Appendix K-2

Water Availability Letter

CONDITIONAL ENGINEERING ANALYSIS AND INFORMATION FOR WATER AVAILABILITY LETTER

Brandeis-Bardin Mutual Water Company
Brandeis, CA
State Water System Number 5603301

Dated: July 29, 2024

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WREA
Water Resource Engineering Associates
2300 Alessandro Dr. Ste 215, Ventura, CA 93001
805.653.7900 800.25.WATER 805.653.0610(fax)
www.wreassoc.net

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BRANDEIS-BARDIN MUTUAL WATER COMPANY
BRANDEIS, CA

CONDITIONAL ENGINEERING ANALYSIS AND INFORMATION FOR WATER AVAILABILITY LETTER

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Background

Brandeis-Bardin Mutual Water Company (BBM/BBMWC) is a water purveyor serving domestic and fire protection water supplied by the system's 6" Calleguas Municipal Water District (CMWD) metered connection adjacent to Peppertree Lane at the intersection of Guardian Street and Tapo Canyon Road.

BBM was formed in 1967 to purvey water to meet domestic and fire protection needs to American Jewish University (AJU), formally Brandeis Bardin institute (BBM). BBM holds a Water Supply Certificate, number 5603301, from the State of California Water Resources Control Board, Division of Drinking Water (DDW), and is therefore under their direct jurisdiction. In December 2022, the water system was reclassified from a Non-Transient Non-Community (NTNC) Water System to a Community Water System (CWS). This determination was made based on current population numbers as reported by the purveyor.

Normally, and especially for new systems, a CWS is required to have two firm water sources, however, DDW is allowing only one source because the system has been in existence since 1967 and the area wholesaler, CMWD, is the supplier.

As a State water purveyor located in Ventura County, BBM is mandated to comply with provisions of Title 22 of the California Administrative Code "The California Waterworks Standards" (CWS) and with the provisions of the Ventura County Waterworks Manual (VCWWM). VCWWM establishes uniform policies and procedures for the design and construction of water supply facilities within County rights-of-way and on projects subject to approval by the County. The VCWWM includes provisions for fire flow.

The Ventura County Fire Protection District (VCFPD) Ordinance and Fire Code (Ordinance) specifies the minimum requirements for fire protection and fire flow for a particular project or area. The International Fire Code is used as the basis for the fire flow and duration standards in the Ordinance.

Analysis Purpose

Pursuant to Section 1.3.6 of the VCWWM, "Water Availability Letter", BBM must present to the County "…A letter from the Water Purveyor declaring that the purveyor's water system has the necessary water capacity available to supply the domestic and firefighting requirements for the project or service area identified in the letter. The Water Availability Letter must be signed by a member of the purveyor's Board of Directors or General Manager…". The term "…*necessary water capacity available*…" is taken to mean compliance with the VCWWM.

This Engineering Analysis (Analysis) will serve at least three purposes as follows:

- First, it will inform BBM of the state of compliance, and indicate improvements necessary to achieve compliance (if any).
- Second, depending on the status of compliance, the analysis will be used as a basis for determining if the system has the "…*necessary water capacity available*…" for any additional connections to the system without affecting compliance.

- Third, this analysis will inform AJU of any recommendations for necessary infrastructure improvements in the event that the existing or proposed system is found to be out of compliance.

System Description

Service Area Description

BBM exclusively serves AJU's Simi Valley, CA campus. Although two parcels (APN 685-0-051-040 and 685-0-051-140) are associated with the Campus's 1101 Peppertree Lane address, APN 685-0-051-040 is the main campus. There are auxiliary buildings in adjacent parcels including APN 685-0-051-210 that BBM has confirmed are not being serviced by the BBMWC. Hence, only APN 685-0-051-040 is considered as part of this analysis. Please refer to the Service Area Map in Appendix 1 for more detailed information.

The zoning is a mixture of Open Space and Rural Agriculture. Elevations range from approximately 944' to 1,400', generally increasing in grade from the University entrance on the northwest side of the subject parcel to the House of the Book on the southeast side of the parcel.

Facility Description

The BBM system is divided into three pressure zones: Zone 1, Zone 2 and Zone 3-Upper House of Book Zone. Zone 3 is effectively a subzone of Zone 2. Zone 1 is supplied directly by a 6-inch CMWD connection (capacity 1,000 GPM) to the pipeline which also fills the existing 608,000 G Main Reservoir (which serves as the water supply for Zone 1 and 2). Please refer to the System Schematic located in the Appendix 2 for more detailed process flow schematic of the zones.

Booster Pump Station #1 (consisting of 2-25 HP 300 GPM pumps[1]) is located at the Main Reservoir and is capable of supplying 300 GPM to Pump Station #2, which then fills the 300,000 G House of Book (HOB) reservoir. Only one pump operates at a time and the system is controlled by VFDs. In addition a bypass of Pump Station #1 exists which allows the pressure from the CMWD meter to provide auxiliary supply and pressure to Zone 2, as necessary.

Booster Pump Station #2 (consisting of 1-15 HP 100 GPM and 1-7.5 HP 60 GPM pumps[1]) is located between the Main Reservoir and the HOB Reservoir. Booster Pump Station #2 serves Zone 3 and the adjacent HOB reservoir[2] and limits the supply to HOB Reservoir to 60 GPM.

The BBM system includes numerous interconnections in Zone 2, all of which are demonstrated in the afore-mentioned Plan View System Schematic, located in Appendix 2.

Operation Description

The system is fully automated. Supply and demand are satisfied by the connection to CMWD, or one of two reservoirs. The Main Reservoir is supplied by the previously described connection to CMWD via a 6" meter (capacity approximately 1,000 GPM), and the HOB Reservoir being filled via booster pump stations.

[1] Pump flow rates and system details supplied by BBM Staff. Booster Pump Station #2 with one pump operating alone limits the supply to HOB Reservoir to 60 gpm. Booster Pump Station #1 and #2 are assumed to be in series.
[2] HOB requirements are listed separately since there is a separate sub-system of Zone 2 supplying the HOB building.

Starting with full reservoirs, each reservoir feeds demand to its respective zone. Additional demand is provided by the CMWD bypass to Zones 1 and 2.

As the level in the Main Reservoir decreases the inlet control valve opens and allows water to enter from the 6" CMWD meter to fill the reservoir. As the level in the Main Reservoir increases to a pre-determined point, the inlet control valve closes shutting off flow to the main reservoir. CMWD water can continues to feed Zone 2 via emergency bypass.

As the level in the HOB Reservoir decreases, the inlet control valve opens, energizing the booster pumps and allows water to enter through the supply pipe from booster pump stations 1 and 2, which operate in series to fill the HOB reservoir. Further, the open inlet control valve also allows for the 6" CMWD meter water to simultaneously enter, re-filling the Main Reservoir (Reservoir 1). As the level in the HOB Reservoir increases to a pre-determined point, the inlet control valve closes and the booster pumps de-energize, shutting off flow from the pumps.

Note that pressure reducing stations are situated across campus to regulate pressure, primarily for the small connections to the larger mainlines. The pressure reducing stations are included in the hydraulic model to assess the worst-case fire flow plus MDD scenarios for both the existing and buildout conditions.

VCWWM Calculation Results[1]

1.3.6-a Service Area Map

A Service Area Map also showing assessor's parcel numbers for each lot, is included in the Appendix 1. See Service Area Description, above, for more detailed information.

1.3.6-b Description of Planned Changes to the Existing System[2]

Changes to the BBM system have been identified which will be necessary to serve the existing and expanded facilities. Exact locations of new mainlines and replaced pipelines will be more definitively determined as the Project continues further in the detailed design phase. For now, through hydraulic modeling and analysis, preliminary proposed system/pipeline replacements have been identified through hydraulic modeling of the BBMWC system. The System Schematic for Hydraulic Analysis showing model areas, junctions, nodes, etc is included in Appendix 4.

The purpose of the hydraulic modeling was to apply worst case scenario conditions to the system in order to identify the compliance/noncompliance of the system. Further, through the model, we identified areas of non-compliance. From these results, preliminary proposed system improvements were brought forth for further discussion with BBMWC.

[1] Numbers shown herein refer to VCWWM Sections. Statements followed by section numbers demonstrate compliance to those sections.

[2] A planned expansion, Camp Alonim, proposes to replace existing Housing Trailer 1, Housing Trailer 2, and Housing Trailer 3 with a new Welcome Center, which will include central offices, a resource center, a staff lounge, and restrooms. An existing storage garage and two staff housing cottages are proposed to be replaced with thirteen, 32-bed Camper Cabins with bathrooms. Three new Head Counselor Cabin trailers capable of housing 2 people each are also proposed. A new open-air shade Arts pavilion with two storage rooms is also proposed.

1.3.6-c Completed Waterworks Manual Compliance Worksheets

See Appendix 5 for the VCWWM Compliance Check documentation. The worksheets are available for the following conditions-

1. Entire BBMWC system, Existing and Buildout Conditions
2. Zone 1, Existing and Buildout Conditions (these values are the same, no new N here)
3. Zone 2, Existing and Buildout Conditions
4. Zone 3, Existing and Buildout Conditions (these values are the same, no new N here)

1.3.6-d Summary of Out of Compliance Areas[1]

Identification of Out of Compliance Areas, as well as preliminary proposed system improvements to bring the system into compliance are related mainly to the increased fire flow requirement. Sections of 6" mainline are proposed to be upsized to 8". Approximately 3,300-lf of various pipeline segments are to be upsized to adequately serve 3 hydrants that, under existing conditions and 1,500-gpm fire flow are under the required 20-psi residual pressure.

Zone 1: No areas out of compliance.

Zone 2:

Out of Compliance Areas in Zone 2 consist of piping supplying fire flow to Hydrants 1 (Lax Building) and 4 (Book Repository), which are the furthest hydrants from the reservoir source pressure (under gravity). About 2,400-lf is scheduled to be upgraded to 8" C-900 PVC (or other AWWA certified pipe material). Proposed improvements may be re-routed slightly in order to reduce replacement costs. The intent is to remove the majority of 6" pipelines from the system in order to maintain acceptable flow velocities during fire flow + MDD demand conditions. Figure 1 presents the areas required for upsizing in Zone 2.

Additionally, the duplex pump station requirement for Pump Station #2 is not met. A new 100-gpm pump would be required to replace the smaller 7.5-hp unit that currently runs at a maximum 60-gpm. The new pump could be added in parallel to the existing units and the smaller 60-gpm pump kept in service as a duty backup.

Detailed discussion of the hydraulic modeling scenarios and results is included in the following section.

[1] The Hydraulic Model identified, pipes that are recommended for replacement/upsizing to reduce friction and to meet residual pressure requirements. Final size, location and other related appurtenances that may also need upgrading will be determined in the detailed design phase. Methodology of modeling approach and model assumptions is included in the following section.

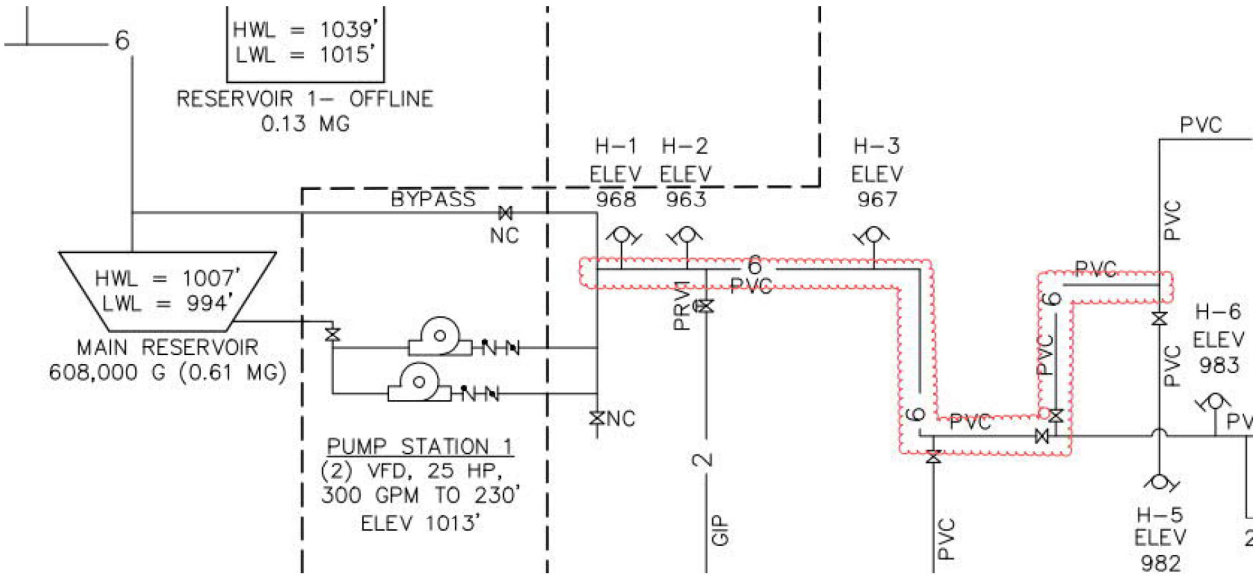


Figure 1: Zone 2 Pipeline Upsize Area

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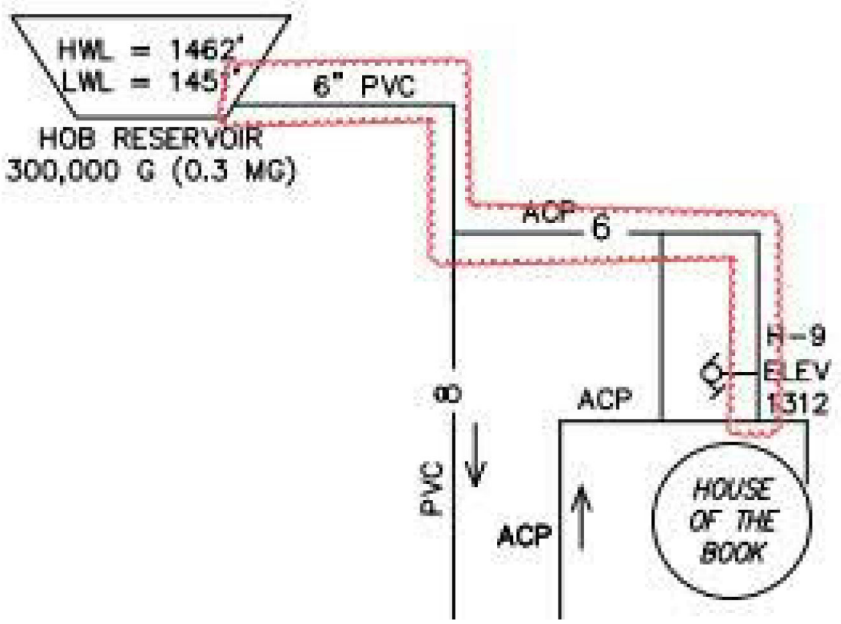


Figure 2: Zone 3 Pipeline Upsize Area

Hydraulic Modeling Assumptions and Methodology

The hydraulic modeling of the BBM water system used the following assumptions, as updated per comments provided in Plan Check 1 of the first WAL submittal.
Clarification of increased fire flow (FF) requirements and reduced domestic maximum day demand (MDD) based on utilizing 10-years of recent usage data provided by BBM.

1. Zone 1, 2 and 3 are defined mainly due to pressure reducing systems. Interconnects within the system as a whole allows for the distribution of water under all scenarios into each respective zone, while maintaining acceptable operational pressures based on the completely automated installed pressure reducing system(s).

2. The BBM water system's hydraulic model was run beginning at initial time zero, with max HGL (both reservoirs being full). – additionally, Calleguas MWD is considered a verified firm source and can refill the reservoirs exceeding the required minimum daily supply rate.

3. All Pressure Reducing Valves have been included in the model to verify full system pressures. PRVs in the model are set to the parameters outlined in the County of Ventura Public Works Agency's "Pipelines, Pressure Reducing Stations, and Automation of Pumping Stations" plan set dated 10/31/94, prepared by Brockmeier.

4. The Max Day Demand per Ventura County Water Works Manual (VCWWM) for the build-out condition was distributed evenly throughout all of the junctions in the model. Buildout was based on the maximum building square-footage allowed onsite giventhe lot size for both overnight and day use structures, per the Abramson Architects EIR 2023 plans, submittal cover sheet. This will be explained in more detail in the WAL report. This method allows BBM to have an approved conditional WAL (Conditional until the required improvements are made to comply with WWM sections) that allows for not just the Camp Alonim Project development but also for future development up to the described buildout N or Equivalent Service Connections (EC).

5. Fire flow (FF) is 1500-gpm at 20 psi residual pressure for commercial uses within the service area per Ventura County Fire Code 2022. Zone 1 FF is 1,000-gpm. Services in this area are all residential use, employee cabins.

6. The Calleguas Municipal Water District (CMWD) meter, with an approximate maximum flow rate of 1,000 gpm, adequately supplies the Main Reservoir.

Methodology included using the most conservative scenarios, meant to represent the BBM water system's hydraulic characteristics at buildout condition, using a straight ratio based on usage data and existing building square-footage, to maximum building area allowed onsite. In more detail, the built-out condition was used with Maximum Day Demand (MDD, Q_O) = 318 gpm (for N = 118, T = 75° F). The existing scenario includes a MDD or Q_O = 135 gpm (for N = 50, T = 75°), which is 183 gpm less than the proposed, built-out condition.

For each run of the hydraulic model the MDD was divided evenly at each junction of the model, with the added fire flow demand of 1500 gpm applied at a single fire hydrant. The model was run with the 1500 gpm demand applied to each one of the three worst case selected hydrants in the system at a time. The hydrant locations included at/near the LAX building, at the Book Repository, and at the House of Book. The scenario for each run begins at time 0, with a full system/full HOB Reservoir. The HOB reservoir gravity feeds each node in the system, including the 1500-gpm applied at the selected hydrant.

Results of the hydraulic model runs are provided in Table 1: Hydraulic Modeling Results of

Existing System. Hydrants not included in Table 1 resulted in acceptable 20-psi residual pressure under existing and buildout conditions.

Table 1: Hydraulic Modeling Results- Existing System

Hydrant Location	Hydrant # in Model	Fire Flow (gpm)[1]	Residual Pressure (psi)
Lax Building	H-1	1,500	-23
Book Repository	H-4	1,500	2
House of Book	H-9	1,500	11

As described in Section 1.3.6-d, Areas out of the compliance, the recommended improvements result in acceptable flow rates for each of the subject hydrants. Hydraulic model results for Existing Conditions, Existing Conditions with Improvements and Buildout Conditions (with Improvements) junction reports are included in Appendix 4 with the System Schematic for Hydraulic Analysis.

Model results with system improvements are outlined in Table 2: Hydraulic Modeling Results – System with Improvements.

Table 2: Hydraulic Modeling Results- Existing System

Hydrant Location	Hydrant # in Model	Fire Flow (gpm)[2]	Residual Pressure (psi)-Existing w/Imp	Residual Pressure (psi)-Buildout w/Imp
Lax Building	H-1	1,500	37	35
Book Repository	H-4	1,500	35	33
House of Book	H-9	1,500	51	49

[1] [1] If certain buildings do not have installed fire sprinklers, the demand may be higher based on fire code criteria, building SF, construction type, and occupancy of building. Based on our individual building analysis the Needleman Building and the HOB MAY require a fire flow of 1,750-gpm. The project architect will be re-evaluating the construction type of those structures and, if necessary, retrofit with fire sprinklers may be recommended to ensure the campus fire flow remains at 1500-gpm.

1.3.6-e Prepared Engineering Analysis

For engineering analysis the existing connections (N) were established based on the State Water Resources Control Board reporting data provided by Patrick Karinja at the Division of Drinking Water. N and equivalent services equal 50 connections based on the available 2021 Electronic Annual Report, which BBM confirmed is still consistent with current system informaiton. The system's Maximum Day Demand (MDD) was calculated by utilizing BBMWC's 10-year water use records. The calculation was based on Cal. Code Regs. Tit. 22, § 64554 - New and Existing Source Capacity and yielded a system MDD of 135-gpm. Appendix 3 provides a summary of the excel spreadsheet original usage data, calculations for MDD and PHD.

Build-out conditions assumed future development of the campus to the maximum allowable building area as consistent with the Ventura County Non-Coastal Zoning Ordinance. Using Abramson Architect EIR 2023 plans and the ratio of the existing building area to MDD, Buildout area to MDD_{BO} provided a MDD_{BO} value of 318 GPM. The straight ratio of N or EC was established yielding max N for the Buildout scenario to be 118 equivalent service connections.

The following text sections include -

1) Method and calculations for determining maximum day average demand (Q_0) and required domestic storage volume (V_0), for both existing and maximum number of service connections (N).
2) Method and calculations for determining compliance with the peak hour demand requirements of the Ventura County Waterworks Manual.
3) Method and calculations for determining compliance with the system reliability requirements of the Ventura County Waterworks Manual.
4) Method and calculations for determining compliance with the emergency requirements in the Ventura County Waterworks Manual.

2.3.1 Peak Hour Flow Multiplier (M):

$M = 10.56 / N^{0.333}$ for $N < 500$
Existing and Buildout conditions for Zone 1 are the same.
Zone 1: N = 8 resident cabins
M = 5.28 for N = 8

Zone 2:
M = 3.17 for N = 37 (existing)
M = 2.24 for N = 105 (full build-out)

HOB (Zone 3):
Existing and Buildout conditions for Zone 3 are the same.
M = 6.18 for N = 5, for 1-acre of commercial uses

2.3.2 Required Duration of Peak Flow (D), and 2.3.3 Fire Flow Requirements (F):

Duration of flow for Commercial and Industrial structures, per Exhibit A, Appendix A, page A-1 of Ventura County Waterworks Manual.

FIRE-FLOW CALCULATION AREA (square feet)					FIRE FLOW (gallons per minute)[c, h]	FLOW DURATION (hours)
Type IA and IB[b, a]	Type IIA and IIIA[b, a]	Type IV and V-A[b, a]	Type IIB and IIIB[b, a]	Type V-B[b, a]		
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	

The Ventura County Fire Code (VCFC) establishes the fire flow (F) for BBM = 1,500 GPM (Commercial-structures other than residential) for a flow duration of 2 hours.

Conclusion:

Based on the VCVC, the required duration (D) of fire flow for the BBM service area is 2 hours, and the required fire flow (F) is 1,500 GPM. ***Note:*** Zone 1 fire flow is 1,000-gpm based on residential employee cabins only. No commercial use or buildings in this area.

2.3.4 Number of Services (N, EC):

Establishment of the equivalent number of service connections (N) is required to initiate system demand and required performance calculations.

Per the state Waterboards section 2.3.4 “N” represents Services for calculating water supply and/or demand. This is a separate term and distinctive from “service connections” or “meter.”

Equivalent Services and Demand Per Equivalent Services

The BBM service area covers only a small portion of APN 685-0-051-040. Per the Waterboard’s CA Drinking Water Watch online portal, the domestic system has a total of 50 water services, made up of 15 residential, and 35 commercial water services, for a total of 50 services.
For engineering analysis, one (1) equivalent service was used per one (1) connection. N and equivalent services equal 50 existing connections based on the available 2021 Electronic Annual Report and Historical Usage data.

Build-out conditions were determined by referencing Abramson Architect EIR 2023 plans, assuming that future development will be to the Maximum Allowable Building Area per Ventura County Zoning Ordinance.

Tables 1 through 3 provide a summary of the three zones and the associated equivalent services or N associated with each zone for both existing and Buildout scenarios.

Table 3. Number of Services (N, EC) for Zone 1-Employee Cabins

Category	Existing Condition			Full Build-Out Condition		
	Service Connections	"N" (Demand)	"N" Subtotal	Number	"N"	"N" Subtotal
Residential Connections	8	1.0	8	8	1.0	8
Totals =			8			8

Table 4. Number of Services (N, EC) for Zone 2-Main Campus

Category	Existing Condition			Full Build-Out Condition		
	Service Connections	"N" (Demand)	"N" Subtotal	Number	"N"	"N" Subtotal
Residential Connections	37	1.0	37	105	1.0	105
Totals =			37			105

Table 5. Number of Services (N, EC) for Zone 3 Upper Zone, HOB

Category	Existing Condition		Full Build-Out Condition	
	Commercial Area (acres)	"N"	"Commercial Area (acres)	"N" Subtotal
Commercial Acres[1]	1	5	1	5
Totals =		5		5

Conclusion:

Number of services for each Zone are as follows:
The total number of services in the system equals 50 for existing conditions.

Buildout conditions N = 118 equivalent connections.

Note: The Camp Alonim Project would use 19 EC associated with the 13 cabins (1N each), 3-trailers for camp hosts (1/3N each = 1N total) and 1-acre of buildings/parking areas in a commercial setting for the Welcome Center and Arts Pavilion. The 1-acre of commercial areas totals 5N. Total N = 19 EC

2.3.5 Maximum Day Average Demand (Q_0), Required Storage (V_O):

Maximum Day Average Demand for the system was taken from water use records for the last most representative 10-years. Years 2020 to 2021 were not used due to very small values, assumably associated with little or no attendance due to Covid-19 pandemic.

[1] Includes parking area for HOB. Buildout for Zones 1 and 3 does not change and assumes all additional connections will be in Zone 2, the Main Campus.

Existing system Maximum Average Day Demand as calculated per Title 22 is 135-gpm (50N).

Per the Ventura County Waterworks Manual Compliance spreadsheet, based on ***Q***, system being located in Simi Valley (75-degrees F), master metered, MDD calculation value of 135-gpm based on usage, with a service connection of 50 (as previously described), the existing required storage (V_0) for the BBMWC system is 76,725 gallons. Factoring in the required Fire Storage, the total storage required is 256,725 gallons.

Currently the BBMWC can supply 1,440,000 gallons per day from the Calleguas meter. The system provides adequate water storage, with the Main Reservoir capacity of 608,000-gallons and the House of Book (HOB) reservoir capacity of 300,000-gal.

