

ELK TOWNSHIP
Gloucester County, New Jersey



Housing Element and Fair Share Plan

June 2025

Amended February 2026

Adopted by the Elk Township Combined Planning and Zoning Board
On June 18, 2025 (Resolution #2025-08)

Amended Plan Adopted by the Elk Township Combined Planning and Zoning Board
On March 2, 2026 (Resolution #2026-10)

Endorsed by the Elk Township Committee
On March 5, 2026 (Resolution #52-2026)

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The original of this document was signed and
sealed in accordance with NJAC 13:41-1.3.b



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TABLE OF CONTENTS

I.	INTRODUCTION	1
A.	AFFORDABLE HOUSING IN NEW JERSEY	1
B.	HOUSING ELEMENT AND FAIR SHARE PLAN REQUIREMENTS	3
C.	MUNICIPAL SUMMARY	4
D.	FAIR SHARE OBLIGATIONS	4
E.	AFFORDABLE HOUSING HISTORY	5
II.	HOUSING ELEMENT ANALYSIS	8
A.	EXISTING HOUSING STOCK	8
B.	DEMOGRAPHIC CHARACTERISTICS	11
C.	EMPLOYMENT	15
D.	PROJECTED HOUSING STOCK	15
E.	FAIR SHARE CAPACITY	15
III.	FAIR SHARE PLAN	17
A.	CONTENTS OF A FAIR SHARE PLAN	17
B.	REGIONAL INCOME LIMITS	17
C.	REHABILITATION OBLIGATION COMPLIANCE	18
D.	SUMMARY OF PRIOR, THIRD, AND FOURTH ROUND OBLIGATIONS (1987 - 2025)	19
E.	SUMMARY OF AFFORDABLE HOUSING DEVELOPMENT	19
F.	PRIOR ROUND OBLIGATION COMPLIANCE (1987-1999)	20
G.	THIRD ROUND OBLIGATION COMPLIANCE (1999-2025)	20
H.	FORTH ROUND OBLIGATION COMPLIANCE (2025-2035)	22
APPENDIX 1	Municipal Resolution Adopting Fourth Round Affordable Housing Obligations	
APPENDIX 2	Spending Plan	
APPENDIX 3	Block 31 Lot 2.01 & Block 58 Lot 2 Affordable Housing Inclusionary Overlay	
APPENDIX 4	Block 34, Lots 6, 7, 8 & 9 Affordable Housing Inclusionary Overlay	
APPENDIX 5	Draft “Ordinance Amending the Amended Aura III Redevelopment Plan To Include Block 34, Lots 9, 8, 7, & 6 Block 31, Lot 2.01 & Block 58, Lot 2 With Standards for Affordable Housing Inclusionary Townhouse Development to Address The Requirements of the Fair Housing Act Regarding Compliance With the Township’s Affordable Housing Obligations”	
APPENDIX 6	Vacant Land Analysis	

I. INTRODUCTION

A. AFFORDABLE HOUSING IN NEW JERSEY

The New Jersey Supreme Court ruled in 1975, in a decision now commonly referred to as “*Mount Laurel I*,” that developing municipalities in New Jersey have a constitutional obligation to provide a realistic opportunity for the construction of low and moderate income housing. Then in 1983 in the “*Mount Laurel II*” decision, the Supreme Court went further, creating an incentive for private developers to enforce the Mount Laurel doctrine by suing municipalities that have not chosen to comply with the *Mount Laurel* principles. Needing a mechanism to implement the *Mount Laurel* doctrine, the legislature adopted the Fair Housing Act (N.J.S.A. 52:27D-310) in 1985, and created the Council on Affordable Housing as the administrative alternative to dealing with affordable housing cases through the courts. COAH was given the responsibility to establish housing regions, estimate low and moderate income housing needs, set criteria for municipalities to determine and address their fair share affordable housing numbers, and review and approve housing elements and fair share plans.

On December 20, 2004, COAH’s first version of the Third Round rules became effective. At that time the Third Round was to cover the time period from 1999 to 2014, since the First and Second Round covered the 1987 to 1999 period. The Third Round affordable housing delivery period was to run from January 1, 2004 through January 1, 2014. After much legal debate on the Third Round Rules, on March 10, 2015, the Supreme Court ruled that the New Jersey Council on Affordable Housing (COAH) failed to act, and as a result, the Courts assumed jurisdiction over municipal compliance with the Mount Laurel doctrine and the Fair Housing Act.

The Township’s Third Round Housing Element and Fair Share Plan was prepared utilizing the Prior Round Rules (N.J.A.C. 5:91 Procedural and N.J.A.C. 5:93 Substantive) as well as the guidance provided in the March 10, 2015 Supreme Court Order and the Township’s January 29, 2018 Settlement Agreement - In the Matter of the Township of Elk, County of Gloucester, Dock No. GLO-L-913-15.

On March 20, 2024, Governor Murphy signed A4/S50 into law ushering in substantial amendments to the New Jersey Fair Housing Act (FHA) and significantly altering the manner in which municipalities will determine their Fourth Round “fair share” obligations, maintain immunity from Mount Laurel lawsuits, respond to objections, and secure approval of their Fourth Round Housing Element and Fair Share Plans. The new affordable housing legislation, A-4 and S-50, establishes processes for calculating municipal housing obligations, compliance filing deadlines, procedures for challenges and dispute resolution mechanisms. The legislation includes considerable amendments to the New Jersey Fair Housing Act and significantly changes the manner in which municipalities will determine their Fourth Round “fair share” obligations, maintain immunity from Mount Laurel lawsuits, respond to objections, and secure approval of their Fourth Round Housing Element and Fair Share Plans.

The amended FHA does the following:

1. Abolishes the Council on Affordable Housing (COAH);
2. Requires the DCA to calculate municipal “fair share” numbers;

3. Establishes a process for municipalities either to accept the DCA's numbers or to determine and substantiate their own present and prospective fair share obligations based on the formulas established in the bill;
4. Creates parameters for fair share plans, such as age-restricted unit maximums, "family-rental" minimums, bonus credit maximums, etc.;
5. Identifies various compliance techniques;
6. Provides criteria for municipalities to secure and maintain Fourth Round "temporary immunity" from exclusionary zoning/builder's remedy lawsuits during the process;
7. Permits interested parties to file formal challenges to the numbers and fair share plans, which will be addressed by the new "Affordable Housing Dispute Resolution Program;"
8. Provides a process for fair share plan approval either through the DCA or the courts via declaratory judgment actions; and
9. Delineates ongoing post-approval municipal monitoring and reporting requirements.

The amended FHA also establishes a series of deadlines for actions to be taken prior to, and after, the beginning of Fourth Round in July of 2025. These are:

January 31, 2025: Deadline for Towns to adopt their numbers via "Binding Resolution" (with or without using the DCA's numbers) thereby establishing temporary immunity.

This was completed via Resolution No.33-125, adopted by Township Committee on January 21, 2025 and filed with the Program in a Declaratory Judgment action under the caption, In the Matter of the Elk Township's Determination of Fourth Round Affordable Housing Obligations, Docket No.: GLO-L-104-25 ("DJ Action"). (Appendix 1)

February 28, 2025: Deadline to challenge the town's Binding Resolution and adopted numbers.

No challenge was made by Elk Township.

March 1, 2025: If no challenges are filed by interested parties, the Town's numbers are established by default and immunity remains in effect.

No challenges were filed by interested parties.

April 1, 2025: Deadline for the Affordable Housing Dispute Resolution Program ("AHDRP") to settle the number challenge(s).

Not applicable to Elk Township.

June 30, 2025: Deadline to adopt and endorse a Housing Element and Fair Share Plan and file with the AHDRP to maintain temporary immunity.

July 1, 2025: First day of Fourth Round

August 31, 2025: Deadline to challenge the validity of a Town's Housing Element and Fair Share Plan.

December 31, 2025: Deadline for the Town to settle the challenge or provide an explanation as to why it will not make all, or some of the requested changes, or both.

March 15, 2026: Deadline for the Fourth Round of affordable housing obligations, the implementing ordinances and resolutions, proposed, and incorporating any changes from the program, shall be adopted. Failure to meet the March 15 deadline shall result in the municipality losing immunity from exclusionary zoning litigation.

It is noted that the Mayor and Committee of Elk Township adopted Resolution No.81-2025: Resolution of the Mayor and Committee of the Township of Elk Directing the Combined Planning and Zoning Board of Adjustment to Prepare a Housing Element and Fair Share Plan and Spending Plan to Address the Township of Elk's 4th Round Affordable Housing Obligations (Appendix 2).

B. HOUSING ELEMENT AND FAIR SHARE PLAN REQUIREMENTS

The Township must prepare and submit both a Housing Element (an element of Master Plan) and Fair Share Plan (describing how the Township will address the obligation). The requirements of the Housing Element are outlined below (N.J.A.C. 5:97-2.1, 2.3 and N.J.S.A. 52:27D-310).

The Housing Element must review and analyze the Township's housing stock, demographic and employment characteristics, leading into the Fair Share Plan, which will demonstrate how the Township will endeavor to provide for its Fair Share obligation. The Housing Element must provide an analysis demonstrating that the plan will provide a realistic opportunity to meet the housing Township's obligations and identify which ordinances must be revised to incorporate the provisions for low and moderate income housing. A municipality's housing element must be designed to achieve the goal of access to affordable housing to meet present and prospective housing needs, with particular attention to low and moderate income housing.

1. Housing Element Requirements under the Fair Housing Act:

- a. An inventory of the municipality's housing stock by age, condition, purchase or rental value, occupancy characteristics, and type, including the number of units affordable to low and moderate income households and substandard housing capable of being rehabilitated, and in conducting this inventory the municipality shall have access, on a confidential basis for the sole purpose of conducting the inventory, to all necessary property tax assessment records and information in the assessor's office, including but not limited to the property record cards;
- b. A projection of the municipality's housing stock, including the probable future construction of low and moderate income housing, for the next ten years, taking into account, but not necessarily limited to, construction permits issued, approvals of applications for development and probable residential development of lands;

- c. An analysis of the municipality's demographic characteristics, including but not necessarily limited to, household size, income level and age;
- d. An analysis of the existing and probable future employment characteristics of the municipality;
- e. A determination of the municipality's present and prospective fair share for low and moderate income housing and its capacity to accommodate its present and prospective housing needs, including its fair share for low and moderate income housing; and
- f. A consideration of the lands that are most appropriate for construction of low and moderate income housing and of the existing structures most appropriate for conversion to, or rehabilitation for, low and moderate income housing, including a consideration of lands of developers who have expressed a commitment to provide low and moderate income housing.

C. MUNICIPAL SUMMARY

The land area of Elk Township is 19.69 square miles or approximately 12,366 acres and is located in south central Gloucester County. Elk Township is bordered by Harrison Township and Glassboro Borough to the north, Clayton Borough and Franklin Township to the east, Upper Pittsgrove Township to the south and South Harrison Township to the west.

The 2023 population estimate for Elk is 4,426 persons based on 2023 U.S. Census Bureau data population estimate.

D. FAIR SHARE OBLIGATIONS

1. Prior Round (1987-1999) and Third Round (1999-2025) Obligations

As a result of the Township's January 29, 2018 Settlement Agreement - In the Matter of the Township of Elk, County of Gloucester, Dock No. GLO-L-913-15, the Township's affordable housing obligation was determined to be:

Elk Township Affordable Housing Obligations 1987-2025 (January 29, 2018 Settlement Agreement)	
Rehabilitation (Present Need 2015)	9
Prior Round (1987 – 1999)	127
Third Round (Prospective Need 1999-2025)	282

2. Fourth Round Obligations (2025-2035)

Under the Affordable Housing Obligations for 2025-2035 (Fourth Round) Methodology and Background as issued by the New Jersey Department of Community Affairs (NJDCa), the Township's Fourth Round (2025-2035) obligations are:

Elk Township Affordable Housing Obligations (NJDCa)	
Rehabilitation (Present Need 2025)	17
Fourth Round (Prospective Need 2025-2035)	214

E. AFFORDABLE HOUSING HISTORY

A Summary of Elk's historic affordable housing timeline is provided below:

First and Second Round

The Township of Elk's first round participation may be summarized as follows:

1. On February 9, 1990 Elk Township submitted a Round I Housing Element and Fair Share Plan to the Council on Affordable Housing. The Round 1 obligation consisted of 29 rehabilitations and 92 new units.
2. On December 4, 1991 COAH issued Administrative Order No. 8, which required Elk Township to complete and submit certain information within 60 days. The Township complied with the requirements as confirmed by the COAH review report dated December 9, 1992.
3. The Housing Element was amended by the Planning Board on April 2, 1992 and the Township Committee re-petitioned COAH for substantive certification on April 2, 1992.
4. On February 3, 1993 Elk received substantive certification of its Round I Housing Element and Fair Share Plan (HEFSP). It was determined by COAH that wastewater treatment capacity in Elk constituted a scarce resource (since only 250,000 gpd had been allocated), and thereby approved a durational adjustment, which was to remain in effect until adequate wastewater treatment capacity becomes available to serve the inclusionary housing site. Certification expired in 1999.
5. Elk Township's cumulative Rounds I and II new construction obligation for the period of 1987 through 1999 was 127.
6. The Housing Element and Fair Share Plan were readopted on January 21, 1999 with a resolution indicating that the existing inclusionary zoning continued to provide a realistic opportunity for the cumulative Rounds I and II obligation. Township Committee adopted a resolution on February 4, 1999 endorsing the HEFSP, and filed the Plan with COAH, but there was no petition for certification (required within 2 years of filing).

Third Round

COAH first proposed third round substantive and procedural rules in October, 2003. 35 N.J.R. 4636(a); 35 N.J.R. 4700(a). Those rules remained un-adopted and COAH re-proposed both the substantive and procedural third round rules (N.J.A.C. 5:94 and 5:95) in August of 2004 and adopted the same effective on December 20, 2004. (the "2004 Regulations")

The Township of Elk's third round participation may be summarized as follows:

1. On November 10, 2005 the Planning Board adopted a new Housing Element and Fair Share Plan responding to the first iteration of the Round III COAH rules (resolution 2005-36). The Round III HEFSP was endorsed by Township Committee on November 14, 2005 (resolution 128-2005), and was submitted to COAH on November 29, 2005.
2. On May 27, 2007 COAH provided the Township with a preliminary review. The Township and COAH staff corresponded via phone and email. The Township formally responded with supplementary information on September 13, 2007. At that time COAH was not in a position to grant substantive certification because a January 2007 Court decision had already required COAH to reexamine the Round III methodology and propose revised rules.
3. COAH adopted new Round III rules in June of 2008, which became effective on October 20, 2008.
4. On December 17, 2008 Elk Planning Board adopted a new Housing Element and Fair Share Plan that addressed the cumulative Rounds I, II, and III obligations. The HEFSP was endorsed by Township Committee on December 18, 2008 and submitted to COAH on December 30, 2008. No objections were filed.
5. Elk's HEFSP was deemed complete by COAH on March 4, 2009.
6. Elk's updated Mandatory Development Fee Ordinance was approved by COAH on March 26, 2009 and was adopted by Ordinance 2009-4 on April 20, 2009.
7. Township staff and professionals corresponded informally with COAH staff through 2009 and early 2010.
8. On April 29, 2010 Elk representatives met with COAH Director Sean Thompson and COAH planner Dennis Funaro to discuss the status of their review and some of the complexities in Elk's plan (infrastructure issues and agreements among developers).
9. On August 9, 2010 COAH issued a report and requested additional information. The deadline to respond was October 8, 2010. On September 29, 2010 the Township was granted a 90 day extension to respond to the request for additional information (until January 6, 2011).
10. On October 8, 2010 the Appellate Division invalidated the Round III methodology.

11. It didn't appear prudent to continue down the path with COAH until there was some certainty about the Round III rules. On December 28, 2010 the Township requested an extension/stay through June 2011. A response to this request was not received.
12. In November 2011 the Planning Board's affordable housing subcommittee met to discuss the status of the Fair Share Plan and the inclusionary aspects of the Silvergate Planned Unit Development project in particular.
13. Since 2011, though the formal COAH review process stalled, the Township has continued to work with developers to ensure the continued viability of inclusionary housing opportunities.
14. Despite the efforts of several developers to plan for and develop residential and commercial space in the eastern portion of Elk Township (within the Route 55 corridor), growth in Elk Township has been slow (the population in 1990 was 3,806; the population in 2010 was 4,216; and the 2014 estimate was 4,234). Elk Township has maintained opportunities for the inclusion of affordable units along with market rate development opportunities.
15. On March 3, 2016, Township representatives participated in a Court mediation with representatives of Fair Share Housing.
16. On April 13, 2016, the Township Combined Planning and Zoning Board adopted the Elk Township, Gloucester County, New Jersey – Housing Element and Fair Share, Revised April 5, 2018.
17. Negotiations continued through 2017 and in January 2018 all parties agreed on the terms of a settlement on January 29, 2018.
18. January 29, 2018 Settlement Agreement - In the Matter of the Township of Elk, County of Gloucester, Dock No. GLO-L-913-15.
19. January 25, 2025 Final Judgment of Compliance of Repose – In the Matter of the Application of the Township of Elk, County of Gloucester, Docket No. GLO-000913-15.

II. HOUSING ELEMENT ANALYSIS

A. EXISTING HOUSING STOCK

An inventory of the municipality's housing stock by age, condition, purchase or rental value, occupancy characteristics, and type, including the number of units affordable to low and moderate income households and substandard housing capable of being rehabilitated, and in conducting this inventory the municipality shall have access, on a confidential basis for the sole purpose of conducting the inventory, to all necessary property tax assessment records and information in the assessor's office, including but not limited to the property record cards.

According to the Census estimate, in 2023 there were 1,560 year-round housing units in Elk, of which 1,416 were occupied and 144 were vacant, in 2023 the vacancy rate of was 0 for homeowners and 0% for rentals.

1. Age of Housing Stock

The Elk Township housing stock is older than the majority of the County stock and the number of persons per household is slightly larger than that of the county.

	Persons Per Household 2023	% Housing Stock Built 1939 or Earlier
Elk Township	3.07	13.2
Gloucester County	2.67	9.8

Source: U.S. Census Bureau, 2023 ACS

Elk Township Age of Housing Stock		
Year Constructed	Number of units	Percent of Total in Year 2023
2020 or later	11	1560
2010-2019	201	0.7
2000 to 2009	351	12.9
1990 to 1999	89	22.5
1980 to 1989	168	5.7
1970 to 1979	158	10.8
1960 to 1969	278	10.1
1950 to 1959	82	17.8
1940 to 1949	16	5.3
1939 or earlier	206	1.0

According to the residential building permit data from the New Jersey Department of Community Affairs, 2 residential certificates of occupancy were issued in 2023 in the Elk Township.

2. Condition and Substandard Units

Of the 1,416 housing units in existence estimated by the 2023 American Community Survey, zero (0) units were reported to be without complete plumbing facilities and zero (0) units were lacking complete kitchen facilities. There are 21 units within the Township that have more than one (1) occupants per room. An assessment of the number of substandard units capable of

being rehabilitated may be made by considering the number of homes without complete plumbing and kitchen facilities since this information is provided in the Census sample data, but there are other factors to consider as well. Occupied housing units with a low market value relative to the average in the area may be an indicator of potential for rehabilitation. COAH has also used “crowding” and the age of the housing units to estimate the number of units in need of rehabilitation. There are surely at least a few units that are in need of rehabilitation, within the Township.

The table below presents a breakdown of the Township’s housing stock by number of rooms as they relate to County averages. The Township has a higher percentage of homes with more than six rooms than Gloucester County overall, with the median number of rooms in the Township at 7.0 per housing unit.

Elk Township Number of Rooms in Housing Units			
Elk # of Rooms	Elk # of Units	Elk %	Gloucester County %
1	0	0	1
2	0	0	1.2
3	25	1.6	5.8
4	36	2.3	10.4
5	368	23.6	13.2
6+	1131	72.5	68.4
Median for Elk	7.0 rooms		6.6 rooms

3. Ownership and Rental Characteristics

A majority, 88.1 percent, of Elk’s population live in owner occupied housing units, while 11.9 percent of the population lived in rented housing units according to the 2023 ACS. 90 percent of the total housing units in Elk Township are single family dwellings (rented and owned), 10 percent are mobile homes.

Year Round Housing Units			Owner-occupied		Rental	
Occupied	Vacant	Total	No.	%	No.	%
1,416	144	1,560	1,247	88.1	169	11.9

4. Occupancy Characteristics and Housing Type

The vacancy rate for year round units is low in the Township, 0% vacancy for owner-occupied units and 0% vacancy for rental units. The average household size in the Township is 3.13 persons per owner occupied units and 2.63 for renter occupied units.

The number of bedrooms in a home is often reflective of the size of a home. The municipalities with a newer housing stock, have a larger percentage of units with more bedrooms. This is reflective of the trend toward larger, more sprawling homes in America over the last several decades. Elk has an older stock of homes and therefore lends itself to a larger percentage of homes with two to three bedrooms.

	Bedroom Distribution Percent of Housing Stock With:		
	One or less Bedrooms	2 - 3 Bedrooms	4+ Bedrooms
Elk Township	3.9%	56.2%	39.9%
Gloucester County	8.7	60	31.3

Source: U.S. Census Bureau, 2023 ACS

Percent Distribution of Housing Units by Structure Type Elk Township		
	Number of units	Percentage
1 (detached)	1378	88.3
1 (attached)	26	1.7
2	0	0
3-4	0	0
5-9	0	0
10-19	0	0
20+	0	0
Mobile	156	10
Other	0	0
Total	1560	100

Source: U.S. Census Bureau, 2023 ACS

Selected Housing or Housing-Related Value Characteristics				
	Median Value Housing	Median Contract Rent	Median Household Income	Rental Vacancy Rate (%)
Elk Township	\$320,100	\$1,181	\$97,474	0%

Source: U.S. Census Bureau, ACS 2023 5 Year Estimate

B. DEMOGRAPHIC CHARACTERISTICS

According to the 2010 US Census, between 2000 and 2014, Elk's population began to increase. The population estimate as of 2023 is 4,426 people, a 26% increase since 2000.

1. Historic Population Trends

Elk Township's population increased consistently since the 1940's, with a slight dip between 1990 and 2000, from 1,656 people in 1940 to 4,246 people in 2023. The US Census estimates an increase of 5% between 2010 and 2023. The table below shows the population changes from 1940 through 2023.

Elk Township, Gloucester County Population									
1940	1950	1960	1970	1980	1990	2000	2010	2020	2023*
1,656	2,074	2,635	2,707	3,187	3,806	3,514	4,216	4,424	4,426

Table 6. New Jersey Resident Population by Municipality 1930-1990; * US Census, estimate

2. Recent Population Change

Between 2010 and 2023, the population in Elk increased from 4,216 to 4,426, an increase of 210 people or 5%.

3. Population Density

In 2023, the population density in Elk Township was estimated to be 224.78 people per square mile, which is significantly less than Gloucester County's and State's population density overall.

Elk Township and Surrounding Municipalities Density Indicators			
	Square Miles	Population per sq mile	Housing units per sq mile
Elk	19.69	224.78	79.23
Gloucester County	337.18	903.09	348.57
New Jersey	8,722.58	1,062.42	432.88

Source: Calculated from U.S. Census Bureau, 2023 ACS

4. Age of Population

The table below provides a breakdown of Elk's population by age cohorts and gender in 2023. The largest age cohort is the 45-54 years of age bracket, with 19.6% of the total population. This is consistent with the Township's median age of 44.4 years. The second largest age cohort is the 5-14 range with 16.2% of the population. With the highest age cohorts being 45-64, over 30% of the population, this indicates that the over 65 population will continue to grow, assuming that the older residents chose to stay in Elk as they reach retirement age.

Elk Township Summary Population Characteristics 2023		
	Number of People	% of Total
Male	2,215	50
Female	2,111	50
Total	4,426	100.0
Under 5	138	3.1
5 - 14	716	16.2
15 - 24	525	11.9
25 - 34	272	6.1
35 - 44	645	14.6
45 - 54	868	19.6
55 - 64	558	12.6
65+	704	15.9
Median Age	44.4	N/A

Source: U.S. Census Bureau, 2023 ACS

5. Household Characteristics

The next table includes family and household characteristics of the Township. In 2023, there were 1,416 households and 1,165 families in Elk with an average of 3.07 persons per household. The table below indicates that Elk is comprised of a majority of married/ couple family households (63.3%) with the second largest household type being householders living alone at 11% .

	Number of Households	Percent
Family Households	1,165	82.3
Married Couple Family	897	63.3
Male Householder, no spouse	100	7.1
Female householder, no spouse	168	11.9
Non Family Households	251	17.7
Householder living alone	156	11
Householder not living alone	95	6.7
Total Households	1,416	100

Source: U.S. Census Bureau, 2023 ACS

6. Income Level & Poverty Status

Elk has higher percentages of households in higher income brackets than the County overall. The Township had an estimated 2023 household median income of \$144,470, compared with the Gloucester County household median income of \$102,807. 0.4% percent of Elk's families had household incomes below the federal poverty level.

Regulations define low income (those earning up to 50% of the median household income for the region) and moderate income households (those earning from more than 50% to 80% of the median household income for the region). The figures are adjusted for household size and the municipality's geographic location since cost of living differs among regions.

Elk is located within Region Five, which includes Camden, Gloucester and Burlington Counties. The 2025 income guidelines for Region Five (based on household size) range from \$66,880 (one person household) to \$95,520 (four person household) for the upper limits of what is considered moderate income; and \$41,800 (one person household) to \$78,850 (eight person household) for the upper limit of what is considered low income. Median income for the region ranges from \$83,600 to \$157,700.

Elk Township 2023 Household Income						
	Elk Township		Gloucester County		New Jersey	
	Households	Elk %	Households	Gloucester County %	Households	State %
Less than \$10,000	14	1	3,591	3.2	140,262	4
10,000 - 14,999	18	1.3	2,279	2.0	99,362	2.9
15,000 - 24,999	26	1.8	2,449	2.2	82,366	2.4
25,000 - 34,999	28	2.0	2,820	2.5	93,036	2.7
35,000 - 49,999	57	4.0	5,659	5.1	184,753	5.3
50,000 - 74,999	52	3.7	8,409	7.5	276,601	8.0
75,000 - 99,999	131	9.3	15,720	14.1	448,192	12.9
100,000 - 149,999	163	11.5	13,305	11.9	397,939	11.4
150,000 - 199,999	229	16.2	22,593	20.2	627,526	18.0
200,000+	698	49.3	34,971	31.3	1,128,318	32.4

Source: U.S. Census Bureau, 2023 American Community Survey 5-year Estimates

Elk Township 2023 Income Levels			
	Elk Township	Gloucester County	New Jersey
Median Household Income	\$144,470	\$102,807	\$101,050
Median Family Income	\$179,087	\$127,695	\$123,892
Poverty Status (Percent of people)	3.8	7.6	9.8
Poverty Status (Percent of families)	0.4	5.6	7.1

Source: U.S. Census Bureau, 2012-2013 American Community Survey 5-year Estimates

7. Employment Status of Residents

Of the 3,514 estimated residents aged sixteen and over in 2023, 2,192 were estimated to be in the labor force (62.4%). 4.2 percent of the labor force were estimated to be unemployed in 2023 (148). The mean travel time to work for Township residents is 28.1 minutes.

The employment data included in the US Census for the Elk Township residents provides a picture of what types of work Township residents are involved in, but does not indicate where those jobs are located. As indicated in the table below, the most significant employment activities of the employed residents are Educational, Health and Social Services with 23.4%, and Retail Trade with 16.3%.

Industry Code	Elk	
	Jobs	%
1 Agriculture, Forestry, Fisheries & Mining	19	0.9
2 Construction	166	8.1
3 Manufacturing	202	9.9
4 Wholesale Trade	123	6.0
5 Retail Trade	334	16.3
6 Transportation, Warehousing, Utilities	118	5.8
7 Information	57	2.8
8 Finance, Insurance, Real Estate, Rental	116	5.7
9 Prof., Sci., Mgmt., Admin Services	167	8.2
10 Educ. Health, Social Services	479	23.4
11 Arts, Entertainment, Recreation, Food	74	3.6
12 Other Services	48	2.3
13 Public Administration	141	6.9

Source: U.S. Census Bureau, 2023 ACS

Employment of Elk Residents			
	# Persons	% ET	% Gloucester County
Management, Professional. & Related	1,002	49.0	45.3
Service	211	10.3	13.4
Sales and Office	366	17.9	22.0
Natural resources, Construction & Maintenance	190	9.3	8.1
Production, Transp. & Material Moving	275	13.5	11.1
Total	2,044	100	100

Source: U.S. Census Bureau, 2023 Census

C. EMPLOYMENT

1. Employment Trends and Outlook

The Delaware Valley Regional Planning Commission publishes employment projections. Employment in Elk Township is expected to rise through 2050, with 15% increase.

Elk Township, DVRPC Projected Employment								
Year	2020	2025	2030	2035	2040	2050	Change 2025-50	% change
Projected Employment	1230	1527	1501	1489	1552	1751	224	15

Source: DVRPC 2040 Employment Forecasts, 2020-2050

D. PROJECTED HOUSING STOCK

Residential growth in Elk has been stagnant since 2009 through 2023

Historic Trend of Certificates of Occupancy and Demolition Permits															
	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
COs Issued	2	1	0	1	0	0	3	26	19	11	0	0	3	2	2
Demolitions	0	0	0	1	0	0	2	7	9	5	4	2	2	0	0
Net	2	1	0	0	0	0	1	19	10	6	-4	-2	1	2	2

Source: New Jersey Construction Reporter and Municipal construction office records

E. FAIR SHARE CAPACITY

1. Land Capacity / Availability of Existing and Planned Infrastructure

Elk Township is comprised of the following diverse State Planning Areas: PA 2 Suburban, PA 3 Fringe, PA 4 Rural, PA 4B Rural Environmental Sensitive, PA 5 Environmentally Sensitive, and Park.

When there is a lack of sufficient land to meet the new construction obligation, a municipality is entitled to rely on NJAC 5:93 to adjust the new construction obligation downward. The adjusted number is known as the realistic development potential (RDP). The RDP represents the portion of the new construction affordable housing obligation that can theoretically be addressed with inclusionary development (defined as a mix of market and affordable units) on lots identified as being suitable in the Vacant Land Analysis ("VLA"). The portion of the new construction obligation for which there is insufficient land is known as the "unmet need". The unmet need is calculated as the difference between the total new construction obligation and the RDP.

The Township performed a Vacant Land Analysis (VLA) entitled Elk Township, Gloucester County, New Jersey – Vacant Land Analysis, Amended February 2026 which is included by reference into this Housing Element and Fair Share Plan. The referenced VLA resulted in the identification of 86 areas of vacant property which can potentially be serviced by public water and sewer within the period of certification (2025-2035) and can accommodate the minimum presumptive density of 6 du / acre for inclusionary affordable development. The Realistic Development Potential (RDP) for inclusionary affordable units was calculated as 57 units.

In addition, when a community has sufficient land area to accommodate the minimum presumptive density of minimum density of 6 du / acre for inclusionary affordable development, but insufficient water and/or sewer to support inclusionary development, the vacant parcels available for inclusionary development shall be reviewed to determine if it is realistic for the site to receive the required water and sewer during the period of certification (2025 to 2035). The 86 parcels that compromise the Realistic Development Potential calculation of 57 units as delineated above are within the sewer service area as delineated on the Elk Township Water Quality Management Plan map "Sewer Service Area Map (Churchill Consulting Engineers, PC) last revised 5/23/12 was included as Appendix 8 of the referenced Vacant Land Analysis, dated February 2026.

The Township claims a Durational Adjustment for all other vacant parcels that have sufficient land area to accommodate the minimum presumptive density of minimum density of 6 du / acre for inclusionary affordable development but are not in the reference sewer service area.

III. FAIR SHARE PLAN

A. CONTENTS OF A FAIR SHARE PLAN

The Fair Share Plan contains the following information:

- Description of existing credits intended to satisfy the obligation;
- Description of mechanisms that will be used to meet any outstanding obligation; and
- An implementation schedule that sets forth a detailed timetable for units to be provided.

In adopting its housing element, a municipality may provide for its fair share of low and moderate income housing by means of any technique or combination of techniques that provide a realistic opportunity for the provision of the fair share. As per N.J.A.C. 5:93, these potential techniques include but are not limited to:

- Rehabilitation of existing substandard housing units;
- ECHO units (as a Rehabilitation credit);
- Municipally-sponsored and 100% affordable developments;
- Zoning for inclusionary development;
- Alternative living arrangements;
- Accessory apartment program;
- Purchase of existing homes;
- Write-down/buy-down programs; and
- Assisted living residences.

B. REGIONAL INCOME LIMITS

Dwelling units are affordable to low and moderate income households if the maximum sales price or rental cost is within their ability to pay such costs, based on a specific formula. The State provides income limits based upon the median gross household income of the affordable housing region in which the household is located. A moderate income household is one with a gross household income equal to or more than 50%, but less than 80%, of the median gross regional household income. A low income household is one with a gross household income equal to 50% or less of the median gross regional household income. Very-low income households are those with a gross household income equal to 30% or less of the median gross household income. Elk is located in Region 5, which contains Burlington, Camden, and Gloucester Counties.

Using the 2025 regional income limits, a four-person household moderate income is capped at \$95,520. Two-person households could make up to \$76,480 and be considered a moderate income household or earn up to \$47,800 and be considered a low income household. See the table on the following page for greater detail.

2025 REGIONAL INCOME LIMITS FOR REGION 5				
	1 Person	2 Person	3 Person	4 Person
Median	\$83,600.00	\$95,600.00	\$107,500.00	\$119,400.00
Moderate	\$66,880.00	\$76,480.00	\$86,000.00	\$95,520.00
Low	\$41,800.00	\$47,800.00	\$53,750.00	\$59,700.00
Very Low	\$25,080.00	\$28,680.00	\$32,250.00	\$35,820.00

Source: UHAC 2025 Affordable Housing Regional Income Limits by Household Size

C. REHABILITATION OBLIGATION COMPLIANCE

The Opinion issued by the Supreme Court of New Jersey on March 10, 2015 states that “the Appellate Division also approved a methodology for identifying substandard housing that used fewer surrogates [or indicators] to approximate the number of deficient or dilapidated housing units”. The Order states that three indicators was not an abuse of discretion. The three indicators utilized are old and over-crowded units, homes with incomplete plumbing and housing units with incomplete kitchens.

Pursuant to the “NJDCA Affordable Housing Obligations for 2025-2035 (Fourth Round Methodology and Background)”, the Township has a rehabilitation requirement of 17 which will addressed through funds in the Affordable Housing Trust Fund and through continued participation in Gloucester County’s rehabilitation program, which is administered with the use of CDBG and HOME funds and utilizing the Township’s Affordable Housing Trust Fund.

N.J.A.C. 5:93-5.2(g) and (h) requires \$10,000 to be spent per unit and a six-year control on affordability for owner-occupied units Rental units are required to have ten-year controls on affordability. Additionally a major system must be repaired in order for a home to qualify as a credit. Section II of this report indicates the condition of houses from the most recently available census data.

- 1 The rules specifically require a minimum of \$2,000 per unit to be spent on administration and \$8,000 per unit to be spent on the rehabilitation activity, which totals at least \$10,000.
- 2 A major system is defined by N.J.A.C. 5:93-5.2(b) as weatherization, a roof, plumbing (including wells), heating, electricity, sanitary plumbing (including septic systems) and/or a load bearing structural system.

D. SUMMARY OF PRIOR, THIRD, AND FOURTH ROUND OBLIGATIONS (1987 – 2035)

Elk Township Affordable Housing Obligations 1987-2035	
Rehabilitation (Present Need 2025)	17
Prior Round (1987 – 1999)	127
Third Round (Prospective Need 1999-2025)	282
Fourth Round (Prospective Need 2025-2035)	214

E. SUMMARY OF AFFORDABLE HOUSING DEVELOPMENT

The following is a summary of affordable housing units currently constructed or planned to be constructed within the compliance period (2025-2035):

1. Silvergate Phase 4: 50 affordable family rental units under the Villages at Still Run Redevelopment Area (formerly Silvergate General Development Plan). It is noted Villages at Still Run Redevelopment Area currently is projected to have a total of 150 affordable units and 999 market rates units.
2. Silvergate Phase 6: 100 affordable family rental units the Villages at Still Run Redevelopment Area (formerly Silvergate General Development Plan). It is noted Villages at Still Run Redevelopment Area currently is projected to have a total of 150 affordable units and 999 market rates units.
3. Aura 1: 218 unit planned and approved development and by the "conversion law" all units are family for sale or rental. 44 affordable family units are required as part of the overall development. Per the conditions of the Elk Township Combined Planning and Zoning Board, the affordable housing units for Aura I must be constructed as part of the Aura II development.
4. Aura 2 (Formerly Part of Latham Park): A planned 121 unit development. 8 affordable family for sale or rental units were originally approved for this development with these 8 units will be built in conjunction with the Aura I affordable units. The Township land use approvals for this development have expired. The owner of the development is currently working towards revesting of Township land use and outside agency approvals. It is understood that a 20% affordable set aside will be required for revesting of Township land use approvals which would result in an additional 16 affordable units. This would result in a total of 24 inclusionary affordable family for sale or rental units.
5. Aura 3 (formerly part of Latham Park): In December 2024 the Elk Township Combined Planning and Zoning Board granted Preliminary and Final Major Subdivision and Preliminary and Final Site Plan review for approval of the construction of 962 residential housing units consisting of 685 single-family age-restricted units and 276 multi-family residential units. The development is divided into three (3) sections, The Willows, The Carriages and The Reeds. The Willows at Orchard Glen consist of 186 single family age-restricted detached dwellings. The Carriages at Orchard Glen consist of 250 active adult single family detached dwellings and 250 active adult twin dwellings (34 of which

are affordable). The Reeds Apartments are garden style apartments that consist of 276 units (76 of which are affordable).

6. 416 Ewan Rd., Robins Nest. Existing supportive needs group home.
7. 125 Daylight Dr., Kelsch Homes. Existing supportive needs group home.
8. 148 Iredell Land, ARC. Existing supportive needs group home.
9. 311 Elk Road, Wounded Warriors. Existing supportive needs group home.
10. 685 Aura Rd., Scioto Properties. Existing supportive needs group home.
11. 355 Union Street, Volunteers of America. Existing supportive needs group home.
12. 103 28th Ave, Scioto Properties. Existing supportive needs group home.
13. 414 Whig Lane Kelsch Homes, Existing supportive needs group home.

F. PRIOR ROUND OBLIGATION COMPLIANCE (1987 - 1999)

The Township had a Prior Round obligation of 127 units and satisfied this obligation utilizing 95 of the 100 affordable family rental units of Silvergate Phase 6 planned under the Villages at Still Run Redevelopment Area (formerly Silvergate General Development Plan). Also a total of 32 associated bonus credits were claimed. This resulted in a total of 127 credits to satisfy the prior round obligation in accordance with the January 9, 2018 Settlement Agreement.

Name of Project	Type	Units	Bonus Credits	Total
Silvergate Phase 6	Family Rental	95	32	127

Round 3 Testing Requirements:

Min rental obligation $0.25 \times 127 = 32$ Provided 95

Max senior $0.25 \times 127 = 32$ Provided 0

Max bonus $0.25 \times 127 = 32$ Provided 32

G. THIRD ROUND OBLIGATION COMPLIANCE (1999 - 2025)

The Township had a third round obligation of 282 units and satisfied this obligation per the following:

1. Silvergate Phase 4: 50 affordable family rental units under the Villages at Still Run Redevelopment Area (formerly Silvergate General Development Plan). It is noted Villages at Still Run Redevelopment Area currently is projected to have a total of 150

affordable units and 999 market rates units. Credit taken for 50 affordable family rental units and 50 bonus credits for a total of 100 credits.

2. Aura 1: 44 affordable units. 218 unit planned and approved development and by the "conversion law" all units are family for sale or rental. 44 affordable family units are required as part of the overall development. Per the conditions of the Elk Township Combined Planning and Zoning Board, the affordable housing units for Aura I must be constructed as part of the Aura II development. Credit taken for 44 affordable family for sale or rental units.
3. Aura 2 (Formerly Part of Latham Park): 8 affordable family for sale or rental units. These units will be built in conjunction with the Aura I affordable units. Credit taken for 8 affordable family for sale or rental units.
4. Aura 3 (formerly part of Latham Park): In December 2024 the Elk Township Combined Planning and Zoning Board granted Preliminary and Final Major Subdivision and Preliminary and Final Site Plan review for approval of the construction of 962 residential housing units consisting of 685 single-family age-restricted units and 276 multi-family residential units. The development is divided into three (3) sections, The Willows, The Carriages and The Reeds. The Willows at Orchard Glen consist of 186 single family age-restricted detached dwellings. The Carriages at Orchard Glen consist of 250 active adult single family detached dwellings and 250 active adult twin dwellings (34 of which are affordable). The Reeds Apartments are garden style apartments that consist of 276 units (76 of which are affordable). Credit taken for 34 affordable senior for sale units. Credit also taken for 52 of the 76 affordable family rental units and associated 21 bonus credits.
5. 125 Daylight Dr., Kelsch Homes. Existing supportive needs group home. Credit taken for 5 beds.
6. 685 Aura Rd., Scioto Properties. Existing supportive needs group home. Credit taken for 4 beds.
7. 355 Union Street, Volunteers of America. Existing supportive needs group home. Credit taken for 7 beds.
8. 103 28th Ave, Scioto Properties. Existing supportive needs group home. Credit taken for 3 beds.
9. 414 Whig Lane Kelsch Homes, Existing supportive needs group home. Credit taken for 4 beds.

Name of Project	Type	Units	Bonus Credits	Total
Silvergate Phase 4	Family Rental	50	50	100
Aura 1	Family for-sale or rental	44		44
Aura 2	Family for-sale or rental	8		8
Aura 3	Senior for sale	34		34
Aura 3	Family Rental	52	21	73
125 Daylight Dr. Kelsch Homes	Group home	5		5
685 Aura Rd. Scioto Properties	Group home	4		4
355 Union Street Volunteers of America	Group home	7		7
103 Twenty-Eight Ave Scioto Properties	Group home	3		3
414 Whig Lane – Kelsch Homes	Group home	4		4
TOTAL		211	71	282

The above provides 211 units and 71 bonus credits for a total of 282 credits.

Round 3 Testing Requirements:

Min rental obligation $0.25 \times 282 = 71$ Provided 102

Max senior $0.25 \times 282 = 71$ Provided 34

Max bonus $0.25 \times 282 = 71$ Provided 71

H. FOURTH ROUND OBLIGATION COMPLIANCE (2025 - 2035)

The Township has a fourth round obligation of 214 units. As indicated in section E. FAIR SHARE CAPACITY, the Township has a calculated Realistic Development Potential (RDP) of 57 units and a calculated Unmet Need of 157 units.

Satisfaction of Realistic Development Potential (RDP) Requirement:

To satisfy the 57 unit RDP, the Township will utilize the following:

Name of Project	Type	Units	Bonus Credits	Total
Silvergate Phase VI	Family Rental	5		5
Aura 3	Family Rental	24		24
416 Ewan Rd. Robins Nest	Group home	4	4	8
148 Iredell Lane ARC	Group home	4	4	8
311 Elk Road Wounded Warriors	Group home	7	7	14
TOTAL		44	15	59

Round 4 Testing Requirements:**Maximum Bonus:**

Allowed: 25% of 57 for 15 units
Taken: 15 credits

Maximum Senior:

Allowed: 30% (excluding bonus credits) of 57 for 17 units
Provided: 0 units

Minimum Family:

Required: 50% of 57 units for 29 units
Provided: 29 units

Minimum Rental:

Required: 25% of 57 for 15 units
Provided: 29 units

Minimum Family Rental:

Required: 50% of minimum rental for 8 units
Provided 29 units

Minimum Very Low Income:

Required: 13% of 30 low and moderate for 4 units
Provided: 4

Unmet Need

The Township has calculated unmet need of 157 units. The Township has the following credits towards this unmet need.

1. Aura 2 (Formerly Part of Latham Park): A planned 121 unit development. 8 affordable family for sale or rental units were originally approved for this development with these 8 units will be built in conjunction with the Aura I affordable units. The Township land use approvals for this development have expired. The owner of the development is currently working towards revesting of Township land use and outside agency approvals. It is understood that a 20% affordable set aside will be required for revesting of Township land use approvals which would result in an additional 16 affordable units. This would result in a total of 24 inclusionary affordable family for sale or rental units.

25% Adjusted Prospective Need Requirement

The amended Fair Housing Act requires a municipality that receives an adjustment of their prospective need to identify sufficient parcels that are likely to develop during the Fourth Round to address 25 percent of their adjusted prospective unmet need with realistic or meaningful zoning.

The Township's unmet need is 157 units (214 obligation - 57 RDP). Therefore, the Township is required to identify sufficient parcels that are likely to develop during the Fourth Round to address 40 affordable units (157 units x 25% = 40 units).

The Township will be utilizing the remaining 16 units from the Aura 2 development which were not allocated to any rounds above.

In addition, the Township has identified two (2) areas that are likely to develop during the Fourth Round. These areas are currently in the Aura III Redevelopment Area. The Township has consulted with DR Horton as the contract redeveloper for the Aura and Silvergate developments and has received confirmation that DR Horton would actively pursue the following redevelopment opportunities:

Block 31, Lot 2.01 & Block 58 Lot 2.

These developed parcels total 10.03 acres in area and are located at the north east intersection of Aura Road and Whig Lane. The parcels are currently included in the Aura III Redevelopment Plan area. An aerial map of these parcels has been provided under Appendix 3 entitled "Block 31 Lot 2.01 & Block 58 Lot 2 Affordable Housing Inclusionary Overlay".

A draft "ORDINANCE AMENDING THE AMENDED AURA III REDEVELOPMENT PLAN TO INCLUDE BLOCK 34, LOTS 9, 8, 7, & 6 BLOCK 31, LOT 2.01 & BLOCK 58, LOT 2 WITH STANDARDS FOR AFFORDABLE HOUSING INCLUSIONARY TOWNHOUSE

DEVELOPMENT TO ADDRESS THE REQUIREMENTS OF THE FAIR HOUSING ACT REGARDING COMPLIANCE WITH THE TOWNSHIP'S AFFORDABLE HOUSING OBLIGATIONS has been provided as Appendix 5 and is intended to be adopted by the Township.

The above referenced Ordinance will create affordable housing overlay zoning in the Aura III Redevelopment Plan to permit family townhouses at a density of 8 units per acre with an inclusionary affordable housing set aside of 20%. This results in a potential development of 80 family units (10.03 acres x 8 units per acre = 80 units) with 16 affordable family units (80 units x 20% = 16 units). In addition, 8 bonus credits will be available as this is a redevelopment of previously developed properties for a total of 24 credits.

As the subject parcels are located in the Aura redevelopment area, they can be serviced by public water and sewer by NJAW under the Silvergate & Aura Water and Sanitary Sewer Infrastructure Agreement, dated June 28, 2018 and the associated NJDEP Treatment Works Approval – Aura and Silvergate, Elk Township, Gloucester County, NJ.

Block 34, Lots 6, 7, 8, & 9

These developed parcels total 4.61 acres in area and are located at the south west intersection of Aura Road and Whig Lane. The parcels are currently included in the Aura III Redevelopment Plan area. An aerial map of these parcels has been provided under Appendix 4 entitled "Block 34, Lots 6, 7, 8 & 9 Affordable Housing Inclusionary Overlay".

A draft "ORDINANCE AMENDING THE AMENDED AURA III REDEVELOPMENT PLAN TO INCLUDE BLOCK 34, LOTS 9, 8, 7, & 6 BLOCK 31, LOT 2.01 & BLOCK 58, LOT 2 WITH STANDARDS FOR AFFORDABLE HOUSING INCLUSIONARY TOWNHOUSE DEVELOPMENT TO ADDRESS THE REQUIREMENTS OF THE FAIR HOUSING ACT REGARDING COMPLIANCE WITH THE TOWNSHIP'S AFFORDABLE HOUSING OBLIGATIONS has been provided as Appendix 5.

The above referenced Ordinance will create affordable housing overlay zoning in the Aura III Redevelopment Plan to permit family townhouses at a density of 8 units per acre with an inclusionary affordable housing set aside of 20%. This results in a potential development of 36 family units (4.61 acres x 8 units per acre = 36 units) with 8 affordable family units (36 units x 20% = 8 units). In addition, 4 bonus credits will be available as this is a redevelopment of previously developed properties for a total of 12 credits.

As the subject parcels are located in the Aura redevelopment area, they can be serviced by public water and sewer by NJAW under the Silvergate & Aura Water and Sanitary Sewer Infrastructure Agreement, dated June 28, 2018 and the associated NJDEP Treatment Works Approval – Aura and Silvergate, Elk Township, Gloucester County, NJ.

The above provides for 40 credits which addresses the 25% Adjusted Prospective Need Requirement of 40 units as demonstrated in the following table.

Name of Project	Type	Units
Aura 2	Family for-sale or rental	16
Block 31, Lot 2.01 & Block 58 Lot 2. Redevelopment.	Family Rental	16
Block 34, Lots 6, 7, 8, & 9. Redevelopment	Family Rental	8
TOTAL		40

The Township is addressing its remaining Fourth Round obligation (unmet need of 157 units) through a durational adjustment. As demonstrated by the above facts, the Township does not have sufficient capacity for water or sewer to support inclusionary development and thus is entitled to a durational adjustment in accordance with N.J.A.C. 5:93-4.3 for the remaining obligation.

In accordance with N.J.A.C. 5:93-4.3(c), the requirement to address the remaining Fourth Round obligation (unmet need of 157 units) shall be deferred until adequate water and/or sewer are made available. The Township shall reserve and set aside new water and/or sewer capacity, when it becomes available, for low and moderate income housing, on a priority basis. Municipal officials shall endorse all applications to the Department of Environmental Protection (DEP) or its agent to provide water and/or sewer capacity. Where the DEP or its designated agent approves a proposal to provide infrastructure to a site for the development of low and moderate income housing identified in the housing element, the Township shall permit such development. Where the Township has designated sites for low and moderate income housing that lack adequate water and/or sewer and where the DEP or its designated agent approves a proposal to provide water and/or sewer to a site other than those designated for the development of low and moderate income housing in the housing element, the Township shall amend its housing element and fair share housing ordinance to permit development of such site for low and moderate income housing.

To further address the adjusted prospective unmet need, the Township intends to amend the Township's Ordinance Chapter 40 AFFORDABLE HOUSING, by providing the following:

Any property in the Township of Elk that is currently zoned for residential use or subsequently receives a zoning change, use variance approval, or a redevelopment plan to permit residential development shall provide an affordable housing set-aside of 20%. This affordable housing set-aside shall apply to all residential developments of 5 units or more. No property shall be subdivided so to avoid compliance with this requirement. Any residential development of 4 units or less units shall provide an affordable housing development fee in accordance with Article II Mandatory Development Fees. Moreover, this provision governs municipal actions only and shall not entitle any property owner or developer to such action by the Township. All affordable units created pursuant to this subsection shall be governed by

the provisions of this chapter. This shall apply to all residential developments unless the affordable housing requirements of a residential development is otherwise prescribed by the most recent adopted Housing Element and Fair Share Plan.

1. Very Low Income Housing

In 2008, P.L. 2008, c. 46 was signed by the Governor, which made a number of changes to the affordable housing rules. In fact, it amended the Fair Housing Act (hereinafter "FHA") to include a requirement that at least 13% of affordable housing units must be made available to very-low income households. Specifically, the FHA reads:

The council shall coordinate and review the housing elements as filed pursuant to section 11 of P.L.1985, c.222 (C.52:27D-311), and the housing activities under section 20 of P.L.1985, c.222 (C.52:27D-320), at least once every three years, to ensure that at least 13 percent of the housing units made available for occupancy by low-income and moderate income households will be reserved for occupancy by very low income households, as that term is defined pursuant to section 4 of P.L.1985, c.222 (C.52:27D-304).

"Very low income housing" means housing affordable according to federal Department of Housing and Urban Development or other recognized standards for home ownership and rental costs and occupied or reserved for occupancy by households with a gross household income equal to 30% or less of the median gross household income for households of the same size within the housing region in which the housing is located.

Elk Township's very-low income obligation remains at 13% of the affordable housing obligation not constructed.

2. Preservation of Multigenerational Family Continuity

Pursuant to the 2024 Fair Housing Act, an analysis was conducted to evaluate the extent to which municipal ordinances and local factors promote or impede the preservation of multigenerational family continuity, as recommended by the Multigenerational Family Housing Continuity Commission (established under P.L.2021, c. 273). The Commission's primary objective is to facilitate senior citizens' ability to reside with their extended families, in so doing strengthening multigenerational family ties.

A review of the Township's ordinances reveals no provisions that would diminish this objective.

3. State Development and Redevelopment Plan Consistency

This Housing Element and Fair Share Plan is consistent with the 2001 State Development and Redevelopment Plan (SDRP) and the draft proposed SDRP as the proposed projects and zoning mechanisms will provide a meaningful opportunity for the construction of affordable housing.

4. Conclusion

Elk Township will continue to grow in a planned and careful manner. The Township has already planned for a large amount of affordable homes and will continue to plan for responsible development in the future. It has always been Elk Township's intent to be inclusionary in its

housing policies. The Township has prepared a plan that provides opportunities for the provision of affordable housing, but its implementation will require continued cooperation among the Township, developers, Gloucester County, and non-profit organizations.

APPENDIX 1

Municipal Resolution Adopting Fourth Round Affordable Housing Obligations

RESOLUTION R-81-2025

RESOLUTION OF THE MAYOR AND COMMITTEE OF THE TOWNSHIP OF ELK DIRECTING THE COMBINED PLANNING AND ZONING BOARD OF ADJUSTMENT TO PREPARE A HOUSING ELEMENT AND FAIR SHARE PLAN AND SPENDING PLAN TO ADDRESS THE TOWNSHIP OF ELK'S 4TH ROUND AFFORDABLE HOUSING OBLIGATIONS

WHEREAS, on March 20, 2024, the New Jersey Legislature adopted legislation known as P.L.2024, c.2, which set forth a procedure for calculating the 4th Round affordable housing obligation for municipalities, and which required this calculation to be adopted by the governing body of a municipality by way of Resolution; and

WHEREAS, N.J.S.A. 52:27D-304.2(b)(1) provides that the Fourth Round municipal affordable housing obligations shall run from the period of July 1, 2025 through June 30, 2035, and Region 5 consists of Burlington County, Camden County and Gloucester County ("Region 5"); and

WHEREAS, in accordance with N.J.S.A. 52:27D-304.1(f)(1)(b), on January 21, 2025, the Township of Elk adopted Resolution No. 33-2025, which set the Township's 4th Round affordable housing obligation as: (1) Present Need – 17 units; and (2) Prospective Need – 214 units; and

WHEREAS, on January 23, 2025, the Township filed the Resolution No. 33-2025 with the newly created Affordable Housing Dispute Resolution Program (the "Program") pursuant to N.J.S.A. 52:27D-313.2, in a Declaratory Judgment action under the caption, In the Matter of the Township of Elk's Determination of 4th Round Affordable Housing Obligations, Docket No.: GLO-L-000104-25 ("DJ Action"); and

WHEREAS, N.J.S.A. 52:27D-304.1(f)(2)(a), requires a municipality participating in the Program must adopt and submit to the Program a Housing Element and Fair Share Plan on or before June 30, 2025; and

WHEREAS, the 4th Round Housing Element and Fair Share Plan must contain:

1. Descriptions of all of the compliance mechanisms to ensure full compliance with the Township's 4th Round obligations and its prior round obligations;
2. Assessment of the degree to which the municipality has met its fair share obligation from the prior rounds of affordable housing obligations and determine to what extent this obligation is unfulfilled or whether the municipality has credits in excess of its prior round obligations;
3. If any prior round obligation remains unfulfilled, a description of how the unfulfilled obligation will be addressed, except that the Housing Element and Fair Share Plan shall retain any sites from prior round obligations that are subject to a contractual agreement with a developer, or for which the developer has filed a complete application seeking subdivision or site plan approval prior to adoption of the Housing Element and Fair Share Plan;
4. A detailed site suitability analyses, based on the best available data, for each of the un-built inclusionary or 100 percent affordable housing sites in the plan (including unbuilt sites from prior rounds);
5. Identification of each of the sites that were proposed for such development in the 4th Round and rejected, along with the reasons for such rejection;
6. A concept plan for the development of each of the selected sites should be overlaid on the most up to date environmental constraints map for that site as part of its analysis;
7. Documentation as to the start dates and lengths of affordability controls, income and bedroom distributions, and all affordable housing agreements or deed restrictions for all existing affordable units;

8. Drafts of proposed zoning or other ordinances and resolutions to implement the compliance mechanisms;
9. Spending Plan for the 4th Round; and
10. All other required components of a housing element as set forth in N.J.S.A. 52:27D-310; and

WHEREAS, the Housing Element and Fair Share Plan is an element of the Township Master Plan, which the Combined Planning and Zoning Board of Adjustment has the authority to prepare, adopt or amend pursuant to N.J.S.A. 40:55-28; and

WHEREAS, the Mayor and Committee of the Township of Elk request that the Combined Planning and Zoning Board of Adjustment prepare and adopt an Amended Housing Element and Fair Share Plan before June 30, 2025 in order to implement and comply with the Township's 4th Round affordable housing obligations.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Committee of the Township of Elk, as follows:

1. The foregoing recitals are incorporated herein by reference as if fully set forth at length.
2. The Clerk shall provide a copy of this Resolution to the Secretary of the Combined Planning and Zoning Board.
3. Mayor and Committee hereby direct that the Combined Planning and Zoning Board of Adjustment to prepare and adopt an Amended Housing Element and Fair Share Plan before June 30, 2025 in order to implement and comply with the Township's 4th Round affordable housing obligations.
4. The Combined Planning and Zoning Board of Adjustment shall submit to the Township's Solicitor a copy of the adopted Housing Element and Fair Share Plan, and the Combined Planning and Zoning Board of Adjustment's Resolution approving same within twenty-four (24) hours of adoption.

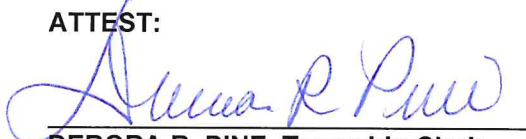
ADOPTED at a Regular Meeting of the Elk Township Committee held May 1, 2025.

TOWNSHIP OF ELK

BY: _____

CAROLYN D. K. SAMMONS, Mayor

ATTEST:


DEBORA R. PINE, Township Clerk

ROLL CALL VOTE				
COMMITTEE	AYE	NAY	ABSTAIN	ABSENT
Cammarata	✓			
Cowan	✓			
Lucas	✓			
Rambo	✓			
Sammons	✓			

CERTIFICATION

I hereby certify that the above resolution is a true copy of a resolution adopted by the Township Committee of the Township of Elk, County of Gloucester, State of New Jersey, at a meeting held by the same on May 1, 2025, in the Elk Township Municipal Building, 680 Whig Lane, Monroeville, New Jersey.

DEBORA R. PINE
Clerk

FILED

April 24, 2025

Hon. Robert G. Malestein, P.J.Ch.

The Hon. ROBERT G. MALESTEIN, P.J.Ch.

Superior Court of New Jersey
Law Division – Civil Part
GLOUCESTER COUNTY
Gloucester County Courthouse
1 N. Broad Street
Woodbury, New Jersey 08096

PREPARED BY THE COURT:

**IN THE MATTER OF THE
DECLARATORY JUDGMENT
ACTION OF THE TOWNSHIP
OF ELK, GLOUCESTER
COUNTY PURSUANT TO P.L.
2024, CHAPTER 2**

Petitioner.

