

**Environmental Utilities Department**

2005 Hilltop Circle
Roseville, California 95747

February 24, 2021

Ms. Stephanie White
Davis-Bacon Compliance
AIS Liaison
Loan and Grant Administration Section
Division of Financial Assistance
State Water Resources Control Board
1001 "I" Street, 16th Floor, Sacramento, CA 95814

NOTE:

This waiver submission may include references to proprietary items and brand name products. These references have been retained in order to provide context for the waiver submission. EPA does not evaluate a waiver based on a proprietary item but reviews the performance-based specifications for the project/products. As such, any references to brand or proprietary items are reviewed on an "or equal" basis by EPA.

Items and pages may have been intentionally redacted or excluded by the EPA. Contact CWSRFWaiver@epa.gov for more information if necessary.

**Subject: City of Roseville Availability Waiver for Seamless Carbon Steel Tubes
(SRF Agreement No. D19-01012, Project No. C-06-8215-210, Pleasant Grove
Wastewater Treatment Expansion and Energy Recovery Project)**

Dear Ms. White:

This letter serves as a request from the City of Roseville (City) to obtain an American Iron and Steel (AIS) Availability Waiver for the seamless carbon steel tubing (tubing) used to construct the CNG Storage Vessels, which are specified for and required to complete the Pleasant Grove Wastewater Treatment Expansion and Energy Recovery Project (Project No. C-06-8215-210). This request is made on the basis that the specified material is not produced in sufficient and reasonably available quantities in the United States (US) and that no domestically manufactured alternatives can be used to meet the project requirements.

The goal of the Expansion and Energy Recovery Project is to provide an economically and environmentally beneficial means of utilizing digester gas produced by the new anaerobic digesters that are being constructed under a separate project at Pleasant Grove Wastewater Treatment Plant. Digester gas will be treated and converted into renewable natural gas by facilities constructed under the Expansion and Energy Recovery Project. That renewable natural gas will then be compressed and used to fuel the City's compressed natural gas (CNG) solid waste truck fleet.

The project has an anticipated completion date of February 2022. Timely procurement of the subject tubing and installation of the CNG Storage Vessels constructed from the tubing are critical to the project schedule. The CNG Storage Vessels are used to store CNG such that the facility has adequate fuel capacity when trucks arrive to fill and are essential to the function of the CNG Fueling Facility, which is contracted as an early construction milestone to be completed by July 2021. The City has purchased CNG-fueled solid waste trucks that will be delivered in 2021. The fueling facility must be finished to allow those vehicles to fuel.

The tubing used to construct the CNG Storage Vessels must satisfy the conditions presented in project specification 43 10 01 and the design drawings (see Exhibit A). However, tubing with the diameter, wall thickness, and length that meets the project requirements for the CNG Storage Vessels is not produced in the US and therefore would not comply with the AIS requirement.

A waiver for seamless carbon steel tubing was not submitted during the design and bidding periods because the exact material used to construct the vessels was not known. As part of the construction contract, the General Contractor was required to develop the detailed design (e.g., the required steel wall thickness to meet the project design pressure, weld locations and types, etc.) for the CNG Storage Vessels. Relevant bidding documents pertaining to AIS guidelines and the General Contractor agreement are included in Exhibit B.

Substitute tube materials that comply with AIS requirements do not meet project requirements given the high storage pressure (up to a max allowable working pressure of 5,500 pounds per square inch [psi]) and required diameter (20 inches). As stated above, the CNG Storage Vessels are intended to contain the digester gas derived CNG, a renewable fuel, produced by the new CNG fueling compressors and used in the fuel dispensers that will fill the City's trucks. The tubing used to construct the CNG Storage Vessels is a specialty product used for storing high pressure gas and completes the path from the anaerobic digesters to the CNG truck fuel tank. Along with the large tubing wall thickness (greater than 1.25 inches), a large tubing volume is required because each storage vessel is specified to hold an absolute water capacity of 57.8 cubic feet and 19,500 standard cubic feet (scf) of CNG at 4,500 psi. For these reasons, 20-inch diameter 37-foot lengths of seamless carbon steel tubing is necessary to meet the project specifications and to produce renewable energy.

