ADDENDUM 5
LARIMER COUNTY BID #B17-14
CARTER LAKE FUEL SITE REPLACEMENT

Under Bid # B17-14, Carter Lake Fuel Site Replacement; the following information may help you prepare your bid.

***Each bidder must acknowledge receipt of Addendum #5 on the Proposal Form below and use REVISED BID SCHEDULE - 7/20/17, below or your Bid will be rejected.***

Specifications - Revised 7/20/2017 for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #1: Bid Schedule #1 page 1 states, The AST shall be delivered to the site as complete factory pre-fabricated system including skid mounted tank, pumping system, piping, fill ports, sensor ports, overfill prevention sumps, leak detection and secondary containment. It is State of Colorado as well as International Fire code regulations that a tank must be tested when it is installed. If the tank is completely assembled, it cannot be tested. Will the county accept construction of the tanks piping system, etc. to be completed on site?

Response #1: Refer to Revised Bid Schedule – 7/20/17.

Question #2: Will the County be responsible to have fuel delivered to the temporary fuel tank?

Response #2: Yes, the County will be responsible to have fuel delivered to the temporary fuel tank.

Question #3: Are proposed equivalents to be proposed directly to John Skogman of Terracon or do we submit them to Whitney Wilson?

Response #3: Proposed equivalents are to be submitted to Whitney Wilson with Larimer County at wwilson@larimer.org no later than 10 calendar days prior to the bid submittal due date. No proposed alternates to the specifications will be considered after the submittal of the bid.

Question #4: Will the new waste oil AST be allowed to set on the existing concrete apron?

Response #4: Yes, the new waste oil AST be allowed to set on the existing concrete apron.
Question #5: Are 6" bollards required for the waste oil AST? Bollards may impede overhead door access.

Response #5: Refer to attached Revised, 7/20/2017, Specifications for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #6: To what inch level will the County have the existing ASTs product pumped down to? (What volume of fuel and waste oil will the Contractor be responsible to dispose of?)

Response #6: The County will empty the existing ASTs as much as possible with the existing pumping systems. Contractor will be responsible to dispose of remaining product, sludge, water, etc.

Question #7: During the walk through, it was decided that at least one new conduit was needed for the proposed Veeder Root tank monitor, Correct?

Response #7: Refer to attached Revised, 7/20/2017, Specifications for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #8: Assuming question 7 is correct, and since trenching will be necessary, does the County want all new conduits for the new fueling system?

Response #8: Yes, if trenching is required, contractor shall install new conduits and not utilize the existing conduits.

Question #9: How many Conduits?
It is estimated that a minimum of 3) 1" conduits will be needed.
1 each for, tank monitor probes and sensor, card reader communications and overfill horn/alarm.
A fourth spare conduit could also be desired.
** See question 14 more conduit could be necessary.

Response #9: Refer to attached Revised, 7/20/2017, Specifications for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #10: Since trenching will be necessary, driveway access will have to be deterred to around the south of the existing maintenance building. Is this acceptable?

Response #10: Yes, contractor will coordinate with Engineer and Owner to provide ample notification to county personnel.

Question #11: Veeder Root is to be mounted where existing key boxes are located within maintenance shop. County to re-locate existing key boxes prior to project commencement. Correct?

Response #11: Yes, the County is to re-locate existing key boxes prior to project commencement.
**Question #12:** Veeder Root overfill horn and light to be mounted on the west side of the existing loafing shed east of the new fueling tanks. Correct?
Veeder Root overfill horn and light will not be permitted to be mounted on the tank fill (Fire code).

**Response #12:** Yes, *Veeder Root overfill horn and light are to be mounted on the west side of the existing loafing shed east of the new fueling tanks.*

**Question #13:** Who is the electrical inspection authority?

**Response #13:** *Colorado Electrical Inspector, State of Colorado.*

**Question #14:** What is the Voltage and ampacity of the existing electrical panel on the pole adjacent to the existing fuel tanks?
Existing fuel electrical panel has a 100 amp two pole breaker as main, but inside maintenance shop only one 15 amp single pole breaker could be found as the supply. Please verify.
** May result in additional conduit and electrical to be needed.

**Response #14:** The 100 amp panel located near the fuel pumps is currently being fed by one 120 volt 15 amp circuit. It appears that and extra #12 wire was pulled in and capped and a future circuit. This is fed from the main shop building. (See following 4 images.)
There is another 100 amp 240 volt panel located in the storage shed east of the fuel site, approximately 70 feet away. There are four spare spaces in this panel (pictured below).
Question #15: Section 13205-C #2 products, 2.1 F. requests;
A 30 year warranty to include primary and secondary tank, concrete pad and any exterior coating, cladding or
finish material.
Tank Warranties are covered by the American Steel Tank Institute (STI) and are for the Tank Only.
Concrete Pad, exterior coatings, cladding or finish materials are not covered under this warranty.
Will the County revise this request?

