CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

March 26, 2018

Jonah Ruybalid, P.E.
Molzen-Corbin & Associates
2701 Miles Road SE
Albuquerque, NM 87106

RE: **Sunport Blvd Extension**
Drainage Report for Work Order
Engineer's Stamp Date: none (report dated March 2019)
Hydrology File: M14D000

Dear Mr. Ruybalid:

Prior to the City of Albuquerque- Hydrology Section approving the Work Order for this project, the following outstanding drainage concerns will need to be corrected:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

1. The report needs to be stamped, signed, and dated by a NM Professional Engineer.

2. The basin delineations work map (in appendix D) needs to include existing contours in the areas where grading is not anticipated (use grayscale or dashed so they don't look like the proposed contours). Some areas draining to Broadway appear to have been missed such as portions of Western Refining, Broadway south of Western Refining, the limited discharge allowed from Aguamatic Landscaping, and the area north of Aguamatic Landscaping. Conversely, some of the developed sites do not discharge to Broadway and are required to pond all or a portion of their runoff onsite (containment lagoons for Western Refining, Ben E. Keith Foods, etc..).

3. The basin delineations and site Hydrology needs to accommodate flows from these surrounding sites with previously approved discharges to Broadway/Woodward. Many of the surrounding properties are required to retain onsite; but there are a few that have limited discharge to the ROW. Hydrology and Transportation files are available online through the City's GIS Viewer 2.0: https://www.cabq.gov/gis/advanced-map-viewer. Turn on the *HydroTrans* layer: *Operational Layers* > *Albuquerque Layers* > *Sites* > *HydroTrans*. Select the desired polygon from the map and click *Link to Project Documents*.

4. Undeveloped areas that discharge into your system need to anticipate future development and establish an allowable discharge rate. Due to the restrictive nature of the drainage system in the South Valley, you won't need to allow/anticipate free discharge as is typical in upland areas, but allowable discharges should be developed based on the current runoff from the site.

5. Use of land treatment A in Basin T is suspect, this area has signs of previous development, grading, trespass traffic, etc…; land treatments B and C seem more appropriate.

6. In the Basin Routing (Figure 6), Basin T is be missing, and Basin XJ is missing.

7. With AHYMO S4, be sure to use NOAA Atlas 14 precipitation depths in conjunction with the NOAA Atlas 14 distribution. Include the location map and tables obtained from the NOAA website. You've used the NOAA Atlas 2 Precipitation depths (Found in the DPM for Zone 2), with the NOAA Atlas 14 Distributions; this results in an over-prediction of the peak runoff (Q_{100}). See AHYMO AppNote-01, and the Hydrology website for more information regarding this error.

8. Use of 'COA Type-C grate only' inlets is not acceptable. These are not a City standard; you may be thinking of Type-D inlets. In order to reduce large debris with a Type-C inlet, throat grates should be used. We've used these in a few places downtown for the same reason; they screen debris, but automatically open when the Q_{100} flow depth is reached, so to reduce flooding from clogged inlets. Alternatively, you can just use Type-D inlets.

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9. Inlets in sump conditions need to be sized for 2x the 100-yr flow (i.e., 50% clogging). Also the open area for an installed bike-friendly Albuquerque grate (Std Dwg 2220-Modified, attached) is 3.72sf, exclusive of: bearing bars, cross bars, end bars, frame and welds; please update the inlet calculations.

10. Use a common naming convention to match the inlets and manholes across the calculation sheets, plans, and HGL calculations, as was done with the storm drain pipe ID's.

11. Do not mix and match the SSA HGLs with the AHYMO discharges on the plans. The AHYMO discharges (hydrology) should be input into the SSA model (hydraulics) and used to compute the HGLs. There is no need to reproduce hydrology in SSA and SSA is not a recognized hydrologic model by the City and cannot be accepted (it is recognized for hydraulic modeling, though).

12. Provide the input and output tables for the HGL calculations, including the EGL. The water surface elevation in the pond at the time of peak inflow should be used as the control water surface for the upstream pipes (currently this is 4934.94' at hour 1.50, but will need to be updated once you update the AHYMO model).

13. HGL calculations are missing for the pipe network between the Sunport pond and the San Jose Drain. For the pipe network discharging to the San Jose Drain, you should use the 10 year water surface elevation in the Drain or a more conservative assumption as the control surface for the HGL calculations.

14. Provide a detail for the Sunport pond outlet structure. It is unclear what is proposed here. How was the storage-discharge curve/table determined? Orifice equation and weir equation?

Provide supporting calculations. The emergency overflow needs to be sized to accommodate 2x the 100-yr peak inflow (or provide an overland flow path sized similarly).

15. For Information. Grading, encroachments, and storm water discharges to the AMAFCA ROW (South Diversion Channel) need to be approved by AMAFCA. Design and calculations for these can be included in the Drainage Report, but AMAFCA approval will ultimately be required prior to or concurrent to City Hydrology signing the Work Order plans. The City will defer to AMAFCA and the County on discharge to the SDC; we are primarily concerned with discharge to the San Jose Drain.

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

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

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City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Sunport Boulevard Extension Building Permit #: _____ Hydrology File #: M14D000

DRB#: DRC #648595 EPC#: _____ Work Order#: _____

Legal Description: MAP44TR 64 C 1 A 2 B 1 1.5 AC, SWLY PORTION OF TRACT 64C3A1 MRGCD MAP 44 CONT 0.245 AC, SELY PORTION OF TRACT 64C3A1 MRGCD MAP 44 CONT 0.63 AC

City Address: 3024 Broadway Blvd SE, 3200 Broadway Blvd SE, 99999 Arno St. SE

Applicant: Molzen Corbin Contact: Jonah Ruybalid

Address: 2701 Miles Road SE Albuquerque, NM 87106

Phone#: 505-242-5700 Fax#: 505-242-0673 E-mail: jruybalid@molzencorbin.com

Owner: Bernalillo County Public Works Contact: Rodrigo Eichwald

Address: 2400 Broadway Blvd SE, Albuquerque, NM 87102

Phone#: 505-848-1574 Fax#: _____ E-mail: rleichwald@bernco.gov

TYPE OF SUBMITTAL: _____ PLAT (___# OF LOTS) ____ RESIDENCE ____ DRB SITE ____ ADMIN SITE

IS THIS A RESUBMITTAL?: X Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION X HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
X OTHER (SPECIFY) Drainage Report Amendment
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY
____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR
____ FLOODPLAIN DEVELOPMENT PERMIT
X OTHER (SPECIFY) Drainage Acceptance

DATE SUBMITTED: March 22, 2019 By: Jonah Ruybalid

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____ **DMD/Public Project**

NEW MEXICO DEPARTMENT OF TRANSPORTATION, CITY OF ALBUQUERQUE

SUNPORT BOULEVARD EXTENSION DRAINAGE REPORT AMENDMENT

Prepared for:

BOHANNAN HUSTON
7500 Jefferson St. NE
Albuquerque, New Mexico 87109

Prepared by:

MOLZEN CORBIN
2701 Miles Road SE
Albuquerque, New Mexico 87106
Phone: (505) 242-5700 Fax: (505) 242-0673

DRAFT

March 2019

MOLZENCORBIN
ENGINEERS | ARCHITECTS | PLANNERS

BHI161-11

ENGINEER OF RECORD

Molzen Corbin
2701 Miles Road, S.E.
Albuquerque, New Mexico 87106
(505) 242-5700

The technical material and data contained in this Master Plan was prepared under the supervision and direction of the undersigned, whose seal as a Professional Engineer, licensed to practice in the State of New Mexico, is affixed below.

(SEAL)

Jonah S. Ruybalid, P.E.

N.M.P.E. No. 23909

All questions about the meaning or intent of these documents shall be submitted only to the Engineer of Record, stated above, in writing.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

Bohannon Huston was contracted to complete the Sunport Boulevard Extension project from Broadway to I-25. Molzen Corbin has been contracted by Bohannan Huston as a sub-consultant to complete various portions of the project including the drainage analysis and design.

URS now AECOM prepared a Preliminary Drainage Report (PDR) in February 2011 for the Sunport Boulevard Extension Broadway to I-25 project. This report was prepared for Bernalillo County Public Works Division under Bernalillo County Project No. TS 09-06 and NMDOT Control No. A300160. In addition to the PDR, URS prepared 30% plans for the roadway project.

Molzen Corbin was instructed to utilize the 30% level plans and the PDR for the basis of design of the Sunport Boulevard Extension project. All Drainage Report updates and/or revisions were to be documented in this Drainage Report Amendment.

All of the existing drainage basins were utilized. However, the addition of multiple drop inlets or updated design geometry caused the basins from the preliminary drainage report to be split into multiple drainage basins. For example, Basin G became Basin G and Basin G1. The AHYMO model was updated and executed to produce updated hydrologic results. Autodesk Storm and Sanitary Analysis (SSA) and Hydraflow Extension were utilized to model the storm sewer system and perform the drop inlet analysis. The plans and structure sections have been revised to include the updated discharge rates, and storm water volumes as a result of the updated analysis. Hydraulic Grade Lines will be added to the structure sections prior to completion of the plans.

The Preliminary Drainage Report suggests the use of linear ditches adjacent to the roadway along Broadway Boulevard. As part of the updated design, the typical section was revised to include curb and gutter. These storm water flows were then routed to the proposed detention pond facility southeast of the Broadway/Sunport intersection.

OVERVIEW

This update is based on the Preliminary Drainage Report (Report) prepared by URS Corporation dated February 2011 and the Preliminary Design 30% Review Plans prepared by URS Corporation dated January 2011. This document identifies the assumptions, criteria and constraints proposed for the preparation of the update and a summary of the proposed changes from the Report.

The design criteria and methodology listed in the Report are used for evaluating and developing the Amendment including:

- City of Albuquerque Development Process Manual (DPM) as the primary source of drainage criteria.

- Arid Lands Hydrology Model (AHYMO) for hydrology. The Report AHYMO results were utilized for the Update. This model includes a sediment bulking factor of 1.10.

- Design storm of the 100-year 24-hour event.

- NMDOT curb and gutter, median curb and gutter, and inlets east of Broadway Boulevard with COA curb and gutter, median curb and gutter, and inlets on Broadway and Woodward.

- Conformance with the South Broadway Sector Drainage Management Plan.

Revisions and exceptions to the design criteria and methodology used in the Preliminary Drainage Report include the following:

- Grade and Alignment. Grade, cross section, lane geometry, and alignment changes during the 30% update, and 60% review will be incorporated into the final drainage computations. Significant changes in drainage design for Sunport Boulevard are not anticipated.

- Sunport and Broadway Boulevards Intersection Drainage. Major revisions to the drainage collection and the detention ponds are proposed:

    - Broadway Detention Pond Relocation. At the request of the County, the proposed pond at the southeast corner of Broadway Boulevard and Sunport Boulevard has been relocated further east. This will result in a deeper pond and larger conveyance to convey the runoff to the pond. The relocated pond detains approximately 2.3 acre-feet and will drain at a peak rate of 2 cfs to the existing SD manhole in the intersection and then to the San Jose Drain (SJD). The pond is approximately 9-feet deep at the west end and approximately 15-feet deep on the east end. Side slopes vary from 3:1 on the north and south sides to 4:1 on the west and east sides. Stormwater quality treatment is provided by allocating infiltration/evapotranspiration retention volume in the pond.

    - Broadway Boulevard Drainage System. The drainage philosophy implemented in the Report was to pond portions of the runoff in "V" ditches along the west side of Broadway Boulevard for infiltration and evaporation. There was not adequate volume on the west side to contain the 100-year runoff. Along the east side of Broadway Boulevard, the runoff was conveyed via a combination of "V" ditches and storm drain into the detention pond at the southeast corner of the intersection. The roadway runoff west of the South Diversion Channel (SDC) was conveyed to the pond in a storm drain system.

The proposed system is to collect all the runoff from Broadway Boulevard in the reconstruction area, as well as the runoff from Sunport Boulevard west of the SDC, in curb and gutter with inlets and drain it via storm drain piping to the relocated detention pond. This system includes curb and gutter on Broadway Boulevard, both to the north and south of the intersection, to control and collect the runoff.

The runoff collected in Broadway Boulevard drains via a 36-inch pipe to the pond. The runoff in excess of the water quality volume is discharged through a restricted outlet junction box to the existing manhole in the intersection and then to the SJD. The storm drain system is constrained by the roadway elevations and the existing manhole invert elevation in the intersection. The resulting pipe slope is 0.1%. This is not adequate to provide self-cleaning velocities and median inlets that do not have a curb opening are used to minimize debris in the system. Due to the shallow system, ductile iron pipe is proposed in select locations. Also, Type II (double grate) inlets are used, even though not required in all locations, to allow for grate clogging.

- Stormwater Quality Volume. The Preliminary Design incorporated a stormwater quality volume of runoff from a 0.25-inch storm at the entrance to the SDC. Stormwater quality was not explicitly addressed for the runoff west of the SDC.

  Current AMAFCA and City of Albuquerque criteria is to manage the runoff from the precipitation from 90th percentile storm events utilizing appropriate techniques such as infiltration, extended filtration, water harvesting, evapotranspiration and other appropriate techniques. Stormwater control measures should manage first flush runoff and runoff from impervious surfaces. The 90th percentile storm precipitation is defined as 0.44 inches.

- SDC Water Quality Pond. This revision impacts the water quality pond at the discharge into the AMAFCA SDC. The pond in the includes a 2-foot +/- thick gravel and rock filter with an underdrain system to provide treatment. The pond also collects runoff from the undeveloped areas upstream from the rundown into the SDC (Drainage Basins XE1 and XF).

- The water quality pond will be modified to capture the runoff only from the roadway east of the SDC but will allow the runoff from the undeveloped area to discharge directly to the SDC. The water quality volume will be modified to satisfy the 90^{th} percentile storm criteria. The gravel-rock filter with subdrain treatment method is proposed. The pond incorporates reverse slope outfall pipes sized for the 10-year storm and a 100-year spillway to discharge flow into the SDC via the existing baffle chute rundown.

- Broadway Pond Water Quality. The Broadway Pond collects runoff from the Sunport Boulevard west of the SDC, the Broadway Boulevard corridor, Arno Street, and Woodward Road (east). Most of this runoff is from paved areas. The water quality volume is approximately 0.69 acre-feet. The proposed treatment method is to dedicate the first level in the pond, approximately 1 foot, as a retention infiltration/evapotranspiration zone. This zone is stored below the invert of the discharge pipe and does not discharge to the SJD.

- Woodward Road (West) Water Quality. The small drainage area on Woodward Road west of Broadway Boulevard is connected directly to the existing 30-inch pipe draining to the SJD as proposed in the Report. A practical method to treat this runoff was not identified; therefore, the water quality volume is not treated in this portion of the system (approximately 3% of the total runoff).

- XE Channel - Edmunds Street to South Diversion Channel. The channel from the 36-inch culvert on Edmunds Street to the SDC in the Report is revised to account for different basin delineation assumptions impacting the flow rate.

  There is a 36-inch culvert under I-25 draining from east to west that flows to the Edmunds Street 36-inch culvert. The Report assumed this discharge, as well as the local area (Basin XD1) drains northward to Woodward Avenue. Based on field observation, the I-25 culvert and the local area both drain to the Edmunds Street culvert in a 3-foot to 6-foot deep incised ditch. The I-25 36-inch culvert discharge is defined in the Molzen Corbin 1996 Sunport Boulevard Final Drainage Report as 33.7 cfs. Also, the portion of the local drainage area between I-25 and Edmunds Street appears to split with approximately 2/3 flowing to the Edmunds Street 36-inch culvert. Based on this analysis, the total flow at the Edmunds Street 36-inch culvert is estimated to be 46.3 cfs.

  The XE Channel conveys this flow, as well as the drainage from local basin XE1, to the existing rundown into the SDC. Currently, this natural arroyo flow meanders under the Sunport Boulevard footprint. As part of the project, the arroyo is channelized to protect the roadway wall and the stormwater quality pond. The Report identified the channel design flow as 14 cfs. Based on the revised hydrology, a flow rate of 50.4 cfs is required. Note that the Sunport Boulevard runoff is conveyed through the stormwater quality pond to the SDC rundown and does not enter the XE Channel.

  A 10-foot wide, 3-foot deep trapezoidal riprap lined channel is proposed for this conveyance. The channel will skirt around the north side of the stormwater quality pond and discharge onto the apron of the rundown into the SDC.

- Added Detention Pond No. 2. A small detention pond is proposed in the “teardrop” shaped area between Sunport Boulevard and Woodward Road just east of Arno Street. The intent is to reduce the volume required in the Sunport Pond. This detention area detains the local runoff from the “teardrop” area and drains into the Broadway Pond at a

peak rate of 2 cfs. The area north of Woodward Road appears to drain west/northwest and although this area was included in the Report, it is not included in the update design. Side slopes for this pond are 3:1.

Utility Conflicts. Based on available data and preliminary analysis, storm drain conflicts with existing gravity systems can be avoided. However, conflicts with pressurized systems such as water and gas lines may require adjustment.

1.0 INTRODUCTION

Drainage plans for the 60% design 10 sheets are included in Appendix A instead of the 30% plans prepared by URS.

2.0 DESIGN CRITERIA AND METHODOLOGY

Hydraflow Extension was used to perform the drop inlet calculations. SSA was used to analyze the storm sewer system. Both the Hydraflow Extension and SSA calculations are further described within Appendix D.

3.0 EXISTING SITE CONDITIONS

No updates

4.0 EXISTING DRAINAGE CONDITIONS

No updates

5.0 PROPOSED DRAINAGE CONDITIONS

The Drainage Basins have been updated based on the updated design. Where additional drainage basins were added, the drainage basin at that location from the PDR was split into multiple basins. For example, Basin G from the PDR was split into two basins which are named Basin G and Basin G1 in this Drainage Report Amendment.

The AHYMO model was revised to include the updated drainage basin areas and routing. Table 5.1 has been revised to show the updated results and have been arranged in alphabetical order, but with existing basins shown first. Table 5.2 has been revised to show analysis points as a result of the updated hydrology. The analysis points for the updated hydrology were considered to be specific junctions within the drainage system such as inlets and outlets of the ponds. Figure 5 has been revised to show the revised drainage basins.

TABLE 5 PROPOSED HYDROLOGY

Basin Name	Area (sq mi)	Q 100-year 24-hour Peak Discharge (cfs)	100-year 24-hour Runoff Volume (ac-ft)
Basin XD1	0.00411	8.31	0.306
Basin XE1	0.00171	4.38	0.141
Basin XE2	0.0039	6.04	0.183
Basin XF	0.00379	6.8	0.222
Basin XJ	0.0099	17.31	0.519
Basin XM1	0.00162	4.67	0.173
Basin A	0.00089	2.99	0.129
Basin B	0.00082	2.78	0.12
Basin C	0.00038	1.29	0.055
Basin D	0.00032	1.09	0.047
Basin G	0.00107	3.63	0.157
Basin G1	0.00135	4.58	0.198
Basin H	0.00066	2.26	0.098
Basin H1	0.00025	0.87	0.037
Basin H2	0.00054	1.84	0.079
Basin H3	0.0028	0.97	0.042
Basin H4	0.00122	4.14	0.18
Basin I	0.00064	2.18	0.094
Basin I1	0.00062	2.11	0.091
Basin I2	0.00025	0.85	0.036
Basin I3	0.00131	4.44	0.192
Basin I4	0.00059	2.01	0.087
Basin M1	0.00115	3.63	0.147
Basin M2	0.00089	2.96	0.126
Basin N	0.00362	8.11	0.239
Basin P	0.00047	1.6	0.069
Basin P1	0.00097	3.2	0.135
Basin Q	0.00079	2.65	0.112
Basin Q1	0.00019	0.65	0.027
Basin R	0.00058	1.94	0.081
Basin R1	0.00058	1.94	0.081
Basin S	0.00044	1.51	0.065
Basin S1	0.00058	1.92	0.081
Basin T	0.00172	2.78	0.092

TABLE 6 ANALYSIS POINTS

Analysis Point	Contributing Basins	Q 100-year 24-hour Peak Discharge (cfs)	100-year 24-hour Runoff Volume (ac-ft)
Water Quality Pond (east inlet to pond)	XE2, XF, XE1	17.19	0.546
Water Quality Pond (south inlet to pond)	I4, I3, H3, H4	11.56	0.5
Water Quality Pond (total discharge to pond)	I4, I3, H3, H4, XE2, XF, XE1	24	0.768
Water Quality Pond (discharge out of pond)		21.27	0.62
Detention Pond (inlet to the pond from the east)	N, M2, XM1, XD1, M2, I, H, H1, H2, I2, I1	27.68	0.991
Detention Pond (inlet to the pond from the west)	G1, G, D, C, Q, R, Q1, R1, S1, P1, S, P	28.76	1.201
Detention Pond (total discharge to pond)	XJ, G1, G, D, C, Q, R, Q1, R1, S1, P1, S, P, N, M2, XM1, XD1, M2, I, H, H1, H2, I2, I1	73.75	2.71
Detention Pond (discharge out of the pond)		1.81	2.445

5.1 Proposed Drainage Basins

5.1.1 Basins XL,XD1, XF and XK

Basin XL was not included in this analysis as it does not discharge into the project drainage system. Basin XK was absorbed by Basin XF with the updated basin map. Basin XF and XD1 areas were increased significantly.

Basin XF flows overland to Basin XE1 where it makes its way to the Water Quality Pond (WQP).

5.1.2 Basins XF, XE1, XE2, H, and I

Basin XF was increased in area to the south to eliminate basin XK as it did not appear that Basin XK was needed. Basin XE1 area was revised, but includes the WQP. As part of construction of the WQP, a berm will be constructed on the north side of the pond. Basin XE2 remains very similar to what was shown in the PDR.

Basins H and I were divided in to multiple basins including basins H, H1, H2, H3, H4 and I, I1, I2, I3, I4. The division was a result of updated design geometry that includes a bike lane separated from travel lanes by a wall, and the placement of drop inlets.

5.1.3 Basin XM1, M1, M2, N

The area for Basin XM1 varies slightly from the PDR, but still includes offsite flows from the structure and property adjacent to Woodward Road. Basin M1 and M2 areas vary slightly from the PDR due to updated design geometry. Basin N remains virtually identical to the PDR.

5.1.4 Basins C, D, and T

Basins C and D areas are smaller due to the increase in size of Basin G and G1 along with updated design geometry. Basin T varies in size slightly due to the relocation of the detention pond to the east.

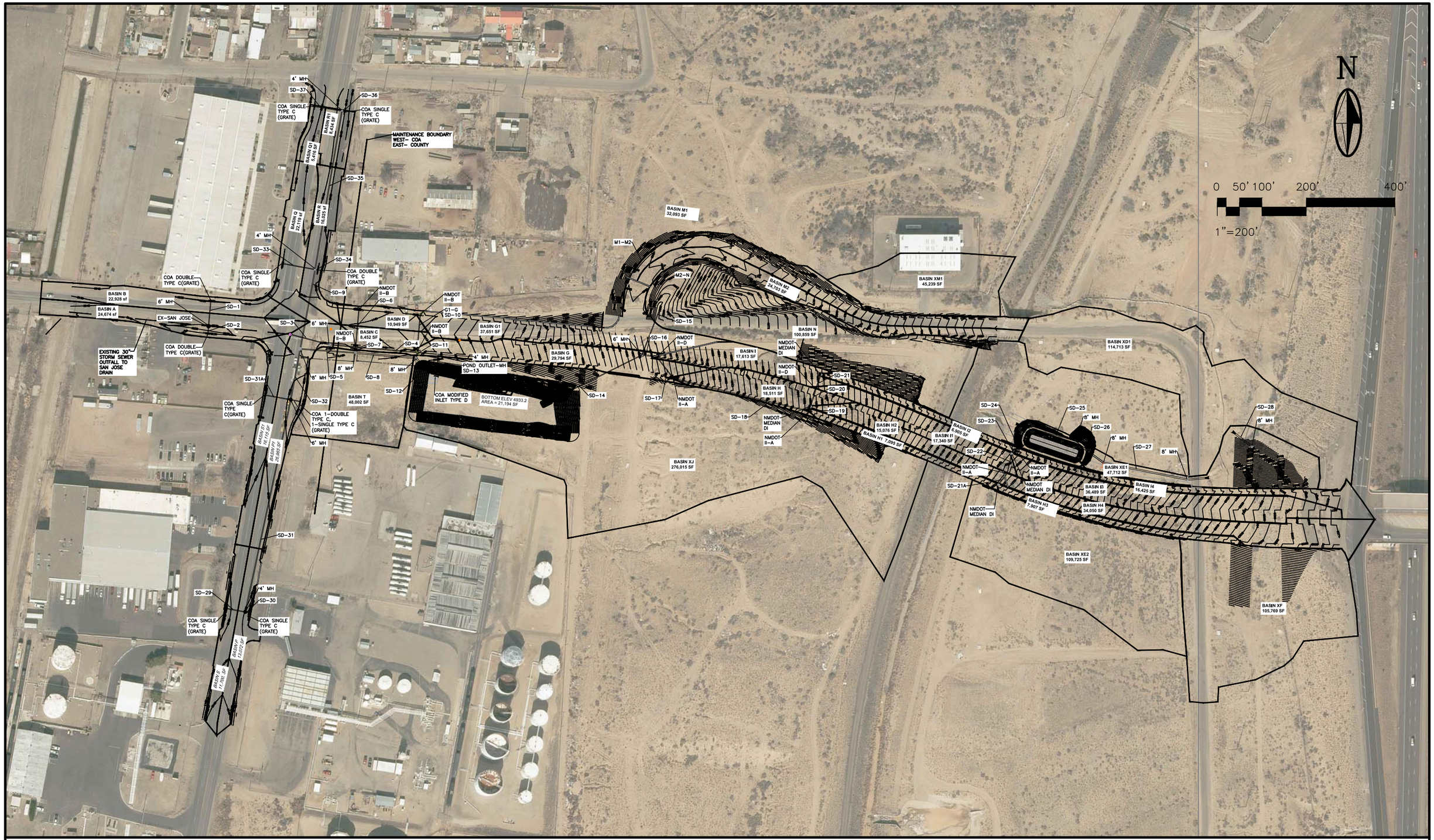
5.1.5 Basins Q, R, S, and P

Basins Q, R, S and P have been divided into two basins each based on the updated design geometry and the location of drop inlets.

5.1.6 Basins A and B (Woodward Road west of Broadway)

Basins A and B remain virtually identical.

LAST MODIFIED: Mar 22, 2019 - 12:39pm BY USER: JRuybalid
DWG. LOCATION: I:\BH\BH1161-11\B\SAC SERVICES\DWGS\Microstation\Proposed\Drainage\
DWG. NAME: BH1161-11_BasinMap_Streacd.dwg



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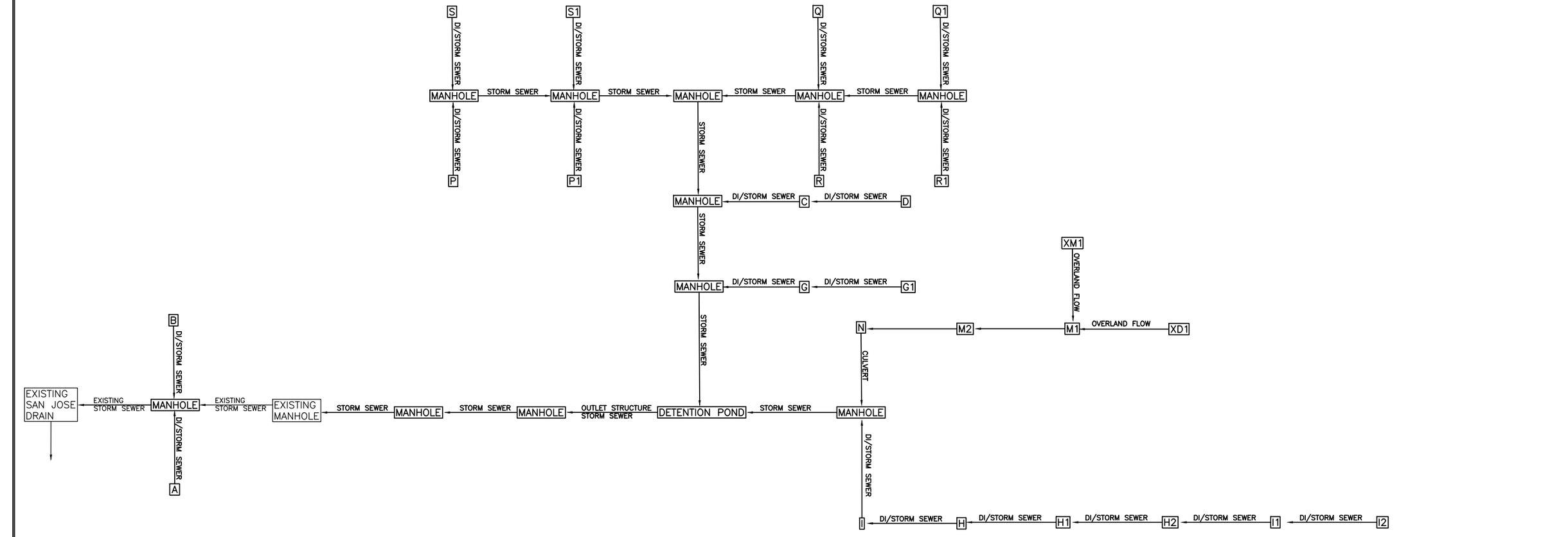
24X36 BASIN MAP CAN BE FOUND IN APPENDIX D

Sunport Boulevard Extension Broadway to I-25

Figure 5 Proposed Drainage Basin Map
Drainage Report Amendment

LAST MODIFIED: Jan 24, 2019 - 10:49am BY USER: JRoybald
DWG. LOCATION: I:\BH\BH1161-11\BASIC SERVICES\DWGS\Micronstation\Proposed\Drainage\
DWG. NAME: Figure_6routing.dwg



Sunport Boulevard Extension Broadway to I-25

MOLZENCORBIN

Figure 6 Proposed Drainage Basin Routing
Drainage Report Amendment

6.0 CONCLUSION

- The San Jose Drain is extremely restricted in the rate of flow it can achieve. The PDR suggests the use of a standpipe outlet. The updated design files limit the flow through a slightly different outlet structure.
- The PDR recommends storm water retention within the Right-of-Way (ROW) within linear ditches. The updated design files provide an urban typical section for Broadway Boulevard with curb and gutter, and drop inlets. The drop inlets route the storm water runoff to the detention pond southeast of the Broadway/Sunport intersection.
- The PDR suggests that the existing pond and driveway on the northeast quadrant of the Broadway/Sunport intersection must be relocated. The existing pond will not be relocated and will be allowed to drain into the storm drain system.
- The PDR suggests that a water quality pond be planned to collect flow from the proposed roadway basins and the existing adjacent arroyo and outflow into the South Diversion Channel (SDC). A culvert system was designed to intercept stormwater flows from the existing arroyo and direct those flows around the water quality pond and into the diversion channel through the energy dissipation structure. The water quality pond receives roadway runoff prior to discharge over a weir into the SDC energy dissipation structure.

7.0 REFERENCES

URS Corporation. *Sunport Boulevart Extension Broadway to I-25 Preliminary Drainage Report*. CNA300160, TS09-06,February 2011

8.0 APPENDICES

Preliminary Drainage Report Appendices

- Appendix A- Sunport Boulevard Extension-excerpts from 30% Plans
  - Typical Sections-Sheets 2-1 to 2-5
  - Roadway Plan and Profile-Sheets 3-2 to 3-12
  - Drainage Plan and Profile- Sheets 10-1 to 10-5
- Appendix B- NRCS Websoil Survey
- Appendix C- AHYMO Input and Output
- Appendix D
  - Hydrology Worksheets
  - Excerpts from Existing Drainage Reports
  - Water Quality Pond Calculations
  - Proposed Channel in Basin XE1
  - Sunport Boulevard & Broadway Boulevard Detention Pond & Private Pond
  - Sunport Boulevard 10-year Flow Depth and Spread
  - Broadway Boulevard Linear Ditches

Drainage Report Amendment Appendices

- Appendix A- Sunport Boulevard Extension-excerpts from 60% Plans
  - Drainage Plans- 10-1 to 10-7
  - Drainage Structure Sections- 10-8 to 10-15
- Appendix B- No Change
- Appendix C- AHYMO Data
  - AHYMO Input
  - AHYMO Summary
  - AHYMO Output
- Appendix D-Hydrology Worksheets
  - Summary of Hydrology and Hydraulic Calculations
  - Subbasin AHYMO Inputs
  - Subbasin Hydrology Results
  - Pond Elevation-Storage-Discharge Tables
  - Basin Map (24x36)
  - Hydraulic Grade Line Graphical Results
  - Drop Inlet Spread Calculations

APPENDIX A
60% DRAINAGE PLANS

DRAINAGE KEY NOTES

(1) GRADE AROUND EXISTING CATH BASIN.
MAINTAIN EXISTING 15" INLET & OUTLET.

(2) REMOVE AND DISPOSE OF EXISTING CATCH BASIN.
CONNECT EXISTING 15" RCP INLET AND OUTLET PIPES
WITH 6' X 15" RCP CL IV (PAID UNDER ITEM 570425 - 18" STORM
DRAIN CULVERT PIPE)

DRAINAGE STRUCTURE BUILD NOTES

P-1
COA SDI SINGLE TYPE C
STA 4998+23.60, LT 25.47' (LOG)
LIP OF GUTTER 4939.29
FLOWLINE ELEV 4939.27 = GRATE
TOC 4939.83
18" OUT 4935.71

P-2
COA DRAIN MANHOLE
TYPE C - 6' DIA.
STA 998+20.67, RT 29.39'
RIM/COVER ELEV 4938.95
18" IN (N) 4935.30
18" IN (S) 4935.04
30" EXIST IN (E)/
OUT (W) 4933.5+/-

P-3
COA SDI DOUBLE TYPE C
STA 998+20.67, RT 43.95' (LOG)
LIP OF GUTTER 4938.66
FLOWLINE ELEV 4938.64 = GRATE
TOC 4939.20
18" OUT 4935.10

P-4
NMDOT SDI TYPE II - B
STA 1001+55.00, LT 35.00' (LOG)
LIP OF GUTTER 4940. 42
FLOWLINE 4940.30
GRATE 4940.07
TOC 4940.96
18" OUT 4936.86

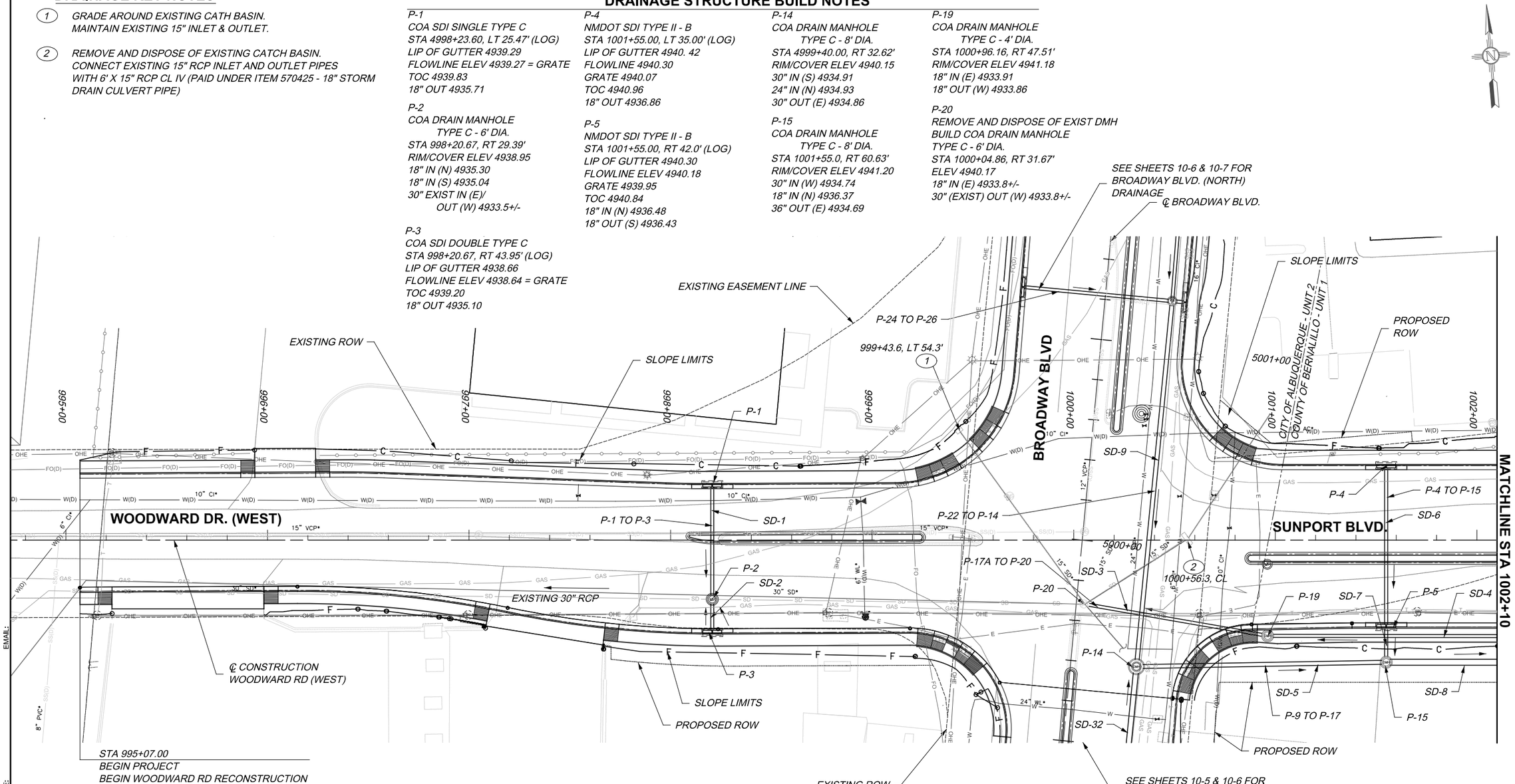
P-5
NMDOT SDI TYPE II - B
STA 1001+55.00, RT 42.0' (LOG)
LIP OF GUTTER 4940.30
FLOWLINE ELEV 4940.18
GRATE 4939.95
TOC 4940.84
18" IN (N) 4936.48
18" OUT (S) 4936.43

P-14
COA DRAIN MANHOLE
TYPE C - 8' DIA.
STA 4999+40.00, RT 32.62'
RIM/COVER ELEV 4940.15
30" IN (S) 4934.91
24" IN (N) 4934.93
30" OUT (E) 4934.86

P-15
COA DRAIN MANHOLE
TYPE C - 8' DIA.
STA 1001+55.0, RT 60.63'
RIM/COVER ELEV 4941.20
30" IN (W) 4934.74
18" IN (N) 4936.37
36" OUT (E) 4934.69

P-19
COA DRAIN MANHOLE
TYPE C - 4' DIA.
STA 1000+96.16, RT 47.51'
RIM/COVER ELEV 4941.18
18" IN (E) 4933.91
18" OUT (W) 4933.86

P-20
REMOVE AND DISPOSE OF EXIST DMH
BUILD COA DRAIN MANHOLE
TYPE C - 6' DIA.
STA 1000+04.86, RT 31.67'
ELEV 4940.17
18" IN (E) 4933.8+/-
30" (EXIST) OUT (W) 4933.8+/-



STORM DRAIN CULVERT BUILD NOTES

SD-1
BUILD 52' X 18" RCP CL IV
BETWEEN P-1 & P-2

SD-2
BUILD 12' X 18" RCP CL IV
BETWEEN P-3 & P-4

SD-3
BUILD 88' X 18" DUCTILE IRON PIPE
BETWEEN P-20 & P-19

SD-4
BUILD 242' X 18" DUCTILE IRON PIPE
BETWEEN P-19 & P-18

SD-5
BUILD 116' X 30" RCP CL IV
BETWEEN P-14 & P-15

SD-6
BUILD 76' X 18" RCP CL IV
BETWEEN P-4 & P-5

SD-7
BUILD 12' X 18" RCP CL IV
BETWEEN P-5 & P-15

SD-8
BUILD 131' X 36" RCP CL IV
BETEEN P-15 & P-16

SD-9
SEE SHEET 10-6

SD-32
SEE SHEET 10-6

DRAINAGE STRUCTURE SECTION SHEET REFERENCE

SYSTEM	SHEET
P-1 TO P-3	10-8
P-4 TO P-15	10-8
P-9 TO P-17	10-10
P-17A TO P-20	10-11
P-22 TO P-14	10-11
P-24 TO P-26	10-9

0 5' 12.5' 25' 50' 100'
1"=50'-0"
DRAWING SCALE:

60% SUBMISSION NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION DRAINAGE PLAN WOODWARD RD. / SUNPORT BLVD.

EMAIL:
PHONE:
DESIGNED BY:

DRAINAGE KEY NOTES

(3) BUILD 20' W X 20L X 6" THICK OUTLET PAD WITH STRUCTURAL CONCRETE CLASS A

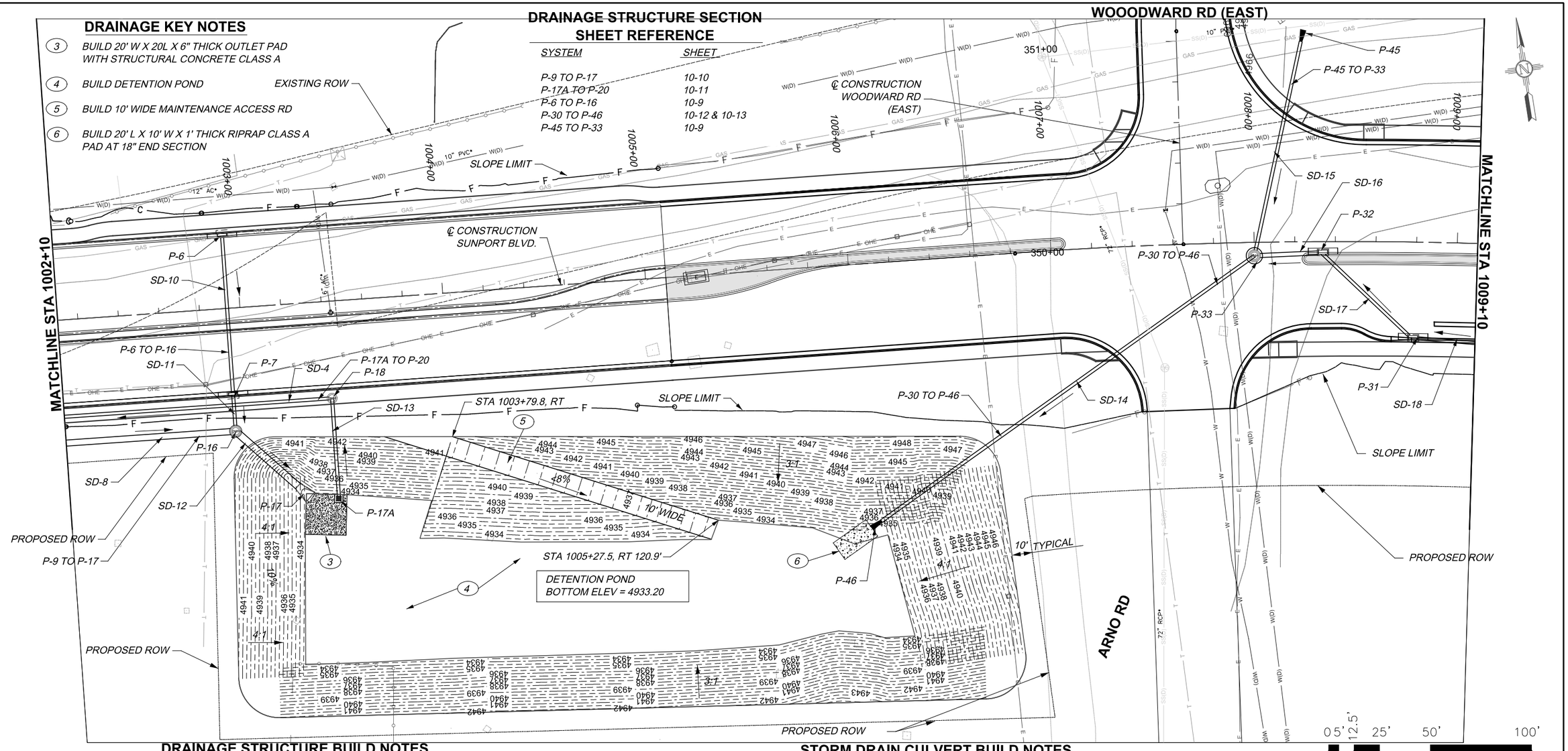
(4) BUILD DETENTION POND

(5) BUILD 10' WIDE MAINTENANCE ACCESS RD

(6) BUILD 20' L X 10' W X 1' THICK RIPRAP CLASS A PAD AT 18" END SECTION

DRAINAGE STRUCTURE SECTION SHEET REFERENCE

SYSTEM	SHEET
P-9 TO P-17	10-10
P-17A TO P-20	10-11
P-6 TO P-16	10-9
P-30 TO P-46	10-12 & 10-13
P-45 TO P-33	10-9



DRAINAGE STRUCTURE BUILD NOTES

P-6
NMDOT SDI TYPE I - B
STA 1002+93.64, LT 35.0' (LOG)
LIP OF GUTTER 4942.20
FLOWLINE ELEV 4942.21
GRATE 4941.85
TOC 4942.74
18" OUT (S) 4938.64

P-7
NMDOT SDI TYPE I - B
1002+93.64, RT 41.00' (LOG)
LIP OF GUTTER 4942.08
FLOWLINE ELEV 4941.96
GRATE 4941.73
TOC 4942.62
18" (N) 4936.26
18" OUT (S) 4936.21

P-16
COA DRAIN MANHOLE
TYPE C - 8' DIA.
STA 1002+93.64 , RT 60.63'
RIM/COVER ELEV 4942.29
36" IN (W) 4934.56
18" IN (N) 4935.XX
42" OUT (E) 4934.51

P-17
1003+22.27, RT 86.71'
42" RC END SECTION
INV OUT 4934.30

P-17A
COA MODIFIED INLET TYPE D
SINGLE GRATE (ALBUQUERQUE)
STD DWG 2220 - MODIFIED
STA 1003+41.93, RT 97.22'
GRATE ELEV 4938.0
2" X 18" SLOT BOTTOM ELEV 4934.25
18" OUT 4934.25

P-18
COA DRAIN MANHOLE
TYPE C - 4' DIA.
STA 1003+42.10, RT 47.76'
RIM/COVER ELEV 4943.82
18" IN (S) 4934.20
18" OUT (W) 4934.15

P-31
NMDOT SDI TYPE I - A CURB
STA 1008+78.94, RT 47.20' (LOG)
LIP OF GUTTER 4943.18
FLOWLINE ELEV 4973.16 = GRATE
TOC 4943.72
18" IN (E) 4969.16
18" OUT (NW) 4969.11

P-45
STA 351+03.54, RT 62.63'
18" RC END SECTION
INV IN = 4960.61

P-32
NMDOT SDI TYPE I - D CURB
STA 1008+33.86, RT 5.39' (LIP OF GUTTER)
LIP OF GUTTER 4970.67
FLOWLINE 4970.65 = GRATE
TOC 4971.14
18" IN (SE) 4965.65
18" OUT (W) 4966.60

P-33
NMDOT STORM DRAIN MANHOLE
TYPE C 6' DIA
STA 1008+00.00, RT 6.59'
RIM/COVER ELEV 4968.45
18" IN (NE) 4960.53
18" IN (E) 4963.67
18" OUT (SW) 4954.75

P-46
18" RC END SECTION
STA 1006+02.46, RT 130.05'
INV OUT = 4934.30

STORM DRAIN CULVERT BUILD NOTES

SD-4
SEE SHEET 10-1

SD-8
SEE SHEET 10-1

SD-10
BUILD 76' X 18" RCP CL IV
BETWEEN P-6 & P-7

SD-11
BUILD 12' X 18" RCP CL IV
BETWEEN P-11 & P-16

SD-12
BUILD 37' X 42" RCP CL IV
BETWEEN P-16 & P-17

SD-13
BUILD 46' X 18" DUCTILE IRON PIPE
BETWEEN P-17A & P-18

SD-14
BUILD 229' X 18" RCP CL IV
BETWEEN P-46 & P-33

SD-15
BUILD 107' X 18" RCP CL IV
BETWEEN P-33 & P-45

SD-16
BUILD 30' X 18" RCP CL IV
BETWEEN P-33 & P32

SD-17
BUILD 57.5' X 18" RCP CL IV
BETWEEN P-32 & P-31

SD-18
SEE SHEET 10-3

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4			
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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

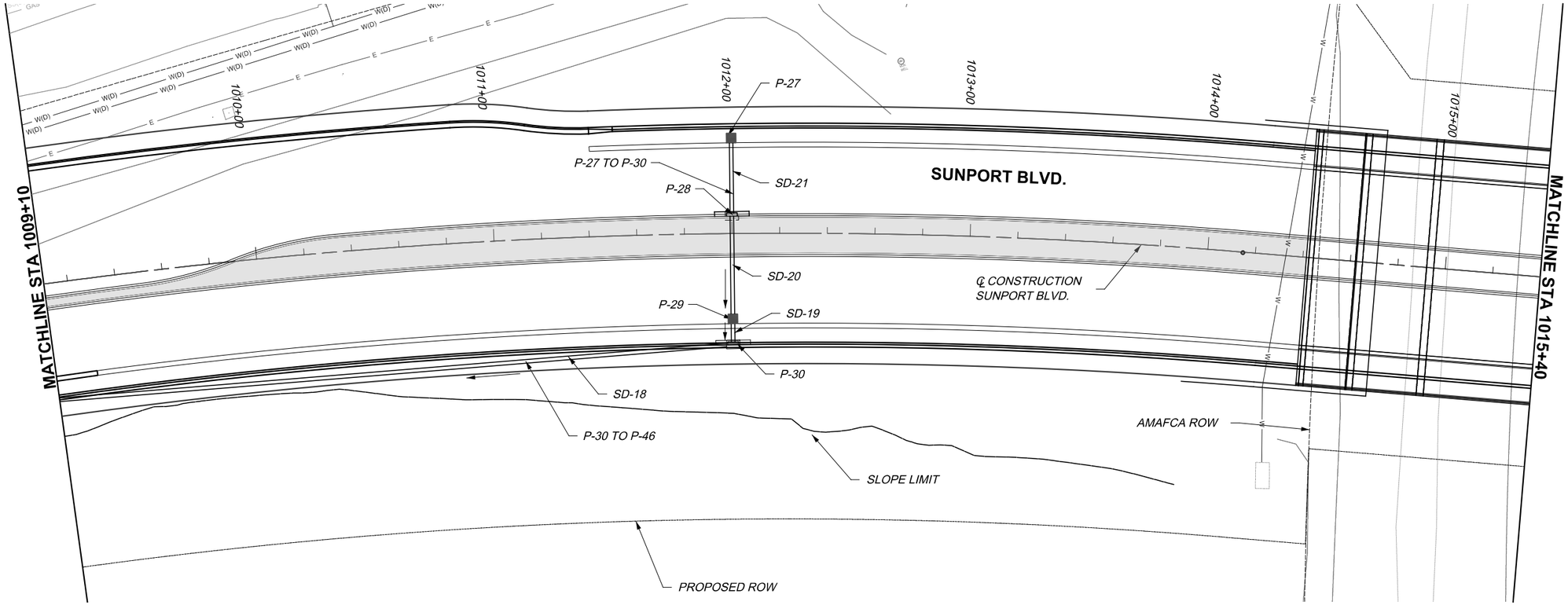
SUNPORT BOULEVARD EXTENSION DRAINAGE PLAN SUNPORT BLVD.

DRAWING SCALE:

EMAIL:
PHONE:
DESIGNED BY:

DRAINAGE STRUCTURE SECTION SHEET REFERENCE

SYSTEM	SHEET
P-30 TO P-46	10-12 & 10-13
P-27 TO P-30	10-13



DRAINAGE STRUCTURE BUILD NOTES

P-27
NMDOT MEDIAN DROP INLET
STA 1012+00.00, LT 38.12'
GRATE ELEV 4997.44
18" INV OUT = 4993.88

P-28
NMDOT SDI TYPE I - D CURB
STA 1012+00.00, LT 8.12' (LOG)
LIP OF GUTTER 4996.63
FLOWLINE ELEV 4996.61
TOC 4997.17
18" IN (N) = 4992.87
18" OUT (S) = 4992.82

P-29
NMDOT MEDIAN DROP INLET
STA 1012+00.00, RT 37.88'
GRATE ELEV 4995.87
18" INV IN = 4992.31
18" INV OUT = 4993.26

P-30
NMDOT SDI TYPE I - A CURB
STA 1012+00.00, RT 45.88' (LOG)
LIP OF GUTTER 4995.66
FLOWLINE ELEV 4995.64 = GUTTER
TOC 4996.20
18" IN (N) = 4992.08
18" OUT (W) = 4992.03

STORM DRAIN CULVERT BUILD NOTES

SD-18
BUILD 310.5' X 18" RCP CL IV
BETWEEN P-31 & P-30

SD-19
BUILD 7.5' X 18" RCP CL IVV
BETWEEN P-30 & P-29

SD-20
BUILD 40' X 18" RCP CL IV
BETWEEN P-29 & P28

SD-21
BUILD 30' X 18" RCP CL IV
BETWEEN P-28 & P-27

0 5' 12.5' 25' 50' 100'

1"=50'-0"

DRAWING SCALE:

60% SUBMISSION NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION DRAINAGE PLAN SUNPORT BLVD.

EMAIL:
PHONE:
DESIGNED BY:

bbailey
2/3/2019 11:18:26 AM

Design File: I:\BHI\BHI161-11(BASIC SERVICES)\DWGS\Microstation\Plans\10_Sheets\BHI161-11_10-3.dgn

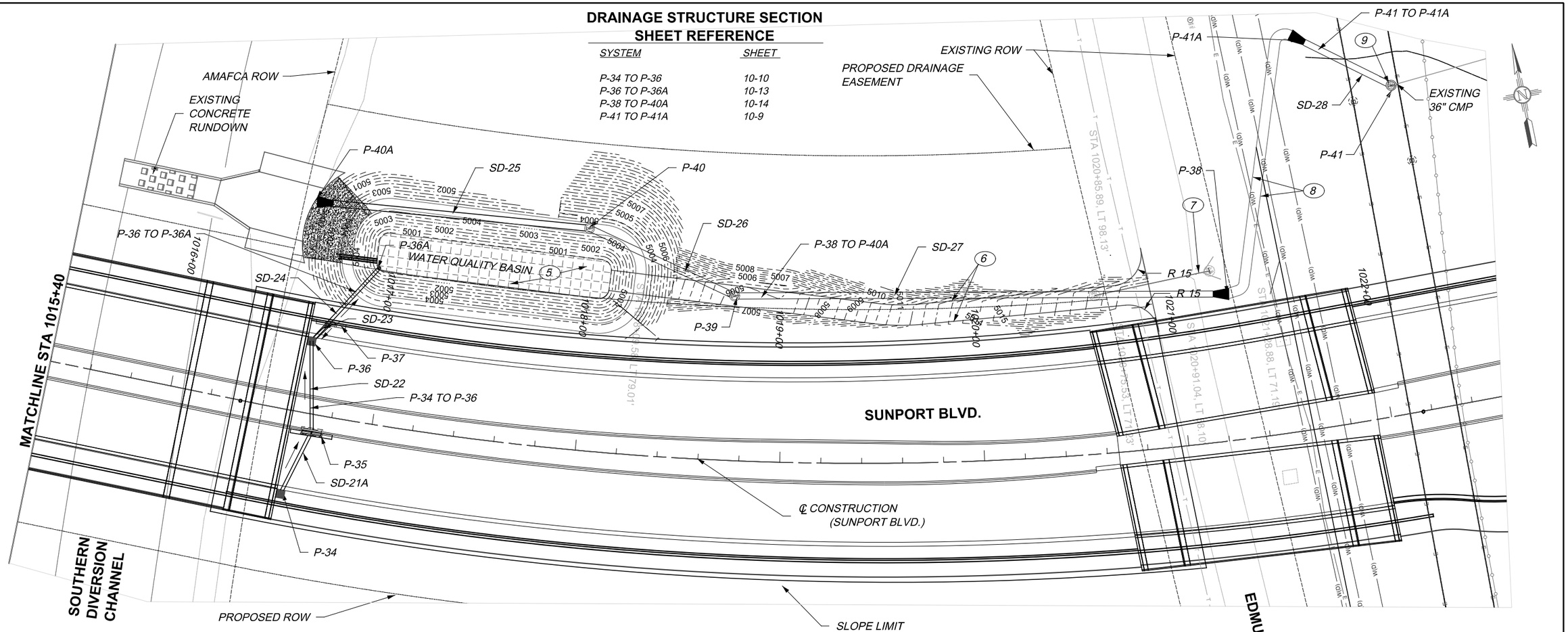
DESIGNED BY: B Bailey

NEW MEXICO PROJECT NO. A300160

MOLZENCORBIN

DRAINAGE STRUCTURE SECTION SHEET REFERENCE

SYSTEM	SHEET
P-34 TO P-36	10-10
P-36 TO P-36A	10-13
P-38 TO P-40A	10-14
P-41 TO P-41A	10-9



DRAINAGE STRUCTURE BUILD NOTES

P-34
NMDOT MEDIAN DROP INLET
STA 1016+62.12, RT 39.04'
GUTTER ELEV 5029.32
18" OUT (N) = 5025.32

P-35
NMDOT SDI TYPE II - D CURB
STA 1016+71.35, RT 9.07' (LOG)
LIP OF GUTTER 5029.30
FLOWLINE ELEV 5029.28 = GRATE
TOC 5029.84
18" IN (S) = 5025.17
18" OUT (N) = 5025.12

P-36
NMDOT MEDIAN DROP INLET
STA 1016+63.55, LT 36.95'
GRATE ELEV 5028.13
18" INV IN (S) = 5024.91
18" INV IN (NE) = 5024.72

P-37
NMDOT SDI TYPE II - A CURB
STA 1016+71.01, LT 44.95' (LOG)
GRATE = 5028.38
18" OUT (S) = 5024.77

P-36A
STA 1016+90.89, LT 75.79'
18" INV OUT = 5000.4
BUILD ENERGY DISSIPATOR

P-38
STA 1021+28.88, LT 71.19'
END 5' WIDE DITCH
OUTLET AT 36" END SECTION
INV = 5016.31

P-39
NMDOT STORM DRAIN MANHOLE TYPE C 8' DIA
STA 1018+74.53, LT 80.35'
RIM 5006.13
36" IN (E) 4999.87
36" OUT (NW) 4999.82

P-40
NMDOT STORM DRAIN MANHOLE TYPE C 8' DIA
STA 1017+96.70, LT 108.42'
RIM 5004.45
36" IN (E) 4998.87
36" OUT (W) 4998.82

P-40A
STA 1016+53.02, LT 102.29'
36" RC END SECTION
INV OUT = 4998.14

STORM DRAIN CULVERT BUILD NOTES

SD-21A
BUILD 31' X 18" RCP CL IV
BETWEEN P-34 & P-35

SD-22
BUILD 41' X 18" RCP CL IV
BETWEEN P-35 & P-36

SD-23
BUILD 10' X 18" RCP CL IV
BETWEEN P-36 & P-37

SD-24
BUILD 70' X 18" DUCTILE IRON PIPE
BETWEEN P-36 & P-36A

SD-27
BUILD 23.2' X 36" RCP CL IV
BETWEEN P-38 & P-39

SD-26
BUILD 70' X 36" RCP CL IV
BETWEEN P-39 & P-40

SD-25
BUILD 127.5' X 36" RCP CL IV
BETWEEN P-40 & P-40A

SD-28
BUILD 41' X 36" RCP CL IV
BETWEEN P-41 & P-41A

DRAINAGE KEY NOTES

(5) *BUILD WATER QUALITY BASIN*

(6) *BUILD 10' WIDE MAINTENANCE ACCESS RD.*

(7) *REMOVE AND DISPOSE OF 57' X 36" CMP AND END SECTIONS*

(8) *BUILD 5' WIDE CHANNEL BETWEEN P-41A AND P-38 (GRADE TO DRAIN FROM P-41A TO P-38)*

(9) *REMOVE AND DISPOSE OF EXISTING 36" END SECTION*

60% SUBMISSION NOT FOR CONSTRUCTION

0 5' 12.5' 25' 50' 100'

1"=50'-0"

DRAWING SCALE:

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION

DRAINAGE PLAN SUNPORT BLVD.

EMAIL:
PHONE:
DESIGNED BY:

bbailey
2/3/2019 11:24:36 AM

Design File: I:\BHI\BHI161-11(BASIC SERVICES)\DWGS\Microstation\Plans\10_Sheets\BHI161-11_10-4.dgn

DESIGNED BY: B Bailey

NEW MEXICO PROJECT NO. A300160

MOLZENCORBIN

SHEET NO. 10 - 4

DRAINAGE STRUCTURE BUILD NOTES

P-8
COA SDI SINGLE TYPE C
STA 4993+34.52, LT 24.00' (LOG)
LIP OF GUTTER 4939.71
FLOWLINE ELEV 4939.69 = GRATE
TOC 4940.25
18" OUT 4936.15

P-9
COA DRAIN MANHOLE
TYPE C - 4' DIA.
STA 4993+34.52, RT 17.19'
RIM/COVER ELEV 4939.85
18" IN (E) 4936.12
18" IN (W) 4936.11
18" OUT (N) 4936.06

P-10
COA SDI SINGLE C
STA 4993+34.52, RT 24.00' (LOG)
LIP OF GUTTER 4939.71
FLOWLINE ELEV 4939.69 = GRATE
TOC 4940.25
18" OUT 4936.15

STORM DRAIN CULVERT BUILD NOTES

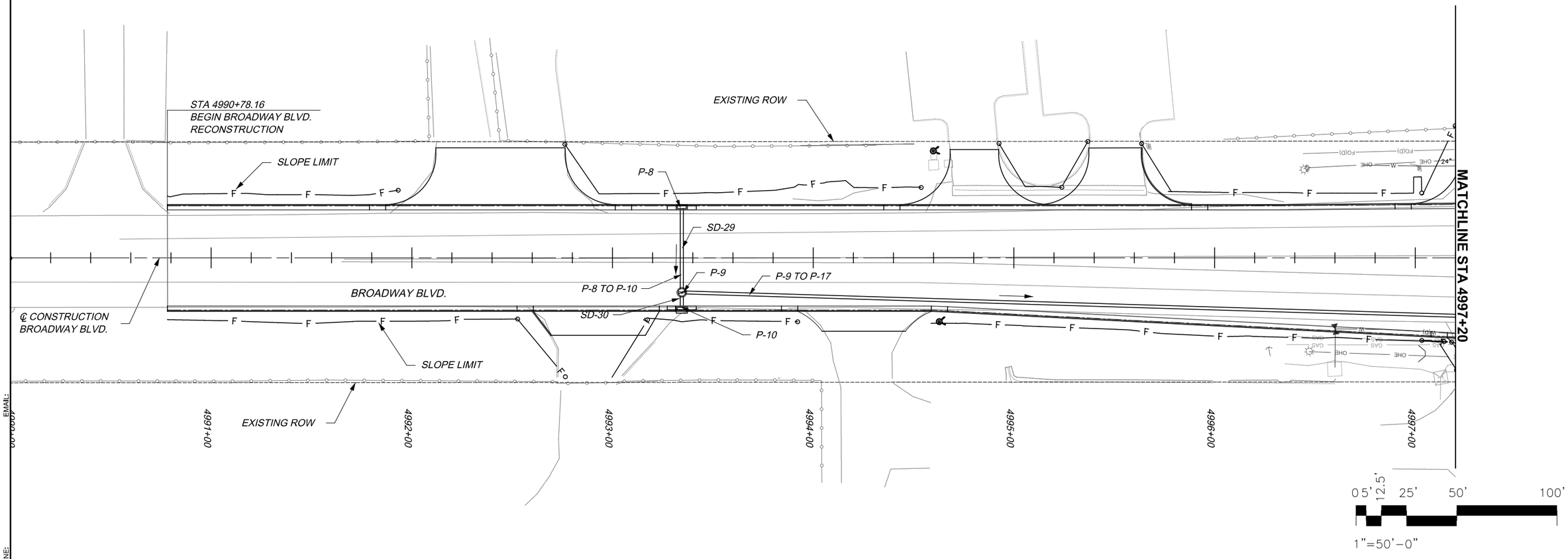
SD-219
BUILD 39' X 18" RCP CL IV
BETWEEN P-8 & P-9

SD-30
BUILD 5' X 18" RCP CL IV
BETWEEN P-9 & P-10

P-31
BUILD 484' X 18" RCP CL IV
BETWEEN P-9 & P-12

DRAINAGE STRUCTURE SECTION SHEET REFERENCE

SYSTEM	SHEET
P-9 TO P-17	10-10
P-8 TO P-10	10-8



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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION DRAINAGE PLAN BROADWAY BLVD.

