

## Peery Park Specific Plan Fee Evaluation

| Peery Park Specific Plan Program Cost          |             |           |                      |
|------------------------------------------------|-------------|-----------|----------------------|
| Item                                           | Staff Hours | Cost/Hour | Total Cost           |
| Specific Plan w/ Contingency                   |             |           | \$ 630,000.00        |
| <b>Staff Costs:</b>                            |             |           |                      |
| Initial Plan Preparation                       | 2000        | 120       | \$ 240,000.00        |
| Annual Maintenance (10 years @ 100 hours/year) | 1000        | 120       | \$ 120,000.0         |
| <b>Total Specific Plan Program Cost</b>        |             |           | <b>\$ 990,000.00</b> |

| Peery Park Development Potential                                   |                |                   |                                 |
|--------------------------------------------------------------------|----------------|-------------------|---------------------------------|
| Construction Type                                                  | Total Sq. Ft.* | Construction Cost | Building Construction Valuation |
| New Buildings and Additions (w/ Tenant Improvements)               | 3,729,000      | \$170/sq. ft.     | 633,930,000.00                  |
| Existing Buildings: Renovations and Tenant Improvements (10 years) | n/a            | \$58,000,000/year | 580,000,000.00                  |
| TOTAL                                                              |                |                   | 1,213,930,000.00                |
| Total Specific Plan Program Cost/Construction Valuation            |                |                   | 0.082%                          |

\*Total Buildout in the PPSP is 9.7 million sq. ft. The New Buildings and Additions square footage was generated by the existing pending development projects and associated gross sq. ft. which totals approx. 3,729,000. The Existing Buildings calculation is based on average rates of construction estimated by the Building Division.

| Peery Park Specific Plan Sense of Place Fee |                   |                 |                 |                                                           |
|---------------------------------------------|-------------------|-----------------|-----------------|-----------------------------------------------------------|
| Item                                        | Number Needed     | Cost/item       | Total Cost      | Notes                                                     |
| Shuttle Stops                               | 10                | \$ 5,000.00     | \$ 50,000.00    |                                                           |
| Pastoria Avenue Streetscape Improvements:   |                   |                 |                 | Northern portion approximately 2,050 feet in total length |
| Double-head decorative LED streetlights     | 2 every 80' = 51  | \$ 25,000.00    | \$ 1,275,000.00 |                                                           |
| 24" box tree                                | 2 every 30' = 137 | \$ 4,000.00     | \$ 548,000.00   | Includes soil, granite, topper & irrigation               |
| Stamped/Decorative Concrete Plaza Area      | 1                 | \$ 1,000,000.00 | \$ 1,000,000.00 | 22' wide                                                  |
| New/Improved Bicycle Lanes                  | 12                | see attached    | \$ 1,726,221.00 | See Attached Breakdown of Bike Lanes Included             |
| Crosswalks with In-Roadway Warning Lights   | Up to 10          | \$ 70,000.00    | \$ 700,000.00   |                                                           |
|                                             |                   |                 | \$ 5,299,221.00 |                                                           |
| Cost/Sq. Ft.                                |                   |                 | \$2.41          | Divided by 2.2 million net new sq. ft.                    |

## Peery Park Sense of Place Fee Bicycle Lane Fee Calculation

### **Bicycle Lanes included in the Sense of Place Fee**

#### ***New bike lanes within the district***

1. Mathilda Ave between Evelyn Ave and Almanor Ave: Approximately 6,600 linear feet (LF) per lane x 2 = Total 13,200 LF.
2. Mary Ave between Central Expwy and Maude Ave: 2,500 LF per lane x 2 = Total 5,000 LF (Per 2006 Bicycle Plan) .
3. Almanor Ave between Vaqueros Ave and Mathilda Ave: 650 LF per lane x 2 = Total 1,300 LF (Per 2006 Bicycle Plan).
4. Maude Ave between Pastoria Ave and Mathilda Ave: 1,015 LF per lane x 2 = Total 2,030 LF (Per 2006 Bicycle Plan).

#### ***Improvements to existing bike lanes within the district***

5. Mary Ave between Maude Ave and Almanor Ave: 2,250 LF per lane x 2 = 4,500 LF
6. Maude Ave between SR 237 and Pastoria Ave: 3,800 LF per lane x 2 = 7,600 LF.
7. Almanor Ave between Mary Ave and Vaqueros Aven: 1,350 LF per lane x 2 = 2,700 LF

#### ***Potential bike connections within the district and extending beyond***

8. Ahwanee Ave from Mathilda Ave extending eastward: 5975 LF (Per 2006 Bicycle Plan)
9. New connector path segment extending Ferndale Ave westward to San Aleso Ave: 290 LF
10. New connector path segment extending Del Rey Ave eastward from Mathilda Avenue to Duane Ave: 110 LF
11. Maude Avenue eastward from Mathilda Avenue to N. Sunnyvale Avenue: 1,600 LF per lane x 2 = Total 3,200 LF
12. California Avenue from Mary Avenue to N. Sunnyvale Avenue: 3,400 LF per lane x 2 = Total 6,800 LF

### **Bicycle Lane General Costs**

Bike Lanes (standard) -

\$800 per 100 L.F. (construction cost only)

\$1,400 per 100 L.F. (construction + start-up, design, inspection, contingencies)

Green-colored Bike Lanes (6-ft width)

\$6,000 per 100 L.F. (construction cost only)

\$10,500 per 100 L.F. (construction + start-up, design, inspection, contingencies)

### **Formula for Calculating Total Fee**

Consider 9 and 10 as trials. 20% of the remaining total lane mileages will be colored bike lanes

**Bicycle Lane Total Fee Calculation*****Green Lanes***

Lane 9 = 290 LF = \$30,450

Lane 10 = 110 LF = \$11,550

20% of the remaining total lane feet = 10,461 = \$1,098,405

***Regular***

80% of the remaining total lane feet = 41,844 = \$585,816

***Total***

\$1,726,221





# Peery Park Specific Plan Wastewater Utility Impact Study

## Technical Memorandum No. 1

|                     |                       |
|---------------------|-----------------------|
| <b>Subject</b>      | Sewer Flow Projection |
| <b>Client</b>       | City of Sunnyvale     |
| <b>Prepared By</b>  | JiaJia Huang, P.E.    |
| <b>Reviewed By</b>  | Scott Humphrey, P.E.  |
| <b>Date - Draft</b> |                       |
| <b>Date - FINAL</b> | April 7, 2016         |

### PURPOSE

The City of Sunnyvale (City) has retained the service of Infrastructure Engineering Corporation (IEC) to prepare a wastewater utility impact study for the Peery Park Specific Plan (PPSP). IEC recently completed a Wastewater Master Plan update (WWMP) for the City that identified capital improvements to accommodate future known development at the time. New development information has been obtained for the PPSP that might impact the City's wastewater system, thus, the City has requested that IEC prepare a wastewater utility impact study for PPSP to identify the incremental impact due to the PPSP.

Before conducting hydraulic modeling analysis for the PPSP, IEC has developed the proposed development flows for the PPSP in this technical memorandum for the City's review.

### DISCUSSION

The City provided IEC with land use information of the PPSP including a boundary shapefile, a traffic analysis zone (TAZ) shapefile, and a spreadsheet of the PPSP buildout summary which includes a breakdown of existing development, buildout development, land use, and jobs. IEC developed the ultimate sewer flow of PPSP based on this data and the WWMP.

#### Methodology

The ultimate sewer flow is calculated for individual TAZ zone by the following equation:

$$\text{Ultimate Sewer Flow} = \text{Existing Sewer Flow} - \text{Flows from Building Removed} + \text{New Development Flow due to PPSP}$$

The existing sewer flow was calculated in parcel level in the WWMP, and the parcels are assigned to the corresponding TAZ zone in this study to obtain the existing sewer flow for individual TAZ zone.

Flows from the building removed due to PPSP are calculated based on the ratio of area removed over the existing property area with the following equations:

$$\text{Flows from the Building Removed} = \text{Existing Sewer Flow} \times \text{Percentage of Area Removed}$$

$$\text{Percentage of Area Removed} = \frac{\text{Building Sq. ft. Removed}}{\text{Existing Building Square Footage Removed}}$$

The new development flow due to PPSP is calculated based on the land use type and the sewer generation factors from WWMP. The following equation is used for calculated sewer flows:

$$\text{New Development Flow due to PPSP} = \text{Proposed Building Square Footage or units} \times \text{Sewer Generation Factor}$$



### Sewer Flow Calculation

The land use breakdown for buildout of the PPSP has been organized in Table 1. Table 2 lists the sewer generation factors used in this study, and Table 3 lists the new development flow, existing sewer flow, existing sewer flow excluding removed area, and the ultimate sewer flow. The ultimate PPSP flow would be approximately 975,000 gpd, or 0.975 mgd. A comparison of the existing flow from the WWMP, build-out flow from the WWMP, and PPSP build-out flow are listed in Table 4.

**Table 1. Land Use Breakdown of Buildout for Peery Park Development**

| TAZ<br>Landuse Type                                                                       | 1555   | 1523    | 1542         | 1540    | 1539    | 1541      | 1538    | 1537    | 1554      | 1556      | 1557      | 1558    | 1580    | Total            |
|-------------------------------------------------------------------------------------------|--------|---------|--------------|---------|---------|-----------|---------|---------|-----------|-----------|-----------|---------|---------|------------------|
| <b>Office - Total (sq. ft.)</b>                                                           | 0      | 0       | 0            | 340,000 | 0       | 1,073,897 | 334,095 | 0       | 222,000   | 580,000   | 406,715   | 0       | 176,617 | <b>3,133,324</b> |
| <b>Office - Projects Under Construction</b>                                               | 0      | 0       | 0            | 0       | 0       | 643,897   | 124,095 | 0       | 0         | 0         | 71,715    | 0       | 106,617 | <b>946,324</b>   |
| <b>Office - Estimated Projects</b>                                                        | 0      | 0       | 0            | 340,000 | 0       | 430,000   | 210,000 | 0       | 222,000   | 580,000   | 335,000   | 0       | 70,000  | <b>2,187,000</b> |
| <b>Industrial (sq. ft.)</b>                                                               | 0      | 50,000  | 0            | 290,000 | 40,000  | 90,000    | 100,000 | 0       | 74,000    | 0         | 200,000   | 200,000 | 30,000  | <b>1,074,000</b> |
| <b>Retail (sq. ft.)</b>                                                                   | 0      | 0       | 15,000       | 20,000  | 0       | 20,000    | 10,000  | 0       | 0         | 120,000   | 35,000    | 10,000  | 0       | <b>230,000</b>   |
| <b>Housing Units</b>                                                                      | 0      | 0       | 215          | 0       | 0       | 0         | 0       | 0       | 0         | 0         | 0         | 0       | 0       | <b>215</b>       |
| <b>Existing Building Area (sq. ft.)</b>                                                   | 20,560 | 248,100 | 403,523      | 499,569 | 745,980 | 559,288   | 238,138 | 374,150 | 970,527   | 621,357   | 808,769   | 421,368 | 677,577 | <b>6,588,906</b> |
| <b>Buidling Square Footage Removed (sq. ft.)</b>                                          | 0      | 16,760  | 146,000      | 258,000 | 20,000  | 137,000   | 100,000 | 0       | 94,000    | 292,000   | 180,000   | 96,000  | 0       | <b>1,339,760</b> |
| <b>Percentage of Area Removed</b>                                                         | 0%     | 6.76%   | 36.18%       | 51.64%  | 2.68%   | 24.50%    | 41.99%  | 0.00%   | 9.69%     | 46.99%    | 22.26%    | 22.78%  | 0.00%   | <b>20.33%</b>    |
| <b>Net Estimated Commercial Development (sq. ft.)</b>                                     | 0      | 33,240  | -<br>131,000 | 392,000 | 20,000  | 403,000   | 220,000 | 0       | 202,000   | 408,000   | 390,000   | 114,000 | 100,000 | <b>2,151,240</b> |
| <b>Net total Commercial Development (including Projects Under Construction) (sq. ft.)</b> | 0      | 33,240  | -<br>131,000 | 392,000 | 20,000  | 1,046,897 | 344,095 | 0       | 202,000   | 408,000   | 461,715   | 114,000 | 206,617 | <b>3,097,564</b> |
| <b>Total New District Commercial Development (sq. ft.)</b>                                | 20,560 | 281,340 | 272,523      | 891,569 | 765,980 | 1,606,185 | 582,233 | 374,150 | 1,172,527 | 1,029,357 | 1,270,484 | 535,368 | 884,194 | <b>9,686,470</b> |

**Table 2. Sewer Generation Factors**

| Landuse Type            | Sewer Generation Factors |                  |
|-------------------------|--------------------------|------------------|
|                         | gpd/unit                 | gpd/1000 sq. ft. |
| Office                  | -                        | 170              |
| Industrial              | -                        | 115              |
| Retail                  | -                        | 245              |
| Low Density Residential | 215                      | -                |

**Table 3. Sewer Flow Projection**

| TAZ<br>Landuse Type                            | 1555         | 1523          | 1542          | 1540           | 1539          | 1541           | 1538          | 1537         | 1554          | 1556           | 1557           | 1558          | 1580          | Total          |
|------------------------------------------------|--------------|---------------|---------------|----------------|---------------|----------------|---------------|--------------|---------------|----------------|----------------|---------------|---------------|----------------|
| <b>Office - Total (gpd)</b>                    | 0            | 0             | 0             | 57,800         | 0             | 182,562        | 56,796        | 0            | 37,740        | 98,600         | 69,142         | 0             | 30,025        | <b>532,665</b> |
| Office - Projects Under Construction (gpd)     | 0            | 0             | 0             | 0              | 0             | 109,462        | 21,096        | 0            | 0             | 0              | 12,192         | 0             | 18,125        | <b>160,875</b> |
| Office - Estimated Projects (gpd)              | 0            | 0             | 0             | 57,800         | 0             | 73,100         | 35,700        | 0            | 37,740        | 98,600         | 56,950         | 0             | 11,900        | <b>371,790</b> |
| <b>Industrial (gpd)</b>                        | 0            | 5,750         | 0             | 33,350         | 4,600         | 10,350         | 11,500        | 0            | 8,510         | 0              | 23,000         | 23,000        | 3,450         | <b>123,510</b> |
| <b>Retail (gpd)</b>                            | 0            | 0             | 3,675         | 4,900          | 0             | 4,900          | 2,450         | 0            | 0             | 29,400         | 8,575          | 2,450         | 0             | <b>56,350</b>  |
| <b>Housing (gpd)</b>                           | 0            | 0             | 46,225        | 0              | 0             | 0              | 0             | 0            | 0             | 0              | 0              | 0             | 0             | <b>46,225</b>  |
| <b>New Development Flow (gpd)</b>              | 0            | 5,750         | 49,900        | 96,050         | 4,600         | 197,812        | 70,746        | 0            | 46,250        | 128,000        | 100,717        | 25,450        | 33,475        | <b>758,750</b> |
| <b>Existing Sewer Flow (gpd)</b>               | 2,313        | 23,296        | 28,849        | 51,803         | 32,648        | 21,482         | 8,669         | 7,052        | 31,552        | 13,247         | 36,308         | 16,822        | 12,350        | <b>286,390</b> |
| <b>Existing Sewer Minus Removed Area (gpd)</b> | 2,313        | 21,722        | 18,411        | 25,050         | 31,773        | 16,220         | 5,029         | 7,052        | 28,496        | 7,022          | 28,227         | 12,990        | 12,350        | <b>216,653</b> |
| <b>Total Ultimate Sewer Flow (gpd)</b>         | <b>2,313</b> | <b>27,472</b> | <b>68,311</b> | <b>121,100</b> | <b>36,373</b> | <b>214,032</b> | <b>75,775</b> | <b>7,052</b> | <b>74,746</b> | <b>135,022</b> | <b>128,944</b> | <b>38,440</b> | <b>45,825</b> | <b>975,403</b> |

**Table 4. Sewer Flow Comparison**

| Phase                                          | PPSP<br>Development<br>Site |
|------------------------------------------------|-----------------------------|
| Existing Flow                                  | 286,390                     |
| Ultimate Buildout<br>Flow Projected in<br>WWMP | 365,623                     |
| Total Peery Park<br>Buildout Flow              | 975,403                     |



# TECHNICAL MEMORANDUM

## Peery Park Specific Plan Wastewater Utility Impact Study

### *Technical Memorandum No. 2*

|                     |                                      |
|---------------------|--------------------------------------|
| <b>Subject</b>      | Wastewater System Hydraulic Analysis |
| <b>Client</b>       | City of Sunnyvale                    |
| <b>Prepared By</b>  | JiaJia Huang, P.E.                   |
| <b>Reviewed By</b>  | Scott Humphrey, P.E.                 |
| <b>Date - Draft</b> |                                      |
| <b>Date - FINAL</b> | March 29, 2016                       |

### EXECUTIVE SUMMARY

The City of Sunnyvale (City) has requested Infrastructure Engineering Corporation (IEC) complete a wastewater utility impact study for the Peery Park Specific Plan (PPSP) as it could potentially impact the City's sewer system.

IEC recently completed a Wastewater Master Plan update (WWMP) for the City that identified a Capital Improvement Program (CIP) based upon current known development information at that time. Since the finalization of the WWMP, a specific plan is being developed for the Peery Park area that has proposed of increase in land use intensity. As these proposed changes may impact the recently recommended capital improvements, the City has requested that the WWMP be examined as part of this study.

The purpose of this study is to analyze the hydraulic capacity of the City's wastewater system based upon the proposed ultimate incremental flow increase of the PPSP and identify any additional capital improvements required due to the PPSP.

This study only analyzed 10-inch and greater pipelines and a few 8-inch pipelines specified by the City in the WWMP, the remaining 8-inch and smaller pipelines may be affected by the development flows and would require separate study on a project to project basis. Additional upgrades may be necessary based on the results of the separate study. The City's wastewater system was analyzed for planning years of Baseline (2015), Early Finish (2025), and Buildout (2035) under Average Dry Weather Flow (ADWF), Peak Dry Weather Flow (PDWF), and Peak Wet Weather Flow (PWWF), and additional pipeline improvements were determined based on the 2035 PWWF model results. Table ES-1 summarizes the pipelines recommended for upsizing due to the PPSP incremental development flows with their proposed diameters, length, and costs. Table ES-2 summarizes the total capital improvement costs for the proposed pipeline improvements and identifies the cost sharing for developers on a per development building square footage basis. The costs were developed based upon the escalated unit costs used in the WWMP to today's dollars using the Engineering News Record Construction Cost Index for the San Francisco, California Area (ENR-CCI-SF). The tables are not full representation of the improvements or costs associated with the growth in to PPSP as 6-inch and 8-inch pipelines were not analyzed for this report. A separate study will be required on a project to project basis that may result in the need for additional upgrades to smaller pipelines.



**Table ES-1. Recommended Pipeline Improvements and Cost Estimates**

| Proposed Diameter (in.) | Length (LF) | Costs (\$) |
|-------------------------|-------------|------------|
| 12                      | 518         | 220,051    |
| 15                      | 3,521       | 1,732,337  |
| 18                      | 3,814       | 2,060,469  |
| 21                      | 313         | 189,963    |
| 27                      | 429         | 293,859    |
| 30                      | 1,132       | 818,898    |
| 33                      | 402         | 312,426    |
| 36                      | 428         | 355,347    |
| 39                      | 212         | 189,883    |
| 42                      | 549         | 529,179    |

**Total** **6,702,411**

\* Costs include construction cost, soft costs, and contingency.

- This table is not a full representation of the improvements and costs associated with the growth in to the PPSP development.

**Table ES-2. Capital Improvement Cost Per Square Footage**

| PPSP Net Growth Square Footage | Total CIP Capital Cost (\$) | Cost per Square Footage (\$) |
|--------------------------------|-----------------------------|------------------------------|
| 2,151,340                      | 6,702,411                   | 3.12                         |

\* Costs include construction cost, soft costs, and contingency.





## DISCUSSION

### BACKGROUND

The Peery Park Specific Plan (PPSP) is a project that provides guidance on future developments, transportation improvements, and infrastructure improvements of the Peery Park area in order to create a prosperous workplace district. Peery Park contains 446 net acreage and is located in the northwest portion of the City. The district is roughly bounded by California State Route 237 to the north and northwest, Mathilda Ave to the east, the Southern Pacific Rail Line to the south, and Mary Ave to the west. The PPSP development area is currently identified as an industrial business park and the PPSP proposes land use intensification that may allow redevelopment for under-utilized or under-developed industrial properties to provide new commercial space for technology-based business uses, mixed commercial, and a limited number of residential uses over the next 20 years.

Approximately a net growth of 2.2 million building square feet (sf) is proposed for commercial use as well as mixed commercial and residential uses. The buildout for commercial uses is approximately 9.7 million sf with approximately 7.5 million sf currently existing or under construction. The buildout for housing is approximately 215 units.

Figure 1 shows the vicinity map of the PPSP project area.

### SEWER HYDRAULIC ANALYSIS

#### Incremental Flow Calculation

In order to perform a sewer hydraulic analysis for the system, incremental development flows for 2015, 2025, and 2035 are determined with respect to the WWMP flows of the corresponding planning years for the PPSP project area under parcel level. The new development flow of each Traffic Analysis Zone (TAZ) calculated in TM No.1 was proportionated to the parcels based on the parcel area to TAZ area ratio. Table 1 compares the built-out flows projected in the WWMP and due to the PPSP. Approximately 0.61 mgd of additional sewer flow will be added to the City's sewer system by the year 2035 and upon the complete buildout of PPSP.

**Table 1. Summary of Sewer Flow Projections for PPSP Parcels Projected in This Study and Master Plan**

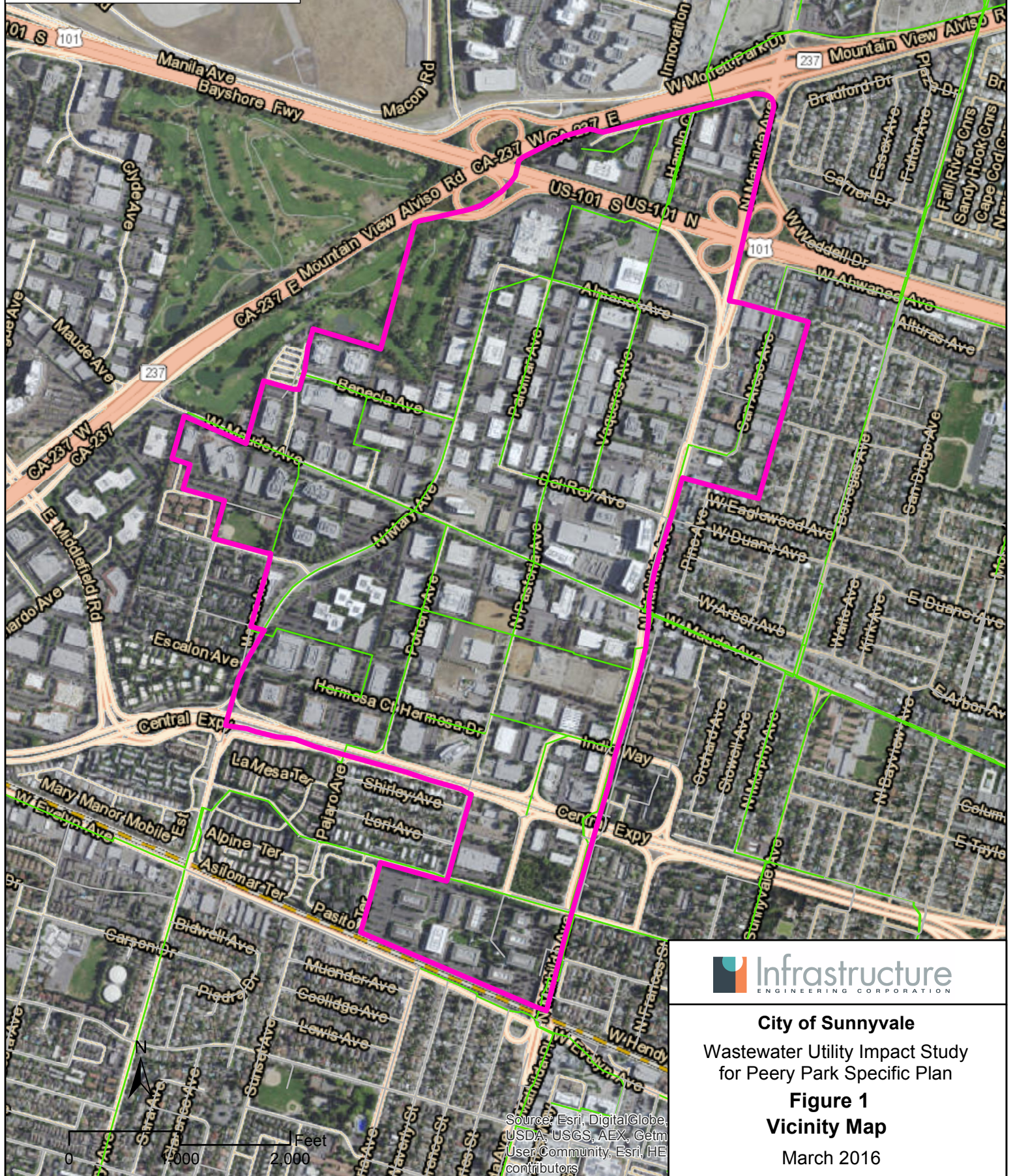
| Plan Year | WWMP    |       | PPSP    |       | Incremental Flow Increase (mgd) |
|-----------|---------|-------|---------|-------|---------------------------------|
|           | gpd     | mgd   | gpd     | mgd   |                                 |
| 2035      | 365,623 | 0.366 | 975,403 | 0.975 | 0.610                           |

Figure 2 shows the pipelines that convey the PPSP flows.



## Legend

- Peery Park Boundary
- Modeled Sewer Main
- City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan

**Figure 1**  
**Vicinity Map**

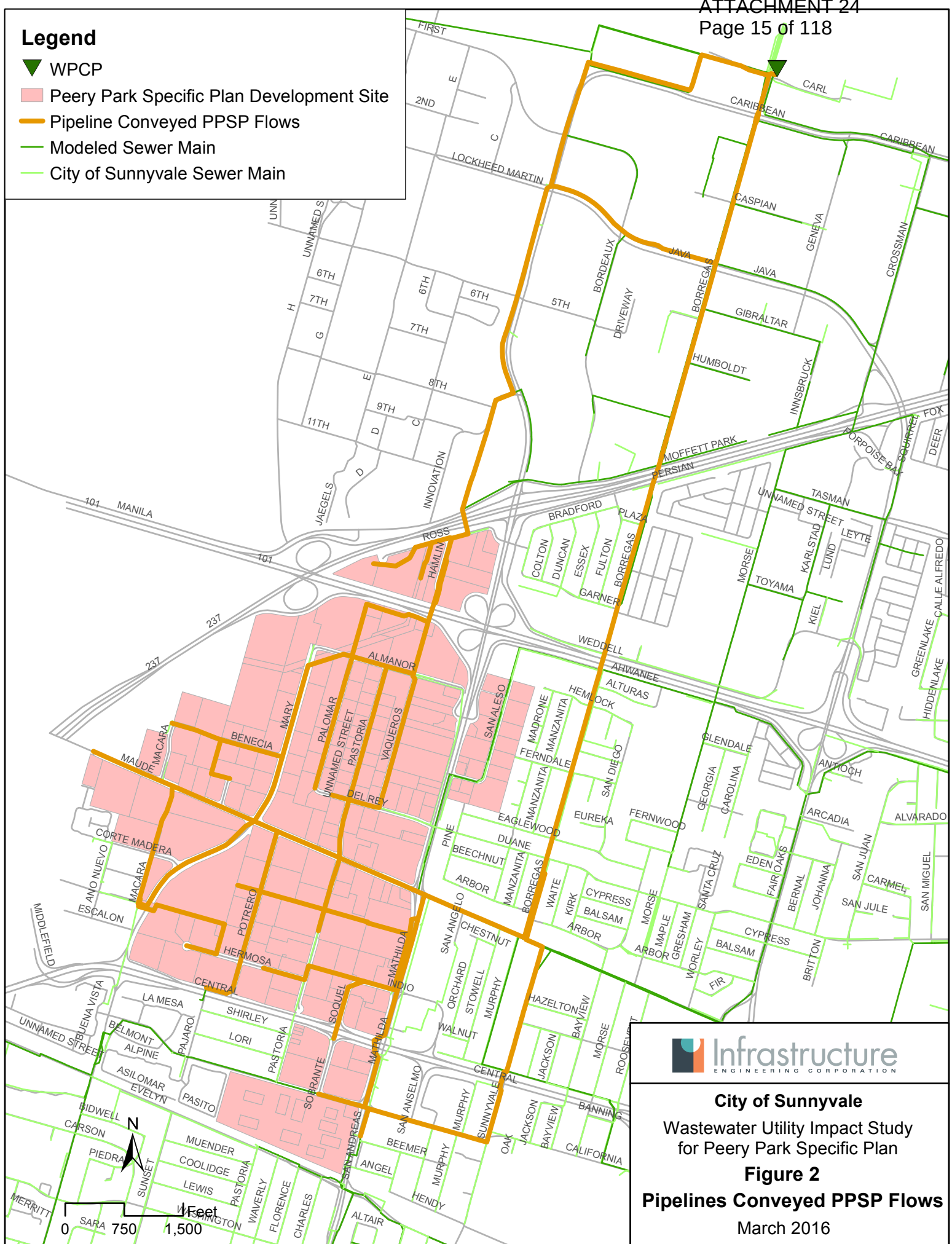
March 2016

Source: Esri, DigitalGlobe,  
USDA, USGS, AEX, Getm  
User Community, Esri, HE  
contributors



▼ WPCP

- Peery Park Specific Plan Development Site
- Pipeline Conveyed PPSP Flows
- Modeled Sewer Main
- City of Sunnyvale Sewer Main



Infrastructure  
ENGINEERING CORPORATION

**City of Sunnyvale**

## Wastewater Utility Impact Study for Peery Park Specific Plan

### Figure 2

### Pipelines Conveyed PPSP Flows

March 2016



### Hydraulic Modeling

As part of the City's WWMP, IEC developed an InfoSWMM sewer system hydraulic model from the sewer system GIS database. This platform combines a fully dynamic hydraulic modeling engine developed and approved by the Environmental Protection Agency (EPA) with the GIS interface that can take advantage of the data that the City has built into its sewer system GIS database.

Six model scenarios were set up for 2015 without PPSP flow contribution, 2015 with PPSP flow contribution, 2025 without PPSP flow contribution, 2025 with PPSP flow contribution, 2035 without PPSP flow contribution, and 2035 with PPSP flow contribution, respectively, and each was run under ADWF, PDWF, and PWWF conditions.

ADWF was calculated using base flows, which were calculated based upon the parcel land use information and the sewer generation factors developed in the WWMP, with the inclusion of Groundwater Infiltration (GWI). PDWF was calculated by applying either the Residential or Non-Residential Diurnal Demand Curve from the WWMP to the respective categorized base flows with the inclusion of GWI. PWWF was calculated by application of the diurnal demand curves developed in the WWMP to the respectively categorized base flows with the inclusion of GWI and rainfall dependent infiltration/inflow (RDI/I).

The sizing criteria used in the WWMP were also used to size the proposed new pipelines:

- Pipes 12-inches in diameter and smaller:  $\frac{1}{2}$  full at peak wet weather flow
- Pipes over 12-inches in diameter:  $\frac{3}{4}$  full at peak wet weather flow
- Minimum velocity: 2 feet per second ( $\frac{1}{2}$  full or full)
- Maximum velocity: 10 feet per second
- Manning's n: .013

Existing pipelines are permitted to flow up to 75 percent full at the PWWF condition before improvement projects will be identified. Only 10-inch and greater pipelines and a few 8-inch pipelines specified by the City in the WWMP were analyzed in this study, the remaining 8-inch and smaller pipelines may be affected and would require separate study on a project to project basis. In order to evaluate the current capacity of the system, the 2015 model scenarios analyzed the City's system with existing diameters and WWMP CIP diameters proposed for planning year 2015. The remaining model scenarios were analyzed under CIP diameters identified in the WWMP for the corresponding phase.

### Results

Model results for each scenario are shown in the appendices. Table A-1 to Table A-6 shows the model results for 2015 without PPSP flow contribution, 2015 with PPSP flow contribution, 2025 without PPSP flow contribution, 2025 with PPSP flow contribution, 2035 without PPSP flow contribution, and 2035 with PPSP flow contribution, respectively. Because the City's design criteria are based upon PWWF, the comparison of PWWF results for all scenarios can be seen in Table A-7. Deficient pipelines were identified and upsized accordingly, and the recommended sizes were revealed in the PPSP CIP column.

The tables are sorted from the greatest depth over diameter (d/D) ratio to the smallest d/D ratio under PWWF conditions. Pipelines highlighted in red are pipelines proposed for upsizing in the WWMP. Among these studied pipelines, 18 pipeline segments were proposed for upsizing in the WWMP, and three of them have been replaced recently, which are P53, P54, and P55. Some pipelines were shown deficient due to backwater conditions and the deficiency gets eliminated once the downstream pipeline gets upsized. Figure 3-1 to Figure 3-15 shows the studied pipelines geographically.

### Capital Improvements and Development Fee

Based upon the model results, pipeline improvements required to accommodate the City's future developments and the PPSP Buildout flows were identified. Per the City's request, IEC developed cost estimates for the improvements based upon unit costs identified in the WWMP and escalated to today's dollars. The ENR-CCI-SF for July 2015 is 11155. Since prices of materials and labor fluctuate with time, new estimates should be obtained during pre-design for proposed facilities to confirm budget amounts. Costs estimates herein for recommended facilities should be adjusted in the future either by making new estimates or by comparing the future ENR-CCI-SF index to 11155.

Table 2 shows the pipelines proposed for improvements, the corresponding unit costs, and the capital improvement costs, but it is not a full representation of the improvements and costs associated with the growth in the PPSP because 6-inch



and 8-inch pipelines were not analyzed for this report and a separate study will be required on a project to project basis that may result in the need for additional upgrades of smaller pipelines. The unit costs herein include the construction cost, soft costs, and contingency. A factor of 45% of construction cost has been used for soft costs, and a factor of 30% of construction costs plus soft costs has been used for contingency.

**Table 2. Proposed CIP and Cost Estimates**

| Sewer Main ID | Facility ID        | Length (ft.) | Existing Diameter (in.) | WWMP Diameter (in.) | PPSP CIP Diameter (in.) | Unit Cost (\$) | Capital Cost (\$) | Figure |
|---------------|--------------------|--------------|-------------------------|---------------------|-------------------------|----------------|-------------------|--------|
| P47           | S5290202-5290213XX | 95.0         | 12                      | 12                  | 15                      | 492            | 46,743            | 3-7    |
| P110          | S5290204-5290202XX | 278.0        | 12                      | 12                  | 15                      | 492            | 136,785           | 3-7    |
| P108          | S5120211-5120206XX | 155.0        | 12                      | 12                  | 15                      | 492            | 76,265            | 3-7    |
| P107          | S5130208-5120211XX | 218.0        | 12                      | 12                  | 15                      | 492            | 107,263           | 3-7    |
| P41           | S5130212-5130208XX | 258.0        | 12                      | 12                  | 15                      | 492            | 126,944           | 3-7    |
| P183          | S5130210-5130212XX | 115.0        | 10                      | 10                  | 15                      | 492            | 56,584            | 3-7    |
| P50           | S5290207-5290208XX | 180.0        | 12                      | 12                  | 15                      | 492            | 88,566            | 3-8    |
| P49           | S5290206-5290207XX | 200.0        | 12                      | 12                  | 15                      | 492            | 98,406            | 3-8    |
| P48           | S5290213-5290206XX | 200.0        | 12                      | 12                  | 15                      | 492            | 98,406            | 3-8    |
| P109          | S5120206-5290204XX | 244.0        | 12                      | 12                  | 15                      | 492            | 120,056           | 3-7    |
| P164          | S4500212-4500211XX | 373.0        | 16                      | 16                  | 27                      | 685            | 255,500           | 3-11   |
| P165          | S4500211-4500210XX | 56.0         | 16                      | 16                  | 27                      | 685            | 38,359            | 3-11   |
| P46           | S5290202-5290203XX | 173.2        | 15                      | 15                  | 18                      | 540            | 93,581            | 3-7    |
| P44           | S5120210-5120207XX | 204.0        | 15                      | 15                  | 18                      | 540            | 110,209           | 3-7    |
| P45           | S5120207-5290203XX | 200.0        | 15                      | 15                  | 18                      | 540            | 108,054           | 3-7    |
| P51           | S5290208-5520204XX | 333.0        | 12                      | 12                  | 15                      | 492            | 163,847           | 3-8    |
| P98           | S6500206-6500209XX | 47.5         | 18                      | 18                  | 21                      | 608            | 28,872            | 3-10   |
| P97           | S6500207-6500206XX | 127.1        | 18                      | 18                  | 21                      | 608            | 77,274            | 3-10   |
| P150          | S5310212-5500209XX | 132.7        | 27                      | 27                  | 33                      | 777            | 103,091           | 3-12   |
| P138          | S4710213-4900224XX | 203.1        | 27                      | 27                  | 30                      | 724            | 146,980           | 3-11   |
| P86           | S6520205-6520204XX | 233.7        | 33                      | 33                  | 42                      | 965            | 225,475           | 3-10   |
| P99           | S6500209-6510201XX | 137.9        | 18                      | 18                  | 21                      | 608            | 83,816            | 3-10   |
| P52           | S5520204-5520203XX | 84.8         | 12                      | 12                  | 15                      | 492            | 41,714            | 3-8    |
| P85           | S6520225-6520205XX | 17.8         | 33                      | 33                  | 42                      | 965            | 17,167            | 3-10   |
| P144          | S5110229-5110211XX | 69.1         | 27                      | 27                  | 30                      | 724            | 50,029            | 3-12   |
| P106          | S6520208-6520225XX | 211.6        | 33                      | 33                  | 39                      | 897            | 189,883           | 3-10   |
| P242          | S3920207-3920206XX | 273.8        | 8                       | 8                   | 12                      | 424            | 116,228           | 3-1    |
| P151          | S5500209-5500207XX | 269.5        | 27                      | 27                  | 33                      | 777            | 209,335           | 3-12   |
| P149          | S5300202-5310212XX | 215.1        | 27                      | 27                  | 30                      | 724            | 155,656           | 3-12   |
| P145          | S5110211-5110209XX | 381.0        | 27                      | 27                  | 30                      | 724            | 275,676           | 3-12   |
| P67           | S6090201-6090205XX | 370.0        | 12                      | 15                  | 18                      | 540            | 199,900           | 3-9    |
| P68           | S6090205-6090202XX | 216.6        | 12                      | 15                  | 18                      | 540            | 117,023           | 3-9    |
| P66           | S5920208-6090201XX | 361.0        | 12                      | 15                  | 18                      | 540            | 195,038           | 3-9    |
| P105          | S6510210-6520208XX | 40.0         | 33                      | 33                  | 36                      | 830            | 33,191            | 3-10   |
| P65           | S5920209-5920208XX | 319.8        | 12                      | 15                  | 18                      | 540            | 172,778           | 3-9    |
| P64           | S5920206-5920209XX | 20.4         | 12                      | 15                  | 18                      | 540            | 11,036            | 3-9    |

**Table 2. Proposed CIP and Cost Estimates**

| Sewer Main ID | Facility ID        | Length (ft.) | Existing Diameter (in.) | WWMP Diameter (in.) | PPSP CIP Diameter (in.) | Unit Cost (\$) | Capital Cost (\$) | Figure |
|---------------|--------------------|--------------|-------------------------|---------------------|-------------------------|----------------|-------------------|--------|
| P139          | S4900224-4900207XX | 263.4        | 27                      | 27                  | 30                      | 724            | 190,557           | 3-11   |
| <b>P63</b>    | S5920210-5920206XX | 105.0        | 12                      | 15                  | 18                      | 540            | 56,728            | 3-9    |
| P241          | S3920208-3920207XX | 244.6        | 10                      | 10                  | 12                      | 424            | 103,824           | 3-1    |
| <b>P62</b>    | S5920207-5920210XX | 280.0        | 12                      | 15                  | 18                      | 540            | 151,276           | 3-9    |
| P163          | S4320227-4500212XX | 353.0        | 16                      | 16                  | 18                      | 540            | 190,715           | 3-11   |
| P104          | S6510208-6510210XX | 388.3        | 33                      | 33                  | 36                      | 830            | 322,155           | 3-10   |
| <b>P61</b>    | S5690207-5920207XX | 158.3        | 12                      | 15                  | 18                      | 540            | 85,525            | 3-9    |
| <b>P60</b>    | S5690201-5690207XX | 552.4        | 12                      | 15                  | 18                      | 540            | 298,471           | 3-9    |
| <b>P59</b>    | S5690202-5690201XX | 32.0         | 12                      | 15                  | 18                      | 540            | 17,289            | 3-9    |
| P87           | S6520214-6520204XX | 297.0        | 39                      | 39                  | 42                      | 965            | 286,536           | 3-10   |
| <b>P58</b>    | S5690203-5690202XX | 468.0        | 12                      | 15                  | 18                      | 540            | 252,847           | 3-9    |
| <b>P57</b>    | S5690204-5690203XX | 331.0        | 12                      | 15                  | 15                      | 492            | 162,863           | 3-8    |
| <b>P69</b>    | S6090202-6100203XX | 373.0        | 12                      | 15                  | 15                      | 492            | 183,528           | 3-9    |
| <b>P70</b>    | S6100203-6100205XX | 56.0         | 12                      | 15                  | 15                      | 492            | 27,554            | 3-9    |
| <b>P56</b>    | S5520201-5690204XX | 400.0        | 12                      | 15                  | 15                      | 492            | 196,813           | 3-8    |

**Total****6,702,411**

\*Pipelines highlighted in red are proposed for upsizing in the WWMP.

- This table is not a full representation of the improvements and costs associated with the growth in the PPSP because 6-inch and 8-inch pipelines were not analyzed for this report and a separate study will be required on a project to project basis that may result in additional upgrades.

The total CIP proposed for PPSP in this study costs approximately 6.7 Million Dollars. Costs may increase if additional improvements for smaller pipelines are required. Based on the calculated costs estimates, the development fee per building square footage for PPSP is approximately \$3.1/sf, as shown in Table 3. The development fee will also increase if additional pipeline improvements needed.

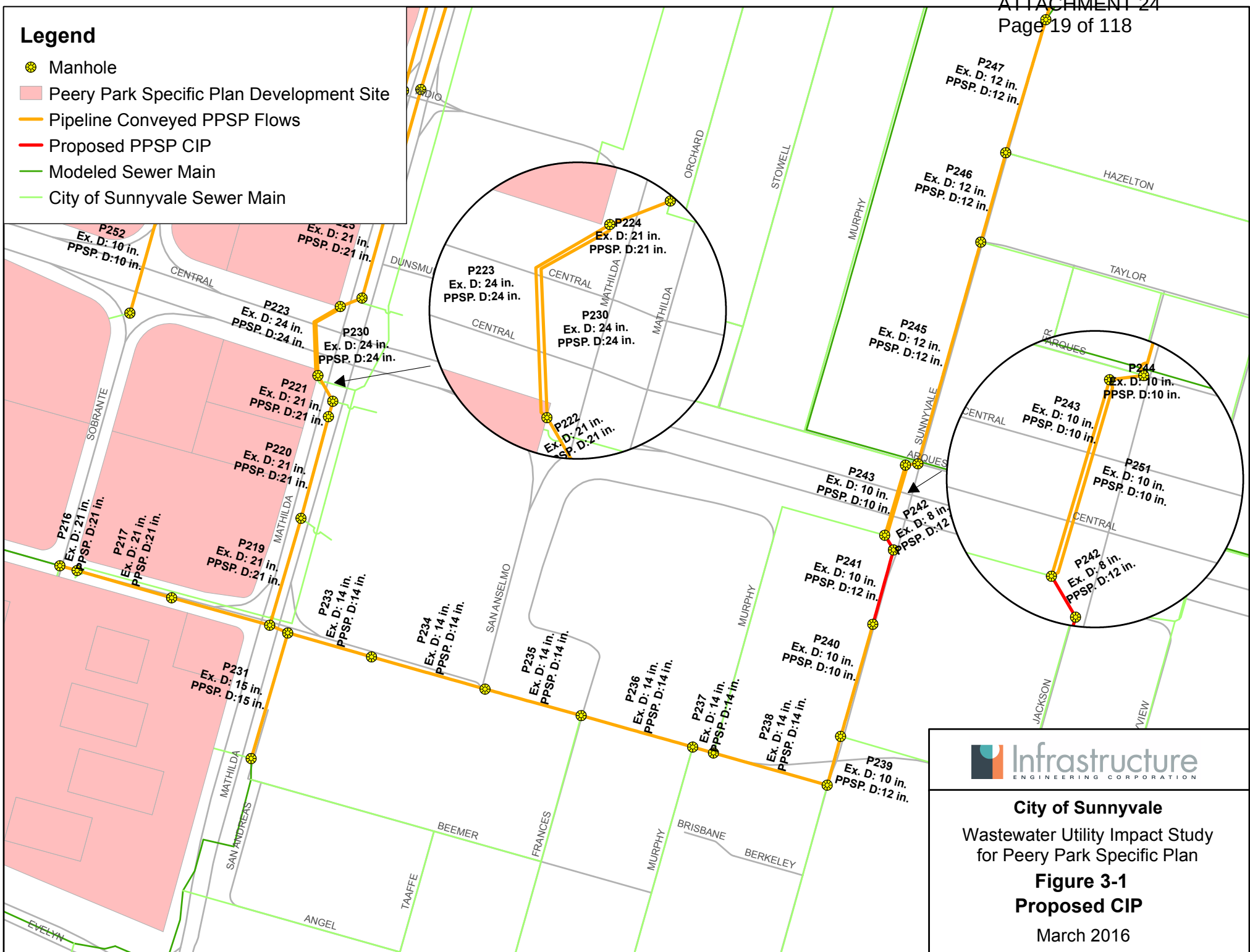
**Table 3. Capital Improvement Cost Per Square Footage**

| PPSP Net Growth Square Footage | Total CIP Capital Cost (\$) | Cost per Square Footage (\$) |
|--------------------------------|-----------------------------|------------------------------|
| 2,151,340                      | 6,702,411                   | 3.12                         |



## Legend

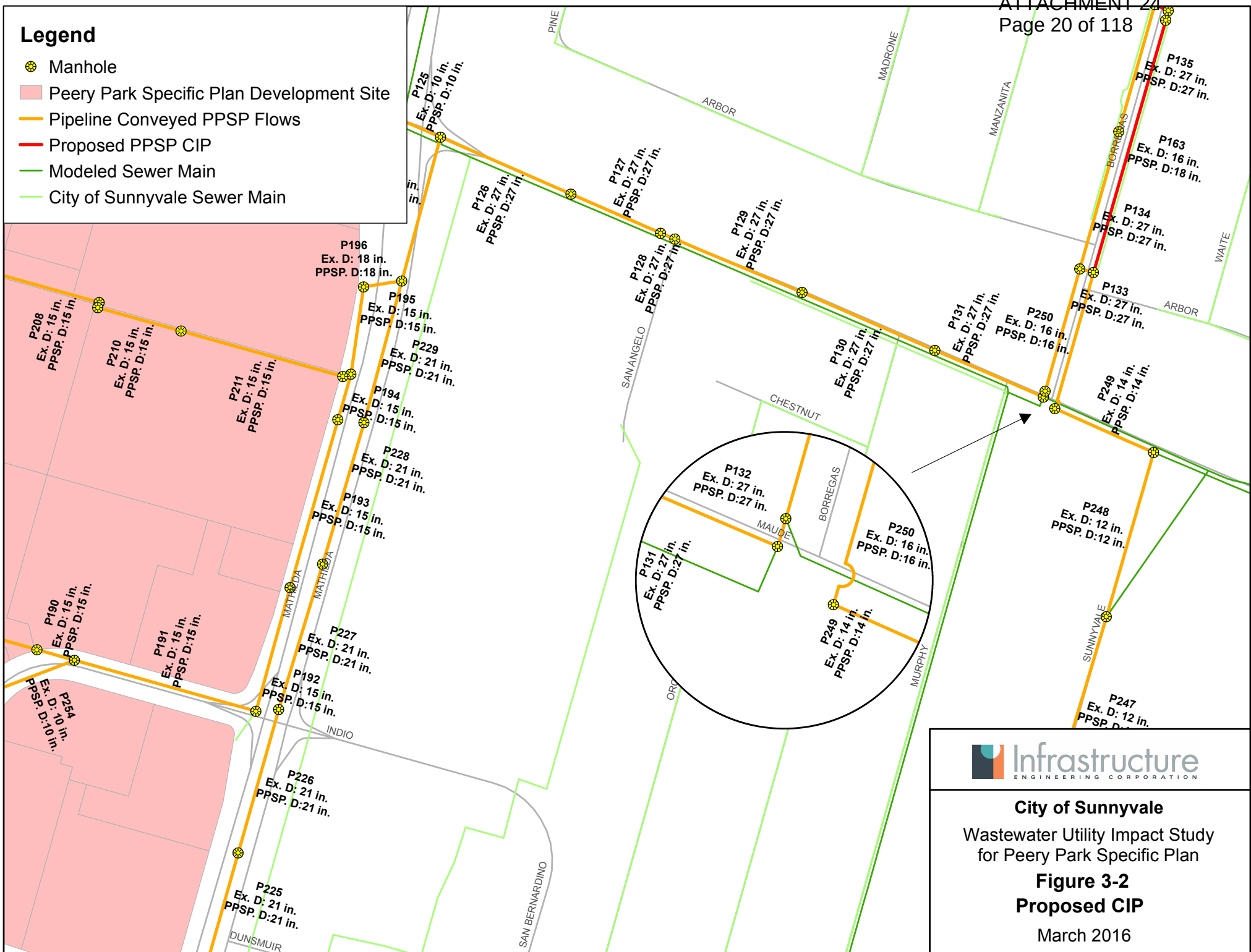
-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan  
**Figure 3-1**  
**Proposed CIP**  
March 2016

## Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan

**Figure 3-2**  
**Proposed CIP**

March 2016



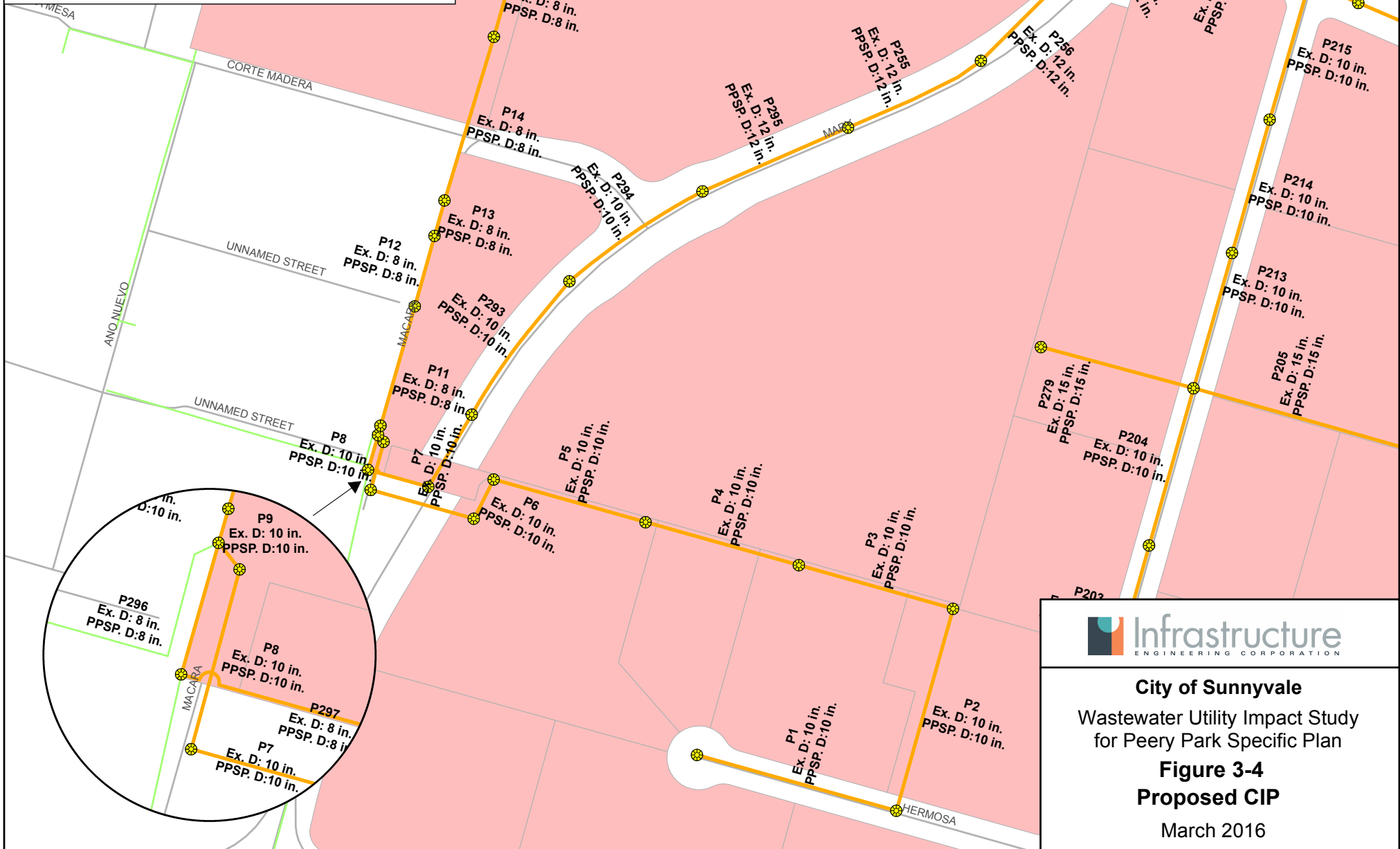
### Legend

- Manhole
- Peery Park Specific Plan Development Site
- Pipeline Conveyed PPSP Flows
- Modeled Sewer Main
- City of Sunnyvale Sewer Main



## Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan  
**Figure 3-4**  
**Proposed CIP**  
March 2016

## Legend

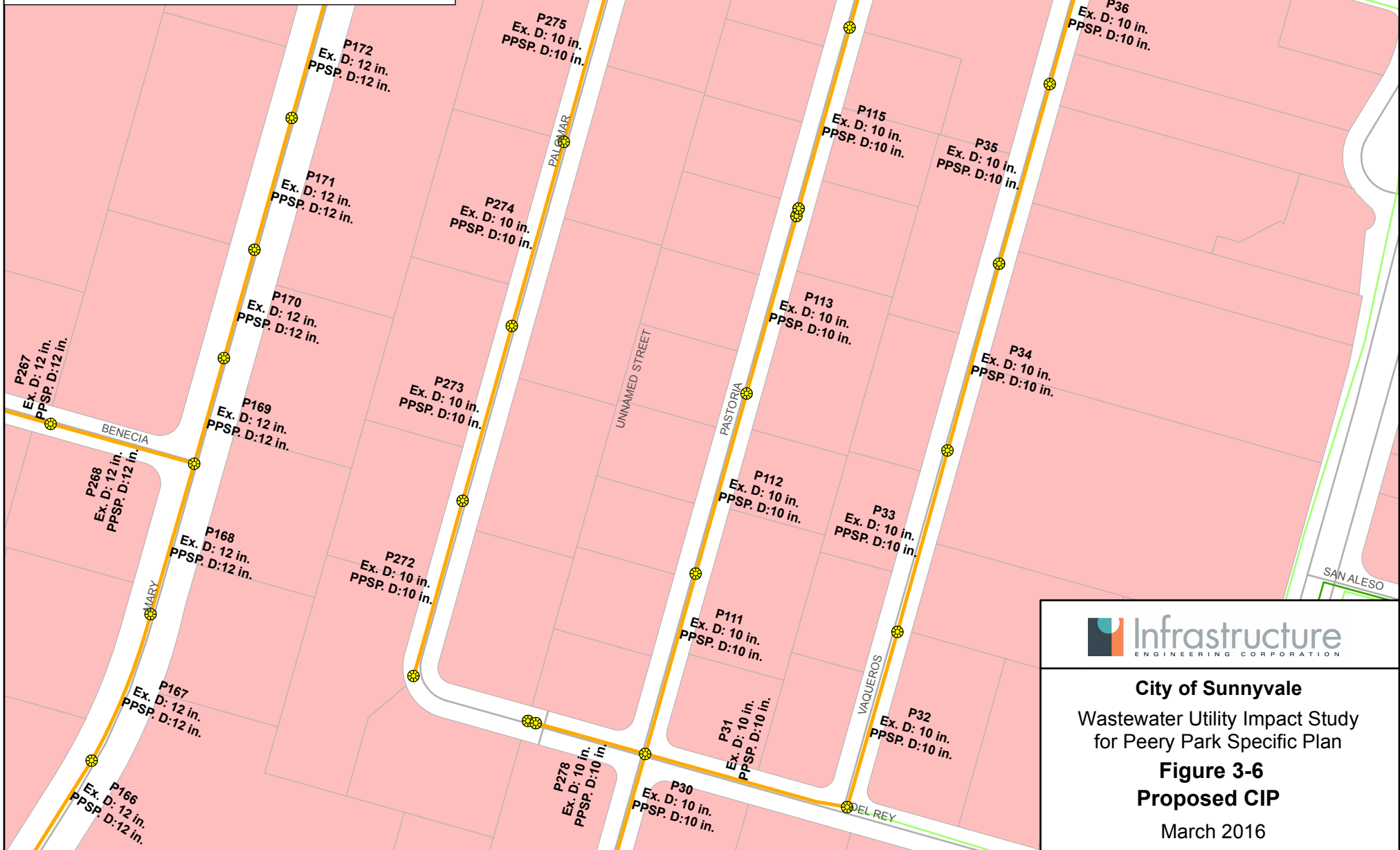
-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan  
**Figure 3-5**  
**Proposed CIP**  
March 2016

**Legend**

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



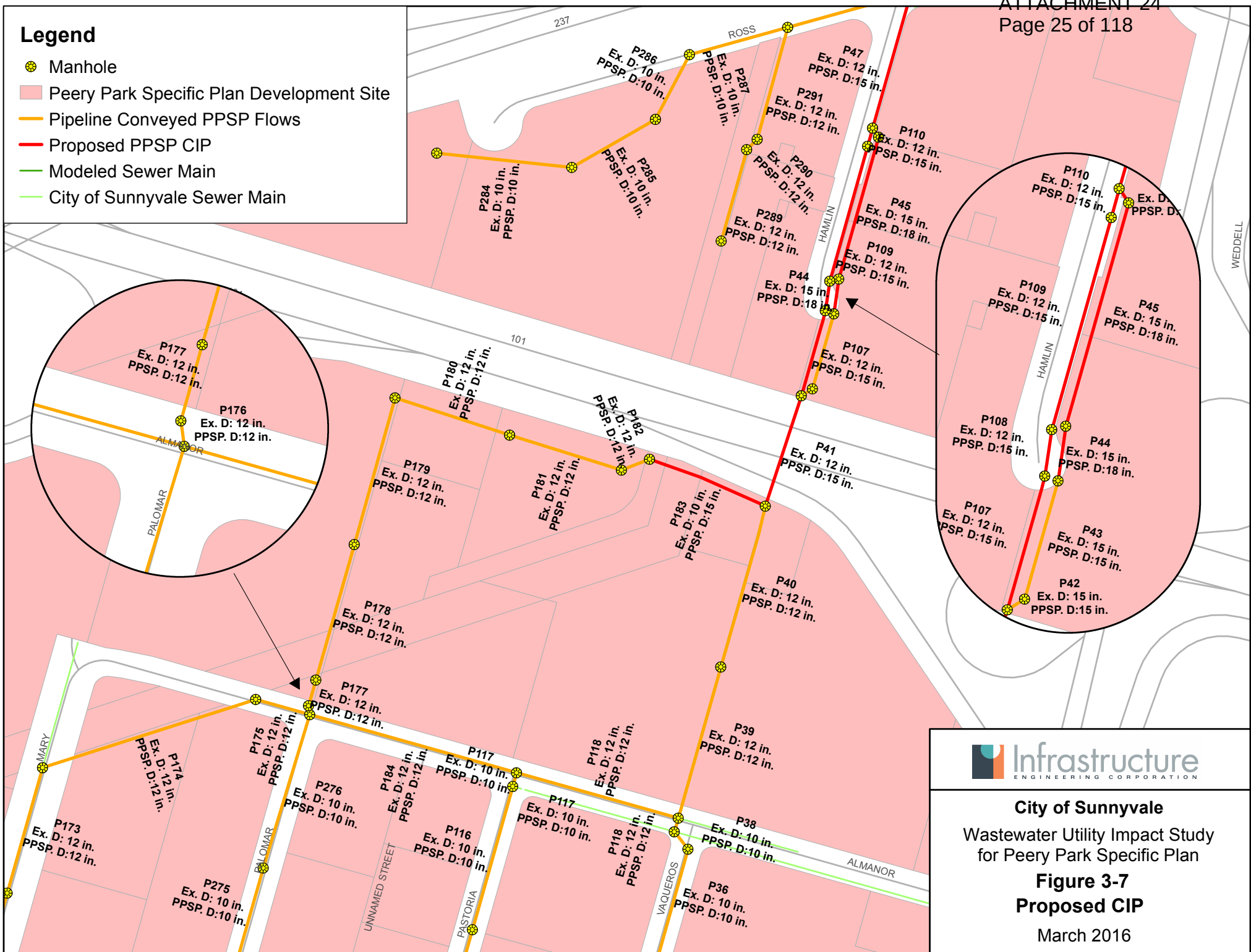
**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan

**Figure 3-6**  
**Proposed CIP**

March 2016

## Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main

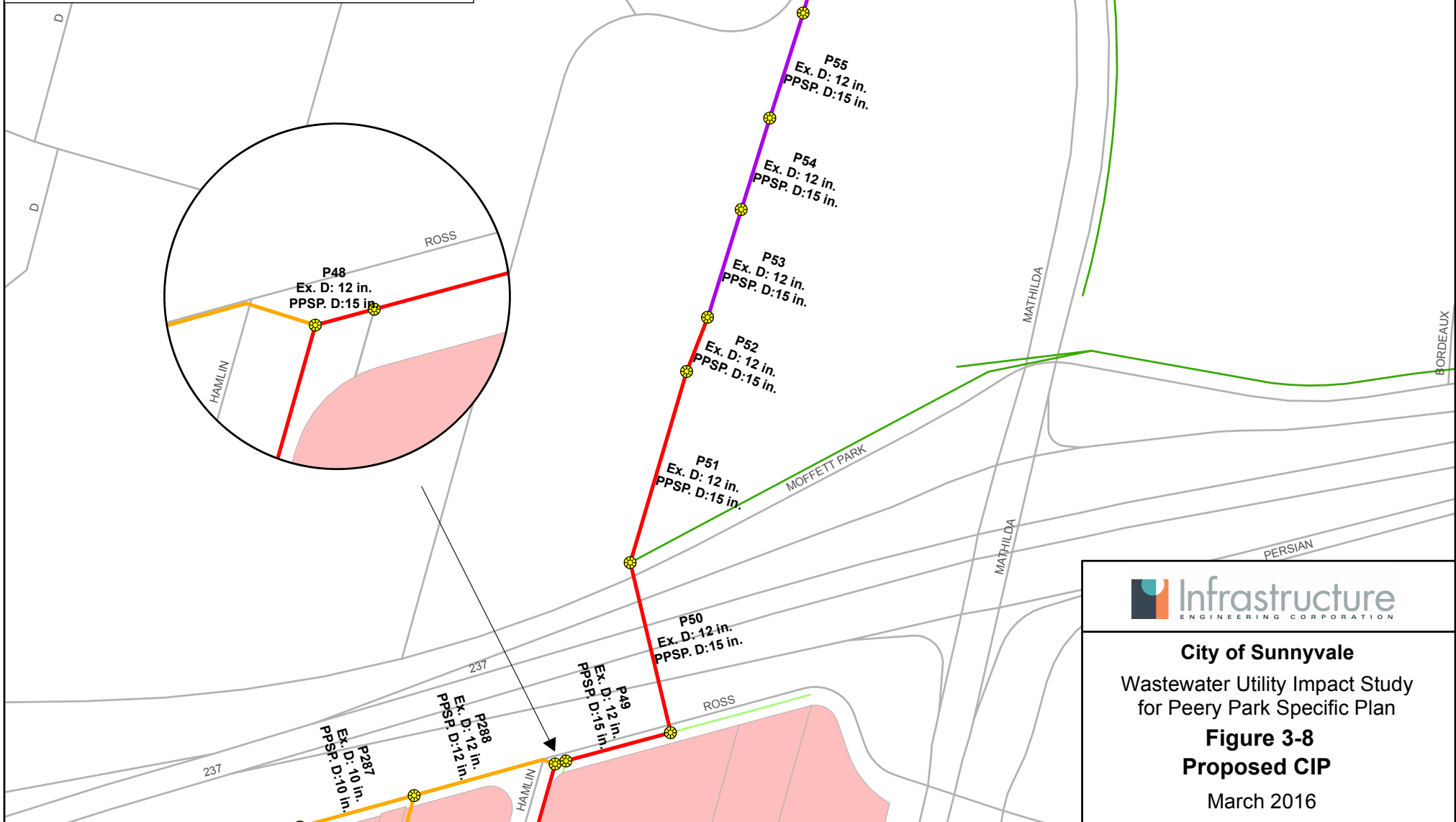


**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan  
**Figure 3-7**  
**Proposed CIP**  
March 2016



## Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Proposed WWMP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan

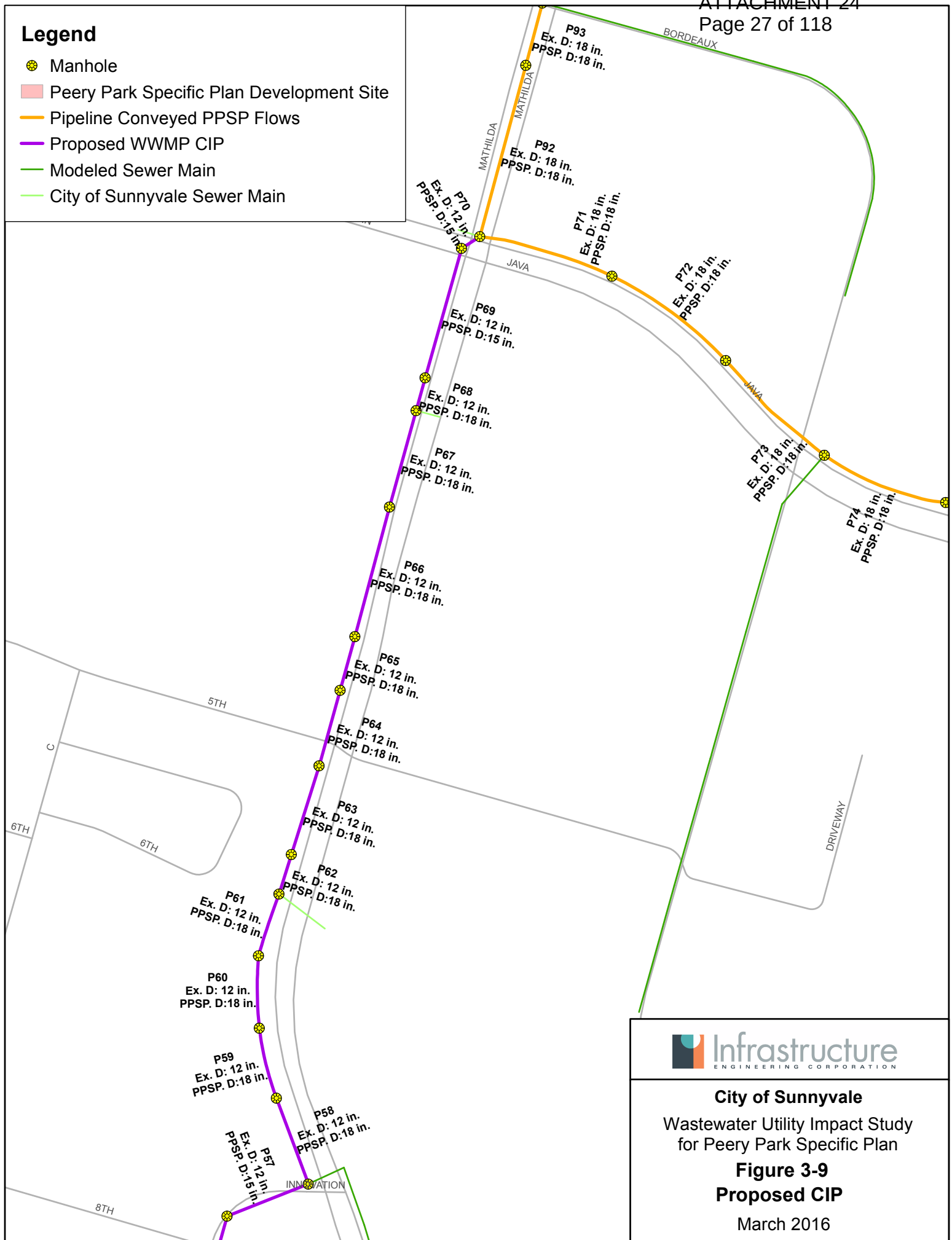
**Figure 3-8**  
**Proposed CIP**

March 2016



**Legend**

- Manhole
- Peery Park Specific Plan Development Site
- Pipeline Conveyed PPSP Flows
- Proposed WWMP CIP
- Modeled Sewer Main
- City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan

**Figure 3-9**  
**Proposed CIP**

March 2016

## Legend

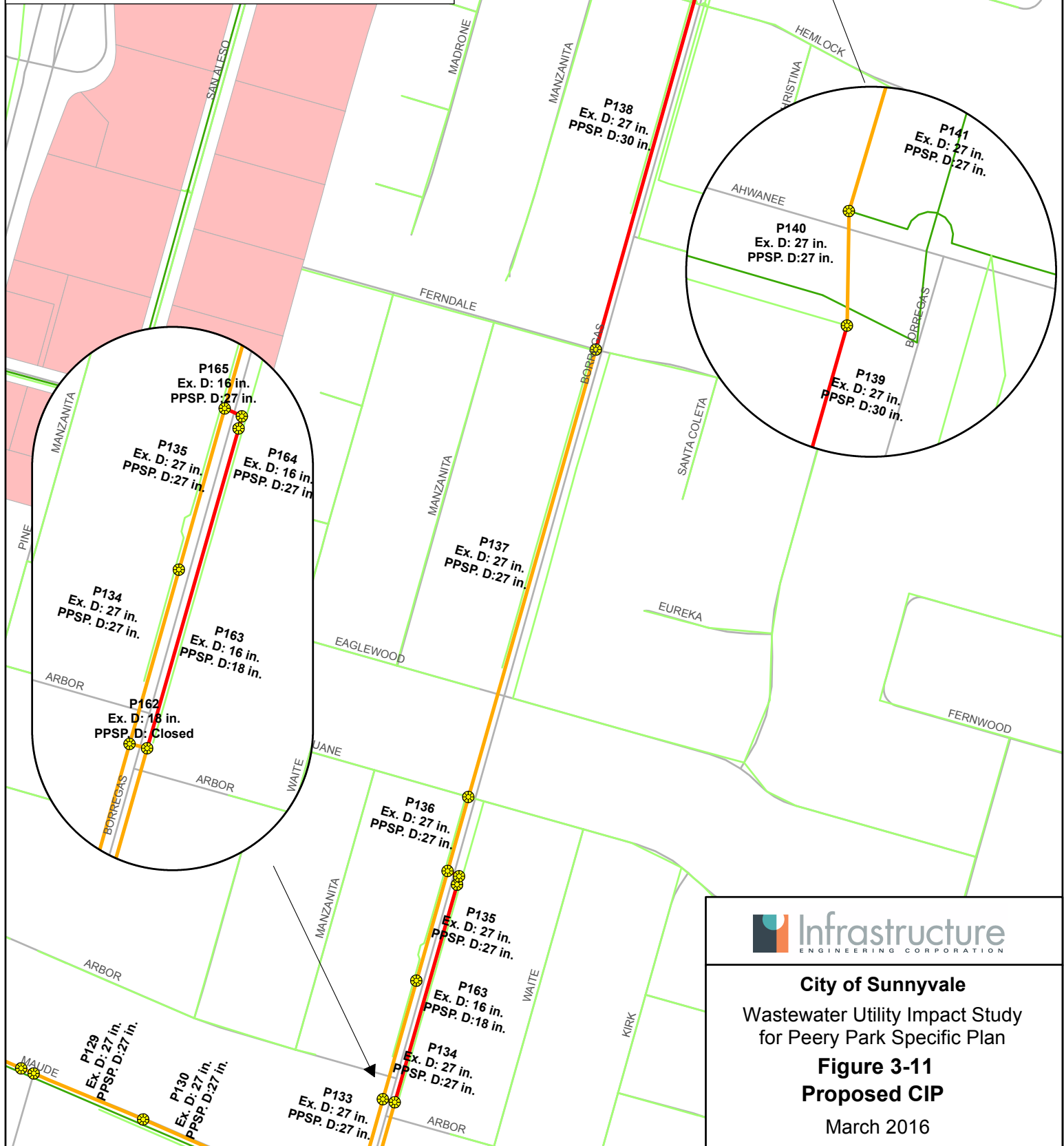
-  Manhole
-  WPCP
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan  
**Figure 3-10**  
**Proposed CIP**  
March 2016

**Legend**

- Manhole
- Peery Park Specific Plan Development Site
- Pipeline Conveyed PPSP Flows
- Proposed PPSP CIP
- Modeled Sewer Main
- City of Sunnyvale Sewer Main



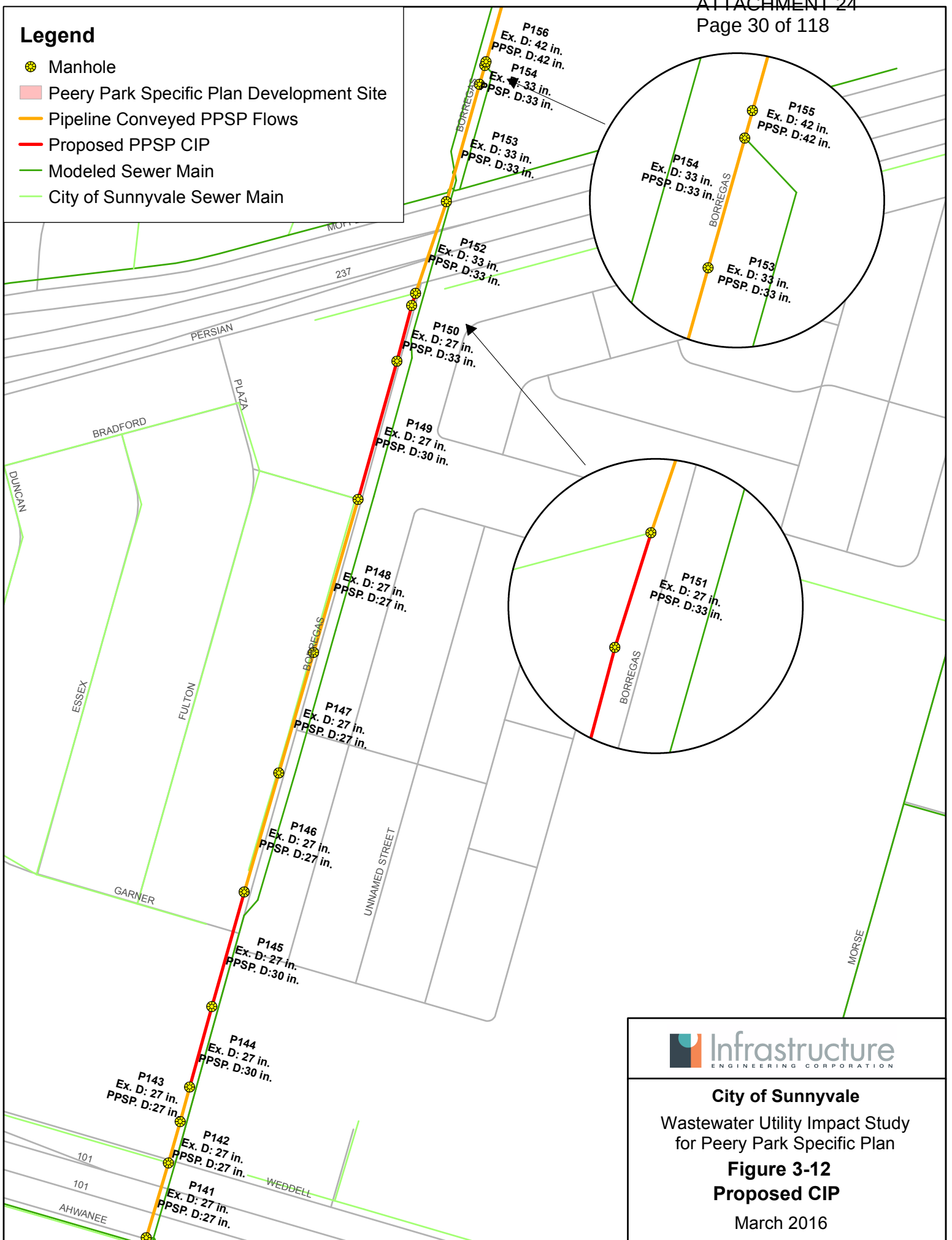
**City of Sunnyvale**  
 Wastewater Utility Impact Study  
 for Peery Park Specific Plan

