

Memorandum

ARUP

To	Guy Bjerke, City of Concord	Date	May 5, 2020
Copies	Dahlia Chazan, Arup	Reference number	216464
From	Jacob Wood, PE, Arup	File reference	
Subject	Coast Guard Housing Utilities		

1 Introduction

This memo presents our understanding of the existing utility infrastructure serving the Coast Guard (CG) Housing on E Olivera Rd – Quinault and Victory Villages, along with summarizing our findings regarding three oil pipelines that bisect the CG property between villages and provides a high-level discussion of the constraints and opportunities for the reuse of existing infrastructure to support the redevelopment of the villages.

Quinault Village was constructed in 1965. It consists of duplexes, approximately 80 housing units, arranged linearly along Hamilton Avenue. Victory Village is newer, constructed in 1989. It consists of triplexes, approximately 200 housing units. All roadways and infrastructure within the villages are owned by the CG.

2 Existing Utilities at Quinault and Victory Villages

Existing utility information presented below is solely based on a phone conversation with Kevin McDonald of CG Housing on 4/8/14 and anecdotal evidence gathered using aerial images and a site walk. A diagrammatic exhibit of the existing utilities is included as Attachment A.

Existing Utilities

Quinault and Victory Village utilities are served from public facilities on or adjacent to E Olivera Rd. In general, Victory utilities are served from the older Quinault services. Thus, the villages have single points of service and single meters for water, electric, and gas. The housing units are not individually metered. The villages do have independent sanitary sewer connections, but the sewers connect to adjacent manholes on the same public sewer main. A brief synopsis of each system follows.

Memorandum

Water

The Villages' domestic and fire water is served by an 8" meter located along the fence line at the western edge of the gravel Little League parking lot across Olivera Rd. The meter is connected to a Contra Costa Water District main. Victory's water main tees off the Quinault main just west of Olivera. There are two non-CG users connected to the Village's water service – the Little League fields irrigation service and fire hydrants for the Navy airfield southwest of Victory. Kevin stated that the Villages have sufficient water supply. However, the village's current occupancy is much lower than it was historically. It is unknown if the existing water system could support full occupancy in the present time.

Natural Gas

Gas service for the Villages is from a PG&E gas main in Olivera Rd. The Village's meter is located in an enclosure behind the sidewalk on Olivera just north of Hamilton Ave. Victory's gas service tees off of the Quinault main. The size of the gas meter and site piping needs to be verified. However, Kevin noted that the Villages have not had any issues with system capacity

Electric

The Villages' electric meter and service originates from a PG&E pole at the Hamilton / Olivera intersection. Quinault's electric service is overhead. Victory's is underground. Size and capacity of the electrical service needs to be verified. However, Kevin noted that the Villages have not had any issues with system capacity.

Sewer

Each village has a 6" sewer service connected to on an existing public sewer main at manholes behind the little league field backstops. The village sewer services are entirely gravity based. There are no pumps or force mains within the private CG system.

Storm Drain

The villages have extremely limited storm drainage, and there is limited public storm drainage infrastructure in the area. Quinault has a single storm drain inlet near the northern portion of the Village. The inlet is connected to a storm drain line of unknown size that runs westerly through a residential property towards Esperanza Drive. Kevin said the site experiences flooding every couple of years. All runoff in Victory is channeled to a detention area in the northwest corner of the village. Stormwater from the detention basin drains by pipe to the City storm drain system in E Olivera Rd.

3 Gas Pipeline Easement

Easements for three oil pipelines ("hazardous liquid pipelines"), granted in the 1950s and 1960s, run between the two villages. Each of the easements has a width of 16.5'. They run in a largely parallel alignment from the southeastern end of the former CNWS north in the Green Frame along the western border, until reaching Willow Pass Road, at which point the pipelines head west across the Village

Memorandum

Neighborhood in the airfield area and intersect the Coast Guard property between Victory Village and Quinault Village before continuing in a westerly direction along E Olivera Rd. The general location of the easements is shown in Attachment A.

Today, three high-pressure pipelines run in these easements, operated by Phillips 66 Pipeline, Kinder Morgan/SFPP, and Shell Pipeline respectively.

