# WATER AND WASTEWATER IMPACT FEE STUDY (UPDATE)

## STUDY PERIOD 2025 – 2035

## IOWA COLONY, TEXAS

DRAFT

CITY OF IOWA COLONY

ADICO CONSULTING ENGINEERS

TBPE FIRM NO. 16423
205 E. Edgewood Dr.
Friendswood, TX 77546
(832) 895-1093

# TABLE OF CONTENTS

**1.0 INTRODUCTION ..... 1**
**2.0 SERVICE AREA ..... 2**
**3.0 LAND USE ASSUMPTIONS AND POPULATION PROJECTIONS ..... 2**
3.1 LAND USE MAP ..... 2
3.2 PREVIOUS PERIOD DEVELOPMENTS ..... 3
3.3 BASE DATA ..... 3
3.4 POPULATION PROJECTION ..... 4
3.5 HOUSING STARTS ..... 5
3.6 TEN YEAR GROWTH ASSUMPTIONS ..... 5
3.7 ULTIMATE POPULATION PROJECTIONS ..... 6
3.8 LAND USE ASSUMPTIONS SUMMARY ..... 10
**4.0 CAPITAL IMPROVEMENT PLAN ..... 11**
4.1 ELIGIBLE FACILITIES ..... 11
4.2 2021 IMPACT FEE STUDY CAPITAL IMPROVEMENT PROJECTS ..... 11
4.3 CAPITAL IMPROVEMENT PROJECTS (2025 UPDATE) ..... 14
**5.0 IMPACT FEE CALCULATION ..... 17**
5.1 FINANCE COSTS DETERMINATION ..... 17
5.2 SERVICE UNIT DETERMINATION ..... 18
5.3 MAXIMUM IMPACT FEE CALCULATION ..... 19
5.4 CONCLUSIONS AND RECOMMENDATIONS ..... 20

# TABLES

TABLE 3.1 CITY OF IOWA COLONY POPULATION DATA ..... 3
TABLE 3.2 CITY OF IOWA COLONY ESTIMATED POPULATION ..... 4
TABLE 3.3 CITY OF IOWA COLONY PREVIOUS HOUSING STARTS ..... 5
TABLE 3.4 PROJECTED DEVELOPMENT AND ESTIMATED WATER USE ..... 7
TABLE 3.5 POPULATION PROJECTIONS SUMMARY ..... 10
TABLE 4.1 2021 WATER CAPITAL IMPROVEMENT PROJECTS ..... 12
TABLE 4.2 2021 WASTEWATER CAPITAL IMPROVEMENT PROJECTS ..... 13
TABLE 4.3 2025 WATER CAPITAL IMPROVEMENT PROJECTS ..... 15
TABLE 4.4 2025 WASTEWATER CAPITAL IMPROVEMENT PROJECTS ..... 16
TABLE 5.1 FINANCE COSTS ..... 17
TABLE 5.2 EQUIVALENT METER FACTORS ..... 18
TABLE 5.3 2025 WATER METER CONNECTION COUNT ..... 18
TABLE 5.4 PROPOSED CAPITAL RECOVERY FEES ..... 20

## EXHIBITS

**EXHIBIT A** SERVICE AREA MAP
**EXHIBIT B** LAND USE MAP
**EXHIBIT C** DEVELOPMENT MAP
**EXHIBIT D** WATER CAPITAL IMPROVEMENT PROJECTS
**EXHIBIT E** WASTEWATER CAPITAL IMPROVEMENT PROJECTS

## APPENDIX

**APPENDIX A** WATER CAPITAL IMPROVEMENT PROJECTS COST ESTIMATES
**APPENDIX B** WASTEWATER CAPITAL IMPROVEMENT PROJECTS COST ESTIMATES

# 1.0 INTRODUCTION

Adico, LLC has been contracted by the City of Iowa Colony ("the City") to prepare the update to the City's Impact Fee study, for the purposes of establishing a capital recovery fee schedule for new development within the City's water and wastewater service area.

The City of Iowa Colony is in a high growth corridor along State Highway 288, south of Houston, Texas. The City has grown rapidly through the development of Municipal Utility Districts ("MUDs") utilized by developers to provide water and sewer utilities.

The City is planning projects which interconnect these systems in order to provide a fully integrated public utility system for the future. These projects were identified in the City's Water and Wastewater Master Plan ("the Master Plan") adopted in 2021, along with projects identified as part of the City's Capital Improvement Plan required to connect to areas not currently served by the existing MUDs.

This study was conducted in compliance with the State of Texas Local Government Code, Title 12, Planning and Development, Subtitle C, Chapter 395, "Financing Capital Improvements in Municipalities, Counties, and Certain Other Local Governments", herein referred to as "Chapter 395". Under Chapter 395 requirements, the City is required to adopt an ordinance, order, or resolution approving land use assumptions (LUA) and capital improvements plan (CIP) prior to considering adoption of a Capital Recovery Fee, also referred to herein as an "impact fee."

The objectives of this study are to:

a) Estimate the probable growth of the City; both in terms of population increases and geographical location of the anticipated growth.
b) Estimate the capital improvement costs that will be needed to provide water and wastewater utility service for this growth through the 10-year development horizon. Eligible projects and costs proposed in the City's Master Plan will be utilized.
c) Calculate the maximum allowable impact fees that may be assessed to new development to defray the cost of the required water and wastewater improvements needed to support the development.

Impact Fees are proposed to be charged by the City for each new connection to the City's water and/or wastewater system. Chapter 395 of the Texas Local Government Code prescribes the required process for cities to follow for adoption, amendment, and update of Impact Fees charged. Updates are required to be performed on a five-year cycle.

The update process requires engaging a Registered Professional Engineering firm to prepare the aforementioned documents and calculations. The results are then presented to an Advisory Committee appointed by the City Council to review and recommend adoption of land use assumptions, population projections, proposed CIP projects, and the amount of the Impact Fees to be considered and adopted by the City.

The City adopted a Water and Wastewater Master Plan in June 2021 that proposed projects and provided the 10-year CIP for the period of 2021-2031 that will be the basis of the cost and calculations provided herein. For purpose of this study, it is recommended that the City adopt a ten-year planning period from 2025-2035 and consider factors affecting growth rates, intensity of development, known major development projects, and projections by local and state agencies to guide the land use assumptions and resulting CIP. Water and

wastewater studies, reports, and corresponding projects performed during this period will be reflected.

# 2.0 SERVICE AREA

The original LUA adopted in 2021 covered the area within the City of Iowa Colony and its ETJ. The proposed service area covered by this Study update is shown in **EXHIBIT A**.

This service area includes all annexations since 2021. In the future, as areas are annexed into the City, the Service Area Map shall be updated to reflect these annexed areas.

Many areas in the City's ETJ were considered for future connection to the ultimate integrated City utility system in the Master Plan and may be assessed for impact fees. Areas outside the City Limits in which the City is considering executing a development agreement for water and/or wastewater service should also be incorporated into the service area and the specific terms regarding impact fee collection should be considered when these agreements are negotiated.

The municipal utility districts (MUDs) currently operating within the City's service area are BCMUD 31, BCMUD 38, BCMUD 55, BCMUD 57, and BCMUD 87. Two other MUDs are located within the City's ETJ; BCMUD 32 and BCMUD 53; are anticipated to be annexed in 2026 and 2029, respectively.

# 3.0 LAND USE ASSUMPTIONS AND POPULATION PROJECTIONS

## 3.1 LAND USE MAP

The Land Use Map (**EXHIBIT B**) provides the basis for provision and requirements for projects to support new development in the Service Area and to project the number of equivalent service units (ESU) to fairly allocate the resulting costs through the assessment of Impact Fees. For the purposes of this report, the terms equivalent meter and equivalent service unit will be used interchangeably.

The following factors were considered in the initially adopted Land Use Assumptions and have been reviewed as part of this update process:

a. The character, type, density and quantity of existing development.
b. Proposed land use.
c. City's Comprehensive Plan (2020 Marsh Darcy Partners)
d. Water and Wastewater Master Plan (2021 Adico Consulting Engineers)
e. Availability of land for future development.
f. Current growth trends in the City.
g. Location and configuration of vacant land.
h. Development agreements in place and under negotiation.
i. Known or anticipated development projects.

See **EXHIBIT 2 - Land Use Map**

## 3.2 PREVIOUS PERIOD DEVELOPMENTS

In 2021, there were various new developments in the planning phase. The following is a list of the major subdivisions which began and were in the planning stages.

a. Sterling Lakes
b. Sterling Lakes North
c. Sterling Lakes West
d. Caldwell Lakes
e. Caldwell Crossing
f. Sierra Vista
g. Sierra Vista West
h. Creekhaven
i. Meridiana
j. Lacovia Lakes
k. Ellwood
l. Maple Farms
m. Evergreen
n. Southern Star
o. Majestic
p. Hines
q. Pupua Tract
r. Sunset Prairie

These developments as well as anticipated development areas are shown in **EXHIBIT C**.

## 3.3 BASE DATA

The data developed for the original Land Use Assumptions was based on the Land Use Map by Marsh Darcy for the City's Comprehensive Plan. Historical population data was obtained from US Census data for 2020 as shown in the following **TABLE 3.1**.

**TABLE 3.1 CITY OF IOWA COLONY POPULATION DATA**

| Year | Household Population | Increase |
|---|---|---|
| 2020 | 8,154 | |
| 2021 | 10,815 | 32.6% |
| 2022 | 12,973 | 20.0% |
| 2023 | 14,850 | 14.5% |
| 2024 | 17,240 | 16.1% |
| 2025 | 20,503 | 18.9% |
| | **AVERAGE** | 20.4% |

## 3.4 POPULATION PROJECTION

A review of U.S. Census data shows that in the period 2020 to 2025, the City grew from a population of 8,154 to a population of 20,503 largely due to new annexations and rapid growth. These figures show a growth record of 20.4% for the period 2020-2025.

The following table shows projected population for the 10-year planning period for this study. Number of connections for year 2020 (3,509 ESU's) was based on existing data from both the previous LUA and Comprehensive Plan. Data for year 2025 (7,021 ESUs) was obtained from available Census Data and showed a population of 20,503 for the year 2025.