General Waiver Requirements

1. Description of the Material:
 - a. Seamless carbon steel tubing, which is used to construct the CNG Storage Vessels that store digester gas derived CNG for use in the CNG fuel dispensers and is provided in the following fashion:
 - a. Thirteen (13) 20 inches outside diameter (OD) X 1.323 inches wide (W) X 36.83 feet lengths (hot finish seamless carbon steel tube conforming with American Iron and Steel Institute standard 4147).
 - b. Refer to Exhibit C for material information and the material quote.
2. Unit of Measure, Quantity, and Price:

	20-inch OD X 1.323-inch W
Unit of Measure	feet
Quantity	480
Cost	

3. Time of Delivery or Availability:

- a. The CNG Storage Vessels, which are fabricated from the material covered by this waiver request, have already been procured. As of February 16, 2021, half of the CNG Storage Vessels have arrived at the project site, and the remaining vessels have been shipped.

4. Location of Construction Project:

- a. The project is located at Pleasant Grove Wastewater Treatment Plant, 5051 Westpark Dr, Roseville, CA 95747.

5. Name and Address of Proposed Supplier:

- a. CP Industries
2214 Walnut Street
McKeesport, PA 15132
Ph: 412-664-6604
Attn: Richard Seitz

6. Justification for Use of Foreign Construction Materials

- a. The material length, diameter, and thickness dimensions described in Item 1 are required to meet the CNG Storage Vessel specifications included in Exhibit A. The specified vessel volumes and quantity were determined based on fuel storage and vehicle fill sequencing requirements. CP Industries determined the material thickness listed in Item 1 to allow for the high-pressure storage application (5,500 psi maximum allowable working pressure) and to meet the requirements of the ASME Boiler and Pressure Vessel Code.
- b. AIS-compliant carbon steel tubing that meets the requirements listed in Item 1 is not available in the US. Specifically, the CNG Storage Vessel supplier, CP Industries, is not aware of any facilities in the US that will produce carbon steel tubing that has the necessary dimensions and wall thickness.
- c. CP Industries is familiar with only one domestic facility (US Steel in Lorain, Ohio) that can produce 20 inches OD X 1.323 inches W carbon steel tubes. However, US Steel is only able to produce pipe lengths less than about 25 feet because their production is limited to about 3.5 tons. At 36.83 feet and 298.83 pounds per foot, each vessel tube exceeds 5 tons. Therefore, seamless carbon steel tubing that meets AIS requirements and project specification storage requirements is not available. Documentation of the communication with US Steel is provided in Exhibit D, and a no-availability letter from CP Industries is included in Exhibit E.

- d. As further demonstration of the lack of domestic suppliers, CP Industries has had to file an Exclusion Request with the US Department of Commerce exempting them from aluminum and steel tariffs for the carbon steel tubes. The Exclusion Request was filed on the grounds that there is "no US production" of the needed products (20 inches OD X 1.323 inches W carbon steel tubes). Documentation of an extension of the Exclusion Request is included in Exhibit F for reference. In that documentation, CP Industries stated that US Steel is a domestic manufacturer but cannot manufacture the steel tubes "due to the length and weight requirement of the product."
- 7. Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor:
 - a. CWSRF and AIS compliance requirements and documentation were included in the bid documents when the City requested proposals from prospective prime contractors. Excerpts from the bid documents and the General Contractor's executed agreement that state these AIS compliance requirements are provided in Exhibit B. Furthermore, the excerpts from the executed agreement demonstrate that the General Contractor acknowledged the AIS compliance requirements.
 - b. Under contract with WM Lyles (prime contractor), EFS West (CNG fueling subcontractor) procured CP Industries as the supplier for the CNG Storage Vessels. As described in Item 6, CP Industries contacted US Steel to supply the carbon steel tubing needed for the CNG Storage Vessels. US Steel is the only domestic supplier that CP Industries is aware of who can provide the specialty carbon steel tubing. However, US Steel cannot provide AIS compliant carbon steel tubing at the necessary dimensions.

