division of
Facilities Construction
and Management

DFCM Addendum #1

Reference: New Loa Fish Hatchery
DFCM Project #24204520
U3P Event #CS26010-Stage I

Date: September 8, 2025

To: Interested Contractors

From: The Division of Facilities Construction and Mangement

Addendum Items

Solicitation Schedule Changes:	A revised Solicitation Schedule is attached. Changes have been made to the following events: A Bid Question & Bid Addendum date have been added to the Stage II Solicitation Schedule.	See the 'Revised Solicitation' document attached under the 'Supporting Documents' in U3P.
DFCM Addendum Items:		
A/E Addendum Items:	A/E Addendum #1 Specification changes and clarification on the Bid Alternate #1	10 pages
	Total Attached Pages:	**10**

Note: This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Bidders are required to acknowledge receipt of this Addendum when their bid is submitted. Failure to do so may subject the Bidder to disqualification.

SUNRISE ENGINEERING

Richfield North Office
635 North Main, Suite 675 Richfield, Utah 84754 **Tel:** 435.896.8857 **Fax:** 435.743.7900

Division Of Wildlife Resources
New Loa Fish Hatchery
Phase IV House Project
DFCM Project #24204520

ADDENDUM #1

September 5, 2025

PLANHOLDER:

This Addendum #1 shall become part of the plans, specifications and contract documents of the above referenced project, and all provisions of the contract shall apply hereto.

1. The Solicitation Schedule has been revised to include a 2nd question period after the short-listing announcement. The 2nd question deadline will be October 30th at 3:00 PM. The Addendum Deadline will be November 6th at 3:00 PM.
2. Section 13400SP Fleet Truck Garage & Feed Storage Building of the project specifications indicates that the owner will purchase, and ship to the project site a feeding system by Norcan Electrical Systems Inc. This system will not be provided by the owner. Rather, the feed system shall be provided and installed by the contractor as part of this contract.
3. Section 13700SP Raceway Building of the project specifications indicates that the owner will purchase and provide a fish feeding and distribution system. The distribution system is required to be designed by the fish feeding system equipment supplier. This system will not be provided by the owner. Rather, the feed system shall be provided and installed by the contractor as part of this contract. The contractor is responsible for coordinating the fish feeding distribution system requirements with the fish feed system supplier.
4. Section 11401SP Feed System has been attached as part of this addendum. This special provision is a performance specification for the fish feed system. The contractor is required to supply and install a fully functional fish feed and distribution system that meets all of these requirements in addition to any manufacturer's requirements of the system. The basis of design for this project is a system by Norcan Electrical Systems Inc. Any other fish feed system will need to be pre-approved by the Engineer prior to bidding the project.
5. Bid Item 7 – Materials Sampling and Testing has been removed from the Bid Schedule. Material Sampling will be provided through the DFCM.
6. The Fish Feed System has been added to the bid schedule as Bid Alternative 1.

7. The items in the Bid Schedule under the Additional Items section will not be part of Bid Alternative 1. The bid schedule has been revised to reflect this. These items can be used as necessary to deal with unanticipated groundwater. Any material quantities needed beyond these material amounts will be negotiated as a change order. If these items are not needed as part of construction, they will be removed as a change order at the end of the project.
8. The Bid Schedule has been revised and is attached as part of the addendum.

Professionally,

Robert Worley
Project Engineer

BID SCHEDULE

CONTRACT FOR:

LOA FISH HATCHERY

The undersigned Bidder, having examined and determined the scope of the Contract Documents, hereby proposes to perform the work described herein for the following unit prices or lump sum amounts.

Note 1. Bids shall include sales tax and all other applicable taxes and fees.

2. All bids shall be checked for errors. If errors are made, unit prices shall govern and corrections will be made according to the unit priceand totals will be revised to reflect the corrections.