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION – CIVIL PART
GLOUCESTER COUNTY
DOCKET NO. GLO-L-104-25

Civil Action

Mt. Laurel Program

**ORDER FIXING MUNICIPAL
OBLIGATIONS FOR “PRESENT NEED”
AND “PROSPECTIVE NEED” FOR THE
FOURTH ROUND HOUSING CYCLE**

THIS MATTER, having come before the Court on its own motion, *sua sponte*, on the Complaint for Declaratory Judgment filed on January 23, 2025 (“DJ Complaint”) by the Petitioner, TOWNSHIP of ELK (“Petitioner” or “Municipality”), pursuant to N.J.S.A. 52:27D-304.2, -304.3, and -304.1(f)(1)(c) of the New Jersey Fair Housing Act, N.J.S.A. 52:27D-301, *et seq.* (collectively, the “FHA”), and in accordance with Section II.A of Administrative Directive #14-24 (“Directive #14-24”) of the Affordable Housing Dispute Resolution Program (the “Program”), seeking a certification of compliance with the FHA;

AND IT APPEARING, that on October 18, 2024, pursuant to the FHA (as amended), the New Jersey Department of Community Affairs (“DCA”) issued its report entitled “*Affordable Housing Obligations for 2025-2035 (Fourth Round)*”,¹ therein setting forth the “present need” and prospective need” obligations of all New Jersey municipalities for the Fourth Round housing cycle (the “DCA’s Fourth Round Report”);

AND IT APPEARING that, pursuant to the DCA’s Fourth Round Report, the “**present need**” obligation of the Petitioner has been calculated and reported as 17 affordable units, and its “**prospective need**” obligation of the Petitioner has been calculated and reported as 214 affordable units, and which calculations have been deemed “presumptively valid” for purposes of the FHA;

AND THE COURT, having determined that no “interested party” has filed a “challenge” to the Petitioner’s DJ Complaint by way of an Answer thereto as provided for and in accordance with Section II.B of Directive #14-24 of the Program;

AND THE COURT, having found and determined, therefore, that the “present need” and “prospective need” affordable housing obligations of the Petitioner for the Fourth Round housing cycle as calculated and reported in the DCA’s Fourth Round Report have been committed to by the Petitioner and are uncontested, and for good cause having otherwise been shown:

IT IS, THEREFORE, on this 24th day of **APRIL 2025 ORDERED AND ADJUDGED** as follows:

1. That the “present need” obligation of the Municipality, be, and hereby is fixed as 17 affordable units for the Fourth Round housing cycle.

¹ See https://nj.gov/dca/dlps/pdf/FourthRoundCalculation_Methodology.pdf

2. That the “prospective need” obligation of the Municipality, be, and hereby is fixed as 214 affordable units for the Fourth Round Housing cycle; and

3. That the Petitioner is hereby authorized to proceed with preparation and adoption of its proposed Housing Element and Fair Share Plan for the Fourth Round, incorporating therein the “present need” and “prospective need” allocations aforesaid (and which plan shall include the elements set forth in the “Addendum” attached to Directive #14-24), by or before June 30, 2025, as provided for and in accordance with Section III.A of Directive #14-24, and without further delay..

IT IS FURTHER ORDERED, that any and all “challenges” to the Petitioner’s housing element and fair share plan as adopted pursuant to Paragraph 3 above must be filed by August 31, 2025, by way of Answer/Objection filed in the eCourts case jacket for this Docket No. # GLO-104-25 ~~1-25~~, and as provided for and in accordance with Section III.B of Directive #14-24; and

IT IS FURTHER ORDERED, that a copy of this Order shall be deemed served on the Petitioner, Petitioner’s counsel and the Program Chair upon its posting by the Court to the eCourts case jacket for this matter pursuant to R. 1:5-1(a) and R. 1:32-2A.

SO ORDERED:

Robert G. Malestein, P.J.Ch.

HON. ROBERT G. MALESTEIN, P.J.Ch.
Designated Mt. Laurel Judge – Vicinage 15

(X) Uncontested.

APPENDIX 2

Spending Plan

Township of Elk, Gloucester County
Affordable Housing Trust Fund Spending Plan

June 2025

Adopted _____ 2025

INTRODUCTION

The Township of Elk, Gloucester County has prepared a Housing Element and Fair Share Plan in accordance with the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.), the Fair Housing Act (N.J.S.A. 52:27D-301).

This Spending Plan is intended to demonstrate commitment of the funds in the affordable housing trust fund within four years of the date of collection as required by P.L. 2008 c.46, to ensure that the Township will retain the funds and have the authority to utilize the funds in support of affordable housing within the Township. This Spending Plan provides a specific plan for the expenditure of the monies collected as of June 2025 and a guide for the expenditure of monies that may be deposited in the fund over the next ten years.

1. REVENUES FOR CERTIFICATION PERIOD

To calculate a projection of revenue anticipated through 2035, the Township of Elk considered the following:

(a) Development fees:

1. Development fees collected as of the time of preparation of this plan.
2. Development fees will be collected on all future development that may come before the Township's Joint Land Use Board in accordance with the Township's development fee Ordinance.

(b) Payment in lieu (PIL):

- No known committed PIL

(c) Other funding sources:

Funds from other sources, including, but not limited to, the sale of units with extinguished controls, repayment of affordable housing program loans, rental income, and proceeds from the sale of affordable units. None at this time.

Projected interest:

Interest on the projected revenue in the municipal affordable housing trust fund at the current average interest rate. The interest is estimated to be \$2,500 dollars per year. Interest collected will vary depending upon the actual revenues and expenditures.

SOURCE OF FUNDS	PROJECTED REVENUES – AFFORDABLE HOUSING TRUST FUND 2025 THROUGH 2035											
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
(a) Development fees:												
Approved Development	\$20,000											\$20,000.00
Development Pending Approval		\$20,000										\$20,000.00
Projected Development			\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$180,000
(b) Payments in Lieu of Construction		-	-	-	-	-	-	-	-	-	-	-
(c) Other Funds (Specify source(s))		-	-		-	-	-	-	-	-	-	-
(d) Interest	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$25,000
Total (Township had a \$627,723.52 balance as of 5/29/2025)	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$852,732.52

The Township of Elk projects a total revenue of \$852,732.52 to be collected through 2035.
All interest earned on the account shall be used only for the purposes of affordable housing.

2. ADMINISTRATIVE MECHANISM TO COLLECT AND DISTRIBUTE FUNDS

The following procedural sequence for the collection and distribution of development fee revenues shall be followed by the Township of Elk:

(a) Collection of development fee revenues:

Collection of development fee revenues shall be consistent with the Township of Elk's development fee ordinance for both residential and non-residential developments in accordance with P.L.2008, c.46, sections 8 (C. 52:27D-329.2) and 32-38 (C. 40:55D-8.1 through 8.7).

(b) Distribution of development fee revenues:

1. The Municipal Housing Liaison forwards a recommendation for expenditure of funds to the Township Clerk.
2. The Township Clerk forwards the recommendation to the Mayor and Committee with an explanation of how the expenditure will advance implementation of the Township's affordable housing objectives and whether the expenditure will be consistent with the Spending Plan.
3. Mayor and Committee reviews the request and authorizes the expenditure by resolution.
4. The Municipal Housing Liaison and the CFO maintain accounting of expenditures.

3. DESCRIPTION OF ANTICIPATED USE OF AFFORDABLE HOUSING FUNDS

At this time the planned uses for the Affordable Housing Funds include administrative costs, rehabilitation, and affordability assistance. The spending plan will be amended if further needs are required including but not limited to the maintenance and/or repair of existing affordable housing units. Excess funds will go towards future Round V, if needed.

(a) Administrative Expenses (N.J.A.C. 5:97-8.9)

Actual development fees and interest thru 5/29/2025		\$ 662,925.02
Projected Development Fees and interest 2025-2035		\$ 225,000
Payments in lieu and other deposits through 5/29/2025		\$ N/A
Subtotal	=	\$ 887,925.02
Calculate 20 percent of Subtotal for Allowed Admin. Exp.	x .20 =	\$ 177,585.00
Less Administrative expenses through 5/29/2025	-	\$ 35,201.50
Administrative expenses through 7/30/2035	=	\$ 142,383.50

The Township of Elk projects that \$142,383.50 will be available for administrative expenses through 2035. However, since there is no certainty about the timing of revenue deposits, the Township will continue to calculate the maximum amount to be expended on administrative expenses yearly. Projected administrative expenditures, in accordance with 5:99-2.4, subject to the 20 percent cap, are as follows:

Administrative expenses may include costs reasonably related to the determination of the fair share obligation and the development of a municipal housing element and fair share plan and may include fees necessary to develop or implement affordable housing programs, an affirmative marketing program, and/or expenses that are reasonably necessary for compliance with the processes of the Program, including, but not limited to, the costs to the municipality of resolving a challenge pursuant to the Program.

Administrative expenses may also include costs associated with functions carried out in compliance with UHAC, including activities related to the marketing program and waitlist management, administering the placement of occupants in housing units, income qualification of households, monitoring the turnover of sale and rental units, preserving existing affordable housing, and compliance with the Division's monitoring requirements.

The proportion of a municipal employee's salary related to the MHL or RCA administrator functions and fees for required educational paid as an administrative expense from the municipal affordable housing trust fund.

As additional monies are deposited into the affordable housing trust fund from anticipated residential development (mandatory development fees and payments-in-lieu); a maximum of 20% of the total will be available for administrative expenses related to the preparation, administration, and implementation of the Township's affordable housing program.

(b) Rehabilitation programs and projects (N.J.A.C. 5:97-8.7)

Elk Township will dedicate \$ 170,000 to rehabilitation as follows:

N.J.A.C. 5:93-5.2(g) and (h) requires \$10,000 to be spent per unit and a six-year control on affordability for owner-occupied units. Rental units are required to have ten-year controls on affordability. Additionally a major systems must be repaired in order for a home to qualify as a credit. The present need rehabilitation according to FSHC report is 17. The Township plans to address the rehabilitation obligation through participation in Gloucester County's rehabilitation program, which is administered with the use of CDBG and HOME funds. The Township may subsidize approximately 50% of the county funds with money from its own trust fund.

1 The rules specifically require a minimum of \$2,000 per unit to be spent on administration and \$8,000 per unit to be spent on the rehabilitation activity, which totals at least \$10,000.

2 A major system is defined by N.J.A.C. 5:93-5.2(b) as weatherization, a roof, plumbing (including wells), heating, electricity, sanitary plumbing (including septic systems) and/or a load bearing structural system.

Rehabilitation program: \$ 170,000

(c) Affordability Assistance (N.J.A.C. 5:97-8.8)

AFFORDABILITY ASSISTANCE CALCULATION

Actual development fees through 5/21/2025			\$644,664.75
Actual interest earned through 5/21/2025	+		\$18,260.27
Development fees projected 2025-2035	+		\$220,000.00
Interest projected 2025-2035	+		\$25,000.00
Less housing activity expenditures through 5/29/2025	-		\$35,201.50
Subtotal	=		\$872,723.52
Calculate 30 percent	x .30 =		\$261,817.06
Less Affordability assistance expenditures through 12/29/2035	-		\$0
PROJECTED MINIMUM Affordability Assistance Requirement 7/1/2025 through 7/30/2035	=		\$261,817.06
PROJECTED MINIMUM Very Low-Income Affordability Assistance Requirement 7/1/2025 through 7/30/2035	÷ 3 =		\$87,272.35

Elk Township will dedicate \$261,817.06 from the affordable housing trust fund to render units more affordable, including \$87,272.35 to render units more affordable to households earning 30 percent or less of median income by region, as follows: *down-payment assistance, rental and/or down payment assistance, assistance with emergency repairs, and converting low-income units to very-low-income units.*

4. EXPENDITURE SCHEDULE

The Township of Elk intends to use affordable housing trust fund revenues for the creation and rehabilitation of housing units as set forth above. The Township will commit funds to specific programs as outlined above, or the plan will be amended.

PROJECTS / PROGRAMS	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	TOTAL
Administration	\$14,238.35	\$14,238.35	\$14,238.35	\$14,238.35	\$14,238.35	\$14,238.35	\$14,238.35	\$14,238.35	\$14,238.35	\$14,238.35	\$14,213.94	\$142,383.50
Rehabilitation	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$170,000
Affordability Assistance	\$26,181.71	\$26,181.71	\$26,181.71	\$26,181.71	\$26,181.71	\$26,181.71	\$26,181.71	\$26,181.71	\$26,181.71	\$26,181.71	\$26,181.71	\$261,817.06
Total	\$57,420.06	\$57,420.06	\$57,420.06	\$57,420.06	\$57,420.06	\$57,420.06	\$57,420.06	\$57,420.06	\$57,420.06	\$57,420.06	\$57,420.06	\$574,200.56

5. EXCESS OR SHORTFALL OF FUNDS

The Township plans to implement the Spending Plan incrementally with the funds that are collected; and will ensure that the collected funds are spent consistent with the applicable rules and regulations and in a manner that advances the Township's affordable housing goals. The purpose of the Spending Plan is to plan for expenditure of monies in the affordable housing trust fund. N.J.A.C. 5:97-8.10(a)(9) requires that the spending plan address the "manner through which the municipality will address any expected or unexpected shortfall if the anticipated revenues are not sufficient to implement the plan".

In the event more funds than anticipated are collected, projected funds exceed the amount necessary to implement the Fair Share Plan, or the Township of Elk is reserving funds for affordable housing projects to meet a future affordable housing obligation, these excess funds will be used to expand the programs described above and to implement the supportive and special needs housing, assist in necessary infrastructure as it relates to affordable housing units, assist in the maintenance and repair of existing affordable units.

SUMMARY

The Township of Elk intends to spend affordable housing trust fund revenues pursuant to N.J.A.C. 5:97-8.7 through 8.9 and consistent with the housing programs outlined in the Housing Element and Fair Share Plan dated June 2025.

SPENDING PLAN SUMMARY	
Balance as of May 29, 2025	\$ 627,723.52
PROJECTED REVENUE 2025-2035	
Development fees	+ \$ 220,000.00
Payments in lieu of construction	+ \$ 0
Other funds	+ \$ 0
Interest	+ \$ 25,000.00
Total projected revenue	= \$ 245,000.00
TOTAL REVENUE	= \$ 871,502.81
PROJECTED EXPENDITURES 2025-2035	
Administration	- \$ 142,383.50
Rehabilitation of existing homes or money towards new homes and group homes	- \$ 170,000.00
Affordability Assistance	- \$ 261,817.06
Excess Funds or Remaining Balance Reserved for Additional Affordable Housing Activity	= \$ 467,302.25
TOTAL PROJECTED EXPENDITURES	= \$ 574,200.56
REMAINING BALANCE	= \$ 297,302.25

APPENDIX 3

Block 31 Lot 2.01 & Block 58 Lot 2 Affordable Housing Inclusionary Overlay



APPENDIX 4

Block 34, Lots 6, 7, 8 & 9 Affordable Housing Inclusionary Overlay



304 White Horse Pike
Haddon Heights, New Jersey 08035
Tel: 856-546-8611
Fax: 856-546-8612
www.BachDesignGroup.com

Township of Elk Gloucester County, NJ

*This map was developed using NJGIN/NJDEP Geographic Information System digital data, but this is a secondary product which has not been verified by NJGIN/NJDE and is not state authorized

Map Data & Source:

Data Source: NJGIN, NJDEP	
Scale: 1" = 100'	Proj: ET2025-1
Date: December 2025	
Drafted by: Chloe Bach, PP, AICP	
Prepared by: Steven M. Bach, PE, RA, PP, CME	

BLOCK 34 LOTS 6, 7, 8 & 9 AFFORDABLE HOUSING INCLUSIONARY OVERLAY



APPENDIX 5

Draft “ORDINANCE AMENDING THE AMENDED AURA III REDEVELOPMENT PLAN TO INCLUDE BLOCK 34, LOTS 9, 8, 7, & 6 BLOCK 31, LOT 2.01 & BLOCK 58, LOT 2 WITH STANDARDS FOR AFFORDABLE HOUSING INCLUSIONARY TOWNHOUSE DEVELOPMENT TO ADDRESS THE REQUIREMENTS OF THE FAIR HOUSING ACT REGARDING COMPLIANCE WITH THE TOWNSHIP’S AFFORDABLE HOUSING OBLIGATIONS”

ORDINANCE _____

AN ORDINANCE AMENDING THE AMENDED AURA III REDEVELOPMENT PLAN TO INCLUDE BLOCK 34, LOTS 9, 8, 7, & 6 BLOCK 31, LOT 2.01 & BLOCK 58, LOT 2 WITH STANDARDS FOR AFFORDABLE HOUSING INCLUSIONARY TOWNHOUSE DEVELOPMENT TO ADDRESS THE REQUIREMENTS OF THE FAIR HOUSING ACT REGARDING COMPLIANCE WITH THE TOWNSHIP'S AFFORDABLE HOUSING OBLIGATIONS

BE IT ORDAINED by the Mayor and Committee of the Township of Elk, Gloucester County, New Jersey, that the Amended Aura III Redevelopment Plan of the Township of Elk is hereby amended to include provisions addressing Elk's constitutional obligation to provide for its fair share of low- and moderate-income housing, as directed by the Superior Court and consistent with N.J.A.C. 5:93-1, et seq., as amended and supplemented, N.J.A.C. 5:80-26.1, et seq., as amended and supplemented, and the New Jersey Fair Housing Act of 1985. This Ordinance is intended to provide assurances that low- and moderate-income units ("affordable units") are created with controls on affordability over time and that low- and moderate-income households shall occupy those units. This Ordinance shall apply except where inconsistent with applicable law.

WHEREAS, BLOCK 34, LOTS 9, 8, 7, & 6 BLOCK 31, LOT 2.01 & BLOCK 58, LOT 2 within the Township of Elk were designated by Township Committee as a Non-Condensation Area in Need of Redevelopment in accordance with Resolution 2016-13 on May 18, 2016; and

WHEREAS, the Aura III Redevelopment Plan within the Township of Elk Recommended to Township by the Joint Land Use Board after a public hearing on May 20, 2020 with Resolution 2020-08 and adopted by Township Committee in accordance with Ordinance O-2-2020 on June 4, 2020; and

WHEREAS, the Amended Aura III Redevelopment Plan within the Township of Elk was recommended to Township Committee by the Joint Land Use Board after a public hearing on March 20, 2024 with Resolution 2024-08 and Adopted by Township Committee in accordance with Ordinance O-1-2024 on April 4, 2024; and

WHEREAS, on June 18, 2025, the Township Planning Board adopted the Housing Element and Fair Share Plan pursuant to Resolution No. 2025-08; and

WHEREAS, on March 2, 2026, the Township Planning Board adopted the Amended Housing Element and Fair Share Plan pursuant to Resolution No. 2026-__ ; and

WHEREAS, pursuant to the February 2026 Housing Element and Fair Share Plan amended per mediation with the Fair Share Housing Center in January 2026, the Township has identified two locations which are projected to be suitable for redevelopment; and

WHEREAS, four (4) parcels (Block 34, Lots 9, 8, 7, & 6) containing 4.6 acres of property which is projected to be suitable for redevelopment; and

WHEREAS, Block 34, Lots 9, 8, 7, & 6 are located adjacent to and in close proximity to proposed higher density residential development, as well as recreation and school facilities; and

WHEREAS, two (2) parcels (Block 31, Lot 2.01 & Block 58, Lot 2) containing 10 acres of property which is projected to be suitable for redevelopment; and

WHEREAS, Block 31, Lot 2.01 & Block 58, Lot 2 are located adjacent to and in close proximity to proposed higher density residential development, as well as recreation and school facilities; and

WHEREAS, the Township has agreed to amend the Amended Aura III Redevelopment Plan to include Block 31, Lot 2.01 & Block 58, Lot 2 and Block 34, Lots 9, 8, 7, & 6 to provide a realistic development potential for these parcels to provide inclusionary housing opportunities; and

WHEREAS, this Affordable Housing Inclusionary Family Townhouse Overlay Zone shall permit 8 du/acre inclusionary family townhouses with a required 20% set-aside on both parcels (Block 31, Lot 2.01 & Block 58, Lot 2 and Block 34, Lots 9, 8, 7, & 6); and

WHEREAS, the Mayor and Township Committee of the Township of Elk has determined that in light of the foregoing it is in the best interest of the Township to adopt and implement this Ordinance that is in keeping with goals of the Master Plan and is in best interest of the Township and health, safety and welfare of its residents and visitors;

NOW THEREFORE, BE IT ORDAINED by the Mayor and Township Committee of the Township of Elk , County of Gloucester and State of New Jersey that:

Section 1. Amend the Amended Aura III Redevelopment Plan to create the Affordable Housing Inclusionary Family Townhouse Overlay Zone within which shall include all properties located within Block 31, Lot 2.01 & Block 58, Lot 2 and Block 34, Lots 9, 8, 7, & 6 of the Township.

Section 2. Affordable Housing Inclusionary Family Townhouse Overlay Zone for Block 31, Lot 2.01 & Block 58, Lot 2 and Block 34, Lots 9, 8, 7, & 6

A. Permitted Uses

(1) Permitted Residential Uses

- (a) Townhomes at 8 du/acre with a mandatory affordable housing set-aside of 20%

(2) Permitted Non-Residential

- (a) New Home Sales Center. Bulk standards shall be consistent with residential building type standards as in Section A- Bulk Standards.
- (b) Common recreational and cultural uses for the use of the residents of the community and their guests (i.e. clubhouse or community building, swimming pools, Sport uses such as shuffleboard courts, bocce courts, tennis courts, pickle ball courts, basketball courts, putting greens and horseshoe pits, no minimum lot area required.

(3) Permitted Accessory Uses: Residential Uses

- (a) Civic uses and temporary uses to benefit the community (i.e. farmers market, outdoor movies)

- (b) Off Street parking and loading for clubhouse and recreation areas require one (1) space per 400 square feet of non-residential area.
- (c) Parking for all residential units shall be in accordance with N.J.S.A. 5:21 (Residential Site Improvement Standards).
- (d) Cluster Mailboxes.
- (e) Retaining walls.
- (f) Fences.
- (g) Decks and patios.
- (h) Signs in accordance with Section 96-60 of the Township Code.
- (i) Storm water management structures and facilities.
- (j) Trash enclosures as approved in conjunction with subdivision or site plan approval.
- (k) Gazebos, shelters, benches and other outdoor furniture as approved in conjunction with subdivision or site plan approval.
- (l) Necessary facilities for maintenance and administration of the development including streets, off-street parking facilities and utilities.
- (m) Parking structures as approved in conjunction with site plan approval
- (n) Hot boxes, transformers and other required utilities and their accessories as required by outside agencies.

B. Design Standards

A. Water and Sewer Infrastructure.

B. Open Space. Land is to be set aside as open space.

C. Bulk Requirements. Development in the Affordable Housing Inclusionary Family Townhouse Overlay Zone shall conform to the bulk standards provided in Schedule A below. Where a standard in Schedule A differs from a standard in the Elk Township Land Development Code, the standard in Schedule A shall supersede.

Schedule A-Bulk Standards

Land Use Category	Building Type	Min. Lot Size	Lot Width @ Building Setback	Lot Depth	Setbacks	Acc. Setback	Height	Impervious cover
					Front/Side/Rear	rear/side/pool	Floors/ Feet	max.
	Townhome	1,700 sf	20' min	85'	18' min-20' min with garage / 20' end unit / 15' min	Not Permitted	3 / 45' max	85%

Section 3. It is hereby found and determined that the Ordinance conforms to the Master Plan of the Township of Elk.

Section 4. It is hereby found and determined that the Ordinance gives due consideration to the provision of appropriate allowable uses within the areas within the Township with special consideration for the health, safety and welfare of the residents of the areas and the Township of Elk.

Section 5. In order to facilitate the implementation Ordinance, it is hereby found and determined that this action must be taken by Mayor and Township Committee to amend the Amended Aura III Redevelopment Plan and take appropriate action upon proposals and measures designed to effectuate the same.

Section 6. All Ordinances contrary to the provisions of this section of the Ordinance are hereby repealed to the extent that they are inconsistent herewith.

Section 7. This Ordinance shall take effect upon final passage and publication in accordance with law.

Section 8. Effective Date. This Ordinance shall take effect upon adoption and publication according to law and the filing of same with the Gloucester County Planning Board in accordance with N.J.S.A. 40:55D-16

ROLL CALL VOTE						
<u>COMMITTEE MEMBER</u>	INTRODUCED	SECONDED	AYE	NAYE	ABSTAIN	ABSENT

Adopted on second and final reading on

Township of Elk

By: James Rambo, Mayor

ATTEST:

By: Timothy Pine, Township Clerk

NOTICE

NOTICE IS HEREBY GIVEN, that the above Ordinance was introduced and passed on first reading at the Regular Business Meeting of the Governing Body of the Township of Elk held in the Municipal Building on the _ day of ____, 2025, and the same shall come up for public hearing at the Regular Business Meeting of the Governing Body to be held on the __ day of ____, 2025, at ____ P.M., at which times any persons interested shall be given the opportunity to be heard concerning said Ordinance. Following the public hearing, said Ordinance shall be considered for final adoption.

Timothy Pine

Municipal Clerk

APPENDIX

Vacant Land Anaylsis

ELK TOWNSHIP
Gloucester County, New Jersey



Vacant Land Analysis

Amended February 2026

Steven M. Bach, PE, RA, PP, CME

Candace A. Kanaplue, AICP, PP

The original of this document was signed and
sealed in accordance with NJAC 13:41-1.3.b

Elk Township 2026 Combined Planning and Zoning Board

Matt Afflerbach (Chairperson)
Jay Hughes (Vice Chairperson)
David Smith
Nathaniel G Lucas III (Committeeman)
Al Richardson (Class II Environmental)
Donna Nicholson
Ed McKeever
Marques Goetsch
Ed Wolf
Josh Peterson (Alternate 1)
Wayne Swanson (Alternate 2)

Ann Marie Weitzel, Secretary

Brandon E. DeJesus, Esq, Solicitor
Steven M. Bach, PE, RA, PP, CME, Engineer
Candace A. Kanaplue, PP, AICP, Planner

2026 Elk Township Committee

James Rambo, Mayor
Carolyn King-Sammons, Deputy Mayor
Christine Cowan
Nathaniel G Lucas III
Antonio Cammarata

Tim Pine, Township Clerk
Brian Duffield, Esq, Township Solicitor
Steven M. Bach, PE, RA, PP, CME, Engineer

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	VACANT LAND ANALYSIS	1
	A. IDENTIFICATION OF VACANT LAND.....	2
	B. PROPERTIES EXCLUDED FROM THE VACANT LAND INVENTORY	2
	C. VACANT PROPERTIES.....	3
	D. LACK OF WATER AND SEWER	3
	E. REALISTIC DEVELOPMENT POTENTIAL	4
	F. CONCLUSION	7

APPENDIX 1	Existing Land Use Map
APPENDIX 2	Environmental Constraints Map
APPENDIX 3	State Planning Area Map
APPENDIX 4	Preserved Farmland Map
APPENDIX 5	Aura I & II Development Area Map
APPENDIX 6	Aura III Redevelopment Area Map
APPENDIX 7	Villages of Still Run Redevelopment Area Zoning Exhibit
APPENDIX 8	Sewer Service Area Map (Churchill Consulting Engineers, PC), last revised 5/23/12
APPENDIX 9	Vacant Land Map
APPENDIX 10	Vacant Parcels Inventory Table
APPENDIX 11	Developable Lands Map 1 of 2
APPENDIX 12	Developable Lands Map 2 of 2
APPENDIX 13	Silvergate & Aura Water and Sanitary Sewer Infrastructure Agreement, dated June 28, 2018
APPENDIX 14	Vacant Parcels Sanitary Sewer Feasibility Table
APPENDIX 15	NJDEP Treatment Works Approval – Aura and Silvergate, Elk Township, Gloucester County, NJ – DESIGN REPORT Wastewater Pumping and Force Mains Analyses, prepared by Taylor Wiseman, revised to January 25, 2023

I. INTRODUCTION

Elk Township is located In Gloucester County. The Township shares a boundary with Glassboro Borough to the northeast, Clayton Borough to the east, Franklin Township to the southeast, Upper Pittsgrove Township in Salem County to the south, South Harrison Township to the west, and Harrison Township to the north. Elk Township is approximately 19.69 square miles or approximately 12,366 acres.

About 23% (2,878 acres) of the Township are environmentally constrained. Elk Township contains six (6) State Development and Redevelopment Plan Planning Areas. Its largest planning area is Environmentally Sensitive with 32.25% of the Township's area, followed by Rural Environmentally Sensitive (23.92%), Suburban (18.28%), Fringe (16.06%), Rural (9.45%), and Metro (0.04%).

This Vacant Land Inventory is prepared to document the lack of available land capacity, pursuant to NJAC 5:93.

The following are included as appendices:

1. Existing Land Use Map
2. Environmental Constraints Map
3. State Planning Area Map
4. Preserved Farmland Map
5. Aura I & II Development Area Map
6. Aura III Redevelopment Area Map
7. Villages of Still Run Redevelopment Area Zoning Exhibit
8. Sewer Service Area Map (Churchill Consulting Engineers, PC), last revised 5/23/12
9. Vacant Land Map
10. Vacant Parcels Inventory Table
11. Developable Lands Map 1 of 2
12. Developable Lands Map 1 of 2
13. Silvergate & Aura Water and Sanitary Sewer Infrastructure Agreement, dated June 28, 2018
14. Vacant Parcels Sanitary Sewer Feasibility Table

15. NJDEP Treatment Works Approval – Aura and Silvergate, Elk Township, Gloucester County, NJ – DESIGN REPORT Wastewater Pumping and Force Mains Analyses, prepared by Taylor Wiseman, revised to January 25, 2023

II. VACANT LAND ANALYSIS

A. IDENTIFICATION OF VACANT LAND

This Inventory reviewed the 2024 MOD IV Tax Data records for Vacant (Property Class 1), Agricultural (Property Classes 3A and 3B), and Public (Property Class 15C) lands in the Township. These parcels were joined into Geographic Information System (GIS) in order to review development capacity and the potential for use as affordable housing sites.

B. PROPERTIES EXCLUDED FROM THE VACANT LAND INVENTORY

The Vacant Land Inventory is prepared to document the lack of available land capacity within the Elk Township. As provided by NJAC 5:93, lands meeting specific criteria may be excluded from the calculation of a municipality's Realistic Development Potential.

These exclusions are:

- Small isolated properties having insufficient acreage to generate an affordable housing set aside as part of an inclusionary development. Per NJAC 5:93-4.1(f), an affordable housing site must be able to accommodate a minimum density of 6 unit per acre with a maximum affordable housing set aside of 20%. Therefore, isolated properties of less than 0.83 acres are excluded as well as properties outside the regional (Gloucester County Utilities Authority) and municipal (Elk Township) sewer service areas as evidenced by the Elk Township Wastewater Management Plan prepared by Churchill Associates, PC. Please note the Sewer Service Area Map (Churchill Consulting Engineers, PC), last revised 5/23/12 is provided as Appendix 4.
- Land locked parcels or sites with limited or no access.
- Agricultural lands when the development rights to these lands have been purchased or restricted by covenant.
- Environmentally sensitive lands which include wetlands, flood hazard areas, areas of properties characterized by steep slopes in excess of 15%; and areas outside of the Sanitary Sewer Service Areas (SSA).
- Historic and architecturally important sites.
- Active recreational lands and properties identified on the municipality's Recreation and Open Space Inventory (ROSI and or / as part of the NJDEP Green Acres Program.

C. VACANT PROPERTIES

Attached as Appendix 6 is the Vacant Land Inventory Table which contains data for block, lot, property classification, zoning, total acreage, planning area, sewer service area, buildable acreage, and reason for elimination.

As indicated in the Vacant Land Inventory Table contained as Appendix 10, 86 vacant properties are potentially viable for development.

It is noted that approximately 3,328 acres of the Township has been preserved as farmland. These represents about 27% of the Township's total land area. A Preserved Farmland Map has been provided as Appendix 4.

Also, it is important to note that there are significant areas of the Township that have already been designated for inclusionary affordable development under Round 3. These are depicted in the Aura I & II Development Area Map provided as Appendix 5, the Aura III Redevelopment Area Map provided as Appendix 6, and the Villages of Still Run Redevelopment Area Zoning Exhibit provided as Appendix 7.

D. LACK OF WATER AND SEWER

When a community has sufficient land, but insufficient water and/or sewer to support inclusionary developed, the vacant parcels available for inclusionary development shall be reviewed to determine if it is realistic for the site to receive the required water and sewer during the period of certification (2025 to 2035). Inclusionary development is considered an affordable housing site that must be able to accommodate a minimum density of 6 unit per acre.

The parcels listed in Appendix 10 Vacant Land Inventory Table as being vacant and suitable for development were evaluated to determine if sufficient water and / or sewer service is available now or will be realistically available during the period of certification (2025-2035).

In Elk Township, only a portion of the Aura 1 development is currently served by public water and sewer. The remaining portions of the Township are serviced by individual wells and septic systems.

For the Aura (Phases 1, 2 and 3), the Silvergate (Phases 1 thru 6) inclusionary housing developments and the Silvergate (Phase VII Commercial Development; there exists a "Silvergate & Aura Water and Sanitary Sewer Infrastructure Agreement", dated June 28, 2018 (attached as Exhibit 7). This agreement allows for New Jersey American Water (NJAW) to provide for the water and sewer services to all of the Silvergate development area (which is also known as the Villages at Still Run Redevelopment Area) and all unbuilt areas of the Aura development which includes the remaining portion of Aura 1, Aura II and Aura III (which is also known as the Amended Aura III Redevelopment Plan Area). It is noted that the water and sewer improvements under this agreement are currently under construction. This construction is being undertaken by NJAW and DR Horton who is the contract developer for both the Aura 3 and Silvergate developments.

The sanitary sewer conveyance currently being constructed by NJAW under this agreement was the subject of a New Jersey Department of Environmental Protection (NJDEP) Treatment

Work Approval which delineates the conveyance capacity being provided by NJAW and the conveyance and treatment capacity being provided by the Gloucester County Utilities Authority. The specifics of these are detailed in Appendix 15 NJDEP Treatment Works Approval – Aura and Silvergate, Elk Township, Gloucester County, NJ – DESIGN REPORT Wastewater Pumping and Force Mains Analyses, prepared by Taylor Wiseman, revised to January 25, 2023.

The potentially developable vacant parcels contained in the Vacant Land Inventory Table contained as Appendix 10 were evaluated to determine which parcels are within proximity to the NJAW sanitary sewer conveyance system and can be provided conveyance and treatment capacity under the above referenced NJDEP Treatment Works Approval. The results are contained in the Vacant Parcels Sanitary Sewer Feasibility Table which is provided as Appendix 14.

From the referenced Vacant Parcels Sanitary Sewer Feasibility Table, two (2) parcels are identified as being vacant and having the ability to be serviced by public water and sewer:

Block 54, Lot 31 with an area of 2.435 acres, and

Block 54, Lot 26.03 with an area of 1.400 acres.

These parcels are depicted on the Developable Lands Maps as provided in Appendix 11 and 12.

In consultation with John Vinci, Executive Directory of the Gloucester County Utilities Authority, there is no regional sewer conveyance or sewer treatment capacity allocated to Elk Township other than what is provided under the “Silvergate & Aura Water and Sanitary Sewer Infrastructure Agreement” that will realistically be available within the period of certification (2025-2035). Without regional water and sewer conveyance and treatment capacity, it is not feasible for the Township to provide public sewer service to any additional areas of the Township other than the areas delineated in the “Silvergate & Aura Water and Sanitary Sewer Infrastructure Agreement”.

It is noted that while the only Block 54, Lot 31 and Lot 26.03 are anticipated to be serviced by public water and sewer withing the period of certification (2025-2035), all of the 86 parcels identified in Appendix 10 Vacant Land Inventory Table as being suitable for development have been included in determination of the Township’s Realistic Development Potential.

It is further noted that the Township is utilizing a Duration Adjustment for all areas of the Township that are not within the sewer service area as identified on the Elk Township Water Quality Management Plan map “Sewer Service Area Map (Churchill Consulting Engineers, PC) last revised 5/23/12 which is included as Appendix 8. It is noted that this mapping is part of the current Gloucester County Non-Consolidated Wastewater Management Plan (WQMP) which was prepared under the provisions of NJAC 7:15.

E. REALISTIC DEVELOPMENT POTENTIAL

The following table provides the realistic development potential properties that are vacant and have the ability to be serviced by public water and sewer with the period of certification (2025-2035).

ELK TOWNSHIP REALISTIC DEVELOPMENT POTENTIAL (RDP) TABLE

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	PARCEL SIZE (ACRES)	DEVELOPABLE AREA (AC)	TOTAL CLUSTER DEVELOPABLE AREA (AC)	POTENTIAL UNITS AT 6 DU/ACRE	POTENTIAL AFFORDABLE UNITS AT 20% SET ASIDE
103	1	B	505 MARION ST	1	MD	2.220	1.871	2.251	13.5	2.7
103	2		TAFT AVE	1	MD	0.115	0.115			
103	3		WEST BOULEVARD	15C	MD	0.267	0.166			
103	4		210 WEST BLVD	1	MD	0.115	0.098			
108	1.01	C	BUCK RD	1	MD	0.597	0.597	1.194	7.2	1.4
108	1.02		BUCK RD	1	MD	0.597	0.597			
119	1	D	360 HARRISON AVE	1	MD	0.482	0.482	1.573	9.4	1.9
119	2		518 PINE ST	1	MD	0.287	0.287			
119	3		514 HARDING ST	1	MD	0.115	0.115			
119	4		510 HARDING ST	1	MD	0.689	0.689			
121	1	E	525 MARION ST	1	MD	2.101	1.932	2.392	14.4	2.9
121	2		521 PIERCE AVE	1	MD	0.460	0.460			
122	1	F	401 PIERCE AVE	1	MD	2.196	2.196	2.483	14.9	3.0
122	2		MCKINLEY AVE	1	MD	0.115	0.115			
122	3		WEST BOULEVARD	1	MD	0.172	0.172			
161	1	G	SECOND AVE	1	MD	0.486	0.486	2.278	13.7	2.7
161	2		545 SECOND AVE	1	MD	0.230	0.230			
161	3		FIRST AVE	1	MD	0.459	0.459			
161	4		SECOND AVE	15C	MD	0.115	0.115			
161	5		FIRST AVE	1	MD	0.115	0.115			
161	6		SECOND AVE	1	MD	0.115	0.115			
161	7		SECOND AVE	1	MD	0.115	0.115			
161	9		SECOND AVE	1	MD	0.644	0.644			
162	1	H	THIRD AVE	15C	MD	0.245	0.245	2.421	14.5	2.9
162	3		561 THIRD AVE	1	MD	0.517	0.517			
162	4		565 THIRD AVE	1	MD	0.115	0.115			
162	5		570 SECOND AVE	1	MD	0.746	0.746			
162	6		460 WEST BLVD	1	MD	0.599	0.599			
162	7		440 WEST BLVD	1	MD	0.199	0.199			
163	2	I	558 THIRD AVE	1	MD	0.230	0.230	1.640	9.8	2.0
163	3		562 THIRD AVE	1	MD	0.401	0.401			
163	4		FOURTH AVE	1	MD	0.116	0.116			

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	PARCEL SIZE (ACRES)	DEVELOPABLE AREA (AC)	TOTAL CLUSTER DEVELOPABLE AREA (AC)	POTENTIAL UNITS AT 6 DU/ACRE	POTENTIAL AFFORDABLE UNITS AT 20% SET ASIDE
163	5		FOURTH AVE	1	MD	0.443	0.443			
163	6		566 THIRD AVE	1	MD	0.114	0.114			
163	9		WEST BLVD	1	MD	0.057	0.057			
163	10		WEST BLVD	1	MD	0.115	0.115			
163	11		WEST BLVD	1	MD	0.057	0.057			
163	12		WEST BLVD	15C	MD	0.108	0.108			
125	4	J	ROOSEVELT AVE	15C	MD	0.057	0.057	1.148	6.9	1.4
125	6.03		STANGER AVE	1	MD	0.057	0.057			
125	7		239 STANGER AVE	1	MD	1.033	1.033			
145	3.01	L	SECOND AVE	1	MD	1.025	1.025	3.889	23.3	4.7
145	4		SECOND AVE	1	MD	0.115	0.115			
146	1		THIRD AVE	1	MD	0.201	0.201			
146	2		DOUGLASS ST	15C	MD	0.330	0.330			
146	3		FOURTH AVE	15C	MD	0.208	0.208			
146	4		524 THIRD AVE	1	MD	1.560	1.560			
146	5		FOURTH AVE	15C	MD	0.172	0.172			
146	6		FOURTH AVE	15C	MD	0.076	0.076			
146	8		DUNBAR BLVD	15C	MD	0.057	0.057			
146	9		112 DUNBAR BLVD	1	MD	0.145	0.145			
139	1.01	M	THIRD ST	1	MD	0.472	0.472	2.152	12.9	2.6
139	1.02		510 THIRD AVE	1	MD	1.246	1.246			
139	1.03		FOURTH AVE	15C	MD	0.057	0.057			
139	2		THIRD AVE	1	MD	0.262	0.262			
139	4		FOURTH AVE	1	MD	0.115	0.115			
132	5	N	SECOND AVE	1	MD	0.482	0.482	1.842	11.1	2.2
133	3		FOURTH ST	1	MD	1.143	1.143			
133	4		REED ST	1	MD	0.216	0.216			
143	2	O	DOUGLASS ST	1	MD	0.203	0.203	1.150	6.9	1.4
143	3		EIGHTH AVE	1	MD	0.947	0.947			
159	1	P	DUNBAR BLVD	1	MD	0.770	0.770	1.115	6.7	1.3
159	3		NINTH AVE	1	MD	0.344	0.344			
157	1	Q	DUNBAR BLVD	1	MD	0.854	0.854	0.969	5.8	1.2
157	3		SEVENTH ST	15C	MD	0.115	0.115			
166	6	R	555 SIXTH AVE	1	MD	0.574	0.574	0.918	5.5	1.1
166	7		549 SEVENTH AVE	1	MD	0.344	0.344			
154	1	S	DUNBAR BLVD	15C	MD	0.472	0.472	1.064	6.4	1.3
154	2		DUNBAR BLVD	15C	MD	0.592	0.592			

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	PARCEL SIZE (ACRES)	DEVELOPABLE AREA (AC)	TOTAL CLUSTER DEVELOPABLE AREA (AC)	POTENTIAL UNITS AT 6 DU/ACRE	POTENTIAL AFFORDABLE UNITS AT 20% SET ASIDE
123	1	T	537 MARION ST	1	MD	0.474	0.474	3.029	18.2	3.6
123	2		MARION ST	1	MD	0.448	0.448			
123	3		MCKINLEY AVE	1	MD	1.056	1.056			
123	4		MCKINLEY AVE	1	MD	0.119	0.119			
123	5		WEST BLVD	1	MD	0.223	0.223			
123	7		WEST BLVD	15C	MD	0.306	0.306			
126	4		371 WEST BLVD	1	MD	0.174	0.174			
126	5		385 WEST BLVD	1	MD	0.115	0.115			
126	6		WEST BLVD	1	MD	0.115	0.115			
54	26.03		AURA RD	1	RE	1.400	1.400	1.400	8.4	1.7
54	31		AURA RD	1	RE	2.435	2.435	2.435	14.6	2.9
72	6		135 BUCK RD	1	MD	14.098	1.630	1.630	9.8	2.0
111	1		365 HARRISON AVE	1	MD	2.393	1.386	1.386	8.3	1.7
120	1.01		515 HARDING ST	1	MD	1.515	1.350	1.350	8.1	1.6
137	1		505 TENTH AVE	1	MD	2.015	2.015	2.015	12.1	2.4
159	5		EIGHTH & MARION	1	MD	0.941	0.941	0.941	5.6	1.1
167	4		EIGHTH AVE	1	MD	2.246	2.246	2.246	13.5	2.7
							TOTAL DEVELOPABLE ACRES	46.912	281.5	56.3
									Round Up	57.0

This results in a realistic development potential (RDP) of 57 units.

F. CONCLUSION

After excluding the properties by the specified criteria, there are two (2) properties that are vacant and have the ability to be serviced by public water and sewer with the period of certification (2025-2035). The realistic development potential (RDP) for the these properties is 5 affordable units.

Appendix 1

Existing Land Use Map

LEGEND

MUNICIPAL BOUNDARIES

ELK TOWNSHIP BOUNDARY

ZONING

C1-NEIGHBORHOOD COMMERCIAL

C2-HIGHWAY COMMERCIAL

M1-LIGHT MANUFACTURING

MHP-MOBLE HOME PARK

MD-MODERATE DENSITY RESIDENTIAL

LD-LOW DENSITY RESIDENTIAL

R-RURAL RESIDENTIAL

RE-RURAL ENVIRONMENTAL RESIDENTIAL

RR-RECREATIONAL RESIDENTIAL

NEIGHBORHOOD COMMERCIAL OVERLAY

LAKE GILMAN OVERLAY ZONE

CANNABIS ESTABLISHMENT OVERLAY (CEO) ZONE

304 White Horse Pike
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Township of Elk
Gloucester County, NJ

*This map was developed using NJGIN/NJDEP Geographic Information System digital data, but this is a secondary product which has not been verified by NJGIN/NJDE and is not state authorized

Map Data & Source:

Data Source: NJGIN, NJDEP

Scale: 1" = 3,400'

Date: December 2025

Drafted by: Chloe Bach, PP, AICP

Prepared by: Steven M. Bach, PE, RA, PP, CME

EXISTING LAND
USE MAP

Appendix 2

Environmental Constraints Map

LEGEND

 MUNICIPAL BOUNDARIES

 STREAMS

 RIPARIAN BUFFER

 WETLANDS

 WATERBODIES

 DEVELOPABLE

 ENVIRONMENTALLY CONSTRAINED

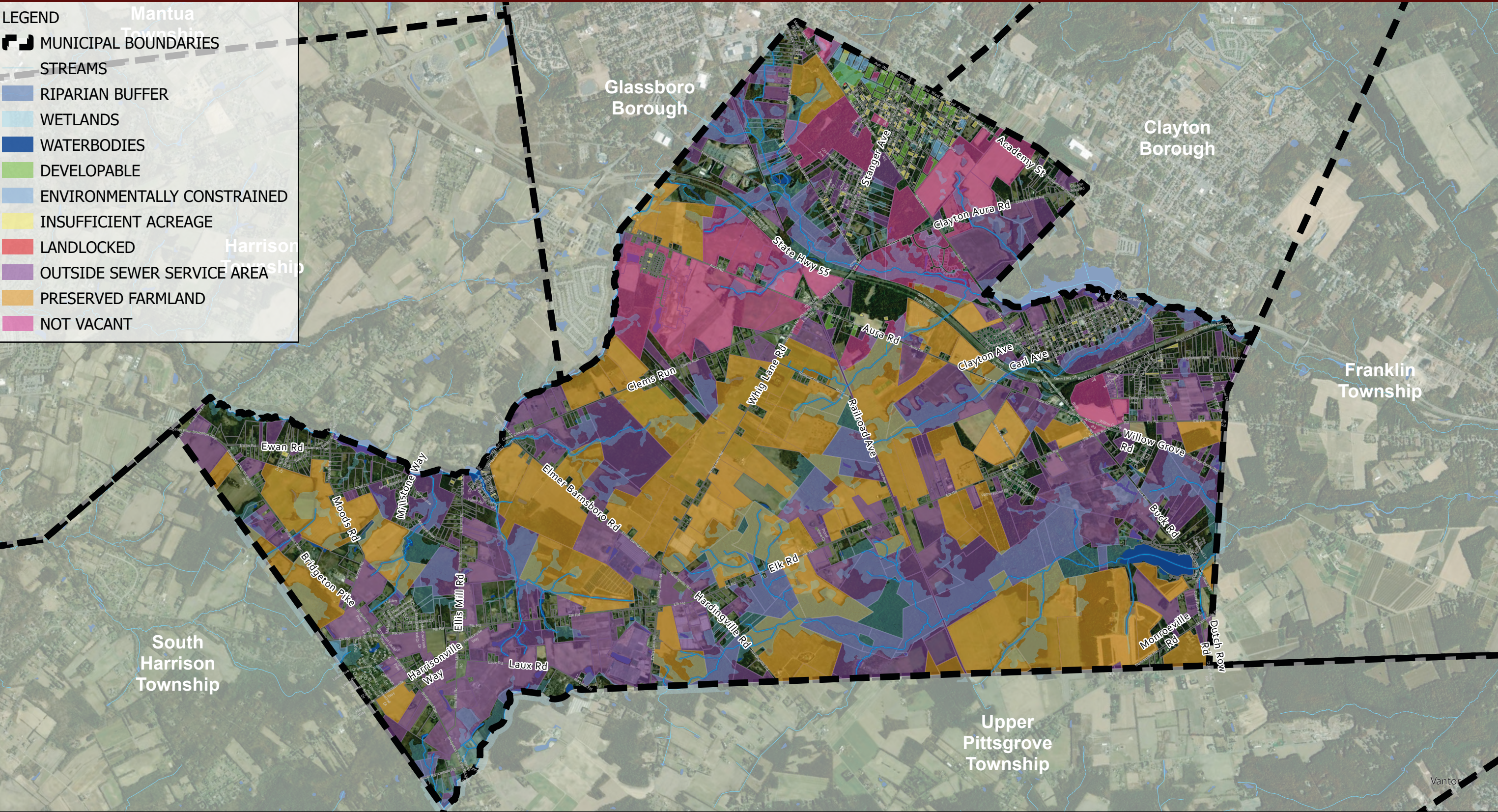
 INSUFFICIENT ACREAGE

 LANDLOCKED

 OUTSIDE SEWER SERVICE AREA

 PRESERVED FARMLAND

 NOT VACANT



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Township of Elk
Gloucester County, NJ

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Map Data & Source:

Data Source: NJGIN, NJDEP	
Scale: 1" = 3,400'	Proj: ET2025-1
Date: December 2025	
Drafted by: Chloe Bach, PP, AICP	
Prepared by: Steven M. Bach, PE, RA, PP, CME	

ENVIRONMENTAL
CONSTRAINTS MAP



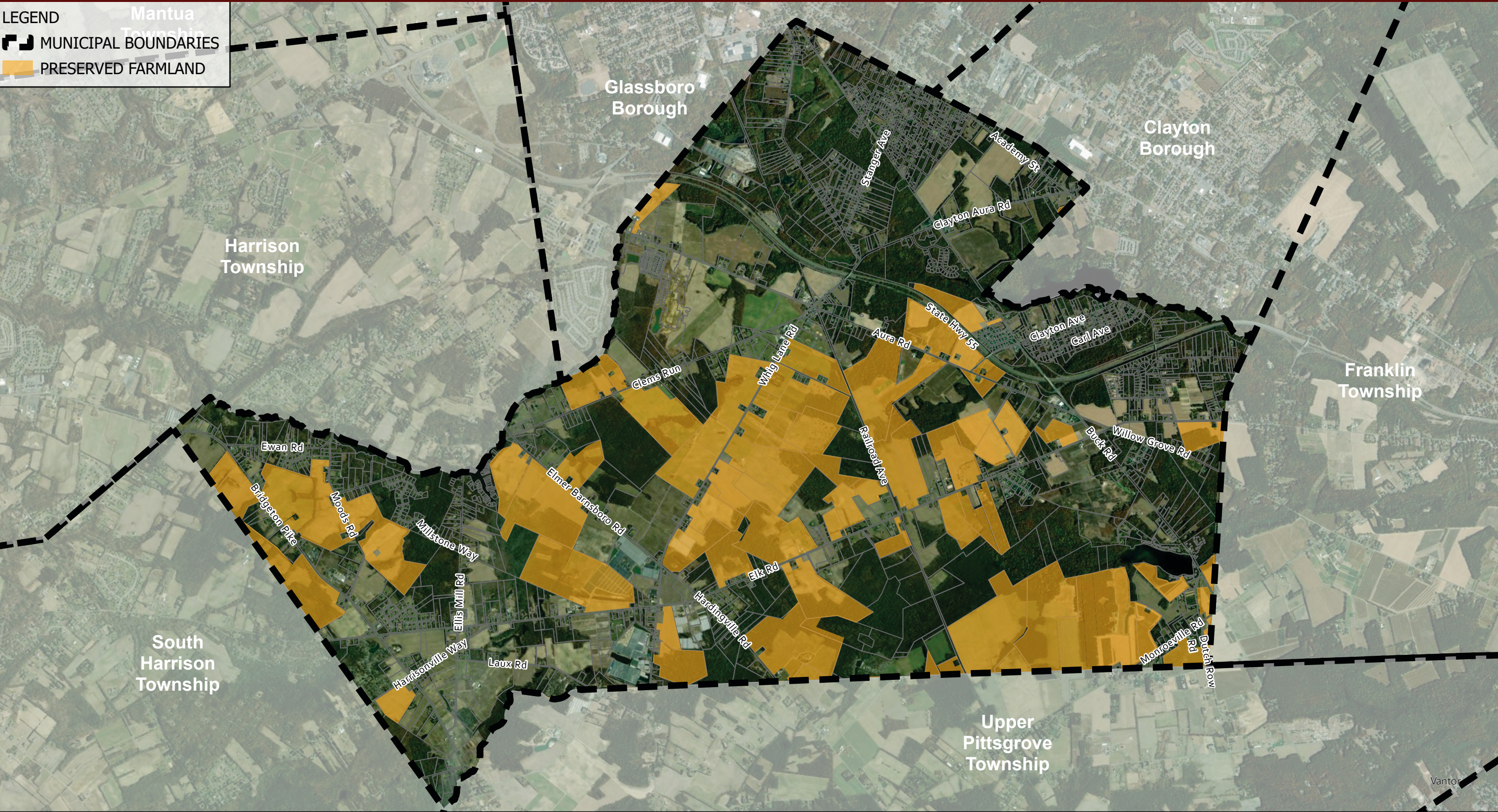
Appendix 3

Preserved Farmland Map

LEGEND

 MUNICIPAL BOUNDARIES

 PRESERVED FARMLAND



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**Township of Elk
Gloucester County, NJ**

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Map Data & Source:	
Data Source: NJGIN, NJDEP	
Scale: 1" = 3,400'	Proj: ET2025-1
Date: December 2025	
Drafted by: Chloe Bach, PP, AICP	
Prepared by: Steven M. Bach, PE, RA, PP, CME	

**PRESERVED FARMLAND
MAP**



Appendix 4

State Planning Area Map

LEGEND

 MUNICIPAL BOUNDARIES

STATE PLANNING AREAS

 METROPOLITAN PLANNING AREA

 SUBURBAN PLANNING AREA

 FRINGE PLANNING AREA

 RURAL PLANNING AREA

 ENV. SENSITIVE PLANNING AREA

 STATE PARK

 RURAL/ENV. SENSITIVE PL. AREA

This map displays the Township of Elk in Gloucester County, New Jersey, overlaid with various state planning areas. The planning areas are color-coded: Metropolitan Planning Area (dark red), Suburban Planning Area (medium red), Fringe Planning Area (light orange), Rural Planning Area (dark orange), Env. Sensitive Planning Area (light green), State Park (purple), and Rural/Env. Sensitive Pl. Area (brown). Municipal boundaries are shown as dashed black lines. The map includes labels for surrounding municipalities: Mantua Township to the north, Glassboro Borough to the northwest, Clayton Borough to the northeast, Franklin Township to the east, Upper Pittsgrove Township to the southeast, and South Harrison Township to the southwest. Numerous roads are labeled, including Ewan Rd, Bridgeton Pike, Mood Rd, Millstone Way, Ellis Mill Rd, Harrisonville Way, Laux Rd, Elmer Barnsboro Rd, Whig Lane Rd, Aurora Rd, State Hwy 55, Clayton Ave, Carl Ave, Academy St, Stanger Ave, Railroad Ave, Buck Rd, Willow Grove Rd, Monroeville Rd, and Dutch Row. A small NJ state logo is located in the center of the map.

