CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

November 2, 2020

Farshad Omidvaran, P.E.
WSP
2440 Louisiana Blvd NE Suite 400
Albuquerque, NM 87110

RE: West Central Avenue Frontage Road Complete Street Improvements
Drainage Report
Engineer's Stamp Date: No Date
Hydrology File: K09D045

Dear Mr. Omidvaran:

Based upon the information provided in your submittal received 10/02/2020, the Drainage Report **is not** approved for Work Order. The following comments need to be addressed for approval of the above referenced project:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

1. Please provide an engineer's stamp with a signature and date either on the cover of the report or on a new page right before the index.

2. Please add the Master Drainage Report for West Point 40 (the shaded grey area in the image below), Engineering Stamp Date of 07/25/2019 by BHI (K09D041). This project extended Bluewater to 98th Street and built storm drain that was tied to the existing drainage system on Bluewater which connects to 90th Street which is in the drainage system that is being analyzed.



3. Please note that the FEMA panel 35001C0328J has been updated 11/04/2016. This is the panel for this project and should be updated in the report.

4. Question. Is a LOMR going to be done to remove the portion of AO within Central?

5. Figure 7. The property located in the Southeast corner of the intersection of 98th Street and Volcanoes is a commercial site. This came through the DRB within the last year so please update from light industrial as it is currently shown.

6. Storm CAD Profiles. Please add a legend to show what the green, blue and red lines represent.

7. Option A. Please add a note that with this option all future development within the watershed will be able to have free discharge as long as they follow the development as outlined in both this report and the Amole Huble.

8. Option B. Please add a note that with this option all future development within the watershed will have to create a retention pond sized for the 100 year – 10 day storm event as outlined in the DPM since there is no downstream capacity in the existing storm sewer system.

9. Option B. Is there a reason why this option is only designing to the 50 year storm event? According to the DPM storm sewer has to be designed to the 100 year storm event.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: West Central Avenue Frontage Road Complete Street Imp. Building Permit #: _____ Hydrology File #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: _____

City Address: Central Avenue and Frontage Road from 98th Street to Unser Avenue

Applicant: WSP Contact: Farshad Omidvaran

Address: 2440 Louisiana Blvd NE Suite 400

Phone#: 505-878-6562 Fax#: _____ E-mail: farshad.omidvaran@wsp.com

Owner: City of Albuquerque DMD - CIP Project NO. 6321.93 Contact: Bridgette Garrett

Address: _____

Phone#: 505-768-3679 Fax#: _____ E-mail: bgarrett@cabq.gov

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

IS THIS A RESUBMITTAL?: _____ Yes ____X____ 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
__X__ DRAINAGE REPORT
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ OTHER (SPECIFY) _____
____ 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
____ OTHER (SPECIFY) _____

DATE SUBMITTED: 10-1-2020 By: Farshad Omidvaran

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

West Central Avenue Frontage Road Complete Street Improvements
City of Albuquerque Project: A/E 6321.93

Preliminary Drainage Report - Draft

October 1, 2020



Prepared for:
City of Albuquerque
Department of Municipal Development
Engineering Division

Prepared by:

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Introduction

WSP USA (WSP) is working with the City of Albuquerque (COA) Department of Municipal Development to design complete streets improvements for the Central Avenue Frontage Road between 98th Street and Sarracino Place in Albuquerque, NM. The project consists of reconstruction of the Frontage Road, adding a multi-use path between Central Avenue and the Frontage Road, and installing curb and gutter in the westbound lane of Central Avenue. A vicinity map for the project area can been seen in Figure 1 – Vicinity Map, which is included as an attachment to this report.

The Amole-Hubbell Drainage Master Plan was developed for this region of the City which provides substantial background information for the overall drainage system that this project needs to tie into and add storm drain infrastructure associated with the proposed roadway improvements. This report documents the design flows and the alternatives required to safely accommodate drainage for the improved Frontage Road and for the future land development on the north side of the Frontage Road, while avoiding adverse impacts to water quality and the surrounding environment. The following provides a summary of the analysis of existing drainage conditions and the proposed drainage facilities within the project limits.

Literature Review

The approved drainage reports and record drawings available for the project area are listed below. They were obtained from the COA and Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) and were used for the development of this drainage report.

- The Amole-Hubbell Drainage Master Plan Update, Wilson & Co. – 2013
- The Amole-Hubbell Drainage Master Plan, Leedshill-Herkenhoff – 1999
- The Design Analysis Report for Central Avenue & Unser Boulevard, Gannett Fleming West, Inc – 2013.
- Central Avenue As-Builts from Unser Boulevard to 114th Street
- West Ridge and Los Volcanes Mobile Home Park As-Builts

Existing Conditions

Frontage Road

The Frontage Road between 98th Street and the Central/Unser Library (Library) is a two-lane roadway with generally poor pavement conditions. The surrounding terrain is semi-steep, and it generally slopes in a southeasterly direction at approximately 2%. The Frontage Road is approximately two (2) to six (6) feet below Central Avenue. Offsite flows from the north and a portion of existing Frontage Road runoff discharge into seven (7) slab-top manholes distributed between 90th Street and 94th Street. The slab-top manholes act as drop inlets because of the openings incorporated into the side of their walls. These slab-top manholes are located just north of the Frontage Road, a few inside the right-of-way (R/W) and some just outside the R/W. The Frontage Road in this segment of the project accepts portions of offsite runoff that does not discharge to existing slab-top manholes. A 36" to 54" diameter Reinforced Concrete Pipe (RCP) trunk line exists in this section of the project; this system stretches between the shopping center

east of 98th Street and 90th Street and it transitions from a 36" diameter RCP into a 42" diameter RCP at the Westland Road intersection, and then to a 54" diameter RCP just after 94th Street. This system collects the flow from the slab-top manholes and carries it to a 66" trunk line in 90th Street. The combined flows from the Frontage Road and 90th Street continue south to Bridge Boulevard in an 84" RCP and then east to the Tierra Bayita Channel.

Runoff east of 90th Street surface flows to 3 – 48" diameter RCP storm drains that flow east from their inlet at the end of the Frontage Road (rundown currently provided in cul-de-sac at Sarracino Place). This outlet accommodates all stormwater runoff east of 90th Street from the Frontage Road/Central Avenue corridor, from offsite, and from Volcano Road. No curb or drop inlets exist on this stretch of road. Roadway runoff sheet flows to an existing unimproved ditch between Central Avenue and the Frontage Road.

Three (3) Concrete Box Culverts (CBC) exist within the project limits including a buried CBC located approximately 350' west of 94th Street and a single and a multi-barrel CBC located about 300' west of 90th Street. These CBCs existed in a 1959 aerial photo and are outdated because of the land use changes that have occurred over the years. It is expected that they will be taken out of service and the north side of the CBCs will be removed to accommodate the proposed complete street improvements to be constructed by this project. The CBCs can be seen in Figure 2 – Existing Conditions as an attachment to this report.

Central Avenue Westbound Lane

Central Avenue between the 98th Street and Unser Boulevard consists of a four-lane divided arterial street typical section. The surrounding terrain is semi-steep. The roadway in this segment of the project is at approximately two (2) to six (6) feet above the Frontage Road and the roadway drainage in the westbound lane typically sheet flows to the ditch between Central Avenue and the Frontage Road. A 36" diameter trunk line exists under 94th Street. This system, which carries the flows from a subdivision south of Central Avenue, crosses Central Avenue and ties into the existing 54" diameter trunk line in the Frontage Road. An existing standard COA Type A drop inlet located approximately 250' east of the shopping center collects the roadway drainage from Central Avenue. The runoff contribution from Central Avenue and its surroundings to this inlet is minimal.

Offsite Areas

Offsite areas to the north contribute to the existing RCP trunk line in the Frontage Road through several slab-top manholes adjacent to the southbound lanes of 90th Street and 94th Street. A portion of these offsite areas drain to a small ditch north of the Frontage Road, and eventually gets collected by these same slab-top manholes.

Floodplains

An existing mapped floodplain as indicated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), 2008/2012 exists within the project. The mapped floodplain is designated as an AO flood zone and is located within the westbound lane of Central Avenue and the swale between Central Avenue and the Frontage Road near the east end of the project. The flood zones in the area are shown in Figure 1 – Vicinity Map as an attachment to this report. The preliminary analysis shows that the improvements recommended in this report would reduce the limits, or could completely remove, the existing mapped floodplain at the east end of this project. Floodplain map revisions were not pursued as part of the Central/Unser intersection improvements.

Hydrology

Criteria and Methodology

The basis for this analysis is the Amole-Hubbell Drainage Management Plan Update. The design flood for this assessment is the 100-year recurrence interval storm based on the COA's Development Process Manual 2020 Edition (DPM). The Amole-Hubbell Update AHYMO model was obtained and revised to estimate the flows for the offsite basins contributing to the project. For smaller basins, the Peak Discharge Rate for Small Watersheds was used to determine peak flow rates and runoff volumes; the 6-hour storm duration was used for the peak flow rate and the 24-hour duration storm was utilized for runoff volume computations. The 100-year rainfall data was obtained from NOAA Atlas 14. The 100-year, 24-hour duration precipitation is 2.53 inches. Table 6-2(A)(5) of the DPM for rainfall Zone 1 was used to determine the peak discharge rate for the roadway basins.

Drainage Basin and Land Use Maps

ArcGIS, version 10.7.1 was used to prepare the drainage basin map for this assessment. Resources used to define basin areas include the Amole-Hubbell Drainage Management Plan Update, aerial photos, and Bernalillo County's 2010 Light Detection and Ranging (LiDAR) mapping data. A field investigation was conducted to verify drainage patterns and basin boundaries. Figure 3 – Drainage Basin Map has been included as an attachment to this report. Interim and ultimate roadway condition basin maps are shown in Figure 4A and Figure 4B (Interim Condition Basin Maps) and Figure 5A and Figure 5B (Ultimate Condition Basin Maps), respectively, and are also included as an attachment to this report.

The existing and proposed roadway typical sections were used to estimate the land treatment percentages for the onsite basins. Land treatment D was used for all paved (asphalt or concrete) surfaces and a 15%, 15%, 70% split for land treatments B, C and D, respectively, were used for offsite flows. The proposed typical section for the ultimate configuration includes two 11' wide paved lanes, one 6' wide bike lane, and curb and gutter in Central Avenue. A 3' bench, 15' embankment slope, 10' multi-use trail and 3' buffer area separates Central Avenue from the Frontage Road. The Frontage Road typical section has an ultimate and interim condition. Both conditions contain 14' driving lanes with curb and gutter in the eastbound lane, but the configuration of the outside edge of the westbound lane differs.

In the interim condition a ditch will be in the shoulder of the westbound lane. The ultimate condition will replace the ditch with curb, gutter, and sidewalk. See Figure 6 – Proposed Typical Section, as an attachment to this report for the proposed Central Avenue and Frontage Road typical section.

The land treatment assumptions for the offsite basins were based on previous reports, aerial photographs, and field observations. Future developed land use estimates are based on the land use designations from the COA GIS Data website. Figure 7 – Land Use Map, has been included as an attachment to this report.

Roadway Discharge and Runoff Volume

The proposed roadway conditions peak flow rate and runoff volume estimates for the project are shown in Tables 1 and 2 on the following pages.

Table 1: Estimated Roadway 10-Year Discharge Rates and Runoff Volumes

Basin ID	Basin Area (acres)	Land Treatment				10-year Peak Discharge (cfs)	10-year Volume, 6-hour (acre-ft)	10-year Volume, 24-hour (acre-ft)	10-year Volume, 10-day (acre-ft)
		A (%)	B (%)	C (%)	D (%)				
CENTRAL AVENUE									
R1P	0.79	0.0	0.0	0.0	100.0	2.04	0.094	0.112	0.178
R2P	0.74	0.0	0.0	0.0	100.0	1.90	0.088	0.105	0.166
R3P	0.31	0.0	0.0	0.0	100.0	0.81	0.037	0.044	0.071
R4P	0.72	0.0	0.0	0.0	100.0	1.85	0.086	0.102	0.162
R5P	0.51	0.0	0.0	0.0	100.0	1.30	0.060	0.072	0.114
R6P	0.53	0.0	0.0	0.0	100.0	1.36	0.063	0.075	0.119
R7P	0.46	0.0	0.0	0.0	100.0	1.19	0.055	0.066	0.104
R8P	0.73	0.0	0.0	0.0	100.0	1.88	0.087	0.104	0.165
R9P	0.71	0.0	0.0	0.0	100.0	1.82	0.084	0.100	0.159
FRONTAGE ROAD ULTIMATE CONDITION									
R10U	0.10	0.0	0.0	0.0	100.0	0.27	0.012	0.015	0.024
R11U	0.33	0.0	0.0	0.0	100.0	0.85	0.040	0.047	0.075
R12U	0.24	0.0	0.0	0.0	100.0	0.62	0.029	0.034	0.054
R13U	0.44	0.0	0.0	0.0	100.0	1.14	0.053	0.063	0.100
R14U	0.27	0.0	0.0	0.0	100.0	0.70	0.032	0.038	0.061
R15U	0.10	0.0	0.0	0.0	100.0	0.25	0.012	0.014	0.022
R16U	0.30	0.0	0.0	0.0	100.0	0.76	0.035	0.042	0.067
R17U	0.28	0.0	0.0	0.0	100.0	0.72	0.034	0.040	0.063
FRONTAGE ROAD INTERIM CONDITION									
D1I	0.65	0.0	15.0	15.0	70.0	1.39	0.060	0.070	0.108
D2I	0.87	0.0	15.0	15.0	70.0	1.86	0.080	0.094	0.144
D3I	1.03	0.0	15.0	15.0	70.0	2.21	0.095	0.111	0.172
D4I	1.36	0.0	15.0	15.0	70.0	2.91	0.125	0.147	0.226
D5I	0.98	0.0	15.0	15.0	70.0	2.10	0.090	0.106	0.163
D6I	1.30	0.0	15.0	15.0	70.0	2.77	0.119	0.140	0.215
D7I	2.38	0.0	15.0	15.0	70.0	5.10	0.219	0.257	0.396
D8I	0.71	0.0	15.0	15.0	70.0	1.51	0.065	0.076	0.118
D9I	1.34	0.0	15.0	15.0	70.0	2.88	0.124	0.145	0.223
D10I	1.32	0.0	15.0	15.0	70.0	2.83	0.122	0.142	0.220
D11I	5.27	0.0	15.0	15.0	70.0	11.28	0.485	0.568	0.876

Table 2: Estimated Roadway 100-Year Discharge Rates and Runoff Volumes

Basin ID	Basin Area (acres)	Land Treatment				100-year Peak Discharge (cfs)	100-year Volume, 6-hour (acre-ft)	100-year Volume, 24-hour (acre-ft)	100-year Volume, 10-day (acre-ft)
		A (%)	B (%)	C (%)	D (%)				
ULTIMATE CONDITION									
R1P	0.79	0.0	0.0	0.0	100.0	3.27	0.148	0.168	0.254
R2P	0.74	0.0	0.0	0.0	100.0	3.05	0.138	0.157	0.237
R3P	0.31	0.0	0.0	0.0	100.0	1.29	0.059	0.067	0.101
R4P	0.72	0.0	0.0	0.0	100.0	2.97	0.135	0.153	0.231
R5P	0.51	0.0	0.0	0.0	100.0	2.09	0.095	0.108	0.163
R6P	0.53	0.0	0.0	0.0	100.0	2.18	0.099	0.112	0.170
R7P	0.46	0.0	0.0	0.0	100.0	1.91	0.087	0.099	0.149
R8P	0.73	0.0	0.0	0.0	100.0	3.02	0.137	0.156	0.235
R9P	0.71	0.0	0.0	0.0	100.0	2.91	0.132	0.150	0.227
R10P	0.10	0.0	0.0	0.0	100.0	0.43	0.020	0.022	0.034
R11P	0.33	0.0	0.0	0.0	100.0	1.37	0.062	0.071	0.106
R12P	0.24	0.0	0.0	0.0	100.0	1.00	0.045	0.051	0.078
R13P	0.44	0.0	0.0	0.0	100.0	1.83	0.083	0.094	0.142
R14P	0.27	0.0	0.0	0.0	100.0	1.12	0.051	0.058	0.087
R15P	0.10	0.0	0.0	0.0	100.0	0.41	0.019	0.021	0.032
R16P	0.30	0.0	0.0	0.0	100.0	1.22	0.055	0.063	0.095
R17P	0.28	0.0	0.0	0.0	100.0	1.16	0.053	0.060	0.090
FRONTAGE ROAD INTERIM CONDITION									
D1I	0.65	0.0	15.0	15.0	70.0	2.37	0.099	0.111	0.160
D2I	0.87	0.0	15.0	15.0	70.0	3.16	0.132	0.148	0.214
D3I	1.03	0.0	15.0	15.0	70.0	3.76	0.157	0.175	0.254
D4I	1.36	0.0	15.0	15.0	70.0	4.95	0.206	0.231	0.334
D5I	0.98	0.0	15.0	15.0	70.0	3.56	0.149	0.166	0.241
D6I	1.30	0.0	15.0	15.0	70.0	4.71	0.196	0.220	0.318
D7I	2.38	0.0	15.0	15.0	70.0	8.67	0.361	0.405	0.585
D8I	0.71	0.0	15.0	15.0	70.0	2.58	0.107	0.120	0.174
D9I	1.34	0.0	15.0	15.0	70.0	4.89	0.204	0.228	0.330
D10I	1.32	0.0	15.0	15.0	70.0	4.81	0.200	0.224	0.325
D12I	2.68	0.0	15.0	15.0	70.0	9.74	0.406	0.454	0.657
D11I	2.60	0.0	15.0	15.0	70.0	9.45	0.394	0.441	0.638

Proposed Storm Drain Discharge Rates

Offsite discharge and runoff volumes were computed using AHYMO-S4 and NOAA Atlas 14 Precipitation data. See **Appendix A – AHYMO Models** as an attachment to this report for the original Amole-Hubbell update and the Revised AHYMO runs. For this report, the offsite basins were further subdivided from the

basins found in the Amole-Hubbell Update DMP. Proposed offsite peak flow rates at analysis points along the Frontage Road are shown in **Table 3**. Refer to Figure 3 – Drainage Basin Map for the Analysis Point locations.

Table 3: Storm Drain Peak Discharge Rates (Proposed Conditions)

Analysis Point	AHYMO-S4 NOAA, Atlas 14 100-year Flow (cfs)	AHYMO-S4 NOAA, Atlas 14 50-year Flow (cfs)	AHYMO-S4 NOAA, Atlas 14 25-year Flow (cfs)	AHYMO-S4 NOAA, Atlas 14 10-year Flow (cfs)
1	95	83	73	58
2	106	93	81	65
3	191	168	146	116
4	312	273	236	186
5	725	656	595	512
6	24	21	19	15
7	42	37	32	25
8	58	51	44	35
9	68	59	52	41
10	170	148	128	100
11	242	222	194	153
12	259	237	210	166
13	268	245	218	100
14	293	268	237	188

The flows from the AHYMO model developed for this project are comparable to those in the 2013 Amole Hubbell DMP Update, though slightly lower. Note that the flow shown for AP TB3 in the DMP report (Figure 3-13 on Page 40) is mislabeled and should have pointed to the intersection of 90th Street with Bridge Boulevard where the flow from TB216 is added.

Hydraulics

Street Hydraulics

Bentley's FlowMaster was used to determine spread, velocity, and flow depth for Central Avenue and the Frontage Road. Inlet spacing was determined using the 10-year and 100-year storms for Central Avenue and only the 100-year storm for the Frontage Road. See Figure 8 and Figure 9 as an attachment to this report for the proposed inlet stations with respect to the Frontage Road alignment as well as the spread, velocity, and flow depth for the 10-year and 100-year storms, respectively. Ditch capacity for the interim condition was calculated for the 100-year storm and can be seen in Figure 10 as an attachment to this report. For the ultimate condition, it is proposed to use the same inlet spacing in both lanes of the Frontage Road. Drop inlet locations are shown in Appendix B – Plan and Profile as an attachment to this report.

Storm Drain Hydraulics

Bentley's StormCAD was used to evaluate the capacity of the existing drainage systems and to estimate the conceptual sizes of the proposed storm drains. HEC-22 (3rd Edition) was used to determine head losses

through manholes. StormCAD profiles are included in Appendix C – StormCAD Profiles as an attachment to this report. The tailwater elevation for the wye in Central Avenue was obtained from the as-built drawing for COA Project No. 623491 and an assumed tailwater elevation of top of pipe was used for the 3 – 48" diameter trunk lines at the end of the Frontage Road.

Conceptual Recommendations

Option A

Inlet Systems

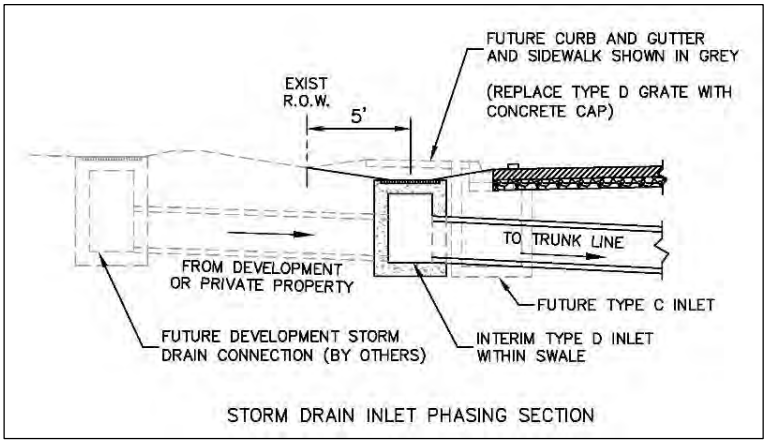
Curb inlets along the north side of Central Avenue will capture runoff from the westbound travel lanes. This system may include a combination of pipes connecting inlets and laterals to the storm drain in the Frontage Road depending on depths and potential utility conflicts.

Curb inlets along the south side of the Frontage Road will capture runoff from the Frontage Road's eastbound travel lanes and the buffer/trail and roadway embankment area between the Frontage Road and Central Avenue. These inlets will connect directly to the storm drain in the Frontage Road.

An inlet system on the north side of the Frontage Road captures runoff from the westbound travel lanes and offsite runoff from abutting properties. This system will need to function for both interim and ultimate conditions. For the interim condition, a swale with Type D inlets will collect offsite flows and flows from the westbound lane of the Frontage Road. The swale would typically be parabolic in shape with an approximate depth of 6" at its lowest point. The depth of the swale would increase to 8" in areas where excessive offsite runoff reaches the Frontage Road. Type D inlets would be placed upstream of driveways as needed to avoid the need for culvert pipes through driveways.

For the ultimate condition, the interim Type D inlets would be capped and new inlets located on abutting properties would tie into the capped Type D inlets (applicable to those properties where the future curb and gutter and sidewalk creates a water block which would prevent offsite flow into the Frontage Road). Type C curb inlets would be provided to capture flows from the westbound travel lane and tie into the Frontage Road storm drain. These systems may need to be offset from the capped Type D inlets for constructability.

Refer to Appendix B – Plan and Profile Sheets for a graphic representation of the proposed drop inlets under this option.



Storm Drain Trunk Lines

The existing trunk line in the Frontage Road would be upsized from west to east in the following manner:

- a 48" diameter RCP trunk line from the Westland Road intersection to the existing manhole located approximately 450' west of 94th Street,
- a 54" diameter RCP trunk line to the Palisades RV Park entrance area, and
- a 60" diameter RCP trunk line from 94th Street to the wye in 90th Street.

The outfall for this system consists of a single 84" diameter storm drain that begins in the median of Central Avenue at the intersection with 90th Street, flows south in 90th Street, and then turns southeast in Bridge Boulevard. This outlet accommodates all stormwater runoff within and west of 90th Street from the Frontage Road/Central Avenue corridor, from offsite, and from the storm drain in 94th Street south of Central Avenue. An existing single 54" diameter RCP carries the flow from the Frontage Road trunk line into the referenced 84" diameter RCP in 90th Street. Because this single 54" diameter RCP trunk line does not have adequate capacity for the 100-year storm, it would be required to be upsized to a 60" diameter RCP. This option would also require the reconstruction of the wye in 90th Street.

East of 90th Street, a new trunk line ranging in size from a single 24" diameter RCP to 3 – 48" diameter RCPs, as shown on Figure 11 – Option A Plan View, is recommended. The system would outfall at the existing 3 – 48" diameter RCPs at the end of the Frontage Road (rundown currently provided in the cul-de-sac at Sarracino Place). This will require reconstruction of the concrete rundown and cul-de-sac. Further investigation in preliminary and final design will be needed to determine if the reconstruction can avoid impacts on Sarracino Road.

Consideration was given to placing a storm drain pipe through one of the CBCs east of 90th Street after the CBCs were partially removed and plugged at both ends. However, the estimated flow was not substantial enough to justify this pipe. Because the CBCs will be removed from the storm drain system, the existing unimproved drainage arroyo between Central Avenue and Bridge Boulevard could be removed thereby allowing higher use of the property.

Option B

Option B is similar to Option A. The proposed drop inlets and the proposed storm drain system east of 90th Street would remain the same. Under this option, the existing Frontage Road trunk line would remain and would not be upsized. This option would only accommodate the 50-year existing conditions storm, so a design variance would be required. Where possible, instead of free discharge from private property, limiting future development to existing discharge rates should be considered. Existing discharge rates at several analysis points for basins are shown in Table 4. A StormCAD profile for the existing storm drain system in the Frontage Road can be found in Appendix C.

Table 4: Storm Drain Peak Discharge Rates (Existing Conditions)

Analysis Point*	25-year Flow Existing (cfs)	50-year Flow Existing (cfs)	100-year Flow Existing (cfs)
AP1	70	80	90
AP2	76	87	99
AP3	126	147	169
AP4	216	252	290
AP5	358	424	495

*Refer to Figure 3 – Drainage Basin Map for Analysis Point locations.

The storm drain layout and sizes for this option is shown in Figure 12 – Option B Plan View as an attachment to this report.

Preferred Option

Option B is considered the preferred option because the replacement of the existing 54" diameter trunk line with a new 60" diameter RCP in Option A would require the replacement of the wye connection directly under the intersection of Central Avenue and 90th Street. This would require additional traffic control and utility relocation on Central Avenue, which would add significant cost to the project. At the request of the COA, the hydrologic analysis used for the study was AHYMO methodology similar to the Amole Hubbell 2013 Update. Although our results were slightly lower than the Amole Hubbell 2013 Update, the estimated design flows may still be conservative. Flooding has not been observed/reported in the area, and if the developers north of the Frontage Road were to maintain the historic flows when they develop the land and increase the impermeable surfaces, the existing system may be adequate.

Conceptual Cost Estimates for Drainage Elements

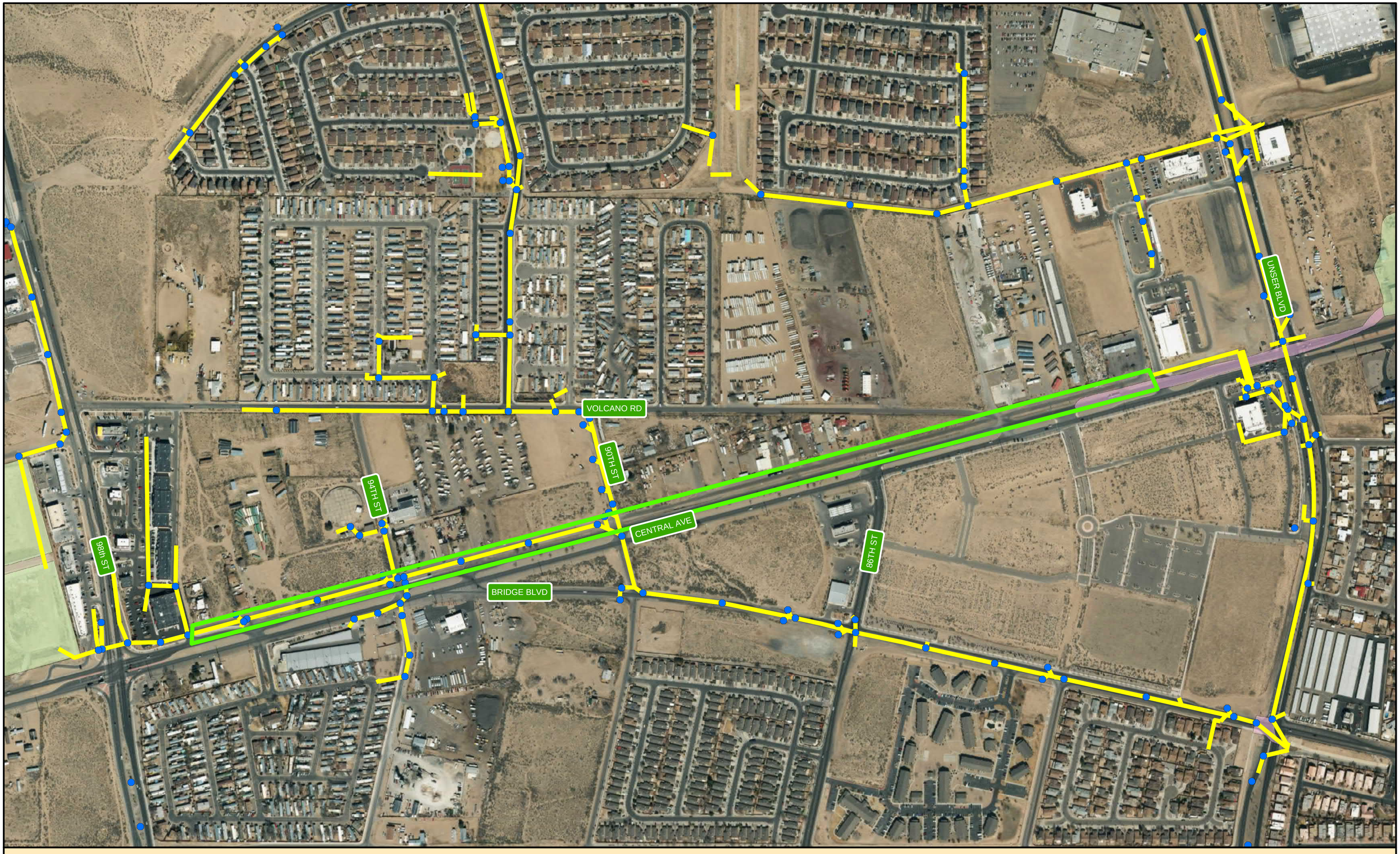
Table 5 provides a comparison of the conceptual cost estimates for the presented drainage system alternatives. The estimate is based on the COA 2018 Unit Bid Prices and comparisons to recent construction bids. The estimates are only valid for comparison of the options by order of magnitude and should not be considered as the actual cost of construction. Mobilization, construction staking, testing, traffic control, erosion protection, utility relocation, roadway reconstruction, etc., are not included. See Appendix D – Cost Estimates for drainage system cost breakdowns of each alternative.

Table 5: Conceptual Cost Estimate

Option	Amount
A	$2,660,000
B	$1,840,000

Attachments

Figure 1:	Vicinity Map
Figure 2:	Existing Conditions
Figure 3:	Drainage Basin Map
Figure 4A & 4B:	Interim Condition Basin Map
Figure 5A & 5B:	Ultimate Condition Basin Map
Figure 6:	Proposed Typical Section
Figure 7:	Land Use Map
Figure 8:	10-Year Street Hydraulics Calculations and Inlet Placement
Figure 9:	100-Year Street Hydraulics Calculations and Inlet Placement
Figure 10:	100-Year Ditch Hydraulic Calculations and Inlet Placement
Figure 11:	Option A Plan View
Figure 12:	Option B Plan View



Legend

- ProjectArea
- Exist. Manholes
- Exist. Storm Drain

Flood Zone

- AE
- AO

0 250 500 1,000 1,500 2,000 Feet

N

Figure 1
West Central Complete Streets
A/E #6321.93
Vicinity Map

VOLCANO RD

90TH ST

94TH ST

98th ST

CENTRAL AVE

UNSER BLVD

BRIDGE BLVD

(2) Existing CBCs to be taken out of service

Existing buried CBC

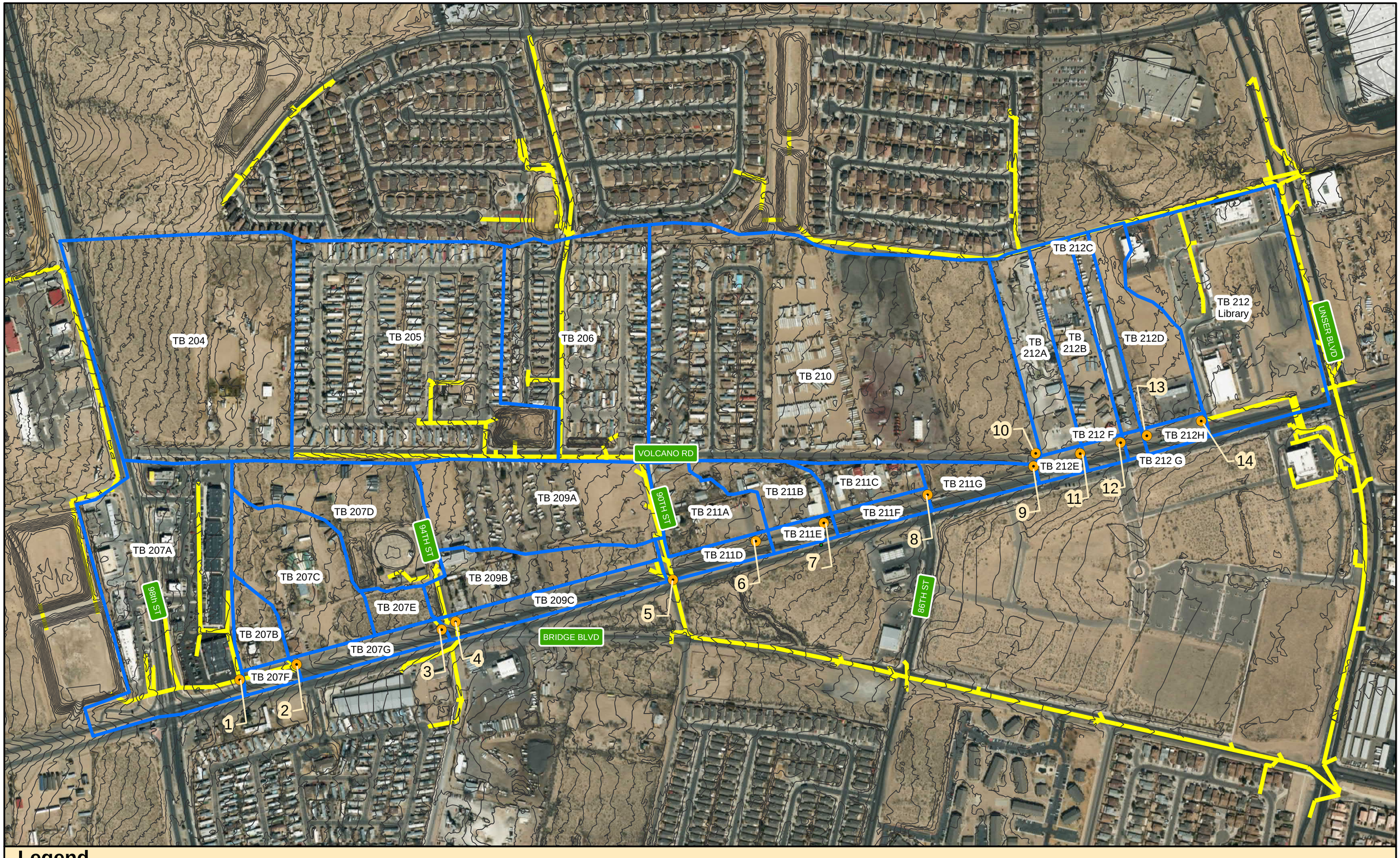
Legend

- Exist. Manholes
- Exist. Storm Drain
- Exist. CBC

0 295 590 1,180 1,770 2,360 Feet

N

Figure 2
West Central Complete Streets
A/E #6321.93
Existing Conditions



Legend

- Analysis Points
- Basin Boundary*
- 2' Contour - 2010 LiDAR
- Exist. Storm Drain
- TBXXX Basin ID

* Overall basin names came from the Amole-Hubbell and were subdivided

0 250 500 1,000 1,500 2,000 Feet

N

Figure 3
West Central Complete Streets
A/E #6321.93
Drainage Basin Map



Legend

- Interim Condition Basins
- Central Basins
- DXI — Ditch Basin, Interim Condition
- RXP — Roadway Basin, Proposed

0 100 200 400 600 800 Feet

N

Figure 4A
West Central Complete Streets
A/E #6321.93
Interim Condition Basin Map
BOP to 90th St



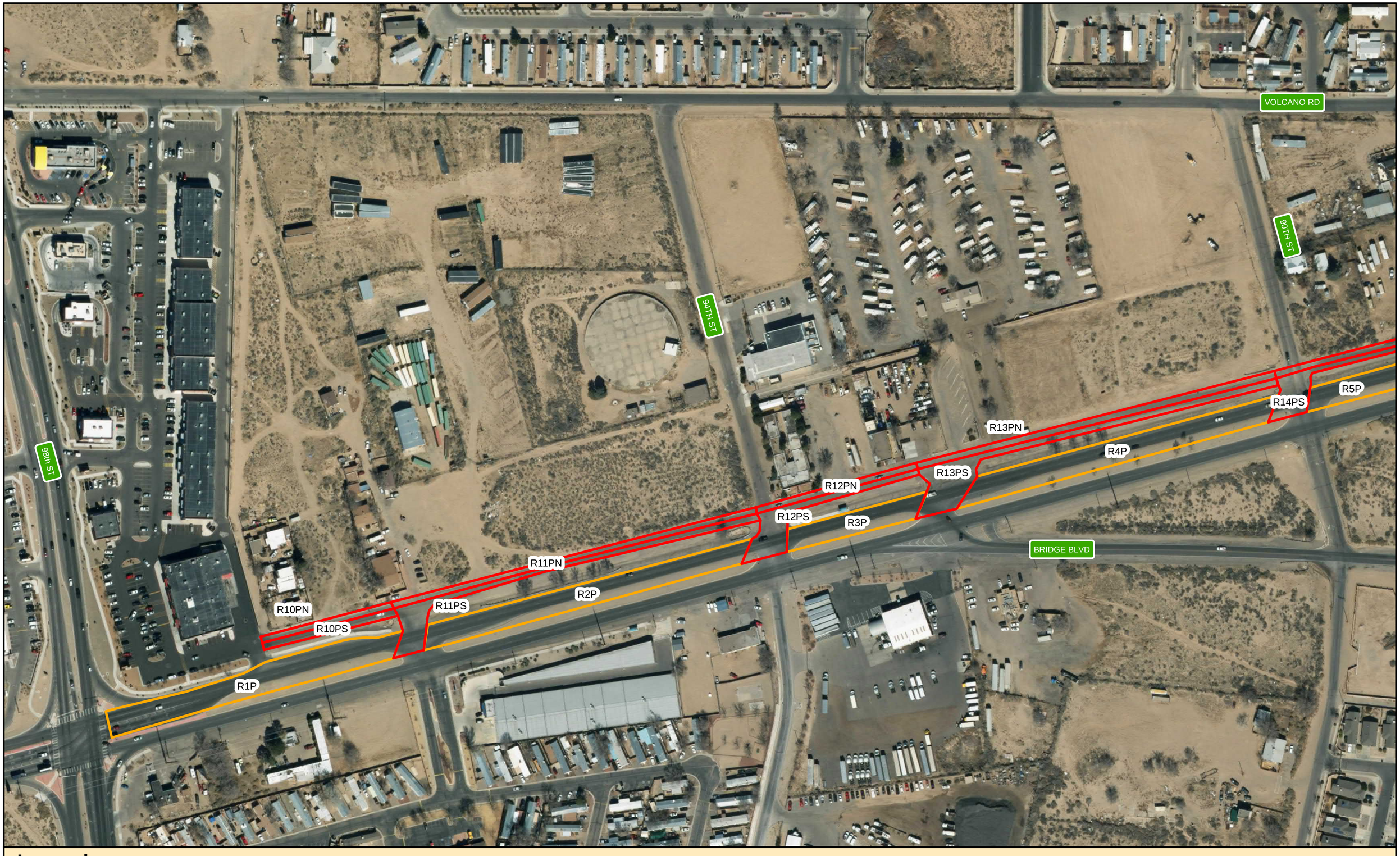
Legend

- Interim Condition Basins
- Central Basins
- DXI — Ditch Basin, Interim Condition
- RXP — Roadway Basin, Proposed

0 100 200 400 600 800 Feet

N

Figure 4B
West Central Complete Streets
A/E #6321.93
Interim Condition Basin Map
90th St to EOP



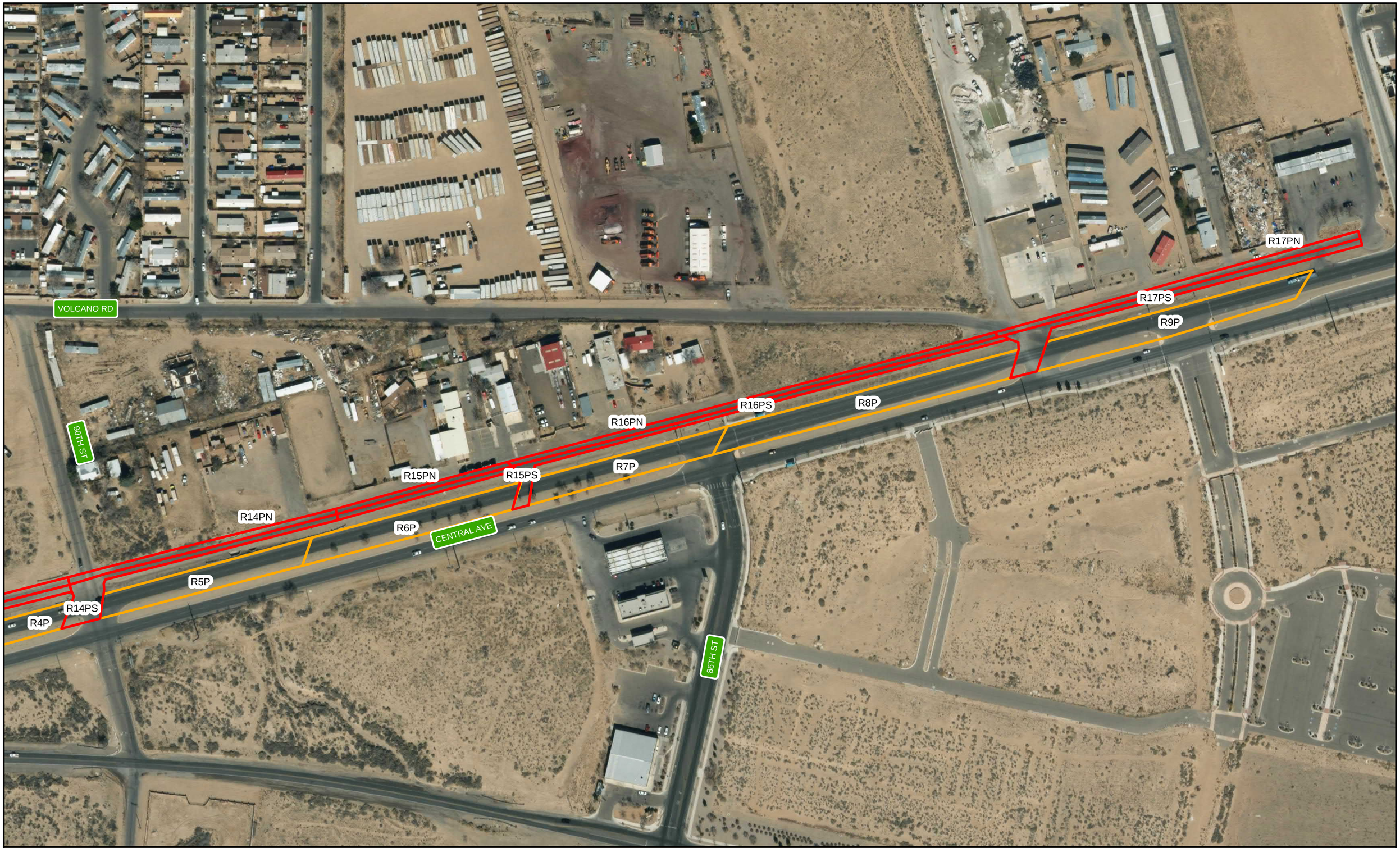
Legend

- Ultimate Condition Basins
- Central Basins
- RXPN Roadway Basin, Westbound Frontage Road
- RXPN Roadway Basin, Eastbound Frontage Road
- RXPN Roadway Basin, Westbound Central Avenue

0 100 200 400 600 800 Feet

N

Figure 5A
West Central Complete Streets
A/E # 6321.93
Ultimate Condition Basin Map
90th St to EOP



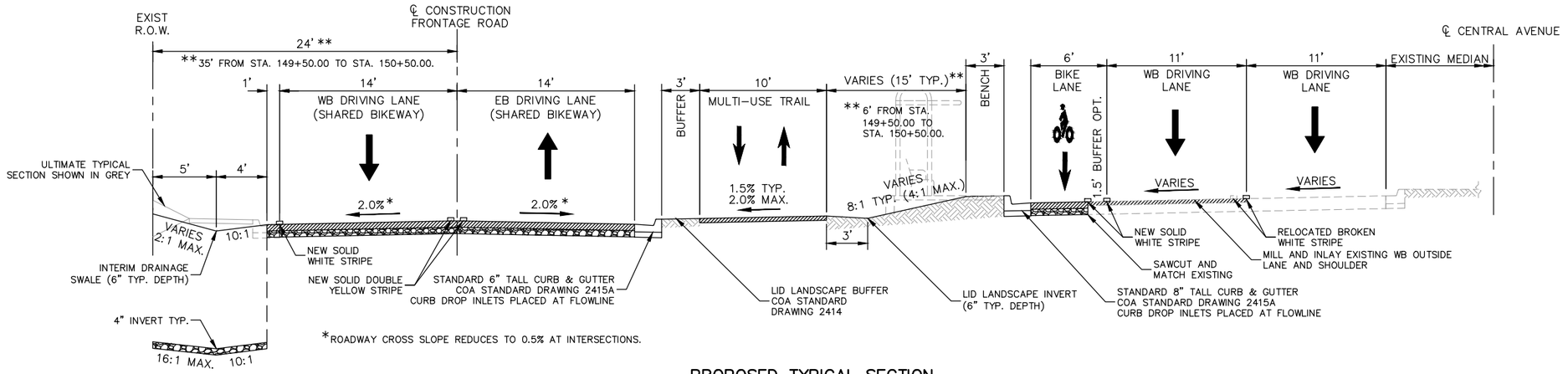
Legend

- Ultimate Condition Basins
- Central Basins
- RXPN Roadway Basin, Westbound Frontage Road
- RXPN Roadway Basin, Eastbound Frontage Road
- RXPN Roadway Basin, Westbound Central Avenue

0 100 200 400 600 800 Feet

N

Figure 5B
West Central Complete Streets
A/E # 6321.93
Ultimate Condition Basin Map
90th St to EOP

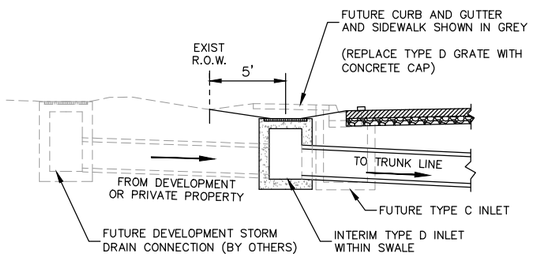


INTERIM DRIVEWAY TYPICAL SECTION

PROPOSED TYPICAL SECTION

STA. 105+00.00 TO STA. 150+60.00

(LOOKING EAST)



STORM DRAIN INLET PHASING SECTION

AS BUILT INFORMATION
CONTRACTOR
WORK STARTED BY DATE
INSPECTOR'S ACCEPTANCE BY DATE
FIELD VERIFICATION BY DATE
DRAWING CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL

NOT FOR CONSTRUCTION
DAR SUBMITTAL

NO.	DATE	REMARKS	BY

DESIGN
DESIGNED BY: WSP DATE 8/7/2020
DRAWN BY: WSP DATE 8/7/2020
CHECKED BY: WSP DATE

WSP USA Inc.
6100 UPTOWN BLVD. NE
SUITE 700
ALBUQUERQUE, NM 87110
TEL: +1 505.881.5357
FAX: +1 505.81.7602

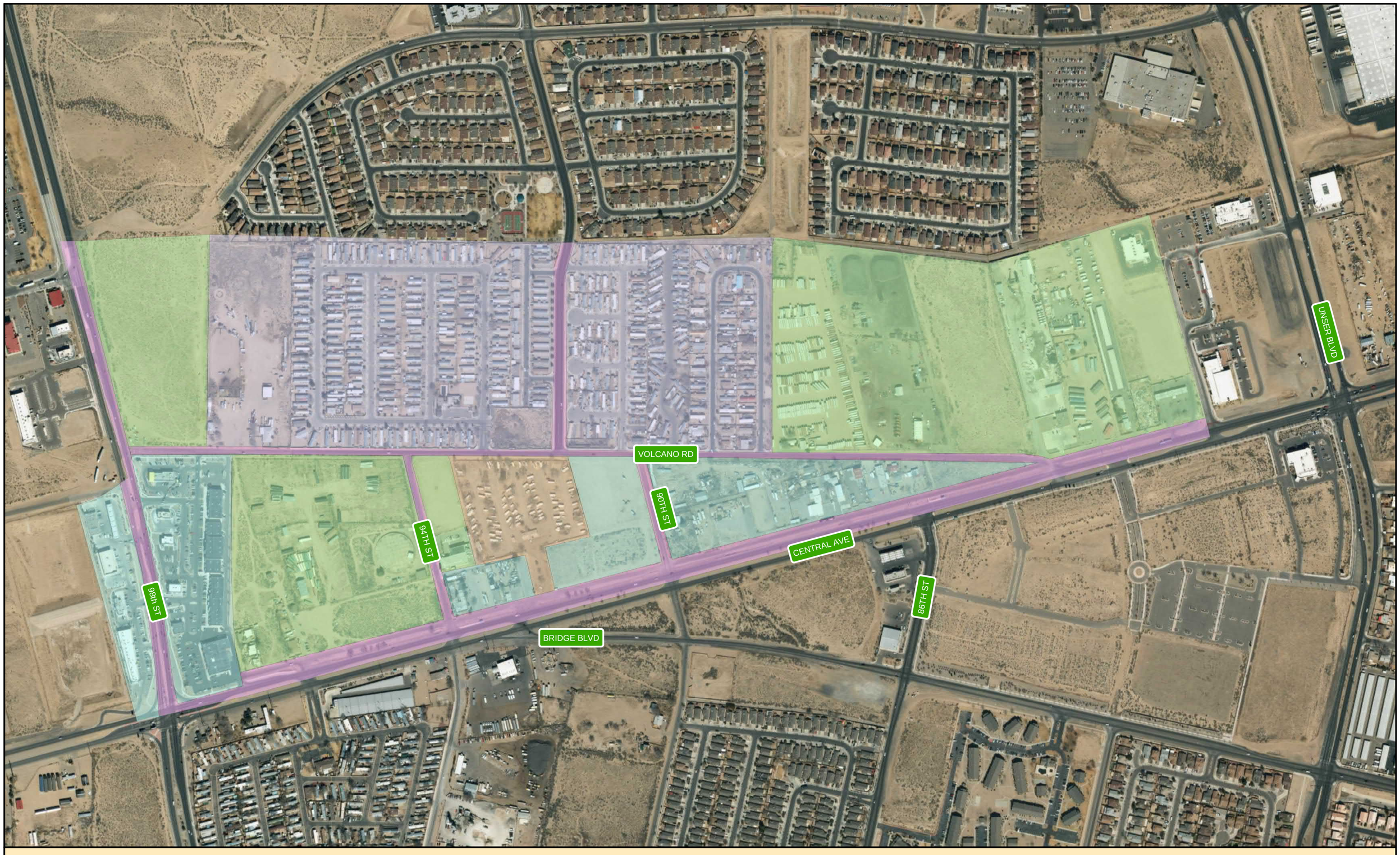
CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

WEST CENTRAL COMPLETE STREET
FIGURE 6
PROPOSED ROADWAY TYPICAL SECTIONS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL		MO./DAY/YR.	MO./DAY/YR.

City Project No. COA 632193 | Zone Map No. K9, K10 | Sheet 1-X

J:\33780 West Central Complete Streets\04 Engineering - PCN#\Plans\1_Sheets\TypicalSection.dwg Aug 07, 2020 - 11:01am Saved By: USAS671341



Legend

Land Use

- COMMERCIAL
- LIGHT-INDUSTRIAL
- OPEN SPACE
- RESIDENTIAL
- TRANSPORTATION

0 250 500 1,000 1,500 2,000 Feet

N

Figure 7
West Central Complete Streets
A/E #6321.93
Land Use Map

Figure 8 - West Central Complete Streets - 10-year Storm Street and Inlet Analysis (Proposed Conditions)

Street Capacity Analysis																				
Station	Location and Direction	Contributing Basins	Basin(s) Flow(cfs)	Bypass Flow from Previous Inlet (cfs)	Total Flow for Street Capacity Analysis (cfs)	Street's Long. Slope (%)	Street's Cross Slope (%)	Street's Manning's n	Flow Spread (ft)	Allow. Spread (ft)	Spread Criterion Met	Flow Depth at the Curb (ft)	Flow Velocity at the Curb (fps)	V * D Product (ft^2 / s)	V * D Product < 6.5	Drop Inlet Location	Drop Inlet Type	Total Flow to Drop Inlet (cfs)	Bypass from previous Inlet (cfs)	Total Flow to Inlet (cfs)	Intercepted Flow (cfs)	Bypass Flow to Next Drop Inlet (cfs)
Central - East of Shopping Center, WBL																						
104+50	WBL, West to East	R1P	2.04		2.04	2.850	2.0	0.017	7.9	19.0	Yes	0.17	3.26	0.54	Yes	104+50	COA Type A Single (Double Throat)	2.04	0.00	2.04	1.66	0.38
104+50	WBL, West to East	R1P		0.38	0.38	2.850	2.0	0.017	4.2	19.0	Yes	0.09	2.14	0.20	Yes	104+50	COA Type A Single (Double Throat)	0.00	0.38	0.38	0.38	0.00
112+00	WBL, West to East	R2P	1.90		1.90	2.400	2.0	0.017	8	19.0	Yes	0.08	3	0.25	Yes	112+00	COA Type A Single (Double Throat)	1.90	0.00	1.90	1.58	0.32
112+00	WBL, West to East	R2P		0.32	0.32	2.400	2.0	0.017	4.1	19.0	Yes	0.12	1.92	0.22	Yes	112+00	COA Type C Single	0.00	0.32	0.32	0.31	0.01
116+00	WBL, West to East	R3P	0.81		0.81	2.400	2.0	0.017	5.8	19.0	Yes	0.10	2.42	0.24	Yes	116+00	COA Type C Double	0.81	0.00	0.81	0.73	0.08
123+50	WBL, West to East	R4P	1.85		1.85	1.700	2.0	0.017	8.4	19.0	Yes	0.17	2.62	0.44	Yes	123+50	COA Type A Single (Double Throat)	1.85	0.00	1.85	1.57	0.28
123+50	WBL, West to East	R4P	0.00	0.28	0.28	1.700	2.0	0.017	4.1	19.0	Yes	0.08	1.63	0.14	Yes	123+50	COA Type C Double	0.00	0.28	0.28	0.27	0.01
128+85	WBL, West to East	R5P	1.30		1.30	1.100	2.0	0.017	9.7	19.0	Yes	0.16	3.05	0.48	Yes	128+85	COA Type A Single (Double Throat)	1.30	0.00	1.30	1.20	0.10
128+85	WBL, West to East	R5P	0.00	0.10	0.10	1.100	2.0	0.017	6.1	19.0	Yes	0.11	1.07	0.12	Yes	128+85	COA Type C Double	0.00	0.10	0.10	0.10	0.00
133+25	WBL, West to East	R6P	1.36		1.36	1.100	2.0	0.017	8.1	19.0	Yes	0.20	2.06	0.41	Yes	133+25	COA Type A Single (Double Throat)	1.36	0.00	1.36	1.24	0.12
133+25	WBL, West to East	R6P	0.00	0.12	0.12	1.100	2.0	0.017	2.9	19.0	Yes	0.12	2.06	0.24	Yes	133+25	COA Type C Double	0.00	0.12	0.12	0.12	0.00
137+50	WBL, West to East	R7P	1.19		1.19	2.200	2.0	0.017	6.8	19.0	Yes	0.14	2.58	0.37	Yes	137+50	COA Type A Single (Double Throat)	1.19	0.00	1.19	1.09	0.10
143+35	WBL, West to East	R8P	1.88	0.10	1.99	1.600	2.0	0.017	8.7	19.0	Yes	0.17	2.61	0.44	Yes	143+35	COA Type C Double	1.88	0.10	1.99	1.62	0.37
143+35	WBL, West to East	R8P		0.37	0.37	1.600	2.0	0.017	4.7	19.0	Yes	0.09	1.71	0.16	Yes	143+35	COA Type C Double	0.00	0.37	0.37	0.36	0.01
150+05	WBL, West to East	R9P	1.82		1.82	1.300	2.0	0.017	8.8	19.0	Yes	0.16	2.36	0.37	Yes	150+05	COA Type A Single (Double Throat)	1.82	0.00	1.82	1.57	0.25
150+20	WBL, West to East	R9P		0.25	0.25	1.300	2.0	0.017	4.2	19.0	Yes	0.08	1.43	0.12	Yes	150+20	COA Type C Double	0.00	0.25	0.25	0.25	0.00

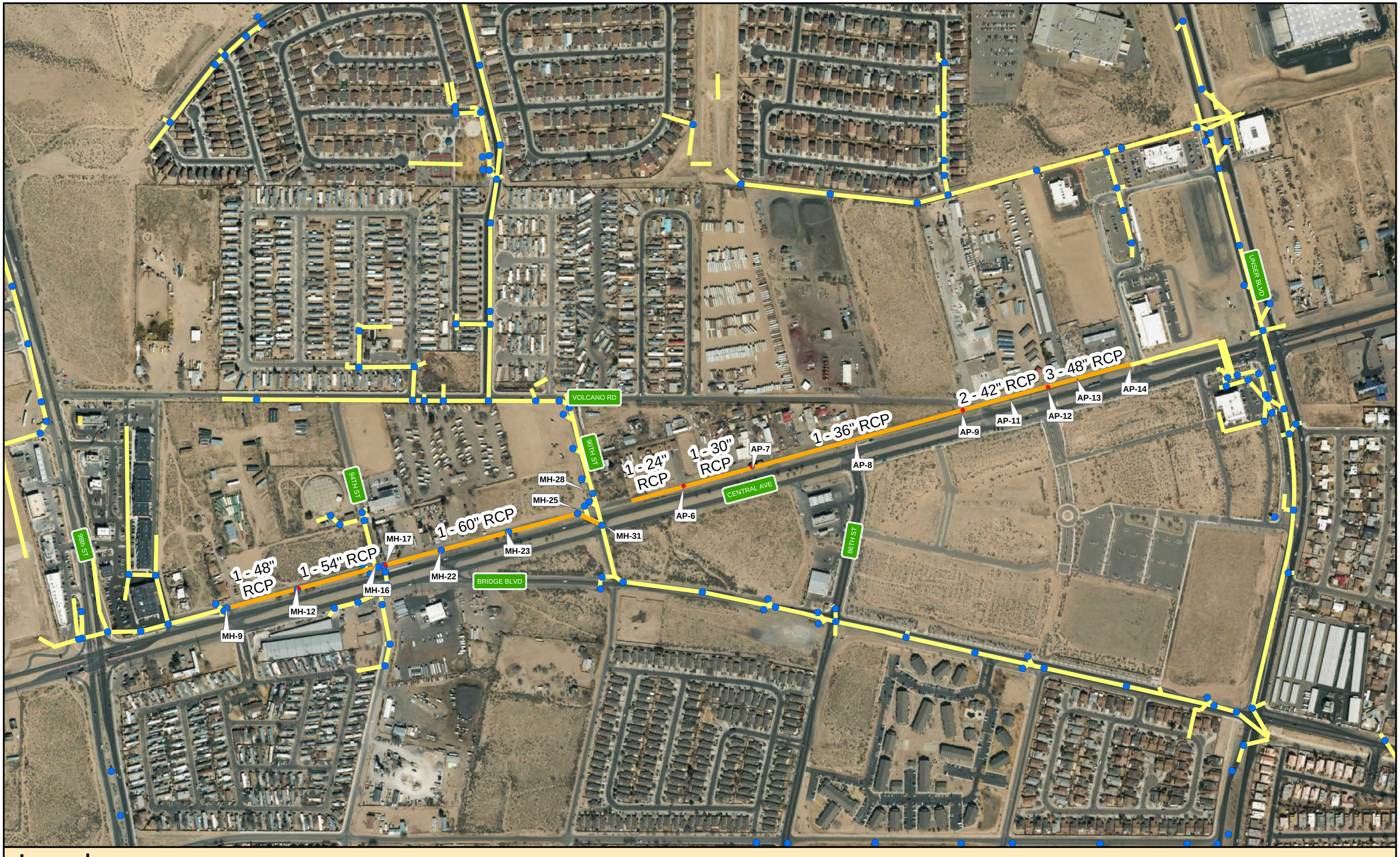
Figure 9 - West Central Complete Streets - 100-year Storm Street and Inlet Analysis (Proposed Conditions)

Street Capacity Analysis Station	Location and Direction	Contributing Basins	Basin(s) Flow(cfs)	Bypass Flow from Previous Inlet (cfs)	Total Flow for Street Capacity Analysis (cfs)	Street's Long. Slope (%)	Street's Cross Slope (%)	Street's Manning's n	Flow Depth at the Curb (ft)	Flow Depth Below Top of Curb (ft)	Drop Inlet Location	Drop Inlet Type	Total Flow to Drop Inlet (cfs)	Bypass from previous Inlet (cfs)	Total Flow to Inlet (cfs)	Flow Depth at the Curb (ft)	Flow Depth Below Top of Curb (ft)	Intercepted Flow (cfs)	Basin Receiving Bypass	Bypass Flow to Next Drop Inlet (cfs)
Central - East of Shopping Center, WBL																				
104+50	WBL, West to East	R1P	3.27		3.27	2.850	2.0	0.017	0.19	Yes	104+50	COA Type A Single (Double Throat)	3.27	0.00	3.27	0.19	Yes	2.37	R1P	0.90
104+65	WBL, West to East	R1P		0.90	0.90	2.850	2.0	0.017	0.12	Yes	104+65	COA Type A Single (Double Throat)	0.00	0.90	0.90	0.12	Yes	0.85	R11P	0.05
112+00	WBL, West to East	R2P	3.05		3.05	2.400	2.0	0.017	0.19	Yes	112+00	COA Type A Single (Double Throat)	3.05	0.00	3.05	0.19	Yes	2.26	R2P	0.79
112+15	WBL, West to East	R2P		0.79	0.79	2.400	2.0	0.017	0.12	Yes	112+15	COA Type C Double	0.00	0.79	0.79	0.12	Yes	0.72	R12P	0.07
116+00	WBL, West to East	R3P	1.29		1.29	2.400	2.0	0.017	0.14	Yes	116+00	COA Type C Double	1.29	0.00	1.29	0.14	Yes	1.09	R13P	0.20
123+50	WBL, West to East	R4P	2.97		2.97	1.700	2.0	0.017	0.20	Yes	123+50	COA Type A Single (Double Throat)	2.97	0.00	2.97	0.20	Yes	2.26	R4P	0.71
123+65	WBL, West to East	R4P		0.71	0.71	1.700	2.0	0.017	0.12	Yes	123+65	COA Type C Double	0.00	0.71	0.71	0.12	Yes	0.65	R14P	0.06
128+85	WBL, West to East	R5P	2.09		2.09	1.100	2.0	0.017	0.19	Yes	128+85	COA Type A Single (Double Throat)	2.09	0.00	2.09	0.19	Yes	1.77	R5P	0.32
129+00	WBL, West to East	R5P		0.32	0.32	1.100	2.0	0.017	0.09	Yes	129+00	COA Type C Double	0.00	0.32	0.32	0.09	Yes	0.31	R15P	0.01
133+25	WBL, West to East	R6P	2.18		2.18	1.100	2.0	0.017	0.19	Yes	133+25	COA Type A Single (Double Throat)	2.18	0.00	2.18	0.19	Yes	1.83	R6P	0.35
133+40	WBL, West to East	R6P		0.35	0.35	1.100	2.0	0.017	0.10	Yes	133+40	COA Type C Double	0.00	0.35	0.35	0.10	Yes	0.34	R16P	0.01
137+50	WBL, West to East	R7P	1.91		1.91	2.200	2.0	0.017	0.18	Yes	137+50	COA Type A Single (Double Throat)	1.91	0.00	1.91	0.18	Yes	1.59	R8P	0.32
143+35	WBL, West to East	R8P	3.02	0.32	3.34	1.600	2.0	0.017	0.21	Yes	143+35	COA Type C Double	3.02	0.32	3.34	0.21	Yes	2.49	R8P	0.85
143+50	WBL, West to East	R8P		0.85	0.85	1.600	2.0	0.017	0.13	Yes	143+50	COA Type C Double	0.00	0.85	0.85	0.13	Yes	0.77	R17P	0.08
150+05	WBL, West to East	R9P	2.91		2.91	1.300	2.0	0.017	0.20	Yes	150+05	COA Type A Single (Double Throat)	2.91	0.00	2.91	0.20	Yes	2.26	R9P	0.65
150+20	WBL, West to East	R9P		0.65	0.65	1.300	2.0	0.017	0.13	Yes	150+20	COA Type C Double	0.00	0.65	0.65	0.13	Yes	0.61	R17P	0.04
Frontage Road - East of Shopping Center, EBL																				
104+75	EBL, West to East	R10P	0.43	0.00	0.43	2.850	2.0	0.017	0.13	Yes	104+75	None	0.43	0.00	0.43	0.13	Yes	0.00	R11U	0.43
112+00	EBL, West to East	R11P	1.37	0.43	1.80	2.200	2.0	0.017	0.15	Yes	112+00	COA Type A Single (Double Throat)	1.37	0.43	1.80	0.15	Yes	1.51	R12U	0.29
116+00	EBL, West to East	R12P	1.00	0.29	1.29	2.400	2.0	0.017	0.14	Yes	116+00	COA Type C Double	1.00	0.29	1.29	0.14	Yes	1.09	R13U	0.20
123+50	EBL, West to East	R13P	1.83	0.20	2.02	1.700	2.0	0.017	0.18	Yes	123+50	COA Type C Double	1.83	0.20	2.02	0.18	Yes	1.63	R14U	0.39
129+50	EBL, West to East	R14P	1.12	0.39	1.51	1.100	2.0	0.017	0.17	Yes	129+50	COA Type C Double	1.12	0.39	1.51	0.17	Yes	1.30	R15U	0.21
133+35	EBL, West to East	R15P	0.41	0.21	0.62	1.100	2.0	0.017	0.13	Yes	133+35	COA Type C Double	0.41	0.21	0.62	0.13	Yes	0.58	R16U	0.04
143+00	EBL, West to East	R16P	1.22	0.04	1.26	1.600	2.0	0.017	0.15	Yes	143+00	COA Type C Double	1.22	0.04	1.26	0.15	Yes	1.09	R17U	0.17
150+05	EBL, West to East	R17P	1.16	0.17	1.30	1.300	2.0	0.017	0.15	Yes	150+05	COA Type C Double	1.16	0.17	1.33	0.15	Yes	1.13	R17U	0.20
150+20	EBL, West to East	R17P		0.20	0.20	1.300	2.0	0.017	0.08	Yes	150+20	COA Type C Double	0.00	0.20	0.20	0.08	Yes	0.20	R17U	0.00

Figure 10 - Frontage Road Ditch Calculations

Street Capacity Analysis Station	Location and Direction	Contributing Basins	Basin(s) Flow(cfs)	Ditch Long. Slope (%)	Ditch Manning's n	Flow Depth (in)	Depth < top of ditch	Drop Inlet Type
104+75	WBL, West to East	D1I	2.37	2.8	0.02			None
112+30	WBL, West to East	D2I	3.16	2.2	0.02	5.2	YES	COA Type D
116+20	WBL, West to East	D3I	3.76	2.2	0.02	4.5	YES	COA Type D
120+25	WBL, West to East	D4I	4.95	2.4	0.02	4.9	YES	COA Type D
123+88	WBL, West to East	D5I	3.56	1.7	0.02	4.6	YES	COA Type D
128+50	WBL, West to East	D6I	4.71	1.7	0.02	5.1	YES	COA Type D
131+90	WBL, West to East	D7I	8.67	1.1	0.02	7	NO	COA Type D
133+35	WBL, West to East	D8I	2.58	1.1	0.02	4.4	YES	COA Type D
143+00	WBL, West to East	D9I	4.89	1.6	0.02	5.3	YES	COA Type D
147+00	WBL, West to East	D10I	4.81	1.6	0.02	5.2	YES	COA Type D
149+00	WBL, West to East	D11I	9.45	1.3	0.02	7	NO	COA Type D
150+50	WBL, West to East	D12I	9.74	1.3	0.02	7.1	NO	COA Type D

Note: In ultimate condition, frontage road westbound lane drop inlets will match eastbound drop inlet stationing
Basins that have flow depths deeper than 6 inches will require a deeper ditch



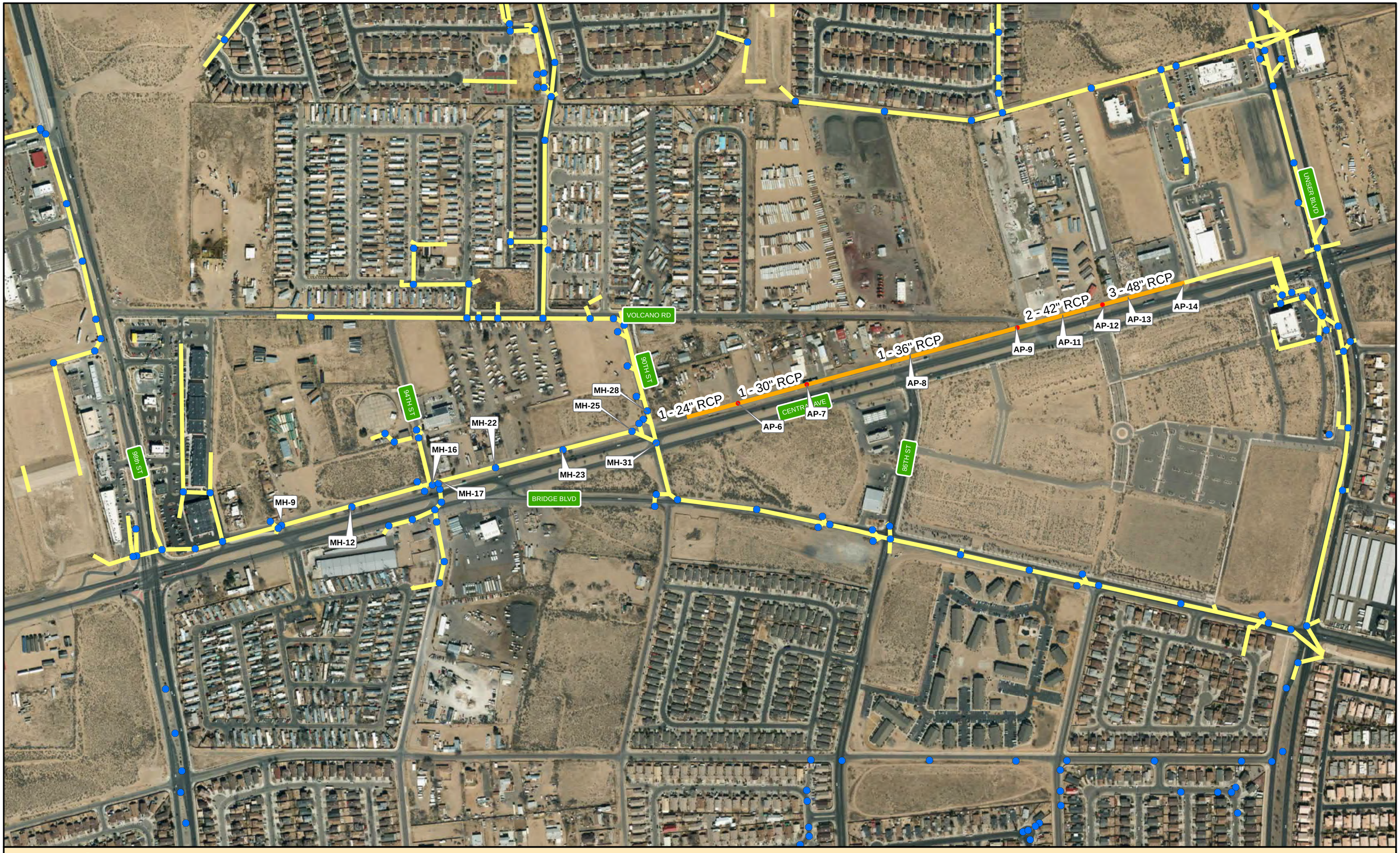
Legend

- Storm Drain Size Transition
- Exist. Manholes
- Prop. Storm Drain
- Exist. Storm Drain

0 250 500 1,000 1,500 2,000 Feet

N

Figure 11
West Central Complete Streets
A/E #6321.93
Proposed Storm Drain
Option A



Legend

- Storm Drain Size Transition
- Exist. Manholes
- Prop. Storm Drain
- Exist. Storm Drain

0 250 500 1,000 1,500 2,000 Feet

N

Figure 12
West Central Complete Streets
A/E #6321.93
Proposed Storm Drain
Option B

