

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

9/9/2025

Yolanda Padilla Moyer, P.E.
Bohannan Huston Inc.
7500 Jefferson St. NE Courtyard I
Albuquerque, NM 87109

**RE: Mesa Del Sol Artiste Subdivision
TRS 5 & 9, BULK LAND PLAT TRACTS 1 THROUGH 18 ARTISTE
Drainage Report
Engineer's Stamp Date: 8/21/2025
Hydrology File: R15D003A
Case #: HYDR-2025-00304**

Dear Ms. Moyer:

Based upon the information provided in your submittal received 8/22/2025, the Drainage Report **is approved** for Grading Permit, preliminary plat approval and work order approvals.

PO Box 1293

Albuquerque

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

NM 87103

If you have any questions, please contact me at 924-3695 or tchen@cabq.gov.

Sincerely,

www.cabq.gov

Tiequan Chen, P.E.
Principal Engineer, Hydrology
Planning Department, Development Review Services

DRAINAGE REPORT FOR ARTISTE SUBDIVISION ALBUQUERQUE, NM

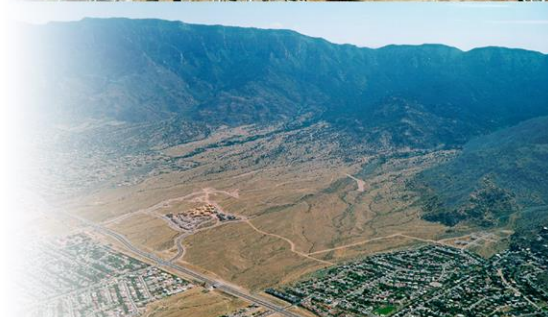
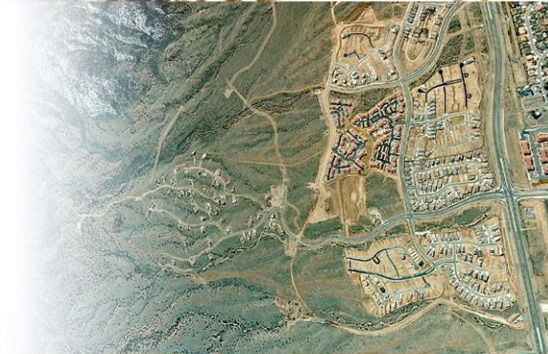
AUGUST 2025

Prepared for:
TITAN DEVELOPMENT
6300 RIVERSIDE PLAZA LN NW # 200
ALBUQUERQUE, NM 87120

Prepared by:

Bohannon  **Huston**

Engineering
Spatial Data
Advanced Technologies



**DRAINAGE REPORT
FOR
ARTISTE SUBDIVISION
ALBUQUERQUE, NM**

AUGUST 2025

Prepared for:

**TITAN DEVELOPMENT
6300 RIVERSIDE PLAZA LN NW # 200
ALBUQUERQUE, NM 87120**

Prepared by:

**BOHANNAN HUSTON, INC.
COURTYARD II
7500 JEFFERSON STREET NE
ALBUQUERQUE, NM 87109**



Yolanda Padilla Moyer

Yolanda Padilla Moyer, PE 08-21-2025
Date

TABLE OF CONTENTS

I. INTRODUCTION 1

II. PURPOSE OF REPORT..... 1

III. METHODOLOGY AND REFERENCES..... 1

IV. SITE LOCATION AND CHARACTERISTICS 2

V. EXISTING CONDITIONS 2

VI. DEVELOPED CONDITIONS..... 3

A. OFFSITE FLOW MANAGEMENT..... 3

B. ONSITE..... 3

VII. STORMWATER QUALITY REQUIRMENTS 6

VIII. GRADING PLAN..... 6

IX. CONCLUSION..... 6

APPENDICES

- APPENDIX A: BASIN ANALYSIS AND SUMMARY OF LAND TREATMENTS**
- APPENDIX B: INLET/STREET HYDRAULICS**
- APPENDIX C: STORM DRAIN PIPE ANALYSIS**
- APPENDIX D: POND VOLUME ANALYSIS**

EXHIBITS

- EXHIBIT A: PRELIMINARY PLAT**
- EXHIBIT B: EXISTING CONDITIONS BASIN MAP**
- EXHIBIT C: PROPOSED CONDITIONS BASIN MAP**
- EXHIBIT D: STORM DRAIN AND POND EXHIBIT**
- EXHIBIT E: GRADING PLAN**
- EXHIBIT F: MASTER DRAINAGE PROPOSED BASIN**
- EXHIBIT G: SITE LOCATION EXHIBIT**

I. INTRODUCTION

Artiste Subdivision is a single-family residential development consisting of 189 lots on approximately 31.7 acres within IDO zoning PC. The site is located at Mesa del Sol Innovation Park Tract 5 and Tract 9, south of Bobby Foster Road and west of Montage Unit 5 and Unit 6. The proposed development will occur in one phase. The site currently drains from west to east to the existing ponds located along the eastern property line of the subdivision. In the proposed conditions the site will have the same drainage pattern and will accept any offsite flows. Storm runoff will be conveyed by the internal street network and collected by an internal storm drain network to the detention ponds. These existing ponds will be regraded to accommodate the developed flows from the subdivision as well as for future developments per the Master Plan drainage Report for Mesa del Sol Artiste. The ponds will be connected through storm drain culvert pipes which will convey the drainage and discharge it at the allowable rate to the future park location. A temporary retention pond for the interim condition will be built in the future park location until the full buildout of Mesa del Sol master plan takes place.

II. PURPOSE OF REPORT

The purpose of this report is to provide site-specific drainage analysis for existing and ultimate conditions for the development referred to as Artiste Subdivision. This report is prepared and submitted to support design and grading of the subdivision, internal streets and roadways for preliminary plat, final plat and construction plan approvals.

III. METHODOLOGY AND REFERENCES

All analysis was completed for the fully developed offsite and fully developed onsite conditions. The runoff flow rates and volumes for the onsite basins were computed for the 100-year 6 hour and 100-year 24-hour storms in accordance with the City of Albuquerque Development Manual (DPM), Chapter 6. Rational Method is used in this report for the hydrology analysis to size storm and inlet capacity. The storm drain system hydraulic grade line (HGL) has been computed using the software Stormwater Studio. APPENDIX C shows the HGL analysis for the storm drain infrastructure. To analyze the detention ponds, HEC-HMS V14.2 was utilized. Street hydraulic capacities were computed in accordance with the COA DPM. Depending on the street section - 8", 6" and 4" curb and gutter for the subdivision has been used to calculate street capacities.

This report compliance with the Master Drainage Report for MDS Artiste Site, prepared by Bohannon Huston Inc., that will be submitted concurrently to the city hydrology for approval.

IV. SITE LOCATION AND CHARACTERISTICS

The site is approximately 31.7 acres, located south of Bobby Foster Rd, west of University Blvd (see EXHIBIT A– Preliminary Plat and EXHIBIT G - Site Location Map). There are existing drainage easements east of the proposed site boundary and east of that is the Montage Subdivision of which unit 5 and unit 6 are currently under construction. The existing topography slopes primarily from west to east across the site with the majority of the slopes less than 5% to the existing detention ponds.

V. EXISTING CONDITIONS

Based on the existing topography, the site is broken into six offsite and nine onsite basins. The existing basin and drainage patterns are shown graphically on the Existing Drainage Conditions Map in 'EXHIBIT B– Existing Conditions Basin Map'. The site consists of undeveloped land and drains from west to east towards the existing ponds located along the east property line of the proposed site.

Offsite Basin-1 is located southwest of the proposed site. Drainage from this basin enters the site from east and combines with Existing Basin 2. Offsite Basin 1 contributes to the majority of the offsite flow that is entering the site. The total combined flow from these two basins continues to drain east toward Existing Basin 4 and Existing Basin 7 and get captured there. Existing Basin 4 and Existing Basin 7 are currently working as an interim conditions pond.

Similarly, Offsite Basin-2 is located northwest of the proposed site. Drainage from this basin enters the site from east and combines with Existing Basin 1. The total combined flow from these two basins continues to drain east toward Existing Basin 3 and Existing Basin 5 and get captured there. Existing Basin 3 and Existing Basin 5 are currently working as an interim conditions pond as well.

Offsite Basin 3 and Offsite Basin 4 are located north of the proposed site. These two basins drain east toward offsite Basin 5. The combined flow from Offsite Basin 3, 4 and 5 enters Existing Basin 5 from north. Existing Basin 6 (a portion of Dekooning) is located in between Existing Basin 5 and 7. This basin is currently draining east, away from the proposed site into Montage 6.

Offsite Basin 6 is currently draining southeast, away from the proposed site where is captured by the existing Calder Loop and in Montage 6. Existing Basin 8 (Future Stryker) is located along the south boundary of the proposed site. In the existing conditions, it drains from west to east to Montage 5. Existing Basin 9 (Bobby Foster) is located north of Offsite Basins 3, 4, 5 and 6. In the existing and ultimate conditions, this basin drains from west to east. Bobby Foster is included in Montage 6 drainage analysis.

VI. DEVELOPED CONDITIONS

A. OFFSITE FLOW MANAGEMENT

As mentioned in the Existing Conditions, the offsite flows enter the proposed site on its western boundary. Ultimately, these flows will be accepted by the storm drain network proposed and will be discharged to the pond locations.

The inlets are sized to capture the offsite flow in interim conditions. However, the storm drain pipes have been analyzed and sized to convey the ultimate developed conditions flow from these offsite basins to the pond locations. The drainage table for developed conditions from the master drainage plan has been utilized to get the flows and size the pipes to provide connection opportunities for future developments.

B. ONSITE

In the proposed conditions, the site is divided into thirty four onsite basins for analysis purposes. Using Section 6-1(A)(2) of the City's DPM, a land treatment was assigned to each onsite basin. Since the number of residential units per acre is less than 6, the percent D land treatment area was determined by "Single Family Residential" equation listed in the City's DPM Table 6.2.10. The remaining area was split evenly between land treatments B and C.

Developed flows are calculated for the 100 year – 24 hour storm event and are shown in APPENDIX A. The developed flows from the subdivision will be conveyed by the internal streets and proposed storm drain networks to the ponds located along the eastern boundary of the site. There will be a temporary full retention pond in the future park location south of Stryker Road to capture the remaining flow developed by the subdivision that is being released from the detention pond 1, 2A, and 2B.

The Drainage Basins Proposed Conditions, as seen in EXHIBIT C - Proposed Basins, illustrates the basin locations and flow directions for the proposed development as well as the proposed street configurations for the subdivision.

There are multiple water blocks and low points planned and placed strategically throughout the site to direct the flow to the detention ponds. The sections below will discuss the basins and their flow path to each pond and discharge points.

Drainage to Pond-1 (Basin 33):

Basin 1 drains to Cassett Drive (Private Alley) which carries the flow east toward Basin 27 at Dillingham Ave. Basin 2 also drains east toward Basin 27 through a swale located withing Basin 2. Basin 4 to Marini Ave (Private Alley) which takes the flow east toward Basin 27. Basin 3 drains to Cassett Drive, which flows south and combines with Basin 5. Basin 6 also drains to Cassett Drive and combines with Basin 5. The combined flow from Basin 3, 6 and Basin 5 drains east through Pena Ave to Basin 27.

Basin 27 is located at Dillingham Ave. The boundary of this basin is defined by the water block locations on that street. All the flow from the basins mentioned above will combine with the flow from this basin and ultimately discharge to Pond 1 through inlets and storm drain pipes located that the sump condition at Dillingham Ave within Basin 27.

Basin 23 is defined by the water blocks located at R Guzman Loop. The flow from this basin and from Offsite Basin 2 will be captured by the set of inlets located at the sump conditions within Basin 23. The combined flow will be then conveyed to Pond 1 through storm drain pipes.

Basin 25 is located at Hopper Ave and east toward Basin 26A at Calder Loop. Offsite Basin 4 and 5 also drains east and southwest respectively to Basin 26A. The combined flow from these basins are then collected by a set of inlets located at the sump conditions within Basin 26A and ultimately discharge to Pond 1.

Drainage to Pond-2A and 2B (Basin 34):

Pond 2A and Pond 2B will be connected through a culvert pipe and function as one pond to provide the required volume in the developed condition.

Basin 8 and Basin 11 drain south toward Dekooning Ave and combines with Basin 12. Basin 9 and Basin 10 drain southeast and combine with Basin 12. Basin 7 drains southeast and Basin 13A drains northeast and combines with Basin 12 as well. The inlets located at the sump conditions at Basin 12 will collect the total combined flow from these basins and outfall it to Pond 2A through storm drain pipe.

Basin 29A drains south and combines with Basin 28. There is another sump conditions located at Basin 28 where the combined flow from these two basins will be captured by an inlet and discharge to Pond 2A through the same storm drain pipe system mentioned above.

Basin 29B drains toward the sump condition located in Dillingham Ave within this basin. The total flow from this basin will be captured by an inlet and discharge to Pond 2A. Similarly, Basin 16 will drain east toward the sump condition located in Dillingham Ave within this basin and will outfall to Pond 2A through an inlet and storm drain pipe.

Basin 15 drains east and combines with Basin 20. The total combined flow from these two basins will be captured by a set of inlets located at the sump conditions within Basin 20 at Dillingham Ave and discharge into Pond 2A.

Basin 13B, Basin 14, Basin 17, Basin 18, Basin 19 and Basin 32 drains west toward Rockwell Drive and combine with Basin 24. Offsite Basin 1 drains east and combines with Basin 24. The total combined flow from these basins mentioned drains to the sump conditions located within Basin 24. In the sump location the total flow will be captured by a set of inlets and drain through the storm drain pipe to Pond 2B.

Flow from Pond 2A will also enter Pond 2B through a culvert pipe at design discharge rate.

Drainage away from Site:

Basin 30B drains south and combines with Basin 31. The combined flow from these two basins is then captured by an inlet located at the sump condition within this basin. The flow will be discharged to the existing pond located south of Stryker Road.

Flow from Pond 2B will also enter the existing pond located south of Stryker Road through a culvert pipe at design discharge rate. There will be another outlet pipe connecting this existing pond to the Future Pond location where the flow will be discharged in the interim developed condition of MDS Artiste Drainage.

Offsite Basin 3 drains east and combines with Basin 22. The total combined flow then drains north toward Bobby Foster Road and enters Basin 21B. The total flow from these basins will continue to drain west and will be collected by future storm drain system at Bobby Foster Road.

Basin 21A continues to drain east similar to the existing condition with an exception that the developed flow discharging east is less than the existing conditions discharge. Therefore, it will not have any negative impact on the existing drainage infrastructure downstream.

Drainage to Interim Pond (Future Park Location):

In the interim condition for the MDS Artiste Site, a pond has been proposed at the Future Park location. The purpose of this interim pond is to contain the remaining portion of the retention volume that was not retained by the onsite ponds. As mentioned previously, a connection will be made through storm drain pipe to the interim pond to outfall the developed flow. See EXHIBIT F for excerpt from Master Drainage Study.

APPENDIX B – Inlet and Street Hydraulics, shows the flow, street grade, water depth, flow captured, and type of each inlet and the size, slope, flow, and capacity of the storm drain system. All upstream flows were within the depth of flow in the street and did not exceed the curb height.

VII. STORMWATER QUALITY REQUIREMENTS

This project is required to meet the stormwater quality volume (SWQV) requirements of the new City Drainage Ordinance per Section 6-12 of the City's DPM. The stormwater quality requirement will be met via a detention volume.

Pond-1, Pond 2A and 2B will capture the flow from the entire site. The required storage is calculated as 0.42 inch times the subdivision acreage times the percent impervious, and is equal to 0.94 ac-ft.

The total retention volume of 0.94 ac-ft is provided in the ponds combinedly, thus fulfilling the water quality requirement for this project. The results of the detention pond analysis are included in APPENDIX D- Pond Volume Analysis

VIII. GRADING PLAN

The grading plan for Artiste Subdivision is included in EXHIBIT E of this report.

IX. CONCLUSION

This drainage report summarizes the hydrologic and hydraulic analysis for the Artiste Subdivision. With the proposed storm drain network there are no adverse effects anticipated to the existing infrastructure. The proposed storm drains infrastructure and drainage management schemes allow for the safe management of storm runoff. The implementation of these concepts would result in the safe passage of the 100-year - 24-hour storm event.

APPENDICES

**APPENDIX A: BASIN ANALYSIS AND SUMMARY
OF LAND TREATMENTS**

APPENDIX B: INLET/STREET HYDRAULICS

APPENDIX C: STORM DRAIN PIPE ANALYSIS

APPENDIX D: POND VOLUME ANALYSIS

**APPENDIX A:
BASIN ANALYSIS AND SUMMARY OF LAND TREATMENTS**

EXISTING CONDITIONS

BASIN I.D.	AREA (AC)	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)	
		A	B	C	D	10 YR	100YR	10 YR	100YR
								<i>6 HOUR STORM</i>	
EXISTING BASIN 1	15.8	96.0%	4.0%	0.0%	0.0%	7.0	27.8	0.2	0.8
EXISTING BASIN 2	22.7	96.0%	4.0%	0.0%	0.0%	10.1	39.9	0.3	1.2
EXISTING BASIN 3	1.8	0.0%	0.0%	100.0%	0.0%	2.9	5.5	0.1	0.2
EXISTING BASIN 4	2.6	0.0%	0.0%	100.0%	0.0%	4.1	7.8	0.1	0.2
EXISTING BASIN 5	3.5	0.0%	0.0%	100.0%	0.0%	5.5	10.5	0.1	0.3
EXISTING BASIN 6	0.2	96.0%	4.0%	0.0%	0.0%	0.1	0.4	0.0	0.0
EXISTING BASIN 7	5.3	0.0%	0.0%	100.0%	0.0%	8.5	16.1	0.2	0.5
EXISTING BASIN 8	1.2	96.0%	4.0%	0.0%	0.0%	0.5	2.1	0.0	0.1
EXISTING BASIN 9	1.7	96.0%	4.0%	0.0%	0.0%	0.7	3.0	0.0	0.1
OFFSITE BASIN 1	34.6	96.0%	4.0%	0.0%	0.0%	15.3	60.8	0.4	1.8
OFFSITE BASIN 2	9.5	96.0%	4.0%	0.0%	0.0%	4.2	16.7	0.1	0.5
OFFSITE BASIN 3	0.7	96.0%	4.0%	0.0%	0.0%	0.3	1.2	0.0	0.0
OFFSITE BASIN 4	2.8	96.0%	4.0%	0.0%	0.0%	1.2	4.9	0.0	0.1
OFFSITE BASIN 5	1.6	96.0%	4.0%	0.0%	0.0%	0.7	2.8	0.0	0.1
OFFSITE BASIN 6	2.7	96.0%	4.0%	0.0%	0.0%	1.2	4.8	0.0	0.1
TOTAL	106.6					62.4	204.1	1.7	6.0

OFFSITE BASINS - INTERIM CONDITIONS

BASIN I.D.	AREA (AC)	UNITS #	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)	
			A	B	C	D	10 YR	100YR	10 YR	100YR
									6 HOUR STORM	
OFFSITE BASIN 1	34.1	0	96.0%	4.0%	0.0%	0.0%	15.1	60.0	0.4	1.8
OFFSITE BASIN 2	9.9	0	96.0%	4.0%	0.0%	0.0%	4.4	17.5	0.1	0.5
OFFSITE BASIN 3	0.3	0	96.0%	4.0%	0.0%	0.0%	0.1	0.4	0.0	0.0
OFFSITE BASIN 4	2.4	0	96.0%	4.0%	0.0%	0.0%	1.0	4.2	0.0	0.1
OFFSITE BASIN 5	1.6	0	96.0%	4.0%	0.0%	0.0%	0.7	2.8	0.0	0.1
OFFSITE BASIN 6	2.7	0	96.0%	4.0%	0.0%	0.0%	1.2	4.8	0.0	0.1
TOTAL	51.0	0					22.6	89.5	0.7	2.7

OFFSITE BASINS - ULTIMATE CONDITIONS

BASIN I.D.	AREA (AC)	UNITS #	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)	
			A	B	C	D	10 YR	100YR	10 YR	100YR
									6 HOUR STORM	
OFFSITE BASIN 1	18.1	0	0.0%	25.0%	25.0%	50.0%	36.1	63.6	1.4	2.4
OFFSITE BASIN 2	9.9	0	0.0%	15.0%	15.0%	70.0%	22.7	38.1	1.0	1.6
OFFSITE BASIN 3	0.3	0	0.0%	15.0%	15.0%	70.0%	0.6	1.0	0.0	0.0
OFFSITE BASIN 4	2.4	0	0.0%	15.0%	15.0%	70.0%	5.4	9.1	0.2	0.4
OFFSITE BASIN 5	1.6	0	0.0%	15.0%	15.0%	70.0%	3.6	6.0	0.2	0.2
OFFSITE BASIN 6	2.7	0	0.0%	15.0%	15.0%	70.0%	6.2	10.4	0.3	0.4
TOTAL	34.9	0					74.5	128.2	3.1	5.1

PROPOSED CONDITIONS

BASIN I.D.	AREA (AC)	UNITS #	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)	
			A	B	C	D	10 YR	100YR	10 YR	100YR
									6 HOUR STORM	
BASIN 1	2.3	13.5	0.0%	25.0%	25.0%	50.0%	4.7	8.2	0.2	0.3
BASIN 2	2.6	20	0.0%	25.0%	25.0%	50.0%	5.2	9.2	0.2	0.4
BASIN 3	0.4	2	0.0%	25.0%	25.0%	50.0%	0.7	1.3	0.0	0.0
BASIN 4	1.7	11	0.0%	25.0%	25.0%	50.0%	3.4	6.0	0.1	0.2
BASIN 5	2.0	8	0.0%	25.0%	25.0%	50.0%	4.0	7.1	0.2	0.3
BASIN 6	1.3	8	0.0%	25.0%	25.0%	50.0%	2.5	4.5	0.1	0.2
BASIN 7	3.4	16	0.0%	25.0%	25.0%	50.0%	6.8	12.0	0.3	0.5
BASIN 8	1.2	6	0.0%	25.0%	25.0%	50.0%	2.3	4.1	0.1	0.2
BASIN 9	0.8	0	0.0%	0.0%	100.0%	0.0%	1.3	2.4	0.0	0.1
BASIN 10	0.9	5	0.0%	25.0%	25.0%	50.0%	1.8	3.2	0.1	0.1
BASIN 11	0.4	2	0.0%	25.0%	25.0%	50.0%	0.9	1.6	0.0	0.1
BASIN 12	2.6	9	0.0%	25.0%	25.0%	50.0%	5.2	9.1	0.2	0.4
BASIN 13A	1.2	3	0.0%	25.0%	25.0%	50.0%	2.5	4.3	0.1	0.2
BASIN 13B	0.8	2	0.0%	25.0%	25.0%	50.0%	1.6	2.7	0.1	0.1
BASIN 14	3.5	22	0.0%	25.0%	25.0%	50.0%	7.0	12.3	0.3	0.5
BASIN 15	1.6	10	0.0%	25.0%	25.0%	50.0%	3.1	5.5	0.1	0.2
BASIN 16	1.4	6	0.0%	25.0%	25.0%	50.0%	2.9	5.1	0.1	0.2
BASIN 17	1.3	7	0.0%	25.0%	25.0%	50.0%	2.6	4.6	0.1	0.2
BASIN 18	2.3	16	0.0%	25.0%	25.0%	50.0%	4.6	8.2	0.2	0.3
BASIN 19	1.2	7	0.0%	25.0%	25.0%	50.0%	2.4	4.2	0.1	0.2
BASIN 20	2.2	10	0.0%	25.0%	25.0%	50.0%	4.3	7.6	0.2	0.3
BASIN 21A	1.3	0	0.0%	0.0%	10.0%	90.0%	3.3	5.4	0.1	0.2
BASIN 21B	0.2	0	0.0%	0.0%	10.0%	90.0%	0.5	0.8	0.0	0.0
BASIN 22	0.2	0	0.0%	0.0%	10.0%	90.0%	0.4	0.7	0.0	0.0
BASIN 23	3.2	3	0.0%	0.0%	10.0%	90.0%	8.3	13.4	0.4	0.6
BASIN 24	2.6	0	0.0%	0.0%	10.0%	90.0%	6.6	10.7	0.3	0.5
BASIN 25	0.7	0	0.0%	0.0%	10.0%	90.0%	1.9	3.0	0.1	0.1
BASIN 26A	0.9	0.5	0.0%	0.0%	10.0%	90.0%	2.3	3.7	0.1	0.2
BASIN 26B	0.6	0	0.0%	0.0%	10.0%	90.0%	1.6	2.6	0.1	0.1
BASIN 27	0.6	0	0.0%	0.0%	10.0%	90.0%	1.6	2.7	0.1	0.1
BASIN 28	0.7	0	0.0%	0.0%	10.0%	90.0%	1.9	3.0	0.1	0.1
BASIN 29A	0.2	0	0.0%	0.0%	10.0%	90.0%	0.5	0.8	0.0	0.0
BASIN 29B	0.8	2	0.0%	0.0%	10.0%	90.0%	2.1	3.3	0.1	0.1
BASIN 30A	0.2	0	0.0%	0.0%	10.0%	90.0%	0.4	0.7	0.0	0.0
BASIN 30B	0.1	0	0.0%	0.0%	10.0%	90.0%	0.2	0.3	0.0	0.0
BASIN 31	1.3	0	0.0%	0.0%	10.0%	90.0%	3.4	5.6	0.2	0.2
BASIN 32	0.2	0	0.0%	0.0%	10.0%	90.0%	0.6	0.9	0.0	0.0
BASIN 33	3.5	0	0.0%	0.0%	100.0%	0.0%	5.5	10.5	0.1	0.3
BASIN 34	5.3	0	0.0%	0.0%	100.0%	0.0%	8.5	16.1	0.2	0.5
TOTAL	57.6	189					119.4	207.2	4.7	8.0

Basins included in calculating %D are Basin 1 through Basin 20, Basin 25, Basin 27, Basin 29 and Basin 30.

Total 37.73 189

NOTES:

Impervious percentages were calculated from the DPM Table 6.2.10, with the remaining percentages distributed to land treatment type B and C, due to the relatively flat terrain

$$N = \text{UNITS/ACRES} = 5.0$$

$$\%D = 7 * \text{SQRT}((N * N) + (5 * N)) = 49.56 \%$$

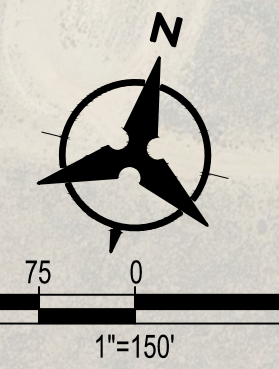
**APPENDIX B:
INLET/STREET HYDRAULICS**



LEGEND

- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLET

This is a 2D plot of a 3D model. It is not a photograph. It is a computer-generated image. It is not a drawing. It is a scan of a drawing. It is not a print. It is a digital file.



ANALYSIS POINTS EXHIBIT			
MDS ARTISTE			
DRAWN BY:	DO	DATE:	6/19/2025
CHECKED BY:	YPM	BHI PROJECT NO.:	20240316
		SHEET NO.:	1 OF 1

66ftROW_2.00%Crown_0.60%Slope AP2

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	4.000	12.000	0.130	7.000	56.000	0.000
2.0	9.380	0.670	5.000	33.000	0.550	8.000	56.630	0.670
3.0	10.000	0.000	6.000	54.000	0.130	9.000	66.000	0.860

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.004	0.839	0.358	0.816	0.816	0.027	0.564
0.050	0.050	0.041	0.023	1.678	0.568	1.632	1.632	0.055	0.633
0.075	0.075	0.092	0.068	2.518	0.744	2.448	2.448	0.084	0.678
0.100	0.100	0.163	0.147	3.357	0.902	3.263	3.263	0.113	0.711
0.125	0.125	0.255	0.267	4.196	1.046	4.079	4.079	0.142	0.738
0.150	0.150	0.381	0.393	6.419	1.030	6.280	6.280	0.167	0.737
0.175	0.175	0.570	0.613	8.988	1.077	8.826	8.826	0.193	0.747
0.200	0.200	0.822	0.956	11.557	1.163	11.373	11.373	0.221	0.762
0.225	0.225	1.138	1.438	14.126	1.263	13.920	13.920	0.250	0.779
0.250	0.250	1.518	2.079	16.695	1.369	16.466	16.466	0.279	0.795
0.275	0.275	1.962	2.897	19.263	1.477	19.013	19.013	0.309	0.810
0.300	0.300	2.469	3.909	21.832	1.583	21.560	21.560	0.339	0.825
0.325	0.325	3.040	5.134	24.401	1.689	24.106	24.106	0.369	0.838
0.350	0.350	3.674	6.587	26.970	1.793	26.653	26.653	0.400	0.851
0.375	0.375	4.372	8.284	29.539	1.895	29.200	29.200	0.431	0.863
0.400	0.400	5.134	10.242	32.108	1.995	31.746	31.746	0.462	0.874
0.425	0.425	5.960	12.474	34.677	2.093	34.293	34.293	0.493	0.885
0.450	0.450	6.849	14.996	37.246	2.189	36.840	36.840	0.525	0.895
0.475	0.475	7.802	17.821	39.815	2.284	39.386	39.386	0.556	0.905
0.500	0.500	8.818	20.964	42.383	2.377	41.933	41.933	0.588	0.914
0.525	0.525	9.898	24.439	44.952	2.469	44.479	44.479	0.620	0.923
0.550	0.550	11.042	28.258	47.521	2.559	47.026	47.026	0.652	0.931
0.575	0.575	12.218	33.419	47.590	2.735	47.073	47.073	0.691	0.946
0.600	0.600	13.396	38.920	47.658	2.905	47.119	47.119	0.731	0.961
0.625	0.625	14.574	44.750	47.726	3.070	47.166	47.166	0.772	0.974
0.650	0.650	15.754	50.900	47.795	3.231	47.213	47.213	0.812	0.986
0.675	0.675	16.936	56.988	48.343	3.365	47.743	47.743	0.851	0.996
0.700	0.700	18.161	61.929	50.811	3.410	50.211	50.211	0.881	1.000
0.725	0.725	19.447	67.250	53.278	3.458	52.678	52.678	0.911	1.003
0.750	0.750	20.795	72.960	55.746	3.509	55.145	55.145	0.941	1.007
0.775	0.775	22.204	79.071	58.213	3.561	57.612	57.612	0.972	1.011
0.800	0.800	23.675	85.592	60.681	3.615	60.079	60.079	1.003	1.015
0.825	0.825	25.208	92.533	63.149	3.671	62.546	62.546	1.035	1.019
0.850	0.850	26.802	99.907	65.616	3.728	65.013	65.013	1.066	1.023

Q = 30.9 cfs
d = 0.56'
E = 0.67'

52ftROW_0.80%Slope

MANNING'S N = 0.017 SLOPE = 0.008 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	1.450	4.000	6.830	0.780	7.000	41.830	0.000
2.0	6.000	1.330	5.000	12.000	0.560	8.000	42.000	0.670
3.0	6.170	0.830	6.000	39.830	0.130	9.000	54.000	0.910

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.001	0.000	0.164	0.221	0.156	0.156	0.011	0.551
0.020	0.020	0.003	0.001	0.329	0.351	0.313	0.313	0.022	0.619
0.030	0.030	0.007	0.003	0.493	0.460	0.469	0.469	0.033	0.662
0.040	0.040	0.013	0.007	0.658	0.557	0.626	0.626	0.045	0.694
0.050	0.050	0.020	0.013	0.822	0.646	0.782	0.782	0.056	0.721
0.060	0.060	0.028	0.021	0.987	0.730	0.938	0.938	0.068	0.743
0.070	0.070	0.038	0.031	1.151	0.809	1.095	1.095	0.080	0.762
0.080	0.080	0.050	0.044	1.316	0.884	1.251	1.251	0.092	0.779
0.090	0.090	0.063	0.061	1.480	0.956	1.407	1.407	0.104	0.795
0.100	0.100	0.078	0.080	1.645	1.026	1.564	1.564	0.116	0.809
0.110	0.110	0.095	0.103	1.809	1.093	1.720	1.720	0.129	0.822
0.120	0.120	0.113	0.130	1.974	1.159	1.877	1.877	0.141	0.834
0.130	0.130	0.132	0.161	2.138	1.222	2.033	2.033	0.153	0.845
0.140	0.140	0.156	0.178	2.296	1.280	2.188	2.188	0.165	0.856
0.150	0.150	0.186	0.207	2.454	1.338	2.346	2.346	0.177	0.867
0.160	0.160	0.222	0.249	2.612	1.396	2.504	2.504	0.189	0.878
0.170	0.170	0.265	0.303	2.770	1.454	2.662	2.662	0.201	0.889
0.180	0.180	0.315	0.369	2.928	1.512	2.820	2.820	0.213	0.900
0.190	0.190	0.371	0.450	3.086	1.570	2.978	2.978	0.225	0.911
0.200	0.200	0.434	0.544	3.244	1.628	3.136	3.136	0.237	0.922
0.210	0.210	0.503	0.654	3.402	1.686	3.294	3.294	0.249	0.933
0.220	0.220	0.578	0.781	3.560	1.744	3.452	3.452	0.261	0.944
0.230	0.230	0.660	0.924	3.718	1.802	3.610	3.610	0.273	0.955
0.240	0.240	0.749	1.086	3.876	1.860	3.768	3.768	0.285	0.966
0.250	0.250	0.844	1.267	4.034	1.918	3.926	3.926	0.297	0.977
0.260	0.260	0.945	1.468	4.192	1.976	4.084	4.084	0.309	0.988
0.270	0.270	1.054	1.689	4.350	2.034	4.242	4.242	0.321	0.999
0.280	0.280	1.168	1.932	4.508	2.092	4.400	4.400	0.333	1.010
0.290	0.290	1.289	2.198	4.666	2.150	4.558	4.558	0.345	1.021
0.300	0.300	1.417	2.487	4.824	2.208	4.716	4.716	0.357	1.032
0.310	0.310	1.551	2.799	4.982	2.266	4.874	4.874	0.369	1.043
0.320	0.320	1.691	3.137	5.140	2.324	5.032	5.032	0.381	1.054
0.330	0.330	1.838	3.501	5.298	2.382	5.190	5.190	0.393	1.065
0.340	0.340	1.992	3.891	5.456	2.440	5.348	5.348	0.405	1.076
0.350	0.350	2.152	4.308	5.614	2.498	5.506	5.506	0.417	1.087
0.360	0.360	2.318	4.753	5.772	2.556	5.664	5.664	0.429	1.098
0.370	0.370	2.491	5.227	5.930	2.614	5.822	5.822	0.441	1.109
0.380	0.380	2.671	5.730	6.088	2.672	5.980	5.980	0.453	1.120
0.390	0.390	2.857	6.264	6.246	2.730	6.138	6.138	0.465	1.131
0.400	0.400	3.049	6.828	6.404	2.788	6.296	6.296	0.477	1.142
0.410	0.410	3.248	7.425	6.562	2.846	6.454	6.454	0.489	1.153
0.420	0.420	3.454	8.053	6.720	2.904	6.612	6.612	0.501	1.164
0.430	0.430	3.666	8.714	6.878	2.962	6.770	6.770	0.513	1.175
0.440	0.440	3.884	9.409	7.036	3.020	6.928	6.928	0.525	1.186
0.450	0.450	4.109	10.139	7.194	3.078	7.086	7.086	0.537	1.197
0.460	0.460	4.341	10.903	7.352	3.136	7.244	7.244	0.549	1.208
0.470	0.470	4.579	11.703	7.510	3.194	7.402	7.402	0.561	1.219
0.480	0.480	4.823	12.540	7.668	3.252	7.560	7.560	0.573	1.230
0.490	0.490	5.074	13.413	7.826	3.310	7.718	7.718	0.585	1.241
WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.500	0.500	5.332	14.325	7.984	3.368	7.876	7.876	0.597	1.252
0.510	0.510	5.596	15.274	8.142	3.426	8.034	8.034	0.609	1.263
0.520	0.520	5.866	16.262	8.300	3.484	8.192	8.192	0.621	1.274
0.530	0.530	6.143	17.290	8.458	3.542	8.350	8.350	0.633	1.285
0.540	0.540	6.427	18.359	8.616	3.600	8.508	8.508	0.645	1.296
0.550	0.550	6.717	19.468	8.774	3.658	8.666	8.666	0.657	1.307
0.560	0.560	7.013	20.618	8.932	3.716	8.824	8.824	0.669	1.318
0.570	0.570	7.314	21.995	9.090	3.774	8.982	8.982	0.681	1.329
0.580	0.580	7.617	23.412	9.248	3.832	9.140	9.140	0.693	1.340
0.590	0.590	7.923	24.867	9.406	3.890	9.298	9.298	0.705	1.351
0.600	0.600	8.231	26.360	9.564	3.948	9.456	9.456	0.717	1.362
0.610	0.610	8.542	27.893	9.722	4.006	9.614	9.614	0.729	1.373
0.620	0.620	8.854	29.463	9.880	4.064	9.772	9.772	0.741	1.384
0.630	0.630	9.169	31.073	10.038	4.122	9.930	9.930	0.753	1.395
0.640	0.640	9.487	32.720	10.196	4.180	10.088	10.088	0.765	1.406
0.650	0.650	9.807	34.406	10.354	4.238	10.246	10.246	0.777	1.417
0.660	0.660	10.129	36.130	10.512	4.296	10.404	10.404	0.789	1.428
0.670	0.670	10.454	37.892	10.670	4.354	10.562	10.562	0.801	1.439
0.680	0.680	10.783	39.324	10.828	4.412	10.720	10.720	0.813	1.450
0.690	0.690	11.120	40.804	10.986	4.470	10.878	10.878	0.825	1.461
0.700	0.700	11.465	42.333	11.144	4.528	11.036	11.036	0.837	1.472
0.710	0.710	11.816	43.911	11.302	4.586	11.194	11.194	0.849	1.483
0.720	0.720	12.175	45.540	11.460	4.644	11.352	11.352	0.861	1.494

Q = 1.9 cfs
d = 0.28'
E = 0.32'

0.730	0.730	12.541	47.219	37.528	3.765	36.995	36.995	0.950	1.140
0.740	0.740	12.915	48.949	38.263	3.790	37.730	37.730	0.963	1.142
0.750	0.750	13.296	50.731	38.999	3.816	38.465	38.465	0.976	1.144
0.760	0.760	13.684	52.566	39.734	3.841	39.200	39.200	0.990	1.146
0.770	0.770	14.080	54.454	40.469	3.868	39.935	39.935	1.003	1.148
0.780	0.780	14.483	56.395	41.205	3.894	40.670	40.670	1.016	1.150
0.790	0.790	14.893	58.483	41.837	3.927	41.302	41.302	1.030	1.153
0.800	0.800	15.309	60.623	42.470	3.960	41.934	41.934	1.044	1.155
0.810	0.810	15.731	62.815	43.102	3.993	42.566	42.566	1.058	1.158
0.820	0.820	16.160	65.060	43.734	4.026	43.198	43.198	1.072	1.160
0.830	0.830	16.595	67.358	44.367	4.059	43.830	43.830	1.086	1.163
0.840	0.840	17.036	69.831	44.878	4.099	44.333	44.333	1.101	1.166
0.850	0.850	17.482	72.356	45.388	4.139	44.837	44.837	1.116	1.169
0.860	0.860	17.933	74.932	45.899	4.178	45.340	45.340	1.132	1.171
0.870	0.870	18.389	77.559	46.410	4.218	45.844	45.844	1.147	1.174
0.880	0.880	18.850	80.239	46.920	4.257	46.347	46.347	1.162	1.177
0.890	0.890	19.316	82.971	47.431	4.296	46.850	46.850	1.177	1.179
0.900	0.900	19.787	85.757	47.942	4.334	47.354	47.354	1.192	1.182

52ftROW_0.80%Slope

MANNING'S N = 0.017 SLOPE = 0.008 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	1.450	4.000	6.830	0.780	7.000	41.830	0.000
2.0	6.000	1.330	5.000	12.000	0.560	8.000	42.000	0.670
3.0	6.170	0.830	6.000	39.830	0.130	9.000	54.000	0.910

