Asset Management Plan

Town of Bentley

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Prepared for:
Town of Bentley

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1 Introduction

The Town of Bentley received funding through the Federation of Canadian Municipalities' Municipal Asset Management Program (FCM-MAMP) to support the development of the Town's first Asset Management Plan for the Water system. The main purpose of this effort for the Town will be to document and codify the existing Levels of Service, the Risk exposure related to the ownership of assets, to create a singular register of the community infrastructure, and to develop a Long-Term Financial Plan.

The primary deliverable from the MAMP Grant funding is to develop:

1. **Training for Staff & Council, Development of an Asset Management Policy & Strategy;**
2. **Document and Codify Asset and Program Levels of Service and Risk Profiles;**
3. **Asset Management Team Development and Draft Asset Management Plan.**

This Asset Management Plan (AMP) will serve as the foundation for the Town's continued growth and maturity in this discipline.

Across Canada, the knowledge that asset management requires proactivity and foresight is becoming more widely accepted and put into practice. Most assets follow a pattern of deterioration where maintenance can extend the useful life of the asset – and drastically reduce the overall cost - if timed appropriately. In contrast, maintenance performed on an asset that is already failing can be of questionable value. In the same manner, long term costs can be forecast by projecting forward the anticipated costs of ownership and renewal at the anticipated end of life.

A plan encompassing all relevant variables enables the community to prioritize asset maintenance, rehabilitation, and replacement measures. This way acceptable levels of service can be maintained while the costs incurred are minimized. Realistic overviews of what to expect in the future can be provided to strengthen the quality of long-term planning and decision making.

Currently, the Town's asset management system is in its infancy. The structure of the inventory and accompanying geographic information system (GIS) have been established. In further stages of development, the asset management plan will provide a basis for both short- and long-term planning and development, along with budgeting. The framework contained in this plan can be adapted and transposed to other infrastructure assets to allow the Town to have a broader perspective on the financial implications of maintaining the Town's assets. .

2 Asset Register

2.1 Water Treatment System

The Town of Bentley pumps raw water from 3 High Quality groundwater wells running simultaneously. The Wells draw from the Paskapoo formation, and the Town has a Diversion License to access 200,043 m3. The 2012 daily average draw from the raw water wells was 287 m3/day, or approximately 104,000 m3/year - just over 50% of the Town's total Diversion License.

From the wells, the raw water is pumped to the Treatment Plant where is it treated with Sodium Hypochlorite for disinfection and into the three inline reservoirs, with the capacity of 1778 m3, stored in the Treated Clear well for discharge to the Distribution System.

To pressurize the Distribution system, there are three Pumps, two in parallel and a third pump for Fire/Standby capacity. These are operated on a timed, alternating cycle.

2.2 Water Distribution System

The Town's water distribution system is constructed primarily of Asbestos Cement (AC) and Polyvinyl Chloride (PVC) pipe materials. AC pipe was used from 1973 to 1979 and can be found mainly in the core areas of the Town, this Asbestos Cement distribution system served as a replacement for individual wells serving residential properties. The town has not actively worked to remove or seal the original residential wells.

PVC has a significantly long life (expected to exceed 100 years) and has excellent resistance to breaks and failures. Figure 1 illustrates the installation of underground water distribution infrastructure over time. Table 1 itemizes the assets covered in this AMP, their quantity, life span and current replacement value.

Table 1: The Town of Bentley's Water System Replacement Value

Asset Type	Asset Quantity (*BULK*)	Typical Life	Current Replacement Value
Wells	3	50	$450,000.00
Treatment Plant	1	50	$310,000
Water Reservoir	4	80	$2,485,000
Water Mains	9176 m	75 – 100 years	$11,929,000.00
Hydrants	44	75 years	$440,000.00
Total Cost			**$15,614,000.00**

As a note on Current Replacement Value, this will be different than the Current Value noted in the Town's Tangible Capital Asset Register (TCA). The TCA will contain an opening balance, or acquisition cost of the assets, then depreciate them annually to calculate a current net book value. The Current Replacement value of the above assets is shown below in Figure 1. The Replacement Value of the Water Distribution system in the Town vastly exceeds the value of the remaining assets. 76% of the value of the Town's water utility assets are comprised of underground distribution mains as indicated in Figure 2.

Figure 1: Current Replacement Value for the water distribution system

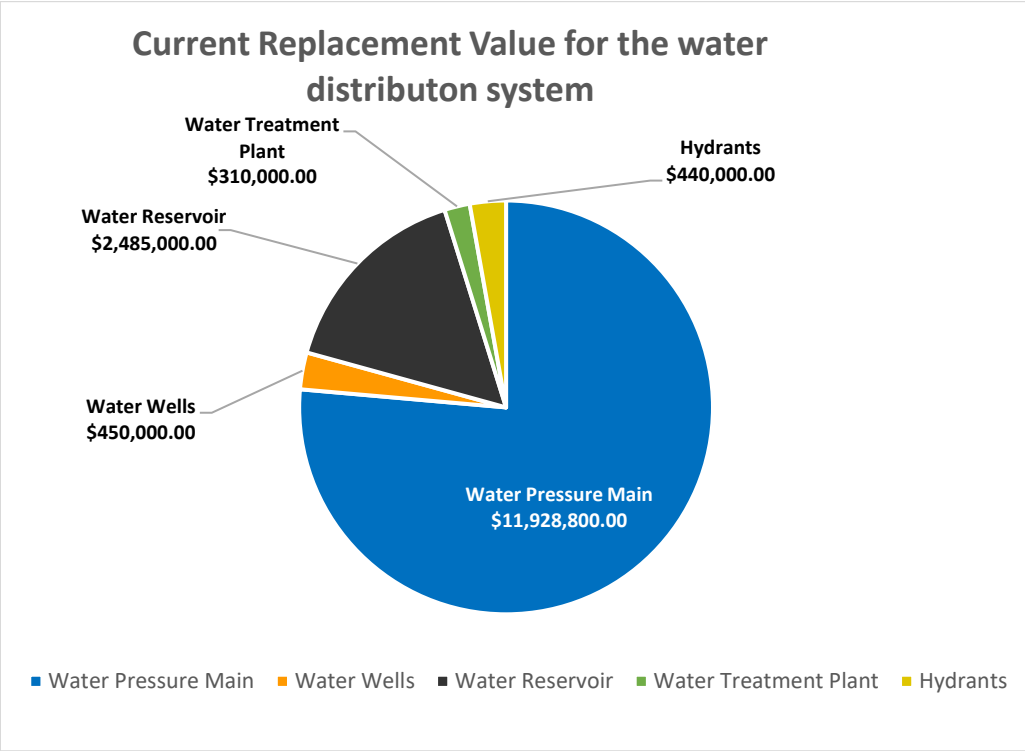
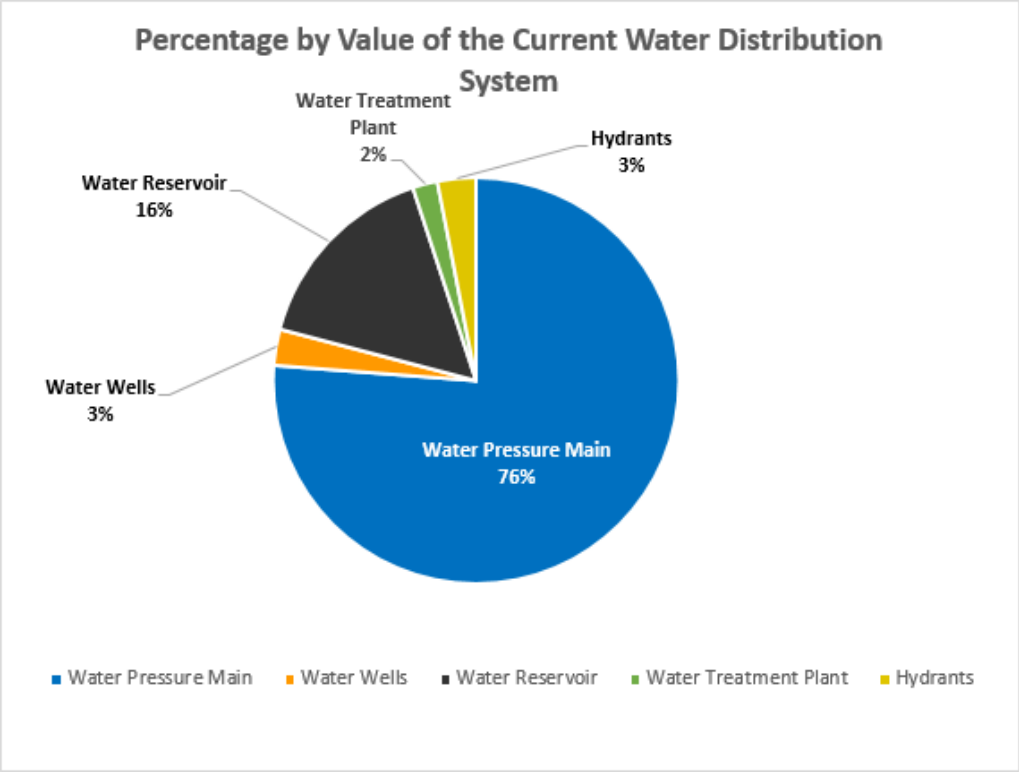
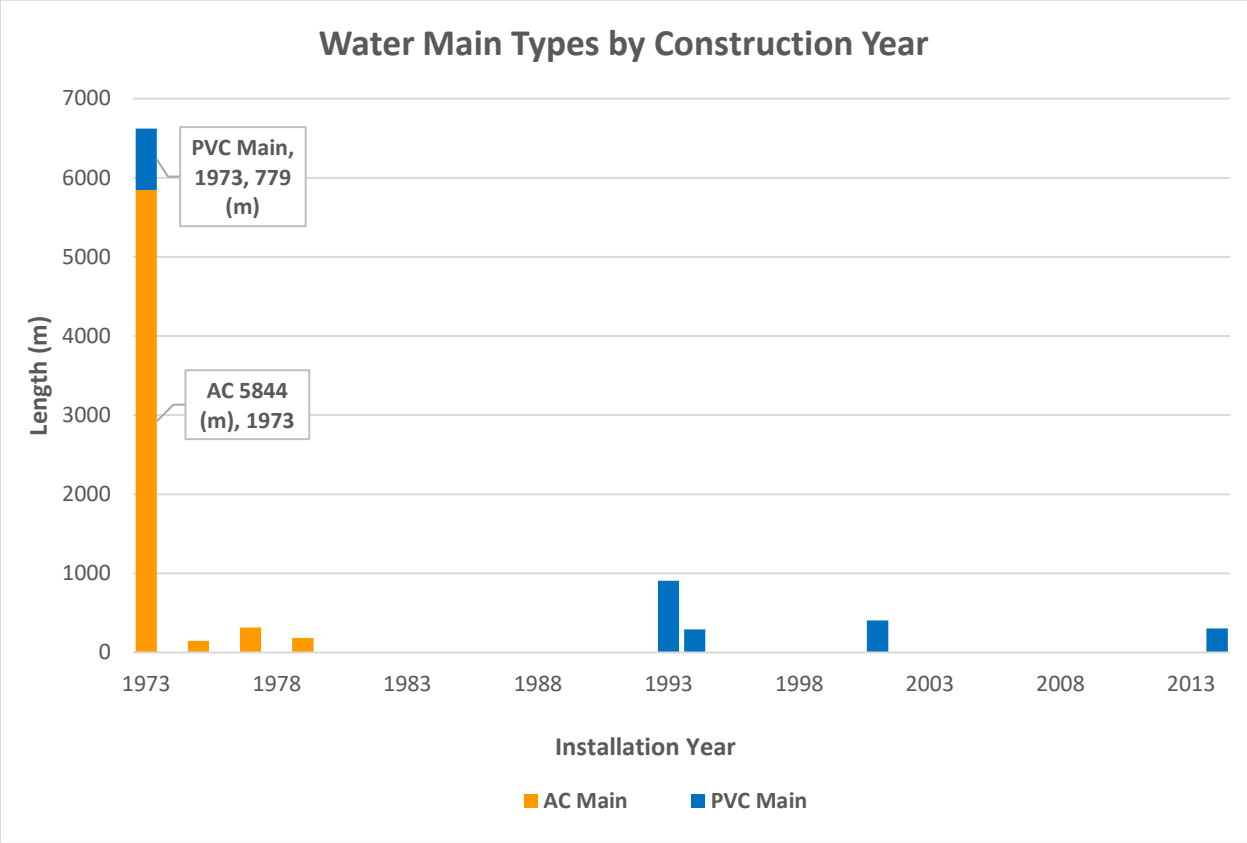


Figure 2: Percentage by Value of the Current Water Distribution System



In addition to the large relative value of underground distribution mains, a significant proportion of these mains were constructed in 1973 as part of the Town's conversion from individual wells servicing homes to a centrally treated municipal supply. Much of the Town's watermains are constructed of Asbestos Cement (AC) pipe with the remainder being of PVC. Figure 3 outlines the progression of underground distribution construction over time and by material.

Figure 3: Water Main Types by Construction Year



While underground infrastructure in many cases has a long useful life, it is finite and will ultimately require renewal and replacement. Table 2 outlines the typically observed life cycles for underground municipal assets in Alberta. Recent academic studies have estimated that the PVC pipe can be expected to provide reliable service in excess of 100 years.[1]

[1] Folkman, Steven, "PVC Pipe Longevity Report: Affordability and the 100+ Year Benchmark Standard" (2014). *Mechanical and Aerospace Engineering Faculty Publications.* Paper 170.
https://digitalcommons.usu.edu/mae_facpub/170

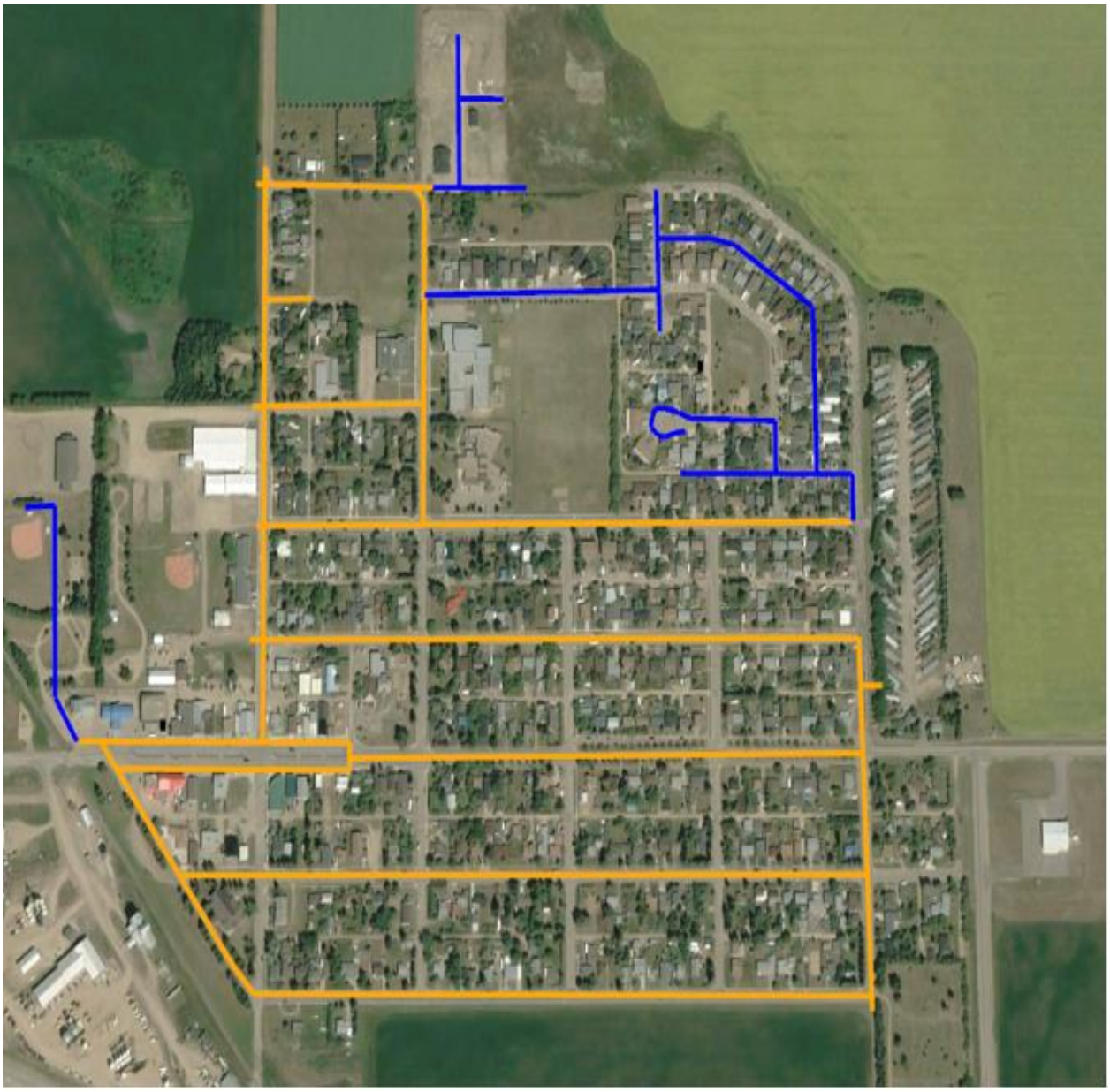
Table 2: The Town of Bentley's Water System Material Types and Estimated Life

Material Type	Estimated Life
Water Main (PVC)	100 years
Water Main (Asbestos Cement)	75 Years
Wells	50 Years
Water Reservoir	80 Years
Water Treatment Plant	50 Years
Hydrants	75 Years

Of note, there are additional system components that have not been included in this analysis. Assets like water meters, service connections (from the mainlines to the curb stop) are all constituent components that the Town may determine should be included in this AMP in future iterations.

