to grant permission. If appropriate, indicate the ability for the requester to revise his/her proposal and submit a new request for Section 408 permission.)

For any questions regarding your Section 408 permission decision, please contact (*name and title* of district Section 408 point of contact here) at (contact information here).

Sincerely, (*Name of District or Division Commander or*

other decision-maker with delegated authority)

(district name here) U.S. Army Corps of Engineers

Enclosures (Attach supplemental documentation as needed).

J-7. <u>Categorical Permission Validation Letter</u>. This letter is used to communicate validation (approval) of use of a categorical permission to the requester. Districts should attach a copy of the standard terms and conditions for the categorical permission to this letter.

(District Letterhead or Division Letter) (Date here)

(Name and address of requester here)
[Mr./Ms.] (Full Name of Requester)
(Title of Requester)
(Requester Address)
(City, State Abbreviation, and Zip Code)

Section 408 Request Number: <u>(Database ID)</u>

Dear [Mr./Ms.] (Last Name of Requester),

The <u>(district or division name here)</u> [District or Division] of the U.S. Army Corps of Engineers (USACE) has completed its evaluation of your request to <u>(brief description of proposed alteration)</u> to <u>(name of federal project to be altered)</u> operated and maintained by <u>(name (s) of non-federal sponsor (s) and/or USACE)</u> under Section 14 of the Rivers and Harbors Act of 1899, 33 U.S.C. 408 (Section 408). This evaluation was performed consistent with Engineer Circular (EC) 1165-2-220.

Your request to (*describe the approved alteration work in detail*) has been validated for use with (*Insert name of District and/or title of the categorical permission*) Categorical Permission, subject to compliance with the terms and conditions below and attached.

(Insert any additional special conditions necessary to ensure the alteration is not injurious to the public interest; does not impair the usefulness of the authorized project; and/or for

environmental compliance purposes. Also attach a copy of the standard terms and conditions in Appendix K and the terms and conditions specific to the categorical permission.)

For any questions regarding your Section 408 permission decision, please contact (*name and title* of district Section 408 point of contact here) at (contact information here).

Sincerely, (Name of District Commander or other decision-maker with delegated authority)

(district name here) U.S. Army Corps of Engineers

Enclosures (Attach a copy of the standard terms and conditions in Appendix K and the terms and conditions of the categorical permission).

APPENDIX K

Standard Terms and Conditions

This appendix includes the standard conditions that must be included in all Section 408 approval notifications, except where marked as optional. Use of optional conditions should be based on scope and scale of the approved activity:

LIMITS OF THE AUTHORIZATION

- 1. This permission only authorizes you, the requester, to undertake the activity described herein under the authority provided in Section 14 of the Rivers and Harbors Act of 1899, as amended (33 USC 408). This permission does not obviate the need to obtain other federal, state, or local authorizations required by law. This permission does not grant any property rights or exclusive privileges, and you must have appropriate real estate instruments in place prior to construction and/or installation.
- 2. The time limit for completing the work authorized ends on ______. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
- 3. Without prior written approval of the USACE, you must neither transfer nor assign this permission nor sublet the premises or any part thereof, nor grant any interest, privilege or license whatsoever in connection with this permission. Failure to comply with this condition will constitute noncompliance for which the permission may be revoked immediately by USACE.
- 4. The requester understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration of the work herein authorized, or if, in the opinion of the Secretary of the Army or an authorized representative, said work will cause unreasonable conditions and/or obstruction of USACE project authorized design, the requester will be required upon due notice from the USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim can be made against the United States on account of any such removal or alteration.

INDEMNIFICATION AND HOLD HARMLESS

- 5. The United States will in no case be liable for:
 - a. any damage or injury to the structures or work authorized by this permission that may be caused or result from future operations undertaken by the United States, and no claim or right to compensation will accrue from any damage; or
 - b. damage claims associated with any future modification, suspension, or revocation

of this permission.

- 6. The United States will not be responsible for damages or injuries which may arise from or be incident to the construction, maintenance, and use of the project requested by you, nor for damages to the property or injuries to your officers, agents, servants, or employees, or others who may be on your premises or project work areas or the federal project(s) rights-of-way. By accepting this permission, you hereby agree to fully defend, **indemnify**, and **hold harmless** the United States and USACE from any and all such claims, subject to any limitations in law.
- 7. Any damage to the water resources development project or other portions of any federal project(s) resulting from your activities must be repaired at your expense.

REEVALUATION OF PERMISSION

- 8. The determination that the activity authorized by this permission would not impair the usefulness of the federal project and would not be injurious to the public interest was made in reliance on the information you provided.
- 9. This office, at its sole discretion, may reevaluate its decision to issue this permission at any time circumstances warrant, which may result in a determination that it is appropriate or necessary to modify or revoke this permission. Circumstances that could require a reevaluation include, but are not limited to, the following:
 - a. you fail to comply with the terms and conditions of this permission;
 - b. the information provided in support of your application for permission proves to have been inaccurate or incomplete; or
 - c. significant new information surfaces which this office did not consider in reaching the original decision that the activity would not impair the usefulness of the water resources development project and would not be injurious to the public interest.

