Water and Sewer Capacity Study

APPENDIX Q

CITY OF GILROY

TECHNICAL MEMORANDUM

Water and Sewer Capacity Study

FOR

2480 & 2740 HECKER PASS RESIDENTIAL

FINAL

July 2025

Prepared for:

MANA INVESTMENTS

Prepared by:

AKEL ENGINEERING GROUP, INC.

AKEL
ENGINEERING GROUP, INC.

Smart Planning Our Water Resources

July 8, 2025

Final

Mana Camden Fund, LLC
5927 Balfour Court, Suite 208
Carlsbad, CA 92008

Attention: Mr. Scott Murray

Subject: 2480 & 2740 Hecker Pass Water and Sewer Capacity Study – Final Technical Memorandum

Dear Scott,

We are pleased to submit this Technical Memorandum (TM) summarizing the water and sewer capacity analysis for the 2480 & 2740 Hecker Pass residential development at the west side of City of Gilroy. This TM is organized as follows:

1. Purpose and Scope
2. Study Area
3. Domestic Water Demand and Sewer Flow Projections
4. Hydraulic Model Updates
5. Water System Capacity Evaluation
6. Sewer System Capacity Evaluation
7. Summary

We are extending our thanks to you and other staff, whose courtesy and cooperation were valuable components in completing this study.

Sincerely,

AKEL ENGINEERING GROUP, INC.

Tony Akel, P.E., D. WRE.
President
Enclosure: Final Technical Memorandum

7433 N. First St, Suite 103 • Fresno, CA 93720 • Tel (559) 436-0600 • Fax (559) 436-0622
www.akeleng.com

TABLE OF CONTENTS

PAGE NO.

1.0 PURPOSE AND SCOPE 1
2.0 STUDY AREA 1
3.0 DOMESTIC WATER DEMAND AND SEWER FLOW PROJECTIONS 2
3.1 Domestic Water Demand Projections 2
3.2 Sanitary Sewer Flow Projections 3
4.0 HYDRUALIC MODEL UPDATES 3
5.0 WATER SYSTEM CAPACITY EVALUATION 4
5.1 Performance and Design Criteria 4
5.2 Service Pressure Evaluation 4
5.2.1 Peak Hour Pressures 4
5.2.2 Maximum Day Demand plus Fire Flow (MDD + FF) Analysis 4
5.2.3 Individual Hydrant Limitation 5
5.2.4 Water Supply and Demand Analysis 5
5.2.5 Storage Capacity Analysis 5
6.0 SEWER SYSTEM CAPACITY EVALUATION 6
6.1 Performance and Design Criteria 6
6.2 Capacity Evaluation Results 6
6.2.1 Existing Conditions 7
6.2.2 Buildout Conditions with related 2023 SSMP Improvements 8
7.0 SUMMARY 9

LIST OF FIGURES

Figure 1 Study Area

Figure 2 On-site Water System

Figure 3 On-site Sewer System

Figure 4 PHD Pressures

Figure 5 Fire Flow Analysis

Figure 6 Sewer Flow Route (Plan View)

Figure 7 Scenario 1. Existing PDWF HGL Profile

Figure 8 Scenario 2. Existing PWWF HGL Profile

Figure 9 Scenario 3. Existing PDWF with Development HGL Profile

Figure 10 Scenario 4. Existing PWWF with Development HGL Profile

Figure 11 Phase 1 Off-Site Pipeline Improvements

Figure 11.A Scenario 4.A Phase 1 Off-Site Pipeline Improvements HGL Profile

Figure 12 2023 SSMP Improvements Downstream of Project Site

Figure 13 Scenario 5. Modified Buildout PDWF HGL Profile

Figure 14 Scenario 6. Modified Buildout PWWF HGL Profile

LIST OF TABLES

Table 1 Domestic Water Demand Projections

Table 2 Sanitary Sewer Flow Projections

Table 3 Performance and Design Criteria

Table 4 Water Supply and Storage Analysis

Table 5 Sewer Analysis Results Summary

LIST OF APPENDICES

Appendix A Hecker Plan Specific Plan – prepared by MH Engineering Co.

LIST OF ABBREVIATIONS AND DEFINITIONS

2023 WSMP	2023 Water System Master Plan
2023 SSMP	2023 Sewer System Master Plan
ADD	Average Day Demand
ADWF	Average Dry Weather Flow
City	City of Gilroy
CIP	Capital Improvement Project
d/D	Depth of Flow to Pipe Diameter Ratio
DU/ac	Dwelling Units per Acre
ft	Feet
gpd	Gallons per Day
gpdc	Gallons per Day per Capita
gpm	Gallons per Minute
HGL	Hydraulic Grade Line
MDD	Maximum Day Demand
MG	Million Gallons
PDWF	Peak Dry Weather Flow
PHD	Peak Hour Demand
Project	2480 & 2740 Hecker Pass
PWWF	Peak Wet Weather Flow
SCRWA	South County Regional Wastewater Authority
WWTP	Wastewater Treatment Plant

1.0 PURPOSE AND SCOPE

The City of Gilroy (City) is currently planning to provide domestic water and sanitary sewer services to support a low-income residential housing – 2480 & 2740 Hecker Pass (Project) located off Hecker Pass Highway.

The purpose of this study is to estimate the water demand and sewer flows generated by the proposed Hecker Pass Project, and to evaluate the impact on the City's existing water distribution and sanitary sewer systems. The scope of work for this study included the following tasks:

- Describe the study area and proposed land use.
- Estimate water demands and sewer flows from the proposed Hecker Pass Project.
- Update the City's water and sewer system hydraulic models to incorporate the projected demands and flows.
- Perform capacity evaluations of the existing systems using City's water and sewer system hydraulic models.
- Identify potential capacity deficiencies and recommend capital improvements needed to maintain the target level of service.

It should be noted that this study focuses only on evaluating the capacity adequacy of the existing water distribution system and sanitary sewer collection system downstream of the proposed projects, as they are usually impacted by said projects. The assessment of the existing system condition, odor control, and other factors are not included in this study's scope.

2.0 STUDY AREA

The 2480 & 2740 Hecker Pass Residential (Project) is proposed on approximately 24-acres of land located south of Hecker Pass Road, north of 3rd Street and Lone Oak Court, as shown on **Figure 1**. The Project consists of three parcels, with two westerly vacant parcels (APNs 810-20-033, 810-20-036) split by 3rd Street. The easterly parcel (APN 810-20-037) located east of 3rd Street currently consists of the existing residence, barn and shed building areas.

According to the preliminary grading plans provided in **Appendix A**, the developer proposes to demolish the existing single-family home, barn, sheds on the easterly parcel, and construct a total of 116 new single-family units on the three parcels. Given its proposed residential density of 6.5 dwelling units per net acre (DU/ac), this Project will be categorized as **Low Density Residential**.

The planned distribution of units is as follows:

- **Easterly Parcel.** The Project on the east side of the 3rd Street consists of 53 single-family residential units.
- **Westerly Parcels.** The Project on the west side of the 3rd Street consists of 63 single-family residential units.

3.0 DOMESTIC WATER DEMAND AND SEWER FLOW PROJECTIONS

This section documents the projected domestic water demands and sanitary sewer flows for this Project.

3.1 Domestic Water Demand Projections

The projected domestic water demands for this Project included three parcels 810-20-033, 03, and 037. Table 1 documents the projected domestic water demands for the Project by parcels, which include: Average Day Demand (ADD), Maximum Day Demand (MDD), and Peak Hour Demand (PHD). The methodology for estimating these demands are discussed as follows:

Domestic Water Demand Projections

- Average Day Demand = 32.7 gpm
- Maximum Day Demand = 65.4 gpm
- Peak Hour Demand = 98.1 gpm

- **Average Day Demand (ADD)**: The average day demand was estimated by applying an average water use factor to the proposed residential units. A per capita water use of 116 gallons per day per capita (gpdc) was calculated using full-year 2024 data, obtained from the California Open Data Portal. A residential density of 3.5 persons per unit was assumed, based on the City of Gilroy General Guidelines. The ADD yields 32.7 gallons per minute (gpm).
- **Maximum Day Demand (MDD)**: The methodology for estimating the maximum day demand was calculated by applying a typical peaking factor of 2.0 to the ADD, yields 65.4 gpm.
- **Peak Hour Demand (PHD)**: Similarly, the methodology for estimating the peak hour demand was calculated by applying a typical peaking factor of 3.0 to the ADD, yields 98.1 gpm.

The total required fire flow for the Project is 1,500 gpm for the Residential land use classification, based on 2023 WSMP. The required fire flow must be provided for a minimum duration of 2 hours while maintaining a minimum hydrant pressure of 20 pounds per square inch (psi).

3.2 Sanitary Sewer Flow Projections

The projected sewage generation included three parcels 810-20-033, 03, and 037. Table 2 documents the projected sewer flows for the Project by parcels, which include: Average Dry Weather Flow (ADWF), Peak Dry Weather Flow (PDWF), and Peak Wet Weather Flow (PWWF). The methodology for estimating these flows are discussed as follows:

Sewer Flow Projections

- Average Dry Weather Flow = 22.6 gpm
- Peak Dry Weather Flow = 40.6 gpm
- Peak Wet Weather Flow = 67.7 gpm

- **Average Dry Weather Flow (ADWF):** The methodology for estimating the average dry weather flows was calculated by applying an average sewer flow factor of 80 gallons per day per capita (gpdc) to the proposed residential units. A residential density of 3.5 persons per unit was assumed, based on the City of Gilroy General Guidelines. The ADWF yields 22.6 gallons per minute (gpm).
- **Peak Dry Weather Flow (PDWF):** The methodology for estimating the peak dry weather flows was calculated by applying a peaking factor of 1.8 to the ADWF. This peaking factor was obtained from the City's calibrated hydraulic model and is observed in residential areas. The PDWF for the Project is estimated at 40.6 gpm.
- **Peak Wet Weather Flow (PWWF):** Similarly, the methodology for estimating the peak wet weather flows was calculated by applying a typical peaking factor of 3.0 to the ADWF. The PWWF for the Project is estimated at 67.7 gpm.

4.0 HYDRUALIC MODEL UPDATES

This section documents the updates to the City's existing water distribution and sanitary sewer hydraulic models. The City's hydraulic models developed as part of the 2023 WSMP and SSMP were used in this study to simulate the projected flow conditions. Key physical and operational elements of the hydraulic model were updated as follows:

- **Proposed On-site System.** The proposed on-site water and sewer alignments, including pipeline diameters, and elevations were extracted from the preliminary improvement plans prepared by MH Engineering , dated February 15, 2024. The proposed on-site water and sewer improvements are shown on Figure 2 and Figure 3, respectively, and included in Appendix A for reference purposes.
- **Datum Adjustments.** The preliminary plans have been digitized into the City's hydraulic model and adjusted to ensure consistency with the elevation datum used in the hydraulic model.
- **Water Demand and Flow Allocations.** The projected water demands and sewer flows have been distributed among the proposed 116 housing units and allocated to the nearest hydraulic model junctions and manholes in the hydraulic models.

5.0 Water System Capacity Evaluation

This section documents the water distribution system evaluation for this Project. The City's domestic water design criteria, service pressure and fire flow evaluation results are documented in the following sections.

5.1 Performance and Design Criteria

The performance and design criteria listed on Table 3 was established from the 2023 WSMP and defines the target level of service for the water distribution system. A summary of the design criteria used to evaluate the distribution system is documented as follows:

- **Service Pressures.** Minimum service pressure during normal operating conditions including peak hour should exceed 35 psi, and minimum residual pressure of 20 psi during fire flows.

5.2 Service Pressure Evaluation

The City's hydraulic model developed as part of the 2023 WSMP were used in this study to simulate the projected flow conditions, and to evaluate the capacity adequacy of the water distribution system under the post-development peak hour and maximum day plus fire flow demand conditions (MDD+FF).

The capacity evaluation results are documented in the subsequent sections.

5.2.1 Peak Hour Pressures

The hydraulic analysis results are graphically documented on Figure 4, and indicates that the peak hour pressure ranges from 48 psi to 51 psi. The hydraulic analysis results indicate that the water distribution system is capable to accommodate the estimated Project's demands under peak hour conditions.

5.2.2 Maximum Day Demand plus Fire Flow (MDD + FF) Analysis

The fire flow analysis was conducted using the maximum day demand scenario in the hydraulic model, with hypothetical fire flows applied. The magnitude of each fire flow was based on the governing land use type within proximity to the fire hydrant location. The fire flow requirements for this Project is 1,500 gpm for a duration of 2 hours for Residential land uses. The required fire flow must be provided for the required duration while maintaining a pressure of 20 pounds per square inch (psi). The criteria for fire flows were also documented on Table 3.

The maximum available fire flows volume at the proposed on-site hydrants are graphically documented on Figure 5, ranges from 2,642 gpm to 3,672 gpm while maintaining a residual pressure of 20 psi. thus meeting the minimum residential fire flow criteria of 1,500 gpm.

5.2.3 Individual Hydrant Limitation

The fire flow analysis in this report includes results simulated by the hydraulic model along distribution mains and do not account for individual hydrant limitations.

The hydraulic model predicts the capability of the distribution system to deliver water at the selected hydrant “location” and does not limit the flow based on the individual hydrant capacity nor lateral limitation. Most hydrants with 4-inch connections typically extract water at a rate of 1,500-2,000 gpm depending on their size, length, and hydrant type. Fire engine trucks can also impact water flow based on the size of their water tank and pump. Fire marshals indicate that individual fire engines can pump up to 2,000 gpm.

When the required fire flow water extraction value exceeds 1,500-2,000 gpm, multiple hydrants become necessary to meet the demand. There is a maximum spacing requirement between hydrants that is based on the prescribed flow, where a higher flow requirement (industrial/commercial/institutional) necessitates more hydrants with reduced spacing between them. Maximum hydrant spacing is documented in the International Fire Code (ICC IFC-2021).

5.2.4 Water Supply and Demand Analysis

A water supply and demand analysis was performed using the existing groundwater well supply capacity and the City's 2024 water demands, incorporating projected post-development conditions for this Project. According to 2023 WSMP, the City's total existing groundwater supply capacity is 12,561 gpm, with a firm capacity of 10,147 gpm (excluding the largest supply well). The City's maximum day demand in 2024 was estimated at 8,754 gpm, based on the data obtained from the California Open Data Portal.

Comparing the firm well capacity against 2024 maximum day demands, and including the projected 65 gpm post-development demands from this Project, the analysis indicated a supply surplus of 1,328 gpm. The supply and demand analysis are documented on **Table 4**.

5.2.5 Storage Capacity Analysis

The Project is located within Pressure Zone 1, which includes three existing storage reservoirs with a total capacity of 10.3 MG. The City’s storage requirements include three components: operational storage, emergency storage, and fire storage.

Storage design criteria vary by pressure zone. The fire flow requirements for Pressure Zone 1 include 25% of the Maximum Day Demand (MDD) for operational and emergency storage, plus a governing fire flow requirement of 5,000 gpm for 3 hours. The storage analysis indicates that Pressure Zone 1 has a surplus storage to accommodate the projected demands from this Project. These results are also documented on **Table 4**.

6.0 SEWER SYSTEM CAPACITY EVALUATION

This section documents the sanitary sewer collection system evaluation for this Project. The capacity evaluation results downstream of the proposed Project to the WWTP, along with the City's design criteria used to evaluate the capacity adequacy are documented in the following sections.

6.1 Performance and Design Criteria

The performance and design criteria listed on **Table 3** was established from the 2023 SSMP and defines the target level of service for the sewer system. A summary of the design criteria is documented as follows:

- **Gravity Pipe Flow Depth (Dry Weather).** Maximum allowable depth-to-diameter ratio (d/D) during peak dry weather flow conditions should not exceed 0.90 for existing pipes and 0.75 for proposed pipes. A graphic of the d/D criteria is shown on **Exhibit A**.
- **Manhole Freeboard (Wet Weather).** Hydraulic Grade Line (HGL) in manholes should be at least 3 feet below the ground elevation during peak wet weather flow conditions. This criterion is typically implemented to avoid premature trunk line replacements and minimize the risk of overflows. A graphic of the wet weather criteria is shown on **Exhibit A**.

