

DS #:

5195

APN:

137-26-112-003

PROJECT:

Summerlin Village 21 Parcel J Stockpile

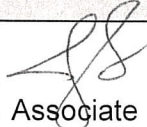
SUBMITTAL:

1st

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		October 2, 2019
TO: Land Development Services Department of Building & Safety		FROM: Jennifer Shinn, P.E.  Flood Control, Engr. Associate Department of Public Works
SUBJECT:	COPIES TO:	
Drainage Study for:	Slater Hanifan	
Summerlin Village 21 Parcel J Stockpile		
Cross Streets:	SWC Kindle Corner Ave and Carriage Hill Dr	Howard Hughes Company, LLC
File Number:	F:\Depot\DSMemos\DS5195A.doc	Richmond American Homes
Parcel Number:	137-26-112-003	Bart Anderson, P.E., DevCo
Zoning Action:	N/A	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	9/26/2019	10/2/2019	See Comments Below	\$400.00	3586745: \$400
			TOTAL FEES (LDDRS):	\$400.00	----

REMARKS:

The Drainage Study for the subject project has been reviewed and:

x	is Conditionally Approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. Prior to final acceptance of the drainage study and final approval of the stockpile plans, provide a copy of the approved Clark County Dust Mitigation Plan with the BMPs.
2. Add note on the Plans: "Stockpile to comply with the approved Dust Mitigation Plan # _____".

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section*. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

END OF REMARKS

jks

T/R/S: T20S/R59E/26
AREA K-26

TECHNICAL DRAINAGE STUDY
Summerlin Village 21 Parcel J
(Stockpile Permit)

City of Las Vegas, Nevada

Job No.: KBH1913.000

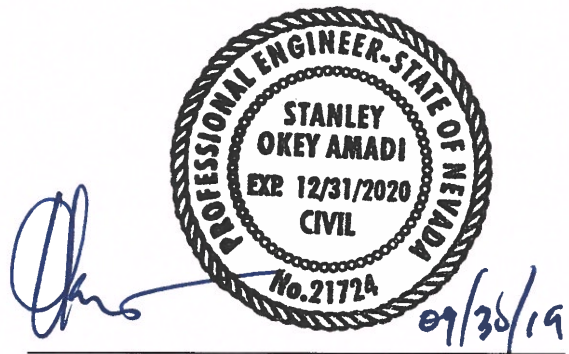
Date: September 2019

Prepared By:

Slater Hanifan Group, A Westwood Team
5740 S. Arville Street, Suite 216
Las Vegas, Nevada 89118
Phone: 702-284-5300 • Fax: 702-284-5399

Prepared For:

KB Home
5795 West Badura Avenue, Suite 180
Las Vegas, NV 89118
Phone: 702-266-8451 • Fax: 702-266-8623



Stanley Okey Amadi, P.E., CFM
NV Professional Engineer No. 21724

Assisted by: Caitlyn Alcantara, EI



SLATER
HANIFAN
GROUP

a Westwood tea

KBH1913.000

September 30, 2019

Jennifer Shinn, P.E.
City of Las Vegas
333 N. Rancho Drive
Las Vegas, NV 89106

Subject: Technical Drainage Study for Summerlin Village 21 Parcel J (Stockpile Permit)

Mr. Sung:

This letter certifies that all items provided on the *Technical Drainage Study for Summerlin Village 21 Parcel J* submittal CD match the paper version bound into the study.

Respectfully Submitted,
SLATER HANIFAN GROUP A WESTWOOD TEAM

A handwritten signature in blue ink that reads "D'Amato Hyche".

D'Amato Hyche
Flood Control Division

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Summerlin Village 21 Parcel K Date: August 2019
Location of Development: a) Descriptive (Cross Streets): North/South: Kindle Corner Way/Redpoint Drive
East/West: Carriage Hill Drive/Desert Foothills Drive
b) Section: 26 Township: 20 S Range: 59 E
c) APN: 137-26-112-003

Name of Owner: Owner: Hughes Howard Company LLC Developer: Richmond American Homes
Telephone No.: 702-617-8464 Fax No.: 702-617-8499 E-mail Address: brian.walsh@mdch.com
Address: 7770 Dean Martin Drive #308 Las Vegas NV 89139

Contact Person – Name: Stanley Okey Amadi, P.E., CFM Telephone No.: (702) 284-5300
*E-mail Address: Stanley.amadi@westwoodps.com Fax No.: (702) 284-5399
Firm: Slater Hanifan Group, A Westwood Team
Address: 5740 S. Arville #216 Las Vegas NV 89118

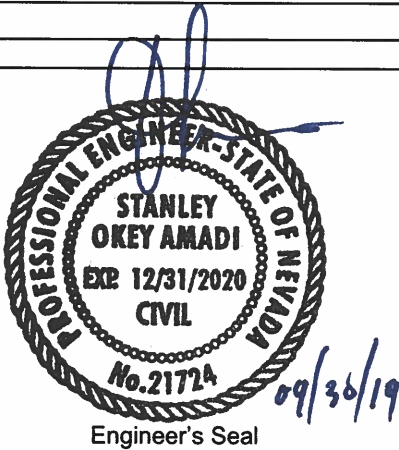
Type of Land Development/Land Disturbance Process:

☐ Rezoning	☐ Subdivision Map	☐ Clearing and grading Only
☐ Parcel Map	☒ Planned Unit Development	☐ Other (Please specify below)
☐ Large Parcel Map	☐ Building Permit	☐

1. Total Owned Land Area: At Site: 8.2 acres Being Developed/Disturbed: 8.2 acres
2. Is a portion or all of the subject property located in a FEMA Flood Hazard Area? ☐ Yes** ☒ No
3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ Yes** ☐ No
4. Proposed type of development (Residential, Commercial, Etc.): Single Family Residential
5. Approximate upstream land area which drains to the subject site: 0
6. Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: _____
Summerlin West Planning Area MPU Update DS4926

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Project will discharge flows to storm drain in
Kindle Corner.

8. Briefly describe your proposed schedule for the subject project: Single phase. ASAP.



Engineer's Seal

Submit this form as part of the required drainage study to the local entity which has jurisdiction over The subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

***Newly Required Field**

****Review and concurrence of the Clark County Regional Flood Control District is required**

Local Entity File No.	Revision	Date

REFERENCE:

STANDARD FORM 1

Updated 05/01/2008



CITY OF LAS VEGAS

MINIMUM DRAINAGE STUDY CRITERIA STANDARD FORM 2 CHECKLIST SUPPLEMENT (Revised 5/18/11)

The following checklist is intended as a supplemental guide for the engineer preparing a Technical Drainage Study submittal to the City of Las Vegas. This supplement focuses on requirements specific to the City of Las Vegas. The requirements presented are in addition to the Clark County Regional Flood Control District (CCRFCD) Manual Standard Form 2. The listed items are the minimum information required prior to the City performing a review. The engineer will remain responsible to ensure the Technical Drainage Study is prepared within the guidelines as set forth in the CCRFCD Hydrologic Criteria and Drainage Design Manual (Design Manual).

An appointment must be made to preview this checklist in conjunction with CCRFCD Standard Form 2 prior to the City accepting a new drainage study for review. The engineer must contact the Flood Control Section at (702) 229-6541 to schedule a submittal appointment.

If items are not applicable for the subject site, provide N/A.

I. GENERAL REQUIREMENT		
Yes	No	
-	N/A	A notarized letter from the adjacent property owner(s) allowing off-site grading. (A copy of the letter must be received prior to final acceptance of the drainage study.)
X	-	Copies of all conditions of approval for development related to this property. (e.g. zoning, use permit, tentative map, etc.) Verify compliance with conditions.
X	-	An electronic copy of the complete submittal is required to be submitted with one original hard copy of the study. Electronic documents should be on a universal computer-readable digital output device replicating your submittal. An Indexed Portable Document Format (PDF) or Print Ready CAD file formats with a minimum of 300dpi are the desired formats. If figures are in color, they must be scanned in color and saved as a separate file. _____ by initial here, the engineer on record acknowledges that the electronic copy is an identical replicate of the original hard copy submitted to the City of Las Vegas.

II. GRADING PLAN INFORMATION		
Yes	No	
X	-	(1) 24" X 36" copy of the Grading Plan, (including all Detail Sheets) sealed by the engineer.
X	-	Proposed future and existing spot grades for top of curbs and street crowns at lot lines, grade breaks, and along curb returns on both sides of the street. Note: Proposed top of curb elevations must be provided for both sides of roadways even if only half street construction is required.
X	-	Label existing topography at a minimum 5 foot elevation interval including adjacent developments, finished floor elevations of existing buildings and top of existing curbs extending 100 feet around the perimeter of the site. (*Measured from the centerline of the adjacent roadway.)

CITY OF LAS VEGAS MINIMUM DRAINAGE STUDY CRITERIA CHECKLIST

II. GRADING PLAN INFORMATION		
Yes	No	
X	-	Proposed on-site and off-site storm drains and other flood control facilities with plan and profile sheets for public storm drains showing the class of pipe, (Class III, IV, V, etc.), design hydraulic grade line, (HGL) and 100 year storm flow. A public drainage easement must be provided over on-site storm drains conveying off-site flows. An overflow path must be provided over all storm drains.
X	-	All existing and "to be constructed" walls with cross-sections showing wall type, (e.g. block wall, retaining wall, flood wall, etc.), with limits clearly defined, adjacent ground elevations. Wall heights must meet current ordinances and in no case exceed 14 feet above the adjacent property.
X	-	Street slopes for both interior and perimeter streets. Note: The minimum slope for a roadway is 0.4 percent, a minimum 18-inch storm drain must be provided where minimum slopes cannot be met.
X	-	Back of lot elevations and lot drainage pattern for all lots including common lots.
X	-	Sites with a grade difference two feet above or below existing ground are required to have approval from City of Las Vegas Current Planning. Current Planning approval is required prior to final approval of the drainage study.
X	-	On-site facilities must perpetuate flows through or around the site without significantly impacting adjacent property owners. (The project must pass flows through the site every 600 feet where the project is blocking flow paths.)
-	N/A	This project uses a solid grouted stem wall (or approved alternate) at the back of sidewalk to provide erosion protection for landscaped areas where the depth of flow in the roadway exceeds the back of walk elevation. A corresponding cross-section detail is included.
-	N/A	Commercial and Common Lot Landscape areas are not allowed to drain over the sidewalk. The grading plans show flow lines with grades and sidewalk under drains for all landscape areas draining to the public ROW.

III. Local Entity Criteria - City of Las Vegas – Manual Section 1600		
Yes	No	
-	N/A	Concrete valley gutters are required in parking lots with slopes less than 1 percent. Slopes through cul-de-sac must be at a 1 percent minimum where flow is drained through the cul-de-sac.
-	N/A	Ten-foot wide public drainage easements to be privately maintained are allowed for flow less than 20 cfs. The depth of flow entering the easement must be checked using the submerged weir calculation.
-	N/A	The limits of the flood zones and the base flood elevations (BFE) must be shown on all grading plans for all developments within a Special Flood Hazard Zone A, AO, AE, etc.
X	-	Minimum finish floor elevation is 6 inches above highest adjacent top of curb. Finish floor calculations must include allowances for super elevations on curves and velocity head for tee intersections.
X	-	Finished floor elevations for buildings adjacent to public drainage easements must be a minimum of 18 inches above the Q100 weir of submerged weir elevation, whichever is greater.

CITY OF LAS VEGAS MINIMUM DRAINAGE STUDY CRITERIA CHECKLIST

III. Local Entity Criteria - City of Las Vegas – Manual Section 1600		
Yes	No	
-	N/A	Lots with "B and C Type Drainage" that drain from one lot to another through a drainage easement shall be required to install an underground nuisance drainage system or a 2-foot valley gutter. 16" x 24" minimum block wall openings are required for both options.
-	N/A	Bubblers are required across 80 foot and greater ROW streets. When flows exceed 10 cfs, bubblers larger than 18 inches will be required up to a maximum of 36". Inlets must be sized to match the pipe size provided.

- Contact the Flood Control Section regarding the drainage study review fee. These fees are payable at the time of submittal.
- The Drainage Study must be conditionally approved prior to submitting improvement plans to the Civil and Planning Development of the Department of Building and Safety for review.

This document is intended as an aid in preparing Technical Drainage Studies for the City of Las Vegas. Each study submitted is reviewed for compliance with local and regional criteria. This form is not intended to be all-inclusive and does not limit the extent of the information, calculations or exhibits which may be necessary to properly evaluate the intended land use.

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

Project Name: Summerlin Village 21 Parcel K

Map ID:

Firm Name: Slater Hanifan Group, A Westwood Team

Engineer: Stanley Okey Amadi, P.E., CFM

Address: 5740 S. Arville #216

City: Las Vegas

State: NV

Zip: 89118

Phone Number: (702) 284-5300

Fax Number: (702) 284-5399

Property Owner: Owner: Hughes Howard Company LLC Developer: Richmond American Homes

Address: 7770 Dean Martin Drive #308

City: Las Vegas

State: NV

Zip: 89139

Reviewed By:

Date Received:

Date Accepted for Review:

The following checklist is intended as a guide for the engineer preparing a Technical Drainage Study to submit to the local entity and Clark County Regional Flood Control District (if necessary). The listed items are the minimum information required prior to the entity performing a review. The engineer will remain responsible to ensure the Technical Drainage Study is prepared within the guidelines as set forth in the Clark County Regional Flood Control District (CCRFCD) Hydrologic Criteria and Drainage Design Manual (MANUAL).

This document is intended as an aid in preparing Technical Drainage Studies. Each study submitted is reviewed for compliance with local and regional criteria. This form is not intended to be all inclusive and does not limit the extent of the information, calculations or exhibits which may be necessary to properly evaluate the intended land use.

If items are not applicable for the subject site, provide N/A.

I. GENERAL REQUIREMENT

Yes	No	
<u>X</u>	<u>-</u>	Design Manual Standard Form 1 with the engineer's seal and signature.
<u>X</u>	<u>-</u>	Design Manual Standard Form 4 .
<u>X</u>	<u>-</u>	2 copies of the 24" x 36" Drainage Plan.
<u>-</u>	<u>N/A</u>	A notarized letter from the adjacent property owner(s) allowing off-site grading or discharge.

II. MAPS AND EXHIBITS

Yes	No	
<u>X</u>	<u>-</u>	A copy of a current Flood Insurance Rate Map (FIRM) with the site delineated.
<u>X</u>	<u>-</u>	A copy of the current CCRFCD Master Plan Update Figure, (F-x), for Flood Control Facilities and Environmental areas with the site delineated.

REFERENCE:

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

II. MAPS AND EXHIBITS (Continued)

Yes	No	
<u>X</u>	<u>-</u>	Off-site drainage basin maps for existing, interim and future conditions showing the existing topography, basin boundaries, concentration points, and flows in cfs.
<u>X</u>	<u>-</u>	On-site drainage basin maps for existing and proposed conditions showing the existing topography, basin boundaries, concentration points, and on-site and off-site flows in cfs.
<u>X</u>	<u>-</u>	Vicinity Map with local and major cross streets identified and a north arrow.

III. DRAINAGE PLAN

Yes	No	
<u>X</u>	<u>-</u>	Sheet size: 24" x 36" sealed by a registered engineer in the State of Nevada.
<u>X</u>	<u>-</u>	Minimum scale: 1" = 60'.
<u>X</u>	<u>-</u>	Project name.
<u>X</u>	<u>-</u>	Vicinity Map with local and major cross streets.
<u>X</u>	<u>-</u>	Revision box.
<u>X</u>	<u>-</u>	North arrow and bar scale.
<u>X</u>	<u>-</u>	Engineer's/consultant's address and phone number.
<u>X</u>	<u>-</u>	Elevation datum and benchmark.
<u>X</u>	<u>-</u>	Legend for symbols and abbreviations.
<u>X</u>	<u>-</u>	Cut/fill scarps, where applicable.
<u>X</u>	<u>-</u>	Street names, grades, widths.
<u>X</u>	<u>-</u>	Proposed future and existing spot grades for top of curbs and street crowns at lot lines, grade breaks, and along curb returns on both sides of the street.
<u>X</u>	<u>-</u>	Existing contours encompassing the site and 100 feet beyond with spot elevations for important locations, where appropriate.
<u>X</u>	<u>-</u>	Minimum finish floor elevations with top-of-curb elevations at upstream end of lot.
<u>X</u>	<u>-</u>	Proposed typical street sections.

REFERENCE:

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
-	N/A	Streets with off-set crowns.
X	-	Proposed contours or spot elevations in sufficient detail to exhibit intended drainage patterns and slopes.
X	-	Property lines.
X	-	Right-of-way lines and widths, existing and proposed.
X	-	Existing improvements and their elevations.
X	-	Delineation of proposed on-site drainage basins indicating area and 10-year and 100-year storm peak flows at basin concentration points.
X	-	Concentration points and drainage flow direction with Q_{100} and V_{100} and D_{100} in streets.
X	-	Cumulative flows, velocity, and direction of flow at upstream and downstream ends of site for the 10-year and 100-year flows.
X	-	Location and cross-section of street capacity calculations.
X	-	Cross-sectional detail for channels, including cutoff wall locations.
X	-	Existing and proposed drainage facilities, appurtenances, and connections (i.e., sidewalk, ditches, swales, storm drain systems, unimproved and improved channels, and culverts, etc.) stating size, material, shape, and slope with plan and profile and HGL calculations.
X	-	Existing and proposed drainage easements and widths shown with sufficient detail. A cross sectional detail must be provided that shows appropriate lining and reinforcement.
-	N/A	Location and detail of existing, proposed, and future block wall openings. Minimum size is 16" x 48". Wrought iron gate is required for flows > 10 cfs.
-	N/A	Location and detail of flood walls illustrating depth of flow, proposed grouting height, etc.
X	-	Perimeter retaining wall locations. All existing and proposed walls (retaining screen and flood) must be shown with adjacent ground elevations. Flood walls with 8-inch concrete masonry unit.
X	-	Building and/or lot numbers.
X	-	Alignment of all existing, proposed, or future Regional Facilities adjacent to the site.
-	N/A	Limits of existing floodplain based on current FIRM or best available information; limits of proposed floodplains based on best available information.

REFERENCE:

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
<u>-</u>	<u>N/A</u>	For areas in Zone A, AE, AH, and AO, base flood elevations (BFEs) must be shown for each lot; BFEs may be listed on each lot, or in a table. Finish floor elevations must be a minimum of 18 inches above BFE.
<u>X</u>	<u>-</u>	Appropriately elevated "humps" 6 inches above the 100 year water surface elevation at site accesses where the intent is to protect the site from the Q_{100} flows.
<u>X</u>	<u>-</u>	Street slopes for perimeter and interior streets. The minimum slope is 0.4 percent.
<u>-</u>	<u>N/A</u>	Location and detail of best management practice (BMP) for parking lots and low impact development (LID) (if required).

IV. HYDROLOGIC ANALYSIS

Yes	No	
<u>-</u>	<u>N/A</u>	Appropriate soil information and Soils Map for existing and future conditions with subbasins and property delineated.
<u>-</u>	<u>N/A</u>	Input and output information for existing conditions from computer models (HEC-1 or TR-55). The flow routing diagram must be provided with HEC-1 models.
<u>-</u>	<u>N/A</u>	Input and output information for future conditions from computer models (HEC-1 or TR-55). The flow routing diagram must be provided with HEC-1 models.
<u>-</u>	<u>N/A</u>	Use of correct precipitation values in and around the McCarran Airport rainfall area.
<u>X</u>	<u>-</u>	A discussion in the text of the hydrologic analysis justifying subbasin boundaries and cutoffs, supporting assumptions, and calculations.
<u>X</u>	<u>-</u>	A summary table of stormwater flows showing basin area, Q_{10} and Q_{100} for both individual basins and combined basin flows, where applicable.
<u>X</u>	<u>-</u>	Copies of supporting technical information referenced from a previously approved study and a statement accepting these results.
<u>X</u>	<u>-</u>	On-site facilities must perpetuate flows through or around the site without significantly impacting adjacent property owners in accordance with current Nevada Drainage Law.
<u>-</u>	<u>N/A</u>	Calculation for impervious area for parking lots and LIDs (if required).

REFERENCE:

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

V. HYDRAULIC ANALYSIS

Yes	No	
<u>-</u>	<u>N/A</u>	Flow split calculations and supporting documentation or reference for the method of flow split calculations used.
<u>X</u>	<u>-</u>	Normal depth street flow calculations and cross section diagrams for all interior and perimeter streets. Provide "d x v" products for the Q_{100} and Q_{10} flows representing the worst case for interior and all perimeter streets. $Q_{100} d \times v \leq 8$. $Q_{10} d \times v \leq 6$ and 12 foot dry lane for rights-of-way ≥ 80 feet. Calculations must be labeled by street name as indicated on the Grading Plan.
<u>X</u>	<u>-</u>	A summary table of interior and exterior street capacity calculations showing the street name, Q_{100} flow, slope, depth of flow, velocity and depth times velocity product and streets needing to meet 12 foot dry lane criteria.
<u>-</u>	<u>N/A</u>	Appropriate hydraulic calculations for block wall openings assuming a 50 percent vertical clogging factor. (Assume the lower half of the opening is plugged.)
<u>-</u>	<u>N/A</u>	Appropriate hydraulic calculations at drainage easement entrance and discharge locations to set finish floor elevations. Hydraulic calculations must include submerged weir, superelevation and tee intersection losses, where appropriate.
<u>X</u>	<u>-</u>	Provide necessary freeboard requirements to set the finished floor elevations of all proposed buildings, 2 x depth of flow or depth of flow plus 18 inches of freeboard, whichever is less. The minimum requirement is 6 inches above adjacent upstream top of curb. Buildings adjacent to drainage easements must always be provided with 18 inches of freeboard above the Q_{100} weir height or flow depth, whichever is greater.
<u>-</u>	<u>N/A</u>	A complete water surface profile analysis (HEC-2, HEC-RAS, etc.) for channel flows and FEMA Zone A flood zones. • Field survey data. • Input and output information. • Plotted cross-sections based on survey with proper encroachments. • A map showing the location of the cross-sections. • Analysis of both sub and super-critical flow segments. • A summary table and a discussion of the results in the text of the report.
<u>X</u>	<u>-</u>	Provide a 50 percent clogging factor in the capacity calculation for drop inlets.
<u>X</u>	<u>-</u>	Hydraulic calculations for culverts and storm drains. D-Load calculations must be provided for storm drain pipes in public rights-of-way, including headwater pool inundation.
<u>X</u>	<u>-</u>	The mitigation of nuisance water, both during construction and in the fully developed condition, must be addressed.
<u>-</u>	<u>N/A</u>	Provide BMP type, size and supporting calculations for parking lots and LIDs (if required).

