REQUEST FOR STATEMENTS OF QUALIFICATIONS (RFSQ) No. 22-025

DATE:	February 24, 2022
Project Title:	**GNPCC Gas Room Relocation**

The Regional District of Nanaimo invites qualified and experienced firms to submit Statements of Qualifications to complete the detailed design for the replacement and relocation of the Greater Nanaimo Pollution Control Centre (GNPCC) gas room equipment including process, structural, electrical, instrumentation, mechanical, and piping design & engineering. Eligible Firms must have a Permit to Practice professional engineering in BC issued by EGBC.

A. Intent

This Request for Statements of Qualifications (RFSQ) is issued to determine the most qualified and experienced service provider to meet the Regional District of Nanaimo's requirements, expectations, and timeline.

The Regional District of Nanaimo will review submissions received in response to this RFSQ and enter discussions with the top-ranked Respondent to negotiate the terms, scope, timeline, and cost based on the actual scope of work required (the Work). Should these negotiations fail to result in a contract for the Work, the Regional District of Nanaimo may then elect to negotiate with the next highest-ranked service provider and so on until an agreement is reached or the process is cancelled.

In any event, the Regional District of Nanaimo shall not be bound to enter a contract with any Respondent to this RFSQ and, at its sole discretion, may elect to collapse this process.

B. Background

The Regional District of Nanaimo (RDN) owns and operates the Greater Nanaimo Pollution Control Centre (GNPCC), located at 4600 Hammond Bay Road, Nanaimo B.C. The facility was constructed in 1973 and has seen numerous upgrades during its lifetime, most recently the upgrade to secondary treatment, which was completed in November 2020.

The treatment process includes three anaerobic digesters which generate biogas. Two of the digesters use a gas recirculation system for mixing. The recirculation system for each digester consists of: An intake nozzle on the digester roof gas collection dome, 6" piping to a gas blower, and 4" piping to the gas injector tube assembly which discharges the pressurized gas into the digester for mixing. The existing blowers are 30hp Sutorbilt 8HXB gas pumps which operate at approximately 325CFM and 7psi discharge pressure.

The existing gas blower room is attached to the main operations building. Due to the aging infrastructure and in order to improve the facility biogas safety, the RDN has decided to relocate the blower system outside of the building, upgrade/replace equipment as required, and demolish abandoned piping.

Photographs of the existing gas blower room are included in Appendix A.
Relocation concept is included in Appendix B.

C. Contemplated Scope of Services

The general scope of services requested as part of this RFSQ includes all engineering design, management and control required to prepare a complete gas room demolition, relocation and replacement/upgrade design package that can be effectively executed by contractors, and provide the RDN with detailed and useable records for ongoing operational and maintenance use. These services include:

i. Project management plans and procedures to ensure project quality, cost, schedule, and risk control;
ii. Review all available record documents and complete a 3D scan to incorporate into 3D design model;
iii. Drawings, specifications, data sheets, and other documents required for a complete detailed design to demolish and replace/upgrade the GNPCC gas circulation equipment compliant with federal and provincial regulations including CSA/ANSI B149.6:20 Code for Digester Gas, Landfill Gas, and Biogas Generation and Utilization;
iv. Detailed design to include new blowers to be monitored via facility Process Control System;
v. Existing pressure and temperature switches to be replaced with temperature and pressure instruments which interlock and alarm through the PCS;
vi. Detailed design to include all civil, structural, electrical, instrumentation, controls, mechanical and piping required for a complete design;
vii. Design and/or construction sequencing is to address the need to minimize the duration of system shut down resulting in loss of digester gas mixing;
viii. Design reviews, submittals, and cost estimate;

ix. Participate in process safety, operability, and maintainability reviews;
x. Procurement support for blower package equipment including specifications and datasheets, tender preparation, tender Q&A support, and bid evaluation and recommendation. RDN to administer the tender;
xi. Procurement support for main construction including tender preparation, tender Q&A support, and bid evaluation and recommendation. RDN to administer the tender;
xii. Project lists, plans, and reports to allow for fully documented design, construction, commissioning, and ongoing operational reference;
xiii. All significant design calculations are to be submitted to the owner for record.