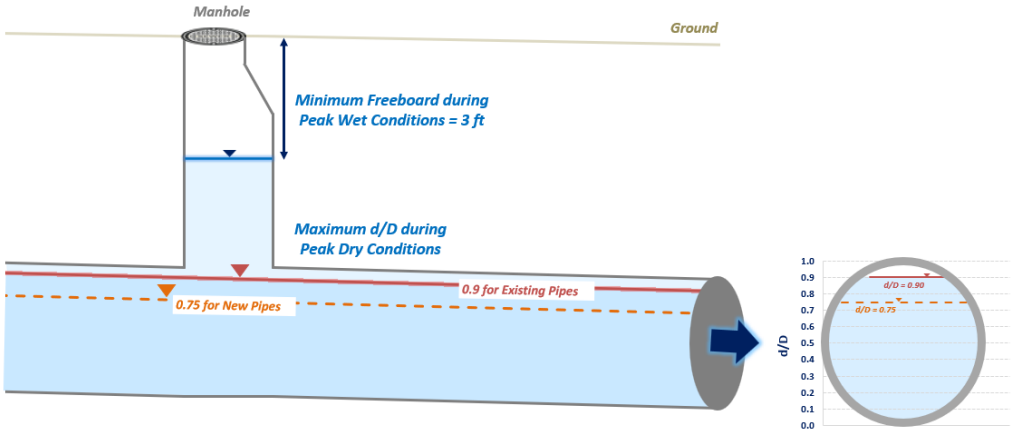


Exhibit A. Peak Dry and Wet Weather Flow Criteria

6.2 Capacity Evaluation Results

The City's hydraulic models developed as part of the 2023 SSMP were used in this study to simulate the projected flow conditions. For this study, post-development conditions were simulated by distributing sewer flow projections to the model on-site manholes in the hydraulic models. **Figure 6** shows the existing backbone sewer collection system downstream of the Project, between 3rd Street and South County Regional Wastewater Authority (SCRWA) Wastewater Treatment Plant (WWTP). This trunk is grouped into six reaches, labeled from A to

G. The hydraulic modeling results for the six reaches, including maximum pipeline flows and d/D ratio are documented on **Table 5**.

The capacity evaluation results are presented in the subsequent sections.

6.2.1 Existing Conditions

The pipeline capacity evaluation results for existing dry and wet weather scenarios are discussed as follows:

- **Scenario 1. Existing Peak Dry Weather Flows**. The hydraulic grade line (HGL) profile from the Project's sewer connection point to Luchessa Avenue is shown on **Figure 7** and illustrates the existing pipeline capacity. The hydraulic results show that the most critical pipeline is 12-inch in diameter and located in Santa Theresa Drive and 3rd Street. This critical pipeline exhibits a d/D ratio of 0.86 (86% full) during peak dry weather conditions, indicating that the existing system is adequately sized to meet the City's maximum allowable peak dry weather flow d/D ratio of 0.90.
- **Scenario 2. Existing Peak Wet Weather Flows (10-Year 24-Hour Design Storm)**. This scenario evaluates the existing downstream sanitary sewer collection system under peak wet weather flow (PWWF) conditions, with a total rainfall depth of 4.69 inches. The capacity evaluation results for this scenario are illustrated on **Figure 8** and the hydraulic model predicts 8 manholes along 3rd Street, between Santa Paula Drive and Santa Theresa Drive have a freeboard depth of less than 3.0 foot and are at risk of potential overflows. These conditions do not meet the City's minimum freeboard criterion of 3.0 feet.

  It should be noted that these deficiencies are identified as existing system deficiency in the City's 2023 SSMP (Section 7.2.2). The deficiency is caused by the limited capacity constraints of the existing 12-inch pipelines.
- **Scenario 3. Existing Peak Dry Weather Flows + Development Flows**. The HGL profile for this scenario is shown on **Figure 9**. The hydraulic results show that the most critical pipeline is 12-inch in diameter and located in Santa Theresa Drive and 3rd Street. This critical pipeline exhibits a d/D ratio of 0.93 (93% full) during peak dry weather conditions, indicating that the existing system downstream of the Project do not meet the City's maximum allowable peak dry weather flow d/D ratio of 0.90. When compared to Scenario 1, the d/D ratio in the existing 12-inch diameter pipeline increases from 0.86 (Scenario 1) to 0.93 (Scenario 3).
- **Scenario 4. Existing Peak Wet Weather Flows + Development Flows (10-Year 24-Hour Design Storm)**. The capacity evaluation results for this scenario are shown on **Figure 10** and are similar to Scenario 2 with slightly higher flows. The HGL profile indicates that 11 manholes along 3rd Street, from St Francis Court to Santa Theresa Drive have a freeboard depth of less than 3.0 foot and at the potential risk of overflows, do not meet the City's freeboard criterion of 3.0 feet.

Improvements triggered by this Project. Based on the hydraulic analysis results and discussions with City staff, we are recommending off-site pipeline capacity improvements to mitigate the Hecker Pass Project's impact on the existing sewer collection system. The recommended off-site improvements overlap with the City's 2023 SSMP, Capital Improvement Project (CIP) ID **UP-1**.

The required Phase 1 off-site improvements, which begin at Miller Avenue, are shown on Figure 11 and detailed as follows:

- **4th Street.** Replace approximately 670 LF of existing 12-inch gravity pipelines with new 18-inch pipelines, from Santa Theresa Drive to Miller Avenue.
- **Santa Theresa Drive.** Replace approximately 660 LF of existing 12-inch gravity pipelines with new 18-inch pipelines, from 3rd Street to 4th Street.

The Hydraulic Grade Line (HGL) profile including the Phase 1 improvements are shown on Figure 11.A. The simulated results show that the proposed improvements will mitigate the risk of overflows, as previously shown on Figure 10.

6.2.2 Buildout Conditions with related 2023 SSMP Improvements

Ultimate buildout condition flows were developed based on land uses from the City's 2035 General Plan and consistent with the 2023 SSMP. For this study, the buildout conditions were modified to include projected flows from this Project.

Buildout Improvements required by 2023 SSMP. The off-site infrastructure located downstream of the proposed development overlaps with three capital improvement projects documented in the City's 2023 SSMP. These overlapping projects are shown on Figure 12 with a uniquely coded project ID and are described as follows:

- **New alignment Capital Improvement Project: UP-1**. This capacity improvement was recommended to mitigate the deficiency of the existing 12-inch pipeline along 3rd Street. It should be noted that the initial UP-1 project recommended in the 2023 SSMP was to construct new 12-inch pipes along Uvas Creek Drive to relieve the 12-inch pipes along 3rd Street by diverting a portion of the upstream flows.

  After further review of the 2023 SSMP improvement alignment and a discussion with City staff on September 25, 2024, a new alignment is preferred alternative to mitigate the existing system deficiency. This new project alignment consists of replacing approximately 6,300 LF of existing 12-inch gravity pipes with new 18-inch pipes along 3rd Street, Santa Theresa Drive, and 1st Street, from Santa Teresa Boulevard to Miller Avenue.

  This project is triggered by existing peak wet weather flows (pre-development) and further exacerbated with the addition of development flows. This capital improvement project not only to address existing wet weather deficiencies but also to accommodate the ultimate buildout condition.

- **Master Plan Capital Improvement Projects: TP-1** and **TP-2**. These capacity improvements consist of replacing approximately 4,270 LF of existing 18-inch gravity pipes with new 21-inch pipe. These new pipes will run parallel to Princevalle Channel and along Monterey Road, from Princevalle Street to Miller Avenue. This is a long-term project recommended in the master plan to improve system performance.

The pipeline capacity evaluation results included the other relevant Master Plan improvements downstream of the proposed development for buildout peak dry and wet weather scenarios are as follows:

- **Scenario 5. Modified Buildout Peak Dry Weather Flows with Development Flows**. The HGL profile from the proposed development to Luchessa Avenue is shown on Figure 13 and indicates that the off-site capital improvement projects downstream of the proposed development is adequately sized to accommodate buildout dry weather flows.
- **Scenario 6. Modified Buildout Peak Wet Weather Flows with Development Flows (10-Year 24-Hour Design Storm)**. The capacity evaluation results for this scenario are illustrated on Figure 14. The hydraulic model results show that the off-site capital improvement projects downstream of the proposed development meet the City's freeboard criteria of 3 feet.

7.0 SUMMARY

The City of Gilroy is planning to provide domestic water and sanitary sewer services to the 2480 & 2740 Hecker Pass residential development. The purpose of this study is to review the projected water demand and sewer flows generated by the proposed development, and to evaluate the impact on the City's existing water distribution and sanitary sewer systems.

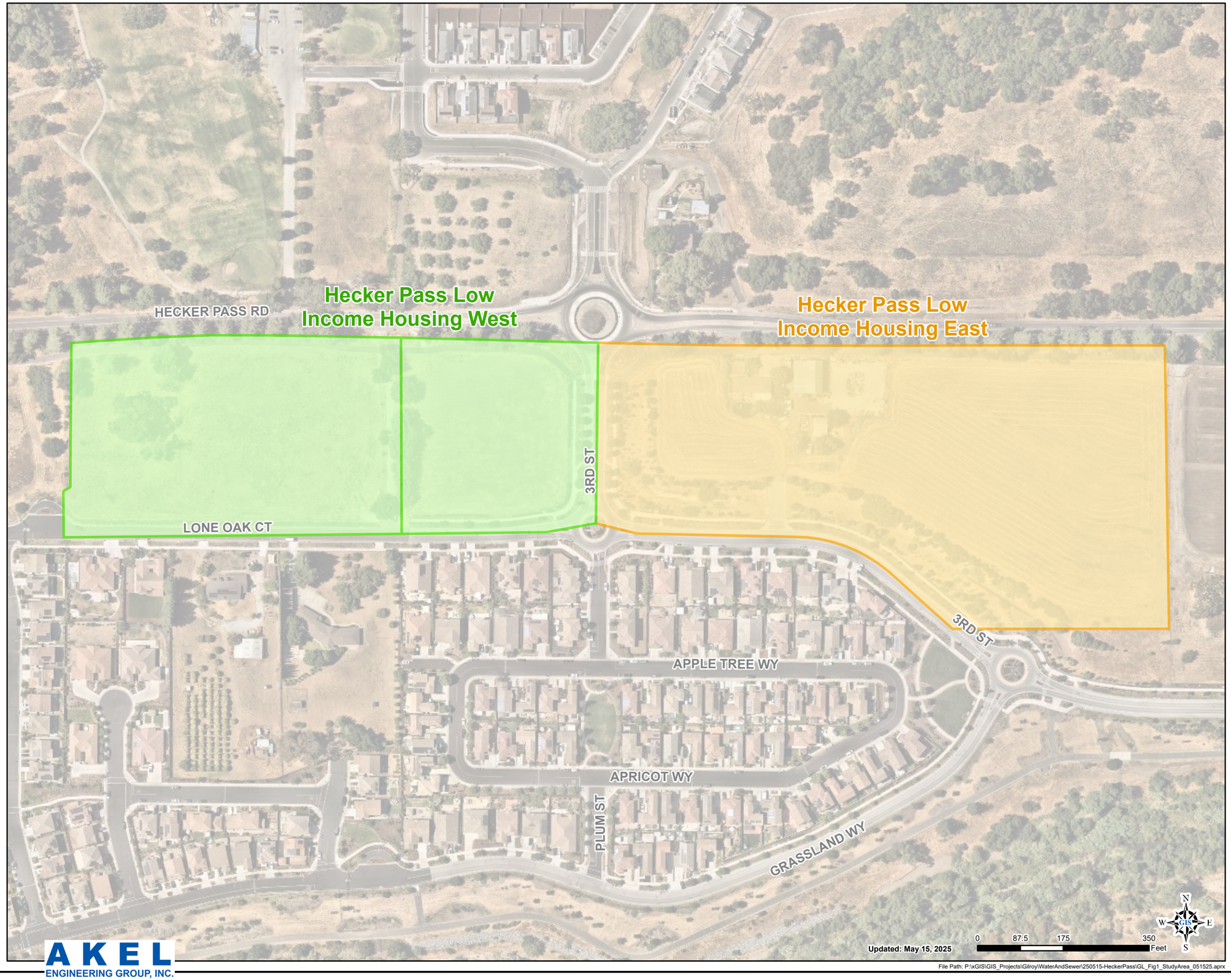
The capacity evaluation for the water system and sewer systems are summarized as follows:

- **Water Distribution System.** The analysis for the water system evaluation is summarized as follows:
    - **Service Pressures.** The hydraulic model results indicate that the water distribution system has sufficient capacity to accommodate the increased water demands without negatively impacting the system pressures. The peak hour service pressures under post-development conditions range approximately from 48 psi to 51 psi.
    - **Fire Flows Requirement.** The fire flow analysis, conducted under the MDD scenario, demonstrates that the distribution system can provide the required fire flows of 1,500 gpm for two hours, while maintaining residual pressures above 20 psi.
    - **Supply vs. Demand.** The water supply and demand analysis indicate that the City's existing well supply has adequate capacity to accommodate the projected demands.

- **Storage Requirement.** The storage capacity analysis indicates that the City's existing system has adequate capacity to accommodate the projected demands.

- **Sewer Collection System.** The analysis for the sanitary sewer system evaluation is summarized as follows:
  - **Downstream Capacity Evaluations.** The hydraulic analysis results indicate that the existing sewer collection system downstream of the Project does not meet the City's minimum freeboard criterion of 3.0 feet under peak wet weather conditions. It should be noted that these deficiencies are identified as existing system deficiency in the City's 2023 SSMP (Section 7.2.2). The deficiency is caused by the limited capacity constraints of the existing 12-inch pipelines along 3rd Street.
  - **Off-site Improvements.** The required off-site improvements to be completed by the Hecker Pass Project, which begin at Miller Avenue, are shown on **Figure 11**. These improvements are summarized as follows:
    - **4th Street.** Replace approximately 670 LF of existing 12-inch gravity pipelines with new 18-inch pipelines, from Santa Theresa Drive to Miller Avenue.
    - **Santa Theresa Drive.** Replace approximately 660 LF of existing 12-inch gravity pipelines with new 18-inch pipelines, from 3rd Street to 4th Street.

FIGURES



Legend

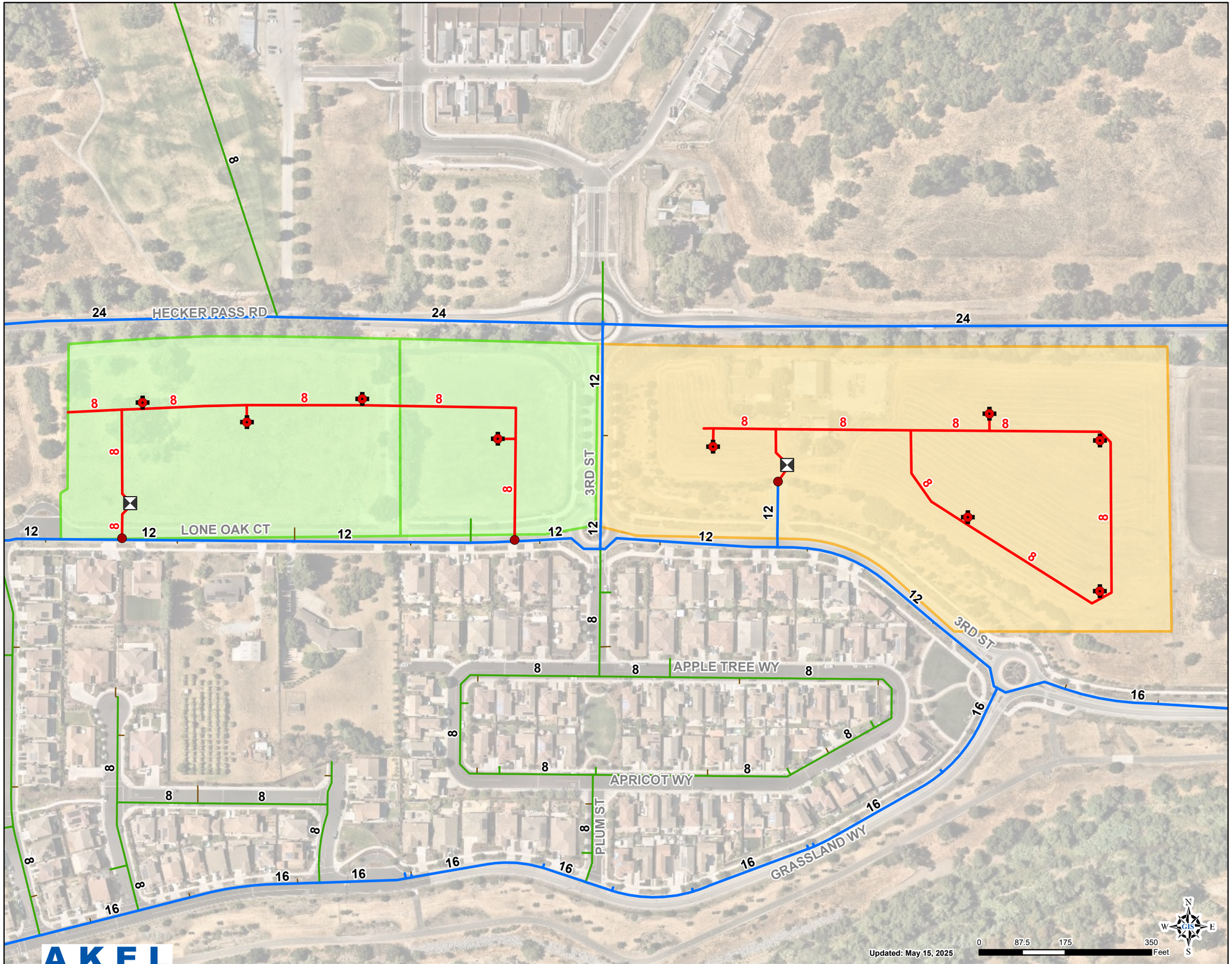
Study Area

- Hecker Pass Low Income Housing - East
- Hecker Pass Low Income Housing - West

Figure 1
Study Area
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_Fig1_StudyArea_051525.aprx