REFERENCE:

STANDARD FORM 2

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LIST OF APPENDICES

- Appendix A** Drainage Exhibits
- Exhibit A – Location Map
 - Exhibit B – FEMA FIRM Panel Map
 - Exhibit C1 – CCRFCD 2013 MPU Facilities Exhibit
 - Exhibit C2 – CCRFCD 2013 MPU Facilities Inventory
 - Exhibit C3 – CCRFCD 2008 MPU Hydrologic Summary
 - Exhibit D – Wash Section Map
- Appendix B** Hydraulic Computations
- Appendix C** Reference Material:
Technical Drainage Study Update for Summerlin West Planning Area
- Approval Letter
 - Referenced Drainage Exhibits
 - Referenced Curve Number Computations
 - Referenced HEC-1
- Appendix D** Stockpile Plans
- Appendix E** Electronic Files

1 INTRODUCTION

1.1 Study Purpose & Location of Project

This drainage study is intended to satisfy the City of Las Vegas Stockpile Permit Process for the stockpile proposed for the Summerlin Village 21 Parcel J – Ascent project. The proposed improvements and development of the site is currently under planning and design and will be addressed by a separate Technical Drainage Study. However, based on the preliminary grading concept, material import will be required for the development. The developer has available nearby offsite source material and intends to stockpile the material on the site pending final grading and construction.

The purpose of this study is to provide a detailed hydrologic and hydraulic analysis in order to support and protect the proposed stockpile and to ensure that the existing drainage patterns are maintenance on the site post-stockpile placement. The following discussions provide drainage information on the proposed stockpile site as well as a comparison of pre- and post-stockpile placement drainage patterns.

The following provides a summary information on the stockpile proposed with this study:

- The proposed stockpile comprises of approximately 33,500 cubic yards of clean earth fill material to be placed over an area of approximately 3.40 acres.
- The material will be imported from offsite and will be stockpiled completely onsite within the northern half of the site near the intersection of Kindle Corner Avenue and Carriage Hill Drive alignments.
- The stockpile will be located on APN: 137-26-112-002. A location map identifying the proposed stockpile boundaries in relation to major street alignments in the vicinity has been prepared as Exhibit A, included in Appendix A.
- The dimensions of the proposed stockpile vary but maintains a maximum height of 8-ft and will include a temporary perimeter fencing. The stockpile dimensions are illustrated on the Stockpile Plan (Sheet EX-1) provided in Appendix D.
- The application for the Clark County Dust Mitigation Plan has been submitted and will be provided upon approval.
- The typical time limit with most Clark County Dust Mitigation Plans for stockpiles is twelve (12) months and expected to be same for this project.

1.2 FEMA Flood Zone Designation

The project site is located on Flood Insurance Rate Map (FIRM) Panel 32003C2150E, dated September 27, 2002. The project site is located within FEMA designated unshaded Zone X. Zone X (unshaded) is described by FEMA as an area determined to be outside the 0.2% annual chance floodplain. Exhibit B identifying the project sites on the FIRM Panel has been included in Appendix A for reference.

1.3 CCRFCD Facility Information

The proposed stockpile boundaries have been delineated on the current 2018 Clark County Regional Flood Control District (CCRFCD) Las Vegas Valley Flood Control Master Plan

Update (2018 MPU) facility figures. The stockpile site is adjacent to a future proposed master planned facility to be located in the alignment of Carriage Hills Drive. The facility is identified as APCH 0031; a 60" RCP of approximately 2008 lineal feet with a design flow of 208 cfs.

Refer to Exhibits C1 and C2 of the MPU facilities in relationship to the proposed stockpiles provided Appendix A. Exhibit C3 illustrates the location of the proposed stockpiles in relationship to the MPU Hydrologic Subbasins Map and is provided in Appendix A.

1.4 Referenced Documents

The following document(s) have been utilized as reference material in preparation of this drainage study. The referenced document(s) have been reviewed and portions determined acceptable for reference have been included in the appropriate appendix. Slater Hanifan Group generally concurs with all referenced and adopted hydrologic and hydraulic analysis from the study and the results established therein unless otherwise stated.

- *Technical Drainage Study Update for Summerlin West Planning Area Master Plan Update* (by VTN Nevada, hereinafter referred to as the Summerlin West Study, Reference 3), has been referenced because it provides ultimate condition flowrates for the drainage basins west of the proposed stockpile. Relevant reference material from the Summerlin West Study has been included in Appendix C.

2 METHODOLOGY

2.1 Compliance

The methodologies utilized in the preparation of this study are in compliance with the Clark County Regional Flood Control District's Hydrologic Criteria and Drainage Design Manual (CCRFGD Manual, Reference 2).

2.2 Hydrologic Modeling

No hydrologic basins were analyzed with this study. All drainage basins and the associated hydrologic analyses were referenced from the Summerlin West Study. The hydrology from the referenced study remains valid because the precipitation has stayed the same and the curve numbers have stayed the same.

2.3 Hydraulic Modeling

Existing Washes: Natural washes have been analyzed utilizing the FlowMaster Version 7 software by Haestad Methods. The Manning's 'n' Roughness Coefficient has been chosen to correspond to the existing earthen sections. The longitudinal slope is based on existing topography.

3 HYDROLOGIC ANALYSES

3.1 Drainage Pattern

Illustrated on Exhibit D is the proposed stockpile located west and south of the alignments of Carriage Hill Drive and Kindle Corner Avenue respectively. Adjacent to the stockpile are existing natural washes. The proposed stockpile will be located outside of the washes to avoid impeding flow conveyance. Additionally, the proposed stockpile will be installed to follow existing topography to ensure that existing drainage pattern are maintained.

3.2 Flow Rates

The drainage basins west of the proposed stockpile have been referenced from the Summerlin West Study. Refer to the referenced Sheet A.6.3 included in Appendix C for a detailed illustration of the flow patterns and the flowrate summary tables of the referenced basins. Refer to Exhibit D, in Appendix A for an illustration of the proposed stockpile location and the wash hydraulic sections and summary table.

Although, the tributary watershed is currently undeveloped, the referenced hydrologic analysis assumes ultimate development and has been adopted since it comprises of higher conservative peak flows. The referenced basins were previously analyzed in the developed conditions. Basin 3-A utilizes mostly residential land uses (i.e., Apartments, 6,000 sq. ft lots or less, and etc.). Basin 3-B consists of multiple land uses with commercial being the majority. Basin 3-C was analyzed with multiple land uses but over half consists of open space (poor). Basins 3-G1, 3-H1, and 3-H2 are made up of commercial land use and multiple residential land uses. Refer to Appendix C for review of the curve number computations used for the referenced basins. The referenced flow rates conveyed through the existing washes adjacent to the proposed stockpile have been quantified and consist of the summation of CP3-H1 (concentration point) and basin 3H2. Refer to Sheet A.6.3 in Appendix C.

4 HYDRAULIC ANALYSES

4.1 Existing Washes

Refer to Exhibit D included in Appendix A for a detailed illustration of the hydraulic section locations. The existing natural washes convey offsite surface flows in an easterly direction and hydraulic sections were analyzed adjacent to the stockpile location. The wash sections were assessed at critical locations which generated the worst-case flow depths for the 100-yr storm event.

The hydraulic analysis indicates that the proposed stockpile is located sufficiently away from the existing wash. Based on the flow rate of 1277 cfs conveying through the wash adjacent to the stockpile, a minimum and maximum flow depth was obtained. Sections W1 and W2 show a flow depth of 4.37-ft and 5.97-ft with more than 7-ft of freeboard. Therefore, the proposed stockpile will not be impacted by the regional flows in the wash. Refer to Exhibit D in Appendix C for the summary table of the hydraulic sections for the wash. Refer to Appendix B for the hydraulic sections.

5 CONCLUSIONS & RECOMMENDATIONS

1. The proposed stockpile is not located within a FEMA designated SFHA. Therefore, notification to FEMA is not required.
2. The proposed stockpile is adjacent to planned CCRFCD regional facilities. However, the stockpile is temporary in nature and will not require CCRFCD concurrence.
3. The proposed stockpiles do not negatively impact the existing drainage patterns in the area and satisfies the City of Las Vegas Stockpile Permit Process requirements.
4. The improvement plans for the proposed stockpile is provided in Appendix D. These plans support the drainage patterns, hydraulic assessments, and conclusions detailed in this study.
5. The electronic files for this study are provided in Appendix E.

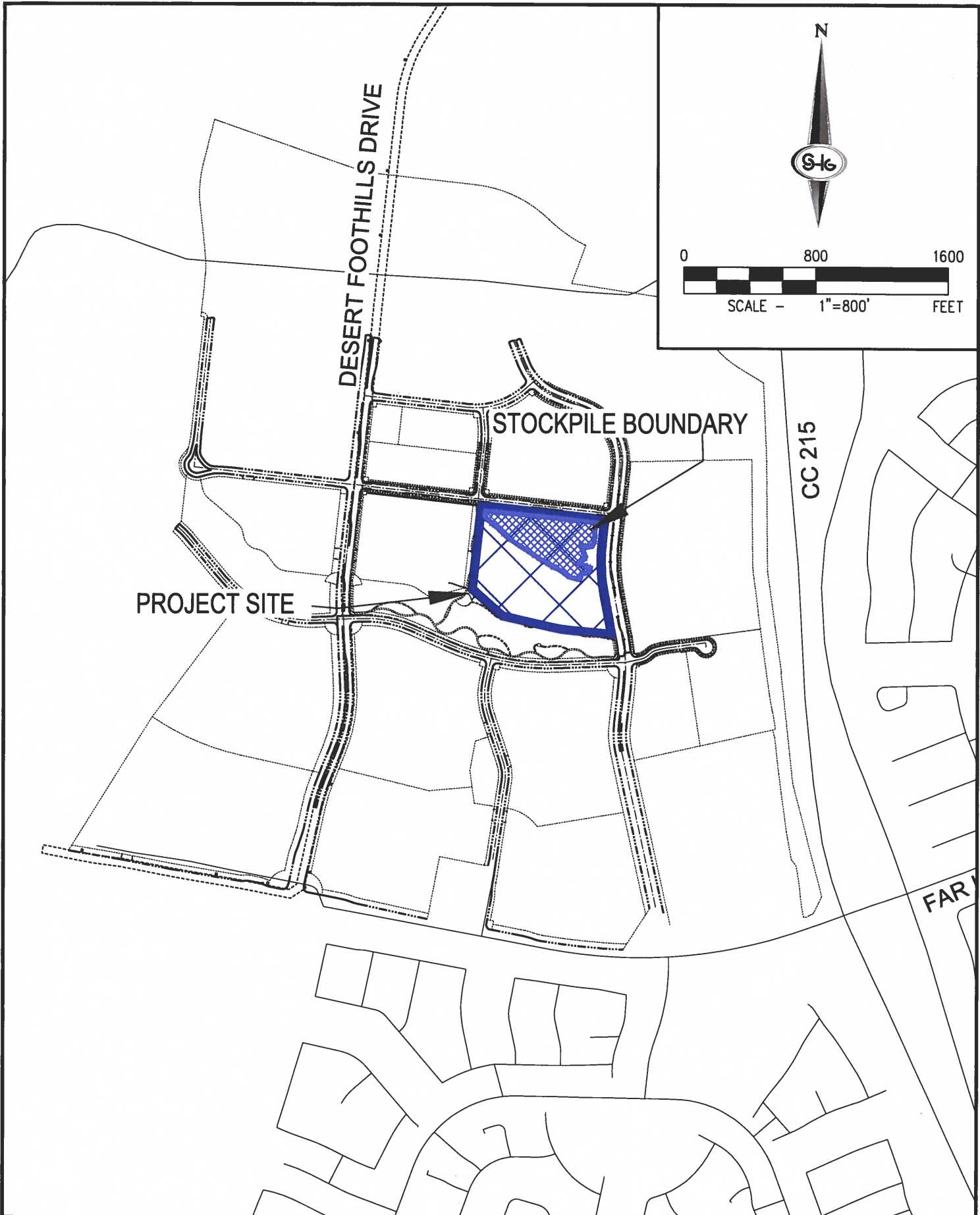
6 REFERENCES

1. *Las Vegas Valley Flood Control Master Plan Update*. Atkins, October 2018.
2. *Hydrologic Criteria and Drainage Design Manual*. Clark County Regional Flood Control District, 1999.
3. *Soil Survey of Las Vegas Valley Area, Nevada*. U.S. Department of Agriculture, Natural Resources Conservation Services, 2019.
4. *Technical Drainage Study Update for Summerlin West Planning Area Master Plan*. VTN Nevada, March 2019.

APPENDIX A

Drainage Exhibits

j:\kbh1913-000 summerlin village 21 parcel j\drainage\stockpile study\kbh1913 stockpile study exhibit a-c.dwg 9/25/2019 11:14 AM Gabby Squillante



S-I-G **SLATER HANIFAN GROUP**
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

KB HOME		DATE: SEPT 2019	PROJECT NO.
SUMMERLIN VILLAGE 21 PARCEL J STOCKPILE LOCATION MAP		DRAFTER: GNS	KBH1913.000
		DESIGNER: GNS	EXHIBIT A
		CHECKED: SOA	
			SHEET 1 OF 1

j:\kbh1913-000 summerlin village 21 parcel j\drainage\stockpile study\kbh1913 stockpile study exhibit a-c.dwg 9/25/2019 11:16 AM Gabby Squillante

CITY OF
LAS VEGAS
325276

STOCKPILE BOUNDARY

PROJECT SITE

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently overtopped. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.

ZONE A99 Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Legend Symbols:

- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- Coastal Barrier Boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities
- Base Flood Elevation line and value; elevation in feet
- Base Flood Elevation value where uniform within zone; elevation in feet
- Referenced to the North American Vertical Datum of 1988
- Cross Section Line
- Transect Line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 1000-meter Universal Transverse Mercator grid values, zone 11
- 5000-foot grid ticks
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile
- MAP REPOSITORY
- Refer to Repository Listing on Index Map
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
- AUGUST 16, 1995
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
- September 27, 2002: to update corporate limits, to change base flood elevations, to add base flood elevations, to add special flood hazard areas, to change special flood hazard areas, to delete special flood hazard areas, to change zone designations, to add roads and road names, to incorporate previously issued letters of map revision, to incorporate previously issued letters of map amendment, and to change floodway.
- For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
- To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 838-6520.

PANEL 2150 E

FIRM

FLOOD INSURANCE RATE MAP

CLARK COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 2150 OF 4090

SEE MAP INDEX FOR FIRM PANEL LAYOUT

COMPANY:

NUMBER:

PANEL:

SHEET:

DATE:

REVISION:

MAP NUMBER

32003C2150 E

MAP REVISED:

SEPTEMBER 27, 2002

Federal Emergency Management Agency

Scale: 0 1000 2000

SCALE - 1"=1000' FEET

North Arrow: N

SLG

SLATER HANIFAN GROUP

Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 284-5300 FAX (702) 284-5399

KB HOME

SUMMERLIN VILLAGE 21 PARCEL J STOCKPILE

FEMA FIRM MAP

DATE: SEPT 2019

DRAFTER: GNS

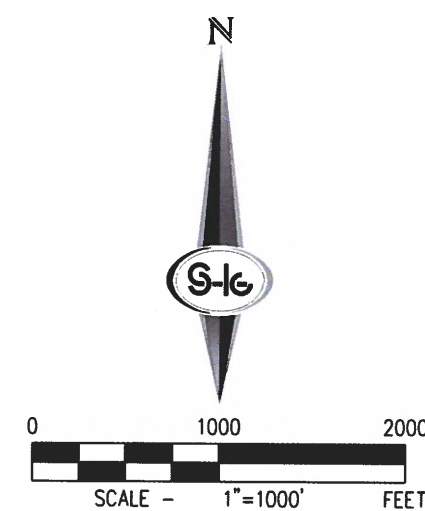
DESIGNER: GNS

CHECKED: SOA

PROJECT NO. KBH1913.000

EXHIBIT B

SHEET 1 OF 1



KB HOME		SLATER HANIFAN GROUP a Westwood team 5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118	
SUMMERLIN VILLAGE 21 PARCEL J STOCKPILE		DATE: SEPT 2019	
MPU FACILITY		DRAFTER: GNS	
		DESIGNER: GNS	
		CHECKED: SOA	
		PROJECT NO. KBH1913.000	
		EXHIBIT C1	
		SHEET 1 OF 1	

ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	MEC-1 Node	MEC-1 Model	Tr tributary Area (sq.mi.)	Channel Slope (%) "
GOL3		GOWAN LONE MOUNTAIN SYSTEM-BRANCH 3						
0100	E	CONC CHNL 26"W 10'D 0"1 SS	200	1271	CRCSY22	GCWSA	4.88	5.67
0115	E	36" RCP OUTLET	670	636	DE726	GCWSA	4.31	0.29
0128	E	305 AC-FT VILLAGE 26 DETENTION BASIN		3615	VIL26IN	GCWSA	4.31	
0137	E	CONC CHNL 26"W 7.5'D 0"1 SS	2720	3815	VIL26IN	GCWSA	4.31	6.50
0188	E	CONC CHNL 26"W 9'D 0"1 SS	583	3815	VIL26IN	GCWSA	4.31	3.91
0197	E	14" X 14" RCB	896	3615	VIL26IN	GCWSA	4.31	0.88
0214	E	Dual 10" X 14" RCB	124	3815	VIL26IN	GCWSA	4.31	0.57
0216	P0	CONC CHNL 36"W 4'D 2.1 SS	4050	3524	CSV26-1	GCWSA	4.02	8.08
0289	P0	CONC CHNL 50"W 3.5'D 2.1 SS	6215	2281	33	GCWSA	2.44	7.95
0290	E	NATURAL WASH 383'W	4850	1410	SV26-1	GCWSA	1.59	22.50
0370	E	NATURAL WASH 450'W	7000	2281	33	GCWSA	2.44	8.50
GOL4		GOWAN LONE MOUNTAIN SYSTEM-BRANCH 4						
0000	E	14" X 8" RCB	554	2243	CLMT1R	GCWSA	2.33	2.50
0010	E	2' 9" X 8" RCB	820	2243	CLMT1R	GCWSA	2.33	4.74
0025	E	SOIL CEMENT CHNL 60"W 8'D 3-4" SS	320	2243	CLMT1R	GCWSA	2.33	2.00
0026	E	SOIL CEMENT CHNL 42"W 6'D 3-4" SS	700	2243	CLMT1R	GCWSA	2.33	1.00

^ For parallel facilities, the existing facility flow equals its normal depth capacity, and the proposed parallel facility flow equals the remaining flow (i.e. HEC-1 Node flow = existing facility normal depth capacity + proposed parallel facility flow).