Appendix A – AHYMO Models

Original Amole Hubbell Update 2013
AHYMO Model by Wilson

100-Year Frequency, 6-Hour
Input File

Proposed Conditions

Note:
Only the AHYMO Input and excerpts from the Summary files for the 100-year frequency storm have been included in this report. Electronic files for this and other storms are available upon request.

```
*  AMOLE HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE
*  Drainage Basin Analysis
*S "PROPOSED" CONDITION MODEL FOR AMOLE HUBBELL
*
START             TIME=0.0  PUNCH CODE=0 PRINT CODE=0
LOCATION          ALBUQUERQUE
*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*S           RAINFALL DATA FROM NOAA ATLAS 14
*S*************************************************************************
*S  100 YEAR 6HR STORM
RAINFALL              TYPE=1
                      QUARTER=1.46 IN
                      HOUR=   1.81 IN
                      SIX HR= 2.25 IN
                      DAY=    2.57 IN   DT=0.03333
*
****Adding Sediment Bulk Factor to all Basins
SEDIMENT BULK     CODE=1  BULK FACTOR=1.06
*
*
*S*************************************************************************
*S**********           98TH AND CENTRAL BASIN
*S*************************************************************************
*
*
*** Sub-BASIN NE202.1 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                      NK=3   ISLOPE=1
                      LENGTH=400 FT   SLOPE=0.053   K=0.7
                                LENGTH=1600 FT   SLOPE=0.056   K=2.0
                                LENGTH=440 FT   SLOPE=0.039   K=3.0
COMPUTE NM HYD                ID=1   HYD NO=NE202.1   DA=0.08439 SQ MI
                      PER A=0 PER B=41  PER C=42  PER D=17
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=1   CODE=1
*
*
****Route HYD NE202.1 to Sub-Basin NE202.2
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                      MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.005  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
```

```
                    0           105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=2  HYD NO=NE202.1RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1080 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN NE202.2 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=400 FT   SLOPE=0.050   K=0.7
                                LENGTH=1100 FT   SLOPE=0.039   K=2.0
                                LENGTH=170 FT   SLOPE=0.029   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=NE202.2   DA=0.06185 SQ MI
                    PER A=0 PER B=41  PER C=42  PER D=17
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (NE202.1RT + NE202.2)
ADD HYD             ID=1  HYD NO=NE202.2SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APNE3
*
*
****Route HYD NE202.2SUM to Sub-Basin NE201.2 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                                DIA=54 IN   N=0.013
*
ROUTE MCUNGE                    ID=2  HYD NO=NE202.2SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1695 FT
                    NS=0  SLOPE=0.023
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN NE204 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
```

```
                    LENGTH=310 FT   SLOPE=0.039   K=0.7
                              LENGTH=1230 FT   SLOPE=0.033   K=2.0
                              LENGTH=1240 FT   SLOPE=0.028   K=3.0
COMPUTE NM HYD      ID=1   HYD NO=NE204   DA=0.08938 SQ MI
                    PER A=0 PER B=41  PER C=42  PER D=17
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (NE201.2SUMBRt + NE204)
ADD HYD             ID=1  HYD NO=NE204SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*


*
****Route HYD NE205.2SUM to Sub-Basin NE206
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.025  FP SLP=0.02 N=0.013
                              DIST=20 FT

                              DIST  ELEV
                    0         105
                              10        100
                              15        100
                              20        105
*
ROUTE MCUNGE                  ID=10  HYD NO=NE204SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1370 FT
                    NS=0  SLOPE=0.025
*
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*
*** Sub-BASIN NE201.1 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=280 FT   SLOPE=0.096   K=0.7
                              LENGTH=2145 FT   SLOPE=0.038   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=NE201.1   DA=0.08463 SQ MI
                    PER A=0 PER B=41  PER C=42  PER D=17
```

```
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD NE201.1 to Sub-Basin NE201.2
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                            CH SLP=0.005  FP SLP=0.02 N=0.013
                            DIST=20 FT

                            DIST  ELEV
                     0      105
                            10          100
                            15          100
                            20          105
*
ROUTE MCUNGE                ID=2  HYD NO=NE201.1RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1175 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN NE201.2 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=220 FT   SLOPE=0.050   K=0.7
                            LENGTH=965 FT   SLOPE=0.041   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=NE201.2   DA=0.04349 SQ MI
                    PER A=0 PER B=41  PER C=42  PER D=17
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (NE201.1RT + NE201.2)
ADD HYD             ID=1  HYD NO=NE201.2SUMA ID I=2  ID II=1
PRINT HYD           ID=1   CODE=1
*
*S APNE1
*
****Route HYD NE201.2SUMB to Sub-Basin NE208 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                            DIA=66 IN   N=0.013
*
```

```
ROUTE MCUNGE              ID=3  HYD NO=NE201.2SUMARt  INFLOW ID=1
                     DT=0 HR  LENGTH=1695 FT
                     NS=0  SLOPE=0.023
*
PRINT HYD            ID=3   CODE=1
*
*
* Total Flow from Basin (NE204SUMRT + NE201.2SUMART)
ADD HYD              ID=1  HYD NO=NE208SUMA ID I=10  ID II=3
PRINT HYD            ID=1   CODE=1
*
*
*******************************************************************************
*** Sub-BASIN NE208 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=3  ISLOPE=1
                     LENGTH=340 FT   SLOPE=0.041   K=0.7
                               LENGTH=1670 FT   SLOPE=0.035   K=2.0
                               LENGTH=500 FT   SLOPE=0.020   K=3.0
COMPUTE NM HYD             ID=2   HYD NO=NE208   DA=0.10104 SQ MI
                     PER A=0 PER B=40.2  PER C=41.2  PER D=18.6
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (NE208SUMA + NE208)
ADD HYD              ID=1  HYD NO=NE208SUMB ID I=1  ID II=2
PRINT HYD            ID=1   CODE=1
*S APNE2
*
*
****Route HYD NE208SUMB to Sub-Basin NE211 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.031
                               DIA=72 IN   N=0.013
*
ROUTE MCUNGE              ID=10  HYD NO=NE208SUMBRt  INFLOW ID=1
                     DT=0 HR  LENGTH=500 FT
                     NS=0  SLOPE=0.031
*
PRINT HYD            ID=10   CODE=1
*
*
*******************************************************************************
*
*
```

```
*** Sub-BASIN NE205.1 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=500 FT   SLOPE=0.040   K=0.7
                              LENGTH=870 FT   SLOPE=0.037   K=2.0
COMPUTE NM HYD             ID=1   HYD NO=NE205.1   DA=0.07464 SQ MI
                    PER A=0 PER B=41  PER C=42  PER D=17
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD NE205.2SUM to Sub-Basin NE206
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.030  FP SLP=0.02 N=0.013
                              DIST=20 FT

                              DIST  ELEV
                    0         105
                              10        100
                              15        100
                              20        105
*
ROUTE MCUNGE               ID=2  HYD NO=NE205.1RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1185 FT
                    NS=0  SLOPE=0.030
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN NE205.2 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=425 FT   SLOPE=0.049   K=0.7
                              LENGTH=840 FT   SLOPE=0.021   K=2.0
                              LENGTH=440 FT   SLOPE=0.023   K=3.0
COMPUTE NM HYD             ID=1   HYD NO=NE205.2   DA=0.06038 SQ MI
                    PER A=0 PER B=40.9  PER C=41.9  PER D=17.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (NE205.1sumRT + NE205.2)
```

```
ADD HYD             ID=1  HYD NO=NE205.2SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD NE205.2SUM to Sub-Basin NE206
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.005  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                        0       105
                                10      100
                                15      100
                                20      105
*
ROUTE MCUNGE                    ID=2  HYD NO=NE205.2SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1075 FT
                        NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN NE206 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=445 FT   SLOPE=0.040   K=0.7
                                LENGTH=880 FT   SLOPE=0.020   K=3.0
COMPUTE NM HYD          ID=1   HYD NO=NE206   DA=0.04398 SQ MI
                        PER A=0.1 PER B=15.3  PER C=15.6  PER D=69.1
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (NE205.2SUMRt+ NE206)
ADD HYD             ID=1  HYD NO=NE206SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APNE4
*
*
****Route HYD NE206SUM to Sub-Basin NE211
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.005  FP SLP=0.02 N=0.013
                                DIST=20 FT
```

```
                                DIST  ELEV
                                 0          105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=2  HYD NO=NE206SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1115 FT
                        NS=0  SLOPE=0.005
*
PRINT HYD               ID=2   CODE=1
*
*
*************************************************************************************
*
* Total Flow from Basin (NE210SumRT + NE206sumRT)
ADD HYD                 ID=1  HYD NO=NE211SUMA ID I=10   ID II=2
PRINT HYD               ID=1   CODE=1
*
*************************************************************************************
*
*
****Route Hyd NE211SUMB through PondNE2
*
ROUTE RESERVOIR                         ID=40  HYD NO=PondNE2  INFLOW ID=1  CODE=1
                                OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                                0                  0                    5204.21
                                1.8                          0.287              5205
                                7.6                1.532               5206
                                10.8                         3.486              5207
                                15.2               7.543               5209
                                18.7                         11.939             5211
                                21.7                         16.689             5213
                                24.3               21.805              5215
                                26.7                         27.301             5217
                                28.9               33.189              5219
                                30.9                         39.483             5221
                                32.8               46.197              5223
                                968                          49.715             5224
                                2615               53.343              5225
                                4809                         57.082             5226
*
*S  RATING CURVE FROM PLAN SET ADN SD FACILITIES
*S  TB DRAINAGE FACILITIES PHASE IIIC JUNE 1995
*
*
```

```
**********************************************************************************************
*
*
*** Sub-BASIN NE210 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=3   ISLOPE=1
                      LENGTH=680 FT   SLOPE=0.035   K=0.7
                                 LENGTH=1330 FT   SLOPE=0.030   K=2.0
                                 LENGTH=700 FT   SLOPE=0.029   K=3.0
COMPUTE NM HYD               ID=1   HYD NO=NE210   DA=0.09526 SQ MI
                      PER A=0 PER B=20.2  PER C=20.5  PER D=59.3
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
****Route HYD NE210 to Sub-Basin NE211
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                      MIN ELEV=100 FT MAX ELEV=105 FT
                                 CH SLP=0.005  FP SLP=0.02 N=0.013
                                 DIST=20 FT

                                 DIST  ELEV
                       0         105
                                 10          100
                                 15          100
                                 20          105
*
ROUTE MCUNGE                 ID=2  HYD NO=NE210RT  INFLOW ID=1
                      DT=0 HR  LENGTH=450 FT
                      NS=0  SLOPE=0.005
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN NE211 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=2   ISLOPE=1
                      LENGTH=420 FT   SLOPE=0.040   K=0.7
                                 LENGTH=1090 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=NE211   DA=0.07784 SQ MI
                      PER A=16.4 PER B=4.8  PER C=21.4  PER D=57.4
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
```

```
*
*
* Total Flow from Basin (NE210RT + PondNE1)
ADD HYD             ID=1   HYD NO=PondNE3SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (NE206SUMRT + NE211)
ADD HYD             ID=1  HYD NO=NE211SUMB ID I=40   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd PONDNE1 through PondNE3
*
ROUTE RESERVOIR             ID=41  HYD NO=PondNE3  INFLOW ID=1  CODE=1
                    OUTFLOW (CFS)     STORAGE (AC FT)             ELEV
                    0                 0                 5201
                    2.8                         0.934             5202
                    8.8               3.359             5203
                    12.5                        6.08              5204
                    16.5              11.813            5206
                    19.9                        17.946            5208
                    22.7                        24.492            5210
                    24.0              31.465            5212
                    1137                        35.115            5213
                    3122              38.877            5214
                    7217                        44.733            5215.5
*
PRINT HYD                   ID=41      CODE=1
*
*
*S**************************************************************************
*S************          END OF 98TH AND CENTRAL BASIN
*S**************************************************************************
*
*
*
*S**************************************************************************
*S**********          UNSER-214 BASIN
*S**************************************************************************
*
*
*** Sub-BASIN U202.2 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=475 FT   SLOPE=0.042   K=0.7
```

```
                    LENGTH=825 FT   SLOPE=0.029   K=3.0
COMPUTE NM HYD      ID=1   HYD NO=U202.2   DA=0.04661 SQ MI
            PER A=31.6 PER B=6.2  PER C=6.2  PER D=56
            TP=0.0   MASSRAIN=-1
*
PRINT HYD   ID=1   CODE=1
*
*
****Route HYD U202.2SUM to Sub-Basin U202.1SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
            MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.021  FP SLP=0.04 N=0.03
                    DIST=20 FT

                    DIST  ELEV
          0         105
                    10          100
                    15          100
                    20          105
*
ROUTE MCUNGE        ID=2  HYD NO=U202.2SUMRT  INFLOW ID=1
            DT=0 HR  LENGTH=945 FT
            NS=0  SLOPE=0.021
*
PRINT HYD   ID=2   CODE=1
*
*
*** Sub-BASIN U201 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
            NK=1   ISLOPE=1
            LENGTH=1790 FT   SLOPE=0.013   K=3.0
COMPUTE NM HYD      ID=1   HYD NO=U201   DA=0.03522 SQ MI
            PER A=0 PER B=5.4  PER C=5.4  PER D=89.1
            TP=0.0   MASSRAIN=-1
*
PRINT HYD   ID=1   CODE=1
*
*
* Total Flow from Basin (U202.2SUMRT + U201)
ADD HYD     ID=1  HYD NO=U201SUM ID I=2   ID II=1
PRINT HYD   ID=1   CODE=1
*
*
****Route Hyd U201SUM through PondU6
*
ROUTE RESERVOIR             ID=30  HYD NO=PondU6  INFLOW ID=1  CODE=1
```

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV
0.0	0.0	5470
4.4	0.14	5471
16.0	0.83	5472
32.0	1.77	5473
45.0	2.79	5474
51.0	3.87	5475
56.0	5.04	5476
79.5	6.27	5477
86.1	7.46	5477.9
93.2	9.01	5479

```
*
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE
TRANSIT FACILITY
*S
*
*
****Route HYD PONDU6 to PONDU4 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.005
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=PONDU6Rt  INFLOW ID=30
                DT=0 HR  LENGTH=689 FT
                NS=0  SLOPE=0.005
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN U202.1 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=290 FT   SLOPE=0.059   K=0.7
                        LENGTH=1825 FT   SLOPE=0.026   K=3.0
COMPUTE NM HYD          ID=1   HYD NO=U202.1   DA=0.06636 SQ MI
                PER A=8.6 PER B=6.1  PER C=6.1  PER D=79.2
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
****Route Hyd U202.1SUM through PondU5
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondU5  INFLOW ID=1  CODE=1
```

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV
0	0.0	5460
4.0	0.02	5461

6.5	0.37	5462	
8.2	0.76	5463	
9.7	1.19	5464	
41.6	1.42	5464.5	
93.0	1.66	5465	
106.3	1.89	5465.5	
116.7	2.12	5466	
132.6	2.74	5467	
146.8	3.35	5468	
157.2	3.87	5468.8	
160.0	4.01	5469	
172.0	4.73	5470	

```
*
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE
TRANSIT FACILITY
*S
*
*
****Route HYD PONDU5 to PONDU4 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.005
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=1  HYD NO=PONDu5Rt  INFLOW ID=30
                  DT=0 HR  LENGTH=310 FT
                  NS=0  SLOPE=0.005
*
PRINT HYD         ID=1   CODE=1
*
*
* Total Flow from Basin (PondU6 + PondU202.1)
ADD HYD           ID=1  HYD NO=U202.1SUM ID I=2   ID II=1
PRINT HYD         ID=1   CODE=1
*
*
****Route Hyd PondU5 through PondU4
*
ROUTE RESERVOIR                 ID=31  HYD NO=PondU4  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                        0                 0.0                      5447
                        0.1                         0.08           5448
                        17.8              0.51                     5449
                        36.5                        1.30           5450
                        49.2              2.29                     5451
                        57.7                        3.26           5451.9
                        61.4                        3.37           5452
                        86.0              3.94                     5452.5
                        92.5              4.52                     5453
```

104.3	5.76	5454
115.9	7.18	5455.1
124.6	8.51	5456

```
*
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE
TRANSIT FACILITY
*S
*
*** Sub-BASIN U203 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1615 FT   SLOPE=0.019   K=3.0
COMPUTE NM HYD             ID=1   HYD NO=U203   DA=0.05311 SQ MI
                      PER A=10 PER B=19.3  PER C=20.2  PER D=50.4
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (PondU4 + U203)
ADD HYD            ID=1  HYD NO=U203SUM ID I=31   ID II=1
PRINT HYD          ID=1   CODE=1
*S APU1
*
*
****Route Hyd U203SUM through PondU3
*
ROUTE RESERVOIR                  ID=30  HYD NO=PondU3  INFLOW ID=1  CODE=1
```

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV
0	0.0	5443
0.1	0.07	5444
7.5	0.50	5445
24.7	1.04	5446
34.2	1.64	5447
38.0	1.97	5447.5
72.8	2.30	5448
85.9	2.65	5448.5
92.4	3.01	5449
104.3	3.78	5450
114.4	4.61	5451
116.2	4.79	5451.2
123.4	5.51	5452.2

```
*
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE
TRANSIT FACILITY
*S
```

```
*
****Route Hyd PondU3 through PondU2
*
ROUTE RESERVOIR                 ID=31  HYD NO=PondU2  INFLOW ID=30  CODE=1
                        OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                        0                 0.0                      5437.9
                        0.1                         0.02           5438
                        0.1               0.27                     5439
                        0.1                         1.05           5440
                        16.7              2.19                     5441
                        28.9                        3.49           5442
                        37.3                        4.87           5443
                        44.1              6.34                     5444
                        48.9              7.58                     5444.8
                        58.0                        8.71           5445.5
                        142.2                       9.53           5446
                        154.6                       11.25          5447
                        165.0                       12.87          5447.9
                        176.8                       14.94          5448.9
*
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE
TRANSIT FACILITY
*S
*
*** Sub-BASIN U204 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                  NK=1   ISLOPE=1
                  LENGTH=1544 FT   SLOPE=0.017   K=3.0
COMPUTE NM HYD          ID=1   HYD NO=U204   DA=0.04966 SQ MI
                  PER A=13.9 PER B=18.7  PER C=19.5  PER D=47.8
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=1   CODE=1
*
*
****Route Hyd U104 through PondU7
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondU7  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                        0                 0                        5140
                        11.7                        0.064          5142
                        23.3              0.233                    5144
                        26                          0.497          5146
                        32.3              0.859                    5148
                        36                          1.334          5150
                        50                          1.60           5151
```

```
*
*S  Pond Rating Curve from Avalon Report Feb. 1998 stated pond release of 35.8cfs.
*S  Sub-Basin U104 drains to pond in analysis; however,
*S  The pond respective watershed is smaller, thus the higher release from pond.
*S
*
* Total Flow from Basin (PondU2 + PondU7)
ADD HYD             ID=1  HYD NO=U204SUM ID I=31   ID II=30
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd U204SUM through PondU1
*
ROUTE RESERVOIR                    ID=30  HYD NO=PondU1  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                          0                        0.0                  5433.5
                          0.1                      0.05                 5434
                          10.4               0.54               5435
                          26.5                     1.34                 5436
                          33.5                     2.22                 5437
                          41.4                     3.18                 5438
                          48.2                     4.22                 5439
                          54.1               5.34               5440
                          59.5                     6.54                 5441
                          64.3               7.83               5442
                          68.9                     9.19                 5443
                          124.6              10.49              5443.9
                          131.5                    12.16                5445
*
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE
TRANSIT FACILITY
*S
*
****Route HYD PondU1 to Sub-Basin U207 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=30 IN   N=0.013
*
ROUTE MCUNGE                ID=1  HYD NO=PondU1Rt  INFLOW ID=30
                    DT=0 HR  LENGTH=1245 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN U207 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
```

```
                    NK=1   ISLOPE=1
                    LENGTH=1375 FT   SLOPE=0.018   K=3.0
COMPUTE NM HYD      ID=2   HYD NO=U207   DA=0.04489 SQ MI
                    PER A=0 PER B=18  PER C=18  PER D=64
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (PondU1Rt + U207)
ADD HYD             ID=1  HYD NO=U207SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD U207SUM to Sub-Basin U209SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=42 IN   N=0.013
*
ROUTE MCUNGE            ID=10  HYD NO=U207SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1275 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=10   CODE=1
*
*******************************************************************************************
*
*
*** Sub-BASIN U205 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=400 FT   SLOPE=0.017   K=0.7
                        LENGTH=1630 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=U205   DA=0.07980 SQ MI
                    PER A=0.1 PER B=15.1  PER C=15.1  PER D=69.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD U205 to Sub-Basin U206 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=54 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=U205Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=1695 FT
                    NS=0  SLOPE=0.010
```

```
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN U206 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                            LENGTH=400 FT   SLOPE=0.014   K=0.7
                    LENGTH=2090 FT   SLOPE=0.014   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=U206   DA=0.09646 SQ MI
                    PER A=0 PER B=16.3  PER C=17  PER D=66.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (U205Rt + U206)
ADD HYD             ID=1  HYD NO=U206SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APU2
*
*
****Route HYD U206SUM to Sub-Basin U209SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.013
                            DIA=60 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=U206SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=840 FT
                    NS=0  SLOPE=0.013
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN U208 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                            LENGTH=300 FT   SLOPE=0.016   K=0.7
                    LENGTH=1085 FT   SLOPE=0.016   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=U208   DA=0.03976 SQ MI
                    PER A=0 PER B=11.9  PER C=31.6  PER D=56.5
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
* Total Flow from Basin (U207SUMRt + U206SUMRT)
```

```
ADD HYD          ID=1  HYD NO=U208SUMB ID I=2   ID II=1
PRINT HYD        ID=1   CODE=1
*
*
*** Sub-BASIN U209 ****
*
COMPUTE LT TP            LCODE=1   UPLAND/LAG TIME METHOD
                 NK=1   ISLOPE=1
                 LENGTH=630 FT   SLOPE=0.016   K=2.0
COMPUTE NM HYD           ID=2   HYD NO=U209   DA=0.03339 SQ MI
                 PER A=0 PER B=7.1  PER C=34.7  PER D=58.2
                 TP=0.0   MASSRAIN=-1
*
PRINT HYD        ID=2   CODE=1
*
*
* Total Flow from Basin (U208 + U209)
ADD HYD          ID=1  HYD NO=U209SUM ID I=1   ID II=2
PRINT HYD        ID=1   CODE=1
*
*
****Route Hyd U209SUM through POND U214
*
ROUTE RESERVOIR                  ID=30  HYD NO=PONDU214  INFLOW ID=1  CODE=1
                       OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                       0                 0                        5096
                       81                          3.04           5098
                       126               7.77                     5100
                       143               13.88                    5102

PRINT HYD        ID=42   CODE=1
*
*
* Total Flow from Basin (U207SUMRt + U206SUMRT)
ADD HYD          ID=42  HYD NO=U208SUMA ID I=10   ID II=30
PRINT HYD        ID=42   CODE=1
*
*
*S APU3
*
*
*
*S**************************************************************************
*S**********      END OF UNSER-214 BASIN
*S**************************************************************************
*
*
```

```
*
*S*************************************************************************
*S**********          TIERRA BAYITA BASIN
*S*************************************************************************
*
*
*** Sub-BASIN TB202.1 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                     LENGTH=445 FT   SLOPE=0.020   K=0.7
                               LENGTH=1870 FT   SLOPE=0.025   K=2.0
COMPUTE NM HYD             ID=1   HYD NO=TB202.1   DA=0.13801 SQ MI
                     PER A=24.8 PER B=6.1  PER C=6.1  PER D=63
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd TB202.1 through PondTB1
*
ROUTE RESERVOIR                    ID=30  HYD NO=PondTB1A  INFLOW ID=1  CODE=1
                               OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                               0                        0                        5206
               180                         1.000                5207

               181                         25.000               5210
*
*
*
****Route HYD PONDTB1 to PONDTB2
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=100 FT MAX ELEV=105 FT
                               CH SLP=0.021  FP SLP=0.02 N=0.013
                               DIST=20 FT

                               DIST  ELEV
                     0         105
                               10        100
                               15        100
                               20        105
*
ROUTE MCUNGE               ID=1  HYD NO=PONDTB1RT  INFLOW ID=30
                     DT=0 HR  LENGTH=1026 FT
                     NS=0  SLOPE=0.021
*
PRINT HYD          ID=1   CODE=1
```

```
*
*
*** Sub-BASIN TB202.2 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=400 FT   SLOPE=0.038   K=0.7
                              LENGTH=1980 FT   SLOPE=0.030   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=TB202.2   DA=0.08784 SQ MI
                    PER A=1.1 PER B=6  PER C=6  PER D=86.9
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
*
****Route Hyd TB202.1 through PondTB1
*
ROUTE RESERVOIR                    ID=30  HYD NO=PondTB1B  INFLOW ID=2  CODE=1
                              OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                              0                        0                        5206
          114                           1.000                5207

          115                           25.000               5210
*
*
*
*
* Total Flow from Basin (PondTB1rt + TB202.2)
ADD HYD            ID=1  HYD NO=TB202.2SUM ID I=1   ID II=30
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD PONDTB1RT to Sub-Basin TB203SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                              DIA=54 IN   N=0.013
*
ROUTE MCUNGE               ID=2  HYD NO=TB202.2SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1028 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN TB203 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
```

```
                    LENGTH=1568 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB103   DA=0.04991 SQ MI
                    PER A=0 PER B=21  PER C=22  PER D=57
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd TB203 through PondTB2
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondTB2  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                          0                 0                        5171
                          14                      1.000              5172
                          77                2.100                  5174
*
*S Outflow equals to 49.4 cfs From "DMP for Avalon Subdivision" on Pg 3
*
*
* Total Flow from Basin (TB202.2SUMRT + PondTB2)
ADD HYD             ID=1  HYD NO=PONDTB2SUM ID I=2   ID II=30
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD PONDTB2SUM to Sub-Basin TB206SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.013
                        DIA=54 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=PONDTB2SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1490 FT
                    NS=0  SLOPE=0.013
*
PRINT HYD           ID=2   CODE=1
*
*
*******************************************************************************
*
*
*** Sub-BASIN TB204 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                        LENGTH=1476 FT   SLOPE=0.026   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB204   DA=0.03918 SQ MI
                    PER A=5.5 PER B=5.5  PER C=5.5 PER D=83.5
                    TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD TB204 to Sub-Basin PONDTB3SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.025
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=3  HYD NO=TB204RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1290 FT
                    NS=0  SLOPE=0.025
*
PRINT HYD          ID=3   CODE=1
*
*
*** Sub-BASIN TB205 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1722 FT   SLOPE=0.020   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB205   DA=0.04575 SQ MI
                    PER A=0 PER B=19.6  PER C=19.6  PER D=60.8
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd TB205SUM through PondTB3
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondTB3  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                        0                  0                    5153.69
                        1                  0.582                5156
                        17                 1.178                5158
                        41.5               3.244                5160
                        56.5               5.029                5162
                        63                 6.019                5163
*
*S Pond never graded per proposed G&D with date 12-7-10
*S Pond likely will be modified per plan, but left as existing
*S Assumed existing 30" RCP outlet with 0.5% slope
*
*
*
* Total Flow from Basin (TB204RT + TB205)
ADD HYD            ID=1  HYD NO=PONDTB3SUM ID I=3   ID II=30
PRINT HYD          ID=1   CODE=1
*
```

```
*
****Route HYD PONDTB3SUM to Sub-Basin PONDTB3 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.016
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=3  HYD NO=PondTB3SUMRT  INFLOW ID=1
                DT=0 HR  LENGTH=490 FT
                NS=0  SLOPE=0.016
*
PRINT HYD       ID=3   CODE=1
*
*
* Total Flow from Basin (PondTB2SUMRT + PONDTB3RT)
ADD HYD         ID=1  HYD NO=TB206SUMA ID I=2   ID II=3
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD TB206SUM to Sub-Basin TB206SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.008
                        DIA=66 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TB206SUMART  INFLOW ID=1
                DT=0 HR  LENGTH=580 FT
                NS=0  SLOPE=0.008
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN TB206 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=1515 FT   SLOPE=0.016   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB206   DA=0.02559 SQ MI
                PER A=0 PER B=19.4  PER C=19.5  PER D=61.1
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (TB206SUMART + TB206)
ADD HYD         ID=1  HYD NO=TB206SUMB ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*S APTB1
*
*
****Route HYD TB206SUM to Sub-Basin TB206SUMB Through a Pipe
```

```
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.008
                        DIA=66 IN   N=0.013
*
ROUTE MCUNGE            ID=10  HYD NO=TB206SUMBRT  INFLOW ID=1
                DT=0 HR  LENGTH=580 FT
                NS=0  SLOPE=0.008
*
PRINT HYD       ID=10   CODE=1
*
*
*******************************************************************************
***Inflow from 98th and Central area
*
***Route HYD NEBASIN to Sub-Basin TB207 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                        DIA=54 IN   N=0.013
*
ROUTE MCUNGE            ID=1  HYD NO=NEBASINRT  INFLOW ID=41
                DT=0 HR  LENGTH=1735 FT
                NS=0  SLOPE=0.023
*
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN TB207 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=1867 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB207   DA=0.06805 SQ MI
                PER A=1.2 PER B=9.6  PER C=16.3  PER D=72.9
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN TB208 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=2000 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD          ID=3   HYD NO=TB208   DA=0.05040 SQ MI
                PER A=0 PER B=16.4  PER C=16.4  PER D=67.2
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=3   CODE=1
*
```

```
*
* Total Flow from Basin (TB207 + TB208)
ADD HYD             ID=2  HYD NO=TB208SUMA ID I=2   ID II=3
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (NEBASINRT + TB208SUMA)
ADD HYD             ID=1  HYD NO=TB208SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APTB2
*
*
***Route HYD TB208SUMB to Sub-Basin TB209SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                        DIA=60 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TB208SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1290 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB206SUMBRT + TB208SUMBRT)
ADD HYD             ID=1  HYD NO=TB209SUMA ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TB209 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1390 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB209   DA=0.03089 SQ MI
                    PER A=0 PER B=8  PER C=8  PER D=84
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB209SUMA + TB209)
ADD HYD             ID=1  HYD NO=TB209SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
***Route HYD TB209SUMB to Sub-Basin TB216SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
```

```
                    DIA=72 IN   N=0.013
*
ROUTE MCUNGE        ID=2  HYD NO=TB209SUMBRT  INFLOW ID=1
                DT=0 HR  LENGTH=1450 FT
                NS=0  SLOPE=0.020
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN TB216 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                LENGTH=1143 FT   SLOPE=0.021   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB216   DA=0.03257 SQ MI
                PER A=0  PER B=8.8  PER C=8.8  PER D=82.4
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD TB216 to Sub-Basin TB216SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.014  FP SLP=0.02 N=0.017
                    DIST=20 FT

                    DIST  ELEV
            0       105
                    10          100
                    15          100
                    20          105
*
ROUTE MCUNGE        ID=3  HYD NO=TB216RT  INFLOW ID=1
                DT=0 HR  LENGTH=1835 FT
                NS=0  SLOPE=0.014
*
PRINT HYD       ID=3   CODE=1
*
*
* Total Flow from Basin (TB209SUMBRT + TB216RT)
ADD HYD         ID=1  HYD NO=TB213SUMA ID I=2   ID II=3
PRINT HYD       ID=1   CODE=1
*S APTB3
*
*
*** Sub-BASIN TB213 ****
```

```
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1813 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB213   DA=0.04712 SQ MI
                     PER A=0 PER B=5.4  PER C=5.5  PER D=89.1
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (TB216SUM + TB213)
ADD HYD              ID=1  HYD NO=TB213SUMB ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
***Route HYD TB213SUM to Sub-Basin TB214 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=78 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=TB213SUMBRT  INFLOW ID=1
                     DT=0 HR  LENGTH=1005 FT
                     NS=0  SLOPE=0.018
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN TB214 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1247 FT   SLOPE=0.014   K=1.0
COMPUTE NM HYD               ID=1   HYD NO=TB214   DA=0.02685 SQ MI
                     PER A=0 PER B=13  PER C=26.2  PER D=60.7
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (TB213SUMRT + TB214)
ADD HYD              ID=1  HYD NO=TB214SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*S APTB7
*
*
***Route HYD TB214SUM to Sub-Basin TB215SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
```

```
                    DIA=90 IN   N=0.013
*
ROUTE MCUNGE        ID=10  HYD NO=TB214SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1230 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*
***Route HYD UNBASIN to Sub-Basin TB212SUMB Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                    DIA=72 IN   N=0.013
*
ROUTE MCUNGE        ID=11  HYD NO=UNBASINRT  INFLOW ID=42
                    DT=0 HR  LENGTH=1120 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=11   CODE=1
*
*
*** Sub-BASIN TB210 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2333 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB210   DA=0.07272 SQ MI
                    PER A=0 PER B=14.1  PER C=14.1  PER D=71.9
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TB211 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2015 FT   SLOPE=0.019   K=2.0
COMPUTE NM HYD      ID=2   HYD NO=TB211   DA=0.02330 SQ MI
                    PER A=0   PER B=5  PER C=5  PER D=90
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
```

```
* Total Flow from Basin (TB210 + TB211)
ADD HYD             ID=1  HYD NO=TB211SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APTB4
*
*
****Route HYD TB211SUM to Sub-Basin TB212SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.01  FP SLP=0.02 N=0.010
                                DIST=20 FT

                                DIST  ELEV
                0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=2  HYD NO=TB211SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1515 FT
                        NS=0  SLOPE=0.010
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB212 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=2362 FT   SLOPE=0.012   K=2.0
COMPUTE NM HYD                  ID=1   HYD NO=TB212   DA=0.06855 SQ MI
                        PER A=0 PER B=8.6  PER C=16.2  PER D=75.2
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB211SUMRT + TB212)
ADD HYD             ID=1  HYD NO=TB212SUMA ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APTB5
*
*
* Total Flow from Basin (UNBASINRT + TB212SUMA)
ADD HYD             ID=1  HYD NO=TB212SUMB ID I=11   ID II=1
PRINT HYD           ID=1   CODE=1
*S APTB6
```

```
*
*
***Route HYD TB212SUMB to Sub-Basin TB215 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                        DIA=96 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TB212SUMBRT  INFLOW ID=1
                DT=0 HR  LENGTH=1880 FT
                NS=0  SLOPE=0.01
*
PRINT HYD       ID=2   CODE=1
*
*
* Total Flow from Basin (TB214SUMRT + TB212SUMBRT)
ADD HYD         ID=1  HYD NO=TB215SUMA ID I=10   ID II=2
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN TB215 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=3027 FT   SLOPE=0.01   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB215   DA=0.11272 SQ MI
                PER A=0 PER B=2.3  PER C=61  PER D=36.7
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
*
* Total Flow from Basin (TB215SUMA + TB215)
ADD HYD         ID=10  HYD NO=TB215SUMB ID I=1   ID II=2
PRINT HYD       ID=10   CODE=1
*
*
*******************************************************************************
*
*** Sub-BASIN TB217 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=1357 FT   SLOPE=0.021   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB217   DA=0.01861 SQ MI
                PER A=0 PER B=9.9  PER C=10  PER D=80.1
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
```

```
*
*
****Route HYD TB217 to Sub-Basin TB220
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.023  FP SLP=0.02 N=0.017
                                DIST=20 FT

                                DIST  ELEV
                0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE            ID=2  HYD NO=TB217RT  INFLOW ID=1
                        DT=0 HR  LENGTH=1110 FT
                        NS=0  SLOPE=0.023
*
PRINT HYD               ID=2   CODE=1
*
*
*** Sub-BASIN TB220 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1726 FT   SLOPE=0.014   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB220   DA=0.03690 SQ MI
                        PER A=0 PER B=14  PER C=15  PER D=71
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (TB217RT + TB220)
ADD HYD                 ID=1  HYD NO=TB220SUM ID I=2   ID II=1
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN TB218 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1258 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB218   DA=0.03573 SQ MI
                        PER A=0 PER B=40.9  PER C=41.9  PER D=17.1
                        TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD           ID=2   CODE=1
*
*
****Route HYD TB218 to Sub-Basin TB219
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.022  FP SLP=0.02 N=0.017
                                DIST=20 FT

                                DIST  ELEV
                0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=3  HYD NO=TB218RT  INFLOW ID=2
                        DT=0 HR  LENGTH=815 FT
                        NS=0  SLOPE=0.022
*
PRINT HYD           ID=3   CODE=1
*
*
*** Sub-BASIN TB219 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1375 FT   SLOPE=0.013   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB219   DA=0.02285 SQ MI
                        PER A=0 PER B=18  PER C=18  PER D=64
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB218RT + TB219)
ADD HYD             ID=2  HYD NO=TB219SUM ID I=2   ID II=3
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB220SUM + TB119SUM)
ADD HYD             ID=1  HYD NO=TB221SUMA ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APTB8
*
*
***Route HYD TB221SUMA to Sub-Basin TB221 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
```

```
                    DIA=60 IN   N=0.013
*
ROUTE MCUNGE        ID=2  HYD NO=TB221SUMART  INFLOW ID=1
                    DT=0 HR  LENGTH=1075 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB221 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1745 FT   SLOPE=0.011   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB221   DA=0.05769 SQ MI
                    PER A=0 PER B=19.4  PER C=20.1  PER D=60.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB221SUMART + TB221)
ADD HYD             ID=1  HYD NO=TB221SUMB ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
***Route HYD TB221SUMB to Sub-Basin TB222 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.007
                    DIA=78 IN   N=0.013
*
ROUTE MCUNGE        ID=2  HYD NO=TB221SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1690 FT
                    NS=0  SLOPE=0.007
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB222 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1570 FT   SLOPE=0.006   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB222   DA=0.07064 SQ MI
                    PER A=0 PER B=18.2  PER C=18.2  PER D=63.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
```

```
*
*
* Total Flow from Basin (TB221SUMBRT + TB222)
ADD HYD             ID=1  HYD NO=TB222SUMA ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APTB9
*
*
* Total Flow from Basin (TB215SUMB + TB222SUMA)
ADD HYD             ID=1  HYD NO=TB222SUMB ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*S APTB10
*
*
****Route HYD TB222SUMB to Sub-Basin TB224SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.01  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=2  HYD NO=TB222SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=2160 FT
                        NS=0  SLOPE=0.01
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB223 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=1837 FT   SLOPE=0.007   K=2.0
                                LENGTH=826 FT    SLOPE=0.012   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=TB223   DA=0.07133 SQ MI
                        PER A=0 PER B=21  PER C=22  PER D=57
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TB224 ****
```

```
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=3880 FT   SLOPE=0.010   K=1.0
COMPUTE NM HYD               ID=3   HYD NO=TB224   DA=0.15974 SQ MI
                      PER A=0 PER B=21.1  PER C=24.5  PER D=54.4
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=3   CODE=1
*
*
* Total Flow from Basin (TB223 + TB224)
ADD HYD              ID=1  HYD NO=TB224SUMA ID I=1   ID II=3
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (TB222SUMBRT + TB224SUMA)
ADD HYD              ID=43  HYD NO=TB224SUMB ID I=2   ID II=1
PRINT HYD            ID=43  CODE=1
*
*
*S*************************************************************************************
*S**************    END OF TIERRA BAYITA BASIN
*S*************************************************************************************
*
*
*S*************************************************************************************
*S**************     ATRISCO BUSINESS PARK BASIN
*S*************************************************************************************
*
*
***From Tierra Bayita Basin
*
****Route HYD TB222SUMB to Sub-Basin TB224SUMB
COMPUTE RATING CURVE     CID=1 VS NO=1 NO SEGS=1
                      MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.026  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                  0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                 ID=20  HYD NO=TB222SUMBRT  INFLOW ID=43
                      DT=0 HR  LENGTH=940 FT
```

```
                    NS=0  SLOPE=0.026
*
PRINT HYD           ID=20   CODE=1
*
*
**** Sub-BASIN AB201.1****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=315 FT   SLOPE=0.025   K=0.7
                               LENGTH=705 FT   SLOPE=0.023   K=2.0
                               LENGTH=1000 FT    SLOPE=0.014   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=AB201.1   DA=0.11831 SQ MI
                    PER A=0 PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd AB201.1 through Pond
*
ROUTE RESERVOIR                     ID=30  HYD NO=PONDAB201.2  INFLOW ID=1  CODE=1
                               OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                               0                  0                    5317
                               7.56                        1                    5318
                               7.57                        20                   5319
*
*
****Route HYD AB201.1 to Sub-Basin POND201.2 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                               DIA=24 IN   N=0.013
*
ROUTE MCUNGE                ID=1  HYD NO=PONDAB201.1Rt  INFLOW ID=30
                    DT=0 HR  LENGTH=975 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN AB201.2****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=990 FT     SLOPE=0.013   K=2.0
                               LENGTH=1475 FT    SLOPE=0.010   K=3.0
COMPUTE NM HYD              ID=2   HYD NO=AB201.2   DA=0.09628 SQ MI
                    PER A=0 PER B=15  PER C=15  PER D=70
```

```
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
****Route Hyd AB201.2 through Pond
*
ROUTE RESERVOIR                 ID=30  HYD NO=PONDAB201.2  INFLOW ID=2  CODE=1
                                OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                                0                  0                        5317
                                6.15                        1               5318
                                6.16                        20              5319
*
*
* Total Flow from Basin (AB201.1PONDRt + PONDAB201.2)
ADD HYD             ID=1  HYD NO=AB201.2SUM ID I=30   ID II=1
PRINT HYD           ID=1   CODE=1
*S APAB1
*
*
****Route HYD Pond201.2SUM to Sub-Basin AB202SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                                DIA=24 IN   N=0.013
*
ROUTE MCUNGE                    ID=2  HYD NO=Pond201.2SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=2175 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN AB202****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=545 FT     SLOPE=0.024   K=0.7
                                LENGTH=3610 FT    SLOPE=0.009   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=AB202   DA=0.18317 SQ MI
                    PER A=0 PER B=14.8  PER C=15.3  PER D=69.9
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd AB202SUM through Pond
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondAB202  INFLOW ID=1  CODE=1
```

```
                                OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                                0                  0                    5317
                                11.71                        1                    5318
                                11.72                        20                   5319
*
*
* Total Flow from Basin (POND201.2SUMRt + Pond202)
ADD HYD             ID=1  HYD NO=POND202SUM ID I=2   ID II=30
PRINT HYD           ID=1   CODE=1
*
*
*S APAB2
*
*
****Route HYD Pond202SUM to Sub-Basin AB203.1 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                                DIA=30 IN   N=0.013
*
ROUTE MCUNGE                    ID=2  HYD NO=Pond202SUMRt  INFLOW ID=1
                        DT=0 HR  LENGTH=1300 FT
                        NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN AB203.1****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=505 FT     SLOPE=0.010   K=0.7
                                LENGTH=1320 FT    SLOPE=0.004   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=AB203.1   DA=0.11159 SQ MI
                        PER A=0 PER B=10.1  PER C=10.1  PER D=79.8
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd AB203.1 through Pond
*
ROUTE RESERVOIR                         ID=30  HYD NO=PondAB203.1  INFLOW ID=1  CODE=1
                                OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                                0                  0                    5317
                                7.13                         1                    5318
                                7.14                         20                   5319
*
*
```

```
* Total Flow from Basin (POND202SUMRt + Pond203.1)
ADD HYD             ID=1  HYD NO=POND202SUM ID I=2   ID II=30
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD AB203.1SUM to Sub-Basin AB203.2 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=30 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=AB203.1Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=1080 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN AB203.2****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=400 FT   SLOPE=0.010   K=0.7
                            LENGTH=680 FT   SLOPE=0.010   K=2.0
                            LENGTH=2165 FT   SLOPE=0.005   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=AB203.2   DA=0.10280 SQ MI
                    PER A=0 PER B=5.8  PER C=29.6  PER D=64.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd AB203.2 through Pond
*
ROUTE RESERVOIR                     ID=30  HYD NO=PondAB203.2  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)      STORAGE (AC FT)             ELEV
                        0                       0                       5317
                        6.57                            1                       5318
                        6.58                            20                      5319
*
*
* Total Flow from Basin (Pond202SUMRt + Pond203.2)
ADD HYD             ID=1  HYD NO=PondAB203.2SUM ID I=2   ID II=30
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD Pond203.2SUM to Sub-Basin AB204 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=48 IN   N=0.013
```

```
*
ROUTE MCUNGE              ID=2  HYD NO=PondAB203.2SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=3485 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*S APAB3
*
*
*** Sub-BASIN AB204****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=600 FT    SLOPE=0.010   K=0.7
                              LENGTH=1265 FT    SLOPE=0.021   K=2.0
                              LENGTH=1720 FT    SLOPE=0.016   K=3.0
COMPUTE NM HYD            ID=1   HYD NO=AB204   DA=0.16122 SQ MI
                    PER A=1.1  PER B=12.5  PER C=12.9  PER D=73.4
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd AB204 through Pond
*
ROUTE RESERVOIR                   ID=30  HYD NO=PondAB204  INFLOW ID=1  CODE=1
                              OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                              0                  0                  5317
                              10.31                    1                  5318
                              10.32                    20                 5319
*
*
* Total Flow from Basin (Pond203.2SUMRt + Pond204)
ADD HYD             ID=1  HYD NO=PondAB204SUM ID I=2   ID II=30
PRINT HYD           ID=1   CODE=1
*S APAB4
*
*
****Route HYD Pond204SUM to Sub-Basin TB225 Through a Pipe
COMPUTE RATING CURVE      CID=1   VS NO=1 CODE=-1   SLP=0.005
                              DIA=72 IN   N=0.013
*
ROUTE MCUNGE              ID=2  HYD NO=PondAB204SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=315 FT
                    NS=0  SLOPE=0.005
```

```
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB225 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=665 FT   SLOPE=0.006   K=0.7
                               LENGTH=1415 FT    SLOPE=0.035   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB225   DA=0.13043 SQ MI
                    PER A=0 PER B=36.5  PER C=37.5  PER D=26
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (AB204SUMRT + TB225)
ADD HYD             ID=1  HYD NO=TB225SUMA ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB225SUM + TIERRA BAYITA BASIN)
ADD HYD             ID=1  HYD NO=TB225SUMB ID I=1   ID II=20
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd AB207SUMB through PondNSCOORS
*
ROUTE RESERVOIR                 ID=44  HYD NO=PondNSCOORS  INFLOW ID=1  CODE=1
                    OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                    0                 0                        5017
                    19                3.172                    5018
                    72                6.520                    5019
                    151               10.043                   5020
                    249               13.750                   5021
                    356               17.645                   5022
                    460               21.731                   5023
                    538               26.011                   5024
                    606               30.486                   5025
                    667               35.157                   5026
                    724               40.027                   5027
                    776               45.098                   5028
                    824               49.328                   5029
                    870               53.763                   5030
                    913               59.462                   5031
                    955               65.417                   5032
```

```
*
PRINT HYD                 ID=44       CODE=1
*
*
*S*************************************************************************
*S**********          END OF ATRISCO BUSINESS PARK BASIN
*S*************************************************************************
*
*S*************************************************************************
*S**********    TOWER-SAGE BASIN
*S*************************************************************************
*
*
*** Sub-BASIN TS201 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                          LENGTH=560 FT   SLOPE=0.013   K=0.7
                    LENGTH=1845 FT   SLOPE=0.028   K=3.0
COMPUTE NM HYD            ID=1   HYD NO=TS201   DA=0.06441 SQ MI
                    PER A=0 PER B=7.3  PER C=7.3  PER D=85.4
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD TS201 to Sub-Basin TS202 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                          DIA=48 IN   N=0.013
*
ROUTE MCUNGE              ID=2  HYD NO=TS201Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=2260 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TS202 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2252 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD            ID=1   HYD NO=TS202   DA=0.08686 SQ MI
                    PER A=0.4 PER B=17.7  PER C=17.9  PER D=64.1
                    TP=0.0   MASSRAIN=-1
```

```
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (TS201Rt + TS202)
ADD HYD              ID=1  HYD NO=TS202SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*S APTS1
*
*
****Route HYD TS202SUM to Sub-Basin TS203 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                        DIA=60 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=TS202SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1410 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN TS203 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=1326 FT   SLOPE=0.018   K=2.0
                        LENGTH=2150 FT   SLOPE=0.015   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=TS203   DA=0.10639 SQ MI
                    PER A=0 PER B=16.9  PER C=17.9  PER D=65.2
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (TS202SUMRt + TS203)
ADD HYD              ID=1  HYD NO=TS203SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*S APTS2
*
*
****Route HYD TS203SUM to Sub-Basin TS205.1 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.021
                        DIA=72 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=TS203SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1925 FT
                    NS=0  SLOPE=0.021
```

```
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN TS205.1 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1890 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=TS205.1   DA=0.04038 SQ MI
                     PER A=0 PER B=21.3  PER C=22.3  PER D=56.4
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (TS203SUMRt + TS205.1)
ADD HYD              ID=1  HYD NO=TS205.1SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
****Route HYD TS205.1SUM to Sub-Basin TS205.2 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.021
                                DIA=72 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=TS205.1SUMRt  INFLOW ID=1
                     DT=0 HR  LENGTH=1040 FT
                     NS=0  SLOPE=0.021
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN TS204 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=2275 FT   SLOPE=0.020   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=TS204   DA=0.04639 SQ MI
                     PER A=8.2 PER B=18.2  PER C=18.5  PER D=55.1
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
****Route HYD TS204 to Sub-Basin TS205.2 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                                DIA=42 IN   N=0.013
```

```
*
ROUTE MCUNGE              ID=3  HYD NO=TS204Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=1130 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (TS205.1SUMRt + TS204RT)
ADD HYD             ID=1  HYD NO=TS205.2SUMA ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TS205.2 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2095 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD            ID=2   HYD NO=TS205.5   DA=0.06260 SQ MI
                    PER A=0 PER B=22.8  PER C=23  PER D=54.2
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TS205.2SUMA + TS205.2)
ADD HYD             ID=1  HYD NO=TS205.1SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APTS3
*
*
****Route HYD TS205.2SUMB to Sub-Basin TS211 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.017
                        DIA=90 IN   N=0.013
*
ROUTE MCUNGE              ID=10  HYD NO=TS205.2SUMBRt  INFLOW ID=1
                    DT=0 HR  LENGTH=910 FT
                    NS=0  SLOPE=0.017
*
PRINT HYD           ID=10   CODE=1
*
*
*** Sub-BASIN TS206 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1270 FT   SLOPE=0.017   K=2.0
```

```
COMPUTE NM HYD          ID=1   HYD NO=TS206   DA=0.02972 SQ MI
                  PER A=0 PER B=8.9  PER C=9.6  PER D=81.5
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=1   CODE=1
*
*
****Route Hyd TS206 through PondTS2
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondTS2  INFLOW ID=1  CODE=1
                  OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                  0                 0                        5132
            15.96                   0.600               5134
            40.01             1.300               5136
*
*
****Route HYD PondTB1 to Sub-Basin PONDTS2 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                  DIA=30 IN   N=0.013
*
ROUTE MCUNGE            ID=1  HYD NO=PONDTS2RT  INFLOW ID=30
                  DT=0 HR  LENGTH=1030 FT
                  NS=0  SLOPE=0.018
*
PRINT HYD         ID=1   CODE=1
*
*
**********************************************************************
*
*
*** Sub-BASIN TS207 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                  NK=1   ISLOPE=1
                  LENGTH=2360 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TS207   DA=0.07155 SQ MI
                  PER A=0 PER B=24.9  PER C=25.9  PER D=49.1
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=2   CODE=1
*
*
* Total Flow from Basin (PONDTS2RT + TS207)
ADD HYD           ID=1  HYD NO=TS207SUM ID I=2   ID II=1
PRINT HYD         ID=1   CODE=1
*
*
```

```
****Route HYD TS207 to Sub-Basin TS208 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.008
                        DIA=54 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TS207SUMRt  INFLOW ID=1
                DT=0 HR  LENGTH=2105 FT
                NS=0  SLOPE=0.008
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN TS208 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                LENGTH=1775 FT   SLOPE=0.011   K=1.0
                        LENGTH=1060 FT   SLOPE=0.010   K=3.0
COMPUTE NM HYD          ID=1   HYD NO=TS208   DA=0.05907 SQ MI
                PER A=0 PER B=23.3  PER C=23.9  PER D=52.7
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (TS207SUMRT + TS208)
ADD HYD         ID=1  HYD NO=TS208SUM ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN TS209 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                LENGTH=2200 FT   SLOPE=0.017   K=1.0
COMPUTE NM HYD          ID=2   HYD NO=TS209   DA=0.06455 SQ MI
                PER A=0 PER B=16.7  PER C=17.5  PER D=65.8
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
*
****Route HYD TS209 to Sub-Basin TS210 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.013
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=3  HYD NO=TS209Rt  INFLOW ID=2
                DT=0 HR  LENGTH=1920 FT
```

```
                    NS=0  SLOPE=0.013
*
PRINT HYD           ID=3   CODE=1
*
*
*** Sub-BASIN TS210 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=1220 FT   SLOPE=0.011   K=2.0
                               LENGTH=1300 FT   SLOPE=0.012   K=3.0
COMPUTE NM HYD              ID=2   HYD NO=TS210   DA=0.06151 SQ MI
                    PER A=0 PER B=20.6  PER C=21.4  PER D=58
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TS209RT + TS210)
ADD HYD             ID=2  HYD NO=TS210SUMA ID I=3   ID II=2
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TS208SUM + TS210SUMA)
ADD HYD             ID=1  HYD NO=TS210SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APTS4
*
*
****Route HYD TS210SUMB to Sub-Basin TS211 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                               DIA=72 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=TS210SUMBRt  INFLOW ID=1
                    DT=0 HR  LENGTH=922 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TS205.2SUMBRT + TS210SUMBRT)
ADD HYD             ID=1  HYD NO=TS211SUMA ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TS211 ****
*
```

```
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=551 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=TS211   DA=0.04503 SQ MI
                      PER A=72.5 PER B=8.8  PER C=8.8  PER D=9.9
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
*
* Total Flow from Basin (TS211SUMA + TS211)
ADD HYD            ID=1  HYD NO=TS211SUMB ID I=1   ID II=2
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd TS211SUMB through PondTS1
*
ROUTE RESERVOIR                  ID=30  HYD NO=PondTS1  INFLOW ID=1  CODE=1
                           OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                           0                  0                  5084
                           18                       7.37                  5086
                           56                 22.64              5088
                           83                       43.00                 5090
                           92                 54.3               5091
*
*
****Route HYD PondTS1 to Sub-Basin TS214 Through a Pipe
COMPUTE RATING CURVE   CID=1   VS NO=1 CODE=-1   SLP=0.01
                           DIA=30 IN   N=0.013
*
ROUTE MCUNGE               ID=1  HYD NO=PondTS1RT  INFLOW ID=30
                      DT=0 HR  LENGTH=1386 FT
                      NS=0  SLOPE=0.01
*
PRINT HYD          ID=1   CODE=1
*
*
*** Sub-BASIN TS214 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                      NK=2   ISLOPE=1
                      LENGTH=1220 FT   SLOPE=0.007   K=2.0
                           LENGTH=700 FT    SLOPE=0.006   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=TS214   DA=0.04836 SQ MI
                      PER A=3.9  PER B=20.5  PER C=21.4  PER D=54.2
                      TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (PondTS1RT + TS214)
ADD HYD             ID=1  HYD NO=TS214SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APTS5
*
*
****Route HYD TS214SUM to Sub-Basin TS215 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=TS214SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=3220 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TS212 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2725 FT   SLOPE=0.01   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TS212   DA=0.09315 SQ MI
                    PER A=0 PER B=17  PER C=17.2  PER D=65.9
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD TS212 to Sub-Basin TS213 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=TS212RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1415 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=3   CODE=1
*
*
*** Sub-BASIN TS213 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
```

```
                    LENGTH=150 FT     SLOPE-0.010   K=0.7
          LENGTH=2210 F`T   SLOPE=0.005   K=3.0
COMPUTE NM HYD      ID=1   HYD NO=TS213   DA=0.06630 SQ MI
          PER A=0 PER B=20.5  PER C=20.9  PER D=58.6
          TP=0.0   MASSRAIN=-1
*
PRINT HYD      ID=1   CODE=1
*
*
* Total Flow from Basin (TS212RT + TS1213)
ADD HYD        ID=1  HYD NO=TS213SUMA ID I=3   ID II=1
PRINT HYD      ID=1   CODE=1
*S APTS6
*
*
****Route HYD TS213SUM to TS215 Channel Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=60 IN   N=0.013
*
ROUTE MCUNGE            ID=3  HYD NO=TS213SUMRT  INFLOW ID=1
          DT=0 HR  LENGTH=2110 FT
          NS=0  SLOPE=0.015
*
PRINT HYD      ID=3   CODE=1
*
*
* Total Flow from Basin (TS215SUMA + N-S COORS POND)
ADD HYD        ID=1  HYD NO=TS213SUMB ID I=3   ID II=44
PRINT HYD      ID=1   CODE=1
*
*
****Route HYD TS215SUMB to Sub-Basin TS217
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
          MIN ELEV=100 FT MAX ELEV=105 FT
                        CH SLP=0.014  FP SLP=0.02 N=0.013
                        DIST=20 FT

                        DIST  ELEV
                0       105
                        10          100
                        15          100
                        20          105
*
ROUTE MCUNGE            ID=3  HYD NO=TS215SUMBRT  INFLOW ID=1
          DT=0 HR  LENGTH=3300 FT
          NS=0  SLOPE=0.014
*
```

```
PRINT HYD           ID=3   CODE=1
*s APTS7
*
*
* Total Flow from Basin (TS215SUMA + N-S COORS POND)
ADD HYD             ID=1  HYD NO=TS215SUMA ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TS215 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=1240 FT   SLOPE=0.005   K=1.0
                               LENGTH=2015 FT   SLOPE=0.025   K=3.0
COMPUTE NM HYD              ID=2   HYD NO=TS215   DA=0.14947 SQ MI
                    PER A=0 PER B=29.2  PER C=30.2  PER D=40.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TS215SUMA + TS215)
ADD HYD             ID=1  HYD NO=TS215SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD TS215SUMB to Sub-Basin TS217
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                               CH SLP=0.005  FP SLP=0.02 N=0.013
                               DIST=20 FT

                               DIST  ELEV
                0       105
                               10          100
                               15          100
                               20          105
*
ROUTE MCUNGE                ID=2  HYD NO=TS215SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1075 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TS216 ****
```

```
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=2456 FT   SLOPE=0.006   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=TS216   DA=0.07651 SQ MI
                      PER A=0 PER B=20.8  PER C=21.5  PER D=57.7
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*S APTS8
*
*
****Route HYD TS216 to Sub-Basin TS217 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                                DIA=30 IN   N=0.013
*
ROUTE MCUNGE                 ID=3  HYD NO=TS216Rt  INFLOW ID=1
                      DT=0 HR  LENGTH=2880 FT
                      NS=0  SLOPE=0.020
*
PRINT HYD            ID=3   CODE=1
*
*
* Total Flow from Basin (TS215SUMRT + TS216RT)
ADD HYD              ID=1  HYD NO=TS217SUMA ID I=2   ID II=3
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN TS217 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=2   ISLOPE=1
                      LENGTH=1210 FT   SLOPE=0.005   K=1.0
                                LENGTH=1650 FT   SLOPE=0.033   K=3.0
COMPUTE NM HYD               ID=2   HYD NO=TS217   DA=0.14062 SQ MI
                      PER A=0 PER B=28  PER C=28.8  PER D=43.2
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (TS217SUMA + TS217)
ADD HYD              ID=45  HYD NO=TSBASIN ID I=1   ID II=2
PRINT HYD            ID=45   CODE=1
*S APTS9
*
*
```

```
*S*************************************************************************
*S**********          END OF TOWER-SAGE BASIN
*S*************************************************************************
*
*
*S*************************************************************************
*S**********  POWERLINE BASIN
*S*************************************************************************
*
*
*** BASIN PL202 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                           LENGTH=400 FT  SLOPE=0.0573  K=0.7
                           LENGTH=1600 FT  SLOPE=0.0573  K=2.0
                           LENGTH=1850 FT  SLOPE=0.0326  K=3.0
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD             ID=1   HYD NO=PL202   DA=0.16047 SQ MI
                    PER A=0 PER B=41  PER C=42  PER D=17
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD PL202 to Basin PL204sum
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                           CH SLP=0.0233  FP SLP=0.005 N=0.030
                           DIST=20 FT

                           DIST  ELEV
            0          105
                              10       100
                              15       100
                              20       105
*
ROUTE MCUNGE               ID=2  HYD NO=PL202Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=1160 FT
                    NS=0  SLOPE=0.0233
*
PRINT HYD          ID=2   CODE=1
*
*
*** BASIN PL204 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
```

```
                    NK=3   ISLOPE=1
                                LENGTH=400 FT  SLOPE=0.0715  K=0.7
                                LENGTH=1600 FT  SLOPE=0.0715  K=0.2.0
                                LENGTH=1850 FT  SLOPE=0.0557  K=3.0
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD              ID=3   HYD NO=PL204   DA=0.15501 SQ MI
                    PER A=0 PER B=40.8  PER C=41.8  PER D=17.4
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (PL202Rt + PL204)
ADD HYD             ID=1  HYD NO=PL204sum ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*S APPL1
****Route HYD PL204sum to Basin PL205sum
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.0136  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                                        0           105
                                        10          100
                                        15          100
                                        20          105
*
ROUTE MCUNGE                ID=2  HYD NO=PL204sumRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1100 FT
                    NS=0  SLOPE=0.0136
*
PRINT HYD           ID=2   CODE=1
*
*
*** BASIN PL205 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                                LENGTH=400 FT  SLOPE=0.0550  K=0.7
                                LENGTH=1600 FT  SLOPE=0.0550  K=2.0
                                LENGTH=2190        FT  SLOPE=0.0413  K=3.0
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD              ID=3   HYD NO=PL205   DA=0.13707 SQ MI
                    PER A=0 PER B=33.9  PER C=34.6  PER D=31.5
```

```
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (PL204sumRt + PL205)
ADD HYD             ID=1  HYD NO=PL205sum ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD PL205sum to Basin PL206sum
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.0128  FP SLP=0.005 N=0.030
                              DIST=20 FT

                              DIST  ELEV
                                    0          105
                                    10         100
                                    15         100
                                    20         105
*
ROUTE MCUNGE                ID=2  HYD NO=PL205sumRt  INFLOW ID=1
                    DT=0 HR  LENGTH=390 FT
                    NS=0  SLOPE=0.0128
*
PRINT HYD           ID=2   CODE=1
*
*
*** BASIN PL206 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                              LENGTH=400 FT  SLOPE=0.0825  K=0.7
                              LENGTH=1600 FT  SLOPE=0.0825  K=2.0
                              LENGTH=2020 FT  SLOPE=0.0347  K=3.0
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD              ID=3   HYD NO=PL206   DA=0.17377 SQ MI
                    PER A=16.3 PER B=44.4  PER C=28  PER D=11.3
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (PL205sumRt + PL206)
ADD HYD             ID=1  HYD NO=PL206sum ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
```

```
*
*
****Route Hyd PL206sum through Pond PL1
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondPL1  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                          0                 0                        5317
                          0.1                         0.730          5318
                          6                 2.190                    5319
                          14                          4.191          5320
                          19                6.732                    5321
                          130                         9.896          5322
                          243               13.68                    5323
                          356                         18.03          5324
                          470                         22.98          5325
*
*S  Increased Pond Storage and Outlet Discharge to Prevent Overtopping.
*S  Same Outlet Configuration as downstream Detention Ponds.
*
*
*
****Route HYD PONDPL1 to Sub-Basin PL207SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=30 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=PONDPL1RT  INFLOW ID=30
                  DT=0 HR  LENGTH=1290 FT
                  NS=0  SLOPE=0.010
*
PRINT HYD         ID=2   CODE=1
*
*
*** BASIN PL207 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                  NK=3   ISLOPE=1
                        LENGTH=400 FT  SLOPE=0.0844  K=0.7
                        LENGTH=1600 FT  SLOPE=0.0844  K=2.0
                        LENGTH=1130 FT  SLOPE=0.0527  K=3.0
                  KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD          ID=3   HYD NO=PL207   DA=0.09881 SQ MI
                  PER A=28.9 PER B=71.1  PER C=0  PER D=0
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=3   CODE=1
*
*
```

```
* Total Flow from Basin (PL1Rt + PL207)
ADD HYD             ID=1  HYD NO=PL207sumA ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD 207SUM to Basin PONDPL2
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.0095  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                                    0       105
                                    10      100
                                    15      100
                                    20      105
*
ROUTE MCUNGE                ID=5  HYD NO=PL207SUMRt  INFLOW ID=1
                        DT=0 HR  LENGTH=740 FT
                        NS=0  SLOPE=0.0095
*
PRINT HYD           ID=5   CODE=1
*
*
*** BASIN PL208.1 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                        NK=3   ISLOPE=1
                                LENGTH=400 FT  SLOPE=0.0700  K=0.7
                                LENGTH=1600 FT  SLOPE=0.0700  K=2.0
                                LENGTH=1050 FT  SLOPE=0.0619  K=3.0
                        KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD              ID=1   HYD NO=PL208.1   DA=0.07570 SQ MI
                        PER A=40.6 PER B=59.4  PER C=0  PER D=0
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD PL208.1 to Basin PL209.3sumB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.0500  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                                    0       105
```

```
                    10          100
                    15          100
                    20          105
*
ROUTE MCUNGE        ID=2  HYD NO=PL208.1Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=500 FT
                    NS=0  SLOPE=0.0500
*
PRINT HYD           ID=2   CODE=1
*
*
*** BASIN PL208.2 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                           LENGTH=520 FT  SLOPE=0.0625  K=2.0
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD      ID=1   HYD NO=PL208.2   DA=0.01112 SQ MI
                    PER A=5.2 PER B=20.1  PER C=21.1  PER D=53.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
*** BASIN PL208.3 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                           LENGTH=300 FT  SLOPE=0.0293  K=0.7
                           LENGTH=410 FT  SLOPE=0.0095  K=3.0
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD      ID=3   HYD NO=PL208.3   DA=0.02338 SQ MI
                    PER A=32.9 PER B=17.4  PER C=17.9  PER D=31.8
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (PL208.2 + PL208.3)
ADD HYD             ID=1  HYD NO=PL208.3sumA ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (PL208.3sumA + PL208.1SUMRT)
ADD HYD             ID=1  HYD NO=PL208.3sumB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
```

```
*
* Total Flow from Basin (PL208.3sumB + PL207SUMRT)
ADD HYD             ID=1  HYD NO=PL208.3sumC ID I=1   ID II=5
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd PL208.3sumB through Pond PL2
*
ROUTE RESERVOIR                    ID=30  HYD NO=PondPL2  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                          0                 0                        5317
                          6                           1.890          5318
                          14                3.921                    5319
                          19                          6.094          5320
                          130               8.431                    5321
                          243                         10.88          5322
                          356               13.49                    5323
                          470               16.25                    5324
*
****Route HYD PONDPL2 to PONDPL3 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=30 IN   N=0.013
*
ROUTE MCUNGE                ID=10  HYD NO=PONDPL2Rt  INFLOW ID=30
                    DT=0 HR  LENGTH=100 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=10   CODE=1
*
*** BASIN PL209.1 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                               LENGTH=400 FT  SLOPE=0.0775  K=0.7
                               LENGTH=1600 FT  SLOPE=0.0775  K=2.0
                               LENGTH=350 FT  SLOPE=0.0629  K=3.0
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD              ID=1   HYD NO=PL209.1   DA=0.06028 SQ MI
                    PER A=37.1 PER B=62.9  PER C=0  PER D=0
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD PL209.1 to Basin PL210.1sum
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
```

```
                                CH SLP=0.0518  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                                        0       105
                                        10      100
                                        15      100
                                        20      105
*
ROUTE MCUNGE            ID=2  HYD NO=PL209.1Rt  INFLOW ID=1
                        DT=0 HR  LENGTH=695 FT
                        NS=0  SLOPE=0.0518
*
PRINT HYD               ID=2   CODE=1
*
*
*** BASIN PL209.2 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=200 FT  SLOPE=0.0280  K=0.7
                                LENGTH=380 FT  SLOPE=0.0280  K=3.0
                        KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD          ID=1   HYD NO=PL209.2   DA=0.01575 SQ MI
                        PER A=0.3 PER B=24.9  PER C=25.9  PER D=48.8
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (PL209.1RT + PL209.2)
ADD HYD                 ID=1  HYD NO=PL209.2sum ID I=1   ID II=2
PRINT HYD               ID=1   CODE=1
*
*
*** BASIN PL209.3 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=240 FT  SLOPE=0.0583  K=0.7
                        KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD          ID=2   HYD NO=PL209.3   DA=0.00878 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
```

```
*
* Total Flow from Basin (PL209.2SUM + PL209.3)
ADD HYD             ID=1  HYD NO=PL209.3sumA ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (PONDPL2RT + PL209.3sumA)
ADD HYD             ID=1  HYD NO=PL209.3sumB ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd PL209.3sumC through Pond PL3
*
ROUTE RESERVOIR                     ID=30  HYD NO=PondPL3  INFLOW ID=1  CODE=1
                            OUTFLOW (CFS)     STORAGE (AC FT)            ELEV
                            0                 0                          5317
                            6                       1.231                5318
                            14                2.560                      5319
                            19                      3.988                5320
                            130               5.517                      5321
                            243                     7.149                5322
                            356               8.885                      5323
                            470               10.73                      5324
*
****Route HYD PONDPL3 to PONDPL4 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                            DIA=30 IN   N=0.013
*
ROUTE MCUNGE                ID=10  HYD NO=UPONDPL3Rt  INFLOW ID=30
                      DT=0 HR  LENGTH=100 FT
                      NS=0  SLOPE=0.010
*
PRINT HYD           ID=10   CODE=1
*
*
*** BASIN PL210.1 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                      NK=3   ISLOPE=1
                                LENGTH=400 FT  SLOPE=0.0825  K=0.7
                                LENGTH=1600 FT  SLOPE=0.0825  K=2.0
                                LENGTH=1000        FT  SLOPE=0.0420  K=3.0
                      KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD              ID=1   HYD NO=PL210.1   DA=0.07778 SQ MI
                      PER A=60.1 PER B=39.9  PER C=0  PER D=0
                      TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD PL210.1 to Basin PL210.1sum
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.0375  FP SLP=0.005 N=0.0375
                                DIST=20 FT

                                DIST  ELEV
                                        0           105
                                        10          100
                                        15          100
                                        20          105
*
ROUTE MCUNGE                    ID=2  HYD NO=PL210.1Rt  INFLOW ID=1
                        DT=0 HR  LENGTH=800 FT
                        NS=0  SLOPE=0.0375
*
PRINT HYD           ID=2   CODE=1
*
*
*** BASIN PL210.2 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=400 FT  SLOPE=0.0291  K=0.7
                                LENGTH=390 FT  SLOPE=0.0291  K=2.0
                        KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD                  ID=1   HYD NO=PL210.2   DA=0.01496 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (PL210.1Rt + PL210.2)
ADD HYD             ID=1  HYD NO=PL210.2sum ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** BASIN PL210.3 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=240 FT  SLOPE=0.0417  K=0.7
                        KN=0.05   CENTROID DIST=.5
```

```
COMPUTE NM HYD          ID=2   HYD NO=PL210.3   DA=0.00903 SQ MI
                  PER A=0 PER B=25  PER C=26  PER D=49
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=2   CODE=1
*
*
* Total Flow from Basin (PL210.2 + PL210.3)
ADD HYD           ID=1  HYD NO=PL210.3sumA ID I=1   ID II=2
PRINT HYD         ID=1   CODE=1
*
* Total Flow from Basin (PL210.2sum + PL210.3sumA)
ADD HYD           ID=1  HYD NO=PL210.3sumB ID I=10  ID II=1
PRINT HYD         ID=1   CODE=1
*
*
****Route Hyd PL210.3sumB through Pond PL4
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondPL4  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                        0                 0                        5317
                        6                           1.429          5318
                        14                2.579                    5319
                        19                          4.045          5320
                        130               5.594                    5321
                        243                         7.247          5322
                        356               9.004                    5323
                        470               10.87                    5324
*
****Route HYD PONDPL4 to PONDPL5 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=30 IN   N=0.013
*
ROUTE MCUNGE            ID=10  HYD NO=PONDPL4Rt  INFLOW ID=30
                  DT=0 HR  LENGTH=100 FT
                  NS=0  SLOPE=0.010
*
PRINT HYD         ID=10   CODE=1
*
*
*** BASIN PL211.1 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                  NK=3   ISLOPE=1
                        LENGTH=400 FT  SLOPE=0.0650  K=0.7
                        LENGTH=1600 FT  SLOPE=0.0650  K=2.0
                        LENGTH=675 FT  SLOPE=0.0370  K=3.0
```

```
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD      ID=1   HYD NO=PL211.1   DA=0.07867 SQ MI
                    PER A=79.8 PER B=20.2  PER C=0  PER D=0
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD PL211.1 to Basin PL211.3sumB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                        CH SLP=0.0457  FP SLP=0.005 N=0.030
                        DIST=20 FT

                        DIST  ELEV
                            0       105
                            10      100
                            15      100
                            20      105
*
ROUTE MCUNGE        ID=2  HYD NO=PL211.1Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=920 FT
                    NS=0  SLOPE=0.0457
*
PRINT HYD           ID=2   CODE=1
*
*
*** BASIN PL211.3 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                        LENGTH=240 FT  SLOPE=0.0167  K=0.7
                    KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD      ID=1   HYD NO=PL211.3   DA=0.01064 SQ MI
                    PER A=0 PER B=25  PER C=26  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (PL211.1 + PL211.3)
ADD HYD             ID=1  HYD NO=PL211.3sumA ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
* Total Flow from Basin (PONDPL4Rt + PL211.3sumA)
ADD HYD             ID=1  HYD NO=PL211.3sumB ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
```

```
*
*
****Route Hyd PL211.3sumB through Pond PL5
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondPL5  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                          0                 0                        5317
                          6                       1.364              5318
                          14                2.839                    5319
                          19                      4.426              5320
                          130               6.129                    5321
                          243                     7.947              5322
                          356               9.883                    5323
                          470               11.94                    5324
*
****Route HYD PONDPL5 to PONDPL6 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=30 IN   N=0.013
*
ROUTE MCUNGE            ID=10  HYD NO=PONDPL5Rt  INFLOW ID=30
                  DT=0 HR  LENGTH=100 FT
                  NS=0  SLOPE=0.010
*
PRINT HYD         ID=10   CODE=1
*
*
*** BASIN PL211.2 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                  NK=2   ISLOPE=1
                        LENGTH=400 FT  SLOPE=0.0225  K=0.7
                        LENGTH=720 FT  SLOPE=0.0225  K=2.0
                  KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD          ID=1   HYD NO=PL211.2   DA=0.05553 SQ MI
                  PER A=0 PER B=25  PER C=26  PER D=49
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=1   CODE=1
*
*


* Total Flow from Basin (PondPL4 + PL211.3sumB)
ADD HYD           ID=1  HYD NO=PL211.2sum ID I=10   ID II=1
PRINT HYD         ID=1   CODE=1
*
****Route Hyd Pond PL5 through Pond PL6
*
```

```
ROUTE RESERVOIR                 ID=30  HYD NO=PondPL6  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                          0                 0                        5317
                          6                 1.485                    5318
                          14                3.083                    5319
                          19                4.796                    5320
                          130               6.626                    5321
                          243               8.574                    5322
                          356               10.64                    5323
                          470               12.83                    5324
*
*
*** BASIN PL212.1 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                          LENGTH=275 FT  SLOPE=0.0264  K=0.7
                          LENGTH=870 FT  SLOPE=0.0264  K=2.0
                     KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD            ID=1   HYD NO=PL212.1   DA=0.03223 SQ MI
                     PER A=0 PER B=25  PER C=26  PER D=49
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
*** BASIN PL212.2 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                          LENGTH=250 FT  SLOPE=0.0267  K=0.7
                          LENGTH=590 FT  SLOPE=0.0203  K=3.0
                     KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD            ID=2   HYD NO=PL212.2   DA=0.01592 SQ MI
                     PER A=0 PER B=25  PER C=26  PER D=49
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (PL212.1 + PL212.2)
ADD HYD              ID=1  HYD NO=PL212.2sumA ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
* Total Flow from Basin (PondPL6 + PL212.2sumA)
ADD HYD              ID=1  HYD NO=PL212.2sumB ID I=30   ID II=1
PRINT HYD            ID=1   CODE=1
```

```
*
*** BASIN PL213 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                             LENGTH=190 FT  SLOPE=0.0272  K=0.7
                      KN=0.05   CENTROID DIST=.5
COMPUTE NM HYD               ID=2   HYD NO=PL213   DA=0.02311 SQ MI
                      PER A=0 PER B=25  PER C=26  PER D=49
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=2   CODE=1
*
*
* Total Flow from Basin (PL212.2sumB + PL213)
ADD HYD               ID=46  HYD NO=PLBASIN ID I=1   ID II=2
PRINT HYD             ID=46   CODE=1
*
*
*S APPL2
*S*************************************************************************************
*S***********   END OF POWERLINE BASIN
*S*************************************************************************************
*
*S*************************************************************************************
*S***********   SNOW VISTA BASIN
*S*************************************************************************************
*
*
*** Sub-BASIN SV201 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1720 FT   SLOPE=0.035   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=SV201   DA=0.10812 SQ MI
                      PER A=0 PER B=24.3  PER C=57.7  PER D=18
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=1   CODE=1
*
*
****Route HYD SV201 to Sub-Basin SV204SUMA
COMPUTE RATING CURVE     CID=1 VS NO=1 NO SEGS=1
                      MIN ELEV=100 FT MAX ELEV=105 FT
                             CH SLP=0.025  FP SLP=0.04 N=0.035
                             DIST=50 FT
```

```
                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=2  HYD NO=SV201Rt  INFLOW ID=1
                        DT=0 HR  LENGTH=1276 FT
                        NS=0  SLOPE=0.025
*
PRINT HYD               ID=2   CODE=1
*
*
*** Sub-BASIN SV203 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1825 FT   SLOPE=0.039   K=2.0
COMPUTE NM HYD                  ID=1   HYD NO=SV203   DA=0.06845 SQ MI
                        PER A=0  PER B=17.6  PER C=17.7  PER D=64.7
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
****Route HYD SV203 to Sub-Basin SV204SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.030  FP SLP=0.02 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                                 0          105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=3  HYD NO=SV203Rt  INFLOW ID=1
                        DT=0 HR  LENGTH=1010 FT
                        NS=0  SLOPE=0.030
*
PRINT HYD               ID=3   CODE=1
*
*
* Total Flow from Basin (SV201Rt + SV203Rt)
ADD HYD                 ID=2  HYD NO=SV202SUMA ID I=2   ID II=3
PRINT HYD               ID=2   CODE=1
```

```
*
*
*** Sub-BASIN SV202 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1801 FT   SLOPE=0.022   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=SV202   DA=0.03670 SQ MI
                        PER A=0 PER B=19.1  PER C=19.2 PER D=61.7
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SV201Rt + SV203Rt)
ADD HYD              ID=1  HYD NO=SV202SUMB ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN SV204 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1295 FT   SLOPE=0.034   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=SV204   DA=0.03698 SQ MI
                        PER A=0 PER B=40.7 PER C=41.7  PER D=17.7
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (SV204SUMA + SV204)
ADD HYD              ID=10  HYD NO=SV204SUM ID I=2   ID II=1
PRINT HYD            ID=10   CODE=1
*
*
*********************************************************************************************
*
*
*** Sub-BASIN SV207 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1340 FT   SLOPE=0.036   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=SV207   DA=0.05374 SQ MI
                        PER A=8.7 PER B=15.4  PER C=15.6  PER D=60.2
                        TP=0.0   MASSRAIN=-1
```

```
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd SV207 through PondSV1
*
ROUTE RESERVOIR                    ID=30  HYD NO=PondSV1  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                          0                 0                        5317
                          0.5                         0.243          5318
                          2                 0.727                    5319
                          5                           1.353          5320
                          8                 2.159                    5321
                          10                          3.188          5322
                          12                4.421                    5323
                          20                          5.815          5324
*
*
****Route HYD PondSV1 to Sub-Basin SV208
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=103 FT
                          CH SLP=0.026  FP SLP=0.02 N=0.016
                          DIST=50 FT

                          DIST  ELEV
                0         101.0
                          10          100.7
                          10          100.0
                          25          100.3
                          40          100.0
                          40          100.7
                          50          101.0
*
ROUTE MCUNGE              ID=1  HYD NO=PondSV1Rt  INFLOW ID=30
                    DT=0 HR  LENGTH=1073 FT
                    NS=0  SLOPE=0.026
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SV212 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                          LENGTH=1500 FT   SLOPE=0.049   K=0.7
                          LENGTH=1074 FT   SLOPE=0.008   K=2.0
COMPUTE NM HYD            ID=2   HYD NO=SV212   DA=0.08270 SQ MI
```

```
                    PER A=0 PER B=25  PER C=26  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
****Route HYD SV212 to Sub-Basin SV208
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=103 FT
                              CH SLP=0.026  FP SLP=0.02 N=0.016
                              DIST=50 FT

                              DIST  ELEV
                0       101.0
                              10          100.7
                              10          100.0
                              25          100.3
                              40          100.0
                              40          100.7
                              50          101.0
*
ROUTE MCUNGE                ID=3  HYD NO=SV208SUMARt  INFLOW ID=2
                    DT=0 HR  LENGTH=1073 FT
                    NS=0  SLOPE=0.026
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (PONDSV1 + SV212)
ADD HYD             ID=1  HYD NO=SV208SUMA ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SV208 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1551 FT   SLOPE=0.034   K=1.0
COMPUTE NM HYD              ID=2   HYD NO=SV208   DA=0.05371 SQ MI
                    PER A=0 PER B=29  PER C=29.6  PER D=41.4
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (PondSV1Rt  + SV208)
ADD HYD             ID=1  HYD NO=SV208SUMB ID I=2   ID II=1
```

```
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (SV204SUM + SV208SUMB)
ADD HYD            ID=1  HYD NO=SV208SUMC ID I=10   ID II=1
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd SV208sumC through PondSV205
*
ROUTE RESERVOIR                  ID=30  HYD NO=PondSV205  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                        0                 0                        5277
                        3.9                         2.604          5278
                        13.3                        5.356          5279
                        17.54                       8.259          5280
                        18.53                       11.312         5281
                        19.67                       14.519         5282
                        20.77             17.882                   5283
                        21.84                       21.400         5284
                        22.86                       25.078         5285
                        23.84                       28.915         5286
                        24.79             32.914                   5287
                        25.71                       37.077         5288
*
*
****Route HYD PondSV205 to PondSV209 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.05
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=10  HYD NO=SVPOND205Rt  INFLOW ID=30
                   DT=0 HR  LENGTH=995 FT
                   NS=0  SLOPE=0.05
*
PRINT HYD          ID=10   CODE=1
**********************************************************************************************
*
*
*** Sub-BASIN SV205 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                   NK=1   ISLOPE=1
                   LENGTH=1625 FT   SLOPE=0.027   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=SV205   DA=0.04181 SQ MI
                   PER A=0 PER B=30.1  PER C=30.7  PER D=39.2
                   TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD           ID=1   CODE=1
*
*
*
****Route HYD SV205 to SV209 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.05
                        DIA=60 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=SVPOND205Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=995 FT
                    NS=0  SLOPE=0.05
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SV209 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=850 FT   SLOPE=0.034   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=SV209   DA=0.04749 SQ MI
                    PER A=0 PER B=37.7  PER C=38.6  PER D=23.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SV205 + SV209)
ADD HYD             ID=1  HYD NO=SV205SUMA ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
*S APSV1
* Total Flow from Basin (SV205SUMA + pondSV205RT)
ADD HYD             ID=1  HYD NO=SV205SUMB ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD SV205SUMB to PONDSV3 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.05
                        DIA=60 IN   N=0.013
*
ROUTE MCUNGE            ID=10  HYD NO=SVPOND205Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=995 FT
                    NS=0  SLOPE=0.05
*
PRINT HYD           ID=10   CODE=1
```

```
*
*
*** Sub-BASIN SV210 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                     LENGTH=150 FT   SLOPE=0.01   K=2.0
                              LENGTH=1365 FT   SLOPE=0.018   K=3.0
COMPUTE NM HYD             ID=1   HYD NO=SV210   DA=0.03230 SQ MI
                     PER A=1.5 PER B=17.8  PER C=17.8  PER D=62.9
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD SV210 to Sub-Basin SV211SUMC
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=100 FT MAX ELEV=103 FT
                              CH SLP=0.020  FP SLP=0.02 N=0.016
                              DIST=50 FT

                              DIST  ELEV
                0       101.0
                              10          100.7
                              10          100.0
                              25          100.3
                              40          100.0
                              40          100.7
                              50          101.0
*
ROUTE MCUNGE               ID=2  HYD NO=SV210Rt  INFLOW ID=1
                     DT=0 HR  LENGTH=455 FT
                     NS=0  SLOPE=0.020
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN SV206 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1581 FT   SLOPE=0.020   K=2.0
COMPUTE NM HYD             ID=1   HYD NO=SV206   DA=0.02392 SQ MI
                     PER A=0  PER B=9.1  PER C=9.1   PER D=81.8
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
```

```
*
*
****Route HYD SV206 to Sub-Basin SV211SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=103 FT
                                CH SLP=0.020  FP SLP=0.02 N=0.016
                                DIST=28 FT

                                DIST  ELEV
                    0       101.0
                                10          100.7
                                10          100.0
                                25          100.3
                                40          100.0
                                40          100.7
                                50          101.0
*
ROUTE MCUNGE                    ID=3  HYD NO=SV206Rt  INFLOW ID=1
                        DT=0 HR  LENGTH=710 FT
                        NS=0  SLOPE=0.020
*
PRINT HYD               ID=3   CODE=1
*
*
*** Sub-BASIN SV211 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=150 FT   SLOPE=0.01   K=2.0
                                LENGTH=426 FT   SLOPE=0.023   K=3.0
COMPUTE NM HYD                  ID=1   HYD NO=SV211   DA=0.01797 SQ MI
                        PER A=54.5 PER B=11.1  PER C=11.1  PER D=23.3
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (SV206Rt + SV211)
ADD HYD                 ID=1  HYD NO=SV211SUMA ID I=3   ID II=1
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (SV210Rt + SV211SUMA)
ADD HYD                 ID=1  HYD NO=SV211SUMB ID I=2   ID II=1
PRINT HYD               ID=1   CODE=1
*
*
```

```
* Total Flow from Basin (SV211SUMARt + SV211SUMB)
ADD HYD             ID=1  HYD NO=SV211SUMC ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd SV211SUMC through PondSV3
ROUTE RESERVOIR                 ID=30  HYD NO=PondSV3  INFLOW ID=1  CODE=1
                            OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                            0                 0                        5212
                            2.4                         1.010          5213
                            5.8               2.136                    5214
                            14.4              3.404                    5215
                            20.4                        4.838          5216
                            113.8                       6.415          5217
                            281.5                       8.110          5218
                            383                         9.01           5218.5
                            496                         9.967          5219
*
*S  RATING CURVE OBTAINED BY 2' LIDAR FOR VOLUME AND CALCULATING OUTFLOW WITH
CULVERTMASTER
*S  FOR ORFICES AND USING CIPOLETTI WEIR EQUATION FOR SPILLWAY
*S
*
****Route HYD PondSV3 to Sub-Basin SV218SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=106 FT
                                CH SLP=0.005  FP SLP=0.02 N=0.013
                                DIST=34 FT

                                DIST  ELEV
                    0       106
                                12          100
                                22          100
                                34          106
*
ROUTE MCUNGE                    ID=10  HYD NO=PondSV3Rt  INFLOW ID=30
                        DT=0 HR  LENGTH=2616 FT
                        NS=0  SLOPE=0.005
*
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*
*** Sub-BASIN SV217 ****
*
```

```
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=150 FT   SLOPE=0.01   K=2.0
                               LENGTH=1570 FT   SLOPE=0.016   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=SV217   DA=0.02636 SQ MI
                    PER A=0 PER B=24.7  PER C=25.7  PER D=49.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
*S APSV2
****Route HYD SV217sum to Sub-Basin SV218SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=103 FT
                               CH SLP=0.027  FP SLP=0.02 N=0.016
                               DIST=50 FT

                               DIST  ELEV
                0       101.0
                               10          100.7
                               10          100.0
                               25          100.3
                               40          100.0
                               40          100.7
                               50          101.0
*
ROUTE MCUNGE                ID=2  HYD NO=SV217Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=935 FT
                    NS=0  SLOPE=0.027
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SV218 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=150 FT   SLOPE=0.01   K=2.0
                               LENGTH=1422 FT   SLOPE=0.024   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=SV218   DA=0.04773 SQ MI
                    PER A=0 PER B=21  PER C=22  PER D=57
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
```

```
* Total Flow from Basin (SV217Rt + SV218)
ADD HYD             ID=1  HYD NO=SV218SUMA ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (PondSV3Rt + SV218SUMA)
ADD HYD             ID=1  HYD NO=SV218SUMB ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*S APSV3
*
*
****Route HYD SV118SUMB to Sub-Basin SV219SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=106 FT
                                CH SLP=0.010  FP SLP=0.02 N=0.013
                                DIST=34 FT

                                DIST  ELEV
                0       106
                                12          100
                                22          100
                                34          106
*
ROUTE MCUNGE                    ID=2  HYD NO=SV218SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1249 FT
                        NS=0  SLOPE=0.010
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SV219 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=150 FT   SLOPE=0.01   K=2.0
                                LENGTH=1018 FT   SLOPE=0.014   K=3.0
COMPUTE NM HYD              ID=1   HYD NO=SV219   DA=0.02000 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SV218SUMBRT + SV219)
ADD HYD             ID=1  HYD NO=SV219SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APSV4
```

```
*
*
****Route HYD SV219SUM to Sub-Basin SV221SUMC
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=106 FT
                                CH SLP=0.014  FP SLP=0.02 N=0.013
                                DIST=34 FT

                                DIST  ELEV
                    0       106
                                12          100
                                22          100
                                34          106
*
ROUTE MCUNGE                    ID=10  HYD NO=SV219SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=436 FT
                        NS=0  SLOPE=0.014
*
PRINT HYD               ID=10   CODE=1
*
*
************************************************************************
*
*

*** Sub-BASIN SV214 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=150 FT   SLOPE=0.01   K=2.0
                                LENGTH=1625 FT   SLOPE=0.023   K=3.0
COMPUTE NM HYD                  ID=1   HYD NO=SV214   DA=0.05386 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
****Route Hyd SV214SUM through PondSV4
ROUTE RESERVOIR                         ID=30  HYD NO=PondSV4  INFLOW ID=1  CODE=1
                                OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                                0                       0                       5254
                                3.9                             0.035           5255
                                13.3                    0.225                   5256
                                23.8                    0.558                   5257
                                31.2                            0.930           5258
                                101                             1.343           5259
```

```
                              223                   1.800                 5260
*
*
*s  ****DIVIDE 42.2 CFS TO 24" PIPE AND REMAINING TO 54" SURGE PIPE
DIVIDE HYD                    ID=30      Q=42.2     ID I=1   HYD NO=PONDSV4RT1
                                                    ID II=2  HYD NO=PONDSV4RT2

PRINT HYD                     ID=1       CODE=1
PRINT HYD                     ID=2       CODE=1
*
*
****Route HYD PONDSV4RT1 to Sub-Basin SV215SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.007
                              DIA=36 IN   N=0.013
*
ROUTE MCUNGE                  ID=5  HYD NO=PondSV4Rt1  INFLOW ID=1
                        DT=0 HR  LENGTH=1073 FT
                        NS=0  SLOPE=0.007
*
PRINT HYD               ID=5   CODE=1
*
*
****Route HYD PONDSV4RT2 to Sub-Basin SV213SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.007
                              DIA=54 IN   N=0.013
*
ROUTE MCUNGE                  ID=4  HYD NO=PondSV4Rt2  INFLOW ID=2
                        DT=0 HR  LENGTH=1073 FT
                        NS=0  SLOPE=0.007
*
PRINT HYD               ID=4   CODE=1
*
*
*** Sub-BASIN SV213 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                              LENGTH=150 FT   SLOPE=0.01   K=2.0
                              LENGTH=1072 FT   SLOPE=0.026   K=3.0
COMPUTE NM HYD                ID=2   HYD NO=SV213   DA=0.02147 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basin (PondSV4Rt2 + SV213)
```

```
ADD HYD             ID=1  HYD NO=SV213SUM ID I=2   ID II=4
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD SV213SUM to Sub-Basin SV215SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.013
                        DIA=72 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=SV213SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=777 FT
                    NS=0  SLOPE=0.013
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (PondSV4Rt1 + SV213SUMRT)
ADD HYD             ID=1  HYD NO=SV215SUMA ID I=5   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SV215 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                        LENGTH=150 FT   SLOPE=0.01   K=2.0
                        LENGTH=1396 FT   SLOPE=0.033   K=3.0
COMPUTE NM HYD          ID=2   HYD NO=SV215   DA=0.01573 SQ MI
                    PER A=0 PER B=25  PER C=26  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SV215SUMA+ SV215)
ADD HYD             ID=1  HYD NO=SV215SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*S APSV5
****Route HYD SV215SUMB to Sub-Basin SV218SUMC Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.027
                        DIA=72 IN   N=0.013
*
ROUTE MCUNGE            ID=20  HYD NO=SV115SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=2195 FT
                    NS=0  SLOPE=0.027
*
PRINT HYD           ID=20   CODE=1
```

```
*
*
**********************************************************************
*
*
*** Sub-BASIN SV216 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=3   ISLOPE=1
                              LENGTH=150 FT   SLOPE=0.01   K=2.0
                              LENGTH=736 FT   SLOPE=0.007   K=3.0
                              LENGTH=1042 FT   SLOPE=0.024   K=3.0
COMPUTE NM HYD             ID=1   HYD NO=SV216   DA=0.02254 SQ MI
                     PER A=0 PER B=25  PER C=26  PER D=49
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD SV216 to Sub-Basin SV220SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=100 FT MAX ELEV=103 FT
                              CH SLP=0.020  FP SLP=0.02 N=0.016
                              DIST=50 FT

                              DIST  ELEV
                0       101.0
                              10          100.7
                              10          100.0
                              25          100.3
                              40          100.0
                              40          100.7
                              50          101.0
*
ROUTE MCUNGE               ID=2  HYD NO=SV216RT  INFLOW ID=1
                     DT=0 HR  LENGTH=1496 FT
                     NS=0  SLOPE=0.020
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN SV220 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                              LENGTH=150 FT   SLOPE=0.01   K=2.0
                              LENGTH=1701 FT   SLOPE=0.022   K=3.0
```

```
COMPUTE NM HYD              ID=1   HYD NO=SV220   DA=0.02887 SQ MI
                      PER A=0 PER B=25  PER C=26  PER D=49
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SV216RT + SV220)
ADD HYD             ID=1  HYD NO=SV220SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD SV220 to Sub-Basin SV220SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.017
                              DIA=72 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=SV120RT  INFLOW ID=1
                      DT=0 HR  LENGTH=960 FT
                      NS=0  SLOPE=0.017
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SV215SUMBRT + SV220SUM)
ADD HYD             ID=1  HYD NO=SV221SUMA ID I=20   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SV221 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                      NK=2   ISLOPE=1
                              LENGTH=150 FT   SLOPE=0.01   K=2.0
                              LENGTH=1894 FT  SLOPE=0.024   K=3.0
COMPUTE NM HYD              ID=2   HYD NO=SV221   DA=0.04057 SQ MI
                      PER A=8.8 PER B=23.1  PER C=24  PER D=44.1
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SV221SUMA+ SV221)
ADD HYD             ID=1  HYD NO=SV221SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SV221SUMB+ SV219SUMRT)
```

```
ADD HYD             ID=1  HYD NO=SV221SUMC ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*S APSV6
*
*
****Route HYD SV221SUMC to SV222SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=106 FT
                                CH SLP=0.022  FP SLP=0.02 N=0.013
                                DIST=34 FT

                                DIST  ELEV
                0       106
                                12          100
                                22          100
                                34          106
*
ROUTE MCUNGE                    ID=2  HYD NO=SV221SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=720 FT
                        NS=0  SLOPE=0.022
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SV222 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=3   ISLOPE=1
                                LENGTH=150 FT   SLOPE=0.01    K=2.0
                                LENGTH=222 FT   SLOPE=0.027   K=3.0
                                LENGTH=1227 FT  SLOPE=0.007   K=3.0
COMPUTE NM HYD                  ID=1   HYD NO=SV222   DA=0.03288 SQ MI
                        PER A=0 PER B=18.7  PER C=19.6  PER D=61.6
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD SV222 to SV222SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.005
                                DIA=72 IN   N=0.013
*
ROUTE MCUNGE                    ID=3  HYD NO=SV222RT  INFLOW ID=1
                        DT=0 HR  LENGTH=1065 FT
                        NS=0  SLOPE=0.005
*
PRINT HYD           ID=3   CODE=1
```

```
*
*
* Total Flow from Basin (SV221SUMCRT + SV222RT)
ADD HYD             ID=10  HYD NO=SV222SUM ID I=2   ID II=3
PRINT HYD           ID=10   CODE=1
*
*
*S APSV7
**************************************************************************
*
*
*** Sub-BASIN SV223 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                            LENGTH=971 FT   SLOPE=0.045   K=0.7
COMPUTE NM HYD              ID=1   HYD NO=SV223   DA=0.01602 SQ MI
                    PER A=0 PER B=25  PER C=26  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd SV223 through PondSV5
ROUTE RESERVOIR                     ID=30  HYD NO=PondSV5  INFLOW ID=1  CODE=1
                            OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                            0                       0                   5317
                            8                       0.184               5318
                            12                      0.389               5319
                            15                      0.615               5320
                            17                      0.864               5321
                            19                      1.135               5322
*
*

****Route HYD PondSV5 to HYD PONDSV6 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                            DIA=30 IN   N=0.013
*
ROUTE MCUNGE                ID=1  HYD NO=PondSV5RT  INFLOW ID=30
                    DT=0 HR  LENGTH=250 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=1   CODE=1
*
*
*
```

```
*** Sub-BASIN SV224 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                  NK=1   ISLOPE=1
                           LENGTH=1100 FT   SLOPE=0.047    K=0.7
COMPUTE NM HYD             ID=2   HYD NO=SV224   DA=0.05671 SQ MI
                  PER A=0 PER B=25  PER C=26  PER D=49
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=2   CODE=1
*
*
* Total Flow from Basin (Hyd PONDSV5RT + SV224)
ADD HYD           ID=1  HYD NO=SV224SUM ID I=1   ID II=2
PRINT HYD         ID=1   CODE=1
*
*
****Route Hyd SV223SUM through PondSV6
ROUTE RESERVOIR                    ID=30  HYD NO=PondSV6  INFLOW ID=1  CODE=1
                           OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                           0                        0                  5316
                           15                       0.334              5317
                           21                       0.730              5318
                           26                       1.189              5319
                           30                       1.712              5320
                           34                       2.299              5321
                           37                       2.952              5322
                           40                       3.671              5323
*
*
****Route HYD PondSV6 to HYD SV225 Through a Pipe
COMPUTE RATING CURVE   CID=1   VS NO=1 CODE=-1   SLP=0.043
                           DIA=72 IN   N=0.013
*
ROUTE MCUNGE               ID=1  HYD NO=PondSV6RT  INFLOW ID=30
                  DT=0 HR  LENGTH=670 FT
                  NS=0  SLOPE=0.043
*
PRINT HYD         ID=1   CODE=1
*
*
*** Sub-BASIN SV225 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                  NK=3   ISLOPE=1
                           LENGTH=150 FT   SLOPE=0.015    K=2.0
                           LENGTH=824 FT   SLOPE=0.017    K=3.0
```

```
                    LENGTH=342 FT   SLOPE=0.02     K=3.0
COMPUTE NM HYD      ID=2   HYD NO=SV225   DA=0.02569 SQ MI
                PER A=0 PER B=23.7  PER C=24.7  PER D=51.7
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
*
* Total Flow from Basin (PondSV6RT + SV225)
ADD HYD         ID=1  HYD NO=SV225SUM ID I=1   ID II=2
PRINT HYD       ID=1   CODE=1
*
*
****Route Hyd SV225SUM through PondSV7
ROUTE RESERVOIR                 ID=30  HYD NO=PondSV7  INFLOW ID=1  CODE=1
                    OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                    0                  0                        5288
                    15                 0.5                      5289
                    21                 1.164                    5290
                    26                 1.994                    5291
                    30                 3.00                     5292

*
*
****Route HYD PondSV7 to SV226 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.045
                    DIA=72 IN   N=0.013
*
ROUTE MCUNGE            ID=1  HYD NO=PondSV7RT  INFLOW ID=30
                DT=0 HR  LENGTH=1415 FT
                NS=0  SLOPE=0.045
*
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN SV226 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                    LENGTH=150 FT   SLOPE=0.015    K=2.0
                    LENGTH=1283 FT   SLOPE=0.017    K=3.0
COMPUTE NM HYD      ID=2   HYD NO=SV226   DA=0.03966 SQ MI
                PER A=0 PER B=25  PER C=26  PER D=49
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
```

```
*
*** Sub-BASIN SV227 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=150 FT   SLOPE=0.015    K=2.0
                               LENGTH=1295 FT   SLOPE=0.042    K=3.0
COMPUTE NM HYD              ID=3   HYD NO=SV227   DA=0.01936 SQ MI
                    PER A=0 PER B=29  PER C=29  PER D=42
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (SV226 + SV227)
ADD HYD             ID=2  HYD NO=SV227SUMA ID I=2   ID II=3
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (PondSV7RT + SV227SUMA)
ADD HYD             ID=1  HYD NO=SV227SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*S APSV8
****Route HYD SV227SUMB to SV228 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.028
                               DIA=72 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=SV227SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1664 FT
                    NS=0  SLOPE=0.028
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SV228 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=150 FT   SLOPE=0.015    K=2.0
                               LENGTH=1603 FT   SLOPE=0.033    K=3.0
COMPUTE NM HYD              ID=1   HYD NO=SV228   DA=0.03522 SQ MI
                    PER A=0 PER B=5.4  PER C=5.4  PER D=89.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
```

```
*
*
* Total Flow from Basin (SV226SUMRT + SV228)
ADD HYD             ID=1  HYD NO=SV228SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd SV228SUM through PondSV8
ROUTE RESERVOIR                     ID=30  HYD NO=PondSV8  INFLOW ID=1  CODE=1
                              OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                              0                        0                    5170
                              15                       0.259                5171
                              21                       0.546                5172
                              26                       0.860                5173
                              30                       1.204                5174
                              34                       1.578                5175
                              37                       1.983                5176
                              40                       2.420                5177
                              43                       2.889                5178
                              46                       3.329                5179
                              500                      3.928                5180
*
*
* Total Flow from Basin (SV222SUM + PondSV8)
ADD HYD             ID=1  HYD NO=PondSV8SUM ID I=10   ID II=30
PRINT HYD           ID=1   CODE=1
*
*
*S APSV9
****Route HYD PondSV8SUM to SV238SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.022  FP SLP=0.005 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                    0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=2  HYD NO=PondSV8SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=538 FT
                        NS=0  SLOPE=0.022
*
PRINT HYD           ID=2   CODE=1
*
```

```
*
*** Sub-BASIN SV238 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                           LENGTH=150 FT   SLOPE=0.015    K=2.0
                           LENGTH=2373 FT   SLOPE=0.027    K=3.0
COMPUTE NM HYD             ID=1   HYD NO=SV238   DA=0.04738 SQ MI
                    PER A=0 PER B=29  PER C=29  PER D=42
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD SV238 to SV239SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=103 FT
                           CH SLP=0.023  FP SLP=0.02 N=0.016
                           DIST=20 FT

                           DIST  ELEV
                0      101.0
                           10          100.7
                           10          100.0
                           25          100.3
                           40          100.0
                           40          100.7
                           50          101.0
*
ROUTE MCUNGE               ID=3  HYD NO=SV238RT  INFLOW ID=1
                    DT=0 HR  LENGTH=527 FT
                    NS=0  SLOPE=0.023
*
PRINT HYD          ID=3   CODE=1
*
*
* Total Flow from Basin (PondSV8SUMRT + SV238RT)
ADD HYD            ID=1  HYD NO=SV239SUMA ID I=2   ID II=3
PRINT HYD          ID=1   CODE=1
*
*
*** Sub-BASIN SV239 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                           LENGTH=150 FT   SLOPE=0.015    K=2.0
                           LENGTH=1158 FT   SLOPE=0.021    K=3.0
```

```
COMPUTE NM HYD              ID=2   HYD NO=SV239   DA=0.03445 SQ MI
                       PER A=0 PER B=27.0  PER C=27.0  PER D=45.9
                       TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SV239SUMA + SV239)
ADD HYD             ID=10  HYD NO=SV239SUMB ID I=1   ID II=2
PRINT HYD           ID=10   CODE=1
*
*
*S APSV10
**************************************************************************
*
*
*** Sub-BASIN SV232 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                       NK=2   ISLOPE=1
                            LENGTH=150 FT   SLOPE=0.015    K=2.0
                            LENGTH=1547 FT   SLOPE=0.019    K=3.0
COMPUTE NM HYD              ID=1   HYD NO=SV232   DA=0.01563 SQ MI
                       PER A=0 PER B=21  PER C=22  PER D=57
                       TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD SV232SUM to SV234SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                       MIN ELEV=100 FT MAX ELEV=103 FT
                            CH SLP=0.025  FP SLP=0.005 N=0.016
                            DIST=20 FT

                            DIST  ELEV
                  0      101.0
                            10          100.7
                            10          100.0
                            25          100.3
                            40          100.0
                            40          100.7
                            50          101.0
*
ROUTE MCUNGE                ID=2  HYD NO=SV232SUMRT  INFLOW ID=1
                       DT=0 HR  LENGTH=1577 FT
                       NS=0  SLOPE=0.025
```

```
*
PRINT HYD           ID=2   CODE=1
*
*S
*S  From Drainage Study for the Timarron W. Subdivision
*S  Unit 5 only 26.6 cfs was supposed to be released to El Moro.
*S  Analysis diverts Sub-basin SV129, SV130, and SV131 S. to Amole.
*S  These sub-basins suppose to discharge to El Moro via pipe.
*S
*
*** Sub-BASIN SV233 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=150 FT   SLOPE=0.015    K=2.0
                               LENGTH=2022 FT   SLOPE=0.027    K=3.0
COMPUTE NM HYD              ID=1   HYD NO=SV233   DA=0.03867 SQ MI
                    PER A=0 PER B=29  PER C=29  PER D=42
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SV234 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=150 FT   SLOPE=0.015    K=2.0
                               LENGTH=1234 FT   SLOPE=0.019    K=3.0
COMPUTE NM HYD              ID=3   HYD NO=SV234   DA=0.01925 SQ MI
                    PER A=0 PER B=29  PER C=29  PER D=42
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (SV233 + SV234)
ADD HYD             ID=1  HYD NO=SV234SUMA ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SV232SUMRT + SV234SUMA)
ADD HYD             ID=1  HYD NO=SV234SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*S APSV11
```

```
****Route HYD SV234SUMB to SV237SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.029
                        DIA=72 IN   N=0.013
*
ROUTE MCUNGE            ID=20  HYD NO=SV234SUMBRT  INFLOW ID=1
                DT=0 HR  LENGTH=1042 FT
                NS=0  SLOPE=0.029
*
PRINT HYD       ID=20   CODE=1
*
*
**************************************************************************
*
*
*** Sub-BASIN SV235 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                        LENGTH=150 FT   SLOPE=0.015    K=2.0
                        LENGTH=1015 FT   SLOPE=0.034    K=3.0
COMPUTE NM HYD          ID=1   HYD NO=SV235   DA=0.01963 SQ MI
                PER A=0 PER B=29  PER C=29  PER D=42
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD SV235 to SV236SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=103 FT
                        CH SLP=0.035  FP SLP=0.02 N=0.016
                        DIST=20 FT

                        DIST  ELEV
            0       101.0
                        10          100.7
                        10          100.0
                        25          100.3
                        40          100.0
                        40          100.7
                        50          101.0
*
ROUTE MCUNGE            ID=2  HYD NO=SV235RT  INFLOW ID=1
                DT=0 HR  LENGTH=1017 FT
                NS=0  SLOPE=0.035
*
PRINT HYD       ID=2   CODE=1
```

```
*
*
*** Sub-BASIN SV236 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                           LENGTH=150 FT   SLOPE=0.015    K=2.0
                           LENGTH=1502 FT   SLOPE=0.025    K=3.0
COMPUTE NM HYD             ID=1   HYD NO=SV236   DA=0.03000 SQ MI
                     PER A=28.4 PER B=21.3  PER C=21.3  PER D=29.1
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (SV235RT + SV236)
ADD HYD            ID=1  HYD NO=SV236SUM ID I=2   ID II=1
PRINT HYD          ID=1   CODE=1
*
*
*S
*S  ****DIVIDE Hyd SV136SUM by Half.  Half of flow turns SW down Del Rey Road
*S  ****Flow diverted to Del Rey Road (SV136SUM2) is added in Amole Basin
*S
DIVIDE HYD                 ID=1       PER=-50  ID I=3   HYD NO=SV136DIV1
                                                ID II=48  HYD NO=SV136DIV2

PRINT HYD                  ID=3       CODE=1
PRINT HYD                  ID=48      CODE=1
*
*
****Route HYD SV236SUM1 to SV237SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=100 FT MAX ELEV=103 FT
                           CH SLP=0.023  FP SLP=0.02 N=0.016
                           DIST=20 FT

                           DIST  ELEV
                0      101.0
                           10          100.7
                           10          100.0
                           25          100.3
                           40          100.0
                           40          100.7
                           50          101.0
*
ROUTE MCUNGE               ID=1  HYD NO=SV236SUM1RT  INFLOW ID=3
```

```
                    DT=0 HR  LENGTH=556 FT
                    NS=0  SLOPE=0.023
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SV234SUMBRT + SV236SUM1RT)
ADD HYD             ID=1  HYD NO=SV237SUMA ID I=20   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SV237 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=150 FT   SLOPE=0.015    K=2.0
                               LENGTH=1869 FT   SLOPE=0.030    K=3.0
COMPUTE NM HYD              ID=2   HYD NO=SV237   DA=0.03272 SQ MI
                    PER A=0 PER B=27.1  PER C=27.1  PER D=45.9
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SV237SUMA + SV237)
ADD HYD             ID=1  HYD NO=SV237SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*S APSV12
****Route HYD SV237SUMB to SV240
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=103 FT
                               CH SLP=0.019  FP SLP=0.02 N=0.016
                               DIST=20 FT

                               DIST  ELEV
                0       101.0
                               10          100.7
                               10          100.0
                               25          100.3
                               40          100.0
                               40          100.7
                               50          101.0
*
ROUTE MCUNGE                ID=2  HYD NO=SV237SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=786 FT
```

```
                    NS=0  SLOPE=0.019
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SV240 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                            LENGTH=150 FT   SLOPE=0.015    K=2.0
                            LENGTH=1568 FT   SLOPE=0.024    K=3.0
COMPUTE NM HYD              ID=1   HYD NO=SV240   DA=0.04727 SQ MI
                    PER A=0 PER B=29  PER C=29  PER D=42
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SV237SUMBRT + SV240)
ADD HYD             ID=1  HYD NO=SV240SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
*S APSV13
****Route HYD SV240SUM to SV241
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=103 FT
                            CH SLP=0.024  FP SLP=0.02 N=0.016
                            DIST=20 FT

                            DIST  ELEV
                0       101.0
                            10          100.7
                            10          100.0
                            25          100.3
                            40          100.0
                            40          100.7
                            50          101.0
*
ROUTE MCUNGE                ID=2  HYD NO=SV240sumRT  INFLOW ID=1
                    DT=0 HR  LENGTH=958 FT
                    NS=0  SLOPE=0.024
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SV241 ****
```

```
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                             LENGTH=150 FT   SLOPE=0.015    K=2.0
                             LENGTH=1888 FT   SLOPE=0.016    K=3.0
COMPUTE NM HYD               ID=1   HYD NO=SV241   DA=0.04160 SQ MI
                     PER A=0 PER B=29  PER C=29  PER D=42
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SV240sumRT + SV241)
ADD HYD              ID=1  HYD NO=SV241SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
*S APSV14
****Route HYD SV241SUM to SV243SUMA
COMPUTE RATING CURVE     CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=100 FT MAX ELEV=105 FT
                             CH SLP=0.017  FP SLP=0.005 N=0.013
                             DIST=20 FT

                             DIST  ELEV
                 0       105
                             10          100
                             15          100
                             20          105
*
ROUTE MCUNGE                 ID=2  HYD NO=SV241SUMRT  INFLOW ID=1
                     DT=0 HR  LENGTH=468 FT
                     NS=0  SLOPE=0.017
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (SV239SUMB + SV241SUMRT)
ADD HYD              ID=10  HYD NO=SV243SUMA ID I=10   ID II=2
PRINT HYD            ID=10   CODE=1
*
*
*S APSV15
**************************************************************************
*
*
*** Sub-BASIN SV242 ****
```

```
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                            LENGTH=2767 FT   SLOPE=0.015    K=2.0
COMPUTE NM HYD              ID=1   HYD NO=SV242   DA=0.08119 SQ MI
                    PER A=3.5 PER B=13.2  PER C=13.2  PER D=70.2
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
*S APSV16
****Route HYD SV242 to SV243SUMB Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.005
                            DIA=72 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=SV242RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1337 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SV243 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                            LENGTH=1011 FT   SLOPE=0.018    K=2.0
COMPUTE NM HYD              ID=1   HYD NO=SV243   DA=0.02884 SQ MI
                    PER A=0 PER B=7.7  PER C=7.7  PER D=84.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SV242RT + SV243)
ADD HYD             ID=1  HYD NO=SV243SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*S APSV17
****Route HYD SV243SUMB to SV243SUMC Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.005
                            DIA=72 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=SV243SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=655 FT
```

```
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SV243SUMA + SV243SUMBRT)
ADD HYD             ID=1  HYD NO=SV243SUMC ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SV244 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                            LENGTH=943 FT   SLOPE=0.015    K=3.0
                            LENGTH=1450 FT   SLOPE=0.007   K=3.0
COMPUTE NM HYD              ID=2   HYD NO=SV244   DA=0.02736 SQ MI
                    PER A=0  PER B=22.6  PER C=23.1  PER D=54.4
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SV243SUMC + SV244)
ADD HYD             ID=1  HYD NO=SV244SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APSV18
*
*
****Route HYD SV208SUMB to Sub-Basin A210
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                            CH SLP=0.015  FP SLP=0.01 N=0.035
                            DIST=50 FT

                            DIST  ELEV
                0       105
                            15          100
                            35          100
                            50          105
*
ROUTE MCUNGE                ID=47  HYD NO=SVBASIN  INFLOW ID=1
                    DT=0 HR  LENGTH=200 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=47   CODE=1
*
```

```
*
*S*****************************************************************************
*S*******   END OF SNOW VISTA BASIN
*S*****************************************************************************
*
*
*S*****************************************************************************
*S*******   AMOLE BASIN
*S*****************************************************************************
*
*
*
*
*S
*S RECALL HYD Below From ORIGINAL DMP AHYMO Files under
*S Folder EX Amole Hubbell Basins File WGEXIST.PUN
*S Offsite flows from Westgate Dam flow into the Amole Basin
*S
*
RECALL HYD         ID= 70 HYD=     WGDAM DT=  .050000 HRS DA=  18.6836 SQ MI
               PEAK=    73.148CFS  RO=  .1679 INCHES  NO PTS=600
               FLOW RATES
                    .000      .000      .000      .000      .000
                    .000      .000      .000      .000      .000
                    .000      .000      .000      .000      .000
                    .000      .000      .000      .000      .000
                    .000      .000      .000      .011      .111
                    .416      .925    22.054    25.867    30.408
                  34.973    38.658    41.456    44.088    45.721
                  47.884    49.489    51.253    52.410    53.506
                  54.531    55.335    56.087    56.812    57.519
                  58.133    58.642    59.147    59.646    60.137
                  60.615    61.080    61.470    61.848    62.217
                  62.577    62.931    63.279    63.620    63.957
                  64.288    64.540    64.751    64.959    65.164
                  65.367    65.568    65.767    65.963    66.158
                  66.350    66.541    66.730    66.917    67.103
                  67.243    67.382    67.520    67.657    67.792
                  67.927    68.060    68.193    68.324    68.454
                  68.584    68.712    68.839    68.964    69.089
                  69.212    69.334    69.455    69.574    69.677
                  69.775    69.872    69.968    70.063    70.157
                  70.250    70.341    70.431    70.519    70.606
                  70.691    70.774    70.856    70.936    71.014
                  71.091    71.166    71.240    71.311    71.382
                  71.450    71.516    71.581    71.643    71.703
                  71.751    71.798    71.844    71.887    71.929
```