No.	Meas. & Pmt.	Item	Quantity	Unit	Unit Price	Amount
General Project Items						
1	01560SP	Construction Survey Staking	1	LS		
2	02000	Mobilization	1	LS		
3	02005SP	Traffic Control	1	LS		
4	02015	Clearing & Grubbing	1	LS		
5	02020	Subsurface Investigation	40	HR		
6	02200SP	Temporary Dewatering	1	LS		
Site Improvements						
7	01019SP	Site Demolition	1	LS		
8	01019SP	Site Earthwork and Grading	1	LS		
9	01019SP	Site Concrete	1	LS		
10	01019SP	Asphalt Pavement	1	LS		
11	01019SP	Decorative Driveway Gravel	1	LS		
12	01019SP	Fencing	1	LS		
13	01019SP	Signs & Paint	1	LS		
14	01019SP	Site Landscaping	1	LS		
Site Piping & Utility Systems						
15	01019SP	Site Utility Earthwork Materials	1	LS		
16	01019SP	Culinary Water System (Blue Pipes)	1	LS		
17	01019SP	Sanitary Sewer System (Dark Green Pipes)	1	LS		
18	01019SP	Storm Drain System (Magenta Pipes X" SD)	1	LS		
19	01019SP	French Drain System (Light Blue Pipes)	1	LS		
20	01019SP	Spring Water Piping System (Dark Blue Pipes)	1	LS		
21	01019SP	Pressurized Spring Water System (Orange Pipes)	1	LS		
22	01019SP	Reuse Water Piping System (Brown Pipes)	1	LS		
23	01019SP	Discharge/Drain Water Piping (Magenta Pipes X" DW/D)	1	LS		
24	01019SP	Dewater Piping System (Light Green Pipes)	1	LS		
25	01019SP	Spring Development	1	LS		
26	01019SP	Instrumentation and Control (Campus SCADA)	1	LS		
27	01019SP	Site Propane	1	LS		
28	01019SP	Site Electrical	1	LS		
29	01019SP	Site Oxygen	1	LS		

Dewatering Tank						
30	13100SP	Dewatering Building Concrete	1	LS		
31	13100SP	Dewatering Building Structure	1	LS		
32	13100SP	Dewatering Building Earthwork & Grading	1	LS		
33	13100SP	Dewatering Building Electrical	1	LS		
34	13100SP	Dewatering Building Plumbing	1	LS		
Dewatering Building						
35	13200SP	Dewatering Building Concrete	1	LS		
36	13200SP	Dewatering Building Structure	1	LS		
37	13200SP	Dewatering Building Earthwork & Grading	1	LS		
38	13200SP	Dewatering Building Electrical	1	LS		
39	13200SP	Dewatering Building Plumbing	1	LS		
40	13200SP	Dewatering Building Mechanical and HVAC	1	LS		
Disinfection Shed Building						
41	13300SP	Disinfection Shed Building Concrete	1	LS		
42	13300SP	Disinfection Shed Building Structure	1	LS		
43	13300SP	Disinfection Shed Building Earthwork & Grading	1	LS		
44	13300SP	Disinfection Shed Building Electrical	1	LS		
Fleet Truck Garage & Feed Storage Building						
45	13400SP	Fleet Truck Garage & Feed Storage Building Concrete	1	LS		
46	13400SP	Fleet Truck Garage & Feed Storage Building Structure	1	LS		
47	13400SP	Fleet Truck Garage & Feed Storage Building Earthwork & Grading	1	LS		
48	13400SP	Fleet Truck Garage & Feed Storage Building Electrical	1	LS		
49	13400SP	Fleet Truck Garage & Feed Storage Building Mechanical and HVAC	1	LS		
50	13400SP	Feed Silo Installation	1	LS		
Hatchery Building						
51	13500SP	Hatchery Building Concrete	1	LS		
52	13500SP	Hatchery Building Structure	1	LS		
53	13500SP	Hatchery Building Earthwork & Grading	1	LS		
54	13500SP	Hatchery Building Electrical	1	LS		
55	13500SP	Hatchery Building Plumbing	1	LS		
56	13500SP	Hatchery Building Mechanical and HVAC	1	LS		
57	13500SP	Hatchery Building Oxygen System	1	LS		
Office Building						
58	13600SP	Office Building Concrete	1	LS		
59	13600SP	Office Building Structure	1	LS		
60	13600SP	Office Building Earthwork & Grading	1	LS		
61	13600SP	Office Building Electrical	1	LS		
62	13600SP	Office Building Plumbing	1	LS		
63	13600SP	Office Building Mechanical and HVAC	1	LS		

