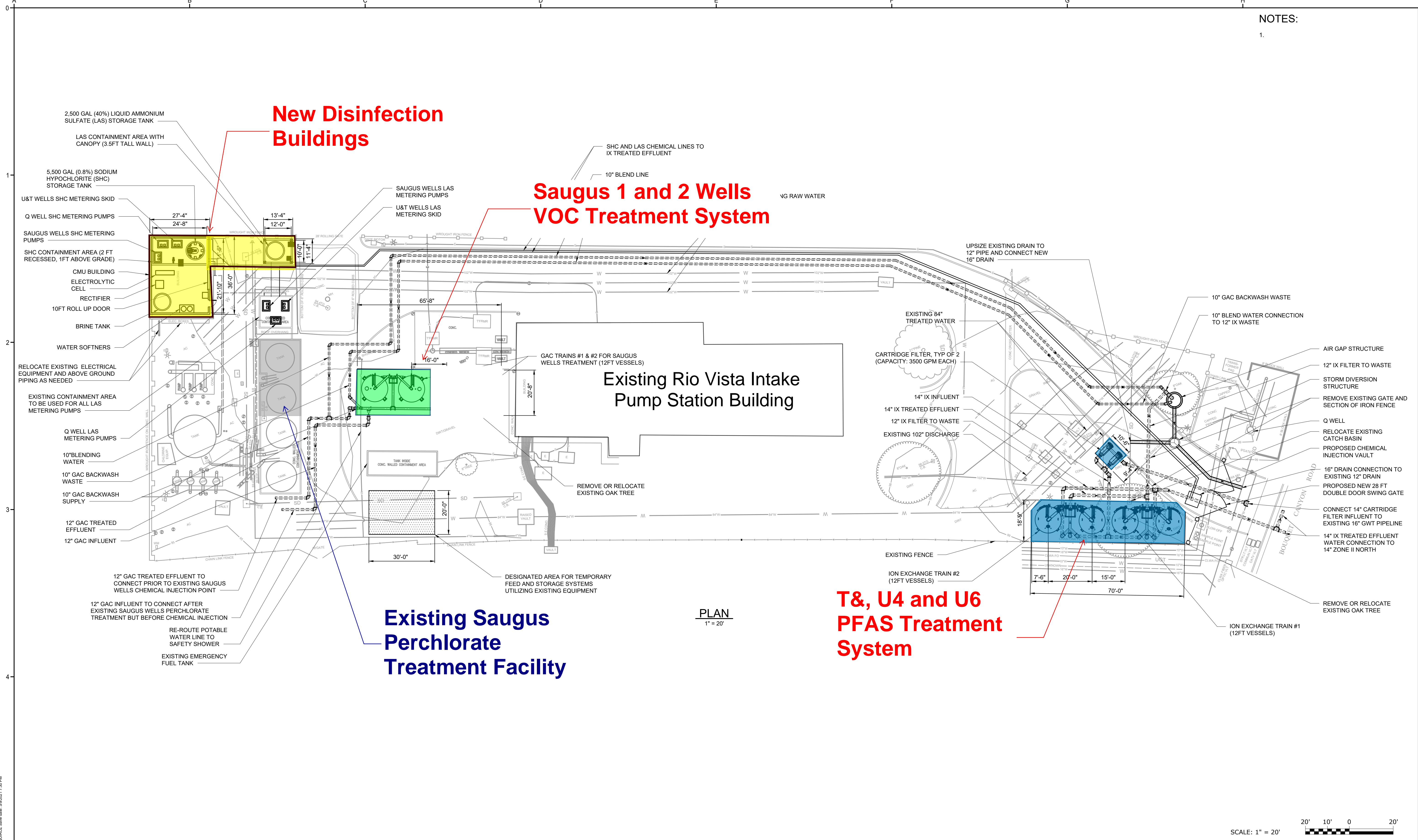


NOTES:

1.



PLAN
1" = 20'