71.969	72.007	72.043	72.078	72.111
72.143	72.173	72.202	72.229	72.257
72.283	72.309	72.334	72.359	72.382
72.406	72.429	72.451	72.473	72.494
72.515	72.535	72.555	72.574	72.593
72.611	72.629	72.646	72.663	72.680
72.696	72.711	72.726	72.741	72.755
72.769	72.782	72.795	72.808	72.820
72.833	72.844	72.856	72.867	72.878
72.888	72.899	72.909	72.919	72.928
72.937	72.946	72.955	72.963	72.972
72.980	72.987	72.995	73.002	73.009
73.016	73.023	73.029	73.036	73.042
73.048	73.053	73.059	73.064	73.069
73.074	73.079	73.083	73.088	73.092
73.096	73.100	73.103	73.107	73.110
73.114	73.117	73.120	73.122	73.125
73.128	73.130	73.132	73.134	73.136
73.138	73.139	73.141	73.142	73.143
73.145	73.145	73.146	73.147	73.147
73.148	73.148	73.148	73.148	73.148
73.148	73.148	73.147	73.146	73.146
73.145	73.144	73.143	73.142	73.140
73.139	73.138	73.136	73.134	73.132
73.130	73.129	73.126	73.124	73.122
73.120	73.117	73.115	73.112	73.109
73.107	73.104	73.101	73.098	73.095
73.092	73.089	73.085	73.082	73.079
73.075	73.072	73.068	73.064	73.060
73.057	73.053	73.049	73.044	73.040
73.036	73.032	73.027	73.023	73.018
73.014	73.009	73.004	72.999	72.994
72.990	72.985	72.980	72.974	72.969
72.964	72.959	72.953	72.948	72.943
72.937	72.932	72.926	72.920	72.915
72.909	72.903	72.897	72.891	72.886
72.880	72.874	72.868	72.861	72.855
72.849	72.843	72.837	72.830	72.824
72.818	72.811	72.805	72.798	72.792
72.785	72.779	72.772	72.765	72.759
72.752	72.745	72.738	72.731	72.724
72.718	72.711	72.704	72.697	72.690
72.683	72.675	72.668	72.661	72.654
72.647	72.640	72.632	72.625	72.618
72.610	72.603	72.596	72.588	72.581
72.573	72.566	72.559	72.551	72.543
72.536	72.528	72.521	72.513	72.506

