

10-YEAR RETURN PERIOD  
**STORM PIPE ANALYSIS**  
**HILLS AT HARRIS CREEK**  
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA



PREPARED BY: TOM TAYLOR  
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166  
305 CHURCH AT NORTH HILLS STREET, SUITE 1110 RALEIGH, NC 27609 |  
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## 1. STUDY DESCRIPTION

**\* This study utilized:**

- Auto Desk Storm and Sanitary Analysis Program for analyzing and designing stormwater sewers.

Calculation requirements:

- Auto Desk Storm and Sanitary Analysis Program for analyzing and designing stormwater sewers.
- The program used to model the storm sewer system utilizes the rational method for the quantity of stormwater input.

- Based on section A. DRAINAGE (page 16&17) of : Subdivision Manual January 2010 Revised December 2020: The minimum design frequency shall be as follows but may be increased at the recommendation of the State Hydraulics Engineer.

**1. Storm sewer collector - 10 years**

2. Cross drainage for Secondary Routes - 25 years
3. Cross drainage on primary and N.C. routes will be 50 years.
4. Minimum Cross Pipe diameter is 18", Minimum Driveway Pipes diameter is 15".
5. All drainage shall be consistent with criteria found in NCDOT - Guidelines for Drainage Studies and Hydraulic Design.

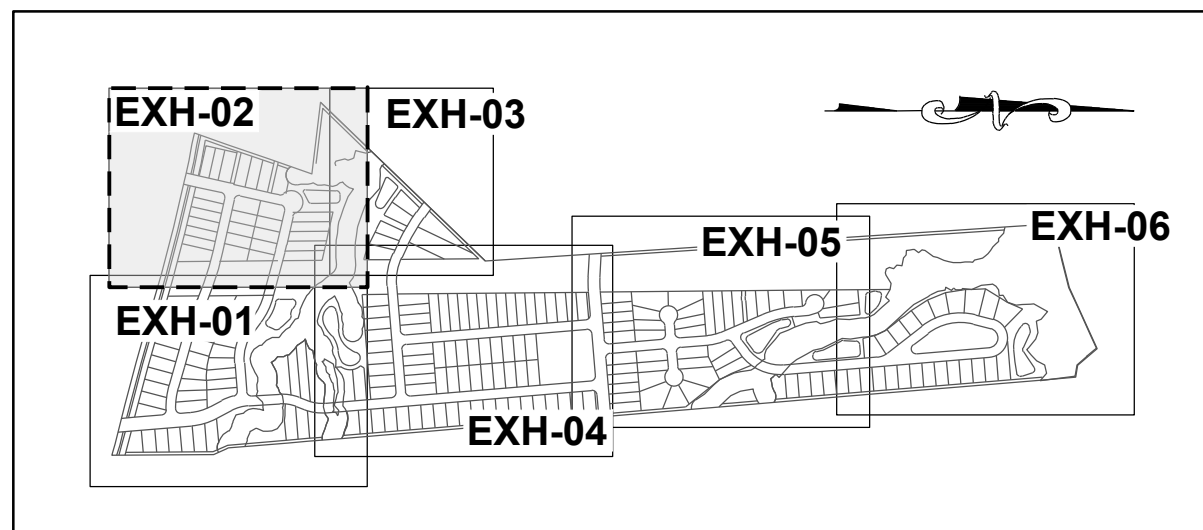
- Based on section 7.4.3 Rational Method (page 48) of: Guidelines for Drainage Studies and Hydraulic Design 2016: **minimum value for tc should be 10 minutes.**

- Based on section 10.5.2.2 Hydraulic Grade Line Development Procedure (page 89) of Guidelines for Drainage Studies and Hydraulic Design 2016:

12. Inlet rim elevation or top of junction. It is desirable for the water surface elevation to be a **minimum of 0.5 feet below this elevation.** If not, the pipe size should be increased or other measures taken as practicable to lower the water level.

## 2. DRAINAGE MAP





SITE KEY PLAN

LEGEND: DRAINAGE AREA



N/F SOUTHVIEW INVESTMENT LLC  
PIN: 1757738451  
DB: 19248 PG: 2000  
ZONING: R-30 (WC) USE: SF

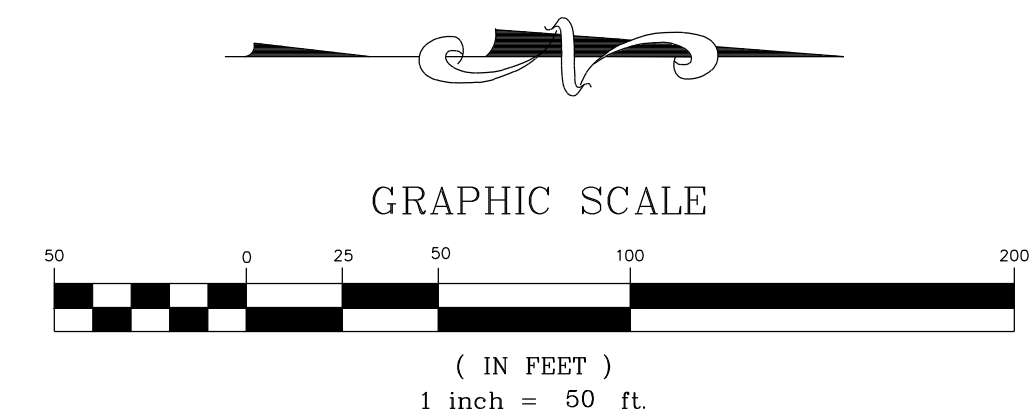
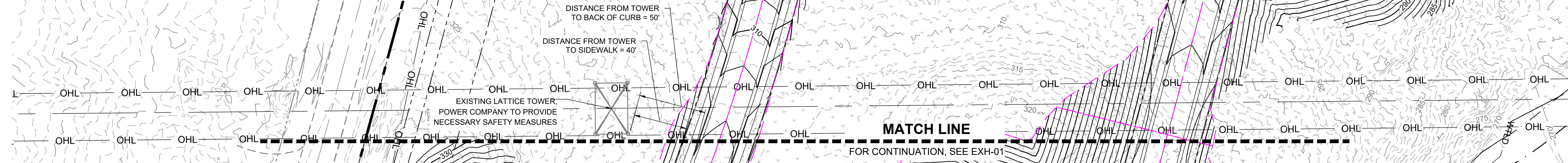
N/F HAMPTON, MELODY L  
PIN: 1757754163  
DB: 4777 PG: 764  
BM 1990 PG 511  
ZONING: R-30 (WC) USE: SF

N/F PREDDY, GENADIUS MAC PREDDY, MATTIE F  
PIN: 1757656586  
DB: 1882 PG: 342  
ZONING: R-30 (WC) USE: S

PRIVATE OFFSITE DRIVEWAY 1  
FOR PIN # 1757657746

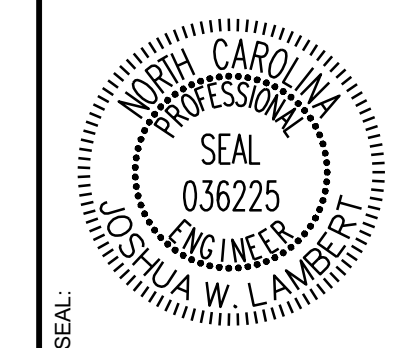
PRIVATE OFFSITE DRIVEWAY 2  
FOR PIN # 1757658917

SCM #1  
TOP: 273.0  
WSE: 277.0  
BOT: 274.0



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11/01/2024	11/01/2024
TOWN OF ROLESVILLE CID-24-07	TOWN OF ROLESVILLE VZ-CID-24-07
02	02
01	02
No.	No.
REVISIONS	REVISIONS
DATE	DATE
BY	BY



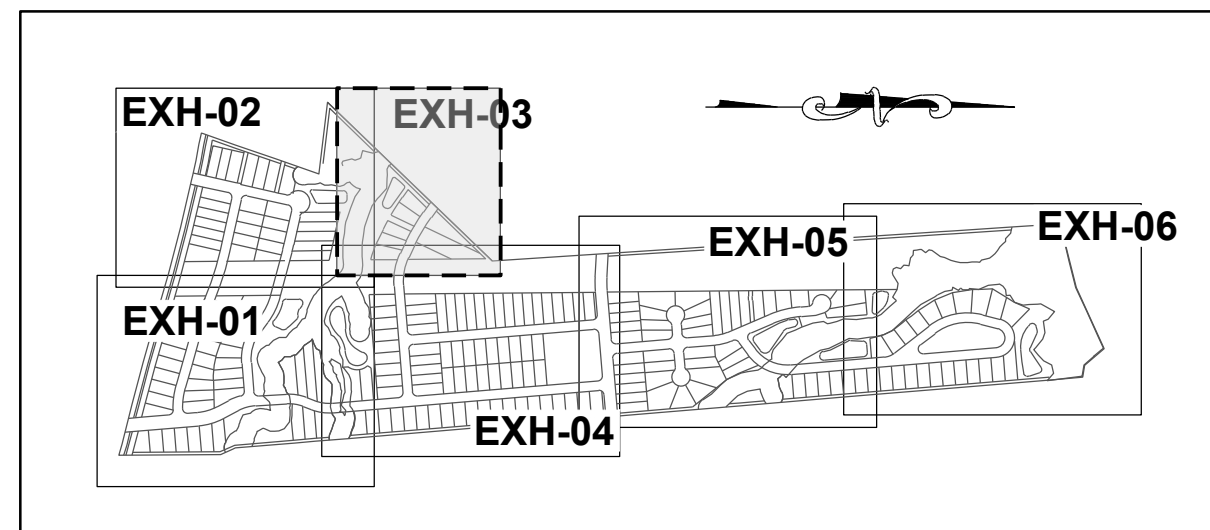
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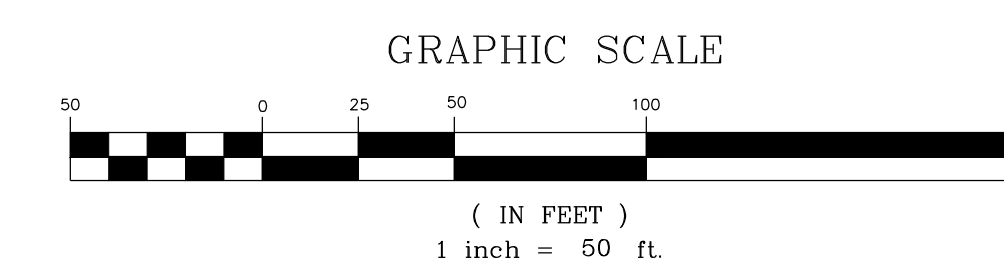
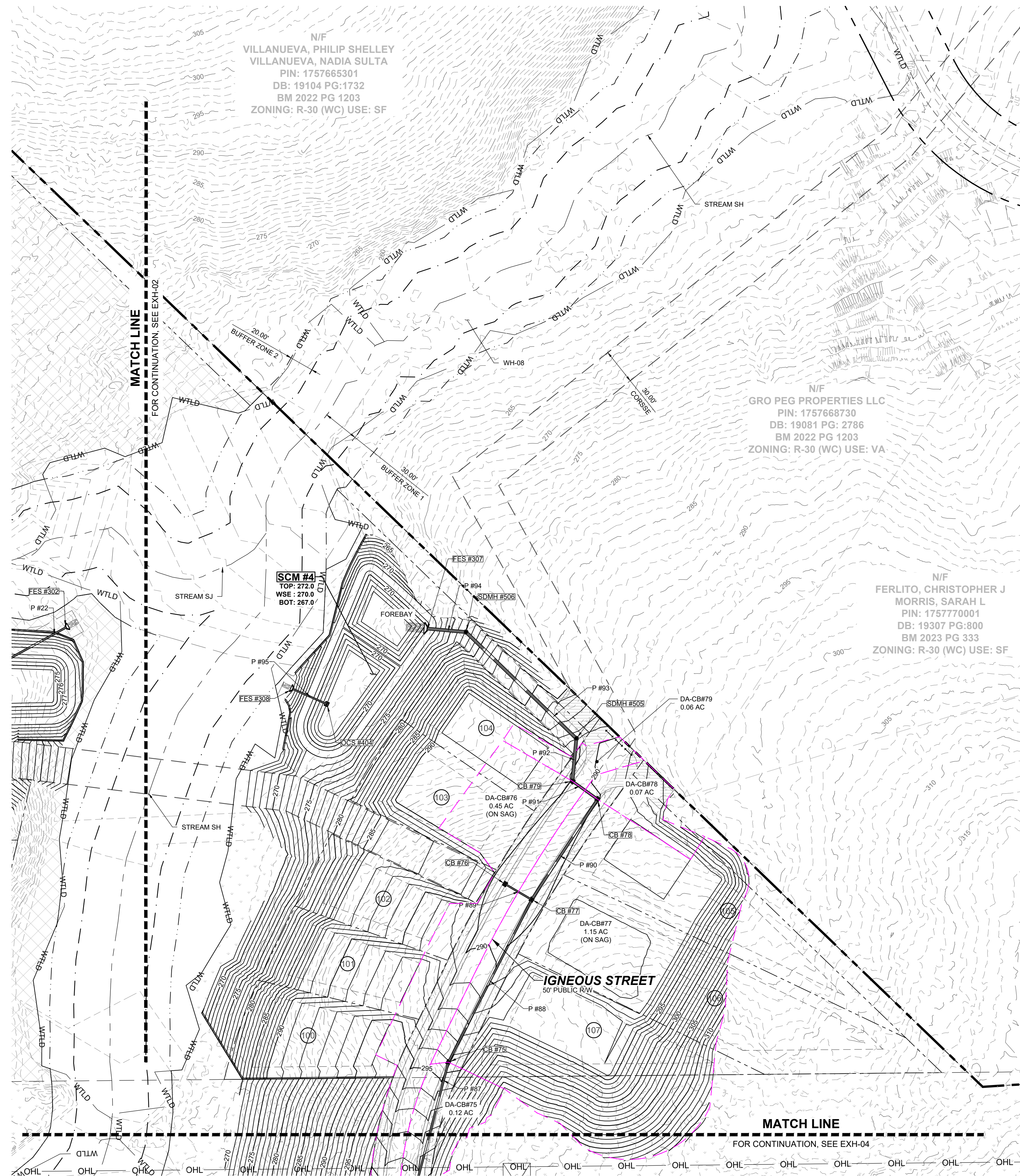
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HILLS AT HARRIS CREEK  
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
THE DRAINAGE MAP PLAN II

DRAWING SHEET  
EXH-02

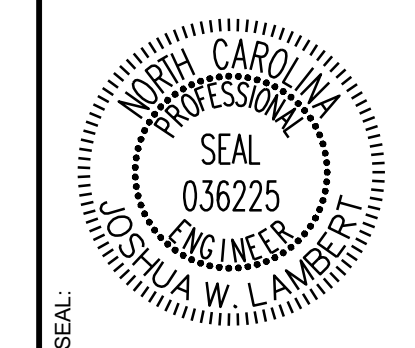


SITE KEY PLAN



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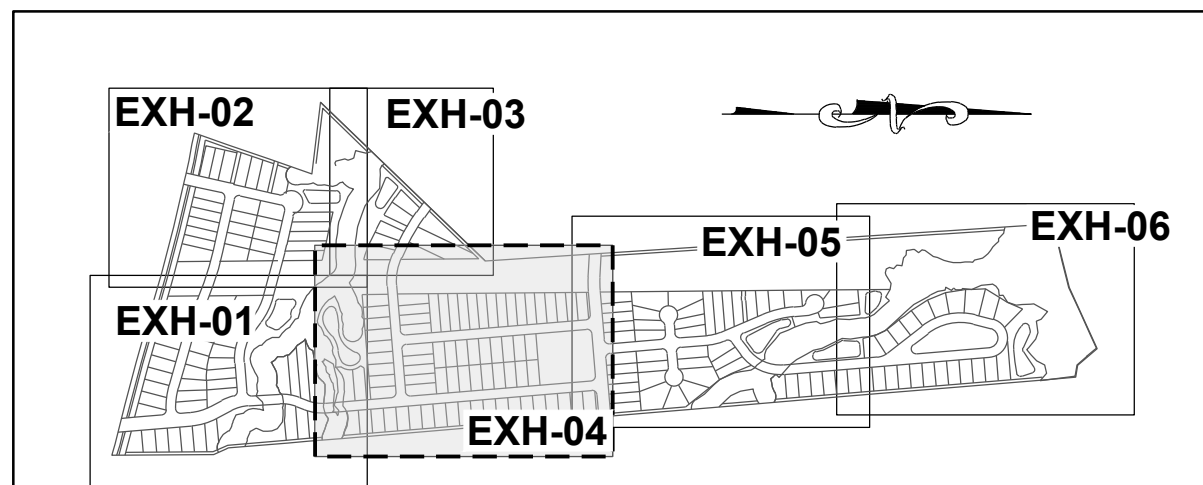
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TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
THE DRAINAGE MAP PLAN III

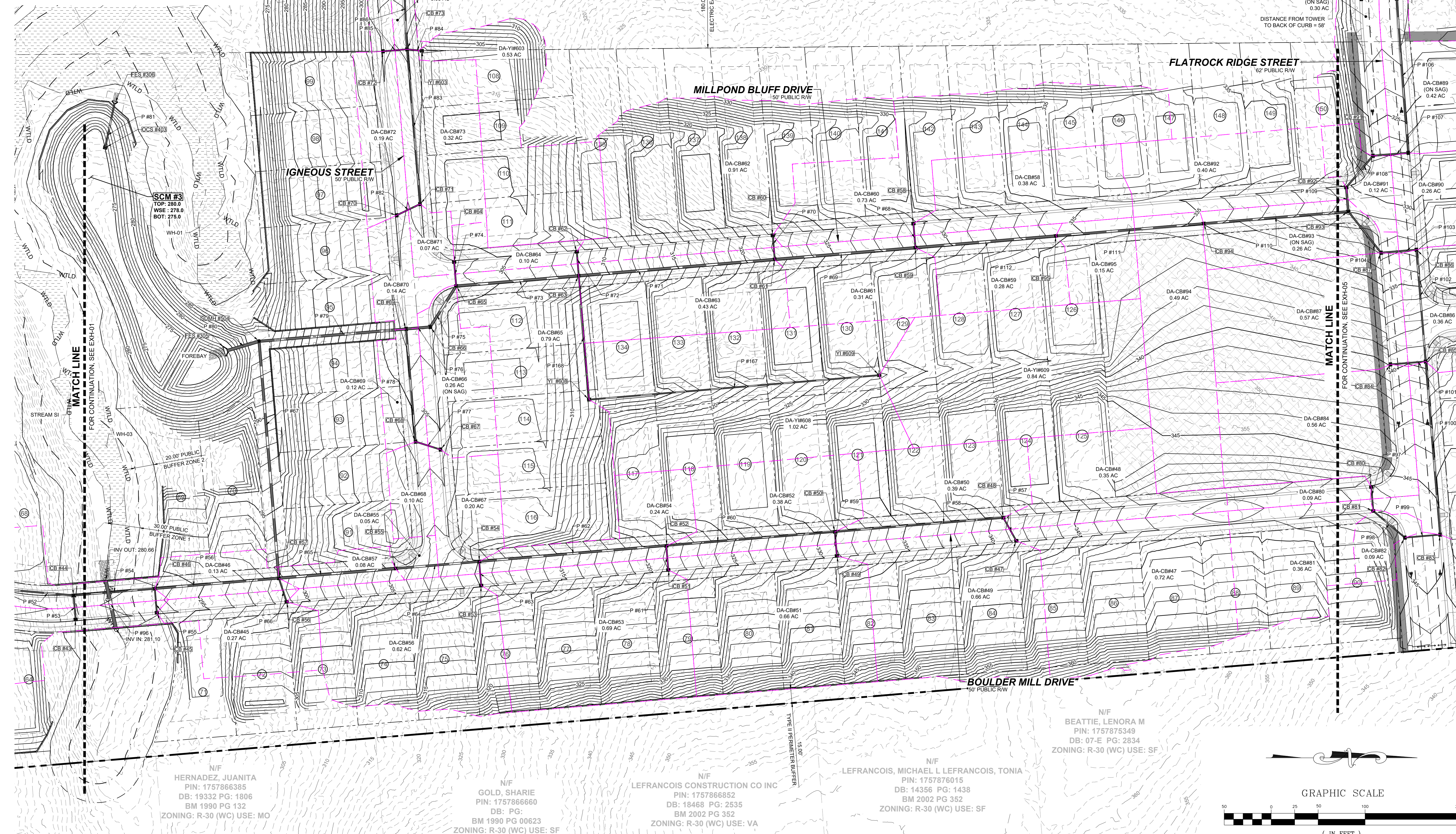
DRAWING SHEET  
**EXH-03**  
03 OF 06





**SITE KEY PLAN**

**LEGEND:**  
--- DRAINAGE AREA



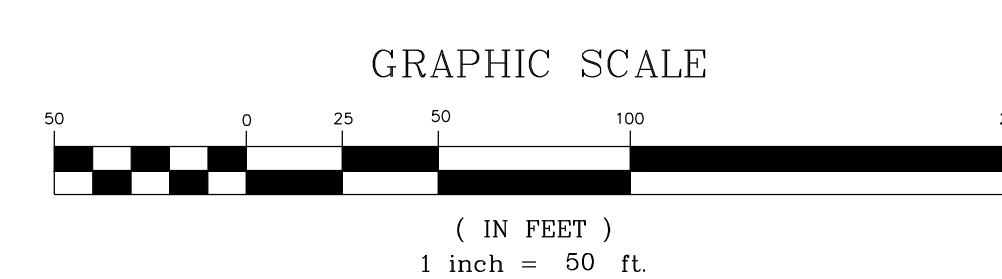
N/F  
HERNADEZ, JUANITA  
PIN: 1757866385  
DB: 19332 PG: 1806  
BM 1990 PG 132  
ZONING: R-30 (WC) USE: MO

N/F  
GOLD, SHARIE  
PIN: 1757866660  
DB: PG:  
BM 1990 PG 00623  
ZONING: R-30 (WC) USE: SF

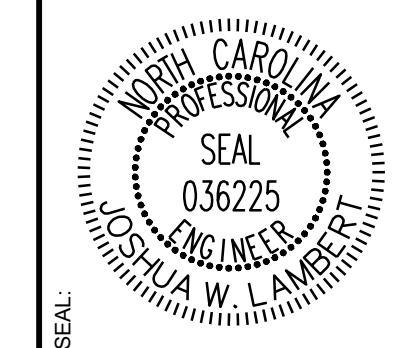
N/F  
LEFRANCOIS CONSTRUCTION CO INC  
PIN: 1757866852  
DB: 18468 PG: 2535  
BM 2002 PG 352  
ZONING: R-30 (WC) USE: VA

N/F  
LEFRANCOIS, MICHAEL L LEFRANCOIS, TONIA  
PIN: 1757876015  
DB: 14356 PG: 1438  
BM 2002 PG 352  
ZONING: R-30 (WC) USE: SF

N/F  
BEATTIE, LENORA M  
PIN: 1757875349  
DB: 07-E PG: 2834  
ZONING: R-30 (WC) USE: SF



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02			



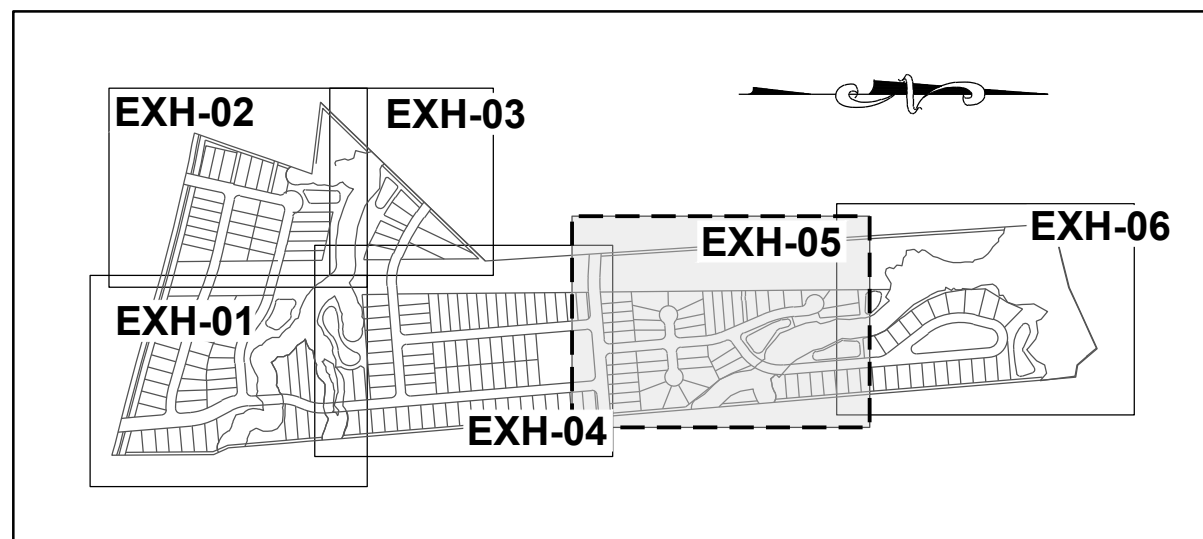
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TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA  
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THE DRAINAGE MAP PLAN IV

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EXH-04

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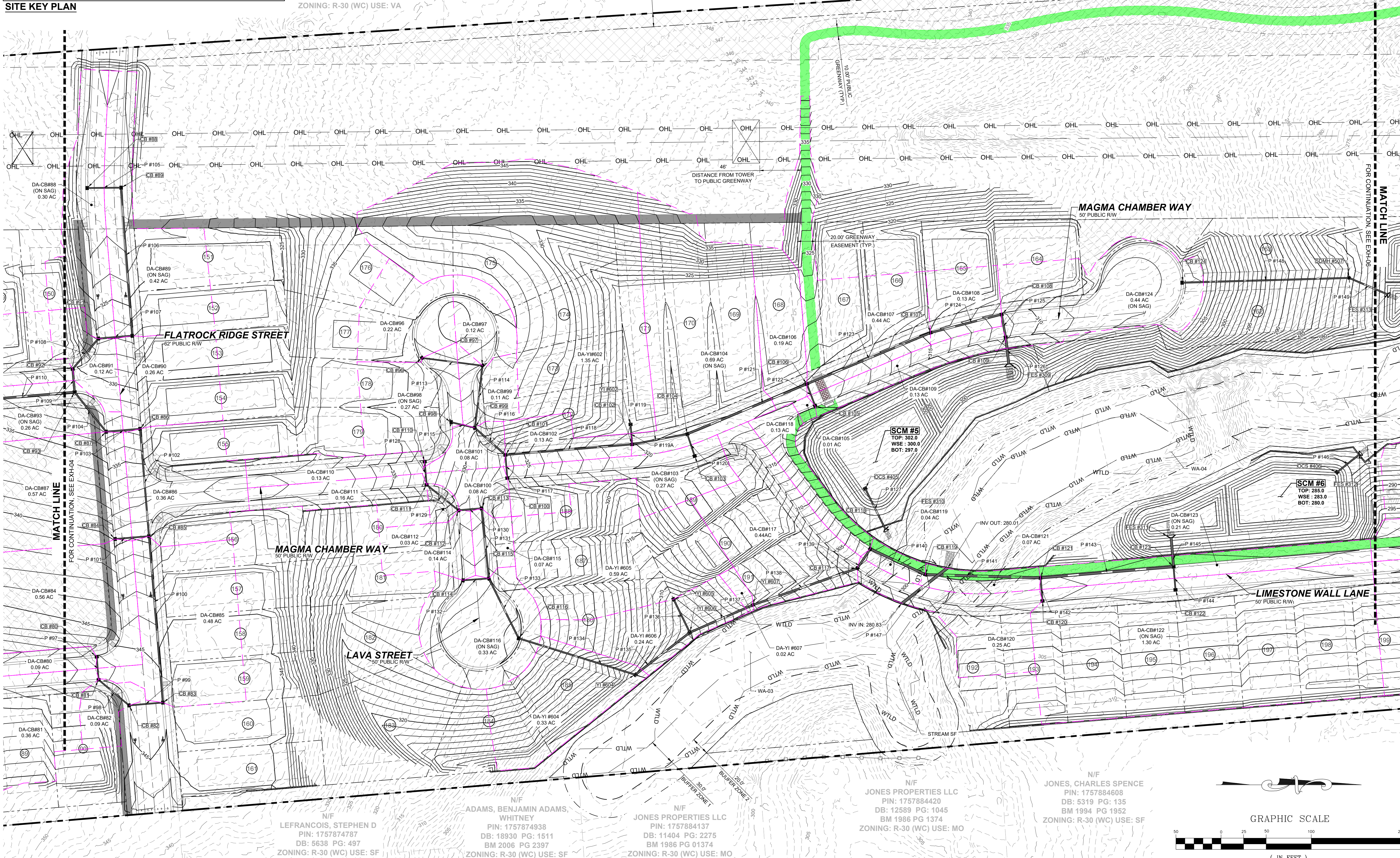


LEGEND: DRAINAGE AREA

N/F GRO PEG PROPERTIES LLC  
PIN: 1757771603  
DB: 18359 PG: 1707  
BM 2023 PG 333  
ZONING: R-30 (WC) USE: VA

N/F CARLE, SCOTT CARLE, THERESA  
PIN: 1757780258  
DB: 14863 PG: 2493  
BM 2008 PG 2198  
ZONING: R-30 (WC) USE: SF

N/F CARLE, SCOTT CARLE, THERESA  
PIN: 1757781960  
DB: 14863 PG: 2493  
BM 2009 PG 645  
ZONING: R-30 (WC) USE: VA



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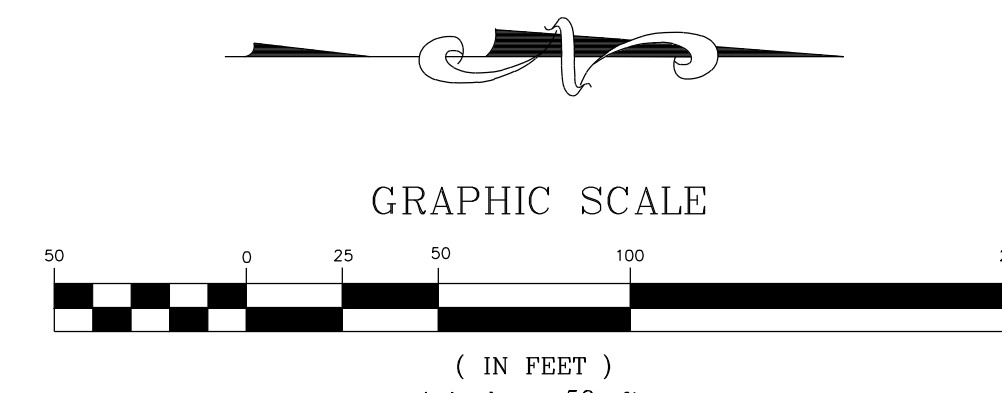
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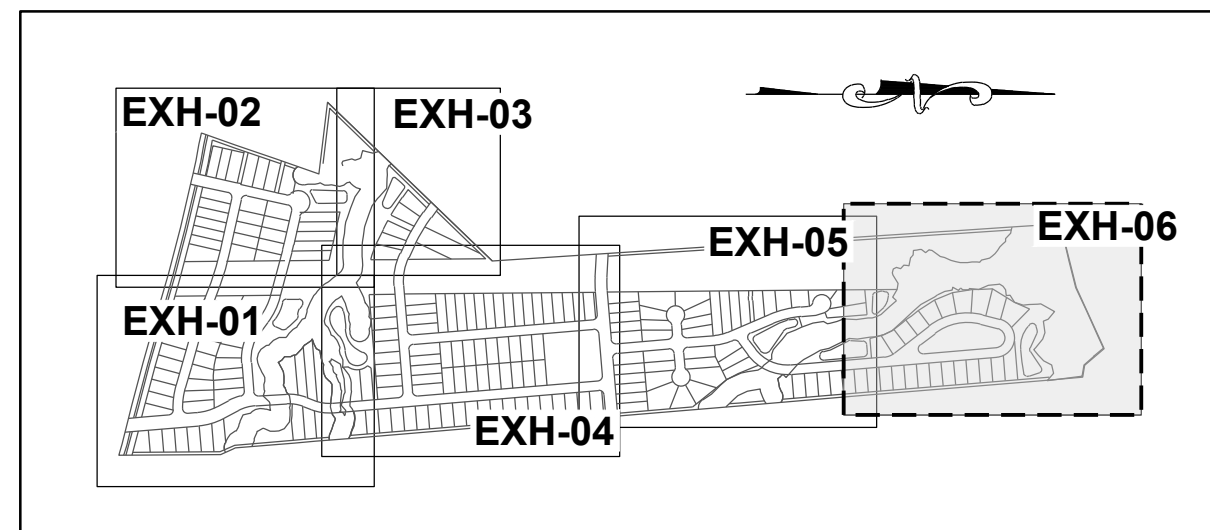
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HILLS AT HARRIS CREEK  
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
THE DRAINAGE MAP PLAN V

DRAWING SHEET  
EXH-05

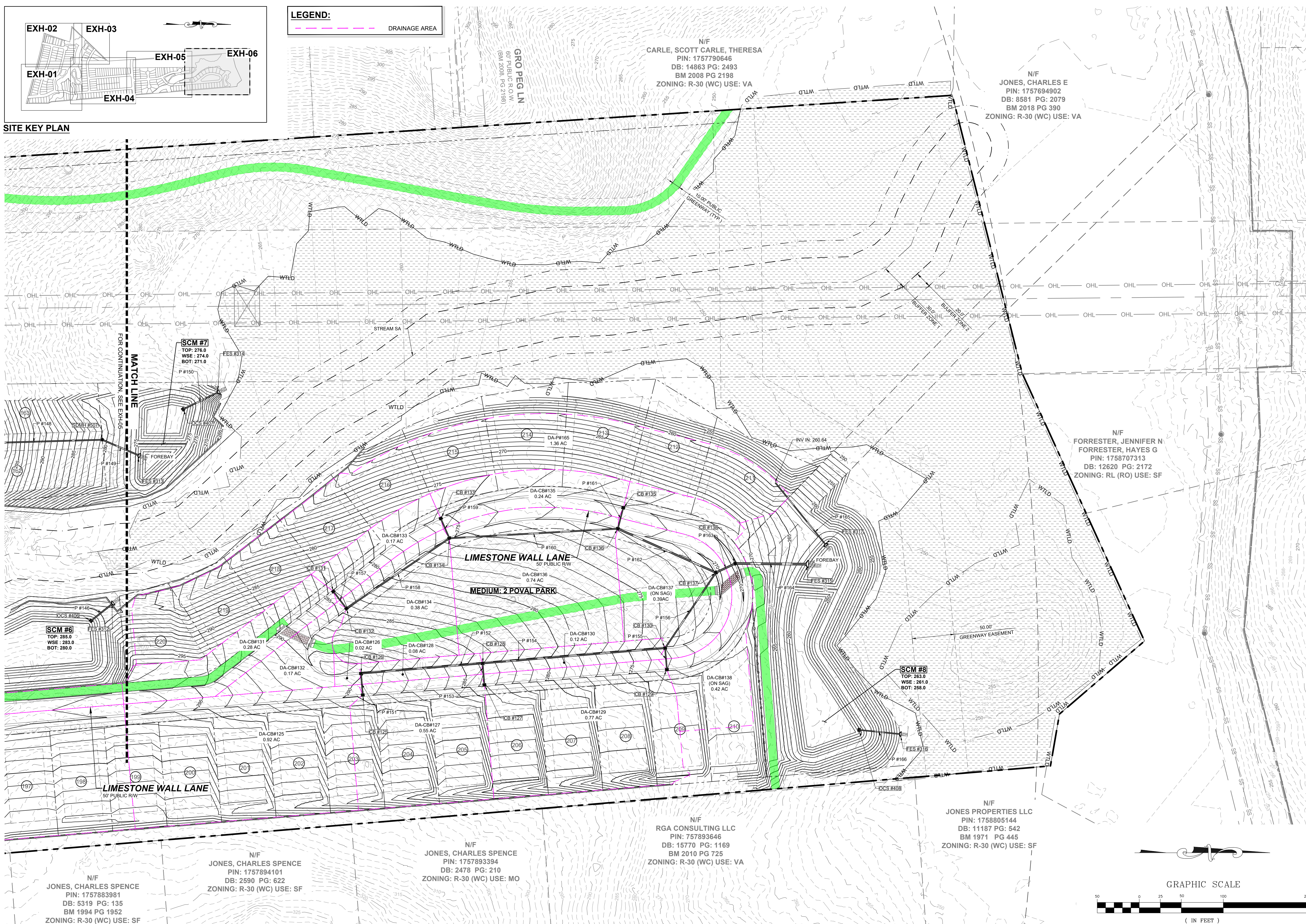


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SITE KEY PLAN

LEGEND: DRAINAGE AREA



N/F JONES, CHARLES SPENCE  
PIN: 1757894101  
DB: 2590 PG: 622  
ZONING: R-30 (WC) USE: SF

N/F JONES, CHARLES SPENCE  
PIN: 1757893394  
DB: 2478 PG: 210  
ZONING: R-30 (WC) USE: MO

N/F RGA CONSULTING LLC  
PIN: 757893646  
DB: 15770 PG: 1169  
BM 2010 PG 725  
ZONING: R-30 (WC) USE: VA

N/F JONES PROPERTIES LLC  
PIN: 1758805144  
DB: 11187 PG: 542  
BM 1971 PG 445  
ZONING: R-30 (WC) USE: SF

N/F JONES, CHARLES E  
PIN: 1757694902  
DB: 8581 PG: 2079  
BM 2018 PG 390  
ZONING: R-30 (WC) USE: VA

N/F FORRESTER, JENNIFER N  
FORRESTER, HAYES G  
PIN: 1758707313  
DB: 12620 PG: 2172  
ZONING: RL (RO) USE: SF

N/F CARLE, SCOTT CARLE, THERESA  
PIN: 1757790646  
DB: 14863 PG: 2493  
BM 2008 PG 2198  
ZONING: R-30 (WC) USE: VA

GRO PEG LN  
60' PUBLIC R.O.W.  
(BM 2008, PG 2198)

SCM #7  
TOP: 276.0  
WSE: 274.0  
BOT: 271.0

SCM #6  
TOP: 285.0  
WSE: 283.0  
BOT: 280.0

SCM #8  
TOP: 263.0  
WSE: 261.0  
BOT: 258.0

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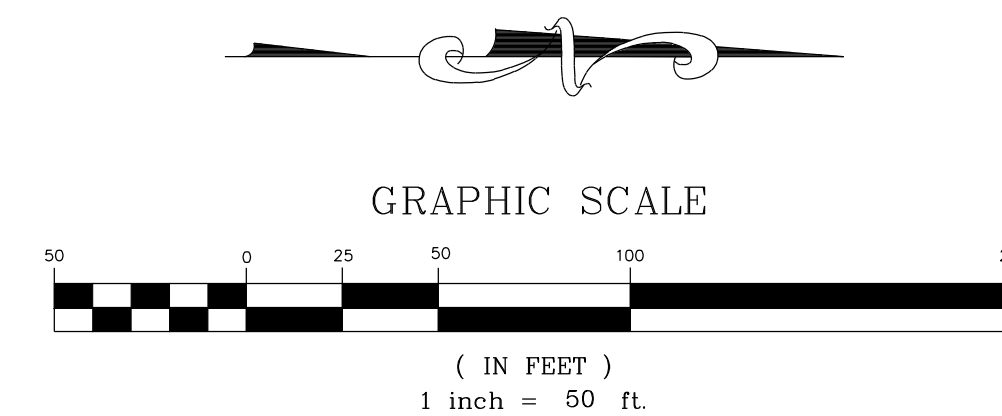
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THE DRAINAGE MAP PLAN VI

DRAWING SHEET  
EXH-06  
06 OF 06



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### **3. RAINFALL DATA**



**POINT PRECIPITATION FREQUENCY ESTIMATES**

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF\\_tabular](#) | [PF\\_graphical](#) | [Maps\\_&\\_aerials](#)

**PF tabular**

<b>PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)<sup>1</sup></b>										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	4.85 (4.44-5.30)	5.63 (5.16-6.16)	6.42 (5.88-7.01)	7.21 (6.59-7.86)	7.99 (7.28-8.71)	8.63 (7.82-9.40)	9.18 (8.28-10.0)	9.67 (8.68-10.6)	10.2 (9.08-11.2)	10.7 (9.44-11.7)
10-min	3.87 (3.55-4.24)	4.50 (4.13-4.92)	5.14 (4.71-5.61)	5.76 (5.27-6.29)	6.37 (5.80-6.95)	6.86 (6.23-7.48)	7.30 (6.58-7.95)	7.67 (6.88-8.37)	8.09 (7.19-8.83)	8.44 (7.44-9.23)
15-min	3.22 (2.95-3.53)	3.77 (3.46-4.12)	4.34 (3.97-4.73)	4.86 (4.44-5.30)	5.38 (4.90-5.87)	5.80 (5.26-6.32)	6.15 (5.54-6.70)	6.45 (5.78-7.04)	6.78 (6.03-7.41)	7.06 (6.22-7.72)
30-min	2.21 (2.02-2.42)	2.61 (2.39-2.85)	3.08 (2.82-3.36)	3.52 (3.22-3.84)	3.99 (3.63-4.35)	4.36 (3.96-4.76)	4.71 (4.24-5.13)	5.02 (4.50-5.48)	5.40 (4.80-5.89)	5.72 (5.04-6.25)
60-min	1.38 (1.26-1.51)	1.64 (1.50-1.79)	1.97 (1.81-2.15)	2.29 (2.10-2.50)	2.66 (2.42-2.89)	2.96 (2.68-3.22)	3.24 (2.92-3.53)	3.52 (3.16-3.84)	3.87 (3.44-4.23)	4.17 (3.68-4.56)
2-hr	0.806 (0.732-0.890)	0.959 (0.875-1.05)	1.17 (1.07-1.29)	1.38 (1.25-1.51)	1.62 (1.46-1.77)	1.83 (1.64-2.00)	2.03 (1.81-2.22)	2.24 (1.98-2.45)	2.51 (2.20-2.75)	2.75 (2.39-3.02)
3-hr	0.568 (0.516-0.630)	0.677 (0.618-0.747)	0.830 (0.755-0.915)	0.981 (0.890-1.08)	1.16 (1.05-1.28)	1.33 (1.19-1.46)	1.49 (1.33-1.64)	1.66 (1.47-1.82)	1.89 (1.65-2.07)	2.10 (1.81-2.30)
6-hr	0.342 (0.312-0.377)	0.407 (0.373-0.448)	0.499 (0.456-0.549)	0.591 (0.538-0.649)	0.705 (0.638-0.772)	0.808 (0.726-0.883)	0.911 (0.811-0.994)	1.02 (0.898-1.11)	1.17 (1.02-1.27)	1.30 (1.12-1.42)
12-hr	0.200 (0.183-0.220)	0.238 (0.219-0.262)	0.294 (0.269-0.322)	0.350 (0.319-0.383)	0.420 (0.380-0.459)	0.485 (0.435-0.527)	0.550 (0.489-0.598)	0.620 (0.545-0.673)	0.717 (0.620-0.778)	0.806 (0.687-0.876)
24-hr	0.119 (0.111-0.128)	0.144 (0.134-0.155)	0.181 (0.168-0.195)	0.211 (0.195-0.227)	0.251 (0.232-0.271)	0.284 (0.261-0.305)	0.317 (0.291-0.342)	0.352 (0.321-0.379)	0.400 (0.363-0.431)	0.438 (0.396-0.473)
2-day	0.069 (0.064-0.074)	0.083 (0.077-0.089)	0.103 (0.096-0.112)	0.120 (0.111-0.129)	0.142 (0.131-0.153)	0.160 (0.147-0.172)	0.178 (0.164-0.192)	0.197 (0.180-0.213)	0.223 (0.203-0.241)	0.244 (0.221-0.264)
3-day	0.048 (0.045-0.052)	0.058 (0.054-0.063)	0.073 (0.068-0.078)	0.084 (0.078-0.090)	0.099 (0.092-0.106)	0.112 (0.103-0.120)	0.124 (0.114-0.133)	0.137 (0.126-0.148)	0.155 (0.141-0.167)	0.169 (0.154-0.183)
4-day	0.038 (0.036-0.041)	0.046 (0.043-0.049)	0.057 (0.053-0.061)	0.066 (0.061-0.070)	0.078 (0.072-0.083)	0.087 (0.081-0.093)	0.097 (0.090-0.104)	0.107 (0.098-0.115)	0.121 (0.111-0.130)	0.132 (0.120-0.142)
7-day	0.025 (0.024-0.027)	0.030 (0.028-0.032)	0.037 (0.035-0.040)	0.042 (0.040-0.045)	0.050 (0.046-0.053)	0.056 (0.052-0.059)	0.062 (0.057-0.066)	0.068 (0.063-0.073)	0.077 (0.070-0.082)	0.083 (0.076-0.090)
10-day	0.020 (0.019-0.021)	0.024 (0.022-0.026)	0.029 (0.027-0.031)	0.033 (0.031-0.035)	0.038 (0.036-0.041)	0.042 (0.039-0.045)	0.047 (0.043-0.050)	0.051 (0.047-0.054)	0.057 (0.052-0.061)	0.061 (0.056-0.066)
20-day	0.013 (0.012-0.014)	0.016 (0.015-0.017)	0.019 (0.018-0.020)	0.021 (0.020-0.022)	0.024 (0.023-0.026)	0.027 (0.025-0.029)	0.029 (0.027-0.031)	0.032 (0.030-0.034)	0.036 (0.033-0.038)	0.038 (0.035-0.041)
30-day	0.011 (0.010-0.012)	0.013 (0.012-0.014)	0.015 (0.014-0.016)	0.017 (0.016-0.018)	0.019 (0.018-0.020)	0.021 (0.019-0.022)	0.023 (0.021-0.024)	0.024 (0.023-0.026)	0.027 (0.025-0.028)	0.028 (0.026-0.030)
45-day	0.009 (0.009-0.010)	0.011 (0.010-0.011)	0.012 (0.012-0.013)	0.014 (0.013-0.015)	0.015 (0.015-0.016)	0.017 (0.016-0.018)	0.018 (0.017-0.019)	0.019 (0.018-0.020)	0.021 (0.019-0.022)	0.022 (0.021-0.023)
60-day	0.008 (0.008-0.009)	0.010 (0.009-0.010)	0.011 (0.010-0.012)	0.012 (0.011-0.013)	0.013 (0.013-0.014)	0.014 (0.014-0.015)	0.015 (0.015-0.016)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.019 (0.017-0.020)

<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

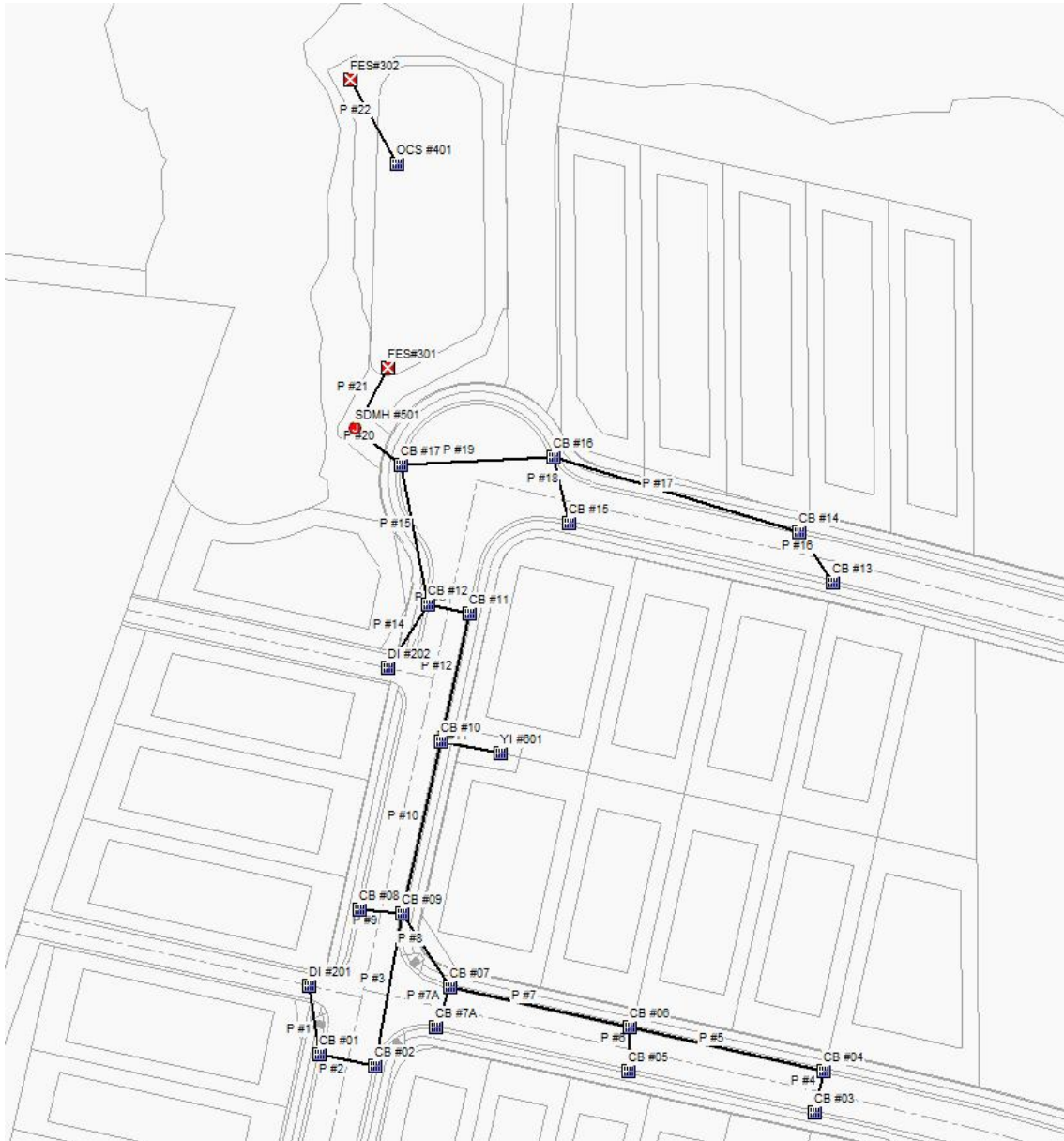
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**PF graphical**

## **4. THE TABLE REPORT & PROFILE HGL OUTPUTS**

## 4.1 STORM WATER AREA "A"

STORMWATER PIPING AND HYDRAULIC GRADE LINE FOR 10-YR STORM

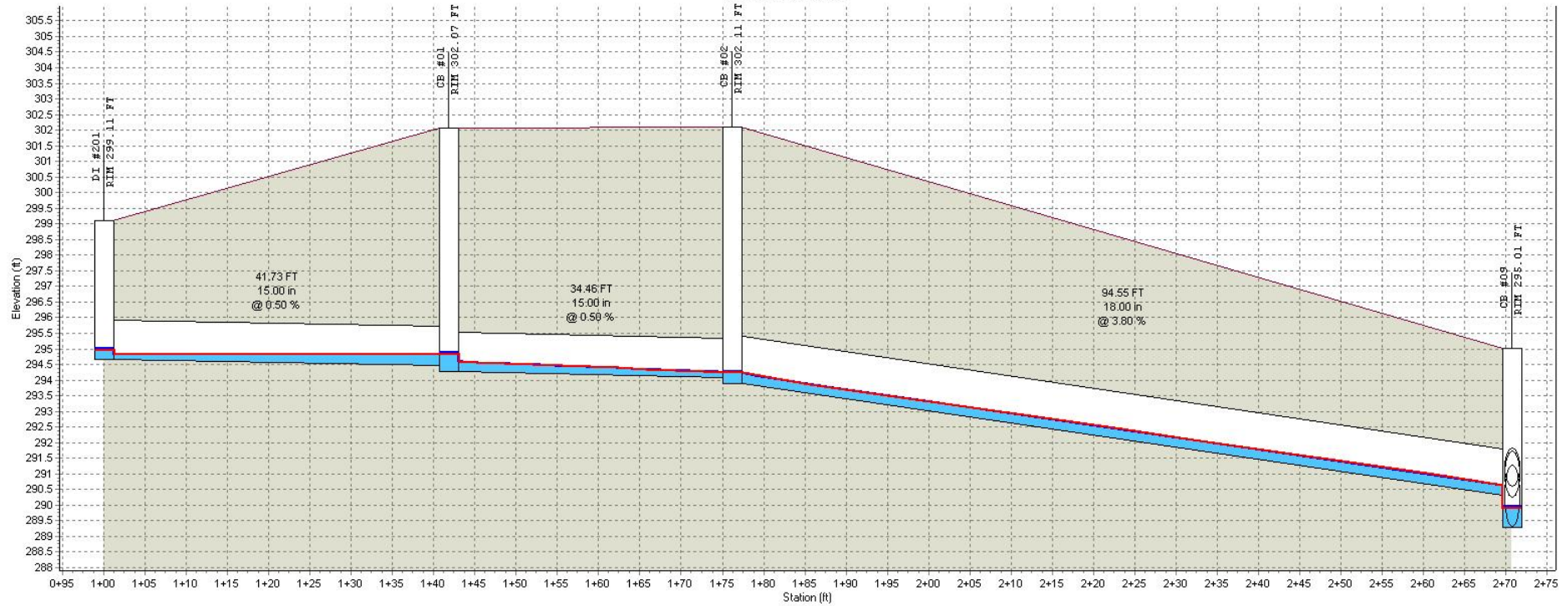


<b>DRAINAGE AREA</b>									
<b>SN</b>	<b>Element ID</b>	<b>Area (acres)</b>	<b>Drainage Node ID</b>	<b>Weighted Runoff Coefficient</b>	<b>Accumulated Precipitation (inches)</b>	<b>Total Runoff (inches)</b>	<b>Peak Runoff (cfs)</b>	<b>Rainfall Intensity (inches/hr)</b>	<b>Time of Concentration (days hh:mm:ss)</b>
1	Sub-CB#01	0.34	CB #01	0.5400	0.96	0.52	1.06	5.760	0 00:10:00
2	Sub-CB#02	0.17	CB #02	0.8300	0.96	0.80	0.81	5.760	0 00:10:00
3	Sub-CB#03	0.44	CB #03	0.6900	0.96	0.66	1.75	5.760	0 00:10:00
4	Sub-CB#04	0.20	CB #04	0.5900	0.96	0.57	0.68	5.760	0 00:10:00
5	Sub-CB#05	0.38	CB #05	0.6900	0.96	0.66	1.51	5.760	0 00:10:00
6	Sub-CB#06	0.24	CB #06	0.5400	0.96	0.52	0.75	5.760	0 00:10:00
7	Sub-CB#07	0.23	CB #07	0.5900	0.96	0.57	0.78	5.760	0 00:10:00
8	Sub-CB#08	0.10	CB #08	0.4900	0.96	0.47	0.28	5.760	0 00:10:00
9	Sub-CB#09	0.08	CB #09	0.8300	0.96	0.80	0.38	5.760	0 00:10:00
10	Sub-CB#10	0.15	CB #10	0.4900	0.96	0.47	0.42	5.760	0 00:10:00
11	Sub-CB#11	0.25	CB #11	0.6900	0.96	0.66	0.99	5.760	0 00:10:00
12	Sub-CB#12	0.43	CB #12	0.5400	0.96	0.52	1.34	5.760	0 00:10:00
13	Sub-CB#13	0.25	CB #13	0.4700	0.96	0.45	0.68	5.760	0 00:10:00
14	Sub-CB#14	0.18	CB #14	0.4900	0.96	0.47	0.51	5.760	0 00:10:00
15	Sub-CB#15	0.33	CB #15	0.5400	0.96	0.52	1.03	5.760	0 00:10:00
16	Sub-CB#16	0.20	CB #16	0.4900	0.96	0.47	0.56	5.760	0 00:10:00
17	Sub-CB#17	0.13	CB #17	0.8300	0.96	0.80	0.62	5.760	0 00:10:00
18	Sub-CB#7A	0.68	CB #7A	0.6900	0.96	0.66	2.70	5.760	0 00:10:00
19	Sub-DI#201	0.15	DI #201	0.5900	0.96	0.57	0.51	5.760	0 00:10:00
20	Sub-DI#202	0.04	DI #202	0.4900	0.96	0.47	0.11	5.760	0 00:10:00
21	Sub-YI#601	0.88	YI #601	0.3500	0.96	0.34	1.77	5.760	0 00:10:00



MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
1	P #1	DI #201	CB #01	41.73	294.68	294.47	0.5000	15.000	0.0130	0.50	0 00:10	1.93	0.36	4.57	0.11	0.28	0.00	0.34	Calculated
2	P #10	CB #09	CB #10	107.21	289.28	284.50	4.4600	24.000	0.0130	10.94	0 00:10	6.82	0.26	47.78	0.23	0.55	0.00	1.11	Calculated
3	P #11	YI #601	CB #10	37.51	288.68	285.43	8.6700	15.000	0.0130	1.77	0 00:10	8.36	0.07	19.02	0.09	0.35	0.00	0.44	Calculated
4	P #12	CB #10	CB #11	80.33	284.30	283.83	0.5900	24.000	0.0130	12.85	0 00:10	4.52	0.30	17.44	0.74	0.85	0.00	1.70	Calculated
5	P #13	CB #11	CB #12	26.50	283.63	283.49	0.5000	24.000	0.0130	13.78	0 00:11	5.14	0.09	16.00	0.86	0.80	0.00	1.59	Calculated
6	P #14	DI #202	CB #12	45.51	285.09	284.62	1.0200	15.000	0.0130	0.11	0 00:10	1.94	0.39	6.53	0.02	0.09	0.00	0.12	Calculated
7	P #15	CB #12	CB #17	86.35	283.29	280.12	3.6700	24.000	0.0130	15.12	0 00:11	10.54	0.14	43.35	0.35	0.47	0.00	0.94	Calculated
8	P #16	CB #13	CB #14	34.73	295.13	294.48	1.8900	15.000	0.0130	0.64	0 00:10	3.90	0.15	8.88	0.07	0.19	0.00	0.24	Calculated
9	P #17	CB #14	CB #16	159.87	294.18	287.22	4.3500	15.000	0.0130	1.13	0 00:10	6.53	0.41	13.48	0.08	0.20	0.00	0.25	Calculated
10	P #18	CB #15	CB #16	40.83	287.95	287.32	1.5400	15.000	0.0130	1.01	0 00:10	4.10	0.17	8.01	0.13	0.26	0.00	0.32	Calculated
11	P #19	CB #16	CB #17	93.41	286.88	280.70	6.6200	18.000	0.0130	2.68	0 00:10	9.29	0.17	27.02	0.10	0.22	0.00	0.33	Calculated
12	P #2	CB #01	CB #02	34.46	294.27	294.10	0.5000	15.000	0.0130	1.52	0 00:10	3.03	0.19	4.57	0.33	0.43	0.00	0.54	Calculated
13	P #20	CB #17	SDMH #501	35.57	279.70	278.80	2.5100	30.000	0.0130	18.28	0 00:11	8.49	0.07	65.00	0.28	0.45	0.00	1.13	Calculated
14	P #21	SDMH #501	FES#301	41.86	278.60	277.00	3.8300	30.000	0.0130	18.29	0 00:11	10.24	0.07	80.25	0.23	0.39	0.00	0.98	Calculated
15	P #3	CB #02	CB #09	94.55	293.90	290.30	3.8000	18.000	0.0130	2.30	0 00:10	7.28	0.22	20.48	0.11	0.24	0.00	0.35	Calculated
16	P #4	CB #03	CB #04	25.72	298.80	298.67	0.5000	15.000	0.0130	1.51	0 00:10	2.98	0.14	4.57	0.33	0.43	0.00	0.54	Calculated
17	P #5	CB #04	CB #06	121.63	298.14	295.05	2.5400	15.000	0.0130	2.17	0 00:10	5.12	0.40	10.30	0.21	0.39	0.00	0.48	Calculated
18	P #6	CB #05	CB #06	26.21	295.45	295.32	0.5000	15.000	0.0130	1.38	0 00:10	2.91	0.15	4.57	0.30	0.41	0.00	0.51	Calculated
19	P #7	CB #06	CB #07	112.34	294.85	293.92	0.8200	18.000	0.0130	4.17	0 00:10	4.84	0.39	9.54	0.44	0.49	0.00	0.74	Calculated
20	P #7A	CB #7A	CB #07	25.83	294.17	294.04	0.5000	15.000	0.0130	3.02	0 00:10	3.62	0.12	4.57	0.66	0.64	0.00	0.80	Calculated
21	P #8	CB #07	CB #09	53.60	293.72	290.22	6.5400	18.000	0.0130	7.88	0 00:10	11.36	0.08	26.87	0.29	0.42	0.00	0.62	Calculated
22	P #9	CB #08	CB #09	25.83	290.76	290.57	0.7400	15.000	0.0130	0.28	0 00:10	2.22	0.19	5.55	0.05	0.16	0.00	0.20	Calculated

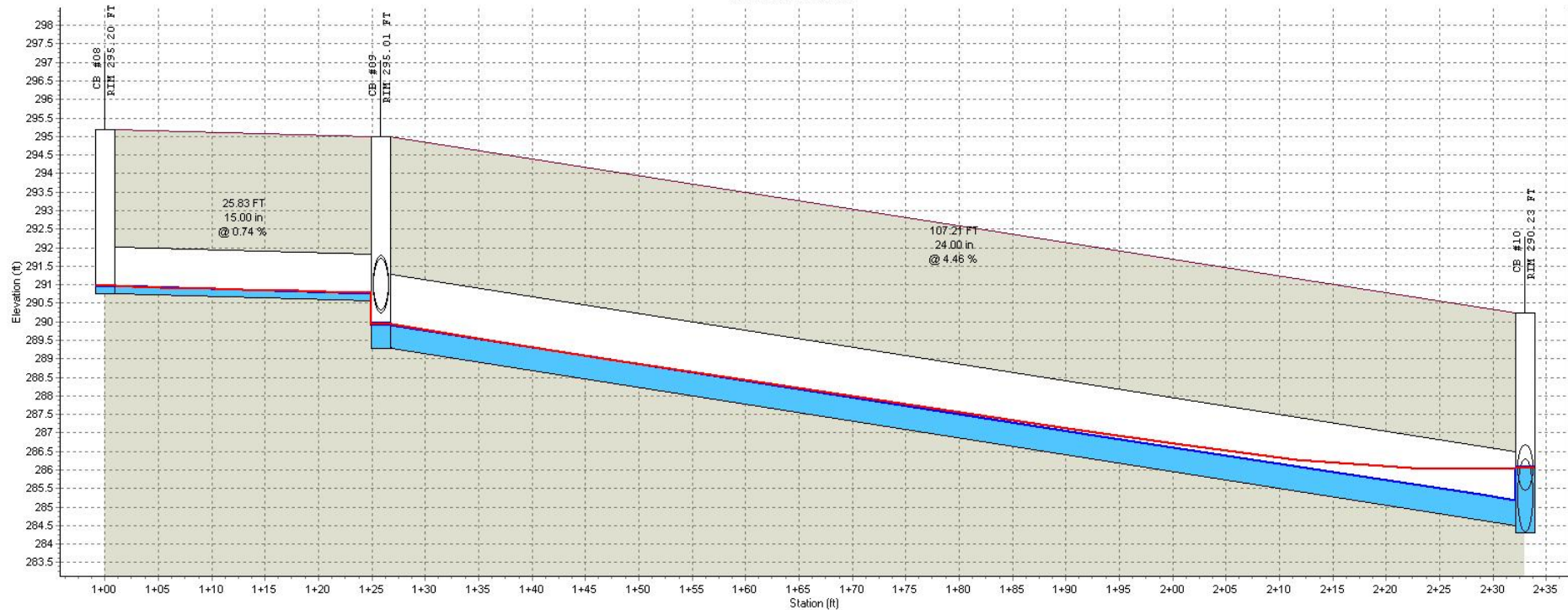
Profile Plot  
Main Street Storm Sewer



	DI #201	CB #01	CB #02	CB #09
RIM (FT)	299.11	302.07	302.11	295.01
Invert (ft)	294.68	294.27	293.90	289.28
Min Pipe Cover (ft)				
Max HGL (ft)	294.98	294.85	294.26	289.94
Link ID:	P #1	P #2	P #3	
(FT)	41.73	34.46	94.55	
(in)	15.00	15.00	18.00	
@ (%)	0.50	0.50	3.80	
Up Invert (ft)	294.68	294.27	293.90	
Dn Invert (ft)	294.47	294.10	290.30	
Max Q (cfs)	0.50	1.52	2.30	
Max Vel (ft/s)	1.93	3.03	7.28	
Max Depth (ft)	0.34	0.54	0.35	

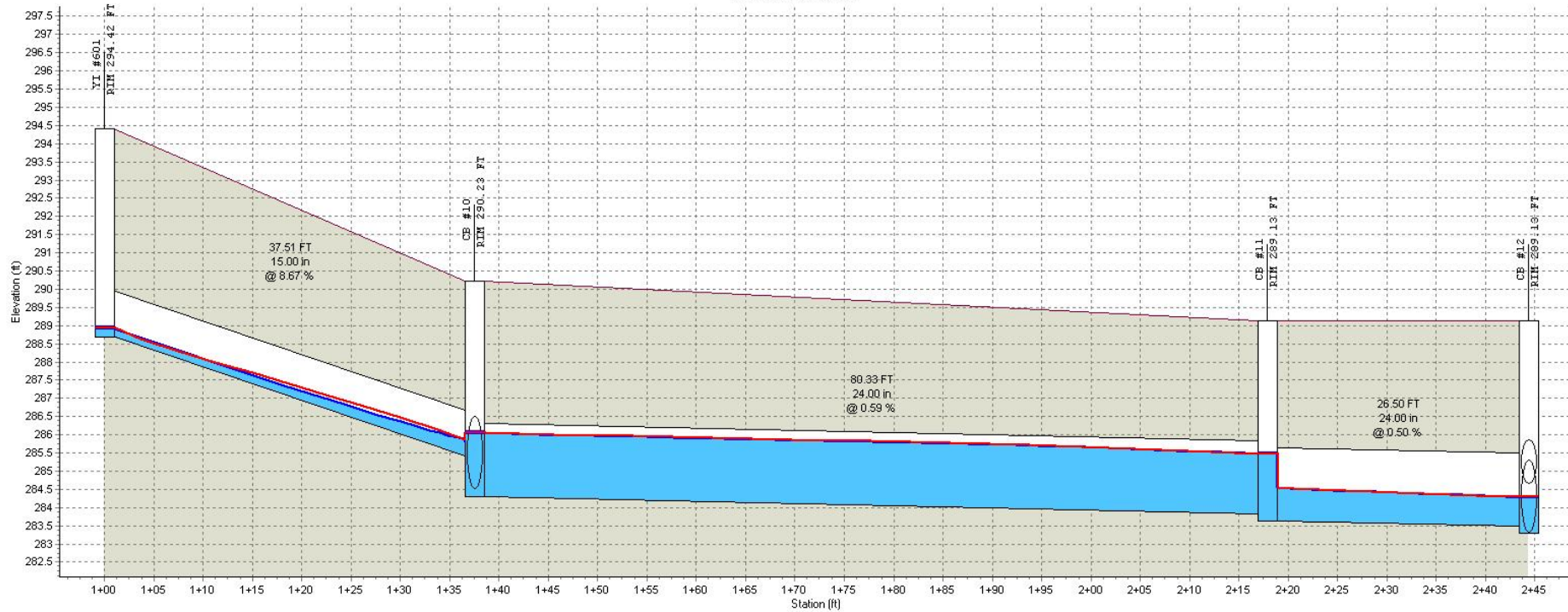
— HGL

Profile Plot  
Main Street Storm Sewer



	CB #08	CB #09	CB #10
RIM (FT):	295.20	296.01	290.23
Invert (ft):	290.76	289.28	284.30
Min Pipe Cover (ft):			
Max HGL (ft):	290.97	289.94	286.06
Link ID:	P #9		P #10
(FT):	25.83		107.21
(in):	15.00		24.00
@ (%):	0.74		4.46
Up Invert (ft):	290.76	289.28	
Dn Invert (ft):	290.57	284.50	
Max Q (cfs):	0.28	10.94	
Max Vel (ft/s):	2.22	6.82	
Max Depth (ft):	0.20	1.11	

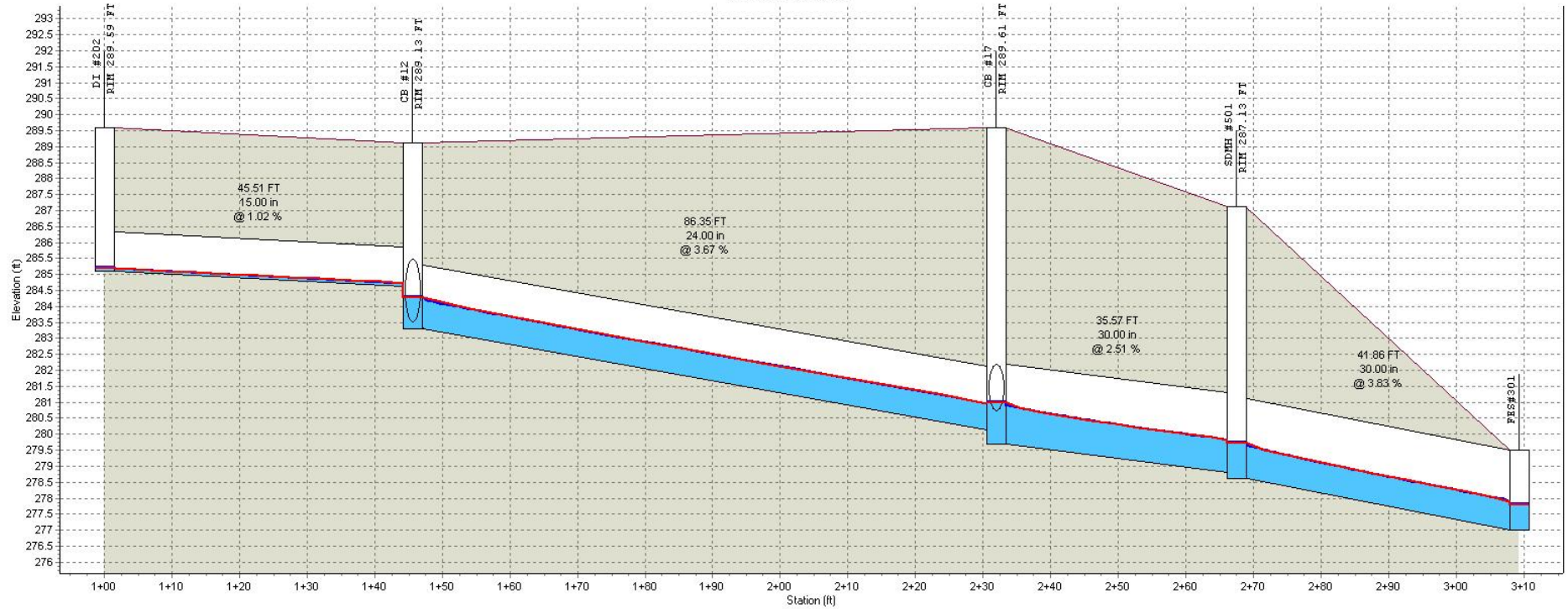
Profile Plot  
Main Street Storm Sewer



	YI #601		CB #10		CB #11		CB #12
RIM (FT):	294.42		290.23		289.13		289.13
Invert (ft):	288.68		284.30		283.63		283.29
Min Pipe Cover (ft):							
Max HGL (ft):	288.94		286.06		285.48		284.29
Link ID:		P #11			P #12		P #13
(FT):		37.51			80.33		26.50
(in):		15.00			24.00		24.00
@ (%):		8.67			0.59		0.50
Up Invert (ft):		288.68			284.30		283.63
Dn Invert (ft):		285.43			283.83		283.49
Max Q (cfs):		1.77			12.85		13.78
Max Vel (ft/s):		8.36			4.52		5.14
Max Depth (ft):		0.44			1.70		1.59

— HGL

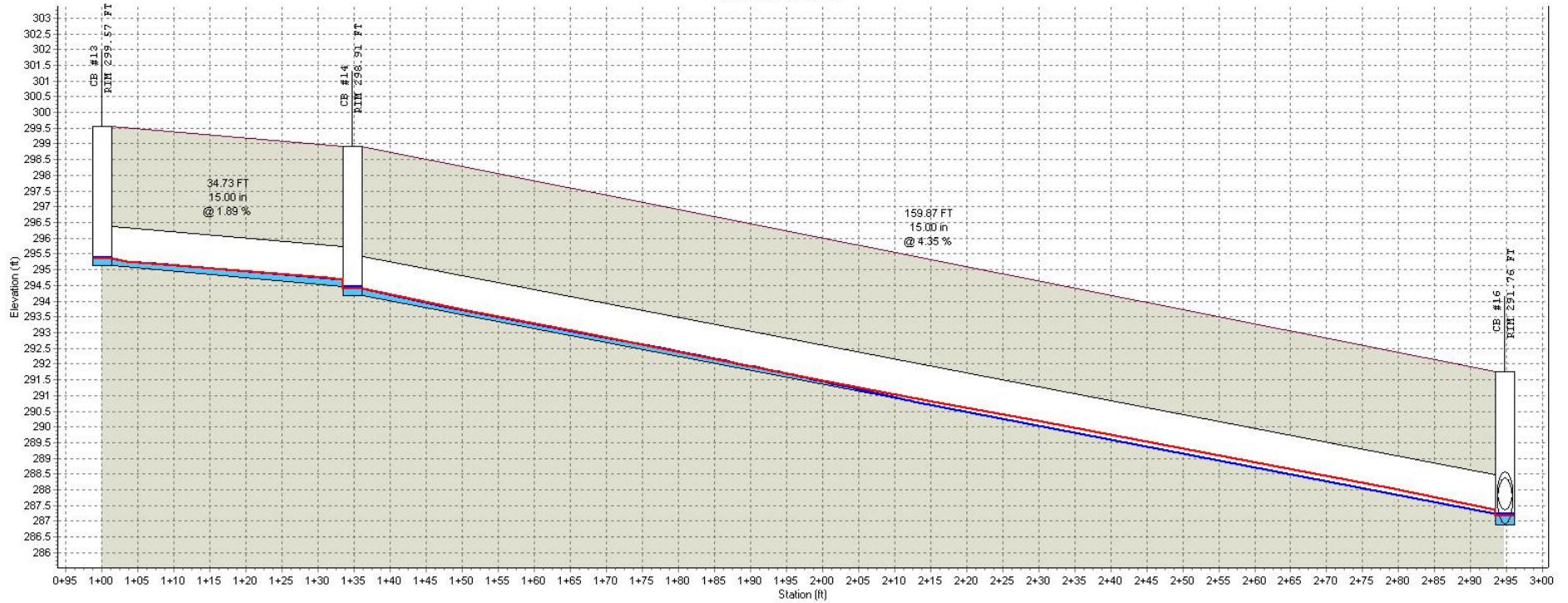
Profile Plot  
Main Street Storm Sewer



	DI #202	CB #12	CB #17	SDM#501	FES#301
RIM (ft):	289.59	289.13	289.61	287.13	
Invert (ft):	285.09	283.29	279.70	278.60	277.00
Min Pipe Cover (ft):				5.83	
Max HGL (ft):	285.20	284.29	281.01	279.75	277.81
Link ID:	P #14		P #15	P #20	P #21
(ft):	45.51		86.35	35.57	41.86
(in):	15.00		24.00	30.00	30.00
@ (%):	1.02		3.67	2.51	3.83
Up Invert (ft):	285.09	283.29	279.70	278.60	277.00
Dn Invert (ft):	284.62	280.12	278.80	277.00	
Max Q (cfs):	0.11	15.12	18.28	18.29	
Max Vel (ft/s):	1.94	10.54	8.49	10.24	
Max Depth (ft):	0.12	0.94	1.13	0.98	

— HGL

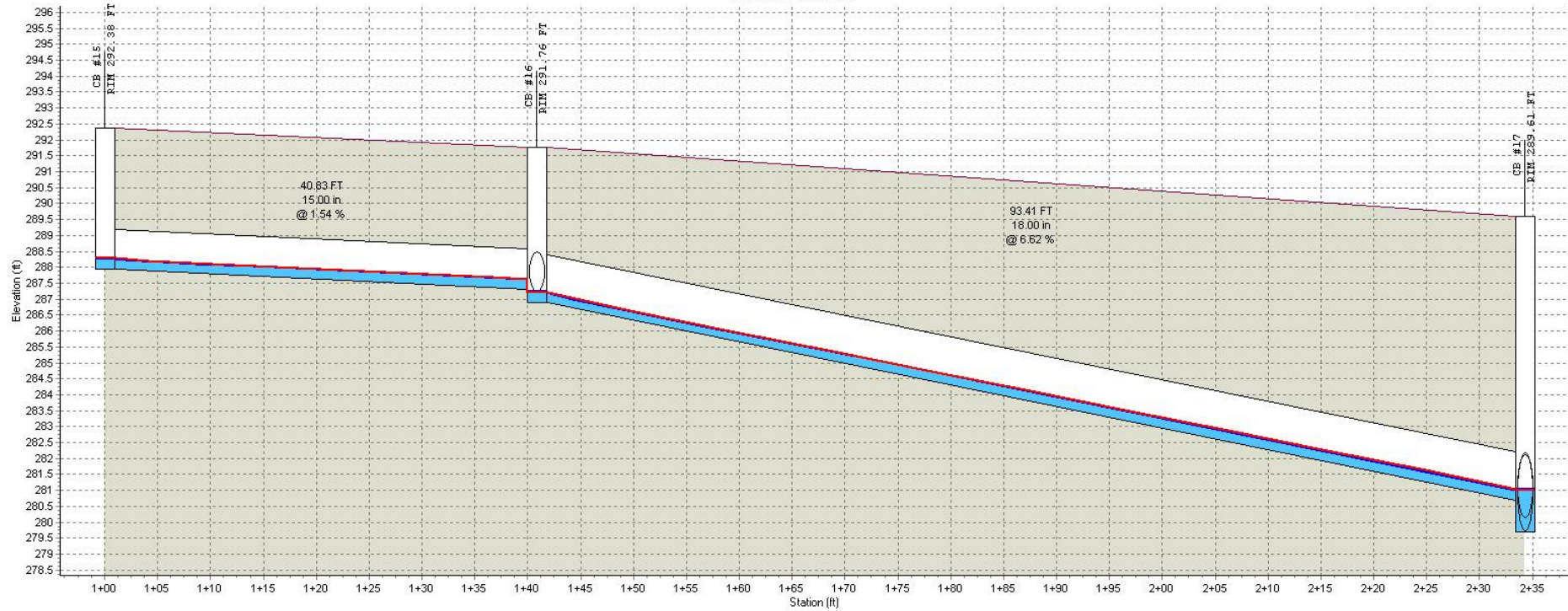
Profile Plot  
Main Street Storm Sewer



	CB #13	CB #14	CB #16
RIM (FT)	299.57	298.91	291.76
Invert (ft)	295.13	294.18	286.88
Min Pipe Cover (ft)			
Max HGL (ft)	295.38	294.43	287.23
Link ID:	P #16		P #17
(FT)	34.73		159.87
(in)	15.00		15.00
@ (%)	1.89		4.35
Up Invert (ft)	295.13		294.18
Dn Invert (ft)	294.48		287.22
Max Q (cfs)	0.64		1.13
Max Vel (ft/s)	3.90		6.53
Max Depth (ft)	0.24		0.25

— HGL

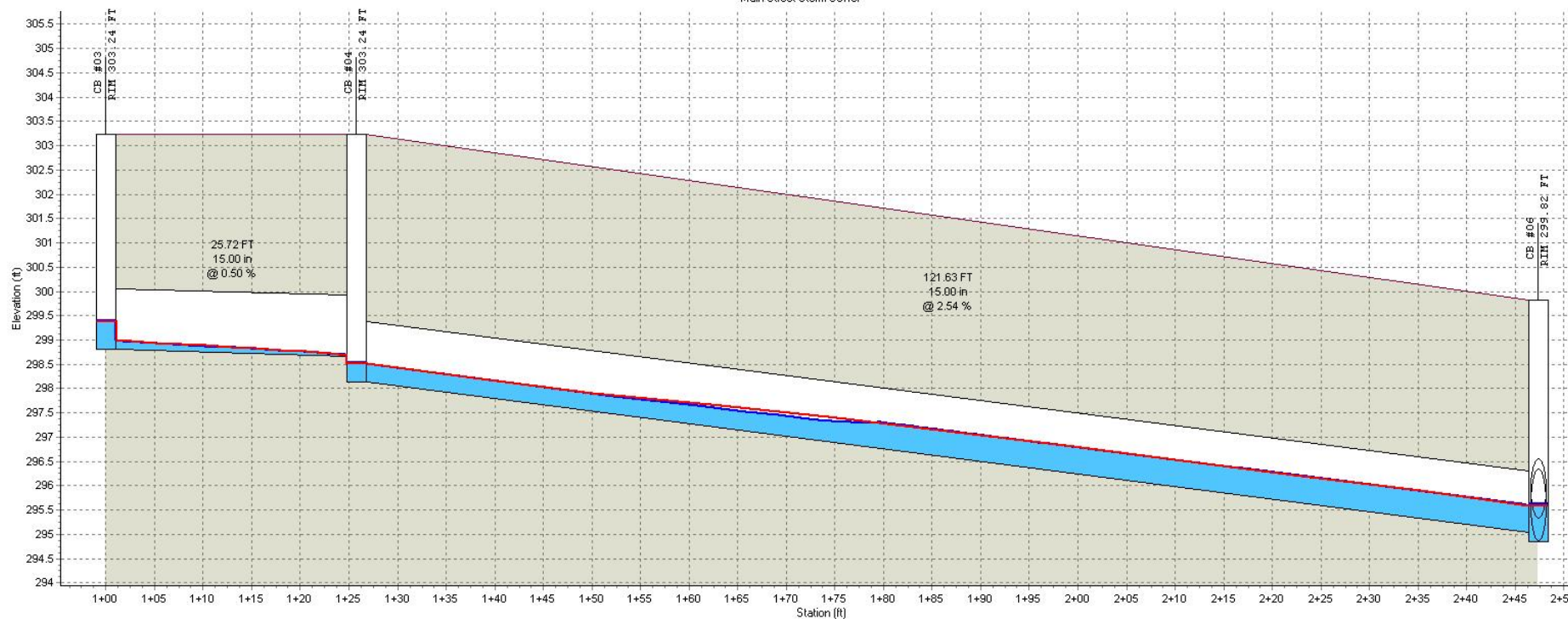
Profile Plot  
Main Street Storm Sewer



	CB #15	CB #16	CB #17
RIM (FT):	292.38	291.76	289.61
Invert (ft):	287.95	286.88	279.70
Min Pipe Cover (ft):			
Max HGL (ft):	288.28	287.23	281.01
Link ID:	P #18		P #19
(FT):	40.83		93.41
(in):	15.00		18.00
@ (%):	1.54		6.62
Up Invert (ft):	287.95		286.88
Dn Invert (ft):	287.32		280.70
Max Q (cfs):	1.01		2.68
Max Vel (ft/s):	4.10		9.29
Max Depth (ft):	0.32		0.33

— HGL

Profile Plot  
Main Street Storm Sewer

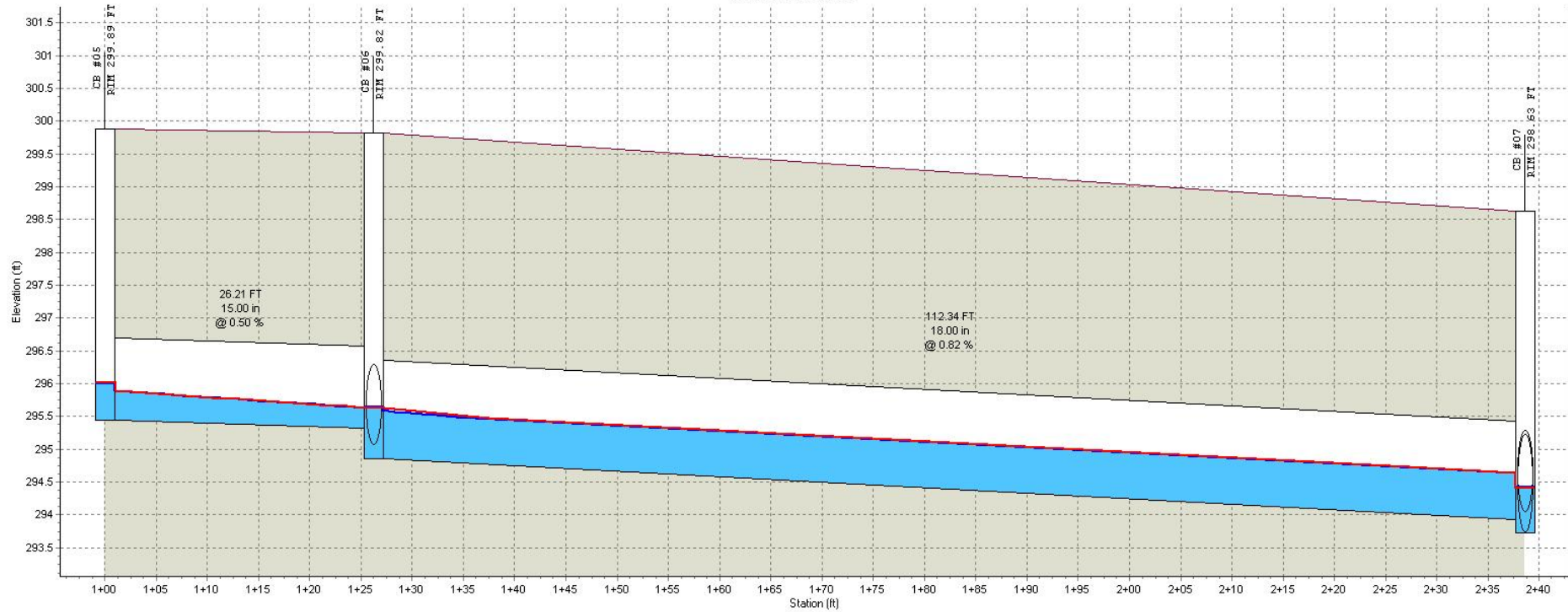


	CB #03	CB #04	CB #06
RIM (FT)	303.24	303.24	299.82
Invert (ft)	298.80	298.14	294.85
Min Pipe Cover (ft)			
Max HGL (ft)	299.39	298.53	295.63
Link ID:	P #4		P #5
(FT)	25.72		121.63
(in)	15.00		15.00
@ (%)	0.50		2.54
Up Invert (ft)	298.80		298.14
Dn Invert (ft)	298.67		295.05
Max Q (cfs)	1.51		2.17
Max Vel (ft/s)	2.98		5.12
Max Depth (ft)	0.54		0.48

— HGL



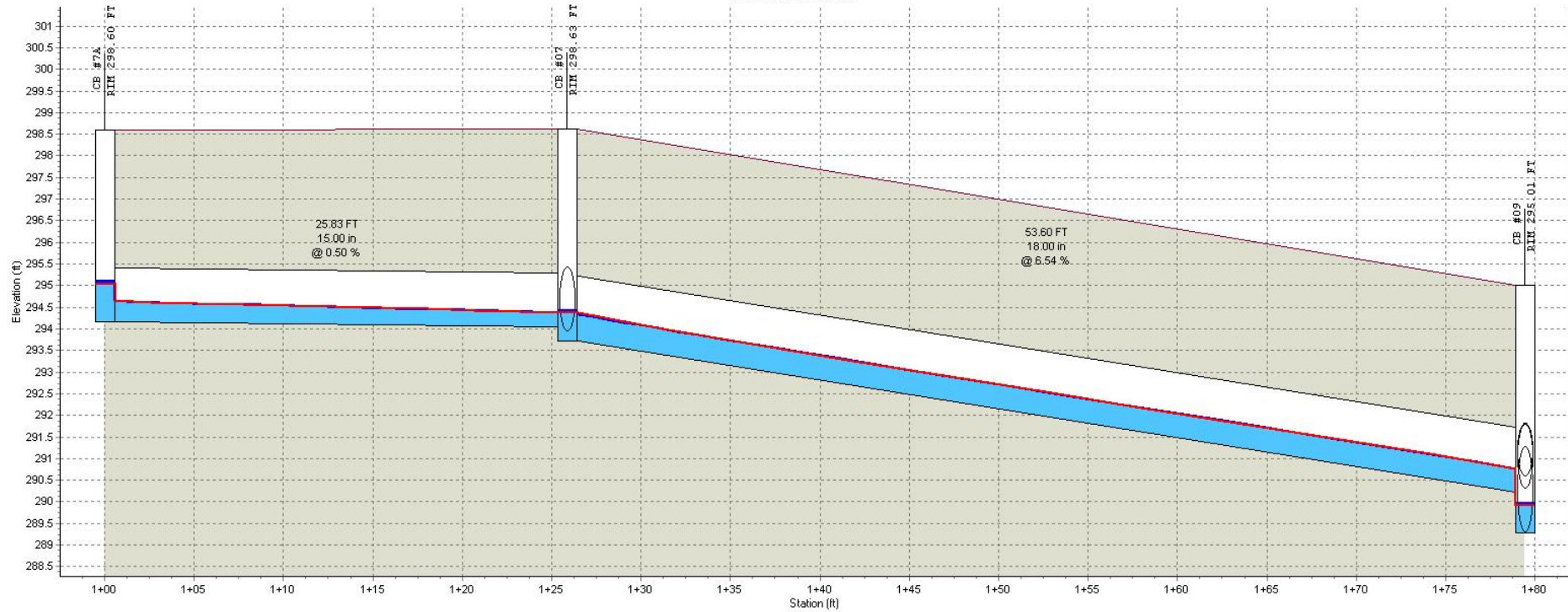
Profile Plot  
Main Street Storm Sewer



	CB #05	CB #06	CB #07
RIM (FT):	299.89	299.82	298.63
Invert (ft):	295.45	294.85	293.72
Min Pipe Cover (ft):			
Max HGL (ft):	296.01	295.63	294.41
Link ID:	P #6		P #7
(FT):	26.21		112.34
(in):	15.00		18.00
@ (%):	0.50		0.82
Up Invert (ft):	295.45		294.85
Dn Invert (ft):	295.32		293.92
Max Q (cfs):	1.38		4.17
Max Vel (ft/s):	2.91		4.84
Max Depth (ft):	0.51		0.74

— HGL

Profile Plot  
Main Street Storm Sewer

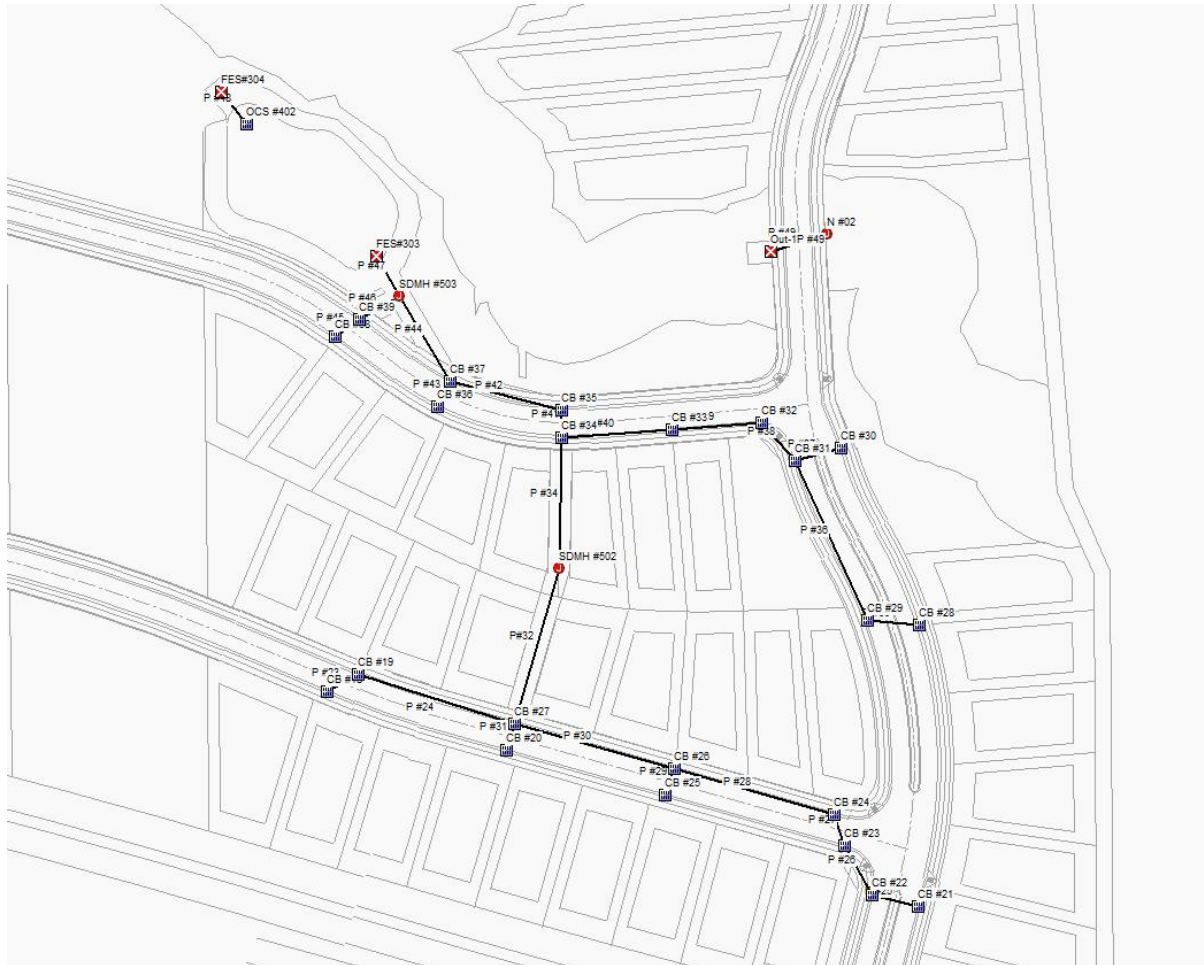


	CB #7A		CB #07		CB #09
RIM (FT)	298.60		298.63		295.01
Invert (ft)	294.17		293.72		289.28
Min Pipe Cover (ft)					
Max HGL (ft)	295.08		294.41		289.94
Link ID:	P #7A				P #8
(FT)	25.83				53.60
(in)	15.00				18.00
@ (%)	0.50				6.54
Up Invert (ft)	294.17				293.72
Dn Invert (ft)	294.04				290.22
Max Q (cfs)	3.02				7.88
Max Vel (ft/s)	3.62				11.36
Max Depth (ft)	0.80				0.62

— HGL

## 4.2. STORM WATER AREA " B "

STORMWATER PIPING AND HYDRAULIC GRADE LINE FOR 10-YR STORM

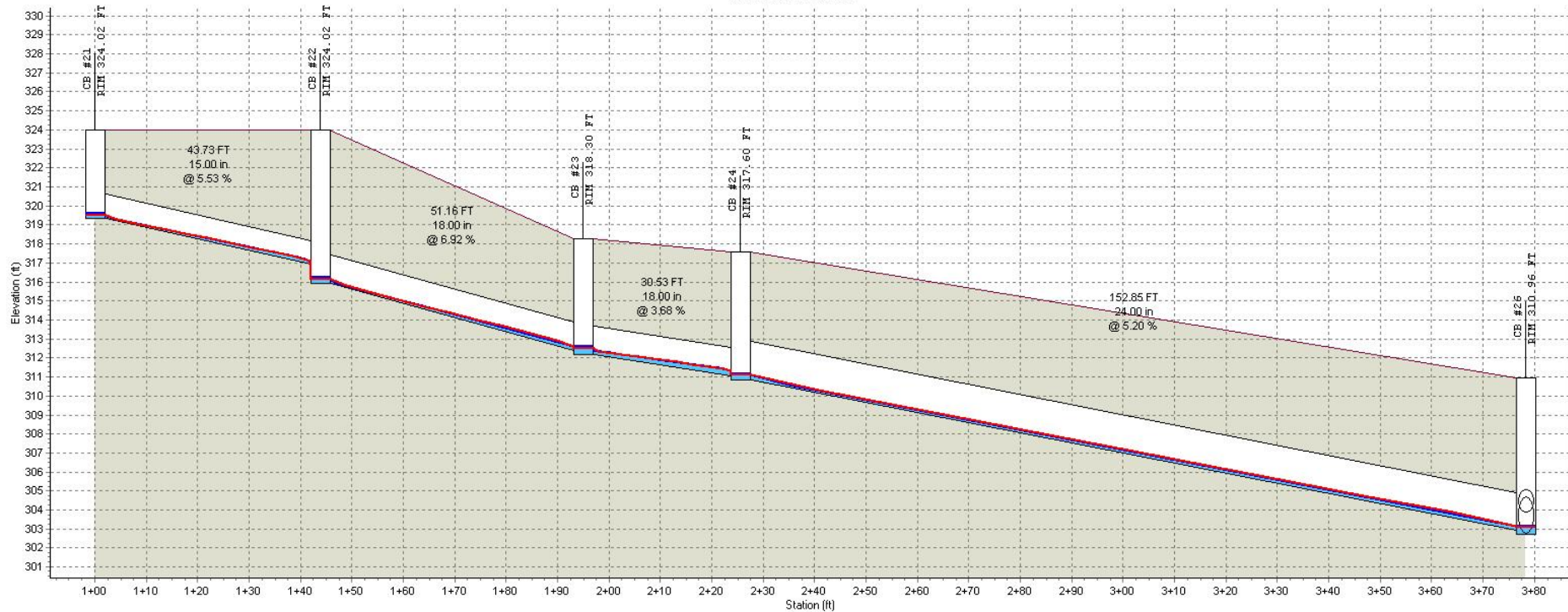


## DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#18	0.46	CB #18	0.5900	0.96	0.57	1.56	5.760	0 00:10:00
2	Sub-CB#19	0.20	CB #19	0.4900	0.96	0.47	0.56	5.760	0 00:10:00
3	Sub-CB#20	1.70	CB #20	0.5700	0.96	0.55	5.58	5.760	0 00:10:00
4	Sub-CB#21	0.25	CB #21	0.4900	0.96	0.47	0.71	5.760	0 00:10:00
5	Sub-CB#22	0.17	CB #22	0.8300	0.96	0.80	0.81	5.760	0 00:10:00
6	Sub-CB#23	0.06	CB #23	0.8300	0.96	0.80	0.29	5.760	0 00:10:00
7	Sub-CB#24	0.01	CB #24	0.8300	0.96	0.80	0.05	5.760	0 00:10:00
8	Sub-CB#25	0.32	CB #25	0.5700	0.96	0.55	1.05	5.760	0 00:10:00
9	Sub-CB#26	0.32	CB #26	0.5400	0.96	0.52	1.00	5.760	0 00:10:00
10	Sub-CB#27	0.63	CB #27	0.5400	0.96	0.52	1.96	5.760	0 00:10:00
11	Sub-CB#28	0.51	CB #28	0.5400	0.96	0.52	1.59	5.760	0 00:10:00
12	Sub-CB#29	0.23	CB #29	0.4900	0.96	0.47	0.65	5.760	0 00:10:00
13	Sub-CB#30	0.21	CB #30	0.4900	0.96	0.47	0.59	5.760	0 00:10:00
14	Sub-CB#31	0.15	CB #31	0.8300	0.96	0.80	0.72	5.760	0 00:10:00
15	Sub-CB#32	0.05	CB #32	0.8300	0.96	0.80	0.24	5.760	0 00:10:00
16	Sub-CB#33	0.59	CB #33	0.6400	0.96	0.61	2.18	5.760	0 00:10:00
17	Sub-CB#34	0.62	CB #34	0.6400	0.96	0.61	2.29	5.760	0 00:10:00
18	Sub-CB#35	0.10	CB #35	0.8300	0.96	0.80	0.48	5.760	0 00:10:00
19	Sub-CB#36	1.50	CB #36	0.6900	0.96	0.66	5.96	5.760	0 00:10:00
20	Sub-CB#37	0.12	CB #37	0.8300	0.96	0.80	0.57	5.760	0 00:10:00
21	Sub-CB#38	0.53	CB #38	0.4700	0.96	0.45	1.44	5.760	0 00:10:00
22	Sub-CB#39	0.15	CB #39	0.8300	0.96	0.80	0.72	5.760	0 00:10:00

MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
1	P #23	CB #18	CB #19	32.81	305.47	305.14	1.0200	15.000	0.0130	1.24	0 00:10	3.67	0.15	6.52	0.19	0.32	0.00	0.40	Calculated
2	P #24	CB #19	CB #27	149.60	304.94	299.27	3.7900	15.000	0.0130	1.77	0 00:10	7.02	0.36	12.58	0.14	0.26	0.00	0.32	Calculated
3	P #25	CB #21	CB #22	43.73	319.35	316.93	5.5300	15.000	0.0130	0.70	0 00:10	5.98	0.12	15.20	0.05	0.15	0.00	0.19	Calculated
4	P #26	CB #22	CB #23	51.16	315.93	312.38	6.9200	18.000	0.0130	1.50	0 00:10	7.84	0.11	27.64	0.05	0.16	0.00	0.25	Calculated
5	P #27	CB #23	CB #24	30.53	312.18	311.06	3.6800	18.000	0.0130	1.78	0 00:10	6.21	0.08	20.15	0.09	0.22	0.00	0.33	Calculated
6	P #28	CB #24	CB #26	152.85	310.86	302.91	5.2000	24.000	0.0130	1.81	0 00:10	7.52	0.34	51.59	0.04	0.13	0.00	0.26	Calculated
7	P #29	CB #25	CB #26	25.66	304.45	303.84	2.3800	15.000	0.0130	0.99	0 00:10	4.61	0.09	9.96	0.10	0.23	0.00	0.29	Calculated
8	P #30	CB #26	CB #27	151.29	302.71	297.78	3.2600	24.000	0.0130	3.71	0 00:10	5.12	0.49	40.84	0.09	0.31	0.00	0.62	Calculated
9	P #31	CB #20	CB #27	25.73	302.15	300.08	8.0500	18.000	0.0130	5.91	0 00:10	10.45	0.04	29.80	0.20	0.36	0.00	0.53	Calculated
10	P #34	SDMH #502	CB #34	119.48	293.57	290.79	2.3300	24.000	0.0130	13.23	0 00:10	5.72	0.35	34.54	0.38	0.69	0.00	1.38	Calculated
11	P #35	CB #28	CB #29	47.79	302.61	302.06	1.1400	15.000	0.0130	1.33	0 00:10	3.98	0.20	6.90	0.19	0.32	0.00	0.40	Calculated
12	P #36	CB #29	CB #31	161.06	301.69	297.01	2.9100	18.000	0.0130	1.93	0 00:10	6.43	0.42	17.91	0.11	0.23	0.00	0.34	Calculated
13	P #37	CB #30	CB #31	43.11	297.44	297.23	0.5000	15.000	0.0130	0.82	0 00:10	2.61	0.28	4.57	0.18	0.30	0.00	0.38	Calculated
14	P #38	CB #31	CB #32	45.64	296.51	294.62	4.1400	24.000	0.0130	3.42	0 00:10	7.66	0.10	46.02	0.07	0.20	0.00	0.40	Calculated
15	P #39	CB #32	CB #33	82.45	294.42	293.23	1.4400	24.000	0.0130	3.66	0 00:10	5.53	0.25	27.14	0.13	0.26	0.00	0.53	Calculated
16	P #40	CB #33	CB #34	100.89	292.69	291.03	1.6400	30.000	0.0130	5.18	0 00:10	4.13	0.41	52.50	0.10	0.43	0.00	1.07	Calculated
17	P #41	CB #34	CB #35	25.73	290.59	290.46	0.5000	30.000	0.0130	20.28	0 00:10	5.38	0.08	29.00	0.70	0.72	0.00	1.81	Calculated
18	P #42	CB #35	CB #37	105.44	290.17	289.55	0.5900	30.000	0.0130	20.68	0 00:11	5.99	0.29	31.48	0.66	0.66	0.00	1.66	Calculated
19	P #43	CB #36	CB #37	25.75	291.00	290.31	2.6600	15.000	0.0130	6.57	0 00:10	7.14	0.06	10.54	0.62	0.70	0.00	0.88	Calculated
20	P #44	CB #37	SDMH #503	90.37	289.07	287.45	1.7900	36.000	0.0130	27.51	0 00:11	6.41	0.23	89.26	0.31	0.58	0.00	1.75	Calculated
21	P #45	CB #38	CB #39	26.89	292.82	292.15	2.5000	15.000	0.0130	1.28	0 00:10	5.00	0.09	10.21	0.13	0.26	0.00	0.33	Calculated
22	P #46	CB #39	SDMH #503	42.68	291.74	288.54	7.5000	18.000	0.0130	1.97	0 00:10	7.82	0.09	28.78	0.07	0.38	0.00	0.57	Calculated
23	P #47	SDMH #503	FES#303	42.99	287.25	287.00	0.5800	36.000	0.0130	29.30	0 00:11	6.18	0.12	50.70	0.58	0.64	0.00	1.91	Calculated
24	P#32	CB #27	SDMH #502	147.62	297.58	294.70	1.9500	24.000	0.0130	13.17	0 00:10	8.74	0.28	31.60	0.42	0.48	0.00	0.97	Calculated

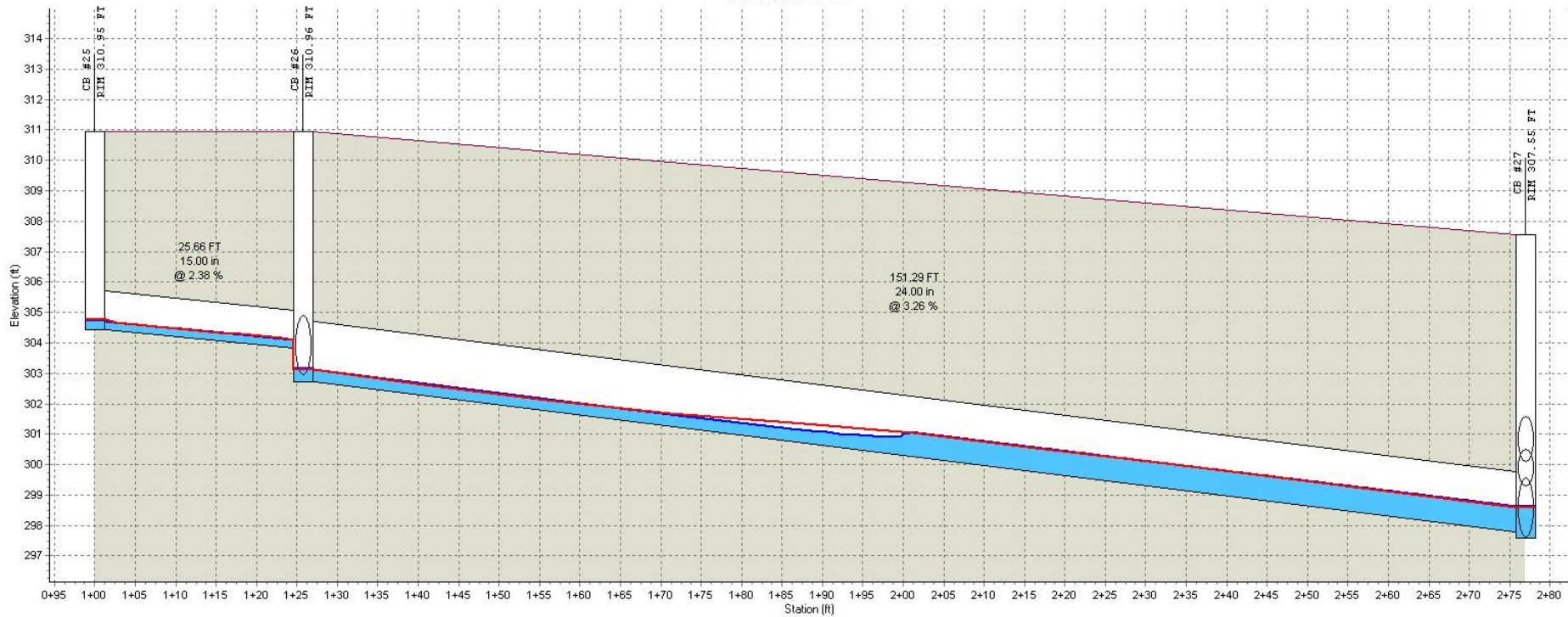
Profile Plot  
Main Street Storm Sewer



	CB #21	CB #22	CB #23	CB #24	CB #26
RIM (FT):	324.02	324.02	318.30	317.60	310.96
Invert (ft):	319.35	315.93	312.18	310.86	302.71
Min Pipe Cover (ft):					
Max HGL (ft):	319.55	316.18	312.54	311.13	303.12
Link ID:	P #25		P #26	P #27	P #28
(FT):	43.73		51.16	30.53	152.85
(in):	15.00		18.00	18.00	24.00
@ (%):	5.53		6.92	3.68	5.20
Up Invert (ft):	319.35	315.93	312.18		310.86
Dn Invert (ft):	316.93	312.38	311.06		302.91
Max Q (cfs):	0.70	1.50	1.78		1.81
Max Vel (ft/s):	5.98	7.84	6.21		7.52
Max Depth (ft):	0.19	0.25	0.33		0.26