Raceway Building						
64	13700SP	Raceway Building Concrete	1	LS		
65	13700SP	Raceway Building Structure	1	LS		
66	13700SP	Raceway Building Earthwork & Grading	1	LS		
67	13700SP	Raceway Building Electrical	1	LS		
68	13700SP	Raceway Building Plumbing	1	LS		
69	13700SP	Raceway Building Oxygen System	1	LS		
70	13700SP	Raceway Building Appurtenances	1	LS		
Liquid Oxygen Tank						
71	13800SP	Liquid Oxygen Tank Concrete	1	LS		
72	13800SP	Liquid Oxygen Tank Structure	1	LS		
73	13800SP	Liquid Oxygen Tank Earthwork and Grading	1	LS		
74	13800SP	Liquid Oxygen Tank Electrical	1	LS		
75	13800SP	Liquid Oxygen Tank Plumbing	1	LS		
Degasser						
76	11310SP	Degasser Pump Station	1	LS		
77	11310SP	Degasser Pump Station Electrical and Controls	1	LS		
Additional Items						
78	01019SP	8-Inch Smooth Lined Corrugated ADS N-12 HDPE Drain Pipe	40	LF		
79	01019SP	12-Inch Smooth Lined Corrugated ADS N-12 HDPE Drain Pipe	40	LF		
80	01019SP	24-Inch Smooth Lined Corrugated ADS N-12 HDPE Drain Pipe	40	LF		
81	01019SP	4-Inch Smooth Lined Corrugated ADS N-12 HDPE Perforated Drain Pipe	40	LF		
82	01019SP	8-Inch Smooth Lined Corrugated ADS N-12 HDPE Perforated Drain Pipe	40	LF		
83	01019SP	12-Inch Smooth Lined Corrugated ADS N-12 HDPE Perforated Drain Pipe	40	LF		
84	01019SP	Traffic Rated Grated Cover Nyloplast Basin	1	EA		
85	01019SP	Solid Cover Nyloplast Basin	1	EA		
86	01019SP	Cleanout	1	EA		
87	02105SP	Untreated Base Course	50	CY		
88	02105	Drain Gravel	50	CY		
Bid Alternative 1 (Feed System)						
89	11401SP	Fish Feed System	1	LS		
					TOTAL	

The undersigned Bidder certifies that this proposal is made in good faith, without collusion or connection with any other person or persons bidding on the work.

Seal (if bid is by Corporation)

Respectfully Submitted:

Bidder: _____

Signature _____

Title: _____

License No. _____ Address: _____

Date: _____

11401.1 DESCRIPTION

The Contractor shall provide a pneumatic model-based, lifecycle-oriented aquaculture fish feeding system. The feeding system components will be housed in two separate buildings. The feed skid will be located in the Feed Storage Building adjacent to the Raceway Building. The feed will be distributed from the skid to each of the rearing units inside the Raceway Building.

11401.2 APPLICABLE DOCUMENTS

11401.2.1 Drawing Sheets

G003 – Area & Location Map
C102 – Overall Site Plan
C112 – Site Plans
CF501 – Feed Silo Details
CR101 – Raceway Pipe Plan
CR307 - CR309 – Raceway Structural Sections
AR100 – Raceway Floor Plan
AR110 – Raceway Roof Plan
AR200 – Raceway Exterior Elevations
AR300 – Raceway Building Sections
AR700 – Raceway Reflected Ceiling Plan
EG801 – Feed System Telecom Riser Diagram
EF201 – Feed Building Floor Plan – Power and Telecom
I201 – Controls Office/Generators Site Plan

11401.2.2 Specifications

Section 01300

11401.3 REQUIREMENTS

11401.3.1 GENERAL

The Contractor shall provide all equipment, labor and materials to furnish and install a fully operational pneumatic model-based, lifecycle-oriented aquaculture fish feeding system. The feeding system skid will be located in the Feed Storage Building adjacent to the Raceway Building. The feed will be distributed throughout each of the twenty-four (24) raceways, and the 144 biomass units inside the Raceway Building. The two buildings are approximately 55 feet apart. The feed will be pneumatically blown from the Feed Building through two stainless steel pipes located in a pipe chase across the driveway to the Raceway Building. These two pipes will deliver feed to two rotating diverter valves (RDV). These RDV's will distribute feed to approximately half of the rearing units and an additional two RDV's. The remaining RDV's will distribute feed to the remaining rearing units. Feed is delivered from the RDV's through HDPE tubing to the feed hoods positioned over the rearing units. The system components in the Raceway Building will be suspended from the roof. All support trays, chains, fasteners, strut, additional support structure, feed hoods, piping, cables, RDV's, feed skid, software, control system, etc. will be provided and installed by the feed system Supplier. The Supplier will be required to work with the engineer and General Contractor over the project to determine the final loads that the building will need to support. The feed system Supplier will also need to work with the General Contractor to coordinate during construction.