72.498	72.490	72.483	72.475	72.467
72.459	72.452	72.444	72.436	72.428
72.420	72.413	72.405	72.397	72.389
72.381	72.373	72.365	72.357	72.350
72.342	72.334	72.326	72.318	72.310
72.302	72.294	72.286	72.278	72.270
72.261	72.253	72.245	72.237	72.229
72.221	72.213	72.205	72.196	72.188
72.180	72.172	72.164	72.156	72.147
72.139	72.131	72.123	72.114	72.106
72.098	72.090	72.081	72.073	72.065
72.056	72.048	72.040	72.031	72.023
72.015	72.006	71.998	71.989	71.981
71.973	71.964	71.956	71.947	71.939
71.931	71.922	71.914	71.905	71.897
71.888	71.880	71.871	71.863	71.854
71.846	71.837	71.829	71.820	71.812
71.803	71.795	71.786	71.778	71.769
71.761	71.752	71.743	71.735	71.726
71.718	71.709	71.700	71.690	71.680
71.670	71.659	71.649	71.638	71.628
71.618	71.607	71.597	71.587	71.576
71.566	71.555	71.545	71.535	71.524
71.514	71.503	71.493	71.482	71.472
71.462	71.451	71.441	71.430	71.420
71.409	71.399	71.388	71.378	71.367
71.357	71.346	71.336	71.325	71.315
71.304	71.294	71.283	71.273	71.262
71.252	71.241	71.231	71.220	71.210
71.199	71.188	71.178	71.167	71.157
71.146	71.135	71.125	71.114	71.103
71.093	71.082	71.071	71.060	71.050
71.039	71.028	71.018	71.007	70.996
70.985	70.974	70.964	70.953	70.942
70.931	70.920	70.910	70.899	70.888
70.877	70.866	70.856	70.845	70.834
70.823	70.812	70.801	70.790	70.780
70.769	70.758	70.747	70.736	70.725
70.715	70.704	70.693	70.682	70.671
70.660	70.649	70.639	70.628	70.617
70.606	70.595	70.584	70.573	70.562
70.552	70.541	70.530	70.519	70.508
70.497	70.486	70.476	70.465	70.454
70.443	70.432	70.421	70.410	70.399
70.389	70.378	70.367	70.356	70.345
70.334	70.323	70.312	70.301	70.291
70.280	70.269	70.258	70.247	70.236

```
                70.225    70.214    70.204    70.193    70.182
*S
*S END of RECALL HYD
*S
*
*
*
****Route HYD PLBASIN to Sub-Basin A201
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.029  FP SLP=0.02 N=0.0
                                DIST=50 FT

                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE            ID=2  HYD NO=PLBASINRT  INFLOW ID=46
                        DT=0 HR  LENGTH=360 FT
                        NS=0  SLOPE=0.029
*
PRINT HYD               ID=2   CODE=1
*
*
****DIVIDE 73 CFS Which is Max Outflow INTO WATERSHED
DIVIDE HYD              ID=70       Q=73        ID I=1   HYD NO=ADIVSUMA
                                                ID II=91  HYD NO=ADIVSUMB

PRINT HYD               ID=1        CODE=1
PRINT HYD               ID=66       CODE=1
*
*
****Route HYD ADIVSUMA to Sub-Basin A201
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.029  FP SLP=0.02 N=0.0
                                DIST=50 FT

                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE            ID=3  HYD NO=ADIVSUMART  INFLOW ID=1
```

```
                    DT=0 HR  LENGTH=2560 FT
                    NS=0  SLOPE=0.029
*
PRINT HYD           ID=3   CODE=1
*S APA1
*
*
* Total Flow from Basin (ADIVSUMART + PLBASINRT)
ADD HYD             ID=1  HYD NO=A201SUMA ID I=3   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN A201 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                            LENGTH=240 FT  SLOPE=0.0625    K=0.7
                            LENGTH=1265 FT   SLOPE=0.0395    K=2.0
                            LENGTH=2060 FT   SLOPE=0.0291    K=4.0
COMPUTE NM HYD              ID=2   HYD NO=A201   DA=0.07236 SQ MI
                    PER A=49 PER B=14.4  PER C=14.8  PER D=21.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (A201SUMA + A201)
ADD HYD             ID=1  HYD NO=A201SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APA2
*
*
****Route HYD A201SUMB to Sub-Basin A202.1
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                            CH SLP=0.029  FP SLP=0.02 N=0.0
                            DIST=50 FT

                            DIST  ELEV
                0       105
                            15          100
                            35          100
                            50          105
*
ROUTE MCUNGE                ID=10  HYD NO=A201SUMBRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1660 FT
                    NS=0  SLOPE=0.029
```

```
*
PRINT HYD            ID=10   CODE=1
*
*
**********************************************************************************************************
*
*
*** Sub-BASIN SV229 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                             LENGTH=900 FT   SLOPE=0.045    K=0.7
COMPUTE NM HYD               ID=1   HYD NO=SV229   DA=0.02916 SQ MI
                     PER A=0 PER B=25  PER C=26  PER D=49
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN SV230 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=3   ISLOPE=1
                             LENGTH=150 FT   SLOPE=0.015    K=2.0
                             LENGTH=313 FT   SLOPE=0.029    K=3.0
                             LENGTH=1202 FT   SLOPE=0.01    K=3.0
COMPUTE NM HYD               ID=2   HYD NO=SV230   DA=0.01824 SQ MI
                     PER A=0 PER B=21  PER C=22  PER D=57
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (SV229 + SV230)
ADD HYD              ID=1  HYD NO=SV230SUM ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
****Route Hyd SV230SUM through PondSV10
ROUTE RESERVOIR                      ID=30  HYD NO=PondSV10  INFLOW ID=1  CODE=1
                             OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                             0                  0                    5282
                             4.39               0.303                5283
                             15.96              0.654                5284
                             32.04              1.053                5285
                             49.61              1.503                5286
                             61.42              2.005                5287
```

```
*
*
****Route HYD SV230SUM to A202.1 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.028
                        DIA=24 IN   N=0.013
*
ROUTE MCUNGE            ID=1  HYD NO=SV230SUMRT  INFLOW ID=30
                DT=0 HR  LENGTH=1664 FT
                NS=0  SLOPE=0.028
*
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN A202.1 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=3   ISLOPE=1
                        LENGTH=800 FT  SLOPE=0.0500    K=0.7
                        LENGTH=1400 FT   SLOPE=0.0107    K=2.0
                        LENGTH=2304 FT   SLOPE=0.0050    K=3.0
COMPUTE NM HYD          ID=2   HYD NO=A202.1   DA=0.05920 SQ MI
                PER A=72 PER B=25  PER C=26  PER D=49
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
*
* Total Flow from Basin (SV230SUMRt + A202.1)
ADD HYD         ID=1  HYD NO=SV202.1SUMA ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD A202.1SUMA to Sub-Basin A202.2
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
                        CH SLP=0.029  FP SLP=0.02 N=0.0
                        DIST=50 FT

                        DIST  ELEV
            0       105
                        15          100
                        35          100
                        50          105
*
ROUTE MCUNGE            ID=2  HYD NO=A202.1SUMARt  INFLOW ID=1
                DT=0 HR  LENGTH=1240 FT
```

```
                    NS=0  SLOPE=0.029
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (A201SUMBRt + A202.1SUMARt)
ADD HYD             ID=1  HYD NO=A202.1SUMB ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN A202.2 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                            LENGTH=350 FT   SLOPE=0.0200    K=0.7
                            LENGTH=900 FT   SLOPE=0.0333    K=4.0
COMPUTE NM HYD              ID=2   HYD NO=A202.2   DA=0.02663 SQ MI
                    PER A=28.1 PER B=19.3  PER C=19.9  PER D=32.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (A202.1SUMB + A202.2)
ADD HYD             ID=1  HYD NO=A202.2SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APA3
*
*
****Route HYD A202.2SUM to Sub-Basin A206SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                            CH SLP=0.029  FP SLP=0.01 N=0.035
                            DIST=50 FT

                            DIST  ELEV
                0       105
                            15          100
                            35          100
                            50          105
*
ROUTE MCUNGE                ID=2  HYD NO=A202.2SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=2760 FT
                    NS=0  SLOPE=0.029
*
PRINT HYD           ID=2   CODE=1
*
```

```
*
*** Sub-BASIN A206 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                             LENGTH=1949 FT   SLOPE=0.027    K=3.0
COMPUTE NM HYD               ID=1   HYD NO=A206   DA=0.03109 SQ MI
                     PER A=0 PER B=25  PER C=26  PER D=49
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
****Route HYD A206 to A206SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                             DIA=48 IN   N=0.013
*
ROUTE MCUNGE                 ID=3  HYD NO=A206Rt  INFLOW ID=1
                     DT=0 HR  LENGTH=685 FT
                     NS=0  SLOPE=0.01
*
PRINT HYD            ID=3   CODE=1
*
*
* Total Flow from Basin (A202.2SUMRT + A206RT)
ADD HYD              ID=10  HYD NO=A206SUM ID I=2   ID II=3
PRINT HYD            ID=10   CODE=1
*
*
**********************************************************************
*
*
****Route HYD SV236DIV2 (DEL REY) to Sub-Basin A207
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=100 FT MAX ELEV=103 FT
                             CH SLP=0.015  FP SLP=0.02 N=0.016
                             DIST=50 FT

                             DIST  ELEV
                 0       101.0
                             10          100.7
                             10          100.0
                             25          100.3
                             40          100.0
                             40          100.7
                             50          101.0
*
```

```
ROUTE MCUNGE              ID=1  HYD NO=SV236SUM2Rt  INFLOW ID=48
                     DT=0 HR  LENGTH=910 FT
                     NS=0  SLOPE=0.015
*
PRINT HYD            ID=1   CODE=1
*S APA4
*
*
*** Sub-BASIN A203 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                               LENGTH=2704 FT   SLOPE=0.019    K=3.0
COMPUTE NM HYD            ID=2   HYD NO=A203   DA=0.06206 SQ MI
                     PER A=0  PER B=29  PER C=29  PER D=42
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
****Route HYD A203 to Sub-Basin A204
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=100 FT MAX ELEV=103 FT
                               CH SLP=0.015  FP SLP=0.02 N=0.016
                               DIST=50 FT

                               DIST  ELEV
                0      101.0
                               10          100.7
                               10          100.0
                               25          100.3
                               40          100.0
                               40          100.7
                               50          101.0
*
ROUTE MCUNGE              ID=3  HYD NO=A203Rt  INFLOW ID=2
                     DT=0 HR  LENGTH=1830 FT
                     NS=0  SLOPE=0.015
*
PRINT HYD            ID=3   CODE=1
*
*
* Total Flow from Basin (A236SUM2Rt + A203Rt)
ADD HYD              ID=2  HYD NO=A204SUMA ID I=3   ID II=1
PRINT HYD            ID=2   CODE=1
*
*
```

```
*** Sub-BASIN A204 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                              LENGTH=1810 FT   SLOPE=0.015    K=3.0
COMPUTE NM HYD             ID=1   HYD NO=A204   DA=0.03430 SQ MI
                    PER A=1.1 PER B=28.7  PER C=28.7  PER D=41.5
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (A204SUMA + A204)
ADD HYD            ID=1  HYD NO=A204SUMB ID I=2   ID II=1
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD A204SumB to Sub-Basin A205
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=103 FT
                              CH SLP=0.018  FP SLP=0.02 N=0.016
                              DIST=50 FT

                              DIST  ELEV
                0       101.0
                              10          100.7
                              10          100.0
                              25          100.3
                              40          100.0
                              40          100.7
                              50          101.0
*
ROUTE MCUNGE               ID=2  HYD NO=A204SumBRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1110 FT
                    NS=0  SLOPE=0.018
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN A205 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                              LENGTH=2544 FT   SLOPE=0.019    K=3.0
                              LENGTH=1390 FT   SLOPE=0.025    K=4.0
COMPUTE NM HYD             ID=1   HYD NO=A205   DA=0.02852 SQ MI
                    PER A=0  PER B=29  PER C=29  PER D=42
```

```
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (A204SumBRt + A205)
ADD HYD             ID=1  HYD NO=A205Sum ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APA5
*
*
****Route HYD A205Sum to Sub-Basin A207
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=103 FT
                              CH SLP=0.018  FP SLP=0.02 N=0.016
                              DIST=50 FT

                              DIST  ELEV
                0       101.0
                              10          100.7
                              10          100.0
                              25          100.3
                              40          100.0
                              40          100.7
                              50          101.0
*
ROUTE MCUNGE                  ID=2  HYD NO=A205SumRt  INFLOW ID=1
                    DT=0 HR  LENGTH=300 FT
                    NS=0  SLOPE=0.018
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (A206SUM + A205Sum)
ADD HYD             ID=1  HYD NO=A207SUMA ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN A207 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                              LENGTH=941 FT   SLOPE=0.030    K=0.7
                              LENGTH=1771 FT   SLOPE=0.029   K=4.0
COMPUTE NM HYD              ID=2   HYD NO=A207   DA=0.04014 SQ MI
                    PER A=68.4 PER B=10.4  PER C=10.4  PER D=10.7
                    TP=0.0   MASSRAIN=-1
```

```
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (A207SumA + A207)
ADD HYD              ID=1  HYD NO=A207SUMB ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*S APA6
*
*
****Route HYD A207SUMB to Sub-Basin A208
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.020  FP SLP=0.01 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                    0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=2  HYD NO=A207SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1305 FT
                        NS=0  SLOPE=0.020
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN A208 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=1673 FT  SLOPE=0.027    K=3.0
                                LENGTH=606 FT   SLOPE=0.017    K=4.0
COMPUTE NM HYD                  ID=1   HYD NO=A208   DA=0.06723 SQ MI
                        PER A=0 PER B=23  PER C=23  PER D=54
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SVBASIN + A208)
ADD HYD              ID=1  HYD NO=A208SUMA ID I=47   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
```

```
* Total Flow from Basin (A207SUMBRT + A208SUMA)
ADD HYD             ID=1  HYD NO=A208SUMB ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD A208SUMB to Sub-Basin A210
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.015  FP SLP=0.01 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=2  HYD NO=A208SUMBRt  INFLOW ID=1
                        DT=0 HR  LENGTH=530 FT
                        NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A209 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=610 FT   SLOPE=0.029    K=1.0
COMPUTE NM HYD                  ID=1   HYD NO=A209   DA=0.01282 SQ MI
                        PER A=75.9 PER B=8.4  PER C=8.4  PER D=7.3
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD A209 to Sub-Basin A210
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=103 FT
                                CH SLP=0.018  FP SLP=0.01 N=0.016
                                DIST=50 FT

                                DIST  ELEV
                0       101.0
                                10          100.7
                                10          100.0
                                25          100.3
```

```
                    40          100.0
                    40          100.7
                    50          101.0
*
ROUTE MCUNGE        ID=3  HYD NO=A209Rt  INFLOW ID=1
                DT=0 HR  LENGTH=2180 FT
                NS=0  SLOPE=0.018
*
PRINT HYD       ID=3   CODE=1
*
*
*** Sub-BASIN A210 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                    LENGTH=2183 FT   SLOPE=0.018    K=3.0
COMPUTE NM HYD      ID=1   HYD NO=A210   DA=0.04365 SQ MI
                PER A=0 PER B=17.9  PER C=17.9  PER D=64.3
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (A209Rt + A210)
ADD HYD         ID=1  HYD NO=A210SUMA ID I=3   ID II=1
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (A208SUMBRT + A210SUMA)
ADD HYD         ID=1  HYD NO=A210SUMB ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*S APA7
*
*
****Route HYD A210SUMB to Sub-Basin A212
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.012  FP SLP=0.01 N=0.035
                    DIST=50 FT

                    DIST  ELEV
              0     105
                    15          100
                    35          100
                    50          105
*
ROUTE MCUNGE        ID=2 HYD NO=A210SUMBRT  INFLOW ID=1
```

```
                    DT=0 HR  LENGTH=965 FT
                    NS=0  SLOPE=0.012
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A211 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                            LENGTH=2940 FT   SLOPE=0.023    K=3.0
COMPUTE NM HYD              ID=1   HYD NO=A211   DA=0.06511 SQ MI
                    PER A=0 PER B=18.4  PER C=18.6  PER D=63
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*S APA8
*
*
****Route HYD A211SUM to A212 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                            DIA=60 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=A211Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=1525 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=3   CODE=1
*
*
*** Sub-BASIN A212 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                            LENGTH=1975 FT   SLOPE=0.017    K=2.0
COMPUTE NM HYD              ID=1   HYD NO=A212   DA=0.06224 SQ MI
                    PER A=0 PER B=5.1  PER C=5.1  PER D=89.8
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (A211Rt + A212)
ADD HYD             ID=1  HYD NO=A212SUMA ID I=3   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
```

```
* Total Flow from Basin (A210SUMBRT + A212SUMA)
ADD HYD             ID=1  HYD NO=A212SUMB ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APA9
*
*
****Route HYD A212SUMB to Sub-Basin A223
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=103 FT
                                CH SLP=0.023  FP SLP=0.02 N=0.016
                                DIST=50 FT

                                DIST  ELEV
                0       101.0
                                10          100.7
                                10          100.0
                                25          100.3
                                40          100.0
                                40          100.7
                                50          101.0
*
ROUTE MCUNGE                    ID=10  HYD NO=A212SUMBRT INFLOW ID=1
                        DT=0 HR  LENGTH=1845 FT
                        NS=0  SLOPE=0.023
*
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*
*** Sub-BASIN A214 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=760 FT   SLOPE=0.057    K=1.0
COMPUTE NM HYD                  ID=1   HYD NO=A214   DA=0.02567 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD A214 to Sub-Basin A215
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=103 FT
                                CH SLP=0.030  FP SLP=0.02 N=0.016
```

```
                    DIST=50 FT

                    DIST  ELEV
          0    101.0
                    10        100.7
                    10        100.0
                    25        100.3
                    40        100.0
                    40        100.7
                    50        101.0
*
ROUTE MCUNGE        ID=2  HYD NO=A214RT INFLOW ID=1
                DT=0 HR  LENGTH=1415 FT
                NS=0  SLOPE=0.030
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN A215 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                    LENGTH=795 FT   SLOPE=0.026    K=1.0
                    LENGTH=1590 FT   SLOPE=0.026    K=3.0
COMPUTE NM HYD      ID=1   HYD NO=A215   DA=0.07926 SQ MI
                PER A=0 PER B=20.1  PER C=30.9  PER D=49
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (A214RT + A215)
ADD HYD         ID=1  HYD NO=A215SUM ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*S APA10
*
*
****Route HYD A215SUM to A217 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                    DIA=48 IN   N=0.013
*
ROUTE MCUNGE        ID=2  HYD NO=A215SUMRt  INFLOW ID=1
                DT=0 HR  LENGTH=600 FT
                NS=0  SLOPE=0.015
*
PRINT HYD       ID=2   CODE=1
*
```

```
*
*** Sub-BASIN A216 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                             LENGTH=350 FT   SLOPE=0.036    K=1.0
COMPUTE NM HYD               ID=1   HYD NO=A216   DA=0.00913 SQ MI
                      PER A=0 PER B=25  PER C=26.1  PER D=48.9
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
****Route HYD A216 to A217 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                             DIA=30 IN   N=0.013
*
ROUTE MCUNGE                 ID=3  HYD NO=A216Rt  INFLOW ID=1
                      DT=0 HR  LENGTH=2465 FT
                      NS=0  SLOPE=0.015
*
PRINT HYD            ID=3   CODE=1
*
*
*** Sub-BASIN A217 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                             LENGTH=2000 FT   SLOPE=0.030    K=3.0
COMPUTE NM HYD               ID=1   HYD NO=A217   DA=0.05761 SQ MI
                      PER A=0 PER B=10.6  PER C=58.3  PER D=31.1
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (A216RT + A217)
ADD HYD              ID=1  HYD NO=A117SUMA ID I=3   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (A215SUMRT + A217SUMA)
ADD HYD              ID=1  HYD NO=A217SUMB ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
****Route HYD A217SUMB to A218 Through a Pipe
```

```
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=A217SUMBRt  INFLOW ID=1
                DT=0 HR  LENGTH=1000 FT
                NS=0  SLOPE=0.015
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN A218 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                        LENGTH=1770 FT   SLOPE=0.038    K=3.0
                        LENGTH=1310 FT   SLOPE=0.015    K=3.0
COMPUTE NM HYD          ID=1   HYD NO=A218   DA=0.05592 SQ MI
                PER A=0 PER B=10  PER C=60.3  PER D=29.7
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (A217SUMBRt + A218)
ADD HYD         ID=1  HYD NO=A218SUMA ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*
*
*S  ****DIVIDE 235 CFS through 54" pipe and remaining to Surge Pond
DIVIDE HYD              ID=1    Q=235    ID I=1   HYD NO=A218SUMB
                                         ID II=2  HYD NO=A218SUMC

PRINT HYD               ID=1    CODE=1
PRINT HYD               ID=2    CODE=1
*
*
****Route Hyd 218SUMC through PondA1
ROUTE RESERVOIR                 ID=30  HYD NO=PondA1  INFLOW ID=2  CODE=1
                        OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                        0                 0                        5157
                        0.1                         1.221          5158
                        0.2               2.507                    5159
                        0.3                         3.859          5160
                        0.4               5.277                    5161
*
*
*
```

```
* Total Flow from Basin (A218SUMB + PondA1)
ADD HYD             ID=1  HYD NO=A218SUMD ID I=1   ID II=30
PRINT HYD           ID=1   CODE=1
*S APA11
*
*
****Route HYD A218SUMD to A219 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=A218SUMDRt  INFLOW ID=1
                    DT=0 HR  LENGTH=840 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A219 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                        LENGTH=2174 FT   SLOPE=0.021    K=3.0
COMPUTE NM HYD          ID=1   HYD NO=A219   DA=0.06433 SQ MI
                    PER A=0 PER B=21  PER C=22  PER D=57
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (A218SUMDRt + A219)
ADD HYD             ID=1  HYD NO=A219SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD A219SUM to A220 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=A219SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1025 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A220 ****
*
```

```
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                             LENGTH=1960 FT   SLOPE=0.020    K=3.0
COMPUTE NM HYD               ID=1   HYD NO=A220   DA=0.03619 SQ MI
                    PER A=1 PER B=20.7  PER C=21.7  PER D=57.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (A219SUMRt + A220)
ADD HYD             ID=1  HYD NO=A220SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APA12
*
*
****Route HYD A220SUM to A221 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                             DIA=48 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=A220SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1050 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A221 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                             LENGTH=1445 FT   SLOPE=0.032    K=1.0
COMPUTE NM HYD               ID=1   HYD NO=A221   DA=0.04187 SQ MI
                    PER A=0 PER B=5.9  PER C=5.9  PER D=88.2
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (A220SUMRt + A221)
ADD HYD             ID=1  HYD NO=A221SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD A221SUM to A222 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                             DIA=48 IN   N=0.013
```

```
*
ROUTE MCUNGE              ID=2  HYD NO=A221SUMRt  INFLOW ID=1
                     DT=0 HR  LENGTH=1165 FT
                     NS=0  SLOPE=0.015
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN A222 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                               LENGTH=1895 FT   SLOPE=0.026    K=1.0
COMPUTE NM HYD            ID=1   HYD NO=A222   DA=0.04520 SQ MI
                     PER A=0 PER B=5.4  PER C=5.4  PER D=89.1
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (A221SUMRt + A222)
ADD HYD              ID=1  HYD NO=A222SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (A212SUMBRT + A222SUM)
ADD HYD              ID=1  HYD NO=A223SUMA ID I=10   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN A223 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                               LENGTH=1715 FT   SLOPE=0.024    K=4.0
COMPUTE NM HYD            ID=2   HYD NO=A223   DA=0.02061 SQ MI
                     PER A=0 PER B=6.8  PER C=6.9  PER D=86.3
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (A223SUMA + A223)
ADD HYD              ID=1  HYD NO=A223SUMB ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*S APA13
*
```

```
*
****Route HYD A223SUMB to Sub-Basin A234
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.024  FP SLP=0.02 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                    0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE            ID=10  HYD NO=A223SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1270 FT
                        NS=0  SLOPE=0.024
*
PRINT HYD               ID=10   CODE=1
*
*
*************************************************************************
*
*
*** Sub-BASIN A224 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=878 FT   SLOPE=0.041    K=1.0
COMPUTE NM HYD          ID=1   HYD NO=A224   DA=0.02007 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
****Route HYD A224 to Sub-Basin A225
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=103 FT
                                CH SLP=0.024  FP SLP=0.02 N=0.016
                                DIST=50 FT

                                DIST  ELEV
                    0       101.0
                                10          100.7
                                10          100.0
                                25          100.3
                                40          100.0
```

```
                    40          100.7
                    50          101.0
*
ROUTE MCUNGE        ID=2  HYD NO=A224RT INFLOW ID=1
                DT=0 HR  LENGTH=1280 FT
                NS=0  SLOPE=0.024
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN A225 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                    LENGTH=873 FT   SLOPE=0.021    K=3.0
                    LENGTH=1183 FT   SLOPE=0.023   K=4.0
COMPUTE NM HYD      ID=1   HYD NO=A225   DA=0.04681 SQ MI
                PER A=0 PER B=18.3  PER C=18.4  PER D=63.3
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (A224rt + A225)
ADD HYD         ID=1  HYD NO=A225SUMA ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*
*
*
****Route HYD A225SUMB to Sub-Basin A234
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.014  FP SLP=0.02 N=0.035
                    DIST=50 FT

                    DIST  ELEV
              0     105
                    15          100
                    35          100
                    50          105
*
ROUTE MCUNGE        ID=2  HYD NO=A225SUMBRT  INFLOW ID=1
                DT=0 HR  LENGTH=835 FT
                NS=0  SLOPE=0.014
*
PRINT HYD       ID=2   CODE=1
```

```
* Total Flow from Basin (A223SUMBRt + A225SUMA)
ADD HYD             ID=10  HYD NO=A225SUMB ID I=10   ID II=2
PRINT HYD           ID=10   CODE=1
*
*S APA15
*
**************************************************************************
*
*** Sub-BASIN A226 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                            LENGTH=2015 FT   SLOPE=0.022    K=3.0
COMPUTE NM HYD              ID=1   HYD NO=A226   DA=0.04817 SQ MI
                    PER A=0 PER B=18.2  PER C=18.3  PER D=63.5
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD A226 to A227 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                            DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=A226Rt  INFLOW ID=1
                    DT=0 HR  LENGTH=1950 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A227 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                            LENGTH=945 FT   SLOPE=0.018    K=3.0
                            LENGTH=1823 FT   SLOPE=0.01    K=3.0
COMPUTE NM HYD              ID=1   HYD NO=A227   DA=0.04342 SQ MI
                    PER A=0 PER B=17.8  PER C=17.8  PER D=64.5
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
```

```
* Total Flow from Basin (A226Rt + A227)
ADD HYD             ID=1  HYD NO=A227SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN A228 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                            LENGTH=1670 FT  SLOPE=0.025    K=3.0
                            LENGTH=333 FT   SLOPE=0.01    K=3.0
COMPUTE NM HYD              ID=2   HYD NO=A228   DA=0.06983 SQ MI
                    PER A=0 PER B=24.8  PER C=25.7  PER D=49.5
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (A227SUM + A228)
ADD HYD             ID=1  HYD NO=A228SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APA14
*
*
****Route HYD A228SUMB to A231 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                            DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=A228SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1650 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A229 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                            LENGTH=772 FT   SLOPE=0.044    K=1.0
COMPUTE NM HYD              ID=1   HYD NO=A229   DA=0.01395 SQ MI
                    PER A=0 PER B=25  PER C=26  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
```

```
* Total Flow from Basin (A228SUMRT + A229)
ADD HYD             ID=1  HYD NO=A229SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD A229SUM to Sub-Basin A231
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=103 FT
                                CH SLP=0.019  FP SLP=0.02 N=0.016
                                DIST=50 FT

                                DIST  ELEV
                0       101.0
                                10          100.7
                                10          100.0
                                25          100.3
                                40          100.0
                                40          100.7
                                50          101.0
*
ROUTE MCUNGE                    ID=2  HYD NO=A229SUMRT INFLOW ID=1
                        DT=0 HR  LENGTH=845 FT
                        NS=0  SLOPE=0.019
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A230 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=1830 FT   SLOPE=0.031    K=1.0
COMPUTE NM HYD                  ID=1   HYD NO=A230   DA=0.04312 SQ MI
                        PER A=0 PER B=15.1  PER C=15.1  PER D=69.8
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (A22PSUMRT + A230)
ADD HYD             ID=1  HYD NO=A230SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN A231 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
```

```
                    NK=1   ISLOPE=1
                           LENGTH=660 FT   SLOPE=0.027    K=3.0
COMPUTE NM HYD             ID=2   HYD NO=A231   DA=0.01188 SQ MI
                    PER A=0 PER B=18.6  PER C=18.6  PER D=62.8
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
*
* Total Flow from Basin (A230SUM + A231)
ADD HYD            ID=1  HYD NO=A231SUMA ID I=1   ID II=2
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD A231SUMC to A224 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE               ID=2  HYD NO=A231SUMCRt  INFLOW ID=1
                    DT=0 HR  LENGTH=840 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD          ID=2   CODE=1
*
*
* Total Flow from Basin (A230SUM + A231)
ADD HYD            ID=1  HYD NO=A231SUMB ID I=10   ID II=2
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD A231SUM to A224 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE               ID=10  HYD NO=A231SUMBRt  INFLOW ID=1
                    DT=0 HR  LENGTH=840 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD          ID=10   CODE=1
*
*
**********************************************************************
*
*
*** Sub-BASIN A232 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
```

```
                    NK=1   ISLOPE=1
                           LENGTH=1536 FT   SLOPE=0.030    K=1.0
COMPUTE NM HYD             ID=1   HYD NO=A232   DA=0.06536 SQ MI
                    PER A=0 PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD A232 to Sub-Basin A233
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                           CH SLP=0.019  FP SLP=0.02 N=0.035
                           DIST=50 FT

                           DIST  ELEV
                0      105
                           15          100
                           35          100
                           50          105
*
ROUTE MCUNGE               ID=2  HYD NO=A232RT  INFLOW ID=1
                    DT=0 HR  LENGTH=3890 FT
                    NS=0  SLOPE=0.019
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN A233 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                           LENGTH=1435 FT   SLOPE=0.028    K=1.0
                           LENGTH=2300 FT   SLOPE=0.013    K=3.0
COMPUTE NM HYD             ID=1   HYD NO=A233   DA=0.11362 SQ MI
                    PER A=0 PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (A232RT + A233)
ADD HYD             ID=1  HYD NO=A233SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APA16
*
*
```

```
****Route HYD A233SUM to Sub-Basin A235
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.010  FP SLP=0.02 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                    0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=2  HYD NO=A233SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=620 FT
                        NS=0  SLOPE=0.010
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basin (A231SUMBRT + A233SUMRT)
ADD HYD                 ID=1  HYD NO=A234SUMA ID I=10   ID II=2
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN A234 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=1317 FT   SLOPE=0.017    K=2.0
COMPUTE NM HYD                  ID=2   HYD NO=A234   DA=0.03607 SQ MI
                        PER A=0 PER B=21.6  PER C=21.6  PER D=56.9
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basin (A234SUMA + A234)
ADD HYD                 ID=1  HYD NO=A234SUMB ID I=1   ID II=2
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN A235 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=1430 FT   SLOPE=0.020    K=3.0
                                LENGTH=1393 FT   SLOPE=0.010    K=3.0
```

```
COMPUTE NM HYD              ID=2   HYD NO=A235   DA=0.08192 SQ MI
                      PER A=0 PER B=21.9  PER C=22.8  PER D=55.3
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (A234SUMB + A235)
ADD HYD             ID=1  HYD NO=A235SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APA17
*
*
****Route HYD A235SUMB to Sub-Basin ADETBASIN
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                      MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.014  FP SLP=0.02 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                ID=49  HYD NO=ABASIN  INFLOW ID=1
                      DT=0 HR  LENGTH=1190 FT
                      NS=0  SLOPE=0.014
*
PRINT HYD           ID=49   CODE=1
*
*
*S*************************************************************************************
*S*******       END OF AMOLE BASIN
*S*************************************************************************************
*
*
*S*************************************************************************************
*S*******   SOUTH AMOLE BASIN
*S*************************************************************************************
*
*
*** Sub-BASIN SA202 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                      NK=2   ISLOPE=1
                      LENGTH=1160 FT    SLOPE=0.022   K=2.0
```

```
                    LENGTH=580 FT    SLOPE=0.021   K=3.0
COMPUTE NM HYD      ID=1   HYD NO=SA202   DA=0.03705 SQ MI
               PER A=0 PER B=16.4  PER C=17  PER D=66.6
               TP=0.0   MASSRAIN=-1
*
PRINT HYD      ID=1   CODE=1
*
*
****Route HYD SA202 to Sub-Basin SA203 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                    DIA=48 IN   N=0.013
*
ROUTE MCUNGE        ID=2  HYD NO=SA202Rt  INFLOW ID=1
               DT=0 HR  LENGTH=1500 FT
               NS=0  SLOPE=0.010
*
PRINT HYD      ID=2   CODE=1
*
*S  Extended Storm System to Avoid Excess Street Flow
*
*
*** Sub-BASIN SA204 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
               NK=1   ISLOPE=1
               LENGTH=1205 FT    SLOPE=0.015   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=SA204   DA=0.02776 SQ MI
               PER A=0 PER B=25.6  PER C=26.5  PER D=47.9
               TP=0.0   MASSRAIN=-1
*
PRINT HYD      ID=1   CODE=1
*
*
****Route Hyd SA204 through PONDSA1
*
ROUTE RESERVOIR             ID=30  HYD NO=PONDSA1  INFLOW ID=1  CODE=1
                    OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                    0                 0                        5317
                    0.5               0.243                    5318
                    2                 0.727                    5319
                    5                 1.353                    5320
                    8                 2.159                    5321
                    10                3.188                    5322
*
*
****Route HYD PondSA1 to Sub-Basin SA203 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
```

```
                                DIA=18 IN   N=0.013
*
ROUTE MCUNGE                    ID=1  HYD NO=PondSA1Rt  INFLOW ID=30
                        DT=0 HR  LENGTH=770 FT
                        NS=0  SLOPE=0.010
*
PRINT HYD               ID=1   CODE=1
*
*S  Extended Storm System to Avoid Excess Street Flow
*
*
* Total Flow from Basin (SA202RT + PONDSA1RT)
ADD HYD                 ID=1  HYD NO=SA203SUMA ID I=2   ID II=1
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN SA203 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=2000 FT    SLOPE=0.022   K=2.0
COMPUTE NM HYD                  ID=2   HYD NO=SA203   DA=0.02384 SQ MI
                        PER A=0 PER B=29  PER C=29  PER D=42
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basin (SA203SUMA + SA203)
ADD HYD                 ID=1  HYD NO=SA203SUMB ID I=1   ID II=2
PRINT HYD               ID=1   CODE=1
*S APSA1
*
*
****Route HYD SA203SUMB to Sub-Basin SA205 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                                DIA=54 IN   N=0.013
*
ROUTE MCUNGE                    ID=2  HYD NO=SA203SUMBRt  INFLOW ID=1
                        DT=0 HR  LENGTH=1250 FT
                        NS=0  SLOPE=0.010
*
PRINT HYD               ID=2   CODE=1
*
*S  Extended Storm System to Avoid Excess Street Flow
*
*
```

```
*** Sub-BASIN SA205 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=2295 FT    SLOPE=0.016   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=SA205   DA=0.07789 SQ MI
                      PER A=11.9 PER B=24.8  PER C=25.1  PER D=38.2
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SA203SUMBRT + SA205)
ADD HYD              ID=1  HYD NO=SA205SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*S APSA2
*
*
****Route HYD SA205SUM to Sub-Basin SA206 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                                DIA=72 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=SA205SUMRt  INFLOW ID=1
                      DT=0 HR  LENGTH=1370 FT
                      NS=0  SLOPE=0.010
*
PRINT HYD            ID=2   CODE=1
*
*S  Extended Storm System to Avoid Excess Street Flow
*
*
*** Sub-BASIN SA206 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1080 FT    SLOPE=0.007   K=2.0
                                LENGTH=1340 FT    SLOPE=0.022   K=3.0
COMPUTE NM HYD               ID=1   HYD NO=SA206   DA=0.04163 SQ MI
                      PER A=0 PER B=22.5  PER C=23.5  PER D=54
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SA205SUMRT + SA206)
ADD HYD              ID=1  HYD NO=SA206SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
```

```
*
*
****Route HYD SA206SUM to Sub-Basin SA213 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.019
                        DIA=78 IN   N=0.013
*
ROUTE MCUNGE            ID=10  HYD NO=SA206SUMRT  INFLOW ID=1
                DT=0 HR  LENGTH=1070 FT
                NS=0  SLOPE=0.019
*
PRINT HYD       ID=10   CODE=1
*
*S  Increased Pipe Size to Allow Extended Storm System
*
*
**********************************************************************
*
*
*** Sub-BASIN SA207 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=1315 FT    SLOPE=0.017   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=SA207   DA=0.01910 SQ MI
                PER A=0 PER B=18  PER C=18  PER D=64
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD SA207 to Sub-Basin SA208 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.027
                        DIA=30 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=SA207RT  INFLOW ID=1
                DT=0 HR  LENGTH=965 FT
                NS=0  SLOPE=0.027
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN SA208 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=1690 FT    SLOPE=0.025   K=0.7
COMPUTE NM HYD          ID=1   HYD NO=SA208   DA=0.03950 SQ MI
```

```
                    PER A=0 PER B=9.1  PER C=9.2  PER D=81.8
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SA207RT  + SA208)
ADD HYD             ID=1  HYD NO=SA208SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APSA3
*
*
****Route HYD SA208SUM to Sub-Basin SA213 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.011
                        DIA=42 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=SA208SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=555 FT
                    NS=0  SLOPE=0.011
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SA206SUMRT  + SA208SUMRT)
ADD HYD             ID=10  HYD NO=SA213SUMA ID I=10   ID II=2
PRINT HYD           ID=10   CODE=1
*
*
*****************************************************************
*
*
*** Sub-BASIN SA209 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2350 FT    SLOPE=0.014   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=SA209   DA=0.03817 SQ MI
                    PER A=0 PER B=5  PER C=5  PER D=90
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
***Route HYD SA209 to Sub-Basin SA210
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                        CH SLP=0.021  FP SLP=0.04 N=0.017
```

```
                              DIST=20 FT

                              DIST  ELEV
                    0       105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE                  ID=2  HYD NO=SA209RT  INFLOW ID=1
                         DT=0 HR  LENGTH=390 FT
                         NS=0  SLOPE=0.021
*
PRINT HYD                ID=2   CODE=1
*
*
*** Sub-BASIN SA210 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                         NK=1   ISLOPE=1
                         LENGTH=2135 FT    SLOPE=0.016   K=2.0
COMPUTE NM HYD                ID=1   HYD NO=SA210   DA=0.05112 SQ MI
                         PER A=8.2 PER B=5.3  PER C=5.3  PER D=81.1
                         TP=0.0   MASSRAIN=-1
*
PRINT HYD                ID=1   CODE=1
*
*
* Total Flow from Basin (SA209RT  + SA210)
ADD HYD                  ID=1  HYD NO=SA210SUM ID I=2   ID II=1
PRINT HYD                ID=1   CODE=1
*S APSA4
*
*
****Route HYD SA210SUM to Sub-Basin SA211 Through a Pipe
COMPUTE RATING CURVE     CID=1   VS NO=1 CODE=-1   SLP=0.015
                              DIA=54 IN   N=0.013
*
ROUTE MCUNGE                  ID=2  HYD NO=SA210SUMRT  INFLOW ID=1
                         DT=0 HR  LENGTH=1020 FT
                         NS=0  SLOPE=0.015
*
PRINT HYD                ID=2   CODE=1
*
*
*** Sub-BASIN SA211 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
```

```
                    NK=1   ISLOPE=1
                    LENGTH=1345 FT    SLOPE=0.013   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=SA211   DA=0.02232 SQ MI
                    PER A=12.5 PER B=22.2  PER C=22.3  PER D=43
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SA212 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2275 FT    SLOPE=0.010   K=2.5
COMPUTE NM HYD      ID=3   HYD NO=SA212   DA=0.06692 SQ MI
                    PER A=0 PER B=24.1  PER C=25  PER D=50.8
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (SA211  + SA212)
ADD HYD             ID=1  HYD NO=SA212SUMA ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SA210SUMRT  + SA212SUMA)
ADD HYD             ID=1  HYD NO=SA212SUMB ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APSA5
*
*
****Route HYD SA212SUMB to Sub-Basin SA213 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                        DIA=72 IN   N=0.013
*
ROUTE MCUNGE        ID=2  HYD NO=SA212SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1150 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SA213SUMA  + SA212SUMBRT)
ADD HYD             ID=1  HYD NO=SA213SUMB ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
```

```
*
*** Sub-BASIN SA213 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=2180 FT    SLOPE=0.013   K=2.5
COMPUTE NM HYD             ID=2   HYD NO=SA213   DA=0.06061 SQ MI
                      PER A=10.3 PER B=21.1  PER C=21.9  PER D=46.8
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
*
* Total Flow from Basin (SA213SUMB  + SA213)
ADD HYD            ID=1  HYD NO=SA213SUMC ID I=1   ID II=2
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd SA213SUMC through PONDSA2
*
ROUTE RESERVOIR                  ID=30  HYD NO=PONDSA2  INFLOW ID=1  CODE=1
                              OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                              0                  0                    5024
                              74.1                     3.40                 5026
                              240.7                    8.55                 5028
                              313.8                    11.4                 5029
                              371.3                    14.4                 5030
                              421                      20.0                 5031
*
*S  PondSA2 is undersized with the 48" RCP as an outlet.
*S  Runoff will overflow on Arenal.  Added Elev. 5031' to route combined
*S  Overflow and pipe flow to Amole del Norte.
*S  Increasing Outlet in Proposed has allowed entire flow to be carried to channel through pipe flow.
*S  Increased to Prevent Overtopping to Double-60" RCP.
*
****Route HYD PONDSA2 to Sub-Basin SA201 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                              DIA=84 IN   N=0.013
*
ROUTE MCUNGE               ID=10  HYD NO=PONDSA2RT  INFLOW ID=30
                      DT=0 HR  LENGTH=1525 FT
                      NS=0  SLOPE=0.015
*
PRINT HYD          ID=10   CODE=1
*
*
*****************************************************************************
```

```
*
*
****Route HYD TSBASIN to Sub-Basin SA201
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.005  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE            ID=1  HYD NO=TSBASINRT  INFLOW ID=45
                        DT=0 HR  LENGTH=2495 FT
                        NS=0  SLOPE=0.005
*
PRINT HYD               ID=1   CODE=1
*
*** Sub-BASIN SA201 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=3   ISLOPE=1
                        LENGTH=550 FT    SLOPE=0.025   K=0.7
                                LENGTH=2090 FT   SLOPE=0.025   K=2.0
                                LENGTH=905 FT    SLOPE=0.005   K=4.0
COMPUTE NM HYD          ID=2   HYD NO=SA201   DA=0.16721 SQ MI
                        PER A=4.7 PER B=17.8  PER C=18.7  PER D=58.7
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basin (TSBASINRT  + SA201)
ADD HYD                 ID=1  HYD NO=SA201SUM ID I=1   ID II=2
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (PONDSA2RT  + SA201SUM)
ADD HYD                 ID=1  HYD NO=SA214SUMA ID I=10   ID II=1
PRINT HYD               ID=1   CODE=1
*S APSA6
*
*
***Route HYD SA214SUMA to Sub-Basin SA214
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
```

```
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.005  FP SLP=0.04 N=0.013
                              DIST=20 FT

                              DIST  ELEV
               0      105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE                  ID=2  HYD NO=SA214SUMART  INFLOW ID=1
                    DT=0 HR  LENGTH=1025 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN SA214 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=870 FT    SLOPE=0.011   K=2.0
                              LENGTH=1775 FT   SLOPE=0.010   K=3.0
                              LENGTH=960 FT    SLOPE=0.005   K=4.0
COMPUTE NM HYD                ID=1   HYD NO=SA214   DA=0.06684 SQ MI
                    PER A=1.9 PER B=18.5  PER C=18.7  PER D=60.8
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (SA214SUMART  + SA214)
ADD HYD            ID=1  HYD NO=SA214SUMB ID I=2   ID II=1
PRINT HYD          ID=1   CODE=1
*
*
***Route HYD SA214SUMB to Sub-Basin SA215
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.005  FP SLP=0.04 N=0.013
                              DIST=20 FT

                              DIST  ELEV
               0      105
                              10          100
                              15          100
                              20          105
```

```
*
ROUTE MCUNGE                ID=2  HYD NO=SA214SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=720 FT
                        NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SA215 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=2400 FT    SLOPE=0.012   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=SA215   DA=0.05396 SQ MI
                        PER A=3.7 PER B=18.5  PER C=18.8  PER D=59
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SA214SUMBRT  + SA215)
ADD HYD             ID=1  HYD NO=SA215SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
***Route HYD SA215SUM to Sub-Basin SA216
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.005  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                ID=2  HYD NO=SA215SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1300 FT
                        NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN SA216 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
```

```
                    NK=2   ISLOPE=1
                    LENGTH=2265 FT    SLOPE=0.016   K=2.0
                              LENGTH=865 FT     SLOPE=0.005   K=4.0
COMPUTE NM HYD              ID=1   HYD NO=SA216   DA=0.13141 SQ MI
                    PER A=1.9 PER B=19.1  PER C=19.5  PER D=59.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SA215SUMRT  + SA216)
ADD HYD             ID=1  HYD NO=SA216SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APSA7
*
*
***Route HYD SA216SUM to Sub-Basin SA217
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.005  FP SLP=0.02 N=0.013
                              DIST=20 FT

                              DIST  ELEV
                0       105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE                ID=20  HYD NO=SA216SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1270 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=20   CODE=1
*
*
*************************************************************************
*
*
*** Sub-BASIN SA218 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1220 FT    SLOPE=0.015   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=SA218   DA=0.03281 SQ MI
                    PER A=0 PER B=25  PER C=25  PER D=50
                    TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN SA219 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1475 FT    SLOPE=0.020   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=SA219   DA=0.01224 SQ MI
                     PER A=0 PER B=26.3  PER C=26.3  PER D=47.5
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (SA218  + SA219)
ADD HYD              ID=1  HYD NO=SA219SUM ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*

****Route HYD SA219SUM to Sub-Basin SA220 Through a Pipe
COMPUTE RATING CURVE     CID=1   VS NO=1 CODE=-1   SLP=0.010
                                 DIA=48 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=SA219SUMRT  INFLOW ID=1
                     DT=0 HR  LENGTH=1520 FT
                     NS=0  SLOPE=0.010
*
PRINT HYD            ID=2   CODE=1
*
*S  Extended Storm System to Avoid Excess Street Flow
*
*
*** Sub-BASIN SA220 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=2530 FT    SLOPE=0.015   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=SA220   DA=0.06240 SQ MI
                     PER A=0 PER B=5  PER C=5  PER D=90
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SA219SUMRT + SA220)
```

```
ADD HYD             ID=1  HYD NO=SA220SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD SA220SUM to Sub-Basin SA221 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=SA220SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=710 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=2   CODE=1
*
*S  Extended Storm System to Avoid Excess Street Flow
*
*
*** Sub-BASIN SA221 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1126 FT    SLOPE=0.007   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=SA221   DA=0.00802 SQ MI
                    PER A=8.3 PER B=5.3  PER C=5.3  PER D=81.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (SA220SUMRT + SA221)
ADD HYD             ID=1  HYD NO=SA221SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APSA8
*
*
****Route HYD SA221SUM to Sub-Basin SA222 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=66 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=SA221SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=2050 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=2   CODE=1
*
*S  Extended Storm System to Avoid Excess Street Flow
*
```

```
*
*** Sub-BASIN SA222 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1980 FT    SLOPE=0.016   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=SA222   DA=0.05066 SQ MI
                        PER A=1.9 PER B=20.5  PER C=21.4  PER D=56.2
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SA221SUMRT + SA222)
ADD HYD              ID=10  HYD NO=SA222SUM ID I=2   ID II=1
PRINT HYD            ID=10   CODE=1
*S APSA9
*
*
**************************************************************************
*
*
*** Sub-BASIN SA223 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=2090 FT    SLOPE=0.018   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=SA223   DA=0.07060 SQ MI
                        PER A=0 PER B=21  PER C=22  PER D=57
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
****Route HYD SA223 to Sub-Basin SA225 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.009
                                DIA=54 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=SA223RT  INFLOW ID=1
                        DT=0 HR  LENGTH=660 FT
                        NS=0  SLOPE=0.009
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN SA224 ****
*
```

```
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1050 FT    SLOPE=0.030   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=SA224   DA=0.01720 SQ MI
                      PER A=0 PER B=6.6  PER C=6.7  PER D=86.8
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SA223 + SA224)
ADD HYD              ID=1  HYD NO=SA224SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN SA225 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1715 FT    SLOPE=0.020   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=SA225   DA=0.02910 SQ MI
                      PER A=0 PER B=16.3  PER C=17  PER D=66.7
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*

* Total Flow from Basin (SA224SUM + SA225)
ADD HYD              ID=1  HYD NO=SA225SUM ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*S APSA10
*
*
****Route HYD SA225SUMB to Sub-Basin SA226 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                               DIA=60 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=SA225SUMRT  INFLOW ID=1
                      DT=0 HR  LENGTH=0 FT
                      NS=0  SLOPE=0.01
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (SA222SUM + SA225SUMRT)
ADD HYD              ID=1  HYD NO=SA226SUMA ID I=10   ID II=2
```

```
PRINT HYD          ID=1   CODE=1
*S APSA11
*
*
*** Sub-BASIN SA226 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1530 FT    SLOPE=0.020   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=SA226   DA=0.06223 SQ MI
                    PER A=0 PER B=21  PER C=22  PER D=57
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
*
* Total Flow from Basin (SA226SUMA + SA226)
ADD HYD            ID=1  HYD NO=SA226SUMB ID I=1   ID II=2
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd SA226SUMB through PONDSA3
*
ROUTE RESERVOIR                  ID=30  HYD NO=PONDSA3  INFLOW ID=1  CODE=1
                         OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                         0                  0                          5040
                         63.5                       1.851              5042
                         179.6                      4.353              5044
                         254                        7.267              5046
                         311.1                      10.56              5048
                         359.2                      14.23              5050
                         391                        16.23              5051
                         401.6                      18.00              5052
*
*S  Pond is adequate or close to adequate.
*S  Added elevation 5052'
*
****Route HYD PONDSA3 to Sub-Basin SA217 Through a Pipe
COMPUTE RATING CURVE   CID=1   VS NO=1 CODE=-1   SLP=0.019
                         DIA=66 IN   N=0.013
*
ROUTE MCUNGE               ID=1  HYD NO=PONDSA3RT  INFLOW ID=30
                    DT=0 HR  LENGTH=3000 FT
                    NS=0  SLOPE=0.019
*
PRINT HYD          ID=1   CODE=1
*
```

```
*S  Increased to Prevent Overtopping to Double-48" RCP.
*S  Also redirected to avoid extending into residents backyards by
*S  running storm drain South down Unser Blvd to Amole Arroyo.
*
*
* Total Flow from Basin (SA216SUMRT + PONDSA3RT)
ADD HYD             ID=1  HYD NO=SA217SUMA ID I=20   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SA217 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=3430 FT    SLOPE=0.012   K=3.0
                               LENGTH=720 FT     SLOPE=0.005   K=4.0
COMPUTE NM HYD              ID=2   HYD NO=SA217   DA=0.12026 SQ MI
                    PER A=0 PER B=20  PER C=20.1  PER D=59.9
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SA217SUMA + SA217)
ADD HYD             ID=1  HYD NO=SA217SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APSA12
*
*
***Route HYD SA217SUMB to Sub-Basin SA227.1
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                               CH SLP=0.005  FP SLP=0.02 N=0.013
                               DIST=20 FT

                               DIST  ELEV
                0      105
                               10          100
                               15          100
                               20          105
*
ROUTE MCUNGE                ID=2  HYD NO=SA217SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1205 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
```

```
*
*** Sub-BASIN SA227.1 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=2   ISLOPE=1
                      LENGTH=290 FT    SLOPE=0.013   K=1.0
                                 LENGTH=2360 FT    SLOPE=0.013   K=3.0
COMPUTE NM HYD               ID=1   HYD NO=SA227.1   DA=0.08008 SQ MI
                      PER A=0 PER B=24.9  PER C=25.2  PER D=49.9
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (SA217SUMBRT + SA227.1)
ADD HYD              ID=1  HYD NO=SA227.1SUMA ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
***Route HYD SA227.1SUM to Sub-Basin SA227.2
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                      MIN ELEV=100 FT MAX ELEV=105 FT
                                 CH SLP=0.005  FP SLP=0.02 N=0.013
                                 DIST=20 FT

                                 DIST  ELEV
                  0      105
                                 10          100
                                 15          100
                                 20          105
*
ROUTE MCUNGE                 ID=2  HYD NO=SA227.1SUMRT  INFLOW ID=1
                      DT=0 HR  LENGTH=990 FT
                      NS=0  SLOPE=0.005
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (AMOLERT + SA227.1SUMRT)
ADD HYD              ID=1  HYD NO=SA227.1SUMB ID I=49   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN SA227.2 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
```

```
                    LENGTH=465 FT    SLOPE=0.013   K=1.0
                               LENGTH=2245 FT    SLOPE=0.013   K=3.0
COMPUTE NM HYD      ID=2   HYD NO=SA227.2   DA=0.12451 SQ MI
                    PER A=32 PER B=21.6  PER C=21.9  PER D=24.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (SA227.1SUMB + SA227.2)
ADD HYD             ID=80  HYD NO=SABASIN ID I=1   ID II=2
PRINT HYD           ID=80   CODE=1
*S APSA13
*
*
*S*************************************************************************************
*S**********          END OF SOUTH AMOLE BASIN
*S*************************************************************************************
*S
*S ***********       AMOLE POND       **************
*S
*
*
****Route Hyd AMOLECOMB through AMOLE DETENTION POND
*
ROUTE RESERVOIR                 ID=60  HYD NO=AMOLEPOND  INFLOW ID=80  CODE=1
                    OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                    0                 0                        4970
                    6.6                         3              4971
                    9.3               9                        4972
                    11.4                        18             4973
                    13.2              30                       4974
                    14.7                        44             4975
                    16.1                        60             4976
                    17.4                        75             4977
                    18.6                        93             4978
                    19.7                        110            4979
                    20.8                        128            4980
                    21.8                        146            4981
                    22.8                        165            4982
                    23.7                        183            4983
                    24.6                        203            4984
                    25.5                        223            4985
                    26.3              244                      4986
                    27.1                        265            4987
                    27.9              286                      4988
                    28.7                        307            4989
```

```
                                29.4                    329             4990
                                30.1                    351             4991
                                30.8                    374             4992
                                31.5                    400             4993
                                32.2                    422             4994
                                32.9                    446             4995
                                33.5                    472             4996
                    34.0        490         4996.75
                                463                     496             4997
                                2777            520             4998
                                5655                    543             4999
                                8596            567             5000
                                10220                   583             5000.37
*
*
****DIVIDE 34 CFS Which is Max Outflow of Amole Dam before the Spillway
DIVIDE HYD                      ID=60   Q=34    ID I=93   HYD NO=AMOLEPRIME
                                                ID II=94  HYD NO=AMOLESPILL

PRINT HYD                       ID=93   CODE=1
PRINT HYD                       ID=94   CODE=1
*
*
*S**************************************************************************
*S**************   SOUTH POWERLINE BASIN
*S**************************************************************************
*
*
*** Sub-BASIN SP201 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=3   ISLOPE=1
                                LENGTH=400 FT   SLOPE=0.125    K=0.7
                                LENGTH=1600 FT  SLOPE=0.0688    K=2.0
                                LENGTH=1410 FT  SLOPE=0.0426    K=3.0
COMPUTE NM HYD                  ID=1   HYD NO=SP201   DA=0.13557 SQ MI
                        PER A=10.7 PER B=34  PER C=19.2  PER D=36.1
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
****Route Hyd SP201 through PondSP1A
*
ROUTE RESERVOIR                         ID=30  HYD NO=PondSP1  INFLOW ID=1  CODE=1
                                OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                                0                       0                       5317
```

```
                                7.4                     0.33            5318
                                25.3                    0.67            5319
                                43.7                    1.00            5320
                                56.5            1.50            5321
                                66.8                    2.50            5322
                                75.8                    4.00            5323
                                83.8                    6.00            5324
*
*
****Route HYD PondSP1 to PONDSP2 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                                DIA=24 IN   N=0.013
*
ROUTE MCUNGE                    ID=1  HYD NO=PondSP1Rt  INFLOW ID=30
                        DT=0 HR  LENGTH=1800 FT
                        NS=0  SLOPE=0.01
*
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN SP202 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=3   ISLOPE=1
                                LENGTH=400 FT  SLOPE=0.1125    K=0.7
                                LENGTH=1600 FT   SLOPE=0.0688    K=2.0
                                LENGTH=2690 FT   SLOPE=0.0558    K=3.0
COMPUTE NM HYD                  ID=2   HYD NO=SP202   DA=0.22512 SQ MI
                        PER A=8.6 PER B=44.9  PER C=16.1  PER D=30.4
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basin (PondSP1Rt + SP202)
ADD HYD                 ID=1  HYD NO=SP202SUM ID I=1   ID II=2
PRINT HYD               ID=1   CODE=1
*
*
****Route Hyd SP202SUM through PondSP2
*
ROUTE RESERVOIR                         ID=30  HYD NO=PondSP2  INFLOW ID=1  CODE=1
                                OUTFLOW (CFS)       STORAGE (AC FT)             ELEV
                                0                       0                       5317
                                17                              0.25            5318
                                46                      0.50            5319
                                78                              1.00            5320
```

```
                    113         2.00        5321
                    149                 3.00        5322
                    186         4.50        5323
                    223         6.50        5324
                    261                 8.60        5325
*
*
****Route HYD PondSP2 to Sub-Basin SP203
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.010  FP SLP=0.02 N=0.035
                    DIST=35 FT

                    DIST  ELEV
          0     105
                    15      100
                    20      100
                    35      105
*
ROUTE MCUNGE        ID=1  HYD NO=PondSP2Rt  INFLOW ID=30
                DT=0 HR  LENGTH=300 FT
                NS=0  SLOPE=0.010
*
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN SP203 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                    LENGTH=400 FT  SLOPE=0.0550    K=0.7
                    LENGTH=550 FT  SLOPE=0.0455    K=2.0
COMPUTE NM HYD      ID=2   HYD NO=SP203   DA=0.00770 SQ MI
                PER A=0 PER B=25  PER C=26  PER D=49
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
*
* Total Flow from Basin (PondSP2Rt + SP203)
ADD HYD         ID=1  HYD NO=SP203SUM ID I=1   ID II=2
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD SP203SUM to Sub-Basin SP204
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
```

```
                    CH SLP=0.010  FP SLP=0.02 N=0.035
                    DIST=35 FT

                    DIST  ELEV
          0    105
                    15        100
                    20        100
                    35        105
*
ROUTE MCUNGE        ID=2  HYD NO=SP203SUMRt  INFLOW ID=1
                DT=0 HR  LENGTH=190 FT
                NS=0  SLOPE=0.010
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN SP204 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=3   ISLOPE=1
                    LENGTH=400 FT   SLOPE=0.0700    K=0.7
                    LENGTH=1600 FT   SLOPE=0.0719    K=2.0
                    LENGTH=2780 FT   SLOPE=0.0522    K=3.0
COMPUTE NM HYD      ID=1   HYD NO=SP204   DA=0.13615 SQ MI
                PER A=24.2 PER B=41.3  PER C=12  PER D=22.5
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (SP203SUMRt + SP204)
ADD HYD         ID=1  HYD NO=SP204SUM ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*
*
****Route Hyd SP205SUM through PondSP4
*
ROUTE RESERVOIR             ID=30  HYD NO=PondSP4  INFLOW ID=1  CODE=1
                    OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                    0                  0                        5317
                    17                 0.25                     5318
                    46                 0.50                     5319
                    78                 1.00                     5320
                    113                1.50                     5321
                    149                2.50                     5322
                    186                3.50                     5323
                    223                5.00                     5324
```

```
                    261                 7.00                5325
*
*
****Route HYD PondSP4 to Sub-Basin SP206
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                        CH SLP=0.010  FP SLP=0.02 N=0.035
                        DIST=35 FT

                        DIST  ELEV
              0     105
                        15        100
                        20        100
                        35        105
*
ROUTE MCUNGE            ID=1  HYD NO=PondSP4Rt  INFLOW ID=30
                    DT=0 HR  LENGTH=450 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SP205 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                        LENGTH=400 FT  SLOPE=0.0500    K=0.7
                        LENGTH=1600 FT  SLOPE=0.0425    K=2.0
                        LENGTH=750 FT  SLOPE=0.0533    K=3.0
COMPUTE NM HYD          ID=2   HYD NO=SP205   DA=0.03658 SQ MI
                    PER A=1.6 PER B=24.6  PER C=25.6  PER D=48.2
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (PondSP4Rt + SP206)
ADD HYD             ID=1  HYD NO=SP205SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd SP205SUM through PondSP5
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondSP5  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                        0                  0                    5317
                        17                      0.25            5318
```

```
                    46          0.50          5319
                    78                  1.00          5320
                    113         1.50          5321
                    149                 2.50          5322
                    186         3.50          5323
                    223         5.00          5324
                    261                 7.00          5325
                    299                 9.70          5326
*
*
****Route HYD PondSP5 to Sub-Basin SP206
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.010  FP SLP=0.02 N=0.035
                    DIST=35 FT

                    DIST  ELEV
            0   105
                    15      100
                    20      100
                    35      105
*
ROUTE MCUNGE        ID=1  HYD NO=PondSP5Rt  INFLOW ID=30
                DT=0 HR  LENGTH=530 FT
                NS=0  SLOPE=0.010
*
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN SP206 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=3   ISLOPE=1
                    LENGTH=400 FT   SLOPE=0.1425    K=1.0
                    LENGTH=1600 FT  SLOPE=0.0625    K=2.0
                    LENGTH=2340 FT  SLOPE=0.0543    K=3.0
COMPUTE NM HYD      ID=2   HYD NO=SP206   DA=0.05864 SQ MI
                PER A=23 PER B=25.1  PER C=18  PER D=33.9
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
*
* Total Flow from Basin (PondSP4Rt + SP206)
ADD HYD         ID=1  HYD NO=SP206SUM ID I=1   ID II=2
PRINT HYD       ID=1   CODE=1
*
```

```
*
****Route Hyd SP206SUM through PondSP6
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondSP6  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                          0                 0                        5317
                          11                0.25                     5318
                          39                0.50                     5319
                          82                1.00                     5320
                          132               1.50                     5321
                          181               2.50                     5322
                          216               3.50                     5323
                          248               5.00                     5324
                          275               7.00                     5325
                          300               9.60                     5326
*
*
****Route HYD PondSP6 to PONDSP7 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                        DIA=66 IN   N=0.013
*
ROUTE MCUNGE            ID=1  HYD NO=SPBASIN  INFLOW ID=30
                  DT=0 HR  LENGTH=650 FT
                  NS=0  SLOPE=0.010
*
PRINT HYD         ID=1   CODE=1
*
*
*** Sub-BASIN SP207 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                  NK=3   ISLOPE=1
                        LENGTH=400 FT  SLOPE=0.1300    K=0.7
                        LENGTH=1600 FT  SLOPE=0.0688    K=2.0
                        LENGTH=2620 FT  SLOPE=0.0466    K=3.0
COMPUTE NM HYD          ID=2   HYD NO=SP207   DA=0.18178 SQ MI
                  PER A=51.6 PER B=35.8  PER C=4.4  PER D=8.2
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=2   CODE=1
*
*
* Total Flow from Basin (PONDSP6RT + SP207)
ADD HYD           ID=1  HYD NO=SP207SUM ID I=1   ID II=2
PRINT HYD         ID=1   CODE=1
*
*
```

```
*****Route Hyd SP207SUM through PondSP7
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondSP7  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                          0                  0                  5129
                          0.1                0.90               5130
                          0.15               1.81               5131
                          0.20               2.71               5132
                          0.25               3.62               5133
                          0.30               4.52               5134
                          0.35               5.42               5135
                          0.4                6.33               5136
                          100                7.5                5137
                          500                8.1                5138
*
****Route HYD PONDSP7 to Sub-Basin SP209
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                          CH SLP=0.010  FP SLP=0.02 N=0.035
                          DIST=35 FT

                          DIST  ELEV
               0      105
                          15         100
                          20         100
                          35         105
*
ROUTE MCUNGE              ID=1  HYD NO=PONDSP7RT  INFLOW ID=30
                    DT=0 HR  LENGTH=200 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SP208 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                          LENGTH=400 FT  SLOPE=0.1250    K=0.7
                          LENGTH=1600 FT  SLOPE=0.0688    K=2.0
                          LENGTH=3140 FT  SLOPE=0.0446    K=3.0
COMPUTE NM HYD            ID=2   HYD NO=SP208   DA=0.13653 SQ MI
                    PER A=76.1 PER B=21.4  PER C=0.9  PER D=1.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
```

```
*
* Total Flow from Basin (SP207SUM + SP208)
ADD HYD             ID=1  HYD NO=SP208SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*****Route Hyd SP208SUM through PondSP8
*
ROUTE RESERVOIR                     ID=30  HYD NO=PondSP8  INFLOW ID=1  CODE=1
                              OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                              0                  0                    5129
                              5.5                      1.40                 5130
                              20.1                     2.86                 5131
                              44.0                     4.41                 5132
                              72.7                     6.02                 5133
                              104.4                    7.72                 5134
                              136.7                    9.50                 5135
                              159.6                    11.4                 5136
                              178.4                    13.3                 5137
                              195.4                    15.3                 5138
                              211.1                    17.5                 5139
*
*
****Route HYD PondSP6 to PONDSP7 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                              DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=1  HYD NO=PONDSP8RT  INFLOW ID=30
                        DT=0 HR  LENGTH=800 FT
                        NS=0  SLOPE=0.010
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN SP209 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                        NK=3   ISLOPE=1
                              LENGTH=400 FT  SLOPE=0.1125    K=0.7
                              LENGTH=1600 FT  SLOPE=0.0675    K=2.0
                              LENGTH=3330 FT  SLOPE=0.0390    K=3.0
COMPUTE NM HYD              ID=2   HYD NO=SP209   DA=0.12305 SQ MI
                        PER A=67.7 PER B=32.2  PER C=0  PER D=0
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
```

```
* Total Flow from Basin (SP208SUMRt + SP209)
ADD HYD             ID=41  HYD NO=SP209SUM ID I=2   ID II=1
PRINT HYD           ID=41   CODE=1
*
*
*S APSP1
*
*
*S*************************************************************************
*S**************   END OF SOUTH POWERLINE BASIN
*S*************************************************************************
*
*
*S*************************************************************************
*S**************   BORREGA BASIN
*S*************************************************************************
*
*
*** Sub-BASIN B201 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=620 FT  SLOPE=0.011  K=0.7
                               LENGTH=1860 FT  SLOPE=0.043  K=2.0
                               LENGTH=3205 FT  SLOPE=0.059  K=3.0
COMPUTE NM HYD              ID=1   HYD NO=B201   DA=0.18234 SQ MI
                    PER A=34.8 PER B=65.2  PER C=0  PER D=0
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD B201 to Sub-Basin B202SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                               CH SLP=0.010  FP SLP=0.005 N=0.030
                               DIST=20 FT

                               DIST  ELEV
          0          105
                               10         100
                               15         100
                               20         105
*
ROUTE MCUNGE                ID=2  HYD NO=B201RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1550 FT
                    NS=0  SLOPE=0.010
```

```
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN B202 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=340 FT  SLOPE=0.162  K=0.7
                               LENGTH=1495 FT  SLOPE=0.090  K=2.0
                               LENGTH=2825 FT  SLOPE=0.055  K=3.0
COMPUTE NM HYD              ID=1   HYD NO=B202   DA=0.22493 SQ MI
                    PER A=44.6 PER B=55.4  PER C=0  PER D=0
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (B201RT + B202)
ADD HYD             ID=1  HYD NO=B202SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD B202SUM to Sub-Basin B203.1SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                               CH SLP=0.005  FP SLP=0.005 N=0.030
                               DIST=20 FT

                               DIST  ELEV
                                 0          105
                               10          100
                               15          100
                               20          105
*
ROUTE MCUNGE                ID=2  HYD NO=B202SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=350 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN B203.1 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=520 FT  SLOPE=0.085  K=0.7
```

```
                    LENGTH=2660 FT  SLOPE=0.057  K=2.0
COMPUTE NM HYD      ID=1   HYD NO=B203.1   DA=0.11117 SQ MI
               PER A=60.6 PER B=39.4  PER C=0  PER D=0
               TP=0.0   MASSRAIN=-1
*
PRINT HYD      ID=1   CODE=1
*
*
* Total Flow from Basin (B202SUMRT + B203.1)
ADD HYD        ID=1  HYD NO=B203.1SUM ID I=2   ID II=1
PRINT HYD      ID=1   CODE=1
*
*
****Route HYD B203.1SUM to Sub-Basin B204
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
               MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.005  FP SLP=0.005 N=0.013
                    DIST=20 FT

                    DIST  ELEV
                      0     105
                    10      100
                    15      100
                    20      105
*
ROUTE MCUNGE        ID=2  HYD NO=B203.1SUMRT  INFLOW ID=1
               DT=0 HR  LENGTH=160 FT
               NS=0  SLOPE=0.005
*
PRINT HYD      ID=2   CODE=1
*
*
*** Sub-BASIN B203.2 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
               NK=1   ISLOPE=1
               LENGTH=2515 FT  SLOPE=0.008  K=4.0
COMPUTE NM HYD      ID=1   HYD NO=B203.2   DA=0.02067 SQ MI
               PER A=56.2 PER B=15.6  PER C=10 PER D=18.2
               TP=0.0   MASSRAIN=-1
*
PRINT HYD      ID=1   CODE=1
*
*
* Total Flow from Basin (B203.1SUMRT + B203.2)
ADD HYD        ID=1  HYD NO=B203.2SUM ID I=2   ID II=1
PRINT HYD      ID=1   CODE=1
```

```
*S APB1
*
*
****Route HYD B203.2SUM to HYD B206SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.005  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                         0      105
                                10      100
                                15      100
                                20      105
*
ROUTE MCUNGE            ID=10  HYD NO=B203.2SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1030FT
                        NS=0  SLOPE=0.005
*
PRINT HYD               ID=10   CODE=1
*
*
*******************************************************************************************
*
*
*** Sub-BASIN B204 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=3   ISLOPE=1
                        LENGTH=290 FT  SLOPE=0.134  K=0.7
                                LENGTH=1670 FT  SLOPE=0.063  K=2.0
                                LENGTH=1685 FT  SLOPE=0.053  K=3.0
COMPUTE NM HYD          ID=1   HYD NO=B204   DA=0.23622 SQ MI
                        PER A=37.4 PER B=62.6  PER C=0  PER D=0
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
****Route HYD B204 to Sub-Basin B205SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.010  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                                 0      105
```

```
                    10          100
                    15          100
                    20          105
*
ROUTE MCUNGE        ID=2  HYD NO=NE204RT  INFLOW ID=1
                DT=0 HR  LENGTH=3290 FT
                NS=0  SLOPE=0.010
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN B205 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=3   ISLOPE=1
                LENGTH=535 FT  SLOPE=0.079  K=0.7
                    LENGTH=1320 FT  SLOPE=0.045  K=2.0
                    LENGTH=1585 FT  SLOPE=0.038  K=3.0
COMPUTE NM HYD      ID=1   HYD NO=B205   DA=0.10595 SQ MI
                PER A=87.4 PER B=12.6  PER C=0  PER D=0
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
* Total Flow from Basin (B204RT + B205)
ADD HYD         ID=1  HYD NO=B205SUM ID I=2   ID II=1
PRINT HYD       ID=1   CODE=1
*S APB2
*
*
****Route Hyd SV205SUM through PondB1
*
ROUTE RESERVOIR             ID=30  HYD NO=PondB1  INFLOW ID=1  CODE=1
                    OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
            0                   0               5018
            10.0                0.5             5019
            37.1                1.5             5020
            76.1                2.5             5021
            120.3               3.5             5022
            156.9               4.5             5023
            185.6               6.0         5024
*
*
****Route HYD B205SUM to B206SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.007
                    DIA=60 IN   N=0.013
```

```
*
ROUTE MCUNGE              ID=1  HYD NO=RB205SUMRT  INFLOW ID=30
                      DT=0 HR  LENGTH=945 FT
                      NS=0  SLOPE=0.007
*
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (B203.2SUMRT + B205SUMRT)
ADD HYD            ID=1  HYD NO=B206SUMA ID I=10   ID II=1
PRINT HYD          ID=1   CODE=1
*
*
*** Sub-BASIN B206 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                      NK=2   ISLOPE=1
                      LENGTH=620 FT  SLOPE=0.040  K=1.0
                                 LENGTH=870 FT  SLOPE=0.036  K=3.0
COMPUTE NM HYD             ID=2   HYD NO=B206   DA=0.02796 SQ MI
                      PER A=0 PER B=20  PER C=20  PER D=60
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
*
* Total Flow from Basin (B206SUMA + B206)
ADD HYD            ID=1  HYD NO=B206SUMB ID I=1   ID II=2
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD B206SUM to Sub-Basin B209SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                      MIN ELEV=100 FT MAX ELEV=105 FT
                                 CH SLP=0.037  FP SLP=0.005 N=0.030
                                 DIST=20 FT

                                 DIST  ELEV
                       0         105
                                 10          100
                                 15          100
                                 20          105
*
ROUTE MCUNGE              ID=2  HYD NO=B206SUMRT  INFLOW ID=1
                      DT=0 HR  LENGTH=780 FT
                      NS=0  SLOPE=0.037
*
```

```
PRINT HYD           ID=2   CODE=1
*
*
**************************************************************************
*
*** Sub-BASIN B207 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=530 FT  SLOPE=0.049  K=0.7
                               LENGTH=1490 FT  SLOPE=0.032  K=2.0
                               LENGTH=895 FT  SLOPE=0.018  K=3.0
COMPUTE NM HYD              ID=1   HYD NO=B207   DA=0.08667 SQ MI
                    PER A=0 PER B=25  PER C=25  PER D=50
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD B207 to B208 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.010
                               DIA=54 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=RB207RT  INFLOW ID=1
                    DT=0 HR  LENGTH=2100 FT
                    NS=0  SLOPE=0.010
*
PRINT HYD           ID=3   CODE=1
*
*
*** Sub-BASIN B208 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=370 FT  SLOPE=0.043  K=0.7
                               LENGTH=1690 FT  SLOPE=0.038  K=2.0
                               LENGTH=590 FT  SLOPE=0.017  K=3.0
COMPUTE NM HYD              ID=1   HYD NO=B208   DA=0.07574 SQ MI
                    PER A=0.7 PER B=24.9  PER C=25.9  PER D=48.5
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (B207RT + B208)
ADD HYD             ID=1  HYD NO=B208SUM ID I=3   ID II=1
PRINT HYD           ID=1   CODE=1
```

```
*
*
* Total Flow from Basin (B206SUMBRT + B208SUM)
ADD HYD             ID=1  HYD NO=B209SUMA ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN B209 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=345 FT  SLOPE=0.048  K=1.0
                               LENGTH=980 FT  SLOPE=0.026  K=3.0
COMPUTE NM HYD              ID=2   HYD NO=B209   DA=0.05388 SQ MI
                    PER A=16.7 PER B=22.9  PER C=23.3  PER D=37.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (B209SUMA + B209)
ADD HYD             ID=1  HYD NO=B209SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APB3
*
*
****Route HYD B209SUMB to Sub-Basin B211.1SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                               CH SLP=0.027  FP SLP=0.005 N=0.030
                               DIST=20 FT

                               DIST  ELEV
                     0         105
                               10        100
                               15        100
                               20        105
*
ROUTE MCUNGE                ID=2  HYD NO=B209SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1945 FT
                    NS=0  SLOPE=0.027
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN B211.1 ****
*
```

```
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=375 FT  SLOPE=0.035  K=0.7
                               LENGTH=1335 FT  SLOPE=0.031  K=2.0
COMPUTE NM HYD              ID=1   HYD NO=B211.1   DA=0.06114 SQ MI
                    PER A=0 PER B=25  PER C=26.0  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (B209SUMBRT + B211.1)
ADD HYD             ID=1  HYD NO=B211.1SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD B211.1SUM to Sub-Basin B211.2SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                               CH SLP=0.027  FP SLP=0.005 N=0.030
                               DIST=20 FT

                               DIST  ELEV
                                 0          105
                               10          100
                               15          100
                               20          105
*
ROUTE MCUNGE                ID=2  HYD NO=B211.1SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=410 FT
                    NS=0  SLOPE=0.027
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN B210 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                    LENGTH=415 FT  SLOPE=0.041  K=0.7
                               LENGTH=1535 FT  SLOPE=0.027  K=2.0
                               LENGTH=685 FT  SLOPE=0.022  K=3.0
COMPUTE NM HYD              ID=1   HYD NO=B210   DA=0.09574 SQ MI
                    PER A=0 PER B=25.0  PER C=26.0  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
```

```
*
*
* Total Flow from Basin (B211.1SUMRT + B210)
ADD HYD             ID=1  HYD NO=B211.2SUMA ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD B211.2SUMA to Sub-Basin B211.2SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.027  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                         0      105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=2  HYD NO=B211.2SUMART  INFLOW ID=1
                        DT=0 HR  LENGTH=1635 FT
                        NS=0  SLOPE=0.027
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN B211.2 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=575 FT  SLOPE=0.030  K=0.7
                                LENGTH=1365 FT  SLOPE=0.023  K=2.0
COMPUTE NM HYD                  ID=1   HYD NO=B211.2   DA=0.03788 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (B211.2SUMART + B211.2)
ADD HYD             ID=10  HYD NO=B211.2SUMB ID I=2   ID II=1
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*** Sub-BASIN B213.1 ****
```

```
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=390 FT  SLOPE=0.038  K=0.7
                              LENGTH=1725 FT  SLOPE=0.031  K=2.0
COMPUTE NM HYD             ID=1   HYD NO=B213.1   DA=0.06111 SQ MI
                    PER A=0 PER B=25  PER C=25.8  PER D=49.2
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD B213.1 to Sub-Basin B213.2SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.022  FP SLP=0.005 N=0.030
                              DIST=20 FT

                              DIST  ELEV
                     0        105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE               ID=2  HYD NO=B213.1RT  INFLOW ID=1
                    DT=0 HR  LENGTH=460 FT
                    NS=0  SLOPE=0.022
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN B213.2 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=310 FT  SLOPE=0.039  K=1.0
COMPUTE NM HYD             ID=1   HYD NO=B213.2   DA=0.01461 SQ MI
                    PER A=0 PER B=25  PER C=26  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (B213.1RT + B213.2)
ADD HYD            ID=1  HYD NO=B213.2SUM ID I=2   ID II=1
PRINT HYD          ID=1   CODE=1
*
```

```
*
****Route HYD B213.2SUM to Sub-Basin B213.3
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.025  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                         0      105
                                10      100
                                15      100
                                20      105
*
ROUTE MCUNGE            ID=2  HYD NO=B213.2SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=2280 FT
                        NS=0  SLOPE=0.025
*
PRINT HYD               ID=2   CODE=1
*
*
*** Sub-BASIN B213.3 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=275 FT  SLOPE=0.022  K=0.7
                                LENGTH=1845 FT  SLOPE=0.030  K=2.0
COMPUTE NM HYD          ID=1   HYD NO=B213.3   DA=0.06698 SQ MI
                        PER A=0 PER B=25  PER C=26  PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (B213.2SUMRT + B213.3)
ADD HYD                 ID=1  HYD NO=B215SUM ID I=2   ID II=1
PRINT HYD               ID=1   CODE=1
*
*
****Route HYD B213.3SUM to Sub-Basin B213.6SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.025  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                         0      105
                                10      100
```

```
                    15          100
                    20          105
*
ROUTE MCUNGE        ID=2  HYD NO=B213.3SUMRT  INFLOW ID=1
                DT=0 HR  LENGTH=1235 FT
                NS=0  SLOPE=0.025
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN B213.4 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=2   ISLOPE=1
                LENGTH=460 FT  SLOPE=0.030  K=0.7
                    LENGTH=950 FT  SLOPE=0.029  K=2.0
COMPUTE NM HYD      ID=1   HYD NO=B213.1   DA=0.02317 SQ MI
                PER A=0 PER B=25  PER C=26  PER D=49
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD B213.4 to Sub-Basin B213.5SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.025  FP SLP=0.005 N=0.030
                    DIST=20 FT

                    DIST  ELEV
                 0          105
                    10          100
                    15          100
                    20          105
*
ROUTE MCUNGE        ID=3  HYD NO=B213.4RT  INFLOW ID=1
                DT=0 HR  LENGTH=2155 FT
                NS=0  SLOPE=0.025
*
PRINT HYD       ID=3   CODE=1
*
*
* Total Flow from Basin (B213.4RT + B213.5)
ADD HYD         ID=1  HYD NO=B213.5SUMA ID I=2   ID II=3
PRINT HYD       ID=1   CODE=1
*
*
```

```
*** Sub-BASIN B213.5 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                     LENGTH=365 FT  SLOPE=0.027  K=0.7
                              LENGTH=1940 FT  SLOPE=0.027  K=2.0
COMPUTE NM HYD             ID=2   HYD NO=B213.5   DA=0.07883 SQ MI
                     PER A=0 PER B=25  PER C=26  PER D=49
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
*
* Total Flow from Basin (B213.4RT + B213.5)
ADD HYD            ID=1  HYD NO=B213.5SUMB ID I=1   ID II=2
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD B213.5SUMB to Sub-Basin B213.6SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.025  FP SLP=0.005 N=0.030
                              DIST=20 FT

                              DIST  ELEV
                      0       105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE               ID=2  HYD NO=B213.5SUMBRT  INFLOW ID=1
                     DT=0 HR  LENGTH=820 FT
                     NS=0  SLOPE=0.025
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN B213.6 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=2   ISLOPE=1
                     LENGTH=625 FT  SLOPE=0.024  K=1.0
                              LENGTH=1100 FT  SLOPE=0.021  K=2.0
COMPUTE NM HYD             ID=1   HYD NO=B213.6   DA=0.05793 SQ MI
                     PER A=0 PER B=25  PER C=26  PER D=49
                     TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (B213.5SUMBRT + B213.6)
ADD HYD             ID=1  HYD NO=B213.6SUMB ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (B211.2SUMB + B213.6SUM)
ADD HYD             ID=1  HYD NO=B213.6SUMC ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*S APB4
*
*
****Route HYD B213.6SUMC to Sub-Basin B212SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.027  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                         0      105
                                10      100
                                15      100
                                20      105
*
ROUTE MCUNGE                    ID=10  HYD NO=B213.6SUMCRT  INFLOW ID=1
                        DT=0 HR  LENGTH=690 FT
                        NS=0  SLOPE=0.027
*
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*
*** Sub-BASIN B211.3 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=750 FT  SLOPE=0.027  K=0.7
                                LENGTH=1305 FT  SLOPE=0.035  K=2.0
COMPUTE NM HYD          ID=1   HYD NO=B211.3   DA=0.04871 SQ MI
                        PER A=27.8 PER B=20  PER C=20.8  PER D=31.4
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
```

```
*
*
****Route HYD B211.3 to Sub-Basin B211.4SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.033  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
                         0      105
                                10      100
                                15      100
                                20      105
*
ROUTE MCUNGE            ID=2  HYD NO=B211.3RT  INFLOW ID=1
                        DT=0 HR  LENGTH=2450 FT
                        NS=0  SLOPE=0.033
*
PRINT HYD               ID=2   CODE=1
*
*
*** Sub-BASIN B211.4 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=3   ISLOPE=1
                        LENGTH=400 FT  SLOPE=0.068  K=0.7
                                LENGTH=1310 FT  SLOPE=0.037  K=2.0
                                LENGTH=2010 FT  SLOPE=0.031  K=3.0
COMPUTE NM HYD          ID=1   HYD NO=B211.4   DA=0.17820 SQ MI
                        PER A=24.5 PER B=18.9  PER C=19.6  PER D=37
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (B211.3RT + B211.4)
ADD HYD                 ID=1 HYD NO=BB211.4SUM ID I=2   ID II=1
PRINT HYD               ID=1   CODE=1
*
*
****Route HYD B211.4SUM to Sub-Basin B211.5SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.017  FP SLP=0.005 N=0.030
                                DIST=20 FT

                                DIST  ELEV
```

```
                    0          105
                               10          100
                               15          100
                               20          105
*
ROUTE MCUNGE                   ID=2  HYD NO=B211.4SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=2365 FT
                    NS=0  SLOPE=0.017
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN B211.5 ****
*
COMPUTE LT TP                  LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=890 FT  SLOPE=0.057  K=0.7
                               LENGTH=890 FT  SLOPE=0.028  K=2.0
COMPUTE NM HYD                 ID=1   HYD NO=B211.5   DA=0.04923 SQ MI
                    PER A=0 PER B=25  PER C=26  PER D=49
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (B211.4SUMRT + B211.5)
ADD HYD             ID=1  HYD NO=B211.5SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (B213.6SUMCRT + B211.5SUM)
ADD HYD             ID=1  HYD NO=B212SUMA ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN B212 ****
*
COMPUTE LT TP                  LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=650 FT  SLOPE=0.022  K=1.0
COMPUTE NM HYD                 ID=2   HYD NO=B212   DA=0.08048 SQ MI
                    PER A=38.8 PER B=16.7  PER C=17.2  PER D=27.4
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
```

```
* Total Flow from Basin (B212SUMA + B212)
ADD HYD             ID=1  HYD NO=B212SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*S
*S ***********       BORREGA DETENTION DAM       **************
*S
*
****Route Hyd B212sumB through BORREGA POND
*
ROUTE RESERVOIR                 ID=30  HYD NO=PONDBOR  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                          0                  0                    4985
                          0.4                2.02                 4986
                          4                  7.94                 4987
                          8                  14.10                4988
                          14                 20.51                4989
                          24                 27.17                4990
                          36                 34.08                4991
                          49                 41.78                4992
                          69                 50.84                4993
                          163                61.26                4994
                          174                73.20                4995
                          184                86.10                4996
                          191                99.30                4997
                          225                100.64               4997.1
                          1252               112.80               4998
                          3176               126.55               4999
*
*
****Route HYD PondB2 to Sub-Basin RB212
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                          CH SLP=0.020  FP SLP=0.04 N=0.035
                          DIST=50 FT

                          DIST  ELEV
                0     105
                          15          100
                          35          100
                          50          105
*
ROUTE MCUNGE              ID=61  HYD NO=BBASIN  INFLOW ID=30
                    DT=0 HR  LENGTH=2520 FT
                    NS=0  SLOPE=0.020
*
```

```
PRINT HYD          ID=61   CODE=1
*
*
*S*************************************************************************
*S**************   END OF BORREGA BASIN
*S*************************************************************************
*
*
*S*************************************************************************
*S**************   RIO BRAVO BASIN
*S*************************************************************************
*
*
*** Sub-BASIN RB201 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                           LENGTH=400 FT  SLOPE=0.048    K=0.7
                           LENGTH=1555 FT  SLOPE=0.043    K=2.0
                           LENGTH=1965 FT  SLOPE=0.010    K=3.0
COMPUTE NM HYD             ID=1   HYD NO=RB201   DA=0.13686 SQ MI
                    PER A=0 PER B=0.3  PER C=94.1  PER D=5.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD RB201 to RB202SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                           DIA=60 IN   N=0.013
*
ROUTE MCUNGE               ID=2  HYD NO=RB201RT  INFLOW ID=1
                    DT=0 HR  LENGTH=980 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD          ID=2   CODE=1
*
*
*** Sub-BASIN RB202 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                           LENGTH=1328 FT  SLOPE=0.033    K=1.0
                           LENGTH=1935 FT   SLOPE=0.015    K=3.0
COMPUTE NM HYD             ID=1   HYD NO=RB202   DA=0.13037 SQ MI
                    PER A=6.2 PER B=17.4  PER C=23.4  PER D=53.1
                    TP=0.0   MASSRAIN=-1
```

```
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (RB201RT + RB202)
ADD HYD              ID=1  HYD NO=RB202SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
****Route Hyd RB202SUM through PondRB1
*
ROUTE RESERVOIR                    ID=30  HYD NO=PondRB1  INFLOW ID=1  CODE=1
                              OUTFLOW (CFS)      STORAGE (AC FT)              ELEV
                              0                  0                    5134
                              4.5                      1.918                5135
                              16                 3.918                5136
                              32                       6.002                5137
                              50                 8.171                5138
                              62                       10.428               5139
                              71                 12.774               5140
                              79                       15.209               5141

*
*
****Route HYD PondRB1 to RB205.1 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                              DIA=30 IN   N=0.013
*
ROUTE MCUNGE                  ID=10  HYD NO=PondRB1RT  INFLOW ID=30
                         DT=0 HR  LENGTH=3405 FT
                         NS=0  SLOPE=0.01
*
PRINT HYD            ID=10   CODE=1
*
*
*************************************************************************
*
*
****Route HYD SPBASIN to Sub-Basin RB203
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                         MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.037  FP SLP=0.04 N=0.035
                              DIST=50 FT

                              DIST  ELEV
                   0      105
                              15          100
```

```
                              35          100
                              50          105
*
ROUTE MCUNGE                  ID=1  HYD NO=SPBASINRT  INFLOW ID=41
                      DT=0 HR  LENGTH=1210 FT
                      NS=0  SLOPE=0.037
*
PRINT HYD             ID=1   CODE=1
*
*
*** Sub-BASIN RB203 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                              LENGTH=1898 FT  SLOPE=0.026    K=1.0
COMPUTE NM HYD                ID=2   HYD NO=RB203   DA=0.04593 SQ MI
                      PER A=0 PER B=5.2  PER C=5.2  PER D=89.6
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=2   CODE=1
*
*
* Total Flow from Basin (SPBASINRT + RB203)
ADD HYD               ID=1  HYD NO=RB203SUM ID I=1   ID II=2
PRINT HYD             ID=1   CODE=1
*
*
****Route HYD RB203SUM to RB204 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.04
                              DIA=60 IN   N=0.013
*
ROUTE MCUNGE                  ID=2  HYD NO=RB203SUMRT  INFLOW ID=1
                      DT=0 HR  LENGTH=965 FT
                      NS=0  SLOPE=0.04
*
PRINT HYD             ID=2   CODE=1
*
*
*** Sub-BASIN RB204 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                      NK=2   ISLOPE=1
                              LENGTH=1140 FT  SLOPE=0.039    K=1.0
                              LENGTH=2556 FT   SLOPE=0.02    K=3.0
COMPUTE NM HYD                ID=1   HYD NO=RB204   DA=0.11728 SQ MI
                      PER A=4.1 PER B=11.6  PER C=53  PER D=31.4
                      TP=0.0   MASSRAIN=-1
```

```
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (RB203SUMRT + RB204)
ADD HYD             ID=1  HYD NO=RB204SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APRB1
*
*
****Route HYD RB204SUM to Sub-Basin RB205.1SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.035  FP SLP=0.04 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                  0     105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=2  HYD NO=RB204SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1724 FT
                        NS=0  SLOPE=0.035
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (PONDRB1RT + RB204SUMRT )
ADD HYD             ID=1  HYD NO=RB204SUM ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
**** Sub-BASIN RB205.1 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=410 FT  SLOPE=0.017    K=1.0
                                LENGTH=2880 FT SLOPE=0.02    K=3.0
COMPUTE NM HYD                  ID=2   HYD NO=RB205.1   DA=0.10519 SQ MI
                        PER A=0 PER B=28.7  PER C=28.7  PER D=42.6
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
```

```
* Total Flow from Basin (PONDRB1RT + RB205.1)
ADD HYD             ID=1  HYD NO=RB205.1SUMA ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APRB2
*
*
****Route HYD RB205.1SUMB to Sub-Basin RB206.2SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.035  FP SLP=0.04 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=2  HYD NO=RB205.1SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=2725 FT
                        NS=0  SLOPE=0.035
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN RB206.1 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=1100 FT  SLOPE=0.027    K=1.0
                                LENGTH=1325 FT  SLOPE=0.020    K=3.0
COMPUTE NM HYD                  ID=1   HYD NO=RB106   DA=0.06997 SQ MI
                        PER A=0 PER B=21.3  PER C=21.8  PER D=56.9
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD RB206.1SUM to RB206.2SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.012
                                DIA=48 IN   N=0.013
*
ROUTE MCUNGE                    ID=3  HYD NO=RB206.1SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=2005 FT
                        NS=0  SLOPE=0.012
*
PRINT HYD           ID=3   CODE=1
```

```
*
*
* Total Flow from Basin (RB205.1RT + RB206.1RT)
ADD HYD             ID=1  HYD NO=RB205.1SUMA ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN RB206.2 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=3   ISLOPE=1
                               LENGTH=1580 FT  SLOPE=0.025    K=1.0
                               LENGTH=420 FT  SLOPE=0.020    K=3.0
                               LENGTH=1665 FT  SLOPE=0.024    K=4.0
COMPUTE NM HYD              ID=2   HYD NO=RB206.2   DA=0.12568 SQ MI
                    PER A=0 PER B=22.2  PER C=23.1  PER D=54.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (RB206.1SUMRT + RB206.2)
ADD HYD             ID=1  HYD NO=RB206.2SUMA ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APRB3
*
*
*** Sub-BASIN RB207.1 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=1950 FT  SLOPE=0.011    K=1.0
                               LENGTH=275 FT   SLOPE=0.020    K=3.0
COMPUTE NM HYD              ID=2   HYD NO=RB207.1   DA=0.06566 SQ MI
                    PER A=0 PER B=18  PER C=18  PER D=64
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (RB206.2SUMBRt + RB207.1)
ADD HYD             ID=1  HYD NO=RB207.1SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APRB4
*
*
****Route HYD RB207.1SUM to Sub-Basin RB209.1SUMB
```

```
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.035  FP SLP=0.04 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE            ID=10  HYD NO=RB207.1SUMRt  INFLOW ID=1
                        DT=0 HR  LENGTH=1505 FT
                        NS=0  SLOPE=0.035
*
PRINT HYD               ID=10   CODE=1
*
*
*************************************************************************
*
*
****Route HYD AMOLEDAM to Sub-Basin RB208
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.023  FP SLP=0.04 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE            ID=1  HYD NO=AMOLEDAMRt  INFLOW ID=94
                        DT=0 HR  LENGTH=2050 FT
                        NS=0  SLOPE=0.023
*
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN RB208 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                                LENGTH=3400 FT  SLOPE=0.017    K=2.0
                                LENGTH=1000 FT   SLOPE=0.005    K=3.0
COMPUTE NM HYD          ID=2   HYD NO=RB208   DA=0.16716 SQ MI
```

```
                    PER A=39.6 PER B=12.2  PER C=12.3  PER D=35.9
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (AMOLEDAMRt + RB208)
ADD HYD             ID=1  HYD NO=RB208SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD RB208SUM to Sub-Basin RB209.1
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                            CH SLP=0.023  FP SLP=0.04 N=0.035
                            DIST=50 FT

                            DIST  ELEV
                0       105
                            15          100
                            35          100
                            50          105
*
ROUTE MCUNGE                ID=2  HYD NO=RB208SUMRt  INFLOW ID=1
                    DT=0 HR  LENGTH=1688 FT
                    NS=0  SLOPE=0.023
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (RB207.1SUMRt + RB208SUMRT)
ADD HYD             ID=1  HYD NO=RB209.1SUMB ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN RB209.1 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                            LENGTH=1675 FT  SLOPE=0.010    K=2.0
                            LENGTH=1130 FT   SLOPE=0.022    K=3.0
COMPUTE NM HYD              ID=2   HYD NO=RB209.1   DA=0.06158 SQ MI
                    PER A=23.7 PER B=28.4  PER C=29.1  PER D=18.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
```

```
*
* Total Flow from Basin (RB208SUMRt + RB209.1)
ADD HYD             ID=1  HYD NO=RB109SUMA ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD RB209.1 to Sub-Basin RB209.2
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.007  FP SLP=0.04 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=10  HYD NO=RB209.1SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=190 FT
                        NS=0  SLOPE=0.007
*
PRINT HYD           ID=10   CODE=1
*
*
*************************************************************************
*
**** Sub-BASIN RB205.2 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=3820 FT  SLOPE=0.025    K=2.0
COMPUTE NM HYD                  ID=1   HYD NO=RB205.2   DA=0.01722 SQ MI
                        PER A=0 PER B=25  PER C=25.4 PER D=49.6
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD RB205.2 to Sub-Basin RB206.3SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.003  FP SLP=0.04 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                0       105
```

```
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=2  HYD NO=RB205.2RT  INFLOW ID=1
                        DT=0 HR  LENGTH=2735 FT
                        NS=0  SLOPE=0.003
*
PRINT HYD               ID=2   CODE=1
*
**** Sub-BASIN RB206.3 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                                LENGTH=2735 FT  SLOPE=0.025    K=2.0
COMPUTE NM HYD                  ID=1   HYD NO=RB206.3   DA=0.01237 SQ MI
                        PER A=0 PER B=25  PER C=26 PER D=49
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (RB205.2Rt + RB206.3)
ADD HYD                 ID=1  HYD NO=RB206.3SUM ID I=2   ID II=1
PRINT HYD               ID=1   CODE=1
*
*
****Route HYD RB206.3SUM to Sub-Basin RB211SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.003  FP SLP=0.04 N=0.035
                                DIST=50 FT

                                DIST  ELEV
                    0       105
                                15          100
                                35          100
                                50          105
*
ROUTE MCUNGE                    ID=2  HYD NO=RB206.3SUMRT  INFLOW ID=1
                        DT=0 HR  LENGTH=830 FT
                        NS=0  SLOPE=0.003
*

PRINT HYD               ID=2   CODE=1
*
**** Sub-BASIN RB207.2 ****
```

```
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                             LENGTH=830 FT  SLOPE=0.025    K=2.0
COMPUTE NM HYD               ID=1   HYD NO=RB207.2   DA=0.00378 SQ MI
                      PER A=0 PER B=25  PER C=26 PER D=49
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (RB206.3SUMRT + RB207.2)
ADD HYD              ID=1  HYD NO=RB207.2SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
**** Sub-BASIN RB211 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                             LENGTH=1680 FT  SLOPE=0.012    K=2.0
COMPUTE NM HYD               ID=2   HYD NO=RB211   DA=0.04777 SQ MI
                      PER A=0 PER B=25  PER C=26 PER D=49
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (RB207.2 + RB211)
ADD HYD              ID=1  HYD NO=RB211SUMA ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
****Route HYD RB211SUMB to Sub-Basin RB209.2SUM
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                      MIN ELEV=100 FT MAX ELEV=105 FT
                             CH SLP=0.003  FP SLP=0.04 N=0.035
                             DIST=50 FT

                             DIST  ELEV
                  0      105
                             15          100
                             35          100
                             50          105
*
ROUTE MCUNGE                 ID=2  HYD NO=RB211SUMART  INFLOW ID=1
                      DT=0 HR  LENGTH=2010 FT
```

```
                    NS=0  SLOPE=0.003
*

PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (RB209.1SUMRt + RB211SUMART)
ADD HYD             ID=1  HYD NO=RB209SUMA ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
**** Sub-BASIN RB209.2 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                               LENGTH=2010 FT  SLOPE=0.025    K=2.0
COMPUTE NM HYD              ID=2   HYD NO=RB209.2   DA=0.01087 SQ MI
                    PER A=20.5 PER B=25.2  PER C=26 PER D=28.3
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (RB209.1SUMBRT + RB209.2)
ADD HYD             ID=1  HYD NO=RB209.2SUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*************************************************************************
*
*
*** Sub-BASIN RB212 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                               LENGTH=1745 FT  SLOPE=0.006    K=2.0
                               LENGTH=1300 FT  SLOPE=0.035    K=3.0
COMPUTE NM HYD              ID=2   HYD NO=RB212   DA=0.29207 SQ MI
                    PER A=24.6 PER B=21.8  PER C=22.5  PER D=31.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (BORREGA DAM + RB212)
ADD HYD             ID=2  HYD NO=RB212SUMA ID I=61   ID II=2
PRINT HYD           ID=2   CODE=1
```

```
*
*
* Total Flow from Basin (RB209.2SUMA + RB212SUMA)
ADD HYD              ID=1  HYD NO=RB212SUMB ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
*S**************************************************************************
*S**************   END OF RIO BRAVO BASIN
*S**************************************************************************
*S
*s ************        HUBBELL LAKE DETENTION BASIN        **************
*S
*
****Route Hyd RBBASIN through HUBBELL LAKE
*
ROUTE RESERVOIR                    ID=99  HYD NO=HUBBELLDAM  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)              ELEV
                          0                 15                  4919
                          0.1                       46                   4920
                          0.2                       79                   4921
                          10                        114                  4922
                          23                        150                  4923
                          30                        187                  4924
                          36                221                 4925
                          42                        257                  4926
                          46                        292                  4927
                          50                        328                  4928
                          52                        364                  4929
                          53                        400                  4930
                          54                440                 4931
                          55                        479                  4932
                          3774                      492                  4933
                          9508                      520                  4934
                          17172                     558                  4935
                          19854                     631                  4935.1
*
*
PRINT HYD            ID=99   CODE=1
*****DIVIDE 55 CFS Which is Max Outflow of Hubbell Dam before the Spillway
DIVIDE HYD                ID=99      Q=55       ID I=1   HYD NO=HUBBELLPRIME
                                                ID II=94  HYD NO=HUBBELLSPILL

PRINT HYD                 ID=1       CODE=1
PRINT HYD                 ID=94      CODE=1
*
FINISH
```

Original Amole Hubbell Update 2013
AHYMO Model by Wilson

100-Year Frequency, 6-Hour
Excerpts from the Summary Output File

Proposed Conditions

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) - Ver. S4.01a, Rel: 01a RUN DATE (MON/DAY/YR) =08/03/2020
INPUT FILE = C:\Farshad\West Central\AHYMO\Revised\Proposed\PHubbellDam 6hr.txt USER NO.= ParsonsB-NMSiteA94251872

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	PEAK AREA (SQ MI)	RUNOFF DISCHARGE (CFS)	VOLUME (AC-FT)	TIME TO RUNOFF (INCHES)	CFS PEAK (HOURS)	PAGE = 1 PER ACRE	NOTATION
*S "PROPOSED" CONDITION MODEL FOR AMOLE HUBBELL										
START							TIME=	0.00		
LOCATION	ALBUQUERQUE									
*S	RAINFALL DATA FROM NOAA ATLAS 14									
*S**********										
*S 100 YEAR 6HR STORM										
RAINFALL TYPE= 1 NOAA 14								RAIN6=	2.250	
SEDIMENT BULK								PK BF =	1.06	
*S**********										
*S**********	98TH AND CENTRAL BASIN									
*S**********										
COMPUTE NM HYD	NE202.1	-	1	0.08439	172.80	5.291	1.17549	1.533	3.199 PER IMP= 17.00	
ROUTE MCUNGE	NE202.1RT	1	2	0.08439	170.40	5.282	1.17367	1.567	3.155 CCODE = 0.1	
COMPUTE NM HYD	NE202.2	-	1	0.06185	126.52	3.878	1.17549	1.533	3.196 PER IMP= 17.00	
ADD HYD	NE202.2SUM	2& 1	1	0.14624	296.40	9.160	1.17444	1.533	3.167	
*S APNE3										
ROUTE MCUNGE	NE202.2SUMRt	1	2	0.14624	295.66	9.158	1.17415	1.567	3.159 CCODE = 0.2	
COMPUTE NM HYD	NE204	-	1	0.08938	183.06	5.603	1.17549	1.533	3.200 PER IMP= 17.00	
ADD HYD	NE204SUM	2& 1	1	0.23562	467.35	14.761	1.17466	1.567	3.099	
ROUTE MCUNGE	NE204SUMRT	1	10	0.23562	466.86	14.752	1.17391	1.567	3.096 CCODE = 0.1	
COMPUTE NM HYD	NE201.1	-	1	0.08463	173.30	5.306	1.17549	1.533	3.200 PER IMP= 17.00	
ROUTE MCUNGE	NE201.1RT	1	2	0.08463	171.13	5.298	1.17379	1.567	3.160 CCODE = 0.1	
COMPUTE NM HYD	NE201.2	-	1	0.04349	88.97	2.727	1.17549	1.533	3.196 PER IMP= 17.00	
ADD HYD	NE201.2SUMA	2& 1	1	0.12812	259.25	8.024	1.17436	1.533	3.162	

```
*S APNE1
ROUTE MCUNGE    NE201.2SUMAR   1    3      0.12812      256.54      8.000     1.17073    1.600    3.129 CCODE =     0.1
ADD HYD         NE208SUMA 10& 3   1      0.36374      721.39     22.752     1.17279    1.600    3.099
COMPUTE NM HYD      NE208   -    2      0.10104      197.57      6.433     1.19369    1.533    3.055 PER IMP=  18.60
ADD HYD         NE208SUMB  1& 2   1      0.46478      906.52     29.184     1.17733    1.567    3.048
*S APNE2
ROUTE MCUNGE    NE208SUMBRt    1   10      0.46478      906.52     29.184     1.17733    1.567    3.048 CCODE =     0.0
COMPUTE NM HYD      NE205.1   -    1      0.07464      152.77      4.679     1.17549    1.533    3.198 PER IMP=  17.00
ROUTE MCUNGE      NE205.1RT    1    2      0.07464      150.12      4.669     1.17290    1.567    3.143 CCODE =     0.1
COMPUTE NM HYD      NE205.2   -    1      0.06038      123.59      3.790     1.17683    1.533    3.198 PER IMP=  17.12
ADD HYD         NE205.2SUM  1& 2   1      0.13502      266.04      8.459     1.17465    1.567    3.079
ROUTE MCUNGE    NE205.2SUMRT    1    2      0.13502      262.30      8.446     1.17285    1.600    3.035 CCODE =     0.1
COMPUTE NM HYD      NE206   -    1      0.04398      114.85      4.143     1.76617    1.533    4.081 PER IMP=  69.03
ADD HYD          NE206SUM  2& 1   1      0.17900      367.45     12.588     1.31862    1.567    3.207
*S APNE4
ROUTE MCUNGE     NE206SUMRT    1    2      0.17900      365.02     12.588     1.31852    1.567    3.186 CCODE =     0.2
ADD HYD         NE211SUMA 10& 2   1      0.64378     1271.54     41.772     1.21659    1.567    3.086
ROUTE RESERVOIR     PondNE2    1   40      0.64378       30.30     41.772     1.21659    2.600    0.074 AC-FT=   37.605
*S  RATING CURVE FROM PLAN SET ADN SD FACILITIES
*S  TB DRAINAGE FACILITIES PHASE IIIC JUNE 1995
COMPUTE NM HYD      NE210   -    1      0.09526      216.65      8.413     1.65584    1.567    3.554 PER IMP=  59.30
ROUTE MCUNGE       NE210RT    1    2      0.09526      215.34      8.405     1.65428    1.567    3.532 CCODE =     0.1
COMPUTE NM HYD      NE211   -    1      0.07784      186.95      6.614     1.59321    1.533    3.753 PER IMP=  57.40
ADD HYD         PondNE3SUM  2& 1   1      0.17310      391.00     15.019     1.62681    1.533    3.529
ADD HYD         NE211SUMB 40& 1   1      0.81688      408.71     56.790     1.30351    1.567    0.782
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ROUTE RESERVOIR     PondNE3    1   41      0.81688       21.27     56.790     1.30351   13.232    0.041 AC-FT=   21.139
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*S**************************************************************************
*S************      END OF 98TH AND CENTRAL BASIN
*S**************************************************************************
*S**************************************************************************
*S**********       UNSER-214 BASIN
*S**************************************************************************
COMPUTE NM HYD       U202.2  -    1      0.04661      104.70      3.755     1.51066    1.533    3.510 PER IMP=  56.00
ROUTE MCUNGE     U202.2SUMRT    1    2      0.04661      103.84      3.748     1.50777    1.567    3.481 CCODE =     0.1
COMPUTE NM HYD        U201   -    1      0.03522       99.89      3.748     1.99549    1.500    4.431 PER IMP=  89.19
ADD HYD           U201SUM  2& 1   1      0.08183      195.86      7.496     1.71768    1.567    3.740
ROUTE RESERVOIR      PondU6    1   30      0.08183       51.96      7.496     1.71768    1.866    0.992 AC-FT=    4.094
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE MCUNGE       PONDU6Rt   30    2      0.08183       51.95      7.496     1.71758    1.900    0.992 CCODE =     0.2
COMPUTE NM HYD       U202.1   -    1      0.06636      176.49      6.552     1.85136    1.533    4.156 PER IMP=  79.20
ROUTE RESERVOIR      PondU5    1   30      0.06636      118.53      6.552     1.85135    1.633    2.791 AC-FT=    2.192
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE MCUNGE       PONDu5Rt   30    1      0.06636      114.97      6.495     1.83503    1.667    2.707 CCODE =     0.2
ADD HYD           U202.1SUM  2& 1   1      0.14819      163.15     13.990     1.77017    1.700    1.720
ROUTE RESERVOIR      PondU4    1   31      0.14819       85.46     13.990     1.77017    2.033    0.901 AC-FT=    3.928
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
COMPUTE NM HYD        U203   -    1      0.05311      124.07      4.300     1.51815    1.533    3.650 PER IMP=  50.45
ADD HYD           U203SUM 31& 1   1      0.20130      149.78     18.290     1.70360    1.533    1.163
*S APU1
ROUTE RESERVOIR      PondU3    1   30      0.20130       92.03     18.290     1.70360    2.166    0.714 AC-FT=    2.989
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE RESERVOIR      PondU2   30   31      0.20130       46.51     18.123     1.68805    3.566    0.361 AC-FT=    6.963
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
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*S
COMPUTE NM HYD       U204  -    1      0.04966      113.17      3.905     1.47431    1.533    3.561 PER IMP=  47.85
ROUTE RESERVOIR      PondU7    1   30      0.04966       47.51      3.905     1.47430    1.733    1.495 AC-FT=    1.553
*S  Pond Rating Curve from Avalon Report Feb. 1998 stated pond release of 35.8cf
*S  Sub-Basin U104 drains to pond in analysis; however,
*S  The pond respective watershed is smaller, thus the higher release from pond.
*S
ADD HYD           U204SUM 31&30   1      0.25096       64.33     22.028     1.64575    2.200    0.401
ROUTE RESERVOIR      PondU1    1   30      0.25096       44.41     21.978     1.64202    4.533    0.277 AC-FT=    3.641
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE MCUNGE       PondU1Rt   30    1      0.25096       44.41     21.977     1.64197    4.566    0.277 CCODE =     0.2
COMPUTE NM HYD       U207  -    2      0.04489      114.77      4.091     1.70894    1.533    3.995 PER IMP=  64.00
ADD HYD           U207SUM  1& 2   1      0.29585      122.92     26.068     1.65213    1.533    0.649
ROUTE MCUNGE      U207SUMRt    1   10      0.29585      122.12     26.066     1.65195    1.567    0.645 CCODE =     0.2
COMPUTE NM HYD       U205  -    1      0.07980      176.04      7.546     1.77307    1.600    3.447 PER IMP=  69.67
ROUTE MCUNGE        U205Rt    1    2      0.07980      175.31      7.541     1.77196    1.633    3.433 CCODE =     0.2
COMPUTE NM HYD       U206  -    1      0.09646      189.28      8.954     1.74051    1.633    3.066 PER IMP=  66.70
ADD HYD           U206SUM  2& 1   1      0.17626      364.59     16.496     1.75475    1.633    3.232
*S APU2
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ROUTE MCUNGE      U206SUMRt    1    2      0.17626      344.43     16.346     1.73881    1.667    3.053 CCODE =     0.2
COMPUTE NM HYD       U208  -    1      0.03976       98.33      3.496     1.64876    1.533    3.864 PER IMP=  56.50
ADD HYD           U208SUMB  2& 1   1      0.21602      411.84     19.842     1.72223    1.633    2.979
COMPUTE NM HYD       U209  -    2      0.03339       85.47      2.990     1.67883    1.533    4.000 PER IMP=  58.20
ADD HYD           U209SUM  1& 2   1      0.24941      480.60     22.832     1.71642    1.567    3.011
ROUTE RESERVOIR     PONDU214    1   30      0.24941      137.74     22.832     1.71642    2.000    0.863 AC-FT=   11.990
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ADD HYD          U208SUMA 10&30  42      0.54526      226.00     48.898     1.68148   1.600    0.648
*S APU3
*S*****************************************************************************
*S**********      END OF UNSER-214 BASIN
*S*****************************************************************************
*S*****************************************************************************
*S**********      TIERRA BAYITA BASIN
*S*****************************************************************************
COMPUTE NM HYD      TB202.1  -    1      0.13801      286.10     11.871     1.61274   1.567    3.239 PER IMP=  63.00
ROUTE RESERVOIR     PondTB1A    1   30      0.13801      180.05     11.871     1.61274   1.733    2.038 AC-FT=    2.194
ROUTE MCUNGE      PONDTB1RT   30    1      0.13801      180.05     11.867     1.61229   1.766    2.038 CCODE =     0.1
COMPUTE NM HYD      TB202.2  -    2      0.08784      234.77      9.208     1.96547   1.533    4.176 PER IMP=  86.90
ROUTE RESERVOIR     PondTB1B    2   30      0.08784      114.06      9.208     1.96546   1.733    2.029 AC-FT=    2.530
ADD HYD          TB202.2SUM  1&30   1      0.22585      294.11     21.075     1.74965   1.733    2.035
ROUTE MCUNGE    TB202.2SUMRT    1    2      0.22585      293.91     20.915     1.73633   1.933    2.033 CCODE =     0.2
COMPUTE NM HYD       TB103  -    1      0.04991      123.90      4.340     1.63054   1.533    3.879 PER IMP=  57.00
ROUTE RESERVOIR     PondTB2    1   30      0.04991       66.57      4.340     1.63053   1.667    2.084 AC-FT=    1.918
*S Outflow equals to 49.4 cfs From "DMP for Avalon Subdivision" on Pg 3
ADD HYD          PONDTB2SUM  2&30   1      0.27576      355.53     25.255     1.71717   1.733    2.014
ROUTE MCUNGE    PONDTB2SUMRT    1    2      0.27576      344.83     24.707     1.67994   1.900    1.954 CCODE =     0.2
COMPUTE NM HYD       TB204  -    1      0.03918      106.93      3.993     1.91088   1.533    4.265 PER IMP=  83.50
ROUTE MCUNGE       TB204RT    1    3      0.03918      106.92      3.992     1.91041   1.533    4.264 CCODE =     0.2
COMPUTE NM HYD       TB205  -    1      0.04575      115.37      4.081     1.67254   1.533    3.940 PER IMP=  60.80
ROUTE RESERVOIR     PondTB3    1   30      0.04575       31.73      4.081     1.67253   1.800    1.084 AC-FT=    2.420
*S Pond never graded per proposed G&D with date 12-7-10
*S Pond likely will be modified per plan, but left as existing
*S Assumed existing 30" RCP outlet with 0.5% slope
ADD HYD          PONDTB3SUM  3&30   1      0.08493      129.96      8.072     1.78213   1.567    2.391
ROUTE MCUNGE    PondTB3SUMRT    1    3      0.08493      129.92      8.072     1.78212   1.567    2.390 CCODE =     0.2
ADD HYD          TB206SUMA  2& 3   1      0.36069      407.53     32.779     1.70400   1.800    1.765
ROUTE MCUNGE    TB206SUMART    1    2      0.36069      400.53     32.375     1.68295   1.833    1.735 CCODE =     0.2
```