D. Contemplated Schedule

i. Final agreement in place by April 1, 2022.
ii. The Blower Package Equipment issued for Tender by April 29, 2022. Blower package equipment has an approximate lead time of 28 weeks from issuance of PO.
iii. Class A (+/-) 10% Installed Cost Estimate along with complete design documents by June 30, 2022.
iv. Final design documents ready to be issued for Tender by July 15, 2022.

E. Statement of Qualifications and Evaluation

The statement of qualifications should be no longer than twelve (12) single-sided pages in length (not including cover page, cover letter and appendices). Please include the following:

- Qualifications and areas of expertise of the Firm and nominated Project Team. Please include CV/Resume of the key personnel of the Project Team and explain their role in the project, and an organizational chart demonstrating roles and lines of responsibility for the Project Team.
- Experience of Firm and nominated Project Team in previous relevant projects. Provide short descriptions of similar projects and assignments completed by both the Firm and nominated Project Team members. Provide brownfield project examples in congested areas, and projects that include nominated team members. Provide client references for two of the referenced projects. If the Firm has performed work with the RDN in the past, internal RDN references may be contacted at the RDN's discretion.
- A description of your Firm's
    - Project management processes to assure quality and project control.

- Design submittal/review/procurement milestones.
- Relevant supporting resources that could be drawn on should additional expertise be required to address anticipated or potential challenges to this specific project.
- List of relevant and plant-specific engineering and design software intended to be used for this assignment including Autodesk Plant 3D.

- Provide within the appendices sample documents that contain typical examples of the following documents. Provide examples that demonstrate proficiency and familiarity with the deliverables, identification and clear communication of items of importance to an engaged and hands-on client, and strong degree of detail to assist with asset management and process safety initiatives.
  - Monthly Progress Report (limit to 1 page)
  - Installed Cost Estimate template
  - P&ID drawing from similar scope project (limit to 1 page)
  - Process Control Narrative
  - Engineering Work Package (EWP) Table of Contents
- A statement of your firm's ability to complete the work within the timeframe described substantiated with information demonstrating a well thought out commitment (e.g. schedule, discussion, notes, concerns, etc.).
- A statement confirming that your Firm has a Permit to Practice professional engineering in BC issued by EGBC.

Statements of Qualifications (the "SOQ") will be initially evaluated by the Regional District of Nanaimo based on the above and assigned a qualitative score out of 50 points. Any or all SOQs will not necessarily be accepted.

F. Budget

The RDN's total project budget is approximately $700,000 & GST, and anticipate the professional fees to be up to $70,000 & GST.

G. Submission Date & Time

Statements of Qualifications should be received **BY EMAIL ONLY** on or before 3:00:00 p.m. local time on the 10 day of March, 2022. The RDN reserves the right to accept late submissions.

H. Questions and Submissions

Questions are requested five (5) calendar days before the closing date.

Questions and submissions should be directed to:

James Haddou
Project Engineer
Regional District of Nanaimo
6300 Hammond Bay Road, V9T 6N2
Phone: 250-390-6560
Email: jhaddou@rdn.bc.ca