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.001	0.000	0.164	0.221	0.156	0.156	0.011	0.551
0.020	0.020	0.003	0.001	0.329	0.351	0.313	0.313	0.022	0.619
0.030	0.030	0.007	0.003	0.493	0.460	0.469	0.469	0.033	0.662
0.040	0.040	0.013	0.007	0.658	0.557	0.626	0.626	0.045	0.694
0.050	0.050	0.020	0.013	0.822	0.646	0.782	0.782	0.056	0.721
0.060	0.060	0.028	0.021	0.987	0.730	0.938	0.938	0.068	0.743
0.070	0.070	0.038	0.031	1.151	0.809	1.095	1.095	0.080	0.762
0.080	0.080	0.050	0.044	1.316	0.884	1.251	1.251	0.092	0.779
0.090	0.090	0.063	0.061	1.480	0.956	1.407	1.407	0.104	0.795
0.100	0.100	0.078	0.080	1.645	1.026	1.564	1.564	0.116	0.809
0.110	0.110	0.095	0.103	1.809	1.093	1.720	1.720	0.129	0.822
0.120	0.120	0.113	0.130	1.974	1.159	1.877	1.877	0.141	0.834
0.130	0.130	0.132	0.161	2.138	1.222	2.033	2.033	0.153	0.845
0.140	0.140	0.156	0.178	2.296	1.280	2.188	2.188	0.166	0.856
0.150	0.150	0.186	0.207	2.454	1.334	2.332	2.332	0.179	0.866
0.160	0.160	0.222	0.249	2.612	1.384	2.530	2.530	0.192	0.875
0.170	0.170	0.265	0.303	2.770	1.430	2.728	2.728	0.205	0.884
0.180	0.180	0.315	0.369	2.928	1.472	2.926	2.926	0.218	0.892
0.190	0.190	0.371	0.450	3.086	1.511	3.124	3.124	0.231	0.900
0.200	0.200	0.434	0.544	3.244	1.547	3.322	3.322	0.244	0.907
0.210	0.210	0.503	0.654	3.402	1.580	3.520	3.520	0.257	0.914
0.220	0.220	0.578	0.781	3.560	1.611	3.718	3.718	0.270	0.920
0.230	0.230	0.660	0.924	3.718	1.639	3.916	3.916	0.283	0.926
0.240	0.240	0.749	1.086	3.876	1.664	4.114	4.114	0.296	0.931
0.250	0.250	0.844	1.267	4.034	1.687	4.312	4.312	0.309	0.936
0.260	0.260	0.945	1.468	4.192	1.708	4.510	4.510	0.322	0.940
0.270	0.270	1.054	1.689	4.350	1.727	4.708	4.708	0.335	0.944
0.280	0.280	1.168	1.932	4.508	1.743	4.906	4.906	0.348	0.947
0.290	0.290	1.289	2.198	4.666	1.757	5.104	5.104	0.361	0.950
0.300	0.300	1.417	2.487	4.824	1.769	5.302	5.302	0.374	0.952
0.310	0.310	1.551	2.799	4.982	1.779	5.500	5.500	0.387	0.954
0.320	0.320	1.691	3.137	5.140	1.787	5.698	5.698	0.399	0.956
0.330	0.330	1.838	3.501	5.298	1.793	5.896	5.896	0.412	0.958
0.340	0.340	1.992	3.891	5.456	1.797	6.094	6.094	0.425	0.960
0.350	0.350	2.152	4.308	5.614	1.799	6.292	6.292	0.438	0.962
0.360	0.360	2.318	4.753	5.772	1.799	6.490	6.490	0.451	0.964
0.370	0.370	2.491	5.227	5.930	1.797	6.688	6.688	0.464	0.966
0.380	0.380	2.671	5.730	6.088	1.793	6.886	6.886	0.477	0.968
0.390	0.390	2.857	6.264	6.246	1.787	7.084	7.084	0.490	0.970
0.400	0.400	3.049	6.828	6.404	1.779	7.282	7.282	0.503	0.972
0.410	0.410	3.248	7.425	6.562	1.769	7.480	7.480	0.516	0.974
0.420	0.420	3.454	8.053	6.720	1.757	7.678	7.678	0.529	0.976
0.430	0.430	3.666	8.714	6.878	1.743	7.876	7.876	0.542	0.978
0.440	0.440	3.884	9.409	7.036	1.727	8.074	8.074	0.555	0.980
0.450	0.450	4.109	10.139	7.194	1.708	8.272	8.272	0.568	0.982
0.460	0.460	4.341	10.903	7.352	1.687	8.470	8.470	0.581	0.984
0.470	0.470	4.579	11.703	7.510	1.664	8.668	8.668	0.594	0.986
0.480	0.480	4.823	12.540	7.668	1.639	8.866	8.866	0.607	0.988
0.490	0.490	5.074	13.413	7.826	1.611	9.064	9.064	0.620	0.990
0.500	0.500	5.332	14.325	7.984	1.580	9.262	9.262	0.633	0.992
0.510	0.510	5.596	15.274	8.142	1.547	9.460	9.460	0.646	0.994
0.520	0.520	5.866	16.262	8.300	1.511	9.658	9.658	0.659	0.996
0.530	0.530	6.143	17.290	8.458	1.472	9.856	9.856	0.672	0.998
0.540	0.540	6.427	18.359	8.616	1.430	10.054	10.054	0.685	1.000
0.550	0.550	6.717	19.468	8.774	1.384	10.252	10.252	0.698	1.002
0.560	0.560	7.013	20.618	8.932	1.334	10.450	10.450	0.711	1.004
0.570	0.570	7.314	21.995	9.090	1.280	10.648	10.648	0.724	1.006
0.580	0.580	7.617	23.412	9.248	1.222	10.846	10.846	0.737	1.008
0.590	0.590	7.923	24.867	9.406	1.164	11.044	11.044	0.750	1.010
0.600	0.600	8.231	26.360	9.564	1.103	11.242	11.242	0.763	1.012
0.610	0.610	8.542	27.893	9.722	1.039	11.440	11.440	0.776	1.014
0.620	0.620	8.854	29.463	9.880	0.972	11.638	11.638	0.789	1.016
0.630	0.630	9.169	31.073	10.038	0.902	11.836	11.836	0.802	1.018
0.640	0.640	9.487	32.720	10.196	0.829	12.034	12.034	0.815	1.020
0.650	0.650	9.807	34.406	10.354	0.753	12.232	12.232	0.828	1.022
0.660	0.660	10.129	36.130	10.512	0.674	12.430	12.430	0.841	1.024
0.670	0.670	10.454	37.892	10.670	0.592	12.628	12.628	0.854	1.026
0.680	0.680	10.783	39.704	10.828	0.507	12.826	12.826	0.867	1.028
0.690	0.690	11.120	40.804	10.986	0.419	13.024	13.024	0.880	1.030
0.700	0.700	11.465	42.333	11.144	0.328	13.222	13.222	0.893	1.032
0.710	0.710	11.816	43.911	11.302	0.233	13.420	13.420	0.906	1.034
0.720	0.720	12.175	45.540	11.460	0.135	13.618	13.618	0.919	1.036

Q = 5.4 cfs
d = 0.37'
E = 0.44'

0.730	0.730	12.541	47.219	37.528	3.765	36.995	36.995	0.950	1.140
0.740	0.740	12.915	48.949	38.263	3.790	37.730	37.730	0.963	1.142
0.750	0.750	13.296	50.731	38.999	3.816	38.465	38.465	0.976	1.144
0.760	0.760	13.684	52.566	39.734	3.841	39.200	39.200	0.990	1.146
0.770	0.770	14.080	54.454	40.469	3.868	39.935	39.935	1.003	1.148
0.780	0.780	14.483	56.395	41.205	3.894	40.670	40.670	1.016	1.150
0.790	0.790	14.893	58.483	41.837	3.927	41.302	41.302	1.030	1.153
0.800	0.800	15.309	60.623	42.470	3.960	41.934	41.934	1.044	1.155
0.810	0.810	15.731	62.815	43.102	3.993	42.566	42.566	1.058	1.158
0.820	0.820	16.160	65.060	43.734	4.026	43.198	43.198	1.072	1.160
0.830	0.830	16.595	67.358	44.367	4.059	43.830	43.830	1.086	1.163
0.840	0.840	17.036	69.831	44.878	4.099	44.333	44.333	1.101	1.166
0.850	0.850	17.482	72.356	45.388	4.139	44.837	44.837	1.116	1.169
0.860	0.860	17.933	74.932	45.899	4.178	45.340	45.340	1.132	1.171
0.870	0.870	18.389	77.559	46.410	4.218	45.844	45.844	1.147	1.174
0.880	0.880	18.850	80.239	46.920	4.257	46.347	46.347	1.162	1.177
0.890	0.890	19.316	82.971	47.431	4.296	46.850	46.850	1.177	1.179
0.900	0.900	19.787	85.757	47.942	4.334	47.354	47.354	1.192	1.182

52ftROW_2.00%Crown_0.56%Slope AP5

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.003	0.821	0.337	2.019	0.769	0.027	0.532
0.050	0.050	0.038	0.021	1.642	0.536	2.788	1.538	0.054	0.597
0.075	0.075	0.087	0.061	2.463	0.702	3.558	2.308	0.083	0.639
0.100	0.100	0.154	0.131	3.283	0.850	4.327	3.077	0.111	0.670
0.125	0.125	0.240	0.237	4.104	0.987	5.096	3.846	0.140	0.696
0.150	0.150	0.360	0.349	6.309	0.970	7.250	6.000	0.165	0.698
0.175	0.175	0.541	0.549	8.859	1.015	9.750	8.500	0.191	0.709
0.200	0.200	0.785	0.862	11.410	1.098	12.250	11.000	0.219	0.725
0.225	0.225	1.091	1.305	13.960	1.196	14.750	13.500	0.247	0.742
0.250	0.250	1.460	1.896	16.511	1.298	17.250	16.000	0.276	0.758
0.275	0.275	1.891	2.651	19.061	1.402	19.750	18.500	0.306	0.773
0.300	0.300	2.385	3.589	21.612	1.505	22.250	21.000	0.335	0.787
0.325	0.325	2.941	4.726	24.162	1.607	24.750	23.500	0.365	0.801
0.350	0.350	3.560	6.076	26.713	1.707	27.250	26.000	0.395	0.813
0.375	0.375	4.241	7.655	29.263	1.805	29.750	28.500	0.426	0.825
0.400	0.400	4.985	9.478	31.814	1.901	32.250	31.000	0.456	0.836
0.425	0.425	5.780	11.869	32.864	2.053	33.250	32.000	0.491	0.852
0.450	0.450	6.580	14.716	32.914	2.236	33.250	32.000	0.528	0.870
0.475	0.475	7.380	17.799	32.964	2.412	33.250	32.000	0.565	0.885
0.500	0.500	8.180	21.108	33.014	2.580	33.250	32.000	0.604	0.900
0.525	0.525	8.980	24.635	33.064	2.743	33.250	32.000	0.642	0.913
0.550	0.550	9.780	28.372	33.114	2.901	33.250	32.000	0.681	0.925
0.575	0.575	10.580	32.312	33.164	3.054	33.250	32.000	0.720	0.936
0.600	0.600	11.380	36.449	33.214	3.203	33.250	32.000	0.760	0.947
0.625	0.625	12.180	40.778	33.264	3.348	33.250	32.000	0.799	0.957
0.650	0.650	12.980	45.294	33.314	3.489	33.250	32.000	0.839	0.966
0.675	0.675	13.781	49.512	33.858	3.593	33.743	32.493	0.876	0.973
0.700	0.700	14.662	51.168	37.625	3.490	36.211	36.211	0.889	0.967
0.725	0.725	15.598	54.330	40.143	3.483	38.678	38.678	0.914	0.967
0.750	0.750	16.596	57.851	42.660	3.486	41.145	41.145	0.939	0.968
0.775	0.775	17.655	61.731	45.178	3.496	43.612	43.612	0.965	0.969
0.800	0.800	18.776	65.973	47.696	3.514	46.079	46.079	0.992	0.970
0.825	0.825	19.959	70.581	50.213	3.536	48.546	48.546	1.020	0.972
0.850	0.850	21.204	75.562	52.731	3.564	51.013	51.013	1.048	0.974

Q = 9.1 cfs
d = 0.40'
E = 0.45

52ftROW_2.00% Crown_0.56%Slope AP6

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.003	0.821	0.337	2.019	0.769	0.027	0.532
0.050	0.050	0.038	0.021	1.642	0.536	2.788	1.538	0.054	0.597
0.075	0.075	0.087	0.061	2.463	0.702	3.558	2.308	0.083	0.639
0.100	0.100	0.154	0.131	3.283	0.850	4.327	3.077	0.111	0.670
0.125	0.125	0.240	0.237	4.104	0.987	5.096	3.846	0.140	0.696
0.150	0.150	0.360	0.349	6.309	0.970	7.250	6.000	0.165	0.698
0.175	0.175	0.541	0.549	8.859	1.015	9.750	8.500	0.191	0.709
0.200	0.200	0.785	0.862	11.410	1.098	12.250	11.000	0.219	0.725
0.225	0.225	1.091	1.305	13.960	1.196	14.750	13.500	0.247	0.742
0.250	0.250	1.460	1.896	16.511	1.298	17.250	16.000	0.276	0.758
0.275	0.275	1.891	2.651	19.061	1.402	19.750	18.500	0.306	0.773
0.300	0.300	2.385	3.589	21.612	1.505	22.250	21.000	0.335	0.787
0.325	0.325	2.941	4.726	24.162	1.607	24.750	23.500	0.365	0.801
0.350	0.350	3.560	6.076	26.713	1.707	27.250	26.000	0.395	0.813
0.375	0.375	4.241	7.655	29.263	1.805	29.750	28.500	0.426	0.825
0.400	0.400	4.985	9.478	31.814	1.901	32.250	31.000	0.456	0.836
0.425	0.425	5.780	11.869	32.864	2.053	33.250	32.000	0.491	0.852
0.450	0.450	6.580	14.716	32.914	2.236	33.250	32.000	0.528	0.870
0.475	0.475	7.380	17.799	32.964	2.412	33.250	32.000	0.565	0.885
0.500	0.500	8.180	21.108	33.014	2.580	33.250	32.000	0.604	0.900
0.525	0.525	8.980	24.635	33.064	2.743	33.250	32.000	0.642	0.913
0.550	0.550	9.780	28.372	33.114	2.901	33.250	32.000	0.681	0.925
0.575	0.575	10.580	32.312	33.164	3.054	33.250	32.000	0.720	0.936
0.600	0.600	11.380	36.449	33.214	3.203	33.250	32.000	0.760	0.947
0.625	0.625	12.180	40.778	33.264	3.348	33.250	32.000	0.799	0.957
0.650	0.650	12.980	45.294	33.314	3.489	33.250	32.000	0.839	0.966
0.675	0.675	13.781	49.512	33.858	3.593	33.743	32.493	0.876	0.973
0.700	0.700	14.662	51.168	37.625	3.490	36.211	36.211	0.889	0.967
0.725	0.725	15.598	54.330	40.143	3.483	38.678	38.678	0.914	0.967
0.750	0.750	16.596	57.851	42.660	3.486	41.145	41.145	0.939	0.968
0.775	0.775	17.655	61.731	45.178	3.496	43.612	43.612	0.965	0.969
0.800	0.800	18.776	65.973	47.696	3.514	46.079	46.079	0.992	0.970
0.825	0.825	19.959	70.581	50.213	3.536	48.546	48.546	1.020	0.972
0.850	0.850	21.204	75.562	52.731	3.564	51.013	51.013	1.048	0.974

Q = 13.7 cfs
d = 0.44'
E = 0.51'

52ftROW_2.00% Crown_0.60% Slope AP7

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.003	0.821	0.349	2.019	0.769	0.027	0.551
0.050	0.050	0.038	0.021	1.642	0.554	2.788	1.538	0.055	0.618
0.075	0.075	0.087	0.063	2.463	0.726	3.558	2.308	0.083	0.661
0.100	0.100	0.154	0.135	3.283	0.880	4.327	3.077	0.112	0.694
0.125	0.125	0.240	0.245	4.104	1.021	5.096	3.846	0.141	0.720
0.150	0.150	0.360	0.361	6.309	1.004	7.250	6.000	0.166	0.722
0.175	0.175	0.541	0.568	8.859	1.050	9.750	8.500	0.192	0.734
0.200	0.200	0.785	0.892	11.410	1.137	12.250	11.000	0.220	0.750
0.225	0.225	1.091	1.351	13.960	1.238	14.750	13.500	0.249	0.768
0.250	0.250	1.460	1.962	16.511	1.344	17.250	16.000	0.278	0.784
0.275	0.275	1.891	2.744	19.061	1.451	19.750	18.500	0.308	0.800
0.300	0.300	2.385	3.715	21.612	1.558	22.250	21.000	0.338	0.815
0.325	0.325	2.941	4.891	24.162	1.663	24.750	23.500	0.368	0.829
0.350	0.350	3.560	6.289	26.713	1.767	27.250	26.000	0.399	0.842
0.375	0.375	4.241	7.924	29.263	1.868	29.750	28.500	0.429	0.854
0.400	0.400	4.985	9.810	31.814	1.968	32.250	31.000	0.460	0.865
0.425	0.425	5.780	12.285	32.864	2.125	33.250	32.000	0.495	0.882
0.450	0.450	6.580	15.232	32.914	2.315	33.250	32.000	0.533	0.900
0.475	0.475	7.380	18.424	32.964	2.496	33.250	32.000	0.572	0.916
0.500	0.500	8.180	21.849	33.014	2.671	33.250	32.000	0.611	0.931
0.525	0.525	8.980	25.500	33.064	2.840	33.250	32.000	0.650	0.945
0.550	0.550	9.780	29.368	33.114	3.003	33.250	32.000	0.690	0.958
0.575	0.575	10.580	33.446	33.164	3.161	33.250	32.000	0.730	0.969
0.600	0.600	11.380	37.728	33.214	3.315	33.250	32.000	0.771	0.980
0.625	0.625	12.180	42.209	33.264	3.465	33.250	32.000	0.812	0.990
0.650	0.650	12.980	46.883	33.314	3.612	33.250	32.000	0.853	1.000
0.675	0.675	13.781	51.249	33.858	3.719	33.743	32.493	0.890	1.007
0.700	0.700	14.662	52.964	37.625	3.612	36.211	36.211	0.903	1.001
0.725	0.725	15.598	56.237	40.143	3.605	38.678	38.678	0.927	1.001
0.750	0.750	16.596	59.881	42.660	3.608	41.145	41.145	0.953	1.002
0.775	0.775	17.655	63.897	45.178	3.619	43.612	43.612	0.979	1.003
0.800	0.800	18.776	68.288	47.696	3.637	46.079	46.079	1.006	1.004
0.825	0.825	19.959	73.059	50.213	3.660	48.546	48.546	1.033	1.006
0.850	0.850	21.204	78.215	52.731	3.689	51.013	51.013	1.062	1.009

Q = 7.4 cfs
d = 0.37'
E = 0.42'

30.25ftAlley_1.00% Crown_0.620%Slope AP8

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.330	4.000	15.130	0.250	7.000	30.250	0.330
2.0	0.630	0.000	5.000	27.630	0.130			
3.0	2.630	0.130	6.000	29.630	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.002	0.000	0.351	0.199	0.346	0.346	0.011	0.496
0.020	0.020	0.007	0.002	0.702	0.316	0.691	0.691	0.022	0.557
0.030	0.030	0.016	0.006	1.054	0.414	1.037	1.037	0.033	0.596
0.040	0.040	0.028	0.014	1.405	0.502	1.382	1.382	0.044	0.625
0.050	0.050	0.043	0.025	1.756	0.582	1.728	1.728	0.055	0.649
0.060	0.060	0.062	0.041	2.107	0.657	2.073	2.073	0.067	0.669
0.070	0.070	0.085	0.062	2.458	0.729	2.419	2.419	0.078	0.687
0.080	0.080	0.111	0.088	2.809	0.796	2.765	2.765	0.090	0.702
0.090	0.090	0.140	0.121	3.161	0.861	3.110	3.110	0.102	0.716
0.100	0.100	0.173	0.160	3.512	0.924	3.456	3.456	0.113	0.729
0.110	0.110	0.209	0.206	3.863	0.985	3.801	3.801	0.125	0.740
0.120	0.120	0.249	0.260	4.214	1.044	4.147	4.147	0.137	0.751
0.130	0.130	0.292	0.321	4.565	1.101	4.492	4.492	0.149	0.761
0.140	0.140	0.348	0.333	6.692	0.958	6.614	6.614	0.154	0.737
0.150	0.150	0.424	0.386	8.818	0.911	8.735	8.735	0.163	0.728
0.160	0.160	0.522	0.473	10.944	0.906	10.856	10.856	0.173	0.728
0.170	0.170	0.641	0.592	13.070	0.923	12.977	12.977	0.183	0.732
0.180	0.180	0.782	0.744	15.197	0.952	15.098	15.098	0.194	0.738
0.190	0.190	0.943	0.933	17.323	0.989	17.220	17.220	0.205	0.745
0.200	0.200	1.126	1.160	19.449	1.030	19.341	19.341	0.217	0.753
0.210	0.210	1.330	1.429	21.575	1.074	21.462	21.462	0.228	0.761
0.220	0.220	1.555	1.742	23.702	1.120	23.583	23.583	0.240	0.769
0.230	0.230	1.802	2.102	25.828	1.166	25.705	25.705	0.251	0.777
0.240	0.240	2.070	2.511	27.954	1.214	27.826	27.826	0.263	0.784
0.250	0.250	2.358	2.973	30.080	1.261	29.947	29.947	0.275	0.792
0.260	0.260	2.658	3.626	30.123	1.364	29.985	29.985	0.289	0.808
0.270	0.270	2.958	4.329	30.166	1.464	30.023	30.023	0.303	0.822
0.280	0.280	3.258	5.082	30.209	1.560	30.061	30.061	0.318	0.835
0.290	0.290	3.559	5.882	30.252	1.653	30.098	30.098	0.332	0.847
0.300	0.300	3.860	6.729	30.295	1.743	30.136	30.136	0.347	0.859
0.310	0.310	4.162	7.620	30.337	1.831	30.174	30.174	0.362	0.869
0.320	0.320	4.464	8.555	30.380	1.917	30.212	30.212	0.377	0.879

Q = 8.2 cfs
d = 0.32'
E = 0.37'

30.25ftAlley_1.00% Crown_0.760%Slope AP9

MANNING'S N = 0.017 SLOPE = 0.008 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.330	4.000	15.130	0.250	7.000	30.250	0.330
2.0	0.630	0.000	5.000	27.630	0.130			
3.0	2.630	0.130	6.000	29.630	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.002	0.000	0.351	0.220	0.346	0.346	0.011	0.550
0.020	0.020	0.007	0.002	0.702	0.350	0.691	0.691	0.022	0.617
0.030	0.030	0.016	0.007	1.054	0.459	1.037	1.037	0.033	0.660
0.040	0.040	0.028	0.015	1.405	0.555	1.382	1.382	0.045	0.692
0.050	0.050	0.043	0.028	1.756	0.645	1.728	1.728	0.056	0.719
0.060	0.060	0.062	0.045	2.107	0.728	2.073	2.073	0.068	0.741
0.070	0.070	0.085	0.068	2.458	0.807	2.419	2.419	0.080	0.760
0.080	0.080	0.111	0.098	2.809	0.882	2.765	2.765	0.092	0.777
0.090	0.090	0.140	0.133	3.161	0.954	3.110	3.110	0.104	0.793
0.100	0.100	0.173	0.177	3.512	1.023	3.456	3.456	0.116	0.807
0.110	0.110	0.209	0.228	3.863	1.090	3.801	3.801	0.128	0.820
0.120	0.120	0.249	0.287	4.214	1.155	4.147	4.147	0.141	0.832
0.130	0.130	0.292	0.356	4.565	1.219	4.492	4.492	0.153	0.843
0.140	0.140	0.348	0.369	6.692	1.061	6.614	6.614	0.158	0.816
0.150	0.150	0.424	0.428	8.818	1.008	8.735	8.735	0.166	0.806
0.160	0.160	0.522	0.524	10.944	1.003	10.856	10.856	0.176	0.806
0.170	0.170	0.641	0.655	13.070	1.021	12.977	12.977	0.186	0.810
0.180	0.180	0.782	0.824	15.197	1.054	15.098	15.098	0.197	0.817
0.190	0.190	0.943	1.033	17.323	1.095	17.220	17.220	0.209	0.825
0.200	0.200	1.126	1.284	19.449	1.141	19.341	19.341	0.220	0.833
0.210	0.210	1.330	1.582	21.575	1.189	21.462	21.462	0.232	0.842
0.220	0.220	1.555	1.928	23.702	1.240	23.583	23.583	0.244	0.851
0.230	0.230	1.802	2.327	25.828	1.291	25.705	25.705	0.256	0.860
0.240	0.240	2.070	2.781	27.954	1.344	27.826	27.826	0.268	0.869
0.250	0.250	2.358	3.292	30.080	1.396	29.947	29.947	0.280	0.877
0.260	0.260	2.658	4.015	30.123	1.510	29.985	29.985	0.295	0.894
0.270	0.270	2.958	4.793	30.166	1.620	30.023	30.023	0.311	0.910
0.280	0.280	3.258	5.627	30.209	1.727	30.061	30.061	0.326	0.925
0.290	0.290	3.559	6.512	30.252	1.830	30.098	30.098	0.342	0.938
0.300	0.300	3.860	7.450	30.295	1.930	30.136	30.136	0.358	0.951
0.310	0.310	4.162	8.436	30.337	2.027	30.174	30.174	0.374	0.962
0.320	0.320	4.464	9.472	30.380	2.122	30.212	30.212	0.390	0.973

Q = 6.0 cfs
d = 0.28'
E = 0.33

MANNING'S N = 0.017 SLOPE = 0.007 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.004	0.821	0.375	2.019	0.769	0.027	0.591
0.050	0.050	0.038	0.023	1.642	0.594	2.788	1.538	0.055	0.663
0.075	0.075	0.087	0.067	2.463	0.779	3.558	2.308	0.084	0.709
0.100	0.100	0.154	0.145	3.283	0.944	4.327	3.077	0.114	0.744
0.125	0.125	0.240	0.263	4.104	1.095	5.096	3.846	0.144	0.772
0.150	0.150	0.360	0.387	6.309	1.076	7.250	6.000	0.168	0.775
0.175	0.175	0.541	0.610	8.859	1.126	9.750	8.500	0.195	0.787
0.200	0.200	0.785	0.957	11.410	1.219	12.250	11.000	0.223	0.805
0.225	0.225	1.091	1.449	13.960	1.327	14.750	13.500	0.252	0.823
0.250	0.250	1.460	2.104	16.511	1.441	17.250	16.000	0.282	0.841
0.275	0.275	1.891	2.943	19.061	1.556	19.750	18.500	0.313	0.858
0.300	0.300	2.385	3.984	21.612	1.671	22.250	21.000	0.343	0.874
0.325	0.325	2.941	5.246	24.162	1.783	24.750	23.500	0.374	0.889
0.350	0.350	3.560	6.744	26.713	1.894	27.250	26.000	0.406	0.903
0.375	0.375	4.241	8.497	29.263	2.003	29.750	28.500	0.437	0.916
0.400	0.400	4.985	10.520	31.814	2.110	32.250	31.000	0.469	0.928
0.425	0.425	5.780	13.174	32.864	2.279	33.250	32.000	0.506	0.945
0.450	0.450	6.580	16.335	32.914	2.483	33.250	32.000	0.546	0.965
0.475	0.475	7.380	19.757	32.964	2.677	33.250	32.000	0.586	0.983
0.500	0.500	8.180	23.431	33.014	2.864	33.250	32.000	0.628	0.999
0.525	0.525	8.980	27.345	33.064	3.045	33.250	32.000	0.669	1.013
0.550	0.550	9.780	31.493	33.114	3.220	33.250	32.000	0.711	1.027
0.575	0.575	10.580	35.867	33.164	3.390	33.250	32.000	0.754	1.039
0.600	0.600	11.380	40.459	33.214	3.555	33.250	32.000	0.797	1.051
0.625	0.625	12.180	45.264	33.264	3.716	33.250	32.000	0.840	1.062
0.650	0.650	12.980	50.277	33.314	3.873	33.250	32.000	0.883	1.072
0.675	0.675	13.781	54.959	33.858	3.988	33.743	32.493	0.922	1.080
0.700	0.700	14.662	56.797	37.625	3.874	36.211	36.211	0.933	1.073
0.725	0.725	15.598	60.308	40.143	3.866	38.678	38.678	0.958	1.073
0.750	0.750	16.596	64.216	42.660	3.869	41.145	41.145	0.983	1.074
0.775	0.775	17.655	68.522	45.178	3.881	43.612	43.612	1.009	1.075
0.800	0.800	18.776	73.231	47.696	3.900	46.079	46.079	1.037	1.077
0.825	0.825	19.959	78.347	50.213	3.925	48.546	48.546	1.065	1.079
0.850	0.850	21.204	83.876	52.731	3.956	51.013	51.013	1.093	1.082

Q = 11.1 cfs
d = 0.41'
E = 0.48'

52ftROW_2.00%Crown_1.45%Slope AP10B

MANNING'S N = 0.017 SLOPE = 0.015 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.005	0.821	0.543	2.019	0.769	0.030	0.856
0.050	0.050	0.038	0.033	1.642	0.862	2.788	1.538	0.062	0.961
0.075	0.075	0.087	0.098	2.463	1.129	3.558	2.308	0.095	1.028
0.100	0.100	0.154	0.210	3.283	1.368	4.327	3.077	0.129	1.079
0.125	0.125	0.240	0.382	4.104	1.587	5.096	3.846	0.164	1.119
0.150	0.150	0.360	0.562	6.309	1.560	7.250	6.000	0.188	1.123
0.175	0.175	0.541	0.884	8.859	1.633	9.750	8.500	0.216	1.141
0.200	0.200	0.785	1.387	11.410	1.767	12.250	11.000	0.249	1.166
0.225	0.225	1.091	2.100	13.960	1.924	14.750	13.500	0.283	1.193
0.250	0.250	1.460	3.050	16.511	2.089	17.250	16.000	0.318	1.219
0.275	0.275	1.891	4.266	19.061	2.256	19.750	18.500	0.354	1.244
0.300	0.300	2.385	5.776	21.612	2.422	22.250	21.000	0.391	1.267
0.325	0.325	2.941	7.604	24.162	2.585	24.750	23.500	0.429	1.288
0.350	0.350	3.560	9.777	26.713	2.746	27.250	26.000	0.467	1.308
0.375	0.375	4.241	12.318	29.263	2.904	29.750	28.500	0.506	1.327
0.400	0.400	4.985	15.251	31.814	3.059	32.250	31.000	0.546	1.345
0.425	0.425	5.780	19.098	32.864	3.304	33.250	32.000	0.595	1.371
0.450	0.450	6.580	23.680	32.914	3.599	33.250	32.000	0.651	1.399
0.475	0.475	7.380	28.641	32.964	3.881	33.250	32.000	0.709	1.425
0.500	0.500	8.180	33.966	33.014	4.152	33.250	32.000	0.768	1.448
0.525	0.525	8.980	39.641	33.064	4.414	33.250	32.000	0.828	1.469
0.550	0.550	9.780	45.654	33.114	4.668	33.250	32.000	0.889	1.489
0.575	0.575	10.580	51.994	33.164	4.914	33.250	32.000	0.951	1.507
0.600	0.600	11.380	58.651	33.214	5.154	33.250	32.000	1.013	1.524
0.625	0.625	12.180	65.617	33.264	5.387	33.250	32.000	1.076	1.539
0.650	0.650	12.980	72.883	33.314	5.615	33.250	32.000	1.140	1.554
0.675	0.675	13.781	79.670	33.858	5.781	33.743	32.493	1.195	1.565
0.700	0.700	14.662	82.335	37.625	5.616	36.211	36.211	1.190	1.556
0.725	0.725	15.598	87.424	40.143	5.605	38.678	38.678	1.214	1.556
0.750	0.750	16.596	93.089	42.660	5.609	41.145	41.145	1.239	1.557
0.775	0.775	17.655	99.333	45.178	5.626	43.612	43.612	1.267	1.559
0.800	0.800	18.776	106.158	47.696	5.654	46.079	46.079	1.297	1.561
0.825	0.825	19.959	113.574	50.213	5.690	48.546	48.546	1.329	1.565
0.850	0.850	21.204	121.590	52.731	5.734	51.013	51.013	1.361	1.568

Q = 12.9 cfs
d = 0.38'
E = 0.51'

Q = 18.1 cfs
d = 0.50'
E = 0.68'

ChicagoRd_0.88%Slope AP11

MANNING'S N = 0.017 SLOPE = 0.009 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.580	4.000	6.000	0.060	7.000	24.830	1.130
2.0	4.330	0.500	5.000	22.170	0.380	8.000	36.000	1.350
3.0	5.000	0.000	6.000	24.170	0.460			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.001	0.000	0.184	0.237	0.180	0.180	0.011	0.590
0.020	0.020	0.004	0.001	0.367	0.376	0.360	0.360	0.022	0.662
0.030	0.030	0.008	0.004	0.551	0.492	0.540	0.540	0.034	0.708
0.040	0.040	0.014	0.009	0.735	0.596	0.720	0.720	0.046	0.743
0.050	0.050	0.023	0.016	0.918	0.692	0.900	0.900	0.057	0.771
0.060	0.060	0.032	0.025	1.102	0.781	1.080	1.080	0.069	0.795
0.070	0.070	0.046	0.035	1.624	0.760	1.599	1.599	0.079	0.791
0.080	0.080	0.064	0.051	2.146	0.792	2.118	2.118	0.090	0.800
0.090	0.090	0.088	0.074	2.669	0.844	2.637	2.637	0.101	0.814
0.100	0.100	0.117	0.106	3.191	0.906	3.155	3.155	0.113	0.829
0.110	0.110	0.151	0.147	3.713	0.971	3.674	3.674	0.125	0.844
0.120	0.120	0.191	0.198	4.235	1.038	4.193	4.193	0.137	0.858
0.130	0.130	0.235	0.260	4.757	1.104	4.711	4.711	0.149	0.872
0.140	0.140	0.285	0.333	5.279	1.171	5.230	5.230	0.161	0.885
0.150	0.150	0.340	0.420	5.801	1.237	5.749	5.749	0.174	0.897
0.160	0.160	0.400	0.520	6.323	1.301	6.268	6.268	0.186	0.908
0.170	0.170	0.465	0.635	6.846	1.365	6.786	6.786	0.199	0.919
0.180	0.180	0.536	0.765	7.368	1.428	7.305	7.305	0.212	0.930
0.190	0.190	0.611	0.911	7.890	1.490	7.824	7.824	0.225	0.940
0.200	0.200	0.692	1.073	8.412	1.551	8.342	8.342	0.237	0.949
0.210	0.210	0.778	1.253	8.934	1.611	8.861	8.861	0.250	0.959
0.220	0.220	0.869	1.452	9.456	1.670	9.380	9.380	0.263	0.967
0.230	0.230	0.966	1.669	9.978	1.728	9.899	9.899	0.276	0.976
0.240	0.240	1.067	1.906	10.500	1.786	10.417	10.417	0.290	0.984
0.250	0.250	1.174	2.163	11.023	1.842	10.936	10.936	0.303	0.991
0.260	0.260	1.286	2.441	11.545	1.898	11.455	11.455	0.316	0.999
0.270	0.270	1.403	2.741	12.067	1.953	11.973	11.973	0.329	1.006
0.280	0.280	1.525	3.063	12.589	2.008	12.492	12.492	0.343	1.013
0.290	0.290	1.653	3.408	13.111	2.062	13.011	13.011	0.356	1.020
0.300	0.300	1.786	3.776	13.633	2.115	13.530	13.530	0.370	1.026
0.310	0.310	1.923	4.169	14.155	2.167	14.048	14.048	0.383	1.033
0.320	0.320	2.067	4.586	14.678	2.219	14.567	14.567	0.397	1.039
0.330	0.330	2.215	5.029	15.200	2.271	15.086	15.086	0.410	1.045
0.340	0.340	2.368	5.498	15.722	2.321	15.604	15.604	0.424	1.051
0.350	0.350	2.527	5.993	16.244	2.372	16.123	16.123	0.437	1.056
0.360	0.360	2.691	6.516	16.766	2.422	16.642	16.642	0.451	1.062
0.370	0.370	2.860	7.066	17.288	2.471	17.160	17.160	0.465	1.067
0.380	0.380	3.034	7.645	17.810	2.520	17.679	17.679	0.479	1.072
0.390	0.390	3.212	8.255	18.332	2.569	18.198	18.198	0.494	1.080
0.400	0.400	3.393	8.901	18.854	2.618	18.717	18.717	0.510	1.087
0.410	0.410	3.576	9.675	19.376	2.667	19.236	19.236	0.526	1.094
0.420	0.420	3.762	10.475	19.898	2.716	19.755	19.755	0.542	1.101
0.430	0.430	3.951	11.301	20.420	2.765	20.274	20.274	0.558	1.107
0.440	0.440	4.142	12.152	20.942	2.814	20.793	20.793	0.573	1.113
0.450	0.450	4.336	13.029	21.464	2.863	21.312	21.312	0.589	1.119
0.460	0.460	4.533	13.933	21.986	2.912	21.831	21.831	0.605	1.125
0.470	0.470	4.731	14.864	22.508	2.961	22.350	22.350	0.623	1.132
0.480	0.480	4.929	15.822	23.030	3.010	22.869	22.869	0.642	1.140
0.490	0.490	5.127	16.905	23.552	3.059	23.388	23.388	0.660	1.147
WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.500	0.500	5.326	18.035	24.074	3.108	23.907	23.907	0.678	1.153
0.510	0.510	5.527	18.841	24.624	3.157	24.426	24.426	0.691	1.155
0.520	0.520	5.734	19.680	25.179	3.206	24.945	24.945	0.703	1.157
0.530	0.530	5.947	20.553	25.735	3.255	25.464	25.464	0.716	1.159
0.540	0.540	6.165	21.461	26.290	3.304	25.983	25.983	0.728	1.161
0.550	0.550	6.389	22.403	26.846	3.353	26.502	26.502	0.741	1.164
0.560	0.560	6.618	23.380	27.401	3.402	27.021	27.021	0.754	1.166
0.570	0.570	6.852	24.394	27.956	3.451	27.540	27.540	0.767	1.168

Q = 19.5cfs
d = 0.51'
E = 0.69'

AP12

ChicagoRd_0.60%Slope

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.580	4.000	6.000	0.060	7.000	24.830	1.130
2.0	4.330	0.500	5.000	22.170	0.380	8.000	36.000	1.350
3.0	5.000	0.000	6.000	24.170	0.460			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.001	0.000	0.184	0.195	0.180	0.180	0.011	0.487
0.020	0.020	0.004	0.001	0.367	0.310	0.360	0.360	0.021	0.547
0.030	0.030	0.008	0.003	0.551	0.406	0.540	0.540	0.033	0.585
0.040	0.040	0.014	0.007	0.735	0.492	0.720	0.720	0.044	0.614
0.050	0.050	0.023	0.013	0.918	0.571	0.900	0.900	0.055	0.637
0.060	0.060	0.032	0.021	1.102	0.645	1.080	1.080	0.066	0.657
0.070	0.070	0.046	0.029	1.624	0.627	1.599	1.599	0.076	0.653
0.080	0.080	0.064	0.042	2.146	0.654	2.118	2.118	0.087	0.661
0.090	0.090	0.088	0.061	2.669	0.697	2.637	2.637	0.098	0.672
0.100	0.100	0.117	0.088	3.191	0.748	3.155	3.155	0.109	0.684
0.110	0.110	0.151	0.121	3.713	0.802	3.674	3.674	0.120	0.697
0.120	0.120	0.191	0.163	4.235	0.857	4.193	4.193	0.131	0.708
0.130	0.130	0.235	0.214	4.757	0.912	4.711	4.711	0.143	0.720
0.140	0.140	0.285	0.275	5.279	0.967	5.230	5.230	0.155	0.730
0.150	0.150	0.340	0.347	5.801	1.021	5.749	5.749	0.166	0.740
0.160	0.160	0.400	0.430	6.323	1.075	6.268	6.268	0.178	0.750
0.170	0.170	0.465	0.524	6.846	1.127	6.786	6.786	0.190	0.759
0.180	0.180	0.536	0.632	7.368	1.179	7.305	7.305	0.202	0.768
0.190	0.190	0.611	0.752	7.890	1.230	7.824	7.824	0.214	0.776
0.200	0.200	0.692	0.886	8.412	1.281	8.342	8.342	0.226	0.784
0.210	0.210	0.778	1.035	8.934	1.330	8.861	8.861	0.238	0.791
0.220	0.220	0.869	1.199	9.456	1.379	9.380	9.380	0.250	0.799
0.230	0.230	0.966	1.378	9.978	1.427	9.899	9.899	0.262	0.806
0.240	0.240	1.067	1.574	10.500	1.475	10.417	10.417	0.274	0.812
0.250	0.250	1.174	1.786	11.023	1.521	10.936	10.936	0.286	0.819
0.260	0.260	1.286	2.016	11.545	1.567	11.455	11.455	0.298	0.825
0.270	0.270	1.403	2.263	12.067	1.613	11.973	11.973	0.310	0.831
0.280	0.280	1.525	2.529	12.589	1.658	12.492	12.492	0.323	0.836
0.290	0.290	1.653	2.814	13.111	1.702	13.011	13.011	0.335	0.842
0.300	0.300	1.786	3.118	13.633	1.746	13.530	13.530	0.347	0.847
0.310	0.310	1.923	3.442	14.155	1.790	14.048	14.048	0.360	0.853
0.320	0.320	2.067	3.787	14.678	1.832	14.567	14.567	0.372	0.858
0.330	0.330	2.215	4.153	15.200	1.875	15.086	15.086	0.385	0.863
0.340	0.340	2.368	4.540	15.722	1.917	15.604	15.604	0.397	0.867
0.350	0.350	2.527	4.949	16.244	1.958	16.123	16.123	0.410	0.872
0.360	0.360	2.691	5.380	16.766	2.000	16.642	16.642	0.422	0.877
0.370	0.370	2.860	5.835	17.288	2.040	17.160	17.160	0.435	0.881
0.380	0.380	3.034	6.313	17.810	2.081	17.679	17.679	0.447	0.885
0.390	0.390	3.212	6.874	18.077	2.140	17.943	17.943	0.461	0.892
0.400	0.400	3.393	7.457	18.344	2.198	18.206	18.206	0.475	0.898
0.410	0.410	3.576	8.063	18.611	2.255	18.469	18.469	0.489	0.903
0.420	0.420	3.762	8.691	18.878	2.310	18.733	18.733	0.503	0.909
0.430	0.430	3.951	9.342	19.145	2.364	18.996	18.996	0.517	0.914
0.440	0.440	4.142	10.015	19.412	2.418	19.260	19.260	0.531	0.919
0.450	0.450	4.336	10.710	19.679	2.470	19.523	19.523	0.545	0.924
0.460	0.460	4.533	11.428	19.946	2.521	19.786	19.786	0.559	0.929
0.470	0.470	4.731	12.260	19.976	2.592	19.810	19.810	0.574	0.935
0.480	0.480	4.929	13.114	20.007	2.661	19.833	19.833	0.590	0.941
0.490	0.490	5.127	13.992	20.038	2.729	19.856	19.856	0.606	0.947
0.500	0.500	5.326	14.892	20.069	2.796	19.879	19.879	0.622	0.952
0.510	0.510	5.527	15.817	20.624	2.815	20.431	20.431	0.633	0.954
0.520	0.520	5.734	16.250	21.179	2.834	20.982	20.982	0.645	0.956
0.530	0.530	5.947	16.971	21.735	2.854	21.533	21.533	0.657	0.957
0.540	0.540	6.165	17.720	22.290	2.874	22.084	22.084	0.669	0.959
0.550	0.550	6.389	18.498	22.846	2.895	22.635	22.635	0.680	0.961
0.560	0.560	6.618	19.306	23.401	2.917	23.186	23.186	0.692	0.963
0.570	0.570	6.852	20.142	23.956	2.939	23.737	23.737	0.704	0.964

Q = 19.5cfs
d = 0.56'
E = 0.69'