As an average of 20.4% population growth rate for the 10-year planning period is not expected to be constant, a person per connection for 2025 was calculated to obtain a projected population based on estimated ESU. This population per equivalent meter will provide a more accurate metric for projected population over the 10-year period.

The existing development data for each existing development, respectively, was used to calculate an individual growth rate. The individual growth rate for each development was used to calculate the projected annual ESU. This was added to future annexations to develop a total annual projected ESU.

***2025 Population per Equivalent Meter***

$$\frac{20{,}503\ \ (Population, 2025)}{7{,}021\ (\ ESU, 2025)} = 2.9\ persons\ per\ ESU$$

**TABLE 3.2 CITY OF IOWA COLONY 10-YEAR PROJECTED POPULATION**

| Plan Year | Year End | Estimated Annual Number of Equivalent Service Units (ESU) | Total Number of ESUs | Projected Population (2.9 per/ESU) |
|---|---|---|---|---|
| 1 | 2026 | 978 | 7,999 | 23,197 |
| 2 | 2027 | 978 | 8,977 | 26,033 |
| 3 | 2028 | 978 | 9,955 | 28,870 |
| 4 | 2029 | 611 | 10,566 | 30,641 |
| 5 | 2030 | 917 | 11,483 | 33,301 |
| 6 | 2031 | 874 | 12,357 | 35,836 |
| 7 | 2032 | 657 | 13,014 | 37,741 |
| 8 | 2033 | 657 | 13,671 | 39,647 |
| 9 | 2034 | 657 | 14,329 | 41,553 |
| 10 | 2035 | 657 | 14,986 | 43,458 |

## 3.5 HOUSING STARTS

According to the City's Building Permit Record, the following table provides housing starts and resulting estimated population increases for the past 5 years.

**TABLE 3.3 CITY OF IOWA COLONY PREVIOUS HOUSING STARTS**

| Year | Housing Starts | Estimated Population (Projected from 2020) | Percent Increase in Housing Starts | Population Increase | Persons per ESU* |
|---|---|---|---|---|---|
| 2020 | 825 | 8,137 | | | |
| 2021 | 722 | 10,014 | 23.1% | 1,877 | 2.60 |
| 2022 | 635 | 11,665 | 16.5% | 1,651 | 2.60 |
| 2023 | 597 | 13,217 | 13.3% | 1,552 | 2.60 |
| 2024 | 740 | 15,141 | 14.6% | 1,924 | 2.60 |
| 2025 | 935 | 17,572 | 16.1% | 2,431 | 2.60 |
| | | **5-Year Average** | **16.7%** | **1,887** | **2.60** |

*Assuming 1 housing start = 1 ESU

## 3.6 TEN YEAR GROWTH ASSUMPTIONS

The original LUA projected a growth rate for the 10-year planning period (2021-2031) of 500 connections per year.

The current growth rate in terms of ESU for the City currently averages around 726 new ESU's per year, over the period of 2020 to 2025, as evidenced by existing housing starts.

With the current total connections in the system expressed in ESU's of approximately 7,021, the average annual growth rate in terms of ESU was 10.34%. It is important to note that as developments approach buildout, growth rate is expected to drop within the next 10 years.

Therefore, it is recommended that for the 2025 update of the LUA the City adopts a growth rate of 11%, or 797 connections added yearly to the water and wastewater system. This is a more realistic statistic because it is based on actual housing starts and future MUD annexations.

For the projected 10-year period, it is estimated that approximately **7,970 new connections** will be added.

## 3.7 ULTIMATE POPULATION PROJECTIONS

The City has developed rapidly and is expected to do so in the upcoming years. A buildout connection capacity was considered using the following primary factors:

a. Existing development
b. Proposed land use
c. Available land

**TABLE 3.4** shows the City's projected development and estimated water use. The City could reasonably be expected to have **30,076** water service connections (ESU's) in the future. The areas of anticipated future development are shown in **EXHIBIT 3.**

## TABLE 3.4 PROJECTED DEVELOPMENT AND ESTIMATED WATER USE

| Service Area No. | Type | Gross Acreage | Estimated Acreage Developed with Water Service | Estimated Equivalent Connections per Acre | Total ESFC at Buildout | Total Estimated Daily Water Usage (gpd) |
|---|---|---|---|---|---|---|
| **Future Development** | | | | | | |
| 1 | Mixed Use | 470.7 | 353.0 | 3 | 1059 | 370,685 |
| 2 | Mixed Use | 94.3 | 70.7 | 3 | 212 | 74,270 |
| 3 | Residential | 119.0 | 89.2 | 4 | 357 | 124,950 |
| 4 | Commercial | 43.1 | 32.3 | 2 | 65 | 22,610 |
| 5 | Municipal | 81.4 | 61.0 | 2 | 122 | 42,735 |
| 6 | Residential | 54.1 | 40.6 | 4 | 162 | 56,805 |
| 7 | Commercial | 39.2 | 29.4 | 2 | 59 | 20,615 |
| 8 | Commercial | 27.4 | 20.6 | 2 | 41 | 14,420 |
| 9 | Mixed Use | 81.6 | 61.2 | 3 | 184 | 64,225 |
| 10 | Commercial | 42.5 | 31.9 | 2 | 64 | 22,330 |
| 11 | Residential | 158.0 | 118.5 | 4 | 474 | 165,865 |
| 12 | Mixed Use | 3.7 | 2.7 | 3 | 8 | 2,905 |
| 13 | Mixed Use | 76.8 | 57.6 | 3 | 173 | 60,445 |
| 14 | Mixed Use | 0.8 | 0.6 | 3 | 2 | 665 |
| 15 | Mixed Use | 102.0 | 76.5 | 3 | 230 | 80,360 |
| 16 | Mixed Use | 29.7 | 22.3 | 3 | 67 | 23,415 |
| 17 | Mixed Use | 53.8 | 40.4 | 3 | 121 | 42,385 |
| 18 | Mixed Use | 30.8 | 23.1 | 3 | 69 | 24,290 |
| 19 | Residential | 86.5 | 64.9 | 4 | 260 | 90,825 |
| 20 | Residential | 57.8 | 43.4 | 4 | 173 | 60,690 |
| 21 | Residential | 61.8 | 46.3 | 4 | 185 | 64,890 |
| 22 | Residential | 28.3 | 21.2 | 4 | 85 | 29,750 |
| 23 | Residential | 43.8 | 32.8 | 4 | 131 | 45,990 |
| 24 | Residential | 63.3 | 47.5 | 4 | 190 | 66,500 |
| 25 | Commercial | 191.3 | 143.5 | 2 | 287 | 100,450 |
| 26 | Commercial | 60.3 | 45.2 | 2 | 90 | 31,640 |
| 27 | Residential | 58.8 | 44.1 | 4 | 176 | 61,740 |
| 28 | Mixed Use | 60.5 | 45.3 | 3 | 136 | 47,635 |
| 29 | Mixed Use | 28.3 | 21.2 | 3 | 64 | 22,295 |
| 30 | Commercial | 9.7 | 7.3 | 2 | 15 | 5,110 |

| Service Area No. | Type | Gross Acreage | Estimated Acreage Developed with Water Service | Estimated Equivalent Connections per Acre | Total ESFC at Buildout | Total Estimated Daily Water Usage (gpd) |
|---|---|---|---|---|---|---|
| **Future Development** | | | | | | |
| 31 | Commercial | 7.1 | 5.3 | 2 | 11 | 3,745 |
| 32 | Commercial | 41.5 | 31.1 | 2 | 62 | 21,770 |
| 33 | Residential | 182.3 | 136.7 | 4 | 547 | 191,415 |
| 34 | Residential | 42.4 | 31.8 | 4 | 127 | 44,520 |
| 35 | Commercial | 30.7 | 23.0 | 2 | 46 | 16,135 |
| 36 | Residential | 67.1 | 50.3 | 4 | 201 | 70,455 |
| 37 | Residential | 98.7 | 74.0 | 4 | 296 | 103,635 |
| 38 | Residential | 99.8 | 74.8 | 4 | 299 | 104,790 |
| 39 | Residential | 89.4 | 67.0 | 4 | 268 | 93,870 |
| 40 | Residential | 145.3 | 109.0 | 4 | 436 | 152,600 |
| 41 | Residential | 126.7 | 95.0 | 4 | 380 | 133,035 |
| 42 | Commercial | 47.7 | 35.8 | 2 | 72 | 25,060 |
| 43 | Commercial | 44.6 | 33.4 | 2 | 67 | 23,415 |
| 44 | Residential | 171.8 | 128.8 | 4 | 515 | 180,390 |
| 45 | Residential | 90.9 | 68.1 | 4 | 273 | 95,410 |
| 46 | Majestic | 119.1 | 89.3 | 4 | 357 | 125,055 |
| 47 | Evergreen | 179.9 | 134.9 | 4 | 540 | 188,895 |
| 48 | Pupua Tract | 500.0 | 375.0 | 4 | 1500 | 525,000 |
| **Existing And Planned Development** | | | | | | |
| 31 | Caldwell Lakes | - | - | - | 1683 | 588,942 |
| 31 | Sterling Lakes North | - | - | - | 1250 | 437,500 |
| 31 | Sterling Lakes West | - | - | - | 569 | 199,150 |
| 31 | Sterling Lakes | - | - | - | 1284 | 449,400 |
| 32 | Sierra Vista | - | - | - | 831 | 290,850 |
| 87 | Caldwell Crossing | - | - | - | 235 | 82,166 |
| 92 | Creekhaven | - | - | - | 280 | 98,000 |
| 55 | Meridiana | - | - | - | 395 | 138,250 |
| 38 | Lacovia Lakes | - | - | - | 500 | 175,000 |
| 57 | Ellwood | - | - | - | 92 | 32,200 |
| 53 | Sierra Vista West | - | - | - | 1368 | 478,800 |
| TBD | Maple Farms | 552.9 | 414.7 | - | 1578 | 552,300 |

| MUD | Name | Gross Acreage | Estimated Acreage Developed with Water Service | Estimated Equivalent Connections per Acre | Total ESFC at Buildout | Total Estimated Daily Water Usage (gpd) |
|---|---|---|---|---|---|---|
| **Existing And Planned Development (Continued)** | | | | | | |
| TBD | Southern Star | 28.5 | 21.4 | - | 86 | 30,100 |
| TBD | Hines | 552.9 | 414.7 | - | 1629 | 570,150 |
| TBD | Alvin ISD | 202.0 | 151.5 | - | 303 | 106,050 |
| TBD | Sunset Prairie | 39.0 | 29.3 | - | 117 | 40,950 |
| TBD | Cadence Creek | - | - | - | 120 | 42,000 |
| TBD | Coogan | - | - | - | 519 | 181,650 |
| TBD | Colony Retreat | - | - | - | 312 | 109,200 |
| TBD | Royal Vista | - | - | - | 471 | 164,850 |
| TBD | CR121 Tract | - | - | - | 1350 | 472,500 |
| | | | | TOTAL | 21,959 | 7,685,493 |

| | |
|---|---|
| Number of Existing Equivalent Connections: | 7,020 |
| Number of Projected New Connections from Development Tracts | 21,959 |
| Projected Infill Developments (5%) | 1,098 |
| **Projected Ultimate Total Connections:** | 30,076 |