COMPUTE NM HYD TB206 - 1 0.02559 64.63 2.288 1.67607 1.533 3.946 PER IMP= 61.10
ADD HYD TB206SUMB 2& 1 1 0.38628 417.80 34.662 1.68249 1.766 1.690
*S APTB1
ROUTE MCUNGE TB206SUMBRT 1 10 0.38628 412.09 34.230 1.66154 1.833 1.667 CCODE = 0.2
ROUTE MCUNGE NEBASINRT 41 1 0.81688 21.27 56.790 1.30351 13.265 0.041 CCODE = 0.2
COMPUTE NM HYD TB207 - 2 0.06805 180.99 6.584 1.81402 1.533 4.156 PER IMP= 72.90
COMPUTE NM HYD TB208 - 3 0.05040 125.02 4.691 1.74534 1.533 3.876 PER IMP= 67.20
ADD HYD TB208SUMA 2& 3 2 0.11845 306.01 11.275 1.78480 1.533 4.037
ADD HYD TB208SUMB 1& 2 1 0.93533 315.55 68.065 1.36446 1.533 0.527
*S APTB2
ROUTE MCUNGE TB208SUMBRT 1 2 0.93533 314.41 68.064 1.36444 1.533 0.525 CCODE = 0.2
ADD HYD TB209SUMA 10& 2 1 1.32161 677.91 102.294 1.45127 1.567 0.801
COMPUTE NM HYD TB209 - 2 0.03089 85.75 3.190 1.93646 1.500 4.338 PER IMP= 84.00
ADD HYD TB209SUMB 1& 2 1 1.35250 757.08 105.485 1.46236 1.567 0.875
ROUTE MCUNGE TB209SUMBRT 1 2 1.35250 723.70 105.321 1.46009 1.633 0.836 CCODE = 0.2

COMPUTE NM HYD TB216 - 1 0.03257 89.82 3.332 1.91826 1.533 4.309 PER IMP= 82.40
ROUTE MCUNGE TB216RT 1 3 0.03257 89.27 3.324 1.91362 1.600 4.283 CCODE = 0.1
ADD HYD TB213SUMA 2& 3 1 1.38507 809.90 108.645 1.47076 1.633 0.914
*S APTB3
COMPUTE NM HYD TB213 - 2 0.04712 133.59 5.013 1.99460 1.500 4.430 PER IMP= 89.10
ADD HYD TB213SUMB 1& 2 1 1.43219 915.95 113.658 1.48799 1.600 0.999
ROUTE MCUNGE TB213SUMBRT 1 2 1.43219 884.55 113.394 1.48454 1.633 0.965 CCODE = 0.2
COMPUTE NM HYD TB214 - 1 0.02685 68.55 2.418 1.68878 1.533 3.989 PER IMP= 60.76
ADD HYD TB214SUM 2& 1 1 1.45904 931.52 115.812 1.48829 1.633 0.998
*S APTB7
ROUTE MCUNGE TB214SUMRT 1 10 1.45904 887.60 115.223 1.48072 1.667 0.951 CCODE = 0.2

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ROUTE MCUNGE      UNBASINRT   42   11      0.54526      224.57      48.884     1.68099    1.633    0.644 CCODE =     0.1
COMPUTE NM HYD       TB210   -    1      0.07272      175.08       6.973     1.79799    1.567    3.762 PER IMP=  71.83
COMPUTE NM HYD       TB211   -    2      0.02330       66.05       2.491     2.00472    1.533    4.429 PER IMP=  90.00
ADD HYD          TB211SUM  1& 2   1      0.09602      238.63       9.465     1.84815    1.533    3.883
*S APTB4
ROUTE MCUNGE     TB211SUMRT    1    2      0.09602      236.24       9.447     1.84472    1.600    3.844 CCODE =     0.1
COMPUTE NM HYD       TB212   -    1      0.06855      159.66       6.749     1.84592    1.567    3.639 PER IMP=  75.20
ADD HYD          TB212SUMA  1& 2   1      0.16457      394.32      16.196     1.84522    1.600    3.744
*S APTB5
ADD HYD          TB212SUMB 11& 1   1      0.70983      615.80      65.080     1.71907    1.600    1.356
*S APTB6
ROUTE MCUNGE     TB212SUMBRT    1    2      0.70983      612.49      65.074     1.71891    1.633    1.348 CCODE =     0.2
ADD HYD          TB215SUMA 10& 2   1      2.16887     1491.18     180.295     1.55866    1.633    1.074
COMPUTE NM HYD       TB215   -    2      0.11272      195.06       8.876     1.47644    1.633    2.704 PER IMP=  36.70
ADD HYD          TB215SUMB  1& 2  10      2.28159     1686.25     189.170     1.55459    1.633    1.155
COMPUTE NM HYD       TB217   -    1      0.01861       50.87       1.878     1.89222    1.533    4.271 PER IMP=  80.10
ROUTE MCUNGE       TB217RT    1    2      0.01861       50.80       1.876     1.89022    1.567    4.266 CCODE =     0.1
COMPUTE NM HYD       TB220   -    1      0.03690       96.97       3.522     1.78980    1.533    4.106 PER IMP=  71.00
ADD HYD          TB220SUM  2& 1   1      0.05551      143.04       5.398     1.82345    1.533    4.026
COMPUTE NM HYD       TB218   -    2      0.03573       73.14       2.243     1.17683    1.533    3.198 PER IMP=  17.12
ROUTE MCUNGE       TB218RT    2    3      0.03573       71.94       2.236     1.17348    1.567    3.146 CCODE =     0.1
COMPUTE NM HYD       TB219   -    2      0.02285       58.43       2.083     1.70894    1.533    3.995 PER IMP=  64.00
ADD HYD          TB219SUM  2& 3   2      0.05858      126.10       4.319     1.38233    1.567    3.363
ADD HYD          TB221SUMA  1& 2   1      0.11409      267.16       9.717     1.59696    1.533    3.659
*S APTB8
ROUTE MCUNGE     TB221SUMART    1    2      0.11409      267.14       9.706     1.59510    1.567    3.659 CCODE =     0.1
COMPUTE NM HYD       TB221   -    1      0.05769      137.45       5.140     1.67043    1.533    3.723 PER IMP=  60.54
ADD HYD          TB221SUMB  2& 1   1      0.17178      401.85      14.845     1.62040    1.567    3.655
ROUTE MCUNGE     TB221SUMBRT    1    2      0.17178      396.95      14.821     1.61777    1.600    3.611 CCODE =     0.2
COMPUTE NM HYD       TB222   -    1      0.07064      155.17       6.421     1.70439    1.567    3.432 PER IMP=  63.60
ADD HYD          TB222SUMA  2& 1   1      0.24242      550.22      21.243     1.64301    1.600    3.546
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*S APTB9
ADD HYD         TB222SUMB 10& 1   1      2.52401     2210.89     210.413     1.56308    1.633    1.369
*S APTB10
ROUTE MCUNGE    TB222SUMBRT   1   2      2.52401     2205.93     210.369     1.56276    1.633    1.366 CCODE =     0.1
COMPUTE NM HYD       TB223   -    1      0.07133      129.70      6.203     1.63054    1.633    2.841 PER IMP=  57.00
COMPUTE NM HYD       TB224   -    3      0.15974      236.51     13.665     1.60392    1.733    2.313 PER IMP=  54.40
ADD HYD         TB224SUMA  1& 3   1     0.23107      355.12     19.868     1.61213    1.700    2.401
ADD HYD         TB224SUMB  2& 1  43      2.75508     2549.14     230.236     1.56690    1.667    1.446
*S**************************************************************************
*S**************  END OF TIERRA BAYITA BASIN
*S**************************************************************************
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*S**************************************************************************
*S**************  ATRISCO BUSINESS PARK BASIN
*S**************************************************************************
ROUTE MCUNGE    TB222SUMBRT   43   20      2.75508     2542.52     230.179     1.56651    1.667    1.442 CCODE =     0.1
COMPUTE NM HYD       AB201.1   -    1      0.11831      299.35     11.214     1.77720    1.533    3.953 PER IMP=  70.00
ROUTE RESERVOIR  PONDAB201.2    1   30      0.11831        7.56     11.214     1.77719    2.566    0.100 AC-FT=    9.770
ROUTE MCUNGE    PONDAB201.1R   30    1      0.11831        7.56     11.214     1.77715    2.600    0.100 CCODE =     0.1
COMPUTE NM HYD       AB201.2   -    2      0.09628      227.97      9.126     1.77720    1.567    3.700 PER IMP=  70.00
ROUTE RESERVOIR  PONDAB201.2    2   30      0.09628        6.15      9.126     1.77719    2.666    0.100 AC-FT=    7.926
ADD HYD         AB201.2SUM 30& 1   1      0.21459       13.72     20.339     1.77715    2.633    0.100
*S APAB1
ROUTE MCUNGE    Pond201.2SUM    1    2      0.21459       13.72     20.338     1.77709    2.733    0.100 CCODE =     0.1
COMPUTE NM HYD       AB202   -    1      0.18317      320.85     17.356     1.77667    1.700    2.737 PER IMP=  69.90
ROUTE RESERVOIR    PondAB202    1   30      0.18317       11.72     17.356     1.77667    3.066    0.100 AC-FT=   14.526
ADD HYD         POND202SUM  2&30   1      0.39776       25.44     37.695     1.77689    2.900    0.100
```

Revised Amole Hubbell Update 2013
AHYMO Model

Revised by WSP

100-Year Frequency, 6-Hour
Excerpts from the Input File

Proposed Conditions

```
                                AHYMO - RevisedAmole Update-CentralImprovements 6hr100yr
*  ********************************************************************************
*  REVISIONS BY WSP
*  The Amole HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE
*   was revised by WSP in August 2020 to determine the effect of
*   Central Blvd. Frontage Road Development on the overall DMP
*   The improvements are between 98th Street and Unser Blvd.
*   ANY REVISIONS TO THIS FILE BY WSP WILL HAVE A STARTING
*  LINE INDICATING "REVISIONS BY WSP"
*  ********************************************************************************
*  AMOLE HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE
*  Drainage Basin Analysis
*S "PROPOSED" CONDITION MODEL FOR AMOLE HUBBELL
*
START             TIME=0.0  PUNCH CODE=0 PRINT CODE=0
LOCATION            ALBUQUERQUE
*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*S            RAINFALL DATA FROM NOAA ATLAS 14
*S*******************************************************************************
*S  100 YEAR 6HR STORM
*S  ********************************************************************************
*S  REVISIONS BY WSP
*S  The Amole HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE
*S Rainfall was revised based on latest NOAA Atlas 14
*S DT was changed from 0.03333 to 0.01
*S  ********************************************************************************
RAINFALL              TYPE=1
                      QUARTER=1.06 IN
                      HOUR=   1.76 IN
                      SIX HR= 2.22 IN
                      DAY=    2.53 IN   DT=0.01
*
****Adding Sediment Bulk Factor to all Basins
SEDIMENT BULK     CODE=1  BULK FACTOR=1.06
*
*
*S*******************************************************************************
*S**********            98TH AND CENTRAL BASIN
*S*******************************************************************************
*
*
*** Sub-BASIN NE202.1 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
```

```
*
*
****Route Hyd U209SUM through POND U214
*
ROUTE RESERVOIR                 ID=30  HYD NO=PONDU214  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)     STORAGE (AC FT)          ELEV
                          0                 0                        5096
                          81                3.04                     5098
                          126               7.77                     5100
                          143               13.88                    5102

PRINT HYD          ID=42   CODE=1
*
*
* Total Flow from Basin (U207SUMRt + U206SUMRT)
ADD HYD            ID=42  HYD NO=U208SUMA ID I=10   ID II=30
PRINT HYD          ID=42   CODE=1
*
*
*S APU3
*
*
*
*S*************************************************************************
*S**********        END OF UNSER-214 BASIN
*S*************************************************************************
*
*
*
*S*************************************************************************
*S**********        TIERRA BAYITA BASIN
*S*************************************************************************
*
*
*** Sub-BASIN TB202.1 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=445 FT   SLOPE=0.020   K=0.7
                              LENGTH=1870 FT   SLOPE=0.025   K=2.0
COMPUTE NM HYD             ID=1   HYD NO=TB202.1   DA=0.13801 SQ MI
                    PER A=24.8 PER B=6.1  PER C=6.1  PER D=63
                    TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd TB202.1 through PondTB1
*
ROUTE RESERVOIR                    ID=30  HYD NO=PondTB1A  INFLOW ID=1  CODE=1
                              OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                              0                  0                          5206
                    180                        1.000                      5207
                    181                        25.000                     5210
*
*
*
****Route HYD PONDTB1 to PONDTB2
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.021  FP SLP=0.02 N=0.013
                              DIST=20 FT

                              DIST  ELEV
                        0     105
                              10    100
                              15    100
                              20    105
*
ROUTE MCUNGE                  ID=1  HYD NO=PONDTB1RT  INFLOW ID=30
                        DT=0 HR  LENGTH=1026 FT
                        NS=0  SLOPE=0.021
*
PRINT HYD          ID=1   CODE=1
*
*
*** Sub-BASIN TB202.2 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=400 FT   SLOPE=0.038   K=0.7
                              LENGTH=1980 FT   SLOPE=0.030   K=2.0
COMPUTE NM HYD                ID=2   HYD NO=TB202.2   DA=0.08784 SQ MI
                        PER A=1.1 PER B=6  PER C=6  PER D=86.9
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
```

```
*
****Route Hyd TB202.1 through PondTB1
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondTB1B  INFLOW ID=2  CODE=1
                          OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                          0                  0                          5206
          114                     1.000              5207
          115                     25.000             5210
*
*
*
*
* Total Flow from Basin (PondTB1rt + TB202.2)
ADD HYD           ID=1  HYD NO=TB202.2SUM ID I=1   ID II=30
PRINT HYD         ID=1   CODE=1
*
*
****Route HYD PONDTB1RT to Sub-Basin TB203SUM Through a Pipe
COMPUTE RATING CURVE   CID=1   VS NO=1 CODE=-1   SLP=0.015
                       DIA=54 IN   N=0.013
*
ROUTE MCUNGE           ID=2  HYD NO=TB202.2SUMRT  INFLOW ID=1
                  DT=0 HR  LENGTH=1028 FT
                  NS=0  SLOPE=0.015
*
PRINT HYD         ID=2   CODE=1
*
*
*** Sub-BASIN TB203 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                  NK=1   ISLOPE=1
                  LENGTH=1568 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB103   DA=0.04991 SQ MI
                  PER A=0 PER B=21  PER C=22  PER D=57
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD         ID=1   CODE=1
*
*
****Route Hyd TB203 through PondTB2
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondTB2  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
```

```
                    0                   0                   5171
                    14                          1.000               5172
                    77                  2.100               5174
*
*S Outflow equals to 49.4 cfs From "DMP for Avalon Subdivision" on Pg 3
*
*
* Total Flow from Basin (TB202.2SUMRT + PondTB2)
ADD HYD         ID=1  HYD NO=PONDTB2SUM ID I=2   ID II=30
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD PONDTB2SUM to Sub-Basin TB206SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.013
                        DIA=54 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=PONDTB2SUMRT  INFLOW ID=1
                DT=0 HR  LENGTH=1490 FT
                NS=0  SLOPE=0.013
*
PRINT HYD       ID=2   CODE=1
*
*
*******************************************************************************
*
*
*** Sub-BASIN TB204 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                        LENGTH=1476 FT   SLOPE=0.026   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB204   DA=0.03918 SQ MI
                PER A=5.5 PER B=5.5  PER C=5.5 PER D=83.5
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD TB204 to Sub-Basin PONDTB3SUM Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.025
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=3  HYD NO=TB204RT  INFLOW ID=1
                DT=0 HR  LENGTH=1290 FT
```

```
                    NS=0  SLOPE=0.025
*
PRINT HYD           ID=3   CODE=1
*
*
*** Sub-BASIN TB205 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1722 FT   SLOPE=0.020   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB205   DA=0.04575 SQ MI
                    PER A=0 PER B=19.6  PER C=19.6  PER D=60.8
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route Hyd TB205SUM through PondTB3
*
ROUTE RESERVOIR                 ID=30  HYD NO=PondTB3  INFLOW ID=1  CODE=1
                          OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                          0                  0                  5153.69
                          1                  0.582              5156
                          17                 1.178              5158
                          41.5               3.244              5160
                          56.5               5.029              5162
                          63                 6.019              5163
*
*S Pond never graded per proposed G&D with date 12-7-10
*S Pond likely will be modified per plan, but left as existing
*S Assumed existing 30" RCP outlet with 0.5% slope
*
*
*
* Total Flow from Basin (TB204RT + TB205)
ADD HYD             ID=1  HYD NO=PONDTB3SUM ID I=3   ID II=30
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD PONDTB3SUM to Sub-Basin PONDTB3 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.016
                          DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=PondTB3SUMRT  INFLOW ID=1
```

```
                    DT=0 HR  LENGTH=490 FT
                    NS=0  SLOPE=0.016
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (PondTB2SUMRT + PONDTB3RT)
ADD HYD             ID=1  HYD NO=TB206SUMA ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD TB206SUM to Sub-Basin TB206SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.008
                        DIA=66 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TB206SUMART  INFLOW ID=1
                    DT=0 HR  LENGTH=580 FT
                    NS=0  SLOPE=0.008
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB206 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1515 FT   SLOPE=0.016   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB206   DA=0.02559 SQ MI
                    PER A=0 PER B=19.4  PER C=19.5  PER D=61.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB206SUMART + TB206)
ADD HYD             ID=1  HYD NO=TB206SUMB ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APTB1
*
*
****Route HYD TB206SUM to Sub-Basin TB206SUMB Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.008
                        DIA=66 IN   N=0.013
*
```

```
ROUTE MCUNGE                ID=15  HYD NO=TB206SUMBRT  INFLOW ID=1
                      DT=0 HR  LENGTH=580 FT
                      NS=0  SLOPE=0.008
*
PRINT HYD           ID=15   CODE=1
*
*
*******************************************************************************
*   "REVISIONS BY WSP" - Started
* Basins TB207 and TB209 were sub-divided in more details
*for the West Central Frontage Road Project
*******************************************************************************
***Inflow from 98th and Central area
*
***Route HYD NEBASIN through Sub-Basin TB207A Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                                DIA=36 IN   N=0.013
*
ROUTE MCUNGE                ID=1  HYD NO=NEBASINRT  INFLOW ID=41
                      DT=0 HR  LENGTH=658 FT
                      NS=0  SLOPE=0.023
*
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TB207A ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1556 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB207A   DA=0.030294 SQ MI
                      PER A=0 PER B=5  PER C=5  PER D=90
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (NEBASINRT + TB207A)
ADD HYD             ID=1  HYD NO=TB207ASUM ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*S AP 1
*
```

```
*
**
***Route HYD TB207ASUMB through TB207F Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TB207ASUMRT  INFLOW ID=1
                DT=0 HR  LENGTH=254 FT
                NS=0  SLOPE=0.023
*
PRINT HYD       ID=2   CODE=1*** Sub-BASIN TB207ASUMRT ****
*
*** Sub-BASIN TB207B ****
*  COMPUTE LT TP        LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=447 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD          ID=3   HYD NO=TB207B   DA=0.003175 SQ MI
                PER A=0.0 PER B=15.0  PER C=15.0  PER D=70.0
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=3   CODE=1
*
* Total Flow from Basin (TB207ASUMRT + TB207B)
ADD HYD         ID=1  HYD NO=TB207BSUM ID I=2   ID II=3
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN TB207F ****
*  COMPUTE LT TP        LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=256 FT   SLOPE=0.016   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB207F   DA=0.001235 SQ MI
                PER A=0.0 PER B=0.0  PER C=10.0  PER D=90.0
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
* Total Flow from Basin (TB207B + TB207F)
ADD HYD         ID=1  HYD NO=TB207FSUM ID I=1   ID II=2
PRINT HYD       ID=1   CODE=1
*
*
*S AP 2
*
```

```
*
****Route HYD TB207F through TB207G Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE                ID=10  HYD NO=TB207FSUMRT  INFLOW ID=1
                DT=0 HR  LENGTH=725 FT
                NS=0  SLOPE=0.023
*
PRINT HYD           ID=10   CODE=1*** Sub-BASIN TB207FSUMRT ****
*
*
*
*** Sub-BASIN TB207C ****
*  COMPUTE LT TP            LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=1080 FT   SLOPE=0.01   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB207C   DA=0.013143 SQ MI
                PER A=0.0 PER B=15.0  PER C=15.0  PER D=70.0
                TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
****Route HYD TB207C Through a Pipe through TB207E
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE                ID=1  HYD NO=TB207CRT  INFLOW ID=2
                DT=0 HR  LENGTH=268 FT
                NS=0  SLOPE=0.023
*
PRINT HYD           ID=1   CODE=1*** Sub-BASIN TB207CRT ****
*
*
*** Sub-BASIN TB207E ****
*  COMPUTE LT TP            LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=358 FT   SLOPE=0.011   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB207E   DA=0.002226 SQ MI
                PER A=0.0 PER B=15.0  PER C=15.0  PER D=70.0
                TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
```

```
** Total Flow from Basin (TB207CRT + TB207E)
ADD HYD              ID=20  HYD NO=TB207ESUM ID I=1   ID II=2
PRINT HYD            ID=20   CODE=1
*
*** Sub-BASIN TB207D ****
*  COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1250 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=TB207D   DA=0.014662 SQ MI
                     PER A=0.0 PER B=15.0  PER C=15.0  PER D=70.0
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
****Route HYD TB207D Through a Pipe through TB207E
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                                DIA=36 IN   N=0.013
*
ROUTE MCUNGE               ID=30  HYD NO=TB207DRT  INFLOW ID=2
                     DT=0 HR  LENGTH=189 FT
                     NS=0  SLOPE=0.023
*
PRINT HYD            ID=30   CODE=1*** Sub-BASIN TB207DRT ****
*
*
** Total Flow from Basin (TB207DRT + TB207E)
ADD HYD              ID=40  HYD NO=TB207ESUM ID I=20   ID II=30
PRINT HYD            ID=40   CODE=1
*
*
** Total Flow from Basin (TB207D + TB207E + TB207FRT)
ADD HYD              ID=50  HYD NO=TB207ESUM ID I=10   ID II=40
PRINT HYD            ID=50   CODE=1
*
*** Sub-BASIN TB207G ****
*  COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=720 FT   SLOPE=0.025   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=TB207G   DA=0.003356 SQ MI
                     PER A=0.0 PER B=0.0  PER C=10.0  PER D=90.0
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
```

```
** Total Flow from Basin (TB207A, B, C, D, E, F G = TB207tot)
ADD HYD              ID=10  HYD NO=TB207SUM ID I=50   ID II=2
PRINT HYD            ID=10   CODE=1
*
*
*S AP 3
*
*
*** Sub-BASIN TB208 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=2000 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD               ID=3   HYD NO=TB208   DA=0.05040 SQ MI
                     PER A=0 PER B=16.4  PER C=16.4  PER D=67.2
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=3   CODE=1
*
*
* Total Flow from Basin (TB207 + TB208)
ADD HYD              ID=20  HYD NO=TB208SUMA ID I=10   ID II=3
PRINT HYD            ID=20   CODE=1
*
*
*
*S AP 4
*
*S APTB2
*
*
***Route HYD TB207+TB208 Sub-Basins to Through TB209C Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                                DIA=36 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=TB208SUMBRT  INFLOW ID=20
                     DT=0 HR  LENGTH=1075 FT
                     NS=0  SLOPE=0.020
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN TB209B ****
*
```

```
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1121 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=TB209B   DA=0.008517 SQ MI
                     PER A=0 PER B=10  PER C=10  PER D=80
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
* Total Flow from Basin (TB209B + TB208SUMBRT)
ADD HYD              ID=10  HYD NO=TB209SUMA ID I=1   ID II=2
PRINT HYD            ID=10   CODE=1
*
***Route HYD TB206SUMRT Through TB209A Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                                DIA=66 IN   N=0.013
*
ROUTE MCUNGE                 ID=1  HYD NO=TB208SUMBRT  INFLOW ID=15
                     DT=0 HR  LENGTH=400 FT
                     NS=0  SLOPE=0.020
*
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN TB209A ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1319 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB209A   DA=0.018441 SQ MI
                     PER A=0 PER B=15  PER C=15  PER D=70
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (TB209A + TB206SUMBRT)
ADD HYD              ID=1  HYD NO=TB209SUMA ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
***Route HYD TB206SUMRT + TB209A through TB209B Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                                DIA=66 IN   N=0.013
```

```
*
ROUTE MCUNGE                ID=20  HYD NO=TB208SUMBRT  INFLOW ID=1
                      DT=0 HR  LENGTH=150 FT
                      NS=0  SLOPE=0.020
*
PRINT HYD             ID=20   CODE=1
*
*
* Total Flow from Basin (TB209A & B+ TB206SUMBRT)
ADD HYD               ID=30  HYD NO=TB209SUMA ID I=10   ID II=20
PRINT HYD             ID=30   CODE=1
*
*
*** Sub-BASIN TB209C ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1166 FT   SLOPE=0.021   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB209C   DA=0.004967 SQ MI
                      PER A=0 PER B=0  PER C=10  PER D=90
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=2   CODE=1
*
* Total Flow from Basin (TB209 + TB206SUMBRT)
ADD HYD               ID=1  HYD NO=TB209SUMA ID I=30   ID II=2
PRINT HYD             ID=1   CODE=1
*
*
*S AP 5
*
*
*S APTB3a
*
*
*********************************************************************************
*   "REVISIONS BY WSP" - Stopped
* Basins TB207 and TB209 were sub-divided in more details
*for the West Central Frontage Road Project
*********************************************************************************
*
*
***Route HYD TB209SUMB to Sub-Basin TB216SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
```

```
                    DIA=72 IN   N=0.013
*
ROUTE MCUNGE        ID=2  HYD NO=TB209SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1450 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB216 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                    NK=2   ISLOPE=1
                    LENGTH=1143 FT   SLOPE=0.021   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB216   DA=0.03257 SQ MI
                    PER A=0  PER B=8.8  PER C=8.8  PER D=82.4
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD TB216 to Sub-Basin TB216SUMA
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.014  FP SLP=0.02 N=0.017
                    DIST=20 FT

                    DIST  ELEV
              0     105
                    10        100
                    15        100
                    20        105
*
ROUTE MCUNGE        ID=3  HYD NO=TB216RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1835 FT
                    NS=0  SLOPE=0.014
*
PRINT HYD           ID=3   CODE=1
*
*
* Total Flow from Basin (TB209SUMBRT + TB216RT)
ADD HYD             ID=1  HYD NO=TB213SUMA ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*S APTB3
```

```
*
*
*** Sub-BASIN TB213 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1813 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB213   DA=0.04712 SQ MI
                      PER A=0 PER B=5.4  PER C=5.5  PER D=89.1
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (TB216SUM + TB213)
ADD HYD              ID=1  HYD NO=TB213SUMB ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*
***Route HYD TB213SUM to Sub-Basin TB214 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=78 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=TB213SUMBRT  INFLOW ID=1
                      DT=0 HR  LENGTH=1005 FT
                      NS=0  SLOPE=0.018
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN TB214 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1247 FT   SLOPE=0.014   K=1.0
COMPUTE NM HYD               ID=1   HYD NO=TB214   DA=0.02685 SQ MI
                      PER A=0 PER B=13  PER C=26.2  PER D=60.7
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (TB213SUMRT + TB214)
ADD HYD              ID=1  HYD NO=TB214SUM ID I=2   ID II=1
```

```
PRINT HYD           ID=1   CODE=1
*S APTB7
*
*
***Route HYD TB214SUM to Sub-Basin TB215SUMA Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                        DIA=90 IN   N=0.013
*
ROUTE MCUNGE                ID=10  HYD NO=TB214SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1230 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*
***Route HYD UNBASIN to Sub-Basin TB212SUMB Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                        DIA=72 IN   N=0.013
*
ROUTE MCUNGE                ID=13  HYD NO=UNBASINRT  INFLOW ID=42
                    DT=0 HR  LENGTH=1120 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=13   CODE=1
*
*Farshad
*
*** Sub-BASIN TB210 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2333 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD              ID=21   HYD NO=TB210   DA=0.07272 SQ MI
                    PER A=0 PER B=14.1  PER C=14.1  PER D=71.9
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=21   CODE=1
*
*
*******************************************************************************
*   "REVISIONS BY WSP" - Started
```

```
* Basins TB211 and TB212 were sub-divided in more details
*for the West Central Frontage Road Project
*******************************************************************************
*
*S AP 10
*
*
*** Sub-BASIN TB211A ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                             NK=1   ISLOPE=1
                             LENGTH=650 FT   SLOPE=0.022   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB211A   DA=0.006371 SQ MI
                             PER A=0   PER B=10  PER C=10  PER D=80
                             TP=0.0   MASSRAIN=-1
*
PRINT HYD                    ID=2   CODE=1
*
*
*
*** Sub-BASIN TB211D ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                             NK=1   ISLOPE=1
                             LENGTH=460 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=TB211D   DA=0.002589 SQ MI
                             PER A=0   PER B=0  PER C=10  PER D=90
                             TP=0.0   MASSRAIN=-1
*
PRINT HYD                    ID=1   CODE=1
*
*
* Total Flow from Basin (TB211A + TB211D)
ADD HYD                      ID=1  HYD NO=TB211DSUMB ID I=1   ID II=2
PRINT HYD                    ID=1   CODE=1
*
*
*S AP 6
*
*
***Route HYD TB211DSUM to Sub-Basin TB211B Through a Pipe
COMPUTE RATING CURVE     CID=1   VS NO=1 CODE=-1   SLP=0.018
                                 DIA=36 IN   N=0.013
*
```

```
ROUTE MCUNGE                ID=3  HYD NO=TB211DSUMBRT  INFLOW ID=1
                      DT=0 HR  LENGTH=460 FT
                      NS=0  SLOPE=0.020
*
PRINT HYD             ID=3   CODE=1
*
**
*** Sub-BASIN TB211B ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=751 FT   SLOPE=0.019   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB211B   DA=0.004981 SQ MI
                      PER A=0   PER B=10  PER C=10  PER D=80
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=2   CODE=1
*
*
*
*** Sub-BASIN TB211E ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=274 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB211E   DA=0.001471 SQ MI
                      PER A=0   PER B=0  PER C=10  PER D=90
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=1   CODE=1
*
*
* Total Flow from Basin (TB211B + TB211E)
ADD HYD               ID=1  HYD NO=TB211DSUMB ID I=1   ID II=2
PRINT HYD             ID=1   CODE=1
*
*
* Total Flow from Basins (TB211A, B, D, E)
ADD HYD               ID=1  HYD NO=TB211DSUMB ID I=1   ID II=3
PRINT HYD             ID=1   CODE=1
*
*
*S AP 7
*
```

```
*
***Route HYD TB211ESUM to Sub-Basin TB211C Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE                ID=4  HYD NO=TB211DSUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=437 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=4   CODE=1
**
**
*** Sub-BASIN TB211C ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=617 FT   SLOPE=0.019   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB211C   DA=0.003801 SQ MI
                    PER A=0   PER B=10  PER C=10  PER D=80
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB211F ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=434 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB211F   DA=0.002128 SQ MI
                    PER A=0   PER B=0  PER C=10  PER D=90
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB211C + TB211F)
ADD HYD             ID=1  HYD NO=TB211DSUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basins (TB211A, B, D, E, C, F)
ADD HYD             ID=1  HYD NO=TB211DSUMB ID I=1   ID II=4
PRINT HYD           ID=1   CODE=1
```

```
*
*
*S AP 8
*
*
***Route HYD TB211FSUM to Sub-Basin TB211G Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=5  HYD NO=TB211FSUMBRT  INFLOW ID=1
                DT=0 HR  LENGTH=512 FT
                NS=0  SLOPE=0.020
*
PRINT HYD       ID=5   CODE=1
*
*
*** Sub-BASIN TB211G ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=535 FT   SLOPE=0.019   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB211G   DA=0.003626 SQ MI
                PER A=0   PER B=5  PER C=10  PER D=85
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=2   CODE=1
*
*
* Total Flow from Basins (TB211A, B, D, E, C, F, G)
ADD HYD         ID=1  HYD NO=TB211DSUMB ID I=2   ID II=5
PRINT HYD       ID=1   CODE=1
*
**
*S AP Total Basin TB211, Just before Volcano
*
*
*S AP 9
*
*
*
* Total Flow from Basin (TB210 + TB211)
ADD HYD         ID=1  HYD NO=TB211SUM ID I=1   ID II=21
PRINT HYD       ID=1   CODE=1
*S APTB4
```

```
*
*
****Route HYD TB211SUM to Sub-Basin TB212SUM
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                                DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=5  HYD NO=TB211SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=900 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=5   CODE=1
*
*
*
*** Sub-BASIN TB212A ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1047 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB212A   DA=0.007716 SQ MI
                    PER A=0   PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*
*** Sub-BASIN TB212E ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=207 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB212E   DA=0.001181 SQ MI
                    PER A=0   PER B=0  PER C=10  PER D=90
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB212A + TB212E)
ADD HYD             ID=1  HYD NO=TB212ESUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
```

```
* Total Flow from Basin (TB210, TB211, TB212A + TB212E)
ADD HYD              ID=1  HYD NO=TB212ESUMB ID I=1   ID II=5
PRINT HYD            ID=1   CODE=1
*
*
*S AP 11
*
*
****Route HYD TB212ESUM to Sub-Basin TB212F Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE                 ID=3  HYD NO=TB212FSUMBRT  INFLOW ID=1
                     DT=0 HR  LENGTH=200 FT
                     NS=0  SLOPE=0.020
*
PRINT HYD            ID=3   CODE=1
*
**
*** Sub-BASIN TB212B ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=1041 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB212B   DA=0.007778 SQ MI
                     PER A=0   PER B=15  PER C=15  PER D=70
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN TB212F ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=200 FT   SLOPE=0.020   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=TB212F   DA=0.001017 SQ MI
                     PER A=0   PER B=0  PER C=10  PER D=90
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (TB212B + TB212F)
```

```
ADD HYD             ID=1  HYD NO=TB212ESUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB210, TB211, TB212A, E, B, F)
ADD HYD             ID=1  HYD NO=TB212FSUMB ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*S AP 12
*
*
****Route HYD TB212FSUM to Sub-Basin TB212G Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=TB212GSUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=105 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=3   CODE=1
*
**
*** Sub-BASIN TB212C ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=997 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB212C   DA=0.003738 SQ MI
                    PER A=0   PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB212G ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=102 FT   SLOPE=0.028   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB212G   DA=0.000483 SQ MI
                    PER A=0   PER B=0  PER C=10  PER D=90
                    TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD             ID=1   CODE=1
*
*
* Total Flow from Basin (TB212C + TB212G)
ADD HYD               ID=1  HYD NO=TB212ESUMB ID I=1   ID II=2
PRINT HYD             ID=1   CODE=1
*
*
* Total Flow from Basins (TB210, TB211, TB212A, E, B, F, C, G)
ADD HYD               ID=1  HYD NO=TB212FSUMB ID I=1   ID II=3
PRINT HYD             ID=1   CODE=1
*
*
*S AP 13
*
*
****Route HYD TB212GSUM to Sub-Basin TB212H Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=TB212GSUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=105 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD             ID=3   CODE=1
*
**
*** Sub-BASIN TB212D ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1079 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB212D   DA=0.009203 SQ MI
                    PER A=0   PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=2   CODE=1
*
*
*** Sub-BASIN TB212H ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=304 FT   SLOPE=0.020   K=2.0
```

```
COMPUTE NM HYD              ID=1   HYD NO=TB212H   DA=0.001502 SQ MI
                            PER A=0   PER B=0  PER C=10  PER D=90
                            TP=0.0   MASSRAIN=-1
*
PRINT HYD                   ID=1   CODE=1
*
*
* Total Flow from Basin (TB212D + TB212H)
ADD HYD                     ID=1  HYD NO=TB212ESUMB ID I=1   ID II=2
PRINT HYD                   ID=1   CODE=1
*
** Total Flow from Basins (TB210, TB211, TB212) at the Cul-de-sac
ADD HYD                     ID=1  HYD NO=TB212FSUMB ID I=1   ID II=3
PRINT HYD                   ID=1   CODE=1
*
*
*S AP 14
*
*S APTB4a at the Cul-de-Sac
*
*
****Route HYD TB212SUM to Sub-Basin TB212Library Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                                DIA=60 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=TB212GSUMBRT  INFLOW ID=1
                            DT=0 HR  LENGTH=500 FT
                            NS=0  SLOPE=0.020
*
PRINT HYD                   ID=3   CODE=1
*
**
*** Sub-BASIN TB212Library ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                            NK=1   ISLOPE=1
                            LENGTH=1210 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB212Library   DA=0.02883 SQ MI
                            PER A=0   PER B=0  PER C=20  PER D=80
                            TP=0.0   MASSRAIN=-1
*
PRINT HYD                   ID=2   CODE=1
*
*
```

```
* Total Flow from Basin (TB212SUMRT + TB212 Library)
ADD HYD             ID=1  HYD NO=TB212SUMA ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*S APTB5
*
*
* Total Flow from Basin (UNBASINRT + TB212SUMA)
ADD HYD             ID=1  HYD NO=TB212SUMB ID I=13   ID II=1
PRINT HYD           ID=1   CODE=1
*
*******************************************************************************
*   "REVISIONS BY WSP" - Stopped
* Basins TB211 and TB212 were sub-divided in more details
*for the West Central Frontage Road Project
*******************************************************************************
**
*
*S APTB6
*
*
***Route HYD TB212SUMB to Sub-Basin TB215 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                        DIA=96 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=TB212SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1880 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB214SUMRT + TB212SUMBRT)
ADD HYD             ID=1  HYD NO=TB215SUMA ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TB215 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=3027 FT   SLOPE=0.01   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB215   DA=0.11272 SQ MI
```

```
                    PER A=0 PER B=2.3  PER C=61  PER D=36.7
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB215SUMA + TB215)
ADD HYD             ID=10  HYD NO=TB215SUMB ID I=1   ID II=2
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*** Sub-BASIN TB217 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1357 FT   SLOPE=0.021   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB217   DA=0.01861 SQ MI
                    PER A=0 PER B=9.9  PER C=10  PER D=80.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD TB217 to Sub-Basin TB220
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.023  FP SLP=0.02 N=0.017
                              DIST=20 FT

                              DIST  ELEV
                0       105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE                ID=2  HYD NO=TB217RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1110 FT
                    NS=0  SLOPE=0.023
*
PRINT HYD           ID=2   CODE=1
*
*
```

```
*** Sub-BASIN TB220 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1726 FT   SLOPE=0.014   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=TB220   DA=0.03690 SQ MI
                        PER A=0 PER B=14  PER C=15  PER D=71
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
*
* Total Flow from Basin (TB217RT + TB220)
ADD HYD              ID=1  HYD NO=TB220SUM ID I=2   ID II=1
PRINT HYD            ID=1   CODE=1
*
*
*** Sub-BASIN TB218 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1258 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB218   DA=0.03573 SQ MI
                        PER A=0 PER B=40.9  PER C=41.9  PER D=17.1
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
****Route HYD TB218 to Sub-Basin TB219
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.022  FP SLP=0.02 N=0.017
                                DIST=20 FT

                                DIST  ELEV
                0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                 ID=3  HYD NO=TB218RT  INFLOW ID=2
                        DT=0 HR  LENGTH=815 FT
                        NS=0  SLOPE=0.022
```

```
*
PRINT HYD           ID=3   CODE=1
*
*
*** Sub-BASIN TB219 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1375 FT   SLOPE=0.013   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB219   DA=0.02285 SQ MI
                    PER A=0 PER B=18  PER C=18  PER D=64
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB218RT + TB219)
ADD HYD             ID=2  HYD NO=TB219SUM ID I=2   ID II=3
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB220SUM + TB119SUM)
ADD HYD             ID=1  HYD NO=TB221SUMA ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*S APTB8
*
*
***Route HYD TB221SUMA to Sub-Basin TB221 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                        DIA=60 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=TB221SUMART  INFLOW ID=1
                    DT=0 HR  LENGTH=1075 FT
                    NS=0  SLOPE=0.015
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB221 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1745 FT   SLOPE=0.011   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB221   DA=0.05769 SQ MI
```

```
                    PER A=0 PER B=19.4  PER C=20.1  PER D=60.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB221SUMART + TB221)
ADD HYD             ID=1  HYD NO=TB221SUMB ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
***Route HYD TB221SUMB to Sub-Basin TB222 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.007
                        DIA=78 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TB221SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1690 FT
                    NS=0  SLOPE=0.007
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB222 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1570 FT   SLOPE=0.006   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB222   DA=0.07064 SQ MI
                    PER A=0 PER B=18.2  PER C=18.2  PER D=63.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB221SUMBRT + TB222)
ADD HYD             ID=1  HYD NO=TB222SUMA ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*S APTB9
*
*
* Total Flow from Basin (TB215SUMB + TB222SUMA)
ADD HYD             ID=1  HYD NO=TB222SUMB ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*S APTB10
```

```
*
*
****Route HYD TB222SUMB to Sub-Basin TB224SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.01  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                    0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=2  HYD NO=TB222SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=2160 FT
                        NS=0  SLOPE=0.01
*
PRINT HYD               ID=2   CODE=1
*
*
*** Sub-BASIN TB223 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=1837 FT   SLOPE=0.007   K=2.0
                                LENGTH=826 FT    SLOPE=0.012   K=3.0
COMPUTE NM HYD                  ID=1   HYD NO=TB223   DA=0.07133 SQ MI
                        PER A=0 PER B=21  PER C=22  PER D=57
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN TB224 ****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=3880 FT   SLOPE=0.010   K=1.0
COMPUTE NM HYD                  ID=3   HYD NO=TB224   DA=0.15974 SQ MI
                        PER A=0 PER B=21.1  PER C=24.5  PER D=54.4
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=3   CODE=1
```

```
*
*
* Total Flow from Basin (TB223 + TB224)
ADD HYD             ID=1  HYD NO=TB224SUMA ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB222SUMBRT + TB224SUMA)
ADD HYD             ID=43  HYD NO=TB224SUMB ID I=2   ID II=1
PRINT HYD           ID=43  CODE=1
*
*
*S*************************************************************************
*S**************    END OF TIERRA BAYITA BASIN
*S*************************************************************************
*
*
*S*************************************************************************
*S**************     ATRISCO BUSINESS PARK BASIN
*S*************************************************************************
*
*
***From Tierra Bayita Basin
*
****Route HYD TB222SUMB to Sub-Basin TB224SUMB
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.026  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=20  HYD NO=TB222SUMBRT  INFLOW ID=43
                        DT=0 HR  LENGTH=940 FT
                        NS=0  SLOPE=0.026
*
PRINT HYD           ID=20   CODE=1
*
*
**** Sub-BASIN AB201.1****
```

Revised Amole Hubbell Update 2013
AHYMO Model

Revised by WSP

100-Year Frequency, 6-Hour
Excerpts from the Summary File

Proposed Conditions

AHYMO - RevisedAmole Update-CentralImprovements 6hr100yr

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) - Ver. S4.02a, Rel: 02a RUN DATE (MON/DAY/YR) =08/18/2020

INPUT FILE = tral\AHYMO\Revised_WSP\Proposed\PHubbellDamCentralImprove 6hr_NewAHYMOS4.txt USER NO.= AHYMO-S4TempUser05901704

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	PEAK AREA (SQ MI)	RUNOFF DISCHARGE (CFS)	VOLUME (AC-FT)	TIME TO RUNOFF (INCHES)	CFS PEAK (HOURS)	PAGE = 1 PER ACRE	NOTATION
*S "PROPOSED" CONDITION MODEL FOR AMOLE HUBBELL										
START							TIME= 0.00			
LOCATION	ALBUQUERQUE									
*S	RAINFALL DATA FROM NOAA ATLAS 14									
*S**********										
*S 100 YEAR 6HR STORM										
*S **********										
*S REVISIONS BY WSP										
*S The Amole HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE										
*S Rainfall was revised based on latest NOAA Atlas 14										
*S DT was changed from 0.03333 to 0.01										
*S **********										
RAINFALL TYPE= 1 NOAA 14									RAIN6= 2.220	
SEDIMENT BULK									PK BF = 1.06	
*S**********										
*S**********	98TH AND CENTRAL BASIN									
*S**********										
COMPUTE NM HYD	NE202.1	-	1	0.08439	167.03	5.111	1.13553	1.530	3.093 PER IMP= 17.00	
ROUTE MCUNGE	NE202.1RT	1	2	0.08439	166.94	5.110	1.13537	1.550	3.091 CCODE = 0.2	
COMPUTE NM HYD	NE202.2	-	1	0.06185	122.35	3.746	1.13553	1.530	3.091 PER IMP= 17.00	
ADD HYD	NE202.2SUM	2& 1	1	0.14624	288.85	8.856	1.13544	1.540	3.086	
*S APNE3										
ROUTE MCUNGE	NE202.2SUMRt	1	2	0.14624	288.14	8.853	1.13502	1.570	3.079 CCODE = 0.2	
COMPUTE NM HYD	NE204	-	1	0.08938	176.94	5.413	1.13553	1.530	3.093 PER IMP= 17.00	
ADD HYD	NE204SUM	2& 1	1	0.23562	460.02	14.266	1.13521	1.560	3.051	
ROUTE MCUNGE	NE204SUMRT	1	10	0.23562	460.25	14.265	1.13518	1.570	3.052 CCODE = 0.2	

COMPUTE NM HYD NE201.1 - 1 0.08463 167.51 5.125 1.13553 1.530 3.093 PER IMP= 17.00
ROUTE MCUNGE NE201.1RT 1 2 0.08463 167.43 5.125 1.13536 1.550 3.091 CCODE = 0.2
COMPUTE NM HYD NE201.2 - 1 0.04349 86.03 2.634 1.13553 1.530 3.091 PER IMP= 17.00
ADD HYD NE201.2SUMA 2& 1 1 0.12812 252.90 7.758 1.13541 1.540 3.084
*S APNE1
ROUTE MCUNGE NE201.2SUMAR 1 3 0.12812 252.95 7.758 1.13534 1.560 3.085 CCODE = 0.2
ADD HYD NE208SUMA 10& 3 1 0.36374 712.27 22.023 1.13524 1.570 3.060
COMPUTE NM HYD NE208 - 2 0.10104 190.68 6.218 1.15388 1.550 2.949 PER IMP= 18.60
ADD HYD NE208SUMB 1& 2 1 0.46478 902.30 28.241 1.13929 1.560 3.033
*S APNE2
ROUTE MCUNGE NE208SUMBRt 1 10 0.46478 887.49 28.153 1.13574 1.580 2.984 CCODE = 0.2
COMPUTE NM HYD NE205.1 - 1 0.07464 147.69 4.520 1.13553 1.530 3.092 PER IMP= 17.00
ROUTE MCUNGE NE205.1RT 1 2 0.07464 147.77 4.520 1.13551 1.550 3.093 CCODE = 0.2
COMPUTE NM HYD NE205.2 - 1 0.06038 119.52 3.661 1.13688 1.530 3.093 PER IMP= 17.12
ADD HYD NE205.2SUM 1& 2 1 0.13502 266.70 8.181 1.13612 1.540 3.086
ROUTE MCUNGE NE205.2SUMRT 1 2 0.13502 266.30 8.180 1.13597 1.550 3.082 CCODE = 0.2
COMPUTE NM HYD NE206 - 1 0.04398 112.50 4.060 1.73080 1.530 3.997 PER IMP= 69.03
ADD HYD NE206SUM 2& 1 1 0.17900 376.57 12.240 1.28211 1.550 3.287
*S APNE4
ROUTE MCUNGE NE206SUMRT 1 2 0.17900 376.30 12.238 1.28196 1.560 3.285 CCODE = 0.2
ADD HYD NE211SUMA 10& 2 1 0.64378 1258.03 40.392 1.17640 1.570 3.053
ROUTE RESERVOIR PondNE2 1 40 0.64378 29.86 40.391 1.17638 2.590 0.072 AC-FT= 36.205
*S RATING CURVE FROM PLAN SET ADN SD FACILITIES
*S TB DRAINAGE FACILITIES PHASE IIIC JUNE 1995

COMPUTE NM HYD NE210 - 1 0.09526 210.49 8.228 1.61961 1.570 3.453 PER IMP= 59.30
ROUTE MCUNGE NE210RT 1 2 0.09526 210.56 8.228 1.61955 1.570 3.454 CCODE = 0.2
COMPUTE NM HYD NE211 - 1 0.07784 182.55 6.477 1.56022 1.530 3.664 PER IMP= 57.40
ADD HYD PondNE3SUM 2& 1 1 0.17310 386.68 14.705 1.59287 1.550 3.490
ADD HYD NE211SUMB 40& 1 1 0.81688 405.39 55.096 1.26463 1.550 0.775

```
ROUTE RESERVOIR     PondNE3   1  41      0.81688      21.02     53.725     1.23316  12.920    0.040 AC-FT=   20.573
*S**************************************************************************
*S***********     END OF 98TH AND CENTRAL BASIN
*S**************************************************************************
*S**************************************************************************
*S**********       UNSER-214 BASIN
*S**************************************************************************
COMPUTE NM HYD      U202.2  -    1      0.04661      102.00      3.676     1.47881    1.530    3.419 PER IMP=  56.00
ROUTE MCUNGE    U202.2SUMRT   1    2      0.04661      101.95      3.676     1.47873    1.550    3.418 CCODE =    0.2
COMPUTE NM HYD       U201   -    1      0.03522       98.04      3.685     1.96188    1.530    4.349 PER IMP=  89.19
ADD HYD           U201SUM  2& 1   1      0.08183      198.94      7.361     1.68668    1.540    3.799
ROUTE RESERVOIR     PondU6   1  30      0.08183       51.42      7.361     1.68668    1.860    0.982 AC-FT=    3.968
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE MCUNGE       PONDU6Rt  30    2      0.08183       51.41      7.361     1.68656    1.880    0.982 CCODE =    0.2
COMPUTE NM HYD      U202.1   -    1      0.06636      173.05      6.435     1.81812    1.530    4.075 PER IMP=  79.20
ROUTE RESERVOIR     PondU5   1  30      0.06636      117.06      6.435     1.81811    1.640    2.756 AC-FT=    2.134
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE MCUNGE       PONDu5Rt  30    1      0.06636      113.20      6.373     1.80075    1.660    2.665 CCODE =    0.2
ADD HYD           U202.1SUM  2& 1   1      0.14819      161.38     13.734     1.73770    1.680    1.702
ROUTE RESERVOIR     PondU4   1  31      0.14819       82.64     13.731     1.73733    2.040    0.871 AC-FT=    3.862
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
COMPUTE NM HYD       U203   -    1      0.05311      121.05      4.205     1.48469    1.530    3.561 PER IMP=  50.45
ADD HYD           U203SUM 31& 1   1      0.20130      145.98     17.936     1.67067    1.550    1.133
*S APU1
ROUTE RESERVOIR     PondU3   1  30      0.20130       90.23     17.927     1.66980    2.160    0.700 AC-FT=    2.890
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE RESERVOIR     PondU2  30  31      0.20130       45.77     17.001     1.58353    3.570    0.355 AC-FT=    6.771
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
COMPUTE NM HYD       U204   -    1      0.04966      110.27      3.817     1.44118    1.530    3.469 PER IMP=  47.85
```

```
ROUTE RESERVOIR      PondU7   1  30      0.04966       45.05      3.817      1.44117    1.740    1.418 AC-FT=    1.506
*S  Pond Rating Curve from Avalon Report Feb. 1998 stated pond release of 35.8cf
*S  Sub-Basin U104 drains to pond in analysis; however,
*S  The pond respective watershed is smaller, thus the higher release from pond.
*S
ADD HYD           U204SUM 31&30  1      0.25096       63.54      20.818     1.55536    2.190    0.396
ROUTE RESERVOIR      PondU1   1  30      0.25096       43.77      20.768     1.55162    4.530    0.273 AC-FT=    3.543
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE MCUNGE      PondU1Rt  30   1      0.25096       43.77      20.767     1.55159    4.560    0.273 CCODE =     0.2
COMPUTE NM HYD       U207   -    2      0.04489      112.30      4.006      1.67313    1.530    3.909 PER IMP=  64.00
ADD HYD           U207SUM  1& 2   1      0.29585      119.85      24.773     1.57003    1.530    0.633
```



```
                    FROM  TO                PEAK        RUNOFF            TIME TO    CFS      PAGE =   3
               HYDROGRAPH  ID   ID        AREA     DISCHARGE     VOLUME      RUNOFF     PEAK     PER
COMMAND      IDENTIFICATION  NO.  NO.     (SQ MI)     (CFS)      (AC-FT)   (INCHES)  (HOURS)    ACRE     NOTATION

ROUTE MCUNGE      U207SUMRt   1   10      0.29585      119.34      24.770     1.56986    1.560    0.630 CCODE =     0.2
COMPUTE NM HYD       U205   -    1      0.07980      171.51      7.396      1.73776    1.600    3.358 PER IMP=  69.67
ROUTE MCUNGE       U205Rt    1   2      0.07980      170.79      7.391      1.73671    1.630    3.344 CCODE =     0.2
COMPUTE NM HYD       U206   -    1      0.09646      183.36      8.771      1.70491    1.640    2.970 PER IMP=  66.70
ADD HYD           U206SUM  2& 1   1      0.17626      353.55      16.162     1.71931    1.640    3.134
*S APU2
ROUTE MCUNGE      U206SUMRt   1   2      0.17626      334.59      16.015     1.70365    1.670    2.966 CCODE =     0.2
COMPUTE NM HYD       U208   -    1      0.03976       95.38      3.419      1.61212    1.540    3.748 PER IMP=  56.50
ADD HYD           U208SUMB  2& 1   1      0.21602      401.94      19.434     1.68680    1.630    2.907
COMPUTE NM HYD       U209   -    2      0.03339       83.65      2.925      1.64230    1.530    3.914 PER IMP=  58.20
ADD HYD           U209SUM  1& 2   1      0.24941      470.12      22.358     1.68084    1.590    2.945
ROUTE RESERVOIR    PONDU214   1   30      0.24941      136.50      22.358     1.68084    1.990    0.855 AC-FT=   11.545
ADD HYD           U208SUMA 10&30  42      0.54526      220.44      47.129     1.62062    1.600    0.632
*S APU3
*S*****************************************************************************
*S**********       END OF UNSER-214 BASIN
*S*****************************************************************************
```

```
*S*****************************************************************************
*S**********      TIERRA BAYITA BASIN
*S*****************************************************************************
COMPUTE NM HYD      TB202.1  -    1      0.13801      276.55      11.633     1.58045    1.580    3.131 PER IMP=  63.00
ROUTE RESERVOIR     PondTB1A    1   30      0.13801      180.04      11.633     1.58045    1.730    2.038 AC-FT=    2.035
ROUTE MCUNGE      PONDTB1RT   30    1      0.13801      180.94      11.633     1.58043    1.560    2.049 CCODE =     0.2
COMPUTE NM HYD      TB202.2  -    2      0.08784      228.07      9.050      1.93180    1.550    4.057 PER IMP=  86.90
ROUTE RESERVOIR     PondTB1B    2   30      0.08784      114.06      9.050      1.93179    1.730    2.029 AC-FT=    2.396
ADD HYD          TB202.2SUM  1&30   1      0.22585      294.96      20.683     1.71708    1.560    2.041
ROUTE MCUNGE    TB202.2SUMRT    1    2      0.22585      293.97      20.486     1.70078    1.930    2.034 CCODE =     0.2
COMPUTE NM HYD       TB103  -    1      0.04991      121.06      4.243      1.59408    1.530    3.790 PER IMP=  57.00
ROUTE RESERVOIR     PondTB2    1   30      0.04991      64.25       4.243      1.59407    1.690    2.012 AC-FT=    1.877
*S Outflow equals to 49.4 cfs From "DMP for Avalon Subdivision" on Pg 3
ADD HYD          PONDTB2SUM  2&30   1      0.27576      353.97      24.730     1.68146    1.730    2.006
ROUTE MCUNGE    PONDTB2SUMRT    1    2      0.27576      343.58      24.205     1.64581    1.890    1.947 CCODE =     0.2
COMPUTE NM HYD       TB204  -    1      0.03918      104.97      3.924      1.87784    1.530    4.186 PER IMP=  83.50
ROUTE MCUNGE        TB204RT    1    3      0.03918      104.72      3.923      1.87732    1.550    4.176 CCODE =     0.2
COMPUTE NM HYD       TB205  -    1      0.04575      112.81      3.993      1.63644    1.530    3.853 PER IMP=  60.80
ROUTE RESERVOIR     PondTB3    1   30      0.04575      30.92       3.989      1.63468    1.820    1.056 AC-FT=    2.352
*S Pond never graded per proposed G&D with date 12-7-10
*S Pond likely will be modified per plan, but left as existing
*S Assumed existing 30" RCP outlet with 0.5% slope
ADD HYD          PONDTB3SUM  3&30   1      0.08493      126.48      7.911      1.74661    1.560    2.327
ROUTE MCUNGE    PondTB3SUMRT    1    3      0.08493      126.46      7.911      1.74656    1.570    2.326 CCODE =     0.2
ADD HYD          TB206SUMA  2& 3   1      0.36069      404.93      32.116     1.66953    1.800    1.754
ROUTE MCUNGE    TB206SUMART    1    2      0.36069      398.18      31.718     1.64880    1.860    1.725 CCODE =     0.2
COMPUTE NM HYD       TB206  -    1      0.02559      63.20       2.238      1.64000    1.530    3.859 PER IMP=  61.10
ADD HYD          TB206SUMB  2& 1   1      0.38628      415.01      33.956     1.64821    1.780    1.679
*S APTB1
ROUTE MCUNGE    TB206SUMBRT    1   15      0.38628      409.27      33.494     1.62580    1.850    1.655 CCODE =     0.2
ROUTE MCUNGE      NEBASINRT   41    1      0.81688      21.02       53.718     1.23299   12.930    0.040 CCODE =     0.2
COMPUTE NM HYD      TB207A  -    2      0.03029      84.60       3.185      1.97118    1.530    4.364 PER IMP=  90.00
ADD HYD          TB207ASUM  1& 2   1      0.84717      94.68       56.902     1.25939    1.530    0.175
*S AP 1
```

ROUTE MCUNGE TB207ASUMRT 1 2 0.84717 94.61 56.899 1.25932 1.540 0.174 CCODE = 0.2

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	PEAK AREA (SQ MI)	RUNOFF DISCHARGE (CFS)	VOLUME (AC-FT)	TIME TO RUNOFF (INCHES)	CFS PEAK (HOURS)	PAGE = 4 PER ACRE	NOTATION
COMPUTE NM HYD	TB207B	-	3	0.00318	8.17	0.295	1.74191	1.530	4.022	PER IMP= 70.00
ADD HYD	TB207BSUM	2& 3	1	0.85035	102.73	57.194	1.26112	1.540	0.189	
COMPUTE NM HYD	TB207F	-	2	0.00124	3.50	0.131	1.98448	1.530	4.427	PER IMP= 90.00
ADD HYD	TB207FSUM	1& 2	1	0.85158	106.20	57.325	1.26217	1.540	0.195	
*S AP 2										
ROUTE MCUNGE	TB207FSUMRT	1	10	0.85158	105.79	57.317	1.26199	1.560	0.194	CCODE = 0.2
COMPUTE NM HYD	TB207C	-	2	0.01314	33.77	1.221	1.74191	1.530	4.015	PER IMP= 70.00
ROUTE MCUNGE	TB207CRT	2	1	0.01314	33.78	1.221	1.74188	1.530	4.016	CCODE = 0.2
COMPUTE NM HYD	TB207E	-	2	0.00223	5.74	0.207	1.74191	1.530	4.026	PER IMP= 70.00
ADD HYD	TB207ESUM	1& 2	20	0.01537	39.52	1.428	1.74186	1.530	4.018	
COMPUTE NM HYD	TB207D	-	2	0.01466	37.68	1.362	1.74191	1.530	4.015	PER IMP= 70.00
ROUTE MCUNGE	TB207DRT	2	30	0.01466	37.69	1.362	1.74189	1.530	4.016	CCODE = 0.2
ADD HYD	TB207ESUM	20&30	40	0.03003	77.21	2.790	1.74187	1.530	4.017	
ADD HYD	TB207ESUM	10&40	50	0.88162	181.81	60.107	1.27834	1.540	0.322	
COMPUTE NM HYD	TB207G	-	2	0.00336	9.47	0.355	1.98448	1.530	4.411	PER IMP= 90.00
ADD HYD	TB207SUM	50& 2	10	0.88497	191.21	60.462	1.28101	1.540	0.338	
*S AP 3										
COMPUTE NM HYD	TB208	-	3	0.05040	121.24	4.596	1.70981	1.550	3.759	PER IMP= 67.20
ADD HYD	TB208SUMA	10& 3	20	0.93537	312.18	65.058	1.30412	1.540	0.521	
*S AP 4										
*S APTB2										
ROUTE MCUNGE	TB208SUMBRT	20	2	0.93537	280.54	64.940	1.30176	1.630	0.469	CCODE = 0.2
COMPUTE NM HYD	TB209B	-	1	0.00852	22.85	0.843	1.85654	1.530	4.191	PER IMP= 80.00
ADD HYD	TB209SUMA	1& 2	10	0.94389	297.13	65.783	1.30676	1.630	0.492	
ROUTE MCUNGE	TB208SUMBRT	15	1	0.38628	409.26	33.494	1.62578	1.860	1.655	CCODE = 0.2
COMPUTE NM HYD	TB209A	-	2	0.01844	47.38	1.713	1.74191	1.530	4.015	PER IMP= 70.00
ADD HYD	TB209SUMA	1& 2	1	0.40472	422.17	35.207	1.63107	1.780	1.630	
ROUTE MCUNGE	TB208SUMBRT	1	20	0.40472	422.17	35.207	1.63107	1.780	1.630	CCODE = 0.0

```
ADD HYD         TB209SUMA 10&20  30     1.34861     714.82    100.990     1.40409    1.630    0.828
COMPUTE NM HYD      TB209C   -    2     0.00497      14.01      0.526     1.98448    1.530    4.408 PER IMP=  90.00
ADD HYD         TB209SUMA 30& 2   1     1.35358     724.94    101.516     1.40622    1.630    0.837
*S AP 5
*S APTB3a
ROUTE MCUNGE    TB209SUMBRT   1    2     1.35358     701.26    101.296     1.40318    1.700    0.810 CCODE =    0.2
COMPUTE NM HYD      TB216    -    1     0.03257      88.19      3.273     1.88406    1.530    4.231 PER IMP=  82.40
ROUTE MCUNGE       TB216RT   1    3     0.03257      88.17      3.272     1.88388    1.560    4.230 CCODE =    0.2
ADD HYD         TB213SUMA  2& 3   1     1.38615     758.29    104.569     1.41447    1.670    0.855
*S APTB3
COMPUTE NM HYD      TB213    -    2     0.04712     131.12      4.928     1.96098    1.530    4.348 PER IMP=  89.10
ADD HYD         TB213SUMB  1& 2   1     1.43327     844.18    109.497     1.43244    1.620    0.920
ROUTE MCUNGE    TB213SUMBRT   1    2     1.43327     830.14    109.248     1.42918    1.680    0.905 CCODE =    0.2
COMPUTE NM HYD      TB214    -    1     0.02685      67.06      2.366     1.65255    1.530    3.903 PER IMP=  60.76
ADD HYD         TB214SUM  2& 1   1     1.46012     871.05    111.614     1.43329    1.650    0.932
*S APTB7
ROUTE MCUNGE     TB214SUMRT   1   10     1.46012     845.28    111.208     1.42807    1.700    0.905 CCODE =    0.2
ROUTE MCUNGE      UNBASINRT   42   13     0.54526     220.36     47.127     1.62058    1.610    0.631 CCODE =    0.2
COMPUTE NM HYD      TB210    -   21     0.07272     170.31      6.837     1.76287    1.570    3.659 PER IMP=  71.83
*S AP 10
COMPUTE NM HYD      TB211A   -    2     0.00637      17.09      0.631     1.85654    1.530    4.192 PER IMP=  80.00
COMPUTE NM HYD      TB211D   -    1     0.00259       7.31      0.274     1.98448    1.530    4.414 PER IMP=  90.00
ADD HYD         TB211DSUMB  1& 2   1     0.00896      24.41      0.905     1.89345    1.530    4.256
*S AP 6
```



```
ROUTE MCUNGE    TB211DSUMBRT   1    3     0.00896      24.40      0.905     1.89343    1.530    4.255 CCODE =    0.2
COMPUTE NM HYD      TB211B   -    2     0.00498      13.37      0.493     1.85654    1.530    4.194 PER IMP=  80.00
COMPUTE NM HYD      TB211E   -    1     0.00147       4.16      0.156     1.98448    1.530    4.422 PER IMP=  90.00
ADD HYD         TB211DSUMB  1& 2   1     0.00645      17.53      0.649     1.88563    1.530    4.246
ADD HYD         TB211DSUMB  1& 3   1     0.01541      41.93      1.554     1.89016    1.530    4.251
```

```
*S AP 7
ROUTE MCUNGE    TB211DSUMBRT   1    4      0.01541      41.92      1.554     1.89012    1.540    4.250 CCODE =     0.2
COMPUTE NM HYD       TB211C   -    2      0.00380      10.21      0.376     1.85654    1.530    4.196 PER IMP=  80.00
COMPUTE NM HYD       TB211F   -    1      0.00213       6.01      0.225     1.98448    1.530    4.416 PER IMP=  90.00
ADD HYD         TB211DSUMB  1& 2   1      0.00593      16.22      0.602     1.90237    1.530    4.275
ADD HYD         TB211DSUMB  1& 4   1      0.02134      58.02      2.155     1.89352    1.540    4.248
*S AP 8
ROUTE MCUNGE    TB211FSUMBRT   1    5      0.02134      58.04      2.155     1.89345    1.540    4.249 CCODE =     0.2
COMPUTE NM HYD       TB211G   -    2      0.00363       9.98      0.371     1.92012    1.530    4.303 PER IMP=  85.00
ADD HYD         TB211DSUMB  2& 5   1      0.02497      67.95      2.526     1.89731    1.540    4.252
*S AP Total Basin TB211, Just before Volcano
*S AP 9
ADD HYD         TB211SUM  1&21   1      0.09769     237.19      9.363     1.79722    1.560    3.794
*S APTB4
ROUTE MCUNGE    TB211SUMBRT   1    5      0.09769     223.39      9.272     1.77972    1.610    3.573 CCODE =     0.2
COMPUTE NM HYD       TB212A   -    2      0.00772      19.84      0.717     1.74191    1.530    4.017 PER IMP=  70.00
COMPUTE NM HYD       TB212E   -    1      0.00118       3.35      0.125     1.98448    1.530    4.428 PER IMP=  90.00
ADD HYD         TB212ESUMB  1& 2   1      0.00890      23.18      0.842     1.77404    1.530    4.071
ADD HYD         TB212ESUMB  1& 5   1      0.10658     242.49     10.114     1.77925    1.600    3.555
*S AP 11
ROUTE MCUNGE    TB212FSUMBRT   1    3      0.10658     240.28     10.082     1.77357    1.610    3.523 CCODE =     0.2
COMPUTE NM HYD       TB212B   -    2      0.00778      20.00      0.723     1.74191    1.530    4.017 PER IMP=  70.00
COMPUTE NM HYD       TB212F   -    1      0.00102       2.88      0.108     1.98448    1.530    4.432 PER IMP=  90.00
ADD HYD         TB212ESUMB  1& 2   1      0.00880      22.88      0.830     1.76990    1.530    4.065
ADD HYD         TB212FSUMB  1& 3   1      0.11538     258.98     10.912     1.77329    1.600    3.507
*S AP 12
ROUTE MCUNGE    TB212GSUMBRT   1    3      0.11538     258.98     10.912     1.77329    1.600    3.507 CCODE =     0.0
COMPUTE NM HYD       TB212C   -    2      0.00374       9.62      0.347     1.74191    1.530    4.021 PER IMP=  70.00
COMPUTE NM HYD       TB212G   -    1      0.00048       1.38      0.051     1.98448    1.530    4.466 PER IMP=  90.00
ADD HYD         TB212ESUMB  1& 2   1      0.00422      11.00      0.398     1.76953    1.530    4.072
ADD HYD         TB212FSUMB  1& 3   1      0.11960     268.20     11.310     1.77315    1.600    3.504
*S AP 13
ROUTE MCUNGE    TB212GSUMBRT   1    3      0.11960     268.20     11.310     1.77315    1.600    3.504 CCODE =     0.0
COMPUTE NM HYD       TB212D   -    2      0.00920      23.66      0.855     1.74191    1.530    4.016 PER IMP=  70.00
```

COMPUTE NM HYD TB212H - 1 0.00150 4.25 0.159 1.98448 1.530 4.422 PER IMP= 90.00
ADD HYD TB212ESUMB 1& 2 1 0.01071 27.91 1.014 1.77589 1.530 4.073
ADD HYD TB212FSUMB 1& 3 1 0.13031 292.51 12.324 1.77338 1.580 3.508
*S AP 14
*S APTB4a at the Cul-de-Sac
ROUTE MCUNGE TB212GSUMBRT 1 3 0.13031 292.55 12.324 1.77329 1.590 3.508 CCODE = 0.2
COMPUTE NM HYD TB212Library - 2 0.02883 78.74 2.896 1.88314 1.530 4.267 PER IMP= 80.00
ADD HYD TB212SUMA 2& 3 1 0.15914 364.15 15.219 1.79319 1.570 3.575
*S APTB5
ADD HYD TB212SUMB 13& 1 1 0.70440 579.55 62.346 1.65955 1.590 1.286
*S APTB6
ROUTE MCUNGE TB212SUMBRT 1 2 0.70440 579.00 62.339 1.65939 1.610 1.284 CCODE = 0.2
ADD HYD TB215SUMA 10& 2 1 2.16451 1405.84 173.548 1.50335 1.630 1.015

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	PEAK AREA (SQ MI)	RUNOFF DISCHARGE (CFS)	VOLUME (AC-FT)	TIME TO RUNOFF (INCHES)	CFS PEAK (HOURS)	PAGE = 6 PER ACRE	NOTATION
COMPUTE NM HYD	TB215 -	2		0.11272	189.09	8.644	1.43788	1.650	2.621	PER IMP= 36.70
ADD HYD	TB215SUMB 1& 2	10		2.27723	1592.94	182.192	1.50011	1.640	1.093	
COMPUTE NM HYD	TB217 -	1		0.01861	49.92	1.844	1.85781	1.530	4.191	PER IMP= 80.10
ROUTE MCUNGE	TB217RT	1	2	0.01861	49.94	1.844	1.85774	1.550	4.193	CCODE = 0.2
COMPUTE NM HYD	TB220 -	1		0.03690	94.82	3.453	1.75457	1.530	4.015	PER IMP= 71.00
ADD HYD	TB220SUM 2& 1	1		0.05551	144.13	5.297	1.78915	1.540	4.057	
COMPUTE NM HYD	TB218 -	2		0.03573	70.73	2.166	1.13688	1.530	3.093	PER IMP= 17.12
ROUTE MCUNGE	TB218RT	2	3	0.03573	70.76	2.166	1.13683	1.550	3.094	CCODE = 0.2
COMPUTE NM HYD	TB219 -	2		0.02285	57.17	2.039	1.67313	1.530	3.909	PER IMP= 64.00
ADD HYD	TB219SUM 2& 3	2		0.05858	127.35	4.205	1.34601	1.540	3.397	
ADD HYD	TB221SUMA 1& 2	1		0.11409	271.48	9.502	1.56162	1.540	3.718	
*S APTB8										
ROUTE MCUNGE	TB221SUMART	1	2	0.11409	270.92	9.500	1.56126	1.550	3.710	CCODE = 0.2
COMPUTE NM HYD	TB221 -	1		0.05769	133.47	5.028	1.63429	1.550	3.615	PER IMP= 60.54
ADD HYD	TB221SUMB 2& 1	1		0.17178	404.39	14.528	1.58579	1.550	3.678	
ROUTE MCUNGE	TB221SUMBRT	1	2	0.17178	398.57	14.499	1.58258	1.590	3.625	CCODE = 0.2

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COMPUTE NM HYD       TB222  -    1      0.07064      150.75      6.286     1.66854    1.590    3.334 PER IMP=  63.60
ADD HYD          TB222SUMA  2& 1   1      0.24242      549.31     20.785     1.60763    1.590    3.541
*S APTB9
ADD HYD          TB222SUMB 10& 1   1      2.51965     2122.85    202.977     1.51046    1.610    1.316
*S APTB10
ROUTE MCUNGE    TB222SUMBRT    1    2      2.51965     2122.12    202.963     1.51035    1.620    1.316 CCODE =    0.2
COMPUTE NM HYD       TB223  -    1      0.07133      125.80      6.064     1.59408    1.650    2.756 PER IMP=  57.00
COMPUTE NM HYD       TB224  -    3      0.15974      228.65     13.352     1.56719    1.740    2.237 PER IMP=  54.40
ADD HYD          TB224SUMA  1& 3   1      0.23107      343.64     19.416     1.57549    1.710    2.324
ADD HYD          TB224SUMB  2& 1  43      2.75072     2433.47    222.379     1.51583    1.630    1.382
*S**************************************************************************
*S**************    END OF TIERRA BAYITA BASIN
*S**************************************************************************
*S**************************************************************************
*S**************    ATRISCO BUSINESS PARK BASIN
*S**************************************************************************
ROUTE MCUNGE    TB222SUMBRT   43   20      2.75072     2434.06    222.372     1.51577    1.640    1.383 CCODE =    0.2
COMPUTE NM HYD      AB201.1  -    1      0.11831      289.77     10.991     1.74191    1.540    3.827 PER IMP=  70.00
ROUTE RESERVOIR  PONDAB201.2    1   30      0.11831        7.56     10.991     1.74190    2.580    0.100 AC-FT=    9.506
ROUTE MCUNGE    PONDAB201.1R   30    1      0.11831        7.60     10.991     1.74188    1.390    0.100 CCODE =    0.2
COMPUTE NM HYD      AB201.2  -    2      0.09628      221.18      8.945     1.74191    1.570    3.590 PER IMP=  70.00
ROUTE RESERVOIR  PONDAB201.2    2   30      0.09628        6.15      8.945     1.74191    2.650    0.100 AC-FT=    7.713
ADD HYD         AB201.2SUM 30& 1   1      0.21459       13.72     19.935     1.74188    2.630    0.100
*S APAB1
ROUTE MCUNGE    Pond201.2SUM    1    2      0.21459       13.75     19.935     1.74187    1.480    0.100 CCODE =    0.2
COMPUTE NM HYD       AB202  -    1      0.18317      311.06     17.011     1.74136    1.700    2.653 PER IMP=  69.90
ROUTE RESERVOIR    PondAB202    1   30      0.18317       11.72     17.011     1.74136    3.110    0.100 AC-FT=   14.129
ADD HYD         POND202SUM  2&30   1      0.39776       25.46     36.947     1.74163    1.480    0.100
*S APAB2
ROUTE MCUNGE    Pond202SUMRt    1    2      0.39776       25.45     36.947     1.74163    1.500    0.100 CCODE =    0.2
COMPUTE NM HYD      AB203.1  -    1      0.11159      226.23     11.036     1.85425    1.640    3.168 PER IMP=  79.80
ROUTE RESERVOIR  PondAB203.1    1   30      0.11159        7.13     11.035     1.85425    2.920    0.100 AC-FT=    9.382
ADD HYD         POND202SUM  2&30   1      0.50935       32.58     47.982     1.76629    1.500    0.100
ROUTE MCUNGE      AB203.1Rt    1    2      0.50935       32.59     47.982     1.76629    1.530    0.100 CCODE =    0.2
```

Revised Amole Hubbell Update 2013
AHYMO Model

Revised by WSP

100-Year Frequency, 6-Hour
Excerpt from the Input File

Existing Conditions

Note:
Only excerpts from the AHYMO Input and Summary files for the 100-year frequency storm have been included in this report. Electronic files for this and other storms are available upon request.