11401.3.1.1 Supplier – There shall be a single source Supplier responsible for all feed system components. This Supplier shall have full responsibility that the equipment work together to meet the

performance goals and objectives in accordance with the requirements for the project. The Supplier shall have a minimum of 20 years' experience in researching and developing aquaculture feeding systems. The Supplier will be required to provide proof that they have successfully completed a minimum of five similar projects.

11401.3.2 MATERIAL

11401.3.2.1 Submittals - The Supplier shall provide complete information, which includes shop drawings, parts lists, capacities, and warrantees in accordance with the requirements of Section 01300.

Shop drawings shall include plan and elevation view of all components provided. They shall also include all wiring diagrams.

The Supplier shall submit structural calculations for the support system.

11401.3.2.2 All materials used shall be corrosion resistant and non-toxic.

11401.3.3 PERFORMANCE REQUIREMENTS

11401.3.3.1 Model-Based, Lifecycle-Oriented Aquaculture Feeding System. The feeding system shall be a centralized feeding system that is capable of tracking information for each of the rearing units.

The system shall include an optimization feed program that is based on fish species. It shall have the ability to do the following:

- Ability to feed each of the 144 units six times in an 8-hour period of time
- Each blower system must be capable of facilitating up to eight (8) dosing systems
- Each blower system must be capable of utilizing up to (72) distribution ports
- Each blower system must be capable of drawing feed from up to eight (8) feed containers
- Each blower system shall have the ability to mix feed from four different sources
- Each blower must be able to feed each diffuser system a minimum of twenty-four (24) times per day
- Each diffuser must have individual adjustable control blower output and distribution patterns
- Ability to adjust delivery rate based on fish consumption rate
- The overall coverage of each raceway section must be a minimum of 80% of the raceway surface area
- Provide even distribution of feed across the rearing unit
- Automated measurement and distribution
- Ability to automatically adjust feed amounts based on the size of fish
- Ability to automatically and precisely calculate, distributes feed to each rearing units
- Automated feed type selection
- Ability to create and setup up different scheduling and feeding strategies
- Ability to identify which feeding groups are online/offline
- The system must be capable of auto and/ or manual feeding
- Ability to maintain constant feed start times for each rearing unit
- Ability to create feed cycles and adjust the percentage of feed for a min of ten (10) cycles per feeding
- The system shall track each group of fish species, quantity, average size, total biomass and amount of feed fed
- Create growth models and forecasting
- Generate reports

- Included calibration system for the feed measurement and distribution system components
- The measurement system must measure in both metric and imperial units
- The consumption rate (C-Rate) shall be based on units of feed per units of biomass (1:1,000, Per-mille)
- C-Rate scaling must be 0 to 10 with a minimum of two (2) decimal places.
- Feed conversion rates shall be based on 'Thermal Growth Coefficient Theory' (TGC)
- Must include the ability for multiple Appetite Factor tables (AF) based on size and temperature
- The system must include the option for multiple Feed Delivery Tables based on C-Rate
- The system must include the option for multiple Feed Conversion Tables (FCR)
- All of the data tables shall be interpolated
- Each biomass group must have the capability of being fed individual self-adjusting rations based on weight, water temperature and feed composition
- The system must have automatic and/or manual rationing, delivery and biomass adjusting
- The discrepancy of feed rationing accuracy must be less than 1%

11401.3.3.2 The system shall operate with two blower systems that are located on the feed skid inside the Feed Building. Each blower shall be capable of delivering feed a minimum of 1,000 feet. After the rearing unit has been fed, the blower system shall totally purge all feed from the distribution system before feeding the next rearing unit.

11401.3.3.3 The system will need to be compatible with feed pellets supplied by Rangen, Inc. The pellet sizes the system is required to handle will range from 2 mm to 8mm.

11401.3.3.4 The estimated biomass weight will range will vary from 8,000 pounds to 18,000 pounds.

11401.3.4 DESIGN

11401.3.4.1 The system shall be designed to meet all of the performance and physical requirements for the feeding system.

11401.3.4.2 The manufacturer is responsible for designing and sizing all of the feed distribution components.

11401.3.4.3 The manufacturer is responsible for providing an engineered design for the feed distribution suspension system. The design shall be stamped by an engineer licensed to work in the State of Utah.

11401.3.5 PHYSICAL CHARACTERISTICS

11401.3.5.1 The feed skid shall be no more than 8 feet wide, 30 feet long, and 6 feet in height. The skid shall include 4 feed storage containers, loading platform, feed screw dosing system, operating system and blowers. The feed storage containers shall have the capability of being filled from a bulk feed auger that will be positioned above two of the skid-based storage containers.