Figure 4 illustrates the current and proposed water distribution network and the existing pipe materials.

Figure 4: Town of Bentley Water Main Network



PVC Water Main

AC Water Main

3 Asset Performance

Assets not only have a typical useful life (based on a number of factors including operating conditions and environmental conditions), but their useful life is also influenced by the level of service that they are able to provide. For example, a component of the distribution system may be functioning adequately in terms of physical performance, but not meet the needs of the community service expectation (for example being undersized for adequate flow). In this example, decisions to invest in and replace/upgrade assets may be made for reasons other than physical condition. The following describes the current Asset performance as currently observed.

3.1 Asbestos Cement Watermain Performance

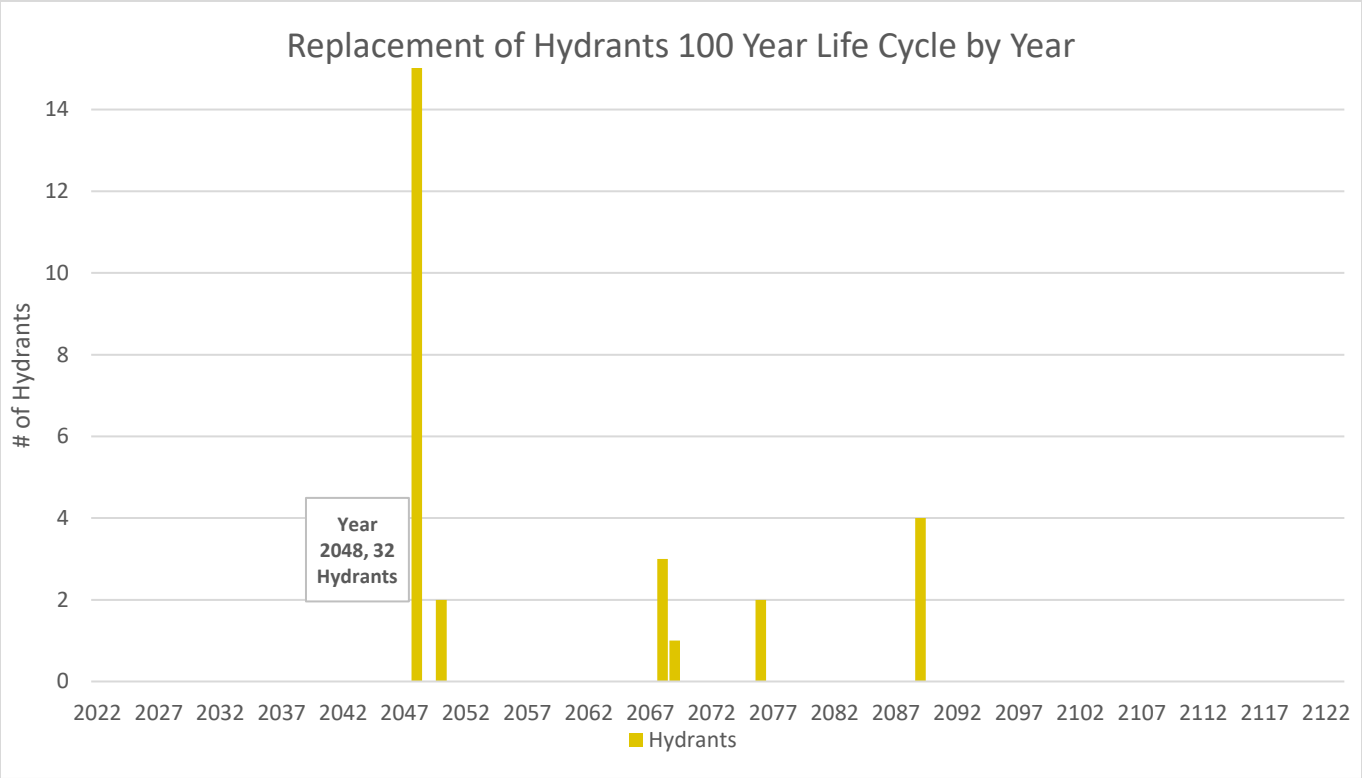
The water distribution infrastructure in the Town of Bentley is relatively new and is demonstrating very good performance. The Town tracks and records the instances of water main breaks, although has not recorded any water main breaks (caused by pipe material failure), and where there have been issues, they have been related to valve failures.

Asbestos Cement (AC) water mains are a well understood material in the water utility industry, and various studies have been conducted on their performance. The National Research Council Canada (NRC) has conducted research on AC water mains in other municipal environments to better understand the performance and failure modes. Factors contributing to the deterioration of AC water mains have been identified as pipe age, size, internal/external chemical attack, soil conditions and climate. Given the variety of factors at play leading to AC water main failure, the ongoing performance of the AC water mains should continue to be monitored, and as failure trends warrant, further examination and analysis should be conducted.

3.2 Hydrants

The Town owns and operates 44 hydrants largely of the same vintage as the watermains they are connected to. Hydrants have a similarly long life to that of AC pipes, however, are subject to occasional mechanical failures and may require early replacement. Figure 5 illustrates the forecast number of hydrants to be replaced annually based on estimated maximum life.

Figure 5: Replacement of Hydrants 100 Year Life Cycle by Year

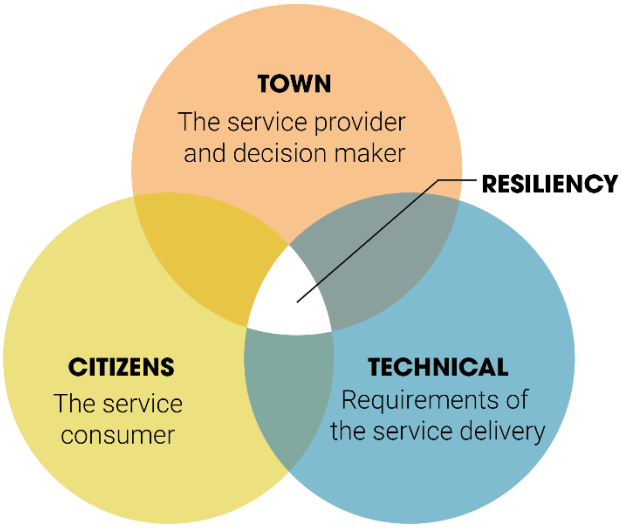


4 Levels of Service

The goal in managing the Towns' infrastructure assets is to meet a series of defined levels of service in the most cost-effective manner for the citizens and stakeholders.

A Level of Service (LOS) is driven by the expectations of the Town's citizens while at the same time meeting legislative and technical requirements. There is a direct relationship between the level of service and the cost of the service as financial constraints, and the availability of resources provides a degree of limitation. Determining the level of service requires finding a balance between three different factors.

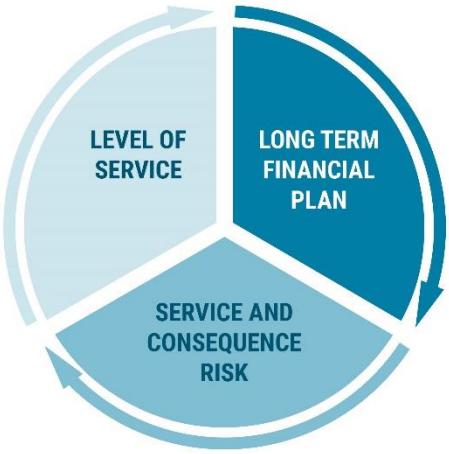
The service provider factor is represented by an elected Council. Staff and elected officials within local government organizations have a variety of responsibilities and motivations when providing a service: the health and wellbeing of residents; regulatory requirements, policies, and laws; short and long-term budget constraints; and local interests and concerns. They must balance these considerations with the technical requirements and costs of service delivery.



1. *What are the Town's strategic goals and what are they willing and financially able to provide?*
2. *What are the Town's citizens expectations?*
3. *What are the technical and safety requirements of delivering these levels of service?*

In order to determine long term service goals and direction, the following are reviewed and assessed:

1. *What is currently provided?*
2. *Where are the gaps between current service levels and expected service levels?*
3. *How can we balance expected LOS against cost in a long-term financial plan with service and consequence risks?*



A Level of Service (LOS) analysis is a component of asset management planning that is significant and has a great deal of impact. One of the Town's core purposes is to provide safe drinking water to citizens and customers with a quality, quantity, and reliability they expect. Assets are used to provide those services and most of the resources devoted to asset management planning are spent on infrastructure. In this respect, physical assets are simply a

portion of what is required to deliver the various levels of service as determined by the Town. The Town needs to ensure the infrastructure performs to meet the level of service goals at an affordable and sustainable cost. An objective of a LOS analysis is to find a balance between the expected level of service and the cost of providing that level of service.

Additionally, as the Level of Service changes, there may be a corresponding change in the risk that is facing the organization. This will be explored later in the Plan.

A Level of Service analysis typically includes:

- Service identification with the identification of assets involved in providing the services and the stakeholders impacted.
- Determination of expectations with respect to services, and the attributes that matter to citizens.
- Determination of customer levels of service and their current and desired performance.
- Determination of technical levels of service for each strategic level of service
- Comparison of existing levels of service to expected strategic/technical levels of service
- An assessment of the lifecycle cost implications of moving from existing levels of service to expected (desired) levels of service over a forecast period.

Typically, an Asset Management Plan will be further defined in advancing levels of detail as more information becomes available and stakeholder expectations are further refined. The LOS analysis has been completed with the input of the Town staff. Workshops were held with staff to identify the range of services and activities performed by the Town.

Once services were identified, qualitative descriptions of the service levels were created on a 1-4 scale. On that scale, the Town's relative placement was identified, and confirmed with staff. This initial placement will allow the Town to objectively describe the services that it strives to provide and can begin to identify the costs to do so. Once that is well understood, a conversation about changes to levels of service, along with the corresponding change in cost, can be had.

As this is the first time the Town has documented its LOS in an Asset Management Plan, revisions are expected as more information becomes available and stakeholder expectations are further refined.

4.1 Customer / Citizen Levels of Service

Customer (or Citizen) Levels of Service (CLOS) are defined to align with the organization and stakeholder's vision and will help guide the infrastructure investment required to meet these goals. The CLOS is the highest level of service statement, and typically describes what the Customer sees or experiences.

Working with the Town staff, the following Strategic Levels of Service for the Water Utility has been defined based on the working knowledge of the Town's priorities:

The Town's water utility will operate in a way that:

- *Ensures the system meets requirements and industry standards;*
- *Ensures that potable water is available for customers reliably (less 8 hours for any service interruption) and with appropriate pressure (45-60 psi) and volume; and*
- *Ensures that rates are affordable for residents (between 85% and 114% of comparable benchmarks).*

While this describes the staff's interpretation of the Town's priorities, it is the highest-level statement from the Town about its service intentions. As such, Service Level Standards should be confirmed by the Town Council through annual budget process.

4.2 Technical Levels of Service

Technical Levels of Service (TLOS) are similar to the CLOS, except they typically describe the programs and activities that are required to ultimately create the CLOS that the customer experiences.

Each service can be delivered at varying degrees of acceptable performance – for example, where a municipality has a significant volume of unaccounted for water, proactively inspecting for mainline leaks can be an important part of leakage/integrity management. The frequency that the inspections are conducted defines the Technical Level of Service. In this example, not having a leakage detection program may be considered a 'Low' Level of Service, while the same inspection program conducted on an annual basis may be considered a 'High' Level of Service. Each example (Low vs. High) has its own cost to operate, as well as residual risks that may be present. Residual risks are discussed later in this report.

This Plan organizes the Town's Technical Services into the following categories:

- Affordability
- Capacity / Availability
- Condition
- Function

4.3 Current Level of Service Register

Levels of Service were described in terms of Customer and Technical along with current services, activities, and objectives and were defined on a 1 to 4 scale (1 being lowest service level and 4 being highest service level).

Using several sources of reference (including the Town staff experience, the Alberta Environment and Parks Regulatory Requirements, AWWA Standards and professional judgement based on the experience of Alberta water systems), Level 3 was identified as a best or recommended practice, with the Town's current activities placed in relation to those practices.

If the Town provided a level of service or conducted activities that exceeded the Level 3 practice, the level of service was identified as Level 4. If the Town provided a level of service below the Level 3 description, the level of service was identified as Level 1 or Level 2.

While there is no absolute answer for what is the 'right' level of service, each program decision carries with it a unique cost and risk residual. By understanding what the current level of service provided is, and what the related costs and risks are, the Town can make informed decisions about what resources are required. Following the methodology outlined above, an assessment was conducted with staff and identified **56** unique Levels of Service and evaluated them on a scale of "Low" to "High".

4.4 Observations on Level of Service

Following the Level of Service workshop, the following observations have been made. There are 20 Services that are currently identified at a below the identified best or recommended practices (i.e., Level of Service = 1 or 2). The Town should review these services and develop an approach to assess the gaps between current and recommended practices and take any sets determined necessary to close those gaps. The full Table of Town services and service levels is shown in Table 3 and are grouped into their corresponding Service Characteristic (Affordability, Capacity/Availability, Condition and Function).