**Figure 3-11**  
**Proposed CIP**

March 2016

## Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



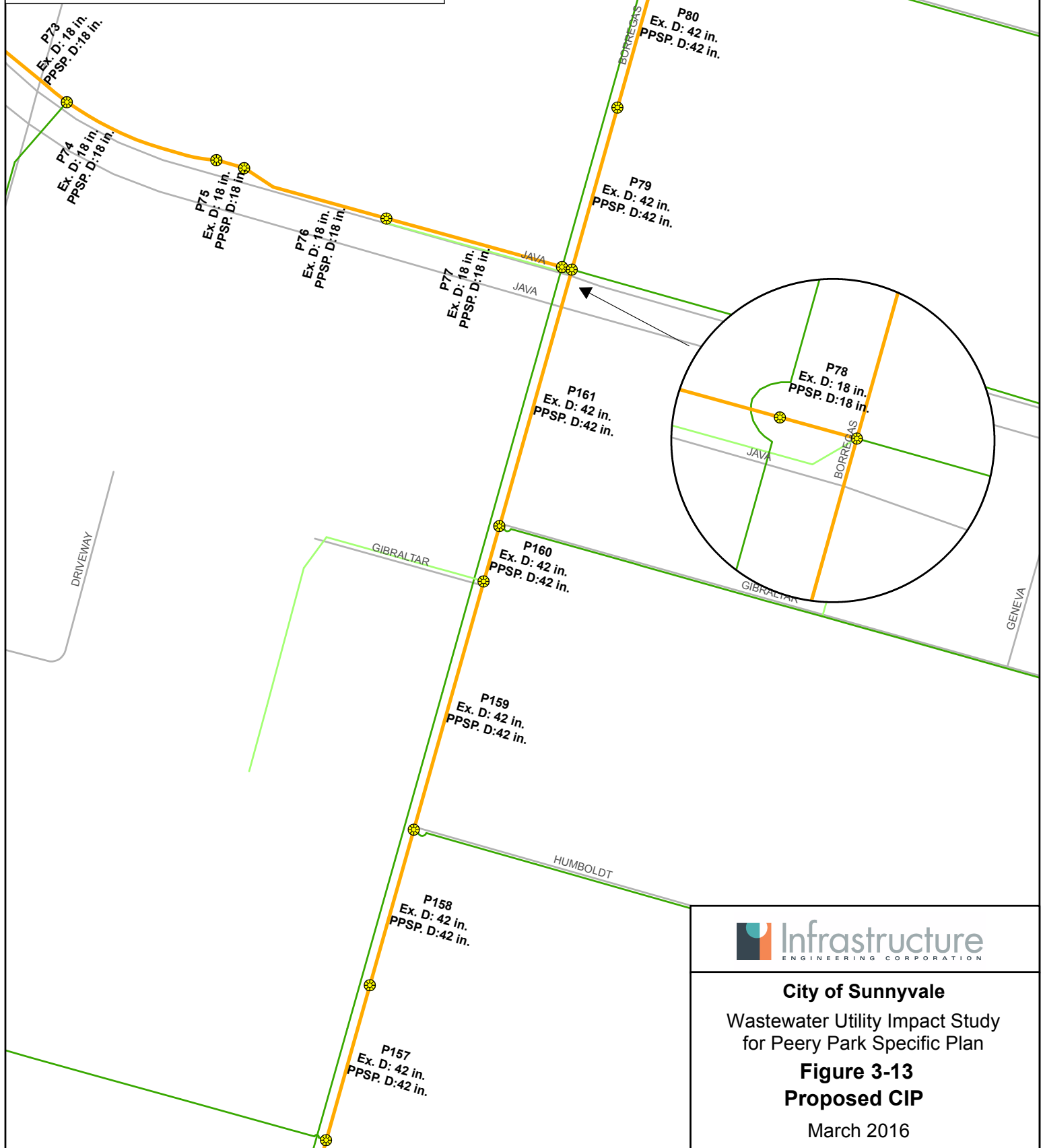
**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan

**Figure 3-12**  
**Proposed CIP**

March 2016

## Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan

**Figure 3-13**  
**Proposed CIP**

March 2016



## Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



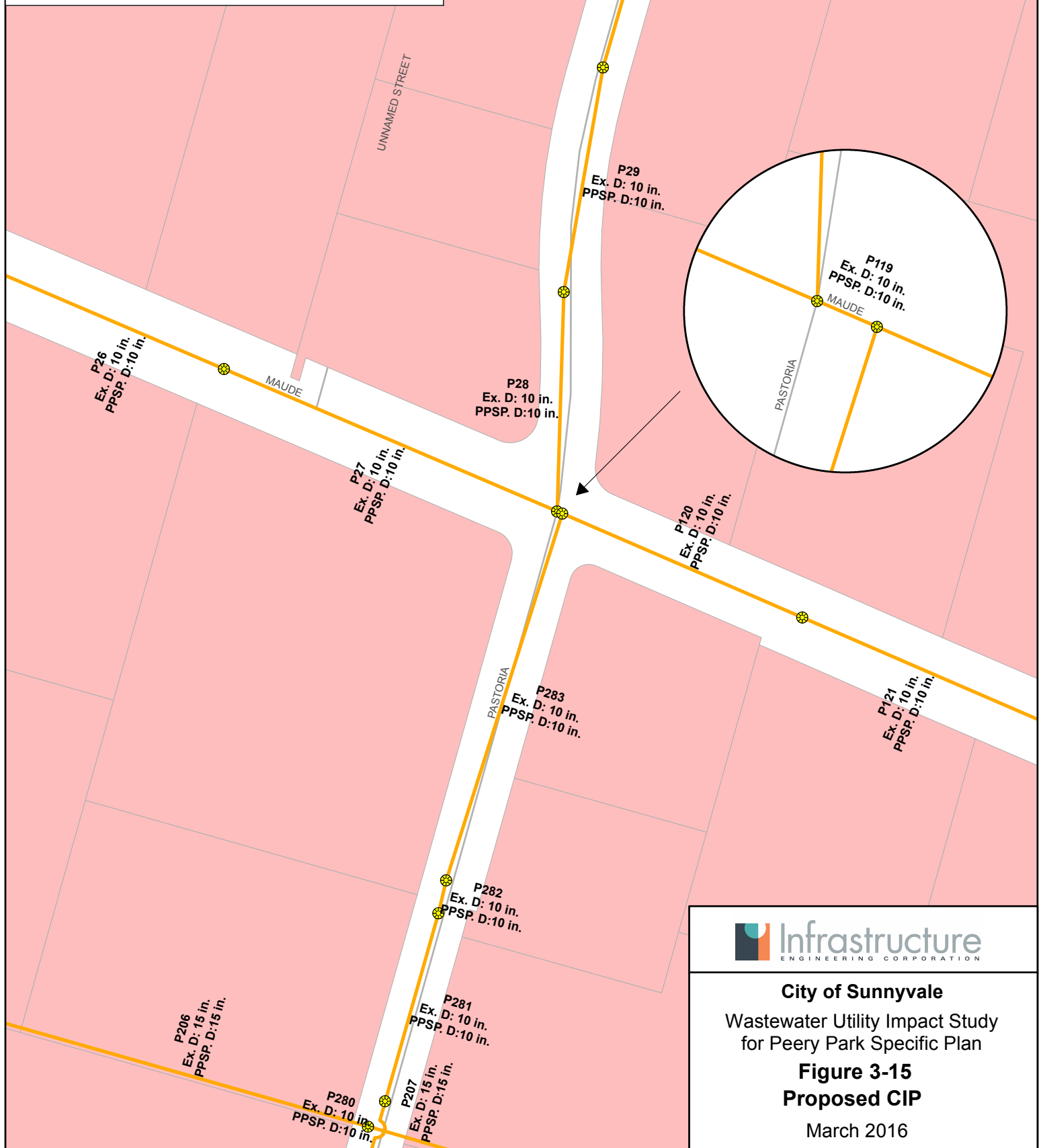
**City of Sunnyvale**  
Wastewater Utility Impact Study  
for Peery Park Specific Plan

**Figure 3-14**  
**Proposed CIP**

March 2016

**Legend**

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



**City of Sunnyvale**  
 Wastewater Utility Impact Study  
 for Peery Park Specific Plan

**Figure 3-15**  
**Proposed CIP**

March 2016

# TECHNICAL MEMORANDUM

## APPENDIX



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D.(in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                  |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P250                       | S4320232-4320227XX | S432MNH0232XX  | S432MNH0227XX    | 16          | 16               | 304.0        | 0.33      | 0.982             | 0.53 | 1.508             | 0.74 | 2.898             | 1.00 | 1.531            | 0.53 | 3-2    |
| P249                       | S4320232-4310207XX | S431MNH0207XX  | S432MNH0232XX    | 14          | 14               | 227.5        | 0.10      | 0.976             | 0.56 | 1.501             | 0.59 | 2.923             | 1.00 | 1.512            | 0.58 | 3-2    |
| P164                       | S4500212-4500211XX | S450MNH0212XX  | S450MNH0211XX    | 16          | 16               | 20.8         | 1.59      | 2.051             | 0.81 | 3.017             | 0.93 | 3.826             | 1.00 | 1.551            | 1.00 | 3-11   |
| P165                       | S4500211-4500210XX | S450MNH0211XX  | S450MNH0210XX    | 16          | 16               | 31.3         | 1.18      | 2.052             | 0.72 | 3.018             | 0.80 | 3.825             | 1.00 | 1.552            | 0.97 | 3-11   |
| P163                       | S4320227-4500212XX | S432MNH0227XX  | S450MNH0212XX    | 16          | 16               | 552.4        | 0.30      | 2.051             | 0.66 | 3.016             | 0.91 | 3.804             | 1.00 | 1.548            | 0.77 | 3-11   |
| P68                        | S6090205-6090202XX | S609MNH0205XX  | S609MNH0202XX    | 12          | 15               | 95.0         | 0.25      | 0.596             | 0.51 | 0.901             | 0.66 | 1.392             | 1.00 | 1.485            | 0.62 | 3-9    |
| P67                        | S6090201-6090205XX | S609MNH0201XX  | S609MNH0205XX    | 12          | 15               | 278.0        | 0.25      | 0.582             | 0.51 | 0.880             | 0.66 | 1.365             | 1.00 | 1.462            | 0.62 | 3-9    |
| P51                        | S5290208-5520204XX | S529MNH0208XX  | S552MNH0204XX    | 12          | 12               | 361.0        | 0.25      | 0.414             | 0.40 | 0.622             | 0.50 | 1.171             | 1.00 | 1.152            | 0.76 | 3-8    |
| P47                        | S5290202-5290213XX | S529MNH0202XX  | S529MNH0213XX    | 12          | 12               | 319.8        | 0.27      | 0.402             | 0.38 | 0.603             | 0.48 | 1.121             | 1.00 | 1.096            | 0.72 | 3-7    |
| P110                       | S5290204-5290202XX | S529MNH0204XX  | S529MNH0202XX    | 12          | 12               | 40.0         | 0.25      | 0.208             | 0.38 | 0.306             | 0.48 | 0.542             | 1.00 | 0.536            | 0.74 | 3-7    |
| P63                        | S5920210-5920206XX | S592MNH0210XX  | S592MNH0206XX    | 12          | 15               | 258.0        | 0.25      | 0.568             | 0.50 | 0.859             | 0.65 | 1.327             | 1.00 | 1.429            | 0.61 | 3-9    |
| P61                        | S5690207-5920207XX | S569MNH0207XX  | S592MNH0207XX    | 12          | 15               | 180.0        | 0.25      | 0.540             | 0.49 | 0.816             | 0.63 | 1.279             | 1.00 | 1.381            | 0.60 | 3-9    |
| P50                        | S5290207-5290208XX | S529MNH0207XX  | S529MNH0208XX    | 12          | 12               | 333.0        | 0.26      | 0.414             | 0.42 | 0.622             | 0.53 | 1.146             | 1.00 | 1.146            | 0.82 | 3-8    |
| P60                        | S5690201-5690207XX | S569MNH0201XX  | S569MNH0207XX    | 12          | 15               | 200.0        | 0.25      | 0.540             | 0.48 | 0.816             | 0.62 | 1.278             | 1.00 | 1.379            | 0.59 | 3-9    |
| P59                        | S5690202-5690201XX | S569MNH0202XX  | S569MNH0201XX    | 12          | 15               | 200.0        | 0.25      | 0.540             | 0.48 | 0.816             | 0.62 | 1.275             | 1.00 | 1.377            | 0.59 | 3-9    |
| P65                        | S5920209-5920208XX | S592MNH0209XX  | S592MNH0208XX    | 12          | 15               | 155.0        | 0.25      | 0.582             | 0.50 | 0.880             | 0.65 | 1.355             | 1.00 | 1.455            | 0.61 | 3-9    |
| P64                        | S5920206-5920209XX | S592MNH0206XX  | S592MNH0209XX    | 12          | 15               | 218.0        | 0.25      | 0.568             | 0.50 | 0.859             | 0.65 | 1.330             | 1.00 | 1.432            | 0.61 | 3-9    |
| P62                        | S5920207-5920210XX | S592MNH0207XX  | S592MNH0210XX    | 12          | 15               | 115.0        | 0.25      | 0.568             | 0.50 | 0.859             | 0.64 | 1.324             | 1.00 | 1.427            | 0.61 | 3-9    |
| P56                        | S5520201-5690204XX | S552MNH0201XX  | S569MNH0204XX    | 12          | 15               | 400.0        | 0.27      | 0.421             | 0.42 | 0.632             | 0.54 | 1.118             | 1.00 | 1.180            | 0.54 | 3-8    |
| P55                        | S5520202-5520201XX | S552MNH0202XX  | S552MNH0201XX    | 12          | 15               | 200.0        | 0.25      | 0.421             | 0.42 | 0.632             | 0.52 | 1.123             | 1.00 | 1.173            | 0.53 | 3-8    |
| P52                        | S5520204-5520203XX | S552MNH0204XX  | S552MNH0203XX    | 12          | 12               | 105.0        | 0.40      | 0.414             | 0.39 | 0.622             | 0.49 | 1.136             | 1.00 | 1.154            | 0.67 | 3-8    |
| P49                        | S5290206-5290207XX | S529MNH0206XX  | S529MNH0207XX    | 12          | 12               | 216.6        | 0.31      | 0.410             | 0.40 | 0.616             | 0.50 | 1.132             | 1.00 | 1.132            | 0.76 | 3-8    |
| P48                        | S5290213-5290206XX | S529MNH0213XX  | S529MNH0206XX    | 12          | 12               | 20.4         | 0.54      | 0.410             | 0.37 | 0.615             | 0.47 | 1.128             | 1.00 | 1.128            | 0.70 | 3-8    |
| P58                        | S5690203-5690202XX | S569MNH0203XX  | S569MNH0202XX    | 12          | 15               | 244.0        | 0.26      | 0.512             | 0.47 | 0.772             | 0.61 | 1.230             | 1.00 | 1.331            | 0.58 | 3-9    |
| P57                        | S5690204-5690203XX | S569MNH0204XX  | S569MNH0203XX    | 12          | 15               | 331.0        | 0.23      | 0.442             | 0.45 | 0.664             | 0.58 | 1.129             | 1.00 | 1.212            | 0.57 | 3-8    |



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P66                        | S5920208-6090201XX | S592MNH0208XX  | S609MNH0201XX    | 12          | 15                | 373.0        | 0.25      | 0.582             | 0.50 | 0.880             | 0.65 | 1.361             | 1.00 | 1.459            | 0.62 | 3-9    |
| P54                        | S5520210-5520202XX | S552MNH0210XX  | S552MNH0202XX    | 12          | 15                | 173.2        | 0.25      | 0.421             | 0.42 | 0.632             | 0.53 | 1.133             | 1.00 | 1.169            | 0.54 | 3-8    |
| P53                        | S5520203-5520210XX | S552MNH0203XX  | S552MNH0210XX    | 12          | 15                | 204.0        | 0.25      | 0.421             | 0.42 | 0.633             | 0.53 | 1.142             | 1.00 | 1.166            | 0.54 | 3-8    |
| P46                        | S5290202-5290203XX | S529MNH0203XX  | S529MNH0202XX    | 15          | 15                | 32.0         | 0.13      | 0.193             | 0.35 | 0.298             | 0.44 | 0.564             | 0.98 | 0.555            | 0.64 | 3-7    |
| P138                       | S4710213-4900224XX | S471MNH0213XX  | S490MNH0224XX    | 27          | 27                | 1086.8       | 0.24      | 3.062             | 0.39 | 4.454             | 0.48 | 11.231            | 0.94 | 9.946            | 0.82 | 3-11   |
| P150                       | S5310212-5500209XX | S531MNH0212XX  | S550MNH0209XX    | 27          | 27                | 355.6        | 0.24      | 3.329             | 0.42 | 4.828             | 0.51 | 11.993            | 0.94 | 10.709           | 0.85 | 3-12   |
| P86                        | S6520205-6520204XX | S652MNH0205XX  | S652MNH0204XX    | 33          | 33                | 10.0         | 0.10      | 6.212             | 0.50 | 9.100             | 0.62 | 18.232            | 0.89 | 17.001           | 0.87 | 3-10   |
| P162                       | S4320228-4320227XX | S432MNH0228XX  | S432MNH0227XX    | 18          | -                 | 30.1         | 1.16      | 1.064             | 0.26 | 1.517             | 0.31 | 5.513             | 0.89 | -                | -    | 3-11   |
| P85                        | S6520225-6520205XX | S652MNH0225XX  | S652MNH0205XX    | 33          | 33                | 20.7         | 0.53      | 6.211             | 0.48 | 9.050             | 0.60 | 17.532            | 0.89 | 16.405           | 0.87 | 3-10   |
| P144                       | S5110229-5110211XX | S511MNH0229XX  | S511MNH0211XX    | 27          | 27                | 206.5        | 0.58      | 3.254             | 0.38 | 4.742             | 0.47 | 11.754            | 0.86 | 10.481           | 0.77 | 3-12   |
| P69                        | S6090202-6100203XX | S609MNH0202XX  | S610MNH0203XX    | 12          | 15                | 373.0        | 0.28      | 0.596             | 0.48 | 0.900             | 0.62 | 1.387             | 0.86 | 1.489            | 0.57 | 3-9    |
| P151                       | S5500209-5500207XX | S550MNH0209XX  | S550MNH0207XX    | 27          | 27                | 31.8         | 0.03      | 3.329             | 0.42 | 4.828             | 0.51 | 11.995            | 0.84 | 10.711           | 0.78 | 3-12   |
| P149                       | S5300202-5310212XX | S530MNH0202XX  | S531MNH0212XX    | 27          | 27                | 355.6        | 0.56      | 3.324             | 0.36 | 4.824             | 0.44 | 11.983            | 0.84 | 10.702           | 0.76 | 3-12   |
| P145                       | S5110211-5110209XX | S511MNH0211XX  | S511MNH0209XX    | 27          | 27                | 295.3        | 0.13      | 3.256             | 0.39 | 4.733             | 0.47 | 11.767            | 0.83 | 10.488           | 0.77 | 3-12   |
| P106                       | S6520208-6520225XX | S652MNH0208XX  | S652MNH0225XX    | 33          | 33                | 41.2         | 0.46      | 1.697             | 0.43 | 2.609             | 0.55 | 3.547             | 0.83 | 3.640            | 0.81 | 3-10   |
| P139                       | S4900224-4900207XX | S490MNH0224XX  | S490MNH0207XX    | 27          | 27                | 258.7        | 0.24      | 3.071             | 0.38 | 4.489             | 0.46 | 11.367            | 0.81 | 10.089           | 0.75 | 3-11   |
| P105                       | S6510210-6520208XX | S651MNH0210XX  | S652MNH0208XX    | 33          | 33                | 220.0        | 0.03      | 1.647             | 0.39 | 2.453             | 0.51 | 3.379             | 0.79 | 3.461            | 0.77 | 3-10   |
| P137                       | S4500207-4710213XX | S450MNH0207XX  | S471MNH0213XX    | 27          | 27                | 1135.1       | 0.84      | 3.026             | 0.33 | 4.409             | 0.40 | 11.104            | 0.78 | 9.825            | 0.69 | 3-11   |
| P109                       | S5120206-5290204XX | S512MNH0206XX  | S529MNH0204XX    | 12          | 12                | 280.0        | 0.25      | 0.208             | 0.31 | 0.306             | 0.40 | 0.535             | 0.77 | 0.535            | 0.59 | 3-7    |
| P142                       | S4900219-5110214XX | S490MNH0219XX  | S511MNH0214XX    | 27          | 27                | 106.7        | 0.25      | 3.257             | 0.35 | 4.758             | 0.43 | 11.755            | 0.76 | 10.485           | 0.68 | 3-12   |
| P104                       | S6510208-6510210XX | S651MNH0208XX  | S651MNH0210XX    | 33          | 33                | 110.0        | 0.10      | 1.653             | 0.37 | 2.478             | 0.48 | 3.355             | 0.76 | 3.427            | 0.74 | 3-10   |
| P87                        | S6520214-6520204XX | S652MNH0204XX  | S652MNH0214XX    | 39          | 39                | 54.7         | 0.18      | 6.228             | 0.44 | 9.005             | 0.53 | 17.575            | 0.74 | 16.422           | 0.73 | 3-10   |
| P70                        | S6100203-6100205XX | S610MNH0203XX  | S610MNH0205XX    | 12          | 15                | 56.0         | 0.80      | 0.854             | 0.47 | 1.301             | 0.60 | 1.788             | 0.74 | 1.891            | 0.57 | 3-9    |
| P141                       | S4900201-4900219XX | S490MNH0201XX  | S490MNH0219XX    | 27          | 27                | 193.4        | 0.62      | 3.234             | 0.34 | 4.754             | 0.42 | 11.716            | 0.73 | 10.476           | 0.67 | 3-11   |
| P143                       | S5110214-5110229XX | S511MNH0214XX  | S511MNH0229XX    | 27          | 27                | 88.6         | 0.47      | 3.255             | 0.32 | 4.749             | 0.39 | 11.759            | 0.72 | 10.497           | 0.62 | 3-12   |



**Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution**

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P78                        | S5900217-5900219XX | S590MNH0219XX  | S590MNH0217XX    | 18          | 18                | 22.7         | 4.68      | 0.277             | 0.34 | 0.417             | 0.41 | 3.098             | 0.72 | 2.729            | 0.68 | 3-13   |
| P140                       | CDT-51             | S490MNH0207XX  | S490MNH0201XX    | 27          | 27                | 23.4         | 0.13      | 3.193             | 0.34 | 5.016             | 0.41 | 12.553            | 0.71 | 11.517           | 0.66 | 3-11   |
| P183                       | S5130210-5130212XX | S513MNH0210XX  | S513MNH0212XX    | 10          | 10                | 263.4        | 0.84      | 0.186             | 0.40 | 0.280             | 0.50 | 0.453             | 0.70 | 0.453            | 0.70 | 3-7    |
| P99                        | S6500209-6510201XX | S650MNH0209XX  | S651MNH0201XX    | 18          | 18                | 468.0        | 0.16      | 1.046             | 0.44 | 1.575             | 0.56 | 2.138             | 0.68 | 2.240            | 0.70 | 3-10   |
| P103                       | S6510211-6510208XX | S651MNH0211XX  | S651MNH0208XX    | 33          | 33                | 383.0        | 0.10      | 1.645             | 0.31 | 2.442             | 0.42 | 3.326             | 0.68 | 3.399            | 0.66 | 3-10   |
| P148                       | S5300219-5300202XX | S530MNH0219XX  | S530MNH0202XX    | 27          | 27                | 395.2        | 0.56      | 3.272             | 0.32 | 4.747             | 0.39 | 11.816            | 0.67 | 10.536           | 0.62 | 3-12   |
| P147                       | S5110218-5300219XX | S511MNH0218XX  | S530MNH0219XX    | 27          | 27                | 310.5        | 0.56      | 3.266             | 0.32 | 4.741             | 0.39 | 11.797            | 0.67 | 10.517           | 0.62 | 3-12   |
| P146                       | S5110209-5110218XX | S511MNH0209XX  | S511MNH0218XX    | 27          | 27                | 306.6        | 0.56      | 3.261             | 0.32 | 4.737             | 0.39 | 11.781            | 0.67 | 10.502           | 0.62 | 3-12   |
| P98                        | S6500206-6500209XX | S650MNH0206XX  | S650MNH0209XX    | 18          | 18                | 468.0        | 0.16      | 1.041             | 0.43 | 1.572             | 0.54 | 2.126             | 0.66 | 2.227            | 0.69 | 3-10   |
| P45                        | S5120207-5290203XX | S512MNH0207XX  | S529MNH0203XX    | 15          | 15                | 297.0        | 0.36      | 0.193             | 0.28 | 0.297             | 0.35 | 0.549             | 0.65 | 0.549            | 0.49 | 3-7    |
| P90                        | S6290216-6290218XX | S629MNH0216XX  | S629MNH0218XX    | 33          | 33                | 36.4         | 0.93      | 4.343             | 0.41 | 5.587             | 0.47 | 9.340             | 0.65 | 8.852            | 0.62 | 3-10   |
| P41                        | S5130212-5130208XX | S513MNH0212XX  | S513MNH0208XX    | 12          | 12                | 244.6        | 0.20      | 0.391             | 0.37 | 0.587             | 0.45 | 1.049             | 0.65 | 1.049            | 0.65 | 3-7    |
| P89                        | CDT-39             | S652MNH0212XX  | OFALL-14         | 48          | 48                | 28.6         | 0.35      | 17.747            | 0.39 | 25.409            | 0.47 | 46.279            | 0.64 | 46.751           | 0.65 | 3-10   |
| P242                       | S3920207-3920206XX | S392MNH0207XX  | S392MNH0206XX    | 8           | 8                 | 47.5         | 1.05      | 0.273             | 0.38 | 0.395             | 0.46 | 0.678             | 0.63 | 0.678            | 0.63 | 3-1    |
| P97                        | S6500207-6500206XX | S650MNH0207XX  | S650MNH0206XX    | 18          | 18                | 67.3         | 0.28      | 1.036             | 0.40 | 1.568             | 0.52 | 2.113             | 0.63 | 2.215            | 0.66 | 3-10   |
| P152                       | S5500207-5500223XX | S550MNH0207XX  | S550MNH0223XX    | 33          | 33                | 239.6        | 0.17      | 3.336             | 0.33 | 4.836             | 0.39 | 12.015            | 0.63 | 10.729           | 0.59 | 3-12   |
| P91                        | S6290218-6290217XX | S629MNH0218XX  | S629MNH0217XX    | 33          | 33                | 91.0         | 0.35      | 3.464             | 0.39 | 4.628             | 0.45 | 8.469             | 0.62 | 7.896            | 0.59 | 3-10   |
| P22                        | S4750214-4470211XX | S475MNH0214XX  | S447MNH0211XX    | 10          | 10                | 211.6        | 0.19      | 0.163             | 0.37 | 0.271             | 0.49 | 0.379             | 0.60 | 0.379            | 0.60 | 3-4    |
| P102                       | S6510205-6510211XX | S651MNH0205XX  | S651MNH0211XX    | 33          | 33                | 132.0        | 0.09      | 1.788             | 0.28 | 2.799             | 0.37 | 3.422             | 0.60 | 3.497            | 0.58 | 3-10   |
| P136                       | S4500210-4500207XX | S450MNH0210XX  | S450MNH0207XX    | 27          | 27                | 187.5        | 0.64      | 2.962             | 0.28 | 4.323             | 0.34 | 10.872            | 0.58 | 9.591            | 0.54 | 3-11   |
| P100                       | S6510201-6510203XX | S651MNH0201XX  | S651MNH0203XX    | 18          | 18                | 468.0        | 0.17      | 1.051             | 0.39 | 1.578             | 0.48 | 2.151             | 0.58 | 2.251            | 0.60 | 3-10   |
| P40                        | S5130213-5130212XX | S513MNH0213XX  | S513MNH0212XX    | 12          | 12                | 353.0        | 1.30      | 0.205             | 0.32 | 0.308             | 0.40 | 0.593             | 0.58 | 0.593            | 0.58 | 3-7    |
| P96                        | S6310208-6500207XX | S631MNH0208XX  | S650MNH0207XX    | 18          | 18                | 497.0        | 0.29      | 1.035             | 0.37 | 1.567             | 0.47 | 2.111             | 0.57 | 2.213            | 0.59 | 3-10   |
| P17                        | S4460201-4460207XX | S446MNH0201XX  | S446MNH0207XX    | 8           | 8                 | 127.1        | 0.83      | 0.156             | 0.36 | 0.265             | 0.49 | 0.339             | 0.57 | 0.339            | 0.57 | 3-4    |
| P88                        | S6520212-6520214XX | S652MNH0214XX  | S652MNH0212XX    | 48          | 48                | 51.1         | 0.37      | 15.906            | 0.31 | 22.746            | 0.39 | 41.771            | 0.56 | 40.605           | 0.56 | 3-10   |



**Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution**

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D.(in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                  |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P197                       | S4330204-4330224XX | S433MNH0204XX  | S433MNH0224XX    | 21          | 21               | 313.5        | 0.87      | 1.871             | 0.33 | 2.769             | 0.40 | 5.100             | 0.56 | 5.100            | 0.56 | 3-2    |
| P21                        | S4750216-4750214XX | S475MNH0216XX  | S475MNH0214XX    | 10          | 10               | 273.8        | 0.20      | 0.163             | 0.35 | 0.272             | 0.46 | 0.376             | 0.56 | 0.376            | 0.56 | 3-5    |
| P135                       | S4310214-4500210XX | S431MNH0214XX  | S450MNH0210XX    | 27          | 27               | 278.2        | 0.52      | 0.907             | 0.23 | 1.310             | 0.28 | 7.518             | 0.56 | 8.082            | 0.55 | 3-11   |
| P19                        | S4750206-4750205XX | S475MNH0206XX  | S475MNH0205XX    | 8           | 8                | 132.7        | 1.34      | 0.156             | 0.35 | 0.264             | 0.47 | 0.343             | 0.55 | 0.343            | 0.55 | 3-5    |
| P20                        | S4750205-4750216XX | S475MNH0205XX  | S475MNH0216XX    | 10          | 10               | 269.5        | 0.20      | 0.161             | 0.34 | 0.269             | 0.45 | 0.369             | 0.55 | 0.369            | 0.55 | 3-5    |
| P95                        | S6310201-6310208XX | S631MNH0201XX  | S631MNH0208XX    | 18          | 18               | 283.9        | 0.29      | 1.030             | 0.36 | 1.563             | 0.46 | 2.097             | 0.54 | 2.200            | 0.56 | 3-10   |
| P18                        | S4460207-4750206XX | S446MNH0207XX  | S475MNH0206XX    | 8           | 8                | 203.1        | 0.37      | 0.156             | 0.35 | 0.265             | 0.46 | 0.341             | 0.54 | 0.341            | 0.54 | 3-4    |
| P94                        | S6310202-6310201XX | S631MNH0202XX  | S631MNH0201XX    | 18          | 18               | 121.3        | 0.31      | 1.027             | 0.36 | 1.561             | 0.45 | 2.090             | 0.54 | 2.192            | 0.56 | 3-10   |
| P218                       | S3930207-3930209XX | S393MNH0207XX  | S393MNH0209XX    | 21          | 21               | 283.9        | 0.31      | 1.267             | 0.31 | 1.984             | 0.39 | 3.562             | 0.54 | 3.562            | 0.54 | 3-1    |
| P101                       | S6510203-6510205XX | S651MNH0203XX  | S651MNH0205XX    | 36          | 36               | 477.5        | 0.05      | 1.809             | 0.28 | 2.850             | 0.36 | 3.506             | 0.53 | 3.570            | 0.52 | 3-10   |
| P84                        | S6290217-6520225XX | S629MNH0217XX  | S652MNH0225XX    | 42          | 42               | 517.4        | 0.47      | 4.649             | 0.29 | 6.658             | 0.36 | 14.253            | 0.53 | 12.982           | 0.52 | 3-10   |
| P83                        | S6290216-6290217XX | S629MNH0216XX  | S629MNH0217XX    | 33          | 33               | 127.1        | 0.02      | 1.940             | 0.30 | 2.870             | 0.36 | 6.500             | 0.53 | 5.882            | 0.50 | 3-10   |
| P224                       | S4080205-4080206XX | S408MNH0205XX  | S408MNH0206XX    | 21          | 21               | 69.0         | 0.75      | 1.778             | 0.31 | 2.651             | 0.38 | 4.740             | 0.52 | 4.740            | 0.52 | 3-1    |
| P133                       | S4320235-4320228XX | S432MNH0235XX  | S432MNH0228XX    | 27          | 27               | 268.0        | 0.55      | 1.962             | 0.21 | 2.818             | 0.25 | 7.918             | 0.52 | 8.199            | 0.54 | 3-2    |
| P93                        | S6310203-6310202XX | S631MNH0203XX  | S631MNH0202XX    | 18          | 18               | 178.7        | 0.28      | 0.865             | 0.35 | 1.311             | 0.43 | 1.818             | 0.52 | 1.921            | 0.54 | 3-9    |
| P241                       | S3920208-3920207XX | S392MNH0208XX  | S392MNH0207XX    | 10          | 10               | 215.1        | 1.12      | 0.273             | 0.31 | 0.395             | 0.37 | 0.678             | 0.52 | 0.678            | 0.52 | 3-1    |
| P134                       | S4320228-4310214XX | S432MNH0228XX  | S431MNH0214XX    | 27          | 27               | 300.7        | 0.50      | 0.903             | 0.17 | 1.306             | 0.20 | 7.504             | 0.52 | 8.093            | 0.54 | 3-11   |
| P225                       | S4080206-4080209XX | S408MNH0206XX  | S408MNH0209XX    | 21          | 21               | 290.8        | 0.73      | 1.781             | 0.30 | 2.654             | 0.37 | 4.752             | 0.51 | 4.752            | 0.51 | 3-1    |
| P11                        | S4350218-4350220XX | S435MNH0218XX  | S435MNH0220XX    | 8           | 8                | 233.7        | 0.41      | 0.120             | 0.34 | 0.204             | 0.46 | 0.250             | 0.51 | 0.250            | 0.51 | 3-4    |
| P219                       | S3930209-3930212XX | S393MNH0209XX  | S393MNH0212XX    | 21          | 21               | 311.0        | 0.82      | 1.734             | 0.30 | 2.591             | 0.37 | 4.640             | 0.51 | 4.640            | 0.51 | 3-1    |
| P12                        | S4350220-4460205XX | S435MNH0220XX  | S446MNH0205XX    | 8           | 8                | 137.9        | 0.36      | 0.120             | 0.34 | 0.204             | 0.46 | 0.251             | 0.51 | 0.251            | 0.51 | 3-4    |
| P229                       | S4330208-4330204XX | S433MNH0208XX  | S433MNH0204XX    | 21          | 21               | 309.1        | 0.87      | 1.797             | 0.30 | 2.670             | 0.36 | 4.804             | 0.51 | 4.804            | 0.51 | 3-2    |
| P217                       | S3940204-3930207XX | S394MNH0204XX  | S393MNH0207XX    | 21          | 21               | 274.5        | 0.72      | 1.264             | 0.29 | 1.981             | 0.37 | 3.551             | 0.51 | 3.551            | 0.51 | 3-1    |
| P220                       | S3930212-3930213XX | S393MNH0212XX  | S393MNH0213XX    | 21          | 21               | 293.7        | 0.71      | 1.738             | 0.30 | 2.595             | 0.37 | 4.652             | 0.51 | 4.652            | 0.51 | 3-1    |
| P228                       | S4330210-4330208XX | S433MNH0210XX  | S433MNH0208XX    | 21          | 21               | 310.5        | 0.87      | 1.793             | 0.29 | 2.666             | 0.36 | 4.791             | 0.50 | 4.791            | 0.50 | 3-2    |



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P92                        | S6100205-6310203XX | S610MNH0205XX  | S631MNH0203XX    | 18          | 18                | 493.5        | 0.29      | 0.863             | 0.33 | 1.310             | 0.42 | 1.813             | 0.50 | 1.916            | 0.52 | 3-9    |
| P226                       | S4080209-4080231XX | S408MNH0209XX  | S408MNH0231XX    | 21          | 21                | 314.0        | 0.86      | 1.785             | 0.29 | 2.658             | 0.36 | 4.765             | 0.50 | 4.765            | 0.50 | 3-1    |
| P227                       | S4080231-4330210XX | S408MNH0231XX  | S433MNH0210XX    | 21          | 21                | 320.0        | 0.88      | 1.789             | 0.29 | 2.662             | 0.36 | 4.778             | 0.50 | 4.778            | 0.50 | 3-2    |
| P128                       | S4320204-4320205XX | S432MNH0204XX  | S432MNH0205XX    | 27          | 27                | 32.6         | 0.31      | 1.888             | 0.29 | 2.787             | 0.36 | 5.189             | 0.50 | 5.189            | 0.50 | 3-2    |
| P247                       | S4090220-4100208XX | S409MNH0220XX  | S410MNH0208XX    | 12          | 12                | 388.3        | 0.49      | 0.314             | 0.30 | 0.448             | 0.36 | 0.802             | 0.50 | 0.802            | 0.50 | 3-2    |
| P108                       | S5120211-5120206XX | S512MNH0211XX  | S512MNH0206XX    | 12          | 12                | 90.0         | 0.26      | 0.208             | 0.29 | 0.306             | 0.35 | 0.530             | 0.50 | 0.530            | 0.48 | 3-7    |
| P130                       | S4320213-4320220XX | S432MNH0213XX  | S432MNH0220XX    | 27          | 27                | 305.2        | 0.40      | 1.960             | 0.29 | 2.892             | 0.36 | 5.337             | 0.50 | 5.337            | 0.50 | 3-2    |
| P132                       | S4320230-4320235XX | S432MNH0230XX  | S432MNH0235XX    | 27          | 27                | 12.4         | 0.81      | 1.953             | 0.25 | 2.809             | 0.30 | 4.390             | 0.50 | 4.967            | 0.52 | 3-2    |
| P155                       | S5500201-5500225XX | S550MNH0201XX  | S550MNH0225XX    | 42          | 42                | 15.0         | 0.07      | 3.392             | 0.25 | 4.907             | 0.31 | 12.184            | 0.49 | 10.896           | 0.46 | 3-12   |
| P127                       | S4320202-4320204XX | S432MNH0202XX  | S432MNH0204XX    | 27          | 27                | 206.1        | 0.29      | 1.887             | 0.28 | 2.786             | 0.35 | 5.177             | 0.49 | 5.177            | 0.49 | 3-2    |
| P131                       | S4320220-4320230XX | S432MNH0220XX  | S432MNH0230XX    | 27          | 27                | 248.8        | 0.20      | 1.964             | 0.29 | 2.896             | 0.36 | 5.350             | 0.49 | 6.453            | 0.51 | 3-2    |
| P248                       | S4100208-4310207XX | S410MNH0208XX  | S431MNH0207XX    | 12          | 12                | 359.8        | 0.51      | 0.316             | 0.29 | 0.451             | 0.35 | 0.811             | 0.49 | 0.811            | 0.49 | 3-2    |
| P16                        | S4460202-4460201XX | S446MNH0202XX  | S446MNH0201XX    | 8           | 8                 | 84.8         | 0.83      | 0.156             | 0.32 | 0.265             | 0.42 | 0.338             | 0.49 | 0.338            | 0.49 | 3-4    |
| P126                       | S4330224-4320202XX | S433MNH0224XX  | S432MNH0202XX    | 27          | 27                | 299.8        | 0.32      | 1.884             | 0.28 | 2.783             | 0.34 | 5.167             | 0.48 | 5.167            | 0.48 | 3-2    |
| P15                        | S4460203-4460202XX | S446MNH0203XX  | S446MNH0202XX    | 8           | 8                 | 166.9        | 0.58      | 0.131             | 0.32 | 0.219             | 0.42 | 0.272             | 0.48 | 0.272            | 0.48 | 3-4    |
| P129                       | S4320205-4320213XX | S432MNH0205XX  | S432MNH0213XX    | 27          | 27                | 290.4        | 0.28      | 1.955             | 0.28 | 2.887             | 0.34 | 5.320             | 0.48 | 5.320            | 0.48 | 3-2    |
| P156                       | S5500225-5710212XX | S550MNH0225XX  | S571MNH0212XX    | 42          | 42                | 286.5        | 0.14      | 3.399             | 0.25 | 4.914             | 0.30 | 12.205            | 0.48 | 10.916           | 0.45 | 3-13   |
| P23                        | S4470211-4470201XX | S447MNH0211XX  | S447MNH0201XX    | 10          | 10                | 381.0        | 0.21      | 0.165             | 0.30 | 0.273             | 0.38 | 0.385             | 0.47 | 0.385            | 0.47 | 3-4    |
| P240                       | S3690219-3920208XX | S369MNH0219XX  | S392MNH0208XX    | 10          | 10                | 325.6        | 1.11      | 0.272             | 0.29 | 0.394             | 0.35 | 0.674             | 0.47 | 0.674            | 0.47 | 3-1    |
| P239                       | S3690209-3690219XX | S369MNH0209XX  | S369MNH0219XX    | 10          | 10                | 141.2        | 1.07      | 0.268             | 0.29 | 0.389             | 0.35 | 0.652             | 0.47 | 0.652            | 0.47 | 3-1    |
| P107                       | S5130208-5120211XX | S513MNH0208XX  | S512MNH0211XX    | 12          | 12                | 158.3        | 0.29      | 0.208             | 0.28 | 0.306             | 0.34 | 0.529             | 0.46 | 0.529            | 0.46 | 3-7    |
| P26                        | S4470208-4470210XX | S447MNH0208XX  | S447MNH0210XX    | 10          | 10                | 370.0        | 0.20      | 0.086             | 0.27 | 0.135             | 0.34 | 0.237             | 0.46 | 0.237            | 0.46 | 3-5    |
| P216                       | S3940201-3940204XX | S394MNH0201XX  | S394MNH0204XX    | 21          | 21                | 49.8         | 0.60      | 1.261             | 0.26 | 1.978             | 0.33 | 3.538             | 0.46 | 3.538            | 0.46 | 3-1    |
| P161                       | S5900216-5900217XX | S590MNH0216XX  | S590MNH0217XX    | 42          | 42                | 600.9        | 0.28      | 3.839             | 0.24 | 5.528             | 0.29 | 12.966            | 0.45 | 11.676           | 0.42 | 3-13   |
| P246                       | S4090221-4090220XX | S409MNH0221XX  | S409MNH0220XX    | 12          | 12                | 258.4        | 1.08      | 0.313             | 0.27 | 0.447             | 0.33 | 0.793             | 0.45 | 0.793            | 0.45 | 3-1    |



**Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution**

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P10                        | S4350201-4350218XX | S435MNH0201XX  | S435MNH0218XX    | 8           | 8                 | 17.8         | 1.12      | 0.120             | 0.30 | 0.204             | 0.40 | 0.247             | 0.45 | 0.247            | 0.45 | 3-4    |
| P13                        | S4460205-4460204XX | S446MNH0205XX  | S446MNH0204XX    | 8           | 8                 | 69.1         | 0.43      | 0.128             | 0.30 | 0.217             | 0.40 | 0.265             | 0.45 | 0.265            | 0.45 | 3-4    |
| P80                        | S6110209-6110210XX | S611MNH0209XX  | S611MNH0210XX    | 42          | 42                | 412.2        | 0.34      | 4.241             | 0.24 | 6.099             | 0.29 | 13.701            | 0.44 | 12.395           | 0.42 | 3-13   |
| P231                       | S3680212-3930211XX | S368MNH0212XX  | S393MNH0211XX    | 15          | 15                | 364.7        | 0.60      | 0.682             | 0.29 | 1.017             | 0.35 | 1.558             | 0.44 | 1.558            | 0.44 | 3-1    |
| P81                        | S6110210-6300209XX | S611MNH0210XX  | S630MNH0209XX    | 42          | 42                | 620.0        | 0.23      | 4.406             | 0.24 | 6.347             | 0.29 | 13.906            | 0.44 | 12.621           | 0.42 | 3-13   |
| P79                        | S5900217-6110209XX | S590MNH0217XX  | S611MNH0209XX    | 42          | 42                | 380.0        | 0.23      | 4.231             | 0.24 | 6.089             | 0.29 | 13.855            | 0.44 | 12.506           | 0.42 | 3-13   |
| P157                       | S5710212-5710211XX | S571MNH0212XX  | S571MNH0211XX    | 42          | 42                | 362.0        | 0.18      | 3.463             | 0.23 | 4.998             | 0.28 | 12.327            | 0.44 | 11.038           | 0.41 | 3-13   |
| P14                        | S4460204-4460203XX | S446MNH0204XX  | S446MNH0203XX    | 8           | 8                 | 321.8        | 1.12      | 0.128             | 0.29 | 0.217             | 0.39 | 0.268             | 0.43 | 0.268            | 0.43 | 3-4    |
| P221                       | S3930213-3930214XX | S393MNH0213XX  | S393MNH0214XX    | 21          | 21                | 44.7         | 0.90      | 1.744             | 0.26 | 2.603             | 0.32 | 4.662             | 0.43 | 4.662            | 0.43 | 3-1    |
| P230                       | S3930216-4080205XX | S393MNH0216XX  | S408MNH0205XX    | 24          | 24                | 232.5        | 0.23      | 0.893             | 0.25 | 1.332             | 0.31 | 2.382             | 0.43 | 2.382            | 0.43 | 3-1    |
| P223                       | CDT-83             | S393MNH0216XX  | S408MNH0205XX    | 24          | 24                | 237.8        | 0.22      | 0.883             | 0.25 | 1.318             | 0.31 | 2.355             | 0.43 | 2.355            | 0.43 | 3-1    |
| P244                       | S3920205-3920204XX | S392MNH0205XX  | S392MNH0204XX    | 10          | 10                | 34.4         | 4.08      | 0.309             | 0.27 | 0.441             | 0.32 | 0.754             | 0.43 | 0.754            | 0.43 | 3-1    |
| P82                        | S6300209-6290216XX | S630MNH0209XX  | S629MNH0216XX    | 42          | 42                | 444.2        | 0.36      | 4.417             | 0.24 | 6.357             | 0.29 | 13.935            | 0.43 | 12.648           | 0.41 | 3-14   |
| P160                       | S5900215-5900216XX | S590MNH0215XX  | S590MNH0216XX    | 42          | 42                | 130.0        | 0.26      | 3.671             | 0.23 | 5.292             | 0.27 | 12.685            | 0.43 | 11.392           | 0.40 | 3-13   |
| P159                       | S5710216-5900215XX | S571MNH0216XX  | S590MNH0215XX    | 42          | 42                | 581.9        | 0.28      | 3.584             | 0.22 | 5.160             | 0.27 | 12.542            | 0.42 | 11.248           | 0.40 | 3-13   |
| P25                        | S4470207-4470208XX | S447MNH0207XX  | S447MNH0208XX    | 10          | 10                | 100.0        | 0.20      | 0.083             | 0.25 | 0.131             | 0.31 | 0.228             | 0.42 | 0.228            | 0.42 | 3-4    |
| P234                       | S3930226-3930227XX | S393MNH0226XX  | S393MNH0227XX    | 14          | 14                | 329.4        | 0.16      | 0.225             | 0.27 | 0.333             | 0.33 | 0.515             | 0.42 | 0.515            | 0.42 | 3-1    |
| P222                       | S3930214-3930216XX | S393MNH0214XX  | S393MNH0216XX    | 21          | 21                | 83.1         | 2.32      | 1.774             | 0.25 | 2.647             | 0.31 | 4.718             | 0.42 | 4.718            | 0.42 | 3-1    |
| P27                        | S4470210-4480204XX | S447MNH0210XX  | S448MNH0204XX    | 10          | 10                | 386.3        | 0.18      | 0.088             | 0.25 | 0.136             | 0.31 | 0.244             | 0.42 | 0.244            | 0.42 | 3-15   |
| P237                       | S3690201-3690218XX | S369MNH0201XX  | S369MNH0218XX    | 14          | 14                | 60.5         | 0.26      | 0.256             | 0.27 | 0.373             | 0.32 | 0.606             | 0.42 | 0.606            | 0.42 | 3-1    |
| P158                       | S5710211-5710216XX | S571MNH0211XX  | S571MNH0216XX    | 42          | 42                | 364.9        | 0.28      | 3.486             | 0.22 | 5.028             | 0.26 | 12.374            | 0.42 | 11.083           | 0.39 | 3-13   |
| P233                       | S3930211-3930226XX | S393MNH0211XX  | S393MNH0226XX    | 14          | 14                | 242.7        | 0.17      | 0.219             | 0.27 | 0.326             | 0.33 | 0.499             | 0.42 | 0.499            | 0.42 | 3-1    |
| P154                       | S5500202-5500201XX | S550MNH0202XX  | S550MNH0201XX    | 33          | 33                | 50.0         | 17.13     | 3.343             | 0.22 | 4.843             | 0.26 | 12.036            | 0.41 | 10.749           | 0.39 | 3-12   |
| P118                       | S4880209-4880210XX | S488MNH0209XX  | S488MNH0210XX    | 12          | 12                | 353.5        | 0.16      | 0.122             | 0.24 | 0.182             | 0.29 | 0.350             | 0.41 | 0.350            | 0.41 | 3-6    |
| P245                       | S3920204-4090221XX | S392MNH0204XX  | S409MNH0221XX    | 12          | 12                | 648.5        | 0.88      | 0.311             | 0.25 | 0.444             | 0.30 | 0.786             | 0.41 | 0.786            | 0.41 | 3-1    |



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P235                       | S3930227-3690214XX | S393MNH0227XX  | S369MNH0214XX    | 14          | 14                | 277.8        | 0.18      | 0.229             | 0.26 | 0.339             | 0.32 | 0.527             | 0.41 | 0.527            | 0.41 | 3-1    |
| P251                       | S3920206-3920205XX | S392MNH0206XX  | S392MNH0205XX    | 10          | 10                | 208.0        | 0.43      | 0.153             | 0.25 | 0.219             | 0.30 | 0.375             | 0.40 | 0.375            | 0.40 | 3-1    |
| P243                       | CDT-81             | S392MNH0206XX  | S392MNH0205XX    | 10          | 10                | 204.0        | 0.44      | 0.155             | 0.25 | 0.221             | 0.30 | 0.378             | 0.40 | 0.378            | 0.40 | 3-1    |
| P236                       | S3690214-3690201XX | S369MNH0214XX  | S369MNH0201XX    | 14          | 14                | 323.4        | 0.26      | 0.247             | 0.25 | 0.362             | 0.31 | 0.582             | 0.40 | 0.582            | 0.40 | 3-1    |
| P117                       | S4880208-4880209XX | S488MNH0208XX  | S488MNH0209XX    | 10          | 10                | 30.0         | 0.83      | 0.062             | 0.23 | 0.093             | 0.28 | 0.187             | 0.40 | 0.187            | 0.40 | 3-6    |
| P153                       | S5500223-5500202XX | S550MNH0223XX  | S550MNH0202XX    | 33          | 33                | 301.8        | 0.12      | 3.342             | 0.22 | 4.842             | 0.26 | 12.033            | 0.39 | 10.747           | 0.37 | 3-12   |
| P43                        | S5120209-5120210XX | S512MNH0209XX  | S512MNH0210XX    | 15          | 15                | 143.0        | 0.29      | 0.183             | 0.24 | 0.281             | 0.29 | 0.527             | 0.39 | 0.527            | 0.39 | 3-7    |
| P44                        | S5120210-5120207XX | S512MNH0210XX  | S512MNH0207XX    | 15          | 15                | 74.0         | 0.00      | 0.193             | 0.24 | 0.297             | 0.29 | 0.542             | 0.38 | 0.542            | 0.38 | 3-7    |
| P232                       | S3930211-3930209XX | S393MNH0211XX  | S393MNH0209XX    | 15          | 15                | 54.6         | 0.68      | 0.463             | 0.25 | 0.691             | 0.30 | 1.065             | 0.38 | 1.065            | 0.38 | 3-1    |
| P238                       | S3690209-3690218XX | S369MNH0218XX  | S369MNH0209XX    | 14          | 14                | 329.4        | 0.26      | 0.257             | 0.24 | 0.374             | 0.29 | 0.612             | 0.38 | 0.612            | 0.38 | 3-1    |
| P184                       | S4880201-4880209XX | S488MNH0201XX  | S488MNH0209XX    | 12          | 12                | 452.8        | 0.13      | 0.059             | 0.22 | 0.089             | 0.27 | 0.159             | 0.37 | 0.159            | 0.37 | 3-6    |
| P179                       | S5130206-5130207XX | S513MNH0206XX  | S513MNH0207XX    | 12          | 12                | 320.6        | 0.39      | 0.183             | 0.24 | 0.275             | 0.29 | 0.438             | 0.37 | 0.438            | 0.37 | 3-7    |
| P174                       | S4870204-4880202XX | S487MNH0204XX  | S488MNH0202XX    | 12          | 12                | 471.4        | 0.51      | 0.186             | 0.23 | 0.282             | 0.28 | 0.475             | 0.37 | 0.475            | 0.37 | 3-7    |
| P28                        | S4480204-4480203XX | S448MNH0204XX  | S448MNH0203XX    | 10          | 10                | 234.0        | 0.48      | 0.088             | 0.22 | 0.136             | 0.27 | 0.247             | 0.37 | 0.247            | 0.37 | 3-15   |
| P262                       | S4750204-4750205XX | S475MNH0204XX  | S475MNH0205XX    | 10          | 10                | 137.7        | 0.22      | 0.004             | 0.20 | 0.008             | 0.27 | 0.027             | 0.37 | 0.027            | 0.37 | 3-5    |
| P181                       | S5130214-5130209XX | S513MNH0214XX  | S513MNH0209XX    | 12          | 12                | 246.4        | 0.51      | 0.186             | 0.23 | 0.280             | 0.29 | 0.449             | 0.37 | 0.449            | 0.37 | 3-7    |
| P196                       | S4330203-4330204XX | S433MNH0203XX  | S433MNH0204XX    | 18          | 18                | 78.0         | 1.58      | 0.070             | 0.21 | 0.102             | 0.25 | 0.283             | 0.37 | 0.283            | 0.37 | 3-2    |
| P24                        | S4470201-4470207XX | S447MNH0201XX  | S447MNH0207XX    | 10          | 10                | 319.1        | 0.18      | 0.052             | 0.22 | 0.085             | 0.28 | 0.126             | 0.36 | 0.126            | 0.36 | 3-4    |
| P38                        | S4880211-4880210XX | S488MNH0211XX  | S488MNH0210XX    | 10          | 10                | 30.0         | 0.83      | 0.064             | 0.20 | 0.097             | 0.25 | 0.205             | 0.36 | 0.205            | 0.36 | 3-6    |
| P178                       | S4880205-5130206XX | S488MNH0205XX  | S513MNH0206XX    | 12          | 12                | 296.4        | 0.43      | 0.135             | 0.22 | 0.203             | 0.27 | 0.367             | 0.36 | 0.367            | 0.36 | 3-7    |
| P29                        | S4480203-4480202XX | S448MNH0203XX  | S448MNH0202XX    | 10          | 10                | 243.0        | 0.34      | 0.091             | 0.21 | 0.140             | 0.26 | 0.255             | 0.36 | 0.255            | 0.36 | 3-15   |
| P182                       | S5130209-5130210XX | S513MNH0209XX  | S513MNH0210XX    | 12          | 12                | 63.2         | 0.41      | 0.186             | 0.23 | 0.280             | 0.28 | 0.450             | 0.36 | 0.450            | 0.36 | 3-7    |
| P180                       | S5130207-5130214XX | S513MNH0207XX  | S513MNH0214XX    | 12          | 12                | 254.0        | 0.50      | 0.183             | 0.23 | 0.275             | 0.28 | 0.440             | 0.36 | 0.440            | 0.36 | 3-7    |
| P39                        | S4880210-5130213XX | S488MNH0210XX  | S513MNH0213XX    | 12          | 12                | 361.0        | 0.70      | 0.186             | 0.20 | 0.278             | 0.25 | 0.561             | 0.35 | 0.561            | 0.35 | 3-6    |
| P42                        | S5130208-5120209XX | S513MNH0208XX  | S512MNH0209XX    | 15          | 15                | 32.0         | 0.13      | 0.183             | 0.21 | 0.281             | 0.25 | 0.523             | 0.35 | 0.523            | 0.35 | 3-7    |



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P77                        | S6110203-5900219XX | S611MNH0203XX  | S590MNH0219XX    | 18          | 18                | 357.0        | 0.23      | 0.274             | 0.15 | 0.414             | 0.19 | 0.496             | 0.34 | 0.501            | 0.31 | 3-13   |
| P173                       | S4870203-4870204XX | S487MNH0203XX  | S487MNH0204XX    | 12          | 12                | 274.6        | 0.83      | 0.184             | 0.21 | 0.280             | 0.26 | 0.460             | 0.34 | 0.460            | 0.34 | 3-7    |
| P175                       | S4880202-4880201XX | S488MNH0202XX  | S488MNH0201XX    | 12          | 12                | 117.9        | 0.51      | 0.186             | 0.21 | 0.282             | 0.25 | 0.477             | 0.34 | 0.477            | 0.34 | 3-7    |
| P169                       | S4740204-4740211XX | S474MNH0204XX  | S474MNH0211XX    | 12          | 12                | 206.5        | 1.19      | 0.177             | 0.21 | 0.271             | 0.25 | 0.434             | 0.32 | 0.434            | 0.32 | 3-5    |
| P170                       | S4740211-4870201XX | S474MNH0211XX  | S487MNH0201XX    | 12          | 12                | 211.8        | 0.49      | 0.180             | 0.21 | 0.275             | 0.25 | 0.442             | 0.32 | 0.442            | 0.32 | 3-5    |
| P30                        | S4480202-4730209XX | S448MNH0202XX  | S473MNH0209XX    | 10          | 10                | 273.6        | 0.69      | 0.092             | 0.19 | 0.142             | 0.23 | 0.261             | 0.32 | 0.261            | 0.32 | 3-6    |
| P172                       | S4870202-4870203XX | S487MNH0202XX  | S487MNH0203XX    | 12          | 12                | 256.9        | 1.27      | 0.182             | 0.19 | 0.278             | 0.23 | 0.453             | 0.30 | 0.453            | 0.30 | 3-6    |
| P177                       | S4880204-4880205XX | S488MNH0204XX  | S488MNH0205XX    | 12          | 12                | 56.6         | 1.15      | 0.135             | 0.18 | 0.203             | 0.22 | 0.362             | 0.30 | 0.362            | 0.30 | 3-7    |
| P215                       | S4470206-4470207XX | S447MNH0206XX  | S447MNH0207XX    | 10          | 10                | 269.7        | 1.90      | 0.031             | 0.17 | 0.047             | 0.21 | 0.102             | 0.28 | 0.102            | 0.28 | 3-4    |
| P203                       | S4340204-4340205XX | S434MNH0204XX  | S434MNH0205XX    | 12          | 12                | 303.6        | 0.14      | 0.046             | 0.17 | 0.072             | 0.21 | 0.140             | 0.28 | 0.140            | 0.28 | 3-3    |
| P200                       | S4070202-4070201XX | S407MNH0202XX  | S407MNH0201XX    | 10          | 10                | 57.5         | 0.30      | 0.045             | 0.17 | 0.071             | 0.21 | 0.124             | 0.28 | 0.124            | 0.28 | 3-3    |
| P171                       | S4870201-4870202XX | S487MNH0201XX  | S487MNH0202XX    | 12          | 12                | 257.5        | 1.27      | 0.180             | 0.18 | 0.275             | 0.22 | 0.446             | 0.28 | 0.446            | 0.28 | 3-5    |
| P176                       | S4880201-4880204XX | S488MNH0201XX  | S488MNH0204XX    | 12          | 12                | 18.5         | 0.65      | 0.135             | 0.17 | 0.203             | 0.21 | 0.361             | 0.28 | 0.361            | 0.28 | 3-7    |
| P199                       | S4070203-4070202XX | S407MNH0203XX  | S407MNH0202XX    | 10          | 10                | 80.0         | 0.30      | 0.045             | 0.16 | 0.071             | 0.20 | 0.123             | 0.27 | 0.123            | 0.27 | 3-3    |
| P198                       | S4060210-4070203XX | S406MNH0210XX  | S407MNH0203XX    | 10          | 10                | 266.0        | 0.30      | 0.045             | 0.16 | 0.071             | 0.20 | 0.122             | 0.27 | 0.122            | 0.27 | 3-3    |
| P168                       | S4740212-4740204XX | S474MNH0212XX  | S474MNH0204XX    | 12          | 12                | 295.0        | 1.18      | 0.143             | 0.17 | 0.231             | 0.21 | 0.356             | 0.27 | 0.356            | 0.27 | 3-5    |
| P114                       | S4880206-4880216XX | S488MNH0206XX  | S488MNH0216XX    | 10          | 10                | 14.8         | 0.67      | 0.059             | 0.15 | 0.089             | 0.19 | 0.172             | 0.26 | 0.172            | 0.26 | 3-6    |
| P166                       | S4470201-4740205XX | S447MNH0201XX  | S474MNH0205XX    | 12          | 12                | 307.6        | 1.00      | 0.138             | 0.16 | 0.225             | 0.21 | 0.340             | 0.26 | 0.340            | 0.26 | 3-4    |
| P35                        | S4880214-4880213XX | S488MNH0214XX  | S488MNH0213XX    | 10          | 10                | 351.0        | 0.70      | 0.049             | 0.15 | 0.073             | 0.18 | 0.157             | 0.26 | 0.157            | 0.26 | 3-6    |
| P201                       | S4070201-4340203XX | S407MNH0201XX  | S434MNH0203XX    | 10          | 10                | 327.6        | 0.30      | 0.045             | 0.15 | 0.071             | 0.19 | 0.129             | 0.26 | 0.129            | 0.26 | 3-3    |
| P116                       | S4880207-4880208XX | S488MNH0207XX  | S488MNH0208XX    | 10          | 10                | 313.6        | 0.90      | 0.062             | 0.15 | 0.093             | 0.18 | 0.186             | 0.25 | 0.186            | 0.25 | 3-6    |
| P167                       | S4740205-4740212XX | S474MNH0205XX  | S474MNH0212XX    | 12          | 12                | 297.5        | 1.18      | 0.140             | 0.16 | 0.227             | 0.20 | 0.348             | 0.25 | 0.348            | 0.25 | 3-5    |
| P113                       | S4730206-4880206XX | S473MNH0206XX  | S488MNH0206XX    | 10          | 10                | 347.0        | 0.89      | 0.058             | 0.15 | 0.088             | 0.18 | 0.171             | 0.25 | 0.171            | 0.25 | 3-6    |
| P204                       | S4340205-4340214XX | S434MNH0205XX  | S434MNH0214XX    | 10          | 10                | 308.0        | 0.19      | 0.050             | 0.15 | 0.077             | 0.18 | 0.150             | 0.25 | 0.150            | 0.25 | 3-3    |
| P111                       | S4730209-4730205XX | S473MNH0209XX  | S473MNH0205XX    | 10          | 10                | 352.4        | 0.51      | 0.052             | 0.15 | 0.080             | 0.18 | 0.153             | 0.25 | 0.153            | 0.25 | 3-6    |



**Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution**

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P76                        | S6110202-6110203XX | S611MNH0202XX  | S611MNH0203XX    | 18          | 18                | 323.0        | 0.18      | 0.198             | 0.19 | 0.298             | 0.24 | 0.342             | 0.25 | 0.342            | 0.25 | 3-13   |
| P115                       | S4880216-4880207XX | S488MNH0216XX  | S488MNH0207XX    | 10          | 10                | 353.6        | 0.91      | 0.060             | 0.15 | 0.090             | 0.18 | 0.179             | 0.25 | 0.179            | 0.25 | 3-6    |
| P36                        | S4880213-4880212XX | S488MNH0213XX  | S488MNH0212XX    | 10          | 10                | 287.0        | 0.69      | 0.060             | 0.15 | 0.091             | 0.18 | 0.176             | 0.25 | 0.176            | 0.25 | 3-6    |
| P31                        | S4730209-4480209XX | S473MNH0209XX  | S448MNH0209XX    | 10          | 10                | 393.3        | 0.35      | 0.041             | 0.14 | 0.063             | 0.18 | 0.122             | 0.25 | 0.122            | 0.25 | 3-6    |
| P296                       | S4350215-4350201XX | S435MNH0215XX  | S435MNH0201XX    | 8           | 8                 | 68.7         | 8.08      | 0.020             | 0.16 | 0.035             | 0.22 | 0.046             | 0.25 | 0.046            | 0.25 | 3-4    |
| P34                        | S4730207-4880214XX | S473MNH0207XX  | S488MNH0214XX    | 10          | 10                | 364.6        | 0.68      | 0.047             | 0.14 | 0.071             | 0.17 | 0.149             | 0.24 | 0.149            | 0.24 | 3-6    |
| P33                        | S4730208-4730207XX | S473MNH0208XX  | S473MNH0207XX    | 10          | 10                | 353.9        | 0.61      | 0.044             | 0.13 | 0.067             | 0.17 | 0.140             | 0.24 | 0.140            | 0.24 | 3-6    |
| P212                       | S4330207-4330206XX | S433MNH0207XX  | S433MNH0206XX    | 15          | 15                | 20.0         | 0.10      | 0.031             | 0.12 | 0.046             | 0.15 | 0.126             | 0.24 | 0.126            | 0.24 | 3-2    |
| P112                       | S4730205-4730206XX | S473MNH0205XX  | S473MNH0206XX    | 10          | 10                | 352.0        | 0.94      | 0.053             | 0.14 | 0.081             | 0.17 | 0.159             | 0.24 | 0.159            | 0.24 | 3-6    |
| P32                        | S4480209-4730208XX | S448MNH0209XX  | S473MNH0208XX    | 10          | 10                | 342.9        | 0.72      | 0.042             | 0.13 | 0.064             | 0.16 | 0.133             | 0.23 | 0.133            | 0.23 | 3-6    |
| P268                       | S4740203-4740204XX | S474MNH0203XX  | S474MNH0204XX    | 12          | 12                | 280.3        | 0.19      | 0.033             | 0.15 | 0.051             | 0.18 | 0.076             | 0.23 | 0.076            | 0.23 | 3-5    |
| P37                        | S4880212-4880211XX | S488MNH0212XX  | S488MNH0211XX    | 10          | 10                | 46.4         | 1.21      | 0.060             | 0.13 | 0.091             | 0.16 | 0.176             | 0.23 | 0.176            | 0.23 | 3-6    |
| P202                       | S4340203-4340204XX | S434MNH0203XX  | S434MNH0204XX    | 12          | 12                | 315.3        | 0.71      | 0.045             | 0.13 | 0.071             | 0.16 | 0.134             | 0.23 | 0.134            | 0.23 | 3-3    |
| P75                        | S6110201-6110202XX | S611MNH0201XX  | S611MNH0202XX    | 18          | 18                | 65.0         | 0.23      | 0.195             | 0.17 | 0.295             | 0.21 | 0.334             | 0.22 | 0.334            | 0.22 | 3-13   |
| P74                        | S6100207-6110201XX | S610MNH0207XX  | S611MNH0201XX    | 18          | 18                | 388.0        | 0.20      | 0.194             | 0.17 | 0.294             | 0.21 | 0.331             | 0.22 | 0.331            | 0.22 | 3-9    |
| P9                         | S4350202-4350201XX | S435MNH0202XX  | S435MNH0201XX    | 10          | 10                | 14.0         | 1.43      | 0.006             | 0.13 | 0.010             | 0.16 | 0.038             | 0.21 | 0.038            | 0.21 | 3-4    |
| P258                       | S4470202-4470201XX | S447MNH0202XX  | S447MNH0201XX    | 12          | 12                | 130.0        | 0.50      | 0.026             | 0.13 | 0.039             | 0.16 | 0.073             | 0.20 | 0.073            | 0.20 | 3-4    |
| P194                       | S4330225-4330206XX | S433MNH0225XX  | S433MNH0206XX    | 15          | 15                | 100.0        | 0.46      | 0.039             | 0.10 | 0.057             | 0.12 | 0.153             | 0.20 | 0.153            | 0.20 | 3-2    |
| P195                       | S4330206-4330203XX | S433MNH0206XX  | S433MNH0203XX    | 15          | 15                | 185.7        | 0.31      | 0.070             | 0.10 | 0.102             | 0.12 | 0.281             | 0.20 | 0.281            | 0.20 | 3-2    |
| P211                       | S4330213-4330207XX | S433MNH0213XX  | S433MNH0207XX    | 15          | 15                | 335.0        | 0.36      | 0.031             | 0.10 | 0.046             | 0.12 | 0.124             | 0.19 | 0.124            | 0.19 | 3-2    |
| P193                       | S4330211-4330225XX | S433MNH0211XX  | S433MNH0225XX    | 15          | 15                | 367.6        | 0.20      | 0.039             | 0.10 | 0.058             | 0.12 | 0.143             | 0.18 | 0.143            | 0.18 | 3-2    |
| P192                       | S4080211-4330211XX | S408MNH0211XX  | S433MNH0211XX    | 15          | 15                | 270.3        | 0.39      | 0.036             | 0.10 | 0.052             | 0.12 | 0.138             | 0.18 | 0.138            | 0.18 | 3-2    |
| P254                       | S4080202-4080201XX | S408MNH0202XX  | S408MNH0201XX    | 10          | 10                | 212.0        | 0.78      | 0.006             | 0.09 | 0.009             | 0.11 | 0.024             | 0.18 | 0.024            | 0.18 | 3-3    |
| P253                       | S4080203-4080202XX | S408MNH0203XX  | S408MNH0202XX    | 10          | 10                | 347.4        | 0.01      | 0.005             | 0.10 | 0.007             | 0.12 | 0.020             | 0.18 | 0.020            | 0.18 | 3-3    |
| P267                       | S4740202-4740203XX | S474MNH0202XX  | S474MNH0203XX    | 12          | 12                | 293.9        | 0.29      | 0.031             | 0.12 | 0.048             | 0.14 | 0.070             | 0.17 | 0.070            | 0.17 | 3-5    |





**Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution**

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P252                       | S4080204-4080203XX | S408MNH0204XX  | S408MNH0203XX    | 10          | 10                | 329.6        | 0.31      | 0.003             | 0.09 | 0.004             | 0.11 | 0.012             | 0.17 | 0.012            | 0.17 | 3-3    |
| P191                       | S4080201-4080211XX | S408MNH0201XX  | S408MNH0211XX    | 15          | 15                | 396.9        | 0.25      | 0.034             | 0.09 | 0.049             | 0.10 | 0.128             | 0.17 | 0.128            | 0.17 | 3-2    |
| P214                       | S4470205-4470206XX | S447MNH0205XX  | S447MNH0206XX    | 10          | 10                | 260.4        | 1.12      | 0.027             | 0.09 | 0.041             | 0.11 | 0.093             | 0.16 | 0.093            | 0.16 | 3-4    |
| P124                       | S4330212-4330230XX | S433MNH0212XX  | S433MNH0230XX    | 10          | 10                | 50.0         | 0.40      | 0.008             | 0.07 | 0.012             | 0.08 | 0.046             | 0.16 | 0.046            | 0.16 | 3-2    |
| P3                         | S4340201-4350211XX | S434MNH0201XX  | S435MNH0211XX    | 10          | 10                | 300.0        | 0.03      | 0.003             | 0.07 | 0.005             | 0.09 | 0.019             | 0.16 | 0.019            | 0.16 | 3-3    |
| P122                       | S4480219-4330229XX | S448MNH0219XX  | S433MNH0229XX    | 10          | 10                | 266.9        | 0.27      | 0.006             | 0.07 | 0.010             | 0.08 | 0.041             | 0.16 | 0.041            | 0.16 | 3-2    |
| P213                       | S4340214-4470205XX | S434MNH0214XX  | S447MNH0205XX    | 10          | 10                | 264.7        | 2.03      | 0.027             | 0.09 | 0.041             | 0.11 | 0.089             | 0.16 | 0.089            | 0.16 | 3-3    |
| P121                       | S4480208-4480219XX | S448MNH0208XX  | S448MNH0219XX    | 10          | 10                | 297.0        | 0.29      | 0.005             | 0.06 | 0.007             | 0.07 | 0.035             | 0.16 | 0.035            | 0.16 | 3-2    |
| P266                       | S4750209-4740202XX | S475MNH0209XX  | S474MNH0202XX    | 12          | 12                | 237.9        | 0.32      | 0.028             | 0.11 | 0.043             | 0.13 | 0.061             | 0.15 | 0.061            | 0.15 | 3-5    |
| P125                       | S4330230-4330224XX | S433MNH0230XX  | S433MNH0224XX    | 10          | 10                | 100.0        | 0.39      | 0.008             | 0.06 | 0.012             | 0.08 | 0.050             | 0.15 | 0.050            | 0.15 | 3-2    |
| P123                       | S4330229-4330212XX | S433MNH0229XX  | S433MNH0212XX    | 10          | 10                | 180.0        | 0.40      | 0.008             | 0.07 | 0.012             | 0.08 | 0.046             | 0.15 | 0.046            | 0.15 | 3-2    |
| P2                         | S4350219-4340201XX | S435MNH0219XX  | S434MNH0201XX    | 10          | 10                | 395.0        | 0.33      | 0.003             | 0.07 | 0.005             | 0.08 | 0.015             | 0.15 | 0.015            | 0.15 | 3-3    |
| P278                       | S4730203-4730209XX | S473MNH0203XX  | S473MNH0209XX    | 10          | 10                | 214.0        | 0.94      | 0.000             | 0.08 | 0.000             | 0.10 | 0.003             | 0.15 | 0.003            | 0.15 | 3-6    |
| P7                         | S4350214-4350206XX | S435MNH0214XX  | S435MNH0206XX    | 10          | 10                | 185.0        | 0.35      | 0.006             | 0.07 | 0.010             | 0.08 | 0.036             | 0.15 | 0.036            | 0.15 | 3-4    |
| P261                       | S4750203-4750204XX | S475MNH0203XX  | S475MNH0204XX    | 10          | 10                | 250.5        | 0.16      | 0.003             | 0.05 | 0.004             | 0.07 | 0.017             | 0.15 | 0.017            | 0.15 | 3-5    |
| P271                       | S4750215-4750209XX | S475MNH0215XX  | S475MNH0209XX    | 10          | 10                | 40.4         | 0.79      | 0.022             | 0.11 | 0.034             | 0.13 | 0.042             | 0.15 | 0.042            | 0.15 | 3-5    |
| P210                       | S4330202-4330213XX | S433MNH0202XX  | S433MNH0213XX    | 15          | 15                | 170.0        | 0.35      | 0.027             | 0.08 | 0.040             | 0.09 | 0.111             | 0.15 | 0.111            | 0.15 | 3-2    |
| P206                       | S4340211-4340207XX | S434MNH0211XX  | S434MNH0207XX    | 15          | 15                | 409.3        | 0.20      | 0.027             | 0.08 | 0.040             | 0.10 | 0.094             | 0.15 | 0.094            | 0.15 | 3-3    |
| P73                        | S6100210-6100207XX | S610MNH0210XX  | S610MNH0207XX    | 18          | 18                | 388.0        | 0.20      | 0.008             | 0.11 | 0.008             | 0.13 | 0.028             | 0.14 | 0.028            | 0.14 | 3-9    |
| P209                       | S4330226-4330202XX | S433MNH0226XX  | S433MNH0202XX    | 15          | 15                | 11.0         | 0.36      | 0.027             | 0.07 | 0.040             | 0.09 | 0.107             | 0.14 | 0.107            | 0.14 | 3-3    |
| P257                       | S4470209-4470202XX | S447MNH0209XX  | S447MNH0202XX    | 12          | 12                | 103.0        | 0.51      | 0.026             | 0.09 | 0.039             | 0.11 | 0.071             | 0.14 | 0.071            | 0.14 | 3-4    |
| P190                       | S4080229-4080201XX | S408MNH0229XX  | S408MNH0201XX    | 15          | 15                | 75.0         | 1.04      | 0.028             | 0.08 | 0.039             | 0.09 | 0.095             | 0.14 | 0.095            | 0.14 | 3-3    |
| P120                       | S4480205-4480208XX | S448MNH0205XX  | S448MNH0208XX    | 10          | 10                | 279.0        | 0.30      | 0.002             | 0.05 | 0.004             | 0.06 | 0.028             | 0.14 | 0.028            | 0.14 | 3-15   |
| P188                       | S4340213-4080230XX | S434MNH0213XX  | S408MNH0230XX    | 12          | 12                | 366.0        | 0.96      | 0.026             | 0.08 | 0.037             | 0.09 | 0.087             | 0.14 | 0.087            | 0.14 | 3-3    |
| P256                       | S4470203-4470209XX | S447MNH0203XX  | S447MNH0209XX    | 12          | 12                | 197.0        | 0.69      | 0.026             | 0.08 | 0.039             | 0.10 | 0.069             | 0.14 | 0.069            | 0.14 | 3-4    |



**Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution**

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P6                         | S4350213-4350214XX | S435MNH0213XX  | S435MNH0214XX    | 10          | 10                | 79.0         | 0.43      | 0.006             | 0.06 | 0.009             | 0.07 | 0.033             | 0.14 | 0.033            | 0.14 | 3-4    |
| P189                       | S4080230-4080229XX | S408MNH0230XX  | S408MNH0229XX    | 12          | 12                | 280.2        | 0.96      | 0.028             | 0.08 | 0.039             | 0.09 | 0.093             | 0.13 | 0.093            | 0.13 | 3-3    |
| P208                       | S4330214-4330226XX | S433MNH0214XX  | S433MNH0226XX    | 15          | 15                | 319.5        | 0.59      | 0.027             | 0.07 | 0.040             | 0.08 | 0.107             | 0.13 | 0.107            | 0.13 | 3-3    |
| P5                         | S4350212-4350213XX | S435MNH0212XX  | S435MNH0213XX    | 10          | 10                | 300.0        | 0.33      | 0.006             | 0.06 | 0.009             | 0.07 | 0.032             | 0.13 | 0.032            | 0.13 | 3-3    |
| P205                       | S4340214-4340211XX | S434MNH0214XX  | S434MNH0211XX    | 15          | 15                | 426.4        | 1.11      | 0.025             | 0.08 | 0.038             | 0.09 | 0.083             | 0.13 | 0.083            | 0.13 | 3-3    |
| P187                       | S4070206-4340213XX | S407MNH0206XX  | S434MNH0213XX    | 12          | 12                | 186.8        | 0.89      | 0.026             | 0.08 | 0.037             | 0.09 | 0.080             | 0.13 | 0.080            | 0.13 | 3-3    |
| P8                         | S4350206-4350202XX | S435MNH0206XX  | S435MNH0202XX    | 10          | 10                | 129.0        | 0.30      | 0.006             | 0.06 | 0.010             | 0.07 | 0.038             | 0.13 | 0.038            | 0.13 | 3-4    |
| P186                       | S4070204-4070206XX | S407MNH0204XX  | S407MNH0206XX    | 10          | 10                | 262.4        | 0.51      | 0.009             | 0.08 | 0.014             | 0.10 | 0.020             | 0.13 | 0.020            | 0.13 | 3-3    |
| P255                       | S4460210-4470203XX | S446MNH0210XX  | S447MNH0203XX    | 12          | 12                | 300.0        | 0.74      | 0.026             | 0.08 | 0.039             | 0.10 | 0.066             | 0.13 | 0.066            | 0.13 | 3-4    |
| P283                       | S4330227-4480205XX | S433MNH0227XX  | S448MNH0205XX    | 10          | 10                | 415.0        | 0.28      | 0.002             | 0.04 | 0.004             | 0.05 | 0.024             | 0.13 | 0.024            | 0.13 | 3-15   |
| P207                       | S4340207-4330214XX | S434MNH0207XX  | S433MNH0214XX    | 15          | 15                | 267.8        | 0.58      | 0.027             | 0.06 | 0.040             | 0.08 | 0.100             | 0.12 | 0.100            | 0.12 | 3-3    |
| P294                       | S4460208-4460209XX | S446MNH0208XX  | S446MNH0209XX    | 10          | 10                | 300.0        | 1.13      | 0.013             | 0.08 | 0.023             | 0.09 | 0.039             | 0.12 | 0.039            | 0.12 | 3-4    |
| P4                         | S4350211-4350212XX | S435MNH0211XX  | S435MNH0212XX    | 10          | 10                | 302.0        | 0.60      | 0.005             | 0.06 | 0.008             | 0.07 | 0.027             | 0.12 | 0.027            | 0.12 | 3-3    |
| P265                       | S4750210-4750209XX | S475MNH0210XX  | S475MNH0209XX    | 10          | 10                | 250.7        | 1.84      | 0.005             | 0.08 | 0.008             | 0.10 | 0.017             | 0.12 | 0.017            | 0.12 | 3-5    |
| P295                       | S4460209-4460210XX | S446MNH0209XX  | S446MNH0210XX    | 12          | 12                | 300.0        | 0.73      | 0.020             | 0.08 | 0.031             | 0.09 | 0.053             | 0.12 | 0.053            | 0.12 | 3-4    |
| P260                       | S4760202-4750203XX | S476MNH0202XX  | S475MNH0203XX    | 10          | 10                | 350.4        | 0.14      | 0.003             | 0.05 | 0.004             | 0.06 | 0.014             | 0.12 | 0.014            | 0.12 | 3-5    |
| P276                       | S4880215-4880201XX | S488MNH0215XX  | S488MNH0201XX    | 10          | 10                | 338.0        | 0.77      | 0.007             | 0.05 | 0.011             | 0.06 | 0.034             | 0.11 | 0.034            | 0.11 | 3-6    |
| P297                       | S4350215-4350216XX | S435MNH0215XX  | S435MNH0216XX    | 8           | 8                 | 95.0         | 3.31      | 0.013             | 0.08 | 0.023             | 0.10 | 0.029             | 0.11 | 0.029            | 0.11 | 3-4    |
| P287                       | S5280204-5280205XX | S528MNH0204XX  | S528MNH0205XX    | 10          | 10                | 156.0        | 0.50      | 0.008             | 0.06 | 0.012             | 0.08 | 0.022             | 0.11 | 0.022            | 0.11 | 3-7    |
| P282                       | S4330228-4330227XX | S433MNH0228XX  | S433MNH0227XX    | 10          | 10                | 36.1         | 0.44      | 0.002             | 0.04 | 0.003             | 0.04 | 0.017             | 0.11 | 0.017            | 0.11 | 3-3    |
| P293                       | S4350217-4460208XX | S435MNH0217XX  | S446MNH0208XX    | 10          | 10                | 300.0        | 1.13      | 0.013             | 0.07 | 0.023             | 0.09 | 0.035             | 0.11 | 0.035            | 0.11 | 3-4    |
| P270                       | S4750217-4750215XX | S475MNH0217XX  | S475MNH0215XX    | 10          | 10                | 300.0        | 0.30      | 0.003             | 0.07 | 0.004             | 0.08 | 0.012             | 0.10 | 0.012            | 0.10 | 3-5    |
| P292                       | S4350216-4350217XX | S435MNH0216XX  | S435MNH0217XX    | 10          | 10                | 160.0        | 1.10      | 0.013             | 0.07 | 0.023             | 0.09 | 0.031             | 0.10 | 0.031            | 0.10 | 3-4    |
| P275                       | S4880203-4880215XX | S488MNH0203XX  | S488MNH0215XX    | 10          | 10                | 358.2        | 1.32      | 0.005             | 0.05 | 0.008             | 0.06 | 0.027             | 0.10 | 0.027            | 0.10 | 3-6    |
| P286                       | S5280203-5280204XX | S528MNH0203XX  | S528MNH0204XX    | 10          | 10                | 185.0        | 0.42      | 0.008             | 0.06 | 0.012             | 0.08 | 0.019             | 0.10 | 0.019            | 0.10 | 3-7    |



**Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution**

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D.(in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                  |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P185                       | S4070213-4070204XX | S407MNH0213XX  | S407MNH0204XX    | 10          | 10               | 278.2        | 0.20      | 0.006             | 0.07 | 0.010             | 0.09 | 0.013             | 0.10 | 0.013            | 0.10 | 3-3    |
| P285                       | S5280202-5280203XX | S528MNH0202XX  | S528MNH0203XX    | 10          | 10               | 195.0        | 0.50      | 0.008             | 0.06 | 0.012             | 0.08 | 0.017             | 0.10 | 0.017            | 0.10 | 3-7    |
| P288                       | S5280205-5290213XX | S528MNH0205XX  | S529MNH0213XX    | 12          | 12               | 325.0        | 0.50      | 0.008             | 0.05 | 0.012             | 0.06 | 0.032             | 0.09 | 0.032            | 0.09 | 3-7    |
| P281                       | S4340206-4330228XX | S434MNH0206XX  | S433MNH0228XX    | 10          | 10               | 208.5        | 0.43      | 0.002             | 0.03 | 0.003             | 0.04 | 0.017             | 0.09 | 0.017            | 0.09 | 3-3    |
| P259                       | S4760201-4760202XX | S476MNH0201XX  | S476MNH0202XX    | 10          | 10               | 356.4        | 0.15      | 0.000             | 0.03 | 0.000             | 0.03 | 0.005             | 0.09 | 0.005            | 0.09 | 3-5    |
| P274                       | S4730204-4880203XX | S473MNH0204XX  | S488MNH0203XX    | 10          | 10               | 360.3        | 1.03      | 0.003             | 0.04 | 0.005             | 0.05 | 0.019             | 0.09 | 0.019            | 0.09 | 3-6    |
| P1                         | S4350210-4350219XX | S435MNH0210XX  | S435MNH0219XX    | 10          | 10               | 390.0        | 0.33      | 0.003             | 0.04 | 0.005             | 0.05 | 0.009             | 0.09 | 0.009            | 0.09 | 3-3    |
| P280                       | S4340212-4340206XX | S434MNH0212XX  | S434MNH0206XX    | 10          | 10               | 320.3        | 0.87      | 0.002             | 0.03 | 0.003             | 0.04 | 0.014             | 0.08 | 0.014            | 0.08 | 3-3    |
| P284                       | S5280208-5280202XX | S528MNH0208XX  | S528MNH0202XX    | 10          | 10               | 254.0        | 0.56      | 0.005             | 0.06 | 0.008             | 0.07 | 0.011             | 0.08 | 0.011            | 0.08 | 3-7    |
| P273                       | S4740201-4730204XX | S474MNH0201XX  | S473MNH0204XX    | 10          | 10               | 341.1        | 1.03      | 0.003             | 0.03 | 0.004             | 0.04 | 0.013             | 0.07 | 0.013            | 0.07 | 3-6    |
| P291                       | S5280206-5280205XX | S528MNH0206XX  | S528MNH0205XX    | 12          | 12               | 240.0        | 0.50      | 0.000             | 0.03 | 0.000             | 0.04 | 0.005             | 0.07 | 0.005            | 0.07 | 3-7    |
| P264                       | S4750208-4750210XX | S475MNH0208XX  | S475MNH0210XX    | 10          | 10               | 198.1        | 0.85      | 0.004             | 0.04 | 0.007             | 0.05 | 0.012             | 0.07 | 0.012            | 0.07 | 3-5    |
| P269                       | S4860203-4750217XX | S486MNH0203XX  | S475MNH0217XX    | 10          | 10               | 316.3        | 0.77      | 0.001             | 0.03 | 0.001             | 0.04 | 0.005             | 0.07 | 0.005            | 0.07 | 3-5    |
| P279                       | S4340209-4340214XX | S434MNH0209XX  | S434MNH0214XX    | 15          | 15               | 297.6        | 0.93      | 0.003             | 0.04 | 0.004             | 0.04 | 0.010             | 0.07 | 0.010            | 0.07 | 3-3    |
| P72                        | S6100209-6100210XX | S610MNH0209XX  | S610MNH0210XX    | 18          | 18               | 384.0        | 0.20      | 0.004             | 0.03 | 0.004             | 0.03 | 0.014             | 0.06 | 0.014            | 0.06 | 3-9    |
| P263                       | S4740207-4750208XX | S474MNH0207XX  | S475MNH0208XX    | 10          | 10               | 244.6        | 0.82      | 0.001             | 0.03 | 0.002             | 0.04 | 0.005             | 0.06 | 0.005            | 0.06 | 3-5    |
| P272                       | S4740213-4740201XX | S474MNH0213XX  | S474MNH0201XX    | 10          | 10               | 342.8        | 1.07      | 0.000             | 0.02 | 0.000             | 0.03 | 0.005             | 0.06 | 0.005            | 0.06 | 3-6    |
| P290                       | S5280207-5280206XX | S528MNH0207XX  | S528MNH0206XX    | 12          | 12               | 21.0         | 0.50      | 0.000             | 0.01 | 0.000             | 0.01 | 0.001             | 0.03 | 0.001            | 0.03 | 3-7    |
| P71                        | S6100205-6100209XX | S610MNH0205XX  | S610MNH0209XX    | 18          | 18               | 384.8        | 0.22      | 0.000             | 0.01 | 0.000             | 0.01 | 0.000             | 0.02 | 0.000            | 0.02 | 3-9    |
| P277                       | S4731001-4730203XX | S473PLG1001XX  | S473MNH0203XX    | 10          | 10               | 15.0         | 0.48      | 0.000             | 0.00 | 0.000             | 0.01 | 0.000             | 0.02 | 0.000            | 0.02 | 3-6    |
| P289                       | S5131001-5280207XX | S513PLG1001XX  | S528MNH0207XX    | 12          | 12               | 200.0        | 0.50      | 0.000             | 0.01 | 0.000             | 0.01 | 0.000             | 0.01 | 0.000            | 0.01 | 3-7    |
| P119                       | S4480204-4480205XX | S448MNH0204XX  | S448MNH0205XX    | 10          | 10               | 6.0          | 1.67      | 0.000             | 0.00 | 0.000             | 0.00 | 0.000             | 0.00 | 0.000            | 0.00 | 3-15   |

\*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with existing diameter.
2. Pipeline was analyzed with WWMP CIP diameter.
3. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P250                       | S4320232-4320227XX | S432MNH0232XX  | S432MNH0227XX    | 16          | 16                | 304.0        | 0.33      | 0.988             | 0.54 | 1.517             | 0.76 | 2.908             | 1.00 | 1.539            | 0.53 | 3-2    |
| P249                       | S4320232-4310207XX | S431MNH0207XX  | S432MNH0232XX    | 14          | 14                | 227.5        | 0.10      | 0.982             | 0.56 | 1.510             | 0.59 | 2.962             | 1.00 | 1.521            | 0.58 | 3-2    |
| P164                       | S4500212-4500211XX | S450MNH0212XX  | S450MNH0211XX    | 16          | 16                | 20.8         | 1.59      | 2.135             | 0.82 | 3.118             | 0.94 | 3.834             | 1.00 | 1.561            | 1.00 | 3-11   |
| P165                       | S4500211-4500210XX | S450MNH0211XX  | S450MNH0210XX    | 16          | 16                | 31.3         | 1.18      | 2.136             | 0.73 | 3.118             | 0.81 | 3.828             | 1.00 | 1.562            | 0.98 | 3-11   |
| P163                       | S4320227-4500212XX | S432MNH0227XX  | S450MNH0212XX    | 16          | 16                | 552.4        | 0.30      | 2.135             | 0.68 | 3.117             | 0.94 | 3.801             | 1.00 | 1.557            | 0.77 | 3-11   |
| P68                        | S6090205-6090202XX | S609MNH0205XX  | S609MNH0202XX    | 12          | 15                | 95.0         | 0.25      | 1.005             | 0.73 | 1.360             | 0.99 | 1.792             | 1.00 | 2.019            | 0.79 | 3-9    |
| P67                        | S6090201-6090205XX | S609MNH0201XX  | S609MNH0205XX    | 12          | 15                | 278.0        | 0.25      | 0.991             | 0.72 | 1.338             | 1.00 | 1.769             | 1.00 | 1.996            | 0.79 | 3-9    |
| P290                       | S5280207-5280206XX | S528MNH0207XX  | S528MNH0206XX    | 12          | 12                | 21.0         | 0.50      | 0.001             | 0.02 | 0.001             | 0.02 | 0.211             | 1.00 | 0.002            | 0.03 | 3-7    |
| P51                        | S5290208-5520204XX | S529MNH0208XX  | S552MNH0204XX    | 12          | 12                | 361.0        | 0.25      | 0.823             | 0.60 | 1.209             | 1.00 | 1.465             | 1.00 | 1.690            | 0.98 | 3-8    |
| P47                        | S5290202-5290213XX | S529MNH0202XX  | S529MNH0213XX    | 12          | 12                | 319.8        | 0.27      | 0.808             | 0.58 | 1.223             | 1.00 | 1.589             | 1.00 | 1.635            | 1.00 | 3-7    |
| P110                       | S5290204-5290202XX | S529MNH0204XX  | S529MNH0202XX    | 12          | 12                | 40.0         | 0.25      | 0.408             | 0.59 | 0.597             | 1.00 | 0.641             | 1.00 | 0.655            | 1.00 | 3-7    |
| P40                        | S5130213-5130212XX | S513MNH0213XX  | S513MNH0212XX    | 12          | 12                | 353.0        | 1.30      | 0.480             | 0.49 | 0.719             | 0.65 | 1.002             | 1.00 | 0.970            | 0.71 | 3-7    |
| P39                        | S4880210-5130213XX | S488MNH0210XX  | S513MNH0213XX    | 12          | 12                | 361.0        | 0.70      | 0.447             | 0.31 | 0.668             | 0.39 | 0.986             | 1.00 | 0.915            | 0.46 | 3-6    |
| P180                       | S5130207-5130214XX | S513MNH0207XX  | S513MNH0214XX    | 12          | 12                | 254.0        | 0.50      | 0.300             | 0.29 | 0.446             | 0.36 | 0.610             | 1.00 | 0.599            | 0.44 | 3-7    |
| P181                       | S5130214-5130209XX | S513MNH0214XX  | S513MNH0209XX    | 12          | 12                | 246.4        | 0.51      | 0.308             | 0.30 | 0.458             | 0.37 | 0.619             | 1.00 | 0.613            | 0.73 | 3-7    |
| P179                       | S5130206-5130207XX | S513MNH0206XX  | S513MNH0207XX    | 12          | 12                | 320.6        | 0.39      | 0.297             | 0.30 | 0.442             | 0.37 | 0.606             | 1.00 | 0.592            | 0.44 | 3-7    |
| P182                       | S5130209-5130210XX | S513MNH0209XX  | S513MNH0210XX    | 12          | 12                | 63.2         | 0.41      | 0.313             | 0.29 | 0.466             | 0.36 | 0.626             | 1.00 | 0.622            | 1.00 | 3-7    |
| P108                       | S5120211-5120206XX | S512MNH0211XX  | S512MNH0206XX    | 12          | 12                | 90.0         | 0.26      | 0.408             | 0.41 | 0.591             | 0.91 | 0.618             | 1.00 | 0.648            | 1.00 | 3-7    |
| P107                       | S5130208-5120211XX | S513MNH0208XX  | S512MNH0211XX    | 12          | 12                | 158.3        | 0.29      | 0.407             | 0.40 | 0.591             | 0.64 | 0.638             | 1.00 | 0.665            | 1.00 | 3-7    |
| P284                       | S5280208-5280202XX | S528MNH0208XX  | S528MNH0202XX    | 10          | 10                | 254.0        | 0.56      | 0.005             | 0.06 | 0.009             | 0.07 | 0.146             | 1.00 | 0.011            | 0.08 | 3-7    |
| P63                        | S5920210-5920206XX | S592MNH0210XX  | S592MNH0206XX    | 12          | 15                | 258.0        | 0.25      | 0.977             | 0.71 | 1.317             | 1.00 | 1.733             | 1.00 | 1.963            | 0.77 | 3-9    |
| P36                        | S4880213-4880212XX | S488MNH0213XX  | S488MNH0212XX    | 10          | 10                | 287.0        | 0.69      | 0.142             | 0.22 | 0.214             | 0.27 | 0.884             | 1.00 | 0.287            | 0.32 | 3-6    |
| P38                        | S4880211-4880210XX | S488MNH0211XX  | S488MNH0210XX    | 10          | 10                | 30.0         | 0.83      | 0.223             | 0.34 | 0.339             | 0.42 | 1.175             | 1.00 | 0.430            | 0.50 | 3-6    |
| P118                       | S4880209-4880210XX | S488MNH0209XX  | S488MNH0210XX    | 12          | 12                | 353.5        | 0.16      | 0.224             | 0.33 | 0.329             | 0.41 | 0.702             | 1.00 | 0.483            | 0.51 | 3-6    |
| P37                        | S4880212-4880211XX | S488MNH0212XX  | S488MNH0211XX    | 10          | 10                | 46.4         | 1.21      | 0.142             | 0.20 | 0.214             | 0.25 | 1.273             | 1.00 | 0.288            | 0.29 | 3-6    |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P41                        | S5130212-5130208XX | S513MNH0212XX  | S513MNH0208XX    | 12          | 12                | 244.6        | 0.20      | 0.796             | 0.54 | 1.188             | 0.71 | 1.549             | 1.00 | 1.596            | 1.00 | 3-7    |
| P43                        | S5120209-5120210XX | S512MNH0209XX  | S512MNH0210XX    | 15          | 15                | 143.0        | 0.29      | 0.389             | 0.34 | 0.597             | 0.45 | 0.981             | 1.00 | 1.023            | 1.00 | 3-7    |
| P42                        | S5130208-5120209XX | S513MNH0208XX  | S512MNH0209XX    | 15          | 15                | 32.0         | 0.13      | 0.389             | 0.30 | 0.597             | 0.37 | 0.989             | 1.00 | 1.021            | 1.00 | 3-7    |
| P287                       | S5280204-5280205XX | S528MNH0204XX  | S528MNH0205XX    | 10          | 10                | 156.0        | 0.50      | 0.009             | 0.07 | 0.013             | 0.08 | 0.249             | 1.00 | 0.024            | 0.11 | 3-7    |
| P286                       | S5280203-5280204XX | S528MNH0203XX  | S528MNH0204XX    | 10          | 10                | 185.0        | 0.42      | 0.009             | 0.07 | 0.013             | 0.08 | 0.252             | 1.00 | 0.021            | 0.10 | 3-7    |
| P61                        | S5690207-5920207XX | S569MNH0207XX  | S592MNH0207XX    | 12          | 15                | 180.0        | 0.25      | 0.949             | 0.70 | 1.275             | 1.00 | 1.682             | 1.00 | 1.914            | 0.76 | 3-9    |
| P183                       | S5130210-5130212XX | S513MNH0210XX  | S513MNH0212XX    | 10          | 10                | 263.4        | 0.84      | 0.313             | 0.58 | 0.466             | 0.71 | 0.633             | 1.00 | 0.635            | 1.00 | 3-7    |
| P46                        | S5290202-5290203XX | S529MNH0203XX  | S529MNH0202XX    | 15          | 15                | 32.0         | 0.13      | 0.400             | 0.52 | 0.622             | 1.00 | 1.014             | 1.00 | 1.051            | 1.00 | 3-7    |
| P50                        | S5290207-5290208XX | S529MNH0207XX  | S529MNH0208XX    | 12          | 12                | 333.0        | 0.26      | 0.823             | 0.64 | 1.203             | 1.00 | 1.461             | 1.00 | 1.685            | 1.00 | 3-8    |
| P291                       | S5280206-5280205XX | S528MNH0206XX  | S528MNH0205XX    | 12          | 12                | 240.0        | 0.50      | 0.001             | 0.04 | 0.001             | 0.05 | 0.227             | 1.00 | 0.006            | 0.07 | 3-7    |
| P288                       | S5280205-5290213XX | S528MNH0205XX  | S529MNH0213XX    | 12          | 12                | 325.0        | 0.50      | 0.009             | 0.05 | 0.016             | 0.17 | 0.416             | 1.00 | 0.034            | 0.55 | 3-7    |
| P60                        | S5690201-5690207XX | S569MNH0201XX  | S569MNH0207XX    | 12          | 15                | 200.0        | 0.25      | 0.949             | 0.69 | 1.275             | 1.00 | 1.679             | 1.00 | 1.912            | 0.75 | 3-9    |
| P59                        | S5690202-5690201XX | S569MNH0202XX  | S569MNH0201XX    | 12          | 15                | 200.0        | 0.25      | 0.949             | 0.69 | 1.275             | 1.00 | 1.677             | 1.00 | 1.910            | 0.75 | 3-9    |
| P65                        | S5920209-5920208XX | S592MNH0209XX  | S592MNH0208XX    | 12          | 15                | 155.0        | 0.25      | 0.991             | 0.71 | 1.339             | 1.00 | 1.760             | 1.00 | 1.989            | 0.78 | 3-9    |
| P64                        | S5920206-5920209XX | S592MNH0206XX  | S592MNH0209XX    | 12          | 15                | 218.0        | 0.25      | 0.977             | 0.71 | 1.317             | 1.00 | 1.736             | 1.00 | 1.966            | 0.78 | 3-9    |
| P62                        | S5920207-5920210XX | S592MNH0207XX  | S592MNH0210XX    | 12          | 15                | 115.0        | 0.25      | 0.977             | 0.71 | 1.317             | 1.00 | 1.729             | 1.00 | 1.960            | 0.77 | 3-9    |
| P56                        | S5520201-5690204XX | S552MNH0201XX  | S569MNH0204XX    | 12          | 15                | 400.0        | 0.27      | 0.830             | 0.64 | 1.125             | 1.00 | 1.484             | 1.00 | 1.707            | 0.69 | 3-8    |
| P55                        | S5520202-5520201XX | S552MNH0202XX  | S552MNH0201XX    | 12          | 15                | 200.0        | 0.25      | 0.830             | 0.62 | 1.129             | 1.00 | 1.480             | 1.00 | 1.703            | 0.68 | 3-8    |
| P52                        | S5520204-5520203XX | S552MNH0204XX  | S552MNH0203XX    | 12          | 12                | 105.0        | 0.40      | 0.823             | 0.58 | 1.166             | 1.00 | 1.465             | 1.00 | 1.686            | 0.91 | 3-8    |
| P289                       | S5131001-5280207XX | S513PLG1001XX  | S528MNH0207XX    | 12          | 12                | 200.0        | 0.50      | 0.001             | 0.02 | 0.001             | 0.02 | 0.140             | 1.00 | 0.001            | 0.02 | 3-7    |
| P49                        | S5290206-5290207XX | S529MNH0206XX  | S529MNH0207XX    | 12          | 12                | 216.6        | 0.31      | 0.819             | 0.60 | 1.207             | 1.00 | 1.449             | 1.00 | 1.672            | 1.00 | 3-8    |
| P48                        | S5290213-5290206XX | S529MNH0213XX  | S529MNH0206XX    | 12          | 12                | 20.4         | 0.54      | 0.818             | 0.56 | 1.207             | 1.00 | 1.448             | 1.00 | 1.668            | 1.00 | 3-8    |
| P109                       | S5120206-5290204XX | S512MNH0206XX  | S529MNH0204XX    | 12          | 12                | 280.0        | 0.25      | 0.408             | 0.48 | 0.592             | 1.00 | 0.621             | 1.00 | 0.651            | 1.00 | 3-7    |
| P44                        | S5120210-5120207XX | S512MNH0210XX  | S512MNH0207XX    | 15          | 15                | 74.0         | 0.00      | 0.399             | 0.33 | 0.613             | 0.54 | 0.995             | 1.00 | 1.041            | 1.00 | 3-7    |
| P45                        | S5120207-5290203XX | S512MNH0207XX  | S529MNH0203XX    | 15          | 15                | 297.0        | 0.36      | 0.399             | 0.41 | 0.613             | 0.76 | 1.004             | 1.00 | 1.045            | 1.00 | 3-7    |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P176                       | S4880201-4880204XX | S488MNH0201XX  | S488MNH0204XX    | 12          | 12                | 18.5         | 0.65      | 0.239             | 0.23 | 0.352             | 0.28 | 0.559             | 1.00 | 0.495            | 0.33 | 3-7    |
| P177                       | S4880204-4880205XX | S488MNH0204XX  | S488MNH0205XX    | 12          | 12                | 56.6         | 1.15      | 0.239             | 0.24 | 0.352             | 0.29 | 0.494             | 1.00 | 0.496            | 0.35 | 3-7    |
| P285                       | S5280202-5280203XX | S528MNH0202XX  | S528MNH0203XX    | 10          | 10                | 195.0        | 0.50      | 0.009             | 0.07 | 0.013             | 0.08 | 0.254             | 1.00 | 0.018            | 0.10 | 3-7    |
| P178                       | S4880205-5130206XX | S488MNH0205XX  | S513MNH0206XX    | 12          | 12                | 296.4        | 0.43      | 0.240             | 0.29 | 0.354             | 0.36 | 0.499             | 1.00 | 0.503            | 0.43 | 3-7    |
| P175                       | S4880202-4880201XX | S488MNH0202XX  | S488MNH0201XX    | 12          | 12                | 117.9        | 0.51      | 0.334             | 0.28 | 0.492             | 0.34 | 0.707             | 1.00 | 0.668            | 0.40 | 3-7    |
| P117                       | S4880208-4880209XX | S488MNH0208XX  | S488MNH0209XX    | 10          | 10                | 30.0         | 0.83      | 0.112             | 0.30 | 0.165             | 0.37 | 0.415             | 1.00 | 0.249            | 0.46 | 3-6    |
| P116                       | S4880207-4880208XX | S488MNH0207XX  | S488MNH0208XX    | 10          | 10                | 313.6        | 0.90      | 0.111             | 0.20 | 0.164             | 0.24 | 0.365             | 1.00 | 0.248            | 0.30 | 3-6    |
| P184                       | S4880201-4880209XX | S488MNH0201XX  | S488MNH0209XX    | 12          | 12                | 452.8        | 0.13      | 0.105             | 0.29 | 0.155             | 0.35 | 0.475             | 1.00 | 0.218            | 0.44 | 3-6    |
| P174                       | S4870204-4880202XX | S487MNH0204XX  | S488MNH0202XX    | 12          | 12                | 471.4        | 0.51      | 0.334             | 0.31 | 0.492             | 0.38 | 0.675             | 1.00 | 0.666            | 0.44 | 3-7    |
| P58                        | S5690203-5690202XX | S569MNH0203XX  | S569MNH0202XX    | 12          | 15                | 244.0        | 0.26      | 0.921             | 0.68 | 1.239             | 1.00 | 1.631             | 1.00 | 1.865            | 0.74 | 3-9    |
| P57                        | S5690204-5690203XX | S569MNH0204XX  | S569MNH0203XX    | 12          | 15                | 331.0        | 0.23      | 0.851             | 0.66 | 1.150             | 1.00 | 1.513             | 1.00 | 1.742            | 0.72 | 3-8    |
| P66                        | S5920208-6090201XX | S592MNH0208XX  | S609MNH0201XX    | 12          | 15                | 373.0        | 0.25      | 0.991             | 0.72 | 1.339             | 1.00 | 1.765             | 1.00 | 1.993            | 0.78 | 3-9    |
| P54                        | S5520210-5520202XX | S552MNH0210XX  | S552MNH0202XX    | 12          | 15                | 173.2        | 0.25      | 0.830             | 0.63 | 1.143             | 1.00 | 1.477             | 1.00 | 1.700            | 0.69 | 3-8    |
| P53                        | S5520203-5520210XX | S552MNH0203XX  | S552MNH0210XX    | 12          | 15                | 204.0        | 0.25      | 0.830             | 0.63 | 1.163             | 1.00 | 1.476             | 1.00 | 1.698            | 0.69 | 3-8    |
| P138                       | S4710213-4900224XX | S471MNH0213XX  | S490MNH0224XX    | 27          | 27                | 1086.8       | 0.24      | 3.250             | 0.40 | 4.687             | 0.49 | 11.444            | 0.94 | 10.213           | 0.84 | 3-11   |
| P150                       | S5310212-5500209XX | S531MNH0212XX  | S550MNH0209XX    | 27          | 27                | 355.6        | 0.24      | 3.557             | 0.43 | 5.123             | 0.53 | 12.266            | 0.94 | 10.986           | 0.87 | 3-12   |
| P69                        | S6090202-6100203XX | S609MNH0202XX  | S610MNH0203XX    | 12          | 15                | 373.0        | 0.28      | 1.005             | 0.65 | 1.359             | 0.85 | 1.797             | 0.93 | 2.024            | 0.70 | 3-9    |
| P162                       | S4320228-4320227XX | S432MNH0228XX  | S432MNH0227XX    | 18          | -                 | 30.1         | 1.16      | 1.141             | 0.27 | 1.609             | 0.31 | 5.534             | 0.89 | -                | -    | 3-11   |
| P144                       | S5110229-5110211XX | S511MNH0229XX  | S511MNH0211XX    | 27          | 27                | 206.5        | 0.58      | 3.483             | 0.40 | 5.040             | 0.48 | 12.028            | 0.88 | 10.795           | 0.79 | 3-12   |
| P86                        | S6520205-6520204XX | S652MNH0205XX  | S652MNH0204XX    | 33          | 33                | 10.0         | 0.10      | 6.853             | 0.52 | 9.612             | 0.63 | 17.974            | 0.88 | 16.969           | 0.87 | 3-10   |
| P85                        | S6520225-6520205XX | S652MNH0225XX  | S652MNH0205XX    | 33          | 33                | 20.7         | 0.53      | 6.851             | 0.50 | 9.614             | 0.61 | 17.806            | 0.87 | 16.821           | 0.86 | 3-10   |
| P70                        | S6100203-6100205XX | S610MNH0203XX  | S610MNH0205XX    | 12          | 15                | 56.0         | 0.80      | 1.263             | 0.59 | 1.760             | 0.73 | 2.183             | 0.85 | 2.425            | 0.67 | 3-9    |
| P151                       | S5500209-5500207XX | S550MNH0209XX  | S550MNH0207XX    | 27          | 27                | 31.8         | 0.03      | 3.557             | 0.43 | 5.123             | 0.52 | 12.268            | 0.85 | 10.987           | 0.80 | 3-12   |
| P149                       | S5300202-5310212XX | S530MNH0202XX  | S531MNH0212XX    | 27          | 27                | 355.6        | 0.56      | 3.552             | 0.38 | 5.118             | 0.46 | 12.256            | 0.84 | 10.984           | 0.77 | 3-12   |
| P145                       | S5110211-5110209XX | S511MNH0211XX  | S511MNH0209XX    | 27          | 27                | 295.3        | 0.13      | 3.484             | 0.40 | 5.029             | 0.49 | 12.041            | 0.84 | 10.800           | 0.79 | 3-12   |





Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P106                       | S6520208-6520225XX | S652MNH0208XX  | S652MNH0225XX    | 33          | 33                | 41.2         | 0.46      | 2.112             | 0.44 | 2.973             | 0.56 | 3.893             | 0.82 | 4.178            | 0.81 | 3-10   |
| P139                       | S4900224-4900207XX | S490MNH0224XX  | S490MNH0207XX    | 27          | 27                | 258.7        | 0.24      | 3.265             | 0.39 | 4.728             | 0.48 | 11.535            | 0.82 | 10.361           | 0.76 | 3-11   |
| P142                       | S4900219-5110214XX | S490MNH0219XX  | S511MNH0214XX    | 27          | 27                | 106.7        | 0.25      | 3.487             | 0.36 | 5.062             | 0.44 | 12.024            | 0.79 | 10.802           | 0.69 | 3-12   |
| P137                       | S4500207-4710213XX | S450MNH0207XX  | S471MNH0213XX    | 27          | 27                | 1135.1       | 0.84      | 3.214             | 0.34 | 4.642             | 0.42 | 11.319            | 0.78 | 10.212           | 0.71 | 3-11   |
| P105                       | S6510210-6520208XX | S651MNH0210XX  | S652MNH0208XX    | 33          | 33                | 220.0        | 0.03      | 2.059             | 0.41 | 2.880             | 0.52 | 3.743             | 0.78 | 4.015            | 0.77 | 3-10   |
| P99                        | S6500209-6510201XX | S650MNH0209XX  | S651MNH0201XX    | 18          | 18                | 468.0        | 0.16      | 1.455             | 0.53 | 2.025             | 0.65 | 2.528             | 0.77 | 2.773            | 0.84 | 3-10   |
| P98                        | S6500206-6500209XX | S650MNH0206XX  | S650MNH0209XX    | 18          | 18                | 468.0        | 0.16      | 1.450             | 0.52 | 2.024             | 0.64 | 2.517             | 0.76 | 2.761            | 0.83 | 3-10   |
| P143                       | S5110214-5110229XX | S511MNH0214XX  | S511MNH0229XX    | 27          | 27                | 88.6         | 0.47      | 3.484             | 0.33 | 5.050             | 0.41 | 12.026            | 0.76 | 10.813           | 0.64 | 3-12   |
| P104                       | S6510208-6510210XX | S651MNH0208XX  | S651MNH0210XX    | 33          | 33                | 110.0        | 0.10      | 2.073             | 0.39 | 2.920             | 0.50 | 3.724             | 0.75 | 3.984            | 0.74 | 3-10   |
| P87                        | S6520214-6520204XX | S652MNH0204XX  | S652MNH0214XX    | 39          | 39                | 54.7         | 0.18      | 6.868             | 0.45 | 9.632             | 0.54 | 18.175            | 0.75 | 17.192           | 0.74 | 3-10   |
| P141                       | S4900201-4900219XX | S490MNH0201XX  | S490MNH0219XX    | 27          | 27                | 193.4        | 0.62      | 3.471             | 0.35 | 5.067             | 0.43 | 11.972            | 0.75 | 10.791           | 0.68 | 3-11   |
| P97                        | S6500207-6500206XX | S650MNH0207XX  | S650MNH0206XX    | 18          | 18                | 67.3         | 0.28      | 1.445             | 0.49 | 2.021             | 0.61 | 2.505             | 0.72 | 2.749            | 0.80 | 3-10   |
| P78                        | S5900217-5900219XX | S590MNH0219XX  | S590MNH0217XX    | 18          | 18                | 22.7         | 4.68      | 0.277             | 0.35 | 0.417             | 0.42 | 3.148             | 0.72 | 2.836            | 0.69 | 3-13   |
| P140                       | CDT-51             | S490MNH0207XX  | S490MNH0201XX    | 27          | 27                | 23.4         | 0.13      | 3.488             | 0.35 | 5.396             | 0.43 | 12.638            | 0.71 | 11.832           | 0.67 | 3-11   |
| P22                        | S4750214-4470211XX | S475MNH0214XX  | S447MNH0211XX    | 10          | 10                | 211.6        | 0.19      | 0.246             | 0.46 | 0.358             | 0.58 | 0.473             | 0.70 | 0.473            | 0.70 | 3-4    |
| P173                       | S4870203-4870204XX | S487MNH0203XX  | S487MNH0204XX    | 12          | 12                | 274.6        | 0.83      | 0.323             | 0.29 | 0.475             | 0.35 | 0.639             | 0.69 | 0.639            | 0.41 | 3-7    |
| P148                       | S5300219-5300202XX | S530MNH0219XX  | S530MNH0202XX    | 27          | 27                | 395.2        | 0.56      | 3.500             | 0.33 | 5.041             | 0.40 | 12.090            | 0.69 | 10.839           | 0.63 | 3-12   |
| P147                       | S5110218-5300219XX | S511MNH0218XX  | S530MNH0219XX    | 27          | 27                | 310.5        | 0.56      | 3.494             | 0.33 | 5.036             | 0.40 | 12.071            | 0.68 | 10.824           | 0.63 | 3-12   |
| P146                       | S5110209-5110218XX | S511MNH0209XX  | S511MNH0218XX    | 27          | 27                | 306.6        | 0.56      | 3.489             | 0.33 | 5.032             | 0.40 | 12.056            | 0.68 | 10.812           | 0.63 | 3-12   |
| P103                       | S6510211-6510208XX | S651MNH0211XX  | S651MNH0208XX    | 33          | 33                | 383.0        | 0.10      | 2.064             | 0.34 | 2.878             | 0.44 | 3.697             | 0.68 | 3.956            | 0.67 | 3-10   |
| P35                        | S4880214-4880213XX | S488MNH0214XX  | S488MNH0213XX    | 10          | 10                | 351.0        | 0.70      | 0.122             | 0.23 | 0.183             | 0.28 | 0.254             | 0.65 | 0.254            | 0.33 | 3-6    |
| P90                        | S6290216-6290218XX | S629MNH0216XX  | S629MNH0218XX    | 33          | 33                | 36.4         | 0.93      | 4.496             | 0.42 | 5.761             | 0.48 | 9.440             | 0.65 | 8.949            | 0.63 | 3-10   |
| P96                        | S6310208-6500207XX | S631MNH0208XX  | S650MNH0207XX    | 18          | 18                | 497.0        | 0.29      | 1.444             | 0.45 | 2.022             | 0.56 | 2.504             | 0.65 | 2.748            | 0.71 | 3-10   |
| P17                        | S4460201-4460207XX | S446MNH0201XX  | S446MNH0207XX    | 8           | 8                 | 127.1        | 0.83      | 0.223             | 0.44 | 0.329             | 0.56 | 0.408             | 0.65 | 0.408            | 0.65 | 3-4    |
| P89                        | CDT-39             | S652MNH0212XX  | OFALL-14         | 48          | 48                | 28.6         | 0.35      | 18.395            | 0.40 | 26.182            | 0.48 | 46.990            | 0.65 | 47.614           | 0.65 | 3-10   |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P21                        | S4750216-4750214XX | S475MNH0216XX  | S475MNH0214XX    | 10          | 10                | 273.8        | 0.20      | 0.246             | 0.44 | 0.358             | 0.54 | 0.471             | 0.65 | 0.471            | 0.65 | 3-5    |
| P100                       | S6510201-6510203XX | S651MNH0201XX  | S651MNH0203XX    | 18          | 18                | 468.0        | 0.17      | 1.460             | 0.46 | 2.024             | 0.56 | 2.539             | 0.64 | 2.784            | 0.68 | 3-10   |
| P115                       | S4880216-4880207XX | S488MNH0216XX  | S488MNH0207XX    | 10          | 10                | 353.6        | 0.91      | 0.109             | 0.19 | 0.161             | 0.23 | 0.241             | 0.64 | 0.241            | 0.29 | 3-6    |
| P242                       | S3920207-3920206XX | S392MNH0207XX  | S392MNH0206XX    | 8           | 8                 | 47.5         | 1.05      | 0.279             | 0.38 | 0.405             | 0.47 | 0.687             | 0.64 | 0.687            | 0.64 | 3-1    |
| P152                       | S5500207-5500223XX | S550MNH0207XX  | S550MNH0223XX    | 33          | 33                | 239.6        | 0.17      | 3.564             | 0.34 | 5.131             | 0.40 | 12.288            | 0.64 | 11.005           | 0.60 | 3-12   |
| P20                        | S4750205-4750216XX | S475MNH0205XX  | S475MNH0216XX    | 10          | 10                | 269.5        | 0.20      | 0.236             | 0.43 | 0.343             | 0.53 | 0.453             | 0.63 | 0.453            | 0.63 | 3-5    |
| P19                        | S4750206-4750205XX | S475MNH0206XX  | S475MNH0205XX    | 8           | 8                 | 132.7        | 1.34      | 0.223             | 0.43 | 0.329             | 0.53 | 0.412             | 0.63 | 0.412            | 0.63 | 3-5    |
| P91                        | S6290218-6290217XX | S629MNH0218XX  | S629MNH0217XX    | 33          | 33                | 91.0         | 0.35      | 3.602             | 0.40 | 4.792             | 0.46 | 8.591             | 0.62 | 8.011            | 0.60 | 3-10   |
| P18                        | S4460207-4750206XX | S446MNH0207XX  | S475MNH0206XX    | 8           | 8                 | 203.1        | 0.37      | 0.223             | 0.42 | 0.329             | 0.53 | 0.411             | 0.62 | 0.411            | 0.62 | 3-4    |
| P95                        | S6310201-6310208XX | S631MNH0201XX  | S631MNH0208XX    | 18          | 18                | 283.9        | 0.29      | 1.439             | 0.44 | 2.020             | 0.53 | 2.491             | 0.61 | 2.735            | 0.65 | 3-10   |
| P94                        | S6310202-6310201XX | S631MNH0202XX  | S631MNH0201XX    | 18          | 18                | 121.3        | 0.31      | 1.436             | 0.43 | 2.017             | 0.53 | 2.483             | 0.60 | 2.727            | 0.64 | 3-10   |
| P102                       | S6510205-6510211XX | S651MNH0205XX  | S651MNH0211XX    | 33          | 33                | 132.0        | 0.09      | 2.276             | 0.31 | 3.226             | 0.40 | 4.105             | 0.60 | 4.217            | 0.59 | 3-10   |
| P11                        | S4350218-4350220XX | S435MNH0218XX  | S435MNH0220XX    | 8           | 8                 | 233.7        | 0.41      | 0.183             | 0.43 | 0.266             | 0.53 | 0.316             | 0.59 | 0.316            | 0.59 | 3-4    |
| P136                       | S4500210-4500207XX | S450MNH0210XX  | S450MNH0207XX    | 27          | 27                | 187.5        | 0.64      | 3.113             | 0.29 | 4.507             | 0.35 | 11.038            | 0.59 | 10.030           | 0.55 | 3-11   |
| P12                        | S4350220-4460205XX | S435MNH0220XX  | S446MNH0205XX    | 8           | 8                 | 137.9        | 0.36      | 0.183             | 0.43 | 0.266             | 0.53 | 0.318             | 0.59 | 0.318            | 0.59 | 3-4    |
| P276                       | S4880215-4880201XX | S488MNH0215XX  | S488MNH0201XX    | 10          | 10                | 338.0        | 0.77      | 0.008             | 0.06 | 0.013             | 0.07 | 0.115             | 0.59 | 0.036            | 0.12 | 3-6    |
| P93                        | S6310203-6310202XX | S631MNH0203XX  | S631MNH0202XX    | 18          | 18                | 178.7        | 0.28      | 1.274             | 0.42 | 1.768             | 0.51 | 2.212             | 0.58 | 2.456            | 0.62 | 3-9    |
| P197                       | S4330204-4330224XX | S433MNH0204XX  | S433MNH0224XX    | 21          | 21                | 313.5        | 0.87      | 1.958             | 0.34 | 2.880             | 0.41 | 5.215             | 0.57 | 5.215            | 0.57 | 3-2    |
| P26                        | S4470208-4470210XX | S447MNH0208XX  | S447MNH0210XX    | 10          | 10                | 370.0        | 0.20      | 0.166             | 0.38 | 0.245             | 0.47 | 0.342             | 0.57 | 0.342            | 0.57 | 3-5    |
| P88                        | S6520212-6520214XX | S652MNH0214XX  | S652MNH0212XX    | 48          | 48                | 51.1         | 0.37      | 16.545            | 0.32 | 23.499            | 0.40 | 42.312            | 0.57 | 41.448           | 0.57 | 3-10   |
| P135                       | S4310214-4500210XX | S431MNH0214XX  | S450MNH0210XX    | 27          | 27                | 278.2        | 0.52      | 0.975             | 0.24 | 1.394             | 0.29 | 7.682             | 0.56 | 8.527            | 0.56 | 3-11   |
| P92                        | S6100205-6310203XX | S610MNH0205XX  | S631MNH0203XX    | 18          | 18                | 493.5        | 0.29      | 1.272             | 0.41 | 1.768             | 0.49 | 2.207             | 0.56 | 2.451            | 0.60 | 3-9    |
| P23                        | S4470211-4470201XX | S447MNH0211XX  | S447MNH0201XX    | 10          | 10                | 381.0        | 0.21      | 0.249             | 0.38 | 0.361             | 0.47 | 0.482             | 0.55 | 0.482            | 0.55 | 3-4    |
| P16                        | S4460202-4460201XX | S446MNH0202XX  | S446MNH0201XX    | 8           | 8                 | 84.8         | 0.83      | 0.223             | 0.38 | 0.329             | 0.48 | 0.407             | 0.54 | 0.407            | 0.54 | 3-4    |
| P15                        | S4460203-4460202XX | S446MNH0203XX  | S446MNH0202XX    | 8           | 8                 | 166.9        | 0.58      | 0.193             | 0.39 | 0.281             | 0.48 | 0.339             | 0.54 | 0.339            | 0.54 | 3-4    |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P101                       | S6510203-6510205XX | S651MNH0203XX  | S651MNH0205XX    | 36          | 36                | 477.5        | 0.05      | 2.289             | 0.31 | 3.352             | 0.39 | 3.879             | 0.54 | 4.131            | 0.54 | 3-10   |
| P218                       | S3930207-3930209XX | S393MNH0207XX  | S393MNH0209XX    | 21          | 21                | 283.9        | 0.31      | 1.267             | 0.31 | 1.985             | 0.39 | 3.563             | 0.54 | 3.563            | 0.54 | 3-1    |
| P83                        | S6290216-6290217XX | S629MNH0216XX  | S629MNH0217XX    | 33          | 33                | 127.1        | 0.02      | 2.046             | 0.31 | 3.007             | 0.37 | 6.634             | 0.53 | 6.016            | 0.51 | 3-10   |
| P84                        | S6290217-6520225XX | S629MNH0217XX  | S652MNH0225XX    | 42          | 42                | 517.4        | 0.47      | 4.880             | 0.30 | 6.951             | 0.37 | 14.523            | 0.53 | 13.265           | 0.52 | 3-10   |
| P224                       | S4080205-4080206XX | S408MNH0205XX  | S408MNH0206XX    | 21          | 21                | 69.0         | 0.75      | 1.798             | 0.31 | 2.678             | 0.38 | 4.767             | 0.53 | 4.767            | 0.53 | 3-1    |
| P133                       | S4320235-4320228XX | S432MNH0235XX  | S432MNH0228XX    | 27          | 27                | 268.0        | 0.55      | 2.107             | 0.22 | 2.994             | 0.26 | 8.072             | 0.53 | 8.695            | 0.56 | 3-2    |
| P241                       | S3920208-3920207XX | S392MNH0208XX  | S392MNH0207XX    | 10          | 10                | 215.1        | 1.12      | 0.279             | 0.31 | 0.405             | 0.38 | 0.686             | 0.52 | 0.686            | 0.52 | 3-1    |
| P134                       | S4320228-4310214XX | S432MNH0228XX  | S431MNH0214XX    | 27          | 27                | 300.7        | 0.50      | 0.971             | 0.18 | 1.390             | 0.21 | 7.668             | 0.52 | 8.613            | 0.56 | 3-11   |
| P27                        | S4470210-4480204XX | S447MNH0210XX  | S448MNH0204XX    | 10          | 10                | 386.3        | 0.18      | 0.174             | 0.35 | 0.256             | 0.43 | 0.357             | 0.52 | 0.357            | 0.52 | 3-15   |
| P225                       | S4080206-4080209XX | S408MNH0206XX  | S408MNH0209XX    | 21          | 21                | 290.8        | 0.73      | 1.801             | 0.30 | 2.681             | 0.37 | 4.779             | 0.52 | 4.779            | 0.52 | 3-1    |
| P10                        | S4350201-4350218XX | S435MNH0201XX  | S435MNH0218XX    | 8           | 8                 | 17.8         | 1.12      | 0.183             | 0.38 | 0.266             | 0.46 | 0.314             | 0.52 | 0.314            | 0.52 | 3-4    |
| P229                       | S4330208-4330204XX | S433MNH0208XX  | S433MNH0204XX    | 21          | 21                | 309.1        | 0.87      | 1.817             | 0.30 | 2.697             | 0.37 | 4.831             | 0.51 | 4.831            | 0.51 | 3-2    |
| P219                       | S3930209-3930212XX | S393MNH0209XX  | S393MNH0212XX    | 21          | 21                | 311.0        | 0.82      | 1.749             | 0.30 | 2.610             | 0.37 | 4.659             | 0.51 | 4.659            | 0.51 | 3-1    |
| P128                       | S4320204-4320205XX | S432MNH0204XX  | S432MNH0205XX    | 27          | 27                | 32.6         | 0.31      | 2.042             | 0.30 | 2.986             | 0.37 | 5.394             | 0.51 | 5.394            | 0.51 | 3-2    |
| P217                       | S3940204-3930207XX | S394MNH0204XX  | S393MNH0207XX    | 21          | 21                | 274.5        | 0.72      | 1.264             | 0.29 | 1.982             | 0.37 | 3.551             | 0.51 | 3.551            | 0.51 | 3-1    |
| P130                       | S4320213-4320220XX | S432MNH0213XX  | S432MNH0220XX    | 27          | 27                | 305.2        | 0.40      | 2.115             | 0.31 | 3.091             | 0.37 | 5.541             | 0.51 | 5.541            | 0.51 | 3-2    |
| P220                       | S3930212-3930213XX | S393MNH0212XX  | S393MNH0213XX    | 21          | 21                | 293.7        | 0.71      | 1.753             | 0.30 | 2.614             | 0.37 | 4.672             | 0.51 | 4.672            | 0.51 | 3-1    |
| P25                        | S4470207-4470208XX | S447MNH0207XX  | S447MNH0208XX    | 10          | 10                | 100.0        | 0.20      | 0.142             | 0.34 | 0.208             | 0.41 | 0.303             | 0.51 | 0.303            | 0.51 | 3-4    |
| P13                        | S4460205-4460204XX | S446MNH0205XX  | S446MNH0204XX    | 8           | 8                 | 69.1         | 0.43      | 0.191             | 0.37 | 0.279             | 0.46 | 0.331             | 0.50 | 0.331            | 0.50 | 3-4    |
| P127                       | S4320202-4320204XX | S432MNH0202XX  | S432MNH0204XX    | 27          | 27                | 206.1        | 0.29      | 2.041             | 0.30 | 2.985             | 0.36 | 5.381             | 0.50 | 5.381            | 0.50 | 3-2    |
| P228                       | S4330210-4330208XX | S433MNH0210XX  | S433MNH0208XX    | 21          | 21                | 310.5        | 0.87      | 1.813             | 0.30 | 2.693             | 0.36 | 4.818             | 0.50 | 4.818            | 0.50 | 3-2    |
| P132                       | S4320230-4320235XX | S432MNH0230XX  | S432MNH0235XX    | 27          | 27                | 12.4         | 0.81      | 2.098             | 0.26 | 2.985             | 0.31 | 4.546             | 0.50 | 5.123            | 0.53 | 3-2    |
| P247                       | S4090220-4100208XX | S409MNH0220XX  | S410MNH0208XX    | 12          | 12                | 388.3        | 0.49      | 0.321             | 0.30 | 0.459             | 0.36 | 0.811             | 0.50 | 0.811            | 0.50 | 3-2    |
| P226                       | S4080209-4080231XX | S408MNH0209XX  | S408MNH0231XX    | 21          | 21                | 314.0        | 0.86      | 1.805             | 0.30 | 2.685             | 0.36 | 4.792             | 0.50 | 4.792            | 0.50 | 3-1    |
| P227                       | S4080231-4330210XX | S408MNH0231XX  | S433MNH0210XX    | 21          | 21                | 320.0        | 0.88      | 1.809             | 0.29 | 2.689             | 0.36 | 4.805             | 0.50 | 4.805            | 0.50 | 3-2    |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P131                       | S4320220-4320230XX | S432MNH0220XX  | S432MNH0230XX    | 27          | 27                | 248.8        | 0.20      | 2.119             | 0.30 | 3.095             | 0.37 | 5.554             | 0.50 | 6.502            | 0.50 | 3-2    |
| P155                       | S5500201-5500225XX | S550MNH0201XX  | S550MNH0225XX    | 42          | 42                | 15.0         | 0.07      | 3.620             | 0.26 | 5.202             | 0.32 | 12.456            | 0.50 | 11.169           | 0.47 | 3-12   |
| P14                        | S4460204-4460203XX | S446MNH0204XX  | S446MNH0203XX    | 8           | 8                 | 321.8        | 1.12      | 0.191             | 0.36 | 0.279             | 0.44 | 0.335             | 0.49 | 0.335            | 0.49 | 3-4    |
| P126                       | S4330224-4320202XX | S433MNH0224XX  | S432MNH0202XX    | 27          | 27                | 299.8        | 0.32      | 2.038             | 0.29 | 2.982             | 0.35 | 5.371             | 0.49 | 5.371            | 0.49 | 3-2    |
| P248                       | S4100208-4310207XX | S410MNH0208XX  | S431MNH0207XX    | 12          | 12                | 359.8        | 0.51      | 0.323             | 0.30 | 0.461             | 0.36 | 0.820             | 0.49 | 0.820            | 0.49 | 3-2    |
| P129                       | S4320205-4320213XX | S432MNH0205XX  | S432MNH0213XX    | 27          | 27                | 290.4        | 0.28      | 2.110             | 0.29 | 3.087             | 0.36 | 5.524             | 0.49 | 5.524            | 0.49 | 3-2    |
| P156                       | S5500225-5710212XX | S550MNH0225XX  | S571MNH0212XX    | 42          | 42                | 286.5        | 0.14      | 3.627             | 0.26 | 5.209             | 0.31 | 12.478            | 0.48 | 11.188           | 0.46 | 3-13   |
| P240                       | S3690219-3920208XX | S369MNH0219XX  | S392MNH0208XX    | 10          | 10                | 325.6        | 1.11      | 0.279             | 0.29 | 0.404             | 0.36 | 0.682             | 0.48 | 0.682            | 0.48 | 3-1    |
| P239                       | S3690209-3690219XX | S369MNH0209XX  | S369MNH0219XX    | 10          | 10                | 141.2        | 1.07      | 0.275             | 0.29 | 0.399             | 0.36 | 0.661             | 0.47 | 0.661            | 0.47 | 3-1    |
| P216                       | S3940201-3940204XX | S394MNH0201XX  | S394MNH0204XX    | 21          | 21                | 49.8         | 0.60      | 1.261             | 0.26 | 1.979             | 0.33 | 3.539             | 0.46 | 3.539            | 0.46 | 3-1    |
| P161                       | S5900216-5900217XX | S590MNH0216XX  | S590MNH0217XX    | 42          | 42                | 600.9        | 0.28      | 4.067             | 0.25 | 5.823             | 0.29 | 13.240            | 0.45 | 11.952           | 0.43 | 3-13   |
| P28                        | S4480204-4480203XX | S448MNH0204XX  | S448MNH0203XX    | 10          | 10                | 234.0        | 0.48      | 0.174             | 0.31 | 0.256             | 0.37 | 0.359             | 0.45 | 0.359            | 0.45 | 3-15   |
| P246                       | S4090221-4090220XX | S409MNH0221XX  | S409MNH0220XX    | 12          | 12                | 258.4        | 1.08      | 0.320             | 0.27 | 0.457             | 0.33 | 0.802             | 0.45 | 0.802            | 0.45 | 3-1    |
| P80                        | S6110209-6110210XX | S611MNH0209XX  | S611MNH0210XX    | 42          | 42                | 412.2        | 0.34      | 4.469             | 0.25 | 6.390             | 0.30 | 13.979            | 0.45 | 12.680           | 0.43 | 3-13   |
| P231                       | S3680212-3930211XX | S368MNH0212XX  | S393MNH0211XX    | 15          | 15                | 364.7        | 0.60      | 0.703             | 0.29 | 1.049             | 0.36 | 1.585             | 0.45 | 1.585            | 0.45 | 3-1    |
| P81                        | S6110210-6300209XX | S611MNH0210XX  | S630MNH0209XX    | 42          | 42                | 620.0        | 0.23      | 4.634             | 0.25 | 6.638             | 0.30 | 14.180            | 0.45 | 12.906           | 0.42 | 3-13   |
| P79                        | S5900217-6110209XX | S590MNH0217XX  | S611MNH0209XX    | 42          | 42                | 380.0        | 0.23      | 4.459             | 0.25 | 6.381             | 0.29 | 14.147            | 0.45 | 12.800           | 0.42 | 3-13   |
| P157                       | S5710212-5710211XX | S571MNH0212XX  | S571MNH0211XX    | 42          | 42                | 362.0        | 0.18      | 3.692             | 0.24 | 5.292             | 0.28 | 12.600            | 0.45 | 11.310           | 0.42 | 3-13   |
| P262                       | S4750204-4750205XX | S475MNH0204XX  | S475MNH0205XX    | 10          | 10                | 137.7        | 0.22      | 0.012             | 0.26 | 0.021             | 0.34 | 0.038             | 0.44 | 0.038            | 0.44 | 3-5    |
| P29                        | S4480203-4480202XX | S448MNH0203XX  | S448MNH0202XX    | 10          | 10                | 243.0        | 0.34      | 0.177             | 0.30 | 0.261             | 0.36 | 0.367             | 0.44 | 0.367            | 0.44 | 3-15   |
| P221                       | S3930213-3930214XX | S393MNH0213XX  | S393MNH0214XX    | 21          | 21                | 44.7         | 0.90      | 1.765             | 0.26 | 2.630             | 0.32 | 4.690             | 0.43 | 4.690            | 0.43 | 3-1    |
| P160                       | S5900215-5900216XX | S590MNH0215XX  | S590MNH0216XX    | 42          | 42                | 130.0        | 0.26      | 3.899             | 0.23 | 5.587             | 0.28 | 12.959            | 0.43 | 11.664           | 0.41 | 3-13   |
| P82                        | S6300209-6290216XX | S630MNH0209XX  | S629MNH0216XX    | 42          | 42                | 444.2        | 0.36      | 4.645             | 0.25 | 6.649             | 0.29 | 14.209            | 0.43 | 12.934           | 0.41 | 3-14   |
| P230                       | S3930216-4080205XX | S393MNH0216XX  | S408MNH0205XX    | 24          | 24                | 232.5        | 0.23      | 0.904             | 0.26 | 1.346             | 0.31 | 2.395             | 0.43 | 2.395            | 0.43 | 3-1    |
| P223                       | CDT-83             | S393MNH0216XX  | S408MNH0205XX    | 24          | 24                | 237.8        | 0.22      | 0.894             | 0.26 | 1.331             | 0.31 | 2.369             | 0.43 | 2.369            | 0.43 | 3-1    |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P244                       | S3920205-3920204XX | S392MNH0205XX  | S392MNH0204XX    | 10          | 10                | 34.4         | 4.08      | 0.315             | 0.27 | 0.452             | 0.32 | 0.763             | 0.43 | 0.763            | 0.43 | 3-1    |
| P24                        | S4470201-4470207XX | S447MNH0201XX  | S447MNH0207XX    | 10          | 10                | 319.1        | 0.18      | 0.094             | 0.30 | 0.136             | 0.36 | 0.176             | 0.43 | 0.176            | 0.43 | 3-4    |
| P159                       | S5710216-5900215XX | S571MNH0216XX  | S590MNH0215XX    | 42          | 42                | 581.9        | 0.28      | 3.812             | 0.23 | 5.455             | 0.27 | 12.816            | 0.43 | 11.520           | 0.40 | 3-13   |
| P234                       | S3930226-3930227XX | S393MNH0226XX  | S393MNH0227XX    | 14          | 14                | 329.4        | 0.16      | 0.232             | 0.28 | 0.344             | 0.34 | 0.523             | 0.42 | 0.523            | 0.42 | 3-1    |
| P158                       | S5710211-5710216XX | S571MNH0211XX  | S571MNH0216XX    | 42          | 42                | 364.9        | 0.28      | 3.714             | 0.22 | 5.322             | 0.27 | 12.647            | 0.42 | 11.356           | 0.40 | 3-13   |
| P222                       | S3930214-3930216XX | S393MNH0214XX  | S393MNH0216XX    | 21          | 21                | 83.1         | 2.32      | 1.794             | 0.25 | 2.675             | 0.31 | 4.745             | 0.42 | 4.745            | 0.42 | 3-1    |
| P237                       | S3690201-3690218XX | S369MNH0201XX  | S369MNH0218XX    | 14          | 14                | 60.5         | 0.26      | 0.263             | 0.27 | 0.384             | 0.33 | 0.614             | 0.42 | 0.614            | 0.42 | 3-1    |
| P233                       | S3930211-3930226XX | S393MNH0211XX  | S393MNH0226XX    | 14          | 14                | 242.7        | 0.17      | 0.226             | 0.27 | 0.336             | 0.33 | 0.508             | 0.42 | 0.508            | 0.42 | 3-1    |
| P154                       | S5500202-5500201XX | S550MNH0202XX  | S550MNH0201XX    | 33          | 33                | 50.0         | 17.13     | 3.571             | 0.22 | 5.138             | 0.27 | 12.309            | 0.42 | 11.023           | 0.40 | 3-12   |
| P245                       | S3920204-4090221XX | S392MNH0204XX  | S409MNH0221XX    | 12          | 12                | 648.5        | 0.88      | 0.317             | 0.25 | 0.454             | 0.31 | 0.794             | 0.41 | 0.794            | 0.41 | 3-1    |
| P235                       | S3930227-3690214XX | S393MNH0227XX  | S369MNH0214XX    | 14          | 14                | 277.8        | 0.18      | 0.236             | 0.27 | 0.349             | 0.32 | 0.535             | 0.41 | 0.535            | 0.41 | 3-1    |
| P236                       | S3690214-3690201XX | S369MNH0214XX  | S369MNH0201XX    | 14          | 14                | 323.4        | 0.26      | 0.254             | 0.26 | 0.372             | 0.31 | 0.591             | 0.40 | 0.591            | 0.40 | 3-1    |
| P251                       | S3920206-3920205XX | S392MNH0206XX  | S392MNH0205XX    | 10          | 10                | 208.0        | 0.43      | 0.157             | 0.25 | 0.224             | 0.31 | 0.379             | 0.40 | 0.379            | 0.40 | 3-1    |
| P243                       | CDT-81             | S392MNH0206XX  | S392MNH0205XX    | 10          | 10                | 204.0        | 0.44      | 0.158             | 0.25 | 0.226             | 0.31 | 0.383             | 0.40 | 0.383            | 0.40 | 3-1    |
| P153                       | S5500223-5500202XX | S550MNH0223XX  | S550MNH0202XX    | 33          | 33                | 301.8        | 0.12      | 3.570             | 0.22 | 5.137             | 0.26 | 12.306            | 0.40 | 11.020           | 0.38 | 3-12   |
| P232                       | S3930211-3930209XX | S393MNH0211XX  | S393MNH0209XX    | 15          | 15                | 54.6         | 0.68      | 0.477             | 0.25 | 0.713             | 0.31 | 1.083             | 0.39 | 1.083            | 0.39 | 3-1    |
| P30                        | S4480202-4730209XX | S448MNH0202XX  | S473MNH0209XX    | 10          | 10                | 273.6        | 0.69      | 0.179             | 0.26 | 0.263             | 0.32 | 0.372             | 0.39 | 0.372            | 0.39 | 3-6    |
| P238                       | S3690209-3690218XX | S369MNH0218XX  | S369MNH0209XX    | 14          | 14                | 329.4        | 0.26      | 0.263             | 0.24 | 0.385             | 0.30 | 0.621             | 0.38 | 0.621            | 0.38 | 3-1    |
| P169                       | S4740204-4740211XX | S474MNH0204XX  | S474MNH0211XX    | 12          | 12                | 206.5        | 1.19      | 0.296             | 0.27 | 0.433             | 0.33 | 0.586             | 0.38 | 0.586            | 0.38 | 3-5    |
| P170                       | S4740211-4870201XX | S474MNH0211XX  | S487MNH0201XX    | 12          | 12                | 211.8        | 0.49      | 0.305             | 0.27 | 0.447             | 0.33 | 0.602             | 0.38 | 0.602            | 0.38 | 3-5    |
| P196                       | S4330203-4330204XX | S433MNH0203XX  | S433MNH0204XX    | 18          | 18                | 78.0         | 1.58      | 0.137             | 0.22 | 0.205             | 0.27 | 0.371             | 0.38 | 0.371            | 0.38 | 3-2    |
| P172                       | S4870202-4870203XX | S487MNH0202XX  | S487MNH0203XX    | 12          | 12                | 256.9        | 1.27      | 0.321             | 0.25 | 0.472             | 0.31 | 0.634             | 0.36 | 0.634            | 0.36 | 3-6    |
| P77                        | S6110203-5900219XX | S611MNH0203XX  | S590MNH0219XX    | 18          | 18                | 357.0        | 0.23      | 0.274             | 0.15 | 0.414             | 0.19 | 0.495             | 0.35 | 0.500            | 0.32 | 3-13   |
| P171                       | S4870201-4870202XX | S487MNH0201XX  | S487MNH0202XX    | 12          | 12                | 257.5        | 1.27      | 0.305             | 0.23 | 0.447             | 0.28 | 0.606             | 0.33 | 0.606            | 0.33 | 3-5    |
| P215                       | S4470206-4470207XX | S447MNH0206XX  | S447MNH0207XX    | 10          | 10                | 269.7        | 1.90      | 0.048             | 0.22 | 0.073             | 0.26 | 0.126             | 0.33 | 0.126            | 0.33 | 3-4    |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P168                       | S4740212-4740204XX | S474MNH0212XX  | S474MNH0204XX    | 12          | 12                | 295.0        | 1.18      | 0.263             | 0.23 | 0.385             | 0.27 | 0.506             | 0.32 | 0.506            | 0.32 | 3-5    |
| P166                       | S4470201-4740205XX | S447MNH0201XX  | S474MNH0205XX    | 12          | 12                | 307.6        | 1.00      | 0.251             | 0.22 | 0.367             | 0.27 | 0.480             | 0.31 | 0.480            | 0.31 | 3-4    |
| P114                       | S4880206-4880216XX | S488MNH0206XX  | S488MNH0216XX    | 10          | 10                | 14.8         | 0.67      | 0.108             | 0.21 | 0.159             | 0.25 | 0.235             | 0.30 | 0.235            | 0.30 | 3-6    |
| P34                        | S4730207-4880214XX | S473MNH0207XX  | S488MNH0214XX    | 10          | 10                | 364.6        | 0.68      | 0.101             | 0.21 | 0.151             | 0.25 | 0.219             | 0.30 | 0.219            | 0.30 | 3-6    |
| P167                       | S4740205-4740212XX | S474MNH0205XX  | S474MNH0212XX    | 12          | 12                | 297.5        | 1.18      | 0.254             | 0.22 | 0.371             | 0.26 | 0.489             | 0.30 | 0.489            | 0.30 | 3-5    |
| P203                       | S4340204-4340205XX | S434MNH0204XX  | S434MNH0205XX    | 12          | 12                | 303.6        | 0.14      | 0.052             | 0.18 | 0.079             | 0.22 | 0.149             | 0.30 | 0.149            | 0.30 | 3-3    |
| P33                        | S4730208-4730207XX | S473MNH0208XX  | S473MNH0207XX    | 10          | 10                | 353.9        | 0.61      | 0.098             | 0.20 | 0.146             | 0.25 | 0.211             | 0.30 | 0.211            | 0.30 | 3-6    |
| P111                       | S4730209-4730205XX | S473MNH0209XX  | S473MNH0205XX    | 10          | 10                | 352.4        | 0.51      | 0.100             | 0.20 | 0.148             | 0.24 | 0.215             | 0.30 | 0.215            | 0.30 | 3-6    |
| P113                       | S4730206-4880206XX | S473MNH0206XX  | S488MNH0206XX    | 10          | 10                | 347.0        | 0.89      | 0.107             | 0.20 | 0.158             | 0.24 | 0.233             | 0.29 | 0.233            | 0.29 | 3-6    |
| P31                        | S4730209-4480209XX | S473MNH0209XX  | S448MNH0209XX    | 10          | 10                | 393.3        | 0.35      | 0.079             | 0.20 | 0.117             | 0.24 | 0.172             | 0.29 | 0.172            | 0.29 | 3-6    |
| P200                       | S4070202-4070201XX | S407MNH0202XX  | S407MNH0201XX    | 10          | 10                | 57.5         | 0.30      | 0.050             | 0.18 | 0.076             | 0.22 | 0.130             | 0.29 | 0.130            | 0.29 | 3-3    |
| P122                       | S4480219-4330229XX | S448MNH0219XX  | S433MNH0229XX    | 10          | 10                | 266.9        | 0.27      | 0.071             | 0.21 | 0.110             | 0.26 | 0.135             | 0.28 | 0.135            | 0.28 | 3-2    |
| P32                        | S4480209-4730208XX | S448MNH0209XX  | S473MNH0208XX    | 10          | 10                | 342.9        | 0.72      | 0.081             | 0.19 | 0.119             | 0.23 | 0.182             | 0.28 | 0.182            | 0.28 | 3-6    |
| P296                       | S4350215-4350201XX | S435MNH0215XX  | S435MNH0201XX    | 8           | 8                 | 68.7         | 8.08      | 0.028             | 0.20 | 0.043             | 0.25 | 0.053             | 0.28 | 0.053            | 0.28 | 3-4    |
| P199                       | S4070203-4070202XX | S407MNH0203XX  | S407MNH0202XX    | 10          | 10                | 80.0         | 0.30      | 0.050             | 0.17 | 0.076             | 0.21 | 0.129             | 0.28 | 0.129            | 0.28 | 3-3    |
| P112                       | S4730205-4730206XX | S473MNH0205XX  | S473MNH0206XX    | 10          | 10                | 352.0        | 0.94      | 0.101             | 0.19 | 0.149             | 0.23 | 0.221             | 0.28 | 0.221            | 0.28 | 3-6    |
| P198                       | S4060210-4070203XX | S406MNH0210XX  | S407MNH0203XX    | 10          | 10                | 266.0        | 0.30      | 0.050             | 0.17 | 0.076             | 0.21 | 0.128             | 0.28 | 0.128            | 0.28 | 3-3    |
| P124                       | S4330212-4330230XX | S433MNH0212XX  | S433MNH0230XX    | 10          | 10                | 50.0         | 0.40      | 0.075             | 0.20 | 0.117             | 0.25 | 0.143             | 0.27 | 0.143            | 0.27 | 3-2    |
| P212                       | S4330207-4330206XX | S433MNH0207XX  | S433MNH0206XX    | 15          | 15                | 20.0         | 0.10      | 0.064             | 0.17 | 0.097             | 0.21 | 0.170             | 0.27 | 0.170            | 0.27 | 3-2    |
| P123                       | S4330229-4330212XX | S433MNH0229XX  | S433MNH0212XX    | 10          | 10                | 180.0        | 0.40      | 0.074             | 0.20 | 0.115             | 0.24 | 0.142             | 0.27 | 0.142            | 0.27 | 3-2    |
| P9                         | S4350202-4350201XX | S435MNH0202XX  | S435MNH0201XX    | 10          | 10                | 14.0         | 1.43      | 0.062             | 0.20 | 0.096             | 0.24 | 0.116             | 0.27 | 0.116            | 0.27 | 3-4    |
| P258                       | S4470202-4470201XX | S447MNH0202XX  | S447MNH0201XX    | 12          | 12                | 130.0        | 0.50      | 0.096             | 0.19 | 0.145             | 0.24 | 0.171             | 0.27 | 0.171            | 0.27 | 3-4    |
| P204                       | S4340205-4340214XX | S434MNH0205XX  | S434MNH0214XX    | 10          | 10                | 308.0        | 0.19      | 0.062             | 0.17 | 0.092             | 0.20 | 0.167             | 0.26 | 0.167            | 0.26 | 3-3    |
| P125                       | S4330230-4330224XX | S433MNH0230XX  | S433MNH0224XX    | 10          | 10                | 100.0        | 0.39      | 0.075             | 0.19 | 0.117             | 0.23 | 0.146             | 0.26 | 0.146            | 0.26 | 3-2    |
| P201                       | S4070201-4340203XX | S407MNH0201XX  | S434MNH0203XX    | 10          | 10                | 327.6        | 0.30      | 0.050             | 0.16 | 0.076             | 0.20 | 0.135             | 0.26 | 0.135            | 0.26 | 3-3    |





Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P7                         | S4350214-4350206XX | S435MNH0214XX  | S435MNH0206XX    | 10          | 10                | 185.0        | 0.35      | 0.062             | 0.19 | 0.096             | 0.24 | 0.115             | 0.26 | 0.115            | 0.26 | 3-4    |
| P268                       | S4740203-4740204XX | S474MNH0203XX  | S474MNH0204XX    | 12          | 12                | 280.3        | 0.19      | 0.027             | 0.17 | 0.042             | 0.21 | 0.069             | 0.25 | 0.069            | 0.25 | 3-5    |
| P121                       | S4480208-4480219XX | S448MNH0208XX  | S448MNH0219XX    | 10          | 10                | 297.0        | 0.29      | 0.028             | 0.17 | 0.044             | 0.22 | 0.067             | 0.25 | 0.067            | 0.25 | 3-2    |
| P76                        | S6110202-6110203XX | S611MNH0202XX  | S611MNH0203XX    | 18          | 18                | 323.0        | 0.18      | 0.198             | 0.19 | 0.298             | 0.24 | 0.342             | 0.25 | 0.342            | 0.25 | 3-13   |
| P3                         | S4340201-4350211XX | S434MNH0201XX  | S435MNH0211XX    | 10          | 10                | 300.0        | 0.03      | 0.025             | 0.18 | 0.039             | 0.22 | 0.050             | 0.25 | 0.050            | 0.25 | 3-3    |
| P2                         | S4350219-4340201XX | S435MNH0219XX  | S434MNH0201XX    | 10          | 10                | 395.0        | 0.33      | 0.021             | 0.17 | 0.032             | 0.21 | 0.040             | 0.24 | 0.040            | 0.24 | 3-3    |
| P202                       | S4340203-4340204XX | S434MNH0203XX  | S434MNH0204XX    | 12          | 12                | 315.3        | 0.71      | 0.050             | 0.14 | 0.076             | 0.17 | 0.140             | 0.23 | 0.140            | 0.23 | 3-3    |
| P6                         | S4350213-4350214XX | S435MNH0213XX  | S435MNH0214XX    | 10          | 10                | 79.0         | 0.43      | 0.045             | 0.17 | 0.069             | 0.21 | 0.086             | 0.23 | 0.086            | 0.23 | 3-4    |
| P194                       | S4330225-4330206XX | S433MNH0225XX  | S433MNH0206XX    | 15          | 15                | 100.0        | 0.46      | 0.073             | 0.14 | 0.109             | 0.17 | 0.197             | 0.23 | 0.197            | 0.23 | 3-2    |
| P75                        | S6110201-6110202XX | S611MNH0201XX  | S611MNH0202XX    | 18          | 18                | 65.0         | 0.23      | 0.195             | 0.17 | 0.295             | 0.21 | 0.334             | 0.22 | 0.334            | 0.22 | 3-13   |
| P195                       | S4330206-4330203XX | S433MNH0206XX  | S433MNH0203XX    | 15          | 15                | 185.7        | 0.31      | 0.137             | 0.14 | 0.205             | 0.17 | 0.369             | 0.22 | 0.369            | 0.22 | 3-2    |
| P8                         | S4350206-4350202XX | S435MNH0206XX  | S435MNH0202XX    | 10          | 10                | 129.0        | 0.30      | 0.062             | 0.17 | 0.096             | 0.20 | 0.116             | 0.22 | 0.116            | 0.22 | 3-4    |
| P211                       | S4330213-4330207XX | S433MNH0213XX  | S433MNH0207XX    | 15          | 15                | 335.0        | 0.36      | 0.064             | 0.14 | 0.097             | 0.17 | 0.168             | 0.22 | 0.168            | 0.22 | 3-2    |
| P74                        | S6100207-6110201XX | S610MNH0207XX  | S611MNH0201XX    | 18          | 18                | 388.0        | 0.20      | 0.194             | 0.17 | 0.294             | 0.21 | 0.331             | 0.22 | 0.331            | 0.22 | 3-9    |
| P257                       | S4470209-4470202XX | S447MNH0209XX  | S447MNH0202XX    | 12          | 12                | 103.0        | 0.51      | 0.096             | 0.16 | 0.145             | 0.20 | 0.170             | 0.22 | 0.170            | 0.22 | 3-4    |
| P5                         | S4350212-4350213XX | S435MNH0212XX  | S435MNH0213XX    | 10          | 10                | 300.0        | 0.33      | 0.045             | 0.16 | 0.069             | 0.19 | 0.085             | 0.21 | 0.085            | 0.21 | 3-3    |
| P256                       | S4470203-4470209XX | S447MNH0203XX  | S447MNH0209XX    | 12          | 12                | 197.0        | 0.69      | 0.096             | 0.16 | 0.145             | 0.19 | 0.169             | 0.21 | 0.169            | 0.21 | 3-4    |
| P261                       | S4750203-4750204XX | S475MNH0203XX  | S475MNH0204XX    | 10          | 10                | 250.5        | 0.16      | 0.009             | 0.09 | 0.014             | 0.13 | 0.026             | 0.21 | 0.026            | 0.21 | 3-5    |
| P254                       | S4080202-4080201XX | S408MNH0202XX  | S408MNH0201XX    | 10          | 10                | 212.0        | 0.78      | 0.011             | 0.13 | 0.017             | 0.16 | 0.031             | 0.21 | 0.031            | 0.21 | 3-3    |
| P192                       | S4080211-4330211XX | S408MNH0211XX  | S433MNH0211XX    | 15          | 15                | 270.3        | 0.39      | 0.068             | 0.13 | 0.103             | 0.16 | 0.181             | 0.20 | 0.181            | 0.20 | 3-2    |
| P193                       | S4330211-4330225XX | S433MNH0211XX  | S433MNH0225XX    | 15          | 15                | 367.6        | 0.20      | 0.073             | 0.13 | 0.109             | 0.16 | 0.187             | 0.20 | 0.187            | 0.20 | 3-2    |
| P4                         | S4350211-4350212XX | S435MNH0211XX  | S435MNH0212XX    | 10          | 10                | 302.0        | 0.60      | 0.038             | 0.15 | 0.059             | 0.18 | 0.072             | 0.20 | 0.072            | 0.20 | 3-3    |
| P255                       | S4460210-4470203XX | S446MNH0210XX  | S447MNH0203XX    | 12          | 12                | 300.0        | 0.74      | 0.096             | 0.15 | 0.145             | 0.18 | 0.167             | 0.20 | 0.167            | 0.20 | 3-4    |
| P253                       | S4080203-4080202XX | S408MNH0203XX  | S408MNH0202XX    | 10          | 10                | 347.4        | 0.01      | 0.009             | 0.13 | 0.014             | 0.15 | 0.026             | 0.20 | 0.026            | 0.20 | 3-3    |
| P295                       | S4460209-4460210XX | S446MNH0209XX  | S446MNH0210XX    | 12          | 12                | 300.0        | 0.73      | 0.083             | 0.14 | 0.127             | 0.18 | 0.146             | 0.19 | 0.146            | 0.19 | 3-4    |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P191                       | S4080201-4080211XX | S408MNH0201XX  | S408MNH0211XX    | 15          | 15                | 396.9        | 0.25      | 0.066             | 0.12 | 0.099             | 0.15 | 0.171             | 0.19 | 0.171            | 0.19 | 3-2    |
| P120                       | S4480205-4480208XX | S448MNH0205XX  | S448MNH0208XX    | 10          | 10                | 279.0        | 0.30      | 0.021             | 0.12 | 0.032             | 0.15 | 0.052             | 0.19 | 0.052            | 0.19 | 3-15   |
| P252                       | S4080204-4080203XX | S408MNH0204XX  | S408MNH0203XX    | 10          | 10                | 329.6        | 0.31      | 0.004             | 0.12 | 0.006             | 0.14 | 0.014             | 0.19 | 0.014            | 0.19 | 3-3    |
| P278                       | S4730203-4730209XX | S473MNH0203XX  | S473MNH0209XX    | 10          | 10                | 214.0        | 0.94      | 0.000             | 0.11 | 0.000             | 0.14 | 0.003             | 0.18 | 0.003            | 0.18 | 3-6    |
| P214                       | S4470205-4470206XX | S447MNH0205XX  | S447MNH0206XX    | 10          | 10                | 260.4        | 1.12      | 0.036             | 0.11 | 0.054             | 0.13 | 0.105             | 0.18 | 0.105            | 0.18 | 3-4    |
| P283                       | S4330227-4480205XX | S433MNH0227XX  | S448MNH0205XX    | 10          | 10                | 415.0        | 0.28      | 0.021             | 0.11 | 0.032             | 0.14 | 0.048             | 0.17 | 0.048            | 0.17 | 3-15   |
| P210                       | S4330202-4330213XX | S433MNH0202XX  | S433MNH0213XX    | 15          | 15                | 170.0        | 0.35      | 0.054             | 0.11 | 0.081             | 0.13 | 0.147             | 0.17 | 0.147            | 0.17 | 3-2    |
| P294                       | S4460208-4460209XX | S446MNH0208XX  | S446MNH0209XX    | 10          | 10                | 300.0        | 1.13      | 0.019             | 0.12 | 0.028             | 0.15 | 0.046             | 0.17 | 0.046            | 0.17 | 3-4    |
| P213                       | S4340214-4470205XX | S434MNH0214XX  | S447MNH0205XX    | 10          | 10                | 264.7        | 2.03      | 0.036             | 0.10 | 0.054             | 0.12 | 0.101             | 0.17 | 0.101            | 0.17 | 3-3    |
| P209                       | S4330226-4330202XX | S433MNH0226XX  | S433MNH0202XX    | 15          | 15                | 11.0         | 0.36      | 0.054             | 0.10 | 0.081             | 0.12 | 0.144             | 0.16 | 0.144            | 0.16 | 3-3    |
| P206                       | S4340211-4340207XX | S434MNH0211XX  | S434MNH0207XX    | 15          | 15                | 409.3        | 0.20      | 0.047             | 0.10 | 0.071             | 0.13 | 0.121             | 0.16 | 0.121            | 0.16 | 3-3    |
| P267                       | S4740202-4740203XX | S474MNH0202XX  | S474MNH0203XX    | 12          | 12                | 293.9        | 0.29      | 0.024             | 0.10 | 0.038             | 0.13 | 0.061             | 0.16 | 0.061            | 0.16 | 3-5    |
| P190                       | S4080229-4080201XX | S408MNH0229XX  | S408MNH0201XX    | 15          | 15                | 75.0         | 1.04      | 0.051             | 0.10 | 0.077             | 0.12 | 0.127             | 0.16 | 0.127            | 0.16 | 3-3    |
| P188                       | S4340213-4080230XX | S434MNH0213XX  | S408MNH0230XX    | 12          | 12                | 366.0        | 0.96      | 0.049             | 0.10 | 0.072             | 0.13 | 0.116             | 0.16 | 0.116            | 0.16 | 3-3    |
| P186                       | S4070204-4070206XX | S407MNH0204XX  | S407MNH0206XX    | 10          | 10                | 262.4        | 0.51      | 0.021             | 0.11 | 0.033             | 0.14 | 0.038             | 0.16 | 0.038            | 0.16 | 3-3    |
| P189                       | S4080230-4080229XX | S408MNH0230XX  | S408MNH0229XX    | 12          | 12                | 280.2        | 0.96      | 0.051             | 0.10 | 0.077             | 0.12 | 0.125             | 0.15 | 0.125            | 0.15 | 3-3    |
| P208                       | S4330214-4330226XX | S433MNH0214XX  | S433MNH0226XX    | 15          | 15                | 319.5        | 0.59      | 0.054             | 0.10 | 0.081             | 0.12 | 0.143             | 0.15 | 0.143            | 0.15 | 3-3    |
| P187                       | S4070206-4340213XX | S407MNH0206XX  | S434MNH0213XX    | 12          | 12                | 186.8        | 0.89      | 0.049             | 0.10 | 0.072             | 0.12 | 0.110             | 0.15 | 0.110            | 0.15 | 3-3    |
| P282                       | S4330228-4330227XX | S433MNH0228XX  | S433MNH0227XX    | 10          | 10                | 36.1         | 0.44      | 0.013             | 0.10 | 0.020             | 0.12 | 0.033             | 0.15 | 0.033            | 0.15 | 3-3    |
| P1                         | S4350210-4350219XX | S435MNH0210XX  | S435MNH0219XX    | 10          | 10                | 390.0        | 0.33      | 0.021             | 0.11 | 0.032             | 0.14 | 0.036             | 0.15 | 0.036            | 0.15 | 3-3    |
| P205                       | S4340214-4340211XX | S434MNH0214XX  | S434MNH0211XX    | 15          | 15                | 426.4        | 1.11      | 0.033             | 0.09 | 0.050             | 0.11 | 0.095             | 0.15 | 0.095            | 0.15 | 3-3    |
| P73                        | S6100210-6100207XX | S610MNH0210XX  | S610MNH0207XX    | 18          | 18                | 388.0        | 0.20      | 0.008             | 0.11 | 0.008             | 0.13 | 0.028             | 0.14 | 0.028            | 0.14 | 3-9    |
| P260                       | S4760202-4750203XX | S476MNH0202XX  | S475MNH0203XX    | 10          | 10                | 350.4        | 0.14      | 0.009             | 0.09 | 0.014             | 0.11 | 0.022             | 0.14 | 0.022            | 0.14 | 3-5    |
| P266                       | S4750209-4740202XX | S475MNH0209XX  | S474MNH0202XX    | 12          | 12                | 237.9        | 0.32      | 0.019             | 0.09 | 0.030             | 0.11 | 0.049             | 0.14 | 0.049            | 0.14 | 3-5    |
| P207                       | S4340207-4330214XX | S434MNH0207XX  | S433MNH0214XX    | 15          | 15                | 267.8        | 0.58      | 0.047             | 0.09 | 0.071             | 0.11 | 0.127             | 0.14 | 0.127            | 0.14 | 3-3    |



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

| Sewer Main ID <sup>3</sup> | Facility ID        | Upstream MH ID | Downstream MH ID | Ex. D.(in.) | WWMP CIP D. (in.) | Length (ft.) | Slope (%) | ADWF <sup>1</sup> |      | PDWF <sup>1</sup> |      | PWWF <sup>1</sup> |      | CIP <sup>2</sup> |      | Figure |
|----------------------------|--------------------|----------------|------------------|-------------|-------------------|--------------|-----------|-------------------|------|-------------------|------|-------------------|------|------------------|------|--------|
|                            |                    |                |                  |             |                   |              |           | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)   | d/D  | Max. Flow (mgd)  | d/D  |        |
| P185                       | S4070213-4070204XX | S407MNH0213XX  | S407MNH0204XX    | 10          | 10                | 278.2        | 0.20      | 0.014             | 0.10 | 0.022             | 0.13 | 0.025             | 0.13 | 0.025            | 0.13 | 3-3    |
| P275                       | S4880203-4880215XX | S488MNH0203XX  | S488MNH0215XX    | 10          | 10                | 358.2        | 1.32      | 0.006             | 0.05 | 0.010             | 0.06 | 0.028             | 0.13 | 0.028            | 0.10 | 3-6    |
| P281                       | S4340206-4330228XX | S434MNH0206XX  | S433MNH0228XX    | 10          | 10                | 208.5        | 0.43      | 0.013             | 0.08 | 0.020             | 0.10 | 0.032             | 0.13 | 0.032            | 0.13 | 3-3    |
| P271                       | S4750215-4750209XX | S475MNH0215XX  | S475MNH0209XX    | 10          | 10                | 40.4         | 0.79      | 0.007             | 0.08 | 0.011             | 0.10 | 0.019             | 0.12 | 0.019            | 0.12 | 3-5    |
| P297                       | S4350215-4350216XX | S435MNH0215XX  | S435MNH0216XX    | 8           | 8                 | 95.0         | 3.31      | 0.018             | 0.09 | 0.027             | 0.11 | 0.034             | 0.12 | 0.034            | 0.12 | 3-4    |
| P265                       | S4750210-4750209XX | S475MNH0210XX  | S475MNH0209XX    | 10          | 10                | 250.7        | 1.84      | 0.011             | 0.08 | 0.017             | 0.10 | 0.024             | 0.12 | 0.024            | 0.12 | 3-5    |
| P293                       | S4350217-4460208XX | S435MNH0217XX  | S446MNH0208XX    | 10          | 10                | 300.0        | 1.13      | 0.019             | 0.08 | 0.028             | 0.09 | 0.041             | 0.12 | 0.041            | 0.12 | 3-4    |
| P292                       | S4350216-4350217XX | S435MNH0216XX  | S435MNH0217XX    | 10          | 10                | 160.0        | 1.10      | 0.019             | 0.08 | 0.028             | 0.10 | 0.037             | 0.11 | 0.037            | 0.11 | 3-4    |
| P280                       | S4340212-4340206XX | S434MNH0212XX  | S434MNH0206XX    | 10          | 10                | 320.3        | 0.87      | 0.010             | 0.07 | 0.015             | 0.09 | 0.025             | 0.11 | 0.025            | 0.11 | 3-3    |
| P259                       | S4760201-4760202XX | S476MNH0201XX  | S476MNH0202XX    | 10          | 10                | 356.4        | 0.15      | 0.001             | 0.06 | 0.002             | 0.08 | 0.007             | 0.11 | 0.007            | 0.11 | 3-5    |
| P270                       | S4750217-4750215XX | S475MNH0217XX  | S475MNH0215XX    | 10          | 10                | 300.0        | 0.30      | 0.007             | 0.07 | 0.011             | 0.08 | 0.019             | 0.10 | 0.019            | 0.10 | 3-5    |
| P269                       | S4860203-4750217XX | S486MNH0203XX  | S475MNH0217XX    | 10          | 10                | 316.3        | 0.77      | 0.003             | 0.06 | 0.005             | 0.07 | 0.009             | 0.09 | 0.009            | 0.09 | 3-5    |
| P274                       | S4730204-4880203XX | S473MNH0204XX  | S488MNH0203XX    | 10          | 10                | 360.3        | 1.03      | 0.004             | 0.04 | 0.006             | 0.05 | 0.020             | 0.09 | 0.020            | 0.09 | 3-6    |
| P264                       | S4750208-4750210XX | S475MNH0208XX  | S475MNH0210XX    | 10          | 10                | 198.1        | 0.85      | 0.008             | 0.06 | 0.013             | 0.07 | 0.017             | 0.08 | 0.017            | 0.08 | 3-5    |
| P273                       | S4740201-4730204XX | S474MNH0201XX  | S473MNH0204XX    | 10          | 10                | 341.1        | 1.03      | 0.003             | 0.04 | 0.005             | 0.05 | 0.014             | 0.08 | 0.014            | 0.08 | 3-6    |
| P279                       | S4340209-4340214XX | S434MNH0209XX  | S434MNH0214XX    | 15          | 15                | 297.6        | 0.93      | 0.007             | 0.05 | 0.011             | 0.06 | 0.016             | 0.07 | 0.016            | 0.07 | 3-3    |
| P263                       | S4740207-4750208XX | S474MNH0207XX  | S475MNH0208XX    | 10          | 10                | 244.6        | 0.82      | 0.003             | 0.05 | 0.005             | 0.06 | 0.008             | 0.07 | 0.008            | 0.07 | 3-5    |
| P72                        | S6100209-6100210XX | S610MNH0209XX  | S610MNH0210XX    | 18          | 18                | 384.0        | 0.20      | 0.004             | 0.03 | 0.004             | 0.03 | 0.014             | 0.06 | 0.014            | 0.06 | 3-9    |
| P272                       | S4740213-4740201XX | S474MNH0213XX  | S474MNH0201XX    | 10          | 10                | 342.8        | 1.07      | 0.001             | 0.02 | 0.001             | 0.03 | 0.006             | 0.06 | 0.006            | 0.06 | 3-6    |
| P71                        | S6100205-6100209XX | S610MNH0205XX  | S610MNH0209XX    | 18          | 18                | 384.8        | 0.22      | 0.000             | 0.01 | 0.000             | 0.01 | 0.000             | 0.02 | 0.000            | 0.02 | 3-9    |
| P277                       | S4731001-4730203XX | S473PLG1001XX  | S473MNH0203XX    | 10          | 10                | 15.0         | 0.48      | 0.000             | 0.01 | 0.000             | 0.01 | 0.000             | 0.02 | 0.000            | 0.02 | 3-6    |
| P119                       | S4480204-4480205XX | S448MNH0204XX  | S448MNH0205XX    | 10          | 10                | 6.0          | 1.67      | 0.000             | 0.00 | 0.000             | 0.00 | 0.000             | 0.00 | 0.000            | 0.00 | 3-15   |

\*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with existing diameter.
2. Pipeline was analyzed with WWMP CIP diameter.
3. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P164                 | S4500212-4500211XX | S450MNH0212XX  | S450MNH0211XX    | 16             | 16                   | 20.8            | 1.59      | 0.627                 | 0.64 | 0.872                 | 0.74 | 1.577                 | 0.99 | 3-11   |
| P165                 | S4500211-4500210XX | S450MNH0211XX  | S450MNH0210XX    | 16             | 16                   | 31.3            | 1.18      | 0.628                 | 0.62 | 0.873                 | 0.71 | 1.577                 | 0.96 | 3-11   |
| P86                  | S6520205-6520204XX | S652MNH0205XX  | S652MNH0204XX    | 33             | 33                   | 10.0            | 0.10      | 5.994                 | 0.51 | 8.585                 | 0.62 | 16.392                | 0.88 | 3-10   |
| P85                  | S6520225-6520205XX | S652MNH0225XX  | S652MNH0205XX    | 33             | 33                   | 20.7            | 0.53      | 5.992                 | 0.49 | 8.571                 | 0.60 | 15.839                | 0.88 | 3-10   |
| P50                  | S5290207-5290208XX | S529MNH0207XX  | S529MNH0208XX    | 12             | 12                   | 333.0           | 0.26      | 0.439                 | 0.44 | 0.659                 | 0.55 | 1.178                 | 0.85 | 3-8    |
| P106                 | S6520208-6520225XX | S652MNH0208XX  | S652MNH0225XX    | 33             | 33                   | 41.2            | 0.46      | 1.727                 | 0.43 | 2.653                 | 0.54 | 3.784                 | 0.82 | 3-10   |
| P150                 | S5310212-5500209XX | S531MNH0212XX  | S550MNH0209XX    | 27             | 27                   | 355.6           | 0.24      | 3.080                 | 0.40 | 4.334                 | 0.48 | 10.058                | 0.81 | 3-12   |
| P49                  | S5290206-5290207XX | S529MNH0206XX  | S529MNH0207XX    | 12             | 12                   | 216.6           | 0.31      | 0.435                 | 0.41 | 0.652                 | 0.52 | 1.164                 | 0.78 | 3-8    |
| P51                  | S5290208-5520204XX | S529MNH0208XX  | S552MNH0204XX    | 12             | 12                   | 361.0           | 0.25      | 0.439                 | 0.41 | 0.659                 | 0.52 | 1.184                 | 0.78 | 3-8    |
| P105                 | S6510210-6520208XX | S651MNH0210XX  | S652MNH0208XX    | 33             | 33                   | 220.0           | 0.03      | 1.672                 | 0.39 | 2.496                 | 0.51 | 3.511                 | 0.78 | 3-10   |
| P138                 | S4710213-4900224XX | S471MNH0213XX  | S490MNH0224XX    | 27             | 27                   | 1086.8          | 0.24      | 2.798                 | 0.37 | 3.938                 | 0.44 | 9.425                 | 0.78 | 3-11   |
| P163                 | S4320227-4500212XX | S432MNH0227XX  | S450MNH0212XX    | 16             | 16                   | 552.4           | 0.30      | 0.627                 | 0.42 | 0.870                 | 0.50 | 1.581                 | 0.76 | 3-11   |
| P151                 | S5500209-5500207XX | S550MNH0209XX  | S550MNH0207XX    | 27             | 27                   | 31.8            | 0.03      | 3.080                 | 0.40 | 4.334                 | 0.48 | 10.059                | 0.76 | 3-12   |
| P110                 | S5290204-5290202XX | S529MNH0204XX  | S529MNH0202XX    | 12             | 12                   | 40.0            | 0.25      | 0.220                 | 0.39 | 0.323                 | 0.50 | 0.549                 | 0.75 | 3-7    |
| P104                 | S6510208-6510210XX | S651MNH0208XX  | S651MNH0210XX    | 33             | 33                   | 110.0           | 0.10      | 1.678                 | 0.37 | 2.525                 | 0.48 | 3.446                 | 0.75 | 3-10   |
| P87                  | S6520214-6520204XX | S652MNH0204XX  | S652MNH0214XX    | 39             | 39                   | 54.7            | 0.18      | 6.008                 | 0.44 | 8.560                 | 0.53 | 15.910                | 0.75 | 3-10   |
| P47                  | S5290202-5290213XX | S529MNH0202XX  | S529MNH0213XX    | 12             | 12                   | 319.8           | 0.27      | 0.426                 | 0.40 | 0.639                 | 0.50 | 1.126                 | 0.74 | 3-7    |
| P145                 | S5110211-5110209XX | S511MNH0211XX  | S511MNH0209XX    | 27             | 27                   | 295.3           | 0.13      | 3.003                 | 0.37 | 4.233                 | 0.44 | 9.878                 | 0.73 | 3-12   |
| P144                 | S5110229-5110211XX | S511MNH0229XX  | S511MNH0211XX    | 27             | 27                   | 206.5           | 0.58      | 2.998                 | 0.37 | 4.237                 | 0.44 | 9.879                 | 0.73 | 3-12   |
| P48                  | S5290213-5290206XX | S529MNH0213XX  | S529MNH0206XX    | 12             | 12                   | 20.4            | 0.54      | 0.434                 | 0.38 | 0.651                 | 0.48 | 1.160                 | 0.72 | 3-8    |
| P149                 | S5300202-5310212XX | S530MNH0202XX  | S531MNH0212XX    | 27             | 27                   | 355.6           | 0.56      | 3.075                 | 0.35 | 4.329                 | 0.42 | 10.050                | 0.72 | 3-12   |
| P139                 | S4900224-4900207XX | S490MNH0224XX  | S490MNH0207XX    | 27             | 27                   | 258.7           | 0.24      | 2.802                 | 0.36 | 3.965                 | 0.43 | 9.536                 | 0.71 | 3-11   |
| P99                  | S6500209-6510201XX | S650MNH0209XX  | S651MNH0201XX    | 18             | 18                   | 468.0           | 0.16      | 1.071                 | 0.45 | 1.614                 | 0.57 | 2.274                 | 0.71 | 3-10   |
| P183                 | S5130210-5130212XX | S513MNH0210XX  | S513MNH0212XX    | 10             | 10                   | 263.4           | 0.84      | 0.197                 | 0.41 | 0.297                 | 0.52 | 0.469                 | 0.71 | 3-7    |
| P98                  | S6500206-6500209XX | S650MNH0206XX  | S650MNH0209XX    | 18             | 18                   | 468.0           | 0.16      | 1.066                 | 0.43 | 1.610                 | 0.55 | 2.262                 | 0.69 | 3-10   |



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P52                  | S5520204-5520203XX | S552MNH0204XX  | S552MNH0203XX    | 12             | 12                   | 105.0           | 0.40      | 0.439                 | 0.38 | 0.659                 | 0.48 | 1.185                 | 0.68 | 3-8    |
| P103                 | S6510211-6510208XX | S651MNH0211XX  | S651MNH0208XX    | 33             | 33                   | 383.0           | 0.10      | 1.670                 | 0.32 | 2.484                 | 0.42 | 3.415                 | 0.67 | 3-10   |
| P97                  | S6500207-6500206XX | S650MNH0207XX  | S650MNH0206XX    | 18             | 18                   | 67.3            | 0.28      | 1.061                 | 0.41 | 1.606                 | 0.52 | 2.249                 | 0.66 | 3-10   |
| P41                  | S5130212-5130208XX | S513MNH0212XX  | S513MNH0208XX    | 12             | 12                   | 244.6           | 0.20      | 0.414                 | 0.38 | 0.621                 | 0.47 | 1.079                 | 0.66 | 3-7    |
| P78                  | S5900217-5900219XX | S590MNH0219XX  | S590MNH0217XX    | 18             | 18                   | 22.7            | 4.68      | 0.277                 | 0.33 | 0.417                 | 0.40 | 2.519                 | 0.66 | 3-13   |
| P89                  | CDT-39             | S652MNH0212XX  | OFALL-14         | 48             | 48                   | 28.6            | 0.35      | 18.406                | 0.40 | 26.374                | 0.48 | 48.082                | 0.66 | 3-10   |
| P46                  | S5290202-5290203XX | S529MNH0203XX  | S529MNH0202XX    | 15             | 15                   | 32.0            | 0.13      | 0.206                 | 0.37 | 0.316                 | 0.45 | 0.572                 | 0.65 | 3-7    |
| P137                 | S4500207-4710213XX | S450MNH0207XX  | S471MNH0213XX    | 27             | 27                   | 1135.1          | 0.84      | 2.761                 | 0.31 | 3.892                 | 0.38 | 9.343                 | 0.65 | 3-11   |
| P142                 | S4900219-5110214XX | S490MNH0219XX  | S511MNH0214XX    | 27             | 27                   | 106.7           | 0.25      | 2.994                 | 0.34 | 4.245                 | 0.40 | 9.877                 | 0.65 | 3-12   |
| P242                 | S3920207-3920206XX | S392MNH0207XX  | S392MNH0206XX    | 8              | 8                    | 47.5            | 1.05      | 0.280                 | 0.38 | 0.405                 | 0.47 | 0.685                 | 0.64 | 3-1    |
| P141                 | S4900201-4900219XX | S490MNH0201XX  | S490MNH0219XX    | 27             | 27                   | 193.4           | 0.62      | 2.958                 | 0.33 | 4.220                 | 0.39 | 9.865                 | 0.64 | 3-11   |
| P68                  | S6090205-6090202XX | S609MNH0205XX  | S609MNH0202XX    | 12             | 15                   | 95.0            | 0.25      | 0.620                 | 0.37 | 0.938                 | 0.47 | 1.517                 | 0.63 | 3-9    |
| P140                 | CDT-51             | S490MNH0207XX  | S490MNH0201XX    | 27             | 27                   | 23.4            | 0.13      | 2.868                 | 0.32 | 4.359                 | 0.39 | 10.704                | 0.63 | 3-11   |
| P67                  | S6090201-6090205XX | S609MNH0201XX  | S609MNH0205XX    | 12             | 15                   | 278.0           | 0.25      | 0.606                 | 0.37 | 0.917                 | 0.47 | 1.494                 | 0.63 | 3-9    |
| P66                  | S5920208-6090201XX | S592MNH0208XX  | S609MNH0201XX    | 12             | 15                   | 373.0           | 0.25      | 0.606                 | 0.37 | 0.917                 | 0.46 | 1.491                 | 0.63 | 3-9    |
| P65                  | S5920209-5920208XX | S592MNH0209XX  | S592MNH0208XX    | 12             | 15                   | 155.0           | 0.25      | 0.606                 | 0.37 | 0.917                 | 0.46 | 1.487                 | 0.62 | 3-9    |
| P64                  | S5920206-5920209XX | S592MNH0206XX  | S592MNH0209XX    | 12             | 15                   | 218.0           | 0.25      | 0.592                 | 0.37 | 0.895                 | 0.46 | 1.464                 | 0.62 | 3-9    |
| P63                  | S5920210-5920206XX | S592MNH0210XX  | S592MNH0206XX    | 12             | 15                   | 258.0           | 0.25      | 0.592                 | 0.37 | 0.896                 | 0.46 | 1.462                 | 0.62 | 3-9    |
| P62                  | S5920207-5920210XX | S592MNH0207XX  | S592MNH0210XX    | 12             | 15                   | 115.0           | 0.25      | 0.592                 | 0.36 | 0.896                 | 0.46 | 1.459                 | 0.62 | 3-9    |
| P22                  | S4750214-4470211XX | S475MNH0214XX  | S447MNH0211XX    | 10             | 10                   | 211.6           | 0.19      | 0.174                 | 0.38 | 0.289                 | 0.51 | 0.393                 | 0.61 | 3-4    |
| P90                  | S6290216-6290218XX | S629MNH0216XX  | S629MNH0218XX    | 33             | 33                   | 36.4            | 0.93      | 4.172                 | 0.40 | 5.283                 | 0.46 | 8.540                 | 0.61 | 3-10   |
| P61                  | S5690207-5920207XX | S569MNH0207XX  | S592MNH0207XX    | 12             | 15                   | 180.0           | 0.25      | 0.564                 | 0.36 | 0.852                 | 0.45 | 1.413                 | 0.61 | 3-9    |
| P60                  | S5690201-5690207XX | S569MNH0201XX  | S569MNH0207XX    | 12             | 15                   | 200.0           | 0.25      | 0.564                 | 0.36 | 0.852                 | 0.45 | 1.411                 | 0.60 | 3-9    |
| P59                  | S5690202-5690201XX | S569MNH0202XX  | S569MNH0201XX    | 12             | 15                   | 200.0           | 0.25      | 0.564                 | 0.36 | 0.852                 | 0.45 | 1.409                 | 0.60 | 3-9    |
| P100                 | S6510201-6510203XX | S651MNH0201XX  | S651MNH0203XX    | 18             | 18                   | 468.0           | 0.17      | 1.076                 | 0.39 | 1.616                 | 0.49 | 2.285                 | 0.60 | 3-10   |



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P109                 | S5120206-5290204XX | S512MNH0206XX  | S529MNH0204XX    | 12             | 12                   | 280.0           | 0.25      | 0.220                 | 0.32 | 0.323                 | 0.41 | 0.549                 | 0.60 | 3-7    |
| P96                  | S6310208-6500207XX | S631MNH0208XX  | S650MNH0207XX    | 18             | 18                   | 497.0           | 0.29      | 1.060                 | 0.38 | 1.606                 | 0.48 | 2.248                 | 0.60 | 3-10   |
| P148                 | S5300219-5300202XX | S530MNH0219XX  | S530MNH0202XX    | 27             | 27                   | 395.2           | 0.56      | 3.019                 | 0.31 | 4.247                 | 0.37 | 9.918                 | 0.60 | 3-12   |
| P143                 | S5110214-5110229XX | S511MNH0214XX  | S511MNH0229XX    | 27             | 27                   | 88.6            | 0.47      | 2.995                 | 0.31 | 4.241                 | 0.37 | 9.886                 | 0.60 | 3-12   |
| P147                 | S5110218-5300219XX | S511MNH0218XX  | S530MNH0219XX    | 27             | 27                   | 310.5           | 0.56      | 3.013                 | 0.30 | 4.242                 | 0.36 | 9.902                 | 0.60 | 3-12   |
| P146                 | S5110209-5110218XX | S511MNH0209XX  | S511MNH0218XX    | 27             | 27                   | 306.6           | 0.56      | 3.008                 | 0.30 | 4.237                 | 0.36 | 9.889                 | 0.59 | 3-12   |
| P102                 | S6510205-6510211XX | S651MNH0205XX  | S651MNH0211XX    | 33             | 33                   | 132.0           | 0.09      | 1.817                 | 0.28 | 2.837                 | 0.37 | 3.522                 | 0.59 | 3-10   |
| P58                  | S5690203-5690202XX | S569MNH0203XX  | S569MNH0202XX    | 12             | 15                   | 244.0           | 0.26      | 0.536                 | 0.35 | 0.809                 | 0.44 | 1.363                 | 0.59 | 3-9    |
| P40                  | S5130213-5130212XX | S513MNH0213XX  | S513MNH0212XX    | 12             | 12                   | 353.0           | 1.30      | 0.217                 | 0.33 | 0.325                 | 0.41 | 0.607                 | 0.59 | 3-7    |
| P17                  | S4460201-4460207XX | S446MNH0201XX  | S446MNH0207XX    | 8              | 8                    | 127.1           | 0.83      | 0.167                 | 0.38 | 0.282                 | 0.51 | 0.354                 | 0.59 | 3-4    |
| P249                 | S4320232-4310207XX | S431MNH0207XX  | S432MNH0232XX    | 14             | 14                   | 227.5           | 0.10      | 0.616                 | 0.44 | 0.858                 | 0.52 | 1.545                 | 0.58 | 3-2    |
| P91                  | S6290218-6290217XX | S629MNH0218XX  | S629MNH0217XX    | 33             | 33                   | 91.0            | 0.35      | 3.313                 | 0.38 | 4.347                 | 0.44 | 7.593                 | 0.58 | 3-10   |
| P69                  | S6090202-6100203XX | S609MNH0202XX  | S610MNH0203XX    | 12             | 15                   | 373.0           | 0.28      | 0.620                 | 0.35 | 0.938                 | 0.45 | 1.521                 | 0.58 | 3-9    |
| P70                  | S6100203-6100205XX | S610MNH0203XX  | S610MNH0205XX    | 12             | 15                   | 56.0            | 0.80      | 0.879                 | 0.37 | 1.339                 | 0.47 | 1.924                 | 0.58 | 3-9    |
| P57                  | S5690204-5690203XX | S569MNH0204XX  | S569MNH0203XX    | 12             | 15                   | 331.0           | 0.23      | 0.467                 | 0.34 | 0.701                 | 0.42 | 1.244                 | 0.58 | 3-8    |
| P88                  | S6520212-6520214XX | S652MNH0214XX  | S652MNH0212XX    | 48             | 48                   | 51.1            | 0.37      | 16.079                | 0.32 | 22.887                | 0.40 | 42.154                | 0.57 | 3-10   |
| P21                  | S4750216-4750214XX | S475MNH0216XX  | S475MNH0214XX    | 10             | 10                   | 273.8           | 0.20      | 0.174                 | 0.36 | 0.289                 | 0.48 | 0.390                 | 0.57 | 3-5    |
| P197                 | S4330204-4330224XX | S433MNH0204XX  | S433MNH0224XX    | 21             | 21                   | 313.5           | 0.87      | 1.959                 | 0.33 | 2.908                 | 0.41 | 5.236                 | 0.57 | 3-2    |
| P152                 | S5500207-5500223XX | S550MNH0207XX  | S550MNH0223XX    | 33             | 33                   | 239.6           | 0.17      | 3.087                 | 0.32 | 4.342                 | 0.37 | 10.077                | 0.57 | 3-12   |
| P19                  | S4750206-4750205XX | S475MNH0206XX  | S475MNH0205XX    | 8              | 8                    | 132.7           | 1.34      | 0.167                 | 0.37 | 0.282                 | 0.48 | 0.357                 | 0.57 | 3-5    |
| P95                  | S6310201-6310208XX | S631MNH0201XX  | S631MNH0208XX    | 18             | 18                   | 283.9           | 0.29      | 1.055                 | 0.37 | 1.602                 | 0.46 | 2.235                 | 0.57 | 3-10   |
| P20                  | S4750205-4750216XX | S475MNH0205XX  | S475MNH0216XX    | 10             | 10                   | 269.5           | 0.20      | 0.171                 | 0.36 | 0.286                 | 0.47 | 0.384                 | 0.56 | 3-5    |
| P94                  | S6310202-6310201XX | S631MNH0202XX  | S631MNH0201XX    | 18             | 18                   | 121.3           | 0.31      | 1.052                 | 0.37 | 1.599                 | 0.46 | 2.227                 | 0.56 | 3-10   |
| P18                  | S4460207-4750206XX | S446MNH0207XX  | S475MNH0206XX    | 8              | 8                    | 203.1           | 0.37      | 0.167                 | 0.36 | 0.282                 | 0.48 | 0.356                 | 0.56 | 3-4    |
| P56                  | S5520201-5690204XX | S552MNH0201XX  | S569MNH0204XX    | 12             | 15                   | 400.0           | 0.27      | 0.446                 | 0.32 | 0.669                 | 0.39 | 1.211                 | 0.55 | 3-8    |





Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P218                 | S3930207-3930209XX | S393MNH0207XX  | S393MNH0209XX    | 21             | 21                   | 283.9           | 0.31      | 1.339                 | 0.32 | 2.103                 | 0.40 | 3.675                 | 0.55 | 3-1    |
| P54                  | S5520210-5520202XX | S552MNH0210XX  | S552MNH0202XX    | 12             | 15                   | 173.2           | 0.25      | 0.446                 | 0.31 | 0.669                 | 0.39 | 1.201                 | 0.55 | 3-8    |
| P53                  | S5520203-5520210XX | S552MNH0203XX  | S552MNH0210XX    | 12             | 15                   | 204.0           | 0.25      | 0.446                 | 0.31 | 0.669                 | 0.39 | 1.198                 | 0.54 | 3-8    |
| P93                  | S6310203-6310202XX | S631MNH0203XX  | S631MNH0202XX    | 18             | 18                   | 178.7           | 0.28      | 0.890                 | 0.35 | 1.349                 | 0.44 | 1.954                 | 0.54 | 3-9    |
| P55                  | S5520202-5520201XX | S552MNH0202XX  | S552MNH0201XX    | 12             | 15                   | 200.0           | 0.25      | 0.446                 | 0.31 | 0.669                 | 0.39 | 1.204                 | 0.54 | 3-8    |
| P250                 | S4320232-4320227XX | S432MNH0232XX  | S432MNH0227XX    | 16             | 16                   | 304.0           | 0.33      | 0.622                 | 0.32 | 0.865                 | 0.38 | 1.564                 | 0.54 | 3-2    |
| P224                 | S4080205-4080206XX | S408MNH0205XX  | S408MNH0206XX    | 21             | 21                   | 69.0            | 0.75      | 1.861                 | 0.31 | 2.784                 | 0.39 | 4.867                 | 0.53 | 3-1    |
| P101                 | S6510203-6510205XX | S651MNH0203XX  | S651MNH0205XX    | 36             | 36                   | 477.5           | 0.05      | 1.837                 | 0.28 | 2.892                 | 0.36 | 3.600                 | 0.53 | 3-10   |
| P135                 | S4310214-4500210XX | S431MNH0214XX  | S450MNH0210XX    | 27             | 27                   | 278.2           | 0.52      | 2.063                 | 0.27 | 2.968                 | 0.32 | 7.751                 | 0.53 | 3-11   |
| P11                  | S4350218-4350220XX | S435MNH0218XX  | S435MNH0220XX    | 8              | 8                    | 233.7           | 0.41      | 0.128                 | 0.35 | 0.218                 | 0.47 | 0.261                 | 0.53 | 3-4    |
| P134                 | S4320228-4310214XX | S432MNH0228XX  | S431MNH0214XX    | 27             | 27                   | 300.7           | 0.50      | 2.059                 | 0.26 | 2.964                 | 0.31 | 7.775                 | 0.53 | 3-11   |
| P133                 | S4320235-4320228XX | S432MNH0235XX  | S432MNH0228XX    | 27             | 27                   | 268.0           | 0.55      | 2.054                 | 0.25 | 2.959                 | 0.31 | 7.901                 | 0.53 | 3-2    |
| P12                  | S4350220-4460205XX | S435MNH0220XX  | S446MNH0205XX    | 8              | 8                    | 137.9           | 0.36      | 0.128                 | 0.35 | 0.218                 | 0.47 | 0.262                 | 0.53 | 3-4    |
| P136                 | S4500210-4500207XX | S450MNH0210XX  | S450MNH0207XX    | 27             | 27                   | 187.5           | 0.64      | 2.694                 | 0.27 | 3.801                 | 0.32 | 9.161                 | 0.52 | 3-11   |
| P92                  | S6100205-6310203XX | S610MNH0205XX  | S631MNH0203XX    | 18             | 18                   | 493.5           | 0.29      | 0.888                 | 0.34 | 1.348                 | 0.42 | 1.949                 | 0.52 | 3-9    |
| P241                 | S3920208-3920207XX | S392MNH0208XX  | S392MNH0207XX    | 10             | 10                   | 215.1           | 1.12      | 0.280                 | 0.31 | 0.405                 | 0.38 | 0.685                 | 0.52 | 3-1    |
| P225                 | S4080206-4080209XX | S408MNH0206XX  | S408MNH0209XX    | 21             | 21                   | 290.8           | 0.73      | 1.864                 | 0.31 | 2.787                 | 0.38 | 4.879                 | 0.52 | 3-1    |
| P219                 | S3930209-3930212XX | S393MNH0209XX  | S393MNH0212XX    | 21             | 21                   | 311.0           | 0.82      | 1.815                 | 0.31 | 2.721                 | 0.38 | 4.763                 | 0.52 | 3-1    |
| P217                 | S3940204-3930207XX | S394MNH0204XX  | S393MNH0207XX    | 21             | 21                   | 274.5           | 0.72      | 1.336                 | 0.30 | 2.100                 | 0.38 | 3.663                 | 0.52 | 3-1    |
| P229                 | S4330208-4330204XX | S433MNH0208XX  | S433MNH0204XX    | 21             | 21                   | 309.1           | 0.87      | 1.880                 | 0.30 | 2.803                 | 0.37 | 4.932                 | 0.52 | 3-2    |
| P84                  | S6290217-6520225XX | S629MNH0217XX  | S652MNH0225XX    | 42             | 42                   | 517.4           | 0.47      | 4.397                 | 0.29 | 6.167                 | 0.35 | 12.392                | 0.52 | 3-10   |
| P220                 | S3930212-3930213XX | S393MNH0212XX  | S393MNH0213XX    | 21             | 21                   | 293.7           | 0.71      | 1.819                 | 0.30 | 2.725                 | 0.38 | 4.776                 | 0.51 | 3-1    |
| P228                 | S4330210-4330208XX | S433MNH0210XX  | S433MNH0208XX    | 21             | 21                   | 310.5           | 0.87      | 1.876                 | 0.30 | 2.799                 | 0.37 | 4.919                 | 0.51 | 3-2    |
| P226                 | S4080209-4080231XX | S408MNH0209XX  | S408MNH0231XX    | 21             | 21                   | 314.0           | 0.86      | 1.868                 | 0.30 | 2.791                 | 0.37 | 4.892                 | 0.51 | 3-1    |
| P227                 | S4080231-4330210XX | S408MNH0231XX  | S433MNH0210XX    | 21             | 21                   | 320.0           | 0.88      | 1.872                 | 0.30 | 2.795                 | 0.37 | 4.906                 | 0.51 | 3-2    |



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P131                 | S4320220-4320230XX | S432MNH0220XX  | S432MNH0230XX    | 27             | 27                   | 248.8           | 0.20      | 2.056                 | 0.30 | 3.041                 | 0.36 | 6.525                 | 0.51 | 3-2    |
| P128                 | S4320204-4320205XX | S432MNH0204XX  | S432MNH0205XX    | 27             | 27                   | 32.6            | 0.31      | 1.976                 | 0.30 | 2.927                 | 0.37 | 5.324                 | 0.51 | 3-2    |
| P132                 | S4320230-4320235XX | S432MNH0230XX  | S432MNH0235XX    | 27             | 27                   | 12.4            | 0.81      | 2.045                 | 0.25 | 2.950                 | 0.30 | 5.062                 | 0.51 | 3-2    |
| P130                 | S4320213-4320220XX | S432MNH0213XX  | S432MNH0220XX    | 27             | 27                   | 305.2           | 0.40      | 2.052                 | 0.30 | 3.038                 | 0.37 | 5.479                 | 0.51 | 3-2    |
| P247                 | S4090220-4100208XX | S409MNH0220XX  | S410MNH0208XX    | 12             | 12                   | 388.3           | 0.49      | 0.324                 | 0.30 | 0.462                 | 0.37 | 0.813                 | 0.50 | 3-2    |
| P127                 | S4320202-4320204XX | S432MNH0202XX  | S432MNH0204XX    | 27             | 27                   | 206.1           | 0.29      | 1.975                 | 0.29 | 2.926                 | 0.36 | 5.313                 | 0.50 | 3-2    |
| P45                  | S5120207-5290203XX | S512MNH0207XX  | S529MNH0203XX    | 15             | 15                   | 297.0           | 0.36      | 0.205                 | 0.29 | 0.316                 | 0.36 | 0.566                 | 0.50 | 3-7    |
| P16                  | S4460202-4460201XX | S446MNH0202XX  | S446MNH0201XX    | 8              | 8                    | 84.8            | 0.83      | 0.167                 | 0.33 | 0.282                 | 0.44 | 0.352                 | 0.50 | 3-4    |
| P15                  | S4460203-4460202XX | S446MNH0203XX  | S446MNH0202XX    | 8              | 8                    | 166.9           | 0.58      | 0.139                 | 0.33 | 0.234                 | 0.44 | 0.283                 | 0.49 | 3-4    |
| P83                  | S6290216-6290217XX | S629MNH0216XX  | S629MNH0217XX    | 33             | 33                   | 127.1           | 0.02      | 1.825                 | 0.29 | 2.642                 | 0.35 | 5.589                 | 0.49 | 3-10   |
| P248                 | S4100208-4310207XX | S410MNH0208XX  | S431MNH0207XX    | 12             | 12                   | 359.8           | 0.51      | 0.326                 | 0.30 | 0.464                 | 0.36 | 0.822                 | 0.49 | 3-2    |
| P126                 | S4330224-4320202XX | S433MNH0224XX  | S432MNH0202XX    | 27             | 27                   | 299.8           | 0.32      | 1.972                 | 0.29 | 2.923                 | 0.35 | 5.302                 | 0.49 | 3-2    |
| P129                 | S4320205-4320213XX | S432MNH0205XX  | S432MNH0213XX    | 27             | 27                   | 290.4           | 0.28      | 2.047                 | 0.29 | 3.033                 | 0.35 | 5.462                 | 0.49 | 3-2    |
| P108                 | S5120211-5120206XX | S512MNH0211XX  | S512MNH0206XX    | 12             | 12                   | 90.0            | 0.26      | 0.220                 | 0.30 | 0.323                 | 0.36 | 0.544                 | 0.48 | 3-7    |
| P23                  | S4470211-4470201XX | S447MNH0211XX  | S447MNH0201XX    | 10             | 10                   | 381.0           | 0.21      | 0.175                 | 0.31 | 0.291                 | 0.40 | 0.400                 | 0.48 | 3-4    |
| P240                 | S3690219-3920208XX | S369MNH0219XX  | S392MNH0208XX    | 10             | 10                   | 325.6           | 1.11      | 0.280                 | 0.29 | 0.404                 | 0.36 | 0.682                 | 0.48 | 3-1    |
| P239                 | S3690209-3690219XX | S369MNH0209XX  | S369MNH0219XX    | 10             | 10                   | 141.2           | 1.07      | 0.276                 | 0.29 | 0.399                 | 0.36 | 0.660                 | 0.47 | 3-1    |
| P107                 | S5130208-5120211XX | S513MNH0208XX  | S512MNH0211XX    | 12             | 12                   | 158.3           | 0.29      | 0.220                 | 0.29 | 0.323                 | 0.35 | 0.543                 | 0.47 | 3-7    |
| P26                  | S4470208-4470210XX | S447MNH0208XX  | S447MNH0210XX    | 10             | 10                   | 370.0           | 0.20      | 0.092                 | 0.28 | 0.143                 | 0.35 | 0.244                 | 0.47 | 3-5    |
| P216                 | S3940201-3940204XX | S394MNH0201XX  | S394MNH0204XX    | 21             | 21                   | 49.8            | 0.60      | 1.333                 | 0.27 | 2.097                 | 0.34 | 3.651                 | 0.46 | 3-1    |
| P10                  | S4350201-4350218XX | S435MNH0201XX  | S435MNH0218XX    | 8              | 8                    | 17.8            | 1.12      | 0.128                 | 0.31 | 0.219                 | 0.41 | 0.259                 | 0.46 | 3-4    |
| P13                  | S4460205-4460204XX | S446MNH0205XX  | S446MNH0204XX    | 8              | 8                    | 69.1            | 0.43      | 0.137                 | 0.31 | 0.231                 | 0.41 | 0.276                 | 0.46 | 3-4    |
| P246                 | S4090221-4090220XX | S409MNH0221XX  | S409MNH0220XX    | 12             | 12                   | 258.4           | 1.08      | 0.323                 | 0.28 | 0.460                 | 0.33 | 0.804                 | 0.45 | 3-1    |
| P155                 | S5500201-5500225XX | S550MNH0201XX  | S550MNH0225XX    | 42             | 42                   | 15.0            | 0.07      | 3.142                 | 0.25 | 4.413                 | 0.29 | 10.228                | 0.45 | 3-12   |
| P231                 | S3680212-3930211XX | S368MNH0212XX  | S393MNH0211XX    | 15             | 15                   | 364.7           | 0.60      | 0.695                 | 0.29 | 1.034                 | 0.35 | 1.573                 | 0.45 | 3-1    |



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P14                  | S4460204-4460203XX | S446MNH0204XX  | S446MNH0203XX    | 8              | 8                    | 321.8           | 1.12      | 0.137                 | 0.30 | 0.231                 | 0.40 | 0.279                 | 0.44 | 3-4    |
| P221                 | S3930213-3930214XX | S393MNH0213XX  | S393MNH0214XX    | 21             | 21                   | 44.7            | 0.90      | 1.826                 | 0.26 | 2.733                 | 0.32 | 4.786                 | 0.44 | 3-1    |
| P230                 | S3930216-4080205XX | S393MNH0216XX  | S408MNH0205XX    | 24             | 24                   | 232.5           | 0.23      | 0.935                 | 0.26 | 1.399                 | 0.32 | 2.446                 | 0.44 | 3-1    |
| P223                 | CDT-83             | S393MNH0216XX  | S408MNH0205XX    | 24             | 24                   | 237.8           | 0.22      | 0.925                 | 0.26 | 1.384                 | 0.32 | 2.418                 | 0.44 | 3-1    |
| P156                 | S5500225-5710212XX | S550MNH0225XX  | S571MNH0212XX    | 42             | 42                   | 286.5           | 0.14      | 3.149                 | 0.24 | 4.420                 | 0.28 | 10.246                | 0.43 | 3-13   |
| P244                 | S3920205-3920204XX | S392MNH0205XX  | S392MNH0204XX    | 10             | 10                   | 34.4            | 4.08      | 0.319                 | 0.27 | 0.454                 | 0.32 | 0.766                 | 0.43 | 3-1    |
| P25                  | S4470207-4470208XX | S447MNH0207XX  | S447MNH0208XX    | 10             | 10                   | 100.0           | 0.20      | 0.089                 | 0.26 | 0.139                 | 0.32 | 0.235                 | 0.43 | 3-4    |
| P222                 | S3930214-3930216XX | S393MNH0214XX  | S393MNH0216XX    | 21             | 21                   | 83.1            | 2.32      | 1.857                 | 0.26 | 2.780                 | 0.32 | 4.845                 | 0.42 | 3-1    |
| P27                  | S4470210-4480204XX | S447MNH0210XX  | S448MNH0204XX    | 10             | 10                   | 386.3           | 0.18      | 0.093                 | 0.25 | 0.144                 | 0.32 | 0.251                 | 0.42 | 3-15   |
| P234                 | S3930226-3930227XX | S393MNH0226XX  | S393MNH0227XX    | 14             | 14                   | 329.4           | 0.16      | 0.230                 | 0.27 | 0.339                 | 0.34 | 0.520                 | 0.42 | 3-1    |
| P118                 | S4880209-4880210XX | S488MNH0209XX  | S488MNH0210XX    | 12             | 12                   | 353.5           | 0.16      | 0.129                 | 0.25 | 0.193                 | 0.30 | 0.361                 | 0.42 | 3-6    |
| P237                 | S3690201-3690218XX | S369MNH0201XX  | S369MNH0218XX    | 14             | 14                   | 60.5            | 0.26      | 0.263                 | 0.27 | 0.382                 | 0.32 | 0.612                 | 0.42 | 3-1    |
| P233                 | S3930211-3930226XX | S393MNH0211XX  | S393MNH0226XX    | 14             | 14                   | 242.7           | 0.17      | 0.223                 | 0.27 | 0.331                 | 0.33 | 0.504                 | 0.42 | 3-1    |
| P245                 | S3920204-4090221XX | S392MNH0204XX  | S409MNH0221XX    | 12             | 12                   | 648.5           | 0.88      | 0.321                 | 0.26 | 0.457                 | 0.31 | 0.797                 | 0.41 | 3-1    |
| P161                 | S5900216-5900217XX | S590MNH0216XX  | S590MNH0217XX    | 42             | 42                   | 600.9           | 0.28      | 3.590                 | 0.23 | 5.036                 | 0.27 | 11.040                | 0.41 | 3-13   |
| P80                  | S6110209-6110210XX | S611MNH0209XX  | S611MNH0210XX    | 42             | 42                   | 412.2           | 0.34      | 3.991                 | 0.24 | 5.611                 | 0.28 | 11.782                | 0.41 | 3-13   |
| P81                  | S6110210-6300209XX | S611MNH0210XX  | S630MNH0209XX    | 42             | 42                   | 620.0           | 0.23      | 4.157                 | 0.24 | 5.859                 | 0.28 | 12.023                | 0.41 | 3-13   |
| P235                 | S3930227-3690214XX | S393MNH0227XX  | S369MNH0214XX    | 14             | 14                   | 277.8           | 0.18      | 0.234                 | 0.26 | 0.345                 | 0.32 | 0.531                 | 0.41 | 3-1    |
| P79                  | S5900217-6110209XX | S590MNH0217XX  | S611MNH0209XX    | 42             | 42                   | 380.0           | 0.23      | 3.981                 | 0.23 | 5.601                 | 0.27 | 11.873                | 0.41 | 3-13   |
| P117                 | S4880208-4880209XX | S488MNH0208XX  | S488MNH0209XX    | 10             | 10                   | 30.0            | 0.83      | 0.067                 | 0.24 | 0.099                 | 0.29 | 0.193                 | 0.40 | 3-6    |
| P251                 | S3920206-3920205XX | S392MNH0206XX  | S392MNH0205XX    | 10             | 10                   | 208.0           | 0.43      | 0.158                 | 0.26 | 0.226                 | 0.31 | 0.380                 | 0.40 | 3-1    |
| P243                 | CDT-81             | S392MNH0206XX  | S392MNH0205XX    | 10             | 10                   | 204.0           | 0.44      | 0.160                 | 0.26 | 0.228                 | 0.31 | 0.384                 | 0.40 | 3-1    |
| P236                 | S3690214-3690201XX | S369MNH0214XX  | S369MNH0201XX    | 14             | 14                   | 323.4           | 0.26      | 0.253                 | 0.26 | 0.370                 | 0.31 | 0.588                 | 0.40 | 3-1    |
| P157                 | S5710212-5710211XX | S571MNH0212XX  | S571MNH0211XX    | 42             | 42                   | 362.0           | 0.18      | 3.214                 | 0.22 | 4.504                 | 0.26 | 10.370                | 0.40 | 3-13   |
| P82                  | S6300209-6290216XX | S630MNH0209XX  | S629MNH0216XX    | 42             | 42                   | 444.2           | 0.36      | 4.168                 | 0.23 | 5.870                 | 0.28 | 12.051                | 0.40 | 3-14   |



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P43                  | S5120209-5120210XX | S512MNH0209XX  | S512MNH0210XX    | 15             | 15                   | 143.0           | 0.29      | 0.194                 | 0.25 | 0.299                 | 0.30 | 0.543                 | 0.39 | 3-7    |
| P160                 | S5900215-5900216XX | S590MNH0215XX  | S590MNH0216XX    | 42             | 42                   | 130.0           | 0.26      | 3.422                 | 0.22 | 4.799                 | 0.26 | 10.736                | 0.39 | 3-13   |
| P44                  | S5120210-5120207XX | S512MNH0210XX  | S512MNH0207XX    | 15             | 15                   | 74.0            | 0.00      | 0.205                 | 0.25 | 0.316                 | 0.30 | 0.559                 | 0.39 | 3-7    |
| P159                 | S5710216-5900215XX | S571MNH0216XX  | S590MNH0215XX    | 42             | 42                   | 581.9           | 0.28      | 3.335                 | 0.21 | 4.667                 | 0.25 | 10.592                | 0.39 | 3-13   |
| P232                 | S3930211-3930209XX | S393MNH0211XX  | S393MNH0209XX    | 15             | 15                   | 54.6            | 0.68      | 0.472                 | 0.25 | 0.703                 | 0.31 | 1.075                 | 0.38 | 3-1    |
| P238                 | S3690209-3690218XX | S369MNH0218XX  | S369MNH0209XX    | 14             | 14                   | 329.4           | 0.26      | 0.263                 | 0.24 | 0.383                 | 0.29 | 0.619                 | 0.38 | 3-1    |
| P262                 | S4750204-4750205XX | S475MNH0204XX  | S475MNH0205XX    | 10             | 10                   | 137.7           | 0.22      | 0.004                 | 0.21 | 0.008                 | 0.29 | 0.028                 | 0.38 | 3-5    |
| P158                 | S5710211-5710216XX | S571MNH0211XX  | S571MNH0216XX    | 42             | 42                   | 364.9           | 0.28      | 3.237                 | 0.21 | 4.534                 | 0.25 | 10.416                | 0.38 | 3-13   |
| P184                 | S4880201-4880209XX | S488MNH0201XX  | S488MNH0209XX    | 12             | 12                   | 452.8           | 0.13      | 0.063                 | 0.23 | 0.095                 | 0.28 | 0.164                 | 0.38 | 3-6    |
| P154                 | S5500202-5500201XX | S550MNH0202XX  | S550MNH0201XX    | 33             | 33                   | 50.0            | 17.13     | 3.094                 | 0.21 | 4.349                 | 0.25 | 10.095                | 0.38 | 3-12   |
| P179                 | S5130206-5130207XX | S513MNH0206XX  | S513MNH0207XX    | 12             | 12                   | 320.6           | 0.39      | 0.194                 | 0.24 | 0.292                 | 0.30 | 0.452                 | 0.38 | 3-7    |
| P174                 | S4870204-4880202XX | S487MNH0204XX  | S488MNH0202XX    | 12             | 12                   | 471.4           | 0.51      | 0.197                 | 0.24 | 0.299                 | 0.29 | 0.489                 | 0.38 | 3-7    |
| P28                  | S4480204-4480203XX | S448MNH0204XX  | S448MNH0203XX    | 10             | 10                   | 234.0           | 0.48      | 0.093                 | 0.22 | 0.144                 | 0.28 | 0.254                 | 0.37 | 3-15   |
| P181                 | S5130214-5130209XX | S513MNH0214XX  | S513MNH0209XX    | 12             | 12                   | 246.4           | 0.51      | 0.197                 | 0.24 | 0.297                 | 0.30 | 0.464                 | 0.37 | 3-7    |
| P196                 | S4330203-4330204XX | S433MNH0203XX  | S433MNH0204XX    | 18             | 18                   | 78.0            | 1.58      | 0.075                 | 0.21 | 0.109                 | 0.26 | 0.291                 | 0.37 | 3-2    |
| P24                  | S4470201-4470207XX | S447MNH0201XX  | S447MNH0207XX    | 10             | 10                   | 319.1           | 0.18      | 0.056                 | 0.23 | 0.090                 | 0.29 | 0.130                 | 0.37 | 3-4    |
| P178                 | S4880205-5130206XX | S488MNH0205XX  | S513MNH0206XX    | 12             | 12                   | 296.4           | 0.43      | 0.143                 | 0.23 | 0.215                 | 0.28 | 0.378                 | 0.37 | 3-7    |
| P38                  | S4880211-4880210XX | S488MNH0211XX  | S488MNH0210XX    | 10             | 10                   | 30.0            | 0.83      | 0.068                 | 0.21 | 0.103                 | 0.26 | 0.210                 | 0.37 | 3-6    |
| P182                 | S5130209-5130210XX | S513MNH0209XX  | S513MNH0210XX    | 12             | 12                   | 63.2            | 0.41      | 0.197                 | 0.23 | 0.297                 | 0.29 | 0.465                 | 0.36 | 3-7    |
| P180                 | S5130207-5130214XX | S513MNH0207XX  | S513MNH0214XX    | 12             | 12                   | 254.0           | 0.50      | 0.194                 | 0.23 | 0.292                 | 0.29 | 0.455                 | 0.36 | 3-7    |
| P29                  | S4480203-4480202XX | S448MNH0203XX  | S448MNH0202XX    | 10             | 10                   | 243.0           | 0.34      | 0.096                 | 0.22 | 0.149                 | 0.27 | 0.261                 | 0.36 | 3-15   |
| P153                 | S5500223-5500202XX | S550MNH0223XX  | S550MNH0202XX    | 33             | 33                   | 301.8           | 0.12      | 3.093                 | 0.21 | 4.348                 | 0.24 | 10.092                | 0.36 | 3-12   |
| P39                  | S4880210-5130213XX | S488MNH0210XX  | S513MNH0213XX    | 12             | 12                   | 361.0           | 0.70      | 0.198                 | 0.21 | 0.295                 | 0.25 | 0.576                 | 0.36 | 3-6    |
| P42                  | S5130208-5120209XX | S513MNH0208XX  | S512MNH0209XX    | 15             | 15                   | 32.0            | 0.13      | 0.194                 | 0.21 | 0.299                 | 0.26 | 0.539                 | 0.35 | 3-7    |
| P173                 | S4870203-4870204XX | S487MNH0203XX  | S487MNH0204XX    | 12             | 12                   | 274.6           | 0.83      | 0.195                 | 0.22 | 0.296                 | 0.27 | 0.474                 | 0.35 | 3-7    |



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P175                 | S4880202-4880201XX | S488MNH0202XX  | S488MNH0201XX    | 12             | 12                   | 117.9           | 0.51      | 0.197                 | 0.21 | 0.299                 | 0.26 | 0.491                 | 0.34 | 3-7    |
| P169                 | S4740204-4740211XX | S474MNH0204XX  | S474MNH0211XX    | 12             | 12                   | 206.5           | 1.19      | 0.187                 | 0.21 | 0.287                 | 0.26 | 0.447                 | 0.33 | 3-5    |
| P170                 | S4740211-4870201XX | S474MNH0211XX  | S487MNH0201XX    | 12             | 12                   | 211.8           | 0.49      | 0.191                 | 0.21 | 0.291                 | 0.26 | 0.454                 | 0.33 | 3-5    |
| P30                  | S4480202-4730209XX | S448MNH0202XX  | S473MNH0209XX    | 10             | 10                   | 273.6           | 0.69      | 0.098                 | 0.19 | 0.151                 | 0.24 | 0.268                 | 0.32 | 3-6    |
| P172                 | S4870202-4870203XX | S487MNH0202XX  | S487MNH0203XX    | 12             | 12                   | 256.9           | 1.27      | 0.193                 | 0.20 | 0.294                 | 0.24 | 0.467                 | 0.30 | 3-6    |
| P77                  | S6110203-5900219XX | S611MNH0203XX  | S590MNH0219XX    | 18             | 18                   | 357.0           | 0.23      | 0.274                 | 0.15 | 0.414                 | 0.19 | 0.502                 | 0.30 | 3-13   |
| P177                 | S4880204-4880205XX | S488MNH0204XX  | S488MNH0205XX    | 12             | 12                   | 56.6            | 1.15      | 0.143                 | 0.19 | 0.215                 | 0.23 | 0.373                 | 0.30 | 3-7    |
| P215                 | S4470206-4470207XX | S447MNH0206XX  | S447MNH0207XX    | 10             | 10                   | 269.7           | 1.90      | 0.033                 | 0.17 | 0.050                 | 0.21 | 0.105                 | 0.29 | 3-4    |
| P200                 | S4070202-4070201XX | S407MNH0202XX  | S407MNH0201XX    | 10             | 10                   | 57.5            | 0.30      | 0.048                 | 0.18 | 0.076                 | 0.22 | 0.129                 | 0.29 | 3-3    |
| P203                 | S4340204-4340205XX | S434MNH0204XX  | S434MNH0205XX    | 12             | 12                   | 303.6           | 0.14      | 0.049                 | 0.17 | 0.076                 | 0.21 | 0.145                 | 0.29 | 3-3    |
| P171                 | S4870201-4870202XX | S487MNH0201XX  | S487MNH0202XX    | 12             | 12                   | 257.5           | 1.27      | 0.191                 | 0.18 | 0.291                 | 0.23 | 0.458                 | 0.29 | 3-5    |
| P176                 | S4880201-4880204XX | S488MNH0201XX  | S488MNH0204XX    | 12             | 12                   | 18.5            | 0.65      | 0.143                 | 0.18 | 0.215                 | 0.21 | 0.372                 | 0.28 | 3-7    |
| P199                 | S4070203-4070202XX | S407MNH0203XX  | S407MNH0202XX    | 10             | 10                   | 80.0            | 0.30      | 0.048                 | 0.17 | 0.076                 | 0.21 | 0.128                 | 0.28 | 3-3    |
| P198                 | S4060210-4070203XX | S406MNH0210XX  | S407MNH0203XX    | 10             | 10                   | 266.0           | 0.30      | 0.048                 | 0.17 | 0.076                 | 0.21 | 0.127                 | 0.27 | 3-3    |
| P168                 | S4740212-4740204XX | S474MNH0212XX  | S474MNH0204XX    | 12             | 12                   | 295.0           | 1.18      | 0.152                 | 0.18 | 0.246                 | 0.22 | 0.368                 | 0.27 | 3-5    |
| P114                 | S4880206-4880216XX | S488MNH0206XX  | S488MNH0216XX    | 10             | 10                   | 14.8            | 0.67      | 0.063                 | 0.16 | 0.094                 | 0.19 | 0.178                 | 0.26 | 3-6    |
| P166                 | S4470201-4740205XX | S447MNH0201XX  | S474MNH0205XX    | 12             | 12                   | 307.6           | 1.00      | 0.147                 | 0.17 | 0.240                 | 0.21 | 0.352                 | 0.26 | 3-4    |
| P201                 | S4070201-4340203XX | S407MNH0201XX  | S434MNH0203XX    | 10             | 10                   | 327.6           | 0.30      | 0.048                 | 0.16 | 0.075                 | 0.20 | 0.133                 | 0.26 | 3-3    |
| P35                  | S4880214-4880213XX | S488MNH0214XX  | S488MNH0213XX    | 10             | 10                   | 351.0           | 0.70      | 0.052                 | 0.15 | 0.078                 | 0.19 | 0.160                 | 0.26 | 3-6    |
| P116                 | S4880207-4880208XX | S488MNH0207XX  | S488MNH0208XX    | 10             | 10                   | 313.6           | 0.90      | 0.066                 | 0.15 | 0.099                 | 0.19 | 0.191                 | 0.26 | 3-6    |
| P167                 | S4740205-4740212XX | S474MNH0205XX  | S474MNH0212XX    | 12             | 12                   | 297.5           | 1.18      | 0.149                 | 0.17 | 0.242                 | 0.21 | 0.359                 | 0.26 | 3-5    |
| P113                 | S4730206-4880206XX | S473MNH0206XX  | S488MNH0206XX    | 10             | 10                   | 347.0           | 0.89      | 0.062                 | 0.15 | 0.093                 | 0.19 | 0.176                 | 0.25 | 3-6    |
| P204                 | S4340205-4340214XX | S434MNH0205XX  | S434MNH0214XX    | 10             | 10                   | 308.0           | 0.19      | 0.053                 | 0.15 | 0.082                 | 0.19 | 0.155                 | 0.25 | 3-3    |
| P111                 | S4730209-4730205XX | S473MNH0209XX  | S473MNH0205XX    | 10             | 10                   | 352.4           | 0.51      | 0.055                 | 0.15 | 0.085                 | 0.19 | 0.157                 | 0.25 | 3-6    |
| P115                 | S4880216-4880207XX | S488MNH0216XX  | S488MNH0207XX    | 10             | 10                   | 353.6           | 0.91      | 0.064                 | 0.15 | 0.096                 | 0.18 | 0.184                 | 0.25 | 3-6    |



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P296                 | S4350215-4350201XX | S435MNH0215XX  | S435MNH0201XX    | 8              | 8                    | 68.7            | 8.08      | 0.022                 | 0.17 | 0.038                 | 0.23 | 0.047                 | 0.25 | 3-4    |
| P36                  | S4880213-4880212XX | S488MNH0213XX  | S488MNH0212XX    | 10             | 10                   | 287.0           | 0.69      | 0.064                 | 0.15 | 0.097                 | 0.18 | 0.180                 | 0.25 | 3-6    |
| P31                  | S4730209-4480209XX | S473MNH0209XX  | S448MNH0209XX    | 10             | 10                   | 393.3           | 0.35      | 0.043                 | 0.15 | 0.067                 | 0.18 | 0.126                 | 0.25 | 3-6    |
| P76                  | S6110202-6110203XX | S611MNH0202XX  | S611MNH0203XX    | 18             | 18                   | 323.0           | 0.18      | 0.198                 | 0.19 | 0.298                 | 0.24 | 0.343                 | 0.25 | 3-13   |
| P34                  | S4730207-4880214XX | S473MNH0207XX  | S488MNH0214XX    | 10             | 10                   | 364.6           | 0.68      | 0.050                 | 0.14 | 0.075                 | 0.17 | 0.152                 | 0.25 | 3-6    |
| P33                  | S4730208-4730207XX | S473MNH0208XX  | S473MNH0207XX    | 10             | 10                   | 353.9           | 0.61      | 0.047                 | 0.14 | 0.071                 | 0.17 | 0.143                 | 0.24 | 3-6    |
| P212                 | S4330207-4330206XX | S433MNH0207XX  | S433MNH0206XX    | 15             | 15                   | 20.0            | 0.10      | 0.033                 | 0.13 | 0.049                 | 0.15 | 0.128                 | 0.24 | 3-2    |
| P112                 | S4730205-4730206XX | S473MNH0205XX  | S473MNH0206XX    | 10             | 10                   | 352.0           | 0.94      | 0.056                 | 0.14 | 0.086                 | 0.17 | 0.163                 | 0.24 | 3-6    |
| P268                 | S4740203-4740204XX | S474MNH0203XX  | S474MNH0204XX    | 12             | 12                   | 280.3           | 0.19      | 0.034                 | 0.16 | 0.052                 | 0.19 | 0.077                 | 0.24 | 3-5    |
| P32                  | S4480209-4730208XX | S448MNH0209XX  | S473MNH0208XX    | 10             | 10                   | 342.9           | 0.72      | 0.045                 | 0.14 | 0.069                 | 0.17 | 0.136                 | 0.24 | 3-6    |
| P37                  | S4880212-4880211XX | S488MNH0212XX  | S488MNH0211XX    | 10             | 10                   | 46.4            | 1.21      | 0.064                 | 0.14 | 0.097                 | 0.17 | 0.180                 | 0.23 | 3-6    |
| P202                 | S4340203-4340204XX | S434MNH0203XX  | S434MNH0204XX    | 12             | 12                   | 315.3           | 0.71      | 0.048                 | 0.13 | 0.075                 | 0.17 | 0.139                 | 0.23 | 3-3    |
| P75                  | S6110201-6110202XX | S611MNH0201XX  | S611MNH0202XX    | 18             | 18                   | 65.0            | 0.23      | 0.195                 | 0.17 | 0.295                 | 0.21 | 0.334                 | 0.22 | 3-13   |
| P74                  | S6100207-6110201XX | S610MNH0207XX  | S611MNH0201XX    | 18             | 18                   | 388.0           | 0.20      | 0.194                 | 0.17 | 0.294                 | 0.21 | 0.332                 | 0.22 | 3-9    |
| P9                   | S4350202-4350201XX | S435MNH0202XX  | S435MNH0201XX    | 10             | 10                   | 14.0            | 1.43      | 0.007                 | 0.13 | 0.010                 | 0.17 | 0.037                 | 0.21 | 3-4    |
| P258                 | S4470202-4470201XX | S447MNH0202XX  | S447MNH0201XX    | 12             | 12                   | 130.0           | 0.50      | 0.028                 | 0.13 | 0.041                 | 0.16 | 0.074                 | 0.21 | 3-4    |
| P194                 | S4330225-4330206XX | S433MNH0225XX  | S433MNH0206XX    | 15             | 15                   | 100.0           | 0.46      | 0.042                 | 0.11 | 0.061                 | 0.13 | 0.158                 | 0.20 | 3-2    |
| P195                 | S4330206-4330203XX | S433MNH0206XX  | S433MNH0203XX    | 15             | 15                   | 185.7           | 0.31      | 0.075                 | 0.10 | 0.109                 | 0.12 | 0.289                 | 0.20 | 3-2    |
| P211                 | S4330213-4330207XX | S433MNH0213XX  | S433MNH0207XX    | 15             | 15                   | 335.0           | 0.36      | 0.033                 | 0.10 | 0.049                 | 0.12 | 0.127                 | 0.20 | 3-2    |
| P193                 | S4330211-4330225XX | S433MNH0211XX  | S433MNH0225XX    | 15             | 15                   | 367.6           | 0.20      | 0.042                 | 0.10 | 0.061                 | 0.12 | 0.148                 | 0.18 | 3-2    |
| P192                 | S4080211-4330211XX | S408MNH0211XX  | S433MNH0211XX    | 15             | 15                   | 270.3           | 0.39      | 0.038                 | 0.10 | 0.055                 | 0.12 | 0.142                 | 0.18 | 3-2    |
| P254                 | S4080202-4080201XX | S408MNH0202XX  | S408MNH0201XX    | 10             | 10                   | 212.0           | 0.78      | 0.006                 | 0.10 | 0.009                 | 0.12 | 0.025                 | 0.18 | 3-3    |
| P253                 | S4080203-4080202XX | S408MNH0203XX  | S408MNH0202XX    | 10             | 10                   | 347.4           | 0.01      | 0.005                 | 0.10 | 0.008                 | 0.12 | 0.020                 | 0.18 | 3-3    |
| P267                 | S4740202-4740203XX | S474MNH0202XX  | S474MNH0203XX    | 12             | 12                   | 293.9           | 0.29      | 0.032                 | 0.12 | 0.050                 | 0.15 | 0.070                 | 0.17 | 3-5    |
| P252                 | S4080204-4080203XX | S408MNH0204XX  | S408MNH0203XX    | 10             | 10                   | 329.6           | 0.31      | 0.003                 | 0.10 | 0.004                 | 0.12 | 0.013                 | 0.17 | 3-3    |



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P191                 | S4080201-4080211XX | S408MNH0201XX  | S408MNH0211XX    | 15             | 15                   | 396.9           | 0.25      | 0.036                 | 0.09 | 0.052                 | 0.11 | 0.133                 | 0.17 | 3-2    |
| P214                 | S4470205-4470206XX | S447MNH0205XX  | S447MNH0206XX    | 10             | 10                   | 260.4           | 1.12      | 0.029                 | 0.09 | 0.044                 | 0.11 | 0.096                 | 0.17 | 3-4    |
| P124                 | S4330212-4330230XX | S433MNH0212XX  | S433MNH0230XX    | 10             | 10                   | 50.0            | 0.40      | 0.008                 | 0.07 | 0.013                 | 0.09 | 0.047                 | 0.16 | 3-2    |
| P122                 | S4480219-4330229XX | S448MNH0219XX  | S433MNH0229XX    | 10             | 10                   | 266.9           | 0.27      | 0.007                 | 0.07 | 0.010                 | 0.08 | 0.042                 | 0.16 | 3-2    |
| P3                   | S4340201-4350211XX | S434MNH0201XX  | S435MNH0211XX    | 10             | 10                   | 300.0           | 0.03      | 0.003                 | 0.07 | 0.005                 | 0.09 | 0.019                 | 0.16 | 3-3    |
| P213                 | S4340214-4470205XX | S434MNH0214XX  | S447MNH0205XX    | 10             | 10                   | 264.7           | 2.03      | 0.029                 | 0.09 | 0.044                 | 0.11 | 0.092                 | 0.16 | 3-3    |
| P261                 | S4750203-4750204XX | S475MNH0203XX  | S475MNH0204XX    | 10             | 10                   | 250.5           | 0.16      | 0.003                 | 0.05 | 0.005                 | 0.08 | 0.018                 | 0.16 | 3-5    |
| P121                 | S4480208-4480219XX | S448MNH0208XX  | S448MNH0219XX    | 10             | 10                   | 297.0           | 0.29      | 0.005                 | 0.06 | 0.008                 | 0.08 | 0.036                 | 0.16 | 3-2    |
| P125                 | S4330230-4330224XX | S433MNH0230XX  | S433MNH0224XX    | 10             | 10                   | 100.0           | 0.39      | 0.008                 | 0.06 | 0.013                 | 0.08 | 0.051                 | 0.15 | 3-2    |
| P123                 | S4330229-4330212XX | S433MNH0229XX  | S433MNH0212XX    | 10             | 10                   | 180.0           | 0.40      | 0.008                 | 0.07 | 0.012                 | 0.08 | 0.046                 | 0.15 | 3-2    |
| P266                 | S4750209-4740202XX | S475MNH0209XX  | S474MNH0202XX    | 12             | 12                   | 237.9           | 0.32      | 0.029                 | 0.11 | 0.044                 | 0.13 | 0.061                 | 0.15 | 3-5    |
| P2                   | S4350219-4340201XX | S435MNH0219XX  | S434MNH0201XX    | 10             | 10                   | 395.0           | 0.33      | 0.003                 | 0.07 | 0.005                 | 0.08 | 0.015                 | 0.15 | 3-3    |
| P278                 | S4730203-4730209XX | S473MNH0203XX  | S473MNH0209XX    | 10             | 10                   | 214.0           | 0.94      | 0.000                 | 0.08 | 0.000                 | 0.10 | 0.003                 | 0.15 | 3-6    |
| P7                   | S4350214-4350206XX | S435MNH0214XX  | S435MNH0206XX    | 10             | 10                   | 185.0           | 0.35      | 0.007                 | 0.07 | 0.010                 | 0.08 | 0.036                 | 0.15 | 3-4    |
| P271                 | S4750215-4750209XX | S475MNH0215XX  | S475MNH0209XX    | 10             | 10                   | 40.4            | 0.79      | 0.022                 | 0.11 | 0.034                 | 0.13 | 0.041                 | 0.15 | 3-5    |
| P210                 | S4330202-4330213XX | S433MNH0202XX  | S433MNH0213XX    | 15             | 15                   | 170.0           | 0.35      | 0.029                 | 0.08 | 0.043                 | 0.09 | 0.114                 | 0.15 | 3-2    |
| P206                 | S4340211-4340207XX | S434MNH0211XX  | S434MNH0207XX    | 15             | 15                   | 409.3           | 0.20      | 0.029                 | 0.08 | 0.043                 | 0.10 | 0.097                 | 0.15 | 3-3    |
| P209                 | S4330226-4330202XX | S433MNH0226XX  | S433MNH0202XX    | 15             | 15                   | 11.0            | 0.36      | 0.029                 | 0.08 | 0.043                 | 0.09 | 0.110                 | 0.14 | 3-3    |
| P73                  | S6100210-6100207XX | S610MNH0210XX  | S610MNH0207XX    | 18             | 18                   | 388.0           | 0.20      | 0.008                 | 0.11 | 0.008                 | 0.13 | 0.028                 | 0.14 | 3-9    |
| P257                 | S4470209-4470202XX | S447MNH0209XX  | S447MNH0202XX    | 12             | 12                   | 103.0           | 0.51      | 0.028                 | 0.09 | 0.041                 | 0.11 | 0.072                 | 0.14 | 3-4    |
| P190                 | S4080229-4080201XX | S408MNH0229XX  | S408MNH0201XX    | 15             | 15                   | 75.0            | 1.04      | 0.029                 | 0.08 | 0.042                 | 0.09 | 0.098                 | 0.14 | 3-3    |
| P120                 | S4480205-4480208XX | S448MNH0205XX  | S448MNH0208XX    | 10             | 10                   | 279.0           | 0.30      | 0.003                 | 0.05 | 0.004                 | 0.06 | 0.029                 | 0.14 | 3-15   |
| P188                 | S4340213-4080230XX | S434MNH0213XX  | S408MNH0230XX    | 12             | 12                   | 366.0           | 0.96      | 0.028                 | 0.08 | 0.040                 | 0.09 | 0.089                 | 0.14 | 3-3    |
| P189                 | S4080230-4080229XX | S408MNH0230XX  | S408MNH0229XX    | 12             | 12                   | 280.2           | 0.96      | 0.029                 | 0.08 | 0.042                 | 0.09 | 0.097                 | 0.14 | 3-3    |
| P256                 | S4470203-4470209XX | S447MNH0203XX  | S447MNH0209XX    | 12             | 12                   | 197.0           | 0.69      | 0.028                 | 0.09 | 0.041                 | 0.11 | 0.070                 | 0.14 | 3-4    |