Existing Facility.....	E
Proposed or Modified Facility.....	P
Contingency Level	
Category A.....	P
Category B.....	P0

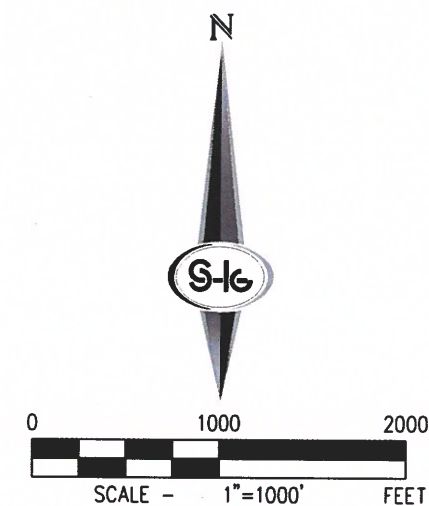
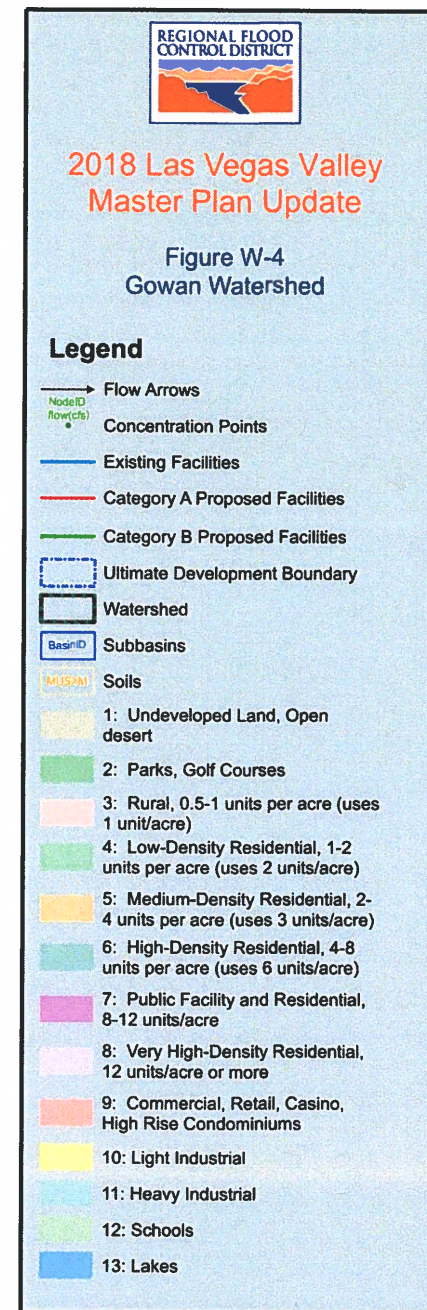
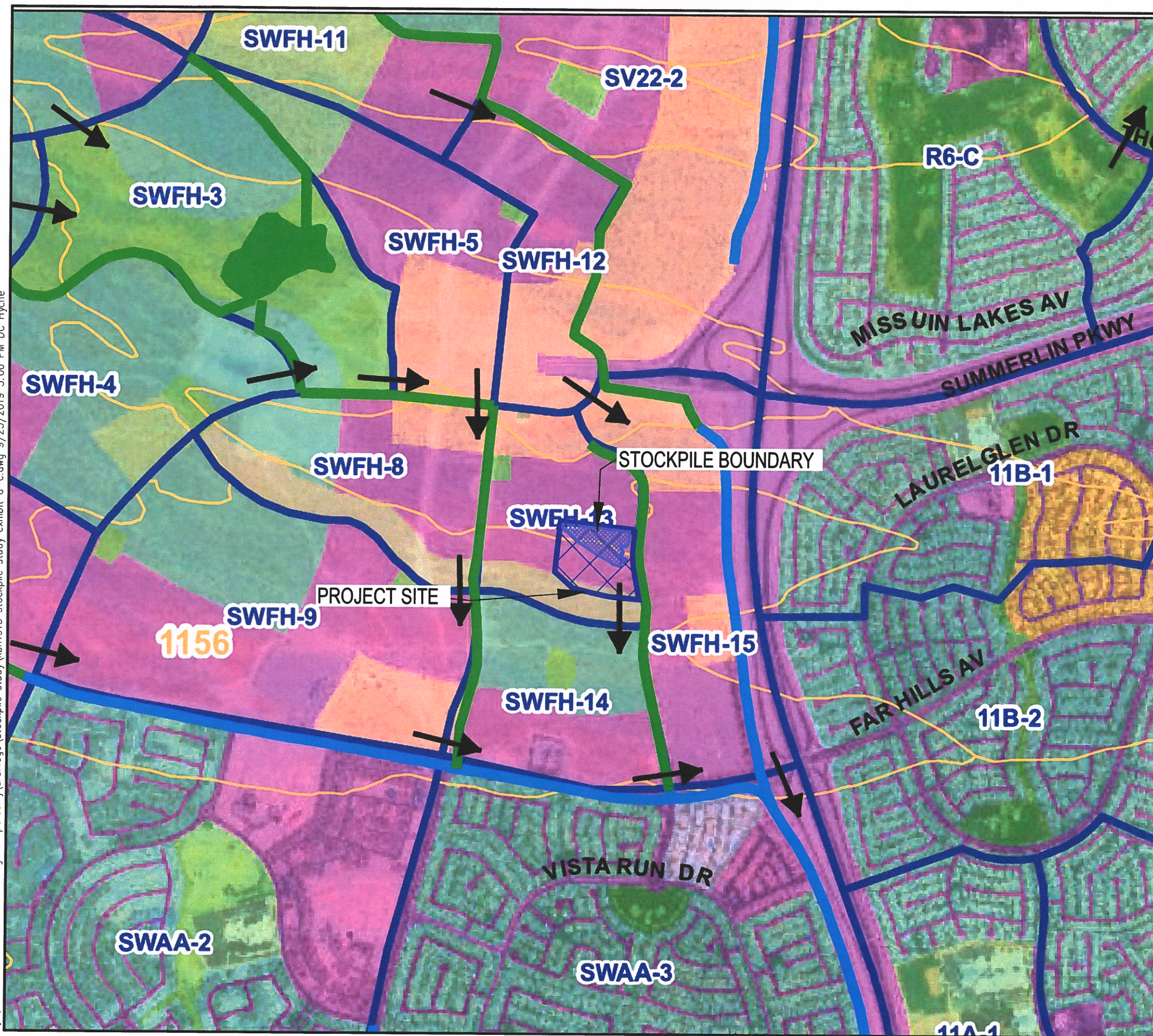
Cast in Place Concrete Pipe.....	CIPCP	Reinforced Concrete Arch Culvert	RCAC
Corrugated Metal Arch Pipe Culvert.....	CMAP	Reinforced Concrete Box.....	RCB
Corrugated Metal Pipe Culvert.....	CMPC	Reinforced Concrete Box Culvert.....	RCBC
High Density Polyethylene.....	HDPE	Reinforced Concrete Pipe.....	RCP
Horizontal Elliptical Reinforced Concrete Pipe.....	HERCP	Reinforced Concrete Pipe Culvert.....	RCPC
Reinforced Concrete Arch Pipe.....	RCAP	Storm Sewer Pipe.....	SSP



KB HOME

SHEET 1 OF 1

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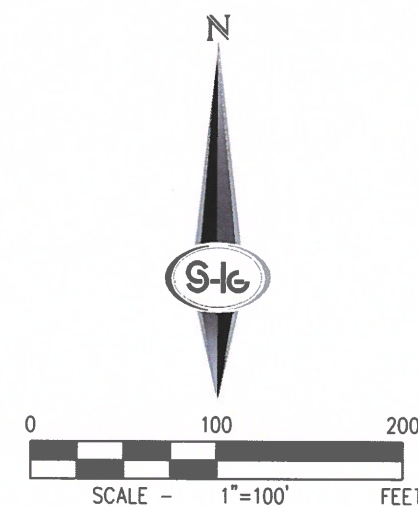
SLATER HANIFAN GROUP a Westwood team		5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118 PHONE (702) 284-5300 FAX (702) 284-5399
RICHLAND AMERICAN HOMES		
SUMMERLIN VILLAGE 21 PARCEL J STOCKPILE		
WATERSHED MAP		
DATE:	SEPT 2019	
DRAFTER:	GNS	
DESIGNER:	GNS	
CHECKED:	SOA	
PROJECT NO.	KBH1913.000	
EXHIBIT C3		
SHEET 1 OF 1		

LEGEND

	BASIN BOUNDARY
	STOCKPILE BOUNDARY
	BASIN ID
	FLOW DIRECTION
	FLOWMASTER SECTION

Wash Sections				
Section ID	Q ₁₀₀ (cfs)	Slope (%)	Depth (ft)	Velocity (fps)
W1	1277.0	8.75	4.37	22.40
W2	1277.0	6.01	5.97	17.78

* FLOW REFERENCED FROM
THE SUMMERLIN WEST PLANNING AREA UPDATE STUDY



APPENDIX B

Hydraulic Computations

Worksheet for W1

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 8.75 %
Discharge 1277.00 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
0+00.00	13.00
0+05.16	12.00
0+10.30	11.00
0+14.33	10.00
0+19.10	9.00
0+24.14	8.00
0+29.34	7.00
0+33.00	6.00
0+33.97	5.00
0+34.56	4.00
0+35.57	3.00
0+38.06	2.00
0+40.47	1.00
0+43.02	0.00
0+45.33	0.00
0+47.67	1.00
0+50.81	2.00
0+53.14	3.00
0+55.37	4.00
0+57.63	5.00
0+60.33	6.00
0+63.59	7.00
0+66.92	8.00
0+70.28	9.00

Roughness Segment Definitions

Worksheet for W1

Input Data

(0+00.00, 13.00)

(0+70.28, 9.00)

0.035

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth		4.37	ft
Elevation Range	0.00 to 13.00 ft		
Flow Area		57.01	ft ²
Wetted Perimeter		23.93	ft
Hydraulic Radius		2.38	ft
Top Width		21.87	ft
Normal Depth		4.37	ft
Critical Depth		6.70	ft
Critical Slope		0.01322	ft/ft
Velocity		22.40	ft/s
Velocity Head		7.80	ft
Specific Energy		12.17	ft
Froude Number		2.45	
Flow Type	Supercritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	4.37	ft
Critical Depth	6.70	ft

Worksheet for W1

GVF Output Data

Channel Slope	8.75	%
Critical Slope	0.01322	ft/ft

Cross Section for W1

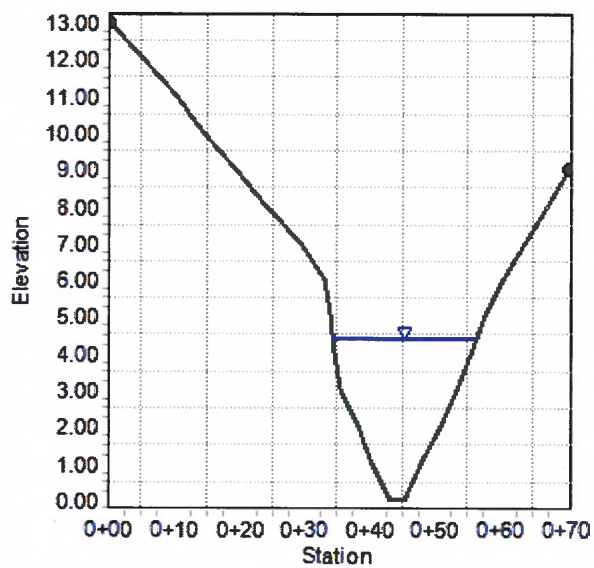
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	8.75	%
Normal Depth	4.37	ft
Discharge	1277.00	ft ³ /s

Cross Section Image



Project Description

Manning Formula

Normal Depth

Channel Slope

6.01 %

1277.00 ft³/s

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	12.00
0+00.62	11.00
0+01.25	10.00
0+02.69	9.00
0+04.46	8.00
0+06.23	7.00
0+07.90	6.00
0+09.35	5.00
0+10.86	4.00
0+12.38	3.00
0+13.69	2.00
0+14.80	1.00
0+17.44	0.00
0+17.49	0.00
0+19.96	1.00
0+20.96	2.00
0+21.81	3.00
0+23.94	4.00
0+32.60	5.00
0+36.97	6.00
0+41.77	7.00
0+45.21	8.00
0+48.67	9.00
0+52.87	10.00
0+57.29	11.00
0+61.10	12.00

Roughness Segment Definitions

Worksheet for W2

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	5.97	ft
Elevation Range	0.00 to 12.00	ft
Flow Area	71.81	ft²
Wetted Perimeter	32.15	ft
Hydraulic Radius	2.23	ft
Top Width	28.88	ft
Normal Depth	5.97	ft
Critical Depth	7.53	ft
Critical Slope	0.01370	ft/ft
Velocity	17.78	ft/s
Velocity Head	4.92	ft
Specific Energy	10.88	ft
Froude Number	1.99	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	5.97	ft
Critical Depth	7.53	ft
Channel Slope	6.01	%
Critical Slope	0.01370	ft/ft

Cross Section for W2

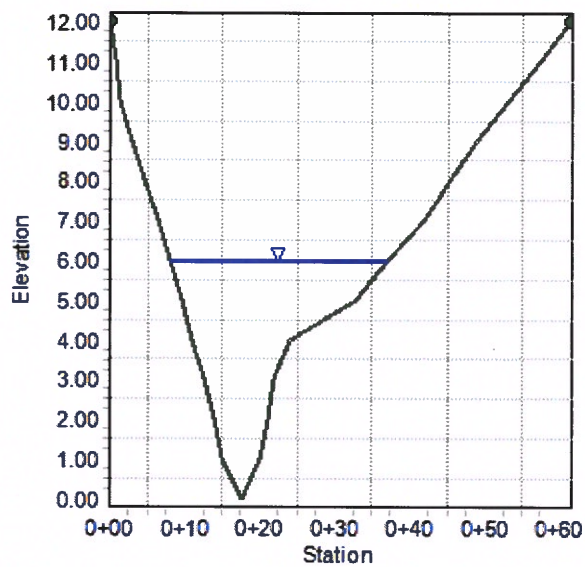
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	6.01	%
Normal Depth	5.97	ft
Discharge	1277.00	ft ³ /s

Cross Section Image



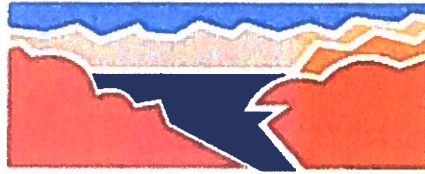
APPENDIX C

Reference Material

*Technical Drainage Study Update for Summerlin West Planning Area
(by VTN Nevada)*

Approval letters

REGIONAL FLOOD CONTROL DISTRICT



Steven C. Parrish, P.E.
General Manager/Chief
Engineer

BOARD OF DIRECTORS

Lawrence L. Brown, III
Chairman
Clark County

Mayor Debra March
Vice-Chairman
City of Henderson

David Ballweg
City of Mesquite

Chris Giunchigliani
Clark County

Mayor Carolyn Goodman
City of Las Vegas

Mayor John J. Lee
City of North Las Vegas

Dr. Lois Tarkanian
City of Las Vegas

Mayor Rodney Woodbury
City of Boulder City

June 28, 2018

Mr. Oh Sang Kwon, P.E.
City of Las Vegas Department of Public Works
333 North Rancho Drive
Las Vegas, NV 89106

**DISTRICT CONCURRENCE: SUMMERLIN WEST PLANNING AREA MASTER
PLAN UPDATE
(DS4926D) (RFCD No. 18-10069)**

Dear Mr. Kwon:

Clark County Regional Flood Control District (District) reviewed Technical Drainage Study dated October 9, 2017, Addendum No. 1 dated December 6, 2017, Addendum No. 2 dated February 27, 2018, Addendum No. 3 dated April 20, 2018, and Supplement No. 1 dated May 22, 2018 for above-mentioned project as submitted by VTN NEVADA. In addition, District is in receipt of the Conditional Letter of Acceptance from City of Las Vegas Department of Public Works dated May 22, 2018.

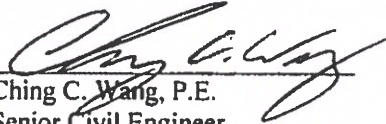
District concurs with acceptance of this Technical Drainage Study by City of Las Vegas Department of Public Works.

District's review of this project was limited to issues of Regional Flood Control Significance as defined in *Uniform Regulations for the Control of Drainage*.

Please be aware that as additional information becomes available and/or restudies of Flood Insurance Studies are performed, information submitted by VTN NEVADA may be superseded. Compliance with regulatory elements and design standards specified in *Uniform Regulations for the Control of Drainage* does not imply a guarantee that properties will be free from flooding or flood damage. The District, its officials, or employees assume no liability for information, data, or conclusions presented by consulting engineers. We, therefore, make no warranties, either expressed or implied, in conducting this review.

STEVEN C. PARRISH, P.E.
General Manager/Chief Engineer

BY:


Ching C. Wang, P.E.
Senior Civil Engineer

CCW:ay

c: William J. Meyer, P.E., VTN Nevada

P:\Letters and Memos\Local Drainage\Land Development & Drainage\2018\L-18-10069 doc

CITY OF LAS VEGAS			DATE:
INTER-OFFICE MEMORANDUM			July 30, 2018
TO: Land Development Services Department of Building & Safety			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT: Drainage Study for: Summerlin West Planning Area Master Plan Update			COPIES TO: VTN Nevada
Cross Streets:	West of I-215 between Lake Mead Boulevard and Charleston Boulevard		The Howard Hughes Corporation
File Number:	F:\Depot\DS\Memos\DS4926E.doc		Bart Anderson, P.E., DayCo
Parcel Number:	137-22-000-017		CCRFC
Zoning Action:			CCPW
FEMA Flood Zone	YES	X	NO
Proposed Storm Drain	YES	X	NO

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Tr #
1 st Submittal	10/9/2017 & 10/25/2017	11/8/2017	Not Approved	\$400.00	490518 \$ ()
2 nd Submittal	12/6/2017	12/20/2017 & 1/10/2018	Not Approved	\$400.00	492005 \$ ()
3 rd Submittal	2/27/2018	3/24/2018	Not Approved	\$400.00	493739 \$ ()
4 th Submittal & Supplement	4/23/2018 & 5/22/2018	5/22/2018	See Comments Below	\$400.00	495223 \$ ()
CCPW & CCRFC	7/30/2018	7/30/2018	Concurrence Recv'd	N/C	N/C
TOTAL FEES (LDDRS):				\$1,600.00	

REMARKS:

The Drainage Study for the subject project has been reviewed and:

X	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

- Atkins is working on the 2018 MPU. Coordinate and verify the proposed regional flood control facilities as shown in Sheet A.6.5 with Atkins for inclusion of the Summerlin West Master Plan facilities into the ongoing 2018 MPU.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the City of Las Vegas Flood Control Section. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the City of Las Vegas reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A planned construction unit in a contiguous subdivision is considered under construction until all disturbed or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/stormC...> or call (775) 687-9429.

END OF REMARKS
WSP/AYS

T/R/S: T21S/R69E/22
AREA K-22



Department of Public Works

500 S Grand Central Pky • Box 554000 • Las Vegas NV 89155-4000
(702) 455-6000 • Fax (702) 455-6040

Denis Cederburg, P.E., Director • E-Mail: dlc@ClarkCountyNV.gov



Drainage Study Concurrence Letter

Date: April 10, 2019
Firm: VTN Nevada
Engineer: Joanna Ayson / Brian Ruiz
Address: 2727 South Rainbow Boulevard, Las Vegas, NV 89146
Phone: (702) 873-7550
Fax: (702) 362-2597
E-mail: jayson@vtnnv.com; bruiz@vtnnv.com

Subject: Update for Summerlin West Planning Area Master Plan Update
Location: West of I-215 between Lake Mead Blvd and Charleston Blvd
APN: 137-21-000-002, 137-26-101-001 and others
Sec, Township, Range: S33 and others T20S, R59E
Flood Zone & Panel: Zone A and Zone X, 2125E and 2150E, Dated September 27, 2002
Application Number: PW19-12378

Submittals	Date Received	Date Returned	Reviewer	Miscellaneous
Update	03/21/2019	04/10/2019	CR	
Addendum 1	03/21/2019	04/10/2019	CR	

The above-referenced project is located within the **City of Las Vegas** adjacent to Clark County unincorporated areas. The drainage study was submitted to the County for concurrence on March 21, 2019. In addition, the County has received the City of Las Vegas acceptance letter dated March 13, 2019 for the Technical Drainage Study (DS4926G).

The County concurs with the acceptance of this Drainage Study by the City of Las Vegas. Please note that the County's review of this development is limited to drainage issues significant to Clark County unincorporated areas.

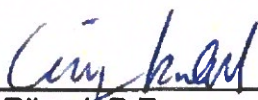
BOARD OF COUNTY COMMISSIONERS
MARILYN KIRKPATRICK, Chair • LAWRENCE WEEKLY, Vice Chair
LARRY BROWN • JAMES B. GIBSON • JUSTIN C. JONES • MICHAEL NAFT • TICK SEGERBLOM
YOLANDA T. KING, County Manager

This update addresses; changes to land densities and parcel configurations; addition of drainage channels to Village 27; interim flood control berm to Village 21; revisions to existing washes to be designated as MPU facilities; upsizing Detention Basins DB5 and Grand Central Park to account for increased flow routing. The previously approved Technical Drainage Studies are: PW18-14248.

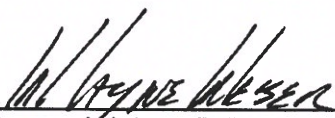
Additional Conditions:

1. The individual Technical Drainage Studies for the areas adjacent to the County to the west of the project site will need to be submitted for County review to verify acceptance of drainage flows.
2. Exhibits in future submittals need to show parcel lines and numbers; entity boundaries; ultimate development boundary; street names; etc.

The County's review is solely based on the information submitted by the Engineer of Record. The County's review is strictly limited to compliance with minimum County Codes and Standards. The Engineer of Record is responsible for researching and addressing situations that may require designs above and beyond the minimum codes for issues of public safety and impacts to upstream, downstream and adjacent properties. The County assumes no liability for information data, designs or conclusions of the Engineer of Record.



Crissy Riland, P.E.
Senior Civil Engineer
Development Review
crissy@ClarkCountyNV.gov



W. Layne Weber, P.E., CFM
Principal Engineer
Development Review
wlweber@ClarkCountyNV.gov

Referenced Drainage Exhibit

Addendum #1 to Update #1 to the FLOOD CONTROL MASTER PLAN UPDATE

SUMMERLIN WEST PLANNING AREA *Las Vegas, Nevada*

W.O. # 7809

Prepared for:
Howard Hughes Corp.