Response #15: Refer to attached Revised, 7/20/2017, Specifications for Sections:
• Section 01011 – Summary of Project
• Section 02223 – Stabilization, Backfill, and Compaction
• Section 13205 – Above-Ground Storage Tank Installation
Question #16: Section 13205-C #2 products, 2.2 Pumps, A. requests;
Red jacket submersible turbine pump 1/3 hp for gasoline.
1/3 hp is no longer available from Red Jacket.
Will County accept and change request to 3/4 hp in place of 1/3 hp?

Response #16: Refer to attached Revised, 7/20/2017, Specifications for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #17: Section 13205-C #2 products, 2.3 Dispenser, A. requests;
Tank Mounted dispenser for gasoline but not for diesel.
Figure 3 shows dispensers independent of tank.
What is the Count’s request?

Response #17: Refer to attached Revised, 7/20/2017, Specifications for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #18: Section 13205-C #2 products, 2.4 Nozzles requests;
Utilize existing. Please Clarify.
What of the existing hanging hardware (hoses, nozzles, breakaways, swivels, etc.) is contractor to re-use?

Response #18: Refer to attached Revised, 7/20/2017, Specifications for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #19: Section 13205-C #2 products, 2.7 ATG, requests;
B. Sump Sensor 794380-352, Why?
Will County remove from request?
C. interstitial sensor 794380-341 is no longer available, needs to be 794390-420 for steel AST.
Will County change request/spec to 794390-420?

Response #19: Refer to attached Revised, 7/20/2017, Specifications for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #20: Estimated tank manufacturing lead time is 13 weeks from date of order.
Will start and end times be revised to allow?

Response #20: Please refer to Addendum #3, which has addressed this question.

Question #21: Will Bid opening be extended by one week to allow Contractor enough time to compile bid after questions are answered?

Response #21: See Addendum #4 B17-14.
Question #22: What will the grade of the new tank pad be?

Response #22: The new tank pad should be elevated above the existing grade approximately 4 inches and the site graded so stormwater from the site does not flow onto or across the concrete pad.

Question #23: Section 02223-C 3.3 Backfilling and compaction, C. Back fill materials to only be filled in at 8” loose lifts.
Will County / Engineer allow 12” loose lifts?

Response #23: Refer to attached Revised, 7/20/2017, Specifications for Sections:
- Section 01011 – Summary of Project
- Section 02223 – Stabilization, Backfill, and Compaction
- Section 13205 – Above-Ground Storage Tank Installation

Question #24: Will County’s Engineer be responsible for an engineered drawing for the tank and dispenser pad?
(Most likely needed for permitting)

Response #24: No, contractor will be responsible to provide engineered drawings required for any permitting.

Question #25: Please indicate if the following manufacturers are acceptable equivalents to the specifications:

- Wemac tanks, Fireguard U.L. 2085 for the 2000 gallon tank and a U.L. 142 double wall for the 300 gallon waste oil.

Response: Yes, both are acceptable equivalents.

VENDORS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM #5 ON THE SIGNATURE PAGE OF YOUR PROPOSAL DOCUMENTS OR YOUR BID WILL BE REJECTED.

NO FURTHER QUESTIONS WILL BE ACCEPTED

Whitney Wilson
Purchasing Agent
1. GENERAL

1.1. SECTION INCLUDES

A. Part 1.2 - Project: Work Covered by Project Specifications
B. Part 1.3 - Administrative and Procedural Sections Applicable to Project

1.2. WORK COVERED BY PROJECT SPECIFICATIONS

A. The specifications for equipment and materials associated with the AST systems allow for the submittal by the Contractor of proposed alternates to the specifications that are required to be reviewed and approved by the Engineer. All proposed equivalents or equals to the specifications are required to be approved prior to the submittal of the bids to the Owner. All proposed alternates to the specifications are required to be submitted 10 calendar days prior to the bid submittal due date. Approved alternates to the specifications will be issued as an addendum to the project specifications prior to submittal of bid. No proposed alternates to the specifications will be considered after submittal of the bid.