Table A-3 Model Results for 2025 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P208                 | S4330214-4330226XX | S433MNH0214XX  | S433MNH0226XX    | 15             | 15                   | 319.5           | 0.59      | 0.029                 | 0.07 | 0.043                 | 0.09 | 0.110                 | 0.14 | 3-3    |
| P6                   | S4350213-4350214XX | S435MNH0213XX  | S435MNH0214XX    | 10             | 10                   | 79.0            | 0.43      | 0.006                 | 0.06 | 0.010                 | 0.07 | 0.033                 | 0.14 | 3-4    |
| P205                 | S4340214-4340211XX | S434MNH0214XX  | S434MNH0211XX    | 15             | 15                   | 426.4           | 1.11      | 0.027                 | 0.08 | 0.041                 | 0.09 | 0.086                 | 0.13 | 3-3    |
| P187                 | S4070206-4340213XX | S407MNH0206XX  | S434MNH0213XX    | 12             | 12                   | 186.8           | 0.89      | 0.028                 | 0.08 | 0.040                 | 0.09 | 0.083                 | 0.13 | 3-3    |
| P5                   | S4350212-4350213XX | S435MNH0212XX  | S435MNH0213XX    | 10             | 10                   | 300.0           | 0.33      | 0.006                 | 0.06 | 0.010                 | 0.08 | 0.032                 | 0.13 | 3-3    |
| P8                   | S4350206-4350202XX | S435MNH0206XX  | S435MNH0202XX    | 10             | 10                   | 129.0           | 0.30      | 0.007                 | 0.06 | 0.010                 | 0.07 | 0.037                 | 0.13 | 3-4    |
| P186                 | S4070204-4070206XX | S407MNH0204XX  | S407MNH0206XX    | 10             | 10                   | 262.4           | 0.51      | 0.010                 | 0.08 | 0.015                 | 0.10 | 0.021                 | 0.13 | 3-3    |
| P283                 | S4330227-4480205XX | S433MNH0227XX  | S448MNH0205XX    | 10             | 10                   | 415.0           | 0.28      | 0.003                 | 0.04 | 0.004                 | 0.05 | 0.025                 | 0.13 | 3-15   |
| P255                 | S4460210-4470203XX | S446MNH0210XX  | S447MNH0203XX    | 12             | 12                   | 300.0           | 0.74      | 0.028                 | 0.08 | 0.042                 | 0.10 | 0.067                 | 0.13 | 3-4    |
| P207                 | S4340207-4330214XX | S434MNH0207XX  | S433MNH0214XX    | 15             | 15                   | 267.8           | 0.58      | 0.029                 | 0.07 | 0.043                 | 0.08 | 0.103                 | 0.13 | 3-3    |
| P294                 | S4460208-4460209XX | S446MNH0208XX  | S446MNH0209XX    | 10             | 10                   | 300.0           | 1.13      | 0.014                 | 0.08 | 0.024                 | 0.10 | 0.040                 | 0.12 | 3-4    |
| P4                   | S4350211-4350212XX | S435MNH0211XX  | S435MNH0212XX    | 10             | 10                   | 302.0           | 0.60      | 0.006                 | 0.06 | 0.009                 | 0.07 | 0.026                 | 0.12 | 3-3    |
| P265                 | S4750210-4750209XX | S475MNH0210XX  | S475MNH0209XX    | 10             | 10                   | 250.7           | 1.84      | 0.006                 | 0.08 | 0.009                 | 0.10 | 0.016                 | 0.12 | 3-5    |
| P295                 | S4460209-4460210XX | S446MNH0209XX  | S446MNH0210XX    | 12             | 12                   | 300.0           | 0.73      | 0.021                 | 0.08 | 0.033                 | 0.09 | 0.054                 | 0.12 | 3-4    |
| P276                 | S4880215-4880201XX | S488MNH0215XX  | S488MNH0201XX    | 10             | 10                   | 338.0           | 0.77      | 0.007                 | 0.05 | 0.012                 | 0.07 | 0.036                 | 0.12 | 3-6    |
| P260                 | S4760202-4750203XX | S476MNH0202XX  | S475MNH0203XX    | 10             | 10                   | 350.4           | 0.14      | 0.003                 | 0.05 | 0.005                 | 0.07 | 0.014                 | 0.12 | 3-5    |
| P297                 | S4350215-4350216XX | S435MNH0215XX  | S435MNH0216XX    | 8              | 8                    | 95.0            | 3.31      | 0.014                 | 0.08 | 0.024                 | 0.10 | 0.030                 | 0.11 | 3-4    |
| P287                 | S5280204-5280205XX | S528MNH0204XX  | S528MNH0205XX    | 10             | 10                   | 156.0           | 0.50      | 0.008                 | 0.06 | 0.012                 | 0.08 | 0.023                 | 0.11 | 3-7    |
| P282                 | S4330228-4330227XX | S433MNH0228XX  | S433MNH0227XX    | 10             | 10                   | 36.1            | 0.44      | 0.002                 | 0.04 | 0.003                 | 0.05 | 0.018                 | 0.11 | 3-3    |
| P293                 | S4350217-4460208XX | S435MNH0217XX  | S446MNH0208XX    | 10             | 10                   | 300.0           | 1.13      | 0.014                 | 0.07 | 0.024                 | 0.09 | 0.036                 | 0.11 | 3-4    |
| P270                 | S4750217-4750215XX | S475MNH0217XX  | S475MNH0215XX    | 10             | 10                   | 300.0           | 0.30      | 0.003                 | 0.07 | 0.004                 | 0.08 | 0.012                 | 0.10 | 3-5    |
| P292                 | S4350216-4350217XX | S435MNH0216XX  | S435MNH0217XX    | 10             | 10                   | 160.0           | 1.10      | 0.014                 | 0.07 | 0.024                 | 0.09 | 0.032                 | 0.10 | 3-4    |
| P286                 | S5280203-5280204XX | S528MNH0203XX  | S528MNH0204XX    | 10             | 10                   | 185.0           | 0.42      | 0.008                 | 0.07 | 0.012                 | 0.08 | 0.020                 | 0.10 | 3-7    |
| P275                 | S4880203-4880215XX | S488MNH0203XX  | S488MNH0215XX    | 10             | 10                   | 358.2           | 1.32      | 0.006                 | 0.05 | 0.009                 | 0.06 | 0.028                 | 0.10 | 3-6    |
| P185                 | S4070213-4070204XX | S407MNH0213XX  | S407MNH0204XX    | 10             | 10                   | 278.2           | 0.20      | 0.007                 | 0.07 | 0.011                 | 0.09 | 0.014                 | 0.10 | 3-3    |



**Table A-3 Model Results for 2025 Flows without the PPSP Contribution**

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P285                 | S5280202-5280203XX | S528MNH0202XX  | S528MNH0203XX    | 10             | 10                   | 195.0           | 0.50      | 0.008                 | 0.07 | 0.012                 | 0.08 | 0.018                 | 0.10 | 3-7    |
| P288                 | S5280205-5290213XX | S528MNH0205XX  | S529MNH0213XX    | 12             | 12                   | 325.0           | 0.50      | 0.008                 | 0.05 | 0.013                 | 0.06 | 0.033                 | 0.10 | 3-7    |
| P281                 | S4340206-4330228XX | S434MNH0206XX  | S433MNH0228XX    | 10             | 10                   | 208.5           | 0.43      | 0.002                 | 0.03 | 0.003                 | 0.04 | 0.017                 | 0.09 | 3-3    |
| P259                 | S4760201-4760202XX | S476MNH0201XX  | S476MNH0202XX    | 10             | 10                   | 356.4           | 0.15      | 0.000                 | 0.03 | 0.000                 | 0.03 | 0.005                 | 0.09 | 3-5    |
| P274                 | S4730204-4880203XX | S473MNH0204XX  | S488MNH0203XX    | 10             | 10                   | 360.3           | 1.03      | 0.004                 | 0.04 | 0.006                 | 0.05 | 0.021                 | 0.09 | 3-6    |
| P1                   | S4350210-4350219XX | S435MNH0210XX  | S435MNH0219XX    | 10             | 10                   | 390.0           | 0.33      | 0.003                 | 0.04 | 0.005                 | 0.06 | 0.010                 | 0.09 | 3-3    |
| P284                 | S5280208-5280202XX | S528MNH0208XX  | S528MNH0202XX    | 10             | 10                   | 254.0           | 0.56      | 0.006                 | 0.06 | 0.009                 | 0.07 | 0.012                 | 0.08 | 3-7    |
| P280                 | S4340212-4340206XX | S434MNH0212XX  | S434MNH0206XX    | 10             | 10                   | 320.3           | 0.87      | 0.002                 | 0.03 | 0.003                 | 0.04 | 0.014                 | 0.08 | 3-3    |
| P273                 | S4740201-4730204XX | S474MNH0201XX  | S473MNH0204XX    | 10             | 10                   | 341.1           | 1.03      | 0.003                 | 0.04 | 0.004                 | 0.04 | 0.014                 | 0.08 | 3-6    |
| P291                 | S5280206-5280205XX | S528MNH0206XX  | S528MNH0205XX    | 12             | 12                   | 240.0           | 0.50      | 0.000                 | 0.03 | 0.000                 | 0.04 | 0.005                 | 0.07 | 3-7    |
| P269                 | S4860203-4750217XX | S486MNH0203XX  | S475MNH0217XX    | 10             | 10                   | 316.3           | 0.77      | 0.001                 | 0.03 | 0.001                 | 0.04 | 0.005                 | 0.07 | 3-5    |
| P279                 | S4340209-4340214XX | S434MNH0209XX  | S434MNH0214XX    | 15             | 15                   | 297.6           | 0.93      | 0.003                 | 0.04 | 0.004                 | 0.05 | 0.010                 | 0.07 | 3-3    |
| P264                 | S4750208-4750210XX | S475MNH0208XX  | S475MNH0210XX    | 10             | 10                   | 198.1           | 0.85      | 0.005                 | 0.04 | 0.007                 | 0.05 | 0.012                 | 0.07 | 3-5    |
| P72                  | S6100209-6100210XX | S610MNH0209XX  | S610MNH0210XX    | 18             | 18                   | 384.0           | 0.20      | 0.004                 | 0.03 | 0.004                 | 0.03 | 0.014                 | 0.06 | 3-9    |
| P272                 | S4740213-4740201XX | S474MNH0213XX  | S474MNH0201XX    | 10             | 10                   | 342.8           | 1.07      | 0.000                 | 0.02 | 0.000                 | 0.03 | 0.005                 | 0.06 | 3-6    |
| P263                 | S4740207-4750208XX | S474MNH0207XX  | S475MNH0208XX    | 10             | 10                   | 244.6           | 0.82      | 0.001                 | 0.03 | 0.002                 | 0.04 | 0.005                 | 0.06 | 3-5    |
| P290                 | S5280207-5280206XX | S528MNH0207XX  | S528MNH0206XX    | 12             | 12                   | 21.0            | 0.50      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.001                 | 0.03 | 3-7    |
| P71                  | S6100205-6100209XX | S610MNH0205XX  | S610MNH0209XX    | 18             | 18                   | 384.8           | 0.22      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.000                 | 0.02 | 3-9    |
| P277                 | S4731001-4730203XX | S473PLG1001XX  | S473MNH0203XX    | 10             | 10                   | 15.0            | 0.48      | 0.000                 | 0.00 | 0.000                 | 0.01 | 0.000                 | 0.02 | 3-6    |
| P289                 | S5131001-5280207XX | S513PLG1001XX  | S528MNH0207XX    | 12             | 12                   | 200.0           | 0.50      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.000                 | 0.01 | 3-7    |
| P119                 | S4480204-4480205XX | S448MNH0204XX  | S448MNH0205XX    | 10             | 10                   | 6.0             | 1.67      | 0.000                 | 0.00 | 0.000                 | 0.00 | 0.000                 | 0.00 | 3-15   |

\*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with WWMP CIP diameter.
2. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P50                  | S5290207-5290208XX | S529MNH0207XX  | S529MNH0208XX    | 12             | 12                   | 333.0           | 0.26      | 0.832                 | 0.64 | 1.241                 | 0.91 | 1.685                 | 1.00 | 3-8    |
| P49                  | S5290206-5290207XX | S529MNH0206XX  | S529MNH0207XX    | 12             | 12                   | 216.6           | 0.31      | 0.828                 | 0.60 | 1.235                 | 0.84 | 1.672                 | 1.00 | 3-8    |
| P110                 | S5290204-5290202XX | S529MNH0204XX  | S529MNH0202XX    | 12             | 12                   | 40.0            | 0.25      | 0.412                 | 0.59 | 0.597                 | 0.81 | 0.657                 | 1.00 | 3-7    |
| P47                  | S5290202-5290213XX | S529MNH0202XX  | S529MNH0213XX    | 12             | 12                   | 319.8           | 0.27      | 0.817                 | 0.58 | 1.218                 | 0.79 | 1.635                 | 1.00 | 3-7    |
| P183                 | S5130210-5130212XX | S513MNH0210XX  | S513MNH0212XX    | 10             | 10                   | 263.4           | 0.84      | 0.317                 | 0.58 | 0.473                 | 0.71 | 0.635                 | 1.00 | 3-7    |
| P48                  | S5290213-5290206XX | S529MNH0213XX  | S529MNH0206XX    | 12             | 12                   | 20.4            | 0.54      | 0.827                 | 0.56 | 1.233                 | 0.76 | 1.668                 | 1.00 | 3-8    |
| P41                  | S5130212-5130208XX | S513MNH0212XX  | S513MNH0208XX    | 12             | 12                   | 244.6           | 0.20      | 0.805                 | 0.54 | 1.201                 | 0.72 | 1.595                 | 1.00 | 3-7    |
| P46                  | S5290202-5290203XX | S529MNH0203XX  | S529MNH0202XX    | 15             | 15                   | 32.0            | 0.13      | 0.405                 | 0.53 | 0.621                 | 0.70 | 1.052                 | 1.00 | 3-7    |
| P109                 | S5120206-5290204XX | S512MNH0206XX  | S529MNH0204XX    | 12             | 12                   | 280.0           | 0.25      | 0.412                 | 0.48 | 0.598                 | 0.64 | 0.648                 | 1.00 | 3-7    |
| P45                  | S5120207-5290203XX | S512MNH0207XX  | S529MNH0203XX    | 15             | 15                   | 297.0           | 0.36      | 0.404                 | 0.41 | 0.620                 | 0.53 | 1.045                 | 1.00 | 3-7    |
| P108                 | S5120211-5120206XX | S512MNH0211XX  | S512MNH0206XX    | 12             | 12                   | 90.0            | 0.26      | 0.412                 | 0.41 | 0.597                 | 0.51 | 0.648                 | 1.00 | 3-7    |
| P107                 | S5130208-5120211XX | S513MNH0208XX  | S512MNH0211XX    | 12             | 12                   | 158.3           | 0.29      | 0.411                 | 0.40 | 0.597                 | 0.50 | 0.665                 | 1.00 | 3-7    |
| P43                  | S5120209-5120210XX | S512MNH0209XX  | S512MNH0210XX    | 15             | 15                   | 143.0           | 0.29      | 0.394                 | 0.34 | 0.604                 | 0.41 | 1.024                 | 1.00 | 3-7    |
| P44                  | S5120210-5120207XX | S512MNH0210XX  | S512MNH0207XX    | 15             | 15                   | 74.0            | 0.00      | 0.404                 | 0.33 | 0.620                 | 0.41 | 1.041                 | 1.00 | 3-7    |
| P42                  | S5130208-5120209XX | S513MNH0208XX  | S512MNH0209XX    | 15             | 15                   | 32.0            | 0.13      | 0.394                 | 0.30 | 0.604                 | 0.37 | 1.022                 | 1.00 | 3-7    |
| P182                 | S5130209-5130210XX | S513MNH0209XX  | S513MNH0210XX    | 12             | 12                   | 63.2            | 0.41      | 0.317                 | 0.30 | 0.473                 | 0.37 | 0.623                 | 1.00 | 3-7    |
| P51                  | S5290208-5520204XX | S529MNH0208XX  | S552MNH0204XX    | 12             | 12                   | 361.0           | 0.25      | 0.832                 | 0.60 | 1.241                 | 0.81 | 1.689                 | 0.98 | 3-8    |
| P164                 | S4500212-4500211XX | S450MNH0212XX  | S450MNH0211XX    | 16             | 16                   | 20.8            | 1.59      | 0.631                 | 0.65 | 0.877                 | 0.75 | 1.543                 | 0.98 | 3-11   |
| P165                 | S4500211-4500210XX | S450MNH0211XX  | S450MNH0210XX    | 16             | 16                   | 31.3            | 1.18      | 0.631                 | 0.63 | 0.877                 | 0.72 | 1.544                 | 0.95 | 3-11   |
| P52                  | S5520204-5520203XX | S552MNH0204XX  | S552MNH0203XX    | 12             | 12                   | 105.0           | 0.40      | 0.832                 | 0.55 | 1.241                 | 0.70 | 1.686                 | 0.91 | 3-8    |
| P86                  | S6520205-6520204XX | S652MNH0205XX  | S652MNH0204XX    | 33             | 33                   | 10.0            | 0.10      | 6.610                 | 0.52 | 9.547                 | 0.64 | 16.001                | 0.88 | 3-10   |
| P85                  | S6520225-6520205XX | S652MNH0225XX  | S652MNH0205XX    | 33             | 33                   | 20.7            | 0.53      | 6.608                 | 0.50 | 9.486                 | 0.62 | 15.858                | 0.86 | 3-10   |
| P99                  | S6500209-6510201XX | S650MNH0209XX  | S651MNH0201XX    | 18             | 18                   | 468.0           | 0.16      | 1.466                 | 0.54 | 2.183                 | 0.69 | 2.773                 | 0.84 | 3-10   |
| P98                  | S6500206-6500209XX | S650MNH0206XX  | S650MNH0209XX    | 18             | 18                   | 468.0           | 0.16      | 1.461                 | 0.52 | 2.181                 | 0.67 | 2.761                 | 0.83 | 3-10   |
| P106                 | S6520208-6520225XX | S652MNH0208XX  | S652MNH0225XX    | 33             | 33                   | 41.2            | 0.46      | 2.126                 | 0.44 | 3.229                 | 0.56 | 4.410                 | 0.81 | 3-10   |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P97                  | S6500207-6500206XX | S650MNH0207XX  | S650MNH0206XX    | 18             | 18                   | 67.3            | 0.28      | 1.456                 | 0.49 | 2.178                 | 0.65 | 2.749                 | 0.80 | 3-10   |
| P150                 | S5310212-5500209XX | S531MNH0212XX  | S550MNH0209XX    | 27             | 27                   | 355.6           | 0.24      | 3.299                 | 0.42 | 4.622                 | 0.50 | 9.794                 | 0.79 | 3-12   |
| P68                  | S6090205-6090202XX | S609MNH0205XX  | S609MNH0202XX    | 12             | 15                   | 95.0            | 0.25      | 1.014                 | 0.49 | 1.516                 | 0.63 | 2.019                 | 0.79 | 3-9    |
| P67                  | S6090201-6090205XX | S609MNH0201XX  | S609MNH0205XX    | 12             | 15                   | 278.0           | 0.25      | 1.000                 | 0.49 | 1.496                 | 0.63 | 1.996                 | 0.79 | 3-9    |
| P66                  | S5920208-6090201XX | S592MNH0208XX  | S609MNH0201XX    | 12             | 15                   | 373.0           | 0.25      | 1.000                 | 0.49 | 1.497                 | 0.63 | 1.993                 | 0.78 | 3-9    |
| P65                  | S5920209-5920208XX | S592MNH0209XX  | S592MNH0208XX    | 12             | 15                   | 155.0           | 0.25      | 1.000                 | 0.49 | 1.498                 | 0.63 | 1.989                 | 0.78 | 3-9    |
| P64                  | S5920206-5920209XX | S592MNH0206XX  | S592MNH0209XX    | 12             | 15                   | 218.0           | 0.25      | 0.986                 | 0.49 | 1.477                 | 0.62 | 1.966                 | 0.78 | 3-9    |
| P63                  | S5920210-5920206XX | S592MNH0210XX  | S592MNH0206XX    | 12             | 15                   | 258.0           | 0.25      | 0.986                 | 0.49 | 1.478                 | 0.62 | 1.963                 | 0.77 | 3-9    |
| P105                 | S6510210-6520208XX | S651MNH0210XX  | S652MNH0208XX    | 33             | 33                   | 220.0           | 0.03      | 2.071                 | 0.41 | 3.040                 | 0.53 | 4.107                 | 0.77 | 3-10   |
| P62                  | S5920207-5920210XX | S592MNH0207XX  | S592MNH0210XX    | 12             | 15                   | 115.0           | 0.25      | 0.986                 | 0.48 | 1.478                 | 0.62 | 1.960                 | 0.77 | 3-9    |
| P61                  | S5690207-5920207XX | S569MNH0207XX  | S592MNH0207XX    | 12             | 15                   | 180.0           | 0.25      | 0.958                 | 0.48 | 1.435                 | 0.61 | 1.914                 | 0.76 | 3-9    |
| P138                 | S4710213-4900224XX | S471MNH0213XX  | S490MNH0224XX    | 27             | 27                   | 1086.8          | 0.24      | 2.980                 | 0.38 | 4.166                 | 0.46 | 9.135                 | 0.76 | 3-11   |
| P60                  | S5690201-5690207XX | S569MNH0201XX  | S569MNH0207XX    | 12             | 15                   | 200.0           | 0.25      | 0.958                 | 0.48 | 1.435                 | 0.61 | 1.912                 | 0.75 | 3-9    |
| P59                  | S5690202-5690201XX | S569MNH0202XX  | S569MNH0201XX    | 12             | 15                   | 200.0           | 0.25      | 0.958                 | 0.48 | 1.436                 | 0.61 | 1.910                 | 0.75 | 3-9    |
| P87                  | S6520214-6520204XX | S652MNH0204XX  | S652MNH0214XX    | 39             | 39                   | 54.7            | 0.18      | 6.626                 | 0.45 | 9.430                 | 0.55 | 16.084                | 0.75 | 3-10   |
| P104                 | S6510208-6510210XX | S651MNH0208XX  | S651MNH0210XX    | 33             | 33                   | 110.0           | 0.10      | 2.085                 | 0.39 | 3.080                 | 0.51 | 4.053                 | 0.75 | 3-10   |
| P151                 | S5500209-5500207XX | S550MNH0209XX  | S550MNH0207XX    | 27             | 27                   | 31.8            | 0.03      | 3.299                 | 0.42 | 4.621                 | 0.50 | 9.794                 | 0.74 | 3-12   |
| P163                 | S4320227-4500212XX | S432MNH0227XX  | S450MNH0212XX    | 16             | 16                   | 552.4           | 0.30      | 0.631                 | 0.43 | 0.875                 | 0.51 | 1.557                 | 0.74 | 3-11   |
| P58                  | S5690203-5690202XX | S569MNH0203XX  | S569MNH0202XX    | 12             | 15                   | 244.0           | 0.26      | 0.930                 | 0.47 | 1.392                 | 0.60 | 1.865                 | 0.74 | 3-9    |
| P181                 | S5130214-5130209XX | S513MNH0214XX  | S513MNH0209XX    | 12             | 12                   | 246.4           | 0.51      | 0.312                 | 0.30 | 0.465                 | 0.37 | 0.613                 | 0.73 | 3-7    |
| P57                  | S5690204-5690203XX | S569MNH0204XX  | S569MNH0203XX    | 12             | 15                   | 331.0           | 0.23      | 0.860                 | 0.46 | 1.284                 | 0.59 | 1.742                 | 0.72 | 3-8    |
| P145                 | S5110211-5110209XX | S511MNH0211XX  | S511MNH0209XX    | 27             | 27                   | 295.3           | 0.13      | 3.223                 | 0.38 | 4.521                 | 0.46 | 9.619                 | 0.72 | 3-12   |
| P144                 | S5110229-5110211XX | S511MNH0229XX  | S511MNH0211XX    | 27             | 27                   | 206.5           | 0.58      | 3.220                 | 0.38 | 4.527                 | 0.46 | 9.639                 | 0.72 | 3-12   |
| P40                  | S5130213-5130212XX | S513MNH0213XX  | S513MNH0212XX    | 12             | 12                   | 353.0           | 1.30      | 0.484                 | 0.49 | 0.726                 | 0.65 | 0.970                 | 0.71 | 3-7    |
| P96                  | S6310208-6500207XX | S631MNH0208XX  | S650MNH0207XX    | 18             | 18                   | 497.0           | 0.29      | 1.455                 | 0.45 | 2.179                 | 0.59 | 2.748                 | 0.71 | 3-10   |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P149                 | S5300202-5310212XX | S530MNH0202XX  | S531MNH0212XX    | 27             | 27                   | 355.6           | 0.56      | 3.294                 | 0.36 | 4.617                 | 0.43 | 9.786                 | 0.70 | 3-12   |
| P139                 | S4900224-4900207XX | S490MNH0224XX  | S490MNH0207XX    | 27             | 27                   | 258.7           | 0.24      | 2.988                 | 0.37 | 4.198                 | 0.45 | 9.237                 | 0.70 | 3-11   |
| P69                  | S6090202-6100203XX | S609MNH0202XX  | S610MNH0203XX    | 12             | 15                   | 373.0           | 0.28      | 1.014                 | 0.45 | 1.514                 | 0.58 | 2.024                 | 0.70 | 3-9    |
| P22                  | S4750214-4470211XX | S475MNH0214XX  | S447MNH0211XX    | 10             | 10                   | 211.6           | 0.19      | 0.254                 | 0.47 | 0.369                 | 0.59 | 0.473                 | 0.70 | 3-4    |
| P56                  | S5520201-5690204XX | S552MNH0201XX  | S569MNH0204XX    | 12             | 15                   | 400.0           | 0.27      | 0.839                 | 0.44 | 1.252                 | 0.56 | 1.707                 | 0.69 | 3-8    |
| P54                  | S5520210-5520202XX | S552MNH0210XX  | S552MNH0202XX    | 12             | 15                   | 173.2           | 0.25      | 0.839                 | 0.44 | 1.252                 | 0.56 | 1.700                 | 0.69 | 3-8    |
| P53                  | S5520203-5520210XX | S552MNH0203XX  | S552MNH0210XX    | 12             | 15                   | 204.0           | 0.25      | 0.839                 | 0.44 | 1.252                 | 0.56 | 1.698                 | 0.69 | 3-8    |
| P100                 | S6510201-6510203XX | S651MNH0201XX  | S651MNH0203XX    | 18             | 18                   | 468.0           | 0.17      | 1.471                 | 0.47 | 2.183                 | 0.59 | 2.785                 | 0.68 | 3-10   |
| P55                  | S5520202-5520201XX | S552MNH0202XX  | S552MNH0201XX    | 12             | 15                   | 200.0           | 0.25      | 0.839                 | 0.44 | 1.252                 | 0.55 | 1.703                 | 0.68 | 3-8    |
| P103                 | S6510211-6510208XX | S651MNH0211XX  | S651MNH0208XX    | 33             | 33                   | 383.0           | 0.10      | 2.076                 | 0.34 | 3.040                 | 0.45 | 4.001                 | 0.67 | 3-10   |
| P70                  | S6100203-6100205XX | S610MNH0203XX  | S610MNH0205XX    | 12             | 15                   | 56.0            | 0.80      | 1.273                 | 0.45 | 1.915                 | 0.57 | 2.426                 | 0.67 | 3-9    |
| P89                  | CDT-39             | S652MNH0212XX  | OFALL-14         | 48             | 48                   | 28.6            | 0.35      | 19.015                | 0.40 | 27.187                | 0.49 | 47.843                | 0.66 | 3-10   |
| P17                  | S4460201-4460207XX | S446MNH0201XX  | S446MNH0207XX    | 8              | 8                    | 127.1           | 0.83      | 0.230                 | 0.45 | 0.343                 | 0.57 | 0.408                 | 0.65 | 3-4    |
| P21                  | S4750216-4750214XX | S475MNH0216XX  | S475MNH0214XX    | 10             | 10                   | 273.8           | 0.20      | 0.254                 | 0.44 | 0.370                 | 0.55 | 0.471                 | 0.65 | 3-5    |
| P95                  | S6310201-6310208XX | S631MNH0201XX  | S631MNH0208XX    | 18             | 18                   | 283.9           | 0.29      | 1.450                 | 0.44 | 2.176                 | 0.56 | 2.735                 | 0.65 | 3-10   |
| P78                  | S5900217-5900219XX | S590MNH0219XX  | S590MNH0217XX    | 18             | 18                   | 22.7            | 4.68      | 0.277                 | 0.34 | 0.417                 | 0.40 | 2.396                 | 0.65 | 3-13   |
| P142                 | S4900219-5110214XX | S490MNH0219XX  | S511MNH0214XX    | 27             | 27                   | 106.7           | 0.25      | 3.221                 | 0.35 | 4.538                 | 0.42 | 9.635                 | 0.64 | 3-12   |
| P94                  | S6310202-6310201XX | S631MNH0202XX  | S631MNH0201XX    | 18             | 18                   | 121.3           | 0.31      | 1.447                 | 0.43 | 2.173                 | 0.55 | 2.727                 | 0.64 | 3-10   |
| P242                 | S3920207-3920206XX | S392MNH0207XX  | S392MNH0206XX    | 8              | 8                    | 47.5            | 1.05      | 0.284                 | 0.39 | 0.411                 | 0.47 | 0.687                 | 0.64 | 3-1    |
| P137                 | S4500207-4710213XX | S450MNH0207XX  | S471MNH0213XX    | 27             | 27                   | 1135.1          | 0.84      | 2.943                 | 0.33 | 4.120                 | 0.39 | 9.051                 | 0.64 | 3-11   |
| P20                  | S4750205-4750216XX | S475MNH0205XX  | S475MNH0216XX    | 10             | 10                   | 269.5           | 0.20      | 0.244                 | 0.43 | 0.357                 | 0.54 | 0.453                 | 0.63 | 3-5    |
| P141                 | S4900201-4900219XX | S490MNH0201XX  | S490MNH0219XX    | 27             | 27                   | 193.4           | 0.62      | 3.195                 | 0.34 | 4.523                 | 0.41 | 9.605                 | 0.63 | 3-11   |
| P19                  | S4750206-4750205XX | S475MNH0206XX  | S475MNH0205XX    | 8              | 8                    | 132.7           | 1.34      | 0.230                 | 0.44 | 0.343                 | 0.55 | 0.412                 | 0.63 | 3-5    |
| P93                  | S6310203-6310202XX | S631MNH0203XX  | S631MNH0202XX    | 18             | 18                   | 178.7           | 0.28      | 1.284                 | 0.42 | 1.922                 | 0.53 | 2.456                 | 0.62 | 3-9    |
| P140                 | CDT-51             | S490MNH0207XX  | S490MNH0201XX    | 27             | 27                   | 23.4            | 0.13      | 3.135                 | 0.34 | 4.733                 | 0.40 | 10.381                | 0.62 | 3-11   |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P18                  | S4460207-4750206XX | S446MNH0207XX  | S475MNH0206XX    | 8              | 8                    | 203.1           | 0.37      | 0.230                 | 0.43 | 0.343                 | 0.54 | 0.411                 | 0.62 | 3-4    |
| P92                  | S6100205-6310203XX | S610MNH0205XX  | S631MNH0203XX    | 18             | 18                   | 493.5           | 0.29      | 1.282                 | 0.41 | 1.923                 | 0.52 | 2.451                 | 0.60 | 3-9    |
| P90                  | S6290216-6290218XX | S629MNH0216XX  | S629MNH0218XX    | 33             | 33                   | 36.4            | 0.93      | 4.324                 | 0.41 | 5.462                 | 0.47 | 8.422                 | 0.60 | 3-10   |
| P102                 | S6510205-6510211XX | S651MNH0205XX  | S651MNH0211XX    | 33             | 33                   | 132.0           | 0.09      | 2.289                 | 0.31 | 3.370                 | 0.41 | 4.256                 | 0.60 | 3-10   |
| P11                  | S4350218-4350220XX | S435MNH0218XX  | S435MNH0220XX    | 8              | 8                    | 233.7           | 0.41      | 0.189                 | 0.44 | 0.277                 | 0.55 | 0.316                 | 0.59 | 3-4    |
| P12                  | S4350220-4460205XX | S435MNH0220XX  | S446MNH0205XX    | 8              | 8                    | 137.9           | 0.36      | 0.189                 | 0.44 | 0.277                 | 0.54 | 0.318                 | 0.59 | 3-4    |
| P143                 | S5110214-5110229XX | S511MNH0214XX  | S511MNH0229XX    | 27             | 27                   | 88.6            | 0.47      | 3.220                 | 0.32 | 4.533                 | 0.38 | 9.704                 | 0.59 | 3-12   |
| P148                 | S5300219-5300202XX | S530MNH0219XX  | S530MNH0202XX    | 27             | 27                   | 395.2           | 0.56      | 3.238                 | 0.32 | 4.534                 | 0.38 | 9.659                 | 0.59 | 3-12   |
| P147                 | S5110218-5300219XX | S511MNH0218XX  | S530MNH0219XX    | 27             | 27                   | 310.5           | 0.56      | 3.232                 | 0.32 | 4.529                 | 0.38 | 9.643                 | 0.59 | 3-12   |
| P146                 | S5110209-5110218XX | S511MNH0209XX  | S511MNH0218XX    | 27             | 27                   | 306.6           | 0.56      | 3.228                 | 0.32 | 4.524                 | 0.38 | 9.631                 | 0.58 | 3-12   |
| P249                 | S4320232-4310207XX | S431MNH0207XX  | S432MNH0232XX    | 14             | 14                   | 227.5           | 0.10      | 0.620                 | 0.44 | 0.863                 | 0.53 | 1.521                 | 0.58 | 3-2    |
| P91                  | S6290218-6290217XX | S629MNH0218XX  | S629MNH0217XX    | 33             | 33                   | 91.0            | 0.35      | 3.448                 | 0.39 | 4.513                 | 0.45 | 7.463                 | 0.58 | 3-10   |
| P197                 | S4330204-4330224XX | S433MNH0204XX  | S433MNH0224XX    | 21             | 21                   | 313.5           | 0.87      | 2.044                 | 0.35 | 3.016                 | 0.42 | 5.215                 | 0.57 | 3-2    |
| P88                  | S6520212-6520214XX | S652MNH0214XX  | S652MNH0212XX    | 48             | 48                   | 51.1            | 0.37      | 16.684                | 0.32 | 23.718                | 0.41 | 42.235                | 0.57 | 3-10   |
| P26                  | S4470208-4470210XX | S447MNH0208XX  | S447MNH0210XX    | 10             | 10                   | 370.0           | 0.20      | 0.169                 | 0.38 | 0.248                 | 0.47 | 0.342                 | 0.57 | 3-5    |
| P152                 | S5500207-5500223XX | S550MNH0207XX  | S550MNH0223XX    | 33             | 33                   | 239.6           | 0.17      | 3.306                 | 0.33 | 4.630                 | 0.38 | 9.812                 | 0.56 | 3-12   |
| P23                  | S4470211-4470201XX | S447MNH0211XX  | S447MNH0201XX    | 10             | 10                   | 381.0           | 0.21      | 0.256                 | 0.38 | 0.372                 | 0.47 | 0.482                 | 0.55 | 3-4    |
| P288                 | S5280205-5290213XX | S528MNH0205XX  | S529MNH0213XX    | 12             | 12                   | 325.0           | 0.50      | 0.010                 | 0.05 | 0.015                 | 0.07 | 0.034                 | 0.55 | 3-7    |
| P16                  | S4460202-4460201XX | S446MNH0202XX  | S446MNH0201XX    | 8              | 8                    | 84.8            | 0.83      | 0.230                 | 0.39 | 0.343                 | 0.49 | 0.407                 | 0.54 | 3-4    |
| P15                  | S4460203-4460202XX | S446MNH0203XX  | S446MNH0202XX    | 8              | 8                    | 166.9           | 0.58      | 0.199                 | 0.40 | 0.291                 | 0.49 | 0.339                 | 0.54 | 3-4    |
| P101                 | S6510203-6510205XX | S651MNH0203XX  | S651MNH0205XX    | 36             | 36                   | 477.5           | 0.05      | 2.302                 | 0.31 | 3.519                 | 0.39 | 4.102                 | 0.54 | 3-10   |
| P218                 | S3930207-3930209XX | S393MNH0207XX  | S393MNH0209XX    | 21             | 21                   | 283.9           | 0.31      | 1.341                 | 0.32 | 2.106                 | 0.40 | 3.563                 | 0.54 | 3-1    |
| P250                 | S4320232-4320227XX | S432MNH0232XX  | S432MNH0227XX    | 16             | 16                   | 304.0           | 0.33      | 0.626                 | 0.32 | 0.870                 | 0.38 | 1.539                 | 0.53 | 3-2    |
| P224                 | S4080205-4080206XX | S408MNH0205XX  | S408MNH0206XX    | 21             | 21                   | 69.0            | 0.75      | 1.881                 | 0.32 | 2.810                 | 0.39 | 4.767                 | 0.53 | 3-1    |
| P241                 | S3920208-3920207XX | S392MNH0208XX  | S392MNH0207XX    | 10             | 10                   | 215.1           | 1.12      | 0.284                 | 0.31 | 0.411                 | 0.38 | 0.686                 | 0.52 | 3-1    |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P135                 | S4310214-4500210XX | S431MNH0214XX  | S450MNH0210XX    | 27             | 27                   | 278.2           | 0.52      | 2.205                 | 0.27 | 3.140                 | 0.33 | 7.428                 | 0.52 | 3-11   |
| P27                  | S4470210-4480204XX | S447MNH0210XX  | S448MNH0204XX    | 10             | 10                   | 386.3           | 0.18      | 0.176                 | 0.35 | 0.260                 | 0.43 | 0.357                 | 0.52 | 3-15   |
| P225                 | S4080206-4080209XX | S408MNH0206XX  | S408MNH0209XX    | 21             | 21                   | 290.8           | 0.73      | 1.884                 | 0.31 | 2.813                 | 0.38 | 4.779                 | 0.52 | 3-1    |
| P10                  | S4350201-4350218XX | S435MNH0201XX  | S435MNH0218XX    | 8              | 8                    | 17.8            | 1.12      | 0.189                 | 0.38 | 0.277                 | 0.48 | 0.314                 | 0.52 | 3-4    |
| P229                 | S4330208-4330204XX | S433MNH0208XX  | S433MNH0204XX    | 21             | 21                   | 309.1           | 0.87      | 1.900                 | 0.31 | 2.829                 | 0.38 | 4.831                 | 0.51 | 3-2    |
| P219                 | S3930209-3930212XX | S393MNH0209XX  | S393MNH0212XX    | 21             | 21                   | 311.0           | 0.82      | 1.829                 | 0.31 | 2.740                 | 0.38 | 4.659                 | 0.51 | 3-1    |
| P136                 | S4500210-4500207XX | S450MNH0210XX  | S450MNH0207XX    | 27             | 27                   | 187.5           | 0.64      | 2.839                 | 0.28 | 3.980                 | 0.33 | 8.815                 | 0.51 | 3-11   |
| P134                 | S4320228-4310214XX | S432MNH0228XX  | S431MNH0214XX    | 27             | 27                   | 300.7           | 0.50      | 2.201                 | 0.27 | 3.136                 | 0.32 | 7.417                 | 0.51 | 3-11   |
| P128                 | S4320204-4320205XX | S432MNH0204XX  | S432MNH0205XX    | 27             | 27                   | 32.6            | 0.31      | 2.128                 | 0.31 | 3.122                 | 0.38 | 5.394                 | 0.51 | 3-2    |
| P84                  | S6290217-6520225XX | S629MNH0217XX  | S652MNH0225XX    | 42             | 42                   | 517.4           | 0.47      | 4.621                 | 0.30 | 6.450                 | 0.36 | 12.124                | 0.51 | 3-10   |
| P217                 | S3940204-3930207XX | S394MNH0204XX  | S393MNH0207XX    | 21             | 21                   | 274.5           | 0.72      | 1.338                 | 0.30 | 2.103                 | 0.38 | 3.551                 | 0.51 | 3-1    |
| P130                 | S4320213-4320220XX | S432MNH0213XX  | S432MNH0220XX    | 27             | 27                   | 305.2           | 0.40      | 2.204                 | 0.31 | 3.233                 | 0.38 | 5.541                 | 0.51 | 3-2    |
| P220                 | S3930212-3930213XX | S393MNH0212XX  | S393MNH0213XX    | 21             | 21                   | 293.7           | 0.71      | 1.833                 | 0.31 | 2.743                 | 0.38 | 4.672                 | 0.51 | 3-1    |
| P133                 | S4320235-4320228XX | S432MNH0235XX  | S432MNH0228XX    | 27             | 27                   | 268.0           | 0.55      | 2.196                 | 0.26 | 3.131                 | 0.32 | 7.404                 | 0.51 | 3-2    |
| P118                 | S4880209-4880210XX | S488MNH0209XX  | S488MNH0210XX    | 12             | 12                   | 353.5           | 0.16      | 0.228                 | 0.34 | 0.335                 | 0.42 | 0.483                 | 0.51 | 3-6    |
| P25                  | S4470207-4470208XX | S447MNH0207XX  | S447MNH0208XX    | 10             | 10                   | 100.0           | 0.20      | 0.145                 | 0.34 | 0.212                 | 0.42 | 0.303                 | 0.51 | 3-4    |
| P13                  | S4460205-4460204XX | S446MNH0205XX  | S446MNH0204XX    | 8              | 8                    | 69.1            | 0.43      | 0.197                 | 0.38 | 0.289                 | 0.47 | 0.331                 | 0.50 | 3-4    |
| P127                 | S4320202-4320204XX | S432MNH0202XX  | S432MNH0204XX    | 27             | 27                   | 206.1           | 0.29      | 2.127                 | 0.30 | 3.121                 | 0.37 | 5.381                 | 0.50 | 3-2    |
| P228                 | S4330210-4330208XX | S433MNH0210XX  | S433MNH0208XX    | 21             | 21                   | 310.5           | 0.87      | 1.896                 | 0.30 | 2.825                 | 0.37 | 4.818                 | 0.50 | 3-2    |
| P247                 | S4090220-4100208XX | S409MNH0220XX  | S410MNH0208XX    | 12             | 12                   | 388.3           | 0.49      | 0.328                 | 0.31 | 0.467                 | 0.37 | 0.811                 | 0.50 | 3-2    |
| P226                 | S4080209-4080231XX | S408MNH0209XX  | S408MNH0231XX    | 21             | 21                   | 314.0           | 0.86      | 1.888                 | 0.30 | 2.817                 | 0.37 | 4.792                 | 0.50 | 3-1    |
| P227                 | S4080231-4330210XX | S408MNH0231XX  | S433MNH0210XX    | 21             | 21                   | 320.0           | 0.88      | 1.892                 | 0.30 | 2.821                 | 0.37 | 4.805                 | 0.50 | 3-2    |
| P131                 | S4320220-4320230XX | S432MNH0220XX  | S432MNH0230XX    | 27             | 27                   | 248.8           | 0.20      | 2.208                 | 0.31 | 3.236                 | 0.38 | 5.554                 | 0.50 | 3-2    |
| P38                  | S4880211-4880210XX | S488MNH0211XX  | S488MNH0210XX    | 10             | 10                   | 30.0            | 0.83      | 0.223                 | 0.34 | 0.340                 | 0.42 | 0.430                 | 0.50 | 3-6    |
| P14                  | S4460204-4460203XX | S446MNH0204XX  | S446MNH0203XX    | 8              | 8                    | 321.8           | 1.12      | 0.197                 | 0.37 | 0.289                 | 0.45 | 0.335                 | 0.49 | 3-4    |





Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P126                 | S4330224-4320202XX | S433MNH0224XX  | S432MNH0202XX    | 27             | 27                   | 299.8           | 0.32      | 2.124                 | 0.30 | 3.118                 | 0.36 | 5.371                 | 0.49 | 3-2    |
| P248                 | S4100208-4310207XX | S410MNH0208XX  | S431MNH0207XX    | 12             | 12                   | 359.8           | 0.51      | 0.330                 | 0.30 | 0.470                 | 0.36 | 0.820                 | 0.49 | 3-2    |
| P129                 | S4320205-4320213XX | S432MNH0205XX  | S432MNH0213XX    | 27             | 27                   | 290.4           | 0.28      | 2.199                 | 0.30 | 3.228                 | 0.36 | 5.524                 | 0.49 | 3-2    |
| P83                  | S6290216-6290217XX | S629MNH0216XX  | S629MNH0217XX    | 33             | 33                   | 127.1           | 0.02      | 1.927                 | 0.30 | 2.774                 | 0.35 | 5.459                 | 0.49 | 3-10   |
| P132                 | S4320230-4320235XX | S432MNH0230XX  | S432MNH0235XX    | 27             | 27                   | 12.4            | 0.81      | 2.187                 | 0.25 | 3.122                 | 0.31 | 5.075                 | 0.48 | 3-2    |
| P240                 | S3690219-3920208XX | S369MNH0219XX  | S392MNH0208XX    | 10             | 10                   | 325.6           | 1.11      | 0.284                 | 0.30 | 0.411                 | 0.36 | 0.682                 | 0.48 | 3-1    |
| P239                 | S3690209-3690219XX | S369MNH0209XX  | S369MNH0219XX    | 10             | 10                   | 141.2           | 1.07      | 0.280                 | 0.30 | 0.406                 | 0.36 | 0.661                 | 0.47 | 3-1    |
| P117                 | S4880208-4880209XX | S488MNH0208XX  | S488MNH0209XX    | 10             | 10                   | 30.0            | 0.83      | 0.114                 | 0.30 | 0.169                 | 0.37 | 0.249                 | 0.46 | 3-6    |
| P39                  | S4880210-5130213XX | S488MNH0210XX  | S513MNH0213XX    | 12             | 12                   | 361.0           | 0.70      | 0.452                 | 0.31 | 0.675                 | 0.39 | 0.915                 | 0.46 | 3-6    |
| P216                 | S3940201-3940204XX | S394MNH0201XX  | S394MNH0204XX    | 21             | 21                   | 49.8            | 0.60      | 1.335                 | 0.27 | 2.100                 | 0.34 | 3.539                 | 0.46 | 3-1    |
| P28                  | S4480204-4480203XX | S448MNH0204XX  | S448MNH0203XX    | 10             | 10                   | 234.0           | 0.48      | 0.176                 | 0.31 | 0.259                 | 0.38 | 0.359                 | 0.45 | 3-15   |
| P246                 | S4090221-4090220XX | S409MNH0221XX  | S409MNH0220XX    | 12             | 12                   | 258.4           | 1.08      | 0.327                 | 0.28 | 0.466                 | 0.33 | 0.802                 | 0.45 | 3-1    |
| P231                 | S3680212-3930211XX | S368MNH0212XX  | S393MNH0211XX    | 15             | 15                   | 364.7           | 0.60      | 0.713                 | 0.29 | 1.062                 | 0.36 | 1.585                 | 0.45 | 3-1    |
| P262                 | S4750204-4750205XX | S475MNH0204XX  | S475MNH0205XX    | 10             | 10                   | 137.7           | 0.22      | 0.012                 | 0.26 | 0.022                 | 0.35 | 0.038                 | 0.44 | 3-5    |
| P174                 | S4870204-4880202XX | S487MNH0204XX  | S488MNH0202XX    | 12             | 12                   | 471.4           | 0.51      | 0.340                 | 0.31 | 0.501                 | 0.38 | 0.666                 | 0.44 | 3-7    |
| P155                 | S5500201-5500225XX | S550MNH0201XX  | S550MNH0225XX    | 42             | 42                   | 15.0            | 0.07      | 3.362                 | 0.25 | 4.701                 | 0.30 | 9.962                 | 0.44 | 3-12   |
| P180                 | S5130207-5130214XX | S513MNH0207XX  | S513MNH0214XX    | 12             | 12                   | 254.0           | 0.50      | 0.304                 | 0.29 | 0.453                 | 0.36 | 0.599                 | 0.44 | 3-7    |
| P179                 | S5130206-5130207XX | S513MNH0206XX  | S513MNH0207XX    | 12             | 12                   | 320.6           | 0.39      | 0.301                 | 0.30 | 0.448                 | 0.38 | 0.592                 | 0.44 | 3-7    |
| P29                  | S4480203-4480202XX | S448MNH0203XX  | S448MNH0202XX    | 10             | 10                   | 243.0           | 0.34      | 0.179                 | 0.30 | 0.264                 | 0.36 | 0.367                 | 0.44 | 3-15   |
| P184                 | S4880201-4880209XX | S488MNH0201XX  | S488MNH0209XX    | 12             | 12                   | 452.8           | 0.13      | 0.107                 | 0.29 | 0.158                 | 0.36 | 0.218                 | 0.44 | 3-6    |
| P221                 | S3930213-3930214XX | S393MNH0213XX  | S393MNH0214XX    | 21             | 21                   | 44.7            | 0.90      | 1.846                 | 0.26 | 2.760                 | 0.33 | 4.690                 | 0.43 | 3-1    |
| P230                 | S3930216-4080205XX | S393MNH0216XX  | S408MNH0205XX    | 24             | 24                   | 232.5           | 0.23      | 0.945                 | 0.26 | 1.413                 | 0.32 | 2.395                 | 0.43 | 3-1    |
| P223                 | CDT-83             | S393MNH0216XX  | S408MNH0205XX    | 24             | 24                   | 237.8           | 0.22      | 0.935                 | 0.26 | 1.397                 | 0.32 | 2.369                 | 0.43 | 3-1    |
| P244                 | S3920205-3920204XX | S392MNH0205XX  | S392MNH0204XX    | 10             | 10                   | 34.4            | 4.08      | 0.323                 | 0.27 | 0.461                 | 0.33 | 0.763                 | 0.43 | 3-1    |
| P24                  | S4470201-4470207XX | S447MNH0201XX  | S447MNH0207XX    | 10             | 10                   | 319.1           | 0.18      | 0.096                 | 0.30 | 0.139                 | 0.36 | 0.176                 | 0.43 | 3-4    |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P156                 | S5500225-5710212XX | S550MNH0225XX  | S571MNH0212XX    | 42             | 42                   | 286.5           | 0.14      | 3.369                 | 0.25 | 4.708                 | 0.29 | 9.980                 | 0.43 | 3-13   |
| P178                 | S4880205-5130206XX | S488MNH0205XX  | S513MNH0206XX    | 12             | 12                   | 296.4           | 0.43      | 0.245                 | 0.29 | 0.360                 | 0.36 | 0.503                 | 0.43 | 3-7    |
| P234                 | S3930226-3930227XX | S393MNH0226XX  | S393MNH0227XX    | 14             | 14                   | 329.4           | 0.16      | 0.235                 | 0.28 | 0.348                 | 0.34 | 0.523                 | 0.42 | 3-1    |
| P222                 | S3930214-3930216XX | S393MNH0214XX  | S393MNH0216XX    | 21             | 21                   | 83.1            | 2.32      | 1.877                 | 0.26 | 2.807                 | 0.32 | 4.745                 | 0.42 | 3-1    |
| P237                 | S3690201-3690218XX | S369MNH0201XX  | S369MNH0218XX    | 14             | 14                   | 60.5            | 0.26      | 0.267                 | 0.27 | 0.389                 | 0.33 | 0.614                 | 0.42 | 3-1    |
| P233                 | S3930211-3930226XX | S393MNH0211XX  | S393MNH0226XX    | 14             | 14                   | 242.7           | 0.17      | 0.229                 | 0.27 | 0.340                 | 0.34 | 0.508                 | 0.42 | 3-1    |
| P245                 | S3920204-4090221XX | S392MNH0204XX  | S409MNH0221XX    | 12             | 12                   | 648.5           | 0.88      | 0.325                 | 0.26 | 0.463                 | 0.31 | 0.794                 | 0.41 | 3-1    |
| P173                 | S4870203-4870204XX | S487MNH0203XX  | S487MNH0204XX    | 12             | 12                   | 274.6           | 0.83      | 0.328                 | 0.29 | 0.483                 | 0.35 | 0.639                 | 0.41 | 3-7    |
| P235                 | S3930227-3690214XX | S393MNH0227XX  | S369MNH0214XX    | 14             | 14                   | 277.8           | 0.18      | 0.239                 | 0.27 | 0.353                 | 0.33 | 0.535                 | 0.41 | 3-1    |
| P161                 | S5900216-5900217XX | S590MNH0216XX  | S590MNH0217XX    | 42             | 42                   | 600.9           | 0.28      | 3.810                 | 0.24 | 5.324                 | 0.28 | 10.772                | 0.40 | 3-13   |
| P80                  | S6110209-6110210XX | S611MNH0209XX  | S611MNH0210XX    | 42             | 42                   | 412.2           | 0.34      | 4.212                 | 0.24 | 5.892                 | 0.29 | 11.511                | 0.40 | 3-13   |
| P81                  | S6110210-6300209XX | S611MNH0210XX  | S630MNH0209XX    | 42             | 42                   | 620.0           | 0.23      | 4.378                 | 0.24 | 6.140                 | 0.29 | 11.755                | 0.40 | 3-13   |
| P236                 | S3690214-3690201XX | S369MNH0214XX  | S369MNH0201XX    | 14             | 14                   | 323.4           | 0.26      | 0.258                 | 0.26 | 0.377                 | 0.32 | 0.591                 | 0.40 | 3-1    |
| P251                 | S3920206-3920205XX | S392MNH0206XX  | S392MNH0205XX    | 10             | 10                   | 208.0           | 0.43      | 0.160                 | 0.26 | 0.229                 | 0.31 | 0.379                 | 0.40 | 3-1    |
| P243                 | CDT-81             | S392MNH0206XX  | S392MNH0205XX    | 10             | 10                   | 204.0           | 0.44      | 0.162                 | 0.26 | 0.231                 | 0.31 | 0.383                 | 0.40 | 3-1    |
| P79                  | S5900217-6110209XX | S590MNH0217XX  | S611MNH0209XX    | 42             | 42                   | 380.0           | 0.23      | 4.202                 | 0.24 | 5.882                 | 0.28 | 11.595                | 0.40 | 3-13   |
| P175                 | S4880202-4880201XX | S488MNH0202XX  | S488MNH0201XX    | 12             | 12                   | 117.9           | 0.51      | 0.340                 | 0.28 | 0.500                 | 0.34 | 0.668                 | 0.40 | 3-7    |
| P157                 | S5710212-5710211XX | S571MNH0212XX  | S571MNH0211XX    | 42             | 42                   | 362.0           | 0.18      | 3.434                 | 0.23 | 4.792                 | 0.27 | 10.105                | 0.40 | 3-13   |
| P82                  | S6300209-6290216XX | S630MNH0209XX  | S629MNH0216XX    | 42             | 42                   | 444.2           | 0.36      | 4.389                 | 0.24 | 6.151                 | 0.28 | 11.782                | 0.39 | 3-14   |
| P232                 | S3930211-3930209XX | S393MNH0211XX  | S393MNH0209XX    | 15             | 15                   | 54.6            | 0.68      | 0.484                 | 0.25 | 0.722                 | 0.31 | 1.083                 | 0.39 | 3-1    |
| P30                  | S4480202-4730209XX | S448MNH0202XX  | S473MNH0209XX    | 10             | 10                   | 273.6           | 0.69      | 0.181                 | 0.27 | 0.267                 | 0.32 | 0.372                 | 0.39 | 3-6    |
| P160                 | S5900215-5900216XX | S590MNH0215XX  | S590MNH0216XX    | 42             | 42                   | 130.0           | 0.26      | 3.642                 | 0.22 | 5.087                 | 0.27 | 10.469                | 0.39 | 3-13   |
| P238                 | S3690209-3690218XX | S369MNH0218XX  | S369MNH0209XX    | 14             | 14                   | 329.4           | 0.26      | 0.268                 | 0.25 | 0.390                 | 0.30 | 0.621                 | 0.38 | 3-1    |
| P169                 | S4740204-4740211XX | S474MNH0204XX  | S474MNH0211XX    | 12             | 12                   | 206.5           | 1.19      | 0.301                 | 0.27 | 0.441                 | 0.33 | 0.586                 | 0.38 | 3-5    |
| P170                 | S4740211-4870201XX | S474MNH0211XX  | S487MNH0201XX    | 12             | 12                   | 211.8           | 0.49      | 0.310                 | 0.27 | 0.455                 | 0.33 | 0.602                 | 0.38 | 3-5    |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P159                 | S5710216-5900215XX | S571MNH0216XX  | S590MNH0215XX    | 42             | 42                   | 581.9           | 0.28      | 3.555                 | 0.22 | 4.955                 | 0.26 | 10.325                | 0.38 | 3-13   |
| P196                 | S4330203-4330204XX | S433MNH0203XX  | S433MNH0204XX    | 18             | 18                   | 78.0            | 1.58      | 0.140                 | 0.23 | 0.210                 | 0.28 | 0.371                 | 0.38 | 3-2    |
| P158                 | S5710211-5710216XX | S571MNH0211XX  | S571MNH0216XX    | 42             | 42                   | 364.9           | 0.28      | 3.457                 | 0.22 | 4.822                 | 0.25 | 10.150                | 0.37 | 3-13   |
| P154                 | S5500202-5500201XX | S550MNH0202XX  | S550MNH0201XX    | 33             | 33                   | 50.0            | 17.13     | 3.313                 | 0.22 | 4.636                 | 0.25 | 9.830                 | 0.37 | 3-12   |
| P172                 | S4870202-4870203XX | S487MNH0202XX  | S487MNH0203XX    | 12             | 12                   | 256.9           | 1.27      | 0.326                 | 0.25 | 0.480                 | 0.31 | 0.634                 | 0.36 | 3-6    |
| P153                 | S5500223-5500202XX | S550MNH0223XX  | S550MNH0202XX    | 33             | 33                   | 301.8           | 0.12      | 3.312                 | 0.22 | 4.635                 | 0.25 | 9.828                 | 0.36 | 3-12   |
| P177                 | S4880204-4880205XX | S488MNH0204XX  | S488MNH0205XX    | 12             | 12                   | 56.6            | 1.15      | 0.243                 | 0.24 | 0.358                 | 0.30 | 0.496                 | 0.35 | 3-7    |
| P171                 | S4870201-4870202XX | S487MNH0201XX  | S487MNH0202XX    | 12             | 12                   | 257.5           | 1.27      | 0.310                 | 0.24 | 0.454                 | 0.29 | 0.606                 | 0.33 | 3-5    |
| P215                 | S4470206-4470207XX | S447MNH0206XX  | S447MNH0207XX    | 10             | 10                   | 269.7           | 1.90      | 0.050                 | 0.22 | 0.074                 | 0.27 | 0.126                 | 0.33 | 3-4    |
| P35                  | S4880214-4880213XX | S488MNH0214XX  | S488MNH0213XX    | 10             | 10                   | 351.0           | 0.70      | 0.122                 | 0.23 | 0.184                 | 0.28 | 0.254                 | 0.33 | 3-6    |
| P176                 | S4880201-4880204XX | S488MNH0201XX  | S488MNH0204XX    | 12             | 12                   | 18.5            | 0.65      | 0.243                 | 0.23 | 0.358                 | 0.28 | 0.495                 | 0.33 | 3-7    |
| P36                  | S4880213-4880212XX | S488MNH0213XX  | S488MNH0212XX    | 10             | 10                   | 287.0           | 0.69      | 0.142                 | 0.22 | 0.214                 | 0.27 | 0.287                 | 0.32 | 3-6    |
| P168                 | S4740212-4740204XX | S474MNH0212XX  | S474MNH0204XX    | 12             | 12                   | 295.0           | 1.18      | 0.268                 | 0.23 | 0.393                 | 0.28 | 0.506                 | 0.32 | 3-5    |
| P166                 | S4470201-4740205XX | S447MNH0201XX  | S474MNH0205XX    | 12             | 12                   | 307.6           | 1.00      | 0.256                 | 0.22 | 0.375                 | 0.27 | 0.480                 | 0.31 | 3-4    |
| P114                 | S4880206-4880216XX | S488MNH0206XX  | S488MNH0216XX    | 10             | 10                   | 14.8            | 0.67      | 0.110                 | 0.21 | 0.162                 | 0.25 | 0.235                 | 0.30 | 3-6    |
| P34                  | S4730207-4880214XX | S473MNH0207XX  | S488MNH0214XX    | 10             | 10                   | 364.6           | 0.68      | 0.102                 | 0.21 | 0.152                 | 0.25 | 0.219                 | 0.30 | 3-6    |
| P167                 | S4740205-4740212XX | S474MNH0205XX  | S474MNH0212XX    | 12             | 12                   | 297.5           | 1.18      | 0.259                 | 0.22 | 0.379                 | 0.27 | 0.489                 | 0.30 | 3-5    |
| P203                 | S4340204-4340205XX | S434MNH0204XX  | S434MNH0205XX    | 12             | 12                   | 303.6           | 0.14      | 0.055                 | 0.19 | 0.083                 | 0.23 | 0.149                 | 0.30 | 3-3    |
| P77                  | S6110203-5900219XX | S611MNH0203XX  | S590MNH0219XX    | 18             | 18                   | 357.0           | 0.23      | 0.274                 | 0.15 | 0.414                 | 0.19 | 0.502                 | 0.30 | 3-13   |
| P33                  | S4730208-4730207XX | S473MNH0208XX  | S473MNH0207XX    | 10             | 10                   | 353.9           | 0.61      | 0.099                 | 0.20 | 0.147                 | 0.25 | 0.211                 | 0.30 | 3-6    |
| P116                 | S4880207-4880208XX | S488MNH0207XX  | S488MNH0208XX    | 10             | 10                   | 313.6           | 0.90      | 0.113                 | 0.20 | 0.167                 | 0.24 | 0.248                 | 0.30 | 3-6    |
| P111                 | S4730209-4730205XX | S473MNH0209XX  | S473MNH0205XX    | 10             | 10                   | 352.4           | 0.51      | 0.102                 | 0.20 | 0.150                 | 0.25 | 0.215                 | 0.30 | 3-6    |
| P113                 | S4730206-4880206XX | S473MNH0206XX  | S488MNH0206XX    | 10             | 10                   | 347.0           | 0.89      | 0.109                 | 0.20 | 0.161                 | 0.24 | 0.233                 | 0.29 | 3-6    |
| P31                  | S4730209-4480209XX | S473MNH0209XX  | S448MNH0209XX    | 10             | 10                   | 393.3           | 0.35      | 0.081                 | 0.20 | 0.119                 | 0.24 | 0.172                 | 0.29 | 3-6    |
| P37                  | S4880212-4880211XX | S488MNH0212XX  | S488MNH0211XX    | 10             | 10                   | 46.4            | 1.21      | 0.142                 | 0.20 | 0.214                 | 0.25 | 0.288                 | 0.29 | 3-6    |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P200                 | S4070202-4070201XX | S407MNH0202XX  | S407MNH0201XX    | 10             | 10                   | 57.5            | 0.30      | 0.052                 | 0.18 | 0.080                 | 0.23 | 0.130                 | 0.29 | 3-3    |
| P115                 | S4880216-4880207XX | S488MNH0216XX  | S488MNH0207XX    | 10             | 10                   | 353.6           | 0.91      | 0.111                 | 0.20 | 0.164                 | 0.24 | 0.242                 | 0.29 | 3-6    |
| P122                 | S4480219-4330229XX | S448MNH0219XX  | S433MNH0229XX    | 10             | 10                   | 266.9           | 0.27      | 0.071                 | 0.21 | 0.111                 | 0.26 | 0.135                 | 0.28 | 3-2    |
| P32                  | S4480209-4730208XX | S448MNH0209XX  | S473MNH0208XX    | 10             | 10                   | 342.9           | 0.72      | 0.082                 | 0.19 | 0.121                 | 0.23 | 0.182                 | 0.28 | 3-6    |
| P296                 | S4350215-4350201XX | S435MNH0215XX  | S435MNH0201XX    | 8              | 8                    | 68.7            | 8.08      | 0.029                 | 0.21 | 0.044                 | 0.26 | 0.053                 | 0.28 | 3-4    |
| P199                 | S4070203-4070202XX | S407MNH0203XX  | S407MNH0202XX    | 10             | 10                   | 80.0            | 0.30      | 0.052                 | 0.18 | 0.080                 | 0.22 | 0.129                 | 0.28 | 3-3    |
| P112                 | S4730205-4730206XX | S473MNH0205XX  | S473MNH0206XX    | 10             | 10                   | 352.0           | 0.94      | 0.103                 | 0.19 | 0.152                 | 0.23 | 0.221                 | 0.28 | 3-6    |
| P198                 | S4060210-4070203XX | S406MNH0210XX  | S407MNH0203XX    | 10             | 10                   | 266.0           | 0.30      | 0.052                 | 0.18 | 0.080                 | 0.22 | 0.128                 | 0.28 | 3-3    |
| P124                 | S4330212-4330230XX | S433MNH0212XX  | S433MNH0230XX    | 10             | 10                   | 50.0            | 0.40      | 0.075                 | 0.20 | 0.116                 | 0.25 | 0.143                 | 0.27 | 3-2    |
| P212                 | S4330207-4330206XX | S433MNH0207XX  | S433MNH0206XX    | 15             | 15                   | 20.0            | 0.10      | 0.065                 | 0.17 | 0.098                 | 0.21 | 0.170                 | 0.27 | 3-2    |
| P123                 | S4330229-4330212XX | S433MNH0229XX  | S433MNH0212XX    | 10             | 10                   | 180.0           | 0.40      | 0.074                 | 0.20 | 0.115                 | 0.24 | 0.142                 | 0.27 | 3-2    |
| P9                   | S4350202-4350201XX | S435MNH0202XX  | S435MNH0201XX    | 10             | 10                   | 14.0            | 1.43      | 0.061                 | 0.20 | 0.095                 | 0.24 | 0.116                 | 0.27 | 3-4    |
| P258                 | S4470202-4470201XX | S447MNH0202XX  | S447MNH0201XX    | 12             | 12                   | 130.0           | 0.50      | 0.095                 | 0.20 | 0.145                 | 0.24 | 0.171                 | 0.27 | 3-4    |
| P204                 | S4340205-4340214XX | S434MNH0205XX  | S434MNH0214XX    | 10             | 10                   | 308.0           | 0.19      | 0.065                 | 0.17 | 0.096                 | 0.20 | 0.167                 | 0.26 | 3-3    |
| P125                 | S4330230-4330224XX | S433MNH0230XX  | S433MNH0224XX    | 10             | 10                   | 100.0           | 0.39      | 0.075                 | 0.19 | 0.116                 | 0.23 | 0.146                 | 0.26 | 3-2    |
| P201                 | S4070201-4340203XX | S407MNH0201XX  | S434MNH0203XX    | 10             | 10                   | 327.6           | 0.30      | 0.052                 | 0.16 | 0.080                 | 0.20 | 0.135                 | 0.26 | 3-3    |
| P7                   | S4350214-4350206XX | S435MNH0214XX  | S435MNH0206XX    | 10             | 10                   | 185.0           | 0.35      | 0.061                 | 0.19 | 0.095                 | 0.24 | 0.115                 | 0.26 | 3-4    |
| P268                 | S4740203-4740204XX | S474MNH0203XX  | S474MNH0204XX    | 12             | 12                   | 280.3           | 0.19      | 0.027                 | 0.17 | 0.042                 | 0.21 | 0.069                 | 0.25 | 3-5    |
| P76                  | S6110202-6110203XX | S611MNH0202XX  | S611MNH0203XX    | 18             | 18                   | 323.0           | 0.18      | 0.198                 | 0.19 | 0.298                 | 0.24 | 0.342                 | 0.25 | 3-13   |
| P121                 | S4480208-4480219XX | S448MNH0208XX  | S448MNH0219XX    | 10             | 10                   | 297.0           | 0.29      | 0.028                 | 0.18 | 0.044                 | 0.22 | 0.067                 | 0.25 | 3-2    |
| P3                   | S4340201-4350211XX | S434MNH0201XX  | S435MNH0211XX    | 10             | 10                   | 300.0           | 0.03      | 0.025                 | 0.18 | 0.039                 | 0.22 | 0.050                 | 0.25 | 3-3    |
| P2                   | S4350219-4340201XX | S435MNH0219XX  | S434MNH0201XX    | 10             | 10                   | 395.0           | 0.33      | 0.021                 | 0.17 | 0.032                 | 0.21 | 0.040                 | 0.24 | 3-3    |
| P202                 | S4340203-4340204XX | S434MNH0203XX  | S434MNH0204XX    | 12             | 12                   | 315.3           | 0.71      | 0.052                 | 0.14 | 0.079                 | 0.17 | 0.140                 | 0.23 | 3-3    |
| P6                   | S4350213-4350214XX | S435MNH0213XX  | S435MNH0214XX    | 10             | 10                   | 79.0            | 0.43      | 0.045                 | 0.17 | 0.069                 | 0.21 | 0.086                 | 0.23 | 3-4    |
| P194                 | S4330225-4330206XX | S433MNH0225XX  | S433MNH0206XX    | 15             | 15                   | 100.0           | 0.46      | 0.075                 | 0.14 | 0.112                 | 0.17 | 0.197                 | 0.23 | 3-2    |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P75                  | S6110201-6110202XX | S611MNH0201XX  | S611MNH0202XX    | 18             | 18                   | 65.0            | 0.23      | 0.195                 | 0.17 | 0.295                 | 0.21 | 0.334                 | 0.22 | 3-13   |
| P195                 | S4330206-4330203XX | S433MNH0206XX  | S433MNH0203XX    | 15             | 15                   | 185.7           | 0.31      | 0.140                 | 0.14 | 0.210                 | 0.17 | 0.369                 | 0.22 | 3-2    |
| P8                   | S4350206-4350202XX | S435MNH0206XX  | S435MNH0202XX    | 10             | 10                   | 129.0           | 0.30      | 0.061                 | 0.17 | 0.095                 | 0.20 | 0.116                 | 0.22 | 3-4    |
| P211                 | S4330213-4330207XX | S433MNH0213XX  | S433MNH0207XX    | 15             | 15                   | 335.0           | 0.36      | 0.065                 | 0.14 | 0.098                 | 0.17 | 0.168                 | 0.22 | 3-2    |
| P74                  | S6100207-6110201XX | S610MNH0207XX  | S611MNH0201XX    | 18             | 18                   | 388.0           | 0.20      | 0.194                 | 0.17 | 0.294                 | 0.21 | 0.331                 | 0.22 | 3-9    |
| P257                 | S4470209-4470202XX | S447MNH0209XX  | S447MNH0202XX    | 12             | 12                   | 103.0           | 0.51      | 0.095                 | 0.16 | 0.145                 | 0.20 | 0.170                 | 0.22 | 3-4    |
| P5                   | S4350212-4350213XX | S435MNH0212XX  | S435MNH0213XX    | 10             | 10                   | 300.0           | 0.33      | 0.045                 | 0.16 | 0.069                 | 0.19 | 0.085                 | 0.21 | 3-3    |
| P256                 | S4470203-4470209XX | S447MNH0203XX  | S447MNH0209XX    | 12             | 12                   | 197.0           | 0.69      | 0.095                 | 0.16 | 0.145                 | 0.19 | 0.169                 | 0.21 | 3-4    |
| P261                 | S4750203-4750204XX | S475MNH0203XX  | S475MNH0204XX    | 10             | 10                   | 250.5           | 0.16      | 0.009                 | 0.09 | 0.014                 | 0.14 | 0.026                 | 0.21 | 3-5    |
| P254                 | S4080202-4080201XX | S408MNH0202XX  | S408MNH0201XX    | 10             | 10                   | 212.0           | 0.78      | 0.011                 | 0.13 | 0.017                 | 0.16 | 0.031                 | 0.21 | 3-3    |
| P192                 | S4080211-4330211XX | S408MNH0211XX  | S433MNH0211XX    | 15             | 15                   | 270.3           | 0.39      | 0.070                 | 0.13 | 0.106                 | 0.16 | 0.181                 | 0.20 | 3-2    |
| P193                 | S4330211-4330225XX | S433MNH0211XX  | S433MNH0225XX    | 15             | 15                   | 367.6           | 0.20      | 0.075                 | 0.13 | 0.112                 | 0.16 | 0.187                 | 0.20 | 3-2    |
| P4                   | S4350211-4350212XX | S435MNH0211XX  | S435MNH0212XX    | 10             | 10                   | 302.0           | 0.60      | 0.038                 | 0.14 | 0.058                 | 0.18 | 0.072                 | 0.20 | 3-3    |
| P255                 | S4460210-4470203XX | S446MNH0210XX  | S447MNH0203XX    | 12             | 12                   | 300.0           | 0.74      | 0.095                 | 0.15 | 0.145                 | 0.18 | 0.167                 | 0.20 | 3-4    |
| P253                 | S4080203-4080202XX | S408MNH0203XX  | S408MNH0202XX    | 10             | 10                   | 347.4           | 0.01      | 0.009                 | 0.13 | 0.014                 | 0.15 | 0.026                 | 0.20 | 3-3    |
| P295                 | S4460209-4460210XX | S446MNH0209XX  | S446MNH0210XX    | 12             | 12                   | 300.0           | 0.73      | 0.084                 | 0.14 | 0.127                 | 0.18 | 0.146                 | 0.19 | 3-4    |
| P191                 | S4080201-4080211XX | S408MNH0201XX  | S408MNH0211XX    | 15             | 15                   | 396.9           | 0.25      | 0.068                 | 0.12 | 0.102                 | 0.15 | 0.171                 | 0.19 | 3-2    |
| P120                 | S4480205-4480208XX | S448MNH0205XX  | S448MNH0208XX    | 10             | 10                   | 279.0           | 0.30      | 0.021                 | 0.12 | 0.033                 | 0.15 | 0.052                 | 0.19 | 3-15   |
| P252                 | S4080204-4080203XX | S408MNH0204XX  | S408MNH0203XX    | 10             | 10                   | 329.6           | 0.31      | 0.004                 | 0.12 | 0.006                 | 0.14 | 0.014                 | 0.19 | 3-3    |
| P278                 | S4730203-4730209XX | S473MNH0203XX  | S473MNH0209XX    | 10             | 10                   | 214.0           | 0.94      | 0.000                 | 0.11 | 0.000                 | 0.14 | 0.003                 | 0.18 | 3-6    |
| P214                 | S4470205-4470206XX | S447MNH0205XX  | S447MNH0206XX    | 10             | 10                   | 260.4           | 1.12      | 0.038                 | 0.11 | 0.056                 | 0.13 | 0.105                 | 0.18 | 3-4    |
| P283                 | S4330227-4480205XX | S433MNH0227XX  | S448MNH0205XX    | 10             | 10                   | 415.0           | 0.28      | 0.021                 | 0.11 | 0.033                 | 0.14 | 0.048                 | 0.17 | 3-15   |
| P210                 | S4330202-4330213XX | S433MNH0202XX  | S433MNH0213XX    | 15             | 15                   | 170.0           | 0.35      | 0.056                 | 0.11 | 0.083                 | 0.13 | 0.147                 | 0.17 | 3-2    |
| P294                 | S4460208-4460209XX | S446MNH0208XX  | S446MNH0209XX    | 10             | 10                   | 300.0           | 1.13      | 0.019                 | 0.12 | 0.029                 | 0.15 | 0.046                 | 0.17 | 3-4    |
| P213                 | S4340214-4470205XX | S434MNH0214XX  | S447MNH0205XX    | 10             | 10                   | 264.7           | 2.03      | 0.038                 | 0.10 | 0.056                 | 0.12 | 0.101                 | 0.17 | 3-3    |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P209                 | S4330226-4330202XX | S433MNH0226XX  | S433MNH0202XX    | 15             | 15                   | 11.0            | 0.36      | 0.056                 | 0.10 | 0.083                 | 0.13 | 0.144                 | 0.16 | 3-3    |
| P206                 | S4340211-4340207XX | S434MNH0211XX  | S434MNH0207XX    | 15             | 15                   | 409.3           | 0.20      | 0.049                 | 0.11 | 0.073                 | 0.13 | 0.121                 | 0.16 | 3-3    |
| P267                 | S4740202-4740203XX | S474MNH0202XX  | S474MNH0203XX    | 12             | 12                   | 293.9           | 0.29      | 0.024                 | 0.10 | 0.038                 | 0.13 | 0.061                 | 0.16 | 3-5    |
| P190                 | S4080229-4080201XX | S408MNH0229XX  | S408MNH0201XX    | 15             | 15                   | 75.0            | 1.04      | 0.053                 | 0.10 | 0.079                 | 0.13 | 0.127                 | 0.16 | 3-3    |
| P188                 | S4340213-4080230XX | S434MNH0213XX  | S408MNH0230XX    | 12             | 12                   | 366.0           | 0.96      | 0.050                 | 0.10 | 0.073                 | 0.13 | 0.116                 | 0.16 | 3-3    |
| P186                 | S4070204-4070206XX | S407MNH0204XX  | S407MNH0206XX    | 10             | 10                   | 262.4           | 0.51      | 0.021                 | 0.11 | 0.033                 | 0.14 | 0.038                 | 0.16 | 3-3    |
| P189                 | S4080230-4080229XX | S408MNH0230XX  | S408MNH0229XX    | 12             | 12                   | 280.2           | 0.96      | 0.053                 | 0.10 | 0.079                 | 0.12 | 0.125                 | 0.15 | 3-3    |
| P208                 | S4330214-4330226XX | S433MNH0214XX  | S433MNH0226XX    | 15             | 15                   | 319.5           | 0.59      | 0.056                 | 0.10 | 0.083                 | 0.12 | 0.143                 | 0.15 | 3-3    |
| P187                 | S4070206-4340213XX | S407MNH0206XX  | S434MNH0213XX    | 12             | 12                   | 186.8           | 0.89      | 0.050                 | 0.10 | 0.073                 | 0.12 | 0.110                 | 0.15 | 3-3    |
| P282                 | S4330228-4330227XX | S433MNH0228XX  | S433MNH0227XX    | 10             | 10                   | 36.1            | 0.44      | 0.013                 | 0.10 | 0.021                 | 0.12 | 0.033                 | 0.15 | 3-3    |
| P1                   | S4350210-4350219XX | S435MNH0210XX  | S435MNH0219XX    | 10             | 10                   | 390.0           | 0.33      | 0.021                 | 0.11 | 0.033                 | 0.14 | 0.036                 | 0.15 | 3-3    |
| P205                 | S4340214-4340211XX | S434MNH0214XX  | S434MNH0211XX    | 15             | 15                   | 426.4           | 1.11      | 0.035                 | 0.09 | 0.052                 | 0.11 | 0.095                 | 0.15 | 3-3    |
| P73                  | S6100210-6100207XX | S610MNH0210XX  | S610MNH0207XX    | 18             | 18                   | 388.0           | 0.20      | 0.008                 | 0.11 | 0.008                 | 0.13 | 0.028                 | 0.14 | 3-9    |
| P260                 | S4760202-4750203XX | S476MNH0202XX  | S475MNH0203XX    | 10             | 10                   | 350.4           | 0.14      | 0.009                 | 0.09 | 0.014                 | 0.11 | 0.022                 | 0.14 | 3-5    |
| P266                 | S4750209-4740202XX | S475MNH0209XX  | S474MNH0202XX    | 12             | 12                   | 237.9           | 0.32      | 0.019                 | 0.09 | 0.029                 | 0.11 | 0.049                 | 0.14 | 3-5    |
| P207                 | S4340207-4330214XX | S434MNH0207XX  | S433MNH0214XX    | 15             | 15                   | 267.8           | 0.58      | 0.049                 | 0.09 | 0.073                 | 0.11 | 0.127                 | 0.14 | 3-3    |
| P185                 | S4070213-4070204XX | S407MNH0213XX  | S407MNH0204XX    | 10             | 10                   | 278.2           | 0.20      | 0.014                 | 0.10 | 0.022                 | 0.13 | 0.025                 | 0.13 | 3-3    |
| P281                 | S4340206-4330228XX | S434MNH0206XX  | S433MNH0228XX    | 10             | 10                   | 208.5           | 0.43      | 0.013                 | 0.08 | 0.021                 | 0.10 | 0.032                 | 0.13 | 3-3    |
| P271                 | S4750215-4750209XX | S475MNH0215XX  | S475MNH0209XX    | 10             | 10                   | 40.4            | 0.79      | 0.007                 | 0.08 | 0.011                 | 0.10 | 0.019                 | 0.12 | 3-5    |
| P297                 | S4350215-4350216XX | S435MNH0215XX  | S435MNH0216XX    | 8              | 8                    | 95.0            | 3.31      | 0.018                 | 0.09 | 0.028                 | 0.11 | 0.034                 | 0.12 | 3-4    |
| P265                 | S4750210-4750209XX | S475MNH0210XX  | S475MNH0209XX    | 10             | 10                   | 250.7           | 1.84      | 0.010                 | 0.08 | 0.016                 | 0.09 | 0.024                 | 0.12 | 3-5    |
| P293                 | S4350217-4460208XX | S435MNH0217XX  | S446MNH0208XX    | 10             | 10                   | 300.0           | 1.13      | 0.019                 | 0.08 | 0.029                 | 0.10 | 0.041                 | 0.12 | 3-4    |
| P276                 | S4880215-4880201XX | S488MNH0215XX  | S488MNH0201XX    | 10             | 10                   | 338.0           | 0.77      | 0.009                 | 0.06 | 0.014                 | 0.07 | 0.036                 | 0.12 | 3-6    |
| P287                 | S5280204-5280205XX | S528MNH0204XX  | S528MNH0205XX    | 10             | 10                   | 156.0           | 0.50      | 0.009                 | 0.07 | 0.014                 | 0.08 | 0.024                 | 0.11 | 3-7    |
| P292                 | S4350216-4350217XX | S435MNH0216XX  | S435MNH0217XX    | 10             | 10                   | 160.0           | 1.10      | 0.019                 | 0.08 | 0.029                 | 0.10 | 0.037                 | 0.11 | 3-4    |



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P280                 | S4340212-4340206XX | S434MNH0212XX  | S434MNH0206XX    | 10             | 10                   | 320.3           | 0.87      | 0.010                 | 0.07 | 0.016                 | 0.09 | 0.025                 | 0.11 | 3-3    |
| P259                 | S4760201-4760202XX | S476MNH0201XX  | S476MNH0202XX    | 10             | 10                   | 356.4           | 0.15      | 0.001                 | 0.06 | 0.002                 | 0.08 | 0.007                 | 0.11 | 3-5    |
| P286                 | S5280203-5280204XX | S528MNH0203XX  | S528MNH0204XX    | 10             | 10                   | 185.0           | 0.42      | 0.009                 | 0.07 | 0.014                 | 0.09 | 0.021                 | 0.10 | 3-7    |
| P275                 | S4880203-4880215XX | S488MNH0203XX  | S488MNH0215XX    | 10             | 10                   | 358.2           | 1.32      | 0.007                 | 0.05 | 0.011                 | 0.07 | 0.028                 | 0.10 | 3-6    |
| P270                 | S4750217-4750215XX | S475MNH0217XX  | S475MNH0215XX    | 10             | 10                   | 300.0           | 0.30      | 0.007                 | 0.07 | 0.011                 | 0.08 | 0.019                 | 0.10 | 3-5    |
| P285                 | S5280202-5280203XX | S528MNH0202XX  | S528MNH0203XX    | 10             | 10                   | 195.0           | 0.50      | 0.009                 | 0.07 | 0.014                 | 0.09 | 0.018                 | 0.10 | 3-7    |
| P269                 | S4860203-4750217XX | S486MNH0203XX  | S475MNH0217XX    | 10             | 10                   | 316.3           | 0.77      | 0.003                 | 0.06 | 0.005                 | 0.07 | 0.009                 | 0.09 | 3-5    |
| P274                 | S4730204-4880203XX | S473MNH0204XX  | S488MNH0203XX    | 10             | 10                   | 360.3           | 1.03      | 0.005                 | 0.04 | 0.007                 | 0.05 | 0.020                 | 0.09 | 3-6    |
| P284                 | S5280208-5280202XX | S528MNH0208XX  | S528MNH0202XX    | 10             | 10                   | 254.0           | 0.56      | 0.006                 | 0.06 | 0.009                 | 0.07 | 0.011                 | 0.08 | 3-7    |
| P264                 | S4750208-4750210XX | S475MNH0208XX  | S475MNH0210XX    | 10             | 10                   | 198.1           | 0.85      | 0.008                 | 0.05 | 0.012                 | 0.07 | 0.017                 | 0.08 | 3-5    |
| P273                 | S4740201-4730204XX | S474MNH0201XX  | S473MNH0204XX    | 10             | 10                   | 341.1           | 1.03      | 0.004                 | 0.04 | 0.006                 | 0.05 | 0.014                 | 0.08 | 3-6    |
| P279                 | S4340209-4340214XX | S434MNH0209XX  | S434MNH0214XX    | 15             | 15                   | 297.6           | 0.93      | 0.008                 | 0.05 | 0.012                 | 0.06 | 0.016                 | 0.07 | 3-3    |
| P291                 | S5280206-5280205XX | S528MNH0206XX  | S528MNH0205XX    | 12             | 12                   | 240.0           | 0.50      | 0.001                 | 0.04 | 0.001                 | 0.05 | 0.006                 | 0.07 | 3-7    |
| P263                 | S4740207-4750208XX | S474MNH0207XX  | S475MNH0208XX    | 10             | 10                   | 244.6           | 0.82      | 0.003                 | 0.04 | 0.004                 | 0.06 | 0.008                 | 0.07 | 3-5    |
| P72                  | S6100209-6100210XX | S610MNH0209XX  | S610MNH0210XX    | 18             | 18                   | 384.0           | 0.20      | 0.004                 | 0.03 | 0.004                 | 0.03 | 0.014                 | 0.06 | 3-9    |
| P272                 | S4740213-4740201XX | S474MNH0213XX  | S474MNH0201XX    | 10             | 10                   | 342.8           | 1.07      | 0.001                 | 0.03 | 0.001                 | 0.03 | 0.006                 | 0.06 | 3-6    |
| P290                 | S5280207-5280206XX | S528MNH0207XX  | S528MNH0206XX    | 12             | 12                   | 21.0            | 0.50      | 0.001                 | 0.02 | 0.001                 | 0.02 | 0.002                 | 0.03 | 3-7    |
| P71                  | S6100205-6100209XX | S610MNH0205XX  | S610MNH0209XX    | 18             | 18                   | 384.8           | 0.22      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.000                 | 0.02 | 3-9    |
| P277                 | S4731001-4730203XX | S473PLG1001XX  | S473MNH0203XX    | 10             | 10                   | 15.0            | 0.48      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.000                 | 0.02 | 3-6    |
| P289                 | S5131001-5280207XX | S513PLG1001XX  | S528MNH0207XX    | 12             | 12                   | 200.0           | 0.50      | 0.001                 | 0.02 | 0.001                 | 0.02 | 0.001                 | 0.02 | 3-7    |
| P119                 | S4480204-4480205XX | S448MNH0204XX  | S448MNH0205XX    | 10             | 10                   | 6.0             | 1.67      | 0.000                 | 0.00 | 0.000                 | 0.00 | 0.000                 | 0.00 | 3-15   |

\*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with WWMP CIP diameter.
2. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.





Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P164                 | S4500212-4500211XX | S450MNH0212XX  | S450MNH0211XX    | 16             | 16                   | 20.8            | 1.59      | 0.763                 | 0.68 | 1.146                 | 0.86 | 1.857                 | 1.00 | 3-11   |
| P165                 | S4500211-4500210XX | S450MNH0211XX  | S450MNH0210XX    | 16             | 16                   | 31.3            | 1.18      | 0.764                 | 0.66 | 1.147                 | 0.83 | 1.858                 | 1.00 | 3-11   |
| P150                 | S5310212-5500209XX | S531MNH0212XX  | S550MNH0209XX    | 27             | 27                   | 355.6           | 0.24      | 3.544                 | 0.43 | 6.027                 | 0.58 | 11.912                | 0.93 | 3-12   |
| P138                 | S4710213-4900224XX | S471MNH0213XX  | S490MNH0224XX    | 27             | 27                   | 1086.8          | 0.24      | 3.248                 | 0.40 | 5.620                 | 0.54 | 11.087                | 0.93 | 3-11   |
| P86                  | S6520205-6520204XX | S652MNH0205XX  | S652MNH0204XX    | 33             | 33                   | 10.0            | 0.10      | 7.193                 | 0.54 | 11.106                | 0.67 | 18.630                | 0.91 | 3-10   |
| P85                  | S6520225-6520205XX | S652MNH0225XX  | S652MNH0205XX    | 33             | 33                   | 20.7            | 0.53      | 7.192                 | 0.52 | 11.105                | 0.66 | 18.479                | 0.90 | 3-10   |
| P50                  | S5290207-5290208XX | S529MNH0207XX  | S529MNH0208XX    | 12             | 12                   | 333.0           | 0.26      | 0.463                 | 0.45 | 0.695                 | 0.57 | 1.216                 | 0.88 | 3-8    |
| P242                 | S3920207-3920206XX | S392MNH0207XX  | S392MNH0206XX    | 8              | 8                    | 47.5            | 1.05      | 0.399                 | 0.46 | 0.585                 | 0.58 | 1.060                 | 0.86 | 3-1    |
| P144                 | S5110229-5110211XX | S511MNH0229XX  | S511MNH0211XX    | 27             | 27                   | 206.5           | 0.58      | 3.465                 | 0.40 | 5.939                 | 0.53 | 11.656                | 0.86 | 3-12   |
| P106                 | S6520208-6520225XX | S652MNH0208XX  | S652MNH0225XX    | 33             | 33                   | 41.2            | 0.46      | 2.002                 | 0.47 | 3.004                 | 0.60 | 4.140                 | 0.85 | 3-10   |
| P149                 | S5300202-5310212XX | S530MNH0202XX  | S531MNH0212XX    | 27             | 27                   | 355.6           | 0.56      | 3.539                 | 0.37 | 6.024                 | 0.51 | 11.902                | 0.84 | 3-12   |
| P151                 | S5500209-5500207XX | S550MNH0209XX  | S550MNH0207XX    | 27             | 27                   | 31.8            | 0.03      | 3.544                 | 0.43 | 6.027                 | 0.57 | 11.914                | 0.84 | 3-12   |
| P145                 | S5110211-5110209XX | S511MNH0211XX  | S511MNH0209XX    | 27             | 27                   | 295.3           | 0.13      | 3.465                 | 0.40 | 5.927                 | 0.53 | 11.672                | 0.83 | 3-12   |
| P49                  | S5290206-5290207XX | S529MNH0206XX  | S529MNH0207XX    | 12             | 12                   | 216.6           | 0.31      | 0.458                 | 0.42 | 0.688                 | 0.54 | 1.202                 | 0.81 | 3-8    |
| P105                 | S6510210-6520208XX | S651MNH0210XX  | S652MNH0208XX    | 33             | 33                   | 220.0           | 0.03      | 1.945                 | 0.43 | 2.911                 | 0.56 | 3.909                 | 0.81 | 3-10   |
| P241                 | S3920208-3920207XX | S392MNH0208XX  | S392MNH0207XX    | 10             | 10                   | 215.1           | 1.12      | 0.399                 | 0.38 | 0.585                 | 0.47 | 1.059                 | 0.81 | 3-1    |
| P139                 | S4900224-4900207XX | S490MNH0224XX  | S490MNH0207XX    | 27             | 27                   | 258.7           | 0.24      | 3.262                 | 0.39 | 5.665                 | 0.52 | 11.244                | 0.81 | 3-11   |
| P163                 | S4320227-4500212XX | S432MNH0227XX  | S450MNH0212XX    | 16             | 16                   | 552.4           | 0.30      | 0.763                 | 0.46 | 1.149                 | 0.60 | 1.855                 | 0.80 | 3-11   |
| P51                  | S5290208-5520204XX | S529MNH0208XX  | S552MNH0204XX    | 12             | 12                   | 361.0           | 0.25      | 0.463                 | 0.42 | 0.695                 | 0.54 | 1.222                 | 0.80 | 3-8    |
| P104                 | S6510208-6510210XX | S651MNH0208XX  | S651MNH0210XX    | 33             | 33                   | 110.0           | 0.10      | 1.957                 | 0.41 | 2.958                 | 0.54 | 3.878                 | 0.79 | 3-10   |
| P137                 | S4500207-4710213XX | S450MNH0207XX  | S471MNH0213XX    | 27             | 27                   | 1135.1          | 0.84      | 3.210                 | 0.34 | 5.593                 | 0.46 | 10.955                | 0.78 | 3-11   |
| P110                 | S5290204-5290202XX | S529MNH0204XX  | S529MNH0202XX    | 12             | 12                   | 40.0            | 0.25      | 0.231                 | 0.40 | 0.339                 | 0.52 | 0.567                 | 0.78 | 3-7    |
| P87                  | S6520214-6520204XX | S652MNH0204XX  | S652MNH0214XX    | 39             | 39                   | 54.7            | 0.18      | 7.208                 | 0.47 | 11.125                | 0.58 | 18.842                | 0.78 | 3-10   |
| P99                  | S6500209-6510201XX | S650MNH0209XX  | S651MNH0201XX    | 18             | 18                   | 468.0           | 0.16      | 1.249                 | 0.49 | 1.890                 | 0.63 | 2.546                 | 0.77 | 3-10   |
| P47                  | S5290202-5290213XX | S529MNH0202XX  | S529MNH0213XX    | 12             | 12                   | 319.8           | 0.27      | 0.449                 | 0.41 | 0.674                 | 0.52 | 1.165                 | 0.76 | 3-7    |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P98                  | S6500206-6500209XX | S650MNH0206XX  | S650MNH0209XX    | 18             | 18                   | 468.0           | 0.16      | 1.244                 | 0.47 | 1.886                 | 0.61 | 2.534                 | 0.76 | 3-10   |
| P142                 | S4900219-5110214XX | S490MNH0219XX  | S511MNH0214XX    | 27             | 27                   | 106.7           | 0.25      | 3.469                 | 0.36 | 5.965                 | 0.49 | 11.659                | 0.75 | 3-12   |
| P48                  | S5290213-5290206XX | S529MNH0213XX  | S529MNH0206XX    | 12             | 12                   | 20.4            | 0.54      | 0.458                 | 0.39 | 0.687                 | 0.50 | 1.198                 | 0.74 | 3-8    |
| P78                  | S5900217-5900219XX | S590MNH0219XX  | S590MNH0217XX    | 18             | 18                   | 22.7            | 4.68      | 0.377                 | 0.37 | 0.572                 | 0.47 | 3.447                 | 0.73 | 3-13   |
| P97                  | S6500207-6500206XX | S650MNH0207XX  | S650MNH0206XX    | 18             | 18                   | 67.3            | 0.28      | 1.239                 | 0.45 | 1.882                 | 0.58 | 2.522                 | 0.73 | 3-10   |
| P141                 | S4900201-4900219XX | S490MNH0201XX  | S490MNH0219XX    | 27             | 27                   | 193.4           | 0.62      | 3.452                 | 0.35 | 5.960                 | 0.47 | 11.619                | 0.73 | 3-11   |
| P143                 | S5110214-5110229XX | S511MNH0214XX  | S511MNH0229XX    | 27             | 27                   | 88.6            | 0.47      | 3.466                 | 0.33 | 5.951                 | 0.45 | 11.664                | 0.71 | 3-12   |
| P183                 | S5130210-5130212XX | S513MNH0210XX  | S513MNH0212XX    | 10             | 10                   | 263.4           | 0.84      | 0.208                 | 0.43 | 0.314                 | 0.53 | 0.486                 | 0.71 | 3-7    |
| P103                 | S6510211-6510208XX | S651MNH0211XX  | S651MNH0208XX    | 33             | 33                   | 383.0           | 0.10      | 1.947                 | 0.35 | 2.909                 | 0.47 | 3.859                 | 0.71 | 3-10   |
| P140                 | CDT-51             | S490MNH0207XX  | S490MNH0201XX    | 27             | 27                   | 23.4            | 0.13      | 3.442                 | 0.35 | 6.384                 | 0.47 | 12.549                | 0.70 | 3-11   |
| P52                  | S5520204-5520203XX | S552MNH0204XX  | S552MNH0203XX    | 12             | 12                   | 105.0           | 0.40      | 0.463                 | 0.40 | 0.695                 | 0.49 | 1.224                 | 0.70 | 3-8    |
| P41                  | S5130212-5130208XX | S513MNH0212XX  | S513MNH0208XX    | 12             | 12                   | 244.6           | 0.20      | 0.437                 | 0.39 | 0.656                 | 0.48 | 1.115                 | 0.68 | 3-7    |
| P68                  | S6090205-6090202XX | S609MNH0205XX  | S609MNH0202XX    | 12             | 15                   | 95.0            | 0.25      | 0.717                 | 0.40 | 1.087                 | 0.51 | 1.665                 | 0.67 | 3-9    |
| P46                  | S5290202-5290203XX | S529MNH0203XX  | S529MNH0202XX    | 15             | 15                   | 32.0            | 0.13      | 0.217                 | 0.38 | 0.335                 | 0.47 | 0.593                 | 0.67 | 3-7    |
| P89                  | CDT-39             | S652MNH0212XX  | OFALL-14         | 48             | 48                   | 28.6            | 0.35      | 20.032                | 0.41 | 29.391                | 0.51 | 50.260                | 0.67 | 3-10   |
| P148                 | S5300219-5300202XX | S530MNH0219XX  | S530MNH0202XX    | 27             | 27                   | 395.2           | 0.56      | 3.481                 | 0.33 | 5.938                 | 0.44 | 11.724                | 0.67 | 3-12   |
| P67                  | S6090201-6090205XX | S609MNH0201XX  | S609MNH0205XX    | 12             | 15                   | 278.0           | 0.25      | 0.694                 | 0.40 | 1.052                 | 0.51 | 1.628                 | 0.67 | 3-9    |
| P147                 | S5110218-5300219XX | S511MNH0218XX  | S530MNH0219XX    | 27             | 27                   | 310.5           | 0.56      | 3.475                 | 0.33 | 5.933                 | 0.44 | 11.703                | 0.67 | 3-12   |
| P146                 | S5110209-5110218XX | S511MNH0209XX  | S511MNH0218XX    | 27             | 27                   | 306.6           | 0.56      | 3.470                 | 0.33 | 5.929                 | 0.44 | 11.686                | 0.67 | 3-12   |
| P66                  | S5920208-6090201XX | S592MNH0208XX  | S609MNH0201XX    | 12             | 15                   | 373.0           | 0.25      | 0.694                 | 0.40 | 1.052                 | 0.50 | 1.625                 | 0.66 | 3-9    |
| P65                  | S5920209-5920208XX | S592MNH0209XX  | S592MNH0208XX    | 12             | 15                   | 155.0           | 0.25      | 0.694                 | 0.40 | 1.052                 | 0.50 | 1.621                 | 0.66 | 3-9    |
| P90                  | S6290216-6290218XX | S629MNH0216XX  | S629MNH0218XX    | 33             | 33                   | 36.4            | 0.93      | 4.776                 | 0.43 | 6.611                 | 0.52 | 9.545                 | 0.66 | 3-10   |
| P64                  | S5920206-5920209XX | S592MNH0206XX  | S592MNH0209XX    | 12             | 15                   | 218.0           | 0.25      | 0.671                 | 0.39 | 1.016                 | 0.50 | 1.584                 | 0.66 | 3-9    |
| P96                  | S6310208-6500207XX | S631MNH0208XX  | S650MNH0207XX    | 18             | 18                   | 497.0           | 0.29      | 1.238                 | 0.41 | 1.882                 | 0.53 | 2.520                 | 0.65 | 3-10   |
| P63                  | S5920210-5920206XX | S592MNH0210XX  | S592MNH0206XX    | 12             | 15                   | 258.0           | 0.25      | 0.671                 | 0.39 | 1.016                 | 0.49 | 1.582                 | 0.65 | 3-9    |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P62                  | S5920207-5920210XX | S592MNH0207XX  | S592MNH0210XX    | 12             | 15                   | 115.0           | 0.25      | 0.671                 | 0.39 | 1.016                 | 0.49 | 1.579                 | 0.65 | 3-9    |
| P100                 | S6510201-6510203XX | S651MNH0201XX  | S651MNH0203XX    | 18             | 18                   | 468.0           | 0.17      | 1.254                 | 0.43 | 1.892                 | 0.54 | 2.557                 | 0.65 | 3-10   |
| P247                 | S4090220-4100208XX | S409MNH0220XX  | S410MNH0208XX    | 12             | 12                   | 388.3           | 0.49      | 0.446                 | 0.36 | 0.656                 | 0.44 | 1.191                 | 0.64 | 3-2    |
| P61                  | S5690207-5920207XX | S569MNH0207XX  | S592MNH0207XX    | 12             | 15                   | 180.0           | 0.25      | 0.634                 | 0.38 | 0.959                 | 0.48 | 1.519                 | 0.64 | 3-9    |
| P22                  | S4750214-4470211XX | S475MNH0214XX  | S447MNH0211XX    | 10             | 10                   | 211.6           | 0.19      | 0.184                 | 0.40 | 0.306                 | 0.52 | 0.413                 | 0.63 | 3-4    |
| P60                  | S5690201-5690207XX | S569MNH0201XX  | S569MNH0207XX    | 12             | 15                   | 200.0           | 0.25      | 0.634                 | 0.38 | 0.959                 | 0.48 | 1.517                 | 0.63 | 3-9    |
| P59                  | S5690202-5690201XX | S569MNH0202XX  | S569MNH0201XX    | 12             | 15                   | 200.0           | 0.25      | 0.634                 | 0.38 | 0.959                 | 0.48 | 1.515                 | 0.63 | 3-9    |
| P197                 | S4330204-4330224XX | S433MNH0204XX  | S433MNH0224XX    | 21             | 21                   | 313.5           | 0.87      | 2.283                 | 0.36 | 3.446                 | 0.45 | 6.162                 | 0.63 | 3-2    |
| P102                 | S6510205-6510211XX | S651MNH0205XX  | S651MNH0211XX    | 33             | 33                   | 132.0           | 0.09      | 2.169                 | 0.31 | 3.401                 | 0.42 | 4.015                 | 0.63 | 3-10   |
| P91                  | S6290218-6290217XX | S629MNH0218XX  | S629MNH0217XX    | 33             | 33                   | 91.0            | 0.35      | 3.879                 | 0.41 | 5.650                 | 0.50 | 8.756                 | 0.63 | 3-10   |
| P231                 | S3680212-3930211XX | S368MNH0212XX  | S393MNH0211XX    | 15             | 15                   | 364.7           | 0.60      | 1.056                 | 0.36 | 1.566                 | 0.44 | 2.747                 | 0.63 | 3-1    |
| P152                 | S5500207-5500223XX | S550MNH0207XX  | S550MNH0223XX    | 33             | 33                   | 239.6           | 0.17      | 3.551                 | 0.34 | 6.035                 | 0.44 | 11.936                | 0.63 | 3-12   |
| P240                 | S3690219-3920208XX | S369MNH0219XX  | S392MNH0208XX    | 10             | 10                   | 325.6           | 1.11      | 0.398                 | 0.35 | 0.584                 | 0.43 | 1.055                 | 0.62 | 3-1    |
| P239                 | S3690209-3690219XX | S369MNH0209XX  | S369MNH0219XX    | 10             | 10                   | 141.2           | 1.07      | 0.394                 | 0.35 | 0.577                 | 0.44 | 1.032                 | 0.62 | 3-1    |
| P58                  | S5690203-5690202XX | S569MNH0203XX  | S569MNH0202XX    | 12             | 15                   | 244.0           | 0.26      | 0.597                 | 0.37 | 0.902                 | 0.47 | 1.455                 | 0.62 | 3-9    |
| P69                  | S6090202-6100203XX | S609MNH0202XX  | S610MNH0203XX    | 12             | 15                   | 373.0           | 0.28      | 0.717                 | 0.38 | 1.087                 | 0.49 | 1.670                 | 0.62 | 3-9    |
| P109                 | S5120206-5290204XX | S512MNH0206XX  | S529MNH0204XX    | 12             | 12                   | 280.0           | 0.25      | 0.231                 | 0.33 | 0.340                 | 0.43 | 0.566                 | 0.62 | 3-7    |
| P70                  | S6100203-6100205XX | S610MNH0203XX  | S610MNH0205XX    | 12             | 15                   | 56.0            | 0.80      | 1.021                 | 0.40 | 1.559                 | 0.51 | 2.142                 | 0.62 | 3-9    |
| P248                 | S4100208-4310207XX | S410MNH0208XX  | S431MNH0207XX    | 12             | 12                   | 359.8           | 0.51      | 0.448                 | 0.35 | 0.659                 | 0.43 | 1.201                 | 0.61 | 3-2    |
| P95                  | S6310201-6310208XX | S631MNH0201XX  | S631MNH0208XX    | 18             | 18                   | 283.9           | 0.29      | 1.233                 | 0.40 | 1.878                 | 0.51 | 2.507                 | 0.61 | 3-10   |
| P17                  | S4460201-4460207XX | S446MNH0201XX  | S446MNH0207XX    | 8              | 8                    | 127.1           | 0.83      | 0.177                 | 0.39 | 0.299                 | 0.52 | 0.373                 | 0.61 | 3-4    |
| P40                  | S5130213-5130212XX | S513MNH0213XX  | S513MNH0212XX    | 12             | 12                   | 353.0           | 1.30      | 0.228                 | 0.34 | 0.342                 | 0.43 | 0.627                 | 0.61 | 3-7    |
| P94                  | S6310202-6310201XX | S631MNH0202XX  | S631MNH0201XX    | 18             | 18                   | 121.3           | 0.31      | 1.230                 | 0.40 | 1.875                 | 0.50 | 2.499                 | 0.60 | 3-10   |
| P57                  | S5690204-5690203XX | S569MNH0204XX  | S569MNH0203XX    | 12             | 15                   | 331.0           | 0.23      | 0.500                 | 0.35 | 0.751                 | 0.44 | 1.295                 | 0.60 | 3-8    |
| P250                 | S4320232-4320227XX | S432MNH0232XX  | S432MNH0227XX    | 16             | 16                   | 304.0           | 0.33      | 0.758                 | 0.36 | 1.207                 | 0.45 | 1.838                 | 0.60 | 3-2    |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P224                 | S4080205-4080206XX | S408MNH0205XX  | S408MNH0206XX    | 21             | 21                   | 69.0            | 0.75      | 2.182                 | 0.34 | 3.317                 | 0.43 | 5.789                 | 0.59 | 3-1    |
| P21                  | S4750216-4750214XX | S475MNH0216XX  | S475MNH0214XX    | 10             | 10                   | 273.8           | 0.20      | 0.184                 | 0.37 | 0.307                 | 0.49 | 0.411                 | 0.59 | 3-5    |
| P88                  | S6520212-6520214XX | S652MNH0214XX  | S652MNH0212XX    | 48             | 48                   | 51.1            | 0.37      | 17.886                | 0.34 | 25.858                | 0.43 | 44.951                | 0.59 | 3-10   |
| P19                  | S4750206-4750205XX | S475MNH0206XX  | S475MNH0205XX    | 8              | 8                    | 132.7           | 1.34      | 0.177                 | 0.38 | 0.299                 | 0.50 | 0.377                 | 0.59 | 3-5    |
| P249                 | S4320232-4310207XX | S431MNH0207XX  | S432MNH0232XX    | 14             | 14                   | 227.5           | 0.10      | 0.752                 | 0.49 | 1.345                 | 0.58 | 1.819                 | 0.58 | 3-2    |
| P135                 | S4310214-4500210XX | S431MNH0214XX  | S450MNH0210XX    | 27             | 27                   | 278.2           | 0.52      | 2.373                 | 0.29 | 4.387                 | 0.39 | 8.846                 | 0.58 | 3-11   |
| P218                 | S3930207-3930209XX | S393MNH0207XX  | S393MNH0209XX    | 21             | 21                   | 283.9           | 0.31      | 1.412                 | 0.33 | 2.221                 | 0.42 | 3.787                 | 0.58 | 3-1    |
| P20                  | S4750205-4750216XX | S475MNH0205XX  | S475MNH0216XX    | 10             | 10                   | 269.5           | 0.20      | 0.182                 | 0.37 | 0.304                 | 0.49 | 0.404                 | 0.58 | 3-5    |
| P225                 | S4080206-4080209XX | S408MNH0206XX  | S408MNH0209XX    | 21             | 21                   | 290.8           | 0.73      | 2.185                 | 0.33 | 3.320                 | 0.42 | 5.801                 | 0.58 | 3-1    |
| P93                  | S6310203-6310202XX | S631MNH0203XX  | S631MNH0202XX    | 18             | 18                   | 178.7           | 0.28      | 1.032                 | 0.38 | 1.569                 | 0.48 | 2.172                 | 0.58 | 3-9    |
| P219                 | S3930209-3930212XX | S393MNH0209XX  | S393MNH0212XX    | 21             | 21                   | 311.0           | 0.82      | 2.134                 | 0.33 | 3.251                 | 0.42 | 5.682                 | 0.58 | 3-1    |
| P136                 | S4500210-4500207XX | S450MNH0210XX  | S450MNH0207XX    | 27             | 27                   | 187.5           | 0.64      | 3.140                 | 0.29 | 5.508                 | 0.39 | 10.711                | 0.58 | 3-11   |
| P18                  | S4460207-4750206XX | S446MNH0207XX  | S475MNH0206XX    | 8              | 8                    | 203.1           | 0.37      | 0.177                 | 0.37 | 0.299                 | 0.50 | 0.376                 | 0.58 | 3-4    |
| P229                 | S4330208-4330204XX | S433MNH0208XX  | S433MNH0204XX    | 21             | 21                   | 309.1           | 0.87      | 2.201                 | 0.33 | 3.335                 | 0.41 | 5.854                 | 0.57 | 3-2    |
| P234                 | S3930226-3930227XX | S393MNH0226XX  | S393MNH0227XX    | 14             | 14                   | 329.4           | 0.16      | 0.345                 | 0.34 | 0.508                 | 0.42 | 0.887                 | 0.57 | 3-1    |
| P220                 | S3930212-3930213XX | S393MNH0212XX  | S393MNH0213XX    | 21             | 21                   | 293.7           | 0.71      | 2.138                 | 0.33 | 3.254                 | 0.41 | 5.695                 | 0.57 | 3-1    |
| P233                 | S3930211-3930226XX | S393MNH0211XX  | S393MNH0226XX    | 14             | 14                   | 242.7           | 0.17      | 0.338                 | 0.34 | 0.500                 | 0.41 | 0.870                 | 0.57 | 3-1    |
| P134                 | S4320228-4310214XX | S432MNH0228XX  | S431MNH0214XX    | 27             | 27                   | 300.7           | 0.50      | 2.369                 | 0.28 | 4.384                 | 0.38 | 8.831                 | 0.57 | 3-11   |
| P101                 | S6510203-6510205XX | S651MNH0203XX  | S651MNH0205XX    | 36             | 36                   | 477.5           | 0.05      | 2.203                 | 0.31 | 3.372                 | 0.40 | 4.046                 | 0.57 | 3-10   |
| P246                 | S4090221-4090220XX | S409MNH0221XX  | S409MNH0220XX    | 12             | 12                   | 258.4           | 1.08      | 0.444                 | 0.33 | 0.654                 | 0.40 | 1.182                 | 0.57 | 3-1    |
| P228                 | S4330210-4330208XX | S433MNH0210XX  | S433MNH0208XX    | 21             | 21                   | 310.5           | 0.87      | 2.197                 | 0.33 | 3.332                 | 0.41 | 5.841                 | 0.57 | 3-2    |
| P133                 | S4320235-4320228XX | S432MNH0235XX  | S432MNH0228XX    | 27             | 27                   | 268.0           | 0.55      | 2.364                 | 0.27 | 4.381                 | 0.38 | 8.814                 | 0.56 | 3-2    |
| P226                 | S4080209-4080231XX | S408MNH0209XX  | S408MNH0231XX    | 21             | 21                   | 314.0           | 0.86      | 2.189                 | 0.33 | 3.324                 | 0.41 | 5.814                 | 0.56 | 3-1    |
| P56                  | S5520201-5690204XX | S552MNH0201XX  | S569MNH0204XX    | 12             | 15                   | 400.0           | 0.27      | 0.470                 | 0.33 | 0.705                 | 0.41 | 1.250                 | 0.56 | 3-8    |
| P227                 | S4080231-4330210XX | S408MNH0231XX  | S433MNH0210XX    | 21             | 21                   | 320.0           | 0.88      | 2.193                 | 0.33 | 3.328                 | 0.41 | 5.828                 | 0.56 | 3-2    |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P92                  | S6100205-6310203XX | S610MNH0205XX  | S631MNH0203XX    | 18             | 18                   | 493.5           | 0.29      | 1.030                 | 0.36 | 1.567                 | 0.46 | 2.167                 | 0.56 | 3-9    |
| P128                 | S4320204-4320205XX | S432MNH0204XX  | S432MNH0205XX    | 27             | 27                   | 32.6            | 0.31      | 2.301                 | 0.32 | 3.465                 | 0.40 | 6.247                 | 0.56 | 3-2    |
| P54                  | S5520210-5520202XX | S552MNH0210XX  | S552MNH0202XX    | 12             | 15                   | 173.2           | 0.25      | 0.470                 | 0.32 | 0.705                 | 0.40 | 1.239                 | 0.56 | 3-8    |
| P53                  | S5520203-5520210XX | S552MNH0203XX  | S552MNH0210XX    | 12             | 15                   | 204.0           | 0.25      | 0.470                 | 0.32 | 0.705                 | 0.40 | 1.236                 | 0.55 | 3-8    |
| P130                 | S4320213-4320220XX | S432MNH0213XX  | S432MNH0220XX    | 27             | 27                   | 305.2           | 0.40      | 2.382                 | 0.32 | 3.582                 | 0.40 | 6.413                 | 0.55 | 3-2    |
| P55                  | S5520202-5520201XX | S552MNH0202XX  | S552MNH0201XX    | 12             | 15                   | 200.0           | 0.25      | 0.470                 | 0.32 | 0.705                 | 0.40 | 1.243                 | 0.55 | 3-8    |
| P127                 | S4320202-4320204XX | S432MNH0202XX  | S432MNH0204XX    | 27             | 27                   | 206.1           | 0.29      | 2.300                 | 0.32 | 3.464                 | 0.39 | 6.240                 | 0.55 | 3-2    |
| P237                 | S3690201-3690218XX | S369MNH0201XX  | S369MNH0218XX    | 14             | 14                   | 60.5            | 0.26      | 0.380                 | 0.32 | 0.556                 | 0.40 | 0.984                 | 0.55 | 3-1    |
| P84                  | S6290217-6520225XX | S629MNH0217XX  | S652MNH0225XX    | 42             | 42                   | 517.4           | 0.47      | 5.341                 | 0.31 | 8.514                 | 0.40 | 14.847                | 0.55 | 3-10   |
| P235                 | S3930227-3690214XX | S393MNH0227XX  | S369MNH0214XX    | 14             | 14                   | 277.8           | 0.18      | 0.350                 | 0.32 | 0.514                 | 0.40 | 0.900                 | 0.55 | 3-1    |
| P11                  | S4350218-4350220XX | S435MNH0218XX  | S435MNH0220XX    | 8              | 8                    | 233.7           | 0.41      | 0.135                 | 0.36 | 0.231                 | 0.49 | 0.276                 | 0.55 | 3-4    |
| P12                  | S4350220-4460205XX | S435MNH0220XX  | S446MNH0205XX    | 8              | 8                    | 137.9           | 0.36      | 0.135                 | 0.37 | 0.231                 | 0.49 | 0.278                 | 0.54 | 3-4    |
| P131                 | S4320220-4320230XX | S432MNH0220XX  | S432MNH0230XX    | 27             | 27                   | 248.8           | 0.20      | 2.386                 | 0.32 | 3.586                 | 0.40 | 6.426                 | 0.54 | 3-2    |
| P83                  | S6290216-6290217XX | S629MNH0216XX  | S629MNH0217XX    | 33             | 33                   | 127.1           | 0.02      | 2.259                 | 0.32 | 3.745                 | 0.41 | 6.802                 | 0.54 | 3-10   |
| P244                 | S3920205-3920204XX | S392MNH0205XX  | S392MNH0204XX    | 10             | 10                   | 34.4            | 4.08      | 0.440                 | 0.32 | 0.647                 | 0.39 | 1.143                 | 0.54 | 3-1    |
| P126                 | S4330224-4320202XX | S433MNH0224XX  | S432MNH0202XX    | 27             | 27                   | 299.8           | 0.32      | 2.297                 | 0.31 | 3.461                 | 0.38 | 6.229                 | 0.54 | 3-2    |
| P132                 | S4320230-4320235XX | S432MNH0230XX  | S432MNH0235XX    | 27             | 27                   | 12.4            | 0.81      | 2.355                 | 0.26 | 3.331                 | 0.36 | 5.156                 | 0.53 | 3-2    |
| P129                 | S4320205-4320213XX | S432MNH0205XX  | S432MNH0213XX    | 27             | 27                   | 290.4           | 0.28      | 2.377                 | 0.31 | 3.578                 | 0.38 | 6.396                 | 0.53 | 3-2    |
| P236                 | S3690214-3690201XX | S369MNH0214XX  | S369MNH0201XX    | 14             | 14                   | 323.4           | 0.26      | 0.370                 | 0.31 | 0.541                 | 0.38 | 0.958                 | 0.53 | 3-1    |
| P217                 | S3940204-3930207XX | S394MNH0204XX  | S393MNH0207XX    | 21             | 21                   | 274.5           | 0.72      | 1.409                 | 0.31 | 2.218                 | 0.39 | 3.775                 | 0.53 | 3-1    |
| P232                 | S3930211-3930209XX | S393MNH0211XX  | S393MNH0209XX    | 15             | 15                   | 54.6            | 0.68      | 0.718                 | 0.31 | 1.066                 | 0.38 | 1.883                 | 0.53 | 3-1    |
| P245                 | S3920204-4090221XX | S392MNH0204XX  | S409MNH0221XX    | 12             | 12                   | 648.5           | 0.88      | 0.442                 | 0.30 | 0.651                 | 0.37 | 1.174                 | 0.51 | 3-1    |
| P16                  | S4460202-4460201XX | S446MNH0202XX  | S446MNH0201XX    | 8              | 8                    | 84.8            | 0.83      | 0.177                 | 0.34 | 0.299                 | 0.45 | 0.372                 | 0.51 | 3-4    |
| P45                  | S5120207-5290203XX | S512MNH0207XX  | S529MNH0203XX    | 15             | 15                   | 297.0           | 0.36      | 0.217                 | 0.30 | 0.334                 | 0.37 | 0.586                 | 0.51 | 3-7    |
| P15                  | S4460203-4460202XX | S446MNH0203XX  | S446MNH0202XX    | 8              | 8                    | 166.9           | 0.58      | 0.147                 | 0.34 | 0.248                 | 0.45 | 0.301                 | 0.51 | 3-4    |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P251                 | S3920206-3920205XX | S392MNH0206XX  | S392MNH0205XX    | 10             | 10                   | 208.0           | 0.43      | 0.218                 | 0.30 | 0.321                 | 0.37 | 0.566                 | 0.51 | 3-1    |
| P243                 | CDT-81             | S392MNH0206XX  | S392MNH0205XX    | 10             | 10                   | 204.0           | 0.44      | 0.220                 | 0.30 | 0.324                 | 0.37 | 0.574                 | 0.51 | 3-1    |
| P238                 | S3690209-3690218XX | S369MNH0218XX  | S369MNH0209XX    | 14             | 14                   | 329.4           | 0.26      | 0.381                 | 0.29 | 0.557                 | 0.36 | 0.990                 | 0.50 | 3-1    |
| P23                  | S4470211-4470201XX | S447MNH0211XX  | S447MNH0201XX    | 10             | 10                   | 381.0           | 0.21      | 0.186                 | 0.32 | 0.308                 | 0.41 | 0.420                 | 0.50 | 3-4    |
| P108                 | S5120211-5120206XX | S512MNH0211XX  | S512MNH0206XX    | 12             | 12                   | 90.0            | 0.26      | 0.231                 | 0.30 | 0.340                 | 0.37 | 0.561                 | 0.49 | 3-7    |
| P155                 | S5500201-5500225XX | S550MNH0201XX  | S550MNH0225XX    | 42             | 42                   | 15.0            | 0.07      | 3.625                 | 0.26 | 6.130                 | 0.34 | 12.131                | 0.49 | 3-12   |
| P221                 | S3930213-3930214XX | S393MNH0213XX  | S393MNH0214XX    | 21             | 21                   | 44.7            | 0.90      | 2.145                 | 0.29 | 3.263                 | 0.36 | 5.705                 | 0.49 | 3-1    |
| P230                 | S3930216-4080205XX | S393MNH0216XX  | S408MNH0205XX    | 24             | 24                   | 232.5           | 0.23      | 1.096                 | 0.28 | 1.667                 | 0.35 | 2.909                 | 0.48 | 3-1    |
| P223                 | CDT-83             | S393MNH0216XX  | S408MNH0205XX    | 24             | 24                   | 237.8           | 0.22      | 1.084                 | 0.28 | 1.649                 | 0.35 | 2.877                 | 0.48 | 3-1    |
| P107                 | S5130208-5120211XX | S513MNH0208XX  | S512MNH0211XX    | 12             | 12                   | 158.3           | 0.29      | 0.231                 | 0.30 | 0.339                 | 0.36 | 0.560                 | 0.48 | 3-7    |
| P26                  | S4470208-4470210XX | S447MNH0208XX  | S447MNH0210XX    | 10             | 10                   | 370.0           | 0.20      | 0.098                 | 0.29 | 0.152                 | 0.36 | 0.254                 | 0.48 | 3-5    |
| P156                 | S5500225-5710212XX | S550MNH0225XX  | S571MNH0212XX    | 42             | 42                   | 286.5           | 0.14      | 3.632                 | 0.26 | 6.136                 | 0.33 | 12.154                | 0.48 | 3-13   |
| P10                  | S4350201-4350218XX | S435MNH0201XX  | S435MNH0218XX    | 8              | 8                    | 17.8            | 1.12      | 0.135                 | 0.32 | 0.234                 | 0.43 | 0.274                 | 0.47 | 3-4    |
| P216                 | S3940201-3940204XX | S394MNH0201XX  | S394MNH0204XX    | 21             | 21                   | 49.8            | 0.60      | 1.406                 | 0.28 | 2.215                 | 0.35 | 3.762                 | 0.47 | 3-1    |
| P13                  | S4460205-4460204XX | S446MNH0205XX  | S446MNH0204XX    | 8              | 8                    | 69.1            | 0.43      | 0.145                 | 0.32 | 0.245                 | 0.43 | 0.293                 | 0.47 | 3-4    |
| P222                 | S3930214-3930216XX | S393MNH0214XX  | S393MNH0216XX    | 21             | 21                   | 83.1            | 2.32      | 2.178                 | 0.28 | 3.313                 | 0.35 | 5.767                 | 0.47 | 3-1    |
| P14                  | S4460204-4460203XX | S446MNH0204XX  | S446MNH0203XX    | 8              | 8                    | 321.8           | 1.12      | 0.145                 | 0.31 | 0.245                 | 0.41 | 0.296                 | 0.46 | 3-4    |
| P161                 | S5900216-5900217XX | S590MNH0216XX  | S590MNH0217XX    | 42             | 42                   | 600.9           | 0.28      | 4.281                 | 0.25 | 7.028                 | 0.32 | 13.208                | 0.45 | 3-13   |
| P80                  | S6110209-6110210XX | S611MNH0209XX  | S611MNH0210XX    | 42             | 42                   | 412.2           | 0.34      | 4.824                 | 0.26 | 7.793                 | 0.33 | 14.148                | 0.45 | 3-13   |
| P81                  | S6110210-6300209XX | S611MNH0210XX  | S630MNH0209XX    | 42             | 42                   | 620.0           | 0.23      | 5.044                 | 0.26 | 8.124                 | 0.33 | 14.433                | 0.45 | 3-13   |
| P79                  | S5900217-6110209XX | S590MNH0217XX  | S611MNH0209XX    | 42             | 42                   | 380.0           | 0.23      | 4.814                 | 0.25 | 7.783                 | 0.33 | 14.323                | 0.45 | 3-13   |
| P157                 | S5710212-5710211XX | S571MNH0212XX  | S571MNH0211XX    | 42             | 42                   | 362.0           | 0.18      | 3.724                 | 0.24 | 6.255                 | 0.31 | 12.315                | 0.44 | 3-13   |
| P82                  | S6300209-6290216XX | S630MNH0209XX  | S629MNH0216XX    | 42             | 42                   | 444.2           | 0.36      | 5.055                 | 0.26 | 8.135                 | 0.33 | 14.464                | 0.44 | 3-14   |
| P25                  | S4470207-4470208XX | S447MNH0207XX  | S447MNH0208XX    | 10             | 10                   | 100.0           | 0.20      | 0.094                 | 0.26 | 0.147                 | 0.33 | 0.244                 | 0.44 | 3-4    |
| P27                  | S4470210-4480204XX | S447MNH0210XX  | S448MNH0204XX    | 10             | 10                   | 386.3           | 0.18      | 0.099                 | 0.26 | 0.153                 | 0.33 | 0.261                 | 0.43 | 3-15   |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P160                 | S5900215-5900216XX | S590MNH0215XX  | S590MNH0216XX    | 42             | 42                   | 130.0           | 0.26      | 4.032                 | 0.24 | 6.682                 | 0.31 | 12.817                | 0.43 | 3-13   |
| P118                 | S4880209-4880210XX | S488MNH0209XX  | S488MNH0210XX    | 12             | 12                   | 353.5           | 0.16      | 0.137                 | 0.25 | 0.204                 | 0.31 | 0.373                 | 0.43 | 3-6    |
| P159                 | S5710216-5900215XX | S571MNH0216XX  | S590MNH0215XX    | 42             | 42                   | 581.9           | 0.28      | 3.909                 | 0.23 | 6.495                 | 0.30 | 12.620                | 0.42 | 3-13   |
| P158                 | S5710211-5710216XX | S571MNH0211XX  | S571MNH0216XX    | 42             | 42                   | 364.9           | 0.28      | 3.756                 | 0.23 | 6.295                 | 0.29 | 12.375                | 0.42 | 3-13   |
| P154                 | S5500202-5500201XX | S550MNH0202XX  | S550MNH0201XX    | 33             | 33                   | 50.0            | 17.13     | 3.558                 | 0.22 | 6.042                 | 0.29 | 11.959                | 0.41 | 3-12   |
| P117                 | S4880208-4880209XX | S488MNH0208XX  | S488MNH0209XX    | 10             | 10                   | 30.0            | 0.83      | 0.071                 | 0.25 | 0.105                 | 0.30 | 0.198                 | 0.41 | 3-6    |
| P196                 | S4330203-4330204XX | S433MNH0203XX  | S433MNH0204XX    | 18             | 18                   | 78.0            | 1.58      | 0.079                 | 0.23 | 0.115                 | 0.28 | 0.295                 | 0.40 | 3-2    |
| P43                  | S5120209-5120210XX | S512MNH0209XX  | S512MNH0210XX    | 15             | 15                   | 143.0           | 0.29      | 0.205                 | 0.26 | 0.316                 | 0.31 | 0.563                 | 0.40 | 3-7    |
| P262                 | S4750204-4750205XX | S475MNH0204XX  | S475MNH0205XX    | 10             | 10                   | 137.7           | 0.22      | 0.005                 | 0.21 | 0.010                 | 0.31 | 0.029                 | 0.40 | 3-5    |
| P44                  | S5120210-5120207XX | S512MNH0210XX  | S512MNH0207XX    | 15             | 15                   | 74.0            | 0.00      | 0.217                 | 0.25 | 0.334                 | 0.31 | 0.580                 | 0.40 | 3-7    |
| P153                 | S5500223-5500202XX | S550MNH0223XX  | S550MNH0202XX    | 33             | 33                   | 301.8           | 0.12      | 3.557                 | 0.22 | 6.041                 | 0.28 | 11.956                | 0.39 | 3-12   |
| P184                 | S4880201-4880209XX | S488MNH0201XX  | S488MNH0209XX    | 12             | 12                   | 452.8           | 0.13      | 0.066                 | 0.24 | 0.100                 | 0.29 | 0.170                 | 0.39 | 3-6    |
| P179                 | S5130206-5130207XX | S513MNH0206XX  | S513MNH0207XX    | 12             | 12                   | 320.6           | 0.39      | 0.204                 | 0.25 | 0.308                 | 0.31 | 0.470                 | 0.38 | 3-7    |
| P174                 | S4870204-4880202XX | S487MNH0204XX  | S488MNH0202XX    | 12             | 12                   | 471.4           | 0.51      | 0.207                 | 0.24 | 0.316                 | 0.30 | 0.509                 | 0.38 | 3-7    |
| P28                  | S4480204-4480203XX | S448MNH0204XX  | S448MNH0203XX    | 10             | 10                   | 234.0           | 0.48      | 0.099                 | 0.23 | 0.153                 | 0.29 | 0.264                 | 0.38 | 3-15   |
| P181                 | S5130214-5130209XX | S513MNH0214XX  | S513MNH0209XX    | 12             | 12                   | 246.4           | 0.51      | 0.208                 | 0.25 | 0.314                 | 0.30 | 0.482                 | 0.38 | 3-7    |
| P77                  | S6110203-5900219XX | S611MNH0203XX  | S590MNH0219XX    | 18             | 18                   | 357.0           | 0.23      | 0.374                 | 0.18 | 0.569                 | 0.22 | 0.666                 | 0.38 | 3-13   |
| P24                  | S4470201-4470207XX | S447MNH0201XX  | S447MNH0207XX    | 10             | 10                   | 319.1           | 0.18      | 0.059                 | 0.24 | 0.095                 | 0.30 | 0.137                 | 0.38 | 3-4    |
| P178                 | S4880205-5130206XX | S488MNH0205XX  | S513MNH0206XX    | 12             | 12                   | 296.4           | 0.43      | 0.150                 | 0.24 | 0.227                 | 0.29 | 0.391                 | 0.37 | 3-7    |
| P38                  | S4880211-4880210XX | S488MNH0211XX  | S488MNH0210XX    | 10             | 10                   | 30.0            | 0.83      | 0.072                 | 0.22 | 0.109                 | 0.26 | 0.217                 | 0.37 | 3-6    |
| P182                 | S5130209-5130210XX | S513MNH0209XX  | S513MNH0210XX    | 12             | 12                   | 63.2            | 0.41      | 0.208                 | 0.24 | 0.314                 | 0.30 | 0.483                 | 0.37 | 3-7    |
| P29                  | S4480203-4480202XX | S448MNH0203XX  | S448MNH0202XX    | 10             | 10                   | 243.0           | 0.34      | 0.102                 | 0.22 | 0.158                 | 0.28 | 0.272                 | 0.37 | 3-15   |
| P180                 | S5130207-5130214XX | S513MNH0207XX  | S513MNH0214XX    | 12             | 12                   | 254.0           | 0.50      | 0.204                 | 0.24 | 0.308                 | 0.30 | 0.473                 | 0.37 | 3-7    |
| P39                  | S4880210-5130213XX | S488MNH0210XX  | S513MNH0213XX    | 12             | 12                   | 361.0           | 0.70      | 0.209                 | 0.21 | 0.313                 | 0.26 | 0.595                 | 0.36 | 3-6    |
| P42                  | S5130208-5120209XX | S513MNH0208XX  | S512MNH0209XX    | 15             | 15                   | 32.0            | 0.13      | 0.205                 | 0.22 | 0.316                 | 0.27 | 0.559                 | 0.36 | 3-7    |





Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P173                 | S4870203-4870204XX | S487MNH0203XX  | S487MNH0204XX    | 12             | 12                   | 274.6           | 0.83      | 0.205                 | 0.23 | 0.313                 | 0.28 | 0.493                 | 0.36 | 3-7    |
| P175                 | S4880202-4880201XX | S488MNH0202XX  | S488MNH0201XX    | 12             | 12                   | 117.9           | 0.51      | 0.207                 | 0.22 | 0.315                 | 0.27 | 0.510                 | 0.35 | 3-7    |
| P169                 | S4740204-4740211XX | S474MNH0204XX  | S474MNH0211XX    | 12             | 12                   | 206.5           | 1.19      | 0.197                 | 0.22 | 0.303                 | 0.27 | 0.466                 | 0.34 | 3-5    |
| P170                 | S4740211-4870201XX | S474MNH0211XX  | S487MNH0201XX    | 12             | 12                   | 211.8           | 0.49      | 0.201                 | 0.22 | 0.307                 | 0.27 | 0.474                 | 0.34 | 3-5    |
| P30                  | S4480202-4730209XX | S448MNH0202XX  | S473MNH0209XX    | 10             | 10                   | 273.6           | 0.69      | 0.104                 | 0.20 | 0.160                 | 0.25 | 0.278                 | 0.33 | 3-6    |
| P172                 | S4870202-4870203XX | S487MNH0202XX  | S487MNH0203XX    | 12             | 12                   | 256.9           | 1.27      | 0.203                 | 0.20 | 0.311                 | 0.25 | 0.487                 | 0.31 | 3-6    |
| P177                 | S4880204-4880205XX | S488MNH0204XX  | S488MNH0205XX    | 12             | 12                   | 56.6            | 1.15      | 0.150                 | 0.19 | 0.227                 | 0.23 | 0.386                 | 0.31 | 3-7    |
| P215                 | S4470206-4470207XX | S447MNH0206XX  | S447MNH0207XX    | 10             | 10                   | 269.7           | 1.90      | 0.035                 | 0.18 | 0.052                 | 0.22 | 0.108                 | 0.30 | 3-4    |
| P200                 | S4070202-4070201XX | S407MNH0202XX  | S407MNH0201XX    | 10             | 10                   | 57.5            | 0.30      | 0.051                 | 0.18 | 0.080                 | 0.23 | 0.133                 | 0.29 | 3-3    |
| P203                 | S4340204-4340205XX | S434MNH0204XX  | S434MNH0205XX    | 12             | 12                   | 303.6           | 0.14      | 0.052                 | 0.18 | 0.081                 | 0.22 | 0.149                 | 0.29 | 3-3    |
| P171                 | S4870201-4870202XX | S487MNH0201XX  | S487MNH0202XX    | 12             | 12                   | 257.5           | 1.27      | 0.201                 | 0.19 | 0.307                 | 0.23 | 0.479                 | 0.29 | 3-5    |
| P76                  | S6110202-6110203XX | S611MNH0202XX  | S611MNH0203XX    | 18             | 18                   | 323.0           | 0.18      | 0.279                 | 0.23 | 0.425                 | 0.28 | 0.469                 | 0.29 | 3-13   |
| P176                 | S4880201-4880204XX | S488MNH0201XX  | S488MNH0204XX    | 12             | 12                   | 18.5            | 0.65      | 0.150                 | 0.18 | 0.227                 | 0.22 | 0.385                 | 0.29 | 3-7    |
| P199                 | S4070203-4070202XX | S407MNH0203XX  | S407MNH0202XX    | 10             | 10                   | 80.0            | 0.30      | 0.051                 | 0.17 | 0.080                 | 0.22 | 0.132                 | 0.28 | 3-3    |
| P198                 | S4060210-4070203XX | S406MNH0210XX  | S407MNH0203XX    | 10             | 10                   | 266.0           | 0.30      | 0.051                 | 0.17 | 0.081                 | 0.22 | 0.131                 | 0.28 | 3-3    |
| P168                 | S4740212-4740204XX | S474MNH0212XX  | S474MNH0204XX    | 12             | 12                   | 295.0           | 1.18      | 0.161                 | 0.18 | 0.261                 | 0.23 | 0.387                 | 0.28 | 3-5    |
| P114                 | S4880206-4880216XX | S488MNH0206XX  | S488MNH0216XX    | 10             | 10                   | 14.8            | 0.67      | 0.066                 | 0.16 | 0.100                 | 0.20 | 0.183                 | 0.27 | 3-6    |
| P166                 | S4470201-4740205XX | S447MNH0201XX  | S474MNH0205XX    | 12             | 12                   | 307.6           | 1.00      | 0.156                 | 0.17 | 0.254                 | 0.22 | 0.370                 | 0.27 | 3-4    |
| P35                  | S4880214-4880213XX | S488MNH0214XX  | S488MNH0213XX    | 10             | 10                   | 351.0           | 0.70      | 0.055                 | 0.16 | 0.083                 | 0.19 | 0.166                 | 0.26 | 3-6    |
| P75                  | S6110201-6110202XX | S611MNH0201XX  | S611MNH0202XX    | 18             | 18                   | 65.0            | 0.23      | 0.276                 | 0.20 | 0.422                 | 0.25 | 0.460                 | 0.26 | 3-13   |
| P167                 | S4740205-4740212XX | S474MNH0205XX  | S474MNH0212XX    | 12             | 12                   | 297.5           | 1.18      | 0.158                 | 0.17 | 0.257                 | 0.22 | 0.377                 | 0.26 | 3-5    |
| P201                 | S4070201-4340203XX | S407MNH0201XX  | S434MNH0203XX    | 10             | 10                   | 327.6           | 0.30      | 0.051                 | 0.16 | 0.080                 | 0.20 | 0.138                 | 0.26 | 3-3    |
| P116                 | S4880207-4880208XX | S488MNH0207XX  | S488MNH0208XX    | 10             | 10                   | 313.6           | 0.90      | 0.070                 | 0.16 | 0.104                 | 0.19 | 0.197                 | 0.26 | 3-6    |
| P74                  | S6100207-6110201XX | S610MNH0207XX  | S611MNH0201XX    | 18             | 18                   | 388.0           | 0.20      | 0.275                 | 0.20 | 0.421                 | 0.25 | 0.458                 | 0.26 | 3-9    |
| P296                 | S4350215-4350201XX | S435MNH0215XX  | S435MNH0201XX    | 8              | 8                    | 68.7            | 8.08      | 0.023                 | 0.18 | 0.040                 | 0.24 | 0.050                 | 0.26 | 3-4    |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P113                 | S4730206-4880206XX | S473MNH0206XX  | S488MNH0206XX    | 10             | 10                   | 347.0           | 0.89      | 0.066                 | 0.16 | 0.099                 | 0.19 | 0.182                 | 0.26 | 3-6    |
| P111                 | S4730209-4730205XX | S473MNH0209XX  | S473MNH0205XX    | 10             | 10                   | 352.4           | 0.51      | 0.059                 | 0.16 | 0.090                 | 0.19 | 0.163                 | 0.26 | 3-6    |
| P204                 | S4340205-4340214XX | S434MNH0205XX  | S434MNH0214XX    | 10             | 10                   | 308.0           | 0.19      | 0.056                 | 0.16 | 0.087                 | 0.19 | 0.159                 | 0.26 | 3-3    |
| P115                 | S4880216-4880207XX | S488MNH0216XX  | S488MNH0207XX    | 10             | 10                   | 353.6           | 0.91      | 0.068                 | 0.15 | 0.102                 | 0.19 | 0.190                 | 0.26 | 3-6    |
| P36                  | S4880213-4880212XX | S488MNH0213XX  | S488MNH0212XX    | 10             | 10                   | 287.0           | 0.69      | 0.068                 | 0.15 | 0.103                 | 0.19 | 0.187                 | 0.26 | 3-6    |
| P31                  | S4730209-4480209XX | S473MNH0209XX  | S448MNH0209XX    | 10             | 10                   | 393.3           | 0.35      | 0.046                 | 0.15 | 0.071                 | 0.19 | 0.130                 | 0.25 | 3-6    |
| P34                  | S4730207-4880214XX | S473MNH0207XX  | S488MNH0214XX    | 10             | 10                   | 364.6           | 0.68      | 0.053                 | 0.15 | 0.080                 | 0.18 | 0.158                 | 0.25 | 3-6    |
| P33                  | S4730208-4730207XX | S473MNH0208XX  | S473MNH0207XX    | 10             | 10                   | 353.9           | 0.61      | 0.050                 | 0.14 | 0.075                 | 0.18 | 0.149                 | 0.25 | 3-6    |
| P212                 | S4330207-4330206XX | S433MNH0207XX  | S433MNH0206XX    | 15             | 15                   | 20.0            | 0.10      | 0.035                 | 0.13 | 0.051                 | 0.15 | 0.131                 | 0.24 | 3-2    |
| P112                 | S4730205-4730206XX | S473MNH0205XX  | S473MNH0206XX    | 10             | 10                   | 352.0           | 0.94      | 0.059                 | 0.15 | 0.091                 | 0.18 | 0.169                 | 0.24 | 3-6    |
| P32                  | S4480209-4730208XX | S448MNH0209XX  | S473MNH0208XX    | 10             | 10                   | 342.9           | 0.72      | 0.048                 | 0.14 | 0.073                 | 0.17 | 0.141                 | 0.24 | 3-6    |
| P268                 | S4740203-4740204XX | S474MNH0203XX  | S474MNH0204XX    | 12             | 12                   | 280.3           | 0.19      | 0.034                 | 0.16 | 0.054                 | 0.19 | 0.079                 | 0.24 | 3-5    |
| P37                  | S4880212-4880211XX | S488MNH0212XX  | S488MNH0211XX    | 10             | 10                   | 46.4            | 1.21      | 0.068                 | 0.14 | 0.103                 | 0.17 | 0.188                 | 0.23 | 3-6    |
| P202                 | S4340203-4340204XX | S434MNH0203XX  | S434MNH0204XX    | 12             | 12                   | 315.3           | 0.71      | 0.051                 | 0.14 | 0.080                 | 0.17 | 0.143                 | 0.23 | 3-3    |
| P9                   | S4350202-4350201XX | S435MNH0202XX  | S435MNH0201XX    | 10             | 10                   | 14.0            | 1.43      | 0.007                 | 0.14 | 0.012                 | 0.18 | 0.039                 | 0.22 | 3-4    |
| P258                 | S4470202-4470201XX | S447MNH0202XX  | S447MNH0201XX    | 12             | 12                   | 130.0           | 0.50      | 0.029                 | 0.14 | 0.044                 | 0.17 | 0.078                 | 0.21 | 3-4    |
| P194                 | S4330225-4330206XX | S433MNH0225XX  | S433MNH0206XX    | 15             | 15                   | 100.0           | 0.46      | 0.044                 | 0.11 | 0.065                 | 0.13 | 0.159                 | 0.20 | 3-2    |
| P195                 | S4330206-4330203XX | S433MNH0206XX  | S433MNH0203XX    | 15             | 15                   | 185.7           | 0.31      | 0.079                 | 0.11 | 0.115                 | 0.13 | 0.293                 | 0.20 | 3-2    |
| P211                 | S4330213-4330207XX | S433MNH0213XX  | S433MNH0207XX    | 15             | 15                   | 335.0           | 0.36      | 0.035                 | 0.10 | 0.052                 | 0.12 | 0.130                 | 0.20 | 3-2    |
| P193                 | S4330211-4330225XX | S433MNH0211XX  | S433MNH0225XX    | 15             | 15                   | 367.6           | 0.20      | 0.044                 | 0.10 | 0.065                 | 0.12 | 0.150                 | 0.18 | 3-2    |
| P192                 | S4080211-4330211XX | S408MNH0211XX  | S433MNH0211XX    | 15             | 15                   | 270.3           | 0.39      | 0.040                 | 0.10 | 0.058                 | 0.12 | 0.144                 | 0.18 | 3-2    |
| P254                 | S4080202-4080201XX | S408MNH0202XX  | S408MNH0201XX    | 10             | 10                   | 212.0           | 0.78      | 0.006                 | 0.10 | 0.010                 | 0.12 | 0.025                 | 0.18 | 3-3    |
| P253                 | S4080203-4080202XX | S408MNH0203XX  | S408MNH0202XX    | 10             | 10                   | 347.4           | 0.01      | 0.005                 | 0.10 | 0.008                 | 0.12 | 0.021                 | 0.18 | 3-3    |
| P267                 | S4740202-4740203XX | S474MNH0202XX  | S474MNH0203XX    | 12             | 12                   | 293.9           | 0.29      | 0.033                 | 0.12 | 0.051                 | 0.15 | 0.072                 | 0.18 | 3-5    |
| P252                 | S4080204-4080203XX | S408MNH0204XX  | S408MNH0203XX    | 10             | 10                   | 329.6           | 0.31      | 0.003                 | 0.10 | 0.005                 | 0.12 | 0.013                 | 0.17 | 3-3    |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P191                 | S4080201-4080211XX | S408MNH0201XX  | S408MNH0211XX    | 15             | 15                   | 396.9           | 0.25      | 0.038                 | 0.09 | 0.055                 | 0.11 | 0.134                 | 0.17 | 3-2    |
| P214                 | S4470205-4470206XX | S447MNH0205XX  | S447MNH0206XX    | 10             | 10                   | 260.4           | 1.12      | 0.031                 | 0.10 | 0.047                 | 0.12 | 0.098                 | 0.17 | 3-4    |
| P261                 | S4750203-4750204XX | S475MNH0203XX  | S475MNH0204XX    | 10             | 10                   | 250.5           | 0.16      | 0.003                 | 0.06 | 0.005                 | 0.09 | 0.018                 | 0.17 | 3-5    |
| P73                  | S6100210-6100207XX | S610MNH0210XX  | S610MNH0207XX    | 18             | 18                   | 388.0           | 0.20      | 0.008                 | 0.12 | 0.008                 | 0.15 | 0.028                 | 0.16 | 3-9    |
| P124                 | S4330212-4330230XX | S433MNH0212XX  | S433MNH0230XX    | 10             | 10                   | 50.0            | 0.40      | 0.009                 | 0.07 | 0.013                 | 0.09 | 0.048                 | 0.16 | 3-2    |
| P3                   | S4340201-4350211XX | S434MNH0201XX  | S435MNH0211XX    | 10             | 10                   | 300.0           | 0.03      | 0.003                 | 0.07 | 0.005                 | 0.09 | 0.020                 | 0.16 | 3-3    |
| P213                 | S4340214-4470205XX | S434MNH0214XX  | S447MNH0205XX    | 10             | 10                   | 264.7           | 2.03      | 0.031                 | 0.09 | 0.047                 | 0.11 | 0.094                 | 0.16 | 3-3    |
| P122                 | S4480219-4330229XX | S448MNH0219XX  | S433MNH0229XX    | 10             | 10                   | 266.9           | 0.27      | 0.007                 | 0.07 | 0.011                 | 0.08 | 0.042                 | 0.16 | 3-2    |
| P121                 | S4480208-4480219XX | S448MNH0208XX  | S448MNH0219XX    | 10             | 10                   | 297.0           | 0.29      | 0.005                 | 0.06 | 0.008                 | 0.08 | 0.036                 | 0.16 | 3-2    |
| P278                 | S4730203-4730209XX | S473MNH0203XX  | S473MNH0209XX    | 10             | 10                   | 214.0           | 0.94      | 0.000                 | 0.09 | 0.000                 | 0.11 | 0.003                 | 0.16 | 3-6    |
| P266                 | S4750209-4740202XX | S475MNH0209XX  | S474MNH0202XX    | 12             | 12                   | 237.9           | 0.32      | 0.029                 | 0.11 | 0.045                 | 0.13 | 0.062                 | 0.16 | 3-5    |
| P125                 | S4330230-4330224XX | S433MNH0230XX  | S433MNH0224XX    | 10             | 10                   | 100.0           | 0.39      | 0.009                 | 0.07 | 0.013                 | 0.08 | 0.052                 | 0.16 | 3-2    |
| P123                 | S4330229-4330212XX | S433MNH0229XX  | S433MNH0212XX    | 10             | 10                   | 180.0           | 0.40      | 0.009                 | 0.07 | 0.013                 | 0.09 | 0.047                 | 0.16 | 3-2    |
| P2                   | S4350219-4340201XX | S435MNH0219XX  | S434MNH0201XX    | 10             | 10                   | 395.0           | 0.33      | 0.003                 | 0.07 | 0.005                 | 0.09 | 0.016                 | 0.16 | 3-3    |
| P7                   | S4350214-4350206XX | S435MNH0214XX  | S435MNH0206XX    | 10             | 10                   | 185.0           | 0.35      | 0.007                 | 0.07 | 0.011                 | 0.09 | 0.037                 | 0.15 | 3-4    |
| P271                 | S4750215-4750209XX | S475MNH0215XX  | S475MNH0209XX    | 10             | 10                   | 40.4            | 0.79      | 0.022                 | 0.11 | 0.034                 | 0.13 | 0.042                 | 0.15 | 3-5    |
| P210                 | S4330202-4330213XX | S433MNH0202XX  | S433MNH0213XX    | 15             | 15                   | 170.0           | 0.35      | 0.030                 | 0.08 | 0.046                 | 0.10 | 0.116                 | 0.15 | 3-2    |
| P206                 | S4340211-4340207XX | S434MNH0211XX  | S434MNH0207XX    | 15             | 15                   | 409.3           | 0.20      | 0.030                 | 0.09 | 0.046                 | 0.10 | 0.100                 | 0.15 | 3-3    |
| P257                 | S4470209-4470202XX | S447MNH0209XX  | S447MNH0202XX    | 12             | 12                   | 103.0           | 0.51      | 0.029                 | 0.09 | 0.044                 | 0.11 | 0.075                 | 0.15 | 3-4    |
| P209                 | S4330226-4330202XX | S433MNH0226XX  | S433MNH0202XX    | 15             | 15                   | 11.0            | 0.36      | 0.030                 | 0.08 | 0.046                 | 0.09 | 0.112                 | 0.15 | 3-3    |
| P190                 | S4080229-4080201XX | S408MNH0229XX  | S408MNH0201XX    | 15             | 15                   | 75.0            | 1.04      | 0.031                 | 0.08 | 0.045                 | 0.09 | 0.100                 | 0.14 | 3-3    |
| P188                 | S4340213-4080230XX | S434MNH0213XX  | S408MNH0230XX    | 12             | 12                   | 366.0           | 0.96      | 0.029                 | 0.08 | 0.042                 | 0.10 | 0.091                 | 0.14 | 3-3    |
| P256                 | S4470203-4470209XX | S447MNH0203XX  | S447MNH0209XX    | 12             | 12                   | 197.0           | 0.69      | 0.029                 | 0.09 | 0.044                 | 0.11 | 0.074                 | 0.14 | 3-4    |
| P120                 | S4480205-4480208XX | S448MNH0205XX  | S448MNH0208XX    | 10             | 10                   | 279.0           | 0.30      | 0.003                 | 0.05 | 0.004                 | 0.06 | 0.029                 | 0.14 | 3-15   |
| P189                 | S4080230-4080229XX | S408MNH0230XX  | S408MNH0229XX    | 12             | 12                   | 280.2           | 0.96      | 0.031                 | 0.08 | 0.045                 | 0.09 | 0.098                 | 0.14 | 3-3    |



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P6                   | S4350213-4350214XX | S435MNH0213XX  | S435MNH0214XX    | 10             | 10                   | 79.0            | 0.43      | 0.007                 | 0.06 | 0.010                 | 0.08 | 0.034                 | 0.14 | 3-4    |
| P208                 | S4330214-4330226XX | S433MNH0214XX  | S433MNH0226XX    | 15             | 15                   | 319.5           | 0.59      | 0.030                 | 0.07 | 0.046                 | 0.09 | 0.112                 | 0.14 | 3-3    |
| P205                 | S4340214-4340211XX | S434MNH0214XX  | S434MNH0211XX    | 15             | 15                   | 426.4           | 1.11      | 0.028                 | 0.08 | 0.043                 | 0.10 | 0.088                 | 0.14 | 3-3    |
| P187                 | S4070206-4340213XX | S407MNH0206XX  | S434MNH0213XX    | 12             | 12                   | 186.8           | 0.89      | 0.029                 | 0.08 | 0.042                 | 0.10 | 0.085                 | 0.14 | 3-3    |
| P5                   | S4350212-4350213XX | S435MNH0212XX  | S435MNH0213XX    | 10             | 10                   | 300.0           | 0.33      | 0.007                 | 0.06 | 0.010                 | 0.08 | 0.033                 | 0.14 | 3-3    |
| P8                   | S4350206-4350202XX | S435MNH0206XX  | S435MNH0202XX    | 10             | 10                   | 129.0           | 0.30      | 0.007                 | 0.06 | 0.011                 | 0.07 | 0.039                 | 0.13 | 3-4    |
| P186                 | S4070204-4070206XX | S407MNH0204XX  | S407MNH0206XX    | 10             | 10                   | 262.4           | 0.51      | 0.010                 | 0.08 | 0.016                 | 0.10 | 0.022                 | 0.13 | 3-3    |
| P255                 | S4460210-4470203XX | S446MNH0210XX  | S447MNH0203XX    | 12             | 12                   | 300.0           | 0.74      | 0.029                 | 0.09 | 0.044                 | 0.10 | 0.071                 | 0.13 | 3-4    |
| P283                 | S4330227-4480205XX | S433MNH0227XX  | S448MNH0205XX    | 10             | 10                   | 415.0           | 0.28      | 0.003                 | 0.04 | 0.004                 | 0.05 | 0.025                 | 0.13 | 3-15   |
| P294                 | S4460208-4460209XX | S446MNH0208XX  | S446MNH0209XX    | 10             | 10                   | 300.0           | 1.13      | 0.015                 | 0.08 | 0.026                 | 0.10 | 0.042                 | 0.13 | 3-4    |
| P207                 | S4340207-4330214XX | S434MNH0207XX  | S433MNH0214XX    | 15             | 15                   | 267.8           | 0.58      | 0.030                 | 0.07 | 0.046                 | 0.08 | 0.105                 | 0.13 | 3-3    |
| P4                   | S4350211-4350212XX | S435MNH0211XX  | S435MNH0212XX    | 10             | 10                   | 302.0           | 0.60      | 0.006                 | 0.06 | 0.009                 | 0.07 | 0.028                 | 0.12 | 3-3    |
| P265                 | S4750210-4750209XX | S475MNH0210XX  | S475MNH0209XX    | 10             | 10                   | 250.7           | 1.84      | 0.006                 | 0.08 | 0.009                 | 0.10 | 0.018                 | 0.12 | 3-5    |
| P295                 | S4460209-4460210XX | S446MNH0209XX  | S446MNH0210XX    | 12             | 12                   | 300.0           | 0.73      | 0.023                 | 0.08 | 0.035                 | 0.10 | 0.057                 | 0.12 | 3-4    |
| P297                 | S4350215-4350216XX | S435MNH0215XX  | S435MNH0216XX    | 8              | 8                    | 95.0            | 3.31      | 0.015                 | 0.08 | 0.026                 | 0.10 | 0.032                 | 0.12 | 3-4    |
| P260                 | S4760202-4750203XX | S476MNH0202XX  | S475MNH0203XX    | 10             | 10                   | 350.4           | 0.14      | 0.003                 | 0.05 | 0.005                 | 0.07 | 0.014                 | 0.12 | 3-5    |
| P276                 | S4880215-4880201XX | S488MNH0215XX  | S488MNH0201XX    | 10             | 10                   | 338.0           | 0.77      | 0.008                 | 0.06 | 0.012                 | 0.07 | 0.035                 | 0.12 | 3-6    |
| P287                 | S5280204-5280205XX | S528MNH0204XX  | S528MNH0205XX    | 10             | 10                   | 156.0           | 0.50      | 0.008                 | 0.07 | 0.013                 | 0.08 | 0.023                 | 0.11 | 3-7    |
| P293                 | S4350217-4460208XX | S435MNH0217XX  | S446MNH0208XX    | 10             | 10                   | 300.0           | 1.13      | 0.015                 | 0.07 | 0.026                 | 0.09 | 0.038                 | 0.11 | 3-4    |
| P282                 | S4330228-4330227XX | S433MNH0228XX  | S433MNH0227XX    | 10             | 10                   | 36.1            | 0.44      | 0.002                 | 0.04 | 0.003                 | 0.05 | 0.018                 | 0.11 | 3-3    |
| P292                 | S4350216-4350217XX | S435MNH0216XX  | S435MNH0217XX    | 10             | 10                   | 160.0           | 1.10      | 0.015                 | 0.07 | 0.026                 | 0.09 | 0.034                 | 0.11 | 3-4    |
| P270                 | S4750217-4750215XX | S475MNH0217XX  | S475MNH0215XX    | 10             | 10                   | 300.0           | 0.30      | 0.003                 | 0.07 | 0.004                 | 0.08 | 0.013                 | 0.11 | 3-5    |
| P286                 | S5280203-5280204XX | S528MNH0203XX  | S528MNH0204XX    | 10             | 10                   | 185.0           | 0.42      | 0.008                 | 0.07 | 0.013                 | 0.08 | 0.020                 | 0.10 | 3-7    |
| P275                 | S4880203-4880215XX | S488MNH0203XX  | S488MNH0215XX    | 10             | 10                   | 358.2           | 1.32      | 0.006                 | 0.05 | 0.009                 | 0.06 | 0.028                 | 0.10 | 3-6    |
| P185                 | S4070213-4070204XX | S407MNH0213XX  | S407MNH0204XX    | 10             | 10                   | 278.2           | 0.20      | 0.007                 | 0.08 | 0.011                 | 0.09 | 0.014                 | 0.10 | 3-3    |