Maximum Day Average Demand
Per VCWWM Compliance sheet, the minimum required peak hour demand (PHD) is 1,694-gpm, of which the system can supply 2,607-gpm.

...

Zone 1:
Existing Condition = Full Built-Out Condition, no change – 8N employee cabins, FF = 1,000-gpm for residential area only.

For N<20 Q_0 Metered
Q_0(N, 8) = 14-GPM
Vo(N,8) = 13,214-gallons
With FF = 133,214-gallons

Zone 2:
Existing Condition, Fire Flow = 1,500-gpm
Q_O = 53-gpm (N = 37, T = 75° F)
V_O = 38,385-gallons
For 20<N<500 V_0 Metered =
V_0(N, 37) with Fire Flow = 218,385 GAL

Full Build-Out Condition
Q_O = 150-gpm (N = 105, T = 75° F)
V_O = 77,744-gallons
For 20<N<500 Vo Metered =
Vo (N, 105) with Fire Flow = 257,774-gallons

Zone 3 Upper HOB (part of Zone2), Fire Flow = 1,500-gpm:
Existing Condition = Full Built-Out Condition
Q_O = 10 gpm (N = 5, T = 75° F)
V_O = 9,997 gallons
For N<20 V_0 Metered =
V_0(N, 5) with Fire Flow = 189,997-gallons

Conclusion:

Zone 1:
The connection to CMWD and the Main Reservoir are capable of supplying the existing MDD, Q_O and V_O requirements by the existing reservoir storage totaling 608,000 G.

Zone 2:
Pump Station #1 with Pump Station #2 can supply Zone #2 and the HOB Reservoir with 160 GPM. The value meets the MDD for Zone 2. The V_O requirements are met by both of the existing reservoirs, with HOB reservoir storage totaling 300,000 G provided by gravity.

HOB (Zone 3):

The HOB Reservoir is capable of supplying the existing MDD, Q_O and V_O requirements.
The requirement is met by the existing HOB reservoir gravity flow and storage totaling 300,000 G.

2.4 Minimum Supply (Q_M):

The minimum supply is calculated by adding the MDD flow rate and the flow rate required to fill the calculated fire protection storage in five days. In this case, the calculated fire protection storage for both Zones 2 and 3 is 180,000 G for 1,500 GPM at a 2-hour duration, with a five-day-flow rate of 36,000 GPD (≈ 25 GPM).

Zone 1:
Q0= 14+16.7 = 31-gpm (existing and buildout) = 44,640-gpd Note: Zone 1 FF = 1,000 gpm or 5 day flow rate = 17-gpm.

Zone 2:
Q_O = 53+25 = 78-gpm (existing) = 112,320-gpd
Q_O = 150 + 25 = 175-gpm (full build-out) = 252,000-gpd

HOB (Zone 3):
Q_O = 10 + 25 = 35 gpm (existing and buildout) = 50,400-gpd

Conclusion:

Zone 1: The minimum supply is provided by the CMWD meter connection which can supply 1,000 gpm or 1,440,000 gpd. This meets the requirements.

Zone 2:
The existing BBM systems primary supply for Zone 2 are the two booster pump stations which combine to produce a maximum of 160 gpm or 230,400 gpd. This does not meet the requirements for existing or build-out condition.

HOB (Zone 3):

The existing BBM system primary supply for Zone 3 is storage at HOB Reservoir (300,000 G). This meets the requirements for the existing condition.

2.5 Peak Demand Rate:

2.5.1 All systems must meet Title 22 requirements for Peak Hour Demand, either by usage data, or the estimate method in 2.5.2. These calculations reflect the estimate method.

2.5.1.1 The distribution system is designed for the flows indicated in 2.5.2.

2.5.2 Peak Hour (Demand) flow rate Peak Hour Demand (PHD)

Zone 1:
. Existing and Buildout Condition
$P_A = (M \times Q_O/2) + F = (5.3 \times 14/2) + 1{,}000 = 1{,}036$-gpm
$P_B = M \times Q_O = 5.3 \times 14 = 72$- gpm

Zone 2:
Existing Condition
$P_A = (M \times Q_O/2) + F = (3.2 \times 53/2) + 1{,}500 = 1{,}584$-gpm
$P_B = M \times Q_O = 3.2 \times 53 = 167$-gpm

Full Build-Out Condition
$P_A = (M \times Q_O/2) + F = 2.2 \times 150/2) + 1{,}500 = 1{,}668$-gpm
$P_B = M \times Q_O = 2.2 \times 150 = 335$-gpm

HOB (Zone 2):
Existing Condition
$P_A = (M \times Q_O/2) + F = (6.2 \times 10/2) + 1{,}500 = 1{,}531$ gpm
$P_B = M \times Q_O = 6.2 \times 10 = 62$ gpm

Conclusion:

Zone 1:
Existing and Buildout conditions are met by the CMWD meter and Main reservoir.

Zone 2:
For the existing condition, PHD = P_A = 1,584 gpm is met by stored water in the reservoirs delivered through the distribution system.

For the full build-out condition, PHD = P_A = 1,668 gpm, is met by stored water in the reservoirs delivered through the distribution system.

HOB (Zone 3):

For the existing condition, PHD = P_A = 1,531 gpm, is met by stored water in the HOB reservoir delivered through the distribution system.

2.7 Storage (V_M)

Zone 1:
Storage from Zone 1 is provided by the Main Reservoir.

Zone 2:
For the existing condition, the installed storage must not be less than $V_O + V_F$ = 38,385 + 180,000 (fire) = 218,385 gallons; actual storage = 608,000 gallons.

For the full build-out condition, the installed storage must not be less than $V_O + V_F$ = 77,744 + 180,000 (fire) = 257,744-gallons; actual storage = 608,000 gallons.

HOB (Zone 3):
For the existing condition, the installed storage must not be less than $V_O + V_F$ = 9,997 + 180,000 (fire) = 189,997 gallons; actual storage = 300,000 gallons.

2.8.2 PE equals the larger of PEF or PED:

Zone 1:
P_{ED} = M x Q0/2 = 36-gpm
P_{EF} = (M*Q/4)+0.75*F = 768-gpm

Zone 2:
Existing Condition
$P_{EF} = (M \times Q_O / 4) + 0.75 \times F$ = 1,167-gpm
$P_{ED} = M \times Q_O / 2$ = 84 GPM

Full Build-Out Condition
$P_{EF} = (M \times Q_O / 4) + 0.75 \times F$ = 1,209-gpm
$P_{ED} = M \times Q_O / 2$ = 168-gpm

HOB (Zone 3):
Existing Condition
$P_{EF} = (M \times Q_O / 4) + 0.75 \times F$ = 1,141-gpm
$P_{ED} = M \times Q_O / 2$ = 31-gpm

Conclusion:

Zone 1:
$P_E = P_{EF}$ is 768 gpm and is delivered through the distribution system.

Zone 2:
For the existing condition, $P_E = P_{EF}$ = 1,167-gpm is delivered through the distribution system.

For the full build-out condition, $P_E = P_{EF}$ = 1,209-gpm, is delivered through the distribution system.

HOB (Zone 2):
For the existing condition, $P_E = P_{EF}$ = 1,141 gpm, is met by stored water in the tanks, delivered through the distribution system.

2.8.3 V_E equals the larger of V_{E1} or V_{E2}:

Zone 1:
Existing Condition
$V_{E1} = 60 \times P_E$ = 46,080-gallons
$V_{E2} = V_O + 0.75 \times 60 \times F$ = 58,214-gallons

Supplied by Main Reservoir = 608,000-gallons

Zone 2:
Existing Condition
$V_{E1} = 60 \times P_E$ = 70,020-gallons
$V_{E2} = V_O + 0.75 \times 60 \times F$ = 105,885-gallons

Full Build-Out
$V_{E1} = 60 \times P_E$ = 72,540-gallons
$V_{E2} = V_O + 0.75 \times 60 \times F$ = 145,244-gallons

HOB (Zone 2):
Existing Condition
$V_{E1} = 60 \times P_E$ = 68,460-gallons
$V_{E2} = V_O + 0.75 \times 60 \times F$ = 77,497-gallons

Conclusion:

Zone 1:
Satisfied by Main Reservoir.

Zone 2:
For the existing and full build-out condition, $V_E = V_{E2}$ is met by the Main Reservoir with a total storage capacity of 608,000 gallons.

HOB (Zone 3):
For the existing condition, $V_E = V_{E2}$ is met by the HOB Reservoir with a total storage capacity of 300,000 gallons.

2.8.4 Required Duration during Emergency Periods:

P_E must be sustained for a period of one hour during a power outage and a two-hour period (D_F) for other emergencies. V_E is required for a one-hour emergency and during a one to four-day type emergency period. The total system facilities remaining in operation during emergency periods must include two or more of the following together (with larger diameter pipe to reduce friction losses in some cases).

	Zone 1-		Zone 2/Zone 3
a.	Water stored at elevation which provide service by gravity. *Analysis: The Main Reservoir is at an elevation which can provide service by gravity.*	a.	Water stored at elevation which provide service by gravity. *Analysis: The HOB Reservoir is at an elevation which can provide service by gravity.*
b.	Duplex booster pump installations (for **§ 2.8.1.2**). *Analysis 1 is supplied 1000 gpm by CMWD meter supplying the main reservoir.*	b.	Duplex booster pump installations (for **§ 2.8.1.2**). *Analysis: BBM Booster Pump Station 1 is comprised of two 25-HP pumps, one duty pump and the other a standby unit plumbed in parallel. Booster Pump Station 2 has a 7.5 HP and 15 HP pump plumbed in parallel. Booster Pump Stations 1 and 2 exist in the BBM system in series. The duplex booster pump emergency requirement is met for Booster Pump Station #1, but not for Pump Station #2.*
c.	Wells or low-level storage utilizing pumps with two sources of power (gas fueled emergency generators + electric powered emergency generators, or electric powered emergency generators + hydrocarbon fueled emergency generators) and automatic power source transfer (for **§ 2.8.1.1**). *Analysis:* N/A	c.	Wells or low-level storage utilizing pumps with two sources of power (gas fueled emergency generators + electric powered emergency generators, or electric powered emergency generators + hydrocarbon fueled emergency generators) and automatic power source transfer (for **§ 2.8.1.1**). *Analysis: N/A*
d.	Wells (with pumps and power supplies as in 2.8.4 c) not required to meet the basic supply requirements (for **§ 2.8.1.2 and § 2.8.1.3**). *Analysis: N/A*	d.	Wells (with pumps and power supplies as in 2.8.4 c) not required to meet the basic supply requirements (for **§ 2.8.1.2 and § 2.8.1.3**). *Analysis: N/A*
e.	Water stored at an elevation that does not provide gravity service can be combined with above (for **§ 2.8.1.2 and § 2.8.1.3**). *Analysis: N/A*	e.	Water stored at an elevation that does not provide gravity service can be combined with above (for **§ 2.8.1.2 and § 2.8.1.3**). *Analysis: N/A*
f.	Emergency standby connection to another water system (for **§ 2.8.1.2 and § 2.8.1.3**). *Analysis: N/A*	f.	Emergency standby connection to another water system (for **§ 2.8.1.2 and § 2.8.1.3**). *Analysis: N/A*

Conclusion:

Zone 1:
Zone 1 meets the gravity stored water requirement 2.8.4.a) and duplex booster pump emergency is not applicable. Zone 1 is supplied 1000 gpm (1,440,000 gpd) by the CMWD meter.

Zone 2:
Zone 2 meets the gravity stored water requirement 2.8.4.a) and duplex booster pump station #1 emergency requirement 2.8.4.b) but does not meet 1.8.4.b) for booster pump station #2.

HOB (Zone 2):

HOB meets the stored water requirement 2.8.4.a) and the duplex booster pump emergency requirement 2.8.4.b).

Compliance Statement

The existing Brandeis-Bardin Mutual Water Company system, after the improvements described herein are implemented, will meet the requirements of the California Waterworks Standards as set forth in California Code of Regulations Title 22, Division 4. The system will also meet the requirements of the Ventura County Waterworks Manual and the Ventura County Fire Protection District Ordinance and Fire Code.

This statement, made on July 29, 2024 is valid for the adequacy for the addition of 68 N, totaling 118 N at full build-out. The Camp Alonim Project uses 19N for a total N available = 49N after the proposed project.

_____	_____	_____
Print Name, Title	Signature	Date

Phone: _____ Corporate Address:_____

Appendix 1 Service Area Map

Appendix 2 Brandeis-Bardin Mutual Water Company Schematic Plan View Exhibit

Appendix 3 Demand Calculations from Raw Usage Data

Appendix 4: System Schematic for Hydraulic Analysis & Model Results Junction Reports

Appendix 5: VCWWM Compliance Check Printouts

APPENDIX 1 - SERVICE AREA MAP



SERVICE AREA MAP

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
LOUIS M. NAGY
No. 47648
Exp. 12-31-25
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
WREA
WATER RESOURCE ENGINEERING ASSOCIATES
2300 ALESSANDRO DR, SUITE 215, VENTURA, CA 93001
• 805.653.7900 • 800-25-WATER • FAX: 805.653.0610

PLAN DATE: 08/01/23 JOB NO. 3583

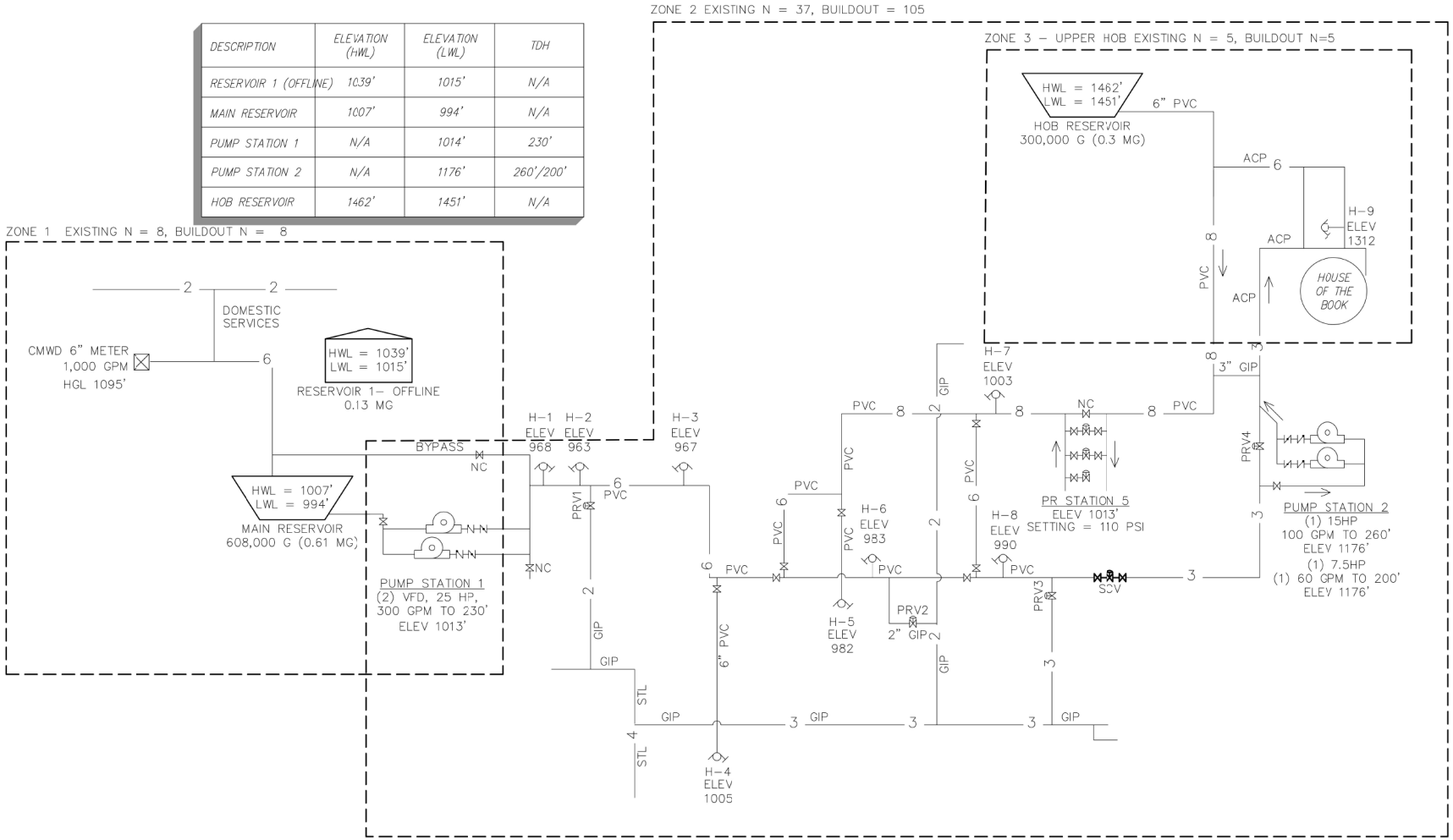
WAL23-0063

BRANDEIS BARDIN MUTUAL WATER COMPANY
BRANDEIS, CA

Plot by: drcar Plot date: Jul 24, 2024 - 12:26pm Drawing name: N:\Shared drives\Data\Projects\3500's\3583-AJU WAL\04 DWG\03 Exhibits\3583 Service Area Map.dwg

APPENDIX 2 - BBMWC FLOW SCHEMATIC - PLAN VIEW EXHIBIT

DESCRIPTION	ELEVATION (HWL)	ELEVATION (LWL)	TDH
RESERVOIR 1 (OFFLINE)	1039'	1015'	N/A
MAIN RESERVOIR	1007'	994'	N/A
PUMP STATION 1	N/A	1014'	230'
PUMP STATION 2	N/A	1176'	260'/200'
HOB RESERVOIR	1462'	1451'	N/A



SCHEMATIC

NOT TO SCALE

SYSTEM CONNECTION SUMMARY:

EXISTING: 35 COMMERCIAL
15 RESIDENTIAL
TOTAL 50 CONNECTIONS[1] = 135 GPM[2]

BUILDOUT
TOTAL 118 CONNECTIONS[3] = 318 GPM

1. PER STATE WATER RESOURCES CONTROL BOARD ANNUAL REPORTING 2021
2. BASED ON 10-YEAR HISTORIC USAGE
3. BASED ON MAX ALLOWABLE BUILDING AREA (ABRAMSON ARCHITECT EIR 2023 PLANS)

REGISTERED PROFESSIONAL ENGINEER HEATHER M. O'CONNELL No. 73119 Exp. 12-31-24 CIVIL STATE OF CALIFORNIA

BY: DREAMING TREE CIVIL
1143 E. MAIN STREET • VENTURA, CA 93001 • 805.701.8755

HEATHER O'CONNELL, R.C.E. 73119 DATE

BRANDEIS-BARDIN MUTUAL WATER COMPANY
SIMPLIFIED SYSTEM SCHEMATIC PLAN

DRAWING NO. 001 SHEET 1 OF 1

WAL23-0003

APPENDIX 3 - DEMAND CALCULATIONS BASED ON RAW USAGE DATA

BRANDEIS - WATER USAGE HISTORY IN ACRE FT. (20+ YEARS)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	AVG
1	2002	3.5	4.5	7.5	6.4	9	11.7	12.6	12.6	11.2	9.2	3.2	4.4	**958**	**8**
2	2003	4	3.9	3.3	4.1	4.3	8.5	12.1	11	10.1	7.5	5.2	5.9	**799**	**6.7**
3	2004	5.1	3.7	3.3	5.6	9	10.9	12.8	12	10.7	7.3	3.2	5.1	**887**	**7.4**
4	2005	3	1.4	1.4	3.6	6.7	8.8	11.6	9.6	8.8	6.4	6.3	5.5	**731**	**6.1**
5	2006	4	5.1	3	2	8.6	9.6	12.9	12.3	10.3	6.9	6.1	5.1	**861**	**7.2**
6	2007	5.4	1.9	5.2	6.5	6.6	8.7	14	11.6	9	7.8	7.3	3.7	**877**	**7.3**
7	2008	3.5	2.6	4.2	6.3	5.7	11.1	12.5	12.6	9.5	8.7	5.8	2.6	**851**	**7.1**
8	2009	3.2	2.6	4.2	6.6	8.1	7.7	11.1	11.2	8.2	6.2	6.1	2.8	**71**	**6.5**
9	2010	3.2	1.7	3.2	4.4	6.7	7.8	11.3	10.5	8.5	5.3	3.1	3.8	**693**	**5.8**
10	2011	2.6	3.1	2.4	3.6	6.7	9.1	9.7	10.7	9.5	7.1	3.7	3.7	**719**	**6**
11	2012	4.3	3.9	4.1	3	7.9	11.2	12.3	12.3	10	9	5.2	3.3	**868**	**7.2**
12	2013	1.6	3.6	2.6	4.5	6	7.2	8.5	10.9	9.2	7	6.3	4.7	**721**	**6**
13	2014	3.7	4.4	3.4	3.4	4.7	8.5	9.3	10	8.8	7.2	5.5	4.5	**734**	**6.1**
14	2015	1.4	2.4	2.4	3.7	5.6	5	6.7	6.6	7.2	4.4	5.1	4.7	**552**	**4.6**
15	2016	4.2	1.2	2.4	3.7	3.6	4.7	7.4	10.2	8	6.1	5.1	2.4	**59**	**4.9**
16	2017	1.2	1.1	1	1.9	3.9	5.8	7.4	8.1	6.8	5.9	5	3.9	**52**	**4.3**
17	2018	4.8	2.5	4	3.7	6.6	6.8	9.2	7.5	6.2	5.2	4.2	1.6	**623**	**5.2**
18	2019	2.3	1	1.2	4.2	4.8	6.5	7.4	6.5	7.5	6.6	4.2	1.4	**534**	**4.5**
19	2020	2.3	3.4	2.3	1.6	5	5.7	7.4	7.1	5	3.9	4.6	3.3	**516**	**4.3**
20	2021	2.5	3.1	2.4	5.7	3.7	5.7	8.8	7.6	6.6	4.9	3.6	1.7	**566**	**4.7**
21	2022	0.1	2.6	2.6	2.8	4	3.3	4.2	3.5	2.6	3	1.3	0.7	**307**	**3.4**
22	2023	0.9	0.3	1.5	0.8	2.3	3.9	5.3	4.3	3.4	4.1	3.8	3.3	**339**	**3.8**
23	2024	3.1	2.8	0.5										**6.1**	**0.7**
	AVG.	**3.2**	**2.9**	**3.2**	**4.2**	**6.2**	**8**	**10.2**	**9.9**	**8.5**	**6.7**	**4.9**	**3.7**	**716**	**8**

Max All Year Data
14 Jul-07

MAX LAST 12 YEARS	(AC=FT)	GALLONS	DAYS JUL	AVE OF MAX MONTH (GPD)	MDD	MDD GPM	AHF OF MDD	PHD (gpm)
11.2 Aug	Aug-12							
11.3 Jul								
10.7 Aug		Conv AF to Gal						
12.3 July/Aug		4007709	31	129281	193921	**135**	8080	**202**
10.9 Aug								
10 Aug								
7.2 Sept								
10.2 Aug								
8.1 Aug								
9.2 Jul								
7.4 Jul								
7.4 Jul								
8.8 Jul								
4.2 Jul								
5.3 Jul								

Ratios for Calculating N and MDD For Buildout

	Existing Structures (AI)	Proposed Structures (AII)	Max Allowable (per Zoning)
Overnight	43389	70385	168000
All Other	99138	107831	167900
Total	142527	178216	335900
Demolished Overnight Demo	4008		

Existing	GPM	**135**	**318**	Source: Abramson Architects
Buildout	N_{Bo}	**50**	**118**	(based on lot size and allowable
Alonim	N_{Pr}	**19**		building area)

See Project EIR Submission

13 Residential cabins	13N	
3 trailer host cabins	1N	(similary to trailer park per WWM Section 2.3.4.4)
1-acre of buildings and parking (includes art pav + wel) center	5N	(commercial areas per WWM Section 2.3.4.2)
Total N Project	**19N**	

CCR-CAL CODE OF REGULATIONS: 65445

codes.

(2) If no daily water usage data are available and monthly water usage data are available:

(A) Identify the month with the highest water usage (maximum month) during at least the most recent ten years of operation or, if the system has been operating for less than ten years, during its period of operation;

(B) To calculate average daily usage during maximum month, divide the total water usage during the maximum month by the number of days is that month; and

(C) To calculate the MDD, multiply the average daily usage by a peaking factor that is a minimum of 1.5; and

(D) To calculate the PHD, determine the average hourly flow during MDD and multiply by a peaking factor that is a minimum of 1.5.

(3) If only annual water usage data are available:

(A) Identify the year with the highest water usage during at least the most recent ten years of operation or, if the system has been operating for less than ten years, during its years of operation;

(B) To calculate the average daily use, divide the total annual water usage for the year with the highest use by 365 days; and

(C) To calculate the MDD, multiply the average daily usage by a peaking factor of 2.25.

(D) To calculate the PHD, determine the average hourly flow during MDD and multiply by a peaking factor that is a minimum of 1.5.

(4) If no water usage data are available, utilize records from a system that is similar in size, elevation, climate, demography, residential propery size, and metering to determine the average water usage per service connection. From the average water usage per service connection, calculate the average daily demand and follow the steps in paragraph (3) to calculate the MDD and PHD.