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Table 3: Level of Service

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
1	Customer	Affordability	Water Rates are Affordable	Water Rates are comparable to other similar sized municipalities	Rates are more than 130% above comparable benchmarks	Rates are within 115-129% of comparable benchmarks	Rates are between 85-114% of comparable benchmarks	Rates are less than 84% of comparable benchmarks	
2	Technical	Affordability	Accuracy of billing	Meter Accuracy	Inspected Meters are recording <93% of measured water	Inspected Meters are recording 93-97% of measured water	Inspected Meters are recording 98% of measured water	Inspected Meters are recording >98% of measured water	
3	Technical	Affordability	The Water Utility is sustainable	The Water Utility has a plan to meet its' Customer Level of Service Statement/Targets and has adequate revenues and reserve balances to sustain itself into the future	MGA requires 3 year operating and 5-year capital budgets	MGA requires 3 year operating and 5-year capital budgets. Developed in-house, projected using simple methods	MGA requires 3 year operating and 5-year capital budgets. Budgets are supported by plans or long-term studies (ex IMP, growth, etc.)	The Utility has a 20-year spending plan that forecasts approved LOS Expenditures against forecast Revenues and shows an positive reserve balance	
4	Technical	Affordability	The Water Utility is sustainable	The ToB has a long-term capital investment plan that forecasts expenditures and revenues	MGA requires 3 year operating and 5-year capital budgets	MGA requires 3 year operating and 5-year capital budgets. Developed in-house, projected using simple methods	MGA requires 3 year operating and 5-year capital budgets. Budgets are supported by plans or long-term studies (ex IMP, growth, etc.)	The Utility has a 20-year spending plan that forecasts approved LOS Expenditures against forecast Revenues and shows a positive reserve balance	
5	Technical	Affordability	Minimize leakage	Water volume loss	>25%	15%-25%	5%-15% unaccounted water	<5%	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
6	Technical	Affordability	water meter servicing/bench testing	# of water meters	none	Water Meters tested at the time of installation	20-34	>34 (1%)	
7	Technical	Affordability	offsite levies are recalculated to ensure that the full costs of new development are reflected	Frequency that levy calculations are updated	Off Site levies are updated every 10 years	Off Site levies are updated every 7 years	Off Site levies are updated every 4 years	Off Site levies are updated every 2 years	
8	Technical	Affordability	Water Asset Management Program	An internal set of business processes is in place that allows the Toc to adequately manage the Water System in an optimal manner	No Asset Management Program in place	The Town has a basic inventory of assets and generally understands the condition of them. No forward-looking planning is competed regarding asset or service management	An Asset Management Program is in place, the Town understand the assets it owns, has a view of the long-term costs, and understands the LOS & Risks facing it.	An Asset Management Program is in place that the Town follows. Regularly reviewed and updated	
9	Technical	Affordability	Water main renewal program is in place	Degree that the main replacement program is financially optimized	No Main renewal Program in Place	Main Renewal Program is in place with modest funding and a forecast of replacing all the network mainlines within 150% of their anticipated life cycle	Main Renewal Program is in place with a target objective of replacing all the network mainlines within 120% of their anticipated life cycle.	Main Renewal Program in place with sufficient funding to reinvest in the water network at an optimized level to minimize overall cost	
10	Customer	Capacity/ Availability	Maximum length of Unplanned Outage	Time that any water customer is without water service due to an unplanned outage	> 12 Hours	8 - 12 Hours	< 8 Hours	< 6 Hours	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
11	Customer	Capacity/ Availability	Water Outages	The Number of times per annum that a customer experiences a planned or unplanned outage. Calculated on a system wide basis (e.g., x = # breaks/year/customers)	> one day every 5 years	One day every 5 years	One day every 10 years	< 1 day every 10 years	
12	Technical	Capacity/ Availability	The ToB has an adequate allocation of water to meet its future needs.	The Town regularly compares the forecast OCP/Growth Plan projections to current Town population and water consumption needs	The ToB has > 10% deficit of Water Allocation when compared to the projected growth over the next 20-year period	The ToB has a 10% deficit of Water Allocation when compared to the projected growth over the next 20-year period	The ToB has adequate Water Allocation to support projected growth over the next 20-year period	The ToB has a 30% excess of Water Allocation to support projected growth over the next 20-year period	
13	Technical	Capacity/ Availability	The Town has adequate Storage to meet Peak Demand and Fire Flow needs under normal operations	Number of hours of uninterrupted fire flow	Unable to maintain under normal operations	Peak demand, mid-August, 8 hours uninterrupted fire flow and service while maintaining pressure	Peak demand, mid-August, 12 hours uninterrupted fire flow and service while maintaining pressure	Peak demand, mid-August, 16 hours uninterrupted fire flow and service while maintaining pressure	
14	Technical	Capacity/ Availability	The Town has adequate Storage to meet Peak Demand and Fire Flow needs under loss of source	Number of hours of uninterrupted fire flow	Unable to maintain under normal operations	Peak demand, mid-August, 4 hours uninterrupted fire flow and service while maintaining pressure	Peak demand, mid-August, 8 hours uninterrupted fire flow and service while maintaining pressure	Peak demand, mid-August, 12 hours uninterrupted fire flow and service while maintaining pressure	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
15	Technical	Capacity/ Availability	Minimize breaks	The Break Rate Projection is an indicator of the overall system health. Calculated as the number of breaks per km per year. As tracking gets better, indicators can be quantitative	Break Rate is in significant incline	Break Rate is in incline	Break Rate is steady at 0%	Break Rate is in decline	
16	Technical	Capacity/ Availability	backup generator testing protocols	Frequency of generator testing	quarterly	monthly	weekly	daily	
17	Technical	Capacity/ Availability	utility locates for third party requests	time from request to locate	> 5 days	3-5 days	1-3 days	Same day	
19	Technical	Capacity/ Availability	a water demand management program is in place	robustness of the program	No Demand Management in place	A Demand Program is in place and is below typical industry and municipal standards.	ToB has a Demand Management Program in place, and it is comparable to similar municipalities	Demand Management Program is considered Class Leading, is auditable, and provides guidance to other municipalities	
20	Customer	Function	Aesthetically pleasing (taste, color, appearance) water	Number of water quality Complaints Annually	More than 20	10-20 complaints	Less than 10 complaints	Less than 5 complaints	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
21	Customer	Function	Water pressure is maintained at the recommended levels	Measure of Static Water Pressure in Mainlines	< 45 psi at times in certain areas of the network	No less than 45 - 60 psi at all times across the entire network	60-80psi at all times across the entire network	70-80 psi at all times across the entire network	Due to topography of the Town higher pressure cannot be obtained without causing issues at lower elevations of the system.
22	Technical	Function	SCADA (Supervisory Control and Data Acquisition Systems)	Measure of operator control over system	Do not have any. All manual control	System Functionality is limited.	Contemporary SCADA system that has remote access and control. responds to system events automatically. required limited direct supervisory control .	Starship Enterprise level control systems. State of the Art & Bleeding Edge. AI Augmented.	
24	Technical	Function	Fire Flows	Measure of the amount of water the Town that has sufficient water capacity under fire flow conditions	<75% compliance	>75% compliance	Sufficient capacity to meet ULC rating	Significantly Exceed ULC rating	
25	Technical	Function	Valve replacement program	4/yr. (360)	60% lifecycle program	80% lifecycle program	valve replacement program meets lifecycle	valve replacement cycle exceeds program requirements	
26	Technical	Function	hydrant replacement program	4/yr. (280)	60% lifecycle program	80% lifecycle program	hydrant replacement program meets lifecycle	hydrant replacement cycle exceeds program requirements	
27	Technical	Function	ToB operates a Valve exercise Program to ensure that Control Valves continue to operate effectively when required. The target is 100% of Valves operate when required	frequency of Valve exercises	<5 years	every 2-5 years	every 2 years	yearly	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
28	Technical	Function	hydrant maintenance program	pump down, visual inspection annually	<50% of hydrants are visually inspected and pumped down prior to winter	50% of hydrants are visually inspected and pumped down prior to winter	80% of hydrants are visually inspected and pumped down prior to winter	Every Hydrant is visually inspected and self draining prior to winter	
29	Technical	Function	Inspect and Maintain Distribution System Pumps in working order	Conduct a vibration test to monitor pump condition and predict potential failures	every 2-5 years	every 2 years	Annually	Every 6 months	
30	Technical	Function	Inspect and Maintain Distribution System Pumps in working order	Conduct Pump tests annually to monitor pump condition and ability to maintain pressure and flow	every 2-5 years	every 2 years	Annually	Every 6 months	
32	Technical	Function	flushing program-reg maintenance	annually	every 2-5 years	every 2 years	Annually	Every 6 months	
33	Technical	Function	flushing program-unidirectional	frequency	Never	Every 10 yrs.	Every 5yrs	Annually	Town to commit to unidirectional program every 5 years.
34	Technical	Function	storage reservoir cleaning program (incl structural inspection)	frequency	Never	10yr	5yr	3yr	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
35	Technical	Function	Infrastructure record drawings are accurate and held by the Town of Bentley	timeliness that records drawings are updated	Record Drawings are not updated	Record Drawings are updated > 12 months after construction	Updated Record Drawings within 6-12 months of construction/revisions	0-6 months	
36	Technical	Function	Water Network Modelling	The Town maintains and updates a Model of the Water Network	No Network Model in place	The Town updates the Water Network model between 5-10 years.	The Town updates the Water Network model every 5 years	The Town updates the water Network model every 2 years or less	
37	Technical	Function	The Town of Bentley supports development with the review of plans and applications	time to process applications from receipt to issue	20 days to review 40 days is the maximum to approve per MGA	15 days to review 30 days to approve	10 days to review 20 days to approve	5 days to review 10 days to approve	
38	Technical	Function	The Town of Bentley has design standards that specify infrastructure requirements	Time between reviews and updates of development standards. Reliance on Red Deer standards for some. We are currently developing the first version of standards for others	Design standards are updated every 10 years	Design standards are updated every 7 years	Design standards are updated every 4 years	Design standards are updated every 2 years	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
39	Technical	Function	The Town of Bentley has master plans for infrastructure to guide development and investments	frequency that master plans are updated. Specifically refers to IMP	Reviewed annually internally Major review and update every 8 years	Reviewed annually internally Major review and update every 6 years	Reviewed annually internally Major review and update every 4 years as per policy	Reviewed annually internally Major review and update every 2 years over and above policy	Town in the process of completing infrastructure masterplan.
40	Technical	Function	The Town of Bentley has a GIS system to aid in decision making	robustness of the Town's GIS platform	GIS system has the ability to display static infrastructure maps	GIS system displays maps that are updated quarterly by PCPS	GIS system displays maps that are updated internally on a monthly basis	GIS system contains real-time data and is used for complex decision making	
41	Technical	Function	new construction is inspected for compliance with bylaws and standards	percentage of post construction inspections for water connections	Water service connections are not inspected	0-33% of water service connections are inspected during construction and at the time of meter install	66-99% of water service connections are inspected during construction and at the time of meter install	100% of water service connections are inspected during construction and at the time of meter install	
42	Technical	Function	The Town enters into developer agreements to enable land and commercial development	timeliness of execution from development approval	Developer agreements prepared and executed within 8 weeks of subdivision or development approval	Developer agreements prepared and executed within 6 weeks of subdivision or development approval	Developer agreements prepared and executed within 4 weeks of subdivision or development approval	Developer agreements prepared and executed within 2 weeks of subdivision or development approval	
43	Technical	Function	The Town of Bentley has "full service" municipal engineering capability	volume of engineering design work contracted to the private sector (greater in-house capacity can lead to more flexibility and independence)	The Town outsources 100% of engineering design	The Town outsources > 50% of engineering design	The Town outsources > 20% of engineering design	The Town outsources 5% of engineering design	Due to amount of engineering design required, it is not feasible to have in -house engineering capacity.

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
44	Technical	Function	cross connection control	Robustness of the Cross Connection Program	No Cross Connection Program	A Cross Connection Program is in place and is below typical industry and municipal standards.	A Cross Connection Program is in place and is comparable to industry and other municipal standards	Cross Connection Program is considered Class Leading, is auditable, and provides guidance to other municipalities	
45	Customer	Regulatory	Clean, Safe Potable Water	Drinking water quality complies with statutory requirements	Not Compliant	Water Quality Testing is Completed, but records are not kept or up to date	All water quality testing, reports and records are kept up-to-date and pass AEP inspection	All water quality testing, reports and records are kept up-to-date and pass AEP inspection. Additional testing beyond scope from what AEP requires	
46	Technical	Regulatory	operator certification	certified operators that meet regulatory requirements	No certified operators	One operator	Level 1 WD and Level 1 WT & 2 Operators	More than two certified operators, with at least one operator with Level 2 WD certification	
47	Technical	Regulatory	Operator Training and Certification Maintenance	operator training programs to meet regulatory requirements	ToB does not have a Staff Training program in place.	ToB Staff to complete their own training for Certification maintenance.	ToB Manages its own Operator and Staff Training Program that meets the requirements of the Regulations	ToB manages its own Operator and Staff training Program that exceeds the requirements of the Regulations	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
48	Technical	Regulatory	testing	daily, as legislated	Not Compliant	Water Quality Testing is Completed, but records are not kept or up to date	All water quality testing, reports and records are kept up-to-date and pass AEP inspection	All water quality testing, reports and records are kept up-to-date and pass AEP inspection. Additional testing beyond scope from what AEP requires	
49	Technical	Regulatory	No Regulatory Compliance Breaches	Record of contraventions reported to AEP	Not reporting to AEP	Reporting some contraventions, but documentation is incomplete	Reporting all contraventions with documentation and no recommendations	No contraventions and passing AEP audit with no recommendations	
50	Technical	Condition	hydrant painting	every third year	Never	10yr	5yr	3yr	
51	Technical	Condition	Distribution pumps	replace 1/yr. deferred main until complete	>35	25-35 years	Replace 25 years	Replace 20-25 years	Distribution Pumps are very expensive. They are inspected yearly and will be replaced when necessary.
52	Technical	Condition	Shock and Airlift Wells	Process completed	never	6-10 years	3-6 years	2-3 years	
53	Technical	Function	A Connection Inspection Program	When private parties connect to a Town Distribution Main, steps are taken to minimize cross connection or contamination	No Action is taken to inspect private connections to the Town's main distribution system	Plans are approved in advance	Plans are approved in advance, and the private constructor is required to have a Town representative inspect/observe the site	Full onsite inspection is provided during construction and plans are approved in advance.	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
54	Technical	Function	Regular Inspection of Treatment Facilities	Periodic Inspections to prevent ingress of contaminants	No regular inspections of Treatment Facilities	Access is lifted and ingress points are secured.	Access is limited and ingress points are secured along with occasional inspections.	Daily comprehensive inspection of treatment facilities to monitor for contaminant ingress	

In reviewing the Services described with a 'Low' level of Service (I.e., at Level 1 or Level 2), there are Services that may need to be reviewed to ensure that they continue to support the Town's overall objectives. Some of these are:

- A Meter Replacement Program to ensure that the Town's water meters are operating at optimum efficiency, and are recording accurate flows;
- A Long-Term Budgeting approach and a 20-year Utility Model would help support effective decision making given the multi-generation life of utility assets;
- Regular updating of the Town's Off Site Levy calculations would ensure that the existing utility customers are not unduly subsidizing new construction;
- The Town has a limited cross connection control program in place.

Other Services that have been identified at a Level 1 or Level 2 that may warrant consideration, but may not be impactful to the overall service delivery or customer experience are:

- The Town has no Demand Management or Water Conservation program in place.
- The Town has limited SCADA or remote Operator Control functionality in the water treatment systems.

5 Risk

With the continuing emphasis on meeting levels of service, it's important that any risk to achieving this is identified, measured, and mitigated. The typical risk management approach is described as identifying, analyzing, and mitigating potential risks, and illustrated in the figure below.

To evaluate the potential risks facing the Town's water utility, the Alberta Environment and Parks Drinking Water Safety Plan (DWSP) Risk Assessment was consulted as a basis from which to work. The DWSP is a proactive method of assessing risk to drinking water quality, which better protects public health. Plans are based on an assessment of risk factors that could potentially adversely affect drinking water quality. The Town has a DWSP completed and in place.

The DWSP risk rating uses a 5-point scale for Likelihood (Most Unlikely, Unlikely, Medium, Probable, Almost Certain), and identified a 5-point scale for Consequence ranging from Insignificant, Minor, Moderate, Severe and Catastrophic. Each step on the 5-point scale has an escalating value between 1 and 16.

In addition to the risks identified in the DWSP, the events were assessed against the following consequence categories to ensure that a full assessment of the potential impact of a risk materializing:

- People & Staff: Impacts on Town staff.
- Reputation: Reputational impacts on the Town resulting from a materialized risk.
- Business Processes & Systems: Internal processes and systems that enable the smooth functioning of the Town.
- Financial: A Risk of financial loss for the Town.

By identifying an event that could potentially occur, then assessing its risk using the multiplied product of the likelihood and consequence ratings, a total risk score can be determined. Events that have a risk score of greater than 32 are deemed to be high risk.

By identifying an event that could potentially occur, then assessing its risk using the multiplied product of the likelihood and consequence ratings, a total risk score can be determined. Events that have a risk score of greater than 32 are deemed to be high risk. Table 4 outlines the risk scores and the level of risk associated with them.

Table 4: Risk Consequence Table

Risk Dimensions	Consequences				
People & Staff	Injuries or ailments not requiring medical treatment.	Minor injury or First Aid Treatment Case.	Serious injury causing hospitalisation or multiple medical treatment cases.	Life threatening injury or multiple serious injuries causing hospitalisation.	Death or multiple life threatening injuries.
Reputation	Internal Review	Scrutiny required by internal committees or internal audit to prevent escalation.	Scrutiny required by clients or third parties etc.	Intense public, political and media scrutiny. E.g. front page headlines, TV, etc.	Legal action or Commission of inquiry or adverse national media.
Business Processes & Systems	Minor errors in systems or processes requiring corrective action, or minor delay without impact on overall schedule.	Policy procedural rule occasionally not met or services do not fully meet needs.	One or more key accountability requirements not met. Inconvenient but not client welfare threatening.	Strategies not consistent with business objectives. Trends show service is degraded.	Critical system failure, bad policy advice or ongoing non-compliance. Business severely affected.
Water Utility Function	Wholesale water interruption < 8 hrs	Short term or localised non-compliance, non health related e.g. aesthetic or interruption 8-12 hrs	Widespread aesthetic issues or long term non compliance, not health related or interruption 12-24 hrs	Potential Illness or interruption >24 - 48 hrs	Actual illness or potential long term health effects or interruption >48 hrs
Financial	$5K	$50K	$100K	$250K	$500K

Likelihood			Insignificant	Minor	Moderate	Severe	Catastrophic
			1	2	4	8	16
Conceivable but extremely small chance of happening in next 4-5 years	1	Most Unlikely	1	2	4	8	16
Is possible and cannot be ruled out in next 4-5 years.	2	Unlikely	2	4	8	16	32
As likely as not to happen in next 4-5 years.	4	Medium	4	8	16	32	64
Would be expected to happen in next 4-5 years but there is a small chance it may not.	8	Probable	8	16	32	64	128
Would be confident this will happen at least once in next 4-5 years	16	Almost Certain	16	32	64	128	256

Risk Management Approach

Low	Manage by routine procedures
Medium	Board delegates responsibility to Commission Manager with written contingencies required to document and manage the consequence should it materialize.
High	Detailed action plan approved by NRDRWSC Board to reduce the Risk to Medium or Low.