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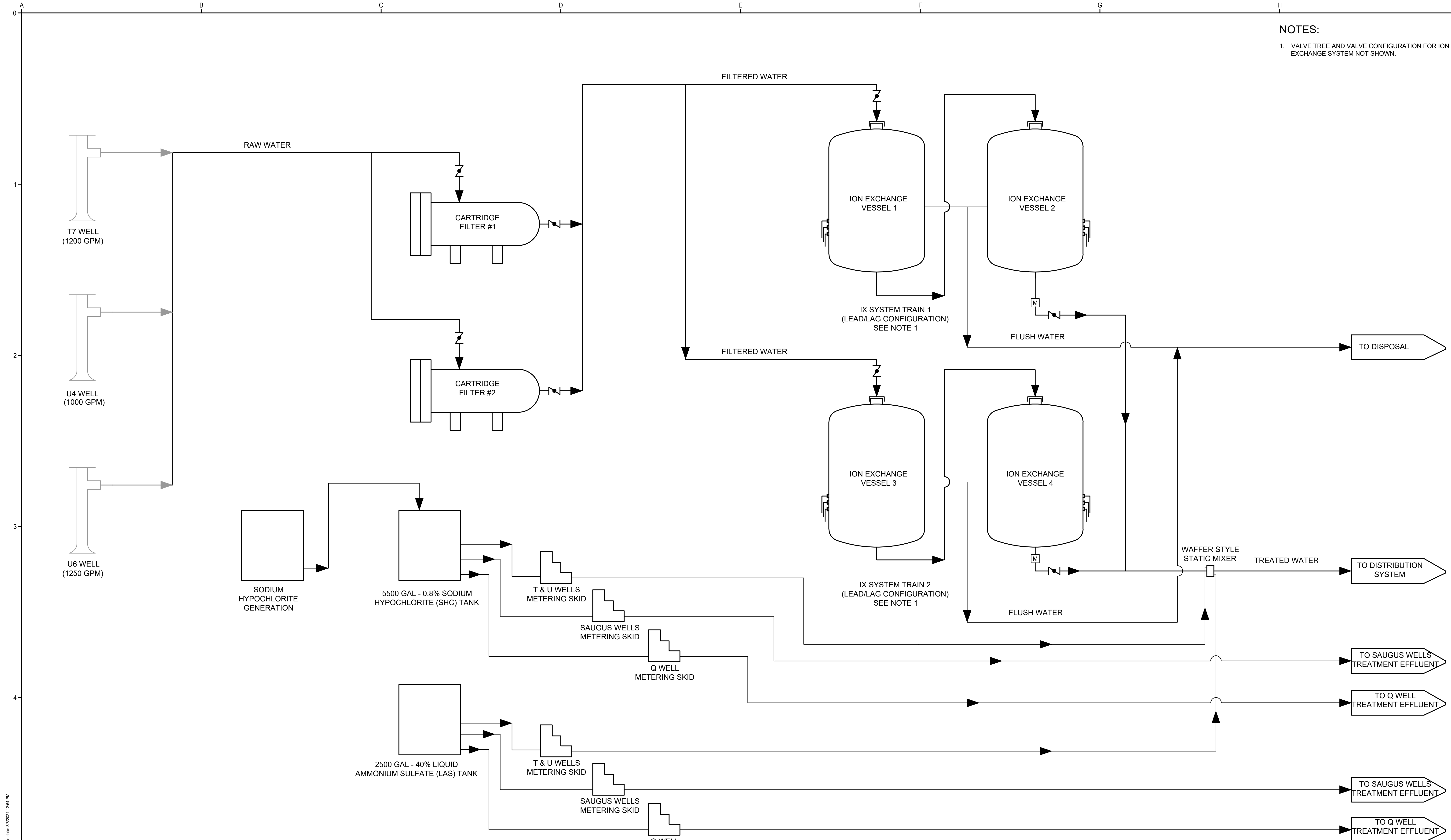
Hazen
HAZEN AND SAWYER
7700 IRVINE CENTER DRIVE, SUITE 200
IRVINE, CALIFORNIA 92618

SCV WATER
SANTA CLARITA VALLEY WATER AGENCY
ENGINEERING SERVICES SECTION
28521 SUMMIT CIRCLE
SANTA CLARITA, CA. 91350
(661) 259-2737

DATE:	MARCH 2021
PROJECT NO.:	HAZEN: 20155-005 SCVWA: XXXXXX
SHEET:	C-XX

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NOTES:
 1. VALVE TREE AND VALVE CONFIGURATION FOR ION EXCHANGE SYSTEM NOT SHOWN.