*Known Lots/ Requested Connections

## 3.8 LAND USE ASSUMPTIONS SUMMARY

The updated LUA are summarized as follows:

a. Based on available U.S. Census data and a 2.9 persons/connection population growth rate, population for 2025 is 20,503 and projected 2035 population is 43,458.
b. The projected ESU growth rate for the 10-year planning period (2025-2035) for purposes of this update report is 11%, or 797 ESU's per year. This results in a total new ESU's for the 10-year planning period of 7,970 connections.
c. Based on population projections and projected connections for the period 2025-2035, a "population per equivalent meter" of 2.9 persons per connection was determined.
d. Ultimate connections are projected to be 30,076 based on available developable areas.
e. Ultimate population is projected to be 87,222 based on 2.9 persons per connection and 30,076 ultimate connections.
f. The following table summarizes projected population and connection growth for 2025, 2035 and ultimate development.

**TABLE 3.5 POPULATION PROJECTIONS SUMMARY**

| Year | Connections 11% Growth | Population |
|---|---|---|
| 2025 | 7,021 | 20,503 |
| 2035 | 14,986 | 43,458 |
| Ultimate | 30,076 | 87,222* |

***Based on 2.9 persons per connection**

# 4.0 CAPITAL IMPROVEMENT PLAN

The impact fee Capital Improvement Plan (CIP) includes projects required to serve anticipated growth in the City during the 10-year planning period. This also serves the City's goal to gradually transition ownership of MUD facilities; existing within the City of Iowa Colony; to the City of Iowa Colony, to create a fully integrated public water system. This enables the City to extend services to all parts of the City, including future annexations.

## 4.1 ELIGIBLE FACILITIES

The impact fee legislation allows those projects necessitated by growth during the planning period to be included in the impact fee calculation. Projects included in the CIP include wastewater collection, wastewater treatment, water distribution lines and water production, water storage, and water treatment facilities, including but not limited to water wells, water storage tanks, and booster pump systems.

## 4.2 2021 IMPACT FEE STUDY CAPITAL IMPROVEMENT PROJECTS

The originally planned projects; including estimated costs; from the 2021 Impact Fee Study prepared by Adico Consulting Engineers, LLC are shown in **TABLE 4.1 and 4.2.**

## TABLE 4.1 2021 WATER CAPITAL IMPROVEMENT PROJECTS

| Project Name | Project Cost | Planned Year | Percent of Cost Related to New Development | Project Costs Related to New Development |
|---|---|---|---|---|
| **CIP Project No. 1A** –12" and 8" Waterline extension to Iowa Colony City Hall Area, including Magnolia Bend, Kelly Leigh Subdivision area | $1,949,198 | 2024 | 80% | $1,559,358 |
| **CIP Project No. 1B** – Water Supply Plant, 12" and 8" Waterline extension to serve area south of Iowa Colony City Hall including Brister Road and Edward Lane | $4,616,460 | 2028 | 80% | $3,693,168 |
| **CIP Project No. 2A** – 12" and 8" Waterline extension to area along Iowa Colony Blvd. north of Meridiana and east of SH 288 | $1,550,475 | 2026 | 80% | $1,240,380 |
| **CIP Project No. 2B** – 12" and 8" Waterline extension to area east of Iowa Colony Blvd. and north of Cedar Rapid Parkway | $5,427,270 | 2029 | 80% | $4,341,816 |
| **CIP Project No. 3A** – 12" & 8" Waterline extension to serve areas along south of Davenport Parkway along Ames Blvd. to South Hayes Creek, including Duke Road and CR 382 | $2,644,380 | 2026 | 80% | $2,115,504 |
| **CIP Project No. 3B** – Water Supply Plant, 12"and 8" waterline extension to serve areas along Ames Blvd, south of South Hayes Creek, including CR 62 | $1,670,085 | 2030 | 80% | $1,336,068 |
| **CIP Project No. 4A** – 12" Waterline extension and Water Supply Plant to serve areas along Iowa Colony Blvd. north of SH288 to Union Pacific Railroad | $4,703,400 | 2026 | 80% | $3,762,720 |
| **CIP Project No. 5** – 12" Waterline extension to serve areas along SH6 | $1,326,375 | 2030 | 80% | $1,061,100 |
| Surface Water Planning and Capacity Reservation | $1,500,000 | 2030 | 100% | $1,500,000 |
| **TOTAL** | **$25,387,643.00** | | | **$20,610,114** |
| New Connections Served in 10 Year Period by Water Capital Improvements | | | | 5596 |
| Cost per Connection | | | | $3,683 |
| Project Cost Assigned to the 10 Year Period | | | | $20,610,114 |

## TABLE 4.2 2021 WASTEWATER CAPITAL IMPROVEMENT PROJECTS

| Project Name | Project Cost | Planned Year | Percent of Cost Related to New Development | Project Costs Related to New Development |
|---|---|---|---|---|
| **CIP Project No. 1** – Lift Station and Force Main to serve areas adjacent to the Iowa Colony City Hall area, including Magnolia Bend, Kelly Leigh Subdivision and surrounding areas | $1,850,850.00 | 2024 | 80% | $1,480,680 |
| **CIP Project No. 2** – Lift Station and Force Main to serve areas south of Davenport Parkway and West of SH 288 | $2,993,204.00 | 2030 | 80% | $2,394,563 |
| **CIP Project No. 3** – Lift Station, Force Main and Gravity Sanitary Sewer to serve areas south of Bullard Parkway and West of SH 288 including Ruth Road and BCMUD 35 | $1,802,642.00 | 2028 | 80% | $1,442,114 |
| **CIP Project No. 4** – Lift Station, Force Main and Gravity Sanitary Sewer to serve areas along SH 6 and areas along Iowa Colony Blvd., from SH 6 to Bullard Parkway | $2,093,261.00 | 2026 | 80% | $1,674,609 |
| **CIP Project No. 5** – Lift Station, Force Main and Gravity Sanitary Sewer to serve areas north of Meridiana Pkwy | $2,093,261.00 | 2026 | 80% | $1,674,609 |
| **CIP Project No. 6** – 5.25 MGD Wastewater Treatment Plant No. 2 Phase I (1.5 MGD) | $19,500,000.00 | 2025 | 100% | $19,500,000 |
| **CIP Project No. 7** – 5.50 MGD Wastewater Treatment Plant No. 1 Phase I (0.5 MGD) | $6,500,000.00 | 2030 | 100% | $6,500,000 |
| **TOTAL** | **$36,833,218.00** | | | **$34,666,574** |
| New Connections Served in 10 Year Period by Wastewater Capital Improvements | | | | 5596 |
| Cost per Connection | | | | $6,195 |
| Project Cost Assigned to the 10 Year Period | | | | $34,666,574 |

## 4.3 CAPITAL IMPROVEMENT PROJECTS (2025 UPDATE)

The eligible water and wastewater projects for Impact Fee consideration are shown in **TABLE 4.3 AND 4.4**. This includes proposed CIP projects, and proposed improvements to existing facilities to provide additional capacity which can serve some or all of the projected growth during the study period.

For the existing facilities, their design capacity was evaluated against existing demands and projected growth to determine the prorated value for growth during the study period. **EXHIBIT D AND EXHIBIT E** show the Water and Wastewater Capital Improvement Project Maps, respectively.

## TABLE 4.3 2025 WATER CAPITAL IMPROVEMENT PROJECTS

| Project Name | Project Cost | Planned Year | Percent of Cost Related to New Development | Project Costs Related to New Development |
|---|---|---|---|---|
| **CIP Project No. 1A** – Water Supply Plant, 12" and 8" Waterline extension to serve area south of Iowa Colony City Hall including Brister Road and Edward Lane | $7,544,304 | 2028 | 90% | $6,789,874 |
| **CIP Project No. 2A** – 12" and 8" Waterline extension to area along Iowa Colony Blvd. north of Meridiana and east of SH 288 | $3,175,301 | 2026 | 80% | $2,540,241 |
| **CIP Project No. 2B** – East Water Supply Plant, 12" and 8" Waterline extension to area east of Iowa Colony Blvd. and north of Cedar Rapid Parkway | $8,162,984 | 2029 | 80% | $6,530,388 |
| **CIP Project No. 3A** – 12" & 8" Waterline extension to serve areas along south of Davenport Parkway along Ames Blvd. to South Hayes Creek, including Duke Road and CR 382 | $3,968,447 | 2026 | 80% | $3,174,757 |
| **CIP Project No. 3B** – Water Supply Plant, 12"and 8" waterline extension to serve areas along Ames Blvd, south of South Hayes Creek, including CR 62 | $7,855,520 | 2030 | 80% | $6,284,416 |
| **CIP Project No. 4A** – 12" Waterline extension and Water Supply Plant to serve areas along Iowa Colony Blvd. north of SH288 to Union Pacific Railroad | $7,654,802 | 2030 | 80% | $6,123,842 |
| **CIP Project No. 5** – 12" Waterline extension to serve areas along SH6 | $2,226,138 | 2032 | 80% | $1,780,910 |
| **CIP Project No. 6** – Elevated Water Storage Tank | $7,500,000 | 2027 | 100% | $7,500,000.00 |
| Surface Water Planning and Capacity Reservation | $1,000,000 | 2030 | 100% | $1,000,000 |
| **Total** | **$49,087,497** | | | **$41,724,428** |
| New Connections Served in 10 Year Period by Water Capital Improvements | | | | 7,970 |
| Cost per Connection | | | | $5,235 |
| Project Cost Assigned to the 10 Year Period | | | | $41,724,428 |