52ftROW_2.00%Crown_0.71%Slope AP13

MANNING'S N = 0.017 SLOPE = 0.007 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.004	0.821	0.380	2.019	0.769	0.027	0.599
0.050	0.050	0.038	0.023	1.642	0.603	2.788	1.538	0.056	0.672
0.075	0.075	0.087	0.068	2.463	0.790	3.558	2.308	0.085	0.719
0.100	0.100	0.154	0.147	3.283	0.957	4.327	3.077	0.114	0.755
0.125	0.125	0.240	0.267	4.104	1.111	5.096	3.846	0.144	0.783
0.150	0.150	0.360	0.393	6.309	1.092	7.250	6.000	0.169	0.786
0.175	0.175	0.541	0.618	8.859	1.143	9.750	8.500	0.195	0.798
0.200	0.200	0.785	0.971	11.410	1.237	12.250	11.000	0.224	0.816
0.225	0.225	1.091	1.469	13.960	1.347	14.750	13.500	0.253	0.835
0.250	0.250	1.460	2.134	16.511	1.462	17.250	16.000	0.283	0.853
0.275	0.275	1.891	2.985	19.061	1.579	19.750	18.500	0.314	0.870
0.300	0.300	2.385	4.042	21.612	1.695	22.250	21.000	0.345	0.886
0.325	0.325	2.941	5.321	24.162	1.809	24.750	23.500	0.376	0.902
0.350	0.350	3.560	6.841	26.713	1.922	27.250	26.000	0.407	0.916
0.375	0.375	4.241	8.619	29.263	2.032	29.750	28.500	0.439	0.929
0.400	0.400	4.985	10.672	31.814	2.141	32.250	31.000	0.471	0.941
0.425	0.425	5.780	13.364	32.864	2.312	33.250	32.000	0.508	0.959
0.450	0.450	6.580	16.570	32.914	2.518	33.250	32.000	0.549	0.979
0.475	0.475	7.380	20.042	32.964	2.716	33.250	32.000	0.590	0.997
0.500	0.500	8.180	23.768	33.014	2.906	33.250	32.000	0.631	1.013
0.525	0.525	8.980	27.739	33.064	3.089	33.250	32.000	0.673	1.028
0.550	0.550	9.780	31.946	33.114	3.267	33.250	32.000	0.716	1.042
0.575	0.575	10.580	36.383	33.164	3.439	33.250	32.000	0.759	1.054
0.600	0.600	11.380	41.041	33.214	3.606	33.250	32.000	0.802	1.066
0.625	0.625	12.180	45.916	33.264	3.770	33.250	32.000	0.846	1.077
0.650	0.650	12.980	51.000	33.314	3.929	33.250	32.000	0.890	1.088
0.675	0.675	13.781	55.750	33.858	4.045	33.743	32.493	0.930	1.095
0.700	0.700	14.662	57.614	37.625	3.930	36.211	36.211	0.940	1.089
0.725	0.725	15.598	61.175	40.143	3.922	38.678	38.678	0.964	1.089
0.750	0.750	16.596	65.140	42.660	3.925	41.145	41.145	0.990	1.090
0.775	0.775	17.655	69.508	45.178	3.937	43.612	43.612	1.016	1.091
0.800	0.800	18.776	74.285	47.696	3.956	46.079	46.079	1.043	1.093
0.825	0.825	19.959	79.474	50.213	3.982	48.546	48.546	1.072	1.095
0.850	0.850	21.204	85.083	52.731	4.013	51.013	51.013	1.100	1.097

Q = 12.0 cfs
d = 0.41'
E = 0.49'

66ftROW_2.00%Crown_0.60%Slope AP14A

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	4.000	12.000	0.130	7.000	56.000	0.000
2.0	9.380	0.670	5.000	33.000	0.550	8.000	56.630	0.670
3.0	10.000	0.000	6.000	54.000	0.130	9.000	66.000	0.860

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.004	0.839	0.358	0.816	0.816	0.027	0.564
0.050	0.050	0.041	0.023	1.678	0.568	1.632	1.632	0.055	0.633
0.075	0.075	0.092	0.068	2.518	0.744	2.448	2.448	0.084	0.678
0.100	0.100	0.163	0.147	3.357	0.902	3.263	3.263	0.113	0.711
0.125	0.125	0.255	0.267	4.196	1.046	4.079	4.079	0.142	0.738
0.150	0.150	0.381	0.393	6.419	1.030	6.280	6.280	0.167	0.737
0.175	0.175	0.570	0.613	8.988	1.077	8.826	8.826	0.193	0.747
0.200	0.200	0.822	0.956	11.557	1.163	11.373	11.373	0.221	0.762
0.225	0.225	1.138	1.438	14.126	1.263	13.920	13.920	0.250	0.779
0.250	0.250	1.518	2.079	16.695	1.369	16.466	16.466	0.279	0.795
0.275	0.275	1.962	2.897	19.263	1.477	19.013	19.013	0.309	0.810
0.300	0.300	2.469	3.909	21.832	1.583	21.560	21.560	0.339	0.825
0.325	0.325	3.040	5.134	24.401	1.689	24.106	24.106	0.369	0.838
0.350	0.350	3.674	6.587	26.970	1.793	26.653	26.653	0.400	0.851
0.375	0.375	4.372	8.284	29.539	1.895	29.200	29.200	0.431	0.863
0.400	0.400	5.134	10.242	32.108	1.995	31.746	31.746	0.462	0.874
0.425	0.425	5.960	12.474	34.677	2.093	34.293	34.293	0.493	0.885
0.450	0.450	6.849	14.996	37.246	2.189	36.840	36.840	0.525	0.895
0.475	0.475	7.802	17.821	39.815	2.284	39.386	39.386	0.556	0.905
0.500	0.500	8.818	20.964	42.383	2.377	41.933	41.933	0.588	0.914
0.525	0.525	9.898	24.439	44.952	2.469	44.479	44.479	0.620	0.923
0.550	0.550	11.042	28.258	47.521	2.559	47.026	47.026	0.652	0.931
0.575	0.575	12.218	33.419	47.590	2.735	47.073	47.073	0.691	0.946
0.600	0.600	13.396	38.920	47.658	2.905	47.119	47.119	0.731	0.961
0.625	0.625	14.574	44.750	47.726	3.070	47.166	47.166	0.772	0.974
0.650	0.650	15.754	50.900	47.795	3.231	47.213	47.213	0.812	0.986
0.675	0.675	16.936	56.988	48.343	3.365	47.743	47.743	0.851	0.996
0.700	0.700	18.161	61.929	50.811	3.410	50.211	50.211	0.881	1.000
0.725	0.725	19.447	67.250	53.278	3.458	52.678	52.678	0.911	1.003
0.750	0.750	20.795	72.960	55.746	3.509	55.145	55.145	0.941	1.007
0.775	0.775	22.204	79.071	58.213	3.561	57.612	57.612	0.972	1.011
0.800	0.800	23.675	85.592	60.681	3.615	60.079	60.079	1.003	1.015
0.825	0.825	25.208	92.533	63.149	3.671	62.546	62.546	1.035	1.019
0.850	0.850	26.802	99.907	65.616	3.728	65.013	65.013	1.066	1.023

Q = 36.7 cfs
d = 0.59'
E = 0.71'

MANNING'S N = 0.017 SLOPE = 0.015 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	4.000	12.000	0.130	7.000	56.000	0.000
2.0	9.380	0.670	5.000	33.000	0.550	8.000	56.630	0.670
3.0	10.000	0.000	6.000	54.000	0.130	9.000	66.000	0.860

WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOPWID	TOTAL	FROUDE
FT.	INC	AREA	RATE	PER	VEL	PLUS	WATER	ENERGY	NO.
		SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS		(FT)	
0.025	0.025	0.010	0.006	0.839	0.566	0.816	0.816	0.030	0.892
0.050	0.050	0.041	0.037	1.678	0.898	1.632	1.632	0.063	1.002
0.075	0.075	0.092	0.108	2.518	1.177	2.448	2.448	0.097	1.072
0.100	0.100	0.163	0.233	3.357	1.426	3.263	3.263	0.132	1.124
0.125	0.125	0.255	0.422	4.196	1.655	4.079	4.079	0.168	1.167
0.150	0.150	0.381	0.621	6.419	1.629	6.280	6.280	0.191	1.166
0.175	0.175	0.570	0.970	8.988	1.702	8.826	8.826	0.220	1.181
0.200	0.200	0.822	1.512	11.557	1.838	11.373	11.373	0.253	1.205
0.225	0.225	1.138	2.274	14.126	1.998	13.920	13.920	0.287	1.231
0.250	0.250	1.518	3.287	16.695	2.165	16.466	16.466	0.323	1.257
0.275	0.275	1.962	4.580	19.263	2.335	19.013	19.013	0.360	1.281
0.300	0.300	2.469	6.181	21.832	2.504	21.560	21.560	0.397	1.304
0.325	0.325	3.040	8.117	24.401	2.670	24.106	24.106	0.436	1.326
0.350	0.350	3.674	10.415	26.970	2.834	26.653	26.653	0.475	1.346
0.375	0.375	4.372	13.099	29.539	2.996	29.200	29.200	0.515	1.365
0.400	0.400	5.134	16.193	32.108	3.154	31.746	31.746	0.555	1.383
0.425	0.425	5.960	19.723	34.677	3.309	34.293	34.293	0.595	1.400
0.450	0.450	6.849	23.710	37.246	3.462	36.840	36.840	0.636	1.415
0.475	0.475	7.802	28.178	39.815	3.612	39.386	39.386	0.678	1.431
0.500	0.500	8.818	33.148	42.383	3.759	41.933	41.933	0.720	1.445
0.525	0.525	9.898	38.641	44.952	3.904	44.479	44.479	0.762	1.459
0.550	0.550	11.042	44.680	47.521	4.046	47.026	47.026	0.805	1.472
0.575	0.575	12.218	52.840	47.590	4.325	47.073	47.073	0.866	1.496
0.600	0.600	13.396	61.538	47.658	4.594	47.119	47.119	0.928	1.519
0.625	0.625	14.574	70.756	47.726	4.855	47.166	47.166	0.992	1.540
0.650	0.650	15.754	80.480	47.795	5.108	47.213	47.213	1.056	1.559
0.675	0.675	16.936	90.106	48.343	5.320	47.743	47.743	1.115	1.575
0.700	0.700	18.161	97.919	50.811	5.392	50.211	50.211	1.152	1.581
0.725	0.725	19.447	106.331	53.278	5.468	52.678	52.678	1.190	1.587
0.750	0.750	20.795	115.360	55.746	5.548	55.145	55.145	1.229	1.593
0.775	0.775	22.204	125.022	58.213	5.631	57.612	57.612	1.268	1.599
0.800	0.800	23.675	135.332	60.681	5.716	60.079	60.079	1.308	1.605
0.825	0.825	25.208	146.308	63.149	5.804	62.546	62.546	1.349	1.612
0.850	0.850	26.802	157.967	65.616	5.894	65.013	65.013	1.390	1.618

Q = 3.8 cfs
d = 0.26'
E = 0.34'

30.25ftAlley_1.00% Crown_0.610%Slope AP15

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.330	4.000	15.130	0.250	7.000	30.250	0.330
2.0	0.630	0.000	5.000	27.630	0.130			
3.0	2.630	0.130	6.000	29.630	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.002	0.000	0.351	0.197	0.346	0.346	0.011	0.492
0.020	0.020	0.007	0.002	0.702	0.314	0.691	0.691	0.022	0.553
0.030	0.030	0.016	0.006	1.054	0.411	1.037	1.037	0.033	0.591
0.040	0.040	0.028	0.014	1.405	0.498	1.382	1.382	0.044	0.620
0.050	0.050	0.043	0.025	1.756	0.577	1.728	1.728	0.055	0.644
0.060	0.060	0.062	0.041	2.107	0.652	2.073	2.073	0.067	0.664
0.070	0.070	0.085	0.061	2.458	0.723	2.419	2.419	0.078	0.681
0.080	0.080	0.111	0.087	2.809	0.790	2.765	2.765	0.090	0.696
0.090	0.090	0.140	0.120	3.161	0.855	3.110	3.110	0.101	0.710
0.100	0.100	0.173	0.158	3.512	0.917	3.456	3.456	0.113	0.723
0.110	0.110	0.209	0.204	3.863	0.977	3.801	3.801	0.125	0.734
0.120	0.120	0.249	0.258	4.214	1.035	4.147	4.147	0.137	0.745
0.130	0.130	0.292	0.319	4.565	1.092	4.492	4.492	0.149	0.755
0.140	0.140	0.348	0.330	6.692	0.950	6.614	6.614	0.154	0.731
0.150	0.150	0.424	0.383	8.818	0.903	8.735	8.735	0.163	0.722
0.160	0.160	0.522	0.469	10.944	0.898	10.856	10.856	0.173	0.722
0.170	0.170	0.641	0.587	13.070	0.915	12.977	12.977	0.183	0.726
0.180	0.180	0.782	0.738	15.197	0.944	15.098	15.098	0.194	0.732
0.190	0.190	0.943	0.925	17.323	0.981	17.220	17.220	0.205	0.739
0.200	0.200	1.126	1.151	19.449	1.022	19.341	19.341	0.216	0.747
0.210	0.210	1.330	1.417	21.575	1.065	21.462	21.462	0.228	0.755
0.220	0.220	1.555	1.728	23.702	1.111	23.583	23.583	0.239	0.763
0.230	0.230	1.802	2.085	25.828	1.157	25.705	25.705	0.251	0.770
0.240	0.240	2.070	2.491	27.954	1.204	27.826	27.826	0.263	0.778
0.250	0.250	2.358	2.949	30.080	1.251	29.947	29.947	0.274	0.786
0.260	0.260	2.658	3.597	30.123	1.353	29.985	29.985	0.288	0.801
0.270	0.270	2.958	4.294	30.166	1.452	30.023	30.023	0.303	0.815
0.280	0.280	3.258	5.041	30.209	1.547	30.061	30.061	0.317	0.828
0.290	0.290	3.559	5.835	30.252	1.639	30.098	30.098	0.332	0.840
0.300	0.300	3.860	6.674	30.295	1.729	30.136	30.136	0.346	0.852
0.310	0.310	4.162	7.558	30.337	1.816	30.174	30.174	0.361	0.862
0.320	0.320	4.464	8.486	30.380	1.901	30.212	30.212	0.376	0.872

Q = 4.3 cfs
d = 0.27'
E = 0.30'

ChicagoRd_0.60%Slope AP16

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.580	4.000	6.000	0.060	7.000	24.830	1.130
2.0	4.330	0.500	5.000	22.170	0.380	8.000	36.000	1.350
3.0	5.000	0.000	6.000	24.170	0.460			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.001	0.000	0.184	0.195	0.180	0.180	0.011	0.487
0.020	0.020	0.004	0.001	0.367	0.310	0.360	0.360	0.021	0.547
0.030	0.030	0.008	0.003	0.551	0.406	0.540	0.540	0.033	0.585
0.040	0.040	0.014	0.007	0.735	0.492	0.720	0.720	0.044	0.614
0.050	0.050	0.023	0.013	0.918	0.571	0.900	0.900	0.055	0.637
0.060	0.060	0.032	0.021	1.102	0.645	1.080	1.080	0.066	0.657
0.070	0.070	0.046	0.029	1.624	0.627	1.599	1.599	0.076	0.653
0.080	0.080	0.064	0.042	2.146	0.654	2.118	2.118	0.087	0.661
0.090	0.090	0.088	0.061	2.669	0.697	2.637	2.637	0.098	0.672
0.100	0.100	0.117	0.088	3.191	0.748	3.155	3.155	0.109	0.684
0.110	0.110	0.151	0.121	3.713	0.802	3.674	3.674	0.120	0.697
0.120	0.120	0.191	0.163	4.235	0.857	4.193	4.193	0.131	0.708
0.130	0.130	0.235	0.214	4.757	0.912	4.711	4.711	0.143	0.720
0.140	0.140	0.285	0.275	5.279	0.967	5.230	5.230	0.155	0.730
0.150	0.150	0.340	0.347	5.801	1.021	5.749	5.749	0.166	0.740
0.160	0.160	0.400	0.430	6.323	1.075	6.268	6.268	0.178	0.750
0.170	0.170	0.465	0.524	6.846	1.127	6.786	6.786	0.190	0.759
0.180	0.180	0.536	0.632	7.368	1.179	7.305	7.305	0.202	0.768
0.190	0.190	0.611	0.752	7.890	1.230	7.824	7.824	0.214	0.776
0.200	0.200	0.692	0.886	8.412	1.281	8.342	8.342	0.226	0.784
0.210	0.210	0.778	1.035	8.934	1.330	8.861	8.861	0.238	0.791
0.220	0.220	0.869	1.199	9.456	1.379	9.380	9.380	0.250	0.799
0.230	0.230	0.966	1.378	9.978	1.427	9.899	9.899	0.262	0.806
0.240	0.240	1.067	1.574	10.500	1.475	10.417	10.417	0.274	0.812
0.250	0.250	1.174	1.786	11.023	1.521	10.936	10.936	0.286	0.819
0.260	0.260	1.286	2.016	11.545	1.567	11.455	11.455	0.298	0.825
0.270	0.270	1.403	2.263	12.067	1.613	11.973	11.973	0.310	0.831
0.280	0.280	1.525	2.529	12.589	1.658	12.492	12.492	0.323	0.836
0.290	0.290	1.653	2.814	13.111	1.702	13.011	13.011	0.335	0.842
0.300	0.300	1.786	3.118	13.633	1.746	13.530	13.530	0.347	0.847
0.310	0.310	1.923	3.442	14.155	1.790	14.048	14.048	0.360	0.853
0.320	0.320	2.067	3.787	14.678	1.832	14.567	14.567	0.372	0.858
0.330	0.330	2.215	4.153	15.200	1.875	15.086	15.086	0.385	0.863
0.340	0.340	2.368	4.540	15.722	1.917	15.604	15.604	0.397	0.867
0.350	0.350	2.527	4.949	16.244	1.958	16.123	16.123	0.410	0.872
0.360	0.360	2.691	5.380	16.766	2.000	16.642	16.642	0.422	0.877
0.370	0.370	2.860	5.835	17.288	2.040	17.160	17.160	0.435	0.881
0.380	0.380	3.034	6.313	17.810	2.081	17.679	17.679	0.447	0.885
0.390	0.390	3.212	6.874	18.077	2.140	17.943	17.943	0.461	0.892
0.400	0.400	3.393	7.457	18.344	2.198	18.206	18.206	0.475	0.898
0.410	0.410	3.576	8.063	18.611	2.255	18.469	18.469	0.489	0.903
0.420	0.420	3.762	8.691	18.878	2.310	18.733	18.733	0.503	0.909
0.430	0.430	3.951	9.342	19.145	2.364	18.996	18.996	0.517	0.914
0.440	0.440	4.142	10.015	19.412	2.418	19.260	19.260	0.531	0.919
0.450	0.450	4.336	10.710	19.679	2.470	19.523	19.523	0.545	0.924
0.460	0.460	4.533	11.428	19.946	2.521	19.786	19.786	0.559	0.929
0.470	0.470	4.731	12.260	19.976	2.592	19.810	19.810	0.574	0.935
0.480	0.480	4.929	13.114	20.007	2.661	19.833	19.833	0.590	0.941
0.490	0.490	5.127	13.992	20.038	2.729	19.856	19.856	0.606	0.947
0.500	0.500	5.326	14.892	20.069	2.796	19.879	19.879	0.622	0.952
0.510	0.510	5.527	15.557	20.624	2.815	20.431	20.431	0.633	0.954
0.520	0.520	5.734	16.250	21.179	2.834	20.982	20.982	0.645	0.956
0.530	0.530	5.947	16.971	21.735	2.854	21.533	21.533	0.657	0.957
0.540	0.540	6.165	17.720	22.290	2.874	22.084	22.084	0.669	0.959
0.550	0.550	6.389	18.498	22.846	2.895	22.635	22.635	0.680	0.961
0.560	0.560	6.618	19.306	23.401	2.917	23.186	23.186	0.692	0.963
0.570	0.570	6.852	20.142	23.956	2.939	23.737	23.737	0.704	0.964

Q = 5.1 cfs
d = 0.35'
E = 0.41'

52ftROW_2.00% Crown_0.50%Slope AP17

MANNING'S N = 0.017 SLOPE = 0.005 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.003	0.821	0.319	2.019	0.769	0.027	0.503
0.050	0.050	0.038	0.019	1.642	0.506	2.788	1.538	0.054	0.564
0.075	0.075	0.087	0.057	2.463	0.663	3.558	2.308	0.082	0.604
0.100	0.100	0.154	0.124	3.283	0.803	4.327	3.077	0.110	0.633
0.125	0.125	0.240	0.224	4.104	0.932	5.096	3.846	0.139	0.657
0.150	0.150	0.360	0.330	6.309	0.916	7.250	6.000	0.163	0.659
0.175	0.175	0.541	0.519	8.859	0.959	9.750	8.500	0.189	0.670
0.200	0.200	0.785	0.815	11.410	1.038	12.250	11.000	0.217	0.685
0.225	0.225	1.091	1.233	13.960	1.130	14.750	13.500	0.245	0.701
0.250	0.250	1.460	1.791	16.511	1.227	17.250	16.000	0.273	0.716
0.275	0.275	1.891	2.505	19.061	1.325	19.750	18.500	0.302	0.730
0.300	0.300	2.385	3.392	21.612	1.422	22.250	21.000	0.331	0.744
0.325	0.325	2.941	4.465	24.162	1.518	24.750	23.500	0.361	0.757
0.350	0.350	3.560	5.741	26.713	1.613	27.250	26.000	0.390	0.768
0.375	0.375	4.241	7.233	29.263	1.705	29.750	28.500	0.420	0.779
0.400	0.400	4.985	8.955	31.814	1.796	32.250	31.000	0.450	0.790
0.425	0.425	5.780	11.215	32.864	1.940	33.250	32.000	0.484	0.805
0.450	0.450	6.580	13.905	32.914	2.113	33.250	32.000	0.519	0.822
0.475	0.475	7.380	16.819	32.964	2.279	33.250	32.000	0.556	0.837
0.500	0.500	8.180	19.945	33.014	2.438	33.250	32.000	0.592	0.850
0.525	0.525	8.980	23.278	33.064	2.592	33.250	32.000	0.630	0.863
0.550	0.550	9.780	26.809	33.114	2.741	33.250	32.000	0.667	0.874
0.575	0.575	10.580	30.532	33.164	2.886	33.250	32.000	0.705	0.885
0.600	0.600	11.380	34.441	33.214	3.026	33.250	32.000	0.742	0.895
0.625	0.625	12.180	38.532	33.264	3.164	33.250	32.000	0.781	0.904
0.650	0.650	12.980	42.798	33.314	3.297	33.250	32.000	0.819	0.913
0.675	0.675	13.781	46.784	33.858	3.395	33.743	32.493	0.854	0.919
0.700	0.700	14.662	48.349	37.625	3.298	36.211	36.211	0.869	0.914
0.725	0.725	15.598	51.337	40.143	3.291	38.678	38.678	0.893	0.914
0.750	0.750	16.596	54.664	42.660	3.294	41.145	41.145	0.919	0.914
0.775	0.775	17.655	58.330	45.178	3.304	43.612	43.612	0.945	0.915
0.800	0.800	18.776	62.338	47.696	3.320	46.079	46.079	0.971	0.917
0.825	0.825	19.959	66.693	50.213	3.341	48.546	48.546	0.999	0.919
0.850	0.850	21.204	71.400	52.731	3.367	51.013	51.013	1.026	0.921

Q = 5.5 cfs
d = 0.35'
E = 0.38'

ChicagoRd_0.83%Slope AP18

MANNING'S N = 0.017 SLOPE = 0.008 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.580	4.000	6.000	0.060	7.000	24.830	1.130
2.0	4.330	0.500	5.000	22.170	0.380	8.000	36.000	1.350
3.0	5.000	0.000	6.000	24.170	0.460			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.001	0.000	0.184	0.230	0.180	0.180	0.011	0.573
0.020	0.020	0.004	0.001	0.367	0.365	0.360	0.360	0.022	0.643
0.030	0.030	0.008	0.004	0.551	0.478	0.540	0.540	0.034	0.688
0.040	0.040	0.014	0.008	0.735	0.579	0.720	0.720	0.045	0.722
0.050	0.050	0.023	0.015	0.918	0.672	0.900	0.900	0.057	0.749
0.060	0.060	0.032	0.025	1.102	0.759	1.080	1.080	0.069	0.772
0.070	0.070	0.046	0.034	1.624	0.738	1.599	1.599	0.078	0.769
0.080	0.080	0.064	0.050	2.146	0.769	2.118	2.118	0.089	0.777
0.090	0.090	0.088	0.072	2.669	0.820	2.637	2.637	0.100	0.791
0.100	0.100	0.117	0.103	3.191	0.880	3.155	3.155	0.112	0.805
0.110	0.110	0.151	0.143	3.713	0.943	3.674	3.674	0.124	0.819
0.120	0.120	0.191	0.192	4.235	1.008	4.193	4.193	0.136	0.833
0.130	0.130	0.235	0.252	4.757	1.073	4.711	4.711	0.148	0.846
0.140	0.140	0.285	0.324	5.279	1.137	5.230	5.230	0.160	0.859
0.150	0.150	0.340	0.408	5.801	1.201	5.749	5.749	0.172	0.871
0.160	0.160	0.400	0.505	6.323	1.264	6.268	6.268	0.185	0.882
0.170	0.170	0.465	0.617	6.846	1.326	6.786	6.786	0.197	0.893
0.180	0.180	0.536	0.743	7.368	1.387	7.305	7.305	0.210	0.903
0.190	0.190	0.611	0.884	7.890	1.447	7.824	7.824	0.223	0.913
0.200	0.200	0.692	1.042	8.412	1.506	8.342	8.342	0.235	0.922
0.210	0.210	0.778	1.217	8.934	1.565	8.861	8.861	0.248	0.931
0.220	0.220	0.869	1.410	9.456	1.622	9.380	9.380	0.261	0.939
0.230	0.230	0.966	1.621	9.978	1.679	9.899	9.899	0.274	0.947
0.240	0.240	1.067	1.851	10.500	1.734	10.417	10.417	0.287	0.955
0.250	0.250	1.174	2.101	11.023	1.789	10.936	10.936	0.300	0.963
0.260	0.260	1.286	2.371	11.545	1.844	11.455	11.455	0.313	0.970
0.270	0.270	1.403	2.662	12.067	1.897	11.973	11.973	0.326	0.977
0.280	0.280	1.525	2.974	12.589	1.950	12.492	12.492	0.339	0.984
0.290	0.290	1.653	3.309	13.111	2.002	13.011	13.011	0.352	0.990
0.300	0.300	1.786	3.667	13.633	2.054	13.530	13.530	0.366	0.997
0.310	0.310	1.923	4.049	14.155	2.105	14.048	14.048	0.379	1.003
0.320	0.320	2.067	4.454	14.678	2.155	14.567	14.567	0.392	1.009
0.330	0.330	2.215	4.884	15.200	2.205	15.086	15.086	0.406	1.015
0.340	0.340	2.368	5.339	15.722	2.255	15.604	15.604	0.419	1.020
0.350	0.350	2.527	5.821	16.244	2.303	16.123	16.123	0.433	1.026
0.360	0.360	2.691	6.328	16.766	2.352	16.642	16.642	0.446	1.031
0.370	0.370	2.860	6.863	17.288	2.400	17.160	17.160	0.460	1.036
0.380	0.380	3.034	7.425	17.810	2.447	17.679	17.679	0.473	1.041
0.390	0.390	3.212	8.085	18.077	2.517	17.943	17.943	0.489	1.049
0.400	0.400	3.393	8.771	18.344	2.585	18.206	18.206	0.504	1.056
0.410	0.410	3.576	9.483	18.611	2.652	18.469	18.469	0.519	1.062
0.420	0.420	3.762	10.222	18.878	2.717	18.733	18.733	0.535	1.069
0.430	0.430	3.951	10.987	19.145	2.781	18.996	18.996	0.550	1.075
0.440	0.440	4.142	11.779	19.412	2.844	19.260	19.260	0.566	1.081
0.450	0.450	4.336	12.597	19.679	2.905	19.523	19.523	0.581	1.087
0.460	0.460	4.533	13.442	19.946	2.966	19.786	19.786	0.597	1.092
0.470	0.470	4.731	14.419	19.976	3.048	19.810	19.810	0.615	1.100
0.480	0.480	4.929	15.425	20.007	3.130	19.833	19.833	0.632	1.107
0.490	0.490	5.127	16.457	20.038	3.210	19.856	19.856	0.650	1.114
0.500	0.500	5.326	17.515	20.069	3.289	19.879	19.879	0.668	1.120
0.510	0.510	5.527	18.298	20.624	3.310	20.431	20.431	0.680	1.122
0.520	0.520	5.734	19.113	21.179	3.333	20.982	20.982	0.693	1.124
0.530	0.530	5.947	19.961	21.735	3.356	21.533	21.533	0.705	1.126
0.540	0.540	6.165	20.842	22.290	3.381	22.084	22.084	0.718	1.128
0.550	0.550	6.389	21.757	22.846	3.406	22.635	22.635	0.730	1.130
0.560	0.560	6.618	22.706	23.401	3.431	23.186	23.186	0.743	1.132
0.570	0.570	6.852	23.690	23.956	3.457	23.737	23.737	0.756	1.134

Q = 9.3 cfs
d = 0.41'
E = 0.52'

ChicagoRd_0.60%Slope AP19

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.580	4.000	6.000	0.060	7.000	24.830	1.130
2.0	4.330	0.500	5.000	22.170	0.380	8.000	36.000	1.350
3.0	5.000	0.000	6.000	24.170	0.460			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.001	0.000	0.184	0.195	0.180	0.180	0.011	0.487
0.020	0.020	0.004	0.001	0.367	0.310	0.360	0.360	0.021	0.547
0.030	0.030	0.008	0.003	0.551	0.406	0.540	0.540	0.033	0.585
0.040	0.040	0.014	0.007	0.735	0.492	0.720	0.720	0.044	0.614
0.050	0.050	0.023	0.013	0.918	0.571	0.900	0.900	0.055	0.637
0.060	0.060	0.032	0.021	1.102	0.645	1.080	1.080	0.066	0.657
0.070	0.070	0.046	0.029	1.624	0.627	1.599	1.599	0.076	0.653
0.080	0.080	0.064	0.042	2.146	0.654	2.118	2.118	0.087	0.661
0.090	0.090	0.088	0.061	2.669	0.697	2.637	2.637	0.098	0.672
0.100	0.100	0.117	0.088	3.191	0.748	3.155	3.155	0.109	0.684
0.110	0.110	0.151	0.121	3.713	0.802	3.674	3.674	0.120	0.697
0.120	0.120	0.191	0.163	4.235	0.857	4.193	4.193	0.131	0.708
0.130	0.130	0.235	0.214	4.757	0.912	4.711	4.711	0.143	0.720
0.140	0.140	0.285	0.275	5.279	0.967	5.230	5.230	0.155	0.730
0.150	0.150	0.340	0.347	5.801	1.021	5.749	5.749	0.166	0.740
0.160	0.160	0.400	0.430	6.323	1.075	6.268	6.268	0.178	0.750
0.170	0.170	0.465	0.524	6.846	1.127	6.786	6.786	0.190	0.759
0.180	0.180	0.536	0.632	7.368	1.179	7.305	7.305	0.202	0.768
0.190	0.190	0.611	0.752	7.890	1.230	7.824	7.824	0.214	0.776
0.200	0.200	0.692	0.886	8.412	1.281	8.342	8.342	0.226	0.784
0.210	0.210	0.778	1.035	8.934	1.330	8.861	8.861	0.238	0.791
0.220	0.220	0.869	1.199	9.456	1.379	9.380	9.380	0.250	0.799
0.230	0.230	0.966	1.378	9.978	1.427	9.899	9.899	0.262	0.806
0.240	0.240	1.067	1.574	10.500	1.475	10.417	10.417	0.274	0.812
0.250	0.250	1.174	1.786	11.023	1.521	10.936	10.936	0.286	0.819
0.260	0.260	1.286	2.016	11.545	1.567	11.455	11.455	0.298	0.825
0.270	0.270	1.403	2.263	12.067	1.613	11.973	11.973	0.310	0.831
0.280	0.280	1.525	2.529	12.589	1.658	12.492	12.492	0.323	0.836
0.290	0.290	1.653	2.814	13.111	1.702	13.011	13.011	0.335	0.842
0.300	0.300	1.786	3.118	13.633	1.746	13.530	13.530	0.347	0.847
0.310	0.310	1.923	3.442	14.155	1.790	14.048	14.048	0.360	0.853
0.320	0.320	2.067	3.787	14.678	1.832	14.567	14.567	0.372	0.858
0.330	0.330	2.215	4.153	15.200	1.875	15.086	15.086	0.385	0.863
0.340	0.340	2.368	4.540	15.722	1.917	15.604	15.604	0.397	0.867
0.350	0.350	2.527	4.949	16.244	1.958	16.123	16.123	0.410	0.872
0.360	0.360	2.691	5.380	16.766	2.000	16.642	16.642	0.422	0.877
0.370	0.370	2.860	5.835	17.288	2.040	17.160	17.160	0.435	0.881
0.380	0.380	3.034	6.313	17.810	2.081	17.679	17.679	0.447	0.885
0.390	0.390	3.212	6.874	18.077	2.140	17.943	17.943	0.461	0.892
0.400	0.400	3.393	7.457	18.344	2.198	18.206	18.206	0.475	0.898
0.410	0.410	3.576	8.063	18.611	2.255	18.469	18.469	0.489	0.903
0.420	0.420	3.762	8.691	18.878	2.310	18.733	18.733	0.503	0.909
0.430	0.430	3.951	9.342	19.145	2.364	18.996	18.996	0.517	0.914
0.440	0.440	4.142	10.015	19.412	2.418	19.260	19.260	0.531	0.919
0.450	0.450	4.336	10.710	19.679	2.470	19.523	19.523	0.545	0.924
0.460	0.460	4.533	11.428	19.946	2.521	19.786	19.786	0.559	0.929
0.470	0.470	4.731	12.260	19.976	2.592	19.810	19.810	0.574	0.935
0.480	0.480	4.929	13.114	20.007	2.661	19.833	19.833	0.590	0.941
0.490	0.490	5.127	13.992	20.038	2.729	19.856	19.856	0.606	0.947
0.500	0.500	5.326	14.892	20.069	2.796	19.879	19.879	0.622	0.952
0.510	0.510	5.527	15.557	20.624	2.815	20.431	20.431	0.633	0.954
0.520	0.520	5.734	16.250	21.179	2.834	20.982	20.982	0.645	0.956
0.530	0.530	5.947	16.971	21.735	2.854	21.533	21.533	0.657	0.957
0.540	0.540	6.165	17.720	22.290	2.874	22.084	22.084	0.669	0.959
0.550	0.550	6.389	18.498	22.846	2.895	22.635	22.635	0.680	0.961
0.560	0.560	6.618	19.306	23.401	2.917	23.186	23.186	0.692	0.963
0.570	0.570	6.852	20.142	23.956	2.939	23.737	23.737	0.704	0.964

Q = 3.8 cfs
d = 0.32'
E = 0.37'

MANNING'S N = 0.017 SLOPE = 0.019 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	4.000	12.000	0.130	7.000	56.000	0.000
2.0	9.380	0.670	5.000	33.000	0.550	8.000	56.630	0.670
3.0	10.000	0.000	6.000	54.000	0.130	9.000	66.000	0.860

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.006	0.839	0.632	0.816	0.816	0.031	0.996
0.050	0.050	0.041	0.041	1.678	1.003	1.632	1.632	0.066	1.118
0.075	0.075	0.092	0.121	2.518	1.314	2.448	2.448	0.102	1.196
0.100	0.100	0.163	0.260	3.357	1.592	3.263	3.263	0.139	1.255
0.125	0.125	0.255	0.471	4.196	1.847	4.079	4.079	0.178	1.303
0.150	0.150	0.381	0.693	6.419	1.819	6.280	6.280	0.201	1.302
0.175	0.175	0.570	1.083	8.988	1.901	8.826	8.826	0.231	1.319
0.200	0.200	0.822	1.688	11.557	2.053	11.373	11.373	0.266	1.346
0.225	0.225	1.138	2.539	14.126	2.230	13.920	13.920	0.302	1.375
0.250	0.250	1.518	3.670	16.695	2.417	16.466	16.466	0.341	1.404
0.275	0.275	1.962	5.114	19.263	2.607	19.013	19.013	0.381	1.431
0.300	0.300	2.469	6.902	21.832	2.795	21.560	21.560	0.422	1.456
0.325	0.325	3.040	9.063	24.401	2.982	24.106	24.106	0.463	1.480
0.350	0.350	3.674	11.628	26.970	3.165	26.653	26.653	0.506	1.503
0.375	0.375	4.372	14.625	29.539	3.345	29.200	29.200	0.549	1.524
0.400	0.400	5.134	18.081	32.108	3.522	31.746	31.746	0.593	1.544
0.425	0.425	5.960	22.021	34.677	3.695	34.293	34.293	0.637	1.563
0.450	0.450	6.849	26.473	37.246	3.865	36.840	36.840	0.682	1.580
0.475	0.475	7.802	31.462	39.815	4.033	39.386	39.386	0.728	1.597
0.500	0.500	8.818	37.011	42.383	4.197	41.933	41.933	0.774	1.614
0.525	0.525	9.898	43.145	44.952	4.359	44.479	44.479	0.821	1.629
0.550	0.550	11.042	49.887	47.521	4.518	47.026	47.026	0.867	1.644
0.575	0.575	12.218	58.999	47.590	4.829	47.073	47.073	0.938	1.671
0.600	0.600	13.396	68.709	47.658	5.129	47.119	47.119	1.009	1.696
0.625	0.625	14.574	79.002	47.726	5.421	47.166	47.166	1.082	1.719
0.650	0.650	15.754	89.859	47.795	5.704	47.213	47.213	1.156	1.741
0.675	0.675	16.936	100.607	48.343	5.940	47.743	47.743	1.224	1.758
0.700	0.700	18.161	109.330	50.811	6.020	50.211	50.211	1.264	1.765
0.725	0.725	19.447	118.724	53.278	6.105	52.678	52.678	1.305	1.771
0.750	0.750	20.795	128.805	55.746	6.194	55.145	55.145	1.347	1.778
0.775	0.775	22.204	139.592	58.213	6.287	57.612	57.612	1.390	1.785
0.800	0.800	23.675	151.104	60.681	6.382	60.079	60.079	1.434	1.792
0.825	0.825	25.208	163.359	63.149	6.480	62.546	62.546	1.478	1.800
0.850	0.850	26.802	176.376	65.616	6.581	65.013	65.013	1.524	1.807

Q = 5.9 cfs
d = 0.29'
E = 0.40'

30.25ftAlley_1.00% Crown_0.60% Slope AP21

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.330	4.000	15.130	0.250	7.000	30.250	0.330
2.0	0.630	0.000	5.000	27.630	0.130			
3.0	2.630	0.130	6.000	29.630	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.010	0.010	0.002	0.000	0.351	0.196	0.346	0.346	0.011	0.488
0.020	0.020	0.007	0.002	0.702	0.311	0.691	0.691	0.022	0.548
0.030	0.030	0.016	0.006	1.054	0.407	1.037	1.037	0.033	0.586
0.040	0.040	0.028	0.014	1.405	0.494	1.382	1.382	0.044	0.615
0.050	0.050	0.043	0.025	1.756	0.573	1.728	1.728	0.055	0.639
0.060	0.060	0.062	0.040	2.107	0.647	2.073	2.073	0.067	0.658
0.070	0.070	0.085	0.061	2.458	0.717	2.419	2.419	0.078	0.675
0.080	0.080	0.111	0.087	2.809	0.783	2.765	2.765	0.090	0.691
0.090	0.090	0.140	0.119	3.161	0.847	3.110	3.110	0.101	0.704
0.100	0.100	0.173	0.157	3.512	0.909	3.456	3.456	0.113	0.717
0.110	0.110	0.209	0.203	3.863	0.969	3.801	3.801	0.125	0.728
0.120	0.120	0.249	0.255	4.214	1.027	4.147	4.147	0.136	0.739
0.130	0.130	0.292	0.316	4.565	1.083	4.492	4.492	0.148	0.749
0.140	0.140	0.348	0.328	6.692	0.943	6.614	6.614	0.154	0.725
0.150	0.150	0.424	0.380	8.818	0.896	8.735	8.735	0.162	0.717
0.160	0.160	0.522	0.465	10.944	0.891	10.856	10.856	0.172	0.716
0.170	0.170	0.641	0.582	13.070	0.908	12.977	12.977	0.183	0.720
0.180	0.180	0.782	0.732	15.197	0.937	15.098	15.098	0.194	0.726
0.190	0.190	0.943	0.918	17.323	0.973	17.220	17.220	0.205	0.733
0.200	0.200	1.126	1.141	19.449	1.013	19.341	19.341	0.216	0.740
0.210	0.210	1.330	1.406	21.575	1.057	21.462	21.462	0.227	0.748
0.220	0.220	1.555	1.713	23.702	1.102	23.583	23.583	0.239	0.756
0.230	0.230	1.802	2.068	25.828	1.147	25.705	25.705	0.250	0.764
0.240	0.240	2.070	2.471	27.954	1.194	27.826	27.826	0.262	0.772
0.250	0.250	2.358	2.925	30.080	1.240	29.947	29.947	0.274	0.779
0.260	0.260	2.658	3.567	30.123	1.342	29.985	29.985	0.288	0.795
0.270	0.270	2.958	4.259	30.166	1.440	30.023	30.023	0.302	0.809
0.280	0.280	3.258	4.999	30.209	1.534	30.061	30.061	0.317	0.822
0.290	0.290	3.559	5.786	30.252	1.626	30.098	30.098	0.331	0.833
0.300	0.300	3.860	6.619	30.295	1.715	30.136	30.136	0.346	0.845
0.310	0.310	4.162	7.496	30.337	1.801	30.174	30.174	0.360	0.855
0.320	0.320	4.464	8.416	30.380	1.885	30.212	30.212	0.375	0.865

Q = 4.2 cfs
d = 0.27'
E = 0.30'