REGIONAL DISTRICT OF NANAIMO

APPENDIX A: Photographs


CAUTION

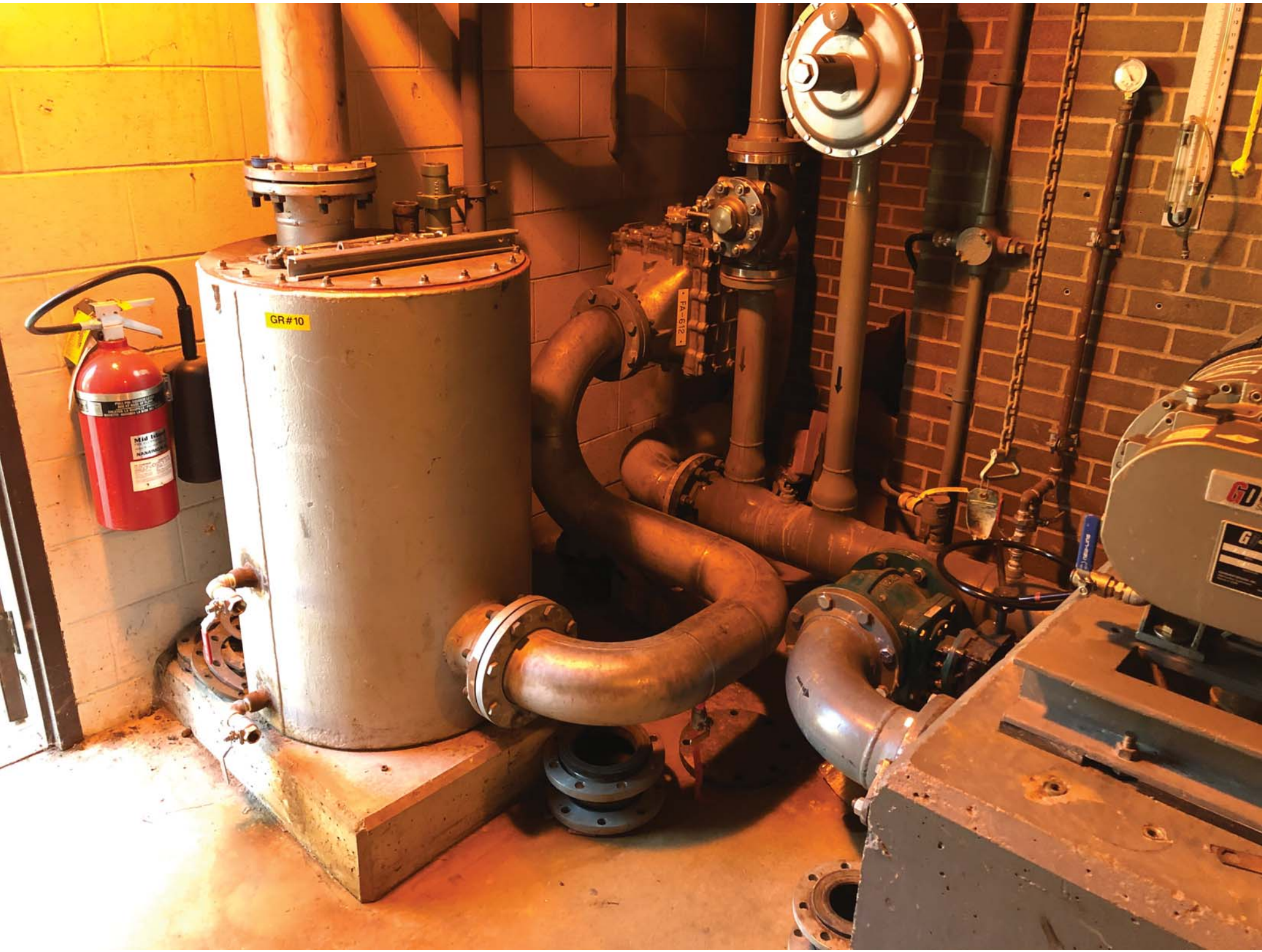

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