MAX NUMBER OF OVERNIGHT USERS (PER 8107 - 17.2.1)

RA-160 AC AREA = 328 ACRES

LOT SIZE IN ACRES X 2.56 = MAX NUMBER OF PERSONS TO BE ACCOMMODATED

328 X 2.56 = 839.68 = 840 PERSONS

MAX TOTAL POPULATION ALLOWED ON SITE (PER 8107 - 17.3.1)

5.12 X LOT SIZE IN GROSS ACRES = TOTAL POPULATION ALLOWED ON SITE

5.12 X 328 = 1679.36 = 1679 PERSONS

MAX ALLOWABLE AREA CALCULATIONS

OVERNIGHT ACCOMMODATIONS (PER 8107 - 17.4.1)

200 SF PER OVERNIGHT GUEST/STAFF

200 X 840 = 168,000 SF

ALL OTHER ROOFED STRUCTURES OR BUILDINGS (PER 8107 - 17.4.2)

100 SF PER PERSON ALLOWED PER 8107 - 17.3 (DAILY ON-SITE POPULATION)

100 X 1679 = 167,900 SF

PROPOSED TOTAL CAMP USE AREA CALCULATIONS

EXISTING TOTAL CAMP USE STRUCTURES SF = 142527 SF

EXISTING OVERNIGHT ACCOMMODATIONS & RESTROOMS = 43389 SF

EXISTING ALL OTHER STRUCTURES SF = 99138 SF

OVERNIGHT ACCOMMODATIONS SF TO BE DEMOLISHED = 4008 SF

PROPOSED TOTAL OVERNIGHT ACCOMMODATIONS =

(43389 - 4008) + 31004 = 70,385 SF

70,385 SF < 168,000 SF

THEREFORE, PROPOSED SF < MAX ALLOWABLE SF FOR OVERNIGHT ACCOMMODATIONS PER (8107 - 17.4.1)

PROPOSED TOTAL ALL OTHER ROOFED STRUCTURES (NOT OVERNIGHT ACCOMMODATIONS) =

99138 + 8693 = 107,831 SF

107,138 SF < 167,900 SF

THEREFORE, PROPOSED SF < MAX ALLOWABLE SF FOR ALL OTHER ROOFED STRUCTURES PER (8107 - 17.4.2)

WAL23-0003

APPENDIX 4 - SYSTEM SCHEMATIC FOR HYDRAULIC ANALYSIS AND MODEL RESULT PAGES

SYSTEM SCHEMATIC FOR HYDRAULIC ANALYSIS

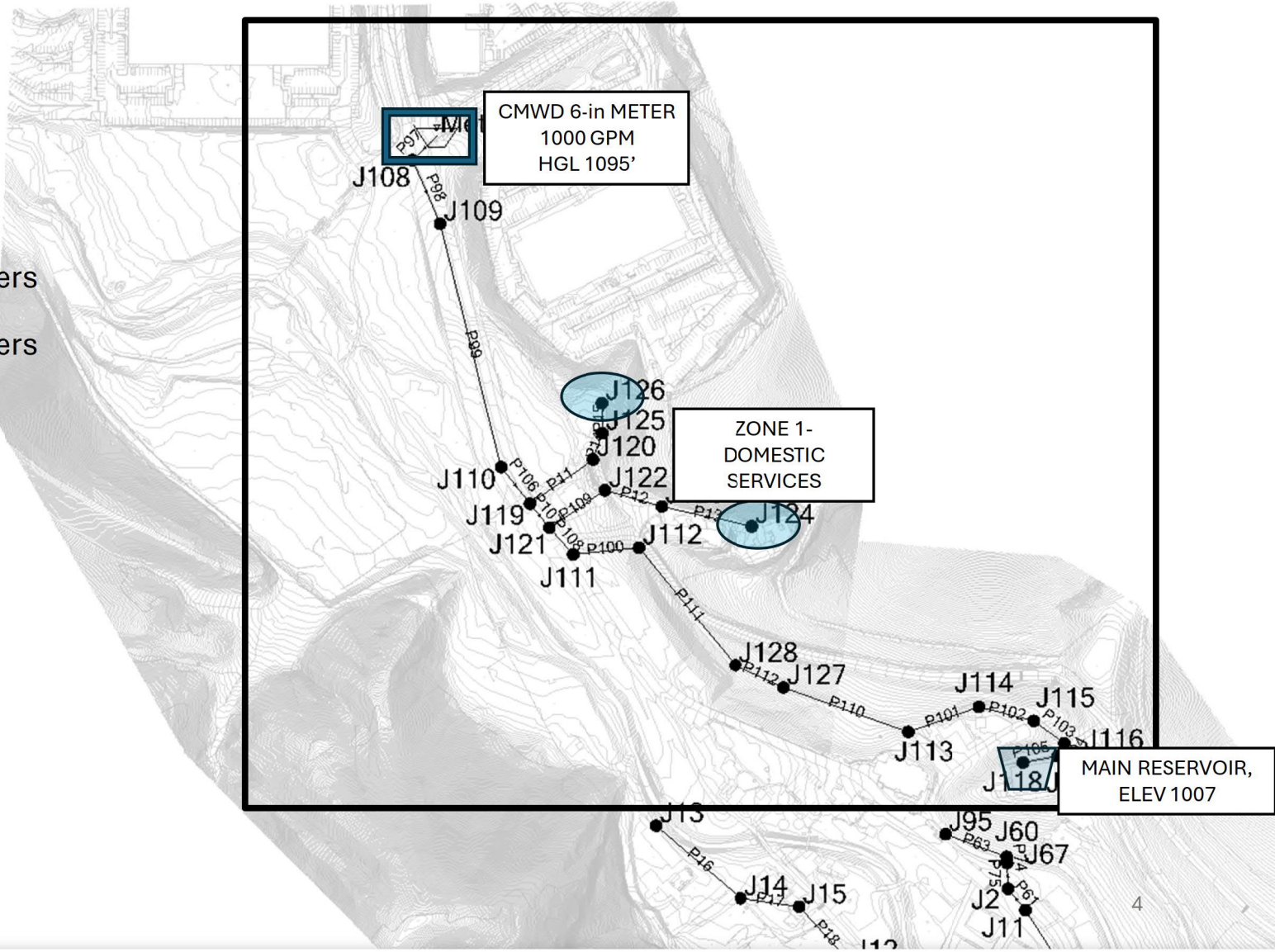

CMWD METER
WATER FLOW DIRECTION
OVERALL CAMPUS MAP/SYSTEM
ZONE 1
RESERVOIR 1
HOB RESERVOIR/ZONE 3
ZONE 2 – MAIN CAMPUS
HOB

SHEET INDEX



Zone 1

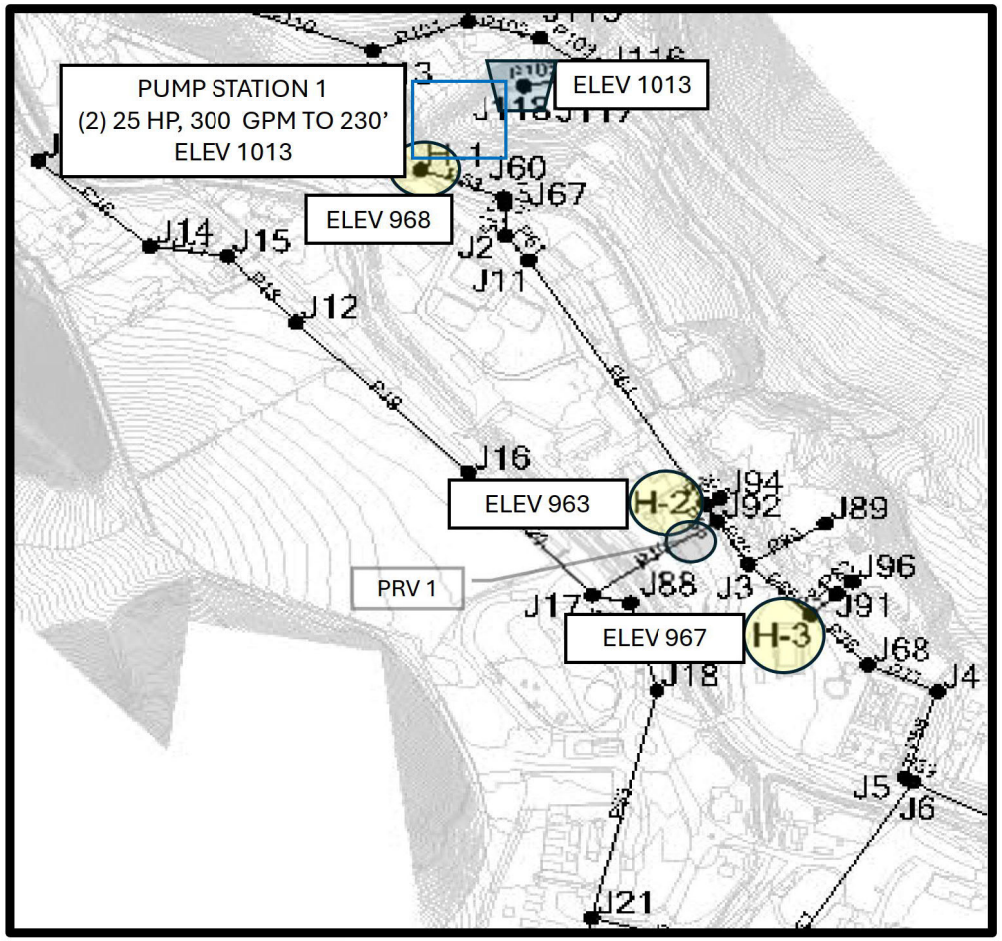
- Calleguas Meter
- J126 - 4 Residential Meters
- J124 - 4 Residential Meters
- Main Reservoir



WAL23-0003

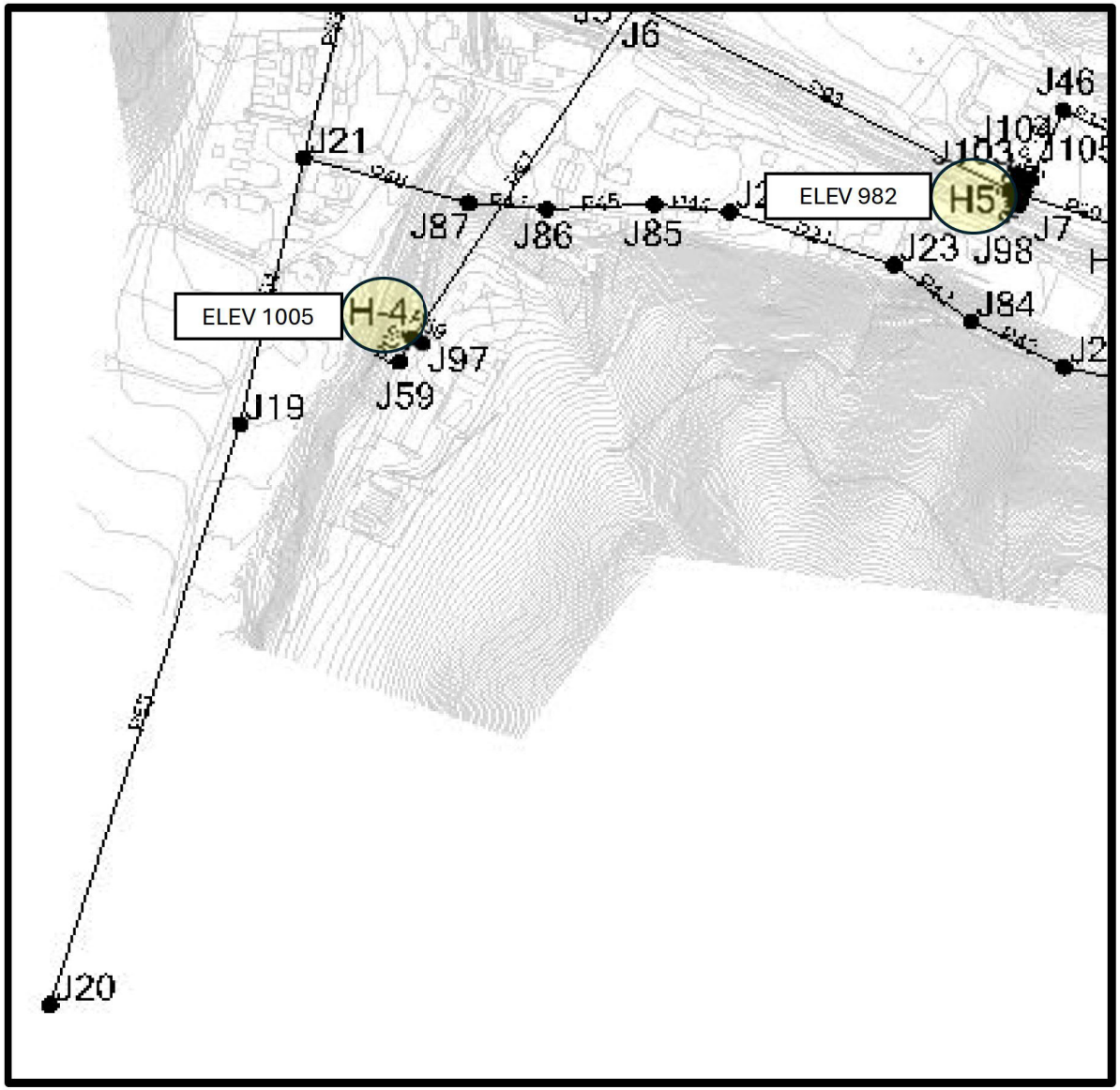
Zone 2

- Main Reservoir
- FH
- Pump Station 1
- Pressure Reducing Station



Zone 2

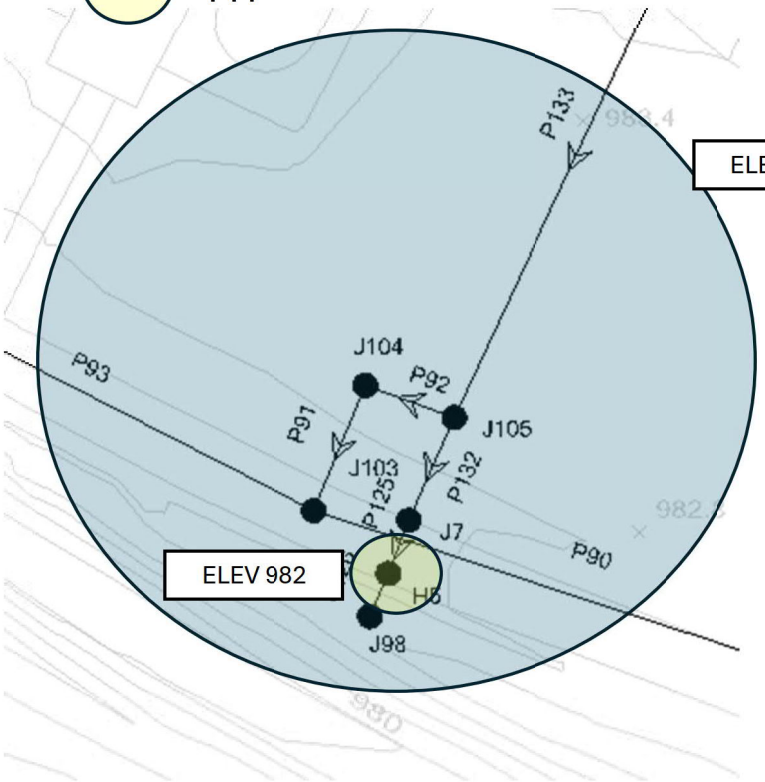
- FH

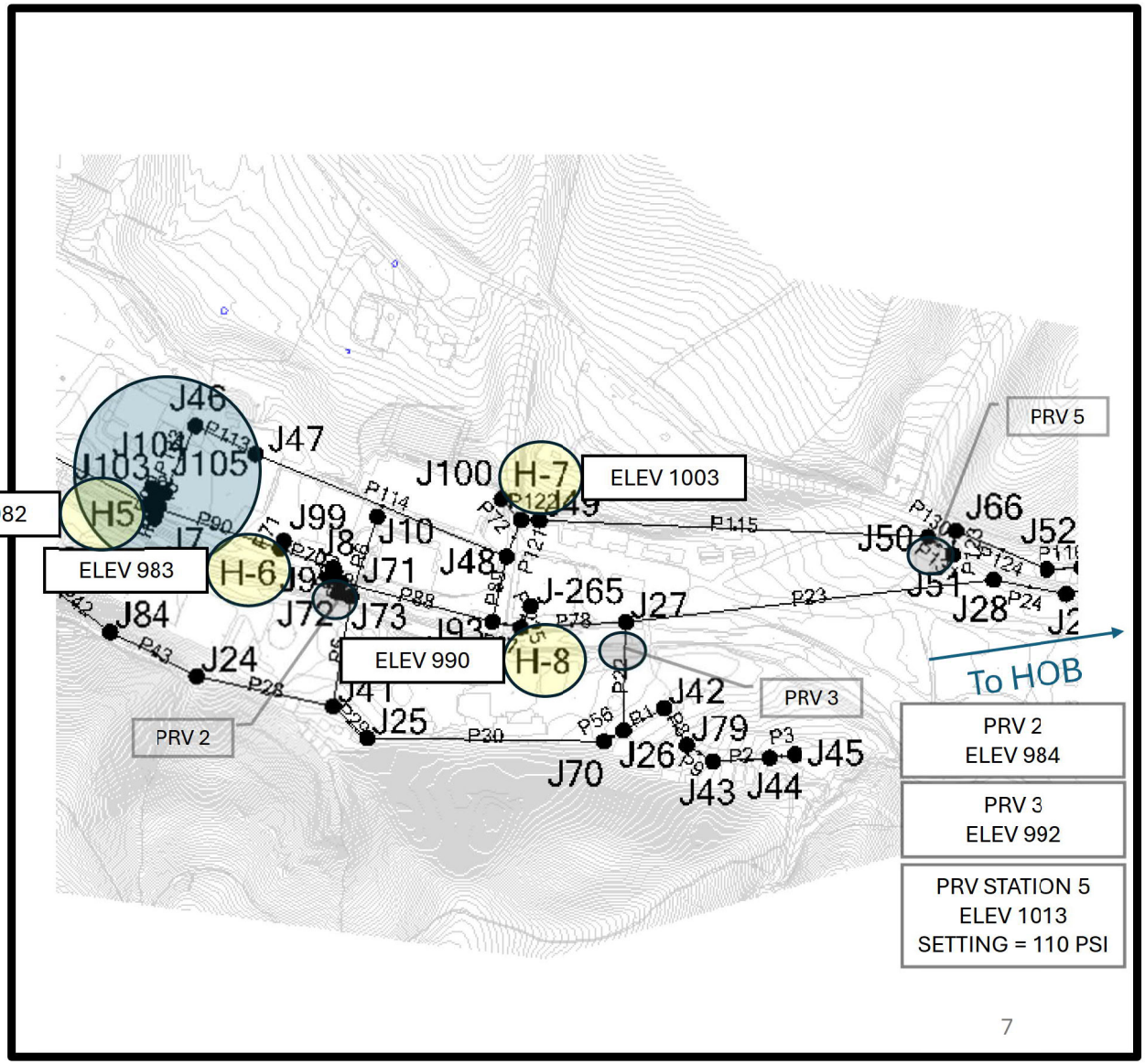


WAL23-0003

Zone 2

- Pressure Reducing Station
- Needleman Activities Center
- FH



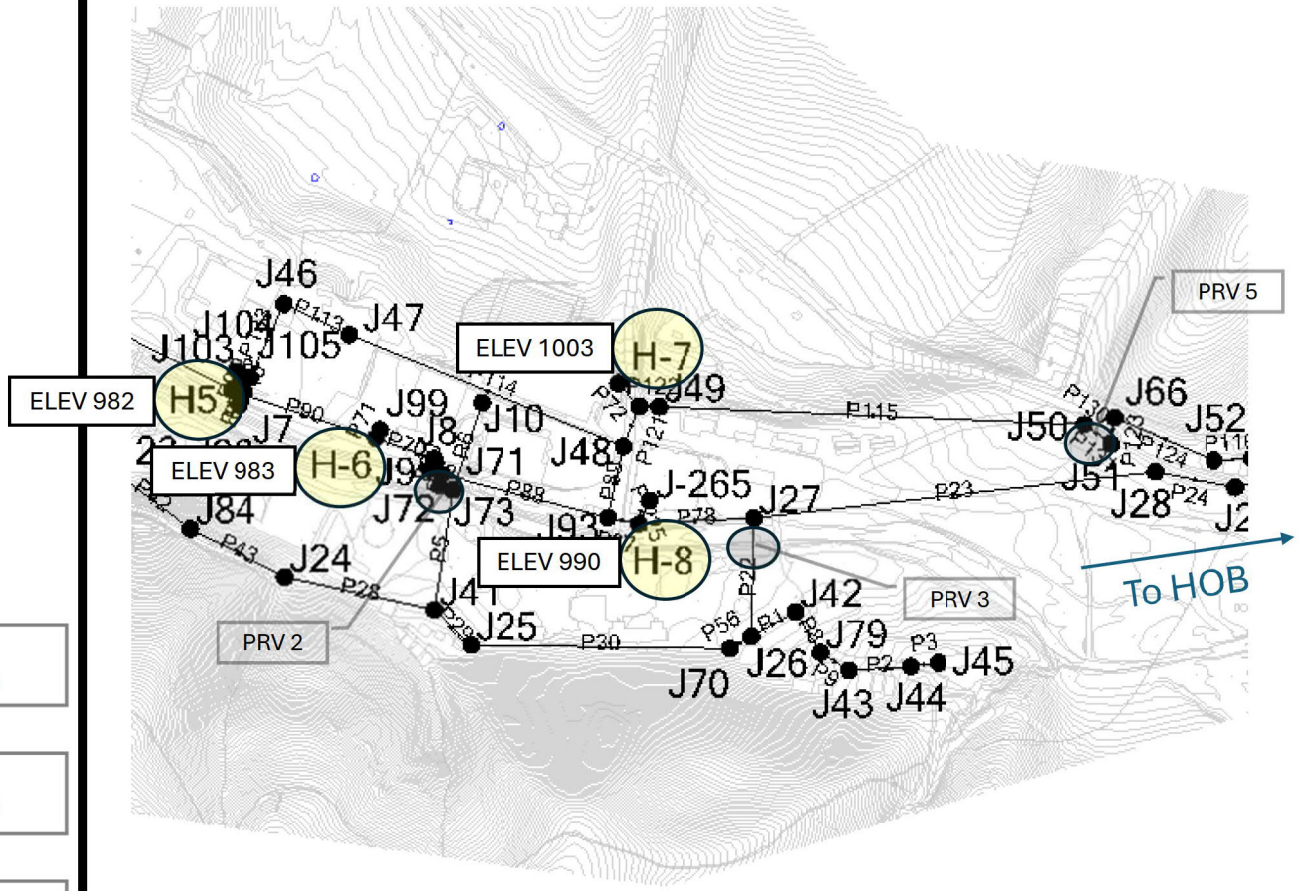


WAL23-0003

Zone 2

- Pressure Reducing Station

- FH



PRV 2
ELEV 984

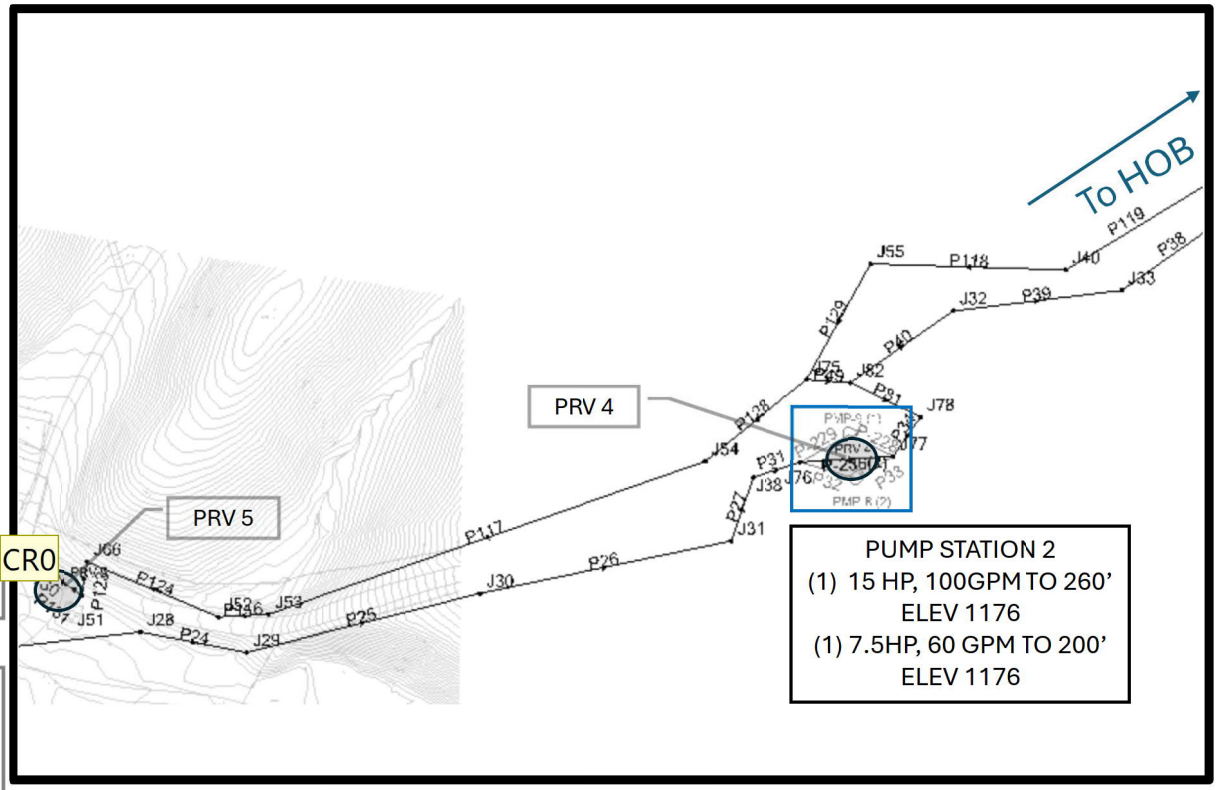
PRV 3
ELEV 992

PRV STATION 5
ELEV 1013
SETTING = 110 PSI

Zone 2

- Pressure Reducing Station

- Pump Station 2



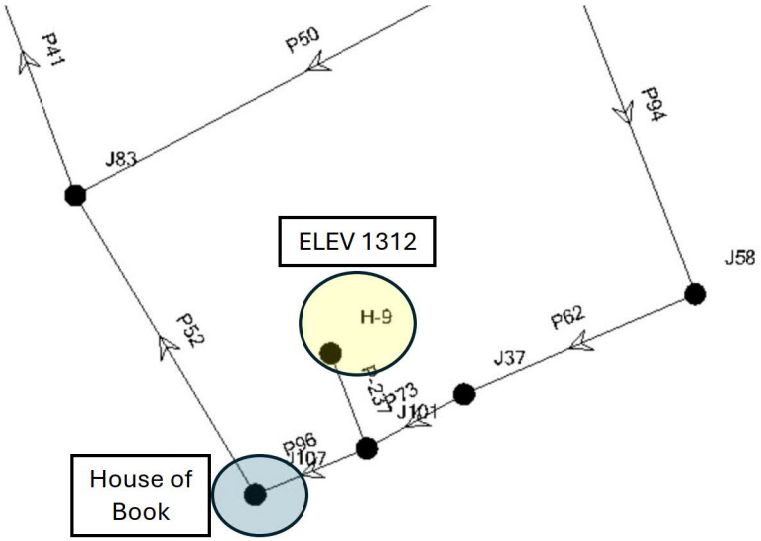
PRV 4
ELEV 1176'