52ftROW_2.00% Crown_0.60% Slope AP22

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.003	0.821	0.349	2.019	0.769	0.027	0.551
0.050	0.050	0.038	0.021	1.642	0.554	2.788	1.538	0.055	0.618
0.075	0.075	0.087	0.063	2.463	0.726	3.558	2.308	0.083	0.661
0.100	0.100	0.154	0.135	3.283	0.880	4.327	3.077	0.112	0.694
0.125	0.125	0.240	0.245	4.104	1.021	5.096	3.846	0.141	0.720
0.150	0.150	0.360	0.361	6.309	1.004	7.250	6.000	0.166	0.722
0.175	0.175	0.541	0.568	8.859	1.050	9.750	8.500	0.192	0.734
0.200	0.200	0.785	0.892	11.410	1.137	12.250	11.000	0.220	0.750
0.225	0.225	1.091	1.351	13.960	1.238	14.750	13.500	0.249	0.768
0.250	0.250	1.460	1.962	16.511	1.344	17.250	16.000	0.278	0.784
0.275	0.275	1.891	2.744	19.061	1.451	19.750	18.500	0.308	0.800
0.300	0.300	2.385	3.715	21.612	1.558	22.250	21.000	0.338	0.815
0.325	0.325	2.941	4.891	24.162	1.663	24.750	23.500	0.368	0.829
0.350	0.350	3.560	6.289	26.713	1.767	27.250	26.000	0.399	0.842
0.375	0.375	4.241	7.924	29.263	1.868	29.750	28.500	0.429	0.854
0.400	0.400	4.985	9.810	31.814	1.968	32.250	31.000	0.460	0.865
0.425	0.425	5.780	12.285	32.864	2.125	33.250	32.000	0.495	0.882
0.450	0.450	6.580	15.232	32.914	2.315	33.250	32.000	0.533	0.900
0.475	0.475	7.380	18.424	32.964	2.496	33.250	32.000	0.572	0.916
0.500	0.500	8.180	21.849	33.014	2.671	33.250	32.000	0.611	0.931
0.525	0.525	8.980	25.500	33.064	2.840	33.250	32.000	0.650	0.945
0.550	0.550	9.780	29.368	33.114	3.003	33.250	32.000	0.690	0.958
0.575	0.575	10.580	33.446	33.164	3.161	33.250	32.000	0.730	0.969
0.600	0.600	11.380	37.728	33.214	3.315	33.250	32.000	0.771	0.980
0.625	0.625	12.180	42.209	33.264	3.465	33.250	32.000	0.812	0.990
0.650	0.650	12.980	46.883	33.314	3.612	33.250	32.000	0.853	1.000
0.675	0.675	13.781	51.249	33.858	3.719	33.743	32.493	0.890	1.007
0.700	0.700	14.662	52.964	37.625	3.612	36.211	36.211	0.903	1.001
0.725	0.725	15.598	56.237	40.143	3.605	38.678	38.678	0.927	1.001
0.750	0.750	16.596	59.881	42.660	3.608	41.145	41.145	0.953	1.002
0.775	0.775	17.655	63.897	45.178	3.619	43.612	43.612	0.979	1.003
0.800	0.800	18.776	68.288	47.696	3.637	46.079	46.079	1.006	1.004
0.825	0.825	19.959	73.059	50.213	3.660	48.546	48.546	1.033	1.006
0.850	0.850	21.204	78.215	52.731	3.689	51.013	51.013	1.062	1.009

Q = 8.2 cfs
d = 0.38'
E = 0.43'

MANNING'S N = 0.017 SLOPE = 0.020 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.006	0.821	0.642	2.019	0.769	0.031	1.013
0.050	0.050	0.038	0.039	1.642	1.020	2.788	1.538	0.066	1.137
0.075	0.075	0.087	0.116	2.463	1.336	3.558	2.308	0.103	1.216
0.100	0.100	0.154	0.249	3.283	1.619	4.327	3.077	0.141	1.276
0.125	0.125	0.240	0.452	4.104	1.878	5.096	3.846	0.180	1.325
0.150	0.150	0.360	0.665	6.309	1.846	7.250	6.000	0.203	1.329
0.175	0.175	0.541	1.046	8.859	1.932	9.750	8.500	0.233	1.350
0.200	0.200	0.785	1.642	11.410	2.091	12.250	11.000	0.268	1.380
0.225	0.225	1.091	2.485	13.960	2.277	14.750	13.500	0.306	1.412
0.250	0.250	1.460	3.609	16.511	2.472	17.250	16.000	0.345	1.443
0.275	0.275	1.891	5.048	19.061	2.669	19.750	18.500	0.386	1.472
0.300	0.300	2.385	6.834	21.612	2.865	22.250	21.000	0.428	1.499
0.325	0.325	2.941	8.997	24.162	3.059	24.750	23.500	0.471	1.524
0.350	0.350	3.560	11.568	26.713	3.249	27.250	26.000	0.514	1.548
0.375	0.375	4.241	14.574	29.263	3.436	29.750	28.500	0.559	1.570
0.400	0.400	4.985	18.045	31.814	3.620	32.250	31.000	0.604	1.591
0.425	0.425	5.780	22.597	32.864	3.910	33.250	32.000	0.663	1.622
0.450	0.450	6.580	28.018	32.914	4.258	33.250	32.000	0.732	1.655
0.475	0.475	7.380	33.888	32.964	4.592	33.250	32.000	0.803	1.686
0.500	0.500	8.180	40.189	33.014	4.913	33.250	32.000	0.875	1.713
0.525	0.525	8.980	46.904	33.064	5.223	33.250	32.000	0.949	1.738
0.550	0.550	9.780	54.018	33.114	5.523	33.250	32.000	1.025	1.761
0.575	0.575	10.580	61.520	33.164	5.815	33.250	32.000	1.101	1.783
0.600	0.600	11.380	69.397	33.214	6.098	33.250	32.000	1.178	1.803
0.625	0.625	12.180	77.639	33.264	6.374	33.250	32.000	1.257	1.822
0.650	0.650	12.980	86.236	33.314	6.644	33.250	32.000	1.337	1.839
0.675	0.675	13.781	94.267	33.858	6.840	33.743	32.493	1.403	1.852
0.700	0.700	14.662	97.420	37.625	6.644	36.211	36.211	1.387	1.841
0.725	0.725	15.598	103.442	40.143	6.632	38.678	38.678	1.409	1.841
0.750	0.750	16.596	110.145	42.660	6.637	41.145	41.145	1.435	1.842
0.775	0.775	17.655	117.532	45.178	6.657	43.612	43.612	1.464	1.845
0.800	0.800	18.776	125.608	47.696	6.690	46.079	46.079	1.496	1.848
0.825	0.825	19.959	134.383	50.213	6.733	48.546	48.546	1.530	1.851
0.850	0.850	21.204	143.867	52.731	6.785	51.013	51.013	1.566	1.855

Q = 4.6 cfs
d = 0.27'
E = 0.37'

MANNING'S N = 0.017 SLOPE = 0.005 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	5.000	12.000	0.130	9.000	42.000	0.670
2.0	9.380	0.670	6.000	26.000	0.410	10.000	42.630	0.670
3.0	10.000	0.670	7.000	40.000	0.130	11.000	52.000	0.860
4.0	10.000	0.000	8.000	42.000	0.000			

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.003	0.821	0.319	2.019	0.769	0.027	0.503
0.050	0.050	0.038	0.019	1.642	0.506	2.788	1.538	0.054	0.564
0.075	0.075	0.087	0.057	2.463	0.663	3.558	2.308	0.082	0.604
0.100	0.100	0.154	0.124	3.283	0.803	4.327	3.077	0.110	0.633
0.125	0.125	0.240	0.224	4.104	0.932	5.096	3.846	0.139	0.657
0.150	0.150	0.360	0.330	6.309	0.916	7.250	6.000	0.163	0.659
0.175	0.175	0.541	0.519	8.859	0.959	9.750	8.500	0.189	0.670
0.200	0.200	0.785	0.815	11.410	1.038	12.250	11.000	0.217	0.685
0.225	0.225	1.091	1.233	13.960	1.130	14.750	13.500	0.245	0.701
0.250	0.250	1.460	1.791	16.511	1.227	17.250	16.000	0.273	0.716
0.275	0.275	1.891	2.505	19.061	1.325	19.750	18.500	0.302	0.730
0.300	0.300	2.385	3.392	21.612	1.422	22.250	21.000	0.331	0.744
0.325	0.325	2.941	4.465	24.162	1.518	24.750	23.500	0.361	0.757
0.350	0.350	3.560	5.741	26.713	1.613	27.250	26.000	0.390	0.768
0.375	0.375	4.241	7.233	29.263	1.705	29.750	28.500	0.420	0.779
0.400	0.400	4.985	8.955	31.814	1.796	32.250	31.000	0.450	0.790
0.425	0.425	5.780	11.215	32.864	1.940	33.250	32.000	0.484	0.805
0.450	0.450	6.580	13.905	32.914	2.113	33.250	32.000	0.519	0.822
0.475	0.475	7.380	16.819	32.964	2.279	33.250	32.000	0.556	0.837
0.500	0.500	8.180	19.945	33.014	2.438	33.250	32.000	0.592	0.850
0.525	0.525	8.980	23.278	33.064	2.592	33.250	32.000	0.630	0.863
0.550	0.550	9.780	26.809	33.114	2.741	33.250	32.000	0.667	0.874
0.575	0.575	10.580	30.532	33.164	2.886	33.250	32.000	0.705	0.885
0.600	0.600	11.380	34.441	33.214	3.026	33.250	32.000	0.742	0.895
0.625	0.625	12.180	38.532	33.264	3.164	33.250	32.000	0.781	0.904
0.650	0.650	12.980	42.798	33.314	3.297	33.250	32.000	0.819	0.913
0.675	0.675	13.781	46.784	33.858	3.395	33.743	32.493	0.854	0.919
0.700	0.700	14.662	48.349	37.625	3.298	36.211	36.211	0.869	0.914
0.725	0.725	15.598	51.337	40.143	3.291	38.678	38.678	0.893	0.914
0.750	0.750	16.596	54.664	42.660	3.294	41.145	41.145	0.919	0.914
0.775	0.775	17.655	58.330	45.178	3.304	43.612	43.612	0.945	0.915
0.800	0.800	18.776	62.338	47.696	3.320	46.079	46.079	0.971	0.917
0.825	0.825	19.959	66.693	50.213	3.341	48.546	48.546	0.999	0.919
0.850	0.850	21.204	71.400	52.731	3.367	51.013	51.013	1.026	0.921

Q = 12.3 cfs
d = 0.44'
E = 0.50'

MANNING'S N = 0.017 SLOPE = 0.009 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	4.000	12.000	0.130	7.000	56.000	0.000
2.0	9.380	0.670	5.000	33.000	0.550	8.000	56.630	0.670
3.0	10.000	0.000	6.000	54.000	0.130	9.000	66.000	0.860

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.020	0.020	0.007	0.002	0.671	0.382	0.653	0.653	0.022	0.673
0.040	0.040	0.026	0.016	1.343	0.606	1.305	1.305	0.046	0.756
0.060	0.060	0.059	0.047	2.014	0.794	1.958	1.958	0.070	0.809
0.080	0.080	0.104	0.100	2.686	0.962	2.611	2.611	0.094	0.848
0.100	0.100	0.163	0.182	3.357	1.117	3.263	3.263	0.119	0.880
0.120	0.120	0.235	0.296	4.028	1.261	3.916	3.916	0.145	0.908
0.140	0.140	0.323	0.415	5.392	1.284	5.261	5.261	0.166	0.913
0.160	0.160	0.449	0.579	7.447	1.289	7.299	7.299	0.186	0.916
0.180	0.180	0.615	0.832	9.502	1.352	9.336	9.336	0.208	0.928
0.200	0.200	0.822	1.184	11.557	1.440	11.373	11.373	0.232	0.944
0.220	0.220	1.070	1.647	13.612	1.539	13.410	13.410	0.257	0.960
0.240	0.240	1.359	2.232	15.667	1.643	15.448	15.448	0.282	0.977
0.260	0.260	1.688	2.952	17.722	1.749	17.485	17.485	0.308	0.992
0.280	0.280	2.058	3.818	19.777	1.855	19.522	19.522	0.334	1.007
0.300	0.300	2.469	4.841	21.832	1.961	21.560	21.560	0.360	1.021
0.320	0.320	2.921	6.032	23.887	2.065	23.597	23.597	0.386	1.035
0.340	0.340	3.413	7.401	25.943	2.169	25.634	25.634	0.413	1.048
0.360	0.360	3.946	8.960	27.998	2.271	27.672	27.672	0.440	1.060
0.380	0.380	4.520	10.717	30.053	2.371	29.709	29.709	0.467	1.072
0.400	0.400	5.134	12.682	32.108	2.470	31.746	31.746	0.495	1.083
0.420	0.420	5.790	14.865	34.163	2.568	33.784	33.784	0.523	1.093
0.440	0.440	6.486	17.275	36.218	2.664	35.821	35.821	0.550	1.104
0.460	0.460	7.222	19.922	38.273	2.758	37.858	37.858	0.578	1.113
0.480	0.480	8.000	22.814	40.328	2.852	39.896	39.896	0.606	1.123
0.500	0.500	8.818	25.960	42.383	2.944	41.933	41.933	0.635	1.132
0.520	0.520	9.677	29.368	44.438	3.035	43.970	43.970	0.663	1.140
0.540	0.540	10.577	33.048	46.494	3.124	46.007	46.007	0.692	1.149
0.560	0.560	11.513	37.497	47.549	3.257	47.045	47.045	0.725	1.161
0.580	0.580	12.454	42.711	47.603	3.430	47.082	47.082	0.763	1.176
0.600	0.600	13.396	48.194	47.658	3.598	47.119	47.119	0.801	1.190
0.620	0.620	14.339	53.937	47.713	3.762	47.157	47.157	0.840	1.203
0.640	0.640	15.282	59.935	47.767	3.922	47.194	47.194	0.879	1.215
0.660	0.660	16.226	66.183	47.822	4.079	47.231	47.231	0.919	1.227
0.680	0.680	17.176	71.754	48.836	4.178	48.237	48.237	0.951	1.234
0.700	0.700	18.161	76.686	50.811	4.223	50.211	50.211	0.977	1.238
0.720	0.720	19.185	81.918	52.785	4.270	52.184	52.184	1.004	1.242
0.740	0.740	20.248	87.458	54.759	4.319	54.158	54.158	1.030	1.245
0.760	0.760	21.351	93.312	56.733	4.370	56.132	56.132	1.057	1.249
0.780	0.780	22.493	99.485	58.707	4.423	58.105	58.105	1.084	1.253
0.800	0.800	23.675	105.986	60.681	4.477	60.079	60.079	1.112	1.257
0.820	0.820	24.896	112.821	62.655	4.532	62.053	62.053	1.139	1.261
0.840	0.840	26.157	119.995	64.629	4.587	64.026	64.026	1.167	1.265

Q = 24.4 cfs
d = 0.49'
E = 0.62'

MANNING'S N = 0.017 SLOPE = 0.006 (ft/ft)

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.000	0.860	4.000	12.000	0.130	7.000	56.000	0.000
2.0	9.380	0.670	5.000	33.000	0.550	8.000	56.630	0.670
3.0	10.000	0.000	6.000	54.000	0.130	9.000	66.000	0.860

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOPWID WATER	TOTAL ENERGY (FT)	FROUDE NO.
0.025	0.025	0.010	0.004	0.839	0.358	0.816	0.816	0.027	0.564
0.050	0.050	0.041	0.023	1.678	0.568	1.632	1.632	0.055	0.633
0.075	0.075	0.092	0.068	2.518	0.744	2.448	2.448	0.084	0.678
0.100	0.100	0.163	0.147	3.357	0.902	3.263	3.263	0.113	0.711
0.125	0.125	0.255	0.267	4.196	1.046	4.079	4.079	0.142	0.738
0.150	0.150	0.381	0.393	6.419	1.030	6.280	6.280	0.167	0.737
0.175	0.175	0.570	0.613	8.988	1.077	8.826	8.826	0.193	0.747
0.200	0.200	0.822	0.956	11.557	1.163	11.373	11.373	0.221	0.762
0.225	0.225	1.138	1.438	14.126	1.263	13.920	13.920	0.250	0.779
0.250	0.250	1.518	2.079	16.695	1.369	16.466	16.466	0.279	0.795
0.275	0.275	1.962	2.897	19.263	1.477	19.013	19.013	0.309	0.810
0.300	0.300	2.469	3.909	21.832	1.583	21.560	21.560	0.339	0.825
0.325	0.325	3.040	5.134	24.401	1.689	24.106	24.106	0.369	0.838
0.350	0.350	3.674	6.587	26.970	1.793	26.653	26.653	0.400	0.851
0.375	0.375	4.372	8.284	29.539	1.895	29.200	29.200	0.431	0.863
0.400	0.400	5.134	10.242	32.108	1.995	31.746	31.746	0.462	0.874
0.425	0.425	5.960	12.474	34.677	2.093	34.293	34.293	0.493	0.885
0.450	0.450	6.849	14.996	37.246	2.189	36.840	36.840	0.525	0.895
0.475	0.475	7.802	17.821	39.815	2.284	39.386	39.386	0.556	0.905
0.500	0.500	8.818	20.964	42.383	2.377	41.933	41.933	0.588	0.914
0.525	0.525	9.898	24.439	44.952	2.469	44.479	44.479	0.620	0.923
0.550	0.550	11.042	28.258	47.521	2.559	47.026	47.026	0.652	0.931
0.575	0.575	12.218	33.419	47.590	2.735	47.073	47.073	0.691	0.946
0.600	0.600	13.396	38.920	47.658	2.905	47.119	47.119	0.731	0.961
0.625	0.625	14.574	44.750	47.726	3.070	47.166	47.166	0.772	0.974
0.650	0.650	15.754	50.900	47.795	3.231	47.213	47.213	0.812	0.986
0.675	0.675	16.936	56.988	48.343	3.365	47.743	47.743	0.851	0.996
0.700	0.700	18.161	61.929	50.811	3.410	50.211	50.211	0.881	1.000
0.725	0.725	19.447	67.250	53.278	3.458	52.678	52.678	0.911	1.003
0.750	0.750	20.795	72.960	55.746	3.509	55.145	55.145	0.941	1.007
0.775	0.775	22.204	79.071	58.213	3.561	57.612	57.612	0.972	1.011
0.800	0.800	23.675	85.592	60.681	3.615	60.079	60.079	1.003	1.015
0.825	0.825	25.208	92.533	63.149	3.671	62.546	62.546	1.035	1.019
0.850	0.850	26.802	99.907	65.616	3.728	65.013	65.013	1.066	1.023

Q = 19.2 cfs
d = 0.49'
E = 0.57'

ANALYSIS OF AN INLET IN A SUMP CONDITION

IN-1

INLET TYPE: Single Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

Wing opening

C= 3.0

L= 4.0 ft

$Q=3.0(4.0)H^{1.5}= 12.0H^{1.5}$

Grate opening

C=3.0

L(single grate)=[(2.67')+2(1.8')]=6.27 ft

$Q=3.0(6.27)H^{1.5}=18.81*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Grate opening

C=0.6

A(single grate)=3.72 sf

$Q=0.6*3.72*(64.4*H)^{0.5}$

Wing opening*

C=0.6

A=2.0 sf

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calcs

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			WING OPENING	SINGLE GRATE	SINGLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at single "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.59	5.66	1.35	Weir controls on grate analysis
	0.20	0.20	1.07	1.68	8.01	3.83	
	0.30	0.30	1.97	3.09	9.81	7.03	
	0.40	0.40	3.04	4.76	11.33	10.83	
	0.50	0.50	4.24	6.65	12.67	15.14	
TOP OF CURB	0.60	0.60	5.58	8.74	13.87	19.90	
	0.70	0.70	7.03	11.02	14.99	25.07	Q(100 yr) = 20.3 cfs
	0.80	0.80	8.59	13.46	16.02	30.63	
ROW LIMIT	0.86	0.86	9.52	14.92	16.58	33.96	
	0.90	0.90	10.25	16.06	16.99	36.55	
	1.00	1.00	12.00	18.81	17.91	41.91	Q(2x100 yr) = 40.6 cfs

NOTE: The total runoff intercepted by the inlet at the low point in the road is:

$Q(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$

ANALYSIS OF AN INLET IN A SUMP CONDITION

IN-2

INLET TYPE: Single Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

Wing opening

C= 3.0

L= 4.0 ft

$Q=3.0(4.0)H^{1.5}= 12.0H^{*1.5}$

Grate opening

C=3.0

L(single grate)=[(2.67')+2(1.8')]=6.27 ft

$Q=3.0(6.27)H^{1.5}=18.81*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Grate opening

C=0.6

A(single grate)=3.72 sf

$Q=0.6*3.72*(64.4*H)^{0.5}$

Wing opening*

C=0.6

A=2.0 sf

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calcs

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			WING OPENING	SINGLE GRATE	SINGLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at single "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.59	5.66	1.35	Weir controls on grate analysis
	0.20	0.20	1.07	1.68	8.01	3.83	
	0.30	0.30	1.97	3.09	9.81	7.03	
	0.40	0.40	3.04	4.76	11.33	10.83	
	0.50	0.50	4.24	6.65	12.67	15.14	
TOP OF CURB	0.60	0.60	5.58	8.74	13.87	19.90	Q(100 yr) = 18.1 cfs
	0.70	0.70	7.03	11.02	14.99	25.07	
	0.80	0.80	8.59	13.46	16.02	30.63	
ROW LIMIT	0.86	0.86	9.52	14.92	16.58	33.96	
	0.90	0.90	10.25	16.06	16.99	36.55	Q(2x100 yr) = 36.2 cfs
	1.00	1.00	12.00	18.81	17.91	41.91	

NOTE: The total runoff intercepted by the inlet at the low point in the road is:

$Q(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$

ANALYSIS OF AN INLET IN A SUMP CONDITION -

IN 3 and IN 4

INLET TYPE: Double Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Wing opening

Grate opening

Grate opening

Wing opening*

C= 3.0

C=3.0

C=0.6

C=0.6

L= 4.0 ft

L(double grate)=[2(2.67')+2(1.8')]=8.94 ft

A(double grate)=8.19 sf

A=2.0 sf

$Q=3.0(4.0')H^{1.5}= 12.0H^{1.5}$

$Q=3.0(8.94)H^{1.5}=26.82*H^{1.5}$

$Q=0.6(7.14)((64.4*H))^{0.5}$

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calc

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	Q=51.23 cfs/2 = 25.62 cfs per inlet COMMENTS:
			"A" OPENING	DOUBLE GRATE	DOUBLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at double "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.85	12.47	1.61	Weir controls on grate analysis
	0.20	0.20	1.07	2.40	17.64	4.55	
	0.30	0.30	1.97	4.41	21.60	8.35	
	0.40	0.40	3.04	6.78	24.94	12.86	
	0.50	0.50	4.24	9.48	27.88	17.97	
TOP OF CURB	0.60	0.60	5.58	12.46	30.55	23.62	@ Q(100 yr) = 18.35 cfs
	0.70	0.70	7.03	15.71	32.99	29.76	
	0.80	0.80	8.59	19.19	35.27	36.36	
ROW LIMIT	0.86	0.86	9.52	21.28	36.51	40.32	@ Q(2 x100 yr) = 36.7 cfs
	0.90	0.90	10.25	22.90	37.41	43.39	
	1.00	1.00	12.00	26.82	39.43	50.82	
	1.10	1.10	13.84	30.94	41.36	58.63	

NOTE:

The total runoff intercepted by the inlet at the low point in the road is:

$Q_r(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})]$.

ANALYSIS OF AN INLET IN A SUMP CONDITION

IN-5

INLET TYPE: Single Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

Wing opening

C= 3.0

L= 4.0 ft

$Q=3.0(4.0)H^{1.5}= 12.0H^{**1.5}$

Grate opening

C=3.0

L(single grate)=[(2.67')+2(1.8')]=6.27 ft

$Q=3.0(6.27)H^{1.5}=18.81*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Grate opening

C=0.6

A(single grate)=3.72 sf

$Q=0.6*3.72*(64.4*H)^{0.5}$

Wing opening*

C=0.6

A=2.0 sf

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calcs

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			WING OPENING	SINGLE GRATE	SINGLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at single "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.59	5.66	1.35	Weir controls on grate analysis
	0.20	0.20	1.07	1.68	8.01	3.83	
	0.30	0.30	1.97	3.09	9.81	7.03	
	0.40	0.40	3.04	4.76	11.33	10.83	
	0.50	0.50	4.24	6.65	12.67	15.14	Q(100 yr) = 13.1 cfs
TOP OF CURB	0.60	0.60	5.58	8.74	13.87	19.90	
	0.70	0.70	7.03	11.02	14.99	25.07	
	0.80	0.80	8.59	13.46	16.02	30.63	Q(2x100 yr) = 26.2 cfs
ROW LIMIT	0.86	0.86	9.52	14.92	16.58	33.96	
	0.90	0.90	10.25	16.06	16.99	36.55	
	1.00	1.00	12.00	18.81	17.91	41.91	

NOTE: The total runoff intercepted by the inlet at the low point in the road is:

$Q(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$

ANALYSIS OF AN INLET IN A SUMP CONDITION -

IN 6

INLET TYPE: Double Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Wing opening

Grate opening

Grate opening

Wing opening*

C= 3.0

C=3.0

C=0.6

C=0.6

L= 4.0 ft

L(double grate)=[2(2.67')+2(1.8')]=8.94 ft

A(double grate)=8.19 sf

A=2.0 sf

Q=3.0(4.0')H^{1.5}= 12.0H^{1.5}

Q=3.0(8.94)H^{1.5}=26.82*H^{1.5}

Q=0.6(7.14)((64.4*H))^{0.5}

Q=1.2*(64.4*H)^{0.5}

*not included in the orifice calc

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			"A" OPENING	DOUBLE GRATE	DOUBLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at double "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.85	12.47	1.61	Weir controls on grate analysis
	0.20	0.20	1.07	2.40	17.64	4.55	
	0.30	0.30	1.97	4.41	21.60	8.35	
	0.40	0.40	3.04	6.78	24.94	12.86	
	0.50	0.50	4.24	9.48	27.88	17.97	
TOP OF CURB	0.60	0.60	5.58	12.46	30.55	23.62	
	0.70	0.70	7.03	15.71	32.99	29.76	@ Q(100 yr) = 24.4 cfs
	0.80	0.80	8.59	19.19	35.27	36.36	
ROW LIMIT	0.86	0.86	9.52	21.28	36.51	40.32	
	0.90	0.90	10.25	22.90	37.41	43.39	
	1.00	1.00	12.00	26.82	39.43	50.82	@ Q(2 x100 yr) = 48.8 cfs
	1.10	1.10	13.84	30.94	41.36	58.63	

NOTE:

The total runoff intercepted by the inlet at the low point in the road is:

$$Q_r(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$$

ANALYSIS OF AN INLET IN A SUMP CONDITION -

IN 7

INLET TYPE: Double Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Wing opening

Grate opening

Grate opening

Wing opening*

C= 3.0

C=3.0

C=0.6

C=0.6

L= 4.0 ft

L(double grate)=[2(2.67')+2(1.8')]=8.94 ft

A(double grate)=8.19 sf

A=2.0 sf

Q=3.0(4.0')H^{1.5}= 12.0H^{1.5}

Q=3.0(8.94)H^{1.5}=26.82*H^{1.5}

Q=0.6(7.14)((64.4*H))^{0.5}

Q=1.2*(64.4*H)^{0.5}

*not included in the orifice calc

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			"A" OPENING	DOUBLE GRATE	DOUBLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at double "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.85	12.47	1.61	Weir controls on grate analysis
	0.20	0.20	1.07	2.40	17.64	4.55	
	0.30	0.30	1.97	4.41	21.60	8.35	
	0.40	0.40	3.04	6.78	24.94	12.86	
	0.50	0.50	4.24	9.48	27.88	17.97	
TOP OF CURB	0.60	0.60	5.58	12.46	30.55	23.62	@ Q(100 yr) = 19.2 cfs
	0.70	0.70	7.03	15.71	32.99	29.76	
	0.80	0.80	8.59	19.19	35.27	36.36	
ROW LIMIT	0.86	0.86	9.52	21.28	36.51	40.32	@ Q(2 x100 yr) = 38.4 cfs
	0.90	0.90	10.25	22.90	37.41	43.39	
	1.00	1.00	12.00	26.82	39.43	50.82	
	1.10	1.10	13.84	30.94	41.36	58.63	

NOTE:

The total runoff intercepted by the inlet at the low point in the road is:

$Q_r(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})]$.

ANALYSIS OF AN INLET IN A SUMP CONDITION

IN-8 and IN-9

INLET TYPE: Single Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

Wing opening

C= 3.0

L= 4.0 ft

$Q=3.0(4.0)H^{1.5}= 12.0H^{**1.5}$

Grate opening

C=3.0

L(single grate)=[(2.67')+2(1.8')]=6.27 ft

$Q=3.0(6.27)H^{1.5}=18.81*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Grate opening

C=0.6

A(single grate)=3.72 sf

$Q=0.6*3.72*(64.4*H)^{0.5}$

Wing opening*

C=0.6

A=2.0 sf

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calcs

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			WING OPENING	SINGLE GRATE	SINGLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at single "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.59	5.66	1.35	Weir controls on grate analysis
	0.20	0.20	1.07	1.68	8.01	3.83	
	0.30	0.30	1.97	3.09	9.81	7.03	
	0.40	0.40	3.04	4.76	11.33	10.83	
	0.50	0.50	4.24	6.65	12.67	15.14	
TOP OF CURB	0.60	0.60	5.58	8.74	13.87	19.90	Q(100 yr) = 15.5 cfs
	0.70	0.70	7.03	11.02	14.99	25.07	
	0.80	0.80	8.59	13.46	16.02	30.63	Q(2x100 yr) = 30.9 cfs
ROW LIMIT	0.86	0.86	9.52	14.92	16.58	33.96	
	0.90	0.90	10.25	16.06	16.99	36.55	
	1.00	1.00	12.00	18.81	17.91	41.91	

NOTE: The total runoff intercepted by the inlet at the low point in the road is:

$Q(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$

ANALYSIS OF AN INLET IN A SUMP CONDITION

IN-10

INLET TYPE: Single Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

Wing opening

C= 3.0

L= 4.0 ft

$Q=3.0(4.0)H^{1.5}= 12.0H^{*1.5}$

Grate opening

C=3.0

L(single grate)=[(2.67')+2(1.8')]=6.27 ft

$Q=3.0(6.27)H^{1.5}=18.81*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Grate opening

C=0.6

A(single grate)=3.72 sf

$Q=0.6*3.72*(64.4*H)^{0.5}$

Wing opening*

C=0.6

A=2.0 sf

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calcs

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			WING OPENING	SINGLE GRATE	SINGLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at single "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.59	5.66	1.35	Weir controls on grate analysis
	0.20	0.20	1.07	1.68	8.01	3.83	
	0.30	0.30	1.97	3.09	9.81	7.03	Q(100 yr) = 5.1 cfs
	0.40	0.40	3.04	4.76	11.33	10.83	
	0.50	0.50	4.24	6.65	12.67	15.14	Q(2x100 yr) = 10.2 cfs
TOP OF CURB	0.60	0.60	5.58	8.74	13.87	19.90	
	0.70	0.70	7.03	11.02	14.99	25.07	
	0.80	0.80	8.59	13.46	16.02	30.63	
ROW LIMIT	0.86	0.86	9.52	14.92	16.58	33.96	
	0.90	0.90	10.25	16.06	16.99	36.55	
	1.00	1.00	12.00	18.81	17.91	41.91	

NOTE: The total runoff intercepted by the inlet at the low point in the road is:

$Q(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$

ANALYSIS OF AN INLET IN A SUMP CONDITION

IN-11

INLET TYPE: Single Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

Wing opening

C= 3.0

L= 4.0 ft

$Q=3.0(4.0)H^{1.5}= 12.0H^{1.5}$

Grate opening

C=3.0

L(single grate)=[(2.67')+2(1.8')]=6.27 ft

$Q=3.0(6.27)H^{1.5}=18.81*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Grate opening

C=0.6

A(single grate)=3.72 sf

$Q=0.6*3.72*(64.4*H)^{0.5}$

Wing opening*

C=0.6

A=2.0 sf

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calcs

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			WING OPENING	SINGLE GRATE	SINGLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at single "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.59	5.66	1.35	Weir controls on grate analysis
	0.20	0.20	1.07	1.68	8.01	3.83	
	0.30	0.30	1.97	3.09	9.81	7.03	Q(100 yr) = 5.9 cfs
	0.40	0.40	3.04	4.76	11.33	10.83	
	0.50	0.50	4.24	6.65	12.67	15.14	Q(2x100 yr) = 11.8 cfs
TOP OF CURB	0.60	0.60	5.58	8.74	13.87	19.90	
	0.70	0.70	7.03	11.02	14.99	25.07	
	0.80	0.80	8.59	13.46	16.02	30.63	
ROW LIMIT	0.86	0.86	9.52	14.92	16.58	33.96	
	0.90	0.90	10.25	16.06	16.99	36.55	
	1.00	1.00	12.00	18.81	17.91	41.91	

NOTE: The total runoff intercepted by the inlet at the low point in the road is:

$Q(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$

ANALYSIS OF AN INLET IN A SUMP CONDITION

IN-12 and IN-13

INLET TYPE: Single Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

Wing opening

C= 3.0

L= 4.0 ft

$Q=3.0(4.0)H^{1.5}= 12.0H^{1.5}$

Grate opening

C=3.0

L(single grate)=[(2.67')+2(1.8')]=6.27 ft

$Q=3.0(6.27)H^{1.5}=18.81*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Grate opening

C=0.6

A(single grate)=3.72 sf

$Q=0.6*3.72*(64.4*H)^{0.5}$

Wing opening*

C=0.6

A=2.0 sf

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calcs

	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			WING OPENING	SINGLE GRATE	SINGLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at single "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.59	5.66	1.35	Weir controls on grate analysis
	0.20	0.20	1.07	1.68	8.01	3.83	
	0.30	0.30	1.97	3.09	9.81	7.03	
	0.40	0.40	3.04	4.76	11.33	10.83	Q(100 yr) = 7.3 cfs
	0.50	0.50	4.24	6.65	12.67	15.14	Q(2x100 yr) = 14.6 cfs
TOP OF CURB	0.60	0.60	5.58	8.74	13.87	19.90	
	0.70	0.70	7.03	11.02	14.99	25.07	
	0.80	0.80	8.59	13.46	16.02	30.63	
ROW LIMIT	0.86	0.86	9.52	14.92	16.58	33.96	
	0.90	0.90	10.25	16.06	16.99	36.55	
	1.00	1.00	12.00	18.81	17.91	41.91	

NOTE: The total runoff intercepted by the inlet at the low point in the road is:

$Q(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$

ANALYSIS OF AN INLET IN A SUMP CONDITION

IN-14

INLET TYPE: Single Grate Type "A" with curb opening wings on both sides on inlet.

WEIR: $Q=C*L*H^{1.5}$

Wing opening

C= 3.0

L= 4.0 ft

$Q=3.0(4.0)H^{1.5}= 12.0H^{*1.5}$

Grate opening

C=3.0

L(single grate)=[(2.67')+2(1.8')]=6.27 ft

$Q=3.0(6.27)H^{1.5}=18.81*H^{1.5}$

ORIFICE: $Q=C*A*(2*G*H)^{0.5}$

Grate opening

C=0.6

A(single grate)=3.72 sf

$Q=0.6*3.72*(64.4*H)^{0.5}$

Wing opening*

C=0.6

A=2.0 sf

$Q=1.2*(64.4*H)^{0.5}$

*not included in the orifice calcs

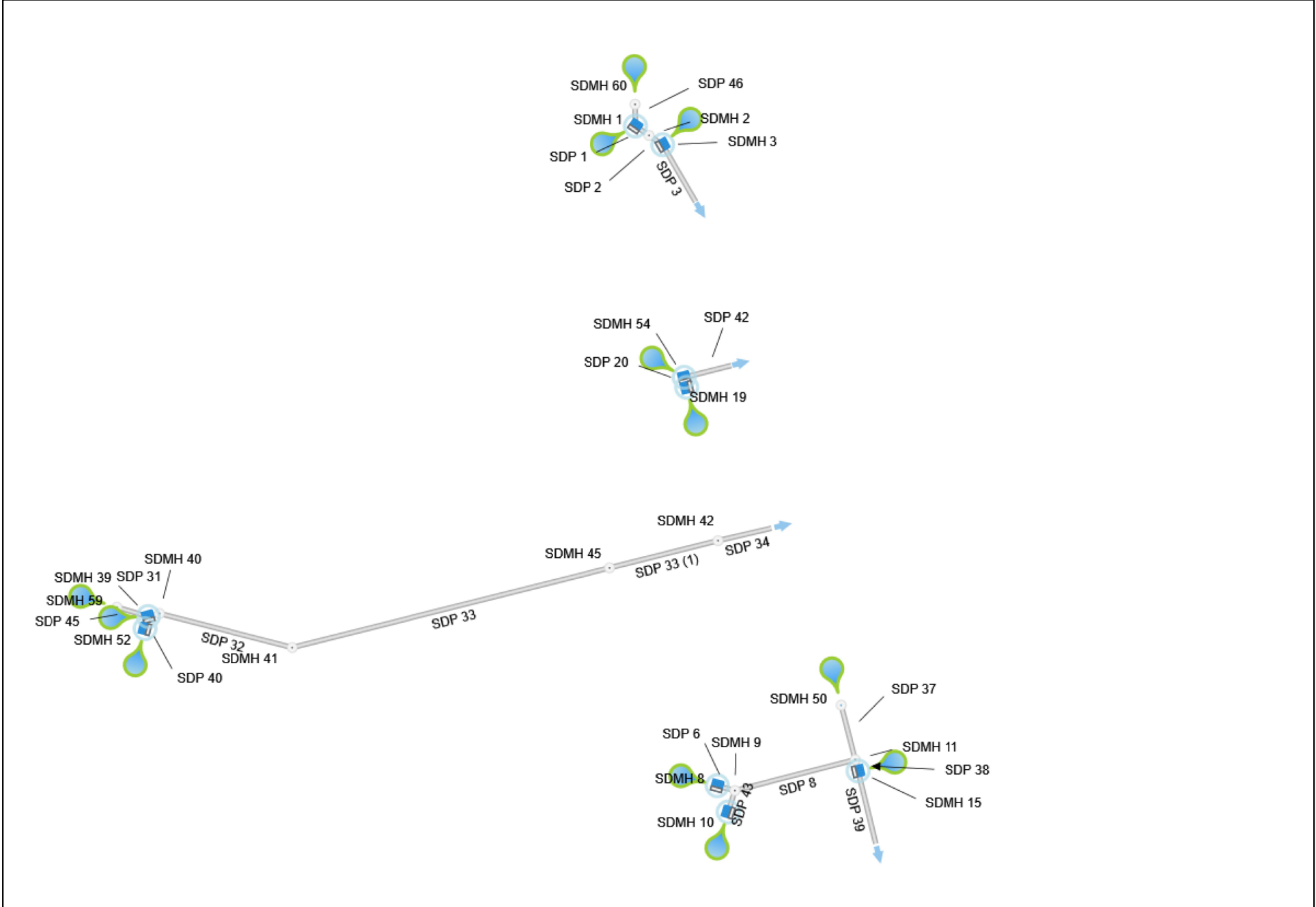
	WS ELEVATION	HEIGHT ABOVE INLET	Q (CFS) WEIR	Q (CFS) WEIR	Q (CFS) ORIFICE	TOTAL Q (CFS)	COMMENTS:
			WING OPENING	SINGLE GRATE	SINGLE GRATE		
~FL @ INLET	0.00	0.00	0.00	0.00	0.00	0.00	Flow at single "A" inlet w/ two wing openings
	0.10	0.10	0.38	0.59	5.66	1.35	Weir controls on grate analysis
	0.20	0.20	1.07	1.68	8.01	3.83	Q(100 yr) = 3.8 cfs
	0.30	0.30	1.97	3.09	9.81	7.03	Q(2x100 yr) = 7.6 cfs
	0.40	0.40	3.04	4.76	11.33	10.83	
	0.50	0.50	4.24	6.65	12.67	15.14	
TOP OF CURB	0.60	0.60	5.58	8.74	13.87	19.90	
	0.70	0.70	7.03	11.02	14.99	25.07	
	0.80	0.80	8.59	13.46	16.02	30.63	
ROW LIMIT	0.86	0.86	9.52	14.92	16.58	33.96	
	0.90	0.90	10.25	16.06	16.99	36.55	
	1.00	1.00	12.00	18.81	17.91	41.91	

NOTE: The total runoff intercepted by the inlet at the low point in the road is:

$Q(100) = 2*[(\text{runoff of the wing opening}) + (\text{the lesser of the weir or orifice amount taken by the double grate})].$