XHubbellDamCentralImprove_6hr-100-yr
```
*  ************************************************************************
*  REVISIONS BY WSP
*  The Amole HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE
*   was revised by WSP in August 2020 to determine the effect of
*   Central Blvd. Frontage Road Development on the overall DMP
*   The improvements are between 98th Street and Unser Blvd.
*   ANY REVISIONS TO THIS FILE BY WSP WILL HAVE A STARTING
*  LINE INDICATING "REVISIONS BY WSP"
*  ************************************************************************
*  AMOLE HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE
*  Drainage Basin Analysis
*S "EXISTING" CONDITION MODEL FOR Amole Basin
*
START             TIME=0.0  PUNCH CODE=0 PRINT CODE=0
LOCATION          ALBUQUERQUE
*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*S           RAINFALL DATA FROM NOAA ATLAS 14
*S**************************************************************************
*S  100 YEAR 6HR STORM
*S  ************************************************************************
*S  REVISIONS BY WSP
*S  The Amole HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE
*S Rainfall was revised based on latest NOAA Atlas 14
*S DT was changed from 0.03333 to 0.01
*S  ************************************************************************
RAINFALL              TYPE=1
                      QUARTER=1.06 IN
                      HOUR=   1.76 IN
                      SIX HR= 2.22 IN
                      DAY=    2.53 IN   DT=0.01
*
*
****Adding Sediment Bulk Factor to all Basins
SEDIMENT BULK     CODE=1  BULK FACTOR=1.06
*
*
*S**************************************************************************
*S**********           98TH & CENTRAL BASIN
*S**************************************************************************
*
*** Sub-BASIN NE101 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=3653 FT   SLOPE=0.048   K=0.7
COMPUTE NM HYD            ID=1   HYD NO=NE101   DA=0.14521 SQ MI
```

```
*
*
*S*************************************************************************
*S**********          TIERRA BAYITA BASIN
*S*************************************************************************
*
*** Sub-BASIN TB101 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=3390 FT   SLOPE=0.029   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB101   DA=0.06013 SQ MI
                    PER A=79 PER B=8  PER C=8  PER D=5
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*S APTB1
*
****Route HYD TB101 to Sub-Basin TB102
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.024  FP SLP=0.04 N=0.030
                              DIST=20 FT

                              DIST  ELEV
                0       105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE                ID=2  HYD NO=TB101RT  INFLOW ID=1
                    DT=0 HR  LENGTH=2500 FT
                    NS=0  SLOPE=0.024
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB102 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=2337 FT   SLOPE=0.027   K=0.7
COMPUTE NM HYD              ID=1   HYD NO=TB102   DA=0.19898 SQ MI
                    PER A=67.2 PER B=7.2  PER C=19.7  PER D=5.9
                    TP=0.0   MASSRAIN=-1
*
```

```
PRINT HYD          ID=1   CODE=1
*
*
* Total Flow from Basin (TB101RT + TB102)
ADD HYD            ID=1  HYD NO=TB102SUM ID I=2   ID II=1
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd TB102SUM through PondTB1
*
ROUTE RESERVOIR                  ID=30  HYD NO=PondTB1  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
                        0                  0                  5206
                        0.1                0.613              5207
                        0.2                1.369              5208
                        0.3                3.469              5210
                        0.4                6.331              5212
                        0.5                13.00              5214
*
*
****Route HYD PONDTB1 to Sub-Basin TB103 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=8 IN   N=0.013
*
ROUTE MCUNGE            ID=1  HYD NO=PONDTB1RT  INFLOW ID=30
                   DT=0 HR  LENGTH=1030 FT
                   NS=0  SLOPE=0.018
*
PRINT HYD          ID=1   CODE=1
*
*
*** Sub-BASIN TB103 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                   NK=1   ISLOPE=1
                   LENGTH=1568 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB103   DA=0.04991 SQ MI
                   PER A=39.5 PER B=14.5  PER C=15  PER D=31
                   TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
*
****Route Hyd TB103sum through PondTB2
*
ROUTE RESERVOIR                  ID=30  HYD NO=PondTB2  INFLOW ID=2  CODE=1
                        OUTFLOW (CFS)      STORAGE (AC FT)            ELEV
```

```
                                XHubbellDamCentralImprove_6hr-100-yr
                               0                0                5171
                               8                        0.341            5172
                               50               1.325            5174
*
*S Outflow equals to 49.4 cfs From "DMP for Avalon Subdivision" on Pg 3
*
*
* Total Flow from Basin (PONDTB1sumRT + PONDTB2)
ADD HYD            ID=1  HYD NO=TB103SUM ID I=1   ID II=30
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD TB103SUM to Sub-Basin TB106 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.013
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=10  HYD NO=TB103SUMRT  INFLOW ID=1
                   DT=0 HR  LENGTH=1490 FT
                   NS=0  SLOPE=0.013
*
PRINT HYD          ID=10   CODE=1
*
*******************************************************************************
*
*** Sub-BASIN TB104 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                   NK=1   ISLOPE=1
                   LENGTH=1476 FT   SLOPE=0.026   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB104   DA=0.03918 SQ MI
                   PER A=59.8 PER B=9.6  PER C=9.6  PER D=21
                   TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD TB104 to Sub-Basin TB105 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.025
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TB104RT  INFLOW ID=1
                   DT=0 HR  LENGTH=1290 FT
                   NS=0  SLOPE=0.025
*
PRINT HYD          ID=2   CODE=1
*
*
```

```
*** Sub-BASIN TB105 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1722 FT   SLOPE=0.020   K=2.0
COMPUTE NM HYD             ID=1   HYD NO=TB105   DA=0.04575 SQ MI
                    PER A=0.8 PER B=19.6  PER C=19.6  PER D=60
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=1   CODE=1
*
*
****Route Hyd TB105SUM through PondTB3
*
ROUTE RESERVOIR                  ID=30  HYD NO=PondTB3  INFLOW ID=1  CODE=1
                              OUTFLOW (CFS)      STORAGE (AC FT)          ELEV
                              0                  0                  5153.69
                              1                  0.582              5156
                              17                 1.178              5158
                              41.5               3.244              5160
                              56.5               5.029              5162
                              63                 6.019              5163
*
*S Pond never graded per proposed G&D with date 12-7-10
*S Pond likely will be modified per plan, but left as existing
*S Assumed existing 30" RCP outlet with 0.5% slope
*
* Total Flow from Basin (TB104RT + PondTB3)
ADD HYD            ID=1  HYD NO=TB105SUM ID I=2   ID II=30
PRINT HYD          ID=1   CODE=1
*
*
****Route HYD TB105SUM to Sub-Basin TB106 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.016
                              DIA=48 IN   N=0.013
*
ROUTE MCUNGE               ID=2  HYD NO=TB105SUMRT  INFLOW ID=1
                    DT=0 HR  LENGTH=740 FT
                    NS=0  SLOPE=0.016
*
PRINT HYD          ID=2   CODE=1
*
*
* Total Flow from Basin (TB103SUMRT + TB105SUMRT)
ADD HYD            ID=1  HYD NO=TB106SUMA ID I=10   ID II=2
PRINT HYD          ID=1   CODE=1
*
```

```
*
*** Sub-BASIN TB106 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1515 FT   SLOPE=0.016   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB106   DA=0.02559 SQ MI
                        PER A=2.9 PER B=19.5  PER C=19.6  PER D=58
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (TB106SUMA + TB106)
ADD HYD              ID=1  HYD NO=TB106SUMB ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*S APTB2
*
****Route HYD TB106SUMB to Sub-Basin TB109 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.008
                                DIA=66 IN   N=0.013
*
ROUTE MCUNGE                 ID=15  HYD NO=TB106SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=580 FT
                        NS=0  SLOPE=0.008
*
PRINT HYD            ID=15   CODE=1
*
*******************************************************************************
*
*******************************************************************************
*   "REVISIONS BY WSP" - Started
* Basins TB107 and TB109 were sub-divided in more details
*for the West Central Frontage Road Project
*******************************************************************************
***Inflow from 98th and Central area
*
***Route HYD NEBASIN through Sub-Basin TB107A Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                                DIA=36 IN   N=0.013
*
ROUTE MCUNGE                 ID=1  HYD NO=NEBASINRT  INFLOW ID=41
                        DT=0 HR  LENGTH=658 FT
                        NS=0  SLOPE=0.023
*
PRINT HYD            ID=1   CODE=1
```

```
*
*
*** Sub-BASIN TB107A ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                             NK=1   ISLOPE=1
                             LENGTH=1556 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB107A   DA=0.030294 SQ MI
                             PER A=0 PER B=5  PER C=5  PER D=90
                             TP=0.0   MASSRAIN=-1
*
PRINT HYD                    ID=2   CODE=1
*
*
* Total Flow from Basin (NEBASINRT + TB107A)
ADD HYD                      ID=1  HYD NO=TB107ASUM ID I=1   ID II=2
PRINT HYD                    ID=1   CODE=1
*
*
*S AP 1
*
*
**
***Route HYD TB107ASUMB through TB107F Through a Pipe
COMPUTE RATING CURVE     CID=1   VS NO=1 CODE=-1   SLP=0.023
                                 DIA=36 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=TB107ASUMRT  INFLOW ID=1
                             DT=0 HR  LENGTH=254 FT
                             NS=0  SLOPE=0.023
*
PRINT HYD                    ID=2   CODE=1*** Sub-BASIN TB107ASUMRT ****
*
*** Sub-BASIN TB107B ****
*  COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                             NK=1   ISLOPE=1
                             LENGTH=447 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD               ID=3   HYD NO=TB107B   DA=0.003175 SQ MI
                             PER A=65.0 PER B=5.0  PER C=5.0  PER D=25.0
                             TP=0.0   MASSRAIN=-1
*
PRINT HYD                    ID=3   CODE=1
*
* Total Flow from Basin (TB107ASUMRT + TB107B)
ADD HYD                      ID=1  HYD NO=TB107BSUM ID I=2   ID II=3
PRINT HYD                    ID=1   CODE=1
*
```

```
*
*** Sub-BASIN TB107F ****
*  COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                  NK=1   ISLOPE=1
                  LENGTH=256 FT   SLOPE=0.016   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=TB107F   DA=0.001235 SQ MI
                  PER A=0.0 PER B=0.0  PER C=10.0  PER D=90.0
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
* Total Flow from Basin (TB107B + TB107F)
ADD HYD            ID=1  HYD NO=TB107FSUM ID I=1   ID II=2
PRINT HYD          ID=1   CODE=1
*
*
*S AP 2
*
*
****Route HYD TB107F through TB107G Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                              DIA=36 IN   N=0.013
*
ROUTE MCUNGE               ID=10  HYD NO=TB107FSUMRT  INFLOW ID=1
                  DT=0 HR  LENGTH=725 FT
                  NS=0  SLOPE=0.023
*
PRINT HYD          ID=10   CODE=1*** Sub-BASIN TB107FSUMRT ****
*
*
*
*** Sub-BASIN TB107C ****
*  COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                  NK=1   ISLOPE=1
                  LENGTH=1080 FT   SLOPE=0.01   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=TB107C   DA=0.013143 SQ MI
                  PER A=15.0 PER B=15.0  PER C=55.0  PER D=15.0
                  TP=0.0   MASSRAIN=-1
*
PRINT HYD          ID=2   CODE=1
*
****Route HYD TB107C Through a Pipe through TB107E
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                              DIA=36 IN   N=0.013
*
ROUTE MCUNGE               ID=1  HYD NO=TB107CRT  INFLOW ID=2
                  DT=0 HR  LENGTH=268 FT
```

```
                                XHubbellDamCentralImprove_6hr-100-yr
                    NS=0  SLOPE=0.023
*
PRINT HYD           ID=1   CODE=1*** Sub-BASIN TB107CRT ****
*
*
*** Sub-BASIN TB107E ****
*  COMPUTE LT TP            LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=358 FT   SLOPE=0.011   K=2.0
COMPUTE NM HYD           ID=2   HYD NO=TB107E   DA=0.002226 SQ MI
                    PER A=50.0 PER B=50.0  PER C=0  PER D=0
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
** Total Flow from Basin (TB107CRT + TB107E)
ADD HYD             ID=20  HYD NO=TB107ESUM ID I=1   ID II=2
PRINT HYD           ID=20   CODE=1
*
*** Sub-BASIN TB107D ****
*  COMPUTE LT TP            LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1250 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD           ID=2   HYD NO=TB107D   DA=0.014662 SQ MI
                    PER A=0.0 PER B=30.0  PER C=30.0  PER D=40.0
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
****Route HYD TB107D Through a Pipe through TB107E
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.023
                                DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=30  HYD NO=TB107DRT  INFLOW ID=2
                    DT=0 HR  LENGTH=189 FT
                    NS=0  SLOPE=0.023
*
PRINT HYD           ID=30   CODE=1*** Sub-BASIN TB107DRT ****
*
*
** Total Flow from Basin (TB107DRT + TB107E)
ADD HYD             ID=40  HYD NO=TB107ESUM ID I=20   ID II=30
PRINT HYD           ID=40   CODE=1
*
*
** Total Flow from Basin (TB107D + TB107E + TB107FRT)
ADD HYD             ID=50  HYD NO=TB107ESUM ID I=10   ID II=40
```

```
PRINT HYD             ID=50   CODE=1
*
*** Sub-BASIN TB107G ****
*  COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=720 FT   SLOPE=0.025   K=2.0
COMPUTE NM HYD             ID=2   HYD NO=TB107G   DA=0.003356 SQ MI
                      PER A=0.0 PER B=0.0  PER C=10.0  PER D=90.0
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=2   CODE=1
*
** Total Flow from Basin (TB107A, B, C, D, E, F G = TB107tot)
ADD HYD               ID=10  HYD NO=TB107SUM ID I=50   ID II=2
PRINT HYD             ID=10   CODE=1
*
*
*S AP 3
*
*** Sub-BASIN TB108 ****
*
COMPUTE LT TP              LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=2000 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD             ID=3   HYD NO=TB108   DA=0.05040 SQ MI
                      PER A=0 PER B=16.4  PER C=16.4  PER D=67.2
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=3   CODE=1
*
*
* Total Flow from Basin (TB107 + TB108)
ADD HYD               ID=20  HYD NO=TB108SUMA ID I=10   ID II=3
PRINT HYD             ID=20   CODE=1
*
*
*
*
*S AP 4
*
*
*S APTB3
*
***Route HYD TB107+TB108 Sub-Basins to Through TB109C Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.020
                      DIA=36 IN   N=0.013
*
```

```
ROUTE MCUNGE                ID=2  HYD NO=TB108SUMBRT  INFLOW ID=20
                            DT=0 HR  LENGTH=1075 FT
                            NS=0  SLOPE=0.020
*
PRINT HYD                   ID=2   CODE=1
*
*
*** Sub-BASIN TB109B ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                            NK=1   ISLOPE=1
                            LENGTH=1121 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB109B   DA=0.008517 SQ MI
                            PER A=0 PER B=20  PER C=20  PER D=60
                            TP=0.0   MASSRAIN=-1
*
PRINT HYD                   ID=1   CODE=1
*
* Total Flow from Basin (TB109B + TB108SUMBRT)
ADD HYD                     ID=10  HYD NO=TB109SUMA ID I=1   ID II=2
PRINT HYD                   ID=10   CODE=1
*
***Route HYD TB106SUMRT Through TB109A Through a Pipe
COMPUTE RATING CURVE     CID=1   VS NO=1 CODE=-1   SLP=0.020
                            DIA=66 IN   N=0.013
*
ROUTE MCUNGE                ID=1  HYD NO=TB108SUMBRT  INFLOW ID=15
                            DT=0 HR  LENGTH=400 FT
                            NS=0  SLOPE=0.020
*
PRINT HYD                   ID=1   CODE=1
*
*
*** Sub-BASIN TB109A ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                            NK=1   ISLOPE=1
                            LENGTH=1319 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB109A   DA=0.018441 SQ MI
                            PER A=0 PER B=20  PER C=20  PER D=60
                            TP=0.0   MASSRAIN=-1
*
PRINT HYD                   ID=2   CODE=1
*
*
* Total Flow from Basin (TB109A + TB106SUMBRT)
ADD HYD                     ID=1  HYD NO=TB109SUMA ID I=1   ID II=2
```

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PRINT HYD ID=1 CODE=1
*
*
***Route HYD TB106SUMRT + TB109A through TB109B Through a Pipe
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.020
DIA=66 IN N=0.013
*
ROUTE MCUNGE ID=20 HYD NO=TB108SUMBRT INFLOW ID=1
DT=0 HR LENGTH=150 FT
NS=0 SLOPE=0.020
*
PRINT HYD ID=20 CODE=1
*
*
* Total Flow from Basin (TB109A & B+ TB106SUMBRT)
ADD HYD ID=30 HYD NO=TB109SUMA ID I=10 ID II=20
PRINT HYD ID=30 CODE=1
*
*
*** Sub-BASIN TB109C ****
*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME METHOD
NK=1 ISLOPE=1
LENGTH=1166 FT SLOPE=0.021 K=2.0
COMPUTE NM HYD ID=2 HYD NO=TB109C DA=0.004967 SQ MI
PER A=0 PER B=0 PER C=10 PER D=90
TP=0.0 MASSRAIN=-1
*
PRINT HYD ID=2 CODE=1
*
* Total Flow from Basin (TB109 + TB106SUMBRT)
ADD HYD ID=1 HYD NO=TB109SUMA ID I=30 ID II=2
PRINT HYD ID=1 CODE=1
*
*
*S AP 5
*
****
* "REVISIONS BY WSP" - Stopped
* Basins TB107 and TB109 were sub-divided in more details
*for the West Central Frontage Road Project
****
*
*S APTB4
*
***Route HYD TB109SUMB to Sub-Basin TB113 Through a Pipe
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.020

```
                    DIA=72 IN   N=0.013
*
ROUTE MCUNGE        ID=2  HYD NO=TB109SUMBRT  INFLOW ID=1
                DT=0 HR  LENGTH=1450 FT
                NS=0  SLOPE=0.020
*
PRINT HYD       ID=2   CODE=1
*
*
*** Sub-BASIN TB116 ****
*
COMPUTE LT TP       LCODE=1   UPLAND/LAG TIME METHOD
                NK=1   ISLOPE=1
                LENGTH=1143 FT   SLOPE=0.021   K=1.0
COMPUTE NM HYD      ID=1   HYD NO=TB116   DA=0.03257 SQ MI
                PER A=27.7 PER B=9.9  PER C=9.9  PER D=52.5
                TP=0.0   MASSRAIN=-1
*
PRINT HYD       ID=1   CODE=1
*
*
****Route HYD TB116 to Sub-Basin TS113
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                MIN ELEV=100 FT MAX ELEV=105 FT
                    CH SLP=0.014  FP SLP=0.02 N=0.017
                    DIST=20 FT

                    DIST  ELEV
            0       105
                    10          100
                    15          100
                    20          105
*
ROUTE MCUNGE        ID=3  HYD NO=TB116RT  INFLOW ID=1
                DT=0 HR  LENGTH=1835 FT
                NS=0  SLOPE=0.014
*
PRINT HYD       ID=3   CODE=1
*
*
* Total Flow from Basin (TB109SUMBRT + TB116RT)
ADD HYD         ID=1  HYD NO=TB113SUMA ID I=2   ID II=3
PRINT HYD       ID=1   CODE=1
*
*
*** Sub-BASIN TB113 ****
*
```

```
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1813 FT   SLOPE=0.023   K=2.0
COMPUTE NM HYD               ID=2   HYD NO=TB113   DA=0.04712 SQ MI
                    PER A=59 PER B=7.7  PER C=7.7  PER D=25.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB113SUMA + TB113)
ADD HYD             ID=1  HYD NO=TB113SUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
***Route HYD TB113SUMB to Sub-Basin TB114 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                                DIA=78 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=TB113SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1005 FT
                    NS=0  SLOPE=0.018
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB114 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1247 FT   SLOPE=0.014   K=1.0
COMPUTE NM HYD               ID=1   HYD NO=TB114   DA=0.02685 SQ MI
                    PER A=0.2 PER B=13  PER C=26.2  PER D=60.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB113SUMBRT + TB114)
ADD HYD             ID=1  HYD NO=TB114SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*S APTB5
*
***Route HYD TB114SUM to Sub-Basin TB115 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                                DIA=90 IN   N=0.013
```

```
*
ROUTE MCUNGE              ID=10  HYD NO=TB114SUMRT  INFLOW ID=1
                     DT=0 HR  LENGTH=1230 FT
                     NS=0  SLOPE=0.01
*
PRINT HYD            ID=10   CODE=1
*
*******************************************************************************
*
*** Sub-BASIN TB110 ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=2333 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD            ID=21   HYD NO=TB110   DA=0.07272 SQ MI
                     PER A=17.6 PER B=14.7  PER C=14.7  PER D=53
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=21   CODE=1
*
*
*
*******************************************************************************
*   "REVISIONS BY WSP" - Started
* Basins TB111 and TB112 were sub-divided in more details
*for the West Central Frontage Road Project
*******************************************************************************
*
*S AP 10
*
*
*** Sub-BASIN TB111A ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
                     NK=1   ISLOPE=1
                     LENGTH=650 FT   SLOPE=0.022   K=2.0
COMPUTE NM HYD            ID=2   HYD NO=TB111A   DA=0.006371 SQ MI
                     PER A=0   PER B=10  PER C=10  PER D=80
                     TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=2   CODE=1
*
*
*
*** Sub-BASIN TB111D ****
*
COMPUTE LT TP             LCODE=1   UPLAND/LAG TIME METHOD
```

```
                    NK=1   ISLOPE=1
                    LENGTH=460 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB111D   DA=0.002589 SQ MI
                    PER A=0   PER B=0  PER C=10  PER D=90
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB111A + TB111D)
ADD HYD             ID=1  HYD NO=TB211DSUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*S AP 6
*
*
***Route HYD TB111DSUM to Sub-Basin TB111B Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=3  HYD NO=TB111DSUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=460 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=3   CODE=1
*
**
*** Sub-BASIN TB111B ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=751 FT   SLOPE=0.019   K=2.0
COMPUTE NM HYD      ID=2   HYD NO=TB111B   DA=0.004981 SQ MI
                    PER A=0   PER B=10  PER C=10  PER D=80
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*
*** Sub-BASIN TB111E ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=274 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD      ID=1   HYD NO=TB111E   DA=0.001471 SQ MI
```

```
                    PER A=0   PER B=0  PER C=10  PER D=90
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB111B + TB111E)
ADD HYD             ID=1  HYD NO=TB111DSUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basins (TB111A, B, D, E)
ADD HYD             ID=1  HYD NO=TB111DSUMB ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*S AP 7
*
*
***Route HYD TB111ESUM to Sub-Basin TB111C Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=4  HYD NO=TB111DSUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=437 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=4   CODE=1
**
**
*** Sub-BASIN TB111C ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=617 FT   SLOPE=0.019   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB111C   DA=0.003801 SQ MI
                    PER A=0   PER B=10  PER C=10  PER D=80
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB111F ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=434 FT   SLOPE=0.023   K=2.0
```

```
COMPUTE NM HYD          ID=1   HYD NO=TB111F   DA=0.002128 SQ MI
                        PER A=0   PER B=0  PER C=10  PER D=90
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basin (TB111C + TB111F)
ADD HYD                 ID=1  HYD NO=TB111DSUMB ID I=1   ID II=2
PRINT HYD               ID=1   CODE=1
*
*
* Total Flow from Basins (TB111A, B, D, E, C, F)
ADD HYD                 ID=1  HYD NO=TB111DSUMB ID I=1   ID II=4
PRINT HYD               ID=1   CODE=1
*
*
*S AP 8
*
*
***Route HYD TB111FSUM to Sub-Basin TB111G Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=36 IN   N=0.013
*
ROUTE MCUNGE            ID=5  HYD NO=TB111FSUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=512 FT
                        NS=0  SLOPE=0.020
*
PRINT HYD               ID=5   CODE=1
*
*
*** Sub-BASIN TB111G ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=535 FT   SLOPE=0.019   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB111G   DA=0.003626 SQ MI
                        PER A=0   PER B=5  PER C=10  PER D=85
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basins (TB111A, B, D, E, C, F, G)
ADD HYD                 ID=1  HYD NO=TB111DSUMB ID I=2   ID II=5
PRINT HYD               ID=1   CODE=1
*
```

```
**
*S AP Total Basin TB111, Just before Volcano
*
*
*S AP 9
*
*
*
* Total Flow from Basin (TB110 + TB111)
ADD HYD             ID=1  HYD NO=TB211SUM ID I=1   ID II=21
PRINT HYD           ID=1   CODE=1
*S APTB6
*
*
****Route HYD TB111SUM to Sub-Basin TB112SUM
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=5  HYD NO=TB111SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=900 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=5   CODE=1
*
*
*
*** Sub-BASIN TB112A ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1047 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB112A   DA=0.007716 SQ MI
                    PER A=0   PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*
*** Sub-BASIN TB112E ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=207 FT   SLOPE=0.024   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB112E   DA=0.001181 SQ MI
                    PER A=0   PER B=0  PER C=10  PER D=90
                    TP=0.0   MASSRAIN=-1
```

```
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB112A + TB112E)
ADD HYD             ID=1  HYD NO=TB112ESUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB110, TB111, TB112A + TB112E)
ADD HYD             ID=1  HYD NO=TB112ESUMB ID I=1   ID II=5
PRINT HYD           ID=1   CODE=1
*
*
*S AP 11
*
*
****Route HYD TB112ESUM to Sub-Basin TB112F Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=TB112FSUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=200 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=3   CODE=1
*
**
*** Sub-BASIN TB112B ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1041 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB112B   DA=0.007778 SQ MI
                    PER A=0   PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB112F ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=200 FT   SLOPE=0.020   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB112F   DA=0.001017 SQ MI
                    PER A=0   PER B=0  PER C=10  PER D=90
```

```
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB112B + TB112F)
ADD HYD             ID=1  HYD NO=TB112ESUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB110, TB111, TB112A, E, B, F)
ADD HYD             ID=1  HYD NO=TB112FSUMB ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*S AP 12
*
*
****Route HYD TB112FSUM to Sub-Basin TB112G Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=3  HYD NO=TB112GSUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=105 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=3   CODE=1
*
**
*** Sub-BASIN TB112C ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=997 FT   SLOPE=0.018   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB112C   DA=0.003738 SQ MI
                    PER A=0   PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB112G ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=102 FT   SLOPE=0.028   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB112G   DA=0.000483 SQ MI
```

```
                    PER A=0   PER B=0  PER C=10  PER D=90
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB112C + TB112G)
ADD HYD             ID=1  HYD NO=TB112ESUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basins (TB110, TB111, TB112A, E, B, F, C, G)
ADD HYD             ID=1  HYD NO=TB112FSUMB ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*S AP 13
*
*
****Route HYD TB112GSUM to Sub-Basin TB112H Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=48 IN   N=0.013
*
ROUTE MCUNGE            ID=3  HYD NO=TB112GSUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=105 FT
                    NS=0  SLOPE=0.020
*
PRINT HYD           ID=3   CODE=1
*
**
*** Sub-BASIN TB112D ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1079 FT   SLOPE=0.017   K=2.0
COMPUTE NM HYD          ID=2   HYD NO=TB112D   DA=0.009203 SQ MI
                    PER A=0   PER B=15  PER C=15  PER D=70
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB112H ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=304 FT   SLOPE=0.020   K=2.0
```

```
COMPUTE NM HYD              ID=1   HYD NO=TB112H   DA=0.001502 SQ MI
                      PER A=0   PER B=0  PER C=10  PER D=90
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB112D + TB112H)
ADD HYD             ID=1  HYD NO=TB212ESUMB ID I=1   ID II=2
PRINT HYD           ID=1   CODE=1
*
** Total Flow from Basins (TB110, TB111, TB112) at the Cul-de-sac
ADD HYD             ID=1  HYD NO=TB112FSUMB ID I=1   ID II=3
PRINT HYD           ID=1   CODE=1
*
*
*S AP 14
*
*S APTB6a at the Cul-de-Sac
*
*
****Route HYD TB112SUM to Sub-Basin TB112Library Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                        DIA=60 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=TB112GSUMBRT  INFLOW ID=1
                      DT=0 HR  LENGTH=500 FT
                      NS=0  SLOPE=0.020
*
PRINT HYD           ID=3   CODE=1
*
**
*** Sub-BASIN TB112Library ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                      NK=1   ISLOPE=1
                      LENGTH=1210 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB112Library   DA=0.02883 SQ MI
                      PER A=0   PER B=0  PER C=20  PER D=80
                      TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB112SUMRT + TB112 Library)
ADD HYD             ID=1  HYD NO=TB212SUMA ID I=2   ID II=3
PRINT HYD           ID=1   CODE=1
```

```
*
*
*S APTB7
*
*
* Total Flow from Basin (UNBASINRT + TB212SUMA)
ADD HYD             ID=1  HYD NO=TB112SUMB ID I=13   ID II=1
PRINT HYD           ID=1   CODE=1
*
*******************************************************************************
*   "REVISIONS BY WSP" - Stopped
* Basins TB211 and TB212 were sub-divided in more details
*for the West Central Frontage Road Project
*******************************************************************************
**
*
*S APTB8
*
***Route HYD TB112SUMB to Sub-Basin TB115 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.01
                        DIA=90 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=TB112SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1880 FT
                    NS=0  SLOPE=0.01
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB114SUMRT + TB112SUMBRT)
ADD HYD             ID=1  HYD NO=TB115SUMA ID I=10   ID II=2
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TB115 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=3027 FT   SLOPE=0.01   K=1.0
COMPUTE NM HYD              ID=2   HYD NO=TB115   DA=0.11272 SQ MI
                    PER A=0 PER B=1.2  PER C=81.5  PER D=17.3
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
* Total Flow from Basin (TB115SUMA + TB115)
```

```
ADD HYD             ID=10  HYD NO=TB115SUMB ID I=1   ID II=2
PRINT HYD           ID=10   CODE=1
*
*
*******************************************************************************
*
*** Sub-BASIN TB117 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1357 FT   SLOPE=0.021   K=1.0
COMPUTE NM HYD              ID=1   HYD NO=TB117   DA=0.01861 SQ MI
                    PER A=39.9 PER B=11.5  PER C=11.5  PER D=37.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
****Route HYD TB117 to Sub-Basin TB120
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.023  FP SLP=0.02 N=0.017
                              DIST=20 FT

                              DIST  ELEV
                0       105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE                ID=2  HYD NO=TB117RT  INFLOW ID=1
                    DT=0 HR  LENGTH=1110 FT
                    NS=0  SLOPE=0.023
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB120 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1726 FT   SLOPE=0.014   K=2.0
COMPUTE NM HYD              ID=1   HYD NO=TB120   DA=0.03690 SQ MI
                    PER A=0 PER B=14  PER C=15  PER D=71
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
```

```
*
*
* Total Flow from Basin (TB117RT + TB120)
ADD HYD             ID=1  HYD NO=TB120SUM ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
*** Sub-BASIN TB118 ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1258 FT   SLOPE=0.024   K=1.0
COMPUTE NM HYD              ID=2   HYD NO=TB118   DA=0.03570 SQ MI
                    PER A=.1 PER B=40.9  PER C=41.9  PER D=17.1
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=2   CODE=1
*
*
****Route HYD TB118 to Sub-Basin TB119
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                              CH SLP=0.022  FP SLP=0.02 N=0.017
                              DIST=20 FT

                              DIST  ELEV
                0       105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE                ID=3  HYD NO=TB118RT1  INFLOW ID=2
                    DT=0 HR  LENGTH=815 FT
                    NS=0  SLOPE=0.022
*
PRINT HYD           ID=3   CODE=1
*
*
***Route HYD TB118RT1 to Sub-Basin TB120 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.005
                              DIA=42 IN   N=0.013
*
ROUTE MCUNGE                ID=2  HYD NO=TB118RT2  INFLOW ID=3
                    DT=0 HR  LENGTH=505 FT
                    NS=0  SLOPE=0.005
*
PRINT HYD           ID=2   CODE=1
```

```
*
*
*** Sub-BASIN TB119 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1375 FT   SLOPE=0.013   K=2.0
COMPUTE NM HYD               ID=3   HYD NO=TB119   DA=0.02285 SQ MI
                        PER A=0 PER B=18  PER C=18  PER D=64
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=3   CODE=1
*
*
* Total Flow from Basin (TB118RT2 + TB119)
ADD HYD              ID=2  HYD NO=TB119SUM ID I=2   ID II=3
PRINT HYD            ID=2   CODE=1
*
*
* Total Flow from Basin (TB120SUM + TB119SUM)
ADD HYD              ID=1  HYD NO=TB121SUMA ID I=1   ID II=2
PRINT HYD            ID=1   CODE=1
*
*S APTB9
*
***Route HYD TB121SUMA to Sub-Basin TB121 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.015
                                DIA=60 IN   N=0.013
*
ROUTE MCUNGE                 ID=2  HYD NO=TB121SUMART  INFLOW ID=1
                        DT=0 HR  LENGTH=1075 FT
                        NS=0  SLOPE=0.015
*
PRINT HYD            ID=2   CODE=1
*
*
*** Sub-BASIN TB121 ****
*
COMPUTE LT TP                LCODE=1   UPLAND/LAG TIME METHOD
                        NK=1   ISLOPE=1
                        LENGTH=1745 FT   SLOPE=0.011   K=2.0
COMPUTE NM HYD               ID=1   HYD NO=TB121   DA=0.05769 SQ MI
                        PER A=12.5 PER B=017.3  PER C=17.3  PER D=52.4
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD            ID=1   CODE=1
*
```

```
*
* Total Flow from Basin (TB121SUMART + TB121)
ADD HYD             ID=1  HYD NO=TB121SUMB ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*
***Route HYD TB121SUMB to Sub-Basin TB122 Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.007
                        DIA=78 IN   N=0.013
*
ROUTE MCUNGE            ID=2  HYD NO=TB121SUMBRT  INFLOW ID=1
                    DT=0 HR  LENGTH=1690 FT
                    NS=0  SLOPE=0.007
*
PRINT HYD           ID=2   CODE=1
*
*
*** Sub-BASIN TB122 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                    NK=1   ISLOPE=1
                    LENGTH=1570 FT   SLOPE=0.006   K=2.0
COMPUTE NM HYD          ID=1   HYD NO=TB122   DA=0.07064 SQ MI
                    PER A=0 PER B=18.2  PER C=18.2  PER D=63.6
                    TP=0.0   MASSRAIN=-1
*
PRINT HYD           ID=1   CODE=1
*
*
* Total Flow from Basin (TB121SUMBRT + TB122)
ADD HYD             ID=1  HYD NO=TB122SUMA ID I=2   ID II=1
PRINT HYD           ID=1   CODE=1
*
*S APTB10
*
* Total Flow from Basin (TB115SUMB + TB122SUMA)
ADD HYD             ID=1  HYD NO=TB122SUMB ID I=10   ID II=1
PRINT HYD           ID=1   CODE=1
*
*S APTB11
*
****Route HYD TB122SUMB to Sub-Basin TB124
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=100 FT MAX ELEV=105 FT
                        CH SLP=0.01  FP SLP=0.02 N=0.013
                        DIST=20 FT
```

```
                              XHubbellDamCentralImprove_6hr-100-yr
                              DIST  ELEV
                 0       105
                              10          100
                              15          100
                              20          105
*
ROUTE MCUNGE                  ID=2  HYD NO=TB122SUMBRT  INFLOW ID=1
                         DT=0 HR  LENGTH=2160 FT
                         NS=0  SLOPE=0.01
*
PRINT HYD             ID=2   CODE=1
*
*
*** Sub-BASIN TB123 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                         NK=2   ISLOPE=1
                         LENGTH=1837 FT   SLOPE=0.007   K=2.0
                              LENGTH=826 FT    SLOPE=0.012   K=3.0
COMPUTE NM HYD                ID=1   HYD NO=TB123   DA=0.07133 SQ MI
                         PER A=0 PER B=21  PER C=22  PER D=57
                         TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=1   CODE=1
*
*
*** Sub-BASIN TB124 ****
*
COMPUTE LT TP                 LCODE=1   UPLAND/LAG TIME METHOD
                         NK=1   ISLOPE=1
                         LENGTH=3880 FT   SLOPE=0.010   K=1.0
COMPUTE NM HYD                ID=3   HYD NO=TB124   DA=0.15974 SQ MI
                         PER A=3.1 PER B=21.1  PER C=24.5  PER D=51.2
                         TP=0.0   MASSRAIN=-1
*
PRINT HYD             ID=3   CODE=1
*
*
* Total Flow from Basin (TB123 + TB124)
ADD HYD               ID=1  HYD NO=TB124SUMA ID I=1   ID II=3
PRINT HYD             ID=1   CODE=1
*
*
* Total Flow from Basin (TB122SUMBRT + TB124SUMA)
ADD HYD               ID=1  HYD NO=TB124SUMB ID I=2   ID II=1
PRINT HYD             ID=1   CODE=1
*
```

```
*S APAB5
*
****Route HYD TB124SUMB to Sub-Basin TB125
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=100 FT MAX ELEV=105 FT
                                CH SLP=0.022  FP SLP=0.02 N=0.013
                                DIST=20 FT

                                DIST  ELEV
                    0       105
                                10          100
                                15          100
                                20          105
*
ROUTE MCUNGE                    ID=43  HYD NO=TB124SUMBRT  INFLOW ID=1
                        DT=0 HR  LENGTH=1000 FT
                        NS=0  SLOPE=0.022
*
PRINT HYD               ID=43   CODE=1
*
*
*S*************************************************************************************
*S**********             END OF TIERRA BAYITA BASIN
*S*************************************************************************************
*
*
*S*************************************************************************************
*S**********             ATRISCO BUSINESS PARK BASIN
*S*************************************************************************************
*
*
*** Sub-BASIN AB101****
*
COMPUTE LT TP                   LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=2050 FT   SLOPE=0.019   K=0.7
                                LENGTH=955 FT    SLOPE=0.010   K=3.0
COMPUTE NM HYD                  ID=1   HYD NO=AB101   DA=0.17731 SQ MI
                        PER A=45 PER B=9  PER C=9  PER D=38
                        TP=0.0   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
****Route Hyd AB101 through Pond
*
ROUTE RESERVOIR                         ID=30  HYD NO=PONDAB101  INFLOW ID=1  CODE=1
```

Revised Amole Hubbell Update 2013
AHYMO Model

Revised by WSP

100-Year Frequency, 6-Hour
Excerpts from the Summary File

Existing Conditions

XHubbellDamCentralImprove_6hr-100-yr

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) - Ver. S4.02a, Rel: 02a RUN DATE (MON/DAY/YR) =09/28/2020

INPUT FILE = Central\AHYMO\Revised_WSP\Existing\XHubbellDamCentralImprove_6hr-100-yr.txt USER NO.= AHYMO-S4TempUser05901704

COMMAND	IDENTIFICATION	FROM HYDROGRAPH NO.	TO ID NO.	PEAK AREA (SQ MI)	RUNOFF DISCHARGE (CFS)	VOLUME (AC-FT)	TIME TO RUNOFF (INCHES)	CFS PEAK (HOURS)	PAGE = 1 PER ACRE	NOTATION
*S "EXISTING" CONDITION MODEL FOR Amole Basin										
START							TIME=	0.00		
LOCATION	ALBUQUERQUE									
*S	RAINFALL DATA FROM NOAA ATLAS 14									
*S**********										
*S 100 YEAR 6HR STORM										
*S **********										
*S REVISIONS BY WSP										
*S The Amole HUBBELL DRAINAGE MANAGEMENT PLAN UPDATE										
*S Rainfall was revised based on latest NOAA Atlas 14										
*S DT was changed from 0.03333 to 0.01										
*S **********										
RAINFALL TYPE= 1	NOAA 14							RAIN6=	2.220	
SEDIMENT BULK								PK BF =	1.06	
*S**********										
*S**********	98TH & CENTRAL BASIN									
*S**********										
COMPUTE NM HYD	NE101	-	1	0.14521	166.52	5.774	0.74558	1.570	1.792 PER IMP=	5.00
ROUTE MCUNGE	NE101RT	1	2	0.14521	165.82	5.771	0.74517	1.670	1.784 CCODE =	0.2
COMPUTE NM HYD	NE110	-	1	0.12985	218.72	9.705	1.40145	1.620	2.632 PER IMP=	45.90
ADD HYD	NE110SUM	2& 1	10	0.27506	378.36	15.476	1.05498	1.640	2.149	
COMPUTE NM HYD	NE105	-	1	0.08439	102.36	3.356	0.74557	1.560	1.895 PER IMP=	5.00
ROUTE RESERVOIR	PondNE1	1	30	0.08439	13.22	3.356	0.74557	2.000	0.245 AC-FT=	2.413
*S MIGHT NEED TO CHANGE ROUTE TO PIPE										
ROUTE MCUNGE	PONDNE1RT	30	1	0.08439	13.22	3.355	0.74552	2.030	0.245 CCODE =	0.2
COMPUTE NM HYD	NE106	-	2	0.05741	108.54	4.328	1.41350	1.570	2.954 PER IMP=	51.45

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ADD HYD          NE106SUM  1& 2   1      0.14180      111.99      7.683     1.01596    1.570    1.234
*S APNE1
ROUTE MCUNGE     NE106SUMRt    1    2      0.14180      111.45      7.681     1.01561    1.600    1.228 CCODE =     0.2
COMPUTE NM HYD       NE104   -    1      0.04197       47.83      1.669     0.74558    1.570    1.781 PER IMP=   5.00
ROUTE MCUNGE       NE104RT    1    3      0.04197       47.74      1.668     0.74539    1.620    1.777 CCODE =     0.2
ADD HYD          NE109SUMA  2& 3   1      0.18377      158.76      9.349     0.95389    1.610    1.350
COMPUTE NM HYD       NE109   -    2      0.04336       67.16      2.206     0.95403    1.540    2.420 PER IMP=  19.50
ADD HYD          NE109SUMB  1& 2   1      0.22713      217.49     11.555     0.95392    1.590    1.496
*S APNE2
ADD HYD        PONDNE3SUMA 10& 1  10      0.50219      584.81     27.032     1.00927    1.630    1.820
COMPUTE NM HYD       NE102   -    1      0.07604       99.22      3.024     0.74558    1.540    2.039 PER IMP=   5.00
ROUTE MCUNGE       NE102RT    1    2      0.07604       99.06      3.023     0.74539    1.580    2.035 CCODE =     0.2
COMPUTE NM HYD       NE107   -    1      0.04325       59.17      1.813     0.78602    1.540    2.138 PER IMP=   6.40
ADD HYD          NE107SUM  2& 1   1      0.11929      156.02      4.836     0.76011    1.570    2.044
*S APNE3
ROUTE MCUNGE       NE107RT    1    2      0.11929      155.69      4.834     0.75986    1.610    2.039 CCODE =     0.2
COMPUTE NM HYD       NE103   -    1      0.06441       82.75      2.561     0.74557    1.540    2.007 PER IMP=   5.00
ROUTE MCUNGE       NE103RT    1    3      0.06441       82.54      2.560     0.74533    1.600    2.002 CCODE =     0.2
ADD HYD          NE108SUMA  2& 3   1      0.18370      238.18      7.395     0.75476    1.600    2.026
COMPUTE NM HYD       NE108   -    2      0.04522       63.03      1.930     0.80027    1.540    2.178 PER IMP=   6.80
ADD HYD          NE108SUMB  1& 2   1      0.22892      294.50      9.325     0.76375    1.590    2.010
*S APNE4
ROUTE MCUNGE     NE108SUMBRT    1    2      0.22892      293.78      9.322     0.76350    1.610    2.005 CCODE =     0.2
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                                FROM  TO                PEAK        RUNOFF            TIME TO    CFS      PAGE =   2
                          HYDROGRAPH   ID   ID        AREA     DISCHARGE      VOLUME      RUNOFF     PEAK     PER
COMMAND      IDENTIFICATION   NO.  NO.     (SQ MI)     (CFS)       (AC-FT)    (INCHES)  (HOURS)    ACRE     NOTATION

COMPUTE NM HYD       NE111   -    1      0.02356       20.93      0.937     0.74558    1.630    1.388 PER IMP=   5.00
ADD HYD          NE111SUM  2& 1   1      0.25248      314.61     10.258     0.76182    1.610    1.947
ROUTE RESERVOIR      PondNE2    1   30      0.25248       40.29     10.258     0.76182    2.100    0.249 AC-FT=    7.134
*S  RATING CURVE FROM PLAN SET ADN SD FACILITIES
*S  TB DRAINAGE FACILITIES PHASE IIIC JUNE 1995
*S
ADD HYD        PONDNE3SUMB 10&30   1      0.75467      607.28     37.290     0.92648    1.630    1.257
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ROUTE RESERVOIR     NEBASIN   1  30      0.75467       60.15      37.290      0.92648    2.940    0.125 AC-FT=   21.695
*S  RATING CURVE FROM PLAN SET ADN SD FACILITIES
*S  TB DRAINAGE FACILITIES PHASE IIIC JUNE 1995
*S
ROUTE MCUNGE      NEBASINRT  30  41      0.75467       60.15      37.290      0.92648    2.980    0.125 CCODE =     0.2
*S**************************************************************************************
*S**********       END OF 98TH & CENTRAL BASIN
*S**************************************************************************************
*S**************************************************************************************
*S**********       UNSER-214 BASIN
*S**************************************************************************************
COMPUTE NM HYD        U101  -    1      0.04564       84.92      2.892      1.18811    1.530    2.907 PER IMP=  33.88
ROUTE RESERVOIR     PondU6    1  30      0.04564        8.27      2.892      1.18810    2.090    0.283 AC-FT=    2.063
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
*S
*S RECALL HYD Below From West I-40 DMP by BHI
*S Folder File WI40IN17.PUN
*S Offsite flows from I-40 Diversion into the Unser/214 Basin
*s
RECALL HYD          48"PIPE   -    89     12.97590      108.00     139.200      0.20114    1.550    0.013
*S
*S END of RECALL HYD
*S
ROUTE MCUNGE         UDIVRT   89    1     12.97590      108.00     139.182      0.20112    1.750    0.013 CCODE =     0.1
COMPUTE NM HYD        U102  -    2      0.12975       201.77      5.955      0.86049    1.540    2.430 PER IMP=   6.30
ADD HYD            U102SUMA  1& 2   1     13.10565      211.19     145.133      0.20764    1.700    0.025
ROUTE RESERVOIR     PondU5    1  31     13.10565      143.14     145.133      0.20764    1.860    0.017 AC-FT=    3.193
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ADD HYD            U102SUMB 30&31   1     13.15129      151.32     148.025      0.21104    1.870    0.018
ROUTE RESERVOIR     PondU4    1  31     13.15129      116.04     147.853      0.21080    3.750    0.014 AC-FT=    7.201
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
COMPUTE NM HYD        U103  -    1      0.05310       121.06      4.206      1.48529    1.530    3.562 PER IMP=  50.50
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ADD HYD          U103SUM 31& 1   1     13.20439      123.20     152.059      0.21592    1.530    0.015
ROUTE RESERVOIR      PondU3    1  30     13.20439      115.00     151.362      0.21493    5.770    0.014 AC-FT=    4.670
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE RESERVOIR      PondU2   30  31     13.20439      115.00     147.334      0.20921    5.840    0.014 AC-FT=    7.088
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
COMPUTE NM HYD       U104  -    1      0.04966      110.30      3.819      1.44182    1.530    3.470 PER IMP=  47.90
ROUTE RESERVOIR      PondU7    1  30      0.04966       45.08      3.819      1.44182    1.740    1.418 AC-FT=    1.507
*S  Pond Rating Curve from Avalon Report Feb. 1998 stated pond release of 35.8cf
*S  Sub-Basin U104 drains to pond in analysis; however,
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*S  The pond respective watershed is smaller, thus the higher release from pond.
*S
ADD HYD          U104SUM 31&30   1     13.25405      115.52     151.153      0.21383    6.030    0.014
ROUTE RESERVOIR      PondU1    1  30     13.25405      114.88     147.798      0.20908    6.410    0.014 AC-FT=    6.707
*S  USED STAGE-STORAGE-DISCHARGE RATING CURVE FROM MDP FOR THE WEST SIDE TRANSIT
*S
ROUTE MCUNGE         PondU1Rt   30   1     13.25405      114.88     147.764      0.20904    6.440    0.014 CCODE =    0.2
COMPUTE NM HYD       U107  -    2      0.04490      112.32      4.007      1.67313    1.530    3.909 PER IMP=  64.00
ADD HYD          U107SUM  1& 2   1     13.29895      116.79     151.771      0.21398    1.530    0.014
*S APU2
ROUTE MCUNGE       U107SUMRt    1   10     13.29895      116.28     151.735      0.21393    1.560    0.014 CCODE =    0.2
COMPUTE NM HYD       U105  -    1      0.07840       83.58      3.425      0.81906    1.600    1.666 PER IMP=   9.79
ROUTE MCUNGE         U105Rt    1    2      0.07840       83.29      3.423      0.81853    1.640    1.660 CCODE =    0.2
COMPUTE NM HYD       U106  -    1      0.09647      178.95      7.310      1.42082    1.580    2.898 PER IMP=  48.50
ADD HYD          U106SUM  2& 1   1      0.17487      257.66     10.733      1.15079    1.600    2.302
*S APU3
ROUTE MCUNGE       U106SUMRt    1    2      0.17487      257.34     10.731      1.15058    1.610    2.299 CCODE =    0.2
COMPUTE NM HYD       U108  -    1      0.03975       98.02      3.418      1.61212    1.530    3.853 PER IMP=  56.50
ADD HYD          U108SUM  2& 1   1      0.21462      339.92     14.148      1.23606    1.590    2.475
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COMPUTE NM HYD       U109   -    2      0.03339      83.65      2.925     1.64230    1.530    3.914 PER IMP=  58.20
ADD HYD           U109SUM  1& 2   1      0.24801     415.15     17.073     1.29075    1.580    2.616
ROUTE RESERVOIR    PONDU214    1   30      0.24801     128.16     17.073     1.29075    1.900    0.807 AC-FT=    8.546
ADD HYD           UBASIN 10&30   1     13.54696     209.78     168.808     0.23364    1.580    0.024
*S APU4
ROUTE MCUNGE      UNBASINRT    1   13     13.54696     209.72     168.771     0.23359    1.600    0.024 CCODE =     0.2
*S*****************************************************************************
*S**********       END OF UNSER-214 BASIN
*S*****************************************************************************
*S*****************************************************************************
*S**********       TIERRA BAYITA BASIN
*S*****************************************************************************
COMPUTE NM HYD       TB101   -    1      0.06013      68.77      2.391     0.74558    1.570    1.787 PER IMP=   5.00
*S APTB1
ROUTE MCUNGE       TB101RT    1    2      0.06013      68.75      2.391     0.74553    1.620    1.786 CCODE =     0.2
COMPUTE NM HYD       TB102   -    1      0.19898     249.65      8.497     0.80066    1.570    1.960 PER IMP=   5.90
ADD HYD           TB102SUM  2& 1   1      0.25911     314.04     10.888     0.78786    1.590    1.894
ROUTE RESERVOIR     PondTB1    1   30      0.25911       0.47      1.451     0.10502    4.730    0.003 AC-FT=   10.720
ROUTE MCUNGE      PONDTB1RT   30    1      0.25911       0.47      1.449     0.10482    4.800    0.003 CCODE =     0.2
COMPUTE NM HYD       TB103   -    2      0.04991      92.23      3.098     1.16373    1.530    2.887 PER IMP=  31.00
ROUTE RESERVOIR     PondTB2    2   30      0.04991      47.54      3.098     1.16373    1.700    1.488 AC-FT=    1.267
*S Outflow equals to 49.4 cfs From "DMP for Avalon Subdivision" on Pg 3
ADD HYD           TB103SUM  1&30   1      0.30902      47.88      4.546     0.27584    1.700    0.242
ROUTE MCUNGE     TB103SUMRT    1   10      0.30902      47.86      4.544     0.27569    1.730    0.242 CCODE =     0.2
COMPUTE NM HYD       TB104   -    1      0.03918      62.72      2.063     0.98739    1.540    2.501 PER IMP=  21.00
ROUTE MCUNGE       TB104RT    1    2      0.03918      62.72      2.063     0.98733    1.550    2.501 CCODE =     0.2
COMPUTE NM HYD       TB105   -    1      0.04575     112.13      3.964     1.62442    1.530    3.829 PER IMP=  60.00
ROUTE RESERVOIR     PondTB3    1   30      0.04575      30.73      3.959     1.62267    1.820    1.050 AC-FT=    2.336
*S Pond never graded per proposed G&D with date 12-7-10
*S Pond likely will be modified per plan, but left as existing
*S Assumed existing 30" RCP outlet with 0.5% slope
ADD HYD           TB105SUM  2&30   1      0.08493      84.66      6.022     1.32957    1.570    1.558
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COMMAND      IDENTIFICATION   NO.  NO.     (SQ MI)     (CFS)       (AC-FT)   (INCHES)  (HOURS)    ACRE     NOTATION

ROUTE MCUNGE     TB105SUMRT    1    2      0.08493       84.64      6.022      1.32954    1.580    1.557 CCODE =     0.2
ADD HYD          TB106SUMA 10& 2    1      0.39395      122.21     10.566      0.50288    1.630    0.485
COMPUTE NM HYD       TB106   -    2      0.02559       61.76      2.176      1.59428    1.530    3.771 PER IMP=  58.00
ADD HYD          TB106SUMB  1& 2    1      0.41954      173.78     12.742      0.56945    1.580    0.647
*S APTB2
ROUTE MCUNGE     TB106SUMBRT    1   15      0.41954      173.65     12.740      0.56938    1.590    0.647 CCODE =     0.2
ROUTE MCUNGE      NEBASINRT   41    1      0.75467       60.15     37.290      0.92648    2.990    0.125 CCODE =     0.2
COMPUTE NM HYD       TB107A   -    2      0.03029       84.60      3.185      1.97118    1.530    4.364 PER IMP=  90.00
ADD HYD          TB107ASUM  1& 2    1      0.78496       90.12     40.475      0.96679    1.530    0.179
*S AP 1
ROUTE MCUNGE     TB107ASUMRT    1    2      0.78496       90.15     40.474      0.96679    1.530    0.179 CCODE =     0.2
COMPUTE NM HYD       TB107B   -    3      0.00318        5.15      0.173      1.02071    1.530    2.534 PER IMP=  25.00
ADD HYD          TB107BSUM  2& 3    1      0.78814       95.30     40.647      0.96701    1.530    0.189
COMPUTE NM HYD       TB107F   -    2      0.00124        3.50      0.131      1.98448    1.530    4.427 PER IMP=  90.00
ADD HYD          TB107FSUM  1& 2    1      0.78937       98.80     40.778      0.96860    1.530    0.196
*S AP 2
ROUTE MCUNGE     TB107FSUMRT    1   10      0.78937       98.61     40.778      0.96859    1.550    0.195 CCODE =     0.2
COMPUTE NM HYD       TB107C   -    2      0.01314       25.45      0.775      1.10548    1.530    3.026 PER IMP=  15.00
ROUTE MCUNGE      TB107CRT    2    1      0.01314       25.47      0.775      1.10546    1.540    3.028 CCODE =     0.2
COMPUTE NM HYD       TB107E   -    2      0.00223        2.95      0.086      0.72100    1.540    2.072 PER IMP=   0.00
ADD HYD          TB107ESUM  1& 2   20      0.01537       28.42      0.860      1.04976    1.540    2.890
COMPUTE NM HYD       TB107D   -    2      0.01466       32.76      1.093      1.39800    1.530    3.491 PER IMP=  40.00
ROUTE MCUNGE      TB107DRT    2   30      0.01466       32.74      1.093      1.39798    1.530    3.489 CCODE =     0.2
ADD HYD          TB107ESUM 20&30   40      0.03003       61.12      1.954      1.21977    1.540    3.180
ADD HYD          TB107ESUM 10&40   50      0.81941      159.67     42.731      0.97780    1.540    0.304
COMPUTE NM HYD       TB107G   -    2      0.00336        9.47      0.355      1.98448    1.530    4.411 PER IMP=  90.00
ADD HYD          TB107SUM 50& 2   10      0.82276      169.07     43.086      0.98190    1.540    0.321
*S AP 3
COMPUTE NM HYD       TB108   -    3      0.05040      121.24      4.596      1.70981    1.550    3.759 PER IMP=  67.20
ADD HYD          TB108SUMA 10& 3   20      0.87316      290.04     47.682      1.02392    1.540    0.519
*S AP 4
*S APTB3
ROUTE MCUNGE     TB108SUMBRT   20    2      0.87316      261.62     47.627      1.02273    1.640    0.468 CCODE =     0.2
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COMPUTE NM HYD      TB109B  -    1     0.00852      20.94     0.739     1.62727   1.530   3.842 PER IMP=  60.00
ADD HYD         TB109SUMA  1& 2  10     0.88168     276.45    48.366     1.02857   1.630   0.490
ROUTE MCUNGE    TB108SUMBRT  15   1     0.41954     173.69    12.740     0.56936   1.600   0.647 CCODE =    0.2
COMPUTE NM HYD      TB109A  -    2     0.01844      45.32     1.600     1.62727   1.530   3.840 PER IMP=  60.00
ADD HYD         TB109SUMA  1& 2   1     0.43798     213.52    14.340     0.61390   1.580   0.762
ROUTE MCUNGE    TB108SUMBRT   1   20     0.43798     213.47    14.340     0.61389   1.580   0.762 CCODE =    0.2
ADD HYD         TB109SUMA 10&20  30     1.31966     483.60    62.706     0.89094   1.610   0.573
COMPUTE NM HYD      TB109C  -    2     0.00497      14.01     0.526     1.98448   1.530   4.408 PER IMP=  90.00
ADD HYD         TB109SUMA 30& 2   1     1.32463     494.74    63.232     0.89504   1.610   0.584
*S AP 5
*S APTB4
ROUTE MCUNGE    TB109SUMBRT   1   2     1.32463     494.27    63.229     0.89500   1.630   0.583 CCODE =    0.2
COMPUTE NM HYD      TB116  -    1     0.03257      70.78     2.517     1.44918   1.530   3.396 PER IMP=  52.50
ROUTE MCUNGE       TB116RT   1   3     0.03257      70.68     2.517     1.44903   1.560   3.391 CCODE =    0.2
ADD HYD         TB113SUMA  2& 3   1     1.35720     557.88    65.746     0.90830   1.620   0.642
COMPUTE NM HYD      TB113  -    2     0.04712      78.19     2.624     1.04397   1.530   2.593 PER IMP=  25.60
ADD HYD         TB113SUMB  1& 2   1     1.40432     623.05    68.370     0.91285   1.600   0.693
ROUTE MCUNGE    TB113SUMBRT   1   2     1.40432     622.79    68.366     0.91281   1.620   0.693 CCODE =    0.2
COMPUTE NM HYD      TB114  -    1     0.02685      66.97     2.363     1.64991   1.530   3.897 PER IMP=  60.60
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ADD HYD         TB114SUM  2& 1   1     1.43117     676.38    70.729     0.92664   1.610   0.738
*S APTB5
ROUTE MCUNGE    TB114SUMRT   1   10     1.43117     674.59    70.717     0.92648   1.620   0.736 CCODE =    0.2
COMPUTE NM HYD      TB110  -   21     0.07272     146.47     5.767     1.48695   1.570   3.147 PER IMP=  53.00
*S AP 10
COMPUTE NM HYD      TB111A  -    2     0.00637      17.09     0.631     1.85654   1.530   4.192 PER IMP=  80.00
COMPUTE NM HYD      TB111D  -    1     0.00259       7.31     0.274     1.98448   1.530   4.414 PER IMP=  90.00
ADD HYD        TB211DSUMB  1& 2   1     0.00896      24.41     0.905     1.89345   1.530   4.256
*S AP 6
ROUTE MCUNGE   TB111DSUMBRT   1   3     0.00896      24.40     0.905     1.89343   1.530   4.255 CCODE =    0.2
COMPUTE NM HYD      TB111B  -    2     0.00498      13.37     0.493     1.85654   1.530   4.194 PER IMP=  80.00
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COMPUTE NM HYD       TB111E   -    1      0.00147      4.16      0.156     1.98448    1.530    4.422 PER IMP=  90.00
ADD HYD              TB111DSUMB  1& 2   1      0.00645      17.53     0.649     1.88563    1.530    4.246
ADD HYD              TB111DSUMB  1& 3   1      0.01541      41.93     1.554     1.89016    1.530    4.251
*S AP 7
ROUTE MCUNGE    TB111DSUMBRT    1    4      0.01541      41.92     1.554     1.89012    1.540    4.250 CCODE =    0.2
COMPUTE NM HYD       TB111C   -    2      0.00380      10.21     0.376     1.85654    1.530    4.196 PER IMP=  80.00
COMPUTE NM HYD       TB111F   -    1      0.00213      6.01      0.225     1.98448    1.530    4.416 PER IMP=  90.00
ADD HYD              TB111DSUMB  1& 2   1      0.00593      16.22     0.602     1.90237    1.530    4.275
ADD HYD              TB111DSUMB  1& 4   1      0.02134      58.02     2.155     1.89352    1.540    4.248
*S AP 8
ROUTE MCUNGE    TB111FSUMBRT    1    5      0.02134      58.04     2.155     1.89345    1.540    4.249 CCODE =    0.2
COMPUTE NM HYD       TB111G   -    2      0.00363      9.98      0.371     1.92012    1.530    4.303 PER IMP=  85.00
ADD HYD              TB111DSUMB  2& 5   1      0.02497      67.95     2.526     1.89731    1.540    4.252
*S AP Total Basin TB111, Just before Volcano
*S AP 9
ADD HYD              TB211SUM  1&21   1      0.09769      213.22    8.293     1.59183    1.560    3.410
*S APTB6
ROUTE MCUNGE    TB111SUMBRT    1    5      0.09769      206.35    8.263     1.58600    1.590    3.301 CCODE =    0.2
COMPUTE NM HYD       TB112A   -    2      0.00772      19.84     0.717     1.74191    1.530    4.017 PER IMP=  70.00
COMPUTE NM HYD       TB112E   -    1      0.00118      3.35      0.125     1.98448    1.530    4.428 PER IMP=  90.00
ADD HYD              TB112ESUMB  1& 2   1      0.00890      23.18     0.842     1.77404    1.530    4.071
ADD HYD              TB112ESUMB  1& 5   1      0.10658      226.90    9.105     1.60170    1.580    3.326
*S AP 11
ROUTE MCUNGE    TB112FSUMBRT    1    3      0.10658      224.77    9.084     1.59797    1.600    3.295 CCODE =    0.2
COMPUTE NM HYD       TB112B   -    2      0.00778      20.00     0.723     1.74191    1.530    4.017 PER IMP=  70.00
COMPUTE NM HYD       TB112F   -    1      0.00102      2.88      0.108     1.98448    1.530    4.432 PER IMP=  90.00
ADD HYD              TB112ESUMB  1& 2   1      0.00880      22.88     0.830     1.76990    1.530    4.065
ADD HYD              TB112FSUMB  1& 3   1      0.11538      244.85    9.914     1.61108    1.580    3.316
*S AP 12
ROUTE MCUNGE    TB112GSUMBRT    1    3      0.11538      244.85    9.914     1.61108    1.580    3.316 CCODE =    0.0
COMPUTE NM HYD       TB112C   -    2      0.00374      9.62      0.347     1.74191    1.530    4.021 PER IMP=  70.00
COMPUTE NM HYD       TB112G   -    1      0.00048      1.38      0.051     1.98448    1.530    4.466 PER IMP=  90.00
ADD HYD              TB112ESUMB  1& 2   1      0.00422      11.00     0.398     1.76953    1.530    4.072
ADD HYD              TB112FSUMB  1& 3   1      0.11960      254.81    10.312    1.61667    1.580    3.329
*S AP 13
```

ROUTE MCUNGE TB112GSUMBRT 1 3 0.11960 254.81 10.312 1.61667 1.580 3.329 CCODE = 0.0
COMPUTE NM HYD TB112D - 2 0.00920 23.66 0.855 1.74191 1.530 4.016 PER IMP= 70.00
COMPUTE NM HYD TB112H - 1 0.00150 4.25 0.159 1.98448 1.530 4.422 PER IMP= 90.00
ADD HYD TB212ESUMB 1& 2 1 0.01071 27.91 1.014 1.77589 1.530 4.073
ADD HYD TB112FSUMB 1& 3 1 0.13031 280.65 11.326 1.62975 1.570 3.365
*S AP 14
*S APTB6a at the Cul-de-Sac

COMMAND	IDENTIFICATION	HYDROGRAPH NO.	FROM ID NO.	TO ID	PEAK AREA (SQ MI)	RUNOFF DISCHARGE (CFS)	VOLUME (AC-FT)	TIME TO RUNOFF (INCHES)	CFS PEAK (HOURS)	PAGE = 6 PER ACRE	NOTATION
ROUTE MCUNGE	TB112GSUMBRT	1	3		0.13031	280.51	11.326	1.62968	1.570	3.364	CCODE = 0.2
COMPUTE NM HYD	TB112Library	-	2		0.02883	78.74	2.896	1.88314	1.530	4.267	PER IMP= 80.00
ADD HYD	TB212SUMA	2& 3	1		0.15914	354.93	14.221	1.67560	1.560	3.485	
*S APTB7											
ADD HYD	TB112SUMB	13& 1	1		13.70609	559.65	182.992	0.25033	1.570	0.064	
*S APTB8											
ROUTE MCUNGE	TB112SUMBRT	1	2		13.70609	558.83	182.948	0.25027	1.600	0.064	CCODE = 0.2
ADD HYD	TB115SUMA	10& 2	1		15.13726	1228.97	253.665	0.31421	1.610	0.127	
COMPUTE NM HYD	TB115	-	2		0.11272	156.55	7.482	1.24450	1.690	2.170	PER IMP= 17.30
ADD HYD	TB115SUMB	1& 2	10		15.24998	1371.04	261.147	0.32108	1.620	0.140	
COMPUTE NM HYD	TB117	-	1		0.01861	35.64	1.224	1.23326	1.530	2.993	PER IMP= 37.10
ROUTE MCUNGE	TB117RT	1	2		0.01861	35.63	1.224	1.23322	1.560	2.992	CCODE = 0.2
COMPUTE NM HYD	TB120	-	1		0.03690	94.82	3.453	1.75457	1.530	4.015	PER IMP= 71.00
ADD HYD	TB120SUM	2& 1	1		0.05551	129.54	4.677	1.57978	1.540	3.646	
COMPUTE NM HYD	TB118	-	2		0.03570	70.64	2.164	1.13632	1.530	3.092	PER IMP= 17.10
ROUTE MCUNGE	TB118RT1	2	3		0.03570	70.67	2.163	1.13627	1.550	3.093	CCODE = 0.2
ROUTE MCUNGE	TB118RT2	3	2		0.03570	69.42	2.157	1.13272	1.570	3.038	CCODE = 0.2
COMPUTE NM HYD	TB119	-	3		0.02285	57.17	2.039	1.67313	1.530	3.909	PER IMP= 64.00
ADD HYD	TB119SUM	2& 3	2		0.05855	124.70	4.196	1.34361	1.550	3.328	
ADD HYD	TB121SUMA	1& 2	1		0.11406	253.84	8.873	1.45855	1.540	3.477	
*S APTB9											
ROUTE MCUNGE	TB121SUMART	1	2		0.11406	253.59	8.871	1.45828	1.560	3.474	CCODE = 0.2
COMPUTE NM HYD	TB121	-	1		0.05769	123.14	4.615	1.50009	1.550	3.335	PER IMP= 52.66