— HGL

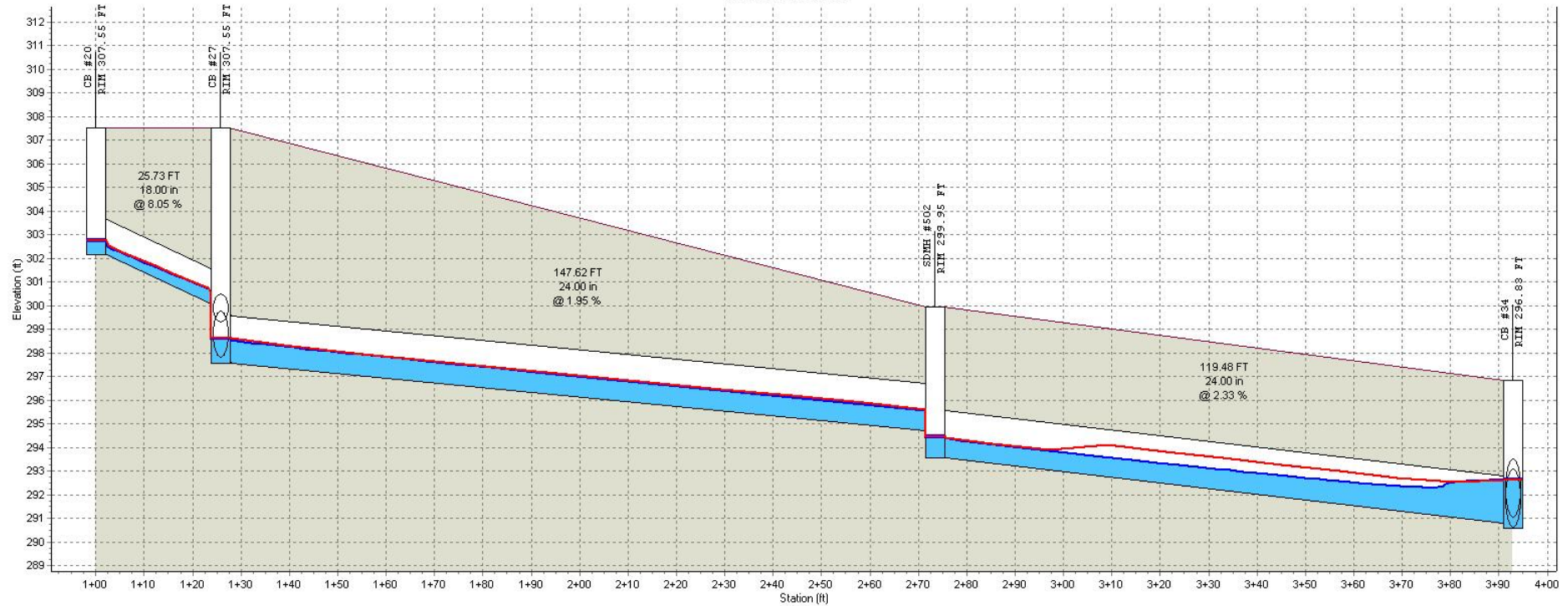
Profile Plot  
Main Street Storm Sewer



	CB #25	CB #26	CB #27
RIM (FT):	310.95	310.96	307.55
Invert (ft):	304.45	302.71	297.58
Min Pipe Cover (ft):			
Max HGL (ft):	304.76	303.12	298.62
Link ID:	P #29		P #30
(FT):	25.66		151.29
(in):	15.00		24.00
@ (%):	2.38		3.26
Up Invert (ft):	304.45		302.71
Dn Invert (ft):	303.84		297.78
Max Q (cfs):	0.99		3.71
Max Vel (ft/s):	4.61		5.12
Max Depth (ft):	0.29		0.62

— HGL

Profile Plot  
Main Street Storm Sewer

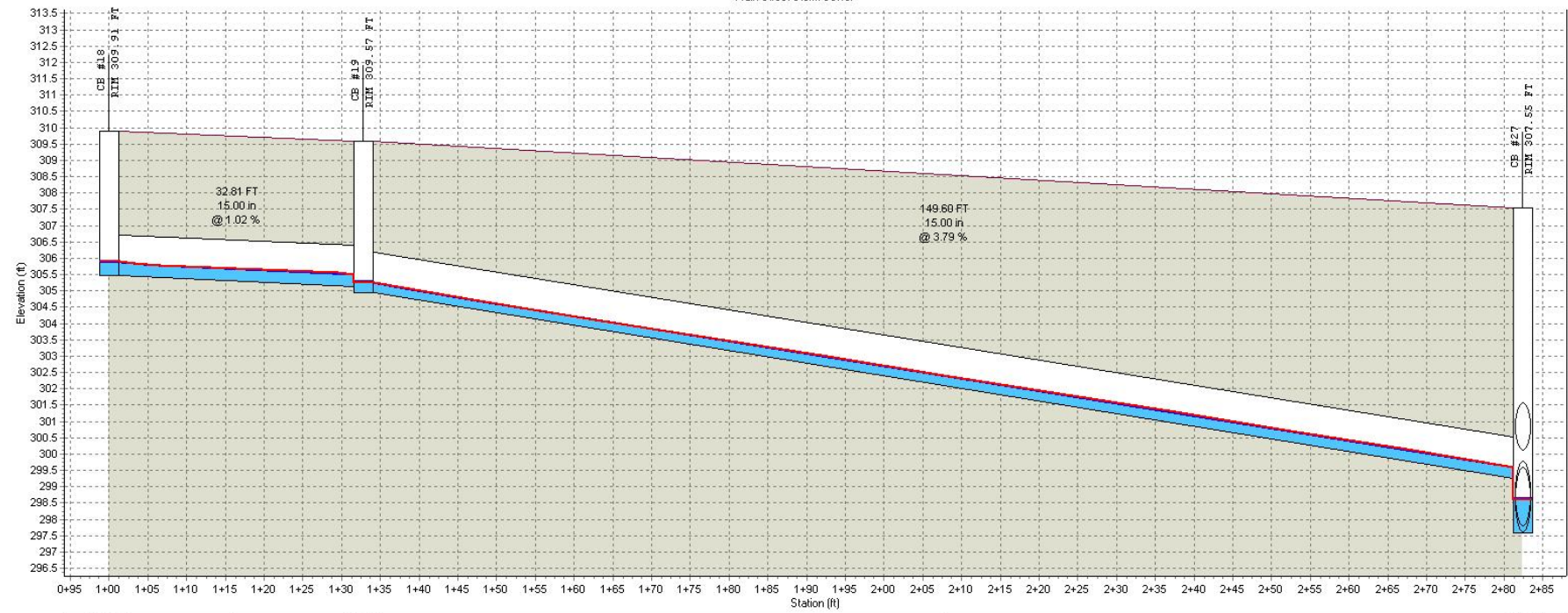


	CB #20	CB #27	SDMH #502	CB #34
RIM (FT):	307.55	307.55	299.95	296.83
Invert (ft):	302.15	297.58	293.57	290.59
Min Pipe Cover (ft):			3.25	
Max HGL (ft):	302.77	298.62	294.48	292.65
Link ID:	P #31	P#32		P #34
(FT):	25.73	147.62		119.48
(in):	18.00	24.00		24.00
@ (%):	8.05	1.95		2.33
Up Invert (ft):	302.15	297.58		293.57
Dn Invert (ft):	300.08	294.70		290.79
Max Q (cfs):	5.91	13.17		13.23
Max Vel (ft/s):	10.45	8.74		5.72
Max Depth (ft):	0.53	0.97		1.38

— HGL



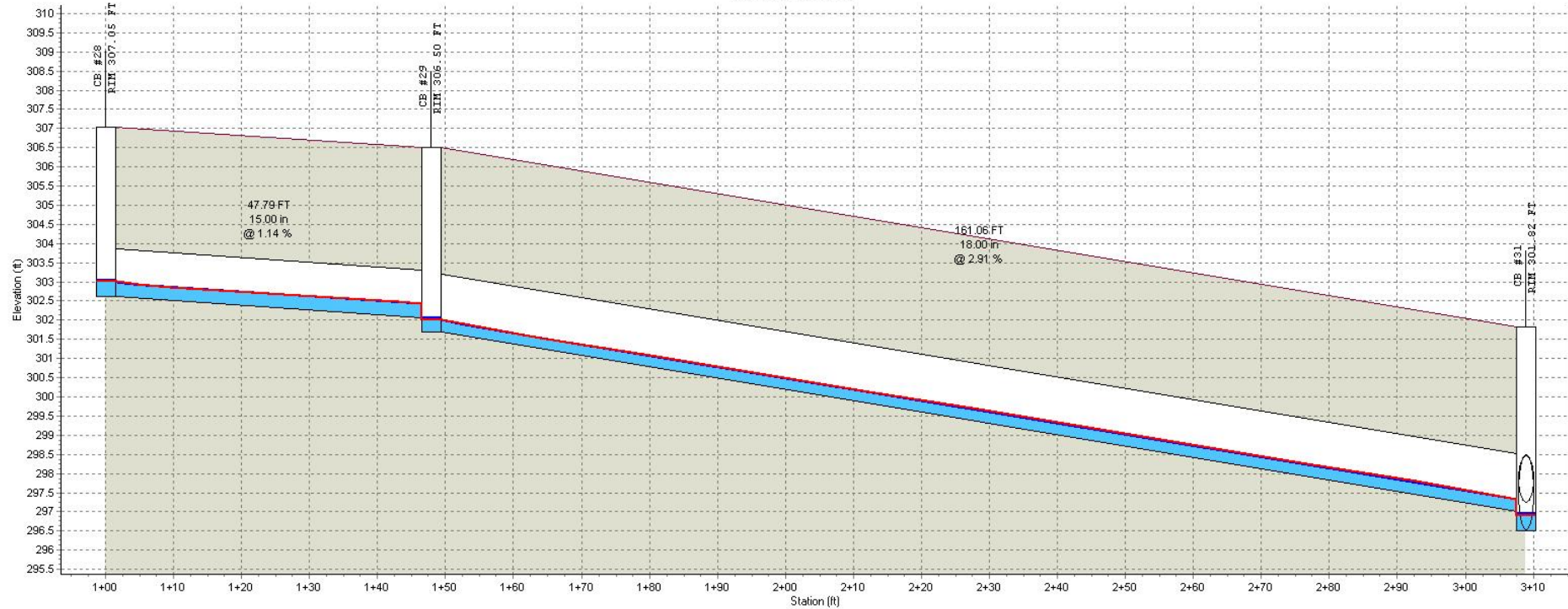
Profile Plot  
Main Street Storm Sewer



	CB #18	CB #19	CB #27
RIM (FT):	309.91	309.57	307.55
Invert (ft):	305.47	304.94	297.58
Min Pipe Cover (ft):			
Max HGL (ft):	305.90	305.27	298.62
Link ID:	P #23		P #24
(FT):	32.81		149.60
(in):	15.00		15.00
@ (%):	1.02		3.79
Up Invert (ft):	305.47		304.94
Dn Invert (ft):	305.14		299.27
Max Q (cfs):	1.24		1.77
Max Vel (ft/s):	3.67		7.02
Max Depth (ft):	0.40		0.32

— HGL

Profile Plot  
Main Street Storm Sewer



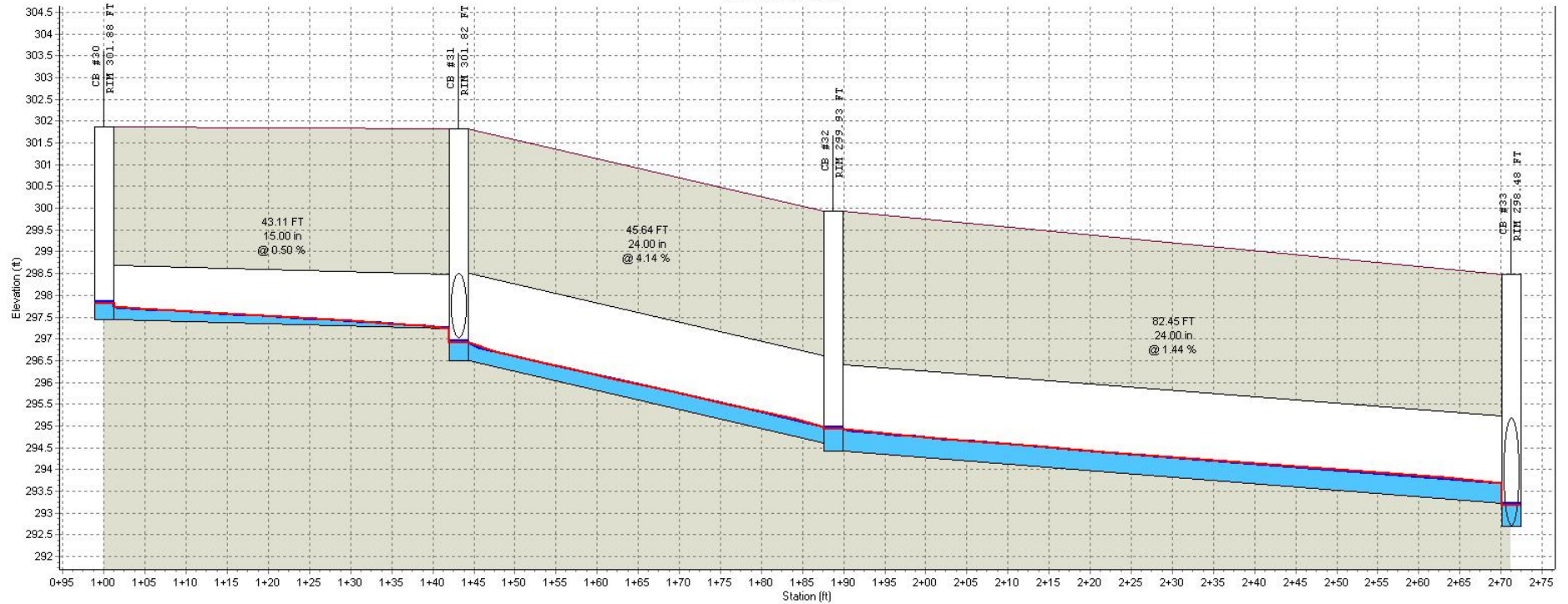
Link ID:	P #35	P #36	
(FT):	47.79	161.06	
(in):	15.00	18.00	
@ (%):	1.14	2.91	
Up Invert (ft):	302.61	301.69	
Dn Invert (ft):	302.06	297.01	
Max Q (cfs):	1.33	1.93	
Max Vel (ft/s):	3.98	6.43	
Max Depth (ft):	0.40	0.34	

Station:	1+00	1+50	3+10
RIM (ft):	307.05	306.50	301.82
Invert (ft):	302.61	301.69	296.51
Min Pipe Cover (ft):			
Max HGL (ft):	303.03	302.04	296.94

— HGL

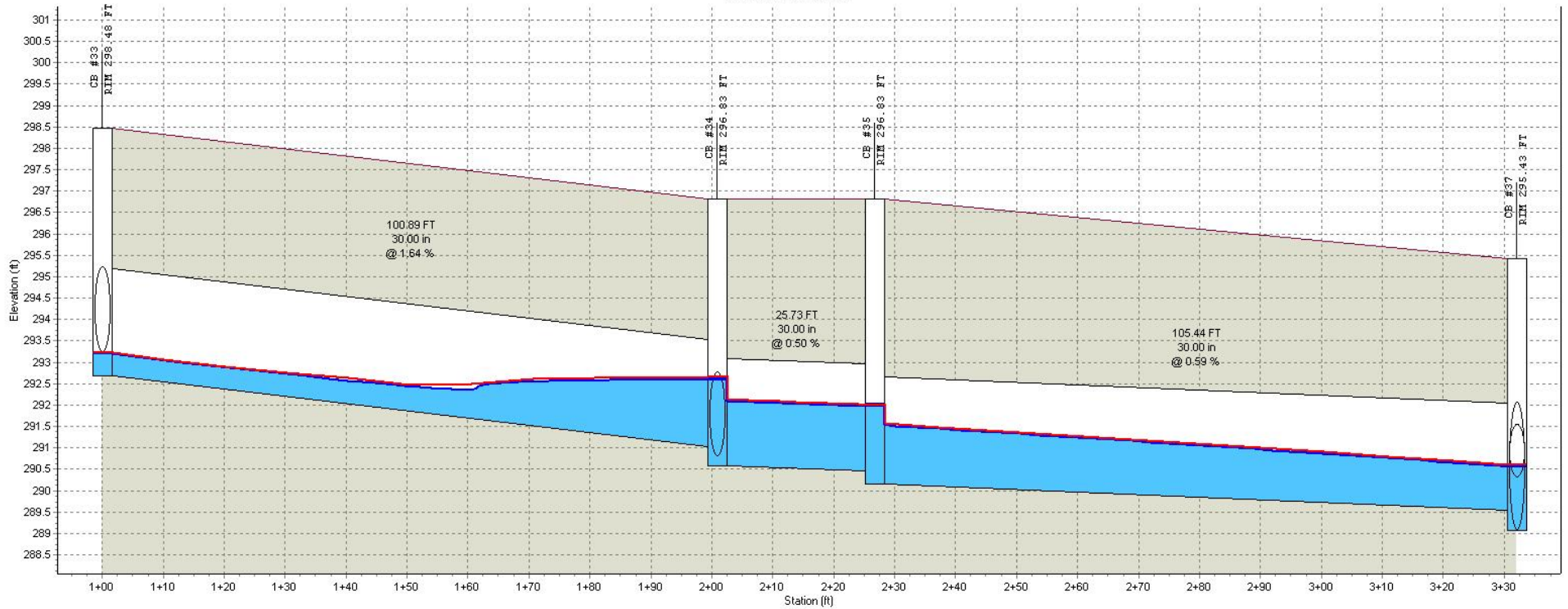
Profile Plot  
Main Street Storm Sewer



	CB #30	CB #31	CB #32	CB #33
RIM (ft):	301.88	301.82	299.93	298.48
Invert (ft):	297.44	296.51	294.42	292.69
Min Pipe Cover (ft):				
Max HGL (ft):	297.85	296.94	294.97	293.22
Link ID:	P #37		P #38	P #39
(ft):	43.11		45.64	82.45
(in):	15.00		24.00	24.00
@ (%):	0.50		4.14	1.44
Up Invert (ft):	297.44		296.51	294.42
Dn Invert (ft):	297.23		294.62	293.23
Max Q (cfs):	0.82		3.42	3.66
Max Vel (ft/s):	2.61		7.66	5.53
Max Depth (ft):	0.38		0.40	0.53

— HGL

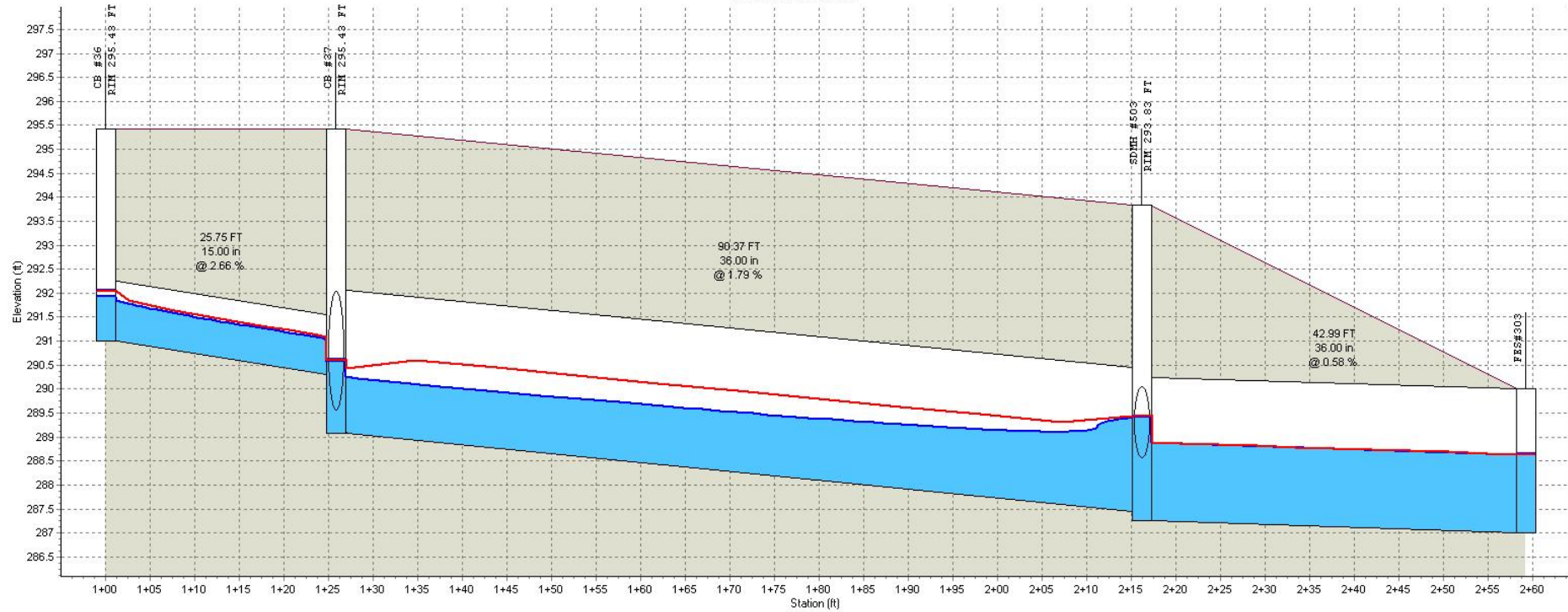
Profile Plot  
Main Street Storm Sewer



	CB #33		CB #34	CB #35	CB #37
RIM (FT):	298.48		296.83	296.83	295.43
Invert (ft):	292.69		290.59	290.17	289.07
Min Pipe Cover (ft):					
Max HGL (ft):	293.22		292.65	292.00	290.60
Link ID:		P #40		P #41	P #42
(FT):		100.89		25.73	105.44
(in):		30.00		30.00	30.00
@ (%):		1.64		0.50	0.59
Up Invert (ft):		292.69		290.59	290.17
Dn Invert (ft):		291.03		290.46	289.55
Max Q (cfs):		5.18		20.28	20.68
Max Vel (ft/s):		4.13		5.38	5.99
Max Depth (ft):		1.07		1.81	1.66

— HGL

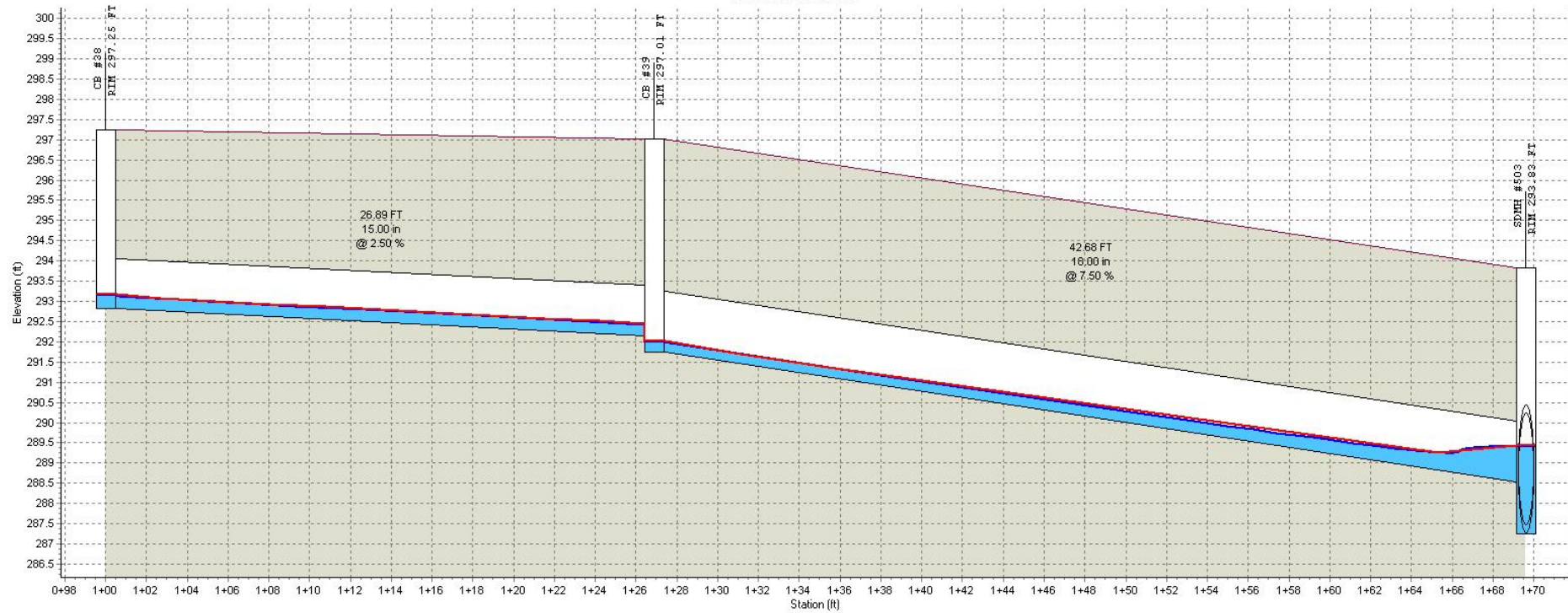
Profile Plot  
Main Street Storm Sewer



	CB #36	CB #37	SDMH #503	FES#303
RIM (ft):	295.43	295.43	293.83	
Invert (ft):	291.00	289.07	287.25	287.00
Min Pipe Cover (ft):			3.38	
Max HGL (ft):	292.04	290.60	289.43	288.64
Link ID:	P #43	P #44		P #47
(ft):	25.75	90.37		42.99
(in):	15.00	36.00		36.00
@ (%):	2.66	1.79		0.58
Up Invert (ft):	291.00	289.07		287.25
Dn Invert (ft):	290.31	287.45		287.00
Max Q (cfs):	6.57	27.51		29.30
Max Vel (ft/s):	7.14	6.41		6.18
Max Depth (ft):	0.88	1.75		1.91

— HGL

Profile Plot  
Main Street Storm Sewer

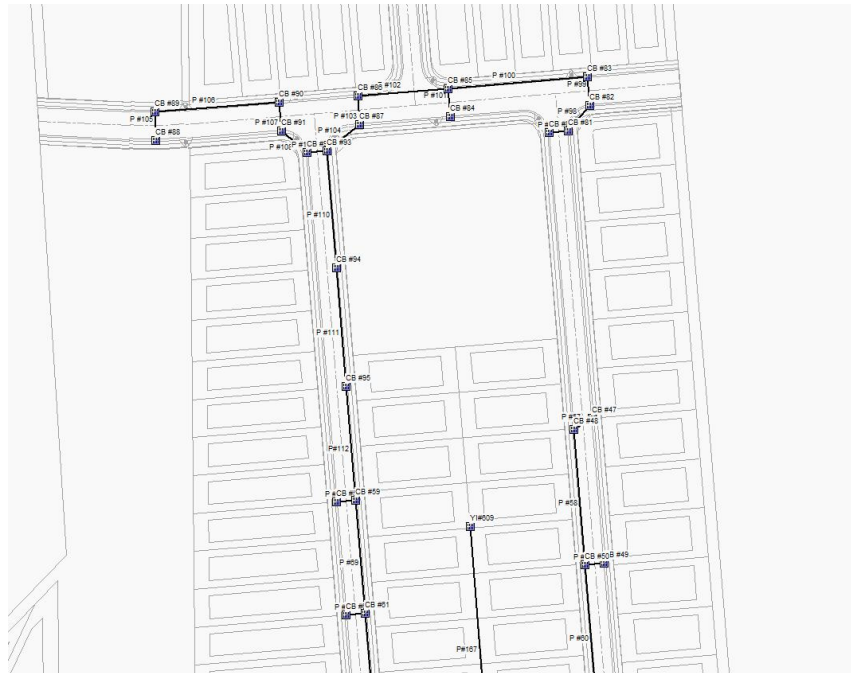


	CB #38	CB #39	SDMH #503
RIM (FT):	297.25	297.01	293.83
Invert (ft):	292.82	291.74	287.25
Min Pipe Cover (ft):			3.38
Max HGL (ft):	293.17	292.01	289.43
Link ID:	P #45		P #46
(FT):	26.89		42.68
(in):	15.00		18.00
@ (%):	2.50		7.50
Up Invert (ft):	292.82		291.74
Dn Invert (ft):	292.15		288.54
Max Q (cfs):	1.28		1.97
Max Vel (ft/s):	5.00		7.82
Max Depth (ft):	0.33		0.57

— HGL

## 4.3. STORM WATER AREA "C"

STORMWATER PIPING AND HYDRAULIC GRADE LINE FOR 10-YR STORM



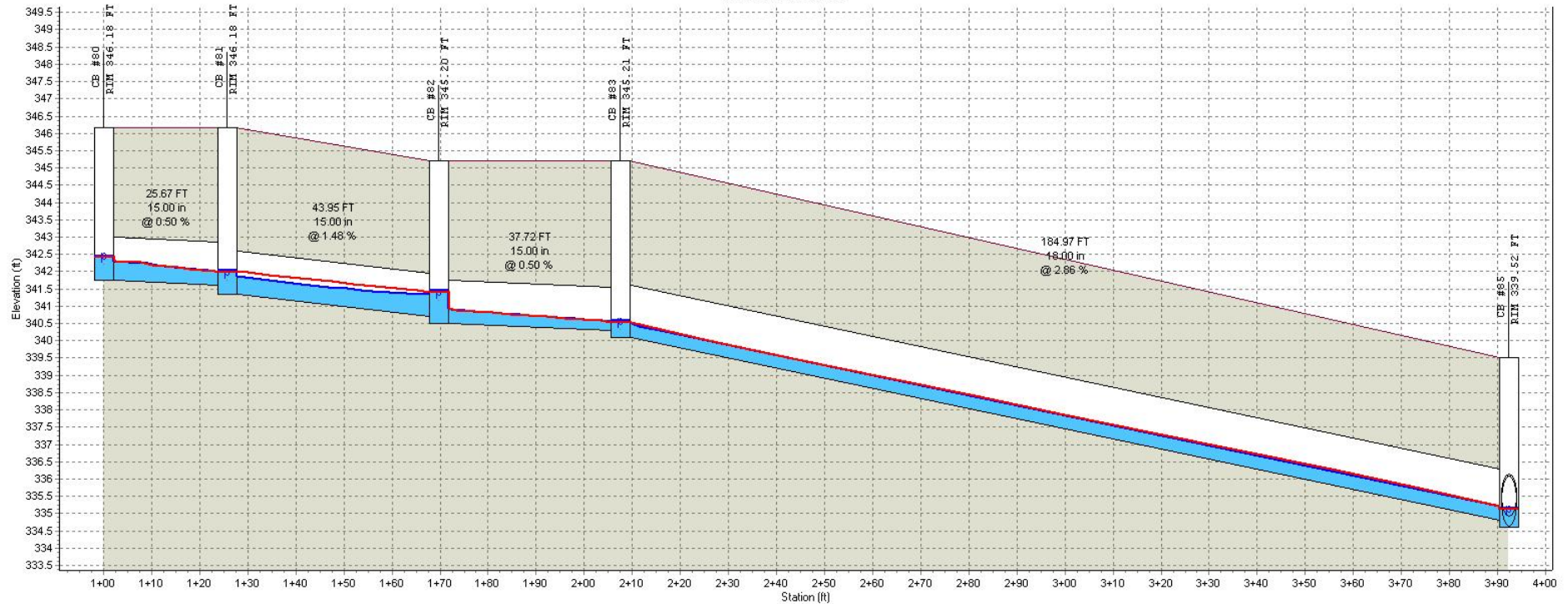
<b>DRAINAGE AREA</b>									
<b>SN</b>	<b>Element ID</b>	<b>Area (acres)</b>	<b>Drainage Node ID</b>	<b>Weighted Runoff Coefficient</b>	<b>Accumulated Precipitation (inches)</b>	<b>Total Runoff (inches)</b>	<b>Peak Runoff (cfs)</b>	<b>Rainfall Intensity (inches/hr)</b>	<b>Time of Concentration (days hh:mm:ss)</b>
1	Sub-CB#40	0.18	CB #40	0.8300	0.96	0.80	0.86	5.760	0 00:10:00
2	Sub-CB#41	0.16	CB #41	0.8300	0.96	0.80	0.77	5.760	0 00:10:00
3	Sub-CB#42	0.22	CB #42	0.5400	0.96	0.52	0.68	5.760	0 00:10:00
4	Sub-CB#43	0.43	CB #43	0.5400	0.96	0.52	1.34	5.760	0 00:10:00
5	Sub-CB#44	0.21	CB #44	0.5400	0.96	0.52	0.65	5.760	0 00:10:00
6	Sub-CB#45	0.27	CB #45	0.5400	0.96	0.52	0.84	5.760	0 00:10:00
7	Sub-CB#46	0.13	CB #46	0.4900	0.96	0.47	0.37	5.760	0 00:10:00
8	Sub-CB#47	0.72	CB #47	0.6900	0.96	0.66	2.86	5.760	0 00:10:00
9	Sub-CB#48	0.35	CB #48	0.5000	0.96	0.48	1.01	5.760	0 00:10:00
10	Sub-CB#49	0.66	CB #49	0.6900	0.96	0.66	2.62	5.760	0 00:10:00
11	Sub-CB#50	0.39	CB #50	0.5400	0.96	0.52	1.21	5.760	0 00:10:00
12	Sub-CB#51	0.66	CB #51	0.6900	0.96	0.66	2.62	5.760	0 00:10:00
13	Sub-CB#52	0.38	CB #52	0.5400	0.96	0.52	1.18	5.760	0 00:10:00
14	Sub-CB#53	0.69	CB #53	0.6900	0.96	0.66	2.74	5.760	0 00:10:00
15	Sub-CB#54	0.24	CB #54	0.5400	0.96	0.52	0.75	5.760	0 00:10:00
16	Sub-CB#55	0.05	CB #55	0.8300	0.96	0.80	0.24	5.760	0 00:10:00
17	Sub-CB#56	0.62	CB #56	0.6900	0.96	0.66	2.46	5.760	0 00:10:00
18	Sub-CB#57	0.08	CB #57	0.8300	0.96	0.80	0.38	5.760	0 00:10:00
19	Sub-CB#58	0.38	CB #58	0.5400	0.96	0.52	1.18	5.760	0 00:10:00
20	Sub-CB#59	0.28	CB #59	0.4900	0.96	0.47	0.79	5.760	0 00:10:00
21	Sub-CB#60	0.73	CB #60	0.5900	0.96	0.57	2.48	5.760	0 00:10:00
22	Sub-CB#61	0.31	CB #61	0.5400	0.96	0.52	0.96	5.760	0 00:10:00
23	Sub-CB#62	0.91	CB #62	0.6900	0.96	0.66	3.62	5.760	0 00:10:00
24	Sub-CB#63	0.43	CB #63	0.5400	0.96	0.52	1.34	5.760	0 00:10:00
25	Sub-CB#64	0.10	CB #64	0.4900	0.96	0.47	0.28	5.760	0 00:10:00
26	Sub-CB#65	0.79	CB #65	0.6400	0.96	0.61	2.91	5.760	0 00:10:00
27	Sub-CB#66	0.26	CB #66	0.5400	0.96	0.52	0.81	5.760	0 00:10:00
28	Sub-CB#67	0.20	CB #67	0.5900	0.96	0.57	0.68	5.760	0 00:10:00
29	Sub-CB#68	0.10	CB #68	0.4900	0.96	0.47	0.28	5.760	0 00:10:00
30	Sub-CB#69	0.12	CB #69	0.4900	0.96	0.47	0.34	5.760	0 00:10:00
31	Sub-CB#80	0.56	CB #80	0.8300	0.96	0.80	2.68	5.760	0 00:10:00
32	Sub-CB#81	0.36	CB #81	0.5900	0.96	0.57	1.22	5.760	0 00:10:00
33	Sub-CB#82	0.09	CB #82	0.4900	0.96	0.47	0.25	5.760	0 00:10:00
34	Sub-CB#83	0.01	CB #83	0.7000	0.96	0.67	0.04	5.760	0 00:10:00
35	Sub-CB#84	0.56	CB #84	0.4900	0.96	0.47	1.58	5.760	0 00:10:00
36	Sub-CB#85	0.48	CB #85	0.5400	0.96	0.52	1.49	5.760	0 00:10:00
37	Sub-CB#86	0.36	CB #86	0.5400	0.96	0.52	1.12	5.760	0 00:10:00
38	Sub-CB#87	0.57	CB #87	0.5000	0.96	0.48	1.64	5.760	0 00:10:00
39	Sub-CB#88	0.30	CB #88	0.4900	0.96	0.47	0.85	5.760	0 00:10:00
40	Sub-CB#89	0.42	CB #89	0.5900	0.96	0.57	1.43	5.760	0 00:10:00
41	Sub-CB#90	0.26	CB #90	0.5900	0.96	0.57	0.88	5.760	0 00:10:00
42	Sub-CB#91	0.12	CB #91	0.4900	0.96	0.47	0.34	5.760	0 00:10:00
43	Sub-CB#92	0.40	CB #92	0.5400	0.96	0.52	1.24	5.760	0 00:10:00
44	Sub-CB#93	0.14	CB #93	0.4200	0.96	0.40	0.34	5.760	0 00:10:00
45	Sub-CB#94	0.49	CB #94	0.4900	0.96	0.47	1.38	5.760	0 00:10:00
46	Sub-CB#95	0.15	CB #95	0.4500	0.96	0.43	0.39	5.760	0 00:10:00
47	Sub-YI#608	1.02	YI#608	0.3000	0.96	0.29	1.76	5.760	0 00:10:00
48	Sub-YI#609	0.84	YI#609	0.3500	0.96	0.34	1.69	5.760	0 00:10:00



MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
1	P #100	CB #83	CB #85	184.97	340.10	334.80	2.8600	18.000	0.0130	3.35	0 00:10	7.45	0.41	17.78	0.19	0.30	0.00	0.45	Calculated
2	P #101	CB #84	CB #85	37.64	335.09	334.90	0.5000	15.000	0.0130	2.16	0 00:10	3.34	0.19	4.57	0.47	0.52	0.00	0.65	Calculated
3	P #102	CB #85	CB #86	119.31	334.60	327.83	5.6800	18.000	0.0130	6.78	0 00:10	8.98	0.22	25.03	0.27	0.44	0.00	0.66	Calculated
4	P #103	CB #86	CB #87	37.79	327.63	326.66	2.5600	18.000	0.0130	7.92	0 00:10	7.63	0.08	16.82	0.47	0.57	0.00	0.85	Calculated
5	P #104	CB #87	CB #93	56.16	324.16	319.65	8.0300	18.000	0.0130	9.49	0 00:10	12.84	0.07	29.76	0.32	0.44	0.00	0.65	Calculated
6	P #105	CB #88	CB #89	37.73	319.69	319.50	0.5000	15.000	0.0130	0.80	0 00:11	2.57	0.24	4.56	0.18	0.31	0.00	0.39	Calculated
7	P #106	CB #89	CB #90	164.60	319.30	318.48	0.5000	18.000	0.0130	2.22	0 00:10	3.21	0.85	7.43	0.30	0.44	0.00	0.65	Calculated
8	P #107	CB #90	CB #91	37.70	318.28	318.09	0.5000	18.000	0.0130	2.91	0 00:11	3.14	0.20	7.51	0.39	0.66	0.00	0.98	Calculated
9	P #108	CB #91	CB #92	44.07	317.89	317.67	0.5000	18.000	0.0130	3.32	0 00:11	2.93	0.25	7.43	0.45	0.85	0.00	1.28	Calculated
10	P #109	CB #92	CB #93	25.67	317.47	317.35	0.5000	24.000	0.0130	4.33	0 00:12	2.24	0.19	15.97	0.27	0.79	0.00	1.58	Calculated
11	P #110	CB #93	CB #94	154.53	317.15	316.37	0.5000	24.000	0.0130	14.01	0 00:11	4.95	0.52	16.09	0.87	0.87	0.00	1.74	Calculated
12	P #111	CB #94	CB #95	157.90	316.17	315.38	0.5000	24.000	0.0130	14.91	0 00:11	5.41	0.49	16.00	0.93	0.82	0.00	1.64	Calculated
13	P #50	CB #40	CB #41	25.75	289.37	289.24	0.5000	15.000	0.0130	0.72	0 00:10	2.47	0.17	4.57	0.16	0.29	0.00	0.36	Calculated
14	P #51	CB #41	CB #42	104.24	289.04	288.52	0.5000	15.000	0.0130	1.34	0 00:10	3.09	0.56	4.57	0.29	0.38	0.00	0.48	Calculated
15	P #52	CB #42	CB #44	88.33	288.26	287.82	0.5000	18.000	0.0130	2.01	0 00:10	2.92	0.50	7.43	0.27	0.44	0.00	0.66	Calculated
16	P #53	CB #43	CB #44	25.70	288.19	288.06	0.5000	15.000	0.0130	1.62	0 00:10	3.04	0.14	4.57	0.35	0.45	0.00	0.56	Calculated
17	P #54	CB #44	CB #46	86.73	287.62	287.18	0.5000	18.000	0.0130	4.24	0 00:11	4.02	0.36	7.43	0.57	0.58	0.00	0.87	Calculated
18	P #55	CB #45	CB #46	25.66	289.07	288.94	0.5000	15.000	0.0130	1.13	0 00:10	2.77	0.15	4.57	0.25	0.37	0.00	0.46	Calculated
19	P #56	CB #46	CB #57	132.58	286.98	286.32	0.5000	24.000	0.0130	5.59	0 00:11	4.29	0.52	16.00	0.35	0.43	0.00	0.87	Calculated
20	P #57	CB #47	CB #48	28.27	336.69	336.20	1.7300	15.000	0.0130	2.21	0 00:10	4.98	0.09	8.49	0.26	0.39	0.00	0.49	Calculated
21	P #58	CB #48	CB #50	179.98	335.93	326.03	5.5000	18.000	0.0150	3.16	0 00:10	8.44	0.36	21.35	0.15	0.26	0.00	0.40	Calculated
22	P #59	CB #49	CB #50	25.73	326.36	326.23	0.5000	15.000	0.0130	2.70	0 00:10	3.50	0.12	4.57	0.59	0.60	0.00	0.75	Calculated
23	P #60	CB #50	CB #52	180.02	325.83	316.23	5.3300	18.000	0.0130	6.96	0 00:10	11.30	0.27	24.25	0.29	0.38	0.00	0.57	Calculated
24	P #61	CB #51	CB #52	25.73	316.52	316.39	0.5000	15.000	0.0130	2.61	0 00:10	3.47	0.12	4.57	0.57	0.59	0.00	0.74	Calculated

MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
25	P #62	CB #52	CB #54	199.99	315.69	304.78	5.4500	24.000	0.0130	10.64	0 00:10	12.49	0.27	52.83	0.20	0.32	0.00	0.63	Calculated
26	P #63	CB #53	CB #54	25.70	305.59	305.46	0.5000	15.000	0.0130	2.67	0 00:10	3.49	0.12	4.57	0.58	0.60	0.00	0.75	Calculated
27	P #64	CB #54	CB #55	89.36	304.44	296.67	8.7000	24.000	0.0130	13.97	0 00:10	14.99	0.10	66.73	0.21	0.34	0.00	0.67	Calculated
28	P #65	CB #55	CB #57	124.65	296.47	286.46	8.0300	30.000	0.0130	14.18	0 00:10	14.78	0.14	116.22	0.12	0.25	0.00	0.63	Calculated
29	P #66	CB #56	CB #57	26.45	285.21	284.89	1.2300	15.000	0.0130	2.56	0 00:10	3.46	0.13	7.16	0.36	0.66	0.00	0.83	Calculated
30	P #67	CB #57	SDMH #504	253.13	284.69	279.42	2.0800	30.000	0.0130	22.55	0 00:11	8.56	0.49	59.14	0.38	0.60	0.00	1.49	Calculated
31	P #68	CB #58	CB #59	25.72	317.74	316.22	5.9000	15.000	0.0130	1.09	0 00:10	6.60	0.06	15.70	0.07	0.19	0.00	0.24	Calculated
32	P #69	CB #59	CB #61	150.32	314.25	313.50	0.5000	30.000	0.0130	16.61	0 00:12	5.50	0.46	29.00	0.57	0.59	0.00	1.48	Calculated
33	P #70	CB #60	CB #61	25.69	316.71	315.34	5.3700	15.000	0.0130	2.14	0 00:10	7.42	0.06	14.97	0.14	0.29	0.00	0.36	Calculated
34	P #71	CB #61	CB #63	209.38	313.30	301.26	5.7500	30.000	0.0130	18.63	0 00:12	11.95	0.29	98.36	0.19	0.36	0.00	0.90	Calculated
35	P #72	CB #62	CB #63	25.68	303.67	302.96	2.7400	15.000	0.0130	3.07	0 00:10	6.23	0.07	10.69	0.29	0.42	0.00	0.53	Calculated
36	P #73	CB #63	CB #65	131.01	301.06	297.43	2.7700	30.000	0.0130	25.70	0 00:11	9.65	0.23	68.28	0.38	0.54	0.00	1.34	Calculated
37	P #74	CB #64	CB #65	25.67	299.14	298.04	4.3100	15.000	0.0130	1.15	0 00:10	4.73	0.09	13.42	0.09	0.42	0.00	0.53	Calculated
38	P #75	CB #65	CB #66	51.59	297.23	295.77	2.8300	30.000	0.0130	28.54	0 00:11	10.33	0.08	69.02	0.41	0.55	0.00	1.37	Calculated
39	P #76	CB #66	CB #69	25.76	294.57	293.65	3.5700	30.000	0.0130	30.05	0 00:11	10.26	0.04	77.53	0.39	0.58	0.00	1.44	Calculated
40	P #77	CB #67	CB #68	27.85	300.94	300.76	0.6300	15.000	0.0130	0.63	0 00:10	2.59	0.18	5.14	0.12	0.25	0.00	0.32	Calculated
41	P #78	CB #68	CB #69	120.33	300.56	294.00	5.4600	18.000	0.0130	0.90	0 00:10	6.45	0.31	24.53	0.04	0.13	0.00	0.20	Calculated
42	P #79	CB #69	SDMH #504	157.14	292.79	278.97	8.7900	30.000	0.0130	31.18	0 00:11	9.55	0.27	121.63	0.26	0.64	0.00	1.60	Calculated
43	P #80	SDMH #504	FES#305	35.01	278.77	278.00	2.2100	36.000	0.0130	53.44	0 00:11	10.37	0.06	99.16	0.54	0.68	0.00	2.05	Calculated
44	P #97	CB #80	CB #81	25.67	341.74	341.61	0.5000	15.000	0.0150	1.90	0 00:10	3.10	0.14	3.96	0.48	0.50	0.00	0.63	Calculated
45	P #98	CB #81	CB #82	43.95	341.34	340.69	1.4800	15.000	0.0130	2.96	0 00:10	4.37	0.17	7.87	0.38	0.57	0.00	0.71	Calculated
46	P #99	CB #82	CB #83	37.72	340.49	340.30	0.5000	15.000	0.0130	3.34	0 00:10	3.77	0.17	4.57	0.73	0.68	0.00	0.85	Calculated
47	P#112	CB #95	CB #59	150.00	315.18	314.43	0.5000	30.000	0.0150	15.19	0 00:12	4.86	0.51	25.14	0.60	0.61	0.00	1.52	Calculated
48	P#167	YI#609	YI#608	310.00	321.03	305.58	4.9900	15.000	0.0130	1.66	0 00:10	6.24	0.83	14.42	0.12	0.29	0.00	0.36	Calculated
49	P#168	YI#608	CB #63	132.34	305.38	303.56	1.3700	15.000	0.0130	3.35	0 00:10	5.63	0.39	7.57	0.44	0.49	0.00	0.61	Calculated

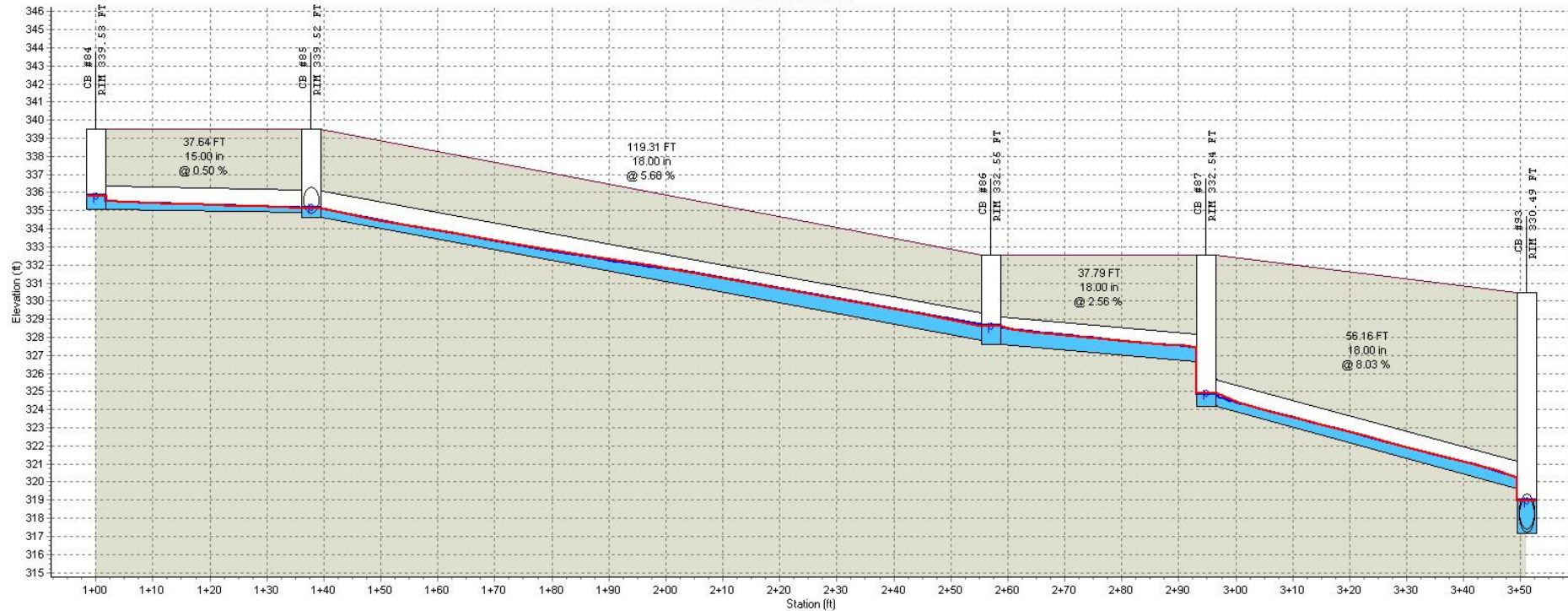
Profile Plot  
Main Street Storm Sewer



	CB #80	CB #81	CB #82	CB #83	CB #85
RIM (FT):	346.18	346.18	345.20	345.21	339.52
Invert (ft):	341.74	341.34	340.49	340.10	334.60
Min Pipe Cover (ft):					
Max HGL (ft):	342.44	342.01	341.45	340.57	335.15
Link ID:	P #97	P #98	P #99	P #100	
(FT):	25.67	43.95	37.72	184.97	
(in):	15.00	15.00	15.00	18.00	
@ (%):	0.50	1.48	0.50	2.86	
Up Invert (ft):	341.74	341.34	340.49	340.10	
Dn Invert (ft):	341.61	340.69	340.30	334.80	
Max Q (cfs):	1.90	2.96	3.34	3.35	
Max Vel (ft/s):	3.10	4.37	3.77	7.45	
Max Depth (ft):	0.63	0.71	0.85	0.45	