Risk Calculation Example

One of the events discussed in the Workshops was related to the failure of pumps at the water treatment plant as a result of a power surge. There was no surge protection in the water treatment plant, and this event would have an impact on the supply of potable water for Residents and was assessed to have a Likelihood score of '4' – Medium.

Assessing this event against the 5 Consequence categories the following consequence ratings were determined:

Operational Impacts: Moderate (4)

People & Staff: Insignificant (1)

Business Processes & Systems: Moderate (4)

Reputation: Moderate (4)

Financial: Moderate (4)

The Maximum value of the Consequences is '8', multiplied by the Likelihood score of '4' produces a total Risk Score of 32, which falls into the High category as defined by the DWSP.

After the initial workshop with Town staff installed surge protection and the risk has now been mitigated. The Likelihood score is now reduced to 1 with the total risk score being reduced to 4.

Following the identification and analysis of potential risks, the mitigation approach is a key step for the Town. An appropriate and documented approach to managing risk will support effective decision making and ensure that the risk management approach is well understood across the organization and approved by the Board. It is suggested here that risks assessed as High (Likelihood x Consequence >32) have a detailed action plan approved by the Town Council, and that those plans identify a path to reduce the risk to Medium or Low. Other risk ratings can be managed through routine procedures (Low Risk) and with written contingencies approved by the Town CAO or appropriate delegated authority (Medium Risk).

5.1 Current Risk Register

Working with the Town Staff, 87 risk items were reviewed (including those from the AEP DWSP). For each of these risk potentials, the likelihood of the event happening was assessed, as well as the consequence resulting from the occurrence. These consequences ranged from the functional operations of the Town water system (as outlined in the DWSP risk register) along with the additional consequence categories to ensure that a full picture of the risk profile was created.

Through the evaluation process, 12 risk items were assessed to be at a Medium level of Risk (with the product of Likelihood x Consequence >=8) and 3 risks were assessed as a High Risk (with the product of Likelihood x Consequence >=32). Table 5 below contains the risks identified in the Medium and High categories.

The complete Risk Register is contained in Appendix 3.

The Town has 3 Risks that were identified as High. One risk related to the Treatment Plants (contamination of potable water from ingress to a Reservoir) and two risks related to the customer responsibilities (connection pipe installation and sizing that may cause contamination issues for the user).

Table 5: Assessed Risks Rated HIGH

Risk Type	Risk Description	Cause of Potential Failure	Comment	Current Monitoring	How Risk is Currently Controlled	Risk Score
Network Risks	Contamination of water due to ingress of water as a result of inadequate structure or maintenance.	Due to lack of structural integrity of reservoir as a result of poor design or maintenance	Common weaknesses are lids, ducting holes for cables, poorly sealed roof joints, air vents.	Divers monitor deficiencies, visual inspections of hatches. Significant drop in cl2 residual would begin investigation.	Tritoflex sealant installed on #3 reservoir, no concerns with other reservoirs	32
Customer Risks	Contamination of water in supply due to reduction in disinfectant levels resulting from long residence time of water in pipe caused by incorrectly sized/long service pipe.	Disinfectant decay due to water remaining in pipe for extended period	Service may have been installed without any consideration of residence time in service pipe	None	None	32
Customer Risks	Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures.	As a result of unsatisfactory or damaged new connections due to bad installation and failure to follow a suitable code of practice	If the pipe ends are not protected during installation, then swarf or dirt may enter the pipe and cause contamination.	None	None	32

5.2 Management Approach

As part of a concerted approach to understand Levels of Service and Risk, and more importantly, to view them as interconnected, it is important to view the linkages between Risk and Level of Service. This is not an absolute exercise, but by viewing the two together, decision makers can often identify key areas for change.

In this exercise, the Levels of Service with a Low rating (1 or 2) with corresponding Risks have been identified. Low Levels of Service that are aligned with higher risks may warrant management attention to determine if the Risks are within acceptable tolerances. If the Risks are beyond acceptable tolerances, then additional actions or changes to the Levels of Service may be in order.

Table 6: *LOS & Risk Management Approach*

Service Description Indicator	LOS Description	Risk Description	Risk Description
Maximum time that any water customer is without water service due to an unplanned outage	8 - 12 Hours	Failure to meet demand due to inability to operate valves as required.	
SCADA systems in Place - Measure of operator control over system	Do not have any. All manual control	Loss of supply resulting from failure of telemetry.	
Frequency of Uni-Directional Flushing Program	Never	Failure to meet demand due to inability to operate valves as required.	
Robustness of the Cross Connection Program	A Cross Connection Program is in place and is below typical industry and municipal standards.	Contamination of water as a result of cross-connection	Contamination of water in supply as a result of inadequate hygiene practice at bulk water filling stations
SCADA (Supervisory Control and Data Acquisition Systems)	Do not have any. All manual control	Loss of supply resulting from failure of telemetry.	

Service Description Indicator	LOS Description	Risk Description	Risk Description
When private parties connect to a Town Distribution Main, steps are taken to minimize cross connection or contamination	Plans are approved in advance, and the private constructor is required to have a Town representative inspect/observe the site	Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures.	Contamination of water in supply as a result of connection to unwholesome water due to lack of knowledge/ supervision.
Periodic Inspections of Treatment Facilities to prevent ingress of contaminants	Access is limited, and ingress points are secured. Regular observations by staff	Contamination of water due to ingress of water as a result of inadequate structure or maintenance.	

6 Life Cycle Management Plan

The lifecycle management plan outlines how the community intends and plans to manage and operate its assets at the agreed levels of service while optimizing life cycle costs. To be successful, it needs to balance incoming revenues against operation costs while meeting maintenance, renewals, and upgrades priorities of the asset portfolio.

For the purposes of this report, a 100-year timeframe was adopted in order to give the Town a long-term view of the long-life infrastructure it manages.

A whole-of-life approach is used in Life Cycle Management. This approach is used to forecast the time of 'failure' of assets and project when they will require funding for renewal or replacement while considering day to day operations and maintenance. It is understood that each asset has a finite life and in the case of significant scale assets, they are made up of components that also have a finite life.

It should be noted that while this approach provides a transparent view of the long-term costs of owning and maintaining an asset, it is a long-term forecast and an estimate of future costs. As an asset is actively managed through its life, decisions need to be made based on the performance and functionality of the asset.

Functional requirements change over decades of operations (e.g., growth and water demand, environmental regulations), and what may have been suitable and desirable when constructed may not remain constant over the life of the asset.

These types of decisions are an important factor in planning for a significant renewal, replacement or upgrade of an asset as well as determining the ideal operations and maintenance budget to achieve optimum asset longevity.

By using information for each of the assets that includes:

- the total expected life,
- the current remaining life, and
- the estimated asset replacement value,

the total estimated and forecasted life and cost can be calculated.

This approach provides a visual and tangible method of assessing the recurring costs of an asset to anticipate the funding required to operate it over the long term. Note that significant components of an asset all require a regular and major reinvestment at the end of their useful lives to ensure the asset continues functioning at an appropriate level.

7 Long Term Financial Plan

The cost estimating method used in this report is based on an estimation of current Alberta construction unit costs multiplied by the volume of assets needing replacement. The anticipated life cycle for assets is shown in the Tables in previous sections.

As the life cycle of each infrastructure component comes to an end of life, the anticipated renewal cost is forecast into the future.

Given that each system component has its own anticipated useful life before requiring refurbishment, a regular and recurring cycle of reinvestment was modelled through the anticipated life of the asset. This recurring reinvestment represents the capital renewals of major systems required to maintain the maximum useful life of the assets. In the preliminary stages of an asset management plan, a number of assets identified as already having outlived their useful life may appear as requiring renewal in the first year. While these asset components should be reviewed for required replacement, it is not generally feasible or required to replace all assets in the next capital year and **prioritization** will be required. As the asset management plan progresses and is further refined, in time, this renewal spike will appear reduced.

The total asset replacement value provided is a high-level estimate for the purposes of asset management using generalized construction types. Since there was no on-site review or a comprehensive review of detailed information for each asset, certain items are assumed, and the costing may not account for specialty items or challenging site conditions etc. Across the portfolio the total asset replacement value is believed to be a legitimate tool for forecasting long term costs.

Based on our costing breakdown outlined above, the following Table 7 provides a summary of the current replacement value of the Town's assets, and the annualized replacement cost for the asset category (based on the forecast replacement schedule), and a calculation of the forecast Reinvestment rate per year as a percentage of total value.

Table 7: Annualized Reinvestment Rate ($/year Replacement)

Asset Name	Current Replacement Value	Annualized Cost $ / Year	Reinvestment % per year
Water Pressure Main	$11,928,800	$119,000	1.0
Water Wells	$450,000	$9000	2.0
Water Reservoir	$2,485,000	$31,000	1.3
Water Treatment Plant	$310,000	$6,200	2.0
Hydrants	$440,000	$6,400	1.3
Combined Total	**$15.6M**	**$172K**	**1.1%**

As indicated in Table 7, the Town's total annual cost of infrastructure renewal based on the forecast lifecycles is $172,000 per year, or 1.1% of the total infrastructure value. This low reinvestment rate is due to the significant value assets (Water Pressure Mains and Reservoirs) having reasonably long-life cycles. While their useful lives are long, their replacement values will represent a significant cost to the town. Planning for these asset replacements well in advance will ensure that the Town has the fiscal capacity to maintain and replace these assets when they reach the end of their useful or reliable life.

The following Figures outline the reinvestment forecast for all asset classes over the next 100 years.