```
ADD HYD         TB121SUMB  2& 1   1      0.17175      376.48      13.486      1.47232    1.560    3.425
ROUTE MCUNGE    TB121SUMBRT    1    2      0.17175      372.80      13.466      1.47010    1.590    3.392 CCODE =     0.2
COMPUTE NM HYD      TB122   -    1      0.07064      150.75      6.286      1.66854    1.590    3.334 PER IMP=  63.60
ADD HYD         TB122SUMA  2& 1   1      0.24239      523.55      19.752      1.52793    1.590    3.375
*S APTB10
ADD HYD         TB122SUMB 10& 1   1      15.49237      1881.73      280.899      0.33996    1.610    0.190
*S APTB11
ROUTE MCUNGE    TB122SUMBRT    1    2      15.49237      1880.64      280.868      0.33993    1.620    0.190 CCODE =     0.2
COMPUTE NM HYD      TB123   -    1      0.07133      125.80      6.064      1.59408    1.650    2.756 PER IMP=  57.00
COMPUTE NM HYD      TB124   -    3      0.15974      221.53      12.950      1.52002    1.740    2.167 PER IMP=  51.25
ADD HYD         TB124SUMA  1& 3   1      0.23107      336.67      19.014      1.54287    1.710    2.277
ADD HYD         TB124SUMB  2& 1   1      15.72344      2186.18      299.882      0.35760    1.630    0.217
*S APAB5
ROUTE MCUNGE    TB124SUMBRT    1   43      15.72344      2186.09      299.862      0.35758    1.640    0.217 CCODE =     0.2
*S*****************************************************************************
*S**********      END OF TIERRA BAYITA BASIN
*S*****************************************************************************
*S*****************************************************************************
*S**********      ATRISCO BUSINESS PARK BASIN
*S*****************************************************************************
COMPUTE NM HYD      AB101   -    1      0.17731      263.02      11.594      1.22599    1.610    2.318 PER IMP=  37.62
ROUTE RESERVOIR    PONDAB101    1   30      0.17731      11.32      11.594      1.22599    2.720    0.100 AC-FT=    9.471
*S APAB1
ROUTE MCUNGE      POND101Rt   30    1      0.17731      11.33      11.593      1.22598    1.520    0.100 CCODE =     0.2
COMPUTE NM HYD      AB102   -    2      0.18464      335.88      18.505      1.87920    1.700    2.842 PER IMP=  82.72
ROUTE RESERVOIR    PondAB102    2   30      0.18464      11.85      18.505      1.87920    3.150    0.100 AC-FT=   15.473
ADD HYD         AB102SUM  1&30   1      0.36195      23.17      30.099      1.55920    2.960    0.100
*S APAB2
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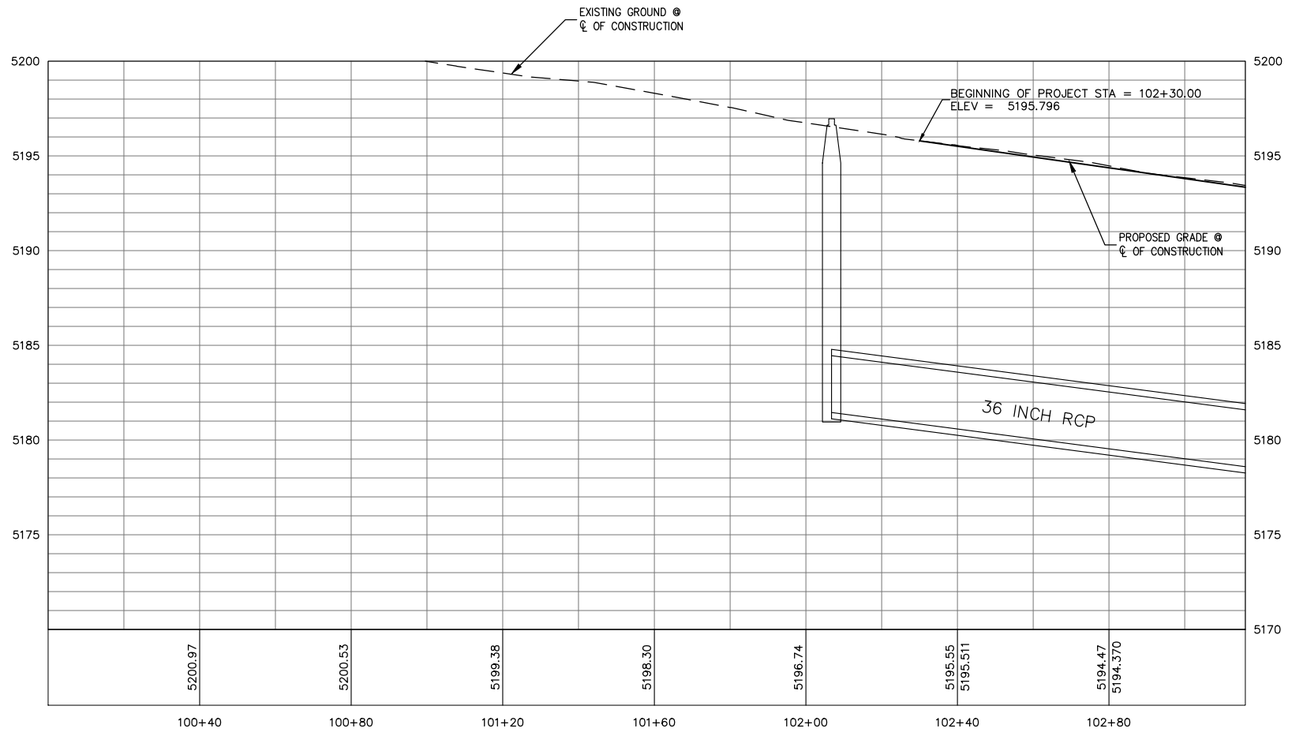