**APPENDIX C:
STORM DRAIN PIPE ANALYSIS**

Plan View North of Dekooning

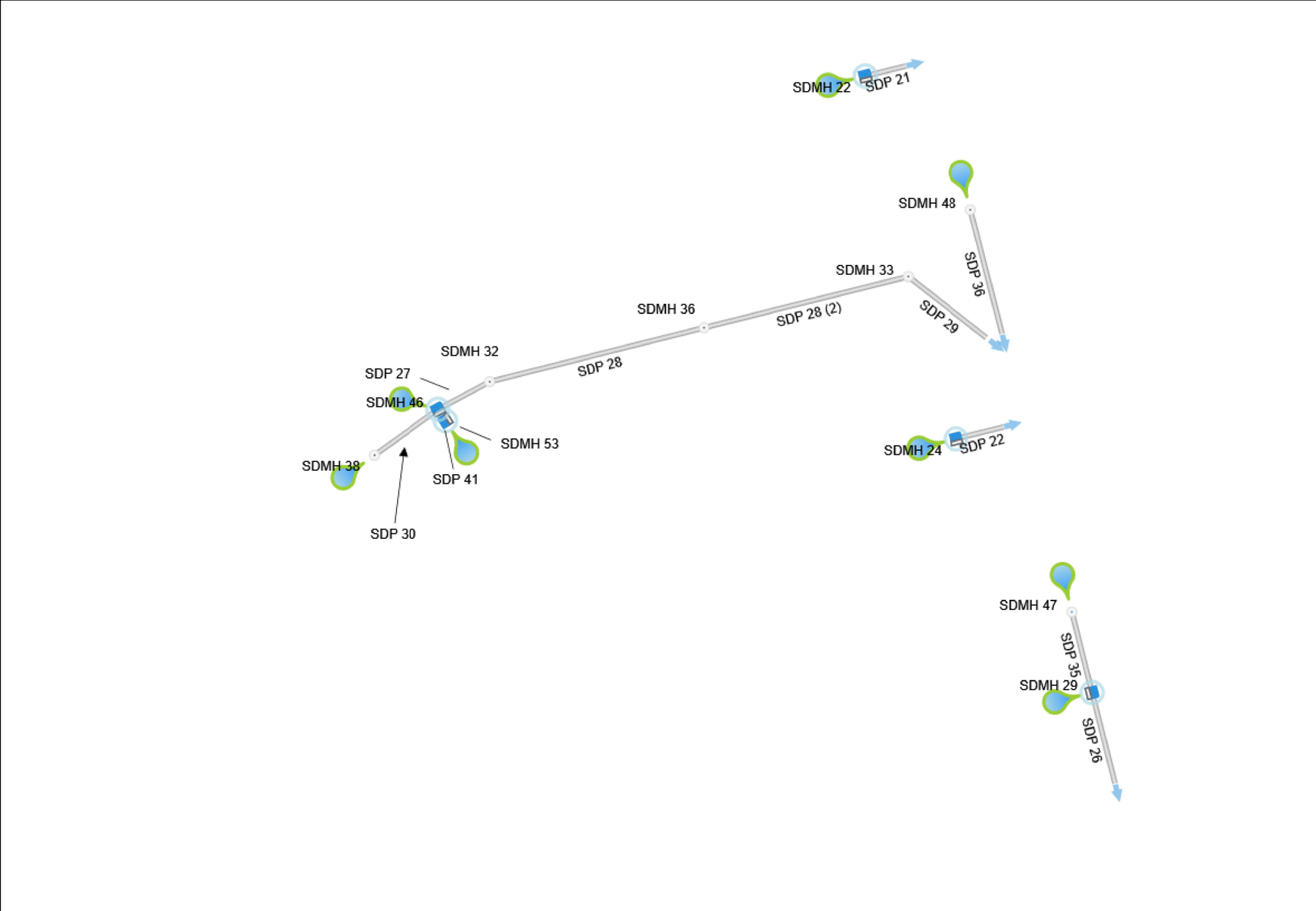


Plan View South of Dekooning

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025



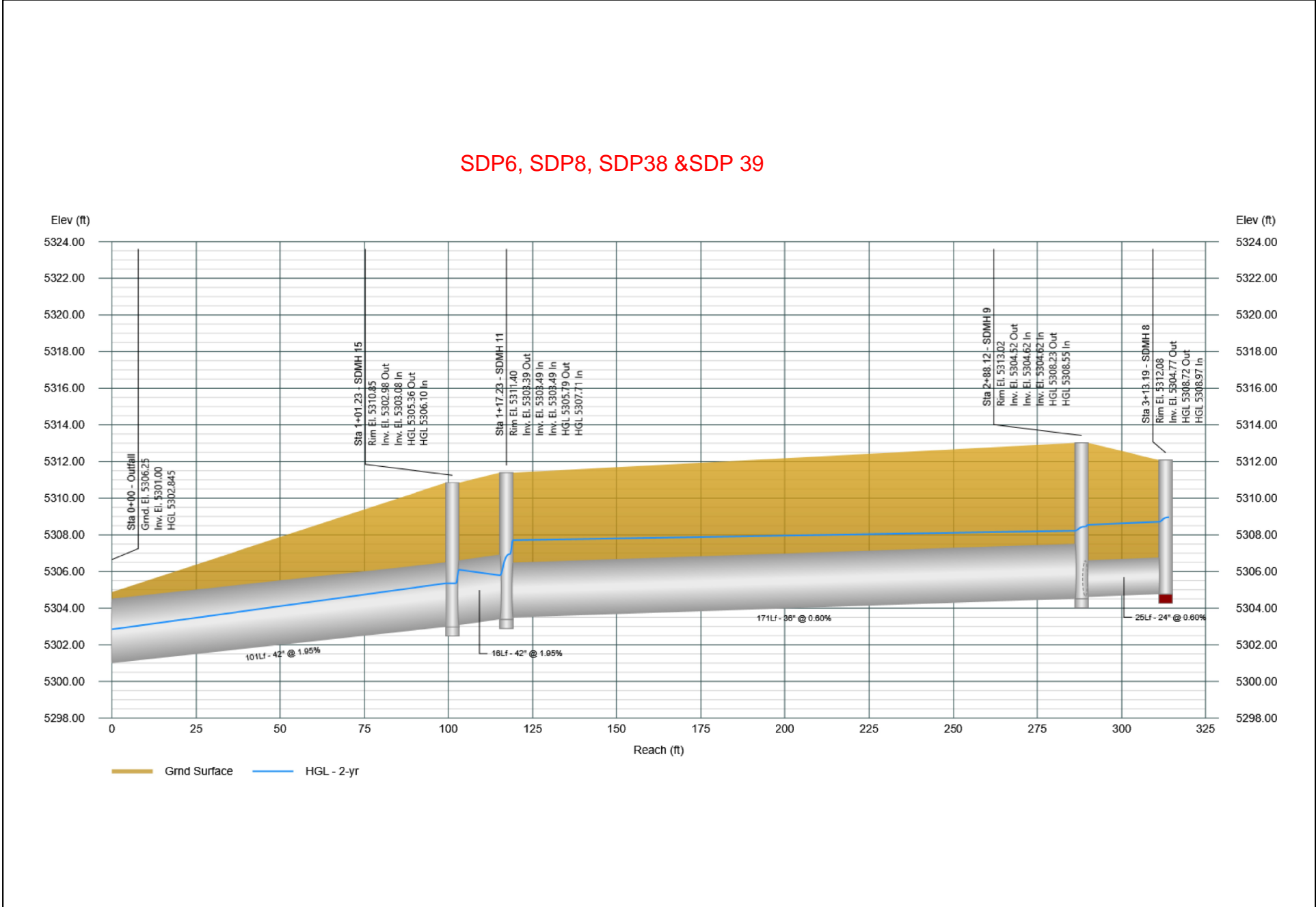
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP6, SDP8, SDP38 & SDP 39



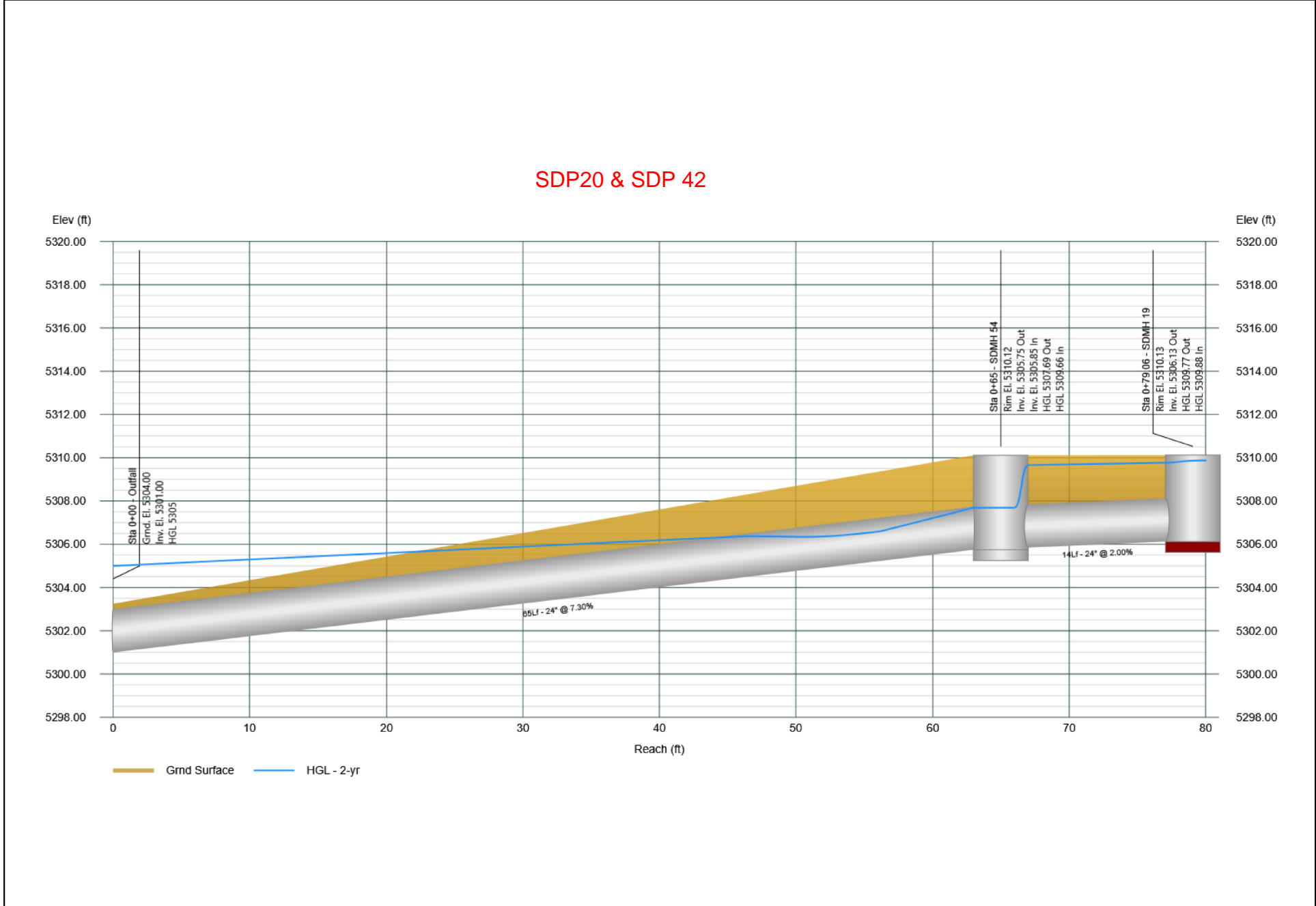
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP20 & SDP 42



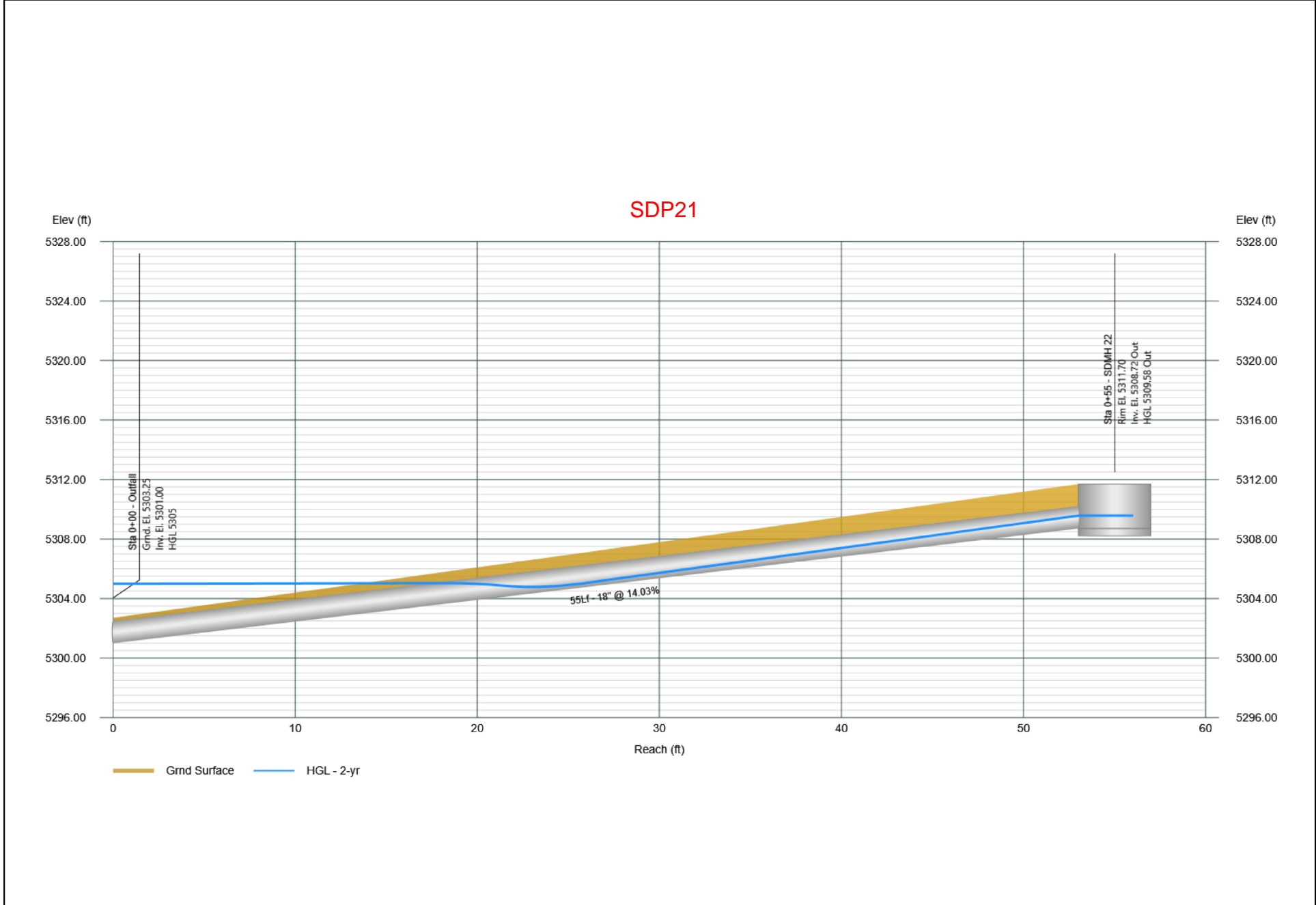
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP21



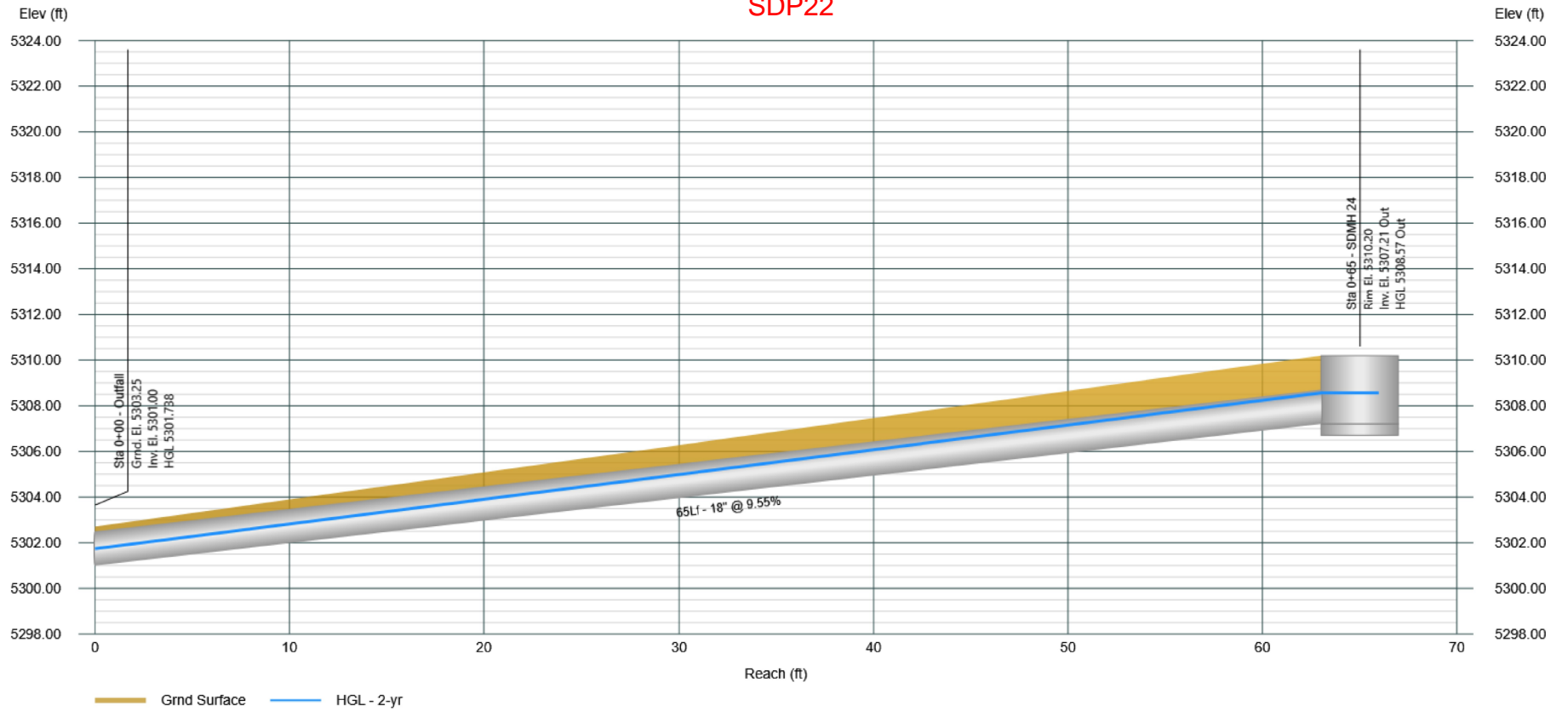
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP22



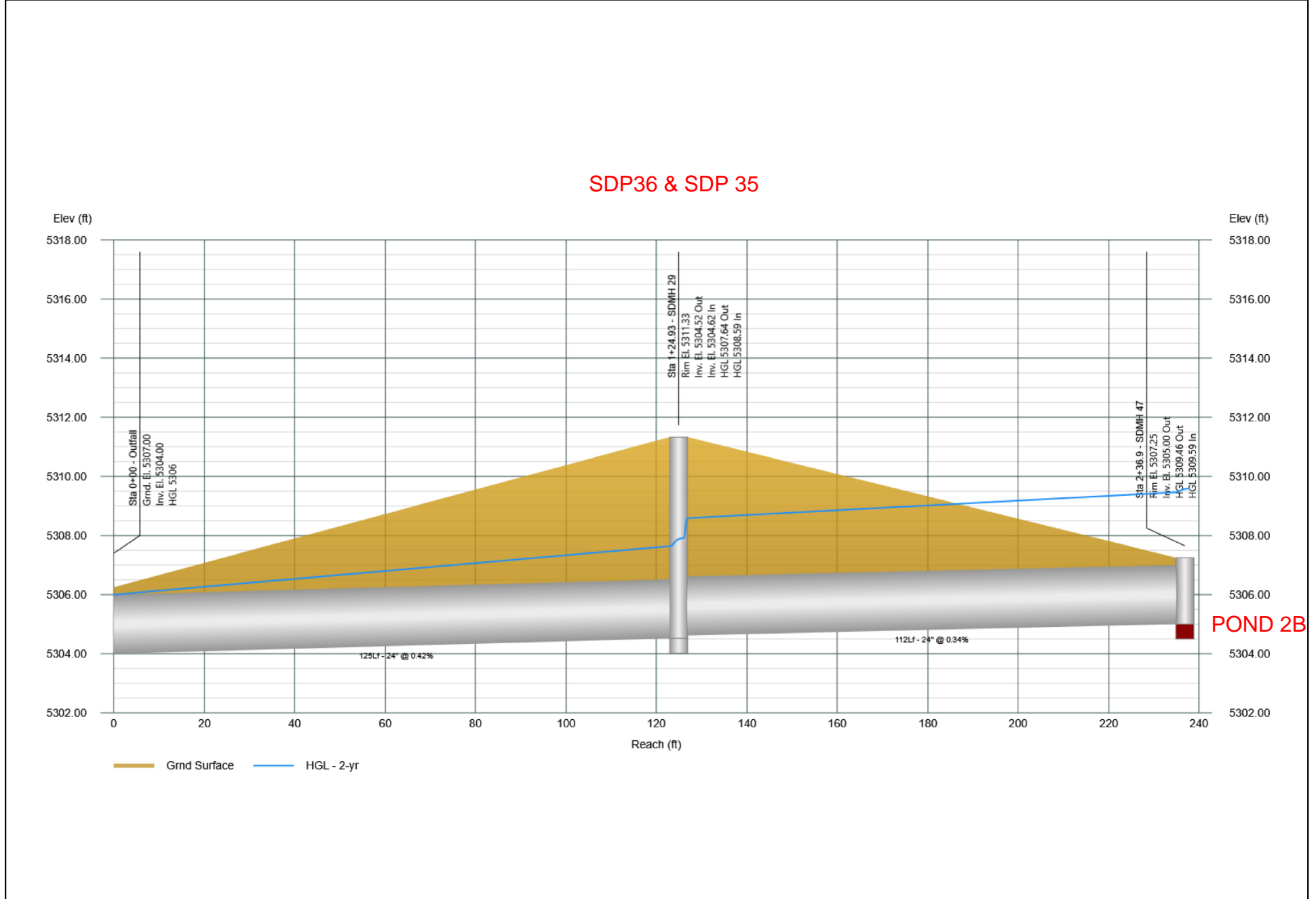
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP36 & SDP 35



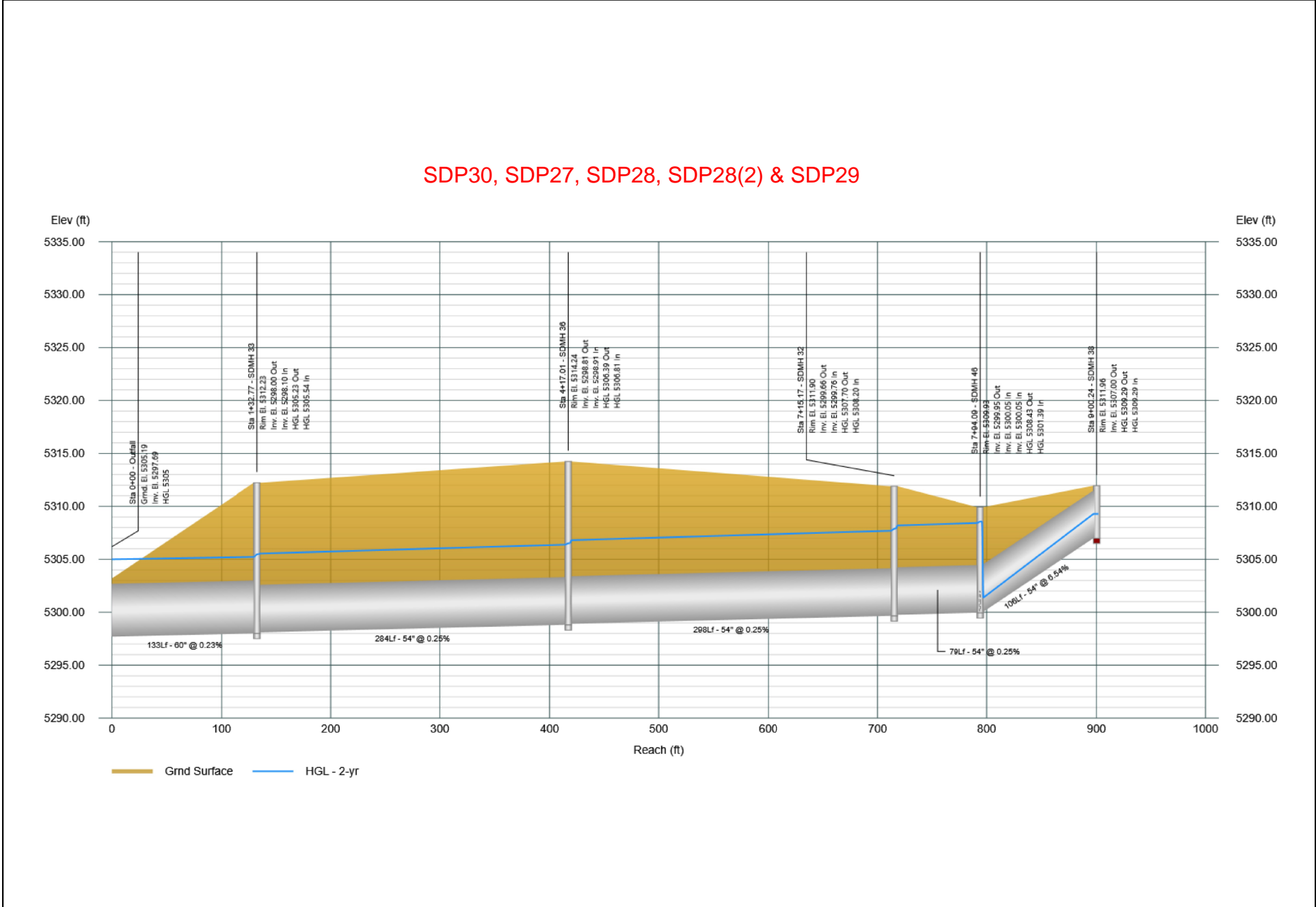
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP30, SDP27, SDP28, SDP28(2) & SDP29



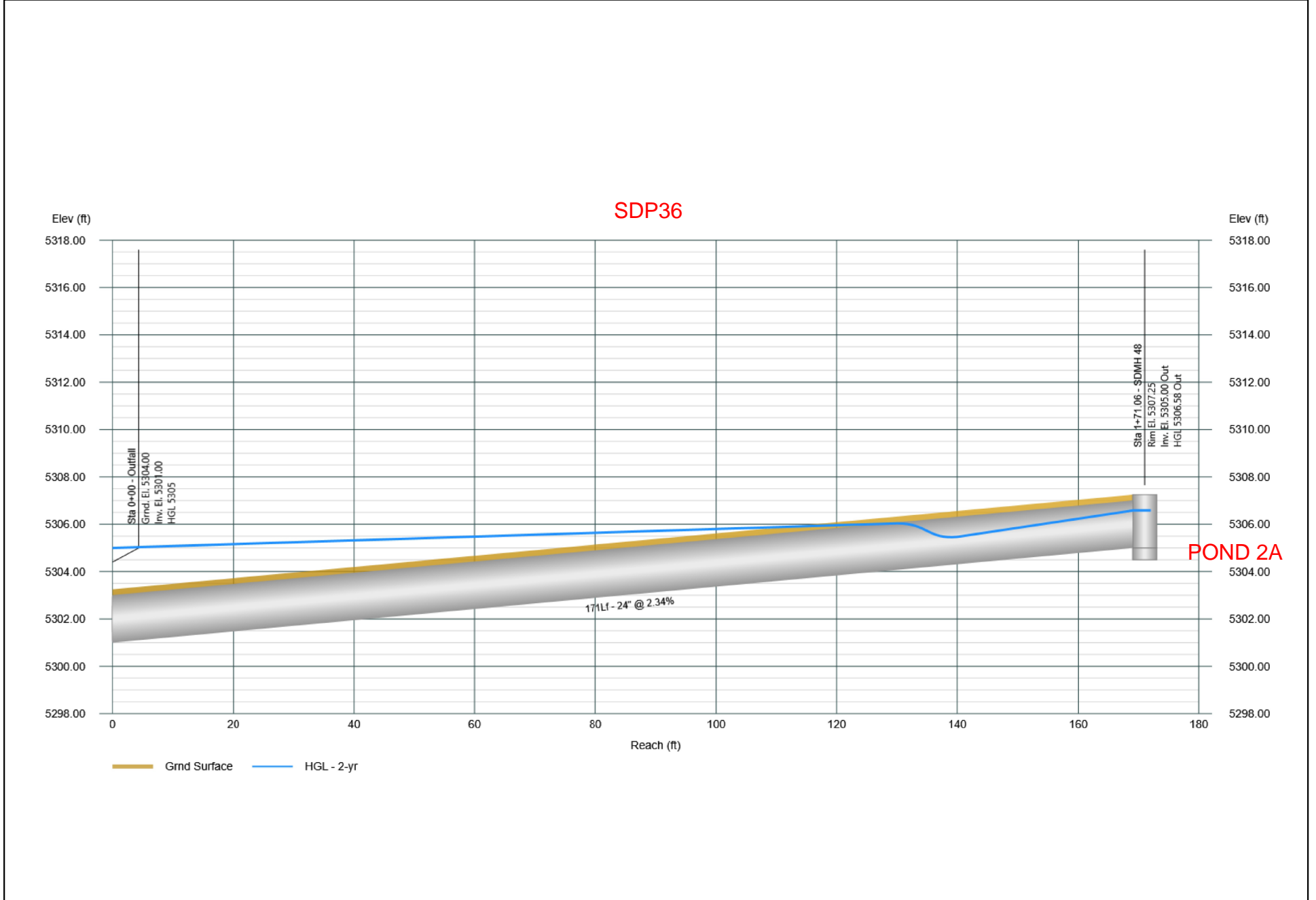
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP36



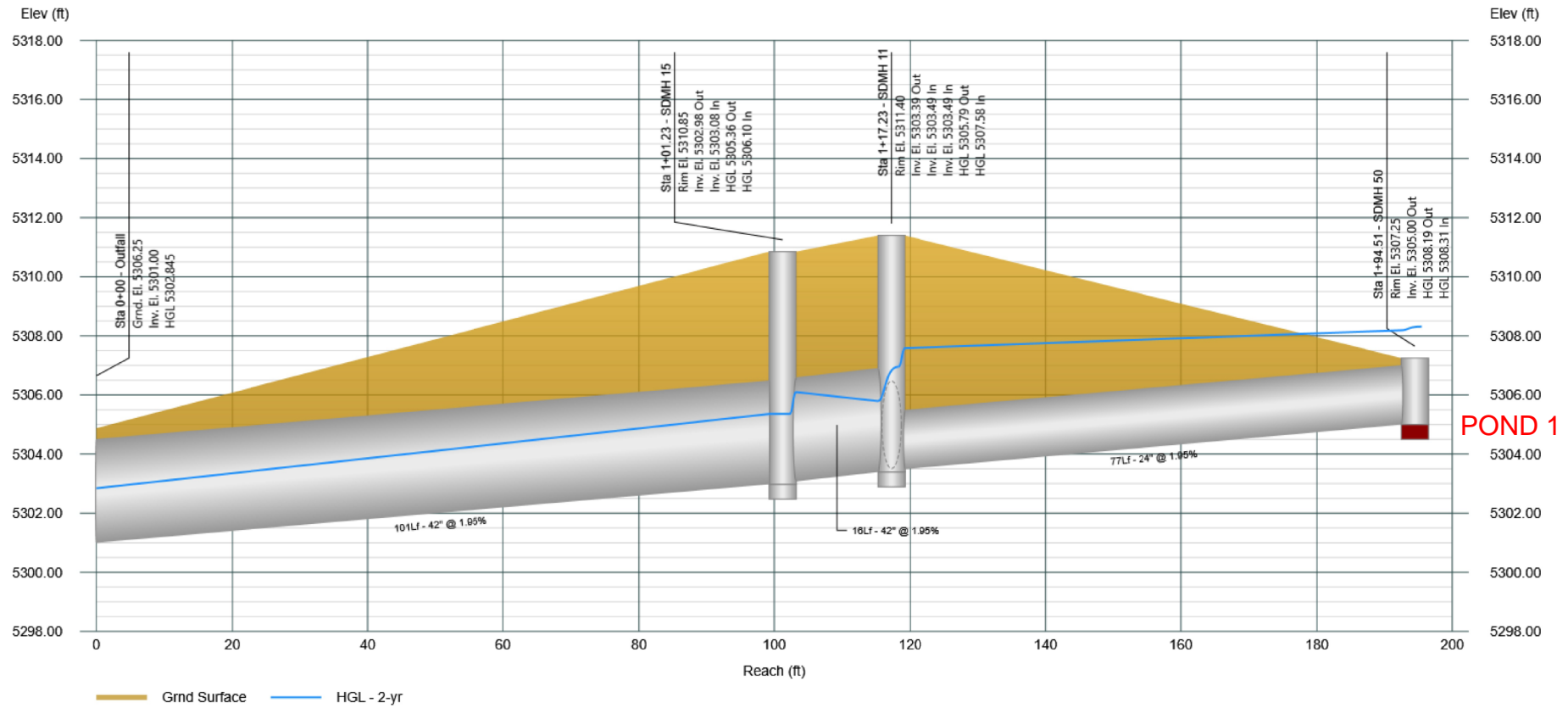
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP37, SDP38 & SDP39



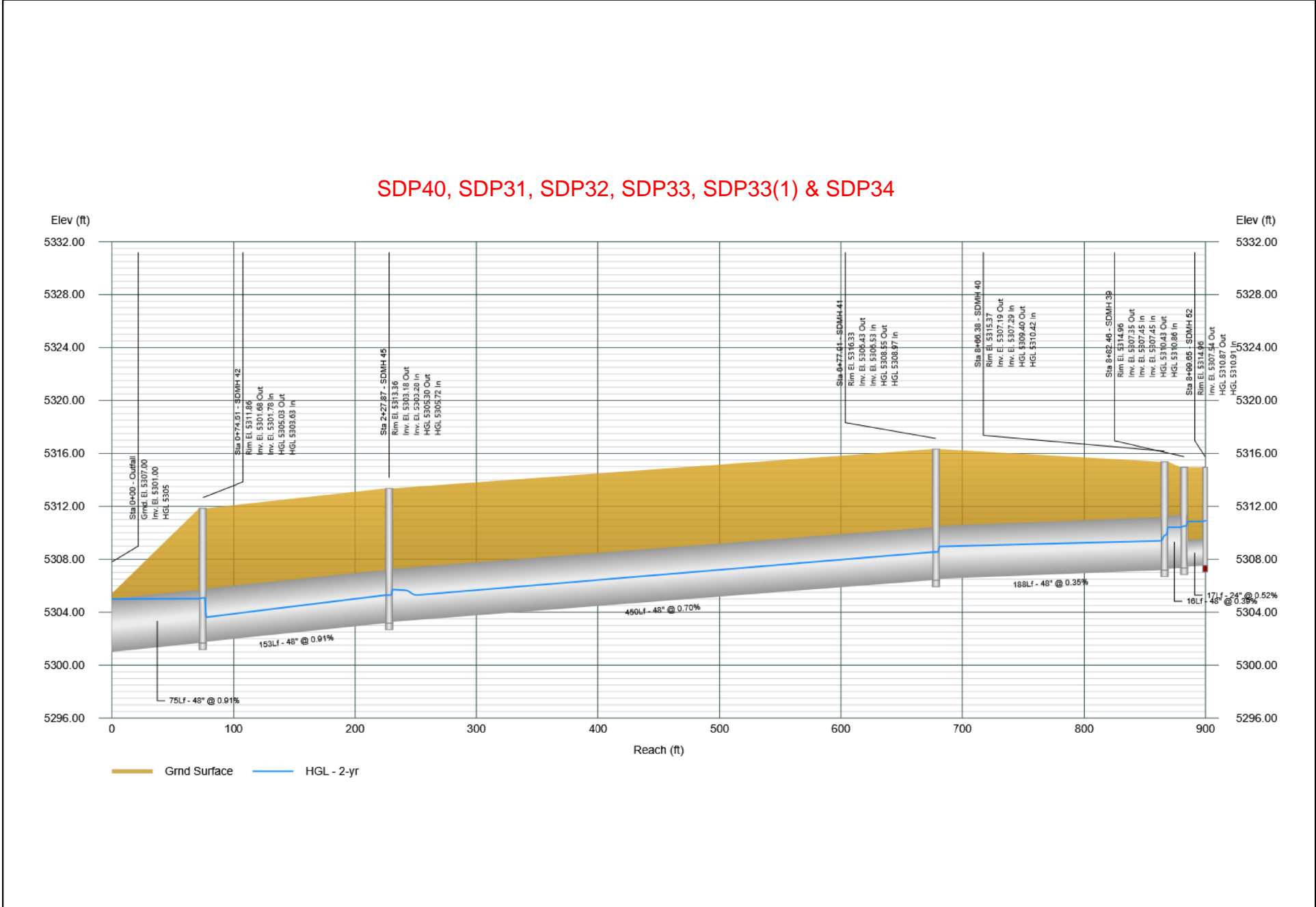
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP40, SDP31, SDP32, SDP33, SDP33(1) & SDP34



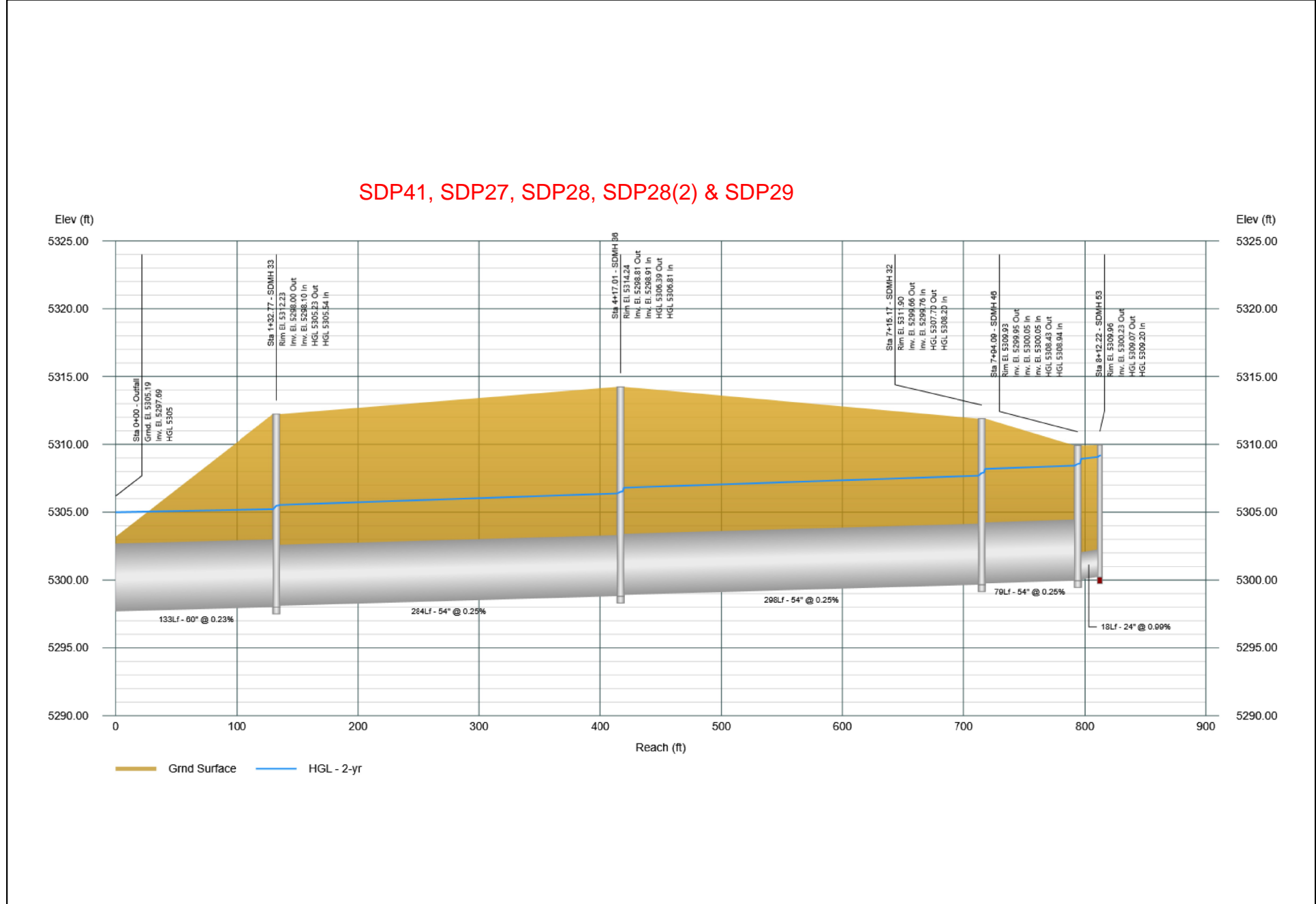
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP41, SDP27, SDP28, SDP28(2) & SDP29



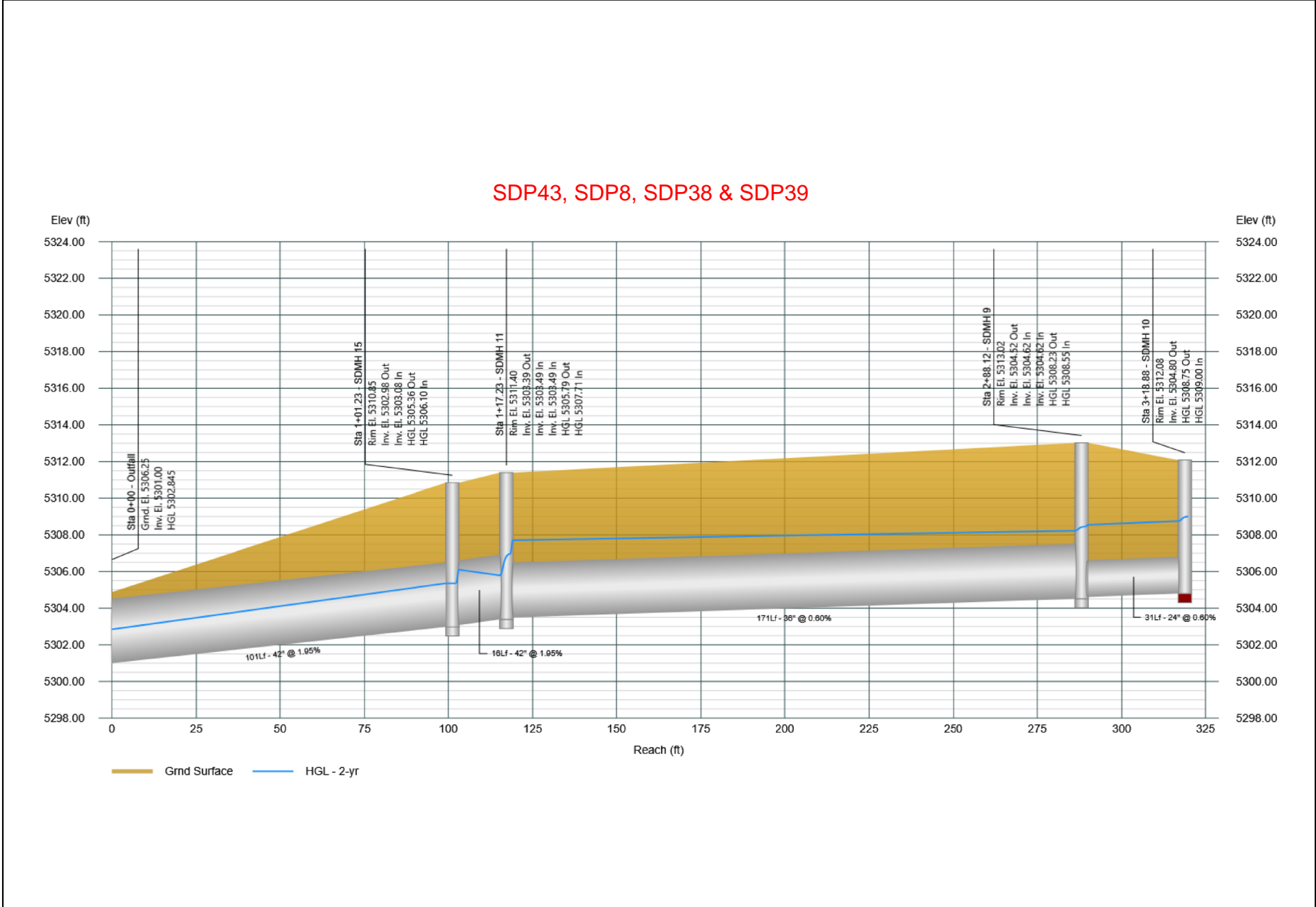
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP43, SDP8, SDP38 & SDP39