DRAWING SCALE:

EMAIL:
PHONE:
DESIGNED BY:

DRAINAGE STRUCTURE BUILD NOTES

P-11
COA SDI SINGLE TYPE C
STA 4998+23.60, LT 25.47' (LOG)
LIP OF GUTTER 4939.29
FLOWLINE ELEV 4939.27 = GRATE
TOC 4939.83
24" OUT 4935.71

P-12
COA DRAIN MANHOLE
TYPE C - 6' DIA.
STA 4998+23.60, RT 31.97'
RIM/COVER ELEV 4939.16
24" IN (S) 4935.07
30" IN (E) 4935.10
24" IN (W) 4935.43
36" OUT (N) 4935.02

P-13
COA SDI DOUBLE TYPE C &
COA SDI SINGLE TYPE C
STA 4998+23.60, RT 52.30' (LOG)
LIP OF GUTTER 4938.75
FLOWLINE ELEV 4938.73
TOC 4939.29
30" OUT 4935.19

P-14
SEE SHEET 10-1

P-24
COA SDI DOUBLE TYPE C
STA 5001+22.31, LT 39.57' (LOG)
LIP OF GUTTER 4939.09
FLOWLINE ELEV 4938.97 = GRATE
TOC 4939.63
24" OUT 4935.53

P-26
COA SDI DOUBLE TYPE C
STA 5001+22.31, rT 38.18' (LOG)
LIP OF GUTTER 4939.11
FLOWLINE ELEV 4938.99 = GRATE
TOC 4939.65
24" OUT 4935.55

P-25
COA DRAIN MANHOLE
TYPE C - 4' DIA.
STA 5001+22.31, RT 33.33'
RIM/COVER ELEV 4939.21
30" IN (N) 4935.18
24" IN (E) 4935.54
24" IN (W) 4935.18
36" OUT (S) 4935.13

DRAINAGE STRUCTURE SECTION SHEET REFERENCE

SYSTEM	SHEET
P-9 TO P-17	10-10
P-11 TO P-13	10-8
P-17A TO P-20	10-11
P-24 TO P-26	10-9
P-22 TO P-14	10-11

STORM DRAIN CULVERT BUILD NOTES

SD-9
BUILD 203' X 36" DUCTILE IRON PIPE
BETWEEN P-14 & P-25

SD-31
SEE SHEET 10-5

SD-31A
BUILD 55' X 24" RCP CL IV
BETWEEN P-11 & P-12

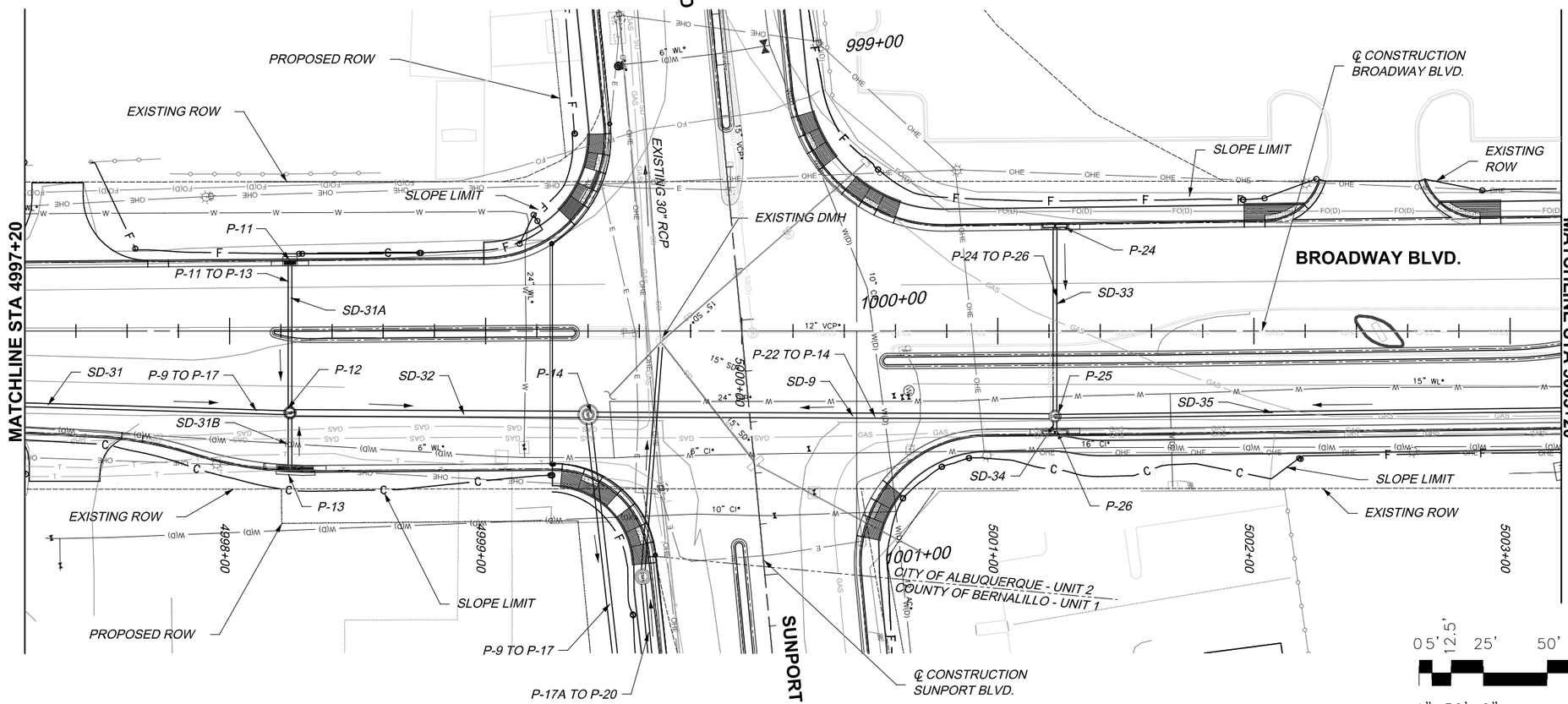
SD-31B
BUILD 17' X 30" RCP CL IV
BETWEEN P-12 & P-13

SD-32
BUILD 110' X 36" RCP CL IV
BETWEEN P-12 & P-14

SD-33
BUILD 71' X 24" RCP CL IV
BETWEEN P-24 & P-25

SD-34
BUILD 3' X 24" RCP CL IV
BETWEEN P-25 & P-26

SD-35
BUILD 359' X 30" RCP CL IV
BETWEEN P-22 & P-25



0 5' 12.5' 25' 50' 100'

1"=50'-0"

60% SUBMISSION NOT FOR CONSTRUCTION

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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION DRAINAGE PLAN BROADWAY BLVD.

DRAWING SCALE:

EMAIL:
PHONE:
DESIGNED BY:

bbailey
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Design File: I:\BHI\BHI161-11(BASIC SERVICES)\DWGS\Microstation\Plans\10_Sheets\BHI161-11_10-6.dgn

DESIGNED BY: B Bailey

NEW MEXICO PROJECT NO. A300160

MOLZENCORBIN

DRAINAGE STRUCTURE BUILD NOTES

P-21
COA SDI SINGLE TYPE C
STA 5004+83.97, LT 32.67' (LOG)
LIP OF GUTTER 4939.58
FLOWLINE ELEV 4939.56 = GRATE
TOC 4940.12
18" OUT 4936.02

P-22
COA DRAIN MANHOLE
TYPE C - 4' DIA.
STA 5004+84.83, RT 28.59'
RIM/COVER ELEV 4939.66
18" IN (E) 4936.00
18" IN (W) 4935.72
18" OUT (S) 4935.67

P-23
COA SDI SINGLE TYPE C
STA 5004+84.90, RT 33.32' (LOG)
LIP OF GUTTER 4939.57
FLOWLINE ELEV 4939.55 = GRATE
TOC 4940.11
18" OUT 4936.01

STORM DRAIN CULVERT BUILD NOTES

SD-35
SEE SHEET 10-6

SD-36
BUILD 3' X 18" RCP CL IV
BETWEEN P-23 & P-22

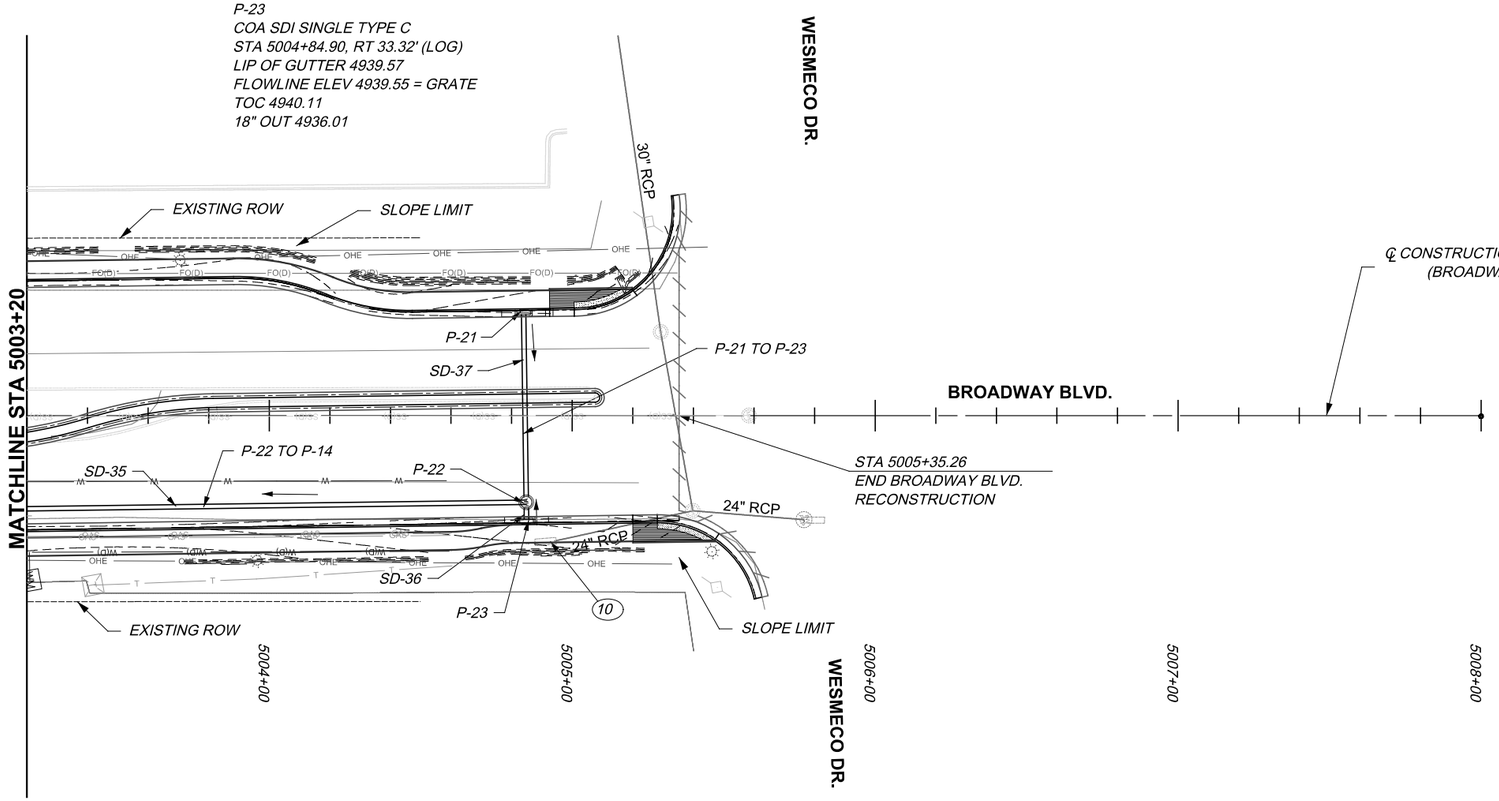
SD-37
BUILD 59' X 18" RCP CL IV
BETWEEN P-22 & P-21

DRAINAGE KEY NOTES

(10) *STA 5004+91.6, RT 40.8'*
REMOVE EXISTING DROP INLET
PLUG AND ABANDON EXISTING
24" RCP (INCIDENTAL TO
ITEM 601000 - REMOVAL OF
STRUCTURES AND OBSTRUCTIONS)

DRAINAGE STRUCTURE SECTION SHEET REFERENCE

SYSTEM	SHEET
P-21 TO P-23	10-8
P-22 TO P-14	10-11



0 5' 12.5' 25' 50' 100'

1"=50'-0"

60% SUBMISSION NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION
DRAINAGE PLAN
BROADWAY BLVD.

DRAWING SCALE:

EMAIL:
PHONE:
DESIGNED BY:

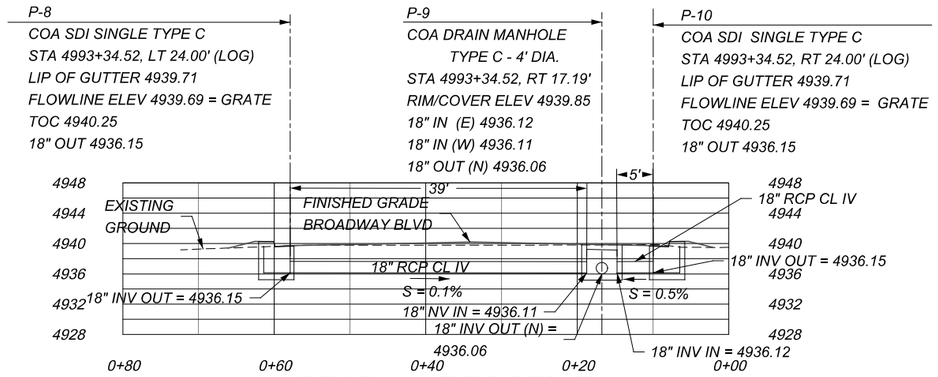
bbailey
2/3/2019 11:38:09 AM

Design File: I:\BHI\BHI161-11(BASIC SERVICES)\DWGS\Microstation\Plans\10_Sheets\BHI161-11_10-7.dgn

DESIGNED BY: B Bailey

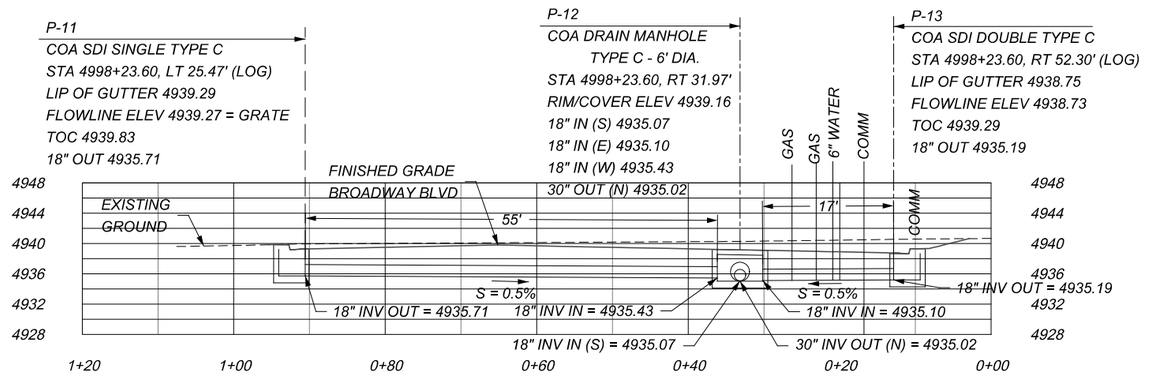
NEW MEXICO PROJECT NO. A300160

MOLZENCORBIN



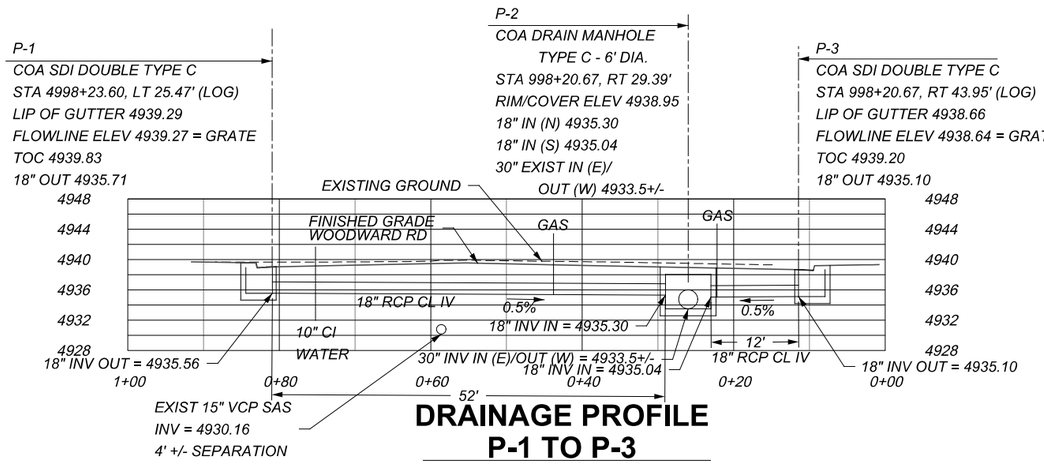
DRAINAGE PROFILE
P-8 TO P10

STA 4993+34.52, LT 24.00' TO STA 4993+34.52, RT 24.00'



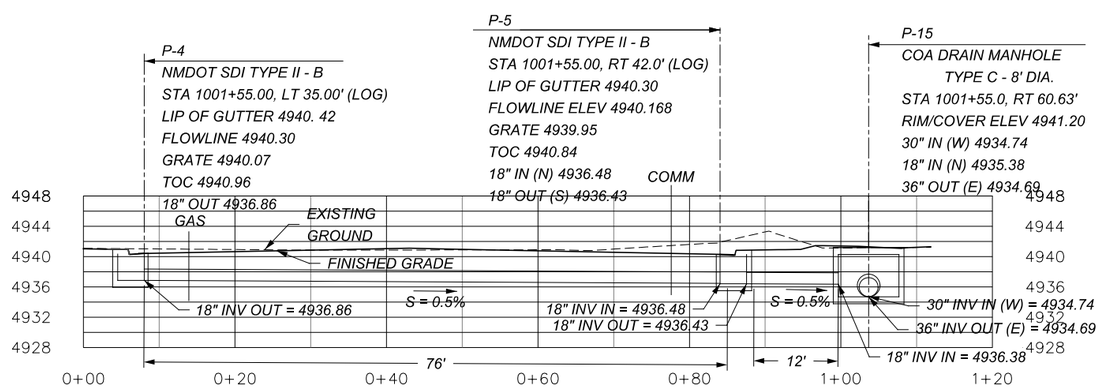
DRAINAGE PROFILE
P-11 TO P13

STA 4998+23.60, LT 25.47' TO STA 4998+23.60, RT 52.30'



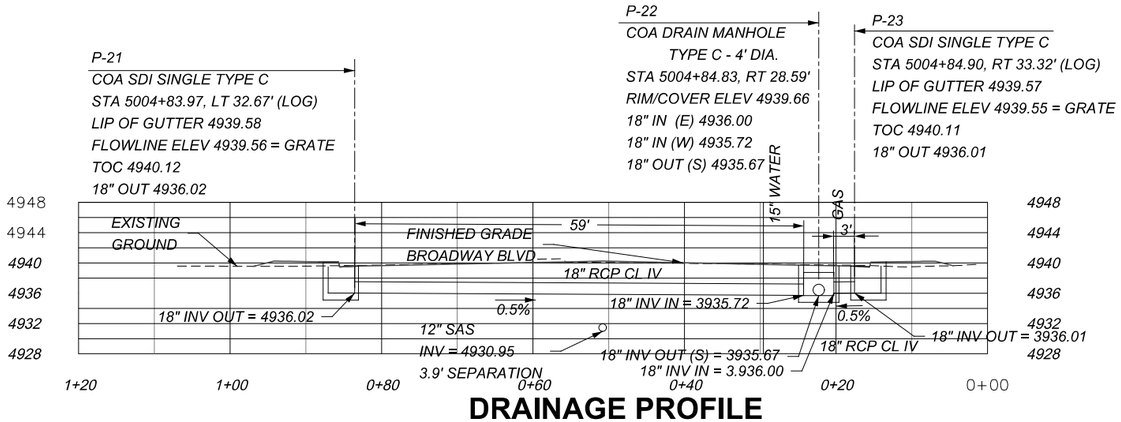
DRAINAGE PROFILE
P-1 TO P-3

STA 998+20.67, LT 25.55' TO STA 998+20.67, RT 43.95'



DRAINAGE PROFILE
P-4 TO P-15

STA 1001+55.00, LT 35.00' TO STA 100+55.00, RT 60.63'



DRAINAGE PROFILE
P-21 TO P-23

STA 5004+83.97, LT 32.67' TO STA 5004+84.90, RT 33.32'

60% SUBMISSION
NOT FOR
CONSTRUCTION

SCALE: 1" = 20' HORIZONTAL
1" = 1' VERTICAL

DRAWING SCALE:

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

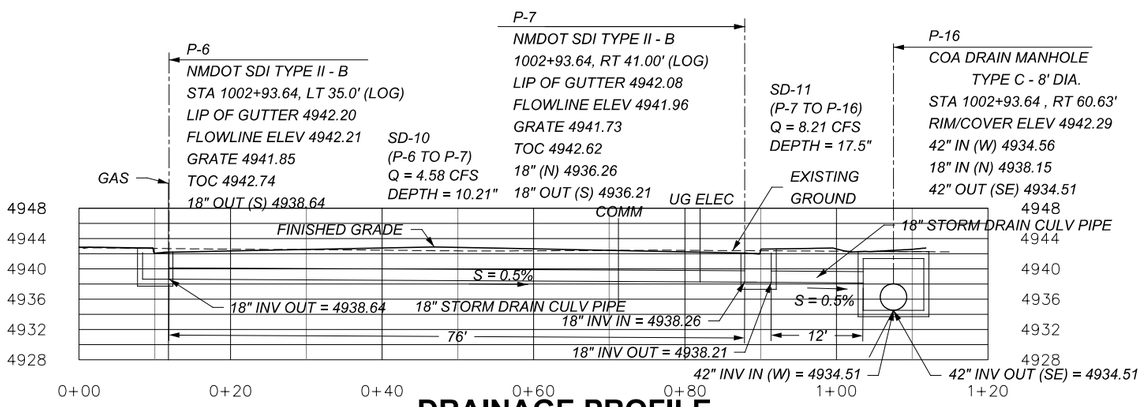
REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION

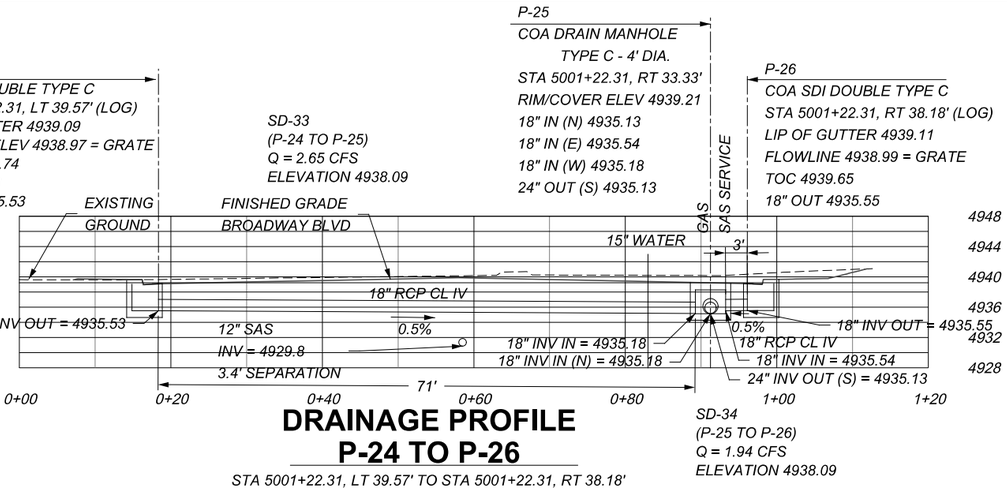
DRAINAGE STRUCTURE SECTION

EMAIL: email
PHONE: phone
DESIGNED BY: designer



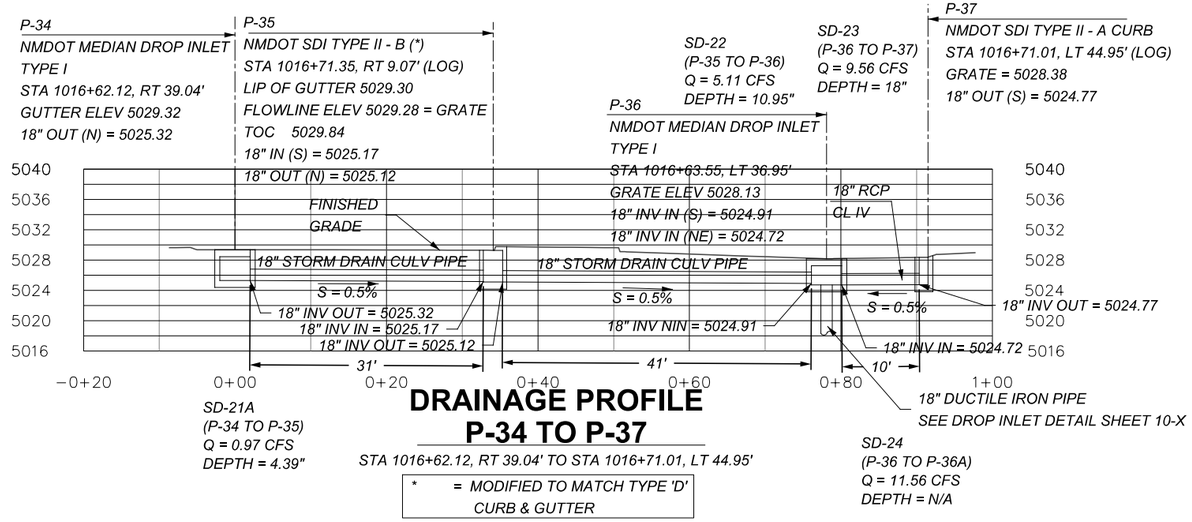
DRAINAGE PROFILE
P-6 TO P-16

STA 1002+93.64, LT 35.00' TO STA 1002+93.64, RT 60.63'



DRAINAGE PROFILE
P-24 TO P-26

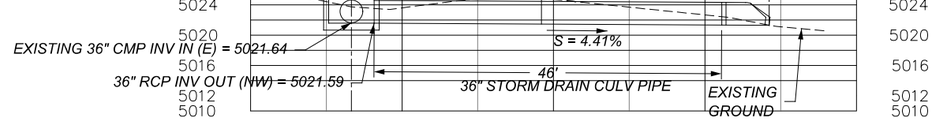
STA 5001+22.31, LT 39.57' TO STA 5001+22.31, RT 38.18'



DRAINAGE PROFILE
P-34 TO P-37

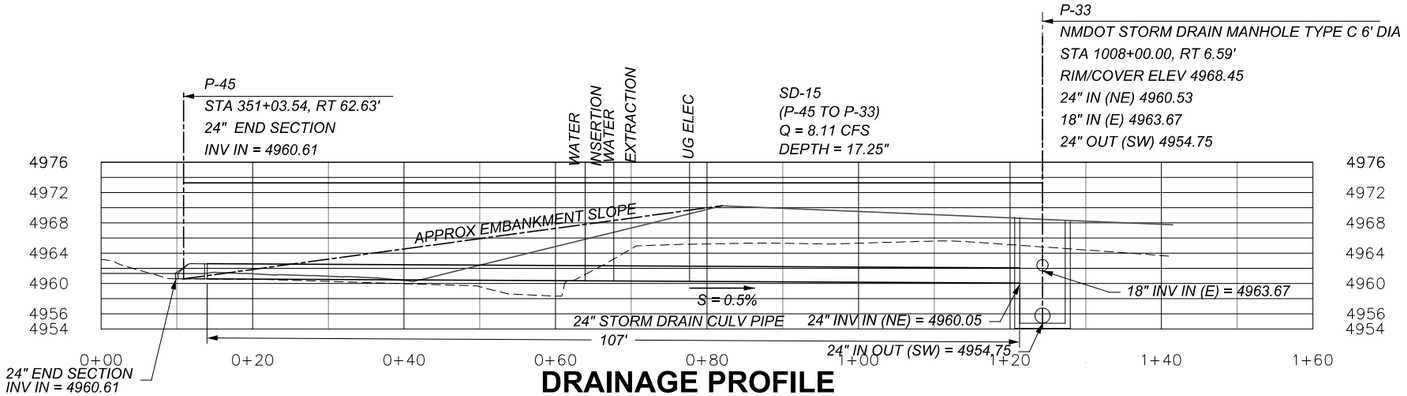
STA 1016+62.12, RT 39.04' TO STA 1016+71.01, LT 44.95'

* = MODIFIED TO MATCH TYPE 'D' CURB & GUTTER



DRAINAGE PROFILE
P-41 TO P-41A

STA 1022+29.46, LT 159.14' TO STA 1021+80.96, LT 191.97'



DRAINAGE PROFILE
P-45 TO P-33

STA 351+03.54, RT 62.63' TO STA 1008+00.00, RT 6.59'

60% SUBMISSION NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION

DRAINAGE STRUCTURE SECTION

DRAWING SCALE:

DESIGNED BY: designer PHONE: phone EMAIL: email

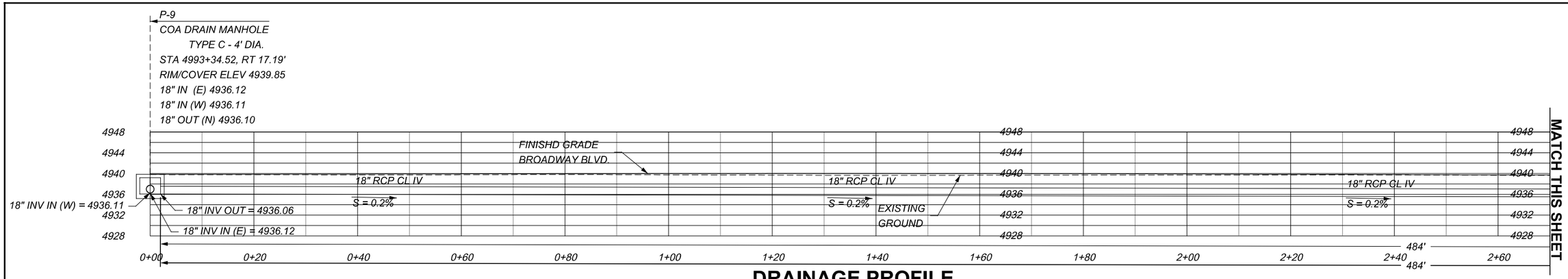
bbailey
3/21/2019 11:45:23 AM

Design File: I:\BHI\BHI161-11(BASIC SERVICES)\DWGS\Microstation\Plans\10_Sheets\BHI161-11_10-8(STRUCTURE SECTIONS).dgn

DESIGNED BY: B Bailey

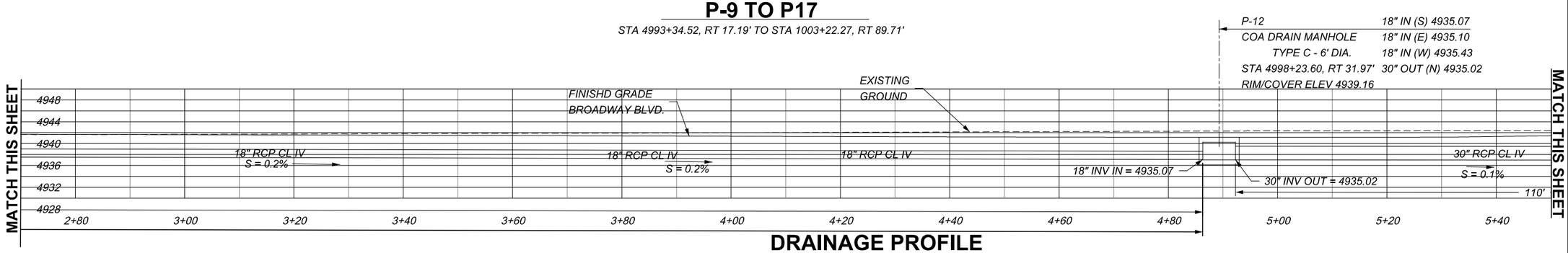
NEW MEXICO PROJECT NO. A300160

MOLZENCORBIN



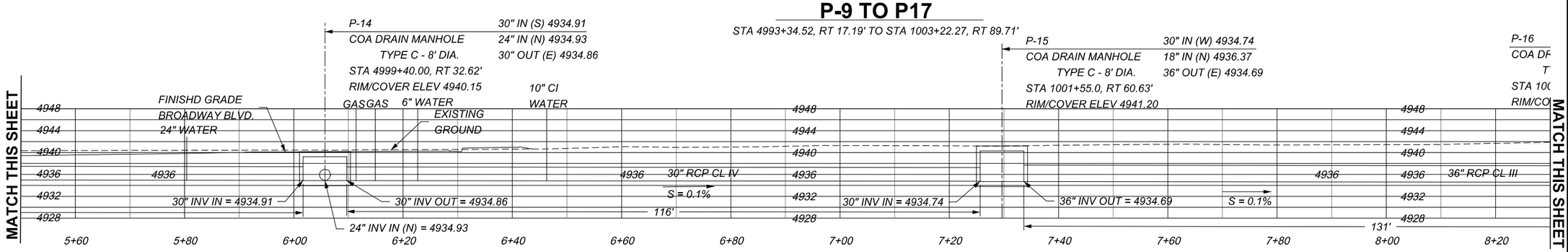
DRAINAGE PROFILE
P-9 TO P17

STA 4993+34.52, RT 17.19' TO STA 1003+22.27, RT 89.71'



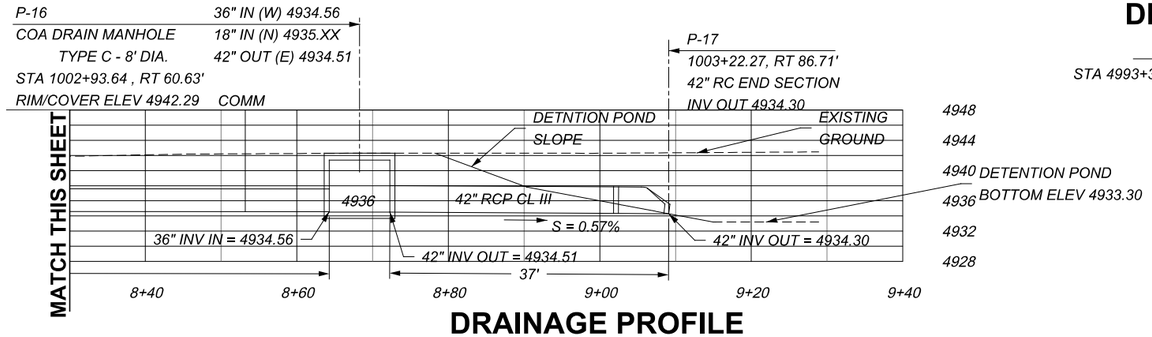
DRAINAGE PROFILE
P-9 TO P17

STA 4993+34.52, RT 17.19' TO STA 1003+22.27, RT 89.71'



DRAINAGE PROFILE
P-9 TO P17

STA 4993+34.52, RT 17.19' TO STA 1003+22.27, RT 89.71'



DRAINAGE PROFILE
P-9 TO P17

STA 4993+34.52, RT 17.19' TO STA 1003+22.27, RT 89.71'

60% SUBMISSION
NOT FOR
CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
4			
3			
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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION

DRAINAGE STRUCTURE SECTION

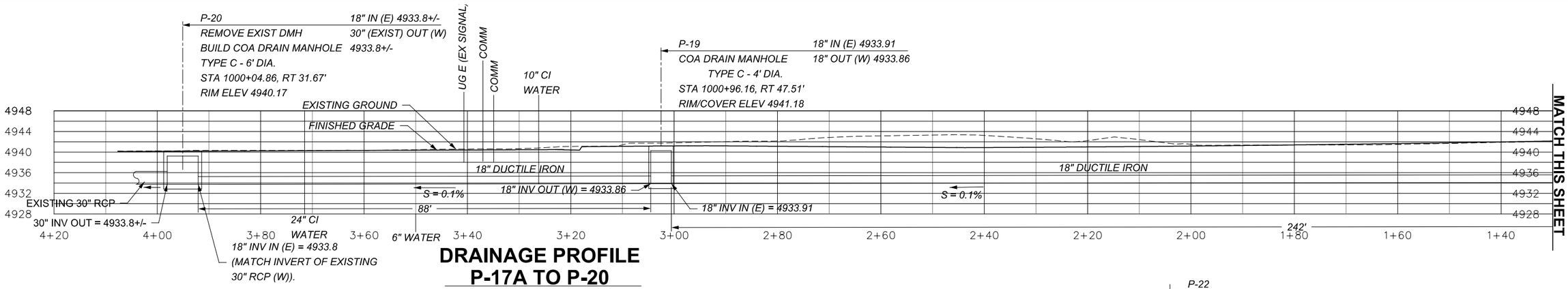
DRAWING SCALE:

DESIGNED BY: designer PHONE: phone EMAIL: email

bbailey 2/1/2019 11:03:36 AM Design File: I:\BHI\BHI161-11(BASIC SERVICES)\DWGS\Microstation\Plans\10_Sheets\BHI161-11_10-8(STRUCTURE SECTIONS).dgn

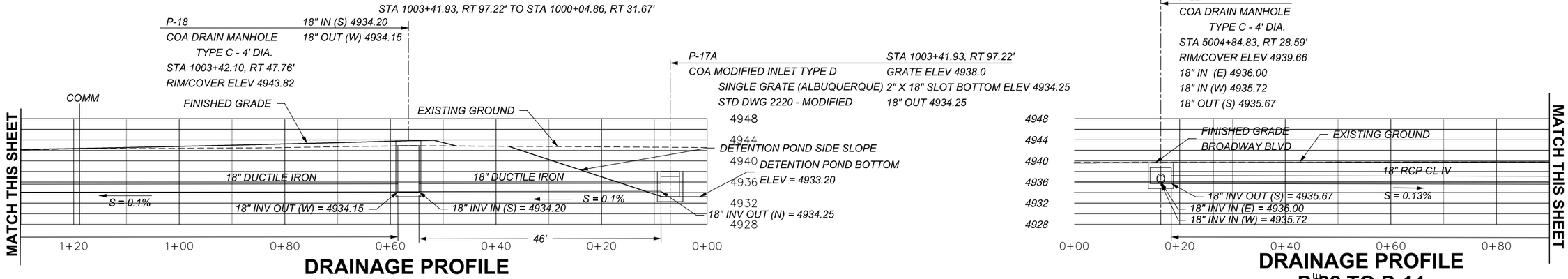
DESIGNED BY: B Bailey NEW MEXICO PROJECT NO. A300160

MOLZENCORBIN



DRAINAGE PROFILE
P-17A TO P-20

STA 1003+41.93, RT 97.22' TO STA 1000+04.86, RT 31.67'

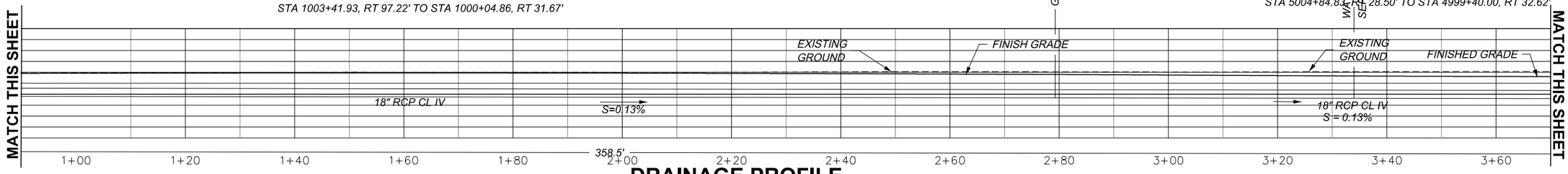


DRAINAGE PROFILE
P-17A TO P-20

STA 1003+41.93, RT 97.22' TO STA 1000+04.86, RT 31.67'

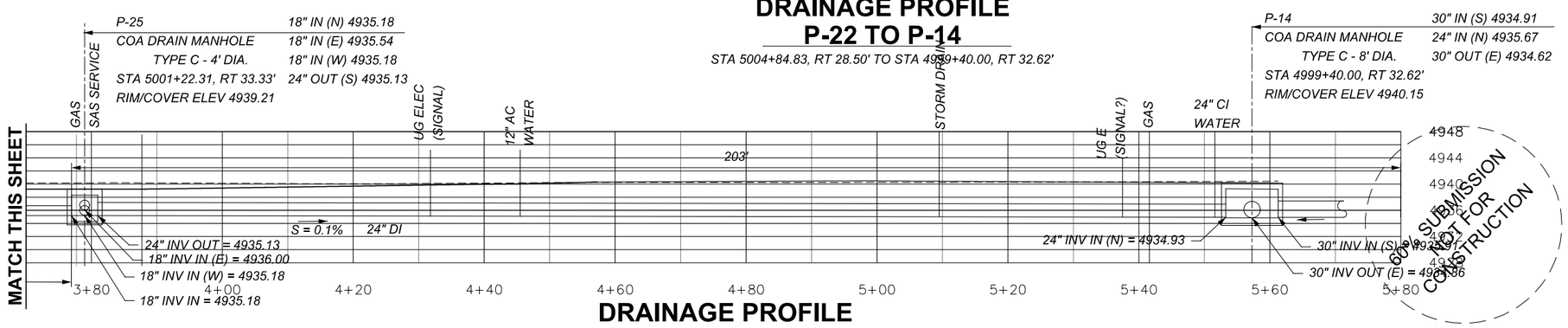
DRAINAGE PROFILE
P-22 TO P-14

STA 5004+84.83, RT 28.50' TO STA 4999+40.00, RT 32.62'



DRAINAGE PROFILE
P-22 TO P-14

STA 5004+84.83, RT 28.50' TO STA 4999+40.00, RT 32.62'



DRAINAGE PROFILE
P-22 TO P-14

STA 5004+84.83, RT 28.50' TO STA 4999+40.00, RT 32.62'

NO.	DESCRIPTION	DATE	BY
4			
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REVISIONS (OR CHANGE NOTICES)

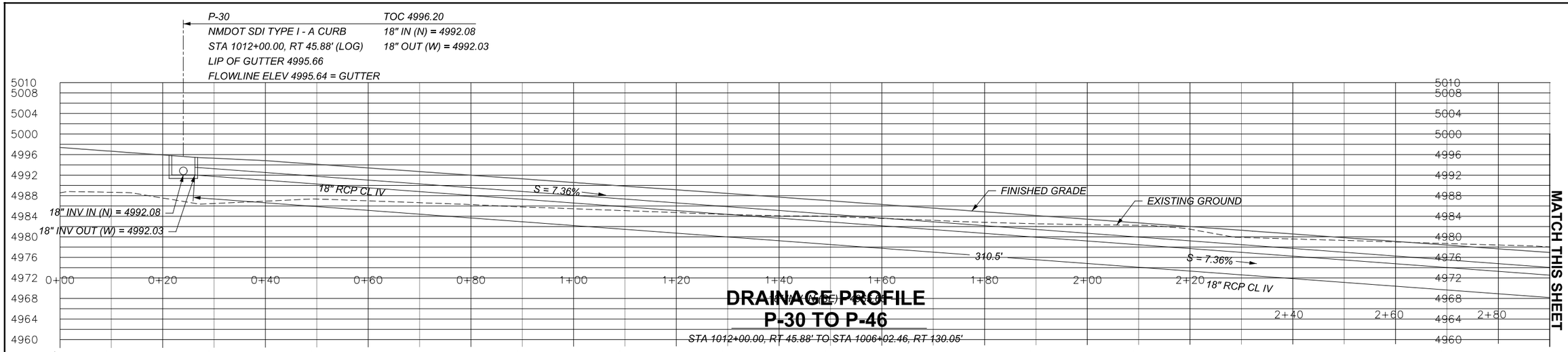
BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION

DRAINAGE STRUCTURE SECTION

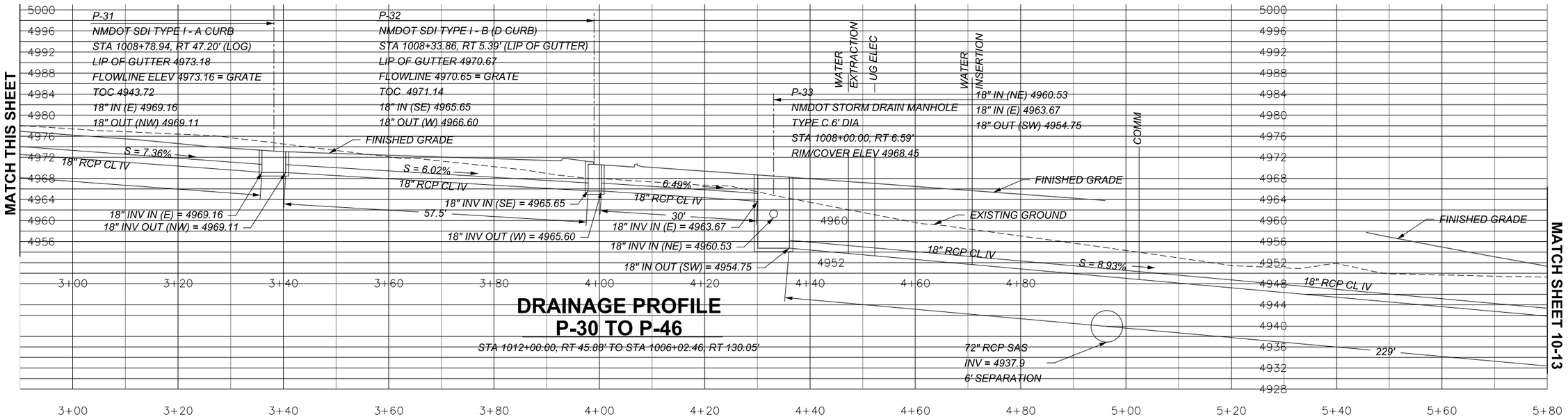
DESIGNED BY: designer PHONE: phone EMAIL: email

DRAWING SCALE:



DRAINAGE PROFILE
P-30 TO P-46

STA 1012+00.00, RT 45.88' TO STA 1006+02.46, RT 130.05'



DRAINAGE PROFILE
P-30 TO P-46

STA 1012+00.00, RT 45.88' TO STA 1006+02.46, RT 130.05'

60% SUBMISSION NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
4			
3			
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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

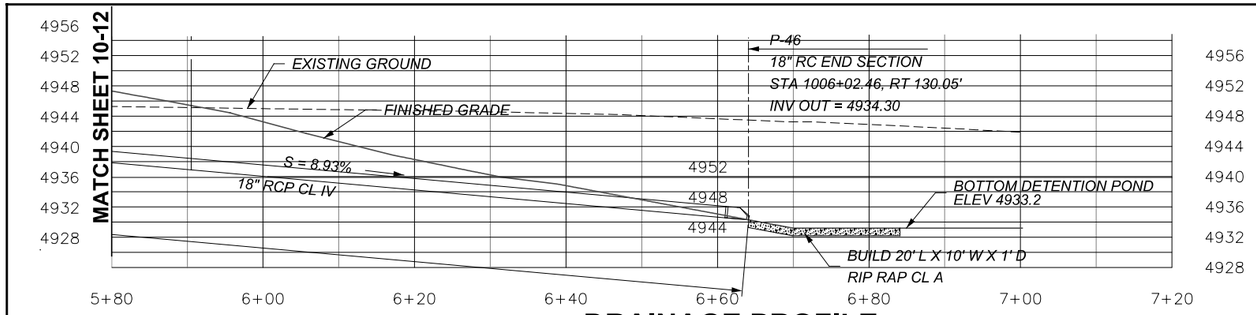
DRAINAGE BOULEVARD SECTION

DRAINAGE STRUCTURE SECTION

DRAWING SCALE:

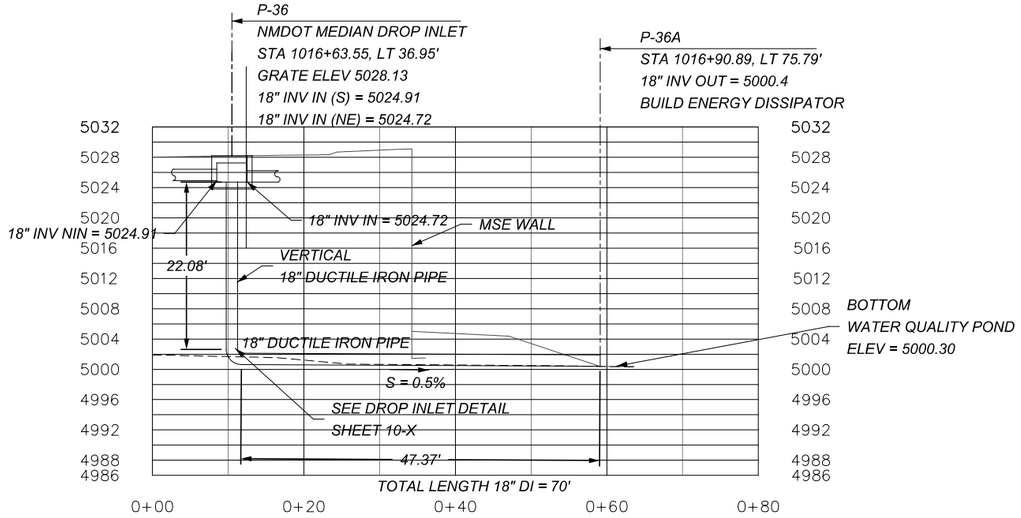
DESIGNED BY: designer
PHONE: phone
EMAIL: email

bbailey 2/3/2019 10:44:39 AM
Design File: I:\BHI\BHI161-11(BASIC SERVICES)\DWGS\Microstation\Plans\10_Sheets\BHI161-11_10-8(STRUCTURE SECTIONS).dgn
DESIGNED BY: B Bailey
NEW MEXICO PROJECT NO. A300160
MOLZENCORBIN
SHEET NO. 10 - 12



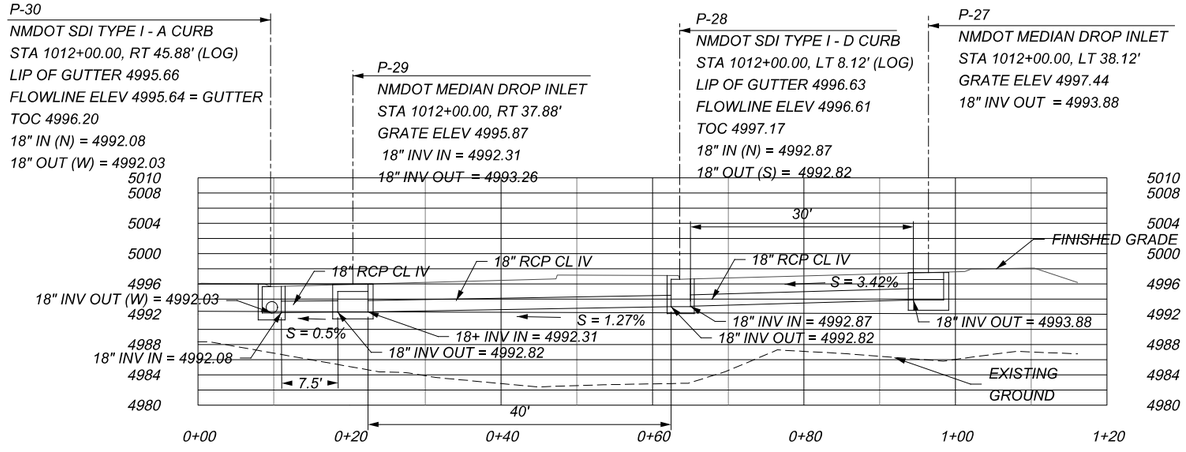
DRAINAGE PROFILE
P-30 TO P-46

STA 1012+00.00, RT 45.88' TO STA 1006+02.46, RT 130.05'



DRAINAGE PROFILE
P-36 TO P-36A

STA 1016+63.55, LT 36.95' TO STA 1016+90.89, LT 75.79'



DRAINAGE PROFILE
P-27 TO P-30

STA 1012+00.00, LT 38.12' TO STA 1012+00.00, RT 45.88'

60% SUBMISSION NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
4			
3			
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REVISIONS (OR CHANGE NOTICES)

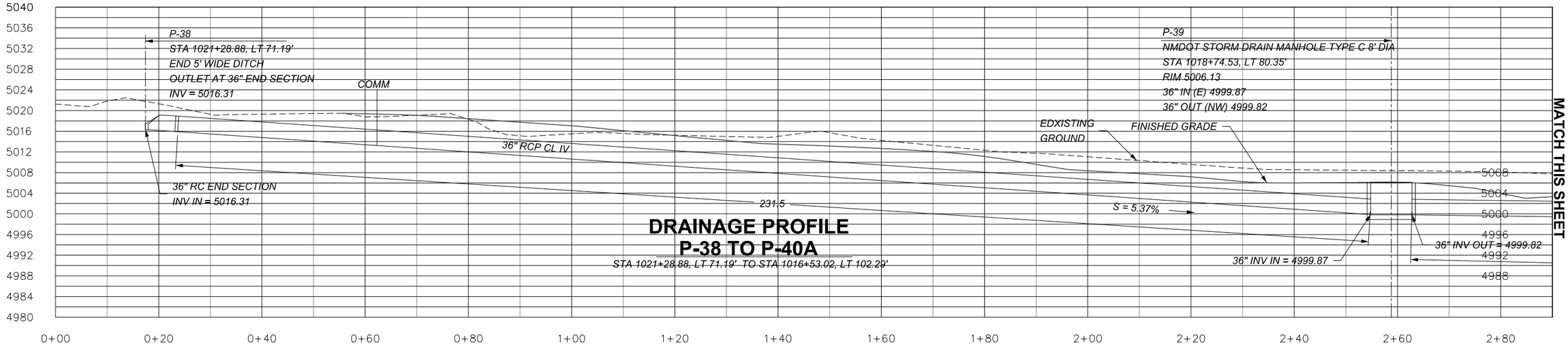
BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION

DRAINAGE STRUCTURE SECTION

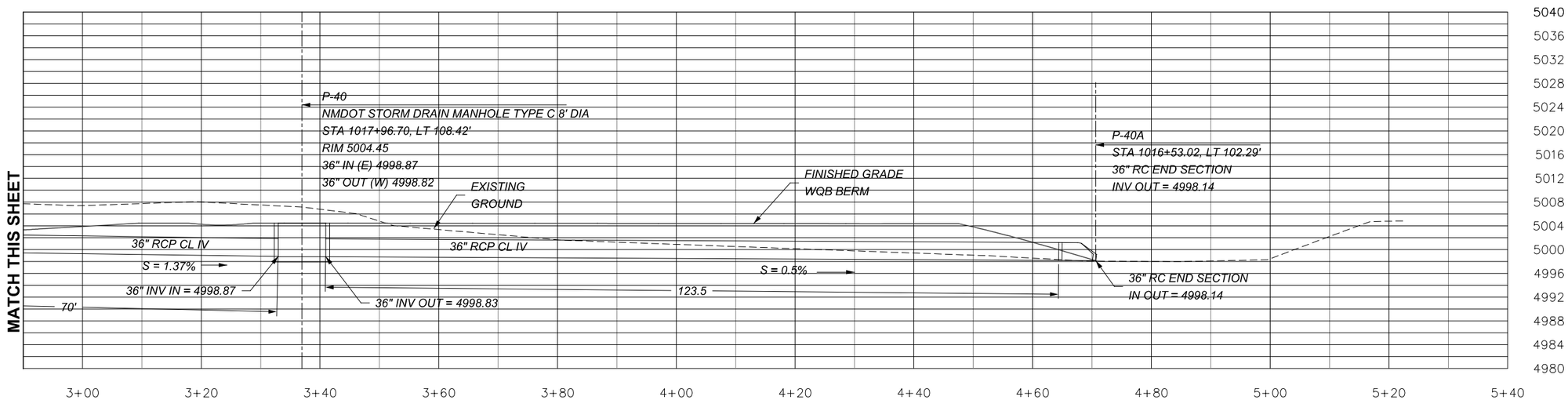
DRAWING SCALE:

DESIGNED BY: designer
PHONE: phone
EMAIL: email



DRAINAGE PROFILE
P-38 TO P-40A

STA 1021+28.88, LT 71.19' TO STA 1016+53.02, LT 102.29'



DRAINAGE PROFILE
P-38 TO P-40A

STA 1021+28.88, LT 71.19' TO STA 1016+53.02, LT 102.29'

60% SUBMISSION
NOT FOR
CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
4			
3			
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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION

DRAINAGE STRUCTURE SECTION

DRAWING SCALE:

DESIGNED BY: designer
PHONE: phone
EMAIL: email

bbailey
2/3/2019 10:45:26 AM

Design File: I:\BHI\BHI161-11(BASIC SERVICES)\DWGS\Microstation\Plans\10_Sheets\BHI161-11_10-8(STRUCTURE SECTIONS).dgn

DESIGNED BY: B Bailey

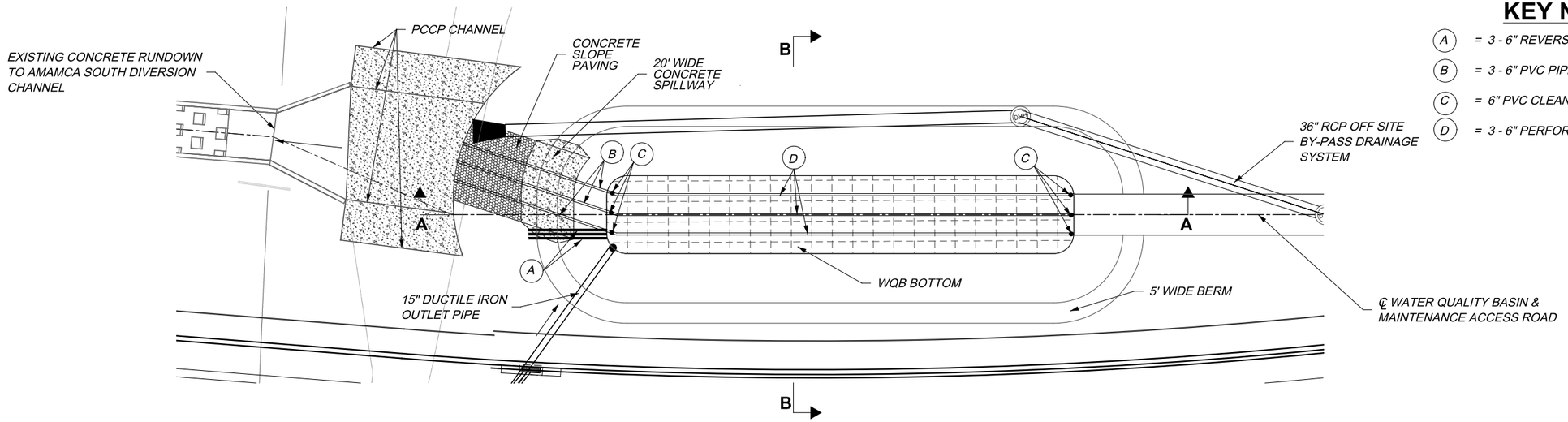
NEW MEXICO PROJECT NO. A300160

MOLZENCORBIN

SHEET NO. 10-14

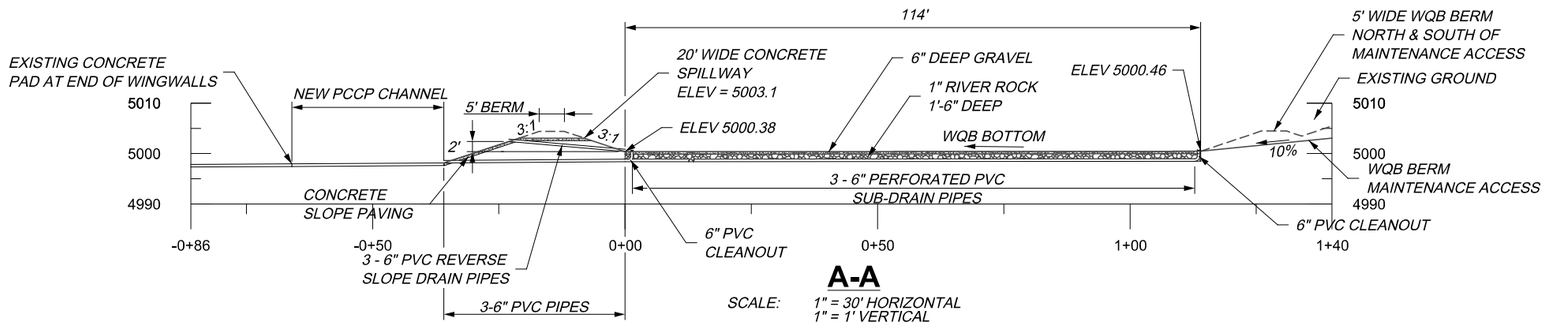
KEY NOTES

(A) = 3 - 6" REVERSE SLOPE REVERSE DRAIN PIPES.
(B) = 3 - 6" PVC PIPES
(C) = 6" PVC CLEANOUTS
(D) = 3 - 6" PERFORATED PVC SUB-DRAIN PIPES



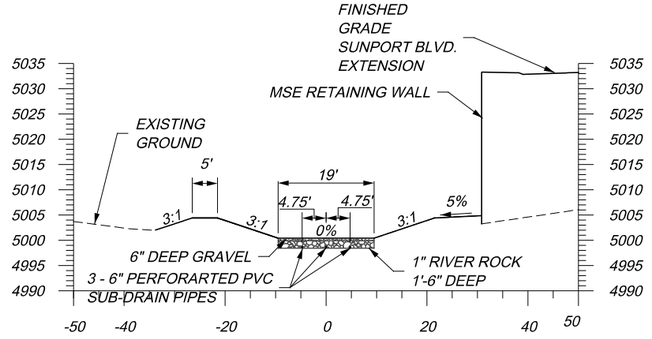
PLAN
WATER QUALITY BASIN

SCALE: 1" = 40'



A-A

SCALE: 1" = 30' HORIZONTAL
1" = 1' VERTICAL



B-B

SCALE: 1" = 30' HORIZONTAL
1" = 1' VERTICAL

60% SUBMISSION NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	BY
4			
3			
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REVISIONS (OR CHANGE NOTICES)

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
TECHNICAL SERVICES DEPARTMENT

SUNPORT BOULEVARD EXTENSION

WATER QUALITY BASIN DETAILS

DRAWING SCALE:

DESIGNED BY: designer
PHONE: phone
EMAIL: email

APPENDIX C
AHYMO DATA

AHYMO INPUT FILE

```
*S Sunport Boulevard extension by Jonah Ruybalid  JAN 10 2019
*
START              TIME=0.0 HR  PUNCH CODE=0
*S 100-YEAR, 24-HOUR STORM EVENT- ZONE 2
RAINFALL           TYPE=2  QUARTER HR RAIN=0.00  ONE HR RAIN=2.01
                SIX HR RAIN=2.35  DAILY RAIN=2.75 DT=0.05 HR
* 10-YEAR, 24-HOUR STORM EVENT, - ZONE 2
*RAINFALL          TYPE=2  QUARTER HR RAIN=0.00  ONE HR RAIN=1.51
*                  SIX HR RAIN=1.57  DAILY RAIN=1.83 DT=0.05 HR
*
**********************************************************************************
SEDIMENT BULK      CODE = 1 BULK FACTOR = 1.10
**********************************************************************************
*PROPOSED SITE CONDITIONS
*
COMPUTE NM HYD     ID=1  HYD=XF  DA=0.003794
                   A B C D 70 0 20  10
                   TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=1  CODE=1
*
COMPUTE NM HYD     ID=2  HYD=XE1  DA=0.0017114
                   A B C D  0  0  85  15
                   TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=2  CODE=1
*
*Add basins XF and XE1 basin-routing
ADD HYD            ID=3  HYD=XF_XE1  ID=1  ID=2
PRINT HYD          ID=3  CODE=1
*
COMPUTE NM HYD     ID=4  HYD=XE2  DA=0.0039
                   A B C D  86  0  14  0
                   TP=0.13330   MASS RAIN=-1
```

```
PRINT HYD          ID=4  CODE=1
*
*Add basins XF XE1 XE2 basin-routing
ADD HYD            ID=5  HYD=WQPondInE(XE2_XF_XE1)  ID=3  ID=4
PRINT HYD          ID=5  CODE=1
*
COMPUTE NM HYD     ID=6  HYD=H3  DA=0.000283628
                   A B C D  0  0  0  100
                   TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=6  CODE=1
*
COMPUTE NM HYD     ID=7  HYD=H4  DA=0.0012214
                   A B C D  0  0  0  100
                   TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=7  CODE=1
*
*Add basins H3 and H4 basin-routing
ADD HYD            ID=8  HYD=H3_H4  ID=6  ID=7
PRINT HYD          ID=8  CODE=1
*
COMPUTE NM HYD     ID=9  HYD=I3  DA=0.0013089
                   A B C D  0  0  0  100
                   TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=9  CODE=1
*
*Add basins I3 H3 H4 basin-routing
ADD HYD            ID=10  HYD=I3_H3_H4  ID=8  ID=9
PRINT HYD          ID=10  CODE=1
*
COMPUTE NM HYD     ID=11  HYD=I4  DA=0.000589138
                   A B C D  0  0  0  100
                   TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=11  CODE=1
```

```
*
*Add basins I4 I3 H3 H4 basin-routing
ADD HYD           ID=12  HYD=WQPondInS(I4_I3_H3_H4)  ID=10  ID=11
PRINT HYD         ID=12  CODE=1
*
*Add basins I4 I3 H3 H4 XE2 XF XE1 basin-routing WQPondIn
ADD HYD           ID=13  HYD=I4_I3_H3_H4_XE2_XF_XE1  ID=5  ID=12
PRINT HYD         ID=13  CODE=1
*
* Water Quality Pond outflows over weir to south diversion channel
ROUTE RESERVOIR    ID=14  HYD=WQPondOut  INFLOW ID=13  CODE=5
                  OUTFLOW(cfs)   STORAGE(ac ft)    ELEV(ft)
                  0.000          0.0           5000.4
                  0.010          0.0326        5001.0
                  0.010          0.1000        5002.0
                  0.050          0.1864        5003.0
                  3.860          0.2938        5004.0
                 70.300          0.5001        5005.0
                239.300          0.7298        5006.0
                524.600          0.9797        5007.0
               1000.000         10.0000        5008.0
*
************************************************************
*
COMPUTE NM HYD     ID=15  HYD=XD1  DA=0.0041148
              A B C D 67 0 4  29
              TP=0.13330   MASS RAIN=-1
PRINT HYD         ID=15  CODE=1
*
COMPUTE NM HYD     ID=16  HYD=M1  DA=0.0011512
              A B C D  0  0  25  75
              TP=0.13330   MASS RAIN=-1
PRINT HYD         ID=16  CODE=1
```

```
*
*Add basins XD1 M1 basin-routing
ADD HYD           ID=17  HYD=XD1_M1  ID=15  ID=16
PRINT HYD         ID=17  CODE=1
*
COMPUTE NM HYD     ID=18  HYD=XM1  DA=0.001623
               A B C D  0  0  53  47
               TP=0.13330   MASS RAIN=-1
PRINT HYD         ID=18  CODE=1
*
*Add basins XM1 XD1 M1 basin-routing
ADD HYD           ID=19  HYD=XM1_XD1_M1  ID=17  ID=18
PRINT HYD         ID=19  CODE=1
*
COMPUTE NM HYD     ID=20  HYD=M2  DA=0.0008861
               A B C D  0  0  7  93
               TP=0.13330   MASS RAIN=-1
PRINT HYD         ID=20  CODE=1
*
*Add basins M2 XM1 XD1 M1 basin-routing
ADD HYD           ID=1  HYD=M2_XM1_XD1_M1  ID=19  ID=20
PRINT HYD         ID=1  CODE=1
*
COMPUTE NM HYD     ID=2  HYD=N  DA=0.003618
               A B C D  15  0  85  0
               TP=0.13330   MASS RAIN=-1
PRINT HYD         ID=2  CODE=1
*
*Add basins N M2 XM1 XD1 M1 basin-routing
ADD HYD           ID=3  HYD=M2_XM1_XD1_M1  ID=1  ID=2
PRINT HYD         ID=3  CODE=1
*
COMPUTE NM HYD     ID=4  HYD=I1  DA=0.000621979
```

```
              A B C D  0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=4  CODE=1
*
COMPUTE NM HYD     ID=5  HYD=I2  DA=0.000247657
              A B C D  0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=5  CODE=1
*
*Add basins I2 I1 basin-routing
ADD HYD            ID=6  HYD=I2_I1  ID=4  ID=5
PRINT HYD          ID=6  CODE=1
*
COMPUTE NM HYD     ID=7  HYD=H2  DA=0.000540774
              A B C D  0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=7  CODE=1
*
*Add basins H2 I2 I1 basin-routing
ADD HYD            ID=8  HYD=H2_I2_I1  ID=6  ID=7
PRINT HYD          ID=8  CODE=1
*
COMPUTE NM HYD     ID=9  HYD=H1  DA=0.000254482
              A B C D  0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=9  CODE=1
*
*Add basins H1 H2 I2 I1 basin-routing
ADD HYD            ID=10  HYD=H1_H2_I2_I1  ID=8  ID=9
PRINT HYD          ID=10  CODE=1
*
COMPUTE NM HYD     ID=11  HYD=H  DA=0.000663978
              A B C D  0  0  0  100
```

```
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=11  CODE=1
*
*Add basins H H1 H2 I2 I1 basin-routing
ADD HYD            ID=12  HYD=H_H1_H2_I2_I1  ID=10  ID=11
PRINT HYD          ID=12  CODE=1
*
COMPUTE NM HYD     ID=13  HYD=I  DA=0.000641823
              A B C D  0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=13  CODE=1
*
*Add basins I H H1 H2 I2 I1 basin-routing
ADD HYD            ID=14  HYD=I_H_H1_H2_I2_I1  ID=12  ID=13
PRINT HYD          ID=14  CODE=1
*
*Add basins DetPondInE(N M2 XM1 XD1 M2 I H H1 H2 I2 I1) basin-routing
ADD HYD            ID=21  HYD=N_M2_XM1_XD1_M2_I_H_H1_H2_I2_I1  ID=3  ID=14
PRINT HYD          ID=21  CODE=1
*
COMPUTE NM HYD     ID=16  HYD=P  DA=0.000468872
              A B C D  0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=16  CODE=1
*
COMPUTE NM HYD     ID=17  HYD=S  DA=0.000444064
              A B C D  0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=17  CODE=1
*
*Add basins S P basin-routing
ADD HYD            ID=18  HYD=S_P  ID=16  ID=17
PRINT HYD          ID=18  CODE=1
```

```
*
COMPUTE NM HYD      ID=19  HYD=P1  DA=0.000967237
                    A B C D  0  0  10  90
                    TP=0.13330   MASS RAIN=-1
PRINT HYD           ID=19  CODE=1
*
COMPUTE NM HYD      ID=20  HYD=S1  DA=0.000578041
                    A B C D  0  0  10  90
                    TP=0.13330   MASS RAIN=-1
PRINT HYD           ID=20  CODE=1
*
*Add basins S1 P1 basin-routing
ADD HYD             ID=1  HYD=S1_P1  ID=19  ID=20
PRINT HYD           ID=1  CODE=1
*
*Add basins S P S1 P1 basin-routing
ADD HYD             ID=2  HYD=S1_P1_S_P  ID=18  ID=1
PRINT HYD           ID=2  CODE=1
*
COMPUTE NM HYD      ID=3  HYD=T  DA=0.001721835
                    A B C D  90  0   0  10
                    TP=0.13330   MASS RAIN=-1
PRINT HYD           ID=3  CODE=1
*
*Add basins T S1 P1 S P basin-routing
ADD HYD             ID=4  HYD=T_S1_P1_S_P  ID=2  ID=3
PRINT HYD           ID=4  CODE=1
*
COMPUTE NM HYD      ID=5  HYD=Q1  DA=0.000194272
                    A B C D  0  0  10  90
                    TP=0.13330   MASS RAIN=-1
PRINT HYD           ID=5  CODE=1
*
```

```
COMPUTE NM HYD      ID=6  HYD=R1  DA=0.000582811
                    A B C D   0  0  10  90
                    TP=0.13330   MASS RAIN=-1
PRINT HYD           ID=6  CODE=1
*
*Add basins Q1 R1 basin-routing
ADD HYD             ID=7  HYD=Q1_R1  ID=5  ID=6
PRINT HYD           ID=7  CODE=1
*
COMPUTE NM HYD      ID=8  HYD=Q  DA=0.000793384
                    A B C D  0  0  8  92
                    TP=0.13330   MASS RAIN=-1
PRINT HYD           ID=8  CODE=1
*
COMPUTE NM HYD      ID=9  HYD=R  DA=0.000582811
                    A B C D   0  0  10  90
                    TP=0.13330   MASS RAIN=-1
PRINT HYD           ID=9  CODE=1
*
*Add basins Q R basin-routing
ADD HYD             ID=10  HYD=Q_R  ID=8  ID=9
PRINT HYD           ID=10  CODE=1
*
*Add basins Q R Q1 R1 basin-routing
ADD HYD             ID=11  HYD=Q_R_Q1_R1  ID=7  ID=10
PRINT HYD           ID=11  CODE=1
*
*Add basins Q R Q1 R1 T S1 P1 S P basin-routing
ADD HYD             ID=12  HYD=Q_R_Q1_R1_T_S1_P1_S_P  ID=4  ID=11
PRINT HYD           ID=12  CODE=1
*
COMPUTE NM HYD      ID=13  HYD=D  DA=0.000317857
                    A B C D   0  0  0  100
```

```
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=13  CODE=1
*
COMPUTE NM HYD      ID=14  HYD=C  DA=0.00037726
              A B C D   0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=14  CODE=1
*
*Add basins D C basin-routing
ADD HYD            ID=15  HYD=D_C  ID=13  ID=14
PRINT HYD          ID=15  CODE=1
*
*Add basins D C Q R Q1 R1 S1 P1 S P basin-routing
ADD HYD            ID=16  HYD=D_C_Q_R_Q1_R1_S1_P1_S_P  ID=12  ID=15
PRINT HYD          ID=16  CODE=1
*
COMPUTE NM HYD      ID=17  HYD=G1  DA=0.001350527
              A B C D   0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=17  CODE=1
*
COMPUTE NM HYD      ID=18  HYD=G  DA=0.001068715
              A B C D   0  0  0  100
              TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=18  CODE=1
*
*Add basins G1 G basin-routing
ADD HYD            ID=19  HYD=G1_G  ID=17  ID=18
PRINT HYD          ID=19  CODE=1
*
*Add basins G1 G D C Q R Q1 R1 S1 P1 S P basin-routing
ADD HYD            ID=20  HYD=DetPondInW  ID=16  ID=19
PRINT HYD          ID=20  CODE=1
```

```
*
*Add basins G1 G D C Q R Q1 R1 S1 P1 S P N M2 XM1 XD1 M2 I H H1 H2 I2 I1 basin-routing
ADD HYD            ID=1  HYD=DetPondInSS  ID=21  ID=20
PRINT HYD          ID=1  CODE=1
*
COMPUTE NM HYD      ID=2  HYD=XJ  DA=0.009900676
                   A B C D   63  0  37  0
                   TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=2  CODE=1
*
*Add basins XJ G1 G D C Q R Q1 R1 S1 P1 S P N M2 XM1 XD1 M2 I H H1 H2 I2 I1 basin-routing
ADD HYD            ID=3  HYD=DetPondIn  ID=1  ID=2
PRINT HYD          ID=3  CODE=1
*
* pond discharges into storm sewer that discharges into the San Jose Drain
ROUTE RESERVOIR     ID=4  HYD=DetPondOut  INFLOW ID=3  CODE=5
                   OUTFLOW(cfs) STORAGE(cfs)   ELEV(ft)
                    0.000        0.000        4933.2
                    0.010        0.343        4934
                    0.200        0.826        4935
                    1.200        1.380        4936
                    1.700        1.980        4937
                    2.100        2.657        4938
                   24.500        3.411        4939
                   65.200        4.248        4940
                  117.800        5.170        4941
*
*************************************************************
*
COMPUTE NM HYD      ID=5  HYD=A  DA=0.000885059
                   A B C D   0  0  2  98
                   TP=0.13330   MASS RAIN=-1
PRINT HYD          ID=5  CODE=1
```

*

COMPUTE NM HYD ID=6 HYD=B DA=0.000822449

A B C D 0 0 2 98

TP=0.13330 MASS RAIN=-1

PRINT HYD ID=6 CODE=1

*

FINISH

AHYMO SUMMARY TABLE

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) - Ver. S4.01a, Rel: 01a RUN DATE (MON/DAY/YR) =03/22/2019
INPUT FILE = C:\Users\Public\AHYMOdata\AHYMO input 3-22-19_MC_new.txt USER NO.= MolzenCorSingleA36115542

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
*S Sunport Boulevard extension by Jonah Ruybalid JAN 10 2019										
START										TIME= 0.00
*S 100-YEAR, 24-HOUR STORM EVENT- ZONE 2										
RAINFALL TYPE= 2 NOAA 14										RAIN24= 2.750
SEDIMENT BULK										PK BF = 1.10
COMPUTE NM HYD	XF	-	1	0.00379	6.80	0.222	1.09881	1.500	2.801	PER IMP= 10.00
COMPUTE NM HYD	XE1	-	2	0.00171	4.38	0.141	1.54545	1.500	3.998	PER IMP= 15.00
ADD HYD	XF_XE1	1& 2	3	0.00551	11.18	0.363	1.23756	1.500	3.173	
COMPUTE NM HYD	XE2	-	4	0.00390	6.04	0.183	0.87870	1.550	2.421	PER IMP= 0.00
ADD HYD	WQPondInE(XE	3& 4	5	0.00941	17.19	0.546	1.08875	1.500	2.856	
COMPUTE NM HYD	H3	-	6	0.00028	0.97	0.042	2.75562	1.500	5.345	PER IMP= 100.00
COMPUTE NM HYD	H4	-	7	0.00122	4.14	0.180	2.75562	1.500	5.302	PER IMP= 100.00
ADD HYD	H3_H4	6& 7	8	0.00151	5.11	0.221	2.75528	1.500	5.310	
COMPUTE NM HYD	I3	-	9	0.00131	4.44	0.192	2.75562	1.500	5.302	PER IMP= 100.00
ADD HYD	I3_H3_H4	8& 9	10	0.00281	9.56	0.414	2.75534	1.500	5.306	
COMPUTE NM HYD	I4	-	11	0.00059	2.01	0.087	2.75562	1.500	5.318	PER IMP= 100.00
ADD HYD	WQPondInS(I4	10&11	12	0.00340	11.56	0.500	2.75529	1.500	5.308	
ADD HYD	I4_I3_H3_H4_	1& 5	13	0.01320	24.00	0.768	1.09162	1.500	2.840	
ROUTE RESERVOIR	WQPondOut	13	14	0.01320	18.39	0.762	1.08253	1.600	2.177	AC-FT= 0.339
COMPUTE NM HYD	XD1	-	15	0.00411	8.31	0.306	1.39420	1.500	3.156	PER IMP= 29.00
COMPUTE NM HYD	M1	-	16	0.00115	3.63	0.147	2.39969	1.500	4.933	PER IMP= 75.00
ADD HYD	XD1_M1	15&16	17	0.00527	11.95	0.453	1.61389	1.500	3.545	
COMPUTE NM HYD	XM1	-	18	0.00162	4.67	0.173	2.00104	1.500	4.492	PER IMP= 47.00
ADD HYD	XM1_XD1_M1	17&18	19	0.00689	16.61	0.626	1.70505	1.500	3.768	
COMPUTE NM HYD	M2	-	20	0.00089	2.96	0.126	2.65596	1.500	5.219	PER IMP= 93.00
ADD HYD	M2_XM1_XD1_M	19&20	1	0.00778	19.57	0.752	1.81339	1.500	3.933	
COMPUTE NM HYD	N	-	2	0.00362	8.11	0.239	1.23690	1.500	3.501	PER IMP= 0.00
ADD HYD	M2_XM1_XD1_M	1& 2	3	0.01139	27.68	0.991	1.63031	1.500	3.796	
COMPUTE NM HYD	I1	-	4	0.00062	2.11	0.091	2.75562	1.500	5.313	PER IMP= 100.00
COMPUTE NM HYD	I2	-	5	0.00025	0.85	0.036	2.75562	1.500	5.345	PER IMP= 100.00
ADD HYD	I2_I1	4& 5	6	0.00087	2.96	0.128	2.75506	1.500	5.322	
COMPUTE NM HYD	H2	-	7	0.00054	1.84	0.079	2.75562	1.500	5.318	PER IMP= 100.00
ADD HYD	H2_I2_I1	6& 7	8	0.00141	4.80	0.207	2.75507	1.500	5.320	
COMPUTE NM HYD	H1	-	9	0.00025	0.87	0.037	2.75562	1.500	5.345	PER IMP= 100.00
ADD HYD	H1_H2_I2_I1	8& 9	10	0.00166	5.67	0.245	2.75501	1.500	5.324	
COMPUTE NM HYD	H	-	11	0.00066	2.26	0.098	2.75562	1.500	5.313	PER IMP= 100.00
ADD HYD	H_H1_H2_I2_I	10&11	12	0.00233	7.93	0.342	2.75506	1.500	5.321	
COMPUTE NM HYD	I	-	13	0.00064	2.18	0.094	2.75562	1.500	5.313	PER IMP= 100.00
ADD HYD	I_H_H1_H2_I2	12&13	14	0.00297	10.11	0.437	2.75509	1.500	5.319	
ADD HYD	N_M2_XM1_XD1	1& 2	21	0.01139	27.68	0.991	1.63031	1.500	3.796	
COMPUTE NM HYD	P	-	16	0.00047	1.60	0.069	2.75562	1.500	5.325	PER IMP= 100.00
COMPUTE NM HYD	S	-	17	0.00044	1.51	0.065	2.75562	1.500	5.325	PER IMP= 100.00
ADD HYD	S_P	16&17	18	0.00091	3.11	0.134	2.75502	1.500	5.325	
COMPUTE NM HYD	P1	-	19	0.00097	3.20	0.135	2.61325	1.500	5.170	PER IMP= 90.00
COMPUTE NM HYD	S1	-	20	0.00058	1.92	0.081	2.61325	1.500	5.190	PER IMP= 90.00
ADD HYD	S1_P1	19&20	1	0.00155	5.12	0.215	2.61287	1.500	5.177	
ADD HYD	S1_P1_S_P	18& 1	2	0.00246	8.23	0.349	2.66566	1.500	5.232	
COMPUTE NM HYD	T	-	3	0.00172	2.78	0.092	1.00574	1.500	2.519	PER IMP= 10.00

AHYMO SUMMARY TABLE

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
ADD HYD	XM1_XD1_M1	17&18	19	0.00689	16.61	0.626	1.70505	1.500	3.768	
COMPUTE NM HYD	M2	-	20	0.00089	2.96	0.126	2.65596	1.500	5.219	PER IMP= 93.00
ADD HYD	M2_XM1_XD1_M	19&20	1	0.00778	19.57	0.752	1.81339	1.500	3.933	
COMPUTE NM HYD	N	-	2	0.00362	8.11	0.239	1.23690	1.500	3.501	PER IMP= 0.00
ADD HYD	M2_XM1_XD1_M	1& 2	3	0.01139	27.68	0.991	1.63031	1.500	3.796	
COMPUTE NM HYD	I1	-	4	0.00062	2.11	0.091	2.75562	1.500	5.313	PER IMP= 100.00
COMPUTE NM HYD	I2	-	5	0.00025	0.85	0.036	2.75562	1.500	5.345	PER IMP= 100.00
ADD HYD	I2_I1	4& 5	6	0.00087	2.96	0.128	2.75506	1.500	5.322	
COMPUTE NM HYD	H2	-	7	0.00054	1.84	0.079	2.75562	1.500	5.318	PER IMP= 100.00
ADD HYD	H2_I2_I1	6& 7	8	0.00141	4.80	0.207	2.75507	1.500	5.320	
COMPUTE NM HYD	H1	-	9	0.00025	0.87	0.037	2.75562	1.500	5.345	PER IMP= 100.00
ADD HYD	H1_H2_I2_I1	8& 9	10	0.00166	5.67	0.245	2.75501	1.500	5.324	
COMPUTE NM HYD	H	-	11	0.00066	2.26	0.098	2.75562	1.500	5.313	PER IMP= 100.00
ADD HYD	H_H1_H2_I2_I	10&11	12	0.00233	7.93	0.342	2.75506	1.500	5.321	
COMPUTE NM HYD	I	-	13	0.00064	2.18	0.094	2.75562	1.500	5.313	PER IMP= 100.00
ADD HYD	I_H_H1_H2_I2	12&13	14	0.00297	10.11	0.437	2.75509	1.500	5.319	
ADD HYD	N_M2_XM1_XD1	1& 2	21	0.01139	27.68	0.991	1.63031	1.500	3.796	
COMPUTE NM HYD	P	-	16	0.00047	1.60	0.069	2.75562	1.500	5.325	PER IMP= 100.00
COMPUTE NM HYD	S	-	17	0.00044	1.51	0.065	2.75562	1.500	5.325	PER IMP= 100.00
ADD HYD	S_P	16&17	18	0.00091	3.11	0.134	2.75502	1.500	5.325	
COMPUTE NM HYD	P1	-	19	0.00097	3.20	0.135	2.61325	1.500	5.170	PER IMP= 90.00
COMPUTE NM HYD	S1	-	20	0.00058	1.92	0.081	2.61325	1.500	5.190	PER IMP= 90.00
ADD HYD	S1_P1	19&20	1	0.00155	5.12	0.215	2.61287	1.500	5.177	
ADD HYD	S1_P1_S_P	18& 1	2	0.00246	8.23	0.349	2.66566	1.500	5.232	
COMPUTE NM HYD	T	-	3	0.00172	2.78	0.092	1.00574	1.500	2.519	PER IMP= 10.00
ADD HYD	T_S1_P1_S_P	2& 3	4	0.00418	11.01	0.442	1.98186	1.500	4.115	

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
COMPUTE NM HYD	Q1	-	5	0.00019	0.65	0.027	2.61325	1.500	5.262	PER IMP= 90.00
COMPUTE NM HYD	R1	-	6	0.00058	1.94	0.081	2.61325	1.500	5.190	PER IMP= 90.00
ADD HYD	Q1_R1	5& 6	7	0.00078	2.59	0.108	2.61260	1.500	5.208	
COMPUTE NM HYD	Q	-	8	0.00079	2.65	0.112	2.64172	1.500	5.210	PER IMP= 92.00
COMPUTE NM HYD	R	-	9	0.00058	1.94	0.081	2.61325	1.500	5.190	PER IMP= 90.00
ADD HYD	Q_R	8& 9	10	0.00138	4.58	0.193	2.62923	1.500	5.202	
ADD HYD	Q_R_Q1_R1	7&10	11	0.00215	7.17	0.301	2.62323	1.500	5.204	
ADD HYD	Q_R_Q1_R1_T_	4&11	12	0.00633	18.18	0.743	2.19992	1.500	4.485	
COMPUTE NM HYD	D	-	13	0.00032	1.09	0.047	2.75562	1.500	5.334	PER IMP= 100.00
COMPUTE NM HYD	C	-	14	0.00038	1.29	0.055	2.75562	1.500	5.325	PER IMP= 100.00
ADD HYD	D_C	13&14	15	0.00070	2.37	0.102	2.75494	1.500	5.329	
ADD HYD	D_C_Q_R_Q1_R	12&15	16	0.00703	20.55	0.845	2.25481	1.500	4.568	
COMPUTE NM HYD	G1	-	17	0.00135	4.58	0.198	2.75562	1.500	5.302	PER IMP= 100.00
COMPUTE NM HYD	G	-	18	0.00107	3.63	0.157	2.75562	1.500	5.305	PER IMP= 100.00
ADD HYD	G1_G	17&18	19	0.00242	8.21	0.356	2.75538	1.500	5.303	
ADD HYD	DetPondInW	16&19	20	0.00945	28.76	1.201	2.38299	1.500	4.757	
ADD HYD	DetPondInSS	21&20	1	0.02084	56.44	2.191	1.97152	1.500	4.231	
COMPUTE NM HYD	XJ	-	2	0.00990	17.31	0.519	0.98210	1.500	2.732	PER IMP= 0.00
ADD HYD	DetPondIn	1& 2	3	0.03074	73.75	2.710	1.65286	1.500	3.748	
ROUTE RESERVOIR	DetPondOut	3	4	0.03074	1.85	2.428	1.48075	2.450	0.094	AC-FT= 2.238
COMPUTE NM HYD	A	-	5	0.00089	2.99	0.129	2.72715	1.500	5.286	PER IMP= 98.00
COMPUTE NM HYD	B	-	6	0.00082	2.78	0.120	2.72715	1.500	5.286	PER IMP= 98.00
FINISH										

AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a

RUN DATE (MON/DAY/YR) = 03/22/2019

START TIME (HR:MIN:SEC) = 11:34:21 USER NO.= MolzenCorSingleA36115542

INPUT FILE = C:\Users\Public\AHYMOdata\AHYMO input 3-22-19_MC_new.txt

*S Sunport Boulevard extension by Jonah Ruybalid JAN 10 2019

*

START TIME=0.0 HR PUNCH CODE=0

*S 100-YEAR, 24-HOUR STORM EVENT- ZONE 2

RAINFALL TYPE=2 QUARTER HR RAIN=0.00 ONE HR RAIN=2.01

SIX HR RAIN=2.35 DAILY RAIN=2.75 DT=0.05 HR

24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE AREAS (NM & AZ) - D1

DT = 0.050000 HOURS END TIME = 24.000002 HOURS

0.0000 0.0023 0.0046 0.0071 0.0099 0.0127 0.0159

0.0203 0.0272 0.0347 0.0424 0.0509 0.0595 0.0684

0.0776 0.0870 0.0974 0.1084 0.1204 0.1437 0.1728

0.2117 0.2559 0.3104 0.3831 0.4649 0.6062 0.8258

1.2021 1.4666 1.6752 1.7800 1.8719 1.9379 1.9905

2.0362 2.0697 2.1005 2.1259 2.1418 2.1530 2.1629

2.1722 2.1803 2.1879 2.1953 2.2025 2.2084 2.2118

2.2152 2.2186 2.2217 2.2247 2.2278 2.2307 2.2336

2.2363 2.2391 2.2417 2.2443 2.2469 2.2494 2.2518

2.2542 2.2565 2.2588 2.2611 2.2633 2.2654 2.2676

2.2697 2.2717 2.2738 2.2758 2.2778 2.2798 2.2817

2.2837 2.2856 2.2874 2.2893 2.2911 2.2930 2.2948

2.2965 2.2983 2.3000 2.3017 2.3034 2.3051 2.3068

2.3084 2.3100 2.3117 2.3133 2.3148 2.3164 2.3180

2.3195 2.3210 2.3225 2.3240 2.3255 2.3269 2.3284

2.3298 2.3313 2.3327 2.3341 2.3355 2.3368 2.3382

2.3396 2.3409 2.3422 2.3436 2.3449 2.3462 2.3474

2.3487 2.3500 2.3513 2.3525 2.3538 2.3551 2.3563

2.3576 2.3589 2.3601 2.3614 2.3627 2.3639 2.3652

2.3665 2.3677 2.3690 2.3702 2.3715 2.3728 2.3740

2.3753 2.3765 2.3778 2.3790 2.3803 2.3815 2.3828

2.3840 2.3853 2.3865 2.3878 2.3890 2.3903 2.3915

2.3927 2.3940 2.3952 2.3965 2.3977 2.3989 2.4002

2.4014 2.4027 2.4039 2.4051 2.4064 2.4076 2.4088

2.4101 2.4113 2.4125 2.4137 2.4150 2.4162 2.4174

2.4186 2.4199 2.4211 2.4223 2.4235 2.4247 2.4260

2.4272 2.4284 2.4296 2.4308 2.4320 2.4333 2.4345

2.4357 2.4369 2.4381 2.4393 2.4405 2.4417 2.4429

2.4441 2.4453 2.4465 2.4478 2.4490 2.4502 2.4514

2.4526 2.4538 2.4550 2.4561 2.4573 2.4585 2.4597

2.4609 2.4621 2.4633 2.4645 2.4657 2.4669 2.4681

2.4692 2.4704 2.4716 2.4728 2.4740 2.4752 2.4764

2.4775 2.4787 2.4799 2.4811 2.4822 2.4834 2.4846

2.4858 2.4869 2.4881 2.4893 2.4905 2.4916 2.4928

2.4940 2.4951 2.4963 2.4975 2.4986 2.4998 2.5010

2.5021 2.5033 2.5044 2.5056 2.5068 2.5079 2.5091

2.5102 2.5114 2.5125 2.5137 2.5148 2.5160 2.5171

2.5183 2.5194 2.5206 2.5217 2.5229 2.5240 2.5252

2.5263 2.5274 2.5286 2.5297 2.5309 2.5320 2.5331

2.5343 2.5354 2.5365 2.5377 2.5388 2.5399 2.5411

2.5422 2.5433 2.5445 2.5456 2.5467 2.5478 2.5490

2.5501 2.5512 2.5523 2.5535 2.5546 2.5557 2.5568

2.5579 2.5590 2.5602 2.5613 2.5624 2.5635 2.5646

2.5657 2.5668 2.5679 2.5691 2.5702 2.5713 2.5724

2.5735 2.5746 2.5757 2.5768 2.5779 2.5790 2.5801

2.5812 2.5823 2.5834 2.5845 2.5856 2.5867 2.5878

2.5889 2.5899 2.5910 2.5921 2.5932 2.5943 2.5954

2.5965 2.5976 2.5986 2.5997 2.6008 2.6019 2.6030

2.6040 2.6051 2.6062 2.6073 2.6084 2.6094 2.6105

2.6116 2.6126 2.6137 2.6148 2.6159 2.6169 2.6180

2.6191 2.6201 2.6212 2.6223 2.6233 2.6244 2.6254

2.6265 2.6276 2.6286 2.6297 2.6307 2.6318 2.6328

2.6339 2.6350 2.6360 2.6371 2.6381 2.6392 2.6402

2.6413 2.6423 2.6433 2.6444 2.6454 2.6465 2.6475

2.6486 2.6496 2.6506 2.6517 2.6527 2.6538 2.6548

2.6558 2.6569 2.6579 2.6589 2.6600 2.6610 2.6620

2.6630 2.6641 2.6651 2.6661 2.6672 2.6682 2.6692

2.6702 2.6712 2.6723 2.6733 2.6743 2.6753 2.6763

2.6774 2.6784 2.6794 2.6804 2.6814 2.6824 2.6834

2.6844 2.6854 2.6865 2.6875 2.6885 2.6895 2.6905

2.6915 2.6925 2.6935 2.6945 2.6955 2.6965 2.6975

2.6985 2.6995 2.7005 2.7015 2.7025 2.7034 2.7044

2.7054 2.7064 2.7074 2.7084 2.7094 2.7104 2.7114

2.7123 2.7133 2.7143 2.7153 2.7163 2.7172 2.7182

2.7192 2.7202 2.7211 2.7221 2.7231 2.7241 2.7250

2.7260 2.7270 2.7280 2.7289 2.7299 2.7309 2.7318

2.7328 2.7338 2.7347 2.7357 2.7366 2.7376 2.7386

```
          2.7395  2.7405  2.7414  2.7424  2.7433  2.7443  2.7452
          2.7462  2.7472  2.7481  2.7491  2.7500

* 10-YEAR, 24-HOUR STORM EVENT, - ZONE 2
*RAINFALL          TYPE=2  QUARTER HR RAIN=0.00  ONE HR RAIN=1.51
*                SIX HR RAIN=1.57  DAILY RAIN=1.83 DT=0.05 HR
*
********************************************************************************
SEDIMENT BULK       CODE = 1 BULK FACTOR = 1.10

********************************************************************************
*PROPOSED SITE CONDITIONS
*
COMPUTE NM HYD      ID=1  HYD=XF  DA=0.003794
             A B C D 70 0 20  10
             TP=0.13330   MASS RAIN=-1

   K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
   UNIT PEAK =   1.4979    CFS   UNIT VOLUME =   0.9928       B =   526.28      P60 = 2.0100
   AREA =     0.000379 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.050000

   K =  0.148441HR    TP =  0.133300HR    K/TP RATIO =  1.113589     SHAPE CONSTANT, N =  3.175733
   UNIT PEAK =   7.5786    CFS   UNIT VOLUME =   0.9980       B =   295.86      P60 = 2.0100
   AREA =     0.003415 SQ MI    IA =   0.58333 INCHES    INF =   1.48333 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.050000

  BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.10000 AT PEAK FLOW.

PRINT HYD           ID=1  CODE=1

                          HYDROGRAPH FROM AREA XF

   RUNOFF VOLUME =     1.09881 INCHES     =       0.2223 ACRE-FEET
   PEAK DISCHARGE RATE =       6.80 CFS  AT    1.500 HOURS   BASIN AREA =  0.0038 SQ. MI.
*
COMPUTE NM HYD      ID=2  HYD=XE1  DA=0.0017114
             A B C D  0  0  85  15
             TP=0.13330   MASS RAIN=-1

   K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
```

UNIT PEAK = 1.0135 CFS UNIT VOLUME = 0.9891 B = 526.28 P60 = 2.0100

AREA = 0.000257 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 4.1855 CFS UNIT VOLUME = 0.9991 B = 383.54 P60 = 2.0100

AREA = 0.001455 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

HYDROGRAPH FROM AREA XE1

RUNOFF VOLUME = 1.54545 INCHES = 0.1411 ACRE-FEET

PEAK DISCHARGE RATE = 4.38 CFS AT 1.500 HOURS BASIN AREA = 0.0017 SQ. MI.

*

*Add basins XF and XE1 basin-routing

ADD HYD ID=3 HYD=XF_XE1 ID=1 ID=2

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA XF_XE1

RUNOFF VOLUME = 1.23756 INCHES = 0.3634 ACRE-FEET

PEAK DISCHARGE RATE = 11.18 CFS AT 1.500 HOURS BASIN AREA = 0.0055 SQ. MI.

*

COMPUTE NM HYD ID=4 HYD=XE2 DA=0.0039

A B C D 86 0 14 0

TP=0.13330 MASS RAIN=-1

K = 0.152775HR TP = 0.133300HR K/TP RATIO = 1.146101 SHAPE CONSTANT, N = 3.090229

UNIT PEAK = 8.4584 CFS UNIT VOLUME = 0.9978 B = 289.10 P60 = 2.0100

AREA = 0.003900 SQ MI IA = 0.60800 INCHES INF = 1.55240 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA XE2

RUNOFF VOLUME = 0.87870 INCHES = 0.1828 ACRE-FEET

PEAK DISCHARGE RATE = 6.04 CFS AT 1.550 HOURS BASIN AREA = 0.0039 SQ. MI.

*

*Add basins XF XE1 XE2 basin-routing

ADD HYD ID=5 HYD=WQPondInE(XE2_XF_XE1) ID=3 ID=4

PRINT HYD ID=5 CODE=1

HYDROGRAPH FROM AREA WQPondInE(XE2_XF_XE1)

RUNOFF VOLUME = 1.08875 INCHES = 0.5461 ACRE-FEET

PEAK DISCHARGE RATE = 17.19 CFS AT 1.500 HOURS BASIN AREA = 0.0094 SQ. MI.

*

COMPUTE NM HYD ID=6 HYD=H3 DA=0.000283628

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 1.1198 CFS UNIT VOLUME = 0.9891 B = 526.28 P60 = 2.0100

AREA = 0.000284 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=6 CODE=1

HYDROGRAPH FROM AREA H3

RUNOFF VOLUME = 2.75562 INCHES = 0.0417 ACRE-FEET

PEAK DISCHARGE RATE = 0.97 CFS AT 1.500 HOURS BASIN AREA = 0.0003 SQ. MI.

*

COMPUTE NM HYD ID=7 HYD=H4 DA=0.0012214

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 4.8222 CFS UNIT VOLUME = 0.9971 B = 526.28 P60 = 2.0100

AREA = 0.001221 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=7 CODE=1

HYDROGRAPH FROM AREA H4

RUNOFF VOLUME = 2.75562 INCHES = 0.1795 ACRE-FEET

PEAK DISCHARGE RATE = 4.14 CFS AT 1.500 HOURS BASIN AREA = 0.0012 SQ. MI.

*

*Add basins H3 and H4 basin-routing

ADD HYD ID=8 HYD=H3_H4 ID=6 ID=7

PRINT HYD ID=8 CODE=1

HYDROGRAPH FROM AREA H3_H4

RUNOFF VOLUME = 2.75528 INCHES = 0.2212 ACRE-FEET

PEAK DISCHARGE RATE = 5.11 CFS AT 1.500 HOURS BASIN AREA = 0.0015 SQ. MI.

*

COMPUTE NM HYD ID=9 HYD=I3 DA=0.0013089

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 5.1676 CFS UNIT VOLUME = 0.9971 B = 526.28 P60 = 2.0100

AREA = 0.001309 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=9 CODE=1

HYDROGRAPH FROM AREA I3

RUNOFF VOLUME = 2.75562 INCHES = 0.1924 ACRE-FEET

PEAK DISCHARGE RATE = 4.44 CFS AT 1.500 HOURS BASIN AREA = 0.0013 SQ. MI.

*

*Add basins I3 H3 H4 basin-routing

ADD HYD ID=10 HYD=I3_H3_H4 ID=8 ID=9

PRINT HYD ID=10 CODE=1

HYDROGRAPH FROM AREA I3_H3_H4

RUNOFF VOLUME = 2.75534 INCHES = 0.4135 ACRE-FEET

PEAK DISCHARGE RATE = 9.56 CFS AT 1.500 HOURS BASIN AREA = 0.0028 SQ. MI.

*

COMPUTE NM HYD ID=11 HYD=I4 DA=0.000589138

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 2.3259 CFS UNIT VOLUME = 0.9941 B = 526.28 P60 = 2.0100

AREA = 0.000589 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA I4

RUNOFF VOLUME = 2.75562 INCHES = 0.0866 ACRE-FEET

PEAK DISCHARGE RATE = 2.01 CFS AT 1.500 HOURS BASIN AREA = 0.0006 SQ. MI.

*

*Add basins I4 I3 H3 H4 basin-routing

ADD HYD ID=12 HYD=WQPondInS(I4_I3_H3_H4) ID=10 ID=11

PRINT HYD ID=12 CODE=1

HYDROGRAPH FROM AREA WQPondInS(I4_I3_H3_H4

RUNOFF VOLUME = 2.75529 INCHES = 0.5001 ACRE-FEET

PEAK DISCHARGE RATE = 11.56 CFS AT 1.500 HOURS BASIN AREA = 0.0034 SQ. MI.

*

*Add basins I4 I3 H3 H4 XE2 XF XE1 basin-routing WQPondIn

ADD HYD ID=13 HYD=I4_I3_H3_H4_XE2_XF_XE1 ID=5 ID=12

PRINT HYD ID=13 CODE=1

HYDROGRAPH FROM AREA I4_I3_H3_H4_XE2_XF_XE

RUNOFF VOLUME = 1.09162 INCHES = 0.7685 ACRE-FEET

PEAK DISCHARGE RATE = 24.00 CFS AT 1.500 HOURS BASIN AREA = 0.0132 SQ. MI.

*

* Water Quality Pond outflows over weir to south diversion channel

ROUTE RESERVOIR ID=14 HYD=WQPondOut INFLOW ID=13 CODE=5

OUTFLOW(cfs)	STORAGE(ac ft)	ELEV(ft)
0.000	0.0	5000.4
0.010	0.0326	5001.0
0.010	0.1000	5002.0
0.050	0.1864	5003.0
3.860	0.2938	5004.0
70.300	0.5001	5005.0
239.300	0.7298	5006.0
524.600	0.9797	5007.0
1000.000	10.0000	5008.0

* * * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	5000.40	0.000	0.00
0.25	0.00	5000.40	0.000	0.00
0.50	0.00	5000.40	0.000	0.00
0.75	0.00	5000.40	0.000	0.00
1.00	0.15	5000.41	0.001	0.00
1.25	0.81	5000.57	0.009	0.00
1.50	24.00	5003.18	0.206	0.73
1.75	8.54	5004.11	0.316	11.00
2.00	2.48	5003.95	0.288	3.65
2.25	1.25	5003.68	0.259	2.64
2.50	0.66	5003.44	0.234	1.73

2.75	0.36	5003.27	0.215	1.08
3.00	0.20	5003.16	0.203	0.66
3.25	0.11	5003.09	0.196	0.39
3.50	0.07	5003.05	0.192	0.23
3.75	0.04	5003.02	0.189	0.14
4.00	0.01	5003.01	0.187	0.08
4.25	0.01	5003.00	0.186	0.05
4.50	0.01	5002.99	0.185	0.05
4.75	0.01	5002.98	0.184	0.05
5.00	0.01	5002.97	0.184	0.05
5.25	0.01	5002.96	0.183	0.05
5.50	0.01	5002.95	0.182	0.05
5.75	0.02	5002.94	0.182	0.05
6.00	0.02	5002.94	0.181	0.05
6.25	0.02	5002.93	0.180	0.05
6.50	0.02	5002.92	0.180	0.05
6.75	0.02	5002.92	0.179	0.05
7.00	0.02	5002.91	0.179	0.05
7.25	0.02	5002.90	0.178	0.05
7.50	0.02	5002.90	0.177	0.05
7.75	0.02	5002.89	0.177	0.05
8.00	0.02	5002.88	0.176	0.05
8.25	0.02	5002.88	0.176	0.05
8.50	0.02	5002.87	0.175	0.04
8.75	0.02	5002.86	0.175	0.04
9.00	0.02	5002.86	0.174	0.04
9.25	0.02	5002.85	0.173	0.04
9.50	0.02	5002.84	0.173	0.04
9.75	0.02	5002.84	0.172	0.04
10.00	0.02	5002.83	0.172	0.04
10.25	0.02	5002.83	0.171	0.04
10.50	0.02	5002.82	0.171	0.04
10.75	0.02	5002.81	0.170	0.04
11.00	0.02	5002.81	0.170	0.04
11.25	0.02	5002.80	0.169	0.04
11.50	0.02	5002.79	0.169	0.04
11.75	0.02	5002.79	0.168	0.04
12.00	0.02	5002.78	0.168	0.04
12.25	0.02	5002.78	0.167	0.04
12.50	0.02	5002.77	0.167	0.04
12.75	0.02	5002.77	0.166	0.04

13.00	0.02	5002.76	0.166	0.04
13.25	0.02	5002.75	0.165	0.04
13.50	0.02	5002.75	0.165	0.04
13.75	0.02	5002.74	0.164	0.04

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	0.02	5002.74	0.164	0.04
14.25	0.02	5002.73	0.163	0.04
14.50	0.02	5002.73	0.163	0.04
14.75	0.02	5002.72	0.162	0.04
15.00	0.02	5002.72	0.162	0.04
15.25	0.02	5002.71	0.161	0.04
15.50	0.02	5002.71	0.161	0.04
15.75	0.02	5002.70	0.160	0.04
16.00	0.02	5002.69	0.160	0.04
16.25	0.02	5002.69	0.160	0.04
16.50	0.02	5002.68	0.159	0.04
16.75	0.02	5002.68	0.159	0.04
17.00	0.02	5002.67	0.158	0.04
17.25	0.02	5002.67	0.158	0.04
17.50	0.02	5002.66	0.157	0.04
17.75	0.02	5002.66	0.157	0.04
18.00	0.02	5002.65	0.156	0.04
18.25	0.02	5002.65	0.156	0.04
18.50	0.02	5002.64	0.156	0.04
18.75	0.01	5002.64	0.155	0.04
19.00	0.02	5002.63	0.155	0.04
19.25	0.02	5002.63	0.154	0.04
19.50	0.01	5002.62	0.154	0.03
19.75	0.01	5002.62	0.154	0.03
20.00	0.01	5002.61	0.153	0.03
20.25	0.01	5002.61	0.153	0.03
20.50	0.01	5002.60	0.152	0.03
20.75	0.01	5002.60	0.152	0.03
21.00	0.01	5002.60	0.151	0.03
21.25	0.01	5002.59	0.151	0.03
21.50	0.01	5002.59	0.151	0.03
21.75	0.01	5002.58	0.150	0.03
22.00	0.01	5002.58	0.150	0.03

22.25	0.01	5002.57	0.150	0.03
22.50	0.01	5002.57	0.149	0.03
22.75	0.01	5002.56	0.149	0.03
23.00	0.01	5002.56	0.148	0.03
23.25	0.01	5002.56	0.148	0.03
23.50	0.01	5002.55	0.148	0.03
23.75	0.01	5002.55	0.147	0.03
24.00	0.01	5002.54	0.147	0.03
24.25	0.00	5002.54	0.146	0.03
24.50	0.00	5002.53	0.146	0.03
24.75	0.00	5002.52	0.145	0.03
25.00	0.00	5002.51	0.144	0.03
25.25	0.00	5002.51	0.144	0.03
25.50	0.00	5002.50	0.143	0.03
25.75	0.00	5002.49	0.143	0.03
26.00	0.00	5002.49	0.142	0.03
26.25	0.00	5002.48	0.141	0.03
26.50	0.00	5002.47	0.141	0.03
26.75	0.00	5002.46	0.140	0.03
27.00	0.00	5002.46	0.140	0.03
27.25	0.00	5002.45	0.139	0.03
27.50	0.00	5002.44	0.138	0.03
27.75	0.00	5002.44	0.138	0.03

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	0.00	5002.43	0.137	0.03
28.25	0.00	5002.42	0.137	0.03
28.50	0.00	5002.42	0.136	0.03
28.75	0.00	5002.41	0.136	0.03
29.00	0.00	5002.41	0.135	0.03
29.25	0.00	5002.40	0.135	0.03
29.50	0.00	5002.39	0.134	0.03
29.75	0.00	5002.39	0.133	0.03
30.00	0.00	5002.38	0.133	0.03
30.25	0.00	5002.38	0.132	0.03
30.50	0.00	5002.37	0.132	0.02
30.75	0.00	5002.36	0.131	0.02
31.00	0.00	5002.36	0.131	0.02
31.25	0.00	5002.35	0.130	0.02

31.50	0.00	5002.35	0.130	0.02
31.75	0.00	5002.34	0.129	0.02
32.00	0.00	5002.33	0.129	0.02
32.25	0.00	5002.33	0.128	0.02
32.50	0.00	5002.32	0.128	0.02
32.75	0.00	5002.32	0.127	0.02
33.00	0.00	5002.31	0.127	0.02
33.25	0.00	5002.31	0.127	0.02
33.50	0.00	5002.30	0.126	0.02
33.75	0.00	5002.30	0.126	0.02
34.00	0.00	5002.29	0.125	0.02
34.25	0.00	5002.29	0.125	0.02
34.50	0.00	5002.28	0.124	0.02
34.75	0.00	5002.28	0.124	0.02
35.00	0.00	5002.27	0.123	0.02
35.25	0.00	5002.27	0.123	0.02
35.50	0.00	5002.26	0.123	0.02
35.75	0.00	5002.26	0.122	0.02
36.00	0.00	5002.25	0.122	0.02
36.25	0.00	5002.25	0.121	0.02
36.50	0.00	5002.24	0.121	0.02
36.75	0.00	5002.24	0.121	0.02
37.00	0.00	5002.23	0.120	0.02
37.25	0.00	5002.23	0.120	0.02
37.50	0.00	5002.22	0.119	0.02
37.75	0.00	5002.22	0.119	0.02
38.00	0.00	5002.21	0.119	0.02
38.25	0.00	5002.21	0.118	0.02
38.50	0.00	5002.21	0.118	0.02
38.75	0.00	5002.20	0.117	0.02
39.00	0.00	5002.20	0.117	0.02
39.25	0.00	5002.19	0.117	0.02
39.50	0.00	5002.19	0.116	0.02
39.75	0.00	5002.18	0.116	0.02
40.00	0.00	5002.18	0.116	0.02
40.25	0.00	5002.18	0.115	0.02
40.50	0.00	5002.17	0.115	0.02
40.75	0.00	5002.17	0.115	0.02
41.00	0.00	5002.16	0.114	0.02
41.25	0.00	5002.16	0.114	0.02
41.50	0.00	5002.16	0.114	0.02

41.75	0.00	5002.15	0.113	0.02

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
42.00	0.00	5002.15	0.113	0.02
42.25	0.00	5002.15	0.113	0.02
42.50	0.00	5002.14	0.112	0.02
42.75	0.00	5002.14	0.112	0.02
43.00	0.00	5002.13	0.112	0.02
43.25	0.00	5002.13	0.111	0.02
43.50	0.00	5002.13	0.111	0.02
43.75	0.00	5002.12	0.111	0.01
44.00	0.00	5002.12	0.110	0.01
44.25	0.00	5002.12	0.110	0.01
44.50	0.00	5002.11	0.110	0.01
44.75	0.00	5002.11	0.109	0.01
45.00	0.00	5002.11	0.109	0.01
45.25	0.00	5002.10	0.109	0.01
45.50	0.00	5002.10	0.109	0.01
45.75	0.00	5002.10	0.108	0.01
46.00	0.00	5002.09	0.108	0.01
46.25	0.00	5002.09	0.108	0.01
46.50	0.00	5002.09	0.107	0.01
46.75	0.00	5002.08	0.107	0.01
47.00	0.00	5002.08	0.107	0.01
47.25	0.00	5002.08	0.107	0.01
47.50	0.00	5002.07	0.106	0.01
47.75	0.00	5002.07	0.106	0.01
48.00	0.00	5002.07	0.106	0.01
48.25	0.00	5002.06	0.106	0.01
48.50	0.00	5002.06	0.105	0.01
48.75	0.00	5002.06	0.105	0.01
49.00	0.00	5002.06	0.105	0.01
49.25	0.00	5002.05	0.105	0.01
49.50	0.00	5002.05	0.104	0.01
49.75	0.00	5002.05	0.104	0.01
50.00	0.00	5002.04	0.104	0.01
50.25	0.00	5002.04	0.104	0.01
50.50	0.00	5002.04	0.103	0.01
50.75	0.00	5002.04	0.103	0.01

51.00	0.00	5002.03	0.103	0.01
51.25	0.00	5002.03	0.103	0.01
51.50	0.00	5002.03	0.102	0.01
51.75	0.00	5002.02	0.102	0.01
52.00	0.00	5002.02	0.102	0.01
52.25	0.00	5002.02	0.102	0.01
52.50	0.00	5002.02	0.101	0.01
52.75	0.00	5002.01	0.101	0.01
53.00	0.00	5002.01	0.101	0.01
53.25	0.00	5002.01	0.101	0.01
53.50	0.00	5002.01	0.101	0.01
53.75	0.00	5002.00	0.100	0.01
54.00	0.00	5002.00	0.100	0.01
54.25	0.00	5002.00	0.100	0.01
54.50	0.00	5002.00	0.100	0.01
54.75	0.00	5002.00	0.100	0.01
55.00	0.00	5002.00	0.100	0.01
55.25	0.00	5002.00	0.100	0.01
55.50	0.00	5002.00	0.100	0.01
55.75	0.00	5002.00	0.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
56.00	0.00	5002.00	0.100	0.01
56.25	0.00	5002.00	0.100	0.01
56.50	0.00	5002.00	0.100	0.01
56.75	0.00	5002.00	0.100	0.01
57.00	0.00	5002.00	0.100	0.01
57.25	0.00	5002.00	0.100	0.01
57.50	0.00	5002.00	0.100	0.01
57.75	0.00	5002.00	0.100	0.01
58.00	0.00	5002.00	0.100	0.01
58.25	0.00	5002.00	0.100	0.01
58.50	0.00	5002.00	0.100	0.01
58.75	0.00	5002.00	0.100	0.01
59.00	0.00	5002.00	0.100	0.01
59.25	0.00	5002.00	0.100	0.01
59.50	0.00	5002.00	0.100	0.01
59.75	0.00	5002.00	0.100	0.01
60.00	0.00	5002.00	0.100	0.01

60.25	0.00	5002.00	0.100	0.01
60.50	0.00	5002.00	0.100	0.01
60.75	0.00	5002.00	0.100	0.01
61.00	0.00	5002.00	0.100	0.01
61.25	0.00	5002.00	0.100	0.01
61.50	0.00	5002.00	0.100	0.01
61.75	0.00	5002.00	0.100	0.01
62.00	0.00	5002.00	0.100	0.01
62.25	0.00	5002.00	0.100	0.01
62.50	0.00	5002.00	0.100	0.01
62.75	0.00	5002.00	0.100	0.01
63.00	0.00	5002.00	0.100	0.01
63.25	0.00	5002.00	0.100	0.01
63.50	0.00	5002.00	0.100	0.01
63.75	0.00	5002.00	0.100	0.01
64.00	0.00	5002.00	0.100	0.01
64.25	0.00	5002.00	0.100	0.01
64.50	0.00	5002.00	0.100	0.01
64.75	0.00	5002.00	0.100	0.01
65.00	0.00	5002.00	0.100	0.01
65.25	0.00	5002.00	0.100	0.01
65.50	0.00	5002.00	0.100	0.01
65.75	0.00	5002.00	0.100	0.01
66.00	0.00	5002.00	0.100	0.01
66.25	0.00	5002.00	0.100	0.01
66.50	0.00	5002.00	0.100	0.01
66.75	0.00	5002.00	0.100	0.01
67.00	0.00	5002.00	0.100	0.01
67.25	0.00	5002.00	0.100	0.01
67.50	0.00	5002.00	0.100	0.01
67.75	0.00	5002.00	0.100	0.01
68.00	0.00	5002.00	0.100	0.01
68.25	0.00	5002.00	0.100	0.01
68.50	0.00	5002.00	0.100	0.01
68.75	0.00	5002.00	0.100	0.01
69.00	0.00	5002.00	0.100	0.01
69.25	0.00	5002.00	0.100	0.01
69.50	0.00	5002.00	0.100	0.01
69.75	0.00	5002.00	0.100	0.01

TIME	INFLOW	ELEV	VOLUME	OUTFLOW

(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)
70.00	0.00	5002.00	0.100	0.01
70.25	0.00	5002.00	0.100	0.01
70.50	0.00	5002.00	0.100	0.01
70.75	0.00	5002.00	0.100	0.01
71.00	0.00	5002.00	0.100	0.01
71.25	0.00	5002.00	0.100	0.01
71.50	0.00	5002.00	0.100	0.01
71.75	0.00	5002.00	0.100	0.01
72.00	0.00	5002.00	0.100	0.01
72.25	0.00	5002.00	0.100	0.01
72.50	0.00	5002.00	0.100	0.01
72.75	0.00	5002.00	0.100	0.01
73.00	0.00	5002.00	0.100	0.01
73.25	0.00	5002.00	0.100	0.01
73.50	0.00	5002.00	0.100	0.01
73.75	0.00	5002.00	0.100	0.01
74.00	0.00	5002.00	0.100	0.01
74.25	0.00	5002.00	0.100	0.01
74.50	0.00	5002.00	0.100	0.01
74.75	0.00	5002.00	0.100	0.01
75.00	0.00	5002.00	0.100	0.01
75.25	0.00	5002.00	0.100	0.01
75.50	0.00	5002.00	0.100	0.01
75.75	0.00	5002.00	0.100	0.01
76.00	0.00	5002.00	0.100	0.01
76.25	0.00	5002.00	0.100	0.01
76.50	0.00	5002.00	0.100	0.01
76.75	0.00	5002.00	0.100	0.01
77.00	0.00	5002.00	0.100	0.01
77.25	0.00	5002.00	0.100	0.01
77.50	0.00	5002.00	0.100	0.01
77.75	0.00	5002.00	0.100	0.01
78.00	0.00	5002.00	0.100	0.01
78.25	0.00	5002.00	0.100	0.01
78.50	0.00	5002.00	0.100	0.01
78.75	0.00	5002.00	0.100	0.01
79.00	0.00	5002.00	0.100	0.01
79.25	0.00	5002.00	0.100	0.01
79.50	0.00	5002.00	0.100	0.01

79.75	0.00	5002.00	0.100	0.01
80.00	0.00	5002.00	0.100	0.01
80.25	0.00	5002.00	0.100	0.01
80.50	0.00	5002.00	0.100	0.01
80.75	0.00	5002.00	0.100	0.01
81.00	0.00	5002.00	0.100	0.01
81.25	0.00	5002.00	0.100	0.01
81.50	0.00	5002.00	0.100	0.01
81.75	0.00	5002.00	0.100	0.01
82.00	0.00	5002.00	0.100	0.01
82.25	0.00	5002.00	0.100	0.01
82.50	0.00	5002.00	0.100	0.01
82.75	0.00	5002.00	0.100	0.01
83.00	0.00	5002.00	0.100	0.01
83.25	0.00	5002.00	0.100	0.01
83.50	0.00	5002.00	0.100	0.01
83.75	0.00	5002.00	0.100	0.01

TIME	INFLOW	ELEV	VOLUME	OUTFLOW
(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)
84.00	0.00	5002.00	0.100	0.01
84.25	0.00	5002.00	0.100	0.01
84.50	0.00	5002.00	0.100	0.01
84.75	0.00	5002.00	0.100	0.01
85.00	0.00	5002.00	0.100	0.01
85.25	0.00	5002.00	0.100	0.01
85.50	0.00	5002.00	0.100	0.01
85.75	0.00	5002.00	0.100	0.01
86.00	0.00	5002.00	0.100	0.01
86.25	0.00	5002.00	0.100	0.01
86.50	0.00	5002.00	0.100	0.01
86.75	0.00	5002.00	0.100	0.01
87.00	0.00	5002.00	0.100	0.01
87.25	0.00	5002.00	0.100	0.01
87.50	0.00	5002.00	0.100	0.01
87.75	0.00	5002.00	0.100	0.01
88.00	0.00	5002.00	0.100	0.01
88.25	0.00	5002.00	0.100	0.01
88.50	0.00	5002.00	0.100	0.01
88.75	0.00	5002.00	0.100	0.01

89.00	0.00	5002.00	0.100	0.01
89.25	0.00	5002.00	0.100	0.01
89.50	0.00	5002.00	0.100	0.01
89.75	0.00	5002.00	0.100	0.01
90.00	0.00	5002.00	0.100	0.01
90.25	0.00	5002.00	0.100	0.01
90.50	0.00	5002.00	0.100	0.01
90.75	0.00	5002.00	0.100	0.01
91.00	0.00	5002.00	0.100	0.01
91.25	0.00	5002.00	0.100	0.01
91.50	0.00	5002.00	0.100	0.01
91.75	0.00	5002.00	0.100	0.01
92.00	0.00	5002.00	0.100	0.01
92.25	0.00	5002.00	0.100	0.01
92.50	0.00	5002.00	0.100	0.01
92.75	0.00	5002.00	0.100	0.01
93.00	0.00	5002.00	0.100	0.01
93.25	0.00	5002.00	0.100	0.01
93.50	0.00	5002.00	0.100	0.01
93.75	0.00	5002.00	0.100	0.01
94.00	0.00	5002.00	0.100	0.01
94.25	0.00	5002.00	0.100	0.01
94.50	0.00	5002.00	0.100	0.01
94.75	0.00	5002.00	0.100	0.01
95.00	0.00	5002.00	0.100	0.01
95.25	0.00	5002.00	0.100	0.01
95.50	0.00	5002.00	0.100	0.01
95.75	0.00	5002.00	0.100	0.01
96.00	0.00	5002.00	0.100	0.01
96.25	0.00	5002.00	0.100	0.01
96.50	0.00	5002.00	0.100	0.01
96.75	0.00	5002.00	0.100	0.01
97.00	0.00	5002.00	0.100	0.01
97.25	0.00	5002.00	0.100	0.01
97.50	0.00	5002.00	0.100	0.01
97.75	0.00	5002.00	0.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
98.00	0.00	5002.00	0.100	0.01

98.25	0.00	5002.00	0.100	0.01
98.50	0.00	5002.00	0.100	0.01
98.75	0.00	5002.00	0.100	0.01
99.00	0.00	5002.00	0.100	0.01
99.25	0.00	5002.00	0.100	0.01
99.50	0.00	5002.00	0.100	0.01
99.75	0.00	5002.00	0.100	0.01
100.00	0.00	5002.00	0.100	0.01
100.25	0.00	5002.00	0.100	0.01
100.50	0.00	5002.00	0.100	0.01
100.75	0.00	5002.00	0.100	0.01
101.00	0.00	5002.00	0.100	0.01
101.25	0.00	5002.00	0.100	0.01
101.50	0.00	5002.00	0.100	0.01
101.75	0.00	5002.00	0.100	0.01
102.00	0.00	5002.00	0.100	0.01
102.25	0.00	5002.00	0.100	0.01
102.50	0.00	5002.00	0.100	0.01
102.75	0.00	5002.00	0.100	0.01
103.00	0.00	5002.00	0.100	0.01
103.25	0.00	5002.00	0.100	0.01
103.50	0.00	5002.00	0.100	0.01
103.75	0.00	5002.00	0.100	0.01
104.00	0.00	5002.00	0.100	0.01
104.25	0.00	5002.00	0.100	0.01
104.50	0.00	5002.00	0.100	0.01
104.75	0.00	5002.00	0.100	0.01
105.00	0.00	5002.00	0.100	0.01
105.25	0.00	5002.00	0.100	0.01
105.50	0.00	5002.00	0.100	0.01
105.75	0.00	5002.00	0.100	0.01
106.00	0.00	5002.00	0.100	0.01
106.25	0.00	5002.00	0.100	0.01
106.50	0.00	5002.00	0.100	0.01
106.75	0.00	5002.00	0.100	0.01
107.00	0.00	5002.00	0.100	0.01
107.25	0.00	5002.00	0.100	0.01
107.50	0.00	5002.00	0.100	0.01
107.75	0.00	5002.00	0.100	0.01
108.00	0.00	5002.00	0.100	0.01
108.25	0.00	5002.00	0.100	0.01

108.50	0.00	5002.00	0.100	0.01
108.75	0.00	5002.00	0.100	0.01
109.00	0.00	5002.00	0.100	0.01
109.25	0.00	5002.00	0.100	0.01
109.50	0.00	5002.00	0.100	0.01
109.75	0.00	5002.00	0.100	0.01
110.00	0.00	5002.00	0.100	0.01
110.25	0.00	5002.00	0.100	0.01
110.50	0.00	5002.00	0.100	0.01
110.75	0.00	5002.00	0.100	0.01
111.00	0.00	5002.00	0.100	0.01
111.25	0.00	5002.00	0.100	0.01
111.50	0.00	5002.00	0.100	0.01
111.75	0.00	5002.00	0.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
112.00	0.00	5002.00	0.100	0.01
112.25	0.00	5002.00	0.100	0.01
112.50	0.00	5002.00	0.100	0.01
112.75	0.00	5002.00	0.100	0.01
113.00	0.00	5002.00	0.100	0.01
113.25	0.00	5002.00	0.100	0.01
113.50	0.00	5002.00	0.100	0.01
113.75	0.00	5002.00	0.100	0.01
114.00	0.00	5002.00	0.100	0.01
114.25	0.00	5002.00	0.100	0.01
114.50	0.00	5002.00	0.100	0.01
114.75	0.00	5002.00	0.100	0.01
115.00	0.00	5002.00	0.100	0.01
115.25	0.00	5002.00	0.100	0.01
115.50	0.00	5002.00	0.100	0.01
115.75	0.00	5002.00	0.100	0.01
116.00	0.00	5002.00	0.100	0.01
116.25	0.00	5002.00	0.100	0.01
116.50	0.00	5002.00	0.100	0.01
116.75	0.00	5002.00	0.100	0.01
117.00	0.00	5002.00	0.100	0.01
117.25	0.00	5002.00	0.100	0.01
117.50	0.00	5002.00	0.100	0.01

117.75	0.00	5002.00	0.100	0.01
118.00	0.00	5002.00	0.100	0.01
118.25	0.00	5002.00	0.100	0.01
118.50	0.00	5002.00	0.100	0.01
118.75	0.00	5002.00	0.100	0.01
119.00	0.00	5002.00	0.100	0.01
119.25	0.00	5002.00	0.100	0.01
119.50	0.00	5002.00	0.100	0.01
119.75	0.00	5002.00	0.100	0.01
120.00	0.00	5002.00	0.100	0.01
120.25	0.00	5002.00	0.100	0.01
120.50	0.00	5002.00	0.100	0.01
120.75	0.00	5002.00	0.100	0.01
121.00	0.00	5002.00	0.100	0.01
121.25	0.00	5002.00	0.100	0.01
121.50	0.00	5002.00	0.100	0.01
121.75	0.00	5002.00	0.100	0.01
122.00	0.00	5002.00	0.100	0.01
122.25	0.00	5002.00	0.100	0.01
122.50	0.00	5002.00	0.100	0.01
122.75	0.00	5002.00	0.100	0.01
123.00	0.00	5002.00	0.100	0.01
123.25	0.00	5002.00	0.100	0.01
123.50	0.00	5002.00	0.100	0.01
123.75	0.00	5002.00	0.100	0.01
124.00	0.00	5002.00	0.100	0.01
124.25	0.00	5002.00	0.100	0.01
124.50	0.00	5002.00	0.100	0.01
124.75	0.00	5002.00	0.100	0.01
125.00	0.00	5002.00	0.100	0.01
125.25	0.00	5002.00	0.100	0.01
125.50	0.00	5002.00	0.100	0.01
125.75	0.00	5002.00	0.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
126.00	0.00	5002.00	0.100	0.01
126.25	0.00	5002.00	0.100	0.01
126.50	0.00	5002.00	0.100	0.01
126.75	0.00	5002.00	0.100	0.01

127.00	0.00	5002.00	0.100	0.01
127.25	0.00	5002.00	0.100	0.01
127.50	0.00	5002.00	0.100	0.01
127.75	0.00	5002.00	0.100	0.01
128.00	0.00	5002.00	0.100	0.01
128.25	0.00	5002.00	0.100	0.01
128.50	0.00	5002.00	0.100	0.01
128.75	0.00	5002.00	0.100	0.01
129.00	0.00	5002.00	0.100	0.01
129.25	0.00	5002.00	0.100	0.01
129.50	0.00	5002.00	0.100	0.01
129.75	0.00	5002.00	0.100	0.01
130.00	0.00	5002.00	0.100	0.01
130.25	0.00	5002.00	0.100	0.01
130.50	0.00	5002.00	0.100	0.01
130.75	0.00	5002.00	0.100	0.01
131.00	0.00	5002.00	0.100	0.01
131.25	0.00	5002.00	0.100	0.01
131.50	0.00	5002.00	0.100	0.01
131.75	0.00	5002.00	0.100	0.01
132.00	0.00	5002.00	0.100	0.01
132.25	0.00	5002.00	0.100	0.01
132.50	0.00	5002.00	0.100	0.01
132.75	0.00	5002.00	0.100	0.01
133.00	0.00	5002.00	0.100	0.01
133.25	0.00	5002.00	0.100	0.01
133.50	0.00	5002.00	0.100	0.01
133.75	0.00	5002.00	0.100	0.01
134.00	0.00	5002.00	0.100	0.01
134.25	0.00	5002.00	0.100	0.01
134.50	0.00	5002.00	0.100	0.01
134.75	0.00	5002.00	0.100	0.01
135.00	0.00	5002.00	0.100	0.01
135.25	0.00	5002.00	0.100	0.01
135.50	0.00	5002.00	0.100	0.01
135.75	0.00	5002.00	0.100	0.01
136.00	0.00	5001.00	0.032	0.01
136.25	0.00	5000.99	0.032	0.01
136.50	0.00	5000.99	0.032	0.01
136.75	0.00	5000.99	0.032	0.01
137.00	0.00	5000.98	0.032	0.01

137.25	0.00	5000.98	0.031	0.01
137.50	0.00	5000.97	0.031	0.01
137.75	0.00	5000.97	0.031	0.01
138.00	0.00	5000.97	0.031	0.01
138.25	0.00	5000.96	0.031	0.01
138.50	0.00	5000.96	0.030	0.01
138.75	0.00	5000.96	0.030	0.01
139.00	0.00	5000.95	0.030	0.01
139.25	0.00	5000.95	0.030	0.01
139.50	0.00	5000.95	0.030	0.01
139.75	0.00	5000.94	0.029	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
140.00	0.00	5000.94	0.029	0.01
140.25	0.00	5000.94	0.029	0.01
140.50	0.00	5000.93	0.029	0.01
140.75	0.00	5000.93	0.029	0.01
141.00	0.00	5000.93	0.029	0.01
141.25	0.00	5000.92	0.028	0.01
141.50	0.00	5000.92	0.028	0.01
141.75	0.00	5000.92	0.028	0.01
142.00	0.00	5000.91	0.028	0.01
142.25	0.00	5000.91	0.028	0.01
142.50	0.00	5000.91	0.027	0.01
142.75	0.00	5000.90	0.027	0.01
143.00	0.00	5000.90	0.027	0.01
143.25	0.00	5000.90	0.027	0.01
143.50	0.00	5000.89	0.027	0.01
143.75	0.00	5000.89	0.027	0.01
144.00	0.00	5000.89	0.026	0.01
144.25	0.00	5000.88	0.026	0.01
144.50	0.00	5000.88	0.026	0.01
144.75	0.00	5000.88	0.026	0.01
145.00	0.00	5000.87	0.026	0.01
145.25	0.00	5000.87	0.026	0.01
145.50	0.00	5000.87	0.025	0.01
145.75	0.00	5000.87	0.025	0.01
146.00	0.00	5000.86	0.025	0.01
146.25	0.00	5000.86	0.025	0.01

146.50	0.00	5000.86	0.025	0.01
146.75	0.00	5000.85	0.025	0.01
147.00	0.00	5000.85	0.025	0.01
147.25	0.00	5000.85	0.024	0.01
147.50	0.00	5000.85	0.024	0.01
147.75	0.00	5000.84	0.024	0.01
148.00	0.00	5000.84	0.024	0.01
148.25	0.00	5000.84	0.024	0.01
148.50	0.00	5000.83	0.024	0.01
148.75	0.00	5000.83	0.023	0.01
149.00	0.00	5000.83	0.023	0.01
149.25	0.00	5000.83	0.023	0.01
149.50	0.00	5000.82	0.023	0.01
149.75	0.00	5000.82	0.023	0.01
150.00	0.00	5000.82	0.023	0.01
150.25	0.00	5000.82	0.023	0.01
150.50	0.00	5000.81	0.022	0.01
150.75	0.00	5000.81	0.022	0.01
151.00	0.00	5000.81	0.022	0.01
151.25	0.00	5000.81	0.022	0.01
151.50	0.00	5000.80	0.022	0.01
151.75	0.00	5000.80	0.022	0.01
152.00	0.00	5000.80	0.022	0.01
152.25	0.00	5000.79	0.021	0.01
152.50	0.00	5000.79	0.021	0.01
152.75	0.00	5000.79	0.021	0.01
153.00	0.00	5000.79	0.021	0.01
153.25	0.00	5000.79	0.021	0.01
153.50	0.00	5000.78	0.021	0.01
153.75	0.00	5000.78	0.021	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
154.00	0.00	5000.78	0.021	0.01
154.25	0.00	5000.78	0.020	0.01
154.50	0.00	5000.77	0.020	0.01
154.75	0.00	5000.77	0.020	0.01
155.00	0.00	5000.77	0.020	0.01
155.25	0.00	5000.77	0.020	0.01
155.50	0.00	5000.76	0.020	0.01

155.75	0.00	5000.76	0.020	0.01
156.00	0.00	5000.76	0.020	0.01
156.25	0.00	5000.76	0.019	0.01
156.50	0.00	5000.75	0.019	0.01
156.75	0.00	5000.75	0.019	0.01
157.00	0.00	5000.75	0.019	0.01
157.25	0.00	5000.75	0.019	0.01
157.50	0.00	5000.75	0.019	0.01
157.75	0.00	5000.74	0.019	0.01
158.00	0.00	5000.74	0.019	0.01
158.25	0.00	5000.74	0.018	0.01
158.50	0.00	5000.74	0.018	0.01
158.75	0.00	5000.73	0.018	0.01
159.00	0.00	5000.73	0.018	0.01
159.25	0.00	5000.73	0.018	0.01
159.50	0.00	5000.73	0.018	0.01
159.75	0.00	5000.73	0.018	0.01
160.00	0.00	5000.72	0.018	0.01
160.25	0.00	5000.72	0.018	0.01
160.50	0.00	5000.72	0.017	0.01
160.75	0.00	5000.72	0.017	0.01
161.00	0.00	5000.72	0.017	0.01
161.25	0.00	5000.71	0.017	0.01
161.50	0.00	5000.71	0.017	0.01
161.75	0.00	5000.71	0.017	0.01
162.00	0.00	5000.71	0.017	0.01
162.25	0.00	5000.71	0.017	0.01
162.50	0.00	5000.70	0.017	0.01
162.75	0.00	5000.70	0.016	0.01
163.00	0.00	5000.70	0.016	0.01
163.25	0.00	5000.70	0.016	0.00

PEAK DISCHARGE = 18.390 CFS - PEAK OCCURS AT HOUR 1.60

MAXIMUM WATER SURFACE ELEVATION = 5004.219

MAXIMUM STORAGE = 0.3389 AC-FT INCREMENTAL TIME= 0.050000HRS

*

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*

COMPUTE NM HYD ID=15 HYD=XD1 DA=0.0041148

A B C D 67 0 4 29

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 4.7112 CFS UNIT VOLUME = 0.9971 B = 526.28 P60 = 2.0100

AREA = 0.001193 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.157185HR TP = 0.133300HR K/TP RATIO = 1.179182 SHAPE CONSTANT, N = 3.009214

UNIT PEAK = 6.1932 CFS UNIT VOLUME = 0.9967 B = 282.58 P60 = 2.0100

AREA = 0.002922 SQ MI IA = 0.63310 INCHES INF = 1.62268 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=15 CODE=1

HYDROGRAPH FROM AREA XD1

RUNOFF VOLUME = 1.39420 INCHES = 0.3060 ACRE-FEET

PEAK DISCHARGE RATE = 8.31 CFS AT 1.500 HOURS BASIN AREA = 0.0041 SQ. MI.