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ROUTE MCUNGE      Pond102Rt    1    2      0.36195      23.17      30.099      1.55919    3.010    0.100 CCODE =     0.2
COMPUTE NM HYD      AB103   -    1      0.21269      305.29      19.276      1.69933    1.780    2.243 PER IMP=  67.00
```

Appendix B – Plan and Profile Sheets



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BENCH MARKS

SURVEY INFORMATION
FIELD NOTES BY — DATE
NO.

ENGINEER'S SEAL

DAR SUBMITTAL
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GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
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NO.	DATE	REMARKS	BY

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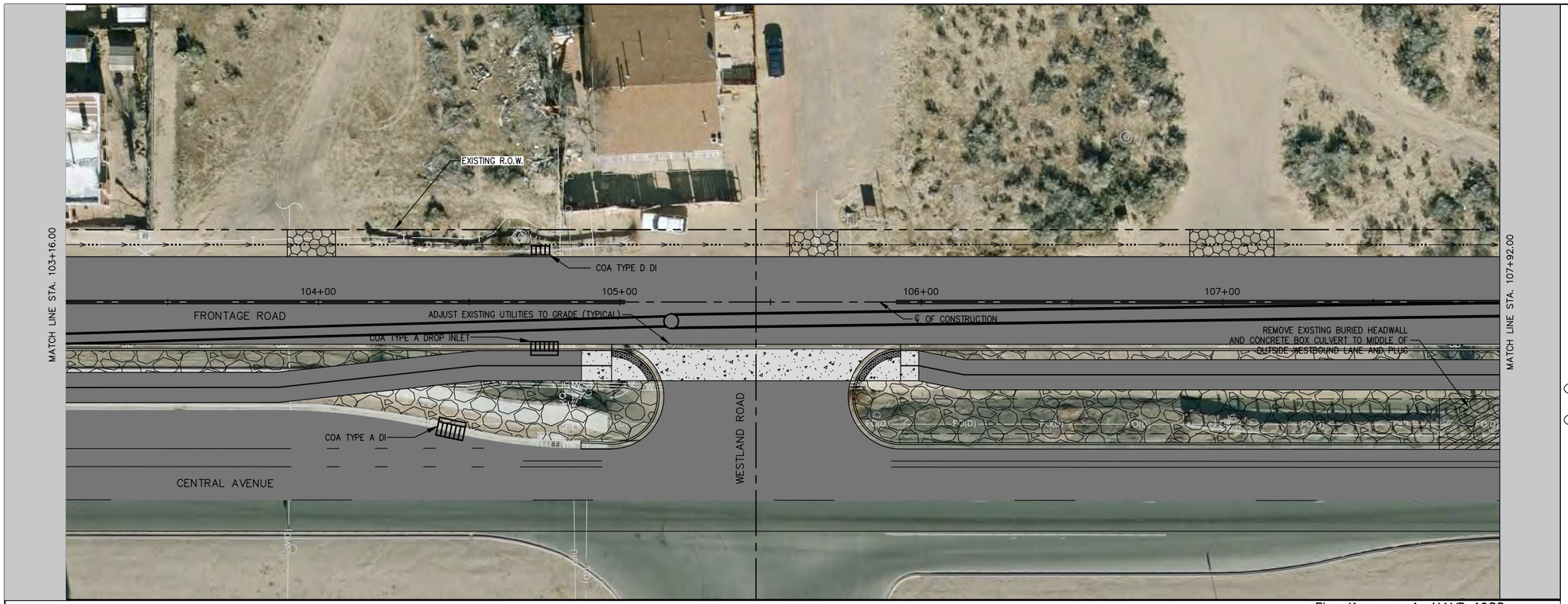
CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

WEST CENTRAL COMPLETE STREET FRONTAGE ROAD RECONSTRUCTION PLAN AND PROFILES

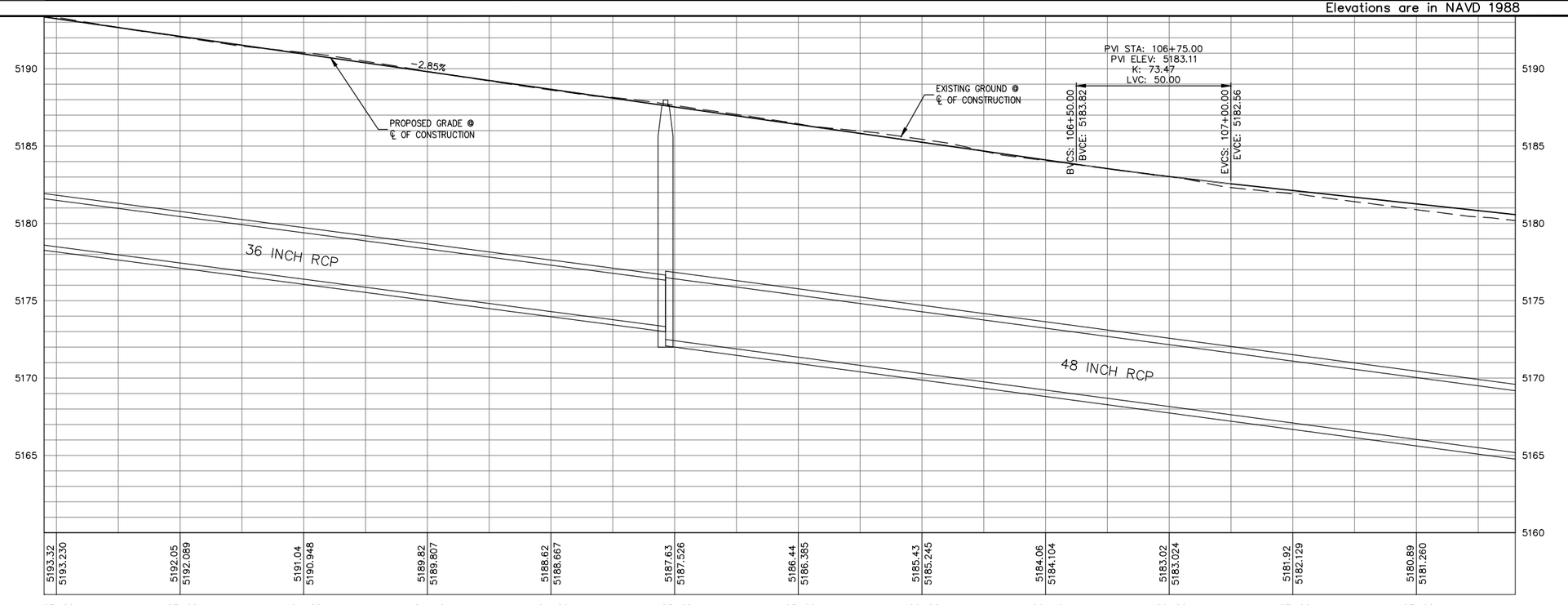
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL		MO./DAY/YR.	MO./DAY/YR.

City Project No.	Zone Map No.	Sheet
COA 632193	K9, K10	3–1

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MICRO-FILM INFORMATION
RECORDED BY — DATE
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BENCH MARKS

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ENGINEER'S SEAL

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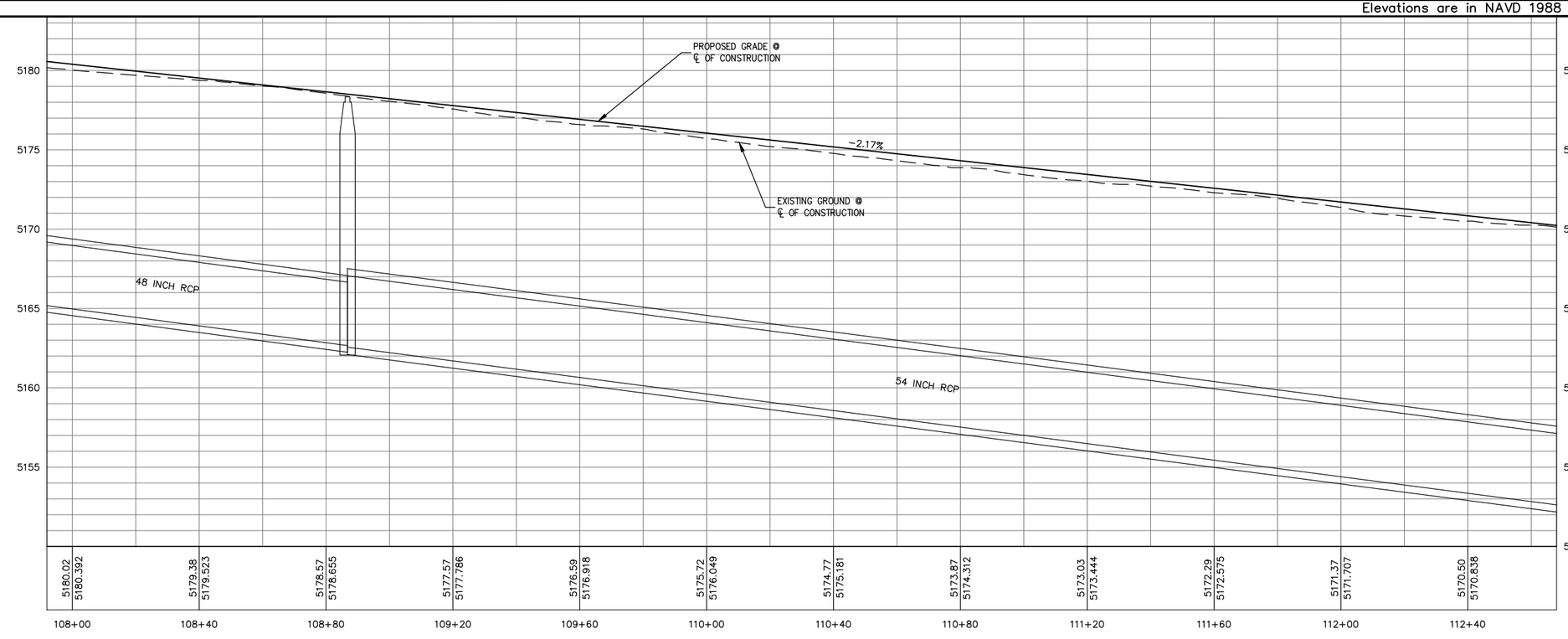
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City Project No.	Zone Map No.	Sheet
COA 632193	K9, K10	3–2

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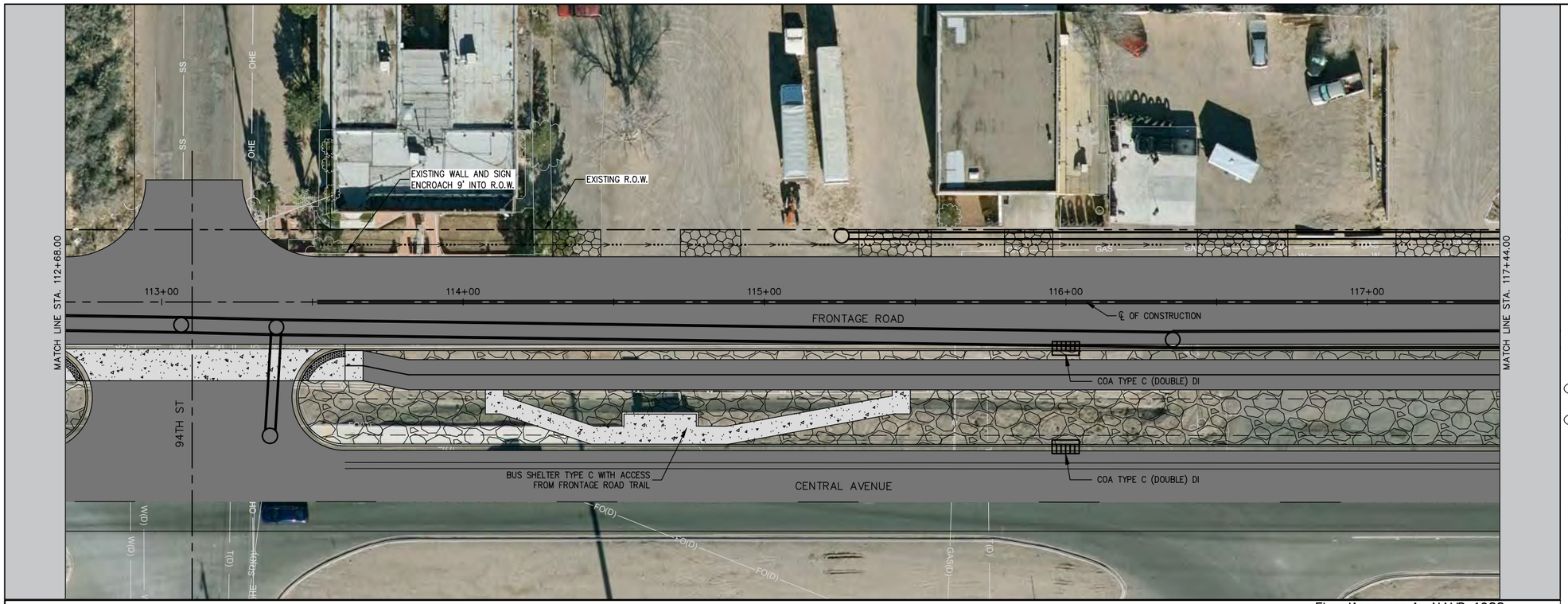
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WEST CENTRAL COMPLETE STREET FRONTAGE ROAD RECONSTRUCTION PLAN AND PROFILES

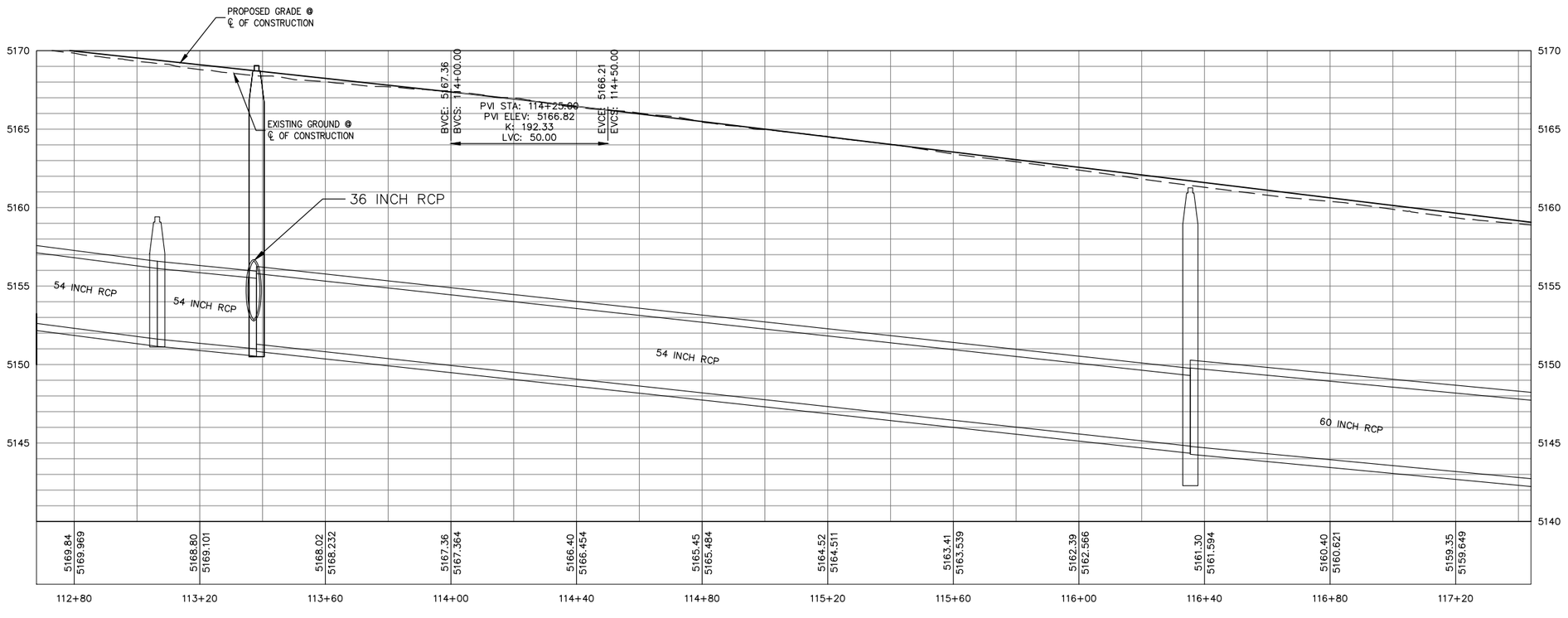
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City Project No.	Zone Map No.	Sheet
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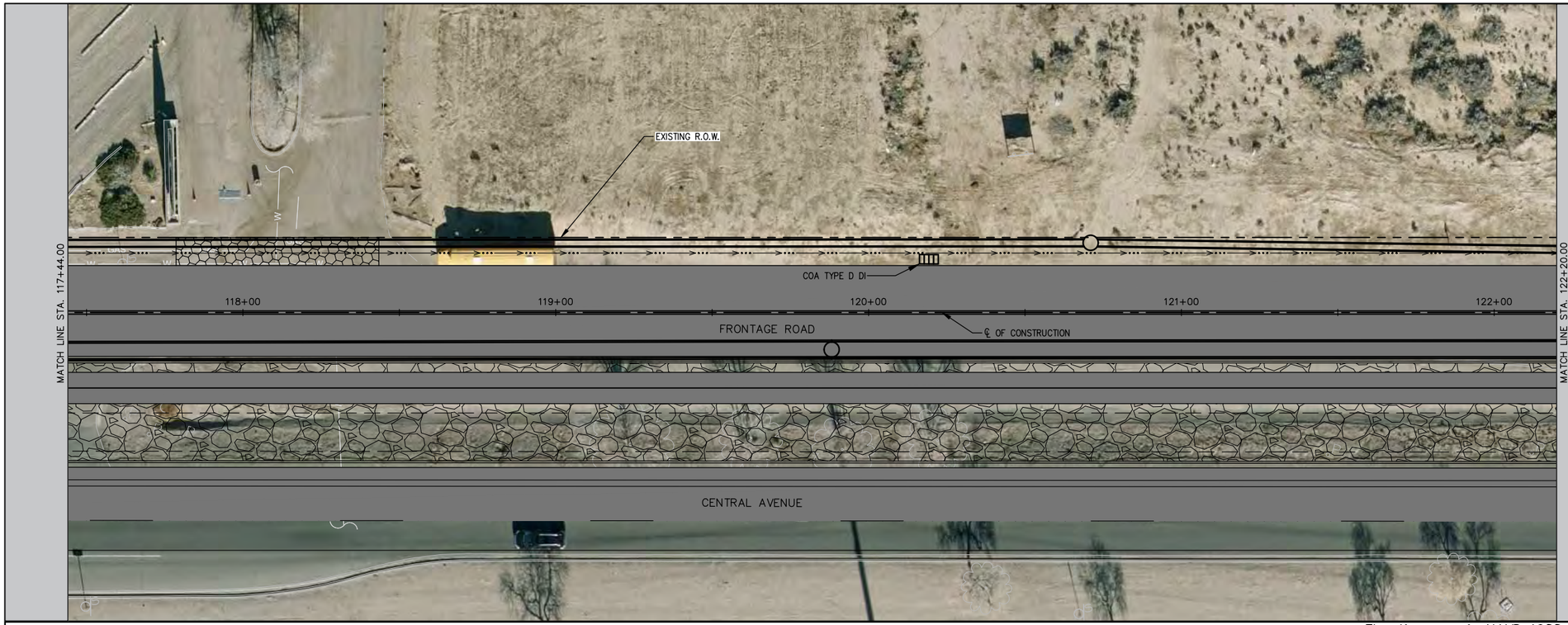
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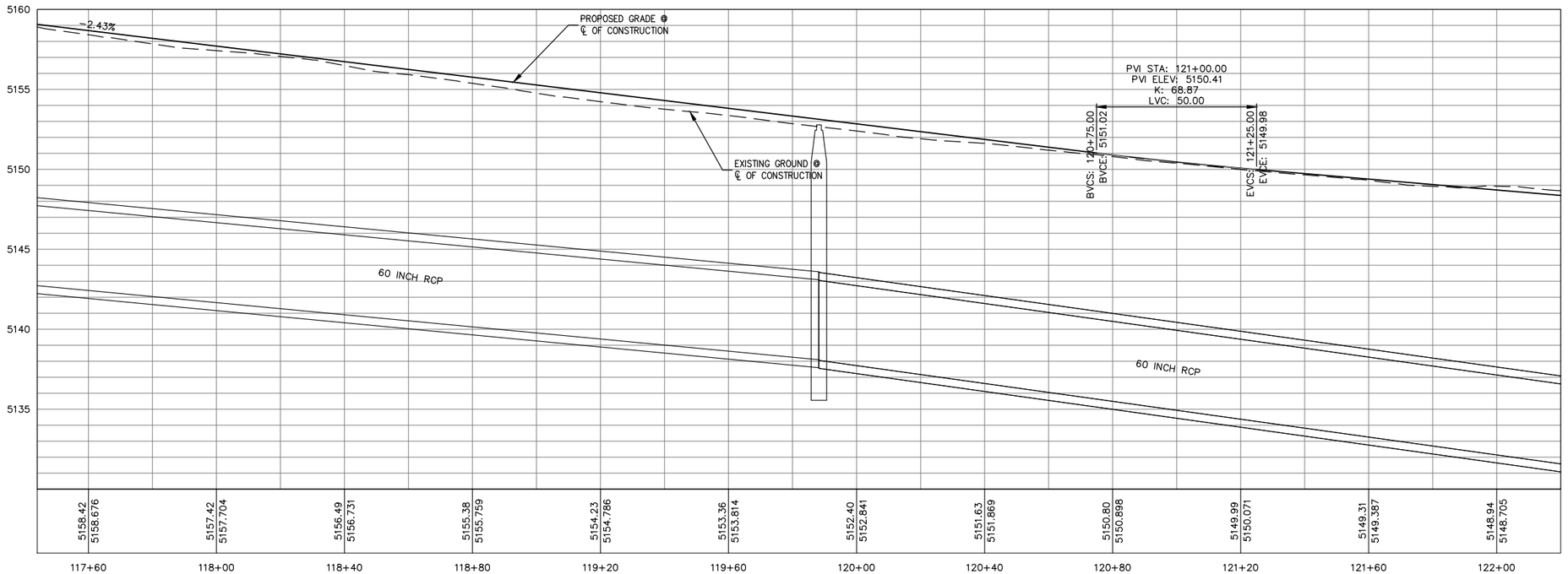
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City Project No.	Zone Map No.	Sheet
COA 632193	K9, K10	3–4

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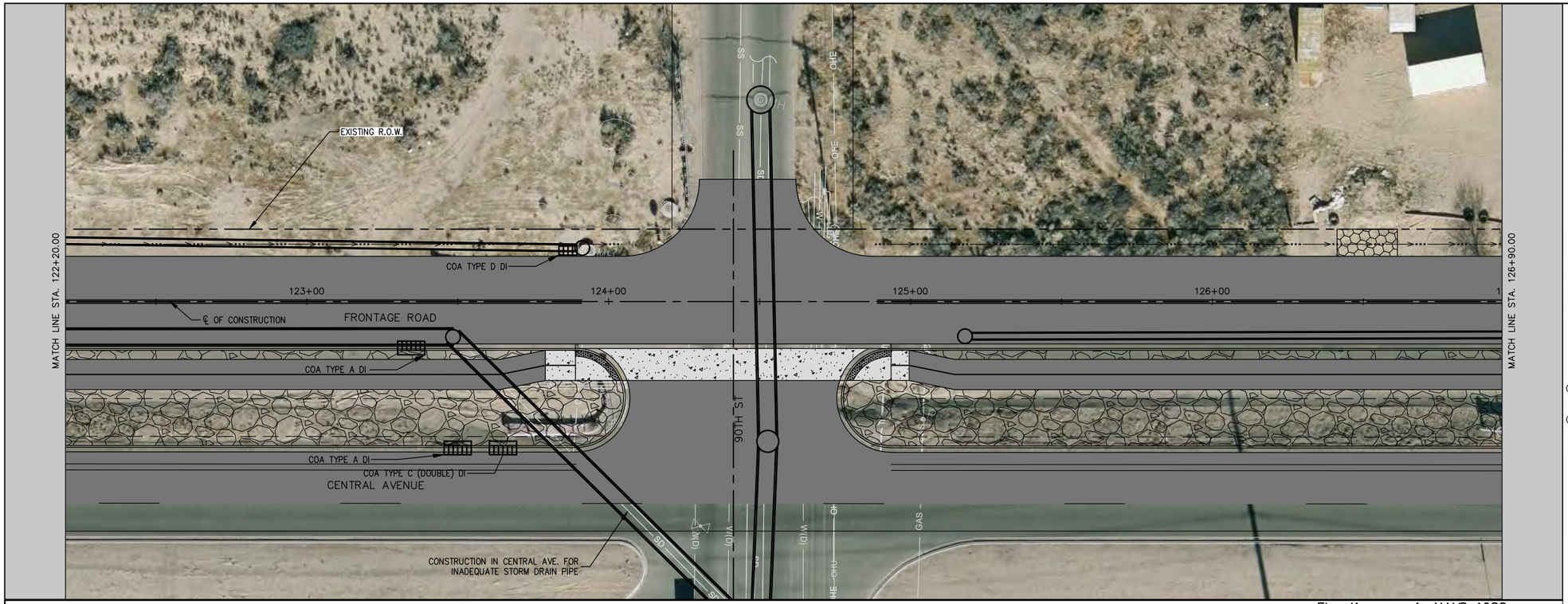
CITY OF ALBUQUERQUE
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WEST CENTRAL COMPLETE STREET
FRONTAGE ROAD RECONSTRUCTION
PLAN AND PROFILES

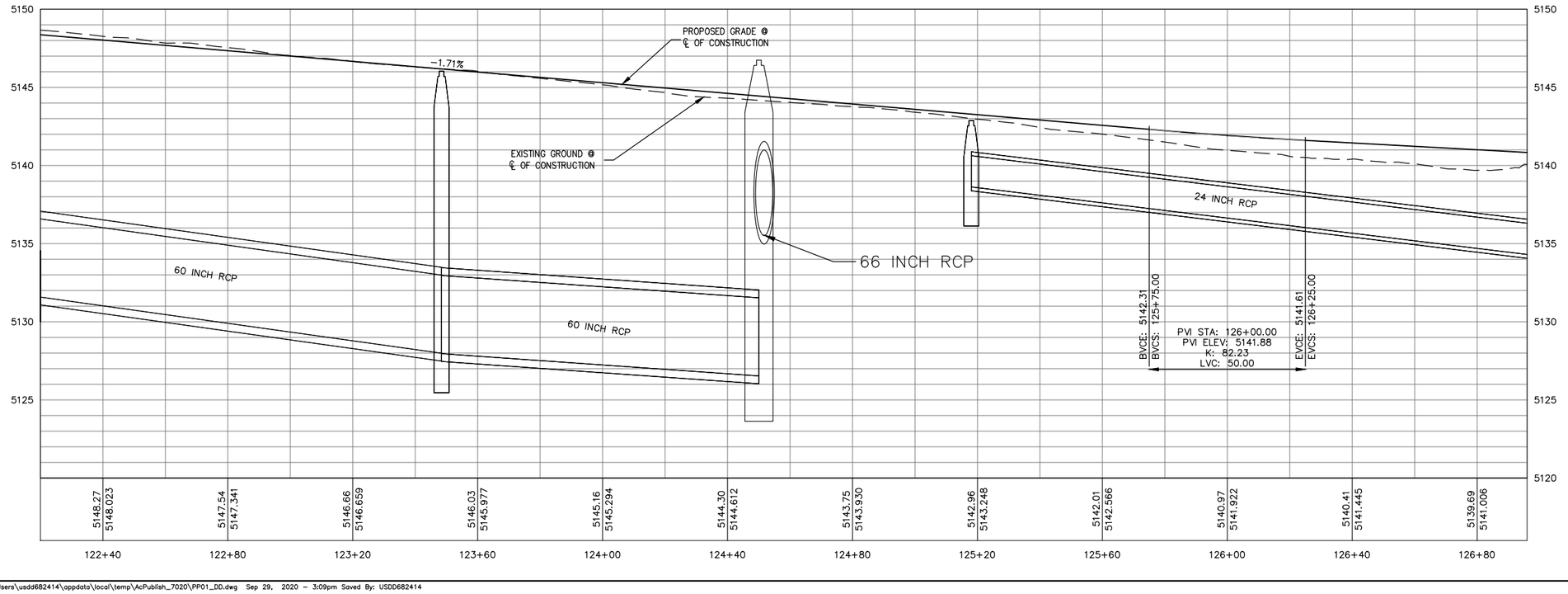
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL		MO./DAY/YR.	MO./DAY/YR.

City Project No.	Zone Map No.	Sheet
COA 632193	K9, K10	3–5

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NO.	DATE	REMARKS	BY
		DESIGN	
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		DRAWN BY	WSP
		CHECKED BY	WSP

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DATE 9/29/2020
DATE

WSP USA Inc.
6100 UPTOWN BLVD. NE
SUITE 700
ALBUQUERQUE, NM 87110
TEL: +1 505.881.5357
FAX: +1 505.81.7602

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

WEST CENTRAL COMPLETE STREET
FRONTAGE ROAD RECONSTRUCTION
PLAN AND PROFILES

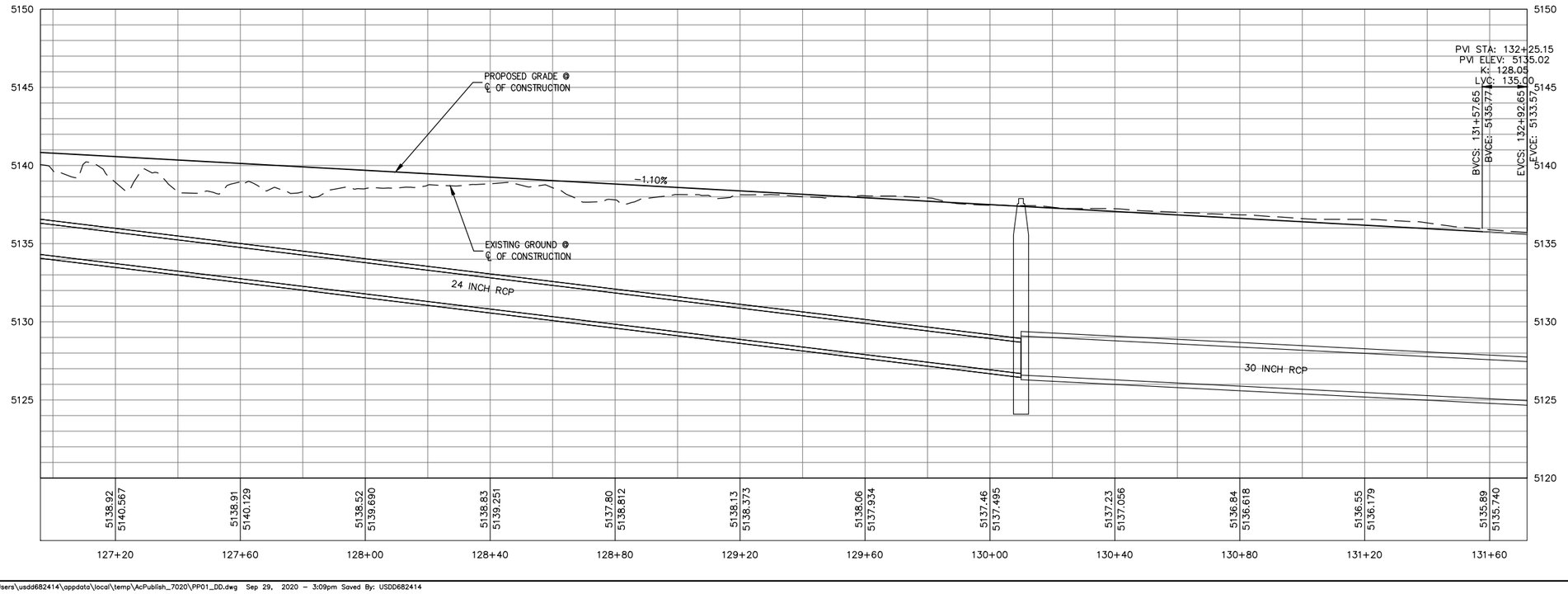
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL		MO./DAY/YR.	MO./DAY/YR.

City Project No.	Zone Map No.	Sheet
COA 632193	K9, K10	3–6

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GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

PROFILE VERTICAL SCALE: 1 inch = 4 ft.

AS BUILT INFORMATION
CONTRACTOR — DATE
WORK STARTED BY — DATE
INSPECTOR'S ACCEPTANCE BY — DATE
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BENCH MARKS

SURVEY INFORMATION
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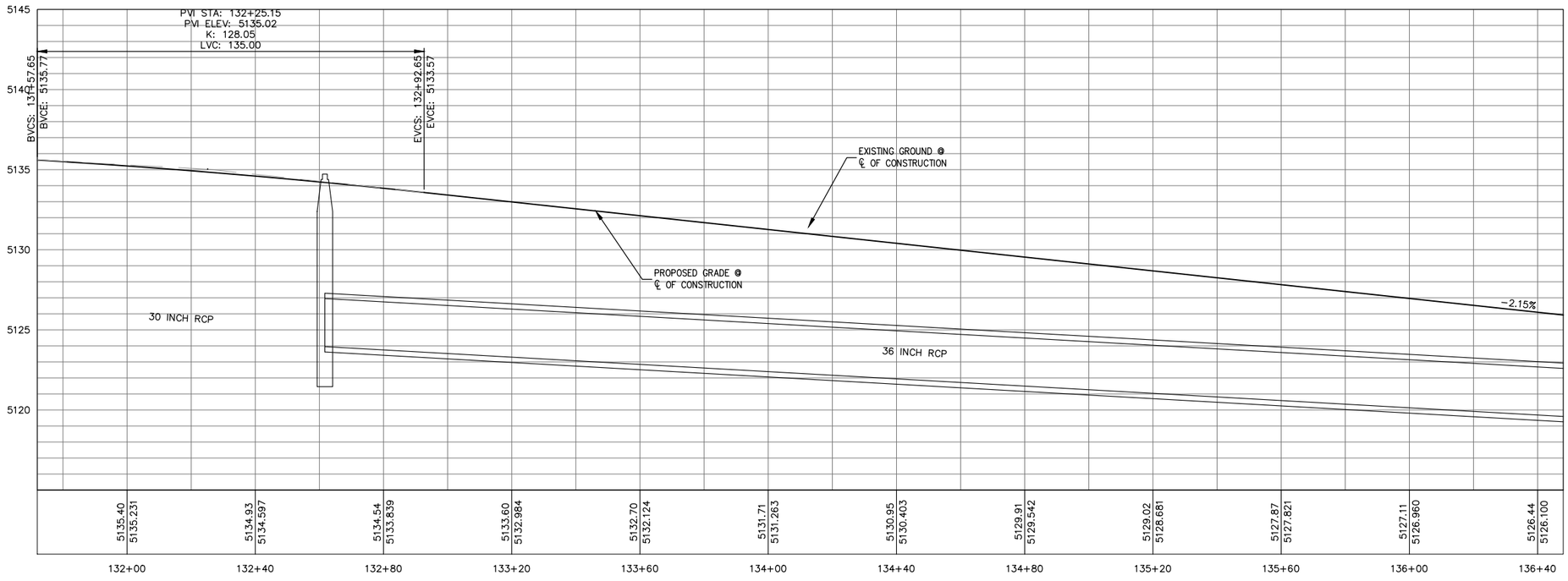
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COA 632193	K9, K10	3-7

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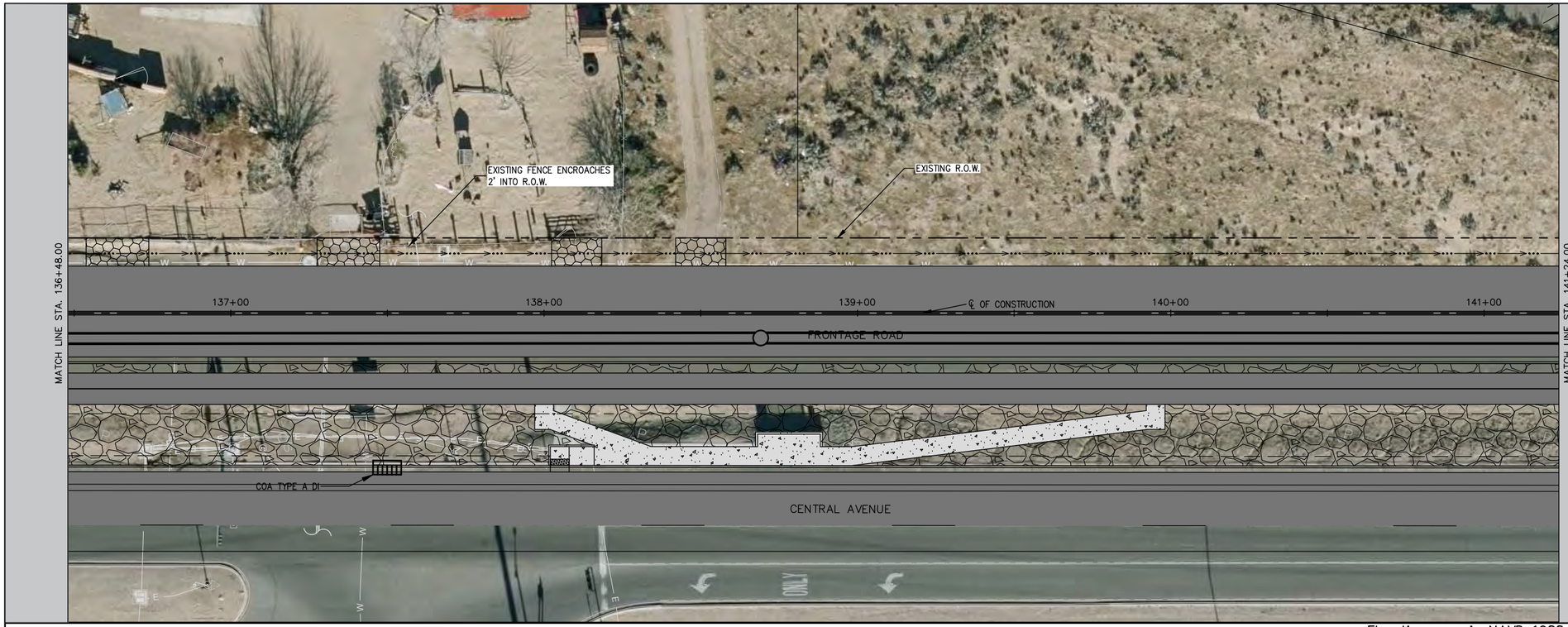
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ENGINEERING DIVISION

WEST CENTRAL COMPLETE STREET
FRONTAGE ROAD RECONSTRUCTION
PLAN AND PROFILES

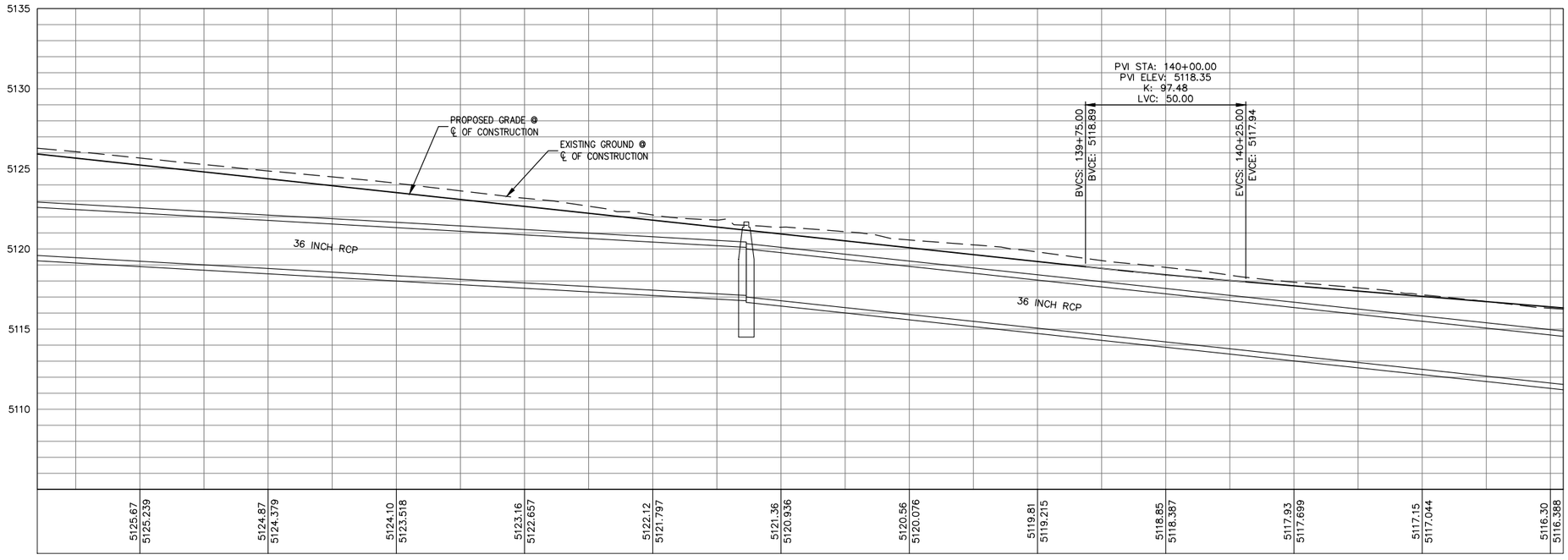
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City Project No. COA 632193 | Zone Map No. K9, K10 | Sheet 3–8

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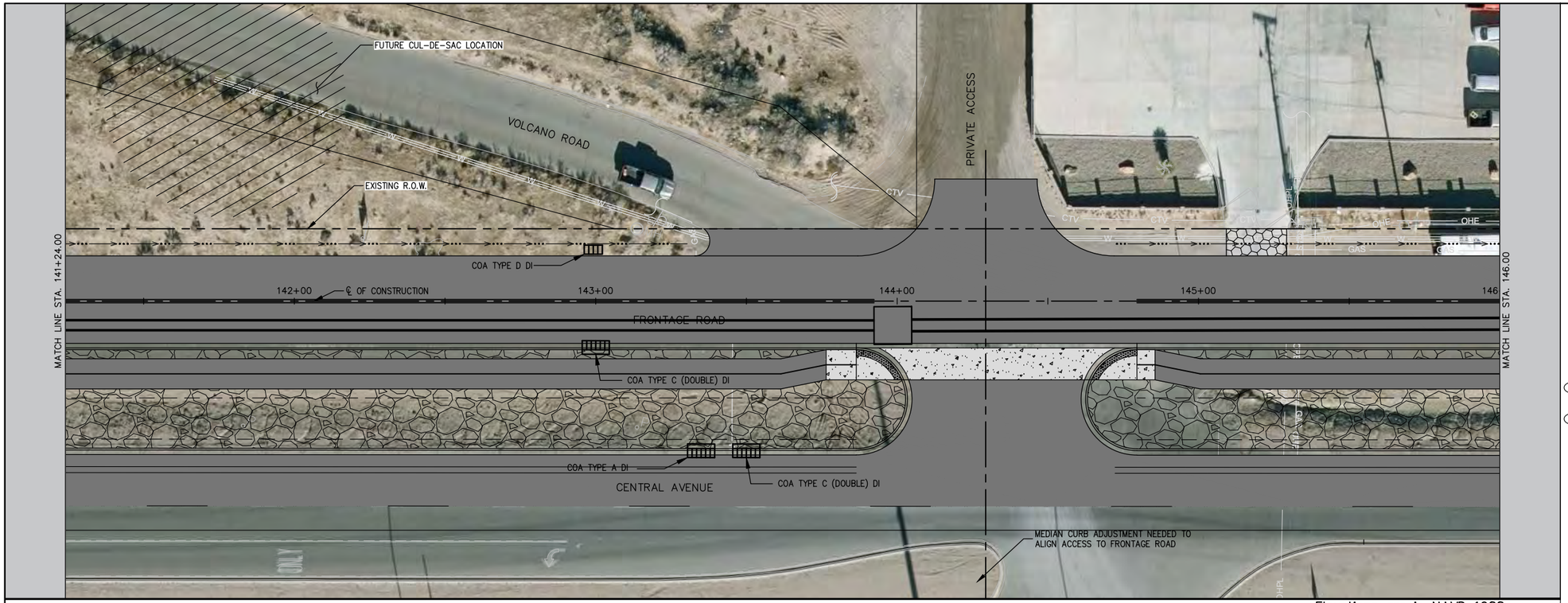
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ENGINEERING DIVISION

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FRONTAGE ROAD RECONSTRUCTION
PLAN AND PROFILES

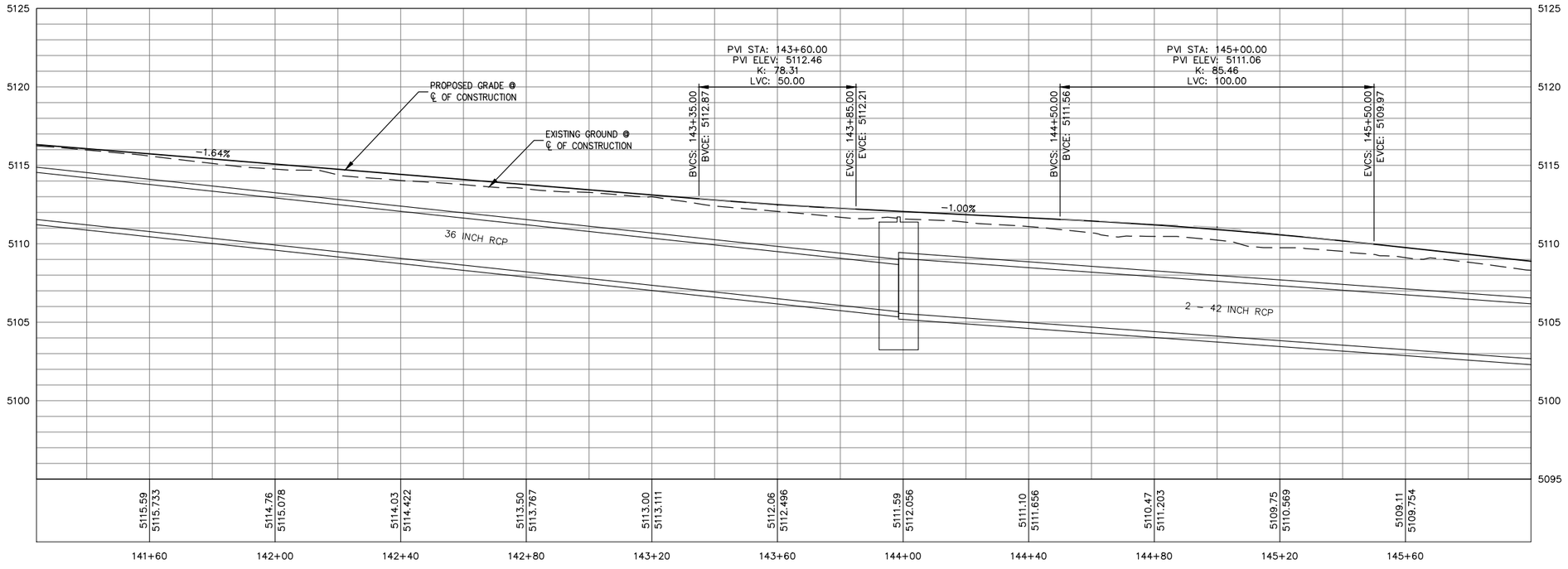
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL		MO./DAY/YR.	MO./DAY/YR.

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COA 632193	K9, K10	3–9

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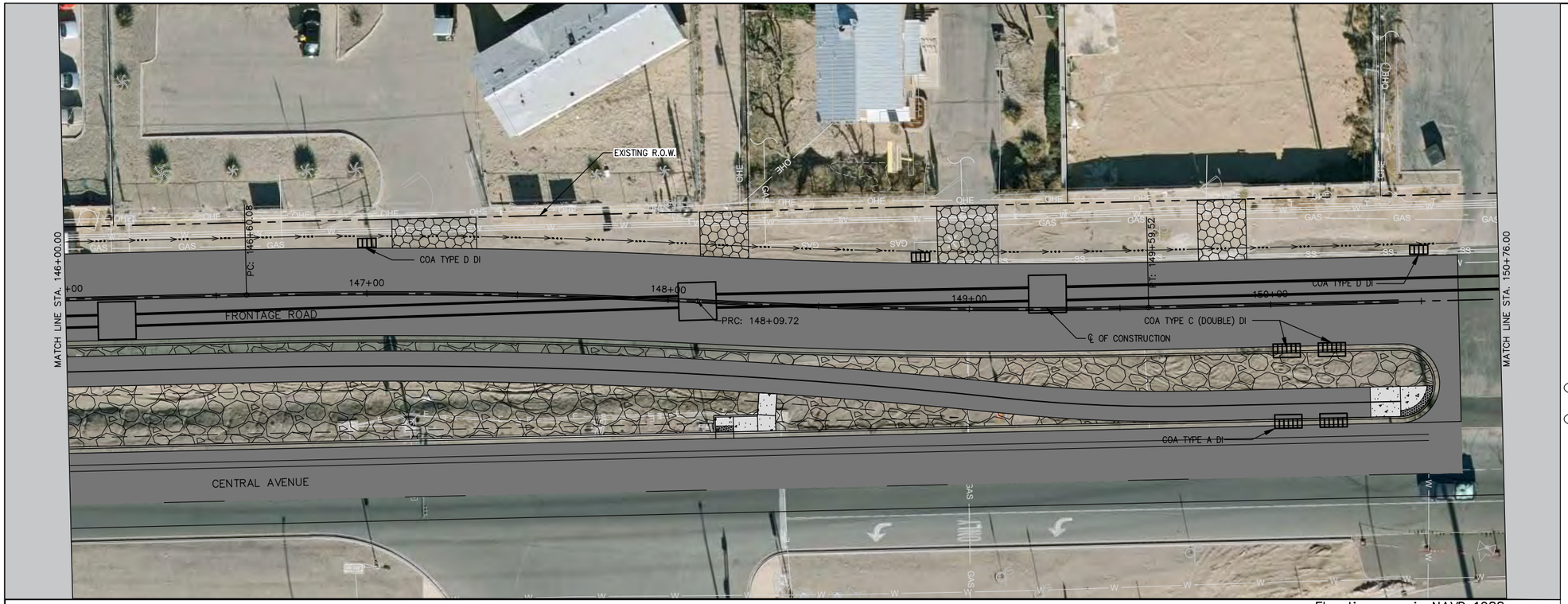
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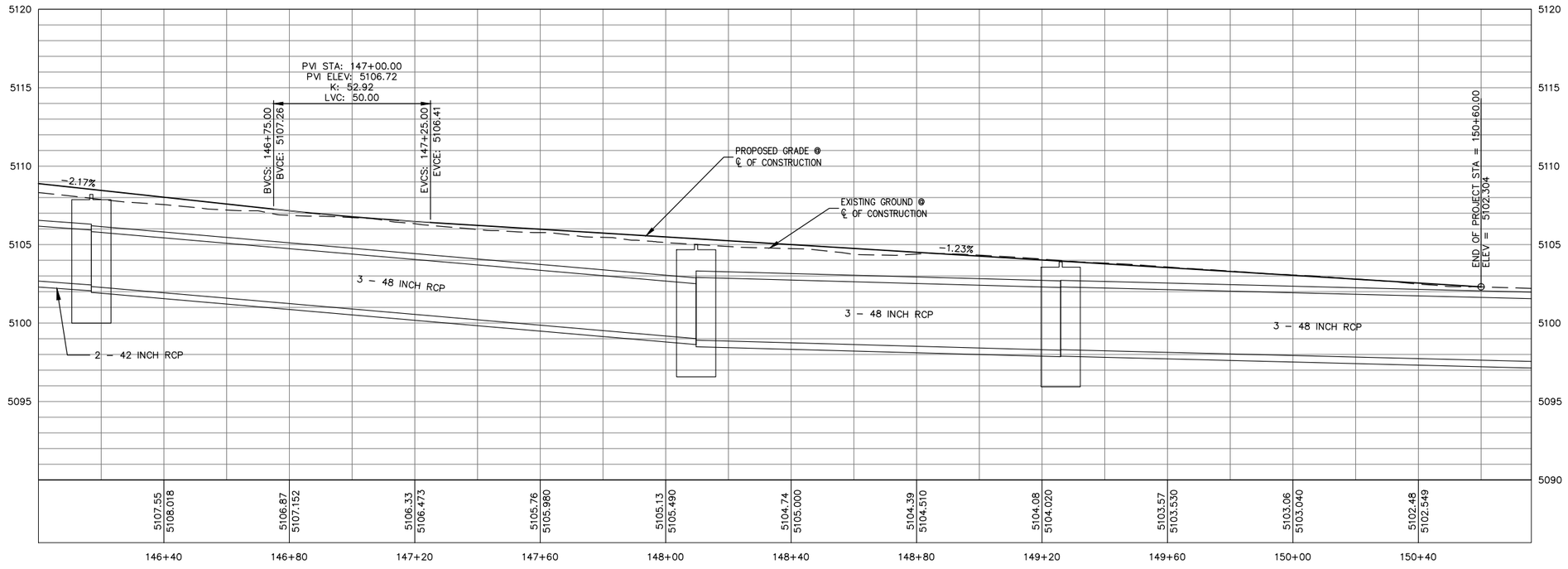
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL		MO./DAY/YR.	MO./DAY/YR.

City Project No. COA 632193 | Zone Map No. K9, K10 | Sheet 3–10

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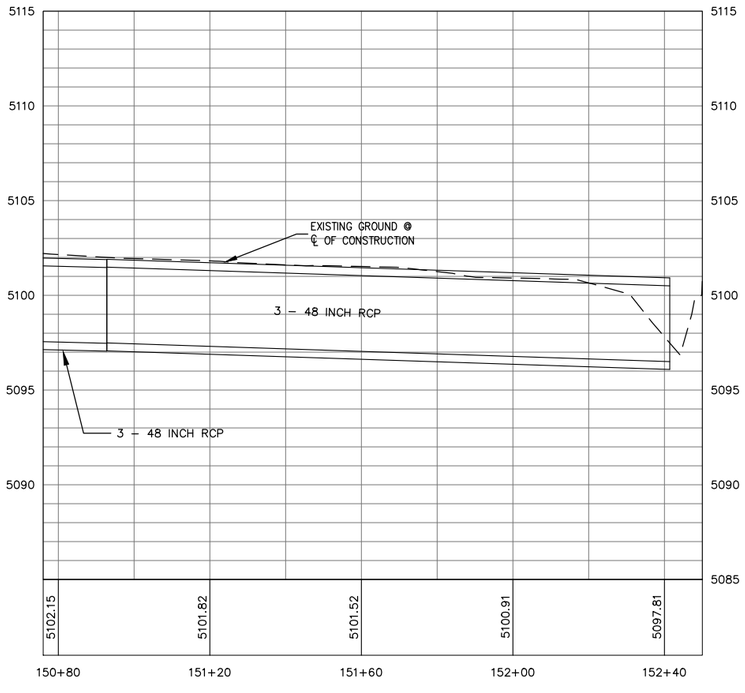
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City Project No.	Zone Map No.	Sheet
COA 632193	K9, K10	3–11

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Appendix C – StormCAD Profiles

Note: Refer to Figures 11 and 12 for Manhole and Analysis Point Locations.

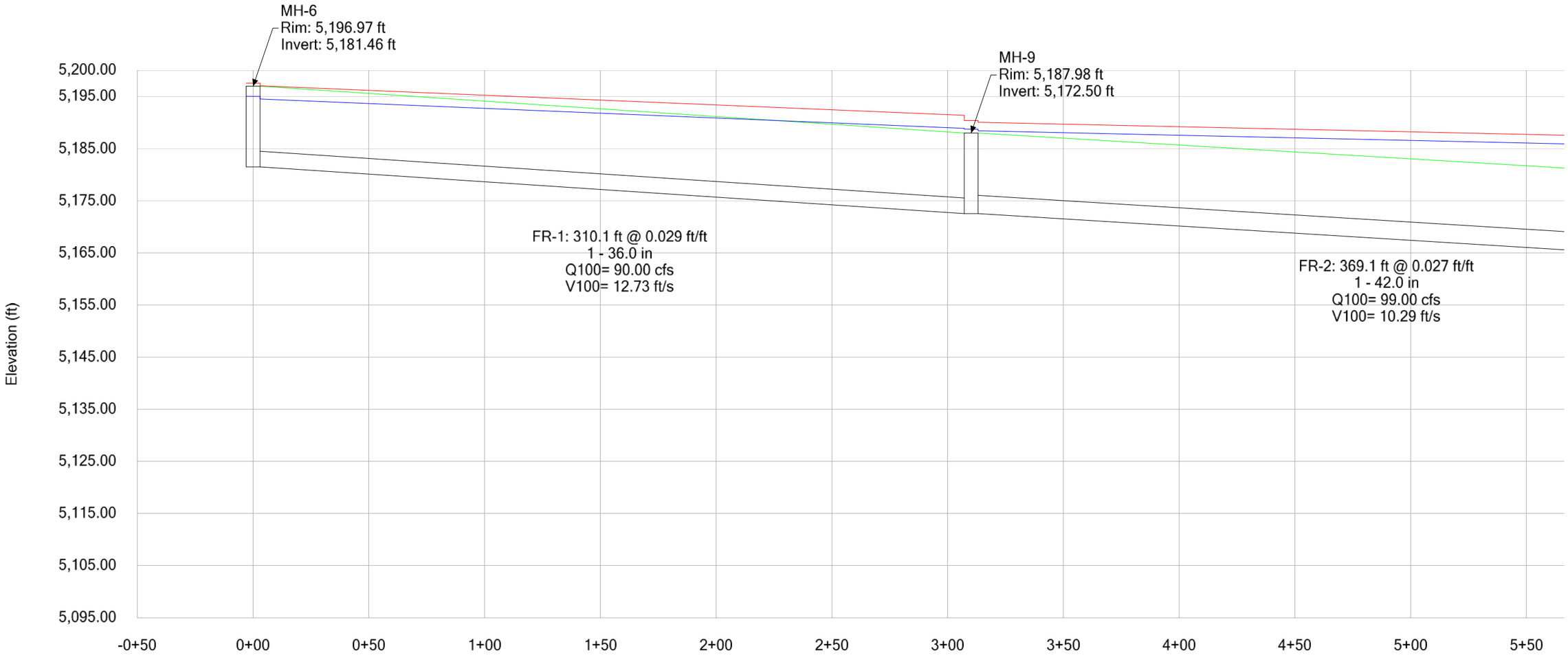
Frontage Road, Shopping Center to 90th St Wye

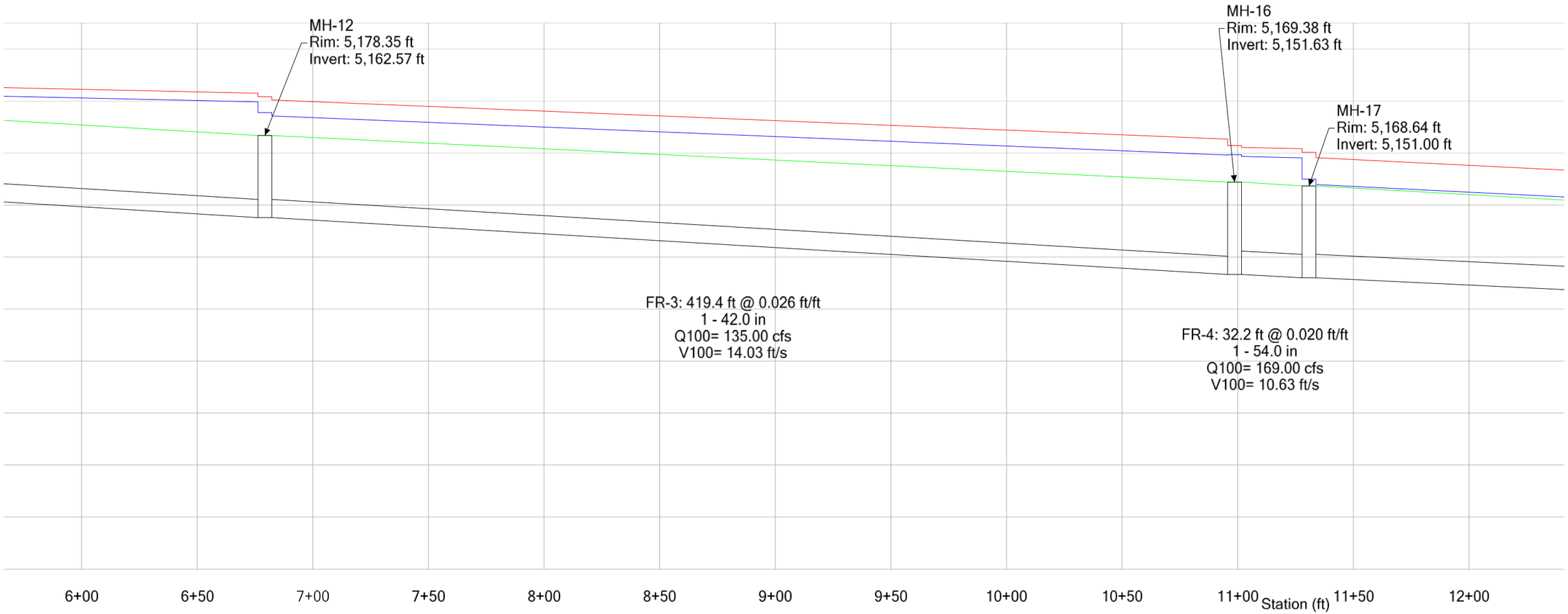
Existing Storm Drain Trunk Line

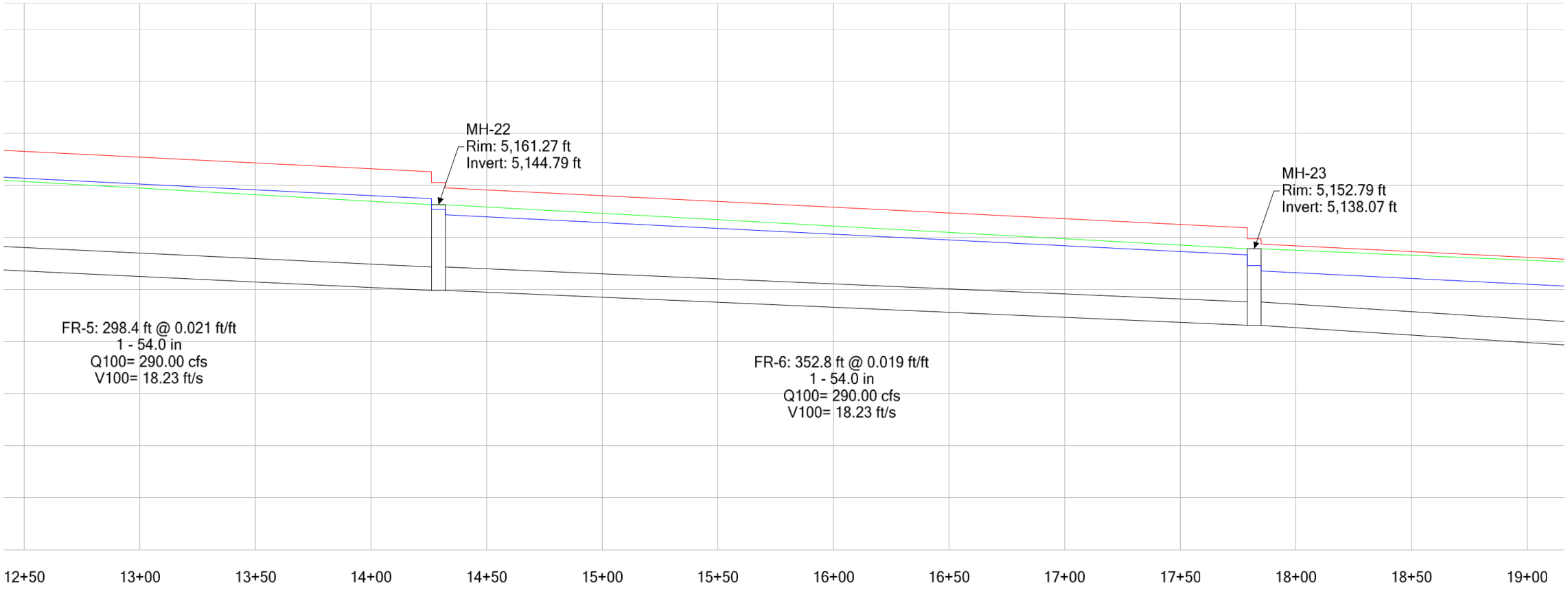
100-year Flow (Existing Conditions)

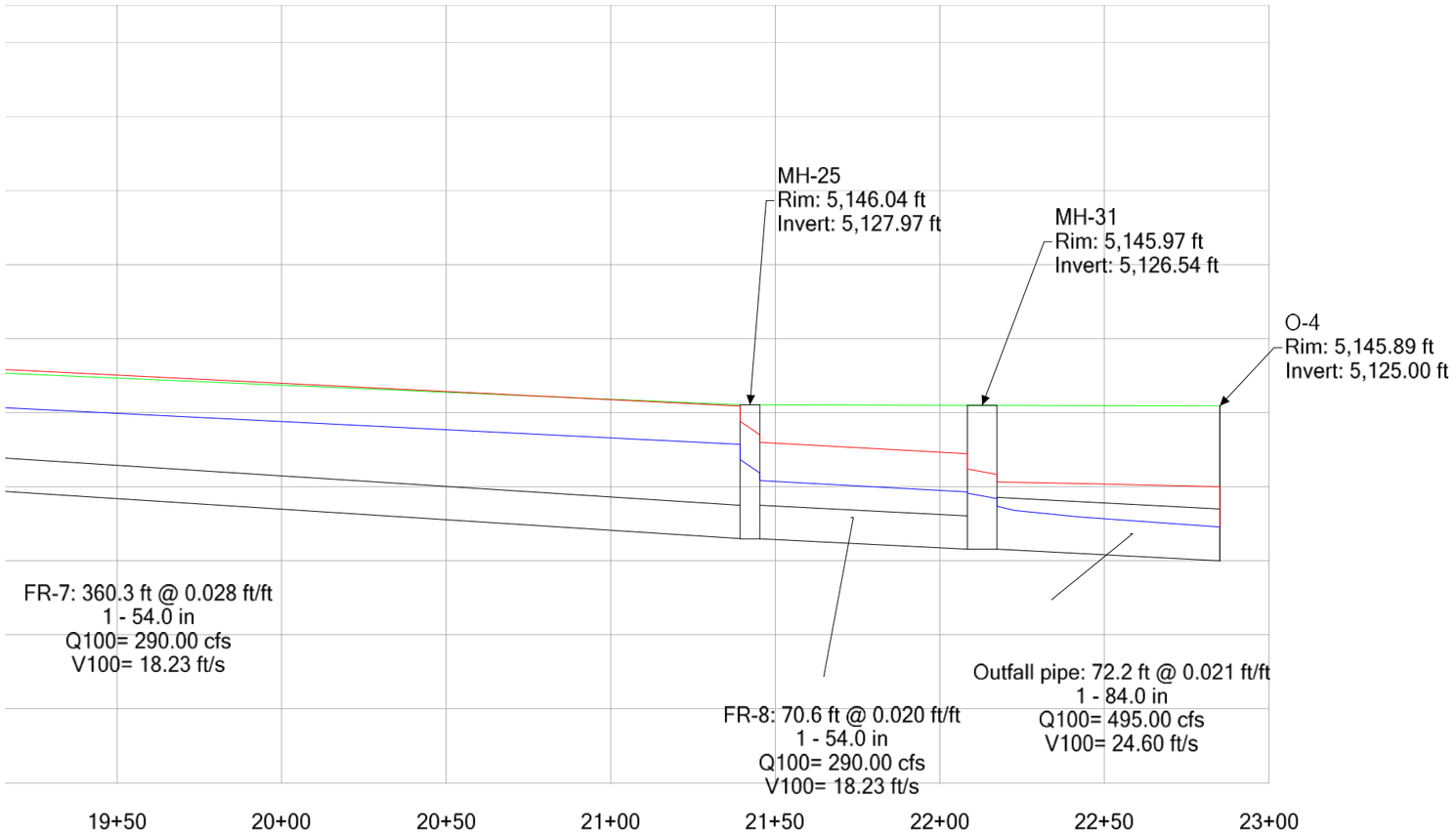
Profile Report

Engineering Profile - Existing (100-Year Existing Storm)Frontage Road Shopping Center to 90th St Wye (West Central Complete Streets-Existing.stsw)




MH-12
Rim: 5,178.35 ft
Invert: 5,162.57 ft
MH-16
Rim: 5,169.38 ft
Invert: 5,151.63 ft
MH-17
Rim: 5,168.64 ft
Invert: 5,151.00 ft
FR-3: 419.4 ft @ 0.026 ft/ft
1 - 42.0 in
Q100= 135.00 cfs
V100= 14.03 ft/s
FR-4: 32.2 ft @ 0.020 ft/ft
1 - 54.0 in
Q100= 169.00 cfs
V100= 10.63 ft/s
6+00
6+50
7+00
7+50
8+00
8+50
9+00
9+50
10+00
10+50
11+00
11+50
12+00
Station (ft)


MH-22
Rim: 5,161.27 ft
Invert: 5,144.79 ft
MH-23
Rim: 5,152.79 ft
Invert: 5,138.07 ft
FR-5: 298.4 ft @ 0.021 ft/ft
1 - 54.0 in
Q100= 290.00 cfs
V100= 18.23 ft/s
FR-6: 352.8 ft @ 0.019 ft/ft
1 - 54.0 in
Q100= 290.00 cfs
V100= 18.23 ft/s
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00

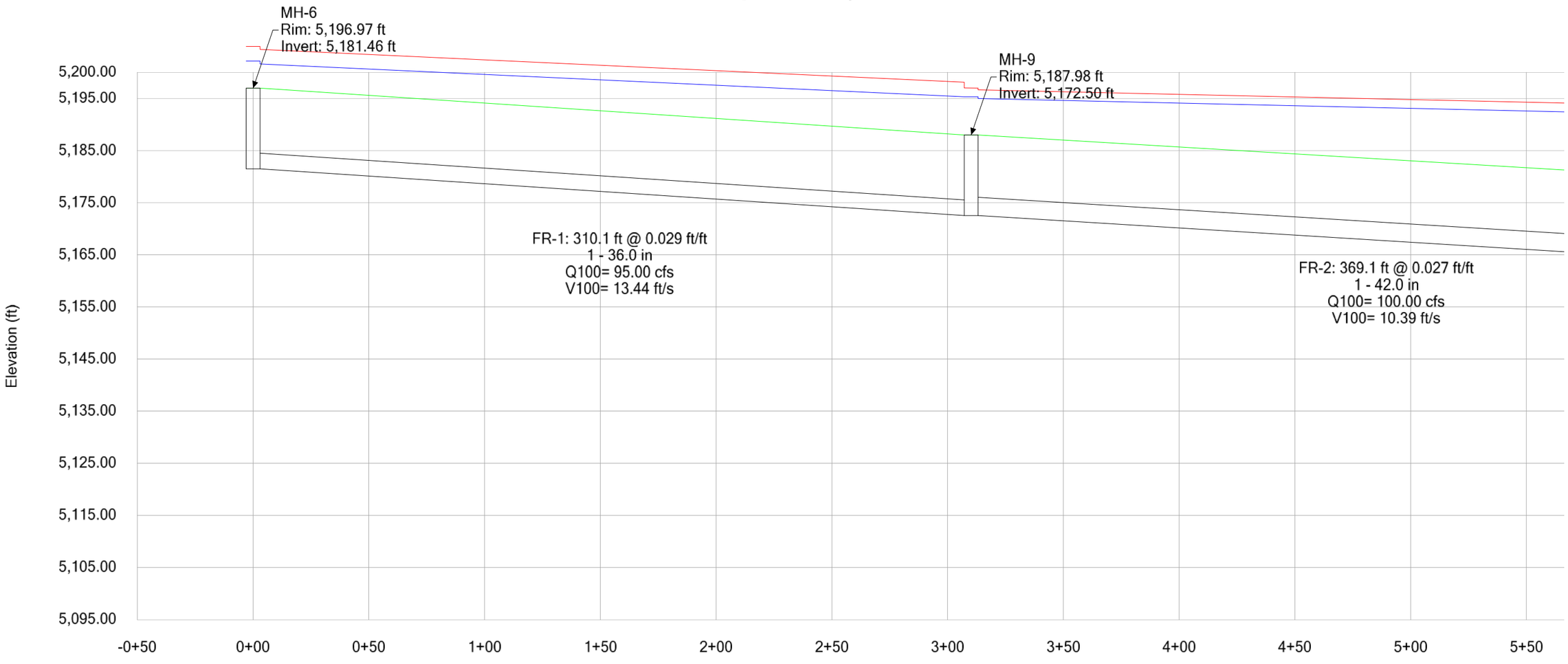

MH-25
Rim: 5,146.04 ft
Invert: 5,127.97 ft
MH-31
Rim: 5,145.97 ft
Invert: 5,126.54 ft
O-4
Rim: 5,145.89 ft
Invert: 5,125.00 ft
FR-7: 360.3 ft @ 0.028 ft/ft
1 - 54.0 in
Q100= 290.00 cfs
V100= 18.23 ft/s
FR-8: 70.6 ft @ 0.020 ft/ft
1 - 54.0 in
Q100= 290.00 cfs
V100= 18.23 ft/s
Outfall pipe: 72.2 ft @ 0.021 ft/ft
1 - 84.0 in
Q100= 495.00 cfs
V100= 24.60 ft/s
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

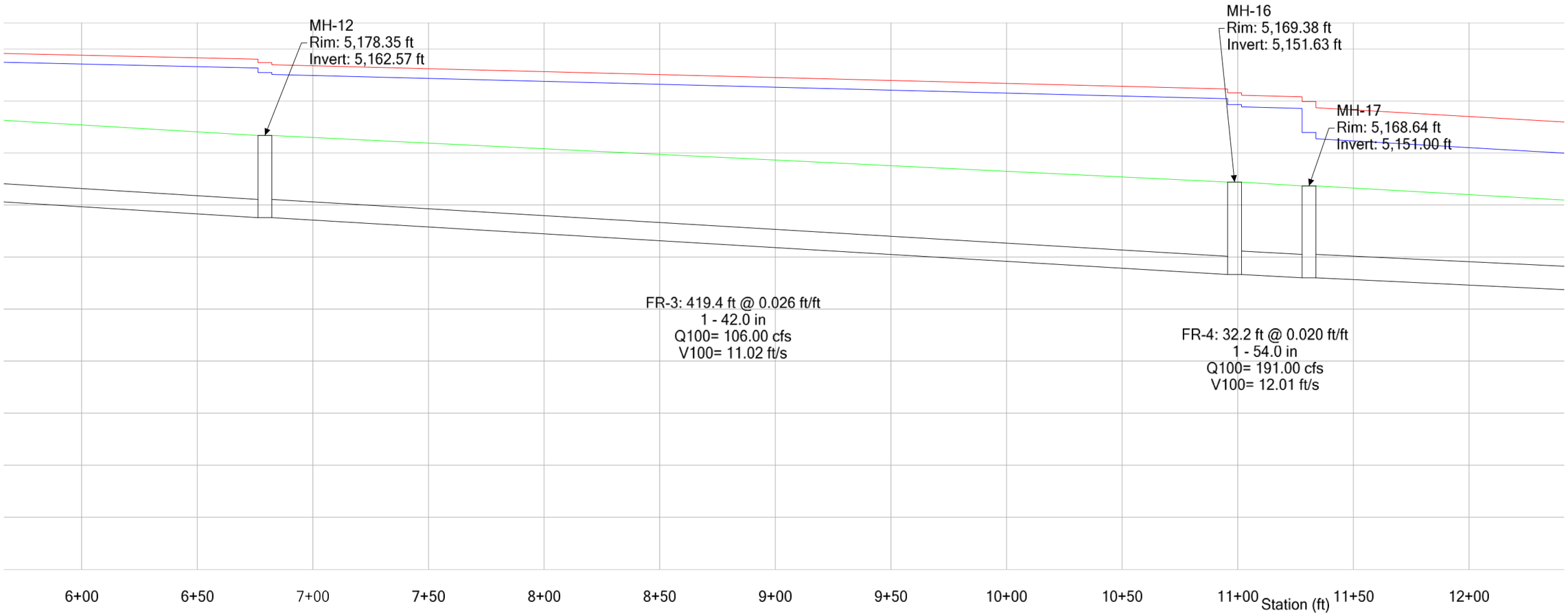
Existing Storm Drain Trunk Line

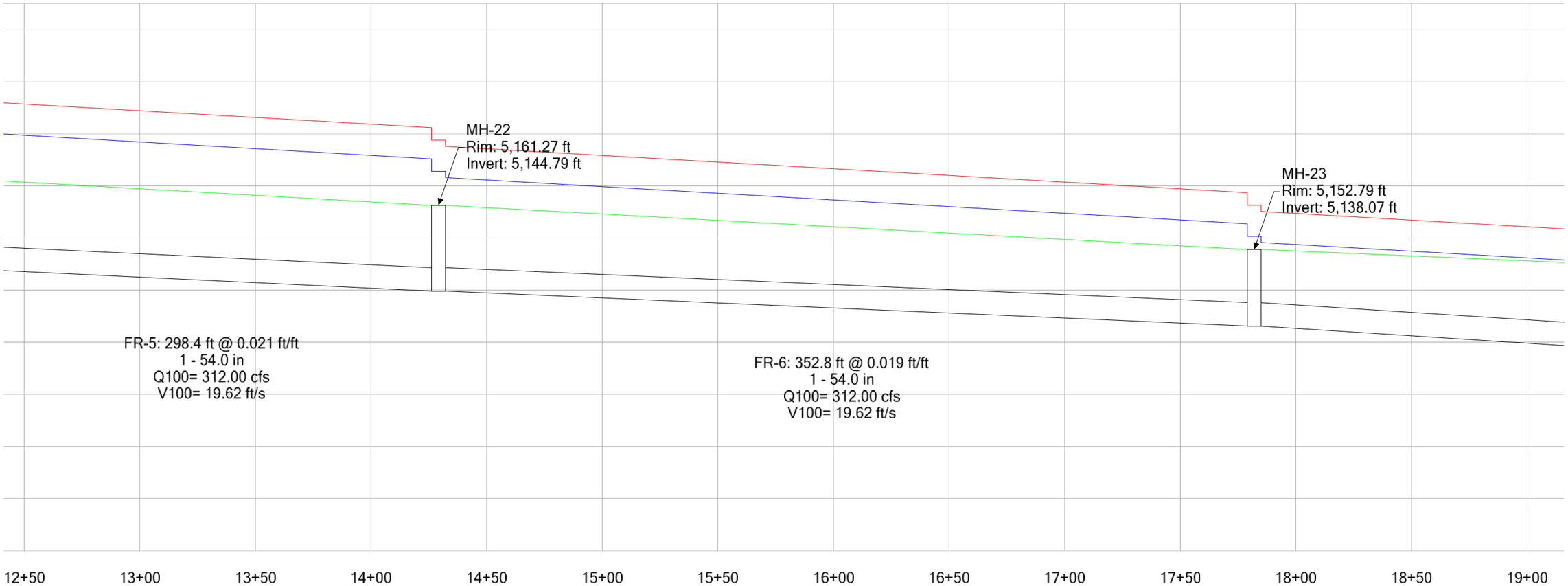
100-year Flow (Proposed Conditions)

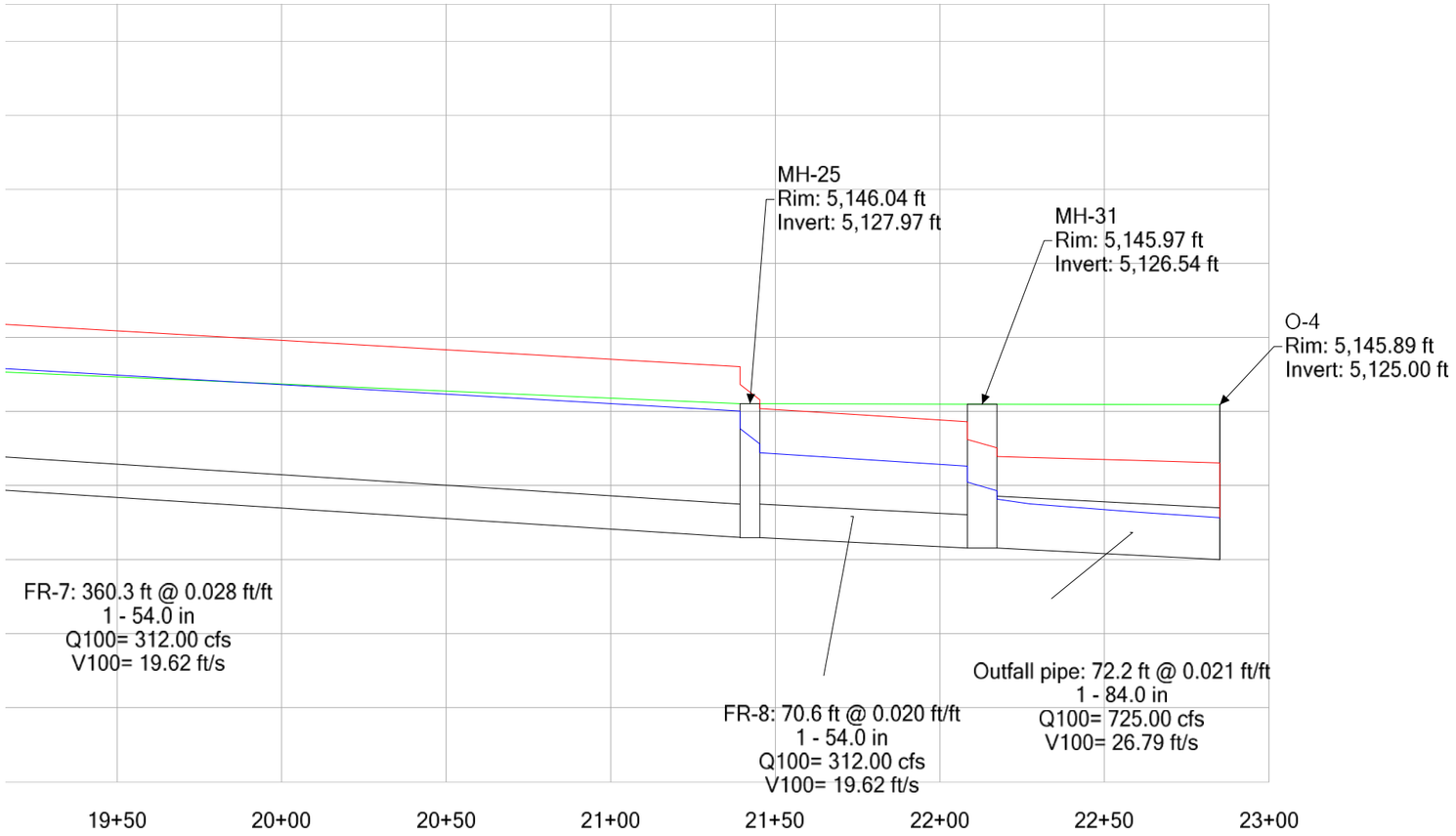
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V100= 12.01 ft/s
6+00
6+50
7+00
7+50
8+00
8+50
9+00
9+50
10+00
10+50
11+00
Station (ft)
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12+00


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Invert: 5,138.07 ft
FR-5: 298.4 ft @ 0.021 ft/ft
1 - 54.0 in
Q100= 312.00 cfs
V100= 19.62 ft/s
FR-6: 352.8 ft @ 0.019 ft/ft
1 - 54.0 in
Q100= 312.00 cfs
V100= 19.62 ft/s
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00

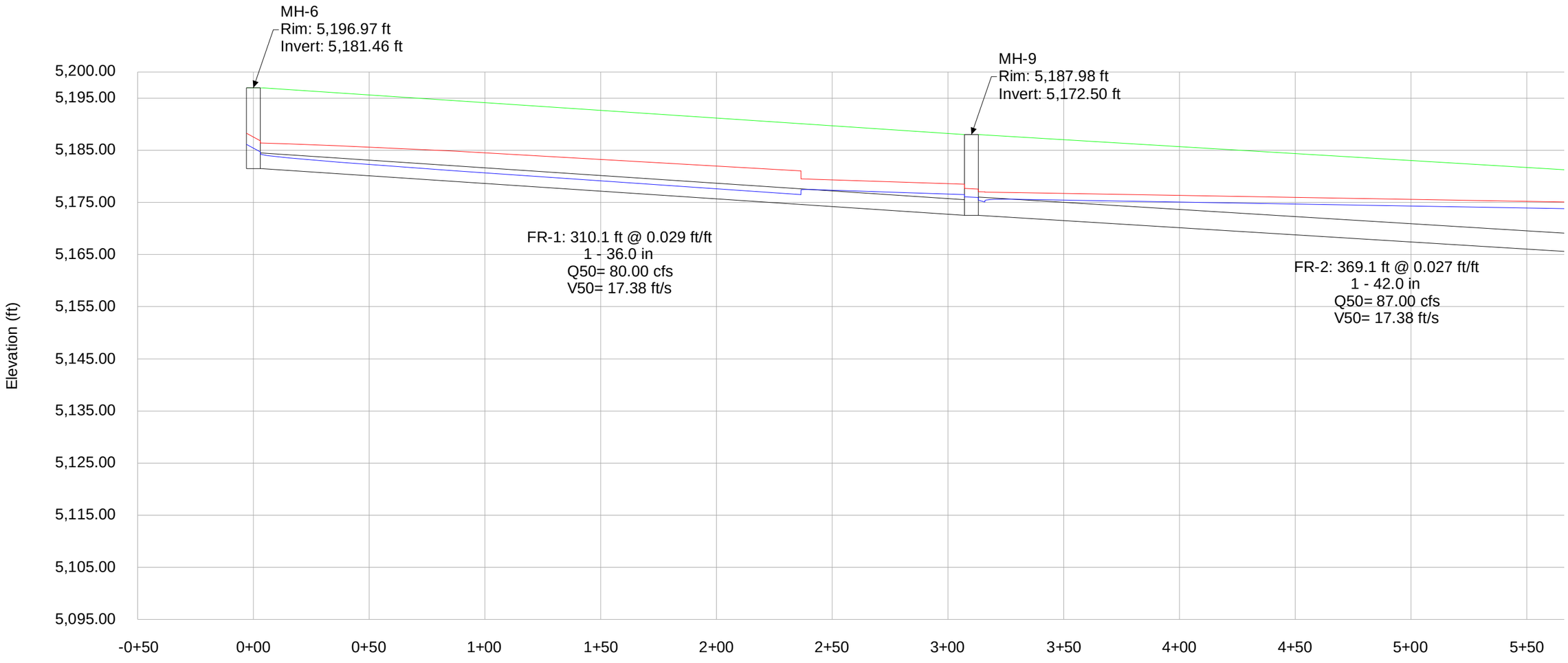

MH-25
Rim: 5,146.04 ft
Invert: 5,127.97 ft
MH-31
Rim: 5,145.97 ft
Invert: 5,126.54 ft
O-4
Rim: 5,145.89 ft
Invert: 5,125.00 ft
FR-7: 360.3 ft @ 0.028 ft/ft
1 - 54.0 in
Q100= 312.00 cfs
V100= 19.62 ft/s
FR-8: 70.6 ft @ 0.020 ft/ft
1 - 54.0 in
Q100= 312.00 cfs
V100= 19.62 ft/s
Outfall pipe: 72.2 ft @ 0.021 ft/ft
1 - 84.0 in
Q100= 725.00 cfs
V100= 26.79 ft/s
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

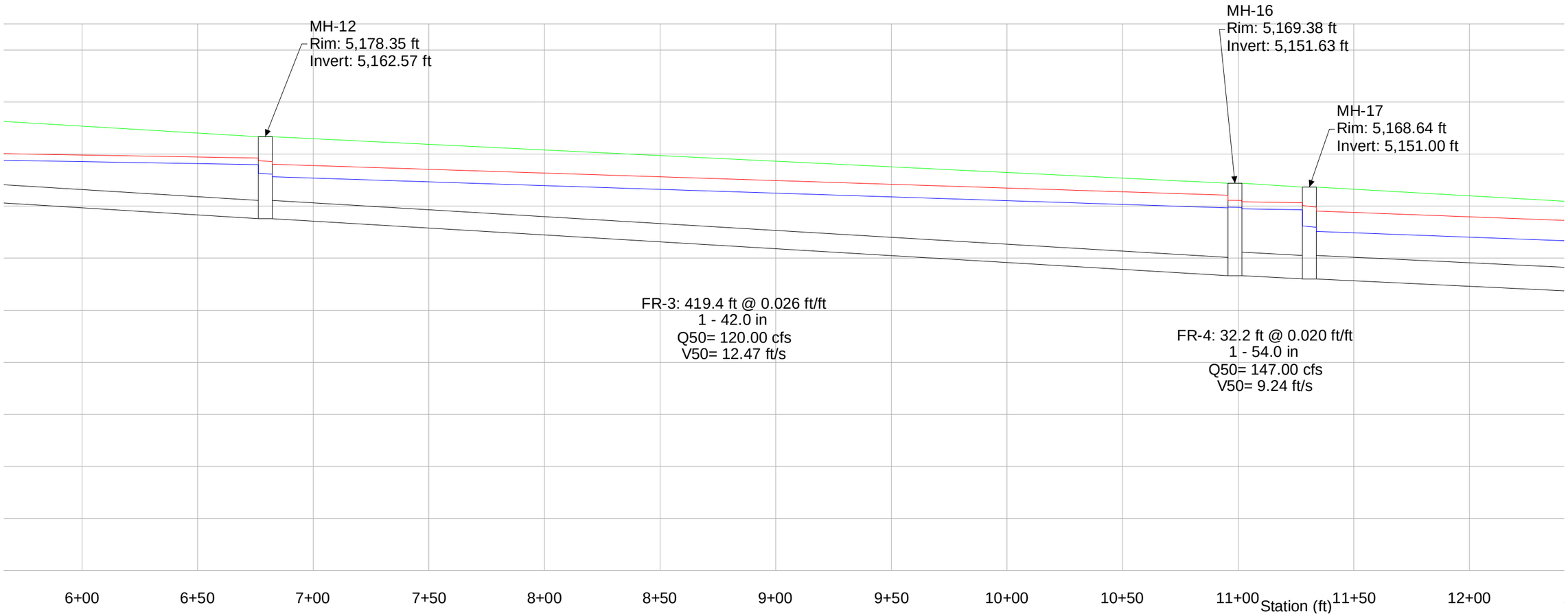
Existing Storm Drain Trunk Line

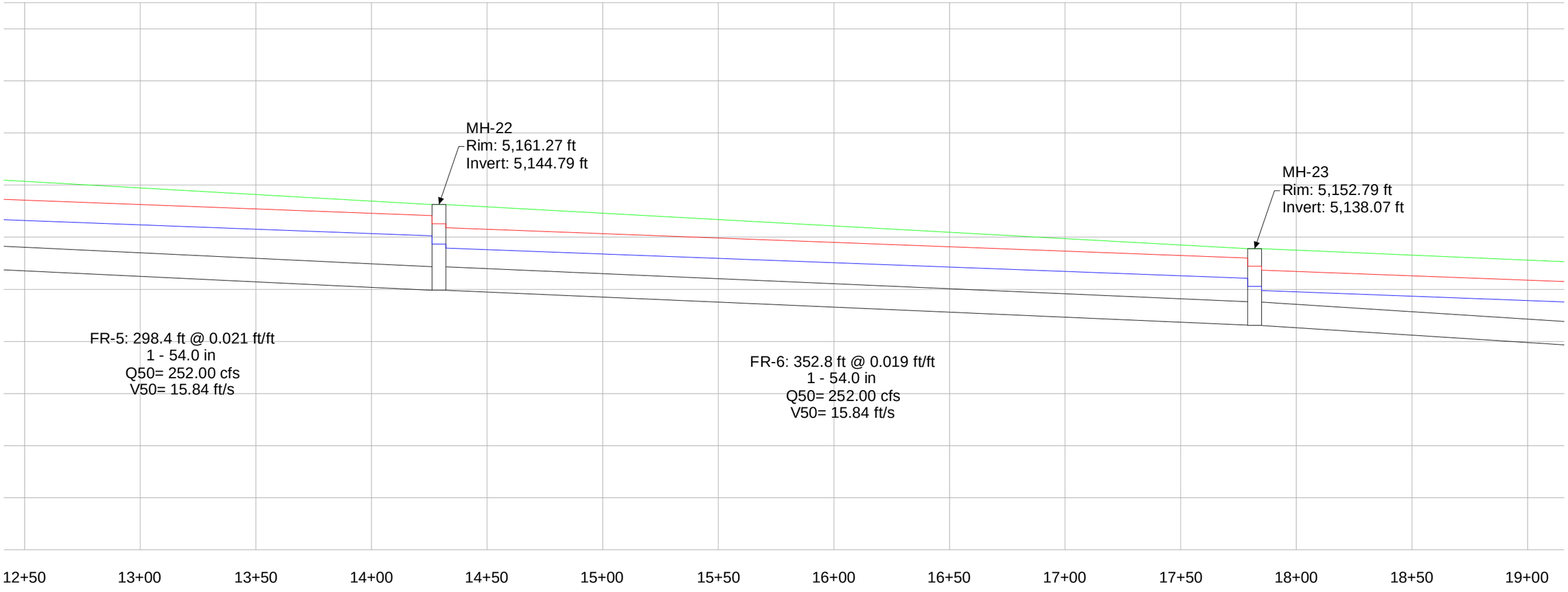
50-year Flow (Existing Conditions)

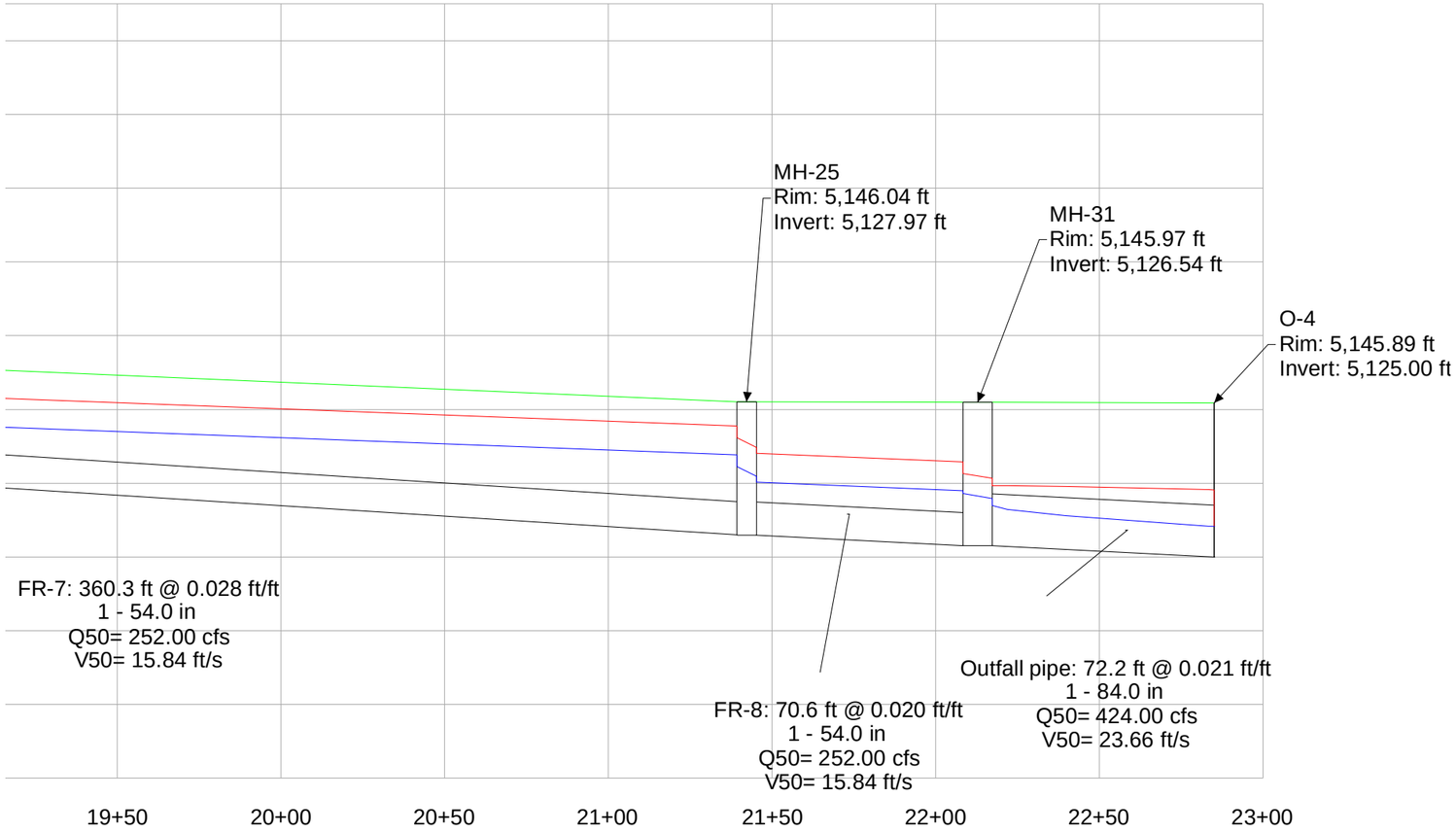
Profile Report

Engineering Profile - Existing (50-Year Existing Storm)Frontage Road Shopping Center to 90th St Wye (West Central Complete Streets-Existing 50year.stsw)




MH-12
Rim: 5,178.35 ft
Invert: 5,162.57 ft
MH-16
Rim: 5,169.38 ft
Invert: 5,151.63 ft
MH-17
Rim: 5,168.64 ft
Invert: 5,151.00 ft
FR-3: 419.4 ft @ 0.026 ft/ft
1 - 42.0 in
Q50= 120.00 cfs
V50= 12.47 ft/s
FR-4: 32.2 ft @ 0.020 ft/ft
1 - 54.0 in
Q50= 147.00 cfs
V50= 9.24 ft/s
6+00
6+50
7+00
7+50
8+00
8+50
9+00
9+50
10+00
10+50
11+00
11+50
12+00
Station (ft)


MH-22
Rim: 5,161.27 ft
Invert: 5,144.79 ft
MH-23
Rim: 5,152.79 ft
Invert: 5,138.07 ft
FR-5: 298.4 ft @ 0.021 ft/ft
1 - 54.0 in
Q50= 252.00 cfs
V50= 15.84 ft/s
FR-6: 352.8 ft @ 0.019 ft/ft
1 - 54.0 in
Q50= 252.00 cfs
V50= 15.84 ft/s
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00


MH-25
Rim: 5,146.04 ft
Invert: 5,127.97 ft
MH-31
Rim: 5,145.97 ft
Invert: 5,126.54 ft
O-4
Rim: 5,145.89 ft
Invert: 5,125.00 ft
FR-7: 360.3 ft @ 0.028 ft/ft
1 - 54.0 in
Q50= 252.00 cfs
V50= 15.84 ft/s
FR-8: 70.6 ft @ 0.020 ft/ft
1 - 54.0 in
Q50= 252.00 cfs
V50= 15.84 ft/s
Outfall pipe: 72.2 ft @ 0.021 ft/ft
1 - 84.0 in
Q50= 424.00 cfs
V50= 23.66 ft/s
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

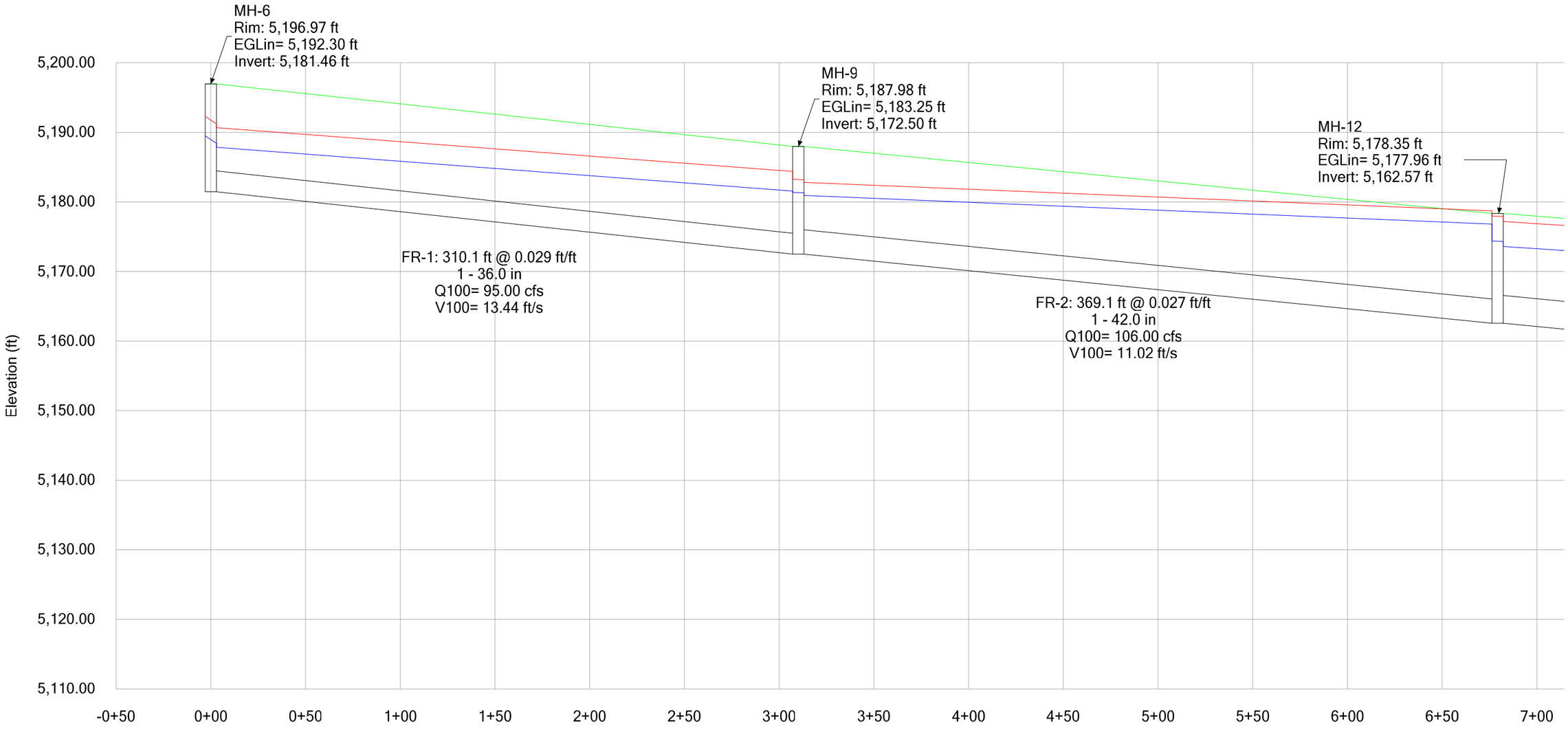
Proposed Storm Drain Trunk Line

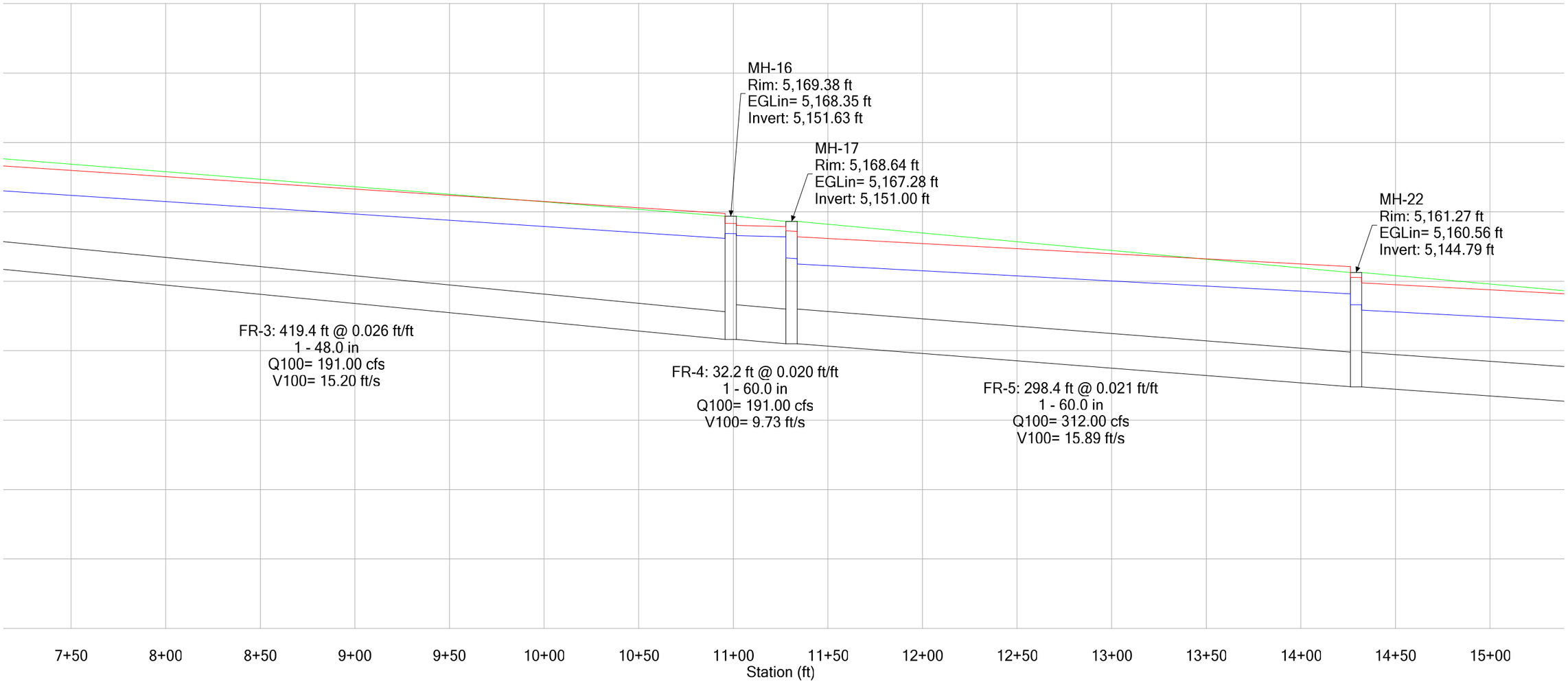
Option A

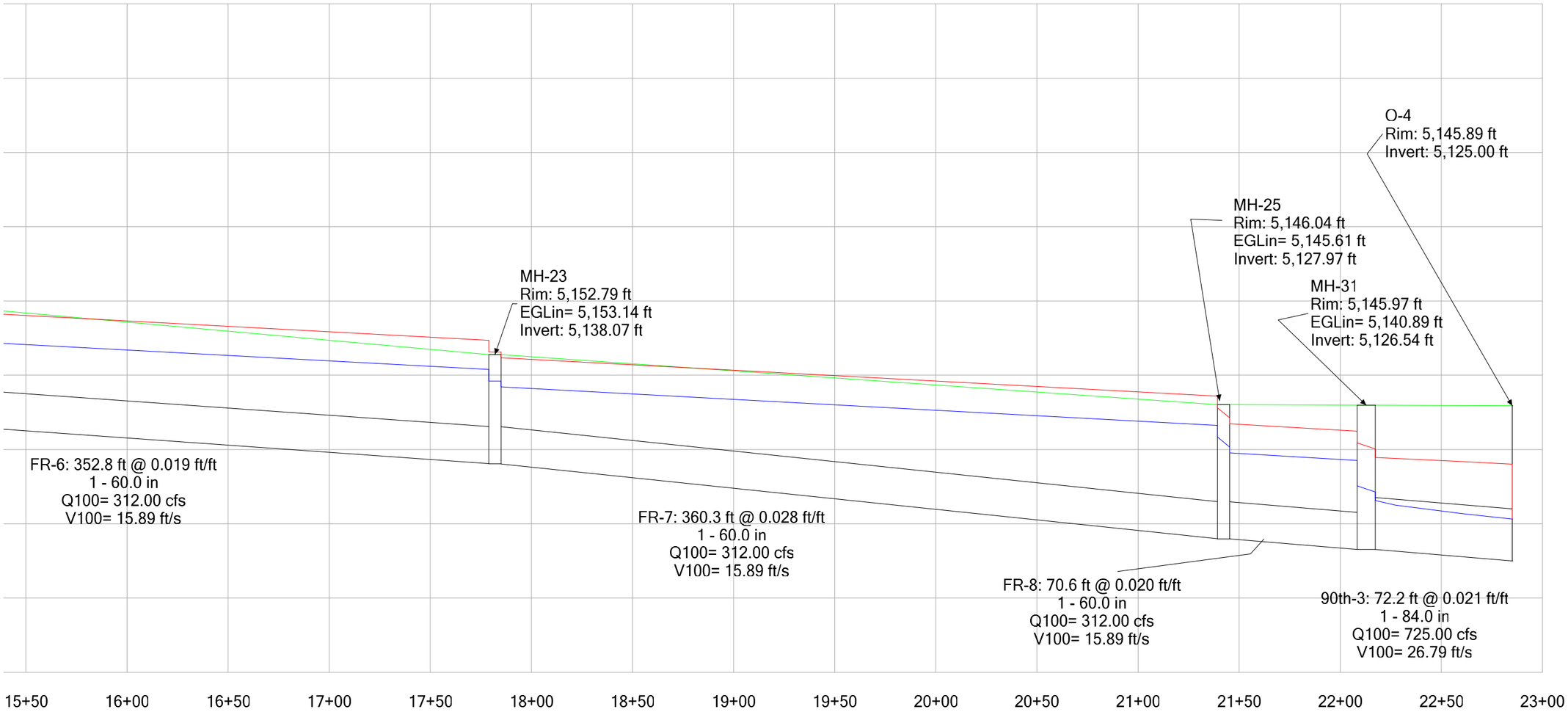
100-Year Flow (Proposed Conditions)

Profile Report

Engineering Profile - Option A Frontage Road Shopping Center to 90th St Wye (West Central Complete Streets-Option A.stsw)




MH-16
Rim: 5,169.38 ft
EGLin= 5,168.35 ft
Invert: 5,151.63 ft
MH-17
Rim: 5,168.64 ft
EGLin= 5,167.28 ft
Invert: 5,151.00 ft
MH-22
Rim: 5,161.27 ft
EGLin= 5,160.56 ft
Invert: 5,144.79 ft
FR-3: 419.4 ft @ 0.026 ft/ft
1 - 48.0 in
Q100= 191.00 cfs
V100= 15.20 ft/s
FR-4: 32.2 ft @ 0.020 ft/ft
1 - 60.0 in
Q100= 191.00 cfs
V100= 9.73 ft/s
FR-5: 298.4 ft @ 0.021 ft/ft
1 - 60.0 in
Q100= 312.00 cfs
V100= 15.89 ft/s
7+50
8+00
8+50
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
Station (ft)


MH-23
Rim: 5,152.79 ft
EGLin= 5,153.14 ft
Invert: 5,138.07 ft
MH-25
Rim: 5,146.04 ft
EGLin= 5,145.61 ft
Invert: 5,127.97 ft
MH-31
Rim: 5,145.97 ft
EGLin= 5,140.89 ft
Invert: 5,126.54 ft
O-4
Rim: 5,145.89 ft
Invert: 5,125.00 ft
FR-6: 352.8 ft @ 0.019 ft/ft
1 - 60.0 in
Q100= 312.00 cfs
V100= 15.89 ft/s
FR-7: 360.3 ft @ 0.028 ft/ft
1 - 60.0 in
Q100= 312.00 cfs
V100= 15.89 ft/s
FR-8: 70.6 ft @ 0.020 ft/ft
1 - 60.0 in
Q100= 312.00 cfs
V100= 15.89 ft/s
90th-3: 72.2 ft @ 0.021 ft/ft
1 - 84.0 in
Q100= 725.00 cfs
V100= 26.79 ft/s
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

Option B

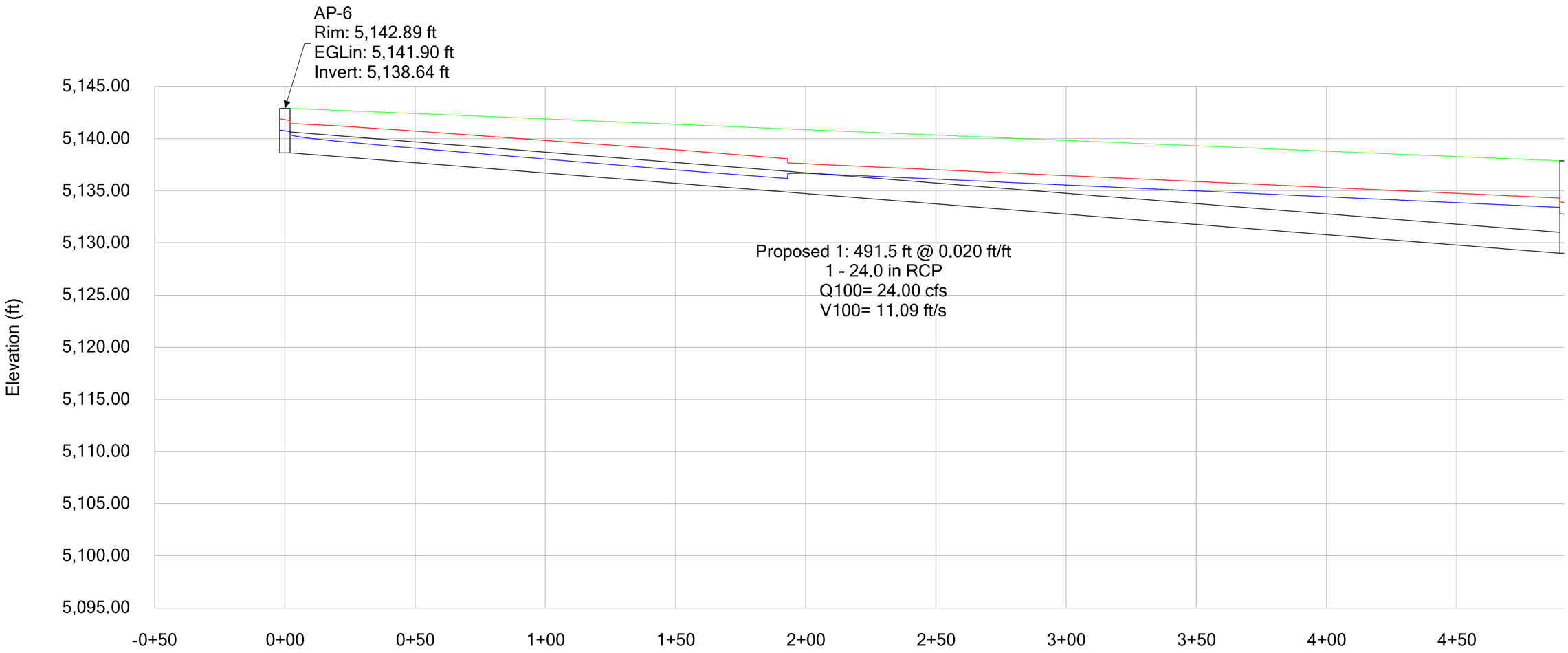
See Existing Storm Drain Trunk Line 50-year Flow (Existing Conditions) above.

Frontage Road 90th St to Library

This profile is consistent for both Options.

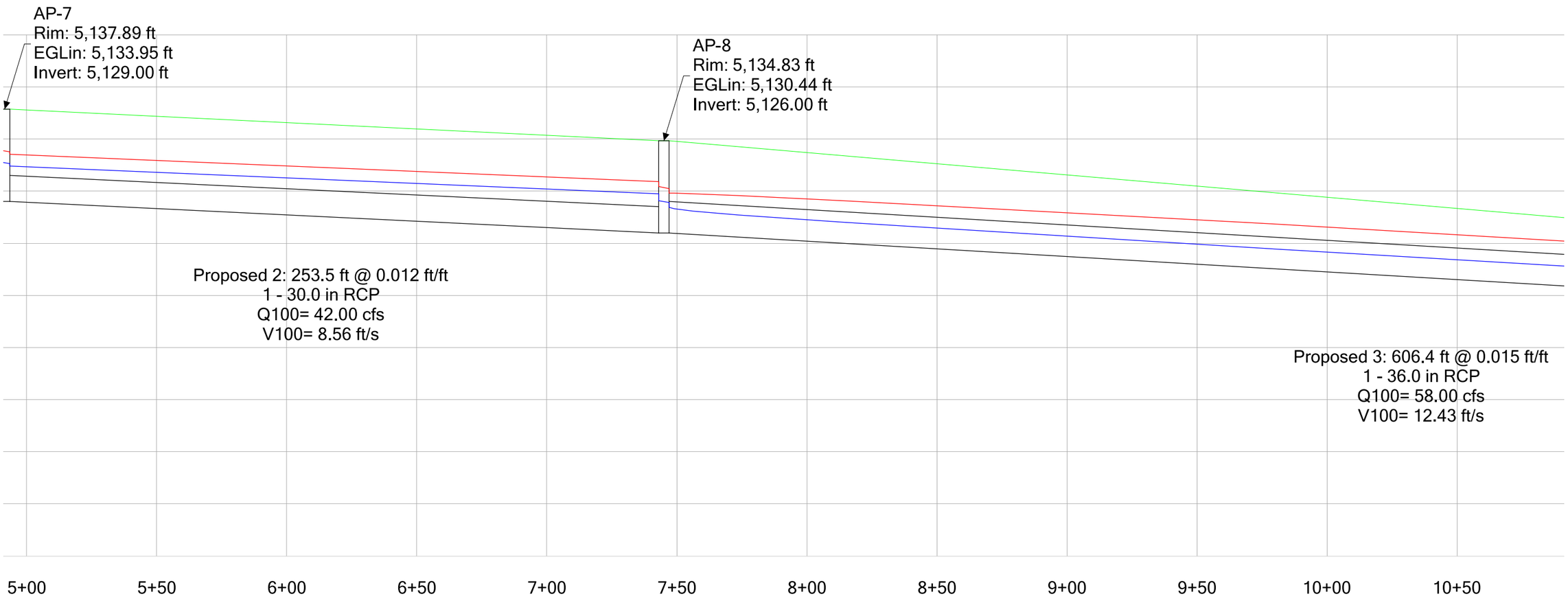
Profile Report

Engineering Profile - Frontage Road 90th St to Library (West Central Complete Streets-Xyear.stsw)



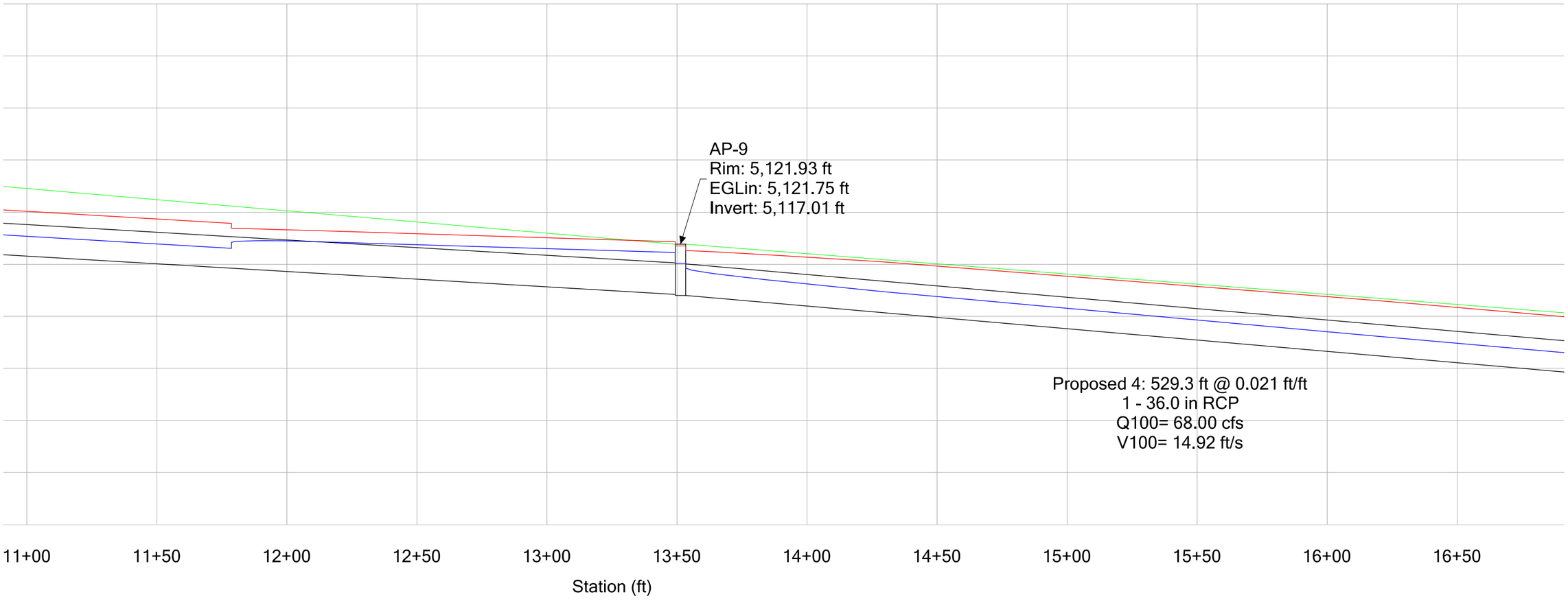
Profile Report

Engineering Profile - Frontage Road 90th St to Library (West Central Complete Streets-Xyear.stsw)



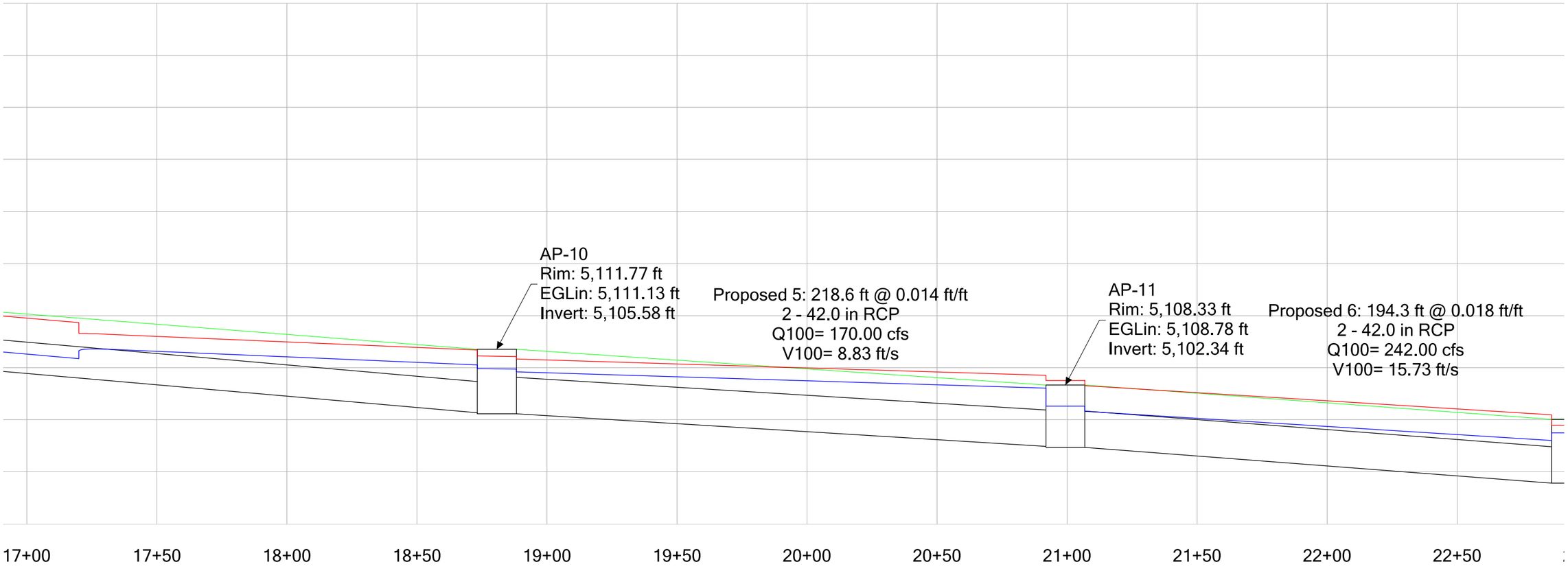
Profile Report

Engineering Profile - Frontage Road 90th St to Library (West Central Complete Streets-Xyear.stsw)



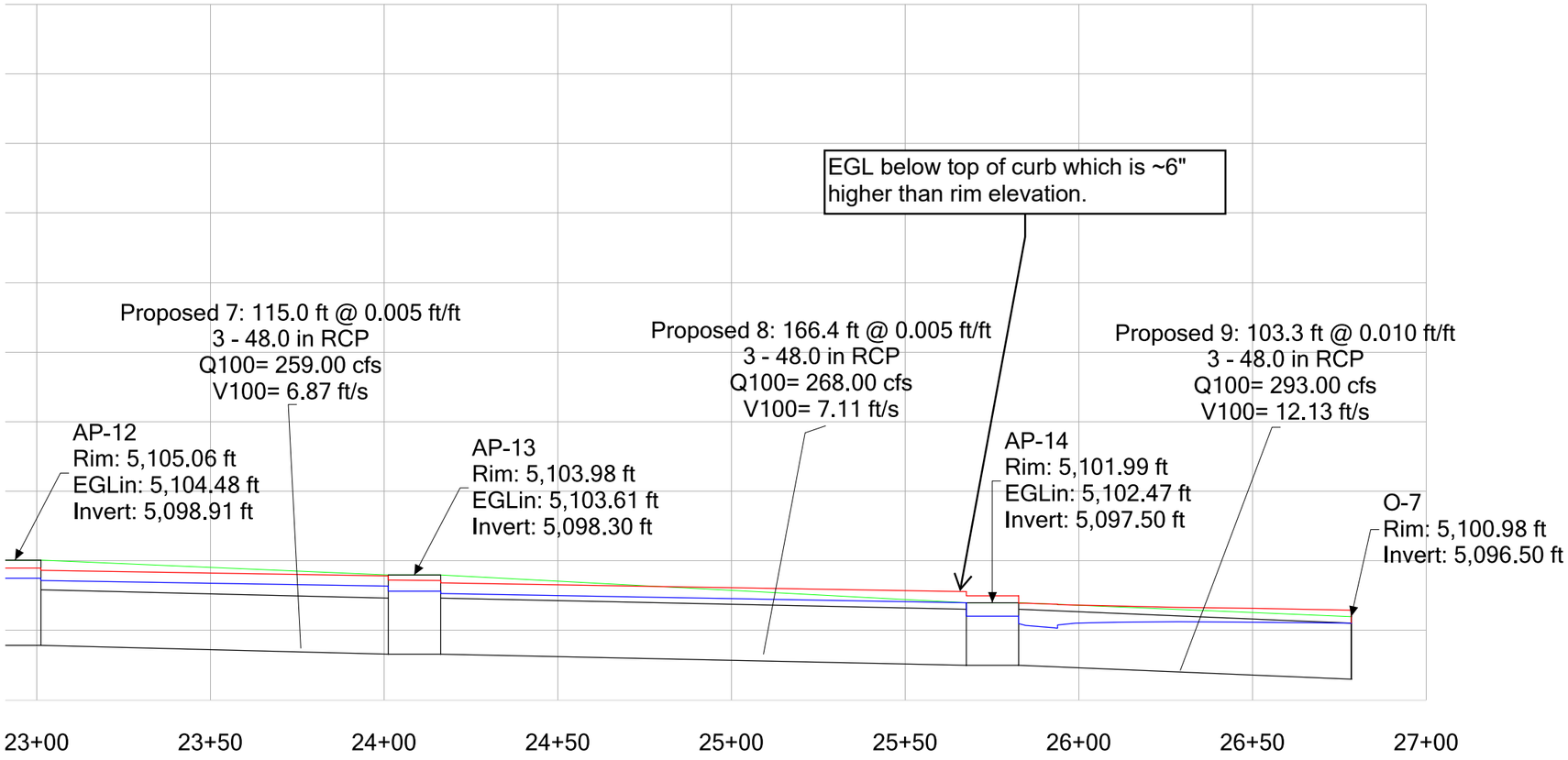
Profile Report

Engineering Profile - Frontage Road 90th St to Library (West Central Complete Streets-Xyear.stsw)



Profile Report

Engineering Profile - Frontage Road 90th St to Library (West Central Complete Streets-Xyear.stsw)



StormCAD Tables

Option B (Existing 50-Year) - Manholes

Label	Elevation (Ground) (ft)	Elevation (Rim) (ft)	HEC-22 Benching Method	Flow (Known) (cfs)	Elevation (Invert in 1) (ft)	Flow (Total Out) (cfs)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Headloss Method	Energy Grade Line (Out) (ft)	Energy Grade Line (In) (ft)	Hydraulic Grade Line (In) (ft)
MH-6	5,196.97	5,196.97	None	80	(N/A)	70	3.09	5,184.55	Energy (Third	5,186.29	5,187.82	5,186.09
MH-9	5,187.98	5,187.98	None	87.00	5,172.50	76	3.21	5,175.71	Energy (Third	5,177.10	5,177.23	5,175.84
MH-12	5,178.35	5,178.35	None	120.00	5,162.57	100	4.74	5,167.31	Energy (Third	5,168.99	5,169.21	5,167.53
MH-16	5,169.38	5,169.38	None	147.00	5,151.63	126	11.18	5,162.81	Energy (Third	5,163.79	5,163.84	5,162.86
MH-17	5,168.64	5,168.64	None	252.00	5,151.00	290	6.07	5,157.07	Energy (Third	5,162.24	5,163.07	5,157.90
MH-22	5,161.27	5,161.27	None	252.00	5,144.81	216	4.76	5,149.55	Energy (Third	5,152.65	5,152.65	5,149.55
MH-23	5,152.79	5,152.79	None	252.00	5,138.11	216	4.75	5,142.82	Energy (Third	5,145.92	5,145.92	5,142.82
MH-25	5,146.04	5,146.04	None	252.00	5,128.00	216	6.98	5,134.96	Energy (Third	5,137.82	5,138.81	5,135.94
MH-28	5,144.89	5,144.89	None	172.00	(N/A)	142	5.85	5,135.27	Energy (Third	5,135.82	5,136.01	5,135.45
MH-31	5,145.97	5,145.97	None	424	5,126.54	358	5.81	5,132.35	Energy (Third	5,134.67	5,135.25	5,132.94

Option B - Conduits

Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Number of Barrels	Conduit Description	Diameter (in)	Manning's n	Material	Flow (cfs)	Velocity (ft/s)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Energy Grade Line (In) (ft)
FR-1	MH-6	5,181.46	MH-9	5,172.50	310	0.029	1	1 - 36 in. RCP	36	0.013		70	16.87	5,176.31	5,184.12	5,177.84	5,185.86
FR-2	MH-9	5,172.50	MH-12	5,162.57	369	0.027	1	1 - 48 in. RCP	42	0.013		76	16.8	5,168.63	5,175.23	5,169.60	5,176.62
FR-3	MH-12	5,162.57	MH-16	5,151.63	419.2	0.026	1	1 - 48 in. RCP	42	0.013		100	10.39	5,162.83	5,166.97	5,164.51	5,168.65
FR-4	MH-16	5,151.63	MH-17	5,151.00	32.2	0.02	1	1 - 48 in. RCP	54	0.013		126	7.92	5,162.49	5,162.62	5,163.46	5,163.59
FR-5	MH-17	5,151.00	MH-22	5,144.81	298.3	0.021	1	1 - 48 in. RCP	54	0.013		290	18.23	5,149.55	5,156.04	5,154.72	5,161.21
FR-6	MH-22	5,144.79	MH-23	5,138.11	352.7	0.019	1	1 - 48 in. RCP	54	0.013		216	18.9	5,144.20	5,148.93	5,147.07	5,152.03
FR-7	MH-23	5,138.07	MH-25	5,128.00	360.2	0.028	1	1 - 54 in. RCP	54	0.013		216	22.06	5,137.09	5,142.20	5,139.96	5,145.30
CO-3	MH-28	5,129.42	MH-31	5,126.54	133.7	0.022	1	1 - 66 in. RCP	66	0.013		142	5.98	5,134.92	5,135.16	5,135.47	5,135.71
FR-8	MH-25	5,127.97	MH-31	5,126.54	70.6	0.02	1	1 - 72 in. RCP	54	0.013		216	13.58	5,133.53	5,134.38	5,136.40	5,137.25
Outfall pipe	MH-31	5,126.54	O-4	5,125.00	72.2	0.021	1	1 - 78 in. RCP	84	0.013		358	22.64	5,130.00	5,131.53	5,132.30	5,133.84

Option A Manholes

Label	Elevation (Rim) (ft)	HEC-22 Benching Method	Flow (Known) (cfs)	Elevation (Invert in 1) (ft)	Flow (Total Out) (cfs)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Headloss Method	Energy Grade Line (Out) (ft)	Energy Grade Line (In) (ft)	Hydraulic Grade Line (In) (ft)
MH-6	5,196.97	None	95	(N/A)	95.00	6.96	5,188.42	HEC-22 Energy (Third Edition)	5,191.23	5,192.30	5,189.49
MH-9	5,187.98	None	106	5,172.50	106.00	8.8	5,181.30	HEC-22 Energy (Third Edition)	5,183.19	5,183.25	5,181.36
MH-12	5,178.35	None	191	5,162.57	191.00	11.76	5,174.33	HEC-22 Energy (Third Edition)	5,177.92	5,177.96	5,174.37
MH-16	5,169.38	None	191	5,151.63	191.00	15.24	5,166.87	HEC-22 Energy (Third Edition)	5,168.34	5,168.35	5,166.88
MH-17	5,168.64	None	312	5,151.00	312.00	12.27	5,163.27	HEC-22 Energy (Third Edition)	5,167.20	5,167.28	5,163.36
MH-22	5,161.27	None	312	5,144.81	312.00	11.84	5,156.63	HEC-22 Energy (Third Edition)	5,160.56	5,160.56	5,156.63
MH-23	5,152.79	None	312	5,138.11	312.00	11.14	5,149.21	HEC-22 Energy (Third Edition)	5,153.14	5,153.14	5,149.21
MH-25	5,146.04	None	312	5,128.00	312.00	12.36	5,140.33	HEC-22 Energy (Third Edition)	5,144.26	5,145.61	5,141.69
MH-28	5,144.89	None	413	5,129.42	413.00	12.82	5,142.24	HEC-22 Energy (Third Edition)	5,144.65	5,144.73	5,142.32
MH-28A	5,144.89	None	413	(N/A)	413.00	12.55	5,143.85	HEC-22 Energy (Third Edition)	5,148.55	5,148.55	5,143.85
MH-31	5,145.97	None	725	5,126.54	725.00	7.75	5,134.29	HEC-22 Energy (Third Edition)	5,140.07	5,140.89	5,135.11

Option A - Conduits

Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Number of Barrels	Conduit Description	Diameter (in)	Manning's n	Material	Flow (cfs)	Velocity (ft/s)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Energy Grade Line (In) (ft)
FR-1	MH-6	5,181.46	MH-9	5,172.50	310	0.029	1	Circle - 36.0 in	36	0.013	Concrete	95	13.44	5,181.56	5,187.86	5,184.37	5,190.66
FR-2	MH-9	5,172.50	MH-12	5,162.57	369	0.027	1	Circle - 42.0 in	42	0.013	Concrete	106	11.02	5,176.83	5,180.92	5,178.71	5,182.81
FR-3	MH-12	5,162.57	MH-16	5,151.63	419.2	0.026	1	Circle - 48.0 in	48	0.013	Concrete	191	15.2	5,166.19	5,173.61	5,169.78	5,177.20
FR-4	MH-16	5,151.63	MH-17	5,151.00	32.2	0.02	1	Circle - 60.0 in	60	0.013	Concrete	191	9.73	5,166.40	5,166.57	5,167.87	5,168.04
FR-5	MH-17	5,151.00	MH-22	5,144.81	298.3	0.021	1	Circle - 60.0 in	60	0.013	Concrete	312	15.89	5,158.20	5,162.49	5,162.13	5,166.41
FR-6	MH-22	5,144.79	MH-23	5,138.11	352.7	0.019	1	Circle - 60.0 in	60	0.013	Concrete	312	15.89	5,150.78	5,155.85	5,154.71	5,159.77
FR-7	MH-23	5,138.07	MH-25	5,128.00	360.2	0.028	1	Circle - 60.0 in	60	0.013	Concrete	312	15.89	5,143.26	5,148.43	5,147.18	5,152.35
FR-8	MH-25	5,127.97	MH-31	5,126.54	70.6	0.02	1	Circle - 60.0 in	60	0.013	Concrete	312	15.89	5,138.54	5,139.55	5,142.46	5,143.47

Frontage Road 90th to Library - Manholes											
Label	Elevation (Rim) (ft)	HEC-22 Benching Method	Flow (Known) (cfs)	Elevation (Invert in 1) (ft)	Flow (Total Out) (cfs)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Headloss Method	Energy Grade Line (Out) (ft)	Energy Grade Line (In) (ft)	Hydraulic Grade Line (In) (ft)
AP-6	5,142.89	None	24	(N/A)	24.00	2.03	5,140.67	HEC-22 Energy (Third Edition)	5,141.73	5,141.90	5,140.84
AP-7	5,137.89	None	42	5,129.00	42.00	3.65	5,132.65	HEC-22 Energy (Third Edition)	5,133.78	5,133.95	5,132.81
AP-8	5,134.83	None	58	5,126.00	58.00	2.9	5,128.90	HEC-22 Energy (Third Edition)	5,130.25	5,130.44	5,129.09
AP-9	5,121.93	None	68	5,117.11	68.00	3.07	5,120.08	HEC-22 Energy (Third Edition)	5,121.74	5,121.75	5,120.09
AP-10	5,111.77	None	170	5,105.68	170.00	4.28	5,109.86	HEC-22 Energy (Third Edition)	5,111.07	5,111.13	5,109.92
AP-11	5,108.33	None	242	5,102.44	242.00	3.97	5,106.31	HEC-22 Energy (Third Edition)	5,108.77	5,108.78	5,106.32
AP-12	5,105.06	None	259	5,098.91	259.00	4.82	5,103.73	HEC-22 Energy (Third Edition)	5,104.46	5,104.48	5,103.75
AP-13	5,103.98	None	268	5,098.30	268.00	4.5	5,102.80	HEC-22 Energy (Third Edition)	5,103.58	5,103.61	5,102.82
AP-14	5,101.99	None	293	5,097.50	293.00	3.51	5,101.01	HEC-22 Energy (Third Edition)	5,102.47	5,102.47	5,101.01

Frontage Road 90th to Library - Conduits

Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Number of Barrels	Conduit Description	Diameter (in)	Manning's n	Material	Flow (cfs)	Velocity (ft/s)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Energy Grade Line (In) (ft)
Proposed 1	AP-6	5,138.64	AP-7	5,129.00	491.4	0.02	1	Circle - 24.0 in	24	0.013	Concrete	24	11.09	5,133.40	5,140.37	5,134.31	5,141.44
Proposed 2	AP-7	5,129.00	AP-8	5,126.00	253.4	0.012	1	Circle - 30.0 in	30	0.013	Concrete	42	8.56	5,129.76	5,132.42	5,130.90	5,133.56
Proposed 3	AP-8	5,126.00	AP-9	5,117.11	606.3	0.015	1	Circle - 36.0 in	36	0.013	Concrete	58	12.43	5,121.12	5,128.47	5,122.17	5,129.82
Proposed 4	AP-9	5,117.01	AP-10	5,105.68	529.2	0.021	1	Circle - 36.0 in	36	0.013	Concrete	68	14.92	5,110.27	5,119.64	5,111.71	5,121.31
Proposed 5	AP-10	5,105.58	AP-11	5,102.44	218.6	0.014	2	Circle - 42.0 in	42	0.013	Concrete	170	8.83	5,108.06	5,109.62	5,109.27	5,110.83
Proposed 6	AP-11	5,102.34	AP-12	5,098.91	194.3	0.018	2	Circle - 42.0 in	42	0.013	Concrete	242	15.73	5,103.01	5,105.81	5,105.47	5,108.28
Proposed 7	AP-12	5,098.91	AP-13	5,098.30	115	0.005	3	Circle - 48.0 in	48	0.013	Concrete	259	6.87	5,103.17	5,103.58	5,103.90	5,104.32
Proposed 8	AP-13	5,098.30	AP-14	5,097.50	166.3	0.005	3	Circle - 48.0 in	48	0.013	Concrete	268	7.11	5,102.00	5,102.64	5,102.78	5,103.43
Proposed 9	AP-14	5,097.50	O-7	5,096.50	103.3	0.01	3	Circle - 48.0 in	48	0.013	Concrete	293	12.13	5,100.50	5,100.50	5,101.44	5,101.95

Appendix D – Cost Estimates

Cost Estimate
Option A

ITEM NUMBER	LONG DESCRIPTION	UNIT	UNIT PRICE	Quantity	Cost
	Drainage Items				
510.110	STRUCTURAL, REINFORCED PC CONCRETE, 4000 PSI, INCL. FORMWORK, CIP.	CY	$ 650.00	40	$ 26,000.00
701.100	TRENCHING, BACKFILLING, & COMPACTION, FOR 18" TO 36" SEWER PIPE, UP TO 8' IN DEPTH, PIPE NOT INCL., COMPL.	LF	$ 24.00	4270	$ 102,480.00
701.150	TRENCHING, BACKFILLING, & COMPACTION, 42" TO 60" SEWER PIPE, UP TO 8' IN DEPTH, PIPE NOT INCL., COMPL.	LF	$ 26.00	3900	$ 101,400.00
910.009	24" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 50.00	2870	$ 143,500.00
910.013	30" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 62.00	260	$ 16,120.00
910.017	36" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 72.00	1140	$ 82,080.00
910.019	42" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 96.00	830	$ 79,680.00
910.021	48" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 130.00	1950	$ 253,500.00
910.025	60" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 204.00	1120	$ 228,480.00
915.020	CATCH BASIN, TYPE "A", SINGLE GRATE, CIP. SD 2201	EA	$ 6,000.00	10	$ 60,000.00
915.040	CATCH BASIN, TYPE "C", DOUBLE GRATE, CIP. SD 2205	EA	$ 6,500.00	18	$ 117,000.00
915.050	CATCH BASIN, TYPE "D", SINGLE GRATE, CIP. SD 2206	EA	$ 5,000.00	10	$ 50,000.00
920.XXX	JUNCTION BOX AT 90TH STREET (PRICE INCREASED FOR UTILITY RELOCATION AND TRAFFIC CONTROL ON CENTRAL AVENUE)	EA	$ 250,000.00	1	$ 250,000.00
920.210	MANHOLE, 8' DIA. TYPE "C" OR "E", 6' TO 10' DEEP, CIP. SD2101	EA	$ 10,000.00	23	$ 230,000.00
920.420	EXISTING MANHOLE FRAME & COVER, ADJUST TO PAVEMENT GRADE WHERE ADJUSTMENT OF CONCRETE OR BLOCK BARREL IS REQUIRED, CIP.	EA	$ 1,800.00	9	$ 16,200.00
			Subtotal		**$ 1,756,440.00**
	Removals				
501.02	EXISTING DRAINAGE STRUCTURE OR CHANNEL LINING , REINFORCED CONCRETE, REMOVE & DISPOSE, COMPL.	CY	$ 200.00	340	$ 68,000.00
910.104	DRAINLINE REMOVAL, 21" TO 48",EXCL. TRENCHING, COMPL.	LF	$ 25.00	420	$ 10,500.00
910.105	DRAINLINE REMOVAL, GREATER THAN 48", EXCL. TRENCHING, COMPL.	LF	$ 50.00	1120	$ 56,000.00
			Subtotal		**$ 134,500.00**
			Total		**$ 1,890,940.00**
			Contingency	30%	$ 567,282.00
			Total		**$ 2,458,222.00**
			NMGRT	7.875%	$ 193,584.98
			Total		**$ 2,651,806.98**
			Total		**$ 2,660,000.00**

Cost Estimate
Option B

ITEM NUMBER	LONG DESCRIPTION	UNIT	UNIT PRICE	Quantity	Cost
	Drainage Items				
510.110	STRUCTURAL, REINFORCED PC CONCRETE, 4000 PSI, INCL. FORMWORK, CIP.	CY	$ 650.00	40	$26,000.00
701.100	TRENCHING, BACKFILLING, & COMPACTION, FOR 18" TO 36" SEWER PIPE, UP TO 8' IN DEPTH, PIPE NOT INCL., COMPL.	LF	$ 24.00	4270	$102,480.00
701.150	TRENCHING, BACKFILLING, & COMPACTION, 42" TO 60" SEWER PIPE, UP TO 8' IN DEPTH, PIPE NOT INCL., COMPL.	LF	$ 26.00	2360	$61,360.00
910.009	24" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 50.00	2870	$143,500.00
910.013	30" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 62.00	260	$16,120.00
910.017	36" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 72.00	1140	$82,080.00
910.019	42" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 96.00	830	$79,680.00
910.021	48" REINFORCED CONCRETE PIPE, CLASS III, FURNISH & PLACE IN OPEN TRENCH, CIP.	LF	$ 130.00	1530	$198,900.00
915.020	CATCH BASIN, TYPE "A", SINGLE GRATE, CIP. SD 2201	EA	$ 6,000.00	10	$60,000.00
915.040	CATCH BASIN, TYPE "C", DOUBLE GRATE, CIP. SD 2205	EA	$ 6,500.00	18	$117,000.00
915.050	CATCH BASIN, TYPE "D", SINGLE GRATE, CIP. SD 2206	EA	$ 5,000.00	10	$50,000.00
920.210	MANHOLE, 8' DIA. TYPE "C" OR "E", 6' TO 10' DEEP, CIP. SD2101	EA	$ 10,000.00	23	$230,000.00
920.420	EXISTING MANHOLE FRAME & COVER, ADJUST TO PAVEMENT GRADE WHERE ADJUSTMENT OF CONCRETE OR BLOCK BARREL IS REQUIRED, CIP.	EA	$ 1,800.00	9	$16,200.00
		Subtotal			**$1,183,320.00**
	Removals				
501.020	EXISTING DRAINAGE STRUCTURE OR CHANNEL LINING , REINFORCED CONCRETE, REMOVE & DISPOSE, COMPL.	CY	$ 200.00	340	$ 68,000.00
910.105	DRAINLINE REMOVAL, GREATER THAN 48", EXCL. TRENCHING, COMPL.	LF	$ 50.00	1120	$ 56,000.00
		Subtotal			**$ 124,000.00**
		Total			**$ 1,307,320.00**
		Contingency		30%	$ 392,196.00
		Total			**$ 1,699,516.00**
		NMGRT		7.875%	$ 133,836.89
		Total			**$ 1,833,352.89**
		Total			**$ 1,840,000.00**