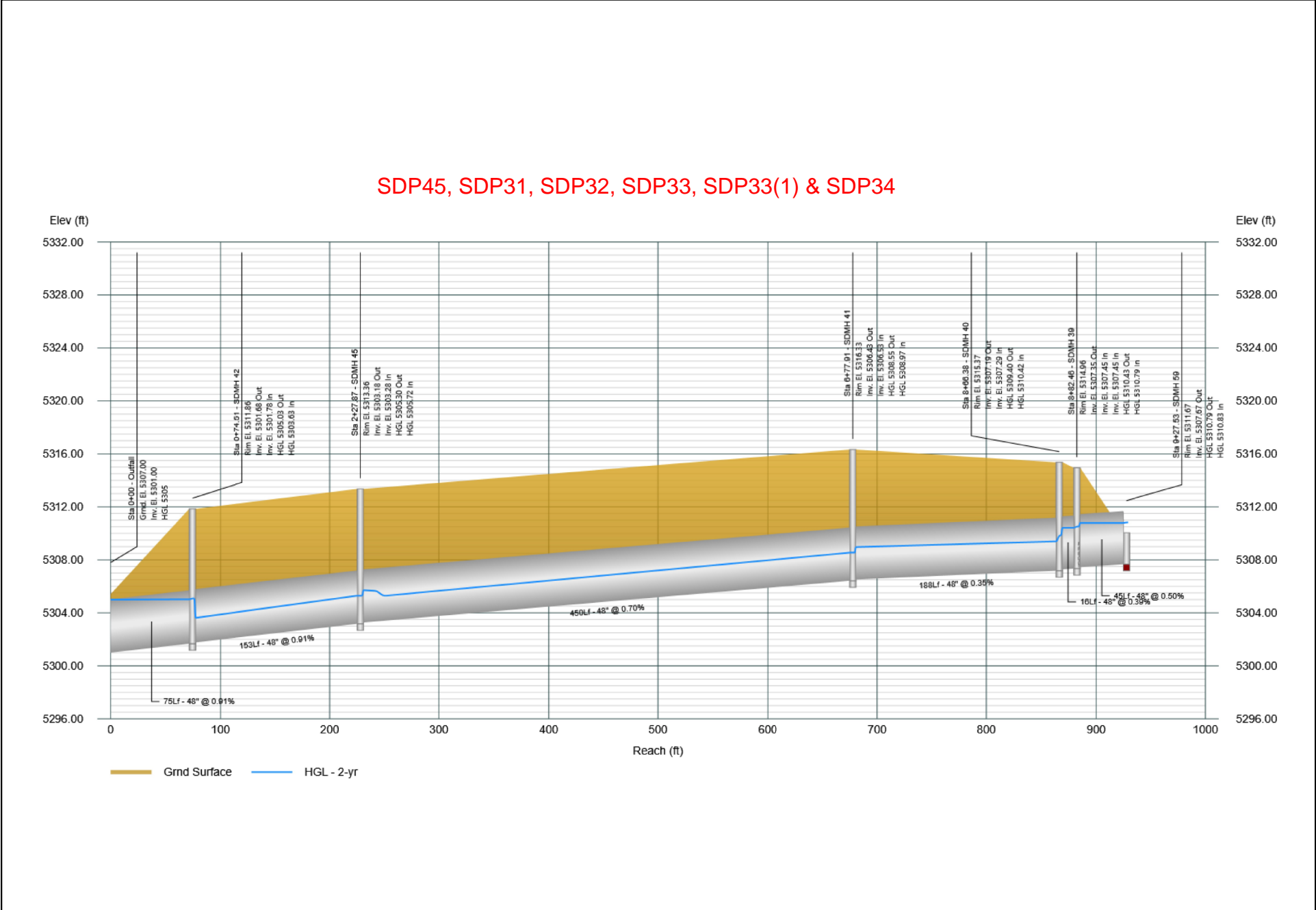
Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025

SDP45, SDP31, SDP32, SDP33, SDP33(1) & SDP34

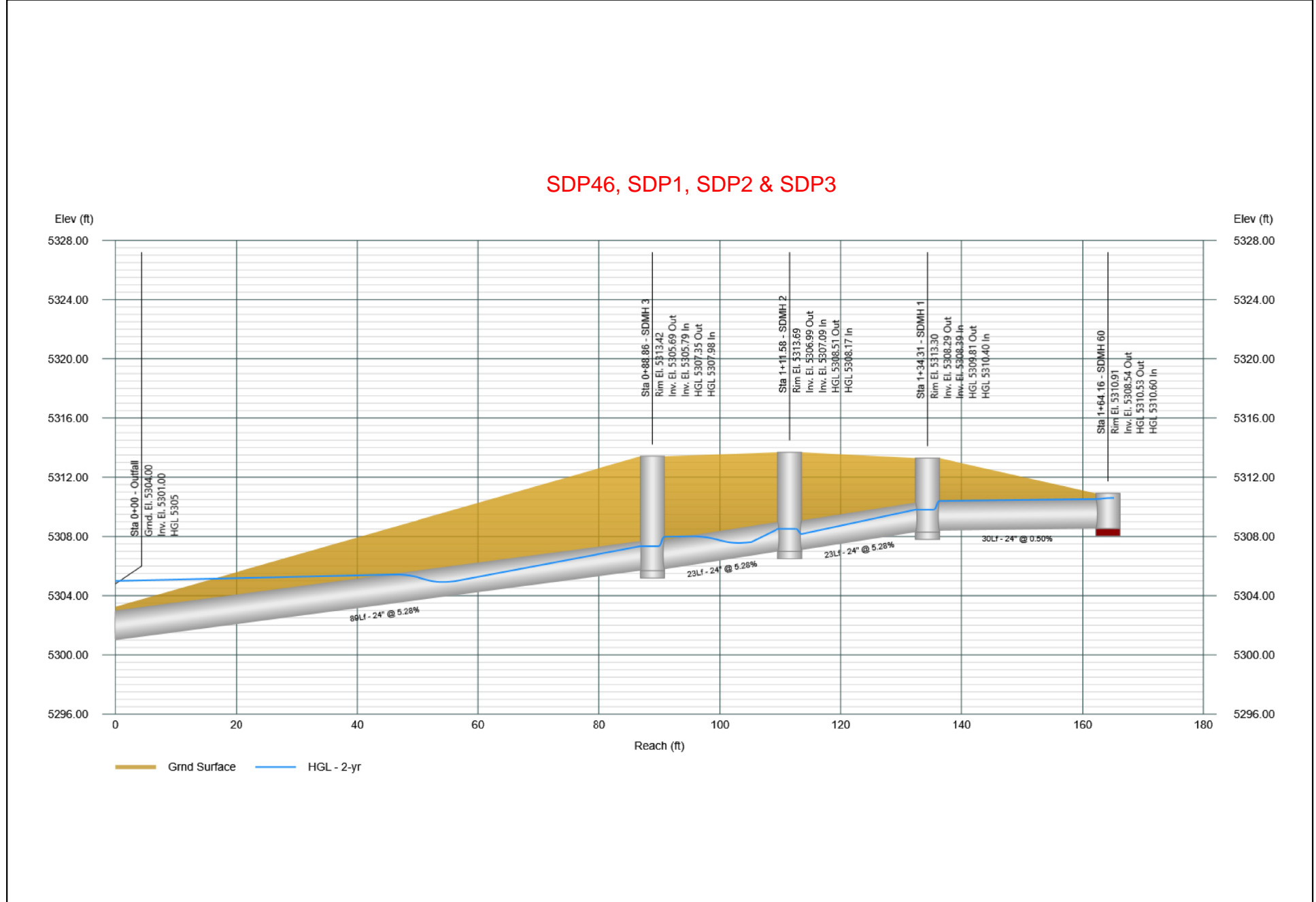


Profile View

Stormwater Studio 2024 v 3.0.0.35

Project Name: SD

08-14-2025



LineNo.	LineNo.	LineID	LineSize (in)	FlowRate (cfs)	VelAve (ft/s)	Grnd/RimE HGLDn (ft)	Grnd/RimE HGLUp (ft)	EGLDn (ft)	EGLUp (ft)	VelDn (ft/s)	VelUp (ft/s)		
	1	1 SDP 3	24	21.8	7.39	5303.25	5305	5313.42	5307.35	5305.75	5308.3	6.94	7.85
	2	2 SDP 2	24	18.45	6.53	5313.42	5307.98	5313.69	5308.51	5308.52	5309.32	5.87	7.2
	3	3 SDP 1	24	18.45	8.93	5313.69	5308.17	5313.3	5309.81	5309.53	5310.62	10.67	7.2
	4	4 SDP 46	24	15.1	4.81	5313.3	5310.4	5310.91	5310.53	5310.76	5310.89	4.81	4.81
	5	5 SDP 34	48	51.5	4.34	5305.42	5305	5311.86	5305.03	5305.26	5305.36	4.1	4.58
	6	6 SDP 33 (1)	48	51.5	8.34	5311.86	5303.63	5313.36	5305.3	5305.54	5306.2	9.07	7.6
	7	7 SDP 33	48	51.5	7.01	5313.36	5305.72	5316.33	5308.55	5306.36	5309.45	6.41	7.6
	8	8 SDP 32	48	51.5	6.81	5316.33	5308.97	5315.37	5309.4	5309.61	5310.21	6.4	7.22
	9	9 SDP 31	48	51.5	4.91	5315.37	5310.42	5314.96	5310.43	5310.79	5310.81	4.87	4.96
	10	10 SDP 45	48	38.1	3.51	5314.96	5310.79	5310.05	5310.79	5310.96	5310.99	3.4	3.63
	11	11 SDP 40	24	6.7	2.13	5314.96	5310.86	5314.96	5310.87	5310.93	5310.94	2.13	2.13
	12	12 SDP 42	24	38.4	12.27	5303.25	5305	5310.12	5307.69	5307.32	5310.05	12.23	12.32
	13	13 SDP 20	24	20.3	6.46	5310.12	5309.66	5310.13	5309.77	5310.31	5310.42	6.46	6.46
	14	14 SDP 26	24	25.9	8.25	5306.25	5306	5311.33	5307.64	5307.06	5308.7	8.25	8.24
	15	15 SDP 35	24	20	6.37	5311.33	5308.59	5307.25	5309.46	5309.22	5310.09	6.37	6.37
	16	16 SDP 39	42	60.4	10.21	5304.88	5302.85	5310.85	5305.36	5305.61	5306.53	11.75	8.67
	17	17 SDP 38	42	56.6	7.23	5310.85	5306.1	5311.4	5305.79	5306.74	5306.8	6.41	8.04
	18	18 SDP 8	36	36.6	5.18	5311.4	5307.71	5313.02	5308.23	5308.13	5308.64	5.18	5.18
	19	19 SDP 6	24	18.3	5.83	5313.02	5308.55	5312.08	5308.72	5309.08	5309.24	5.83	5.83
	20	20 SDP 43	24	18.3	5.83	5313.02	5308.55	5312.08	5308.75	5309.08	5309.28	5.83	5.83
	21	21 SDP 37	24	20	6.37	5311.4	5307.58	5307.25	5308.19	5308.21	5308.82	6.37	6.37
	22	22 SDP 44	24	20	6.45	5305.25	5305	5307.25	5306.88	5305.63	5307.54	6.37	6.53
	23	23 SDP 29	60	107.2	5.46	5303.19	5305	5312.23	5305.23	5305.46	5305.69	5.46	5.46
	24	24 SDP 28 (2)	54	107.2	6.74	5312.23	5305.54	5314.24	5306.39	5306.25	5307.09	6.74	6.74
	25	25 SDP 28	54	107.2	6.74	5314.24	5306.81	5311.9	5307.7	5307.52	5308.4	6.74	6.74
	26	26 SDP 27	54	107.2	6.74	5311.9	5308.2	5309.93	5308.43	5308.91	5309.14	6.74	6.74
	27	27 SDP 30	54	63.6	12	5309.93	5301.39	5311.96	5309.29	5309.39	5310.24	16.17	7.83
	28	28 SDP 36	24	20	6.93	5303.25	5305	5307.25	5306.58	5305.63	5307.46	6.37	7.5
	29	29 SDP 21	18	5.1	3.87	5302.71	5305	5311.7	5309.58	5305.13	5309.94	2.89	4.85
	30	30 SDP 22	18	13.1	11.46	5302.71	5301.74	5310.2	5308.57	5303.35	5309.51	15.13	7.79
	31	31 SDP 41	24	19.2	6.11	5309.93	5308.94	5309.96	5309.07	5309.52	5309.65	6.11	6.11

**APPENDIX D:
POND VOLUME ANALYSIS**

Pond 1 Stage Storage Volume

Project: Artiste Subdivision

Basin Description: Ultimate Conditions

Contour Elevation	Contour Area (sq. ft)	Depth (ft)	Incremental Volume Avg. End (cu. ft)	Cumulative Volume Avg. End (cu. ft)	Incremental Volume Conic (cu. ft)	Cumulative Volume Conic (cu. ft)
5,301.000	34,436.75	N/A	N/A	0.00	N/A	0.00
5,302.000	41,722.83	1.000	38079.79	38079.79	38021.57	38021.57
5,303.000	49,164.82	1.000	45443.83	83523.62	45392.96	83414.53
5,304.000	56,762.73	1.000	52963.78	136487.39	52918.30	136332.83
5,305.000	64,493.12	1.000	60627.93	197115.32	60586.81	196919.65

Pond 2A Stage Storage Volume
 Project: Artiste Subdivision
 Basin Description: Ultimate Conditions

Contour Elevation	Contour Area (sq. ft)	Depth (ft)	Incremental Volume Avg. End (cu. ft)	Cumulative Volume Avg. End (cu. ft)	Incremental Volume Conic (cu. ft)	Cumulative Volume Conic (cu. ft)
5,301.000	33,570.44	N/A	N/A	0.00	N/A	0.00
5,302.000	39,682.33	1.000	36626.38	36626.38	36583.81	36583.81
5,303.000	45,948.46	1.000	42815.39	79441.78	42777.13	79360.95
5,304.000	52,375.01	1.000	49161.73	128603.51	49126.69	128487.64
5,305.000	58,957.99	1.000	55666.50	184270.01	55634.03	184121.67

Project: Pond 2B
 Basin Description:

Contour Elevation	Contour Area (sq. ft)	Depth (ft)	Incremental Volume Avg. End (cu. ft)	Cumulative Volume Avg. End (cu. ft)	Incremental Volume Conic (cu. ft)	Cumulative Volume Conic (cu. ft)
5,297.500	4,322.81	N/A	N/A	0.00	N/A	0.00
5,298.000	6,094.07	0.500	2604.22	2604.22	2591.58	2591.58
5,299.000	10,385.70	1.000	8239.89	10844.11	8145.12	10736.70
5,300.000	15,811.49	1.000	13098.59	23942.70	13003.92	23740.62
5,301.000	22,337.17	1.000	19074.33	43017.03	18980.61	42721.23
5,302.000	26,680.48	1.000	24508.82	67525.85	24476.69	67197.92
5,303.000	31,117.98	1.000	28899.23	96425.08	28870.80	96068.72
5,304.000	35,715.86	1.000	33416.92	129842.00	33390.53	129459.24
5,305.000	40,470.19	1.000	38093.03	167935.03	38068.28	167527.52

EXHIBITS

EXHIBIT A: PRELIMINARY PLAT

EXHIBIT B: EXISTING CONDITIONS BASIN MAP

EXHIBIT C: PROPOSED CONDITIONS BASIN MAP

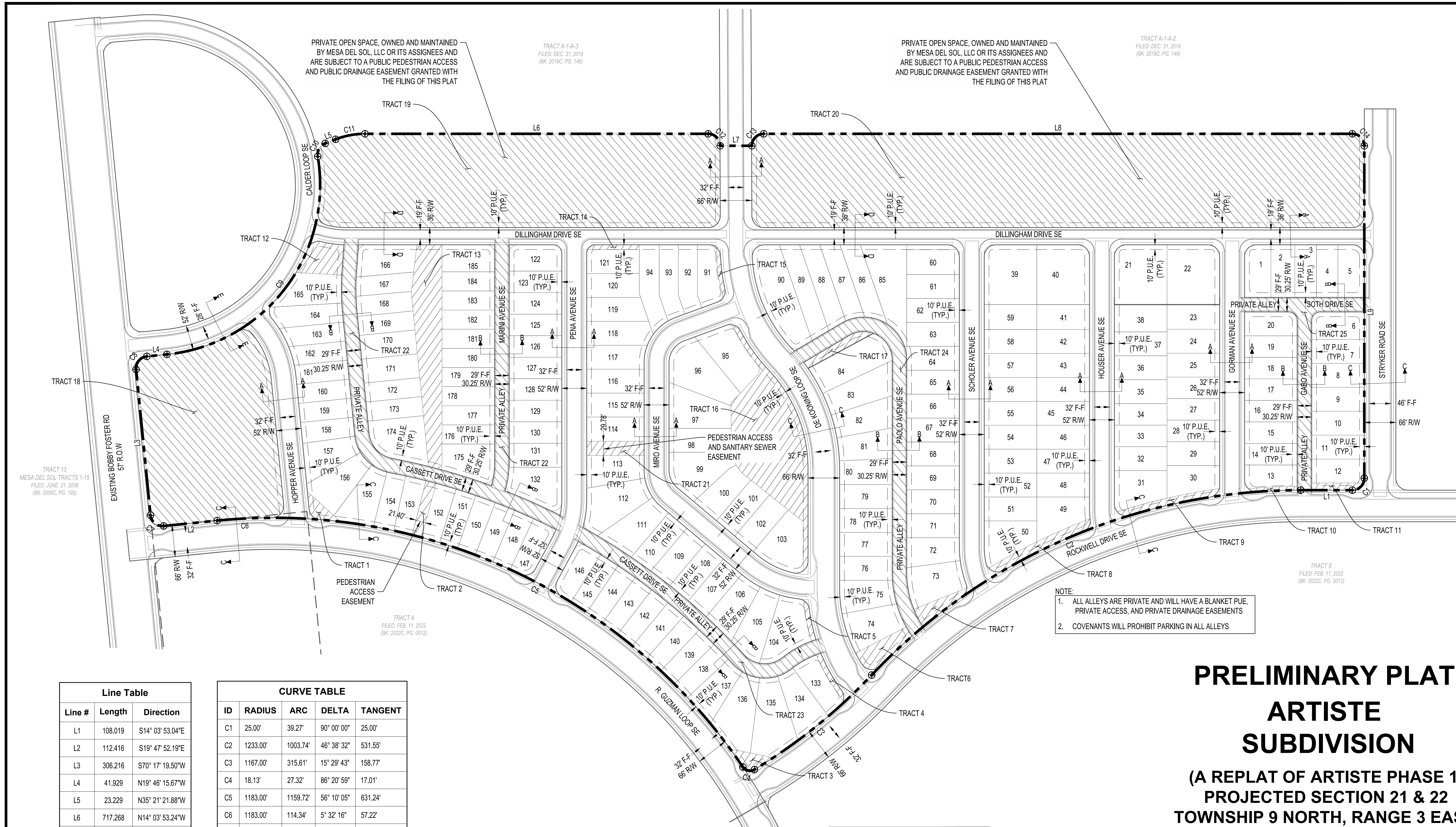
EXHIBIT D: STORM DRAIN AND POND EXHIBIT

EXHIBIT E: GRADING PLAN

EXHIBIT F: MASTER DRAINAGE EXHIBIT

EXHIBIT G: SITE LOCATION EXHIBIT

**EXHIBIT A:
PRELIMINARY PLAT**



PRIVATE OPEN SPACE, OWNED AND MAINTAINED BY MESA DEL SOL, LLC OR ITS ASSIGNEES AND ARE SUBJECT TO A PUBLIC PEDESTRIAN ACCESS AND PUBLIC DRAINAGE EASEMENT GRANTED WITH THE FILING OF THIS PLAT

TRACT A-1-A-3
FILED: DEC. 31, 2019
(BK. 2019C, PG. 146)

PRIVATE OPEN SPACE, OWNED AND MAINTAINED BY MESA DEL SOL, LLC OR ITS ASSIGNEES AND ARE SUBJECT TO A PUBLIC PEDESTRIAN ACCESS AND PUBLIC DRAINAGE EASEMENT GRANTED WITH THE FILING OF THIS PLAT

TRACT A-1-A-2
FILED: DEC. 31, 2019
(BK. 2019C, PG. 146)

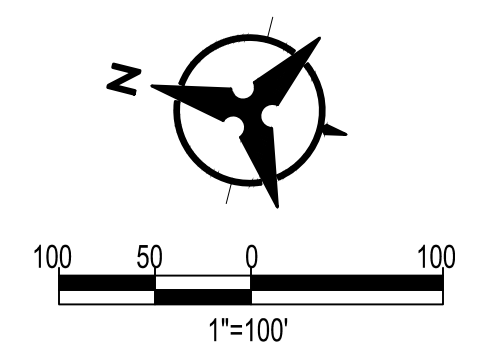
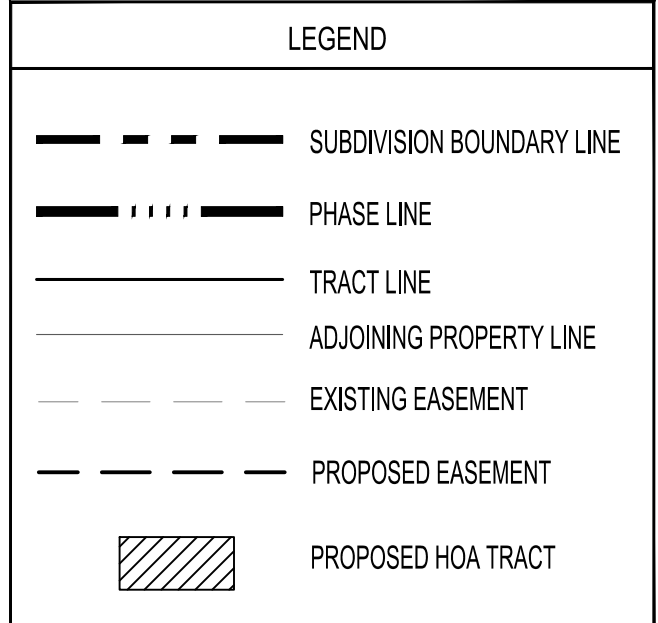
TRACT 13
MESA DEL SOL TRACTS 1-15
FILED: JUNE 21, 2006
(BK. 2006C, PG. 195)

TRACT 8
FILED: FEB. 11, 2022
(BK. 2022C, PG. 0012)

NOTE:
1. ALL ALLEYS ARE PRIVATE AND WILL HAVE A BLANKET PUE, PRIVATE ACCESS, AND PRIVATE DRAINAGE EASEMENTS
2. COVENANTS WILL PROHIBIT PARKING IN ALL ALLEYS

Line Table		
Line #	Length	Direction
L1	108.019	S14° 03' 53.04"E
L2	112.416	S19° 47' 52.19"E
L3	306.216	S70° 17' 19.50"W
L4	41.929	N19° 46' 15.67"W
L5	23.229	N35° 21' 21.88"W
L6	717.268	N14° 03' 53.24"W
L7	66.000	N14° 03' 53.24"W
L8	1229.971	N14° 03' 53.24"W
L9	694.923	N75° 56' 07.17"E

CURVE TABLE				
ID	RADIUS	ARC	DELTA	TANGENT
C1	25.00'	39.27'	90° 00' 00"	25.00'
C2	1233.00'	1003.74'	46° 38' 32"	531.55'
C3	1167.00'	315.61'	15° 29' 43"	158.77'
C4	18.13'	27.32'	86° 20' 59"	17.01'
C5	1183.00'	1159.72'	56° 10' 05"	631.24'
C6	1183.00'	114.34'	5° 32' 16"	57.22'
C7	25.00'	39.31'	90° 05' 12"	25.04'
C8	25.00'	39.24'	89° 56' 25"	24.97'
C9	355.88'	583.38'	93° 55' 18"	381.11'
C10	25.00'	34.18'	78° 20' 12"	20.37'
C11	169.50'	62.99'	21° 17' 29"	31.86'
C12	25.00'	39.27'	90° 00' 00"	25.00'
C13	25.00'	39.27'	90° 00' 00"	25.00'
C14	25.00'	39.27'	90° 00' 00"	25.00'



PRELIMINARY PLAT
ARTISTE
SUBDIVISION
(A REPLAT OF ARTISTE PHASE 1)
PROJECTED SECTION 21 & 22
TOWNSHIP 9 NORTH, RANGE 3 EAST,
TOWN OF ATRISCO GRANT
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
JULY, 2025

Bohannon **Huston**
www.bhinc.com 800.877.5332

Wed, 16-Jul-2025 - 1:20 pm, Plotted by: AROMERO
C:\Users\aromero\appdata\local\temp\AUP\Map_1287620240316_PreliminaryPlat.dwg

LEGAL DESCRIPTION:

TRACT '1' OF THE BULK LAND PLAT FOR ARTISTE SUBDIVISION WITHIN PROJECTED SECTION 21 AND 22, TOWNSHIP 9 NORTH, RANGE 3 EAST OF THE NEW MEXICO PRIME MERIDIAN AS PROJECTED INTO THE TOWN OF ATRISCO GRANT, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO AS THE SAME IS SHOWN AND DESIGNATED ON SAID PLAT FILED FOR RECORD IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO

1. EXISTING ZONING: PC
PROPOSED ZONING: PC

PROPOSED RESIDENTIAL DEVELOPMENT:
SINGLE FAMILY DETACHED RESIDENTIAL

2. TOTAL ACREAGE:
EXISTING TRACT '1' = 51.02 ACRES

ACREAGE:

- TRACT '1' = 0.0392 Acres
- TRACT '2' = 0.0566 Acres
- TRACT '3' = 0.0451 Acres
- TRACT '4' = 0.0225 Acres
- TRACT '5' = 0.0170 Acres
- TRACT '6' = 0.1028 Acres
- TRACT '7' = 0.0670 Acres
- TRACT '8' = 0.1021 Acres
- TRACT '9' = 0.0706 Acres
- TRACT '10' = 0.0173 Acres
- TRACT '11' = 0.0350 Acres
- TRACT '12' = 0.1216 Acres
- TRACT '13' = 0.5220 Acres
- TRACT '14' = 0.0238 Acres
- TRACT '15' = 0.0186 Acres
- TRACT '16' = 0.8341 Acres
- TRACT '17' = 0.0583 Acres
- TRACT '18' = 2.3375 Acres
- TRACT '19' = 3.7410 Acres
- TRACT '20' = 5.7512 Acres
- TRACT '21' = 0.0820 Acres
- TRACT '22' = 0.9760 Acres (PRIVATE ALLEY)
- TRACT '23' = 0.4366 Acres (PRIVATE ALLEY)
- TRACT '24' = 0.6001 Acres (PRIVATE ALLEY)
- TRACT '25' = 0.4553 Acres (PRIVATE ALLEY)

NUMBER OF LOTS:
PHASE 1 = 185

PROPOSED DENSITY: 7.05 D.U./ACRE

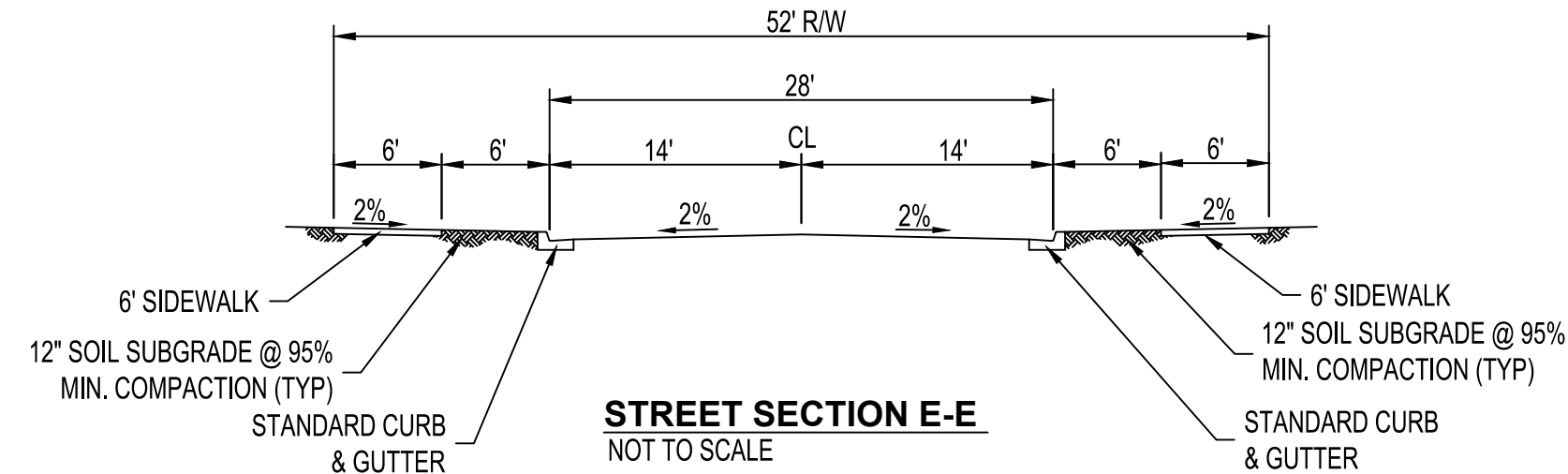
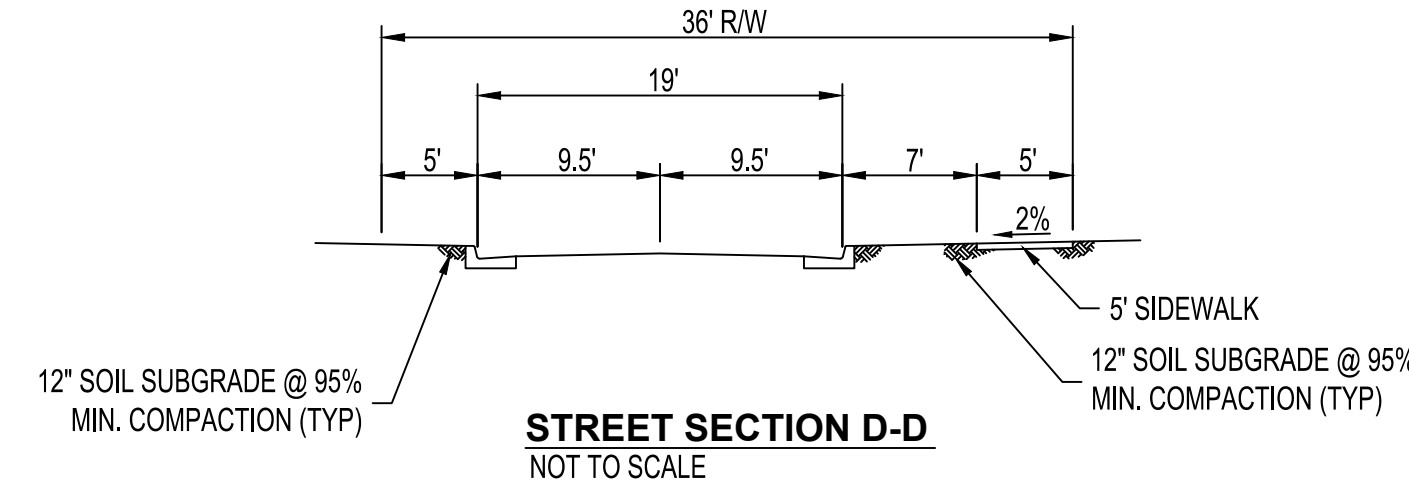
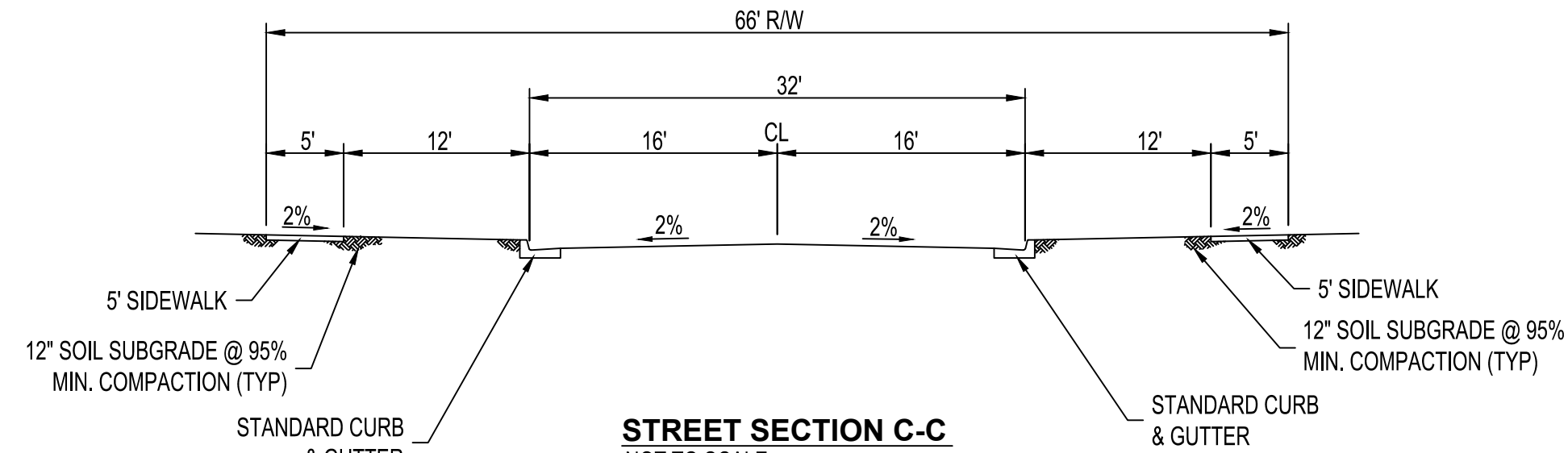
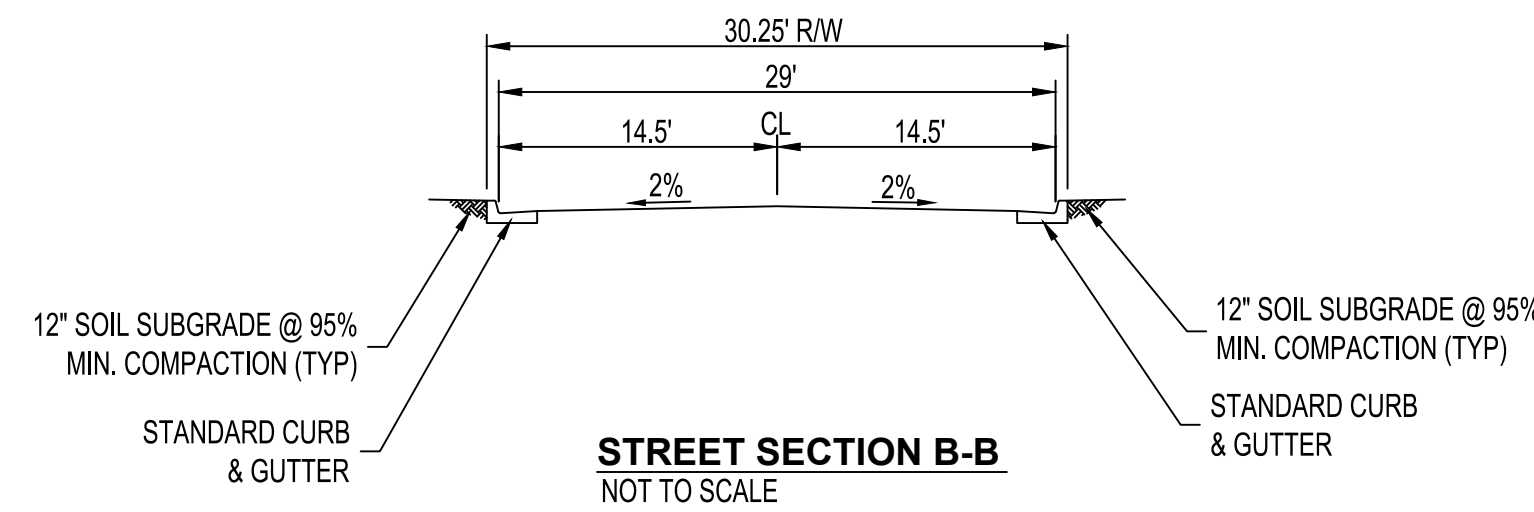
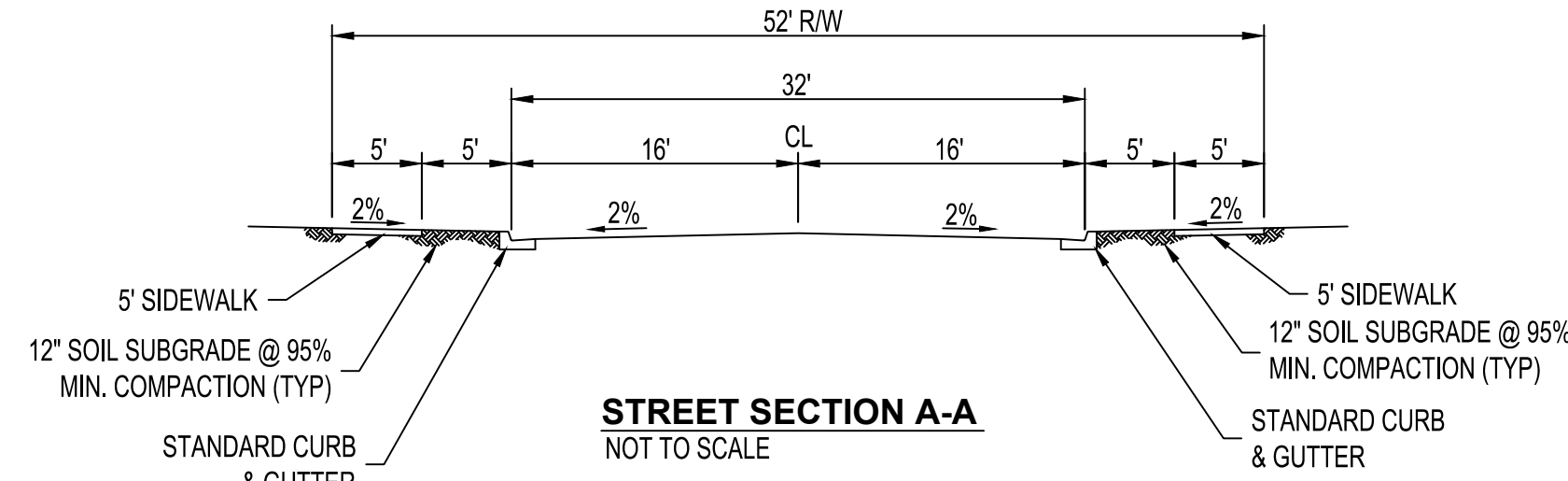
3. MINIMUM LOT DIMENSIONS: 40'x110'
MINIMUM LOT AREA: 4,400 SF

4. LOT SETBACKS:
FRONT: 10'
SIDE: 10'
REAR: 4'

5. PROPOSED SOLAR ACCESS PROVISIONS,
SHALL BE IN ACCORDANCE WITH INTEGRATED DEVELOPMENT
ORDINANCE 14-16-5-10.

6. THE H.O.A. SHALL MAINTAIN ALL TRAILS LOCATED
WITHIN H.O.A. TRACTS AND ITS CONNECTIONS TO
ANY PUBLIC OWNED AND MAINTAINED
SIDEWALK / TRAIL.

7. TRACTS '1' - '21' CONTAIN A PUBLIC PEDESTRIAN AND PUBLIC
DRAINAGE EASEMENT GRANTED TO THE H.O.A. SEE THIS SHEET
FOR 'DRAINAGE FACILITIES MAINTENANCE NOTE' FOR OWNERSHIP
AND MAINTENANCE RESPONSIBILITY



ABCWUA PUBLIC WATER & SANITARY SEWER EASEMENTS:

ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY (ABCWUA) IS GRANTED EASEMENT(S) IN THE DIMENSIONS NOTED ON THIS PLAT FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, REPAIR, MODIFICATIONS, REPLACEMENT AND OPERATION OF PUBLIC WATER AND SANITARY SERVICE LINES, EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE SERVICE TOGETHER WITH FREE ACCESS ON AND OVER THE EASEMENT AND THE RIGHT TO REMOVE TREES, SHRUBS, UNDERGROWTH AND ANY OTHER OBSTACLES, MODIFICATIONS, OR STRUCTURES WHICH INTERFERE WITH USE OF THE EASEMENT.