Availability Waiver Requirements

- 1. Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials:
 - a. The carbon steel tube material quotation from the proposed foreign supplier is included in Exhibit C. A quotation from US Steel is provided in Exhibit D, but, as discussed in General Waiver Requirements Item 6, US Steel cannot provide domestic steel tubing that meets the project requirements.
- 2. Project Schedule:

- a. The project's completion date is currently scheduled to be February 20, 2022. However, the project includes seven Substantial Completion Milestones, and completion of the CNG Fueling Facility is Substantial Completion Milestone #5, scheduled for June 2021. CNG storage vessel installation is scheduled to occur in February 2021. A delay to the vessel supply and installation will result in a delayed completion of the CNG Fueling Facility, which will impact when the City's new Solid Waste CNG vehicles can begin using the renewable digester gas derived CNG. The CNG vehicles are contracted to be delivered to the City in 2021. Time is of the essence for the installation of the subject CNG Storage Vessels because their location needs to be finalized to connect process tubing and to allow sufficient time for start-up and testing.
3. Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials:
 - a. Contract requirements including the applicable specification language and project plans for the CNG Storage Vessels are provided in Exhibit A. The specification requirements, particularly the pressure rating, dictate the material requirements for the carbon steel tubing used to construct the CNG Storage Vessels.
4. Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers:
 - a. The General Contractor's Subcontractor (EFS West) procured CP Industries to produce the CNG Storage Vessels. CP Industries contacted US Steel, which is the only domestic supplier of the required carbon steel tubing, according to CP Industries, to source the carbon steel tubing. Documentation of CP Industries' communication with US Steel is included in Exhibit D. US Steel can produce 20-inch OD X 1.323-inch W tubing, however, not to the project-specified lengths.
5. Contractor and/or supplier to provide a statement confirming the nonavailability of the domestic construction material which is sought:
 - a. A signed statement from CP Industries confirming nonavailability of domestically produced seamless carbon steel tubes is provided in Exhibit E.
6. Has the State received other waiver requests for the materials described in this waiver request, for comparable projects?
 - a. A prior waiver request has not been submitted or approved because the material is a unique specialty item for an uncommon municipal wastewater process.

Ms. Stephanie White
Division of Financial Assistance
February 16, 2021
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Sincerely,



Kenneth Glotzbach
Assistant Director of Environmental Utilities

cc: Tracie Mueller, City of Roseville, Project Manager
Joshua Fegurgur, State Water Resources Control Board
Adam Ross, Brown and Caldwell
William Pevec, Brown and Caldwell

Attachments:

- Exhibit A – CNG Storage Vessel Contract Requirements
- Exhibit B – AIS Bid Requirements and Agreement
- Exhibit C – Material Data and Quote
- Exhibit D – US Steel Quote and Communication Documentation
- Exhibit E – Nonavailability Letter from CP Industries
- Exhibit F – Tariff Exclusion Request Documentation

Exhibit A

CNG Storage Vessel Contract Requirements

2.10 CNG-STORAGE VESSELS

A. General

1. (13) ASME-rated CNG storage vessel shall be provided. Each vessel shall have an absolute water capacity of 57.8 cu. ft., a gas capacity of 19,500 SCF at 4500 PSIG, an MAWP of 5500 PSIG, and shall include framing and bracing suitable for the environmental conditions specified in Section 01 11 80.
2. Design, fabricate, inspect and test in accordance with the ASME Boiler and Pressure Vessel Code Section VIII with code and National Board inspection stamp.

B. Acceptable Manufacturers and Packagers

1. CP Industries.
McKeesport, PA
Telephone: (412) 664-6604
2. FIBA Technologies
Littleton, MA
(508) 887-7100
3. J.W. Operating Company
122 Dovel Rd.
Longview TX 75603
(903) 643-3413
4. Or approved equal.

C. Arrangement

1. Tube-type vessel shall be bolted to their foundation by structural coated steel rack. Tube-type vessels shall be sloped 1"-1.5" along their length toward the drain end to facilitate drainage of fluids and condensates from the vessels.