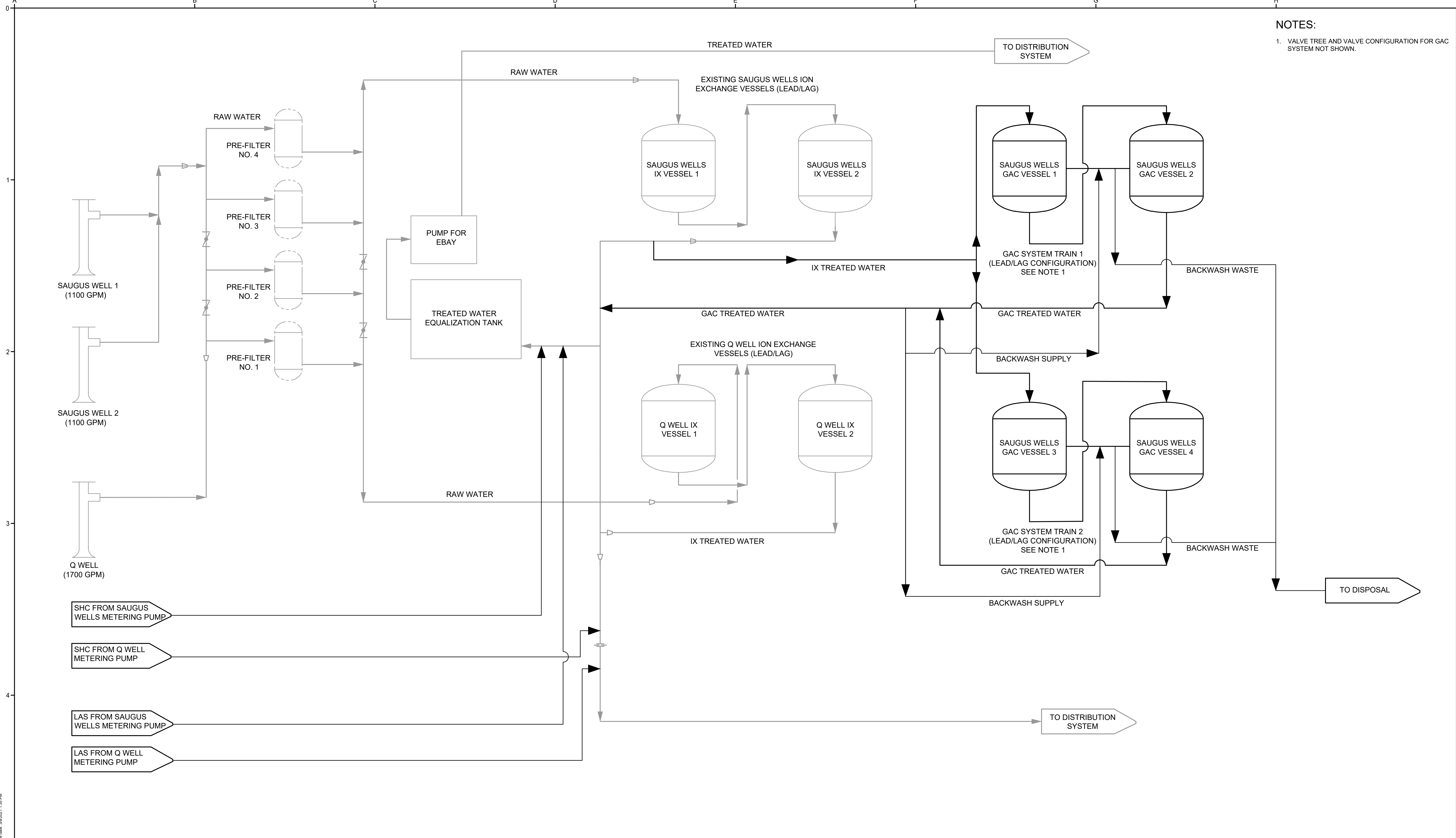


PRELIMINARY DESIGN- DO NOT USE FOR CONSTRUCTION

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					DRAWN BY: XXXX			SCV WATER SANTA CLARITA VALLEY WATER AGENCY ENGINEERING SERVICES SECTION 28521 SUMMIT CIRCLE SANTA CLARITA, CA. 91350 (661) 259-2737
					CHECKED BY: XXXX	T7, U4, U6, SAUGUS 1, AND SAUGUS 2 WELLS GROUNDWATER TREATMENT IMPROVEMENTS AND NEW RVIPS DISINFECTION FACILITY T7, U4, AND U6 ION EXCHANGE TREATMENT PROCESS FLOW DIAGRAM		

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NOTES:
 1. VALVE TREE AND VALVE CONFIGURATION FOR GAC SYSTEM NOT SHOWN.



PRELIMINARY DESIGN- DO NOT USE FOR CONSTRUCTION

REVISIONS				SCALES	DESIGNED BY:	PLANS PREPARED BY:	 SANTA CLARITA VALLEY WATER AGENCY ENGINEERING SERVICES SECTION 28521 SUMMIT CIRCLE SANTA CLARITA, CA. 91350 (661) 259-2737	T7, U4, U6, SAUGUS 1, AND SAUGUS 2 WELLS GROUNDWATER TREATMENT IMPROVEMENTS AND NEW RVIPS DISINFECTION FACILITY SAUGUS 1 AND SAUGUS 2 WELLS GAC TREATMENT PROCESS FLOW DIAGRAM	DATE:
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Santa Clarita Valley Water Agency

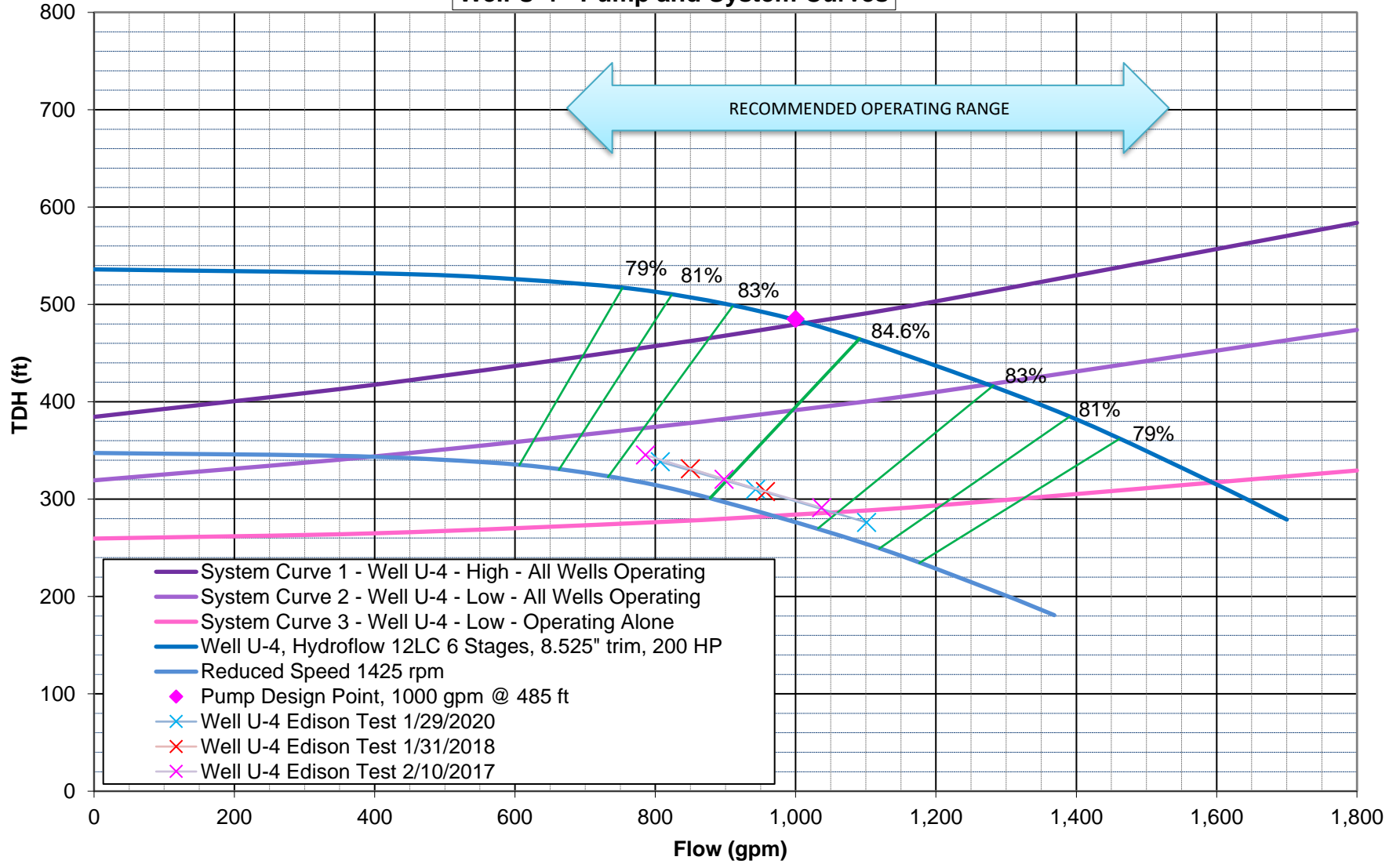
T7, U4, U6, Saugus 1, and Saugus 2 Well Pump Evaluation