Legend

Proposed System

- Backflow Preventers
- Hydrants
- Point of Connection
- Pipelines

Study Area

- Hecker Pass Low Income Housing - East
- Hecker Pass Low Income Housing - West

Existing System

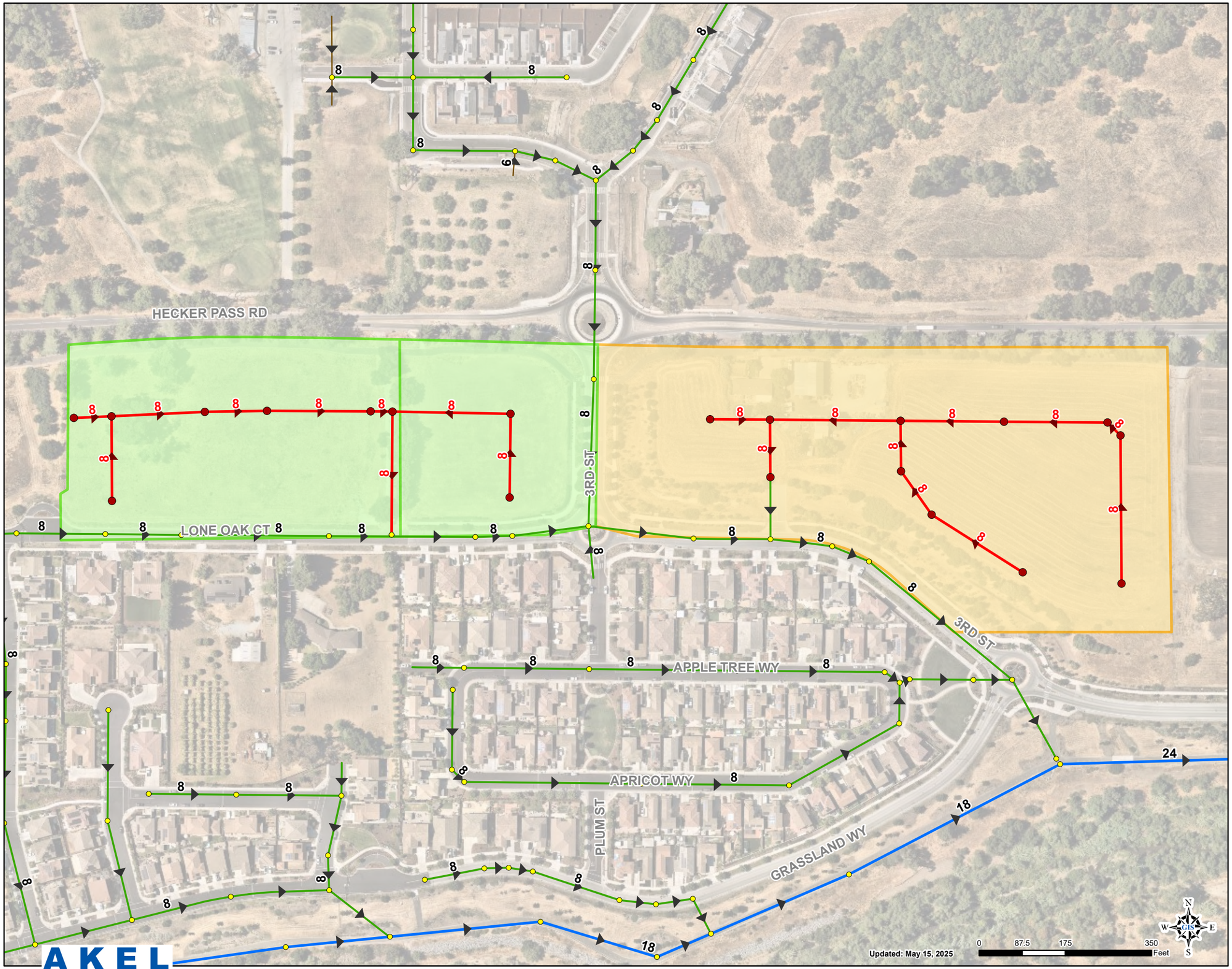
Pipelines by Diameter

- 6" or Smaller
- 8" - 10"
- 12" or Larger

Figure 2
On-site Water System
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

AKEL
ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_Fig2_WaterSystem_051525.aprx



Legend

Proposed System

- Manholes
- Gravity Pipes

Study Area

- Hecker Pass Low Income Housing - East
- Hecker Pass Low Income Housing - West

Existing System

- Flow Direction
- Manholes

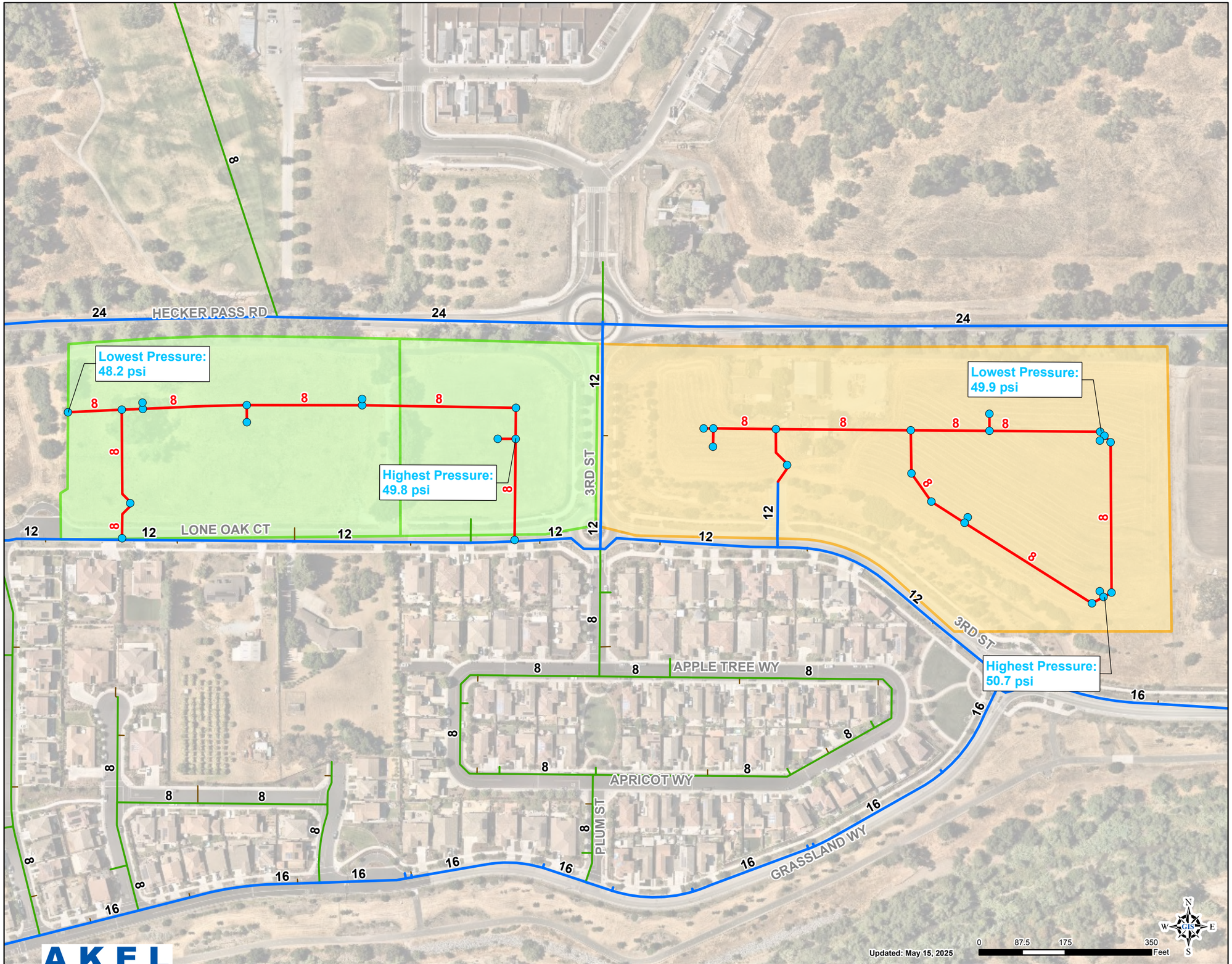
Gravity Pipes by Diameter

- 6" or Smaller
- 8" - 10"
- 12" or Larger

Figure 3
On-site Sewer System
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_Fig3_SewerSystem_051525.aprx



Legend

Peak Hour Demand Pressures

- 40 psi or More
- 40 psi or Less
- Pipelines

Study Area

- Hecker Pass Low Income Housing - East
- Hecker Pass Low Income Housing - West

Existing System

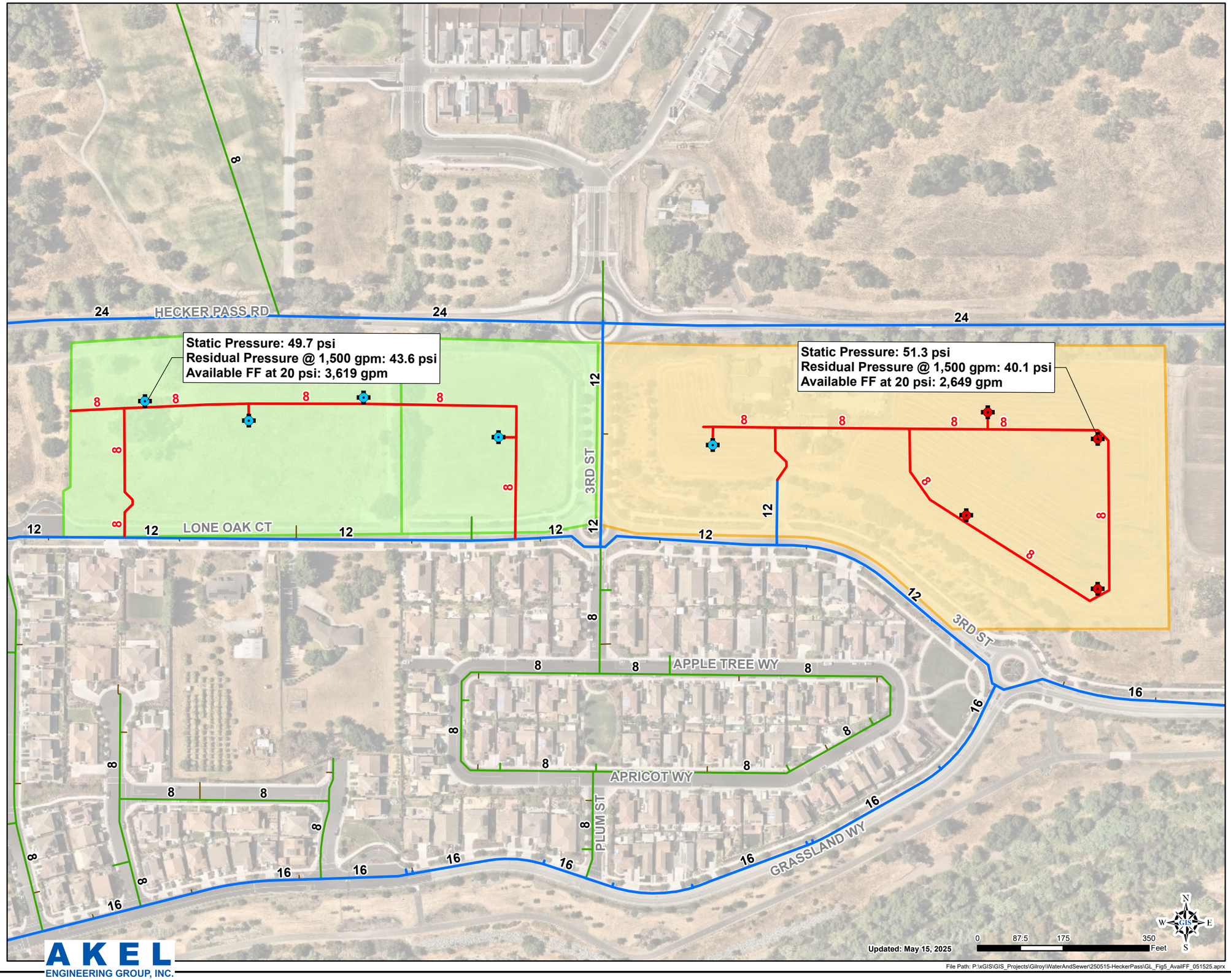
Pipelines by Diameter

- 6" or Smaller
- 8" - 10"
- 12" or Larger

Figure 4
PHD Pressures
2480 & 2740 Hecker Pass
Water and Sewer Capacity
Study City of Gilroy

AKEL
ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_Fig4_MDDPressures_051525.aprx



Legend

Available Fire Flows

- 3,000 gpm or Greater
- Less than 3,000 gpm
- Pipelines

Study Area

- Hecker Pass Low Income Housing - East
- Hecker Pass Low Income Housing - West

Existing System

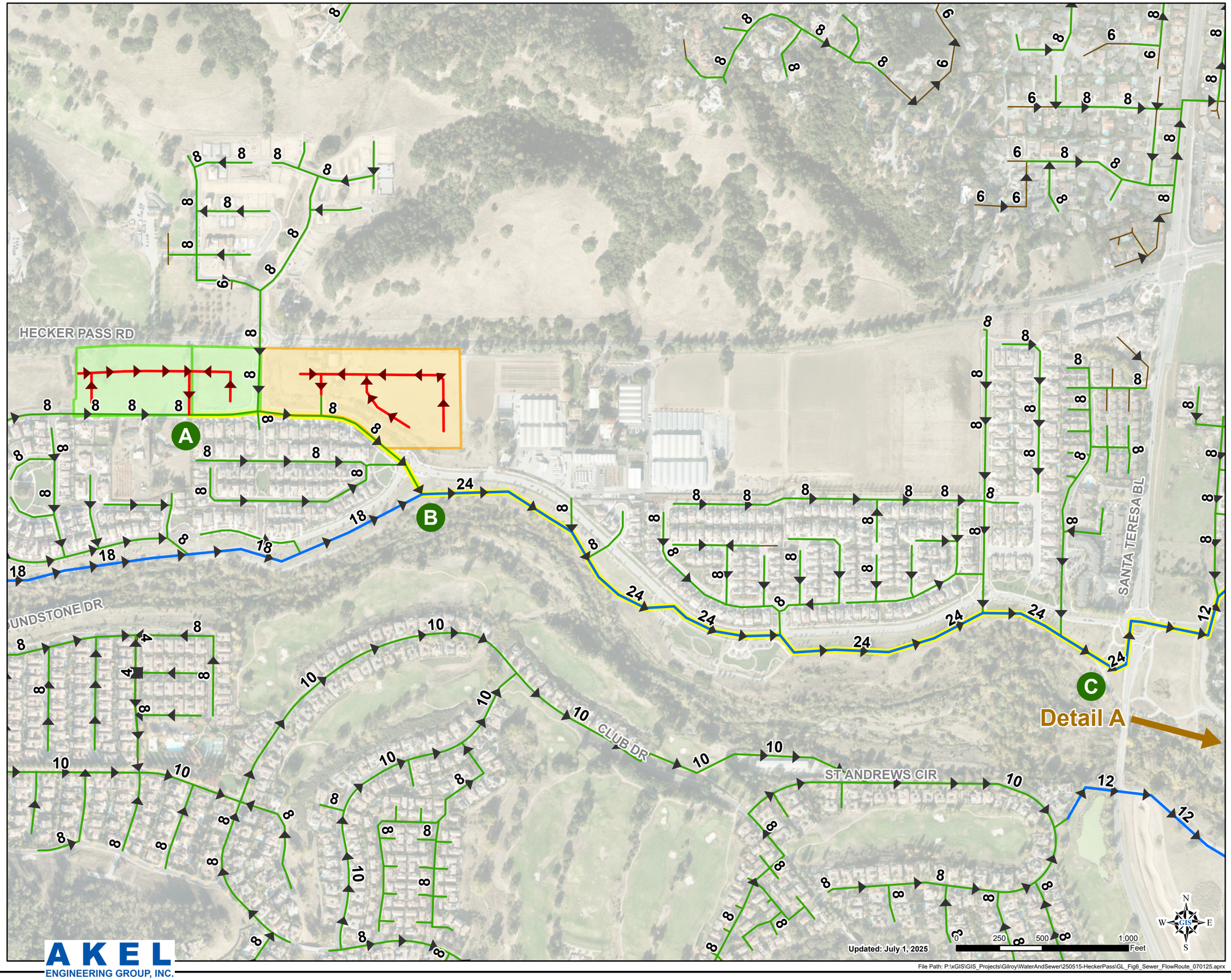
Pipelines by Diameter

- 6" or Smaller
- 8" - 10"
- 12" or Larger

Figure 5
Fire Flow Analysis
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_Fig5_AvailFF_051525.aprx