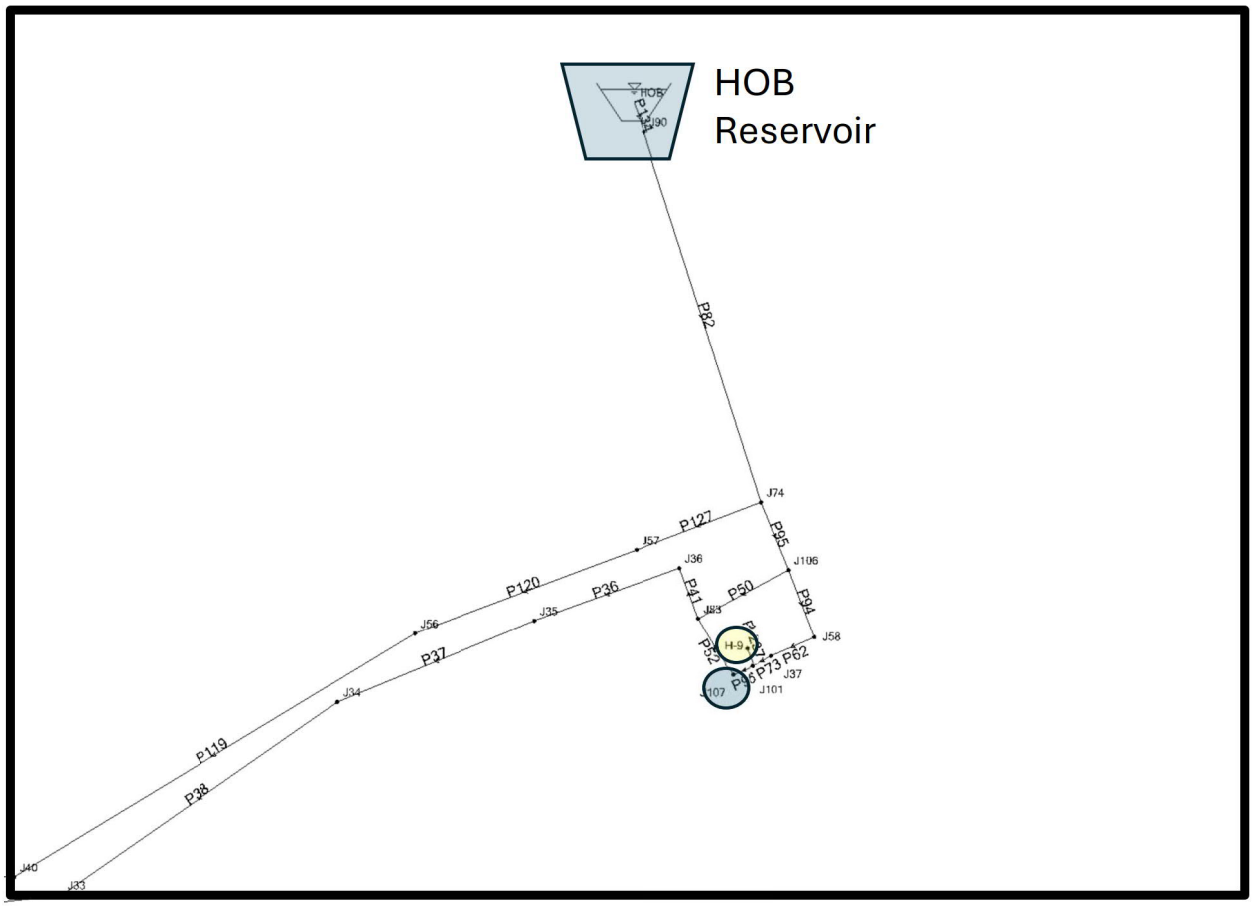
PR STATION 5
(MAIN PRV ON
FIRE SYSTEM)
ELEV 1013'
SETTING = 110 PSI

PUMP STATION 2
(1) 15 HP, 100GPM TO 260'
ELEV 1176
(1) 7.5HP, 60 GPM TO 200'
ELEV 1176

Zone 3 Upper HOB

- HOB Reservoir
- House of Book
- FH





WAL23-0003

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	1500	915.47	-23
3	634	H-2	970	0	1038	29
4	636	H-3	977.3	0	1075.2	42
5	637	H-4	1010	0	1135.19	54
6	447	H-5	982	0	1229.19	107
7	639	H-6	985	0	1230.97	106
8	640	H-7	998	0	1243.27	106
9	723	H-8	980	0	1238.5	112
10	753	H-9	1312	0	1374.1	27
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	949.85	-5
15	179	J3	964	1	1056.14	40
16	180	J4	980	0	1109.99	56
17	181	J5	970	1	1133.13	71
18	182	J6	973	1	1135.19	70
19	183	J7	982	1	1229.19	107
20	184	J8	984	1	1232.55	108
21	185	J9	980	1	1232.88	109
22	186	J10	986	1	1133.23	64
23	208	J11	962	1	958.7	-1
24	211	J12	957.8	1	1076.69	51
25	212	J13	950	1	1076.66	55
26	213	J14	952.5	1	1076.66	54
27	214	J15	953.6	1	1076.67	53
28	215	J16	962.4	1	1076.75	49
29	216	J17	961	0	1076.83	50
30	217	J18	969	1	1079.07	48
31	218	J19	984.7	1	1081.26	42
32	219	J20	983.7	1	1081.26	42
33	220	J21	974.7	1	1081.27	46
34	221	J22	973	0	1099.53	55
35	222	J23	979	2	1107.17	55
36	223	J24	1004	1	1116.6	49
37	224	J25	994.5	1	1124.71	56
38	225	J26	994.5	1	1129.34	58
39	226	J27	989	1	1238.5	108
40	227	J28	1013	1	1245.42	101
41	228	J29	1006.9	1	1246.88	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.33	102
43	230	J31	1162	1	1254.16	40
44	232	J32	1204	1	1325.55	53
45	233	J33	1221	1	1332.97	48
46	234	J34	1250	1	1350.28	43
47	235	J35	1298	1	1361.54	27
48	236	J36	1306	1	1369.87	28
49	237	J37	1305	1	1374.11	30
50	239	J38	1168	1	1255.21	38
51	242	J40	1239	1	1333.53	41
52	276	J41	1001.6	1	1123.87	53
53	284	J42	994.5	1	1129.24	58
54	286	J43	1026	1	1129.14	45
55	288	J44	1004	1	1129.12	54
56	290	J45	1005	1	1129.12	54
57	295	J46	983.4	1	1231.27	107
58	297	J47	983.4	4	1233.13	108
59	299	J48	993	4	1240.82	107
60	301	J49	1006	0	1244.39	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1283.95	118
63	307	J52	1028	1	1291.6	114
64	309	J53	1035	1	1293.79	112
65	311	J54	1156	1	1314.01	68
66	313	J55	1272	1	1325.27	23
67	316	J56	1272	1	1356.29	36
68	318	J57	1305	1	1367.79	27
69	322	J58	1304	1	1374.13	30
70	327	J59	1008	1	1135.19	55
71	372	J60	970	1	939.57	-13
72	413	J66	1021	1	1285.45	114
73	440	J67	968.67	1	941.57	-12
74	444	J68	971	0	1092.89	53
75	451	J70	994.5	0	1129.26	58
76	460	J71	980	1	1233.22	110
77	463	J72	980	1	1232.02	109
78	465	J73	987.6	1	1133.24	63
79	469	J74	1307	1	1374.28	29
80	474	J75	1193	1	1319.73	55
81	478	J76	1176	1	1256.02	35
82	484	J77	1176	1	1319.34	62
83	487	J78	1181	1	1320.18	60
84	490	J79	1006.44	1	1129.17	53

	A	B	C	D	E	F
85	504	J82	1189	1	1320.22	57
86	506	J83	1314	1	1372.85	25
87	514	J84	1022	1	1111.64	39
88	518	J85	973.34	1	1096.19	53
89	524	J86	974	1	1091.6	51
90	525	J87	987	0	1088.38	44
91	528	J88	965.44	1	1078.25	49
92	565	J89	978	1	1056.14	34
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1075.2	44
95	625	J92	963.65	0	1043.47	35
96	629	J93	989.11	0	1238.5	108
97	376	J94	963.52	1	1038	32
98	380	J96	966.79	0	1075.2	47
99	384	J97	1005.71	1	1135.19	56
100	638	J98	982	1	1229.19	107
101	388	J99	983	1	1230.97	107
102	396	J100	1002.65	1	1243.27	104
103	641	J101	1305	0	1374.1	30
104	644	J103	980	0	1227.43	107
105	646	J104	982	0	1228.31	107
106	648	J105	982.23	0	1229.19	107
107	653	J106	1305.49	0	1374.17	30
108	657	J107	1314.87	1	1374.08	26
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.5	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1038	30
3	634	H-2	970	1500	1036.43	29
4	636	H-3	977.3	0	1075.2	42
5	637	H-4	1010	0	1135.19	54
6	447	H-5	982	0	1229.19	107
7	639	H-6	985	0	1230.97	106
8	640	H-7	998	0	1243.27	106
9	723	H-8	980	0	1238.5	112
10	753	H-9	1312	0	1374.1	27
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1038	33
15	179	J3	964	1	1056.14	40
16	180	J4	980	0	1109.99	56
17	181	J5	970	1	1133.13	71
18	182	J6	973	1	1135.19	70
19	183	J7	982	1	1229.19	107
20	184	J8	984	1	1232.55	108
21	185	J9	980	1	1232.88	109
22	186	J10	986	1	1133.23	64
23	208	J11	962	1	1038	33
24	211	J12	957.8	1	1076.69	51
25	212	J13	950	1	1076.66	55
26	213	J14	952.5	1	1076.66	54
27	214	J15	953.6	1	1076.67	53
28	215	J16	962.4	1	1076.75	49
29	216	J17	961	0	1076.83	50
30	217	J18	969	1	1079.07	48
31	218	J19	984.7	1	1081.26	42
32	219	J20	983.7	1	1081.26	42
33	220	J21	974.7	1	1081.27	46
34	221	J22	973	0	1099.53	55
35	222	J23	979	2	1107.17	55
36	223	J24	1004	1	1116.6	49
37	224	J25	994.5	1	1124.71	56
38	225	J26	994.5	1	1129.34	58
39	226	J27	989	1	1238.5	108
40	227	J28	1013	1	1245.42	101
41	228	J29	1006.9	1	1246.88	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.33	102
43	230	J31	1162	1	1254.16	40
44	232	J32	1204	1	1325.55	53
45	233	J33	1221	1	1332.97	48
46	234	J34	1250	1	1350.28	43
47	235	J35	1298	1	1361.54	27
48	236	J36	1306	1	1369.87	28
49	237	J37	1305	1	1374.11	30
50	239	J38	1168	1	1255.21	38
51	242	J40	1239	1	1333.53	41
52	276	J41	1001.6	1	1123.87	53
53	284	J42	994.5	1	1129.24	58
54	286	J43	1026	1	1129.14	45
55	288	J44	1004	1	1129.12	54
56	290	J45	1005	1	1129.12	54
57	295	J46	983.4	1	1231.27	107
58	297	J47	983.4	4	1233.13	108
59	299	J48	993	4	1240.82	107
60	301	J49	1006	0	1244.39	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1283.95	118
63	307	J52	1028	1	1291.6	114
64	309	J53	1035	1	1293.79	112
65	311	J54	1156	1	1314.01	68
66	313	J55	1272	1	1325.27	23
67	316	J56	1272	1	1356.29	36
68	318	J57	1305	1	1367.79	27
69	322	J58	1304	1	1374.13	30
70	327	J59	1008	1	1135.19	55
71	372	J60	970	1	1038	29
72	413	J66	1021	1	1285.45	114
73	440	J67	968.67	1	1038	30
74	444	J68	971	0	1092.89	53
75	451	J70	994.5	0	1129.26	58
76	460	J71	980	1	1233.22	110
77	463	J72	980	1	1232.02	109
78	465	J73	987.6	1	1133.24	63
79	469	J74	1307	1	1374.28	29
80	474	J75	1193	1	1319.73	55
81	478	J76	1176	1	1256.02	35
82	484	J77	1176	1	1319.33	62
83	487	J78	1181	1	1320.18	60
84	490	J79	1006.44	1	1129.17	53

	A	B	C	D	E	F
85	504	J82	1189	1	1320.22	57
86	506	J83	1314	1	1372.85	25
87	514	J84	1022	1	1111.64	39
88	518	J85	973.34	1	1096.19	53
89	524	J86	974	1	1091.6	51
90	525	J87	987	0	1088.38	44
91	528	J88	965.44	1	1078.24	49
92	565	J89	978	1	1056.14	34
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1075.2	44
95	625	J92	963.65	0	1043.47	35
96	629	J93	989.11	0	1238.5	108
97	376	J94	963.52	1	1038	32
98	380	J96	966.79	0	1075.2	47
99	384	J97	1005.71	1	1135.19	56
100	638	J98	982	1	1229.19	107
101	388	J99	983	1	1230.97	107
102	396	J100	1002.65	1	1243.27	104
103	641	J101	1305	0	1374.1	30
104	644	J103	980	0	1227.43	107
105	646	J104	982	0	1228.31	107
106	648	J105	982.23	0	1229.19	107
107	653	J106	1305.49	0	1374.17	30
108	657	J107	1314.87	1	1374.08	26
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.5	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1072.13	45
3	634	H-2	970	0	1072.13	44
4	636	H-3	977.3	1500	1056.49	34
5	637	H-4	1010	0	1133.24	53
6	447	H-5	982	0	1229.03	107
7	639	H-6	985	0	1230.9	106
8	640	H-7	998	0	1243.26	106
9	723	H-8	980	0	1238.56	112
10	753	H-9	1312	0	1374.09	27
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1072.13	48
15	179	J3	964	1	1072.11	47
16	180	J4	980	0	1107.54	55
17	181	J5	970	1	1131.13	70
18	182	J6	973	1	1133.24	69
19	183	J7	982	1	1229.03	107
20	184	J8	984	1	1232.53	108
21	185	J9	980	1	1232.87	109
22	186	J10	986	1	1133.36	64
23	208	J11	962	1	1072.13	48
24	211	J12	957.8	1	1093.12	59
25	212	J13	950	1	1093.09	62
26	213	J14	952.5	1	1093.1	61
27	214	J15	953.6	1	1093.1	60
28	215	J16	962.4	1	1093.18	57
29	216	J17	961	0	1093.26	57
30	217	J18	969	1	1094.75	54
31	218	J19	984.7	1	1096.23	48
32	219	J20	983.7	1	1096.22	49
33	220	J21	974.7	1	1096.23	53
34	221	J22	973	0	1108.85	59
35	222	J23	979	2	1114.18	58
36	223	J24	1004	1	1120.84	51
37	224	J25	994.5	1	1126.58	57
38	225	J26	994.5	1	1129.71	58
39	226	J27	989	1	1238.56	108
40	227	J28	1013	1	1245.45	101
41	228	J29	1006.9	1	1246.92	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.35	102
43	230	J31	1162	1	1254.17	40
44	232	J32	1204	1	1325.54	53
45	233	J33	1221	1	1332.95	48
46	234	J34	1250	1	1350.27	43
47	235	J35	1298	1	1361.54	27
48	236	J36	1306	1	1369.86	28
49	237	J37	1305	1	1374.1	30
50	239	J38	1168	1	1255.21	38
51	242	J40	1239	1	1333.52	41
52	276	J41	1001.6	1	1126.02	54
53	284	J42	994.5	1	1129.6	58
54	286	J43	1026	1	1129.5	45
55	288	J44	1004	1	1129.48	54
56	290	J45	1005	1	1129.48	54
57	295	J46	983.4	1	1231.14	107
58	297	J47	983.4	4	1233.02	108
59	299	J48	993	4	1240.81	107
60	301	J49	1006	0	1244.38	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1283.92	118
63	307	J52	1028	1	1291.58	114
64	309	J53	1035	1	1293.77	112
65	311	J54	1156	1	1314	68
66	313	J55	1272	1	1325.26	23
67	316	J56	1272	1	1356.28	36
68	318	J57	1305	1	1367.78	27
69	322	J58	1304	1	1374.12	30
70	327	J59	1008	1	1133.24	54
71	372	J60	970	1	1072.13	44
72	413	J66	1021	1	1285.43	114
73	440	J67	968.67	1	1072.13	45
74	444	J68	971	0	1090.11	52
75	451	J70	994.5	0	1129.65	58
76	460	J71	980	1	1233.22	110
77	463	J72	980	1	1232.25	109
78	465	J73	987.6	1	1133.37	63
79	469	J74	1307	1	1374.28	29
80	474	J75	1193	1	1319.71	55
81	478	J76	1176	1	1256.03	35
82	484	J77	1176	1	1319.33	62
83	487	J78	1181	1	1320.17	60
84	490	J79	1006.44	1	1129.53	53

	A	B	C	D	E	F
85	504	J82	1189	1	1320.2	57
86	506	J83	1314	1	1372.85	25
87	514	J84	1022	1	1117.33	41
88	518	J85	973.34	1	1106.52	58
89	524	J86	974	1	1103.34	56
90	525	J87	987	0	1101.13	49
91	528	J88	965.44	1	1094.2	56
92	565	J89	978	1	1072.11	41
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1062.2	38
95	625	J92	963.65	0	1072.13	47
96	629	J93	989.11	0	1238.56	108
97	376	J94	963.52	1	1072.13	47
98	380	J96	966.79	0	1072.08	46
99	384	J97	1005.71	1	1133.24	55
100	638	J98	982	1	1229.03	107
101	388	J99	983	1	1230.9	107
102	396	J100	1002.65	1	1243.26	104
103	641	J101	1305	0	1374.09	30
104	644	J103	980	0	1227.24	107
105	646	J104	982	0	1228.14	106
106	648	J105	982.23	0	1229.03	107
107	653	J106	1305.49	0	1374.16	30
108	657	J107	1314.87	1	1374.08	26
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.56	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1126.7	69
3	634	H-2	970	0	1126.7	68
4	636	H-3	977.3	0	1126.7	65
5	637	H-4	1010	1500	1014.96	2
6	447	H-5	982	0	1228.48	107
7	639	H-6	985	0	1230.63	106
8	640	H-7	998	0	1243.25	106
9	723	H-8	980	0	1238.74	112
10	753	H-9	1312	0	1374.09	27
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1126.7	71
15	179	J3	964	1	1126.7	70
16	180	J4	980	0	1126.7	63
17	181	J5	970	1	1126.71	68
18	182	J6	973	1	1126.71	67
19	183	J7	982	1	1228.48	107
20	184	J8	984	1	1232.41	107
21	185	J9	980	1	1232.79	109
22	186	J10	986	1	1133.62	64
23	208	J11	962	1	1126.7	71
24	211	J12	957.8	1	1126.79	73
25	212	J13	950	1	1126.76	76
26	213	J14	952.5	1	1126.77	75
27	214	J15	953.6	1	1126.77	75
28	215	J16	962.4	1	1126.86	71
29	216	J17	961	0	1126.93	72
30	217	J18	969	1	1127.01	68
31	218	J19	984.7	1	1127.09	62
32	219	J20	983.7	1	1127.09	62
33	220	J21	974.7	1	1127.1	66
34	221	J22	973	0	1128.29	67
35	222	J23	979	2	1128.86	65
36	223	J24	1004	1	1129.7	54
37	224	J25	994.5	1	1130.44	59
38	225	J26	994.5	1	1130.52	59
39	226	J27	989	1	1238.77	108
40	227	J28	1013	1	1245.58	101
41	228	J29	1006.9	1	1247.03	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.42	102
43	230	J31	1162	1	1254.2	40
44	232	J32	1204	1	1325.55	53
45	233	J33	1221	1	1332.97	48
46	234	J34	1250	1	1350.28	43
47	235	J35	1298	1	1361.54	27
48	236	J36	1306	1	1369.87	28
49	237	J37	1305	1	1374.1	30
50	239	J38	1168	1	1255.23	38
51	242	J40	1239	1	1333.52	41
52	276	J41	1001.6	1	1130.43	56
53	284	J42	994.5	1	1130.42	59
54	286	J43	1026	1	1130.32	45
55	288	J44	1004	1	1130.3	55
56	290	J45	1005	1	1130.3	54
57	295	J46	983.4	1	1230.68	107
58	297	J47	983.4	4	1232.65	108
59	299	J48	993	4	1240.8	107
60	301	J49	1006	0	1244.37	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1283.92	118
63	307	J52	1028	1	1291.58	114
64	309	J53	1035	1	1293.77	112
65	311	J54	1156	1	1314	68
66	313	J55	1272	1	1325.26	23
67	316	J56	1272	1	1356.29	36
68	318	J57	1305	1	1367.79	27
69	322	J58	1304	1	1374.13	30
70	327	J59	1008	1	1016.53	4
71	372	J60	970	1	1126.7	68
72	413	J66	1021	1	1285.43	114
73	440	J67	968.67	1	1126.7	68
74	444	J68	971	0	1126.7	67
75	451	J70	994.5	0	1130.52	59
76	460	J71	980	1	1233.17	110
77	463	J72	980	1	1232.7	109
78	465	J73	987.6	1	1133.64	63
79	469	J74	1307	1	1374.28	29
80	474	J75	1193	1	1319.72	55
81	478	J76	1176	1	1256.04	35
82	484	J77	1176	1	1319.35	62
83	487	J78	1181	1	1320.18	60
84	490	J79	1006.44	1	1130.35	54

	A	B	C	D	E	F
85	504	J82	1189	1	1320.22	57
86	506	J83	1314	1	1372.85	25
87	514	J84	1022	1	1129.24	46
88	518	J85	973.34	1	1128.04	67
89	524	J86	974	1	1127.73	67
90	525	J87	987	0	1127.53	61
91	528	J88	965.44	1	1126.98	70
92	565	J89	978	1	1126.7	64
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1126.7	66
95	625	J92	963.65	0	1126.7	71
96	629	J93	989.11	0	1238.74	108
97	376	J94	963.52	1	1126.7	71
98	380	J96	966.79	0	1126.7	69
99	384	J97	1005.71	1	1016.53	5
100	638	J98	982	1	1228.48	107
101	388	J99	983	1	1230.63	107
102	396	J100	1002.65	1	1243.25	104
103	641	J101	1305	0	1374.09	30
104	644	J103	980	0	1226.61	107
105	646	J104	982	0	1227.55	106
106	648	J105	982.23	0	1228.48	107
107	653	J106	1305.49	0	1374.17	30
108	657	J107	1314.87	1	1374.08	26
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.74	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1228.08	113
3	634	H-2	970	0	1228.08	112
4	636	H-3	977.3	0	1228.08	109
5	637	H-4	1010	0	1228.09	94
6	447	H-5	982	1500	1226.37	106
7	639	H-6	985	0	1231.7	107
8	640	H-7	998	0	1243.24	106
9	723	H-8	980	0	1238.99	112
10	753	H-9	1312	0	1374.09	27
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1228.08	115
15	179	J3	964	1	1228.08	114
16	180	J4	980	0	1228.09	107
17	181	J5	970	1	1228.09	112
18	182	J6	973	1	1228.09	110
19	183	J7	982	1	1226.82	106
20	184	J8	984	1	1233.3	108
21	185	J9	980	1	1233.64	110
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1228.08	115
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1239.02	108
40	227	J28	1013	1	1245.73	101
41	228	J29	1006.9	1	1247.16	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.51	102
43	230	J31	1162	1	1254.23	40
44	232	J32	1204	1	1325.56	53
45	233	J33	1221	1	1332.97	48
46	234	J34	1250	1	1350.29	43
47	235	J35	1298	1	1361.54	27
48	236	J36	1306	1	1369.87	28
49	237	J37	1305	1	1374.1	30
50	239	J38	1168	1	1255.25	38
51	242	J40	1239	1	1333.52	41
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1230.04	107
58	297	J47	983.4	4	1232.13	108
59	299	J48	993	4	1240.79	107
60	301	J49	1006	0	1244.36	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1283.9	118
63	307	J52	1028	1	1291.57	114
64	309	J53	1035	1	1293.76	112
65	311	J54	1156	1	1314	68
66	313	J55	1272	1	1325.27	23
67	316	J56	1272	1	1356.29	36
68	318	J57	1305	1	1367.79	27
69	322	J58	1304	1	1374.13	30
70	327	J59	1008	1	1228.09	95
71	372	J60	970	1	1228.08	112
72	413	J66	1021	1	1285.42	114
73	440	J67	968.67	1	1228.08	112
74	444	J68	971	0	1228.09	111
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1233.98	110
77	463	J72	980	1	1233.53	110
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1374.28	29
80	474	J75	1193	1	1319.72	55
81	478	J76	1176	1	1256.05	35
82	484	J77	1176	1	1319.37	62
83	487	J78	1181	1	1320.19	60
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1320.23	57
86	506	J83	1314	1	1372.85	25
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1228.08	108
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1228.08	110
95	625	J92	963.65	0	1228.08	114
96	629	J93	989.11	0	1238.98	108
97	376	J94	963.52	1	1228.08	114
98	380	J96	966.79	0	1228.08	113
99	384	J97	1005.71	1	1228.09	96
100	638	J98	982	1	1226.37	106
101	388	J99	983	1	1231.7	108
102	396	J100	1002.65	1	1243.24	104
103	641	J101	1305	0	1374.09	30
104	644	J103	980	0	1228.11	107
105	646	J104	982	0	1227.91	106
106	648	J105	982.23	0	1227.7	106
107	653	J106	1305.49	0	1374.17	30
108	657	J107	1314.87	1	1374.08	26
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.99	108