Figure 6: Water System 100-year Life Cycle Cost by Year and Asset Class

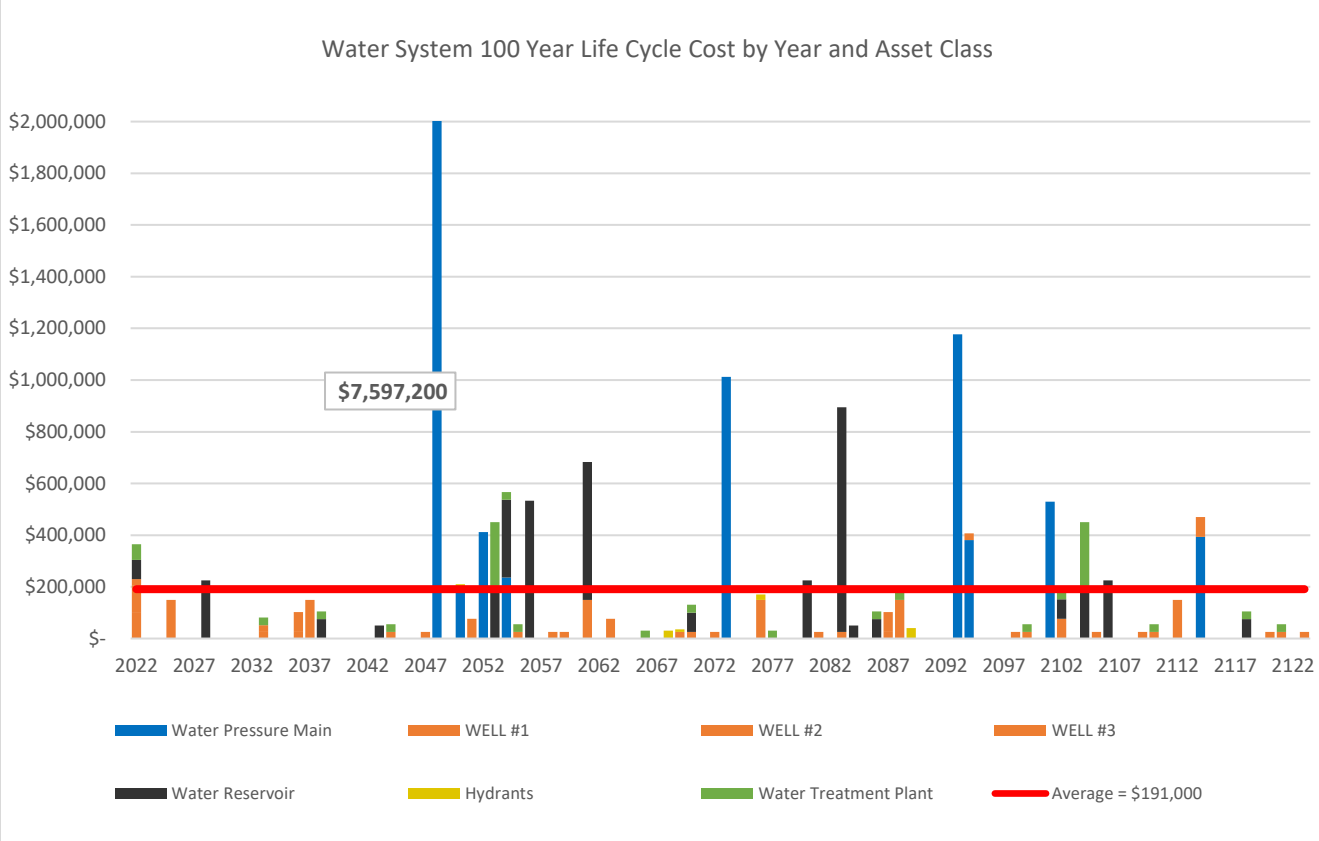


Figure 7: Water Pressure Main 100-year Life Cycle Cost by Year

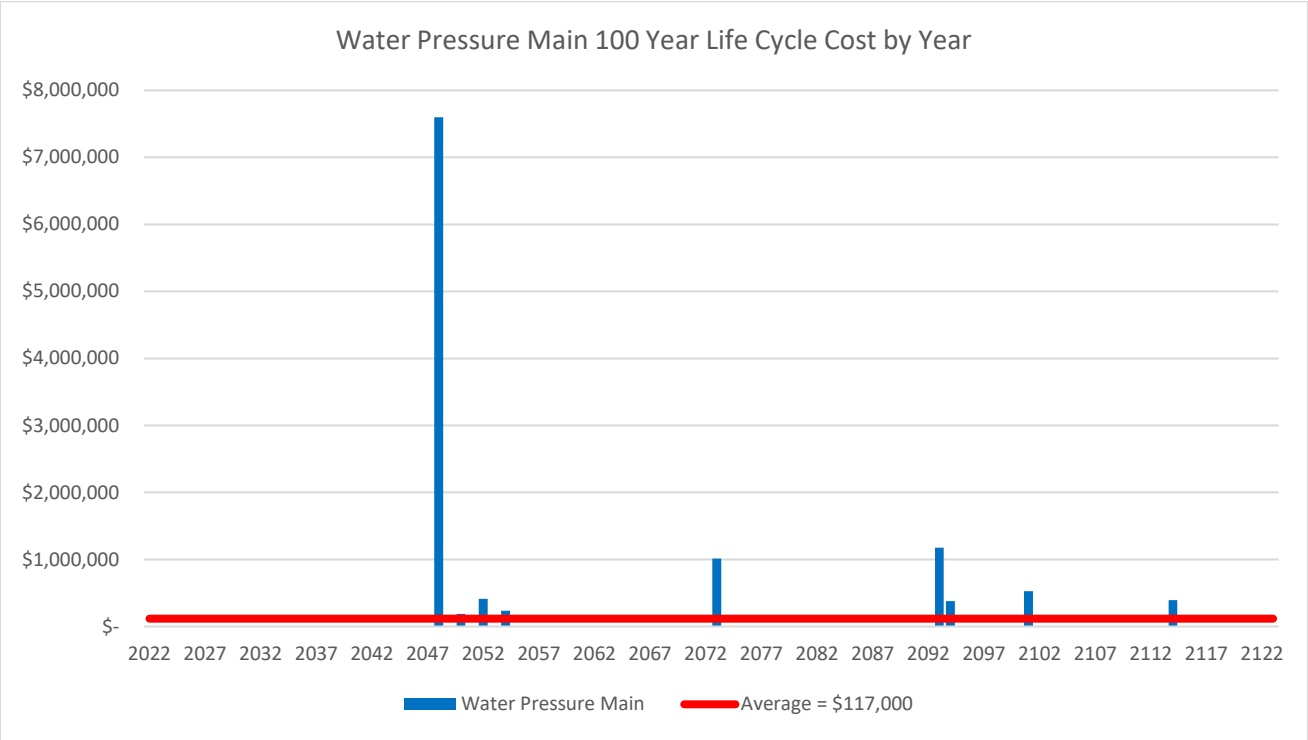


Figure 8: Water Treatment Facility and Wells 100-year Life Cycle Cost by Year

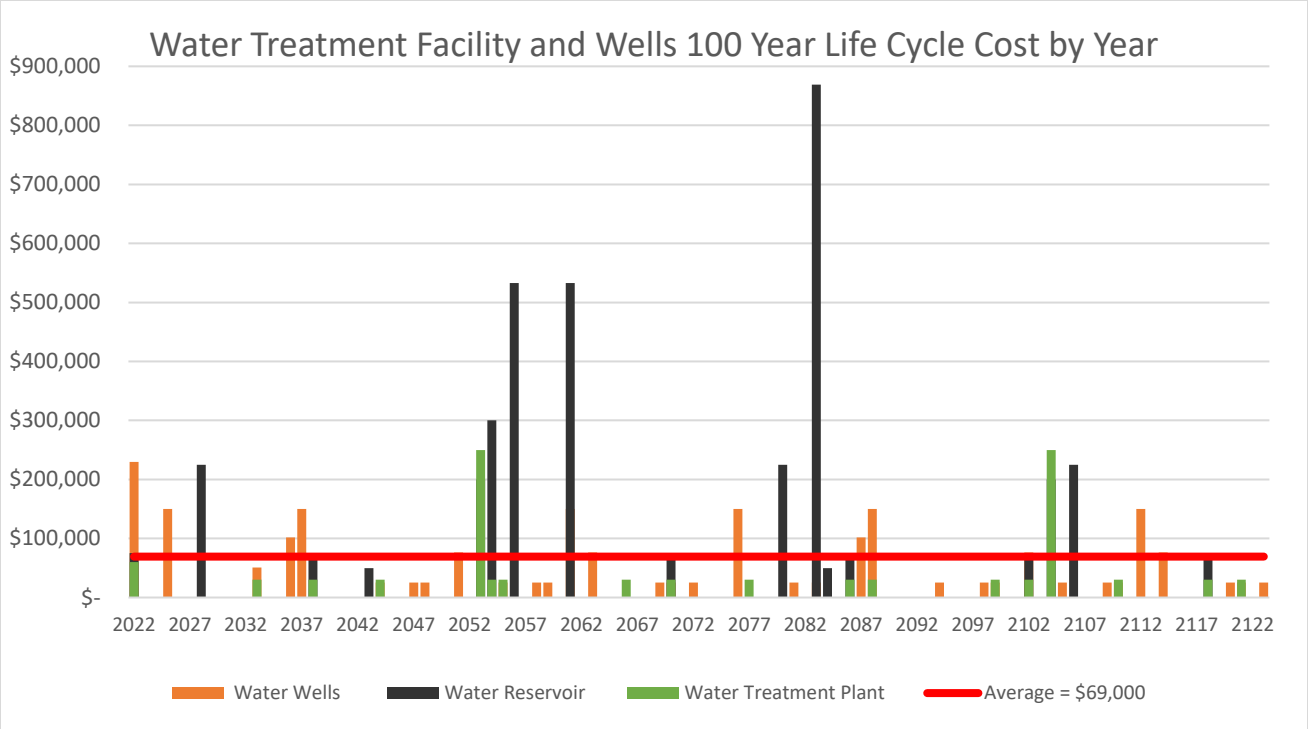
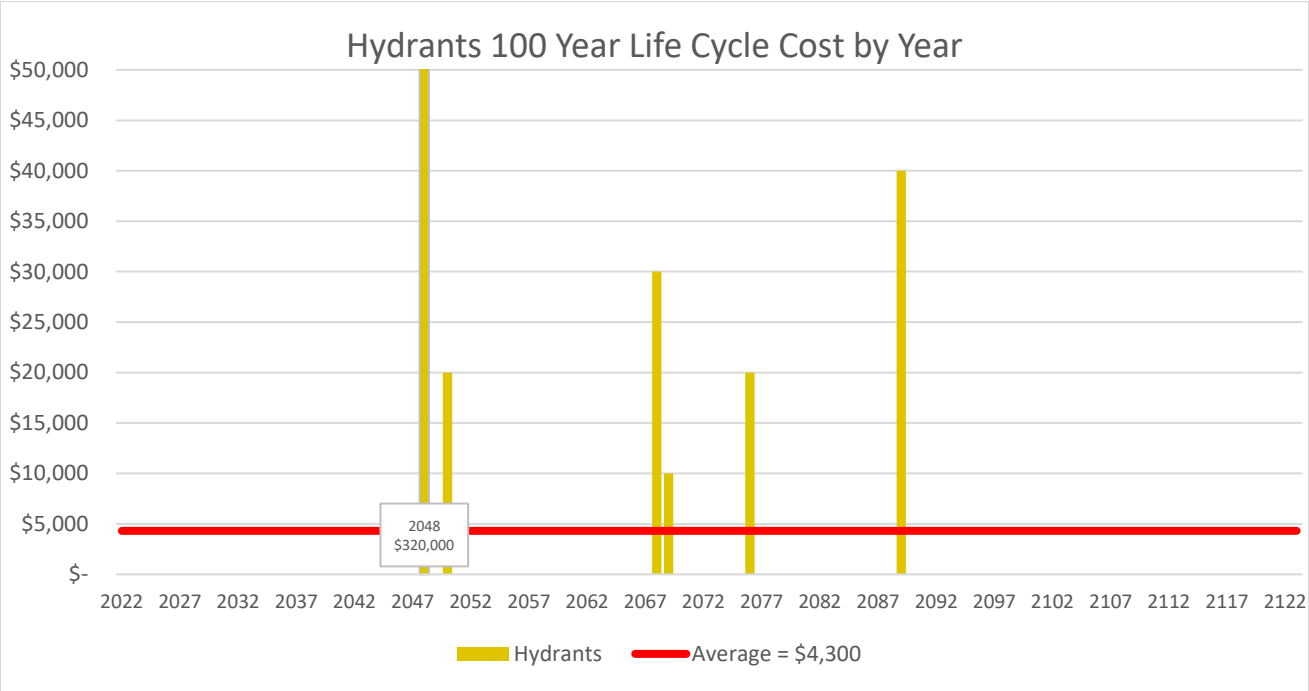


Figure 9: Hydrants 100-year Life Cycle Cost by Year



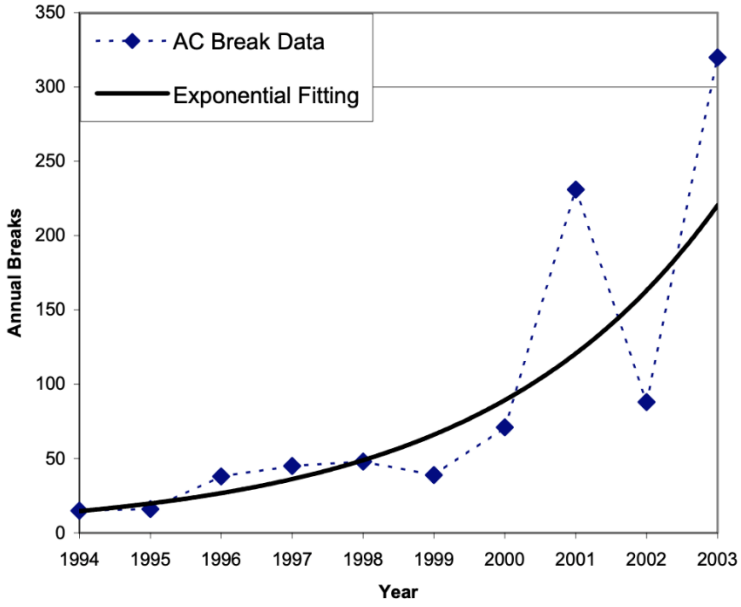
7.1 Observations

Generally, the mid-term forecast for the Water Utility expenses appears modest. Over the duration of the 100-year analysis, an average of $172,000/year has been identified as the annual average rehabilitation spend. The next significant investment exceeding that average will be related to the end-of-life failure of the AC water main network, which is forecast to approach a total of $7.5 M in investments (anticipated to be in 2048). As noted earlier, the expected life of AC water main is approximately 75 years, and subject to a variety of factors that may influence its functional life. The Town should be anticipating that as the AC water mains age, their performance will deteriorate and accelerate.

Figure 10 below illustrates the observed failure rate over time based on empirical data gathered by the National Research Council of Canada using City of Regina data.

Other, lesser cost investments in the near term may also be related to the Raw Water Wells and Reservoirs all may require updating of the electrical and controls systems and other regular maintenance based on the age of the assets. There is no performance data to suggest that they are in need of renewal, however as all assets age, their reliabilty and performance degrade. The Town should consider a more detailed assessment of these systems and plan for any updates required.

Figure 10: Observed AC Main Pipe Failure Data – National Research Council of Canada



8 Future Demand

In order to establish the existing and future demands for the Town the following items should be considered:

- Population change
- Change in demographics
- Seasonal Factors
- Community Expectations
- Technological Changes
- Economic Factors
- Environmental Awareness and Resiliency requirements

The demand drivers above will influence future service delivery and requirements. These new services will be delivered by managing the Community's existing assets, upgrading, and providing new infrastructure to meet demand. This demand will be managed by additional non-asset solutions that include insuring against critical risks and managing network failures.

As part of an annual planning process, the Town Council and Staff should undertake an examination of the trends the Town is experiencing and how they will impact the future service and infrastructure requirements.

Stantec is in the process of preparing a servicing study for the Southeast Area Structure Plan, which also takes into account buildout of all future development area within the Town's existing limits. **The modeling and recommendations are still underway at the time of this report, but the preliminary findings are summarized below.**

Groundwater Wells

The Town's current (2021) average daily water demand is 290 m^3/day, which is supplied by three wells that have been pump tested and licensed/approved to pump up to their sustainable long-term yields. The wells have a combined capacity to supply 548 m^3/day, which is 189% of the average daily demand. The wells also have capacity to refill the reservoirs in the event that high demand for fire water or other temporary demand well in excess of the average daily demand is encountered. Without adding a fourth production well the Town has residual capacity to accommodate approximately 3% annual growth for more than 20 years.

Even with the conservative growth rate applied for planning and design, the Town's current wells are capable of service into the future with the likely need to add a fourth well to meet the projected demand for the full Town and southeast area buildout with a high level of confidence. Note that the individual wells also have higher allowable maximum diversion rates than the average daily maximums as presented above which can be leveraged to calculate limitations of the wells to meet potential short-term, high-demand situations/scenarios such as reservoir filling/fire water demand. However, if maximum daily withdrawals are made, the overall annual volumetric approvals still apply.

Reservoir Capacity

The Town's reservoirs have a total combined capacity of 1,778 m^3. Currently 1,269 m^3 of that capacity is utilized for the maximum daily demand, emergency storage, and fire flow storage (assuming 150 l/s fire flow for two hours). The future commercial/industrial areas are being planned for an average demand of 0.05 l/s/ha with a 2-hour fire flow of 150 l/s. Combined with the Town's future residential buildout within Town limits, it is estimated that the ultimate reservoir volume will need to be approximately 2,180m3. Depending on timing of future buildout and the life expectancy of the water treatment plant and reservoirs, this additional volume could be accommodated either by adding more capacity to the reservoirs at the water treatment plant, which would be challenging to expand with the current site constraints, or by replacing the water treatment plant with a new facility and additional storage.

Water Treatment and Pumping

The water treatment plant currently utilizes chlorination treatment without any filtration. If the existing wells and future wells continue to be classified as non-GUDI wells (Groundwater Under Direct Influence of surface water), and these

wells continue to produce high quality ground water as what is being produced, the chlorination process for disinfection will be adequate to claim 4-log reduction credit on virus inactivation.

The existing pump station is not known to have mechanical issues that need immediate attention, but the addition of surge protection is necessary and recommended to protect the electrical system and pump motors. To meet the long-term future demands, the pump station will need be upgraded to increase the pumping capacity and storage volume. Like the reservoir capacity, this can potentially be accommodated by upgrades at the existing water treatment plant but depending on timing for increases in demands and the estimated lifespan of the facility, the Town may want to consider replacing the water treatment plant and reservoirs in the relatively long-term future (approximately 20 years for an assumed 3% annual growth).

The Town is currently working on planning for the Town's growth over the next 20 years. With respect to Asset Management, it will be incumbent on the Town to add the new assets as they are brought online. This will allow the Town to further mange the replacement costs well into the future for their Water Assets. Planned upgrades will include assets like an additional Water Treatment plant, new water pipes, hydrants, water wells, etc.

9 Improvement Plan

An asset management plan is meant to be a living document that evolves every year to inform service decisions and long-term financial planning. In this initial stage of the plan, only a very high level of information was incorporated. Future iterations of the AM plan could evolve into more detail, which will lead to greater accuracy should the Town find benefit in more detailed information. It is recognized that it may take a number of planning cycles to evolve the plan to a sufficient level of detail for good asset management.

Based on the engagements with staff, the assessment of the data on hand, and the analysis of life cycle forecasts, the overall recommendation for the Town is to continue being a conscientious operator of the water system, and to be mindful of the forecast 2048 spike in AC Pipe failures. Knowing that this date represents the assumed 'end of life' for the AC mains, the Town can make plans to ensure that when the performance does deteriorate, that adequate financial resources are in place to effectively replace the network in an efficient manner.

The following are more detailed recommendations for improvements based on the structure of this Plan.

9.1 Asset Register

- Create a Record/Register of water asset performance and failures to ensure that the current performance is monitored in a systemic manner. Ensuring that the Town's infrastructure performance is accurately captured and recorded can serve as a valuable rearward looking dataset to forecast future performance.
- Ensure that the Town's physical assets are captured in not only the Asset Register but are accurately recorded in the Town's Tangible Capital Asset List as well as the Town's GIS Platform.

9.2 Level of Service

- Review the noted services that have been identified as Low (at a LOS 1 or 2) and review any changes required.

9.3 Risk

- Review the four noted Risks that have been identified as High (Risk Score >32) and determine if mitigating action is required. Review these risks (and the current services mitigating them) with Council and determine if they are within the Town's Risk Tolerance.
- Plan to conduct an inspection of the well casings to determine their integrity.
- Investigate the addition of electrical Surge Protection at the water treatment plant to ensure that the plant telemetry continues operating in the event of an electrical problem.

9.4 Lifecycle Management Plan

- Actively monitor the performance of the underground assets as they approach the end of their forecast lifecycle to ensure that the Town has the fiscal capacity to replace them when required.