B. The following specifications and associated diagrams constitute the requirements for work to be performed by the contractor or subcontractor(s) (hereafter known as the Contractor), for removal and replacement of above-ground storage tanks (ASTs) at the Larimer County Fleet Services – Carter Lake Shop in Loveland, CO. These project specifications have been developed by Terracon Consultants, Inc. (hereafter known as the Engineer), on behalf of Larimer County Fleet Services (hereafter known as the Owner). Drawings of the site showing the approximate locations of the new and existing AST systems and components are attached. The general scope of this work includes, but is not limited to, the removal, purchase, and installation of items described in the following sections.
1) Above-ground Storage Tank Removal

The Contractor shall provide all equipment, materials, labor and permitting as may be required for removal and disposal of the existing AST systems at the Carter Lake Shop in Loveland, Colorado. This includes demolition and removal of the following:

- Four singled wall 560-gallon ASTs used for both unleaded gasoline and diesel fuel storage;
- One approximately 300-gallon AST for used oil storage;
- Associated aboveground product piping and dispensers;
- Concrete secondary containment basin with metal fence;
- Miscellaneous equipment from the site as shown on the Drawings;
- Permitting and notices required as part of the work, including notices with Colorado Department of Labor and Employment Division of Oil and Public Safety. CDLE-OPS and the local fire authority; and,
- Contractor is responsible for removal and proper disposal of all liquids and/or sludge inside the ASTs, piping, and dispensers prior to demolition and removal.

The existing four 560-gallon ASTs, and one 300-gallon AST, along with the secondary concrete containment basin, metal fence, piping and dispensers shall be disconnected, removed, and disposed of properly. The area will be backfilled and compacted as specified, if needed, see below:

Contractor shall include additional allowance money in bid for overexcavation, loading, waste characterization sampling and testing, waste disposal acceptance, transportation, and replacement/backfill material of up to 100 in-place cubic yards of petroleum contaminated soil as directed by the Engineer.

The existing AST system will be removed prior to construction and installation of the new AST system, therefore the Contractor will be responsible for providing an approximate 500-gallon storage tank and dispenser for unleaded gasoline for temporary use to fuel vehicles onsite. The temporary fuel tank and dispenser will be available for use from the time current fueling system is taken offline, until the new AST
and associated piping and dispensers are installed and operational. The temporary fuel tank will be provided in accordance with all local, state and federal guidance and laws. The Contractor will not be responsible for providing gasoline, nor is the Contractor responsible for providing a temporary means of storing and dispensing diesel fuel.

2) Above-Ground Storage Tank Installation

The Contractor shall provide all equipment, materials, and labor as may be required for the complete installation of the new AST system at the Carter Lake Shop in Loveland, Colorado. This includes installation of one new 2,000-gallon dual-compartment UL2085 AST (1,500-gallon unleaded gasoline and 500-gallon mid-grade unleaded gasoline) system. The AST system shall be delivered to the site factory assembled, including skid-mounted tank, pumping system, sensor ports and overfill prevention sumps. The installation also includes concrete tank foundations, dispensers, piping, fill ports, protective bollards, site lighting, electrical service, Veeder Root Model TLS-300C and miscellaneous equipment for a complete system as shown on the Drawings.

The Contractor shall also provide all equipment and labor as may be required to install a new 300-gallon used oil UL142 double wall AST in the location as shown in the associated project figures. The installation of both AST installations also includes the following:

- Concrete tank pads/foundations and drive pads (where applicable);
- Protective 6-inch diameter bollards at the 2,000-gallon AST and the 300-gallon used oil AST;
- Electrical service;
- Miscellaneous equipment and materials for a complete fuel system, select items are shown on the Drawings; and,
- Miscellaneous equipment and materials for the new 300-gallon used oil AST, including installation of a catch basin inside the fleet building with piping and a manually activated pump to transfer used oil from the catch basin to the used oil UST outside
C. Project Sequence: The installation of the new 300-gallon double wall used oil AST, along with its associated piping and manually activated pump shall occur first to prevent the need for temporary used oil storage. The Contractor will provide an approximate 500-gallon storage tank and dispenser for unleaded gasoline, which must be on-site prior to existing fueling system shut down and removal. The existing AST system and used oil AST will be removed and underlying soils will be inspected by the Engineer for petroleum contamination (see Section D below for details). After removal and demolition of existing AST system, the new 2000-gallon AST and associated piping and dispensers shall be installed and fully operational.

D. Project Sequence: In the event that soils under the existing concrete secondary containment basin are contaminated with petroleum products, over-excavation and approved backfill of up to 100 cubic yards of soil will occur. The soil over-excavation will occur between the events of removing and demolition of the current AST system and associated components and structures, and the installation of the new AST fueling system with its associated components and structures.