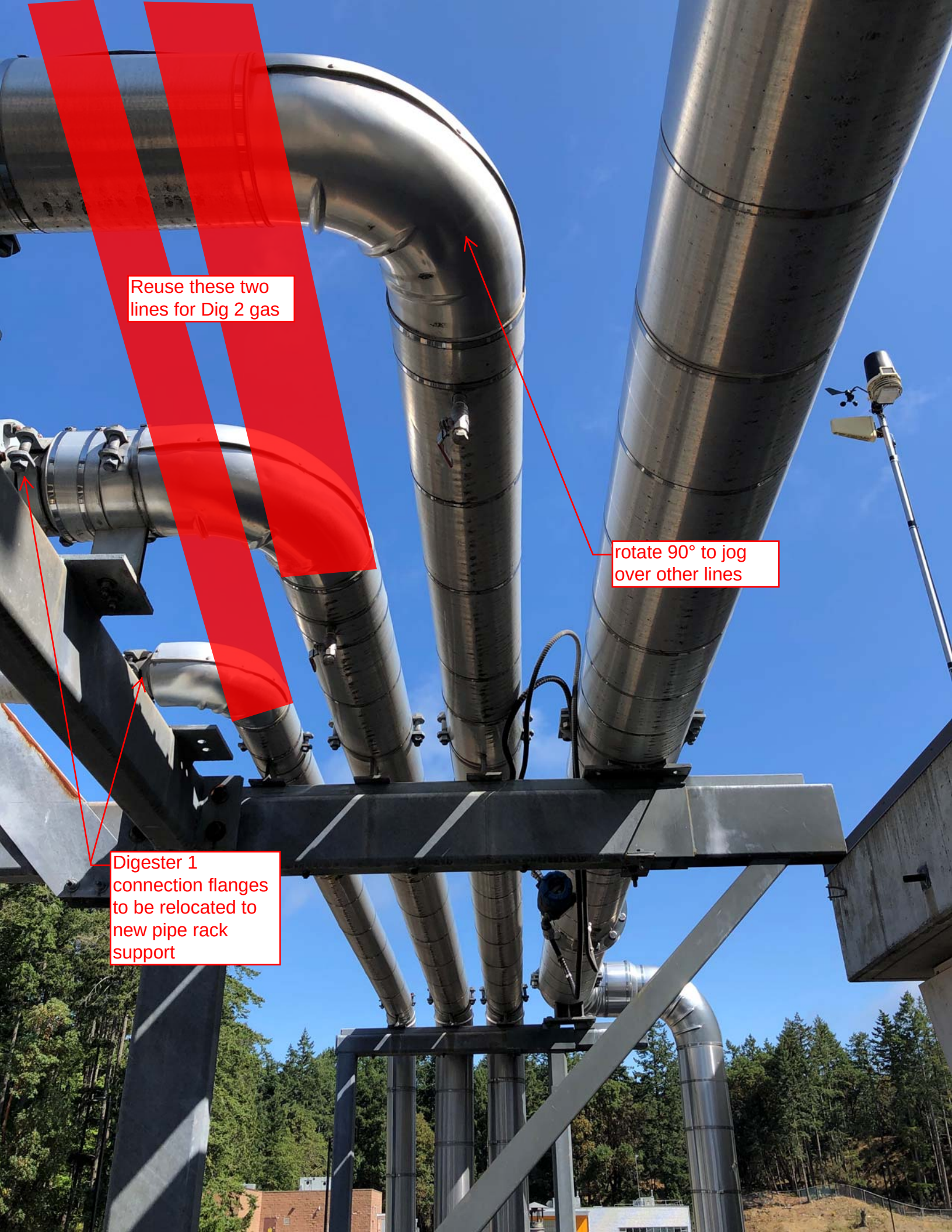



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REGIONAL DISTRICT OF NANAIMO