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
635	H-1	968	0	1231.48	114
634	H-2	970	0	1231.48	113
636	H-3	977.3	0	1231.48	110
637	H-4	1010	0	1231.49	96
447	H-5	982	0	1232.75	108
639	H-6	985	1500	1220.17	102
640	H-7	998	0	1243.34	106
723	H-8	980	0	1236.99	111
753	H-9	1312	0	1374.09	27
738	J-267	1014	0	1007	-3
740	J-268	1014	0	1007	-3
742	J-269	1014	0	1007	-3
178	J2	962	1	1231.48	117
179	J3	964	1	1231.48	116
180	J4	980	0	1231.49	109
181	J5	970	1	1231.49	113
182	J6	973	1	1231.49	112
183	J7	982	1	1232.75	108
184	J8	984	1	1225.17	104
185	J9	980	1	1225.9	106
186	J10	986	1	1133.63	64
208	J11	962	1	1231.48	117
211	J12	957.8	1	1128.21	74
212	J13	950	1	1128.19	77
213	J14	952.5	1	1128.19	76
214	J15	953.6	1	1128.2	76
215	J16	962.4	1	1128.28	72
216	J17	961	0	1128.36	72
217	J18	969	1	1128.39	69
218	J19	984.7	1	1128.42	62
219	J20	983.7	1	1128.42	63
220	J21	974.7	1	1128.43	67
221	J22	973	0	1129.13	68
222	J23	979	2	1129.49	65
223	J24	1004	1	1130.05	55
224	J25	994.5	1	1130.56	59
225	J26	994.5	1	1130.56	59
226	J27	989	1	1237.03	107
227	J28	1013	1	1244.52	100
228	J29	1006.9	1	1246.11	103
229	J30	1015.7	1	1249.83	101

230	J31	1162	1	1253.96	40
232	J32	1204	1	1325.5	53
233	J33	1221	1	1332.92	48
234	J34	1250	1	1350.26	43
235	J35	1298	1	1361.53	27
236	J36	1306	1	1369.86	28
237	J37	1305	1	1374.1	30
239	J38	1168	1	1255.09	38
242	J40	1239	1	1333.53	41
276	J41	1001.6	1	1130.56	56
284	J42	994.5	1	1130.46	59
286	J43	1026	1	1130.36	45
288	J44	1004	1	1130.34	55
290	J45	1005	1	1130.34	54
295	J46	983.4	1	1234.2	109
297	J47	983.4	4	1235.5	109
299	J48	993	4	1240.9	107
301	J49	1006	0	1244.46	103
303	J50	1019	1	1268.71	108
305	J51	1012	1	1284.04	118
307	J52	1028	1	1291.68	114
309	J53	1035	1	1293.86	112
311	J54	1156	1	1314.03	68
313	J55	1272	1	1325.27	23
316	J56	1272	1	1356.29	36
318	J57	1305	1	1367.79	27
322	J58	1304	1	1374.13	30
327	J59	1008	1	1231.49	97
372	J60	970	1	1231.48	113
413	J66	1021	1	1285.55	114
440	J67	968.67	1	1231.48	114
444	J68	971	0	1231.48	113
451	J70	994.5	0	1130.56	59
460	J71	980	1	1226.63	107
463	J72	980	1	1226.18	107
465	J73	987.6	1	1133.65	63
469	J74	1307	1	1374.28	29
474	J75	1193	1	1319.73	55
478	J76	1176	1	1255.96	35
484	J77	1176	1	1319.21	62
487	J78	1181	1	1320.12	60
490	J79	1006.44	1	1130.39	54
504	J82	1189	1	1320.16	57
506	J83	1314	1	1372.85	25

514	J84	1022	1	1129.74	47
518	J85	973.34	1	1128.98	67
524	J86	974	1	1128.79	67
525	J87	987	0	1128.68	61
528	J88	965.44	1	1128.37	70
565	J89	978	1	1231.48	110
606	J90	1452	1	1462	4
617	J91	973.41	1	1231.48	112
625	J92	963.65	0	1231.48	116
629	J93	989.11	0	1236.98	107
376	J94	963.52	1	1231.48	116
380	J96	966.79	0	1231.48	115
384	J97	1005.71	1	1231.49	98
638	J98	982	1	1232.75	108
388	J99	983	1	1221.74	103
396	J100	1002.65	1	1243.34	104
641	J101	1305	0	1374.09	30
644	J103	980	0	1231.51	109
646	J104	982	0	1232.13	108
648	J105	982.23	0	1232.75	108
653	J106	1305.49	0	1374.17	30
657	J107	1314.87	1	1374.08	26
677	J108	942	0	1092.18	65
679	J109	948	0	1086.41	60
681	J110	940	0	1065.53	54
683	J111	943	0	1056.35	49
685	J112	962	0	1051.06	39
687	J113	990	0	1024.37	15
689	J114	1014	0	1018.38	2
691	J115	995	0	1013.94	8
693	J116	1014	0	1010.95	-1
695	J117	1014	0	1009.74	-2
697	J118	1014	0	1007	-3
699	J119	942	0	1061.67	52
702	J120	942	0	1061.52	52
704	J121	942	0	1059.18	51
707	J122	957	0	1058.6	44
709	J123	963	0	1058.11	41
711	J124	980	10	1057.32	33
713	J125	942	0	1061.35	52
715	J126	942	10	1061.24	52
717	J127	978.84	0	1034.84	24
720	J128	970.04	0	1039.04	30
44	J265	990	0	1236.99	107

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1242.97	119
3	634	H-2	970	0	1242.97	118
4	636	H-3	977.3	0	1242.97	115
5	637	H-4	1010	0	1242.98	101
6	447	H-5	982	0	1243	113
7	639	H-6	985	0	1243	112
8	640	H-7	998	1500	1239.09	104
9	723	H-8	980	0	1243.03	114
10	753	H-9	1312	0	1374.09	27
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1242.97	122
15	179	J3	964	1	1242.97	121
16	180	J4	980	0	1242.98	114
17	181	J5	970	1	1242.98	118
18	182	J6	973	1	1242.98	117
19	183	J7	982	1	1243	113
20	184	J8	984	1	1243	112
21	185	J9	980	1	1243	114
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1242.97	122
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1243.05	110
40	227	J28	1013	1	1248.18	102
41	228	J29	1006.9	1	1249.28	105

	A	B	C	D	E	F
42	229	J30	1015.7	1	1251.88	102
43	230	J31	1162	1	1254.79	40
44	232	J32	1204	1	1325.73	53
45	233	J33	1221	1	1333.11	49
46	234	J34	1250	1	1350.37	43
47	235	J35	1298	1	1361.59	28
48	236	J36	1306	1	1369.88	28
49	237	J37	1305	1	1374.1	30
50	239	J38	1168	1	1255.59	38
51	242	J40	1239	1	1333.52	41
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1243	112
58	297	J47	983.4	4	1243.01	112
59	299	J48	993	4	1243.02	108
60	301	J49	1006	0	1244.15	103
61	303	J50	1019	1	1268.7	108
62	305	J51	1012	1	1283.59	118
63	307	J52	1028	1	1291.32	114
64	309	J53	1035	1	1293.53	112
65	311	J54	1156	1	1313.94	68
66	313	J55	1272	1	1325.25	23
67	316	J56	1272	1	1356.29	36
68	318	J57	1305	1	1367.78	27
69	322	J58	1304	1	1374.13	30
70	327	J59	1008	1	1242.98	102
71	372	J60	970	1	1242.97	118
72	413	J66	1021	1	1285.12	114
73	440	J67	968.67	1	1242.97	119
74	444	J68	971	0	1242.97	118
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1243	114
77	463	J72	980	1	1242.55	114
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1374.28	29
80	474	J75	1193	1	1319.71	55
81	478	J76	1176	1	1256.22	35
82	484	J77	1176	1	1319.72	62
83	487	J78	1181	1	1320.38	60
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1320.41	57
86	506	J83	1314	1	1372.86	25
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1242.97	115
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1242.97	117
95	625	J92	963.65	0	1242.97	121
96	629	J93	989.11	0	1243.02	110
97	376	J94	963.52	1	1242.97	121
98	380	J96	966.79	0	1242.97	119
99	384	J97	1005.71	1	1242.98	103
100	638	J98	982	1	1243	113
101	388	J99	983	1	1243	112
102	396	J100	1002.65	1	1243.02	104
103	641	J101	1305	0	1374.09	30
104	644	J103	980	0	1243	114
105	646	J104	982	0	1243	113
106	648	J105	982.23	0	1243	113
107	653	J106	1305.49	0	1374.17	30
108	657	J107	1314.87	1	1374.08	26
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1243.03	109

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1238.89	117
3	634	H-2	970	0	1238.9	116
4	636	H-3	977.3	0	1238.9	113
5	637	H-4	1010	0	1238.91	99
6	447	H-5	982	0	1239.25	111
7	639	H-6	985	0	1236.45	109
8	640	H-7	998	0	1243.84	106
9	723	H-8	980	1500	1218.93	103
10	753	H-9	1312	0	1374.09	27
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1238.89	120
15	179	J3	964	1	1238.9	119
16	180	J4	980	0	1238.9	112
17	181	J5	970	1	1238.91	116
18	182	J6	973	1	1238.91	115
19	183	J7	982	1	1239.25	111
20	184	J8	984	1	1235.36	109
21	185	J9	980	1	1235.13	110
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1238.89	120
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1225.64	102
40	227	J28	1013	1	1237.64	97
41	228	J29	1006.9	1	1240.15	101

	A	B	C	D	E	F
42	229	J30	1015.7	1	1245.99	100
43	230	J31	1162	1	1252.4	39
44	232	J32	1204	1	1325.24	52
45	233	J33	1221	1	1332.71	48
46	234	J34	1250	1	1350.13	43
47	235	J35	1298	1	1361.46	27
48	236	J36	1306	1	1369.84	28
49	237	J37	1305	1	1374.1	30
50	239	J38	1168	1	1254.14	37
51	242	J40	1239	1	1333.54	41
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1239.64	111
58	297	J47	983.4	4	1239.99	111
59	299	J48	993	4	1241.44	107
60	301	J49	1006	0	1244.93	103
61	303	J50	1019	1	1268.73	108
62	305	J51	1012	1	1284.73	118
63	307	J52	1028	1	1292.22	114
64	309	J53	1035	1	1294.36	112
65	311	J54	1156	1	1314.16	68
66	313	J55	1272	1	1325.29	23
67	316	J56	1272	1	1356.3	36
68	318	J57	1305	1	1367.79	27
69	322	J58	1304	1	1374.13	30
70	327	J59	1008	1	1238.91	100
71	372	J60	970	1	1238.89	116
72	413	J66	1021	1	1286.21	115
73	440	J67	968.67	1	1238.89	117
74	444	J68	971	0	1238.9	116
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1234.91	110
77	463	J72	980	1	1234.45	110
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1374.28	29
80	474	J75	1193	1	1319.74	55
81	478	J76	1176	1	1255.48	34
82	484	J77	1176	1	1318.46	62
83	487	J78	1181	1	1319.82	60
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1319.87	57
86	506	J83	1314	1	1372.84	25
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1238.9	113
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1238.9	115
95	625	J92	963.65	0	1238.9	119
96	629	J93	989.11	0	1232.3	105
97	376	J94	963.52	1	1238.9	119
98	380	J96	966.79	0	1238.9	118
99	384	J97	1005.71	1	1238.91	101
100	638	J98	982	1	1239.25	111
101	388	J99	983	1	1236.45	110
102	396	J100	1002.65	1	1243.84	104
103	641	J101	1305	0	1374.09	30
104	644	J103	980	0	1238.93	112
105	646	J104	982	0	1239.09	111
106	648	J105	982.23	0	1239.25	111
107	653	J106	1305.49	0	1374.17	30
108	657	J107	1314.87	1	1374.08	26
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1225.57	102

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1269.48	130
3	634	H-2	970	0	1269.48	130
4	636	H-3	977.3	0	1269.48	126
5	637	H-4	1010	0	1269.49	112
6	447	H-5	982	0	1269.52	124
7	639	H-6	985	0	1269.51	123
8	640	H-7	998	0	1269.55	117
9	723	H-8	980	0	1269.52	125
10	753	H-9	1312	1500	1337.88	11
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1269.48	133
15	179	J3	964	1	1269.48	132
16	180	J4	980	0	1269.49	125
17	181	J5	970	1	1269.49	130
18	182	J6	973	1	1269.49	128
19	183	J7	982	1	1269.52	124
20	184	J8	984	1	1269.51	124
21	185	J9	980	1	1269.51	125
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1269.48	133
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1269.51	121
40	227	J28	1013	1	1269.29	111
41	228	J29	1006.9	1	1269.26	114

	A	B	C	D	E	F
42	229	J30	1015.7	1	1269.21	110
43	230	J31	1162	1	1269.18	46
44	232	J32	1204	1	1369.24	71
45	233	J33	1221	1	1366.08	63
46	234	J34	1250	1	1359.18	47
47	235	J35	1298	1	1354.97	25
48	236	J36	1306	1	1352.06	20
49	237	J37	1305	1	1342.62	16
50	239	J38	1168	1	1269.18	44
51	242	J40	1239	1	1373.62	58
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1269.52	124
58	297	J47	983.4	4	1269.52	124
59	299	J48	993	4	1269.54	120
60	301	J49	1006	0	1269.56	114
61	303	J50	1019	1	1269.66	108
62	305	J51	1012	1	1373.23	156
63	307	J52	1028	1	1373.26	149
64	309	J53	1035	1	1373.27	146
65	311	J54	1156	1	1373.38	94
66	313	J55	1272	1	1373.49	44
67	316	J56	1272	1	1373.99	44
68	318	J57	1305	1	1374.17	30
69	322	J58	1304	1	1349.82	20
70	327	J59	1008	1	1269.49	113
71	372	J60	970	1	1269.48	130
72	413	J66	1021	1	1373.23	152
73	440	J67	968.67	1	1269.48	130
74	444	J68	971	0	1269.49	129
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1269.51	125
77	463	J72	980	1	1269.05	125
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1374.28	29
80	474	J75	1193	1	1373.41	78
81	478	J76	1176	1	1269.17	40
82	484	J77	1176	1	1371.66	85
83	487	J78	1181	1	1371.66	82
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1371.66	79
86	506	J83	1314	1	1351.09	16
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1269.48	126
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1269.48	128
95	625	J92	963.65	0	1269.48	132
96	629	J93	989.11	0	1269.52	121
97	376	J94	963.52	1	1269.48	132
98	380	J96	966.79	0	1269.48	131
99	384	J97	1005.71	1	1269.49	114
100	638	J98	982	1	1269.52	124
101	388	J99	983	1	1269.51	124
102	396	J100	1002.65	1	1269.55	115
103	641	J101	1305	0	1339.45	15
104	644	J103	980	0	1269.51	125
105	646	J104	982	0	1269.52	124
106	648	J105	982.23	0	1269.52	124
107	653	J106	1305.49	0	1360.81	24
108	657	J107	1314.87	1	1339.55	11
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1269.52	121

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	1500	1054.27	37
3	634	H-2	970	0	1176.8	89
4	636	H-3	977.3	0	1186.66	91
5	637	H-4	1010	0	1202.76	83
6	447	H-5	982	0	1227.99	106
7	639	H-6	985	0	1231.28	107
8	640	H-7	998	0	1243.24	106
9	723	H-8	980	0	1238.9	112
10	753	H-9	1312	0	1440.35	56
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1088.64	55
15	179	J3	964	1	1181.55	94
16	180	J4	980	0	1196	93
17	181	J5	970	1	1202.21	100
18	182	J6	973	1	1202.76	99
19	183	J7	982	1	1227.99	106
20	184	J8	984	1	1232.95	108
21	185	J9	980	1	1233.31	110
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1097.5	59
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1238.93	108
40	227	J28	1013	1	1245.68	101
41	228	J29	1006.9	1	1247.11	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.48	102
43	230	J31	1162	1	1254.22	40
44	232	J32	1204	1	1391.69	81
45	233	J33	1221	1	1399.12	77
46	234	J34	1250	1	1416.47	72
47	235	J35	1298	1	1427.75	56
48	236	J36	1306	1	1436.09	56
49	237	J37	1305	1	1440.35	59
50	239	J38	1168	1	1255.25	38
51	242	J40	1239	1	1399.65	70
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1230.27	107
58	297	J47	983.4	4	1232.32	108
59	299	J48	993	4	1240.79	107
60	301	J49	1006	0	1244.36	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1350.03	146
63	307	J52	1028	1	1357.7	143
64	309	J53	1035	1	1359.89	141
65	311	J54	1156	1	1380.13	97
66	313	J55	1272	1	1391.39	52
67	316	J56	1272	1	1422.41	65
68	318	J57	1305	1	1433.9	56
69	322	J58	1304	1	1440.36	59
70	327	J59	1008	1	1202.76	84
71	372	J60	970	1	1078.37	47
72	413	J66	1021	1	1351.54	143
73	440	J67	968.67	1	1080.37	48
74	444	J68	971	0	1191.41	95
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1233.66	110
77	463	J72	980	1	1233.21	110
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1440.4	58
80	474	J75	1193	1	1385.84	83
81	478	J76	1176	1	1256.04	35
82	484	J77	1176	1	1385.49	91
83	487	J78	1181	1	1386.31	89
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1386.35	85
86	506	J83	1314	1	1439.08	54
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1181.55	88
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1186.66	92
95	625	J92	963.65	0	1178.14	93
96	629	J93	989.11	0	1238.89	108
97	376	J94	963.52	1	1176.8	92
98	380	J96	966.79	0	1186.66	95
99	384	J97	1005.71	1	1202.76	85
100	638	J98	982	1	1227.99	106
101	388	J99	983	1	1231.28	107
102	396	J100	1002.65	1	1243.24	104
103	641	J101	1305	0	1440.35	59
104	644	J103	980	0	1227.51	107
105	646	J104	982	0	1227.75	106
106	648	J105	982.23	0	1227.99	106
107	653	J106	1305.49	0	1440.37	58
108	657	J107	1314.87	1	1440.34	54
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.9	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1176.8	90
3	634	H-2	970	1500	1175.23	89
4	636	H-3	977.3	0	1186.66	91
5	637	H-4	1010	0	1202.76	83
6	447	H-5	982	0	1227.99	106
7	639	H-6	985	0	1231.28	107
8	640	H-7	998	0	1243.24	106
9	723	H-8	980	0	1238.9	112
10	753	H-9	1312	0	1440.35	56
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1176.8	93
15	179	J3	964	1	1181.55	94
16	180	J4	980	0	1196	93
17	181	J5	970	1	1202.21	100
18	182	J6	973	1	1202.76	99
19	183	J7	982	1	1227.99	106
20	184	J8	984	1	1232.95	108
21	185	J9	980	1	1233.31	110
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1176.8	93
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1238.93	108
40	227	J28	1013	1	1245.68	101
41	228	J29	1006.9	1	1247.11	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.48	102
43	230	J31	1162	1	1254.22	40
44	232	J32	1204	1	1391.69	81
45	233	J33	1221	1	1399.12	77
46	234	J34	1250	1	1416.47	72
47	235	J35	1298	1	1427.75	56
48	236	J36	1306	1	1436.09	56
49	237	J37	1305	1	1440.35	59
50	239	J38	1168	1	1255.25	38
51	242	J40	1239	1	1399.65	70
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1230.27	107
58	297	J47	983.4	4	1232.32	108
59	299	J48	993	4	1240.79	107
60	301	J49	1006	0	1244.36	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1350.03	146
63	307	J52	1028	1	1357.7	143
64	309	J53	1035	1	1359.89	141
65	311	J54	1156	1	1380.13	97
66	313	J55	1272	1	1391.39	52
67	316	J56	1272	1	1422.41	65
68	318	J57	1305	1	1433.9	56
69	322	J58	1304	1	1440.36	59
70	327	J59	1008	1	1202.76	84
71	372	J60	970	1	1176.8	89
72	413	J66	1021	1	1351.54	143
73	440	J67	968.67	1	1176.8	90
74	444	J68	971	0	1191.41	95
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1233.66	110
77	463	J72	980	1	1233.21	110
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1440.4	58
80	474	J75	1193	1	1385.84	83
81	478	J76	1176	1	1256.04	35
82	484	J77	1176	1	1385.49	91
83	487	J78	1181	1	1386.31	89
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1386.35	85
86	506	J83	1314	1	1439.08	54
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1181.55	88
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1186.66	92
95	625	J92	963.65	0	1178.14	93
96	629	J93	989.11	0	1238.89	108
97	376	J94	963.52	1	1176.8	92
98	380	J96	966.79	0	1186.66	95
99	384	J97	1005.71	1	1202.76	85
100	638	J98	982	1	1227.99	106
101	388	J99	983	1	1231.28	107
102	396	J100	1002.65	1	1243.24	104
103	641	J101	1305	0	1440.35	59
104	644	J103	980	0	1227.51	107
105	646	J104	982	0	1227.75	106
106	648	J105	982.23	0	1227.99	106
107	653	J106	1305.49	0	1440.37	58
108	657	J107	1314.87	1	1440.34	54
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.9	108

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
635	H-1	968	0	1186.66	95
634	H-2	970	0	1186.66	94
636	H-3	977.3	1500	1171.07	84
637	H-4	1010	0	1202.76	83
447	H-5	982	0	1227.99	106
639	H-6	985	0	1231.28	107
640	H-7	998	0	1243.24	106
723	H-8	980	0	1238.9	112
753	H-9	1312	0	1440.35	56
738	J-267	1014	0	1007	-3
740	J-268	1014	0	1007	-3
742	J-269	1014	0	1007	-3
178	J2	962	1	1186.66	97
179	J3	964	1	1186.66	96
180	J4	980	0	1196	93
181	J5	970	1	1202.21	100
182	J6	973	1	1202.76	99
183	J7	982	1	1227.99	106
184	J8	984	1	1232.95	108
185	J9	980	1	1233.31	110
186	J10	986	1	1133.63	64
208	J11	962	1	1186.66	97
211	J12	957.8	1	1128.21	74
212	J13	950	1	1128.19	77
213	J14	952.5	1	1128.19	76
214	J15	953.6	1	1128.2	76
215	J16	962.4	1	1128.28	72
216	J17	961	0	1128.36	72
217	J18	969	1	1128.39	69
218	J19	984.7	1	1128.42	62
219	J20	983.7	1	1128.42	63
220	J21	974.7	1	1128.43	67
221	J22	973	0	1129.13	68
222	J23	979	2	1129.49	65
223	J24	1004	1	1130.05	55
224	J25	994.5	1	1130.56	59
225	J26	994.5	1	1130.56	59
226	J27	989	1	1238.93	108
227	J28	1013	1	1245.68	101
228	J29	1006.9	1	1247.11	104
229	J30	1015.7	1	1250.48	102

230	J31	1162	1	1254.22	40
232	J32	1204	1	1391.7	81
233	J33	1221	1	1399.12	77
234	J34	1250	1	1416.47	72
235	J35	1298	1	1427.75	56
236	J36	1306	1	1436.09	56
237	J37	1305	1	1440.35	59
239	J38	1168	1	1255.25	38
242	J40	1239	1	1399.65	70
276	J41	1001.6	1	1130.56	56
284	J42	994.5	1	1130.46	59
286	J43	1026	1	1130.36	45
288	J44	1004	1	1130.34	55
290	J45	1005	1	1130.34	54
295	J46	983.4	1	1230.27	107
297	J47	983.4	4	1232.32	108
299	J48	993	4	1240.79	107
301	J49	1006	0	1244.36	103
303	J50	1019	1	1268.71	108
305	J51	1012	1	1350.03	146
307	J52	1028	1	1357.7	143
309	J53	1035	1	1359.89	141
311	J54	1156	1	1380.13	97
313	J55	1272	1	1391.39	52
316	J56	1272	1	1422.41	65
318	J57	1305	1	1433.9	56
322	J58	1304	1	1440.36	59
327	J59	1008	1	1202.76	84
372	J60	970	1	1186.66	94
413	J66	1021	1	1351.54	143
440	J67	968.67	1	1186.66	94
444	J68	971	0	1191.41	95
451	J70	994.5	0	1130.56	59
460	J71	980	1	1233.66	110
463	J72	980	1	1233.21	110
465	J73	987.6	1	1133.65	63
469	J74	1307	1	1440.4	58
474	J75	1193	1	1385.84	83
478	J76	1176	1	1256.04	35
484	J77	1176	1	1385.49	91
487	J78	1181	1	1386.31	89
490	J79	1006.44	1	1130.39	54
504	J82	1189	1	1386.35	85
506	J83	1314	1	1439.08	54