**Table A-5 Model Results for 2035 Flows without the PPSP Contribution**

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P285                 | S5280202-5280203XX | S528MNH0202XX  | S528MNH0203XX    | 10             | 10                   | 195.0           | 0.50      | 0.008                 | 0.07 | 0.013                 | 0.08 | 0.018                 | 0.10 | 3-7    |
| P288                 | S5280205-5290213XX | S528MNH0205XX  | S529MNH0213XX    | 12             | 12                   | 325.0           | 0.50      | 0.009                 | 0.05 | 0.014                 | 0.06 | 0.033                 | 0.10 | 3-7    |
| P281                 | S4340206-4330228XX | S434MNH0206XX  | S433MNH0228XX    | 10             | 10                   | 208.5           | 0.43      | 0.002                 | 0.03 | 0.003                 | 0.04 | 0.017                 | 0.09 | 3-3    |
| P259                 | S4760201-4760202XX | S476MNH0201XX  | S476MNH0202XX    | 10             | 10                   | 356.4           | 0.15      | 0.000                 | 0.03 | 0.000                 | 0.04 | 0.005                 | 0.09 | 3-5    |
| P1                   | S4350210-4350219XX | S435MNH0210XX  | S435MNH0219XX    | 10             | 10                   | 390.0           | 0.33      | 0.003                 | 0.05 | 0.005                 | 0.06 | 0.010                 | 0.09 | 3-3    |
| P274                 | S4730204-4880203XX | S473MNH0204XX  | S488MNH0203XX    | 10             | 10                   | 360.3           | 1.03      | 0.004                 | 0.04 | 0.006                 | 0.05 | 0.020                 | 0.09 | 3-6    |
| P284                 | S5280208-5280202XX | S528MNH0208XX  | S528MNH0202XX    | 10             | 10                   | 254.0           | 0.56      | 0.006                 | 0.06 | 0.009                 | 0.07 | 0.012                 | 0.08 | 3-7    |
| P280                 | S4340212-4340206XX | S434MNH0212XX  | S434MNH0206XX    | 10             | 10                   | 320.3           | 0.87      | 0.002                 | 0.03 | 0.003                 | 0.04 | 0.014                 | 0.08 | 3-3    |
| P273                 | S4740201-4730204XX | S474MNH0201XX  | S473MNH0204XX    | 10             | 10                   | 341.1           | 1.03      | 0.003                 | 0.04 | 0.005                 | 0.04 | 0.014                 | 0.08 | 3-6    |
| P291                 | S5280206-5280205XX | S528MNH0206XX  | S528MNH0205XX    | 12             | 12                   | 240.0           | 0.50      | 0.000                 | 0.03 | 0.000                 | 0.04 | 0.005                 | 0.07 | 3-7    |
| P264                 | S4750208-4750210XX | S475MNH0208XX  | S475MNH0210XX    | 10             | 10                   | 198.1           | 0.85      | 0.005                 | 0.04 | 0.008                 | 0.05 | 0.013                 | 0.07 | 3-5    |
| P269                 | S4860203-4750217XX | S486MNH0203XX  | S475MNH0217XX    | 10             | 10                   | 316.3           | 0.77      | 0.001                 | 0.03 | 0.001                 | 0.04 | 0.005                 | 0.07 | 3-5    |
| P279                 | S4340209-4340214XX | S434MNH0209XX  | S434MNH0214XX    | 15             | 15                   | 297.6           | 0.93      | 0.003                 | 0.04 | 0.005                 | 0.05 | 0.010                 | 0.07 | 3-3    |
| P72                  | S6100209-6100210XX | S610MNH0209XX  | S610MNH0210XX    | 18             | 18                   | 384.0           | 0.20      | 0.004                 | 0.03 | 0.004                 | 0.03 | 0.014                 | 0.06 | 3-9    |
| P263                 | S4740207-4750208XX | S474MNH0207XX  | S475MNH0208XX    | 10             | 10                   | 244.6           | 0.82      | 0.001                 | 0.03 | 0.002                 | 0.04 | 0.005                 | 0.06 | 3-5    |
| P272                 | S4740213-4740201XX | S474MNH0213XX  | S474MNH0201XX    | 10             | 10                   | 342.8           | 1.07      | 0.000                 | 0.02 | 0.000                 | 0.03 | 0.005                 | 0.06 | 3-6    |
| P290                 | S5280207-5280206XX | S528MNH0207XX  | S528MNH0206XX    | 12             | 12                   | 21.0            | 0.50      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.001                 | 0.03 | 3-7    |
| P71                  | S6100205-6100209XX | S610MNH0205XX  | S610MNH0209XX    | 18             | 18                   | 384.8           | 0.22      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.000                 | 0.02 | 3-9    |
| P277                 | S4731001-4730203XX | S473PLG1001XX  | S473MNH0203XX    | 10             | 10                   | 15.0            | 0.48      | 0.000                 | 0.00 | 0.000                 | 0.01 | 0.000                 | 0.02 | 3-6    |
| P289                 | S5131001-5280207XX | S513PLG1001XX  | S528MNH0207XX    | 12             | 12                   | 200.0           | 0.50      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.000                 | 0.01 | 3-7    |
| P119                 | S4480204-4480205XX | S448MNH0204XX  | S448MNH0205XX    | 10             | 10                   | 6.0             | 1.67      | 0.000                 | 0.00 | 0.000                 | 0.00 | 0.000                 | 0.00 | 3-15   |

\*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with WWMP CIP diameter.
2. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P164                 | S4500212-4500211XX | S450MNH0212XX  | S450MNH0211XX    | 16             | 16                   | 20.8            | 1.59      | 1.146                 | 0.86 | 0.967                 | 0.85 | 1.860                 | 1.00 | 3-11   |
| P165                 | S4500211-4500210XX | S450MNH0211XX  | S450MNH0210XX    | 16             | 16                   | 31.3            | 1.18      | 1.147                 | 0.83 | 0.967                 | 0.83 | 1.860                 | 1.00 | 3-11   |
| P47                  | S5290202-5290213XX | S529MNH0202XX  | S529MNH0213XX    | 12             | 12                   | 319.8           | 0.27      | 0.674                 | 0.52 | 1.239                 | 0.81 | 1.662                 | 1.00 | 3-7    |
| P110                 | S5290204-5290202XX | S529MNH0204XX  | S529MNH0202XX    | 12             | 12                   | 40.0            | 0.25      | 0.339                 | 0.52 | 0.606                 | 0.83 | 0.661                 | 1.00 | 3-7    |
| P182                 | S5130209-5130210XX | S513MNH0209XX  | S513MNH0210XX    | 12             | 12                   | 63.2            | 0.41      | 0.314                 | 0.30 | 0.481                 | 0.37 | 0.637                 | 1.00 | 3-7    |
| P108                 | S5120211-5120206XX | S512MNH0211XX  | S512MNH0206XX    | 12             | 12                   | 90.0            | 0.26      | 0.340                 | 0.37 | 0.606                 | 0.51 | 0.650                 | 1.00 | 3-7    |
| P107                 | S5130208-5120211XX | S513MNH0208XX  | S512MNH0211XX    | 12             | 12                   | 158.3           | 0.29      | 0.339                 | 0.36 | 0.606                 | 0.50 | 0.671                 | 1.00 | 3-7    |
| P41                  | S5130212-5130208XX | S513MNH0212XX  | S513MNH0208XX    | 12             | 12                   | 244.6           | 0.20      | 0.656                 | 0.48 | 1.220                 | 0.73 | 1.619                 | 1.00 | 3-7    |
| P43                  | S5120209-5120210XX | S512MNH0209XX  | S512MNH0210XX    | 15             | 15                   | 143.0           | 0.29      | 0.316                 | 0.31 | 0.614                 | 0.42 | 1.039                 | 1.00 | 3-7    |
| P42                  | S5130208-5120209XX | S513MNH0208XX  | S512MNH0209XX    | 15             | 15                   | 32.0            | 0.13      | 0.316                 | 0.27 | 0.614                 | 0.38 | 1.037                 | 1.00 | 3-7    |
| P183                 | S5130210-5130212XX | S513MNH0210XX  | S513MNH0212XX    | 10             | 10                   | 263.4           | 0.84      | 0.314                 | 0.53 | 0.481                 | 0.71 | 0.639                 | 1.00 | 3-7    |
| P46                  | S5290202-5290203XX | S529MNH0203XX  | S529MNH0202XX    | 15             | 15                   | 32.0            | 0.13      | 0.335                 | 0.47 | 0.632                 | 0.71 | 1.068                 | 1.00 | 3-7    |
| P50                  | S5290207-5290208XX | S529MNH0207XX  | S529MNH0208XX    | 12             | 12                   | 333.0           | 0.26      | 0.695                 | 0.57 | 1.259                 | 0.93 | 1.696                 | 1.00 | 3-8    |
| P49                  | S5290206-5290207XX | S529MNH0206XX  | S529MNH0207XX    | 12             | 12                   | 216.6           | 0.31      | 0.688                 | 0.54 | 1.253                 | 0.87 | 1.684                 | 1.00 | 3-8    |
| P48                  | S5290213-5290206XX | S529MNH0213XX  | S529MNH0206XX    | 12             | 12                   | 20.4            | 0.54      | 0.687                 | 0.50 | 1.252                 | 0.79 | 1.681                 | 1.00 | 3-8    |
| P109                 | S5120206-5290204XX | S512MNH0206XX  | S529MNH0204XX    | 12             | 12                   | 280.0           | 0.25      | 0.340                 | 0.43 | 0.607                 | 0.65 | 0.655                 | 1.00 | 3-7    |
| P44                  | S5120210-5120207XX | S512MNH0210XX  | S512MNH0207XX    | 15             | 15                   | 74.0            | 0.00      | 0.334                 | 0.31 | 0.631                 | 0.41 | 1.057                 | 1.00 | 3-7    |
| P45                  | S5120207-5290203XX | S512MNH0207XX  | S529MNH0203XX    | 15             | 15                   | 297.0           | 0.36      | 0.334                 | 0.37 | 0.631                 | 0.54 | 1.061                 | 1.00 | 3-7    |
| P51                  | S5290208-5520204XX | S529MNH0208XX  | S552MNH0204XX    | 12             | 12                   | 361.0           | 0.25      | 0.695                 | 0.54 | 1.259                 | 0.83 | 1.700                 | 0.98 | 3-8    |
| P98                  | S6500206-6500209XX | S650MNH0206XX  | S650MNH0209XX    | 18             | 18                   | 468.0           | 0.16      | 1.886                 | 0.61 | 2.435                 | 0.74 | 3.017                 | 0.95 | 3-10   |
| P97                  | S6500207-6500206XX | S650MNH0207XX  | S650MNH0206XX    | 18             | 18                   | 67.3            | 0.28      | 1.882                 | 0.58 | 2.431                 | 0.70 | 3.005                 | 0.94 | 3-10   |
| P150                 | S5310212-5500209XX | S531MNH0212XX  | S550MNH0209XX    | 27             | 27                   | 355.6           | 0.24      | 6.027                 | 0.58 | 6.137                 | 0.59 | 12.160                | 0.94 | 3-12   |
| P138                 | S4710213-4900224XX | S471MNH0213XX  | S490MNH0224XX    | 27             | 27                   | 1086.8          | 0.24      | 5.620                 | 0.54 | 5.662                 | 0.55 | 11.277                | 0.94 | 3-11   |
| P86                  | S6520205-6520204XX | S652MNH0205XX  | S652MNH0204XX    | 33             | 33                   | 10.0            | 0.10      | 11.106                | 0.67 | 11.753                | 0.68 | 19.241                | 0.92 | 3-10   |
| P99                  | S6500209-6510201XX | S650MNH0209XX  | S651MNH0201XX    | 18             | 18                   | 468.0           | 0.16      | 1.890                 | 0.63 | 2.436                 | 0.75 | 3.029                 | 0.92 | 3-10   |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P52                  | S5520204-5520203XX | S552MNH0204XX  | S552MNH0203XX    | 12             | 12                   | 105.0           | 0.40      | 0.695                 | 0.49 | 1.259                 | 0.71 | 1.701                 | 0.92 | 3-8    |
| P85                  | S6520225-6520205XX | S652MNH0225XX  | S652MNH0205XX    | 33             | 33                   | 20.7            | 0.53      | 11.105                | 0.66 | 11.755                | 0.67 | 19.093                | 0.91 | 3-10   |
| P144                 | S5110229-5110211XX | S511MNH0229XX  | S511MNH0211XX    | 27             | 27                   | 206.5           | 0.58      | 5.939                 | 0.53 | 6.044                 | 0.53 | 11.903                | 0.88 | 3-12   |
| P106                 | S6520208-6520225XX | S652MNH0208XX  | S652MNH0225XX    | 33             | 33                   | 41.2            | 0.46      | 3.004                 | 0.60 | 3.525                 | 0.61 | 4.709                 | 0.87 | 3-10   |
| P242                 | S3920207-3920206XX | S392MNH0207XX  | S392MNH0206XX    | 8              | 8                    | 47.5            | 1.05      | 0.585                 | 0.58 | 0.593                 | 0.58 | 1.068                 | 0.86 | 3-1    |
| P151                 | S5500209-5500207XX | S550MNH0209XX  | S550MNH0207XX    | 27             | 27                   | 31.8            | 0.03      | 6.027                 | 0.57 | 6.137                 | 0.57 | 12.162                | 0.85 | 3-12   |
| P149                 | S5300202-5310212XX | S530MNH0202XX  | S531MNH0212XX    | 27             | 27                   | 355.6           | 0.56      | 6.024                 | 0.51 | 6.132                 | 0.51 | 12.149                | 0.84 | 3-12   |
| P181                 | S5130214-5130209XX | S513MNH0214XX  | S513MNH0209XX    | 12             | 12                   | 246.4           | 0.51      | 0.314                 | 0.30 | 0.473                 | 0.38 | 0.628                 | 0.84 | 3-7    |
| P145                 | S5110211-5110209XX | S511MNH0211XX  | S511MNH0209XX    | 27             | 27                   | 295.3           | 0.13      | 5.927                 | 0.53 | 6.033                 | 0.54 | 11.918                | 0.84 | 3-12   |
| P67                  | S6090201-6090205XX | S609MNH0201XX  | S609MNH0205XX    | 12             | 15                   | 278.0           | 0.25      | 1.052                 | 0.51 | 1.612                 | 0.66 | 2.111                 | 0.83 | 3-9    |
| P68                  | S6090205-6090202XX | S609MNH0205XX  | S609MNH0202XX    | 12             | 15                   | 95.0            | 0.25      | 1.087                 | 0.51 | 1.645                 | 0.67 | 2.149                 | 0.83 | 3-9    |
| P66                  | S5920208-6090201XX | S592MNH0208XX  | S609MNH0201XX    | 12             | 15                   | 373.0           | 0.25      | 1.052                 | 0.50 | 1.613                 | 0.66 | 2.108                 | 0.83 | 3-9    |
| P105                 | S6510210-6520208XX | S651MNH0210XX  | S652MNH0208XX    | 33             | 33                   | 220.0           | 0.03      | 2.911                 | 0.56 | 3.439                 | 0.58 | 4.471                 | 0.83 | 3-10   |
| P65                  | S5920209-5920208XX | S592MNH0209XX  | S592MNH0208XX    | 12             | 15                   | 155.0           | 0.25      | 1.052                 | 0.50 | 1.614                 | 0.66 | 2.104                 | 0.82 | 3-9    |
| P64                  | S5920206-5920209XX | S592MNH0206XX  | S592MNH0209XX    | 12             | 15                   | 218.0           | 0.25      | 1.016                 | 0.50 | 1.579                 | 0.66 | 2.066                 | 0.82 | 3-9    |
| P139                 | S4900224-4900207XX | S490MNH0224XX  | S490MNH0207XX    | 27             | 27                   | 258.7           | 0.24      | 5.665                 | 0.52 | 5.712                 | 0.53 | 11.404                | 0.82 | 3-11   |
| P63                  | S5920210-5920206XX | S592MNH0210XX  | S592MNH0206XX    | 12             | 15                   | 258.0           | 0.25      | 1.016                 | 0.49 | 1.579                 | 0.65 | 2.064                 | 0.82 | 3-9    |
| P241                 | S3920208-3920207XX | S392MNH0208XX  | S392MNH0207XX    | 10             | 10                   | 215.1           | 1.12      | 0.585                 | 0.47 | 0.593                 | 0.48 | 1.067                 | 0.81 | 3-1    |
| P62                  | S5920207-5920210XX | S592MNH0207XX  | S592MNH0210XX    | 12             | 15                   | 115.0           | 0.25      | 1.016                 | 0.49 | 1.580                 | 0.65 | 2.061                 | 0.81 | 3-9    |
| P163                 | S4320227-4500212XX | S432MNH0227XX  | S450MNH0212XX    | 16             | 16                   | 552.4           | 0.30      | 1.149                 | 0.60 | 0.964                 | 0.57 | 1.858                 | 0.80 | 3-11   |
| P104                 | S6510208-6510210XX | S651MNH0208XX  | S651MNH0210XX    | 33             | 33                   | 110.0           | 0.10      | 2.958                 | 0.54 | 3.496                 | 0.56 | 4.439                 | 0.80 | 3-10   |
| P96                  | S6310208-6500207XX | S631MNH0208XX  | S650MNH0207XX    | 18             | 18                   | 497.0           | 0.29      | 1.882                 | 0.53 | 2.433                 | 0.64 | 3.005                 | 0.80 | 3-10   |
| P61                  | S5690207-5920207XX | S569MNH0207XX  | S592MNH0207XX    | 12             | 15                   | 180.0           | 0.25      | 0.959                 | 0.48 | 1.523                 | 0.64 | 2.001                 | 0.80 | 3-9    |
| P60                  | S5690201-5690207XX | S569MNH0201XX  | S569MNH0207XX    | 12             | 15                   | 200.0           | 0.25      | 0.959                 | 0.48 | 1.523                 | 0.63 | 1.999                 | 0.79 | 3-9    |
| P59                  | S5690202-5690201XX | S569MNH0202XX  | S569MNH0201XX    | 12             | 15                   | 200.0           | 0.25      | 0.959                 | 0.48 | 1.523                 | 0.63 | 1.997                 | 0.78 | 3-9    |





Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P87                  | S6520214-6520204XX | S652MNH0204XX  | S652MNH0214XX    | 39             | 39                   | 54.7            | 0.18      | 11.125                | 0.58 | 11.769                | 0.58 | 19.347                | 0.78 | 3-10   |
| P137                 | S4500207-4710213XX | S450MNH0207XX  | S471MNH0213XX    | 27             | 27                   | 1135.1          | 0.84      | 5.593                 | 0.46 | 5.614                 | 0.46 | 11.145                | 0.78 | 3-11   |
| P142                 | S4900219-5110214XX | S490MNH0219XX  | S511MNH0214XX    | 27             | 27                   | 106.7           | 0.25      | 5.965                 | 0.49 | 6.069                 | 0.49 | 11.899                | 0.78 | 3-12   |
| P58                  | S5690203-5690202XX | S569MNH0203XX  | S569MNH0202XX    | 12             | 15                   | 244.0           | 0.26      | 0.902                 | 0.47 | 1.466                 | 0.62 | 1.937                 | 0.77 | 3-9    |
| P143                 | S5110214-5110229XX | S511MNH0214XX  | S511MNH0229XX    | 27             | 27                   | 88.6            | 0.47      | 5.951                 | 0.45 | 6.055                 | 0.45 | 11.903                | 0.74 | 3-12   |
| P141                 | S4900201-4900219XX | S490MNH0201XX  | S490MNH0219XX    | 27             | 27                   | 193.4           | 0.62      | 5.960                 | 0.47 | 6.062                 | 0.48 | 11.846                | 0.74 | 3-11   |
| P57                  | S5690204-5690203XX | S569MNH0204XX  | S569MNH0203XX    | 12             | 15                   | 331.0           | 0.23      | 0.751                 | 0.44 | 1.316                 | 0.60 | 1.772                 | 0.74 | 3-8    |
| P69                  | S6090202-6100203XX | S609MNH0202XX  | S610MNH0203XX    | 12             | 15                   | 373.0           | 0.28      | 1.087                 | 0.49 | 1.644                 | 0.61 | 2.153                 | 0.74 | 3-9    |
| P78                  | S5900217-5900219XX | S590MNH0219XX  | S590MNH0217XX    | 18             | 18                   | 22.7            | 4.68      | 0.572                 | 0.47 | 0.572                 | 0.47 | 3.486                 | 0.74 | 3-13   |
| P100                 | S6510201-6510203XX | S651MNH0201XX  | S651MNH0203XX    | 18             | 18                   | 468.0           | 0.17      | 1.892                 | 0.54 | 2.437                 | 0.63 | 3.041                 | 0.73 | 3-10   |
| P22                  | S4750214-4470211XX | S475MNH0214XX  | S447MNH0211XX    | 10             | 10                   | 211.6           | 0.19      | 0.306                 | 0.52 | 0.387                 | 0.61 | 0.502                 | 0.73 | 3-4    |
| P103                 | S6510211-6510208XX | S651MNH0211XX  | S651MNH0208XX    | 33             | 33                   | 383.0           | 0.10      | 2.909                 | 0.47 | 3.439                 | 0.50 | 4.391                 | 0.73 | 3-10   |
| P40                  | S5130213-5130212XX | S513MNH0213XX  | S513MNH0212XX    | 12             | 12                   | 353.0           | 1.30      | 0.342                 | 0.43 | 0.736                 | 0.66 | 0.988                 | 0.71 | 3-7    |
| P140                 | CDT-51             | S490MNH0207XX  | S490MNH0201XX    | 27             | 27                   | 23.4            | 0.13      | 6.384                 | 0.47 | 6.493                 | 0.47 | 12.613                | 0.71 | 3-11   |
| P70                  | S6100203-6100205XX | S610MNH0203XX  | S610MNH0205XX    | 12             | 15                   | 56.0            | 0.80      | 1.559                 | 0.51 | 2.115                 | 0.61 | 2.625                 | 0.70 | 3-9    |
| P56                  | S5520201-5690204XX | S552MNH0201XX  | S569MNH0204XX    | 12             | 15                   | 400.0           | 0.27      | 0.705                 | 0.41 | 1.270                 | 0.57 | 1.723                 | 0.70 | 3-8    |
| P54                  | S5520210-5520202XX | S552MNH0210XX  | S552MNH0202XX    | 12             | 15                   | 173.2           | 0.25      | 0.705                 | 0.40 | 1.270                 | 0.56 | 1.716                 | 0.69 | 3-8    |
| P53                  | S5520203-5520210XX | S552MNH0203XX  | S552MNH0210XX    | 12             | 15                   | 204.0           | 0.25      | 0.705                 | 0.40 | 1.270                 | 0.56 | 1.714                 | 0.69 | 3-8    |
| P95                  | S6310201-6310208XX | S631MNH0201XX  | S631MNH0208XX    | 18             | 18                   | 283.9           | 0.29      | 1.878                 | 0.51 | 2.430                 | 0.60 | 2.991                 | 0.69 | 3-10   |
| P17                  | S4460201-4460207XX | S446MNH0201XX  | S446MNH0207XX    | 8              | 8                    | 127.1           | 0.83      | 0.299                 | 0.52 | 0.362                 | 0.59 | 0.437                 | 0.69 | 3-4    |
| P94                  | S6310202-6310201XX | S631MNH0202XX  | S631MNH0201XX    | 18             | 18                   | 121.3           | 0.31      | 1.875                 | 0.50 | 2.428                 | 0.59 | 2.983                 | 0.68 | 3-10   |
| P55                  | S5520202-5520201XX | S552MNH0202XX  | S552MNH0201XX    | 12             | 15                   | 200.0           | 0.25      | 0.705                 | 0.40 | 1.270                 | 0.56 | 1.718                 | 0.68 | 3-8    |
| P148                 | S5300219-5300202XX | S530MNH0219XX  | S530MNH0202XX    | 27             | 27                   | 395.2           | 0.56      | 5.938                 | 0.44 | 6.045                 | 0.44 | 11.971                | 0.68 | 3-12   |
| P89                  | CDT-39             | S652MNH0212XX  | OFALL-14         | 48             | 48                   | 28.6            | 0.35      | 29.391                | 0.51 | 30.548                | 0.52 | 51.154                | 0.68 | 3-10   |
| P21                  | S4750216-4750214XX | S475MNH0216XX  | S475MNH0214XX    | 10             | 10                   | 273.8           | 0.20      | 0.307                 | 0.49 | 0.387                 | 0.57 | 0.499                 | 0.68 | 3-5    |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P147                 | S5110218-5300219XX | S511MNH0218XX  | S530MNH0219XX    | 27             | 27                   | 310.5           | 0.56      | 5.933                 | 0.44 | 6.040                 | 0.44 | 11.950                | 0.68 | 3-12   |
| P146                 | S5110209-5110218XX | S511MNH0209XX  | S511MNH0218XX    | 27             | 27                   | 306.6           | 0.56      | 5.929                 | 0.44 | 6.036                 | 0.44 | 11.934                | 0.68 | 3-12   |
| P90                  | S6290216-6290218XX | S629MNH0216XX  | S629MNH0218XX    | 33             | 33                   | 36.4            | 0.93      | 6.611                 | 0.52 | 6.686                 | 0.52 | 9.611                 | 0.66 | 3-10   |
| P93                  | S6310203-6310202XX | S631MNH0203XX  | S631MNH0202XX    | 18             | 18                   | 178.7           | 0.28      | 1.569                 | 0.48 | 2.122                 | 0.57 | 2.656                 | 0.66 | 3-9    |
| P20                  | S4750205-4750216XX | S475MNH0205XX  | S475MNH0216XX    | 10             | 10                   | 269.5           | 0.20      | 0.304                 | 0.49 | 0.375                 | 0.56 | 0.482                 | 0.66 | 3-5    |
| P102                 | S6510205-6510211XX | S651MNH0205XX  | S651MNH0211XX    | 33             | 33                   | 132.0           | 0.09      | 3.401                 | 0.42 | 3.875                 | 0.45 | 4.621                 | 0.65 | 3-10   |
| P19                  | S4750206-4750205XX | S475MNH0206XX  | S475MNH0205XX    | 8              | 8                    | 132.7           | 1.34      | 0.299                 | 0.50 | 0.362                 | 0.56 | 0.441                 | 0.65 | 3-5    |
| P18                  | S4460207-4750206XX | S446MNH0207XX  | S475MNH0206XX    | 8              | 8                    | 203.1           | 0.37      | 0.299                 | 0.50 | 0.362                 | 0.56 | 0.439                 | 0.65 | 3-4    |
| P247                 | S4090220-4100208XX | S409MNH0220XX  | S410MNH0208XX    | 12             | 12                   | 388.3           | 0.49      | 0.656                 | 0.44 | 0.664                 | 0.45 | 1.198                 | 0.64 | 3-2    |
| P197                 | S4330204-4330224XX | S433MNH0204XX  | S433MNH0224XX    | 21             | 21                   | 313.5           | 0.87      | 3.446                 | 0.45 | 3.546                 | 0.46 | 6.267                 | 0.64 | 3-2    |
| P92                  | S6100205-6310203XX | S610MNH0205XX  | S631MNH0203XX    | 18             | 18                   | 493.5           | 0.29      | 1.567                 | 0.46 | 2.122                 | 0.55 | 2.650                 | 0.64 | 3-9    |
| P152                 | S5500207-5500223XX | S550MNH0207XX  | S550MNH0223XX    | 33             | 33                   | 239.6           | 0.17      | 6.035                 | 0.44 | 6.145                 | 0.44 | 12.183                | 0.63 | 3-12   |
| P91                  | S6290218-6290217XX | S629MNH0218XX  | S629MNH0217XX    | 33             | 33                   | 91.0            | 0.35      | 5.650                 | 0.50 | 5.720                 | 0.50 | 8.852                 | 0.63 | 3-10   |
| P231                 | S3680212-3930211XX | S368MNH0212XX  | S393MNH0211XX    | 15             | 15                   | 364.7           | 0.60      | 1.566                 | 0.44 | 1.594                 | 0.45 | 2.770                 | 0.63 | 3-1    |
| P240                 | S3690219-3920208XX | S369MNH0219XX  | S392MNH0208XX    | 10             | 10                   | 325.6           | 1.11      | 0.584                 | 0.43 | 0.593                 | 0.44 | 1.064                 | 0.63 | 3-1    |
| P239                 | S3690209-3690219XX | S369MNH0209XX  | S369MNH0219XX    | 10             | 10                   | 141.2           | 1.07      | 0.577                 | 0.44 | 0.587                 | 0.44 | 1.042                 | 0.62 | 3-1    |
| P11                  | S4350218-4350220XX | S435MNH0218XX  | S435MNH0220XX    | 8              | 8                    | 233.7           | 0.41      | 0.231                 | 0.49 | 0.291                 | 0.56 | 0.339                 | 0.62 | 3-4    |
| P12                  | S4350220-4460205XX | S435MNH0220XX  | S446MNH0205XX    | 8              | 8                    | 137.9           | 0.36      | 0.231                 | 0.49 | 0.291                 | 0.56 | 0.340                 | 0.61 | 3-4    |
| P248                 | S4100208-4310207XX | S410MNH0208XX  | S431MNH0207XX    | 12             | 12                   | 359.8           | 0.51      | 0.659                 | 0.43 | 0.666                 | 0.44 | 1.207                 | 0.61 | 3-2    |
| P88                  | S6520212-6520214XX | S652MNH0214XX  | S652MNH0212XX    | 48             | 48                   | 51.1            | 0.37      | 25.858                | 0.43 | 26.442                | 0.44 | 45.753                | 0.60 | 3-10   |
| P250                 | S4320232-4320227XX | S432MNH0232XX  | S432MNH0227XX    | 16             | 16                   | 304.0           | 0.33      | 1.207                 | 0.45 | 0.959                 | 0.41 | 1.841                 | 0.60 | 3-2    |
| P224                 | S4080205-4080206XX | S408MNH0205XX  | S408MNH0206XX    | 21             | 21                   | 69.0            | 0.75      | 3.317                 | 0.43 | 3.341                 | 0.43 | 5.813                 | 0.60 | 3-1    |
| P101                 | S6510203-6510205XX | S651MNH0203XX  | S651MNH0205XX    | 36             | 36                   | 477.5           | 0.05      | 3.372                 | 0.40 | 3.984                 | 0.43 | 4.548                 | 0.59 | 3-10   |
| P288                 | S5280205-5290213XX | S528MNH0205XX  | S529MNH0213XX    | 12             | 12                   | 325.0           | 0.50      | 0.014                 | 0.06 | 0.015                 | 0.06 | 0.048                 | 0.59 | 3-7    |
| P135                 | S4310214-4500210XX | S431MNH0214XX  | S450MNH0210XX    | 27             | 27                   | 278.2           | 0.52      | 4.387                 | 0.39 | 4.524                 | 0.39 | 8.988                 | 0.59 | 3-11   |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P249                 | S4320232-4310207XX | S431MNH0207XX  | S432MNH0232XX    | 14             | 14                   | 227.5           | 0.10      | 1.345                 | 0.58 | 0.952                 | 0.55 | 1.822                 | 0.58 | 3-2    |
| P136                 | S4500210-4500207XX | S450MNH0210XX  | S450MNH0207XX    | 27             | 27                   | 187.5           | 0.64      | 5.508                 | 0.39 | 5.472                 | 0.39 | 10.854                | 0.58 | 3-11   |
| P225                 | S4080206-4080209XX | S408MNH0206XX  | S408MNH0209XX    | 21             | 21                   | 290.8           | 0.73      | 3.320                 | 0.42 | 3.344                 | 0.42 | 5.825                 | 0.58 | 3-1    |
| P218                 | S3930207-3930209XX | S393MNH0207XX  | S393MNH0209XX    | 21             | 21                   | 283.9           | 0.31      | 2.221                 | 0.42 | 2.222                 | 0.42 | 3.788                 | 0.58 | 3-1    |
| P26                  | S4470208-4470210XX | S447MNH0208XX  | S447MNH0210XX    | 10             | 10                   | 370.0           | 0.20      | 0.152                 | 0.36 | 0.256                 | 0.48 | 0.353                 | 0.58 | 3-5    |
| P219                 | S3930209-3930212XX | S393MNH0209XX  | S393MNH0212XX    | 21             | 21                   | 311.0           | 0.82      | 3.251                 | 0.42 | 3.267                 | 0.42 | 5.699                 | 0.58 | 3-1    |
| P229                 | S4330208-4330204XX | S433MNH0208XX  | S433MNH0204XX    | 21             | 21                   | 309.1           | 0.87      | 3.335                 | 0.41 | 3.359                 | 0.42 | 5.879                 | 0.58 | 3-2    |
| P234                 | S3930226-3930227XX | S393MNH0226XX  | S393MNH0227XX    | 14             | 14                   | 329.4           | 0.16      | 0.508                 | 0.42 | 0.518                 | 0.42 | 0.894                 | 0.58 | 3-1    |
| P134                 | S4320228-4310214XX | S432MNH0228XX  | S431MNH0214XX    | 27             | 27                   | 300.7           | 0.50      | 4.384                 | 0.38 | 4.521                 | 0.39 | 8.973                 | 0.58 | 3-11   |
| P233                 | S3930211-3930226XX | S393MNH0211XX  | S393MNH0226XX    | 14             | 14                   | 242.7           | 0.17      | 0.500                 | 0.41 | 0.509                 | 0.42 | 0.877                 | 0.58 | 3-1    |
| P23                  | S4470211-4470201XX | S447MNH0211XX  | S447MNH0201XX    | 10             | 10                   | 381.0           | 0.21      | 0.308                 | 0.41 | 0.390                 | 0.49 | 0.510                 | 0.58 | 3-4    |
| P220                 | S3930212-3930213XX | S393MNH0212XX  | S393MNH0213XX    | 21             | 21                   | 293.7           | 0.71      | 3.254                 | 0.41 | 3.271                 | 0.42 | 5.712                 | 0.57 | 3-1    |
| P133                 | S4320235-4320228XX | S432MNH0235XX  | S432MNH0228XX    | 27             | 27                   | 268.0           | 0.55      | 4.381                 | 0.38 | 4.518                 | 0.38 | 8.956                 | 0.57 | 3-2    |
| P246                 | S4090221-4090220XX | S409MNH0221XX  | S409MNH0220XX    | 12             | 12                   | 258.4           | 1.08      | 0.654                 | 0.40 | 0.662                 | 0.40 | 1.190                 | 0.57 | 3-1    |
| P128                 | S4320204-4320205XX | S432MNH0204XX  | S432MNH0205XX    | 27             | 27                   | 32.6            | 0.31      | 3.465                 | 0.40 | 3.651                 | 0.41 | 6.441                 | 0.57 | 3-2    |
| P228                 | S4330210-4330208XX | S433MNH0210XX  | S433MNH0208XX    | 21             | 21                   | 310.5           | 0.87      | 3.332                 | 0.41 | 3.355                 | 0.41 | 5.865                 | 0.57 | 3-2    |
| P226                 | S4080209-4080231XX | S408MNH0209XX  | S408MNH0231XX    | 21             | 21                   | 314.0           | 0.86      | 3.324                 | 0.41 | 3.348                 | 0.41 | 5.839                 | 0.57 | 3-1    |
| P227                 | S4080231-4330210XX | S408MNH0231XX  | S433MNH0210XX    | 21             | 21                   | 320.0           | 0.88      | 3.328                 | 0.41 | 3.351                 | 0.41 | 5.852                 | 0.57 | 3-2    |
| P16                  | S4460202-4460201XX | S446MNH0202XX  | S446MNH0201XX    | 8              | 8                    | 84.8            | 0.83      | 0.299                 | 0.45 | 0.362                 | 0.50 | 0.435                 | 0.57 | 3-4    |
| P15                  | S4460203-4460202XX | S446MNH0203XX  | S446MNH0202XX    | 8              | 8                    | 166.9           | 0.58      | 0.248                 | 0.45 | 0.308                 | 0.51 | 0.363                 | 0.56 | 3-4    |
| P130                 | S4320213-4320220XX | S432MNH0213XX  | S432MNH0220XX    | 27             | 27                   | 305.2           | 0.40      | 3.582                 | 0.40 | 3.768                 | 0.41 | 6.606                 | 0.56 | 3-2    |
| P127                 | S4320202-4320204XX | S432MNH0202XX  | S432MNH0204XX    | 27             | 27                   | 206.1           | 0.29      | 3.464                 | 0.39 | 3.650                 | 0.40 | 6.434                 | 0.56 | 3-2    |
| P84                  | S6290217-6520225XX | S629MNH0217XX  | S652MNH0225XX    | 42             | 42                   | 517.4           | 0.47      | 8.514                 | 0.40 | 8.638                 | 0.40 | 15.089                | 0.55 | 3-10   |
| P180                 | S5130207-5130214XX | S513MNH0207XX  | S513MNH0214XX    | 12             | 12                   | 254.0           | 0.50      | 0.308                 | 0.30 | 0.462                 | 0.37 | 0.615                 | 0.55 | 3-7    |
| P237                 | S3690201-3690218XX | S369MNH0201XX  | S369MNH0218XX    | 14             | 14                   | 60.5            | 0.26      | 0.556                 | 0.40 | 0.565                 | 0.40 | 0.992                 | 0.55 | 3-1    |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P131                 | S4320220-4320230XX | S432MNH0220XX  | S432MNH0230XX    | 27             | 27                   | 248.8           | 0.20      | 3.586                 | 0.40 | 3.772                 | 0.41 | 6.620                 | 0.55 | 3-2    |
| P235                 | S3930227-3690214XX | S393MNH0227XX  | S369MNH0214XX    | 14             | 14                   | 277.8           | 0.18      | 0.514                 | 0.40 | 0.524                 | 0.40 | 0.908                 | 0.55 | 3-1    |
| P126                 | S4330224-4320202XX | S433MNH0224XX  | S432MNH0202XX    | 27             | 27                   | 299.8           | 0.32      | 3.461                 | 0.38 | 3.647                 | 0.39 | 6.423                 | 0.55 | 3-2    |
| P83                  | S6290216-6290217XX | S629MNH0216XX  | S629MNH0217XX    | 33             | 33                   | 127.1           | 0.02      | 3.745                 | 0.41 | 3.804                 | 0.41 | 6.919                 | 0.54 | 3-10   |
| P129                 | S4320205-4320213XX | S432MNH0205XX  | S432MNH0213XX    | 27             | 27                   | 290.4           | 0.28      | 3.578                 | 0.38 | 3.763                 | 0.39 | 6.590                 | 0.54 | 3-2    |
| P244                 | S3920205-3920204XX | S392MNH0205XX  | S392MNH0204XX    | 10             | 10                   | 34.4            | 4.08      | 0.647                 | 0.39 | 0.656                 | 0.39 | 1.151                 | 0.54 | 3-1    |
| P132                 | S4320230-4320235XX | S432MNH0230XX  | S432MNH0235XX    | 27             | 27                   | 12.4            | 0.81      | 3.331                 | 0.36 | 3.489                 | 0.37 | 5.298                 | 0.54 | 3-2    |
| P10                  | S4350201-4350218XX | S435MNH0201XX  | S435MNH0218XX    | 8              | 8                    | 17.8            | 1.12      | 0.234                 | 0.43 | 0.291                 | 0.49 | 0.336                 | 0.54 | 3-4    |
| P236                 | S3690214-3690201XX | S369MNH0214XX  | S369MNH0201XX    | 14             | 14                   | 323.4           | 0.26      | 0.541                 | 0.38 | 0.550                 | 0.39 | 0.966                 | 0.53 | 3-1    |
| P232                 | S3930211-3930209XX | S393MNH0211XX  | S393MNH0209XX    | 15             | 15                   | 54.6            | 0.68      | 1.066                 | 0.38 | 1.086                 | 0.39 | 1.899                 | 0.53 | 3-1    |
| P217                 | S3940204-3930207XX | S394MNH0204XX  | S393MNH0207XX    | 21             | 21                   | 274.5           | 0.72      | 2.218                 | 0.39 | 2.219                 | 0.39 | 3.776                 | 0.53 | 3-1    |
| P27                  | S4470210-4480204XX | S447MNH0210XX  | S448MNH0204XX    | 10             | 10                   | 386.3           | 0.18      | 0.153                 | 0.33 | 0.267                 | 0.44 | 0.368                 | 0.53 | 3-15   |
| P13                  | S4460205-4460204XX | S446MNH0205XX  | S446MNH0204XX    | 8              | 8                    | 69.1            | 0.43      | 0.245                 | 0.43 | 0.306                 | 0.48 | 0.355                 | 0.53 | 3-4    |
| P245                 | S3920204-4090221XX | S392MNH0204XX  | S409MNH0221XX    | 12             | 12                   | 648.5           | 0.88      | 0.651                 | 0.37 | 0.659                 | 0.37 | 1.182                 | 0.52 | 3-1    |
| P25                  | S4470207-4470208XX | S447MNH0207XX  | S447MNH0208XX    | 10             | 10                   | 100.0           | 0.20      | 0.147                 | 0.33 | 0.219                 | 0.42 | 0.314                 | 0.52 | 3-4    |
| P118                 | S4880209-4880210XX | S488MNH0209XX  | S488MNH0210XX    | 12             | 12                   | 353.5           | 0.16      | 0.204                 | 0.31 | 0.341                 | 0.42 | 0.497                 | 0.51 | 3-6    |
| P14                  | S4460204-4460203XX | S446MNH0204XX  | S446MNH0203XX    | 8              | 8                    | 321.8           | 1.12      | 0.245                 | 0.41 | 0.306                 | 0.47 | 0.358                 | 0.51 | 3-4    |
| P251                 | S3920206-3920205XX | S392MNH0206XX  | S392MNH0205XX    | 10             | 10                   | 208.0           | 0.43      | 0.321                 | 0.37 | 0.326                 | 0.37 | 0.571                 | 0.51 | 3-1    |
| P243                 | CDT-81             | S392MNH0206XX  | S392MNH0205XX    | 10             | 10                   | 204.0           | 0.44      | 0.324                 | 0.37 | 0.329                 | 0.37 | 0.579                 | 0.51 | 3-1    |
| P238                 | S3690209-3690218XX | S369MNH0218XX  | S369MNH0209XX    | 14             | 14                   | 329.4           | 0.26      | 0.557                 | 0.36 | 0.566                 | 0.36 | 0.999                 | 0.50 | 3-1    |
| P38                  | S4880211-4880210XX | S488MNH0211XX  | S488MNH0210XX    | 10             | 10                   | 30.0            | 0.83      | 0.109                 | 0.26 | 0.344                 | 0.43 | 0.435                 | 0.50 | 3-6    |
| P155                 | S5500201-5500225XX | S550MNH0201XX  | S550MNH0225XX    | 42             | 42                   | 15.0            | 0.07      | 6.130                 | 0.34 | 6.240                 | 0.35 | 12.379                | 0.50 | 3-12   |
| P221                 | S3930213-3930214XX | S393MNH0213XX  | S393MNH0214XX    | 21             | 21                   | 44.7            | 0.90      | 3.263                 | 0.36 | 3.287                 | 0.36 | 5.729                 | 0.49 | 3-1    |
| P230                 | S3930216-4080205XX | S393MNH0216XX  | S408MNH0205XX    | 24             | 24                   | 232.5           | 0.23      | 1.667                 | 0.35 | 1.679                 | 0.35 | 2.921                 | 0.49 | 3-1    |
| P223                 | CDT-83             | S393MNH0216XX  | S408MNH0205XX    | 24             | 24                   | 237.8           | 0.22      | 1.649                 | 0.35 | 1.661                 | 0.35 | 2.889                 | 0.49 | 3-1    |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P156                 | S5500225-5710212XX | S550MNH0225XX  | S571MNH0212XX    | 42             | 42                   | 286.5           | 0.14      | 6.136                 | 0.33 | 6.247                 | 0.34 | 12.402                | 0.48 | 3-13   |
| P117                 | S4880208-4880209XX | S488MNH0208XX  | S488MNH0209XX    | 10             | 10                   | 30.0            | 0.83      | 0.105                 | 0.30 | 0.171                 | 0.37 | 0.262                 | 0.47 | 3-6    |
| P216                 | S3940201-3940204XX | S394MNH0201XX  | S394MNH0204XX    | 21             | 21                   | 49.8            | 0.60      | 2.215                 | 0.35 | 2.216                 | 0.35 | 3.764                 | 0.47 | 3-1    |
| P262                 | S4750204-4750205XX | S475MNH0204XX  | S475MNH0205XX    | 10             | 10                   | 137.7           | 0.22      | 0.010                 | 0.31 | 0.022                 | 0.37 | 0.039                 | 0.47 | 3-5    |
| P222                 | S3930214-3930216XX | S393MNH0214XX  | S393MNH0216XX    | 21             | 21                   | 83.1            | 2.32      | 3.313                 | 0.35 | 3.337                 | 0.35 | 5.791                 | 0.47 | 3-1    |
| P39                  | S4880210-5130213XX | S488MNH0210XX  | S513MNH0213XX    | 12             | 12                   | 361.0           | 0.70      | 0.313                 | 0.26 | 0.685                 | 0.39 | 0.933                 | 0.46 | 3-6    |
| P28                  | S4480204-4480203XX | S448MNH0204XX  | S448MNH0203XX    | 10             | 10                   | 234.0           | 0.48      | 0.153                 | 0.29 | 0.267                 | 0.38 | 0.370                 | 0.46 | 3-15   |
| P161                 | S5900216-5900217XX | S590MNH0216XX  | S590MNH0217XX    | 42             | 42                   | 600.9           | 0.28      | 7.028                 | 0.32 | 7.144                 | 0.33 | 13.457                | 0.46 | 3-13   |
| P80                  | S6110209-6110210XX | S611MNH0209XX  | S611MNH0210XX    | 42             | 42                   | 412.2           | 0.34      | 7.793                 | 0.33 | 7.916                 | 0.33 | 14.400                | 0.46 | 3-13   |
| P81                  | S6110210-6300209XX | S611MNH0210XX  | S630MNH0209XX    | 42             | 42                   | 620.0           | 0.23      | 8.124                 | 0.33 | 8.247                 | 0.33 | 14.678                | 0.46 | 3-13   |
| P79                  | S5900217-6110209XX | S590MNH0217XX  | S611MNH0209XX    | 42             | 42                   | 380.0           | 0.23      | 7.783                 | 0.33 | 7.906                 | 0.33 | 14.585                | 0.45 | 3-13   |
| P174                 | S4870204-4880202XX | S487MNH0204XX  | S488MNH0202XX    | 12             | 12                   | 471.4           | 0.51      | 0.316                 | 0.30 | 0.515                 | 0.39 | 0.689                 | 0.45 | 3-7    |
| P157                 | S5710212-5710211XX | S571MNH0212XX  | S571MNH0211XX    | 42             | 42                   | 362.0           | 0.18      | 6.255                 | 0.31 | 6.365                 | 0.31 | 12.563                | 0.44 | 3-13   |
| P179                 | S5130206-5130207XX | S513MNH0206XX  | S513MNH0207XX    | 12             | 12                   | 320.6           | 0.39      | 0.308                 | 0.31 | 0.457                 | 0.38 | 0.608                 | 0.44 | 3-7    |
| P184                 | S4880201-4880209XX | S488MNH0201XX  | S488MNH0209XX    | 12             | 12                   | 452.8           | 0.13      | 0.100                 | 0.29 | 0.162                 | 0.36 | 0.225                 | 0.44 | 3-6    |
| P29                  | S4480203-4480202XX | S448MNH0203XX  | S448MNH0202XX    | 10             | 10                   | 243.0           | 0.34      | 0.158                 | 0.28 | 0.272                 | 0.37 | 0.378                 | 0.44 | 3-15   |
| P82                  | S6300209-6290216XX | S630MNH0209XX  | S629MNH0216XX    | 42             | 42                   | 444.2           | 0.36      | 8.135                 | 0.33 | 8.258                 | 0.33 | 14.708                | 0.44 | 3-14   |
| P24                  | S4470201-4470207XX | S447MNH0201XX  | S447MNH0207XX    | 10             | 10                   | 319.1           | 0.18      | 0.095                 | 0.30 | 0.144                 | 0.37 | 0.184                 | 0.44 | 3-4    |
| P160                 | S5900215-5900216XX | S590MNH0215XX  | S590MNH0216XX    | 42             | 42                   | 130.0           | 0.26      | 6.682                 | 0.31 | 6.793                 | 0.31 | 13.066                | 0.44 | 3-13   |
| P178                 | S4880205-5130206XX | S488MNH0205XX  | S513MNH0206XX    | 12             | 12                   | 296.4           | 0.43      | 0.227                 | 0.29 | 0.369                 | 0.37 | 0.519                 | 0.43 | 3-7    |
| P159                 | S5710216-5900215XX | S571MNH0216XX  | S590MNH0215XX    | 42             | 42                   | 581.9           | 0.28      | 6.495                 | 0.30 | 6.605                 | 0.30 | 12.868                | 0.43 | 3-13   |
| P158                 | S5710211-5710216XX | S571MNH0211XX  | S571MNH0216XX    | 42             | 42                   | 364.9           | 0.28      | 6.295                 | 0.29 | 6.404                 | 0.29 | 12.624                | 0.42 | 3-13   |
| P173                 | S4870203-4870204XX | S487MNH0203XX  | S487MNH0204XX    | 12             | 12                   | 274.6           | 0.83      | 0.313                 | 0.28 | 0.497                 | 0.36 | 0.662                 | 0.42 | 3-7    |
| P154                 | S5500202-5500201XX | S550MNH0202XX  | S550MNH0201XX    | 33             | 33                   | 50.0            | 17.13     | 6.042                 | 0.29 | 6.152                 | 0.29 | 12.207                | 0.42 | 3-12   |
| P196                 | S4330203-4330204XX | S433MNH0203XX  | S433MNH0204XX    | 18             | 18                   | 78.0            | 1.58      | 0.115                 | 0.28 | 0.210                 | 0.30 | 0.377                 | 0.42 | 3-2    |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P175                 | S4880202-4880201XX | S488MNH0202XX  | S488MNH0201XX    | 12             | 12                   | 117.9           | 0.51      | 0.315                 | 0.27 | 0.515                 | 0.34 | 0.691                 | 0.41 | 3-7    |
| P153                 | S5500223-5500202XX | S550MNH0223XX  | S550MNH0202XX    | 33             | 33                   | 301.8           | 0.12      | 6.041                 | 0.28 | 6.151                 | 0.29 | 12.204                | 0.40 | 3-12   |
| P30                  | S4480202-4730209XX | S448MNH0202XX  | S473MNH0209XX    | 10             | 10                   | 273.6           | 0.69      | 0.160                 | 0.25 | 0.274                 | 0.33 | 0.383                 | 0.39 | 3-6    |
| P169                 | S4740204-4740211XX | S474MNH0204XX  | S474MNH0211XX    | 12             | 12                   | 206.5           | 1.19      | 0.303                 | 0.27 | 0.456                 | 0.33 | 0.609                 | 0.39 | 3-5    |
| P170                 | S4740211-4870201XX | S474MNH0211XX  | S487MNH0201XX    | 12             | 12                   | 211.8           | 0.49      | 0.307                 | 0.27 | 0.470                 | 0.33 | 0.625                 | 0.39 | 3-5    |
| P77                  | S6110203-5900219XX | S611MNH0203XX  | S590MNH0219XX    | 18             | 18                   | 357.0           | 0.23      | 0.569                 | 0.22 | 0.569                 | 0.22 | 0.666                 | 0.38 | 3-13   |
| P172                 | S4870202-4870203XX | S487MNH0202XX  | S487MNH0203XX    | 12             | 12                   | 256.9           | 1.27      | 0.311                 | 0.25 | 0.495                 | 0.31 | 0.656                 | 0.36 | 3-6    |
| P177                 | S4880204-4880205XX | S488MNH0204XX  | S488MNH0205XX    | 12             | 12                   | 56.6            | 1.15      | 0.227                 | 0.23 | 0.367                 | 0.30 | 0.512                 | 0.36 | 3-7    |
| P171                 | S4870201-4870202XX | S487MNH0201XX  | S487MNH0202XX    | 12             | 12                   | 257.5           | 1.27      | 0.307                 | 0.23 | 0.469                 | 0.29 | 0.629                 | 0.34 | 3-5    |
| P215                 | S4470206-4470207XX | S447MNH0206XX  | S447MNH0207XX    | 10             | 10                   | 269.7           | 1.90      | 0.052                 | 0.22 | 0.076                 | 0.27 | 0.129                 | 0.34 | 3-4    |
| P176                 | S4880201-4880204XX | S488MNH0201XX  | S488MNH0204XX    | 12             | 12                   | 18.5            | 0.65      | 0.227                 | 0.22 | 0.367                 | 0.28 | 0.511                 | 0.33 | 3-7    |
| P35                  | S4880214-4880213XX | S488MNH0214XX  | S488MNH0213XX    | 10             | 10                   | 351.0           | 0.70      | 0.083                 | 0.19 | 0.187                 | 0.28 | 0.259                 | 0.33 | 3-6    |
| P168                 | S4740212-4740204XX | S474MNH0212XX  | S474MNH0204XX    | 12             | 12                   | 295.0           | 1.18      | 0.261                 | 0.23 | 0.408                 | 0.28 | 0.529                 | 0.32 | 3-5    |
| P36                  | S4880213-4880212XX | S488MNH0213XX  | S488MNH0212XX    | 10             | 10                   | 287.0           | 0.69      | 0.103                 | 0.19 | 0.218                 | 0.28 | 0.292                 | 0.32 | 3-6    |
| P166                 | S4470201-4740205XX | S447MNH0201XX  | S474MNH0205XX    | 12             | 12                   | 307.6           | 1.00      | 0.254                 | 0.22 | 0.389                 | 0.27 | 0.503                 | 0.31 | 3-4    |
| P167                 | S4740205-4740212XX | S474MNH0205XX  | S474MNH0212XX    | 12             | 12                   | 297.5           | 1.18      | 0.257                 | 0.22 | 0.394                 | 0.27 | 0.512                 | 0.31 | 3-5    |
| P114                 | S4880206-4880216XX | S488MNH0206XX  | S488MNH0216XX    | 10             | 10                   | 14.8            | 0.67      | 0.100                 | 0.20 | 0.165                 | 0.25 | 0.241                 | 0.31 | 3-6    |
| P34                  | S4730207-4880214XX | S473MNH0207XX  | S488MNH0214XX    | 10             | 10                   | 364.6           | 0.68      | 0.080                 | 0.18 | 0.155                 | 0.26 | 0.224                 | 0.31 | 3-6    |
| P116                 | S4880207-4880208XX | S488MNH0207XX  | S488MNH0208XX    | 10             | 10                   | 313.6           | 0.90      | 0.104                 | 0.19 | 0.170                 | 0.24 | 0.255                 | 0.30 | 3-6    |
| P203                 | S4340204-4340205XX | S434MNH0204XX  | S434MNH0205XX    | 12             | 12                   | 303.6           | 0.14      | 0.081                 | 0.22 | 0.086                 | 0.23 | 0.155                 | 0.30 | 3-3    |
| P111                 | S4730209-4730205XX | S473MNH0209XX  | S473MNH0205XX    | 10             | 10                   | 352.4           | 0.51      | 0.090                 | 0.19 | 0.154                 | 0.25 | 0.221                 | 0.30 | 3-6    |
| P33                  | S4730208-4730207XX | S473MNH0208XX  | S473MNH0207XX    | 10             | 10                   | 353.9           | 0.61      | 0.075                 | 0.18 | 0.151                 | 0.25 | 0.216                 | 0.30 | 3-6    |
| P200                 | S4070202-4070201XX | S407MNH0202XX  | S407MNH0201XX    | 10             | 10                   | 57.5            | 0.30      | 0.080                 | 0.23 | 0.083                 | 0.23 | 0.136                 | 0.30 | 3-3    |
| P113                 | S4730206-4880206XX | S473MNH0206XX  | S488MNH0206XX    | 10             | 10                   | 347.0           | 0.89      | 0.099                 | 0.19 | 0.164                 | 0.25 | 0.239                 | 0.30 | 3-6    |
| P31                  | S4730209-4480209XX | S473MNH0209XX  | S448MNH0209XX    | 10             | 10                   | 393.3           | 0.35      | 0.071                 | 0.19 | 0.122                 | 0.24 | 0.177                 | 0.30 | 3-6    |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P37                  | S4880212-4880211XX | S488MNH0212XX  | S488MNH0211XX    | 10             | 10                   | 46.4            | 1.21      | 0.103                 | 0.17 | 0.218                 | 0.25 | 0.293                 | 0.29 | 3-6    |
| P115                 | S4880216-4880207XX | S488MNH0216XX  | S488MNH0207XX    | 10             | 10                   | 353.6           | 0.91      | 0.102                 | 0.19 | 0.167                 | 0.24 | 0.248                 | 0.29 | 3-6    |
| P76                  | S6110202-6110203XX | S611MNH0202XX  | S611MNH0203XX    | 18             | 18                   | 323.0           | 0.18      | 0.425                 | 0.28 | 0.425                 | 0.28 | 0.469                 | 0.29 | 3-13   |
| P296                 | S4350215-4350201XX | S435MNH0215XX  | S435MNH0201XX    | 8              | 8                    | 68.7            | 8.08      | 0.040                 | 0.24 | 0.047                 | 0.27 | 0.058                 | 0.29 | 3-4    |
| P122                 | S4480219-4330229XX | S448MNH0219XX  | S433MNH0229XX    | 10             | 10                   | 266.9           | 0.27      | 0.011                 | 0.08 | 0.110                 | 0.26 | 0.135                 | 0.28 | 3-2    |
| P199                 | S4070203-4070202XX | S407MNH0203XX  | S407MNH0202XX    | 10             | 10                   | 80.0            | 0.30      | 0.080                 | 0.22 | 0.083                 | 0.22 | 0.136                 | 0.28 | 3-3    |
| P32                  | S4480209-4730208XX | S448MNH0209XX  | S473MNH0208XX    | 10             | 10                   | 342.9           | 0.72      | 0.073                 | 0.17 | 0.124                 | 0.23 | 0.187                 | 0.28 | 3-6    |
| P198                 | S4060210-4070203XX | S406MNH0210XX  | S407MNH0203XX    | 10             | 10                   | 266.0           | 0.30      | 0.081                 | 0.22 | 0.083                 | 0.22 | 0.135                 | 0.28 | 3-3    |
| P112                 | S4730205-4730206XX | S473MNH0205XX  | S473MNH0206XX    | 10             | 10                   | 352.0           | 0.94      | 0.091                 | 0.18 | 0.155                 | 0.23 | 0.227                 | 0.28 | 3-6    |
| P9                   | S4350202-4350201XX | S435MNH0202XX  | S435MNH0201XX    | 10             | 10                   | 14.0            | 1.43      | 0.012                 | 0.18 | 0.097                 | 0.25 | 0.117                 | 0.28 | 3-4    |
| P212                 | S4330207-4330206XX | S433MNH0207XX  | S433MNH0206XX    | 15             | 15                   | 20.0            | 0.10      | 0.051                 | 0.15 | 0.099                 | 0.21 | 0.173                 | 0.28 | 3-2    |
| P124                 | S4330212-4330230XX | S433MNH0212XX  | S433MNH0230XX    | 10             | 10                   | 50.0            | 0.40      | 0.013                 | 0.09 | 0.117                 | 0.25 | 0.143                 | 0.28 | 3-2    |
| P123                 | S4330229-4330212XX | S433MNH0229XX  | S433MNH0212XX    | 10             | 10                   | 180.0           | 0.40      | 0.013                 | 0.09 | 0.115                 | 0.24 | 0.142                 | 0.27 | 3-2    |
| P258                 | S4470202-4470201XX | S447MNH0202XX  | S447MNH0201XX    | 12             | 12                   | 130.0           | 0.50      | 0.044                 | 0.17 | 0.148                 | 0.24 | 0.174                 | 0.27 | 3-4    |
| P204                 | S4340205-4340214XX | S434MNH0205XX  | S434MNH0214XX    | 10             | 10                   | 308.0           | 0.19      | 0.087                 | 0.19 | 0.099                 | 0.20 | 0.173                 | 0.27 | 3-3    |
| P201                 | S4070201-4340203XX | S407MNH0201XX  | S434MNH0203XX    | 10             | 10                   | 327.6           | 0.30      | 0.080                 | 0.20 | 0.083                 | 0.20 | 0.141                 | 0.27 | 3-3    |
| P75                  | S6110201-6110202XX | S611MNH0201XX  | S611MNH0202XX    | 18             | 18                   | 65.0            | 0.23      | 0.422                 | 0.25 | 0.422                 | 0.25 | 0.460                 | 0.26 | 3-13   |
| P125                 | S4330230-4330224XX | S433MNH0230XX  | S433MNH0224XX    | 10             | 10                   | 100.0           | 0.39      | 0.013                 | 0.08 | 0.117                 | 0.23 | 0.146                 | 0.26 | 3-2    |
| P74                  | S6100207-6110201XX | S610MNH0207XX  | S611MNH0201XX    | 18             | 18                   | 388.0           | 0.20      | 0.421                 | 0.25 | 0.421                 | 0.25 | 0.458                 | 0.26 | 3-9    |
| P7                   | S4350214-4350206XX | S435MNH0214XX  | S435MNH0206XX    | 10             | 10                   | 185.0           | 0.35      | 0.011                 | 0.09 | 0.097                 | 0.24 | 0.115                 | 0.26 | 3-4    |
| P268                 | S4740203-4740204XX | S474MNH0203XX  | S474MNH0204XX    | 12             | 12                   | 280.3           | 0.19      | 0.054                 | 0.19 | 0.042                 | 0.21 | 0.069                 | 0.26 | 3-5    |
| P121                 | S4480208-4480219XX | S448MNH0208XX  | S448MNH0219XX    | 10             | 10                   | 297.0           | 0.29      | 0.008                 | 0.08 | 0.044                 | 0.22 | 0.067                 | 0.25 | 3-2    |
| P3                   | S4340201-4350211XX | S434MNH0201XX  | S435MNH0211XX    | 10             | 10                   | 300.0           | 0.03      | 0.005                 | 0.09 | 0.040                 | 0.22 | 0.050                 | 0.25 | 3-3    |
| P2                   | S4350219-4340201XX | S435MNH0219XX  | S434MNH0201XX    | 10             | 10                   | 395.0           | 0.33      | 0.005                 | 0.09 | 0.033                 | 0.21 | 0.040                 | 0.24 | 3-3    |
| P202                 | S4340203-4340204XX | S434MNH0203XX  | S434MNH0204XX    | 12             | 12                   | 315.3           | 0.71      | 0.080                 | 0.17 | 0.082                 | 0.18 | 0.146                 | 0.24 | 3-3    |





Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P194                 | S4330225-4330206XX | S433MNH0225XX  | S433MNH0206XX    | 15             | 15                   | 100.0           | 0.46      | 0.065                 | 0.13 | 0.112                 | 0.17 | 0.199                 | 0.23 | 3-2    |
| P6                   | S4350213-4350214XX | S435MNH0213XX  | S435MNH0214XX    | 10             | 10                   | 79.0            | 0.43      | 0.010                 | 0.08 | 0.070                 | 0.21 | 0.087                 | 0.23 | 3-4    |
| P195                 | S4330206-4330203XX | S433MNH0206XX  | S433MNH0203XX    | 15             | 15                   | 185.7           | 0.31      | 0.115                 | 0.13 | 0.210                 | 0.17 | 0.375                 | 0.23 | 3-2    |
| P211                 | S4330213-4330207XX | S433MNH0213XX  | S433MNH0207XX    | 15             | 15                   | 335.0           | 0.36      | 0.052                 | 0.12 | 0.100                 | 0.17 | 0.171                 | 0.22 | 3-2    |
| P8                   | S4350206-4350202XX | S435MNH0206XX  | S435MNH0202XX    | 10             | 10                   | 129.0           | 0.30      | 0.011                 | 0.07 | 0.097                 | 0.20 | 0.116                 | 0.22 | 3-4    |
| P257                 | S4470209-4470202XX | S447MNH0209XX  | S447MNH0202XX    | 12             | 12                   | 103.0           | 0.51      | 0.044                 | 0.11 | 0.148                 | 0.20 | 0.172                 | 0.22 | 3-4    |
| P261                 | S4750203-4750204XX | S475MNH0203XX  | S475MNH0204XX    | 10             | 10                   | 250.5           | 0.16      | 0.005                 | 0.09 | 0.014                 | 0.15 | 0.026                 | 0.22 | 3-5    |
| P5                   | S4350212-4350213XX | S435MNH0212XX  | S435MNH0213XX    | 10             | 10                   | 300.0           | 0.33      | 0.010                 | 0.08 | 0.070                 | 0.19 | 0.086                 | 0.22 | 3-3    |
| P256                 | S4470203-4470209XX | S447MNH0203XX  | S447MNH0209XX    | 12             | 12                   | 197.0           | 0.69      | 0.044                 | 0.11 | 0.148                 | 0.20 | 0.171                 | 0.21 | 3-4    |
| P254                 | S4080202-4080201XX | S408MNH0202XX  | S408MNH0201XX    | 10             | 10                   | 212.0           | 0.78      | 0.010                 | 0.12 | 0.017                 | 0.16 | 0.031                 | 0.21 | 3-3    |
| P192                 | S4080211-4330211XX | S408MNH0211XX  | S433MNH0211XX    | 15             | 15                   | 270.3           | 0.39      | 0.058                 | 0.12 | 0.105                 | 0.16 | 0.184                 | 0.21 | 3-2    |
| P193                 | S4330211-4330225XX | S433MNH0211XX  | S433MNH0225XX    | 15             | 15                   | 367.6           | 0.20      | 0.065                 | 0.12 | 0.112                 | 0.16 | 0.189                 | 0.21 | 3-2    |
| P255                 | S4460210-4470203XX | S446MNH0210XX  | S447MNH0203XX    | 12             | 12                   | 300.0           | 0.74      | 0.044                 | 0.10 | 0.148                 | 0.19 | 0.170                 | 0.20 | 3-4    |
| P4                   | S4350211-4350212XX | S435MNH0211XX  | S435MNH0212XX    | 10             | 10                   | 302.0           | 0.60      | 0.009                 | 0.07 | 0.060                 | 0.18 | 0.073                 | 0.20 | 3-3    |
| P253                 | S4080203-4080202XX | S408MNH0203XX  | S408MNH0202XX    | 10             | 10                   | 347.4           | 0.01      | 0.008                 | 0.12 | 0.014                 | 0.15 | 0.026                 | 0.20 | 3-3    |
| P295                 | S4460209-4460210XX | S446MNH0209XX  | S446MNH0210XX    | 12             | 12                   | 300.0           | 0.73      | 0.035                 | 0.10 | 0.129                 | 0.18 | 0.149                 | 0.19 | 3-4    |
| P191                 | S4080201-4080211XX | S408MNH0201XX  | S408MNH0211XX    | 15             | 15                   | 396.9           | 0.25      | 0.055                 | 0.11 | 0.101                 | 0.15 | 0.173                 | 0.19 | 3-2    |
| P120                 | S4480205-4480208XX | S448MNH0205XX  | S448MNH0208XX    | 10             | 10                   | 279.0           | 0.30      | 0.004                 | 0.06 | 0.032                 | 0.15 | 0.052                 | 0.19 | 3-15   |
| P252                 | S4080204-4080203XX | S408MNH0204XX  | S408MNH0203XX    | 10             | 10                   | 329.6           | 0.31      | 0.005                 | 0.12 | 0.006                 | 0.14 | 0.014                 | 0.19 | 3-3    |
| P278                 | S4730203-4730209XX | S473MNH0203XX  | S473MNH0209XX    | 10             | 10                   | 214.0           | 0.94      | 0.000                 | 0.11 | 0.000                 | 0.14 | 0.003                 | 0.18 | 3-6    |
| P214                 | S4470205-4470206XX | S447MNH0205XX  | S447MNH0206XX    | 10             | 10                   | 260.4           | 1.12      | 0.047                 | 0.12 | 0.057                 | 0.13 | 0.108                 | 0.18 | 3-4    |
| P283                 | S4330227-4480205XX | S433MNH0227XX  | S448MNH0205XX    | 10             | 10                   | 415.0           | 0.28      | 0.004                 | 0.05 | 0.032                 | 0.14 | 0.048                 | 0.17 | 3-15   |
| P210                 | S4330202-4330213XX | S433MNH0202XX  | S433MNH0213XX    | 15             | 15                   | 170.0           | 0.35      | 0.046                 | 0.10 | 0.084                 | 0.13 | 0.150                 | 0.17 | 3-2    |
| P294                 | S4460208-4460209XX | S446MNH0208XX  | S446MNH0209XX    | 10             | 10                   | 300.0           | 1.13      | 0.026                 | 0.10 | 0.031                 | 0.15 | 0.048                 | 0.17 | 3-4    |
| P213                 | S4340214-4470205XX | S434MNH0214XX  | S447MNH0205XX    | 10             | 10                   | 264.7           | 2.03      | 0.047                 | 0.11 | 0.057                 | 0.12 | 0.104                 | 0.17 | 3-3    |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P206                 | S4340211-4340207XX | S434MNH0211XX  | S434MNH0207XX    | 15             | 15                   | 409.3           | 0.20      | 0.046                 | 0.10 | 0.074                 | 0.13 | 0.124                 | 0.17 | 3-3    |
| P209                 | S4330226-4330202XX | S433MNH0226XX  | S433MNH0202XX    | 15             | 15                   | 11.0            | 0.36      | 0.046                 | 0.09 | 0.084                 | 0.13 | 0.147                 | 0.17 | 3-3    |
| P73                  | S6100210-6100207XX | S610MNH0210XX  | S610MNH0207XX    | 18             | 18                   | 388.0           | 0.20      | 0.008                 | 0.15 | 0.008                 | 0.15 | 0.028                 | 0.16 | 3-9    |
| P267                 | S4740202-4740203XX | S474MNH0202XX  | S474MNH0203XX    | 12             | 12                   | 293.9           | 0.29      | 0.051                 | 0.15 | 0.038                 | 0.13 | 0.061                 | 0.16 | 3-5    |
| P287                 | S5280204-5280205XX | S528MNH0204XX  | S528MNH0205XX    | 10             | 10                   | 156.0           | 0.50      | 0.013                 | 0.08 | 0.013                 | 0.08 | 0.024                 | 0.16 | 3-7    |
| P190                 | S4080229-4080201XX | S408MNH0229XX  | S408MNH0201XX    | 15             | 15                   | 75.0            | 1.04      | 0.045                 | 0.09 | 0.079                 | 0.13 | 0.129                 | 0.16 | 3-3    |
| P188                 | S4340213-4080230XX | S434MNH0213XX  | S408MNH0230XX    | 12             | 12                   | 366.0           | 0.96      | 0.042                 | 0.10 | 0.074                 | 0.13 | 0.119                 | 0.16 | 3-3    |
| P186                 | S4070204-4070206XX | S407MNH0204XX  | S407MNH0206XX    | 10             | 10                   | 262.4           | 0.51      | 0.016                 | 0.10 | 0.033                 | 0.14 | 0.038                 | 0.16 | 3-3    |
| P189                 | S4080230-4080229XX | S408MNH0230XX  | S408MNH0229XX    | 12             | 12                   | 280.2           | 0.96      | 0.045                 | 0.09 | 0.079                 | 0.12 | 0.128                 | 0.16 | 3-3    |
| P208                 | S4330214-4330226XX | S433MNH0214XX  | S433MNH0226XX    | 15             | 15                   | 319.5           | 0.59      | 0.046                 | 0.09 | 0.084                 | 0.12 | 0.146                 | 0.16 | 3-3    |
| P187                 | S4070206-4340213XX | S407MNH0206XX  | S434MNH0213XX    | 12             | 12                   | 186.8           | 0.89      | 0.042                 | 0.10 | 0.074                 | 0.13 | 0.113                 | 0.16 | 3-3    |
| P282                 | S4330228-4330227XX | S433MNH0228XX  | S433MNH0227XX    | 10             | 10                   | 36.1            | 0.44      | 0.003                 | 0.05 | 0.020                 | 0.12 | 0.033                 | 0.15 | 3-3    |
| P205                 | S4340214-4340211XX | S434MNH0214XX  | S434MNH0211XX    | 15             | 15                   | 426.4           | 1.11      | 0.043                 | 0.10 | 0.053                 | 0.12 | 0.098                 | 0.15 | 3-3    |
| P1                   | S4350210-4350219XX | S435MNH0210XX  | S435MNH0219XX    | 10             | 10                   | 390.0           | 0.33      | 0.005                 | 0.06 | 0.033                 | 0.14 | 0.037                 | 0.15 | 3-3    |
| P260                 | S4760202-4750203XX | S476MNH0202XX  | S475MNH0203XX    | 10             | 10                   | 350.4           | 0.14      | 0.005                 | 0.07 | 0.014                 | 0.11 | 0.022                 | 0.14 | 3-5    |
| P207                 | S4340207-4330214XX | S434MNH0207XX  | S433MNH0214XX    | 15             | 15                   | 267.8           | 0.58      | 0.046                 | 0.08 | 0.073                 | 0.11 | 0.130                 | 0.14 | 3-3    |
| P266                 | S4750209-4740202XX | S475MNH0209XX  | S474MNH0202XX    | 12             | 12                   | 237.9           | 0.32      | 0.045                 | 0.13 | 0.030                 | 0.11 | 0.049                 | 0.14 | 3-5    |
| P185                 | S4070213-4070204XX | S407MNH0213XX  | S407MNH0204XX    | 10             | 10                   | 278.2           | 0.20      | 0.011                 | 0.09 | 0.022                 | 0.13 | 0.025                 | 0.13 | 3-3    |
| P281                 | S4340206-4330228XX | S434MNH0206XX  | S433MNH0228XX    | 10             | 10                   | 208.5           | 0.43      | 0.003                 | 0.04 | 0.020                 | 0.10 | 0.032                 | 0.13 | 3-3    |
| P297                 | S4350215-4350216XX | S435MNH0215XX  | S435MNH0216XX    | 8              | 8                    | 95.0            | 3.31      | 0.026                 | 0.10 | 0.030                 | 0.11 | 0.037                 | 0.13 | 3-4    |
| P271                 | S4750215-4750209XX | S475MNH0215XX  | S475MNH0209XX    | 10             | 10                   | 40.4            | 0.79      | 0.034                 | 0.13 | 0.011                 | 0.10 | 0.019                 | 0.12 | 3-5    |
| P293                 | S4350217-4460208XX | S435MNH0217XX  | S446MNH0208XX    | 10             | 10                   | 300.0           | 1.13      | 0.026                 | 0.09 | 0.031                 | 0.10 | 0.044                 | 0.12 | 3-4    |
| P265                 | S4750210-4750209XX | S475MNH0210XX  | S475MNH0209XX    | 10             | 10                   | 250.7           | 1.84      | 0.009                 | 0.10 | 0.017                 | 0.10 | 0.024                 | 0.12 | 3-5    |
| P276                 | S4880215-4880201XX | S488MNH0215XX  | S488MNH0201XX    | 10             | 10                   | 338.0           | 0.77      | 0.012                 | 0.07 | 0.013                 | 0.07 | 0.036                 | 0.12 | 3-6    |
| P292                 | S4350216-4350217XX | S435MNH0216XX  | S435MNH0217XX    | 10             | 10                   | 160.0           | 1.10      | 0.026                 | 0.09 | 0.031                 | 0.10 | 0.040                 | 0.11 | 3-4    |



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

| Pipe ID <sup>2</sup> | Sewer Main ID      | Upstream MH ID | Downstream MH ID | Ex.<br>D.(in.) | WWMP CIP<br>D. (in.) | Length<br>(ft.) | Slope (%) | ADWF <sup>1</sup>     |      | PDWF <sup>1</sup>     |      | PWWF <sup>1</sup>     |      | Figure |
|----------------------|--------------------|----------------|------------------|----------------|----------------------|-----------------|-----------|-----------------------|------|-----------------------|------|-----------------------|------|--------|
|                      |                    |                |                  |                |                      |                 |           | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  | Max.<br>Flow<br>(mgd) | d/D  |        |
| P291                 | S5280206-5280205XX | S528MNH0206XX  | S528MNH0205XX    | 12             | 12                   | 240.0           | 0.50      | 0.000                 | 0.04 | 0.001                 | 0.05 | 0.006                 | 0.11 | 3-7    |
| P280                 | S4340212-4340206XX | S434MNH0212XX  | S434MNH0206XX    | 10             | 10                   | 320.3           | 0.87      | 0.003                 | 0.04 | 0.015                 | 0.09 | 0.025                 | 0.11 | 3-3    |
| P259                 | S4760201-4760202XX | S476MNH0201XX  | S476MNH0202XX    | 10             | 10                   | 356.4           | 0.15      | 0.000                 | 0.04 | 0.002                 | 0.08 | 0.007                 | 0.11 | 3-5    |
| P286                 | S5280203-5280204XX | S528MNH0203XX  | S528MNH0204XX    | 10             | 10                   | 185.0           | 0.42      | 0.013                 | 0.08 | 0.013                 | 0.08 | 0.021                 | 0.10 | 3-7    |
| P275                 | S4880203-4880215XX | S488MNH0203XX  | S488MNH0215XX    | 10             | 10                   | 358.2           | 1.32      | 0.009                 | 0.06 | 0.010                 | 0.06 | 0.028                 | 0.10 | 3-6    |
| P270                 | S4750217-4750215XX | S475MNH0217XX  | S475MNH0215XX    | 10             | 10                   | 300.0           | 0.30      | 0.004                 | 0.08 | 0.011                 | 0.08 | 0.019                 | 0.10 | 3-5    |
| P285                 | S5280202-5280203XX | S528MNH0202XX  | S528MNH0203XX    | 10             | 10                   | 195.0           | 0.50      | 0.013                 | 0.08 | 0.013                 | 0.08 | 0.018                 | 0.10 | 3-7    |
| P269                 | S4860203-4750217XX | S486MNH0203XX  | S475MNH0217XX    | 10             | 10                   | 316.3           | 0.77      | 0.001                 | 0.04 | 0.005                 | 0.07 | 0.009                 | 0.09 | 3-5    |
| P274                 | S4730204-4880203XX | S473MNH0204XX  | S488MNH0203XX    | 10             | 10                   | 360.3           | 1.03      | 0.006                 | 0.05 | 0.006                 | 0.05 | 0.020                 | 0.09 | 3-6    |
| P284                 | S5280208-5280202XX | S528MNH0208XX  | S528MNH0202XX    | 10             | 10                   | 254.0           | 0.56      | 0.009                 | 0.07 | 0.009                 | 0.07 | 0.011                 | 0.08 | 3-7    |
| P264                 | S4750208-4750210XX | S475MNH0208XX  | S475MNH0210XX    | 10             | 10                   | 198.1           | 0.85      | 0.008                 | 0.05 | 0.013                 | 0.07 | 0.017                 | 0.08 | 3-5    |
| P273                 | S4740201-4730204XX | S474MNH0201XX  | S473MNH0204XX    | 10             | 10                   | 341.1           | 1.03      | 0.005                 | 0.04 | 0.005                 | 0.05 | 0.014                 | 0.08 | 3-6    |
| P279                 | S4340209-4340214XX | S434MNH0209XX  | S434MNH0214XX    | 15             | 15                   | 297.6           | 0.93      | 0.005                 | 0.05 | 0.011                 | 0.06 | 0.016                 | 0.07 | 3-3    |
| P263                 | S4740207-4750208XX | S474MNH0207XX  | S475MNH0208XX    | 10             | 10                   | 244.6           | 0.82      | 0.002                 | 0.04 | 0.005                 | 0.06 | 0.008                 | 0.07 | 3-5    |
| P72                  | S6100209-6100210XX | S610MNH0209XX  | S610MNH0210XX    | 18             | 18                   | 384.0           | 0.20      | 0.004                 | 0.03 | 0.004                 | 0.03 | 0.014                 | 0.06 | 3-9    |
| P272                 | S4740213-4740201XX | S474MNH0213XX  | S474MNH0201XX    | 10             | 10                   | 342.8           | 1.07      | 0.000                 | 0.03 | 0.001                 | 0.03 | 0.006                 | 0.06 | 3-6    |
| P290                 | S5280207-5280206XX | S528MNH0207XX  | S528MNH0206XX    | 12             | 12                   | 21.0            | 0.50      | 0.000                 | 0.01 | 0.001                 | 0.02 | 0.002                 | 0.03 | 3-7    |
| P71                  | S6100205-6100209XX | S610MNH0205XX  | S610MNH0209XX    | 18             | 18                   | 384.8           | 0.22      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.000                 | 0.02 | 3-9    |
| P277                 | S4731001-4730203XX | S473PLG1001XX  | S473MNH0203XX    | 10             | 10                   | 15.0            | 0.48      | 0.000                 | 0.01 | 0.000                 | 0.01 | 0.000                 | 0.02 | 3-6    |
| P289                 | S5131001-5280207XX | S513PLG1001XX  | S528MNH0207XX    | 12             | 12                   | 200.0           | 0.50      | 0.000                 | 0.01 | 0.001                 | 0.02 | 0.001                 | 0.02 | 3-7    |
| P119                 | S4480204-4480205XX | S448MNH0204XX  | S448MNH0205XX    | 10             | 10                   | 6.0             | 1.67      | 0.000                 | 0.00 | 0.000                 | 0.00 | 0.000                 | 0.00 | 3-15   |