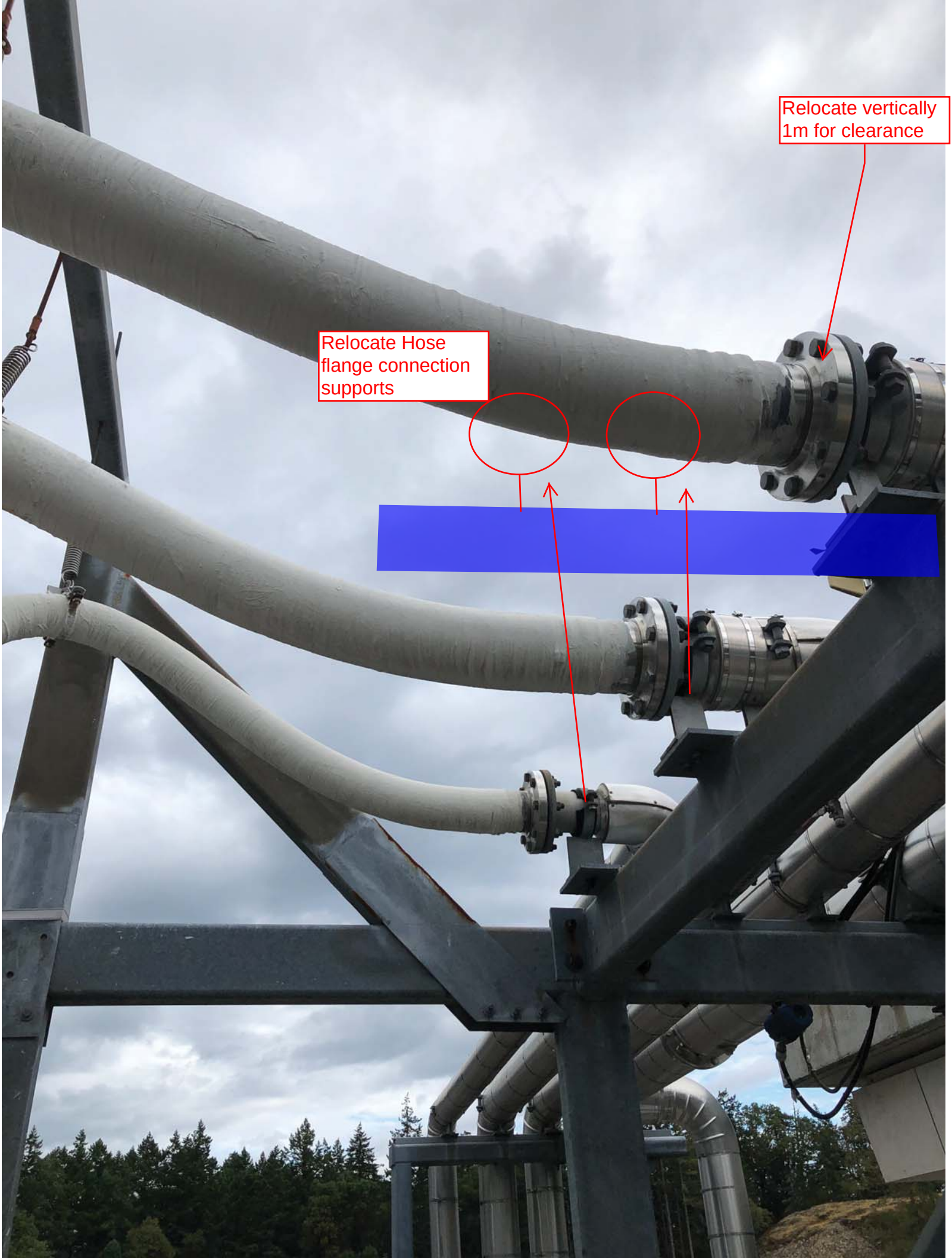
APPENDIX B: Concept


Dig 2 lines
Digester 2 lines to reuse the existing digester 1 lines


Reuse these two lines for Dig 2 gas
rotate 90° to jog over other lines
Digester 1 connection flanges to be relocated to new pipe rack support