514	J84	1022	1	1129.74	47
518	J85	973.34	1	1128.98	67
524	J86	974	1	1128.79	67
525	J87	987	0	1128.68	61
528	J88	965.44	1	1128.37	70
565	J89	978	1	1186.66	90
606	J90	1452	1	1462	4
617	J91	973.41	1	1176.78	88
625	J92	963.65	0	1186.66	96
629	J93	989.11	0	1238.89	108
376	J94	963.52	1	1186.66	97
380	J96	966.79	0	1186.66	95
384	J97	1005.71	1	1202.76	85
638	J98	982	1	1227.99	106
388	J99	983	1	1231.28	107
396	J100	1002.65	1	1243.24	104
641	J101	1305	0	1440.35	59
644	J103	980	0	1227.51	107
646	J104	982	0	1227.75	106
648	J105	982.23	0	1227.99	106
653	J106	1305.49	0	1440.37	58
657	J107	1314.87	1	1440.34	54
677	J108	942	0	1092.18	65
679	J109	948	0	1086.41	60
681	J110	940	0	1065.53	54
683	J111	943	0	1056.35	49
685	J112	962	0	1051.06	39
687	J113	990	0	1024.37	15
689	J114	1014	0	1018.38	2
691	J115	995	0	1013.94	8
693	J116	1014	0	1010.95	-1
695	J117	1014	0	1009.74	-2
697	J118	1014	0	1007	-3
699	J119	942	0	1061.67	52
702	J120	942	0	1061.52	52
704	J121	942	0	1059.18	51
707	J122	957	0	1058.6	44
709	J123	963	0	1058.11	41
711	J124	980	10	1057.32	33
713	J125	942	0	1061.35	52
715	J126	942	10	1061.24	52
717	J127	978.84	0	1034.84	24
720	J128	970.04	0	1039.04	30
44	J265	990	0	1238.9	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1202.76	102
3	634	H-2	970	0	1202.76	101
4	636	H-3	977.3	0	1202.76	98
5	637	H-4	1010	1500	1091.01	35
6	447	H-5	982	0	1227.99	106
7	639	H-6	985	0	1231.28	107
8	640	H-7	998	0	1243.24	106
9	723	H-8	980	0	1238.9	112
10	753	H-9	1312	0	1440.35	56
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1202.76	104
15	179	J3	964	1	1202.76	103
16	180	J4	980	0	1202.76	96
17	181	J5	970	1	1202.76	101
18	182	J6	973	1	1202.76	99
19	183	J7	982	1	1227.99	106
20	184	J8	984	1	1232.95	108
21	185	J9	980	1	1233.31	110
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1202.76	104
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1238.93	108
40	227	J28	1013	1	1245.68	101
41	228	J29	1006.9	1	1247.11	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.48	102
43	230	J31	1162	1	1254.22	40
44	232	J32	1204	1	1391.69	81
45	233	J33	1221	1	1399.12	77
46	234	J34	1250	1	1416.47	72
47	235	J35	1298	1	1427.75	56
48	236	J36	1306	1	1436.09	56
49	237	J37	1305	1	1440.35	59
50	239	J38	1168	1	1255.25	38
51	242	J40	1239	1	1399.65	70
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1230.27	107
58	297	J47	983.4	4	1232.32	108
59	299	J48	993	4	1240.79	107
60	301	J49	1006	0	1244.36	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1350.03	146
63	307	J52	1028	1	1357.7	143
64	309	J53	1035	1	1359.89	141
65	311	J54	1156	1	1380.13	97
66	313	J55	1272	1	1391.39	52
67	316	J56	1272	1	1422.41	65
68	318	J57	1305	1	1433.9	56
69	322	J58	1304	1	1440.36	59
70	327	J59	1008	1	1092.58	37
71	372	J60	970	1	1202.76	101
72	413	J66	1021	1	1351.54	143
73	440	J67	968.67	1	1202.76	101
74	444	J68	971	0	1202.76	100
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1233.66	110
77	463	J72	980	1	1233.21	110
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1440.4	58
80	474	J75	1193	1	1385.84	83
81	478	J76	1176	1	1256.04	35
82	484	J77	1176	1	1385.49	91
83	487	J78	1181	1	1386.31	89
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1386.35	85
86	506	J83	1314	1	1439.08	54
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1202.76	97
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1202.76	99
95	625	J92	963.65	0	1202.76	103
96	629	J93	989.11	0	1238.89	108
97	376	J94	963.52	1	1202.76	104
98	380	J96	966.79	0	1202.76	102
99	384	J97	1005.71	1	1092.58	38
100	638	J98	982	1	1227.99	106
101	388	J99	983	1	1231.28	107
102	396	J100	1002.65	1	1243.24	104
103	641	J101	1305	0	1440.35	59
104	644	J103	980	0	1227.51	107
105	646	J104	982	0	1227.75	106
106	648	J105	982.23	0	1227.99	106
107	653	J106	1305.49	0	1440.37	58
108	657	J107	1314.87	1	1440.34	54
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.9	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1227.9	112
3	634	H-2	970	0	1227.9	112
4	636	H-3	977.3	0	1227.9	108
5	637	H-4	1010	0	1227.9	94
6	447	H-5	982	1500	1226.47	106
7	639	H-6	985	0	1231.56	107
8	640	H-7	998	0	1243.24	106
9	723	H-8	980	0	1238.96	112
10	753	H-9	1312	0	1440.35	56
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1227.9	115
15	179	J3	964	1	1227.9	114
16	180	J4	980	0	1227.9	107
17	181	J5	970	1	1227.9	112
18	182	J6	973	1	1227.9	110
19	183	J7	982	1	1226.92	106
20	184	J8	984	1	1233.18	108
21	185	J9	980	1	1233.52	110
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1227.9	115
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1238.99	108
40	227	J28	1013	1	1245.71	101
41	228	J29	1006.9	1	1247.14	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1250.5	102
43	230	J31	1162	1	1254.23	40
44	232	J32	1204	1	1391.7	81
45	233	J33	1221	1	1399.12	77
46	234	J34	1250	1	1416.47	72
47	235	J35	1298	1	1427.75	56
48	236	J36	1306	1	1436.09	56
49	237	J37	1305	1	1440.35	59
50	239	J38	1168	1	1255.25	38
51	242	J40	1239	1	1399.65	70
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1230.12	107
58	297	J47	983.4	4	1232.2	108
59	299	J48	993	4	1240.79	107
60	301	J49	1006	0	1244.36	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1350.03	146
63	307	J52	1028	1	1357.69	143
64	309	J53	1035	1	1359.88	141
65	311	J54	1156	1	1380.13	97
66	313	J55	1272	1	1391.39	52
67	316	J56	1272	1	1422.41	65
68	318	J57	1305	1	1433.9	56
69	322	J58	1304	1	1440.36	59
70	327	J59	1008	1	1227.9	95
71	372	J60	970	1	1227.9	112
72	413	J66	1021	1	1351.54	143
73	440	J67	968.67	1	1227.9	112
74	444	J68	971	0	1227.9	111
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1233.87	110
77	463	J72	980	1	1233.42	110
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1440.4	58
80	474	J75	1193	1	1385.84	83
81	478	J76	1176	1	1256.04	35
82	484	J77	1176	1	1385.49	91
83	487	J78	1181	1	1386.32	89
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1386.35	85
86	506	J83	1314	1	1439.08	54
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1227.9	108
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1227.9	110
95	625	J92	963.65	0	1227.9	114
96	629	J93	989.11	0	1238.95	108
97	376	J94	963.52	1	1227.9	114
98	380	J96	966.79	0	1227.9	113
99	384	J97	1005.71	1	1227.9	96
100	638	J98	982	1	1226.47	106
101	388	J99	983	1	1231.56	108
102	396	J100	1002.65	1	1243.24	104
103	641	J101	1305	0	1440.35	59
104	644	J103	980	0	1227.91	107
105	646	J104	982	0	1227.85	106
106	648	J105	982.23	0	1227.8	106
107	653	J106	1305.49	0	1440.37	58
108	657	J107	1314.87	1	1440.34	54
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1238.96	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1232.23	114
3	634	H-2	970	0	1232.23	113
4	636	H-3	977.3	0	1232.23	110
5	637	H-4	1010	0	1232.23	96
6	447	H-5	982	0	1232.55	108
7	639	H-6	985	1500	1220.67	102
8	640	H-7	998	0	1243.34	106
9	723	H-8	980	0	1237.09	111
10	753	H-9	1312	0	1440.35	56
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1232.23	117
15	179	J3	964	1	1232.23	116
16	180	J4	980	0	1232.23	109
17	181	J5	970	1	1232.23	113
18	182	J6	973	1	1232.23	112
19	183	J7	982	1	1232.55	108
20	184	J8	984	1	1225.57	105
21	185	J9	980	1	1226.29	107
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1232.23	117
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1237.13	107
40	227	J28	1013	1	1244.58	100
41	228	J29	1006.9	1	1246.16	104

	A	B	C	D	E	F
42	229	J30	1015.7	1	1249.86	101
43	230	J31	1162	1	1253.97	40
44	232	J32	1204	1	1391.64	81
45	233	J33	1221	1	1399.07	77
46	234	J34	1250	1	1416.44	72
47	235	J35	1298	1	1427.74	56
48	236	J36	1306	1	1436.09	56
49	237	J37	1305	1	1440.35	59
50	239	J38	1168	1	1255.09	38
51	242	J40	1239	1	1399.65	70
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1234.04	108
58	297	J47	983.4	4	1235.37	109
59	299	J48	993	4	1240.89	107
60	301	J49	1006	0	1244.45	103
61	303	J50	1019	1	1268.71	108
62	305	J51	1012	1	1350.16	146
63	307	J52	1028	1	1357.79	143
64	309	J53	1035	1	1359.98	141
65	311	J54	1156	1	1380.15	97
66	313	J55	1272	1	1391.39	52
67	316	J56	1272	1	1422.41	65
68	318	J57	1305	1	1433.9	56
69	322	J58	1304	1	1440.36	59
70	327	J59	1008	1	1232.23	97
71	372	J60	970	1	1232.23	113
72	413	J66	1021	1	1351.66	143
73	440	J67	968.67	1	1232.23	114
74	444	J68	971	0	1232.23	113
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1227	107
77	463	J72	980	1	1226.54	107
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1440.4	58
80	474	J75	1193	1	1385.85	83
81	478	J76	1176	1	1255.97	35
82	484	J77	1176	1	1385.35	91
83	487	J78	1181	1	1386.25	89
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1386.29	85
86	506	J83	1314	1	1439.08	54
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1232.23	110
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1232.23	112
95	625	J92	963.65	0	1232.23	116
96	629	J93	989.11	0	1237.08	107
97	376	J94	963.52	1	1232.23	116
98	380	J96	966.79	0	1232.23	115
99	384	J97	1005.71	1	1232.23	98
100	638	J98	982	1	1232.55	108
101	388	J99	983	1	1222.24	104
102	396	J100	1002.65	1	1243.34	104
103	641	J101	1305	0	1440.35	59
104	644	J103	980	0	1232.24	109
105	646	J104	982	0	1232.4	108
106	648	J105	982.23	0	1232.55	108
107	653	J106	1305.49	0	1440.37	58
108	657	J107	1314.87	1	1440.34	54
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1237.09	107

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1242.99	119
3	634	H-2	970	0	1242.99	118
4	636	H-3	977.3	0	1242.99	115
5	637	H-4	1010	0	1242.99	101
6	447	H-5	982	0	1243	113
7	639	H-6	985	0	1243	112
8	640	H-7	998	1500	1239.09	104
9	723	H-8	980	0	1243.03	114
10	753	H-9	1312	0	1440.35	56
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1242.99	122
15	179	J3	964	1	1242.99	121
16	180	J4	980	0	1242.99	114
17	181	J5	970	1	1243	118
18	182	J6	973	1	1243	117
19	183	J7	982	1	1243	113
20	184	J8	984	1	1243	112
21	185	J9	980	1	1243	114
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1242.99	122
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1243.05	110
40	227	J28	1013	1	1248.18	102
41	228	J29	1006.9	1	1249.28	105

	A	B	C	D	E	F
42	229	J30	1015.7	1	1251.88	102
43	230	J31	1162	1	1254.79	40
44	232	J32	1204	1	1391.86	81
45	233	J33	1221	1	1399.27	77
46	234	J34	1250	1	1416.55	72
47	235	J35	1298	1	1427.8	56
48	236	J36	1306	1	1436.11	56
49	237	J37	1305	1	1440.35	59
50	239	J38	1168	1	1255.59	38
51	242	J40	1239	1	1399.64	69
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1243	112
58	297	J47	983.4	4	1243.01	112
59	299	J48	993	4	1243.02	108
60	301	J49	1006	0	1244.15	103
61	303	J50	1019	1	1268.7	108
62	305	J51	1012	1	1349.72	146
63	307	J52	1028	1	1357.44	143
64	309	J53	1035	1	1359.65	140
65	311	J54	1156	1	1380.07	97
66	313	J55	1272	1	1391.38	52
67	316	J56	1272	1	1422.4	65
68	318	J57	1305	1	1433.9	56
69	322	J58	1304	1	1440.36	59
70	327	J59	1008	1	1242.99	102
71	372	J60	970	1	1242.99	118
72	413	J66	1021	1	1351.24	143
73	440	J67	968.67	1	1242.99	119
74	444	J68	971	0	1242.99	118
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1243	114
77	463	J72	980	1	1242.55	114
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1440.4	58
80	474	J75	1193	1	1385.83	83
81	478	J76	1176	1	1256.22	35
82	484	J77	1176	1	1385.85	91
83	487	J78	1181	1	1386.51	89
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1386.54	85
86	506	J83	1314	1	1439.09	54
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1242.99	115
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1242.99	117
95	625	J92	963.65	0	1242.99	121
96	629	J93	989.11	0	1243.02	110
97	376	J94	963.52	1	1242.99	121
98	380	J96	966.79	0	1242.99	120
99	384	J97	1005.71	1	1242.99	103
100	638	J98	982	1	1243	113
101	388	J99	983	1	1243	112
102	396	J100	1002.65	1	1243.02	104
103	641	J101	1305	0	1440.35	59
104	644	J103	980	0	1243	114
105	646	J104	982	0	1243	113
106	648	J105	982.23	0	1243	113
107	653	J106	1305.49	0	1440.37	58
108	657	J107	1314.87	1	1440.34	54
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1243.03	109

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1239.12	117
3	634	H-2	970	0	1239.12	116
4	636	H-3	977.3	0	1239.12	113
5	637	H-4	1010	0	1239.12	99
6	447	H-5	982	0	1239.21	111
7	639	H-6	985	0	1236.6	109
8	640	H-7	998	0	1243.84	106
9	723	H-8	980	1500	1218.99	103
10	753	H-9	1312	0	1440.35	56
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1239.12	120
15	179	J3	964	1	1239.12	119
16	180	J4	980	0	1239.12	112
17	181	J5	970	1	1239.12	116
18	182	J6	973	1	1239.12	115
19	183	J7	982	1	1239.21	111
20	184	J8	984	1	1235.49	109
21	185	J9	980	1	1235.25	110
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1239.12	120
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1225.7	102
40	227	J28	1013	1	1237.67	97
41	228	J29	1006.9	1	1240.18	101

	A	B	C	D	E	F
42	229	J30	1015.7	1	1246.01	100
43	230	J31	1162	1	1252.41	39
44	232	J32	1204	1	1391.38	81
45	233	J33	1221	1	1398.86	77
46	234	J34	1250	1	1416.32	72
47	235	J35	1298	1	1427.67	56
48	236	J36	1306	1	1436.07	56
49	237	J37	1305	1	1440.35	59
50	239	J38	1168	1	1254.15	37
51	242	J40	1239	1	1399.66	70
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1239.6	111
58	297	J47	983.4	4	1239.96	111
59	299	J48	993	4	1241.44	107
60	301	J49	1006	0	1244.93	103
61	303	J50	1019	1	1268.73	108
62	305	J51	1012	1	1350.85	147
63	307	J52	1028	1	1358.34	143
64	309	J53	1035	1	1360.48	141
65	311	J54	1156	1	1380.28	97
66	313	J55	1272	1	1391.41	52
67	316	J56	1272	1	1422.42	65
68	318	J57	1305	1	1433.91	56
69	322	J58	1304	1	1440.36	59
70	327	J59	1008	1	1239.12	100
71	372	J60	970	1	1239.12	116
72	413	J66	1021	1	1352.33	143
73	440	J67	968.67	1	1239.12	117
74	444	J68	971	0	1239.12	116
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1235.02	110
77	463	J72	980	1	1234.57	110
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1440.4	58
80	474	J75	1193	1	1385.87	83
81	478	J76	1176	1	1255.48	34
82	484	J77	1176	1	1384.59	90
83	487	J78	1181	1	1385.94	89
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1386	85
86	506	J83	1314	1	1439.07	54
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1239.12	113
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1239.12	115
95	625	J92	963.65	0	1239.12	119
96	629	J93	989.11	0	1232.36	105
97	376	J94	963.52	1	1239.12	119
98	380	J96	966.79	0	1239.12	118
99	384	J97	1005.71	1	1239.12	101
100	638	J98	982	1	1239.21	111
101	388	J99	983	1	1236.6	110
102	396	J100	1002.65	1	1243.84	104
103	641	J101	1305	0	1440.35	59
104	644	J103	980	0	1239.13	112
105	646	J104	982	0	1239.17	111
106	648	J105	982.23	0	1239.21	111
107	653	J106	1305.49	0	1440.37	58
108	657	J107	1314.87	1	1440.34	54
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1225.63	102

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1269.51	130
3	634	H-2	970	0	1269.51	130
4	636	H-3	977.3	0	1269.51	126
5	637	H-4	1010	0	1269.51	112
6	447	H-5	982	0	1269.52	124
7	639	H-6	985	0	1269.51	123
8	640	H-7	998	0	1269.55	117
9	723	H-8	980	0	1269.52	125
10	753	H-9	1312	1500	1429.35	51
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	1	1269.51	133
15	179	J3	964	1	1269.51	132
16	180	J4	980	0	1269.51	125
17	181	J5	970	1	1269.51	130
18	182	J6	973	1	1269.51	128
19	183	J7	982	1	1269.52	124
20	184	J8	984	1	1269.51	124
21	185	J9	980	1	1269.51	125
22	186	J10	986	1	1133.63	64
23	208	J11	962	1	1269.51	133
24	211	J12	957.8	1	1128.21	74
25	212	J13	950	1	1128.19	77
26	213	J14	952.5	1	1128.19	76
27	214	J15	953.6	1	1128.2	76
28	215	J16	962.4	1	1128.28	72
29	216	J17	961	0	1128.36	72
30	217	J18	969	1	1128.39	69
31	218	J19	984.7	1	1128.42	62
32	219	J20	983.7	1	1128.42	63
33	220	J21	974.7	1	1128.43	67
34	221	J22	973	0	1129.13	68
35	222	J23	979	2	1129.49	65
36	223	J24	1004	1	1130.05	55
37	224	J25	994.5	1	1130.56	59
38	225	J26	994.5	1	1130.56	59
39	226	J27	989	1	1269.51	121
40	227	J28	1013	1	1269.29	111
41	228	J29	1006.9	1	1269.26	114

	A	B	C	D	E	F
42	229	J30	1015.7	1	1269.21	110
43	230	J31	1162	1	1269.18	46
44	232	J32	1204	1	1438.6	102
45	233	J33	1221	1	1437.76	94
46	234	J34	1250	1	1435.99	80
47	235	J35	1298	1	1434.96	59
48	236	J36	1306	1	1434.28	55
49	237	J37	1305	1	1431.81	55
50	239	J38	1168	1	1269.18	44
51	242	J40	1239	1	1439.96	87
52	276	J41	1001.6	1	1130.56	56
53	284	J42	994.5	1	1130.46	59
54	286	J43	1026	1	1130.36	45
55	288	J44	1004	1	1130.34	55
56	290	J45	1005	1	1130.34	54
57	295	J46	983.4	1	1269.52	124
58	297	J47	983.4	4	1269.52	124
59	299	J48	993	4	1269.54	120
60	301	J49	1006	0	1269.56	114
61	303	J50	1019	1	1269.66	108
62	305	J51	1012	1	1439.64	185
63	307	J52	1028	1	1439.67	178
64	309	J53	1035	1	1439.68	175
65	311	J54	1156	1	1439.79	123
66	313	J55	1272	1	1439.87	73
67	316	J56	1272	1	1440.2	73
68	318	J57	1305	1	1440.33	59
69	322	J58	1304	1	1433.84	56
70	327	J59	1008	1	1269.51	113
71	372	J60	970	1	1269.51	130
72	413	J66	1021	1	1439.64	181
73	440	J67	968.67	1	1269.51	130
74	444	J68	971	0	1269.51	129
75	451	J70	994.5	0	1130.56	59
76	460	J71	980	1	1269.51	125
77	463	J72	980	1	1269.06	125
78	465	J73	987.6	1	1133.65	63
79	469	J74	1307	1	1440.4	58
80	474	J75	1193	1	1439.81	107
81	478	J76	1176	1	1269.17	40
82	484	J77	1176	1	1439.27	114
83	487	J78	1181	1	1439.27	112
84	490	J79	1006.44	1	1130.39	54

	A	B	C	D	E	F
85	504	J82	1189	1	1439.27	108
86	506	J83	1314	1	1434.06	52
87	514	J84	1022	1	1129.74	47
88	518	J85	973.34	1	1128.98	67
89	524	J86	974	1	1128.79	67
90	525	J87	987	0	1128.68	61
91	528	J88	965.44	1	1128.37	70
92	565	J89	978	1	1269.51	126
93	606	J90	1452	1	1462	4
94	617	J91	973.41	1	1269.51	128
95	625	J92	963.65	0	1269.51	132
96	629	J93	989.11	0	1269.52	121
97	376	J94	963.52	1	1269.51	132
98	380	J96	966.79	0	1269.51	131
99	384	J97	1005.71	1	1269.51	114
100	638	J98	982	1	1269.52	124
101	388	J99	983	1	1269.51	124
102	396	J100	1002.65	1	1269.55	115
103	641	J101	1305	0	1430.92	54
104	644	J103	980	0	1269.52	125
105	646	J104	982	0	1269.52	124
106	648	J105	982.23	0	1269.52	124
107	653	J106	1305.49	0	1436.94	57
108	657	J107	1314.87	1	1430.95	50
109	677	J108	942	0	1092.18	65
110	679	J109	948	0	1086.41	60
111	681	J110	940	0	1065.53	54
112	683	J111	943	0	1056.35	49
113	685	J112	962	0	1051.06	39
114	687	J113	990	0	1024.37	15
115	689	J114	1014	0	1018.38	2
116	691	J115	995	0	1013.94	8
117	693	J116	1014	0	1010.95	-1
118	695	J117	1014	0	1009.74	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1061.67	52
121	702	J120	942	0	1061.52	52
122	704	J121	942	0	1059.18	51
123	707	J122	957	0	1058.6	44
124	709	J123	963	0	1058.11	41
125	711	J124	980	10	1057.32	33
126	713	J125	942	0	1061.35	52
127	715	J126	942	10	1061.24	52

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.84	24
129	720	J128	970.04	0	1039.04	30
130	44	J265	990	0	1269.52	121

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	1500	1048.15	35
3	634	H-2	970	0	1171.49	87
4	636	H-3	977.3	0	1181.49	88
5	637	H-4	1010	0	1197.87	81
6	447	H-5	982	0	1223.79	105
7	639	H-6	985	0	1227.03	105
8	640	H-7	998	0	1240.08	105
9	723	H-8	980	0	1235.01	110
10	753	H-9	1312	0	1436.38	54
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1082.56	52
15	179	J3	964	3	1176.29	92
16	180	J4	980	0	1190.99	91
17	181	J5	970	3	1197.31	98
18	182	J6	973	3	1197.88	97
19	183	J7	982	3	1223.79	105
20	184	J8	984	3	1228.71	106
21	185	J9	980	3	1229.07	108
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1091.48	56
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1235.01	106
40	227	J28	1013	3	1242.45	99
41	228	J29	1006.9	3	1244.13	103

	A	B	C	D	E	F
42	229	J30	1015.7	3	1248.27	101
43	230	J31	1162	3	1253.12	39
44	232	J32	1204	3	1379.01	76
45	233	J33	1221	3	1387.34	72
46	234	J34	1250	3	1407.39	68
47	235	J35	1298	3	1420.8	53
48	236	J36	1306	3	1431	54
49	237	J37	1305	3	1436.38	57
50	239	J38	1168	3	1254.51	37
51	242	J40	1239	3	1389.01	65
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1226.18	105
58	297	J47	983.4	10	1228.34	106
59	299	J48	993	10	1237.34	106
60	301	J49	1006	0	1241.33	102
61	303	J50	1019	3	1268.59	108
62	305	J51	1012	3	1332.54	139
63	307	J52	1028	3	1341.17	135
64	309	J53	1035	3	1343.64	134
65	311	J54	1156	3	1366.54	91
66	313	J55	1272	3	1379.43	46
67	316	J56	1272	3	1415.47	62
68	318	J57	1305	3	1428.86	54
69	322	J58	1304	3	1436.39	57
70	327	J59	1008	3	1197.87	82
71	372	J60	970	3	1072.24	44
72	413	J66	1021	3	1334.24	136
73	440	J67	968.67	3	1074.25	46
74	444	J68	971	0	1186.32	93
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1229.43	108
77	463	J72	980	3	1228.49	108
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1373.01	78
81	478	J76	1176	3	1255.64	34
82	484	J77	1176	3	1371.88	85
83	487	J78	1181	3	1373.14	83
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1373.2	80
86	506	J83	1314	3	1434.74	52
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1176.29	86
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1181.49	90
95	625	J92	963.65	0	1172.85	91
96	629	J93	989.11	0	1235.01	106
97	376	J94	963.52	3	1171.49	90
98	380	J96	966.79	0	1181.49	93
99	384	J97	1005.71	3	1197.87	83
100	638	J98	982	3	1223.79	105
101	388	J99	983	3	1227.03	106
102	396	J100	1002.65	3	1240.08	103
103	641	J101	1305	0	1436.38	57
104	644	J103	980	0	1223.29	105
105	646	J104	982	0	1223.54	105
106	648	J105	982.23	0	1223.79	105
107	653	J106	1305.49	0	1436.4	57
108	657	J107	1314.87	3	1436.36	53
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1235.01	106