9.5 Long Term Financial Plan

- Develop a 20-year Financial Model for the Town's water utility to forecast long-term revenues, expenses, reserve balances and rates.
- Table the Asset Management Plan (along with the Long-Term financial plan) with Council

01

Appendix 1

Asset Register

A	B	C	D		E	F	G	H	I	L	M	N	O
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**Diameter (mm)**	**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**Length (m)**	**Unit Cost**	**Historical Cost**	**Asset Replacement Cost**	**Current Total Cost**
GIS #	**Water Pressure Main**												
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	150	1973	75	26	2048	**12.00**	$ 1,300	$ -	$ 15,600	$ 15,600
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	150	1973	75	26	2048	**106.00**	$ 1,300	$ -	$ 137,800	$ 137,800
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	150	1973	75	26	2048	**114.00**	$ 1,300	$ -	$ 148,200	$ 148,200
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	150	1973	75	26	2048	**131.00**	$ 1,300	$ -	$ 170,300	$ 170,300
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	200	1973	75	26	2048	**102.00**	$ 1,300	$ -	$ 132,600	$ 132,600
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	200	1973	75	26	2048	**101.00**	$ 1,300	$ -	$ 131,300	$ 131,300
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	200	2014	100	92	2114	**152.00**	$ 1,300	$ -	$ 197,600	$ 197,600
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	150	1973	75	26	2048	**124.00**	$ 1,300	$ -	$ 161,200	$ 161,200
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	150	1973	75	26	2048	**98.00**	$ 1,300	$ -	$ 127,400	$ 127,400
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	150	1973	75	26	2048	**124.00**	$ 1,300	$ -	$ 161,200	$ 161,200
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	150	2001	100	79	2101	**93.00**	$ 1,300	$ -	$ 120,900	$ 120,900
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	150	2001	100	79	2101	**27.00**	$ 1,300	$ -	$ 35,100	$ 35,100
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	150	1993	100	71	2093	**364.00**	$ 1,300	$ -	$ 473,200	$ 473,200
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	200	1973	100	51	2073	**159.00**	$ 1,300	$ -	$ 206,700	$ 206,700
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	200	1973	75	26	2048	**121.00**	$ 1,300	$ -	$ 157,300	$ 157,300
0201	**46 St (46 St - East Side)**	B1B	AC	150	1973	75	26	2048	**21.00**	$ 1,300	$ -	$ 27,300	$ 27,300
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	150	1973	75	26	2048	**102.00**	$ 1,300	$ -	$ 132,600	$ 132,600
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	150	1973	75	26	2048	**113.00**	$ 1,300	$ -	$ 146,900	$ 146,900
0189	**46 St (48 Ave - South End)**	B1B	AC	150	1973	75	26	2048	**16.00**	$ 1,300	$ -	$ 20,800	$ 20,800
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	150	1973	100	51	2073	**102.00**	$ 1,300	$ -	$ 132,600	$ 132,600
N/A	**56 Ave (48A St - East End)**	B1B	PVC	200	2014	100	92	2114	**58.00**	$ 1,300	$ -	$ 75,400	$ 75,400
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**177.00**	$ 1,300	$ -	$ 230,100	$ 230,100
0145	**55 Ave (49 St - East End)**	B1B	AC	150	1973	75	26	2048	**18.00**	$ 1,300	$ -	$ 23,400	$ 23,400
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	200	2014	100	92	2114	**93.00**	$ 1,300	$ -	$ 120,900	$ 120,900
138, 139	**54 Ave (50 St - East End)**	B1B	AC	150	1973	75	26	2048	**52.00**	$ 1,300	$ -	$ 67,600	$ 67,600
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	150	2001	100	79	2101	**287.00**	$ 1,300	$ -	$ 373,100	$ 373,100
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**194.00**	$ 1,300	$ -	$ 252,200	$ 252,200
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	150	1993	100	71	2093	**222.00**	$ 1,300	$ -	$ 288,600	$ 288,600
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	150	1993	100	71	2093	**60.00**	$ 1,300	$ -	$ 78,000	$ 78,000
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	150	1993	100	71	2093	**105.00**	$ 1,300	$ -	$ 136,500	$ 136,500
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	150	1993	100	71	2093	**56.00**	$ 1,300	$ -	$ 72,800	$ 72,800
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	150	1993	100	71	2093	**43.00**	$ 1,300	$ -	$ 55,900	$ 55,900
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	150	1993	100	71	2093	**33.00**	$ 1,300	$ -	$ 42,900	$ 42,900
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	200	1993	100	71	2093	**22.00**	$ 1,300	$ -	$ 28,600	$ 28,600
0172	**52 Ave (West End - 50 St)**	B1B	AC	150	1973	75	26	2048	**7.00**	$ 1,300	$ -	$ 9,100	$ 9,100
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	200	1973	75	26	2048	**182.00**	$ 1,300	$ -	$ 236,600	$ 236,600
0168	**52 Ave (49 St - 48 St)**	B1B	AC	200	1973	75	26	2048	**186.00**	$ 1,300	$ -	$ 241,800	$ 241,800
0167	**52 Ave (48 St - 47 St)**	B1B	AC	200	1979	75	32	2054	**182.00**	$ 1,300	$ -	$ 236,600	$ 236,600
0166	**52 Ave (47 St - 46 St)**	B1B	AC	200	1975	75	28	2050	**146.00**	$ 1,300	$ -	$ 189,800	$ 189,800
0193	**51 Ave (West End - 50 St)**	B1B	AC	150	1973	75	26	2048	**7.00**	$ 1,300	$ -	$ 9,100	$ 9,100
0122	**51 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**201.00**	$ 1,300	$ -	$ 261,300	$ 261,300
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	150	1973	75	26	2048	**173.00**	$ 1,300	$ -	$ 224,900	$ 224,900
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	150	1977	75	30	2052	**153.00**	$ 1,300	$ -	$ 198,900	$ 198,900
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	150	1973	75	26	2048	**175.00**	$ 1,300	$ -	$ 227,500	$ 227,500
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	150	1994	100	72	2094	**293.00**	$ 1,300	$ -	$ 380,900	$ 380,900
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	200	1973	75	26	2048	**192.00**	$ 1,300	$ -	$ 249,600	$ 249,600
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	200	1973	75	26	2048	**112.00**	$ 1,300	$ -	$ 145,600	$ 145,600
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	200	1973	75	26	2048	**25.00**	$ 1,300	$ -	$ 32,500	$ 32,500
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	150	1973	75	26	2048	**121.00**	$ 1,300	$ -	$ 157,300	$ 157,300
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	150	1973	75	26	2048	**161.00**	$ 1,300	$ -	$ 209,300	$ 209,300
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	200	1973	75	26	2048	**98.00**	$ 1,300	$ -	$ 127,400	$ 127,400
0194	**50 Ave (49 St - 48 St)**	B1B	AC	200	1973	75	26	2048	**168.00**	$ 1,300	$ -	$ 218,400	$ 218,400
0195	**50 Ave (48 St - 47 St)**	B1B	AC	200	1973	75	26	2048	**173.00**	$ 1,300	$ -	$ 224,900	$ 224,900
0103	**50 Ave (47 St - 46 St)**	B1B	AC	200	1973	75	26	2048	**158.00**	$ 1,300	$ -	$ 205,400	$ 205,400
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	200	1973	100	51	2073	**108.00**	$ 1,300	$ -	$ 140,400	$ 140,400
0191	**50 Ave (45 St - East End)**	B1B	PVC	200	1973	100	51	2073	**295.00**	$ 1,300	$ -	$ 383,500	$ 383,500
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	150	1977	75	30	2052	**164.00**	$ 1,300	$ -	$ 213,200	$ 213,200
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	150	1973	75	26	2048	**156.00**	$ 1,300	$ -	$ 202,800	$ 202,800
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	150	1973	75	26	2048	**19.00**	$ 1,300	$ -	$ 24,700	$ 24,700
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	150	1973	75	26	2048	**99.00**	$ 1,300	$ -	$ 128,700	$ 128,700
0184	**49 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**188.00**	$ 1,300	$ -	$ 244,400	$ 244,400
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	150	1973	75	26	2048	**172.00**	$ 1,300	$ -	$ 223,600	$ 223,600
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	150	1973	75	26	2048	**173.00**	$ 1,300	$ -	$ 224,900	$ 224,900
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	150	1973	75	26	2048	**153.00**	$ 1,300	$ -	$ 198,900	$ 198,900
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	150	1973	100	51	2073	**115.00**	$ 1,300	$ -	$ 149,500	$ 149,500
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	200	1973	75	26	2048	**154.00**	$ 1,300	$ -	$ 200,200	$ 200,200
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	200	1973	75	26	2048	**159.00**	$ 1,300	$ -	$ 206,700	$ 206,700
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**193.00**	$ 1,300	$ -	$ 250,900	$ 250,900
0109	**48 Ave (49 St - 48 St)**	B1B	AC	150	1973	75	26	2048	**188.00**	$ 1,300	$ -	$ 244,400	$ 244,400
0108	**48 Ave (48 St - 47 St)**	B1B	AC	150	1973	75	26	2048	**172.00**	$ 1,300	$ -	$ 223,600	$ 223,600
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	150	1973	75	26	2048	**153.00**	$ 1,300	$ -	$ 198,900	$ 198,900
	45 St Lane (Lane - East Side)	**Proposed**	PVC	150	Proposed	100	N/A	N/A	**44.00**	$ 1,300	$ -	$ 57,200	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	200	Proposed	100	N/A	N/A	**511.00**	$ 1,300	$ -	$ 664,300	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	200	Proposed	100	N/A	N/A	**43.00**	$ 1,300	$ -	$ 55,900	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	200	Proposed	100	N/A	N/A	**371.00**	$ 1,300	$ -	$ 482,300	$ -
	Subtotal - Water Pressure Main								**9176**			**$ 11,928,800**	**$ 11,928,800**

A	B	C	D	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
GIS #	**Water Pressure Main**													
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ 15,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ 137,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ 148,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ 170,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ 132,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ 131,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ 161,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ 127,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ 161,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ 157,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ 27,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ 132,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ 146,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ 20,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 230,100	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ 23,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ 67,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 252,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 9,100	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 236,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 241,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 236,600	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ 189,800	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 9,100	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 261,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 224,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 198,900	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 227,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 249,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ 145,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ 32,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 157,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ 209,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 127,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 218,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ 224,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 205,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 213,200	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 202,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ 24,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 128,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 244,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 223,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ 224,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 198,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ 200,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ 206,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 250,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 244,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ 223,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 198,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			**$ -**	**$ -**	**$ -**	**$ 7,597,200**	**$ -**	**$ 189,800**	**$ -**	**$ 412,100**	**$ -**	**$ 236,600**	**$ -**	**$ -**

A	B	C	D	BI											
Asset ID	Asset Name (Between)	Asset Code	Material	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
GIS #	Water Pressure Main														
0142	50 St(North Wat Plug F3 - 55 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	50 St (55 Ave - 54 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	50 St (54 Ave - 53 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	50 St (53 Ave - 52 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	50 St (52 Ave - 51 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	50 St (51 Ave - 50 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	48A St (55 Ave - Cul-de-sac)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	49 St (55 Ave - 54 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	49 St (54 Ave - 53 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	49 St (53 Ave - 52 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	47A St (55 Ave - 54 Ave)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	47A St (54 Ave - Cul-de-sac)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	54 Ave Lane (47A St - 46A St)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	46 St Lane (52 Ave - 51 Ave)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	46 St (51 Ave - 50 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	46 St (46 St - East Side)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	46 St (50 Ave - 49 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	46 St (49 Ave - 48 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	46 St (48 Ave - South End)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	45 St (50 Ave - 49 Ave)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	55 Ave (50 St - 49 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	55 Ave (49 St - East End)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	54 Ave (50 St - East End)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	54 Ave (49 St - 47A St)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	53 Ave (50 St - 49 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	53 Ave Close (Cul-de-sac - 49 St)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	46A St (53 Ave Close - 53 Ave Lane)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	53 Ave Lane (East side - 46A St)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	53 Ave Lane (46A St - 46 St Lane)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	53 Ave Lane (46 St Lane - 46 St)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	46 St (53 Ave Lane - 52 Ave)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	46 St (53 Ave Lane - 52 Ave)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	52 Ave (West End - 50 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	52 Ave (50 St - 49 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	52 Ave (49 St - 48 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	52 Ave (48 St - 47 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	52 Ave (47 St - 46 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	51 Ave (West End - 50 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	51 Ave (50 St - 49 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	51 Ave (49 St - 48 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	51 Ave (48 St - 47 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	51 Ave (47 St - 46 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	North-West (H 135 - 50 Ave)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	50 Ave North Side (West End - 50 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	50 Ave North Side (50 St - 50 st Lane)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	50 Ave (50 St Lane - South Side)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	50 Ave South (50 St Lane - 50 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	50 Ave South (50 St - Railway Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	50 Ave (50 St Lane - 49 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	50 Ave (49 St - 48 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	50 Ave (48 St - 47 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	50 Ave (47 St - 46 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	50 Ave (46 St - 45 St)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	50 Ave (45 St - East End)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	50 Ave North (48 St - 47 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	50 Ave North (47 St - 46 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	49 Ave (West End - Railway Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	49 Ave (Railway Ave - 50 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	49 Ave (50 St - 49 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	49 Ave (49 St - 48 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	49 Ave (48 St - 47 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	49 Ave (47 St - 46 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	49 Ave (46 St - 45 St)	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	Railway Ave (50 Ave - 49 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	Railway Ave (49 Ave - 48 Ave)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	48 Ave (50 St - 49 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	48 Ave (49 St - 48 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	48 Ave (48 St - 47 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	48 Ave (47 St - 46 St)	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	Proposed	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	49 Ave (45 St - East End)	Proposed	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	49 Ave Lane (45 St - East End)	Proposed	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	50 Ave (45 St - East End)	Proposed	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**	**2080**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	206,700 $ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	132,600 $ -	$ -	$ -	$ -	$ -	$ -	$ -	-
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	140,400 $ -	$ -	$ -	$ -	$ -	$ -	-
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	383,500 $ -	$ -	$ -	$ -	$ -	$ -	-
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	149,500 $ -	$ -	$ -	$ -	$ -	$ -	-
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	1,012,700 $ -	$ -	$ -	$ -	$ -	$ -	$ -	-

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2081**	**2082**	**2083**	**2084**	**2085**	**2086**	**2087**	**2088**	**2089**	**2090**	**2091**	**2092**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2093**	**2094**	**2095**	**2096**	**2097**	**2098**	**2099**	**2100**	**2101**	**2102**	**2103**	**2104**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	120,900 $	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	35,100 $	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ 473,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	373,100 $	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ 288,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ 78,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ 136,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ 72,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ 55,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ 42,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ 28,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ 380,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			**$ 1,176,500**	**$ 380,900**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**529,100 $**	**$ -**	**$ -**	**$ -**

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2105**	**2106**	**2107**	**2108**	**2109**	**2110**	**2111**	**2112**	**2113**	**2114**	**2115**	**2116**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 197,600	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,400	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 120,900	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 393,900	$ -	$ -

A	B	C	D							
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2117**	**2118**	**2119**	**2120**	**2121**	**2122**	**2123**
GIS #	**Water Pressure Main**									
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D	E	F	G	H	I	L	M	N	O
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**Diameter (mm)**	**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**Length (m)**	**Unit Cost**	**Historical Cost**	**Asset Replacement Cost**	**Current Total Cost**
Asset ID	**WELL #1**	**Asset Code**	**Components**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**WELL #1**	B1F	Deactivate Well		1975	50	3	2025	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Casting and Surface Seal		1975	25	0	2022	20%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A		B1F	Drill Well		1975	50	3	2025	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Electrical		1975	25	0	2022	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Pump		1975	25	0	2022	15%	$ 22,500.00	$ -	$ 22,500	$ 22,500
N/A		B1F	Yield Test & Quality Testing		1975	10	0	2022	17%	$ 25,500.00	$ -	$ 25,500	$ 25,500
	Subtotal - Well #1	**B1F**			**1975**	50	**3**	**2025**	**100%**	**$ 150,000**		**$ 150,000**	**$ 150,000**
Asset ID	**WELL #2**	**Asset Code**	**Components**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**WELL #2**	B1F	Deactivate Well		1987	50	15	2037	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Casting and Surface Seal		1987	25	0	2022	20%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A		B1F	Drill Well		1987	50	15	2037	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Electrical		1987	25	0	2022	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Pump		1987	25	0	2022	15%	$ 22,500.00	$ -	$ 22,500	$ 22,500
N/A		B1F	Yield Test & Quality Testing		1987	10	0	2022	17%	$ 25,500.00	$ -	$ 25,500	$ 25,500
	Subtotal - Well #2	**B1F**			**1987**	50	**15**	**2037**	**100%**	**$ 150,000**		**$ 150,000**	**$ 150,000**
Asset ID	**WELL #3**	**Asset Code**	**Components**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**WELL #3**	B1F	Deactivate Well		2011	50	39	2061	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Casting and Surface Seal		2011	25	14	2036	20%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A		B1F	Drill Well		2011	50	39	2061	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Electrical		2011	25	14	2036	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Pump		2011	25	14	2036	15%	$ 22,500.00	$ -	$ 22,500	$ 22,500
N/A		B1F	Yield Test & Quality Testing		2011	10	0	2022	17%	$ 25,500.00	$ -	$ 25,500	$ 25,500
	Subtotal - Well #3	**B1F**			**2011**	50	**39**		**100%**	**$ 150,000**		**$ 150,000**	**$ 150,000**
	Water Wells											**$ 450,000**	**$ 450,000**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volume (m3)**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**Concrete Reservoir #1**	B1E	712		2003	80	61	2083	29%	$ 1,000.00	$ -	$ 712,000	$ 712,000
N/A	**Concrete Reservoir #2**	B1E	533		1976	80	34	2056	21%	$ 1,000.00	$ -	$ 533,000	$ 533,000
N/A	**Concrete Reservoir #3**	B1E	533		1981	80	39	2061	21%	$ 1,000.00	$ -	$ 533,000	$ 533,000
N/A	**Concrete Clear Well**	B1E	107		2003	80	61	2083	4%	$ 1,000.00	$ -	$ 107,000	$ 107,000
N/A	**Electrical**	B1E	1		2003	25	6	2028	6%	$ 150,000.00	$ -	$ 150,000	$ 150,000
N/A	**Controls & Instrumentation**	B1E	1		2003	15	0	2022	3%	$ 75,000.00	$ -	$ 75,000	$ 75,000
N/A	**Pipe works**	B1E	1		2003	40	21	2043	2%	$ 50,000.00	$ -	$ 50,000	$ 50,000
N/A	**Decommissioning**	B1E	1		2003	80	61	2083	2%	$ 50,000.00	$ -	$ 50,000	$ 50,000
N/A	**Building**	B1E	1		2003	50	31	2053	8%	$ 200,000.00	$ -	$ 200,000	$ 200,000
N/A	**Pump 1, 2, 3**	B1E	3		2003	25	6	2028	3%	$ 25,000.00	$ -	$ 75,000	$ 75,000
	Subtotal - Water Reservoir	**B1E**				80			**100%**			**$ 2,485,000**	**$ 2,485,000**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volume (m3)**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**Chlorination injection System**	B1D	1		2003	15	0	2022	10%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A	**Controls & Instrumentation**	B1D	1		2003	10	0	2022	10%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A	**Decommissioning**	B1D	1		2003	50	31	2053	16%	$ 50,000.00	$ -	$ 50,000	$ 50,000
N/A	**Building**	B1D	1		2003	50	31	2053	65%	$ 200,000.00	$ -	$ 200,000	$ 200,000
	Subtotal - Water Treatment Plant	**B1D**				50			**100%**	**$ 310,000**		**$ 310,000**	**$ 310,000**