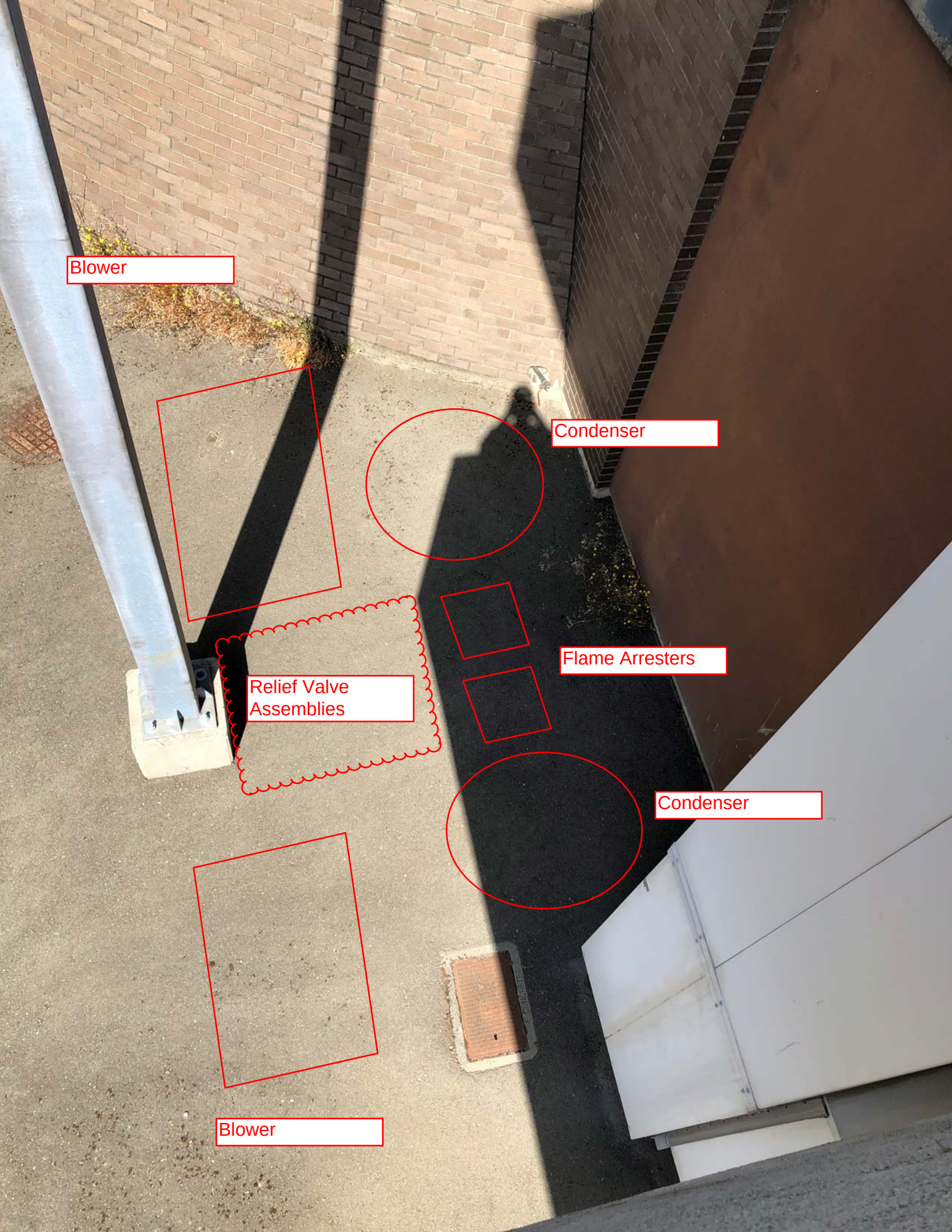

Replace pipe support with a stanchion 1m tall and add a 90° jog downstream.
Intent is to provide clearance for new lines going E-W.