Activities around the pipelines are subject to regulation at the state and federal levels. At the federal level, the Code of Federal Regulations Title 49, Part 195, regulates hazardous liquid pipelines and establishes standards for their design and operation. It makes provisions for the siting of pipelines and provides the following guidance on setbacks and restrictions on land uses in close proximity to a pipeline easement. Part 195 establishes:

- No pipeline may be located within 50 feet (15 meters) of any private dwelling, or any industrial building or place of public assembly in which persons work, congregate, or assemble, unless it is provided with at least 12 inches (305 millimeters) of cover in addition to that prescribed in §195.248 [36-inches below finished grade].

At the state level, the State Fire Marshal serves as the regulatory and enforcement authority over intrastate pipelines. The State Fire Marshall has adopted by reference the aforementioned federal regulations set forth in Part 195. In addition, California Government Code Title 5 (Local Agencies), Division 1, Part 1, Chapter 5.5 establishes the following guidelines for intrastate pipelines:

- No structures or improvements may be constructed within a pipeline easement.
- No structure, wall, or fence adjacent to the easement may be built that would prevent complete and unimpaired surface access to the easement.
- No shrubbery or shielding in or along the easement may be built that will impair aerial observation.
- The easement may be revegetated following pipeline construction and the operator may permit seasonal agriculture, if desired.
- Operators are permitted to conduct any necessary activities within their easement, including construct, replace, relocate, repair, or operate the pipeline.

Beyond these regulations, California has also established regulations setting the minimum distance between sites for school facilities and pipelines. Section 14010 of Title 5 of the California Code of Regulations establishes standards for construction of school facilities which prevent a school site from being located within 1,500 feet of a pipeline easement that poses a safety hazard as determined by a risk analysis study.

The exact alignments of the easements and associated pipelines will need to be verified to properly assess their impacts on any potential redevelopment of the CG property.

Memorandum

4 Utility Infrastructure Reuse Opportunities at Quinault and Victory Villages

Quinault Village

Quinault Village is roughly 55 years old. The utility infrastructure is original and at or nearing the end of its design life. Kevin McDonald reported that they have issues with clogged sewer connections and leaking gas services, etc. In light of that and the regular flooding and overhead electric services, Kevin suggested that if the site were redeveloped, all of Quinault's utility infrastructure would need to be replaced back to the main connections.

Victory Village

Victory Village was constructed in 1989. The utility infrastructure is roughly 30 years old. It is possible that if Victory were redeveloped, some portion of the backbone utility infrastructure could be reused. A condition assessment survey would be required to confirm the condition, size, and location of the existing utility network prior to determining the viability of reusing any portion of the existing system.

Since the Victory Village utilities are served from the much older Quinault service connections the systems will need to be decoupled if any of the Victory infrastructure is to be reused. Two potential options for the decoupling are:

Option 1: Disconnect services to Quinault Village but keep existing services connections and meters in place for Victory Village.

- Pro – Minimal cost and disruption the existing utility system
- Con – Long service runs from current service locations at Quinault will constrain frontage improvements, and existing services are old, which will increase maintenance and operations costs.
- Risk – Existing services may be oversized, old and in poor condition, and not configured to allow separation without being replaced.