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Township of Elk
Gloucester County, NJ

*This map was developed using NJGIN/NJDEP Geographic Information System digital data, but this is a secondary product which has not been verified by NJGIN/NJDE and is not state authorized

Map Data & Source:

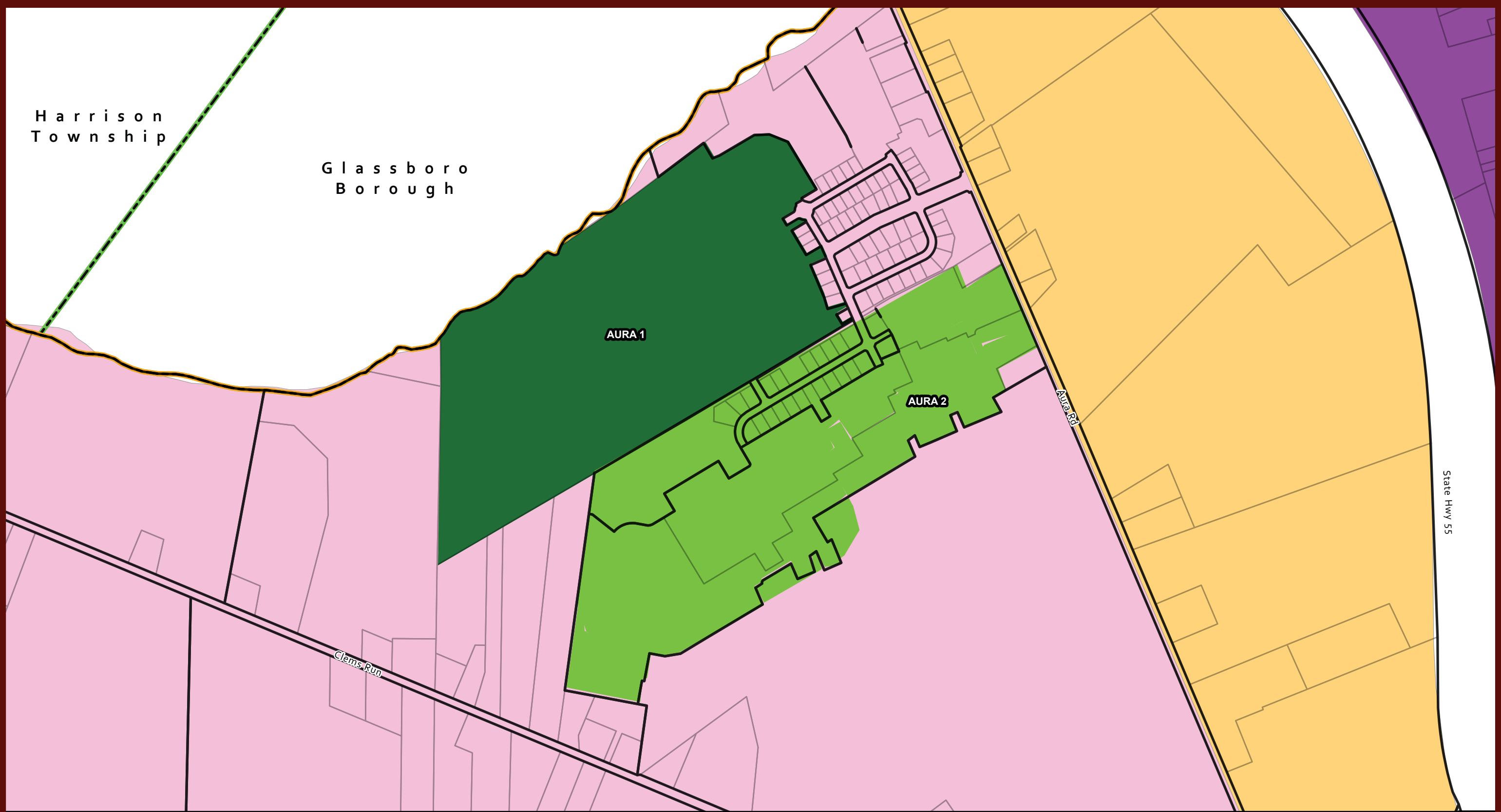
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Scale: 1" = 3,400'	Proj: ET2025-1
Date: December 2025	
Drafted by: Chloe Bach, PP, AICP	
Prepared by: Steven M. Bach, PE, RA, PP, CME	

STATE PLANNING
AREA MAP



Appendix 5

Aura I & II Development Area Map



Harrison
Township

Glassboro
Borough

AURA 1

AURA 2

Aure Rd

State Hwy 55

Clems Run

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**Township of Elk
Gloucester County, NJ**

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Map Data & Source:

Data Source: NJGIN, NJDEP	
Scale: 1" = 3,400'	Proj: ET2025-1
Date: December 2025	
Drafted by: Chloe Bach, PP, AICP	
Prepared by: Steven M. Bach, PE, RA, PP, CME	

**AURA I & II DEVELOPMENT
AREA MAP**



Appendix 6

Aura III Redevelopment Area Map

Legend

 Aura III Parcels

 Parcels

Zoning

 C1-Neighborhood Commercial

 C2-Highway Commercial

 M1-Light Manufacturing

 MHP-Moble Home Park

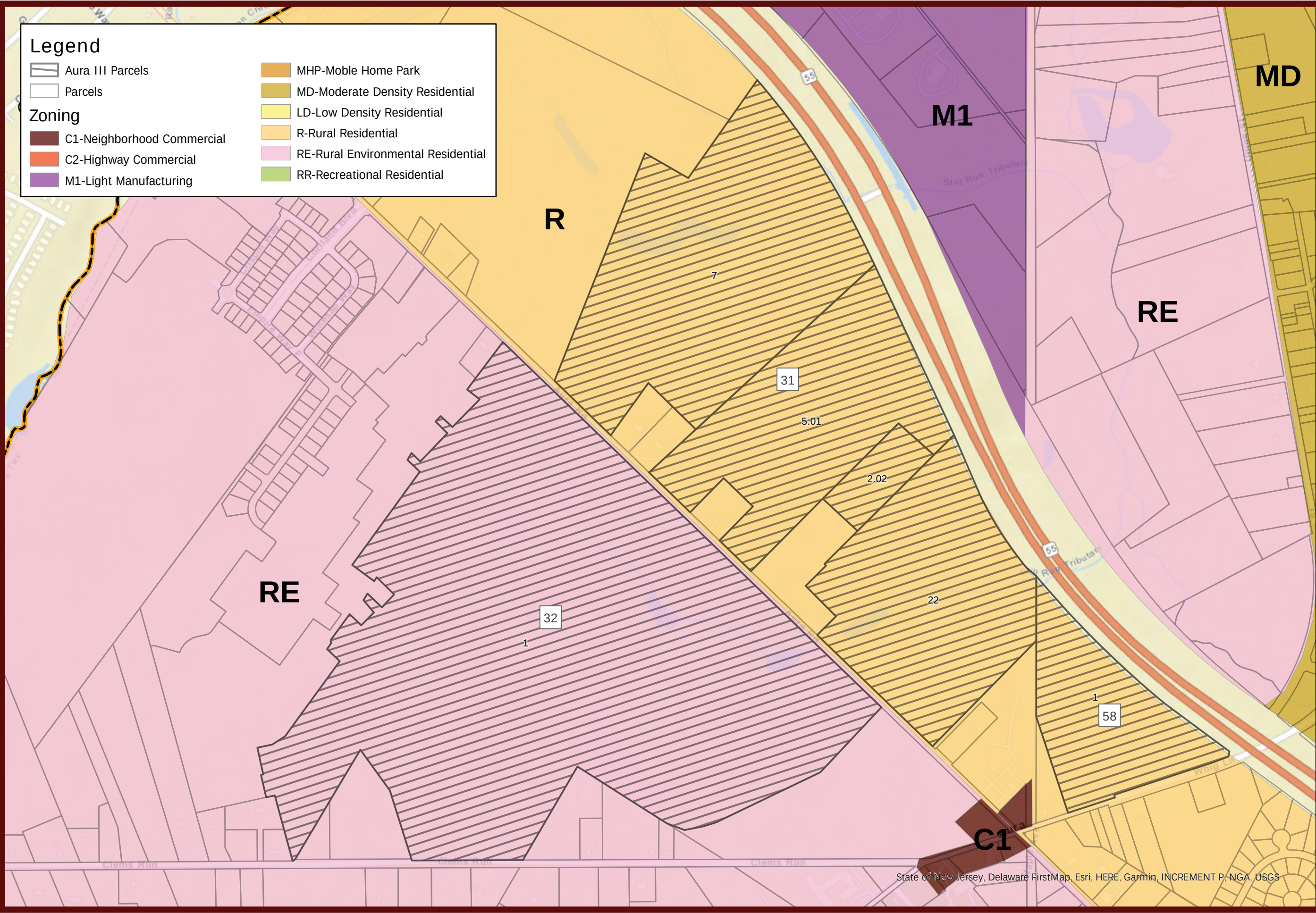
 MD-Moderate Density Residential

 LD-Low Density Residential

 R-Rural Residential

 RE-Rural Environmental Residential

 RR-Recreational Residential



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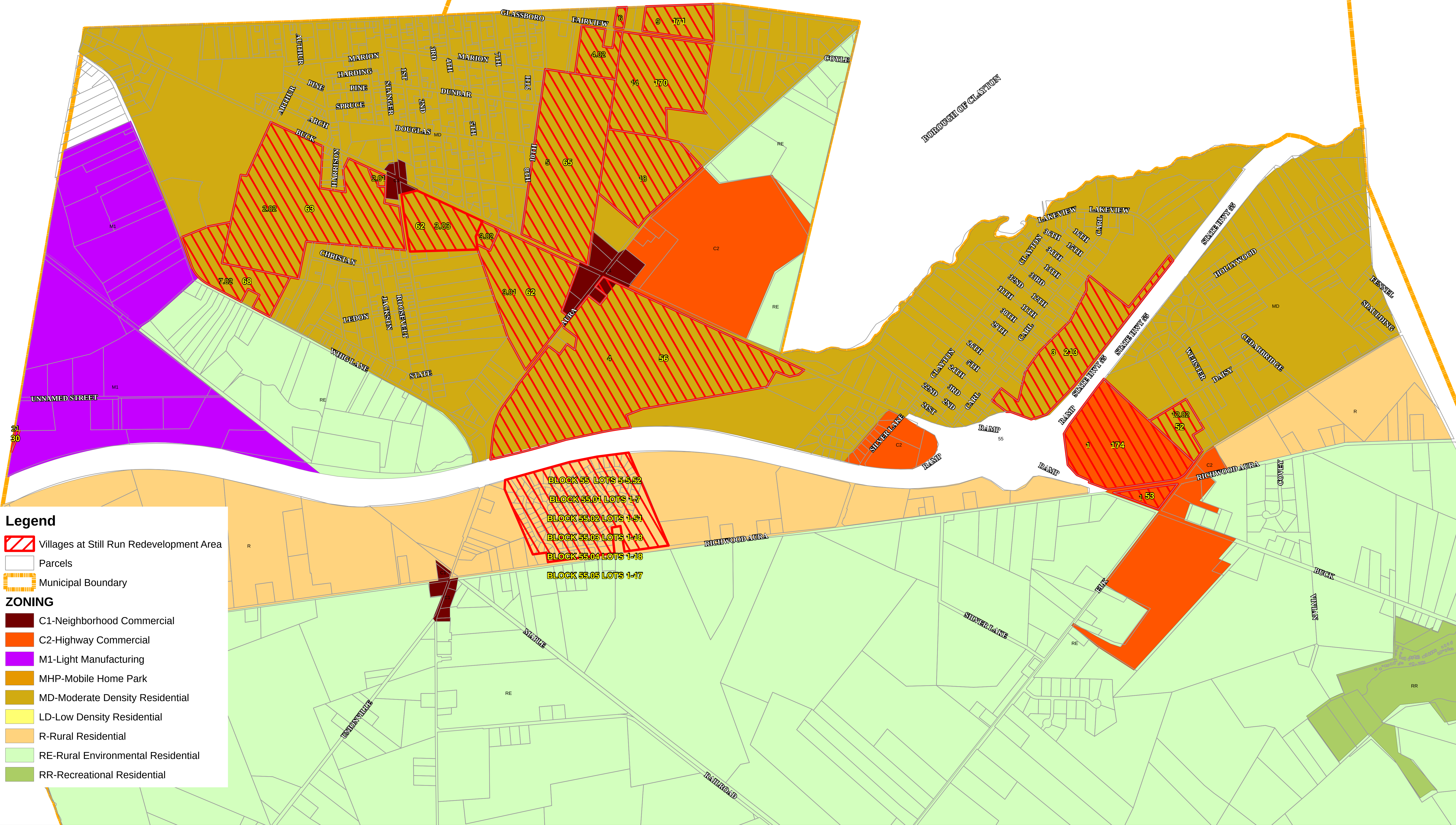
**AURA III
REDEVELOPMENT AREA**
**Township of Elk
Gloucester County, NJ**

Map Data & Source:
Data Source: NJGIN
Scale: 1" = 600'
Project Number: ET2022-1
Date: January 2024
Drafted by: Chloe Bach
Prepared by: Candace Kanaplue, AICP, PP



Appendix 7

Villages at Still Run Redevelopment Zoning Exhibit



Legend

Villages at Still Run Redevelopment Area

Parcels

Municipal Boundary

ZONING

C1-Neighborhood Commercial

C2-Highway Commercial

M1-Light Manufacturing

MHP-Mobile Home Park

MD-Moderate Density Residential

LD-Low Density Residential

R-Rural Residential

RE-Rural Environmental Residential

RR-Recreational Residential

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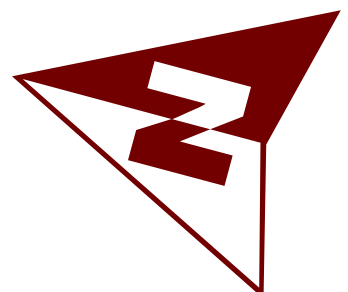
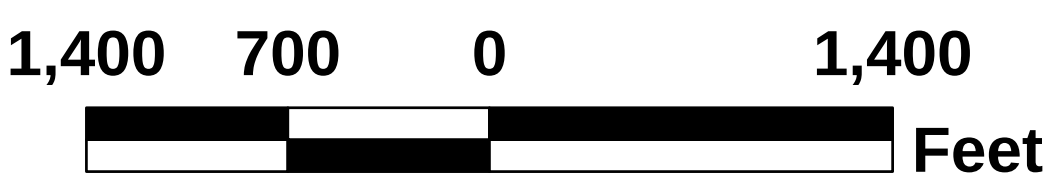
Township of Elk
Gloucester County, NJ

*This map was developed using NGIN/NIDEP Geographic Information System digital data, but this is a secondary product which has not been verified by NGIN/NIDEP and is not state authorized

Zoning Map Sources

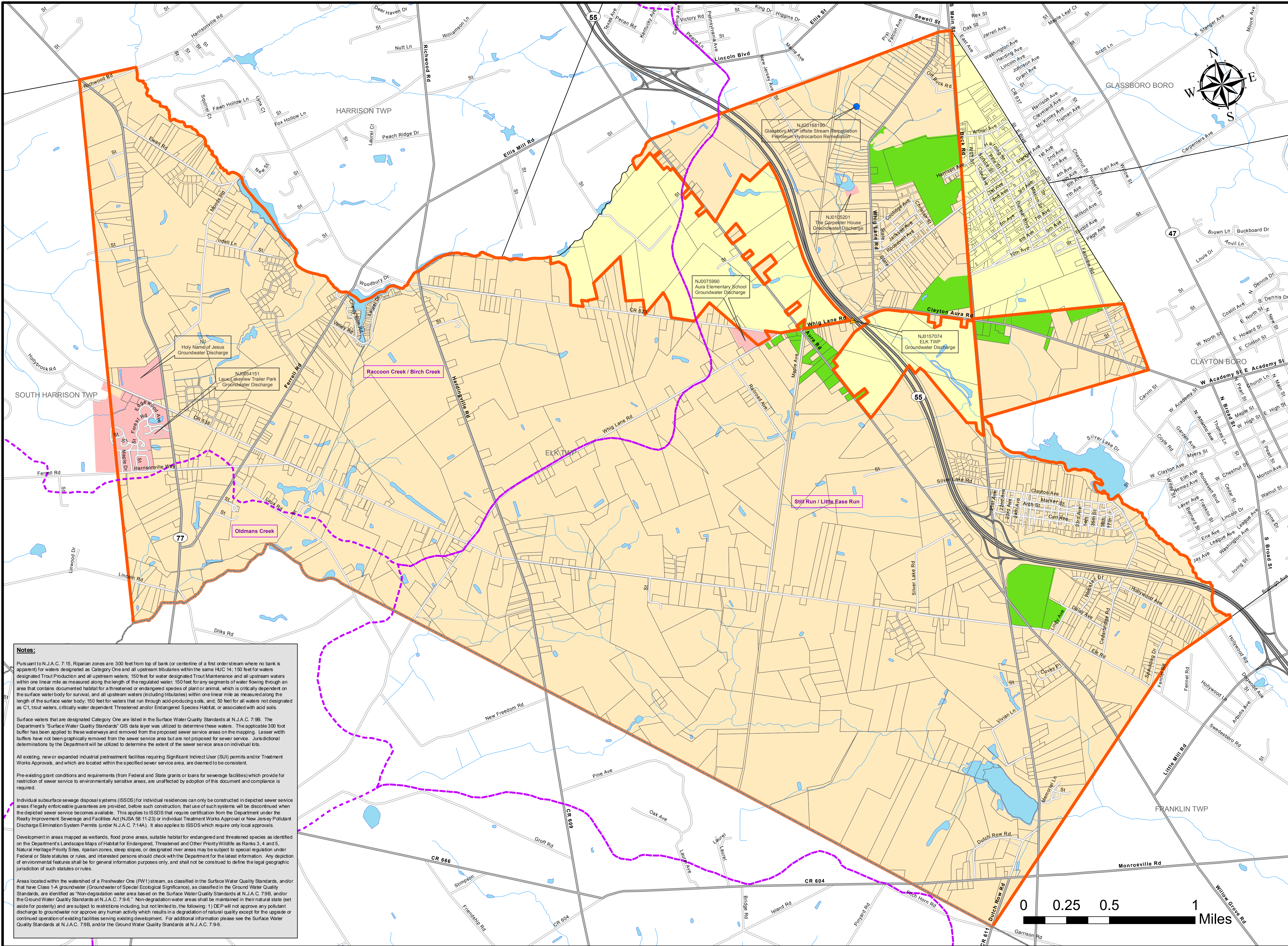
Parcel Data: Gloucester County Planning Department	
Pinelands Boundary & Watershed Layer: NJ Pinelands Comm.	
Scale: 1" = 1,200 feet	Updated Bach Associates 2020
Date: February 19, 2020	Proj: ET2016
Prepared by: Candace Kanapue PP #33L100594200	

**VILLAGES AT STILL RUN REDEVELOPMENT AREA
ZONING EXHIBIT**



Appendix 8

**Sewer Service Area Map
(Churchill Consulting Engineers, PC)
last revised 5/23/12**



Notes:

Pursuant to N.J.A.C. 7:15, Riparian zones are 300 feet from top of bank (or centerline of a first order stream where no bank is apparent) for waters designated as Category One and all upstream tributaries within the same HUC 14, 150 feet for waters designated Trout Production and all upstream waters; 150 feet for water designated Trout Maintenance and all upstream waters within one linear mile as measured along the length of the regulated water; 150 feet for any segments of water flowing through an area that contains documented habitat for a threatened or endangered species of plant or animal, which is critically dependent on the surface water body for survival, and all upstream waters (including tributaries) within one linear mile as measured along the length of the surface water body; 150 feet for waters that run through acid-producing soils, and, 50 feet for all waters not designated as C1, trout waters, critically water dependent Threatened and/or Endangered Species Habitat, or associated with acid soils.

Surface waters that are designated Category One are listed in the Surface Water Quality Standards at N.J.A.C. 7:9B. The Department's "Surface Water Quality Standards" GIS data layer was utilized to determine these waters. The applicable 300 foot buffer has been applied to these waterways and removed from the proposed sewer service areas on the mapping. Lesser width buffers have not been graphically removed from the sewer service area but are not proposed for sewer service. Jurisdictional determinations by the Department will be utilized to determine the extent of the sewer service area on individual lots.

All existing, new or expanded industrial pretreatment facilities requiring Significant Indirect User (SIU) permits and/or Treatment Works Approvals, and which are located within the specified sewer service area, are deemed to be consistent.

Pre-existing grant conditions and requirements (from Federal and State grants or loans for sewerage facilities) which provide for restriction of sewer service to environmentally sensitive areas, are unaffected by adoption of this document and compliance is required.

Individual subsurface sewage disposal systems (ISSDS) for individual residences can only be constructed in depicted sewer service areas if legally enforceable guarantees are provided, before such construction, that use of such systems will be discontinued when the depicted sewer service becomes available. This applies to ISSDS that require certification from the Department under the Realty Improvement Sewerage and Facilities Act (NJSA 58:11-23) or individual Treatment Works Approval or New Jersey Pollutant Discharge Elimination System Permits (under N.J.A.C. 7:14A). It also applies to ISSDS which require only local approvals.

Development in areas mapped as wetlands, flood prone areas, suitable habitat for endangered and threatened species as identified on the Department's Landscape Maps of Habitat for Endangered, Threatened and Other Priority Wildlife as Ranks 3, 4 and 5, Natural Heritage Priority Sites, riparian zones, steep slopes, or designated river areas may be subject to special regulation under Federal or State statutes or rules, and interested persons should check with the Department for the latest information. Any depiction of environmental features shall be for general information purposes only, and shall not be construed to define the legal geographic jurisdiction of such statutes or rules.

Areas located within the watershed of a Freshwater One (FW1) stream, as classified in the Surface Water Quality Standards, and/or that have Class 1-A groundwater (Groundwater of Special Ecological Significance), as classified in the Ground Water Quality Standards, are identified as "Non-degradation water area based on the Surface Water Quality Standards at N.J.A.C. 7:9B, and/or the Ground Water Quality Standards at N.J.A.C. 7:9-6." Non-degradation water areas shall be maintained in their natural state (set aside for posterity) and are subject to restrictions including, but not limited to, the following: 1) DEP will not approve any pollutant discharge to groundwater nor approve any human activity which results in a degradation of natural quality except for the upgrade or continued operation of existing facilities serving existing development. For additional information please see the Surface Water Quality Standards at N.J.A.C. 7:9B, and/or the Ground Water Quality Standards at N.J.A.C. 7:9-6.



Gloucester County Non-Consolidated District Wastewater Management Plan

Map 3

ELK TOWNSHIP FUTURE WASTEWATER SERVICE AREA MAP

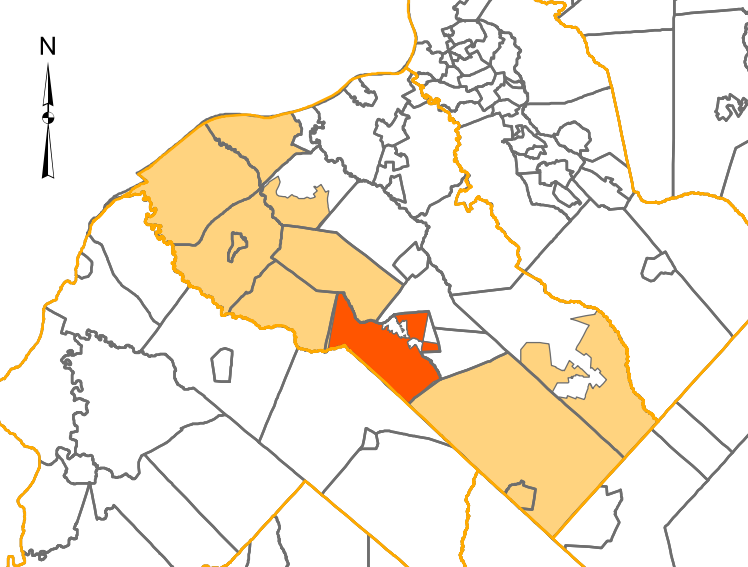
Legend

- Non-Consolidated District Planning Area in Elk Township
- Consolidated District Planning Area in Elk Township
- County Boundary
- Municipality Boundary
- Watershed Boundary
- Waterbody
- NJPDES Surface Water Discharges
- NJPDES Groundwater Discharges

Future Sewer Service Area

- Groundwater Discharge Individual Permits
- Elk Township Sewer Service Area Dependent Upon Future Wastewater Treatment Availability
- Service Area for Wastewater Facilities with Planning Flows of Less Than 2,000 GPD Which Discharges to Groundwater
- NJPDES Surface/Groundwater Discharge ID (See Table)
- Watershed

Note: This Map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.



No.	Date	Description
1	04/25/12	Submission to NJDEP - WCMP Amendments
2	05/23/12	Revised Laux Mobile Home SSA as per NJDEP Legend Rev.
3		
4		
5		
6		
7		
8		
9		

CHURCHILL

Consulting Engineers

A Professional Corporation

344 N Route 73, Suite A
Berlin, NJ 08009
856-767-6901

Appendix 9

Vacant Land Map

Appendix 10

Vacant Land Parcels Inventory Table

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
1	1		305 FISLERVILLE RD	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.577137
2	2.03		305 BRIDGETON PK	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.760511
2	2.05		301 BRIDGETON PK	3B	C1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.048079
2	2.06		309 BRIDGETON PK	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.984337
2	7		EWAN RD	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.94369
2	9		433 EWAN RD	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.346644
5	1		328 BRIDGETON PK	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	33.07137
5	2		344 BRIDGETON PK	3B	LD	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	15.03001
5	5.02		358 BRIDGETON PK	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.55669
5	5.03		364 BRIDGETON PK	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.323025
5	7		374 BRIDGETON PK	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.77228
5	9		502 BRIDGETON PK	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	8.638796
5	11		530 BRIDGETON PK	3B	LD	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	96.25554
5	11.02		BRIDGETON PIKE	3B	C1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.425751
6	4		343 BRIDGETON PK	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.955898
6	14.02		106 DAYLIGHT DR	1	LD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.759808
6	14.19		101 DAYLIGHT DR	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.9309
6	21		361 BRIDGETON PK	3A	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.020129
6	28.01		423 BRIDGETON PK	3B	LD	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	143.2742
6	30		503 BRIDGETON PK	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.892033
6	34		105 MOODS RD	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.127741
7	1		641 BRIDGETON PK	3B	LD	OUTSIDE SEWER SERVICE AREA	GROUNDWATER DISCHARGE INDIVIDUAL PERMITS MOSTLY GROUNDWATER DISCHARGE INDIVIDUAL PERMITS	27.7804
8	1		20 ELK RD	1	R	ENVIRONMENTALLY CONSTRAINED		7.263826
8	6.01		768 BRIDGETON PK	3B	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.978911
8	6.02		755 BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.000194
8	6.03		746 BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.729244
9	1		701 BRIDGETON PK	1	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.321744
9	3		735 BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	21.57949
9	7.02		690 FERRELL RD	1	C1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.304799
9	7.05		630 FERRELL RD	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.854874
10	2		106 IREDELL LN	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.271422
10	3		110 IREDELL LN	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.213837

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
10	4		112 IREDELL LN	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.147719
10	10		130 MOODS RD	3B	LD	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	106.96
10	11.01		803 BRIDGETON PK	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	35.08673
10	12.03		BRIDGETON PK	1	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.05948
10	12.24		405 MALLARD LN	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.331767
10	14		ELLIS MILL RD	15C	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.199086
10	26		1499 ELLIS MILL RD	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	43.59218
11	1		147 LINCOLN RD	1	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.264325
11	2		LINCOLN RD	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.91857
11	6		BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.038645
11	7		900 BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	15.54169
11	11		822 BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.955027
11	12		816 BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.920779
11	14		575 FERRELL RD	3B	R	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	25.21102
11	17		810 BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.994146
12	1		821-841 BRIDGETON PK	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	15.86987
12	3.03		617 FERRELL RD	1	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.146219
12	7		699 FERRELL RD	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.21091
12	8		1661 ELLIS MILL RD	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	8.733213
12	10		1675 ELLIS MILL RD	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.00941
13	7		104 LINCOLN RD	1	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.836694
13	9		OLDMANS CRK	1	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.320744
15	3		1700 ELLIS MILL RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.25515
15	4		1690 ELLIS MILL RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	24.55664
15	7		LAUX RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	54.61103
15	9		LAUX RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	26.9424
17	1		1500 & 1530 ELLIS MILL RD	3B	RE / C1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	16.72837
17	6.01		1490 ELLIS MILL RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	23.15538
17	9		ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.718557
17	18		337 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.98332
17	20		341 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.11369
17	27		351 ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.094298

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
18	6		LAUX RD	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.885733
18	7		334 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	55.52596
18	14		LAUX RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.93595
18	15		344 ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.974213
18	24		LAUX RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	50.16101
18	28		1049 WHIG LN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	64.95011
18	46		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.540441
18	47		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.98289
18	48		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	36.32013
19	1		419 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.31038
19	4		ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	147.6123
19	12		961 WHIG LN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	44.923
19	14		HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	43.13664
20	1		MOODS RD	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.2528
20	22		IREDELL LANE	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.902846
21	1		111 MILLSTONE WAY	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	54.02887
21	1.04		112 MILLSTONE WAY	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.085799
21	1.15		204 GRINDSTONE CT	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	19.69791
21	1.53		205 GRINDSTONE CT	1	LD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.189383
21	5.04		95 MILLSTONE WAY	1	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.554309
21	15		CLEMS RUN (BACK)	3B	LD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.06058
22	1		1409 ELLIS MILL RD	1	LD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.722099
22	9		6 SPRING CIRCLE DR	1	LD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.309636
23	1		W SIDE GILMAN LK	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.46748
23	34		33 VALLEY RD	1	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.22498
23	50		49 VALLEY RD	1	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.247073
24	4		1456 ELLIS MILL RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	13.64902
24	4.01		1460 ELLIS MILL RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.05505
24	5		ELLIS MILL RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	41.15285
24	6		1452 ELLIS MILL RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	8.526271
24	14		S OF ELLIS MILL RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.910261
25	5		558 HARDINGVILLE RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	47.83195

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
25	7		600 HARDINGVILLE RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	128.333
27	1.01		707 CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.31685
27	2		729 CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	17.10745
27	3.01		735 CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.638254
27	3.02		CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.880459
27	4		751 CLEMS RUN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	44.38337
27	6		HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.635466
28	7		569 HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.29662
28	9		HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.00091
28	10		HARDINGVILLE RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	40.16743
28	13		HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	42.3303
28	15.01		HARDINGVILLE RD	3B	RE	PENDING PRESERVED FARMLAND DESIGNATION / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	66.59219
28	19.01		716 CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	36.85309
28	24		750 CLEMS RUN	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	118.7884
29	4		771 CLEMS RUN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	16.85278
29	5		775 CLEMS RUN	3B	RE	PRESERVED FARMLAND	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	29.4012
29	11		795 CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.904852
29	15		279 UNIONVILLE RD	3B	RE	PRESERVED FARMLAND	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.843382
29	16		CRISPIN WAY	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.238006
29	20		AURA RD	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA I (FORMERLY CAMELOT)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	86.16847
29	24.02		AURA RD	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	36.77073
29	24.03		AURA RD	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	6.860752
29	24.04		AURA RD	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	19.25447
29.01	5		CORTLAND BLVD	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA I (FORMERLY CAMELOT)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.434373
29.01	6		AURA RD	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA I (FORMERLY CAMELOT)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	6.406723
29.01	54		CRISPIN WAY	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA I (FORMERLY CAMELOT)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	8.46175
29.01	55		FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	9.106199
29.01	56		200 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.259115
29.01	57		204 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.270114
29.01	58		208 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.429416
29.01	76		AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.541162
29.01	77		AURA RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.081407

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
29.01	79		AURA RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.961255
29.01	81		ELLIS MILL RD	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA I (FORMERLY CAMELOT)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.518236
29.02	12		CORTLAND BLVD	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA I (FORMERLY CAMELOT)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.625971
29.02	13		30 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.302668
29.02	20		EMPIRE WAY EAST	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA I (FORMERLY CAMELOT)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.05295
29.03	1		102 CORTLAND BLVD	1	RE	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.260027
29.03	2		104 CORTLAND BLVD	1	RE	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.189157
29.03	5		110 CORTLAND BLVD	1	RE	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.159011
29.03	10		EMPIRE WAY EAST	1	RE	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.069046
29.08	28		100 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.310407
29.08	29		104 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.223827
29.08	30		108 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.223827
29.08	31		112 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.223827
29.08	32		116 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.223827
29.08	33		120 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.856731
29.08	34		124 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.223827
29.08	35		128 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.250713
29.11	13		2 EMPIRE WAY EAST	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.329034
29.12	1		209 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.257386
29.12	2		205 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.22383
29.12	3		201 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.22383
29.12	4		133 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.22383
29.12	5		129 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.223829
29.12	6		125 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.229798
29.12	7		121 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.38933
29.12	8		117 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.246583
29.12	9		113 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.22383
29.12	10		109 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.223829
29.12	11		105 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.22383
29.12	12		101 FORELLE DR	1	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA II (FORMERLY LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.30823
30	2		850 JACOB HARRIS LN	3B	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	8.184697
30	3		840 JACOB HARRIS LN	3B	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	17.08638

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
30	11		780 JACOB HARRIS LN	1	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.959281
30	18		710 JACOB HARRIS LN	1	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.049713
30	19		702 JACOB HARRIS LN	1	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.058812
30	21		704 JACOB HARRIS LN	1	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.249699
31	2.02		799 AURA RD	3B	R	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA III (FORMERLY PART OF LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	5.119634
31	5.01		701 AURA RD	3B	R	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA III (FORMERLY PART OF LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	37.78831
31	7		AURA RD	3B	R	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA III (FORMERLY PART OF LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	60.70328
31	8		AURA RD	3B	R	PENDING PRESERVED FARMLAND DESIGNATION / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	68.22945
31	14		603 AURA RD	3B	R	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	22.42093
31	14.01		AURA RD	3B	R	PENDING PRESERVED FARMLAND DESIGNATION / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.621827
31	22		AURA RD	3B	R	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA III (FORMERLY PART OF LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	40.85666
32	1		AURA RD	3B	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA III (FORMERLY PART OF LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	169.9208
32	2		710 AURA RD	15C	RE	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA III (FORMERLY PART OF LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	24.84528
32	10		845 CLEMS RUN	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.780404
32	16.01		825 CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.973522
33	1.01		770 CLEMS RUN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	91.62558
33	4		CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.63295
33	6		CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	27.47392
33	12.03		749 WHIG LN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.984165
33	12.11		801 & 821 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	68.21498
33	12.12		851 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	85.86514
33	12.13		933 & 941 WHIG LN	3B	RE	PENDING PRESERVED FARMLAND DESIGNATION / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	46.93697
33	12.14		844 CLEMS RUN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.618278
33	12.18		840 CLEMS RUN	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.434581
34	1		714 & 720 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	49.25887
34	1.03		710 WHIG LN	15C	RE	NOT VACANT - PART OF MUNICIPAL COMPLEX	PARTIALLY OUTSIDE SEWER SERVICE AREA	1.016764
34	1.05		700 WHIG LN	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	16.87008
34	3		690 WHIG LN	15C	RE	NOT VACANT - PART OF MUNICIPAL COMPLEX	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	1.775596
34	4		680 WHIG LN	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	8.963171

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
35	1		WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	75.25298
35	1.07		RAILROAD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	53.714
35	1.08		800 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	32.56866
35	1.09		WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	27.67602
35	2		754 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.36617
35	5		141 RAILROAD AVE	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	35.02502
35	6		RAILROAD AVE	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.063577
36	1.01		105 POND VIEW CT	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.097107
36	1.02		107 POND VIEW CT	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.101705
36	1.03		109 POND VIEW CT	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.155718
36	1.04		111 POND VIEW CT	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.469601
36	1.05		115 POND VIEW CT	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	56.47189
36	1.06		110 POND VIEW CT	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.062025
36	1.07		108 POND VIEW CT	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.995488
36	1.08		106 POND VIEW CT	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.982648
36	1.09		104 POND VIEW CT	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.99798
36	2		ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.43971
36	7		869 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.876381
36	8		886 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.182853
36	12		115 RAILROAD AVE	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	18.7893
36	14		RAILROAD AVE	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	21.26713
36	15		ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	28.16505
36	18		850 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	57.895
37	1		WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	34.20153
37	2		912 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	42.44288
37	2.09		940 & 950 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	52.39683
37	7		717 HARDINGVILLE RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.48186
37	7.01		HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.664466
37	8		751 HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.03686
37	12.01		641 ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	45.9892
37	16		701 ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.89639
37	19		759 ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	88.32212

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
38	2		970 WHIG LN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	15.8958
38	5		HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.397638
38	6		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.671059
39	1		994 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.04886
39	2		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.78524
39	3		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.450501
39	3.01		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.315764
39	5		800 HARDINGVILLE RD	3A	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.996395
39	6		820 HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.16708
39	8.01		HARDINGVILLE RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.76586
39	11		HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	13.71007
39	12		E OF WHIG LN	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	28.50628
39	13		1026 WHIG LN	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	47.38038
39	14.01		1050 WHIG LN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.312922
40	1		HARDINGVILLE RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	123.1679
40	8		835 HARDINGVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.229378
40	11.01		620 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	13.37523
40	14		692 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.97206
40	16		ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	16.48941
40	17		S OF ELK RD	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	17.31363
40	18		ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	82.08591
40	19		ELK RD	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	38.25271
40	21		HARDINGVILLE RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.116201
40	22		HARDINGVILLE RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.70807
41	1		W OF PRSL	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.728553
41	2		274 RICHWOOD RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.56627
41	3		CONRAIL RR	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.276468
41	4		ELK RD S	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	41.52467
41	6		ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.110021
41	7		ELK RD S	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.688365
41	8		ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	18.35155
41	10		868 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.445438

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
41	12		836 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.36632
41	12.01		838 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	15.96929
41	12.02		840 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	22.71469
41	14.03		770 ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.840001
41	15.01		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.165157
41	16		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.654998
41	17		ELK ROAD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.19358
41	18		ELK RD S	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	50.01922
41	21		CONRAIL RR	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.853722
41	22		ELK RD	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	21.08016
41	27		274 RICHWOOD RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	70.56746
41	28		E OF PRSL	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.992995
41	29		900 ELK RD	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	8.713592
42	1		E OF PRSL	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	137.2465
42	2		E OF PRSL	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	16.18718
42	3		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	38.50415
42	7		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	28.0222
42	7.01		ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	27.33602
42	9		ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	24.93722
42	10		968 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.408326
42	11		978 ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	25.46657
42	12		ELK ROAD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	22.53172
42	13		133 STOCKTON CT	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	36.08589
42	18		S OF ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.914239
43	1		E OF PRSL	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	143.6593
43	2		MONROEVILLE RD BACK	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	16.15079
43	4		BUCK RD LANDLOCKED	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	125.9083
43	5		MONROEVILLE RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	193.5045
43	11		526 MONROEVILLE RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.114025
43	11.01		522 MONROEVILLE RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.405046
44	1		6 HUGHES LN	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.829124
44	3		760 BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	26.64904

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
44	4		730 BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	80.11394
44	6		ELK RD	3B	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	56.84897
44	8		1074 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.15614
44	13		ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.416735
44	14		ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.82406
44	15		W OF BUCK RD	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	43.46326
44	16		BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	34.39057
44	20		BUCK RD WEST END	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.225414
45	8		24 N SHORE DR	1	RR	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.008038
45	8		37 N SHORE DR	1	RR	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.021777
45	12		DUTCH ROW RD	3B	RR	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	22.66283
45	15		DUTCH ROW RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.727303
45	16		106 DUTCH ROW RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.075151
45	22		639 MONROEVILLE RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	28.78955
45	23		MONROEVILLE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	31.6147
46	1		MONROEVILLE RD	1	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.398507
46	7.01		MONROEVILLE RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	31.97089
46	8		DUTCH ROW RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.885935
47	1		DUTCH ROW RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.518094
48	1		BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.938654
48	3		862 BUCK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.369492
49	1		863 BUCK RD	3B	RE / RR	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.8323
49	2		170 BURMA RD	1	RR	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.01603
49	2		131 BUCK RD	1	RR	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.039357
49	5		815 BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.966648
49	6		807 BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.01313
49	7		801 BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.886095
50	4		1866 WILLOW GROVE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	47.12328
50	4.02		755 BUCK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.501066
50	6		739 BUCK RD	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.835327
50	7		737 BUCK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.919422
50	11		1834 WILLOW GROVE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.6937

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
50	15		705 BUCK RD	1	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.554754
50	17.06		COVEY PL	1	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.656789
50	19		1872 WILLOW GROVE RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	21.60182
50	20		1886 WILLOW GROVE RD	3B	RE / RR	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	17.47542
51	2		ELK RD	3B	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.661288
51	4		ELK RD	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	13.05188
51	5		ELK RD	3B	R	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	31.47817
51	6.01		1881 WILLOW GROVE RD	1	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.840412
51	7		WILLOW GROVE RD	1	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.385895
52	1.01		426 CEDAR BRIDGE RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.529718
52	5		1205 ELK RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.83308
52	7		ELK RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.579547
52	12.02		1129 ELK RD	3B	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE VI	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	9.252515
52	16		214A DAISY AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.452884
53	1		BUCK RD	1	C2	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE VI	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	4.120319
54	3		905 ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	44.78912
54	4		909 ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	45.21116
54	6		947 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.25941
54	6.01		ELK ROAD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.88378
54	6.02		961 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.06805
54	6.03		949 ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.43364
54	8		967 ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	55.60651
54	12		1021 ELK RD	1	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.729324
54	15		HAYNICZ RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	27.0477
54	17		1152 AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	13.84338
54	18		1140 AURA RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.72587
54	20		AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	110.5228
54	21		AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.7478
54	22		AURA RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	132.0767
54	24		948 AURA RD	15C	RE	ROSI / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	21.90966
54	26.01		942 AURA RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.857473
54	26.03		930 AURA RD	1	RE	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	1.400114

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
54	31		AURA RD	1	RE	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	2.435145
54	33		AURA RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.655428
54	34		AURA RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.896475
54	36		AURA RD	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	13.32988
55	1		1075 AURA RD	3B	R	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.31085
55	3		1049 AURA RD	3B	R	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	52.93041
55	3.02		1065 AURA RD	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.233241
55	5		AURA RD	3B	R	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE III	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	10.36037
55	18.02		610 WHIG LN	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.569749
55	19		602 WHIG LN	15C	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.452809
55.02	1		AURA RD	3B	R	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.215175
55.04	1		AURA RD	3B	R	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.308727
56	2.01		554 BUCK RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.000373
56	4		500 & 540 WHIG LN	3B	MD	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	38.71972
56	5		ALONG RT55	1	MD	LANDLOCKED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.992097
56.01	1		THORNWOOD DR	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.476677
56.03	1		BUCK RD & SILVERGATE BLVD	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.920756
56.03	2		WHIG LN	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	4.95731
56.03	3		SILVERGATE BLVD & WHIG LN	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	5.19199
56.04	1		103 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.351376
56.04	2		107 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.360824
56.04	3		111 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344352
56.04	4		115 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344352
56.04	5		119 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344354
56.04	6		123 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.404694
56.04	7		137 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.351841
56.04	8		145 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.349698
56.04	9		151 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	3.533585
56.05	4		125 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	86.42709
56.05	4.01		102 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.364261
56.05	4.02		106 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.347741
56.05	4.03		110 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344352

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
56.05	4.04		114 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344352
56.05	4.05		120 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344352
56.05	4.06		124 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.351286
56.05	4.07		100 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.365363
56.05	4.08		108 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.382493
56.05	4.09		112 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.364683
56.05	4.1		120 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.353939
56.05	4.11		124 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.373824
56.05	4.13		123 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.358767
56.05	4.14		119 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.35432
56.05	4.15		115 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.377438
56.05	4.16		111 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.345067
56.05	4.17		109 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344731
56.05	4.18		105 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.391845
56.05	4.19		101 TARNBROOK CIR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.376607
56.05	4.2		134 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.387457
56.05	4.21		102 WATERVIEW CT	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.393731
56.05	4.22		106 WATERVIEW CT	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.328225
56.05	4.23		110 WATERVIEW CT	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.361945
56.05	4.24		105 WATERVIEW CT	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.340636
56.05	4.25		101 WATERVIEW CT	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.368312
56.05	4.26		146 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.364543
56.05	4.27		152 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344356
56.05	4.28		154 HIDDEN LAKE DR	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.383877
56.05	4.29		WHIG LN	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE I	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	18.12761
57	1		AURA RD	15C	R	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.002884
58	1		625 WHIG LN	3B	R	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - AURA III (FORMERLY PART OF LATHAM PARK)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	21.27612
59	5.01		439 UNION ST	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.731224
59	7		459 UNION ST	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.229399
59	8		465 UNION ST	1	RE / MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	15.68046
59	9		UNION ST	15C	RE / MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.469644

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
59	11		UNION ST	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	8.754552
59	12		W OF UNION ST	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.5339
59	13		W OF PRSL	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.50127
62	3.01		555 WHIG LN	3B	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE IV	MOSTLY ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	43.18613
62	3.03		BUCK RD	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	19.29661
62	6.02		589 WHIG LN	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.295672
62	14		102 STANGER AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.446181
62	19		STANGER AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.097612
62	20		S OF STANGER AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.971488
62	29		STANGER AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.172171
62	34		STANGER AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.751743
62	35		STANGER AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.043498
62	36		STANGER AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.997448
63	2.02		240 BUCK RD	3B	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE II	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	90.08735
63	14		STANGER AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.444594
64	1		251 BUCK RD	15C	C1	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.435089
64	4		207 STANGER AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.422406
64	6		213 STANGER AVE	15C	MD	RECREATION AREA	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	3.605811
64	7		211 STANGER AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.265152
65	2		678 FAIRVIEW RD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.611224
65	4.02		670 FAIRVIEW RD	3B	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE IV	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	10.2614
65	5		BUCK RD	3B	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE IV, V & OPEN SPACE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	69.44212
66	1.04		707 JACOB HARRIS LN	1	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.058134
66	2		801 JACOB HARRIS LN	1	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.556579
66	3		765 JACOB HARRIS LN	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	33.85423
66	5		767 JACOB HARRIS LN	15C	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.728294
66	6		811 JACOB HARRIS LN	15C	M1	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.353763
67	1		375 UNION ST	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.26138
67	2		371 UNION ST	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.019215
67	7		333 UNION ST	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.281281
67	8		327 UNION ST	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.150968

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
67	11		315 UNION ST	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.096221
67	12		311 UNION ST	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.969092
67	14		299 UNION ST	1	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.518065
67	19		279 UNION ST	3B	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	19.57067
67	21		265 UNION ST	3B	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	9.585437
67	23		UNION ST	3B	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.36006
67	26		UNION ST	3B	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.874493
67	38		199 UNION ST	15C	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.016521
67	39		WHIG LN	1	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.25938
67	40		W WHIG LN	1	M1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	12.14288
67	41		JACOB HARRIS LN	15C	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.149077
67	44		AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.76298
67	46		WHIG LN	15C	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.132108
68	1		370 UNION ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.621234
68	5		356 UNION ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.018323
68	7.02		985 WHIG LN	3B	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE II	MOSTLY ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	22.46508
68	10		128 BUCK RD	3B	MD	PENDING PRESERVED FARMLAND DESIGNATION / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	63.55026
69	3		106 WOLF AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.016695
69	5		234 UNION ST	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.241097
70	12.01		200 UNION ST	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.03154
71	1		103 BUCK RD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.358511
72	2.01		113 BUCK RD	1	MD	NOT VACANT - ADD LOT OF EXISTING BUSINESS DEVELOPMENT PROJECT - NOT VACANT (SELF STORAGE FACILITY)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.73282
72	4		125 BUCK RD	1	MD		ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	12.42506
72	6	A	135 BUCK RD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	14.09826
73	1		374 UNION ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.907714
74	2		STATE ST	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.057392
74	4		386 UNION ST	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.344352
74	4.01		382 UNION ST	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.057392
74	7		422 UNION ST	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.321396
75	2		428 UNION ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.229568
75	3		430 UNION ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.229568
76	1		448 UNION ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.416899

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
76	4		STANGER AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.400808
77	1		100 STATE ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.676402
77	3		501 COOLIDGE AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.29206
79	1		CLEVELAND AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.036192
79	2		CLEVELAND AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.377672
80	2		LEDDON ST	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.160593
80	3		CLEVELAND AVE	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.57392
81	1		835 STATE ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.976455
81	3		JACKSON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.829546
81	4		JACKSON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.829545
82	1		109 STANGER AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.901109
83	1.01		621 COOLIDGE AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.171726
84	1		624 COOLIDGE AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.684286
85	1.01		CLEVELAND AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.239807
85	2		CLEVELAND AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.286961
86	1		CLEVELAND AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114781
86	2		CLEVELAND AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.860877
86	4		CLEVELAND AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114784
86	7		518 CHRISTIAN ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114784
86	8		JACKSON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114788
86	9		JACKSON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114788
86	13		516 CHRISTIAN ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.344352
88	6		STANGER AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.114784
88	8		147 STANGER AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.688705
88	9		410 CHRISTIAN ST	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114784
88	10		STANGER AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.114784
88	11		STANGER AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.114784
88	13		STANGER AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114784
88	14		STANGER AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114784
89	1		309 OAK ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.385065
90	2		LOCUST ST	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.057461
94	2		523 CHRISTIAN ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.793985

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
96	2		550 JACKSON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.226805
97	1		451 CHRISTIAN ST	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.374918
98	1		FILLMORE AVE	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.027544
99	1	A	126 WEST BLVD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.355884
100	1		152 WEST BLVD	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.355892
101	1		HAYES AVE	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.801823
101	2		HAYES AVE	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.381914
101	3		WEST BLVD	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172162
102	1	A	HAYES AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.131828
102	3		HAYES AVE	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.703827
102	4		GARFIELD	15C	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172176
103	1	B	505 MARION ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.220413
103	2	B	TAFT AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114694
103	3	B	WEST BOULEVARD	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.266734
103	4	B	210 WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
104	1		ARTHUR AVE	15C	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.712232
106	1	A	ARCH ST	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.590418
106	2	A	507 ARTHUR AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.183523
107	2		ARCH ST	15C	MD	LANDLOCKED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.126281
107	3		ARCH ST	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.091825
107	5		157 BUCK RD	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.183654
107	6.01		MAIN ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.321404
107	6.02		ARCH ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.091824
108	1.01	C	BUCK RD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.596878
108	1.02	C	BUCK RD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.596878
108	3		MAIN ST	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
109	3		SPRUCE ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.516528
109	7		305 HARRISON AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.106335
110	1		ARTHUR AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.091828
110	3		SPRUCE ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.601054
111	1		365 HARRISON AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.393118
112	1		TAFT AVE	15C	MD	NOT VACANT - HOUSE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.492769

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
113	1		201 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.301188
113	2		205 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.239935
113	3		213 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.742675
113	5		231 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.301406
113	6		220 BUCK RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.157886
113	7		222 BUCK RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114317
113	8		224 BUCK RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.114317
114	1		200 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.273077
114	2		206 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.41953
114	3		208 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.06746
114	6		218 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.183404
114	7		222 SHOULTZ AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.256071
115	1		BUCK RD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.117644
115	3		306 HARRISON AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.217933
115	4		308 HARRISON AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.145912
115	5		312 HARRISON AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.219213
116	2		SPRUCE ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.160698
117	1.01		FLORENCE AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.297277
117	5		SPRUCE ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
118	2		513 SPRUCE ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.573921
118	5.02		505 PINE ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.401745
118	6		635 ROOSEVELT AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344353
119	1	D	360 HARRISON AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.482094
119	2	D	518 PINE ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.28696
119	3	D	514 HARDING ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
119	4	D	510 HARDING ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.688705
119	8		502 HARDING ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.286961
120	1.01		515 HARDING ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.515151
120	3		MARION ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
121	1	E	525 MARION ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.100853
121	2	E	521 PIERCE AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.460055
122	1	F	401 PIERCE AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.196454

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
122	2	F	MCKINLEY AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114829
122	3	F	WEST BOULEVARD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172201
123	1	T	537 MARION ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.473826
123	2	T	MARION ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.447659
123	3	T	MCKINLEY AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.056014
123	4	T	MCKINLEY AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.118809
123	5	T	WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.22273
123	7	T	WEST BLVD	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.306334
124	1		ROOSEVELT AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.164837
124	3		ROOSEVELT AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.229568
124	5		ROOSEVELT AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
124	13		ROOSEVELT	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
125	4	J	ROOSEVELT AVE	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
125	6.03	J	STANGER AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
125	7	J	239 STANGER AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.033058
126	4	T	371 WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.174342
126	5	T	385 WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.11478
126	6	T	WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114779
128	7		FIRST AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.198689
128	9		FIRST AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.238794
129	5		FIRST AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.115291
130	4		STANGER AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.107653
131	1		MAIN ST	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.23511
131	3		SECOND AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.437394
131	6		SECOND AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.229568
132	5	N	SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.482392
133	3	N	FOURTH ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.143351
133	4	N	REED ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.216435
134	1.03		BUCK RD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.356434
134	1.04		FIFTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.15406
134	2		FOURTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
135	2		FIFTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.427639

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
135	3		502 FIFTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
135	5		510 FIFTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.536827
136	2		SEVENTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
137	1		505 TENTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.01541
138	1		508 SECOND AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.471992
138	4		SECOND AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172259
139	1.01	M	THIRD ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.471992
139	1.02	M	510 THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.245707
139	1.03	M	FOURTH AVE	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057733
139	2	M	THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.262361
139	4	M	FOURTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114847
140	2		514 FOURTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.459137
140	7		FIFTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
141	2		FIFTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
141	3		FIFTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172176
142	2		SIXTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.14348
143	1	O	DOUGLASS ST	1	MD	NOT VACANT - DEVELOPMENT PROJECT	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	3.024335
143	2	O	DOUGLASS ST	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.202916
143	3	O	EIGHTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.946962
144	1		DOUGLASS ST	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.199728
144	3		FIRST AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.334501
144	4		FIRST AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
144	6		525 SECOND AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.236587
145	3.01	L	SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.025413
145	4	L	SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.11514
146	1	L	THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.200906
146	2	L	DOUGLASS ST	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.330085
146	3	L	FOURTH AVE	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.207759
146	4	L	524 THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.559904
146	5	L	FOURTH AVE	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172176
146	6	L	FOURTH AVE	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.075952
146	8	L	DUNBAR BLVD	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.05671

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
146	9	L	112 DUNBAR BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.144903
147	3		539 FIFTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.480904
148	1		DOUGLASS ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.257291
149	3		SIXTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
149	5.01		SIXTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.168871
150	1		SEVENTH AVE	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.411073
150	2		DUNBAR BLVD	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.471992
151	1		199 DOUGLASS ST	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.349448
151	2		EIGHTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
151	3		142 DUNBAR BLVD	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.461931
152	1	K	DUNBAR BLVD	1	MD	NOT VACANT - HOUSE UNDER CONSTRUCTION	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.542351
152	2	K	DUNBAR BLVD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.199843
152	3	K	SECOND AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
152	4	K	SECOND AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
153	1		DUNBAR BLVD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.157807
153	2		528 SECOND AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.195588
153	4		SECOND AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
154	1	S	DUNBAR BLVD	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.471993
154	2	S	DUNBAR BLVD	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.591986
155	1		117 DUNBAR BLVD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.15806
155	2		115 DUNBAR BLVD	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.313933
155	4		FIFTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.130543
155	5		MARION ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.256625
155	6		MARION ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.11481
155	7		MARION ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.100557
156	2		SIXTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.221993
156	5		MARION AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.372337
156	6		MARION ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.099655
157	1	Q	DUNBAR BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.853765
157	3		SEVENTH ST	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
157	5		MARION ST	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.471993
159	1	P	DUNBAR BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.770431

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
159	3		NINTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344353
159	5		EIGHTH & MARION	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.941303
160	1		NINTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.136888
160	2		NINTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.496157
161	1	G	SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.486227
161	2	G	545 SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.229568
161	3	G	FIRST AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.459137
161	4	G	SECOND AVE	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114612
161	5	G	FIRST AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
161	6	G	SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114957
161	7	G	SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
161	8		SECOND AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.057084
161	9	G	SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.64416
162	1	H	THIRD AVE	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.245208
162	3	H	561 THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.516529
162	4	H	565 THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
162	5	H	570 SECOND AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.746172
162	6	H	460 WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.598666
162	7	H	440 WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.199445
163	2	I	558 THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.229562
163	3	I	562 THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.401074
163	4	I	FOURTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.116023
163	5	I	FOURTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.442503
163	6	I	566 THIRD AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.113624
163	9	I	WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057264
163	10	I	WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114653
163	11	I	WEST BLVD	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.05739
163	12	I	WEST BLVD	15C	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.107995
164	3		WEST BLVD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.352915
165	3		SIXTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.05754
165	4.01		SIXTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.768351
166	1		541 SEVENTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.483242

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
166	6	R	555 SIXTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.573922
166	7		549 SEVENTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344352
166	9		650 WEST BLVD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.459574
167	4		EIGHTH AVE	1	MD	DEVELOPABLE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.245859
168	2		NINTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114812
168	3.01		532 EIGHTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114756
168	3.03		536 EIGHTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.229569
169	2		522 NINTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114617
169	3		TENTH AVE	15C	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.093752
169	5		528 NINTH AVE	15C	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.228891
169	7		532 NINTH AVE	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172655
169	8		682 FAIRVIEW RD	1	MD	INSUFFICIENT ACREAGE	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.30425
169	11		526 NINTH AVE	1	MD	ENVIRONMENTALLY CONSTRAINED	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.09215
170	14		FAIRVIEW RD	3B	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE IV	PARTIALLY CURRENT / FUTURE SEWER SERVICE AREA	44.85288
170	14.01		FAIRVIEW RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.165803
170	15		499 WHIG LN	1	C1	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.41579
170	17		487 WHIG LN	3B	MD	NOT VACANT - HOUSE	PARTIALLY CURRENT / FUTURE SEWER SERVICE AREA	8.04365
170	18		477 WHIG LN	3B	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE IV	PARTIALLY CURRENT / FUTURE SEWER SERVICE AREA	34.97306
171	6		665 FAIRVIEW RD	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE IV	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.127362
171	9		621 FAIRVIEW RD	1	MD	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE IV	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	12.20653
171	16		535 FAIRVIEW RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.835006
171	23		503 FAIRVIEW RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.397435
171	24		501 FAIRVIEW RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.144654
171	25		FAIRVIEW RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.083438
171	31		FAIRVIEW RD	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.332162
171	32		FAIRVIEW RD	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.119887
172	1.01		490 WHIG LN	3B	C2	NOT VACANT - HOUSE	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	6.887445
172	4		BUCK RD	15C	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	96.59395
172	6		460 WHIG LN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	13.81635
172	7		440 WHIG LN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	26.80311
172	9.01		420 WHIG LN	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.782741
172	10		BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.311005

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
172	11		BUCK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	13.69502
173	3		400 WHIG LN	1	RE	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.228081
174	1		BUCK RD	3B	C2	INCLUSIONARY DEVELOPMENT PROJECT - NOT VACANT - SILVERGATE PHASE VI	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	47.21993
175	1		HAYNICZ RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	29.91689
175	4		ELK RD	1	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.308122
175	7		ELK RD	3B	RE	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	27.93374
175	7.01		ELK RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.500039
175	11		1192 AURA RD	3A	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.345322
175	12		AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	8.813616
175	12.01		AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.872127
175	12.02		AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.938912
175	13		AURA RD	3B	RE	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	6.824074
176	3		AURA RD	3B	R	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	10.81334
176	7		AURA RD	3B	R	PRESERVED FARMLAND / OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.39017
177	1		BUCK RD	15C	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.567661
177	2.02		CEDAR LN	1	C2	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	7.157777
178	1		SILVER LAKE	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.20326
178	3		565 BUCK RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.805274
178	6		583 BUCK RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	3.46999
178	14		241 CLAYTON AVE	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	11.60801
178	22		259 CLAYTON AVE	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.778754
178	28		293 CLAYTON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.225336
178	29		CLAYTON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.402698
179	1		CLAYTON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.101661
179	2		CLAYTON AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.137741
179	3		CLAYTON AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.091827
179	7		113 TWENTY-FIRST AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.165289
180	6		CARL AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.091827
181	1		BUCK RD	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.190773
182	3		THIRD AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.275482
182	4		TWENTY-SECOND AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.413223
182	6		TWENTY-THIRD AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.137741

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
182	8		SECOND AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.137741
183	3		THIRD AVE	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.296829
185	5		FOURTH AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.006173
186	3		250 CLAYTON AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.367309
189	2		TWENTY-FIFTH AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.547556
190	6		TWENTY SIXTH AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.183655
190	8		SEVENTH AVE	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.110642
191	3		TWENTY SIXTH AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.703459
191	4		TWENTY-SEVENTH AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.055055
193	2		TWENTY-SEVENTH AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.584545
194	1		CLAYTON AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.459137
195	1		TWENTY-NINETH AVE	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.13754
195	3		TWENTY-EIGHTH AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.571249
196	5		106 TWENTY-NINETH AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.137741
196	6		104 TWENTY-NINETH AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.183655
196	7		105 THIRTIETH AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.229568
197	1		150 CARL AVE	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.137741
197	4		101 THIRTIETH AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.367999
198	6		153 CARL AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.091827
199	2		102 THIRTIETH AVE	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.321396
201	4		THIRTY-SECOND AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.237488
203	2		211 THIRTY-SECOND AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.366975
203	3		210 THIRTY-THIRD AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.328283
205	2		THIRTEENTH AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.396283
206	1		288 CLAYTON AVE	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.26087
207	1		THIRTY-FOURTH AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.536053
208	5		175 CARL AVE	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.229568
212	4		CEDAR BRIDGE RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.238989
213	1		CEDAR BRIDGE RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.533677
213	2		CEDAR BRIDGE RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	20.40116
213	3		CEDAR BRIDGE RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	41.69913
214	1		CEDAR BRIDGE RD	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.551867

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
214.01	29		1 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.596489
214.01	29.01		5 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.579734
214.01	29.02		9 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.57566
214.01	29.03		13 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.584286
214.01	29.04		17 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.576231
214.01	29.05		21 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.57625
214.01	29.06		25 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.556288
214.01	29.07		33 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.242611
214.01	29.08		28 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.794178
214.01	29.09		24 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.583983
214.01	29.1		20 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.583868
214.01	29.11		16 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.583751
214.01	29.12		12 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.577018
214.01	29.13		8 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.588221
214.01	29.14		4 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.588885
214.01	29.15		2 MIMOSA CT	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.596487
214.01	30		NORTHBROOK PL REAR	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.380105
215	1		201 CEDAR BRIDGE RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.966505
215	3		221 CEDAR BRIDGE RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	17.91989
215	11		CEDAR BRIDGE RD	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.148464
215	13		N OF HOLLYWOOD AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.253512
215	14		E OF CEDAR BR RD	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.66243
216	1		CEDAR BRIDGE RD	15C	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.79248
216	16.01		271 HOLLYWOOD AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.671557
216	19.01		297 HOLLYWOOD AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.165578
216	21		HOLLYWOOD AVE	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.643757
217	1		1265 ELK RD	3B	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	43.71572
217	3		325 CEDAR BRIDGE RD	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.917808
217	4		319 CEDAR BRIDGE RD	15C	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.818642
217	9		CEDAR BRIDGE RD	1	MD	INSUFFICIENT ACREAGE	OUTSIDE SEWER SERVICE AREA	0.244971
217	15		220 HOLLYWOOD AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	5.899765
217	27.02		288 HOLLYWOOD AVE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.06218

Vacant Land Inventory

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	REASON FOR EXCLUSION	SEWER SERVICE AREA	SIZE (ACRES)
217	30		LITTLE MILL RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.047539
217	36		615 FENNEL RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.52039
217	38		FENNEL RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	1.857857
217	43		1298 ELK RD	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.236681
217	45		54 SPAULDING LN PRIVATE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	2.304695
217	49		SPAULDING LN PRIVATE	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	4.739089
217	53		SPAULDING LN (PRIVATE)	1	MD	OUTSIDE SEWER SERVICE AREA	OUTSIDE SEWER SERVICE AREA	0.801433

Appendix 11

Developable Lands Map 1 of 2

LEGEND

STREAMS

RIPARIAN BUFFER

WETLANDS

WATERBODIES

DEVELOPLE AREAS



BA

BACH Associates,PC

ENGINEERS • ARCHITECTS • PLANNERS

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Township of Elk
Gloucester County, NJ

*This map was developed using NJGIN/NJDEP Geographic Information System digital data, but this is a secondary product which has not been verified by NJGIN/NJDE and is not state authorized

Map Data & Source:	
Data Source: NJGIN, NJDEP	
Scale: 1" = 400'	Proj: ET2025-1
Date: December 2025	
Drafted by: Chloe Bach, PP, AICP	
Prepared by: Steven M. Bach, PE, RA, PP, CME	

DEVELOPABLE
LANDS MAP
MAP 1 OF 2



Appendix 12

Developable Lands Map 2 of 2

LEGEND

STREAMS

RIPARIAN BUFFER

WETLANDS

WATERBODIES

DEVELOPLE AREAS



BA

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**Township of Elk
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Map Data & Source:	
Data Source: NJGIN, NJDEP	
Scale: 1" = 400'	Proj: ET2025-1
Date: December 2025	
Drafted by: Chloe Bach, PP, AICP	
Prepared by: Steven M. Bach, PE, RA, PP, CME	

**DEVELOPABLE
LANDS MAP
MAP 2 OF 2**



Appendix 13

**Silvergate & Aura Water and Sanitary
Sewer Infrastructure Agreement, dated June 28, 2018**

Aura & Silvergate
Elk Township
Gloucester County, NJ

DESIGN REPORT
Wastewater Pumping Stations
& Force Mains Analyses

Prepared for:

D.R. Horton
2040-A Briggs Road
Mount Laurel, NJ 08054

Prepared by:



Taylor Wiseman & Taylor

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Raymond J. Wheaton Jr., P.E.
NJ Professional Engineer No. 24GE05399200

Project #: 17715.1017.00
Date: September 13 2022
Last Revised: January 25, 2023

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Wastewater Pumping Stations and Force Main Analyses Report-REV-230119.docx

TABLE OF CONTENTS

I.	Executive Summary	Page 1
II.	Purpose & Background	Page 1
III.	Description of Study	Page 2
IV.	Flows	Page 3
V.	Analysis	Page 4
VI.	Control Elevations	Page 6
VII.	Equipment	Page 6

Appendix

- Aura & Silvergate Wastewater Pump Stations and Force Main Calculations
- GCUA Clayton Pumping Station & Force Main Data
- Flygt Pump Curves and Data
- WaterCAD V8i System Model Map
- WaterCAD V8i Output Results (Aura Pumping Station and Silvergate Pumping Stations #1 & #2)
- DeZURIK Check Valve Product Information
- DeZURIK APCO ASU Combination Air Valve Product Information
- Ford Meter Box Company Adapter Flange Submittal Information



I. Executive Summary

This document was prepared as the design report for the modifications to the previously designed and New Jersey Department of Environmental Protection Department (NJDEP) permitted Elk Township Wastewater Collection System. The design in this report is based on the previous discussion document entitled, "Conceptual Design Report, prepared by Taylor Wiseman & Taylor, dated January 25, 2018." The base wastewater system has been designed and permitted through the NJDEP for the Silvergate Development (TWA Permit # 00-3697). Modification of the permit is required due to overall changes in the development plans for Elk Township, acquisition of the wastewater franchise by New Jersey American Water (NJAW), and acceptance by the Gloucester County Utilities Authority (GCUA) to receive the total wastewater generated within Elk Township. The core concept of disposal remains the same as the approved permit, with Silvergate Pumping Station # 2 injecting into the GCUA Clayton Force Main at final full buildout, but now proposing an interim direct connection of Silvergate Pumping Station #1. The connection to the GCUA Clayton Force Main has been constructed and will remain as the single point of connection. The changes in the developments are a result of the land use changes, relocation of the pumping stations and the phasing of the proposed developments. Complete build-out of the developments will take approximately 10-20 years. This report is based on the full build-out of development with sewer flows based on current NJDEP criteria which, historically, are conservative. It should be expected that once development begins, the actual sewer flows will be monitored, re-quantified, and compared with projections, and the balance of capacity evaluated on an annual basis.