1.3. ADMINISTRATIVE AND PROCEDURAL SECTIONS APPLICABLE TO PROJECT

A. Section 01011 - Summary of Project
B. Section 01039 - Coordination
C. Section 01100 - Health and Safety
D. Section 01400 - Quality Control
E. Section 01410 - Testing Laboratory Services
F. Section 01570 - Traffic Control
G. Section 02000 - Mobilization and Demobilization
H. Section 02110 - Demolition and Site Clearing
I. Section 02116 – Above-Ground Storage Tank Removal
J. Section 02222 - Excavation
K. Section 02223 - Stabilization, Backfill and Compaction
L. Section 02231 - Aggregate Base Course
M. Section 02575 - Pavement Repair and Resurfacing
N. Section 13205 - Above-Ground Storage Tank Installation

END OF SECTION
SECTION 02223

STABILIZATION, BACKFILL, AND COMPACTION

1. GENERAL

1.1. DESCRIPTION: This section describes preparation of subgrades; backfilling; compacting; and finish grading for excavation areas.

1.2. SECTION INCLUDES

A. Related Sections
B. Materials
C. Execution
D. Payment

1.3. RELATED SECTIONS

A. Section 02116 - Above-Ground Storage Tank Removal
B. Section 02222 - Excavation
C. Section 02231 - Aggregate Base Course
D. Section 13205 - Above-Ground Storage Tank Installation
E. Larimer County Urban Area Street Standards (LCUASS) - Chapters 22 and 23

2. EXCAVATION BACKFILL MATERIAL: Excavation backfill material shall be placed from the bottom of the excavation to the bottom of the base course and/or pavement subgrade in accordance with applicable sections of LCUASS Chapter
3. EXECUTION

3.1. QUALITY ASSURANCE

A. Compaction Testing: Engineer shall conduct compaction testing as required.

B. Soil compaction tests shall be performed in accordance with:

1) ASTM D698 - Standard Method of Test for Moisture Density Relations of Soils.

2) ASTM D4253 and D4254 - Standard Method of Test for Relative Density of Cohesionless Soils.

3) Density testing shall be performed in accordance with Section 01410 - "Testing Laboratory Services".

3.2. FIELD QUALITY CONTROL

A. Field Compaction Control

1) Density-moisture testing shall be performed in general accordance with Sections 01400 and 01410.

2) Field tests will be conducted to verify compliance of compaction methods with specified density and moisture in accordance with ASTM D2922 and ASTM D3017 at frequencies and locations randomly selected by the Engineer.

3) Compaction tests for excavations shall be performed for each lift for every 1,000 square feet of backfill area or per LCUASS Chapter 23, Table 23-1 for areas/structures within jurisdiction of the local government entity.

4) If the Engineer determines that reliable and uniform results are produced by the Contractor's construction techniques, the frequency of testing may be decreased by the Engineer.
B. Compaction shall be verified by ASTM D2922 to the following minimum densities (reference ASTM D698 unless otherwise indicated) or as approved by the Engineer:

1) Storage Tank Slab Bedding
   a) Compacted to 95% of maximum dry density.

2) Excavation Area Backfill
   a) Paved Roadways and concrete slabs - 95% of maximum dry density.
   b) All Other Locations: 90% of maximum dry density.

3) All cohesionless materials that cannot be determined by ASTM D698 will be determined by ASTM D4253 and D4254 with a compaction minimum of 65 percent.

C. Moisture Content

1) All compacted backfill shall be within 2% of optimum water content cohesive and 3% for granular soils as determined by ASTM D698 and performed in accordance with ASTM D3017: or as approved by the Engineer.

2) Water shall be added to the material, or the material shall be harrowed, discs, bladed, or otherwise worked to insure a uniform moisture content, as specified.

D. Care shall be used when operating mechanical equipment in locations where it may cause damage to buildings, property, utilities, or structures above or below ground.
3.3. BACKFILLING AND COMPACTION

A. Excavation areas shall be backfilled promptly after removing the aboveground storage tanks and/or contaminated soils, as directed by the Engineer.

B. Excavation areas shall be backfilled promptly after removing the concrete drive pads, pump islands and product lines, as directed by the Engineer.

C. Backfill material shall be deposited in uniform loose lifts not to exceed 12 inches (prior to compaction) in all areas.

1) Other thickness may be used with the prior written approval of the Engineer.

D. Methods and equipment which are appropriate for the backfill of material shall be employed.

1) Backfill equipment or backfilling methods which transmit damaging shocks to subsurface utilities are not to be used.

E. Compaction shall not be performed by jetting or water settling.

F. If compaction cannot be obtained with excavated material, backfill material shall be imported, as directed by the Engineer.

G. Excess excavated materials and materials not suitable for backfill shall be removed from the site, as directed by the Engineer.