## TABLE 4.4 2025 WASTEWATER CAPITAL IMPROVEMENT PROJECTS

| Project Name | Project Cost | Planned Year | Percent of Cost Related to New Development | Project Costs Related to New Development |
|---|---|---|---|---|
| **CIP Project No. 1** – Lift Station and Force Main to serve areas adjacent to the Iowa Colony City Hall area, including Magnolia Bend, Kelly Leigh Subdivision and surrounding areas | $2,498,033 | 2026 | 80% | $1,998,427 |
| **CIP Project No. 2** – Lift Station and Force Main to serve areas south of Davenport Parkway and West of SH 288 | $4,616,432 | 2026 | 90% | $4,154,789 |
| **CIP Project No. 3** – Lift Station, Force Main and Gravity Sanitary Sewer to serve areas along SH 6 and areas along Iowa Colony Blvd., from SH 6 to Bullard Parkway | $3,466,957 | 2028 | 100% | $3,466,957 |
| **CIP Project No. 4** – Lift Station, Force Main and Gravity Sanitary Sewer to serve areas north of Meridiana Pkwy | $3,055,455 | 2028 | 80% | $2,444,364 |
| **CIP Project No. 5** – Northwest Wastewater Treatment Plant No. 2 Phase I (1.5 MGD) | $20,250,000 | 2025 | 9% | $1,822,500 |
| **CIP Project No. 6** – Southeast Wastewater Treatment Plant No. 1 Phase I (0.5 MGD) | $15,900,000 | 2027 | 90% | $14,310,000 |
| **CIP Project No. 7** - Southwest Wastewater Treatment Plant Expansion (0.4 MGD) | $11,000,000 | 2026 | 90% | $9,900,000 |
| **TOTAL** | **$60,786,877** | | | **$38,097,037** |
| New Connections Served in 10 Year Period by Wastewater Capital Improvements | | | | 7,970 |
| Cost per Connection | | | | $4,780 |
| Project Cost Assigned to the 10 Year Period | | | | $38,097,037 |

# 5.0 IMPACT FEE CALCULATION

This section includes a summary of the capital improvement project costs, interest costs, service unit equivalency, and a calculation of the maximum impact fee amount.

The capital improvement costs included in the impact fee calculation will include the portion of the project cost that is directly related to new growth. Some of the projects include provision of additional capacity for future growth.

The previous tables (**TABLE 4.3 AND 4.4**) show the proposed CIP Costs Summary, reflecting costs prorated for new development, to be used in the impact fee calculation.

## 5.1 FINANCE COSTS DETERMINATION

Costs incurred to support the debt service for the CIP projects listed in **TABLE 5.1** are eligible for reimbursement in accordance with the Impact Fee Legislation. This update reflects an estimated interest rate of 2.5% per annum on bonds such as TWDB State Revolving Fund loans. On that basis, the total interest expense for the Impact Fee calculation are as follows, based on a 20-year finance term:

**TABLE 5.1 FINANCE COSTS**

| | WATER | WASTEWATER |
|---|---|---|
| **Total Project Cost** | $41,724,427.84 | $38,097,036.54 |
| **Interest Rate** | 2.50% | 2.50% |
| **Term (Years)** | 20 | 20 |
| **Total Interest** | $11,339,320.21 | $10,353,515.17 |
| **Total Eligible Cost w/ Interest** | $53,063,748.06 | $48,450,551.70 |

## 5.2 SERVICE UNIT DETERMINATION

The equivalent meter/ ESU is used to measure consumption by new growth for impact fee purposes, similar to the 2021 Impact Fee report. The 5/8", 3/4" and 1" water meters serve as the service unit for both water and wastewater impact fee calculations. The equivalent meter is defined as the unit equivalent to the hydraulic capacity of a 3/4" meter.

The 5/8" and 3/4" meters were selected because it represents the water meter size for an average single-family dwelling. Equivalency factors were provided for larger meter sizes as developed by the American Water Works Association. **TABLE 5.2** provides these equivalency factors.

**TABLE 5.2 EQUIVALENT METER FACTORS**

| Meter Size (inches) | Equivalency Factor |
|---|---|
| 5/8" | 1 |
| 3/4" | 1 |
| 1" | 1 |
| 1.5" | 3.33 |
| 2" | 5.33 |
| 3" | 10 |
| 4" | 16.67 |
| 6" | 33.33 |
| 8" | 53.33 |

**TABLE 5.3** uses these equivalency factors and the total existing meter count provided by the City of Iowa Colony Water Billing Department to determine the total equivalent meters in the system.

**TABLE 5.3 2025 WATER METER CONNECTION COUNT**

| Meter Size | Number of Connections | Equivalency Factor | Number of Equivalent Connections |
|---|---|---|---|
| 5/8" | 6360 | 1 | 6360 |
| 3/4" | 0 | 1 | 0 |
| 1" | 0 | 1 | 0 |
| 1.5" | 0 | 3.33 | 0 |
| 2" | 52 | 5.33 | 277 |
| 3" | 1 | 10.67 | 10 |
| 6" | 0 | 33.33 | 0 |
| 8" | 7 | 53.33 | 373 |
| **TOTAL** | **6420** | | **7020** |

A "population per equivalent meter" to factor in residential and commercial meters was also calculated. The calculation for the 10-year period (2025-2035) is as follows:

***2025-2035 Population per Equivalent meter***

$$\frac{43{,}458 \ - 20{,}503 \ \text{(Increase in Population, } 2025 - 2035)}{7{,}970 \ \text{(Projected Increase in ESU)}} = 2.9$$

## 5.3 MAXIMUM IMPACT FEE CALCULATION

The maximum assessable impact fee is determined by dividing the cost of the CIP projects plus interest by the projected increase in equivalent meters for the 10-year planning period. The fee for various meter sizes is then determined by applying the factors provided in **TABLE 5.2** for all meters larger than the standard 3/4" residential meter. The maximum assessable impact fee for the City of Iowa Colony for water and wastewater is as follows:

**MAXIMUM WATER IMPACT FEE**

$$\frac{\$53{,}063{,}748.06 \ \text{(Cost of Water CIP Projects)}}{7{,}970 \ \text{(Projected Increase in ESU)}} = \$13{,}315.87$$

**MAXIMUM WASTEWATER IMPACT FEE**

$$\frac{\$48{,}450{,}551.70 \ \text{(Cost of Wastewater CIP Projects)}}{7{,}970 \ \text{(Projected Increase in ESU)}} = \$12{,}158.23$$

Chapter 395 of the Local Government Code was amended in 2001 to include that the City must provide a credit for the following:

*Section 395.014 Paragraph a (7):*

*(A) A credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the Capital Improvements Plan; or*

*(B) In the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.*

The Impact Fee legislation allows the City to charge an impact fee up to the amount shown as the calculated maximum.

For this update (2025), the maximum allowable impact fee proposed is calculated as follows:

50% of Water CIP Costs per Equivalent Meter = $13,315.87 x 50% = $6,657.94

50% of Wastewater CIP Costs per Equivalent Meter = $12,158.23 x 50% = $6,079.12

Total Impact Fee (Water + Wastewater) = $12,737.05

*In 2021, the maximum calculated fees were $2,352 for water and $3,955 for wastewater, adopting a fee of $2,350 and $3,950 respectively. This impact fee value has remained unchanged.*

## 5.4 CONCLUSIONS AND RECOMMENDATIONS

After discussion and deliberation of the Impact Fee Advisory Committee, the 2025 fee amounts to be recommended to City Council are as shown on **TABLE 5.4** below:

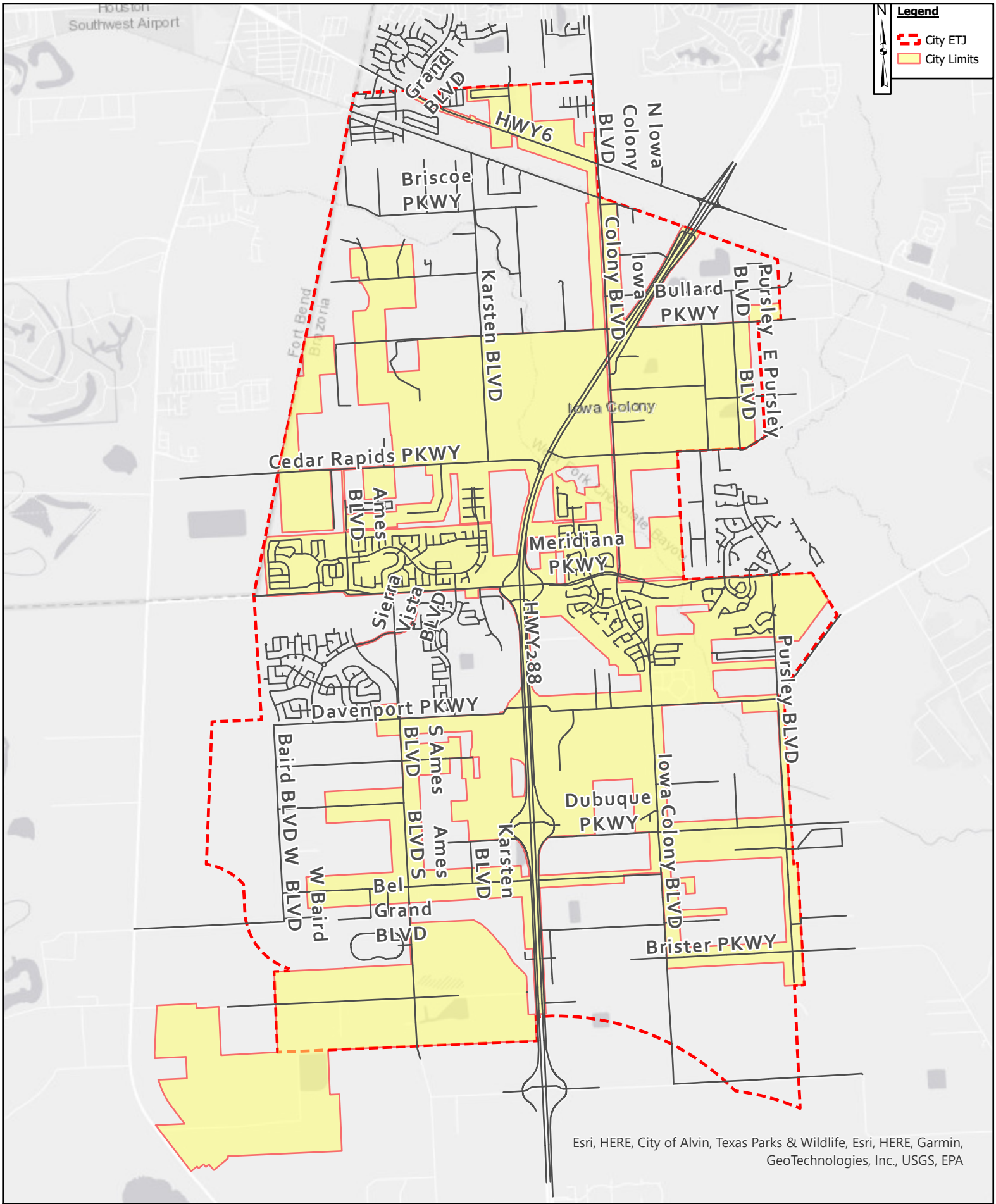
**TABLE 5.4 PROPOSED CAPITAL RECOVERY FEES**

| TYPE | CURRENT FEE | 2025 UPDATE MAX FEE W/ 50% CREDIT | RECOMMENDED FEE |
|---|---|---|---|
| Water | $2,350.00 | $6,657.94 | |
| Wastewater | $3,950.00 | $6,079.12 | |
| **TOTAL** | **$6,300.00** | **$12,737.05** | **$0.00** |
| **MULTIPLYING FACTORS** | | | |
| **DEVELOPMENT** | **FACTOR** | **UNIT** | **TOTAL IMPACT FEE** |
| Single Family Dwelling | 1 | ESFC | $0.00 |
| Apartment Complex | 1 | ESFC per living unit | $0.00 |
| Hotel, Motel, Resort, Etc. | 0.8 | ESFC per unit or room | $0.00 |
| Mobile Home | 1 | ESFC per unit or room | $0.00 |
| **Commercial, Retail, Institutional, Light Industrial, and all other non-residential development:** | | | |
| **METER SIZE** | **FACTOR** | **UNIT** | **TOTAL IMPACT FEE** |
| 5/8" | 1 | ESFC's | $0.00 |
| 3/4" | 1 | ESFC's | $0.00 |
| 1" | 1 | ESFC's | $0.00 |
| 1.5" | 3.33 | ESFC's | $0.00 |
| 2", All Types | 5.33 | ESFC's | $0.00 |
| 3" Compound | 10.67 | ESFC's | $0.00 |
| 3" Turbine | 11.67 | ESFC's | $0.00 |
| 4" Compound | 16.67 | ESFC's | $0.00 |
| 4" Turbine | 21 | ESFC's | $0.00 |
| 6" Compound | 33.33 | ESFC's | $0.00 |
| 6" Turbine | 43.33 | ESFC's | $0.00 |
| 8" Compound | 53.33 | ESFC's | $0.00 |
| 8" Turbine | 93.33 | ESFC's | $0.00 |
| 10" Compound | 76.67 | ESFC's | $0.00 |
| 10" Turbine | 140 | ESFC's | $0.00 |
| 12" All Types | 176.67 | ESFC's | $0.00 |

**Note 1**: When separate dedicated fire system meters and systems are installed, the fire system meters are not charged a separate capital recovery fee.

**Note 2:** When building fire flow systems are combined with other building systems, the City Engineer shall determine the equivalency factor based on the meter size that would be required without the fire protection component of the flow.

# Exhibit A - Service Area Map




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
SERVICE AREA MAP

CITY OF IOWA COLONY

# Exhibit B - Land Use Map

# CITY OF IOWA COLONY

## LEGEND

**FEMA FLOOD ZONE**

- OPEN SPACE PARKS
- HIGH DENSITY MIXED USE
- MEDIUM DENSITY MIXED USE
- MEDIUM DENSITY SINGLE FAMILY RESIDENTIAL (1 LOT/AC TO 3LOTS/AC)
- LOW DENSITY SINGLE FAMILY RESIDENTIAL (1 LOT/AC OR LESS)
- MOBILE HOME RESIDENTIAL
- PUBLIC

**MAJOR ARTERIAL**

- SUFFICIENT WIDTH
- TO BE WIDENED
- PROPOSED ALIGNMENT

**MAJOR COLLECTOR**

- SUFFICIENT WIDTH
- TO BE WIDENED
- PROPOSED ALIGNMENT

**MINOR COLLECTOR**

- SUFFICIENT WIDTH
- TO BE WIDENED
- PROPOSED ALIGNMENT

**MISCELLANEOUS**

- SUPER ARTERIALS
- TXDOT SIGNALIZATION
- MAJOR ARTERIALS INTERSECTION SIGNALIZATION
- MAJOR COLLECTOR INTERSECTION SIGNALIZATION
- ROUNDABOUT
- RAILROAD GRADE SEPARATION
- ARTERIALS OUTSIDE ETJ

**IOWA COLONY**

- CITY LIMITS
- CITY ETJ

0 1000 2000 FEET

FORT BEND COUNTY
BRAZORIA COUNTY

SH 6

BRISCOE PKWY (FCR956)

AMES BLVD (FCR48)

KARSTEN BLVD (FCR383)

IOWA COLONY BLVD (FCR48)

NOLAN RYAN EXPRESS WAY (SH 288)

BULLARD PKWY (FCR81)

PURSLEY BLVD (FCR80)

CEDAR RAPIDS PKWY (FCR57)

DISCOVERY

MERIDIANA PKWY (FCR56)

DAVENPORT PKWY (FCR64)

BAIRD BLVD (FCR55)

DUBUQUE PKWY (FCR63)

PURSLEY BLVD (FCR67)

IOWA COLONY BLVD (FCR65)

BRISTER PKWY (FCR121)

SANDY POINT PKWY (FCR53)

ALVIN
2 MILE ETJ

FUTURE SH 99 GRAND PARKWAY

ADICO CONSULTING ENGINEERS

marshdarcy PARTNERS

RCC Ron Cox Consulting
Helping Cities Manage Better

# CITY OF IOWA COLONY
## GENERAL CONCEPT FUTURE LAND USE

ADOPTED JUNE 15, 2020

# Exhibit C - Development Map

**Legend**

- City ETJ
- BC MUDs
- Parcels

Zone

- Commercial
- Mixed Use
- Municipal
- Residential
- Iowa Colony Roads

N

1 in. = 1,100 ft.

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, City of Alvin, Texas Parks & Wildlife, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA

# EXHIBIT C
# CITY OF IOWA COLONY
## DEVELOPMENT MAP

ADICO CONSULTING ENGINEERS

CITY OF IOWA COLONY

# Exhibit D - Water Capital Improvement Projects




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WATER CIP PROJECT NO. 1A

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WATER CIP PROJECT NO. 2A

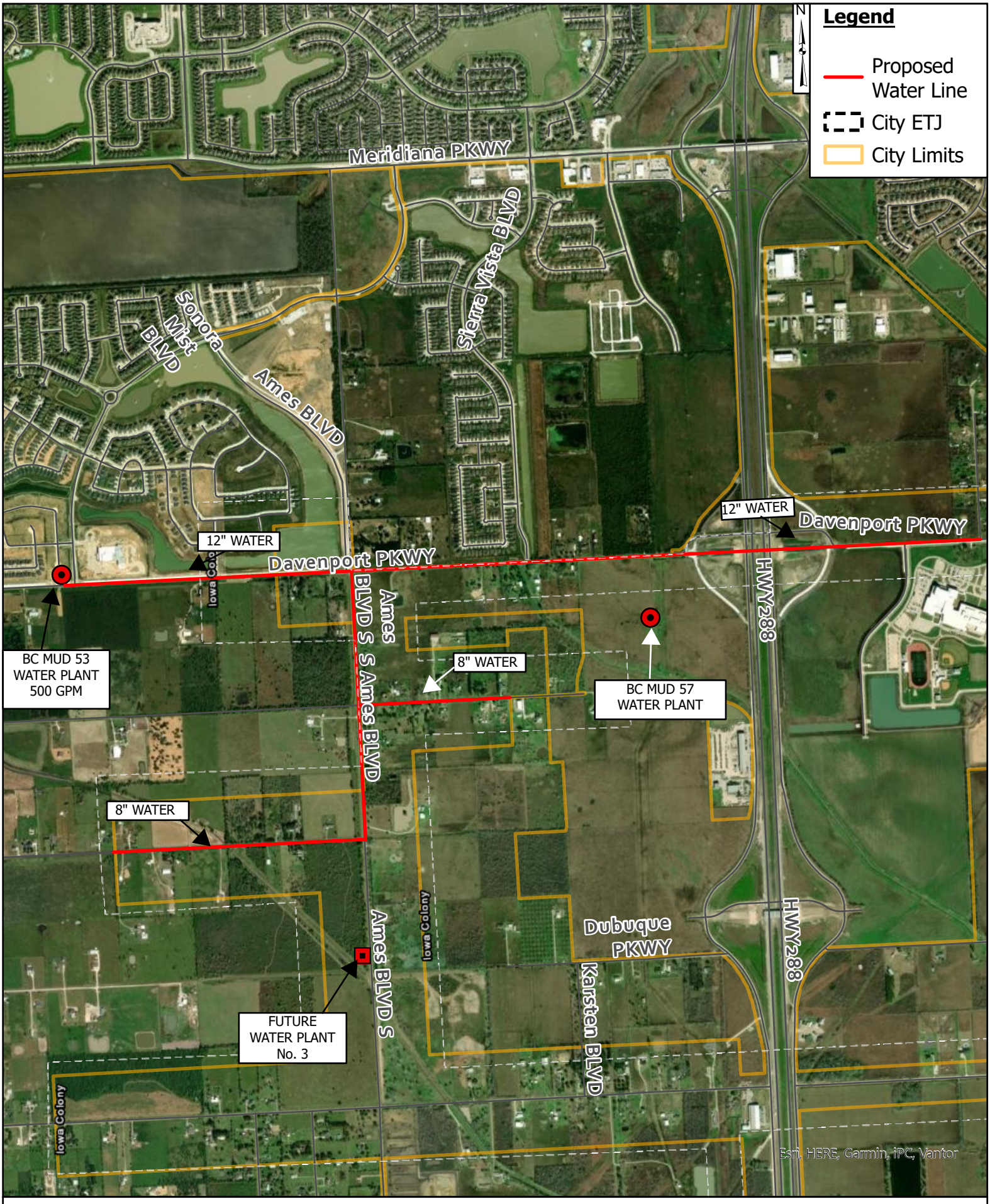
CITY OF IOWA COLONY




**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WATER CIP PROJECT NO. 2B

ADICO CONSULTING ENGINEERS

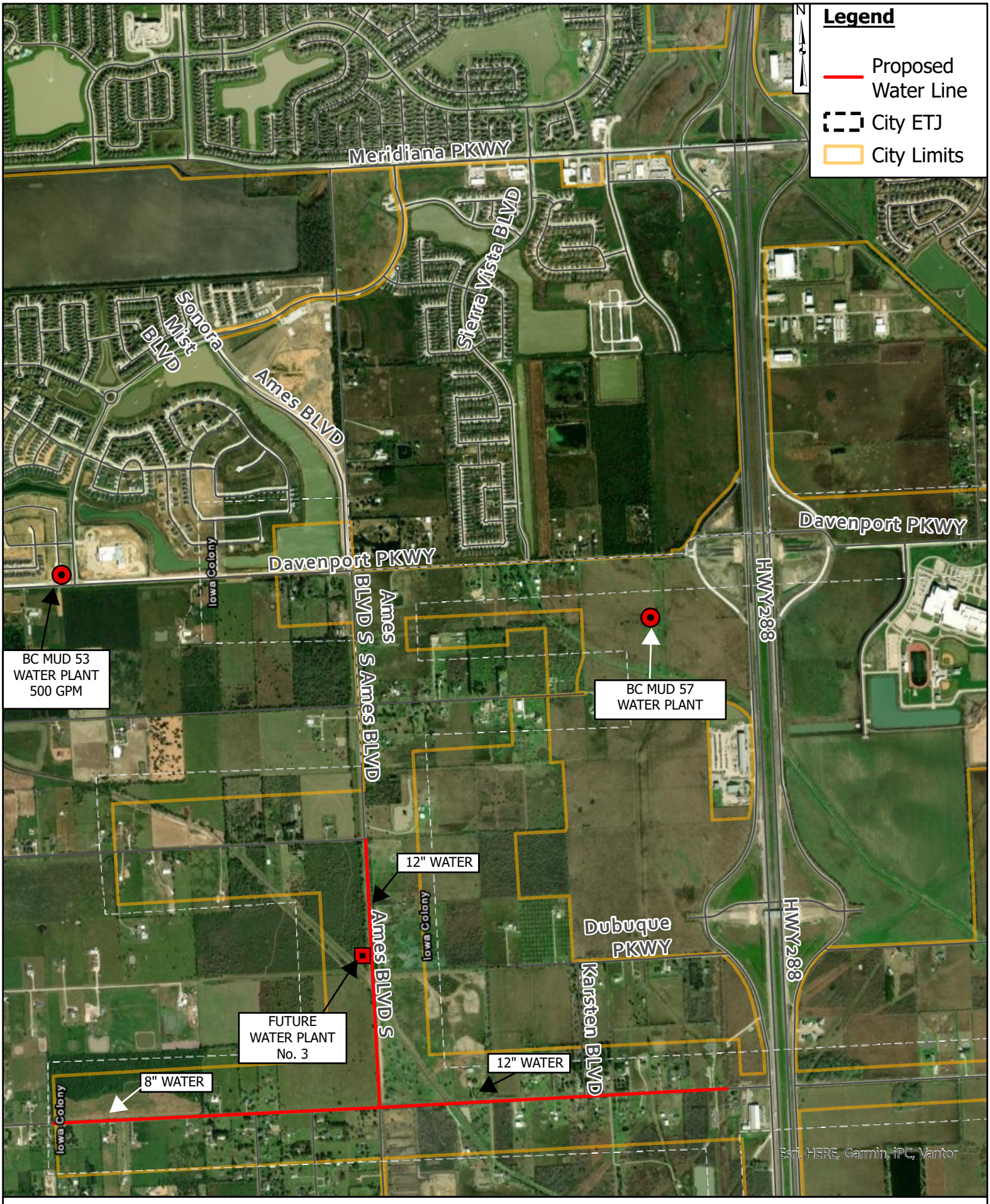
CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WATER CIP PROJECT NO. 3A

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WATER CIP PROJECT NO. 3B

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WATER CIP PROJECT NO. 4A

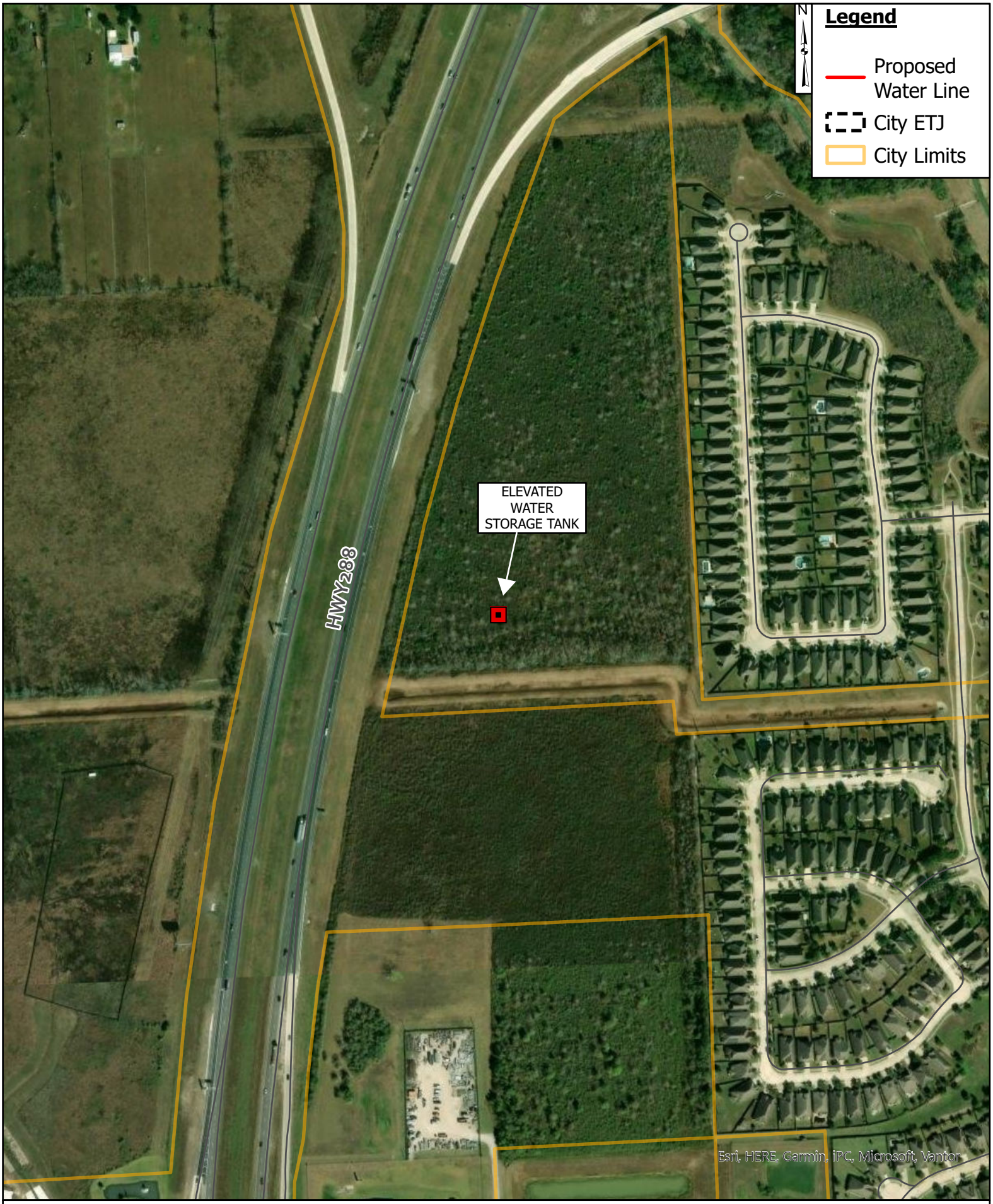
CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WATER CIP PROJECT NO. 5