Summary of Design Points, Motor Sizes, and Selected Pumps

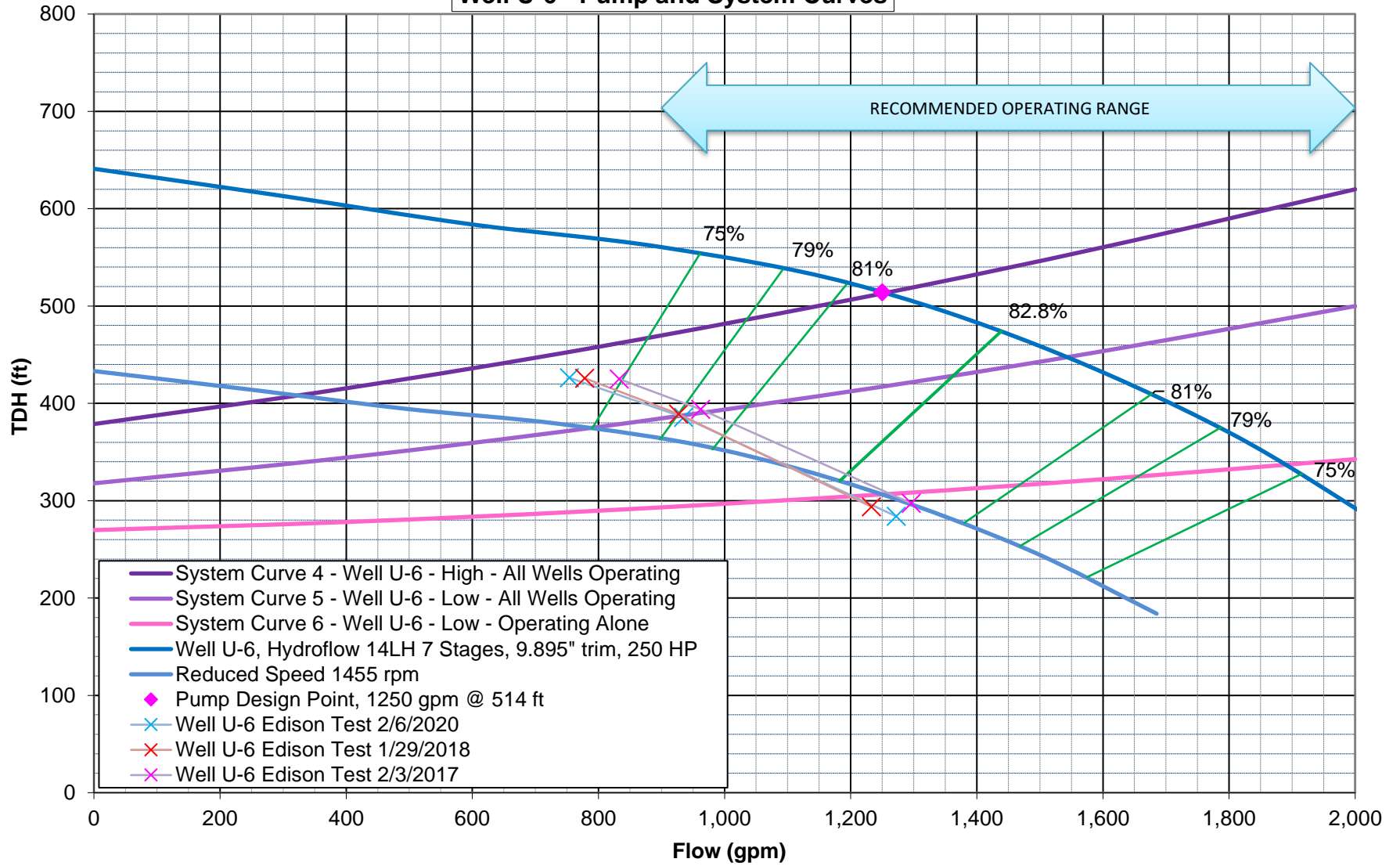
Well	Flow (gpm)	TDH (ft)	Motor Size (HP)	Selected Pump
Saugus 1	1100	486	250	Hydroflow 12LC, 7 Stages, 8.19" trim
Saugus 2	1100	470	250	Hydroflow 12LC, 7 Stages, 8.19" trim
U-4	1000	485	200	Hydroflow 12LC, 6 Stages, 8.525" trim
U-6	1250	514	250	Hydroflow 14LH, 7 Stages, 9.895" trim
T-7	1200	494	250	Hydroflow 14LH, 7 Stages, 9.895" trim