II. Purpose & Background

The purpose of this report is to finalize the pump selections and hydraulic conditions for the proposed wastewater pumping stations and force mains for the Aura and Silvergate development projects. Wastewater will be conveyed to the pumping stations via gravity sewers and then pumped from the stations into a force main that discharges into the GCUA's Clayton Force Main. The Aura and Silvergate projects will be constructed in phases. The Aura project will be served by two pumping stations, though only one is part of the shared system with Silvergate. This pumping station is included in this design report and will be referenced as Aura P.S. #1. The Silvergate project will be served by two pumping stations, both of which are part of the shared system. These pump stations are referenced in this report as Silvergate P.S. #1 and Silvergate P.S. #2. This



report analyzed various scenarios as the phases of the projects are constructed. The objective was to size the pumping systems associated with each pumping station and to study how the system will perform, given the changing operating conditions as the pumping stations become operational over the course of the phased construction.

III. Description of Study

The wastewater conveyance system was analyzed using Bentley WaterCAD V8i hydraulic modeling software. The location of the pumping stations and force main routes were based on the latest available information from Aura Investors, LLC., and Silvergate Associates regarding their respective proposed projects. The analysis uses Silvergate Associates' locations for the pumping stations within Phase 1 and Phase 6 of its project. The GCUA Force Main discharge was modeled using pump and force main data provided by the GCUA for the Clayton Pumping Station¹.

The final build-out will consist of:

- Aura P.S. #1 and its 8-inch force main that runs in a southerly direction along Aura Road (County Route (CR) 667), and discharges to a gravity sanitary sewer manhole, situated within the right-of-way of Aura Road (CR 667), approximately fifty (50') feet south of its intersection with Whig Lane (CR 619). This manhole is part of the gravity sanitary sewer collection and conveyance system of Silvergate Phase 3.
- Silvergate Phase 3 gravity system, which is connected to previously installed 12-inch PVC piping that runs under Route 55 and Still Run, connecting to Silvergate Phase 1 gravity system.
- Silvergate Phase 1 gravity system, which drains to Silvergate P.S. #1.
- Silvergate P.S. #1 and its 8-inch and 10-inch force main that runs in a northerly direction along Buck Road (CR 553) until the Buck Road (CR 553)/Whig Lane (CR 610) intersection. From there, it turns and runs in an easterly direction along Whig Lane (CR 610), approximately 1,600 feet, before turning northerly into the Silvergate Phase 6 development. The force main continues for another 170 feet, through the Force Main Interconnection Vault, and discharging to the Silvergate Phase 6 gravity system.
- Silvergate Phase 6 gravity system, which drains to Silvergate P.S. #2.

¹ Minimal Information was provided by the GCUA. Information used in this study is based on assumed data that closely correlates with the data that was provided.



- Silvergate P.S. #2 and its 10-inch force main that runs in a northerly direction through rights-of-way of the Silvergate Phase 6 development for approximately 3,300 feet and discharges to the 16-inch GCUA Clayton force main situated along western side of S. Academy Street (CR 637), approximately 1,880 feet north of its intersection with Whig Lane (CR 610). The GCUA Clayton force main will carry the flow to the GCUA sewer plant for treatment and disposal.

As designed, the Aura P.S. cannot be built without the construction of the Silvergate P.S. #1 as well. This report considered the possibility of the Silvergate pump stations (#1 & #2) being constructed independent of one another's timelines.

Various operating conditions were analyzed as part of the conceptual study to see how the entire system will perform during the implementation of the projects. Below is a brief description of the two (2) scenarios that were analyzed:

Scenario #1: Silvergate P.S. #1 discharging to the GCUA Force Main

Scenario #2: Aura P.S. discharging to Silvergate P.S. #1. Silvergate P.S. #1 discharging directly to the GCUA Force Main.

Scenario #3: Silvergate P.S. #2 discharging directly to the GCUA Force Main.

Scenario #4: Full Build-Out. Aura P.S. discharging to Silvergate P.S. #1. Silvergate P.S. #1 discharging to Silvergate P.S. #2. Silvergate P.S. #2 discharging directly to the GCUA Force Main.

Each scenario was analyzed with the GCUA Clayton Pump Station's pumps operating as well as idle. All four of these scenarios are presented in this report.

IV. Flows

The table below is a summary of the contributing daily flows, at full build-out, for the three (3) pumping stations and the required pumping rates of the stations to meet the NJDEP requirement of 2.5 times the average daily flow. A full breakdown of the contributing flows for each station for all four (4) scenarios can be found in the appendix of this report.



Description	Total Avg. Daily Flow	Avg. Daily Flow Rate	Required Pumping Rate ²
	GPD	GPM	GPM
Aura Pumping Station	287,700	200	499
Silvergate Pumping Station #1	284,160	198	993 ³
Silvergate Pumping Station #2	206,400	143	1,351 ⁴

The GCUA Clayton Pumping Station is reported to have an operating point of 1,300 GPM at 80 feet of head with one pump in operation and an operating point of 1,623 GPM at 89 feet of head with two pumps in operation. The current average daily flow through the station is reported to be 601,000 GPD from MS#5 (Metering Station #5?). The GCUA is committing an additional flow of 327,000 GPD, for a total future flow of 928,000 GPD. It is not clear if the proposed flow from Elk Township is included in the future flow value or what the timing is for when the committed flow will be online.

V. Analysis

The hydraulic analysis was run with published pump curve data from the pump manufacturers. For the GCUA Clayton Pumping Station, the pump curve used in the study was the flooded suction Fairbanks Morse model 5433 with a 10.2" Impeller and a six (6") inch discharge. The data points used for the curve were a shutoff head of 111 Feet, 1,300 GPM at 80 feet, 812 GPM at 89 feet, and maximum operating rate of 2,500 GPM at 40 feet.

The proposed pumps for the Aura and Silvergate pump stations were based on ITT Flygt duplex submersible pumps. The pumps were sized to meet or exceed the required pumping rate for each station and provide a force main velocity greater than two (2') feet per second. The full build-out pumping rate was used for each scenario and a pump was chosen that can achieve the required flows for each scenario.

² Required Pumping Rate is 2.5 times the average daily flow into the station per NJDEP pumping station requirements.

³ (2.5x Total Avg. Day Flow) + (Aura P.S.#1 Required Pumping Rate)

⁴ (2.5x Total Avg. Day Flow) + (Aura P.S.#1 Required Pumping Rate) + (Silvergate P.S. #1 Required Pumping Rate).



Following is a table summarizing the results of the predicted pumping rates for the four (4) scenarios identified in this design report. All four (4) scenarios were analyzed with the GCUA Clayton pumps both running and idle. In actual operation, the pumps will cycle off & on, based on inflow rates, starting and stopping independently. Pump rates will be greater than the inflow rate and provide a velocity in the force main greater than two (2) feet per second.

Description	Predicted Pumping Rate	Total Dynamic Head	Pump Size
	GPM	Feet	HP
Scenario No. 1A: Silvergate PS #1 to GCUA Force Main (GCUA Pumps OFF)			
Silvergate Pumping Station #1	1,139	104	54
Scenario No. 1B: Silvergate PS #1 to GCUA Force Main (GCUA Pumps ON)			
Silvergate Pumping Station #1	1,006	110	54
GCUA Pumping Station	914	90	40
Scenario No. 2A: Aura to Silvergate PS #1 to GCUA Force Main (GCUA Pumps OFF)			
Aura Pumping Station	618	35	11
Silvergate Pumping Station #1	1,139	104	54
Scenario No. 2B: Aura to Silvergate PS #1 to GCUA Force Main (GCUA Pumps ON)			
Aura Pumping Station	618	35	11
Silvergate Pumping Station #1	1,006	110	54
GCUA Pumping Station	914	90	40
Scenario No. 3A: Silvergate PS #2 to GCUA Force Main (GCUA Pumps OFF)			
Silvergate Pumping Station #2	1,704	94	70
Scenario No. 3B: Silvergate PS #2 to GCUA Force Main (GCUA Pumps ON)			
Silvergate Pumping Station #2	1,533	102	70
GCUA Pumping Station	740	94	40
Scenario No. 4A: Aura to Silvergate #1 to Silvergate PS #2 to GCUA Force Main (GCUA Pumps OFF)			
Aura Pumping Station	618	35	11
Silvergate Pumping Station #1	1,434	91	54
Silvergate Pumping Station #2	1,704	94	70



Description	Predicted Pumping Rate	Total Dynamic Head	Pump Size
Scenario No. 4B: Aura to Silvergate #1 to Silvergate PS #2 to GCUA Force Main (GCUA Pumps ON)			
Aura Pumping Station	618	35	11
Silvergate Pumping Station #1	1,434	91	54
Silvergate Pumping Station #2	1,533	102	70
GCUA Pumping Station	740	94	40

To achieve a velocity greater than two (2') feet per second, the following is a table of the pump rates required for each of the force main diameters.

Aura P.S. #1	8-inch FM	325 GPM
Silvergate P.S. #1	10-inch FM	500 GPM
Silvergate P.S. #2	10-inch FM	500 GPM

All proposed pump stations will have the capability of achieving a flow rate of 500 GPM in the ten (10") inch force main to provide a minimum velocity greater than two (2') feet per second.

Once the Silvergate P.S. #2 is in service, the total dynamic head is reduced for the Silvergate P.S.#1. Reducing the total dynamic head pressure results in an increase in flow capability for the pumping station.

VI Control Elevations

Control elevations along with cycle times for the wet wells and pumps are contained in the Appendix. Cycle times are based on fixed speed operation at the pump rate of 2.5 times the Average Daily Flow Rate. In operation, the depth between "Lead Pump On" and "Pumps Off" will be 3.00 feet for Aura P.S., 4.50 feet for Silvergate P.S.#1, and four (4') feet for Silvergate P.S.#2, which will allow sufficient range for a variable flow rate greater than the inflow rate and above the minimum flow rate required for cleaning velocities.



VII Equipment

The pumps selected for the Pumping Stations are as follows:

- Aura P.S. #1: Flygt NP 3127.930 MT, rated at 11 horsepower.
- Silvergate P.S.#1: Flygt NP 3202.830 HT, rated at 54 horsepower.
- Silvergate P.S. #2: Flygt NP 3202.095 HT, rated at 70 horsepower.

Each pumping station will have duplex pumps, and submersible pressure transducers to monitor wet well liquid levels. The Silvergate pump stations will also include magnetic flow meters to monitor flows. All controls will be enclosed in a locking equipment cabinet. Controls will interface and report alarm conditions, with the New Jersey American Water Supervisory Control and Data Acquisition (SCADA) system located at the Delran, N.J. control center.

Also as part of the pump stations, a comminutor (sewage grinder) will be provided on the influent sewer line and, a davit crane/winch will be provided for removal of the pumps or comminutor. A water service with backflow prevention and hose bib will be provided for periodic washdown.

Complete details of each of the pumping stations will be submitted separately for review and approval.



APPENDIX

I. DESIGN PARAMETERS FOR AURA PUMPING STATION

II. DETERMINE TOTAL FLOW PER DAY

A. Subtotal Flows

Single Family Dwellings (SFD) (Three bedroom)		
Number of Units	269 Units	
Flow per Unit*	300 GPD	
Subtotal Flow/Day (SFD)	80,700 GPD	

Age-Restricted Single Family Dwellings (ARSFD) (Three bedroom)		
Number of Units	436 Units	
Flow per Unit*	225 GPD	
Subtotal Flow/Day (ARSFD)	98,100 GPD	

Townhouse/Apartments (T/A) Three bedroom		
Number of Units	363 Units	
Flow per Unit*	300 GPD	
Subtotal Flow/Day (SFD)	108,900 GPD	

B. Total Flows

Daily Average Flow Rate	287,700 GPD
Use A 16-Hour Day For Flow Rate Conversion	1,440 Minutes/Day
Daily Average Flow Rate	200 GPM
Peak Factor	2.5
	499 GPM
Minimum Pump Rate That Provides 2 FPS Flow Velocity (8"FM)	320 GPM
USE	530 GPM
Retention Time In Wet Well (Less Than)	10 Minutes

* All flow rates were obtained from NJAC 1:14A-23.3(a), Projected Flow Criteria Table

V. DETERMINE EQUIVALENT LENGTH OF FORCE MAIN

A. STATION LOSSES (Within Pump Station Enclosure)

#	Descr	Eq. Ft		Total (ft)
40	6" Pipe	1	=	40
1	Entrance loss	6	=	6
1	90 deg bend (4")	11	=	11
1	4" x 6" Enlarger	6	=	6
3	90 deg bend (6")	16	=	48
1	Check Valve (6")	40	=	40
1	Gate Valve (6")	4	=	4
1	Standard Tee (Run) (6")	11	=	11
1	6" x 8" Enlarger	5	=	5
	Equivalent Length of 8" pipe for Above Components		=	694
15	8" Pipe	1	=	15
1	Pinch Valve (8")	25	=	25
1	Standard Tee (Run) (8")	15	=	15
	Total		=	749

B. FORCE MAIN

#	Descr	Eq. Ft		Total (ft)
1,690	8" Pipe	1	=	1,690
4	45 deg bend (8")	10	=	40
	Total		=	1,730
	Station Losses			749
	TOTAL EQUIVALENT LENGTH			2,479
	ROUND UP - USE			2,500



I. DESIGN PARAMETERS FOR SILVERGATE PUMPING STATION #1

II. DETERMINE TOTAL FLOW PER DAY

A. Gravity Flows to Silvergate Pumping Station #1 (Silvergate Phases 1, 3, 4, & 7) (Provided by James Sassano Associates)

Phase I

Single Family Dwellings (SFD) (Three bedroom)		
Number of Units	35 Units	
Flow per Unit*	300 GPD	
Subtotal Flow/Day (SFD)	10,500 GPD	
Medical Office		
Square Footage	20,000 SF	
Flow per Unit*	0.1 SPD/SF	
Subtotal Flow/Day (SFD)	2,000 GPD	
Day Care Facility		
Number of People	84 People	
Flow per Person	10 GPD	
Subtotal Flow/Day (Day Care)	840 GPD	

Phase 3

Single Family Dwellings (SFD) (Three bedroom)		
Number of Units	162 Units	
Flow per Unit*	300 GPD	
Subtotal Flow/Day (SFD)	48,600 GPD	

Phase 4

Apartments (Two bedroom)		
Number of Units	96 Units	
Flow per Unit*	225 GPD	
Subtotal Flow/Day (SFD)	21,600 GPD	
Apartments (Three bedroom)		
Number of Units	96 Units	
Flow per Unit*	300 GPD	
Subtotal Flow/Day (SFD)	28,800 GPD	
Square Footage	160,000 SF	
Flow per Unit*	0.1 SPD/SF	
Subtotal Flow/Day (SFD)	16,000 GPD	

Phase 7

Commercial Space		
Square Footage	475,000 SF	
Flow per Unit*	0.1 SPD/SF	
Subtotal Flow/Day (SFD)	47,500 GPD	
Office/Flex Space		
Square Footage	39,200 SF	
Flow per Unit*	0.1 SPD/SF	
Subtotal Flow/Day (SFD)	3,920 GPD	
Number of Employees =	3,920	
Per 7:14A-23.3(a) Table, for warehouse use =	25 Gallons per Day (GPD)	
Total Daily Flow =	98,000 GPD	

Daily Average Flow Rate (Silvergate Phases 1, 3, 4, & 7) 277,760 GPD

* All flow rates were obtained from NJAC 1:14A-23.3(a), Projected Flow Criteria Table

I. DESIGN PARAMETERS FOR SILVERGATE PUMPING STATION #1

II. DETERMINE TOTAL FLOW PER DAY

B. Total Flows to Silvergate Pumping Station #1

Daily Average Flow Rate (Silvergate Phases 1, 3, 4, & 7)	277,760 GPD	(From Previous Page)
Aura Elementary School		
Number of Students	400 Students	
Flow per Student*	15 GPD	
Subtotal Flow/Day (SFD)	6,000 GPD	
Elk Municipal Building		
Square Footage	4,000 SF	
Flow per Unit*	0.1 SPD/SF	
Subtotal Flow/Day (SFD)	400 GPD	
Total Daily Average Flow Rate (Silvergate Phases 1, 3, 4, & 7)	284,160 GPD	
Daily Average Flow Rate (Aura)	287,700 GPD	(From Aura PS Engineer's Report)
Daily Average Flow Rate		
	571,860 GPD	
	1,440 Minutes/Day	
Daily Average Flow Rate	397 GPM	
Peak Factor	2.5	
	993 GPM	
Minimum Pump Rate That Provides 2 FPS Flow Velocity (10"FM)	500 GPM	
USE	1090 GPM	
Retention Time In Wet Well (Less Than)	10 Minutes	

* All flow rates were obtained from NJAC 1:14A-23.3(a), Projected Flow Criteria Table

V. DETERMINE EQUIVALENT LENGTH OF FORCE MAIN (FREE DISCHARGE)

A. STATION LOSSES (Within Pump Station Enclosure)

#	Descr	Eq. Ft		Total (ft)
50	8" Pipe	1	=	50
1	Entrance loss	6	=	6
1	90 deg bend (4")	11	=	11
1	4" x 8" Enlarger	8	=	8
2	90 deg bend (8")	20	=	40
1	Check Valve (8")	55	=	55
1	Plug Valve (8")	4	=	4
1	Standard Tee (Side) (8")	45	=	45
	Total		=	219
	Equivalent Length of 10" pipe for Above Components		=	667

B. FORCE MAIN

#	Descr	Eq. Ft		Total (ft)
625	8" Pipe	1	=	625
1	8" x 10" Enlarger	5	=	5
	Equivalent Length of 10" pipe for Above Components		=	1,914
3,475	10" Pipe	1	=	3,475
2	Standard Tee (Through) (10")	17	=	34
4	11.25 deg bend (10")	13	=	52
14	45 deg bend (10")	13	=	182
1	Standard Tee (Side) (10")	58	=	58
1	Plug Valve (10")	6	=	6
2	90 deg bend (10")	26	=	52
	Total		=	5,773
	Station Losses (Equivalent Length (10"))			667
	TOTAL EQUIVALENT LENGTH			6,440
	ROUND UP - USE			6,500



I. DESIGN PARAMETERS FOR SILVERGATE PUMPING STATION #2

II. DETERMINE TOTAL FLOW PER DAY

A. Gravity Flows to Silvergate #2 Pumping Station (Silvergate Phases 2, 5, & 6) (Provided by James Sassano Associates)

Phase 2

Single Family Dwellings (SFD) (Three bedroom)	
Number of Units	229 Units
Flow per Unit*	300 GPD
Subtotal Flow/Day (SFD)	68,700 GPD

Phases 5 & 6

Single Family Dwellings (SFD) (Three bedroom)	
Number of Units	145 Units
Flow per Unit*	300 GPD
Subtotal Flow/Day (SFD)	43,500 GPD

Townhouse Units (Three bedroom)	
Number of Units	172 Units
Flow per Unit*	300 GPD
Subtotal Flow/Day (SFD)	51,600 GPD

Duplex Units (Three bedroom)	
Number of Units	70 Units
Flow per Unit*	300 GPD
Subtotal Flow/Day (SFD)	21,000 GPD

Apartments (One bedroom)	
Number of Units	28 Units
Flow per Unit*	150 GPD
Subtotal Flow/Day (SFD)	4,200 GPD

Apartments (Two bedroom)	
Number of Units	40 Units
Flow per Unit*	225 GPD
Subtotal Flow/Day (SFD)	9,000 GPD

Apartments (Three bedroom)	
Number of Units	28 Units
Flow per Unit*	300 GPD
Subtotal Flow/Day (SFD)	8,400 GPD

Daily Average Flow Rate (Silvergate Phases 2, 5, & 6) 206,400 GPD

* All flow rates were obtained from NJAC 1:14A-23.3(a), Projected Flow Criteria Table



I. DESIGN PARAMETERS FOR SILVERGATE PUMPING STATION #2

II. DETERMINE TOTAL FLOW PER DAY

B. Total Flows to Silvergate Pumping Station #2

Daily Average Flow Rate (Silvergate Phases 2, 5, & 6)	206,400 GPD	(From Previous Page)
Daily Average Flow Rate (Silvergate PS #1)	284,160 GPD	(From Silvergate PS #1 Engineer's Report)
Daily Average Flow Rate (Aura PS)	287,700 GPD	(From Aura PS Engineer's Report)
Daily Average Flow Rate	778,260 GPD	
	1,440 Minutes/Day	
Daily Average Flow Rate	540 GPM	
Peak Factor	2.5	
	1351 GPM	
Minimum Pump Rate That Provides 2 FPS Flow Velocity (10"FM)	500 GPM	
USE	1390 GPM	
Retention Time In Wet Well (Less Than)	10 Minutes	

* All flow rates were obtained from NJAC 1:14A-23.3(a), Projected Flow Criteria Table

V. DETERMINE EQUIVALENT LENGTH OF FORCE MAIN

A. STATION LOSSES (Within Pump Station Enclosure)

#	Descr	Eq. Ft		Total (ft)
70	10" Pipe	1	=	70
1	Entrance loss	6	=	6
1	90 deg bend (4")	11	=	11
1	4" x 10" Enlarger	6	=	6
2	90 deg bend (10")	26	=	52
1	Check Valve (10")	70	=	70
1	Plug Valve (10")	6	=	6
1	Standard Tee (Through) (10")	18	=	18
	Total		=	239
	Equivalent Length of 16" pipe for Above Components		=	2,480

B. FORCE MAIN

	#	Descr	Eq. Ft		Total (ft)
SG#2 to GCUA FM	3,700	10" Pipe	1	=	3,700
	4	Standard Tee (Through) (10")	17	=	68
	3	11.25 deg bend (10")	13	=	39
	4	22.5 deg bend (10")	13	=	52
	11	45 deg bend (10")	13	=	143
	2	Plug Valve (10")	6	=	12
		Equivalent Length of 16" pipe for Above Components		=	41,650
GCUA FM	14,340	16" Pipe	1	=	14,340
	1	10" x 16" Tee (Standard)	55	=	55
	6	Standard Tee (Through) (16")	28	=	168
	4	90 deg bend (16")	40	=	160
	9	45 deg bend (16")	20	=	180
		Total		=	56,553
		Station Losses		=	2,480
		TOTAL EQUIVALENT LENGTH			59,033
		ROUND UP - USE			59,100



Taylor Wiseman & Taylor
ENGINEERS SURVEYORS SCIENTISTS

**Wastewater Pumping Station & Force Main
Design Parameters - Aura Pumping Station**

200	Qa		gpm	avg 24 hr flow
530	Qp		gpm	pump rate @ C=100
	PF	2.65		peak factor
10.00	d		ft	diameter of wet well (equivalent)
	Vpf	587.52	g/ft	gallons per foot
	Rt	8.82	min	retention time
	V	1762.55	g	storage volume
	Pt	5.34	min	pump running time
	Ct	14.16	min	cycle time-wet well
	PCt	22.98	min	cycle time per pump
	Cph	4.24	c/hr	wet well cycles per hour
	PCph	2.61	c/hr	pump cycles per hour
130.00	INFL		elev	invert elev of influent
	HWA	124.00	elev	high water alarm
	LAGON	123.50	elev	lag pump on
	LEDON	123.00	elev	lead pump on
3.00	Ho		ft	operating range
	LWL	120.00	elev	low water level (Pumps off)
	LWA	119.50	elev	low water alarm
2.00	s		ft	depth to bottom of wet well
	INV	118.00	elev	invert of wet well
530.00	Q		gpm	flow rate
8.00	dp		in	diameter of force main in inches
2500.00	L		ft	equivalent length of force main
141.25	HP		ft	high point elevation
	cfs	1.18	cfs	cubic feet per second
	Vel	3.38	f/s	velocity in feet per second
	Ap	0.35	sf	area of pipe
	F	0.92		friction-Hazen&Williams C=100 per 100'
	F120	0.66		friction C=120
	F150	0.39		friction C=150
	dH	23.04	ft	dynamic head
	Hs	21.25	ft	static head
	TDH	44.29	ft	total dynamic head C=100
	T120	37.70	ft	TDH C=120
	T150	30.90	ft	TDH C=150



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**Wastewater Pumping Station & Force Main
Design Parameters - Silvergate #1 Pumping Station**

397	Qa		gpm	avg 24 hr flow
1090	Qp		gpm	pump rate @ C=100
	PF	2.74		peak factor
10.00	d		ft	diameter of wet well
	Vpf	587.52	g/ft	gallons per foot
	Rt	6.66	min	retention time
	V	2643.83	g	storage volume
	Pt	3.82	min	pump running time
	Ct	10.47	min	cycle time-wet well
	PCt	17.13	min	cycle time per pump
	Cph	5.73	c/hr	wet well cycles per hour
	PCph	3.50	c/hr	pump cycles per hour
104.02	INFL		elev	invert elev of influent
	HWA	103.00	elev	high water alarm
	LAGON	102.50	elev	lag pump on
	LEDON	102.00	elev	lead pump on
4.50	Ho		ft	operating range
	LWL	97.50	elev	low water level (Pumps off)
	LWA	96.75	elev	low water alarm
1.75	s		ft	depth to bottom of wet well
	INV	95.75	elev	invert of wet well
1090.00	Q		gpm	flow rate
10.00	dp		in	diameter of force main in inches
6500.00	L		ft	equivalent length of force main
126.60	HP		ft	high point elevation
	cfs	2.43	cfs	cubic feet per second
	Vel	4.45	f/s	velocity in feet per second
	Ap	0.55	sf	area of pipe
	F	1.18		friction-Hazen&Williams C=100 per 100'
	F120	0.84		friction C=120
	F150	0.49		friction C=150
	dH	76.77	ft	dynamic head
	Hs	29.10	ft	static head
	TDH	105.87	ft	total dynamic head C=100
	T120	83.91	ft	TDH C=120
	T150	61.27	ft	TDH C=150



Taylor Wiseman & Taylor
ENGINEERS SURVEYORS SCIENTISTS

**Wastewater Pumping Station & Force Main
Design Parameters - Silvergate #2 Pumping Station**

540	Qa		gpm	avg 24 hr flow
1390	Qp		gpm	pump rate @ C=100
	PF	2.57		peak factor
10.00	d		ft	diameter of wet well (equivalent)
	Vpf	587.52	g/ft	gallons per foot
	Rt	4.35	min	retention time
	V	2350.07	g	storage volume
	Pt	2.77	min	pump running time
	Ct	7.11	min	cycle time-wet well
	PCt	11.46	min	cycle time per pump
	Cph	8.43	c/hr	wet well cycles per hour
	PCph	5.23	c/hr	pump cycles per hour
119.00	INFL		elev	invert elev of influent
	HWA	116.00	elev	high water alarm
	LAGON	115.50	elev	lag pump on
	LEDON	115.00	elev	lead pump on
4.00	Ho		ft	operating range
	LWL	111.00	elev	low water level (Pumps off)
	LWA	110.50	elev	low water alarm
3.00	s		ft	depth to bottom of wet well
	INV	108.00	elev	invert of wet well
1390.00	Q		gpm	flow rate
16.00	dp		in	diameter of force main in inches
59100.00	L		ft	equivalent length of force main
141.00	HP		ft	high point elevation
	cfs	3.10	cfs	cubic feet per second
	Vel	2.22	f/s	velocity in feet per second
	Ap	1.40	sf	area of pipe
	F	0.19		friction-Hazen&Williams C=100 per 100'
	F120	0.13		friction C=120
	F150	0.08		friction C=150
	dH	111.19	ft	dynamic head
	Hs	30.00	ft	static head
	TDH	141.19	ft	total dynamic head C=100
	T120	109.39	ft	TDH C=120
	T150	76.59	ft	TDH C=150

Wingate, Thomas A

From: Dennis Yoder <Dennis.Yoder@rve.com>
Sent: Wednesday, October 28, 2015 11:20 AM
To: Wingate, Thomas A
Subject: RE: GCUA force main

the force main is 16"

pumps are 1300 gpm @ 80' TDH

two pumps running result in 1623 gpm @ 89 TDH

Regards,

Dennis K. Yoder, P.E., Director of Engineering
Remington & Vernick Engineers

6"

5413

VERTICAL FOR
FLEXIBLE
SHAFTING

5423

HORIZONTAL

5433

VERTICAL
BLT TOGETHER

5443

VERTICAL CLOSE
COUPLED

1780 RPM

NO. OF VANES 2

SUCTION SIZE

5423: 6"

OTHER: 6" OR 8"

IMPELLER

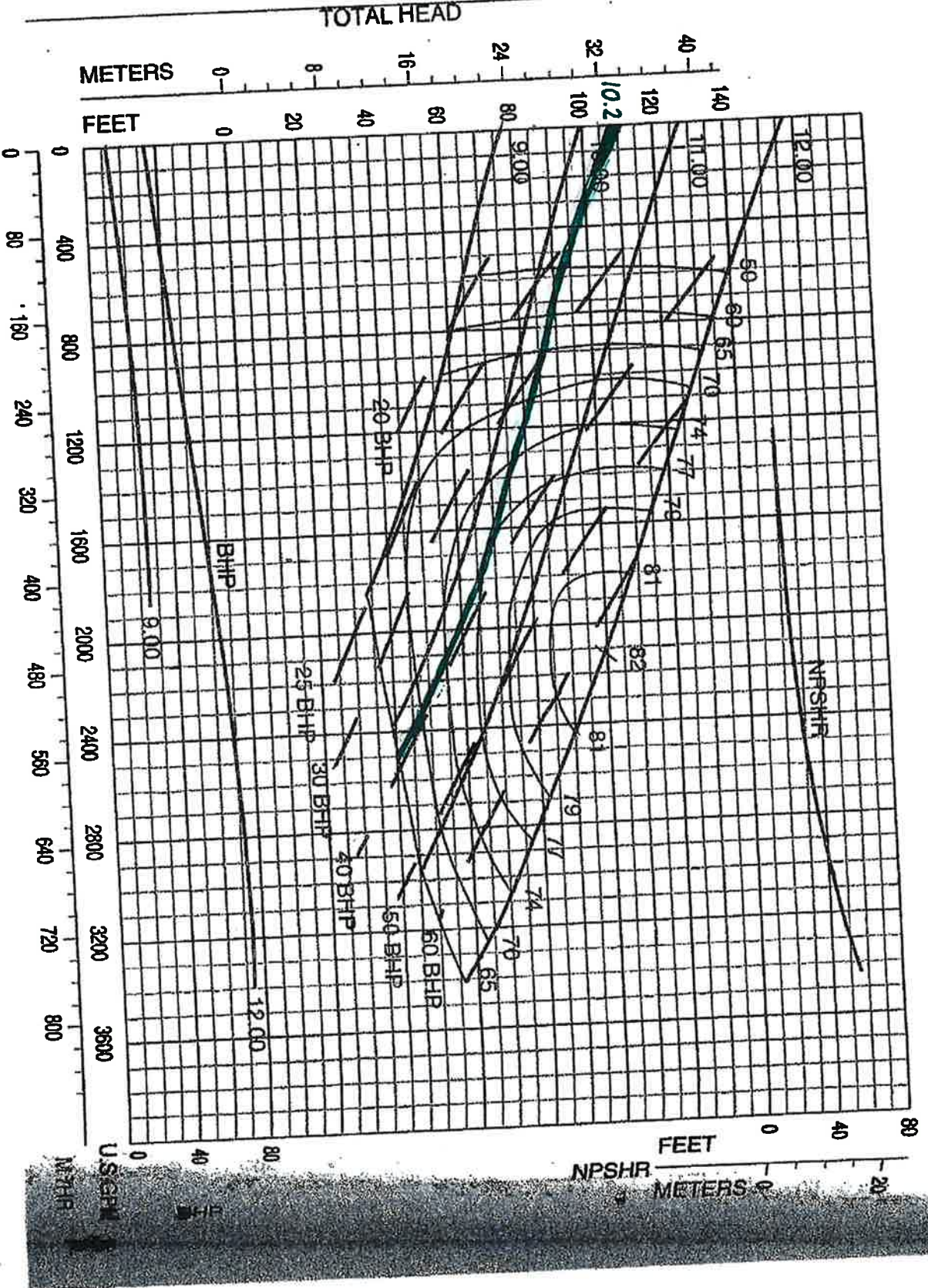
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INLET AREA

52.88 SQ. IN.

MAX. SPHERE

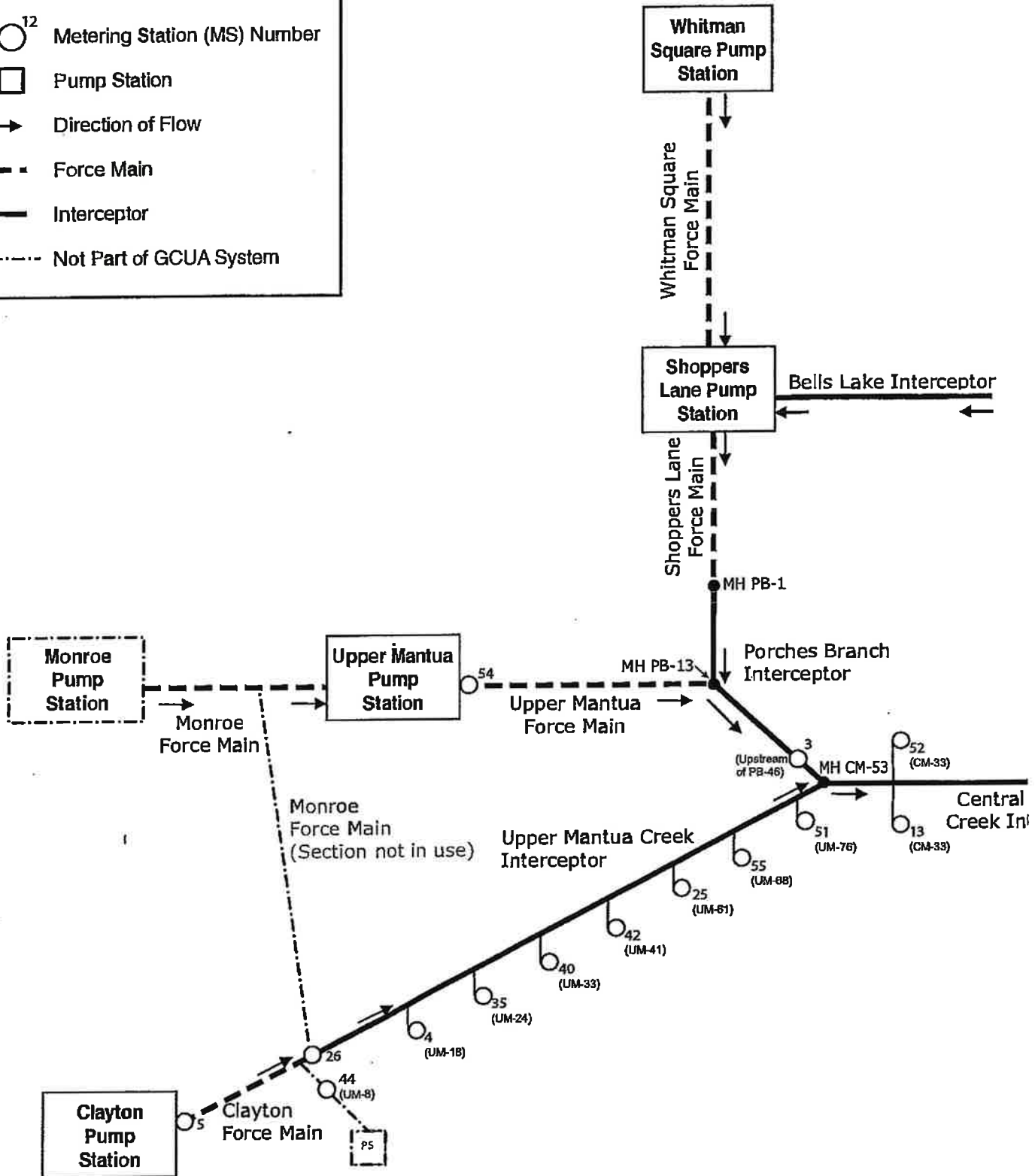
3"



Assumed Pump Curve For GCUA Force Main Pumps (Fairbanks Morse Model 543

LEGEND

- ¹² Metering Station (MS) Number
- Pump Station
- Direction of Flow
- - - Force Main
- Interceptor
- · - · - Not Part of GCUA System



NP 3127 MT 3~ Adaptive 439

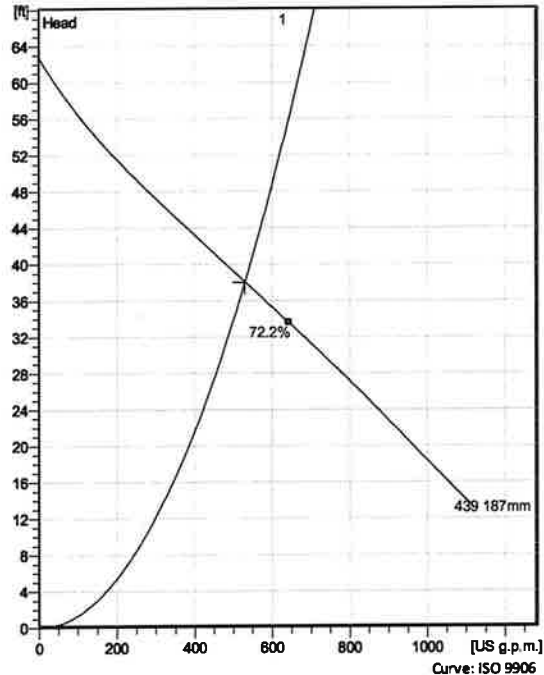
Patented self cleaning semi-open channel impeller, ideal for pumping in waste water applications. Modular based design with high adaptation grade.



Technical specification



Curves according to: Water, pure Water, pure [100%], 39.2 °F, 62.42 lb/ft³, 1.6891E-5 ft²/s



Configuration

Motor number N3127.930 21-12-4AS-W IE3 11hp	Installation type P - Semi permanent, Wet
Impeller diameter 187 mm	Discharge diameter 4 inch

Pump information

Impeller diameter 187 mm
Discharge diameter 4 inch
Inlet diameter 100 mm
Maximum operating speed 1800 rpm
Number of blades 2

Max. fluid temperature
40 °C

Materials

Impeller Hard-Iron™
Stator housing material Grey cast iron

Project
Block

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4/14/2022

NP 3127 MT 3~ Adaptive 439

Technical specification



Motor - General

Motor number N3127.930 21-12-4AS-W IE3 11hp	Phases 3~	Rated speed 1800 rpm	Rated power 11 hp
ATEX approved FM	Number of poles 4	Rated current 12 A	Stator variant 60
Frequency 60 Hz	Rated voltage 460 V	Insulation class H	Type of Duty S1
Version code 930			

Motor - Technical

Power factor - 1/1 Load 0.90	Motor efficiency - 1/1 Load 92.1 %	Total moment of inertia 1.17 lb ft ²	Starts per hour max. 30
Power factor - 3/4 Load 0.87	Motor efficiency - 3/4 Load 92.0 %	Starting current, direct starting 87 A	
Power factor - 1/2 Load 0.79	Motor efficiency - 1/2 Load 90.3 %	Starting current, star-delta 29 A	

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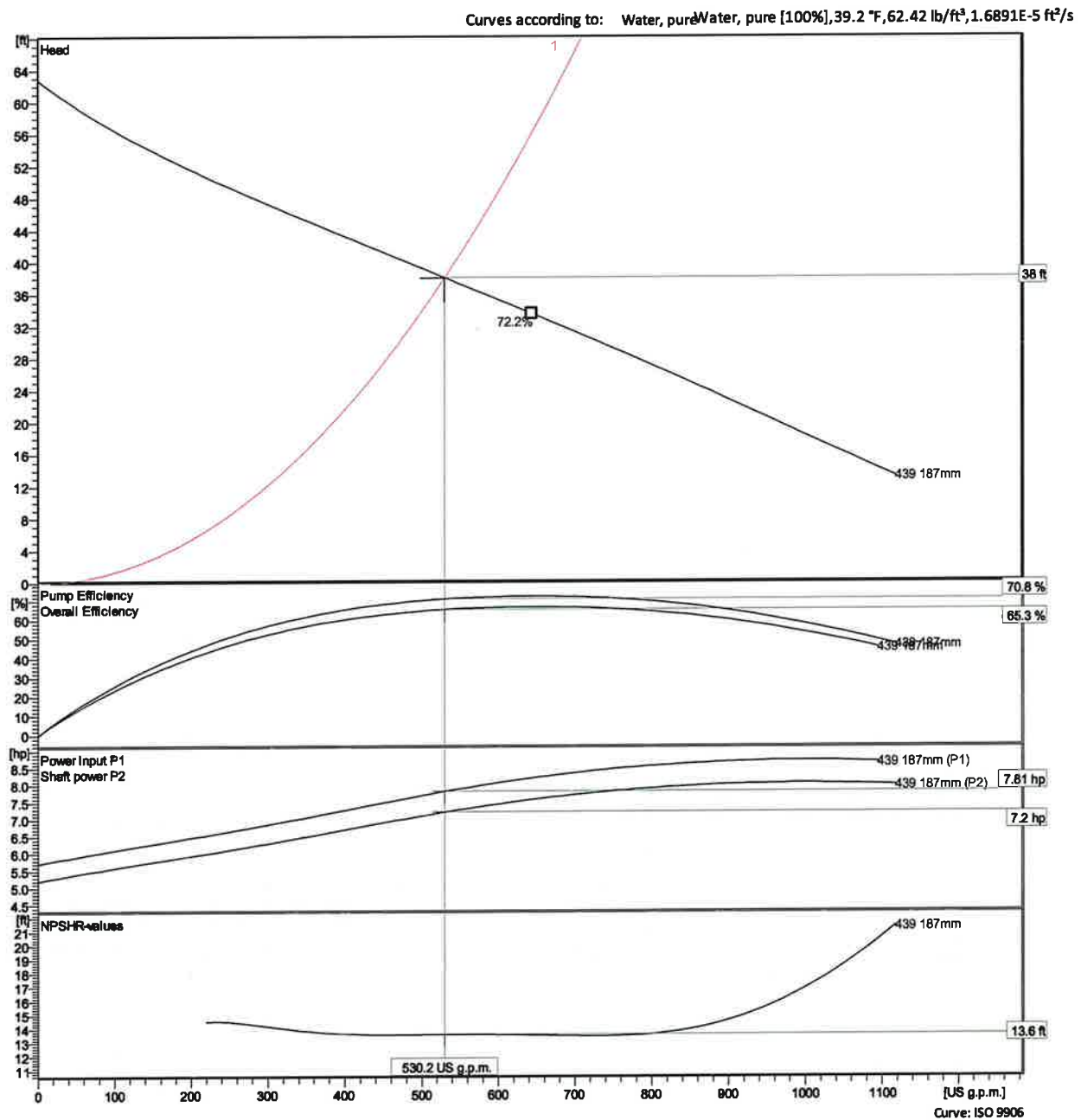
Performance curve



Duty point

Flow
530 US g.p.m.

Head
38 ft



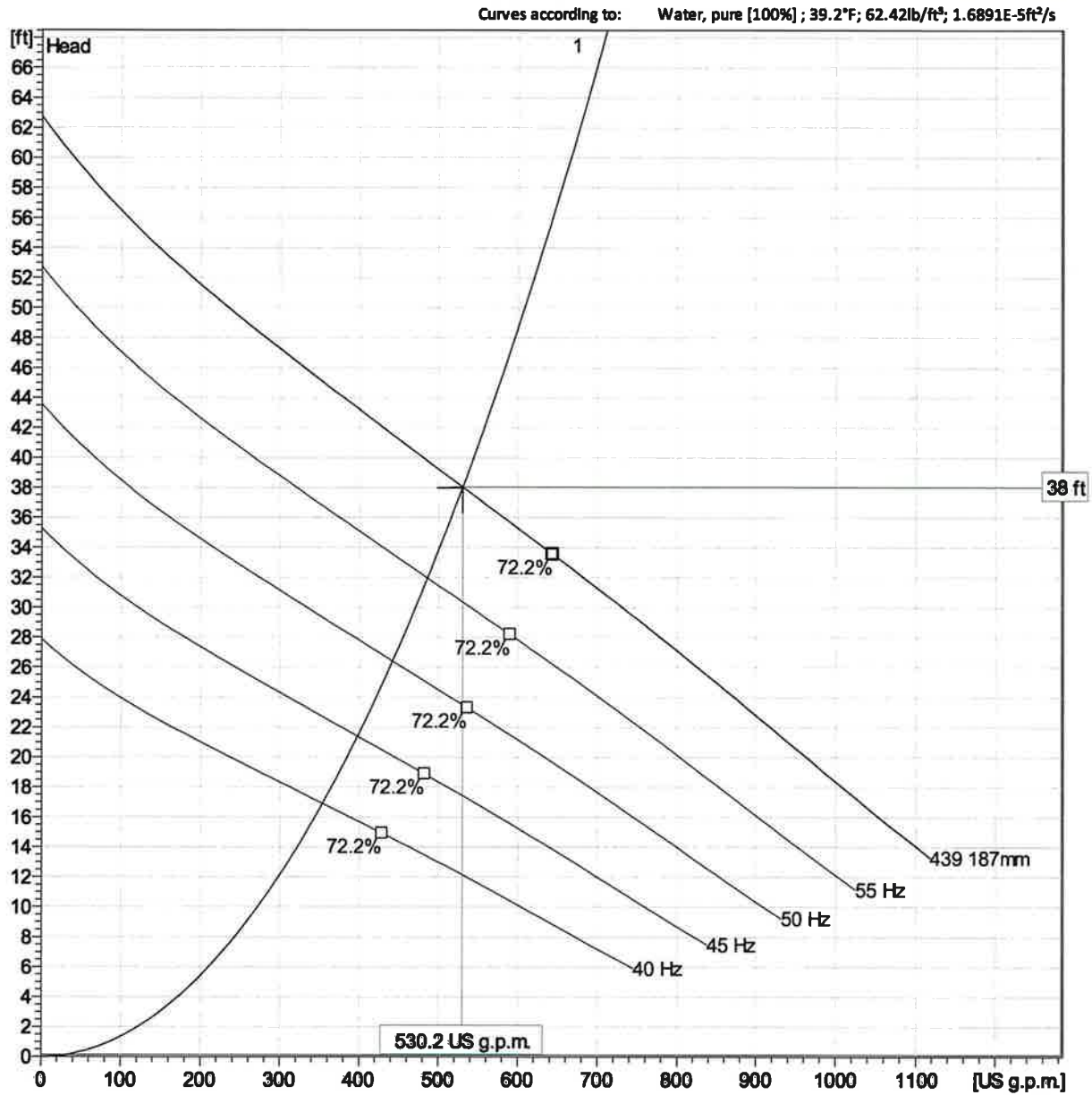
Michael Wilks

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4/14/2022

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Duty Analysis



Operating characteristics

Pumps / Systems	Flow US g.p.m.	Head ft	Shaft power hp	Flow US g.p.m.	Head ft	Shaft power hp	Hydr. eff.	Spec. Energy kWh/US MG	NPSHr ft
1	530	38	7.2	530	38	7.2	70.8 %	183	13.6

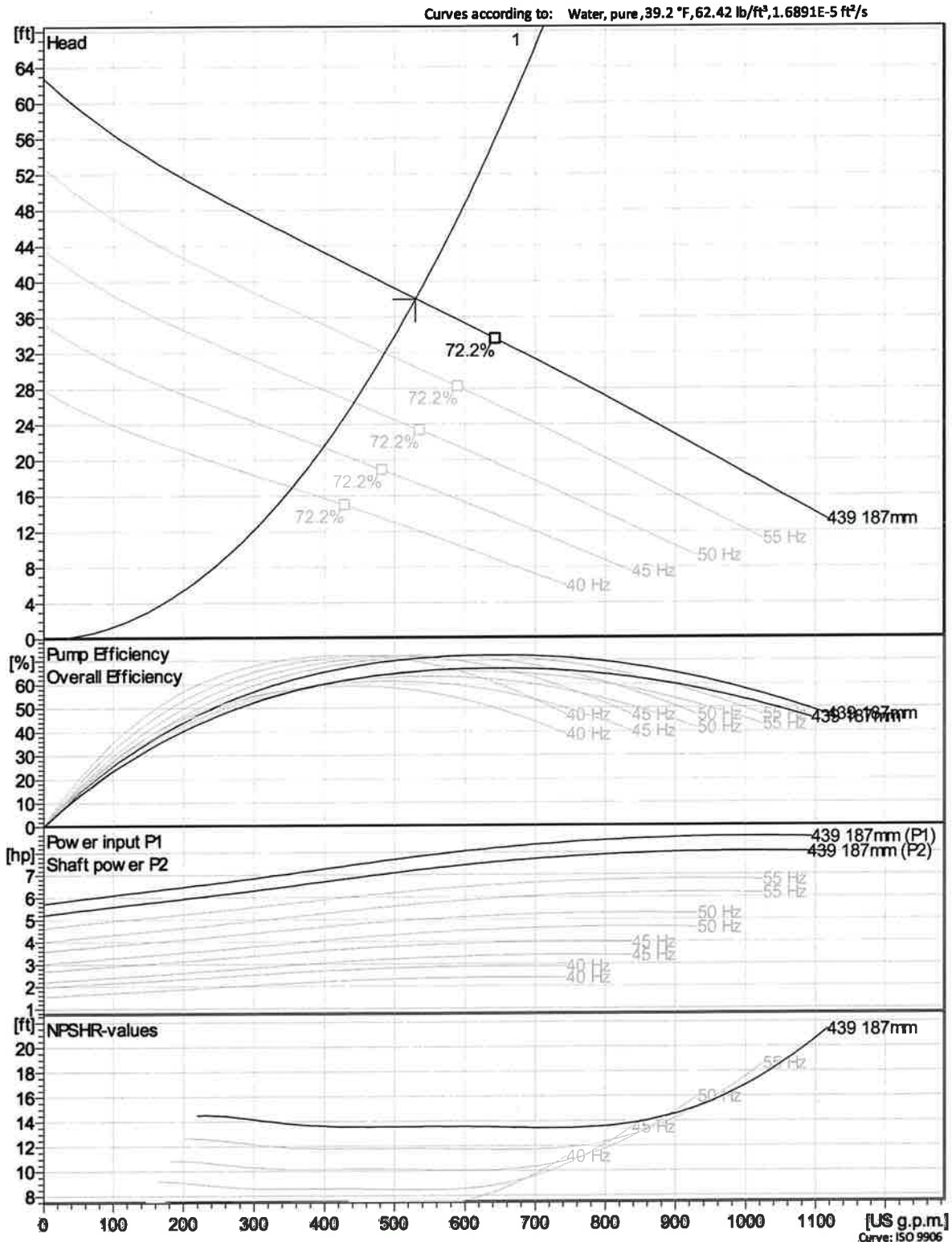
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Created on 4/14/2022

Last update 4/14/2022

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VFD Curve

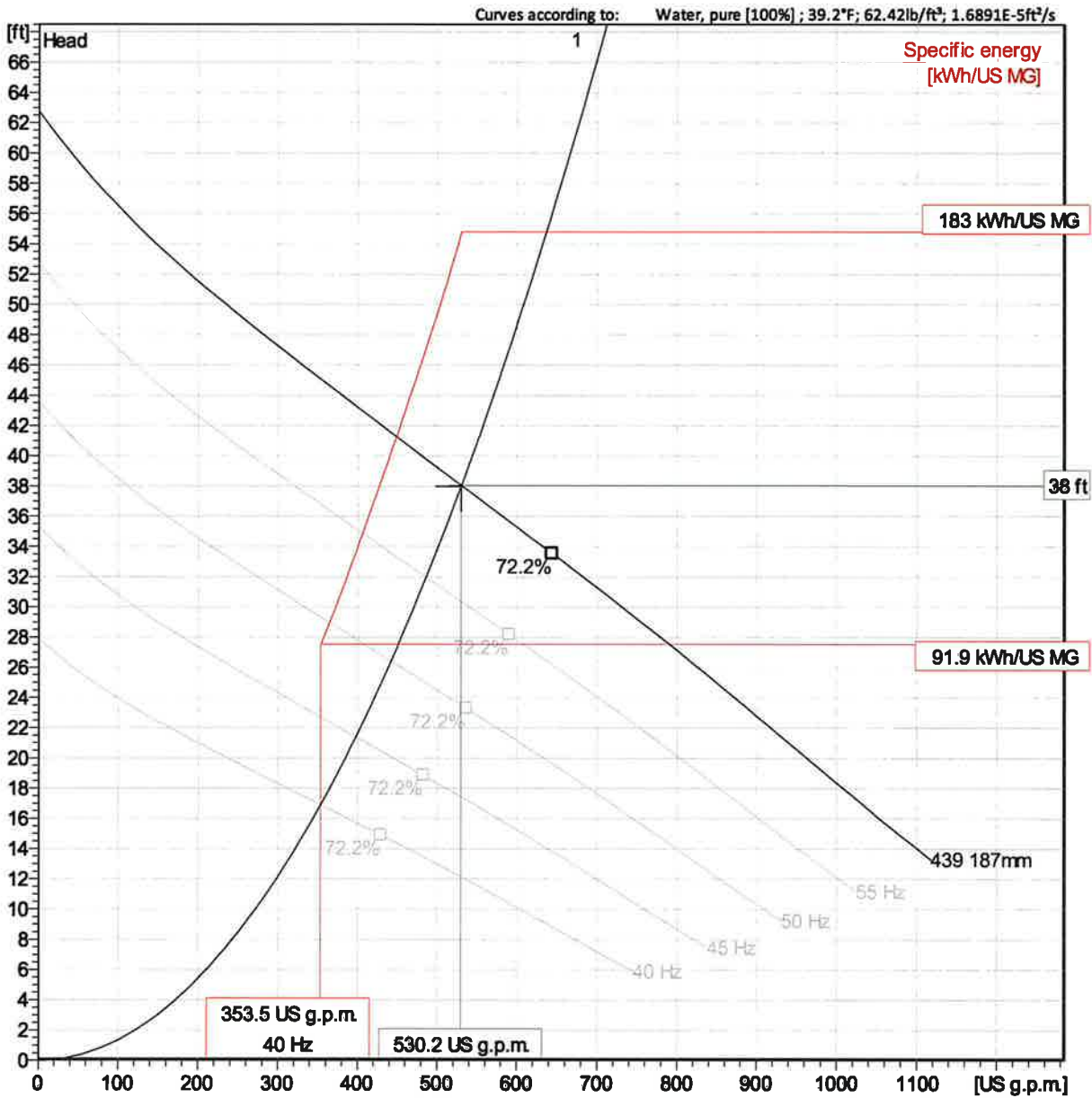


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NP 3127 MT 3~ Adaptive 439

VFD Analysis



Operating Characteristics

Pumps / Systems	Frequency	Flow US g.p.m.	Head ft	Shaft power hp	Flow US g.p.m.	Head ft	Shaft power hp	Hydr. eff.	Specific energy kWh/US MG	NPSHr ft
1	60 Hz	530	38	7.2	530	38	7.2	70.8 %	183	13.6
1	55 Hz	486	32	5.55	486	32	5.55	70.8 %	195	11.8
1	50 Hz	442	26.4	4.17	442	26.4	4.17	70.8 %	209	10.1
1	45 Hz	398	21.4	3.04	398	21.4	3.04	70.8 %	227	8.57