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WATER CIP PROJECT NO. 6

CITY OF IOWA COLONY

# Exhibit E - Wastewater Capital Improvement Projects




**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WASTEWATER CIP PROJECT NO. 1

ADICO CONSULTING ENGINEERS

CITY OF IOWA COLONY




**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WASTEWATER CIP PROJECT NO. 2

ADICO CONSULTING ENGINEERS

CITY OF IOWA COLONY



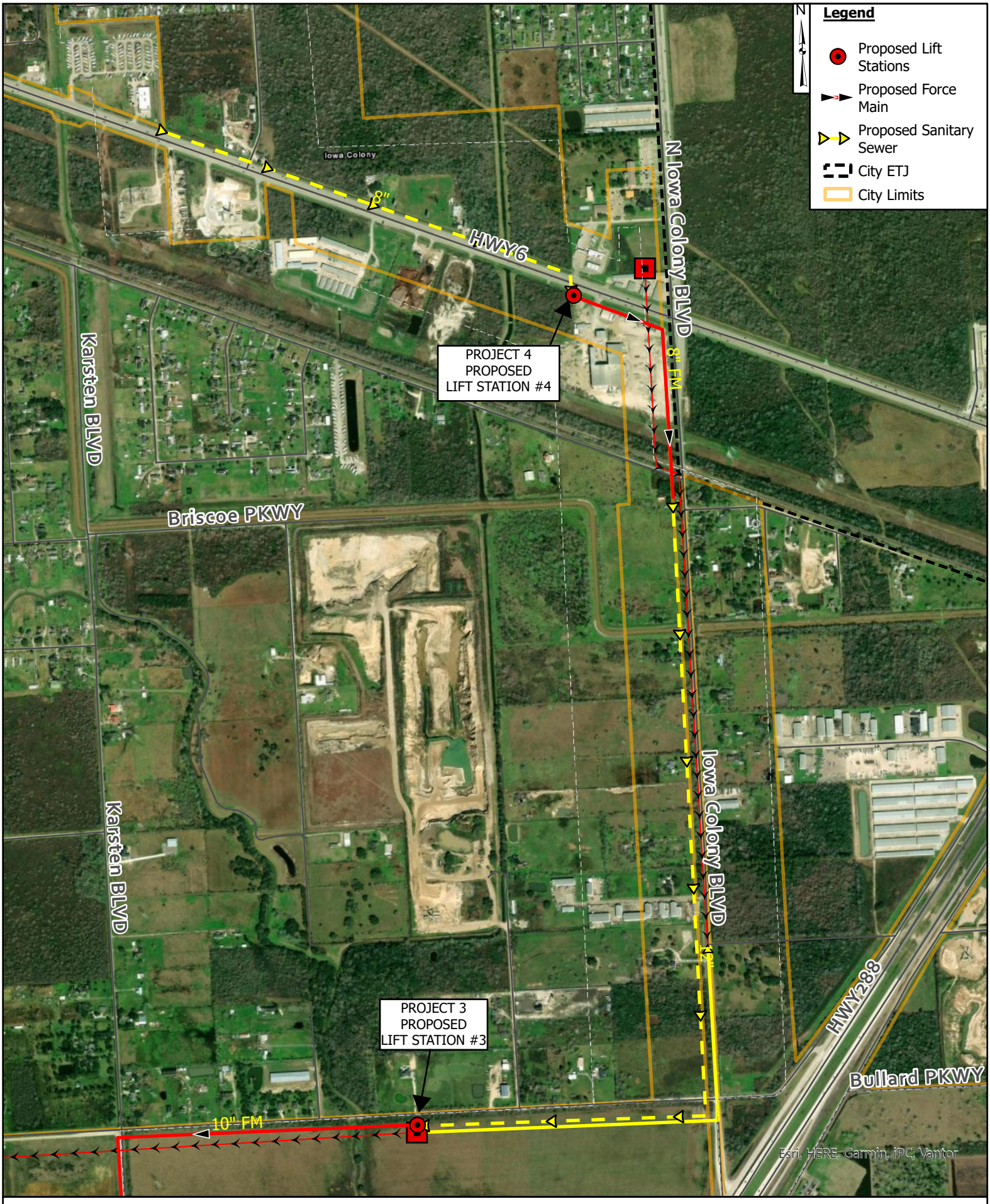

ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**

WATER AND WASTEWATER IMPACT FEE STUDY

WASTEWATER CIP PROJECT NO. 3

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WASTEWATER CIP PROJECT NO. 4

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**
WATER AND WASTEWATER IMPACT FEE STUDY
WASTEWATER CIP PROJECT NO. 5

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**

WATER AND WASTEWATER IMPACT FEE STUDY

WASTEWATER CIP PROJECT NO. 6

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**

WATER AND WASTEWATER IMPACT FEE STUDY

WASTEWATER CIP PROJECT NO. 7

CITY OF IOWA COLONY




ADICO CONSULTING ENGINEERS

**CITY OF IOWA COLONY**

WATER AND WASTEWATER IMPACT FEE STUDY

WASTEWATER CIP PROJECT NO. 8

CITY OF IOWA COLONY

# Appendix A - Water Capital Improvement Projects Cost Estimates

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opininon of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: Iowa Colony Blvd South Waterline Extension and Improvements Phase II

Description: Waterline Extension to serve area south of Iowa Colony City Hall

| | |
|---|---|
| CIP Project No. | **1A** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2028 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | 8" Waterline (all depths) | 15,950 | LF | $90 | $1,435,500 |
| 2. | 8" Bore | 200 | LF | $190 | $38,000 |
| 3. | 8" Gate Valves | 16 | EA | $4,800 | $76,560 |
| 4. | Fire Hydrant Assembly | 32 | EA | $6,750 | $218,240 |
| 5. | Wet Connection | 1 | EA | $3,750 | $3,750 |
| 6. | Water Plant No. 1 (Including 500 GPM well, GST, etc) | 1 | LS | $3,500,000 | $3,500,000 |
| | | | | **Subtotal:** | **$5,272,050** |
| | | | | **Contingency (20%):** | **$1,054,410** |
| | | | | **Engineering (15%):** | **$790,808** |
| | | | | **Total:** | **$7,117,268** |
| | | | | **Total Cost (Inflation)** | **$7,544,304** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opininon of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: Iowa Colony Blvd Central Waterline Extension and Improvements

Description: Waterline Extension to area along Iowa Colony Blvd. north of Meridiana and east of SH 288

| | |
|---|---|
| CIP Project No. | **2A** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2027 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | 8" Waterline (all depths) | 1,550 | LF | $90 | $139,500 |
| 2. | 12" Waterline (all depths) | 14,900 | LF | $115 | $1,713,500 |
| 3. | 8" Bore | 200 | LF | $190 | $38,000 |
| 4. | 12" Bore | 500 | LF | $250 | $125,000 |
| 5. | 8" Gate Valves | 2 | EA | $4,800 | $8,400 |
| 6. | 12" Gate Valves | 15 | LF | $6,000 | $92,400 |
| 7. | Fire Hydrant Assembly | 34 | LF | $6,750 | $231,525 |
| 8. | Wet Connection | 1 | EA | $3,750 | $3,750 |
| | | | **Subtotal:** | | **$2,352,075** |
| | | | **Contingency (20%):** | | **$470,415** |
| | | | **Engineering (15%):** | | **$352,811** |
| | | | **Total:** | | **$3,175,301** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opininon of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: East Water Plant & Cedar Rapid East Waterline Extension and Improvements

Description: East Water Plant and Waterline Extension to area east of Iowa Colony Blvd. and north of Cedar Rapid Parkway

| | |
|---|---|
| CIP Project No. | **2B** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2029 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | 8" Waterline (all depths) | 14,600 | LF | $90 | $1,314,000 |
| 2. | 12" Waterline (all depths) | 2,700 | LF | $115 | $310,500 |
| 3. | 8" Bore | 200 | LF | $190 | $38,000 |
| 4. | 12" Bore | 200 | LF | $250 | $50,000 |
| 5. | 8" Gate Valves | 15 | EA | $4,800 | $71,040 |
| 6. | 12" Gate Valves | 3 | LF | $6,000 | $17,400 |
| 7. | Fire Hydrant Assembly | 35 | LF | $6,750 | $238,950 |
| 8. | Wet Connection | 1 | EA | $7,500 | $7,500 |
| 9. | East Water Plant (Including 500 GMP well, GST, etc.) | 1 | LS | $3,500,000 | $3,500,000 |

| | |
|---|---|
| **Subtotal:** | **$5,547,390** |
| **Contingency (20%):** | **$1,109,478** |
| **Engineering (15%):** | **$832,109** |
| **Total:** | **$7,488,977** |
| **Total Cost (Inflation)** | **$8,162,984** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opininon of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: Davenport Parkway and Ames Blvd. South Waterline Extension and Imp.

Description: Waterline Extension to serve areas along south of Davenport Parkway along Ames Blvd to South Hayes Creek, including Duke Road and CR 382

| | |
|---|---|
| CIP Project No. | **3A** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2028 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | 8" Waterline (all depths) | 5,100 | LF | $90 | $459,000 |
| 2. | 12" Waterline (all depths) | 13,700 | LF | $115 | $1,575,500 |
| 3. | 8" Bore | 200 | LF | $190 | $38,000 |
| 4. | 12" Bore | 1,500 | LF | $250 | $375,000 |
| 5. | 8" Gate Valves | 5 | EA | $4,800 | $25,440 |
| 6. | 12" Gate Valves | 30 | LF | $6,000 | $182,400 |
| 7. | Fire Hydrant Assembly | 41 | LF | $6,750 | $276,750 |
| 8. | Wet Connection | 1 | EA | $7,500 | $7,500 |
| | | | | **Subtotal:** | **$2,939,590** |
| | | | | **Contingency (20%):** | **$587,918** |
| | | | | **Engineering (15%):** | **$440,939** |
| | | | | **Total:** | **$3,968,447** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opininon of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: Ames Blvd South Waterline Extension and Improvements

Description: Waterline Extension and Water Plant to serve areas along Ames Blvd south of South Hayes Creek, including County Road 62

| | |
|---|---|
| CIP Project No. | **3B** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2030 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | 8" Waterline (all depths) | 4,000 | LF | $90 | $360,000 |
| 2. | 12" Waterline (all depths) | 7,100 | LF | $115 | $816,500 |
| 3. | 8" Bore | 400 | LF | $190 | $76,000 |
| 4. | 12" Bore | 800 | LF | $250 | $200,000 |
| 5. | 8" Gate Valves | 4 | EA | $5,000 | $22,000 |
| 6. | 12" Gate Valves | 8 | LF | $6,000 | $47,400 |
| 7. | Fire Hydrant Assembly | 25 | LF | $6,750 | $166,050 |
| 8. | Wet Connection | 1 | EA | $7,500 | $7,500 |
| 9. | Water Plant No. 3 (Including 500 GPM well, GST, etc) | 1 | LS | $3,500,000 | $3,500,000 |

| | |
|---|---|
| **Subtotal:** | **$5,195,450** |
| **Contingency (20%):** | **$1,039,090** |
| **Engineering (15%):** | **$779,318** |
| **Total:** | **$7,013,858** |
| **Total Cost (Inflation):** | **$7,855,520** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opininon of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: Iowa Colony Blvd North Waterline Exension and Improvements