DRAINAGE FACILITIES MAINTENANCE NOTES:

AREAS DESIGNATED ON THE ACCOMPANYING PLAT AS "DRAINAGE EASEMENTS" ("DETENTION AREAS") ARE HEREBY DEDICATED BY THE OWNER AS A PERPETUAL EASEMENT FOR THE COMMON USE AND BENEFIT OF THE VARIOUS LOTS WITHIN THE SUBDIVISIONS FOR THE PURPOSE OF PERMITTING THE CONVEYANCE OF STORM WATER RUNOFF AND THE CONSTRUCTING AND MAINTAINING OF DRAINAGE FACILITIES (STORM WATER DETENTION FACILITIES) IN ACCORDANCE WITH STANDARDS PRESCRIBED BY THE CITY OF ALBUQUERQUE. NO FENCE, WALL, BUILDING OR OTHER OBSTRUCTION (UNLESS SHOWN ON THE APPROVED GRADING PLAN) MAY BE PLACED OR MAINTAINED IN THE EASEMENT AREA WITHOUT APPROVAL OF THE CITY ENGINEER OF THE CITY OF ALBUQUERQUE. THERE ALSO SHALL BE NO ALTERATION OF THE GRADES OR CONTOURS IN SAID EASEMENT AREA WITHOUT THE APPROVAL OF THE CITY ENGINEER. IT SHALL BE THE DUTY OF THE LOT OWNERS OF THIS SUBDIVISION TO MAINTAIN SAID DRAINAGE EASEMENT (DETENTION AREA) AND FACILITIES AT THEIR COST IN ACCORDANCE WITH STANDARDS PRESCRIBED BY THE CITY OF ALBUQUERQUE. THE CITY SHALL HAVE THE RIGHT TO ENTER PERIODICALLY TO INSPECT THE FACILITIES. IN THE EVENT SAID LOT OWNERS FAIL TO ADEQUATELY AND PROPERLY MAINTAIN DRAINAGE EASEMENT (DETENTION AREA) AND FACILITIES, AT ANY TIME FOLLOWING FIFTEEN (15) DAYS WRITTEN NOTICE TO SAID LOT OWNERS, THE CITY MAY ENTER UPON SAID AREA, PERFORM SAID MAINTENANCE, AND THE COST OF PERFORMING SAID MAINTENANCE SHALL BE PAID BY APPLICABLE LOT OWNERS PROPORTIONATELY ON THE BASIS OF LOT OWNERSHIP. IN THE EVENT LOT OWNERS FAIL TO PAY THE COST OF MAINTENANCE WITHIN THIRTY (30) DAYS AFTER DEMAND FOR PAYMENT MADE BY THE CITY, THE CITY MAY FILE A LIEN AGAINST ALL LOTS IN THE SUBDIVISION FOR WHICH PROPORTIONATE PAYMENT HAS NOT BEEN MADE. THE OBLIGATIONS IMPOSED HEREIN SHALL BE BINDING UPON THE OWNER, HIS HEIRS, AND ASSIGNS AND SHALL RUN WITH ALL LOTS WITHIN THIS SUBDIVISION.

THE GRANTOR AGREES TO DEFEND, INDEMNIFY, AND HOLD HARMLESS, THE CITY, ITS OFFICIALS, AGENTS AND EMPLOYEES FROM AND AGAINST ANY AND ALL CLAIMS, ACTIONS, SUITS, OR PROCEEDINGS OF ANY KIND BROUGHT AGAINST SAID PARTIES FOR OR ON ACCOUNT OF ANY MATTER ARISING FROM THE DRAINAGE FACILITY PROVIDED FOR HEREIN OR THE GRANTOR'S FAILURE TO CONSTRUCT, MAINTAIN, OR MODIFY SAID DRAINAGE FACILITY.

Free Consent & Dedication

THE SUBDIVISION SHOWN AND DESCRIBED HEREON IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE UNDERSIGNED OWNER(S) THEREOF AND GRANT ALL EASEMENTS AS SHOWN HEREON. EXISTING AND/OR GRANTED PUBLIC UTILITY EASEMENTS (P.U.E) AS SHOWN HEREON, UNLESS NOTED OTHERWISE, ARE FOR THE COMMON AND JOINT USE OF GAS, ELECTRICAL POWER AND COMMUNICATION SERVICES FOR BURIED AND/OR OVERHEAD DISTRIBUTION LINES, CONDUIT AND PIPES FOR UNDERGROUND UTILITIES. SAID UTILITY COMPANIES HAVE THE RIGHT OF INGRESS/EGRESS FOR CONSTRUCTION OF, MAINTENANCE OF AND REPLACEMENT OF SAID UTILITIES INCLUDING THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS WITHIN SAID P.U.E.. SAID OWNERS CERTIFY THAT THIS SUBDIVISION IS THEIR FREE ACT AND DEED.

THE PLAT SHOWN HEREON IS MADE WITH FREE CONSENT AND IN ACCORDANCE OF THE DESIRES OF THE UNDERSIGNED OWNER(S). THE EXECUTION OF THIS PLAT IS THEIR FREE ACT AND DEED. THOSE SIGNING AS OWNER(S) WARRANT THAT THEY HOLD AMONG THEM, COMPLETE INDEFEASIBLE TITLE IN FEE SIMPLE TO THE LAND SHOWN ON THIS PLAT. OWNER(S) HEREBY AFFIRM THAT THE DESCRIBED PROPERTY SHOWN ON THIS PLAT LIES WITHIN THE PLATTING AND SUBDIVISION JURISDICTION OF CITY OF ALBUQUERQUE, NEW MEXICO. SAID OWNER(S) HEREBY GRANT ALL EASEMENTS AS MAY BE SHOWN ON THIS PLAT TO THE CITY OF ALBUQUERQUE, NEW MEXICO IN FEE SIMPLE WITH WARRANTY COVENANTS. SAID OWNERS DO HEREBY DEDICATE ADDITIONAL PUBLIC RIGHT OF WAY AS SHOWN HEREON TO THE CITY OF ALBUQUERQUE IN FEE SIMPLE.

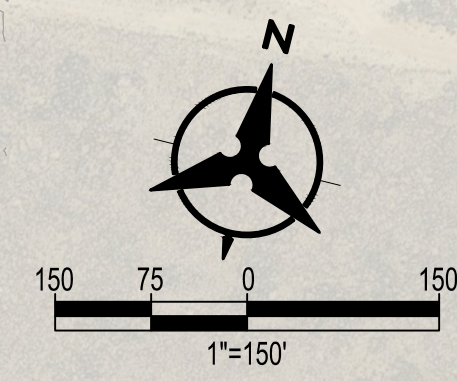
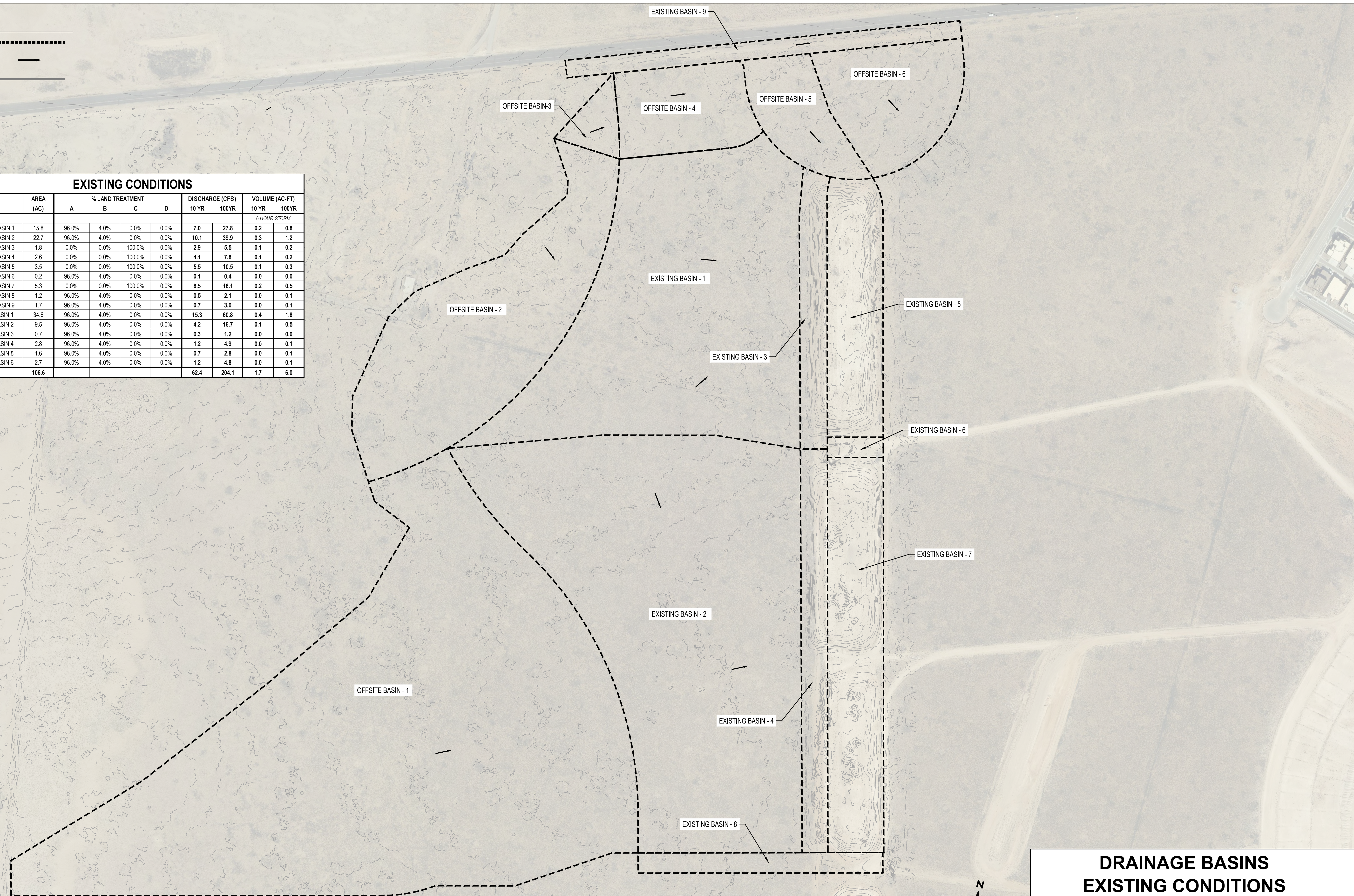
BY: _____
Steve B. Chavez,
MDS INVESTMENTS, LLC a new mexico limited liability company
STATE OF NEW MEXICO }
COUNTY OF BERNALILLO } SS
THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON _____ DAY OF _____, 20____
BY Steve B. Chavez, MDS INVESTMENTS, LLC
MY COMMISSION EXPIRES _____ NOTARY PUBLIC

**PRELIMINARY PLAT
ARTISTE
SUBDIVISION
(A REPLAT OF ARTISTE PHASE 1)
PROJECTED SECTION 21 & 22
TOWNSHIP 9 NORTH, RANGE 3 EAST,
TOWN OF ATRISCO GRANT
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
JULY, 2025**

**EXHIBIT B:
EXISTING CONDITIONS BASIN MAP**

LEGEND
 BASIN BOUNDARY - - - - -
 FLOW ARROW →
 EXISTING STORM DRAIN ———

EXISTING CONDITIONS									
BASIN I.D.	AREA (AC)	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)	
		A	B	C	D	10 YR	100YR	10 YR	100YR
EXISTING BASIN 1	15.8	96.0%	4.0%	0.0%	0.0%	7.0	27.8	0.2	0.8
EXISTING BASIN 2	22.7	96.0%	4.0%	0.0%	0.0%	10.1	39.9	0.3	1.2
EXISTING BASIN 3	1.8	0.0%	0.0%	100.0%	0.0%	2.9	5.5	0.1	0.2
EXISTING BASIN 4	2.6	0.0%	0.0%	100.0%	0.0%	4.1	7.8	0.1	0.2
EXISTING BASIN 5	3.5	0.0%	0.0%	100.0%	0.0%	5.5	10.5	0.1	0.3
EXISTING BASIN 6	0.2	96.0%	4.0%	0.0%	0.0%	0.1	0.4	0.0	0.0
EXISTING BASIN 7	5.3	0.0%	0.0%	100.0%	0.0%	8.5	16.1	0.2	0.5
EXISTING BASIN 8	1.2	96.0%	4.0%	0.0%	0.0%	0.5	2.1	0.0	0.1
EXISTING BASIN 9	1.7	96.0%	4.0%	0.0%	0.0%	0.7	3.0	0.0	0.1
OFFSITE BASIN 1	34.6	96.0%	4.0%	0.0%	0.0%	15.3	60.8	0.4	1.8
OFFSITE BASIN 2	9.5	96.0%	4.0%	0.0%	0.0%	4.2	16.7	0.1	0.5
OFFSITE BASIN 3	0.7	96.0%	4.0%	0.0%	0.0%	0.3	1.2	0.0	0.0
OFFSITE BASIN 4	2.8	96.0%	4.0%	0.0%	0.0%	1.2	4.9	0.0	0.1
OFFSITE BASIN 5	1.6	96.0%	4.0%	0.0%	0.0%	0.7	2.8	0.0	0.1
OFFSITE BASIN 6	2.7	96.0%	4.0%	0.0%	0.0%	1.2	4.8	0.0	0.1
TOTAL	106.6					62.4	204.1	1.7	6.0



DRAINAGE BASINS EXISTING CONDITIONS			
MDS ARTISTE			
DRAWN BY:	DO	DATE:	06/2025
CHECKED BY:	YPM	BHI PROJECT NO.	20240316
		SHEET NO.	1 OF 1

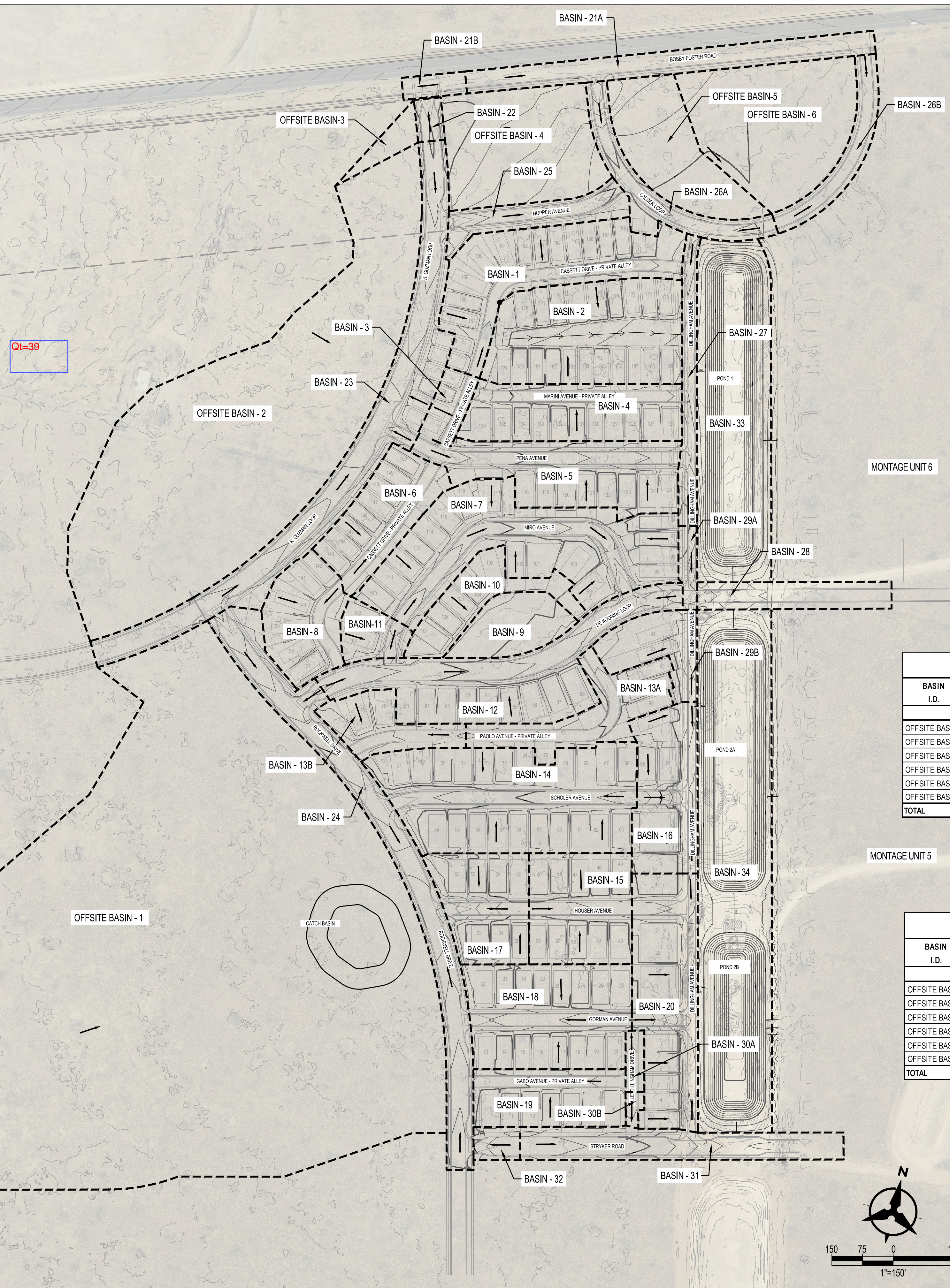
**EXHIBIT C:
PROPOSED CONDITIONS BASIN MAP**

PROPOSED CONDITIONS										
BASIN I.D.	AREA (AC)	UNITS #	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)	
			A	B	C	D	10 YR	100YR	10 YR	100YR
6 HOUR STORM										
BASIN 1	2.3	13.5	0.0%	25.0%	25.0%	50.0%	4.7	8.2	0.2	0.3
BASIN 2	2.6	20	0.0%	25.0%	25.0%	50.0%	5.2	9.2	0.2	0.4
BASIN 3	0.4	2	0.0%	25.0%	25.0%	50.0%	0.7	1.3	0.0	0.0
BASIN 4	1.7	11	0.0%	25.0%	25.0%	50.0%	3.4	6.0	0.1	0.2
BASIN 5	2.0	8	0.0%	25.0%	25.0%	50.0%	4.0	7.1	0.2	0.3
BASIN 6	1.3	8	0.0%	25.0%	25.0%	50.0%	2.5	4.5	0.1	0.2
BASIN 7	3.4	16	0.0%	25.0%	25.0%	50.0%	6.8	12.0	0.3	0.5
BASIN 8	1.2	6	0.0%	25.0%	25.0%	50.0%	2.3	4.1	0.1	0.2
BASIN 9	0.8	0	0.0%	0.0%	100.0%	0.0%	1.3	2.4	0.0	0.1
BASIN 10	0.9	5	0.0%	25.0%	25.0%	50.0%	1.8	3.2	0.1	0.1
BASIN 11	0.4	2	0.0%	25.0%	25.0%	50.0%	0.9	1.6	0.0	0.1
BASIN 12	2.6	9	0.0%	25.0%	25.0%	50.0%	5.2	9.1	0.2	0.4
BASIN 13A	1.2	3	0.0%	25.0%	25.0%	50.0%	2.5	4.3	0.1	0.2
BASIN 13B	0.8	2	0.0%	25.0%	25.0%	50.0%	1.6	2.7	0.1	0.1
BASIN 14	3.5	22	0.0%	25.0%	25.0%	50.0%	7.0	12.3	0.3	0.5
BASIN 15	1.6	10	0.0%	25.0%	25.0%	50.0%	3.1	5.5	0.1	0.2
BASIN 16	1.4	6	0.0%	25.0%	25.0%	50.0%	2.9	5.1	0.1	0.2
BASIN 17	1.3	7	0.0%	25.0%	25.0%	50.0%	2.6	4.6	0.1	0.2
BASIN 18	2.3	16	0.0%	25.0%	25.0%	50.0%	4.6	8.2	0.2	0.3
BASIN 19	1.2	7	0.0%	25.0%	25.0%	50.0%	2.4	4.2	0.1	0.2
BASIN 20	2.2	10	0.0%	25.0%	25.0%	50.0%	4.3	7.6	0.2	0.3
BASIN 21A	1.3	0	0.0%	0.0%	10.0%	90.0%	3.3	5.4	0.1	0.2
BASIN 21B	0.2	0	0.0%	0.0%	10.0%	90.0%	0.5	0.8	0.0	0.0
BASIN 22	0.2	0	0.0%	0.0%	10.0%	90.0%	0.4	0.7	0.0	0.0
BASIN 23	3.2	3	0.0%	0.0%	10.0%	90.0%	8.3	13.4	0.4	0.6
BASIN 24	2.6	0	0.0%	0.0%	10.0%	90.0%	6.6	10.7	0.3	0.5
BASIN 25	0.7	0	0.0%	0.0%	10.0%	90.0%	1.9	3.0	0.1	0.1
BASIN 26A	0.9	0.5	0.0%	0.0%	10.0%	90.0%	2.3	3.7	0.1	0.2
BASIN 26B	0.6	0	0.0%	0.0%	10.0%	90.0%	1.6	2.6	0.1	0.1
BASIN 27	0.6	0	0.0%	0.0%	10.0%	90.0%	1.6	2.7	0.1	0.1
BASIN 28	0.7	0	0.0%	0.0%	10.0%	90.0%	1.9	3.0	0.1	0.1
BASIN 29A	0.2	0	0.0%	0.0%	10.0%	90.0%	0.5	0.8	0.0	0.0
BASIN 29B	0.8	2	0.0%	0.0%	10.0%	90.0%	2.1	3.3	0.1	0.1
BASIN 30A	0.2	0	0.0%	0.0%	10.0%	90.0%	0.4	0.7	0.0	0.0
BASIN 30B	0.1	0	0.0%	0.0%	10.0%	90.0%	0.2	0.3	0.0	0.0
BASIN 31	1.3	0	0.0%	0.0%	10.0%	90.0%	3.4	5.6	0.2	0.2
BASIN 32	0.2	0	0.0%	0.0%	10.0%	90.0%	0.6	0.9	0.0	0.0
BASIN 33	3.5	0	0.0%	0.0%	100.0%	0.0%	5.5	10.5	0.1	0.3
BASIN 34	5.3	0	0.0%	0.0%	100.0%	0.0%	8.5	16.1	0.2	0.5
TOTAL	57.6	189					119.4	207.2	4.7	8.0

Basins included in calculating %D are Basin 1 through Basin 20, Basin 25, Basin 27, Basin 29 and Basin 30.
Total 37.73 189

NOTES:
 Impervious percentages were calculated from the DPM Table 6.2.10, with the remaining percentages distributed to land treatment type B and C, due to the relatively flat terrain
 N=UNITS/ACRES = 5.0
 %D = 7*SQRT((N*N)-(5*N)) = 49.56 %

- LEGEND
- BASIN BOUNDARY
 - FLOW ARROW
 - EXISTING STORM DRAIN
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN MANHOLE
 - PROPOSED STORM DRAIN INLET
 - HIGH POINT



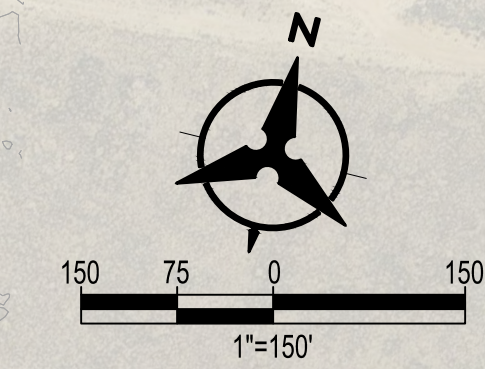
OFFSITE BASINS - INTERIM CONDITIONS										
BASIN I.D.	AREA (AC)	UNITS #	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)	
			A	B	C	D	10 YR	100YR	10 YR	100YR
6 HOUR STORM										
OFFSITE BASIN 1	34.1	0	96.0%	4.0%	0.0%	0.0%	15.1	60.0	0.4	1.8
OFFSITE BASIN 2	9.9	0	96.0%	4.0%	0.0%	0.0%	4.4	17.5	0.1	0.5
OFFSITE BASIN 3	0.3	0	96.0%	4.0%	0.0%	0.0%	0.1	0.4	0.0	0.0
OFFSITE BASIN 4	2.4	0	96.0%	4.0%	0.0%	0.0%	1.0	4.2	0.0	0.1
OFFSITE BASIN 5	1.6	0	96.0%	4.0%	0.0%	0.0%	0.7	2.8	0.0	0.1
OFFSITE BASIN 6	2.7	0	96.0%	4.0%	0.0%	0.0%	1.2	4.8	0.0	0.1
TOTAL	51.0	0					22.6	89.5	0.7	2.7

OFFSITE BASINS - ULTIMATE CONDITIONS										
BASIN I.D.	AREA (AC)	UNITS #	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)	
			A	B	C	D	10 YR	100YR	10 YR	100YR
6 HOUR STORM										
OFFSITE BASIN 1	18.1	0	0.0%	25.0%	25.0%	50.0%	36.1	63.6	1.4	2.4
OFFSITE BASIN 2	9.9	0	0.0%	15.0%	15.0%	70.0%	22.7	38.1	1.0	1.6
OFFSITE BASIN 3	0.3	0	0.0%	15.0%	15.0%	70.0%	0.6	1.0	0.0	0.0
OFFSITE BASIN 4	2.4	0	0.0%	15.0%	15.0%	70.0%	5.4	9.1	0.2	0.4
OFFSITE BASIN 5	1.6	0	0.0%	15.0%	15.0%	70.0%	3.6	6.0	0.2	0.2
OFFSITE BASIN 6	2.7	0	0.0%	15.0%	15.0%	70.0%	6.2	10.4	0.3	0.4
TOTAL	34.9	0					74.5	128.2	3.1	5.1

**DRAINAGE BASINS
PROPOSED CONDITIONS**

MDS ARTISTE

DRAWN BY: DO	DATE: 7/3/2025
CHECKED BY: YPM	BHI PROJECT NO. 20240316 SHEET NO. 1 OF 1



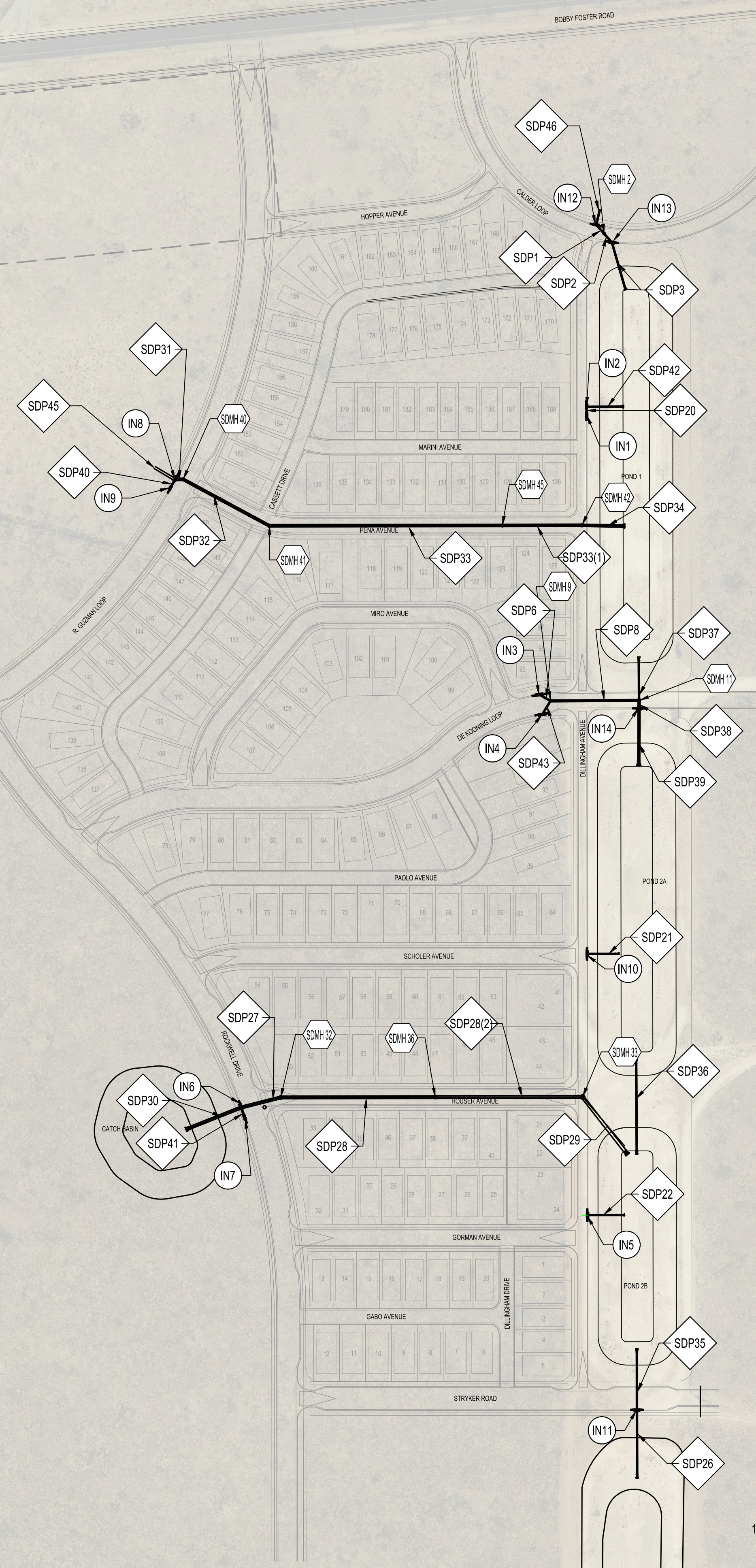
**EXHIBIT D:
STORM DRAIN AND POND EXHIBIT**

INLET TABLE - INTERIM CONDITIONS				
Inlet #	UPSTREAM FLOW (cfs)	Inlet Type	FLOW CAPTURED (cfs)	BYPASS FLOW (cfs)
IN1	20.3	Type A - SGL Grate SGL Wing R	20.3	0.0
IN2	18.1	Type A - SGL Grate SGL Wing L	18.1	0.0
IN3	18.30	Type A - DBL Grate DBL Wing	18.30	0.0
IN4	18.30	Type A - DBL Grate DBL Wing	18.30	0.0
IN5	13.10	Type A - SGL Grate DBL Wing	13.10	0.0
IN6	24.40	Type A - DBL Grate SGL Wing L	24.40	0.0
IN7	19.20	Type A - DBL Grate SGL Wing R	19.20	0.0
IN8	15.40	Type A - SGL Grate SGL Wing L	15.40	0.0
IN9	15.40	Type A - SGL Grate SGL Wing R	15.40	0.0
IN10	5.10	Type A - SGL Grate DBL Wing	5.10	0.0
IN11	5.90	Type A - SGL Grate DBL Wing	5.90	0.0
IN12	7.25	Type A - SGL Grate DBL Wing	7.25	0.0
IN13	7.25	Type A - SGL Grate DBL Wing	7.25	0.0
IN14	3.80	Type A - SGL Grate DBL Wing	3.80	0.0

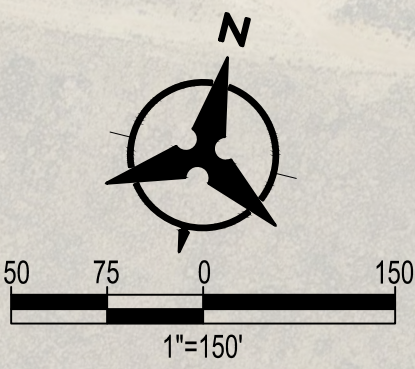
INLET TABLE - ULTIMATE CONDITIONS				
Inlet #	UPSTREAM FLOW (cfs)	Inlet Type	FLOW CAPTURED (cfs)	BYPASS FLOW (cfs)
IN1	20.3	Type A - SGL Grate SGL Wing R	20.3	0.0
IN2	18.1	Type A - SGL Grate SGL Wing L	18.1	0.0
IN3	18.30	Type A - DBL Grate DBL Wing	18.30	0.0
IN4	18.30	Type A - DBL Grate DBL Wing	18.30	0.0
IN5	13.10	Type A - SGL Grate DBL Wing	13.10	0.0
IN6	24.40	Type A - DBL Grate SGL Wing L	24.40	0.0
IN7	19.20	Type A - DBL Grate SGL Wing R	19.20	0.0
IN8	6.70	Type A - SGL Grate SGL Wing L	6.70	0.0
IN9	6.70	Type A - SGL Grate SGL Wing R	6.70	0.0
IN10	5.10	Type A - SGL Grate DBL Wing	5.10	0.0
IN11	5.90	Type A - SGL Grate DBL Wing	5.90	0.0
IN12	3.35	Type A - SGL Grate DBL Wing	3.35	0.0
IN13	3.35	Type A - SGL Grate DBL Wing	3.35	0.0
IN14	3.80	Type A - SGL Grate DBL Wing	3.80	0.0

STORM DRAIN PIPE TABLE					
PIPE #	Size in.	Slope	Capacity ¹ cfs	ACTUAL FLOW cfs INTERIM CONDITIONS	ACTUAL FLOW cfs ULTIMATE CONDITIONS
ONSITE					
SDP1	24	5.28%	51.98	7.25	18.45
SDP2	24	5.28%	51.98	7.25	18.45
SDP3	24	5.28%	52.0	14.5	21.8
SDP6*	24	0.60%	17.52	18.50	18.30
SDP8	36	0.60%	51.66	37.00	36.60
SDP20	24	2.00%	31.99	20.30	20.30
SDP21	18	14.03%	39.35	5.10	5.10
SDP22	18	9.55%	32.46	13.10	13.10
SDP26*	24	0.41%	14.49	25.90	25.90
SDP27*	54	0.25%	98.32	103.30	107.20
SDP28(2)*	54	0.25%	98.32	103.30	107.20
SDP28*	54	0.25%	98.32	103.30	107.20
SDP29	60	0.23%	124.90	103.30	107.20
SDP30	54	6.54%	502.90	60.00	63.60
SDP31	48	0.39%	89.71	30.80	51.40
SDP32	48	0.35%	84.98	30.80	51.40
SDP33	48	0.70%	120.18	30.80	51.40
SDP33(1)	48	0.91%	137.03	30.80	51.40
SDP34	48	0.91%	137.03	30.80	51.50
SDP35*	24	0.34%	13.19	20.00	20.00
SDP36	24	2.34%	34.61	20.00	20.00
SDP37	24	1.95%	31.6	20.0	20.0
SDP38	42	1.95%	140.49	57.00	56.60
SDP39	42	1.95%	140.49	60.80	60.40
SDP40	24	0.50%	16.00	15.40	6.70
SDP41	24	1.00%	22.62	19.20	19.20
SDP42	24	7.30%	61.1	38.4	38.4
SD43*	24	0.60%	17.52	18.50	18.30
SDP44*	24	0.78%	19.72	20.00	20.00
SDP45	48	0.50%	101.57	0.00	38.10
SDP46	24	0.50%	16.00	0.00	15.10

¹- Capacity Based on Manning's Eq w/ n=0.013
* Pipe under pressure flow



- LEGEND
- EXISTING STORM DRAIN
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN MANHOLE
 - PROPOSED STORM DRAIN INLET



STORM DRAIN EXHIBIT

MDS ARTISTE SUBDIVISION

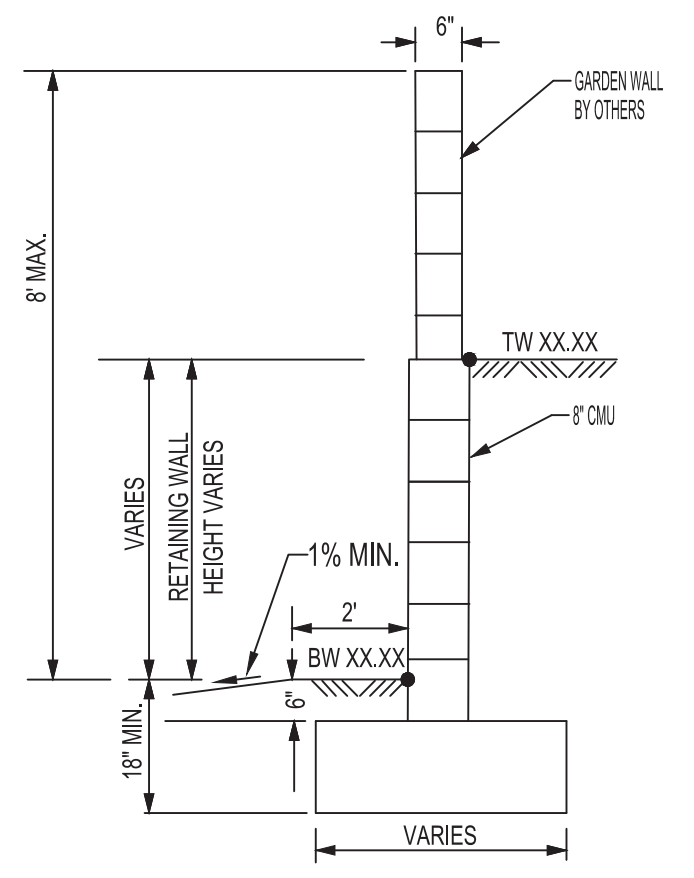
DRAWN BY: AHA	DATE: 8/21/2025
CHECKED BY: YPM	BHI PROJECT NO. 20240316 SHEET NO. 1 OF 1

**EXHIBIT E:
GRADING PLAN**

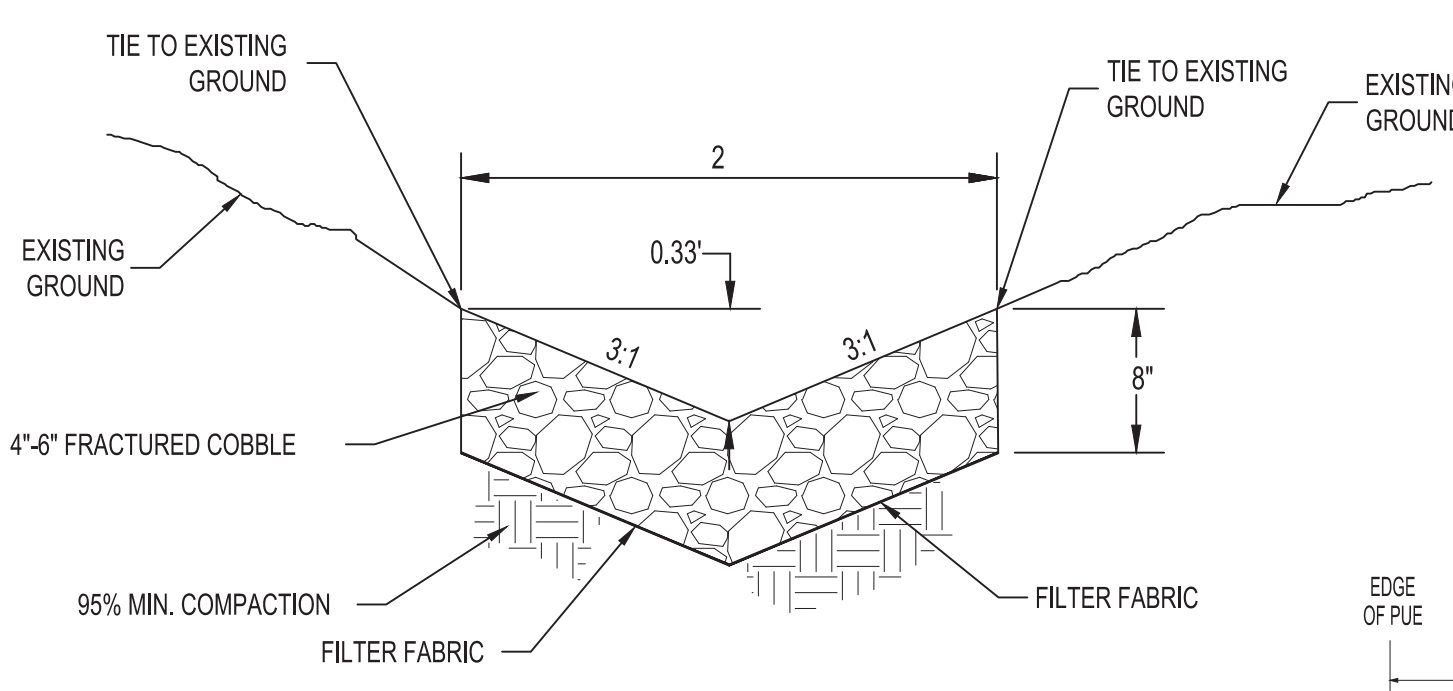


LEGEND

PROPOSED SPOT ELEVATION	● 5235.25
EXISTING SPOT ELEVATION	● EX 5235.25
PROPOSED CONTOUR	— 5025 —
EXISTING STORM DRAIN LINE	— — — — —
PROPOSED STORM DRAIN INLET	⊞
PROPOSED STORM DRAIN LINE	⊞ — — — — —
PROPOSED STORM DRAIN MANHOLE	○
PROPOSED WATER BLOCK	⊞
PERIMETER WALL	— · — · — · — · —
RETAINING WALL	— · — · — · — · —
GARDEN WALL	— · — · — · — · —
PAD	□ 10 P=5300.00
TURNED BLOCK	⊞
STREET SLOPE	XX
DIRECTION OF FLOW	→

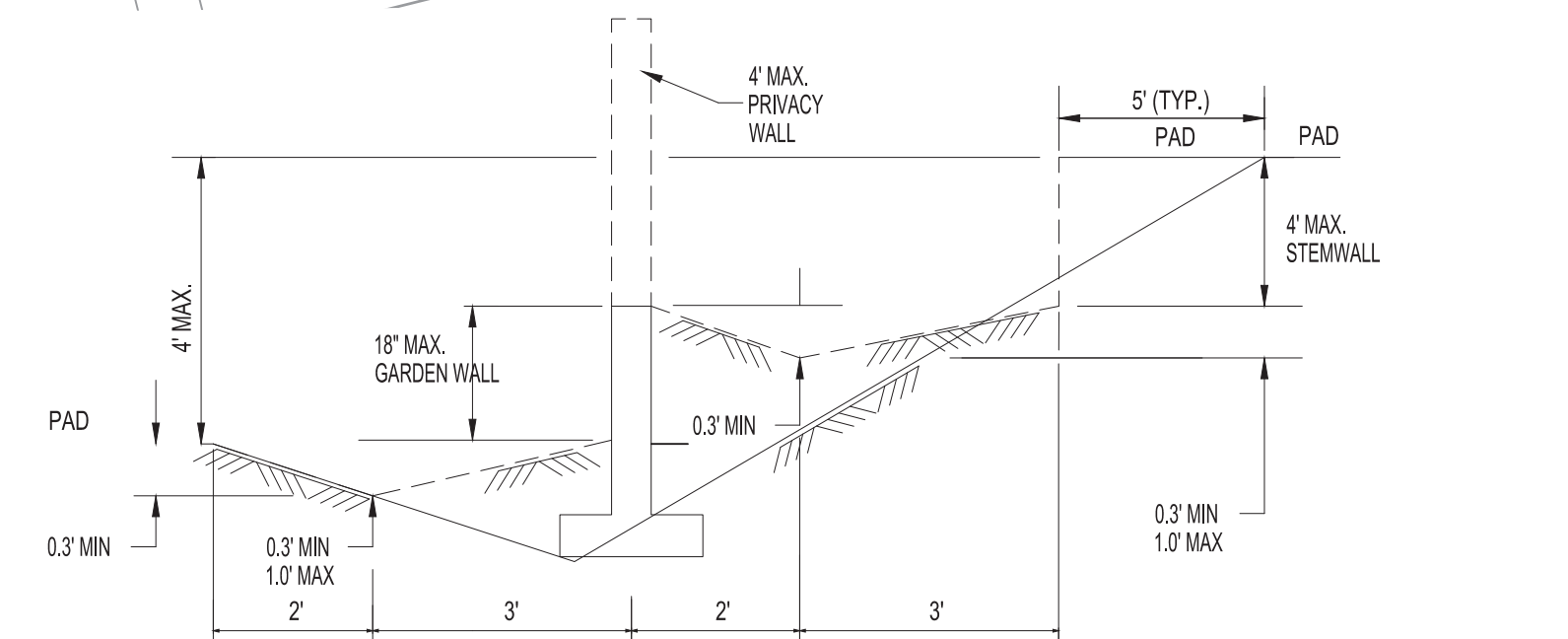


TW=FINISHED GRADE ELEVATION AT TOP OF RETAINING WALL
 BW=FINISHED GRADE ELEVATION AT BOTTOM OF RETAINING WALL
TYPICAL RETAINING WALL NOMENCLATURE
 NOT TO SCALE
 (RETAINING HEIGHT IS TAKEN TO BE DIFFERENCE IN FINISHED GRADES ON LEFT AND RIGHT SIDE OF WALL.)
 HEIGHT IS IN ACCORDANCE WITH CITY COMPREHENSIVE ZONING CODE, SECTION 14-16-3-19, GENERAL HEIGHT AND DESIGN REGULATIONS FOR WALLS, FENCES, AND RETAINING WALLS.