Submitted to:
**Public Works Department
City of Las Vegas**



HEC-1 SUMMARY TABLE DB5/ALTA TRIBUTARY ULTIMATE CONDITION											
Basin / Concentration Point	Area (Acres)			Q _{max} (cfs)			SDN	Basin / Concentration Point	Area (Acres)		
	Update	Previous	Difference	Update	Previous	Difference			Update	Previous	Difference
3-1	1422.67	1422.67	0	2117	2117	0	SDN3	3-62	119.24	82.23	37.01
3-2	144.58	144.58	0	429	429	0	SDN3	3-42	59.53	-1.82	188
3-3	-	-	-	2172	2172	0	SDN3	3-4	602	602	896
3-4	213.04	213.07	-0.03	614	488	126	SDN3	3-4	616.53	233.21	383.32
3-5	111.16	111.16	0	2332	2319	13	SDN3	3-8	100.29	446.26	345.97
3-6	221.26	221.26	0	392	392	0	SDN3	3-8	141.56	194.83	-53.28
3-7	187.91	187.91	0	757	757	0	SDN3	3-8	884.37	884.37	0
3-8	520.33	520.33	0	625	625	0	SDN3	3-8	117.56	110.4	7.16
3-9	362.34	362.34	0	1666	1666	0	SDN3	3-8	95.51	95.51	0
3-10	138.17	138.17	0	476	476	0	SDN3	3-8	0.01	0.01	0
3-11	56.74	56.74	0	438	358	80	SDN3	3-8	204	204	0
3-12	109.69	109.69	0	423	423	0	SDN3	3-8	529	529	0
3-13	157.02	157.02	0	414	200	214	SDN3	3-8	341	341	0
3-14	408.73	408.73	0	672	689	-17	SDN3	3-8	713	796	-83
3-15	537.27	537.27	0	1113	1113	0	SDN3	3-8	257	257	0
3-16	568.98	568.98	0	1378	1226	152	SDN3	3-8	501	501	0
3-17	290.04	290.04	0	3188	2804	384	SDN3	3-8	209	209	0
3-18	149.46	149.46	0	485	382	103	SDN3	3-8	388	406	-18
3-19	4510.94	4510.94	0	7787	6857	930	SDN3	3-8	2656	2656	0
3-20	150.92	150.92	0	2148	2137	11	SDN3	3-8	187	187	0
3-21	4661.86	4661.86	0	2221	2206	15	SDN3	3-8	155	155	0
3-22	448	448	0	948	948	0	SDN3	3-8	419	233	186
3-23	5109.86	5109.86	0	2220	2205	15	SDN3	3-8	197	197	0
3-24	371.2	371.2	0	688	688	0	SDN3	3-8	779	804	-25
3-25	5451.05	5451.05	0	3121	3074	47	SDN3	3-8	325	325	0
3-26	23.31	23.31	0	3074	3074	0	SDN3	3-8	8849	8849	0
3-27	23.31	23.31	0	3074	3074	0	SDN3	3-8	405	405	0

LEGEND

CONCENTRATION POINT

BASIN BOUNDARY

LOT BOUNDARY

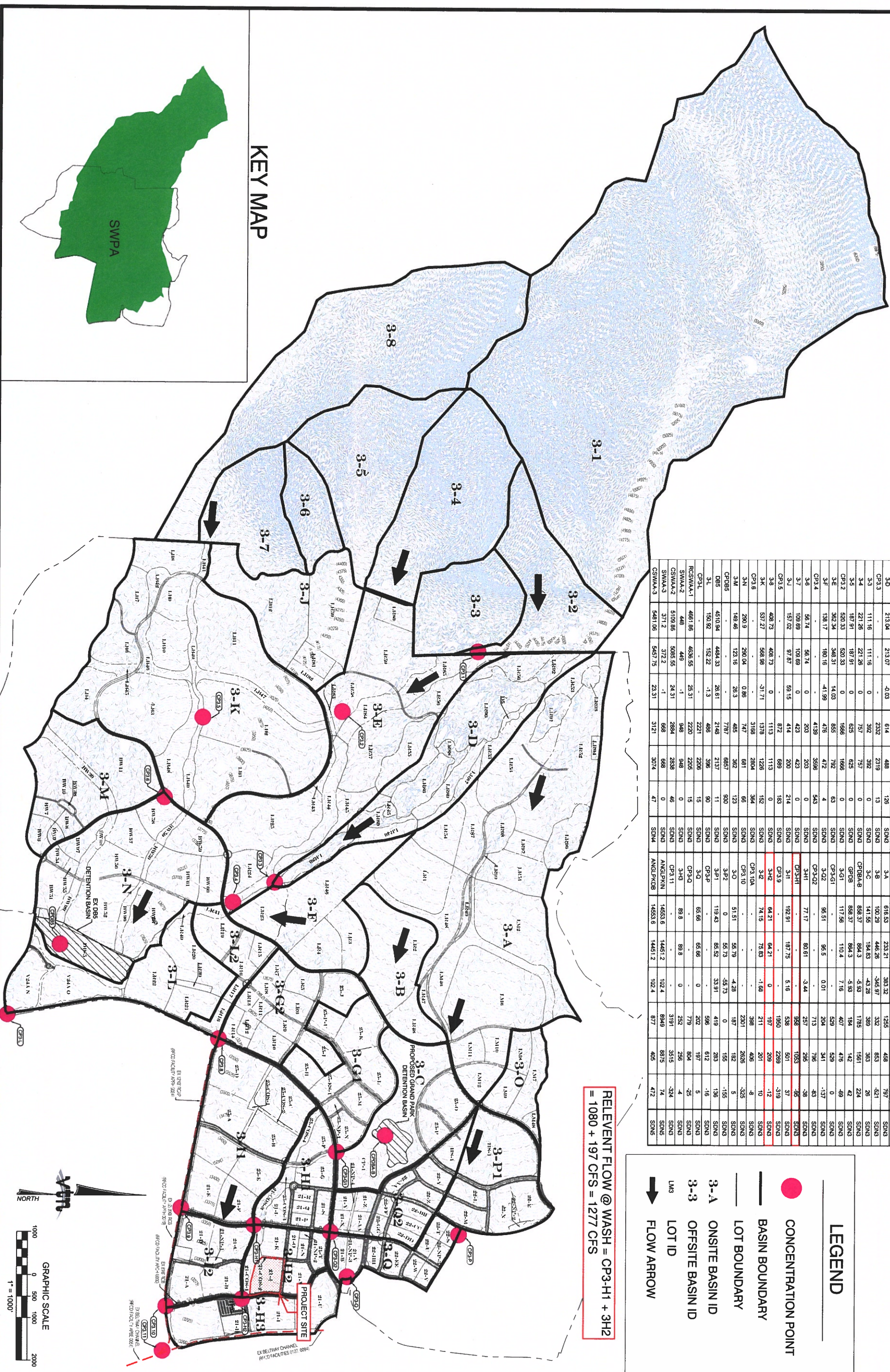
3-A ONSITE BASIN ID

3-3 OFFSITE BASIN ID

LOT ID

FLOW ARROW

RELEVANT FLOW @ WASH = CP3-H1 + 3H2
= 1080 + 197 CFS = 1277 CFS



NORTH

GRAPHIC SCALE

1" = 1000'

DRAWN BY: PLM 11/2018		2018 UPDATE TO SUMMERLIN WEST PLANNING AREA		THE HOWARD HUGHES CORPORATION 10801 WEST CHARLESTON BLVD. 3RD FLOOR LAS VEGAS, NV 89135	
DESIGNED BY:		A.6.3 DB5/Alta Tributary		2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146-5148	
CHECKED BY:		SCALE: 1" = 1000' HORIZ. VERT.		PH (702) 873-7550 FAX (702) 362-2587 WEB WWW.VTNV.COM	
PROJECT NO: 7805				CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS	
SHEET A.6.3 OF 3 SHEETS				ADDENDUM #1/2017	
DRAWING NO:				REVISION	

Referenced Curve Number Computations

Curve Number calculations for basins																					
Basin	Total Area (ACRE)	Subbasin	Area	%Area	Type	Soil Percentage	1	2	4	5	6	7	8	9	11	12	Soil Weighted CN	Weighted CN	Composite e CN	CN Value	
		LM12 - SFA	13.98	2.27%	155	52%				100%							47.7	2.0	85.9		88.6
					502	48%				100%						40.9					
					LM11 - VC	10.98	1.78%	155	6%												100%
		156	30%											100%		28.7					
		502	63%											100%		58.4					
		LM10 - SFA	10.87	1.76%	155	8%				100%							7.2	1.5			
					502	92%				100%					78.3						
					155	25%								100%		23.8					
		LM6 - SF3	83.32	13.51%	156	1%										100%		1.4			
					191	4%								100%		3.3					
					502	26%								100%		24.0					
					731	44%									100%		41.6				
					155	23%							100%		20.8						
					156	0%							100%		0.2						
		LM46- COS	36.3	5.89%	191	5%									100%		3.6				
					502	0%							100%		0.0						
					731	71%							100%		61.8						
		LR99 - COS	1.09	0.18%	731	100%									100%		87.0	0.2			
					155	21%							100%		18.4						
		LM2 - ER	65.18	10.57%	191	18%												11.1			8.6
					320	0%							100%		0.0						
731	61%										100%		51.6								
LR51 - ER	29.39	4.77%	191	0%											0.0	4.1					
			731	100%						100%		85.0									
LR98 - COS	13.83	2.24%	731	100%										100%		87.0	2.0				
			LR97 - DC	10.16	1.65%	731	100%								100%			92.0			
LR96- COS	19.94	3.23%	191	20%										100%		13.6	1.5				
			731	80%							100%		69.6								
LR52 - ER	93.74	15.20%	112	2%												1.3	12.8				
			191	2%							100%		1.5								
			731	95%							100%		81.2								
LR94 - DC	2.61	0.42%	731	100%										100%		92.0	0.4				
LR93 - COS	2.17	0.35%	731	100%										100%		87.0	0.3				
LR47 - COS	4.22	0.68%	731	100%										100%		87.0	0.6				
LR49 - COS	3.45	0.56%	731	100%										100%		87.0	0.5				
LR93 - COS	1.79	0.29%	112	13%										100%		9.1	0.2				
LR48 - COS	31.29	5.08%	731	87%										100%		75.4	4.4				
LR1 - SF1	46.64	7.56%	731	100%										100%		87.0	6.8				
LR54 - SF1	22.82	3.70%	731	100%						100%						90.0	3.3				
LR87 - COS	21.90	3.55%	731	100%										100%		87.0	3.1				

Curve Number calculations for basins																						
Basin	Total Area (ACRE)	Subbasin	Area	%Area	Type	Soil Percentage	1	2	4	5	6	7	8	9	11	12	Soil Weighted CN	Weighted CN	Composite e CN	CN Value		
		DEVELOPED CONDITION ONSITE																				
		LR53 - ER (Res)	60.62	9.83%	112	35%							100%				19.0	7.1				
					640	1%										0.7						
					731	64%									52.4							
		LR91 - COS RR	11.96	1.94%	112	29%							100%				20.0	1.6				
					640	71%									100%		62.8					
					731	0%									100%		0.0					
		ROADS	18.28	2.96%	NA	100%		100%									NA	2.9				
					156	1%										1.2						
		3-B	100.29	LR48 (B1) - COS (DP)	19.87	19.81%	731	99%							100%						85.8	17.2
							731	100%							100%			95.0				
NA	100%															3.1						
CP1 - COS(RP)	94.05			66.44%	156	91%							100%				80.1	58.4				
					731	9%									100%		7.8					
3-C	141.55	O - SF3	19.69	13.91%	155	1%									100%		1.3	12.9				
					156	31%									100%		29.6					
					502	67%									100%		62.1					
		P - SF3	10.29	7.27%	156	40%									100%		38.1	6.8				
					502	60%									100%		55.2					
		ROADS	17.52	12.37%	NA	100%		100%									NA	12.1				
																				98.0		

Curve Number calculations for basins																							
Basin	Total Area (ACRE)	Subbasin	Area	%Area	Type	Soil Percentage	1	2	4	5	6	7	8	9	11	12	Soil Weighted CN	Weighted CN	Composite e CN	CN Value			
3-F	138.17	DEVELOPED CONDITION ONSITE																					
		LR2 - SF3	0.06	0.04%	731	100%										100%		95.0	0.0	95.1	95.0		
		LR48 - COS	0.00	0.00%	731	100%										100%		95.0	0.0		95.0		
		LR1 - SF1	0.02	0.01%	731	100%										100%		95.0	0.0		95.0		
		LR54 - SF1	0.00	0.00%	731	100%										100%		95.0	0.0		95.0		
		LR4- VC (R-C)	23.29	16.85%	731	100%										100%		95.0	16.0		95.0		
		LR3 - SFA	21.84	15.80%	731	100%										100%		95.0	15.0		95.0		
		LR46 - COS	66.79	48.34%	156	7%										100%		6.7	45.9		95.0		
			731	93%	731											100%		88.4			95.0		
		LR23 - VC (RR-MU)	23.31	16.87%	156	88%										100%		83.6	16.0			95.0	
			731	12%	731											100%		11.4				95.0	
		ROADS		2.86	2.07%	NA	100%														2.0		98.0
		V25-DG1 - DC		15.47	10.06%	731	100%											100%	92.0		9.3		92.0
		V25-ES1 - NF		10.13	6.58%	156	47%										100%		45.0		6.3		95.0
V25-H - SF2		12.09	7.86%	156	53%										100%		50.0						
				156	5%										100%		4.3	7.5		95.0			
				731	95%										100%		90.7						
V25-I - SF2		12.93	8.41%	156	2%										100%		1.6	8.0		95.0			
V25-J - SF2		16.88	10.97%	731	98%										100%		93.4			95.0			
V25-K - SF2		22.18	14.42%	731	100%										100%		95.0	10.4		95.0			
				156	20%										100%		19.2	13.7		95.0			
V25-L - SF2		13.10	8.52%	156	87%										100%		82.4	8.1		95.0			
V25-M - SF2		10.86	7.06%	731	13%										100%		12.6		95.1	95.0			
V25-N - SF2		10.03	6.52%	156	100%										100%		95.0	6.7		95.0			
				152	6%										100%		5.4	6.2		95.0			
				156	94%										100%		89.6				95.0		
V25-NP1 - COS NP		2.75	1.79%	152	37%									100%			32.8	1.6		88.4			
				156	63%									100%			55.6			88.4			
V30-P - MF3		0.01	0.00%	731	100%				100%								92.0	0.0		92.0			
V30-Q - MF2		0.09	0.06%	731	100%				100%								92.0	0.1		92.0			
V30-R - SF3		0.20	0.13%	731	100%										100%		95.0	0.1		95.0			
V30-S - SF3		0.06	0.04%	156	1%										100%		1.0	0.0		95.0			
				731	99%										100%		94.0			95.0			
ROADS		27.07	17.59%	NA	100%			100%									NA	17.2		98.0			
3-G1	153.84																						

Curve Number calculations for basins																						
Basin	Total Area (ACRE)	Subbasin	Area	%Area	Type	Soil Percentage	1	2	4	5	6	7	8	9	11	12	Soil Weighted CN	Weighted CN	Composit e CN	CN Value		
3-G2	83.48	V30-N - MF3	9.47	11.34%	156	50%			100%									46.3	10.5	93.6	92.5	
						731	50%			100%								46.2				92.8
		V30-O - MF2	6.50	7.79%	156	83%				100%								76.7	7.2			
						731	17%			100%								16.1				92.0
		V30-P - MF3	10.32	12.36%	731	100%				100%								92.0	11.4			
		V30-Q - MF2	9.53	11.41%	731	100%				100%								92.0	10.5			92.0
						156	0%									100%		0.4	9.5			95.0
		V30-R - SF3	8.39	10.05%	731	100%										100%		94.6				95.0
						156	70%									100%		66.7	14.5			95.0
		V30-S - SF3	12.71	15.22%	731	30%										100%		28.3				95.0
						156	85%									100%		80.4	4.6			95.0
		V30-T - SF3	4.05	4.85%	731	15%										100%		14.6				95.0
						156	100%									100%		95.0	5.4			95.0
		V30-U - SF3	4.74	5.68%	731	0%										100%		0.0				92.0
		V30-V - SFZL	4.37	5.23%	156	100%					100%							92.0	4.8			92.0
3-H1	77.17	V30-W - SFZL	7.51	9.00%	156	100%				100%								92.0	8.3	93.9	92.1	
		ROADS	5.90	7.07%	NA	100%		100%										NA	6.9			92.2
		V21-COS3 - COS W	5.90	7.64%	156	100%									100%			88.0	6.7			92.2
						152	35%									100%		33.4	9.2			94.2
		V21-L - SF3	7.44	9.64%	156	65%										100%		61.6				94.2
						152	100%				95%					5%		92.1	3.6			92.1
		V21-P - VC/SFA	3.02	3.91%	152	100%					95%					5%		92.2	3.8			92.2
		V21-Q - VC/SFA	3.18	4.12%	152	100%					95%					5%		92.2	3.6			92.2
		V21-R - VC/SFA	3.05	3.96%	152	100%					95%					5%		92.2	3.6			92.2
						152	99%									60%		93.7	7.7			94.2
		V21-S - VC/MF3	6.33	8.20%	152	1%				40%						60%		0.5				94.2
						156	9%			40%						100%		8.1	2.7			88.1
		V25-COS3 - COS W	2.32	3.01%	152	91%										100%		80.0				88.1
		V25-COS4 - COS W	4.71	6.10%	156	100%										100%		88.0	5.4			88.0
						152	79%									100%		75.3	12.8			95.0
V25-F - SF3	10.40	13.48%	156	21%										100%		19.7			95.0			
				152	84%											77.7	13.8		93.0			
V25-G - MF3 (R)	11.44	14.82%	156	16%				100%								15.3			93.0			
ROADS	19.39	25.12%	NA	100%		100%										NA	24.6		98.0			

Curve Number calculations for basins																					
Basin	Total Area (ACRE)	Subbasin	Area	%Area	Type	Soil Percentage	1	2	4	5	6	7	8	9	11	12	Soil Weighted CN	Weighted CN	Composit e CN	CN Value	
3-H2	64.21	DEVELOPED CONDITION ONSITE																			
		V21-B - SF3	0.16	0.25%	156	100%											100%		95.0	0.2	93.0
		V21-COS1 - COS	7.79	12.13%	156	100%										100%		88.0	10.7	88.0	
		V21-COS2 - COS	0.58	0.91%	156	65%									100%		57.6	0.8	88.3		
		V21J - SFA	11.75	18.30%	152	28%			100%	100%							25.4	16.8	92.0		
		V21-K - SFA	8.20	12.77%	156	72%			100%	100%								66.6			
		V21-M - SFA	8.94	13.92%	152	26%			100%	100%								24.0			
		V21-N - VC/SFA	2.50	3.90%	156	74%			100%	100%								68.0			
		V21-NP2 - COS	0.94	1.46%	152	99%			100%	100%								90.8	12.8	92.0	
		V21-O - VC/SFA	3.45	5.37%	152	1%			100%	100%								1.2			
		V21-T - EC/MF3	5.93	9.23%	152	100%			95%	95%							5%		92.2	3.6	92.2
		ROADS	13.97	21.76%	156	100%			40%	40%							100%		89.0	1.3	89.0
		V21-DC1 - DC	8.07	8.98%	152	26%											60%		92.1	4.9	92.1
		V21-DC2 - DC	1.19	1.32%	156	74%											60%		24.7	8.7	94.2
V21-G - EC	4.93	5.49%	152	74%			100%	100%							60%		69.5	21.3	98.0		
V21-H - EC	5.86	6.53%	156	100%													NA	8.4	93.0		
V21-I - SFA	18.62	20.74%	152	36%												100%	33.1				
V21-NVE - DC	21.78	24.26%	156	64%												100%	59.9				
V21-U - EC/MF3	20.09	22.37%	152	21%												100%	19.7				
ROADS	9.27	10.32%	156	79%												100%	73.3				
3-H3	89.80	V21-J - EC/MF3	20.09	22.37%	152	32%										100%		30.8	5.2	93.0	
		V21-K - EC/MF3	20.09	22.37%	156	68%										100%		64.2	5.2	95.0	
		V21-L - EC/MF3	20.09	22.37%	152	74%										100%		70.3	6.2	95.0	
		V21-M - EC/MF3	20.09	22.37%	156	26%										100%		24.7	6.2	95.0	
		V21-N - EC/MF3	20.09	22.37%	152	0%												0.4	19.1	92.0	
		V21-O - EC/MF3	20.09	22.37%	156	100%												91.6	22.6	93.0	
		V21-P - EC/MF3	20.09	22.37%	152	6%											100%	5.5	21.1	94.2	
		V21-Q - EC/MF3	20.09	22.37%	156	94%											100%	87.5	10.1	98.0	
		V21-R - EC/MF3	20.09	22.37%	152	56%											60%		NA		
		V21-S - EC/MF3	20.09	22.37%	156	44%											60%		NA		

Curve Number calculations for basins																						
Basin	Total Area (ACRE)	Subbasin	Area	%Area	Type	Soil Percentage	1	2	4	5	6	7	8	9	11	12	Soil Weighted CN	Weighted CN	Composit e CN	CN Value		
3-Q2	95.51	DEVELOPED CONDITION ONSITE																		81.9		
		V21-AA - VC-MF3	4.09	4.29%	156	100%			40%							60%		94.2	4.0		94.2	
		V21-NP3 - COS	1.14	1.19%	156	100%									100%			88.0	1.0		88.0	
		V21-NP4 - COS	1.05	1.10%	156	100%									100%			88.0	1.0		88.0	
		V21-X - VC-MF3	3.94	0.00%	152	14%			40%							60%		13.6	0.0			94.2
			156	86%												60%		80.6				
		V21-Y - VC-MF3	4.00	0.00%	152	9%			40%							60%		8.2	0.0			94.2
			156	91%												60%		86.0				
		V21-Z - VC-MF3	4.64	4.86%	156	100%			40%							60%		86.0	4.6			94.2
		V22-AA - VC-MF3	4.81	5.04%	156	100%			40%							60%		94.2	4.7			94.2
		V22-BB - VC-MF3	6.13	6.42%	156	24%			40%							60%		22.7	5.8			90.7
			502	0.00%												60%		68.0				
		V22-CC - VC-MF3	5.34	5.59%	156	16%			40%							60%		15.0	5.0			90.3
			502	0.00%												60%		75.3				
		V22-DD - VC-MF3	4.58	4.80%	156	10%			40%							60%		9.5	4.3			90.1
			502	90%												60%		80.6				
		V22-FF - VC-MF3	3.23	3.38%	156	100%			40%							60%		94.2	3.2			94.2
		V22-GG - VC-MF3	3.76	3.98%	156	100%			40%							60%		94.2	0.0			94.2
			155	5%												100%		4.3				
		V22-HS1 - NF	10.38	10.87%	502	95%										100%		87.8	10.0			92.1
			502													100%						
		V22-Y - SF3	8.07	8.45%	156	14%										100%		13.5	7.8			92.4
			502	86%												100%		78.9				
		V22-Z - SFA	7.04	7.37%	502	22%					100%							20.3	6.4			86.5
502	78%							100%								66.3						
		ROADS	23.32	24.41%	NA	100%	100%										NA	23.9		98.0		

Referenced HEC-1

Update #1 to the FLOOD CONTROL MASTER PLAN UPDATE

SUMMERLIN WEST PLANNING AREA *Las Vegas, Nevada*

W.O. # 7809

Prepared for:
Howard Hughes Corp.