*

COMPUTE NM HYD ID=16 HYD=M1 DA=0.0011512

A B C D 0 0 25 75

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 3.4087 CFS UNIT VOLUME = 0.9959 B = 526.28 P60 = 2.0100

AREA = 0.000863 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 0.82807 CFS UNIT VOLUME = 0.9868 B = 383.54 P60 = 2.0100

AREA = 0.000288 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=16 CODE=1

HYDROGRAPH FROM AREA M1

RUNOFF VOLUME = 2.39969 INCHES = 0.1473 ACRE-FEET
PEAK DISCHARGE RATE = 3.63 CFS AT 1.500 HOURS BASIN AREA = 0.0012 SQ. MI.

*
*Add basins XD1 M1 basin-routing
ADD HYD ID=17 HYD=XD1_M1 ID=15 ID=16
PRINT HYD ID=17 CODE=1

HYDROGRAPH FROM AREA XD1_M1

RUNOFF VOLUME = 1.61389 INCHES = 0.4533 ACRE-FEET
PEAK DISCHARGE RATE = 11.95 CFS AT 1.500 HOURS BASIN AREA = 0.0053 SQ. MI.

*
COMPUTE NM HYD ID=18 HYD=XM1 DA=0.001623
A B C D 0 0 53 47
TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.0116 CFS UNIT VOLUME = 0.9959 B = 526.28 P60 = 2.0100
AREA = 0.000763 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407
UNIT PEAK = 2.4750 CFS UNIT VOLUME = 0.9967 B = 383.54 P60 = 2.0100
AREA = 0.000860 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=18 CODE=1

HYDROGRAPH FROM AREA XM1

RUNOFF VOLUME = 2.00104 INCHES = 0.1732 ACRE-FEET
PEAK DISCHARGE RATE = 4.67 CFS AT 1.500 HOURS BASIN AREA = 0.0016 SQ. MI.
*

*Add basins XM1 XD1 M1 basin-routing

ADD HYD ID=19 HYD=XM1_XD1_M1 ID=17 ID=18

PRINT HYD ID=19 CODE=1

HYDROGRAPH FROM AREA XM1_XD1_M1

RUNOFF VOLUME = 1.70505 INCHES = 0.6265 ACRE-FEET

PEAK DISCHARGE RATE = 16.61 CFS AT 1.500 HOURS BASIN AREA = 0.0069 SQ. MI.

*

COMPUTE NM HYD ID=20 HYD=M2 DA=0.0008861

A B C D 0 0 7 93

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 3.2535 CFS UNIT VOLUME = 0.9959 B = 526.28 P60 = 2.0100

AREA = 0.000824 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 0.17847 CFS UNIT VOLUME = 0.9308 B = 383.54 P60 = 2.0100

AREA = 0.000062 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=20 CODE=1

HYDROGRAPH FROM AREA M2

RUNOFF VOLUME = 2.65596 INCHES = 0.1255 ACRE-FEET

PEAK DISCHARGE RATE = 2.96 CFS AT 1.500 HOURS BASIN AREA = 0.0009 SQ. MI.

*

*Add basins M2 XM1 XD1 M1 basin-routing

ADD HYD ID=1 HYD=M2_XM1_XD1_M1 ID=19 ID=20

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA M2_XM1_XD1_M1

RUNOFF VOLUME = 1.81339 INCHES = 0.7520 ACRE-FEET

PEAK DISCHARGE RATE = 19.57 CFS AT 1.500 HOURS BASIN AREA = 0.0078 SQ. MI.

```
*
COMPUTE NM HYD      ID=2  HYD=N  DA=0.003618
                    A B C D  15  0  85  0
                    TP=0.13330   MASS RAIN=-1

    K =  0.115352HR    TP =  0.133300HR    K/TP RATIO =  0.865358     SHAPE CONSTANT, N =  4.107143
    UNIT PEAK =   9.8321    CFS   UNIT VOLUME =    1.000       B =   362.25      P60 = 2.0100
    AREA =     0.003618 SQ MI    IA =   0.39500 INCHES    INF =   0.95600 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.050000

   BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.10000 AT PEAK FLOW.

PRINT HYD           ID=2  CODE=1

                              HYDROGRAPH FROM AREA N

   RUNOFF VOLUME =     1.23690 INCHES     =       0.2387 ACRE-FEET
   PEAK DISCHARGE RATE =       8.11 CFS  AT   1.500 HOURS   BASIN AREA =  0.0036 SQ. MI.
*
*Add basins N M2 XM1 XD1 M1 basin-routing
ADD HYD             ID=3  HYD=M2_XM1_XD1_M1  ID=1  ID=2
PRINT HYD           ID=3  CODE=1

                              HYDROGRAPH FROM AREA M2_XM1_XD1_M1

   RUNOFF VOLUME =     1.63031 INCHES     =       0.9906 ACRE-FEET
   PEAK DISCHARGE RATE =      27.68 CFS  AT   1.500 HOURS   BASIN AREA =  0.0114 SQ. MI.
*
COMPUTE NM HYD      ID=4  HYD=I1  DA=0.000621979
                    A B C D  0  0  0  100
                    TP=0.13330   MASS RAIN=-1

    K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
    UNIT PEAK =   2.4556    CFS   UNIT VOLUME =   0.9951       B =   526.28      P60 = 2.0100
    AREA =     0.000622 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.050000

   BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.10000 AT PEAK FLOW.

PRINT HYD           ID=4  CODE=1
```

HYDROGRAPH FROM AREA I1

RUNOFF VOLUME = 2.75562 INCHES = 0.0914 ACRE-FEET

PEAK DISCHARGE RATE = 2.11 CFS AT 1.500 HOURS BASIN AREA = 0.0006 SQ. MI.

*

COMPUTE NM HYD ID=5 HYD=I2 DA=0.000247657

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 0.97776 CFS UNIT VOLUME = 0.9891 B = 526.28 P60 = 2.0100

AREA = 0.000248 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=5 CODE=1

HYDROGRAPH FROM AREA I2

RUNOFF VOLUME = 2.75562 INCHES = 0.0364 ACRE-FEET

PEAK DISCHARGE RATE = 0.85 CFS AT 1.500 HOURS BASIN AREA = 0.0002 SQ. MI.

*

*Add basins I2 I1 basin-routing

ADD HYD ID=6 HYD=I2_I1 ID=4 ID=5

PRINT HYD ID=6 CODE=1

HYDROGRAPH FROM AREA I2_I1

RUNOFF VOLUME = 2.75506 INCHES = 0.1278 ACRE-FEET

PEAK DISCHARGE RATE = 2.96 CFS AT 1.500 HOURS BASIN AREA = 0.0009 SQ. MI.

*

COMPUTE NM HYD ID=7 HYD=H2 DA=0.000540774

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 2.1350 CFS UNIT VOLUME = 0.9941 B = 526.28 P60 = 2.0100

AREA = 0.000541 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=7 CODE=1

HYDROGRAPH FROM AREA H2

RUNOFF VOLUME = 2.75562 INCHES = 0.0795 ACRE-FEET

PEAK DISCHARGE RATE = 1.84 CFS AT 1.500 HOURS BASIN AREA = 0.0005 SQ. MI.

*

*Add basins H2 I2 I1 basin-routing

ADD HYD ID=8 HYD=H2_I2_I1 ID=6 ID=7

PRINT HYD ID=8 CODE=1

HYDROGRAPH FROM AREA H2_I2_I1

RUNOFF VOLUME = 2.75507 INCHES = 0.2072 ACRE-FEET

PEAK DISCHARGE RATE = 4.80 CFS AT 1.500 HOURS BASIN AREA = 0.0014 SQ. MI.

*

COMPUTE NM HYD ID=9 HYD=H1 DA=0.000254482

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 1.0047 CFS UNIT VOLUME = 0.9891 B = 526.28 P60 = 2.0100

AREA = 0.000254 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=9 CODE=1

HYDROGRAPH FROM AREA H1

RUNOFF VOLUME = 2.75562 INCHES = 0.0374 ACRE-FEET

PEAK DISCHARGE RATE = 0.87 CFS AT 1.500 HOURS BASIN AREA = 0.0003 SQ. MI.

*

*Add basins H1 H2 I2 I1 basin-routing

ADD HYD ID=10 HYD=H1_H2_I2_I1 ID=8 ID=9

PRINT HYD ID=10 CODE=1

HYDROGRAPH FROM AREA H1_H2_I2_I1

RUNOFF VOLUME = 2.75501 INCHES = 0.2446 ACRE-FEET

PEAK DISCHARGE RATE = 5.67 CFS AT 1.500 HOURS BASIN AREA = 0.0017 SQ. MI.

*

COMPUTE NM HYD ID=11 HYD=H DA=0.000663978

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 2.6214 CFS UNIT VOLUME = 0.9951 B = 526.28 P60 = 2.0100

AREA = 0.000664 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA H

RUNOFF VOLUME = 2.75562 INCHES = 0.0976 ACRE-FEET

PEAK DISCHARGE RATE = 2.26 CFS AT 1.500 HOURS BASIN AREA = 0.0007 SQ. MI.

*

*Add basins H H1 H2 I2 I1 basin-routing

ADD HYD ID=12 HYD=H_H1_H2_I2_I1 ID=10 ID=11

PRINT HYD ID=12 CODE=1

HYDROGRAPH FROM AREA H_H1_H2_I2_I1

RUNOFF VOLUME = 2.75506 INCHES = 0.3422 ACRE-FEET

PEAK DISCHARGE RATE = 7.93 CFS AT 1.500 HOURS BASIN AREA = 0.0023 SQ. MI.

*

COMPUTE NM HYD ID=13 HYD=I DA=0.000641823

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 2.5340 CFS UNIT VOLUME = 0.9951 B = 526.28 P60 = 2.0100

AREA = 0.000642 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=13 CODE=1

HYDROGRAPH FROM AREA I

RUNOFF VOLUME = 2.75562 INCHES = 0.0943 ACRE-FEET

PEAK DISCHARGE RATE = 2.18 CFS AT 1.500 HOURS BASIN AREA = 0.0006 SQ. MI.

*

*Add basins I H H1 H2 I2 I1 basin-routing

ADD HYD ID=14 HYD=I_H_H1_H2_I2_I1 ID=12 ID=13

PRINT HYD ID=14 CODE=1

HYDROGRAPH FROM AREA I_H_H1_H2_I2_I1

RUNOFF VOLUME = 2.75509 INCHES = 0.4365 ACRE-FEET

PEAK DISCHARGE RATE = 10.11 CFS AT 1.500 HOURS BASIN AREA = 0.0030 SQ. MI.

*

*Add basins DetPondInE(N M2 XM1 XD1 M2 I H H1 H2 I2 I1) basin-routing

ADD HYD ID=21 HYD=N_M2_XM1_XD1_M2_I_H_H1_H2_I2_I1 ID=3 ID=14

PRINT HYD ID=21 CODE=1

HYDROGRAPH FROM AREA N_M2_XM1_XD1_M2_I_H_H

RUNOFF VOLUME = 1.63031 INCHES = 0.9906 ACRE-FEET

PEAK DISCHARGE RATE = 27.68 CFS AT 1.500 HOURS BASIN AREA = 0.0114 SQ. MI.

*

COMPUTE NM HYD ID=16 HYD=P DA=0.000468872

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 1.8511 CFS UNIT VOLUME = 0.9928 B = 526.28 P60 = 2.0100

AREA = 0.000469 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=16 CODE=1

HYDROGRAPH FROM AREA P

RUNOFF VOLUME = 2.75562 INCHES = 0.0689 ACRE-FEET

PEAK DISCHARGE RATE = 1.60 CFS AT 1.500 HOURS BASIN AREA = 0.0005 SQ. MI.

*

COMPUTE NM HYD ID=17 HYD=S DA=0.000444064

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 1.7532 CFS UNIT VOLUME = 0.9928 B = 526.28 P60 = 2.0100

AREA = 0.000444 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=17 CODE=1

HYDROGRAPH FROM AREA S

RUNOFF VOLUME = 2.75562 INCHES = 0.0653 ACRE-FEET

PEAK DISCHARGE RATE = 1.51 CFS AT 1.500 HOURS BASIN AREA = 0.0004 SQ. MI.

*

*Add basins S P basin-routing

ADD HYD ID=18 HYD=S_P ID=16 ID=17

PRINT HYD ID=18 CODE=1

HYDROGRAPH FROM AREA S_P

RUNOFF VOLUME = 2.75502 INCHES = 0.1341 ACRE-FEET

PEAK DISCHARGE RATE = 3.11 CFS AT 1.500 HOURS BASIN AREA = 0.0009 SQ. MI.

*

COMPUTE NM HYD ID=19 HYD=P1 DA=0.000967237

A B C D 0 0 10 90

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 3.4368 CFS UNIT VOLUME = 0.9959 B = 526.28 P60 = 2.0100

AREA = 0.000871 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 0.27830 CFS UNIT VOLUME = 0.9573 B = 383.54 P60 = 2.0100

AREA = 0.000097 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=19 CODE=1

HYDROGRAPH FROM AREA P1

RUNOFF VOLUME = 2.61325 INCHES = 0.1348 ACRE-FEET

PEAK DISCHARGE RATE = 3.20 CFS AT 1.500 HOURS BASIN AREA = 0.0010 SQ. MI.

*

COMPUTE NM HYD ID=20 HYD=S1 DA=0.000578041

A B C D 0 0 10 90

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 2.0539 CFS UNIT VOLUME = 0.9941 B = 526.28 P60 = 2.0100

AREA = 0.000520 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 0.16632 CFS UNIT VOLUME = 0.9308 B = 383.54 P60 = 2.0100

AREA = 0.000058 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=20 CODE=1

HYDROGRAPH FROM AREA S1

RUNOFF VOLUME = 2.61325 INCHES = 0.0806 ACRE-FEET
PEAK DISCHARGE RATE = 1.92 CFS AT 1.500 HOURS BASIN AREA = 0.0006 SQ. MI.

*
*Add basins S1 P1 basin-routing
ADD HYD ID=1 HYD=S1_P1 ID=19 ID=20
PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA S1_P1

RUNOFF VOLUME = 2.61287 INCHES = 0.2153 ACRE-FEET
PEAK DISCHARGE RATE = 5.12 CFS AT 1.500 HOURS BASIN AREA = 0.0015 SQ. MI.

*
*Add basins S P S1 P1 basin-routing
ADD HYD ID=2 HYD=S1_P1_S_P ID=18 ID=1
PRINT HYD ID=2 CODE=1

HYDROGRAPH FROM AREA S1_P1_S_P

RUNOFF VOLUME = 2.66566 INCHES = 0.3495 ACRE-FEET
PEAK DISCHARGE RATE = 8.23 CFS AT 1.500 HOURS BASIN AREA = 0.0025 SQ. MI.

*
COMPUTE NM HYD ID=3 HYD=T DA=0.001721835
A B C D 90 0 0 10
TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 0.67979 CFS UNIT VOLUME = 0.9832 B = 526.28 P60 = 2.0100
AREA = 0.000172 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.160154HR TP = 0.133300HR K/TP RATIO = 1.201459 SHAPE CONSTANT, N = 2.957769
UNIT PEAK = 3.2361 CFS UNIT VOLUME = 0.9940 B = 278.37 P60 = 2.0100
AREA = 0.001550 SQ MI IA = 0.65000 INCHES INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA T

RUNOFF VOLUME = 1.00574 INCHES = 0.0924 ACRE-FEET
PEAK DISCHARGE RATE = 2.78 CFS AT 1.500 HOURS BASIN AREA = 0.0017 SQ. MI.

*

*Add basins T S1 P1 S P basin-routing

ADD HYD ID=4 HYD=T_S1_P1_S_P ID=2 ID=3

PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA T_S1_P1_S_P

RUNOFF VOLUME = 1.98186 INCHES = 0.4418 ACRE-FEET
PEAK DISCHARGE RATE = 11.01 CFS AT 1.500 HOURS BASIN AREA = 0.0042 SQ. MI.

*

COMPUTE NM HYD ID=5 HYD=Q1 DA=0.000194272
A B C D 0 0 10 90
TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 0.69030 CFS UNIT VOLUME = 0.9832 B = 526.28 P60 = 2.0100
AREA = 0.000175 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000
K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407
UNIT PEAK = 0.55897E-01CFS UNIT VOLUME = 0.8888 B = 383.54 P60 = 2.0100
AREA = 0.000019 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=5 CODE=1

HYDROGRAPH FROM AREA Q1

RUNOFF VOLUME = 2.61325 INCHES = 0.0271 ACRE-FEET
PEAK DISCHARGE RATE = 0.65 CFS AT 1.500 HOURS BASIN AREA = 0.0002 SQ. MI.

```
*
COMPUTE NM HYD      ID=6  HYD=R1  DA=0.000582811
                    A B C D   0  0  10  90
                    TP=0.13330   MASS RAIN=-1

    K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
    UNIT PEAK =   2.0709    CFS   UNIT VOLUME =   0.9941       B =   526.28      P60 = 2.0100
    AREA =     0.000525 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.050000

    K =  0.107446HR    TP =  0.133300HR    K/TP RATIO =  0.806046     SHAPE CONSTANT, N =  4.440407
    UNIT PEAK =  0.16769    CFS   UNIT VOLUME =   0.9308       B =   383.54      P60 = 2.0100
    AREA =     0.000058 SQ MI    IA =   0.35000 INCHES    INF =   0.83000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.050000

   BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.10000 AT PEAK FLOW.

PRINT HYD           ID=6  CODE=1

                              HYDROGRAPH FROM AREA R1


   RUNOFF VOLUME =     2.61325 INCHES     =       0.0812 ACRE-FEET
   PEAK DISCHARGE RATE =       1.94 CFS  AT   1.500 HOURS   BASIN AREA =  0.0006 SQ. MI.

*
*Add basins Q1 R1 basin-routing
ADD HYD             ID=7  HYD=Q1_R1  ID=5  ID=6
PRINT HYD           ID=7  CODE=1

                              HYDROGRAPH FROM AREA Q1_R1


   RUNOFF VOLUME =     2.61260 INCHES     =       0.1083 ACRE-FEET
   PEAK DISCHARGE RATE =       2.59 CFS  AT   1.500 HOURS   BASIN AREA =  0.0008 SQ. MI.

*
COMPUTE NM HYD      ID=8  HYD=Q  DA=0.000793384
                    A B C D  0  0  8  92
                    TP=0.13330   MASS RAIN=-1

    K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
```

UNIT PEAK = 2.8817 CFS UNIT VOLUME = 0.9951 B = 526.28 P60 = 2.0100

AREA = 0.000730 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 0.18262 CFS UNIT VOLUME = 0.9308 B = 383.54 P60 = 2.0100

AREA = 0.000063 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=8 CODE=1

HYDROGRAPH FROM AREA Q

RUNOFF VOLUME = 2.64172 INCHES = 0.1118 ACRE-FEET

PEAK DISCHARGE RATE = 2.65 CFS AT 1.500 HOURS BASIN AREA = 0.0008 SQ. MI.

*

COMPUTE NM HYD ID=9 HYD=R DA=0.000582811

A B C D 0 0 10 90

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 2.0709 CFS UNIT VOLUME = 0.9941 B = 526.28 P60 = 2.0100

AREA = 0.000525 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 0.16769 CFS UNIT VOLUME = 0.9308 B = 383.54 P60 = 2.0100

AREA = 0.000058 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=9 CODE=1

HYDROGRAPH FROM AREA R

RUNOFF VOLUME = 2.61325 INCHES = 0.0812 ACRE-FEET

PEAK DISCHARGE RATE = 1.94 CFS AT 1.500 HOURS BASIN AREA = 0.0006 SQ. MI.

*

*Add basins Q R basin-routing

ADD HYD ID=10 HYD=Q_R ID=8 ID=9

PRINT HYD ID=10 CODE=1

HYDROGRAPH FROM AREA Q_R

RUNOFF VOLUME = 2.62923 INCHES = 0.1930 ACRE-FEET

PEAK DISCHARGE RATE = 4.58 CFS AT 1.500 HOURS BASIN AREA = 0.0014 SQ. MI.

*

*Add basins Q R Q1 R1 basin-routing

ADD HYD ID=11 HYD=Q_R_Q1_R1 ID=7 ID=10

PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA Q_R_Q1_R1

RUNOFF VOLUME = 2.62323 INCHES = 0.3013 ACRE-FEET

PEAK DISCHARGE RATE = 7.17 CFS AT 1.500 HOURS BASIN AREA = 0.0022 SQ. MI.

*

*Add basins Q R Q1 R1 T S1 P1 S P basin-routing

ADD HYD ID=12 HYD=Q_R_Q1_R1_T_S1_P1_S_P ID=4 ID=11

PRINT HYD ID=12 CODE=1

HYDROGRAPH FROM AREA Q_R_Q1_R1_T_S1_P1_S_P

RUNOFF VOLUME = 2.19992 INCHES = 0.7431 ACRE-FEET

PEAK DISCHARGE RATE = 18.18 CFS AT 1.500 HOURS BASIN AREA = 0.0063 SQ. MI.

*

COMPUTE NM HYD ID=13 HYD=D DA=0.000317857

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 1.2549 CFS UNIT VOLUME = 0.9911 B = 526.28 P60 = 2.0100

AREA = 0.000318 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=13 CODE=1

HYDROGRAPH FROM AREA D

RUNOFF VOLUME = 2.75562 INCHES = 0.0467 ACRE-FEET

PEAK DISCHARGE RATE = 1.09 CFS AT 1.500 HOURS BASIN AREA = 0.0003 SQ. MI.

*

COMPUTE NM HYD ID=14 HYD=C DA=0.00037726

A B C D 0 0 0 100

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 1.4894 CFS UNIT VOLUME = 0.9928 B = 526.28 P60 = 2.0100

AREA = 0.000377 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=14 CODE=1

HYDROGRAPH FROM AREA C

RUNOFF VOLUME = 2.75562 INCHES = 0.0554 ACRE-FEET

PEAK DISCHARGE RATE = 1.29 CFS AT 1.500 HOURS BASIN AREA = 0.0004 SQ. MI.

*

*Add basins D C basin-routing

ADD HYD ID=15 HYD=D_C ID=13 ID=14

PRINT HYD ID=15 CODE=1

HYDROGRAPH FROM AREA D_C

RUNOFF VOLUME = 2.75494 INCHES = 0.1021 ACRE-FEET

PEAK DISCHARGE RATE = 2.37 CFS AT 1.500 HOURS BASIN AREA = 0.0007 SQ. MI.

```
*
*Add basins D C Q R Q1 R1 S1 P1 S P basin-routing
ADD HYD           ID=16  HYD=D_C_Q_R_Q1_R1_S1_P1_S_P  ID=12  ID=15
PRINT HYD         ID=16  CODE=1

                          HYDROGRAPH FROM AREA D_C_Q_R_Q1_R1_S1_P1_S

  RUNOFF VOLUME =     2.25481 INCHES     =       0.8452 ACRE-FEET
  PEAK DISCHARGE RATE =      20.55 CFS  AT   1.500 HOURS   BASIN AREA =  0.0070 SQ. MI.
*
COMPUTE NM HYD     ID=17  HYD=G1  DA=0.001350527
             A B C D   0  0  0  100
             TP=0.13330   MASS RAIN=-1

   K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
   UNIT PEAK =   5.3320    CFS   UNIT VOLUME =   0.9971       B =   526.28      P60 = 2.0100
   AREA =     0.001351 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.050000

  BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.10000 AT PEAK FLOW.

PRINT HYD         ID=17  CODE=1

                          HYDROGRAPH FROM AREA G1

  RUNOFF VOLUME =     2.75562 INCHES     =       0.1985 ACRE-FEET
  PEAK DISCHARGE RATE =       4.58 CFS  AT   1.500 HOURS   BASIN AREA =  0.0014 SQ. MI.

*
COMPUTE NM HYD     ID=18  HYD=G  DA=0.001068715
             A B C D   0  0  0  100
             TP=0.13330   MASS RAIN=-1

   K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
   UNIT PEAK =   4.2193    CFS   UNIT VOLUME =   0.9966       B =   526.28      P60 = 2.0100
   AREA =     0.001069 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.050000

  BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.10000 AT PEAK FLOW.
```

PRINT HYD ID=18 CODE=1

HYDROGRAPH FROM AREA G

RUNOFF VOLUME = 2.75562 INCHES = 0.1571 ACRE-FEET
PEAK DISCHARGE RATE = 3.63 CFS AT 1.500 HOURS BASIN AREA = 0.0011 SQ. MI.

*
*Add basins G1 G basin-routing
ADD HYD ID=19 HYD=G1_G ID=17 ID=18
PRINT HYD ID=19 CODE=1

HYDROGRAPH FROM AREA G1_G

RUNOFF VOLUME = 2.75538 INCHES = 0.3555 ACRE-FEET
PEAK DISCHARGE RATE = 8.21 CFS AT 1.500 HOURS BASIN AREA = 0.0024 SQ. MI.

*
*Add basins G1 G D C Q R Q1 R1 S1 P1 S P basin-routing
ADD HYD ID=20 HYD=DetPondInW ID=16 ID=19
PRINT HYD ID=20 CODE=1

HYDROGRAPH FROM AREA DetPondInW

RUNOFF VOLUME = 2.38299 INCHES = 1.2007 ACRE-FEET
PEAK DISCHARGE RATE = 28.76 CFS AT 1.500 HOURS BASIN AREA = 0.0094 SQ. MI.

*
*Add basins G1 G D C Q R Q1 R1 S1 P1 S P N M2 XM1 XD1 M2 I H H1 H2 I2 I1 basin-r
ADD HYD ID=1 HYD=DetPondInSS ID=21 ID=20
PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA DetPondInSS
RUNOFF VOLUME = 1.97152 INCHES = 2.1913 ACRE-FEET
PEAK DISCHARGE RATE = 56.44 CFS AT 1.500 HOURS BASIN AREA = 0.0208 SQ. MI.

*
COMPUTE NM HYD ID=2 HYD=XJ DA=0.009900676
A B C D 63 0 37 0

TP=0.13330 MASS RAIN=-1

K = 0.140652HR TP = 0.133300HR K/TP RATIO = 1.055156 SHAPE CONSTANT, N = 3.346132
UNIT PEAK = 22.945 CFS UNIT VOLUME = 0.9995 B = 308.93 P60 = 2.0100
AREA = 0.009901 SQ MI IA = 0.53900 INCHES INF = 1.35920 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

HYDROGRAPH FROM AREA XJ

RUNOFF VOLUME = 0.98210 INCHES = 0.5186 ACRE-FEET
PEAK DISCHARGE RATE = 17.31 CFS AT 1.500 HOURS BASIN AREA = 0.0099 SQ. MI.

*
*Add basins XJ G1 G D C Q R Q1 R1 S1 P1 S P N M2 XM1 XD1 M2 I H H1 H2 I2 I1 basi
ADD HYD ID=3 HYD=DetPondIn ID=1 ID=2
PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DetPondIn

RUNOFF VOLUME = 1.65286 INCHES = 2.7099 ACRE-FEET
PEAK DISCHARGE RATE = 73.75 CFS AT 1.500 HOURS BASIN AREA = 0.0307 SQ. MI.

*
* pond discharges into storm sewer that discharges into the San Jose Drain
ROUTE RESERVOIR ID=4 HYD=DetPondOut INFLOW ID=3 CODE=5

OUTFLOW(cfs)	STORAGE(cfs)	ELEV(ft)
0.000	0.000	4933.2
0.010	0.343	4934
0.200	0.826	4935
1.200	1.380	4936
1.700	1.980	4937
2.100	2.657	4938
24.500	3.411	4939
65.200	4.248	4940
117.800	5.170	4941

* * * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	4933.20	0.000	0.00
0.25	0.00	4933.20	0.000	0.00
0.50	0.00	4933.20	0.000	0.00
0.75	0.00	4933.20	0.000	0.00
1.00	1.63	4933.22	0.008	0.00
1.25	7.87	4933.43	0.099	0.00
1.50	73.75	4934.94	0.798	0.19
1.75	26.32	4936.80	1.858	1.60
2.00	8.82	4937.24	2.142	1.80
2.25	3.67	4937.36	2.222	1.84
2.50	1.62	4937.38	2.238	1.85
2.75	0.75	4937.36	2.222	1.84
3.00	0.40	4937.32	2.196	1.83
3.25	0.24	4937.27	2.165	1.81
3.50	0.15	4937.22	2.132	1.79
3.75	0.11	4937.17	2.097	1.77
4.00	0.10	4937.12	2.063	1.75
4.25	0.09	4937.07	2.029	1.73
4.50	0.10	4937.02	1.996	1.71
4.75	0.12	4936.97	1.963	1.69
5.00	0.13	4936.92	1.931	1.66
5.25	0.14	4936.87	1.900	1.63
5.50	0.16	4936.82	1.870	1.61
5.75	0.18	4936.77	1.840	1.58
6.00	0.19	4936.72	1.811	1.56
6.25	0.20	4936.67	1.784	1.54
6.50	0.20	4936.63	1.756	1.51
6.75	0.20	4936.58	1.729	1.49
7.00	0.20	4936.54	1.703	1.47
7.25	0.20	4936.49	1.677	1.45
7.50	0.20	4936.45	1.651	1.43
7.75	0.20	4936.41	1.626	1.41
8.00	0.20	4936.37	1.601	1.38
8.25	0.20	4936.33	1.577	1.36
8.50	0.20	4936.29	1.553	1.34
8.75	0.19	4936.25	1.530	1.32
9.00	0.19	4936.21	1.506	1.31

9.25	0.19	4936.17	1.484	1.29
9.50	0.19	4936.14	1.461	1.27
9.75	0.19	4936.10	1.439	1.25
10.00	0.19	4936.06	1.418	1.23
10.25	0.19	4936.03	1.396	1.21
10.50	0.19	4935.99	1.375	1.19
10.75	0.19	4935.95	1.355	1.15
11.00	0.19	4935.92	1.335	1.12
11.25	0.19	4935.89	1.316	1.09
11.50	0.19	4935.85	1.298	1.05
11.75	0.19	4935.82	1.281	1.02
12.00	0.18	4935.79	1.264	0.99
12.25	0.19	4935.76	1.247	0.96
12.50	0.19	4935.73	1.232	0.93
12.75	0.18	4935.71	1.217	0.90
13.00	0.18	4935.68	1.202	0.88
13.25	0.18	4935.65	1.188	0.85
13.50	0.18	4935.63	1.174	0.83
13.75	0.18	4935.60	1.161	0.80

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	0.18	4935.58	1.148	0.78
14.25	0.18	4935.56	1.136	0.76
14.50	0.18	4935.54	1.124	0.74
14.75	0.18	4935.52	1.113	0.72
15.00	0.18	4935.50	1.102	0.70
15.25	0.18	4935.48	1.091	0.68
15.50	0.18	4935.46	1.081	0.66
15.75	0.17	4935.44	1.071	0.64
16.00	0.17	4935.43	1.062	0.63
16.25	0.17	4935.41	1.053	0.61
16.50	0.17	4935.39	1.044	0.59
16.75	0.17	4935.38	1.035	0.58
17.00	0.17	4935.36	1.027	0.56
17.25	0.17	4935.35	1.019	0.55
17.50	0.17	4935.33	1.011	0.53
17.75	0.17	4935.32	1.004	0.52
18.00	0.17	4935.31	0.997	0.51
18.25	0.17	4935.30	0.990	0.50

18.50	0.17	4935.28	0.983	0.48
18.75	0.17	4935.27	0.977	0.47
19.00	0.17	4935.26	0.971	0.46
19.25	0.17	4935.25	0.965	0.45
19.50	0.16	4935.24	0.959	0.44
19.75	0.16	4935.23	0.953	0.43
20.00	0.16	4935.22	0.948	0.42
20.25	0.16	4935.21	0.943	0.41
20.50	0.16	4935.20	0.938	0.40
20.75	0.16	4935.19	0.933	0.39
21.00	0.16	4935.18	0.928	0.38
21.25	0.16	4935.18	0.923	0.38
21.50	0.16	4935.17	0.919	0.37
21.75	0.16	4935.16	0.915	0.36
22.00	0.16	4935.15	0.911	0.35
22.25	0.16	4935.15	0.907	0.35
22.50	0.16	4935.14	0.903	0.34
22.75	0.15	4935.13	0.899	0.33
23.00	0.15	4935.13	0.895	0.33
23.25	0.15	4935.12	0.892	0.32
23.50	0.15	4935.11	0.889	0.31
23.75	0.15	4935.11	0.885	0.31
24.00	0.15	4935.10	0.882	0.30
24.25	0.02	4935.09	0.878	0.29
24.50	0.00	4935.08	0.872	0.28
24.75	0.00	4935.07	0.866	0.27
25.00	0.00	4935.06	0.861	0.26
25.25	0.00	4935.05	0.855	0.25
25.50	0.00	4935.04	0.850	0.24
25.75	0.00	4935.04	0.845	0.23
26.00	0.00	4935.03	0.841	0.23
26.25	0.00	4935.02	0.836	0.22
26.50	0.00	4935.01	0.832	0.21
26.75	0.00	4935.00	0.827	0.20
27.00	0.00	4934.99	0.823	0.20
27.25	0.00	4934.99	0.819	0.20
27.50	0.00	4934.98	0.815	0.20
27.75	0.00	4934.97	0.811	0.19

TIME	INFLOW	ELEV	VOLUME	OUTFLOW
(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)

28.00	0.00	4934.96	0.807	0.19
28.25	0.00	4934.95	0.803	0.19
28.50	0.00	4934.94	0.799	0.19
28.75	0.00	4934.94	0.795	0.19
29.00	0.00	4934.93	0.791	0.19
29.25	0.00	4934.92	0.788	0.18
29.50	0.00	4934.91	0.784	0.18
29.75	0.00	4934.90	0.780	0.18
30.00	0.00	4934.90	0.776	0.18
30.25	0.00	4934.89	0.772	0.18
30.50	0.00	4934.88	0.769	0.18
30.75	0.00	4934.87	0.765	0.18
31.00	0.00	4934.87	0.762	0.17
31.25	0.00	4934.86	0.758	0.17
31.50	0.00	4934.85	0.754	0.17
31.75	0.00	4934.84	0.751	0.17
32.00	0.00	4934.84	0.747	0.17
32.25	0.00	4934.83	0.744	0.17
32.50	0.00	4934.82	0.740	0.17
32.75	0.00	4934.82	0.737	0.16
33.00	0.00	4934.81	0.734	0.16
33.25	0.00	4934.80	0.730	0.16
33.50	0.00	4934.79	0.727	0.16
33.75	0.00	4934.79	0.724	0.16
34.00	0.00	4934.78	0.720	0.16
34.25	0.00	4934.77	0.717	0.16
34.50	0.00	4934.77	0.714	0.16
34.75	0.00	4934.76	0.711	0.15
35.00	0.00	4934.75	0.707	0.15
35.25	0.00	4934.75	0.704	0.15
35.50	0.00	4934.74	0.701	0.15
35.75	0.00	4934.73	0.698	0.15
36.00	0.00	4934.73	0.695	0.15
36.25	0.00	4934.72	0.692	0.15
36.50	0.00	4934.72	0.689	0.15
36.75	0.00	4934.71	0.686	0.14
37.00	0.00	4934.70	0.683	0.14
37.25	0.00	4934.70	0.680	0.14
37.50	0.00	4934.69	0.677	0.14
37.75	0.00	4934.69	0.674	0.14

38.00	0.00	4934.68	0.671	0.14
38.25	0.00	4934.67	0.668	0.14
38.50	0.00	4934.67	0.665	0.14
38.75	0.00	4934.66	0.663	0.14
39.00	0.00	4934.66	0.660	0.13
39.25	0.00	4934.65	0.657	0.13
39.50	0.00	4934.64	0.654	0.13
39.75	0.00	4934.64	0.652	0.13
40.00	0.00	4934.63	0.649	0.13
40.25	0.00	4934.63	0.646	0.13
40.50	0.00	4934.62	0.644	0.13
40.75	0.00	4934.62	0.641	0.13
41.00	0.00	4934.61	0.638	0.13
41.25	0.00	4934.61	0.636	0.13
41.50	0.00	4934.60	0.633	0.12
41.75	0.00	4934.60	0.631	0.12

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
42.00	0.00	4934.59	0.628	0.12
42.25	0.00	4934.58	0.626	0.12
42.50	0.00	4934.58	0.623	0.12
42.75	0.00	4934.57	0.621	0.12
43.00	0.00	4934.57	0.618	0.12
43.25	0.00	4934.56	0.616	0.12
43.50	0.00	4934.56	0.613	0.12
43.75	0.00	4934.55	0.611	0.12
44.00	0.00	4934.55	0.609	0.11
44.25	0.00	4934.54	0.606	0.11
44.50	0.00	4934.54	0.604	0.11
44.75	0.00	4934.54	0.601	0.11
45.00	0.00	4934.53	0.599	0.11
45.25	0.00	4934.53	0.597	0.11
45.50	0.00	4934.52	0.595	0.11
45.75	0.00	4934.52	0.592	0.11
46.00	0.00	4934.51	0.590	0.11
46.25	0.00	4934.51	0.588	0.11
46.50	0.00	4934.50	0.586	0.11
46.75	0.00	4934.50	0.584	0.10
47.00	0.00	4934.49	0.581	0.10

47.25	0.00	4934.49	0.579	0.10
47.50	0.00	4934.48	0.577	0.10
47.75	0.00	4934.48	0.575	0.10
48.00	0.00	4934.48	0.573	0.10
48.25	0.00	4934.47	0.571	0.10
48.50	0.00	4934.47	0.569	0.10
48.75	0.00	4934.46	0.567	0.10
49.00	0.00	4934.46	0.565	0.10
49.25	0.00	4934.46	0.563	0.10
49.50	0.00	4934.45	0.561	0.10
49.75	0.00	4934.45	0.559	0.09
50.00	0.00	4934.44	0.557	0.09
50.25	0.00	4934.44	0.555	0.09
50.50	0.00	4934.44	0.553	0.09
50.75	0.00	4934.43	0.551	0.09
51.00	0.00	4934.43	0.549	0.09
51.25	0.00	4934.42	0.547	0.09
51.50	0.00	4934.42	0.546	0.09
51.75	0.00	4934.42	0.544	0.09
52.00	0.00	4934.41	0.542	0.09
52.25	0.00	4934.41	0.540	0.09
52.50	0.00	4934.40	0.538	0.09
52.75	0.00	4934.40	0.536	0.09
53.00	0.00	4934.40	0.535	0.09
53.25	0.00	4934.39	0.533	0.08
53.50	0.00	4934.39	0.531	0.08
53.75	0.00	4934.39	0.529	0.08
54.00	0.00	4934.38	0.528	0.08
54.25	0.00	4934.38	0.526	0.08
54.50	0.00	4934.38	0.524	0.08
54.75	0.00	4934.37	0.523	0.08
55.00	0.00	4934.37	0.521	0.08
55.25	0.00	4934.37	0.519	0.08
55.50	0.00	4934.36	0.518	0.08
55.75	0.00	4934.36	0.516	0.08

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
56.00	0.00	4934.35	0.515	0.08
56.25	0.00	4934.35	0.513	0.08

56.50	0.00	4934.35	0.511	0.08
56.75	0.00	4934.35	0.510	0.08
57.00	0.00	4934.34	0.508	0.07
57.25	0.00	4934.34	0.507	0.07
57.50	0.00	4934.34	0.505	0.07
57.75	0.00	4934.33	0.504	0.07
58.00	0.00	4934.33	0.502	0.07
58.25	0.00	4934.33	0.501	0.07
58.50	0.00	4934.32	0.499	0.07
58.75	0.00	4934.32	0.498	0.07
59.00	0.00	4934.32	0.496	0.07
59.25	0.00	4934.31	0.495	0.07
59.50	0.00	4934.31	0.493	0.07
59.75	0.00	4934.31	0.492	0.07
60.00	0.00	4934.31	0.491	0.07
60.25	0.00	4934.30	0.489	0.07
60.50	0.00	4934.30	0.488	0.07
60.75	0.00	4934.30	0.486	0.07
61.00	0.00	4934.29	0.485	0.07
61.25	0.00	4934.29	0.484	0.07
61.50	0.00	4934.29	0.482	0.06
61.75	0.00	4934.29	0.481	0.06
62.00	0.00	4934.28	0.480	0.06
62.25	0.00	4934.28	0.478	0.06
62.50	0.00	4934.28	0.477	0.06
62.75	0.00	4934.27	0.476	0.06
63.00	0.00	4934.27	0.474	0.06
63.25	0.00	4934.27	0.473	0.06
63.50	0.00	4934.27	0.472	0.06
63.75	0.00	4934.26	0.471	0.06
64.00	0.00	4934.26	0.469	0.06
64.25	0.00	4934.26	0.468	0.06
64.50	0.00	4934.26	0.467	0.06
64.75	0.00	4934.25	0.466	0.06
65.00	0.00	4934.25	0.465	0.06
65.25	0.00	4934.25	0.463	0.06
65.50	0.00	4934.25	0.462	0.06
65.75	0.00	4934.24	0.461	0.06
66.00	0.00	4934.24	0.460	0.06
66.25	0.00	4934.24	0.459	0.06
66.50	0.00	4934.24	0.458	0.06

66.75	0.00	4934.23	0.456	0.05
67.00	0.00	4934.23	0.455	0.05
67.25	0.00	4934.23	0.454	0.05
67.50	0.00	4934.23	0.453	0.05
67.75	0.00	4934.23	0.452	0.05
68.00	0.00	4934.22	0.451	0.05
68.25	0.00	4934.22	0.450	0.05
68.50	0.00	4934.22	0.449	0.05
68.75	0.00	4934.22	0.448	0.05
69.00	0.00	4934.21	0.447	0.05
69.25	0.00	4934.21	0.446	0.05
69.50	0.00	4934.21	0.445	0.05
69.75	0.00	4934.21	0.444	0.05

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
70.00	0.00	4934.21	0.443	0.05
70.25	0.00	4934.20	0.442	0.05
70.50	0.00	4934.20	0.440	0.05
70.75	0.00	4934.20	0.440	0.05
71.00	0.00	4934.20	0.439	0.05
71.25	0.00	4934.20	0.438	0.05
71.50	0.00	4934.19	0.437	0.05
71.75	0.00	4934.19	0.436	0.05
72.00	0.00	4934.19	0.435	0.05
72.25	0.00	4934.19	0.434	0.05
72.50	0.00	4934.19	0.433	0.05
72.75	0.00	4934.18	0.432	0.04
73.00	0.00	4934.18	0.431	0.04
73.25	0.00	4934.18	0.430	0.04
73.50	0.00	4934.18	0.429	0.04
73.75	0.00	4934.18	0.428	0.04
74.00	0.00	4934.17	0.427	0.04
74.25	0.00	4934.17	0.426	0.04
74.50	0.00	4934.17	0.426	0.04
74.75	0.00	4934.17	0.425	0.04
75.00	0.00	4934.17	0.424	0.04
75.25	0.00	4934.17	0.423	0.04
75.50	0.00	4934.16	0.422	0.04
75.75	0.00	4934.16	0.421	0.04

76.00	0.00	4934.16	0.420	0.04
76.25	0.00	4934.16	0.420	0.04
76.50	0.00	4934.16	0.419	0.04
76.75	0.00	4934.16	0.418	0.04
77.00	0.00	4934.15	0.417	0.04
77.25	0.00	4934.15	0.416	0.04
77.50	0.00	4934.15	0.415	0.04
77.75	0.00	4934.15	0.415	0.04
78.00	0.00	4934.15	0.414	0.04
78.25	0.00	4934.15	0.413	0.04
78.50	0.00	4934.14	0.412	0.04
78.75	0.00	4934.14	0.412	0.04
79.00	0.00	4934.14	0.411	0.04
79.25	0.00	4934.14	0.410	0.04
79.50	0.00	4934.14	0.409	0.04
79.75	0.00	4934.14	0.409	0.04
80.00	0.00	4934.13	0.408	0.04
80.25	0.00	4934.13	0.407	0.04
80.50	0.00	4934.13	0.406	0.03
80.75	0.00	4934.13	0.406	0.03
81.00	0.00	4934.13	0.405	0.03
81.25	0.00	4934.13	0.404	0.03
81.50	0.00	4934.13	0.404	0.03
81.75	0.00	4934.12	0.403	0.03
82.00	0.00	4934.12	0.402	0.03
82.25	0.00	4934.12	0.401	0.03
82.50	0.00	4934.12	0.401	0.03
82.75	0.00	4934.12	0.400	0.03
83.00	0.00	4934.12	0.399	0.03
83.25	0.00	4934.12	0.399	0.03
83.50	0.00	4934.11	0.398	0.03
83.75	0.00	4934.11	0.397	0.03

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
84.00	0.00	4934.11	0.397	0.03
84.25	0.00	4934.11	0.396	0.03
84.50	0.00	4934.11	0.396	0.03
84.75	0.00	4934.11	0.395	0.03
85.00	0.00	4934.11	0.394	0.03

85.25	0.00	4934.10	0.394	0.03
85.50	0.00	4934.10	0.393	0.03
85.75	0.00	4934.10	0.392	0.03
86.00	0.00	4934.10	0.392	0.03
86.25	0.00	4934.10	0.391	0.03
86.50	0.00	4934.10	0.391	0.03
86.75	0.00	4934.10	0.390	0.03
87.00	0.00	4934.10	0.389	0.03
87.25	0.00	4934.10	0.389	0.03
87.50	0.00	4934.09	0.388	0.03
87.75	0.00	4934.09	0.388	0.03
88.00	0.00	4934.09	0.387	0.03
88.25	0.00	4934.09	0.387	0.03
88.50	0.00	4934.09	0.386	0.03
88.75	0.00	4934.09	0.385	0.03
89.00	0.00	4934.09	0.385	0.03
89.25	0.00	4934.09	0.384	0.03
89.50	0.00	4934.08	0.384	0.03
89.75	0.00	4934.08	0.383	0.03
90.00	0.00	4934.08	0.383	0.03
90.25	0.00	4934.08	0.382	0.03
90.50	0.00	4934.08	0.382	0.03
90.75	0.00	4934.08	0.381	0.03
91.00	0.00	4934.08	0.381	0.02
91.25	0.00	4934.08	0.380	0.02
91.50	0.00	4934.08	0.380	0.02
91.75	0.00	4934.07	0.379	0.02
92.00	0.00	4934.07	0.379	0.02
92.25	0.00	4934.07	0.378	0.02
92.50	0.00	4934.07	0.378	0.02
92.75	0.00	4934.07	0.377	0.02
93.00	0.00	4934.07	0.377	0.02
93.25	0.00	4934.07	0.376	0.02
93.50	0.00	4934.07	0.376	0.02
93.75	0.00	4934.07	0.375	0.02
94.00	0.00	4934.07	0.375	0.02
94.25	0.00	4934.06	0.374	0.02
94.50	0.00	4934.06	0.374	0.02
94.75	0.00	4934.06	0.373	0.02
95.00	0.00	4934.06	0.373	0.02
95.25	0.00	4934.06	0.373	0.02

95.50	0.00	4934.06	0.372	0.02
95.75	0.00	4934.06	0.372	0.02
96.00	0.00	4934.06	0.371	0.02
96.25	0.00	4934.06	0.371	0.02
96.50	0.00	4934.06	0.370	0.02
96.75	0.00	4934.06	0.370	0.02
97.00	0.00	4934.05	0.370	0.02
97.25	0.00	4934.05	0.369	0.02
97.50	0.00	4934.05	0.369	0.02
97.75	0.00	4934.05	0.368	0.02

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
98.00	0.00	4934.05	0.368	0.02
98.25	0.00	4934.05	0.367	0.02
98.50	0.00	4934.05	0.367	0.02
98.75	0.00	4934.05	0.367	0.02
99.00	0.00	4934.05	0.366	0.02
99.25	0.00	4934.05	0.366	0.02
99.50	0.00	4934.05	0.365	0.02
99.75	0.00	4934.05	0.365	0.02
100.00	0.00	4934.04	0.365	0.02
100.25	0.00	4934.04	0.364	0.02
100.50	0.00	4934.04	0.364	0.02
100.75	0.00	4934.04	0.364	0.02
101.00	0.00	4934.04	0.363	0.02
101.25	0.00	4934.04	0.363	0.02
101.50	0.00	4934.04	0.362	0.02
101.75	0.00	4934.04	0.362	0.02
102.00	0.00	4934.04	0.362	0.02
102.25	0.00	4934.04	0.361	0.02
102.50	0.00	4934.04	0.361	0.02
102.75	0.00	4934.04	0.361	0.02
103.00	0.00	4934.04	0.360	0.02
103.25	0.00	4934.04	0.360	0.02
103.50	0.00	4934.03	0.360	0.02
103.75	0.00	4934.03	0.359	0.02
104.00	0.00	4934.03	0.359	0.02
104.25	0.00	4934.03	0.359	0.02
104.50	0.00	4934.03	0.358	0.02

104.75	0.00	4934.03	0.358	0.02
105.00	0.00	4934.03	0.358	0.02
105.25	0.00	4934.03	0.357	0.02
105.50	0.00	4934.03	0.357	0.02
105.75	0.00	4934.03	0.357	0.02
106.00	0.00	4934.03	0.356	0.02
106.25	0.00	4934.03	0.356	0.02
106.50	0.00	4934.03	0.356	0.02
106.75	0.00	4934.03	0.355	0.01
107.00	0.00	4934.02	0.355	0.01
107.25	0.00	4934.02	0.355	0.01
107.50	0.00	4934.02	0.354	0.01
107.75	0.00	4934.02	0.354	0.01
108.00	0.00	4934.02	0.354	0.01
108.25	0.00	4934.02	0.354	0.01
108.50	0.00	4934.02	0.353	0.01
108.75	0.00	4934.02	0.353	0.01
109.00	0.00	4934.02	0.353	0.01
109.25	0.00	4934.02	0.352	0.01
109.50	0.00	4934.02	0.352	0.01
109.75	0.00	4934.02	0.352	0.01
110.00	0.00	4934.02	0.352	0.01
110.25	0.00	4934.02	0.351	0.01
110.50	0.00	4934.02	0.351	0.01
110.75	0.00	4934.02	0.351	0.01
111.00	0.00	4934.02	0.351	0.01
111.25	0.00	4934.02	0.350	0.01
111.50	0.00	4934.01	0.350	0.01
111.75	0.00	4934.01	0.350	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
112.00	0.00	4934.01	0.349	0.01
112.25	0.00	4934.01	0.349	0.01
112.50	0.00	4934.01	0.349	0.01
112.75	0.00	4934.01	0.349	0.01
113.00	0.00	4934.01	0.348	0.01
113.25	0.00	4934.01	0.348	0.01
113.50	0.00	4934.01	0.348	0.01
113.75	0.00	4934.01	0.348	0.01

114.00	0.00	4934.01	0.347	0.01
114.25	0.00	4934.01	0.347	0.01
114.50	0.00	4934.01	0.347	0.01
114.75	0.00	4934.01	0.347	0.01
115.00	0.00	4934.01	0.347	0.01
115.25	0.00	4934.01	0.346	0.01
115.50	0.00	4934.01	0.346	0.01
115.75	0.00	4934.01	0.346	0.01
116.00	0.00	4934.01	0.346	0.01
116.25	0.00	4934.00	0.345	0.01
116.50	0.00	4934.00	0.345	0.01
116.75	0.00	4934.00	0.345	0.01
117.00	0.00	4934.00	0.345	0.01
117.25	0.00	4934.00	0.344	0.01
117.50	0.00	4934.00	0.344	0.01
117.75	0.00	4934.00	0.344	0.01
118.00	0.00	4934.00	0.344	0.01
118.25	0.00	4934.00	0.344	0.01
118.50	0.00	4934.00	0.343	0.01
118.75	0.00	4934.00	0.343	0.01
119.00	0.00	4934.00	0.343	0.01
119.25	0.00	4934.00	0.343	0.01
119.50	0.00	4934.00	0.343	0.01
119.75	0.00	4934.00	0.342	0.01
120.00	0.00	4934.00	0.342	0.01
120.25	0.00	4934.00	0.342	0.01
120.50	0.00	4934.00	0.342	0.01
120.75	0.00	4934.00	0.342	0.01
121.00	0.00	4934.00	0.341	0.01
121.25	0.00	4934.00	0.341	0.01
121.50	0.00	4934.00	0.341	0.01
121.75	0.00	4933.99	0.341	0.01
122.00	0.00	4933.99	0.341	0.01
122.25	0.00	4933.99	0.340	0.01
122.50	0.00	4933.99	0.340	0.01
122.75	0.00	4933.99	0.340	0.01
123.00	0.00	4933.99	0.340	0.01
123.25	0.00	4933.99	0.339	0.01
123.50	0.00	4933.99	0.339	0.01
123.75	0.00	4933.99	0.339	0.01
124.00	0.00	4933.99	0.339	0.01

124.25	0.00	4933.99	0.339	0.01
124.50	0.00	4933.99	0.338	0.01
124.75	0.00	4933.99	0.338	0.01
125.00	0.00	4933.99	0.338	0.01
125.25	0.00	4933.99	0.338	0.01
125.50	0.00	4933.99	0.338	0.01
125.75	0.00	4933.99	0.337	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
126.00	0.00	4933.99	0.337	0.01
126.25	0.00	4933.99	0.337	0.01
126.50	0.00	4933.99	0.337	0.01
126.75	0.00	4933.99	0.337	0.01
127.00	0.00	4933.98	0.336	0.01
127.25	0.00	4933.98	0.336	0.01
127.50	0.00	4933.98	0.336	0.01
127.75	0.00	4933.98	0.336	0.01
128.00	0.00	4933.98	0.336	0.01
128.25	0.00	4933.98	0.335	0.01
128.50	0.00	4933.98	0.335	0.01
128.75	0.00	4933.98	0.335	0.01
129.00	0.00	4933.98	0.335	0.01
129.25	0.00	4933.98	0.335	0.01
129.50	0.00	4933.98	0.334	0.01
129.75	0.00	4933.98	0.334	0.01
130.00	0.00	4933.98	0.334	0.01
130.25	0.00	4933.98	0.334	0.01
130.50	0.00	4933.98	0.334	0.01
130.75	0.00	4933.98	0.333	0.01
131.00	0.00	4933.98	0.333	0.01
131.25	0.00	4933.98	0.333	0.01
131.50	0.00	4933.98	0.333	0.01
131.75	0.00	4933.98	0.333	0.01
132.00	0.00	4933.98	0.332	0.01
132.25	0.00	4933.97	0.332	0.01
132.50	0.00	4933.97	0.332	0.01
132.75	0.00	4933.97	0.332	0.01
133.00	0.00	4933.97	0.332	0.01
133.25	0.00	4933.97	0.331	0.01

133.50	0.00	4933.97	0.331	0.01
133.75	0.00	4933.97	0.331	0.01
134.00	0.00	4933.97	0.331	0.01
134.25	0.00	4933.97	0.331	0.01
134.50	0.00	4933.97	0.330	0.01
134.75	0.00	4933.97	0.330	0.01
135.00	0.00	4933.97	0.330	0.01
135.25	0.00	4933.97	0.330	0.01
135.50	0.00	4933.97	0.330	0.01
135.75	0.00	4933.97	0.329	0.01
136.00	0.00	4933.97	0.329	0.01
136.25	0.00	4933.97	0.329	0.01
136.50	0.00	4933.97	0.329	0.01
136.75	0.00	4933.97	0.329	0.01
137.00	0.00	4933.97	0.328	0.01
137.25	0.00	4933.97	0.328	0.01
137.50	0.00	4933.96	0.328	0.01
137.75	0.00	4933.96	0.328	0.01
138.00	0.00	4933.96	0.328	0.01
138.25	0.00	4933.96	0.327	0.01
138.50	0.00	4933.96	0.327	0.01
138.75	0.00	4933.96	0.327	0.01
139.00	0.00	4933.96	0.327	0.01
139.25	0.00	4933.96	0.327	0.01
139.50	0.00	4933.96	0.326	0.01
139.75	0.00	4933.96	0.326	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
140.00	0.00	4933.96	0.326	0.01
140.25	0.00	4933.96	0.326	0.01
140.50	0.00	4933.96	0.326	0.01
140.75	0.00	4933.96	0.325	0.01
141.00	0.00	4933.96	0.325	0.01
141.25	0.00	4933.96	0.325	0.01
141.50	0.00	4933.96	0.325	0.01
141.75	0.00	4933.96	0.325	0.01
142.00	0.00	4933.96	0.324	0.01
142.25	0.00	4933.96	0.324	0.01
142.50	0.00	4933.96	0.324	0.01

142.75	0.00	4933.96	0.324	0.01
143.00	0.00	4933.96	0.324	0.01
143.25	0.00	4933.95	0.324	0.01
143.50	0.00	4933.95	0.323	0.01
143.75	0.00	4933.95	0.323	0.01
144.00	0.00	4933.95	0.323	0.01
144.25	0.00	4933.95	0.323	0.01
144.50	0.00	4933.95	0.323	0.01
144.75	0.00	4933.95	0.322	0.01
145.00	0.00	4933.95	0.322	0.01
145.25	0.00	4933.95	0.322	0.01
145.50	0.00	4933.95	0.322	0.01
145.75	0.00	4933.95	0.322	0.01
146.00	0.00	4933.95	0.321	0.01
146.25	0.00	4933.95	0.321	0.01
146.50	0.00	4933.95	0.321	0.01
146.75	0.00	4933.95	0.321	0.01
147.00	0.00	4933.95	0.321	0.01
147.25	0.00	4933.95	0.320	0.01
147.50	0.00	4933.95	0.320	0.01
147.75	0.00	4933.95	0.320	0.01
148.00	0.00	4933.95	0.320	0.01
148.25	0.00	4933.95	0.320	0.01
148.50	0.00	4933.95	0.319	0.01
148.75	0.00	4933.94	0.319	0.01
149.00	0.00	4933.94	0.319	0.01
149.25	0.00	4933.94	0.319	0.01
149.50	0.00	4933.94	0.319	0.01
149.75	0.00	4933.94	0.318	0.01
150.00	0.00	4933.94	0.318	0.01
150.25	0.00	4933.94	0.318	0.01
150.50	0.00	4933.94	0.318	0.01
150.75	0.00	4933.94	0.318	0.01
151.00	0.00	4933.94	0.318	0.01
151.25	0.00	4933.94	0.317	0.01
151.50	0.00	4933.94	0.317	0.01
151.75	0.00	4933.94	0.317	0.01
152.00	0.00	4933.94	0.317	0.01
152.25	0.00	4933.94	0.317	0.01
152.50	0.00	4933.94	0.316	0.01
152.75	0.00	4933.94	0.316	0.01

153.00	0.00	4933.94	0.316	0.01
153.25	0.00	4933.94	0.316	0.01
153.50	0.00	4933.94	0.316	0.01
153.75	0.00	4933.94	0.315	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
154.00	0.00	4933.94	0.315	0.01
154.25	0.00	4933.94	0.315	0.01
154.50	0.00	4933.93	0.315	0.01
154.75	0.00	4933.93	0.315	0.01
155.00	0.00	4933.93	0.314	0.01
155.25	0.00	4933.93	0.314	0.01
155.50	0.00	4933.93	0.314	0.01
155.75	0.00	4933.93	0.314	0.01
156.00	0.00	4933.93	0.314	0.01
156.25	0.00	4933.93	0.314	0.01
156.50	0.00	4933.93	0.313	0.01
156.75	0.00	4933.93	0.313	0.01
157.00	0.00	4933.93	0.313	0.01
157.25	0.00	4933.93	0.313	0.01
157.50	0.00	4933.93	0.313	0.01
157.75	0.00	4933.93	0.312	0.01
158.00	0.00	4933.93	0.312	0.01
158.25	0.00	4933.93	0.312	0.01
158.50	0.00	4933.93	0.312	0.01
158.75	0.00	4933.93	0.312	0.01
159.00	0.00	4933.93	0.311	0.01
159.25	0.00	4933.93	0.311	0.01
159.50	0.00	4933.93	0.311	0.01
159.75	0.00	4933.93	0.311	0.01
160.00	0.00	4933.92	0.311	0.01
160.25	0.00	4933.92	0.311	0.01
160.50	0.00	4933.92	0.310	0.01
160.75	0.00	4933.92	0.310	0.01
161.00	0.00	4933.92	0.310	0.01
161.25	0.00	4933.92	0.310	0.01
161.50	0.00	4933.92	0.310	0.01
161.75	0.00	4933.92	0.309	0.01
162.00	0.00	4933.92	0.309	0.01

162.25	0.00	4933.92	0.309	0.01
162.50	0.00	4933.92	0.309	0.01
162.75	0.00	4933.92	0.309	0.01
163.00	0.00	4933.92	0.308	0.01
163.25	0.00	4933.92	0.308	0.01
163.50	0.00	4933.92	0.308	0.01
163.75	0.00	4933.92	0.308	0.01
164.00	0.00	4933.92	0.308	0.01
164.25	0.00	4933.92	0.308	0.01
164.50	0.00	4933.92	0.307	0.01
164.75	0.00	4933.92	0.307	0.01
165.00	0.00	4933.92	0.307	0.01
165.25	0.00	4933.92	0.307	0.01
165.50	0.00	4933.92	0.307	0.01
165.75	0.00	4933.91	0.306	0.01
166.00	0.00	4933.91	0.306	0.01
166.25	0.00	4933.91	0.306	0.01
166.50	0.00	4933.91	0.306	0.01
166.75	0.00	4933.91	0.306	0.01
167.00	0.00	4933.91	0.306	0.01
167.25	0.00	4933.91	0.305	0.01
167.50	0.00	4933.91	0.305	0.01
167.75	0.00	4933.91	0.305	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
168.00	0.00	4933.91	0.305	0.01
168.25	0.00	4933.91	0.305	0.01
168.50	0.00	4933.91	0.304	0.01
168.75	0.00	4933.91	0.304	0.01
169.00	0.00	4933.91	0.304	0.01
169.25	0.00	4933.91	0.304	0.01
169.50	0.00	4933.91	0.304	0.01
169.75	0.00	4933.91	0.304	0.01
170.00	0.00	4933.91	0.303	0.01
170.25	0.00	4933.91	0.303	0.01
170.50	0.00	4933.91	0.303	0.01
170.75	0.00	4933.91	0.303	0.01
171.00	0.00	4933.91	0.303	0.01
171.25	0.00	4933.91	0.302	0.01

171.50	0.00	4933.90	0.302	0.01
171.75	0.00	4933.90	0.302	0.01
172.00	0.00	4933.90	0.302	0.01
172.25	0.00	4933.90	0.302	0.01
172.50	0.00	4933.90	0.301	0.01
172.75	0.00	4933.90	0.301	0.01
173.00	0.00	4933.90	0.301	0.01
173.25	0.00	4933.90	0.301	0.01
173.50	0.00	4933.90	0.301	0.01
173.75	0.00	4933.90	0.301	0.01
174.00	0.00	4933.90	0.300	0.01
174.25	0.00	4933.90	0.300	0.01
174.50	0.00	4933.90	0.300	0.01
174.75	0.00	4933.90	0.300	0.01
175.00	0.00	4933.90	0.300	0.01
175.25	0.00	4933.90	0.300	0.01
175.50	0.00	4933.90	0.299	0.01
175.75	0.00	4933.90	0.299	0.01
176.00	0.00	4933.90	0.299	0.01
176.25	0.00	4933.90	0.299	0.01
176.50	0.00	4933.90	0.299	0.01
176.75	0.00	4933.90	0.298	0.01
177.00	0.00	4933.90	0.298	0.01
177.25	0.00	4933.90	0.298	0.01
177.50	0.00	4933.90	0.298	0.01
177.75	0.00	4933.89	0.298	0.01
178.00	0.00	4933.89	0.298	0.01
178.25	0.00	4933.89	0.297	0.01
178.50	0.00	4933.89	0.297	0.01
178.75	0.00	4933.89	0.297	0.01
179.00	0.00	4933.89	0.297	0.01
179.25	0.00	4933.89	0.297	0.01
179.50	0.00	4933.89	0.296	0.01
179.75	0.00	4933.89	0.296	0.01
180.00	0.00	4933.89	0.296	0.01
180.25	0.00	4933.89	0.296	0.01
180.50	0.00	4933.89	0.296	0.01
180.75	0.00	4933.89	0.296	0.01
181.00	0.00	4933.89	0.295	0.01
181.25	0.00	4933.89	0.295	0.01
181.50	0.00	4933.89	0.295	0.01

181.75	0.00	4933.89	0.295	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
182.00	0.00	4933.89	0.295	0.01
182.25	0.00	4933.89	0.294	0.01
182.50	0.00	4933.89	0.294	0.01
182.75	0.00	4933.89	0.294	0.01
183.00	0.00	4933.89	0.294	0.01
183.25	0.00	4933.89	0.294	0.01
183.50	0.00	4933.88	0.294	0.01
183.75	0.00	4933.88	0.293	0.01
184.00	0.00	4933.88	0.293	0.01
184.25	0.00	4933.88	0.293	0.01
184.50	0.00	4933.88	0.293	0.01
184.75	0.00	4933.88	0.293	0.01
185.00	0.00	4933.88	0.293	0.01
185.25	0.00	4933.88	0.292	0.01
185.50	0.00	4933.88	0.292	0.01
185.75	0.00	4933.88	0.292	0.01
186.00	0.00	4933.88	0.292	0.01
186.25	0.00	4933.88	0.292	0.01
186.50	0.00	4933.88	0.291	0.01
186.75	0.00	4933.88	0.291	0.01
187.00	0.00	4933.88	0.291	0.01
187.25	0.00	4933.88	0.291	0.01
187.50	0.00	4933.88	0.291	0.01
187.75	0.00	4933.88	0.291	0.01
188.00	0.00	4933.88	0.290	0.01
188.25	0.00	4933.88	0.290	0.01
188.50	0.00	4933.88	0.290	0.01
188.75	0.00	4933.88	0.290	0.01
189.00	0.00	4933.88	0.290	0.01
189.25	0.00	4933.88	0.290	0.01
189.50	0.00	4933.88	0.289	0.01
189.75	0.00	4933.87	0.289	0.01
190.00	0.00	4933.87	0.289	0.01
190.25	0.00	4933.87	0.289	0.01
190.50	0.00	4933.87	0.289	0.01
190.75	0.00	4933.87	0.289	0.01

191.00	0.00	4933.87	0.288	0.01
191.25	0.00	4933.87	0.288	0.01
191.50	0.00	4933.87	0.288	0.01
191.75	0.00	4933.87	0.288	0.01
192.00	0.00	4933.87	0.288	0.01
192.25	0.00	4933.87	0.287	0.01
192.50	0.00	4933.87	0.287	0.01
192.75	0.00	4933.87	0.287	0.01
193.00	0.00	4933.87	0.287	0.01
193.25	0.00	4933.87	0.287	0.01
193.50	0.00	4933.87	0.287	0.01
193.75	0.00	4933.87	0.286	0.01
194.00	0.00	4933.87	0.286	0.01
194.25	0.00	4933.87	0.286	0.01
194.50	0.00	4933.87	0.286	0.01
194.75	0.00	4933.87	0.286	0.01
195.00	0.00	4933.87	0.286	0.01
195.25	0.00	4933.87	0.285	0.01
195.50	0.00	4933.87	0.285	0.01
195.75	0.00	4933.86	0.285	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
196.00	0.00	4933.86	0.285	0.01
196.25	0.00	4933.86	0.285	0.01
196.50	0.00	4933.86	0.285	0.01
196.75	0.00	4933.86	0.284	0.01
197.00	0.00	4933.86	0.284	0.01
197.25	0.00	4933.86	0.284	0.01
197.50	0.00	4933.86	0.284	0.01
197.75	0.00	4933.86	0.284	0.01
198.00	0.00	4933.86	0.284	0.01
198.25	0.00	4933.86	0.283	0.01
198.50	0.00	4933.86	0.283	0.01
198.75	0.00	4933.86	0.283	0.01
199.00	0.00	4933.86	0.283	0.01
199.25	0.00	4933.86	0.283	0.01
199.50	0.00	4933.86	0.283	0.01
199.75	0.00	4933.86	0.282	0.01

PEAK DISCHARGE = 1.852 CFS - PEAK OCCURS AT HOUR 2.45

MAXIMUM WATER SURFACE ELEVATION = 4937.381

MAXIMUM STORAGE = 2.2379 AC-FT INCREMENTAL TIME= 0.050000HRS

*

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*

COMPUTE NM HYD ID=5 HYD=A DA=0.000885059

A B C D 0 0 2 98

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 3.4244 CFS UNIT VOLUME = 0.9959 B = 526.28 P60 = 2.0100

AREA = 0.000867 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 0.50931E-01CFS UNIT VOLUME = 0.8888 B = 383.54 P60 = 2.0100

AREA = 0.000018 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=5 CODE=1

HYDROGRAPH FROM AREA A

RUNOFF VOLUME = 2.72715 INCHES = 0.1287 ACRE-FEET

PEAK DISCHARGE RATE = 2.99 CFS AT 1.500 HOURS BASIN AREA = 0.0009 SQ. MI.