Legend

Proposed System

- Manholes
- Gravity Pipes

Study Area

- Hecker Pass Low Income Housing - East
- Hecker Pass Low Income Housing - West

Existing System

- Flow Direction

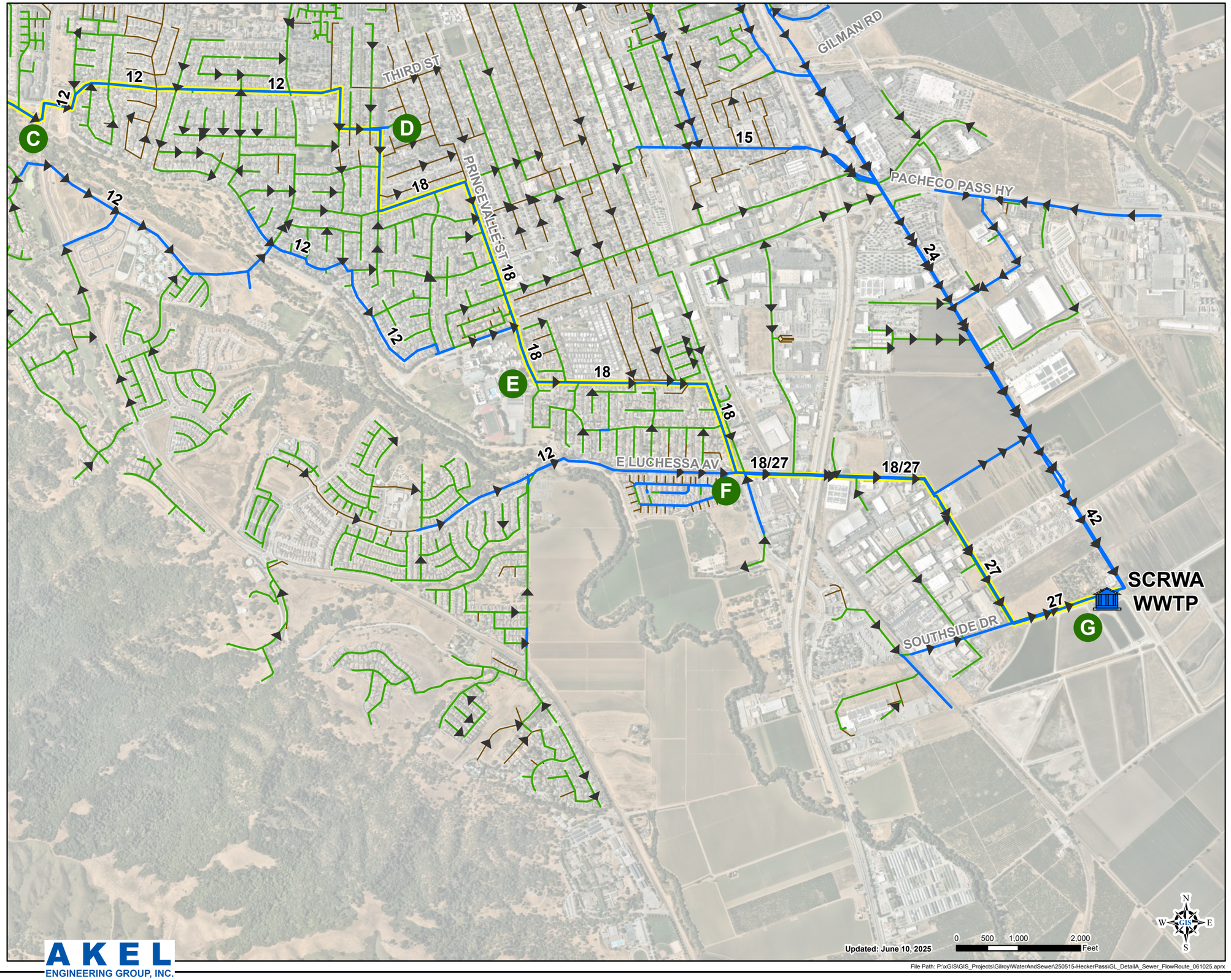
Gravity Pipes by Diameter

- 6" or Smaller
- 8" - 10"
- 12" or Larger
- Flow to SCRWA WWTP

Figure 6
Sewer Flow Route
(Plan View)
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_Fig6_Sewer_FlowRoute_070125.aprx



Legend

Existing System

- WWTP
- Flow Direction

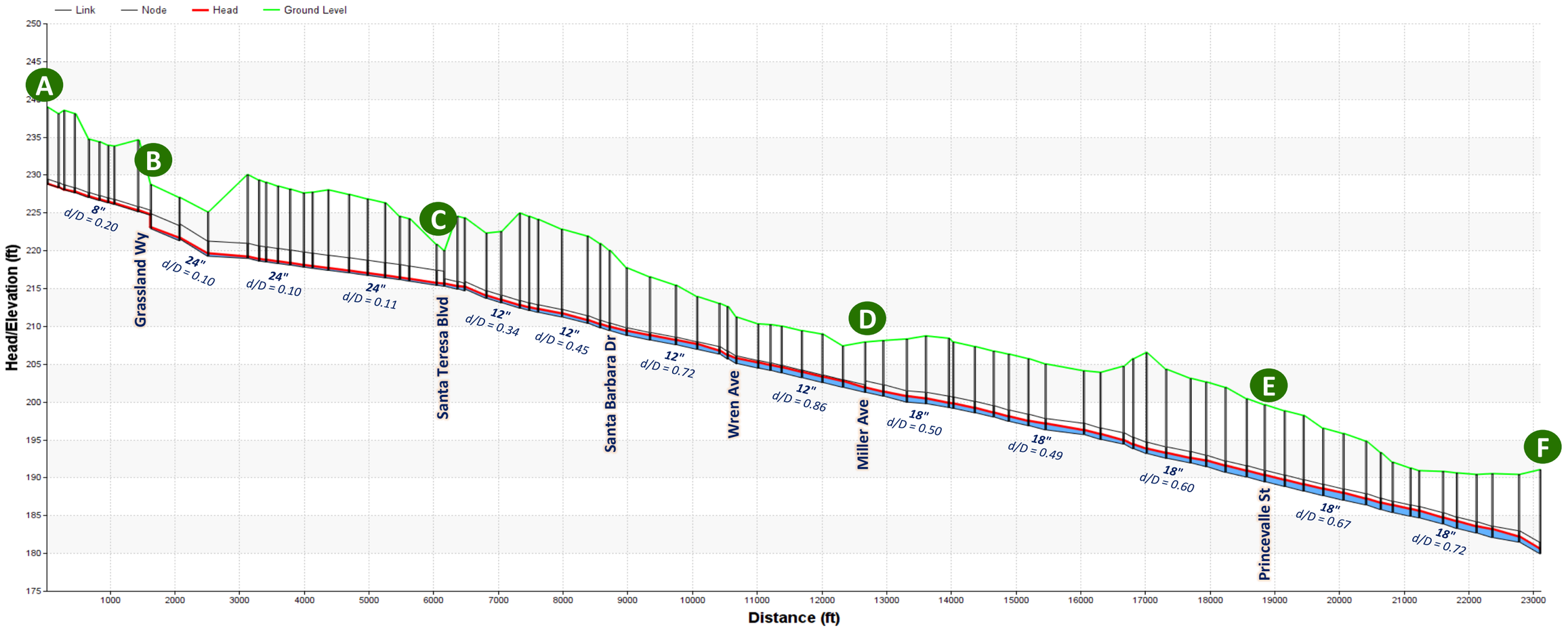
Gravity Pipes by Diameter

- 6" or Smaller
- 8" - 10"
- 12" or Larger
- Flow to SCRWA WWTP

Detail A
Sewer Flow Route
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_DetailA_Sewer_FlowRoute_061025.aprx



Notes:

1. The hydraulic grade line (HGL) profile shown represents existing peak dry weather flow conditions.
2. Pipeline d/D represents the depth of flow to pipe diameter ratio (d/D).
3. The hydraulic model results **satisfy the City's dry weather design criteria**, which stipulates a maximum allowable d/D of 0.90 for existing pipes.

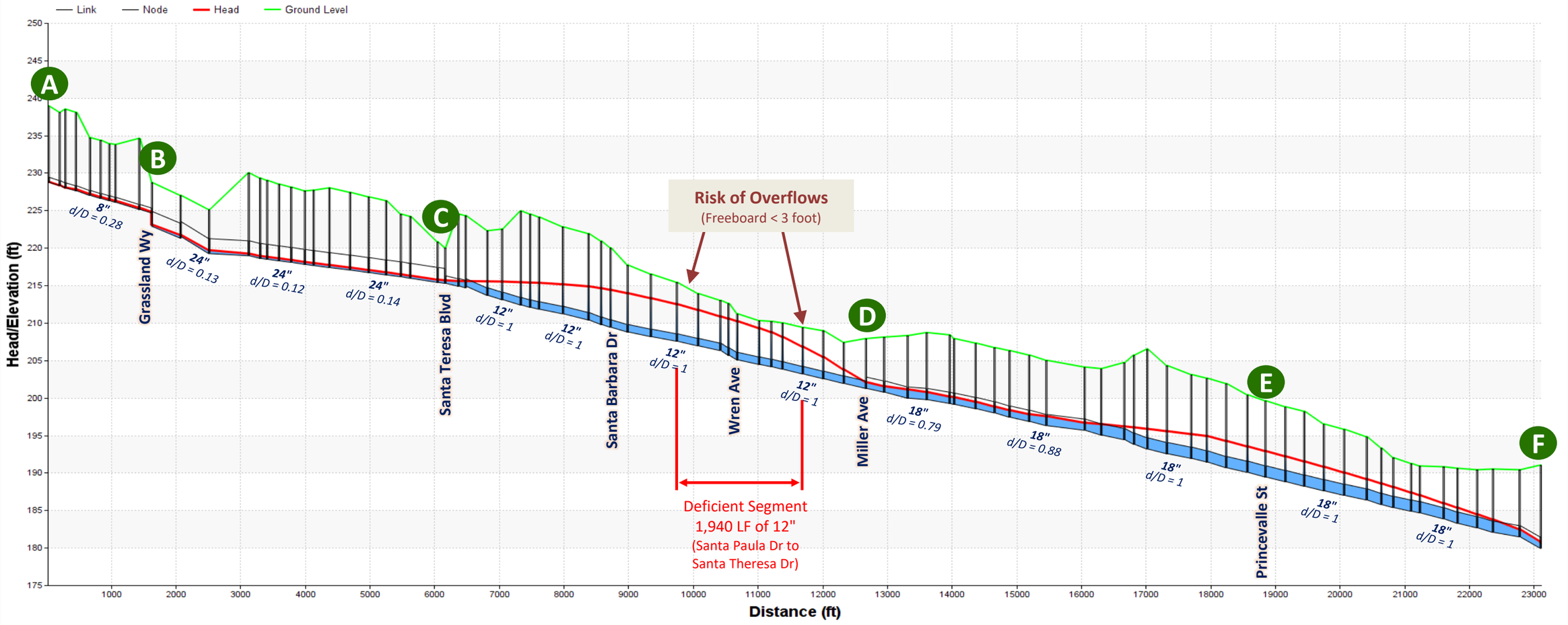
7/1/2025

AKEL ENGINEERING GROUP, INC.

Figure 7

Scenario 1. Existing
PDWF HGL Profile
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

gilroy



Notes:

1. The hydraulic grade line (HGL) profile shown represents existing peak wet weather flow conditions, with a total rainfall depth of 4.69 inches.
2. Pipeline d/D represents the depth of flow to pipe diameter ratio (d/D).
3. The hydraulic model results indicate that few sewer manholes along 3rd Street, from Santa Paula Drive to Santa Theresa Drive **do not meet the City's wet weather 3 foot freeboard depth criteria**.

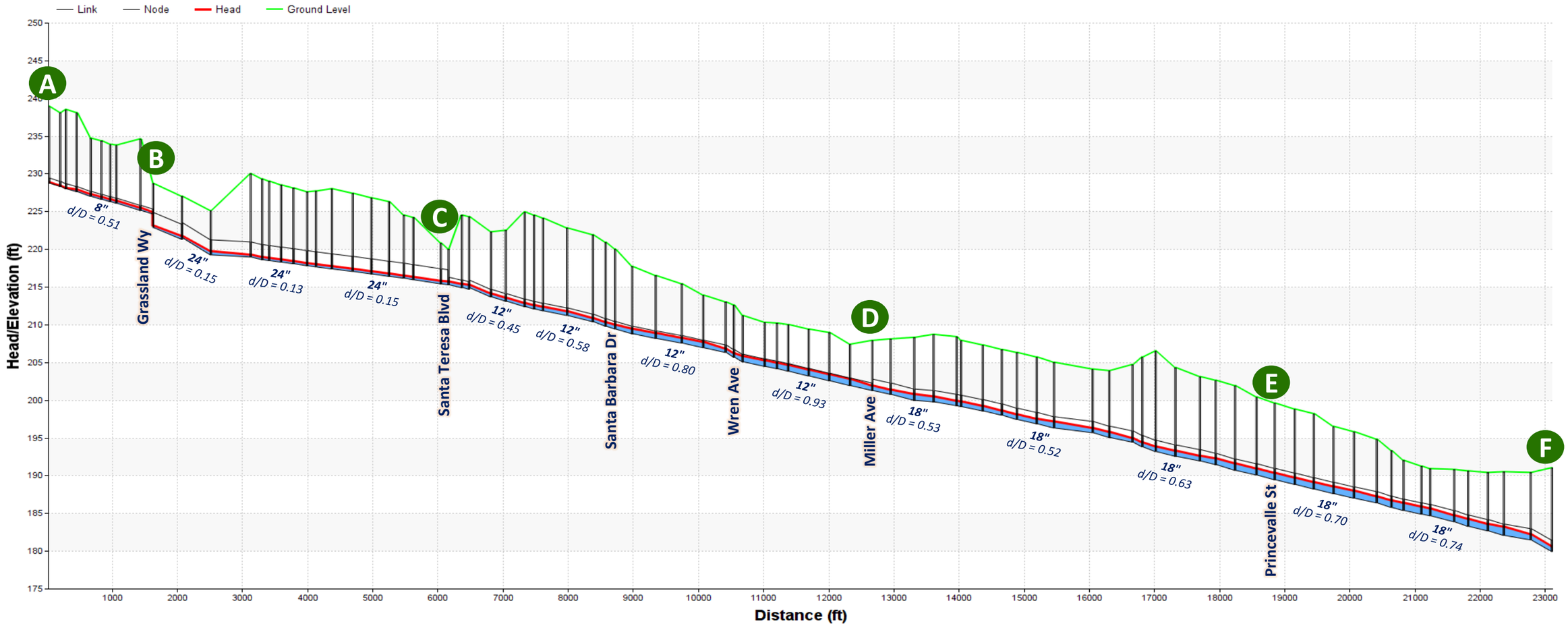
7/1/2025

AKEL ENGINEERING GROUP, INC.

Figure 8

Scenario 2. Existing
PWWF HGL Profile
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

gilroy



Notes:

1. The hydraulic grade line (HGL) profile shown represents existing peak dry weather flow with projected development conditions.
2. Pipeline d/D represents the depth of flow to pipe diameter ratio (d/D).
3. The hydraulic model results indicate that the existing 12-inch pipelines between Wren Avenue and Miller Avenue **do not satisfy the City's dry weather design criteria**.