Project
Block

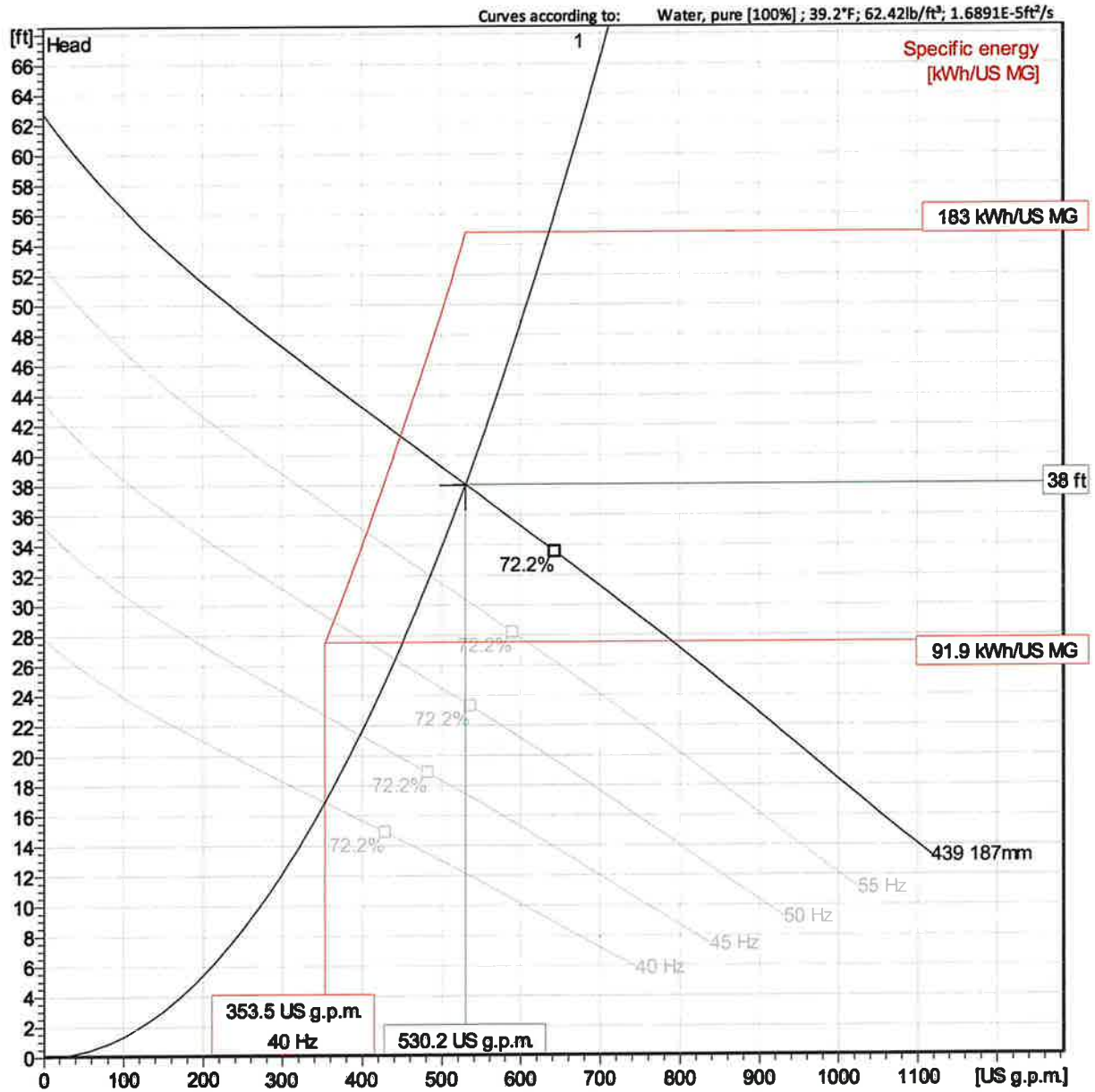
Created by Michael Wilks
Created on 4/14/2022

Last update

4/14/2022

NP 3127 MT 3~ Adaptive 439

VFD Analysis



Operating Characteristics

Pumps / Systems	Frequency	Flow	Head	Shaft power	Flow	Head	Shaft power	Hydr. eff.	Specific energy	NPSH _{req}
		US g.p.m.	ft	hp	US g.p.m.	ft	hp		kWh/US MG	
1	40 Hz	353	16.9	2.13	353	16.9	2.13	70.8 %	249	7.1

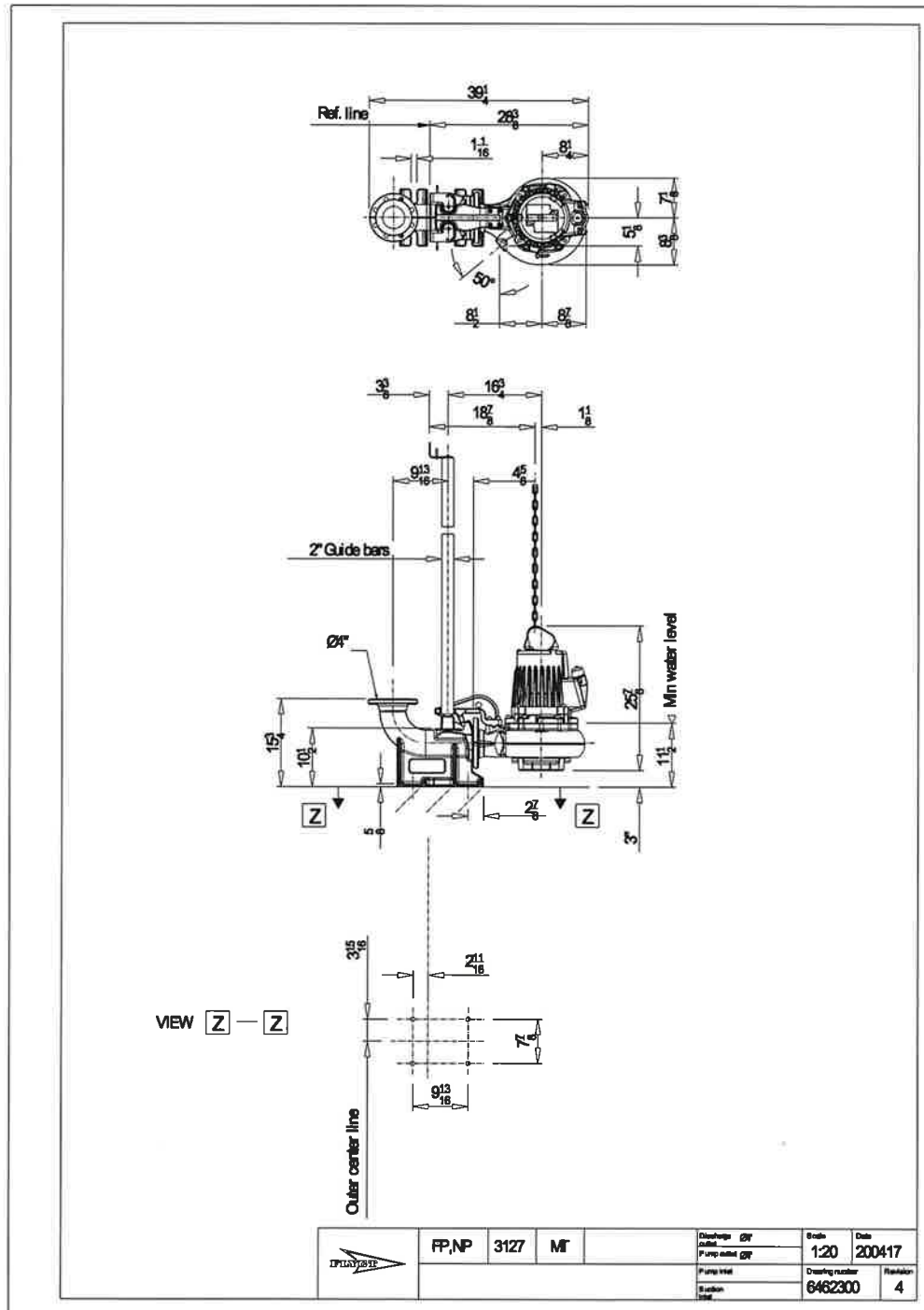
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Last update 4/14/2022

NP 3127 MT 3~ Adaptive 439

Dimensional drawing



Project
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NP 3202 HT 3~ 460

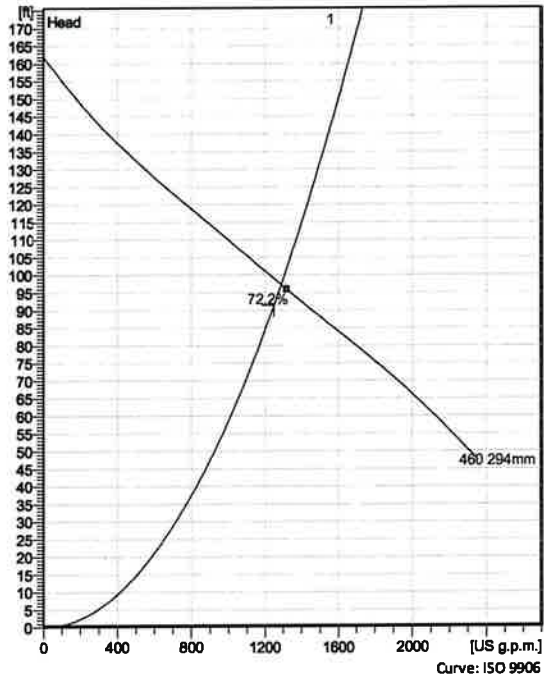
Patented self cleaning semi-open channel impeller, ideal for pumping in waste water applications. Modular based design with high adaptation grade.



Technical specification



Curves according to: Water, pure Water, pure [100%], 39.2 °F, 62.42 lb/ft³, 1.6891E-5 ft²/s



Configuration

Motor number	Installation type
N3202.830 30-37-4IE-W IE3	P - Semi permanent, Wet
54hp	
Impeller diameter	Discharge diameter
294 mm	6 inch

Pump information

Impeller diameter
294 mm
Discharge diameter
6 inch
Inlet diameter
200 mm
Maximum operating speed
1785 rpm
Number of blades
2

Max. fluid temperature
40 °C

Materials

Impeller
Hard-Iron™

Project
Block

Created by
Created on

Michael Wilks

5/10/2022 Last update

5/10/2022

NP 3202 HT 3~ 460

Technical specification



Motor - General

Motor number N3202.830 30-37-4IE-W IE3 54hp	Phases 3~	Rated speed 1785 rpm	Rated power 54 hp
ATEX approved FM	Number of poles 4	Rated current 61 A	Stator variant 4
Frequency 60 Hz	Rated voltage 460 V	Insulation class H	Type of Duty S1
Version code 830			

Motor - Technical

Power factor - 1/1 Load 0.86	Motor efficiency - 1/1 Load 95.2 %	Total moment of inertia 12.2 lb ft ²	Starts per hour max. 30
Power factor - 3/4 Load 0.81	Motor efficiency - 3/4 Load 95.5 %	Starting current, direct starting 565 A	
Power factor - 1/2 Load 0.71	Motor efficiency - 1/2 Load 95.1 %	Starting current, star-delta 188 A	

Project
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NP 3202 HT 3~ 460

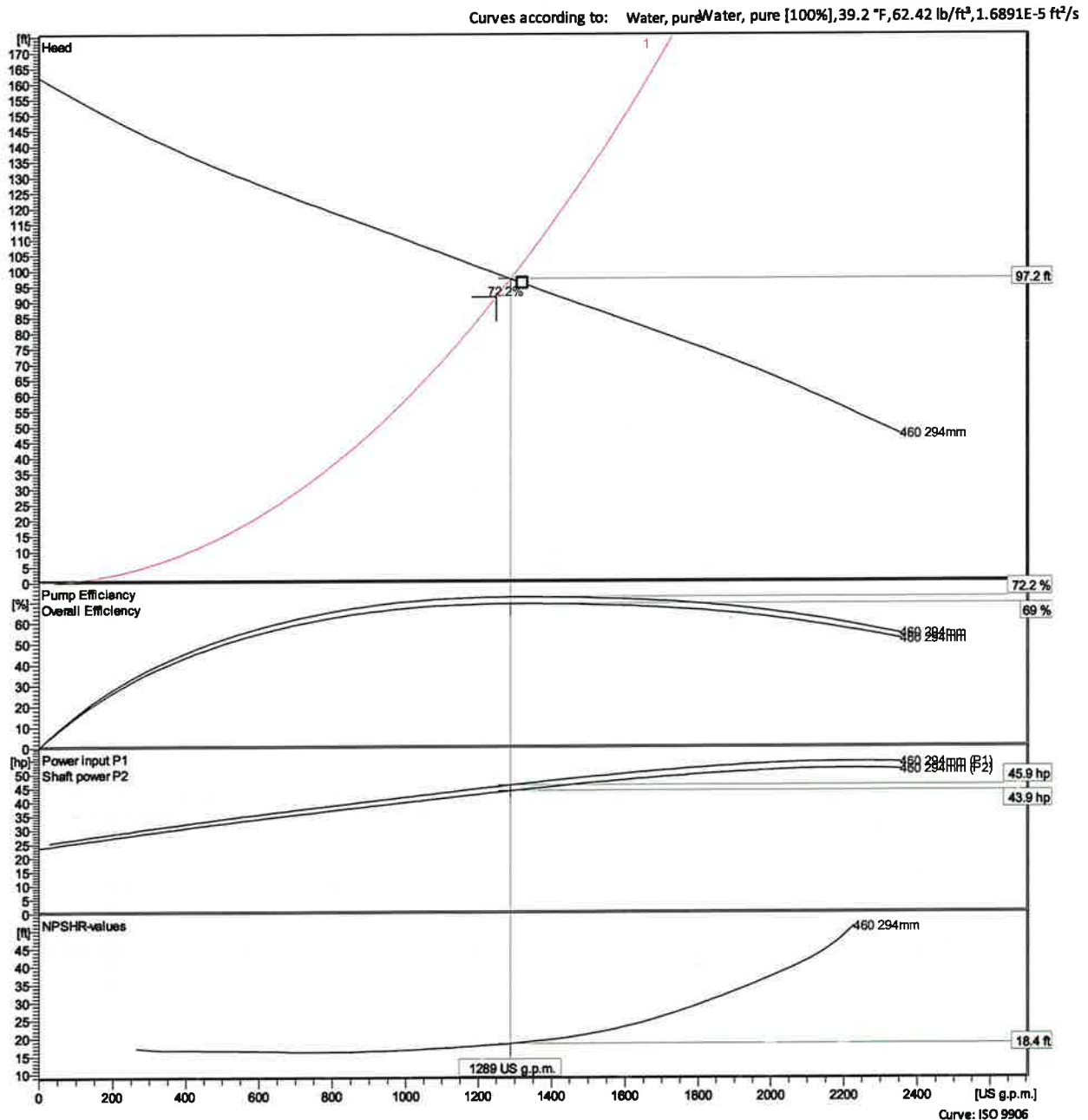
Performance curve



Duty point

Flow
1290 US g.p.m.

Head
97.2 ft



Michael Wilks

Created on

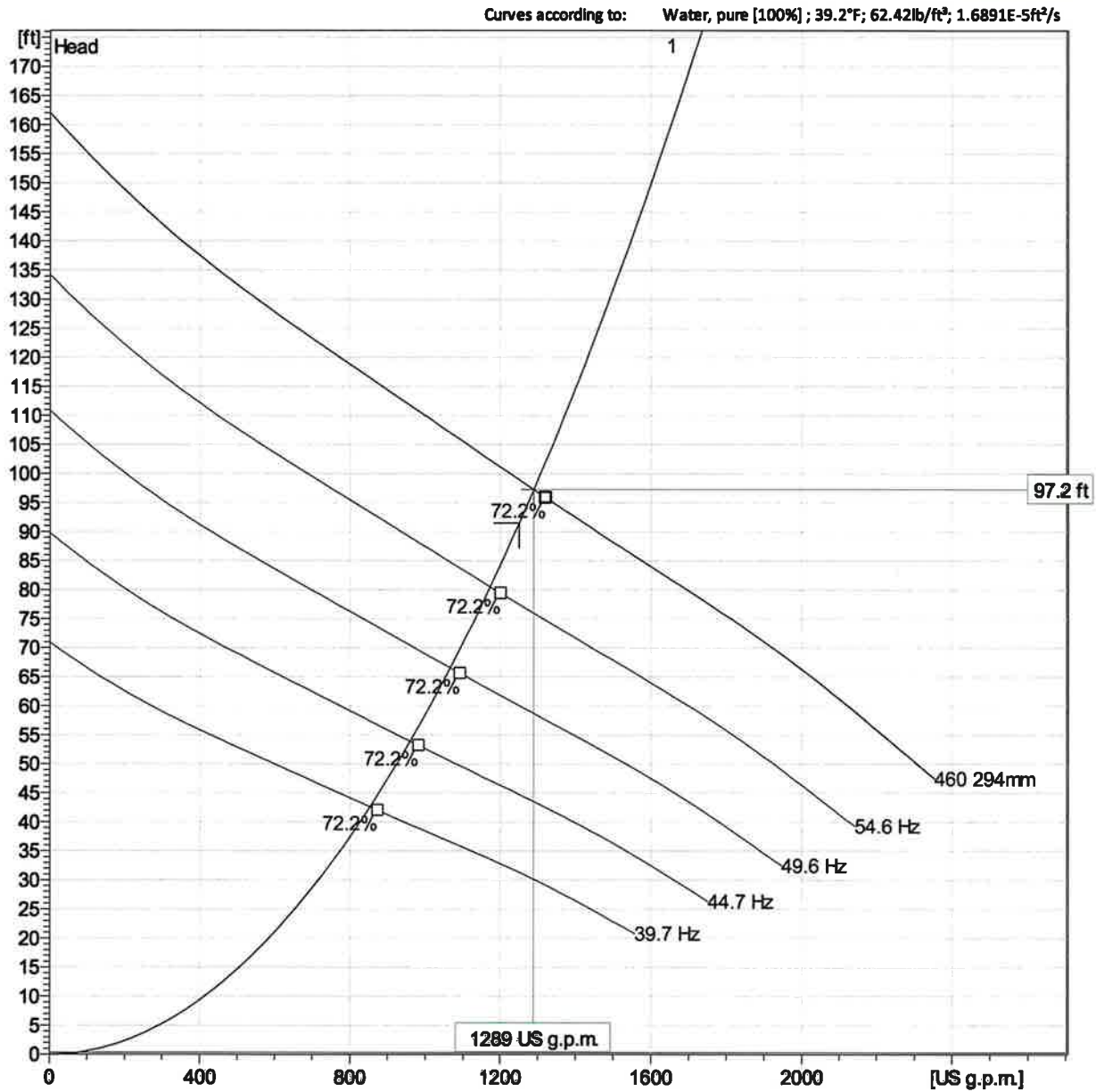
5/10/2022

Last update

5/10/2022

NP 3202 HT 3~ 460

Duty Analysis



Operating characteristics

Pumps / Systems	Flow US g.p.m.	Head ft	Shaft power hp	Flow US g.p.m.	Head ft	Shaft power hp	Hydr. eff.	Spec. Energy kWh/US MG	NPSHr ft
1	1290	97.2	43.9	1290	97.2	43.9	72.2 %	443	18.4

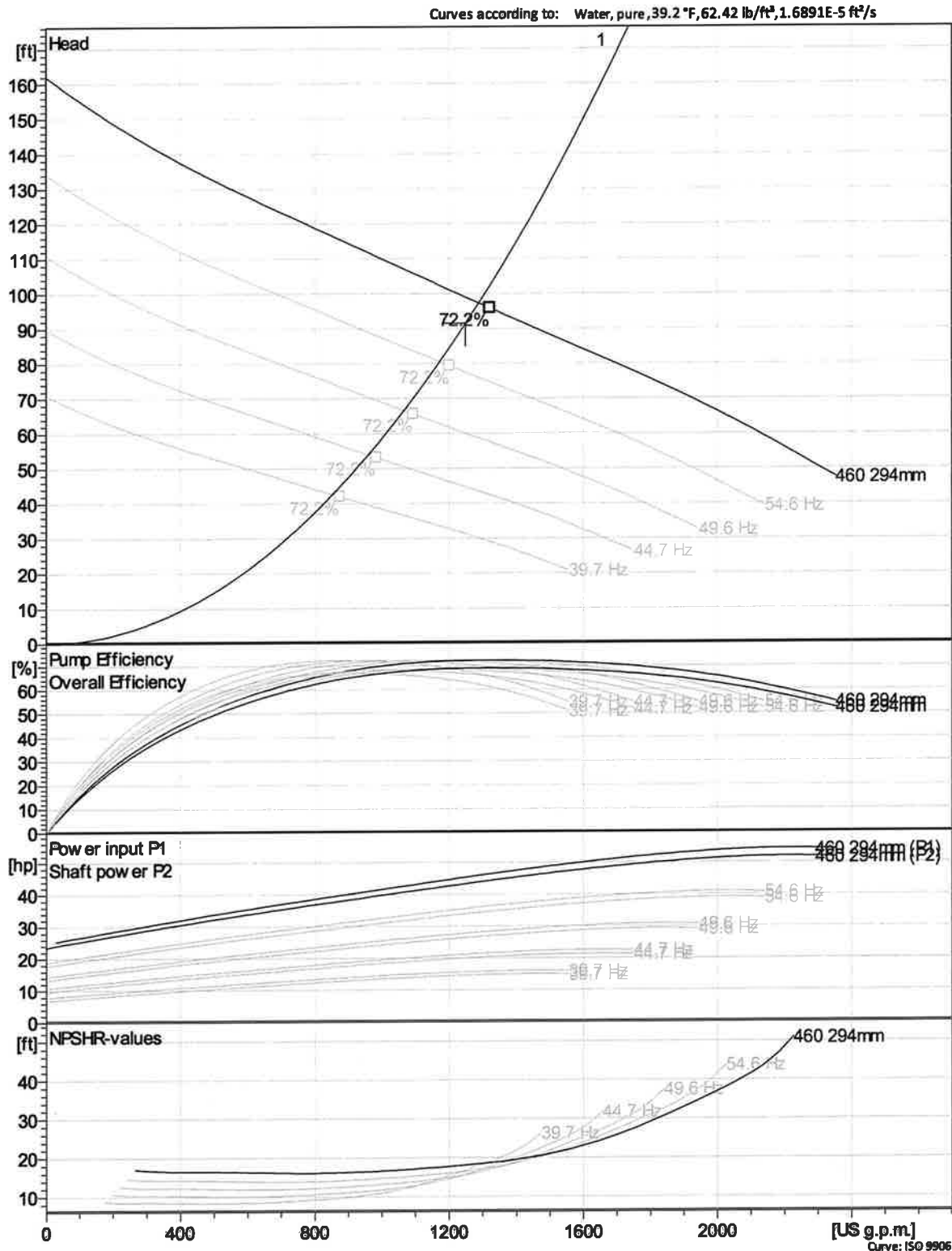
Project
Block

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Created on 5/10/2022

Last update 5/10/2022

NP 3202 HT 3~ 460

VFD Curve

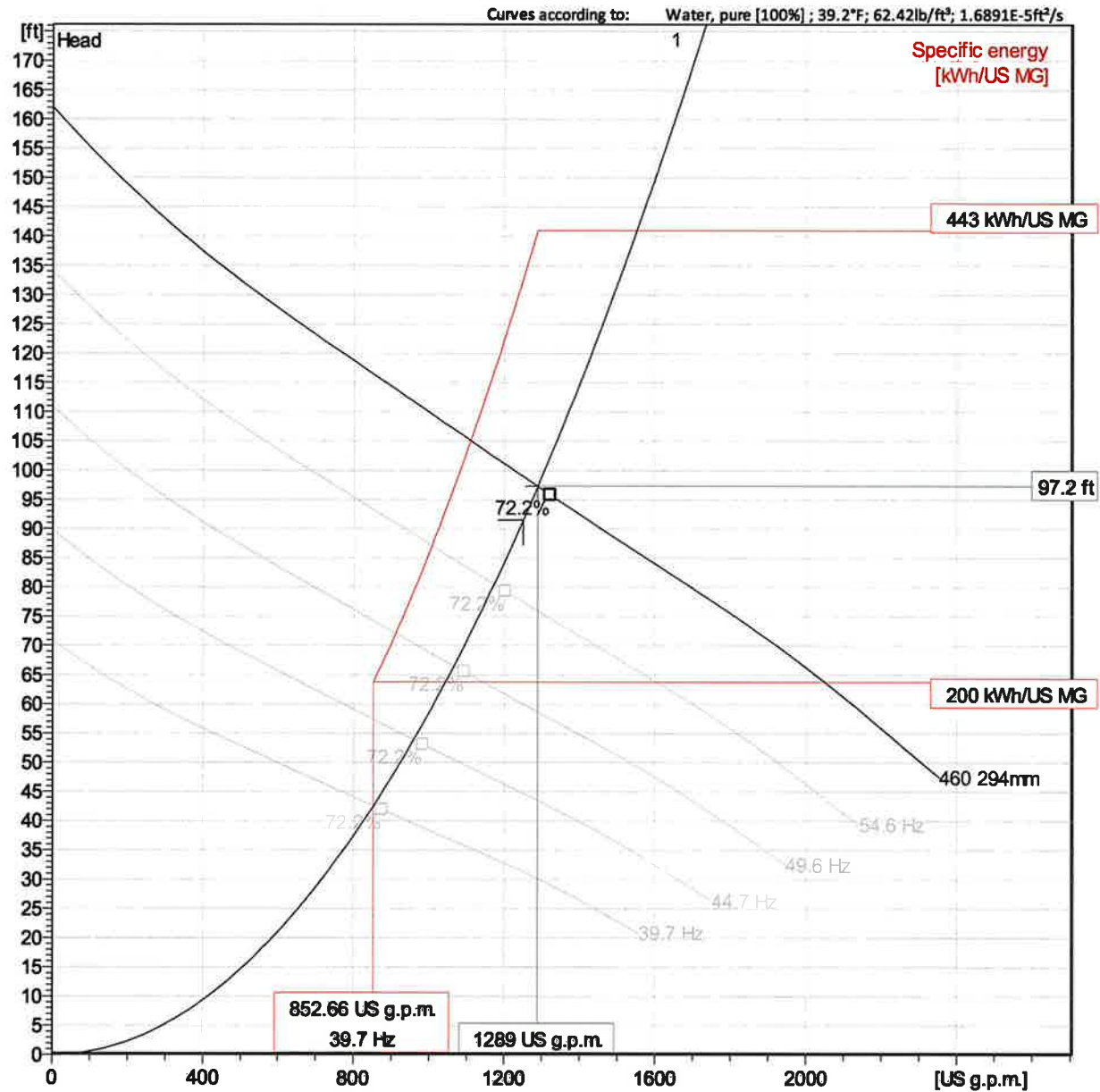


Project
Block

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Created on 5/10/2022 last update 5/10/2022

NP 3202 HT 3~ 460

VFD Analysis



Operating Characteristics

Pumps / Systems	Frequency	Flow US g.p.m.	Head ft	Shaft power hp	Flow US g.p.m.	Head ft	Shaft power hp	Hydr. eff.	Specific energy kWh/US MG	NPSHr ft
1	60 Hz	1290	97.2	43.9	1290	97.2	43.9	72.2 %	443	18.4
1	54.6 Hz	1170	80.5	33.1	1170	80.5	33.1	72.2 %	469	15.8
1	49.6 Hz	1070	66.5	24.8	1070	66.5	24.8	72.2 %	497	13.6
1	44.7 Hz	959	53.9	18.1	959	53.9	18.1	72.2 %	531	11.5

Project
Block

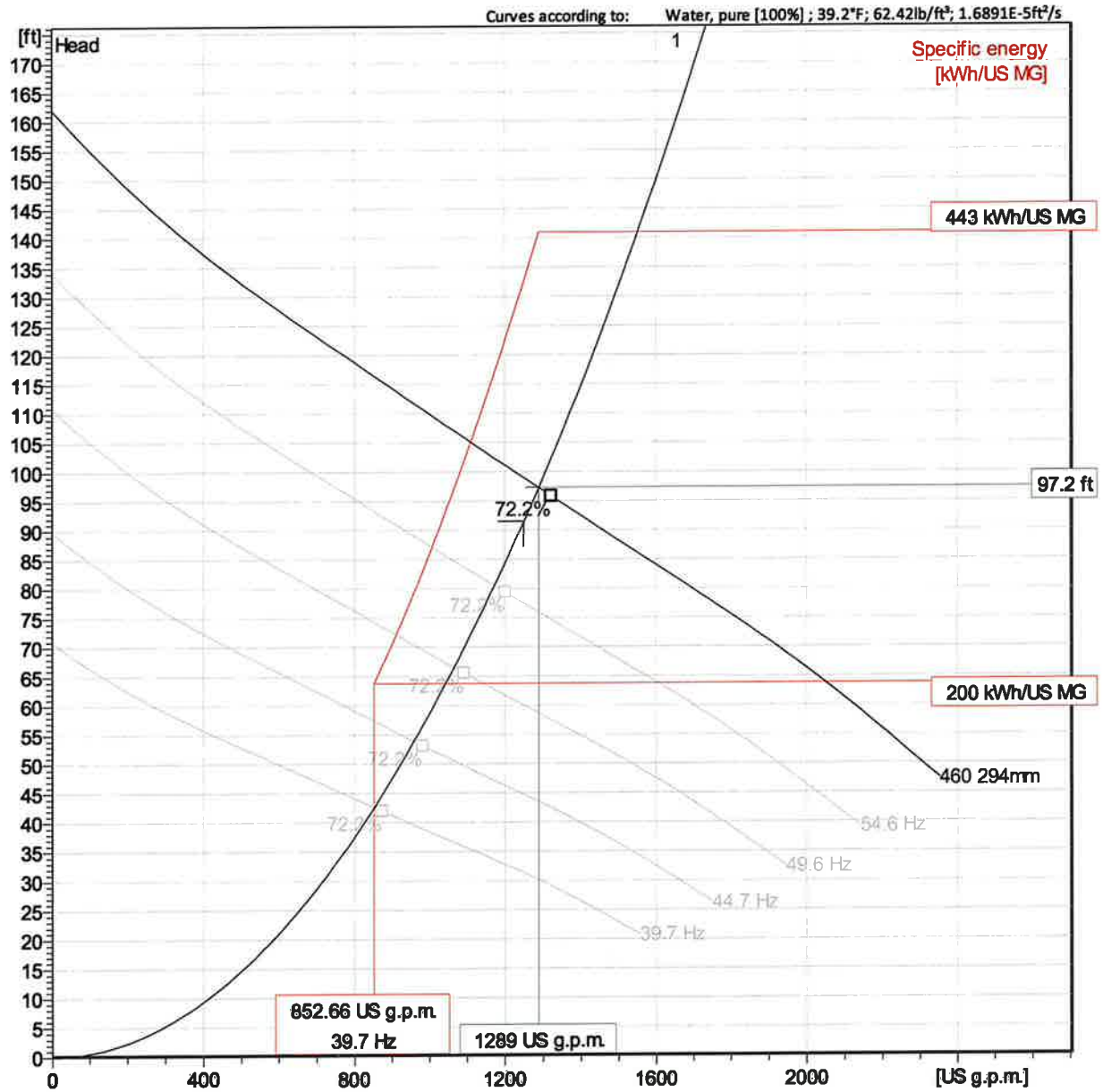
Created by Michael Wilks
Created on 5/10/2022

Last update

5/10/2022

NP 3202 HT 3~ 460

VFD Analysis



Operating Characteristics

Pumps / Systems	Frequency	Flow US g.p.m.	Head ft	Shaft power hp	Flow US g.p.m.	Head ft	Shaft power hp	Hydr. eff.	Specific energy kWh/US MG	NPSHr ft
1	39.7 Hz	853	42.6	12.7	853	42.6	12.7	72.2 %	374	9.5

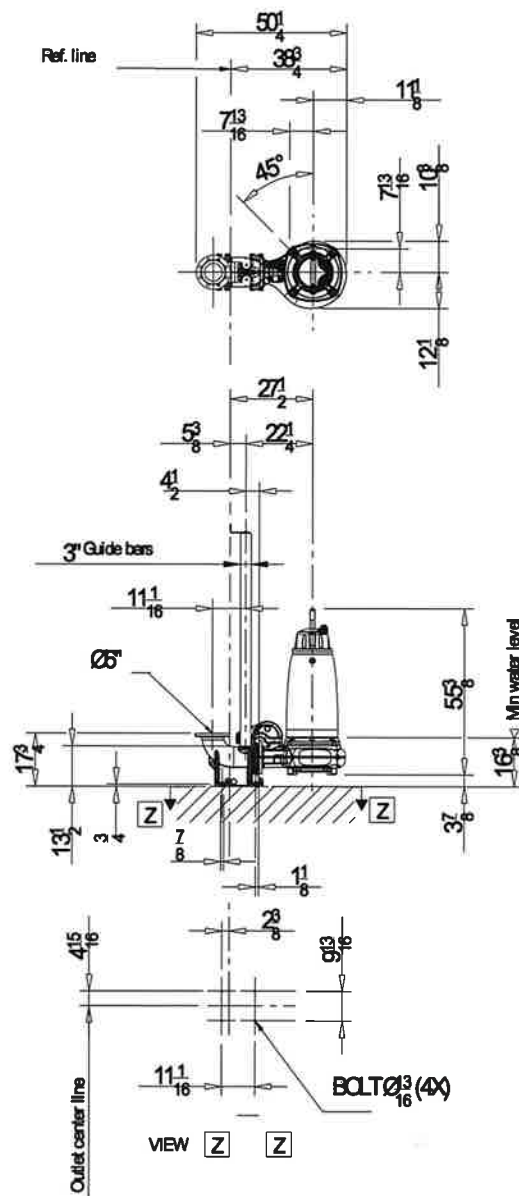
Project
Block

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Last update 5/10/2022

NP 3202 HT 3~ 460

Dimensional drawing



	FP, NP	3202	HT	Discharge outlet	2"	Scale	Date
	800, 810, 820, 830, 840, 850, 860, 870			Pump outlet	2"	1:40	210319
				Pump inlet		Drawing number	Revision
				Outlet		7731000	5

Project
Block

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5/10/2022

NP 3202 HT 3~ 458

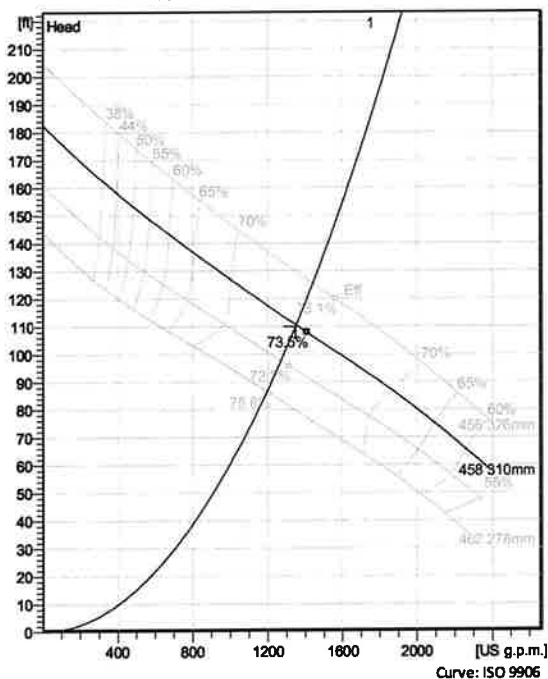
Patented self cleaning semi-open channel Impeller, ideal for pumping in waste water applications. Modular based design with high adaptation grade.



Technical specification



Curves according to: Water, pure Water, pure [100%], 39.2 °F, 62.42 lb/ft³, 1.6891E-5 ft²/s



Configuration

Motor number N3202.095 30-29-4AA-W 70hp	Installation type P - Semi permanent, Wet
Impeller diameter 310 mm	Discharge diameter 6 inch

Pump information

Impeller diameter 310 mm
Discharge diameter 6 inch
Inlet diameter 200 mm
Maximum operating speed 1775 rpm
Number of blades 2

Max. fluid temperature
40 °C

Materials

Impeller
Hard-Iron™

Project
Block

Created by Michael Wilks
Created on 5/10/2022 **Last update**

5/10/2022

NP 3202 HT 3~ 458

Technical specification



Motor - General

Motor number N3202.095 30-29-4AA-W 70hp	Phases 3~	Rated speed 1775 rpm	Rated power 70 hp
ATEX approved FM	Number of poles 4	Rated current 79 A	Stator variant 1
Frequency 60 Hz	Rated voltage 460 V	Insulation class H	Type of Duty S1
Version code 095			

Motor - Technical

Power factor - 1/1 Load 0.90	Motor efficiency - 1/1 Load 92.5 %	Total moment of inertia 10.4 lb ft ²	Starts per hour max. 30
Power factor - 3/4 Load 0.87	Motor efficiency - 3/4 Load 93.0 %	Starting current, direct starting 550 A	
Power factor - 1/2 Load 0.80	Motor efficiency - 1/2 Load 93.0 %	Starting current, star-delta 183 A	

Project
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NP 3202 HT 3~ 458

Performance curve

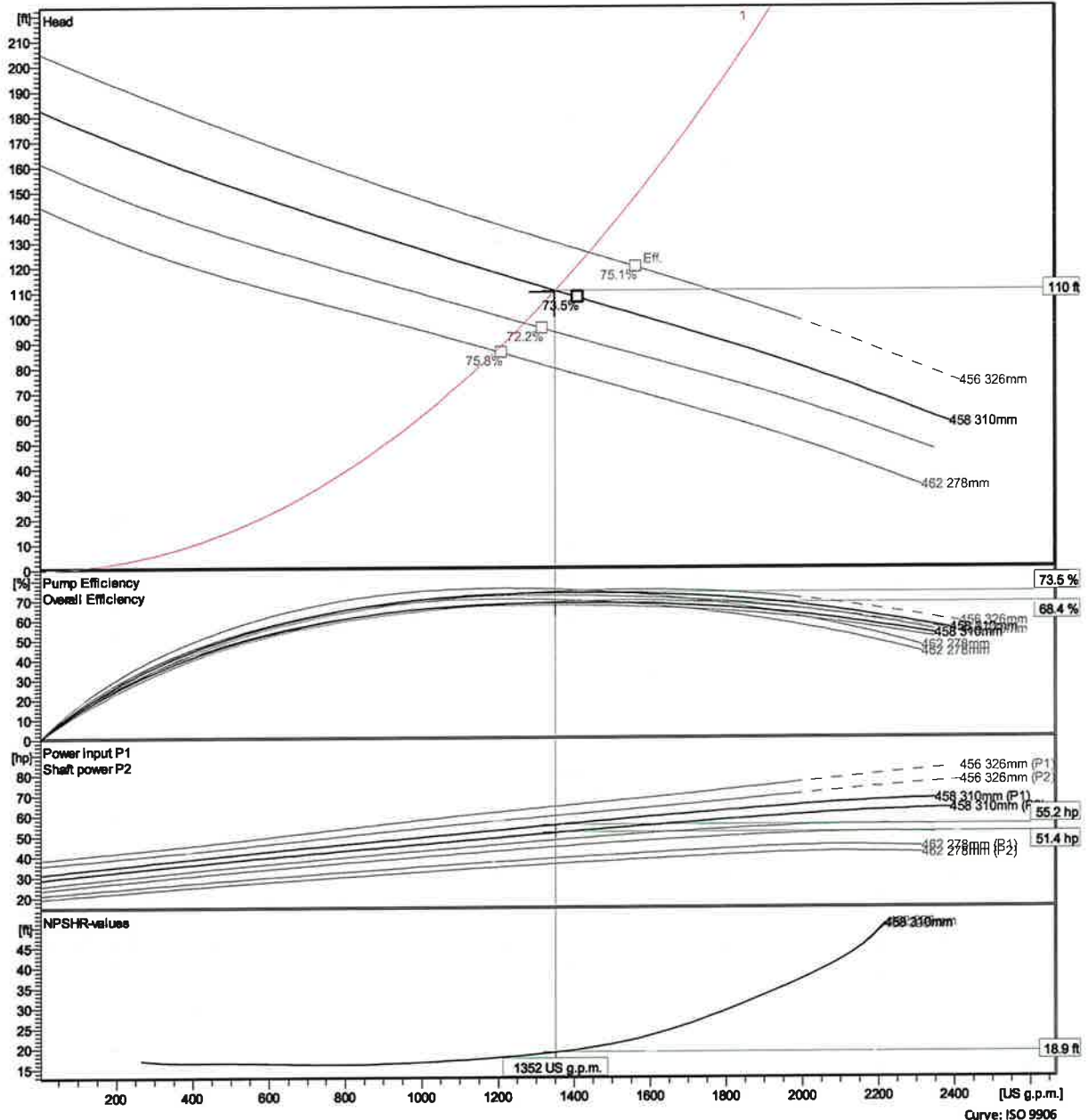


Duty point

Flow
1350 US g.p.m.

Head
110 ft

Curves according to: Water, pure Water, pure [100%], 39.2 °F, 62.42 lb/ft³, 1.6891E-5 ft²/s



Michael Wilks

Created on 5/10/2022 Last update

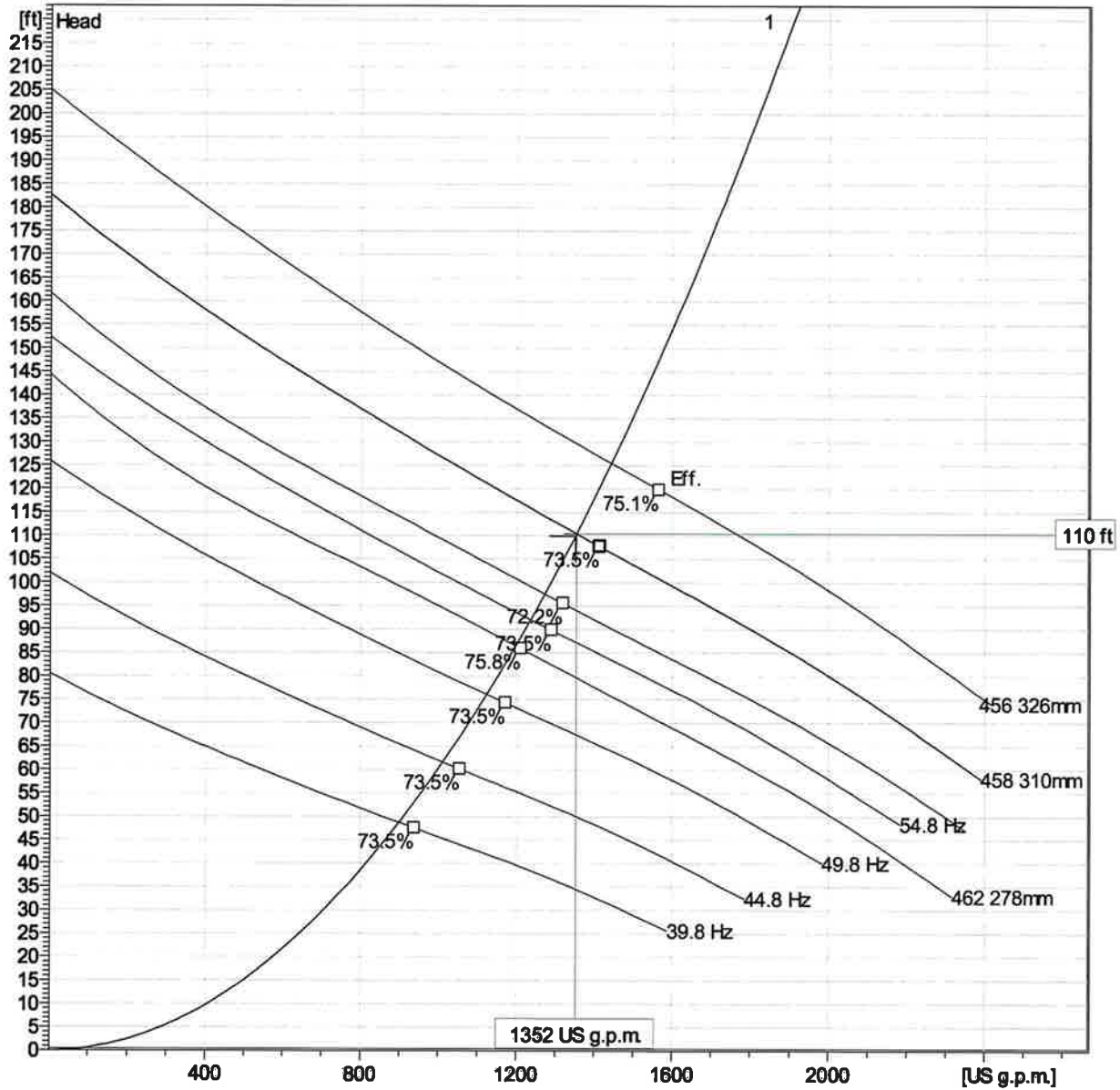
5/10/2022

NP 3202 HT 3~ 458

Duty Analysis



Curves according to: Water, pure [100%] ; 39.2°F; 62.42lb/ft³; 1.6891E-5ft²/s



Operating characteristics

Pumps / Systems	Flow US g.p.m.	Head ft	Shaft power hp	Flow US g.p.m.	Head ft	Shaft power hp	Hydr. eff.	Spec. Energy kWh/US MG	NPSHr ft
1	1350	110	51.4	1350	110	51.4	73.5 %	507	18.9

Project
Block

Created by Michael Wilks
Created on 5/10/2022

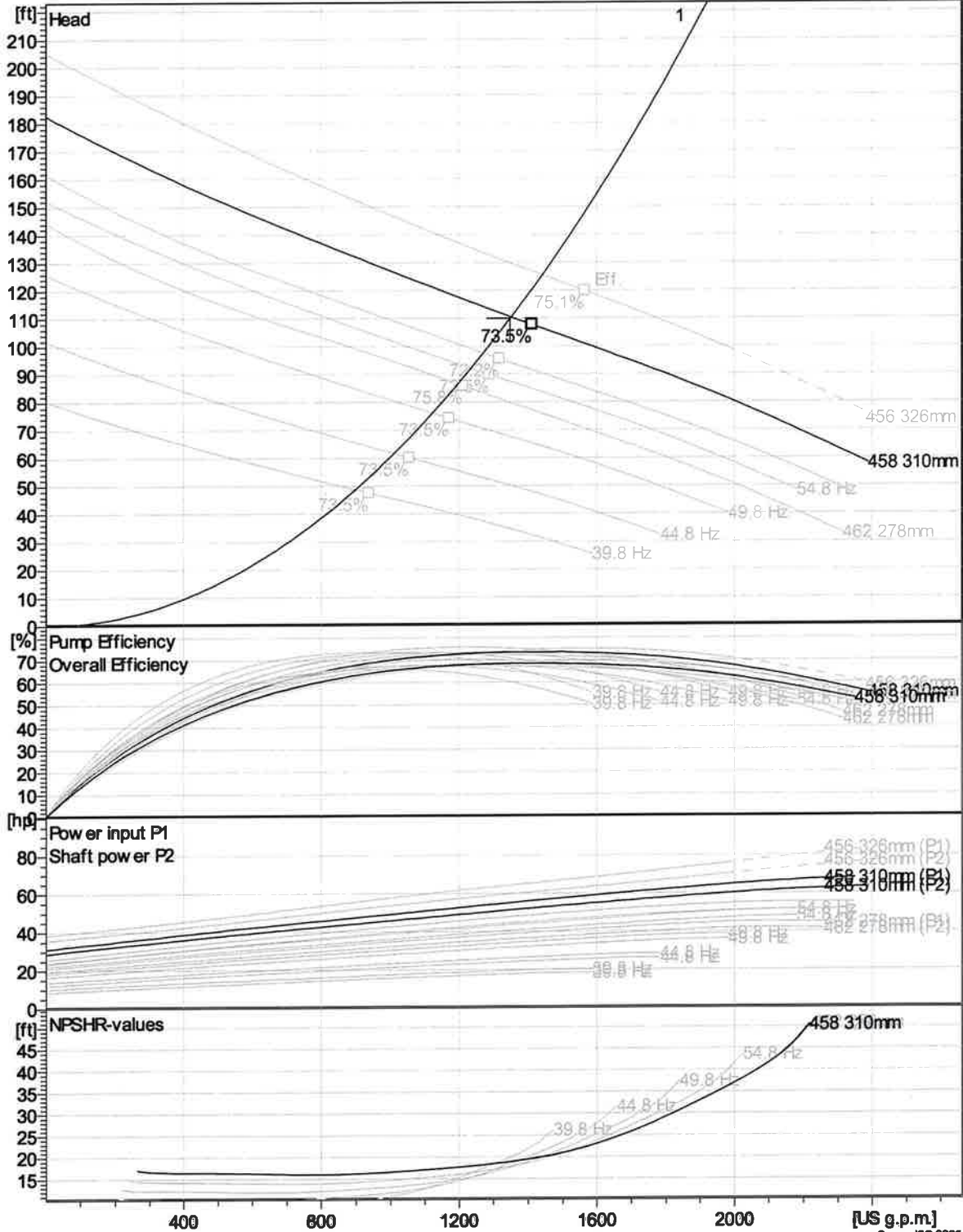
Last update 5/10/2022

NP 3202 HT 3~ 458

VFD Curve



Curves according to: Water, pure, 39.2 °F, 62.42 lb/ft³, 1.6891E-5 ft²/s



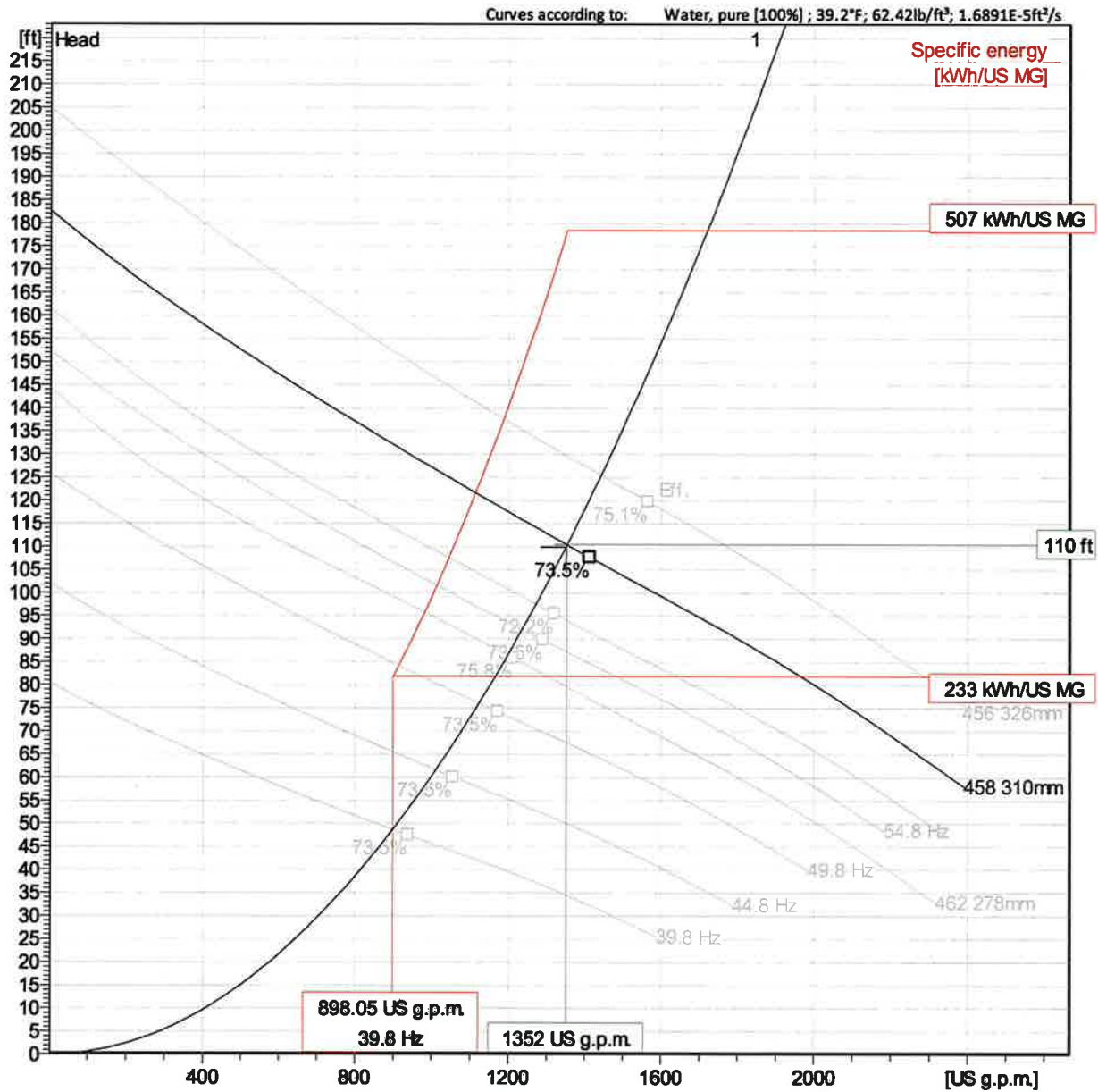
Project
Block

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Created on 5/10/2022 Last update 5/10/2022

Curve: ISO 9906

NP 3202 HT 3~ 458

VFD Analysis



Operating Characteristics

Pumps / Systems	Frequency	Flow US g.p.m.	Head ft	Shaft power hp	Flow US g.p.m.	Head ft	Shaft power hp	Hydr. eff.	Specific energy kWh/US MG	NPSHr ft
1	60 Hz	1350	110	51.4	1350	110	51.4	73.5 %	507	18.9
1	54.8 Hz	1230	92	39.1	1230	92	39.1	73.5 %	536	16.3
1	49.8 Hz	1120	76.1	29.4	1120	76.1	29.4	73.5 %	568	14
1	44.8 Hz	1010	61.6	21.4	1010	61.6	21.4	73.5 %	607	11.9

Project
Block

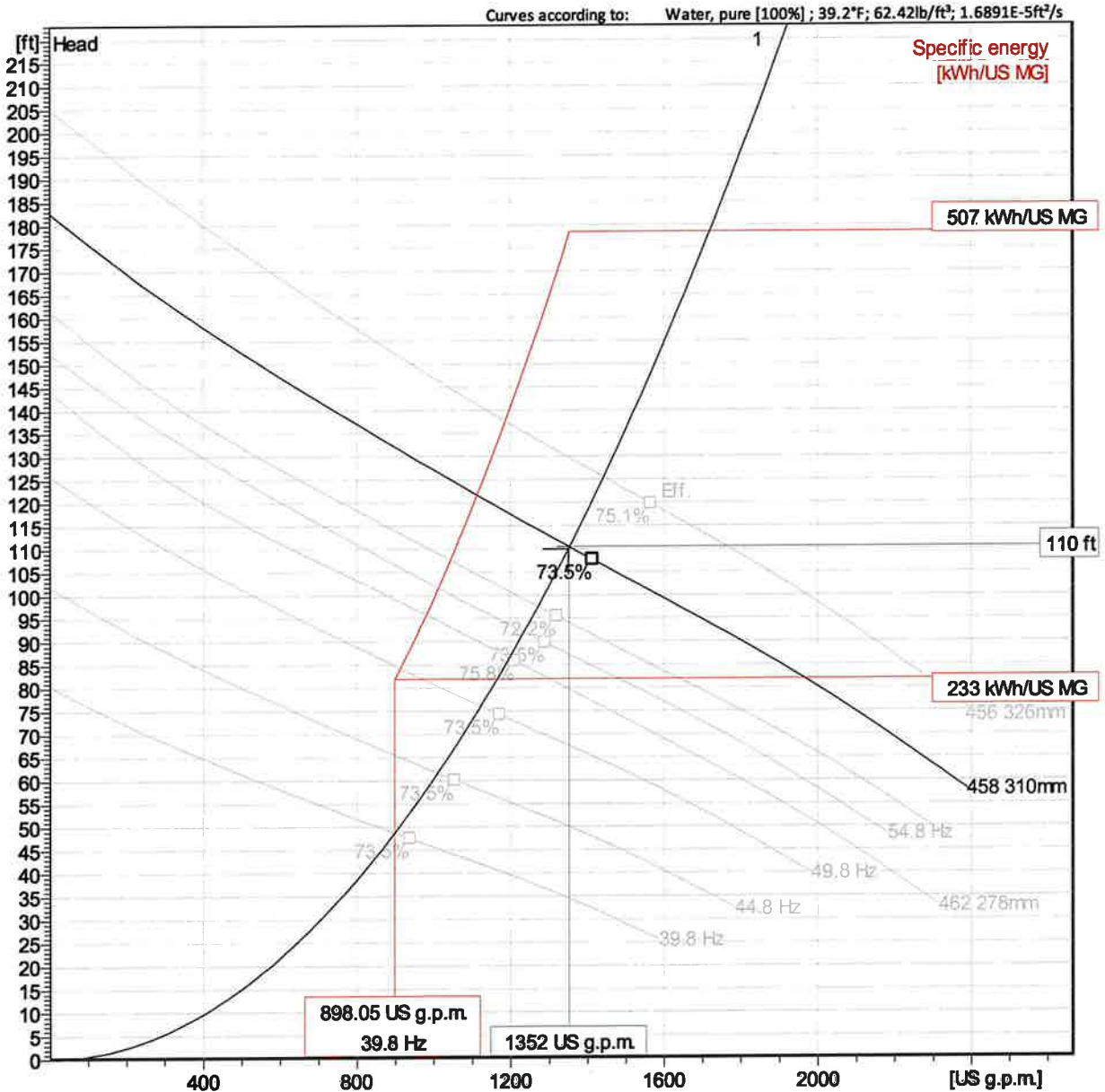
Created by Michael Wilks
Created on 5/10/2022

Last update

5/10/2022

NP 3202 HT 3~ 458

VFD Analysis



Operating Characteristics

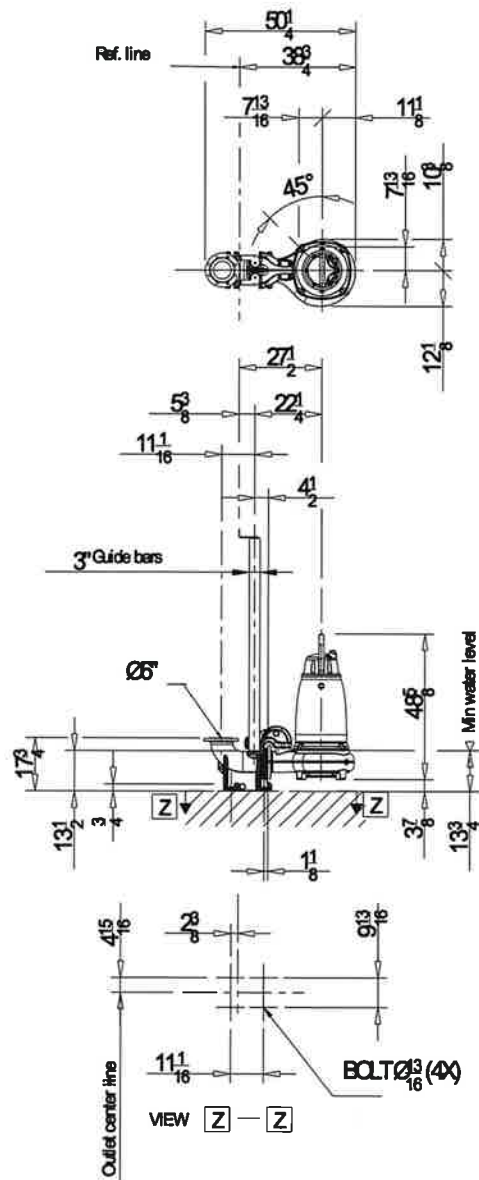
Pumps / Systems	Frequency	Flow	Head	Shaft power	Flow	Head	Shaft power	Hydr. eff.	Specific energy	NPSHr
		US g.p.m.	ft	hp	US g.p.m.	ft	hp		kWh/US MG	ft
1	39.8 Hz	898	48.7	15	898	48.7	15	73.5 %	657	9.82

Project
Block

Created by Michael Wilks
Created on 5/10/2022

Last update 5/10/2022

Dimensional drawing



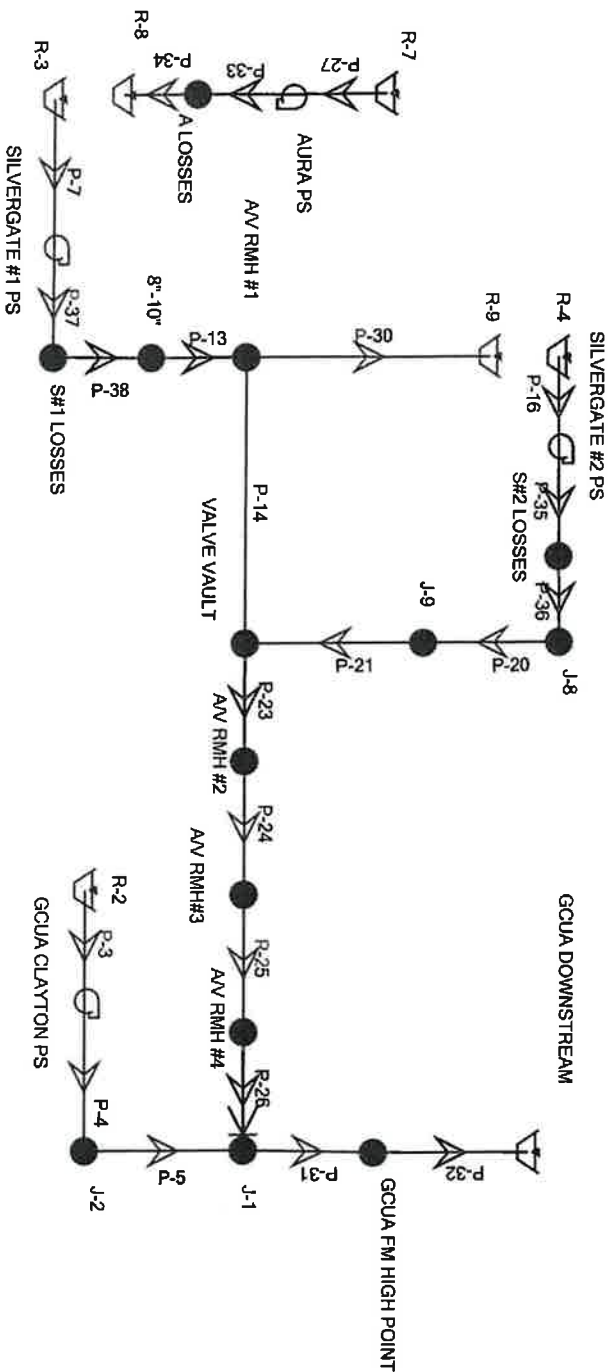
	FP, NP	3202	HT		Drachage out ☐ Pump out ☐	Scale 1:40	Date 210318
	080,085,180,185,360,360,660,670				Pump in ☐ Suction in ☐	Drawing number 6664300	Revision 11

Project Block

Created by Michael Wilks
Created on 5/10/2022 **Last update**

5/10/2022

Scenario: Aura, Silvergate, and GCUA Clayton Pump Stations Model



Aura/Silvergate #1/Silvergate #2/GCUA Clayton System Junction Labels and Elevations

	ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
31: J-1	31	J-1	127.00	<None>	<Collection: 0 items>	0	170.98	19
32: J-2	32	J-2	109.00	<None>	<Collection: 0 items>	0	174.30	28
43: 8"-10"	43	8"-10"	120.30	<None>	<Collection: 0 items>	0	162.59	18
56: A/V RMH #1	56	A/V RMH #1	127.60	<None>	<Collection: 0 items>	0	145.25	8
57: VALVE VAULT	57	VALVE VAULT	126.60	<None>	<Collection: 0 items>	0	206.44	35
65: J-8	65	J-8	124.00	<None>	<Collection: 0 items>	0	208.53	37
66: J-9	66	J-9	125.00	<None>	<Collection: 0 items>	0	207.49	36
73: A/V RMH #2	73	A/V RMH #2	132.40	<None>	<Collection: 0 items>	0	196.53	28
74: A/V RMH#3	74	A/V RMH#3	130.10	<None>	<Collection: 0 items>	0	182.45	23
75: A/V RMH #4	75	A/V RMH #4	133.00	<None>	<Collection: 0 items>	0	174.63	18
120: GCUA FM HIGH POINT	120	GCUA FM HIGH POINT	141.00	<None>	<Collection: 0 items>	0	153.62	5
124: A LOSSES	124	A LOSSES	134.72	<None>	<Collection: 0 items>	0	150.75	7
129: S#2 LOSSES	129	S#2 LOSSES	119.39	<None>	<Collection: 0 items>	0	209.57	39
132: S#1 LOSSES	132	S#1 LOSSES	110.11	<None>	<Collection: 0 items>	0	179.79	30

Aura/Silvergate #1/Silvergate #2/GCUA Clayton System Pump Station Wet Well and Force Main Discharge Labels and Elevations

	ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
30: GCUA DOWNSTREAM	30	GCUA DOWNSTREAM	130.00	<None>	-2,274	130.00
36: R-2	36	R-2	90.00	<None>	740	90.00
45: R-3	45	R-3	97.50	<None>	1,434	97.50
54: R-4	54	R-4	111.00	<None>	1,533	111.00
108: R-7	108	R-7	120.00	<None>	586	120.00
113: R-8	113	R-8	141.75	<None>	-586	141.75
117: R-9	117	R-9	126.60	<None>	-1,434	126.60

Scenario No. 1A:

- Silvergate No. 1 discharging to the GCUA force main.
- GCUA Clayton PS pumps off.

	ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
35: GCUA CLAYTON PS	35	GCUA CLAYTON PS	90.00	GCUA Pump	Off	90.00	141.39	0	0.00
44: SILVERGATE #1 PS	44	SILVERGATE #1 PS	97.50	S#1 Flygt NP 3202-100%	On	97.50	201.34	1,139	103.84
55: SILVERGATE #2 PS	55	SILVERGATE #2 PS	111.00	S#2 Flygt NP 3202-100%	Off	111.00	156.24	0	0.00
109: AURA PS	109	AURA PS	120.00	Aura Flygt 3127-100%	Off	120.00	141.75	0	0.00

	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
37: P-3	P-3	24	R-2	GCUA CLAYTON PS	100.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	1
38: P-4	P-4	31	GCUA CLAYTON PS	J-2	6.0	Ductile Iron	130.0	✓	8.100	0	0.00	0.000	✓	20
39: P-5	P-5	33	J-2	J-1	16.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	9,300
46: P-7	P-7	31	R-3	SILVERGATE #1 PS	100.0	PVC	150.0	✓	0.000	1,139	0.05	0.000	✓	1
59: P-13	P-13	20	8'-10"	A/V RMH #1	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	1,884
60: P-14	P-14	60	A/V RMH #1	VALVE VAULT	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	1,975
62: P-16	P-16	19	R-4	SILVERGATE #2 PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
69: P-20	P-20	29	J-8	J-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
70: P-21	P-21	37	J-9	VALVE VAULT	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
76: P-23	P-23	25	VALVE VAULT	A/V RMH #2	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	950
77: P-24	P-24	28	A/V RMH #2	A/V RMH #3	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	1,350
78: P-25	P-25	29	A/V RMH #3	A/V RMH #4	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	750
79: P-26	P-26	25	A/V RMH #4	J-1	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	350
110: P-27	P-27	21	R-7	AURA PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
118: P-30	P-30	51	A/V RMH #1	R-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	2,025
122: P-31	P-31	27	J-1	GCUA FM HIGH POINT	16.0	Ductile Iron	130.0	✓	0.000	1,139	1.82	0.001	✓	6,075
123: P-32	P-32	33	GCUA FM HIGH POINT	GCUA DOWNSTREAM	16.0	Ductile Iron	130.0	✓	0.000	1,139	1.82	0.001	✓	8,265
125: P-33	P-33	18	AURA PS	A LOSSES	8.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	749
126: P-34	P-34	15	A LOSSES	R-8	8.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,730
130: P-35	P-35	22	SILVERGATE #2 PS	S#2 LOSSES	10.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	239
131: P-36	P-36	18	S#2 LOSSES	J-8	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
133: P-37	P-37	22	SILVERGATE #1 PS	S#1 LOSSES	8.0	Ductile Iron	130.0	✓	0.000	1,139	7.27	0.023	✓	219
134: P-38	P-38	21	S#1 LOSSES	8'-10"	8.0	PVC	150.0	✓	0.000	1,139	7.27	0.018	✓	630

System Head Curve Detailed Report - #1A-Silvergate #1-ON & GCUA-OFF

Element Details

Label	#1A-Silvergate #1-ON & GCUA-OFF	Maximum Flow	3,429 gpm
Pump	SILVERGATE #1 PS	Number of Intervals	10

Time
(hours)

0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#1-Flygt NP 3202-100% Flow (gpm)	S#1-Flygt NP 3202-100% Head (ft)
0	32.50	3,429	0.00
343	40.23	3,067	16.03
686	60.39	2,708	32.07
1,029	91.59	2,352	48.10
1,371	133.18	1,998	64.13
1,714	184.70	1,648	80.17
2,057	245.83	1,302	96.20
2,400	316.32	961	112.23
2,743	395.95	626	128.27
3,086	484.54	301	144.30
3,429	581.94	0	160.33



Scenario No. 1B:

- Silvergate No. 1 discharging to the GCUA force main.
- GCUA Clayton PS pumps on.

	ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
35: GCUA CLAYTON PS	35	GCUA CLAYTON PS	90.00	GCUA Pump	On	90.00	179.63	914	89.63
44: SILVERGATE #1 PS	44	SILVERGATE #1 PS	97.50	S#1 Flygt NP 3202-100%	On	97.50	207.60	1,006	110.10
55: SILVERGATE #2 PS	55	SILVERGATE #2 PS	111.00	S#2 Flygt NP 3202-100%	Off	111.00	164.46	0	0.00
109: AURA PS	109	AURA PS	120.00	Aura Flygt 3127-100%	Off	120.00	141.75	0	0.00

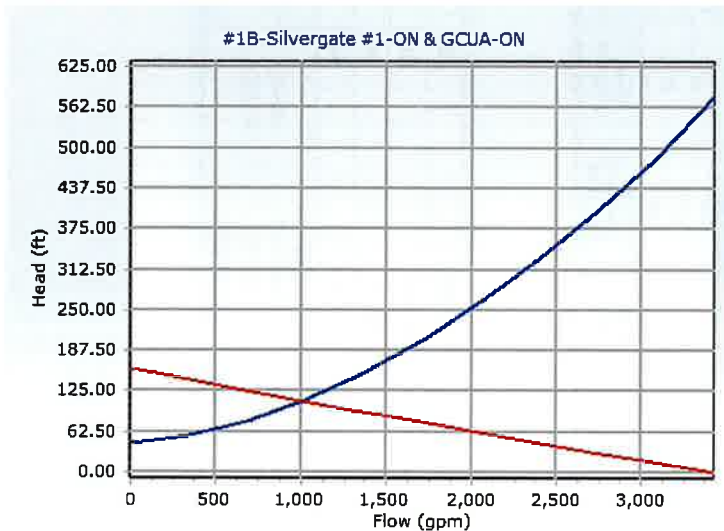
	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
37: P-3	P-3	24	R-2	GCUA CLAYTON PS	100.0	Ductile Iron	130.0	✓	0.000	914	0.04	0.000	✓	1
38: P-4	P-4	31	GCUA CLAYTON PS	J-2	6.0	Ductile Iron	130.0	✓	8.100	914	10.37	0.739	✓	20
39: P-5	P-5	33	J-2	J-1	16.0	Ductile Iron	130.0	✓	0.000	914	1.46	0.001	✓	9,300
46: P-7	P-7	31	R-3	SILVERGATE #1 PS	100.0	PVC	150.0	✓	0.000	1,006	0.04	0.000	✓	1
59: P-13	P-13	20	8"-10"	AV RMH #1	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	1,884
60: P-14	P-14	60	AV RMH #1	VALVE VALUT	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	1,975
62: P-16	P-16	19	R-4	SILVERGATE #2 PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
69: P-20	P-20	29	J-8	J-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
70: P-21	P-21	37	J-9	VALVE VALUT	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
76: P-23	P-23	25	VALVE VALUT	AV RMH #2	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	950
77: P-24	P-24	28	AV RMH #2	AV RMH #3	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	1,350
78: P-25	P-25	29	AV RMH #3	AV RMH #4	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	750
79: P-26	P-26	25	AV RMH #4	J-1	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	350
110: P-27	P-27	21	R-7	AURA PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
118: P-30	P-30	51	AV RMH #1	R-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	2,025
122: P-31	P-31	27	J-1	GCUA FM HIGH POINT	16.0	Ductile Iron	130.0	✓	0.000	1,920	3.06	0.002	✓	6,075
123: P-32	P-32	33	GCUA FM HIGH POINT	GCUA DOWNSTREAM	16.0	Ductile Iron	130.0	✓	0.000	1,920	3.06	0.002	✓	8,265
125: P-33	P-33	18	AURA PS	A LOSSES	8.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	749
126: P-34	P-34	15	A LOSSES	R-8	8.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,730
130: P-35	P-35	22	SILVERGATE #2 PS	S#2 LOSSES	10.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	239
131: P-36	P-36	18	S#2 LOSSES	J-8	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
133: P-37	P-37	22	SILVERGATE #1 PS	S#1 LOSSES	8.0	Ductile Iron	130.0	✓	0.000	1,006	6.42	0.018	✓	219
134: P-38	P-38	21	S#1 LOSSES	8"-10"	8.0	PVC	150.0	✓	0.000	1,006	6.42	0.014	✓	630

System Head Curve Detailed Report - #1B-Silvergate #1-ON & GCUA-ON

Element Details			
Label	#1B-Silvergate #1-ON & GCUA-ON	Maximum Flow	3,429 gpm
Pump	SILVERGATE #1 PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#1-Flygt NP 3202-100% Flow (gpm)	S#1-Flygt NP 3202-100% Head (ft)
0	44.27	3,429	0.00
343	56.36	3,067	16.03
686	79.57	2,708	32.07
1,029	112.57	2,352	48.10
1,371	154.64	1,998	64.13
1,714	205.25	1,648	80.17
2,057	263.92	1,302	96.20
2,400	330.15	961	112.23
2,743	403.33	626	128.27
3,086	484.54	301	144.30
3,429	581.94	0	160.33



System Head Curve Detailed Report - #1B-Silvergate #1-ON & GCUA-ON

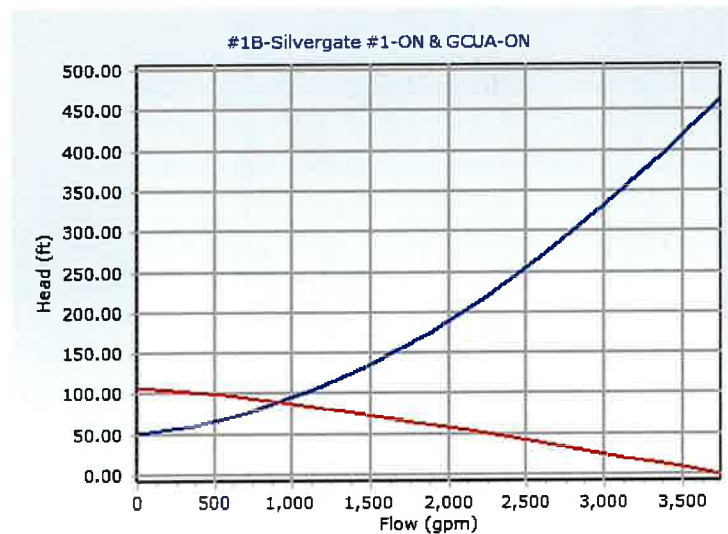
Element Details

Label	#1B-Silvergate #1-ON & GCUA-ON	Maximum Flow	3,749 gpm
Pump	GCUA CLAYTON PS	Number of Intervals	10

Time
(hours)

0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	GCUA Pump Flow (gpm)	GCUA Pump Head (ft)
0	51.39	3,749	0.00
375	61.64	3,441	10.89
750	79.52	3,125	21.79
1,125	104.67	2,803	32.68
1,500	136.83	2,471	43.57
1,875	175.81	2,130	54.47
2,250	221.42	1,775	65.36
2,625	273.47	1,404	76.25
3,000	331.76	1,008	87.15
3,374	396.06	573	98.04
3,749	466.09	0	108.93



Scenario: No. 2A:

- Aura Pump Station discharging to Silvergate #1.
- Silvergate #1 discharging to the GCUA Force Main.
- GCUA Clayton pumps off.

	ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
35: GCUA CLAYTON PS	35	GCUA CLAYTON PS	90.00	GCUA Pump	Off	90.00	141.39	0	0.00
44: SILVERGATE #1 PS	44	SILVERGATE #1 PS	97.50	S#1 Flygt NP 3202-100%	On	97.50	201.34	1,139	103.84
55: SILVERGATE #2 PS	55	SILVERGATE #2 PS	111.00	S#2 Flygt NP 3202-100%	Off	111.00	161.82	0	0.00
109: AURA PS	109	AURA PS	120.00	Aura Flygt 3127-100%	On	120.00	155.83	586	35.83

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
37: P-3	24	R-2	GCUA CLAYTON PS	100.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	1
38: P-4	31	GCUA CLAYTON PS	J-2	6.0	Ductile Iron	130.0	✓	8.100	0	0.00	0.000	✓	20
39: P-5	33	J-2	J-1	16.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	9,300
46: P-7	31	R-3	SILVERGATE #1 PS	100.0	PVC	150.0	✓	0.000	1,139	0.05	0.000	✓	1
59: P-13	20	8'-10"	A/V RMH #1	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	1,884
60: P-14	60	A/V RMH #1	VALVE VAULT	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	1,975
62: P-16	19	R-4	SILVERGATE #2 PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
69: P-20	29	J-8	J-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
70: P-21	37	J-9	VALVE VAULT	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
76: P-23	25	VALVE VAULT	A/V RMH #2	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	950
77: P-24	28	A/V RMH #2	A/V RMH #3	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	1,350
78: P-25	29	A/V RMH #3	A/V RMH #4	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	750
79: P-26	25	A/V RMH #4	J-1	10.0	PVC	150.0	✓	0.000	1,139	4.65	0.006	✓	350
110: P-27	21	R-7	AURA PS	100.0	PVC	150.0	✓	0.000	586	0.02	0.000	✓	1
118: P-30	51	A/V RMH #1	R-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	2,025
122: P-31	27	J-1	GCUA FM HIGH POINT	16.0	Ductile Iron	130.0	✓	0.000	1,139	1.82	0.001	✓	6,075
123: P-32	33	GCUA FM HIGH POINT	GCUA DOWNSTREAM	16.0	Ductile Iron	130.0	✓	0.000	1,139	1.82	0.001	✓	8,265
125: P-33	18	AURA PS	A LOSSES	8.0	Ductile Iron	130.0	✓	0.000	586	3.74	0.007	✓	749
126: P-34	15	A LOSSES	R-8	8.0	PVC	130.0	✓	0.000	586	3.74	0.005	✓	1,730
130: P-35	22	SILVERGATE #2 PS	S#2 LOSSES	10.0	Ductile Iron	150.0	✓	0.000	0	0.00	0.000	✓	239
131: P-36	18	S#2 LOSSES	J-8	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
133: P-37	22	SILVERGATE #1 PS	S#1 LOSSES	8.0	Ductile Iron	130.0	✓	0.000	1,139	7.27	0.023	✓	219
134: P-38	21	S#1 LOSSES	8'-10"	6.0	PVC	150.0	✓	0.000	1,139	7.27	0.018	✓	630

System Head Curve Detailed Report - #2A-Aura & Silvergate #1-ON & GCUA-OFF

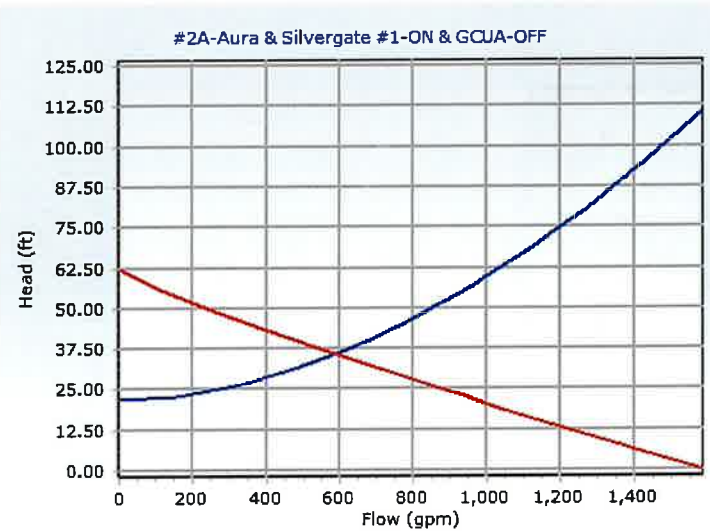
Element Details

Label	#2A-Aura & Silvergate #1 -ON & GCUA-OFF	Maximum Flow	1,589 gpm
Pump	AURA PS	Number of Intervals	10

Time
(hours)

	0.000
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0.000 hours Flow (gpm)	0.000 hours Head (ft)	Aura-Flygt 3127- 100% Flow (gpm)	Aura-Flygt 3127- 100% Head (ft)
0	21.75	1,589	0.00
159	23.01	1,405	6.24
318	26.29	1,224	12.48
477	31.37	1,047	18.73
636	38.13	874	24.97
794	46.51	706	31.21
953	56.46	544	37.45
1,112	67.93	389	43.69
1,271	80.89	242	49.94
1,430	95.30	107	56.18
1,589	111.15	0	62.42

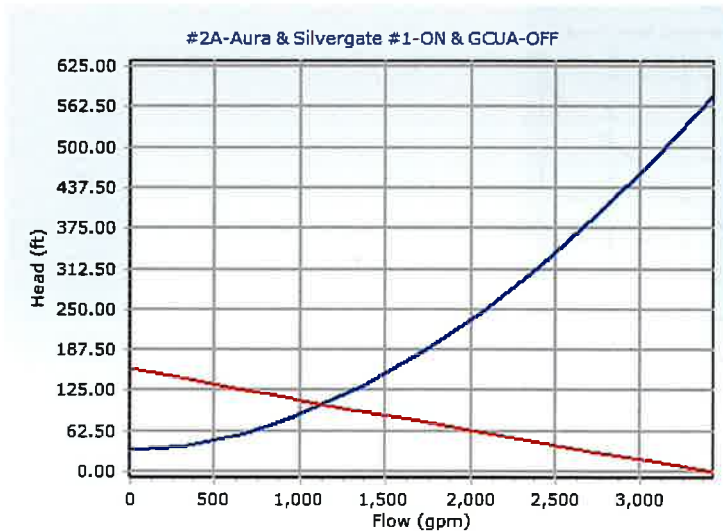


System Head Curve Detailed Report - #2A-Aura & Silvergate #1-ON & GCUA-OFF

Element Details			
Label	#2A-Aura & Silvergate #1-ON & GCUA-OFF	Maximum Flow	3,429 gpm
Pump	SILVERGATE #1 PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#1-Flygt NP 3202-100% Flow (gpm)	S#1-Flygt NP 3202-100% Head (ft)
0	32.50	3,429	0.00
343	40.23	3,067	16.03
686	60.39	2,708	32.07
1,029	91.59	2,352	48.10
1,371	133.18	1,998	64.13
1,714	184.70	1,648	80.17
2,057	245.83	1,302	96.20
2,400	316.32	961	112.23
2,743	395.95	626	128.27
3,086	484.54	301	144.30
3,429	581.94	0	160.33



Scenario: No. 2B:

- Aura Pump Station discharging to Silvergate #1.
- Silvergate #1 discharging to the GCUA Force Main.
- GCUA Clayton pumps on.

	ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
35: GCUA CLAYTON PS	35	GCUA CLAYTON PS	90.00	GCUA Pump	On	90.00	179.63	914	89.63
44: SILVERGATE #1 PS	44	SILVERGATE #1 PS	97.50	S#1-Flygt NP 3202-100%	On	97.50	207.60	1,006	110.10
55: SILVERGATE #2 PS	55	SILVERGATE #2 PS	111.00	S#2-Flygt NP 3202-100%	Off	111.00	176.19	0	0.00
109: AURA PS	109	AURA PS	120.00	Aura-Flygt 3127-100 %	On	120.00	155.83	586	35.83

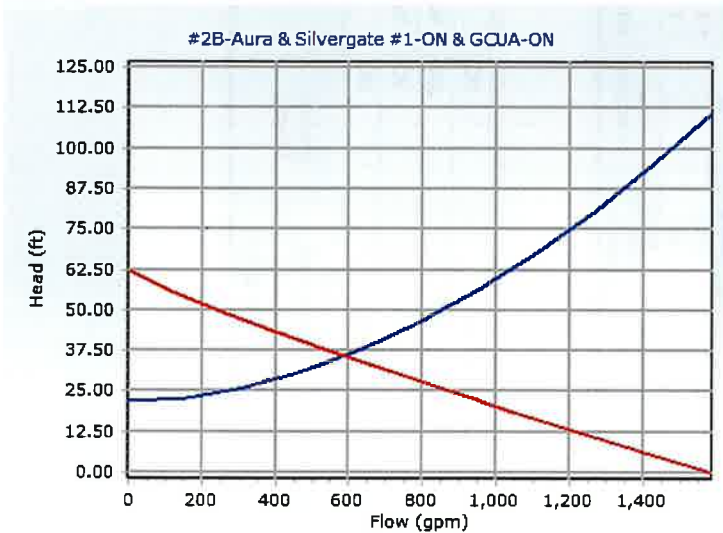
Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
37: P-3	24	R-2	GCUA CLAYTON PS	100.0	Ductile Iron	130.0	✓	0.000	914	0.04	0.000	✓	1
38: P-4	31	GCUA CLAYTON PS	J-2	6.0	Ductile Iron	130.0	✓	8.100	914	10.37	0.739	✓	20
39: P-5	33	J-2	J-1	16.0	Ductile Iron	130.0	✓	0.000	914	1.46	0.001	✓	9,300
46: P-7	31	R-3	SILVERGATE #1 PS	100.0	PVC	150.0	✓	0.000	1,006	0.04	0.000	✓	1
59: P-13	20	8"-10"	A/N RMH #1	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	1,884
60: P-14	60	A/N RMH #1	VALVE VAULT	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	1,975
62: P-16	19	R-4	SILVERGATE #2 PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
69: P-20	29	J-8	J-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
70: P-21	37	J-9	VALVE VAULT	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
76: P-23	25	VALVE VAULT	A/N RMH #2	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	950
77: P-24	28	A/N RMH #2	A/N RMH #3	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	1,350
78: P-25	29	A/N RMH #3	A/N RMH #4	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	750
79: P-26	25	A/N RMH #4	J-1	10.0	PVC	150.0	✓	0.000	1,006	4.11	0.005	✓	350
110: P-27	21	R-7	AURA PS	100.0	PVC	150.0	✓	0.000	586	0.02	0.000	✓	1
118: P-30	51	A/N RMH #1	R-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	2,025
122: P-31	27	J-1	GCUA FM HIGH POINT	16.0	Ductile Iron	130.0	✓	0.000	1,920	3.06	0.002	✓	6,075
123: P-32	33	GCUA FM HIGH POINT	GCUA FM DOWNSTREAM	16.0	Ductile Iron	130.0	✓	0.000	1,920	3.06	0.002	✓	8,265
125: P-33	18	AURA PS	A LOSSES	8.0	Ductile Iron	130.0	✓	0.000	586	3.74	0.007	✓	749
126: P-34	15	A LOSSES	R-8	8.0	PVC	150.0	✓	0.000	586	3.74	0.005	✓	1,730
130: P-35	22	SILVERGATE #2 PS	S#2 LOSSES	10.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	239
131: P-36	18	S#2 LOSSES	J-8	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	100
133: P-37	22	SILVERGATE #1 PS	S#1 LOSSES	8.0	Ductile Iron	130.0	✓	0.000	1,006	6.42	0.018	✓	219
134: P-38	21	S#1 LOSSES	8"-10"	8.0	PVC	150.0	✓	0.000	1,006	6.42	0.014	✓	630

System Head Curve Detailed Report - #2B-Aura & Silvergate #1-ON & GCUA-ON

Element Details			
Label	#2B-Aura & Silvergate #1-ON & GCUA-ON	Maximum Flow	1,589 gpm
Pump	AURA PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	Aura-Flygt 3127- 100% Flow (gpm)	Aura-Flygt 3127- 100% Head (ft)
0	21.75	1,589	0.00
159	23.01	1,405	6.24
318	26.29	1,224	12.48
477	31.37	1,047	18.73
636	38.13	874	24.97
794	46.51	706	31.21
953	56.46	544	37.45
1,112	67.93	389	43.69
1,271	80.89	242	49.94
1,430	95.30	107	56.18
1,589	111.15	0	62.42



System Head Curve Detailed Report - #2B-Aura & Silvergate #1-ON & GCUA-ON

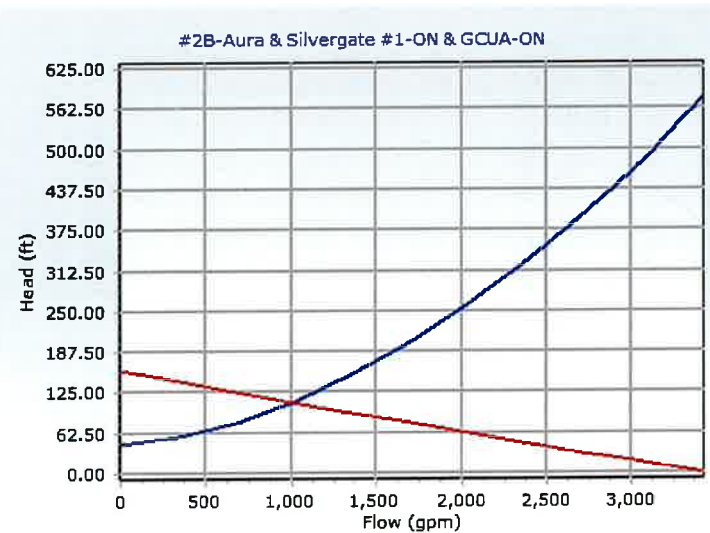
Element Details

Label	#2B-Aura & Silvergate #1-ON & GCUA-ON	Maximum Flow	3,429 gpm
Pump	SILVERGATE #1 PS	Number of Intervals	10

Time
(hours)

0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#1-Flygt NP 3202-100% Flow (gpm)	S#1-Flygt NP 3202-100% Head (ft)
0	44.27	3,429	0.00
343	56.36	3,067	16.03
686	79.57	2,708	32.07
1,029	112.57	2,352	48.10
1,371	154.64	1,998	64.13
1,714	205.25	1,648	80.17
2,057	263.92	1,302	96.20
2,400	330.15	961	112.23
2,743	403.33	626	128.27
3,086	484.54	301	144.30
3,429	581.94	0	160.33

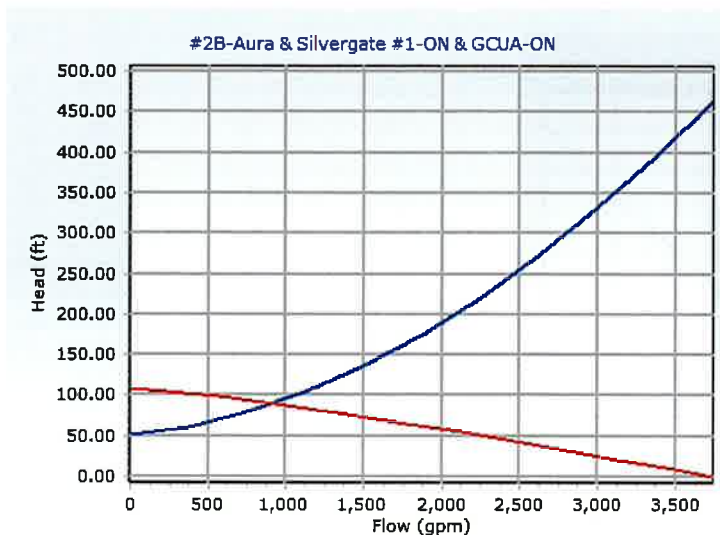


System Head Curve Detailed Report - #2B-Aura & Silvergate #1-ON & GCUA-ON

Element Details			
Label	#2B-Aura & Silvergate #1-ON & GCUA-ON	Maximum Flow	3,749 gpm
Pump	GCUA CLAYTON PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	GCUA Pump Flow (gpm)	GCUA Pump Head (ft)
0	51.39	3,749	0.00
375	61.64	3,441	10.89
750	79.52	3,125	21.79
1,125	104.67	2,803	32.68
1,500	136.83	2,471	43.57
1,875	175.81	2,130	54.47
2,250	221.42	1,775	65.36
2,625	273.47	1,404	76.25
3,000	331.76	1,008	87.15
3,374	396.06	573	98.04
3,749	466.09	0	108.93



Scenario No. 3A:

- Silvergate No. 2 discharging to the GCUA force main.
- GCUA Clayton PS pumps off.

	ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
35: GCUA CLAYTON PS	35	GCUA CLAYTON PS	90.00	GCUA Pump	Off	90.00	154.01	0	0.00
44: SILVERGATE #1 PS	44	SILVERGATE #1 PS	97.50	S#1-Flygt NP 3202-100%	Off	97.50	126.60	0	0.00
55: SILVERGATE #2 PS	55	SILVERGATE #2 PS	111.00	S#2-Flygt NP 3202-100%	On	111.00	204.87	1,704	93.87
109: AURA PS	109	AURA PS	120.00	Aura-Flygt 3127-100%	Off	120.00	141.75	0	0.00

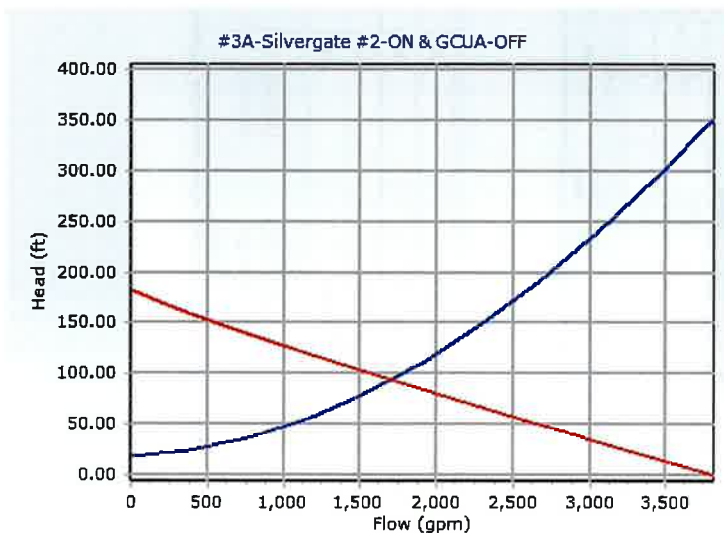
	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
37: P-3	P-3	24	R-2	GCUA CLAYTON PS	100.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	1
38: P-4	P-4	31	GCUA CLAYTON PS	J-2	6.0	Ductile Iron	130.0	✓	8.100	0	0.00	0.000	✓	20
39: P-5	P-5	33	J-2	J-1	16.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	9,300
46: P-7	P-7	31	R-3	SILVERGATE #1 PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
59: P-13	P-13	20	8"-10"	A/V RMH #1	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,884
60: P-14	P-14	60	A/V RMH #1	VALVE VAULT	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,975
62: P-16	P-16	19	R-4	SILVERGATE #2 PS	100.0	PVC	150.0	✓	0.000	1,704	0.07	0.000	✓	1
69: P-20	P-20	29	J-8	J-9	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	100
70: P-21	P-21	37	J-9	VALVE VAULT	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	100
76: P-23	P-23	25	VALVE VAULT	A/V RMH #2	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	950
77: P-24	P-24	28	A/V RMH #2	A/V RMH #3	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	1,350
78: P-25	P-25	29	A/V RMH #3	A/V RMH #4	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	750
79: P-26	P-26	25	A/V RMH #4	J-1	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	350
110: P-27	P-27	21	R-7	AURA PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
118: P-30	P-30	51	A/V RMH #1	R-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	2,025
122: P-31	P-31	27	J-1	GCUA FM HIGH POINT	16.0	Ductile Iron	130.0	✓	0.000	1,704	2.72	0.002	✓	6,075
123: P-32	P-32	33	GCUA FM HIGH POINT	GCUA DOWSTREAM	16.0	Ductile Iron	130.0	✓	0.000	1,704	2.72	0.002	✓	8,265
125: P-33	P-33	18	AURA PS	A LOSSES	8.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	749
126: P-34	P-34	15	A LOSSES	R-8	8.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,730
130: P-35	P-35	22	SILVERGATE #2 PS	S#2 LOSSES	10.0	Ductile Iron	130.0	✓	0.000	1,704	6.96	0.017	✓	239
131: P-36	P-36	18	S#2 LOSSES	J-8	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	100
133: P-37	P-37	22	SILVERGATE #1 PS	S#1 LOSSES	8.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	219
134: P-38	P-38	21	S#1 LOSSES	8"-10"	8.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	630

System Head Curve Detailed Report - #3A-Silvergate #2-ON & GCUA-OFF

Element Details			
Label	#3A-Silvergate #2-ON & GCUA-OFF	Maximum Flow	3,817 gpm
Pump	SILVERGATE #2 PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#2-Flygt NP 3202-100% Flow (gpm)	S#2-Flygt NP 3202-100% Head (ft)
0	19.00	3,817	0.00
382	23.69	3,395	18.22
763	35.93	2,977	36.43
1,145	54.88	2,566	54.65
1,527	80.12	2,161	72.86
1,909	111.40	1,764	91.08
2,290	148.52	1,375	109.30
2,672	191.31	998	127.51
3,054	239.66	635	145.73
3,436	293.44	294	163.94
3,817	352.58	0	182.16



Scenario No. 3B:

- Silvergate No. 2 discharging to the GCUA force main.
- GCUA Clayton PS pumps on.

	ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
35: GCUA CLA	35	GCUA CLAYTON PS	90.00	GCUA Pump	On	90.00	184.02	740	94.02
44: SILVERGAT	44	SILVERGATE #1 PS	97.50	S#1-Flygt NP 3202-100 %	Off	97.50	126.60	0	0.00
55: SILVERGAT	55	SILVERGATE #2 PS	111.00	S#2-Flygt NP 3202-100 %	On	111.00	212.82	1,533	101.82
109: AURA PS	109	AURA PS	120.00	Aura-Flygt 3127-100 %	Off	120.00	141.75	0	0.00

	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
37: P-3	P-3	24	R-2	GCUA CLAYTON PS	100.0	Ductile Iron	130.0	✓	0.000	740	0.03	0.000	✓	1
38: P-4	P-4	31	GCUA CLAYTON PS	J-2	6.0	Ductile Iron	130.0	✓	8.100	740	8.40	0.486	✓	20
39: P-5	P-5	33	J-2	J-1	16.0	Ductile Iron	130.0	✓	0.000	740	1.18	0.000	✓	9,300
46: P-7	P-7	31	R-3	SILVERGATE #1 PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
59: P-13	P-13	20	8"-10"	AV RMH #1	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,884
60: P-14	P-14	60	AV RMH #1	VALVE VALUT	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,975
62: P-16	P-16	19	R-4	SILVERGATE #2 PS	100.0	PVC	150.0	✓	0.000	1,533	0.06	0.000	✓	1
69: P-20	P-20	29	J-8	J-9	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	100
70: P-21	P-21	37	J-9	VALVE VALUT	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	100
76: P-23	P-23	25	VALVE VALUT	AV RMH #2	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	950
77: P-24	P-24	28	AV RMH #2	AV RMH #3	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	1,350
78: P-25	P-25	29	AV RMH #3	AV RMH #4	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	750
79: P-26	P-26	25	AV RMH #4	J-1	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	350
110: P-27	P-27	21	R-7	AURA PS	100.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1
118: P-30	P-30	51	AV RMH #1	R-9	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	2,025
122: P-31	P-31	27	J-1	GCUA FM HIGH POINT	16.0	Ductile Iron	130.0	✓	0.000	2,274	3.63	0.003	✓	6,075
123: P-32	P-32	33	GCUA FM HIGH POINT	GCUA DOWNSTREAM	16.0	Ductile Iron	130.0	✓	0.000	2,274	3.63	0.003	✓	8,265
125: P-33	P-33	18	AURA PS	A LOSSES	8.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	749
126: P-34	P-34	15	A LOSSES	R-8	8.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,730
130: P-35	P-35	22	SILVERGATE #2 PS	S#2 LOSSES	10.0	Ductile Iron	130.0	✓	0.000	1,533	6.26	0.014	✓	239
131: P-36	P-36	18	S#2 LOSSES	J-8	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.014	✓	100
133: P-37	P-37	22	SILVERGATE #1 PS	S#1 LOSSES	8.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	219
134: P-38	P-38	21	S#1 LOSSES	8"-10"	8.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	630

System Head Curve Detailed Report - #3B-Silvergate #2-ON & GCUA-ON

Element Details			
Label	#3B-Silvergate #2-ON & GCUA-ON	Maximum Flow	3,817 gpm
Pump	SILVERGATE #2 PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#2-Flygt NP 3202-100% Flow (gpm)	S#2-Flygt NP 3202-100% Head (ft)
0	30.77	3,817	0.00
382	40.24	3,395	18.22
763	55.63	2,977	36.43
1,145	76.17	2,566	54.65
1,527	101.36	2,161	72.86
1,909	130.76	1,764	91.08
2,290	163.93	1,375	109.30
2,672	200.24	998	127.51
3,054	239.66	635	145.73
3,436	293.44	294	163.94
3,817	352.58	0	182.16



System Head Curve Detailed Report - #3B-Silvergate #2-ON & GCUA-ON

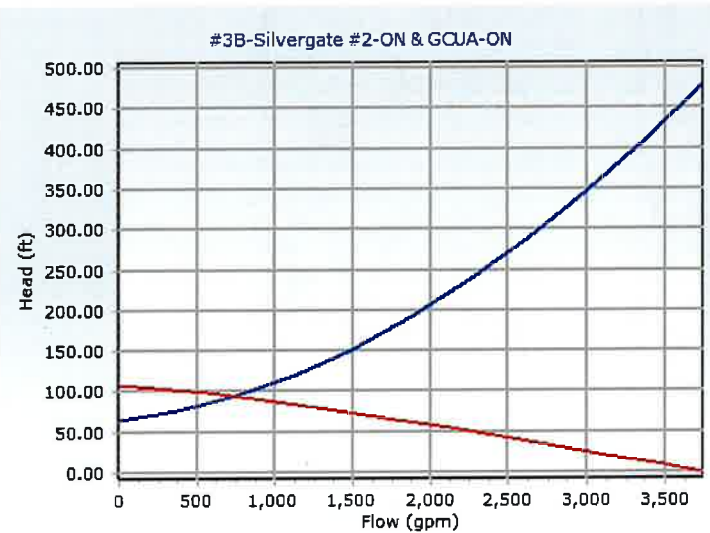
Element Details

Label	#3B-Silvergate #2-ON & GCUA-ON	Maximum Flow	3,749 gpm
Pump	GCUA CLAYTON PS	Number of Intervals	10

Time
(hours)

0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	GCUA Pump Flow (gpm)	GCUA Pump Head (ft)
0	64.01	3,749	0.00
375	75.69	3,441	10.89
750	94.60	3,125	21.79
1,125	120.43	2,803	32.68
1,500	152.97	2,471	43.57
1,875	192.06	2,130	54.47
2,250	237.58	1,775	65.36
2,625	289.39	1,404	76.25
3,000	347.39	1,008	87.15
3,374	411.47	573	98.04
3,749	481.52	0	108.93



Scenario No. 4A:

- Aura Pump Station discharging to Silvergate #1.
- Silvergate #1 discharging to the Silvergate #2.
- Silvergate #2 discharging to the GCUA Force Main.
- GCUA Clayton pumps off.

	ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
35: GCUA CLAYTON PS	35	GCUA CLAYTON PS	90.00	GCUA Pump	Off	90.00	154.01	0	0.00
44: SILVERGATE #1 PS	44	SILVERGATE #1 PS	97.50	S#1-Flygt NP 3202-100%	On	97.50	187.59	1,434	90.09
55: SILVERGATE #2 PS	55	SILVERGATE #2 PS	111.00	S#2-Flygt NP 3202-100%	On	111.00	204.87	1,704	93.87
109: AURA PS	109	AURA PS	120.00	Aura-Flygt 3127-100%	On	120.00	155.83	586	35.83

	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
37: P-3	P-3	24	R-2	GCUA CLAYTON PS	100.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	1
38: P-4	P-4	31	GCUA CLAYTON PS	J-2	6.0	Ductile Iron	130.0	✓	8.100	0	0.00	0.000	✓	20
39: P-5	P-5	33	J-2	J-1	16.0	Ductile Iron	130.0	✓	0.000	0	0.00	0.000	✓	9,300
46: P-7	P-7	31	R-3	SILVERGATE #1 PS	100.0	PVC	150.0	✓	0.000	1,434	0.06	0.000	✓	1
59: P-13	P-13	20	8" - 10"	A/V RMH #1	10.0	PVC	150.0	✓	0.000	1,434	5.86	0.009	✓	1,884
60: P-14	P-14	60	A/V RMH #1	VALVE VAULT	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,975
62: P-16	P-16	19	R-4	SILVERGATE #2 PS	100.0	PVC	150.0	✓	0.000	1,704	0.07	0.000	✓	1
69: P-20	P-20	29	J-8	J-9	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	100
70: P-21	P-21	37	J-9	VALVE VAULT	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	100
76: P-23	P-23	25	VALVE VAULT	A/V RMH #2	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	950
77: P-24	P-24	28	A/V RMH #2	A/V RMH #3	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	1,350
78: P-25	P-25	29	A/V RMH #3	A/V RMH #4	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	750
79: P-26	P-26	25	A/V RMH #4	J-1	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	350
110: P-27	P-27	20	R-7	AURA PS	100.0	PVC	150.0	✓	0.000	586	0.02	0.000	✓	1
118: P-30	P-30	51	A/V RMH #1	R-9	10.0	PVC	150.0	✓	0.000	1,434	5.86	0.009	✓	2,025
122: P-31	P-31	27	J-1	GCUA FM HIGH POINT	16.0	Ductile Iron	130.0	✓	0.000	1,704	2.72	0.002	✓	6,075
123: P-32	P-32	33	GCUA FM HIGH POINT	GCUA DOWNSTREAM	16.0	Ductile Iron	130.0	✓	0.000	1,704	2.72	0.002	✓	8,265
125: P-33	P-33	19	AURA PS	A LOSSES	8.0	Ductile Iron	130.0	✓	0.000	586	3.74	0.007	✓	749
126: P-34	P-34	15	A LOSSES	R-8	8.0	PVC	150.0	✓	0.000	586	3.74	0.005	✓	1,730
130: P-35	P-35	22	SILVERGATE #2 PS	S#2 LOSSES	10.0	Ductile Iron	130.0	✓	0.000	1,704	6.96	0.017	✓	239
131: P-36	P-36	18	S#2 LOSSES	J-8	10.0	PVC	150.0	✓	0.000	1,704	6.96	0.013	✓	100
133: P-37	P-37	22	SILVERGATE #1 PS	S#1 LOSSES	8.0	Ductile Iron	130.0	✓	0.000	1,434	9.15	0.036	✓	219
134: P-38	P-38	21	S#1 LOSSES	8" - 10"	8.0	PVC	150.0	✓	0.000	1,434	9.15	0.027	✓	630

System Head Curve Detailed Report - #4A-Aura & Silvergates #1 & #2-ON & GCUA-OFF

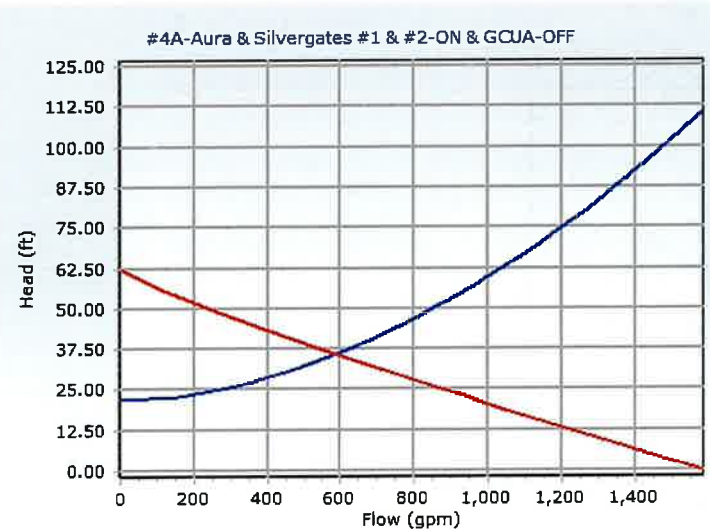
Element Details

Label	#4A-Aura & Silvergates #1 & #2-ON & GCUA-OFF	Maximum Flow	1,589 gpm
Pump	AURA PS	Number of Intervals	10

Time
(hours)

0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	Aura-Flygt 3127- 100% Flow (gpm)	Aura-Flygt 3127- 100% Head (ft)
0	21.75	1,589	0.00
159	23.01	1,405	6.24
318	26.29	1,224	12.48
477	31.37	1,047	18.73
636	38.13	874	24.97
794	46.51	706	31.21
953	56.46	544	37.45
1,112	67.93	389	43.69
1,271	80.89	242	49.94
1,430	95.30	107	56.18
1,589	111.15	0	62.42

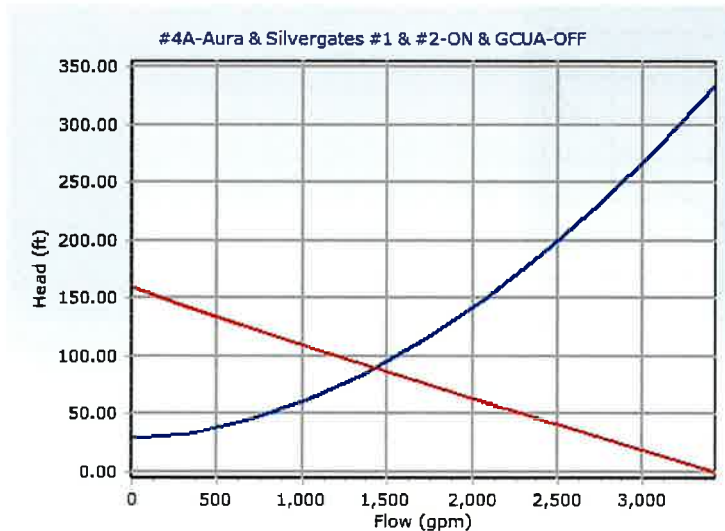


System Head Curve Detailed Report - #4A-Aura & Silvergates #1 & #2-ON & GCUA-OFF

Element Details			
Label	#4A-Aura & Silvergates #1 & #2-ON & GCUA-OFF	Maximum Flow	3,429 gpm
Pump	SILVERGATE #1 PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#1-Flygt NP 3202-100% Flow (gpm)	S#1-Flygt NP 3202-100% Head (ft)
0	29.10	3,429	0.00
343	33.41	3,067	16.03
686	44.67	2,708	32.07
1,029	62.08	2,352	48.10
1,371	85.29	1,998	64.13
1,714	114.05	1,648	80.17
2,057	148.17	1,302	96.20
2,400	187.51	961	112.23
2,743	231.95	626	128.27
3,086	281.39	301	144.30
3,429	335.75	0	160.33



System Head Curve Detailed Report - #4A-Aura & Silvergates #1 & #2-ON & GCUA-OFF

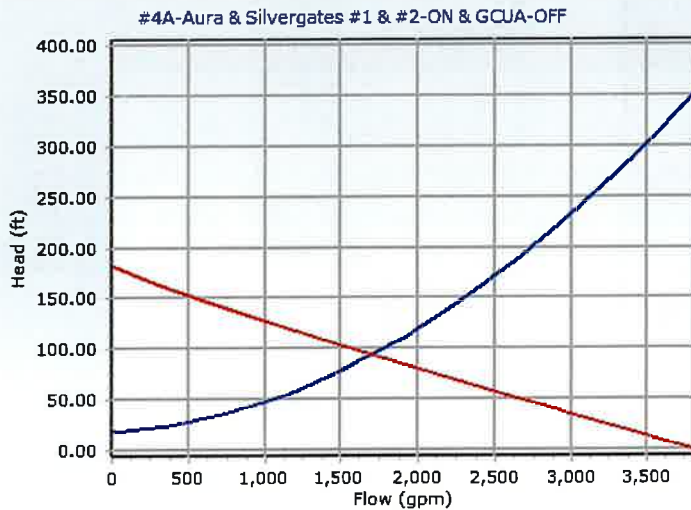
Element Details

Label	#4A-Aura & Silvergates #1 & #2-ON & GCUA-OFF	Maximum Flow	3,817 gpm
Pump	SILVERGATE #2 PS	Number of Intervals	10

Time
(hours)

0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#2-Flygt NP 3202-100% Flow (gpm)	S#2-Flygt NP 3202-100% Head (ft)
0	19.00	3,817	0.00
382	23.69	3,395	18.22
763	35.93	2,977	36.43
1,145	54.88	2,566	54.65
1,527	80.12	2,161	72.86
1,909	111.40	1,764	91.08
2,290	148.52	1,375	109.30
2,672	191.31	998	127.51
3,054	239.66	635	145.73
3,436	293.44	294	163.94
3,817	352.58	0	182.16



Scenario No. 4B:

- Aura Pump Station discharging to Silvergate #1.
- Silvergate #1 discharging to the Silvergate #2.
- Silvergate #2 discharging to the GCUA Force Main.
- GCUA Clayton pumps on.

	ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
35: GCUA CLAYTON PS	35	GCUA CLAYTON PS	90.00	GCUA Pump	On	90.00	184.02	740	94.02
44: SILVERGATE #1 PS	44	SILVERGATE #1 PS	97.50	S#1 Flygt NP 3202-100%	On	97.50	187.59	1,434	90.09
55: SILVERGATE #2 PS	55	SILVERGATE #2 PS	111.00	S#2 Flygt NP 3202-100%	On	111.00	212.82	1,533	101.82
109: AURA PS	109	AURA PS	120.00	Aura Flygt 3127-100%	On	120.00	155.83	586	35.83

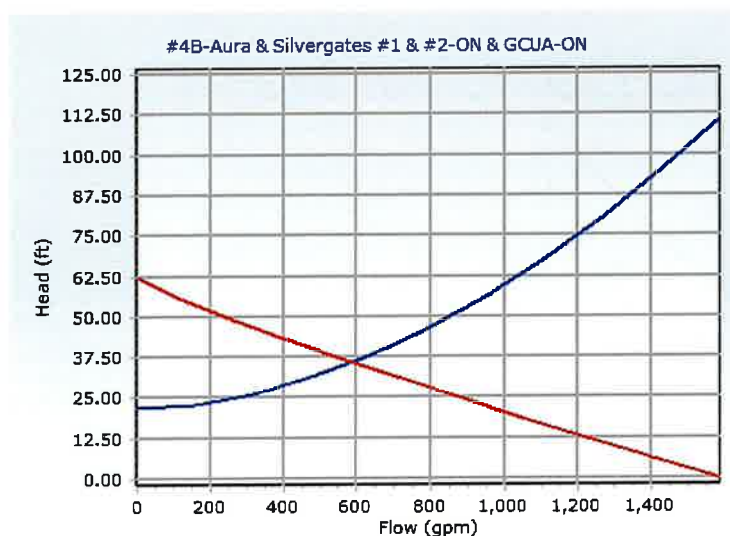
	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
37: P-3	P-3	24	R-2	GCUA CLAYTON PS	100.0	Ductile Iron	130.0	✓	0.000	740	0.03	0.000	✓	1
38: P-4	P-4	31	GCUA CLAYTON PS	J-2	6.0	Ductile Iron	130.0	✓	8.100	740	8.40	0.486	✓	20
39: P-5	P-5	33	J-2	J-1	16.0	Ductile Iron	130.0	✓	0.000	740	1.18	0.000	✓	9,300
46: P-7	P-7	31	R-3	SILVERGATE #1 PS	100.0	PVC	150.0	✓	0.000	1,434	0.06	0.000	✓	1
59: P-13	P-13	20	8"-10"	A/V RMH #1	10.0	PVC	150.0	✓	0.000	1,434	5.86	0.009	✓	1,884
60: P-14	P-14	60	A/V RMH #1	VALVE VAULT	10.0	PVC	150.0	✓	0.000	0	0.00	0.000	✓	1,975
62: P-16	P-16	19	R-4	SILVERGATE #2 PS	100.0	PVC	150.0	✓	0.000	1,533	0.06	0.000	✓	1
69: P-20	P-20	29	J-8	J-9	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	100
70: P-21	P-21	37	J-9	VALVE VAULT	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	100
76: P-23	P-23	25	VALVE VAULT	A/V RMH #2	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	950
77: P-24	P-24	28	A/V RMH #2	A/V RMH #3	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	1,350
78: P-25	P-25	29	A/V RMH #3	A/V RMH #4	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	750
79: P-26	P-26	25	A/V RMH #4	J-1	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	350
110: P-27	P-27	20	R-7	AURA PS	100.0	PVC	150.0	✓	0.000	586	0.02	0.000	✓	1
118: P-30	P-30	51	A/V RMH #1	R-9	10.0	PVC	150.0	✓	0.000	1,434	5.86	0.009	✓	2,025
122: P-31	P-31	27	J-1	GCUA FM HIGH POINT	16.0	Ductile Iron	130.0	✓	0.000	2,274	3.63	0.003	✓	6,075
123: P-32	P-32	33	GCUA FM HIGH POINT	GCUA DOWNSTREAM	16.0	Ductile Iron	130.0	✓	0.000	2,274	3.63	0.003	✓	8,265
125: P-33	P-33	19	AURA PS	A LOSSES	8.0	Ductile Iron	130.0	✓	0.000	586	3.74	0.007	✓	749
126: P-34	P-34	15	A LOSSES	R-8	8.0	PVC	150.0	✓	0.000	586	3.74	0.005	✓	1,730
130: P-35	P-35	22	SILVERGATE #2 PS	S#2 LOSSES	10.0	Ductile Iron	130.0	✓	0.000	1,533	6.26	0.014	✓	239
131: P-36	P-36	18	S#2 LOSSES	J-8	10.0	PVC	150.0	✓	0.000	1,533	6.26	0.010	✓	100
133: P-37	P-37	22	SILVERGATE #1 PS	S#1 LOSSES	8.0	Ductile Iron	130.0	✓	0.000	1,434	9.15	0.036	✓	219
134: P-38	P-38	21	S#1 LOSSES	8"-10"	8.0	PVC	150.0	✓	0.000	1,434	9.15	0.027	✓	630

System Head Curve Detailed Report - #4B-Aura & Silvergates #1 & #2-ON & GCUA-ON

Element Details			
Label	#4B-Aura & Silvergates #1 & #2-ON & GCUA-ON	Maximum Flow	1,589 gpm
Pump	AURA PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	Aura-Flygt 3127-100% Flow (gpm)	Aura-Flygt 3127-100% Head (ft)
0	21.75	1,589	0.00
159	23.01	1,405	6.24
318	26.29	1,224	12.48
477	31.37	1,047	18.73
636	38.13	874	24.97
794	46.51	706	31.21
953	56.46	544	37.45
1,112	67.93	389	43.69
1,271	80.89	242	49.94
1,430	95.30	107	56.18
1,589	111.15	0	62.42

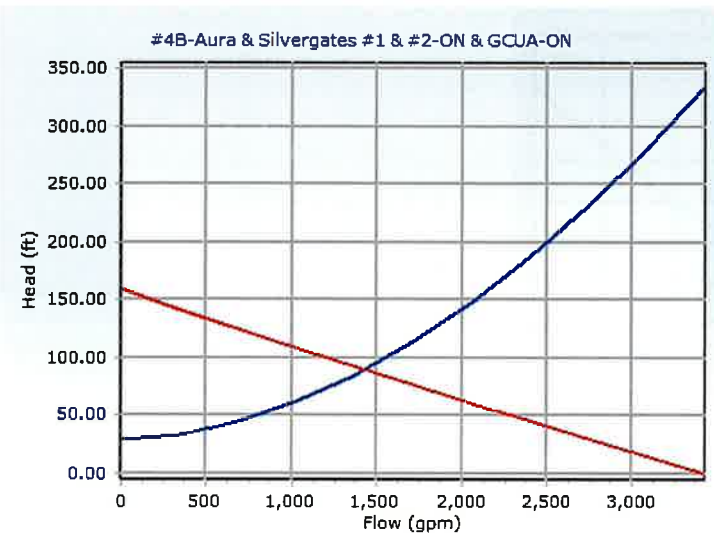


System Head Curve Detailed Report - #4B-Aura & Silvergates #1 & #2-ON & GCUA-ON

Element Details			
Label	#4B-Aura & Silvergates #1 & #2-ON & GCUA-ON	Maximum Flow	3,429 gpm
Pump	SILVERGATE #1 PS	Number of Intervals	10

Time (hours)
0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#1-Flygt NP 3202-100% Flow (gpm)	S#1-Flygt NP 3202-100% Head (ft)
0	29.10	3,429	0.00
343	33.41	3,067	16.03
686	44.67	2,708	32.07
1,029	62.08	2,352	48.10
1,371	85.29	1,998	64.13
1,714	114.05	1,648	80.17
2,057	148.17	1,302	96.20
2,400	187.51	961	112.23
2,743	231.95	626	128.27
3,086	281.39	301	144.30
3,429	335.75	0	160.33



System Head Curve Detailed Report - #4B-Aura & Silvergates #1 & #2-ON & GCUA-ON

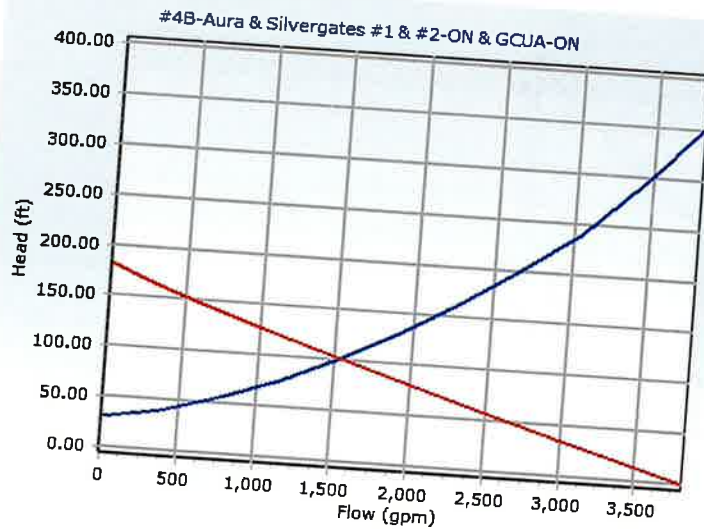
Element Details

Label	#4B-Aura & Silvergates #1 & #2-ON & GCUA-ON	Maximum Flow	3,817 gpm
Pump	SILVERGATE #2 PS	Number of Intervals	10

Time
(hours)

0.000

0.000 hours Flow (gpm)	0.000 hours Head (ft)	S#2-Flygt NP 3202-100% Flow (gpm)	S#2-Flygt NP 3202-100% Head (ft)
0	30.77	3,817	0.00
382	40.24	3,395	18.22
763	55.63	2,977	36.43
1,145	76.17	2,566	54.65
1,527	101.36	2,161	72.86
1,909	130.76	1,764	91.08
2,290	163.93	1,375	109.30
2,672	200.24	998	127.51
3,054	239.66	635	145.73
3,436	293.44	294	163.94
3,817	352.58	0	182.16

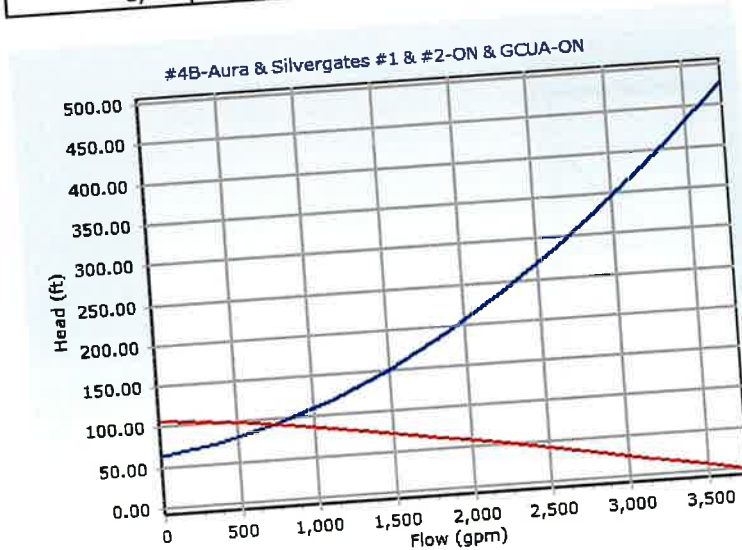


System Head Curve Detailed Report - #4B-Aura & Silvergates #1 & #2-ON & GCUA-ON

Element Details		Maximum Flow	3,749 gpm
Label	#4B-Aura & Silvergates #1 & #2-ON & GCUA-ON	Number of Intervals	10
Pump	GCUA CLAYTON PS		

Time (hours)	0.000
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0.000 hours Flow (gpm)	0.000 hours Head (ft)	GCUA Pump Flow (gpm)	GCUA Pump Head (ft)
0	64.01	3,749	0.00
375	75.69	3,441	10.89
750	94.60	3,125	21.79
1,125	120.43	2,803	32.68
1,500	152.97	2,471	43.57
1,875	192.06	2,130	54.47
2,250	237.58	1,775	65.36
2,625	289.39	1,404	76.25
3,000	347.39	1,008	87.15
3,374	411.47	573	98.04
3,749	481.52	0	108.93



Appendix 14

Vacant Parcels Sanitary Sewer Feasibility Table

Vacant Parcels Sanitary Sewer Feasibility Table

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	SEWER FEASIBILITY	SEWER SERVICE AREA	SIZE (ACRES)
54	26.03		AURA RD	1	RE	ACCESS TO PHYSICAL INFRASTRUCTURE AND TREATMENT CAPACITY AVAILABLE	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	1.400114
54	31		AURA RD	1	RE	ACCESS TO PHYSICAL INFRASTRUCTURE AND TREATMENT CAPACITY AVAILABLE	ELK TOWNSHIP SEWER SERVICE AREA - FUTURE	2.435145
72	6	A	135 BUCK RD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	14.09826
103	1	B	505 MARION ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.220413
103	2	B	TAFT AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114694
103	3	B	WEST BOULEVARD	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.266734
103	4	B	210 WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
108	1.01	C	BUCK RD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.596878
108	1.02	C	BUCK RD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.596878
111	1		365 HARRISON AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.393118
119	1	D	360 HARRISON AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.482094
119	2	D	518 PINE ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.28696
119	3	D	514 HARDING ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
119	4	D	510 HARDING ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.688705
120	1.01		515 HARDING ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.515151
121	1	E	525 MARION ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.100853
121	2	E	521 PIERCE AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.460055
122	1	F	401 PIERCE AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.196454
122	2	F	MCKINLEY AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114829
122	3	F	WEST BOULEVARD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172201
123	1	T	537 MARION ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.473826
123	2	T	MARION ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.447659
123	3	T	MCKINLEY AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.056014

Vacant Parcels Sanitary Sewer Feasibility Table

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	SEWER FEASIBILITY	SEWER SERVICE AREA	SIZE (ACRES)
123	4	T	MCKINLEY AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.118809
123	5	T	WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.22273
123	7	T	WEST BLVD	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.306334
125	4	J	ROOSEVELT AVE	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
125	6.03	J	STANGER AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057392
125	7	J	239 STANGER AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.033058
126	4	T	371 WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.174342
126	5	T	385 WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.11478
126	6	T	WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114779
132	5	N	SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.482392
133	3	N	FOURTH ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.143351
133	4	N	REED ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.216435
137	1		505 TENTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.01541
139	1.01	M	THIRD ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.471992
139	1.02	M	510 THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.245707
139	1.03	M	FOURTH AVE	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.05733
139	2	M	THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.262361
139	4	M	FOURTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114847
143	2	O	DOUGLASS ST	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.202916
143	3	O	EIGHTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.946962
145	3.01	L	SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.025413
145	4	L	SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.11514
146	1	L	THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.200906

Vacant Parcels Sanitary Sewer Feasibility Table

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	SEWER FEASIBILITY	SEWER SERVICE AREA	SIZE (ACRES)
146	2	L	DOUGLASS ST	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.330085
146	3	L	FOURTH AVE	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.207759
146	4	L	524 THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	1.559904
146	5	L	FOURTH AVE	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.172176
146	6	L	FOURTH AVE	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.075952
146	8	L	DUNBAR BLVD	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.05671
146	9	L	112 DUNBAR BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.144903
154	1	S	DUNBAR BLVD	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.471993
154	2	S	DUNBAR BLVD	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.591986
157	1	Q	DUNBAR BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.853765
157	3		SEVENTH ST	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
159	1	P	DUNBAR BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.770431
159	3		NINTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344353
159	5		EIGHTH & MARION	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.941303
161	1	G	SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.486227
161	2	G	545 SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.229568
161	3	G	FIRST AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.459137
161	4	G	SECOND AVE	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114612
161	5	G	FIRST AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
161	6	G	SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114957
161	7	G	SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
161	9	G	SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.64416
162	1	H	THIRD AVE	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.245208

Vacant Parcels Sanitary Sewer Feasibility Table

BLOCK	LOT	CLUSTER	LOCATION	PROPERTY CLASS	ZONE	SEWER FEASIBILITY	SEWER SERVICE AREA	SIZE (ACRES)
162	3	H	561 THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.516529
162	4	H	565 THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114784
162	5	H	570 SECOND AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.746172
162	6	H	460 WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.598656
162	7	H	440 WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.199445
163	2	I	558 THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.229562
163	3	I	562 THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.401074
163	4	I	FOURTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.116023
163	5	I	FOURTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.442503
163	6	I	566 THIRD AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.113624
163	9	I	WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.057264
163	10	I	WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.114653
163	11	I	WEST BLVD	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.05739
163	12	I	WEST BLVD	15C	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.107995
166	6	R	555 SIXTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.573922
166	7		549 SEVENTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	0.344352
167	4		EIGHTH AVE	1	MD	NO PHYSICAL INFRASTRUCTURE OR TREATMENT CAPACITY WITHIN COMPLIANCE PERIOD (2025 – 2035)	ELK TOWNSHIP SEWER SERVICE AREA - CURRENT	2.245859

Appendix 15

**NJDEP Treatment Works Approval – Aura and Silvergate, Elk Township,
Gloucester County, NJ – DESIGN REPORT Wastewater Pumping and Force Mains
Analyses, prepared by Taylor Wiseman, revised to January 25, 2023**

**SILVERGATE & AURA
WATER AND SANITARY SEWER
INFRASTRUCTURE AGREEMENT**

THIS AGREEMENT is made on this 28th day of June, 2018, by and between:

SILVERGATE ASSOCIATES, a New Jersey Joint Venture with offices at 593 Bethlehem Pike, Suite 6A, Montgomeryville, PA 18936 (hereinafter "Silvergate"); and

AURA INVESTORS, LLC, a Delaware limited liability corporation with offices at 902 Carnegie Center Boulevard, Suite 300, Princeton, NJ 08054 (hereinafter "Aura")

For purposes of this Agreement, Silvergate and Aura shall collectively be called the "Developers" and either of them may be called a "Developer."

WITNESSETH:

- A. WHEREAS, each of the Developers is planning to construct certain real estate projects in the Township of Elk, Gloucester County, New Jersey. The projects, described by block/lot identification, are set forth below:

Developer/Project
Silvergate

Block and Lot #

Phase 1	N/F Block 56, Lots 4, 11.02 and 12.
Phase 2	N/F Block 63, Lots 2.01 and 2.02.
Phase 3	N/F Block 55, Lot 5 and Lots 5.01-5.52; Block 5.01, Lots 1-7; Block 5.02, Lots 1-51; Block 55.03, Lots 1-18; Block 55.04, Lots 1-18; and, Block 55.05, Lots 1-17.
Phase 4	Block 62, Lots 3.01 and 3.02.
Phase 5	Block 65, P/O Lot 5.
Phase 6	Block 65, P/O Lot 5 and Lot 4.02; Block 170, Lots 14 and 18; and Block 171, Lots 6 and 9.
Phase 7	Block 52, Lot 12.02; Block 53, Lot 1; Block 174, Lot 1; and, Block 213, Lot 3.

Together with such other properties owned or to be acquired by Silvergate to become incorporated as part of the intended Silvergate Project (hereinafter "Silvergate Project/Property(ies)").

Aura

N/F Block 29, Lots 24.02, 24.03 and 24.04; Block 29.01, Lots 55, 56, 57 and 58; Block 29.02, Lots 13 and 20; Block 29.08, Lots 28, 29, 30, 31, 32, 33, 34 and 35; Block 29.11, Lot 13; Block 29.12, Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12; ; Block 31, Lots 2.02, 5.01, 7 & 22; Block 32, Lots 1; and Block 58, Lot 1.

Together with such other properties owned or to be acquired by Aura to become incorporated as part of the intended Aura Project (hereinafter "Aura Project/Property(ies)").

B. WHEREAS, Aura is the successor in title to the lands previously owned by Orleans at Elk, LLC, which may be subject to various Developers Agreements and Infrastructure Cost Sharing Agreements to which Silvergate is a party including, but not limited to:

1. Amended and Restated Developers Agreement Among and Between Silvergate Associates, OHI NJ, Inc. (Orleans), CAN2, LLC (Canuso) and Elk Township Municipal Utilities Authority, dated February 4, 2005.

- Exhibit C-1 to the Amended and Restated Developers Agreement – Primary Water System Schematic prepared by Taylor Wiseman which graphically illustrated the components of the Primary Water System (also attached as Exhibit A to the Water Service Infrastructure Cost Sharing Agreement).
- Exhibit D-1 to the Amended and Restated Developers Agreement – Primary Sewer System Schematic prepared by Taylor Wiseman and Taylor which graphically illustrates the components of the Primary Sewer System (also attached as Exhibit A to the Sewerage Infrastructure Cost Sharing Agreement).
- Exhibit M to the Amended and Restated Developers Agreement:
 - Water Service Infrastructure Cost Sharing Agreement between Silvergate Associates, OHI North Service Corp. (Orleans), CAMCO Management LLC (Canuso), Elk Township Municipal Utilities Authority and New Jersey American Water Company, dated 2004.
 - Sewerage Infrastructure Cost Sharing Agreement between Silvergate Associates and OHI NJ, INC., dated 2005.

2. Addendum to Amended and Restated Developers Agreement Among and Between Silvergate Associates, OHI NJ, INC., CAN2, LLC and Elk Township Municipal Utilities Authority, dated October 9, 2006.

C. WHEREAS, the Developers have obtained or are in the process of obtaining approvals from Elk Township, Gloucester County, and other regulatory agencies to allow for the development of the Silvergate Project and the Aura Project (hereinafter "Projects"); and,

D. WHEREAS, the properties subject to this Agreement have been designated by Elk Township as "Areas in Need of Redevelopment," which may result in the Developers pursuing the modification of approvals which have already been obtained for their projects (hereinafter "Redevelopment Plan(s)"); and,

E. WHEREAS, the Developers recognize that in order for water and sanitary sewer service to be provided for the development of the Projects, it is necessary to design and install comprehensive infrastructure systems (hereinafter "Water System" and "Sanitary Sewer System") that will serve and benefit both the Silvergate Project and the Aura Project, and

that each Developer shall have individual duties and financial responsibilities regarding the installation of the Water System and Sanitary Sewer System as outlined in this Agreement; and,

- F. WHEREAS, the sewerage collection and conveyance system and the water distribution and storage system for the Projects are now under the jurisdiction and control of New Jersey Department of Environmental Protection (hereinafter "NJDEP") and New Jersey American Water (hereinafter "NJAW"); and the sewerage treatment and disposal is under the jurisdiction and control of NJDEP and the Gloucester County Utilities Authority (hereinafter "GCUA"); and prior to the start of the Projects, the Developers must reach mutually satisfactory agreements with NJAW and GCUA to more specifically define the various components of each system, the Developers responsibilities for the construction of each component and any cost sharing responsibilities between the Developers, in a manner by which each Developer may proceed independently or collectively; and,
- G. WHEREAS, the Developers agree that the previous Agreements identified in Section B. above are incorporated herein by reference for background purposes and it is in the interest of both parties to modify, amend and restate the terms and conditions of the said Agreements which apply to the development of the properties, and it is the express purpose of this Agreement to supersede and replace the prior referenced Agreements with the terms and conditions set forth herein:

NOW, THEREFORE, for and in consideration of the mutual terms, covenants and Agreements set forth herein, and intending to be legally bound, the parties agree as follows:

1. BACKGROUND

The purpose and intent of this Agreement is to simplify the process; define individual responsibilities for each Developer; define the cost sharing responsibilities; and provide a procedure by which either Developer can proceed independently or collectively in a fair and equitable basis, without affecting the integrity of the Water System and/or the Sanitary Sewer System which are necessary to serve the intended development of both Projects.

2. WATER SYSTEM: DESIGN, PERMITS, APPROVALS AND CONSTRUCTION

- a. The Water System shall include an extension of the 16" water main (or its equivalent) from its current terminus along CR-667 from Aura to the proposed location of an elevated water storage tank on lands owned by Aura on the west side of Rt. 55 (Block 58, Lot 1); a 750,000-gallon elevated water storage tank; a 12" water main to be extended through an existing sleeve under Rt. 55 and through an existing easement (hereinafter the "Schaffer Easement") from Rt. 55 to CR-619; a 12" water main to be extended along CR-610 from CR-619 to the proposed intersection of Silvergate Drive and CR-610 at Silvergate Phase 1; a 12" water main, or its equivalent, to be extended through Silvergate Phase 1, connecting to an existing 12" water main that extends through an existing sleeve under Rt. 55 between Silvergate Phase 1 and Silvergate Phase 3; a 12" water main, or its equivalent, to be extended from the existing 12"

water main at the sleeve under Rt. 55, through Silvergate Phase 3 to CR-667; and a 12" water main to be extended north along CR-667 and connecting to the 16" water main (or its equivalent) at the intersection of CR-667 and CR-619 to the water distribution system from Aura, as illustrated on **EXHIBIT "A"**.

b. The Developers agree that the responsibilities and obligations for the design, approvals, construction, performance guaranties and all costs associated with of the Water System are as follows:

i. Aura shall have the following responsibilities, duties and obligations regarding the Water System:

- (a.) Aura shall design, obtain all necessary permits and approvals and construct, at its sole cost, the 16" CLDIP Water Main (or its equivalent) from its current terminus along CR-667 from Aura to the proposed location of an elevated water storage tank on lands owned by Aura on the west side of Rt. 55 (Block 58, Lot 1), including a 12" Water Main stub across CR-619 with valve and cap to allow for a future extension of a 12" water main along CR-667. Silvergate shall be responsible for all water improvements from CR-619 to Silvergate Phase 3 and shall be responsible for all costs, easements and performance guaranties related thereto; and,
- (b.) Aura shall design, obtain all necessary permits and approvals and construct a 750,000-gallon elevated water storage tank on lands owned by Aura on the west side of Rt. 55 (Block 58, Lot 1), including a 12" CLDIP water main extension from the elevated water storage tank to a point within 100 feet of the existing sleeve under Rt. 55 with a cap and valve that will allow Silvergate to perform the future extension of a 12" water main through the sleeve under Rt. 55 (subject to Silvergate's responsibilities set forth in Section 2.b.ii.(d.) below), and shall be responsible for all costs, easements and performance guaranties related thereto; with the understanding that NJAW will pay all additional costs to increase the size of the tank from 500,000 gallons to 750,000 gallons; and,
- (c.) Aura shall be responsible for the design and obtaining all necessary permits and approvals (including all costs relating thereto) to extend a 12" Water Main through the existing sleeve under Rt. 55, through New Jersey Department of Transportation (hereinafter "NJDOT") lands adjoining the Rt. 55 Right of Way, and within the Schaffer Easement (including all costs relating to the modification of said easement to allow for construction and maintenance of both water and sanitary sewer utilities) from Rt. 55 to CR-619 and then along CR-610 to the proposed intersection of Silvergate Drive and CR-610. Silvergate shall be responsible for the construction and all other costs related to the construction of this work described in this Section 2.b.i.(c.); and,

- (d.) Within 30 days of full execution of this Agreement, Aura shall proceed immediately with the design and applications for all necessary permits and approvals for the construction of the water mains and elevated water storage tank for which it is responsible to construct. Within ninety (90) days after obtaining final and unappealable approvals from all governmental authorities, for its project or any single phase requiring the use of the infrastructure improvements, Aura shall proceed with the construction of the Water System as described in this Section 2.
- (e.) Aura shall be responsible for the design, obtaining all necessary permits and approvals and construction of the water distribution system within its property to provide adequate water service for its intended development and all costs and performance guaranties related thereto.
- (f.) The parties shall execute and deliver the appropriate permanent easements for the water system and temporary construction easements as reasonably required to construct and maintain the water system as more particularly set forth on **EXHIBIT "D"**. Each party shall obtain appropriate subordination and non-disturbance agreements from its respective Lenders, if any.
- ii. Silvergate shall have the following responsibilities, duties and obligations regarding the Water System:
- (a.) Silvergate shall design, obtain all necessary permits and approvals and construct a 12" Water Main along CR-667 from the 12" water main stub constructed by Aura from the intersection of CR-667 and CR-619 to Silvergate Phase 3 at such time as development of Phase 3 starts and shall be responsible for all costs, easements and performance guaranties related thereto; and,
- (b.) Silvergate shall design, obtain all necessary permits and approvals and construct a 12" Water Main (or its equivalent) through Silvergate Phase 3, from CR-667 to the existing 12" Water Main that was previously constructed through the sleeves under Rt. 55 as part of the build out of Phase 3, or at such time as development starts in Silvergate Phase 1, whichever occurs first, and shall be responsible for all costs, easements and performance guaranties related thereto; and,
- (c.) Silvergate shall design, obtain all necessary permits and approvals and construct a 12" CLDIP Water Main (or its equivalent) through Phase 1 from the proposed intersection of Silvergate Drive and CR-610 to the existing 12" Water Main that was previously constructed between Silvergate Phase I and Silvergate Phase 3, as part of the build out of Phase 1 and shall be responsible for all costs, easements and performance guaranties related thereto; and,

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- (d.) Silvergate shall construct a 12" CLDIP Water Main through the sleeves under Rt. 55, through NJDOT lands adjoining the Rt. 55 Right of Way and through the Schaffer Easement between Rt. 55 and CR-619 and extending along CR-610 to the proposed intersection of CR-610 and Silvergate Drive at Silvergate Phase 1 pursuant to the design, permits and approvals obtained by Aura and Silvergate shall be responsible for the construction and all costs related to the construction of this work described in this Section 2.b.ii.(d).; and,
- (e.) Silvergate shall be responsible for the design, all necessary permits and approvals and construction of the water distribution system within its property to provide adequate water service for its intended development and all costs and performance guaranties related thereto; and,
- (f.) In the event that NJAW requires an emergency connection with another community water system, Silvergate agrees to cooperate by providing a connection to its water distribution system at the eastern end of Phase 6 and agrees to grant such easements as may be required within the Silvergate Property and any rights to other utility easements which Silvergate may have beyond the limits of the Silvergate Property (provided NJAW assumes responsibility for the design, obtaining all necessary permits, approvals and agreements with the owner of such other community water system in such form that does not subject Aura or Silvergate to any additional connections fees or costs related to such emergency connection) and all construction costs associated with the connection to such other community water system; and,
- (g.) In the event that NJAW requires an ASR well, Silvergate agrees to cooperate by providing a two (2) acre parcel at the previously approved location of the elevated water storage tank on Silvergate's property located along CR-553 (Block 62, Lot 3.02), and any rights that it may have to the existing well on that property, provided NJAW assumes responsibility for the design, obtaining all necessary permits and approvals and all costs related thereto, including construction of a water main connection to the water system constructed for Silvergate's intended development.
- iii. In the event that NJAW requires an increase in the size of any water mains or the extension of any water mains beyond what is necessary to serve the intended developments of Aura and Silvergate, Aura and Silvergate shall cooperate by providing any additional easements as may be required, provided such water main extension does not affect the intended developments of Aura or Silvergate and further provided that NJAW assumes responsibility for all additional costs for design, permits, approvals and increased construction costs related thereto.

3. SANITARY SEWER SYSTEM: DESIGN, PERMITS, APPROVALS, CONSTRUCTION AND COST SHARING REIMBURSEMENT

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- a. The Sanitary Sewer System shall include a series of collection mains, pump stations and force mains which will serve all or portions of the Aura and Silvergate properties and a primary pump station and force mains which will serve the combined sewerage flow from the intended development of the Aura and Silvergate properties or portions thereof, as more specifically described herein and illustrated schematically on **EXHIBIT "B"**. It is the intent of this Agreement to (1) define the responsibilities of each Developer for the construction of certain components of the Sanitary Sewer System under different development scenarios; (2) allow for the orderly and timely construction of the entire Sanitary Sewer System in such a form that either Developer can proceed with its intended development, either independently or collectively, without adversely affecting the other Developer's ability to proceed with its intended development; and (3) define responsibilities for costs and reimbursements between the Developers for certain components of the Sanitary Sewer System which are required and shared by both Developers.
- b. The Developers agree that the shared components of the Sanitary Sewer System will include (1) an 8" force main, starting at a point at the proposed intersection of Silvergate Drive and CR-610, at which point the entire sewerage flow from Aura (currently estimated to be 301,519 g.p.d.) will converge with the sewerage flow from Pump Station #1 (hereinafter "PS-1") which discharges the combined sewerage flow from Silvergate Phases 1, 3, 4 and 7 (currently estimated to be 163,643 g.p.d.) and extending along CR-610 to the proposed Pump Station #2 (hereinafter "PS-2"), which is to be relocated to a location near the intersection of CR-610 and the Road A entrance to Silvergate Phase 6; (2) PS-2 which will receive the entire sewerage flow from Aura (currently estimated to be 301,519 g.p.d.) and the entire sewerage flow from Silvergate (currently estimated to be 378,308 g.p.d.); and, (3) a 10" force main extending from PS-2 and discharging into an existing connection to the GCUA force main at CR-637, through easements to be provided by Silvergate. The design and construction of the shared components of the Sanitary Sewer System shall conform to the Conceptual Design Report, Wastewater Pumping Stations & Force Main Analysis, prepared by Taylor, Wiseman and Taylor, dated January 25, 2018, attached hereto as **EXHIBIT "C"**, subject to such modifications as may be required through the approval process by NJAW, GCUA and NJDEP. The Developers agree that there are three different scenarios under which the design, approvals and sequence of construction of the Sanitary Sewer System could progress, depending upon whether one Developer commences construction ahead of the other, or depending on the which Phase of development Silvergate starts first (hereinafter "Scenario #1," "Scenario #2," and "Scenario #3").
- i. Scenario #1 - Aura starts development of the Aura Project before Silvergate starts the Silvergate Project. Aura constructs a pump station at Aura (hereinafter "Aura PS"), with a force main directly to existing connection to the GCUA force main in CR-637, previously constructed by Silvergate, as set forth herein:

(a) Aura constructs Aura PS.

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(b) Aura constructs 8" force main from Aura PS along CR-667 and CR-619, or through lands owned by Aura to the Sleeves under Rt. 55. (Elk Township to provide access and use of the second sleeve under Rt. 55.)

(c) Aura modifies the Schaffer Easement or obtains a new easement from the sleeves under Rt. 55 to CR-619 as may be required.

(d) Aura constructs 8" force main through the sleeves under Rt. 55 and through the Schaffer Easement to CR-619 and then to CR-610.

(e) Aura constructs 8" force main along CR-610 to the proposed location of PS #2 in Silvergate Phase 6, with a 6" stub connection provided at the intersection of proposed Silvergate Drive and CR-610 for future connection from PS #1 in Silvergate Phase 1; and a by-pass connection in Silvergate Phase 6 for the future connection to PS #2.

(f) Aura constructs a 10" force main from the location of PS#2 through easements provided by Silvergate through Phase 6 to connect to the existing connection to the GCUA force main in CR-637.

(g) At such time as Silvergate starts development of Silvergate Phase 1 or Silvergate Phase 6, Silvergate shall reimburse Aura for its proportionate share of the costs, based on percentage of ultimate projected flow anticipated within each component of the system used by Silvergate, i.e.; if Silvergate starts development of Phase 1 first, it will reimburse Aura its proportionate share of the cost for the 8" force main from the intersection of Silvergate Drive and CR-610 to the relocated site for PS #2 in Phase 6, and its proportionate share of the cost for the 10" force main from the relocated site of PS #2 to the existing connection to the GCUA force main in CR-637.

ii. Scenario #2 - Silvergate starts development of Phases 5 and 6 of the Silvergate Project before Aura starts the Aura Project, as set forth herein:.

(a.) Silvergate constructs PS #2 in Phase 6 with adequate capacity for the full build out of the Silvergate Project and the Aura Project, with an 8" stub connection provided for future 8" force main connection from the Aura Project or Silvergate PS #1.

(b.) Silvergate constructs 10" force main from PS #2 to the existing connection to the GCUA force main in CR-637.

(c.) At such time that Aura starts development of the Aura Project, Aura shall reimburse Silvergate for its proportionate share of the cost for PS #2 and the 10" force main from PS #2 to the GCUA force main based on the percentage of the ultimate projected flow from each project.

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- iii. Scenario #3 - Silvergate starts development of Phase 1 or Phase 3 of the Silvergate Project before Aura starts the Aura Project. Silvergate constructs PS #1 in Phase 1 with a force main connection directly to the existing connection to the GCUA force main in CR-637 as set forth herein:
- (a.) Silvergate constructs PS #1 in Phase 1.
 - (b.) Silvergate constructs a 6" force main through Phase 1 to the proposed intersection of Silvergate Drive and CR-610.
 - (c.) Silvergate constructs a 8" force main from the proposed intersection of Silvergate Drive and CR-610 to the relocated site of PS #2 in Phase 6, with a connection provided at the proposed intersection of Silvergate Drive and CR-610 (at Silvergate Phase 1) for the 8" force main to be constructed by Aura in the future. Silvergate constructs a 10" force main from the PS #2 site to the existing connection to the GCUA force main at CR-637.
 - (d.) At such time as Aura starts construction of the Aura Project, Aura shall reimburse Silvergate for its proportionate share of the costs of the 8" and 10" force mains from the intersection of proposed Silvergate Drive and CR-610 (at Silvergate Phase 1) to the GCUA force main in CR-637, based on the ultimate projected flow from each project.
- c. The Developers agree that Silvergate had previously obtained all necessary permits and approvals for the construction of the shared components a sanitary sewer system intended to serve the Aura Project (formerly Latham Park) and Silvergate Project as approved pursuant to NJDEP TWA Permit # 03-0209, which TWA Permit remains valid. The Sanitary Sewer System described in this Section 3 will require an amendment or modification to said TWA Permit. Aura agrees that it will be responsible for the revised design and all costs associated with revised permits and approvals necessary to affect these revisions and obtain an amendment or modification to said TWA Permit in accordance with the CONCEPTUAL DESIGN REPORT, Wastewater Pumping Stations & Force Mains Analysis for Aura and Silvergate, prepared by Taylor Wiseman & Taylor, dated January 25, 2018 (as previously identified as **EXHIBIT "C"**). Silvergate and Aura will remain responsible for all costs related to the revised design of the sanitary sewer collection mains within their individual Projects required to amend or modify said TWA Permit.
- d. The parties shall execute and deliver the appropriate permanent easements for the sewer system and temporary construction easements as reasonably required to construct and maintain the sewer system as more particularly set forth on **EXHIBIT "D"**. Each party shall obtain appropriate subordination and non-disturbance agreements from its respective Lenders, if any.

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4. DEVELOPERS' OBLIGATION TO PROVIDE NOTICE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF WATER SYSTEM AND SANITARY SEWER SYSTEM

Silvergate and Aura acknowledge and agree that due to the interrelationship of the Projects and the Developers' individual and joint responsibilities in regards to the Water System and the Sanitary Sewer System, it is imperative that they keep one another informed as to the timing for the commencement of construction of their respective Project, and therefore agree to undertake the following steps, in accordance with the Notice provisions in Section 10 below:

a. Water System:

- i. Aura agrees that at least 45 days prior to the commencement of construction of the Water System, it will provide written notice to Silvergate.
- ii. Within 15 days of receipt of such notice, Silvergate shall advise Aura if it intends to commence construction of any portion of its Project, and of any additional portions of the Water System required to serve that portion of Silvergate's Project. The Developers agree to coordinate the timing, sequence and construction of the various components of the Water System in such a manner to result in the most cost effective and timely completion of each component in the best interest of both Developers.

b. Sanitary Sewer System - Scenario #1:

- i. Aura agrees that at least 45 days prior to the commencement of construction of the Sewer System under Scenario #1, it will provide written notice to Silvergate.
- ii. Within 15 days of receipt of such notice, Silvergate shall advise Aura if it intends to commence construction of any portion of its Project, and of any additional portions of the Sanitary Sewer System required to serve that portion of Silvergate's Project. The Developers agree to coordinate the timing, sequence and construction of the various components of the Sanitary Sewer System in such a manner to result in the most cost effective and timely completion of each component in the best interest of both Developers.
- iii. If Silvergate provides notification to Aura that it does not intend to commence construction in conjunction with Section 4.b.ii. above, then Silvergate shall provide Aura with at least 45 days written notice prior to its commencement of construction of either Phase 1 or Phase 6, and Silvergate's Reimbursement Obligations (as defined in Section 5 below) shall become due and payable.

c. Sanitary Sewer System - Scenario #2 or Scenario #3:

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- i. Silvergate agrees that at least 45 days prior to the commencement of construction of the Sewer System under Scenario #2 or Scenario #3, it will provide written notice to Aura.
- ii. Within 15 days of receipt of such notice, Aura shall advise Silvergate if it intends to commence construction of any portion of its Project, and of any additional portions of the Sanitary Sewer System required to serve that portion of Aura's Project. The Developers agrees to coordinate the timing, sequence and construction of the various components of the Sanitary Sewer System in such a manner to result in the most cost effective and timely completion of each component in the best interest of both Developers.
- iii. If Aura provides notification to Silvergate that it does not intend to commence construction in conjunction with Section 4.c.ii. above, Aura shall provide Silvergate with at least 45 days written notice prior to its commencement of construction, and Aura's Reimbursement Obligations (as defined in Section 5 below) shall become due and payable.

5. DEVELOPERS' REIMBURSEMENT OBLIGATIONS

The Developers acknowledge that they are subject to Reimbursement Obligations (as defined herein) for the shared components of the Sanitary Sewer System as defined in Section 3.b. above, and agree to pay its respective Reimbursement Obligation at such time as specifically set forth under each Scenario described in Section 3. above, pursuant to the following:

- a. The total amount that will be used to calculate the Reimbursement Obligation(s) shall include the actual cost of construction, the cost of performance guaranties (if any), survey layout, inspections, NJAW overhead charges, dedication/asset transfer fees, and interest that may accrue as set forth in Section 5. d. below.
- b. The amount of the Reimbursement Obligation(s) to be paid shall be based on the percentage of ultimate projected flow anticipated within each component of the system from each Project at the time that Reimbursement Obligation payment is due, however, at no time shall the ultimate projected sewerage flow from the entire Aura Project be less than 214,216 g.p.d.; and the ultimate projected sewerage flow from the entire Silvergate Project be less than 358,318 g.p.d. as set forth in **EXHIBIT "E"**.
- c. The Developer entitled to receive the Reimbursement Obligation payment shall provide the other party with an Invoice (hereinafter "Original Invoice") for the total Reimbursement Obligation amount as set forth in Section 5. a. and Section 5. b. above, within 30 days of completion of the work for which reimbursement is due, including the following written documentation:



- i. Invoices detailing the cost of each component of the Sewer System which is subject to a Reimbursement Obligation under the scenario that was constructed, with proof of payment.
 - ii. A calculation showing the total flow through each of those components, and what percentage of that flow is attributable to each of the Projects.
 - iii. A letter from NJAW or its Engineer acknowledging satisfactory completion of the work.
 - iv. The items described in Section 5.c.(i) and Section 5.c.(ii) above shall be combined to provide an invoice outlining the Developer's Reimbursement Obligation.
- d. If full payment of the Reimbursement Obligation is not made within thirty (30) days of receipt of the Original Invoice, interest shall accrue at a rate of five percent (5%) per annum, calculated from the date of the Original Invoice until full payment, including accrued interest, is made as required in Section 4. b. and 4. c. above.
- d. The parties agree that invoices sent by facsimile transmission or email shall be acceptable.
- e. The failure of Silvergate or Aura to fulfill their Reimbursement Obligation(s) as described herein shall constitute an "event of default" which shall trigger the remedies outlined in Section 6 below.

6. DEFAULT

In the event Silvergate or Aura fails or refuses to comply fully with any term of the Agreement (hereinafter "Defaulting Party"), the other party (hereinafter "Non-Defaulting Party") may declare them in Default through written notice describing such default (hereinafter "Notice of Default"). If the Defaulting Party fails to cure such monetary default within ten (10) days or thirty (30) days for a non-monetary default following its receipt of Notice of Default, the Non-Defaulting Party shall have the right to undertake any or all of the following steps:

- a. The Non-Defaulting Party shall have the right to proceed with the construction of any components of the Water System and/or the Sanitary Sewer System which are the responsibility of the Defaulting Party, but only to the extent necessary for the Non-Defaulting Party to proceed with the development of its Project. Upon completion of such work, the Non-Defaulting Party shall present Defaulting Party with an invoice for reimbursement of all costs incurred for the performance of such work, which the Defaulting Party shall be required to pay within 30 days from the date of such invoice.



- b. The Non-Defaulting Party shall be permitted to file a Construction Lien Claim against the Property of the Defaulting Party to secure payment of the Reimbursement Obligation(s).
- c. The Defaulting Party shall be responsible for paying interest on outstanding Invoices and/or Reimbursement Obligations at the rate of 1.5% compound interest per month from the date of receipt of Notice of Default until payment is made in full, in addition to reimbursing the Non-Defaulting Party for all collection costs and reasonable attorneys' fees.

In the event of Default, the Defaulting Party shall not be entitled to use or make connection to any components of the Water System and/or Sanitary Sewer System until and unless all obligations of the Defaulting Party have been satisfied. The Non-Defaulting Party shall be permitted to notify all appropriate agencies, authorities and public entities having authority and control of the Projects that a Default has occurred and the Defaulting Party is restricted from any use or connection to the Water System and/or Sanitary Sewer System until the Default has been satisfied, and take any action necessary to enforce the restriction, without recourse by the Defaulting Party.

7. TIMING

In the event that Aura fails to pursue its obligations for design, permits and approvals and construction for the Water System as set forth in Section 2 above in a diligent and timely manner, Silvergate may provide notice to Aura that it intends to assume the responsibility and obligations of Aura, and if Aura fails to satisfy those obligations within ninety (90) days of receipt of such notice, Silvergate may, but is not obligated to, complete the obligations of Aura as it relates to Section 2 above. Upon completion of the work related thereto, Silvergate shall be entitled to reimbursement of all costs related thereto, pursuant to the provisions of Section 5 above, and if full payment is not received by Silvergate within the time specified therein, Aura shall be declared in Default pursuant to the provisions of Section 6 above.

8. DISPUTE RESOLUTION BETWEEN THE DEVELOPERS

Any dispute between the Developers concerning the terms and conditions of this Agreement, or its interpretation, shall be resolved through mediation with an agreed-upon mediator. The Developer seeking mediation shall transmit a written Notice of Requested Mediation to the other Developer, and the mediation shall be scheduled thereafter as soon as a mediator has been selected, as set forth below, but in no event later than thirty (30) days following the date of the Notice of Requested Mediation. The mediator shall attempt to mediate the dispute and, if the mediation is unsuccessful, the matter shall thereafter proceed to binding arbitration to be conducted in accordance with the Rules of the American Arbitration Association.

The Developers shall jointly choose the qualified mediator/arbitrator. If the Developers are unable to agree upon selection of a mediator/arbitrator, each Developer shall choose a qualified mediator/arbitrator, who shall in turn jointly choose a third mediator/arbitrator, who shall individually hear and decide the dispute. The determination of the third mediator/arbitrator shall be conclusive, final and binding on all parties. The parties agree to split the cost of any mediation or arbitration under this section.

9. GOVERNING LAW

The Agreement shall be governed and construed by the laws of the State of New Jersey.

10. NOTICES

All notices, consents, approvals or other communications hereunder or necessary to affect the purpose and intent of this Agreement shall be in writing and shall be deemed properly given if sent by the United States Mail, Certified, Return Receipt Requested, addressed to the appropriate party or successor in interest, or sent via telefax or email with a copy sent via regular mail. Changes in notice recipient for any parties to this Agreement shall be made in writing under the terms of this Section 10. Notice shall be effective upon mailing.

NOTICES shall be sent as follows:

Notice to Silvergate:

Silvergate Associates
c/o The Quaker Group
593 Bethlehem Pike
Suite 6A
Montgomeryville, PA 18936

ATTN: Nicholas Casey
Phone: (856) 627-1809
Email: ncasey@quakergroup.com

With Copy to:

M. James Maley, Jr., Esq.
Maley Givens, P.C.
1150 Haddonfield Avenue
Suite 210
Collingswood, NJ 08108

Phone: (856) 854-1515
Fax: (856) 858-2944
Email: jmaley@maleygivens.com

Handwritten signature and initials in blue ink, located in the bottom right corner of the page.

Notice to Aura:

Aura Investors, LLC
902 Carnegie Center Blvd.
Suite 300
Princeton, NJ 08540

ATTN: Dennis W. Stattman
Phone:
Email:

With Copy to:
Aura Investors, LLC
c/o Harvestate Group, LLC
188 Tamarack Circle
Skillman, NJ 08588

ATTN: Stephen Patron
Phone: (609) 448-3300
Email: spatron@Harvestate.com

With Additional Copy to:

Jack Plackter, Esq.
Fox Rothschild, LLP
Midtown Building
1301 Atlantic Avenue
Suite 400
Atlantic City, NJ 08401-7212

Phone: (609) 348-4515
Fax: (609) 348-6834
Email: jplackter@foxrothschild.com

11. MISCELLANEOUS

- a. This Agreement may be signed in one or more counterparts (or with scanned or facsimile counterpart signature pages) which, taken together, shall constitute a fully executed Agreement and shall be considered as a single document. The effective date shall be the date of the last signature.
- b. This Agreement shall inure to the benefit of and be binding upon the parties, their successors and assigns, including any successor in title, interest or equity to all or any portion of the properties specified in Section A above. The terms, conditions, covenants and provisions of this Agreement shall be binding and fully enforceable not only on the parties named herein, but also their or its respective heirs, executors,

administrators and successors in title, interest or equity to the property or any portions thereof.

12. DEVELOPERS' REPRESENTATIONS AND WARRANTIES

Silvergate and Aura represent and warrant that each has the full power and authority to enter into and fulfill its obligations under this Agreement, and the execution, delivery and performance of this Agreement by Developer constitutes a valid and binding obligation of Developer and the respective Developer's property, enforceable in accordance with its terms. No consent, waiver or approval by any other party or person is required in connection with the execution and delivery by Developer of this Agreement, or the performance by Developer of its obligations hereunder, or any instrument contemplated thereby.

13. ENTIRE AGREEMENT

The entire Agreement between the Developers is expressly set forth in this Agreement, and the parties are not bound by any agreements, understandings, provision, conditions, representations or warranties other than those expressly set forth herein. It is further agreed and understood, that upon execution hereof, the terms and conditions set forth in this Agreement shall replace and supersede all prior Agreements set forth in Section B. 1. and Section B. 2. above.

14. CHANGES

No change, alteration, amendment, modification or waiver of any of the terms or provisions hereto shall be valid, unless the same shall be in writing and signed by parties hereto.

15. OTHER PARTIES

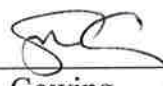
Nothing in this Agreement shall preclude a subsequent amendment to permit additional developers to become a party to this Agreement, including, but not limited to, the assignee of any party hereto, provided, however, that any such additional party shall execute an appropriate assignment and assumption agreement agreeing to be bound by this Agreement and such other agreements as are required.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective the day and date first above written.

WITNESS:



SILVERGATE ASSOCIATES:



Sara Gowing
President of Managing Partner



Date: June 28 , 2018

WITNESS:

Dawn E Pharo

AURA INVESTORS, LLC

Dennis W. Stattman

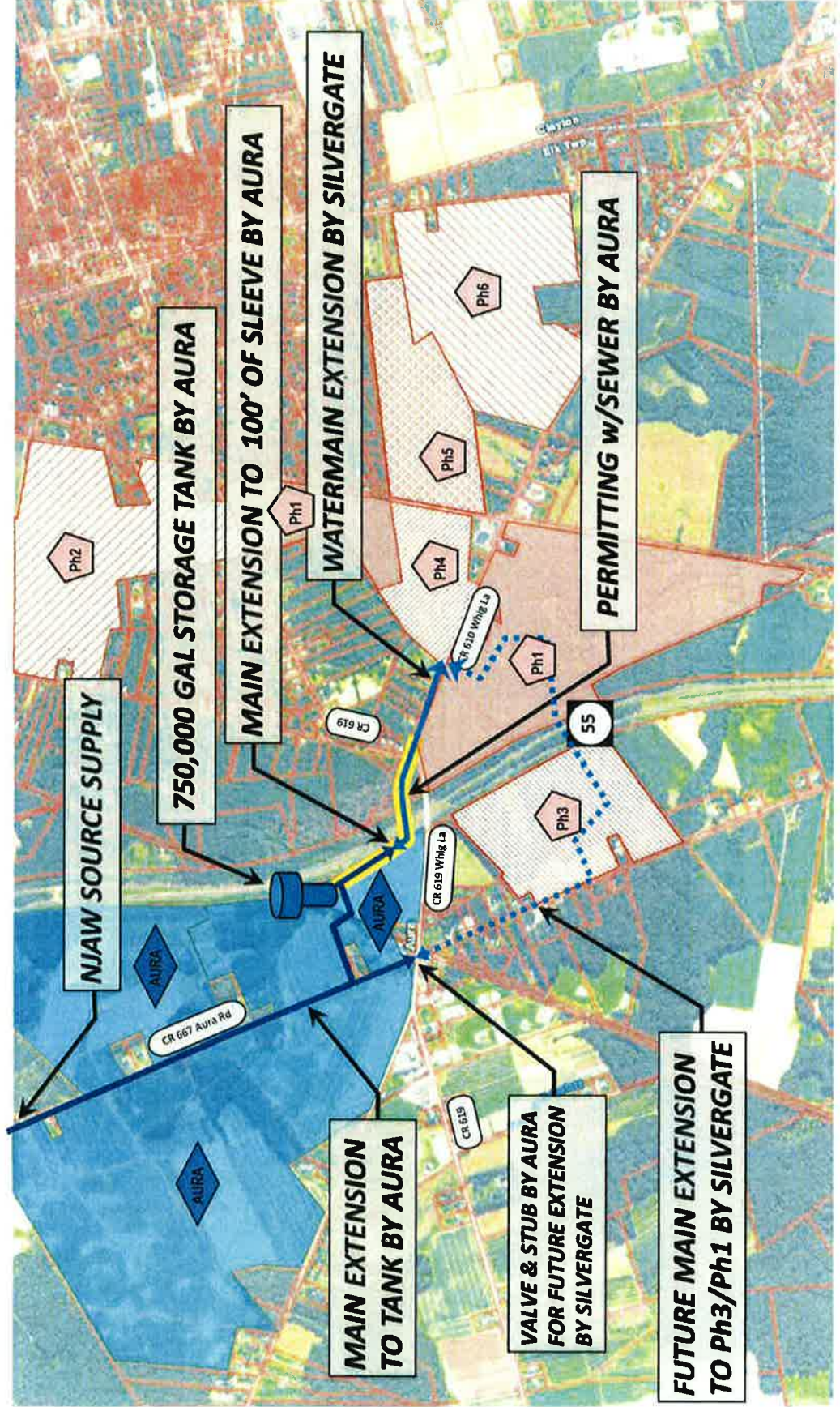
Dennis W. Stattman
Managing Member

Date: June 28 , 2018

Each page
initialed by
me

of
5

SCHEMATIC LAYOUT
COMMON/INTERCONNECTED WATER FACILITIES
ELK TOWNSHIP, GLOUCESTER COUNTY, NJ



The map illustrates the water infrastructure for the Silvergate area. Key features include:

- Aura Pumping:** Located in the bottom left, connected to the main system via CR 607 Aura Rd.
- 8" FM - ALTERNATE PATH, Aura:** A line connecting the Aura Pumping station to the Silvergate 2 Pump Station.
- Silvergate 2 Pump Sta. Shared:** A central pumping station serving multiple phases (PH1, PH2, PH3, PH4, PH5, PH6).
- 8" FM - Shared:** A line connecting the Silvergate 2 Pump Station to the Silvergate 1 Pump Station.
- 8" FM - Aura:** A line connecting the Silvergate 2 Pump Station to the Aura Pumping station.
- Silvergate 1 Pump Sta.:** A pumping station located near the center-right of the map.
- 6" FM - Silvergate:** A line connecting the Silvergate 1 Pump Station to the 10" FM line.
- 10" FM - Shared:** A line connecting the Silvergate 1 Pump Station to the GCUA Clayton FM.
- GCUA Clayton FM:** A line connecting the 10" FM line to the GCUA Connection (exist).
- GCUA Connection (exist):** A line connecting the GCUA Clayton FM to the GCUA Clayton FM.
- Phases (PH1, PH2, PH3, PH4, PH5, PH6):** Various areas of the map are labeled with phase numbers, indicating different development stages.
- Roads:** CR 619, CR 619 Whig La, CR 607 Aura Rd, and CR 610 Whig La are shown as major roads.

EXHIBIT "C"

CONCEPTUAL DESIGN REPORT Wastewater Pumping Stations & Force Mains Analyses

Aura & Silvergate
Elk Township
Gloucester County, NJ

Prepared for:

Aura Investors, LLC
902 Carnegie Center Boulevard, Suite 300
Princeton, NJ 08540

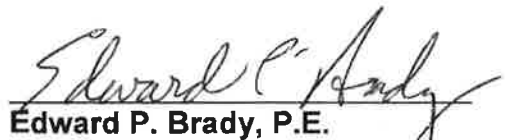
Prepared by:



Taylor Wiseman & Taylor

ENGINEERS SURVEYORS SCIENTISTS

124 Gaither Drive, Suite 150
Mount Laurel, NJ 08054
(856) 235 - 7200


Edward P. Brady, P.E.

NJ Professional Engineer No. 24GE03283600

Assisted by: Thomas A. Wingate
Christopher M. Bryan, PE

Project #: 17715.1012.00

Date: January 25, 2018

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TABLE OF CONTENTS

I.	Executive Summary	Page 1
II.	Purpose & Background	Page 1
III.	Description of Study	Page 2
IV.	Flows	Page 3
V.	Analysis	Page 4

Appendix

- Aura & Silvergate Wastewater Flows Calculations
- GCUA Clayton Pumping Station & Force Main Data
- Fairbanks Morse Model 5433 Pump Curve
- Flygt Pump Curves
- Concept Design Schematic
- WaterCAD V8i Output Results (Aura Pumping Station & Full Build Out)



I. Executive Summary

This document was prepared as a discussion instrument for the conceptual design modifications of the Elk Township Wastewater Collection System. The base wastewater system has been designed and permitted through the New Jersey Department of Environmental Protection Department (NJDEP) for the Silvergate Development (TWA Permit # 00-3697). Modification of the permit is required due to overall changes in the development plans for Elk Township, acquisition of the wastewater franchise by New Jersey American (NJA), and acceptance from the Gloucester County Utilities Authority (GCUA) of the total wastewater generated within Elk Township. The core concept of disposal remains the same as the approved permit, with Silvergate Pumping Station # 2 injecting into the GCUA Clayton Force Main at final full buildout, but now allows for interim direct connection of Silvergate Pumping Station #1 and the Aura Pumping Station. Note: there would remain the single connection point with the Clayton Force Main which is currently constructed. The changes in the development is a result of the land use changes, relocation of the pumping stations and the phasing of the proposed development, with the understanding that build-out would take approximately 10-15 years. This study is based on the full build-out of development with sewer flows based on current NJDEP criteria, which historically are conservative. It should be expected that once development begins, the actual sewer flows will be monitored, quantified, compared with projections and the balance of capacity evaluated on a semi-annual basis. In doing so, it is anticipated that the need for larger capacity pumps in the future may not be required.

II. Purpose & Background

The purpose of this study was to analyze the proposed wastewater pumping stations and force mains for the Aura and Silvergate development projects. Wastewater will be conveyed to the pumping stations via gravity sewers and then pumped from the stations into a shared force main that discharges into the Gloucester County Utility Authority's (GCUA) Clayton Force Main. The Aura and Silvergate projects will be constructed in phases. The Aura project will be served by a single pumping station, referenced in this report as Aura P.S. The Silvergate project will be served by two pumping stations, referenced in this report as Silvergate P.S. #1 and Silvergate P.S. #2. The study analyzed various scenarios as the phases of the projects are constructed. The objective was to size the pumping systems for each pumping station and study how the



system will perform given the changing operating conditions as the pumping stations become operational over the course of the phased construction.

III. Description of Study

The wastewater conveyance system was analyzed using Bentley WaterCAD V8i hydraulic modeling software. The location of pumping stations and force main routes were based on the latest available information from Aura Investors, LLC. and Silvergate Associates on their proposed projects. The analysis uses Silvergate Associates recently revised locations for the pumping stations within the Phase 1 and Phase 6 of its project. The new station locations reduced the size and depth of the gravity collection mains and reduced the depth of the station wet wells. The GCUA Force Main discharge was modeled using pump and force main data provided by the GCUA for the Clayton Pumping Station¹.

The final build out will consist of the Aura P.S. with an 8-inch force main that runs south along RT 667 and then east along RT 610 until it discharges into the Silvergate P.S. #2. The Silvergate P.S. #1 will connect into the 8-inch force main at the proposed intersection of RT 610 and Silvergate Drive via a 6-inch force main running through the Silvergate Phase 1 project. The Silvergate P.S. #2 will then pump the total flow from the Silvergate and Aura projects via a 10-inch force main that discharges at the existing connection point into the GCUA 16-inch force main located along RT 637.

The study considered the possibility of the Silvergate and Aura projects being constructed independent of one another's timelines. If the Aura project is constructed first, the 10-inch force main for the Silvergate P.S. #2 to the GCUA system connection would be constructed at the same time as the 8-inch force main from the Aura P.S. and a by-pass connection installed near the Silvergate P.S. #2 that will allow the 8-inch force main to be connected directly to the 10-inch force main until the Silvergate P.S. #2 is built. If the Silvergate P.S. #2 is the first station built, the 10-inch force main would be constructed and an 8-inch stub would be constructed from the wet well that provides for the future connection of the 8-inch force main to the pumping station.

¹ Minimal Information was provided by the GCUA. Information used in this study is based on assumed data that closely correlates with the data provided



Various operating conditions were analyzed as part of the study to see how the entire system will perform during the implementation of the projects. Below is a brief description of the 6 scenarios that were analyzed:

- Scenario #1:** Aura P.S. Discharging Directly into GCUA Force Main
- Scenario #2:** Silvergate P.S. #1 Discharging Directly into GCUA Force Main
- Scenario #3:** Aura and Silvergate P.S. #1 Discharging Directly into GCUA Force Main Simultaneously
- Scenario #4:** Aura P.S. Discharging into Silvergate P.S. #2. Silvergate P.S. #2 Discharging into GCUA Force Main.
- Scenario #5:** Silvergate P.S. #1 Discharging into Silvergate P.S. #2. Silvergate P.S. #2 Discharging into GCUA Force Main.
- Scenario #6:** Aura P.S. and Silvergate P.S. #1 Discharging into Pumping Silvergate P.S. #2 Simultaneously. Silvergate P.S. #2 Discharging into GCUA Force Main.

IV. Flows

The table below is a summary of the contributing daily flows, at full build out, for the three pumping stations and the required pumping rate of the stations to meet the NJDEP requirement of 2.5 times the average daily flow. A full breakdown of the phased contributing flows for each station can be found in the appendix of this report.

Description	Total Avg. Daily Flow	Avg. Daily Flow Rate	Minimum Pumping Rate ²
	GPD	GPM	GPM
Aura Pumping Station	301,519	209	523
Silvergate Pumping Station #1	163,643	114	284
Silvergate Pumping Station #2	214,665	149	1225 ³

² Minimum Pumping Rate is 2.5 times the average daily flow into the station per NJDEP pumping station requirements.

³ $(2.5 \times \text{Total Avg. Day Flow}) + (\text{Aura P.S. Pumping Rate}) + (\text{Silvergate P.S. \#1 Pumping Rate})$



The GCUA Clayton Pumping Station is reported to have an operating point of 1,300 GPM at 80 feet of head with one pump in operation and an operating point of 1,623 GPM at 89 feet of head with two pumps operating. The current average daily flow through the station is reported at 601,000 GPD with an additional committed flow of 327,000 GPD, for a future flow of 928,000 GPD. The current minimum pumping rate of the station is 1043 GPM and the future minimum pumping rate of the station is 1611 GPM.

V. Analysis

The hydraulic analysis was run with published pump curve data from manufacturers. For the GCUA Clayton Pumping Station, the pump curve used in the study was the flooded suction Fairbanks Morse model 5433 with 10.2" Impeller and 6" discharge. The data points used for the curve were a shutoff head of 111 Feet, 1300 GPM at 80 feet, 812 GPM at 89 feet, and max operating of 2500 GPM at 40 feet. Proposed pumping stations pumps were based on Flygt duplex submersible pumps. The pumps were sized to meet or exceed the minimum pumping rate for each station. The full buildout pumping rate was used for each scenario and a pump was chosen that can achieve the required flows for each scenario. Following is a table summarizing the results of the pump operating points for the various scenarios.

Description	Pumping Rate	Static Head	Total Dynamic Head	Pump Size
	GPM	Feet	Feet	HP
Scenario #1: Aura P.S. to GCUA				
Aura Pumping Station	610	4	130	35
GCUA Pumping Station	1115	28	84	40
Scenario #2: Silvergate P.S. #1 to GCUA				
Silvergate Pumping Station #1	385	18	181	35
GCUA Pumping Station	1175	28	83	40
Scenario #3: Aura P.S. & Silvergate P.S. #1 to GCUA				
Aura Pumping Station	555	4	143	35
Silvergate Pumping Station #1	255	22	212	35
GCUA Pumping Station	1060	28	86	40
Scenario #4: Aura P.S. to Silvergate P.S. #2 to GCUA				
Aura Pumping Station	570	-10	68	23



Silvergate Pumping Station #2	1325	19	113	60
GCUA Pumping Station	890	28	91	40
Scenario #5: Silvergate P.S. #1 to Silvergate P.S. #2 to GCUA				
Silvergate Pumping Station #1	295	4	126	23
Silvergate Pumping Station #2	1325	19	113	60
GCUA Pumping Station	890	28	91	40
Scenario #6: All Stations Operating				
Aura Pumping Station	540	-10	74	23
Silvergate Pumping Station #1	220	4	143	23
Silvergate Pumping Station #2	1325	19	113	60
GCUA Pumping Station	890	28	91	40

The analysis found that the highest operating condition for the Aura P.S. and Silvergate P.S. #1 is if the stations discharge directly into the GCUA force main. This is due to the increase pipe length and the injection pressure required for the discharge into the 16-inch force main. Once the Silvergate P.S. #2 is in service, the total dynamic head is reduced for the other two stations. In this situation, the pumps for the Aura P.S. and Silvergate P.S. #1 pumping stations could be changed out to smaller pumps or variable frequency drives (VFD) could be used to reduce the running speeds of the pumps so that energy savings can be realized once the entire wastewater system is constructed. Installation of VFD's for each station is recommended in general so that run speeds can be adjusted as contributing flows increase as phases of construction progress and also to lessen the impact on the downstream system pressure by the pumping stations.