*

COMPUTE NM HYD ID=6 HYD=B DA=0.000822449

A B C D 0 0 2 98

TP=0.13330 MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 3.1821 CFS UNIT VOLUME = 0.9959 B = 526.28 P60 = 2.0100

AREA = 0.000806 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE CONSTANT, N = 4.440407

UNIT PEAK = 0.47328E-01CFS UNIT VOLUME = 0.8888 B = 383.54 P60 = 2.0100

AREA = 0.000016 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.10000 AT PEAK FLOW.

PRINT HYD ID=6 CODE=1

HYDROGRAPH FROM AREA B

RUNOFF VOLUME = 2.72715 INCHES = 0.1196 ACRE-FEET
PEAK DISCHARGE RATE = 2.78 CFS AT 1.500 HOURS BASIN AREA = 0.0008 SQ. MI.

*

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 11:34:21

APPENDIX D

APPENDIX D HYDROLOGY WORKSHEETS

Appendix D Table of Contents

SUMMARY OF HYDROLOGY AND HYDRAULIC CALCULATIONS

Hydrology

The computer program AHYMO was utilized to calculate storm water runoff volumes and flow rates for the 100-year 24 hour event, consistent with the preliminary drainage report (PDR). The AHYMO model varies from the AHYMO model from the PDR due to an increase on the number of sub basins as a result of roadway geometry and placement of drop inlets.

Hydraulics

This project utilizes both NMDOT and COA standard drawings. The portion of this project which utilizes NMDOT items is east of Broadway Boulevard consisting of Sunport Boulevard while the portion utilizing COA items consists of Broadway Boulevard and Woodward Road.

Drop Inlet Calculations

The computer program Hydraflow Express which is an extension of AutoCAD Civil 3D was utilized to determine inlet capacities. A number of inputs specific to the type of drop inlet were input into the program to determine inlet capacities including but not limited to the inlet type, sag or grade location, length, throat height, grate width, local depression, and cross slopes.

Sunport Boulevard generally consists of slopes between 4% and 6.5%. Spread did not appear to be an issue with the utilization of the single Type I inlets, as the spread did not appear to approach 1 driving lane in width. Bypass however, did appear to be an issue. Therefore, double Type II drop inlets were chosen as they allowed for higher efficiency than the Type I drop inlets.

Woodward Road and Broadway Boulevard have minimal longitudinal slope. The storm sewer lines as part of this project generally have a slope of 0.1% with minimal cover to allow for discharge to the detention pond southeast of the Broadway/Sunport intersection. Due to the shallow slopes and backwater effects from the pond once it is full, velocities are expected to be minimal during high precipitation events. Therefore, COA Type C grate only drop inlets are proposed for this portion of the project. The thought is that drop inlets which utilize the grate opening as well as the curb opening may allow for larger debris to enter the storm sewer system in this area that most likely would not have the velocities to effectively remove that debris.

The results of these computations can be found within Appendix D including a graphical representation of the spread and a tabular results showing the efficiency of the inlet for discharge in increments of 0.25 cfs. It should be noted that spread is limited to less than 1 driving lane throughout the project.

Storm Sewer Calculations

The computer program Autodesk Storm and Sanitary Analysis 2018 (SSA) was utilized to model flows within the storm sewer system. It was determined that the storm sewer system within

Broadway Boulevard discharging into the detention pond would require modeling of backwater effects and surcharging due to the system configuration. SSA was determined to have the ability to model what was necessary for this type of system.

In order to run the program effectively to model the necessary components of the system, many program components were created with a number of inputs. These components included rain gages (precipitation data), subbasins, inlets, conveyance links (pipes), and Storage Nodes (detention pond). Below is a brief summary of each of these components:

- Precipitation data from AHYMO was input into SSA in tabular form using cumulative precipitation values versus time in 3 minute increments for the 24 hour duration.
- Subbasins were modeled based on the areas from AutoCAD Civil 3D and the loss factors from AHYMO. Average slopes of each of the basins were input including an equivalent length of the basin. The AHYMO model created for the PDR utilized time of concentration values of approximately 12 minutes, which was utilized in the AHYMO model created for this analysis. Equivalent lengths of the sub basins were input to create a time of concentration of approximately 12 minutes to be consistent with the AHYMO models.
- Inlets were utilized to capture the stormwater runoff within each subbasin and direct that flow to the conveyance links (storm sewer pipes). Inlet calculations were performed in Hydraflow Express.
- Conveyance links were created to connect the inlets as they do within the plans. Input information including pipe sizes, materials, and invert elevations were assigned to each conveyance link. Junctions (manholes) were utilized as shown on the plans.
- Storage Nodes utilized the storage, elevation, discharge data used within the AHYMO model.

It should be noted that it is difficult to get the same hydrology results among different softwares due to varying inputs and factors within the programs. With this analysis, SSA produced stormwater runoff volumes that were virtually identical to the stormwater runoff volumes from AHYMO. However, the peak runoff values were fairly different. On average, the 100-year 24 hour peak discharges from SSA were approximately 20% higher than the discharges from AHYMO.

Despite AHYMO being the preferred computational program, the results of the SSA model were utilized to size the storm sewer lines. The AHYMO discharges were utilized in the inlet calculations and are shown on the design plans. The Hydraulic Grade Lines (HGL) calculated within the SSA model will be shown on the design plans with the AHYMO discharges.

The results of the analysis including HGL and drop inlet graphical results and tabular results can be found within this Appendix.

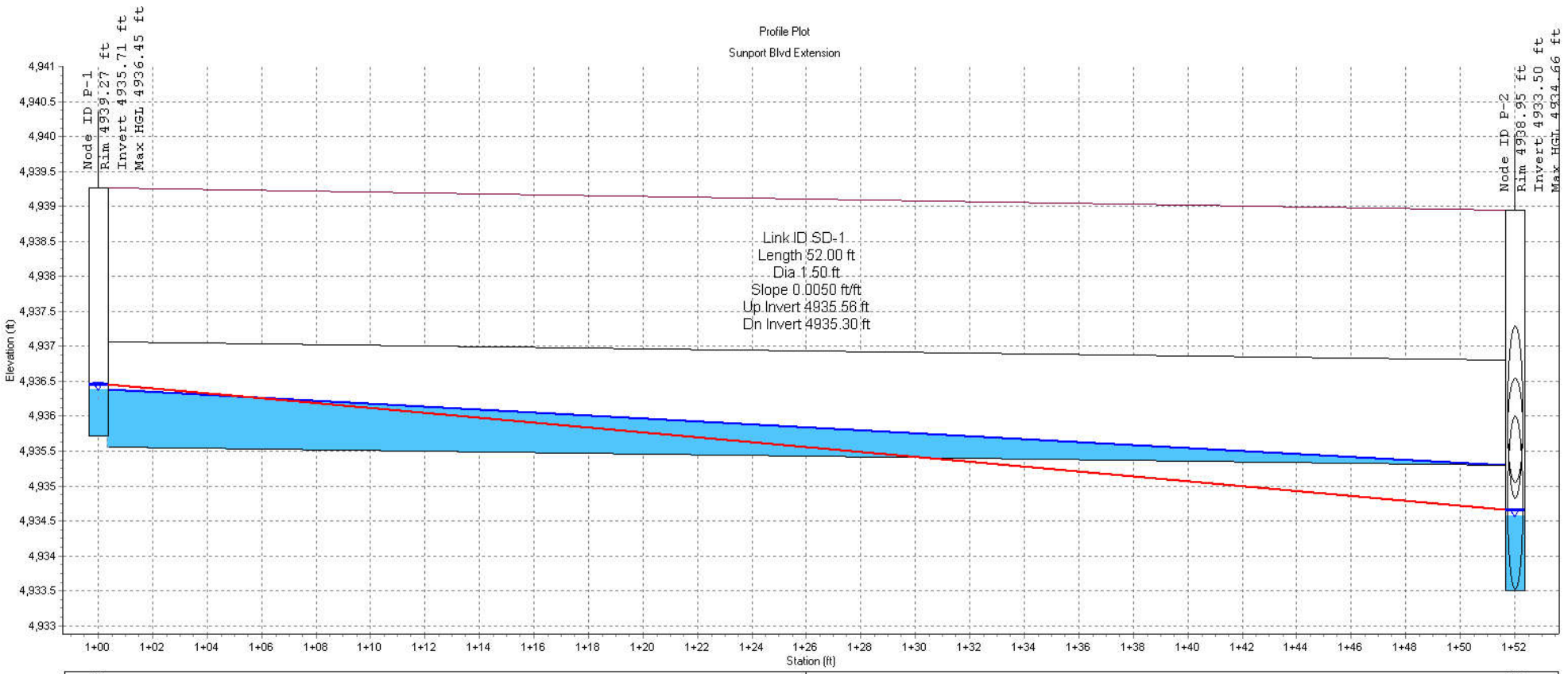
			Land Type			
ID	HYD	DA (sq miles)	A(ng)	B	C (comp)	D (imp)
1	Basin XF	0.003793941	70	0	20	10
2	Basin XE1	0.001711433		0	85	15
3	XF_XE1					
4	Basin XE2	0.003900009	86	0	14	0
5	WQPondInE(XE2_XF_XE1)					
6	Basin H3	0.000283628	0	0	0	100
7	Basin H4	0.001221371	0	0	0	100
8	H3_H4					
9	Basin I3	0.001308852	0	0	0	100
10	I3_H3_H4					
11	Basin I4	0.000589138	0	0	0	100
12	WQPondInS(I4_I3_H3_H4)					
13	WQPondIn(I4_I3_H3_H4_XE2_XF_XE1)					
14	WQPondOut					
15	Basin XD1	0.004114763	67	0	4	29
16	Basin M1	0.001151178	0	0	25	75
17	XD1_M1					
18	Basin XM1	0.001622726	0	0	53	47
19	XM1_XD1_M1					
20	Basin M2	0.000886098	0	0	7	93
1	M2_XM1_XD1_M1					
2	Basin N	0.003617819	15	0	85	0
3	N_M2_XM1_XD1_M2					
4	Basin I1	0.000621979	0	0	0	100
5	Basin I2	0.000247657	0	0	0	100
6	I2_I1					
7	Basin H2	0.000540774	0	0	0	100
8	H2_I2_I1					
9	Basin H1	0.000254482	0	0	0	100
10	H1_H2_I2_I1					
11	Basin H	0.000663978	0	0	0	100
12	H_H1_H2_I2_I1					
13	Basin I	0.000641823	0	0	0	100
14	I_H_H1_H2_I2_I1					
21	DetPondInE(N_M2_XM1_XD1_M2_I_H_H1_H2_I2_I1)					
16	Basin P	0.000468872	0	0	10	90
17	Basin S	0.000444064	0	0	10	90
18	S_P					
19	Basin P1	0.000967237	0	0	10	90
20	Basin S1	0.000578041	0	0	10	90
1	S1_P1					
2	S1_P1_S_P					
3	Basin T	0.001721835	90	0	10	0
4	T_S1_P1_S_P					
5	Basin Q1	0.000194272	0	0	10	90
6	Basin R1	0.000302584	0	0	10	90
7	Q1_R1					
8	Basin Q	0.000793384	0	0	8	92
9	Basin R	0.000582811	0	0	10	90
10	Q_R					
11	Q_R_Q1_R1					
12	Q_R_Q1_R1_T_S1_P1_S_P					
13	Basin D	0.000317857	0	0	0	100
14	Basin C	0.00037726	0	0	0	100
15	D_C					
16	D_C_Q_R_Q1_R1S1_P1_S_P					
17	Basin G1	0.001350527	0	0	0	100
18	Basin G	0.001068715	0	0	0	100
19	G1_G					
20	DetPondInW(G1_G_D_C_Q_R_Q1_R1S1_P1_S_P)					
1	DetPondInSS(G1_G_D_C_Q_R_Q1_R1S1_P1_S_P_N_M2_XM1_XD1_M2_I_H_H1_H2_I2_I1)					
2	Basin XJ	0.009900676	63	0	37	0
3	DetPondIn(XJ_G1_G_D_C_Q_R_Q1_R1S1_P1_S_P_N_M2_XM1_XD1_M2_I_H_H1_H2_I2_I1)					
4	DetPondOut					
5	Basin A	0.000885059	0	0	2	98
6	Basin B	0.000822449	0	0	2	98

Subbasin hydrology Results										
Hydrograph Identification	Area (ac)	Area (sq mi)	Q100 Peak Discharge, AHYMO (cfs)	Runoff Volume, AHYMO (ac-ft)	SSA Q Peak Discharge(cfs)	SSA Runoff (ac-ft)	Q ssa - Q ahymo	V ssa- V ahymo	Q ssa/Qahymo	V ssa vs V ahymo
Basin A	0.5696	0.00089	2.99	0.129	3.69	0.130	0.70	0.00	1.23	1.01
Basin B	0.5248	0.00082	2.78	0.12	3.41	0.120	0.63	(0.00)	1.23	1.00
Basin C	0.2432	0.00038	1.29	0.055	1.57	0.056	0.28	0.00	1.22	1.01
Basin D	0.2048	0.00032	1.09	0.047	1.33	0.047	0.24	(0.00)	1.22	1.00
Basin G	0.6848	0.00107	3.63	0.157	4.44	0.157	0.81	(0.00)	1.22	1.00
Basin G1	0.864	0.00135	4.58	0.198	5.6	0.197	1.02	(0.00)	1.22	1.00
Basin H	0.4224	0.00066	2.26	0.098	2.73	0.097	0.47	(0.00)	1.21	0.99
Basin H1	0.16	0.00025	0.87	0.037	1.04	0.037	0.17	(0.00)	1.20	0.99
Basin H2	0.3456	0.00054	1.84	0.079	2.24	0.079	0.40	(0.00)	1.22	1.00
Basin H3	0.1792	0.00028	0.97	0.042	1.16	0.041	0.19	(0.00)	1.20	0.97
Basin H4	0.7808	0.00122	4.14	0.18	5.02	0.179	0.88	(0.00)	1.21	0.99
Basin I	0.4096	0.00064	2.18	0.094	2.66	0.094	0.48	(0.00)	1.22	1.00
Basin I1	0.3968	0.00062	2.11	0.091	2.58	0.091	0.47	(0.00)	1.22	1.00
Basin I2	0.16	0.00025	0.85	0.036	1.04	0.037	0.19	0.00	1.22	1.02
Basin I3	0.8384	0.00131	4.44	0.192	5.42	0.192	0.98	(0.00)	1.22	1.00
Basin I4	0.3776	0.00059	2.01	0.087	2.45	0.086	0.44	(0.00)	1.22	0.99
Basin M1	0.736	0.00115	3.63	0.147	4.39	0.153	0.76	0.01	1.21	1.04
Basin M2	0.5696	0.00089	2.96	0.126	3.7	0.130	0.74	0.00	1.25	1.03
Basin N	2.3168	0.00362	8.11	0.239	8.57	0.315	0.46	0.08	1.06	1.32
Basin P	0.3008	0.00047	1.6	0.069	1.94	0.069	0.34	(0.00)	1.21	1.00
Basin P1	0.6208	0.00097	3.2	0.135	4.03	0.142	0.83	0.01	1.26	1.05
Basin Q	0.5056	0.00079	2.65	0.112	3.28	0.116	0.63	0.00	1.24	1.03
Basin Q1	0.1216	0.00019	0.65	0.027	0.79	0.028	0.14	0.00	1.22	1.03
Basin R	0.3712	0.00058	1.94	0.081	2.41	0.085	0.47	0.00	1.24	1.05
Basin R1	0.3712	0.00058	1.94	0.081	2.41	0.085	0.47	0.00	1.24	1.05
Basin S	0.2816	0.00044	1.51	0.065	1.82	0.064	0.31	(0.00)	1.21	0.99
Basin S1	0.3712	0.00058	1.92	0.081	2.41	0.085	0.49	0.00	1.26	1.05
Basin T	1.1008	0.00172	2.78	0.092	2.95	0.128	0.17	0.04	1.06	1.39
Basin XD1	2.6304	0.00411	8.31	0.306	8.22	0.353	(0.09)	0.05	0.99	1.15
Basin XE1	1.0944	0.00171	4.38	0.141	4.28	0.165	(0.10)	0.02	0.98	1.17
Basin XE2	2.496	0.0039	6.04	0.183	7.79	0.335	1.75	0.15	1.29	1.83
Basin XF	2.4256	0.00379	6.8	0.222	7.56	0.326	0.76	0.10	1.11	1.47
Basin XJ	6.336	0.0099	17.31	0.519	19.72	0.851	2.41	0.33	1.14	1.64
Basin XM1	1.0368	0.00162	4.67	0.173	4.68	0.182	0.01	0.01	1.00	1.05

Detention Pond (Southeast of Broadway/Sunport intersection						
Elevation (ft)	**Depth (ft)**	**Storage (cf)**	**Storage (ac-ft)**	**Q (cfs) 2"x18" slot**	**Q (cfs) grate**	**Q(cfs)**
4933.2	0		0	0.0	0.0	0.0
4934	0.8	14921.9	0.3425597	0.0	0.0	0.0
4935	1.8	35976.126	0.8258982	0.2	0.0	0.2
4936	2.8	60124.547	1.3802697	1.2	0.0	1.2
4937	3.8	86315.716	1.9815362	1.7	0.0	1.7
4938	4.8	115742.16	2.6570744	2.1	0.0	2.1
4939	5.8	148591.42	3.4111896	2.4	22.1	24.5
4940	6.8	185021.82	4.2475165	2.7	62.5	65.2
4941	7.8	225178.7	5.1693917	2.9	114.8	117.8

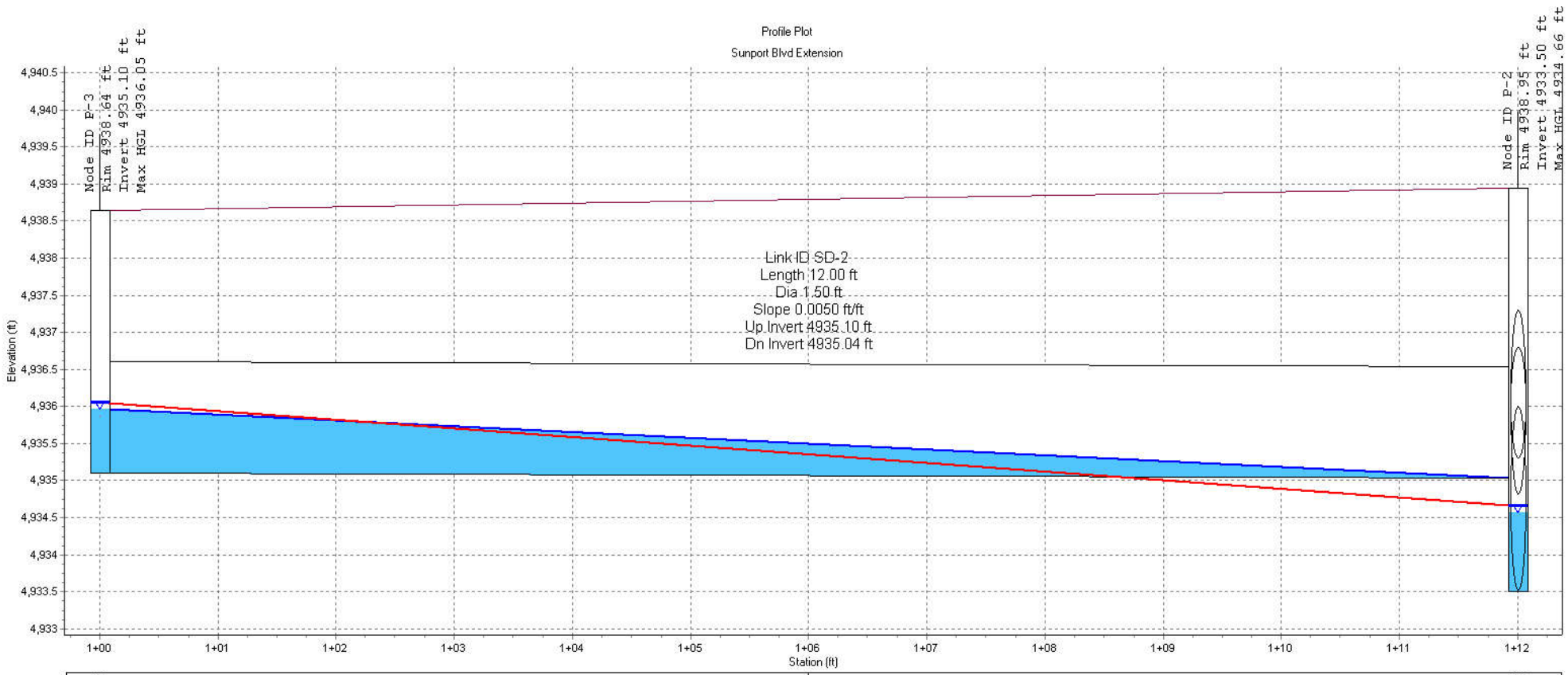
Water Quality Basin						
Elevation (ft)	**Depth (ft)**	**Storage (cf)**	**Storage (ac-ft)**	**Q (cfs) 6" PVC reverse slope pipes**	**Q(cfs) spillway**	**Q(cfs) Total**
5000.4	0	0	0.00	0.00	0	0.0
5001	0.6	1,418	0.03	0.00	0	0.0
5002	1.6	4,354	0.10	0.00	0	0.0
5003	2.6	8,121	0.19	0.05	0	0.1
5004	3.6	12,798	0.29	3.86	0	3.9
5005	4.6	21,787	0.50	4.79	66	70.3
5006	5.6	31,789	0.73	5.56	234	239.3
5007	6.6	42,676	0.98	6.24	518	524.6


4' MH
SD-37
SD-36
COA SINGLE TYPE C (GRATE)
COA SINGLE TYPE C (GRATE)
BASIN F1 6,434 SF
BASIN G1 5,416 SF
MAINTENANCE BOUNDARY WEST= COA EAST= COUNTY
SD-35
BASIN G 22,194 sf
BASIN M 16,025 sf
4' MH
SD-33
SD-34
COA DOUBLE TYPE C(GRATE)
COA SINGLE TYPE C (GRATE)
COA DOUBLE TYPE C (GRATE)
NMDOT II-B
SD-9
SD-6
BASIN B 22,928 sf
BASIN A 24,674 sf
6' MH
SD-1
EX-SAN JOSE
SD-2
SD-3
6' MH
BASIN D 10,949 SF
NMDOT II-B
G1-C
SD-10
BASIN G1 37,651 SF
NMDOT II-B
NMDOT-II-B
BASIN C 8,452 SF
SD-7
SD-4
SD-11
4' MH
BASIN G 29,794 SF
POND OUTLET-MH SD-13
EXISTING 30"-STORM SEWER OUTFALL TO SAN JOSE DRAIN
COA DOUBLE-TYPE C(GRATE)
8' MH
8' MH
8' MH
SD-31A
SD-5
SD-8
SD-12
COA MODIFIED INLET TYPE D
BOTTOM ELEV 4933.2 AREA = 21,194 SF
SD-14
SD-32
BASIN T 48,002 SF
COA SINGLE TYPE C(GRATE)
COA 1-DOUBLE TYPE C, 1-SINGLE TYPE C (GRATE)
6' MH
BASIN G2 21,194 SF
BASIN F2 26,808 SF
SD-31
SD-29
4' MH
SD-30
COA SINGLE TYPE C (GRATE)
COA SINGLE TYPE C (GRATE)
BASIN P 6,072 SF
BASIN S 14,286 SF
BASIN M1 32,093 SF
M1-M2
M2-N
BASIN M2 24,703 SF
BASIN XM1 45,239 SF
SD-15
6' MH
SD-16
NMDOT II-D
BASIN N 100,859 SF
NMDOT-MEDIAN DI
BASIN I 17,613 SF
NMDOT-II-D
BASIN XD1 114,713 SF
SD-21
SD-20
BASIN H 18,511 SF
SD-19
SD-17
NMDOT II-A
SD-18
NMDOT-MEDIAN DI
NMDOT-II-A
BASIN H2 15,076 SF
BASIN H1 7,095 SF
BASIN I2 5,960 SF
BASIN I1 17,340 SF
SD-24
SD-23
SD-25
8' MH
SD-26
8' MH
SD-27
8' MH
SD-28
8' MH
SD-22
NMDOT-II-A
NMDOT II-A
NMDOT MEDIAN DI
BASIN XE1 47,712 SF
BASIN I3 36,489 SF
BASIN I4 16,425 SF
BASIN H3 7,907 SF
BASIN H4 34,050 SF
SD-21A
NMDOT-MEDIAN DI
BASIN XJ 276,015 SF
BASIN XE2 109,725 SF
BASIN XF 105,769 SF
N
0' 20' 50' 100' 200'
1"=100'-0"



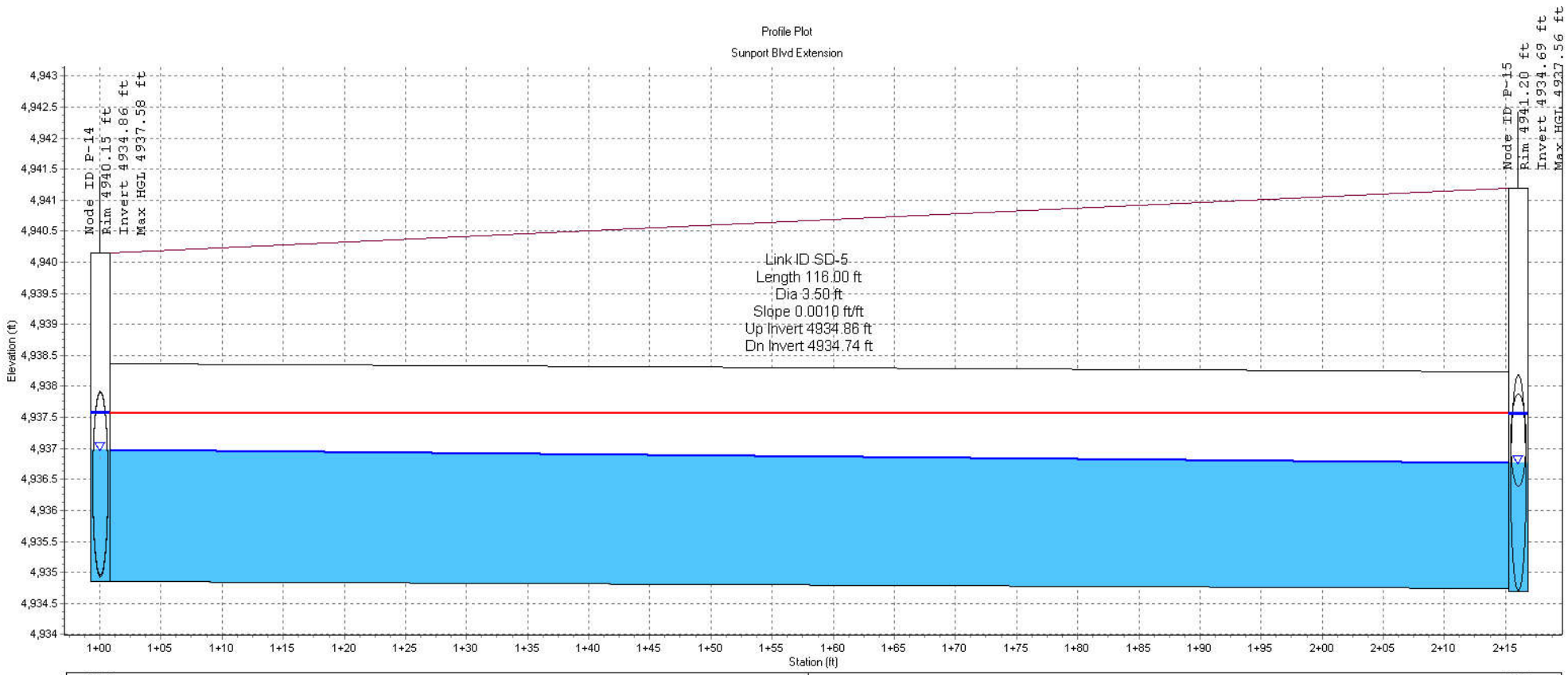
Node ID:	P-1	P-2
Rim (ft):	4939.27	4938.95
Invert (ft):	4935.71	4933.50
Min Pipe Cover (ft):		1.65
Max HGL (ft):	4936.45	4934.66

Link ID:	SD-1
Length (ft):	52.00
Dia (ft):	1.50
Slope (ft/ft):	0.0050
Up Invert (ft):	4935.56
Dn Invert (ft):	4935.30
Max Q (cfs):	3.39
Max Vel (ft/s):	4.35
Max Depth (ft):	0.68

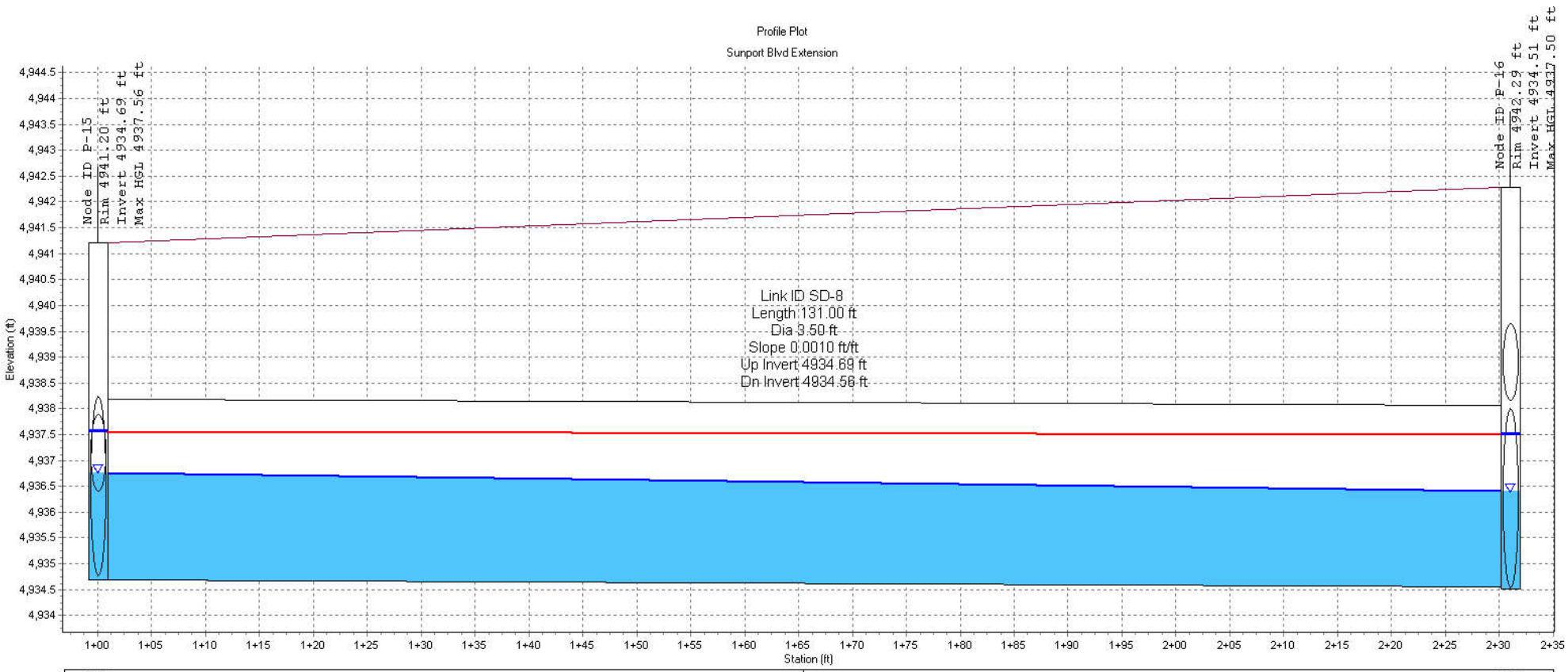


Node ID:	P-3		P-2
Rim (ft):	4938.64		4938.95
Invert (ft):	4935.10		4933.50
Min Pipe Cover (ft):			1.65
Max HGL (ft):	4936.05		4934.66

Link ID:	SD-2
Length (ft):	12.00
Dia (ft):	1.50
Slope (ft/ft):	0.0050
Up Invert (ft):	4935.10
Dn Invert (ft):	4935.04
Max Q (cfs):	3.68
Max Vel (ft/s):	3.60
Max Depth (ft):	0.84

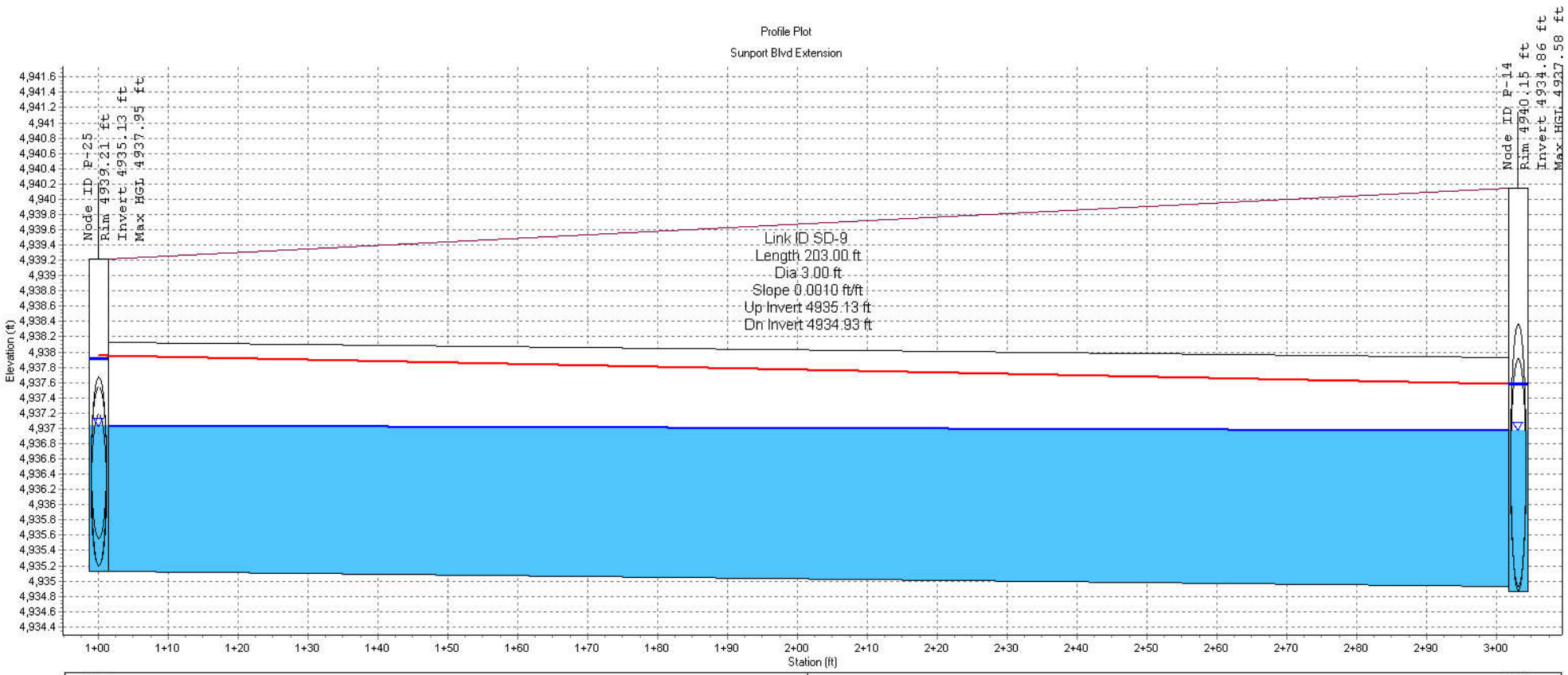


Node ID:	P-14	P-15
Rim (ft):	4940.15	4941.20
Invert (ft):	4934.86	4934.69
Min Pipe Cover (ft):	1.79	2.96
Max HGL (ft):	4937.58	4937.56
Link ID:	SD-5	
Length (ft):	116.00	
Dia (ft):	3.50	
Slope (ft/ft):	0.0010	
Up Invert (ft):	4934.86	
Dn Invert (ft):	4934.74	
Max Q (cfs):	16.87	
Max Vel (ft/s):	2.87	
Max Depth (ft):	2.77	



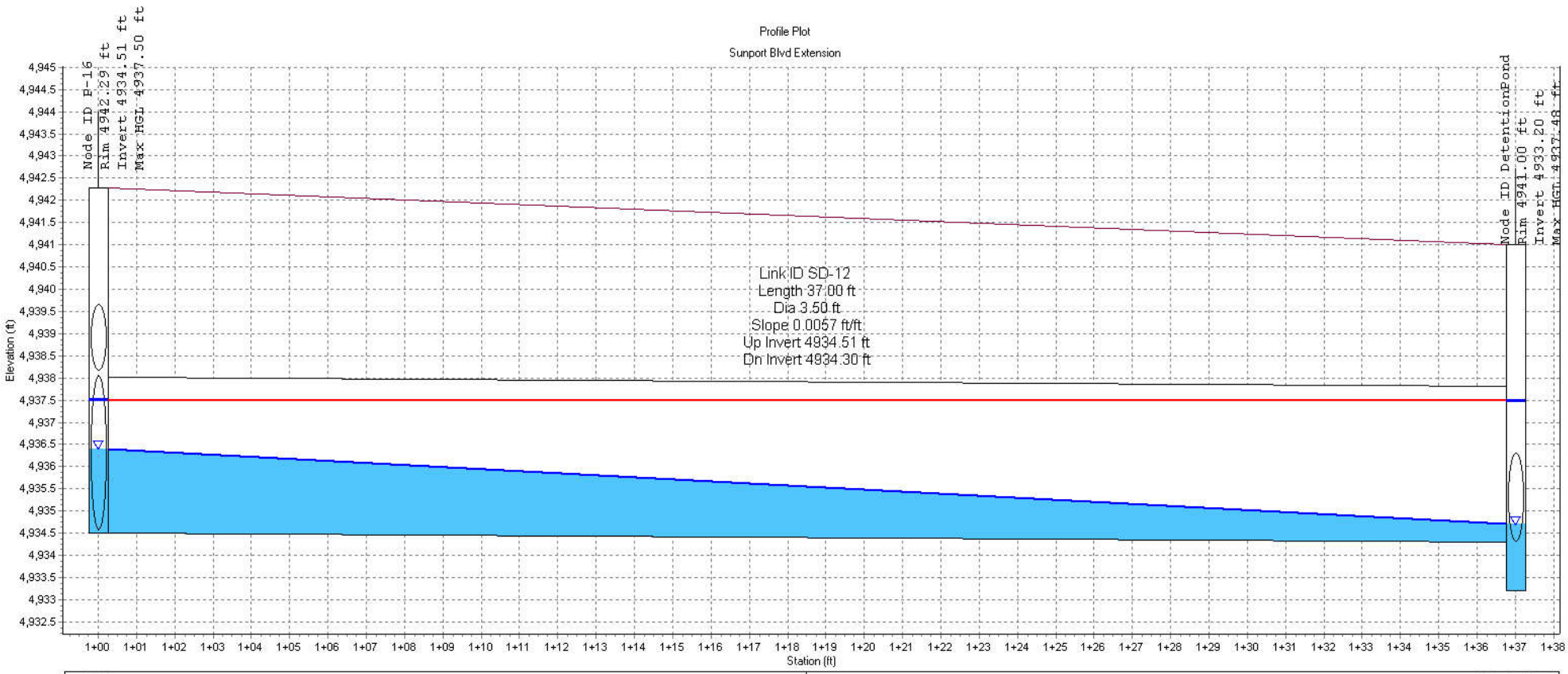
Node ID:	P-15	P-16
Rim (ft):	4941.20	4942.29
Invert (ft):	4934.69	4934.51
Min Pipe Cover (ft):	2.96	2.64
Max HGL (ft):	4937.56	4937.50

Link ID:	SD-8
Length (ft):	131.00
Dia (ft):	3.50
Slope (ft/ft):	0.0010
Up Invert (ft):	4934.69
Dn Invert (ft):	4934.56
Max Q (cfs):	19.28
Max Vel (ft/s):	3.57
Max Depth (ft):	2.90



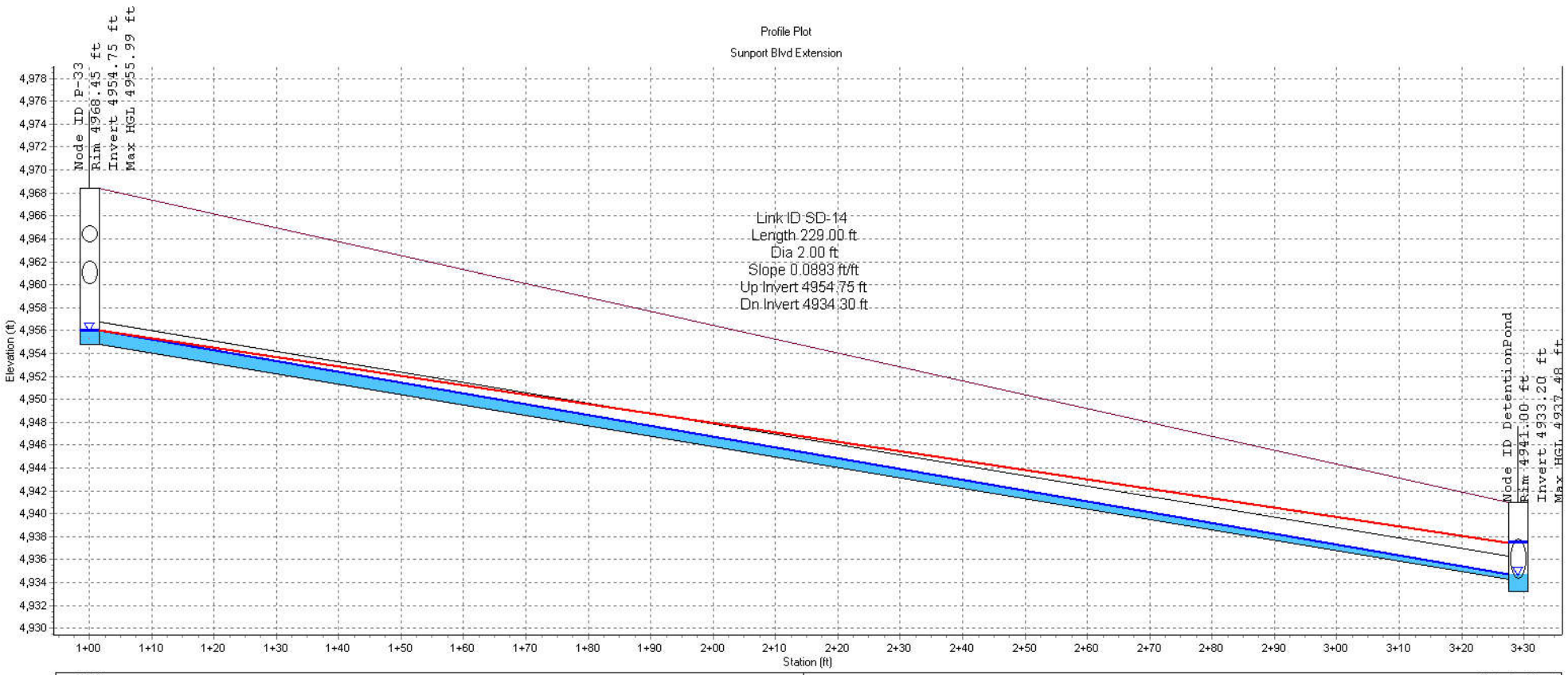
Node ID:	P-25	P-14
Rim (ft):	4939.21	4940.15
Invert (ft):	4935.13	4934.86
Min Pipe Cover (ft):	1.08	1.79
Max HGL (ft):	4937.95	4937.58

Link ID:	SD-9
Length (ft):	203.00
Dia (ft):	3.00
Slope (ft/ft):	0.0010
Up Invert (ft):	4935.13
Dn Invert (ft):	4934.93
Max Q (cfs):	8.10
Max Vel (ft/s):	1.85
Max Depth (ft):	2.67

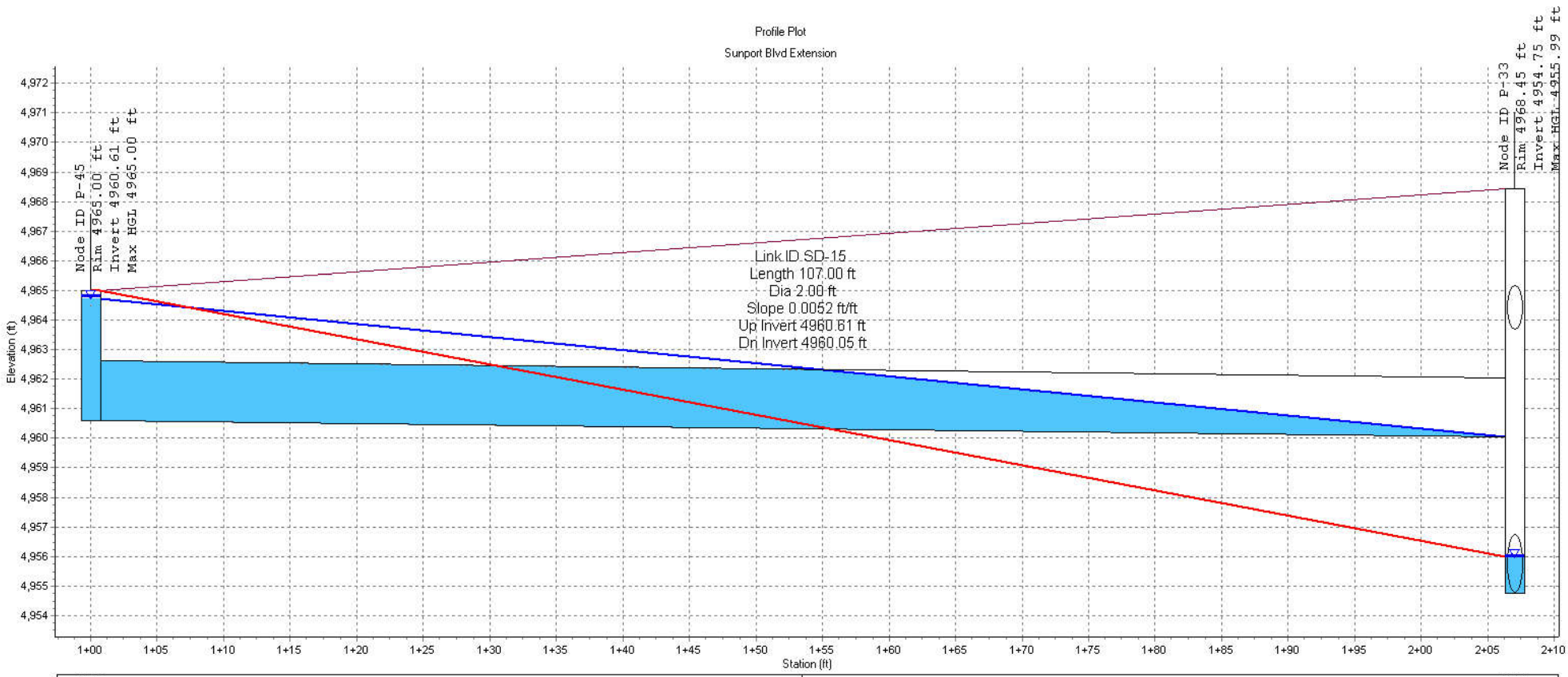


Node ID:	P-16	DetentionPond
Rim (ft):	4942.29	4941.00
Invert (ft):	4934.51	4933.20
Min Pipe Cover (ft):	2.64	
Max HGL (ft):	4937.50	4937.48

Link ID:	SD-12
Length (ft):	37.00
Dia (ft):	3.50
Slope (ft/ft):	0.0057
Up Invert (ft):	4934.51
Dn Invert (ft):	4934.30
Max Q (cfs):	27.27
Max Vel (ft/s):	6.01
Max Depth (ft):	3.08

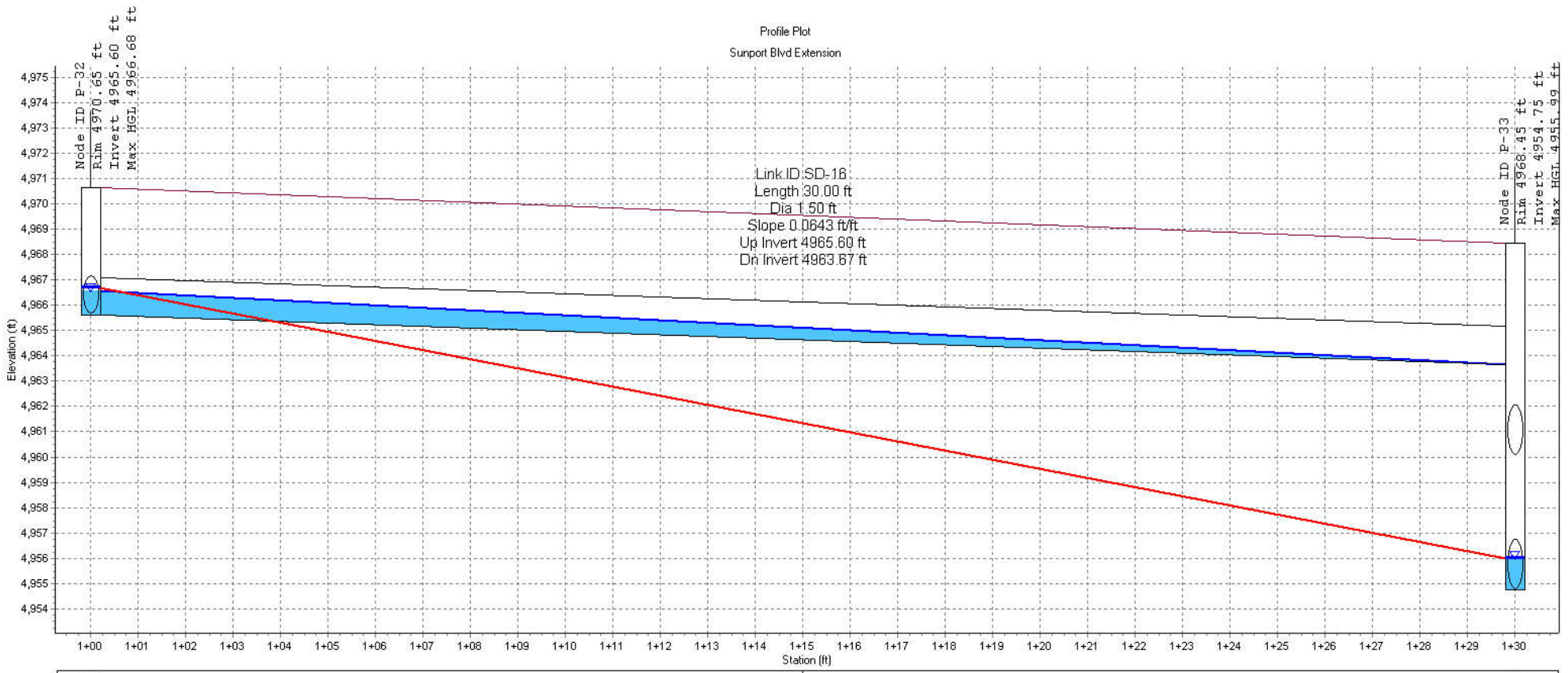


Node ID:	P-33		DetentionPond
Rim (ft):	4968.45		4941.00
Invert (ft):	4954.75		4933.20
Min Pipe Cover (ft):	3.28		
Max HGL (ft):	4955.99		4937.48
Link ID:		SD-14	
Length (ft):		229.00	
Dia (ft):		2.00	
Slope (ft/ft):		0.0893	
Up Invert (ft):		4954.75	
Dn Invert (ft):		4934.30	
Max Q (cfs):		38.61	
Max Vel (ft/s):		20.50	
Max Depth (ft):		1.18	

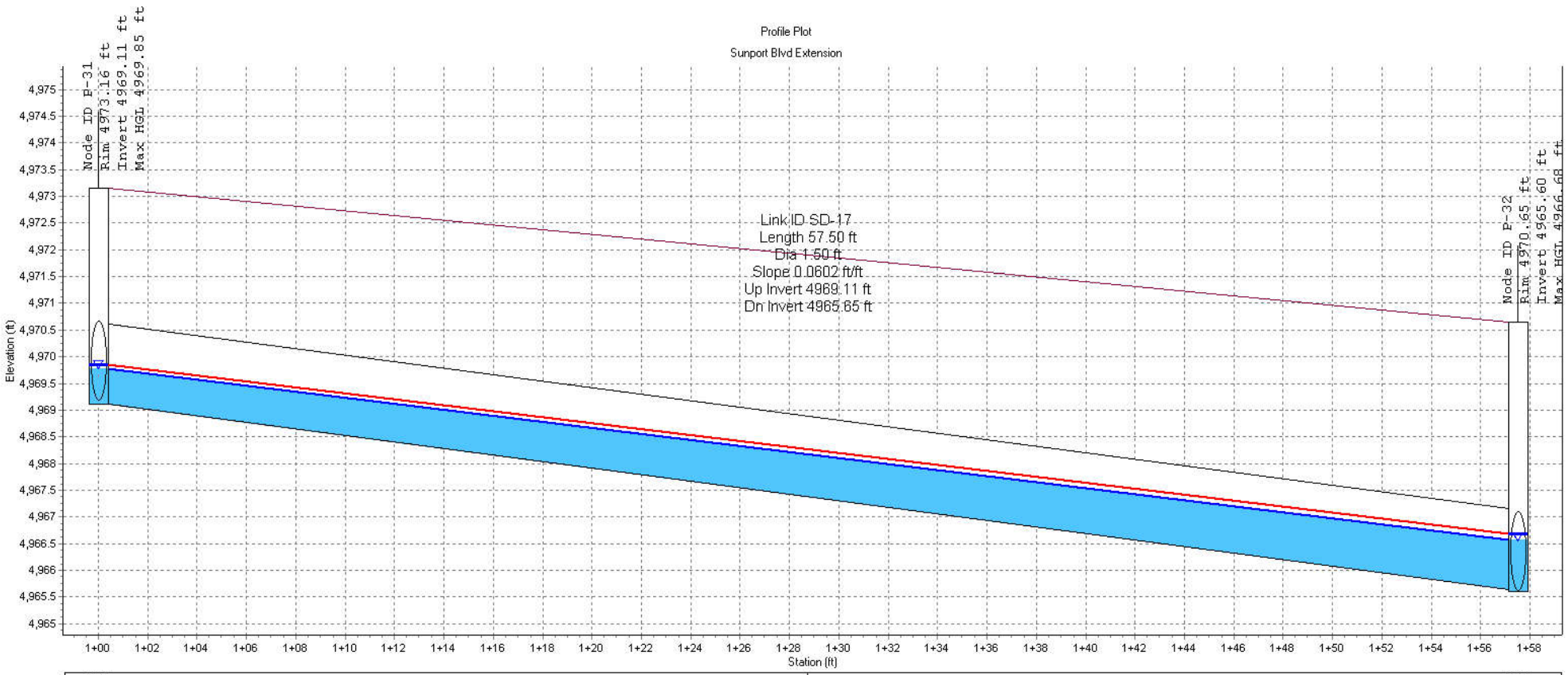


Node ID:	P-45	P-33
Rim (ft):	4965.00	4968.45
Invert (ft):	4960.61	4954.75
Min Pipe Cover (ft):	2.39	3.28
Max HGL (ft):	4965.00	4955.99

Link ID:	SD-15
Length (ft):	107.00
Dia (ft):	2.00
Slope (ft/ft):	0.0052
Up Invert (ft):	4960.61
Dn Invert (ft):	4960.05
Max Q (cfs):	28.17
Max Vel (ft/s):	9.10
Max Depth (ft):	1.91

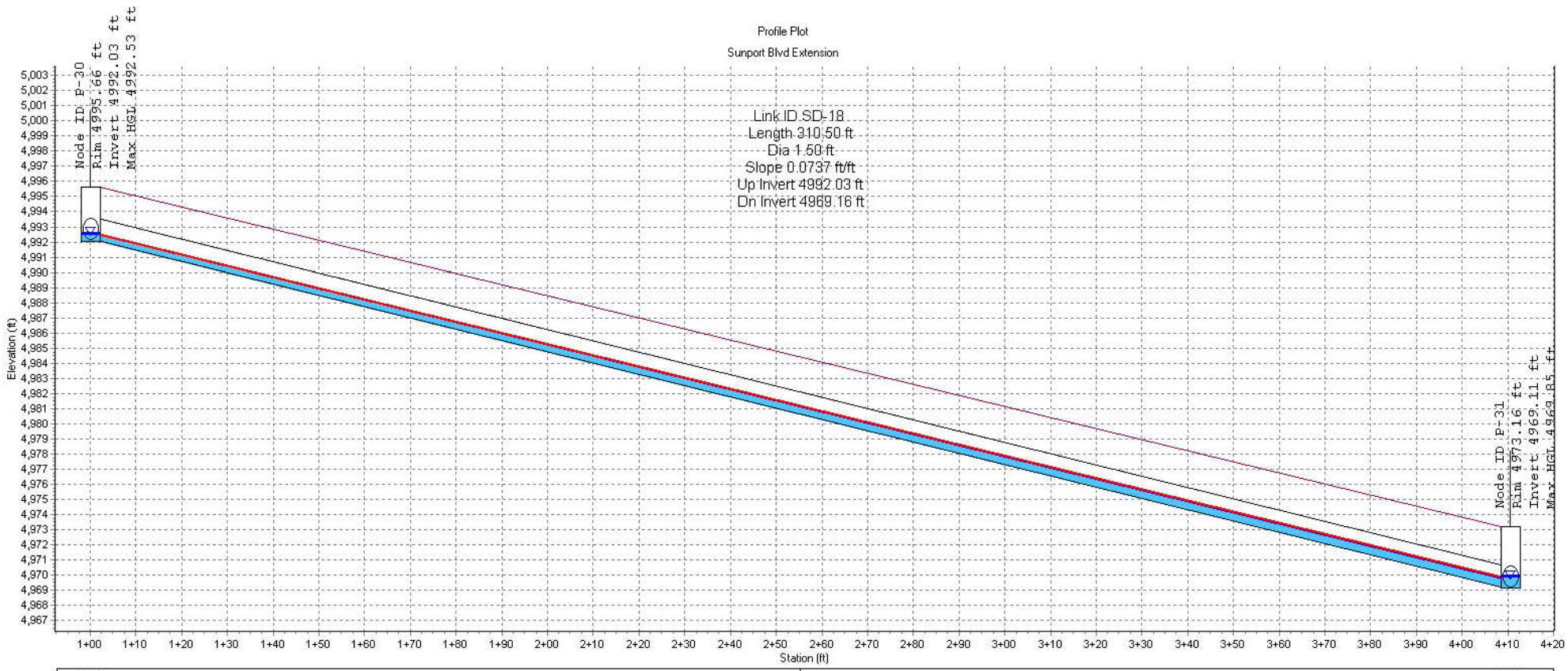


Node ID:	P-32		P-33
Rim (ft):	4970.65		4968.45
Invert (ft):	4965.60		4954.75
Min Pipe Cover (ft):			3.28
Max HGL (ft):	4966.68		4955.99
Link ID:		SD-16	
Length (ft):		30.00	
Dia (ft):		1.50	
Slope (ft/ft):		0.0643	
Up Invert (ft):		4965.60	
Dn Invert (ft):		4963.67	
Max Q (cfs):		12.14	
Max Vel (ft/s):		11.05	
Max Depth (ft):		0.89	