T7, U4, and U6 Wells
Pump and System Curves

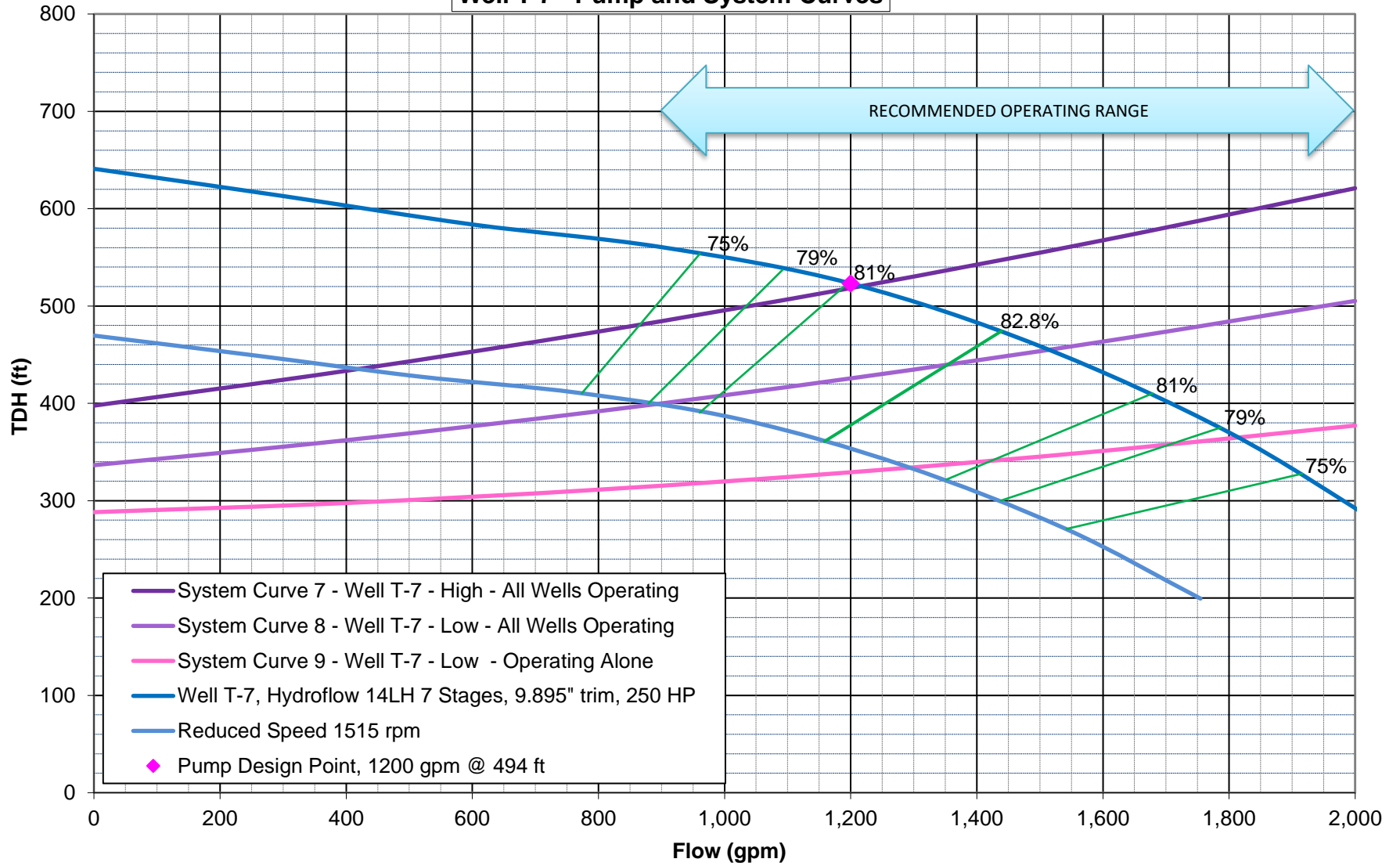
Santa Clarita Valley Water Agency Well U-4 - Pump and System Curves