4. MEASUREMENT AND PAYMENT

4.1. Quantities of backfilling of excavation will be based on weight tickets from materials supplier.

4.2. Payment for all work described in this section shall be included in the unit prices in the Bid Schedule. The lump sum and unit prices shall include all costs for all labor, materials, and equipment required to complete the work in accordance with the Plans and Specifications. The Contractor is required to submit with each invoice that includes backfill material, copies of all weight tickets associated with backfill being invoiced.

END OF SECTION
SECTION 13205

ABOVE-GROUND STORAGE TANK INSTALLATION

1. GENERAL

1.1. DESCRIPTION: The Work included under this section consists of furnishing all labor, materials, services, equipment and appliances required to properly install one 2,000-gallon dual-compartment double-walled AST (1,500-gallon unleaded gasoline and 500-gallon mid-graded unleaded gasoline) and dispensing systems. The AST systems shall be delivered to the site as complete factory pre-fabricated systems including skid-mounted tank, pumping system, sensor ports, overfill prevention sumps, leak detection and secondary containment. The Work included under this section also consists of furnishing all labor, materials, services, equipment and appliances required to properly install one 300-gallon double-walled AST for used oil, including a catch basin, piping and manually activated pump. The installation also includes the following:

β Concrete tank foundation/pads and drive pads (where applicable)

β Protective 6-inch diameter bollards at the 2,000-gallon AST and the 300-gallon AST

β Electrical service

β Miscellaneous equipment for a complete system as shown on the Drawings

β Miscellaneous equipment and materials for the new 300-gallon used oil AST, including installation of a catch basin inside the fleet building with piping and a manually activated pump to transfer used oil from the catch basin to the used oil AST outside

1.2. SECTION INCLUDES

A. Related Sections

B. Performance Requirements

C. Owner Occupancy

D. Protection
E. Utilities

F. Qualifications

G. Indemnification

H. Products

I. Execution

J. Payment

1.3. RELATED SECTIONS

A. Section 01570 - Traffic Control

B. Section 02223 - Stabilization, Backfill, and Compaction

C. Section 02231 - Aggregate Base Course

1.4. PERFORMANCE REQUIREMENTS

A. The intent of section is to provide guidance concerning the installation of two separate (one fueling system and one used oil storage system) complete above-ground storage tank systems including: tanks, pumps, piping, supporting slab, dispensers, electrical service, and signage as required. The Contractor shall furnish all labor, materials, supplies, equipment, transportation, travel, and services necessary for a complete turnkey installation.

B. The Automatic Tank Gauging System shall be provided and installed as part of the system installation. The Contractor shall provide a complete turnkey installation with the Automatic Tank Gauging System.

C. All work is to be performed in accordance with applicable Federal, State and local regulations including requirements of NFPA, EPA, OSHA, Larimer County, the Colorado Department of Labor and Employment Division of Oil and Public Safety (OPS) and the Loveland Fire Rescue Authority. All equipment and related methods of installation shall be performed as per appropriate Uniform Fire Codes, UL, NFPA-30 and 30A, and local
regulations as is applicable to each individual piece of equipment, system design, and/or method of installation.

1.5. OWNER OCCUPANCY

A. The Owner will occupy the site during the entire period of tank removal and installation activities. The new used oil AST shall be installed and functional and a temporary unleaded gasoline AST and dispenser shall be on-site and operational prior to the existing diesel and gasoline storage and dispensing system at the Carter Lake Shop being shut down. The temporary dispensers shall remain operational throughout the removal of the old facility and the construction of new facility. Contractor will cooperate fully with the Owner during the work to minimize conflicts and to facilitate Owner’s usage of the site.

1.6. PROTECTION

A. The Contractor shall adequately protect the work site, adjacent property and the general public during all phases of the project. Contractor shall be responsible for all damages or injury due to his action or negligence.

1.7. UTILITIES

A. Prior to commencing work, Contractor shall verify and have professionally identified the location of all site utilities and take precautions to protect same during the work. Should damage result due to Contractor negligence, Contractor shall bear cost of repairs. Should existing utilities require relocation, Contractor shall note and include monies for said work in the Bid.

1.8. QUALIFICATIONS

A. All work under this contract must be completed under the direction of personnel experienced and registered in the installation of above-ground fuel storage systems in the State of Colorado.

1.9. INDEMNIFICATION

A. Contractor shall assume, indemnify and hold harmless the Engineer and the Owner for and from any and all liability, loss and expense (including Workmen’s Compensation) resulting from loss of life or damage or injury to persons or property (including employees of either of the parties hereto).
arising in whole or in part by reason of or in a way resulting from negligent operations under this contract, whether such operations be by said Contractor(s), or by any Subcontractor(s), or anyone directly or indirectly employed by either of them.