— HGL

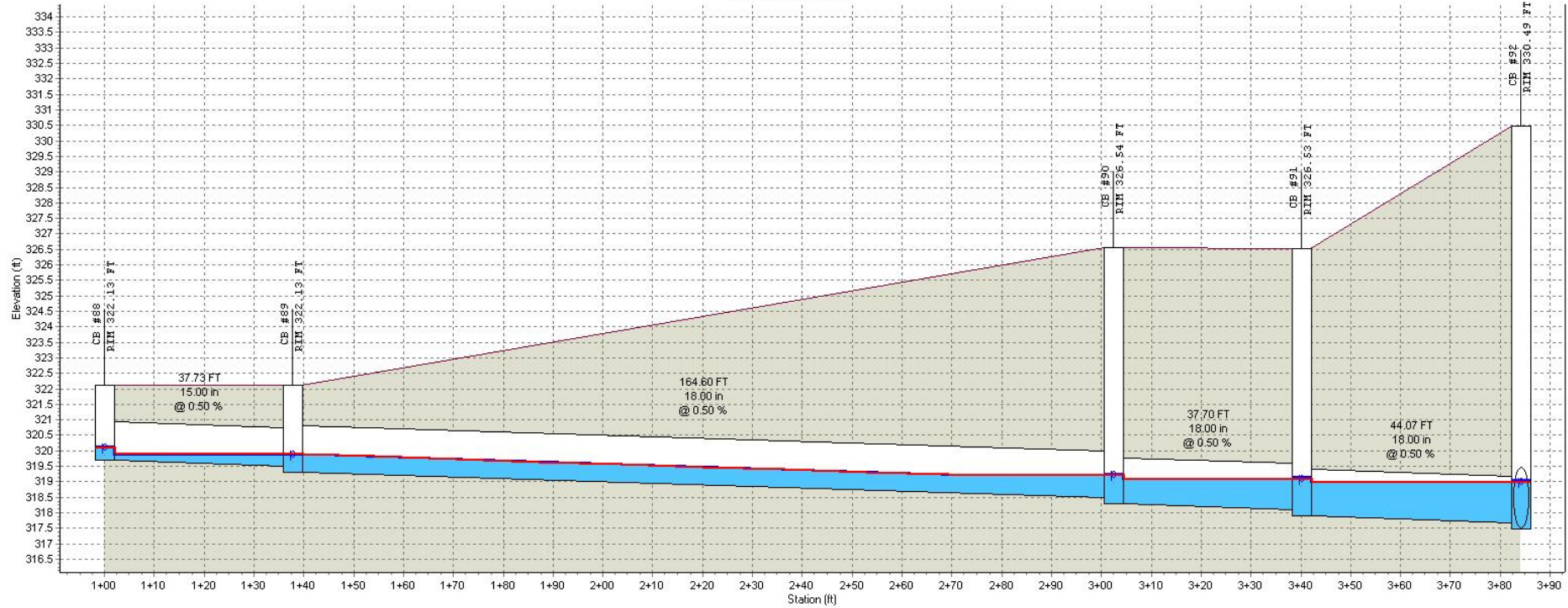
Profile Plot  
Main Street Storm Sewer



	CB #84	CB #85	CB #86	CB #87	CB #93
RIM (FT):	339.53	339.52	332.55	332.54	330.49
Invert (ft):	335.09	334.60	327.63	324.16	317.15
Min Pipe Cover (ft):					
Max HGL (ft):	335.81	335.15	328.61	324.88	318.96
Link ID:	P #101	P #102	P #103	P #104	
(FT):	37.64	119.31	37.79	56.16	
(in):	15.00	18.00	18.00	18.00	
@ (%):	0.50	5.68	2.56	8.03	
Up Invert (ft):	335.09	334.60	327.63	324.16	
Dn Invert (ft):	334.90	327.83	326.66	319.65	
Max Q (cfs):	2.16	6.78	7.92	9.49	
Max Vel (ft/s):	3.34	8.98	7.63	12.84	
Max Depth (ft):	0.65	0.66	0.85	0.65	

— HGL

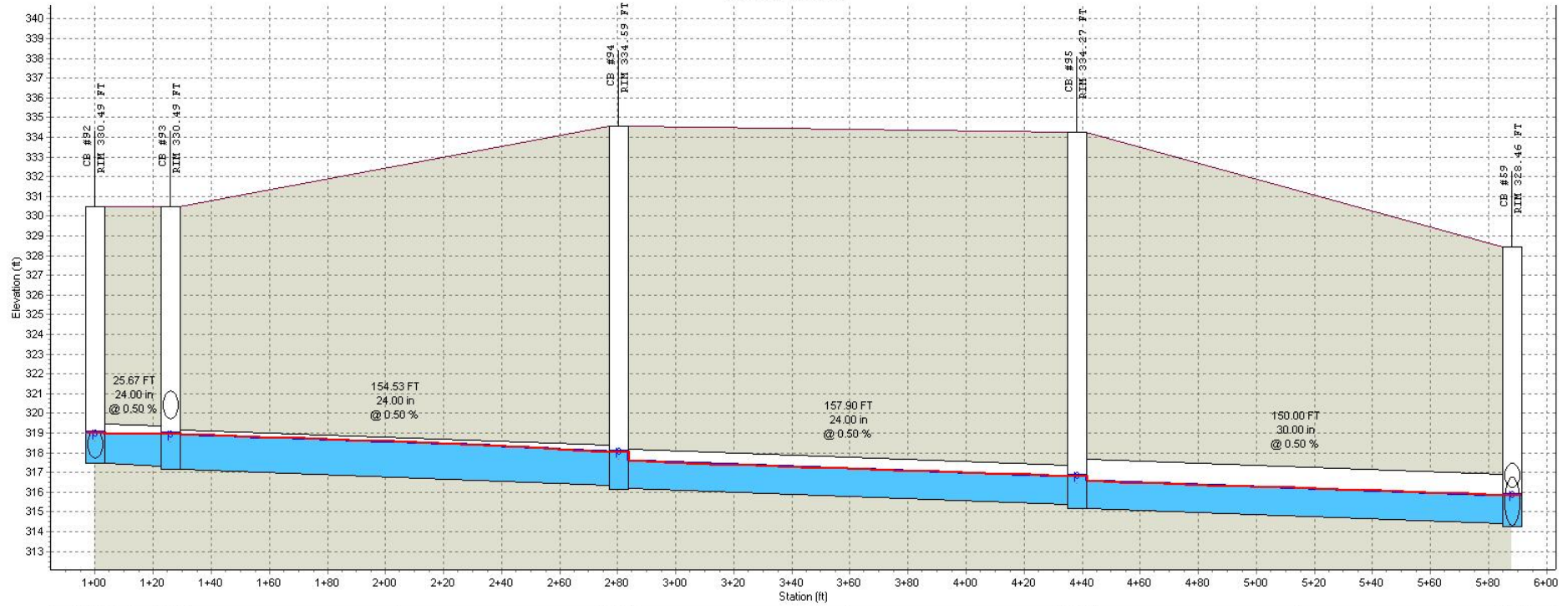
Profile Plot  
Main Street Storm Sewer



	CB #88	CB #89	CB #90	CB #91	CB #92
RIM (ft):	322.13	322.13	326.54	326.53	330.49
Invert (ft):	319.69	319.30	318.28	317.89	317.47
Min Pipe Cover (ft):					
Max HGL (ft):	320.10	319.88	319.23	319.11	319.01
Link ID:	P #105	P #106	P #107	P #108	
(ft):	37.73	164.60	37.70	44.07	
(in):	15.00	18.00	18.00	18.00	
@ (%):	0.50	0.50	0.50	0.50	
Up Invert (ft):	319.69	319.30	318.28	317.89	
Dn Invert (ft):	319.50	318.48	318.09	317.67	
Max Q (cfs):	0.80	2.22	2.91	3.32	
Max Vel (ft/s):	2.57	3.21	3.14	2.93	
Max Depth (ft):	0.39	0.65	0.98	1.28	

— HGL

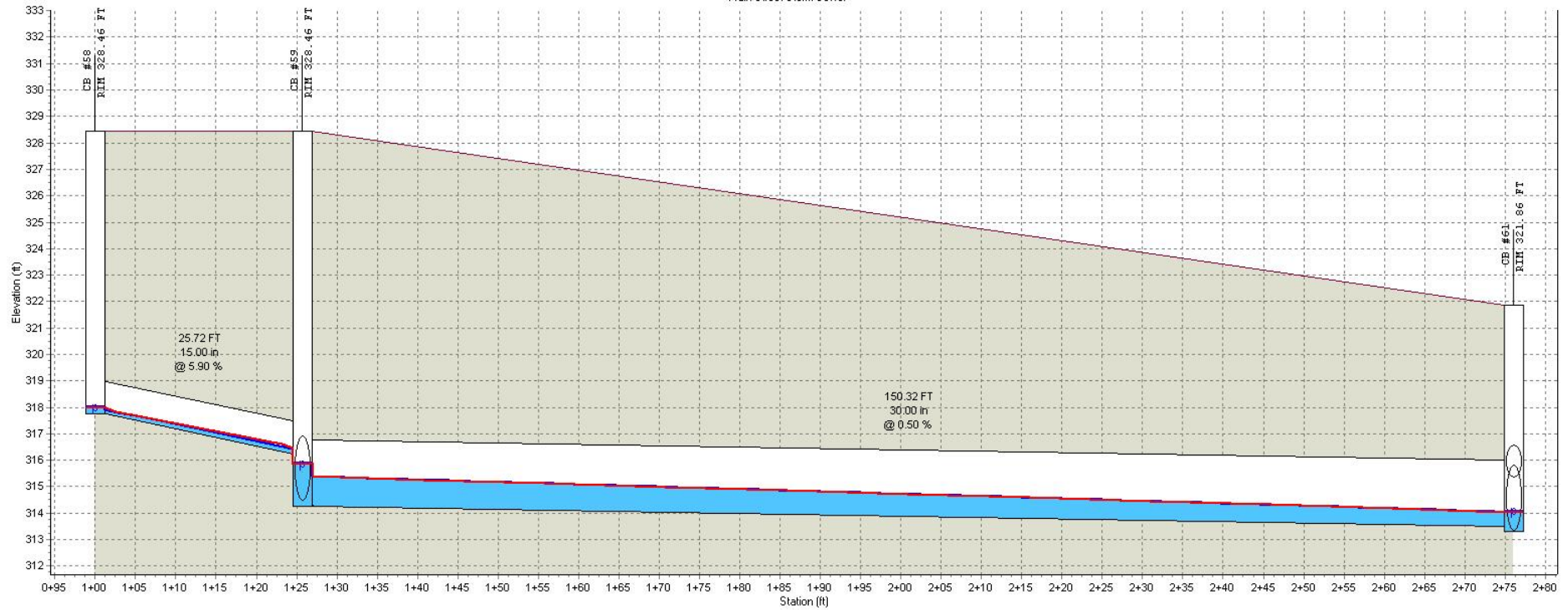
Profile Plot  
Main Street Storm Sewer



	CB #92	CB #93		CB #94		CB #95		CB #59
RIM (FT):	330.49	330.49		334.59		334.27		328.46
Invert (ft):	317.47	317.15		316.17		315.18		314.25
Min Pipe Cover (ft):								
Max HGL (ft):	319.01	318.96		318.04		316.81		315.86
Link ID:	P #109		P #110		P #111		P #112	
(FT):	25.67		154.53		157.90		150.00	
(in):	24.00		24.00		24.00		30.00	
@ (%):	0.50		0.50		0.50		0.50	
Up Invert (ft):	317.47		317.15		316.17		315.18	
Dn Invert (ft):	317.35		316.37		315.38		314.43	
Max Q (cfs):	4.33		14.01		14.91		15.19	
Max Vel (ft/s):	2.24		4.95		5.41		4.86	
Max Depth (ft):	1.58		1.74		1.64		1.52	

— HGL

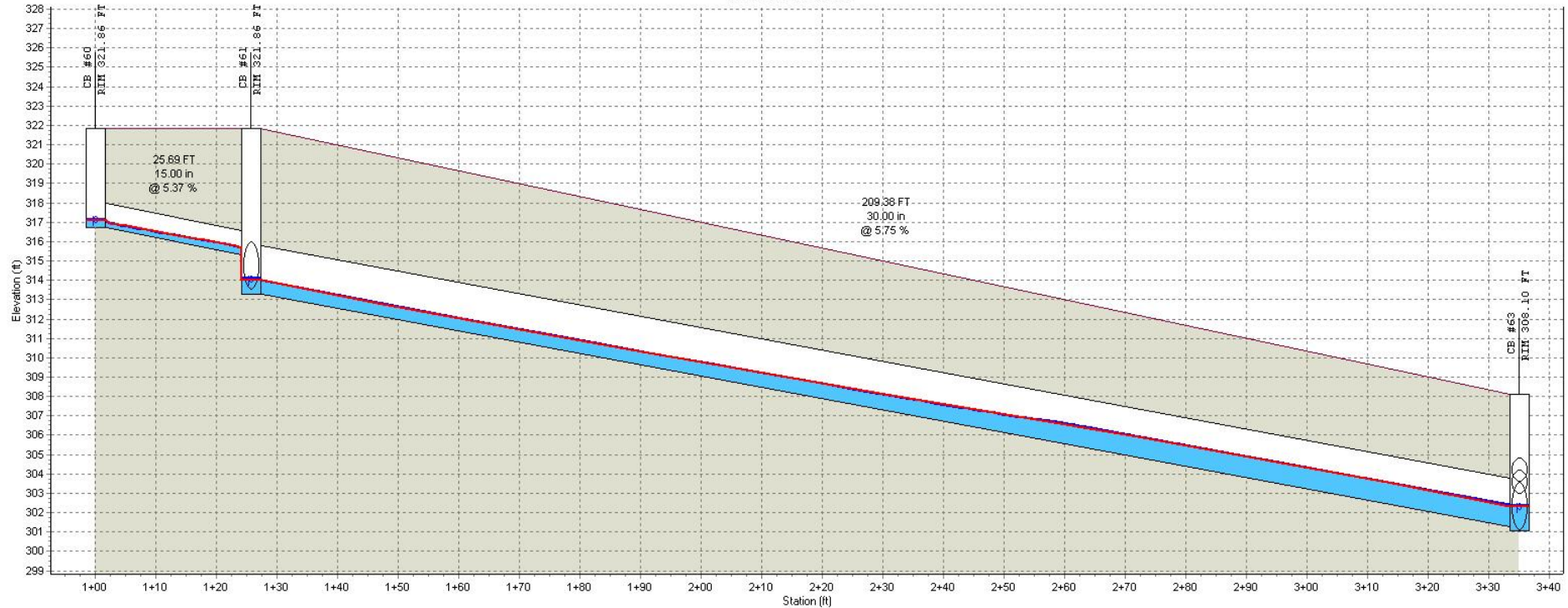
Profile Plot  
Main Street Storm Sewer



	CB #58	CB #59		CB #61
RIM (FT):	328.46	328.46		321.86
Invert (ft):	317.74	314.25		313.30
Min Pipe Cover (ft):				
Max HGL (ft):	318.00	315.86		314.05
Link ID:	P #68		P #69	
(FT):	25.72		150.32	
(in):	15.00		30.00	
@ (%):	5.90		0.50	
Up Invert (ft):	317.74		314.25	
Dn Invert (ft):	316.22		313.50	
Max Q (cfs):	1.09		16.61	
Max Vel (ft/s):	6.60		5.50	
Max Depth (ft):	0.24		1.48	

— HGL

Profile Plot  
Main Street Storm Sewer

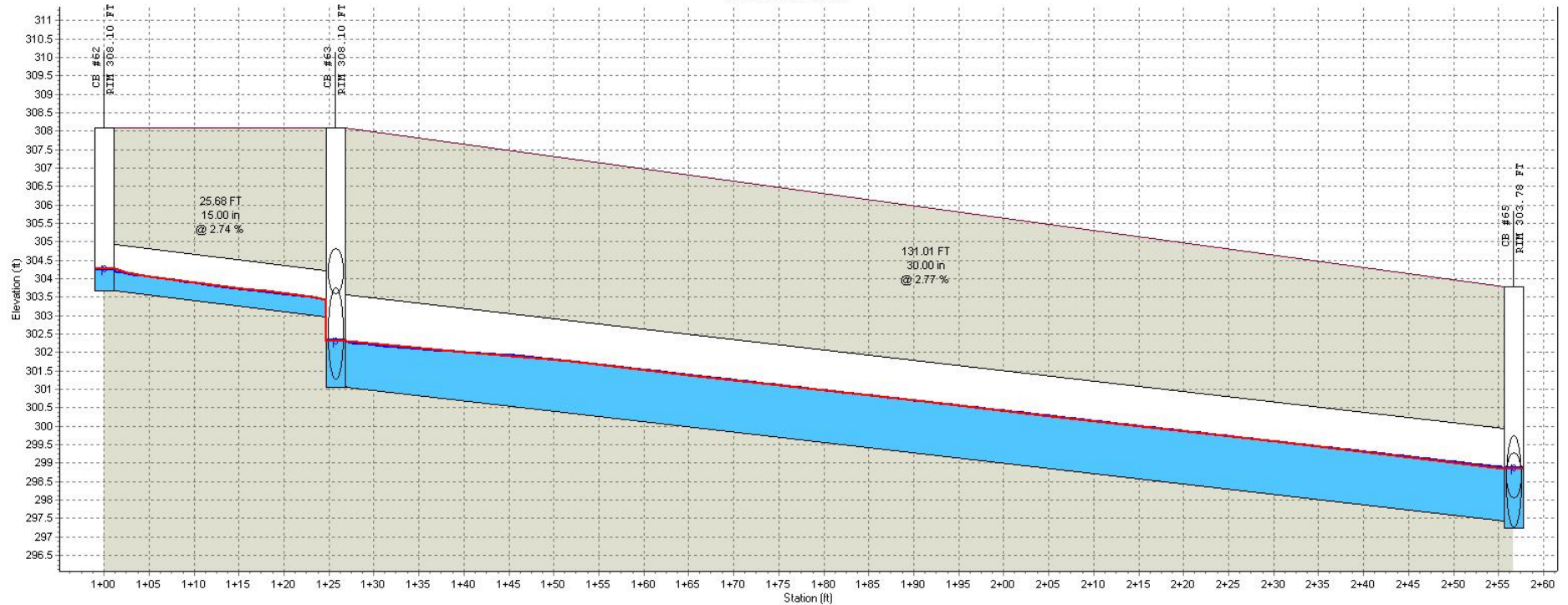


	CB #60	CB #61		CB #63
RIM (FT):	321.86	321.86		308.10
Invert (ft):	316.71	313.30		301.06
Min Pipe Cover (ft):				
Max HGL (ft):	317.11	314.05		302.31
Link ID:	P #70		P #71	
(FT):	25.69		209.38	
(in):	15.00		30.00	
@ (%):	5.37		5.75	
Up Invert (ft):	316.71		313.30	
Dn Invert (ft):	315.33		301.26	
Max Q (cfs):	2.14		18.63	
Max Vel (ft/s):	7.42		11.95	
Max Depth (ft):	0.36		0.90	

— HGL



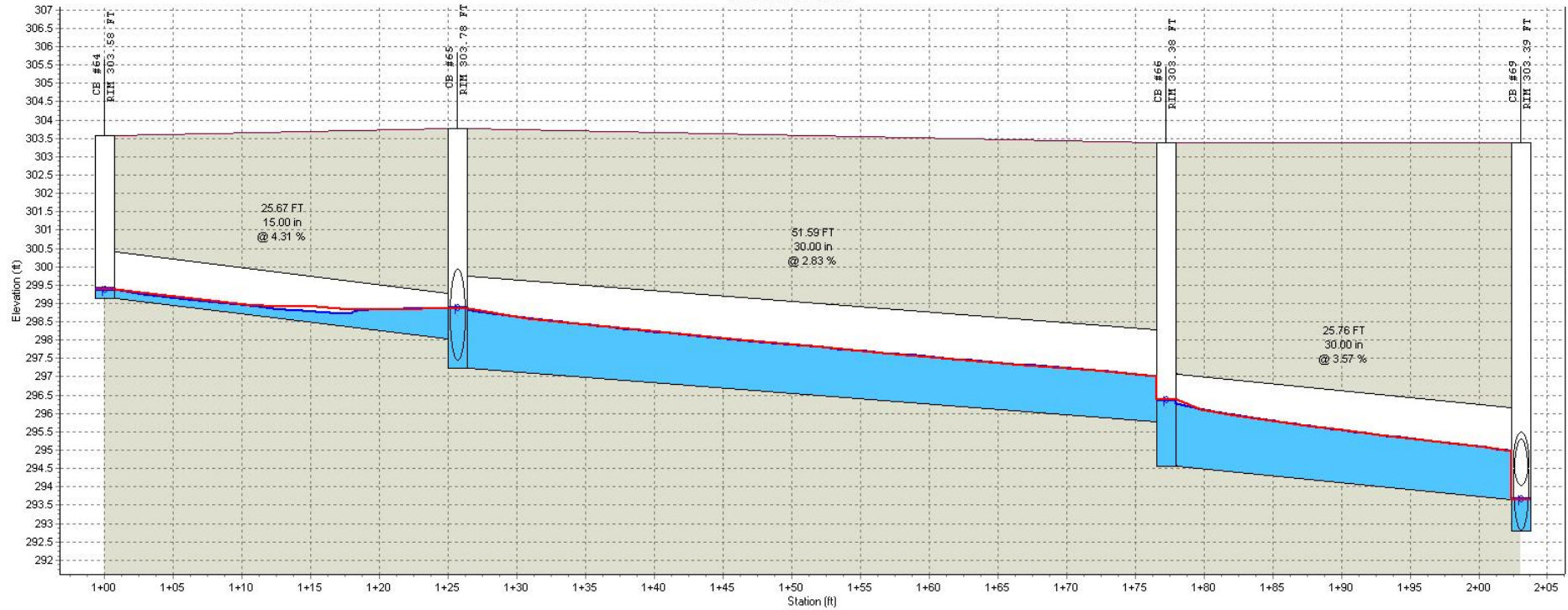
Profile Plot  
Main Street Storm Sewer



	CB #62	CB #63		CB #65
RIM (FT):	308.10	308.10		303.78
Invert (ft):	303.67	301.06		297.23
Min Pipe Cover (ft):				
Max HGL (ft):	304.26	302.31		298.86
Link ID:		P #72		P #73
(FT):		25.68		131.01
(in):		15.00		30.00
@ (%):		2.74		2.77
Up Invert (ft):		303.67		301.06
Dn Invert (ft):		302.96		297.43
Max Q (cfs):		3.07		25.70
Max Vel (ft/s):		6.23		9.65
Max Depth (ft):		0.53		1.34

— HGL

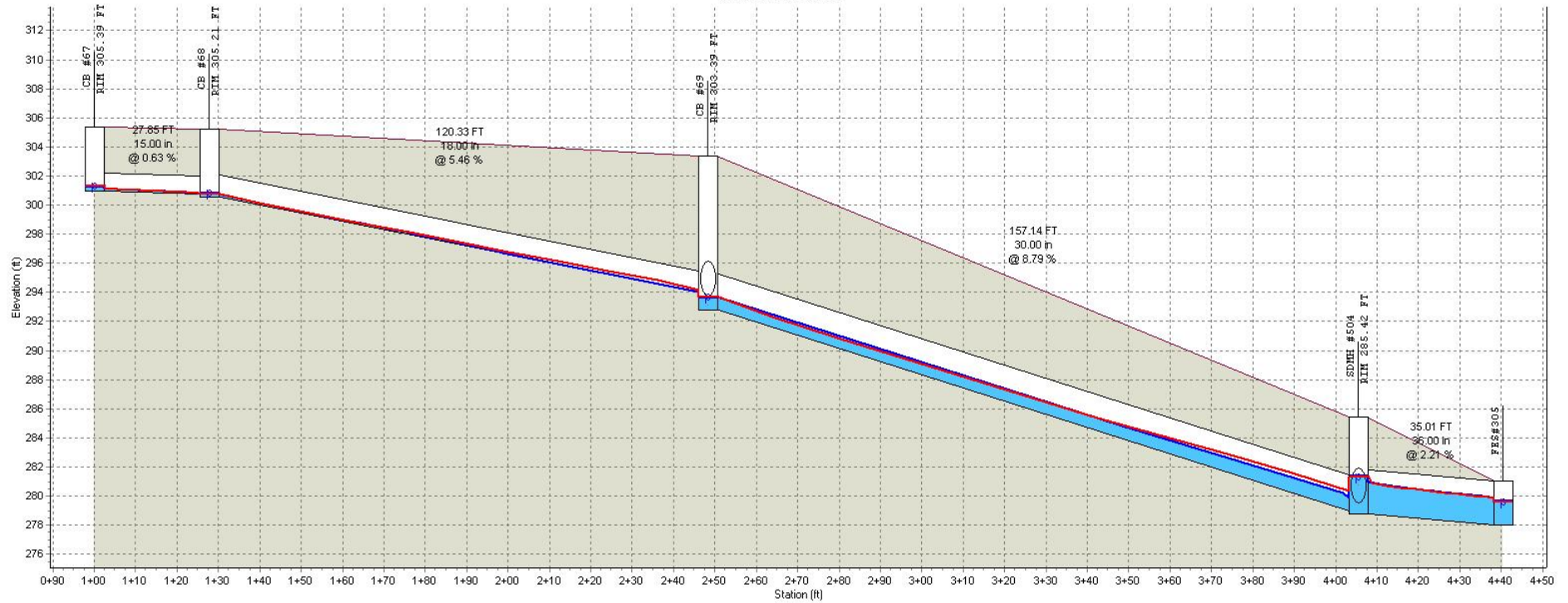
Profile Plot  
Main Street Storm Sewer



	CB #64	CB #65	CB #66	CB #69
RIM (FT):	303.58	303.78	303.38	303.39
Invert (ft):	299.14	297.23	294.57	292.79
Min Pipe Cover (ft):				
Max HGL (ft):	299.39	298.86	296.37	293.65
Link ID:	P #74		P #75	P #76
(FT):	25.67		51.59	25.76
(in):	15.00		30.00	30.00
@ (%):	4.31		2.83	3.57
Up Invert (ft):	299.14		297.23	294.57
Dn Invert (ft):	298.04		295.77	293.65
Max Q (cfs):	1.15		28.54	30.05
Max Vel (ft/s):	4.73		10.33	10.26
Max Depth (ft):	0.53		1.37	1.44

— HGL

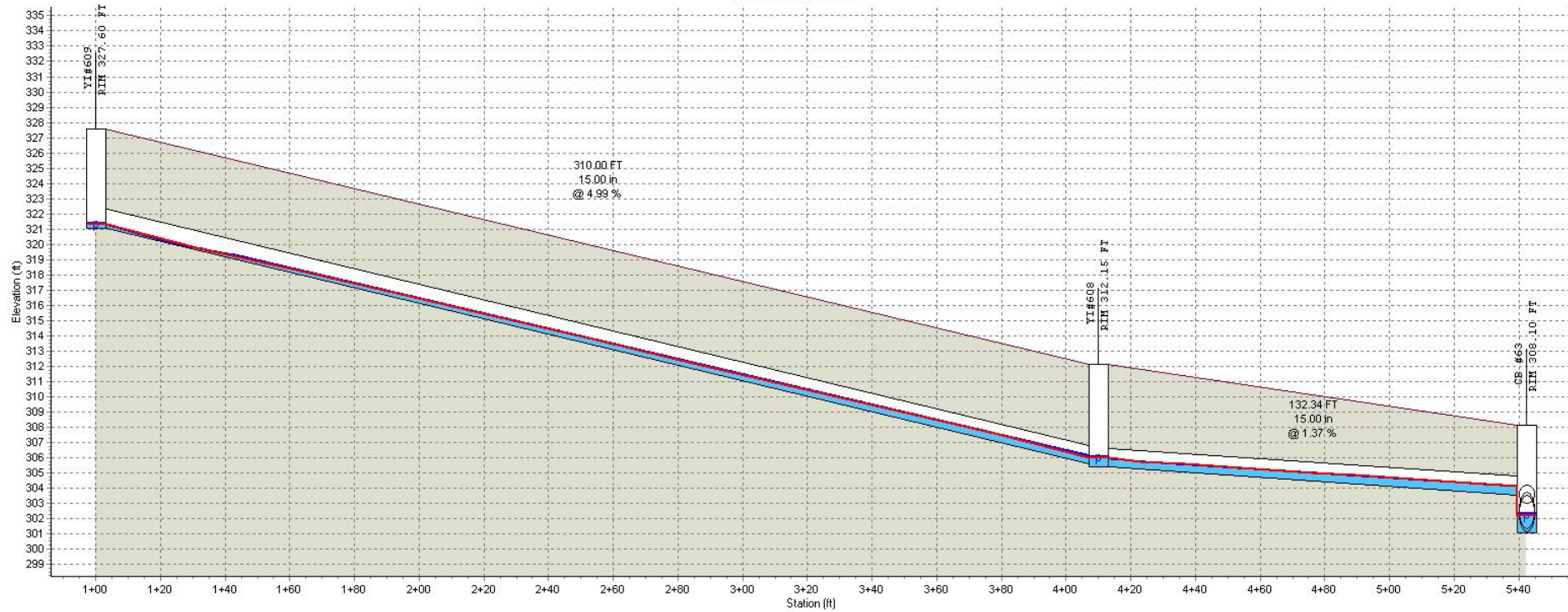
Profile Plot  
Main Street Storm Sewer



	CB #67	CB #68	CB #69	SDMH #504	FES#305
RIM (ft):	305.39	305.21	303.39	285.42	
Invert (ft):	300.94	300.56	292.79	278.77	278.00
Min Pipe Cover (ft):				3.50	
Max HGL (ft):	301.28	300.77	293.65	281.31	279.57
Link ID:	P #77		P #78		P #80
(ft):	27.85		120.33		35.01
(in):	15.00		18.00		36.00
@ (%):	0.63		5.46		2.21
Up Invert (ft):	300.94		300.56		278.77
Dn Invert (ft):	300.76		294.00		278.00
Max Q (cfs):	0.63		0.90		53.44
Max Vel (ft/s):	2.59		6.45		10.37
Max Depth (ft):	0.32		0.20		2.05

— HGL

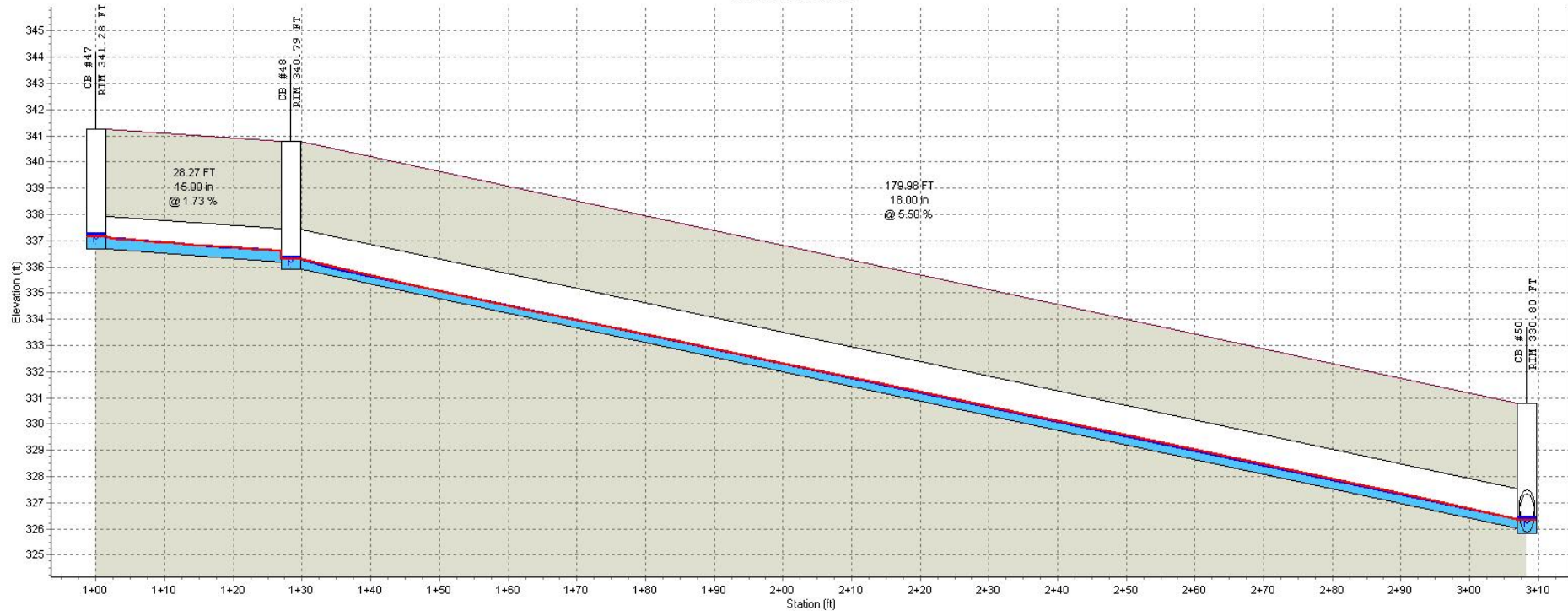
Profile Plot  
Main Street Storm Sewer



	YI#609		YI#608		CB#63
RIM (FT):	327.60		312.15		308.10
Invert (ft):	321.03		305.38		301.06
Min Pipe Cover (ft):					
Max HGL (ft):	321.32		306.02		302.31
Link ID:		P#167		P#168	
(FT):		310.00		132.34	
(in):		15.00		15.00	
@ (%):		4.99		1.37	
Up Invert (ft):		321.03		305.38	
Dn Invert (ft):		305.58		303.56	
Max Q (cfs):		1.66		3.35	
Max Vel (ft/s):		6.24		5.63	
Max Depth (ft):		0.36		0.61	

— HGL

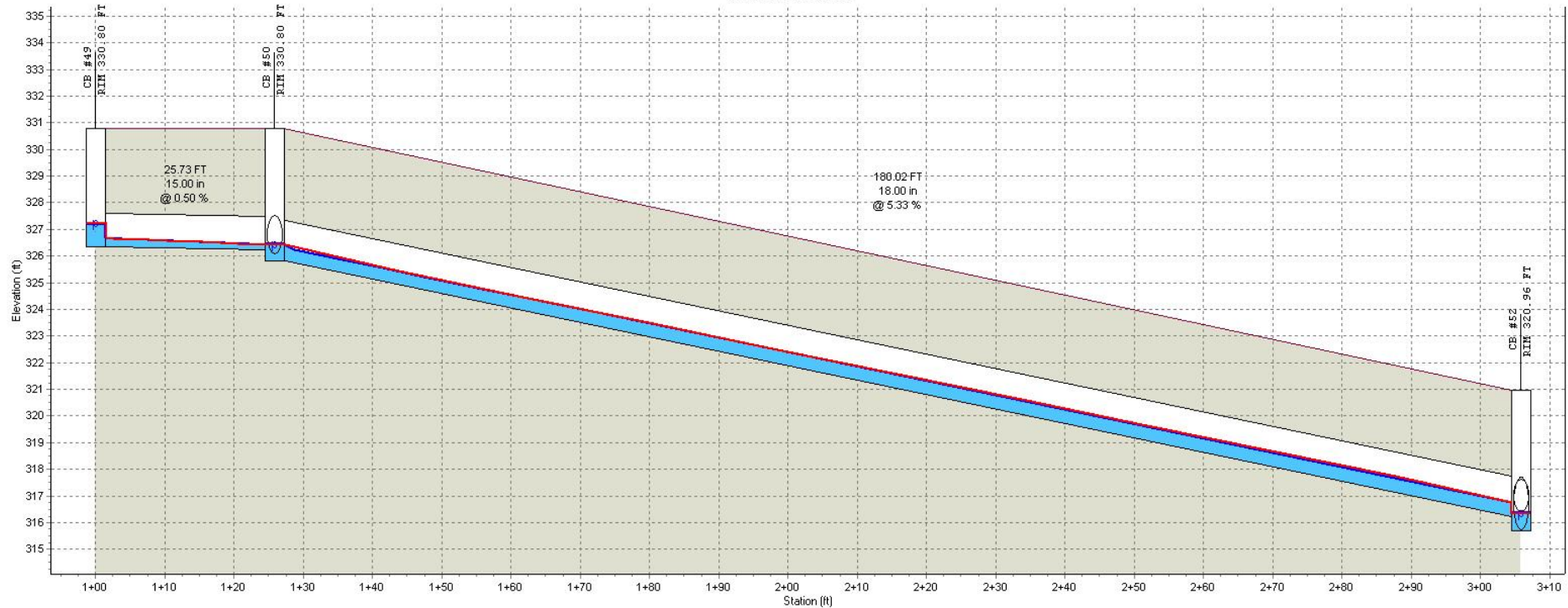
Profile Plot  
Main Street Storm Sewer



	CB #47	CB #48	CB #50
RIM (FT):	341.28	340.79	330.80
Invert (ft):	336.69	335.93	325.83
Min Pipe Cover (ft):			
Max HGL (ft):	337.23	336.33	326.42
Link ID:	P #57	P #58	
(FT):	28.27	179.98	
(in):	15.00	18.00	
@ (%):	1.73	5.50	
Up Invert (ft):	336.69	335.93	
Dn Invert (ft):	336.20	326.03	
Max Q (cfs):	2.21	3.16	
Max Vel (ft/s):	4.98	8.44	
Max Depth (ft):	0.49	0.40	

— HGL

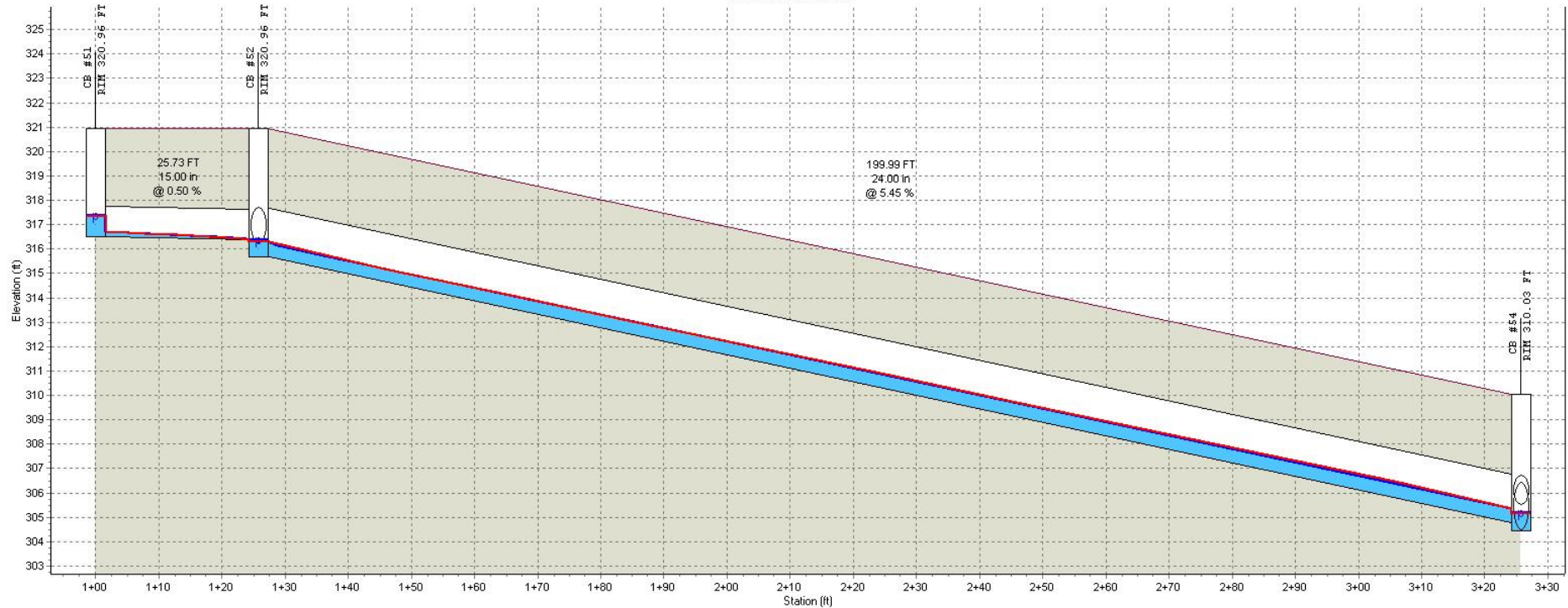
Profile Plot  
Main Street Storm Sewer



	CB #49	CB #50		CB #52
RIM (FT):	330.80	330.80		320.96
Invert (ft):	326.36	325.83		315.69
Min Pipe Cover (ft):				
Max HGL (ft):	327.21	326.42		316.34
Link ID:	P #59		P #60	
(FT):	25.73		180.02	
(in):	15.00		18.00	
@ (%):	0.50		5.33	
Up Invert (ft):	326.36		325.83	
Dn Invert (ft):	326.23		316.23	
Max Q (cfs):	2.70		6.96	
Max Vel (ft/s):	3.50		11.30	
Max Depth (ft):	0.75		0.57	

— HGL

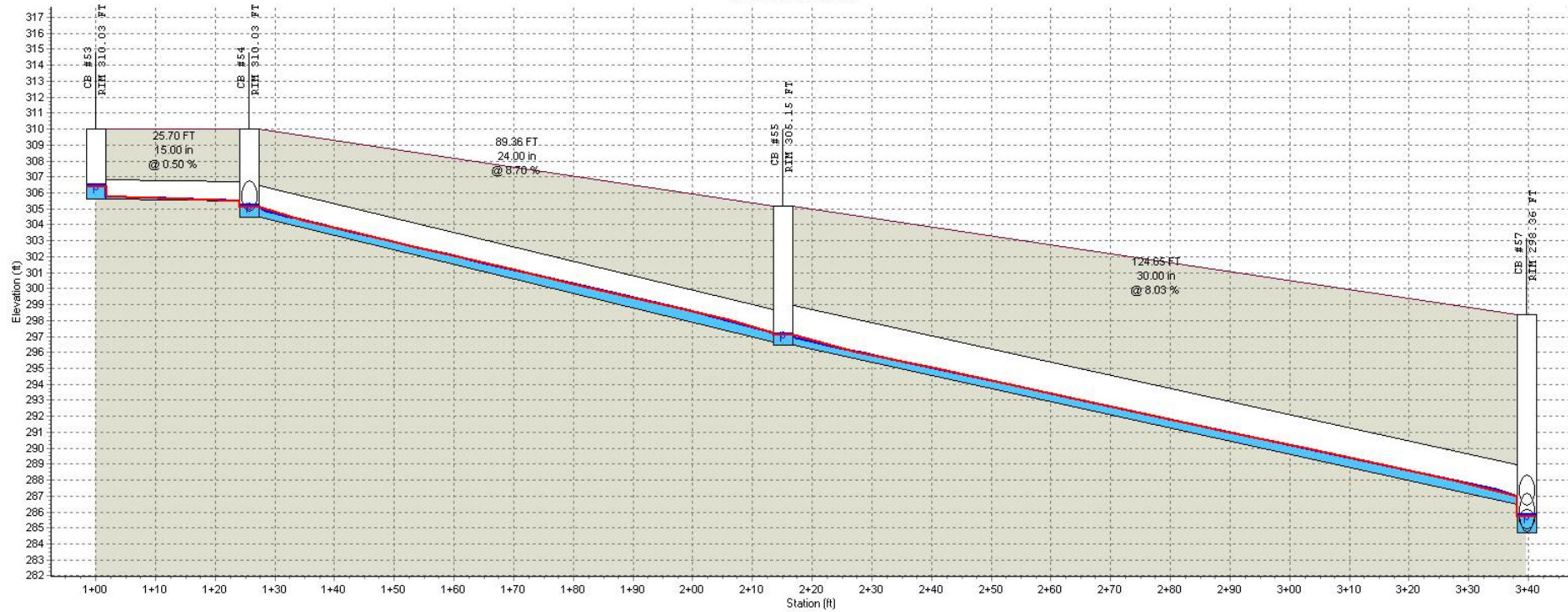
Profile Plot  
Main Street Storm Sewer



	CB #51	CB #52		CB #54
RIM (FT):	320.96	320.96		310.03
Invert (ft):	316.52	315.69		304.44
Min Pipe Cover (ft):				
Max HGL (ft):	317.35	316.34		305.17
Link ID:	P #61		P #62	
(FT):	25.73		199.99	
(in):	15.00		24.00	
@ (%):	0.50		5.45	
Up Invert (ft):	316.52		315.69	
Dn Invert (ft):	316.39		304.78	
Max Q (cfs):	2.61		10.64	
Max Vel (ft/s):	3.47		12.49	
Max Depth (ft):	0.74		0.63	

— HGL

Profile Plot  
Main Street Storm Sewer

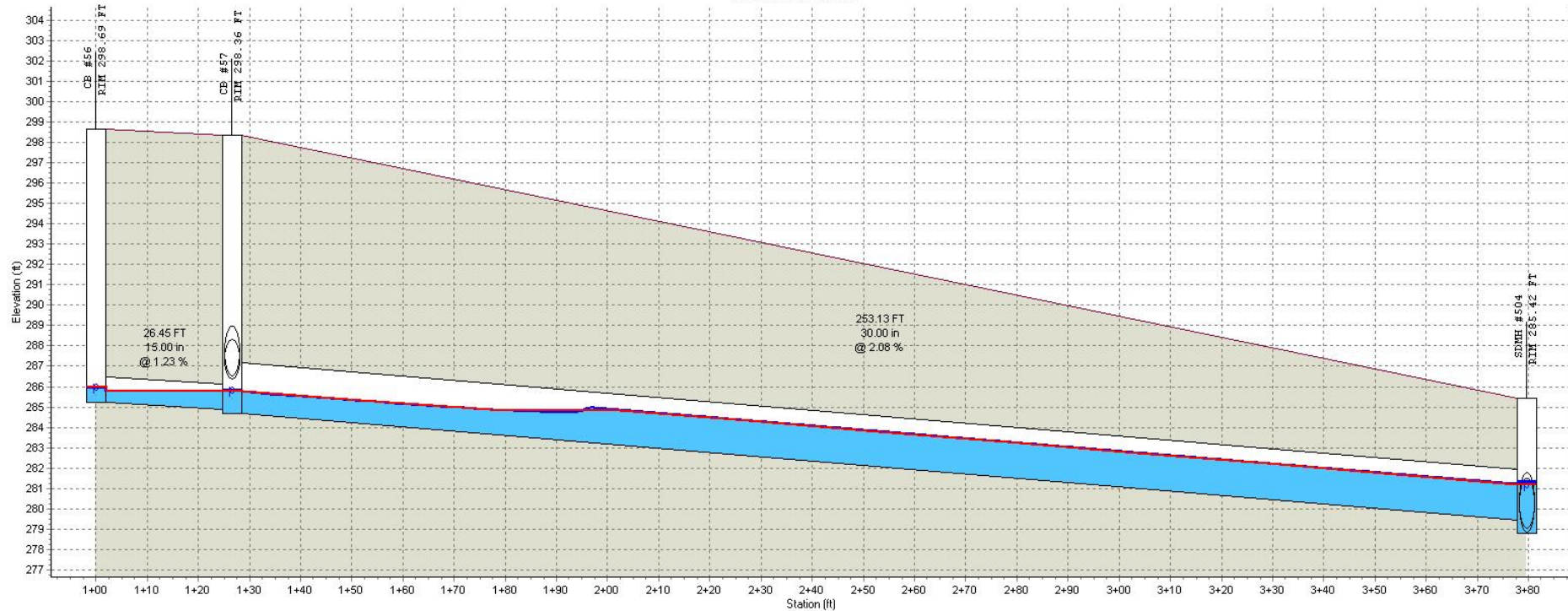


	CB #53	CB #54	CB #55	CB #57
RIM (FT):	310.03	310.03	305.15	298.36
Invert (ft):	305.59	304.44	296.47	284.69
Min Pipe Cover (ft):				
Max HGL (ft):	306.43	305.17	297.13	285.81
Link ID:	P #63		P #64	P #65
(FT):	25.70		89.36	124.65
(in):	15.00		24.00	30.00
@ (%):	0.50		8.70	8.03
Up Invert (ft):	305.59	304.44		296.47
Dn Invert (ft):	305.46	296.67		286.46
Max Q (cfs):	2.67	13.97		14.18
Max Vel (ft/s):	3.49	14.99		14.78
Max Depth (ft):	0.75	0.67		0.63

— HGL



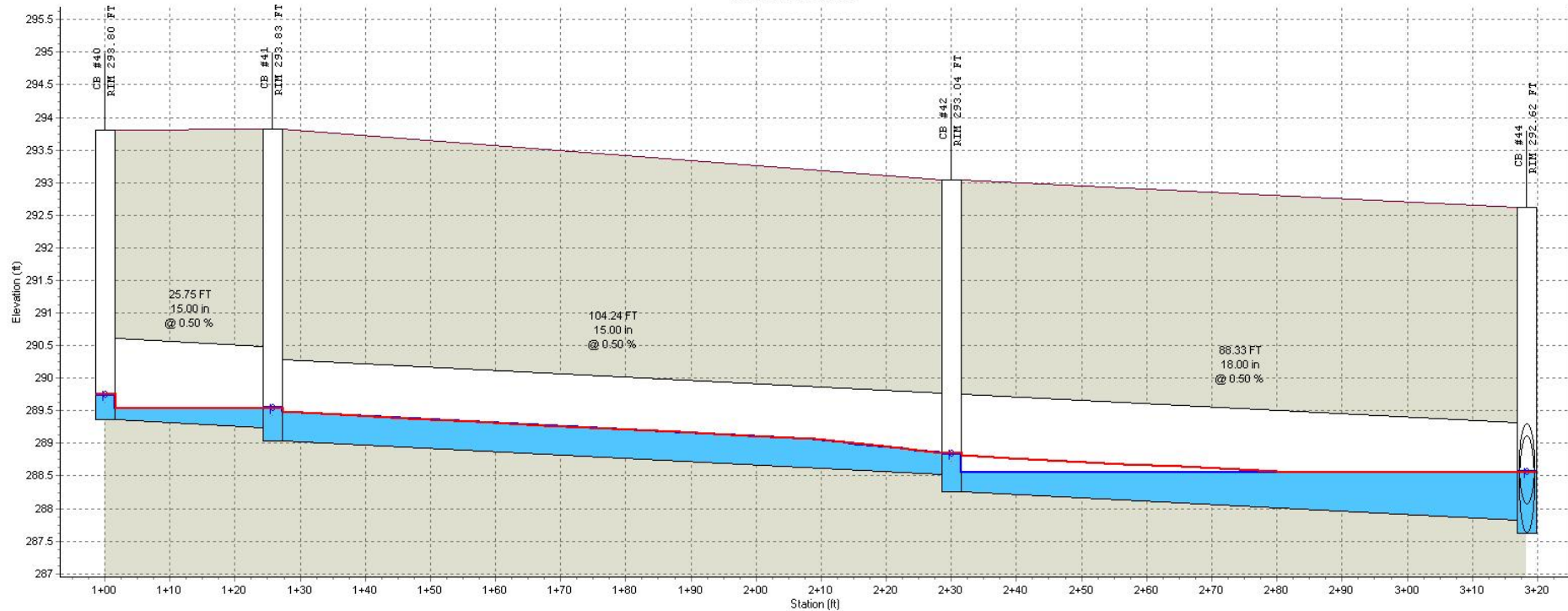
Profile Plot  
Main Street Storm Sewer



	CB #56	CB #57	SDMH #504
RIM (FT):	298.69	298.36	285.42
Invert (ft):	285.21	284.69	278.77
Min Pipe Cover (ft):			3.50
Max HGL (ft):	285.96	285.81	281.31
Link ID:	P #66		P #67
(FT):	26.45		253.13
(in):	15.00		30.00
@ (%):	1.23		2.08
Up Invert (ft):	285.21		284.69
Dn Invert (ft):	284.89		279.42
Max Q (cfs):	2.56		22.55
Max Vel (ft/s):	3.46		8.56
Max Depth (ft):	0.83		1.49

— HGL

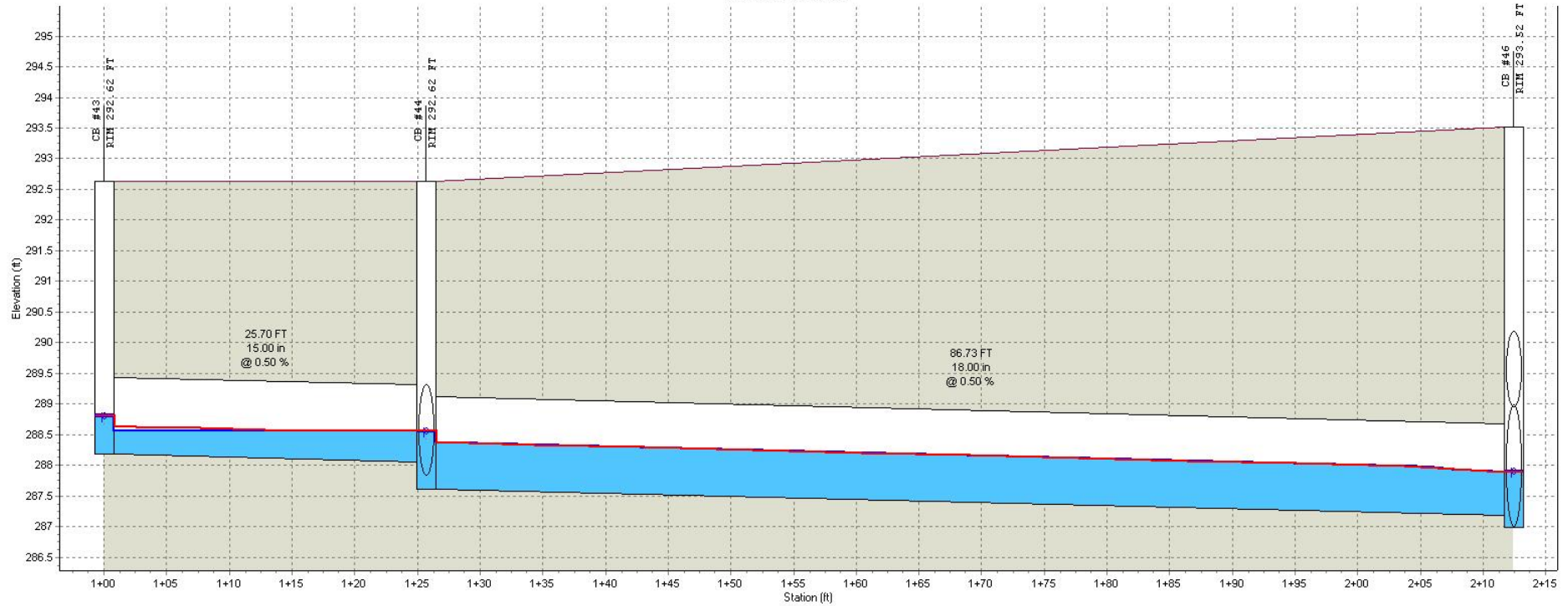
Profile Plot  
Main Street Storm Sewer



	CB #40	CB #41	CB #42	CB #44
RIM (FT):	293.80	293.83	293.04	292.62
Invert (ft):	289.36	289.04	288.26	287.62
Min Pipe Cover (ft):				
Max HGL (ft):	289.75	289.54	288.84	288.56
Link ID:	P #50	P #51	P #52	
(FT):	25.75	104.24	88.33	
(in):	15.00	15.00	18.00	
@ (%):	0.50	0.50	0.50	
Up Invert (ft):	289.37	289.04	288.26	
Dn Invert (ft):	289.24	288.52	287.82	
Max Q (cfs):	0.72	1.34	2.01	
Max Vel (ft/s):	2.47	3.09	2.92	
Max Depth (ft):	0.36	0.48	0.66	