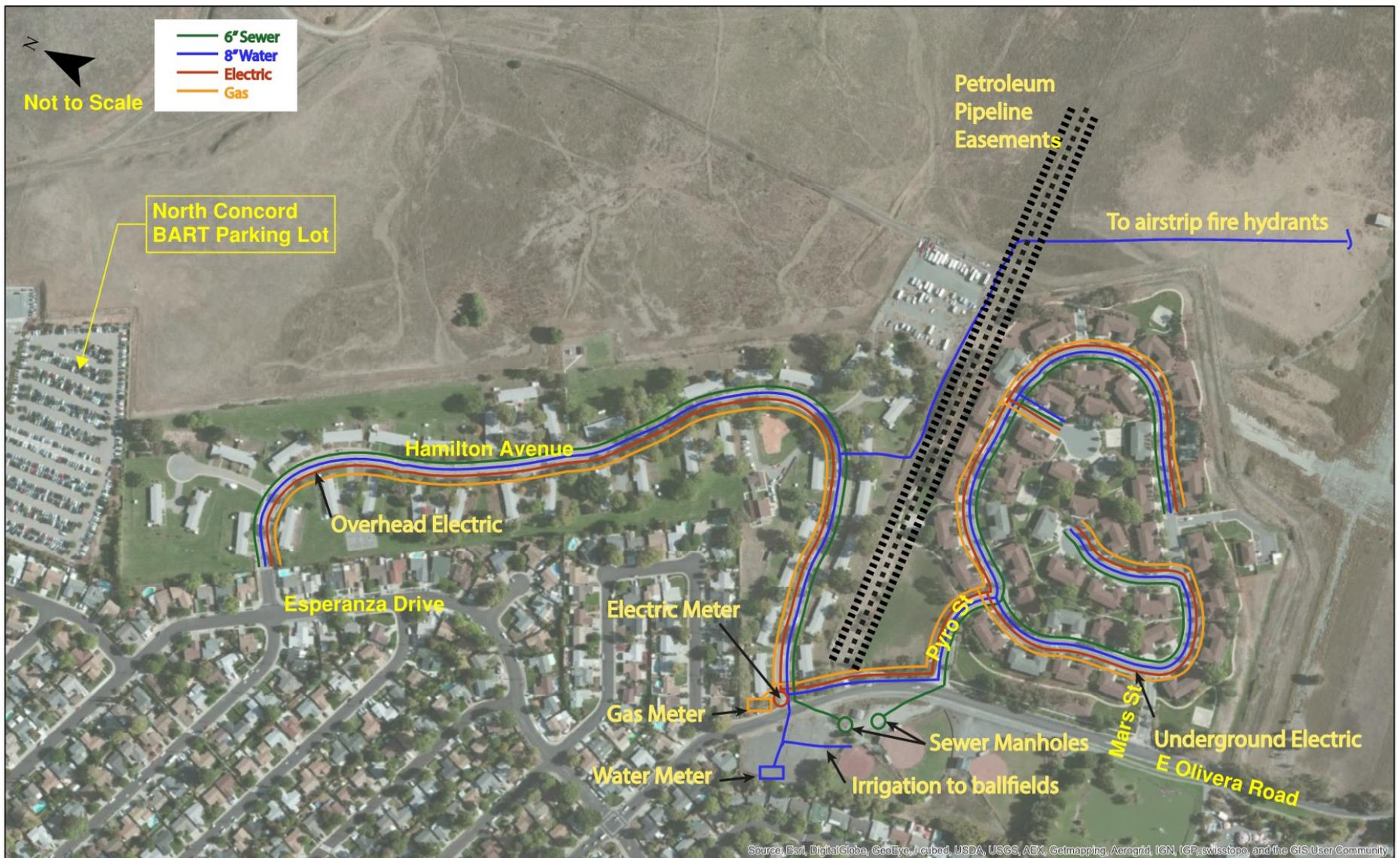
Option 2: Remove existing services to Quinault and Victory Villages and construct new service connections for Victory on E Olivera Rd

- Pro – Creates new services, properly sized, constructed close to Victory Village, minimizing frontage constraints and long-term maintenance costs and insuring efficient routing, siting, and sizing of new service connections
- Con – Increased costs compared to Option 1
- Risks – Potential construction delays and costs due to utility agency coordination and timing.

In addition to the utility separations, Victory Village will need to comply with current Contra Costa County Stormwater regulations. Most runoff from the site currently drains to a detention area in the northwestern corner of site before exiting to the local storm drain system. The basin does not comply with current stormwater regulations for water quality treatment and is likely undersized to

Memorandum

accommodate large storm events. A new stormwater conveyance, treatment, and detention system will be required as part of any redevelopment to the Village.



Information shown on this exhibit is diagrammatic and based primarily on phone conversations with USCG Housing staff in April 2014. Utility information has not been field verified and is only representative of assumed conditions.