2. PRODUCTS

2.1. Above-Ground Storage Tank: Tank shall be skid-mounted, above-ground fuel storage tank systems furnished as a complete factory prefabricated system. One dual-compartment AST for unleaded gasoline and mid-grade unleaded gasoline services will be installed per the specifications and drawings. Components of the tank package shall be as follows:

A. Underwriter’s Laboratory (UL) standard for construction, UL2085 listed, Fireguard Cylindrical tank, double-walled tank with primary and secondary steel tanks, as supplied by Eaton Metal Products, We-Mac Tanks or Engineer approved equivalent. Tank capacity shall be 2,000-gallons – 1,500-gallons for unleaded gasoline and 500-gallons for diesel fuel.

B. Secondary containment shall be designed and constructed to allow for installation of a liquid leak detector in the interstitial space.

C. Vents: Both normal pressure relief and emergency vents shall be independent of each other and shall be designed and constructed as per NFPA 30.

D. Grounding lug for connection to a ground connector shall be in accordance with NFPA 78.

E. All metal risers, fittings, and components shall be of corrosion resistant material or receive exterior finish to equal.

F. Tank structure in its entirety shall have a 30-year warranty to include primary and secondary tank.

G. Tank shall be mounted on corrosion resistant supports a minimum of two inches above concrete foundation/support pad.

H. All tank openings, including leak detection port, shall be threaded.

I. Tank shall have appropriate product and warning labels as to contents.
J. Tank shall be painted beige in color as approved by Engineer and Owner.

2.2. Pumps

A. Gasoline system will include a Red Jacket submersible turbine pumps-3/4 hp, 60 HZ, single phase with added wiring for auxiliary equipment, or Engineer approved equivalent.

B. Mid-Grade gasoline system will include a Red Jacket submersible turbine pumps-3/4 hp, 60 HZ, single phase with added wiring for auxiliary equipment, or Engineer approved equivalent.

2.3. Dispenser:

A. The gasoline systems shall each include a cabinet mounted Dresser-Wayne Reliance G6200 dispenser, Gasboy Atlas 9100 Series dispenser or Engineer approved equivalent.

B. Each gasoline system shall include an Engineer approved pulser and high hose retractor.

2.4. Nozzles: The system shall include new Husky 1-GS automatic shut-off nozzle or Engineer approved equivalent. Nozzles will be connected to hoses with a minimum length of 20 feet with OPW 66 REC reconnectable breakaway.

2.5. Liquid Level Gauge: System shall include visual liquid level gauge at the tank for product volume as supplied by Morrison Clock Gauge Model 818 or Engineer approved equivalent.

2.6. Fill Port: Fill ports will include 2-inch male quick disconnect fitting with spill containment sump of minimum seven gallons with integral reservoir and manual flow back drain system. Fill ports to be located at the south side of the tank. Fill ports must be located within spill containment box so that connections made to fill port will be within the spill containment sump. Manual shut off valves and one way valves will be located in each fill port pipe adjacent to the spill containment sump. Each fill port pipe and cap will be painted appropriate color as per API color codes.

Overfill prevention shall be provided by installing a mechanical overfill prevention valve within the AST fill opening, OPW61 fSTOP three-inch cylinder float or Engineer approved equivalent.
2.7. Automatic Tank Gauging System (ATG): Tank monitoring system for inventory management, overfill protection, and leak detection as supplied by Veeder Root Model TLS-300C or Engineer approved equivalent shall be installed.

   A. Gage – Veeder Root Series 8473 Magnetostrictive Inventory Measurement Probe.

   B. Interstitial Sensors – Veeder Root Form No. 794390-420

   C. Overfill alarm with audible alarm at AST – Veeder Root No. 790091-001 and 790095-001

2.8. Emergency Shut-off: An emergency shut off switch shall be located east of the AST on the north side of the south side of the existing site building, as shown in the drawings, greater than 20 feet from the ASTs, and no further than 100 feet. A 20-pound ABC fire extinguisher in a weather resistant box shall be mounted adjacent to the emergency shut-off switch. Audible overfill alarm with light and alarm acknowledge unit shall also be located adjacent to emergency shut-off switch.

2.9. Foundation Slab: Slab shall be designed in accordance with tank manufacturer’s specifications and criteria

2.10. Card Reader: A Fuel Focus fuel management system will be installed at the new AST system by others following the installation of the AST fuel system by the Contractor. Contractor is required to install electrical power and all conduits for installation of wiring to install the new Fuel Focus fuel management system, as described in Attachment A:

2.11. Card Reader Cabinet: The Fuel Focus fuel management system terminal will require the installation of a new cabinet/shelter. The cabinet shall be constructed of metal, include a motion activated light, and powder coated in color to match the AST. The approximate cabinet dimension is shown on Drawing 3, attached, or engineer approved equal.