A	B	C	D	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
Asset ID	**WELL #1**	**Asset Code**	**Comp**											
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ 24,000	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ 22,500	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Q	$ 25,500	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ 102,000**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**											
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Q	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ 102,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**											
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Q	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ 229,500**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Vol**											
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	150,000 $	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	75,000 $	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**225,000 $**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Vol**											
N/A	**Chlorination injection System**	B1D		$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ 60,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

A	B	C	D	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ 25,500	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500
	Subtotal - Well #3	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**
	Water Wells			**$ 51,000**	**$ -**	**$ -**	**$ 102,000**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 50,000**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**

A	B	C	D	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**
	Water Wells			**$ -**	**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 533,000
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 200,000**	**$ 300,000**	**$ -**	**$ 533,000**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 30,000**	**$ 30,000**	**$ -**

A	B	C	D	BI											
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ 150,000**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ 533,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**$ -**	**$ -**	**$ 533,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**	**2080**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ 25,500**	**$ 25,500**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000
N/A	**Controls & Instrumentation**	B1E		$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 225,000**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2081**	**2082**	**2083**	**2084**	**2085**	**2086**	**2087**	**2088**	**2089**	**2090**	**2091**	**2092**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ -	25,500	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	22,500	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	25,500	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**150,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	22,500	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**25,500**	**$ -**	**$ -**	**$ -**	**76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ 25,500**	**$ -**	**25,500**	**$ -**	**$ -**	**$ -**	**102,000**	**150,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	712,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	107,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	75,000	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**869,000**	**$ 50,000**	**$ -**	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**30,000**	**$ -**	**30,000**	**$ -**	**$ -**	**$ -**	**$ -**

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2093**	**2094**	**2095**	**2096**	**2097**	**2098**	**2099**	**2100**	**2101**	**2102**	**2103**	**2104**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 75,000**	**$ -**	**$ 200,000**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ 250,000**

A	B	C	D	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**												
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ 150,000**	**$ -**	**$ 76,500**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ 150,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ 225,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

A	B	C	D		2117	2118	2119	2120	2121	2122	2123
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**								
Asset ID	**WELL #1**	**Asset Code**	**Comp**								
N/A	**WELL #1**	B1F	Deactivate W	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Casting and S	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Drill Well	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Electrical	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Pump	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Yield Test & Qu	$	- $	- $	- $	25,500 $	- $	- $	-
	Subtotal - Well #1	**B1F**		**$**	**- $**	**- $**	**- $**	**25,500 $**	**- $**	**- $**	**-**
Asset ID	**WELL #2**	**Asset Code**	**Comp**								
N/A	**WELL #2**	B1F	Deactivate W	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Casting and S	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Drill Well	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Electrical	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Pump	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Yield Test & Qu	$	- $	- $	- $	- $	25,500 $	- $	-
	Subtotal - Well #2	**B1F**		**$**	**- $**	**- $**	**- $**	**- $**	**25,500 $**	**- $**	**-**
Asset ID	**WELL #3**	**Asset Code**	**Comp**								
N/A	**WELL #3**	B1F	Deactivate W	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Casting and S	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Drill Well	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Electrical	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Pump	$	- $	- $	- $	- $	- $	- $	-
N/A		B1F	Yield Test & Qu	$	- $	- $	- $	- $	- $	- $	25,500
	Subtotal - Well #3	**B1F**		**$**	**- $**	**- $**	**- $**	**- $**	**- $**	**- $**	**25,500**
	Water Wells			**$**	**- $**	**- $**	**- $**	**25,500 $**	**25,500 $**	**- $**	**25,500**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Vol**								
N/A	**Concrete Reservoir #1**	B1E	7	$	- $	- $	- $	- $	- $	- $	-
N/A	**Concrete Reservoir #2**	B1E	5	$	- $	- $	- $	- $	- $	- $	-
N/A	**Concrete Reservoir #3**	B1E	5	$	- $	- $	- $	- $	- $	- $	-
N/A	**Concrete Clear Well**	B1E	1	$	- $	- $	- $	- $	- $	- $	-
N/A	**Electrical**	B1E		$	- $	- $	- $	- $	- $	- $	-
N/A	**Controls & Instrumentation**	B1E		$	- $	75,000 $	- $	- $	- $	- $	-
N/A	**Pipe works**	B1E		$	- $	- $	- $	- $	- $	- $	-
N/A	**Decommissioning**	B1E		$	- $	- $	- $	- $	- $	- $	-
N/A	**Building**	B1E		$	- $	- $	- $	- $	- $	- $	-
N/A	**Pump 1, 2, 3**	B1E		$	- $	- $	- $	- $	- $	- $	-
	Subtotal - Water Reservoir	**B1E**		**$**	**- $**	**75,000 $**	**- $**	**- $**	**- $**	**- $**	**-**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Vol**								
N/A	**Chlorination injection System**	B1D		$	- $	30,000 $	- $	- $	- $	- $	-
N/A	**Controls & Instrumentation**	B1D		$	- $	- $	- $	- $	30,000 $	- $	-
N/A	**Decommissioning**	B1D		$	- $	- $	- $	- $	- $	- $	-
N/A	**Building**	B1D		$	- $	- $	- $	- $	- $	- $	-
	Subtotal - Water Treatment Plant	**B1D**		**$**	**- $**	**30,000 $**	**- $**	**- $**	**30,000 $**	**- $**	**-**

A	B	C	D		E	F	G	H	I	L	M	N	O
Asset ID	Asset Name (Between)	Asset Code	Material	Diameter (mm)	Construction Year	General Life Expectancy	Estimated Remaining Life	Replacement Year	Length (m)	Unit Cost	Historical Cost	Asset Replacement Cost	Current Total Cost
Hydrant#	Hydrants	Asset Code	Model	Life Status	Construction Year	General Life Expectancy	Estimated Remaining Life	Replacement Year	Length (m)	Unit Cost	Historical Cost	Asset Replacement Cost	Current Total Cost
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	N/A	2014	75	67	2089	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	56 Ave (48A St - East End)	B1B	N/A	N/A	2014	75	67	2089	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	N/A	2014	75	67	2089	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	N/A	2014	75	67	2089	N/A	$ -	$ -	$ 10,000	$ 10,000
H126	55 Ave (50 St - 49 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H125	54 Ave (49 St - 47A St)	B1B	N/A	Active	2001	75	54	2076	N/A	$ -	$ -	$ 10,000	$ 10,000
H100	52 Ave (49 St - 48 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H101	49 Ave (46 St - 45 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H102	49 Ave (47 St - 46 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H103	49 Ave (48 St - 47 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H104	49 Ave (49 St - 48 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H105	49 Ave (50 St - 49 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H106	50 Ave (49 St - 48 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H107	50 Ave (48 St - 47 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H108	50 Ave (47 St - 46 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H109	50 Ave North (47 St - 46 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H110	52 Ave (47 St - 46 St)	B1B	N/A	Active	1975	75	28	2050	N/A	$ -	$ -	$ 10,000	$ 10,000
H111	52 Ave (47 St - 46 St)	B1B	N/A	Active	1975	75	28	2050	N/A	$ -	$ -	$ 10,000	$ 10,000
H112	52 Ave (49 St - 48 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H114	48 Ave (47 St - 46 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H115	48 Ave (47 St - 46 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H116	48 Ave (48 St - 47 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H117	48 Ave (50 St - 49 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H118	48 Ave (49 St - 48 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H119	52 Ave (50 St - 49 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H120	51 Ave (48 St - 47 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H121	51 Ave (47 St - 46 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H122	51 Ave (49 St - 48 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H123	51 Ave (50 St - 49 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H124	51 Ave (West End - 50 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	Active	1993	75	46	2068	N/A	$ -	$ -	$ 10,000	$ 10,000
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	Active	2001	75	54	2076	N/A	$ -	$ -	$ 10,000	$ 10,000
H130	55 Ave (47A St - 46 St)	B1B	N/A	Active	1993	75	46	2068	N/A	$ -	$ -	$ 10,000	$ 10,000
H131	55 Ave (47A St - 46 St)	B1B	N/A	Active	1993	75	46	2068	N/A	$ -	$ -	$ 10,000	$ 10,000
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H135	North-West (H 135 - 50 Ave)	B1B	N/A	Active	1994	75	47	2069	N/A	$ -	$ -	$ 10,000	$ 10,000
H136	53 Ave (50 St - 49 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H137	53 Ave (50 St - 49 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	49 Ave (45 St - East End)	B1B	N/A	N/A	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	50 Ave (45 St - East End)	B1B	N/A	N/A	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
0044	Subtotal - Hydrants											$ 440,000	$ 440,000
											Grand Total		

CURRENT ASSESSMENT YEAR	2022
Total capital replacement and major maintenance over next 100 Years	$ 19,439,300
Total Current Water Systems Replacement Value	$ 15,613,800

A	B	C	D	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
Asset ID	Asset Name (Between)	Asset Code	Material	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Hydrant#	Hydrants	Asset Code	Model											
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ 364,500	$ -	$ -	$ 150,000	$ -	$ -	$ 225,000	$ -	$ -	$ -	$ -

A	B	C	D	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
Asset ID	Asset Name (Between)	Asset Code	Material	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ 81,000	$ -	$ -	$ 102,000	$ 150,000	$ 105,000	$ -	$ -	$ -	$ -	$ 50,000	$ 55,500

A	B	C	D	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI
Asset ID	Asset Name (Between)	Asset Code	Material	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ 320,000	$ -	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ -
				$ -	$ -	$ 25,500	$ 7,942,700	$ -	$ 209,800	$ 76,500	$ 412,100	$ 450,000	$ 566,600	$ 55,500	$ 533,000

A	B	C	D	BI											
Asset ID	Asset Name (Between)	Asset Code	Material	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	10,000
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	10,000
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	10,000
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	30,000
				$ -	$ 25,500	$ 25,500	$ -	$ 683,000	$ -	$ 76,500	$ -	$ -	$ 30,000	$ -	$ 30,000

A	B	C	D												
Asset ID	Asset Name (Between)	Asset Code	Material	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -	$ -	$ -	$ -
				$ 35,500	$ 130,500	$ -	$ 25,500	$ 1,012,700	$ -	$ -	$ 170,000	$ 30,000	$ -	$ -	$ 225,000

A	B	C	D												
Asset ID	Asset Name (Between)	Asset Code	Material	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 40,000	$ -	$ -	$ -
				$ 25,500	$ -	$ 894,500	$ 50,000	$ -	$ 105,000	$ 102,000	$ 180,000	$ 40,000	$ -	$ -	$ -

A	B	C	D												
Asset ID	Asset Name (Between)	Asset Code	Material	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ 1,176,500	$ 406,400	$ -	$ -	$ -	$ 25,500	$ 55,500	$ -	$ 529,100	$ 181,500	$ -	$ 450,000

A	B	C	D											
Asset ID	Asset Name (Between)	Asset Code	Material	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ 25,500	$ 225,000	$ -	$ -	$ 25,500	$ 55,500	$ -	$ 150,000	$ -	$ 470,400	$ -	$ -

A	B	C	D							
Asset ID	Asset Name (Between)	Asset Code	Material	2117	2118	2119	2120	2121	2122	2123
Hydrant#	Hydrants	Asset Code	Model							
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ -	$ 105,000	$ -	$ 25,500	$ 55,500	$ -	$ 25,500

02

Appendix 2

Risk Register

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Source Risks	4	General Risks	Contamination of raw water with sewage	Microbiological contamination	Resulting from sewage input to the source from private septic tanks or sewer outfalls.	No sanitary sewer line within 50'+ of a well.	1
Source Risks	5	General Risks	Chemical contamination of raw water as a result of proximity to transport corridor.	Chemical contamination Hydrocarbons	Due to chemical contamination in the source due to spillage from transport corridor (e.g., road or rail tanker) adjacent to source and no containment.	May result from accidental spillage or a crash.	1
Source Risks	10	General Risks	Contamination of water with nutrients, due to agricultural activity.	Algal bloom Reduced oxygen level in water.	Due to contamination in run-off from areas of agricultural activity.	There are a number of different sources: silage pits, sludge lagoons, concentrations of stock.	2
Source Risks	11	General Risks	Contamination of water with pathogens due to agricultural activity.	Microbiological contamination	Due to contamination in run-off from areas of agricultural activity.	Wells are all within Town limits.	4
Source Risks	12	General Risks	Contamination of raw water with pesticides	Pesticides	Resulting from pesticides spraying in the watershed due to poor practice.	Toxicity testing for Town water every 5 years.	8
Source Risks	13	General Risks	Deterioration of raw water as a result of flooding or heavy rain	Turbidity	Due to inability to close intake when raw water has deteriorated.	Lack of storage may also influence ability to close intake; high sediment loading resulting from high level of rainfall or spring melt.	1
Source Risks	22	General Risks	Insufficient raw water quantity	Loss of supply	Resulting from restriction in diversion license due to changing legislation or growth in demand.	Changes in environmental legislation may lead to tighter diversion limits.	1
Source Risks	24	General Risks	Insufficient water available for abstraction	Low pressure Loss of supply	As a result of drought.	The Town`s recent draw down recovery for the wells shows that in 20+ years the wells have shown no change in abstraction ability.	1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Source Risks	25	Well Risks	Contamination of well during construction	Microbiological contamination Metals Drilling fluids	Cross-contamination by drilling equipment or residual substances used in drilling e.g., Barium released from drilling mud.	Drillers should operate according to the Water (Ministerial) Regulations	8
Source Risks	30	Well Risks	Deterioration of water quality	Iron manganese	Due to over-production from aquifer, mixing with other zones or biofouling	Well should not be pumped higher than recommended rate, downhole camera inspection, shock chlorination, rehabilitation	1
Source Risks	31	Well Risks	Deterioration of water quality	Fluoride Arsenic Uranium Other heavy metals	Due to naturally occurring minerals	Yearly water analysis done by contracted lab.	1
Source Risks	32	Well Risks	Contamination of aquifer	Hydrocarbons Pesticides Nutrients	Activities within recharge zone or vulnerable aquifer	More likely with shallow wells, unconfined aquifers or where rock is badly faulted or fractured.	1
Source Risks	36	Pumps & Mains Risks	Reduced resource availability due to break/leak on raw water mains	Loss of supply	Resulting from raw water main breaks/leaks as a result of poor mains condition.	Lack of maintenance may lead to more frequent interruptions to supply.	1
Source Risks	38	Pumps & Mains Risks	Failure of pumps at Pump Station	Loss of supply	Resulting from pumps failure due to insufficient/no standby generation if electricity supply fails.	Wells/pumps serviced every 5 years.	1
Source Risks	39	Pumps & Mains Risks	Loss of power to pumps as a result of electrical fault.	Loss of capacity	Loss of power to pumps due to control panel fault resulting from insufficient maintenance.	Essential components need to be maintained regularly.	1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Treatment Risks	**57**	**General Risks**	Contamination caused by unauthorized human access	Unknown contamination	Unauthorized human access may lead to contamination.	WTWs should be kept secure at all times when not attended.	**4**
Treatment Risks	**58**	**General Risks**	Contamination of treated water as a result of dosing with incorrect or inferior quality chemicals	Chemical contamination	Contamination due to use of incorrect or inferior quality or contaminated chemicals due to lack of control check on deliveries.	Might be due to change in supplier or inadequate specification for chemicals used.	**1**
Treatment Risks	**62**	**General Risks**	Inability to meet demand caused by power failure	Loss of Supply	Resulting from power failure and to failure of stand by generator change over or no standby generator.	Many small WTW will have no standby power generation	**4**
Treatment Risks	**66**	**General Risks**	Inadequate treatment caused by incorrect dosing of chemicals	Chemical contamination	Due to incorrect dosing due to faulty equipment.	Manual dosing by hand can also be done.	**4**
Treatment Risks	**67**	**General Risks**	Loss of supply as a result of flooding	Loss of Supply	Due to plant shut down as a result of flooded areas of plant.	Flooding is not a great concern as in other Towns as we are on the side of the Blindman Valley, and our pumphouse is at the top of the hill.	**1**
Treatment Risks	**68**	**General Risks**	Contamination due to incorrectly plumbed drains	Chemical contamination Microbiological contamination	Due to inappropriate cross-connection of drainage into treated water areas.		**1**
Treatment Risks	**69**	**General Risks**	Contamination or loss of supply due to lack of knowledge of infrastructure location	Chemical contamination Microbiological contamination	Due to lack of adequate 'as-built' drawings	Bentley spent 3 years and contracted Stantec to map/GPS water system.	**1**