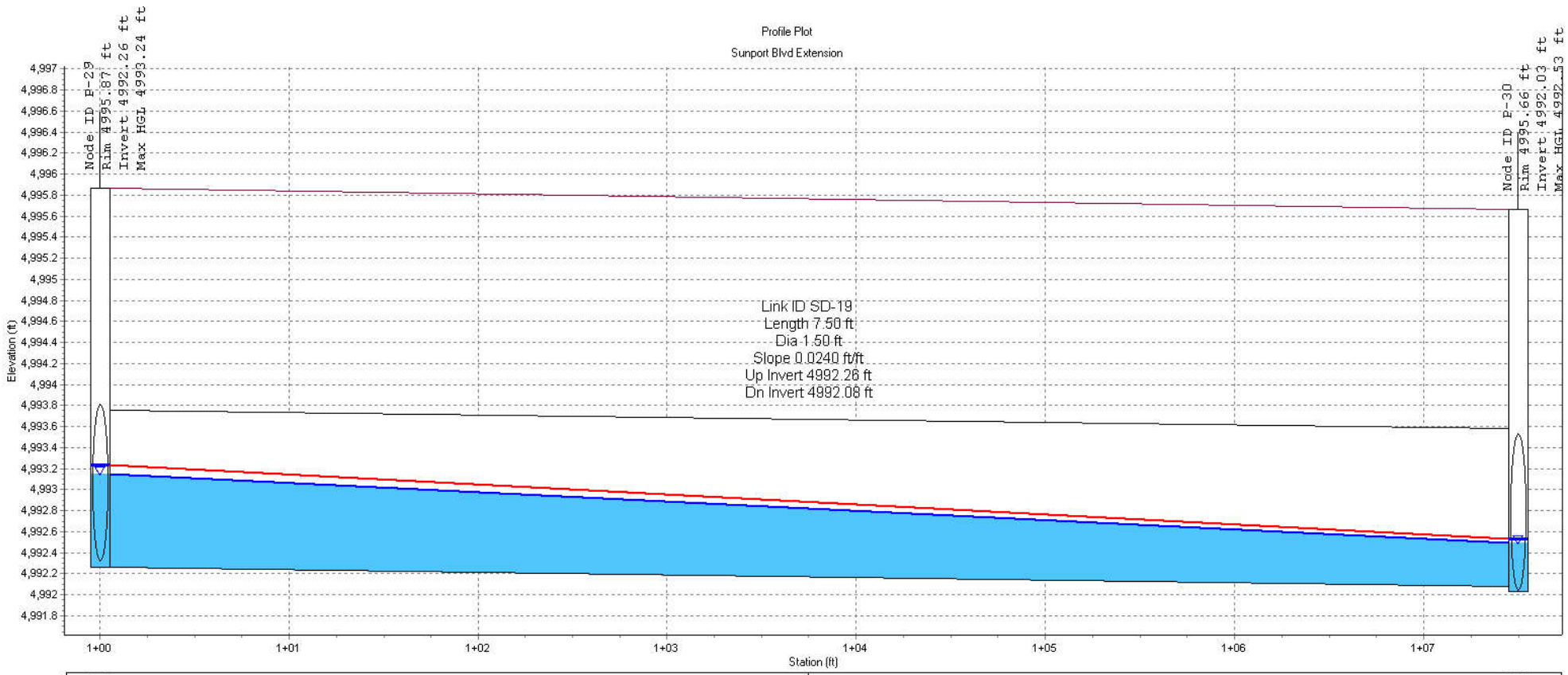
Node ID:	P-31		P-32
Rim (ft):	4973.16		4970.65
Invert (ft):	4969.11		4965.60
Min Pipe Cover (ft):			
Max HGL (ft):	4969.85		4966.68

Link ID:	SD-17
Length (ft):	57.50
Dia (ft):	1.50
Slope (ft/ft):	0.0602
Up Invert (ft):	4969.11
Dn Invert (ft):	4965.65
Max Q (cfs):	9.52
Max Vel (ft/s):	8.82
Max Depth (ft):	0.88



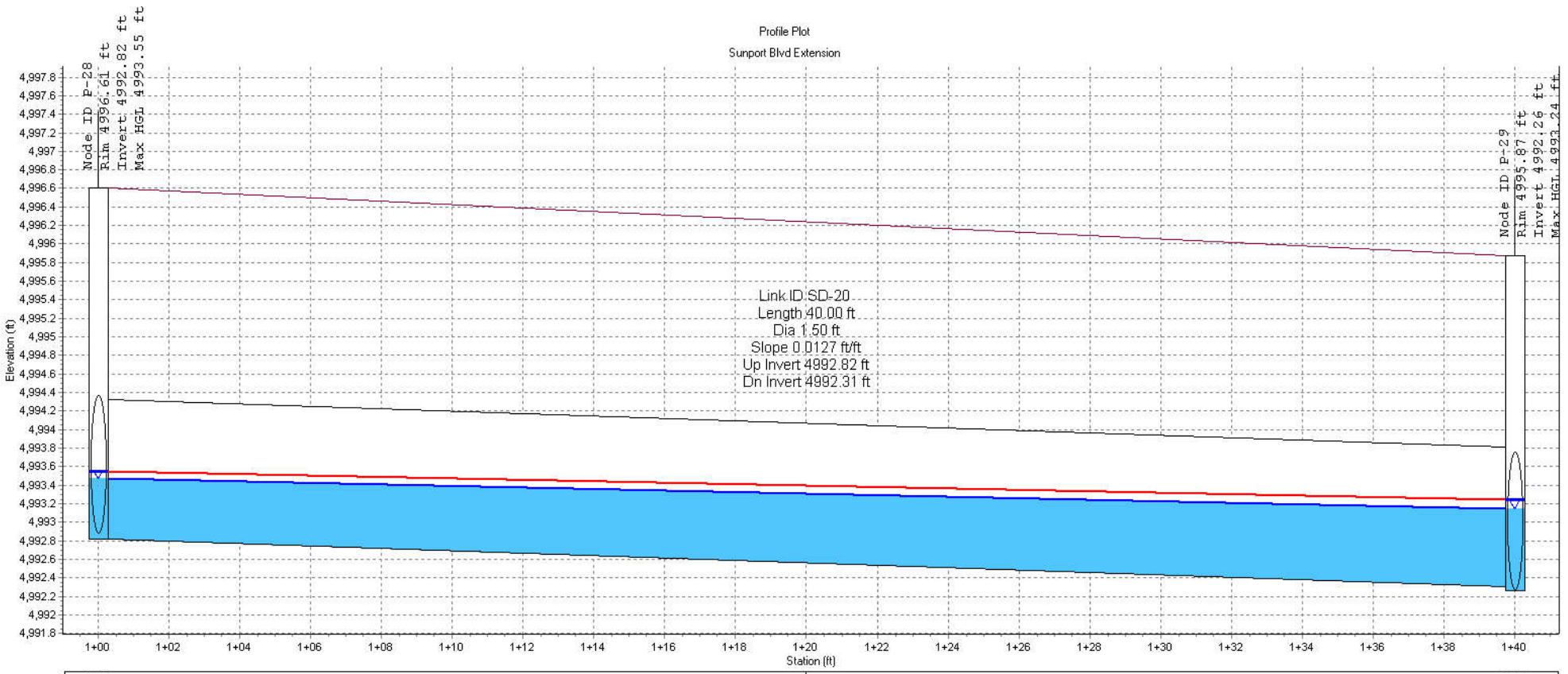
Node ID:	P-30	P-31
Rim (ft):	4995.66	4973.16
Invert (ft):	4992.03	4969.11
Min Pipe Cover (ft):		
Max HGL (ft):	4992.53	4969.85

Link ID:	SD-18
Length (ft):	310.50
Dia (ft):	1.50
Slope (ft/ft):	0.0737
Up Invert (ft):	4992.03
Dn Invert (ft):	4969.16
Max Q (cfs):	6.84
Max Vel (ft/s):	10.49
Max Depth (ft):	0.59



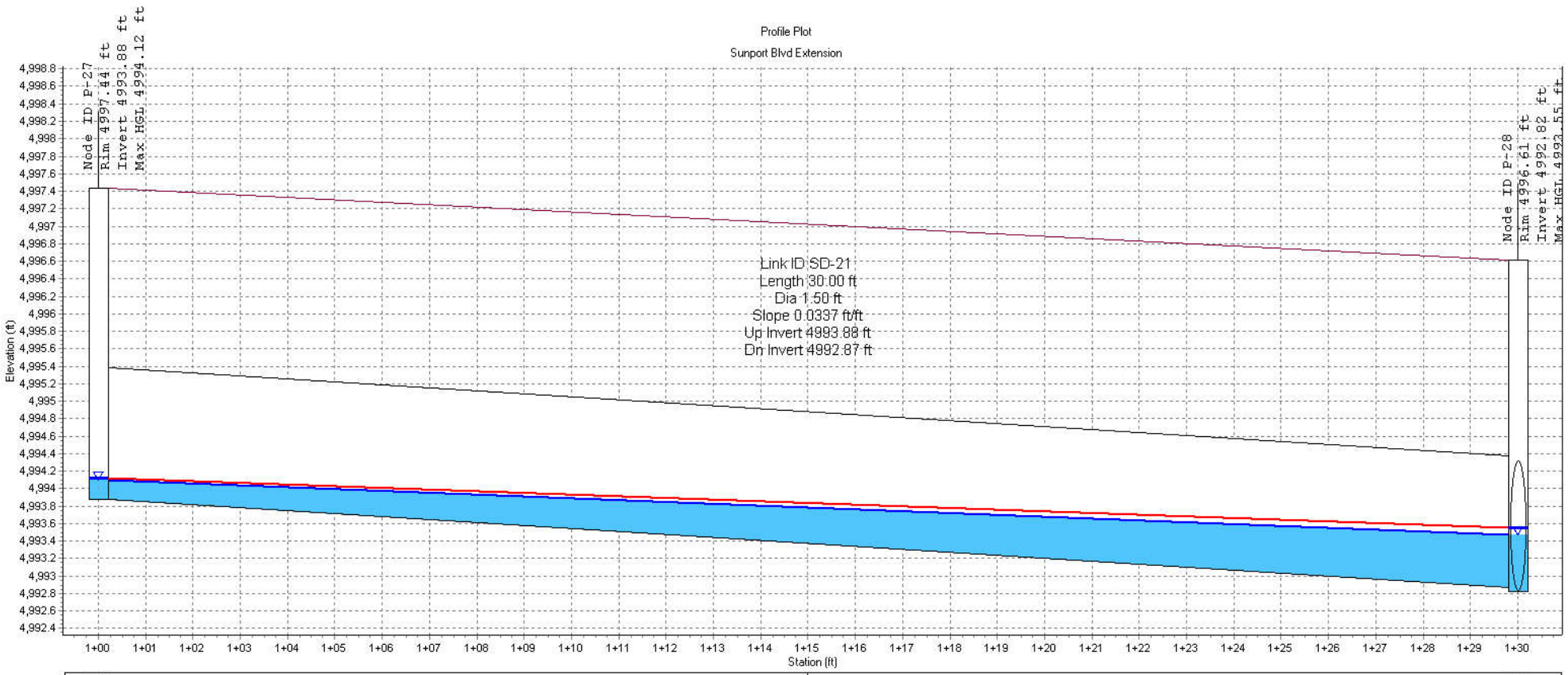
Node ID:	P-29	P-30
Rim (ft):	4995.87	4995.66
Invert (ft):	4992.26	4992.03
Min Pipe Cover (ft):		
Max HGL (ft):	4993.24	4992.53

Link ID:	SD-19
Length (ft):	7.50
Dia (ft):	1.50
Slope (ft/ft):	0.0240
Up Invert (ft):	4992.26
Dn Invert (ft):	4992.08
Max Q (cfs):	5.82
Max Vel (ft/s):	6.08
Max Depth (ft):	0.80



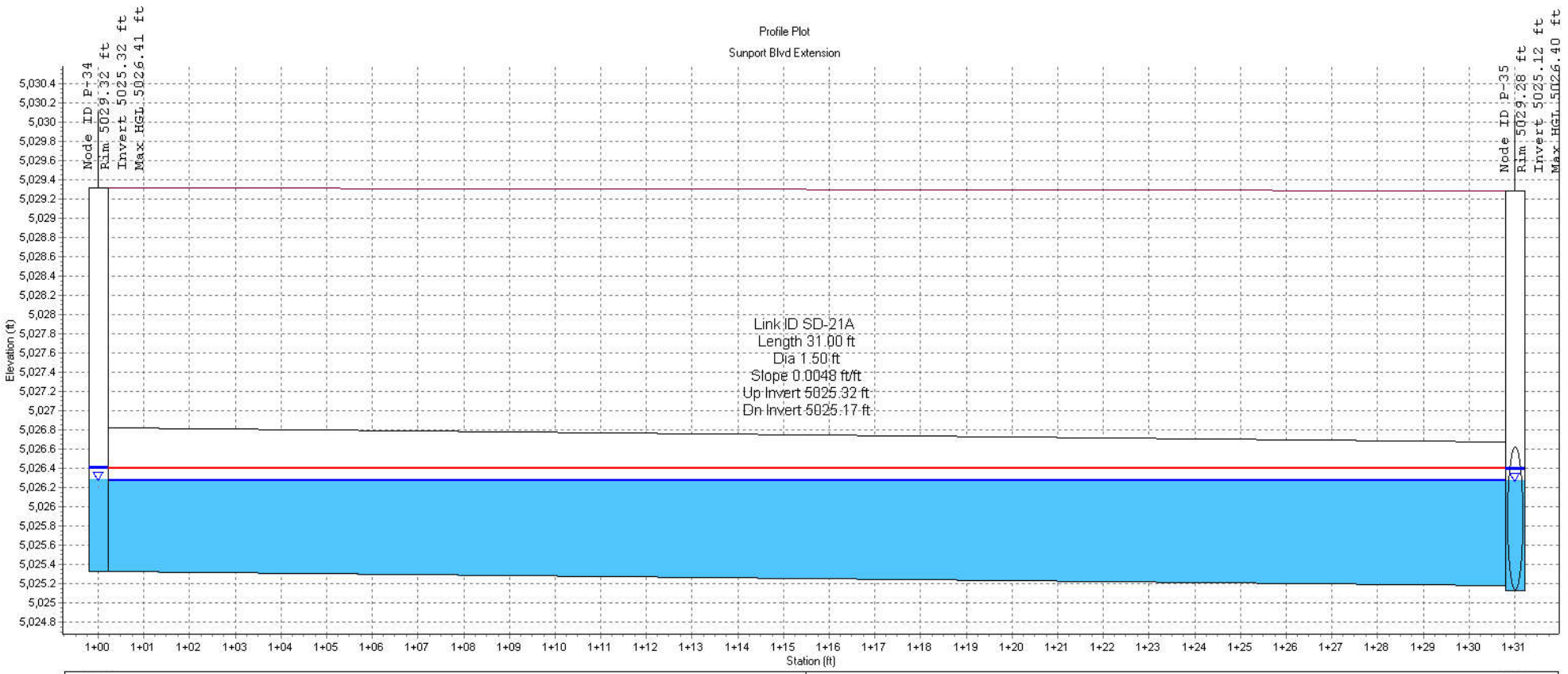
Node ID:	P-28	P-29
Rim (ft):	4996.61	4995.87
Invert (ft):	4992.82	4992.26
Min Pipe Cover (ft):		
Max HGL (ft):	4993.55	4993.24

Link ID:	SD-20
Length (ft):	40.00
Dia (ft):	1.50
Slope (ft/ft):	0.0127
Up Invert (ft):	4992.82
Dn Invert (ft):	4992.31
Max Q (cfs):	3.60
Max Vel (ft/s):	3.58
Max Depth (ft):	0.83



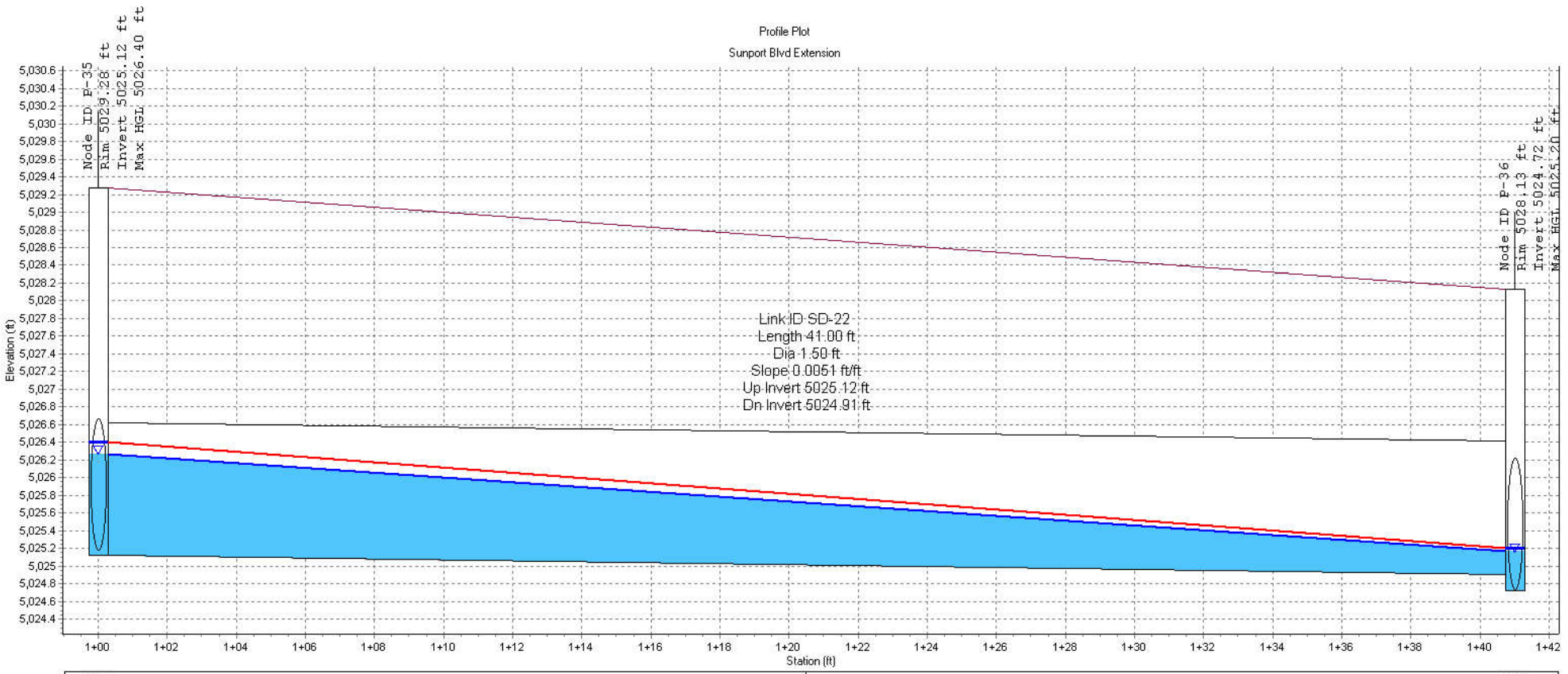
Node ID:	P-27	P-28
Rim (ft):	4997.44	4996.61
Invert (ft):	4993.88	4992.82
Min Pipe Cover (ft):		
Max HGL (ft):	4994.12	4993.55

Link ID:	SD-21
Length (ft):	30.00
Dia (ft):	1.50
Slope (ft/ft):	0.0337
Up Invert (ft):	4993.88
Dn Invert (ft):	4992.87
Max Q (cfs):	1.04
Max Vel (ft/s):	2.25
Max Depth (ft):	0.46



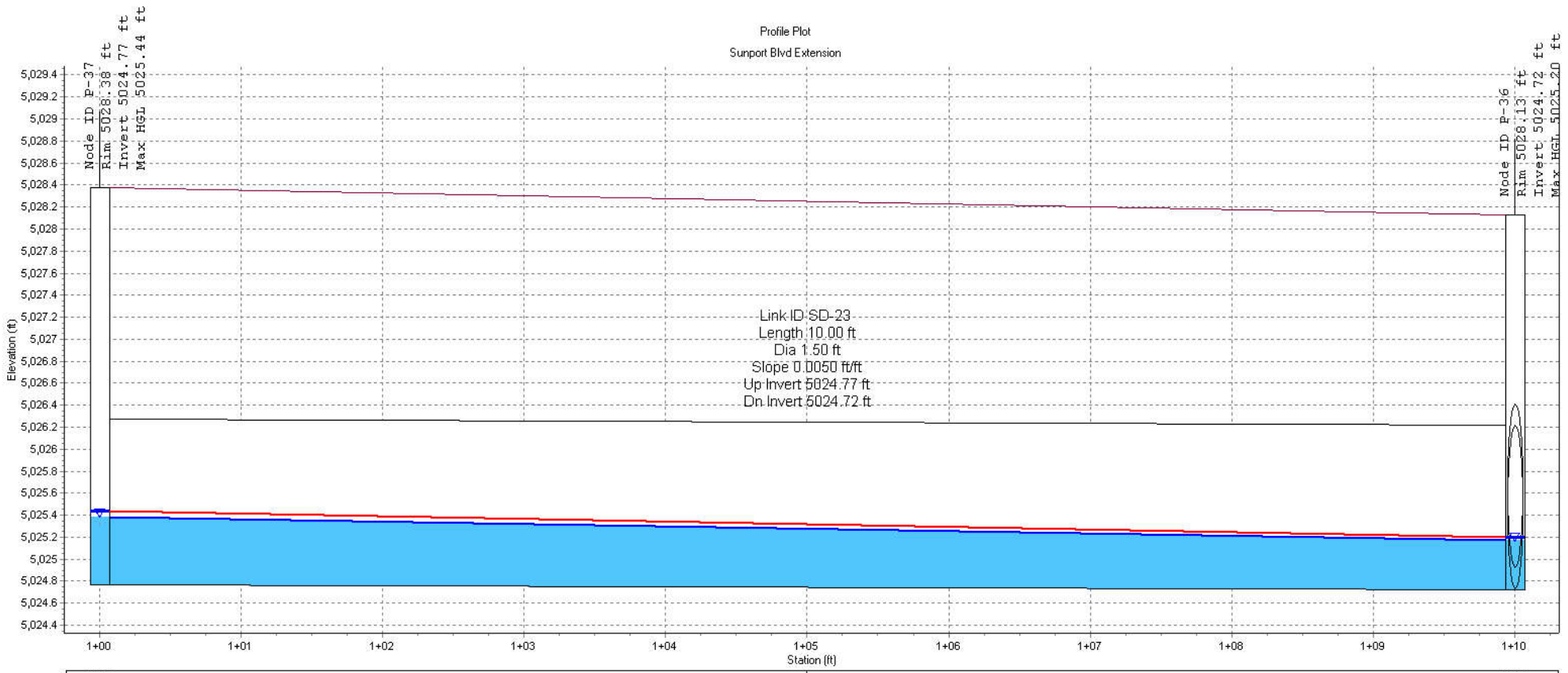
Node ID:	P-34	P-35
Rim (ft):	5029.32	5029.28
Invert (ft):	5025.32	5025.12
Min Pipe Cover (ft):		
Max HGL (ft):	5026.41	5026.40

Link ID:	SD-21A
Length (ft):	31.00
Dia (ft):	1.50
Slope (ft/ft):	0.0048
Up Invert (ft):	5025.32
Dn Invert (ft):	5025.17
Max Q (cfs):	1.16
Max Vel (ft/s):	0.84
Max Depth (ft):	1.16

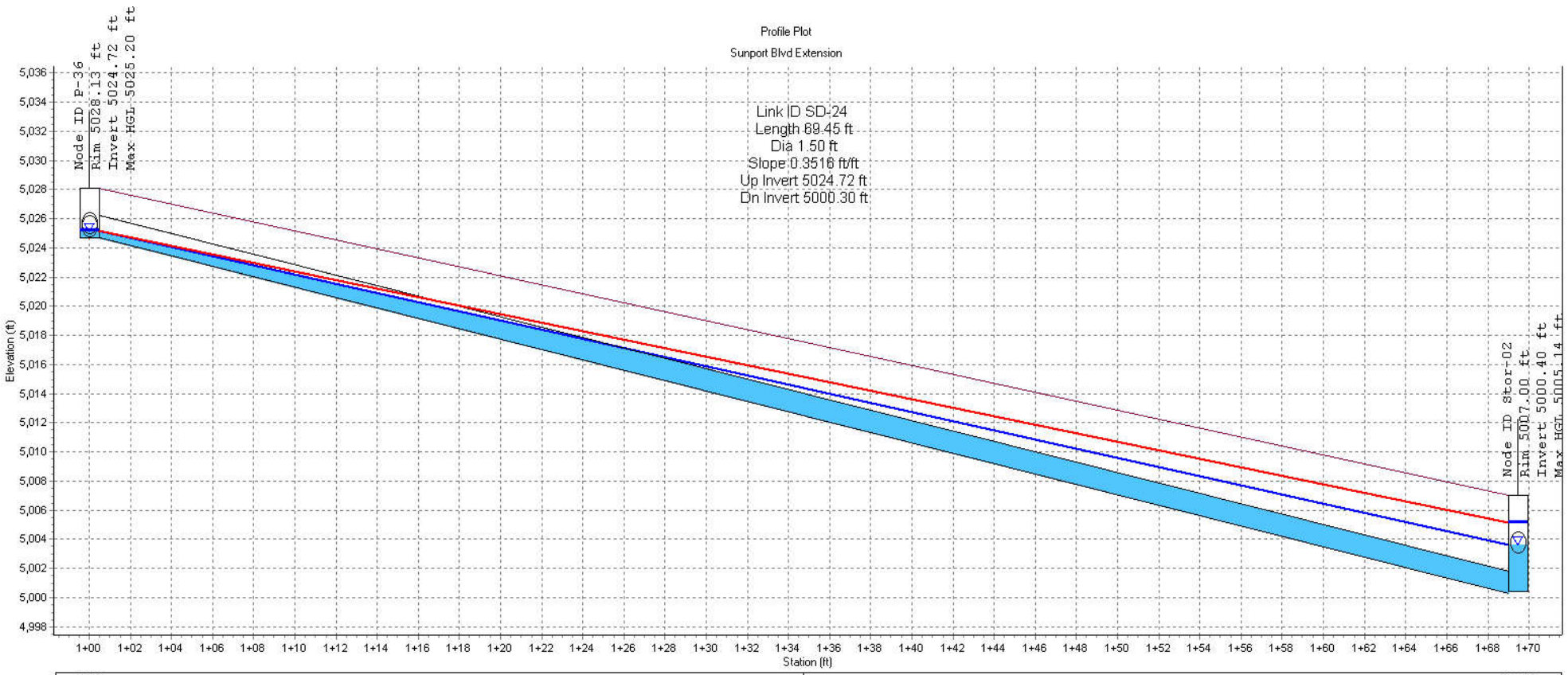


Node ID:	P-35	P-36
Rim (ft):	5029.28	5028.13
Invert (ft):	5025.12	5024.72
Min Pipe Cover (ft):		
Max HGL (ft):	5026.40	5025.20

Link ID:	SD-22
Length (ft):	41.00
Dia (ft):	1.50
Slope (ft/ft):	0.0051
Up Invert (ft):	5025.12
Dn Invert (ft):	5024.91
Max Q (cfs):	6.12
Max Vel (ft/s):	4.35
Max Depth (ft):	1.12



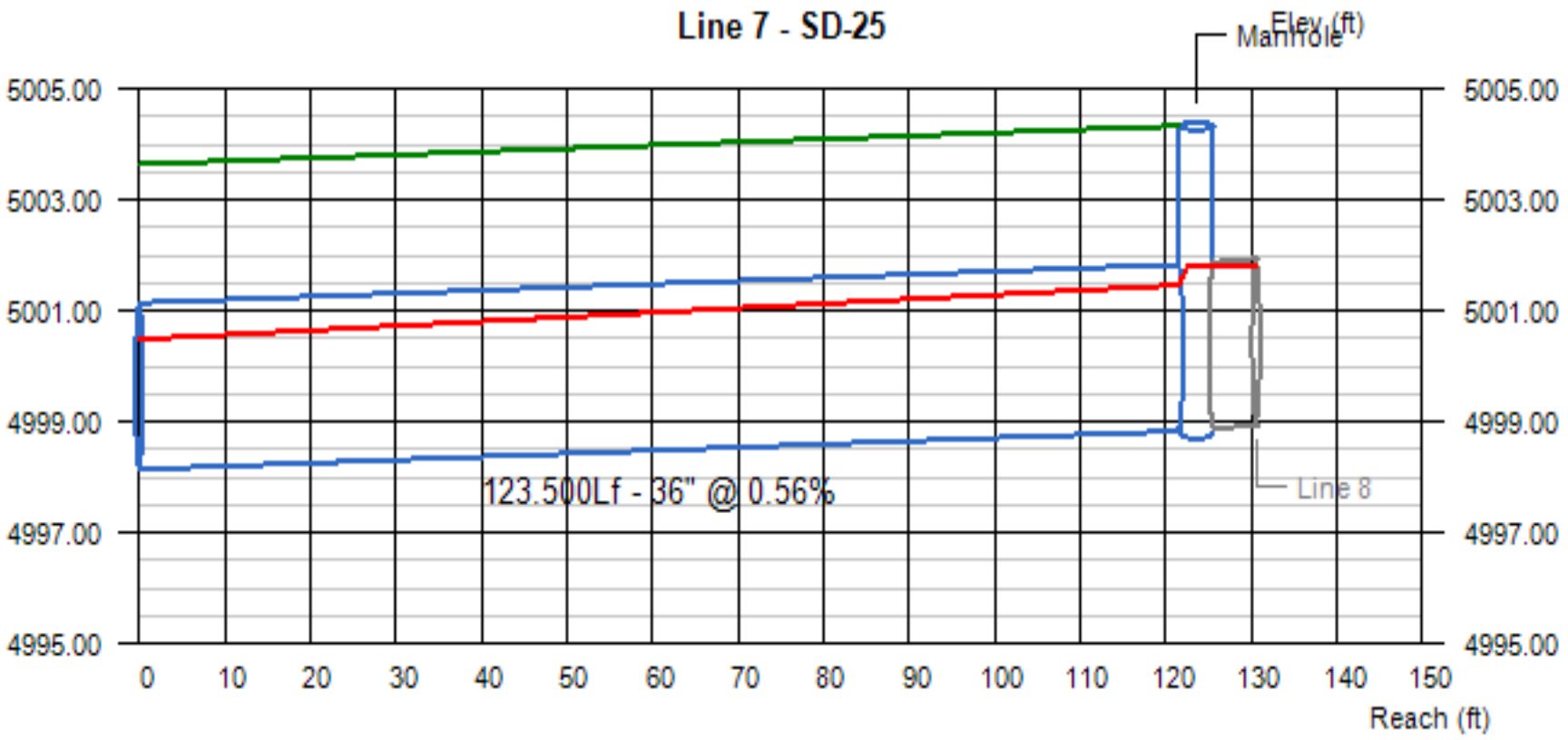
Node ID:	P-37		P-36
Rim (ft):	5028.38		5028.13
Invert (ft):	5024.77		5024.72
Min Pipe Cover (ft):			
Max HGL (ft):	5025.44		5025.20
Link ID:		SD-23	
Length (ft):		10.00	
Dia (ft):		1.50	
Slope (ft/ft):		0.0050	
Up Invert (ft):		5024.77	
Dn Invert (ft):		5024.72	
Max Q (cfs):		2.45	
Max Vel (ft/s):		3.89	
Max Depth (ft):		0.58	



Node ID:	P-36		Stor-02
Rim (ft):	5028.13		5007.00
Invert (ft):	5024.72		5000.40
Min Pipe Cover (ft):			
Max HGL (ft):	5025.20		5005.14

Link ID:	SD-24
Length (ft):	69.45
Dia (ft):	1.50
Slope (ft/ft):	0.3516
Up Invert (ft):	5024.72
Dn Invert (ft):	5000.30
Max Q (cfs):	13.97
Max Vel (ft/s):	11.27
Max Depth (ft):	0.99

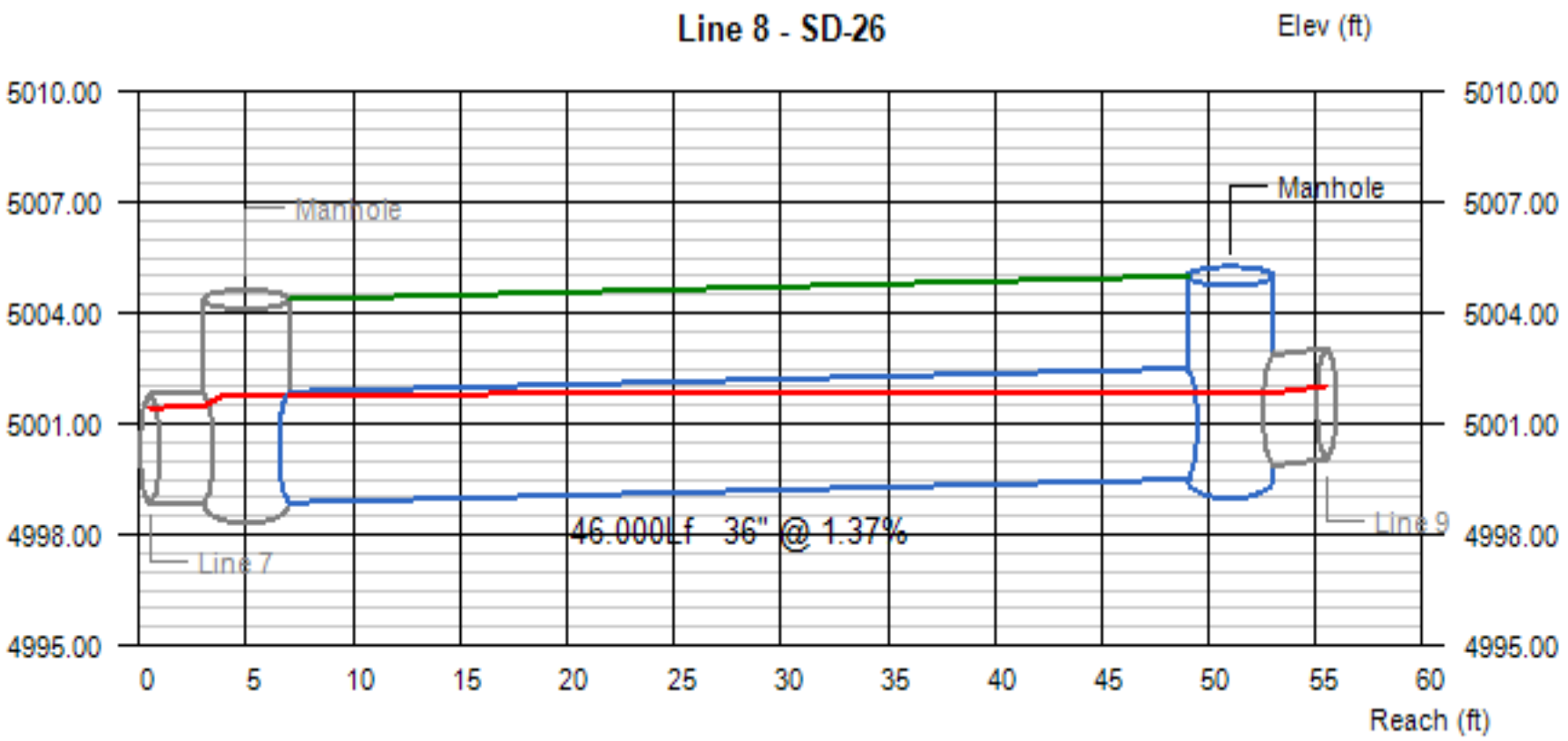
Line Profile (Line 7) - SD-25



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
7	52.00	4998.14	4998.83	2.34	2.63	2.97	5000.48	5001.46	5001.80	8.78	7.92	2.50	2.50

Project File: | No. Lines: 10 | Run Date: 3/21/2019

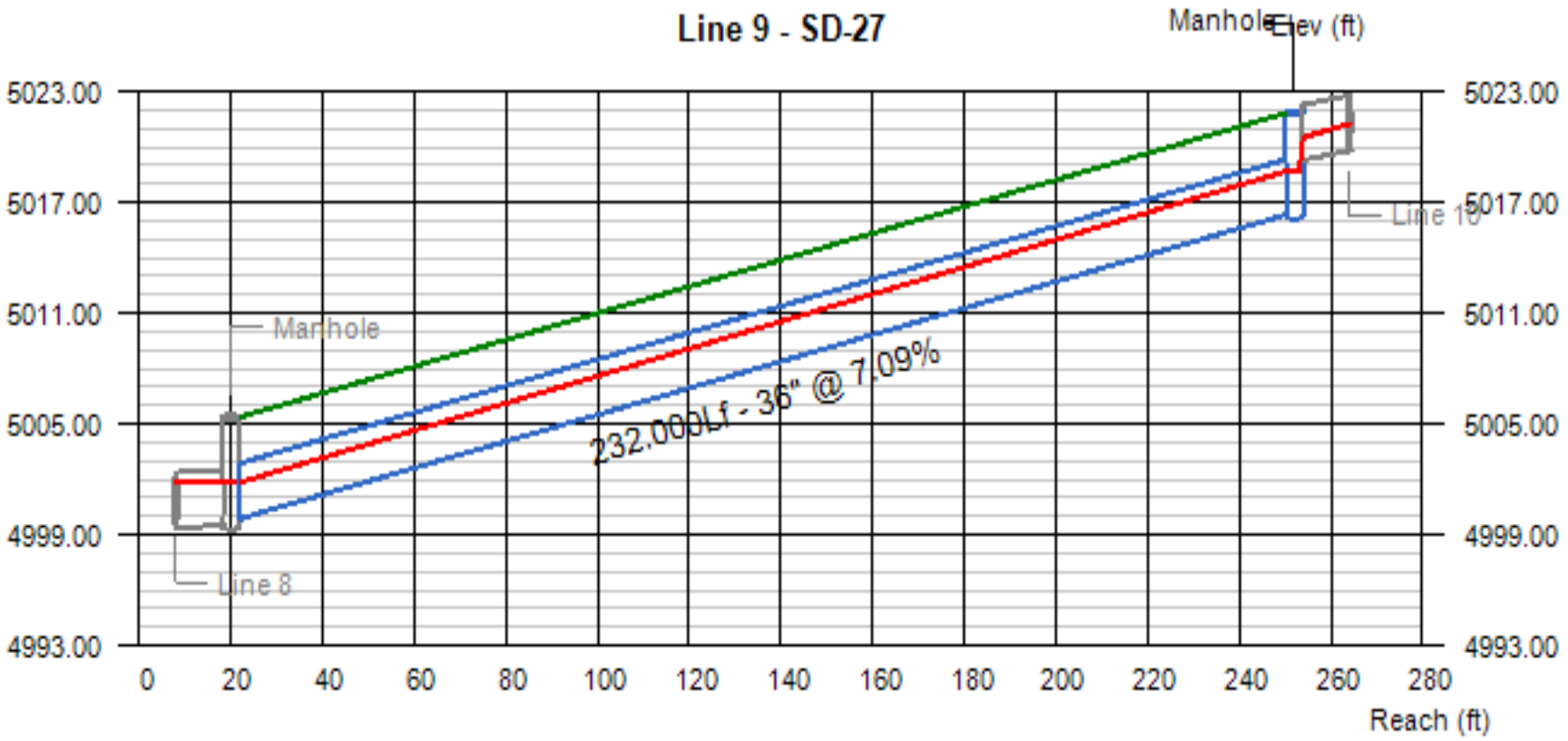
Line Profile (Line 8) - SD-26



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
8	52.00	4998.87	4999.50	2.93	2.34	2.34	5001.80	5001.84	5001.84	7.40	8.78	2.50	2.50

Project File: | No. Lines: 10 | Run Date: 3/21/2019

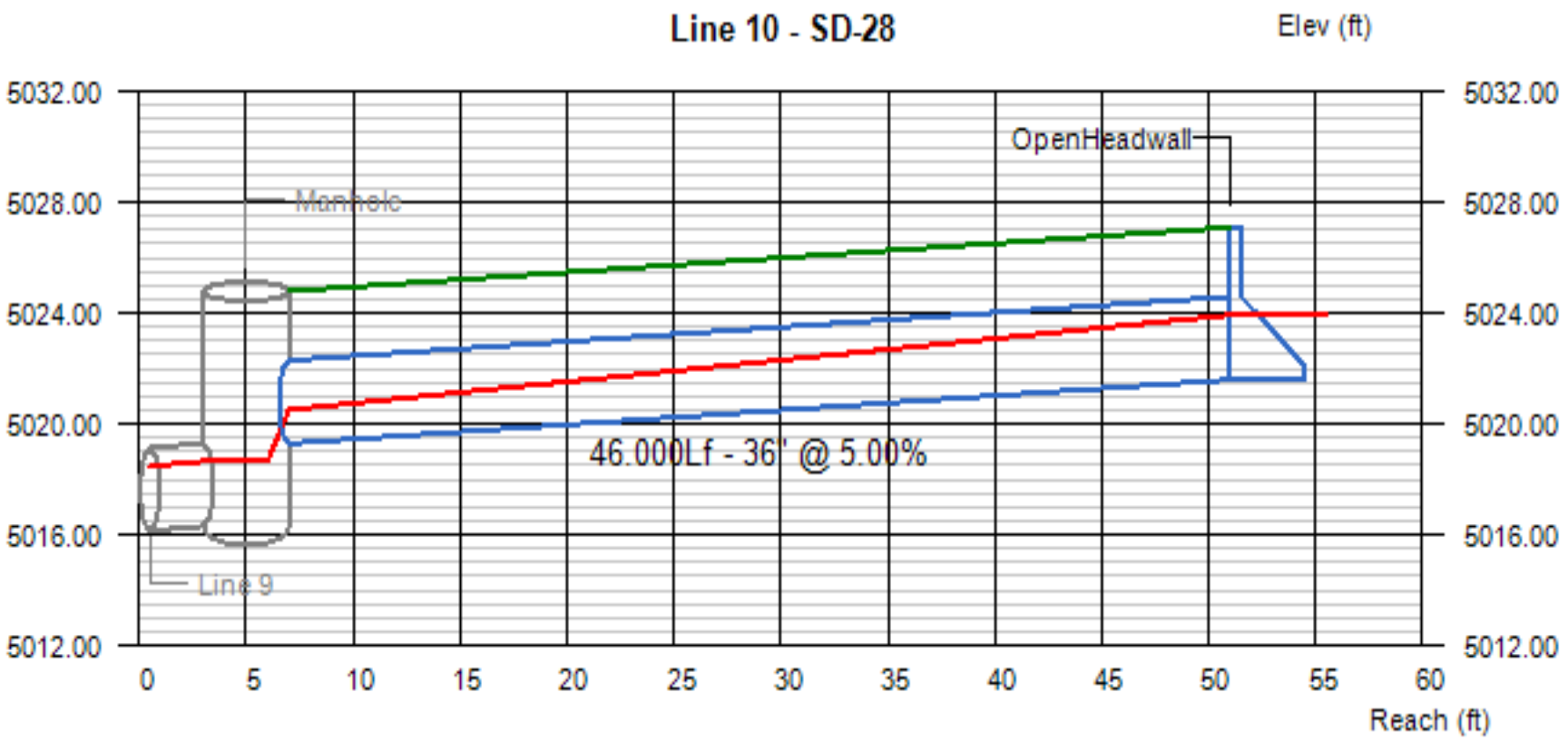
Line Profile (Line 9) - SD-27



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
9	52.00	4999.87	5016.31	1.97	2.34	2.34	5001.84	5018.65	5018.65	10.55	8.78	2.50	2.50

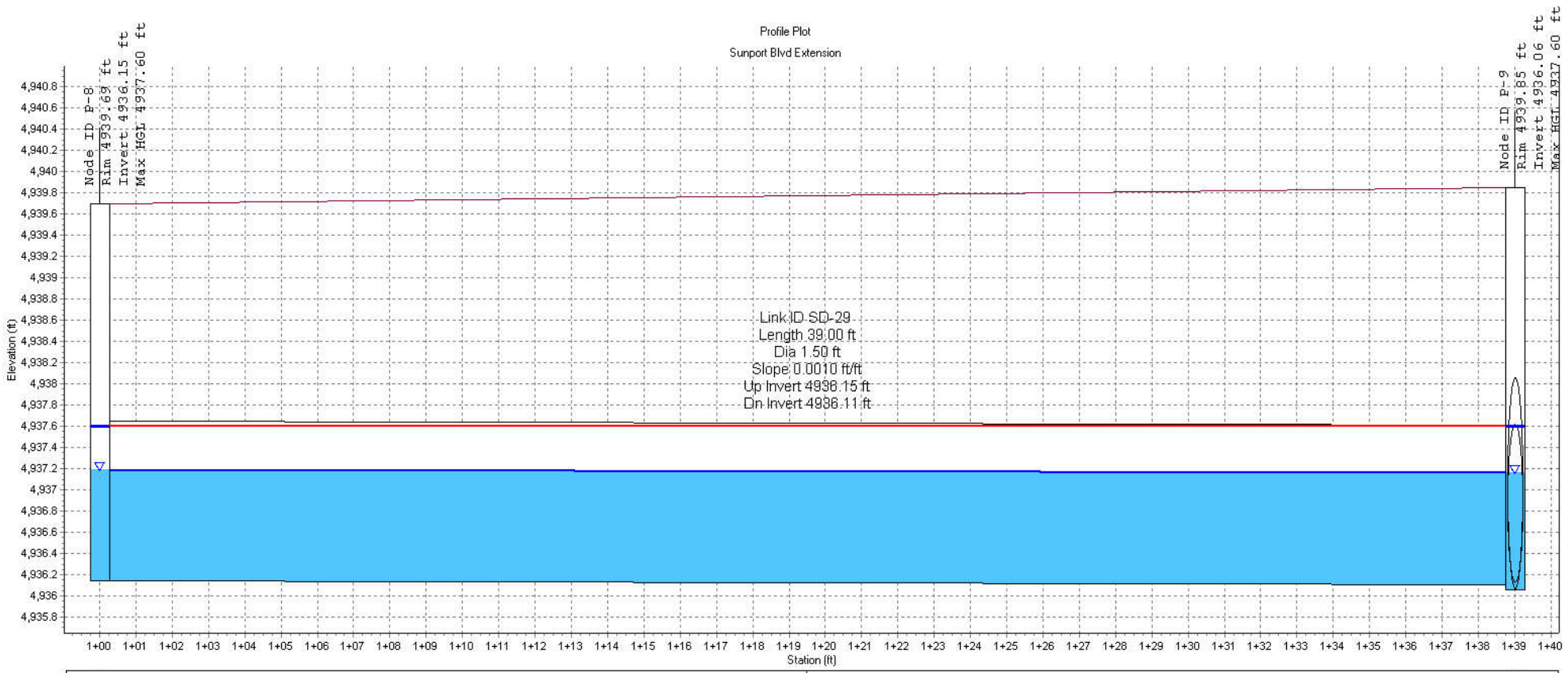
Project File: | No. Lines: 10 | Run Date: 3/21/2019

Line Profile (Line 10) - SD-28



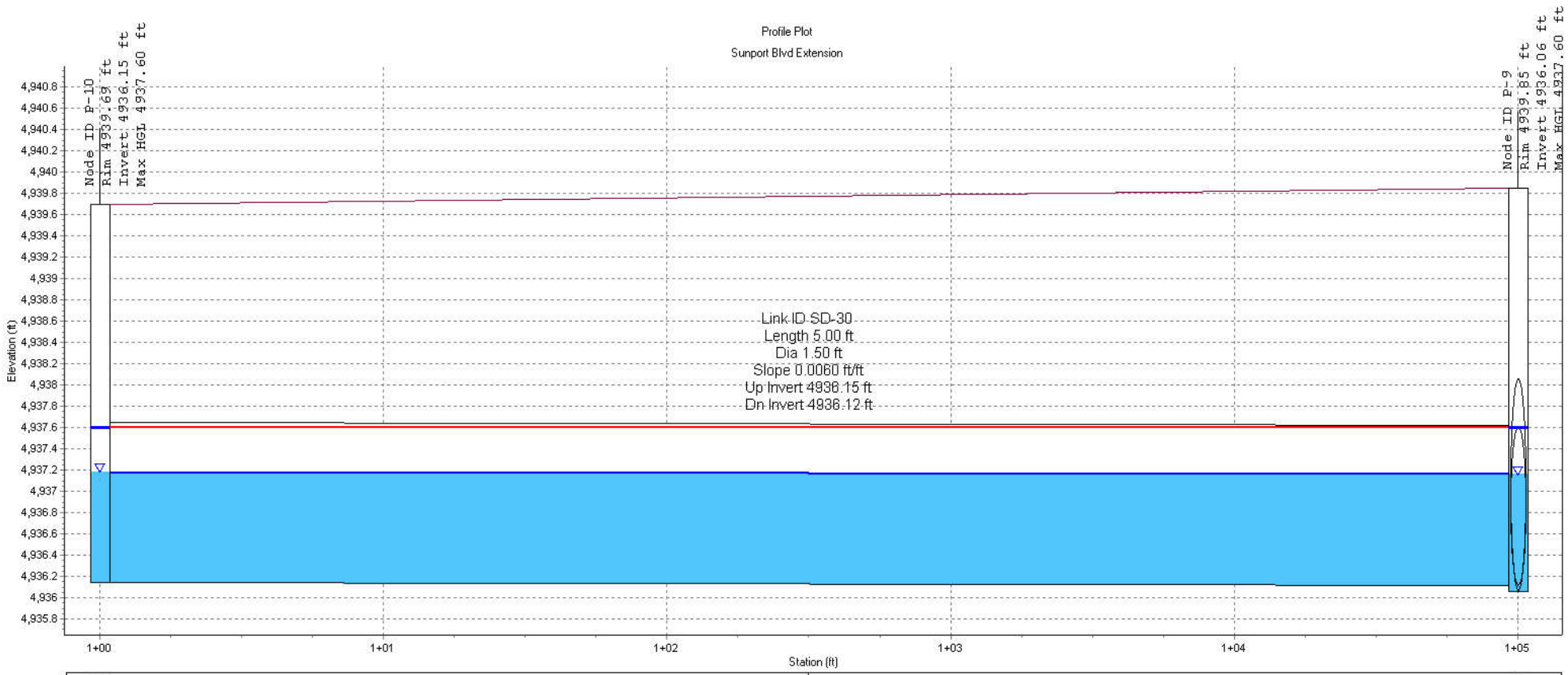
Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
10	52.00	5019.29	5021.59	1.22	2.34	2.34	5020.51	5023.93	5023.93	19.21	8.78	2.50	2.50

Project File: | No. Lines: 10 | Run Date: 3/21/2019

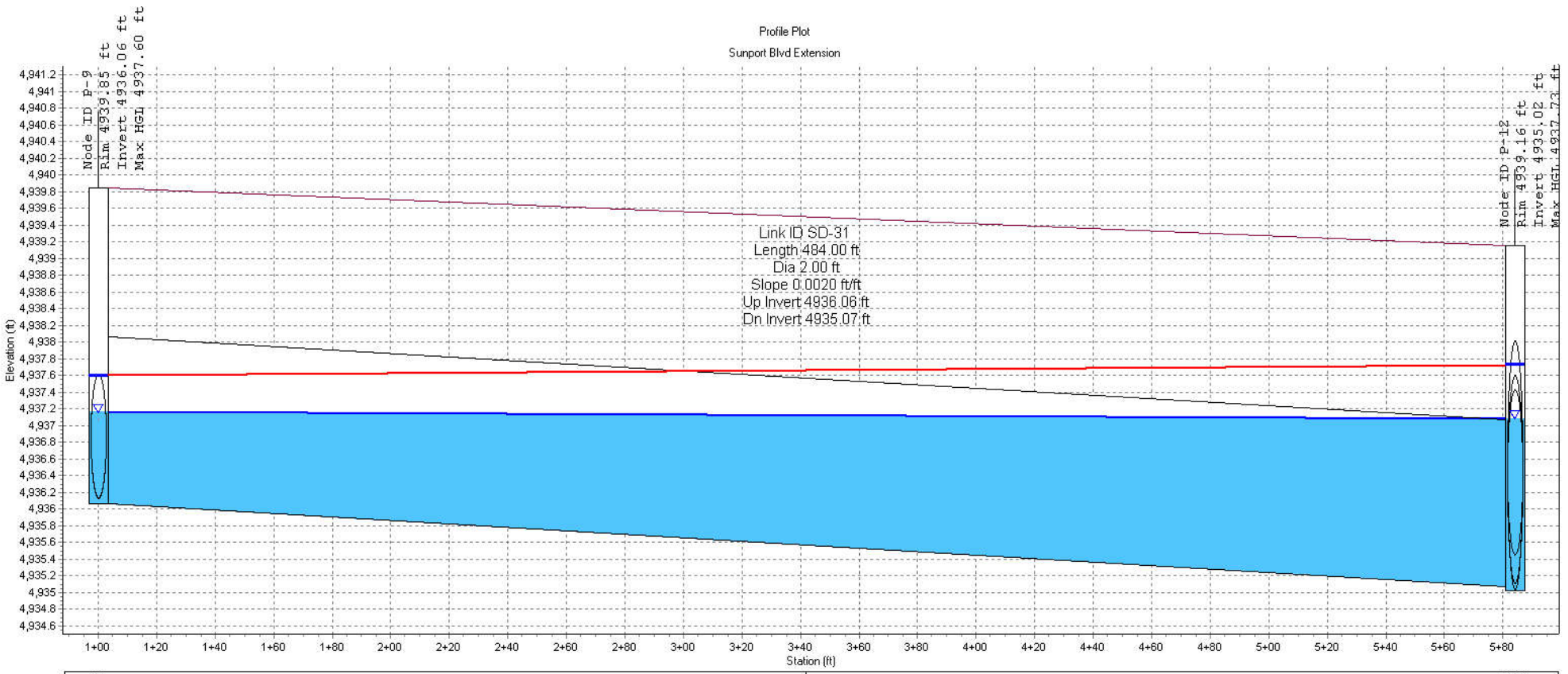


Node ID:	P-8	P-9
Rim (ft):	4939.69	4939.85
Invert (ft):	4936.15	4936.06
Min Pipe Cover (ft):		1.79
Max HGL (ft):	4937.60	4937.60

Link ID:	SD-29
Length (ft):	39.00
Dia (ft):	1.50
Slope (ft/ft):	0.0010
Up Invert (ft):	4936.15
Dn Invert (ft):	4936.11
Max Q (cfs):	1.78
Max Vel (ft/s):	1.94
Max Depth (ft):	1.47

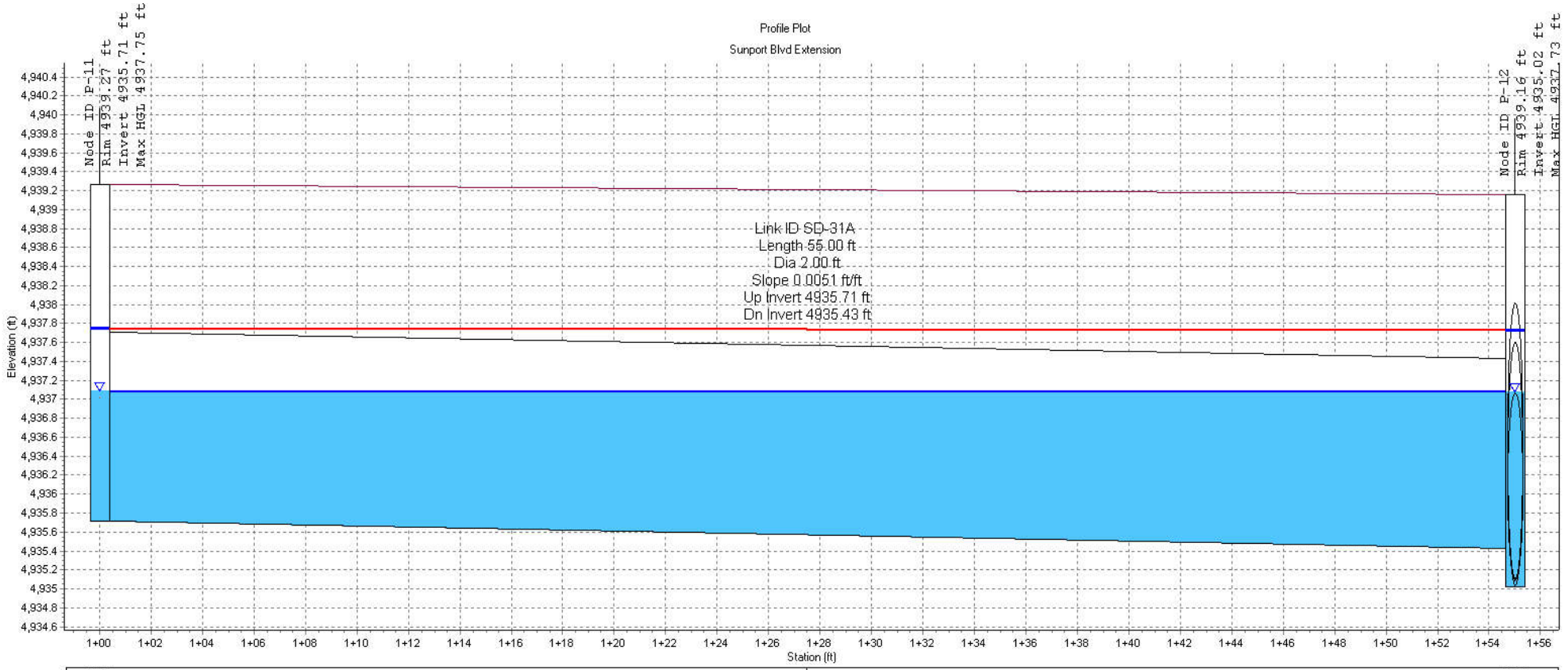


Node ID:	P-10		P-9
Rim (ft):	4939.69		4939.85
Invert (ft):	4936.15		4936.06
Min Pipe Cover (ft):			1.79
Max HGL (ft):	4937.60		4937.60
Link ID:		SD-30	
Length (ft):		5.00	
Dia (ft):		1.50	
Slope (ft/ft):		0.0060	
Up Invert (ft):		4936.15	
Dn Invert (ft):		4936.12	
Max Q (cfs):		1.92	
Max Vel (ft/s):		2.16	
Max Depth (ft):		1.46	



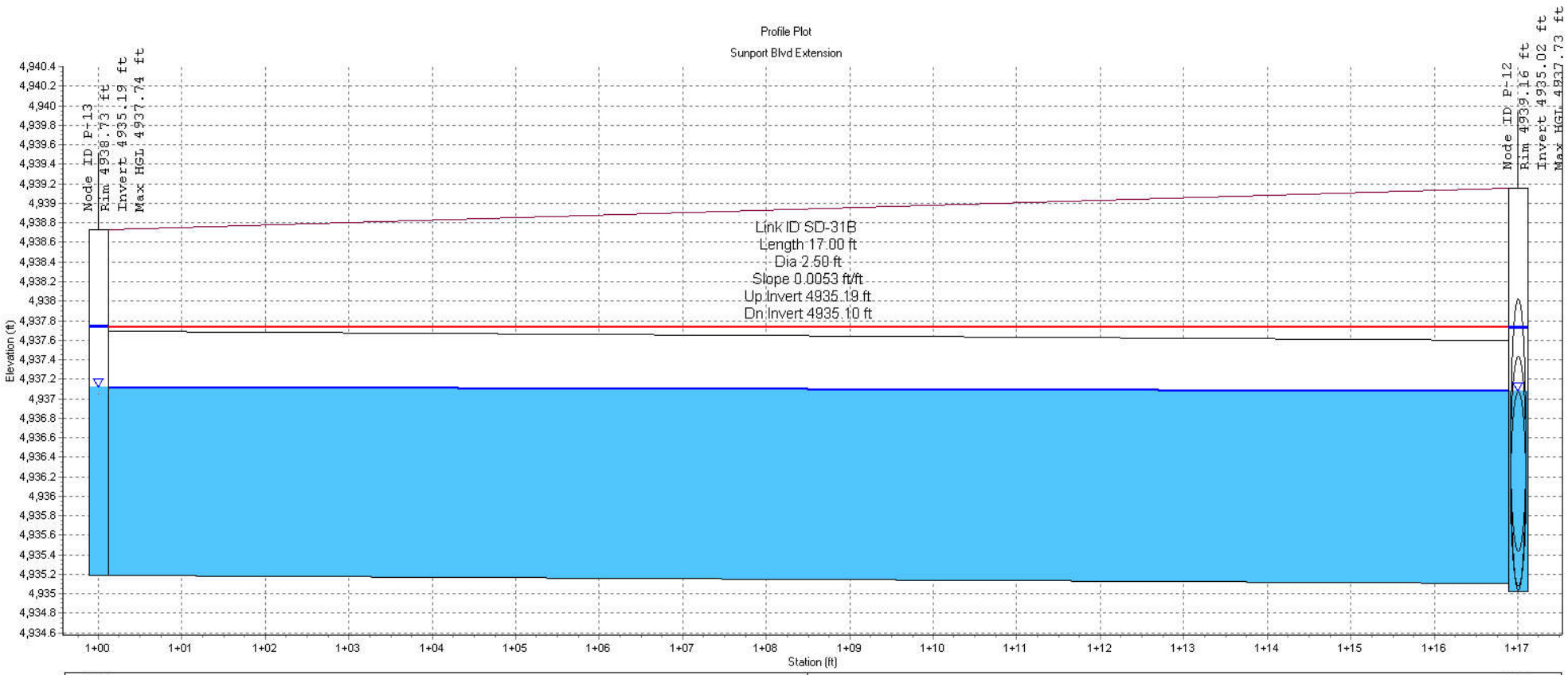
Node ID:	P-9	P-12
Rim (ft):	4939.85	4939.16
Invert (ft):	4936.06	4935.02
Min Pipe Cover (ft):	1.79	1.14
Max HGL (ft):	4937.60	4937.73

Link ID:	SD-31
Length (ft):	484.00
Dia (ft):	2.00
Slope (ft/ft):	0.0020
Up Invert (ft):	4936.06
Dn Invert (ft):	4935.07
Max Q (cfs):	2.98
Max Vel (ft/s):	1.58
Max Depth (ft):	1.77



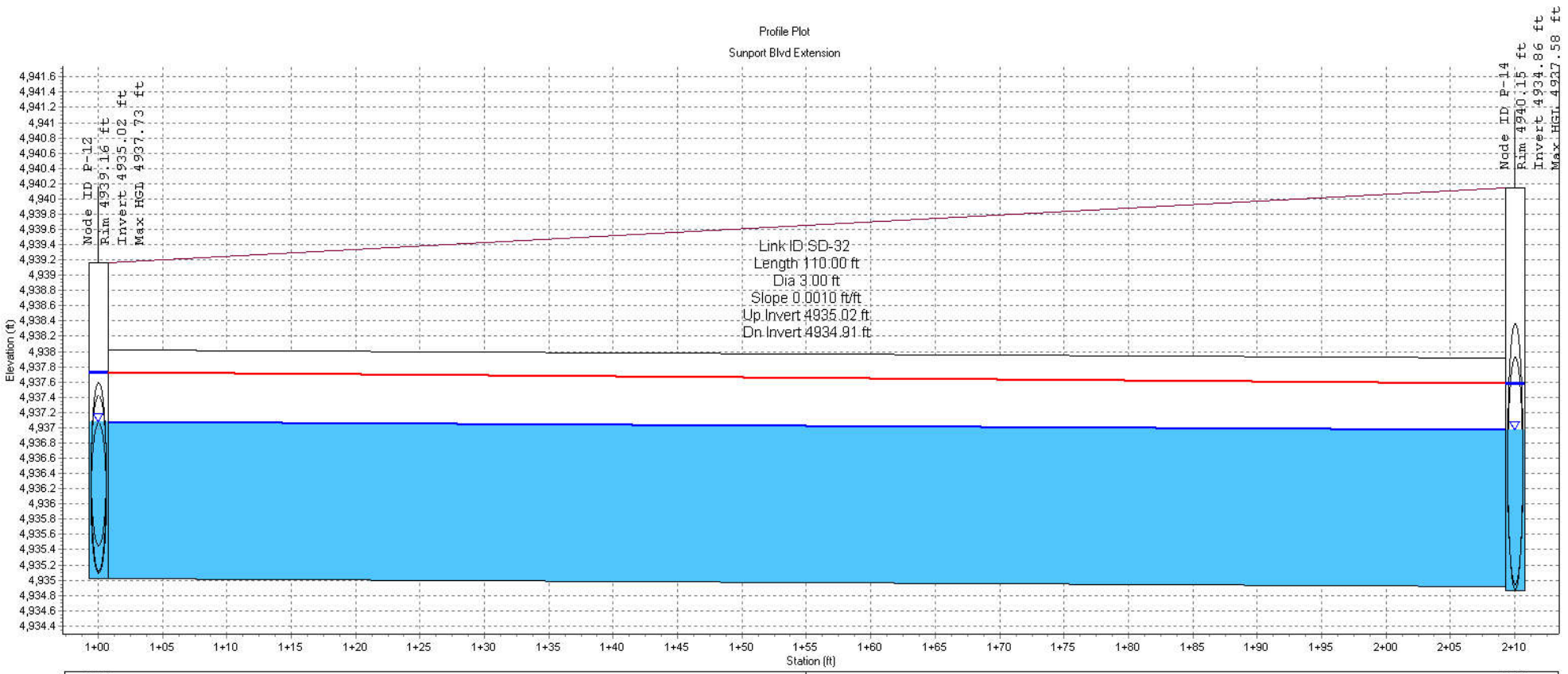
Node ID:	P-11	P-12
Rim (ft):	4939.27	4939.16
Invert (ft):	4935.71	4935.02
Min Pipe Cover (ft):		1.14
Max HGL (ft):	4937.75	4937.73

Link ID:	SD-31A
Length (ft):	55.00
Dia (ft):	2.00
Slope (ft/ft):	0.0051
Up Invert (ft):	4935.71
Dn Invert (ft):	4935.43
Max Q (cfs):	2.25
Max Vel (ft/s):	2.37
Max Depth (ft):	2.00