**Santa Clarita Valley Water Agency
Well U-6 - Pump and System Curves**

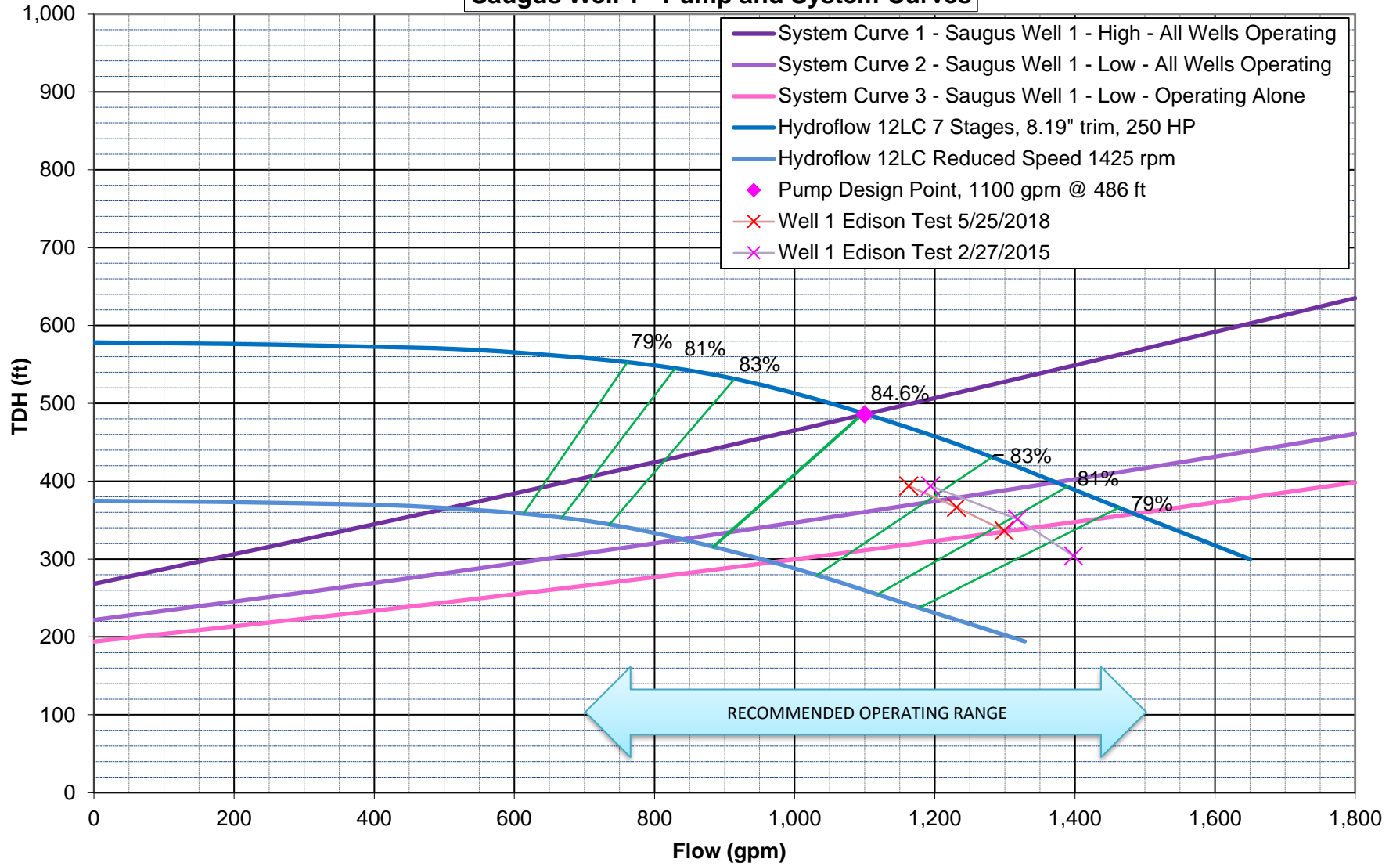


**Santa Clarita Valley Water Agency
Well T-7 - Pump and System Curves**

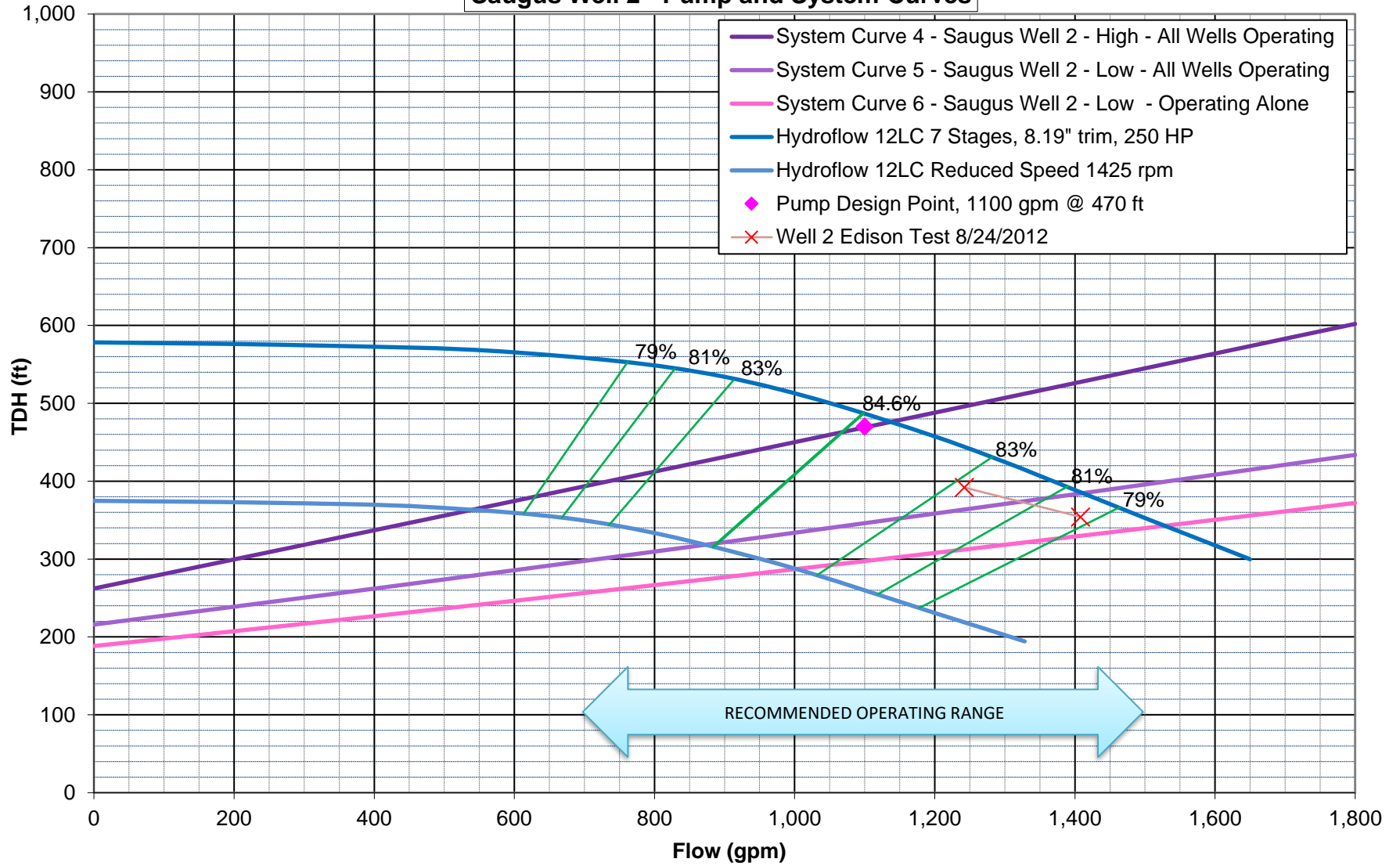


Saugus 1 and Saugus 2 Wells
Pump and System Curves

Santa Clarita Valley Water Agency Saugus Well 1 - Pump and System Curves



Santa Clarita Valley Water Agency Saugus Well 2 - Pump and System Curves



Hazen *Technical Memorandum (Draft)*

March 8, 2021

To: Orlando Moreno, PE
From: Alex Rahimian-Pour, PE
Alejandro Quiroz
Daniel Loza

T7, U4, U6, Saugus 1, and Saugus 2 Wells Groundwater Treatment Improvements and New RVIPS Disinfection Facility – Preliminary Electrical Evaluation

Introduction

This Technical Memorandum (TM) provides a preliminary evaluation of available power at the Rio Vista Intake Pump Station (RVIPS) site and provide recommendations for the electrical upgrades and/or infrastructure required to provide power to the proposed treatment facility.

SCV Water is planning to construct PFAS treatment improvements for T7, U4, and U6 wells, VOC treatment system for Saugus 1 and Saugus 2 Wells, and a new disinfection facility at the SCV Water RVIPS site. The major improvements include construction of a new PFAS groundwater treatment system to treat raw groundwater from T7, U4, and U6 Wells and VOC treatment system for removal of VOC compounds from Saugus 1 and Saugus 2 Wells. In addition, a new centralized disinfection facility is required to include a liquid ammonium sulfate feed and storage system and an on-site sodium hypochlorite generation system to disinfect treated water from T7, U4, U6, Q2, Saugus 1 and Saugus 2 Wells.