In Scenarios #3 and #6, when both the Aura P.S. and Silvergate P.S. #1 are operating simultaneously, the pumping rate drops below the minimum pumping rate for the Silvergate P.S. #1. Given that the pumps still operate well above the average daily flow rate and the operating condition will only occur temporarily, the risk of over flowing the station is minimal. If the water level in the station did start to exceed normal operating, the lag pump would come on to achieve a flow greater than the minimum pumping rate.

The flow velocities in the force mains were also analyzed. A flow velocity greater than 2 feet/second was achieved in the force mains for each scenario, except for the 10-inch portion of the force main in Scenario #2. This scenario will only be of concern if the Silvergate P.S. #1



becomes operational before the Aura P.S. or the Silvergate P.S. #2. In that scenario, a maintenance plan may need to be developed for the 10-inch force main to ensure there is no accumulation of sediment.



APPENDIX



Taylor Wiseman & Taylor
ENGINEERS SURVEYORS SCIENTISTS

CALCULATIONS

BY **TAW** DATE **01/08/18**
CHK'D **EPB** DATE

SHEET 1 of 2
JOB # 17715.1011.06

Flow

Determine Wastewater Flow Generation for Proposed Aura Development unit count provided by M.Canuso 12/08/17 (& revised per discussion)

Plan A (Existing Approval at Age Restricted Flow)

Unit Type	# Units	3 Bed	2 Bed	1 Bed	Total Flow
Residential	AR Q/unit>>	225	170	110	GPD
	Q/unit>>	300	225	150	GPD
AR Single Family	477	477	0		107,325
Ap'd Single Fam >> to Glassboro				0	0
Totals	477	477	0	0	107,325

Commercial

Retail (sf)	160,000	16,000
		123,325

Municipal Allocation 4,600

Future Growth 18% 22,266

Total Estimated Flow 150,191 >>>>>>

Round Up 151,000 GPD~gpm

ADF gpm	PF	Min Pump
105	2.5	262

Plan C - (per M.Canuso & follow-up with S.Patron)

Age Restricted (reduced flow)

Unit Type	# Units	3 Bed	2 Bed	1 Bed	Total Flow
Residential	Q/unit>>	225	170	110	GPD
Multi Family	684		479	205	103,980
Townhouse	390	117	273	0	72,735
Single Family	320	96	224	0	59,680
Totals	1394	213	976	205	236,395

Commercial

Retail (sf)	150,000	15,000
		251,395

Municipal Allocation 4,600

Future Growth 18% 45,524

Total Estimated Flow 301,519 >>>>>>

Round Up 302,000 GPD~gpm

ADF gpm	PF	Min Pump
210	2.5	524



Taylor Wiseman & Taylor
ENGINEERS SURVEYORS SCIENTISTS

CALCULATIONS

BY **TAW** DATE **1/18/2018**
CHK'D **EPB** DATE

SHEET 1 of 2
JOB # 17715.1011.06

Flow

Determine Wastewater Flow Generation for Proposed Silvergate Development
Contributing Flow Data Provided by Richard Clemson on 1/15/18

Silvergate Flows to Pump Station #1:

Silvergate Phase 1:	13,340 gpd			
Silvergate Phase 3:	48,600 gpd			
Silvergate Phase 4:	55,967 gpd	gpm		
Silvergate Phase 7:	45,736 gpd		PF	Min Pump
Total to PS#1:	163,643 gpd	114	2.5	284

Silvergate Flows to Pump Station #2:

Silvergate Phase 2:	68,700 gpd			
Silvergate Phase 5:	56,265 gpd			
Silvergate Phase 6:	89,700 gpd	gpm		
Flow from PS#1:	163,643 gpd		PF	Min Pump
Total to PS#2:	378,308 gpd	263	2.5	657

Silvergate PUD
 Elk Township, Gloucester County, NJ

LAND USE SCHEDULE AND WASTEWATER FLOW PROJECTION

PHASE	RESIDENTIAL UNITS APPROVED PER GENERAL DEVELOPMENT PLAN				NUDEP REQUIRED UNIT FLOW	RESIDENTIAL PROJECTED FLOW (GPD)	* RESIDENTIAL UNITS WITH PRELIMINARY APPROVAL OR ANTICIPATED				NUDEP REQUIRED UNIT FLOW	RESIDENTIAL PROJECTED FLOW (GPD)	NON-RESIDENTIAL SQUARE FOOTAGE APPROVED PER GENERAL DEVELOPMENT PLAN				NUDEP REQUIRED UNIT FLOW	NON-RESIDENTIAL PROJECTED FLOW (GPD)	** NON-RESIDENTIAL SQUARE FOOTAGE WITH PRELIMINARY APPROVAL OR ANTICIPATED				NUDEP REQUIRED UNIT FLOW	NON-RESIDENTIAL PROJECTED FLOW (GPD)	TOTAL PROJECTED FLOW PER GPD	TOTAL ANTICIPATED FLOW (GPD)	
	PLAN	UNIT	TYPE	NUDEP REQUIRED UNIT FLOW			PLAN	UNIT	TYPE	NUDEP REQUIRED UNIT FLOW			PLAN	UNIT FLOW	UNITS	NUDEP REQUIRED UNIT FLOW			PLAN	UNIT FLOW	UNITS	NUDEP REQUIRED UNIT FLOW					PLAN
1	35	SFD	300	GPD/DU	10,500		35	SFD	300	GPD/DU	10,500		25,400	0.10	GPD/SF	2,540		25,400	0.10	GPD/SF	2,540		13,340		13,340		
2	284	SFD	300	GPD/DU	85,200		229	SFD	300	GPD/DU	68,700		N/A	N/A		N/A		N/A	N/A		N/A		85,200		85,200		
3	181	SFD	300	GPD/DU	54,300		182	SFD	300	GPD/DU	54,600		N/A	N/A		N/A		N/A	N/A		N/A		54,300		54,300		
4	98	2BR DU	225	GPD/DU	21,000		48	2BR DU	225	GPD/DU	10,800		100,000	0.10	GPD/SF	10,000		148,042	Varies	GPD/SF	30,767		66,400		55,067		
5	99	3BR DU	300	GPD/DU	28,800		48	3BR DU	300	GPD/DU	14,400																
5 (100K CENTER)	228	THU	300	GPD/DU	67,800		172	THU	300	GPD/DU	51,800		45,650	0.10	GPD/SF	4,665		40,090	0.10	GPD/SF	4,065		72,485		50,285		
5		APT			0		48	2BR APT	225	GPD/DU	10,800		N/A	N/A		N/A		N/A	N/A		N/A		117,000		88,700		
5		APT			0		48	3BR APT	300	GPD/DU	14,400		N/A	N/A		N/A		N/A	N/A		N/A						
5	208	DUPLEX	300	GPD/DU	79,800		70	DUPLEX	300	GPD/DU	21,000																
5	127	SFD	300	GPD/DU	38,100		145	SFD	300	GPD/DU	43,300																
***7 (REGIONAL COMMERCIAL)	N/A						N/A						237,500	0.10	GPD/SF	23,750		188,000	0.10	GPD/SF	18,000		23,750		18,000		
***7 (REGIONAL COMMERCIAL)	N/A						N/A						237,500	0.10	GPD/SF	23,750		188,000	0.10	GPD/SF	18,000		23,750		18,000		
***7 (REGIONAL COMMERCIAL)	N/A						N/A						38,200	0.10	GPD/SF	3,820		31,380	0.10	GPD/SF	3,138		3,820		3,138		
***7 (REGIONAL COMMERCIAL)	N/A						N/A						230	25	GPD/EMP	5,750		184	25	GPD/EMP	4,600		5,750		4,600		

TOTAL PROJECTED FLOW PER GENERAL DEVELOPMENT PLAN APPROVAL = 488,775

TOTAL ANTICIPATED SEWAGE FLOW = 378,308

1 Proposed residential/non-residential quantities shown hereon for Phases 1, 2, 3, 5 and 6 reflect residential and non-residential yields obtained from engineered plans that have been prepared and submitted to Elk Township for approval. Phases 1 and 3 have received Final Approval; Phases 2, 5 and 6 have received conditional Preliminary Approval; Phase 4 has been temporarily tabled.

* Proposed residential quantities shown hereon for Phase 4 reflects transfer of 98 apartment units from Phase 4 to Phase 6.

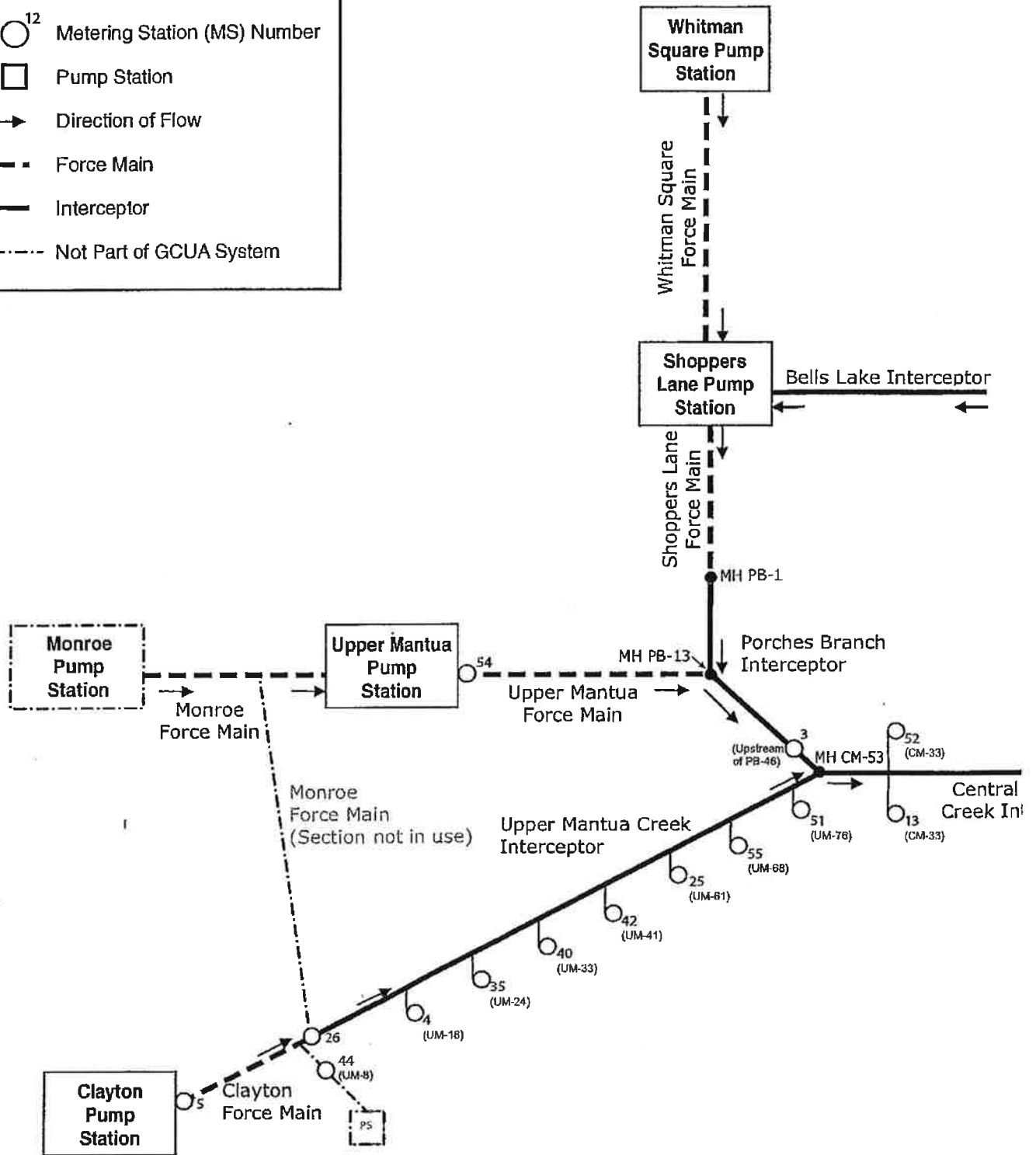
** Proposed non-residential quantities shown hereon for Phase 4 reflects an estimated yield based on a Concept Plan developed by Silvergate.

Proposed non-residential quantities shown hereon for Phase 7 reflects an estimated yield obtained by reducing the General Development Approved Land Use yield by 20%.

*** Total yield approved by the GPD is 815,200 sf. 140,200 sf is designated as Industrial/Office, leaving 237,500 sf as commercial space. Out of the 140,200 sf, 38,200 sf is designated as office space. The remaining 101,000 sf is designated as warehouse. It is anticipated that this space would support 230 employees.

LEGEND

-  Metering Station (MS) Number
-  Pump Station
-  Direction of Flow
-  Force Main
-  Interceptor
-  Not Part of GCUA System



2.3.3 Clayton Connection

The Clayton connection consists of a pump station, force main, and MS #5. Flows collected at the pump station are discharged through a force main with a total equivalent length of 24,715 lf constructed of 16-inch cement-lined ductile iron pipe. The Clayton force main terminates at Manhole UM-1, the upstream end of the Upper Mantua Creek interceptor. Table 2-11 summarizes the physical characteristics of Clayton force main.

Table 2-11
Summary of Clayton Force Main

System Component	Location	Pipe Size (inches)	Length (lf)	Material
Clayton force main	Clayton pump station to UM-1	16	24,715*	Cement-lined ductile iron

*Length equals total equivalent length.

The Clayton pump station consists of two installed Fairbanks Morse pumps. There is also a shelf spare available. Each pump at Clayton pump station has an impeller diameter of 10.2 inches. The pumps are individually rated to discharge 1,300 gpm at a total dynamic head of 80 ft. Pumping in parallel, the pump station flow capacity is 1,623 gpm at a total dynamic head of 89 ft. Power for the pumps is provided by 40-hp, constant speed electric motors operating at 1,750 rpm.

All wastewater collected by the Clayton Sewerage Authority collection system discharges into the Clayton pump station. MS #5 is located immediately downstream of the pump station to measure flows being discharged to the GCUA system. Average daily flows through this station are approximately 601,000 gpd. In addition, approximately 327,000 gpd are committed from various approved projects.

2.3.4 Upper Mantua Creek Interceptor

The main trunkline of the Mantua Creek collection system begins with the Upper Mantua Creek interceptor at the discharge point of the Clayton force main. The upstream end of this interceptor

is defined by Manhole UM-1. Flows are conveyed to the downstream end of the Upper Mantua Creek interceptor at Manhole CM-53, the upstream end of the Central Mantua interceptor.

The Upper Mantua Creek interceptor is 27,807 ft long and is connected by 93 manholes. When first constructed, the sewer was composed entirely of reinforced concrete pipe, but a multi-phase rehabilitation project was implemented in the mid-1980s during which the interceptor between Manholes UM-1 and UM-19 was sleeved with a polyethylene liner. This resulted in a 2-inch reduction in pipe diameter, but the hydraulic capacity of the pipe was not critically reduced due to improved flow conditions. Table 2-12 summarizes the physical characteristics of the Upper Mantua Creek interceptor.

Table 2-12
Summary of Upper Mantua Creek Interceptor

System Component	Location	Pipe Size (inches)	Length (lf)	Material
Upper Mantua Creek interceptor	UM-1 to UM-8	22	2,835	Polyethylene-lined reinforced concrete
Upper Mantua Creek interceptor	UM-8 to UM-19	25	4,112	Polyethylene-lined reinforced concrete
Upper Mantua Creek interceptor	UM-19 to CM-53	30	20,860	Reinforced concrete
Total length of pipe = 27,807 lf				
Total number of manholes = 93				

There are eight locations at which flows are metered from municipal sewer line connections with the GCUA system. All MSs along this interceptor are offline. Below, the locations at which each connection ties into the system, as well as the average flows measured by the MSs, are specified:

- **Stanger Avenue MS #44:** Measures flows that connect to the Upper Mantua Creek interceptor at Manhole UM-8. Average flows are approximately 64,400 gpd.
- **Birches MS #4:** Measures flows that connect to the Upper Mantua Creek interceptor at UM-18. Average flows are approximately 1.5 mgd.
- **Whethersfield Woods MS #35:** Measures flows that connect to the Upper Mantua Creek interceptor at UM-24. Average flows are approximately 192,000 gpd.

- **Doubletree MS #40:** Measures flows that are conveyed through a short interceptor to Manhole UM-33, the connection point with the Upper Mantua Creek interceptor. The short interceptor consists of two pipe segments and Manhole UM-33A. The upstream pipe segment between Doubletree MS #40 and UM-33A is approximately 125 ft long and the downstream pipe segment between UM-33A and UM-33 is approximately 257 ft long. Average flows through Doubletree MS #40 are approximately 176,000 gpd.
- **Autumn Ridge MS #42:** Measures flows that connect to the Upper Mantua Creek interceptor at UM-41. Average flows are approximately 56,000 gpd.
- **Pitman East MS #25:** Measures flows that connect to the Upper Mantua Creek interceptor at UM-61. Average flows are approximately 211,000 gpd.
- **Parke Place MS #55:** Measures flows that connect to the Upper Mantua Creek interceptor at UM-68. Average flows are approximately 65,800 gpd.
- **Bethel Mill Park MS #51:** Measures flows that connect to the Upper Mantua Creek interceptor at UM-76. Average flows are approximately 6,700 gpd.

In addition to currently metered flows, approximately 280,000 gpd are committed from various approved projects.

2.3.5 Whitman Square Pump Station and Force Main

The Whitman Square pump station is located at the site of a former sewage treatment plant on Whitman Drive in Washington Township. Flows are discharged from the pump station to the Whitman Square force main, which conveys flows to the Shoppers Lane pump station. The force main varies in diameter from the upstream to the downstream end. At the upstream end, a 12-inch main constructed of cast iron extends approximately 3,800 ft from the pump station to Black Horse Pike (State Route 42), where it is reduced to an 8-inch cement-lined cast iron main, which continues for approximately 1,750 ft along Greentree Road. At a point about 500 ft west of Barclay Drive, the main connects to a wye leading to parallel 8-inch and 12-inch pipes. However, the 8-inch main has been valved off and is no longer in use. All of the flow is conveyed through the 12-inch reinforced concrete main, which continues for approximately 2,220 ft to the terminus of the force main at Manhole WS-1 on Shoppers Lane. The total equivalent length of the force main is 7,808 lf. A 60-ft gravity line constructed of 24-inch reinforced concrete pipe connects the Whitman Square force main at Manhole WS-1 to the wet well at Shoppers Lane pump station. Table 2-13 summarizes the physical characteristics of the Whitman Square connection.

6"

5413

VERTICAL FOR
FLEXIBLE
SHAFTING

5423

HORIZONTAL

5433

VERTICAL
BILTTOGETHER

5443

VERTICAL CLOSE
COUPLED

1780 RPM

NO. OF VANES 2

SUCTION SIZE

5423: 6"

OTHER: 6" OR 8"

IMPELLER

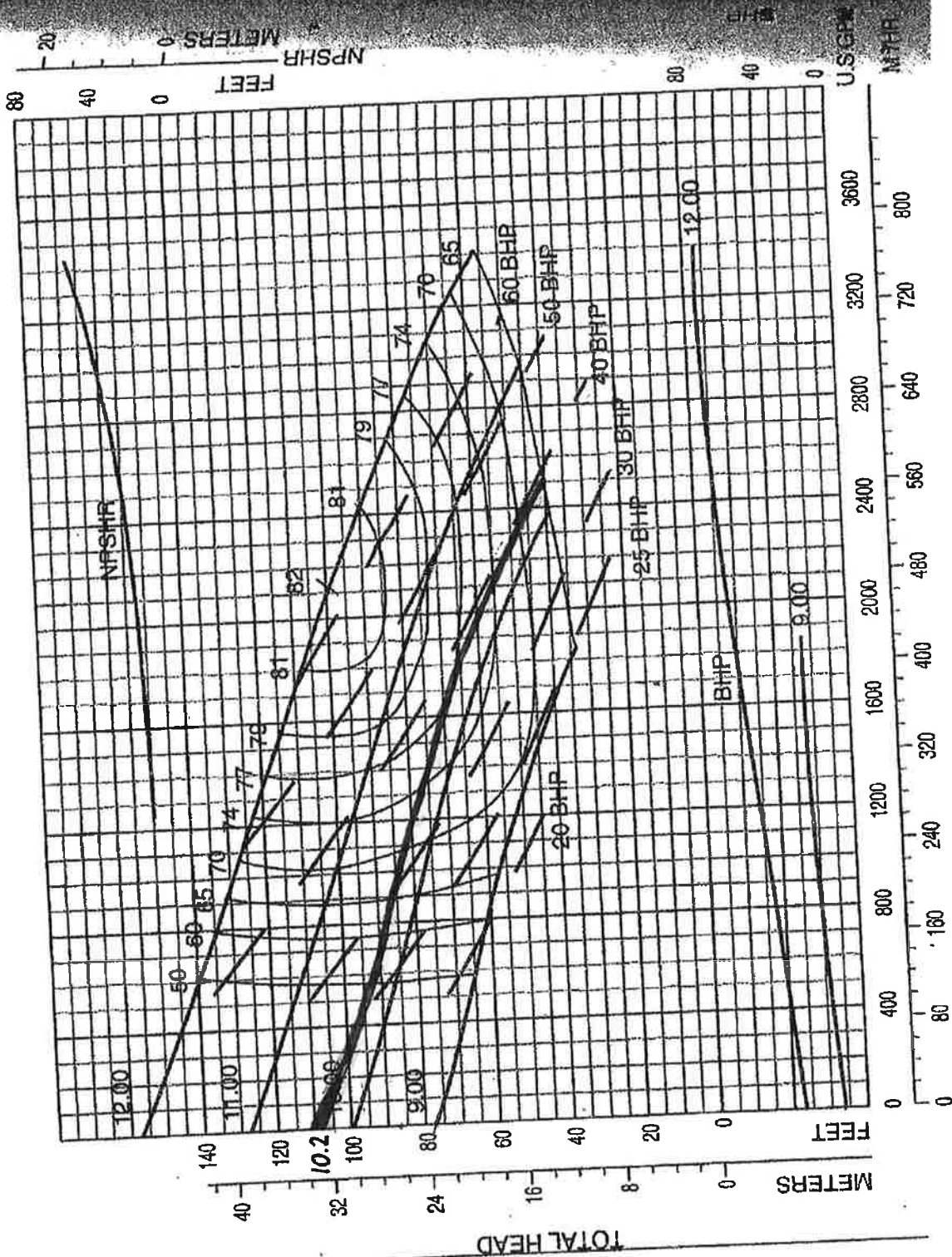
T6C1C

INLET AREA

52.88 SQ. IN.

MAX. SPHERE

3"





PERFORMANCE CURVE

PRODUCT

NP3202.180

TYPE

HT

DATE

2018-01-24

PROJECT

CURVE NO

63-456-00-3050

ISSUE

3

	1/1-LOAD	3/4-LOAD	1/2-LOAD	RATED POWER	60	hp
POWER FACTOR	0.89	0.86	0.79	STARTING CURRENT ...	465	A
EFFICIENCY	91.5 %	92.5 %	92.0 %	RATED CURRENT ...	68	A
MOTOR DATA	---	---	---	RATED SPEED	1775	rpm
COMMENTS	INLET/OUTLET			TOT. MOM. OF INERTIA ...	0.39	kgm2
	- / 6 inch			NO. OF BLADES	2	
	IMP. THROUGHLET					

IMPELLER DIAMETER

326 mm

MOTOR #

30-24-4AA

STATOR

01D

REV

10

FREQ.

60 Hz

PHASES

3

VOLTAGE

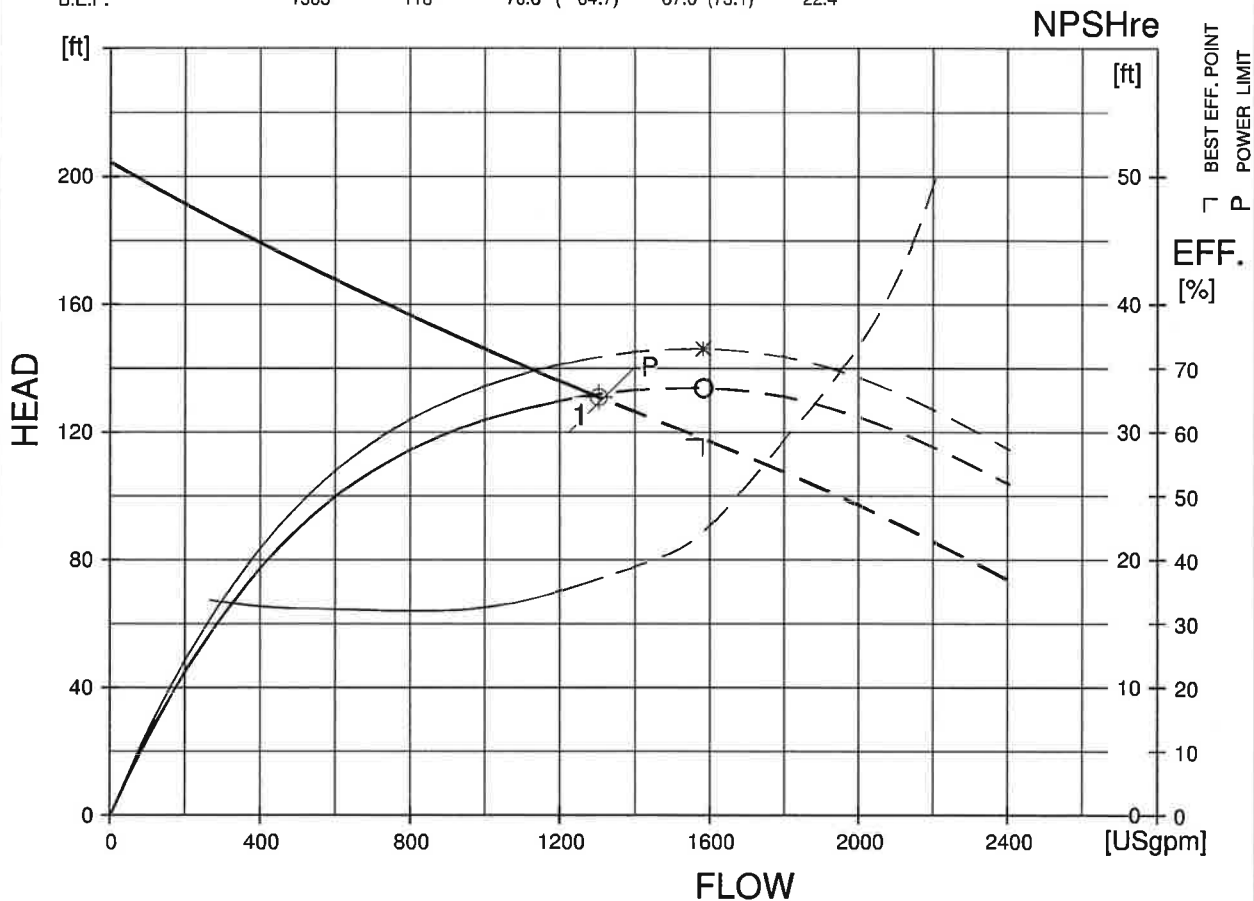
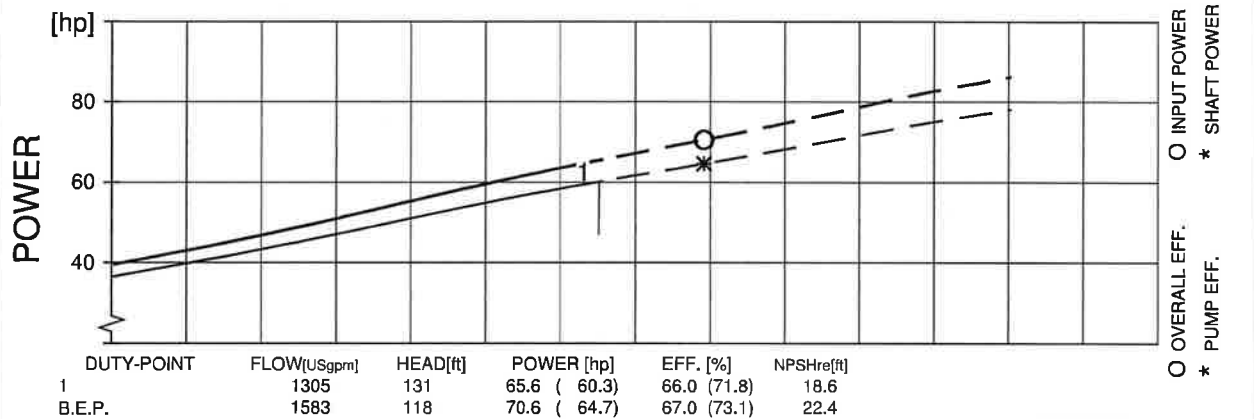
460 V

POLES

4

GEARTYPE

RATIO



FLYPS3.1.0.0 (20050224)

NPSHre = NPSH3% + min. operational margin

Performance with clear water and ambient temp 40 °C



HI B Curve



PERFORMANCE CURVE

PRODUCT

NP3171.180

TYPE

SH

DATE

2018-01-24

PROJECT

CURVE NO

63-275-00-1070

ISSUE

3

POWER FACTOR
EFFICIENCY
MOTOR DATA

1/1-LOAD

0.91
91.0 %

3/4-LOAD

0.89
91.5 %

1/2-LOAD

0.82
92.0 %RATED POWER 35 hp
STARTING CURRENT ... 292 A
RATED CURRENT ... 40 A
RATED SPEED 3530 rpm
TOT.MOM.OF INERTIA ... 0.073 kgm2
NO. OF BLADES 2

IMPELLER DIAMETER

195 mm

MOTOR #

25-18-2AA

STATOR

09YSER

REV

10

FREQ.

60 Hz

PHASES

3

VOLTAGE

460 V

POLES

2

COMMENTS

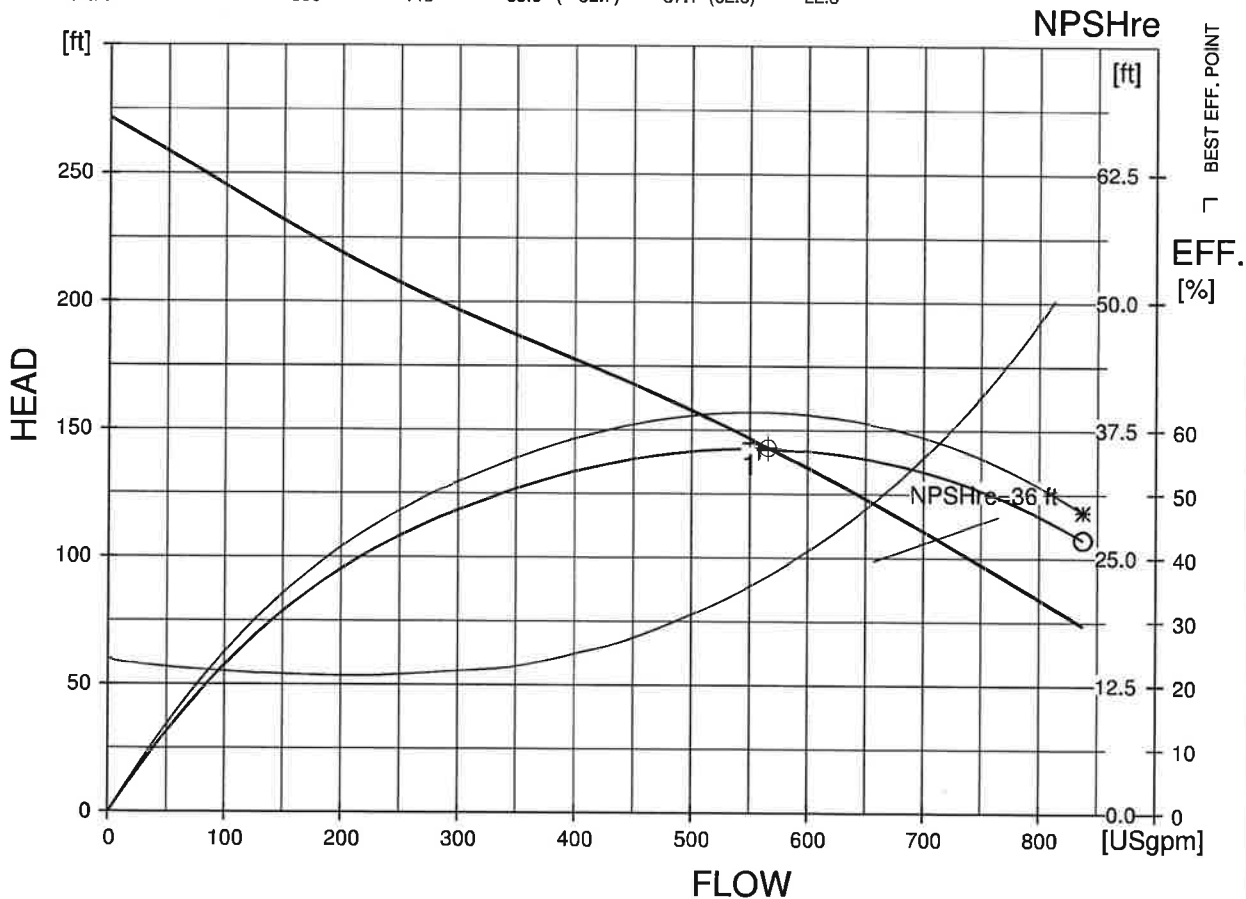
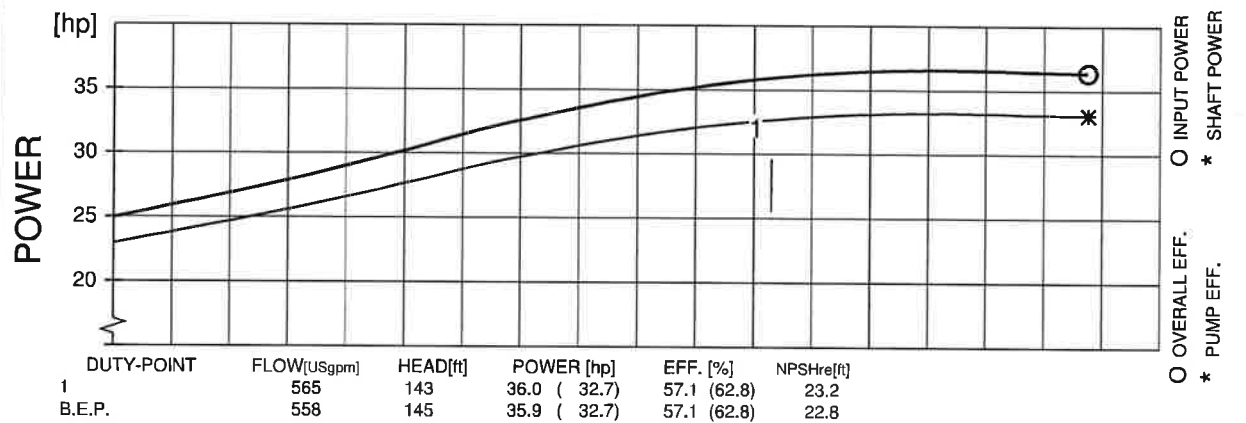
INLET/OUTLET

- / 4 inch

IMP. THROUGHLET

GEARTYPE

RATIO



FLYPS3.1.0.0 (20050224)

NPSHre = NPSH3% + min. operational margin

Performance with clear water and ambient temp 40 °C



HI B Curve



PERFORMANCE CURVE

PRODUCT

NP3153.181

TYPE

SH

DATE

2018-01-24

PROJECT

CURVE NO

63-275-00-1070

ISSUE

1

	1/1-LOAD	3/4-LOAD	1/2-LOAD	RATED POWER	23	hp
POWER FACTOR	0.91	0.87	0.79	STARTING CURRENT ...	207	A
EFFICIENCY	91.0 %	91.5 %	91.5 %	RATED CURRENT ...	26	A
MOTOR DATA	---	---	---	RATED SPEED	3510	rpm
COMMENTS	INLET/OUTLET			TOT.MOM.OF	0.030	kgm2
	- / 4 inch			NO. OF	2	
	IMP. THROUGHLET			BLADES		

IMPELLER DIAMETER

166 mm

MOTOR #

21-18-2BB

STATOR

04YSER

REV

10

FREQ.

60 Hz

PHASES

3

VOLTAGE

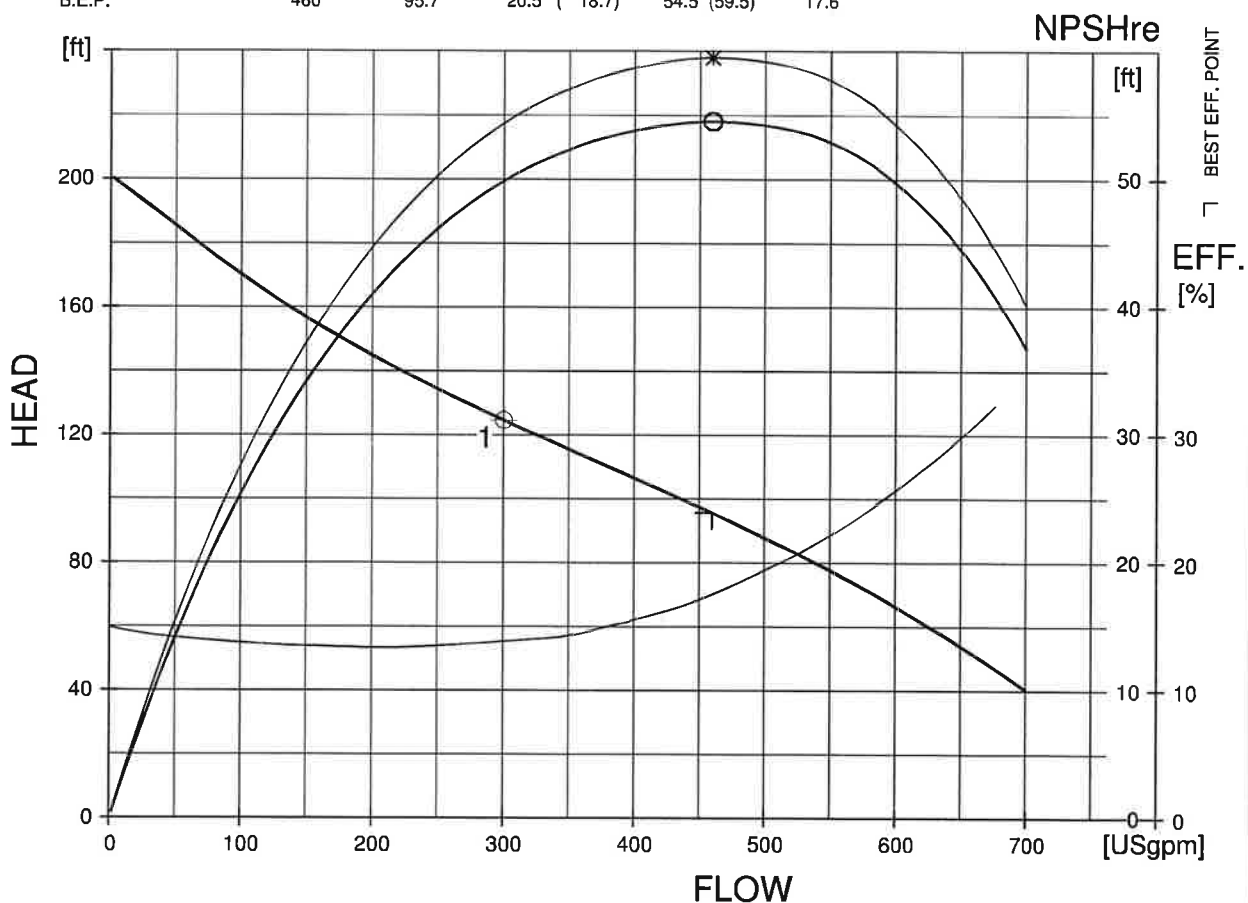
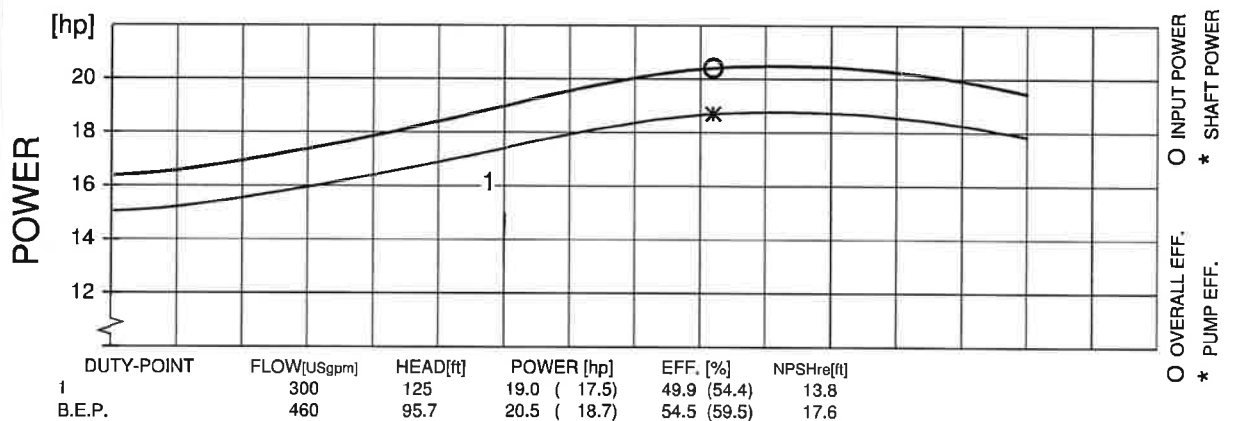
460 V

POLES

2

GEARTYPE

RATIO



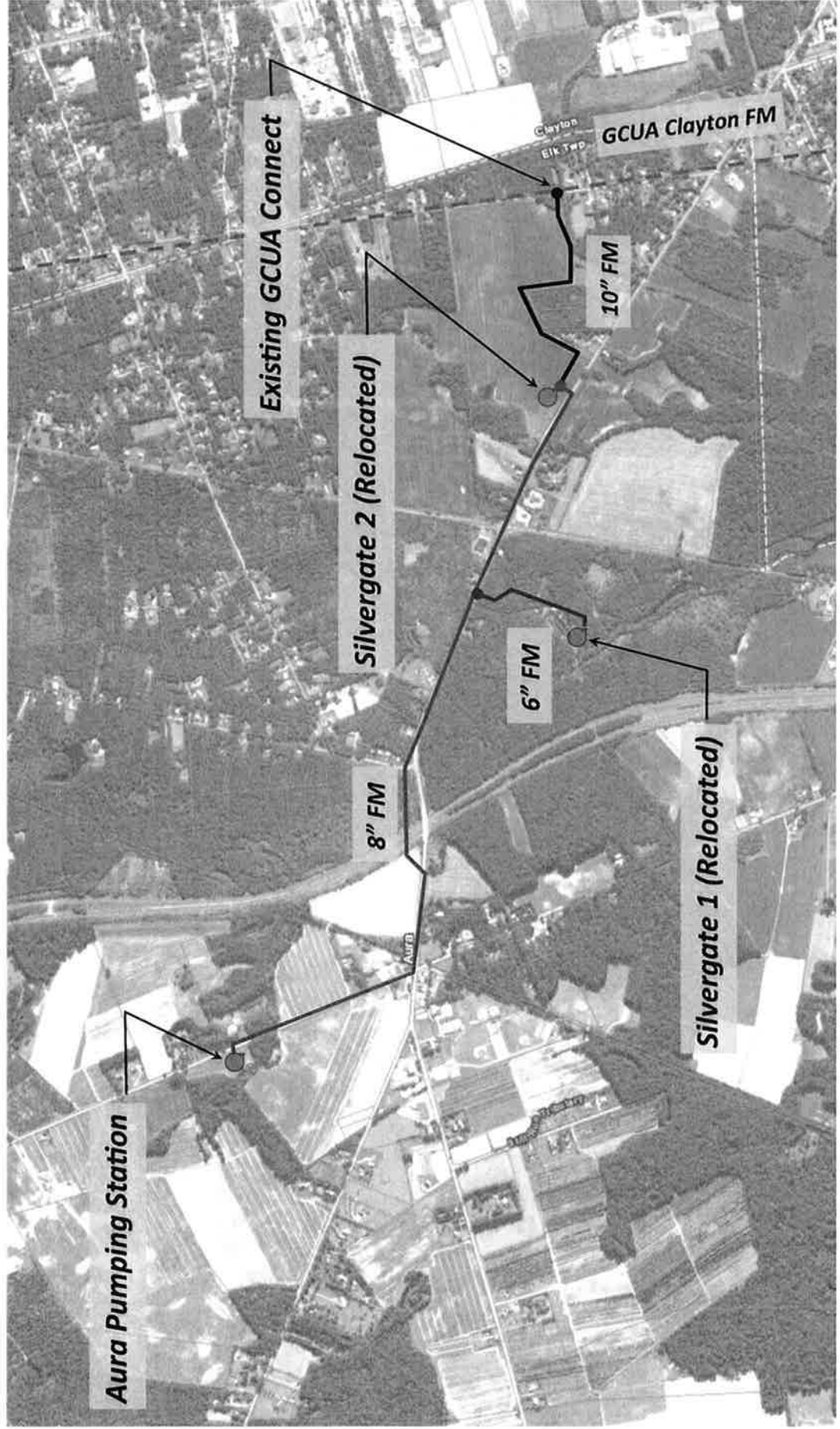
NPSHr = NPSH3% + min. operational margin

Performance with clear water and ambient temp 40 °C

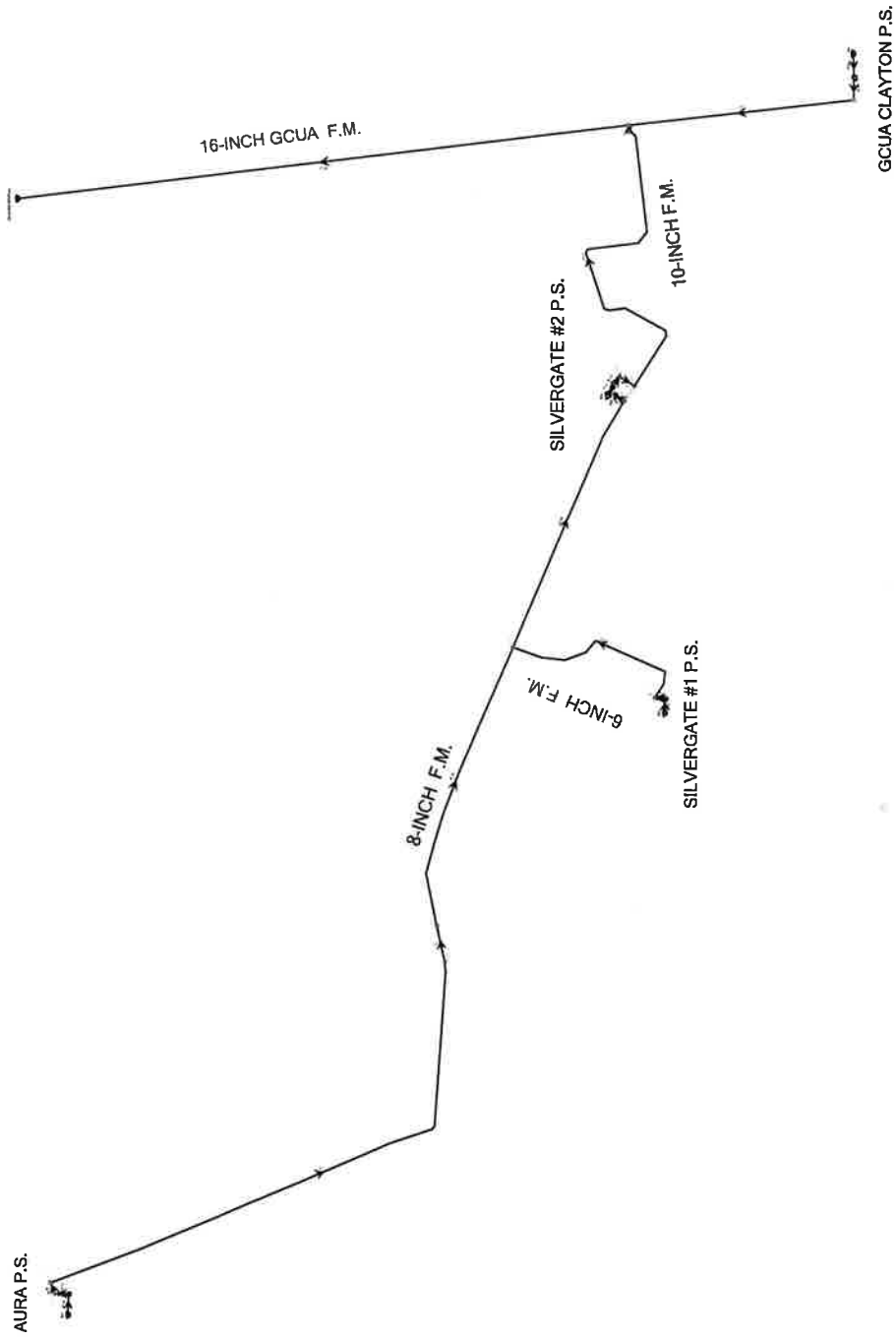


HI B Curve

CONCEPTUAL DESIGN SCHEMATIC
Wastewater Pumping Station & Force Main
ELK TOWNSHIP, GLOUCESTER COUNTY, NJ



Scenario: All Stations Operating Simultaneously



Scenario: Aura Pumping Station
Current Time Step: 0.000 h
FlexTable: Pump Table

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
57	AURA P.S.	114.00	NP3171 SH3 35 HP	On	115.00	244.94	612	129.94
79	SILVERGATE #1 P.S.	96.00	NP3171 SH3 35 HP	Off	0.00	175.19	0	0.00
85	SILVERGATE #2 P.S.	99.00	NP3202.180-HT 60 HP	Off	100.00	128.41	0	0.00
114	GCUA CLAYTON P.S.	90.00	GCUA Pump	On	91.00	175.24	1,117	84.24

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Scenario: Aura Pumping Station
Current Time Step: 0.000 h
FlexTable: Pipe Table

Label	Start Node	Stop Node	Status (Initial)	Diameter (in)	Material	Hazen- Williams C	Minor Loss Coefficient (Local)	Length (ft)	Flow (gpm)	Velocity (ft/s)
P-12	R-1	AURA P.S.	Open	100.0	Ductile Iron	100.0	0.000	0	612	0.03
P-13	AURA P.S.	J-10	Open	6.0	Ductile Iron	100.0	8.100	25	612	6.95
P-14	J-10	J-11	Open	8.0	PVC	130.0	0.000	109	612	3.91
P-15	J-11	J-12	Open	8.0	PVC	130.0	0.000	5,318	612	3.91
P-16	J-12	J-13	Open	8.0	PVC	130.0	0.000	332	612	3.91
P-17	J-13	J-14	Open	8.0	PVC	130.0	0.000	2,728	612	3.91
P-18	J-14	J-15	Open	8.0	PVC	130.0	0.000	2,495	612	3.91
P-20	J-15	J-16	Open	8.0	PVC	130.0	0.000	163	612	3.91
P-21	J-16	J-17	Open	10.0	PVC	130.0	3.000	3,354	612	2.50
P-22	J-17	J-18	Open	8.0	PVC	130.0	0.000	60	612	3.91
P-23	R-2	SILVERGATE #1 P.S.	Open	100.0	Ductile Iron	100.0	0.000	0	0	0.00
P-24	SILVERGATE #1 P.S.	J-19	Open	6.0	Ductile Iron	100.0	8.100	20	0	0.00
P-25	J-19	J-14	Open	6.0	PVC	130.0	0.800	1,795	0	0.00
P-26	R-4	SILVERGATE #2 P.S.	Open	100.0	Ductile Iron	130.0	0.000	0	0	0.00
P-28	J-15	R-3	Closed	8.0	PVC	130.0	0.000	92	0	0.00
P-29	J-18	GCUA DOWNSTREAM	Open	16.0	Ductile Iron	130.0	0.000	16,015	1,729	2.76
P-30	SILVERGATE #2 P.S.	J-20	Open	8.0	Ductile Iron	130.0	8.100	20	0	0.00
P-31	J-20	J-16	Closed	10.0	PVC	130.0	0.000	156	0	0.00
P-32	R-7	GCUA CLAYTON P.S.	Open	100.0	Ductile Iron	130.0	0.000	1	1,117	0.05
P-33	GCUA CLAYTON P.S.	J-21	Open	6.0	Ductile Iron	130.0	8.100	20	1,117	12.67
P-34	J-21	J-18	Open	16.0	Ductile Iron	130.0	0.000	8,700	1,117	1.78

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Scenario: Aura Pumping Station
Current Time Step: 0.000 h
FlexTable: Junction Table

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
59	J-10	141.00	0	237.66	42
61	J-11	141.00	0	236.86	41
63	J-12	126.00	0	197.71	31
65	J-13	121.00	0	195.26	32
67	J-14	126.00	0	175.19	21
69	J-15	125.00	0	156.82	14
71	J-16	125.00	0	155.62	13
74	J-17	127.00	0	147.00	9
76	J-18	127.00	0	146.56	8
81	J-19	124.00	0	175.19	22
92	J-20	124.00	0	128.41	2
116	J-21	109.00	0	153.22	19

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Scenario: All Stations Operating Simultaneously
Current Time Step: 0.000 h
FlexTable: Pump Table

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
57	AURA P.S.	114.00	NP 3153 SH3 23 HP	On	115.00	188.68	540	73.68
79	SILVERGATE #1 P.S.	99.00	NP 3153 SH3 23 HP	On	0.00	142.50	220	142.50
85	SILVERGATE #2 P.S.	99.00	Constant Power Sizing	On	100.00	212.29	1,325	112.29
114	GCUA CLAYTON P.S.	90.00	GCUA Pump	On	91.00	181.18	892	90.18

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Scenario: All Stations Operating Simultaneously
Current Time Step: 0.000 h
FlexTable: Pipe Table

Label	Start Node	Stop Node	Status (Initial)	Diameter (in)	Material	Hazen- Williams C	Minor Loss Coefficient (Local)	Length (ft)	Flow (gpm)	Velocity (ft/s)
P-12	R-1	AURA P.S.	Open	100.0	Ductile Iron	100.0	0.000	0	540	0.02
P-13	AURA P.S.	J-10	Open	6.0	Ductile Iron	100.0	8.100	25	540	6.13
P-14	J-10	J-11	Open	8.0	PVC	130.0	0.000	109	540	3.45
P-15	J-11	J-12	Open	8.0	PVC	130.0	0.000	5,318	540	3.45
P-16	J-12	J-13	Open	8.0	PVC	130.0	0.000	332	540	3.45
P-17	J-13	J-14	Open	8.0	PVC	130.0	0.000	2,728	540	3.45
P-18	J-14	J-15	Open	8.0	PVC	130.0	0.000	2,495	760	4.85
P-20	J-15	J-16	Closed	8.0	PVC	130.0	0.000	163	0	0.00
P-21	J-16	J-17	Open	10.0	PVC	130.0	3.000	3,354	1,325	5.41
P-22	J-17	J-18	Open	8.0	PVC	130.0	0.000	60	1,325	8.46
P-23	R-2	SILVERGATE #1 P.S.	Open	100.0	Ductile Iron	100.0	0.000	0	220	0.01
P-24	SILVERGATE #1 P.S.	J-19	Open	6.0	Ductile Iron	100.0	8.100	20	220	2.50
P-25	J-19	J-14	Open	6.0	PVC	130.0	0.800	1,795	220	2.50
P-26	R-4	SILVERGATE #2 P.S.	Open	100.0	Ductile Iron	130.0	0.000	0	1,325	0.05
P-28	J-15	R-3	Open	8.0	PVC	130.0	0.000	92	760	4.85
P-29	J-18	GCUA DOWNSTREAM	Open	16.0	Ductile Iron	130.0	0.000	16,015	2,217	3.54
P-30	SILVERGATE #2 P.S.	J-20	Open	8.0	Ductile Iron	100.0	8.100	20	1,325	8.46
P-31	J-20	J-16	Open	10.0	PVC	130.0	0.000	156	1,325	5.41
P-32	R-7	GCUA CLAYTON P.S.	Open	100.0	Ductile Iron	130.0	0.000	1	892	0.04
P-33	GCUA CLAYTON P.S.	J-21	Open	6.0	Ductile Iron	130.0	8.100	20	892	10.13
P-34	J-21	J-18	Open	16.0	Ductile Iron	130.0	0.000	8,700	892	1.42

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Scenario: All Stations Operating Simultaneously
Current Time Step: 0.000 h
FlexTable: Junction Table

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
59	J-10	141.00	0	182.99	18
61	J-11	141.00	0	182.35	18
63	J-12	126.00	0	151.30	11
65	J-13	121.00	0	149.36	12
67	J-14	127.00	0	133.43	3
69	J-15	125.00	0	106.01	-8
71	J-16	125.00	0	200.68	33
74	J-17	127.00	0	164.54	16
76	J-18	127.00	0	162.68	15
81	J-19	116.00	0	141.57	11
92	J-20	124.00	0	202.30	34
116	J-21	109.00	0	167.08	25

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EXHIBIT "D"

RECIPRICAL UTILITY & CONSTRUCTION EASEMENTS

Aura Investors, LLC shall grant Utility, Access and Construction Easements to Silvergate Associates and New Jersey American Water within the following properties for the stated purposes:

1. Block 31, Lots 2.02, 5.01, 7 & 22; and, Block 58, Lot 1 for construction, access and maintenance of a water main extension from the existing 16" water main in CR-667 to the proposed location of the elevated water storage tank as illustrated on Exhibit "A", including access easements from CR-667 and CR-619, pursuant to plans and descriptions to be prepared by Taylor, Wiseman and Taylor.
2. Block 58, Lot 1 for construction, access and maintenance of the proposed water storage tank and the water main extension from the proposed elevated water storage tank to the existing sleeve under Rt. 55 as illustrated on Exhibit "B" and for a water main extension to provide for a future 12" water main connection at the intersection of CR-667 and CR-619, including an access easement from CR-619, pursuant to plans and descriptions to be prepared by Taylor, Wiseman and Taylor.

Silvergate Associates shall grant Utility, Access and Construction Easements to Aura Investors, LLC and New Jersey American Water within the following properties for the stated purposes:

1. Block 170, Lots 14 & 18 for construction, access and maintenance of a sanitary sewer force main, including a by-pass connection at the proposed location of PS #2, and connection to an existing sanitary sewer connection to the GCUA force main in CR-637 as illustrated on Exhibit "B", including access easements from CR-610 and CR-637, pursuant to plans and descriptions to be prepared by James Sassano Associates.

Aura Investors, LLC and Silvergate Associates agree to cooperate in providing any additional easements as may be required by New Jersey American Water and necessary to complete the Water System and Sanitary Sewer System as described in Sections 2 and 3 of the underlying Water and Sanitary Sewer Infrastructure Agreement.

EXHIBIT "E"
Base Projected Sewer Flows

	Unit Type	No. of Units	GPD/Unit	Total GPD
Latham Park				
	Single Family	646	300	193,800
	Commercial	204,160	0.10	<u>20,416</u>
Total Projected Sewerage Flow				214,216

Silvergate				
	Single Family	571	300	171,300
	Twins	70	300	21,000
	Townhouses	172	300	51,600
	Afford. Apts	192	262.5	50,400
	Commercial	640,182	0.1	<u>64,018</u>
Total Projected Sewerage Flow				358,318