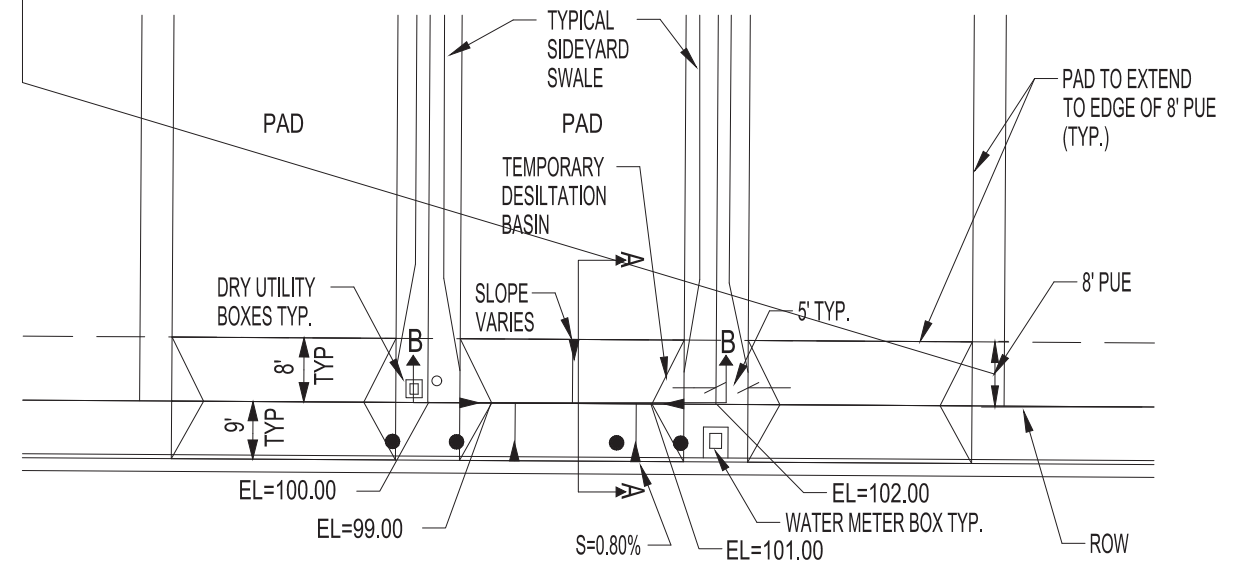


- GENERAL NOTES**
- ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.
 - THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
 - TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
 - ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
 - THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.
 - CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 - OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.
 - THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E. BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).
 - ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.
 - THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
 - ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
 - THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
 - THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES REQUIREMENTS.

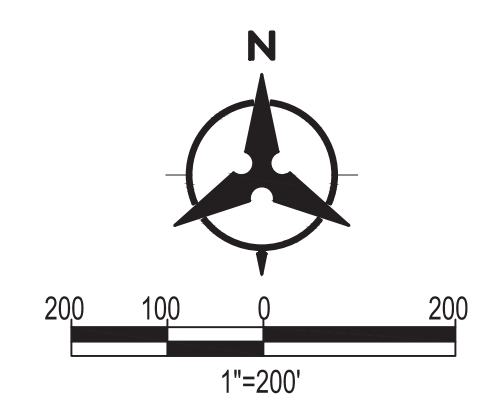
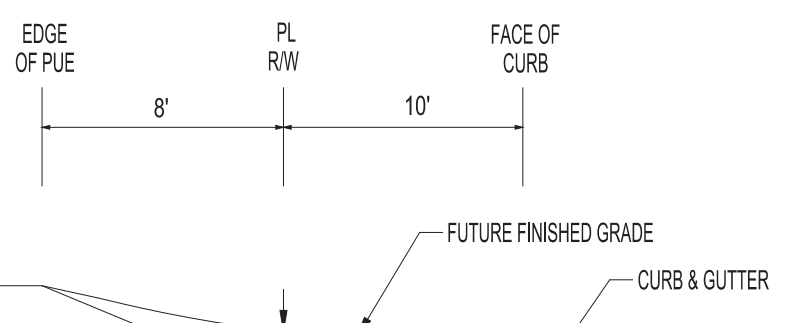
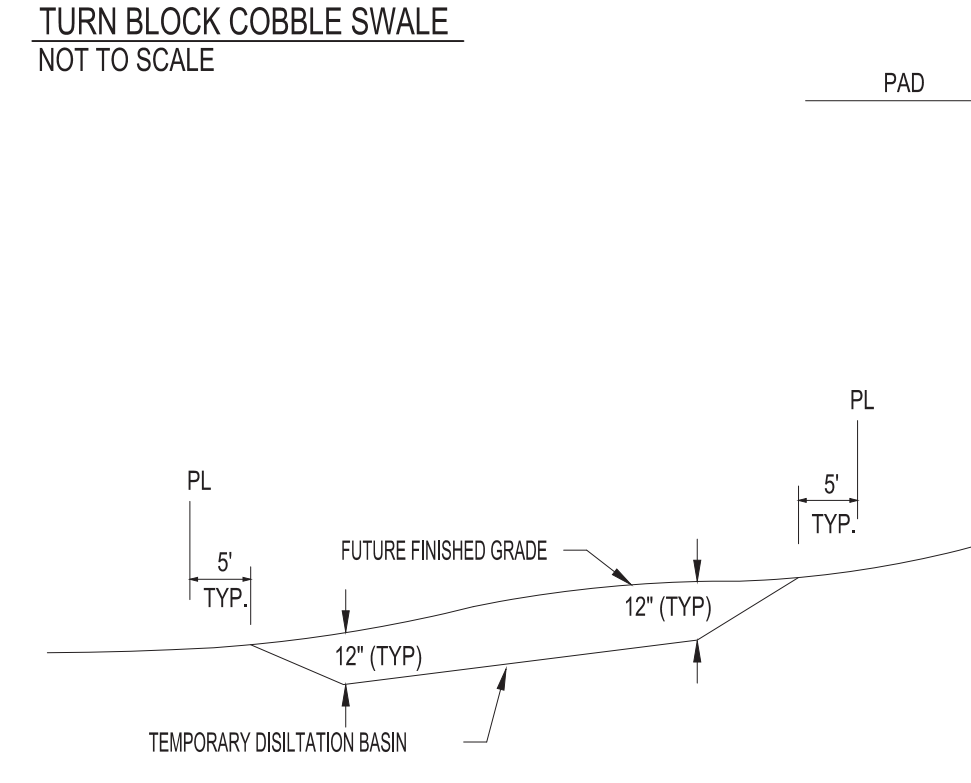
- GRADING NOTES**
- EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
 - CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION, PRIOR TO CONSTRUCTION. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL MEASURES AND REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.
 - ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SOILS REPORT. ALL OTHER WORK, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS (FIRST PRIORITY), AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).
 - TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
 - PRIOR TO GRADING, ALL VEGETATION DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE OR STOCK-PILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
 - EARTH SLOPES SHALL NOT EXCEED 4 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
 - IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.
 - THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.
 - A DISPOSAL SITE FOR ALL EXCESS EXCAVATION AND UNSUITABLE MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
 - PAVING AND ROADWAY GRADES SHALL BE +0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +0.05' FROM BUILDING PLAN ELEVATIONS.
 - ALL SPOT ELEVATIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. VALLEY GUTTER ELEVATIONS ARE SHOWN AT FLOWLINE ELEVATION.
 - GRADING SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.



TYPICAL SIDE LOT LINE SECTION
 NOT TO SCALE
 NOTE: DASHED LINES IN TYP. SIDE LOT LINE SECTIONS REPRESENT THE FINAL CONDITION AFTER THE GARDEN, STEM, AND PRIVACY WALLS HAVE BEEN CONSTRUCTED. THE INTERIM CONDITION, WHICH IS TO BE CONSTRUCTED BY THE GRADING CONTRACTOR AND CERTIFIED BY THE ENGINEER, IS REPRESENTED BY THE SOLID LINES. RETAINING WALLS WILL BE CONSTRUCTED PRIOR TO GRADING CERTIFICATION.



** BOTTOM OF BASIN IS 1' BELOW PROPERTY LINE ELEVATION SEE GRADING PLANS FOR EXACT ELEVATIONS



CALL NM ONE-CALL SYSTEM SEVEN (7) DAYS PRIOR TO ANY EXCAVATION



CITY OF ALBUQUERQUE
 DEPARTMENT OF MUNICIPAL DEVELOPMENT
 ENGINEERING DIVISION

ARTISTE SUBDIVISION
OVERALL GRADING PLAN

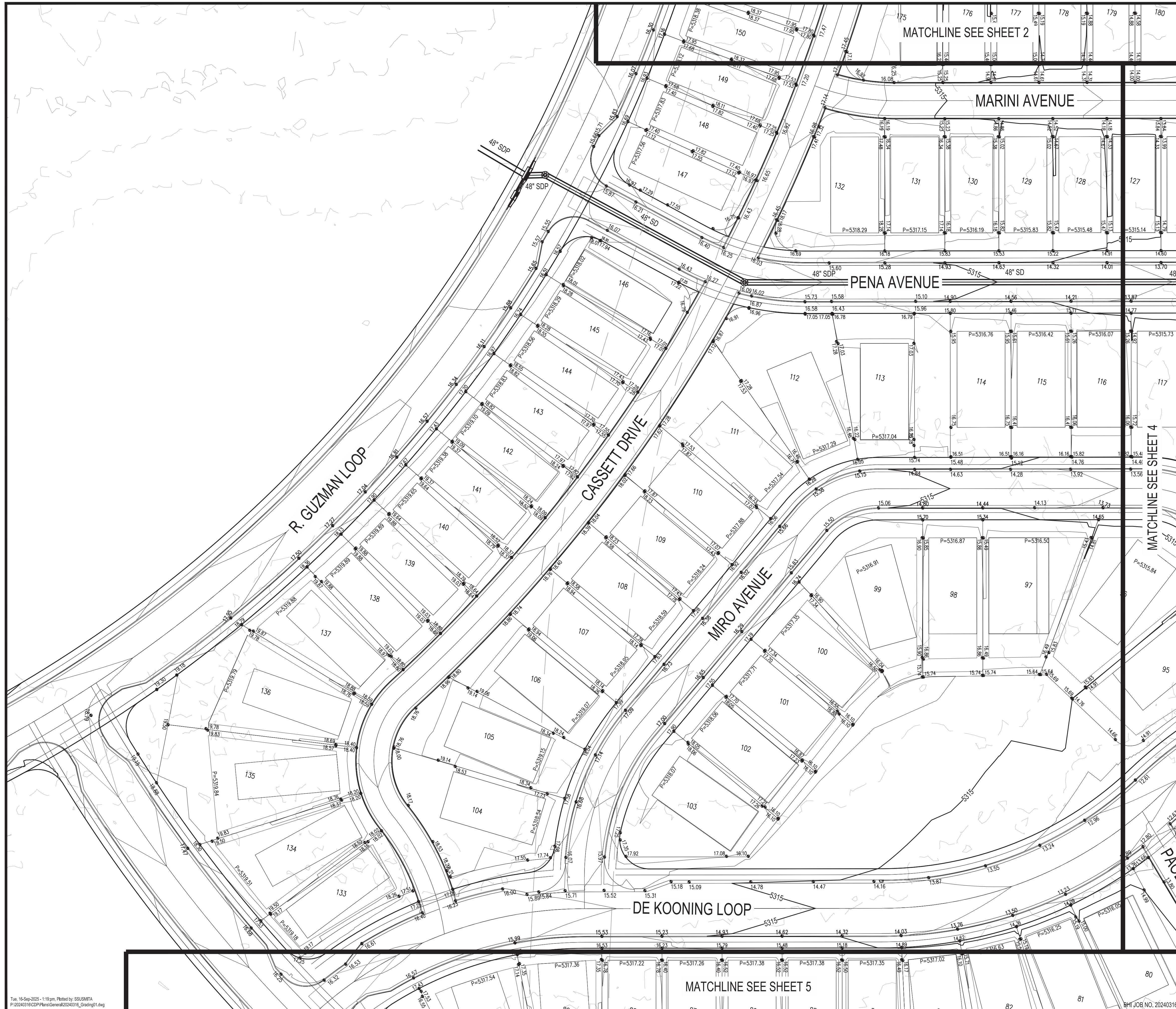
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	ZONE MAP NO. R-15-Z & S-15-Z
		CITY PROJECT NO. 20240316
		SHEET NO. 1 OF 7

Bohannon
Huston
 www.bhinc.com
 800.877.5332

CONSULTANTS

BENCH MARKS

DESIGNED BY: ###	BY:
DRAWN BY: DO	CONTRACTOR:
CHECKED BY: #####	DATE:
DATE: 4/2/2025	DATE:
NO. DATE	DATE:
AS-BUILT INFORMATION	DATE:
WORK STAKED BY:	DATE:
INSPECTOR'S ACCEPTANCE BY:	DATE:
FIELD VERIFICATION BY:	DATE:
DRAWINGS CORRECTED BY:	DATE:



LEGEND

- PROPOSED SPOT ELEVATION ● 5235.25
- EXISTING SPOT ELEVATION ● EX 5235.25
- PROPOSED CONTOUR — 5225
- EXISTING STORM DRAIN LINE ———
- PROPOSED STORM DRAIN INLET [Symbol]
- PROPOSED STORM DRAIN LINE [Symbol]
- PROPOSED STORM DRAIN MANHOLE [Symbol]
- PROPOSED WATER BLOCK [Symbol]
- PERIMETER WALL [Symbol]
- RETAINING WALL [Symbol]
- GARDEN WALL [Symbol]
- PAD [Symbol]
- TURNED BLOCK WITH SWALE SEE SWALE DETAIL SHEET 1 [Symbol]
- STREET SLOPE [Symbol]
- DIRECTION OF FLOW [Symbol]

BOHANNAN & HUSTON
CONSULTANTS
www.bhinc.com
800.877.5332

BOHANNAN & HUSTON
REGISTERED PROFESSIONAL ENGINEER
16035
08-22-2020

DESIGNED BY: YPM
DRAWN BY: DO
CHECKED BY: YPM
DATE: 4/2/2025

NO. DATE DESCRIPTION CONTRACTOR
AS-BUILT INFORMATION
WORK STAKED BY: INSPECTOR'S ACCEPTANCE BY: DATE: DATE: DATE:
FIELD VERIFICATION BY: DRAWINGS CORRECTED BY: DATE:

811
CALL NM ONE-CALL
SYSTEM SEVEN (7) DAYS
PRIOR TO ANY EXCAVATION

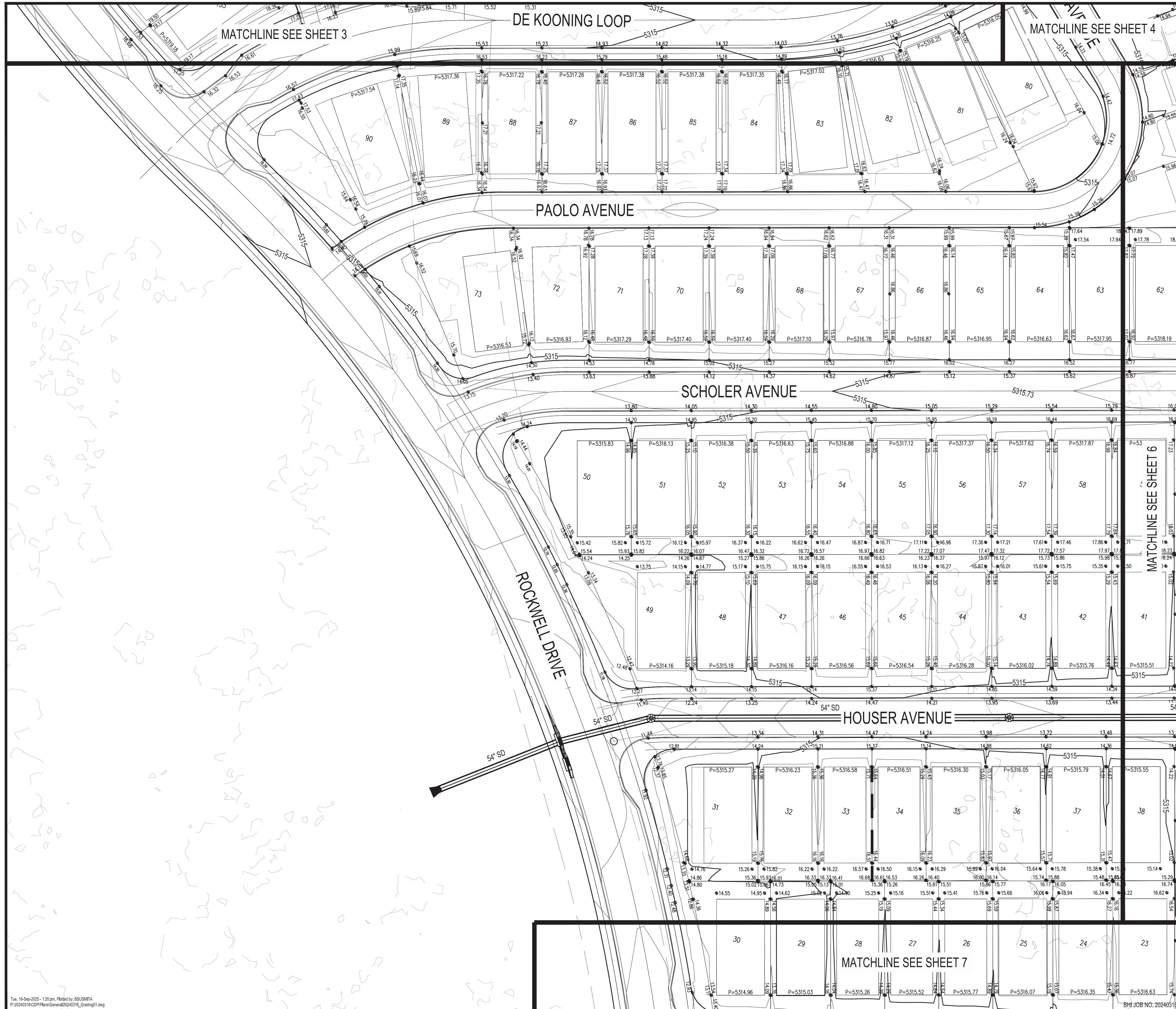
CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

ARTISTE SUBDIVISION
GRADING PLAN

DESIGN REVIEW COMMITTEE CITY ENGINEER APPROVAL

ZONE MAP NO. R-15-Z & S-15-Z
CITY PROJECT NO. 20240316
SHEET NO. 3 OF 7

Tue, 16-Sep-2025 1:19 pm, Plotted by: SSJ/SMTA
P:\20240316\CDP\Plans\General\20240316_Grading1.dwg



LEGEND

- PROPOSED SPOT ELEVATION: ● 5235.25
- EXISTING SPOT ELEVATION: ● EX 5235.25
- PROPOSED CONTOUR: - - - 5225
- EXISTING STORM DRAIN LINE: ---
- PROPOSED STORM DRAIN INLET: [Symbol]
- PROPOSED STORM DRAIN LINE: [Symbol]
- PROPOSED STORM DRAIN MANHOLE: [Symbol]
- PROPOSED WATER BLOCK: [Symbol]
- PERIMETER WALL: [Symbol]
- RETAINING WALL: [Symbol]
- GARDEN WALL: [Symbol]
- PAD: [Symbol]
- TURNED BLOCK WITH SWALE SEE SWALE DETAIL SHEET 1: [Symbol]
- STREET SLOPE: [Symbol]
- DIRECTION OF FLOW: [Symbol]

CONSULTANTS

BENCH MARKS

10
P=5300.00

TB

XX

[Symbol]

SEAL

BOHANNAN HUSTON
16035
08-22-2022
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION	BY
1		AS-BUILT INFORMATION	
2		WORK STAKED BY:	
3		INSPECTOR'S ACCEPTANCE BY:	
4		FIELD VERIFICATION BY:	
5		DRAWINGS CORRECTED BY:	

DESIGNED BY: YPM
DRAWN BY: DO
CHECKED BY: YPM
DATE: 4/2/2025

811

CALL NM ONE-CALL SYSTEM SEVEN (7) DAYS PRIOR TO ANY EXCAVATION

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

ARTISTE SUBDIVISION
GRADING PLAN

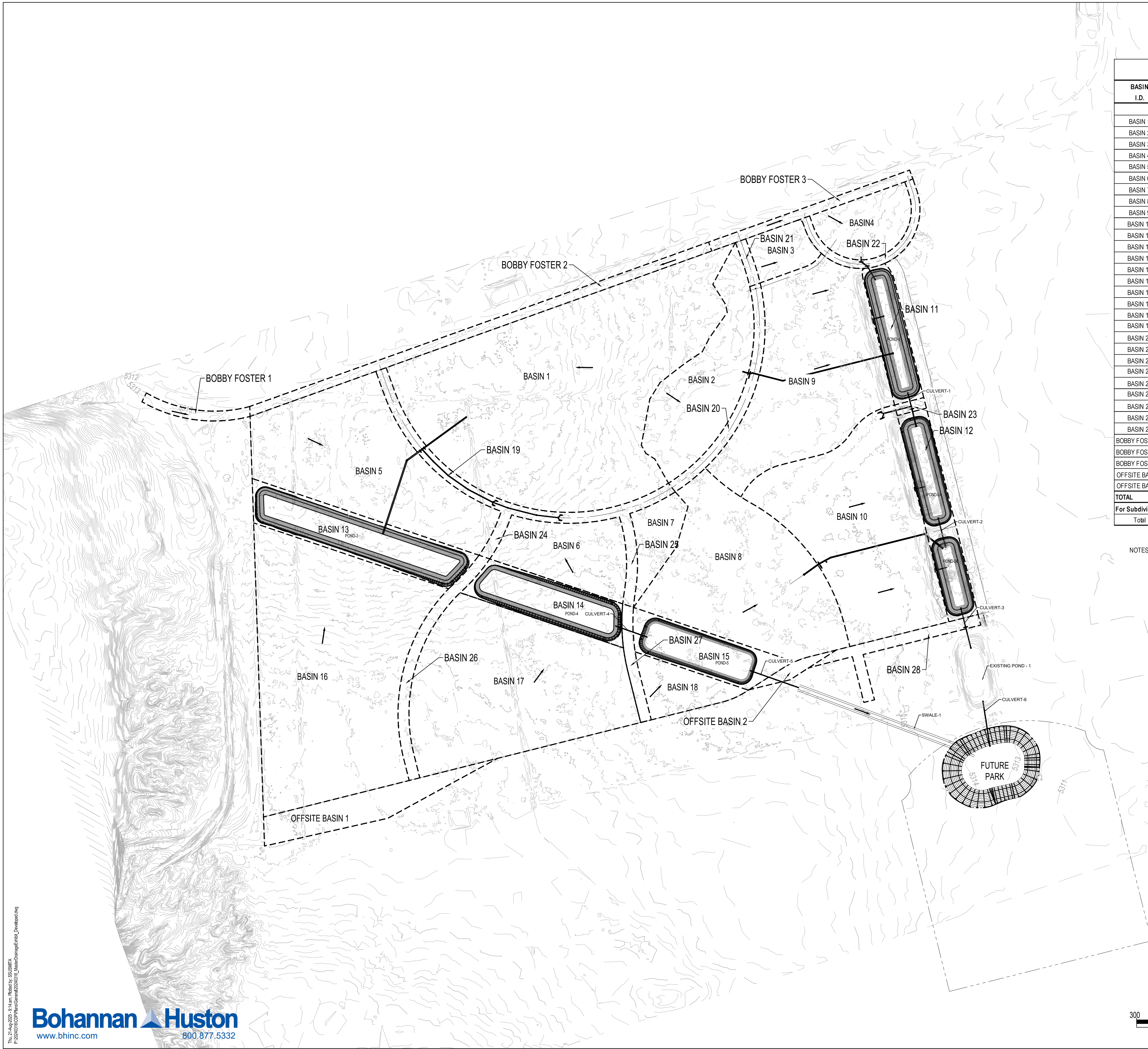
DESIGN REVIEW COMMITTEE

CITY ENGINEER APPROVAL

ZONE MAP NO. R-15-Z & S-15-Z
CITY PROJECT NO. 20240316
SHEET NO. 5 OF 7

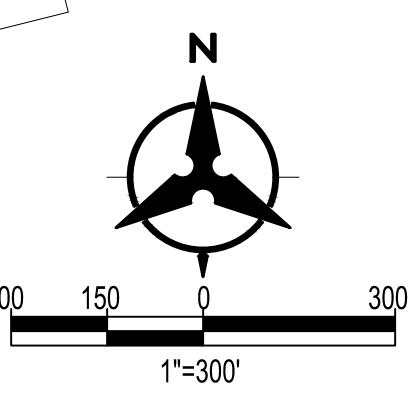
Tue, 16-Sep-2025 1:20 pm, Plotted by: SSS/SMITA
P:\20240316\CDP\Plans\General\20240316_Grading1.dwg

**EXHIBIT F:
MASTER DRAINAGE PROPOSED BASIN**



PROPOSED CONDITIONS												
BASIN I.D.	AREA (AC)	UNITS #	% LAND TREATMENT				DISCHARGE (CFS)		VOLUME (AC-FT)		VOLUME (AC-FT)	
			A	B	C	D	10 YR	100YR	6 HOUR STORM		10 DAY STORM	
									10 YR	100YR	10 YR	100YR
BASIN 1	42.2		0.0%	15.0%	15.0%	70.0%	96.2	162.0	4.1	6.7	6.79	9.98
BASIN 2	9.9		0.0%	15.0%	15.0%	70.0%	22.6	38.0	1.0	1.6	1.59	2.34
BASIN 3	2.3		0.0%	15.0%	15.0%	70.0%	5.3	9.0	0.2	0.4	0.38	0.55
BASIN 4	4.3		0.0%	15.0%	15.0%	70.0%	9.7	16.4	0.4	0.7	0.69	1.01
BASIN 5	18.6		0.0%	25.0%	25.0%	50.0%	37.0	65.2	1.5	2.5	2.31	3.54
BASIN 6	6.5		0.0%	25.0%	25.0%	50.0%	13.0	22.9	0.5	0.9	0.81	1.24
BASIN 7	2.8		0.0%	25.0%	25.0%	50.0%	5.5	9.7	0.2	0.4	0.34	0.53
BASIN 8	18.8		0.0%	25.0%	25.0%	50.0%	37.5	66.1	1.5	2.5	2.34	3.59
BASIN 9	18.2	96	0.0%	25.0%	25.0%	50.0%	36.3	63.8	1.4	2.5	2.26	3.47
BASIN 10	19.6	93	0.0%	25.0%	25.0%	50.0%	39.0	68.6	1.5	2.6	2.43	3.73
BASIN 11	5.1		0.0%	5.0%	95.0%	0.0%	8.0	15.4	0.2	0.4	0.20	0.44
BASIN 12	7.0		0.0%	5.0%	95.0%	0.0%	11.0	21.0	0.3	0.6	0.28	0.60
BASIN 13	6.2		0.0%	5.0%	95.0%	0.0%	9.6	18.4	0.2	0.5	0.24	0.52
BASIN 14	4.1		0.0%	5.0%	95.0%	0.0%	6.4	12.2	0.2	0.3	0.16	0.35
BASIN 15	4.1		0.0%	5.0%	95.0%	0.0%	6.4	12.2	0.2	0.3	0.16	0.35
BASIN 16	33.1		0.0%	25.0%	25.0%	50.0%	66.1	116.3	2.6	4.5	4.11	6.31
BASIN 17	25.0		0.0%	25.0%	25.0%	50.0%	49.8	87.6	2.0	3.4	3.10	4.76
BASIN 18	4.1		0.0%	5.0%	95.0%	0.0%	6.4	12.3	0.2	0.3	0.16	0.35
BASIN 19	3.3		0.0%	0.0%	10.0%	90.0%	8.6	14.0	0.4	0.6	0.66	0.94
BASIN 20	2.1		0.0%	0.0%	10.0%	90.0%	5.5	8.9	0.2	0.4	0.42	0.60
BASIN 21	0.4		0.0%	0.0%	10.0%	90.0%	1.1	1.8	0.0	0.1	0.08	0.12
BASIN 22	1.4		0.0%	0.0%	10.0%	90.0%	3.6	5.9	0.2	0.3	0.28	0.40
BASIN 23	0.3		0.0%	0.0%	10.0%	90.0%	0.7	1.2	0.0	0.1	0.05	0.08
BASIN 24	0.4		0.0%	0.0%	10.0%	90.0%	1.2	1.9	0.1	0.1	0.09	0.13
BASIN 25	0.8		0.0%	0.0%	10.0%	90.0%	2.2	3.5	0.1	0.2	0.17	0.24
BASIN 26	2.3		0.0%	0.0%	10.0%	90.0%	5.9	9.5	0.3	0.4	0.45	0.64
BASIN 27	1.1		0.0%	0.0%	10.0%	90.0%	2.8	4.5	0.1	0.2	0.21	0.30
BASIN 28	1.9		0.0%	0.0%	10.0%	90.0%	4.9	7.9	0.2	0.3	0.37	0.53
BOBBY FOSTER 1	0.9		0.0%	0.0%	10.0%	90.0%	2.3	3.7	0.1	0.2	0.17	0.25
BOBBY FOSTER 2	3.9		0.0%	0.0%	10.0%	90.0%	10.0	16.2	0.5	0.7	0.76	1.09
BOBBY FOSTER 3	1.7		0.0%	0.0%	10.0%	90.0%	4.4	7.1	0.2	0.3	0.34	0.48
OFFSITE BASIN 1	4.7		95.0%	5.0%	0.0%	0.0%	2.1	8.2	0.1	0.2	0.06	0.24
OFFSITE BASIN 2	0.6		95.0%	5.0%	0.0%	0.0%	0.3	1.1	0.0	0.0	0.01	0.03
TOTAL	257.5	189					521.4	912.7	20.7	35.2	32.47	49.71
For Subdivision only Basin-9 and Basin-10 is considered in calculating %D												
Total	37.73	189										

NOTES:
 Impervious percentages were calculated from the DPM Table 6.2.10, with the remaining percentages distributed to land treatment type B and C, due to the relatively flat terrain
 N=UNITS/ACRES = 5.0
 %D = 7*SQRT((N*N)*(5*N)) = 49.56 %



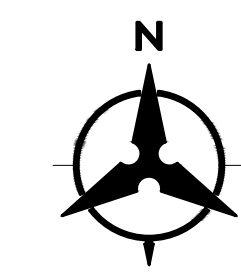
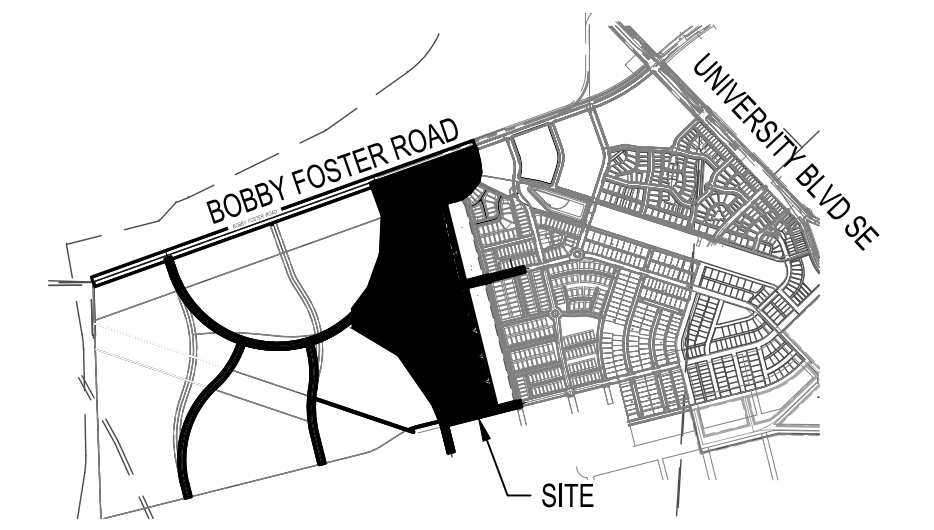
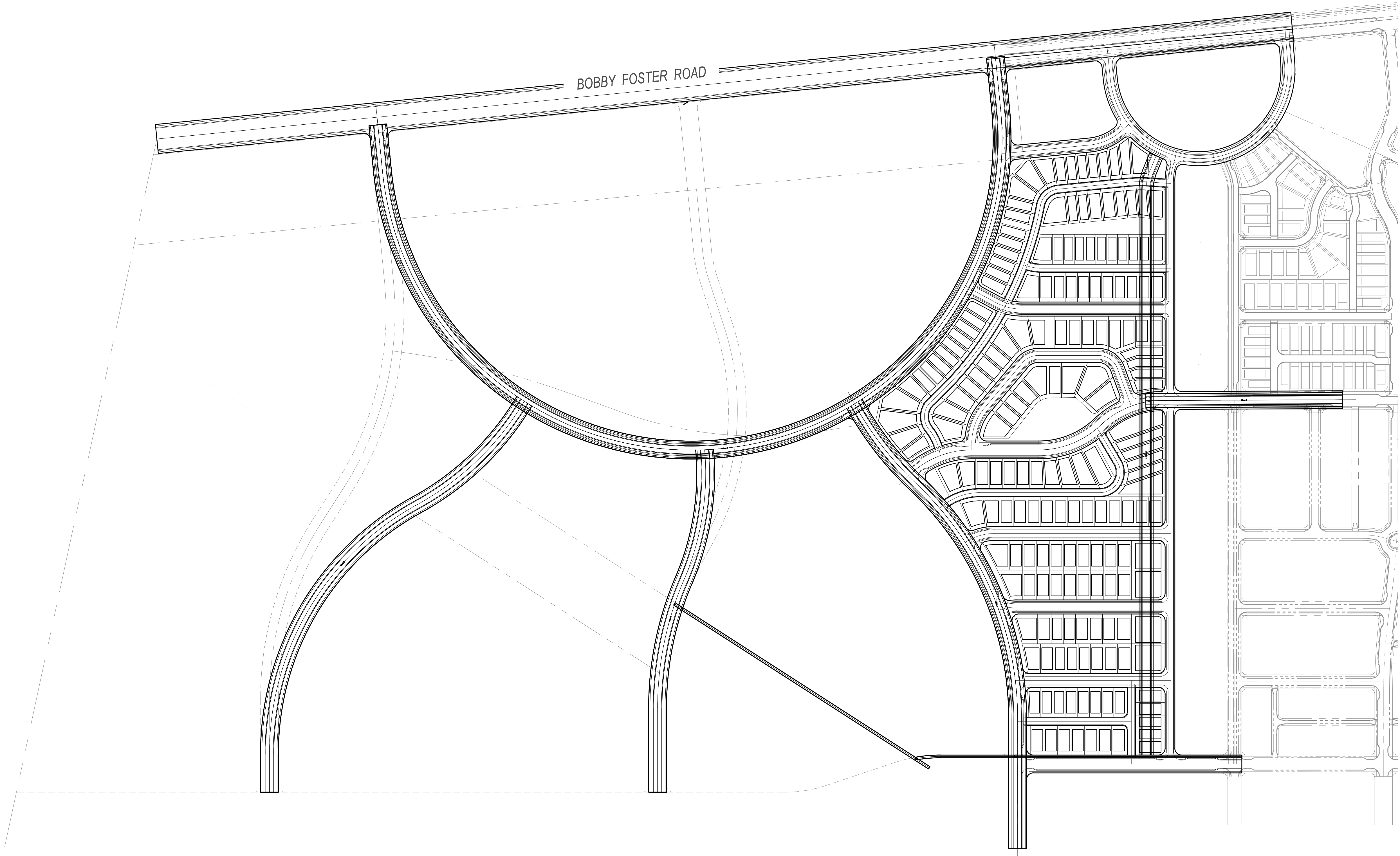
MASTER DRAINAGE EXHIBIT PROPOSED CONDITIONS

MDS ARTISTE

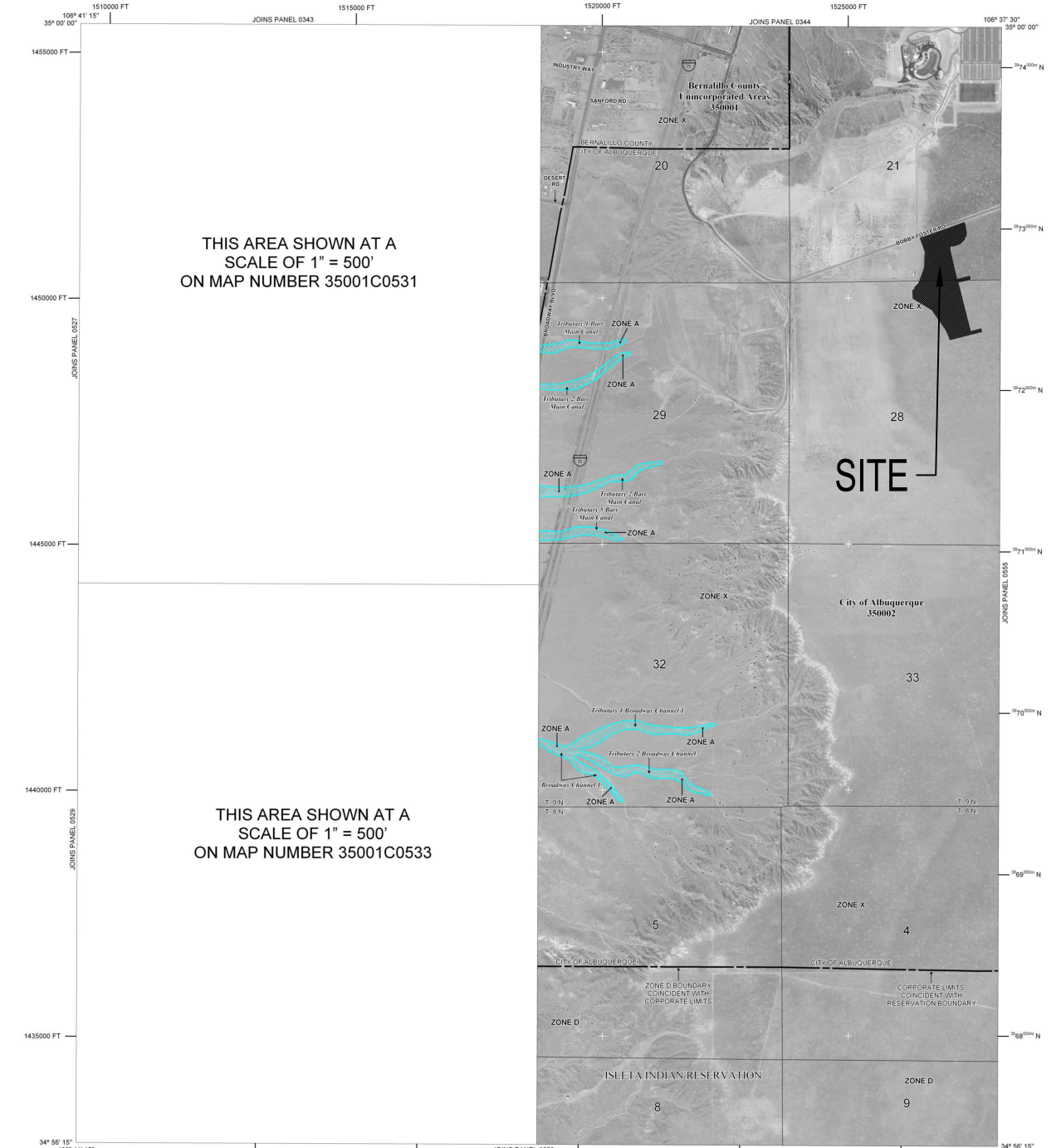
DRAWN BY: DO	DATE: 8/12/2025
CHECKED BY: YPM	BHI PROJECT NO. 20240316 SHEET NO. 1 OF 1

**EXHIBIT G:
SITE LOCATION EXHIBIT**

SITE LOCATION EXHIBIT
ARTISTE SUBDIVISION
AUGUST 2025



LOCATION MAP (ZONE ATLAS # R-15 & S-15)
SCALE: 1" = 2000'



FEMA MAP NUMBER
35001C0535G (ZONE X)
N.T.S

MAP REVISED
SEPTEMBER 26, 2008