1. Proposed Improvements

1.1 Electrical Basis of Design

The anticipated new loads for this project are anticipated to be 208VAC or 120VAC, single phase. The anticipated new loads include – Sodium Hypochlorite Metering Skids and Pumps, Ammonium Sulfate Metering Skids and Pumps, Chlorine Analyzers, Flow Meters, Lighting, and some other miscellaneous electrical equipment.

1.2 Electrical Upgrades and Improvements

Electrical upgrades and improvements are a portion of the proposed improvements. A summary of the proposed improvements is provided herein.

Currently the site has two existing lighting panels that supply 208/120V power throughout the facility. One existing lighting panel (LP-A), see Figure 1.2.2 is located at the Pump Room and the other existing lighting panel (LP-C), see Figure 1.2.3 is located at the northwest area of the facility near the existing Chemical Storage Building. Existing Lighting Panel LP-A does not have spare breakers or space available for use. Existing lighting panel LP-C does have spare breakers available for use but due to the number of equipment that require power at the proposed project location of the northwest area of the facility. We recommend installing a new 208/120V lighting panel to serve the northwest area of the facility. The new lighting panel will be sub-fed from the existing lighting panel LP-C. Modification to existing lighting panel LP-C will need to be made to accommodate this work.

There is additional work at the proposed project location of the southeast area of the facility that does not have available power. We recommend installing a new dry type transformer and a new 208/120V lighting panel to serve the southeast area of the facility.