7/1/2025

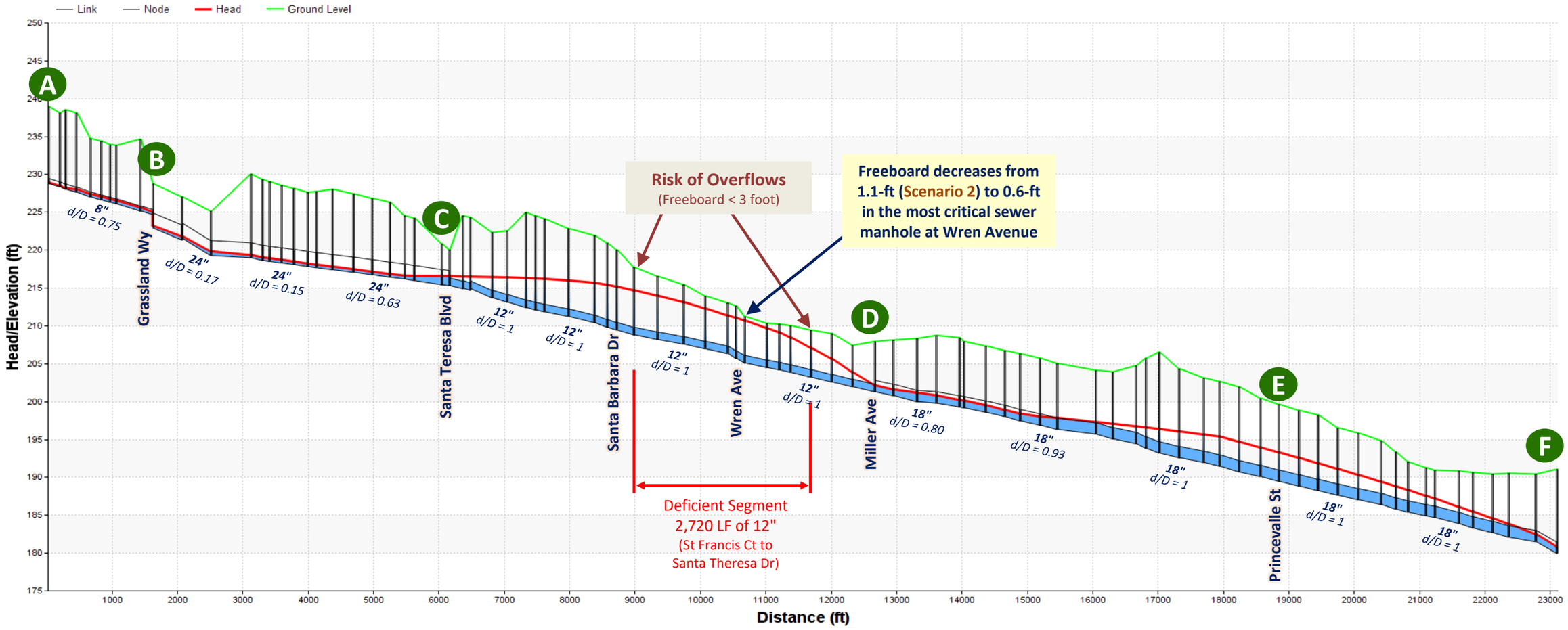
AKEL ENGINEERING GROUP, INC.

Figure 9

Scenario 3. Existing PDWF with Development HGL Profile

2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

gilroy



Notes:

1. The hydraulic grade line (HGL) profile shown represents existing peak wet weather flow with projected development conditions.
2. Pipeline d/D represents the depth of flow to pipe diameter ratio (d/D).
3. The hydraulic model results indicate that few sewer manholes along 3rd Street, from St Francis Court to Santa Theresa Drive **do not meet the 3 foot freeboard depth criteria**.

7/1/2025

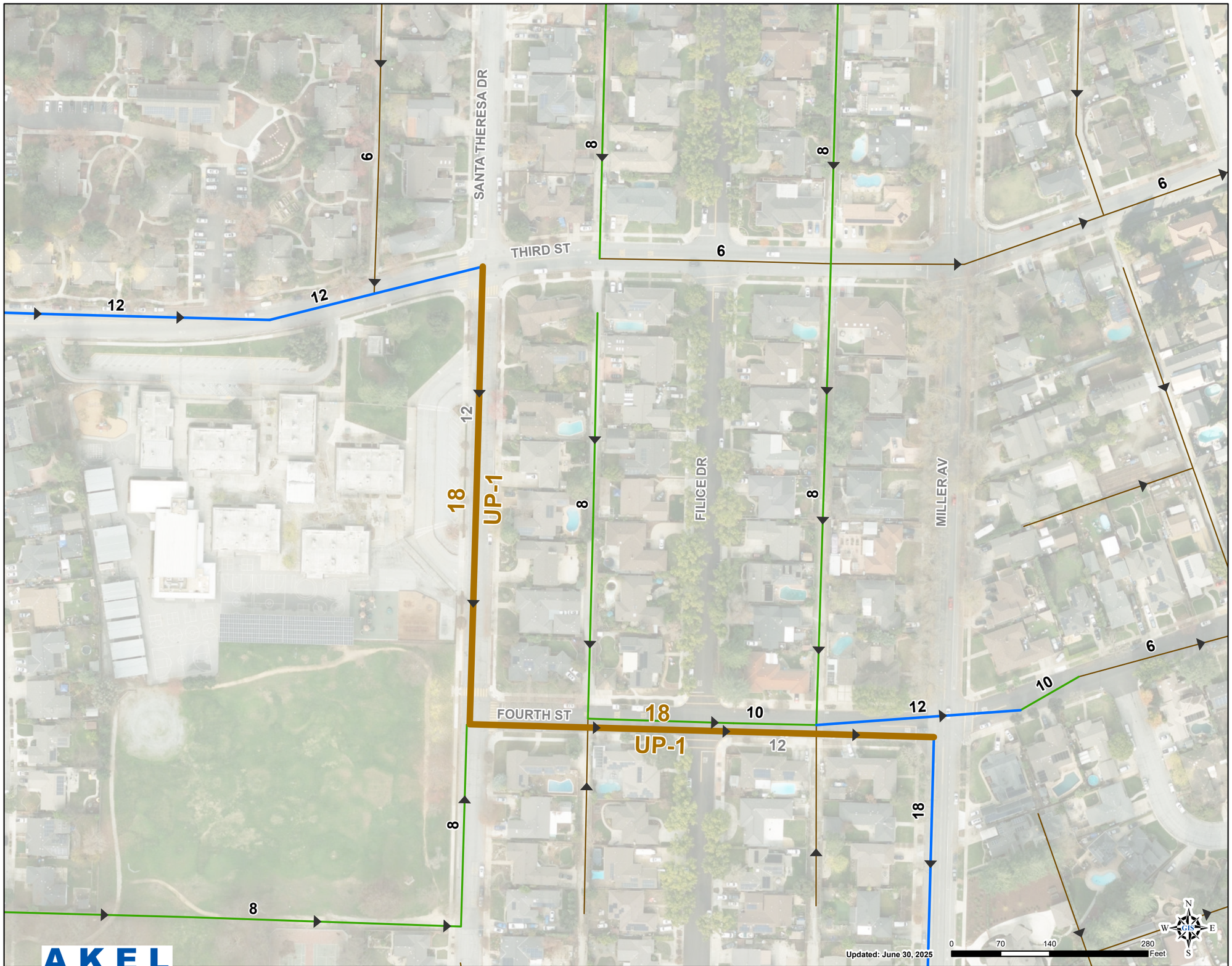
AKEL ENGINEERING GROUP, INC.

Figure 10

Scenario 4. Existing PWWF with Development HGL Profile

2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

gilroy



Legend

Downstream Capacity Improvements

- Proposed CIP UP-1 (New Alignment)

Existing System

- Flow Direction

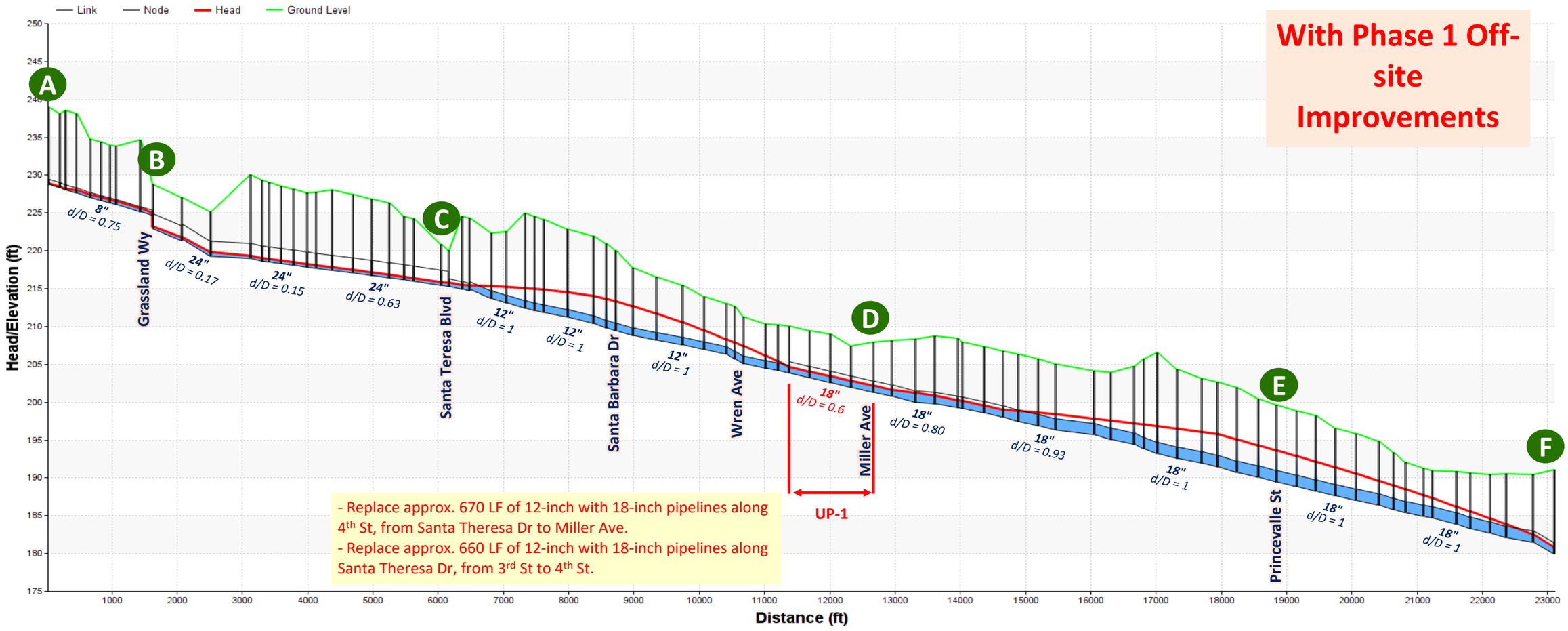
Gravity Pipes by Diameter

- 6" or Smaller
- 8" - 10"
- 12" or Larger

Figure 11
Phase 1 Off-Site Pipeline Improvements
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_Fig8_Phase1_OffsiteImps_063025.aprx



Notes:

1. The hydraulic grade line (HGL) profile shown represents existing peak wet weather flow with projected development conditions.
2. Pipeline d/D represents the depth of flow to pipe diameter ratio (d/D).
3. The capacity evaluation results indicate that the following off-site pipeline improvements are required to meet City's Design Criteria:
   - Replace approximately 670 LF of existing 12-inch gravity pipes with 18-inch, along 4th Street, from Santa Theresa Drive to Miller Avenue.
   - Replace approximately 660 LF of existing 12-inch gravity pipes with 18-inch, along Santa Theresa Drive, from 3rd Street to 4th Street.

7/1/2025

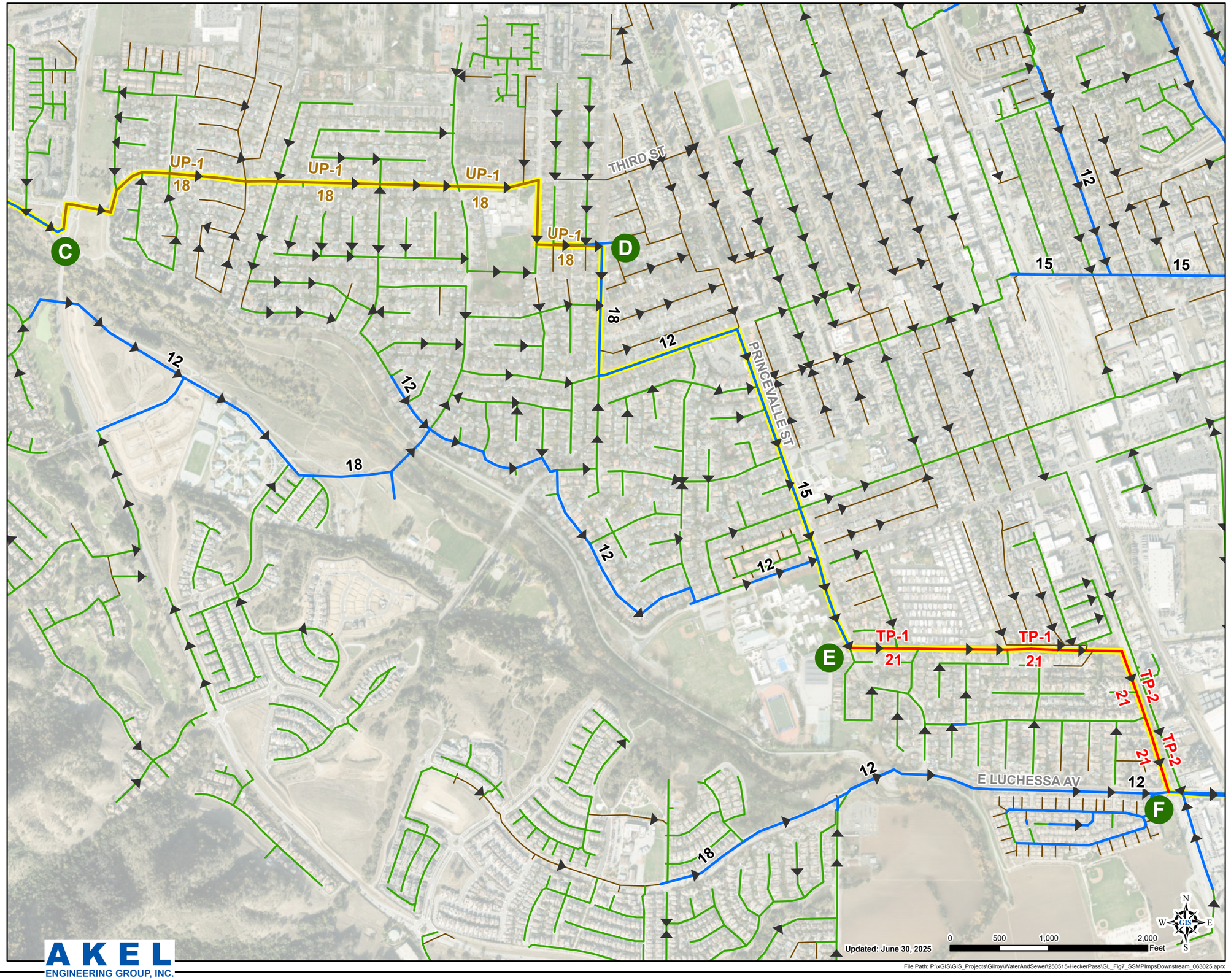
AKEL ENGINEERING GROUP, INC.

Figure 11.A

Scenario 4.A. Phase 1 off-site Improvements HGL Profile

2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

gilroy



Legend

Downstream Capacity Improvements

- Master Plan Improvement Pipes
- Proposed CIP UP-1 (New Alignment)

Existing System

- Flow Direction

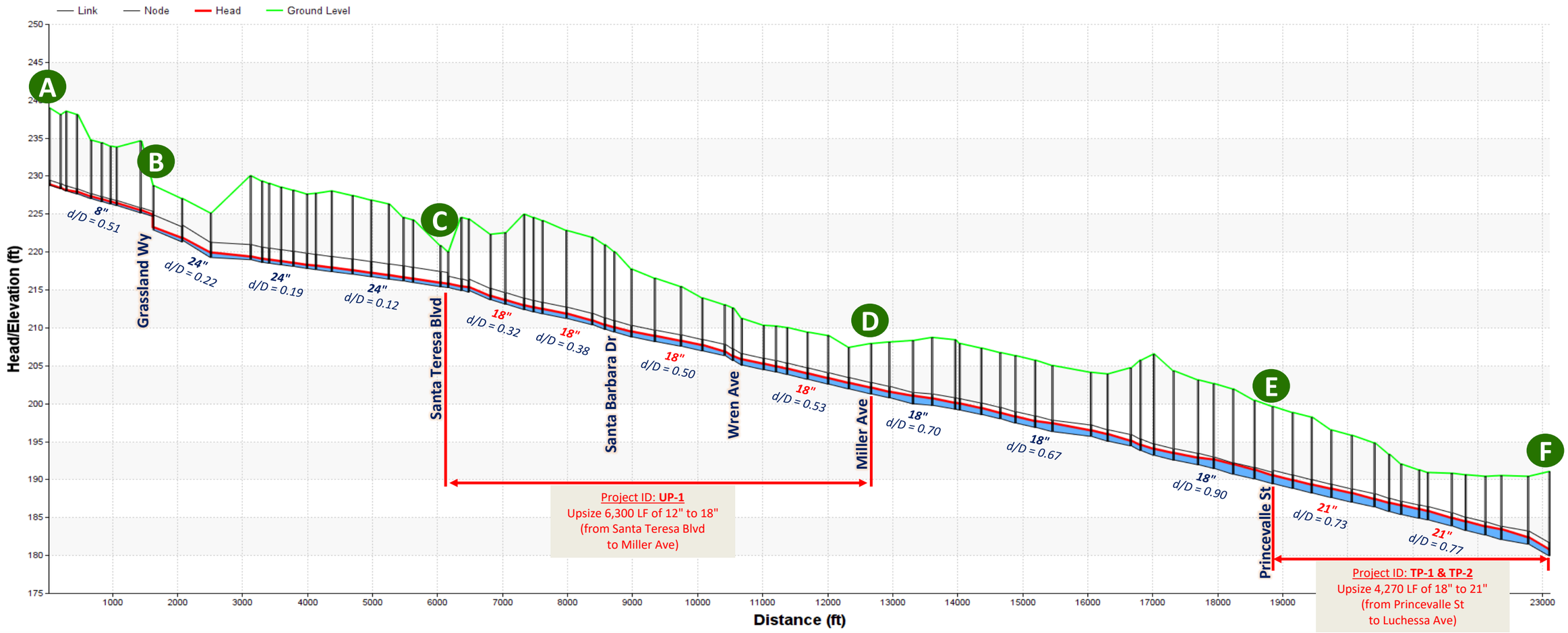
Gravity Pipes by Diameter

- 6" or Smaller
- 8" - 10"
- 12" or Larger
- Flow to SCRWA WWTP

Figure 12
2023 SSMP Improvements Downstream of Project Site
2480 & 2740 Hecker Pass
Water and Sewer Capacity Study
City of Gilroy

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Gilroy\WaterAndSewer\250515-HeckerPass\GL_Fig7_SSMPImpsDownstream_063025.aprx



Notes:

1. The hydraulic grade line (HGL) profile shown represents the modified buildout peak dry weather flow with development site.
2. This scenario includes 2023 SSMP recommended improvements downstream of the development site: UP-1, TP-1 & TP-2.
3. Pipeline d/D represents the depth of flow to pipe diameter ratio (d/D).
4. The capacity evaluation results indicate that the recommended improvements system meets the City's design criteria.