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1171.48	88
3	634	H-2	970	1500	1169.92	86
4	636	H-3	977.3	0	1181.49	88
5	637	H-4	1010	0	1197.87	81
6	447	H-5	982	0	1223.79	105
7	639	H-6	985	0	1227.03	105
8	640	H-7	998	0	1240.08	105
9	723	H-8	980	0	1235.01	110
10	753	H-9	1312	0	1436.38	54
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1171.48	91
15	179	J3	964	3	1176.29	92
16	180	J4	980	0	1190.99	91
17	181	J5	970	3	1197.31	98
18	182	J6	973	3	1197.88	97
19	183	J7	982	3	1223.79	105
20	184	J8	984	3	1228.71	106
21	185	J9	980	3	1229.07	108
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1171.48	91
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1235.01	106
40	227	J28	1013	3	1242.45	99
41	228	J29	1006.9	3	1244.13	103

	A	B	C	D	E	F
42	229	J30	1015.7	3	1248.27	101
43	230	J31	1162	3	1253.12	39
44	232	J32	1204	3	1379.01	76
45	233	J33	1221	3	1387.34	72
46	234	J34	1250	3	1407.39	68
47	235	J35	1298	3	1420.8	53
48	236	J36	1306	3	1431	54
49	237	J37	1305	3	1436.38	57
50	239	J38	1168	3	1254.51	37
51	242	J40	1239	3	1389.01	65
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1226.18	105
58	297	J47	983.4	10	1228.34	106
59	299	J48	993	10	1237.34	106
60	301	J49	1006	0	1241.33	102
61	303	J50	1019	3	1268.59	108
62	305	J51	1012	3	1332.54	139
63	307	J52	1028	3	1341.17	135
64	309	J53	1035	3	1343.64	134
65	311	J54	1156	3	1366.54	91
66	313	J55	1272	3	1379.43	46
67	316	J56	1272	3	1415.47	62
68	318	J57	1305	3	1428.86	54
69	322	J58	1304	3	1436.39	57
70	327	J59	1008	3	1197.87	82
71	372	J60	970	3	1171.48	87
72	413	J66	1021	3	1334.24	136
73	440	J67	968.67	3	1171.48	88
74	444	J68	971	0	1186.32	93
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1229.43	108
77	463	J72	980	3	1228.49	108
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1373.01	78
81	478	J76	1176	3	1255.64	34
82	484	J77	1176	3	1371.88	85
83	487	J78	1181	3	1373.14	83
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1373.2	80
86	506	J83	1314	3	1434.74	52
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1176.29	86
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1181.49	90
95	625	J92	963.65	0	1172.85	91
96	629	J93	989.11	0	1235.01	106
97	376	J94	963.52	3	1171.49	90
98	380	J96	966.79	0	1181.49	93
99	384	J97	1005.71	3	1197.87	83
100	638	J98	982	3	1223.79	105
101	388	J99	983	3	1227.03	106
102	396	J100	1002.65	3	1240.08	103
103	641	J101	1305	0	1436.38	57
104	644	J103	980	0	1223.29	105
105	646	J104	982	0	1223.54	105
106	648	J105	982.23	0	1223.79	105
107	653	J106	1305.49	0	1436.4	57
108	657	J107	1314.87	3	1436.36	53
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1235.01	106

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1181.47	92
3	634	H-2	970	0	1181.48	91
4	636	H-3	977.3	1500	1165.88	82
5	637	H-4	1010	0	1197.87	81
6	447	H-5	982	0	1223.79	105
7	639	H-6	985	0	1227.03	105
8	640	H-7	998	0	1240.08	105
9	723	H-8	980	0	1235.01	110
10	753	H-9	1312	0	1436.38	54
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1181.47	95
15	179	J3	964	3	1181.49	94
16	180	J4	980	0	1190.99	91
17	181	J5	970	3	1197.31	98
18	182	J6	973	3	1197.88	97
19	183	J7	982	3	1223.79	105
20	184	J8	984	3	1228.71	106
21	185	J9	980	3	1229.07	108
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1181.47	95
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1235.01	106
40	227	J28	1013	3	1242.45	99
41	228	J29	1006.9	3	1244.13	103

	A	B	C	D	E	F
42	229	J30	1015.7	3	1248.27	101
43	230	J31	1162	3	1253.12	39
44	232	J32	1204	3	1379.01	76
45	233	J33	1221	3	1387.34	72
46	234	J34	1250	3	1407.39	68
47	235	J35	1298	3	1420.8	53
48	236	J36	1306	3	1431	54
49	237	J37	1305	3	1436.38	57
50	239	J38	1168	3	1254.51	37
51	242	J40	1239	3	1389.01	65
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1226.18	105
58	297	J47	983.4	10	1228.34	106
59	299	J48	993	10	1237.34	106
60	301	J49	1006	0	1241.33	102
61	303	J50	1019	3	1268.59	108
62	305	J51	1012	3	1332.54	139
63	307	J52	1028	3	1341.17	135
64	309	J53	1035	3	1343.64	134
65	311	J54	1156	3	1366.54	91
66	313	J55	1272	3	1379.43	46
67	316	J56	1272	3	1415.47	62
68	318	J57	1305	3	1428.86	54
69	322	J58	1304	3	1436.39	57
70	327	J59	1008	3	1197.87	82
71	372	J60	970	3	1181.47	91
72	413	J66	1021	3	1334.24	136
73	440	J67	968.67	3	1181.47	92
74	444	J68	971	0	1186.32	93
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1229.43	108
77	463	J72	980	3	1228.49	108
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1373.01	78
81	478	J76	1176	3	1255.64	34
82	484	J77	1176	3	1371.88	85
83	487	J78	1181	3	1373.14	83
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1373.2	80
86	506	J83	1314	3	1434.74	52
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1181.48	88
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1171.58	86
95	625	J92	963.65	0	1181.48	94
96	629	J93	989.11	0	1235.01	106
97	376	J94	963.52	3	1181.48	94
98	380	J96	966.79	0	1181.49	93
99	384	J97	1005.71	3	1197.87	83
100	638	J98	982	3	1223.79	105
101	388	J99	983	3	1227.03	106
102	396	J100	1002.65	3	1240.08	103
103	641	J101	1305	0	1436.38	57
104	644	J103	980	0	1223.29	105
105	646	J104	982	0	1223.54	105
106	648	J105	982.23	0	1223.79	105
107	653	J106	1305.49	0	1436.4	57
108	657	J107	1314.87	3	1436.36	53
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1235.01	106

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1197.85	99
3	634	H-2	970	0	1197.87	99
4	636	H-3	977.3	0	1197.87	95
5	637	H-4	1010	1500	1085.63	33
6	447	H-5	982	0	1223.79	105
7	639	H-6	985	0	1227.03	105
8	640	H-7	998	0	1240.08	105
9	723	H-8	980	0	1235.01	110
10	753	H-9	1312	0	1436.38	54
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1197.85	102
15	179	J3	964	3	1197.87	101
16	180	J4	980	0	1197.88	94
17	181	J5	970	3	1197.88	99
18	182	J6	973	3	1197.88	97
19	183	J7	982	3	1223.79	105
20	184	J8	984	3	1228.71	106
21	185	J9	980	3	1229.07	108
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1197.86	102
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1235.01	106
40	227	J28	1013	3	1242.45	99
41	228	J29	1006.9	3	1244.13	103

	A	B	C	D	E	F
42	229	J30	1015.7	3	1248.27	101
43	230	J31	1162	3	1253.12	39
44	232	J32	1204	3	1379.01	76
45	233	J33	1221	3	1387.34	72
46	234	J34	1250	3	1407.39	68
47	235	J35	1298	3	1420.8	53
48	236	J36	1306	3	1431	54
49	237	J37	1305	3	1436.38	57
50	239	J38	1168	3	1254.51	37
51	242	J40	1239	3	1389.01	65
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1226.18	105
58	297	J47	983.4	10	1228.34	106
59	299	J48	993	10	1237.34	106
60	301	J49	1006	0	1241.33	102
61	303	J50	1019	3	1268.59	108
62	305	J51	1012	3	1332.54	139
63	307	J52	1028	3	1341.17	135
64	309	J53	1035	3	1343.64	134
65	311	J54	1156	3	1366.54	91
66	313	J55	1272	3	1379.43	46
67	316	J56	1272	3	1415.47	62
68	318	J57	1305	3	1428.86	54
69	322	J58	1304	3	1436.39	57
70	327	J59	1008	3	1087.21	34
71	372	J60	970	3	1197.85	99
72	413	J66	1021	3	1334.24	136
73	440	J67	968.67	3	1197.85	99
74	444	J68	971	0	1197.87	98
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1229.43	108
77	463	J72	980	3	1228.49	108
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1373.01	78
81	478	J76	1176	3	1255.64	34
82	484	J77	1176	3	1371.88	85
83	487	J78	1181	3	1373.14	83
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1373.2	80
86	506	J83	1314	3	1434.74	52
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1197.87	95
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1197.87	97
95	625	J92	963.65	0	1197.87	101
96	629	J93	989.11	0	1235.01	106
97	376	J94	963.52	3	1197.87	101
98	380	J96	966.79	0	1197.87	100
99	384	J97	1005.71	3	1087.21	35
100	638	J98	982	3	1223.79	105
101	388	J99	983	3	1227.03	106
102	396	J100	1002.65	3	1240.08	103
103	641	J101	1305	0	1436.38	57
104	644	J103	980	0	1223.29	105
105	646	J104	982	0	1223.54	105
106	648	J105	982.23	0	1223.79	105
107	653	J106	1305.49	0	1436.4	57
108	657	J107	1314.87	3	1436.36	53
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1235.01	106

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1223.64	111
3	634	H-2	970	0	1223.65	110
4	636	H-3	977.3	0	1223.66	107
5	637	H-4	1010	0	1223.66	92
6	447	H-5	982	1500	1222.26	104
7	639	H-6	985	0	1227.32	105
8	640	H-7	998	0	1240.07	105
9	723	H-8	980	0	1235.07	110
10	753	H-9	1312	0	1436.38	54
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1223.64	113
15	179	J3	964	3	1223.65	112
16	180	J4	980	0	1223.66	105
17	181	J5	970	3	1223.66	110
18	182	J6	973	3	1223.66	108
19	183	J7	982	3	1222.71	104
20	184	J8	984	3	1228.94	106
21	185	J9	980	3	1229.3	108
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1223.64	113
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1235.07	106
40	227	J28	1013	3	1242.49	99
41	228	J29	1006.9	3	1244.16	103

	A	B	C	D	E	F
42	229	J30	1015.7	3	1248.3	101
43	230	J31	1162	3	1253.13	39
44	232	J32	1204	3	1379.01	76
45	233	J33	1221	3	1387.35	72
46	234	J34	1250	3	1407.39	68
47	235	J35	1298	3	1420.8	53
48	236	J36	1306	3	1431	54
49	237	J37	1305	3	1436.38	57
50	239	J38	1168	3	1254.52	37
51	242	J40	1239	3	1389.01	65
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1226.03	105
58	297	J47	983.4	10	1228.21	106
59	299	J48	993	10	1237.33	106
60	301	J49	1006	0	1241.33	102
61	303	J50	1019	3	1268.59	108
62	305	J51	1012	3	1332.54	139
63	307	J52	1028	3	1341.17	135
64	309	J53	1035	3	1343.64	134
65	311	J54	1156	3	1366.53	91
66	313	J55	1272	3	1379.43	46
67	316	J56	1272	3	1415.47	62
68	318	J57	1305	3	1428.86	54
69	322	J58	1304	3	1436.39	57
70	327	J59	1008	3	1223.66	93
71	372	J60	970	3	1223.64	110
72	413	J66	1021	3	1334.23	136
73	440	J67	968.67	3	1223.64	110
74	444	J68	971	0	1223.66	109
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1229.65	108
77	463	J72	980	3	1228.71	108
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1373.01	78
81	478	J76	1176	3	1255.64	34
82	484	J77	1176	3	1371.89	85
83	487	J78	1181	3	1373.15	83
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1373.2	80
86	506	J83	1314	3	1434.74	52
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1223.65	106
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1223.66	108
95	625	J92	963.65	0	1223.65	112
96	629	J93	989.11	0	1235.07	106
97	376	J94	963.52	3	1223.65	113
98	380	J96	966.79	0	1223.66	111
99	384	J97	1005.71	3	1223.66	94
100	638	J98	982	3	1222.26	104
101	388	J99	983	3	1227.32	106
102	396	J100	1002.65	3	1240.07	103
103	641	J101	1305	0	1436.38	57
104	644	J103	980	0	1223.69	105
105	646	J104	982	0	1223.65	105
106	648	J105	982.23	0	1223.6	104
107	653	J106	1305.49	0	1436.4	57
108	657	J107	1314.87	3	1436.36	53
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1235.07	106

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1228.02	112
3	634	H-2	970	0	1228.03	112
4	636	H-3	977.3	0	1228.04	108
5	637	H-4	1010	0	1228.04	94
6	447	H-5	982	0	1228.4	107
7	639	H-6	985	1500	1216.36	100
8	640	H-7	998	0	1240.17	105
9	723	H-8	980	0	1233.1	110
10	753	H-9	1312	0	1436.38	54
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1228.02	115
15	179	J3	964	3	1228.03	114
16	180	J4	980	0	1228.04	107
17	181	J5	970	3	1228.04	112
18	182	J6	973	3	1228.04	110
19	183	J7	982	3	1228.4	107
20	184	J8	984	3	1221.23	103
21	185	J9	980	3	1221.94	105
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1228.02	115
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1233.1	106
40	227	J28	1013	3	1241.26	99
41	228	J29	1006.9	3	1243.09	102

	A	B	C	D	E	F
42	229	J30	1015.7	3	1247.6	100
43	230	J31	1162	3	1252.84	39
44	232	J32	1204	3	1378.98	76
45	233	J33	1221	3	1387.31	72
46	234	J34	1250	3	1407.37	68
47	235	J35	1298	3	1420.79	53
48	236	J36	1306	3	1430.99	54
49	237	J37	1305	3	1436.38	57
50	239	J38	1168	3	1254.34	37
51	242	J40	1239	3	1389.02	65
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1229.99	107
58	297	J47	983.4	10	1231.43	107
59	299	J48	993	10	1237.44	106
60	301	J49	1006	0	1241.42	102
61	303	J50	1019	3	1268.59	108
62	305	J51	1012	3	1332.67	139
63	307	J52	1028	3	1341.27	136
64	309	J53	1035	3	1343.73	134
65	311	J54	1156	3	1366.56	91
66	313	J55	1272	3	1379.44	46
67	316	J56	1272	3	1415.48	62
68	318	J57	1305	3	1428.86	54
69	322	J58	1304	3	1436.39	57
70	327	J59	1008	3	1228.04	95
71	372	J60	970	3	1228.02	112
72	413	J66	1021	3	1334.36	136
73	440	J67	968.67	3	1228.02	112
74	444	J68	971	0	1228.04	111
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1222.65	105
77	463	J72	980	3	1221.71	105
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1373.02	78
81	478	J76	1176	3	1255.55	34
82	484	J77	1176	3	1371.75	85
83	487	J78	1181	3	1373.1	83
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1373.16	80
86	506	J83	1314	3	1434.74	52
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1228.03	108
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1228.04	110
95	625	J92	963.65	0	1228.03	114
96	629	J93	989.11	0	1233.1	106
97	376	J94	963.52	3	1228.03	114
98	380	J96	966.79	0	1228.04	113
99	384	J97	1005.71	3	1228.04	96
100	638	J98	982	3	1228.4	107
101	388	J99	983	3	1217.93	102
102	396	J100	1002.65	3	1240.17	103
103	641	J101	1305	0	1436.38	57
104	644	J103	980	0	1228.07	107
105	646	J104	982	0	1228.24	107
106	648	J105	982.23	0	1228.4	107
107	653	J106	1305.49	0	1436.4	57
108	657	J107	1314.87	3	1436.36	53
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1233.1	105

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1239.68	118
3	634	H-2	970	0	1239.69	117
4	636	H-3	977.3	0	1239.69	114
5	637	H-4	1010	0	1239.7	99
6	447	H-5	982	0	1239.73	112
7	639	H-6	985	0	1239.73	110
8	640	H-7	998	1500	1235.9	103
9	723	H-8	980	0	1239.78	112
10	753	H-9	1312	0	1436.38	54
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1239.68	120
15	179	J3	964	3	1239.69	119
16	180	J4	980	0	1239.7	112
17	181	J5	970	3	1239.7	117
18	182	J6	973	3	1239.7	115
19	183	J7	982	3	1239.73	112
20	184	J8	984	3	1239.73	111
21	185	J9	980	3	1239.73	112
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1239.68	120
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1239.78	108
40	227	J28	1013	3	1245.44	101
41	228	J29	1006.9	3	1246.73	104

	A	B	C	D	E	F
42	229	J30	1015.7	3	1249.98	101
43	230	J31	1162	3	1253.83	40
44	232	J32	1204	3	1379.13	76
45	233	J33	1221	3	1387.45	72
46	234	J34	1250	3	1407.45	68
47	235	J35	1298	3	1420.83	53
48	236	J36	1306	3	1431.01	54
49	237	J37	1305	3	1436.38	57
50	239	J38	1168	3	1254.95	38
51	242	J40	1239	3	1389.01	65
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1239.74	111
58	297	J47	983.4	10	1239.75	111
59	299	J48	993	10	1239.8	107
60	301	J49	1006	0	1241.09	102
61	303	J50	1019	3	1268.58	108
62	305	J51	1012	3	1332.19	139
63	307	J52	1028	3	1340.89	135
64	309	J53	1035	3	1343.39	133
65	311	J54	1156	3	1366.47	91
66	313	J55	1272	3	1379.43	46
67	316	J56	1272	3	1415.47	62
68	318	J57	1305	3	1428.86	54
69	322	J58	1304	3	1436.39	57
70	327	J59	1008	3	1239.7	100
71	372	J60	970	3	1239.68	117
72	413	J66	1021	3	1333.9	135
73	440	J67	968.67	3	1239.68	117
74	444	J68	971	0	1239.7	116
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1239.73	112
77	463	J72	980	3	1238.79	112
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1373.01	78
81	478	J76	1176	3	1255.87	35
82	484	J77	1176	3	1372.24	85
83	487	J78	1181	3	1373.29	83
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1373.34	80
86	506	J83	1314	3	1434.75	52
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1239.69	113
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1239.69	115
95	625	J92	963.65	0	1239.69	119
96	629	J93	989.11	0	1239.78	108
97	376	J94	963.52	3	1239.69	119
98	380	J96	966.79	0	1239.7	118
99	384	J97	1005.71	3	1239.7	101
100	638	J98	982	3	1239.73	112
101	388	J99	983	3	1239.73	111
102	396	J100	1002.65	3	1239.83	103
103	641	J101	1305	0	1436.38	57
104	644	J103	980	0	1239.73	112
105	646	J104	982	0	1239.73	112
106	648	J105	982.23	0	1239.73	111
107	653	J106	1305.49	0	1436.4	57
108	657	J107	1314.87	3	1436.36	53
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1239.78	108

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1235.15	116
3	634	H-2	970	0	1235.16	115
4	636	H-3	977.3	0	1235.16	112
5	637	H-4	1010	0	1235.17	97
6	447	H-5	982	0	1235.29	110
7	639	H-6	985	0	1232.5	107
8	640	H-7	998	0	1240.68	105
9	723	H-8	980	1500	1214.57	101
10	753	H-9	1312	0	1436.38	54
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1235.15	118
15	179	J3	964	3	1235.16	117
16	180	J4	980	0	1235.17	110
17	181	J5	970	3	1235.17	115
18	182	J6	973	3	1235.17	113
19	183	J7	982	3	1235.29	110
20	184	J8	984	3	1231.33	107
21	185	J9	980	3	1231.08	109
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1235.15	118
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1221.23	100
40	227	J28	1013	3	1233.92	96
41	228	J29	1006.9	3	1236.7	99

	A	B	C	D	E	F
42	229	J30	1015.7	3	1243.42	99
43	230	J31	1162	3	1251.12	39
44	232	J32	1204	3	1378.86	76
45	233	J33	1221	3	1387.21	72
46	234	J34	1250	3	1407.32	68
47	235	J35	1298	3	1420.76	53
48	236	J36	1306	3	1430.98	54
49	237	J37	1305	3	1436.38	57
50	239	J38	1168	3	1253.28	37
51	242	J40	1239	3	1389.02	65
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1235.76	109
58	297	J47	983.4	10	1236.18	109
59	299	J48	993	10	1238	106
60	301	J49	1006	0	1241.91	102
61	303	J50	1019	3	1268.61	108
62	305	J51	1012	3	1333.37	139
63	307	J52	1028	3	1341.83	136
64	309	J53	1035	3	1344.25	134
65	311	J54	1156	3	1366.68	91
66	313	J55	1272	3	1379.44	46
67	316	J56	1272	3	1415.48	62
68	318	J57	1305	3	1428.86	54
69	322	J58	1304	3	1436.39	57
70	327	J59	1008	3	1235.17	98
71	372	J60	970	3	1235.15	115
72	413	J66	1021	3	1335.03	136
73	440	J67	968.67	3	1235.15	115
74	444	J68	971	0	1235.17	114
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1230.84	109
77	463	J72	980	3	1229.9	108
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1373.03	78
81	478	J76	1176	3	1255.01	34
82	484	J77	1176	3	1371.08	84
83	487	J78	1181	3	1372.95	83
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1373.03	80
86	506	J83	1314	3	1434.74	52
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1235.16	111
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1235.16	113
95	625	J92	963.65	0	1235.16	117
96	629	J93	989.11	0	1228.26	103
97	376	J94	963.52	3	1235.16	118
98	380	J96	966.79	0	1235.16	116
99	384	J97	1005.71	3	1235.17	99
100	638	J98	982	3	1235.29	110
101	388	J99	983	3	1232.5	108
102	396	J100	1002.65	3	1240.68	103
103	641	J101	1305	0	1436.38	57
104	644	J103	980	0	1235.2	110
105	646	J104	982	0	1235.25	110
106	648	J105	982.23	0	1235.29	109
107	653	J106	1305.49	0	1436.4	57
108	657	J107	1314.87	3	1436.36	53
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1221.22	100

	A	B	C	D	E	F
1	ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2	635	H-1	968	0	1268.9	130
3	634	H-2	970	0	1268.91	129
4	636	H-3	977.3	0	1268.91	126
5	637	H-4	1010	0	1268.92	112
6	447	H-5	982	0	1268.95	124
7	639	H-6	985	0	1268.93	123
8	640	H-7	998	0	1269.1	117
9	723	H-8	980	0	1268.93	125
10	753	H-9	1312	1500	1425.24	49
11	738	J-267	1014	0	1007	-3
12	740	J-268	1014	0	1007	-3
13	742	J-269	1014	0	1007	-3
14	178	J2	962	3	1268.9	133
15	179	J3	964	3	1268.91	132
16	180	J4	980	0	1268.92	125
17	181	J5	970	3	1268.92	129
18	182	J6	973	3	1268.92	128
19	183	J7	982	3	1268.95	124
20	184	J8	984	3	1268.93	123
21	185	J9	980	3	1268.93	125
22	186	J10	986	3	1133.36	64
23	208	J11	962	3	1268.9	133
24	211	J12	957.8	3	1116.81	69
25	212	J13	950	3	1116.69	72
26	213	J14	952.5	3	1116.7	71
27	214	J15	953.6	3	1116.73	71
28	215	J16	962.4	3	1117.14	67
29	216	J17	961	0	1117.52	68
30	217	J18	969	3	1117.66	64
31	218	J19	984.7	3	1117.85	58
32	219	J20	983.7	3	1117.84	58
33	220	J21	974.7	3	1117.87	62
34	221	J22	973	0	1121.32	64
35	222	J23	979	6	1123.05	62
36	223	J24	1004	3	1125.81	53
37	224	J25	994.5	3	1128.47	58
38	225	J26	994.5	3	1129.84	59
39	226	J27	989	3	1268.84	121
40	227	J28	1013	3	1267.76	110
41	228	J29	1006.9	3	1267.6	113

	A	B	C	D	E	F
42	229	J30	1015.7	3	1267.37	109
43	230	J31	1162	3	1267.22	46
44	232	J32	1204	3	1432.93	99
45	233	J33	1221	3	1432.17	91
46	234	J34	1250	3	1430.79	78
47	235	J35	1298	3	1430.1	57
48	236	J36	1306	3	1429.72	54
49	237	J37	1305	3	1427.72	53
50	239	J38	1168	3	1267.2	43
51	242	J40	1239	3	1434.83	85
52	276	J41	1001.6	3	1128.26	55
53	284	J42	994.5	3	1129.32	58
54	286	J43	1026	3	1128.86	45
55	288	J44	1004	3	1128.74	54
56	290	J45	1005	3	1128.73	54
57	295	J46	983.4	3	1268.96	124
58	297	J47	983.4	10	1268.98	124
59	299	J48	993	10	1269.05	119
60	301	J49	1006	0	1269.13	114
61	303	J50	1019	3	1269.64	108
62	305	J51	1012	3	1433.43	182
63	307	J52	1028	3	1433.61	175
64	309	J53	1035	3	1433.66	172
65	311	J54	1156	3	1434.16	120
66	313	J55	1272	3	1434.51	70
67	316	J56	1272	3	1435.72	71
68	318	J57	1305	3	1436.18	57
69	322	J58	1304	3	1429.77	54
70	327	J59	1008	3	1268.91	113
71	372	J60	970	3	1268.9	129
72	413	J66	1021	3	1433.47	178
73	440	J67	968.67	3	1268.9	130
74	444	J68	971	0	1268.91	129
75	451	J70	994.5	0	1129.82	59
76	460	J71	980	3	1268.93	125
77	463	J72	980	3	1267.99	125
78	465	J73	987.6	3	1133.43	63
79	469	J74	1307	3	1436.44	56
80	474	J75	1193	3	1434.3	104
81	478	J76	1176	3	1267.2	39
82	484	J77	1176	3	1433.6	111
83	487	J78	1181	3	1433.6	109
84	490	J79	1006.44	3	1128.99	53