\*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with WWMP CIP diameter.
2. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P164                 | S4500212-4500211XX | 16         | 16                   | 27                      | 20.8            | 1.59      | 3.826                                            | 1.00 | 1.857                                               | 1.00 | 1.860                                              | 1.00 | 1.859                                           | 0.70 | 3-11   |
| P165                 | S4500211-4500210XX | 16         | 16                   | 27                      | 31.3            | 1.18      | 3.825                                            | 1.00 | 1.858                                               | 1.00 | 1.860                                              | 1.00 | 1.860                                           | 0.69 | 3-11   |
| P50                  | S5290207-5290208XX | 12         | 12                   | 15                      | 333.0           | 0.26      | 1.146                                            | 1.00 | 1.216                                               | 0.88 | 1.696                                              | 1.00 | 1.721                                           | 0.70 | 3-8    |
| P49                  | S5290206-5290207XX | 12         | 12                   | 15                      | 216.6           | 0.31      | 1.132                                            | 1.00 | 1.202                                               | 0.81 | 1.684                                              | 1.00 | 1.709                                           | 0.66 | 3-8    |
| P183                 | S5130210-5130212XX | 10         | 10                   | 15                      | 263.4           | 0.84      | 0.453                                            | 0.70 | 0.486                                               | 0.71 | 0.639                                              | 1.00 | 0.640                                           | 0.49 | 3-7    |
| P110                 | S5290204-5290202XX | 12         | 12                   | 15                      | 40.0            | 0.25      | 0.542                                            | 1.00 | 0.567                                               | 0.78 | 0.661                                              | 1.00 | 0.893                                           | 0.64 | 3-7    |
| P47                  | S5290202-5290213XX | 12         | 12                   | 15                      | 319.8           | 0.27      | 1.121                                            | 1.00 | 1.165                                               | 0.76 | 1.662                                              | 1.00 | 1.675                                           | 0.63 | 3-7    |
| P48                  | S5290213-5290206XX | 12         | 12                   | 15                      | 20.4            | 0.54      | 1.128                                            | 1.00 | 1.198                                               | 0.74 | 1.681                                              | 1.00 | 1.705                                           | 0.62 | 3-8    |
| P41                  | S5130212-5130208XX | 12         | 12                   | 15                      | 244.6           | 0.20      | 1.049                                            | 0.65 | 1.115                                               | 0.68 | 1.619                                              | 1.00 | 1.635                                           | 0.57 | 3-7    |
| P46                  | S5290202-5290203XX | 15         | 15                   | 18                      | 32.0            | 0.13      | 0.564                                            | 0.98 | 0.593                                               | 0.67 | 1.068                                              | 1.00 | 0.778                                           | 0.58 | 3-7    |
| P109                 | S5120206-5290204XX | 12         | 12                   | 15                      | 280.0           | 0.25      | 0.535                                            | 0.77 | 0.566                                               | 0.62 | 0.655                                              | 1.00 | 0.893                                           | 0.54 | 3-7    |
| P108                 | S5120211-5120206XX | 12         | 12                   | 15                      | 90.0            | 0.26      | 0.530                                            | 0.50 | 0.561                                               | 0.49 | 0.650                                              | 1.00 | 0.890                                           | 0.46 | 3-7    |
| P45                  | S5120207-5290203XX | 15         | 15                   | 18                      | 297.0           | 0.36      | 0.549                                            | 0.65 | 0.586                                               | 0.51 | 1.061                                              | 1.00 | 0.773                                           | 0.45 | 3-7    |
| P107                 | S5130208-5120211XX | 12         | 12                   | 15                      | 158.3           | 0.29      | 0.529                                            | 0.46 | 0.560                                               | 0.48 | 0.671                                              | 1.00 | 0.888                                           | 0.45 | 3-7    |
| P43                  | S5120209-5120210XX | 15         | 15                   | 15                      | 143.0           | 0.29      | 0.527                                            | 0.39 | 0.563                                               | 0.40 | 1.039                                              | 1.00 | 0.752                                           | 0.44 | 3-7    |
| P44                  | S5120210-5120207XX | 15         | 15                   | 18                      | 74.0            | 0.00      | 0.542                                            | 0.38 | 0.580                                               | 0.40 | 1.057                                              | 1.00 | 0.769                                           | 0.35 | 3-7    |
| P182                 | S5130209-5130210XX | 12         | 12                   | 12                      | 63.2            | 0.41      | 0.450                                            | 0.36 | 0.483                                               | 0.37 | 0.637                                              | 1.00 | 0.638                                           | 0.39 | 3-7    |
| P42                  | S5130208-5120209XX | 15         | 15                   | 15                      | 32.0            | 0.13      | 0.523                                            | 0.35 | 0.559                                               | 0.36 | 1.037                                              | 1.00 | 0.749                                           | 0.42 | 3-7    |
| P51                  | S5290208-5520204XX | 12         | 12                   | 15                      | 361.0           | 0.25      | 1.171                                            | 1.00 | 1.222                                               | 0.80 | 1.700                                              | 0.98 | 1.725                                           | 0.66 | 3-8    |
| P98                  | S6500206-6500209XX | 18         | 18                   | 21                      | 468.0           | 0.16      | 2.126                                            | 0.66 | 2.534                                               | 0.76 | 3.017                                              | 0.95 | 3.041                                           | 0.64 | 3-10   |
| P97                  | S6500207-6500206XX | 18         | 18                   | 21                      | 67.3            | 0.28      | 2.113                                            | 0.63 | 2.522                                               | 0.73 | 3.005                                              | 0.94 | 3.028                                           | 0.61 | 3-10   |
| P150                 | S5310212-5500209XX | 27         | 27                   | 33                      | 355.6           | 0.24      | 11.993                                           | 0.94 | 11.912                                              | 0.93 | 12.160                                             | 0.94 | 12.158                                          | 0.67 | 3-12   |
| P138                 | S4710213-4900224XX | 27         | 27                   | 30                      | 1086.8          | 0.24      | 11.231                                           | 0.94 | 11.087                                              | 0.93 | 11.277                                             | 0.94 | 11.276                                          | 0.72 | 3-11   |
| P86                  | S6520205-6520204XX | 33         | 33                   | 42                      | 10.0            | 0.10      | 18.232                                           | 0.89 | 18.630                                              | 0.91 | 19.241                                             | 0.92 | 19.479                                          | 0.72 | 3-10   |
| P99                  | S6500209-6510201XX | 18         | 18                   | 21                      | 468.0           | 0.16      | 2.138                                            | 0.68 | 2.546                                               | 0.77 | 3.029                                              | 0.92 | 3.053                                           | 0.71 | 3-10   |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P52                  | S5520204-5520203XX | 12         | 12                   | 15                      | 105.0           | 0.40      | 1.136                                            | 1.00 | 1.224                                               | 0.70 | 1.701                                              | 0.92 | 1.726                                           | 0.65 | 3-8    |
| P85                  | S6520225-6520205XX | 33         | 33                   | 42                      | 20.7            | 0.53      | 17.532                                           | 0.89 | 18.479                                              | 0.90 | 19.093                                             | 0.91 | 19.288                                          | 0.70 | 3-10   |
| P144                 | S5110229-5110211XX | 27         | 27                   | 30                      | 206.5           | 0.58      | 11.754                                           | 0.86 | 11.656                                              | 0.86 | 11.903                                             | 0.88 | 11.939                                          | 0.69 | 3-12   |
| P106                 | S6520208-6520225XX | 33         | 33                   | 39                      | 41.2            | 0.46      | 3.547                                            | 0.83 | 4.140                                               | 0.85 | 4.709                                              | 0.87 | 4.644                                           | 0.71 | 3-10   |
| P242                 | S3920207-3920206XX | 8          | 8                    | 12                      | 47.5            | 1.05      | 0.678                                            | 0.63 | 1.060                                               | 0.86 | 1.068                                              | 0.86 | 1.068                                           | 0.48 | 3-1    |
| P151                 | S5500209-5500207XX | 27         | 27                   | 33                      | 31.8            | 0.03      | 11.995                                           | 0.84 | 11.914                                              | 0.84 | 12.162                                             | 0.85 | 12.161                                          | 0.68 | 3-12   |
| P149                 | S5300202-5310212XX | 27         | 27                   | 30                      | 355.6           | 0.56      | 11.983                                           | 0.84 | 11.902                                              | 0.84 | 12.149                                             | 0.84 | 12.148                                          | 0.64 | 3-12   |
| P181                 | S5130214-5130209XX | 12         | 12                   | 12                      | 246.4           | 0.51      | 0.449                                            | 0.37 | 0.482                                               | 0.38 | 0.628                                              | 0.84 | 0.629                                           | 0.43 | 3-7    |
| P145                 | S5110211-5110209XX | 27         | 27                   | 30                      | 295.3           | 0.13      | 11.767                                           | 0.83 | 11.672                                              | 0.83 | 11.918                                             | 0.84 | 11.917                                          | 0.71 | 3-12   |
| P67                  | S6090201-6090205XX | 12         | 15                   | 18                      | 278.0           | 0.25      | 1.365                                            | 1.00 | 1.628                                               | 0.67 | 2.111                                              | 0.83 | 2.134                                           | 0.60 | 3-9    |
| P68                  | S6090205-6090202XX | 12         | 15                   | 18                      | 95.0            | 0.25      | 1.392                                            | 1.00 | 1.665                                               | 0.67 | 2.149                                              | 0.83 | 2.171                                           | 0.66 | 3-9    |
| P66                  | S5920208-6090201XX | 12         | 15                   | 18                      | 373.0           | 0.25      | 1.361                                            | 1.00 | 1.625                                               | 0.66 | 2.108                                              | 0.83 | 2.131                                           | 0.57 | 3-9    |
| P105                 | S6510210-6520208XX | 33         | 33                   | 36                      | 220.0           | 0.03      | 3.379                                            | 0.79 | 3.909                                               | 0.81 | 4.471                                              | 0.83 | 4.411                                           | 0.73 | 3-10   |
| P65                  | S5920209-5920208XX | 12         | 15                   | 18                      | 155.0           | 0.25      | 1.355                                            | 1.00 | 1.621                                               | 0.66 | 2.104                                              | 0.82 | 2.127                                           | 0.57 | 3-9    |
| P64                  | S5920206-5920209XX | 12         | 15                   | 18                      | 218.0           | 0.25      | 1.330                                            | 1.00 | 1.584                                               | 0.66 | 2.066                                              | 0.82 | 2.090                                           | 0.57 | 3-9    |
| P139                 | S4900224-4900207XX | 27         | 27                   | 30                      | 258.7           | 0.24      | 11.367                                           | 0.81 | 11.244                                              | 0.81 | 11.404                                             | 0.82 | 11.387                                          | 0.69 | 3-11   |
| P63                  | S5920210-5920206XX | 12         | 15                   | 18                      | 258.0           | 0.25      | 1.327                                            | 1.00 | 1.582                                               | 0.65 | 2.064                                              | 0.82 | 2.087                                           | 0.57 | 3-9    |
| P241                 | S3920208-3920207XX | 10         | 10                   | 12                      | 215.1           | 1.12      | 0.678                                            | 0.52 | 1.059                                               | 0.81 | 1.067                                              | 0.81 | 1.067                                           | 0.47 | 3-1    |
| P62                  | S5920207-5920210XX | 12         | 15                   | 18                      | 115.0           | 0.25      | 1.324                                            | 1.00 | 1.579                                               | 0.65 | 2.061                                              | 0.81 | 2.084                                           | 0.57 | 3-9    |
| P163                 | S4320227-4500212XX | 16         | 16                   | 18                      | 552.4           | 0.30      | 3.804                                            | 1.00 | 1.855                                               | 0.80 | 1.858                                              | 0.80 | 1.858                                           | 0.72 | 3-11   |
| P104                 | S6510208-6510210XX | 33         | 33                   | 36                      | 110.0           | 0.10      | 3.355                                            | 0.76 | 3.878                                               | 0.79 | 4.439                                              | 0.80 | 4.412                                           | 0.71 | 3-10   |
| P96                  | S6310208-6500207XX | 18         | 18                   | 18                      | 497.0           | 0.29      | 2.111                                            | 0.57 | 2.520                                               | 0.65 | 3.005                                              | 0.80 | 3.027                                           | 0.69 | 3-10   |
| P61                  | S5690207-5920207XX | 12         | 15                   | 18                      | 180.0           | 0.25      | 1.279                                            | 1.00 | 1.519                                               | 0.64 | 2.001                                              | 0.80 | 2.024                                           | 0.56 | 3-9    |
| P60                  | S5690201-5690207XX | 12         | 15                   | 18                      | 200.0           | 0.25      | 1.278                                            | 1.00 | 1.517                                               | 0.63 | 1.999                                              | 0.79 | 2.022                                           | 0.56 | 3-9    |
| P59                  | S5690202-5690201XX | 12         | 15                   | 18                      | 200.0           | 0.25      | 1.275                                            | 1.00 | 1.515                                               | 0.63 | 1.997                                              | 0.78 | 2.020                                           | 0.56 | 3-9    |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P87                  | S6520214-6520204XX | 39         | 39                   | 42                      | 54.7            | 0.18      | 17.575                                           | 0.74 | 18.842                                              | 0.78 | 19.347                                             | 0.78 | 19.454                                          | 0.73 | 3-10   |
| P137                 | S4500207-4710213XX | 27         | 27                   | 27                      | 1135.1          | 0.84      | 11.104                                           | 0.78 | 10.955                                              | 0.78 | 11.145                                             | 0.78 | 11.145                                          | 0.69 | 3-11   |
| P142                 | S4900219-5110214XX | 27         | 27                   | 27                      | 106.7           | 0.25      | 11.755                                           | 0.76 | 11.659                                              | 0.75 | 11.899                                             | 0.78 | 11.912                                          | 0.74 | 3-12   |
| P58                  | S5690203-5690202XX | 12         | 15                   | 18                      | 244.0           | 0.26      | 1.230                                            | 1.00 | 1.455                                               | 0.62 | 1.937                                              | 0.77 | 1.961                                           | 0.55 | 3-9    |
| P143                 | S5110214-5110229XX | 27         | 27                   | 27                      | 88.6            | 0.47      | 11.759                                           | 0.72 | 11.664                                              | 0.71 | 11.903                                             | 0.74 | 12.324                                          | 0.65 | 3-12   |
| P141                 | S4900201-4900219XX | 27         | 27                   | 27                      | 193.4           | 0.62      | 11.716                                           | 0.73 | 11.619                                              | 0.73 | 11.846                                             | 0.74 | 11.826                                          | 0.72 | 3-11   |
| P57                  | S5690204-5690203XX | 12         | 15                   | 15                      | 331.0           | 0.23      | 1.129                                            | 1.00 | 1.295                                               | 0.60 | 1.772                                              | 0.74 | 1.796                                           | 0.70 | 3-8    |
| P69                  | S6090202-6100203XX | 12         | 15                   | 15                      | 373.0           | 0.28      | 1.387                                            | 0.86 | 1.670                                               | 0.62 | 2.153                                              | 0.74 | 2.175                                           | 0.74 | 3-9    |
| P78                  | S5900217-5900219XX | 18         | 18                   | 18                      | 22.7            | 4.68      | 3.098                                            | 0.72 | 3.447                                               | 0.73 | 3.486                                              | 0.74 | 3.483                                           | 0.74 | 3-13   |
| P100                 | S6510201-6510203XX | 18         | 18                   | 18                      | 468.0           | 0.17      | 2.151                                            | 0.58 | 2.557                                               | 0.65 | 3.041                                              | 0.73 | 3.065                                           | 0.73 | 3-10   |
| P22                  | S4750214-4470211XX | 10         | 10                   | 10                      | 211.6           | 0.19      | 0.379                                            | 0.60 | 0.413                                               | 0.63 | 0.502                                              | 0.73 | 0.502                                           | 0.73 | 3-4    |
| P103                 | S6510211-6510208XX | 33         | 33                   | 33                      | 383.0           | 0.10      | 3.326                                            | 0.68 | 3.859                                               | 0.71 | 4.391                                              | 0.73 | 4.351                                           | 0.70 | 3-10   |
| P40                  | S5130213-5130212XX | 12         | 12                   | 12                      | 353.0           | 1.30      | 0.593                                            | 0.58 | 0.627                                               | 0.61 | 0.988                                              | 0.71 | 0.988                                           | 0.66 | 3-7    |
| P140                 | CDT-51             | 27         | 27                   | 27                      | 23.4            | 0.13      | 12.553                                           | 0.71 | 12.549                                              | 0.70 | 12.613                                             | 0.71 | 12.664                                          | 0.71 | 3-11   |
| P70                  | S6100203-6100205XX | 12         | 15                   | 15                      | 56.0            | 0.80      | 1.788                                            | 0.74 | 2.142                                               | 0.62 | 2.625                                              | 0.70 | 2.648                                           | 0.71 | 3-9    |
| P56                  | S5520201-5690204XX | 12         | 15                   | 15                      | 400.0           | 0.27      | 1.118                                            | 1.00 | 1.250                                               | 0.56 | 1.723                                              | 0.70 | 1.747                                           | 0.72 | 3-8    |
| P54                  | S5520210-5520202XX | 12         | 15                   | 15                      | 173.2           | 0.25      | 1.133                                            | 1.00 | 1.239                                               | 0.56 | 1.716                                              | 0.69 | 1.741                                           | 0.70 | 3-8    |
| P53                  | S5520203-5520210XX | 12         | 15                   | 15                      | 204.0           | 0.25      | 1.142                                            | 1.00 | 1.236                                               | 0.55 | 1.714                                              | 0.69 | 1.739                                           | 0.70 | 3-8    |
| P95                  | S6310201-6310208XX | 18         | 18                   | 18                      | 283.9           | 0.29      | 2.097                                            | 0.54 | 2.507                                               | 0.61 | 2.991                                              | 0.69 | 3.013                                           | 0.69 | 3-10   |
| P17                  | S4460201-4460207XX | 8          | 8                    | 8                       | 127.1           | 0.83      | 0.339                                            | 0.57 | 0.373                                               | 0.61 | 0.437                                              | 0.69 | 0.437                                           | 0.69 | 3-4    |
| P94                  | S6310202-6310201XX | 18         | 18                   | 18                      | 121.3           | 0.31      | 2.090                                            | 0.54 | 2.499                                               | 0.60 | 2.983                                              | 0.68 | 3.005                                           | 0.69 | 3-10   |
| P55                  | S5520202-5520201XX | 12         | 15                   | 15                      | 200.0           | 0.25      | 1.123                                            | 1.00 | 1.243                                               | 0.55 | 1.718                                              | 0.68 | 1.743                                           | 0.69 | 3-8    |
| P148                 | S5300219-5300202XX | 27         | 27                   | 27                      | 395.2           | 0.56      | 11.816                                           | 0.67 | 11.724                                              | 0.67 | 11.971                                             | 0.68 | 11.970                                          | 0.65 | 3-12   |
| P89                  | CDT-39             | 48         | 48                   | 48                      | 28.6            | 0.35      | 46.279                                           | 0.64 | 50.260                                              | 0.67 | 51.154                                             | 0.68 | 51.060                                          | 0.68 | 3-10   |
| P21                  | S4750216-4750214XX | 10         | 10                   | 10                      | 273.8           | 0.20      | 0.376                                            | 0.56 | 0.411                                               | 0.59 | 0.499                                              | 0.68 | 0.499                                           | 0.68 | 3-5    |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P147                 | S5110218-5300219XX | 27         | 27                   | 27                      | 310.5           | 0.56      | 11.797                                           | 0.67 | 11.703                                              | 0.67 | 11.950                                             | 0.68 | 11.949                                          | 0.68 | 3-12   |
| P146                 | S5110209-5110218XX | 27         | 27                   | 27                      | 306.6           | 0.56      | 11.781                                           | 0.67 | 11.686                                              | 0.67 | 11.934                                             | 0.68 | 11.932                                          | 0.68 | 3-12   |
| P90                  | S6290216-6290218XX | 33         | 33                   | 33                      | 36.4            | 0.93      | 9.340                                            | 0.65 | 9.545                                               | 0.66 | 9.611                                              | 0.66 | 9.603                                           | 0.66 | 3-10   |
| P93                  | S6310203-6310202XX | 18         | 18                   | 18                      | 178.7           | 0.28      | 1.818                                            | 0.52 | 2.172                                               | 0.58 | 2.656                                              | 0.66 | 2.678                                           | 0.66 | 3-9    |
| P20                  | S4750205-4750216XX | 10         | 10                   | 10                      | 269.5           | 0.20      | 0.369                                            | 0.55 | 0.404                                               | 0.58 | 0.482                                              | 0.66 | 0.482                                           | 0.66 | 3-5    |
| P102                 | S6510205-6510211XX | 33         | 33                   | 33                      | 132.0           | 0.09      | 3.422                                            | 0.60 | 4.015                                               | 0.63 | 4.621                                              | 0.65 | 4.594                                           | 0.63 | 3-10   |
| P19                  | S4750206-4750205XX | 8          | 8                    | 8                       | 132.7           | 1.34      | 0.343                                            | 0.55 | 0.377                                               | 0.59 | 0.441                                              | 0.65 | 0.441                                           | 0.65 | 3-5    |
| P18                  | S4460207-4750206XX | 8          | 8                    | 8                       | 203.1           | 0.37      | 0.341                                            | 0.54 | 0.376                                               | 0.58 | 0.439                                              | 0.65 | 0.439                                           | 0.65 | 3-4    |
| P247                 | S4090220-4100208XX | 12         | 12                   | 12                      | 388.3           | 0.49      | 0.802                                            | 0.50 | 1.191                                               | 0.64 | 1.198                                              | 0.64 | 1.198                                           | 0.64 | 3-2    |
| P197                 | S4330204-4330224XX | 21         | 21                   | 21                      | 313.5           | 0.87      | 5.100                                            | 0.56 | 6.162                                               | 0.63 | 6.267                                              | 0.64 | 6.267                                           | 0.64 | 3-2    |
| P92                  | S6100205-6310203XX | 18         | 18                   | 18                      | 493.5           | 0.29      | 1.813                                            | 0.50 | 2.167                                               | 0.56 | 2.650                                              | 0.64 | 2.673                                           | 0.64 | 3-9    |
| P152                 | S5500207-5500223XX | 33         | 33                   | 33                      | 239.6           | 0.17      | 12.015                                           | 0.63 | 11.936                                              | 0.63 | 12.183                                             | 0.63 | 12.181                                          | 0.63 | 3-12   |
| P91                  | S6290218-6290217XX | 33         | 33                   | 33                      | 91.0            | 0.35      | 8.469                                            | 0.62 | 8.756                                               | 0.63 | 8.852                                              | 0.63 | 8.848                                           | 0.63 | 3-10   |
| P231                 | S3680212-3930211XX | 15         | 15                   | 15                      | 364.7           | 0.60      | 1.558                                            | 0.44 | 2.747                                               | 0.63 | 2.770                                              | 0.63 | 2.770                                           | 0.63 | 3-1    |
| P240                 | S3690219-3920208XX | 10         | 10                   | 10                      | 325.6           | 1.11      | 0.674                                            | 0.47 | 1.055                                               | 0.62 | 1.064                                              | 0.63 | 1.064                                           | 0.60 | 3-1    |
| P239                 | S3690209-3690219XX | 10         | 10                   | 10                      | 141.2           | 1.07      | 0.652                                            | 0.47 | 1.032                                               | 0.62 | 1.042                                              | 0.62 | 1.042                                           | 0.63 | 3-1    |
| P11                  | S4350218-4350220XX | 8          | 8                    | 8                       | 233.7           | 0.41      | 0.250                                            | 0.51 | 0.276                                               | 0.55 | 0.339                                              | 0.62 | 0.339                                           | 0.62 | 3-4    |
| P12                  | S4350220-4460205XX | 8          | 8                    | 8                       | 137.9           | 0.36      | 0.251                                            | 0.51 | 0.278                                               | 0.54 | 0.340                                              | 0.61 | 0.340                                           | 0.61 | 3-4    |
| P248                 | S4100208-4310207XX | 12         | 12                   | 12                      | 359.8           | 0.51      | 0.811                                            | 0.49 | 1.201                                               | 0.61 | 1.207                                              | 0.61 | 1.207                                           | 0.61 | 3-2    |
| P88                  | S6520212-6520214XX | 48         | 48                   | 48                      | 51.1            | 0.37      | 41.771                                           | 0.56 | 44.951                                              | 0.59 | 45.753                                             | 0.60 | 45.936                                          | 0.60 | 3-10   |
| P250                 | S4320232-4320227XX | 16         | 16                   | 16                      | 304.0           | 0.33      | 2.898                                            | 1.00 | 1.838                                               | 0.60 | 1.841                                              | 0.60 | 1.841                                           | 0.58 | 3-2    |
| P224                 | S4080205-4080206XX | 21         | 21                   | 21                      | 69.0            | 0.75      | 4.740                                            | 0.52 | 5.789                                               | 0.59 | 5.813                                              | 0.60 | 5.813                                           | 0.60 | 3-1    |
| P101                 | S6510203-6510205XX | 36         | 36                   | 36                      | 477.5           | 0.05      | 3.506                                            | 0.53 | 4.046                                               | 0.57 | 4.548                                              | 0.59 | 4.553                                           | 0.57 | 3-10   |
| P288                 | S5280205-5290213XX | 12         | 12                   | 12                      | 325.0           | 0.50      | 0.032                                            | 0.09 | 0.033                                               | 0.10 | 0.048                                              | 0.59 | 0.034                                           | 0.10 | 3-7    |
| P135                 | S4310214-4500210XX | 27         | 27                   | 27                      | 278.2           | 0.52      | 7.518                                            | 0.56 | 8.846                                               | 0.58 | 8.988                                              | 0.59 | 8.988                                           | 0.59 | 3-11   |





Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P249                 | S4320232-4310207XX | 14         | 14                   | 14                      | 227.5           | 0.10      | 2.923                                            | 1.00 | 1.819                                               | 0.58 | 1.822                                              | 0.58 | 1.822                                           | 0.58 | 3-2    |
| P136                 | S4500210-4500207XX | 27         | 27                   | 27                      | 187.5           | 0.64      | 10.872                                           | 0.58 | 10.711                                              | 0.58 | 10.854                                             | 0.58 | 10.854                                          | 0.58 | 3-11   |
| P225                 | S4080206-4080209XX | 21         | 21                   | 21                      | 290.8           | 0.73      | 4.752                                            | 0.51 | 5.801                                               | 0.58 | 5.825                                              | 0.58 | 5.825                                           | 0.58 | 3-1    |
| P218                 | S3930207-3930209XX | 21         | 21                   | 21                      | 283.9           | 0.31      | 3.562                                            | 0.54 | 3.787                                               | 0.58 | 3.788                                              | 0.58 | 3.788                                           | 0.58 | 3-1    |
| P26                  | S4470208-4470210XX | 10         | 10                   | 10                      | 370.0           | 0.20      | 0.237                                            | 0.46 | 0.254                                               | 0.48 | 0.353                                              | 0.58 | 0.353                                           | 0.58 | 3-5    |
| P219                 | S3930209-3930212XX | 21         | 21                   | 21                      | 311.0           | 0.82      | 4.640                                            | 0.51 | 5.682                                               | 0.58 | 5.699                                              | 0.58 | 5.699                                           | 0.58 | 3-1    |
| P229                 | S4330208-4330204XX | 21         | 21                   | 21                      | 309.1           | 0.87      | 4.804                                            | 0.51 | 5.854                                               | 0.57 | 5.879                                              | 0.58 | 5.879                                           | 0.58 | 3-2    |
| P234                 | S3930226-3930227XX | 14         | 14                   | 14                      | 329.4           | 0.16      | 0.515                                            | 0.42 | 0.887                                               | 0.57 | 0.894                                              | 0.58 | 0.894                                           | 0.58 | 3-1    |
| P134                 | S4320228-4310214XX | 27         | 27                   | 27                      | 300.7           | 0.50      | 7.504                                            | 0.52 | 8.831                                               | 0.57 | 8.973                                              | 0.58 | 8.973                                           | 0.58 | 3-11   |
| P233                 | S3930211-3930226XX | 14         | 14                   | 14                      | 242.7           | 0.17      | 0.499                                            | 0.42 | 0.870                                               | 0.57 | 0.877                                              | 0.58 | 0.877                                           | 0.58 | 3-1    |
| P23                  | S4470211-4470201XX | 10         | 10                   | 10                      | 381.0           | 0.21      | 0.385                                            | 0.47 | 0.420                                               | 0.50 | 0.510                                              | 0.58 | 0.510                                           | 0.58 | 3-4    |
| P220                 | S3930212-3930213XX | 21         | 21                   | 21                      | 293.7           | 0.71      | 4.652                                            | 0.51 | 5.695                                               | 0.57 | 5.712                                              | 0.57 | 5.712                                           | 0.57 | 3-1    |
| P133                 | S4320235-4320228XX | 27         | 27                   | 27                      | 268.0           | 0.55      | 7.918                                            | 0.52 | 8.814                                               | 0.56 | 8.956                                              | 0.57 | 8.956                                           | 0.57 | 3-2    |
| P246                 | S4090221-4090220XX | 12         | 12                   | 12                      | 258.4           | 1.08      | 0.793                                            | 0.45 | 1.182                                               | 0.57 | 1.190                                              | 0.57 | 1.190                                           | 0.57 | 3-1    |
| P128                 | S4320204-4320205XX | 27         | 27                   | 27                      | 32.6            | 0.31      | 5.189                                            | 0.50 | 6.247                                               | 0.56 | 6.441                                              | 0.57 | 6.441                                           | 0.57 | 3-2    |
| P228                 | S4330210-4330208XX | 21         | 21                   | 21                      | 310.5           | 0.87      | 4.791                                            | 0.50 | 5.841                                               | 0.57 | 5.865                                              | 0.57 | 5.865                                           | 0.57 | 3-2    |
| P226                 | S4080209-4080231XX | 21         | 21                   | 21                      | 314.0           | 0.86      | 4.765                                            | 0.50 | 5.814                                               | 0.56 | 5.839                                              | 0.57 | 5.839                                           | 0.57 | 3-1    |
| P227                 | S4080231-4330210XX | 21         | 21                   | 21                      | 320.0           | 0.88      | 4.778                                            | 0.50 | 5.828                                               | 0.56 | 5.852                                              | 0.57 | 5.852                                           | 0.57 | 3-2    |
| P16                  | S4460202-4460201XX | 8          | 8                    | 8                       | 84.8            | 0.83      | 0.338                                            | 0.49 | 0.372                                               | 0.51 | 0.435                                              | 0.57 | 0.435                                           | 0.57 | 3-4    |
| P15                  | S4460203-4460202XX | 8          | 8                    | 8                       | 166.9           | 0.58      | 0.272                                            | 0.48 | 0.301                                               | 0.51 | 0.363                                              | 0.56 | 0.363                                           | 0.56 | 3-4    |
| P130                 | S4320213-4320220XX | 27         | 27                   | 27                      | 305.2           | 0.40      | 5.337                                            | 0.50 | 6.413                                               | 0.55 | 6.606                                              | 0.56 | 6.606                                           | 0.56 | 3-2    |
| P127                 | S4320202-4320204XX | 27         | 27                   | 27                      | 206.1           | 0.29      | 5.177                                            | 0.49 | 6.240                                               | 0.55 | 6.434                                              | 0.56 | 6.434                                           | 0.56 | 3-2    |
| P84                  | S6290217-6520225XX | 42         | 42                   | 42                      | 517.4           | 0.47      | 14.253                                           | 0.53 | 14.847                                              | 0.55 | 15.089                                             | 0.55 | 15.095                                          | 0.54 | 3-10   |
| P180                 | S5130207-5130214XX | 12         | 12                   | 12                      | 254.0           | 0.50      | 0.440                                            | 0.36 | 0.473                                               | 0.37 | 0.615                                              | 0.55 | 0.615                                           | 0.43 | 3-7    |
| P237                 | S3690201-3690218XX | 14         | 14                   | 14                      | 60.5            | 0.26      | 0.606                                            | 0.42 | 0.984                                               | 0.55 | 0.992                                              | 0.55 | 0.992                                           | 0.55 | 3-1    |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P131                 | S4320220-4320230XX | 27         | 27                   | 27                      | 248.8           | 0.20      | 5.350                                            | 0.49 | 6.426                                               | 0.54 | 6.620                                              | 0.55 | 6.620                                           | 0.55 | 3-2    |
| P235                 | S3930227-3690214XX | 14         | 14                   | 14                      | 277.8           | 0.18      | 0.527                                            | 0.41 | 0.900                                               | 0.55 | 0.908                                              | 0.55 | 0.908                                           | 0.55 | 3-1    |
| P126                 | S4330224-4320202XX | 27         | 27                   | 27                      | 299.8           | 0.32      | 5.167                                            | 0.48 | 6.229                                               | 0.54 | 6.423                                              | 0.55 | 6.423                                           | 0.55 | 3-2    |
| P83                  | S6290216-6290217XX | 33         | 33                   | 33                      | 127.1           | 0.02      | 6.500                                            | 0.53 | 6.802                                               | 0.54 | 6.919                                              | 0.54 | 6.920                                           | 0.55 | 3-10   |
| P129                 | S4320205-4320213XX | 27         | 27                   | 27                      | 290.4           | 0.28      | 5.320                                            | 0.48 | 6.396                                               | 0.53 | 6.590                                              | 0.54 | 6.590                                           | 0.54 | 3-2    |
| P244                 | S3920205-3920204XX | 10         | 10                   | 10                      | 34.4            | 4.08      | 0.754                                            | 0.43 | 1.143                                               | 0.54 | 1.151                                              | 0.54 | 1.151                                           | 0.54 | 3-1    |
| P132                 | S4320230-4320235XX | 27         | 27                   | 27                      | 12.4            | 0.81      | 4.390                                            | 0.50 | 5.156                                               | 0.53 | 5.298                                              | 0.54 | 5.298                                           | 0.54 | 3-2    |
| P10                  | S4350201-4350218XX | 8          | 8                    | 8                       | 17.8            | 1.12      | 0.247                                            | 0.45 | 0.274                                               | 0.47 | 0.336                                              | 0.54 | 0.336                                           | 0.54 | 3-4    |
| P236                 | S3690214-3690201XX | 14         | 14                   | 14                      | 323.4           | 0.26      | 0.582                                            | 0.40 | 0.958                                               | 0.53 | 0.966                                              | 0.53 | 0.966                                           | 0.53 | 3-1    |
| P232                 | S3930211-3930209XX | 15         | 15                   | 15                      | 54.6            | 0.68      | 1.065                                            | 0.38 | 1.883                                               | 0.53 | 1.899                                              | 0.53 | 1.899                                           | 0.53 | 3-1    |
| P217                 | S3940204-3930207XX | 21         | 21                   | 21                      | 274.5           | 0.72      | 3.551                                            | 0.51 | 3.775                                               | 0.53 | 3.776                                              | 0.53 | 3.776                                           | 0.53 | 3-1    |
| P27                  | S4470210-4480204XX | 10         | 10                   | 10                      | 386.3           | 0.18      | 0.244                                            | 0.42 | 0.261                                               | 0.43 | 0.368                                              | 0.53 | 0.368                                           | 0.53 | 3-15   |
| P13                  | S4460205-4460204XX | 8          | 8                    | 8                       | 69.1            | 0.43      | 0.265                                            | 0.45 | 0.293                                               | 0.47 | 0.355                                              | 0.53 | 0.355                                           | 0.53 | 3-4    |
| P245                 | S3920204-4090221XX | 12         | 12                   | 12                      | 648.5           | 0.88      | 0.786                                            | 0.41 | 1.174                                               | 0.51 | 1.182                                              | 0.52 | 1.182                                           | 0.52 | 3-1    |
| P25                  | S4470207-4470208XX | 10         | 10                   | 10                      | 100.0           | 0.20      | 0.228                                            | 0.42 | 0.244                                               | 0.44 | 0.314                                              | 0.52 | 0.314                                           | 0.52 | 3-4    |
| P118                 | S4880209-4880210XX | 12         | 12                   | 12                      | 353.5           | 0.16      | 0.350                                            | 0.41 | 0.373                                               | 0.43 | 0.497                                              | 0.51 | 0.497                                           | 0.51 | 3-6    |
| P14                  | S4460204-4460203XX | 8          | 8                    | 8                       | 321.8           | 1.12      | 0.268                                            | 0.43 | 0.296                                               | 0.46 | 0.358                                              | 0.51 | 0.358                                           | 0.51 | 3-4    |
| P251                 | S3920206-3920205XX | 10         | 10                   | 10                      | 208.0           | 0.43      | 0.375                                            | 0.40 | 0.566                                               | 0.51 | 0.571                                              | 0.51 | 0.571                                           | 0.51 | 3-1    |
| P243                 | CDT-81             | 10         | 10                   | 10                      | 204.0           | 0.44      | 0.378                                            | 0.40 | 0.574                                               | 0.51 | 0.579                                              | 0.51 | 0.579                                           | 0.51 | 3-1    |
| P238                 | S3690209-3690218XX | 14         | 14                   | 14                      | 329.4           | 0.26      | 0.612                                            | 0.38 | 0.990                                               | 0.50 | 0.999                                              | 0.50 | 0.999                                           | 0.50 | 3-1    |
| P38                  | S4880211-4880210XX | 10         | 10                   | 10                      | 30.0            | 0.83      | 0.205                                            | 0.36 | 0.217                                               | 0.37 | 0.435                                              | 0.50 | 0.435                                           | 0.50 | 3-6    |
| P155                 | S5500201-5500225XX | 42         | 42                   | 42                      | 15.0            | 0.07      | 12.184                                           | 0.49 | 12.131                                              | 0.49 | 12.379                                             | 0.50 | 12.375                                          | 0.50 | 3-12   |
| P221                 | S3930213-3930214XX | 21         | 21                   | 21                      | 44.7            | 0.90      | 4.662                                            | 0.43 | 5.705                                               | 0.49 | 5.729                                              | 0.49 | 5.729                                           | 0.49 | 3-1    |
| P223                 | CDT-83             | 24         | 24                   | 24                      | 237.8           | 0.22      | 2.355                                            | 0.43 | 2.877                                               | 0.48 | 2.889                                              | 0.49 | 2.889                                           | 0.49 | 3-1    |
| P230                 | S3930216-4080205XX | 24         | 24                   | 24                      | 232.5           | 0.23      | 2.382                                            | 0.43 | 2.909                                               | 0.48 | 2.921                                              | 0.49 | 2.921                                           | 0.49 | 3-1    |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P156                 | S5500225-5710212XX | 42         | 42                   | 42                      | 286.5           | 0.14      | 12.205                                           | 0.48 | 12.154                                              | 0.48 | 12.402                                             | 0.48 | 12.398                                          | 0.48 | 3-13   |
| P117                 | S4880208-4880209XX | 10         | 10                   | 10                      | 30.0            | 0.83      | 0.187                                            | 0.40 | 0.198                                               | 0.41 | 0.262                                              | 0.47 | 0.262                                           | 0.47 | 3-6    |
| P216                 | S3940201-3940204XX | 21         | 21                   | 21                      | 49.8            | 0.60      | 3.538                                            | 0.46 | 3.762                                               | 0.47 | 3.764                                              | 0.47 | 3.764                                           | 0.47 | 3-1    |
| P262                 | S4750204-4750205XX | 10         | 10                   | 10                      | 137.7           | 0.22      | 0.027                                            | 0.37 | 0.029                                               | 0.40 | 0.039                                              | 0.47 | 0.039                                           | 0.47 | 3-5    |
| P222                 | S3930214-3930216XX | 21         | 21                   | 21                      | 83.1            | 2.32      | 4.718                                            | 0.42 | 5.767                                               | 0.47 | 5.791                                              | 0.47 | 5.791                                           | 0.47 | 3-1    |
| P39                  | S4880210-5130213XX | 12         | 12                   | 12                      | 361.0           | 0.70      | 0.561                                            | 0.35 | 0.595                                               | 0.36 | 0.933                                              | 0.46 | 0.933                                           | 0.46 | 3-6    |
| P28                  | S4480204-4480203XX | 10         | 10                   | 10                      | 234.0           | 0.48      | 0.247                                            | 0.37 | 0.264                                               | 0.38 | 0.370                                              | 0.46 | 0.370                                           | 0.46 | 3-15   |
| P161                 | S5900216-5900217XX | 42         | 42                   | 42                      | 600.9           | 0.28      | 12.966                                           | 0.45 | 13.208                                              | 0.45 | 13.457                                             | 0.46 | 13.453                                          | 0.46 | 3-13   |
| P80                  | S6110209-6110210XX | 42         | 42                   | 42                      | 412.2           | 0.34      | 13.701                                           | 0.44 | 14.148                                              | 0.45 | 14.400                                             | 0.46 | 14.402                                          | 0.46 | 3-13   |
| P81                  | S6110210-6300209XX | 42         | 42                   | 42                      | 620.0           | 0.23      | 13.906                                           | 0.44 | 14.433                                              | 0.45 | 14.678                                             | 0.46 | 14.683                                          | 0.46 | 3-13   |
| P79                  | S5900217-6110209XX | 42         | 42                   | 42                      | 380.0           | 0.23      | 13.855                                           | 0.44 | 14.323                                              | 0.45 | 14.585                                             | 0.45 | 14.586                                          | 0.45 | 3-13   |
| P174                 | S4870204-4880202XX | 12         | 12                   | 12                      | 471.4           | 0.51      | 0.475                                            | 0.37 | 0.509                                               | 0.38 | 0.689                                              | 0.45 | 0.689                                           | 0.45 | 3-7    |
| P157                 | S5710212-5710211XX | 42         | 42                   | 42                      | 362.0           | 0.18      | 12.327                                           | 0.44 | 12.315                                              | 0.44 | 12.563                                             | 0.44 | 12.558                                          | 0.44 | 3-13   |
| P179                 | S5130206-5130207XX | 12         | 12                   | 12                      | 320.6           | 0.39      | 0.438                                            | 0.37 | 0.470                                               | 0.38 | 0.608                                              | 0.44 | 0.608                                           | 0.44 | 3-7    |
| P184                 | S4880201-4880209XX | 12         | 12                   | 12                      | 452.8           | 0.13      | 0.159                                            | 0.37 | 0.170                                               | 0.39 | 0.225                                              | 0.44 | 0.225                                           | 0.44 | 3-6    |
| P29                  | S4480203-4480202XX | 10         | 10                   | 10                      | 243.0           | 0.34      | 0.255                                            | 0.36 | 0.272                                               | 0.37 | 0.378                                              | 0.44 | 0.378                                           | 0.44 | 3-15   |
| P82                  | S6300209-6290216XX | 42         | 42                   | 42                      | 444.2           | 0.36      | 13.935                                           | 0.43 | 14.464                                              | 0.44 | 14.708                                             | 0.44 | 14.713                                          | 0.44 | 3-14   |
| P24                  | S4470201-4470207XX | 10         | 10                   | 10                      | 319.1           | 0.18      | 0.126                                            | 0.36 | 0.137                                               | 0.38 | 0.184                                              | 0.44 | 0.184                                           | 0.44 | 3-4    |
| P160                 | S5900215-5900216XX | 42         | 42                   | 42                      | 130.0           | 0.26      | 12.685                                           | 0.43 | 12.817                                              | 0.43 | 13.066                                             | 0.44 | 13.058                                          | 0.44 | 3-13   |
| P178                 | S4880205-5130206XX | 12         | 12                   | 12                      | 296.4           | 0.43      | 0.367                                            | 0.36 | 0.391                                               | 0.37 | 0.519                                              | 0.43 | 0.519                                           | 0.43 | 3-7    |
| P159                 | S5710216-5900215XX | 42         | 42                   | 42                      | 581.9           | 0.28      | 12.542                                           | 0.42 | 12.620                                              | 0.42 | 12.868                                             | 0.43 | 12.860                                          | 0.43 | 3-13   |
| P158                 | S5710211-5710216XX | 42         | 42                   | 42                      | 364.9           | 0.28      | 12.374                                           | 0.42 | 12.375                                              | 0.42 | 12.624                                             | 0.42 | 12.618                                          | 0.42 | 3-13   |
| P173                 | S4870203-4870204XX | 12         | 12                   | 12                      | 274.6           | 0.83      | 0.460                                            | 0.34 | 0.493                                               | 0.36 | 0.662                                              | 0.42 | 0.662                                           | 0.42 | 3-7    |
| P154                 | S5500202-5500201XX | 33         | 33                   | 33                      | 50.0            | 17.13     | 12.036                                           | 0.41 | 11.959                                              | 0.41 | 12.207                                             | 0.42 | 12.204                                          | 0.42 | 3-12   |
| P196                 | S4330203-4330204XX | 18         | 18                   | 18                      | 78.0            | 1.58      | 0.283                                            | 0.37 | 0.295                                               | 0.40 | 0.377                                              | 0.42 | 0.377                                           | 0.42 | 3-2    |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P175                 | S4880202-4880201XX | 12         | 12                   | 12                      | 117.9           | 0.51      | 0.477                                            | 0.34 | 0.510                                               | 0.35 | 0.691                                              | 0.41 | 0.691                                           | 0.41 | 3-7    |
| P153                 | S5500223-5500202XX | 33         | 33                   | 33                      | 301.8           | 0.12      | 12.033                                           | 0.39 | 11.956                                              | 0.39 | 12.204                                             | 0.40 | 12.200                                          | 0.40 | 3-12   |
| P30                  | S4480202-4730209XX | 10         | 10                   | 10                      | 273.6           | 0.69      | 0.261                                            | 0.32 | 0.278                                               | 0.33 | 0.383                                              | 0.39 | 0.383                                           | 0.39 | 3-6    |
| P169                 | S4740204-4740211XX | 12         | 12                   | 12                      | 206.5           | 1.19      | 0.434                                            | 0.32 | 0.466                                               | 0.34 | 0.609                                              | 0.39 | 0.609                                           | 0.39 | 3-5    |
| P170                 | S4740211-4870201XX | 12         | 12                   | 12                      | 211.8           | 0.49      | 0.442                                            | 0.32 | 0.474                                               | 0.34 | 0.625                                              | 0.39 | 0.625                                           | 0.39 | 3-5    |
| P77                  | S6110203-5900219XX | 18         | 18                   | 18                      | 357.0           | 0.23      | 0.496                                            | 0.34 | 0.666                                               | 0.38 | 0.666                                              | 0.38 | 0.666                                           | 0.39 | 3-13   |
| P172                 | S4870202-4870203XX | 12         | 12                   | 12                      | 256.9           | 1.27      | 0.453                                            | 0.30 | 0.487                                               | 0.31 | 0.656                                              | 0.36 | 0.656                                           | 0.36 | 3-6    |
| P177                 | S4880204-4880205XX | 12         | 12                   | 12                      | 56.6            | 1.15      | 0.362                                            | 0.30 | 0.386                                               | 0.31 | 0.512                                              | 0.36 | 0.512                                           | 0.36 | 3-7    |
| P171                 | S4870201-4870202XX | 12         | 12                   | 12                      | 257.5           | 1.27      | 0.446                                            | 0.28 | 0.479                                               | 0.29 | 0.629                                              | 0.34 | 0.629                                           | 0.34 | 3-5    |
| P215                 | S4470206-4470207XX | 10         | 10                   | 10                      | 269.7           | 1.90      | 0.102                                            | 0.28 | 0.108                                               | 0.30 | 0.129                                              | 0.34 | 0.129                                           | 0.34 | 3-4    |
| P176                 | S4880201-4880204XX | 12         | 12                   | 12                      | 18.5            | 0.65      | 0.361                                            | 0.28 | 0.385                                               | 0.29 | 0.511                                              | 0.33 | 0.511                                           | 0.33 | 3-7    |
| P35                  | S4880214-4880213XX | 10         | 10                   | 10                      | 351.0           | 0.70      | 0.157                                            | 0.26 | 0.166                                               | 0.26 | 0.259                                              | 0.33 | 0.259                                           | 0.33 | 3-6    |
| P168                 | S4740212-4740204XX | 12         | 12                   | 12                      | 295.0           | 1.18      | 0.356                                            | 0.27 | 0.387                                               | 0.28 | 0.529                                              | 0.32 | 0.529                                           | 0.32 | 3-5    |
| P36                  | S4880213-4880212XX | 10         | 10                   | 10                      | 287.0           | 0.69      | 0.176                                            | 0.25 | 0.187                                               | 0.26 | 0.292                                              | 0.32 | 0.292                                           | 0.32 | 3-6    |
| P166                 | S4470201-4740205XX | 12         | 12                   | 12                      | 307.6           | 1.00      | 0.340                                            | 0.26 | 0.370                                               | 0.27 | 0.503                                              | 0.31 | 0.503                                           | 0.31 | 3-4    |
| P167                 | S4740205-4740212XX | 12         | 12                   | 12                      | 297.5           | 1.18      | 0.348                                            | 0.25 | 0.377                                               | 0.26 | 0.512                                              | 0.31 | 0.512                                           | 0.31 | 3-5    |
| P114                 | S4880206-4880216XX | 10         | 10                   | 10                      | 14.8            | 0.67      | 0.172                                            | 0.26 | 0.183                                               | 0.27 | 0.241                                              | 0.31 | 0.241                                           | 0.31 | 3-6    |
| P34                  | S4730207-4880214XX | 10         | 10                   | 10                      | 364.6           | 0.68      | 0.149                                            | 0.24 | 0.158                                               | 0.25 | 0.224                                              | 0.31 | 0.224                                           | 0.31 | 3-6    |
| P116                 | S4880207-4880208XX | 10         | 10                   | 10                      | 313.6           | 0.90      | 0.186                                            | 0.25 | 0.197                                               | 0.26 | 0.255                                              | 0.30 | 0.255                                           | 0.30 | 3-6    |
| P203                 | S4340204-4340205XX | 12         | 12                   | 12                      | 303.6           | 0.14      | 0.140                                            | 0.28 | 0.149                                               | 0.29 | 0.155                                              | 0.30 | 0.155                                           | 0.30 | 3-3    |
| P111                 | S4730209-4730205XX | 10         | 10                   | 10                      | 352.4           | 0.51      | 0.153                                            | 0.25 | 0.163                                               | 0.26 | 0.221                                              | 0.30 | 0.221                                           | 0.30 | 3-6    |
| P33                  | S4730208-4730207XX | 10         | 10                   | 10                      | 353.9           | 0.61      | 0.140                                            | 0.24 | 0.149                                               | 0.25 | 0.216                                              | 0.30 | 0.216                                           | 0.30 | 3-6    |
| P200                 | S4070202-4070201XX | 10         | 10                   | 10                      | 57.5            | 0.30      | 0.124                                            | 0.28 | 0.133                                               | 0.29 | 0.136                                              | 0.30 | 0.136                                           | 0.30 | 3-3    |
| P113                 | S4730206-4880206XX | 10         | 10                   | 10                      | 347.0           | 0.89      | 0.171                                            | 0.25 | 0.182                                               | 0.26 | 0.239                                              | 0.30 | 0.239                                           | 0.30 | 3-6    |
| P31                  | S4730209-4480209XX | 10         | 10                   | 10                      | 393.3           | 0.35      | 0.122                                            | 0.25 | 0.130                                               | 0.25 | 0.177                                              | 0.30 | 0.177                                           | 0.30 | 3-6    |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P37                  | S4880212-4880211XX | 10         | 10                   | 10                      | 46.4            | 1.21      | 0.176                                            | 0.23 | 0.188                                               | 0.23 | 0.293                                              | 0.29 | 0.293                                           | 0.29 | 3-6    |
| P115                 | S4880216-4880207XX | 10         | 10                   | 10                      | 353.6           | 0.91      | 0.179                                            | 0.25 | 0.190                                               | 0.26 | 0.248                                              | 0.29 | 0.248                                           | 0.29 | 3-6    |
| P76                  | S6110202-6110203XX | 18         | 18                   | 18                      | 323.0           | 0.18      | 0.342                                            | 0.25 | 0.469                                               | 0.29 | 0.469                                              | 0.29 | 0.469                                           | 0.29 | 3-13   |
| P296                 | S4350215-4350201XX | 8          | 8                    | 8                       | 68.7            | 8.08      | 0.046                                            | 0.25 | 0.050                                               | 0.26 | 0.058                                              | 0.29 | 0.058                                           | 0.29 | 3-4    |
| P122                 | S4480219-4330229XX | 10         | 10                   | 10                      | 266.9           | 0.27      | 0.041                                            | 0.16 | 0.042                                               | 0.16 | 0.135                                              | 0.28 | 0.135                                           | 0.28 | 3-2    |
| P199                 | S4070203-4070202XX | 10         | 10                   | 10                      | 80.0            | 0.30      | 0.123                                            | 0.27 | 0.132                                               | 0.28 | 0.136                                              | 0.28 | 0.136                                           | 0.28 | 3-3    |
| P32                  | S4480209-4730208XX | 10         | 10                   | 10                      | 342.9           | 0.72      | 0.133                                            | 0.23 | 0.141                                               | 0.24 | 0.187                                              | 0.28 | 0.187                                           | 0.28 | 3-6    |
| P198                 | S4060210-4070203XX | 10         | 10                   | 10                      | 266.0           | 0.30      | 0.122                                            | 0.27 | 0.131                                               | 0.28 | 0.135                                              | 0.28 | 0.135                                           | 0.28 | 3-3    |
| P112                 | S4730205-4730206XX | 10         | 10                   | 10                      | 352.0           | 0.94      | 0.159                                            | 0.24 | 0.169                                               | 0.24 | 0.227                                              | 0.28 | 0.227                                           | 0.28 | 3-6    |
| P9                   | S4350202-4350201XX | 10         | 10                   | 10                      | 14.0            | 1.43      | 0.038                                            | 0.21 | 0.039                                               | 0.22 | 0.117                                              | 0.28 | 0.117                                           | 0.28 | 3-4    |
| P212                 | S4330207-4330206XX | 15         | 15                   | 15                      | 20.0            | 0.10      | 0.126                                            | 0.24 | 0.131                                               | 0.24 | 0.173                                              | 0.28 | 0.173                                           | 0.28 | 3-2    |
| P124                 | S4330212-4330230XX | 10         | 10                   | 10                      | 50.0            | 0.40      | 0.046                                            | 0.16 | 0.048                                               | 0.16 | 0.143                                              | 0.28 | 0.143                                           | 0.28 | 3-2    |
| P123                 | S4330229-4330212XX | 10         | 10                   | 10                      | 180.0           | 0.40      | 0.046                                            | 0.15 | 0.047                                               | 0.16 | 0.142                                              | 0.27 | 0.142                                           | 0.27 | 3-2    |
| P258                 | S4470202-4470201XX | 12         | 12                   | 12                      | 130.0           | 0.50      | 0.073                                            | 0.20 | 0.078                                               | 0.21 | 0.174                                              | 0.27 | 0.174                                           | 0.27 | 3-4    |
| P204                 | S4340205-4340214XX | 10         | 10                   | 10                      | 308.0           | 0.19      | 0.150                                            | 0.25 | 0.159                                               | 0.26 | 0.173                                              | 0.27 | 0.173                                           | 0.27 | 3-3    |
| P201                 | S4070201-4340203XX | 10         | 10                   | 10                      | 327.6           | 0.30      | 0.129                                            | 0.26 | 0.138                                               | 0.26 | 0.141                                              | 0.27 | 0.141                                           | 0.27 | 3-3    |
| P75                  | S6110201-6110202XX | 18         | 18                   | 18                      | 65.0            | 0.23      | 0.334                                            | 0.22 | 0.460                                               | 0.26 | 0.460                                              | 0.26 | 0.460                                           | 0.26 | 3-13   |
| P125                 | S4330230-4330224XX | 10         | 10                   | 10                      | 100.0           | 0.39      | 0.050                                            | 0.15 | 0.052                                               | 0.16 | 0.146                                              | 0.26 | 0.146                                           | 0.26 | 3-2    |
| P74                  | S6100207-6110201XX | 18         | 18                   | 18                      | 388.0           | 0.20      | 0.331                                            | 0.22 | 0.458                                               | 0.26 | 0.458                                              | 0.26 | 0.458                                           | 0.26 | 3-9    |
| P7                   | S4350214-4350206XX | 10         | 10                   | 10                      | 185.0           | 0.35      | 0.036                                            | 0.15 | 0.037                                               | 0.15 | 0.115                                              | 0.26 | 0.115                                           | 0.26 | 3-4    |
| P268                 | S4740203-4740204XX | 12         | 12                   | 12                      | 280.3           | 0.19      | 0.076                                            | 0.23 | 0.079                                               | 0.24 | 0.069                                              | 0.26 | 0.069                                           | 0.26 | 3-5    |
| P121                 | S4480208-4480219XX | 10         | 10                   | 10                      | 297.0           | 0.29      | 0.035                                            | 0.16 | 0.036                                               | 0.16 | 0.067                                              | 0.25 | 0.067                                           | 0.25 | 3-2    |
| P3                   | S4340201-4350211XX | 10         | 10                   | 10                      | 300.0           | 0.03      | 0.019                                            | 0.16 | 0.020                                               | 0.16 | 0.050                                              | 0.25 | 0.050                                           | 0.25 | 3-3    |
| P2                   | S4350219-4340201XX | 10         | 10                   | 10                      | 395.0           | 0.33      | 0.015                                            | 0.15 | 0.016                                               | 0.16 | 0.040                                              | 0.24 | 0.040                                           | 0.24 | 3-3    |
| P202                 | S4340203-4340204XX | 12         | 12                   | 12                      | 315.3           | 0.71      | 0.134                                            | 0.23 | 0.143                                               | 0.23 | 0.146                                              | 0.24 | 0.146                                           | 0.24 | 3-3    |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P194                 | S4330225-4330206XX | 15         | 15                   | 15                      | 100.0           | 0.46      | 0.153                                            | 0.20 | 0.159                                               | 0.20 | 0.199                                              | 0.23 | 0.199                                           | 0.23 | 3-2    |
| P6                   | S4350213-4350214XX | 10         | 10                   | 10                      | 79.0            | 0.43      | 0.033                                            | 0.14 | 0.034                                               | 0.14 | 0.087                                              | 0.23 | 0.087                                           | 0.23 | 3-4    |
| P195                 | S4330206-4330203XX | 15         | 15                   | 15                      | 185.7           | 0.31      | 0.281                                            | 0.20 | 0.293                                               | 0.20 | 0.375                                              | 0.23 | 0.375                                           | 0.23 | 3-2    |
| P211                 | S4330213-4330207XX | 15         | 15                   | 15                      | 335.0           | 0.36      | 0.124                                            | 0.19 | 0.130                                               | 0.20 | 0.171                                              | 0.22 | 0.171                                           | 0.22 | 3-2    |
| P8                   | S4350206-4350202XX | 10         | 10                   | 10                      | 129.0           | 0.30      | 0.038                                            | 0.13 | 0.039                                               | 0.13 | 0.116                                              | 0.22 | 0.116                                           | 0.22 | 3-4    |
| P257                 | S4470209-4470202XX | 12         | 12                   | 12                      | 103.0           | 0.51      | 0.071                                            | 0.14 | 0.075                                               | 0.15 | 0.172                                              | 0.22 | 0.172                                           | 0.22 | 3-4    |
| P261                 | S4750203-4750204XX | 10         | 10                   | 10                      | 250.5           | 0.16      | 0.017                                            | 0.15 | 0.018                                               | 0.17 | 0.026                                              | 0.22 | 0.026                                           | 0.22 | 3-5    |
| P5                   | S4350212-4350213XX | 10         | 10                   | 10                      | 300.0           | 0.33      | 0.032                                            | 0.13 | 0.033                                               | 0.14 | 0.086                                              | 0.22 | 0.086                                           | 0.22 | 3-3    |
| P256                 | S4470203-4470209XX | 12         | 12                   | 12                      | 197.0           | 0.69      | 0.069                                            | 0.14 | 0.074                                               | 0.14 | 0.171                                              | 0.21 | 0.171                                           | 0.21 | 3-4    |
| P254                 | S4080202-4080201XX | 10         | 10                   | 10                      | 212.0           | 0.78      | 0.024                                            | 0.18 | 0.025                                               | 0.18 | 0.031                                              | 0.21 | 0.031                                           | 0.21 | 3-3    |
| P192                 | S4080211-4330211XX | 15         | 15                   | 15                      | 270.3           | 0.39      | 0.138                                            | 0.18 | 0.144                                               | 0.18 | 0.184                                              | 0.21 | 0.184                                           | 0.21 | 3-2    |
| P193                 | S4330211-4330225XX | 15         | 15                   | 15                      | 367.6           | 0.20      | 0.143                                            | 0.18 | 0.150                                               | 0.18 | 0.189                                              | 0.21 | 0.189                                           | 0.21 | 3-2    |
| P255                 | S4460210-4470203XX | 12         | 12                   | 12                      | 300.0           | 0.74      | 0.066                                            | 0.13 | 0.071                                               | 0.13 | 0.170                                              | 0.20 | 0.170                                           | 0.20 | 3-4    |
| P4                   | S4350211-4350212XX | 10         | 10                   | 10                      | 302.0           | 0.60      | 0.027                                            | 0.12 | 0.028                                               | 0.12 | 0.073                                              | 0.20 | 0.073                                           | 0.20 | 3-3    |
| P253                 | S4080203-4080202XX | 10         | 10                   | 10                      | 347.4           | 0.01      | 0.020                                            | 0.18 | 0.021                                               | 0.18 | 0.026                                              | 0.20 | 0.026                                           | 0.20 | 3-3    |
| P295                 | S4460209-4460210XX | 12         | 12                   | 12                      | 300.0           | 0.73      | 0.053                                            | 0.12 | 0.057                                               | 0.12 | 0.149                                              | 0.19 | 0.149                                           | 0.19 | 3-4    |
| P191                 | S4080201-4080211XX | 15         | 15                   | 15                      | 396.9           | 0.25      | 0.128                                            | 0.17 | 0.134                                               | 0.17 | 0.173                                              | 0.19 | 0.173                                           | 0.19 | 3-2    |
| P120                 | S4480205-4480208XX | 10         | 10                   | 10                      | 279.0           | 0.30      | 0.028                                            | 0.14 | 0.029                                               | 0.14 | 0.052                                              | 0.19 | 0.052                                           | 0.19 | 3-15   |
| P252                 | S4080204-4080203XX | 10         | 10                   | 10                      | 329.6           | 0.31      | 0.012                                            | 0.17 | 0.013                                               | 0.17 | 0.014                                              | 0.19 | 0.014                                           | 0.19 | 3-3    |
| P278                 | S4730203-4730209XX | 10         | 10                   | 10                      | 214.0           | 0.94      | 0.003                                            | 0.15 | 0.003                                               | 0.16 | 0.003                                              | 0.18 | 0.003                                           | 0.18 | 3-6    |
| P214                 | S4470205-4470206XX | 10         | 10                   | 10                      | 260.4           | 1.12      | 0.093                                            | 0.16 | 0.098                                               | 0.17 | 0.108                                              | 0.18 | 0.108                                           | 0.18 | 3-4    |
| P283                 | S4330227-4480205XX | 10         | 10                   | 10                      | 415.0           | 0.28      | 0.024                                            | 0.13 | 0.025                                               | 0.13 | 0.048                                              | 0.17 | 0.048                                           | 0.17 | 3-15   |
| P210                 | S4330202-4330213XX | 15         | 15                   | 15                      | 170.0           | 0.35      | 0.111                                            | 0.15 | 0.116                                               | 0.15 | 0.150                                              | 0.17 | 0.150                                           | 0.17 | 3-2    |
| P294                 | S4460208-4460209XX | 10         | 10                   | 10                      | 300.0           | 1.13      | 0.039                                            | 0.12 | 0.042                                               | 0.13 | 0.048                                              | 0.17 | 0.048                                           | 0.17 | 3-4    |
| P213                 | S4340214-4470205XX | 10         | 10                   | 10                      | 264.7           | 2.03      | 0.089                                            | 0.16 | 0.094                                               | 0.16 | 0.104                                              | 0.17 | 0.104                                           | 0.17 | 3-3    |



Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P206                 | S4340211-4340207XX | 15         | 15                   | 15                      | 409.3           | 0.20      | 0.094                                            | 0.15 | 0.100                                               | 0.15 | 0.124                                              | 0.17 | 0.124                                           | 0.17 | 3-3    |
| P209                 | S4330226-4330202XX | 15         | 15                   | 15                      | 11.0            | 0.36      | 0.107                                            | 0.14 | 0.112                                               | 0.15 | 0.147                                              | 0.17 | 0.147                                           | 0.17 | 3-3    |
| P73                  | S6100210-6100207XX | 18         | 18                   | 18                      | 388.0           | 0.20      | 0.028                                            | 0.14 | 0.028                                               | 0.16 | 0.028                                              | 0.16 | 0.028                                           | 0.16 | 3-9    |
| P267                 | S4740202-4740203XX | 12         | 12                   | 12                      | 293.9           | 0.29      | 0.070                                            | 0.17 | 0.072                                               | 0.18 | 0.061                                              | 0.16 | 0.061                                           | 0.16 | 3-5    |
| P287                 | S5280204-5280205XX | 10         | 10                   | 10                      | 156.0           | 0.50      | 0.022                                            | 0.11 | 0.023                                               | 0.11 | 0.024                                              | 0.16 | 0.024                                           | 0.11 | 3-7    |
| P190                 | S4080229-4080201XX | 15         | 15                   | 15                      | 75.0            | 1.04      | 0.095                                            | 0.14 | 0.100                                               | 0.14 | 0.129                                              | 0.16 | 0.129                                           | 0.16 | 3-3    |
| P188                 | S4340213-4080230XX | 12         | 12                   | 12                      | 366.0           | 0.96      | 0.087                                            | 0.14 | 0.091                                               | 0.14 | 0.119                                              | 0.16 | 0.119                                           | 0.16 | 3-3    |
| P186                 | S4070204-4070206XX | 10         | 10                   | 10                      | 262.4           | 0.51      | 0.020                                            | 0.13 | 0.022                                               | 0.13 | 0.038                                              | 0.16 | 0.038                                           | 0.16 | 3-3    |
| P189                 | S4080230-4080229XX | 12         | 12                   | 12                      | 280.2           | 0.96      | 0.093                                            | 0.13 | 0.098                                               | 0.14 | 0.128                                              | 0.16 | 0.128                                           | 0.16 | 3-3    |
| P208                 | S4330214-4330226XX | 15         | 15                   | 15                      | 319.5           | 0.59      | 0.107                                            | 0.13 | 0.112                                               | 0.14 | 0.146                                              | 0.16 | 0.146                                           | 0.16 | 3-3    |
| P187                 | S4070206-4340213XX | 12         | 12                   | 12                      | 186.8           | 0.89      | 0.080                                            | 0.13 | 0.085                                               | 0.14 | 0.113                                              | 0.16 | 0.113                                           | 0.16 | 3-3    |
| P282                 | S4330228-4330227XX | 10         | 10                   | 10                      | 36.1            | 0.44      | 0.017                                            | 0.11 | 0.018                                               | 0.11 | 0.033                                              | 0.15 | 0.033                                           | 0.15 | 3-3    |
| P205                 | S4340214-4340211XX | 15         | 15                   | 15                      | 426.4           | 1.11      | 0.083                                            | 0.13 | 0.088                                               | 0.14 | 0.098                                              | 0.15 | 0.098                                           | 0.15 | 3-3    |
| P1                   | S4350210-4350219XX | 10         | 10                   | 10                      | 390.0           | 0.33      | 0.009                                            | 0.09 | 0.010                                               | 0.09 | 0.037                                              | 0.15 | 0.037                                           | 0.15 | 3-3    |
| P260                 | S4760202-4750203XX | 10         | 10                   | 10                      | 350.4           | 0.14      | 0.014                                            | 0.12 | 0.014                                               | 0.12 | 0.022                                              | 0.14 | 0.022                                           | 0.14 | 3-5    |
| P207                 | S4340207-4330214XX | 15         | 15                   | 15                      | 267.8           | 0.58      | 0.100                                            | 0.12 | 0.105                                               | 0.13 | 0.130                                              | 0.14 | 0.130                                           | 0.14 | 3-3    |
| P266                 | S4750209-4740202XX | 12         | 12                   | 12                      | 237.9           | 0.32      | 0.061                                            | 0.15 | 0.062                                               | 0.16 | 0.049                                              | 0.14 | 0.049                                           | 0.14 | 3-5    |
| P185                 | S4070213-4070204XX | 10         | 10                   | 10                      | 278.2           | 0.20      | 0.013                                            | 0.10 | 0.014                                               | 0.10 | 0.025                                              | 0.13 | 0.025                                           | 0.13 | 3-3    |
| P281                 | S4340206-4330228XX | 10         | 10                   | 10                      | 208.5           | 0.43      | 0.017                                            | 0.09 | 0.017                                               | 0.09 | 0.032                                              | 0.13 | 0.032                                           | 0.13 | 3-3    |
| P297                 | S4350215-4350216XX | 8          | 8                    | 8                       | 95.0            | 3.31      | 0.029                                            | 0.11 | 0.032                                               | 0.12 | 0.037                                              | 0.13 | 0.037                                           | 0.13 | 3-4    |
| P271                 | S4750215-4750209XX | 10         | 10                   | 10                      | 40.4            | 0.79      | 0.042                                            | 0.15 | 0.042                                               | 0.15 | 0.019                                              | 0.12 | 0.019                                           | 0.12 | 3-5    |
| P293                 | S4350217-4460208XX | 10         | 10                   | 10                      | 300.0           | 1.13      | 0.035                                            | 0.11 | 0.038                                               | 0.11 | 0.044                                              | 0.12 | 0.044                                           | 0.12 | 3-4    |
| P265                 | S4750210-4750209XX | 10         | 10                   | 10                      | 250.7           | 1.84      | 0.017                                            | 0.12 | 0.018                                               | 0.12 | 0.024                                              | 0.12 | 0.024                                           | 0.12 | 3-5    |
| P276                 | S4880215-4880201XX | 10         | 10                   | 10                      | 338.0           | 0.77      | 0.034                                            | 0.11 | 0.035                                               | 0.12 | 0.036                                              | 0.12 | 0.036                                           | 0.12 | 3-6    |
| P292                 | S4350216-4350217XX | 10         | 10                   | 10                      | 160.0           | 1.10      | 0.031                                            | 0.10 | 0.034                                               | 0.11 | 0.040                                              | 0.11 | 0.040                                           | 0.11 | 3-4    |





Table A-7 Comparison of PWWF Results

| Pipe ID <sup>1</sup> | Sewer Main ID      | Ex. D(in.) | WWMP CIP D.<br>(in.) | PPSP<br>CIP D.<br>(in.) | Length<br>(ft.) | Slope (%) | 2015 PWWF w/o<br>PPSP using<br>Existing Diameter |      | 2035 PWWF w/o<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using<br>WWMP CIP<br>Diameter |      | 2035 PWWF w/<br>PPSP using PPSP<br>CIP Diameter |      | Figure |
|----------------------|--------------------|------------|----------------------|-------------------------|-----------------|-----------|--------------------------------------------------|------|-----------------------------------------------------|------|----------------------------------------------------|------|-------------------------------------------------|------|--------|
|                      |                    |            |                      |                         |                 |           | Max. Flow<br>(mgd)                               | d/D  | Max. Flow<br>(mgd)                                  | d/D  | Max. Flow<br>(mgd)                                 | d/D  | Max. Flow<br>(mgd)                              | d/D  |        |
| P291                 | S5280206-5280205XX | 12         | 12                   | 12                      | 240.0           | 0.50      | 0.005                                            | 0.07 | 0.005                                               | 0.07 | 0.006                                              | 0.11 | 0.006                                           | 0.07 | 3-7    |
| P280                 | S4340212-4340206XX | 10         | 10                   | 10                      | 320.3           | 0.87      | 0.014                                            | 0.08 | 0.014                                               | 0.08 | 0.025                                              | 0.11 | 0.025                                           | 0.11 | 3-3    |
| P259                 | S4760201-4760202XX | 10         | 10                   | 10                      | 356.4           | 0.15      | 0.005                                            | 0.09 | 0.005                                               | 0.09 | 0.007                                              | 0.11 | 0.007                                           | 0.11 | 3-5    |
| P286                 | S5280203-5280204XX | 10         | 10                   | 10                      | 185.0           | 0.42      | 0.019                                            | 0.10 | 0.020                                               | 0.10 | 0.021                                              | 0.10 | 0.021                                           | 0.10 | 3-7    |
| P275                 | S4880203-4880215XX | 10         | 10                   | 10                      | 358.2           | 1.32      | 0.027                                            | 0.10 | 0.028                                               | 0.10 | 0.028                                              | 0.10 | 0.028                                           | 0.10 | 3-6    |
| P270                 | S4750217-4750215XX | 10         | 10                   | 10                      | 300.0           | 0.30      | 0.012                                            | 0.10 | 0.013                                               | 0.11 | 0.019                                              | 0.10 | 0.019                                           | 0.10 | 3-5    |
| P285                 | S5280202-5280203XX | 10         | 10                   | 10                      | 195.0           | 0.50      | 0.017                                            | 0.10 | 0.018                                               | 0.10 | 0.018                                              | 0.10 | 0.018                                           | 0.10 | 3-7    |
| P269                 | S4860203-4750217XX | 10         | 10                   | 10                      | 316.3           | 0.77      | 0.005                                            | 0.07 | 0.005                                               | 0.07 | 0.009                                              | 0.09 | 0.009                                           | 0.09 | 3-5    |
| P274                 | S4730204-4880203XX | 10         | 10                   | 10                      | 360.3           | 1.03      | 0.019                                            | 0.09 | 0.020                                               | 0.09 | 0.020                                              | 0.09 | 0.020                                           | 0.09 | 3-6    |
| P284                 | S5280208-5280202XX | 10         | 10                   | 10                      | 254.0           | 0.56      | 0.011                                            | 0.08 | 0.012                                               | 0.08 | 0.011                                              | 0.08 | 0.011                                           | 0.08 | 3-7    |
| P264                 | S4750208-4750210XX | 10         | 10                   | 10                      | 198.1           | 0.85      | 0.012                                            | 0.07 | 0.013                                               | 0.07 | 0.017                                              | 0.08 | 0.017                                           | 0.08 | 3-5    |
| P273                 | S4740201-4730204XX | 10         | 10                   | 10                      | 341.1           | 1.03      | 0.013                                            | 0.07 | 0.014                                               | 0.08 | 0.014                                              | 0.08 | 0.014                                           | 0.08 | 3-6    |
| P279                 | S4340209-4340214XX | 15         | 15                   | 15                      | 297.6           | 0.93      | 0.010                                            | 0.07 | 0.010                                               | 0.07 | 0.016                                              | 0.07 | 0.016                                           | 0.07 | 3-3    |
| P263                 | S4740207-4750208XX | 10         | 10                   | 10                      | 244.6           | 0.82      | 0.005                                            | 0.06 | 0.005                                               | 0.06 | 0.008                                              | 0.07 | 0.008                                           | 0.07 | 3-5    |
| P72                  | S6100209-6100210XX | 18         | 18                   | 18                      | 384.0           | 0.20      | 0.014                                            | 0.06 | 0.014                                               | 0.06 | 0.014                                              | 0.06 | 0.014                                           | 0.06 | 3-9    |
| P272                 | S4740213-4740201XX | 10         | 10                   | 10                      | 342.8           | 1.07      | 0.005                                            | 0.06 | 0.005                                               | 0.06 | 0.006                                              | 0.06 | 0.006                                           | 0.06 | 3-6    |
| P290                 | S5280207-5280206XX | 12         | 12                   | 12                      | 21.0            | 0.50      | 0.001                                            | 0.03 | 0.001                                               | 0.03 | 0.002                                              | 0.03 | 0.002                                           | 0.03 | 3-7    |
| P71                  | S6100205-6100209XX | 18         | 18                   | 18                      | 384.8           | 0.22      | 0.000                                            | 0.02 | 0.000                                               | 0.02 | 0.000                                              | 0.02 | 0.000                                           | 0.02 | 3-9    |
| P277                 | S4731001-4730203XX | 10         | 10                   | 10                      | 15.0            | 0.48      | 0.000                                            | 0.02 | 0.000                                               | 0.02 | 0.000                                              | 0.02 | 0.000                                           | 0.02 | 3-6    |
| P289                 | S5131001-5280207XX | 12         | 12                   | 12                      | 200.0           | 0.50      | 0.000                                            | 0.01 | 0.000                                               | 0.01 | 0.001                                              | 0.02 | 0.001                                           | 0.02 | 3-7    |
| P119                 | S4480204-4480205XX | 10         | 10                   | 10                      | 6.0             | 1.67      | 0.000                                            | 0.00 | 0.000                                               | 0.00 | 0.000                                              | 0.00 | 0.000                                           | 0.00 | 3-15   |

\*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.