Submitted to:
Public Works Department
City of Las Vegas



B.3.3 DB5/ALTA – ALTA SDN3.OUT

ALTA-SDN3.OUT

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1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
*
* RUN DATE 10DEC18 TIME 09:37:37
*
*****

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*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

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X X XXXXXX XXXX X
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XXXXXX XXXX X XXXX X
X X X X X
X X X X X
X X XXXXXX XXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
 THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
 NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
 DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
 KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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HEC-1 INPUT

PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

*DIAGRAM

*** FREE ***

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1 ID THIS VERSION OF THE CCRFCD 2008 MPU GOWAN WATERSHED HAS BEEN UPDATED BY VTN
2 ID TO SHOW THE EFFECTS OF THE NEW PLACEMENT OF THE DETENTION BASIN HAS ON
3 ID DOWNSTREAM HOLDING FACILITIES
4 ID
5 ID MODELED BY VTN, NEVADA SVB/JYA/AH
6 ID Sep 5, 2018
7 ID
8 ID
9 ID CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
10 ID GOWAN WATERSHED (ALL)
11 ID RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
12 ID INPUT FILE = Alta-sdn3.DAT
13 ID INPUT FILE DATE = MAY 5, 2008
14 ID DESIGN STORM = 100-YEAR 6-HR STORM
15 ID STORM DISTRIBUTION = SDN 3
16 ID MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
17 ID CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
18 ID STORM CENTERING = FULL WATERSHEDCP
19 ID
20 ID REFERENCED HYDROLOGIC MODELS:
21 ID CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
22 ID NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
23 ID RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
24 ID CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
25 ID 3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
26 ID CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
27 ID SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
28 ID MASTER PLAN UPDATE (G.C. WALLACE 2006)
29 ID GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
30 ID (G.C. WALLACE 2007)
31 ID LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
32 ID FROM G.C. WALLACE ON JANUARY 31, 2008)
33 ID US 95/RANCHO FIS RESTUDY (PBS&J 1998)
34 ID JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:
35 ID
36 ID AREA DARF
37 ID SQ. MI.
38 ID 0-0.5 0.99
39 ID 0.5-1 0.975
40 ID 1-2 0.95
41 ID 2-3 0.925
42 ID 3-4 0.915
43 ID 4-5 0.908
44 ID 5-6 0.903
45 ID 6-7 0.895
46 ID 7-8 0.885
47 ID
48 ID JR CARD RATIOS REPRESENT DEPTH-AREA REDUCTION FACTORS (DARF'S)
49 ID

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50 ID 100-YEAR, 6-HOUR STORM, SDN3 ALTA-SDN3.OUT
 51 ID
 52 IT 5 0 0 300
 53 IO 5 0 0

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HEC-1 INPUT

PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

54 IN 5 0 0
 55 ID 0-0.5 0.5-1 1-2 2-3 3-4 4-5 5-6 6-7 7-8
 56 JR PREC 0.99 0.975 0.95 0.925 0.915 0.908 0.903 0.895 0.885
 *

57 KK 3-1
 58 KM COMPARE TO MPU BASIN DB54-1 (CURVE NUMBER CHANGED FROM 87.2)
 59 BA 2.22
 60 PB 3.75
 61 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.130
 62 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
 63 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
 64 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
 65 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.835 0.851 0.856
 66 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.937 0.95 0.97 0.976
 67 PC 0.982 0.985 0.987 0.989 0.99 0.993 0.993 0.994 0.995 0.998
 68 PC 0.998 0.999 1
 69 LS 0 87.0
 70 UD 0.582
 *

71 KK R3-1
 72 KM ROUTE R3-1 THROUGH 3-2
 73 KM EXISTING NATURAL WASH
 74 RD 3322 0.092 0.030 0 TRAP 125 0
 *

75 KK 3-2
 76 KM COMPARE TO MPU BASIN DB54-5 (CURVE NUMBER CHANGED FROM 85.2)
 77 BA 0.226
 78 PB 3.67
 79 LS 0 85.6
 80 UD 0.108
 *

81 KK CP3.1
 82 KM COMBINE R3-1 AND 3-2
 83 HC 2
 *

84 KK RCP3.1
 85 KM ROUTE CP3.1 TO CP3.3 THROUGH 3-E VIA
 86 KM (PORTION OF FACILITY APM50059)
 87 RD 7900 0.070 0.013 0 TRAP 125 2
 *

88 KK 3-D
 89 KM PORTION OF BASINS DB54-6R (PB=3.56)
 90 BA 0.3329
 91 PB 3.59
 92 LS 0 91.4
 93 UD 0.207
 *

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HEC-1 INPUT

PAGE 3

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

94 KK CP3.3
 95 KM COMBINE 3-D, RCP3.1,
 96 HC 2
 *

97 KK RCP3.3
 98 KM ROUTE CP3.3 TO CP3.4 THROUGH 3-E VIA A
 99 KM (PORTION OF FACILITY APM50059)
 100 RD 1000 0.070 0.013 0 TRAP 125 2
 *

101 KK 3-3
 102 KM PORTION OF MPU BASIN DB54-3
 103 BA 0.1737
 104 PB 3.65
 105 LS 0 88.0
 106 UD 0.081
 *

107 KK R3-3
 108 KM ROUTE R3-3 THROUGH A PORTION OF 3-E TO CP3.2
 109 KM NATURAL WASH
 110 RD 2233 0.054 0.030 0 TRAP 100 0

ALTA-SDN3.OUT

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*
111 KK 3-4
112 KM PORTION OF MPU BASIN DB54-3
113 BA 0.3457
114 PB 3.68
115 LS 0 88.0
116 UD 0.092
*
117 KK R3-4
118 KM ROUTE R3-4 THROUGH A PORTION OF 3-E TO CP3.2
119 KM NATURAL WASH
120 RD 3300 0.097 0.030 0 TRAP 100 0
*
121 KK 3-5
122 KM COMPARE TO MPU BASIN DB54-2 (SLIGHTLY LARGER PORTION OF DB54-4)
123 BA 0.2936
124 PB 3.65
125 LS 0 87.7
126 UD 0.094
*
127 KK R3-5
128 KM ROUTE R3-5 THROUGH A PORTION OF 3-E TO CP3.2
129 KM (PORTION OF FACILITY APM50057)
130 RD 4400 0.068 0.013 0 TRAP 50 2
*

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HEC-1 INPUT

PAGE 4

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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131 KK CP3.2
132 KM COMBINE R3-5 , R3-4 AND R3-3
133 HC 3
*
134 KK RCP3.2
135 KM ROUTE RCP3.2 THROUGH A PORTION OF 3-E TO CP3.4
136 KM (PORTION OF FACILITY APM50057)
137 RD 5500 0.068 0.013 0 TRAP 50 2
*
138 KK 3-E
139 KM PORTION OF BASINS DB54-4 (PB=3.60) AND DB54-6R (PB=3.56)
140 BA 0.5662
141 PB 3.57
142 LS 0 88.5
143 UD 0.268
*
144 KK 3-F
145 KM COMPARE TO MPU BASIN SWFH-5
146 BA 0.2159
147 PB 3.51
148 LS 0 95.1
149 UD 0.152
*
150 KK CP3.4
151 KM COMBINE 3-E, RCP3.2 AND RCP3.3, AND 3-F
152 HC 4
*
153 KK RCP3.4
154 KM ROUTE RCP3.4 TO CPDB5
155 KM (FACILITIES APM50056, APM50047 AND APM50008)
156 RD 3365 0.052 0.013 0 TRAP 80 2
*
157 KK 3-6
158 KM PORTION OF MPU BASIN DB55-3 AND DB55-4
159 BA 0.0887
160 PB 3.62
161 LS 0 88.0
162 UD 0.074
*
163 KK R3-6
164 KM ROUTE 3-6 THROUGH A PORTION OF 3-J AND A PORTION OF 3-K TO CP3.5
165 KM EXISTING NATURAL WASHES
166 RD 4500 0.080 0.030 0 TRAP 100 0
*

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HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

ALTA-SDN3.OUT

167 KK 3-7
 168 KM PORTION OF MPU BASIN DB55-3 AND DB55-4
 169 BA 0.1714
 170 PB 3.61
 171 LS 0 87.2
 172 UD 0.048
 *

173 KK R3-7
 174 KM ROUTE 3-7 THROUGH A PORTION OF 3-K TO CP3.5
 175 KM PORTION OF FACILITY ID APM50213
 176 RD 4340 0.073 0.013 0 TRAP 50 2
 *

177 KK 3-J
 178 KM PORTION OF MPU BASIN DB55-4
 179 BA 0.2453
 180 PB 3.59
 181 LS 0 85.9
 182 UD 0.177
 *

183 KK R3-J
 184 KM ROUTE 3-J THROUGH A PORTION OF 3-K TO CP3.5
 185 KM NATURAL WASHES
 186 RD 2700 0.074 0.030 0 TRAP 100 0
 *

187 KK CP3.5
 188 KM COMBINE R3-J, R3-7 AND R3-6
 189 HC 3
 *

190 KK RCP3.5
 191 KM ROUTE CP3.5 THROUGH A PORTION OF 3-K TO CP3.6
 192 KM PORTION OF FACILITY ID APM50213
 193 RD 2100 0.073 0.013 0 TRAP 50 2
 *

194 KK 3-8
 195 KM COMPARE TO MPU BASIN DB55-1
 196 BA 0.6386
 197 PB 3.70
 198 LS 0 87.8
 199 UD 0.196
 *

200 KK R3-8
 201 KM ROUTE 3-8 THROUGH A PORTION OF 3-K TO CP3.6
 202 KM FACILITY ID APM50212
 203 RD 6695 0.075 0.013 0 TRAP 30 2
 *

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HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

204 KK 3-K
 205 KM COMPARE TO MPU BASIN DB55-7
 206 BA 0.8395
 207 PB 3.54
 208 LS 0 90.7
 209 UD 0.253
 *

210 KK CP3.6
 211 KM COMBINE 3-K, R3-8 AND RCP3.5
 212 HC 3
 *

213 KK RCP3.6
 214 KM ROUTE CP3.6 TO CPDB5
 215 KM FACILITY ID APM500009
 216 RD 4180 0.058 0.013 0 TRAP 50 2
 *

217 KK 3-N
 218 KM COMPARE TO MPU BASIN DB55-8
 219 BA 0.4545
 220 PB 3.46
 221 LS 0 91.6
 222 UD 0.262
 *

223 KK 3-M
 224 KM COMPARE TO MPU BASIN DB55-8
 225 BA 0.2335
 226 PB 3.48

ALTA-SDN3.OUT

227 LS 0 92.1
 228 UD 0.139
 *

229 KK R3-M
 230 KM ROUTE 3-M TO CPDB5
 231 KM FACILITY ID PORTION OF APM500009
 232 RD 4500 0.0528 0.013 0 TRAP 7 0
 *

233 KK CPDB5
 234 KM COMBINE 3-M, 3-N, RCP3.6 AND RCP3.4
 235 KM TOTAL INFLOW TO SUMMERLIN #5 DETENTION BASIN
 236 KO 0
 237 HC 4
 *

238 KK DB5
 239 KM SUMMERLIN DETENTION BASIN 5
 240 KM FACILITY = ANGEL PARK - MIDDLE 5 BRANCH
 241 KM FACILITY # = APM5 0000
 242 KM STORAGE VOLUME = 384.1 ACRE-FEET
 243 KM OUTLET = 2: 7' x 5.5' RCBS

HEC-1 INPUT

PAGE 7

1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

244 KM 100-YEAR DISCHARGE = 2,150 CFS
 245 KM SPILLWAY LENGTH = 453.6'
 246 KM SPILLWAY HEIGHT =
 247 KM SPILLWAY CREST ELEVATION = 3563'
 248 KM SPILLWAY TYPE = CONCRETE BROAD CRESTED WEIR
 249 KM PMF DISCHARGE = 12,153 CFS
 250 KM TOP OF EMBANKMENT ELEVATION = 3569'
 251 KM DETENTION BASIN PARAMETERS REFERENCED FROM "DETENTION BASIN NO. 5
 252 KM EXPANSION AND DIVERSION BERM" PLANS BY G.C. WALLACE (5-23-2001)
 253 KM STAGE-STORAGE-DISCHARGE CURVE REFERENCED FROM "2006 SUMMERLIN WEST
 254 KM CONCEPTUAL DRAINAGE STUDY MASTER PLAN AMENDMENT: EXISTING OFFSITE/PROPOSED
 255 KM ONSITE DRAINAGE CONDITION" HYDROLOGIC MODEL DATED 8-7-2006 AND SUBMITTED
 256 KM WITH THE SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
 257 KM CONTROL MASTER PLAN UPDATE BY G.C. WALLACE (08-2006)
 258 KO 3
 259 RS 1 STOR -1
 260 SV 0 2.0 5.2 9.7 15.0 20.8 27.2 34.3 42.0 50.2
 261 SV 68.1 88.6 114.1 145.4 182.2 224.5 274.5 343.0 384.05 405.65
 262 SQ 0 192 276 391 505 616 725 813 900 982
 263 SQ 1176 1368 1534 1683 1804 1920 2033 2149 2315 3725
 264 SE 3532.5 3535 3536 3537 3538 3539 3540 3541 3542 3543
 265 SE 3545 3547 3549 3551 3553 3555 3557 3559.5 3563 3564
 266 SS 3563 435.6 3 1.5
 *

267 KK 3-L
 268 KM COMPARE TO MPU BASIN SWAA-1
 269 BA 0.2358
 270 PB 3.42
 271 LS 0 92.3
 272 UD 0.131
 *

273 KK CP3-L
 274 KM COMBINE 3-L AND DB3
 275 KM THIS IS CSWAA-1 IN GOWAN MPU HEC-1
 276 HC 2
 *

* END OF SECTION MODELED BY VTN, NEVADA SVB
 * TIE VTN SECTION TO 2008 MPU HEC-1
 *

277 KKRCWAA-1
 278 KM ROUTE CSWAA-1 TO CSWAA-2
 279 KM FACILITY = ANGEL PARK - ALTA DRIVE
 280 KM FACILITY # = APAD 0115, 0146
 281 KM LINING = RCB
 282 RD 4640 0.044 0.015 0 TRAP 10 0
 *

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HEC-1 INPUT

PAGE 8

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

283 KK SWAA-2
 284 BA 0.700
 285 PB 3.39
 286 LS 0 90.9
 287 UD 0.346
 *

288 KK CSWAA-2

ALTA-SDN3.OUT

```

289      KM COMBINE RCSWAA-1 AND SWAA-2
290      HC      2
      *

291      KK RCSWAA-2
292      KM ROUTE CSWAA-2 TO CSWAA-3
293      KM FACILITY = ANGEL PARK - ALTA DRIVE
294      KM FACILITY # = APAD 0000, 0018, 0044, 0073
295      KM LINING = RCB
296      RD      6120  0.035  0.015      0  TRAP      11      0
      *

297      KK SWAA-3
298      BA      0.581
299      PB      3.31
300      LS      0      87.8
301      UD      0.361
      *

302      KK CSWAA-3
303      KM COMBINE RCSWAA-2 AND SWAA-3
304      HC      2
      *
      * THE FOLLOWING SECTION OF HYDROLOGY IS NOT PART OF THE 2008 MPU
      * THIS SECTION IS MODELED BASED ON THE 2017 CONDITION OF THE SUMMERLIN MASTER PL
      * MODELED BY VTN, NEVADA SVB
      *

305      KK      3-G2
306      KM COMPARE TO MPU BASIN SWFH-6
307      BA      0.1304
308      PB      3.47
309      LS      0      93.6
310      UD      0.104
      *

311      KK      3-L2
312      BA      0.0917
313      PB      3.48
314      LS      0      91.4
315      UD      0.145
      *

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      HEC-1 INPUT
      PAGE 9

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

316      KK      CP3.8
317      KM COMBINES 3-L2 AND 3-G2
318      HC      2
      *

319      KK RCP3.8
320      KM ROUTE CP3.8 TO CP3.9
321      KM FACILITIES APD6000 AND APDF0000
322      RD      4500  0.075  0.013      0  TRAP      12      0
      *

323      KK      3-A
324      KM COMPARE TO MPU BASIN SWFH-1
325      BA      0.9633
326      PB      3.57
327      LS      0      85.9
328      UD      0.307
      *

329      KK      R3-A
330      KM ROUTE 3-A THROUGH STORM DRAIN TO CPDBA-B
331      RD      3000  0.032  0.013      0  TRAP      5      0
      *

332      KK      3-B
333      KM COMPARE TO MPU BASIN SWFH-1
334      BA      0.1567
335      PB      3.55
336      LS      0      93.5
337      UD      0.1648
      *

338      KK      R3-B
339      KM ROUTE 3-B THROUGH STORM DRAIN TO CPDBA-B
340      RD      3000  0.024  0.013      0  TRAP      5      0
      *

341      KK      3-C
342      KM COMPARE TO MPU BASIN SWFH-2
343      BA      0.2212
344      PB      3.46
345      LS      0      90.2

```


346 UD 0.195 ALTA-SDN3.OUT
 *
 347 KK CPDBA-B
 348 KO 0
 349 KM COMBINE 3-A, 3-B, AND 3-C
 350 KM PROPOSED BASINS CONTRIBUTING TO NEW DETENTION BASINS
 351 HC 3
 *

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HEC-1 INPUT

PAGE 10

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

352 KK GPDB
 353 KM VILLAGE 22 DETENTION BASIN (GRAND PARK DETENTION BASIN)
 354 KM FACILITY = GOWAN/LONE MOUNTAIN SYSTEM - BELTWAY 2 BRANCH
 355 KM FACILITY # = 0001
 356 KM STORAGE VOLUME = 161.1 AC-FT AT 3530 STAGE
 357 KM OUTLET = 36" ORIFICE PLATE ON 48" RCP
 358 KM 100-YEAR DISCHARGE = 183 CFS
 359 KM SPILLWAY LENGTH = 135-FT WITH LEFT 10:1 AND RIGHT 4:1 SIDE SLOPES
 360 KM SPILLWAY HEIGHT = 4-FT
 361 KM SPILLWAY CREST ELEVATION = 3527.0'
 362 KM SPILLWAY TYPE = BROAD CRESTED TRAPEZOIDAL WEIR
 363 KM PMF DISCHARGE = 2011 CFS
 364 KM TOP OF EMBANKMENT ELEVATION = 3531'
 365 KM STAGE/STORAGE/DISCHARGE CALCULATED BY: PLM OF VTN FROM DTJ BASIN FG SURFACE
 366 KO 3
 367 RS 1 STOR 0
 368 SV 0.0 6.3 9.2 12.6 16.4 20.8 30.1 42.8 56.1 72.2
 369 SV 90.1 111.1 134.9 147.7 161.1
 370 SE 3500 3506 3508 3510 3512 3514 3516 3518 3520 3522
 371 SE 3524 3526 3528 3529 3530
 372 SQ 0 78.2 94.0 107.5 119.5 130.4 140.4 149.8 158.6 166.9
 373 SQ 174.9 182.5 189.8 193.4 196.8
 *

374 KK 3-G1
 375 KM COMPARE TO MPU BASIN SWFH-6
 376 BA 0.2404
 377 PB 3.47
 378 LS 0 95.1
 379 UD 0.119
 *

380 KK R3-G1
 381 KM ROUTE 3-G1 TO CP3-G1
 382 KM LINING RCB
 383 RD 1000 0.044 0.013 0 TRAP 6 0
 *

384 KK CP3-G1
 385 KM COMBINE 3-G1, AND GPDB
 386 HC 2
 *

387 KK RCP3-G1
 388 KM ROUTE 3P3-G1 TO CP3-Q2
 389 KM LINING RCB
 390 RD 1950 0.044 0.013 0 TRAP 8 0
 *

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

391 KK 3-Q2
 392 KM COMPARE TO MPU BASIN SV22-2
 393 BA 0.1492
 394 PB 3.41
 395 LS 0 81.9
 396 UD 0.170
 *

397 KK CP3-Q2
 398 KM COMBINE CP3-G1, AND 3-Q2
 399 HC 2
 *

400 KK RCP3-Q2
 401 KM ROUTE 3P3-G1 TO CP3-Q2
 402 KM LINING RCB
 403 RD 1750 0.044 0.013 0 TRAP 8 0
 *

404 KK 3-H1
 405 KM COMPARE TO MPU BASIN SWFH-9
 406 BA 0.1206

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407 PB 3.41
 408 LS 0 93.9
 409 UD 0.125
 *

410 KK CP3-H1
 411 KM COMBINE RCP3-Q2, AND 3-H1
 412 HC 2
 *

413 KK RCP3-H1
 414 KM ROUTE CP3-H1 TO CP3.9
 415 KM LINING RCB
 416 RD 1725 0.044 0.013 0 TRAP 8 0
 *

417 KK 3-I1
 418 KM COMPARE TO MPU BASIN SWFH-7
 419 BA 0.3014
 420 PB 3.42
 421 LS 0 93.6
 422 UD 0.228
 *

423 KK CP3.9
 424 KM COMBINE CP3.8, CP3-H1 AND C-I1
 425 HC 3
 *

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PAGE 12

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

426 KK RCP9
 427 KM ROUTE CP3.9 TO CP3.10
 428 RD 2390 0.027 0.013 0 TRAP 6 0
 *

429 KK 3-H2
 430 BA 0.1003
 431 PB 3.38
 432 LS 0 93.0
 433 UD 0.169
 *

434 KK RCPH2
 435 KM ROUTE 3-H2 TO CP3.10A
 436 KM LINING RCB
 437 RD 1725 0.019 0.013 0 TRAP 20 0
 *

438 KK 3-I2
 439 KM COMPARE TO MPU BASIN SWFH-7
 440 BA 0.1159
 441 PB 3.36
 442 LS 0 95.4
 443 UD 0.224
 *

444 KK CP3.10A
 445 KM COMBINE CP3.9 AND CP3.10A
 446 HC 2
 *

447 KK CP3.10
 448 KM COMBINE CP3.9 AND CP3.10A
 449 HC 2
 *

450 KK RCP3.10
 451 KM ROUTE CP3.10 TO CP3.11
 452 KM FACILITIES APFH0000
 453 KM LINING RCB
 454 RD 1000 0.0350 0.013 0 TRAP 16 0
 *

455 KK 3-0
 456 KM COMPARE TO MPU BASIN SV22-2
 457 BA 0.0805
 458 PB 3.48
 459 LS 0 94.5
 460 UD 0.103
 *

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

461 KK R3-0

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462	KM	ROUTE 3-O TO CP3-P					
463	KM	LINING RCB					
464	RD	3260 0.028 0.013 0 TRAP 4 0					
	*						
465	KK	3-P1					
466	KM	COMPARE TO MPU BASIN SV22-2					
467	BA	0.1866					
468	PB	3.44					
469	LS	0 94.0					
470	UD	0.106					
	*						
471	KK	CP3-P					
472	HC	2					
	*						
473	KK	RCP3-P					
474	KM	ROUTE CP3-P THROUGH STORM DRAIN TO CP3-Q					
475	RD	2750 0.033 0.013 0 TRAP 10 0					
	*						
476	KK	3-Q					
477	KM	COMPARE TO MPU BASIN SV22-2					
478	BA	0.1026					
479	PB	3.39					
480	LS	0 91.9					
481	UD	0.152					
	*						
482	KK	CP3-Q					
483	KM	COMBINES CP3-P AND 3-Q					
484	HC	2					
	*						
485	KK	RCP3-Q					
486	KM	ROUTE CP3-Q THROUGH STORM DRAIN TO CP3-H2					
487	KM	LINING RCB					
488	RD	3000 0.015 0.013 0 TRAP 20 0					
	*						
489	KK	3-H3					
490	KM	COMPARE TO MPU BASIN SWFH-9					
491	BA	0.1403					
492	PB	3.33					
493	LS	0 93.8					
494	UD	0.208					
	*						