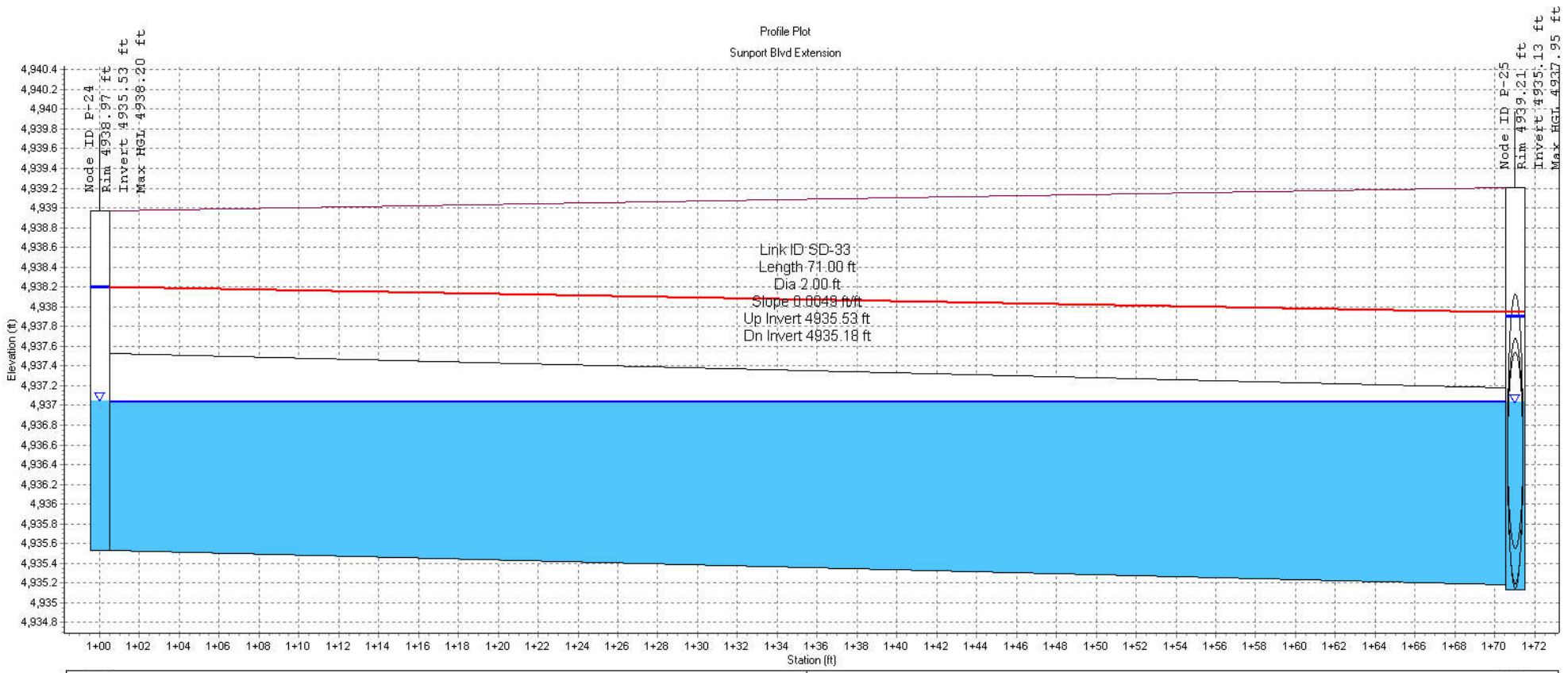
Node ID:	P-13	P-12
Rim (ft):	4938.73	4939.16
Invert (ft):	4935.19	4935.02
Min Pipe Cover (ft):		1.14
Max HGL (ft):	4937.74	4937.73

Link ID:	SD-31B
Length (ft):	17.00
Dia (ft):	2.50
Slope (ft/ft):	0.0053
Up Invert (ft):	4935.19
Dn Invert (ft):	4935.10
Max Q (cfs):	6.37
Max Vel (ft/s):	1.95
Max Depth (ft):	2.50



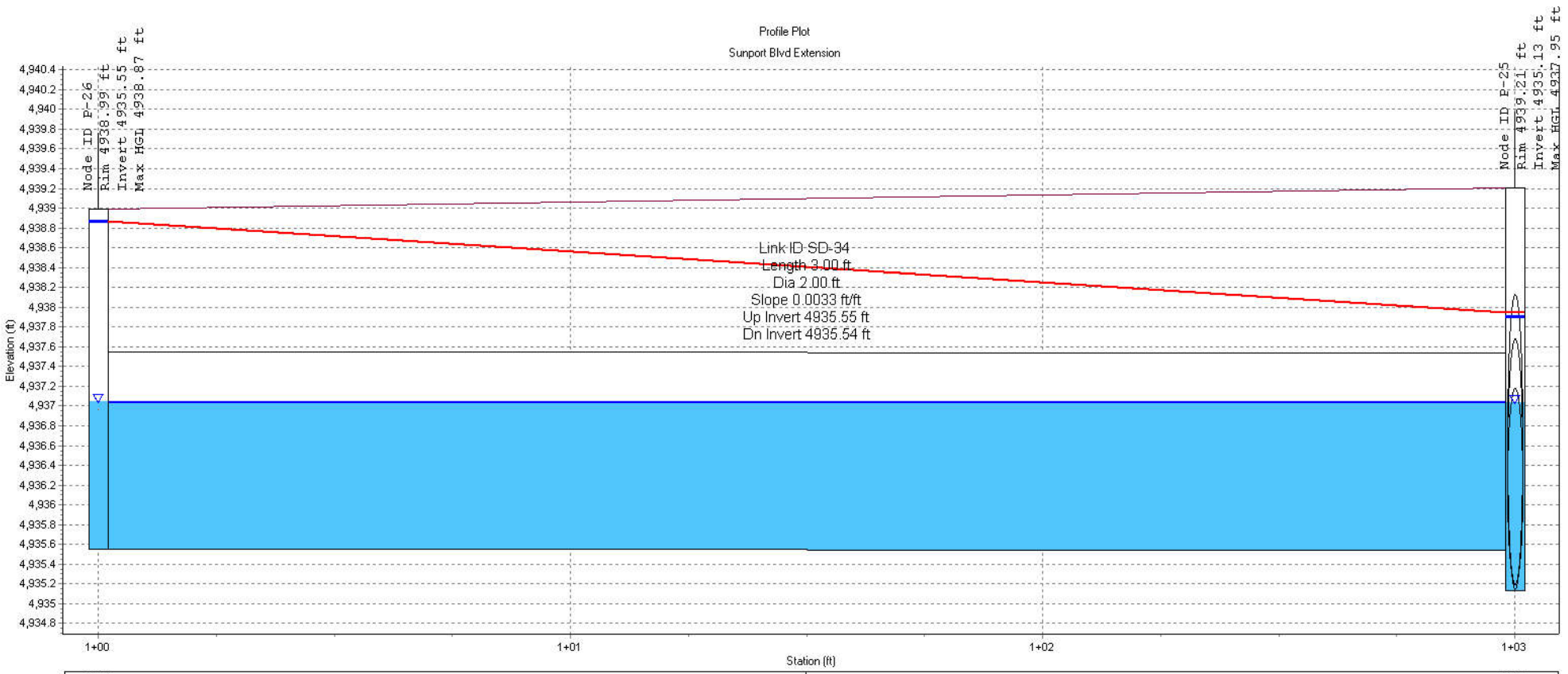
Node ID:	P-12	P-14
Rim (ft):	4939.16	4940.15
Invert (ft):	4935.02	4934.86
Min Pipe Cover (ft):	1.14	1.79
Max HGL (ft):	4937.73	4937.58

Link ID:	SD-32
Length (ft):	110.00
Dia (ft):	3.00
Slope (ft/ft):	0.0010
Up Invert (ft):	4935.02
Dn Invert (ft):	4934.91
Max Q (cfs):	10.58
Max Vel (ft/s):	2.10
Max Depth (ft):	2.69



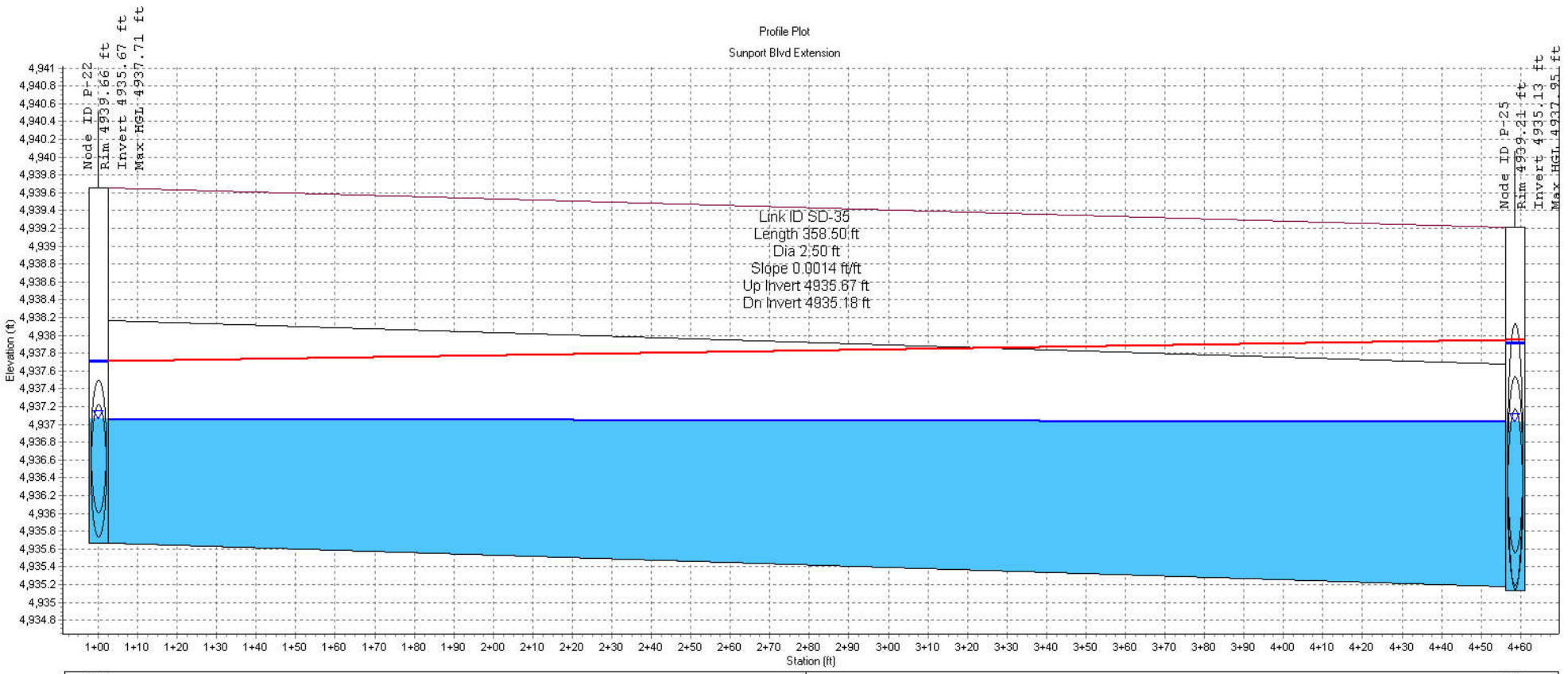
Node ID:	P-24	P-25
Rim (ft):	4938.97	4939.21
Invert (ft):	4935.53	4935.13
Min Pipe Cover (ft):		1.08
Max HGL (ft):	4938.20	4937.95

Link ID:	SD-33
Length (ft):	71.00
Dia (ft):	2.00
Slope (ft/ft):	0.0049
Up Invert (ft):	4935.53
Dn Invert (ft):	4935.18
Max Q (cfs):	3.08
Max Vel (ft/s):	1.98
Max Depth (ft):	2.00



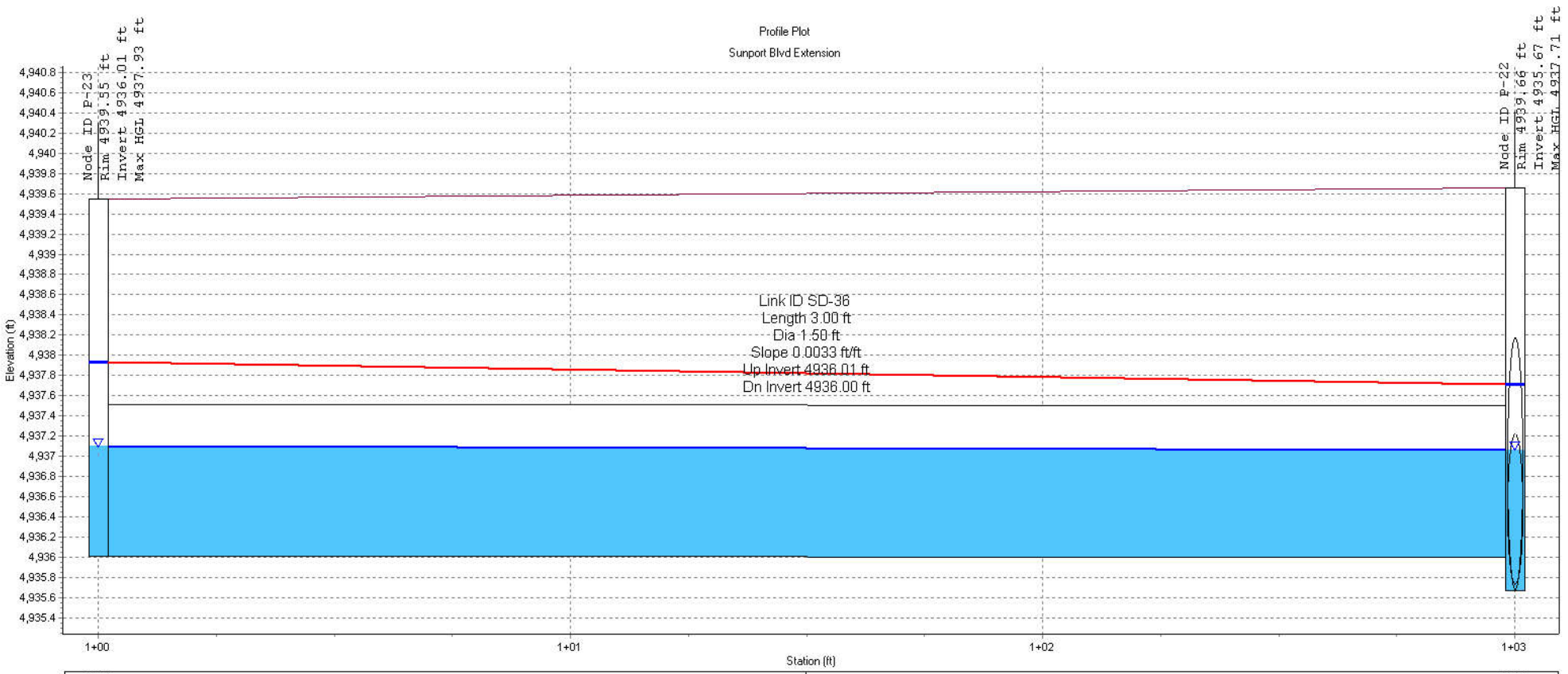
Node ID:	P-26	P-25
Rim (ft):	4938.99	4939.21
Invert (ft):	4935.55	4935.13
Min Pipe Cover (ft):		1.08
Max HGL (ft):	4938.87	4937.95

Link ID:	SD-34
Length (ft):	3.00
Dia (ft):	2.00
Slope (ft/ft):	0.0033
Up Invert (ft):	4935.55
Dn Invert (ft):	4935.54
Max Q (cfs):	66.12
Max Vel (ft/s):	35.91
Max Depth (ft):	2.00



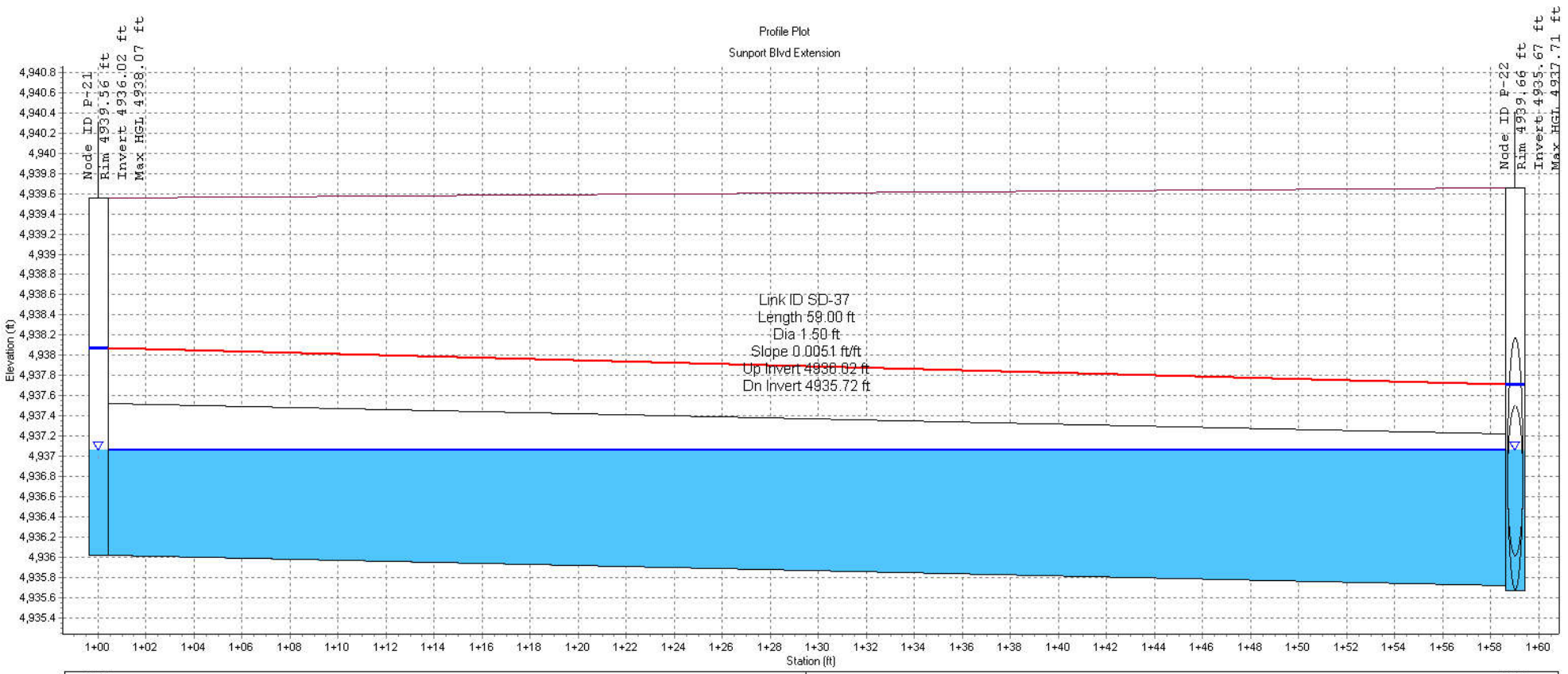
Node ID:	P-22	P-25
Rim (ft):	4939.66	4939.21
Invert (ft):	4935.67	4935.13
Min Pipe Cover (ft):	1.49	1.08
Max HGL (ft):	4937.71	4937.95

Link ID:	SD-35
Length (ft):	358.50
Dia (ft):	2.50
Slope (ft/ft):	0.0014
Up Invert (ft):	4935.67
Dn Invert (ft):	4935.18
Max Q (cfs):	3.89
Max Vel (ft/s):	1.25
Max Depth (ft):	2.19



Node ID:	P-23		P-22
Rim (ft):	4939.55		4939.66
Invert (ft):	4936.01		4935.67
Min Pipe Cover (ft):			1.49
Max HGL (ft):	4937.93		4937.71

Link ID:	SD-36
Length (ft):	3.00
Dia (ft):	1.50
Slope (ft/ft):	0.0033
Up Invert (ft):	4936.01
Dn Invert (ft):	4936.00
Max Q (cfs):	9.70
Max Vel (ft/s):	5.53
Max Depth (ft):	1.50



Node ID:	P-21	P-22
Rim (ft):	4939.56	4939.66
Invert (ft):	4936.02	4935.67
Min Pipe Cover (ft):		1.49
Max HGL (ft):	4938.07	4937.71

Link ID:	SD-37
Length (ft):	59.00
Dia (ft):	1.50
Slope (ft/ft):	0.0051
Up Invert (ft):	4936.02
Dn Invert (ft):	4935.72
Max Q (cfs):	0.90
Max Vel (ft/s):	1.35
Max Depth (ft):	1.50

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Wednesday, Mar 20 2019

COA Single Storm Inlet Type C (Sag)

Grate Inlet

Location	= Sag
Curb Length (ft)	= -0-
Throat Height (in)	= -0-
Grate Area (sqft)	= 5.88
Grate Width (ft)	= 2.00
Grate Length (ft)	= 2.94

Gutter

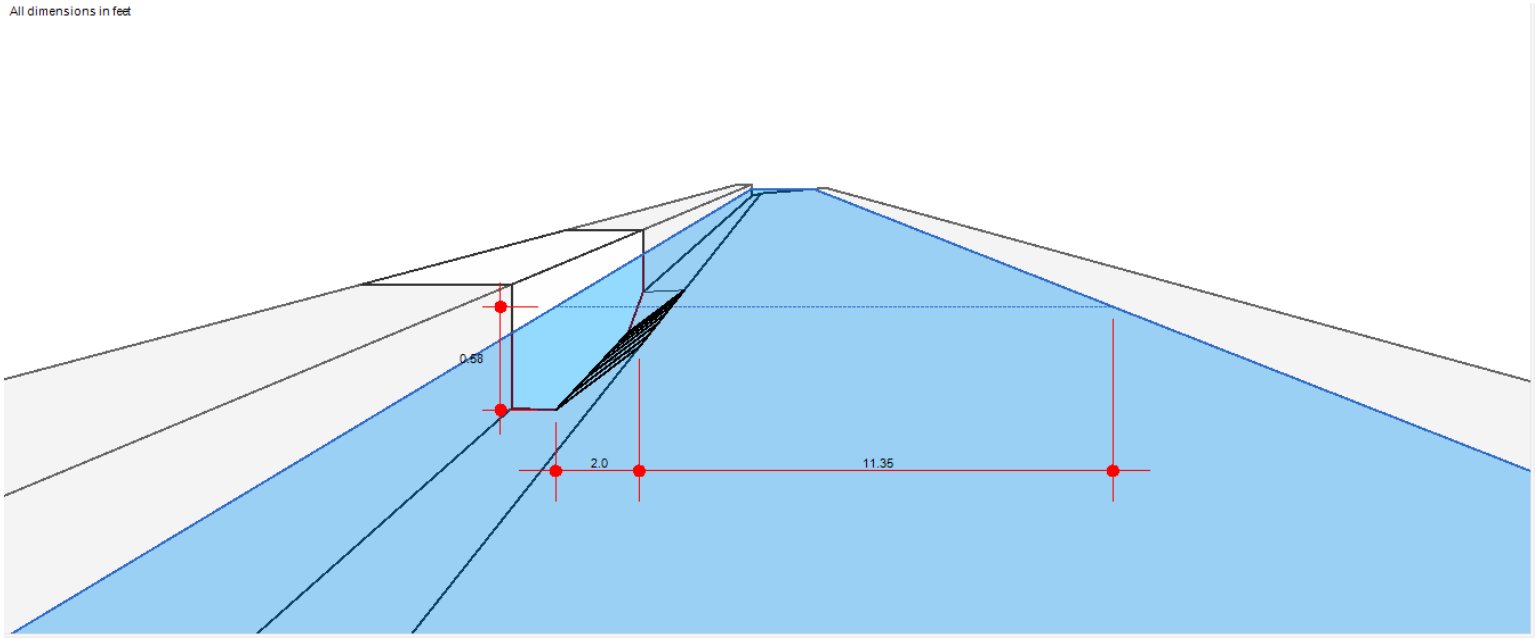
Slope, Sw (ft/ft)	= 0.063
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.75
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= -0-
Gutter n-value	= -0-

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 7

Highlighted

Q Total (cfs)	= 3.25
Q Capt (cfs)	= 3.25
Q Bypass (cfs)	= -0-
Depth at Inlet (in)	= 6.98
Efficiency (%)	= 100
Gutter Spread (ft)	= 13.35
Gutter Vel (ft/s)	= -0-
Bypass Spread (ft)	= -0-
Bypass Depth (in)	= -0-



Q		Inlet		Gutter			Bypass
Total	Captured	Depth	Efficiency	Depth	Spread	Velocity	Q
(cfs)	(cfs)	(in)	(%)	(in)	(ft)	(ft/s)	(cfs)
0.25	0.25	4.01	100	1.26	1.66	n/a	n/a
0.50	0.50	4.50	100	1.75	3.01	n/a	n/a
0.75	0.75	4.81	100	2.06	4.30	n/a	n/a
1.00	1.00	5.09	100	2.34	5.46	n/a	n/a
1.25	1.25	5.35	100	2.60	6.52	n/a	n/a
1.50	1.50	5.58	100	2.83	7.51	n/a	n/a
1.75	1.75	5.81	100	3.06	8.44	n/a	n/a
2.00	2.00	6.02	100	3.27	9.34	n/a	n/a
2.25	2.25	6.23	100	3.48	10.19	n/a	n/a
2.50	2.50	6.43	100	3.68	11.02	n/a	n/a
2.75	2.75	6.62	100	3.87	11.82	n/a	n/a
3.00	3.00	6.80	100	4.05	12.59	n/a	n/a
3.25	3.25	6.98	100	4.23	13.35	n/a	n/a
3.50	3.50	7.16	100	4.41	14.08	n/a	n/a

Bypass	
Spread	Depth
(ft)	(in)
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a

Inlet Report

COA Single Storm Inlet Type C (Sag)

Combination Inlet

Location	= Sag
Curb Length (ft)	= 2.94
Throat Height (in)	= 6.25
Grate Area (sqft)	= 5.88
Grate Width (ft)	= 2.00
Grate Length (ft)	= 2.94

Gutter

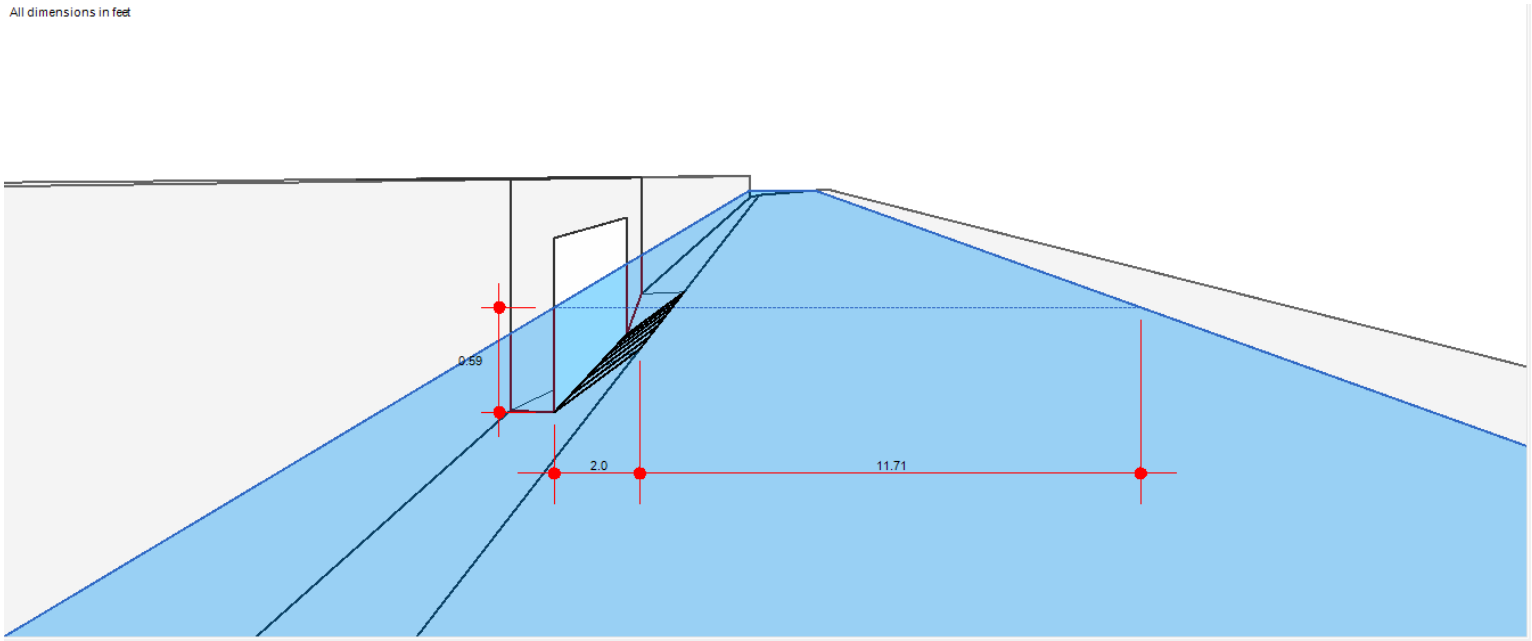
Slope, Sw (ft/ft)	= 0.063
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.75
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= -0-
Gutter n-value	= -0-

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 7

Highlighted

Q Total (cfs)	= 5.50
Q Capt (cfs)	= 5.50
Q Bypass (cfs)	= -0-
Depth at Inlet (in)	= 7.07
Efficiency (%)	= 100
Gutter Spread (ft)	= 13.71
Gutter Vel (ft/s)	= -0-
Bypass Spread (ft)	= -0-
Bypass Depth (in)	= -0-



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	1.87	100	-0.88	0.88
0.50	0.50	2.77	100	0.02	1.30
0.75	0.75	3.46	100	0.71	1.63
1.00	1.00	4.04	100	1.29	1.89
1.25	1.25	4.26	100	1.51	2.00
1.50	1.50	4.26	100	1.51	2.00
1.75	1.75	4.43	100	1.68	2.72
2.00	2.00	4.65	100	1.90	3.61
2.25	2.25	4.85	100	2.10	4.47
2.50	2.50	5.05	100	2.30	5.29
2.75	2.75	5.24	100	2.49	6.09
3.00	3.00	5.43	100	2.68	6.87
3.25	3.25	5.61	100	2.86	7.62
3.50	3.50	5.79	100	3.04	8.36
3.75	3.75	5.96	100	3.21	9.07
4.00	4.00	6.13	100	3.38	9.77
4.25	4.25	6.29	100	3.54	10.46
4.50	4.50	6.45	100	3.70	11.13
4.75	4.75	6.61	100	3.86	11.79
5.00	5.00	6.77	100	4.02	12.44
5.25	5.25	6.92	100	4.17	13.08
5.50	5.50	7.07	100	4.32	13.71

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
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n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Wednesday, Mar 20 2019

COA Double Storm Inlet Type C Grate (Sag)

Grate Inlet

Location	= Sag
Curb Length (ft)	= -0-
Throat Height (in)	= -0-
Grate Area (sqft)	= 11.76
Grate Width (ft)	= 2.00
Grate Length (ft)	= 5.88

Gutter

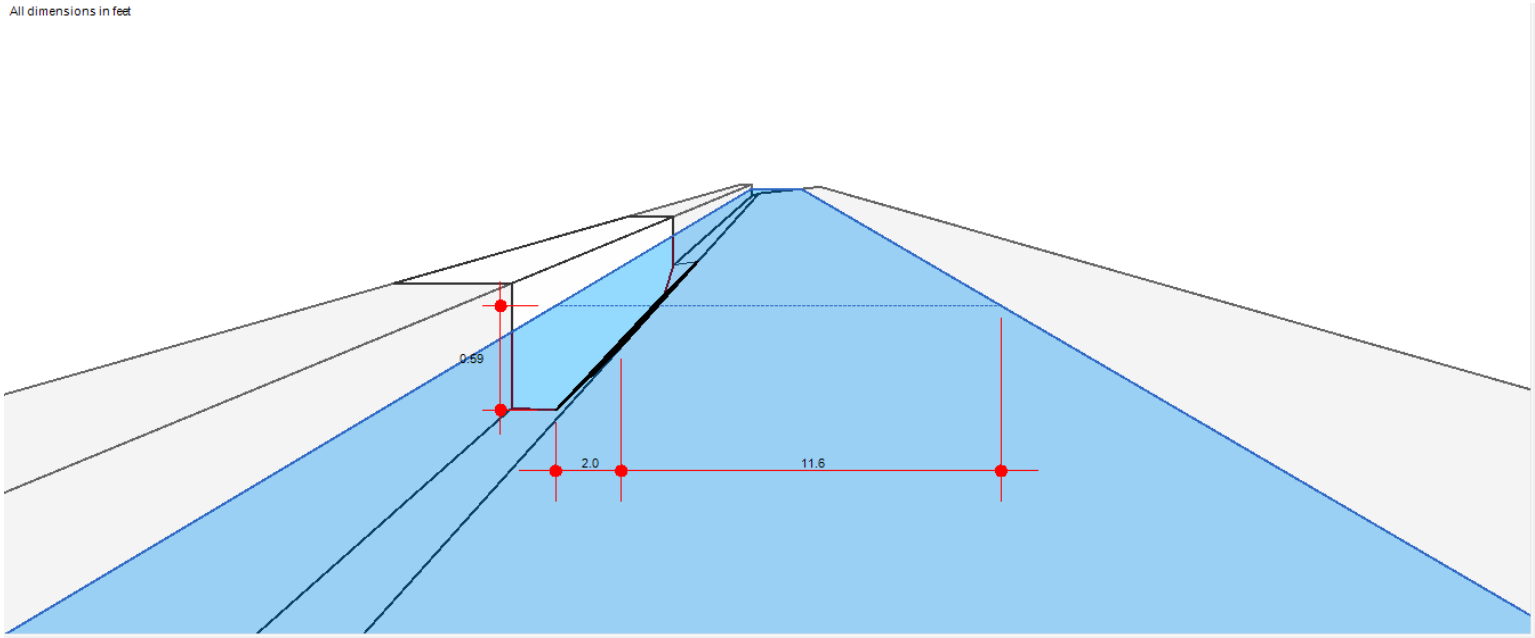
Slope, Sw (ft/ft)	= 0.063
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.75
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= -0-
Gutter n-value	= -0-

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 8

Highlighted

Q Total (cfs)	= 4.75
Q Capt (cfs)	= 4.75
Q Bypass (cfs)	= -0-
Depth at Inlet (in)	= 7.05
Efficiency (%)	= 100
Gutter Spread (ft)	= 13.60
Gutter Vel (ft/s)	= -0-
Bypass Spread (ft)	= -0-
Bypass Depth (in)	= -0-



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	2.45	100	0.95	0.40
0.50	0.50	3.02	100	1.52	0.63
0.75	0.75	3.49	100	1.99	0.83
1.00	1.00	3.91	100	2.41	1.00
1.25	1.25	4.29	100	2.79	1.16
1.50	1.50	4.65	100	3.15	1.31
1.75	1.75	4.99	100	3.49	1.46
2.00	2.00	5.32	100	3.82	1.59
2.25	2.25	5.63	100	4.13	1.72
2.50	2.50	5.93	100	4.43	1.85
2.75	2.75	6.22	100	4.72	1.97
3.00	3.00	6.40	100	4.90	2.43
3.25	3.25	6.54	100	5.04	3.00
3.50	3.50	6.67	100	5.17	3.56
3.75	3.75	6.80	100	5.30	4.10
4.00	4.00	6.93	100	5.43	4.63
4.25	4.25	7.06	100	5.56	5.15
4.50	4.50	7.18	100	5.68	5.66
4.75	4.75	7.30	100	5.80	6.17
5.00	5.00	7.42	100	5.92	6.66
5.25	5.25	7.53	100	6.03	7.14
5.50	5.50	7.65	100	6.15	7.62
5.75	5.75	7.76	100	6.26	8.09
6.00	6.00	7.87	100	6.37	8.55
6.25	6.25	7.98	100	6.48	9.01
6.50	6.50	8.09	100	6.59	9.46
6.75	6.75	8.20	100	6.70	9.90
7.00	7.00	8.30	100	6.80	10.34
7.25	7.25	8.41	100	6.91	10.78
7.50	7.50	8.51	100	7.01	11.21
7.75	7.75	8.61	100	7.11	11.63
8.00	8.00	8.71	100	7.21	12.05
8.25	8.25	8.81	100	7.31	12.47
8.50	8.50	8.91	100	7.41	12.88
8.75	8.75	9.01	100	7.51	13.29

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
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n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
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n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Wednesday, Mar 20 2019

COA Double Storm Inlet Type C Combination (Sag)

Combination Inlet

Location	= Sag
Curb Length (ft)	= 5.88
Throat Height (in)	= 6.25
Grate Area (sqft)	= 11.76
Grate Width (ft)	= 2.00
Grate Length (ft)	= 5.88

Gutter

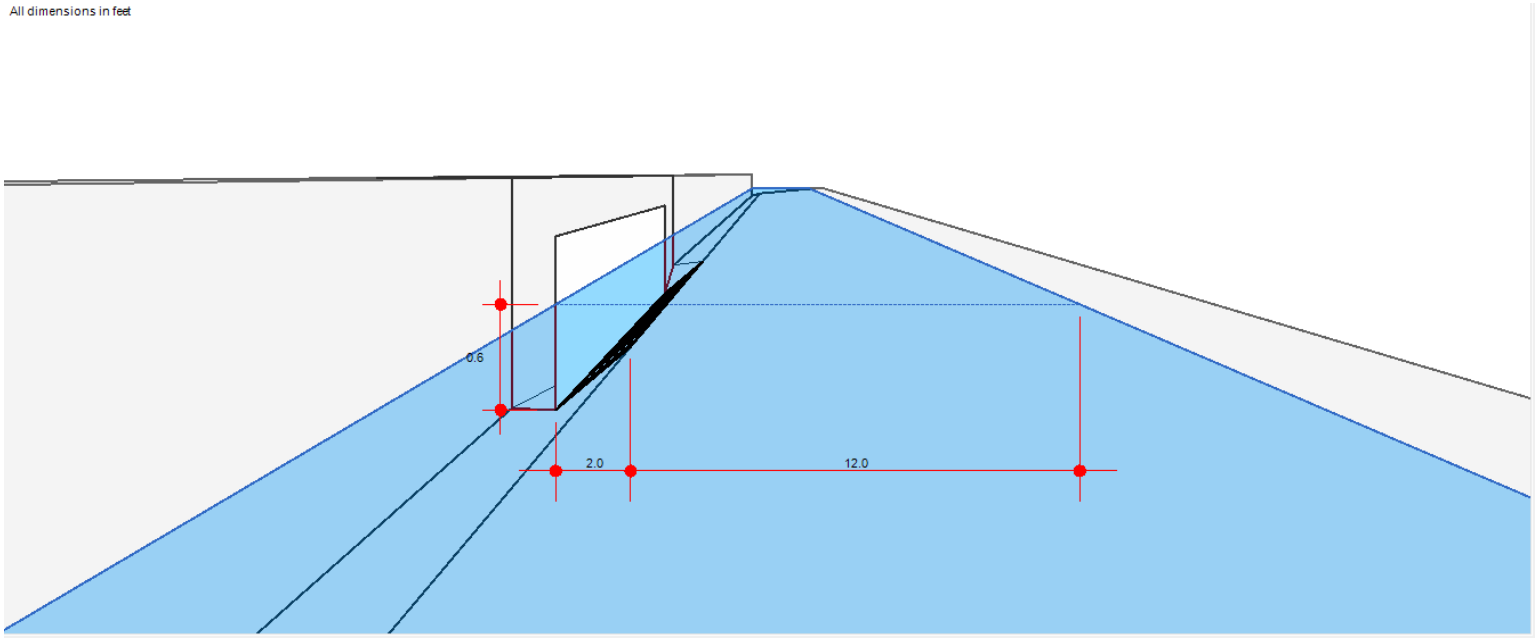
Slope, Sw (ft/ft)	= 0.063
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.75
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= -0-
Gutter n-value	= -0-

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 8

Highlighted

Q Total (cfs)	= 8.00
Q Capt (cfs)	= 8.00
Q Bypass (cfs)	= -0-
Depth at Inlet (in)	= 7.14
Efficiency (%)	= 100
Gutter Spread (ft)	= 14.00
Gutter Vel (ft/s)	= -0-
Bypass Spread (ft)	= -0-
Bypass Depth (in)	= -0-



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	1.32	100	-1.43	0.62
0.50	0.50	2.02	100	-0.73	0.95
0.75	0.75	2.58	100	-0.17	1.21
1.00	1.00	3.06	100	0.31	1.44
1.25	1.25	3.49	100	0.74	1.64
1.50	1.50	3.88	100	1.13	1.82
1.75	1.75	4.24	100	1.49	1.99
2.00	2.00	4.26	100	1.51	2.00
2.25	2.25	4.28	100	1.53	2.09
2.50	2.50	4.44	100	1.69	2.74
2.75	2.75	4.59	100	1.84	3.37
3.00	3.00	4.74	100	1.99	3.98
3.25	3.25	4.88	100	2.13	4.58
3.50	3.50	5.02	100	2.27	5.16
3.75	3.75	5.16	100	2.41	5.73
4.00	4.00	5.29	100	2.54	6.28
4.25	4.25	5.42	100	2.67	6.82
4.50	4.50	5.55	100	2.80	7.35
4.75	4.75	5.67	100	2.92	7.88
5.00	5.00	5.80	100	3.05	8.39
5.25	5.25	5.92	100	3.17	8.89
5.50	5.50	6.04	100	3.29	9.39
5.75	5.75	6.15	100	3.40	9.88
6.00	6.00	6.27	100	3.52	10.36
6.25	6.25	6.38	100	3.63	10.84
6.50	6.50	6.50	100	3.75	11.31
6.75	6.75	6.61	100	3.86	11.77
7.00	7.00	6.72	100	3.97	12.23
7.25	7.25	6.83	100	4.08	12.68
7.50	7.50	6.93	100	4.18	13.13
7.75	7.75	7.04	100	4.29	13.57
8.00	8.00	7.14	100	4.39	14.00
8.25	8.25	7.25	100	4.50	14.44
8.50	8.50	7.35	100	4.60	14.86
8.75	8.75	7.45	100	4.70	15.29
9.00	9.00	7.55	100	4.80	15.71

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
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n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Mar 19 2019

NMDOT Combination Drop Inlet Type 1-B on Grade (4.2% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 5.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 5.58

Gutter

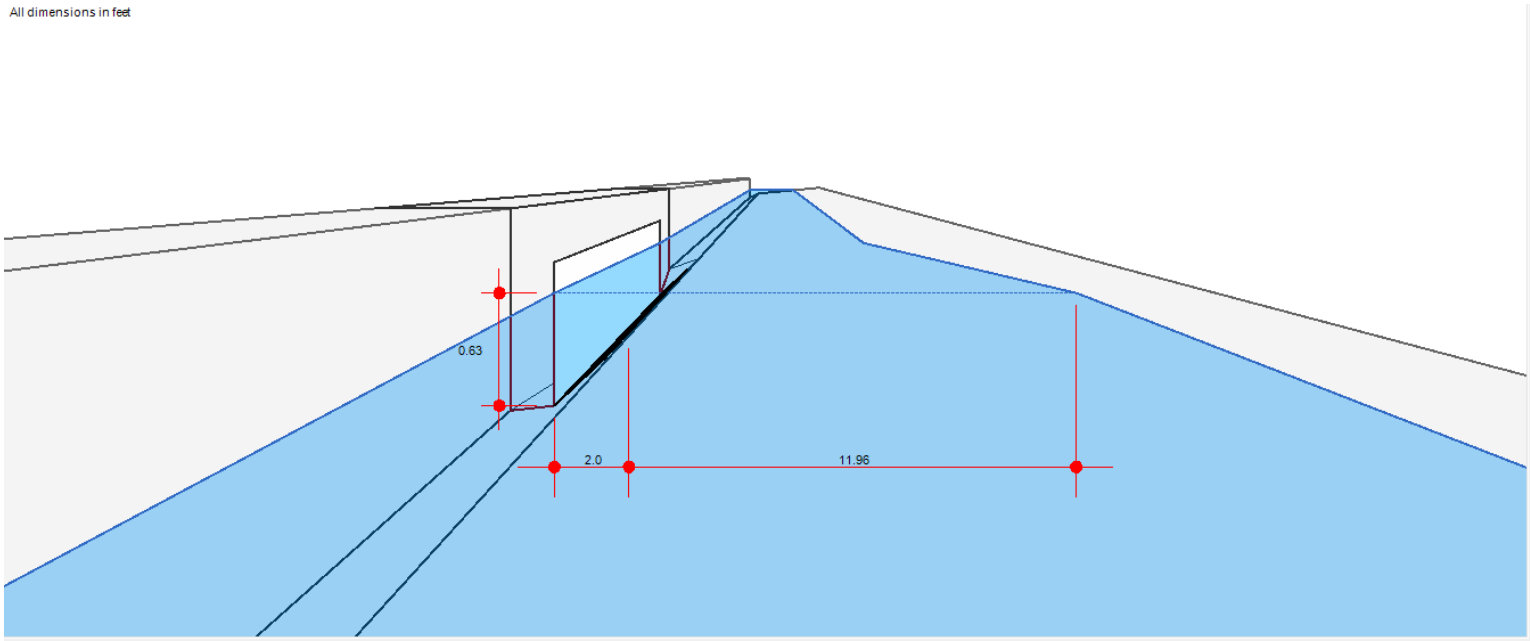
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 4.20
Gutter n-value	= 0.017

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 8

Highlighted

Q Total (cfs)	= 13.50
Q Capt (cfs)	= 6.34
Q Bypass (cfs)	= 7.16
Depth at Inlet (in)	= 7.60
Efficiency (%)	= 47
Gutter Spread (ft)	= 13.96
Gutter Vel (ft/s)	= 6.40
Bypass Spread (ft)	= 10.49
Bypass Depth (in)	= 4.46



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	3.79	100	1.48	1.22
0.50	0.50	4.22	99	1.91	1.58
0.75	0.72	4.54	96	2.23	1.84
1.00	0.93	4.79	93	2.48	2.25
1.25	1.12	5.00	90	2.69	3.11
1.50	1.31	5.17	87	2.86	3.83
1.75	1.48	5.32	85	3.01	4.43
2.00	1.65	5.44	82	3.13	4.95
2.25	1.80	5.55	80	3.24	5.42
2.50	1.95	5.65	78	3.34	5.84
2.75	2.10	5.75	76	3.44	6.22
3.00	2.24	5.83	75	3.52	6.58
3.25	2.37	5.91	73	3.60	6.91
3.50	2.50	5.99	72	3.68	7.22
3.75	2.63	6.06	70	3.75	7.51
4.00	2.76	6.12	69	3.81	7.79
4.25	2.88	6.19	68	3.88	8.05
4.50	3.00	6.25	67	3.94	8.30
4.75	3.12	6.30	66	3.99	8.55
5.00	3.23	6.36	65	4.05	8.78
5.25	3.34	6.41	64	4.10	9.00
5.50	3.45	6.47	63	4.16	9.22
5.75	3.56	6.52	62	4.21	9.42
6.00	3.67	6.56	61	4.25	9.63
6.25	3.77	6.61	60	4.30	9.82
6.50	3.88	6.66	60	4.35	10.01
6.75	3.98	6.70	59	4.39	10.20
7.00	4.08	6.74	58	4.43	10.38
7.25	4.18	6.78	58	4.47	10.55
7.50	4.28	6.83	57	4.52	10.72
7.75	4.37	6.87	56	4.56	10.89
8.00	4.47	6.90	56	4.59	11.05
8.25	4.56	6.94	55	4.63	11.21
8.50	4.65	6.98	55	4.67	11.36
8.75	4.75	7.02	54	4.71	11.52
9.00	4.84	7.05	54	4.74	11.67
9.25	4.93	7.09	53	4.78	11.81
9.50	5.02	7.12	53	4.81	11.96
9.75	5.11	7.16	52	4.85	12.10
10.00	5.19	7.19	52	4.88	12.24
10.25	5.28	7.22	52	4.91	12.37
10.50	5.37	7.26	51	4.95	12.51
10.75	5.45	7.29	51	4.98	12.64
11.00	5.53	7.32	50	5.01	12.77
11.25	5.62	7.35	50	5.04	12.89
11.50	5.70	7.38	50	5.07	13.02
11.75	5.78	7.41	49	5.10	13.14
12.00	5.86	7.44	49	5.13	13.26
12.25	5.94	7.47	48	5.16	13.38

Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
12.50	6.02	7.49	48	5.18	13.50
12.75	6.10	7.52	48	5.21	13.62
13.00	6.18	7.55	48	5.24	13.74
13.25	6.26	7.58	47	5.27	13.85
13.50	6.34	7.60	47	5.29	13.96
13.75	6.41	7.63	47	5.32	14.07
14.00	6.49	7.66	46	5.35	14.18
14.25	6.56	7.68	46	5.37	14.29
14.50	6.64	7.71	46	5.40	14.40
14.75	6.71	7.73	46	5.42	14.50
15.00	6.79	7.76	45	5.45	14.61
15.25	6.86	7.78	45	5.47	14.71
15.50	6.94	7.81	45	5.50	14.81
15.75	7.01	7.83	44	5.52	14.91
16.00	7.08	7.86	44	5.55	15.01
16.25	7.15	7.88	44	5.57	15.11
16.50	7.22	7.90	44	5.59	15.21
16.75	7.30	7.93	44	5.62	15.31
17.00	7.36	7.95	43	5.64	15.40
17.25	7.44	7.97	43	5.66	15.50
17.50	7.51	8.00	43	5.69	15.59
17.75	7.57	8.02	43	5.71	15.68

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
3.34	0.00	0.00	0.00
3.97	0.00	0.28	0.34
4.39	0.03	0.56	0.68
4.71	0.07	0.77	0.93
4.83	0.13	0.95	1.15
4.87	0.19	1.10	1.34
4.89	0.27	1.25	1.52
4.91	0.35	1.39	1.68
4.94	0.45	1.52	1.84
4.98	0.55	1.63	1.98
5.01	0.65	1.75	2.12
5.05	0.76	1.85	2.24
5.09	0.88	1.95	2.36
5.13	1.00	2.23	2.48
5.17	1.12	2.68	2.59
5.21	1.24	3.09	2.69
5.25	1.37	3.48	2.78
5.29	1.50	3.83	2.86
5.32	1.63	4.16	2.94
5.36	1.77	4.47	3.02
5.40	1.91	4.76	3.09
5.44	2.05	5.04	3.15
5.47	2.19	5.30	3.22
5.51	2.33	5.56	3.28
5.55	2.48	5.80	3.33
5.58	2.62	6.03	3.39
5.62	2.77	6.25	3.44
5.65	2.92	6.46	3.49
5.69	3.07	6.68	3.55
5.72	3.22	6.87	3.59
5.75	3.38	7.07	3.64
5.79	3.53	7.26	3.69
5.82	3.69	7.44	3.73
5.85	3.85	7.62	3.77
5.88	4.00	7.79	3.81
5.91	4.16	7.95	3.85
5.94	4.32	8.13	3.89
5.97	4.48	8.29	3.93
6.00	4.64	8.45	3.97
6.03	4.81	8.59	4.01
6.06	4.97	8.75	4.04
6.08	5.13	8.90	4.08
6.11	5.30	9.05	4.11
6.14	5.47	9.18	4.15
6.17	5.63	9.33	4.18
6.20	5.80	9.47	4.22
6.22	5.97	9.60	4.25
6.25	6.14	9.74	4.28
6.27	6.31	9.87	4.31

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
6.30	6.48	9.99	4.34
6.33	6.65	10.12	4.37
6.35	6.82	10.25	4.40
6.37	6.99	10.37	4.43
6.40	7.16	10.49	4.46
6.42	7.34	10.61	4.49
6.44	7.51	10.73	4.52
6.47	7.69	10.85	4.55
6.49	7.86	10.96	4.57
6.51	8.04	11.07	4.60
6.54	8.21	11.18	4.63
6.56	8.39	11.30	4.65
6.58	8.56	11.40	4.68
6.60	8.74	11.51	4.71
6.63	8.92	11.62	4.73
6.65	9.10	11.72	4.76
6.67	9.28	11.83	4.78
6.69	9.45	11.93	4.81
6.71	9.64	12.03	4.83
6.73	9.81	12.13	4.86
6.75	9.99	12.23	4.88
6.77	10.18	12.33	4.90

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Mar 19 2019

NMDOT Combination Drop Inlet Type 1-B on Grade (4.4% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 5.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 5.58

Gutter

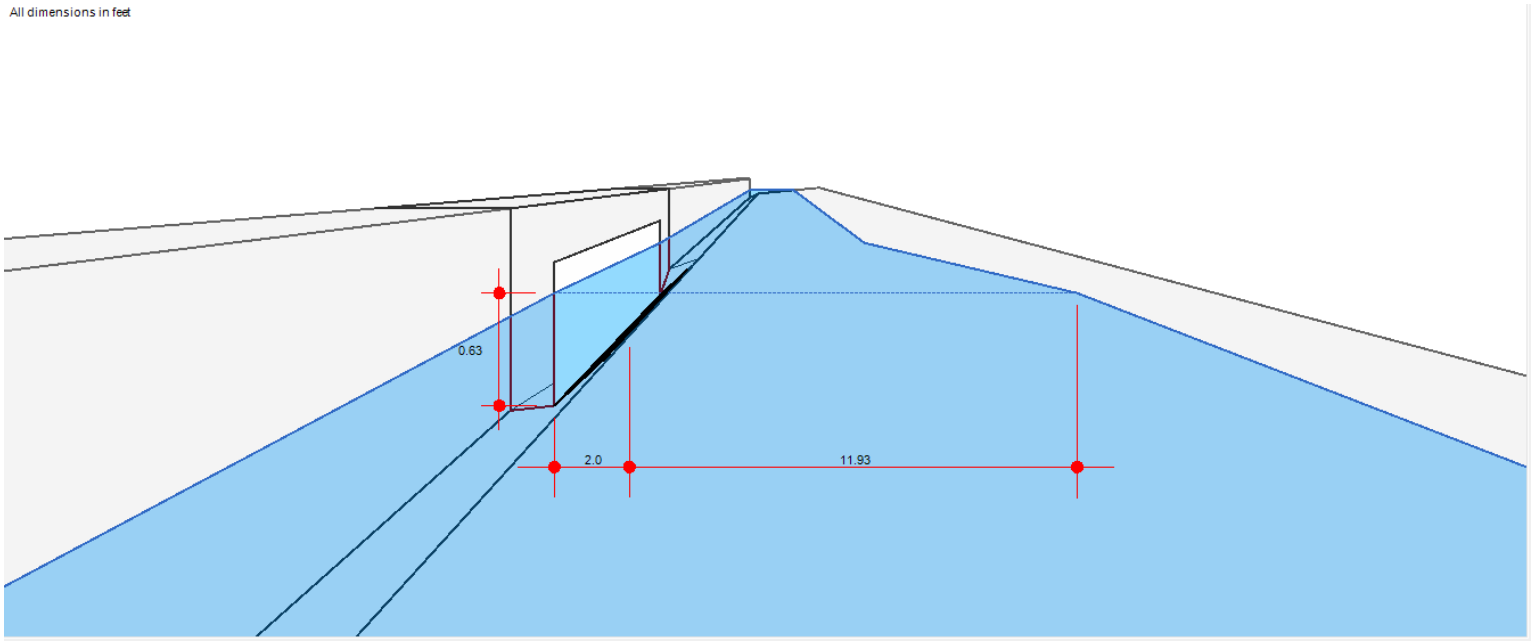
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 4.40
Gutter n-value	= 0.017

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 8

Highlighted

Q Total (cfs)	= 13.75
Q Capt (cfs)	= 6.40
Q Bypass (cfs)	= 7.35
Depth at Inlet (in)	= 7.60
Efficiency (%)	= 47
Gutter Spread (ft)	= 13.93
Gutter Vel (ft/s)	= 6.54
Bypass Spread (ft)	= 10.50
Bypass Depth (in)	= 4.46



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	3.77	100	1.46	1.21
0.50	0.50	4.21	99	1.90	1.57
0.75	0.72	4.52	96	2.21	1.82
1.00	0.93	4.77	93	2.46	2.16
1.25	1.13	4.98	90	2.67	3.02
1.50	1.31	5.15	87	2.84	3.73
1.75	1.48	5.29	85	2.98	4.34
2.00	1.65	5.42	82	3.11	4.86
2.25	1.81	5.53	80	3.22	5.32
2.50	1.96	5.63	78	3.32	5.74
2.75	2.10	5.72	76	3.41	6.13
3.00	2.24	5.81	75	3.50	6.48
3.25	2.38	5.89	73	3.58	6.81
3.50	2.51	5.96	72	3.65	7.12
3.75	2.64	6.03	70	3.72	7.41
4.00	2.76	6.10	69	3.79	7.69
4.25	2.88	6.16	68	3.85	7.95
4.50	3.00	6.22	67	3.91	8.20
4.75	3.12	6.28	66	3.97	8.44
5.00	3.23	6.33	65	4.02	8.67
5.25	3.34	6.39	64	4.08	8.89
5.50	3.46	6.44	63	4.13	9.11
5.75	3.57	6.49	62	4.18	9.32
6.00	3.67	6.54	61	4.23	9.51
6.25	3.78	6.58	60	4.27	9.71
6.50	3.88	6.63	60	4.32	9.90
6.75	3.98	6.67	59	4.36	10.08
7.00	4.08	6.72	58	4.41	10.26
7.25	4.18	6.76	58	4.45	10.43
7.50	4.28	6.80	57	4.49	10.60
7.75	4.37	6.84	56	4.53	10.77
8.00	4.47	6.88	56	4.57	10.93
8.25	4.56	6.91	55	4.60	11.09
8.50	4.65	6.95	55	4.64	11.24
8.75	4.75	6.99	54	4.68	11.39
9.00	4.84	7.02	54	4.71	11.54
9.25	4.93	7.06	53	4.75	11.69
9.50	5.02	7.09	53	4.78	11.83
9.75	5.10	7.13	52	4.82	11.97
10.00	5.19	7.16	52	4.85	12.11
10.25	5.28	7.19	51	4.88	12.24
10.50	5.36	7.22	51	4.91	12.38
10.75	5.45	7.26	51	4.95	12.51
11.00	5.53	7.29	50	4.98	12.64
11.25	5.61	7.32	50	5.01	12.76
11.50	5.69	7.35	50	5.04	12.89
11.75	5.77	7.38	49	5.07	13.01
12.00	5.85	7.40	49	5.09	13.13
12.25	5.94	7.43	48	5.12	13.25

Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
12.50	6.02	7.46	48	5.15	13.37
12.75	6.09	7.49	48	5.18	13.48
13.00	6.17	7.52	47	5.21	13.60
13.25	6.25	7.54	47	5.23	13.71
13.50	6.33	7.57	47	5.26	13.82
13.75	6.40	7.60	47	5.29	13.93
14.00	6.48	7.62	46	5.31	14.04
14.25	6.56	7.65	46	5.34	14.15
14.50	6.63	7.67	46	5.36	14.25
14.75	6.70	7.70	45	5.39	14.36
15.00	6.78	7.72	45	5.41	14.46
15.25	6.85	7.75	45	5.44	14.56
15.50	6.93	7.77	45	5.46	14.67
15.75	7.00	7.80	44	5.49	14.77
16.00	7.07	7.82	44	5.51	14.87
16.25	7.14	7.84	44	5.53	14.96
16.50	7.21	7.87	44	5.56	15.06
16.75	7.28	7.89	43	5.58	15.16
17.00	7.35	7.91	43	5.60	15.25
17.25	7.42	7.94	43	5.63	15.35
17.50	7.49	7.96	43	5.65	15.44
17.75	7.56	7.98	43	5.67	15.53
18.00	7.63	8.00	42	5.69	15.62

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
3.39	0.00	0.00	0.00
4.04	0.00	0.26	0.31
4.47	0.03	0.54	0.66
4.80	0.07	0.76	0.92
4.94	0.12	0.93	1.13
4.98	0.19	1.09	1.32
5.00	0.27	1.23	1.50
5.03	0.35	1.37	1.66
5.06	0.44	1.50	1.82
5.09	0.54	1.62	1.96
5.12	0.65	1.73	2.09
5.16	0.76	1.83	2.22
5.19	0.87	1.93	2.34
5.24	0.99	2.13	2.45
5.27	1.11	2.57	2.56
5.31	1.24	2.99	2.66
5.35	1.37	3.37	2.75
5.39	1.50	3.73	2.84
5.43	1.63	4.06	2.92
5.47	1.77	4.37	2.99
5.51	1.91	4.67	3.06
5.55	2.04	4.95	3.13
5.58	2.18	5.20	3.19
5.62	2.33	5.46	3.25
5.66	2.47	5.70	3.31
5.70	2.62	5.93	3.37
5.73	2.77	6.15	3.42
5.76	2.92	6.37	3.47
5.80	3.07	6.58	3.52
5.83	3.22	6.78	3.57
5.87	3.38	6.97	3.62
5.90	3.53	7.16	3.66
5.93	3.69	7.34	3.71
5.96	3.85	7.51	3.75
6.00	4.00	7.69	3.79
6.03	4.16	7.86	3.83
6.06	4.32	8.03	3.87
6.08	4.48	8.18	3.91
6.11	4.65	8.34	3.95
6.15	4.81	8.50	3.98
6.17	4.97	8.65	4.02
6.20	5.14	8.80	4.05
6.23	5.30	8.94	4.09
6.26	5.47	9.08	4.12
6.28	5.64	9.22	4.16
6.31	5.81	9.36	4.19
6.34	5.98	9.49	4.22
6.37	6.15	9.63	4.25
6.39	6.31	9.75	4.29

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
6.42	6.48	9.89	4.32
6.44	6.66	10.01	4.35
6.47	6.83	10.14	4.38
6.49	7.00	10.26	4.41
6.52	7.17	10.38	4.43
6.54	7.35	10.50	4.46
6.56	7.52	10.62	4.49
6.59	7.69	10.73	4.52
6.61	7.87	10.85	4.55
6.64	8.05	10.96	4.57
6.66	8.22	11.07	4.60
6.68	8.40	11.18	4.63
6.70	8.57	11.29	4.65
6.72	8.75	11.40	4.68
6.75	8.93	11.50	4.70
6.77	9.11	11.61	4.73
6.79	9.29	11.71	4.75
6.81	9.47	11.81	4.78
6.83	9.65	11.91	4.80
6.85	9.83	12.01	4.83
6.88	10.01	12.11	4.85
6.90	10.19	12.21	4.87
6.92	10.37	12.31	4.90

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Mar 19 2019

NMDOT Combination Drop Inlet Type 1-B on Grade (5.2% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 5.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 5.58

Gutter

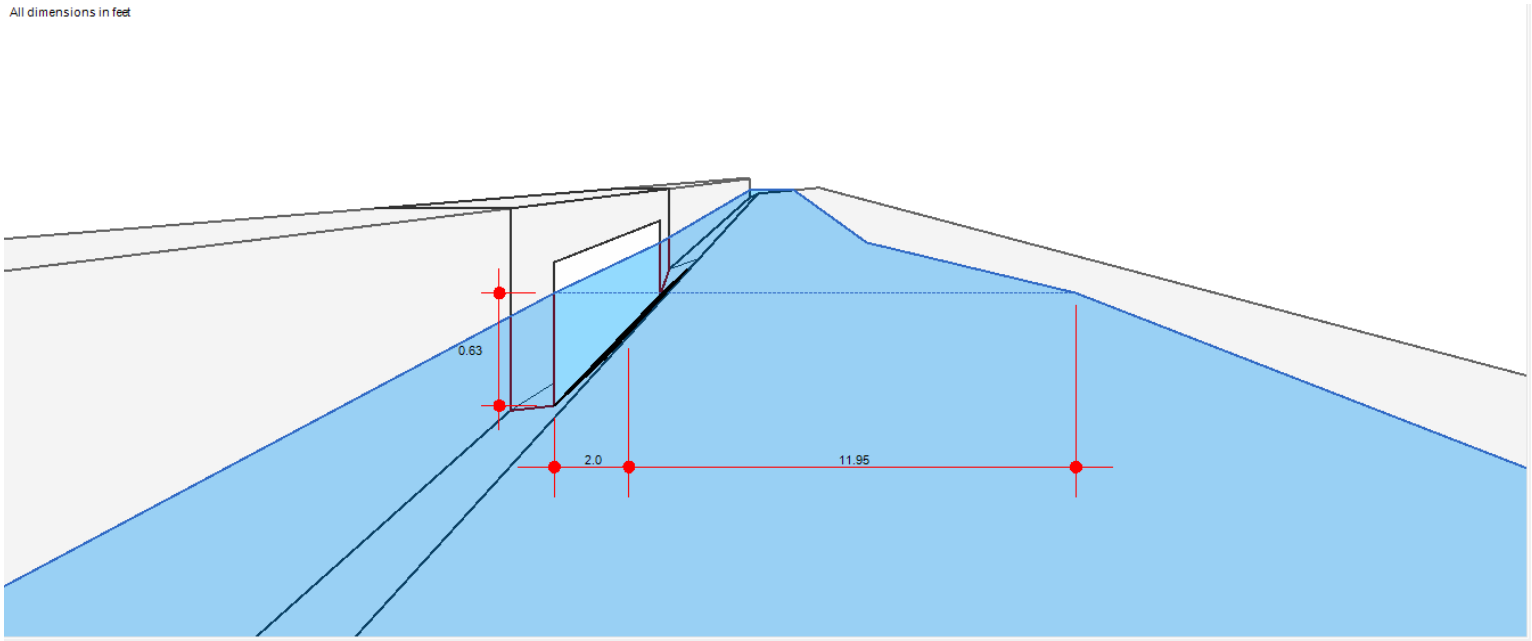
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 5.20
Gutter n-value	= 0.017

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 8

Highlighted

Q Total (cfs)	= 15.00
Q Capt (cfs)	= 6.76
Q Bypass (cfs)	= 8.24
Depth at Inlet (in)	= 7.60
Efficiency (%)	= 45
Gutter Spread (ft)	= 13.95
Gutter Vel (ft/s)	= 7.12
Bypass Spread (ft)	= 10.66
Bypass Depth (in)	= 4.50