D. Valves And Drains

1. Each vessel shall include a full-port 3/4" pressure relief valve (PRV) set at vessel MAWP with a full-port 3/4" ball valve locked open between the PRV and the vessel. Each vessel shall include a 3/4" service ball valve, a drain port at its low point with a throttling plug valve and a pressure-rated discharge pipe or tube convenient for draining. Outlet of drain port shall be anchored and shall be directed away from servicing personnel.

E. Vent Risers

1. Each storage vessel PRV shall have its own vent riser constructed of 1-inch diameter schedule 80 carbon-steel pipe. Riser openings shall be 10 feet above grade and shall be protected by a rain cap or tee w/ 6" pipe nipples. Vent riser assembly shall be fully supported by a steel bracket anchored to the concrete slab; threaded connections to PRVs shall not be the means of support for the risers.

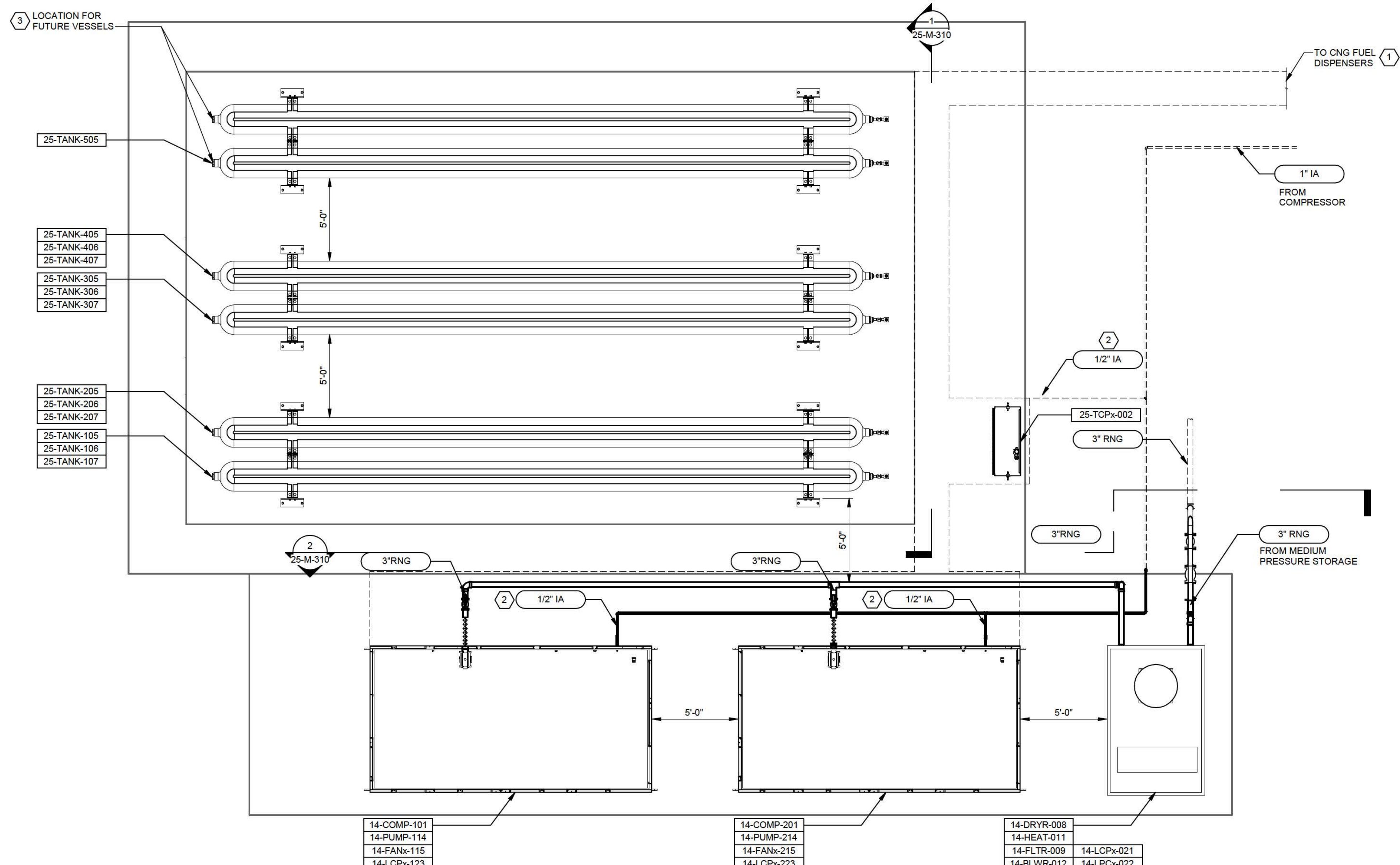
2.11 FAST-FILL DISPENSERS

A. General

1. (4) one-hose high-flow CNG dispensers with internal fill-control logic shall be provided.

GENERAL NOTES:

- LOCATE NG AND CNG EQUIPMENT 5 FEET FROM THE ROAD, MINIMUM.
- LOCATE CNG VESSELS 15 FEET FROM MEDIUM PRESSURE STORAGE VESSELS, MINIMUM.