7/1/2025

AKEL ENGINEERING GROUP, INC.

Figure 13

Scenario 5. Modified Buildout

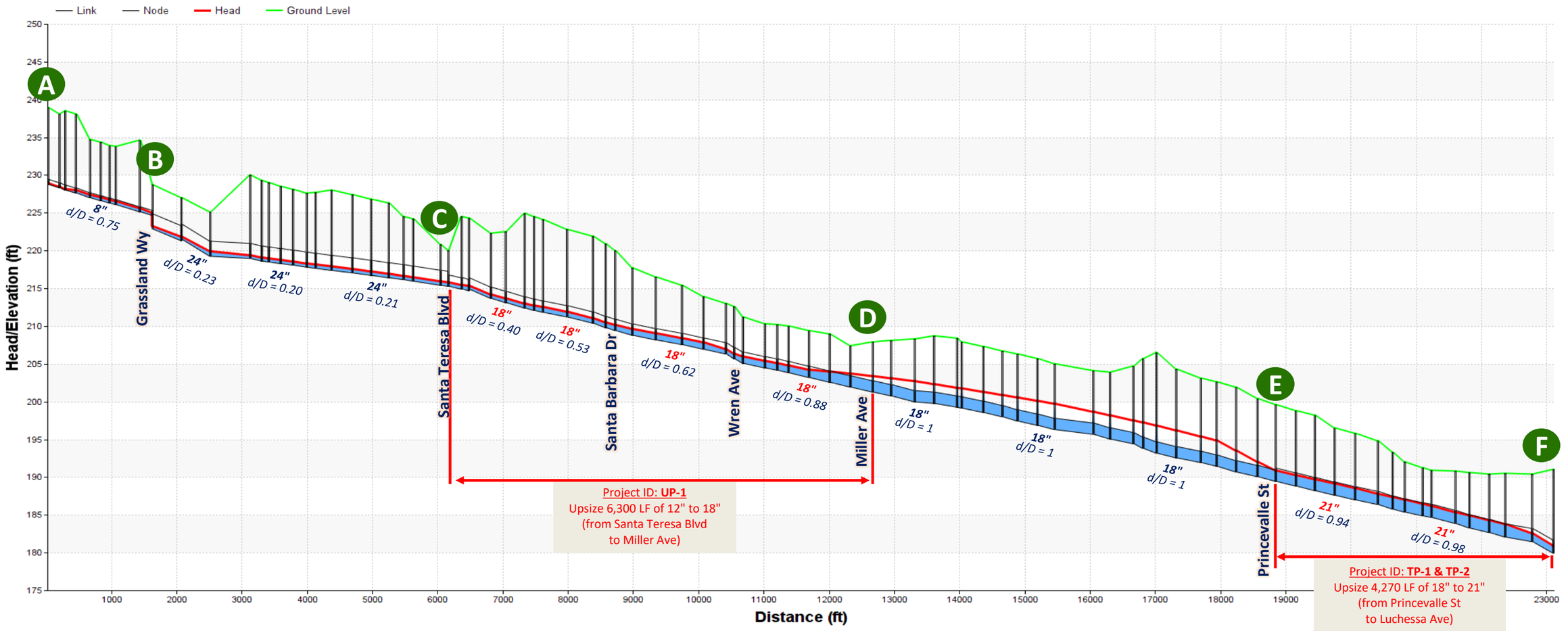
PDWF HGL Profile

2480 & 2740 Hecker Pass

Water and Sewer Capacity Study

City of Gilroy

gilroy



Notes:

1. The hydraulic grade line (HGL) profile shown represents the modified buildout peak wet weather flow with development site.
2. This scenario includes 2023 SSMP recommended improvements downstream of the development site: UP-1, TP-1 & TP-2.
3. Pipeline d/D represents the depth of flow to pipe diameter ratio (d/D).
4. The capacity evaluation results indicate that the recommended improvements system meets the City's design criteria.

7/1/2025

AKEL ENGINEERING GROUP, INC.

Figure 14

Scenario 6. Modified Buildout

PWWF HGL Profile

2480 & 2740 Hecker Pass

Water and Sewer Capacity Study

City of Gilroy

gilroy

TABLES

Table 1 Domestic Water Demand Projections

2480 & 2740 Hecker Pass Water and Sewer Capacity Study

City of Gilroy

Development Information[1,2]			Proposed Land Use	Average Water Use per Capita[3]	Projected Water Demands[4,5]		
Assessor's Parcel Number	Gross Area (acres)	Dwelling Units (DU)		(gpd/acre)	Average Day Demand (gpm)	Maximum Day Demand (gpm)	Peak Hour Demand (gpm)
Hecker Pass Low Income Housing - East							
810-20-037	12.8	53	Low Density Residential	116	14.9	29.9	44.8
Hecker Pass Low Income Housing - West							
810-20-036	3.6	20	Low Density Residential	116	5.6	11.3	16.9
810-20-033	6.3	43		116	12.1	24.2	36.4
	22.6	116	**Total Demands**		**32.7**	**65.4**	**98.1**

AKEL ENGINEERING GROUP, INC.

6/11/2025

Notes:

1. Project information was provided by developer on April 16, 2025.
2. Parcel area extracted from the City of Gilroy parcel shapefile.
3. A per capita water use of 116 gallons per day per capita (gpdc) was calculated using full-year 2024 data, obtained from the California Open Data
4. A residential density of 3.5 persons per unit was assumed, based on the City of Gilroy General Guidelines.
5. Peaking factors: MDD = 2.0 x ADD, PHD = 3.0 x ADD.

Table 2 Sanitary Sewer Flow Projections

2480 & 2740 Hecker Pass Water and Sewer Capacity Study

City of Gilroy

Development Information[1,2]			Proposed Land Use	Average Flow Factor per Capita[3]	Projected Sewer Flows[4,5]		
Assessor's Parcel Number	Gross Area (acres)	Dwelling Units (DU)		(gpd/acre)	Average Dry Weather Flow (gpm)	Peak Dry Weather Flow (gpm)	Peak Wet Weather Flow (gpm)
Hecker Pass Low Income Housing - East							
810-20-037	12.8	53	Low Density Residential	80	10.3	18.6	30.9
Hecker Pass Low Income Housing - West							
810-20-036	3.6	20	Low Density Residential	80	3.9	7.0	11.7
810-20-033	6.3	43		80	8.4	15.1	25.1
	22.6	116	**Total Demands**		**22.6**	**40.6**	**67.7**

AKEL ENGINEERING GROUP, INC.

6/11/2025

Notes:

1. Project information was provided by developer on April 16, 2025.
2. Parcel area was extracted from the City of Gilroy parcel shapefile and excludes the right-of-way area along Hecker Pass Highway.
3. Average sewer flow factor per capita of 80 gallons per day per capita (gpdc), consistent with the City of Gilroy General Guidelines.
4. A residential density of 3.5 persons per unit was assumed, based on the City of Gilroy General Guidelines.
5. Peaking factors: PDWF = 1.8 x ADWF, PWWF = 3.0 x ADWF.

Table 3 Performance and Design Criteria

2480 & 2740 Hecker Pass Water and Sewer Capacity Study

City of Gilroy

Design Parameter	Criteria		
Domestic Water[1]			
Service Pressures	Maximum Pressure		80 psi
	Minimum Pressure (during Maximum Day)		40 psi
	Minimum Pressure (during Peak Hour)		35 psi
	Minimum Pressure for New Development (during Peak Hour)		40 psi
	Minimum Residual Pressure (during Fires)		20 psi
Demand Peaking Factors	Maximum Month Demand	1.50 x Average Day Demand	
	Maximum Day Demand	2.00 x Average Day Demand	
	Peak Hour Demand	3.00 x Average Day Demand	
Fire Flows	Residential	1,500 gpm for 2 hours	
	Commercial	2,500 gpm for 2 hours	
	Industrial	3,500 gpm for 3 hours	
Sanitary Sewer[2]			
Peak Dry Weather Flow	Existing Pipes:	Maximum Depth of Flow to Pipe Diameter (d/D) ≤ 0.90	
	New Pipes:	Maximum Depth of Flow to Pipe Diameter (d/D) ≤ 0.75	
Peak Wet Weather Flow	Hydraulic Grade Line (HGL) should be at least **3 feet** below the manhole ground elevation.		

AKEL ENGINEERING GROUP, INC.

6/11/2025

Notes:

1. Source: 2023 Waster System Master Plan.
2. Source: 2023 Sewer System Master Plan.

Table 4 Water Supply and Storage Analysis

2480 & 2740 Hecker Pass Water and Sewer Capacity Study

City of Gilroy

Supply vs. Demand Analysis

Water Supply Capacity

Well No	Well Status	Tested Well Capacity[1] (gpm)
1	Active	1,113
2	Active	841
3	Active	2,075
4	Active	1,179
5	Active	1,718
6	Active	1,697
7	Active	1,296
8	Active	2,414
8A	Active	228
		gpm
Total Supply Capacity		12,561
Firm Capacity (Excluding largest supply well)		10,147

Water Demand Requirement		City-wide	2480 & 2740 Hecker Pass	Total with 2480 & 2740 Hecker Pass
Average Day Demands[2]	gpm	4,377	33	4,410
	MGD	6.3	0.05	6.3
Maximum Day Demands	gpm	8,754	65	8,819
	MGD	12.6	0.09	12.7
Peak Hour Demands	gpm	13,131	98	13,229
	MGD	18.9	0.14	19.0

Supply vs Demand	Total with 2480 & 2740 Hecker Pass
1,393 Surplus	1,328 Surplus

Storage Analysis

Available Storage	Zone 1
MG	10.3

Zone 1 includes Tank 1A (3 MG), Tank 1B (2 MG), and Tank 1G (5.3MG).

Storage Requirement		Zone 1	2480 & 2740 Hecker Pass	Total with 2480 & 2740 Hecker Pass
Operational at 25% MDD[3]	MG	2.8	0.02	2.8
Emergency at 25% MDD	MG	2.8	0.02	2.8
Fire 5,000 gpm at 3 hours	MG	0.9	-	0.9
		6.45	0.05	6.50

Available Storage Surplus/Deficit	Zone 1	Total with 2480 & 2740 Hecker Pass
	3.85 Surplus	3.80 Surplus

AKEL ENGINEERING GROUP, INC.

6/11/2025

Notes:

1. Source: 2023 Water System Master Plan.
2. City of Gilroy's 2024 water demand obtained from California Open Data Portal.
3. Zone 1 = 88% of demand, based on meter records.
4. This water supply and storage analysis does not account for additional water demands from ongoing or future developments.

Table 5 Sewer Analysis Results Summary

2480 & 2740 Hecker Pass Water and Sewer Capacity Study

City of Gilroy

Reach		Existing Pipe Diameter[2]	Existing Conditions[1]				Existing Conditions + 2480 & 2740 Hecker Pass			
			PDWF		PWWF		PDWF		PWWF	
		(inch)	Maximum Pipe Flow (gpm)	Resulting d/D	Maximum Pipe Flow (gpm)	Resulting d/D	Maximum Pipe Flow (gpm)	Resulting d/D	Maximum Pipe Flow (gpm)	Resulting d/D
A - B	3rd St	8	35	0.20	56	0.28	132	0.51	217	0.75
B - C	3rd St	24	196	0.11	245	0.14	287	0.15	376	0.63
C - D	3rd St, Santa Theresa Dr, 4th St	12	682	0.86	1,153	HGL within 3ft of G.E.	742	0.93	1,195	HGL within 3ft of G.E.
D - E	Miller Ave, 6th St, Princevalle St	18	1,356	0.60	2,206	Surcharging	1,416	0.63	2,258	Surcharging
E - F	Princevalle Channel easement, Monterey Rd	18	1,587	0.72	2,530	Surcharging	1,646	0.74	2,583	Surcharging
F - G	Luchessa Ave, Rossi Ln, Southside Dr	27	1,855	0.33	2,922	0.45	2,051	0.35	2,994	0.46

AKEL ENGINEERING GROUP, INC.

7/2/2025

Notes:

1. Existing conditions include flows from the Hoey North, as directed by City staff in an email on March 10, 2025.
2. Pipe diameter shown in each sewer reach, extracted from the City of Gilroy latest WWMP InfoSWMM hydraulic model.
3. Peak wet flows shown reflect a 10-Year 24-Hour Design Storm Event, with a total rainfall depth of 4.69 inches.
4. The maximum pipe flow and d/D represents the maximum pipe flow and depth-to-diameter ratio in each sewer reach.

APPENDICES

APPENDIX A

Hecker Plan Specific Plan – prepared by MH Engineering Co.

Gilroy Golf Course

Tact 10495
Hoey North

783-04-026 | 783-04-032 | 783-04-031 | 783-45-044

Hecker Pass Highway — CALIFORNIA 152

(N1°03'49"W) (33.06') (274.39') (N85°33'33"E) (1,011.64') (S89°00'44"E) (783.78') (N89°32'54"E) (167.20') (N89°20'13"E) (S1°08'08"E) (32.99')

(N1°03'49"W) (262.69')

Walter Way

Walter Way | Two Oak Lane | Walter Court | Autumn Drive | Hoey Ct. | Ranch Drive | Hoey Place | Barn Drive | EVA

810-20-021 | 810-20-033 | 810-20-036 | 810-20-037 | 810-20-039

(N49°09'41"E) (25.37') (N0°52'02"W) (115.46')

Lone Oak Court — (S89°19'51"W) (687.34') (N0°40'48"W) (1.25') (S89°59'23"W) (254.42') (S79°59'23"W) (92.40') (S89°59'23"W) (263.92') (N80°00'37"W) (92.40') 3rd St

(r = 300.00') (Δ = 10°00'00") (l = 52.36') (r = 300.00') (Δ = 39°00'17") (l = 204.23') (N51°00'25"W) (162.10') (S88°52'41"W) (453.10') (44.92') (S1°08'08"E)

ex. driveway | ex. residence | ex. shed

810-20-008 | 810-20-009

Tact 10398 Heartland Gardens Phase 2

Tact 10399 Heartland Gardens Phase 3

Tact 10279 Hoey South

Plum St.