— HGL

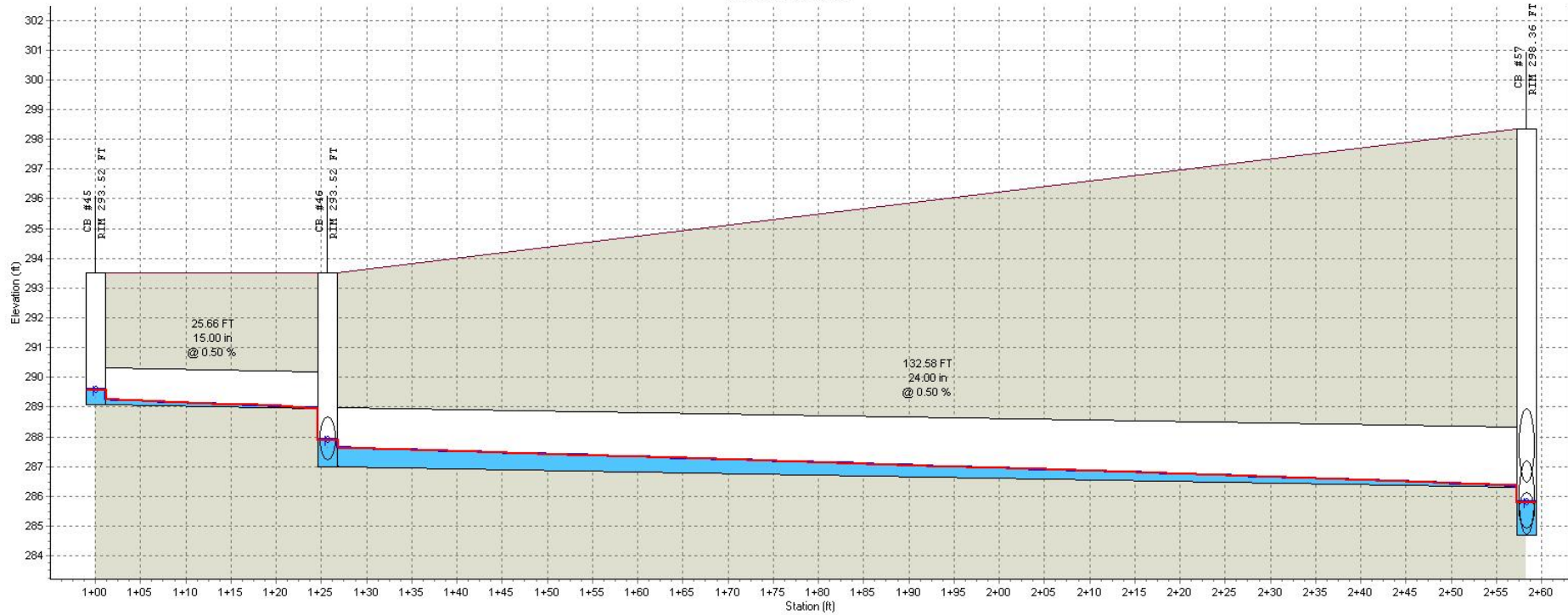
Profile Plot  
Main Street Storm Sewer



	CB #43	CB #44	CB #46
RIM (FT):	292.62	292.62	293.52
Invert (ft):	288.19	287.62	286.98
Min Pipe Cover (ft):			
Max HGL (ft):	288.01	288.56	287.90
Link ID:	P #53		P #54
(FT):	25.70		86.73
(in):	15.00		18.00
@ (%):	0.50		0.50
Up Invert (ft):	288.19		287.62
Dn Invert (ft):	288.06		287.18
Max Q (cfs):	1.62		4.24
Max Vel (ft/s):	3.04		4.02
Max Depth (ft):	0.56		0.87

— HGL

Profile Plot  
Main Street Storm Sewer



	CB #45	CB #46	CB #57
RIM (FT):	293.52	293.52	298.36
Invert (ft):	289.07	286.98	284.69
Min Pipe Cover (ft):			
Max HGL (ft):	289.57	287.90	285.81
Link ID:	P #55		P #56
(FT):	25.66		132.58
(in):	15.00		24.00
@ (%):	0.50		0.50
Up Invert (ft):	289.07		286.98
Dn Invert (ft):	288.94		286.32
Max Q (cfs):	1.13		5.59
Max Vel (ft/s):	2.77		4.29
Max Depth (ft):	0.46		0.87

— HGL

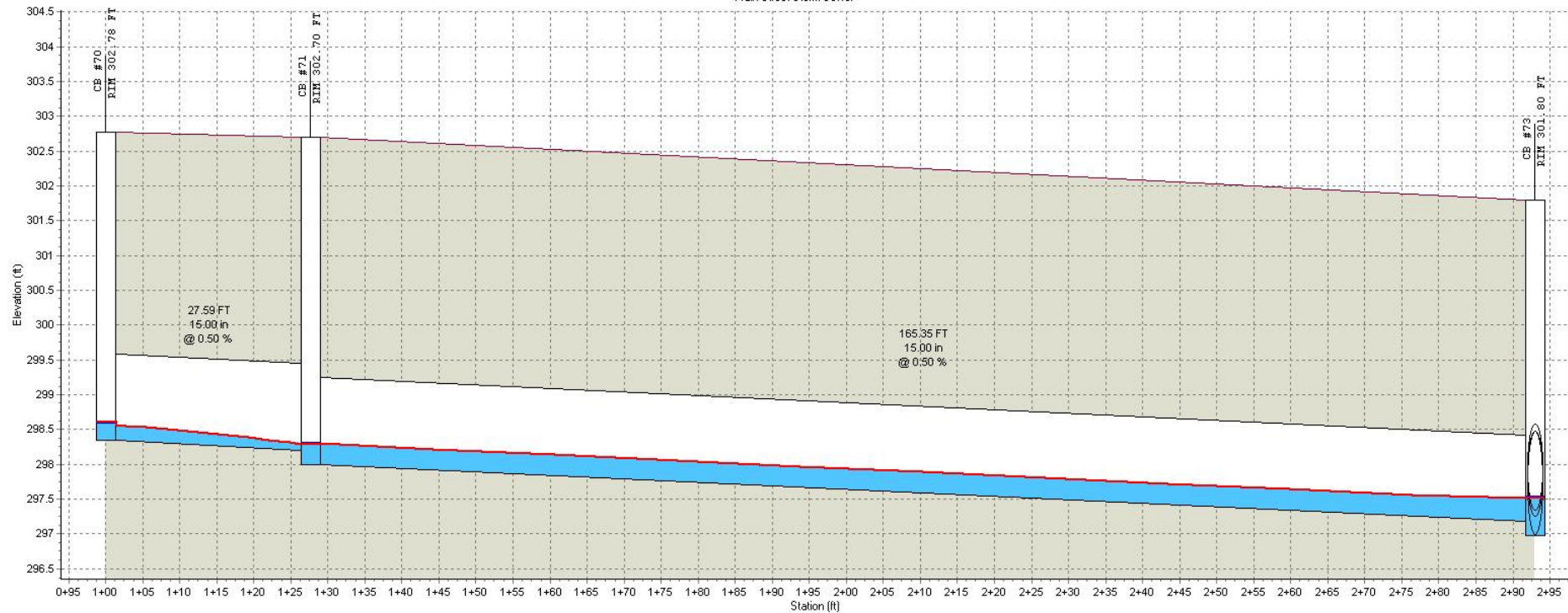


## DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#70	0.14	CB #70	0.4900	0.96	0.47	0.40	5.760	0 00:10:00
2	Sub-CB#71	0.07	CB #71	0.4900	0.96	0.47	0.20	5.760	0 00:10:00
3	Sub-CB#72	0.19	CB #72	0.4900	0.96	0.47	0.54	5.760	0 00:10:00
4	Sub-CB#73	0.32	CB #73	0.5400	0.96	0.52	1.00	5.760	0 00:10:00
5	Sub-CB#74	0.05	CB #74	0.8300	0.96	0.80	0.24	5.760	0 00:10:00
6	Sub-CB#75	0.12	CB #75	0.8300	0.96	0.80	0.57	5.760	0 00:10:00
7	Sub-CB#76	0.45	CB #76	0.5400	0.96	0.52	1.40	5.760	0 00:10:00
8	Sub-CB#77	1.15	CB #77	0.7400	0.96	0.71	4.90	5.760	0 00:10:00
9	Sub-CB#78	0.07	CB #78	0.7100	0.96	0.68	0.29	5.760	0 00:10:00
10	Sub-CB#79	0.06	CB #79	0.7000	0.96	0.67	0.24	5.760	0 00:10:00
11	Sub-YI#603	0.88	YI #603	0.3500	0.96	0.34	1.77	5.760	0 00:10:00

MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
1	P #82	CB #70	CB #71	27.59	298.34	298.20	0.5000	15.000	0.0130	0.36	0 00:10	2.09	0.22	4.57	0.08	0.20	0.00	0.25	Calculated
2	P #83	CB #71	CB #73	165.35	298.00	297.17	0.5000	15.000	0.0130	0.53	0 00:10	2.25	1.22	4.57	0.12	0.25	0.00	0.31	Calculated
3	P #84	YI #603	CB #73	15.74	298.25	297.33	5.8300	15.000	0.0130	1.77	0 00:10	6.86	0.04	15.60	0.11	0.26	0.00	0.33	Calculated
4	P #85	CB #72	CB #73	25.73	297.36	297.23	0.5000	15.000	0.0130	0.51	0 00:10	2.26	0.19	4.57	0.11	0.24	0.00	0.30	Calculated
5	P #86	CB #73	CB #74	85.70	296.97	294.99	2.3200	18.000	0.0130	3.59	0 00:10	6.74	0.21	16.00	0.22	0.34	0.00	0.51	Calculated
6	P #87	CB #74	CB #75	109.06	294.78	288.00	6.2200	18.000	0.0130	3.98	0 00:10	10.13	0.18	26.19	0.15	0.27	0.00	0.41	Calculated
7	P #88	CB #75	CB #77	152.13	287.41	283.96	2.2600	18.000	0.0130	4.51	0 00:10	4.64	0.55	15.80	0.29	0.61	0.00	0.91	Calculated
8	P #89	CB #76	CB #77	25.73	284.74	284.61	0.5000	15.000	0.0130	1.44	0 00:10	2.83	0.15	4.57	0.31	0.50	0.00	0.62	Calculated
9	P #90	CB #77	CB #78	100.00	283.75	283.25	0.5000	24.000	0.0130	10.58	0 00:10	4.44	0.38	16.00	0.66	0.71	0.00	1.42	Calculated
10	P #91	CB #78	CB #79	25.72	283.05	282.92	0.5000	24.000	0.0130	10.80	0 00:10	4.71	0.09	16.00	0.67	0.68	0.00	1.37	Calculated
11	P #92	CB #79	SDMH #505	35.77	282.72	282.54	0.5000	30.000	0.0130	11.00	0 00:11	4.66	0.13	29.00	0.38	0.48	0.00	1.21	Calculated
12	P #93	SDMH #505	SDMH #506	127.74	282.34	271.36	8.6000	30.000	0.0130	11.01	0 00:11	11.99	0.18	120.27	0.09	0.24	0.00	0.61	Calculated
13	P #94	SDMH #506	FES#307	32.05	271.16	270.00	3.6200	30.000	0.0130	11.01	0 00:11	8.75	0.06	78.04	0.14	0.30	0.00	0.76	Calculated

Profile Plot  
Main Street Storm Sewer

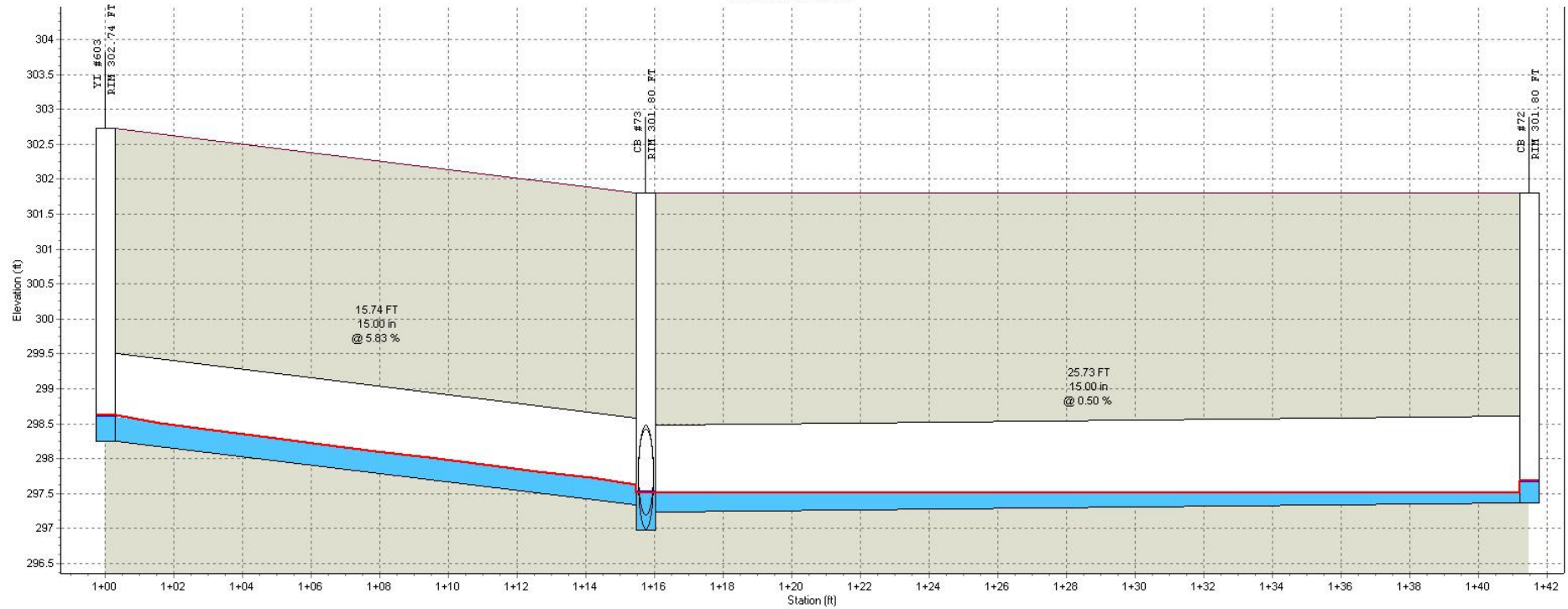


	CB #70	CB #71	CB #73
RIM (FT)	302.78	302.70	301.80
Invert (ft)	298.34	298.00	296.97
Min Pipe Cover (ft)			
Max HGL (ft)	298.60	298.29	297.52
Link ID:	P #82		P #83
(FT)	27.59		165.35
(in)	15.00		15.00
@ (%)	0.50		0.50
Up Invert (ft)	298.34		298.00
Dn Invert (ft)	298.20		297.17
Max Q (cfs)	0.36		0.53
Max Vel (ft/s)	2.09		2.25
Max Depth (ft)	0.25		0.31

— HGL



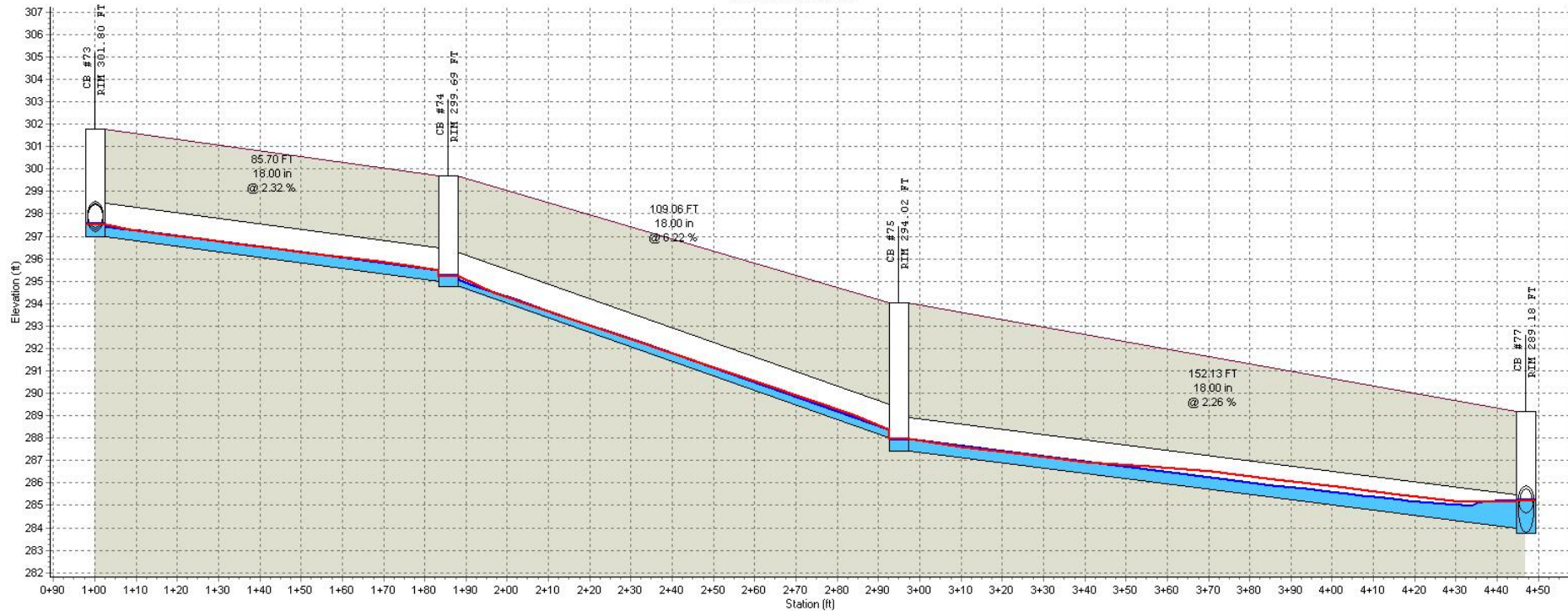
Profile Plot  
Main Street Storm Sewer



	Y1 #603		CB #73		CB #72
RIM (FT):	302.74		301.80		301.80
Invert (ft):	298.25		296.97		297.36
Min Pipe Cover (ft):					
Max HGL (ft):	298.62		297.52		297.68
Link ID:		P #84		P #85	
(FT):		15.74		25.73	
(in):		15.00		15.00	
@ (%):		5.83		0.50	
Up Invert (ft):		298.25		297.36	
Dn Invert (ft):		297.33		297.23	
Max Q (cfs):		1.77		0.51	
Max Vel (ft/s):		6.86		2.26	
Max Depth (ft):		0.33		0.30	

— HGL

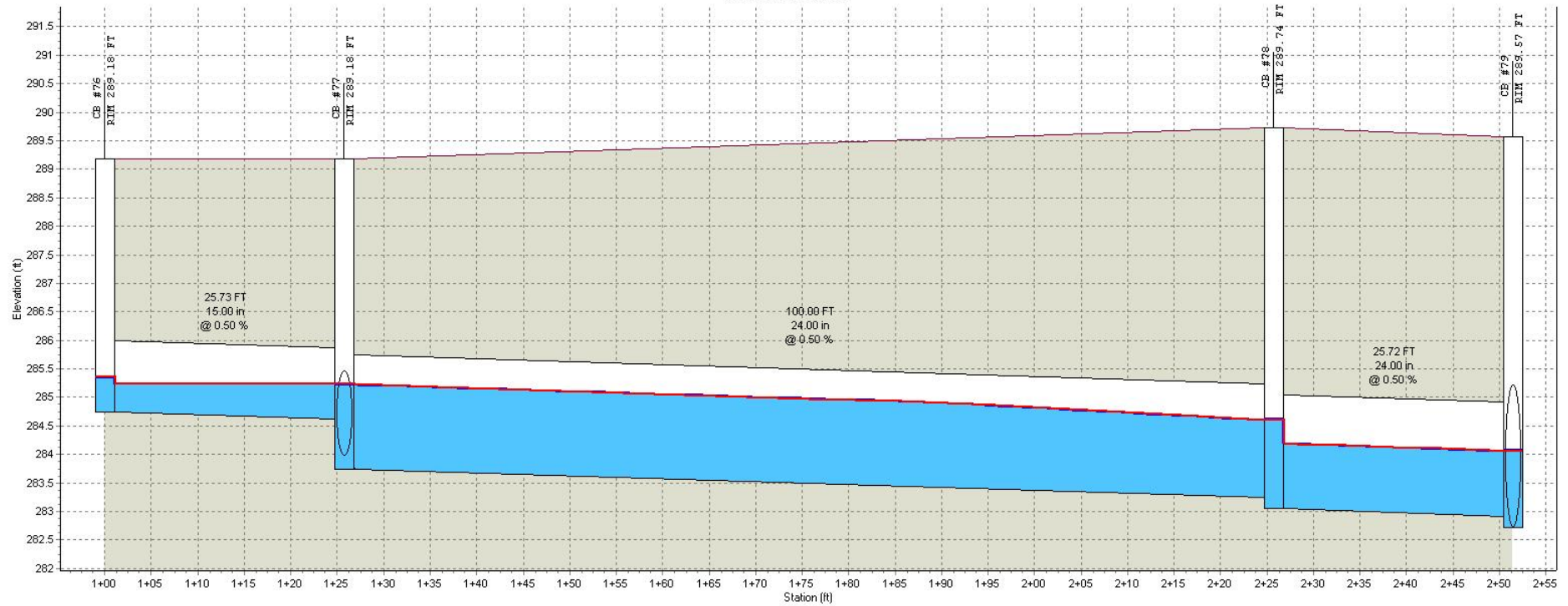
Profile Plot  
Main Street Storm Sewer



	CB #73	CB #74	CB #75	CB #77
RIM (FT):	301.80	299.69	294.02	289.18
Invert (ft):	296.97	294.78	287.41	283.75
Min Pipe Cover (ft):				
Max HGL (ft):	297.52	295.20	287.95	285.23
Link ID:	P #86		P #87	P #88
(FT):	85.70		109.06	152.13
(in):	18.00		18.00	18.00
@ (%):	2.32		6.22	2.26
Up Invert (ft):	296.97		294.78	287.41
Dn Invert (ft):	294.99		288.00	283.96
Max Q (cfs):	3.59		3.98	4.51
Max Vel (ft/s):	6.74		10.13	4.64
Max Depth (ft):	0.51		0.41	0.91

— HGL

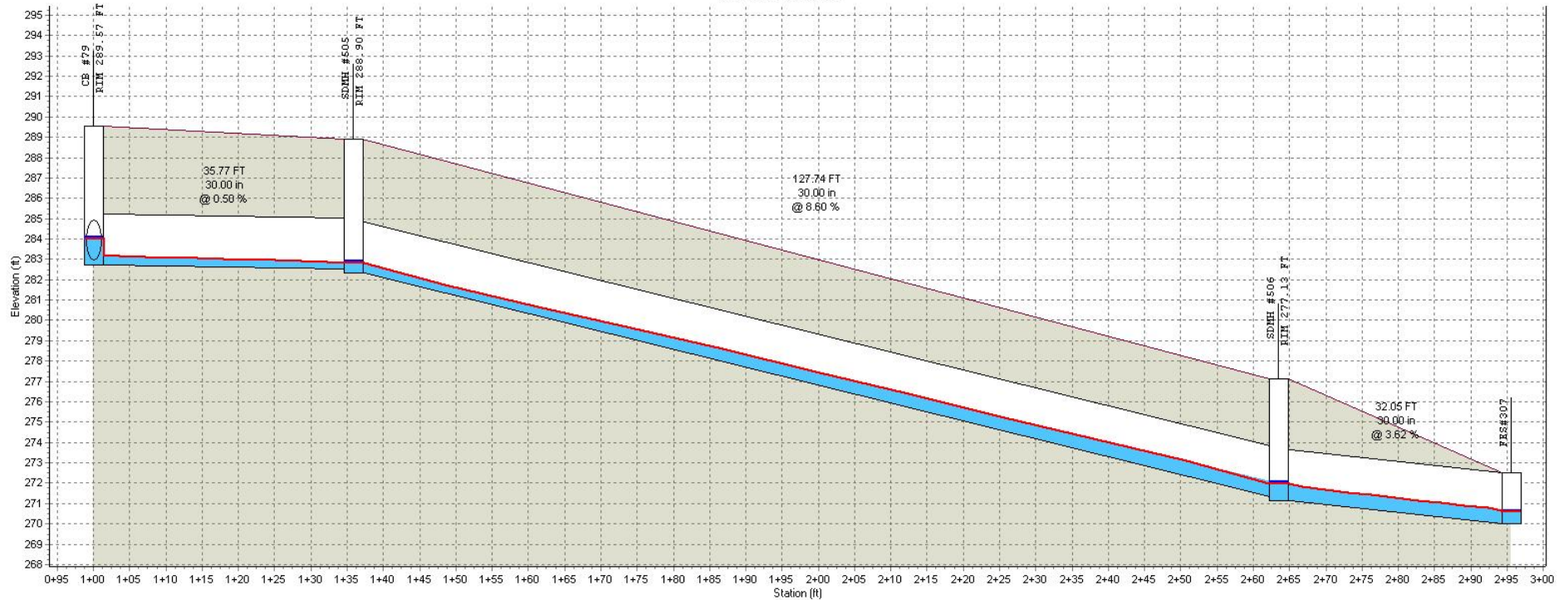
Profile Plot  
Main Street Storm Sewer



	CB #76	CB #77	CB #78	CB #79
RIM (ft):	289.18	289.18	289.74	289.57
Invert (ft):	284.74	283.75	283.05	282.72
Min Pipe Cover (ft):				
Max HGL (ft):	285.36	285.23	284.61	284.07
Link ID:	P #89		P #90	P #91
(ft):	25.73		100.00	25.72
(in):	15.00		24.00	24.00
@ (%):	0.50		0.50	0.50
Up Invert (ft):	284.74		283.75	283.05
Dn Invert (ft):	284.61		283.25	282.92
Max Q (cfs):	1.44		10.58	10.80
Max Vel (ft/s):	2.83		4.44	4.71
Max Depth (ft):	0.62		1.42	1.37

— HGL

Profile Plot  
Main Street Storm Sewer

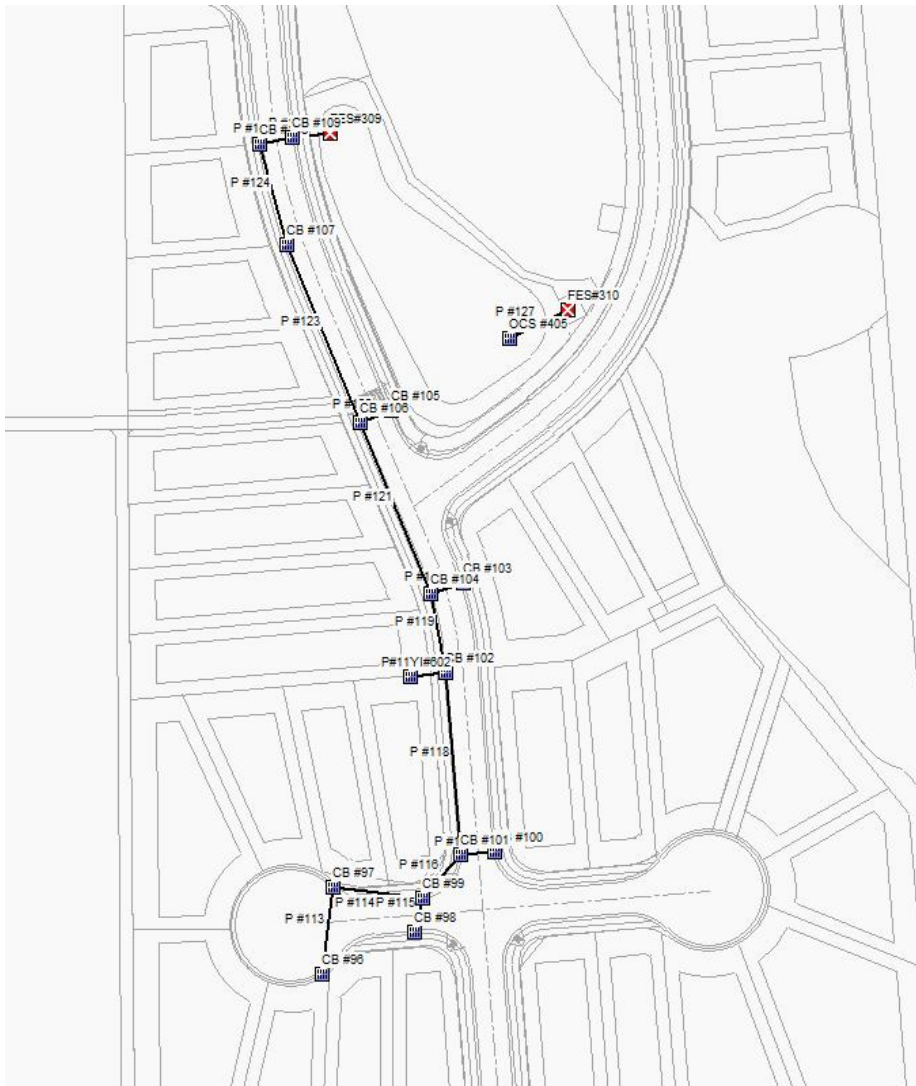


	CB #79	SDMH #505	SDMH #506	FES#307
RIM (FT):	289.57	288.90	277.13	
Invert (ft):	282.72	282.34	271.16	270.00
Min Pipe Cover (ft):		3.87	3.28	
Max HGL (ft):	284.07	282.86	272.04	270.63
Link ID:	P #92		P #93	P #94
(FT):	35.77		127.74	32.05
(in):	30.00		30.00	30.00
@ (%):	0.50		8.60	3.62
Up Invert (ft):	282.72		282.34	271.16
Dn Invert (ft):	282.54		271.36	270.00
Max Q (cfs):	11.00		11.01	11.01
Max Vel (ft/s):	4.66		11.99	8.75
Max Depth (ft):	1.21		0.61	0.76

— HGL

## 4.5. STORM WATER AREA " E "

STORMWATER PIPING AND HYDRAULIC GRADE LINE FOR 10-YR STORM

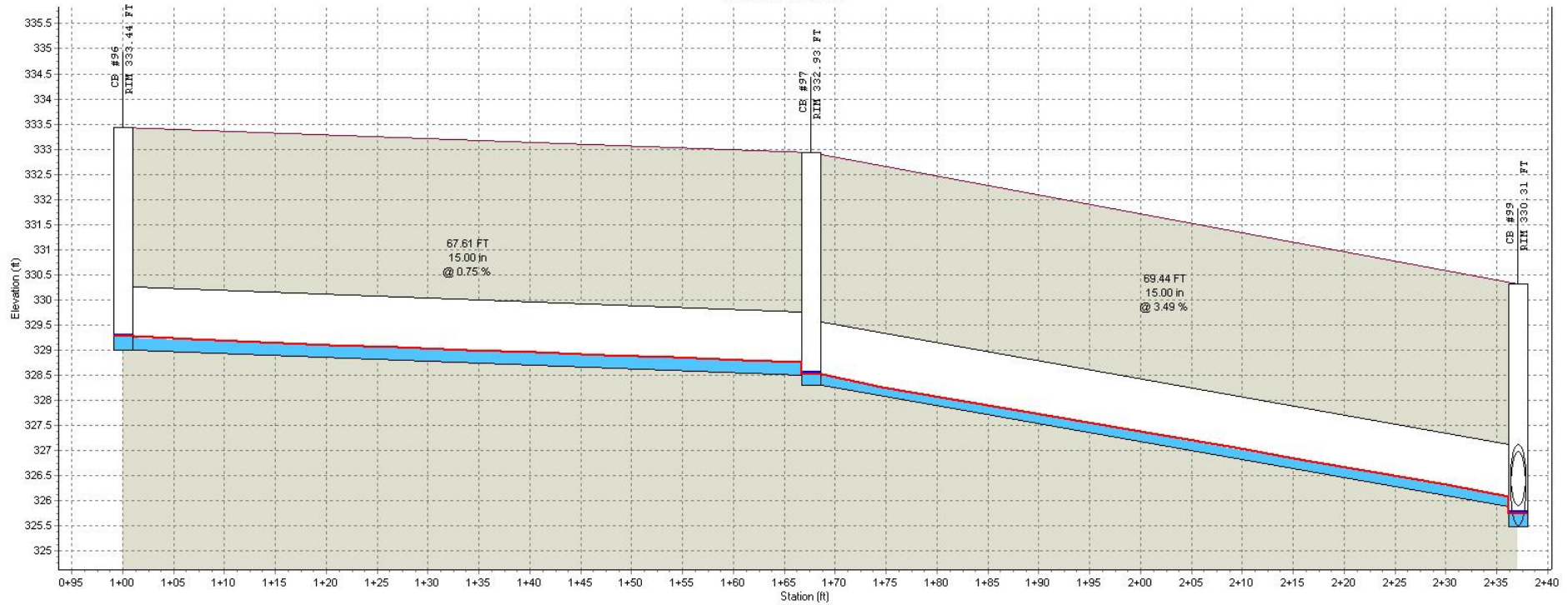


## DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#100	0.08	CB #100	0.4900	0.96	0.47	0.23	5.760	0 00:10:00
2	Sub-CB#101	0.08	CB #101	0.4900	0.96	0.47	0.23	5.760	0 00:10:00
3	Sub-CB#102	0.13	CB #102	0.4900	0.96	0.47	0.37	5.760	0 00:10:00
4	Sub-CB#103	0.27	CB #103	0.5400	0.96	0.52	0.84	5.760	0 00:10:00
5	Sub-CB#104	0.69	CB #104	0.6900	0.96	0.66	2.74	5.760	0 00:10:00
6	Sub-CB#105	0.01	CB #105	0.8300	0.96	0.80	0.05	5.760	0 00:10:00
7	Sub-CB#106	0.19	CB #106	0.7900	0.96	0.76	0.87	5.760	0 00:10:00
8	Sub-CB#107	0.44	CB #107	0.5900	0.96	0.57	1.50	5.760	0 00:10:00
9	Sub-CB#108	0.13	CB #108	0.5900	0.96	0.57	0.44	5.760	0 00:10:00
10	Sub-CB#109	0.13	CB #109	0.8300	0.96	0.80	0.62	5.760	0 00:10:00
11	Sub-CB#96	0.22	CB #96	0.4600	0.96	0.44	0.58	5.760	0 00:10:00
12	Sub-CB#97	0.12	CB #97	0.4500	0.96	0.43	0.31	5.760	0 00:10:00
13	Sub-CB#98	0.27	CB #98	0.5900	0.96	0.57	0.92	5.760	0 00:10:00
14	Sub-CB#99	0.11	CB #99	0.4500	0.96	0.43	0.29	5.760	0 00:10:00
15	Sub-YI#602	1.35	YI#602	0.3300	0.96	0.32	2.57	5.760	0 00:10:00

MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
1	P #113	CB #96	CB #97	67.61	329.00	328.50	0.7500	15.000	0.0130	0.57	0 00:10	2.79	0.40	5.59	0.10	0.22	0.00	0.28	Calculated
2	P #114	CB #97	CB #99	69.44	328.30	325.87	3.4900	15.000	0.0130	0.87	0 00:10	5.48	0.21	12.07	0.07	0.19	0.00	0.23	Calculated
3	P #115	CB #98	CB #99	27.05	326.51	325.87	2.3500	15.000	0.0130	0.89	0 00:10	4.49	0.10	9.90	0.09	0.22	0.00	0.27	Calculated
4	P #116	CB #99	CB #101	45.21	325.47	321.53	8.7300	18.000	0.0130	2.03	0 00:10	9.13	0.08	31.04	0.07	0.18	0.00	0.28	Calculated
5	P #117	CB #100	CB #101	25.66	321.60	321.47	0.5000	15.000	0.0130	0.22	0 00:10	1.85	0.23	4.57	0.05	0.15	0.00	0.19	Calculated
6	P #118	CB #101	CB #102	141.00	320.63	314.65	4.2400	18.000	0.0130	2.46	0 00:10	4.33	0.54	21.64	0.11	0.43	0.00	0.65	Calculated
7	P #119	CB #102	CB #104	62.15	314.45	314.14	0.5000	18.000	0.0130	5.22	0 00:10	3.86	0.27	7.43	0.70	0.72	0.00	1.07	Calculated
8	P #120	CB #103	CB #104	25.86	314.91	314.79	0.5000	15.000	0.0130	0.78	0 00:11	2.51	0.17	4.57	0.17	0.30	0.00	0.38	Calculated
9	P #121	CB #104	CB #106	143.68	313.94	313.22	0.5000	24.000	0.0130	8.53	0 00:11	4.74	0.51	16.00	0.53	0.56	0.00	1.12	Calculated
10	P #122	CB #105	CB #106	25.73	314.86	313.58	4.9900	15.000	0.0130	0.04	0 00:10	2.33	0.18	14.43	0.00	0.11	0.00	0.13	Calculated
11	P #123	CB #106	CB #107	148.46	313.02	309.29	2.5100	24.000	0.0130	9.24	0 00:11	8.87	0.28	35.85	0.26	0.37	0.00	0.73	Calculated
12	P #124	CB #107	CB #108	81.22	309.09	304.92	5.1300	24.000	0.0130	10.56	0 00:11	10.73	0.13	51.25	0.21	0.35	0.00	0.70	Calculated
13	P #125	CB #108	CB #109	25.79	304.72	303.15	6.1100	24.000	0.0130	11.08	0 00:11	10.33	0.04	55.91	0.20	0.37	0.00	0.75	Calculated
14	P #126	CB #109	FES#309	29.45	301.15	300.02	3.8100	30.000	0.0130	11.63	0 00:11	8.89	0.06	80.10	0.15	0.31	0.00	0.78	Calculated
15	P#119A	YI#602	CB #102	22.12	316.46	315.49	4.3800	15.000	0.0130	2.56	0 00:10	6.98	0.05	13.51	0.19	0.34	0.00	0.42	Calculated

Profile Plot  
Main Street Storm Sewer

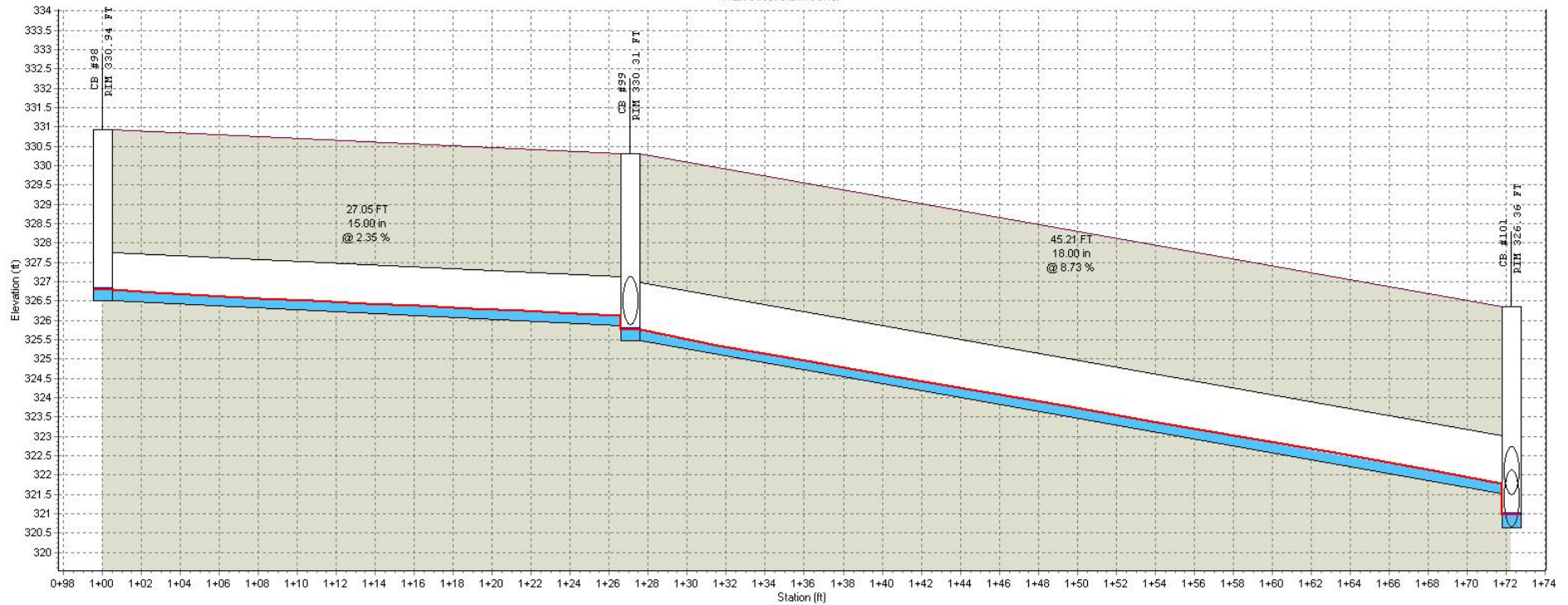


	CB #96	CB #97	CB #99
RIM (FT)	333.44	332.93	330.31
Invert (ft)	329.00	328.30	325.47
Min Pipe Cover (ft)			
Max HGL (ft)	329.29	328.54	325.76
Link ID:	P #113		P #114
(ft)	67.61		69.44
(in)	15.00		15.00
@ (%)	0.75		3.49
Up Invert (ft)	329.00		328.30
Dn Invert (ft)	328.50		325.87
Max Q (cfs)	0.57		0.87
Max Vel (ft/s)	2.79		5.48
Max Depth (ft)	0.28		0.23

— HGL



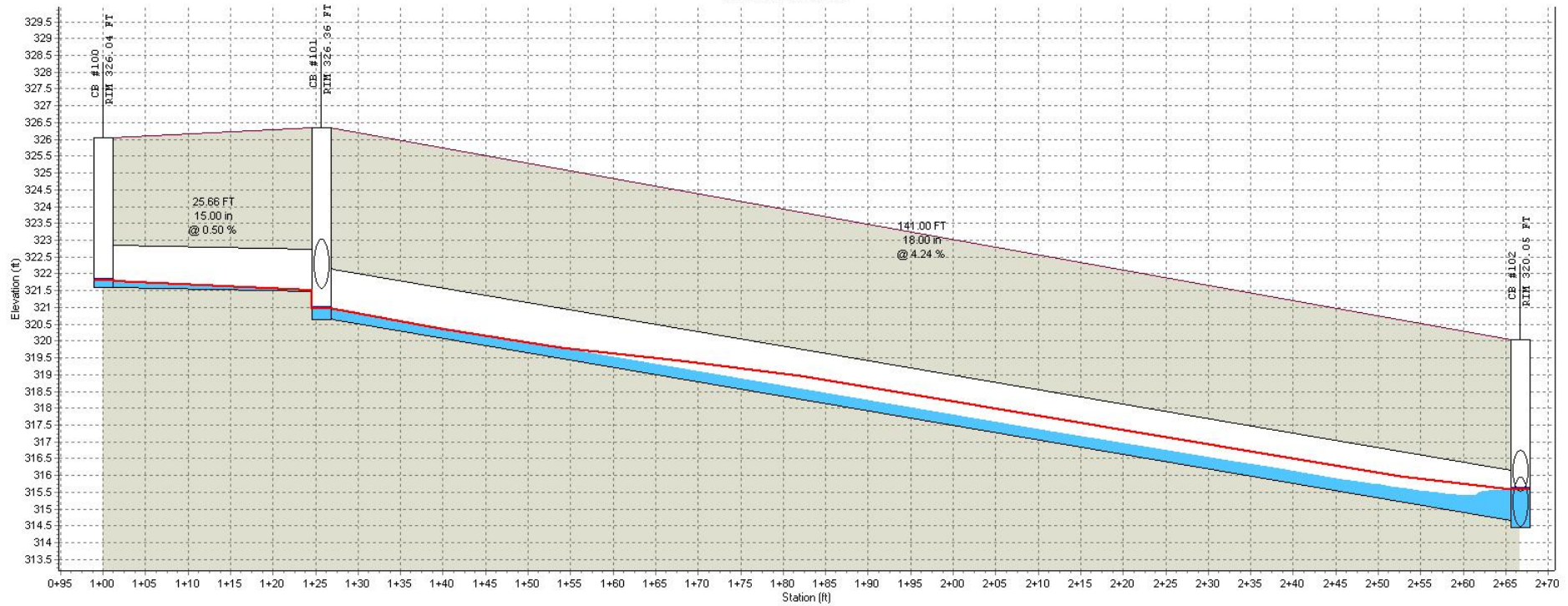
Profile Plot  
Main Street Storm Sewer



	CB #98	CB #99	CB #101
RIM (FT)	330.94	330.31	326.36
Invert (ft)	326.51	325.47	320.63
Min Pipe Cover (ft)			
Max HGL (ft)	326.80	325.76	320.97
Link ID:	P #115		P #116
(FT)	27.05		45.21
(in)	15.00		18.00
@ (%)	2.35		8.73
Up Invert (ft)	326.51		325.47
Dn Invert (ft)	325.87		321.53
Max Q (cfs)	0.89		2.03
Max Vel (ft/s)	4.49		9.13
Max Depth (ft)	0.27		0.28

— HGL

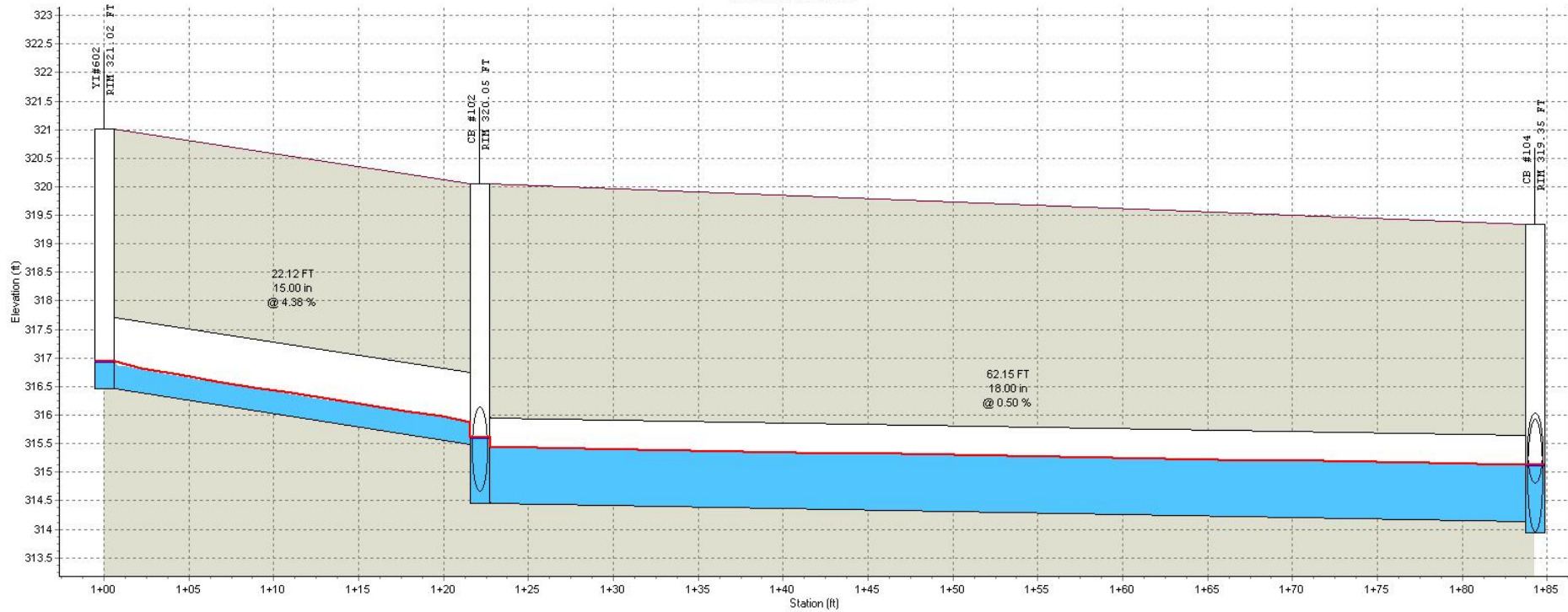
Profile Plot  
Main Street Storm Sewer



	CB #100	CB #101	CB #102
RIM (FT):	326.04	326.36	320.05
Invert (R):	321.60	320.63	314.45
Min Pipe Cover (R):			
Max HGL (R):	321.81	320.97	315.60
Link ID:	P #117		P #118
(FT):	25.66		141.00
(in):	15.00		18.00
@ (%):	0.50		4.24
Up Invert (R):	321.60		320.63
Dn Invert (R):	321.47		314.65
Max Q (cfs):	0.22		2.46
Max Vel (ft/s):	1.85		4.33
Max Depth (R):	0.19		0.65

— HGL

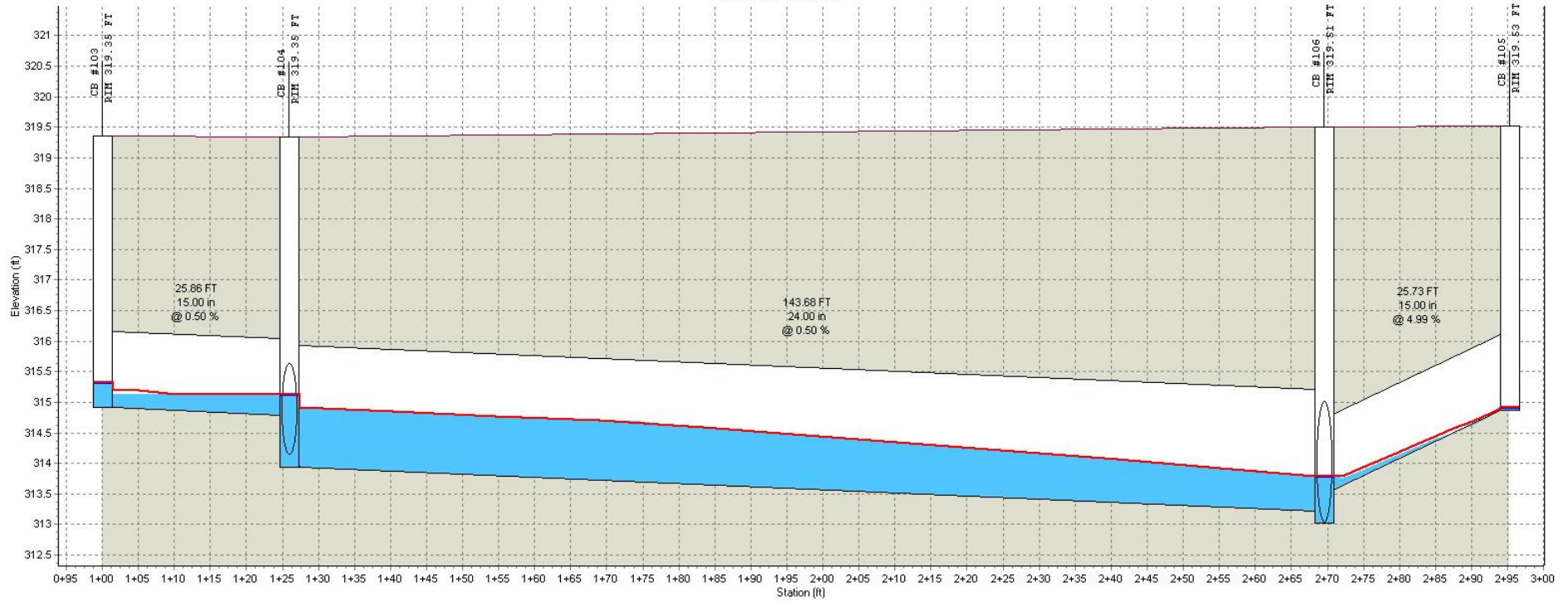
Profile Plot  
Main Street Storm Sewer



	YI#602		CB #102		CB #104
RIM (FT):	321.02		320.05		319.35
Invert (R):	316.46		314.45		313.94
Min Pipe Cover (R):					
Max HGL (R):	316.94		315.60		315.13
Link ID:		P#113A		P #119	
(FT):		22.12		62.15	
(in):		15.00		18.00	
@ (%):		4.38		0.50	
Up Invert (R):		316.46		314.45	
Dn Invert (R):		315.49		314.14	
Max Q (cfs):		2.56		5.22	
Max Vel (ft/s):		6.98		3.86	
Max Depth (R):		0.42		1.07	

— HGL

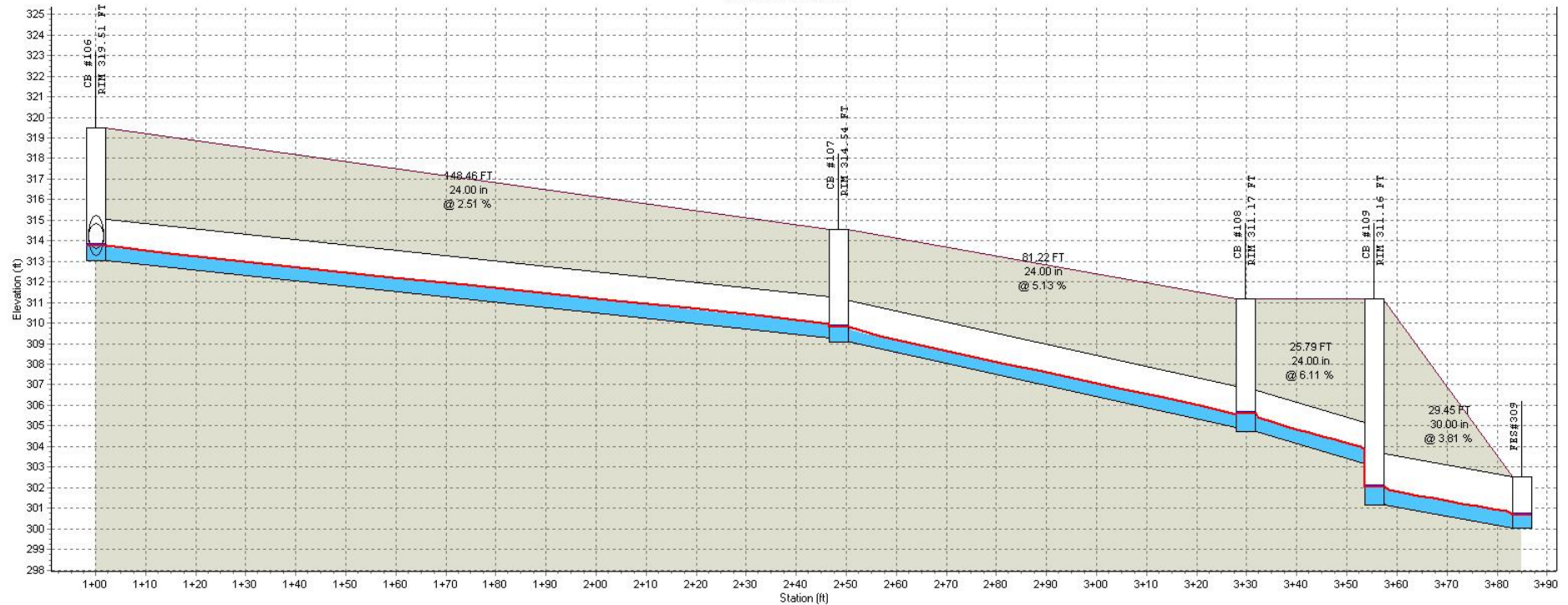
Profile Plot  
Main Street Storm Sewer



	CB #103	CB #104		CB #106	CB #105
RIM (FT):	319.35	319.35		319.51	319.53
Invert (ft):	314.91	313.94		313.02	314.86
Min Pipe Cover (ft):					
Max HGL (ft):	315.32	315.13		313.79	314.91
Link ID:	P #120		P #121		P #122
(ft):	25.86		143.68		25.73
(in):	15.00		24.00		15.00
@ (%):	0.50		0.50		4.99
Up Invert (ft):	314.91		313.94		314.86
Dn Invert (ft):	314.79		313.22		313.58
Max Q (cfs):	0.78		8.53		0.04
Max Vel (ft/s):	2.51		4.74		2.33
Max Depth (ft):	0.38		1.12		0.13