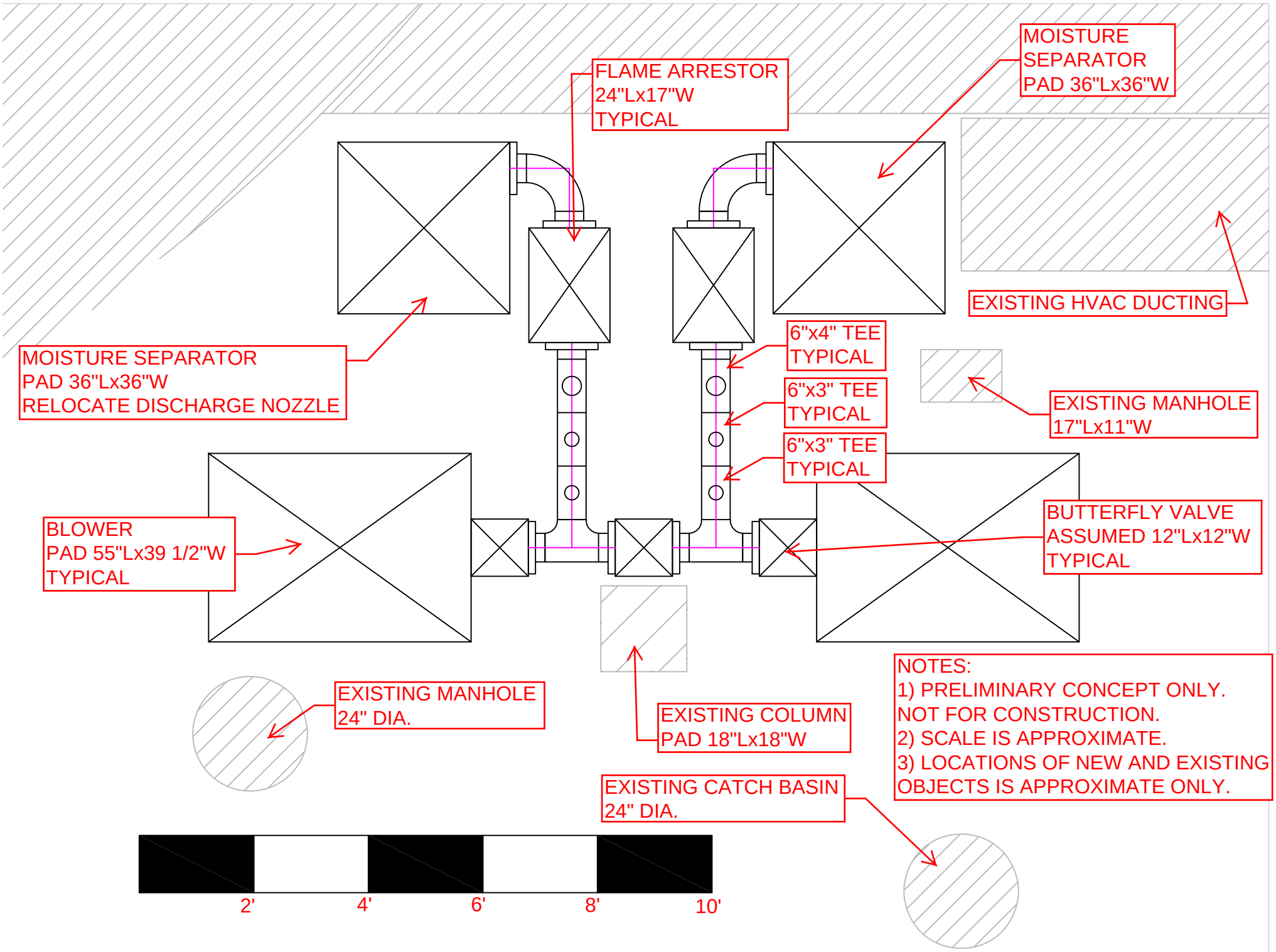

Add pipe rack on one side to pick up the digester 1 hose flanges. Include new/relocated pipe supports