Apple Tree Way

SCALE: 1"=80'
0 20 40 60 80 100

Project Summary:

Project Area:	24.310 ac
Existing Dedicated Public Right-of-Way:	2.862 ac
Proposed Dedicated Right-of-Way:	3.596 ac
Open Space:	3.203 ac
Public Open Space:	1.097 ac
Private Open Space:	2.106 ac
Project Net Acreage:	17.852 ac

Existing Building Areas (To Be Demolished)

Type	Gross Area
Residence	2,595 SF
Barn	3,870 SF
Shed	1,025 SF
Shed	198 SF
Shed	104 SF
Total:	7,792 SF

Proposed Building Areas

Plan	Plan Area	Qty	Total
Plan XP1*	1,582 SF	19	30,058 SF
Plan XP2	1,797 SF	27	48,519 SF
Plan XP3	1,859 SF	17	31,603 SF
Plan XP4	1,712 SF	19	32,528 SF
Plan XP5	2,072 SF	13	26,936 SF
Plan XP6	2,310 SF	21	48,510 SF
Total:		116	218,154 SF

Total Dwelling Units:	116
Dwelling Units Per Acre:	7
Low Income Units:	24
* = Location of Low Income Units	

Parking

Required: per ORD. NO. 2013-08, § 2 (EXH. A), 8-5-13; ORD. NO. 2019-08, § 15, 10-7-19	
Covered (1 per Dwelling Unit)	116
Total (2 per Dwelling Unit)	232
Provided:	
Garage, Covered (2/unit):	232
Driveway (2/unit):	232
Total:	464

Building Coverage	
Footprint:	142,588 SF / 18.34%
Floor Area Ratio:	218,154 SF / 28.05%
Pervious/Impervious Areas	
Pervious Areas (Landscape):	392,909 SF (50.5%)
Impervious Areas (Structures, Streets, Walkways, Patios and Driveways):	384,724 SF (49.5%)

Current Zoning Designation per Hecker Pass Specific Plan: Agri-tourist Commercial

Setback Guidelines:

Building to Hecker Pass Highway Existing Centerline	115 Feet
Building Front to All Other Public Right-of-Way	30 Feet
Building Side to All Other Public Right-of-Way	10 Feet
Building Side to Lot Line (all other side yard)	6 Feet
Rear Lot Line	0
Max. Height	35 Feet, 2 Stories

Contact List:

Owners
Owens Financial Corp.
2221 Olympic Blvd
Walnut Creek, CA 94595

James W. Hoey and Debra J. Hoey Revocable Trust
2480 Hecker Pass Road
Gilroy, CA 95020

Applicant
Mana Camden Fund, LLC
Scott Murray
5927 Balfour Ct., Suite 208
Carlsbad, CA 92008
408.406.6000
sm@manainv.com

Engineer/Surveyor
MH Engineering Co.
William J. McClintock
16075 Vineyard Blvd.
Morgan Hill, CA 95037
408.779.7381
billm@mhengineering.com

Architect
William Hezmalhalch Architects, Inc.
Mark Retherford
5000 Executive parkway, Suite 375
San Ramon, CA 94583
925.463.1700
markre@whainc.com

Geotechnical Engineer
Baez Geotechnical Group
Stefanie Parman
355 Earhart Way
Livermore, CA 94551
209.409.8527
smp@baezgeotechnicalgroup.com

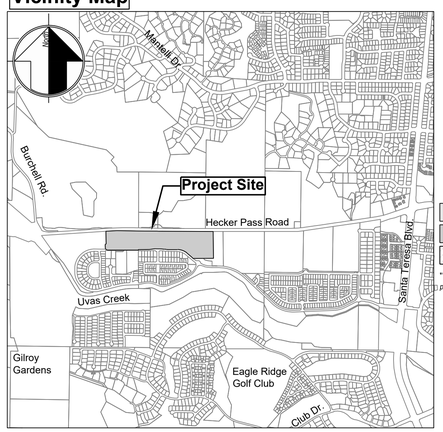
Underground Service Alert Note

Observed surface evidence of utility lines including facilities, appurtenances, and markings were used in depicting the locations of the underground features shown on these plans. Underground features depicted are approximate and it is the responsibility of the contractor to determine the actual location and depth of underground utilities prior to starting excavation.
Call USA North: 1.800.227.2600 OR 811

Notes:

ASSESSOR'S PARCEL NO:	810-20-033, 810-20-036, 810-20-037
PRESENT USE:	VACANT
PROPOSED USE:	RESIDENTIAL
SANITARY SEWER:	CITY OF GILROY
GAS and ELECTRIC:	PG&E
WATER:	CITY OF GILROY
TELEPHONE:	VERIZON
EXISTING IMPROVEMENTS:	AS SHOWN
FLOOD ZONE	ZONE D

Vicinity Map



Legend

Proposed	Description	Existing
	Project Property Boundary	
	Property Line	
	Centerline	
	Easement, as noted	
	Curb and Gutter	
	Driveway Approach	
SD	Storm Drain	(SD)
SD	Perforated Storm Drain	(SD)
SS	Sanitary Sewer	(SS)
W	Water Main	(W)
IRR	Irrigation Line	(IIR)
	Chainlink Fence	
	Wood Fence	
100	Major Contour	(100)
99	Minor Contour	(99)
	Monument, Type as shown	
#/A	Section	
	Swale	
2.2%	Slope	(2.1%)
SD	Storm Drain Manhole	(SD)
	Curb Inlet	
	Drop Inlet	
SS	Sanitary Sewer Manhole	(SS)
	Fire Hydrant	
CO	Cleanout	(CO)
	Gate Valve	
	Electrolier	
	Sewer Service	
W	Water Service	(W)
	AC Pavement	
	PCC walks/driveways	
	Structures	

*** existing features are labeled in italics and parentesis, typical*
proposed improvements shall be installed per City of Gilroy Standard Details

City of Gilroy Standard Details

Std No.	Description
SWR-1	Type 1 - Concentric Manhole 8" to 33" Pipe
SWR-5B	Side Sewer/Lateral Connections to Existing Mains
SWR-6	Sewer Lateral
STM-7A	Pre-Cast Drop Inlet (Up to 24" Pipe)
STM-7B	Pre-Cast Drop Inlet (Up to 24" Pipe)
STM-9	Standard Storm Drain Manhole
STM-10	Typical Manhole Connection
STR-1	Street Section Requirements
STR-2A	Street Sections
STR-2C	Street Sections
STR-4	Public to Private Road Transition
STR-5	Two-Legged Intersection - Local
STR-8	Cul-de-Sac Turn Around
STR-10	Typical Lot Utility Location
STR-11B	ADA Ramp Configuration Greater Than 20' Radial Corner
STR-12	Monolithic Curb & Gutter
STR-13	Curb and Gutter Replacement in Existing Street
STR-14	Separated Sidewalk
STR-15	Monolithic Sidewalk
STR-22	Sign Post Installation
STR-23	Standard Stop Sign
STR-24	Standard Street Name Sign
STR-26	Standard Monument
WA-1	Valve Box Installation
WA-2	Thrust Blocks
WA-3	Thrust Blocks for Horizontal and Vertical Downward Bend
WA-4	Thrust Blocks for Horizontal and Vertical Upward Thrust
WA-6	End of Main Blowoff
WA-7	Fire Hydrant Assembly
WA-8	Fire Hydrant Placement
WA-9	Fire Hydrant Location Marker
WA-10	Typical 1" Service Installation
WA-11	Typical 1-1/2" Service Installation
WA-20	Backflow Prevention Device Installation
WA-21	Backflow Preventor Installation (Domestic/Irrigation)
WA-24	Air Valve Assembly
UN-1	Trench Restoration/Backfill

Abbreviations

AC	Asphalt Concrete	INV	Invert
BC	Beginning of Curve	JP	Joint Pole
BLS	Building Setback Line	LP	Low Point
BVC	Beginning of Vertical Curve	LE	Landscape Easement
BW	Back of Walk	Max	Maximum
℄	Centerline	Min	Minimum
CL D/W	Centerline Driveway	NG	Natural Ground
CMP	Corrugated Metal Pipe	PB	Pull Box
CO	Clean Out	℗	Property Line
DI	Drop Inlet	PSE	Public Service Easement
DIP	Ductile Iron Pipe	PSDE	Private Storm Drain Easement
DWY	Driveway	PVI	Point of Vertical Intersection
EC	End of Curve	PUE	Public Utility Easement
EG	Existing Ground	RCP	Reinforced Concrete Pipe
ELCT	Electrolier	R/W	Right of Way
EP	Edge of Pavement	SDMH	Storm Drain Manhole
ER	End of Return	SSMH	Sanitary Sewer Manhole
EVC	End of Vertical Curve	Std	Standard
EX, EXST	Existing	SW	Sidewalk
FF	Finish Floor	TBM	Temporary Benchmark
FG	Finish Grade	TBV	To Be Vacated
FL	Flowline	TC	Top of Curb
GB	Grade Break	Typ	Typical
HP	High Point		

Engineer's Statement

I, William J. McClintock, certify that this Tentative Map was prepared by me or under my direct supervision and that it complies with the City of Gilroy Subdivision Ordinance and the State Map Act.

Geotechnical Engineer's Statement

A soils report on this property has been prepared by Stefanie Parman-Ribeiro entitled Geotechnical Investigation Hecker Pass Residential Development, which has been filed with the City of Gilroy.

Surveyor's Statement

I, William J. McClintock, a licensed Land Surveyor in the State of California, hereby state that this Tentative Map is based upon survey under my direct supervision and that it complies with the City of Gilroy Subdivision Ordinance and the State Map Act.

Sheet List Table

#	Sheet Title
C.1	Cover Sheet
C.2	Site Development Plan
C.2.1	Site Development Plan
C.2.2	Site Development Plan
C.3	Site Development Plan
C.3.1	Site Development Plan
C.3.2	Site Development Plan
C.4	Vesting Tentative Map
C.5	Vesting Tentative Map
C.6	Vesting Tentative Map
C.7	Vesting Tentative Map
C.8	Vesting Tentative Map
C.9	Vesting Tentative Map
C.10	Vesting Tentative Map
C.11	Topo Demo Plan - West Side
C.12	Topo Demo Plan - East Side
C.13	Prelminary Grading Plan - West Side
C.14	Preliminary Grading Plan - East Side
C.15	Prelminary Grading Sections
C.16	Utility Plan - West Side
C.16.1	Utility Sections
C.16.2	Utility Sections
C.17	Utility Plan - East Side
C.18	Circulation Plan - Fire West Side
C.19	Circulation Plan - Fire East Side
C.20	Circulation Plan - Garbage West Side
C.21	Circulation Plan - Garbage East Side
C.22	Phasing Plan
C.23	Stormwater Control Plan - DMA 1
C.24	Stormwater Control Plan - DMA 2
C.25	Stormwater Control Plan Details
C.26	NDS StormChamber SC-44 Details
C.27	Tree Protection Zone Exhibit
C.28	Streetlight Exhibit - West Side
C.29	Streetlight Exhibit - East Side
C.30	CoG Streetlight Standards
C.31	Standard Residential Driveway Exhibit

APN 420865-3 Exp.
FOR PLANCHECK ONLY

REGISTERED PROFESSIONAL ENGINEER — WILLIAM J. McCLINTOCK — No. 24893 — EXP 12-31-2023 — STATE OF CALIFORNIA

FOR PLANCHECK ONLY
signature shall be provided upon approval

MH engineering Co.
16075 Vineyard Boulevard
Morgan Hill, CA 95037

Cover Sheet

Hecker Pass Specific Plan - Low Income Housing

DATE: 2/15/2024
SCALE: 1" = 80'
DRAWN BY: RS
CHECKED BY: WJM

JOB NO. 223026

SHEET C.1 OF 37

Plotted: 2/15/2024 9:34 AM | By: Rebecca Stevenson
X:\PROJECTS\223026 Hecker Pass Specific Plan - Low Income Housing\Civil\Exhibits\223026 Cover Sheet.dwg

SCALE: 1"=40'

0 10 20 30 40 60 80 100

Hecker Pass Highway CALIFORNIA 152

Match Line
See Sheet C.16

(e x 12" irr line) (GRWP)

Lot 1 Lot 2 Lot 3 Lot 4 Lot 5 Lot 6 Lot 7 Lot 8 Lot 9 Lot 10 Lot 11 Lot 12 Lot 13 Lot 14 Lot 15 Lot 16 Lot 17 Lot 18 Lot 19 Lot 20 Lot 21 Lot 22 Lot 23 Lot 24 Lot 25 Lot 26 Lot 27 Lot 28 Lot 29 Lot 30 Lot 31 Lot 32 Lot 33 Lot 34 Lot 35 Lot 36 Lot 37 Lot 38 Lot 39 Lot 40 Lot 41 Lot 42 Lot 43 Lot 44 Lot 45 Lot 46 Lot 47 Lot 48 Lot 49 Lot 50 Lot 51 Lot 52 Lot 53 Lot 54 Lot 55 Lot 56 Lot 57 Lot 58 Lot 59 Lot 60 Lot 61 Lot 62 Lot 63

SSMH
Rim 245.54
Inv 238.66', 8" (Out)

111' - 8" Water Line

77' - 8" PVC SS @ S=0.80%

190' - 8" PVC SS @ S=0.80%

SSMH
Rim 244.20
Inv 236.53', 8" (In)
Inv 236.53', 8" (Out)

30' - 15" PVC SD @ S=2.00%

Curb Inlet
TC 243.95
Inv 236.90', 15" (Out)

SSMH
Rim 243.57
Inv 235.52', 8" (In)
Inv 235.52', 8" (Out)

126' - 8" PVC SS @ S=0.80%

67' - 18" PVC SD @ S=0.50%

261' - 8" PVC SS @ S=0.80%

801' - 8" Water Line

244' - 18" PVC SD @ S=0.50%

29' - 15" PVC SD @ S=3.45%

Curb Inlet
TC 242.36
Inv 235.33', 12" Ø (In)
Inv 236.50', 15" (Out)

24x36 Field Inlet
Rim 242.80
Inv 238.62', 30" (Out)

SSMH
Rim 242.40
Inv 233.48', 8" (In)
Inv 233.48', 8" (In)
Inv 233.48', 8" (Out)

44' - 8" PVC SS @ S=0.80%

240' - 8" Ø PVC SS @ S=0.50%

ex. sdmh
Rim 243.13
Inv 238.21', 18" (In)
Inv 232.51', 15" (Out)

ex. sdmh
Rim 242.80
Inv 232.32', 15" (In)
Inv 232.32', 15" (Out)

(ex 105' - 8" Ø rcp sd @ s=0.50%)

(ex 39' - 15" Ø rcp sd @ s=0.49%)

SSMH
Rim 241.77
Inv 234.54', 8" (In)
Inv 234.68', 8" (Out)

(ex 408' - 8" Ø pvc @ S=0.25%)

(ex 166' - 15" Ø rcp sd @ s=0.49%)

Autumn Drive

Walter Way

Walter Way

Walter Way

SSMH
Rim 245.15
Inv 238.05', 8" (In)
Inv 238.05', 8" (In)
Inv 238.05', 8" (Out)

Curb Inlet
TC 244.00
Inv 235.60', 15" (Out)

14' - 15" PVC SD @ S=2.14%

SDMH
Rim 243.70
Inv 235.30', 15" (In)
Inv 236.30', 15" (In)
Inv 235.30', 18" (Out)

SDMH
Rim 243.39
Inv 234.97', 18" (In)
Inv 234.97', 18" (Out)

115' - 18" PVC SD @ S=0.50%

SDMH
Rim 242.30
Inv 233.75', 18" (In)
Inv 235.50', 15" (In)
Inv 233.75', 18" (Out)

245' - 30" RCP SD @ S=2.00%

SDMH
Rim 241.46
Inv 234.22', 18" (In)
Inv 234.22', 18" (Out)

76' - 18" PVC SD @ S=1.00%

236' - 18" PVC SD @ S=0.50%

SDMH
Rim 240.87
Inv 234.44', 16" (In)
Inv 234.44', 18" (Out)

SDMH
Rim 241.23
Inv 236.00', 15" (In)
Inv 236.00', 15" (In)
Inv 236.00', 18" (Out)

20' - 15" PVC SD @ S=2.00%

Curb Inlet
Rim 241.28
Inv 236.40', 15" (Out)

ex. field inlet
rim 239.87'
inv 233.71', 30" Ø (bidirectional)
inv 233.71', 30" Ø (Out)
inv 235.50', 18" Ø (Out)

30' - 18" PVC SD @ S=1.69%

(ex 43' - 30" Ø rcp sd @ s=1.18%)

30' - 18" PVC SD @ S=0.77%

Curb Inlet
Rim 240.67
Inv 234.67', 15" (In)
Inv 234.67', 18" (Out)

Curb Inlet
Rim 239.83
Inv 234.93', 15" (Out)

52' - 15" PVC SD @ S=0.50%

Master Water Meter and Backflow Preventer

(ex 113' - 30" Ø rcp sd @ s=0.25%)

ex. field inlet
Rim 238.68
Inv 232.81', 15" (Out)

(ex 32' - 15" Ø rcp sd @ s=1.27%)

(ex 159' - 8" Ø pvc @ s=0.30%)

(ex 91' - 30" Ø rcp sd @ s=0.31%)

ex. ssmh
rim 240.59'
inv 230.25', 8" Ø (in)
inv 230.35', 8" Ø (in)
inv 230.28', 8" Ø (out)

ex. sdmh
Rim 240.61
Inv 231.79', 30" (In)
Inv 231.79', 30" (Out)

(ex 87' - 8" Ø pvc @ s=0.25%)

(ex 137' - 30" Ø rcp sd @ s=0.30%)

ex. sdmh
Rim 239.44
Inv 232.27', 30" (In)
Inv 232.40', 15" (In)
Inv 232.07', 30" (Out)
Inv 232.40', 15" (Out)

ex. ssmh
rim 240.10'
inv 230.72', 8" Ø (in)
inv 230.72', 8" Ø (out)

ex. sdmh
Rim 240.68
Inv 232.68', 30" (In)
Inv 232.68', 30" (Out)

ex. ssmh
rim 240.78'
inv 230.94', 8" Ø (in)
inv 231.20', 4" Ø (in)
inv 230.94', 8" Ø (out)

(ex 172' - 30" Ø rcp sd @ s=0.30%)

ex. sdmh
Rim 241.47
Inv 233.20', 24" (In)
Inv 234.20', 15" (In)
Inv 233.20', 30" (In)
Inv 233.20', 30" (Out)

ex. ssmh
rim 241.61'
inv 231.48', 8" Ø (in)
inv 231.48', 8" Ø (out)

ex. sdmh
Rim 241.83
Inv 233.42', 24" (In)
Inv 233.88', 15" (In)
Inv 233.42', 24" (Out)

ex. ssmh
rim 242.15'
inv 231.85', 8" Ø (in)
inv 231.85', 8" Ø (out)

ex. sdmh
Rim 242.65
Inv 234.24', 24" (In)
Inv 236.18', 15" (In)
Inv 234.88', 15" (In)
Inv 234.24', 24" (Out)

(ex 237' - 24" Ø rcp sd @ s=0.35%)

(ex 289' - 8" Ø pvc @ s=0.30%)

(12" Water)

(e x 30" HDPE irr line) (GRWP)

Lone Oak Ct.