	A	B	C	D	E	F
85	504	J82	1189	3	1433.6	106
86	506	J83	1314	3	1429.63	50
87	514	J84	1022	3	1124.29	44
88	518	J85	973.34	3	1120.56	64
89	524	J86	974	3	1119.65	63
90	525	J87	987	0	1119.09	57
91	528	J88	965.44	3	1117.6	66
92	565	J89	978	3	1268.91	126
93	606	J90	1452	3	1462	4
94	617	J91	973.41	3	1268.91	128
95	625	J92	963.65	0	1268.91	132
96	629	J93	989.11	0	1268.95	121
97	376	J94	963.52	3	1268.91	132
98	380	J96	966.79	0	1268.91	131
99	384	J97	1005.71	3	1268.92	114
100	638	J98	982	3	1268.95	124
101	388	J99	983	3	1268.93	124
102	396	J100	1002.65	3	1269.1	115
103	641	J101	1305	0	1426.81	53
104	644	J103	980	0	1268.95	125
105	646	J104	982	0	1268.95	124
106	648	J105	982.23	0	1268.95	124
107	653	J106	1305.49	0	1432.92	55
108	657	J107	1314.87	3	1426.84	48
109	677	J108	942	0	1092.06	65
110	679	J109	948	0	1086.05	60
111	681	J110	940	0	1064.27	54
112	683	J111	943	0	1054.98	48
113	685	J112	962	0	1049.83	38
114	687	J113	990	0	1023.89	15
115	689	J114	1014	0	1018.07	2
116	691	J115	995	0	1013.75	8
117	693	J116	1014	0	1010.84	-1
118	695	J117	1014	0	1009.67	-2
119	697	J118	1014	0	1007	-3
120	699	J119	942	0	1060.24	51
121	702	J120	942	0	1059.51	51
122	704	J121	942	0	1057.73	50
123	707	J122	957	0	1054.93	42
124	709	J123	963	0	1052.5	39
125	711	J124	980	24	1048.67	30
126	713	J125	942	0	1058.69	50
127	715	J126	942	24	1058.16	50

	A	B	C	D	E	F
128	717	J127	978.84	0	1034.06	24
129	720	J128	970.04	0	1038.15	29
130	44	J265	990	0	1268.93	121

APPENDIX 5 - VCWWM COMPLIANCE CALCULATION SHEETS

County of Ventura Waterworks Manual Compliance Check

Water Purveyor: Brandais-Bardin Mutual (BBM) Water Company

System or Zone: Entire System, Existing Condition

1. Maximum Day Demand (Q_0) from Analysis, Storage (V_0) and N				Section	Comments
a. Temerature in °F =	75	degrees			
b. The System is metered.	TRUE				
c. Maximum Day Average Demand (Q_0) =	135	GPM			Use
d. Maximum Number of Service Connections (N) =	50	Calculated N =		95	50
e. Required Storage Volume (V_0) in gallons =	76,725	Calculated V_0 =		46,250	76,725

2. Determine Minimum Required Fire Flow (F) and Duration (D_F)				Section	Comments
a. Minimum Fire Flow (F) =	1,500	GPM			
b. Minimum Fire Flow Duration (D_F) =	2	Hours			

3. Determine Required Minimum Total Storage (V_M)				Section	Comments
a. Domestic Storage Required (V_0) =	76,725	Gal			
b. Fire Storage Required (V_F) = 60 * F * D_F =	180,000	Gal			
c. Total Storage Required (V_M) = V_o + V_F =	256,725	Gal			
d. Actual Storage Available (V_1) =	908,000	Gal	OK		

4. Determine Minimum Required Total Supply (Q_M)				Section	Comments
a. Actual Supply Available in the System (Q_1) =	1,440,000	GPD	OK		Meter offers 1000GPM
b. Storage Factor (S) =	1.0				HOB Reservoir 1607
c. Domestic Supply Required (Q_D) = 1440 * S * Q_0 =	194,400	GPD			
d. Fire Supply Required (Q_F) =	36,000	GPD			
e. Total Supply Required (Q_M) = Q_D + Q_F =	230,400	GPD			

5. Determine Minimum Required Peak Hour Demand (PHD_M)				Section	Comments
a. Peak Hour Demand Multiplier (M) =	2.9				
b. P_A = (M * Q_0 / 2) + F =	1,694	GPM			
c. P_B = M * Q_0 =	387	GPM			
d. PHD_M = greater of P_A and P_B =	1,694	GPM			
e. Actual Peak Flow Rate (PHD_1) =	2,607	GPM	OK		gravity from reservoirs

6. Determine Emergency Requirements (P_E, VE_1 and VE_2)				Section	Comments
a. P_{ED} = M * Q_0 / 2 =	194				
b. P_{EF} = (M * Q_0 / 4) + 0.75 * F =	1,222	GPM			
c. P_E = the greater of P_{ED} and P_{EF} =	1,222	GPM			
d. V_{E1} = 60 * P_E =	73,312	Gal			
e. V_{E2} = V_0 + 0.75 * 60 * F =	113,750	Gal			
f. Power Interuption of 1 Hour					
Peak Hour Demand (must be ≥ P_E) =	2,607	GPM	OK		
Volume (must be ≥ V_{E1}) =	908,000	Gal	OK		
g. Pump Out of Service					
Peak Hour Demand (must be ≥ P_E) =	2,607	GPM	OK		
Volume (must be ≥ V_{E2}) =	908,000	Gal	OK		
h. Source Interruption					
Peak Hour Demand (must be ≥ P_E) =	2,607		OK		
Volume (must be ≥ V_{E2}) =	908,000		OK		

Water Purveyor: Brandais-Bardin Mutual (BBM) Water Company

System or Zone: Entire System, Existing Condition

7. Comments

Section 6 assumes meter is available and reservoirs are full (valid, calleguas is firm source and autofill on reservoirs).

Water Purveyor Approval					
Prepared By:	Heather O'Connell	**Title:**	Engineer	**Date:**	07/28/24
Approve By:		**Title:**		**Date:**	

County Use Only			
Accepted By:		**Date:**	

County of Ventura Waterworks Manual Compliance Check

Water Purveyor: Brandais-Bardin Mutual (BBM) Water Company

System or Zone: Entire System, Build Out Condition

1. Maximum Day Demand (Q_0) from Analysis, Storage (V_0) and N				Section	Comments
a. Temerature in °F =	75	degrees			
b. The System is metered.	TRUE				
c. Maximum Day Average Demand (Q_0) =	318	GPM			Use
d. Maximum Number of Service Connections (N) =	118		Calculated N =	223	118
e. Required Storage Volume (V_0) in gallons =	130,327		Calculated V_0 =	85,056	130,327

2. Determine Minimum Required Fire Flow (F) and Duration (D_F)			Section	Comments
a. Minimum Fire Flow (F) =	1,500	GPM		
b. Minimum Fire Flow Duration (D_F) =	2	Hours		

3. Determine Required Minimum Total Storage (V_M)				Section	Comments
a. Domestic Storage Required (V_0) =	130,327	Gal			
b. Fire Storage Required (V_F) = 60 * F * D_F =	180,000	Gal			
c. Total Storage Required (V_M) = V_o + V_F =	310,327	Gal			
d. Actual Storage Available (V_1) =	908,000	Gal	OK		

4. Determine Minimum Required Total Supply (Q_M)				Section	Comments
a. Actual Supply Available in the System (Q_1) =	1,440,000	GPD	OK		
b. Storage Factor (S) =	1.0				
c. Domestic Supply Required (Q_D) = 1440 * S * Q_0 =	457,920	GPD			
d. Fire Supply Required (Q_F) =	36,000	GPD			
e. Total Supply Required (Q_M) = Q_D + Q_F =	493,920	GPD			

5. Determine Minimum Required Peak Hour Demand (PHD_M)				Section	Comments
a. Peak Hour Demand Multiplier (M) =	2.2				1000 from Meter
b. P_A = (M * Q_0 / 2) + F =	1,843	GPM			1608 HOB Res.
c. P_B = M * Q_0 =	686	GPM			Gravity
d. PHD_M = greater of P_A and P_B =	1,843	GPM			
e. Actual Peak Flow Rate (PHD_1) =	2,608	GPM	OK		

6. Determine Emergency Requirements (P_E, VE_1 and VE_2)				Section	Comments
a. P_{ED} = M * Q_0 / 2 =	343				
b. P_{EF} = (M * Q_0 / 4) + 0.75 * F =	1,296	GPM			
c. P_E = the greater of P_{ED} and P_{EF} =	1,296	GPM			
d. V_{E1} = 60 * P_E =	77,786	Gal			
e. V_{E2} = V_0 + 0.75 * 60 * F =	152,556	Gal			
f. Power Interuption of 1 Hour					
Peak Hour Demand (must be ≥ P_E) =	2,608	GPM	OK		Gravity Flow
Volume (must be ≥ V_{E1}) =	908,000	Gal	OK		
g. Pump Out of Service					
Peak Hour Demand (must be ≥ P_E) =	2,608	GPM	OK		Gravity Flow
Volume (must be ≥ V_{E2}) =	908,000	Gal	OK		
h. Source Interruption					
Peak Hour Demand (must be ≥ P_E) =	2,608		OK		Gravity Flow
Volume (must be ≥ V_{E2}) =	908,000		OK		

Water Purveyor: Brandais-Bardin Mutual (BBM) Water Company

System or Zone: Entire System, Build Out Condition

7. Comments

Section 6 assumes Meter is available and Reservoirs are full.

Water Purveyor Approval

Prepared By: HEATHER O'CONNELL **Title:** ENGINEER **Date:** 7/28/24

Approve By: _____ **Title:** _____ **Date:** _____

County Use Only

Accepted By: _____ **Date:** _____

County of Ventura Waterworks Manual Compliance Check

Water Purveyor: Brandeis-Bardin Mutual (BBM) Water Company

System or Zone: Existing and Buildout Condition - Zone 1

1. Determine Number of Service Connections (N)

Category	Qty	Value	Total	Section	Comments
a. Number of single residential homes or lots =	8	1.0	8		employee cabins
b. Number of 2nd residential units ≤ 1,200 sf =		0.5	0		
c. Number of 2nd residential units > 1,200 sf =		1.0	0		
d. Number of multifamily housing units =		0.5	0		
e. Number of commercial and industrial acres =		5.0	0		
f. Number of agricultural acres =		2.0	0		
		Maximum Service Connections (N) =	**8**		
		Actual Service Connections Issued =	**50**		
		Connections Available =	**(42)**		

2. Determine Maximum Day Demand (Q_0) and Storage (V_0) from N

				Section	Comments
a. Temerature in °F =	75	degrees			
b. The System is metered.	TRUE				
b. Maximum Day Average Demand (Q_0) =	14	GPM			
c. Required Storage Volume (V_0) =	13,214	Gal			

3. Determine Minimum Required Fire Flow (F) and Duration (D_F)

				Section	Comments
a. Minimum Fire Flow (F) =	1,000	GPM			Minimum fire flow for
b. Minimum Fire Flow Duration (D_F) =	2	Hours			residential areas[1]

4. Determine Required Minimum Total Storage (V_M)

				Section	Comments
a. Domestic Storage Required (V_0) =	13,214	Gal			
b. Fire Storage Required (V_F) = 60 * F * D_F =	120,000	Gal			
c. Total Storage Required (V_M) = V_o + V_F =	133,214	Gal			
d. Actual Storage Available (V_1) =	608,000	Gal	OK		

5. Determine Minimum Required Total Supply (Q_M)

				Section	Comments
a. Actual Supply Available in the System (Q_1) =	608,000	GPD	OK		
b. Storage Factor (S) =	1.0				
c. Domestic Supply Required (Q_D) = 1440 * S * Q_0 =	19,584	GPD			
d. Fire Supply Required (Q_F) =	24,000	GPD			
e. Total Supply Required (Q_M) = Q_D + Q_F =	43,584	GPD			

6. Determine Minimum Required Peak Hour Demand (PHD_M)

				Section	Comments
a. Peak Hour Demand Multiplier (M) =	5.3				
b. P_A = (M * Q_0 / 2) + F =	1,036	GPM			
c. P_B = M * Q_0 =	72	GPM			
d. PHD_M = greater of P_A and P_B =	1,036	GPM			
e. Actual Peak Flow Rate (PHD_1) =	2,607	GPM	OK		

7. Determine Emergency Requirements (P_E, VE_1 and VE_2)				Section	Comments
a. $P_{ED} = M * Q_0 / 2 =$	36				
b. $P_{EF} = (M * Q_0 / 4) + 0.75 * F =$	768	GPM			
c. P_E = the greater of P_{ED} and P_{EF} =	768	GPM			
d. $V_{E1} = 60 * P_E =$	46,078	Gal			
e. $V_{E2} = V_0 + 0.75 * 60 * F =$	58,214	Gal			
f. Power Interuption of 1 Hour					
Peak Hour Demand (must be ≥ P_E) =	2,607	GPM	OK		
Volume (must be ≥ V_{E1}) =	608,000	Gal	OK		
g. Pump Out of Service					
Peak Hour Demand (must be ≥ P_E) =	2,607	GPM	OK		
Volume (must be ≥ V_{E2}) =	608,000	Gal	OK		
h. Source Interruption					
Peak Hour Demand (must be ≥ P_E) =	2,607		OK		
Volume (must be ≥ V_{E2}) =	608,000		OK		

8. Comments

1. Per WWM 1,000 gpm for residential areas - zone 1 supplied by Meter and gravity from Reservoir 1
Results vary slightly from hand calculations.

Water Purveyor

Prepared By: _____ **Title:** _____ **Date:** _____

Approve By: _____ **Title:** _____ **Date:** _____

County Use Only

Accepted By: _____ **Date:** _____

County of Ventura Waterworks Manual Compliance Check

Water Purveyor: Brandeis-Bardin Mutual (BBM) Water Company

System or Zone: Existing and Buildout Condition - Zone 3 (HOB)

1. Determine Number of Service Connections (N)

Category	Qty	Value	Total	Section	Comments
a. Number of single residential homes or lots =		1.0	0		
b. Number of 2nd residential units ≤ 1,200 sf =		0.5	0		
c. Number of 2nd residential units > 1,200 sf =		1.0	0		
d. Number of multifamily housing units =		0.5	0		
e. Number of commercial and industrial acres =	1	5.0	5		
f. Number of agricultural acres =		2.0	0		
		Maximum Service Connections (N) =	**5**		
		Actual Service Connections Issued =	**50**		
		Connections Available =	**(45)**		

2. Determine Maximum Day Demand (Q_0) and Storage (V_0) from N

			Section	Comments
a. Temerature in °F =	75	degrees		
b. The System is metered.	TRUE			
b. Maximum Day Average Demand (Q_0) =	10	GPM		
c. Required Storage Volume (V_0) =	9,997	Gal		

3. Determine Minimum Required Fire Flow (F) and Duration (D_F)

			Section	Comments
a. Minimum Fire Flow (F) =	1,500	GPM		Minimum fire flow for
b. Minimum Fire Flow Duration (D_F) =	2	Hours		residential areas[1]

4. Determine Required Minimum Total Storage (V_M)

				Section	Comments
a. Domestic Storage Required (V_0) =	9,997	Gal			
b. Fire Storage Required (V_F) = 60 * F * D_F =	180,000	Gal			
c. Total Storage Required (V_M) = V_o + V_F =	189,997	Gal			
d. Actual Storage Available (V_1) =	300,000	Gal	OK		

5. Determine Minimum Required Total Supply (Q_M)

				Section	Comments
a. Actual Supply Available in the System (Q_1) =	300,000	GPD	OK		
b. Storage Factor (S) =	1.0				
c. Domestic Supply Required (Q_D) = 1440 * S * Q_0 =	14,491	GPD			
d. Fire Supply Required (Q_F) =	36,000	GPD			
e. Total Supply Required (Q_M) = Q_D + Q_F =	50,491	GPD			

6. Determine Minimum Required Peak Hour Demand (PHD_M)

				Section	Comments
a. Peak Hour Demand Multiplier (M) =	6.2				
b. P_A = (M * Q_0 / 2) + F =	1,531	GPM			
c. P_B = M * Q_0 =	62	GPM			
d. PHD_M = greater of P_A and P_B =	1,531	GPM			
e. Actual Peak Flow Rate (PHD_1) =	2,607	GPM	OK		

County of Ventura Waterworks Manual Compliance Check

Water Purveyor: Brandeis-Bardin Mutual (BBM) Water Company

System or Zone: Existing Condition - Zone 2

1. Determine Number of Service Connections (N)

Category	Qty	Value	Total	Section	Comments
a. Number of single residential homes or lots =	37	1.0	37		
b. Number of 2nd residential units ≤ 1,200 sf =		0.5	0		
c. Number of 2nd residential units > 1,200 sf =		1.0	0		
d. Number of multifamily housing units =		0.5	0		
e. Number of commercial and industrial acres =		5.0	0		
f. Number of agricultural acres =		2.0	0		
		Maximum Service Connections (N) =	**37**		
		Actual Service Connections Issued =	**50**		
		Connections Available =	**(13)**		

2. Determine Maximum Day Demand (Q_0) and Storage (V_0) from N

				Section	Comments
a. Temerature in °F =	75	degrees			
b. The System is metered.	TRUE				
b. Maximum Day Average Demand (Q_0) =	53	GPM			
c. Required Storage Volume (V_0) =	38,385	Gal			

3. Determine Minimum Required Fire Flow (F) and Duration (D_F)

				Section	Comments
a. Minimum Fire Flow (F) =	1,500	GPM			Minimum fire flow for
b. Minimum Fire Flow Duration (D_F) =	2	Hours			commercial areas[1]

4. Determine Required Minimum Total Storage (V_M)

				Section	Comments
a. Domestic Storage Required (V_0) =	38,385	Gal			
b. Fire Storage Required (V_F) = 60 * F * D_F =	180,000	Gal			
c. Total Storage Required (V_M) = V_o + V_F =	218,385	Gal			
d. Actual Storage Available (V_1) =	908,000	Gal	OK		

5. Determine Minimum Required Total Supply (Q_M)

				Section	Comments
a. Actual Supply Available in the System (Q_1) =	1,440,000	GPD	OK		1000 FROM METER
b. Storage Factor (S) =	1.0				
c. Domestic Supply Required (Q_D) = 1440 * S * Q_0 =	75,924	GPD			
d. Fire Supply Required (Q_F) =	36,000	GPD			
e. Total Supply Required (Q_M) = Q_D + Q_F =	111,924	GPD			

6. Determine Minimum Required Peak Hour Demand (PHD_M)

				Section	Comments
a. Peak Hour Demand Multiplier (M) =	3.2				1000 FROM METER
b. P_A = (M * Q_0 / 2) + F =	1,584	GPM			1614 FROM HOB
c. P_B = M * Q_0 =	167	GPM			
d. PHD_M = greater of P_A and P_B =	1,584	GPM			
e. Actual Peak Flow Rate (PHD_1) =	2,614	GPM	OK		

7. Determine Emergency Requirements (P_E, VE_1 and VE_2)				Section	Comments
a. $P_{ED} = M * Q_0 / 2 =$	84				
b. $P_{EF} = (M * Q_0 / 4) + 0.75 * F =$	1,167	GPM			
c. P_E = the greater of P_{ED} and P_{EF} =	1,167	GPM			
d. $V_{E1} = 60 * P_E =$	70,009	Gal			
e. $V_{E2} = V_0 + 0.75 * 60 * F =$	105,885	Gal			
f. Power Interuption of 1 Hour					
Peak Hour Demand (must be ≥ P_E) =	1,499	GPM	OK		
Volume (must be ≥ V_{E1}) =	300,000	Gal	OK		
g. Pump Out of Service					
Peak Hour Demand (must be ≥ P_E) =	1,499	GPM	OK		
Volume (must be ≥ V_{E2}) =	300,000	Gal	OK		
h. Source Interruption					
Peak Hour Demand (must be ≥ P_E) =	1,499		OK		
Volume (must be ≥ V_{E2}) =	908,000		OK		

8. Comments

Water Purveyor					
Prepared By:		**Title:**		**Date:**	
Approve By:		**Title:**		**Date:**	

County Use Only		
Accepted By:		**Date:**

7. Determine Emergency Requirements (P_E, VE_1 and VE_2)				Section	Comments
a. $P_{ED} = M * Q_0 / 2 =$	31				
b. $P_{EF} = (M * Q_0 / 4) + 0.75 * F =$	1,141	GPM			
c. P_E = the greater of P_{ED} and P_{EF} =	1,141	GPM			
d. $V_{E1} = 60 * P_E =$	68,433	Gal			
e. $V_{E2} = V_0 + 0.75 * 60 * F =$	77,497	Gal			
f. Power Interuption of 1 Hour					
Peak Hour Demand (must be ≥ P_E) =	2,607	GPM	OK		
Volume (must be ≥ V_{E1}) =	300,000	Gal	OK		
g. Pump Out of Service					
Peak Hour Demand (must be ≥ P_E) =	2,607	GPM	OK		
Volume (must be ≥ V_{E2}) =	300,000	Gal	OK		
h. Source Interruption					
Peak Hour Demand (must be ≥ P_E) =	2,607		OK		
Volume (must be ≥ V_{E2}) =	300,000		OK		

8. Comments

1. Zone 3 supplied by gravity HOB Reservoir
Results vary slightly from hand calculations.

Water Purveyor

Prepared By: _____ **Title:** _____ **Date:** _____

Approve By: _____ **Title:** _____ **Date:** _____

County Use Only

Accepted By: _____ **Date:** _____

County of Ventura Waterworks Manual Compliance Check

Water Purveyor: Brandeis-Bardin Mutual (BBM) Water Company

System or Zone: Full Build-Out Condition - Zone 2

1. Determine Number of Service Connections (N)

Category	Qty	Value	Total	Section	Comments
a. Number of single residential homes or lots =	105	1.0	105		
b. Number of 2nd residential units ≤ 1,200 sf =		0.5	0		
c. Number of 2nd residential units > 1,200 sf =		1.0	0		
d. Number of multifamily housing units =		0.5	0		
e. Number of commercial and industrial acres =		5.0	0		
f. Number of agricultural acres =		2.0	0		
		Maximum Service Connections (N) =	**105**		
		Actual Service Connections Issued =	**50**		
		Connections Available =	**55**		

2. Determine Maximum Day Demand (Q_0) and Storage (V_0) from N

				Section	Comments
a. Temerature in °F =	75	degrees			
b. The System is metered.	TRUE				
b. Maximum Day Average Demand (Q_0) =	150	GPM			
c. Required Storage Volume (V_0) =	77,744	Gal			

3. Determine Minimum Required Fire Flow (F) and Duration (D_F)

				Section	Comments
a. Minimum Fire Flow (F) =	1,500	GPM			Minimum fire flow for
b. Minimum Fire Flow Duration (D_F) =	2	Hours			commercial areas[1]

4. Determine Required Minimum Total Storage (V_M)

				Section	Comments
a. Domestic Storage Required (V_0) =	77,744	Gal			
b. Fire Storage Required (V_F) = 60 * F * D_F =	180,000	Gal			
c. Total Storage Required (V_M) = V_o + V_F =	257,744	Gal			
d. Actual Storage Available (V_1) =	608,000	Gal	OK		

5. Determine Minimum Required Total Supply (Q_M)

				Section	Comments
a. Actual Supply Available in the System (Q_1) =	1,440,000	GPD	OK		1000 FROM METER
b. Storage Factor (S) =	1.0				
c. Domestic Supply Required (Q_D) = 1440 * S * Q_0 =	215,460	GPD			
d. Fire Supply Required (Q_F) =	36,000	GPD			
e. Total Supply Required (Q_M) = Q_D + Q_F =	251,460	GPD			

6. Determine Minimum Required Peak Hour Demand (PHD_M)

				Section	Comments
a. Peak Hour Demand Multiplier (M) =	2.2				1000 FROM METER
b. P_A = (M * Q_0 / 2) + F =	1,668	GPM			1614 FROM HOB
c. P_B = M * Q_0 =	335	GPM			
d. PHD_M = greater of P_A and P_B =	1,668	GPM			
e. Actual Peak Flow Rate (PHD_1) =	2,614	GPM	OK		

7. Determine Emergency Requirements (P_E, VE_1 and VE_2)				Section	Comments
a. $P_{ED} = M * Q_0 / 2 =$	168				
b. $P_{EF} = (M * Q_0 / 4) + 0.75 * F =$	1,209	GPM			
c. P_E = the greater of P_{ED} and P_{EF} =	1,209	GPM			
d. $V_{E1} = 60 * P_E =$	72,532	Gal			
e. $V_{E2} = V_0 + 0.75 * 60 * F =$	145,244	Gal			
f. Power Interuption of 1 Hour					
Peak Hour Demand (must be ≥ P_E) =	2,614	GPM	OK		
Volume (must be ≥ V_{E1}) =	608,000	Gal	OK		
g. Pump Out of Service					
Peak Hour Demand (must be ≥ P_E) =	2,614	GPM	OK		
Volume (must be ≥ V_{E2}) =	608,000	Gal	OK		
h. Source Interruption					
Peak Hour Demand (must be ≥ P_E) =	2,614		OK		
Volume (must be ≥ V_{E2}) =	608,000		OK		

8. Comments

Water Purveyor					
Prepared By:		**Title:**		**Date:**	
Approve By:		**Title:**		**Date:**	

County Use Only		
Accepted By:		**Date:**