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

495	KK	CP3.11					
496	KM	COMBINE 3-H3 AND RCP3.10					
497	KM	THIS IS CSWFH-9 IN 2008 MPU HEC-1					
498	HC	3					
	*						
	*	END OF SECTION MODELED BY VTN, NEVADA					
	*	TIE VTN SECTION TO 2008 MPU HEC-1					
	*						
499	KKRCSWFH-9						
500	KM	ROUTE CSWFH-9 TO CRCSWFH9					
501	KM	FACILITY = ANGEL PARK - BELTWAY BRANCH					
502	KM	FACILITY # = APBE 0000, 0013, 0022, 0051					
503	KM	LINING = CONCRETE					
504	RD	4338 0.0181 0.015 0 TRAP 20 2					
	*						
505	KKRCSWFH9						
506	KM	COMBINE RCSWFH9 AND CSWAA-3					
507	HC	2					
	*						
	*	END OF G.C. WALLACE'S HYDROLOGIC MODEL					
	*						
508	KKRCSWFH						
509	KM	ROUTE CRCSWFH9 TO C11A-1					
510	KM	FACILITY = ANGEL PARK MIDDLE BRANCH					
511	KM	FACILITY # = APMD 0230,0233,0237,0247,0248,0253,0258					
512	KM	LINING = CONCRETE					
513	RD	1418 0.04 0.015 0 TRAP 76 2					
	*						
514	KK	11A-1					
515	BA	0.208					
516	PB	3.25					
517	LS	0 85.3					

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518 UD 0.292
*
519 KK C11A-1
520 KM COMBINE RCRCSWFH AND 11A-1
521 KM ANGEL PARK MIDDLE BRANCH @ PAVILLION CENTER DRIVE
522 HC 2
*
523 KK RC11A-1
524 KM ROUTE C11A-1 TO C11A-3
525 KM FACILITY = ANGEL PARK MIDDLE BRANCH
526 KM FACILITY # = APMD 0190,0195,0198,0208,0218,0227
527 KM LINING = CONCRETE
528 RD 2065 0.0281 0.015 0 TRAP 62 2
*
1 HEC-1 INPUT PAGE 15

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

529 KK 11A-3
530 BA 0.195
531 PB 3.21
532 LS 0 89.3
533 UD 0.229
*
534 KK C11A-3
535 KM COMBINE RC11A-1 AND 11A-3
536 KM ANGEL PARK MIDDLE BRANCH @ TOWN CENTER DRIVE
537 HC 2
*

538 KK RC11A-3
539 KM ROUTE C11A-3 TO C3A
540 KM FACILITY = ANGEL PARK MIDDLE BRANCH
541 KM FACILITY # = APMD 0132, 0133
542 KM LENGTH = 3,164
543 KM SLOPE = 3.0%
544 KM N = 0.040
545 KM HYDRAULIC RADIUS = 1.5
546 KM VELOCITY = 13.5
547 KM NATURAL WASH
548 RM 1 0.065 0.15
*

549 KK 3A
550 BA 0.178
551 PB 3.15
552 LS 0 84.0
553 UD 0.244
*

554 KK C3A
555 KM COMBINE RCC11A-3 AND 3A
556 KM ANGEL PARK MIDDLE BRANCH @ HUALAPAI WAY
557 HC 2
*

558 KK RC3A
559 KM ROUTE C3A TO C3B-1
560 KM FACILITY = ANGEL PARK MIDDLE BRANCH
561 KM FACILITY # = APMD 0027, 0030
562 KM LENGTH = 6,500
563 KM SLOPE = 3.0%
564 KM N = 0.040
565 KM HYDRAULIC RADIUS = 1.5
566 KM VELOCITY = 13.5
567 KM NATURAL WASH
568 RM 2 0.133 0.15
*

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

569 KK 3B-1
570 BA 0.258
571 PB 3.04
572 LS 0 82.0
573 UD 0.257
*

574 KK C3B-1
575 KM COMBINE RC3A AND 3B-1
576 HC 2
*

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577 KK RC3B-1
 578 KM ROUTE C3B-1 TO CC3B-2B
 579 KM FACILITY = ANGEL PARK MIDDLE BRANCH
 580 KM FACILITY # = APMD 0000,0027,0030
 581 KM LINING = UNLINED
 582 KM CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
 583 RD 940 0.029 0.04 0 TRAP 100 3
 *

584 KK 11B-2
 585 BA 0.441
 586 PB 3.25
 587 LS 0 85.7
 588 UD 0.423
 *

589 KK R11B-2
 590 KM ROUTE 11B-2 TO C11B-1
 591 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 592 KM FACILITY # = APSP 0177,0183
 593 KM LINING = CONCRETE
 594 RD 1900 0.017 0.015 0 TRAP 10 2
 *

595 KK 11B-1
 596 BA 0.394
 597 PB 3.26
 598 LS 0 87.2
 599 UD 0.267
 *

600 KK C11B-1
 601 KM COMBINE R11B-2 AND 11B-1
 602 KM ANGEL PARK-SUMMERLIN PARKWAY @ ANASAZI DRIVE
 603 HC 2
 *

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1
 LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

604 KK RC11B-1
 605 KM ROUTE C11B-1 TO C8B-1
 606 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 607 KM FACILITY # = APSP 0135,0177
 608 KM LINING = CONCRETE
 609 RD 2150 0.024 0.015 0 TRAP 10 2
 *

610 KK 8B-1
 611 BA 0.304
 612 PB 3.17
 613 LS 0 87.8
 614 UD 0.288
 *

615 KK C8B-1
 616 KM COMBINE RC11B-1 AND 8B-1
 617 KM ANGEL PARK-SUMMERLIN PARKWAY @ CRESTDALE DRIVE
 618 HC 2
 *

619 KK RC8B-1
 620 KM ROUTE C8B-1 TO C8B-2
 621 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 622 KM FACILITY # = APSP 0066,0069,0133
 623 KM LINING = CONCRETE
 624 RD 3575 0.024 0.015 0 TRAP 10 2
 *

625 KK 8B-2
 626 BA 0.420
 627 PB 3.10
 628 LS 0 93.7
 629 UD 0.336
 *

630 KK C8B-2
 631 KM COMBINE 8B-2 AND RC8B-1
 632 KM ANGEL PARK-SUMMERLIN PARKWAY @ TOWN CENTER DRIVE
 633 HC 2
 *

634 KK RC8B-2
 635 KM ROUTE C8B-2 TO CC3B-2A
 636 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 637 KM FACILITY # = APSP 0002
 638 KM LINING = UNLINED
 639 RD 1424 0.035 0.025 0 TRAP 50 3

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

640 KK 11A-2
 641 BA 0.290
 642 PB 3.20
 643 LS 0 88.3
 644 UD 0.194
 *

645 KK R11A-2
 646 KM ROUTE 11A-2 TO C8A
 647 KM TOWN CENTER DRIVE AND HUALAPAI WAY
 648 RD 2900 0.017 0.016 0 TRAP 0 50
 *

649 KK 8A
 650 BA 0.306
 651 PB 3.16
 652 LS 0 86.0
 653 UD 0.239
 *

654 KK C8A
 655 KM COMBINE 8A AND R11A-2
 656 HC 2
 *

657 KK RC8A
 658 KM ROUTE C8A TO C3B-2A
 659 KM NATURAL WASH
 660 KM TRAVEL LENGTH = 4,500
 661 KM SLOPE = 2.8%
 662 KM N = 0.040
 663 KM HYDRAULIC RADIUS = 1.5
 664 KM VELOCITY = 13.1
 665 RM 1 0.096 0.15
 *

666 KK 3B-2A
 667 BA 0.243
 668 PB 3.06
 669 LS 0 88.5
 670 UD 0.213
 *

671 KK C3B-2A
 672 KM COMBINE 3B-2A AND RC8A
 673 HC 2
 *

674 KK CC3B-2A
 675 KM COMBINE C3B-2A AND RC8B-2
 676 HC 2
 *

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

677 KKCC3B-2A
 678 KM ROUTE CC3B-2A TO C3B-2B
 679 KM FACILITY = ANGEL PARK - SUMMERLIN PARKWAY
 680 KM FACILITY # = APSP 0001
 681 KM LINING = UNLINED
 682 RD 3924 0.03 0.025 0 TRAP 20 2
 *

683 KK 3B-2B
 684 BA 0.273
 685 PB 2.99
 686 LS 0 85.1
 687 UD 0.309
 *

688 KK C3B-2B
 689 KM COMBINE RCC3B-2A AND 3B-2B
 690 HC 2
 *

691 KK CC3B-2B
 692 KM COMBINE RC3B-1 AND C3B-2B
 693 HC 2
 *

694 KKCC3B-2B

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695      KM  ROUTE CC3B-2B TO CSF2-C
696      KM  FACILITY = ANGEL PARK NORTH
697      KM  FACILITY # = APNO 0012,0013,0015 APSP 0000
698      KM  LINING = UNLINED (NATURAL WASH)
699      KM  CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
700      RD   1854  0.025  0.04  0  TRAP  100  3
      *

701      KK  SF2-C
702      BA   0.388
703      PB   2.91
704      LS   0    84.2
705      UD   0.443
      *

706      KK  CSF2-C
707      KM  COMBINE SF2-C AND RCC3B-2B
708      HC   2
      *

709      KK  RCSF2-C
710      KM  ROUTE CSF2-C TO ANGLPKIN
711      KM  FACILITY = ANGEL PARK NORTH
712      KM  FACILITY # = APNO 0005
713      KM  LINING = UNLINED (NATURAL WASH)
714      KM  CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
715      RD   1559  0.02  0.04  0  TRAP  100  3
      *

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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716      KK  SW11
717      BA   0.589
718      PB   3.34
719      LS   0    87.8
720      UD   0.311
      *

721      KK  RSW11
722      KM  ROUTE SW11 TO CSW17
723      KM  FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
724      KM  FACILITY # = APCB 0064, 0000
725      KM  LINING = RCB
726      RD   2338  0.0167  0.015  0  TRAP  7  0
      *

727      KK  SW17
728      BA   0.356
729      PB   3.30
730      LS   0    87.8
731      UD   0.271
      *

732      KK  CSW17
733      KM  COMBINE RSW11 AND SW17
734      HC   2
      *

735      KK  RCSW17
736      KM  ROUTE CSW17 TO CSW18
737      KM  FACILITY = ANGEL PARK - CHARLESTON BOULEVARD
738      KM  FACILITY # = APCB 0000,0001,0019,0050
739      KM  LINING = RCB
740      RD   3600  0.014  0.015  0  TRAP  11  0
      *

741      KK  SW18
742      BA   0.405
743      PB   3.27
744      LS   0    86.8
745      UD   0.271
      *

746      KK  CSW18
747      KM  COMBINE RCSW17 AND SW18
748      HC   2
      *

749      KK  RCSW18
750      KM  ROUTE CSW18 TO C12A
751      KM  FACILITY = ANGEL PARK SOUTH
752      KM  FACILITY # = APSO 0254,0255,0258,0345,0346; APCB 0000
753      KM  NATURAL WASH
754      KM  LENGTH = 5,200
755      KM  SLOPE = 1.4%

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LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
756	KM N = 0.040
757	KM HYDRAULIC RADIUS = 1.5
758	KM VELOCITY = 9.2
759	RM 2 0.157 0.15
	*
760	KK 12A
761	BA 0.392
762	PB 3.20
763	LS 0 91.2
764	UD 0.264
	*
765	KK C12A
766	KM COMBINE 12A AND RCSW18
767	HC 2
	*
768	KK RC12A
769	KM ROUTE THRU 12B
770	KM FACILITY = ANGEL PARK SOUTH
771	KM FACILITY # = APSO 0204, 0205
772	KM NATURAL WASH
773	KM LENGTH = 2,600
774	KM SLOPE = 3.5%
775	KM N = 0.040
776	KM HYDRAULIC RADIUS = 1.5
777	KM VELOCITY = 14.5
778	RM 1 0.05 0.15
	*
779	KK 12B
780	BA 0.260
781	PB 3.13
782	LS 0 91.0
783	UD 0.233
	*
784	KK C12B
785	KM COMBINE 12B AND RC12A
786	HC 2
	*
787	KK RC12B
788	KM ROUTE C12B TO C57B-3
789	KM FACILITY = ANGEL PARK SOUTH
790	KM FACILITY # = APSO 0067
791	KM NATURAL WASH
792	KM LENGTH = 6,000
793	KM SLOPE = 2.3%
794	KM N = 0.040
795	KM HYDRAULIC RADIUS = 1.5
796	KM VELOCITY = 11.8
797	RM 2 0.141 0.15
	*

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LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
798	KK 57B-3
799	BA 0.310
800	PB 3.04
801	LS 0 82.1
802	UD 0.332
	*
803	KK C57B-3
804	KM COMBINE RC12B AND 57B-3
805	HC 2
	*
806	KK RC57B-3
807	KM ROUTE C57B-3 TO C57B-2
808	KM FACILITY = ANGEL PARK SOUTH
809	KM FACILITY # = APSO 0067
810	KM NATURAL WASH
811	KM LENGTH = 1,300
812	KM SLOPE = 1.7%
813	KM N = 0.040
814	KM HYDRAULIC RADIUS = 1.5
815	KM VELOCITY = 10.2
816	RM 0 0.035 0.15
	*
817	KK 57B-2
818	BA 0.362

819 PB 3.02
 820 LS 0 84.1
 821 UD 0.332
 *

822 KK C57B-2
 823 KM COMBINE 57B-2 AND RC57B-3
 824 HC 2
 *

825 KK RC57B-2
 826 KM ROUTE C57B-2 TO CC57B-1
 827 KM FACILITY = ANGEL PARK SOUTH
 828 KM FACILITY # = APSO 0067
 829 KM NATURAL WASH
 830 KM LENGTH = 1,000
 831 KM SLOPE = 1.8%
 832 KM N = 0.040
 833 KM HYDRAULIC RADIUS = 1.5
 834 KM VELOCITY = 10.5
 835 RM 0 0.027 0.15
 *

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

836 KK 13B-1
 837 BA 0.249
 838 PB 3.19
 839 LS 0 91.6
 840 UD 0.284
 *

841 KK RC13B-1
 842 KM ROUTE 13B-1 TO C13B-2
 843 KM GRIFFITH PARK DRIVE AND HUALAPAI WAY
 844 RD 3000 0.018 0.016 0 TRAP 0 50
 *

845 KK 13B-2
 846 BA 0.216
 847 PB 3.14
 848 LS 0 89.7
 849 UD 0.231
 *

850 KK C13B-2
 851 KM COMBINE 13B-2 AND RC13B-1
 852 KM HUALAPAI WAY AND LOCAL FACILITY
 853 HC 2
 *

854 KK RC13B-2
 855 KM ROUTE C13B-2 TO CCPIA-A
 856 KM LINING = GRASS
 857 RD 4900 0.021 0.03 0 TRAP 40 6
 *

858 KK 19A
 859 BA 0.253
 860 PB 3.25
 861 LS 0 89.9
 862 UD 0.351
 *

863 KK R19A
 864 KM ROUTE 19A TO C13A-1
 865 KM UNNAMED ROAD
 866 RD 4300 0.021 0.016 0 TRAP 0 50
 *

867 KK 13A-1
 868 BA 0.224
 869 PB 3.19
 870 LS 0 91.4
 871 UD 0.302
 *

1

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

872 KK C13A-1
 873 KM COMBINE 13A-1 AND R19A
 874 KM TOWN CENTER DRIVE AND SWALE
 875 HC 2
 *

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876 KK RC13A-1
877 KM ROUTE C13A-1 TO C13A-2
878 KM NATURAL WASH
879 KM TRAVEL LENGTH = 2,800
880 KM SLOPE = 2.1%
881 KM N = 0.040
882 KM HYDRAULIC RADIUS = 1.5
883 KM VELOCITY = 11.4
884 RM 1 0.068 0.15
*

885 KK 13A-2
886 BA 0.188
887 PB 3.15
888 LS 0 90.0
889 UD 0.236
*

890 KK C13A-2
891 KM COMBINE 13A-2 AND RC13A-1
892 HC 2
*

893 KK RC13A-2
894 KM ROUTE C13A-2 TO CPIC-C
895 KM LINING = GRASS
896 RD 5200 0.015 0.03 0 TRAP 40 4
*

897 KK PIC-C
898 BA 0.243
899 PB 3.08
900 LS 0 90.4
901 UD 0.373
*

902 KK CPIC-C
903 KM COMBINE PIC-C AND RC13A-2
904 HC 2
*

905 KK RCPIC-C
906 KM ROUTE CPIC-C TO CPIC-A
907 KM LINING = GRASS
908 RD 2200 0.025 0.03 0 TRAP 40 4
*

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

909 KK PIC-A
910 BA 0.359
911 PB 3.03
912 LS 0 91.1
913 UD 0.499
*

914 KK CPIC-A
915 KM COMBINE RCPIC-C AND PIC-A
916 HC 2
*

917 KK CCPIC-A
918 KM COMBINE CPIC-A AND RC13B-2
919 HC 2
*

920 KK RCPIC-A
921 KM ROUTE CCPIC-A TO C57B-1
922 KM FACILITY = ANGEL PARK - PECCOLE 2
923 KM FACILITY # = APP2 0000
924 KM LINING = GRASS
925 RD 4793 0.021 0.03 0 TRAP 10 2
*

926 KK 57B-1
927 BA 0.197
928 PB 2.92
929 LS 0 85.5
930 UD 0.277
*

931 KK C57B-1
932 KM COMBINE 57B-1 AND RCPIC-A
933 HC 2
*

934 KK CCS7B-1

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935 KM COMBINE C57B-1 AND RC57B-2
 936 HC 2
 *
 937 KKRCC57B-1
 938 KM ROUTE CC57B-1 TO C57B-4
 939 KM FACILITY = ANGEL PARK - SOUTH BRANCH
 940 KM FACILITY # = APSO 0050
 941 KM LINING = NATURAL WASH
 942 RD 300 0.0184 0.04 0 TRAP 100 3
 *

1

HEC-1 INPUT

PAGE 26

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

943 KK 57B-4
 944 BA 0.200
 945 PB 2.91
 946 LS 0 90.0
 947 UD 0.233
 *
 948 KK C57B-4
 949 KM COMBINE RCC57B-1 AND 57B-4
 950 HC 2
 *
 951 KK PIC-B
 952 BA 0.441
 953 PB 2.98
 954 LS 0 91.1
 955 UD 0.471
 *
 956 KK RPIC-B
 957 KM ROUTE PIC-B TO CC57B-4
 958 KM FACILITY = ANGEL PARK - PECCOLE 1
 959 KM FACILITY # = APP1 0000
 960 KM LINING = RCP
 961 RD 2982 0.024 0.013 0 CIRC 6
 *

962 KK CC57B-4
 963 KM COMBINE RPIC-B AND C57B-4
 964 HC 2
 *
 965 KKRCC57B-4
 966 KM ROUTE CC57B-4 TO ANGLPKIN
 967 KM FACILITY = ANGEL PARK SOUTH
 968 KM FACILITY # = APSO 0000, 0020
 969 KM LINING = RCB
 970 RD 2857 0.0162 0.015 0 TRAP 24 0
 *

971 KK 38A
 972 BA 0.353
 973 PB 2.86
 974 LS 0 91.6
 975 UD 0.399
 *
 976 KK R38A
 977 KM ROUTE 38A TO C38B
 978 KM FACILITY = ANGEL PARK - DURANGO
 979 KM FACILITY # = APDG 0000,0060
 980 KM LINING = RCP
 981 RD 4500 0.0096 0.015 0 CIRC 6
 *

1

HEC-1 INPUT

PAGE 27

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

982 KK 38B
 983 BA 0.440
 984 PB 2.82
 985 LS 0 92.9
 986 UD 0.375
 *
 987 KK C38B
 988 KM COMBINE 38B AND R38A
 989 KM DUCHARME AND DURANGO
 990 HC 2
 *
 991 KK 57BA

ALTA-SDN3.OUT

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992      BA  0.317
993      PB  2.96
994      LS   0   78.2
995      UD  0.436
          *

996      KK  R57BA
997      KM  ROUTE 57BA TO C3C
998      KM  RAMPART BOULEVARD
999      RD   500   0.02  0.016   0   TRAP   0   50
          *

1000     KK   3C
1001     BA  0.153
1002     PB  2.90
1003     LS   0   93.1
1004     UD  0.246
          *

1005     KK   C3C
1006     KM  COMBINE 3C AND R57BA
1007     KM  RAMPART AND REGENT LAS VEGAS
1008     HC   2
          *

1009     KK  RC3C
1010     KM  ROUTE C3C TO ANGLPKIN
1011     KM  LINING = UNLINED
1012     KM  CONVERTED TO MUSKINGUM-CUNGE TO ACHIEVE STABILITY
1013     RD  2300  0.0326  0.04   0   TRAP   50   4
          *

1014     KK   AP
1015     BA  0.668
1016     PB  2.81
1017     LS   0   81.6
1018     UD  0.392
          *

```

1

HEC-1 INPUT

PAGE 28

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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

1019      KKANGLPKIN
1020      KM  COMBINE AP,RC3C,C38B,RCC57B-4, AND RCSF2-2
1021      KM  TOTAL INFLOW TO ANGEL PARK DETENTION BASIN
          * KO1
1022      HC   5
          *

1023      KKANGLPKDB
1024      KM  ANGEL PARK DETENTION BASIN
1025      KM  FACILITY = ANGEL PARK NORTH
1026      KM  FACILITY # = APNO 0000,0001
1027      KM  STORAGE VOLUME = 1512 AC-FT (2002 MPU VOLUME = 1400 AC-FT; 8% INCREASE)
1028      KM  OUTLET = 54" RCP
1029      KM  100-YEAR DISCHARGE =
1030      KM  SPILLWAY LENGTH =
1031      KM  SPILLWAY HEIGHT =
1032      KM  SPILLWAY CREST ELEVATION = 2619'
1033      KM  SPILLWAY TYPE =
1034      KM  PMF DISCHARGE =
1035      KM  TOP OF EMBANKMENT ELEVATION =
1036      KO   3
1037      RS   1   STOR   -1
1038      SV   0   10.8  43.2  113.4  222.48  411.48  640.44  910.44  1239.84  1470.9
1039      SV  1512 1554.12 1596.24 1640.52 1684.8 1730.16 1775.52 1823.04 1875.96 1919.1
1040      SE  2576 2580 2585 2590 2595 2600 2605 2610 2616 2618
1041      SE  2619 2619.5 2620 2620.5 2621 2621.5 2622 2622.5 2623 2623.5
1042      SQ   0   89   194   232   285   316   343   370   392   405
1043      SQ  407  1852  4491  7909  11955  16545  21620  27137  33064  39373
          *
1044      ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE  (V) ROUTING      (--->) DIVERSION OR PUMP FLOW

NO.   (.) CONNECTOR    (<---) RETURN OF DIVERTED OR PUMPED FLOW

57     3-1
      V
      V
71     R3-1
      .
      .
75     .      3-2
      .
      .