— HGL

Profile Plot  
Main Street Storm Sewer

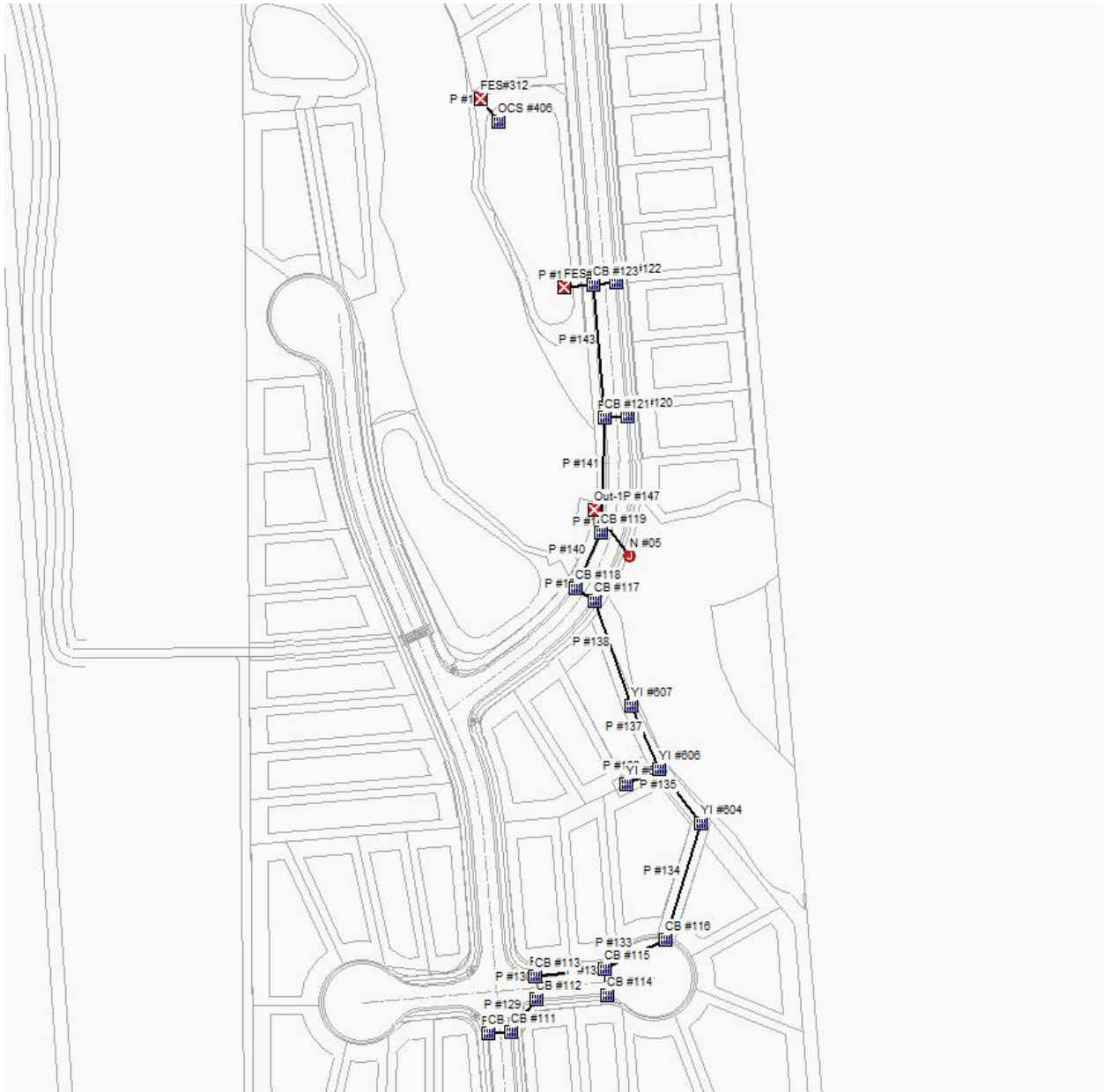


	CB #106	CB #107	CB #108	CB #109	FES#309
RIM (FT):	319.51	314.54	311.17	311.16	
Invert (ft):	313.02	309.09	304.72	301.15	300.02
Min Pipe Cover (ft):					
Max HGL (ft):	313.79	309.80	305.61	302.06	300.67
Link ID:	P #123		P #124	P #125	P #126
(FT):	148.46		81.22	25.79	29.45
(in):	24.00		24.00	24.00	30.00
@ (%):	2.51		5.13	6.11	3.81
Up Invert (ft):	313.02		309.09	304.72	301.15
Dn Invert (ft):		309.29	304.92	303.15	300.02
Max Q (cfs):	9.24		10.56	11.08	11.63
Max Vel (ft/s):	8.87		10.73	10.33	8.89
Max Depth (ft):	0.73		0.70	0.75	0.78

— HGL

## 4.6. STORM WATER AREA " F "

STORMWATER PIPING AND HYDRAULIC GRADE LINE FOR 10-YR STORM

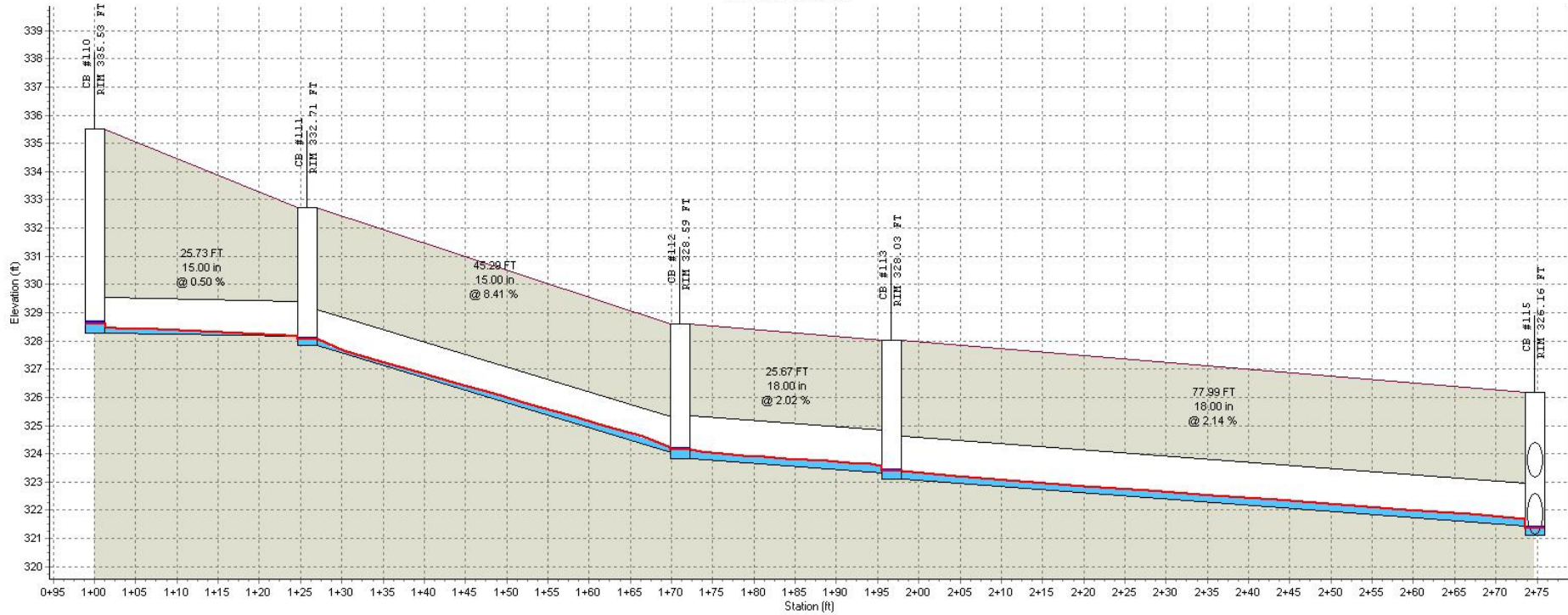


<b>DRAINAGE AREA</b>									
<b>SN</b>	<b>Element ID</b>	<b>Area (acres)</b>	<b>Drainage Node ID</b>	<b>Weighted Runoff Coefficient</b>	<b>Accumulated Precipitation (inches)</b>	<b>Total Runoff (inches)</b>	<b>Peak Runoff (cfs)</b>	<b>Rainfall Intensity (inches/hr)</b>	<b>Time of Concentration (days hh:mm:ss)</b>
1	Sub-CB#110	0.13	CB #110	0.8300	0.96	0.80	0.62	5.760	0 00:10:00
2	Sub-CB#111	0.16	CB #111	0.4900	0.96	0.47	0.45	5.760	0 00:10:00
3	Sub-CB#112	0.03	CB #112	0.2900	0.96	0.28	0.05	5.760	0 00:10:00
4	Sub-CB#113	0.01	CB #113	0.7000	0.96	0.67	0.04	5.760	0 00:10:00
5	Sub-CB#114	0.14	CB #114	0.4900	0.96	0.47	0.40	5.760	0 00:10:00
6	Sub-CB#115	0.07	CB #115	0.4900	0.96	0.47	0.20	5.760	0 00:10:00
7	Sub-CB#116	0.33	CB #116	0.4500	0.96	0.43	0.86	5.760	0 00:10:00
8	Sub-CB#117	0.44	CB #117	0.5400	0.96	0.52	1.37	5.760	0 00:10:00
9	Sub-CB#118	0.13	CB #118	0.8300	0.96	0.80	0.62	5.760	0 00:10:00
10	Sub-CB#119	0.04	CB #119	0.8300	0.96	0.80	0.19	5.760	0 00:10:00
11	Sub-CB#120	0.25	CB #120	0.5400	0.96	0.52	0.78	5.760	0 00:10:00
12	Sub-CB#121	0.07	CB #121	0.8300	0.96	0.80	0.34	5.760	0 00:10:00
13	Sub-CB#122	1.30	CB #122	0.5400	0.96	0.52	4.04	5.760	0 00:10:00
14	Sub-CB#123	0.21	CB #123	0.8300	0.96	0.80	1.00	5.760	0 00:10:00
15	Sub-YI#604	0.33	YI #604	0.4500	0.96	0.43	0.86	5.760	0 00:10:00
16	Sub-YI#605	0.59	YI #605	0.3500	0.96	0.34	1.19	5.760	0 00:10:00
17	Sub-YI#606	0.24	YI #606	0.3500	0.96	0.34	0.48	5.760	0 00:10:00
18	Sub-YI#607	0.02	YI #607	0.1800	0.96	0.17	0.02	5.760	0 00:10:00

MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
1	P #128	CB #110	CB #111	25.73	328.29	328.16	0.5000	15.000	0.0130	0.61	0 00:10	2.37	0.18	4.57	0.13	0.26	0.00	0.33	Calculated
2	P #129	CB #111	CB #112	45.29	327.85	324.04	8.4100	15.000	0.0130	1.06	0 00:10	7.78	0.10	18.73	0.06	0.17	0.00	0.21	Calculated
3	P #130	CB #112	CB #113	25.67	323.84	323.32	2.0200	18.000	0.0130	1.10	0 00:10	4.38	0.10	14.92	0.07	0.20	0.00	0.30	Calculated
4	P #131	CB #113	CB #115	77.99	323.12	321.45	2.1400	18.000	0.0130	1.14	0 00:10	4.86	0.27	15.37	0.07	0.19	0.00	0.29	Calculated
5	P #132	CB #114	CB #115	28.65	323.61	323.14	1.6700	15.000	0.0130	0.39	0 00:10	3.24	0.15	8.35	0.05	0.15	0.00	0.19	Calculated
6	P #133	CB #115	CB #116	74.12	321.10	317.05	5.4700	18.000	0.0130	1.71	0 00:10	7.60	0.16	24.56	0.07	0.18	0.00	0.28	Calculated
7	P #134	CB #116	YI #604	135.48	316.85	305.28	8.5400	18.000	0.0130	2.47	0 00:10	10.12	0.22	30.70	0.08	0.20	0.00	0.29	Calculated
8	P #135	YI #604	YI #606	76.39	304.74	300.57	5.4500	24.000	0.0130	3.27	0 00:10	5.70	0.22	52.80	0.06	0.25	0.00	0.51	Calculated
9	P #136	YI #605	YI #606	41.04	303.00	301.06	4.7300	18.000	0.0130	1.18	0 00:10	6.34	0.11	22.85	0.05	0.16	0.00	0.24	Calculated
10	P #137	YI #606	YI #607	76.34	300.37	299.99	0.5000	24.000	0.0130	4.85	0 00:10	4.02	0.32	16.00	0.30	0.41	0.00	0.82	Calculated
11	P #138	YI #607	CB #117	122.68	299.73	296.84	2.3600	24.000	0.0130	4.88	0 00:11	5.03	0.41	34.75	0.14	0.35	0.00	0.69	Calculated
12	P #139	CB #117	CB #118	25.76	296.64	296.51	0.5000	24.000	0.0130	6.06	0 00:11	4.02	0.11	16.00	0.38	0.48	0.00	0.97	Calculated
13	P #140	CB #118	CB #119	67.31	296.25	293.20	4.5300	30.000	0.0130	6.61	0 00:11	9.42	0.12	87.27	0.08	0.20	0.00	0.50	Calculated
14	P #141	CB #119	CB #121	127.69	292.80	290.12	2.1000	30.000	0.0130	6.77	0 00:11	7.48	0.28	59.44	0.11	0.24	0.00	0.60	Calculated
15	P #142	CB #120	CB #121	25.71	291.40	291.28	0.5000	18.000	0.0130	0.70	0 00:10	2.39	0.18	7.43	0.09	0.22	0.00	0.33	Calculated
16	P #143	CB #121	CB #123	147.96	289.92	284.66	3.5500	30.000	0.0130	7.70	0 00:11	8.22	0.30	77.36	0.10	0.25	0.00	0.62	Calculated
17	P #144	CB #122	CB #123	25.67	287.29	286.21	4.2100	15.000	0.0130	4.13	0 00:10	7.71	0.06	13.25	0.31	0.45	0.00	0.56	Calculated
18	P #145	CB #123	FES#311	32.18	284.46	283.00	4.5400	30.000	0.0130	12.41	0 00:10	9.71	0.06	87.42	0.14	0.31	0.00	0.77	Calculated



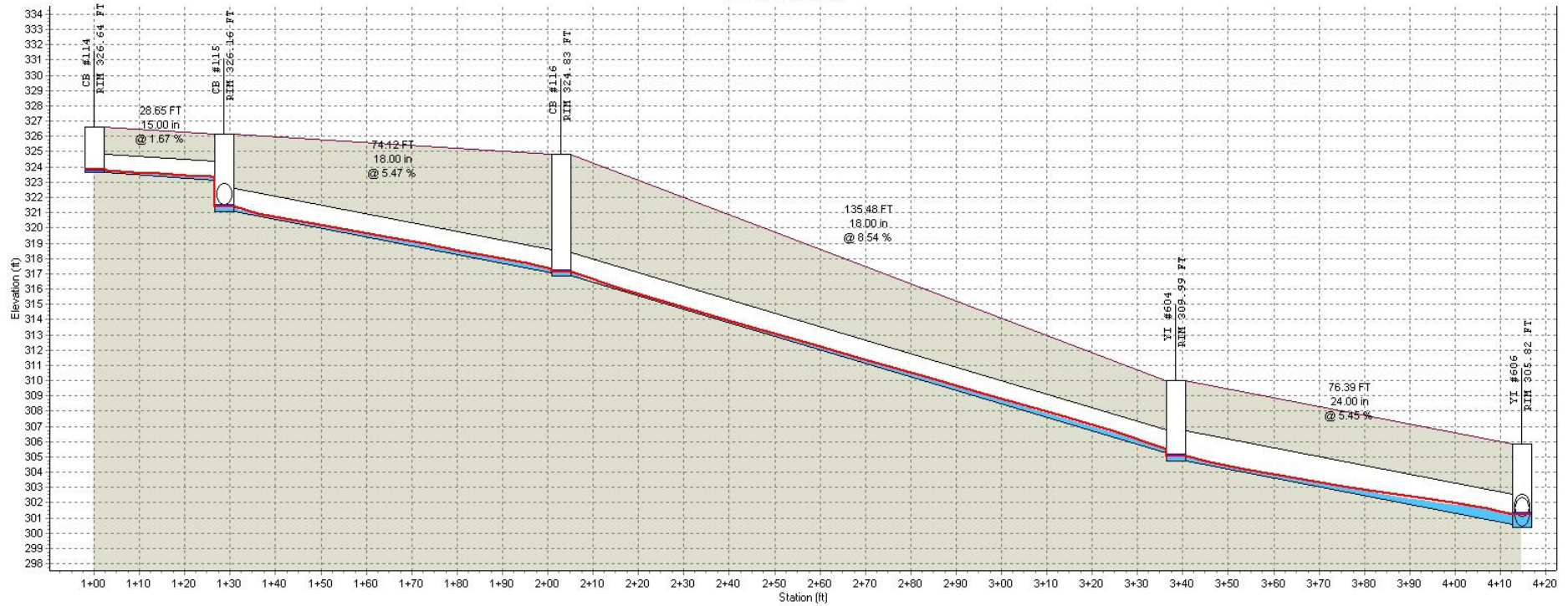
Profile Plot  
Main Street Storm Sewer



	CB #110	CB #111	CB #112	CB #113	CB #115
RIM (ft)	335.53	332.71	328.59	328.03	326.16
Invert (ft)	328.29	327.85	323.84	323.12	321.10
Min Pipe Cover (ft)					
Max HGL (ft)	328.65	328.07	324.17	323.41	321.39
Link ID:	P #128	P #129	P #130	P #131	
(ft)	25.73	45.29	25.67	77.99	
(in)	15.00	15.00	18.00	18.00	
@ (%)	0.50	8.41	2.02	2.14	
Up Invert (ft)	328.29	327.85	323.84	323.12	
Dn Invert (ft)	328.16	324.04	323.32	321.45	
Max Q (cfs)	0.61	1.06	1.10	1.14	
Max Vel (ft/s)	2.37	7.78	4.38	4.86	
Max Depth (ft)	0.33	0.21	0.30	0.29	

— HGL

Profile Plot  
Main Street Storm Sewer

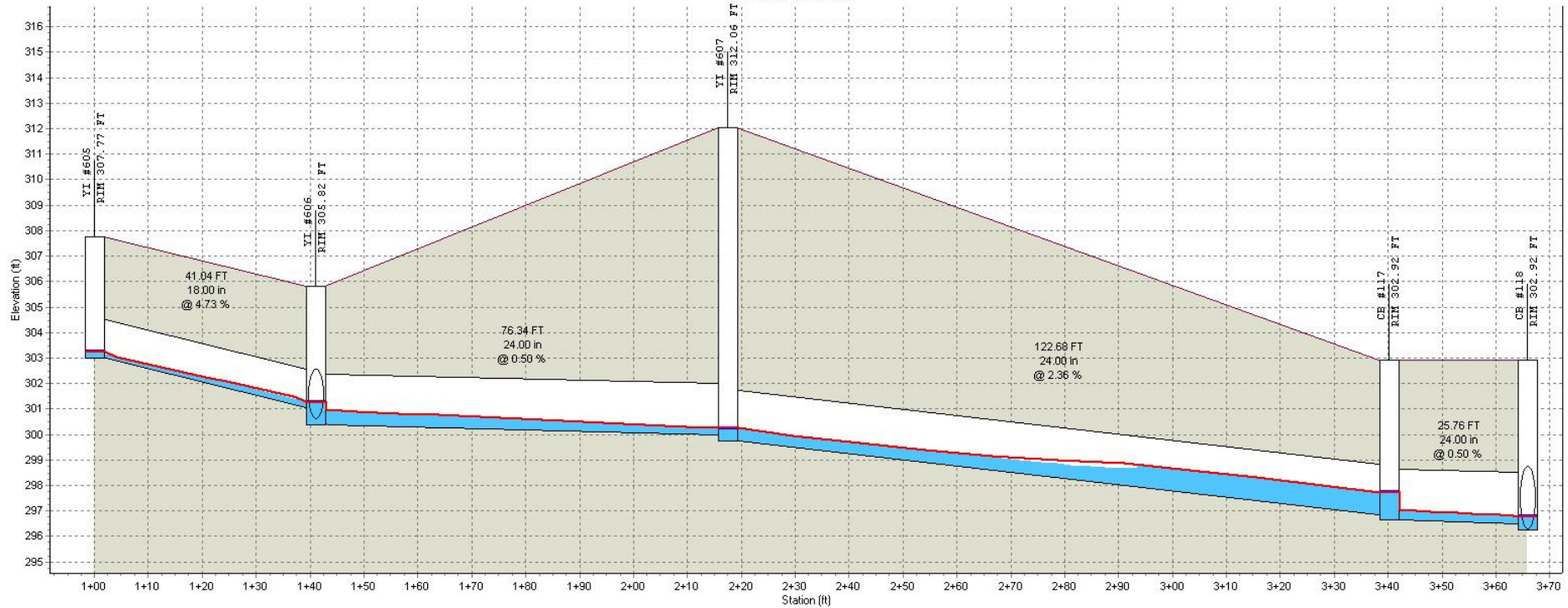


	CB #114	CB #115	CB #116	YI #604	YI #606
RIM (FT):	326.64	326.16	324.83	309.99	305.82
Invert (ft):	323.61	321.10	316.85	304.74	300.37
Min Pipe Cover (ft):					
Max HGL (ft):	323.82	321.39	317.15	305.07	301.25
Link ID:	P #132	P #133	P #134	P #135	
(FT):	28.65	74.12	135.48	76.39	
(in):	15.00	18.00	18.00	24.00	
@ (%):	1.67	5.47	8.54	5.45	
Up Invert (ft):	323.61	321.10	316.85	304.74	
Dn Invert (ft):	323.14	317.05	305.28	300.57	
Max Q (cfs):	0.39	1.71	2.47	3.27	
Max Vel (ft/s):	3.24	7.60	10.12	5.70	
Max Depth (ft):	0.19	0.28	0.29	0.51	

— HGL

Profile Plot

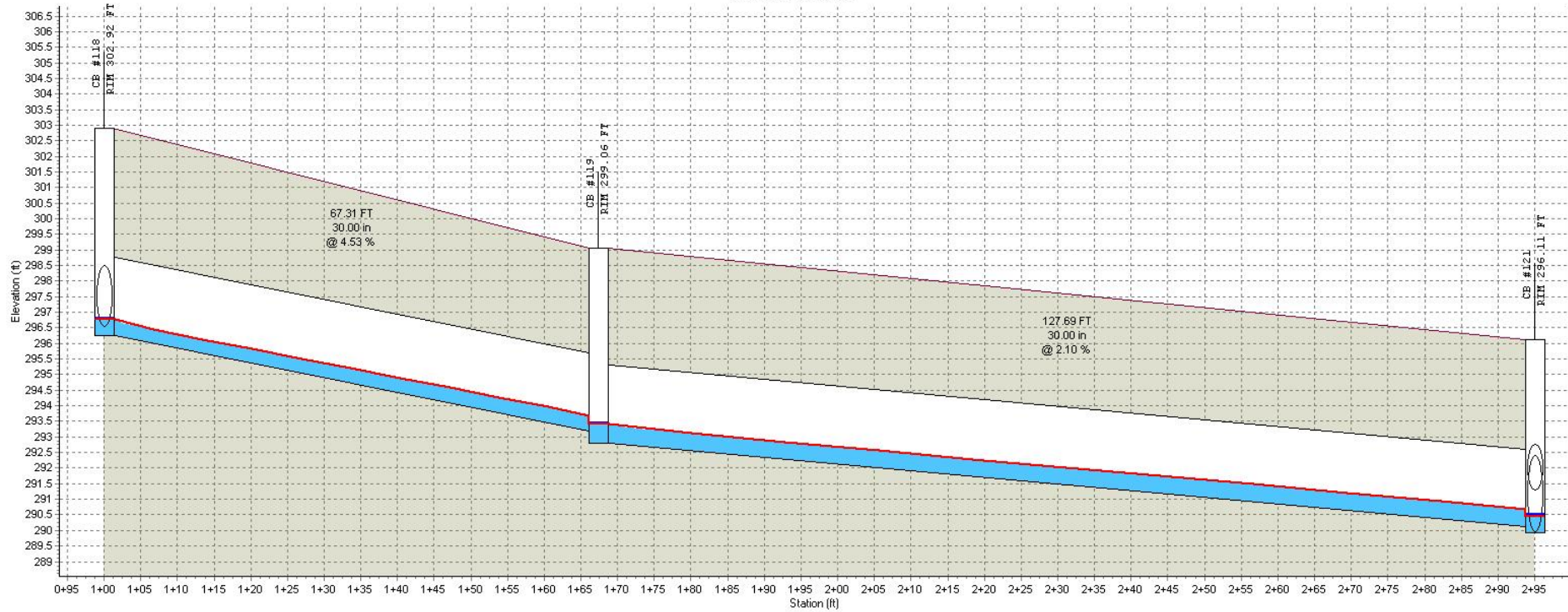
Main Street Storm Sewer



	YI #605	YI #606	YI #607	CB #117	CB #118
RIM (FT):	307.77	305.82	312.06	302.92	302.92
Invert (ft):	303.00	300.37	299.73	296.64	296.25
Min Pipe Cover (ft):					
Max HGL (ft):	303.26	301.25	300.24	297.72	296.79
Link ID:	P #136	P #137	P #138		P #139
(FT):	41.04	76.34	122.68		25.76
(in):	18.00	24.00	24.00		24.00
@ (%):	4.73	0.50	2.36		0.50
Up Invert (ft):	303.00	300.37	299.73		296.64
Dn Invert (ft):	301.06	299.99	296.84		296.51
Max Q (cfs):	1.18	4.85	4.88		6.06
Max Vel (ft/s):	6.34	4.02	5.03		4.02
Max Depth (ft):	0.24	0.82	0.69		0.97

— HGL

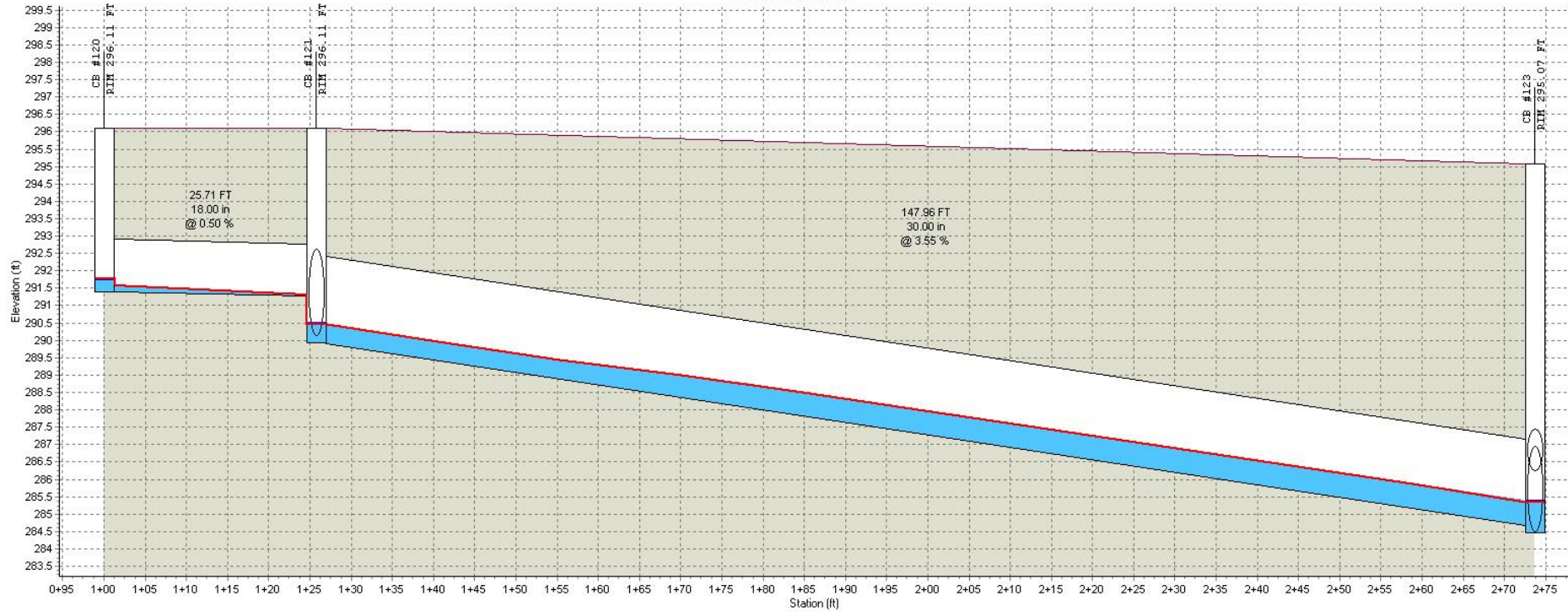
Profile Plot  
Main Street Storm Sewer



	CB #118	CB #119	CB #121
RIM (FT)	302.92	299.06	296.11
Invert (ft)	296.25	292.80	289.92
Min Pipe Cover (ft)			
Max HGL (ft)	296.79	293.43	290.48
Link ID:	P #140		P #141
(FT)	67.31		127.69
(in)	30.00		30.00
@ (%)	4.53		2.10
Up Invert (ft)	296.25		292.80
Dn Invert (ft)	293.20		290.12
Max Q (cfs)	6.61		6.77
Max Vel (ft/s)	9.42		7.48
Max Depth (ft)	0.50		0.60

— HGL

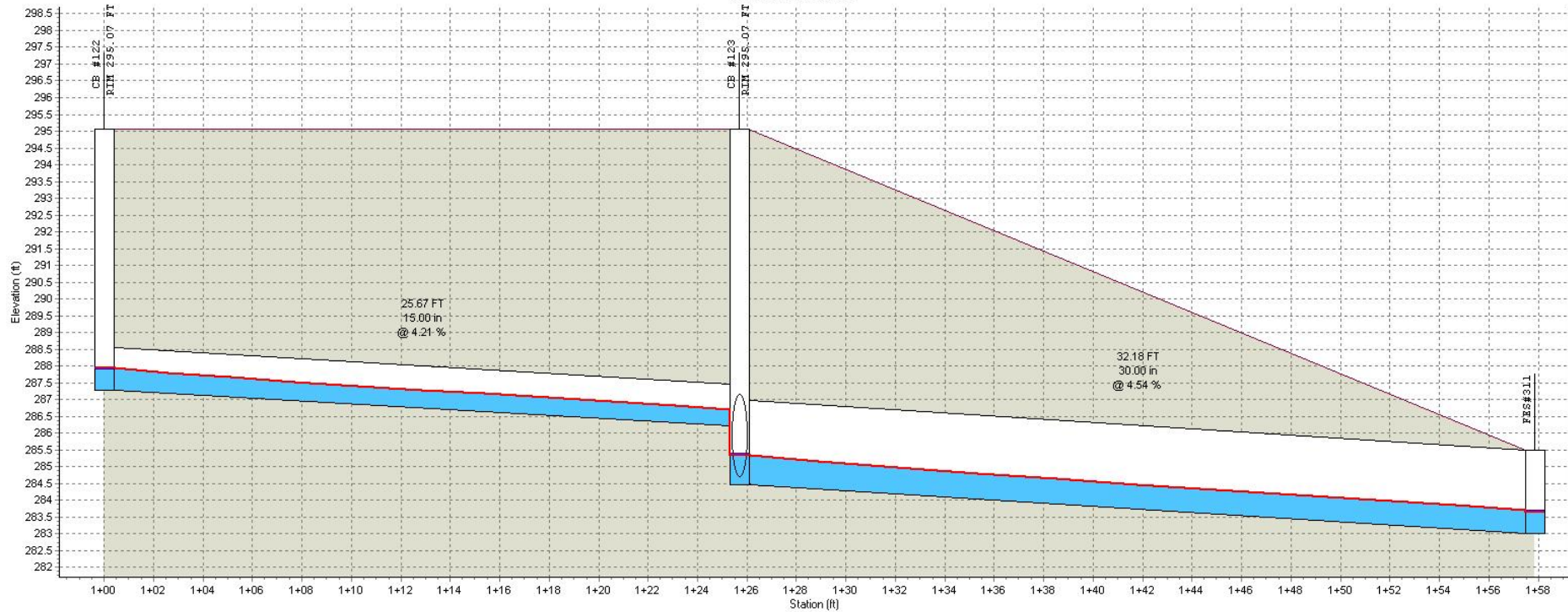
Profile Plot  
Main Street Storm Sewer



	CB #120	CB #121		CB #123
RIM (FT)	296.11	296.11		295.07
Invert (ft)	291.40	289.92		284.46
Min Pipe Cover (ft)				
Max HGL (ft)	291.76	290.48		285.36
Link ID:	P #142		P #143	
(FT)	25.71		147.96	
(in)	18.00		30.00	
@ (%)	0.50		3.55	
Up Invert (ft)	291.40		289.92	
Dn Invert (ft)	291.28		284.66	
Max Q (cfs)	0.70		7.70	
Max Vel (ft/s)	2.39		8.22	
Max Depth (ft)	0.33		0.62	

— HGL

Profile Plot  
Main Street Storm Sewer

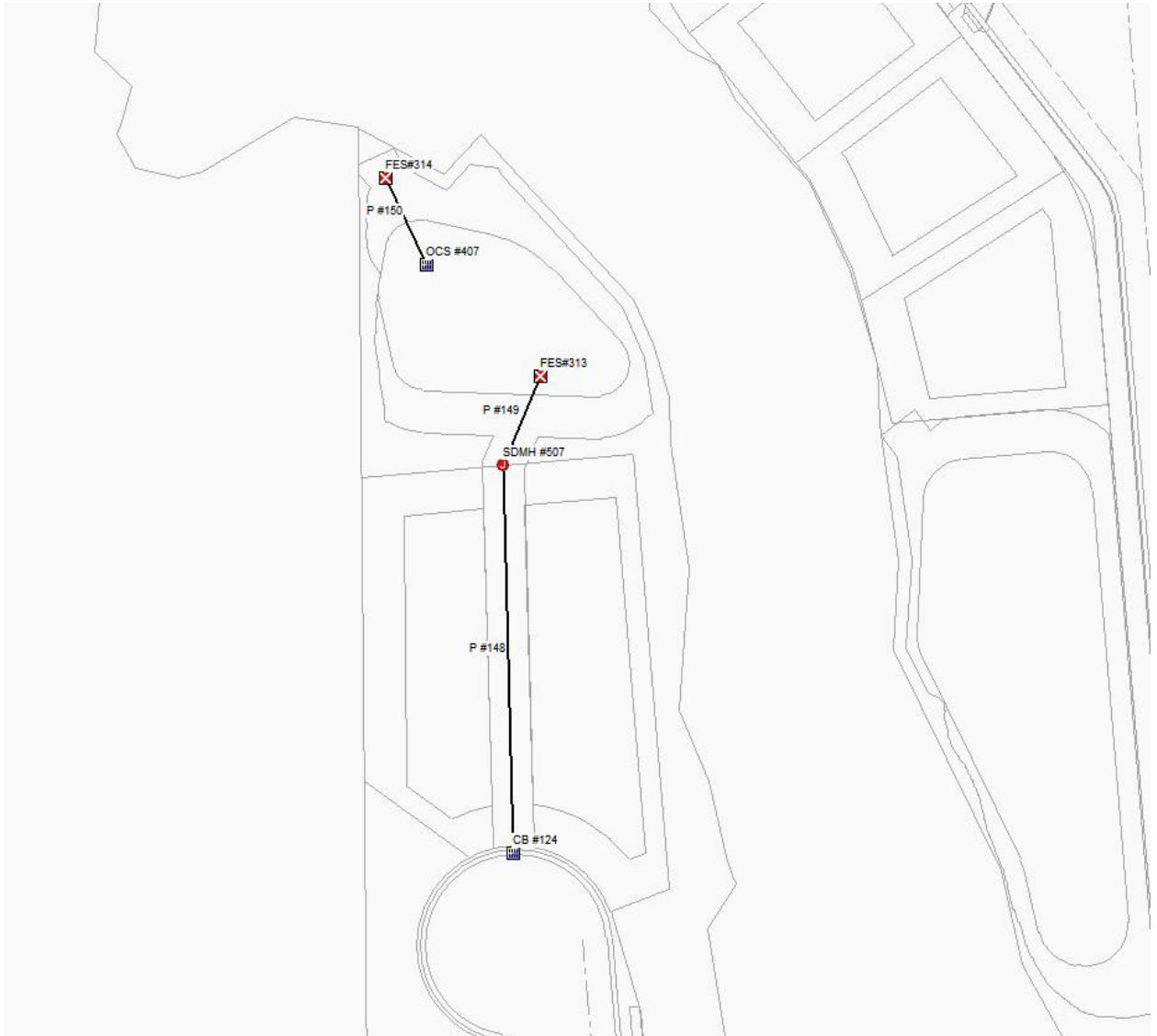


Link ID:	CB #122	CB #123	FES#311
RIM (FT):	295.07	295.07	
Invert (ft):	287.29	284.46	283.00
Min Pipe Cover (ft):			
Max HGL (ft):	287.93	285.36	283.64
Link ID:	P #144	P #145	
(ft):	25.67	32.18	
(in):	15.00	30.00	
@ (%):	4.21	4.54	
Up Invert (ft):	287.29	284.46	
Dn Invert (ft):	286.21	283.00	
Max Q (cfs):	4.13	12.41	
Max Vel (ft/s):	7.71	9.71	
Max Depth (ft):	0.56	0.77	

— HGL

## 4.7. STORM WATER AREA "G"

STORMWATER PIPING AND HYDRAULIC GRADE LINE FOR 10-YR STORM



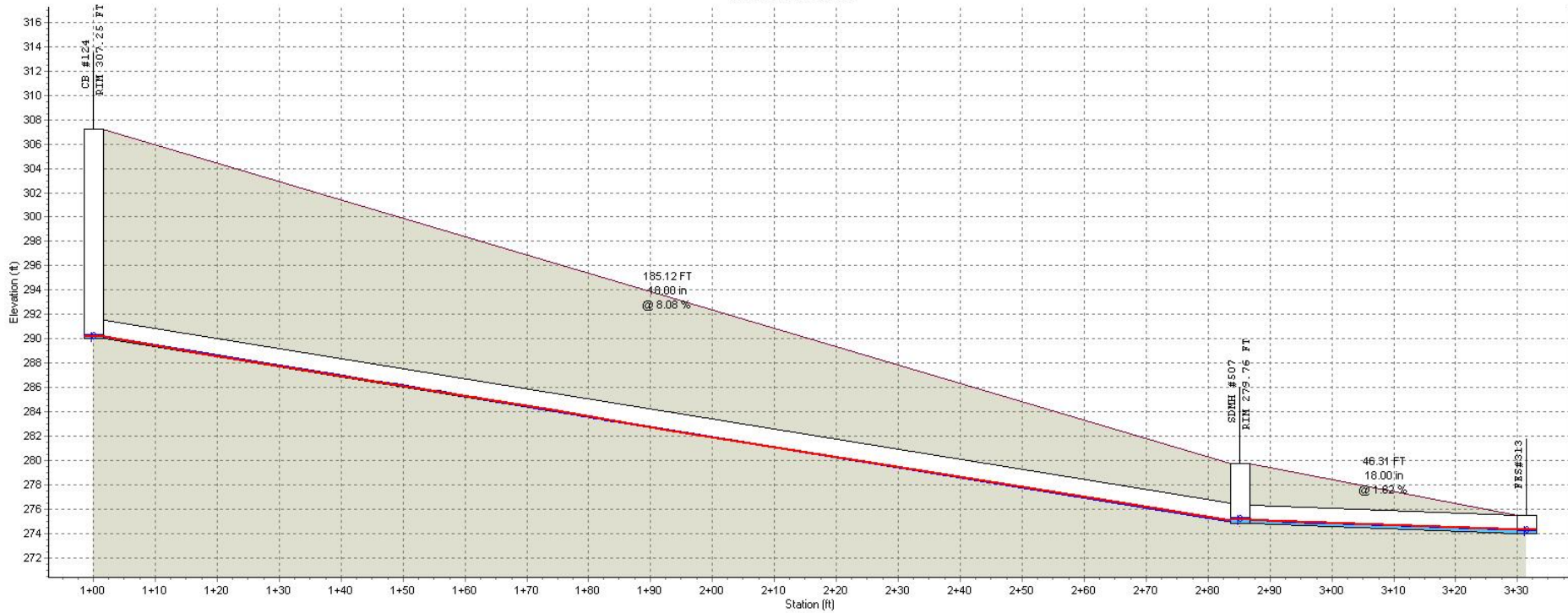
### DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#124	0.44	CB #124	0.5400	0.96	0.52	1.37	5.760	0 00:10:00



MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet Node)	To (Outlet Node)	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
1	P #148	CB #124	SDMH #507	185.12	290.00	275.04	8.0800	18.000	0.0130	1.35	0 00:10	8.41	0.37	29.86	0.05	0.15	0.00	0.22	Calculated
2	P #149	SDMH #507	FES#313	46.31	274.84	274.00	1.8200	18.000	0.0130	1.35	0 00:10	4.64	0.17	14.17	0.09	0.22	0.00	0.33	Calculated

Profile Plot  
Main Street Storm Sewer

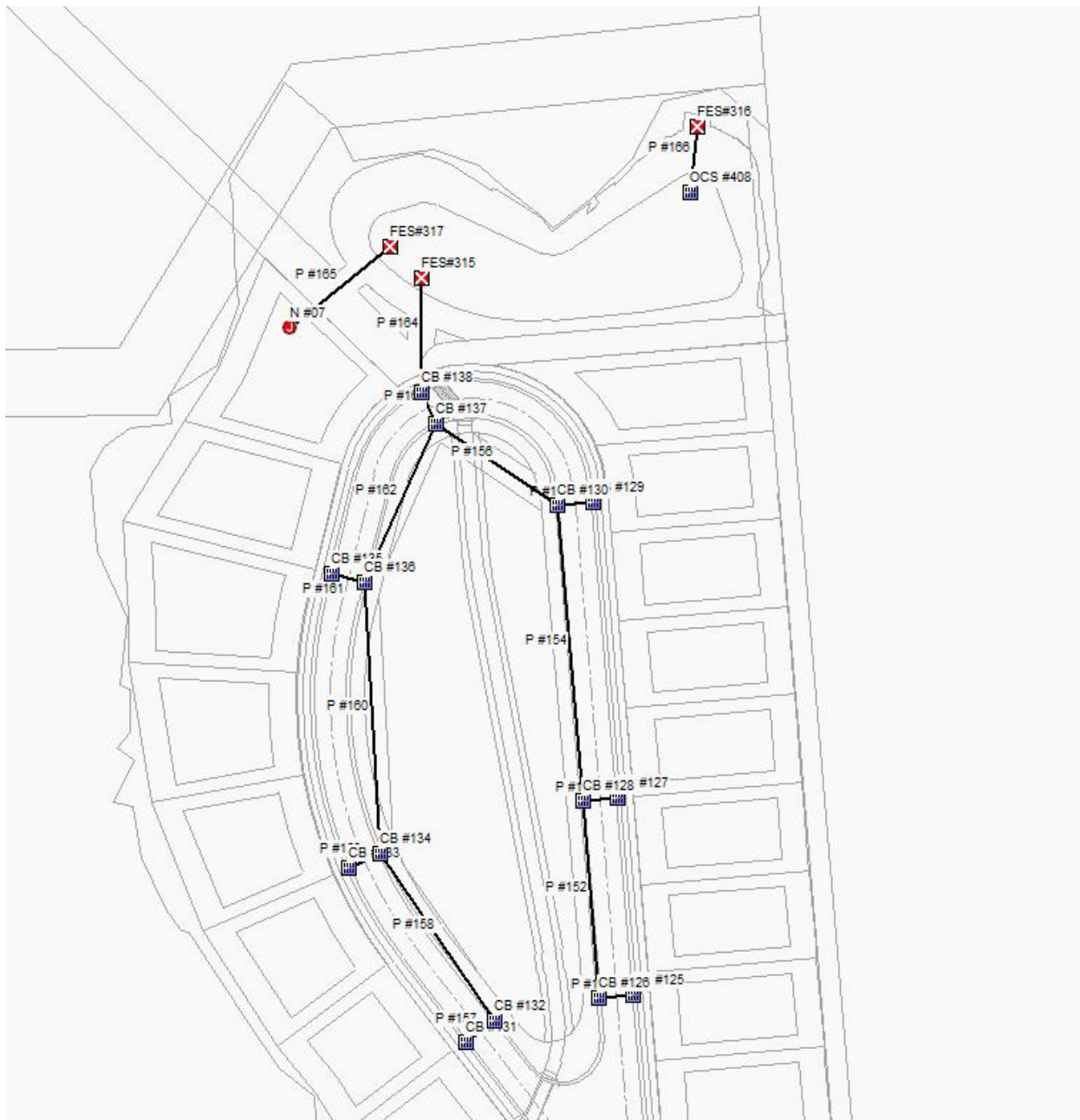


	CB #124		SDMH #507	FES#313
RIM (FT):	307.25		279.76	
Invert (ft):	290.00		274.84	274.00
Min Pipe Cover (ft):			3.22	
Max HGL (ft):	290.22		275.19	274.31
Link ID:		P #148		P #149
(FT):		185.12		46.31
(in):		18.00		18.00
@ (%):		8.08		1.82
Up Invert (ft):		290.00		274.84
Dn Invert (ft):		275.04		274.00
Max Q (cfs):		1.35		1.35
Max Vel (ft/s):		8.41		4.64
Max Depth (ft):		0.22		0.33

— HGL

## 4.8. STORM WATER AREA "H"

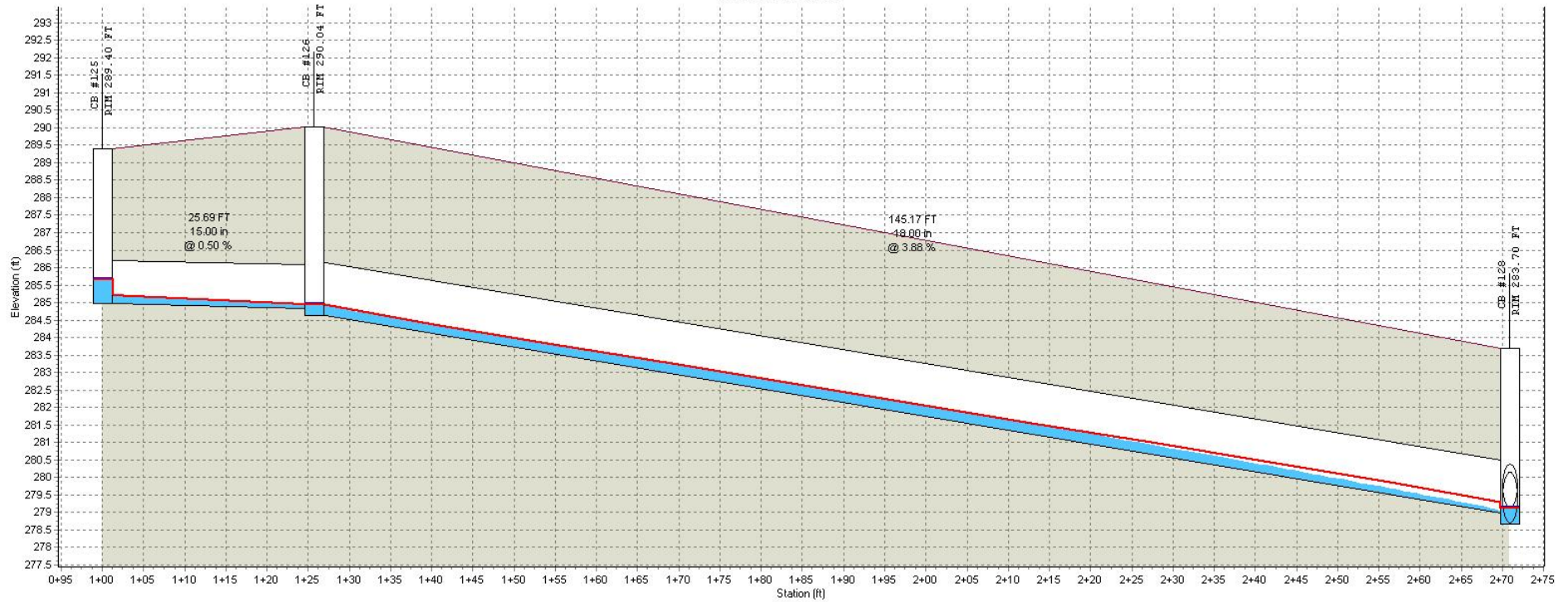
STORMWATER PIPING AND HYDRAULIC GRADE LINE FOR 10-YR STORM



<b>DRAINAGE AREA</b>									
<b>SN</b>	<b>Element ID</b>	<b>Area (acres)</b>	<b>Drainage Node ID</b>	<b>Weighted Runoff Coefficient</b>	<b>Accumulated Precipitation (inches)</b>	<b>Total Runoff (inches)</b>	<b>Peak Runoff (cfs)</b>	<b>Rainfall Intensity (inches/hr)</b>	<b>Time of Concentration (days hh:mm:ss)</b>
1	Sub-CB#125	0.92	CB #125	0.5400	0.96	0.52	2.86	5.760	0 00:10:00
2	Sub-CB#126	0.02	CB #126	0.7100	0.96	0.68	0.08	5.760	0 00:10:00
3	Sub-CB#127	0.55	CB #127	0.5400	0.96	0.52	1.71	5.760	0 00:10:00
4	Sub-CB#128	0.08	CB #128	0.7900	0.96	0.76	0.36	5.760	0 00:10:00
5	Sub-CB#129	0.77	CB #129	0.5400	0.96	0.52	2.40	5.760	0 00:10:00
6	Sub-CB#130	0.12	CB #130	0.7900	0.96	0.76	0.55	5.760	0 00:10:00
7	Sub-CB#131	0.28	CB #131	0.4900	0.96	0.47	0.79	5.760	0 00:10:00
8	Sub-CB#132	0.17	CB #132	0.6700	0.96	0.64	0.66	5.760	0 00:10:00
9	Sub-CB#133	0.17	CB #133	0.4900	0.96	0.47	0.48	5.760	0 00:10:00
10	Sub-CB#134	0.38	CB #134	0.7100	0.96	0.68	1.55	5.760	0 00:10:00
11	Sub-CB#135	0.24	CB #135	0.4900	0.96	0.47	0.68	5.760	0 00:10:00
12	Sub-CB#136	0.74	CB #136	0.7100	0.96	0.68	3.03	5.760	0 00:10:00
13	Sub-CB#137	0.39	CB #137	0.7100	0.96	0.68	1.60	5.760	0 00:10:00
14	Sub-CB#138	0.42	CB #138	0.5400	0.96	0.52	1.31	5.760	0 00:10:00

MODEL INPUT										MODEL OUTPUT									
SN	Element ID	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Max Flow Velocity (ft/sec)	Travel Time (min)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged (min)	Max Flow Depth (ft)	Reported Condition
1	P #151	CB #125	CB #126	25.69	284.96	284.83	0.5000	15.000	0.0130	2.03	0 00:10	3.23	0.13	4.57	0.44	0.51	0.00	0.64	Calculated
2	P #152	CB #126	CB #128	145.17	284.63	278.99	3.8800	18.000	0.0130	2.10	0 00:10	7.29	0.33	20.70	0.10	0.22	0.00	0.33	Calculated
3	P #153	CB #127	CB #128	25.70	279.26	279.13	0.5000	15.000	0.0130	2.28	0 00:10	3.33	0.13	4.57	0.50	0.55	0.00	0.68	Calculated
4	P #154	CB #128	CB #130	217.87	278.67	268.14	4.8300	18.000	0.0130	4.73	0 00:10	9.68	0.38	23.09	0.20	0.32	0.00	0.48	Calculated
5	P #155	CB #129	CB #130	25.73	268.54	268.41	0.5000	15.000	0.0130	2.15	0 00:10	3.28	0.13	4.57	0.47	0.53	0.00	0.66	Calculated
6	P #156	CB #130	CB #137	108.24	267.83	265.05	2.5700	18.000	0.0130	7.32	0 00:10	8.38	0.22	16.84	0.43	0.50	0.00	0.74	Calculated
7	P #157	CB #131	CB #132	25.69	279.62	279.50	0.5000	15.000	0.0130	0.78	0 00:10	2.51	0.17	4.57	0.17	0.30	0.00	0.37	Calculated
8	P #158	CB #132	CB #134	148.20	278.92	270.19	5.8900	18.000	0.0130	1.42	0 00:10	7.55	0.33	25.49	0.06	0.16	0.00	0.24	Calculated
9	P #159	CB #133	CB #134	25.73	270.84	270.71	0.5000	15.000	0.0130	0.47	0 00:10	2.22	0.19	4.57	0.10	0.23	0.00	0.29	Calculated
10	P #160	CB #134	CB #136	200.69	269.92	266.77	1.5700	18.000	0.0130	3.05	0 00:10	5.83	0.57	13.15	0.23	0.34	0.00	0.50	Calculated
11	P #161	CB #135	CB #136	25.73	267.11	266.99	0.5000	15.000	0.0130	0.63	0 00:10	2.39	0.18	4.57	0.14	0.27	0.00	0.34	Calculated
12	P #162	CB #136	CB #137	127.82	266.21	264.52	1.3200	24.000	0.0130	5.89	0 00:10	5.55	0.38	26.02	0.23	0.40	0.00	0.80	Calculated
13	P #163	CB #137	CB #138	25.60	264.07	263.25	3.2000	24.000	0.0130	15.68	0 00:10	8.85	0.05	40.44	0.39	0.55	0.00	1.10	Calculated
14	P #164	CB #138	FES#315	83.98	262.32	261.00	1.5800	30.000	0.0130	17.39	0 00:10	8.08	0.17	51.48	0.34	0.45	0.00	1.13	Calculated