The existing 480VAC power distribution panel (DP-A), see Figure 1.2.4, located in the Pump Room will supply 480VAC to the new dry type transformer primary which will step down the voltage to 208/120VAC secondary. The 208/120VAC secondary of the dry type transformer will supply the new 208/120V lighting panel. Modification to existing power distribution panel DP-A will need to be made to accommodate this work.



Figure 1.2.2 – Existing Lighting Panel (LP-A) located at the Pump Room

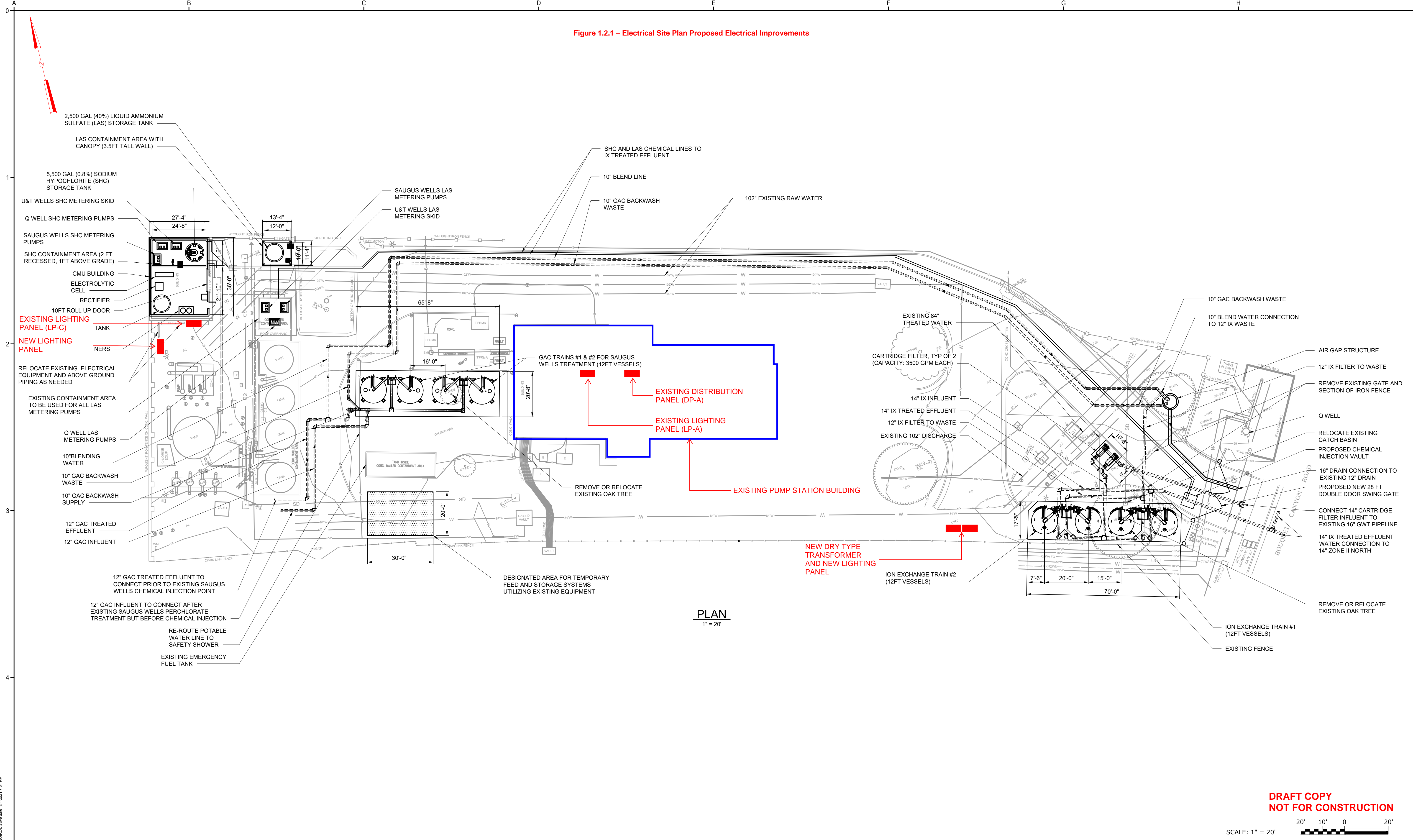


Figure 1.2.3 – Existing Lighting Panel (LP-C) located at Chemical Storage Building



Figure 1.2.4 – Existing Power Distribution Panel (DP-A) located at the Pump Room

Figure 1.2.1 – Electrical Site Plan Proposed Electrical Improvements



PLAN
1" = 20'

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SCALE: 1" = 20'

REVISIONS			
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DESIGNED BY:	PLANS PREPARED BY:
XXXX	Hazen
DRAWN BY:	HAZEN AND SAWYER 7700 IRVINE CENTER DRIVE, SUITE 200 IRVINE, CALIFORNIA 92618
CHECKED BY:	
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SANTA CLARITA, CA. 91350
(661) 259-2737

T7, U4, U6, SAUGUS 1, AND SAUGUS 2 WELLS GROUNDWATER TREATMENT IMPROVEMENTS AND NEW RVIPS DISINFECTION FACILITY

ELECTRICAL PROPOSED IMPROVEMENTS PRELIMINARY CONCEPTUAL LAYOUT

DATE:	MARCH 2021
PROJECT NO.:	HAZEN: 20155-005 SCVWA: XXXXXX
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