- LOCATE CNG VESSELS 10 FEET FROM THE ROAD, MINIMUM.
- REFER TO CIVIL DRAWINGS FOR CONTINUATION OF BURIED PIPE.
- CNG AND RNG LINES LESS THAN 2" NOT SHOWN. REFER TO N-DRAWINGS FOR CNG LINE SIZE AND NUMBER.
- ALL PIPE PENETRATIONS THROUGH SLAB SHALL BE PER DETAIL M1101 ON DRAWING 00-GM-002.



KEYNOTES:

- DASHED AREA REPRESENTS APPROXIMATE LOCATION FOR ROUTING BURIED CNG LINES. REFER TO N-DRAWINGS FOR LINE SIZE AND NUMBER. REFER TO SECTION 43 10 01 FOR PIPING AND INSTALLATION REQUIREMENTS.
- ROUTE 1/2" IA TO CNG COMPRESSORS AND PRIORITY VALVE PANEL. PROVIDE 1/2" ISOLATION BALL VALVE AT EACH PIECE OF EQUIPMENT.
- PROVIDE THIRTEEN ASME-RATED CNG STORAGE VESSELS, FRAMING, AND BRACING, PER SECTION 43 10 01. ADDITIONAL CNG STORAGE VESSELS ARE ONLY SHOWN ON THIS DRAWING FOR REFERENCE AND FUTURE CONSIDERATIONS THAT ARE NOT PART OF THIS PROJECT.

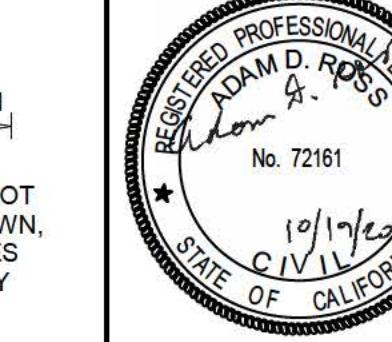
PLAN

SCALE: 1/4" = 1'-0"

Brown and Caldwell

USE OF DOCUMENTS
THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF BROWN AND CALDWELL, INC.

NO. REVISION DATE BY

SCALE
LINE IS 1 INCHIF THIS BAR IS NOT
DIMENSION SHOWN,
ADJUST SCALES
ACCORDINGLYDESIGNED:
A. ROSSDRAWN:
M. MATSUMOTOCHECKED:
L. SLEZAKAPPROVED:
A. ROSS