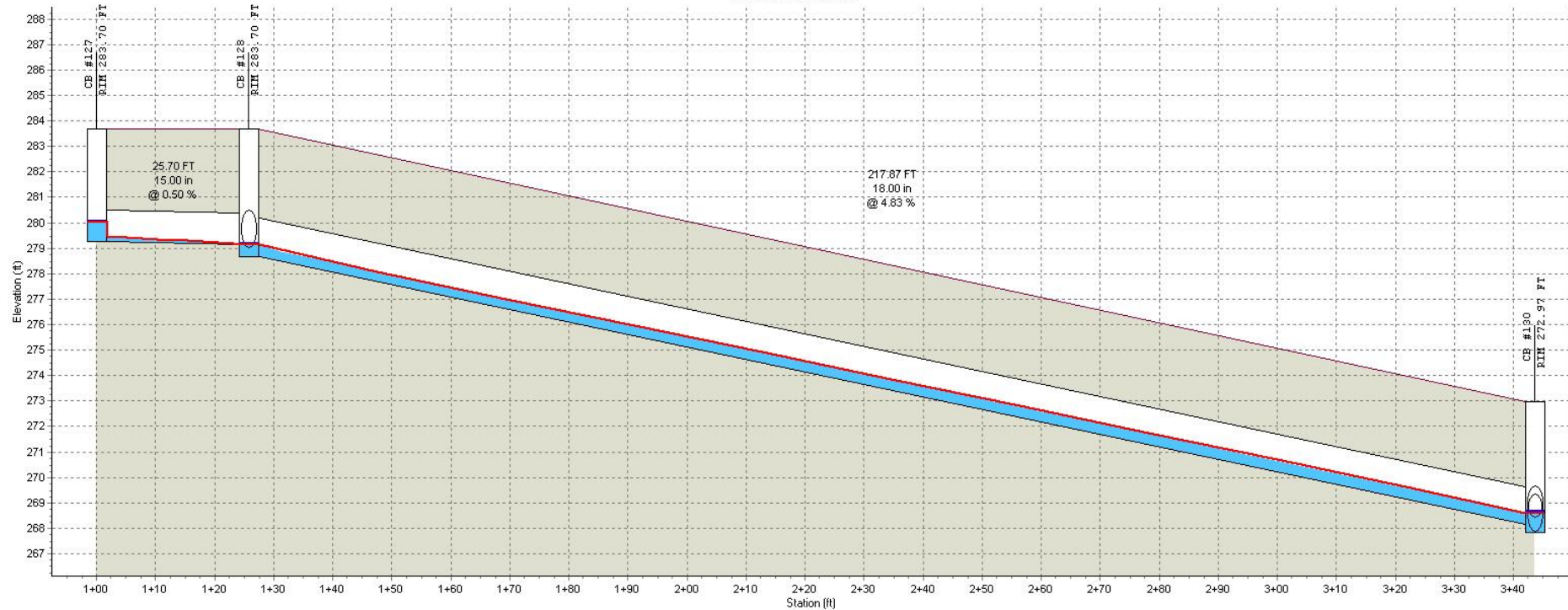
Profile Plot  
Main Street Storm Sewer



	CB #125	CB #126		CB #128
RIM (FT)	289.40	290.04		283.70
Invert (ft)	284.96	284.63		278.67
Min Pipe Cover (ft)				
Max HGL (ft)	285.67	284.97		279.14
Link ID:		P #151		P #152
(FT)		25.69		145.17
(in)		15.00		18.00
@ (%)		0.50		3.88
Up Invert (ft)		284.96		284.63
Dn Invert (ft)		284.83		278.99
Max Q (cfs)		2.03		2.10
Max Vel (ft/s)		3.23		7.29
Max Depth (ft)		0.64		0.33

— HGL

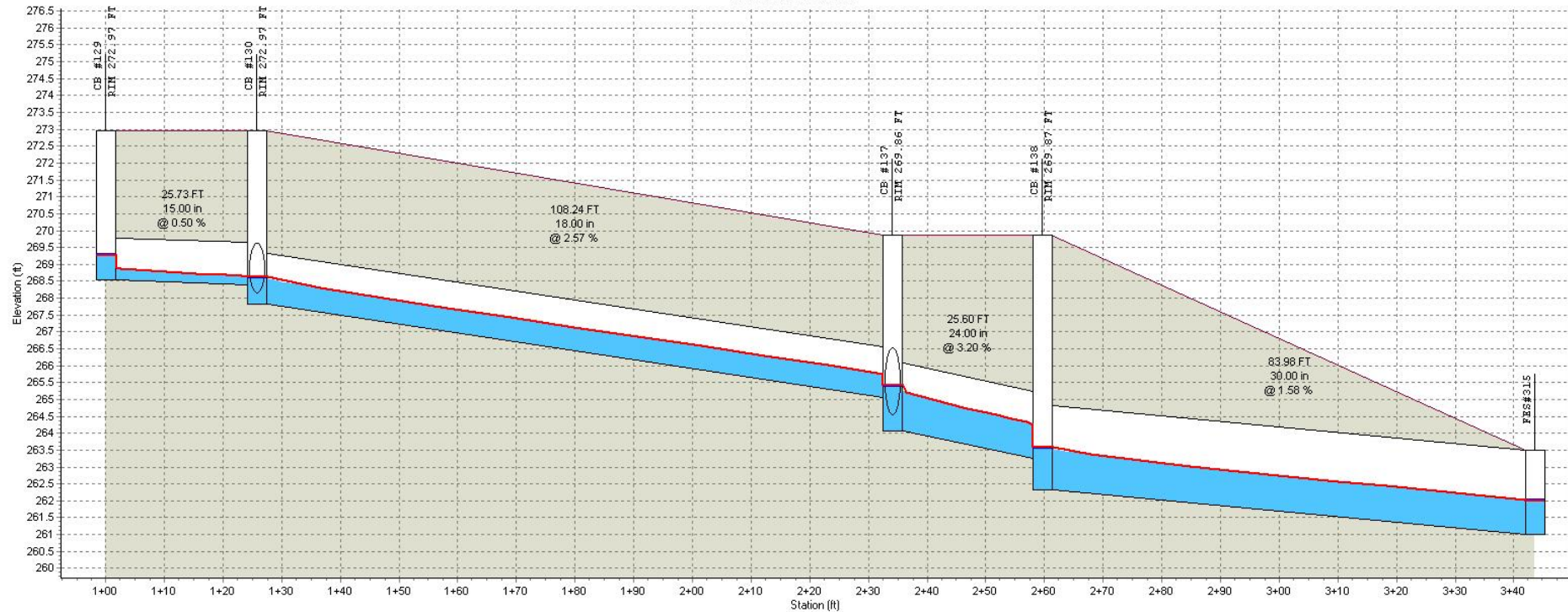
Profile Plot  
Main Street Storm Sewer



	CB #127	CB #128		CB #130
RIM (FT):	283.70	283.70		272.97
Invert (ft):	279.26	278.67		267.83
Min Pipe Cover (ft):				
Max HGL (ft):	280.02	279.14		268.63
Link ID:		P #153		P #154
(FT):		25.70		217.87
(in):		15.00		18.00
@ (%):		0.50		4.83
Up Invert (ft):		279.26		278.67
Dn Invert (ft):		279.13		268.14
Max Q (cfs):		2.28		4.73
Max Vel (ft/s):		3.33		9.68
Max Depth (ft):		0.68		0.48

— HGL

Profile Plot  
Main Street Storm Sewer

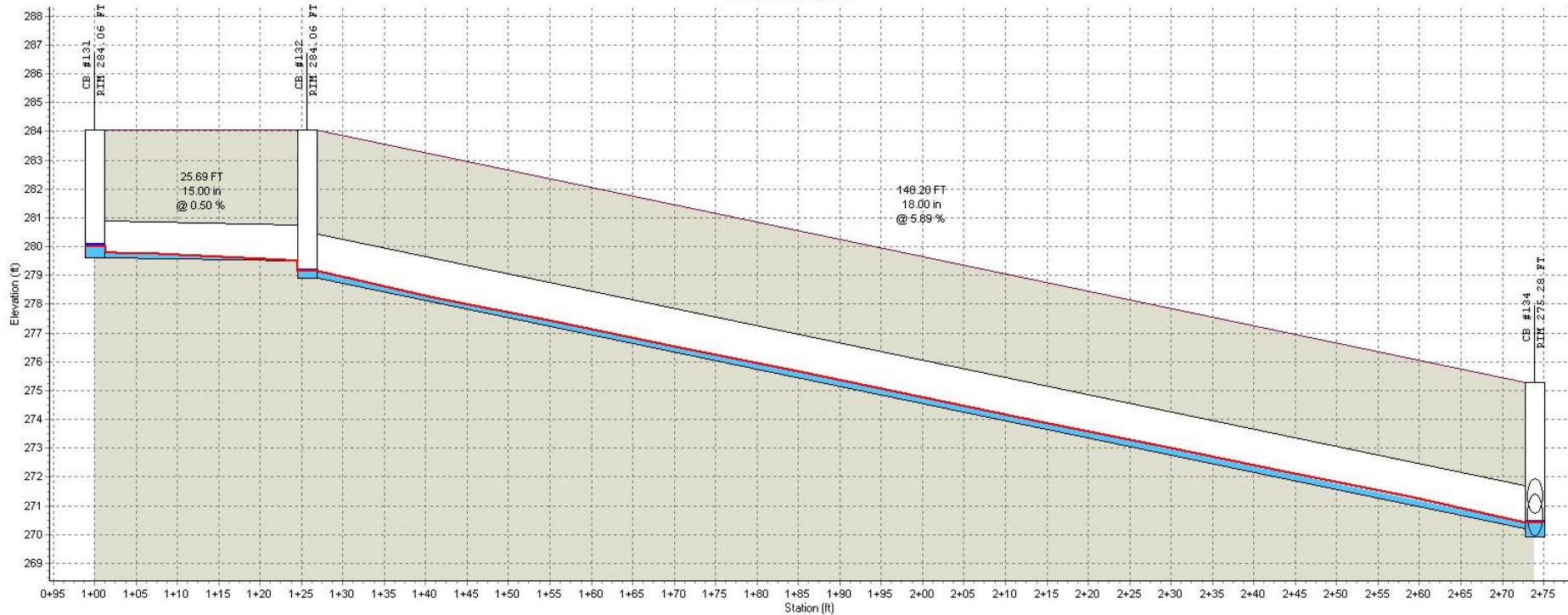


	CB #129	CB #130		CB #137	CB #138	FES#315
RIM (FT):	272.97	272.97		269.86	269.87	
Invert (ft):	268.54	267.83		264.07	262.32	261.00
Min Pipe Cover (ft):						
Max HGL (ft):	269.27	268.63		265.41	263.58	262.00
Link ID:		P #155		P #156		P #163
(FT):		25.73		108.24		25.60
(in):		15.00		18.00		24.00
@ (%):		0.50		2.57		3.20
Up Invert (ft):		268.54		267.83		264.07
Dn Invert (ft):		268.41		265.05		263.25
Max Q (cfs):		2.15		7.32		15.68
Max Vel (ft/s):		3.28		8.38		8.85
Max Depth (ft):		0.66		0.74		1.10
						P #164
						83.98
						30.00
						1.58
						262.32
						261.00
						17.39
						8.08
						1.13

— HGL



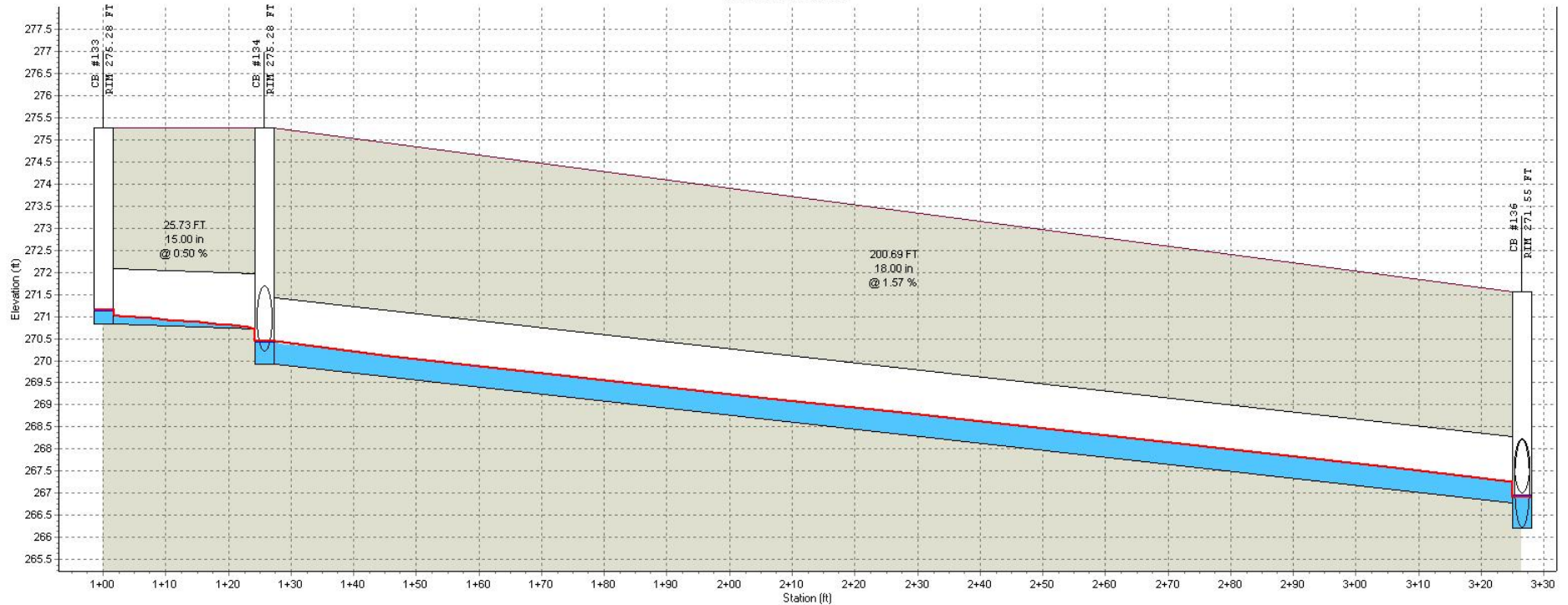
Profile Plot  
Main Street Storm Sewer



	CB #131	CB #132	CB #134
RIM (FT):	284.06	284.06	275.28
Invert (ft):	279.62	278.92	263.92
Min Pipe Cover (ft):			
Max HGL (ft):	280.03	279.16	270.43
Link ID:	P #157		P #158
(FT):	25.69		148.20
(in):	15.00		18.00
@ (%):	0.50		5.89
Up Invert (ft):	279.62		278.92
Dn Invert (ft):	279.50		270.19
Max Q (cfs):	0.78		1.42
Max Vel (ft/s):	2.51		7.55
Max Depth (ft):	0.37		0.24

— HGL

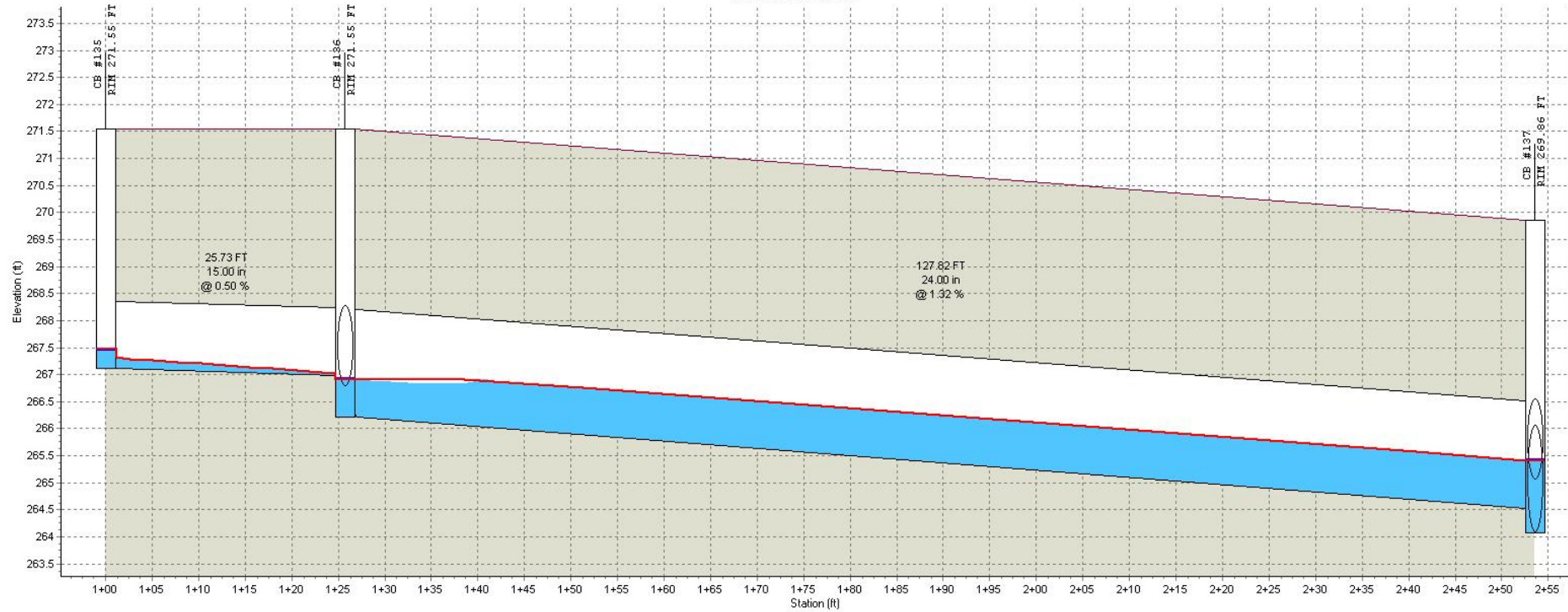
Profile Plot  
Main Street Storm Sewer



	CB #133	CB #134		CB #136
RIM (FT):	275.28	275.28		271.55
Invert (ft):	270.84	269.92		266.21
Min Pipe Cover (ft):				
Max HGL (ft):	271.14	270.43		266.92
Link ID:	P #159		P #160	
(FT):	25.73		200.69	
(in):	15.00		18.00	
@ (%):	0.50		1.57	
Up Invert (ft):	270.84		269.92	
Dn Invert (ft):	270.71		266.77	
Max Q (cfs):	0.47		3.05	
Max Vel (ft/s):	2.22		5.83	
Max Depth (ft):	0.29		0.50	

— HGL

Profile Plot  
Main Street Storm Sewer

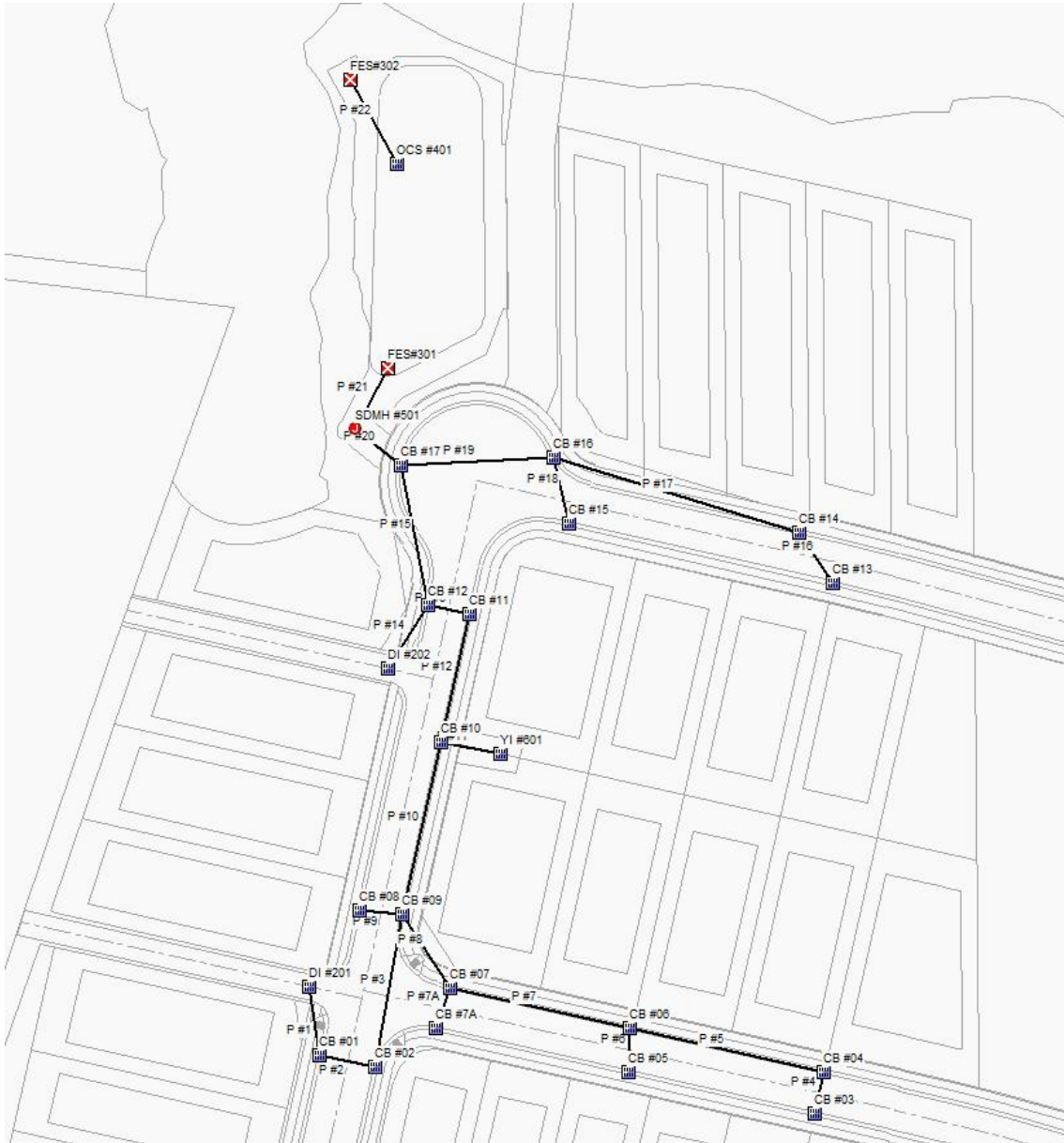


	CB #135	CB #136	CB #137
RIM (FT):	271.55	271.55	269.86
Invert (ft):	267.11	266.21	264.07
Min Pipe Cover (ft):			
Max HGL (ft):	267.47	266.92	265.41
Link ID:	P #161		P #162
(FT):	25.73		127.82
(in):	15.00		24.00
@ (%):	0.50		1.32
Up Invert (ft):	267.11		266.21
Dn Invert (ft):	266.99		264.52
Max Q (cfs):	0.63		5.89
Max Vel (ft/s):	2.39		5.55
Max Depth (ft):	0.34		0.80

— HGL

## **5. GUTTER SPREAD ANALYSIC REPORT**

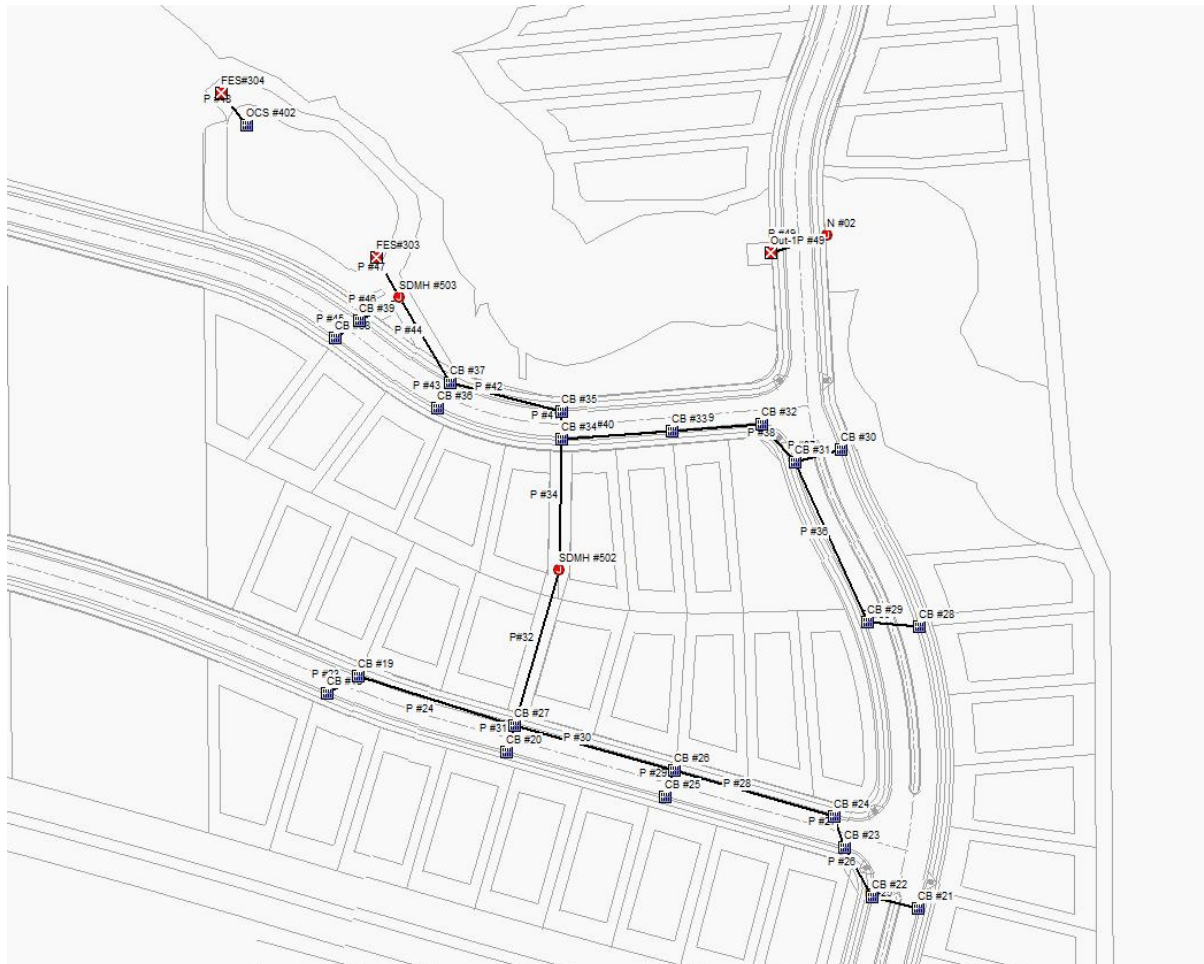
## 5.1. STORM WATER AREA "A"



<b>DRAINAGE AREA</b>									
<b>SN</b>	<b>Element ID</b>	<b>Area (acres)</b>	<b>Drainage Node ID</b>	<b>Weighted Runoff Coefficient</b>	<b>Accumulated Precipitation (inches)</b>	<b>Total Runoff (inches)</b>	<b>Peak Runoff (cfs)</b>	<b>Rainfall Intensity (inches/hr)</b>	<b>Time of Concentration (days hh:mm:ss)</b>
1	Sub-CB#01	0.34	CB #01	0.5400	0.67	0.36	0.73	4.000	0 00:10:00
2	Sub-CB#02	0.17	CB #02	0.8300	0.67	0.55	0.56	4.000	0 00:10:00
3	Sub-CB#03	0.44	CB #03	0.6900	0.67	0.46	1.21	4.000	0 00:10:00
4	Sub-CB#04	0.20	CB #04	0.5900	0.67	0.39	0.47	4.000	0 00:10:00
5	Sub-CB#05	0.38	CB #05	0.6900	0.67	0.46	1.05	4.000	0 00:10:00
6	Sub-CB#06	0.24	CB #06	0.5400	0.67	0.36	0.52	4.000	0 00:10:00
7	Sub-CB#07	0.23	CB #07	0.5900	0.67	0.39	0.54	4.000	0 00:10:00
8	Sub-CB#08	0.10	CB #08	0.4900	0.67	0.33	0.20	4.000	0 00:10:00
9	Sub-CB#09	0.08	CB #09	0.8300	0.67	0.55	0.27	4.000	0 00:10:00
10	Sub-CB#10	0.15	CB #10	0.4900	0.67	0.33	0.29	4.000	0 00:10:00
11	Sub-CB#11	0.25	CB #11	0.6900	0.67	0.46	0.69	4.000	0 00:10:00
12	Sub-CB#12	0.43	CB #12	0.5400	0.67	0.36	0.93	4.000	0 00:10:00
13	Sub-CB#13	0.25	CB #13	0.4700	0.67	0.31	0.47	4.000	0 00:10:00
14	Sub-CB#14	0.18	CB #14	0.4900	0.67	0.33	0.35	4.000	0 00:10:00
15	Sub-CB#15	0.33	CB #15	0.5400	0.67	0.36	0.71	4.000	0 00:10:00
16	Sub-CB#16	0.20	CB #16	0.4900	0.67	0.33	0.39	4.000	0 00:10:00
17	Sub-CB#17	0.13	CB #17	0.8300	0.67	0.55	0.43	4.000	0 00:10:00
18	Sub-CB#7A	0.68	CB #7A	0.6900	0.67	0.46	1.88	4.000	0 00:10:00

MODEL INPUT														MODEL OUTPUT											
SN	Element ID	Inlet Location	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Surface Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Total Peak Flow (cfs)	Max Gutter Spread during Peak Flow (ft)	Allowable Spread (ft)	Check	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)
1	CB #01	On Grade	294.27	302.07	294.27	0.00	N/A	0.00	0.0823	0.0200	0.0130	0.0600	2.00	1.4400	0.73	0.01	0.73	0.91	0.73	2.02	8.00	YES	302.11	0.04	0 00:10
2	CB #02	On Grade	293.90	302.11	293.90	0.00	N/A	0.00	0.0823	0.0200	0.0130	0.0600	2.00	1.4400	0.56	0.56	0.00	100.00	0.56	1.83	8.00	YES	302.22	0.11	0 00:10
3	CB #03	On Grade	298.80	303.24	298.80	0.00	N/A	0.00	0.0498	0.0200	0.0130	0.0600	2.00	1.4400	1.21	1.14	0.07	94.13	1.21	3.90	8.00	YES	303.40	0.16	0 00:10
4	CB #04	On Grade	298.14	303.24	298.14	0.00	N/A	0.00	0.0498	0.0200	0.0130	0.0600	2.00	1.4400	0.47	0.47	0.00	100.00	0.47	1.88	8.00	YES	303.35	0.11	0 00:10
5	CB #05	On Grade	295.45	299.89	295.45	0.00	N/A	0.00	0.0105	0.0200	0.0130	0.0600	2.00	1.4400	1.05	0.94	0.18	83.61	1.12	5.86	8.00	YES	300.08	0.20	0 00:10
6	CB #06	On Grade	294.85	299.82	294.85	0.00	N/A	0.00	0.0105	0.0200	0.0130	0.0600	2.00	1.4400	0.52	0.50	0.02	96.17	0.52	3.71	8.00	YES	299.97	0.15	0 00:10
7	CB #07	On Grade	293.72	298.63	293.72	0.00	N/A	0.00	0.0105	0.0200	0.0130	0.0600	2.00	1.4400	0.54	0.53	0.03	95.34	0.55	3.88	8.00	YES	298.79	0.16	0 00:10
8	CB #08	On Grade	290.76	295.20	290.76	0.00	N/A	0.00	0.0823	0.0200	0.0130	0.0600	2.00	1.4400	0.20	0.20	0.00	100.00	0.20	1.23	8.00	YES	295.27	0.07	0 00:10
9	CB #09	On Grade	289.28	295.01	289.28	0.00	N/A	0.00	0.0823	0.0200	0.0130	0.0600	2.00	1.4400	0.27	0.29	0.00	100.00	0.29	1.41	8.00	YES	295.09	0.08	0 00:10
10	CB #10	On Grade	284.30	290.23	284.30	0.00	N/A	0.00	0.0823	0.0200	0.0130	0.0600	2.00	1.4400	0.29	0.29	0.00	100.00	0.29	1.43	8.00	YES	290.31	0.09	0 00:10
11	CB #11	On Sag	283.63	289.13	283.63	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.69	N/A	N/A	N/A	0.70	3.14	8.00	YES	289.27	0.14	0 00:11
12	CB #12	On Sag	283.29	289.13	283.29	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.93	N/A	N/A	N/A	0.93	3.40	8.00	YES	289.27	0.15	0 00:11
13	CB #13	On Grade	295.13	299.57	295.13	0.00	N/A	0.00	0.0232	0.0200	0.0130	0.0600	2.00	1.4400	0.47	0.01	0.46	2.59	0.47	2.17	8.00	YES	299.61	0.04	0 00:10
14	CB #14	On Grade	294.18	298.91	294.18	0.00	N/A	0.00	0.0232	0.0200	0.0130	0.0600	2.00	1.4400	0.35	0.35	0.00	100.00	0.35	1.95	8.00	YES	299.03	0.12	0 00:10
15	CB #15	On Grade	287.95	292.38	287.95	0.00	N/A	0.00	0.0509	0.0200	0.0130	0.0600	2.00	1.4400	0.71	0.01	0.71	1.26	0.71	2.18	8.00	YES	292.43	0.04	0 00:10
16	CB #16	On Grade	286.88	291.76	286.88	0.00	N/A	0.00	0.0509	0.0200	0.0130	0.0600	2.00	1.4400	0.39	0.39	0.00	100.00	0.39	1.74	8.00	YES	291.86	0.10	0 00:10
17	CB #17	On Grade	279.70	289.61	279.70	0.00	N/A	0.00	0.0509	0.0200	0.0130	0.0600	2.00	1.4400	0.43	0.43	0.00	100.00	0.43	1.81	8.00	YES	289.72	0.11	0 00:11
18	CB #7A	On Sag	294.17	298.60	294.17	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	1.88	N/A	N/A	N/A	2.03	3.95	8.00	YES	298.76	0.16	0 00:10

## 5.2. STORM WATER AREA "B"



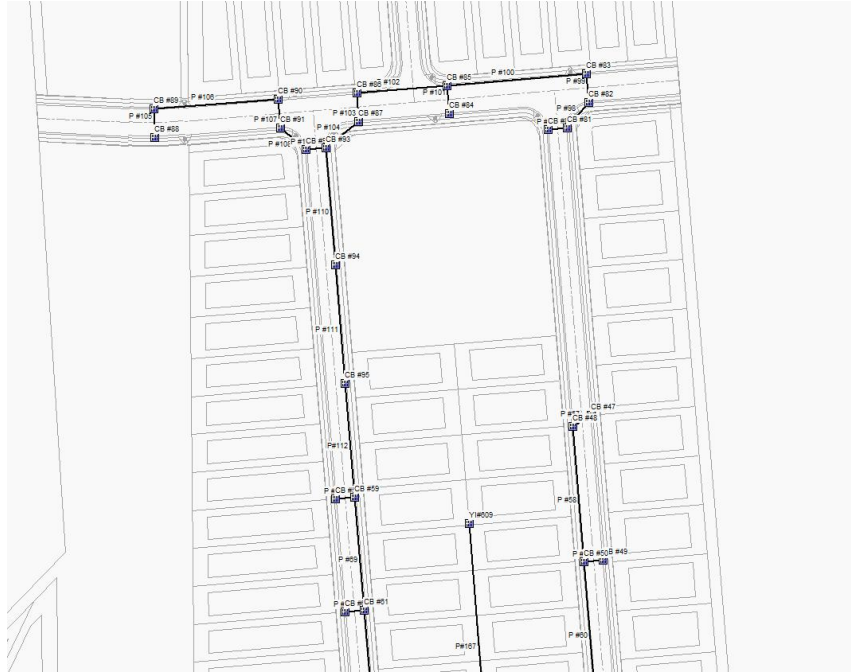


## DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#18	0.46	CB #18	0.5900	0.67	0.39	1.09	4.000	0 00:10:00
2	Sub-CB#19	0.20	CB #19	0.4900	0.67	0.33	0.39	4.000	0 00:10:00
3	Sub-CB#20	1.70	CB #20	0.5700	0.67	0.38	3.88	4.000	0 00:10:00
4	Sub-CB#21	0.25	CB #21	0.4900	0.67	0.33	0.49	4.000	0 00:10:00
5	Sub-CB#22	0.17	CB #22	0.8300	0.67	0.55	0.56	4.000	0 00:10:00
6	Sub-CB#23	0.06	CB #23	0.8300	0.67	0.55	0.20	4.000	0 00:10:00
7	Sub-CB#24	0.01	CB #24	0.8300	0.67	0.55	0.03	4.000	0 00:10:00
8	Sub-CB#25	0.32	CB #25	0.5700	0.67	0.38	0.73	4.000	0 00:10:00
9	Sub-CB#26	0.32	CB #26	0.5400	0.67	0.36	0.69	4.000	0 00:10:00
10	Sub-CB#27	0.63	CB #27	0.5400	0.67	0.36	1.36	4.000	0 00:10:00
11	Sub-CB#28	0.51	CB #28	0.5400	0.67	0.36	1.10	4.000	0 00:10:00
12	Sub-CB#29	0.23	CB #29	0.4900	0.67	0.33	0.45	4.000	0 00:10:00
13	Sub-CB#30	0.21	CB #30	0.4900	0.67	0.33	0.41	4.000	0 00:10:00
14	Sub-CB#31	0.15	CB #31	0.8300	0.67	0.55	0.50	4.000	0 00:10:00
15	Sub-CB#32	0.05	CB #32	0.8300	0.67	0.55	0.17	4.000	0 00:10:00
16	Sub-CB#33	0.59	CB #33	0.6400	0.67	0.43	1.51	4.000	0 00:10:00
17	Sub-CB#34	0.62	CB #34	0.6400	0.67	0.43	1.59	4.000	0 00:10:00
18	Sub-CB#35	0.10	CB #35	0.8300	0.67	0.55	0.33	4.000	0 00:10:00
19	Sub-CB#36	1.50	CB #36	0.6900	0.67	0.46	4.14	4.000	0 00:10:00
20	Sub-CB#37	0.12	CB #37	0.8300	0.67	0.55	0.40	4.000	0 00:10:00
21	Sub-CB#38	0.53	CB #38	0.4700	0.67	0.31	1.00	4.000	0 00:10:00
22	Sub-CB#39	0.15	CB #39	0.8300	0.67	0.55	0.50	4.000	0 00:10:00

MODEL INPUT														MODEL OUTPUT											
SN	Element ID	Inlet Location	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Surface Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Total Peak Flow (cfs)	Max Gutter Spread during Peak Flow (ft)	Allowable Spread (ft)	Check	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)
1	CB #18	On Grade	305.47	309.91	4.44	305.47	N/A	0.00	0.0164	0.0200	0.0130	0.0600	2.00	1.4400	1.09	0.95	0.14	87.29	1.08	5.12	8.00	YES	310.09	0.18	0 00:10
2	CB #19	On Grade	304.94	309.57	4.64	304.94	N/A	0.00	0.0164	0.0200	0.0130	0.0600	2.00	1.4400	0.39	0.01	0.38	3.52	0.39	2.16	8.00	YES	309.62	0.04	0 00:10
3	CB #20	On Sag	302.15	307.55	5.40	302.15	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	3.88	N/A	N/A	N/A	4.02	4.80	8.00	YES	307.72	0.18	0 00:10
4	CB #21	On Grade	319.35	324.02	4.66	319.35	N/A	0.00	0.0788	0.0200	0.0130	0.0600	2.00	1.4400	0.49	0.49	0.00	100.00	0.49	1.74	8.00	YES	324.12	0.10	0 00:10
5	CB #22	On Grade	315.93	324.02	8.09	315.93	N/A	0.00	0.0788	0.0200	0.0130	0.0600	2.00	1.4400	0.56	0.56	0.00	100.00	0.56	1.84	8.00	YES	324.13	0.11	0 00:10
6	CB #23	On Grade	312.18	318.30	6.11	312.18	N/A	0.00	0.0434	0.0200	0.0130	0.0600	2.00	1.4400	0.20	0.20	0.00	100.00	0.20	1.40	8.00	YES	318.38	0.08	0 00:10
7	CB #24	On Grade	310.86	317.60	6.73	310.86	N/A	0.00	0.0434	0.0200	0.0130	0.0600	2.00	1.4400	0.03	0.03	0.00	100.00	0.03	0.71	8.00	YES	317.64	0.04	0 00:10
8	CB #25	On Grade	304.45	310.95	6.50	304.45	N/A	0.00	0.0434	0.0200	0.0130	0.0600	2.00	1.4400	0.73	0.01	0.72	1.39	0.73	2.27	8.00	YES	310.99	0.05	0 00:10
9	CB #26	On Grade	302.71	310.96	8.25	302.71	N/A	0.00	0.0434	0.0200	0.0130	0.0600	2.00	1.4400	0.69	0.01	0.68	1.43	0.69	2.22	8.00	YES	311.01	0.04	0 00:10
10	CB #27	On Sag	297.58	307.55	9.96	297.58	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	1.36	N/A	N/A	N/A	1.36	3.61	8.00	YES	307.70	0.15	0 00:10
11	CB #28	On Grade	302.61	307.05	4.44	302.61	N/A	0.00	0.0289	0.0200	0.0130	0.0600	2.00	1.4400	1.10	1.01	0.09	91.38	1.10	4.39	8.00	YES	307.21	0.17	0 00:10
12	CB #29	On Grade	301.69	306.50	4.81	301.69	N/A	0.00	0.0289	0.0200	0.0130	0.0600	2.00	1.4400	0.45	0.01	0.44	2.24	0.45	2.04	8.00	YES	306.54	0.04	0 00:10
13	CB #30	On Grade	297.44	301.88	4.44	297.44	N/A	0.00	0.0289	0.0200	0.0130	0.0600	2.00	1.4400	0.41	0.01	0.49	2.14	0.50	2.12	8.00	YES	301.92	0.04	0 00:10
14	CB #31	On Grade	296.51	301.82	5.32	296.51	N/A	0.00	0.0289	0.0200	0.0130	0.0600	2.00	1.4400	0.50	0.01	0.49	2.14	0.50	2.12	8.00	YES	301.86	0.04	0 00:10
15	CB #32	On Grade	294.42	299.93	5.52	294.42	N/A	0.00	0.0166	0.0200	0.0130	0.0600	2.00	1.4400	0.17	0.17	0.00	100.00	0.17	1.56	8.00	YES	300.03	0.09	0 00:10
16	CB #33	On Grade	292.69	298.48	5.79	292.69	N/A	0.00	0.0166	0.0200	0.0130	0.0600	2.00	1.4400	1.51	1.22	0.29	81.01	1.51	6.05	8.00	YES	298.68	0.20	0 00:10
17	CB #34	On Grade	290.59	296.83	6.24	290.59	N/A	0.00	0.0166	0.0200	0.0130	0.0600	2.00	1.4400	1.59	1.42	0.44	76.58	1.86	6.74	8.00	YES	297.04	0.21	0 00:11
18	CB #35	On Grade	290.17	296.83	6.66	290.17	N/A	0.00	0.0166	0.0200	0.0130	0.0600	2.00	1.4400	0.33	0.01	0.32	3.73	0.33	2.03	8.00	YES	296.87	0.04	0 00:11
19	CB #36	On Sag	291.00	295.43	4.44	291.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	4.14	N/A	N/A	N/A	4.45	5.15	8.00	YES	295.62	0.18	0 00:10
20	CB #37	On Sag	289.07	295.43	6.36	289.07	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.40	N/A	N/A	N/A	0.40	0.92	8.00	YES	295.53	0.10	0 00:11
21	CB #38	On Grade	292.82	297.25	4.44	292.82	N/A	0.00	0.0429	0.0200	0.0130	0.0600	2.00	1.4400	1.00	0.95	0.04	95.87	1.00	3.60	8.00	YES	297.41	0.15	0 00:10
22	CB #39	On Grade	291.74	297.01	5.27	291.74	N/A	0.00	0.0429	0.0200	0.0130	0.0600	2.00	1.4400	0.50	0.50	0.00	100.00	0.50	1.97	8.00	YES	297.13	0.12	0 00:09

## 5.3. STORM WATER AREA "C"

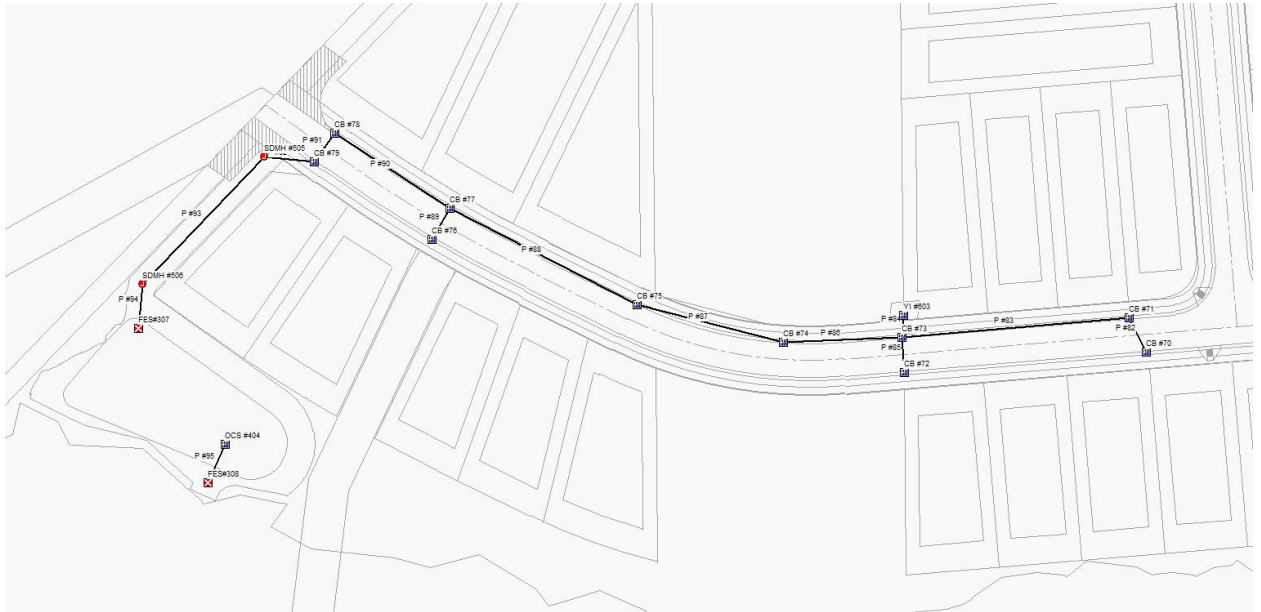


## DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#40	0.18	CB #40	0.8300	0.67	0.55	0.60	4.000	0 00:10:00
2	Sub-CB#41	0.16	CB #41	0.8300	0.67	0.55	0.53	4.000	0 00:10:00
3	Sub-CB#42	0.22	CB #42	0.5400	0.67	0.36	0.48	4.000	0 00:10:00
4	Sub-CB#43	0.43	CB #43	0.5400	0.67	0.36	0.93	4.000	0 00:10:00
5	Sub-CB#44	0.21	CB #44	0.5400	0.67	0.36	0.45	4.000	0 00:10:00
6	Sub-CB#45	0.27	CB #45	0.5400	0.67	0.36	0.58	4.000	0 00:10:00
7	Sub-CB#46	0.13	CB #46	0.4900	0.67	0.33	0.26	4.000	0 00:10:00
8	Sub-CB#47	0.72	CB #47	0.6900	0.67	0.46	1.99	4.000	0 00:10:00
9	Sub-CB#48	0.35	CB #48	0.5000	0.67	0.33	0.70	4.000	0 00:10:00
10	Sub-CB#49	0.66	CB #49	0.6900	0.67	0.46	1.82	4.000	0 00:10:00
11	Sub-CB#50	0.39	CB #50	0.5400	0.67	0.36	0.84	4.000	0 00:10:00
12	Sub-CB#51	0.66	CB #51	0.6900	0.67	0.46	1.82	4.000	0 00:10:00
13	Sub-CB#52	0.38	CB #52	0.5400	0.67	0.36	0.82	4.000	0 00:10:00
14	Sub-CB#53	0.69	CB #53	0.6900	0.67	0.46	1.90	4.000	0 00:10:00
15	Sub-CB#54	0.24	CB #54	0.5400	0.67	0.36	0.52	4.000	0 00:10:00
16	Sub-CB#55	0.05	CB #55	0.8300	0.67	0.55	0.17	4.000	0 00:10:00
17	Sub-CB#56	0.62	CB #56	0.6900	0.67	0.46	1.71	4.000	0 00:10:00
18	Sub-CB#57	0.08	CB #57	0.8300	0.67	0.55	0.27	4.000	0 00:10:00
19	Sub-CB#58	0.38	CB #58	0.5400	0.67	0.36	0.82	4.000	0 00:10:00
20	Sub-CB#59	0.28	CB #59	0.4900	0.67	0.33	0.55	4.000	0 00:10:00
21	Sub-CB#60	0.73	CB #60	0.5900	0.67	0.39	1.72	4.000	0 00:10:00
22	Sub-CB#61	0.31	CB #61	0.5400	0.67	0.36	0.67	4.000	0 00:10:00
23	Sub-CB#62	0.91	CB #62	0.6900	0.67	0.46	2.51	4.000	0 00:10:00
24	Sub-CB#63	0.43	CB #63	0.5400	0.67	0.36	0.93	4.000	0 00:10:00
25	Sub-CB#64	0.10	CB #64	0.4900	0.67	0.33	0.20	4.000	0 00:10:00
26	Sub-CB#65	0.79	CB #65	0.6400	0.67	0.43	2.02	4.000	0 00:10:00
27	Sub-CB#66	0.26	CB #66	0.5400	0.67	0.36	0.56	4.000	0 00:10:00
28	Sub-CB#67	0.20	CB #67	0.5900	0.67	0.39	0.47	4.000	0 00:10:00
29	Sub-CB#68	0.10	CB #68	0.4900	0.67	0.33	0.20	4.000	0 00:10:00
30	Sub-CB#69	0.12	CB #69	0.4900	0.67	0.33	0.24	4.000	0 00:10:00
31	Sub-CB#80	0.56	CB #80	0.8300	0.67	0.55	1.86	4.000	0 00:10:00
32	Sub-CB#81	0.36	CB #81	0.5900	0.67	0.39	0.85	4.000	0 00:10:00
33	Sub-CB#82	0.09	CB #82	0.4900	0.67	0.33	0.18	4.000	0 00:10:00
34	Sub-CB#83	0.01	CB #83	0.7000	0.67	0.47	0.03	4.000	0 00:10:00
35	Sub-CB#84	0.56	CB #84	0.4900	0.67	0.33	1.10	4.000	0 00:10:00
36	Sub-CB#85	0.48	CB #85	0.5400	0.67	0.36	1.04	4.000	0 00:10:00
37	Sub-CB#86	0.36	CB #86	0.5400	0.67	0.36	0.78	4.000	0 00:10:00
38	Sub-CB#87	0.57	CB #87	0.5000	0.67	0.33	1.14	4.000	0 00:10:00
39	Sub-CB#88	0.30	CB #88	0.4900	0.67	0.33	0.59	4.000	0 00:10:00
40	Sub-CB#89	0.42	CB #89	0.5900	0.67	0.39	0.99	4.000	0 00:10:00
41	Sub-CB#90	0.26	CB #90	0.5900	0.67	0.39	0.61	4.000	0 00:10:00
42	Sub-CB#91	0.12	CB #91	0.4900	0.67	0.33	0.24	4.000	0 00:10:00
43	Sub-CB#92	0.40	CB #92	0.5400	0.67	0.36	0.86	4.000	0 00:10:00
44	Sub-CB#93	0.14	CB #93	0.4200	0.67	0.28	0.24	4.000	0 00:10:00
45	Sub-CB#94	0.49	CB #94	0.4900	0.67	0.33	0.96	4.000	0 00:10:00
46	Sub-CB#95	0.15	CB #95	0.4500	0.67	0.30	0.27	4.000	0 00:10:00