(ex 365' - 24" Ø rcp sd @ s=0.35%)

(ex 180' - 8" Ø pvc @ s=0.28%)

(ex 140' - 15" Ø rcp sd @ s=0.49%)

(ex 25' - 15" Ø rcp sd @ s=1.98%)

(ex 26' - 15" Ø rcp sd @ s=0.50%)

2.08%)

(ex 12" dip Water min 36" cover)

ex. ssmh
rim 243.20'
inv 233.95', 8" Ø (in)
inv 233.76', 8" Ø (out)

ex. sdmh
Rim 242.70
Inv 236.38', 15" (In)*
Inv 238.52', 15" (In)*
Inv 235.46', 24" (Out)

ex. ssmh
rim 242.92'
inv 233.25', 8" Ø (in)
inv 233.25', 8" Ø (out)

SDMH
Rim 242.72
Inv 237.01', 15" (In)
Inv 236.76', 18" (Out)

Cascade Separator SDMH
Rim 243.82
Inv 233.72', 18" (In)
Inv 233.72', 18" (Out)

(2) 201" NDS StormChamber SC-44
Base Elev. 232.99

(3)220' NDS StormChamber SC-44
Base Elev. 232.99

Cascade Separator SDMH
Rim 241.66
Inv 233.18', 18" (In)
Inv 233.26', 18" (In)
Inv 235.24', 18" (In)
Inv 233.18', 18" (Out)

56' - 18" PVC SD @ S=0.16%

73' - 18" PVC SD @ S=0.54%

20' - 15" PVC SD @ S=2.00%

Outlet Structure 1
Rim 241.22
Inv 235.00', 18" (In)
Inv 233.83', 18" (In)

100 Year HGL at Discharge = 233.7
Q=5.13

(ex 132' - 18" Ø pvc @ s=1.09%)

ex. ssmh
rim 242.99'
inv 232.75', 8" Ø (in)
inv 232.75', 8" Ø (out)

(ex 155' - 8" Ø pvc @ s=0.32%)

Master Water Meter and Backflow Preventer

44' - 18" PVC SD @ S=1.00%

95' - 18" PVC SD @ S=3.19%

52' - 15" PVC SD @ S=1.00%

261' - 8" Water Line

Walter Way

Utility Notes:
1. All proposed water, storm, and sanitary sewer mains shall be privately owned and maintained
2. Proposed storm and sanitary sewer mains shall be PVC solid wall SDR-26.
3. Proposed water mains shall be ductile iron pipe.

Plum St.

Applicant:
MANA CAMDEN FUND, LLC
5927 BALFOUR CT. SUITE 208
CARLSBAD, CA 92008
(408) 406-6000

Engineer:
MH ENGINEERING
16075 VINEYARD BLVD.
MORGAN HILL, CA 95037
(408) 779-7381

Owner:
OWENS FINANCIAL CORP
2221 OLYMPIC BLVD.
WALNUT CREEK, CA 94595
&
JAMES W. HOEY AND DEBRA J. HOEY REVOCABLE TRUST
2480 HECKER PASS RD.
GILROY, CA 95020

See Sheet C.16
Match Line

ADV U2995.0 Rev.

FOR PLANCHECK ONLY

REGISTERED PROFESSIONAL ENGINEER
WILLIAM J. McCLINCHEY
No. 24893
EXP 12-31-2023
STATE OF CALIFORNIA

FOR PLANCHECK ONLY
signature shall be provided upon approval

MH engineering Co.
16075 Vineyard Boulevard
Morgan Hill, CA 95037

Utility Plan - West Side

Hecker Pass Specific Plan - Low Income Housing

DATE: 2/15/2024
SCALE: 1" = 40'
DRAWN BY: WA
CHECKED BY: WJM

JOB NO.
223026

SHEET
C.16
OF
37

Z:\223026 - 20Acres - Hecker Pass\Hecker Pass\Drawings\Civil\Utility Plan.dwg, 3/1/2024 4:38 PM, Picasso 2\2023\Lib\Plot Styles\ACAD-ByLayer.ctb, Mark Wilson (Civil)

ADV LD2005.0.0Dec

FOR PLANCHECK ONLY

REGISTERED PROFESSIONAL ENGINEER
WILLIAM J. McCLINTOCK
No. 24893
EXP 12-31-2023
STATE OF CALIFORNIA

FOR PLANCHECK ONLY
signature shall be provided upon approval

MH engineering Co.
16075 Vineyard Boulevard
Morgan Hill, CA 95037

Utility Plan - East Side

Hecker Pass Specific Plan - Low Income Housing

DATE: 2/15/2024
SCALE: 1" = 40'
DRAWN BY: WA
CHECKED BY: WJM

JOB NO. 223026

SHEET C.17
OF 37

SCALE: 1"=40'
0 10 20 30 40 60 80 100

Match Line
See Sheet C.16

Hecker Pass Highway 152

Hoey Ct
Ranch Drive
Hoey Place
Barn Drive
3rd St.
Plum St.

Lot 89 Lot 90 Lot 91 Lot 92 Lot 93 Lot 94 Lot 95 Lot 96 Lot 97 Lot 98 Lot 99 Lot 100 Lot 101 Lot 102 Lot 103 Lot 104 Lot 105 Lot 106 Lot 107 Lot 108 Lot 109 Lot 110 Lot 111 Lot 112 Lot 113 Lot 114 Lot 115 Lot 116 Lot 64 Lot 65 Lot 66 Lot 67 Lot 68 Lot 69 Lot 70 Lot 71 Lot 72

(ex 48' - 18" Ø rcp sd @ s=0.46%)
(ex 55' - 18" Ø rcp sd @ s=0.46%)
(ex 46' - 18" Ø rcp sd @ s=0.58%)
(ex 105' - 30" Ø rcp sd @ s=0.50%)
(ex 100' - 30" Ø rcp sd @ s=0.50%)
(ex 105' - 30" Ø rcp sd @ s=0.50%)
(ex 164' - 30" Ø rcp sd @ s=1.16%)
(ex 165' - 15" Ø rcp sd @ s=0.49%)
(ex 48' - 18" Ø rcp sd @ s=0.49%)
(ex 212' - 8" Ø pvc @ s=0.25%)
(ex 158' - 6" Ø pvc @ s=0.25%)
(ex 126' - 8" Ø pvc @ s=2.63%)
(ex 378' - 8" Ø pvc @ s=0.29%)
(ex 200' - 8" Ø pvc @ s=4.91%)
(e x 12" irr line) (GRWP)
(e x 30" HDPE irr line) (GRWP)

ex. field inlet
Rim 244.98
Inv 234.43', 18" (Out)

ex. sdmh
Rim 242.24
Inv 234.21', 18" (In)
Inv 234.18', 18" (In)
Inv 234.18', 18" (Out)

ex. sdmh
Rim 242.80
Inv 232.32', 15" (In)
Inv 232.32', 15" (Out)

ex. sdmh
Rim 240.61
Inv 231.79', 30" (In)
Inv 231.79', 30" (Out)

ex. ssmh
rim 237.24'
inv 229.71', 8" Ø (in)
inv 229.71', 8" Ø (out)

ex. ssmh
rim 237.05'
inv 229.32', 8" Ø (in)
inv 230.09', 8" Ø (in)
inv 229.32', 8" Ø (out)

ex. ssmh
rim 236.96'
inv 226.91', 8" Ø (in)
inv 229.07', 8" Ø (out)

ex. ssmh
rim 236.66'
inv 228.80', 8" Ø (in)
inv 228.80', 8" Ø (out)

ex. ssmh
rim 237.21'
inv 227.86', 8" Ø (in)
inv 227.86', 8" Ø (out)
inv 227.86', 8" Ø (out)

ex. ssmh
Inv ±230.44', 8" (Out)

SSMH
Rim 241.03
Inv 231.27', 8" (Out)

SSMH
Rim 240.23
Inv 230.91', 8" (In)
Inv 230.90', 8" (In)
Inv 230.91', 8" (Out)

Curb Inlet
TC 240.41
Inv 232.90', 15" (Out)

Curb Inlet
TC 241.32
Inv 233.45', 15" (Out)

SSMH
Rim 241.45
Inv 231.71', 8" (In)
Inv 231.70', 8" (In)
Inv 231.71', 8" (Out)

SSMH
Rim 240.50
Inv 232.34', 8" (In)
Inv 232.34', 8" (Out)

Curb Inlet
TC 240.65
Inv 234.25', 15" (Out)

SSMH
Rim 241.55
Inv 232.97', 8" (In)
Inv 232.97', 8" (Out)

SSMH
Rim 241.41
Inv 233.08', 8" (In)
Inv 233.08', 8" (Out)

SSMH
Rim 240.38
Inv 230.37', 18" (In)
Inv 232.38', 15" (In)
Inv 230.37', 18" (Out)

Master Water Meter and Backflow Preventer

SDMH
Rim 238.32
Inv 230.70', 18" (In)
Inv 232.13', 12" (In)
Inv 230.70', 18" (Out)

SDMH
Rim 237.75
Inv 231.04', 15" (In)
Inv 231.04', 15" (In)
Inv 230.79', 18" (Out)

Curb Inlet
TC 237.94
Inv 231.61', 15" (Out)

Curb Inlet
TC 232.82
Inv 231.34', 15" (Out)

SDMH
Rim 241.19
Inv 229.86', 18" (In)
Inv 232.97', 15" (In)
Inv 230.02', 15" (In)
Inv 229.86', 18" (Out)

Curb Inlet
TC 241.32
Inv 230.34', 15" (Out)

SSMH
Rim 240.94
Inv 232.01', 8" (In)
Inv 232.01', 8" (Out)

SDMH
Rim 241.64
Inv 229.60', 18" (In)
Inv 229.60', 18" (In)

SDMH
Rim 241.11
Inv 229.31', 18" (In)
Inv 229.77', 12" (In)
Inv 229.31', 18" (Out)

Curb Inlet
TC 240.85
Inv 234.09', 15" (Out)

SDMH
Rim 240.52
Inv 233.77', 15" (In)
Inv 233.77', 15" (In)
Inv 233.52', 18" (Out)

SDMH
Rim 240.72
Inv 228.95', 15" (In)
Inv 229.15', 15" (In)
Inv 228.80', 18" (Out)

Curb Inlet
Rim 240.85
Inv 229.27', 15" (Out)

SDMH
Rim 239.30
Inv 228.02', 18" (In)
Inv 228.30', 15" (In)
Inv 228.30', 15" (In)
Inv 228.02', 18" (Out)

SSMH
Rim 239.78
Inv 233.98', 8" (Out)

Curb Inlet
TC 240.85
Inv 229.63', 15" (Out)

SDMH
Rim 239.65
Inv 228.27', 18" (Thru)

SDMH
Rim 240.68
Inv 229.05', 18" (In)
Inv 229.05', 15" (In)
Inv 229.05', 15" (In)
Inv 229.05', 18" (Out)

SSMH
Rim 240.94
Inv 232.01', 8" (In)

Curb Inlet
TC 240.79
Inv 229.42', 15" (Out)

SSMH
Rim 240.49
Inv 232.28', 8" (In)
Inv 232.33', 8" (Out)

SSMH
Rim 239.39
Inv 232.93', 8" (Out)

Curb Inlet
Rim 239.20
Inv 229.03', 15" (Out)

ex. sdmh
Rim 235.66
Inv 229.75', 18" (In)
Inv 230.00', 15" (In)
Inv 229.75', 18" (Out)

ex. sdmh
Rim 237.40
Inv 229.40', 18" (In)
Inv 229.45', 30" (In)
Inv 228.95', 36" (Out)

Contech Cascade Separator
Rim 233.02
Inv 227.93', 18" (In)
Inv 228.00', 18" (In)
Inv 227.56', 18" (Out)

Outlet Structure 2
Rim 235.98
Inv 227.52', 18" (In)
Inv 227.52', 18" (Bidirectional)
Inv 227.52', 18" (Bidirectional)
Inv 228.50', 18" (Out)

(2) 362' NDS StormChamber SC-44
Base Elev. 227.52

(5) 93' NDS StormChamber SC-44
Base Elev. 227.52

100 Year HGL at Discharge = 228.88
Q=5.39

245' - 12"Ø PVC @ S=0.51%
245' - 12"Ø PVC @ S=0.51%
24' - 15" PVC SD @ S=2.00%
26' - 15" PVC SD @ S=2.00%
122' - 8" PVC SS @ S=0.30%
147' - 8" Water Line
123' - 8" PVC SS @ S=0.30%
71' - 18" PVC SD @ S=0.30%
274' - 8" Water Line
86' - 18" PVC SD @ S=0.30%
16' - 15"Ø PVC SD @ S=2.00%
102' - 8" PVC SS @ S=0.30%
97' - 18" PVC SD @ S=0.30%
97' - 8" Water Line
87' - 18" PVC SD @ S=0.30%
214' - 18" PVC SD @ S=1.84%
385' - 8" Water Line
210' - 8" PVC SS @ S=0.30%
16' - 15" PVC SD @ S=2.00%
37' - 8" PVC SS @ S=0.30%
30' - 8" Water Line
32' - 18" PVC SD @ S=0.30%
108' - 8" Ø SS PVC @ S=0.30%
19' - 15" PVC SD @ S=2.00%
11' - 15" PVC SD @ S=2.82%
28' - 15" PVC SD @ S=2.00%
23' - 15" PVC SD @ S=2.00%
12' - 8" PVC SS @ Min. 0.30%
386' - 8" Water Line
38' - 15" PVC SD @ S=2.00%
3' - 18" PVC SD @ S=0.30%
305' - 8" Water Line
305' - 8" PVC SS @ S=0.30%
300' - 8" PVC SS @ S=0.30%
178' - 15" PVC SD @ S=0.30%
24' - 15" PVC SD @ S=2.00%
36' - 15" PVC SD @ S=2.00%
30' - 18"Ø PVC SD @ S=0.30%
46' - 8" Water Line
88' - 18"Ø PVC SD @ S=0.30%
83' - 18" PVC SD @ S=7.87%

Utility Notes:
1. All proposed water, storm, and sanitary sewer mains shall be privately owned and maintained
2. Proposed storm and sanitary sewer mains shall be PVC solid wall SDR-26.
3. Proposed water mains shall be ductile iron pipe.

Applicant:
MANA CAMDEN FUND, LLC
5927 BALFOUR CT. SUITE 208
CARLSBAD, CA 92008
(408) 406-6000

Engineer:
MH ENGINEERING
16075 VINEYARD BLVD.
MORGAN HILL, CA 95037
(408) 779-7381

Owner:
OWENS FINANCIAL CORP
2221 OLYMPIC BLVD.
WALNUT CREEK, CA 94595
&
JAMES W. HOEY AND DEBRA J. HOEY REVOCABLE TRUST
2480 HECKER PASS RD.
GILROY, CA 95020

See Sheet C.16
Match Line

Autodesk Docs://Hecker Pass/Hecker Pass Specific Plan - 24 Lots - Tier Req - 3-1-2023 9-18 PM - Richard.RPC2023-1.rvt Mon Aug 21 2023 9:18:47 AM Richard