PLEASANT GROVE WASTEWATER TREATMENT PLANT
ENERGY RECOVERY PROJECT

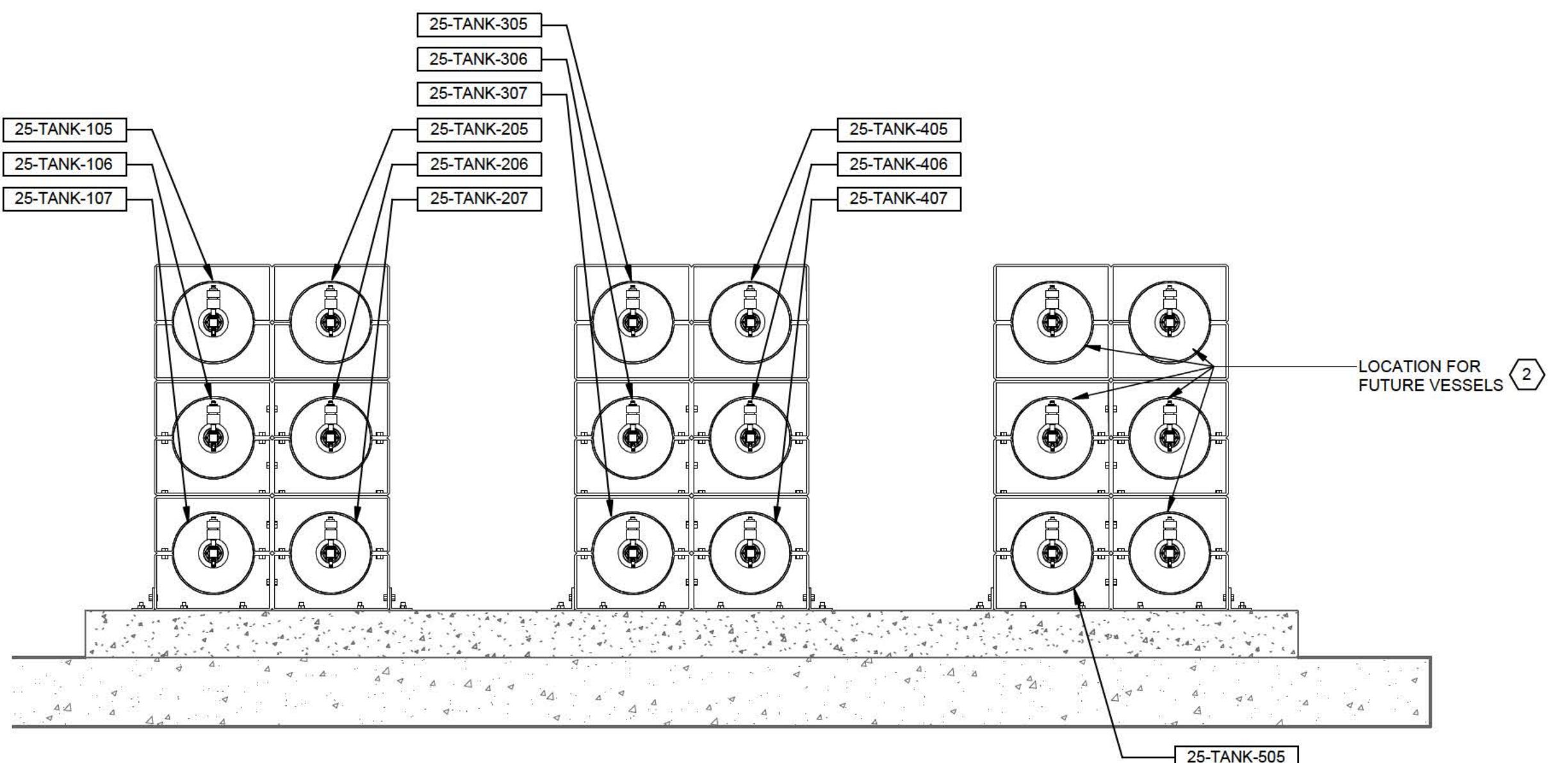
CNG COMPRESSION AND STORAGE SYSTEM
PLAN

MECHANICAL

FINAL DESIGN SUBMITTAL
NOT FOR CONSTRUCTION
FILE NAME
148320_2D_M_R17.rvt
PROJECT NUMBER
148320
FACILITY DESIGNATION
CG
SHEET NUMBER
25-M-110

GENERAL NOTES:

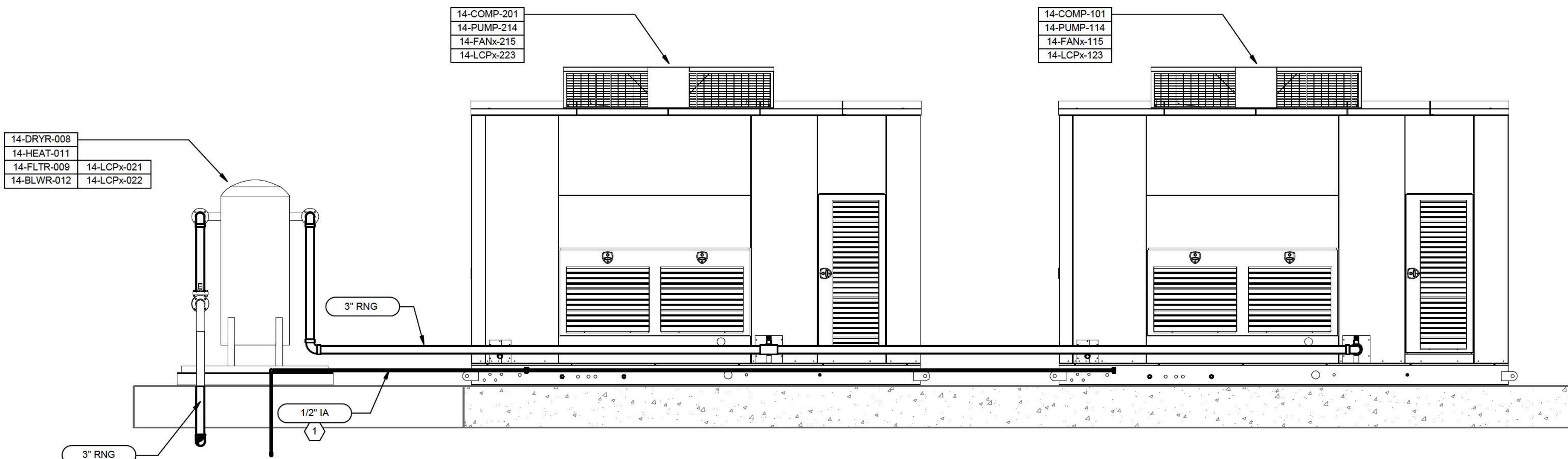
- CNG LINES LESS THAN 2" NOT SHOWN. REFER TO "N" SERIES DRAWINGS FOR CNG LINE SIZE AND NUMBER.
- ALL PIPE PENETRATIONS THROUGH SLAB SHALL BE PER DETAIL M1101 ON DRAWING 00-GM-002.



KEYNOTES:

- ROUTE 1/2" IA TO CNG FUEL DISPENSERS. PROVIDE 1/2" ISOLATION BALL VALVE AT EACH PIECE OF EQUIPMENT.
- PROVIDE THIRTEEN ASME-RATED CNG STORAGE VESSELS, FRAMING, AND BRACING. PER SECTION 43 10 01. ADDITIONAL CNG STORAGE VESSELS ARE ONLY SHOWN ON THIS DRAWING FOR REFERENCE AND FUTURE CONSIDERATIONS THAT ARE NOT PART OF THIS PROJECT.

1 SECTION
25-M-110 SCALE: 3/8" = 1'-0"



2 SECTION
25-M-110 SCALE: 3/8" = 1'-0"

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NO. REVISION DATE BY

SCALE
LINE IS 1 INCH
IF THIS BAR IS NOT
DIMENSION SHOWN,
ADJUST SCALES
ACCORDINGLY



DESIGNED:
A. ROSS
DRAWN:
M. MATSUMOTO
CHECKED:
L. SLEZAK
APPROVED:
A. ROSS



PLEASANT GROVE WASTEWATER TREATMENT PLANT
ENERGY RECOVERY PROJECT

CNG COMPRESSION AND STORAGE SYSTEM SECTIONS

MECHANICAL

FINAL DESIGN SUBMITTAL NOT FOR CONSTRUCTION
FILENAME 148320_2D_M_R17.rvt
PROJECT NUMBER 148320
FACILITY DESIGNATION CG
SHEET NUMBER 25-M-310