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	3.73	100	1.42	1.17
0.50	0.50	4.15	100	1.84	1.52
0.75	0.72	4.45	97	2.14	1.77
1.00	0.94	4.70	94	2.39	1.97
1.25	1.13	4.90	91	2.59	2.70
1.50	1.32	5.07	88	2.76	3.41
1.75	1.50	5.22	86	2.91	4.01
2.00	1.67	5.34	83	3.03	4.53
2.25	1.82	5.45	81	3.14	4.99
2.50	1.98	5.55	79	3.24	5.41
2.75	2.12	5.64	77	3.33	5.79
3.00	2.26	5.73	75	3.42	6.14
3.25	2.40	5.81	74	3.50	6.47
3.50	2.53	5.88	72	3.57	6.77
3.75	2.66	5.95	71	3.64	7.06
4.00	2.78	6.01	70	3.70	7.33
4.25	2.90	6.07	68	3.76	7.59
4.50	3.02	6.13	67	3.82	7.84
4.75	3.14	6.19	66	3.88	8.07
5.00	3.25	6.24	65	3.93	8.30
5.25	3.37	6.30	64	3.99	8.52
5.50	3.48	6.35	63	4.04	8.73
5.75	3.58	6.40	62	4.09	8.92
6.00	3.69	6.44	61	4.13	9.13
6.25	3.79	6.49	61	4.18	9.32
6.50	3.89	6.53	60	4.22	9.49
6.75	3.99	6.58	59	4.27	9.67
7.00	4.09	6.62	58	4.31	9.85
7.25	4.19	6.66	58	4.35	10.02
7.50	4.29	6.70	57	4.39	10.19
7.75	4.39	6.74	57	4.43	10.35
8.00	4.48	6.78	56	4.47	10.51
8.25	4.57	6.81	55	4.50	10.66
8.50	4.66	6.85	55	4.54	10.81
8.75	4.75	6.88	54	4.57	10.96
9.00	4.84	6.92	54	4.61	11.11
9.25	4.93	6.95	53	4.64	11.25
9.50	5.02	6.99	53	4.68	11.39
9.75	5.11	7.02	52	4.71	11.52
10.00	5.19	7.05	52	4.74	11.66
10.25	5.28	7.08	51	4.77	11.79
10.50	5.36	7.11	51	4.80	11.92
10.75	5.44	7.14	51	4.83	12.05
11.00	5.53	7.17	50	4.86	12.17
11.25	5.61	7.20	50	4.89	12.30
11.50	5.69	7.23	49	4.92	12.42
11.75	5.77	7.26	49	4.95	12.54
12.00	5.85	7.29	49	4.98	12.65
12.25	5.93	7.32	48	5.01	12.77

Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
12.50	6.01	7.35	48	5.04	12.89
12.75	6.08	7.37	48	5.06	13.00
13.00	6.16	7.40	47	5.09	13.11
13.25	6.24	7.43	47	5.12	13.22
13.50	6.31	7.45	47	5.14	13.33
13.75	6.39	7.48	46	5.17	13.44
14.00	6.46	7.50	46	5.19	13.54
14.25	6.54	7.53	46	5.22	13.65
14.50	6.61	7.55	46	5.24	13.75
14.75	6.69	7.58	45	5.27	13.85
15.00	6.76	7.60	45	5.29	13.95
15.25	6.83	7.63	45	5.32	14.05
15.50	6.90	7.65	45	5.34	14.15
15.75	6.97	7.67	44	5.36	14.25
16.00	7.04	7.70	44	5.39	14.34
16.25	7.12	7.72	44	5.41	14.44
16.50	7.19	7.74	44	5.43	14.54
16.75	7.25	7.76	43	5.45	14.63
17.00	7.32	7.79	43	5.48	14.72
17.25	7.39	7.81	43	5.50	14.81
17.50	7.46	7.83	43	5.52	14.90
17.75	7.53	7.85	42	5.54	14.99
18.00	7.59	7.87	42	5.56	15.08
18.25	7.66	7.89	42	5.58	15.17
18.50	7.73	7.92	42	5.61	15.26
18.75	7.80	7.94	42	5.63	15.35
19.00	7.86	7.96	41	5.65	15.43
19.25	7.93	7.98	41	5.67	15.52
19.50	7.99	8.00	41	5.69	15.60
19.75	8.05	8.02	41	5.71	15.68

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
3.61	0.00	0.00	0.00
4.30	0.00	0.20	0.25
4.76	0.03	0.50	0.60
5.11	0.06	0.70	0.85
5.33	0.12	0.88	1.06
5.40	0.18	1.03	1.25
5.43	0.25	1.17	1.42
5.45	0.33	1.30	1.58
5.47	0.43	1.43	1.73
5.50	0.52	1.54	1.87
5.54	0.63	1.65	2.00
5.57	0.74	1.75	2.13
5.60	0.85	1.85	2.25
5.64	0.97	1.94	2.36
5.68	1.09	2.17	2.46
5.72	1.22	2.59	2.56
5.76	1.35	2.98	2.66
5.80	1.48	3.34	2.75
5.84	1.61	3.68	2.83
5.88	1.75	4.00	2.90
5.92	1.88	4.30	2.97
5.96	2.02	4.58	3.04
6.00	2.17	4.85	3.11
6.03	2.31	5.10	3.17
6.07	2.46	5.34	3.23
6.11	2.61	5.58	3.28
6.15	2.76	5.80	3.33
6.18	2.91	6.01	3.39
6.22	3.06	6.22	3.44
6.25	3.21	6.41	3.48
6.28	3.36	6.61	3.53
6.32	3.52	6.80	3.57
6.35	3.68	6.98	3.62
6.39	3.84	7.16	3.66
6.42	4.00	7.33	3.70
6.45	4.16	7.49	3.74
6.48	4.32	7.66	3.78
6.51	4.48	7.82	3.82
6.55	4.64	7.97	3.86
6.58	4.81	8.13	3.89
6.61	4.97	8.28	3.93
6.64	5.14	8.42	3.96
6.67	5.31	8.56	4.00
6.69	5.47	8.70	4.03
6.72	5.64	8.84	4.07
6.75	5.81	8.98	4.10
6.78	5.98	9.11	4.13
6.81	6.15	9.24	4.16
6.83	6.32	9.37	4.19

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
6.86	6.49	9.49	4.22
6.89	6.67	9.62	4.25
6.92	6.84	9.74	4.28
6.94	7.01	9.86	4.31
6.97	7.19	9.98	4.34
6.99	7.36	10.10	4.37
7.02	7.54	10.21	4.39
7.04	7.71	10.33	4.42
7.07	7.89	10.44	4.45
7.09	8.06	10.55	4.47
7.12	8.24	10.66	4.50
7.14	8.42	10.77	4.53
7.16	8.60	10.87	4.55
7.19	8.78	10.98	4.58
7.21	8.96	11.08	4.60
7.23	9.13	11.18	4.63
7.25	9.31	11.28	4.65
7.28	9.50	11.39	4.68
7.30	9.68	11.48	4.70
7.32	9.86	11.58	4.72
7.35	10.04	11.68	4.75
7.37	10.22	11.78	4.77
7.39	10.41	11.87	4.79
7.41	10.59	11.96	4.81
7.43	10.77	12.06	4.84
7.45	10.95	12.15	4.86
7.47	11.14	12.24	4.88
7.49	11.32	12.33	4.90
7.51	11.51	12.42	4.92
7.54	11.70	12.51	4.95

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Mar 19 2019

NMDOT Combination Drop Inlet Type 1-B on Grade (6.05% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 5.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 5.58

Gutter

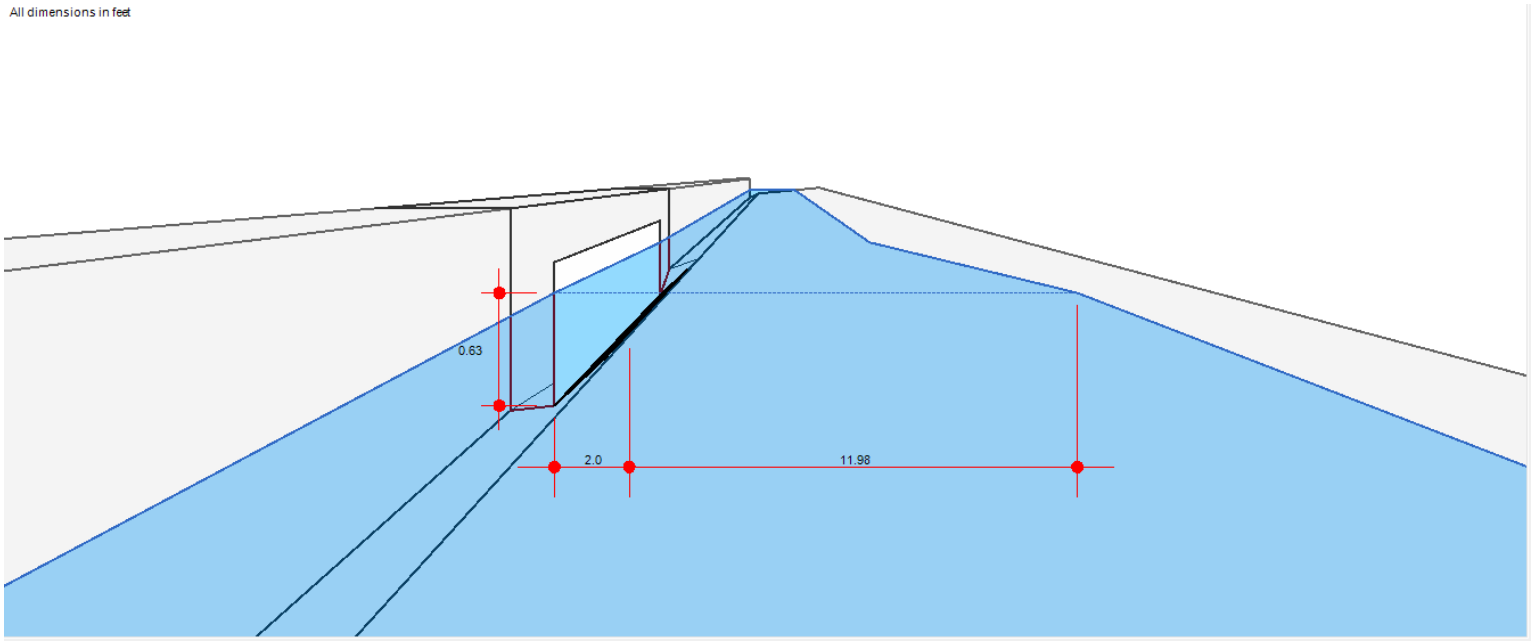
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 6.05
Gutter n-value	= 0.017

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 8

Highlighted

Q Total (cfs)	= 16.25
Q Capt (cfs)	= 7.11
Q Bypass (cfs)	= 9.14
Depth at Inlet (in)	= 7.61
Efficiency (%)	= 44
Gutter Spread (ft)	= 13.98
Gutter Vel (ft/s)	= 7.68
Bypass Spread (ft)	= 10.80
Bypass Depth (in)	= 4.53



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	3.69	100	1.38	1.14
0.50	0.50	4.10	100	1.79	1.48
0.75	0.73	4.39	97	2.08	1.72
1.00	0.94	4.63	94	2.32	1.91
1.25	1.14	4.83	91	2.52	2.40
1.50	1.33	5.00	89	2.69	3.11
1.75	1.51	5.14	86	2.83	3.71
2.00	1.68	5.27	84	2.96	4.24
2.25	1.84	5.38	82	3.07	4.70
2.50	2.00	5.48	80	3.17	5.11
2.75	2.14	5.57	78	3.26	5.49
3.00	2.29	5.65	76	3.34	5.84
3.25	2.42	5.73	75	3.42	6.16
3.50	2.55	5.80	73	3.49	6.46
3.75	2.68	5.87	72	3.56	6.74
4.00	2.81	5.94	70	3.63	7.01
4.25	2.93	6.00	69	3.69	7.27
4.50	3.05	6.06	68	3.75	7.51
4.75	3.17	6.11	67	3.80	7.74
5.00	3.28	6.17	66	3.86	7.97
5.25	3.39	6.22	65	3.91	8.17
5.50	3.50	6.27	64	3.96	8.38
5.75	3.61	6.31	63	4.00	8.58
6.00	3.71	6.36	62	4.05	8.78
6.25	3.82	6.40	61	4.09	8.96
6.50	3.92	6.45	60	4.14	9.15
6.75	4.02	6.49	60	4.18	9.32
7.00	4.12	6.53	59	4.22	9.49
7.25	4.22	6.57	58	4.26	9.66
7.50	4.31	6.61	58	4.30	9.82
7.75	4.41	6.65	57	4.34	9.97
8.00	4.50	6.69	56	4.38	10.13
8.25	4.59	6.72	56	4.41	10.29
8.50	4.68	6.76	55	4.45	10.43
8.75	4.77	6.79	55	4.48	10.58
9.00	4.86	6.83	54	4.52	10.72
9.25	4.95	6.86	54	4.55	10.86
9.50	5.04	6.89	53	4.58	10.99
9.75	5.12	6.92	53	4.61	11.13
10.00	5.21	6.96	52	4.65	11.26
10.25	5.29	6.99	52	4.68	11.39
10.50	5.38	7.02	51	4.71	11.52
10.75	5.46	7.05	51	4.74	11.64
11.00	5.54	7.08	50	4.77	11.76
11.25	5.62	7.11	50	4.80	11.88
11.50	5.70	7.13	50	4.82	12.00
11.75	5.78	7.16	49	4.85	12.12
12.00	5.86	7.19	49	4.88	12.23
12.25	5.94	7.22	48	4.91	12.35

Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
12.50	6.02	7.24	48	4.93	12.46
12.75	6.10	7.27	48	4.96	12.57
13.00	6.17	7.30	47	4.99	12.68
13.25	6.25	7.32	47	5.01	12.79
13.50	6.32	7.35	47	5.04	12.89
13.75	6.40	7.37	47	5.06	13.00
14.00	6.47	7.40	46	5.09	13.10
14.25	6.54	7.42	46	5.11	13.20
14.50	6.62	7.45	46	5.14	13.30
14.75	6.69	7.47	45	5.16	13.40
15.00	6.76	7.49	45	5.18	13.50
15.25	6.83	7.52	45	5.21	13.60
15.50	6.90	7.54	45	5.23	13.70
15.75	6.97	7.56	44	5.25	13.79
16.00	7.05	7.59	44	5.28	13.89
16.25	7.11	7.61	44	5.30	13.98
16.50	7.18	7.63	44	5.32	14.07
16.75	7.25	7.65	43	5.34	14.16
17.00	7.32	7.67	43	5.36	14.25
17.25	7.39	7.70	43	5.39	14.34
17.50	7.46	7.72	43	5.41	14.43
17.75	7.52	7.74	42	5.43	14.52
18.00	7.59	7.76	42	5.45	14.61
18.25	7.66	7.78	42	5.47	14.69
18.50	7.72	7.80	42	5.49	14.78
18.75	7.79	7.82	42	5.51	14.86
19.00	7.85	7.84	41	5.53	14.95
19.25	7.91	7.86	41	5.55	15.03
19.50	7.98	7.88	41	5.57	15.11
19.75	8.04	7.90	41	5.59	15.19
20.00	8.11	7.92	41	5.61	15.27
20.25	8.17	7.94	40	5.63	15.35
20.50	8.23	7.96	40	5.65	15.43
20.75	8.30	7.98	40	5.67	15.51
21.00	8.36	7.99	40	5.68	15.59
21.25	8.42	8.01	40	5.70	15.67

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
3.83	0.00	0.00	0.00
4.55	0.00	0.15	0.18
5.04	0.02	0.45	0.54
5.41	0.06	0.66	0.80
5.69	0.11	0.83	1.00
5.80	0.17	0.98	1.18
5.84	0.24	1.11	1.35
5.86	0.32	1.24	1.50
5.88	0.41	1.36	1.65
5.91	0.50	1.48	1.79
5.94	0.61	1.58	1.92
5.97	0.71	1.69	2.04
6.01	0.83	1.78	2.16
6.05	0.95	1.87	2.27
6.08	1.07	1.96	2.37
6.12	1.19	2.21	2.47
6.16	1.32	2.61	2.57
6.20	1.45	2.98	2.66
6.24	1.58	3.32	2.74
6.28	1.72	3.64	2.82
6.32	1.86	3.95	2.89
6.36	2.00	4.23	2.96
6.40	2.14	4.50	3.02
6.44	2.29	4.76	3.09
6.48	2.43	5.00	3.14
6.51	2.58	5.23	3.20
6.55	2.73	5.46	3.25
6.59	2.88	5.67	3.30
6.63	3.03	5.88	3.36
6.66	3.19	6.08	3.40
6.70	3.34	6.27	3.45
6.73	3.50	6.46	3.49
6.76	3.66	6.64	3.54
6.80	3.82	6.82	3.58
6.83	3.98	6.99	3.62
6.87	4.14	7.15	3.66
6.90	4.30	7.32	3.70
6.94	4.46	7.47	3.74
6.97	4.63	7.63	3.77
7.00	4.79	7.78	3.81
7.03	4.96	7.93	3.85
7.06	5.12	8.07	3.88
7.09	5.29	8.21	3.91
7.12	5.46	8.35	3.95
7.15	5.63	8.49	3.98
7.18	5.80	8.62	4.01
7.21	5.97	8.75	4.04
7.24	6.14	8.88	4.08
7.27	6.31	9.00	4.11

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
7.30	6.48	9.13	4.14
7.32	6.65	9.25	4.16
7.35	6.83	9.38	4.19
7.38	7.00	9.49	4.22
7.40	7.18	9.61	4.25
7.43	7.35	9.73	4.28
7.45	7.53	9.84	4.30
7.48	7.71	9.95	4.33
7.51	7.88	10.06	4.36
7.53	8.06	10.17	4.38
7.56	8.24	10.28	4.41
7.59	8.42	10.39	4.44
7.61	8.60	10.49	4.46
7.63	8.78	10.59	4.49
7.66	8.95	10.69	4.51
7.68	9.14	10.80	4.53
7.70	9.32	10.89	4.56
7.73	9.50	10.99	4.58
7.75	9.68	11.09	4.61
7.78	9.86	11.19	4.63
7.80	10.04	11.28	4.65
7.82	10.23	11.38	4.67
7.84	10.41	11.47	4.70
7.87	10.59	11.56	4.72
7.89	10.78	11.65	4.74
7.91	10.96	11.74	4.76
7.93	11.15	11.83	4.78
7.96	11.34	11.92	4.80
7.98	11.52	12.01	4.83
8.00	11.71	12.10	4.85
8.02	11.89	12.19	4.87
8.04	12.08	12.27	4.89
8.06	12.27	12.36	4.91
8.08	12.45	12.44	4.93
8.11	12.64	12.52	4.95
8.12	12.83	12.60	4.97

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Mar 19 2019

NMDOT Combination Drop Inlet Type 2-B on Grade (1.6% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 9.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 9.58

Gutter

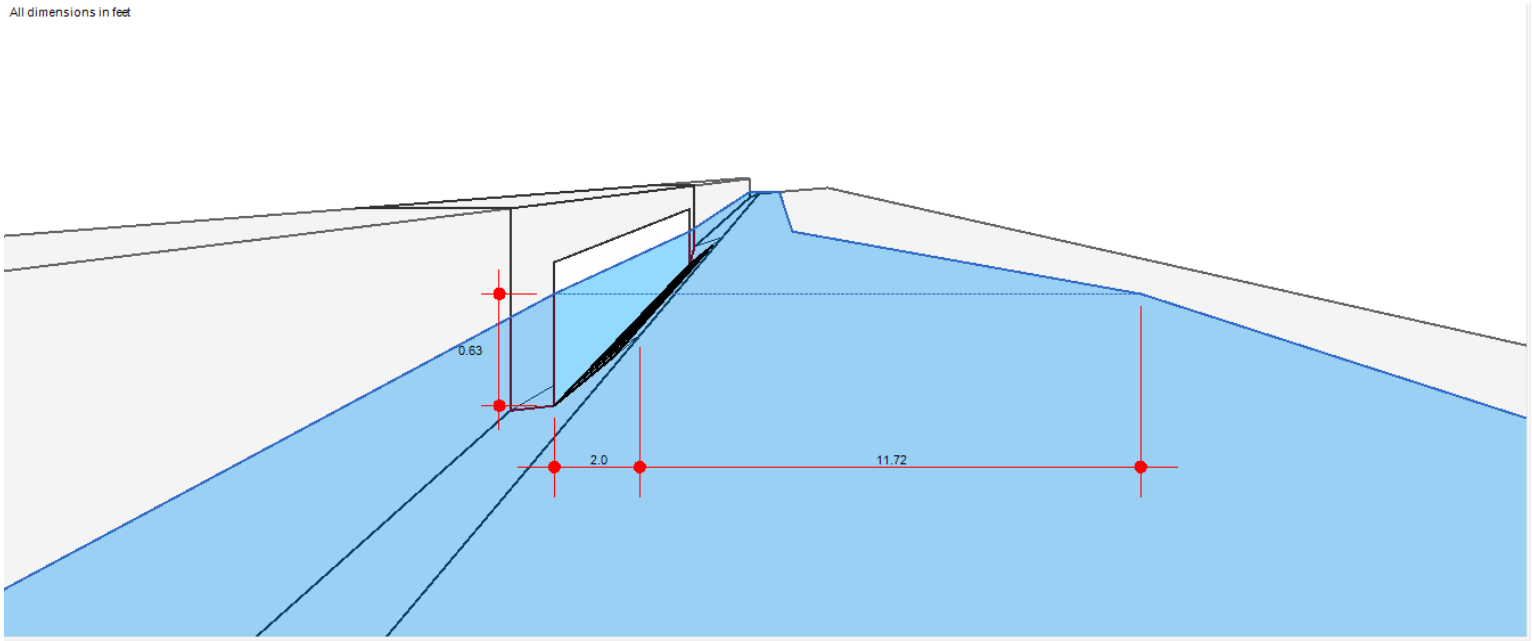
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 1.60
Gutter n-value	= 0.017

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 8

Highlighted

Q Total (cfs)	= 8.00
Q Capt (cfs)	= 6.29
Q Bypass (cfs)	= 1.71
Depth at Inlet (in)	= 7.55
Efficiency (%)	= 79
Gutter Spread (ft)	= 13.72
Gutter Vel (ft/s)	= 3.92
Bypass Spread (ft)	= 6.25
Bypass Depth (in)	= 3.44



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	4.08	100	1.77	1.46
0.50	0.49	4.60	99	2.29	1.89
0.75	0.73	4.97	97	2.66	3.00
1.00	0.95	5.24	95	2.93	4.13
1.25	1.18	5.45	94	3.14	5.00
1.50	1.39	5.63	93	3.32	5.72
1.75	1.61	5.78	92	3.47	6.34
2.00	1.82	5.91	91	3.60	6.89
2.25	2.03	6.03	90	3.72	7.39
2.50	2.23	6.14	89	3.83	7.84
2.75	2.43	6.24	88	3.93	8.26
3.00	2.63	6.33	88	4.02	8.65
3.25	2.83	6.42	87	4.11	9.01
3.50	3.03	6.50	86	4.19	9.36
3.75	3.22	6.58	86	4.27	9.68
4.00	3.41	6.65	85	4.34	10.00
4.25	3.60	6.72	85	4.41	10.29
4.50	3.79	6.79	84	4.48	10.58
4.75	3.98	6.86	84	4.55	10.85
5.00	4.16	6.92	83	4.61	11.11
5.25	4.35	6.98	83	4.67	11.37
5.50	4.53	7.04	82	4.73	11.61
5.75	4.71	7.10	82	4.79	11.85
6.00	4.89	7.15	82	4.84	12.08
6.25	5.07	7.21	81	4.90	12.30
6.50	5.25	7.26	81	4.95	12.52
6.75	5.42	7.31	80	5.00	12.73
7.00	5.60	7.36	80	5.05	12.94
7.25	5.77	7.41	80	5.10	13.14
7.50	5.95	7.45	79	5.14	13.34
7.75	6.12	7.50	79	5.19	13.53
8.00	6.29	7.55	79	5.24	13.72

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
2.32	0.00	0.08	0.09
2.76	0.01	0.39	0.47
2.98	0.02	0.60	0.73
3.01	0.05	0.77	0.94
3.04	0.07	0.92	1.12
3.07	0.11	1.06	1.28
3.10	0.14	1.18	1.43
3.14	0.18	1.30	1.57
3.18	0.22	1.40	1.70
3.22	0.27	1.50	1.82
3.26	0.32	1.60	1.93
3.30	0.37	1.69	2.04
3.33	0.42	1.77	2.15
3.37	0.47	1.86	2.25
3.41	0.53	1.94	2.35
3.45	0.59	2.06	2.44
3.48	0.65	2.44	2.53
3.51	0.71	2.79	2.61
3.55	0.77	3.12	2.69
3.58	0.84	3.43	2.77
3.61	0.90	3.73	2.84
3.64	0.97	4.01	2.91
3.67	1.04	4.28	2.97
3.70	1.11	4.53	3.03
3.73	1.18	4.78	3.09
3.76	1.25	5.01	3.15
3.79	1.33	5.23	3.20
3.81	1.40	5.45	3.25
3.84	1.48	5.66	3.30
3.87	1.55	5.86	3.35
3.89	1.63	6.06	3.40
3.92	1.71	6.25	3.44

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Thursday, Mar 21 2019

NMDOT Combination Drop Inlet Type 2-B on Grade (4.2% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 9.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 9.58

Gutter

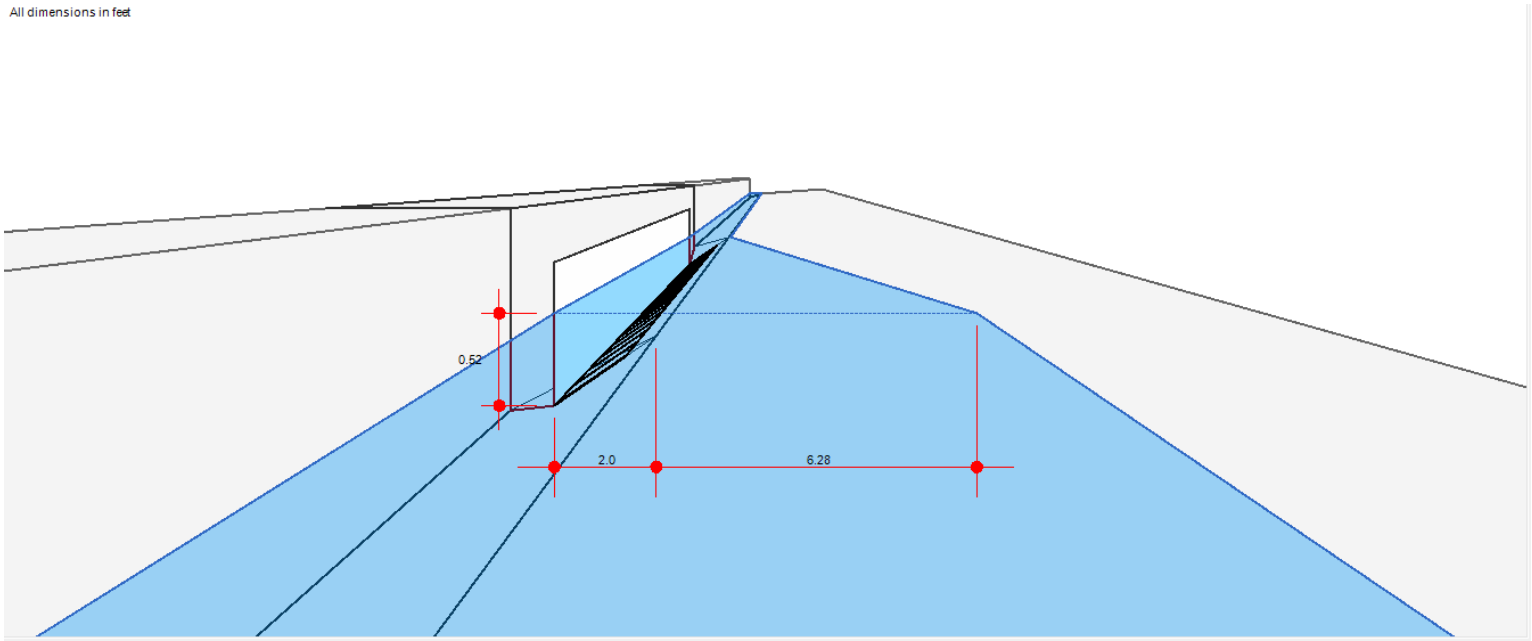
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 4.20
Gutter n-value	= 0.016

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 7

Highlighted

Q Total (cfs)	= 4.75
Q Capt (cfs)	= 3.73
Q Bypass (cfs)	= 1.02
Depth at Inlet (in)	= 6.24
Efficiency (%)	= 78
Gutter Spread (ft)	= 8.28
Gutter Vel (ft/s)	= 5.61
Bypass Spread (ft)	= 2.10
Bypass Depth (in)	= 2.45



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	3.75	100	1.44	1.19
0.50	0.50	4.18	100	1.87	1.54
0.75	0.73	4.49	98	2.18	1.80
1.00	0.96	4.74	96	2.43	2.01
1.25	1.18	4.94	94	2.63	2.88
1.50	1.39	5.11	93	2.80	3.59
1.75	1.59	5.26	91	2.95	4.19
2.00	1.79	5.38	90	3.07	4.71
2.25	1.99	5.50	88	3.19	5.18
2.50	2.17	5.60	87	3.29	5.59
2.75	2.36	5.69	86	3.38	5.97
3.00	2.54	5.77	85	3.46	6.33
3.25	2.72	5.85	84	3.54	6.66
3.50	2.89	5.92	83	3.61	6.96
3.75	3.06	5.99	82	3.68	7.25
4.00	3.23	6.06	81	3.75	7.53
4.25	3.40	6.12	80	3.81	7.79
4.50	3.56	6.18	79	3.87	8.04
4.75	3.73	6.24	78	3.93	8.28
5.00	3.89	6.29	78	3.98	8.50
5.25	4.05	6.35	77	4.04	8.72
5.50	4.20	6.40	76	4.09	8.93
5.75	4.36	6.45	76	4.14	9.14
6.00	4.51	6.50	75	4.19	9.34
6.25	4.66	6.54	75	4.23	9.53
6.50	4.81	6.59	74	4.28	9.72
6.75	4.96	6.63	74	4.32	9.90
7.00	5.11	6.67	73	4.36	10.08
7.25	5.25	6.71	72	4.40	10.25
7.50	5.40	6.75	72	4.44	10.42
7.75	5.54	6.79	72	4.48	10.58
8.00	5.69	6.83	71	4.52	10.74
8.25	5.83	6.87	71	4.56	10.90
8.50	5.96	6.90	70	4.59	11.05
8.75	6.10	6.94	70	4.63	11.20
9.00	6.24	6.98	69	4.67	11.35
9.25	6.38	7.01	69	4.70	11.49

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
3.49	0.00	0.00	0.00
4.15	0.00	0.18	0.22
4.59	0.02	0.42	0.51
4.94	0.04	0.60	0.73
5.11	0.07	0.75	0.91
5.16	0.11	0.88	1.07
5.18	0.16	1.00	1.21
5.21	0.21	1.11	1.35
5.23	0.26	1.22	1.47
5.27	0.33	1.32	1.59
5.30	0.39	1.41	1.71
5.34	0.46	1.50	1.81
5.37	0.53	1.58	1.92
5.41	0.61	1.66	2.01
5.45	0.69	1.74	2.11
5.49	0.77	1.81	2.20
5.53	0.85	1.88	2.28
5.57	0.94	1.95	2.37
5.61	1.02	2.10	2.45
5.65	1.11	2.43	2.53
5.69	1.20	2.73	2.60
5.73	1.30	3.02	2.67
5.77	1.39	3.30	2.73
5.80	1.49	3.56	2.80
5.84	1.59	3.81	2.86
5.88	1.69	4.05	2.92
5.91	1.79	4.27	2.97
5.95	1.89	4.49	3.02
5.98	2.00	4.71	3.07
6.02	2.10	4.91	3.12
6.05	2.21	5.10	3.17
6.08	2.31	5.29	3.21
6.12	2.42	5.47	3.26
6.15	2.54	5.65	3.30
6.18	2.65	5.82	3.34
6.21	2.76	5.99	3.38
6.25	2.87	6.15	3.42

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Thursday, Mar 21 2019

NMDOT Combination Drop Inlet Type 2-B on Grade (4.4% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 9.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 9.58

Gutter

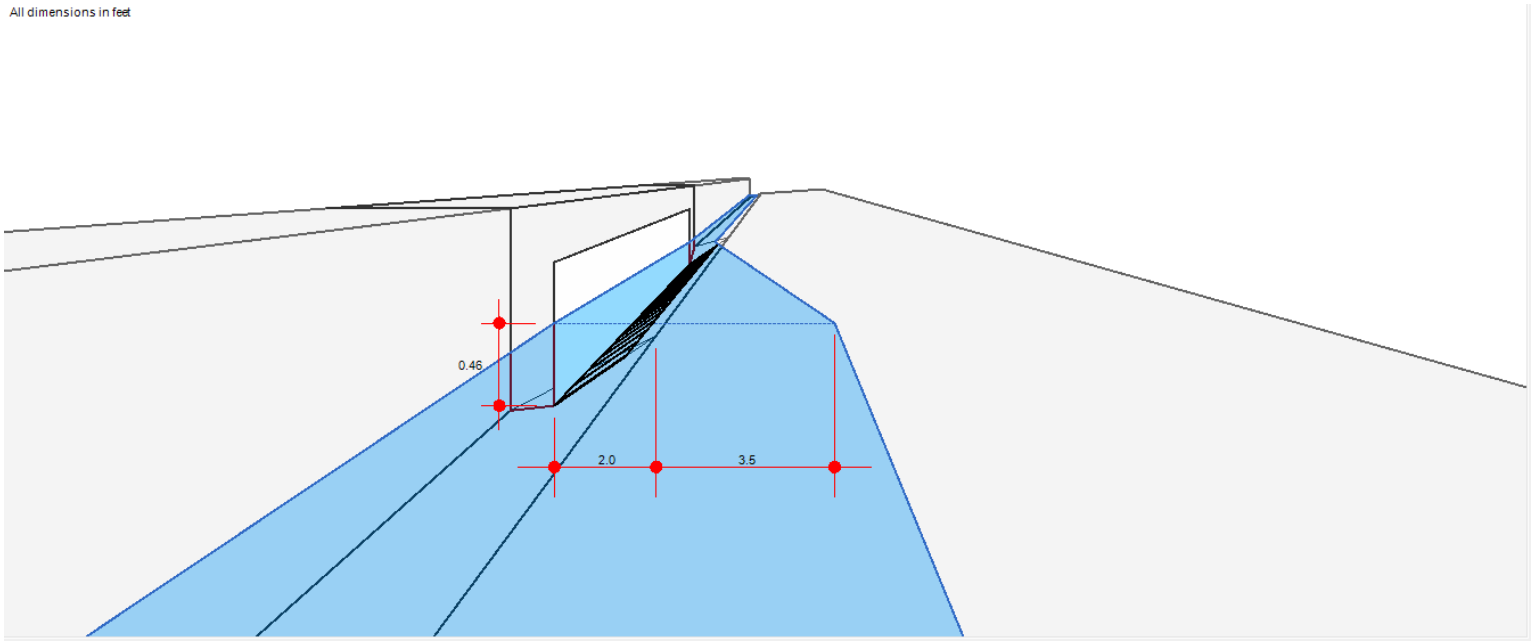
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 4.40
Gutter n-value	= 0.016

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 7

Highlighted

Q Total (cfs)	= 2.50
Q Capt (cfs)	= 2.17
Q Bypass (cfs)	= 0.33
Depth at Inlet (in)	= 5.57
Efficiency (%)	= 87
Gutter Spread (ft)	= 5.50
Gutter Vel (ft/s)	= 5.38
Bypass Spread (ft)	= 1.30
Bypass Depth (in)	= 1.58



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	3.74	100	1.43	1.18
0.50	0.50	4.17	100	1.86	1.53
0.75	0.74	4.47	98	2.16	1.78
1.00	0.96	4.72	96	2.41	1.99
1.25	1.18	4.92	94	2.61	2.79
1.50	1.39	5.09	93	2.78	3.50
1.75	1.59	5.24	91	2.93	4.10
2.00	1.79	5.36	90	3.05	4.62
2.25	1.98	5.47	88	3.16	5.08
2.50	2.17	5.57	87	3.26	5.50
2.75	2.36	5.67	86	3.36	5.88
3.00	2.54	5.75	85	3.44	6.23
3.25	2.71	5.83	84	3.52	6.56
3.50	2.89	5.90	83	3.59	6.87
3.75	3.06	5.97	82	3.66	7.15
4.00	3.23	6.04	81	3.73	7.43
4.25	3.39	6.10	80	3.79	7.69
4.50	3.56	6.16	79	3.85	7.93
4.75	3.72	6.21	78	3.90	8.17
5.00	3.88	6.27	78	3.96	8.40
5.25	4.04	6.32	77	4.01	8.62
5.50	4.19	6.37	76	4.06	8.83
5.75	4.35	6.42	76	4.11	9.03
6.00	4.50	6.47	75	4.16	9.23
6.25	4.65	6.51	74	4.20	9.42
6.50	4.80	6.56	74	4.25	9.61
6.75	4.95	6.60	73	4.29	9.79
7.00	5.09	6.64	73	4.33	9.96
7.25	5.24	6.69	72	4.38	10.13
7.50	5.38	6.73	72	4.42	10.30
7.75	5.52	6.76	71	4.45	10.46
8.00	5.66	6.80	71	4.49	10.62
8.25	5.80	6.84	70	4.53	10.78
8.50	5.94	6.88	70	4.57	10.93
8.75	6.08	6.91	69	4.60	11.08
9.00	6.22	6.95	69	4.64	11.22
9.25	6.35	6.98	69	4.67	11.37
9.50	6.49	7.02	68	4.71	11.51

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
3.55	0.00	0.00	0.00
4.23	0.00	0.18	0.21
4.68	0.01	0.41	0.50
5.02	0.04	0.59	0.72
5.22	0.07	0.74	0.90
5.28	0.11	0.87	1.05
5.31	0.16	0.99	1.20
5.33	0.21	1.10	1.33
5.36	0.27	1.21	1.46
5.38	0.33	1.30	1.58
5.42	0.39	1.40	1.69
5.45	0.46	1.49	1.80
5.49	0.54	1.57	1.90
5.53	0.61	1.65	2.00
5.57	0.69	1.73	2.09
5.61	0.77	1.80	2.18
5.65	0.86	1.87	2.27
5.68	0.94	1.94	2.35
5.73	1.03	2.04	2.43
5.76	1.12	2.36	2.51
5.81	1.21	2.67	2.58
5.84	1.31	2.96	2.65
5.88	1.40	3.24	2.72
5.92	1.50	3.50	2.78
5.96	1.60	3.75	2.84
5.99	1.70	3.99	2.90
6.03	1.80	4.22	2.96
6.07	1.91	4.43	3.01
6.10	2.01	4.65	3.06
6.13	2.12	4.85	3.11
6.17	2.23	5.04	3.15
6.20	2.34	5.23	3.20
6.24	2.45	5.41	3.24
6.27	2.56	5.59	3.28
6.30	2.67	5.76	3.33
6.33	2.78	5.93	3.37
6.36	2.90	6.09	3.41
6.39	3.01	6.25	3.44

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Thursday, Mar 21 2019

NMDOT Combination Drop Inlet Type 2-B on Grade (5.2% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 9.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 9.58

Gutter

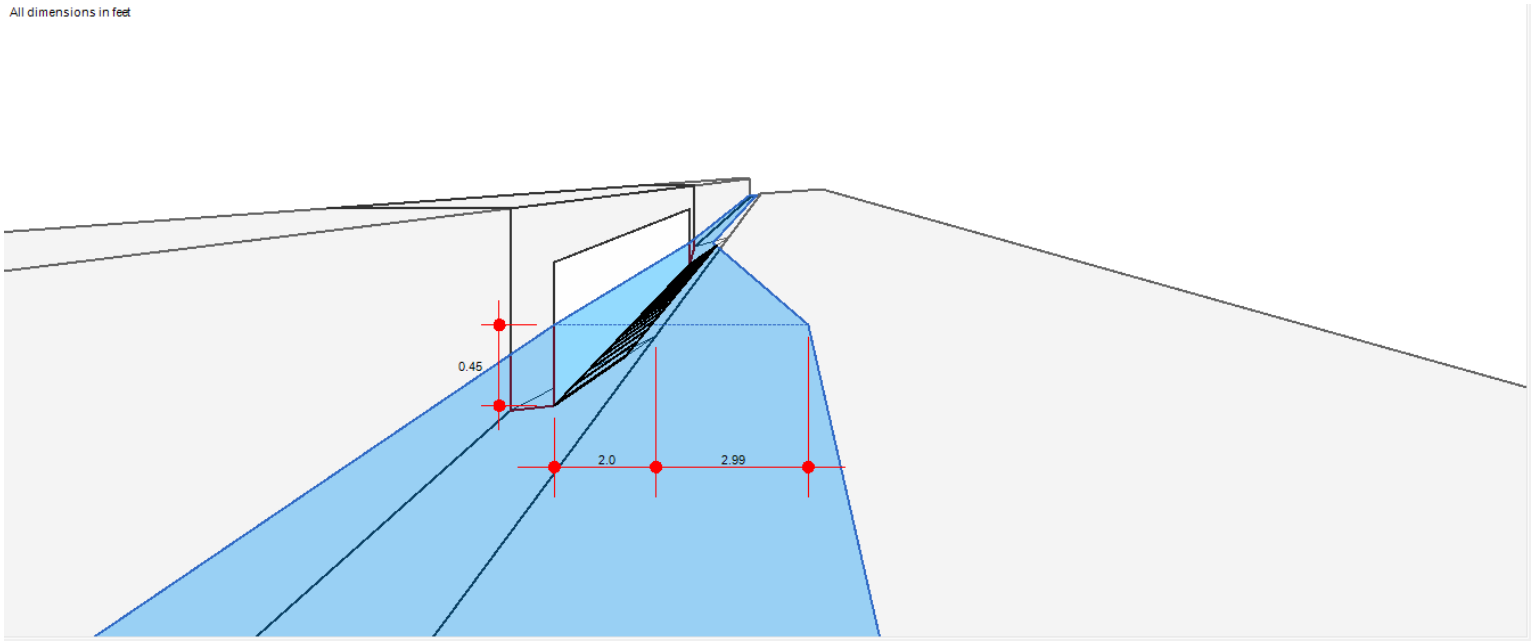
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 5.20
Gutter n-value	= 0.017

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 7

Highlighted

Q Total (cfs)	= 2.25
Q Capt (cfs)	= 1.99
Q Bypass (cfs)	= 0.26
Depth at Inlet (in)	= 5.45
Efficiency (%)	= 88
Gutter Spread (ft)	= 4.99
Gutter Vel (ft/s)	= 5.47
Bypass Spread (ft)	= 1.20
Bypass Depth (in)	= 1.45



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	3.73	100	1.42	1.17
0.50	0.50	4.15	100	1.84	1.52
0.75	0.74	4.45	98	2.14	1.77
1.00	0.96	4.70	96	2.39	1.97
1.25	1.18	4.90	94	2.59	2.70
1.50	1.39	5.07	93	2.76	3.41
1.75	1.59	5.22	91	2.91	4.01
2.00	1.79	5.34	90	3.03	4.53
2.25	1.99	5.45	88	3.14	4.99
2.50	2.17	5.55	87	3.24	5.41
2.75	2.36	5.64	86	3.33	5.79
3.00	2.54	5.73	85	3.42	6.14
3.25	2.71	5.81	84	3.50	6.47
3.50	2.89	5.88	82	3.57	6.77
3.75	3.06	5.95	82	3.64	7.06
4.00	3.23	6.01	81	3.70	7.33
4.25	3.39	6.07	80	3.76	7.59
4.50	3.55	6.13	79	3.82	7.84
4.75	3.71	6.19	78	3.88	8.07
5.00	3.87	6.24	77	3.93	8.30
5.25	4.03	6.30	77	3.99	8.52
5.50	4.19	6.35	76	4.04	8.73
5.75	4.34	6.40	75	4.09	8.92
6.00	4.49	6.44	75	4.13	9.13
6.25	4.64	6.49	74	4.18	9.32
6.50	4.79	6.53	74	4.22	9.49
6.75	4.93	6.58	73	4.27	9.67
7.00	5.08	6.62	73	4.31	9.85
7.25	5.22	6.66	72	4.35	10.02
7.50	5.36	6.70	72	4.39	10.19
7.75	5.51	6.74	71	4.43	10.35
8.00	5.65	6.78	71	4.47	10.51
8.25	5.78	6.81	70	4.50	10.66
8.50	5.92	6.85	70	4.54	10.81
8.75	6.06	6.88	69	4.57	10.96
9.00	6.19	6.92	69	4.61	11.11
9.25	6.33	6.95	68	4.64	11.25
9.50	6.46	6.99	68	4.68	11.39
9.75	6.59	7.02	68	4.71	11.52

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
3.61	0.00	0.00	0.00
4.30	0.00	0.16	0.20
4.76	0.01	0.40	0.49
5.11	0.04	0.58	0.71
5.33	0.07	0.73	0.88
5.40	0.11	0.86	1.04
5.43	0.16	0.98	1.19
5.45	0.21	1.09	1.32
5.47	0.26	1.20	1.45
5.50	0.33	1.29	1.57
5.54	0.39	1.39	1.68
5.57	0.46	1.47	1.79
5.60	0.54	1.56	1.89
5.64	0.61	1.64	1.98
5.68	0.69	1.71	2.08
5.72	0.77	1.79	2.17
5.76	0.86	1.86	2.25
5.80	0.95	1.93	2.34
5.84	1.04	1.99	2.42
5.88	1.13	2.30	2.49
5.92	1.22	2.60	2.57
5.96	1.31	2.89	2.64
6.00	1.41	3.18	2.71
6.03	1.51	3.43	2.77
6.07	1.61	3.69	2.83
6.11	1.71	3.93	2.89
6.15	1.82	4.16	2.94
6.18	1.92	4.38	2.99
6.22	2.03	4.59	3.04
6.25	2.14	4.79	3.09
6.28	2.24	4.98	3.14
6.32	2.35	5.17	3.18
6.35	2.47	5.35	3.23
6.39	2.58	5.53	3.27
6.42	2.69	5.70	3.31
6.45	2.81	5.87	3.35
6.48	2.92	6.03	3.39
6.51	3.04	6.19	3.43
6.55	3.16	6.35	3.47

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Thursday, Mar 21 2019

NMDOT Combination Drop Inlet Type 2-B on Grade (6.05% slope)

Combination Inlet

Location	= On grade
Curb Length (ft)	= 9.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= -0-
Grate Width (ft)	= 1.38
Grate Length (ft)	= 9.58

Gutter

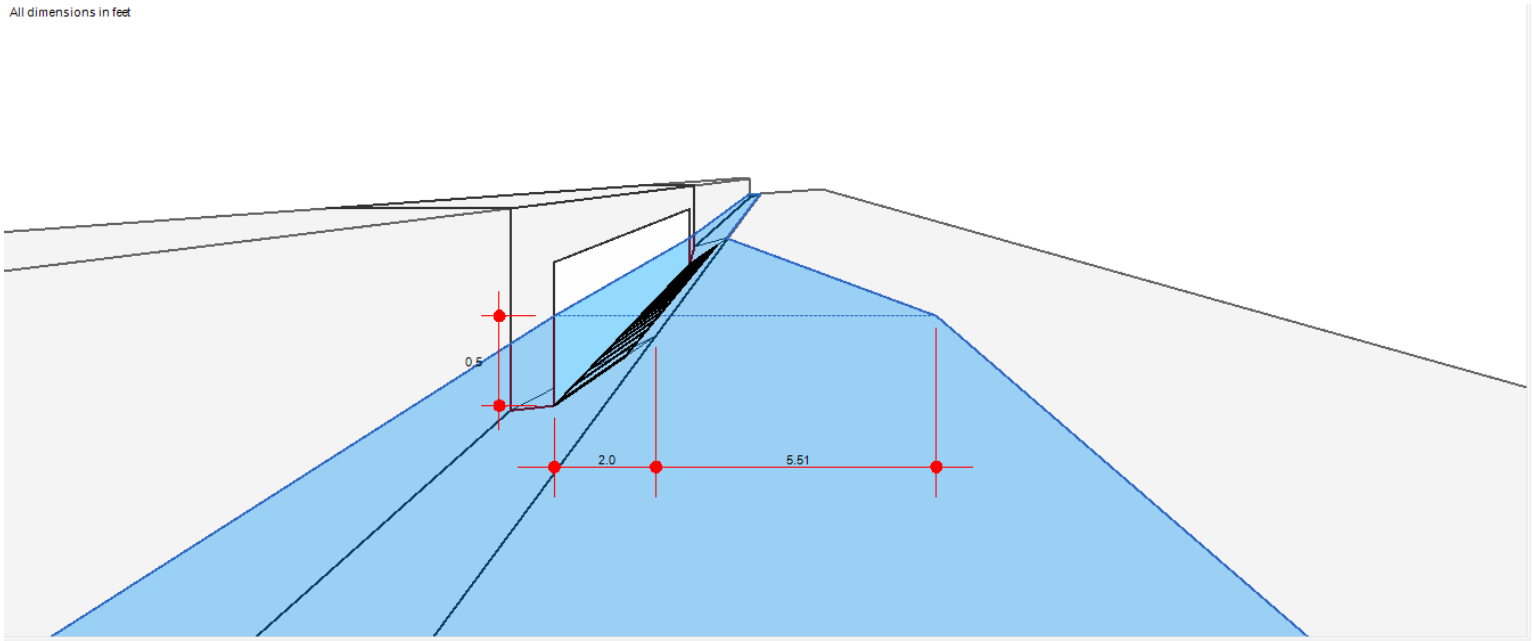
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= 6.05
Gutter n-value	= 0.017

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 7

Highlighted

Q Total (cfs)	= 4.50
Q Capt (cfs)	= 3.54
Q Bypass (cfs)	= 0.96
Depth at Inlet (in)	= 6.06
Efficiency (%)	= 79
Gutter Spread (ft)	= 7.51
Gutter Vel (ft/s)	= 6.20
Bypass Spread (ft)	= 1.89
Bypass Depth (in)	= 2.28



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	3.69	100	1.38	1.14
0.50	0.50	4.10	100	1.79	1.48
0.75	0.74	4.39	98	2.08	1.72
1.00	0.96	4.63	96	2.32	1.91
1.25	1.18	4.83	95	2.52	2.40
1.50	1.39	5.00	93	2.69	3.11
1.75	1.60	5.14	91	2.83	3.71
2.00	1.80	5.27	90	2.96	4.24
2.25	1.99	5.38	88	3.07	4.70
2.50	2.18	5.48	87	3.17	5.11
2.75	2.36	5.57	86	3.26	5.49
3.00	2.54	5.65	85	3.34	5.84
3.25	2.71	5.73	83	3.42	6.16
3.50	2.88	5.80	82	3.49	6.46
3.75	3.05	5.87	81	3.56	6.74
4.00	3.22	5.94	80	3.63	7.01
4.25	3.38	6.00	80	3.69	7.27
4.50	3.54	6.06	79	3.75	7.51
4.75	3.70	6.11	78	3.80	7.74
5.00	3.85	6.17	77	3.86	7.97
5.25	4.01	6.22	76	3.91	8.17
5.50	4.16	6.27	76	3.96	8.38
5.75	4.31	6.31	75	4.00	8.58
6.00	4.46	6.36	74	4.05	8.78
6.25	4.60	6.40	74	4.09	8.96
6.50	4.75	6.45	73	4.14	9.15
6.75	4.89	6.49	73	4.18	9.32
7.00	5.04	6.53	72	4.22	9.49
7.25	5.18	6.57	71	4.26	9.66
7.50	5.32	6.61	71	4.30	9.82
7.75	5.45	6.65	70	4.34	9.97
8.00	5.59	6.69	70	4.38	10.13
8.25	5.73	6.72	69	4.41	10.29
8.50	5.86	6.76	69	4.45	10.43
8.75	5.99	6.79	69	4.48	10.58
9.00	6.12	6.83	68	4.52	10.72
9.25	6.26	6.86	68	4.55	10.86
9.50	6.39	6.89	67	4.58	10.99
9.75	6.52	6.92	67	4.61	11.13
10.00	6.64	6.96	66	4.65	11.26
10.25	6.77	6.99	66	4.68	11.39
10.50	6.90	7.02	66	4.71	11.52

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
3.83	0.00	0.00	0.00
4.55	0.00	0.12	0.14
5.04	0.01	0.37	0.45
5.41	0.04	0.55	0.66
5.69	0.07	0.70	0.85
5.80	0.11	0.83	1.00
5.84	0.15	0.94	1.14
5.86	0.20	1.05	1.28
5.88	0.26	1.16	1.40
5.91	0.32	1.25	1.52
5.94	0.39	1.35	1.63
5.97	0.46	1.43	1.74
6.01	0.54	1.52	1.84
6.05	0.62	1.60	1.94
6.08	0.70	1.67	2.03
6.12	0.78	1.75	2.12
6.16	0.87	1.82	2.20
6.20	0.96	1.89	2.28
6.24	1.05	1.95	2.36
6.28	1.15	2.07	2.44
6.32	1.24	2.38	2.52
6.36	1.34	2.67	2.58
6.40	1.44	2.96	2.65
6.44	1.54	3.22	2.72
6.48	1.65	3.47	2.78
6.51	1.75	3.71	2.83
6.55	1.86	3.94	2.89
6.59	1.96	4.16	2.94
6.63	2.07	4.38	2.99
6.66	2.18	4.58	3.04
6.70	2.30	4.78	3.09
6.73	2.41	4.97	3.14
6.76	2.52	5.15	3.18
6.80	2.64	5.33	3.22
6.83	2.76	5.50	3.26
6.87	2.88	5.67	3.30
6.90	2.99	5.83	3.34
6.94	3.11	5.99	3.38
6.97	3.23	6.14	3.42
7.00	3.36	6.29	3.45
7.03	3.48	6.44	3.49
7.06	3.60	6.58	3.52

Inlet Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Mar 19 2019

NMDOT Combination Drop Inlet Type 2-B Sag

Combination Inlet

Location	= Sag
Curb Length (ft)	= 9.58
Throat Height (in)	= 5.06
Grate Area (sqft)	= 13.22
Grate Width (ft)	= 1.38
Grate Length (ft)	= 9.58

Gutter

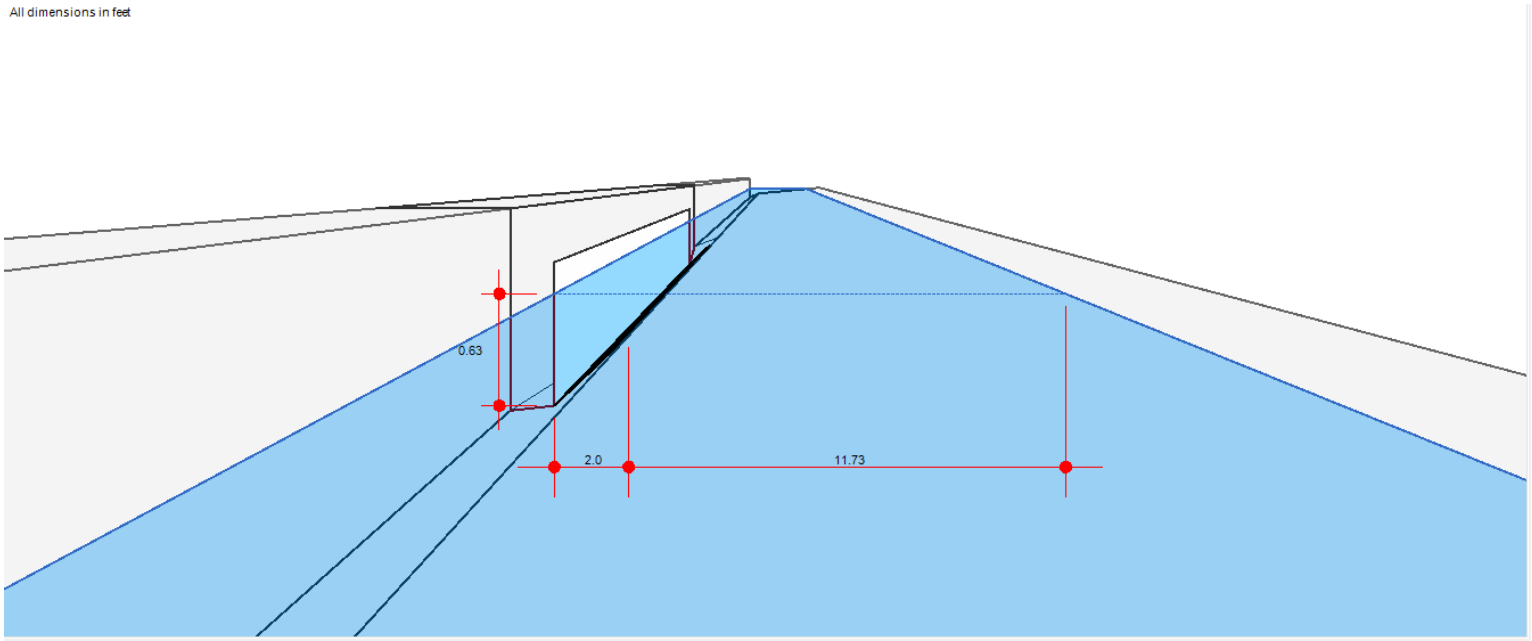
Slope, Sw (ft/ft)	= 0.101
Slope, Sx (ft/ft)	= 0.020
Local Depr (in)	= 2.31
Gutter Width (ft)	= 2.00
Gutter Slope (%)	= -0-
Gutter n-value	= -0-

Calculations

Compute by:	Q vs Depth
Max Depth (in)	= 8

Highlighted

Q Total (cfs)	= 10.50
Q Capt (cfs)	= 10.50
Q Bypass (cfs)	= -0-
Depth at Inlet (in)	= 7.55
Efficiency (%)	= 100
Gutter Spread (ft)	= 13.73
Gutter Vel (ft/s)	= 8.12
Bypass Spread (ft)	= -0-
Bypass Depth (in)	= -0-



Q		Inlet		Gutter	
Total	Captured	Depth	Efficiency	Depth	Spread
(cfs)	(cfs)	(in)	(%)	(in)	(ft)
0.25	0.25	0.99	100	-1.32	0.42
0.50	0.50	1.54	100	-0.77	0.65
0.75	0.75	2.00	100	-0.31	0.84
1.00	1.00	2.39	100	0.08	1.01
1.25	1.25	2.75	100	0.44	1.16
1.50	1.50	3.08	100	0.77	1.30
1.75	1.75	3.27	100	0.96	1.38
2.00	2.00	3.43	100	1.12	1.45
2.25	2.25	3.71	100	1.40	1.57
2.50	2.50	3.98	100	1.67	1.68
2.75	2.75	4.24	100	1.93	1.79
3.00	3.00	4.50	100	2.19	1.90
3.25	3.25	4.74	100	2.43	2.02
3.50	3.50	4.86	100	2.55	2.52
3.75	3.75	4.97	100	2.66	3.00
4.00	4.00	5.09	100	2.78	3.48
4.25	4.25	5.20	100	2.89	3.95
4.50	4.50	5.31	100	3.00	4.41
4.75	4.75	5.42	100	3.11	4.86
5.00	5.00	5.53	100	3.22	5.30
5.25	5.25	5.63	100	3.32	5.74
5.50	5.50	5.73	100	3.42	6.17
5.75	5.75	5.83	100	3.52	6.59
6.00	6.00	5.93	100	3.62	7.00
6.25	6.25	6.03	100	3.72	7.41
6.50	6.50	6.13	100	3.82	7.82
6.75	6.75	6.23	100	3.92	8.22
7.00	7.00	6.32	100	4.01	8.61
7.25	7.25	6.41	100	4.10	9.00
7.50	7.50	6.51	100	4.20	9.39
7.75	7.75	6.60	100	4.29	9.77
8.00	8.00	6.69	100	4.38	10.15
8.25	8.25	6.78	100	4.47	10.52
8.50	8.50	6.87	100	4.56	10.89
8.75	8.75	6.95	100	4.64	11.25
9.00	9.00	7.04	100	4.73	11.62
9.25	9.25	7.13	100	4.82	11.98
9.50	9.50	7.21	100	4.90	12.33
9.75	9.75	7.30	100	4.99	12.68
10.00	10.00	7.38	100	5.07	13.03
10.25	10.25	7.47	100	5.16	13.38
10.50	10.50	7.55	100	5.24	13.73
10.75	10.75	7.63	100	5.32	14.07
11.00	11.00	7.71	100	5.40	14.41
11.25	11.25	7.79	100	5.48	14.74
11.50	11.50	7.87	100	5.56	15.08
11.75	11.75	7.95	100	5.64	15.41
12.00	12.00	8.03	100	5.72	15.74

Gutter	Bypass		
Velocity	Q	Spread	Depth
(ft/s)	(cfs)	(ft)	(in)
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
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n/a	n/a	n/a	n/a

PCH Copy

SUNPORT BOULEVARD EXTENSION

Broadway to I-25

Preliminary Drainage Report

NMDOT Control No. A300160

Bernalillo County Project No. TS-09-06

Prepared For:

Bernalillo County, New Mexico
Public Works Division
2400 South Broadway, Bldg. N
Albuquerque, New Mexico 87102

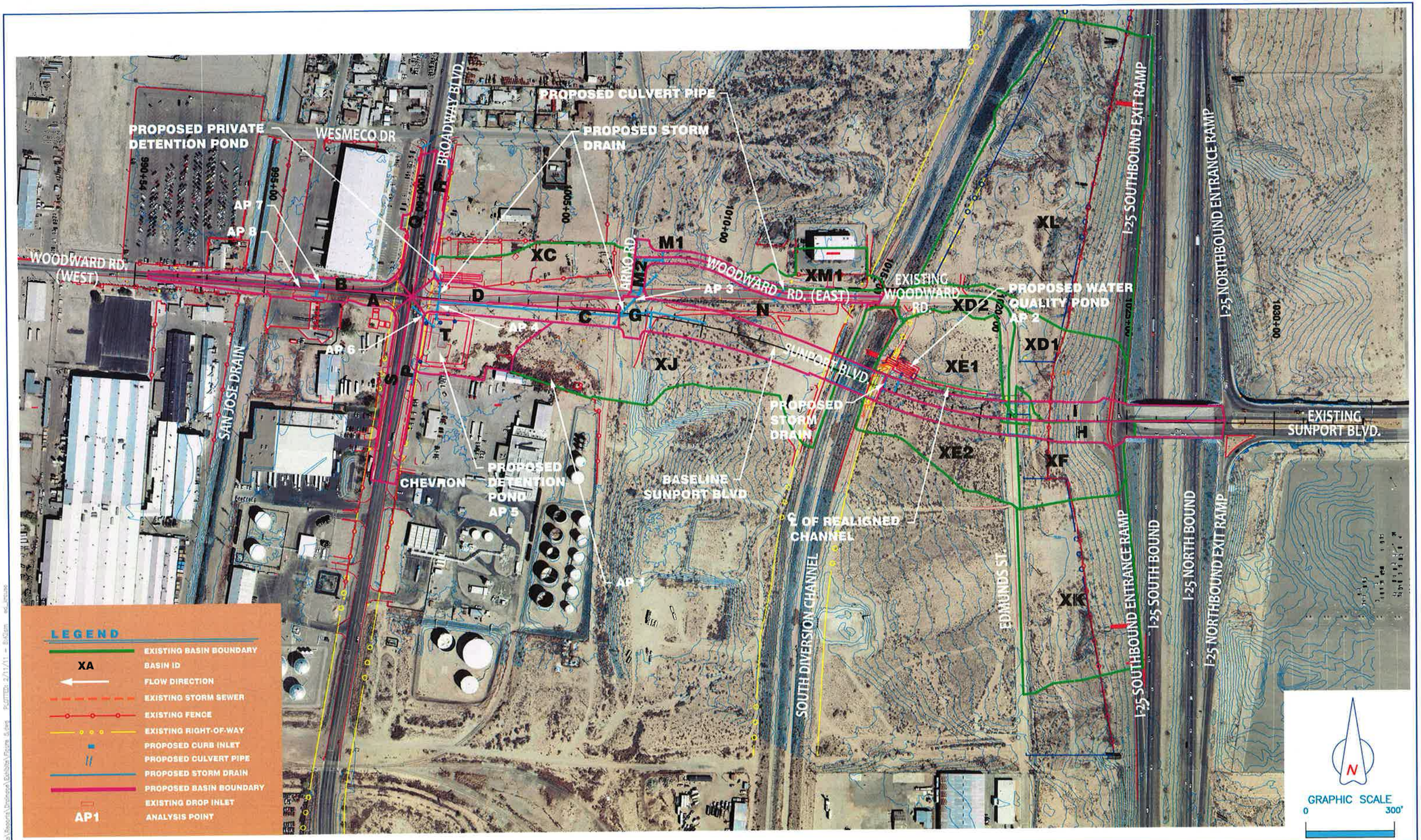
Prepared By:

URS Corporation
6501 Americas Parkway NE, Ste. 900
Albuquerque, New Mexico 87110

NMDOT

U.S. Department of Transportation
Federal Highway Administration

February 2011



Sunport Boulevard Extension
Bernalillo County Division of Public Works

SOURCE OF ORTHO PHOTOS: BERNALILLO COUNTY GIS WEB SITE; DATED 2008
SOURCE OF CONTOURS WITHIN PROJECT LIMITS: SITE SURVEY PERFORMED SPECIFICALLY FOR THIS PROJECT, 2010
SOURCE OF CONTOURS BEYOND PROJECT LIMITS: BERNALILLO COUNTY GIS WEB SITE; DATED 2004

Figure 5
Preliminary Drainage Report
Proposed Drainage Plan

February 2011

URS

MOLZENCORBIN
ENGINEERS | ARCHITECTS | PLANNERS

Transmittal

2701 Miles RD SE, Albuquerque, NM 87106

PROJECT:	BHI SunportBlvdExt BHI161-11	DATE:	3/22/2019
SUBJECT:	Sunport Drainage Amendment	TRANSMITTAL ID:	00005
PURPOSE:	For your review and comment	VIA:	Info Exchange

FROM

NAME	COMPANY	EMAIL	PHONE
Jonah Ruybalid 2701 Miles RD SE Albuquerque NM 87106 United States	Molzen Corbin & Associates	jruybalid@molzencorbin.com	505-242-5700

TO

NAME	COMPANY	EMAIL	PHONE
PLNDRS@cabq.gov		PLNDRS@cabq.gov	

REMARKS:

Good afternoon,

Attached to this email are the updated Draft Drainage Report Amendment for the Sunport Boulevard Extension Project as well as the DTIS form. Please let me know if you need anything else, or have issues downloading the files.

Thank you,

Jonah Ruybalid
505-242-5700
Molzen Corbin

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	3/22/2019	SunportDRAmend_Draft_March2019.pdf	
1	3/22/2019	DTISsheet.pdf	

COPIES:

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