   Site Lighting – One LED yard light with pole is to be installed. Yard light will be located on the southeast end of the new AST. Light pole shall be 15-feet tall, 4-inch square steel, minimum 0.120-inch wall thickness, rated for fixture weight and local wind conditions, and bolted to concrete pad. Motion detectors are to be installed on lights with adjustable timers to be approved by Engineer and Owner, approximately 10 minutes.
3. EXECUTION

3.1. TANK INSTALLATION

A. Contractor shall supply all labor and materials necessary to provide a complete turnkey installation of all equipment. The tank system, including associated equipment, shall be installed in accordance with manufacturers specifications.

B. The tank shall be placed on a reinforced foundation slab designed to support the fully loaded tank. Contractor shall provide a foundation design.

C. Contractor shall provide Owner all equipment brochures, manuals, warranties and operational material as necessary to maintain and satisfy regulatory requirements for record keeping. All materials shall be turned over to the Owner's authorized representative at the time of start up and training portion of project.

D. Stormwater flow across the site should generally be to the south. Prevent pooling of stormwater on or around the AST installation.

3.2. SIGNAGE AND PROTECTION

A. Signage: Provide and install a professionally painted sign permanently affixed adjacent to tank facility. Sign shall be painted on a metal backing of sufficient size to include all required notices including those below:

1) IT IS UNLAWFUL AND DANGEROUS TO DISPENSE GASOLINE INTO UNAPPROVED CONTAINERS.

2) NO SMOKING.

3) STOP MOTOR.

4) NO FILLING OF PORTABLE CONTAINERS IN OR ON A MOTOR VEHICLE.

5) PLACE CONTAINER ON GROUND BEFORE FILLING.

6) DISCHARGE YOUR STATIC ELECTRICITY BEFORE FUELING BY TOUCHING A METAL SURFACE AWAY FROM THE NOZZLE.
7) DO NOT RE-ENTER YOUR VEHICLE WHILE GASOLINE IS PUMPING.

8) IF A FIRE STARTS, DO NOT REMOVE NOZZLE — BACK AWAY IMMEDIATELY.

9) DO NOT ALLOW INDIVIDUALS UNDER LICENSED AGE TO USE THE PUMP.

10) TRANSPORT OPERATOR SHALL REMAIN WITH TRANSPORT AT ALL TIMES DURING UNLOADING OPERATIONS

11) DELIVERY TRANSPORT SHALL BE SECURED WITH WHEEL CHOCKS DURING DELIVERY PROCESS

12) TRANSPORT OPERATOR SHALL VERIFY THAT VOLUME AVAILABLE IN TANK IS GREATER THAN AMOUNT OF PRODUCT TO BE DELIVERED PRIOR TO COMMENCING DELIVERY

13) TRANSPORT, DELIVERY VALVES, COUPLINGS AND HOSES SHALL BE INSPECTED IMMEDIATELY PRIOR TO AND CONTINUALLY MONITORED DURING DELIVERY PROCESS FOR LEAKAGE OR DEFECTS

14) IN CASE OF EMERGENCY CONTACT 911 AND LARIMER COUNTY FLEET SERVICES AT (970) 498-5690

B. Sign shall metal base material pre-drilled prior to painting process. Sign shall be warranted against fading or chipping for a minimum of five years from date of installation.

C. Protection: Protect installation from vehicular intrusion with bollards around perimeter as shown on the drawings. Bollards shall be constructed of 6-inch diameter by seven feet in length concrete filled steel pipe buried vertically with three feet buried below grade. Bollards shall extend four feet above grade and be painted safety red. Finish collar at grade flush with surrounding pavements. Bollards are to be spaced as follows:

- Spacing between bollards – not more than four feet on center
- Spacing between bollards and AST – minimum three feet
3.3. TESTING

A. Prior to completion, Contractor shall perform complete testing of all systems as per manufacturer’s specifications and start up criteria. Contractor shall provide verification of proper tightness testing of primary tank, secondary containment system, and piping in writing to Owner.

B. Contractor shall also provide Owner written verification on Contractor’s letterhead that all systems have been installed in accordance with all manufacturer’s and regulatory requirements as are applicable to that system.

3.4. WARRANTIES

A. Contractor shall warranty installation against faulty workmanship for a period of not less than two years from installation. Contractor shall also provide all warranties as applicable to each individual component. Tanks shall be warranted by manufacturer for a minimum of 30 years from date of installation for all defects resulting from manufacturing processes or materials relating thereto. The 30 year warranty for tanks shall cover both primary and secondary tanks and all manufacturer supplied accessories. The warranty shall be delivered to Owner within ten days of completion of the project in writing from tank manufacturer and Contractor.