```



```

81  CP3.1.....
    V
    V
84  RCP3.1
    .
    .
88  .          3-D
    .          .
    .          .
94  CP3.3.....
    V
    V
97  RCP3.3
    .
    .
101 .          3-3
    .          V
    .          V
107 .          R3-3
    .          .
    .          .
111 .          .          3-4
    .          .          V
    .          .          V
117 .          .          R3-4
    .          .          .
    .          .          .
121 .          .          .          3-5
    .          .          .          V
    .          .          .          V
127 .          .          .          R3-5
    .          .          .          .
    .          .          .          .
131 .          CP3.2.....
    .          V
    .          V
134 .          RCP3.2
    .          .
    .          .
138 .          .          3-E
    .          .          .
    .          .          .
144 .          .          .          3-F
    .          .          .          .
    .          .          .          .
150 .          CP3.4.....
    .          V
    .          V
153 .          RCP3.4
    .          .
    .          .
157 .          .          3-6
    .          .          V
    .          .          V
163 .          .          R3-6
    .          .          .
    .          .          .
167 .          .          .          3-7
    .          .          .          V
    .          .          .          V
173 .          .          .          R3-7
    .          .          .          .
    .          .          .          .
177 .          .          .          .          3-J
    .          .          .          .          V
    .          .          .          .          V
183 .          .          .          .          R3-J
    .          .          .          .          .
    .          .          .          .          .
187 .          .          CP3.5.....
    .          .          V
    .          .          V
190 .          .          RCP3.5
    .          .          .
    .          .          .
194 .          .          .          3-8
    .          .          .          V
    .          .          .          V
200 .          .          .          R3-8
    .          .          .          .
    .          .          .          .
204 .          .          .          .          3-K
    .          .          .          .          .
    .          .          .          .          .
210 .          .          CP3.6.....
    .          .          V
    .          .          V
213 .          .          RCP3.6
    .          .          .
    .          .          .

```

217	.	.	3-N	
	.	.	.	
223	.	.	.	3-M
	.	.	.	V
	.	.	.	V
229	.	.	.	R3-M
	.	.	.	.
	.	.	.	.
233	CPDB5			
	V			
	V			
238	DB5			
	.			
267	.	3-L		
	.	.		
	.	.		
273	CP3-L			
	V			
	V			
277	RCSWAA-1			
	.			
283	.	SWAA-2		
	.	.		
	.	.		
288	CSWAA-2			
	V			
	V			
291	RCSWAA-2			
	.			
297	.	SWAA-3		
	.	.		
	.	.		
302	CSWAA-3			
	.			
305	.	3-G2		
	.	.		
311	.	.	3-L2	
	.	.	.	
	.	.	.	
316	.	CP3.8		
	.	V		
	.	V		
319	.	RCP3.8		
	.	.		
	.	.		
323	.	.	3-A	
	.	.	V	
	.	.	V	
329	.	.	R3-A	
	.	.	.	
	.	.	.	
332	.	.	.	3-B
	.	.	.	V
	.	.	.	V
338	.	.	.	R3-B
	.	.	.	.
	.	.	.	.
341	.	.	.	3-C
	.	.	.	.
	.	.	.	.
347	.	.	CPDBA-B	
	.	.	V	
	.	.	V	
352	.	.	GPDB	
	.	.	.	
	.	.	.	
374	.	.	.	3-G1
	.	.	.	V
	.	.	.	V
380	.	.	.	R3-G1
	.	.	.	.
	.	.	.	.
384	.	.	CP3-G1	
	.	.	V	
	.	.	V	
387	.	.	RCP3-G1	
	.	.	.	
	.	.	.	
391	.	.	.	3-Q2
	.	.	.	.
	.	.	.	.
397	.	.	CP3-Q2	


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      .      .      V
      .      .      V
400      .      .      RCP3-Q2
      .      .      .
      .      .      .
404      .      .      .      3-H1
      .      .      .      .
      .      .      .      .
410      .      .      CP3-H1.....
      .      .      V
      .      .      V
413      .      .      RCP3-H1
      .      .      .
      .      .      .
417      .      .      .      3-I1
      .      .      .      .
      .      .      .      .
423      .      .      CP3.9.....
      .      .      V
      .      .      V
426      .      .      RCP9
      .      .      .
      .      .      .
429      .      .      .      3-H2
      .      .      .      V
      .      .      .      V
434      .      .      .      RCPH2
      .      .      .      .
      .      .      .      .
438      .      .      .      .      3-I2
      .      .      .      .      .
      .      .      .      .      .
444      .      .      .      CP3.10A.....
      .      .      .      .
      .      .      .      .
447      .      .      .      CP3.10.....
      .      .      .      V
      .      .      .      V
450      .      .      .      RCP3.10
      .      .      .      .
      .      .      .      .
455      .      .      .      .      3-O
      .      .      .      .      V
      .      .      .      .      V
461      .      .      .      .      R3-O
      .      .      .      .      .
      .      .      .      .      .
465      .      .      .      .      .      3-P1
      .      .      .      .      .      .
      .      .      .      .      .      .
471      .      .      .      .      CP3-P.....
      .      .      .      .      V
      .      .      .      .      V
473      .      .      .      .      RCP3-P
      .      .      .      .      .
      .      .      .      .      .
476      .      .      .      .      .      3-Q
      .      .      .      .      .      .
      .      .      .      .      .      .
482      .      .      .      .      CP3-Q.....
      .      .      .      .      V
      .      .      .      .      V
485      .      .      .      .      RCP3-Q
      .      .      .      .      .
      .      .      .      .      .
489      .      .      .      .      .      3-H3
      .      .      .      .      .      .
      .      .      .      .      .      .
495      .      .      .      .      CP3.11.....
      .      .      .      .      V
      .      .      .      .      V
499      .      .      .      .      RCSHFH-9
      .      .      .      .      .
      .      .      .      .      .
505      .      .      .      .      CRCSWFH9.....
      .      .      .      .      V
      .      .      .      .      V
508      .      .      .      .      RCRCSWFH
      .      .      .      .      .
      .      .      .      .      .
514      .      .      .      .      .      11A-1
      .      .      .      .      .      .
      .      .      .      .      .      .
519      .      .      .      .      .      C11A-1.....
      .      .      .      .      .      V
      .      .      .      .      .      V
523      .      .      .      .      .      RC11A-1
      .      .      .      .      .      .
      .      .      .      .      .      .

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529      .      11A-3
      .
      .
534      C11A-3.....
      V
      V
538      RC11A-3
      .
      .
549      .      3A
      .
      .
554      C3A.....
      V
      V
558      RC3A
      .
      .
569      .      3B-1
      .
      .
574      C3B-1.....
      V
      V
577      RC3B-1
      .
      .
584      .      11B-2
      .      V
      .      V
589      .      R11B-2
      .
      .
595      .      .      11B-1
      .
      .
600      .      C11B-1.....
      .      V
      .      V
604      .      RC11B-1
      .
      .
610      .      .      8B-1
      .
      .
615      .      C8B-1.....
      .      V
      .      V
619      .      RC8B-1
      .
      .
625      .      .      8B-2
      .
      .
630      .      C8B-2.....
      .      V
      .      V
634      .      RC8B-2
      .
      .
640      .      .      11A-2
      .      .      V
      .      .      V
645      .      .      R11A-2
      .
      .
649      .      .      .      8A
      .
      .
654      .      .      C8A.....
      .      .      V
      .      .      V
657      .      .      RC8A
      .
      .
666      .      .      .      3B-2A
      .
      .
671      .      .      C3B-2A.....
      .
      .
674      .      CC3B-2A.....
      .      V
      .      V
677      .      RCC3B-2A
      .
      .
683      .      .      3B-2B
      .
      .
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688      .      .      C3B-2B.....
      .      .
691      .      .      CC3B-2B.....
      .      .      V
      .      .      V
694      .      .      RCC3B-2B
      .      .
701      .      .      SF2-C
      .      .
706      .      .      CSF2-C.....
      .      .      V
709      .      .      RCSF2-C
      .      .
716      .      .      SW11
      .      .      V
721      .      .      RSW11
      .      .      V
727      .      .      .      SW17
      .      .
732      .      .      CSW17.....
      .      .      V
735      .      .      RCSW17
      .      .      V
741      .      .      .      SW18
      .      .
746      .      .      CSW18.....
      .      .      V
749      .      .      RCSW18
      .      .      V
760      .      .      .      12A
      .      .
765      .      .      C12A.....
      .      .      V
768      .      .      RC12A
      .      .      V
779      .      .      .      12B
      .      .
784      .      .      C12B.....
      .      .      V
787      .      .      RC12B
      .      .      V
798      .      .      .      57B-3
      .      .
803      .      .      C57B-3.....
      .      .      V
806      .      .      RC57B-3
      .      .      V
817      .      .      .      57B-2
      .      .
822      .      .      C57B-2.....
      .      .      V
825      .      .      RC57B-2
      .      .      V
836      .      .      .      13B-1
      .      .      V
841      .      .      RC13B-1
      .      .      V
845      .      .      .      13B-2
      .      .
850      .      .      C13B-2.....

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      .      .      V
      .      .      V
854      .      .      RC13B-2
      .      .      .
858      .      .      .      19A
      .      .      .      V
863      .      .      .      R19A
      .      .      .      .
867      .      .      .      .      13A-1
      .      .      .      .      .
872      .      .      .      C13A-1.....
      .      .      .      V
876      .      .      .      RC13A-1
      .      .      .      .
885      .      .      .      .      13A-2
      .      .      .      .      .
890      .      .      .      C13A-2.....
      .      .      .      V
893      .      .      .      RC13A-2
      .      .      .      .
897      .      .      .      .      PIC-C
      .      .      .      .      .
902      .      .      .      CPIC-C.....
      .      .      .      V
905      .      .      .      RCPIC-C
      .      .      .      .
909      .      .      .      .      PIC-A
      .      .      .      .      .
914      .      .      .      CPIC-A.....
      .      .      .      .      .
917      .      .      .      CCPIC-A.....
      .      .      .      V
920      .      .      .      RCCPIC-A
      .      .      .      .
926      .      .      .      .      57B-1
      .      .      .      .      .
931      .      .      .      C57B-1.....
      .      .      .      .      .
934      .      .      .      CC57B-1.....
      .      .      .      V
937      .      .      .      RCC57B-1
      .      .      .      .
943      .      .      .      .      57B-4
      .      .      .      .      .
948      .      .      .      C57B-4.....
      .      .      .      .      .
951      .      .      .      PIC-B
      .      .      .      V
956      .      .      .      RPIC-B
      .      .      .      .
962      .      .      .      CC57B-4.....
      .      .      .      V
965      .      .      .      RCC57B-4
      .      .      .      .
971      .      .      .      .      38A
      .      .      .      .      V
976      .      .      .      .      R38A
      .      .      .      .      .
982      .      .      .      .      38B
      .      .      .      .      .

```



```

1*****
(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*      JUN 1998                      *
*      VERSION 4.1                   *
*
* RUN DATE 10DEC18 TIME 09:37:37    *
*
*****

```