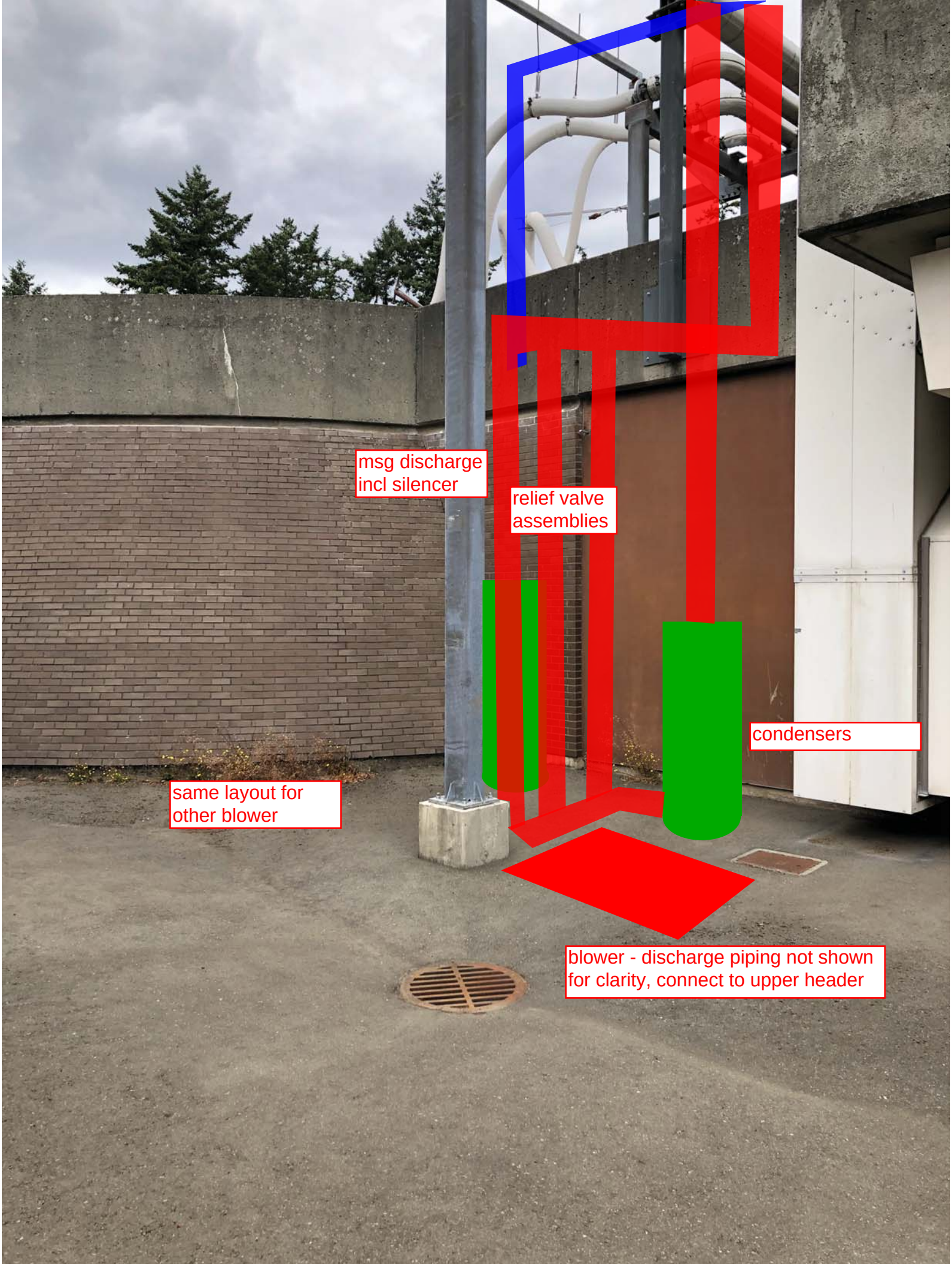

Relocate vertically
1m for clearance
Relocate Hose
flange connection
supports


Dig 2 lines
Dig 1 lines
Extend or create new pipe rack
LSG piping supported off concrete, runs down to outdoor gas skid


WARNING
Support off concrete


Blower
Condenser
Relief Valve Assemblies
Flame Arresters
Condenser
Blower


FLAME ARRESTOR
24"Lx17"W
TYPICAL
MOISTURE
SEPARATOR
PAD 36"Lx36"W
EXISTING HVAC DUCTING
MOISTURE SEPARATOR
PAD 36"Lx36"W
RELOCATE DISCHARGE NOZZLE
6"x4" TEE
TYPICAL
6"x3" TEE
TYPICAL
6"x3" TEE
TYPICAL
EXISTING MANHOLE
17"Lx11"W
BLOWER
PAD 55"Lx39 1/2"W
TYPICAL
BUTTERFLY VALVE
ASSUMED 12"Lx12"W
TYPICAL
EXISTING MANHOLE
24" DIA.
EXISTING COLUMN
PAD 18"Lx18"W
NOTES:
1) PRELIMINARY CONCEPT ONLY.
NOT FOR CONSTRUCTION.
2) SCALE IS APPROXIMATE.
3) LOCATIONS OF NEW AND EXISTING
OBJECTS IS APPROXIMATE ONLY.
EXISTING CATCH BASIN
24" DIA.
2'
4'
6'
8'
10'


msg discharge
incl silencer
relief valve
assemblies
condensers
same layout for
other blower
blower - discharge piping not shown
for clarity, connect to upper header