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Treatment Risks	**70**	**Process Control Risks**	Loss of supply resulting from failure of telemetry.	Loss of supply	Due to plant shut down not being notified due to failure of telemetry	The only system on a SCADA set-up is well number 3.	**8**
Treatment Risks	**113**	**Disinfection Risks**	Contamination of treated water as a result of accumulation of deposits in contact tank	Turbidity	As a result of carryover of sediment from contact tank.	n/a	**1**
Treatment Risks	**114**	**Disinfection Risks**	Contamination of treated water as a result high bromate content of sodium hypochlorite	Chemical contamination	As a result of sodium hypochlorite not meeting supply specification	n/a	**0**
Treatment Risks	**115**	**Disinfection Risks**	Contamination of treated water as a result of excessive formation of disinfection by-products	Chemical contamination	As a result of excessive disinfectant dose and high levels of trace organics	Due to formation of disinfection by-products	**4**
Treatment Risks	**119**	**Disinfection Risks**	Failure of disinfection as a result of failure of sodium hypochlorite delivery system.	Microbiological contamination	Due to failure of disinfection due to failure of delivery system.	Back-up chlorinator in stock.	**2**
Treatment Risks	**122**	**Disinfection Risks**	Inadequate treatment as a result of inability to meet disinfection requirements due to high chlorine demand	Microbiological contamination	Due to inability to add sufficient chlorine due to high flow or high chlorine demand	Colorimeter sample taken 7 days a week.	**2**
Treatment Risks	**123**	**Disinfection Risks**	Inadequate treatment as a result of insufficient contact time	Microbiological contamination	Due to insufficient contact time to kill bacteria as a result of poor contact tank design or operating beyond design flow	In 2002 the Town added a new pumphouse & reservoir to the existing. At that time, the two older reservoirs were retrofitted with diffusion piping on both the inlets and the outlets of reservoir 1 & 2.	**1**

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Treatment Risks	**124**	**Disinfection Risks**	Inadequate treatment as a result of incorrect chlorine dose	Microbiological contamination	Due to lack of residual controller and rapid change in chlorine demand, due to insufficient manual intervention.	The system is not a PLC setup, dosage does not control the CL2 injector. The injector is controlled by the start/stop process of the wells, dosage is manually adjusted.	**2**
Treatment Risks	**130**	**Treated Storage Risks**	Contamination of treated water as a result of vandalism	Microbiological contamination Chemical contamination	As a results of actions by intruders	As a minimum lids and air vents must be secure. Security fence is in place.	**2**
Treatment Risks	**131**	**Treated Storage Risks**	Contamination of treated water caused by rainwater ingress	Microbiological contamination Chemical contamination	As a result of lack of structural integrity of reservoir due to lack of inspection or maintenance	Reservoirs should be cleaned and inspected on a regular basis.	**1**
Treatment Risks	**132**	**Treated Storage Risks**	Deterioration in water quality due to disturbance of sediment in reservoir	Microbiological contamination Turbidity Aluminum Iron	Due to disturbance of sediment on floor of reservoir due to low level and lack of maintenance.	Reservoirs should be cleaned and inspected on a regular basis.	**1**
Treatment Risks	**133**	**Treated Storage Risks**	Loss of supply due to inadequate storage	Loss of supply	Due to insufficient storage to cope with fluctuations in demand.	Reservoirs may be undersized due to financial considerations.	**4**
Treatment Risks	**134**	**Facility Specific Risks**	VFD pressure switch waterline freezing		Emergency back-up pump running, ceiling exhaust fan removing excess heat and fumes from building causing a drop in temperature.	Only an issue during extended running of the back-up pump when the temperature outside the building is negative zero Celsius.	**2**
Network Risks	**145**	**General Risks**	Buildup of deposits in network as a result of inadequate flushing frequency and/or velocity	Discoloration Taste & Odor	Resulting from inadequate flushing of problem areas.	Areas where sediment is known to build up benefit from a regular flushing programmed.	**1**

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	**146**	**General Risks**	Broken main as a result of PRV failure	Loss of supply Chemical contamination Microbiological contamination	As a result of a broken main due to high pressure due to failure of PRV.	PRVs should be serviced as required.	**2**
Network Risks	**147**	**General Risks**	Loss of supply and/or deterioration of water quality as a result of broken main	Loss of supply Chemical contamination Microbiological contamination	As a result of a broken main due to failure of pipe integrity.	May be as a result of many different circumstances	**8**
Network Risks	**148**	**General Risks**	Contamination of water as a result of cross-connection	Chemical contamination Microbiological contamination	As a result of connection with private supply due to customer having dual connection, no air gap	If customer has dual supply the pipework must be safely set up.	**8**
Network Risks	**150**	**General Risks**	Contamination of water in supply as a result of the use of non-approved or inappropriate materials in the network	Chemical contamination	As a result of contact with inappropriate materials.	Any materials used in the network should comply with the appropriate standard.	**1**
Network Risks	**151**	**General Risks**	Contamination of water due to failure to follow proper hygiene practice when carrying out repairs.	Chemical contamination Microbiological contamination	Due to ingress of material from excavation and/or poor disinfection procedures.	Operators should be fully trained in proper hygiene practice	**1**

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	152	General Risks	Contamination of water in supply as a result of connection to mothballed or abandoned assets.	Chemical contamination microbiological contamination	As a result of connection to a main containing stagnant water.	All abandoned assets should be cut and capped rather than just valved off.	1
Network Risks	153	General Risks	Deterioration of water quality as a result of incorrect sequence of valve operations	Chemical contamination Microbiological contamination	As a result of flow reversal due to the need for rezoning due to the incorrect sequence of valve operations	Valves should be maintained, and good records kept of their location and mode of operation, i.e., RH or LH thread.	1
Network Risks	155	General Risks	Deterioration of water quality due to change in normal flow pattern.	Chemical contamination	Due to mains sediment being disturbed by increased flow.	Iron, manganese, aluminum sediment	1
Network Risks	156	General Risks	Failure to meet demand as a result of failure to mend break in a reasonable time	Loss of supply	As a result of poor access.	or as a result of contractor timing.	16
Network Risks	157	General Risks	Failure to meet demand due to inability to operate valves as required.	Loss of supply	Inability to operate valves when needed due to the lack of maintenance	If valves are not operated and checked, they may become difficult to operate.	8
Network Risks	158	General Risks	Failure to meet demand as a result of insufficient valves to isolate area affected by break	Loss of supply	Due to high loss of water due lack of isolation of mains	All valves exercised yearly with documentation; problem valves are replaced immediately.	8
Network Risks	159	General Risks	Failure to meet demand as a results of operating system above design pressure	Loss of supply	Due to broken mains as a result of operating mains above design pressure.	Pressure is maintained at 43 psi by VFD motors controlled by the main VFD computer.	2
Network Risks	161	General Risks	Failure to meet demand as a result of breaks caused by age-related deterioration.	Loss of supply	Resulting from break due to deterioration of pipe condition due to age.	Planned maintenance/renewal should prevent this problem occurring.	4
Network Risks	163	General Risks	Loss of pressure as a result of leakage	Loss of supply Loss of pressure	Due to leakage due to inadequate leakage control/poor maintenance.	If system leakage rates are high, a leakage control programme is recommended.	4

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	164	General Risks	Loss of supply or pressure or contamination of water in supply as a result of fire service tackling a fire	Loss of supply Loss of pressure Microbiological contamination Chemical contamination	Due to high flow rate or changes in flow patterns, or loss of disinfectant contact time or disturbance of sediment		2
Network Risks	165	General Risks	Loss of supply or contamination of water in supply as a result of excessive demand in a short period of time	Loss of supply Chemical contamination	Lack of communication from external stakeholders, e.g., builders, fire service	Fire service should be aware that if they are testing hydrants, they should notify water operators.	2
Network Risks	166	General Risks	Loss of supply as a result of failure of critical main due to lack of alternative supply	Loss of supply	Due to break on a critical main such that no alternative means of supply is available		0
Network Risks	167	General Risks	Microbiological growth in distribution system as a result of oversized mains	Microbiological contamination	Buildup of biofilms in the network due to excessive dwell time as a result of incorrectly sized mains.	Biofilms are more likely to develop in areas of low flow where disinfectant residual may be very low.	1
Network Risks	168	General Risks	Microbiological growth in distribution system as a result of low disinfectant residual	Microbiological contamination	Buildup of biofilms in the network due to inadequate residual disinfectant.		1
Network Risks	169	General Risks	Migration of hydrocarbons and other contaminants through pipework as a result of inappropriate materials used in areas of contaminated land	Chemical contamination	Resulting from use of inappropriate materials in areas of contaminated land	All polyethylene pipes are susceptible to migration of hydrocarbons through the pipe wall.	1
Network Risks	170	General Risks	Health risk to vulnerable customer due to inability to operate dialysis machine or similar	Loss of supply	Due to loss of supply	Long term care facility.	2

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	171	General Risks	Pressure problems caused by PRV failure	Loss of pressure High pressure	Pressure fluctuation due to the failure of PRV.	PRVs should be serviced as required.	2
Network Risks	172	Pumping Station Risks	Failure of pump control panel resulting in power loss	Loss of supply	As a results of inability to operate pumps due to lack of power	2 vfd's installed now	1
Network Risks	174	Pumping Station Risks	Oil contaminating water due to use of unacceptable pump lubricants.	Hydrocarbon contamination	Due to non-food grade leaking into wet well.	All pumps should use food grade lubricants.	1
Network Risks	175	Pumping Station Risks	Failure of pumps due to power surge at pump station.	Loss of supply	Due to pump failure due to electrical fault caused by power surge.	If electrical supply is subject to power fluctuations surge protection should be used.	4
Network Risks	176	Pumping Station Risks	Failure of pumps due to flooding	Loss of supply	Due to inadequate drainage or poor siting of pump house		1
Network Risks	178	Pumping Station Risks	Failure to meet demand due to insufficient pumping capacity	Loss of supply Low pressure	Due to pumps operating below rating or inadequately sized.	Pump capacity should be matched to expected demand.	
Network Risks	179	Reservoir Risks	Contamination of water as a result of sediment deposition in reservoir	Chemical contamination Microbiological contamination.	Due to buildup of sediment in bottom of reservoir as a result of inadequate maintenance.	Reservoirs should be emptied, inspected, and cleaned on a regular basis.	1
Network Risks	180	Reservoir Risks	Contamination of water due to ingress of water as a result of inadequate structure or maintenance.	Chemical contamination Microbiological contamination.	Due to lack of structural integrity of reservoir as a result of poor design or maintenance	Common weaknesses are lids, ducting holes for cables, poorly sealed roof joints, air vents.	32

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	181	Reservoir Risks	Contamination of water due to ingress of organic debris as a result of inadequate structure or maintenance.	Chemical contamination Microbiological contamination.	Due to lack of structural integrity of reservoir as a result of poor design or maintenance	More of a problem on earth covered reservoirs where plant roots may penetrate structure.	1
Network Risks	182	Reservoir Risks	Contamination of water due to poor hygiene practice when doing planned inspection or maintenance.	Chemical contamination Microbiological contamination.	Due to poor hygiene practice or use of non-approved chemicals.	Operators should be fully trained in proper hygiene practice	1
Network Risks	183	Reservoir Risks	Contamination of water due to reservoir running empty due to faulty or no telemetry.	Chemical contamination	Due to disturbance of sediment on floor of reservoir due to low level as a result of lack of alarm.	Regular cleaning will help keep sediment build up to a minimum.	1
Network Risks	184	Reservoir Risks	Contamination of water as a result of vandalism	Chemical contamination Microbiological contamination.	Due to vandalism, due to lack of secure fencing and structure.	Degree of security required will depend on location.	1
Network Risks	185	Reservoir Risks	Contamination of water due to access to reservoir by stock or wildlife	Microbiological contamination	Due to lack of secure fencing round reservoir.	Degree of security required will depend on location.	1
Network Risks	186	Reservoir Risks	Contamination of water due vermin accessing reservoir	Microbiological contamination	Due to lack of mesh or flap valve on overflow from reservoir.		2
Network Risks	187	Reservoir Risks	Deterioration of water quality due to thermal stratification	Chemical contamination Microbiological contamination.	Due to hot weather and reservoir being above ground and inadequately insulated and poor circulation		1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Customer Risks	202	General Risks	Lead in water in supply picked up from the service pipes and other fittings	Chemical contamination	Resulting from dissolved lead from internal pipework or lead solder.		4
Customer Risks	203	General Risks	Contamination of water in supply due to reduction in disinfectant levels resulting from long residence time of water in pipe caused by incorrectly sized/long service pipe.	Chemical contamination Microbiological contamination	Disinfectant decay due to water remaining in pipe for extended period	Service may have been installed without any consideration of residence time in service pipe	32
Customer Risks	205	General Risks	Contamination of water in supply or pressure problems as a result of leaking service pipe	Microbiological contamination Loss of pressure	Due to ingress due to leaking service pipe	If a leaking service pipe is sitting in water and there is a sudden drop in pressure, water may drawn in.	1
Customer Risks	206	General Risks	Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures.	Chemical contamination Microbiological contamination	As a result of unsatisfactory or damaged new connections due to bad installation and failure to follow a suitable code of practice	If the pipe ends are not protected during installation, then swarf or dirt may enter the pipe and cause contamination.	32
Customer Risks	207	General Risks	Hydrocarbon contamination as a result of laying service in contaminated land.	Chemical contamination.	As a result of fuel/oil leak in soil through which polyethylene pipe is laid.	Hydrocarbons can migrate through polyethylene pipe.	2
Customer Risks	208	General Risks	Contamination of water in supply as a result of connection to unwholesome water due to lack of knowledge/supervision.	Chemical contamination Microbiological contamination	Due to incorrect connection to unwholesome water due to lack of knowledge/supervision	Use of non-certified tradesmen may lead to unsatisfactory conditions	8
Customer Risks	209	General Risks	Contamination of water in supply as a result of use of inappropriate material in the presence of contaminated land	Chemical contamination.	Due to the use of inappropriate material due to the presence of contaminated land.	If laying pipes in contaminated land, contractors must install appropriate pipe materials.	2
Customer Risks	210	General Risks	Contamination of water in supply as a result of back siphonage caused by the lack of appropriate backflow protection	Chemical contamination Microbiological contamination	Resulting from back siphonage due to the lack of appropriate backflow protection, i.e. non-return valve.	Industrial/Commercial Premises are generally High Risk; Household Customers are generally Low Risk, although preparing pesticides for garden use potentially high.	8

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Customer Risks	**211**	**General Risks**	Pressure problems as a result of leakage caused by corrosion	Loss of pressure	Resulting from leakage due to corrosion of copper pipework due to lack of protection or maintenance	Pitting corrosion or electrolytic or galvanic corrosion may cause leakage or failure.	**4**
Customer Risks	**212**	**General Risks**	Increased water temperature as a result of inadequate design of storage facility or internal pipework	Chemical contamination Microbiological contamination	Warm water due to on site storage above required temp due to inappropriate storage facility/lack of insulation	Elevated temperature may encourage microbial growth.	**1**
Customer Risks	**213**	**General Risks**	Contamination of water in supply as a result of loss of chlorine residual caused by increased temperature	Microbiological contamination	Resulting from loss of chlorine residual due to increase in temperature.	May give rise to microbial growth.	**2**
Customer Risks	**214**	**General Risks**	Contamination of water in supply as a result of inappropriate plumbing	Chemical contamination Microbiological contamination	Resulting from use of inappropriate plumbing materials	Plumbers should only use materials approved for potable water.	**2**
Customer Risks	**217**	**General Risks**	Contamination of water in supply as a result of installation of inappropriate appliances	Microbiological contamination	Resulting from installation of inappropriate water filters and cartridges.	Any point of use device should be approved for potable water use.	**2**
Customer Risks	**218**	**General Risks**	Contamination of water in supply caused by bacterial growth in appliances as a result of inadequate maintenance	Microbiological contamination	Due to growth of bacteria in water filters or cartridges resulting from inadequate maintenance.	If cartridges or filters are not changed regularly internal bacterial growth may occur.	**8**
Customer Risks	**221**	**General Risks**	Contamination of water in supply as a result of inadequate hygiene practice at bulk water filling stations	Chemical contamination Microbiological contamination	As a result of ingress of contamination due to failure to operate proper hygiene practice.	If hoses are not properly managed and kept from coming into contact with the ground or other undesirable material contamination can easily occur.	**16**