11401.3.5.2 The system shall be a dual blower system that can deliver feed to all of the (144) rearing spaces of the Raceway Building.

11401.3.5.3 Each blower shall be capable of delivering feed up to 1,000 feet,

11401.3.5.4 The onboard storage containers shall have a minimum capacity to store six (6) tons of fish food. Two containers shall store a minimum of two (2) tons of food each. The other two containers shall store a minimum of one (1) ton of food each.

11401.3.5.5 The system shall be limited to only two distribution pipes that deliver feed from the feed skid in the Feed Building to the Raceway Building.

11401.3.5.6 There shall be a minimum of four (4) distribution points in the Raceway Building.

11401.3.5.7 Each raceway shall have a minimum of six (6) feed diffusers.

11401.3.5.8 Each diffuser must have five (5) sub feed diffuser points.

11401.3.5.9 The feed distribution system inside the Raceway Building will be suspended from the roof of the structure. It is anticipated that main support columns will be spaced along the length of the building approximately every 25 feet. Purlins will be placed across the main columns every 5 feet. The feed system can be suspended from the building structure. Any additional support materials needed to suspend the feed system will be provided by the feed system Supplier. The feed system Supplier will be required to provide the final weight of the feed system components to the engineer.

11401.3.5.10 The system shall not be suspended lower than the roll up doors in the drive isles of the Raceway Building. None of the components that are suspended above the rearing spaces shall protrude into the drive isle unless they are above the top of the roll up door height.

11401.3.5.11 The system shall include the appropriate hood or other necessary components to deliver feed to the rearing spaces without spilling into the drive and walk isles.

11401.3.5.12 The manufacturer is responsible for providing all material and labor required to install a fully functional fish feeding system. This shall include the feed skid, distribution piping, distribution valving, supports, suspension system, hangers, diffusers, hoods, etc.

11401.3.6 INTERFACE, INTEROPERABILITY, AND COMPATIBILITY REQUIREMENTS

11401.3.6.1 The feed system shall be supplied with its own operation and control system to be located on the feed skid.

11401.3.6.2 The control system shall be capable of operating up to eight (8) individual blower systems for the ability to expand in the future.

11401.3.6.3 The feed system shall be able to be controlled from a terminal at the Office Building. A computer for the SCADA system will be provided by the owner's General Contractor as part of the main project. The feed system shall be operated from this computer.

11401.3.6.4 There shall be a minimum of four (4) operator terminals in various locations.

11401.3.6.5 The Supplier must provide and allow full control over all source code (open source). This shall include but not limited to all SCADA, HMI and SQL databases.

11401.3.6.6 The feed system shall be able to provide live status information and operational controls by a mobile application that will be installed on mobile devices of the hatchery staff. The mobile devices will be supplied by the owner.

11401.3.6.7 The feed system Supplier will be responsible for providing and installing any WIFI system components, and installation required for a fully functional and operational system.

11401.3.6.8 The feed system shall have a notification and alarm system that will notify the hatchery staff.

11401.3.6.9 The Owner's General Contractor will provide the following as requested or required by the feed system Supplier.

- Conduit from feed system control panel to Office Building with CAT6A cable
- Conduit from feed system control panel to Raceway Building telecom rack with CAT6A cable
- Power to feed system skid disconnect
- Power and control cables and conduits to feed system components in the Raceway Building

11401.3.7 RELIABILITY

11401.3.7.1 The feed system shall be reliable and shall not have more than 20 hours of disruption and down time throughout the first year of service.

11401.3.8 MAINTAINABILITY

11401.3.8.1 The Supplier shall include a minimum of two days onsite by a qualified technician for system start up and owner training following completion of construction.

11401.3.8.2 The Supplier shall include a minimum of one day on site training by a qualified technician. This visit shall be approximately 6 weeks following the startup visit.

11401.3.8.3 The Supplier shall provide phone support for 365 days following final completion.

11401.3.8.4 The feed system shall have the ability to be calibrated and adjusted by the feed system Supplier remotely.

11401.4 METHOD OF MEASUREMENT

11401.4.1 Measurement shall include all of the equipment, components, and appurtenances required for a fully functional fish feeding system as outlined in the specification. This shall include, but is not limited to the feed skid, blowers, RDV's, operating system, data system, distribution system, support system, etc. In short all of the components required for a fully functional fish feeding system.

11401.5 BASIS OF PAYMENT

11401.5.1 The accepted quantity will be paid for at the contract unit price for:

PAY ITEM	UNIT
Fish Feed System	Lump Sum