CONDUCT OF WORK UNDER THIS PERMISSION

- 10. You are responsible for implementing any requirements for mitigation, reasonable and prudent alternatives, or other conditions or requirements imposed as a result of environmental compliance.
- 11. Work/usage allowed under this permission must proceed in a manner that avoids interference with the inspection, operation, and maintenance of the federal project.
- 12. In the event of any deficiency in the design or construction of the requested activity, you are solely responsible for taking remedial action to correct the deficiency.
- 13. The right is reserved to the USACE to enter upon the premises at any time and for any purpose necessary or convenient in connection with government purposes, to make inspections, to operate and/or to make any other use of the lands as may be necessary in connection with government purposes, and you will have no claim for damages on

account thereof against the United States or any officer, agent or employee thereof.

- 14. You must provide copies of pertinent design, construction, and/or usage submittals/documents. USACE may request that survey and photographic documentation of the alteration work and the impacted project area be provided before, during, and after construction and/or installation.
- 15. You may be required to perform an inspection of the federal project with the USACE, prior to your use of the structure, to document existing conditions.
- 16. USACE shall not be responsible for the technical sufficiency of the alteration design nor for the construction and/or installation work.
- 17. (optional, at the discretion of the district) Once permission is granted, you must notify the USACE District at least _____ (__) days before work/usage is started so that post-permission over sight can be performed by USACE.
- 18. (optional, at the discretion of the district) You must schedule a final inspection with the USACE within _____ (__) days after completion of the work/usage.
- 19. (optional, at the discretion of the district) You must submit a copy of "as-built" drawings within _____ (__) days of completion of work showing the new work as it relates to identifiable features of the federal project.

APPENDIX L

Terms and Abbreviations

AEP	Annual Exceedance Probability
ASA(CW)	Assistant Secretary of the Army for Civil Works
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWBI	Civil Works Business Intelligence
DSO	Dam Safety Officer
DSOG	Dam Safety Oversight Group
EA	Environmental Assessment
EC	Engineer Circular
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ERDC	Engineer and Research Development Center
ESA	Endangered Species Act
FAST-41	Title 41 of the Fixing America's Surface Transportation Act
FCA	Flood Control Act
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
H&H	Hydrology and Hydraulics
HEC	Hydrologic Engineering Center
HQUSACE	Headquarters USACE
LSO	Levee Safety Officer
LSOG	Levee Safety Oversight Group
LSPM	Levee Safety Program Manager
M&I	Municipal and Industrial
MFR	Memorandum for Record
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program

NHPA	National Historic Preservation Act
NID	National Inventory of Dams
NLD	National Levee Database
NOAA	National Oceanic and Atmospheric Administration
O&M	Operation and Maintenance
OMRR&R	Operation, Maintenance, Repair, Replacement, and Rehabilitation
PL	Public Law
QCP	Quality Control Plan
RIT	Regional Integration Team
RMC	Risk Management Center
RMO	Review Management Organization
ROD	Record of Decision
SAR	Safety Assurance Review
SLOPES	Standard Local Operating Procedures for Endangered Species
USACE	U.S. Army Corps of Engineers
USC	United States Code
USCG	U.S. Coast Guard
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
WCM	Water Control Manual
WRDA	Water Resources and Development Act
WRRDA	Water Resources Reform and Development Act
WSA	Water Supply Act

Appendix E

1. Environmental Permitting Summary

Environmental Permitting Summary

There are threatened and endangered species in the area, including humpback whales and Steller sea lions. The City of Cordova (City) is completing a Biological Assessment to document the impacts to these species. National Marine Fisheries Service (NMFS) is expected to concur with the assessment's findings and issue a Biological Opinion by April 2023.

There are marine mammals protected by the Marine Mammal Protection Act in the area that could be harassed by pile driving noise associated with construction of the harbor improvements. The City is preparing two Incidental Harassment Authorization (IHA) applications to be authorized to continue pile driving activities when marine mammals are in the area. NMFS is expected to issue an IHA to allow harassment of Dall's porpoise, harbor porpoise, and killer whales (only expected outside the harbor) and Steller sea lions (expected inside and outside the harbor) by April 2023. U.S. Fish and Wildlife is expected to issue an IHA to allow harassment of Dall's portected to issue an IHA to allow harassment of Dall's portected to issue an IHA to allow harassment of Steller sea lions (expected inside and outside the harbor) by April 2023. U.S. Fish and Wildlife is expected to issue an IHA to allow harassment of northern sea otters, which are abundant inside and outside the harbor, by August 2023.

To comply with the National Environmental Policy Act (NEPA), the City is currently completing an Environmental Assessment (EA). The EA is contingent on issuing the NMFS's approvals and is expected to be approved by completed by May 2023.

An Alaska Department of Environmental Conservation Water Quality Certification is needed to place fill in the harbor, and the City is preparing an application. The certification is expected by June 2023.

The City is preparing a USACE Section 404/10 permit application to allow the placement of fill and piles in marine waters. The permit is also contingent on the issuance on the Water Quality Certification, NMFS's approvals, and the USACE's 408 permits and is expected to be issued by July 2023.

The Design Builder will be responsible for securing a Section 408 Permit application. To ensure that the U.S. Army Corps of Engineers (USACE)-owned harbor breakwater is not impacted by the City's proposed improvements within the harbor. Completion of USACE's review is contingent on completion of the EA and is expected by June 2023.