MODEL INPUT														MODEL OUTPUT											
SN	Element ID	Inlet Location	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Surface Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Total Peak Flow (cfs)	Max Gutter Spread during Peak Flow (ft)	Allowable Spread (ft)	Check	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)
1	CB #40	On Grade	289.36	293.80	289.36	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.60	0.54	0.06	90.48	0.60	5.12	8.00	YES	293.98	0.18	0 00:10
2	CB #41	On Grade	289.04	293.83	289.04	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.53	0.49	0.04	92.24	0.53	4.76	8.00	YES	294.00	0.18	0 00:10
3	CB #42	On Grade	288.26	293.04	288.26	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.48	0.47	0.04	92.81	0.51	4.64	8.00	YES	293.21	0.17	0 00:10
4	CB #43	On Sag	288.19	292.62	288.19	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.93	N/A	N/A	N/A	1.06	3.46	8.00	YES	292.77	0.15	0 00:11
5	CB #44	On Sag	287.62	292.62	287.62	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.45	N/A	N/A	N/A	0.49	1.67	8.00	YES	292.74	0.11	0 00:11
6	CB #45	On Grade	289.07	293.52	289.07	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.58	0.67	0.11	86.44	0.78	5.87	8.00	YES	293.72	0.20	0 00:10
7	CB #46	On Grade	286.98	293.52	286.98	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.26	0.02	0.23	8.93	0.25	2.30	8.00	YES	293.57	0.05	0 00:11
8	CB #47	On Grade	336.69	341.28	336.69	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	1.99	1.70	0.29	85.62	1.99	5.13	8.00	YES	341.46	0.18	0 00:10
9	CB #48	On Grade	335.93	340.79	335.93	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	0.70	0.01	0.69	1.22	0.70	2.14	8.00	YES	340.83	0.04	0 00:10
10	CB #49	On Grade	326.36	330.80	326.36	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	1.82	1.78	0.33	84.51	2.10	5.27	8.00	YES	330.99	0.19	0 00:10
11	CB #50	On Grade	325.83	330.80	325.83	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	0.84	0.01	0.83	1.13	0.84	2.30	8.00	YES	330.85	0.05	0 00:10
12	CB #51	On Grade	316.52	320.96	316.52	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	1.82	1.74	0.31	85.03	2.05	5.20	8.00	YES	321.14	0.18	0 00:10
13	CB #52	On Grade	315.69	320.96	315.69	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	0.82	0.01	0.81	1.13	0.82	2.27	8.00	YES	321.01	0.05	0 00:10
14	CB #53	On Grade	305.59	310.03	305.59	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	1.90	1.80	0.33	84.33	2.13	5.30	8.00	YES	310.22	0.19	0 00:10
15	CB #54	On Grade	304.44	310.03	304.44	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	0.52	0.52	0.00	100.00	0.52	1.91	8.00	YES	310.15	0.11	0 00:10
16	CB #55	On Grade	296.47	305.15	296.47	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	0.17	0.17	0.00	100.00	0.17	1.24	8.00	YES	305.23	0.07	0 00:10
17	CB #56	On Grade	285.21	298.69	285.21	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	1.71	1.68	0.28	85.73	1.97	5.11	8.00	YES	298.87	0.18	0 00:10
18	CB #57	On Grade	284.69	298.36	284.69	0.00	N/A	0.00	0.0546	0.0200	0.0130	0.0600	2.00	1.4400	0.27	0.27	0.00	100.00	0.27	1.49	8.00	YES	298.45	0.09	0 00:10
19	CB #58	On Grade	317.74	328.46	317.74	0.00	N/A	0.00	0.0401	0.0200	0.0130	0.0600	2.00	1.4400	0.82	0.01	0.81	1.41	0.82	2.42	8.00	YES	328.51	0.05	0 00:10
20	CB #59	On Grade	314.25	328.46	314.25	0.00	N/A	0.00	0.0401	0.0200	0.0130	0.0600	2.00	1.4400	0.55	0.01	0.54	1.66	0.55	2.07	8.00	YES	328.50	0.04	0 00:12
21	CB #60	On Grade	316.71	321.86	316.71	0.00	N/A	0.00	0.0682	0.0200	0.0130	0.0600	2.00	1.4400	1.72	1.58	0.17	90.48	1.75	4.43	8.00	YES	322.03	0.17	0 00:10
22	CB #61	On Grade	313.30	321.86	313.30	0.00	N/A	0.00	0.6820	0.0200	0.0130	0.0600	2.00	1.4400	0.67	0.31	0.36	45.77	0.67	1.31	8.00	YES	321.94	0.08	0 00:12
23	CB #62	On Grade	303.67	308.10	303.67	0.00	N/A	0.00	0.0682	0.0200	0.0130	0.0600	2.00	1.4400	2.51	2.17	0.50	81.33	2.67	5.68	8.00	YES	308.30	0.19	0 00:10
24	CB #63	On Grade	301.06	308.10	301.06	0.00	N/A	0.00	0.0682	0.0200	0.0130	0.0600	2.00	1.4400	0.93	1.25	0.06	95.19	1.31	3.70	8.00	YES	308.26	0.15	0 00:12
25	CB #64	On Grade	299.14	303.58	299.14	0.00	N/A	0.00	0.0244	0.0200	0.0130	0.0600	2.00	1.4400	0.20	0.01	0.61	2.20	0.62	2.38	8.00	YES	303.63	0.05	0 00:10
26	CB #65	On Grade	297.23	303.78	297.23	0.00	N/A	0.00	0.0244	0.0200	0.0130	0.0600	2.00	1.4400	2.02	1.57	0.45	77.90	2.02	6.38	8.00	YES	303.99	0.21	0 00:11
27	CB #66	On Sag	294.57	303.38	294.57	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.56	N/A	N/A	N/A	0.96	3.41	8.00	YES	303.53	0.15	0 00:11
28	CB #67	On Grade	300.94	305.39	300.94	0.00	N/A	0.00	0.0166	0.0200	0.0130	0.0600	2.00	1.4400	0.47	0.01	0.46	3.18	0.47	2.31	8.00	YES	305.44	0.05	0 00:10
29	CB #68	On Grade	300.56	305.21	300.56	0.00	N/A	0.00	0.0166	0.0200	0.0130	0.0600	2.00	1.4400	0.20	0.20	0.00	100.00	0.20	1.66	8.00	YES	305.31	0.10	0 00:10
30	CB #69	On Grade	292.79	303.39	292.79	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.24	0.02	0.21	9.15	0.24	2.23	8.00	YES	303.44	0.04	0 00:11
31	CB #80	On Grade	341.74	346.18	341.74	0.00	N/A	0.00	0.0237	0.0200	0.0130	0.0600	2.00	1.4400	1.86	1.47	0.38	79.35	1.86	6.17	8.00	YES	346.38	0.20	0 00:10
32	CB #81	On Grade	341.34	346.18	341.34	0.00	N/A	0.00	0.0237	0.0200	0.0130	0.0600	2.00	1.4400	0.85	0.80	0.05	94.44	0.85	3.91	8.00	YES	346.34	0.16	0 00:10
33	CB #82	On Grade	340.49	345.20	340.49	0.00	N/A	0.00	0.0241	0.0200	0.0130	0.0600	2.00	1.4400	0.18	0.23	0.00	100.00	0.23	1.65	8.00	YES	345.30	0.10	0 00:10
34	CB #83	On Grade	340.10	345.21	340.10	0.00	N/A	0.00	0.0241	0.0200	0.0130	0.0600	2.00	1.4400	0.03	0.03	0.00	100.00	0.03	0.75	8.00	YES	345.25	0.04	0 00:10
35	CB #84	On Grade	335.09	339.53	335.09	0.00	N/A	0.00	0.0585	0.0200	0.0130	0.0600	2.00	1.4400	1.10	1.36	0.12	92.12	1.48	4.20	8.00	YES	339.69	0.16	0 00:10
36	CB #85	On Grade	334.60	339.52	334.60	0.00	N/A	0.00	0.0585	0.0200	0.0130	0.0600	2.00	1.4400	1.04	0.01	1.03	0.97	1.04	2.44	8.00	YES	339.57	0.05	0 00:10
37	CB #86	On Grade	327.63	332.55	327.63	0.00	N/A	0.00	0.0585	0.0200	0.0130	0.0600	2.00	1.4400	0.78	0.01	0.77	1.10	0.78	2.19	8.00	YES	332.59	0.04	0 00:10
38	CB #87	On Grade	324.16	332.54	324.16	0.00	N/A	0.00	0.0585	0.0200	0.0130	0.0600	2.00	1.4400	1.14	1.12	0.05	95.72	1.17	3.61	8.00	YES	332.69	0.15	0 00:10
39	CB #88	On Sag	319.69	322.13	319.69	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.59	N/A	N/A	N/A	0.59	1.71	8.00	YES	322.25	0.11	0 00:10
40	CB #89	On Sag	319.30	322.13	319.30	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.99	N/A	N/A	N/A	0.99	3.43	8.00	YES	322.28	0.15	0 00:11
41	CB #90	On Grade	318.28	326.54	318.28	0.00	N/A	0.00	0.0585	0.0200	0.0130	0.0600	2.00	1.4400	0.61	0.01	0.61	1.25	0.61	2.02	8.00	YES	326.58	0.04	0 00:11
42	CB #91	On Grade	317.89	326.53	317.89	0.00	N/A	0.00	0.0585	0.0200	0.0130	0.0600	2.00	1.4400	0.24	0.29	0.00	100.00	0.29	1.51	8.00	YES	326.62	0.09	0 00:11
43	CB #92	On Grade	317.47	330.49	317.47	0.00	N/A	0.00	0.0265	0.0200	0.0130	0.0600	2.00	1.4400	0.86	0.82	0.04	94.93	0.86	3.81	8.00	YES	330.65	0.16	0 00:11
44	CB #93	On Sag	317.15	330.49	317.15	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.24	N/A	N/A	N/A	0.30	1.97	8.00	YES	330.61	0.12	0 00:11
45	CB #94	On Grade	316.17	334.59	316.17	0.00	N/A	0.00	0.0265	0.0200	0.0130	0.0600	2.00	1.4400	0.96	0.89	0.06	93.25	0.96	4.10	8.00	YES	334.75	0.16	0 00:11
46	CB #95	On Grade	315.18	334.27	315.18	0.00	N/A	0.00	0.0401	0.0200	0.0130	0.0600	2.00	1.4400	0.27	0.27	0.00	100.00	0.27	1.59	8.00	YES	334.36	0.10	0 00:12

## 5.4. STORM WATER AREA "D"



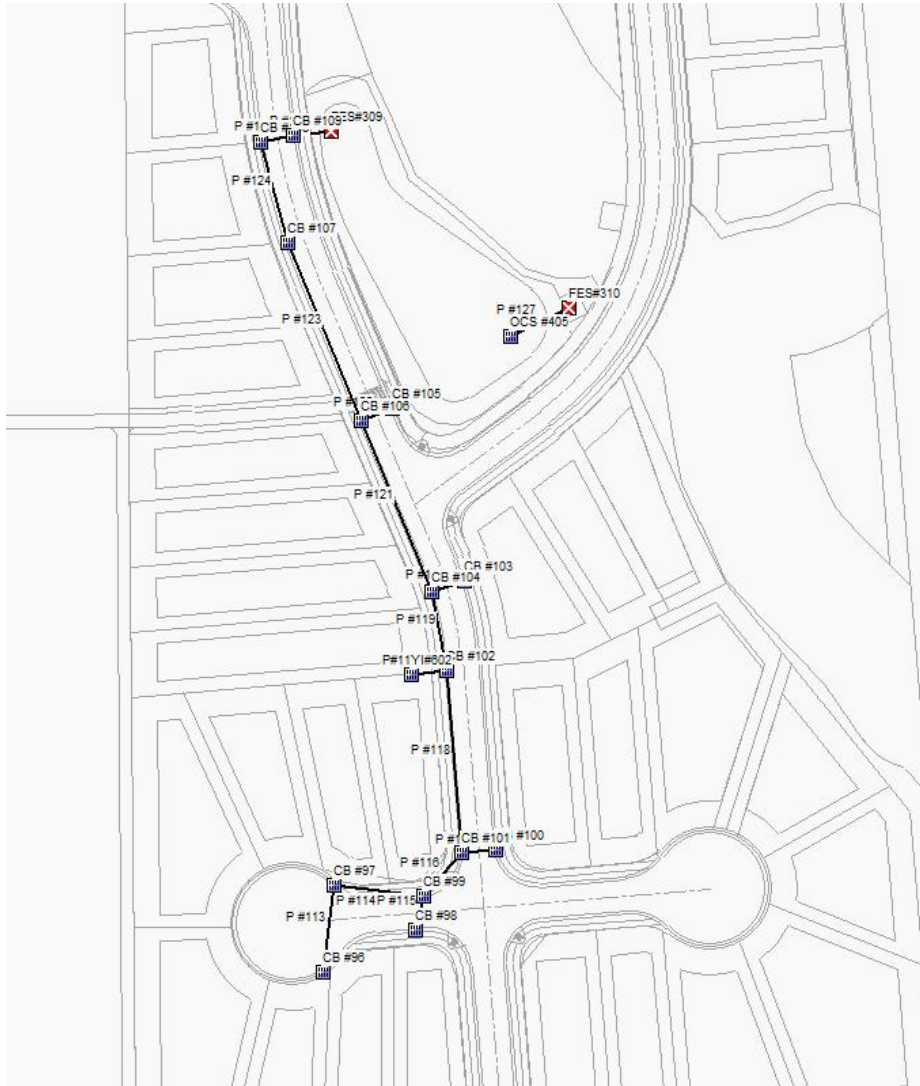
## DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#70	0.14	CB #70	0.4900	0.67	0.33	0.27	4.000	0 00:10:00
2	Sub-CB#71	0.07	CB #71	0.4900	0.67	0.33	0.14	4.000	0 00:10:00
3	Sub-CB#72	0.19	CB #72	0.4900	0.67	0.33	0.37	4.000	0 00:10:00
4	Sub-CB#73	0.32	CB #73	0.5400	0.67	0.36	0.69	4.000	0 00:10:00
5	Sub-CB#74	0.05	CB #74	0.8300	0.67	0.55	0.17	4.000	0 00:10:00
6	Sub-CB#75	0.12	CB #75	0.8300	0.67	0.55	0.40	4.000	0 00:10:00
7	Sub-CB#76	0.45	CB #76	0.5400	0.67	0.36	0.97	4.000	0 00:10:00
8	Sub-CB#77	1.15	CB #77	0.7400	0.67	0.49	3.40	4.000	0 00:10:00
9	Sub-CB#78	0.07	CB #78	0.7100	0.67	0.47	0.20	4.000	0 00:10:00
10	Sub-CB#79	0.06	CB #79	0.7000	0.67	0.47	0.17	4.000	0 00:10:00

MODEL INPUT														MODEL OUTPUT											
SN	Element ID	Inlet Location	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft <sup>2</sup> )	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Surface Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Total Peak Flow (cfs)	Max Gutter Spread during Peak Flow (ft)	Allowable Spread (ft)	Check	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)
1	CB #70	On Grade	298.34	302.78	298.34	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.27	0.02	0.25	8.58	0.27	2.35	8.00	YES	302.82	0.05	0 00:10
2	CB #71	On Grade	298.00	302.70	298.00	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.14	0.14	0.00	100.00	0.14	1.82	8.00	YES	302.81	0.11	0 00:10
3	CB #72	On Grade	297.36	301.80	297.36	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.37	0.36	0.01	96.55	0.37	3.80	8.00	YES	301.96	0.16	0 00:10
4	CB #73	On Grade	296.97	301.80	296.97	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.69	0.61	0.08	88.28	0.69	5.54	8.00	YES	301.99	0.19	0 00:10
5	CB #74	On Grade	294.78	299.69	294.78	0.00	N/A	0.00	0.0575	0.0200	0.0130	0.0600	2.00	1.4400	0.17	0.17	0.00	100.00	0.17	1.24	8.00	YES	299.77	0.07	0 00:10
6	CB #75	On Grade	287.41	294.02	287.41	0.00	N/A	0.00	0.0575	0.0200	0.0130	0.0600	2.00	1.4400	0.40	0.40	0.00	100.00	0.40	1.71	8.00	YES	294.13	0.10	0 00:10
7	CB #76	On Sag	284.74	289.18	284.74	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.97	N/A	N/A	N/A	0.97	5.44	8.00	YES	289.37	0.19	0 00:10
8	CB #77	On Sag	283.75	289.18	283.75	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	3.40	N/A	N/A	N/A	3.41	4.51	8.00	YES	289.35	0.17	0 00:10
9	CB #78	On Grade	283.05	289.74	283.05	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.20	0.02	0.18	9.91	0.20	2.09	8.00	YES	289.78	0.04	0 00:11
10	CB #79	On Grade	282.72	289.57	282.72	0.00	N/A	0.00	0.0050	0.0200	0.0130	0.0600	2.00	1.4400	0.17	0.17	0.00	100.00	0.17	1.96	8.00	YES	289.69	0.12	0 00:11



**5.5. STORM WATER AREA " E "**

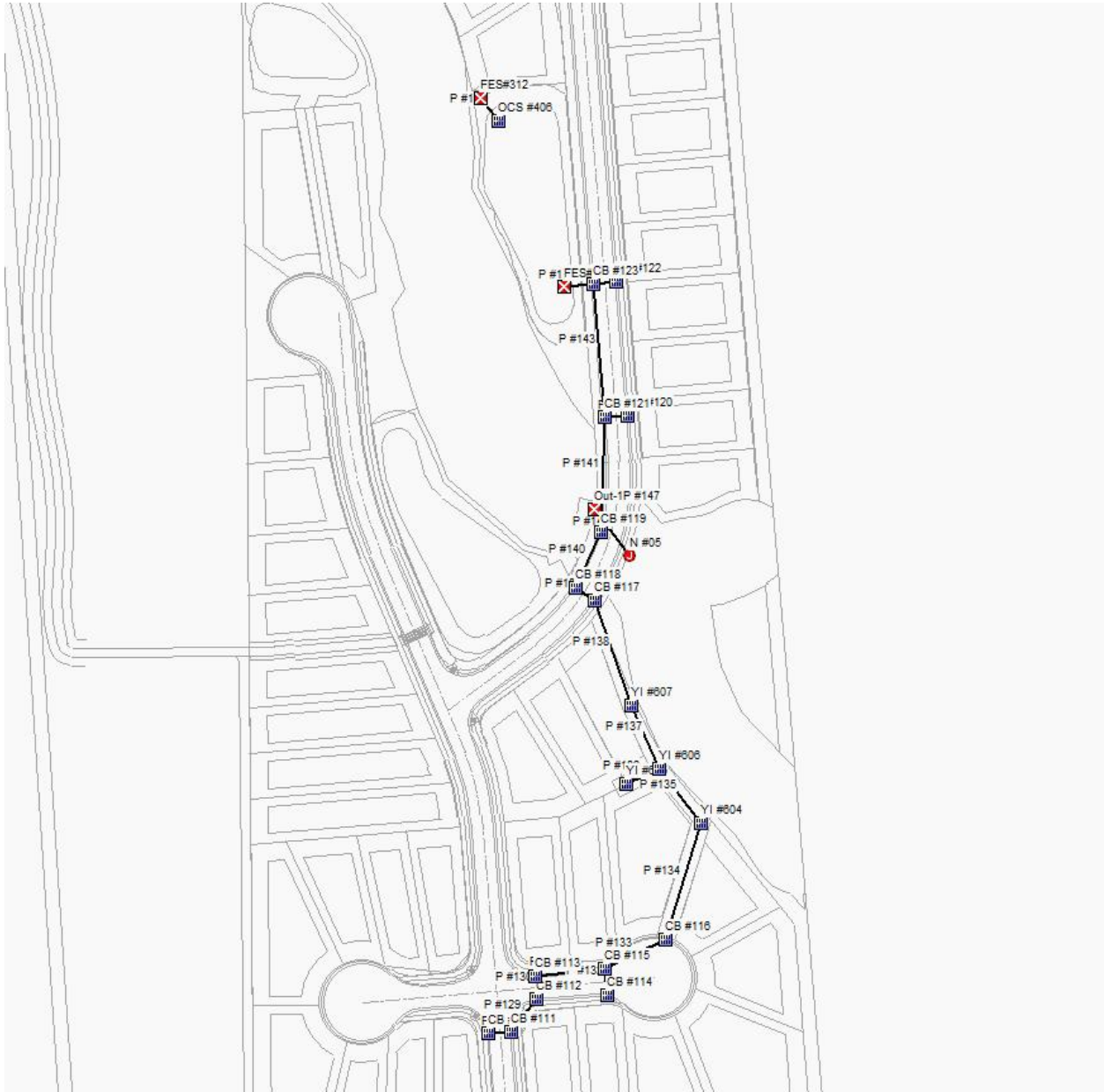


## DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#100	0.08	CB #100	0.4900	0.67	0.33	0.16	4.000	0 00:10:00
2	Sub-CB#101	0.08	CB #101	0.4900	0.67	0.33	0.16	4.000	0 00:10:00
3	Sub-CB#102	0.13	CB #102	0.4900	0.67	0.33	0.26	4.000	0 00:10:00
4	Sub-CB#103	0.27	CB #103	0.5400	0.67	0.36	0.58	4.000	0 00:10:00
5	Sub-CB#104	0.69	CB #104	0.6900	0.67	0.46	1.90	4.000	0 00:10:00
6	Sub-CB#105	0.01	CB #105	0.8300	0.67	0.55	0.03	4.000	0 00:10:00
7	Sub-CB#106	0.19	CB #106	0.7900	0.67	0.53	0.60	4.000	0 00:10:00
8	Sub-CB#107	0.44	CB #107	0.5900	0.67	0.39	1.04	4.000	0 00:10:00
9	Sub-CB#108	0.13	CB #108	0.5900	0.67	0.39	0.31	4.000	0 00:10:00
10	Sub-CB#109	0.13	CB #109	0.8300	0.67	0.55	0.43	4.000	0 00:10:00
11	Sub-CB#96	0.22	CB #96	0.4600	0.67	0.31	0.41	4.000	0 00:10:00
12	Sub-CB#97	0.12	CB #97	0.4500	0.67	0.30	0.22	4.000	0 00:10:00
13	Sub-CB#98	0.27	CB #98	0.5900	0.67	0.39	0.64	4.000	0 00:10:00
14	Sub-CB#99	0.11	CB #99	0.4500	0.67	0.30	0.20	4.000	0 00:10:00

MODEL INPUT														MODEL OUTPUT											
SN	Element ID	Inlet Location	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Surface Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Total Peak Flow (cfs)	Max Gutter Spread during Peak Flow (ft)	Allowable Spread (ft)	Check	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)
1	CB #100	On Grade	321.60	326.04	321.60	0.00	N/A	0.00	0.0758	0.0200	0.0130	0.0600	2.00	1.4400	0.16	0.16	0.00	100.00	0.16	1.15	8.00	YES	326.11	0.07	0 00:10
2	CB #101	On Grade	320.63	326.36	320.63	0.00	N/A	0.00	0.0758	0.0200	0.0130	0.0600	2.00	1.4400	0.16	0.16	0.00	100.00	0.16	1.15	8.00	YES	326.43	0.07	0 00:10
3	CB #102	On Grade	314.45	320.05	314.45	0.00	N/A	0.00	0.0053	0.0200	0.0130	0.0600	2.00	1.4400	0.26	0.02	0.23	8.55	0.25	2.27	8.00	YES	320.10	0.05	0 00:10
4	CB #103	On Sag	314.91	319.35	314.91	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.58	N/A	N/A	N/A	0.58	2.34	8.00	YES	319.48	0.13	0 00:11
5	CB #104	On Sag	313.94	319.35	313.94	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	1.90	N/A	N/A	N/A	1.91	3.89	8.00	YES	319.51	0.16	0 00:10
6	CB #105	On Grade	314.86	319.53	314.86	0.00	N/A	0.00	0.0053	0.0200	0.0130	0.0600	2.00	1.4400	0.03	0.03	0.00	100.00	0.03	1.06	8.00	YES	319.59	0.06	0 00:10
7	CB #106	On Grade	313.02	319.51	313.02	0.00	N/A	0.00	0.0053	0.0200	0.0130	0.0600	2.00	1.4400	0.60	0.54	0.06	90.75	0.60	5.02	8.00	YES	319.69	0.18	0 00:11
8	CB #107	On Grade	309.09	314.54	309.09	0.00	N/A	0.00	0.0426	0.0200	0.0130	0.0600	2.00	1.4400	1.04	1.02	0.06	94.78	1.08	3.80	8.00	YES	314.70	0.16	0 00:11
9	CB #108	On Grade	304.72	311.17	304.72	0.00	N/A	0.00	0.0426	0.0200	0.0130	0.0600	2.00	1.4400	0.31	0.34	0.00	100.00	0.34	1.71	8.00	YES	311.27	0.10	0 00:11
10	CB #109	On Grade	301.15	311.16	301.15	0.00	N/A	0.00	0.0456	0.0200	0.0130	0.0600	2.00	1.4400	0.43	0.43	0.00	100.00	0.43	1.85	8.00	YES	311.27	0.11	0 00:11
11	CB #96	On Grade	329.00	333.44	329.00	0.00	N/A	0.00	0.0511	0.0200	0.0130	0.0600	2.00	1.4400	0.41	0.40	0.00	100.00	0.40	1.77	8.00	YES	333.55	0.11	0 00:10
12	CB #97	On Grade	328.30	332.93	328.30	0.00	N/A	0.00	0.0511	0.0200	0.0130	0.0600	2.00	1.4400	0.22	0.22	0.00	100.00	0.22	1.40	8.00	YES	333.02	0.08	0 00:10
13	CB #98	On Sag	326.51	330.94	326.51	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.64	N/A	N/A	N/A	0.64	2.03	8.00	YES	331.06	0.12	0 00:10
14	CB #99	On Grade	325.47	330.31	325.47	0.00	N/A	0.00	0.0256	0.0200	0.0130	0.0600	2.00	1.4400	0.20	0.20	0.00	100.00	0.20	1.54	8.00	YES	330.40	0.09	0 00:10

## 5.6. STORM WATER AREA " F "



## DRAINAGE AREA

SN	Element ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-CB#110	0.13	CB #110	0.8300	0.67	0.55	0.43	4.000	0 00:10:00
2	Sub-CB#111	0.16	CB #111	0.4900	0.67	0.33	0.31	4.000	0 00:10:00
3	Sub-CB#112	0.03	CB #112	0.2900	0.67	0.19	0.04	4.000	0 00:10:00
4	Sub-CB#113	0.01	CB #113	0.7000	0.67	0.47	0.03	4.000	0 00:10:00
5	Sub-CB#114	0.14	CB #114	0.4900	0.67	0.33	0.27	4.000	0 00:10:00
6	Sub-CB#115	0.07	CB #115	0.4900	0.67	0.33	0.14	4.000	0 00:10:00
7	Sub-CB#116	0.33	CB #116	0.4500	0.67	0.30	0.59	4.000	0 00:10:00
8	Sub-CB#117	0.44	CB #117	0.5400	0.67	0.36	0.95	4.000	0 00:10:00
9	Sub-CB#118	0.13	CB #118	0.8300	0.67	0.55	0.43	4.000	0 00:10:00
10	Sub-CB#119	0.04	CB #119	0.8300	0.67	0.55	0.13	4.000	0 00:10:00
11	Sub-CB#120	0.25	CB #120	0.5400	0.67	0.36	0.54	4.000	0 00:10:00
12	Sub-CB#121	0.07	CB #121	0.8300	0.67	0.55	0.23	4.000	0 00:10:00
13	Sub-CB#122	1.30	CB #122	0.5400	0.67	0.36	2.81	4.000	0 00:10:00
14	Sub-CB#123	0.21	CB #123	0.8300	0.67	0.55	0.70	4.000	0 00:10:00

MODEL INPUT														MODEL OUTPUT											
SN	Element ID	Inlet Location	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Surface Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Total Peak Flow (cfs)	Max Gutter Spread during Peak Flow (ft)	Allowable Spread (ft)	Check	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)
1	CB #110	On Grade	328.29	332.73	328.29	0.00	N/A	0.00	0.0758	0.0200	0.0130	0.0600	2.00	1.4400	0.43	0.43	0.00	100.00	0.43	1.68	8.00	YES	332.83	0.10	0 00:10
2	CB #111	On Grade	327.85	332.71	327.85	0.00	N/A	0.00	0.0758	0.0200	0.0130	0.0600	2.00	1.4400	0.31	0.31	0.00	100.00	0.31	1.49	8.00	YES	332.80	0.09	0 00:10
3	CB #112	On Grade	323.84	328.59	323.84	0.00	N/A	0.00	0.0259	0.0200	0.0130	0.0600	2.00	1.4400	0.03	0.03	0.00	100.00	0.04	0.80	8.00	YES	328.64	0.05	0 00:10
4	CB #113	On Grade	323.12	328.03	323.12	0.00	N/A	0.00	0.0259	0.0200	0.0130	0.0600	2.00	1.4400	0.03	0.03	0.00	100.00	0.03	0.74	8.00	YES	328.08	0.04	0 00:10
5	CB #114	On Grade	323.61	326.64	323.61	0.00	N/A	0.00	0.0259	0.0200	0.0130	0.0600	2.00	1.4400	0.27	0.27	0.00	100.00	0.27	1.74	8.00	YES	326.74	0.10	0 00:10
6	CB #115	On Grade	321.10	326.16	321.10	0.00	N/A	0.00	0.0259	0.0200	0.0130	0.0600	2.00	1.4400	0.14	0.14	0.00	100.00	0.14	1.34	8.00	YES	326.24	0.08	0 00:10
7	CB #116	On Sag	316.85	324.83	316.85	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.59	N/A	N/A	N/A	0.59	2.42	8.00	YES	324.96	0.13	0 00:10
8	CB #117	On Grade	296.64	302.92	296.64	0.00	N/A	0.00	0.0875	0.0200	0.0130	0.0600	2.00	1.4400	0.95	0.01	0.94	0.77	0.95	2.19	8.00	YES	302.96	0.04	0 00:11
9	CB #118	On Grade	296.25	302.92	296.25	0.00	N/A	0.00	0.0875	0.0200	0.0130	0.0600	2.00	1.4400	0.43	0.43	0.00	100.00	0.43	1.63	8.00	YES	303.02	0.10	0 00:11
10	CB #119	On Grade	292.80	299.06	292.80	0.00	N/A	0.00	0.0078	0.0200	0.0130	0.0600	2.00	1.4400	0.13	0.13	0.00	100.00	0.13	1.65	8.00	YES	299.15	0.10	0 00:11
11	CB #120	On Grade	291.40	296.11	291.40	0.00	N/A	0.00	0.0078	0.0200	0.0130	0.0600	2.00	1.4400	0.54	0.51	0.03	94.12	0.54	4.20	8.00	YES	296.28	0.16	0 00:10
12	CB #121	On Grade	289.92	296.11	289.92	0.00	N/A	0.00	0.0078	0.0200	0.0130	0.0600	2.00	1.4400	0.23	0.02	0.22	6.96	0.23	2.04	8.00	YES	296.15	0.04	0 00:11
13	CB #122	On Sag	287.29	295.07	287.29	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	2.84	N/A	N/A	N/A	2.81	4.34	8.00	YES	295.24	0.17	0 00:10
14	CB #123	On Sag	284.46	295.07	284.46	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.70	N/A	N/A	N/A	0.70	3.17	8.00	YES	295.22	0.14	0 00:10

## 5.7. STORM WATER AREA "G"

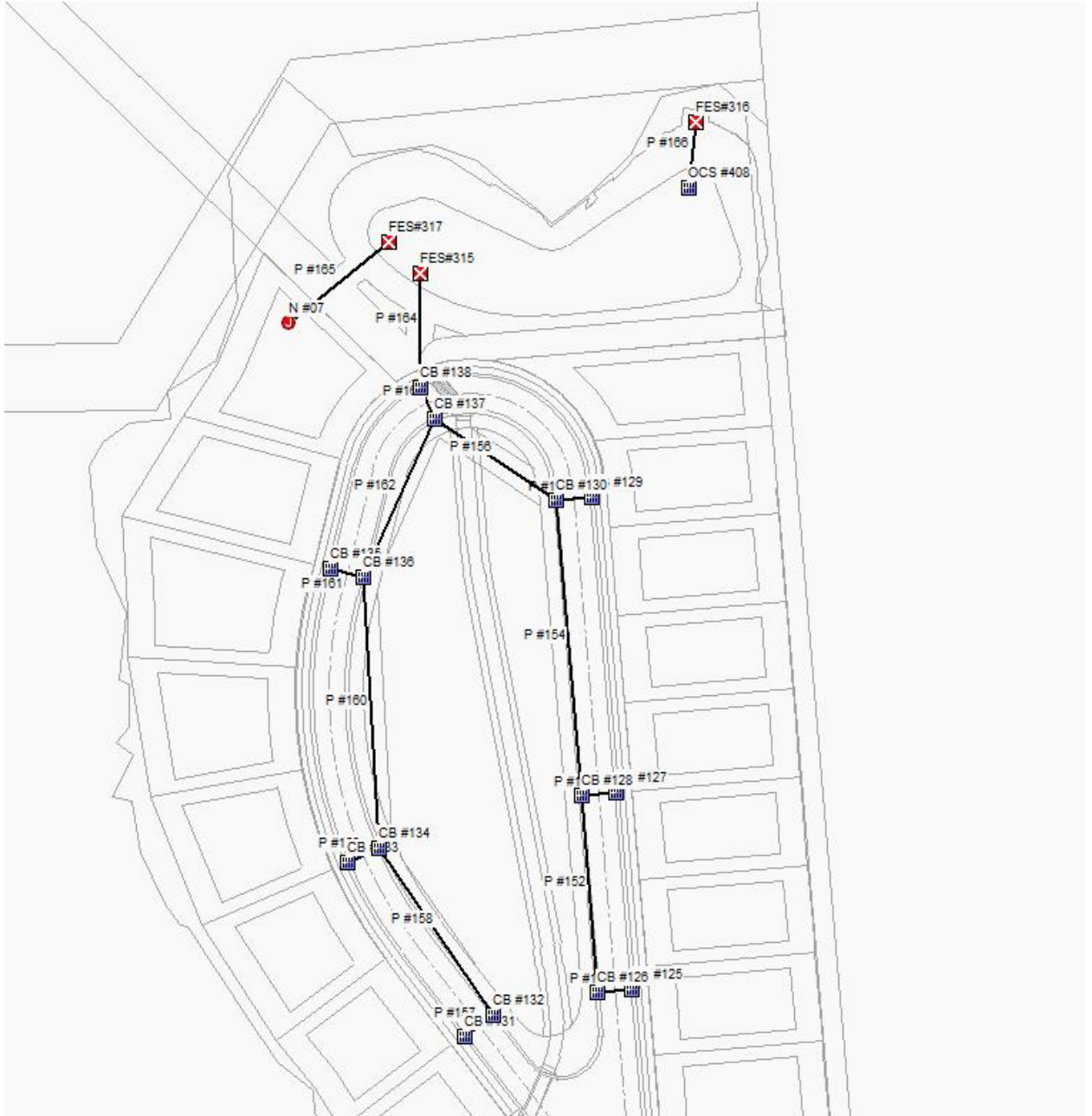


<b>DRAINAGE AREA</b>									
<b>SN</b>	<b>Element ID</b>	<b>Area (acres)</b>	<b>Drainage Node ID</b>	<b>Weighted Runoff Coefficient</b>	<b>Accumulated Precipitation (inches)</b>	<b>Total Runoff (inches)</b>	<b>Peak Runoff (cfs)</b>	<b>Rainfall Intensity (inches/hr)</b>	<b>Time of Concentration (days hh:mm:ss)</b>
1	Sub-CB#124	0.44	CB #124	0.5400	0.67	0.36	0.95	4.000	0 00:10:00



MODEL INPUT														MODEL OUTPUT											
SN	Element ID	Inlet Location	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft <sup>2</sup> )	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Surface Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Total Peak Flow (cfs)	Max Gutter Spread during Peak Flow (ft)	Allowable Spread (ft)	Check	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)
1	CB #124	On Sag	290.00	307.25	290.00	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.95	N/A	N/A	N/A	0.95	3.41	8.00	YES	307.40	0.15	0 00:10

## 5.8. STORM WATER AREA "H"

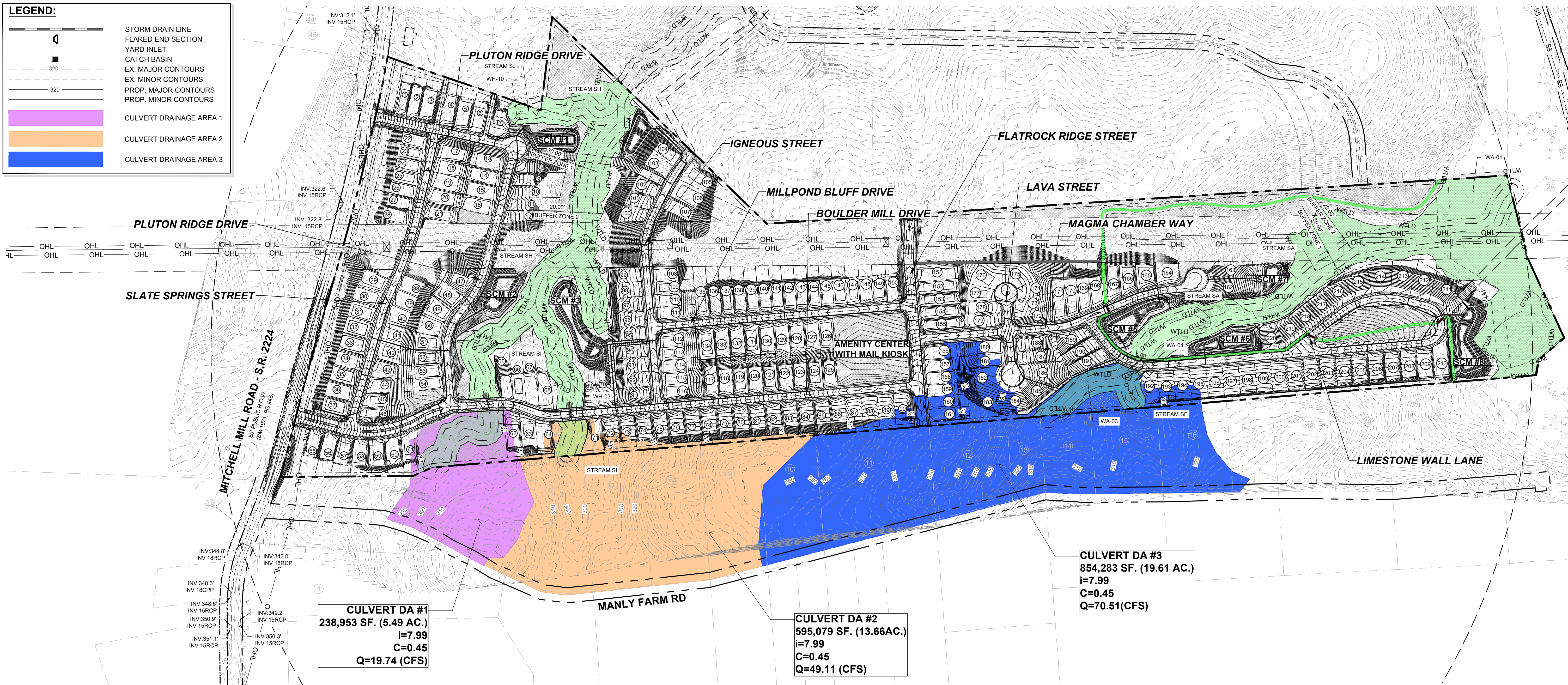


<b>DRAINAGE AREA</b>									
<b>SN</b>	<b>Element ID</b>	<b>Area (acres)</b>	<b>Drainage Node ID</b>	<b>Weighted Runoff Coefficient</b>	<b>Accumulated Precipitation (inches)</b>	<b>Total Runoff (inches)</b>	<b>Peak Runoff (cfs)</b>	<b>Rainfall Intensity (inches/hr)</b>	<b>Time of Concentration (days hh:mm:ss)</b>
1	Sub-CB#125	0.92	CB #125	0.5400	0.67	0.36	1.99	4.000	0 00:10:00
2	Sub-CB#126	0.02	CB #126	0.7100	0.67	0.47	0.06	4.000	0 00:10:00
3	Sub-CB#127	0.55	CB #127	0.5400	0.67	0.36	1.19	4.000	0 00:10:00
4	Sub-CB#128	0.08	CB #128	0.7900	0.67	0.53	0.25	4.000	0 00:10:00
5	Sub-CB#129	0.77	CB #129	0.5400	0.67	0.36	1.66	4.000	0 00:10:00
6	Sub-CB#130	0.12	CB #130	0.7900	0.67	0.53	0.38	4.000	0 00:10:00
7	Sub-CB#131	0.28	CB #131	0.4900	0.67	0.33	0.55	4.000	0 00:10:00
8	Sub-CB#132	0.17	CB #132	0.6700	0.67	0.45	0.46	4.000	0 00:10:00
9	Sub-CB#133	0.17	CB #133	0.4900	0.67	0.33	0.33	4.000	0 00:10:00
10	Sub-CB#134	0.38	CB #134	0.7100	0.67	0.47	1.08	4.000	0 00:10:00
11	Sub-CB#135	0.24	CB #135	0.4900	0.67	0.33	0.47	4.000	0 00:10:00
12	Sub-CB#136	0.74	CB #136	0.7100	0.67	0.47	2.10	4.000	0 00:10:00
13	Sub-CB#137	0.39	CB #137	0.7100	0.67	0.47	1.11	4.000	0 00:10:00
14	Sub-CB#138	0.42	CB #138	0.5400	0.67	0.36	0.91	4.000	0 00:10:00

MODEL INPUT														MODEL OUTPUT											
SN	Element ID	Inlet Location	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft <sup>2</sup> )	Grate Clogging Factor (%)	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (inches)	Surface Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Total Peak Flow (cfs)	Max Gutter Spread during Peak Flow (ft)	Allowable Spread (ft)	Check	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Maximum Depth Occurrence (days hh:mm)
1	CB #125	On Grade	284.96	289.40	284.96	0.00	N/A	0.00	0.0280	0.0200	0.0130	0.0600	2.00	1.4400	1.99	1.58	0.41	79.44	1.99	6.11	8.00	YES	289.60	0.20	0 00:10
2	CB #126	On Grade	284.63	290.04	284.63	0.00	N/A	0.00	0.0280	0.0200	0.0130	0.0600	2.00	1.4400	0.06	0.06	0.00	100.00	0.06	0.95	8.00	YES	290.09	0.06	0 00:10
3	CB #127	On Grade	279.26	283.70	279.26	0.00	N/A	0.00	0.0501	0.0200	0.0130	0.0600	2.00	1.4400	1.19	1.42	0.17	89.28	1.59	4.63	8.00	YES	283.87	0.17	0 00:10
4	CB #128	On Grade	278.67	283.70	278.67	0.00	N/A	0.00	0.0501	0.0200	0.0130	0.0600	2.00	1.4400	0.25	0.25	0.00	100.00	0.25	1.48	8.00	YES	283.79	0.09	0 00:10
5	CB #129	On Grade	268.54	272.97	268.54	0.00	N/A	0.00	0.0501	0.0200	0.0130	0.0600	2.00	1.4400	1.66	1.52	0.21	87.59	1.73	4.86	8.00	YES	273.15	0.18	0 00:10
6	CB #130	On Grade	267.83	272.97	267.83	0.00	N/A	0.00	0.0501	0.0200	0.0130	0.0600	2.00	1.4400	0.38	0.38	0.00	100.00	0.38	1.73	8.00	YES	273.08	0.10	0 00:10
7	CB #131	On Grade	279.62	284.06	279.62	0.00	N/A	0.00	0.0779	0.0200	0.0130	0.0600	2.00	1.4400	0.55	0.55	0.00	100.00	0.55	1.83	8.00	YES	284.17	0.11	0 00:10
8	CB #132	On Grade	278.92	284.06	278.92	0.00	N/A	0.00	0.0779	0.0200	0.0130	0.0600	2.00	1.4400	0.46	0.46	0.00	100.00	0.46	1.71	8.00	YES	284.17	0.10	0 00:10
9	CB #133	On Grade	270.84	275.28	270.84	0.00	N/A	0.00	0.0147	0.0200	0.0130	0.0600	2.00	1.4400	0.33	0.01	0.32	4.00	0.33	2.07	8.00	YES	275.32	0.04	0 00:10
10	CB #134	On Grade	269.92	275.28	269.92	0.00	N/A	0.00	0.0147	0.0200	0.0130	0.0600	2.00	1.4400	1.08	0.93	0.14	86.61	1.08	5.26	8.00	YES	275.46	0.19	0 00:10
11	CB #135	On Grade	267.11	271.55	267.11	0.00	N/A	0.00	0.0147	0.0200	0.0130	0.0600	2.00	1.4400	0.47	0.02	0.46	3.40	0.48	2.36	8.00	YES	271.60	0.05	0 00:10
12	CB #136	On Grade	266.21	271.55	266.21	0.00	N/A	0.00	0.0147	0.0200	0.0130	0.0600	2.00	1.4400	2.10	1.59	0.62	72.07	2.21	7.55	8.00	YES	271.79	0.23	0 00:10
13	CB #137	On Sag	264.07	269.86	264.07	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	1.11	N/A	N/A	N/A	1.65	3.76	8.00	YES	270.02	0.16	0 00:10
14	CB #138	On Sag	262.32	269.87	262.32	0.00	6.00	0.00	N/A	0.0200	0.0130	0.0600	2.00	1.4400	0.91	N/A	N/A	N/A	1.11	3.48	8.00	YES	270.02	0.15	0 00:10

**LEGEND:**

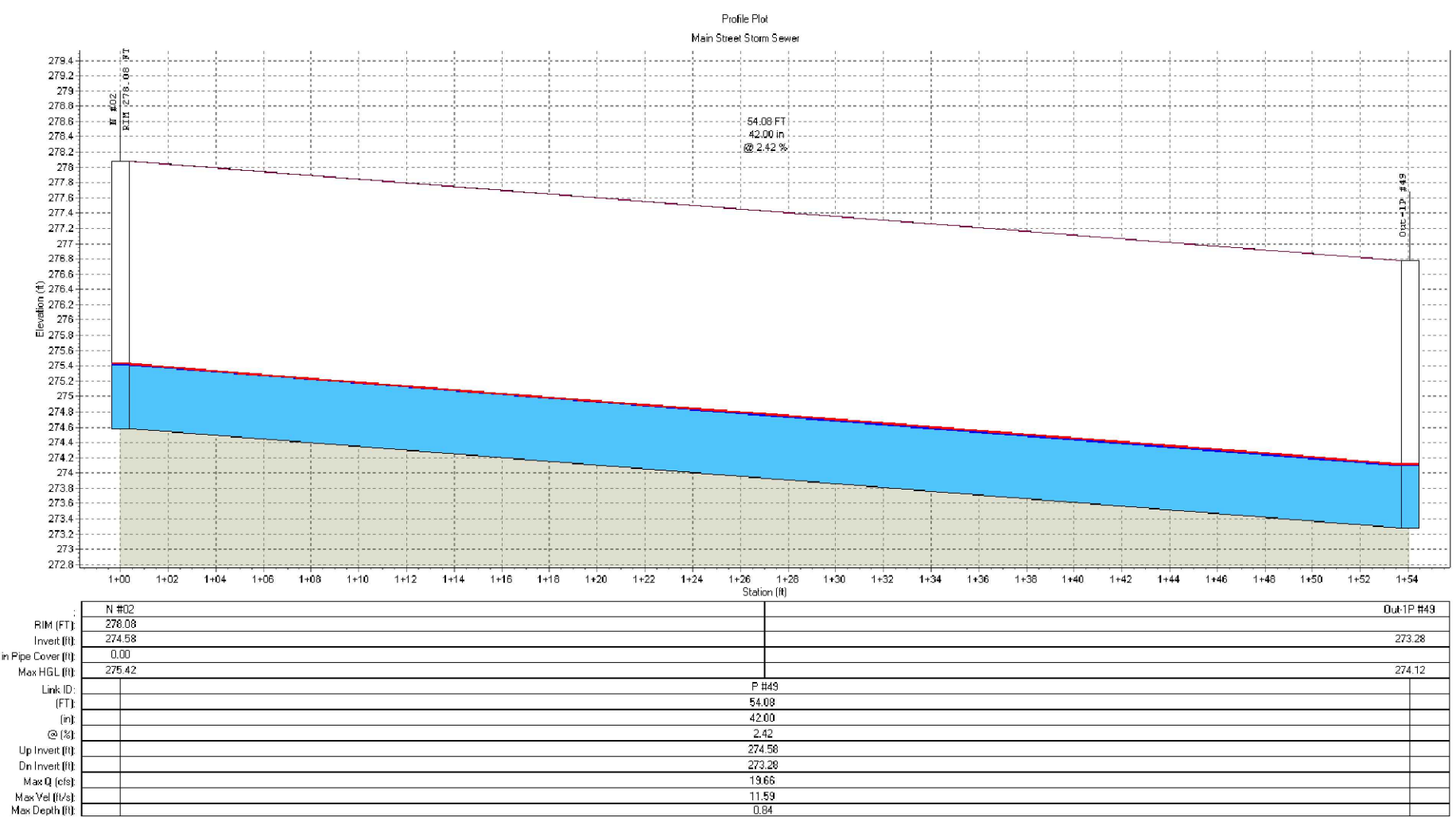
- STORM DRAIN LINE
- FLARED END SECTION
- YARD INLET
- CATCH BASIN
- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- PROP. MAJOR CONTOURS
- PROP. MINOR CONTOURS
- CULVERT DRAINAGE AREA 1
- CULVERT DRAINAGE AREA 2
- CULVERT DRAINAGE AREA 3



**CULVERT DA #1**  
 238,953 SF. (5.49 AC.)  
 i=7.99  
 C=0.45  
 Q=19.74 (CFS)

**CULVERT DA #2**  
 595,079 SF. (13.66 AC.)  
 i=7.99  
 C=0.45  
 Q=49.11 (CFS)

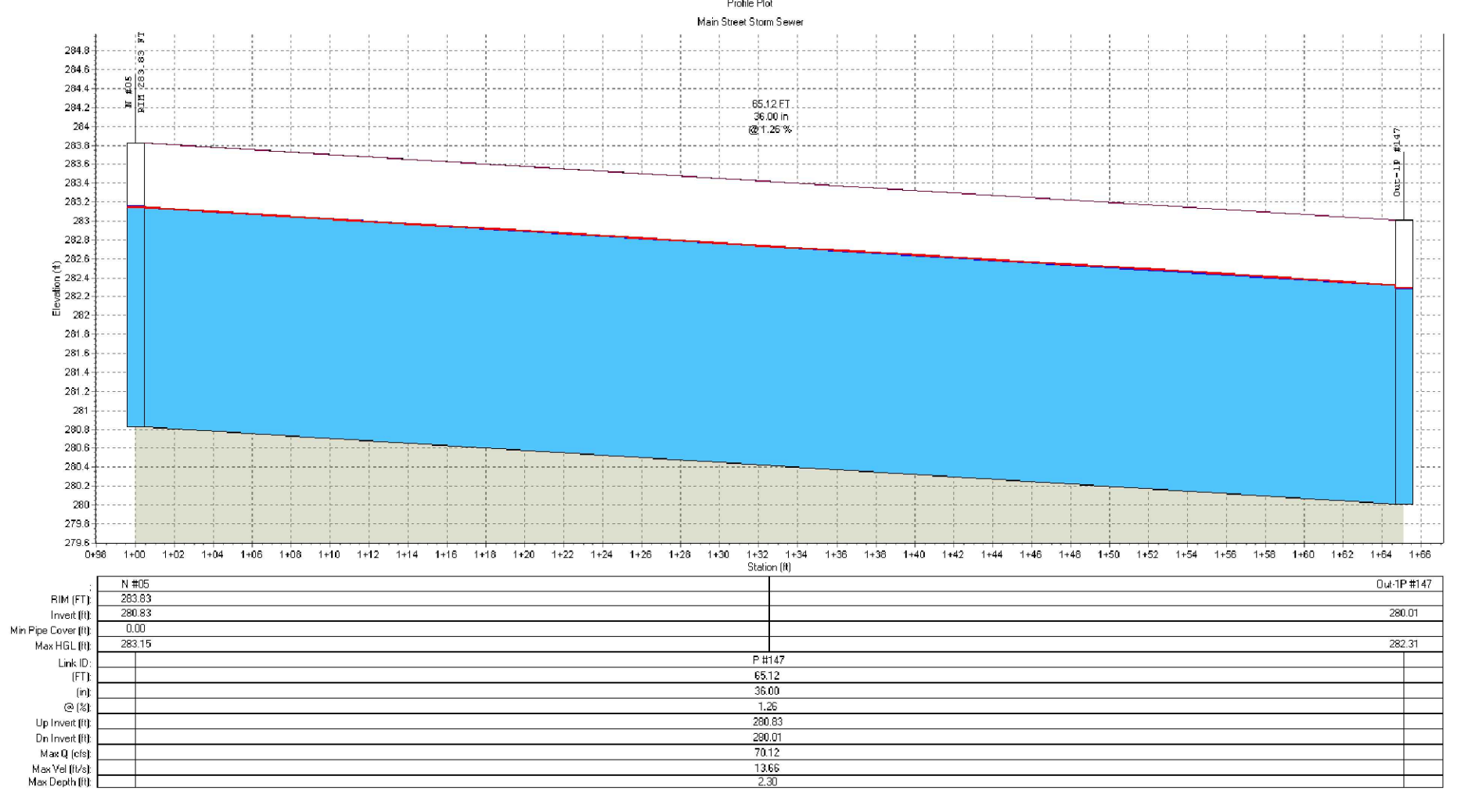
**CULVERT DA #3**  
 854,283 SF. (19.61 AC.)  
 i=7.99  
 C=0.45  
 Q=70.51 (CFS)



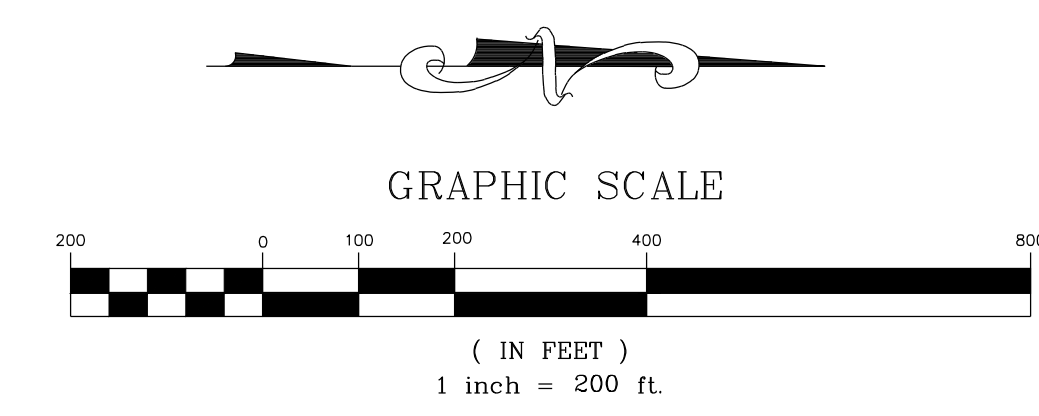
PROFILE HGL 25YR FOR CULVERT DA#1



PROFILE HGL 25YR FOR CULVERT DA#2

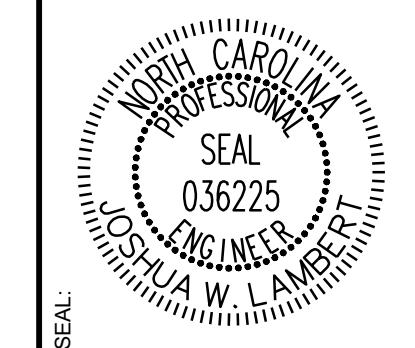


PROFILE HGL 25YR FOR CULVERT DA#3



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 CITY OF SANFORD, LEE COUNTY, NORTH CAROLINA  
**THE DRAINAGE AREA AND THE PROFILE HGL 25YR FOR CULVERT**

DRAWING SHEET  
**EXH-01**