3.5. START UP

A. Contractor shall advise Engineer and Owner of intended start-up date. Contractor shall provide training of on-site personnel in complete system operation and all aspects of accessories and facilities relating to the tank installation. Contractor shall notify Engineer and Owner a minimum of 72 hours prior to intended start up.

3.6. HOUSE-KEEPING

A. At all times the premises shall be kept clean and neat. No debris shall be allowed to remain on site overnight at any time during the project. At the completion of the project all debris shall be removed from the site as part of this contract. All surrounding earth work shall be left in natural or improved condition to match surrounding terrain as per site plan for this location.
4. PAYMENT

4.1. PAYMENT: Payment for all work described in this section shall be included in the lump sum or unit prices in the Bid Schedule. The lump sum and unit prices shall include all costs for all labor, materials and equipment required to complete the work in accordance with the Plans and Specifications.

END OF SECTION
REVISED BID SCHEDULE - 7/20/17
LARIMER COUNTY CARTER LAKE SHOP AST REMOVAL AND REPLACEMENT CONTRACT

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>ESTIMATED QUANTITY</th>
<th>UNITS</th>
<th>DESCRIPTION</th>
<th>UNIT PRICE (Words/Numbers) (Typed or Printed)</th>
<th>EXTENDED TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Lump Sum</td>
<td>The Work included under this section consists of furnishing all labor, materials, services, equipment and appliances required to properly install one 2,000-gallon dual compartment AST (1,500 gallon unleaded gasoline and 500-gallon mid grade unleaded gasoline) and dispensing systems at the Carter Lake Shop in Loveland, Colorado. The AST system shall be delivered to the site as factory assembled, including skid-mounted tank, pumping system, sensor ports, and overfill prevention sumps. The installation also includes concrete tank foundations, dispensers, piping, fill ports, protective bollards, site lighting, electrical service, Veeder Root Model TLS-300C and miscellaneous equipment for a complete system as shown on the Drawings.</td>
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<tr>
<td>2</td>
<td>1</td>
<td>Lump Sum</td>
<td>The Work included under this section consists of furnishing all labor, materials, services, equipment and appliances required to provide one 500-gallon storage tank with dispenser for the temporary fueling of site vehicles and equipment.</td>
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<tr>
<td>3</td>
<td>1</td>
<td>Lump Sum</td>
<td>Furnishing all labor, materials, services, equipment and appliances required to properly remove, close and dispose of the existing AST systems and associated ancillary equipment, foundations, and containment structures at the Carter Lake Shop in Loveland, Colorado including removal and disposal of four approximately 560 gallon ASTs containing gasoline and diesel fuel and one approximately 300-gallon AST containing used oil; removal and disposal of pumping systems, piping, fill ports, containment structures, tank foundations, pump islands, dispensers, electrical service, concrete, pavement, and miscellaneous equipment from the site;</td>
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<tr>
<td>4</td>
<td>100</td>
<td>Cubic Yards</td>
<td>Excavation, Stockpiling and Loading of Excavated Soils associated with the AST closure</td>
<td></td>
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<tr>
<td>5</td>
<td>100</td>
<td>Cubic Yards</td>
<td>Transportation and Disposal of Petroleum Contaminated Soils associated with the AST closure</td>
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<tr>
<td>BID ITEM</td>
<td>ESTIMATED QUANTITY</td>
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<td>6</td>
<td>100</td>
<td>Cubic Yards</td>
<td>Backfill and Compaction (Purchase, Transport, Compact Backfill Material)</td>
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<td></td>
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<td>associated with the AST closure</td>
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<tr>
<td>7</td>
<td>100</td>
<td>Cubic Yards</td>
<td>Backfill and Compaction (Clean Excavated Material) associated with the AST closure</td>
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<td>8</td>
<td>1</td>
<td>Lump Sum</td>
<td>The Work included under this section consists of furnishing all labor,</td>
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<td>materials, services, equipment and appliances required to install one</td>
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<td>300-gallon double wall AST for used oil (located outside) with a catch</td>
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<td>basin and manually activated pump (located inside) at the Carter Lake Shop</td>
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<td>in Loveland, Colorado. The installation also includes piping, and</td>
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<td>miscellaneous equipment for a complete system.</td>
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TOTAL CONTRACT AMOUNT $ __________________________

Estimated number of days to complete Project: __________________________

Note:

1) Quantities shown on bid schedule are estimated and are not guaranteed under the contract.