Description: Waterline Extension and Water Plant to serve areas along Iowa Colony Blvd. north of SH 288 to railroad

| | |
|---|---|
| CIP Project No. | **4A** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2030 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | 12" Waterline (all depths) | 7,500 | LF | $115 | $862,500 |
| 2. | 12" Bore | 600 | LF | $250 | $150,000 |
| 3. | 12" Bore with Casing | 500 | LF | $750 | $375,000 |
| 4. | 12" Gate Valves | 9 | LF | $6,000 | $51,600 |
| 5. | Fire Hydrant Assembly | 17 | LF | $6,750 | $116,100 |
| 6. | Wet Connection | 1 | EA | $7,500 | $7,500 |
| 7. | Water Plant No. 4 (Including 500 GPM well, GST, etc) | 1 | LS | $3,500,000 | $3,500,000 |

| | |
|---|---|
| **Subtotal:** | **$5,062,700** |
| **Contingency (20%):** | **$1,012,540** |
| **Engineering (15%):** | **$759,405** |
| **Total:** | **$6,834,645** |
| **Total Cost (Inflation):** | **$7,654,802** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opininon of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: SH6 Waterline Extension and Improvements

Description: Waterline Extension and to serve areas along SH6

| | |
|---|---|
| CIP Project No. | **5** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2032 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | 12" Waterline (all depths) | 6,100 | LF | $115 | $701,500 |
| 2. | 12" Bore | 400 | LF | $250 | $100,000 |
| 3. | 12" Bore with Casing | 600 | LF | $750 | $450,000 |
| 4. | 12" Gate Valves | 7 | LF | $6,000 | $42,600 |
| 5. | Fire Hydrant Assembly | 14 | LF | $6,750 | $95,850 |
| 6. | Wet Connection | 1 | EA | $7,500 | $7,500 |
| | | | | **Subtotal:** | **$1,397,450** |
| | | | | **Contingency (20%):** | **$279,490** |
| | | | | **Engineering (15%):** | **$209,618** |
| | | | | **Total:** | **$1,886,558** |
| | | | | **Total Cost (Inflation):** | **$2,226,138** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opininon of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: Elevated Water Storage Tank

Description: 1 MGD Elevated Storage Tank to Provide Water Storage Capacity and S

| | |
|---|---|
| CIP Project No. | **5** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2026 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | Elevated Water Storage Tank | 1 | LS | $6,250,000 | $6,250,000 |
| | | | **Subtotal:** | | **$6,250,000** |
| | | | **Contingency (10%):** | | **$625,000** |
| | | | **Engineering (10%):** | | **$625,000** |
| | | | **Total:** | | **$7,500,000** |

# Appendix B - Wastewater Capital Improvement Projects Cost Estimates

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opinion of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: City Hall Wastewater Extension

Description: Proposed Lift Station and Forcemain to serve areas adjacent to the Iowa Colony City Hall area, including Magnolia Bend, Kelly Leigh Subdivision and surrounding areas

| | |
|---|---|
| CIP Project No. | **1** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2026 |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | Lift Station | 1 | LS | $650,000 | $650,000 |
| 2. | Generator | 1 | LS | $125,000 | $125,000 |
| 3. | 8" Sanitary Sewer (all depths) | 800 | LF | $75 | $60,000 |
| 4. | 12" Sanitary Sewer (all depths) | 7,800 | LF | $85 | $663,000 |
| 5. | 8" Forcemain | 2,100 | LF | $65 | $136,500 |
| 6. | Sanitary Sewer Manholes | 30 | LF | $4,000 | $120,000 |
| 7. | Extra Depth Manholes | 150 | EA | $180 | $27,000 |
| 8. | Air Release Manholes | 2 | EA | $7,500 | $15,000 |
| 9. | Connection to existing Force Main | 1 | EA | $4,800 | $4,800 |

| | |
|---|---|
| **Subtotal:** | **$1,796,500** |
| **Contingency (20%):** | **$359,300** |
| **Engineering (15%):** | **$269,475** |
| **Total:** | **$2,425,275** |
| **Total Cost (Inflation):** | **$2,498,033** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opinion of Probable Construction Cost**

Adico, LLC - Consulting Engineers

CIP Project No. **2**
Date: 8/26/2026
Prepared By: AG
Checked By: BB
Projection: 2026

Project Name: BCMUD 53 Sanitary Sewer Collection Extension

Description: Proposed Lift Station, forcemain and gravity collection system to serve areas south of Davenport Parkway and west of SH 288

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | Lift Station | 1 | LS | $650,000 | $650,000 |
| 2. | Generator | 1 | LS | $125,000 | $125,000 |
| 3. | 8" Sanitary Sewer (all depths) | 10,550 | LF | $75 | $791,250 |
| 4. | 12" Sanitary Sewer (all depths) | 5,210 | LF | $85 | $442,850 |
| 5. | 8" Forcemain | 11,080 | LF | $65 | $720,200 |
| 6. | Sanitary Sewer Manholes | 63 | LF | $4,000 | $252,160 |
| 7. | Extra Depth Manholes | 315 | EA | $180 | $56,736 |
| 8. | Air Release Manholes | 2 | EA | $7,500 | $15,000 |

| | |
|---|---|
| **Subtotal:** | **$3,053,196** |
| **Contingency (20%):** | **$610,639** |
| **Engineering (15%):** | **$457,979** |
| **Total:** | **$4,121,815** |
| **Total Cost (Inflation):** | **$4,616,432** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opinion of Probable Construction Cost**

Adico, LLC - Consulting Engineers

| | |
|---|---|
| CIP Project No. | **3** |
| Date: | 8/26/2026 |
| Prepared By: | AG |
| Checked By: | BB |
| Projection: | 2028 |

Project Name: Bullard Parkway Sanitary Sewer Collection Extension

Description: Proposed Lift Station, forcemain and gravity collection system to serve areas along SH 6 and areas along Iowa Colony Blvd. from SH 6 to Bullard Parkway.

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | Lift Station | 1 | LS | $650,000 | $650,000 |
| 2. | Generator | 1 | LS | $125,000 | $125,000 |
| 3. | 8" Sanitary Sewer (all depths) | 4,200 | LF | $70 | $294,000 |
| 4. | 12" Sanitary Sewer (all depths) | 8,050 | LF | $85 | $684,250 |
| 5. | 8" Forcemain | 2,400 | LF | $70 | $168,000 |
| 6. | Sanitary Sewer Manholes | 49 | LF | $4,000 | $196,016 |
| 7. | Extra Depth Manholes | 245 | EA | $180 | $44,104 |
| 8. | Air Release Manholes | 2 | EA | $7,500 | $15,000 |
| 9. | Bore and Case 8" Sanitary Sewer | 400 | LF | $475 | $190,000 |

| | |
|---|---|
| **Subtotal:** | **$2,176,370** |
| **Contingency (20%):** | **$435,274** |
| **Engineering (15%):** | **$326,455** |
| **Total:** | **$2,938,099** |
| **Total Cost (Inflation):** | **$3,466,957** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opinion of Probable Construction Cost**

Adico, LLC - Consulting Engineers

CIP Project No. **4**
Date: 8/26/2026
Prepared By: AG
Checked By: BB
Projection: 2028

Project Name: Meridiana Sanitary Sewer Collection Extension

Description: Proposed Lift Station, forcemain and gravity collection system to serve areas north of Meridiana Parkway

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | Lift Station | 1 | LS | $742,500 | $742,500 |
| 2. | Generator | 1 | LS | $135,000 | $135,000 |
| 3. | 8" Sanitary Sewer (all depths) | 4,200 | LF | $70 | $294,000 |
| 4. | 12" Sanitary Sewer (all depths) | 8,050 | LF | $70 | $563,500 |
| 5. | 8" Forcemain | 2,400 | LF | $65 | $156,000 |
| 6. | Sanitary Sewer Manholes | 49 | LF | $3,780 | $185,235 |
| 7. | Extra Depth Manholes | 245 | EA | $180 | $44,104 |
| 8. | Air Release Manholes | 2 | EA | $7,425 | $14,850 |
| 9. | Bore and Case 8" Sanitary Sewer | 500 | LF | $475 | $237,500 |

| | |
|---|---|
| **Subtotal:** | **$2,135,189** |
| **Contingency (20%):** | **$427,038** |
| **Engineering (15%):** | **$320,278** |
| **Total:** | **$2,882,505** |
| **Total Cost (Inflation):** | **$3,055,455** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opinion of Probable Construction Cost**

Adico, LLC - Consulting Engineers

CIP Project No. **5**
Date: 8/26/2026
Prepared By: AG
Checked By: BB
Projection: 2025

Project Name: Northwest Wastewater Treatment Plant

Description: Proposed Wastewater Treatment Plant Expansion to serve northwest side of the City.

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | Wastewater Treatment Plant | 1 | LS | $15,000,000 | $15,000,000 |
| | | | **Subtotal:** | | **$15,000,000** |
| | | | **Contingency (20%):** | | **$3,000,000** |
| | | | **Engineering (15%):** | | **$2,250,000** |
| | | | **Total:** | | **$20,250,000** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opinion of Probable Construction Cost**

Adico, LLC - Consulting Engineers

CIP Project No. **6**
Date: 8/26/2026
Prepared By: AG
Checked By: BB
Projection: 2027

Project Name: Southeast Wastewater Treatment Plant

Description: Proposed Wastewater Treatment Plant to serve southeast side of the City.

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | Wastewater Treatment Plant | 1 | LS | $12,500,000 | $12,500,000 |
| | | | **Subtotal:** | | **$12,500,000** |
| | | | **Contingency (10%):** | | **$1,250,000** |
| | | | **Engineering (10%):** | | **$1,250,000** |
| | | | **Total:** | | **$15,000,000** |
| | | | **Total Cost (Inflation):** | | **$15,900,000** |

**CITY OF IOWA COLONY**
**Water and Wastewater Impact Fee Study (Update)**
**Opinion of Probable Construction Cost**

Adico, LLC - Consulting Engineers

Project Name: Southwest Wastewater Treatment Plant Expansion

Description: Proposed Wastewater Treatment Plant Expansion

CIP Project No. **7**
Date: 8/26/2026
Prepared By: AG
Checked By: BB
Projection: 2026

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT | UNIT PRICE | TOTAL ITEM COST |
|---|---|---|---|---|---|
| 1. | Wastewater Treatment Plant | 1 | LS | $8,800,000 | $8,800,000 |
| | | | **Subtotal:** | | **$8,800,000** |
| | | | **Contingency (15%):** | | **$1,320,000** |
| | | | **Engineering (10%):** | | **$880,000** |
| | | | **Total:** | | **$11,000,000** |