```
*****
*
*      U.S. ARMY CORPS OF ENGINEERS
*      HYDROLOGIC ENGINEERING CENTER
*      609 SECOND STREET
*      DAVIS, CALIFORNIA 95616
*      (916) 756-1104
*
*****
```

MODELED BY VTN, NEVADA SVB/JYA/AH
Sep 5, 2018

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT 2008 MASTER PLAN UPDATE
GOWAN WATERSHED (ALL)
RECOMMENDED DRAINAGE SYSTEM WITH ULTIMATE DEVELOPMENT
INPUT FILE = Alta-sdn3.DAT
INPUT FILE DATE = MAY 5, 2008
DESIGN STORM = 100-YEAR 6-HR STORM
STORM DISTRIBUTION = SDN 3
MODELED BY PBS&J (MICHELE L. D'ALESSANDRO, E.I., CFM)
CHECKED BY PBS&J (HARSHAL B. DESAI, P.E., CFM)
STORM CENTERING = FULL WATERSHEDCP

REFERENCED HYDROLOGIC MODELS:
CITY OF LAS VEGAS CITY WIDE HYDROLOGY ANALYSIS (PBS&J 1997)
NORTHWEST NEIGHBORHOOD STUDY PHASE 1 (PBS&J 1997)
RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
3RD RESPONSE TO COMMENTS ON THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD
CONTROL MASTER PLAN UPDATE (G.C. WALLACE 2006)
SUPPLEMENT FOR THE 2006 SUMMERLIN WEST PLANNING AREA FLOOD CONTROL
MASTER PLAN UPDATE (G.C. WALLACE 2006)
GOWAN OUTFALL - LONE MOUNTAIN BRANCH PRELIMINARY DESIGN REPORT
(G.C. WALLACE 2007)
LONE MOUNTAIN WESTERN BELTWAY DETENTION BASIN PARAMETERS (RECEIVED
FROM G.C. WALLACE ON JANUARY 31, 2008)
US 95/RANCHO FIS RESTUDY (PBS&J 1998)
JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:

AREA SQ. MI.	DARF
0-0.5	0.99
0.5-1	0.975
1-2	0.95
2-3	0.925
3-4	0.915
4-5	0.908
5-6	0.903
6-7	0.895
7-8	0.885

Page 25

100-YEAR, 6-HOUR STORM, SDN3

53 IO OUTPUT CONTROL VARIABLES
 IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE
 0-0.5 0.5-1 1-2 2-3 3-4 4-5 5-6 6-7 7-8

IT HYDROGRAPH TIME DATA
 NMIN 5 MINUTES IN COMPUTATION INTERVAL
 IDATE 1 0 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 300 NUMBER OF HYDROGRAPH ORDINATES
 NDDATE 2 0 ENDING DATE
 NDTIME 0055 ENDING TIME
 ICENT 19 CENTURY MARK

 COMPUTATION INTERVAL .08 HOURS
 TOTAL TIME BASE 24.92 HOURS

ENGLISH UNITS
 DRAINAGE AREA SQUARE MILES
 PRECIPITATION DEPTH INCHES
 LENGTH, ELEVATION FEET
 FLOW CUBIC FEET PER SECOND
 STORAGE VOLUME ACRE-FEET
 SURFACE AREA ACRES
 TEMPERATURE DEGREES FAHRENHEIT

JP MULTI-PLAN OPTION
 NPLAN 1 NUMBER OF PLANS

JR MULTI-RATIO OPTION
 RATIOS OF PRECIPITATION
 .99 .98 .95 .93 .92 .91 .90 .89 .88

*** **

 * *
 233 KK CPDB5 *
 * *

236 KO OUTPUT CONTROL VARIABLES
 IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

*** **

 * *
 238 KK DB5 *
 * *

258 KO OUTPUT CONTROL VARIABLES
 IPRNT 3 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

259 RS STORAGE ROUTING
 NSTPS 1 NUMBER OF SUBREACHES
 ITYP STOR TYPE OF INITIAL CONDITION
 RSVRIC -1.00 INITIAL CONDITION
 X .00 WORKING R AND D COEFFICIENT

260 SV	STORAGE	.0	2.0	5.2	9.7	15.0	20.8	27.2	34.3	42.0	50.2
		68.1	88.6	114.1	145.4	182.2	224.5	274.5	343.0	384.0	405.6
262 SQ	DISCHARGE	0.	192.	276.	391.	505.	616.	725.	813.	900.	982.
		1176.	1368.	1534.	1683.	1804.	1920.	2033.	2149.	2315.	3725.
264 SE	ELEVATION	3532.50	3535.00	3536.00	3537.00	3538.00	3539.00	3540.00	3541.00	3542.00	3543.00
		3545.00	3547.00	3549.00	3551.00	3553.00	3555.00	3557.00	3559.50	3563.00	3564.00
266 SS	SPILLWAY CREL	3563.00	SPILLWAY CREST ELEVATION								

SPWID 435.60 SPILLWAY WIDTH
COQW 3.00 WEIR COEFFICIENT
EXPW 1.50 EXPONENT OF HEAD

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	2.00	5.20	9.70	15.00	20.80	27.20	34.30	42.00	50.20
OUTFLOW	.00	192.00	276.00	391.00	505.00	616.00	725.00	813.00	900.00	982.00
ELEVATION	3532.50	3535.00	3536.00	3537.00	3538.00	3539.00	3540.00	3541.00	3542.00	3543.00
STORAGE	68.10	88.60	114.10	145.40	182.20	224.50	274.50	343.00	384.05	405.65
OUTFLOW	1176.00	1368.00	1534.00	1683.00	1804.00	1920.00	2033.00	2149.00	2315.00	3725.00
ELEVATION	3545.00	3547.00	3549.00	3551.00	3553.00	3555.00	3557.00	3559.50	3563.00	3564.00

HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	2896.	4.50	1721.	459.	442.
			(INCHES)	2.271	2.423
			(AC-FT)	853.	911.
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				
+	393.	4.50	206.	52.	50.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
+	3563.41	4.50	3552.41	3537.83	3537.63

CUMULATIVE AREA = 7.05 SQ MI

HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	2781.	4.83	1686.	449.	433.
			(INCHES)	2.225	2.373
			(AC-FT)	836.	892.
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				
+	391.	4.83	204.	52.	50.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
+	3563.33	4.83	3552.26	3537.78	3537.59

CUMULATIVE AREA = 7.05 SQ MI

HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	2502.	5.00	1629.	434.	418.
			(INCHES)	2.149	2.288
			(AC-FT)	808.	860.
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				
+	387.	5.00	200.	50.	49.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
+	3563.33	5.00	3552.26	3537.78	3537.59

+	(FEET)	(HR)				
	3563.13	5.00	3551.95	3537.69	3537.50	3537.50

CUMULATIVE AREA = 7.05 SQ MI

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HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		
+	(CFS)	(HR)		24-HR	72-HR	24.92-HR
+	2266.	5.08	(CFS)			
			1577.	418.	403.	403.
			(INCHES)	2.081	2.206	2.206
			(AC-FT)	782.	829.	829.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		
+	(AC-FT)	(HR)		24-HR	72-HR	24.92-HR
	372.	5.08				
			190.	48.	46.	46.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		
+	(FEET)	(HR)		24-HR	72-HR	24.92-HR
	3561.98	5.08				
			3551.26	3537.48	3537.30	3537.30

CUMULATIVE AREA = 7.05 SQ MI

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HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		
+	(CFS)	(HR)		24-HR	72-HR	24.92-HR
+	2238.	5.08	(CFS)			
			1557.	412.	397.	397.
			(INCHES)	2.054	2.173	2.173
			(AC-FT)	772.	817.	817.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		
+	(AC-FT)	(HR)		24-HR	72-HR	24.92-HR
	365.	5.08				
			185.	47.	45.	45.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		
+	(FEET)	(HR)		24-HR	72-HR	24.92-HR
	3561.38	5.08				
			3550.95	3537.39	3537.21	3537.21

CUMULATIVE AREA = 7.05 SQ MI

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HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW		
+	(CFS)	(HR)		24-HR	72-HR	24.92-HR
+	2217.	5.08	(CFS)			
			1541.	407.	392.	392.
			(INCHES)	2.034	2.148	2.148
			(AC-FT)	764.	807.	807.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE		
+	(AC-FT)	(HR)		24-HR	72-HR	24.92-HR
	360.	5.08				
			182.	46.	44.	44.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE		
+	(FEET)	(HR)		24-HR	72-HR	24.92-HR
	3560.93	5.08				
			3550.71	3537.32	3537.15	3537.15

CUMULATIVE AREA = 7.05 SQ MI

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HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .90

ALTA-SDN3.OUT

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 2202.	5.08	(CFS)	1531.	404.	389.	389.
		(INCHES)	2.020	2.132	2.132	2.132
		(AC-FT)	759.	801.	801.	801.
PEAK STORAGE	TIME			MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 356.	5.08		180.	45.	44.	44.
PEAK STAGE	TIME			MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 3560.63	5.08		3550.56	3537.28	3537.10	3537.10
CUMULATIVE AREA =			7.05 SQ MI			

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HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .89

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 2180.	5.08	(CFS)	1515.	399.	385.	385.
		(INCHES)	2.000	2.107	2.107	2.107
		(AC-FT)	751.	792.	792.	792.
PEAK STORAGE	TIME			MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 351.	5.08		176.	44.	43.	43.
PEAK STAGE	TIME			MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 3560.16	5.08		3550.33	3537.21	3537.04	3537.04
CUMULATIVE AREA =			7.05 SQ MI			

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HYDROGRAPH AT STATION DB5
FOR PLAN 1, RATIO = .88

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 2148.	5.08	(CFS)	1493.	393.	378.	378.
		(INCHES)	1.971	2.072	2.072	2.072
		(AC-FT)	741.	779.	779.	779.
PEAK STORAGE	TIME			MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 343.	5.08		171.	43.	41.	41.
PEAK STAGE	TIME			MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 3559.49	5.08		3550.01	3537.12	3536.95	3536.95
CUMULATIVE AREA =			7.05 SQ MI			

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347 KK * CPDBA-B *
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348 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

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352 KK * GPDB *
*

366 KO OUTPUT CONTROL VARIABLES
IPRNT 3 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

367 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP STOR TYPE OF INITIAL CONDITION
RSVRIC .00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

STATION	STORAGE	0	6.3	9.2	12.6	16.4	20.8	30.1	42.8	56.1	72.2
368 SV		90.1	111.1	134.9	147.7	161.1					
370 SE	ELEVATION	3500.00	3506.00	3508.00	3510.00	3512.00	3514.00	3516.00	3518.00	3520.00	3522.00
		3524.00	3526.00	3528.00	3529.00	3530.00					
372 SQ	DISCHARGE	0.	78.	94.	108.	120.	130.	140.	150.	159.	167.
		175.	183.	190.	193.	197.					

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HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(CFS)				
+	184.	5.42	175.	81.	78.	78.
			1.213	2.247	2.247	2.247
		(AC-FT)	87.	161.	161.	161.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	116.	5.42	92.	30.	29.	29.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3526.42	5.42	3524.06	3509.91	3509.54	3509.54

CUMULATIVE AREA = 1.34 SQ MI

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HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(CFS)				
+	183.	5.33	174.	79.	76.	76.
			1.205	2.199	2.199	2.199
		(AC-FT)	86.	157.	157.	157.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	113.	5.42	89.	29.	28.	28.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3526.17	5.42	3523.78	3509.65	3509.30	3509.30

CUMULATIVE AREA = 1.34 SQ MI

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HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	182.	5.33	(CFS)	172.	76.	74.	74.
			(INCHES)	1.192	2.119	2.119	2.119
			(AC-FT)	85.	152.	152.	152.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	108.	5.33		85.	27.	26.	26.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	3525.74	5.33		3523.31	3509.24	3508.90	3508.90

CUMULATIVE AREA = 1.34 SQ MI

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	180.	5.33	(CFS)	170.	74.	71.	71.
			(INCHES)	1.179	2.039	2.039	2.039
			(AC-FT)	84.	146.	146.	146.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	104.	5.33		81.	25.	25.	25.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	3525.30	5.33		3522.83	3508.84	3508.51	3508.51

CUMULATIVE AREA = 1.34 SQ MI

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	179.	5.33	(CFS)	169.	72.	70.	70.
			(INCHES)	1.173	2.008	2.008	2.008
			(AC-FT)	84.	144.	144.	144.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	102.	5.33		79.	25.	24.	24.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	3525.12	5.33		3522.63	3508.68	3508.36	3508.36

CUMULATIVE AREA = 1.34 SQ MI

HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	179.	5.33	(CFS)	169.	72.	69.	69.
			(INCHES)	1.170	1.986	1.986	1.986
			(AC-FT)	84.	142.	142.	142.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
101.	5.33	78.	24.	23.	23.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
3525.00	5.33	3522.50	3508.56	3508.25	3508.25

CUMULATIVE AREA = 1.34 SQ MI

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HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .90

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				
+ 178.	5.33	(CFS)	168.	71.	68.
		(INCHES)	1.167	1.970	1.970
		(AC-FT)	83.	141.	141.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
100.	5.33	77.	24.	23.	23.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
3524.91	5.33	3522.40	3508.48	3508.17	3508.17

CUMULATIVE AREA = 1.34 SQ MI

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HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .89

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				
+ 178.	5.33	(CFS)	168.	70.	68.
		(INCHES)	1.162	1.944	1.944
		(AC-FT)	83.	139.	139.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
98.	5.33	75.	23.	22.	22.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
3524.76	5.33	3522.24	3508.36	3508.05	3508.05

CUMULATIVE AREA = 1.34 SQ MI

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HYDROGRAPH AT STATION GPDB
FOR PLAN 1, RATIO = .88

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				
+ 177.	5.33	(CFS)	167.	69.	66.
		(INCHES)	1.157	1.913	1.913
		(AC-FT)	83.	137.	137.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
96.	5.33	74.	23.	22.	22.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
3524.59	5.33	3522.04	3508.20	3507.89	3507.89

CUMULATIVE AREA = 1.34 SQ MI

ALTA-SDN3.OUT

***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-3.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
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 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).
 ***** WARNING ***** POSSIBLE INSTABILITIES IN THE MUSKINGUM ROUTING FOR REACH RC57B-2.
 ADJUST NSTPS AND/OR COMPUTATION INTERVAL TO MEET CRITERIA IN USER MANUAL).

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 1023 KK * ANGLPKDB *
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1036 KO OUTPUT CONTROL VARIABLES
 IPRNT 3 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

1037 RS STORAGE ROUTING
 NSTPS 1 NUMBER OF SUBREACHES
 ITYP STOR TYPE OF INITIAL CONDITION
 RSVRIC -1.00 INITIAL CONDITION
 X .00 WORKING R AND D COEFFICIENT

1038 SV	STORAGE	.0	10.8	43.2	113.4	222.5	411.5	640.4	910.4	1239.8	1470.9
		1512.0	1554.1	1596.2	1640.5	1684.8	1730.2	1775.5	1823.0	1876.0	1919.1

1040 SE	ELEVATION	2576.00	2580.00	2585.00	2590.00	2595.00	2600.00	2605.00	2610.00	2616.00	2618.00
		2619.00	2619.50	2620.00	2620.50	2621.00	2621.50	2622.00	2622.50	2623.00	2623.50

1042 SQ	DISCHARGE	0.	89.	194.	232.	285.	316.	343.	370.	392.	405.
		407.	1852.	4491.	7909.	11955.	16545.	21620.	27137.	33064.	39373.

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HYDROGRAPH AT STATION ANGLPKDB
 FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	5953.	1984.	767.	739.	739.
	(INCHES)	.811	1.255	1.255	1.255
	(AC-FT)	984.	1522.	1522.	1522.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				

1615.	5.42	1547.	1207.	1163.	ALTA-SDN3.OUT 1163.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE		
+ (FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
2620.21	5.42	2619.38	2613.37	2612.01	2612.01

CUMULATIVE AREA = 22.74 SQ MI

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

HYDROGRAPH AT STATION ANGLPKDB
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW		
+ (CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+ 5463.	5.50	(CFS)			
		(INCHES)	1880.	741.	714.
		(AC-FT)	.769	1.212	1.212
			932.	1469.	1470.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE		
+ (AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
1609.	5.50	1545.	1204.	1160.	1160.

PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE		
+ (FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
2620.14	5.50	2619.35	2613.30	2611.94	2611.94

CUMULATIVE AREA = 22.74 SQ MI

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

HYDROGRAPH AT STATION ANGLPKDB
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW		
+ (CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+ 4569.	5.58	(CFS)			
		(INCHES)	1708.	697.	671.
		(AC-FT)	.698	1.140	1.140
			847.	1382.	1383.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE		
+ (AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
1597.	5.58	1541.	1198.	1154.	1154.

PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE		
+ (FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
2620.01	5.58	2619.30	2613.18	2611.82	2611.82

CUMULATIVE AREA = 22.74 SQ MI

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

HYDROGRAPH AT STATION ANGLPKDB
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW		
+ (CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+ 3862.	5.75	(CFS)			
		(INCHES)	1540.	654.	630.
		(AC-FT)	.630	1.070	1.070
			764.	1297.	1297.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE		
+ (AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
1586.	5.75	1536.	1191.	1147.	1147.

PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE		
+ (FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
2619.88	5.75	2619.24	2613.04	2611.68	2611.68

CUMULATIVE AREA = 22.74 SQ MI

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

HYDROGRAPH AT STATION ANGLPKDB
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	3606.	5.83	1476.	637.	614.	614.
		(INCHES)	.603	1.043	1.043	1.043
		(AC-FT)	732.	1264.	1265.	1265.
PEAK STORAGE	TIME					
+	(AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
	1582.	5.83	1535.	1188.	1144.	1144.
PEAK STAGE	TIME					
+	(FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
	2619.83	5.83	2619.21	2612.98	2611.63	2611.63

CUMULATIVE AREA = 22.74 SQ MI

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

HYDROGRAPH AT STATION ANGLPKDB
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	3430.	5.83	1426.	625.	602.	602.
		(INCHES)	.583	1.022	1.022	1.022
		(AC-FT)	707.	1239.	1240.	1240.
PEAK STORAGE	TIME					
+	(AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
	1579.	5.83	1533.	1185.	1142.	1142.
PEAK STAGE	TIME					
+	(FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
	2619.80	5.83	2619.19	2612.94	2611.58	2611.58

CUMULATIVE AREA = 22.74 SQ MI

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

HYDROGRAPH AT STATION ANGLPKDB
FOR PLAN 1, RATIO = .90

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	3310.	5.92	1392.	616.	594.	594.
		(INCHES)	.569	1.008	1.008	1.008
		(AC-FT)	690.	1222.	1222.	1222.
PEAK STORAGE	TIME					
+	(AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
	1577.	5.92	1532.	1184.	1140.	1140.
PEAK STAGE	TIME					
+	(FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
	2619.78	5.92	2619.17	2612.91	2611.55	2611.55

CUMULATIVE AREA = 22.74 SQ MI

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

HYDROGRAPH AT STATION ANGLPKDB
FOR PLAN 1, RATIO = .89

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	3134.	6.00	1342.	603.	581.	581.
		(INCHES)	.549	.987	.987	.987
		(AC-FT)	665.	1196.	1196.	1196.

ALTA-SDN3.OUT

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
1575.	6.00	1531.	1181.	1138.	1138.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
2619.74	6.00	2619.15	2612.86	2611.51	2611.51

CUMULATIVE AREA = 22.74 SQ MI

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

HYDROGRAPH AT STATION ANGLPKDB
FOR PLAN 1, RATIO = .88

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				
2936.	6.08	1274.	586.	564.	564.
		(INCHES)	.521	.958	.958
		(AC-FT)	632.	1162.	1162.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
1571.	6.08	1528.	1178.	1135.	1135.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
2619.71	6.08	2619.11	2612.79	2611.45	2611.45

CUMULATIVE AREA = 22.74 SQ MI

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION								
					RATIO 1 .99	RATIO 2 .98	RATIO 3 .95	RATIO 4 .93	RATIO 5 .92	RATIO 6 .91	RATIO 7 .90	RATIO 8 .89	RATIO 9 .88
HYDROGRAPH AT	3-1	2.22	1	FLOW	2324.	2276.	2196.	2117.	2085.	2063.	2047.	2021.	1989.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
ROUTED TO	R3-1	2.22	1	FLOW	2311.	2269.	2184.	2104.	2077.	2050.	2038.	2013.	1981.
				TIME	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
HYDROGRAPH AT	3-2	.23	1	FLOW	429.	420.	405.	389.	383.	379.	376.	371.	365.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	CP3.1	2.45	1	FLOW	2387.	2342.	2255.	2172.	2144.	2116.	2104.	2078.	2045.
				TIME	4.00	4.08	4.00	4.08	4.08	4.08	4.08	4.08	4.08
ROUTED TO	RCP3.1	2.45	1	FLOW	2379.	2342.	2259.	2162.	2147.	2106.	2087.	2066.	2043.
				TIME	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
HYDROGRAPH AT	3-D	.33	1	FLOW	614.	603.	584.	565.	558.	552.	549.	543.	535.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	CP3.3	2.78	1	FLOW	2563.	2523.	2435.	2332.	2316.	2273.	2252.	2230.	2205.
				TIME	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
ROUTED TO	RCP3.3	2.78	1	FLOW	2562.	2520.	2432.	2330.	2312.	2270.	2249.	2227.	2202.
				TIME	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
HYDROGRAPH AT	3-3	.17	1	FLOW	392.	384.	371.	358.	353.	350.	347.	343.	338.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO	R3-3	.17	1	FLOW	368.	363.	351.	340.	335.	332.	329.	325.	321.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58

ALTA-SDN3.OUT

HYDROGRAPH AT													
+	3-4	.35	1	FLOW	757.	742.	717.	692.	682.	675.	670.	662.	652.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO													
+	R3-4	.35	1	FLOW	730.	716.	692.	670.	660.	654.	649.	641.	632.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT													
+	3-5	.29	1	FLOW	625.	613.	592.	571.	563.	557.	553.	546.	538.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO													
+	R3-5	.29	1	FLOW	601.	587.	566.	546.	542.	537.	529.	525.	517.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT													
+	CP3.2	.81	1	FLOW	1699.	1666.	1609.	1556.	1538.	1522.	1508.	1492.	1469.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO													
+	RCP3.2	.81	1	FLOW	1650.	1594.	1539.	1484.	1484.	1453.	1435.	1429.	1397.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT													
+	3-E	.57	1	FLOW	873.	855.	826.	797.	786.	777.	772.	762.	751.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT													
+	3-F	.22	1	FLOW	476.	468.	455.	442.	437.	433.	430.	426.	421.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
4 COMBINED AT													
+	CP3.4	4.37	1	FLOW	4674.	4553.	4395.	4242.	4203.	4139.	4109.	4074.	3989.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO													
+	RCP3.4	4.37	1	FLOW	4626.	4517.	4352.	4193.	4161.	4094.	4060.	4025.	3945.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT													
+	3-6	.09	1	FLOW	203.	199.	193.	186.	183.	181.	180.	178.	175.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO													
+	R3-6	.09	1	FLOW	188.	184.	179.	173.	171.	169.	168.	163.	161.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT													
+	3-7	.17	1	FLOW	423.	415.	401.	387.	381.	377.	374.	370.	364.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO													
+	R3-7	.17	1	FLOW	357.	348.	334.	323.	319.	316.	314.	310.	306.
				TIME	3.50	3.50	3.50	3.50	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT													
+	3-J	.25	1	FLOW	414.	405.	390.	375.	369.	365.	362.	358.	352.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO													
+	R3-J	.25	1	FLOW	406.	388.	375.	371.	354.	350.	352.	356.	338.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
3 COMBINED AT													
+	CP3.5	.51	1	FLOW	891.	872.	838.	811.	795.	788.	785.	777.	759.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO													
+	RCP3.5	.51	1	FLOW	865.	844.	812.	783.	766.	762.	756.	750.	729.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT													
+	3-8	.64	1	FLOW	1136.	1113.	1075.	1037.	1021.	1011.	1003.	991.	976.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO													
+	R3-8	.64	1	FLOW	1119.	1102.	1065.	1029.	1013.	998.	990.	981.	966.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT													
+	3-K	.84	1	FLOW	1404.	1378.	1334.	1290.	1273.	1260.	1252.	1238.	1220.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
3 COMBINED AT													
+	CP3.6	1.98	1	FLOW	3341.	3273.	3168.	3070.	3014.	2983.	2963.	2939.	2881.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67

ALTA-SDN3.OUT													
ROUTED TO													
+	RCP3.6	1.98	1	FLOW TIME	3295. 3.67	3227. 3.67	3119. 3.67	3016. 3.67	2967. 3.67	2933. 3.67	2915. 3.67	2883. 3.67	2829. 3.67
HYDROGRAPH AT													
+	3-N	.45	1	FLOW TIME	747. 3.67	733. 3.67	710. 3.67	687. 3.67	678. 3.67	672. 3.67	667. 3.67	660. 3.67	651. 3.67
HYDROGRAPH AT													
+	3-M	.23	1	FLOW TIME	485. 3.58	477. 3.58	462. 3.58	448. 3.58	442. 3.58	438. 3.58	435. 3.58	431. 3.58	425. 3.58
ROUTED TO													
+	R3-M	.23	1	FLOW TIME	475. 3.58	466. 3.58	453. 3.58	438. 3.58	432. 3.58	428. 3.58	425. 3.58	421. 3.58	415. 3.58
4 COMBINED AT													
+	CPDB5	7.05	1	FLOW TIME	9081. 3.67	8883. 3.67	8573. 3.67	8277. 3.67	8183. 3.67	8070. 3.67	8014. 3.67	7933. 3.67	7787. 3.67
ROUTED TO													
+	DB5	7.05	1	FLOW TIME	2896. 4.50	2781. 4.83	2502. 5.00	2266. 5.08	2238. 5.08	2217. 5.08	2202. 5.08	2180. 5.08	2148. 5.08
** PEAK STAGES IN FEET **													
			1	STAGE TIME	3563.41 4.50	3563.33 4.83	3563.13 5.00	3561.98 5.08	3561.38 5.08	3560.93 5.08	3560.63 5.08	3560.16 5.08	3559.49 5.08
HYDROGRAPH AT													
+	3-L	.24	1	FLOW TIME	486. 3.58	477. 3.58	463. 3.58	448. 3.58	443. 3.58	439. 3.58	436. 3.58	431. 3.58	425. 3.58
2 COMBINED AT													
+	CP3-L	7.28	1	FLOW TIME	2964. 4.50	2864. 4.83	2565. 5.00	2338. 4.92	2309. 4.92	2286. 4.92	2272. 4.92	2249. 4.92	2221. 4.92
ROUTED TO													
+	RCSWAA-1	7.28	1	FLOW TIME	2959. 4.58	2860. 4.83	2562. 5.00	2336. 4.92	2307. 4.92	2284. 4.92	2270. 4.92	2247. 4.92	2220. 4.92
HYDROGRAPH AT													
+	SWAA-2	.70	1	FLOW TIME	967. 3.75	948. 3.75	918. 3.75	887. 3.75	875. 3.75	867. 3.75	861. 3.75	851. 3.75	839. 3.75
2 COMBINED AT													
+	CSWAA-2	7.98	1	FLOW TIME	3196. 4.83	3107. 3.83	3045. 3.83	2986. 3.83	2962. 3.83	2943. 3.83	2931. 3.83	2912. 3.83	2884. 3.83
ROUTED TO													
+	RCSWAA-2	7.98	1	FLOW TIME	3194. 4.83	3104. 3.83	3042. 3.83	2982. 3.83	2956. 3.83	2939. 3.83	2926. 3.83	2906. 3.83	2878. 3.83
HYDROGRAPH AT													
+	SWAA-3	.58	1	FLOW TIME	682. 3.75	668. 3.75	644. 3.75	620. 3.75	611. 3.75	604. 3.75	599. 3.75	592. 3.75	582. 3.75
2 COMBINED AT													
+	CSWAA-3	8.56	1	FLOW TIME	3822. 3.83	3769. 3.83	3685. 3.83	3601. 3.83	3566. 3.83	3542. 3.83	3525. 3.83	3497. 3.83	3460. 3.83
HYDROGRAPH AT													
+	3-G2	.13	1	FLOW TIME	295. 3.50	290. 3.50	281. 3.50	273. 3.50	269. 3.50	267. 3.50	265. 3.50	263. 3.50	259. 3.50
HYDROGRAPH AT													
+	3-L2	.09	1	FLOW TIME	186. 3.58	183. 3.58	177. 3.58	171. 3.58	169. 3.58	168. 3.58	166. 3.58	165. 3.58	162. 3.58
2 COMBINED AT													
+	CP3.8	.22	1	FLOW TIME	465. 3.50	457. 3.50	443. 3.50	429. 3.50	423. 3.50	420. 3.50	417. 3.50	412. 3.50	407. 3.50
ROUTED TO													
+	RCP3.8	.22	1	FLOW TIME	461. 3.58	452. 3.58	440. 3.58	425. 3.58	421. 3.58	416. 3.58	415. 3.58	409. 3.58	405. 3.58
HYDROGRAPH AT													
+	3-A	.96	1	FLOW TIME	1283. 3.75	1255. 3.75	1210. 3.75	1164. 3.75	1146. 3.75	1133. 3.75	1124. 3.75	1110. 3.75	1092. 3.75
ROUTED TO													
+	R3-A	.96	1	FLOW TIME	1277. 3.75	1250. 3.75	1204. 3.75	1160. 3.75	1141. 3.75	1128. 3.75	1119. 3.75	1105. 3.75	1087. 3.75
HYDROGRAPH AT													
+	3-B	.16	1	FLOW TIME	332. 3.58	327. 3.58	317. 3.58	308. 3.58	304. 3.58	301. 3.58	299. 3.58	296. 3.58	292. 3.58
ROUTED TO													

ALTA-SDN3.OUT													
+	R3-B	.16	1	FLOW TIME	323. 3.58	318. 3.58	308. 3.58	299. 3.58	296. 3.58	293. 3.58	291. 3.58	288. 3.58	284. 3.58
HYDROGRAPH AT													
+	3-C	.22	1	FLOW TIME	389. 3.58	382. 3.58	369. 3.58	357. 3.58	352. 3.58	348. 3.58	346. 3.58	342. 3.58	337. 3.58
3 COMBINED AT													
+	CPDBA-B	1.34	1	FLOW TIME	1889. 3.67	1850. 3.67	1785. 3.67	1720. 3.67	1694. 3.67	1677. 3.67	1664. 3.67	1643. 3.67	1617. 3.67
ROUTED TO													
+	GPDB	1.34	1	FLOW TIME	184. 5.42	183. 5.33	182. 5.33	180. 5.33	179. 5.33	179. 5.33	178. 5.33	178. 5.33	177. 5.33
** PEAK STAGES IN FEET **													
			1	STAGE TIME	3526.42 5.42	3526.17 5.42	3525.74 5.33	3525.30 5.33	3525.12 5.33	3525.00 5.33	3524.91 5.33	3524.76 5.33	3524.59 5.33
HYDROGRAPH AT													
+	3-G1	.24	1	FLOW TIME	534. 3.58	525. 3.58	510. 3.58	496. 3.58	490. 3.58	486. 3.58	483. 3.58	478. 3.58	472. 3.58
ROUTED TO													
+	R3-G1	.24	1	FLOW TIME	533. 3.58	524. 3.58	510. 3.58	496. 3.58	490. 3.58	485. 3.58	483. 3.58	478. 3.58	472. 3.58
2 COMBINED AT													
+	CP3-G1	1.58	1	FLOW TIME	676. 3.58	666. 3.58	650. 3.58	634. 3.58	628. 3.58	623. 3.58	620. 3.58	615. 3.58	608. 3.58
ROUTED TO													
+	RCP3-G1	1.58	1	FLOW TIME	674. 3.58	664. 3.58	649. 3.58	632. 3.58	625. 3.58	621. 3.58	618. 3.58	612. 3.58	606. 3.58
HYDROGRAPH AT													
+	3-Q2	.15	1	FLOW TIME	204. 3.58	199. 3.58	191. 3.58	183. 3.58	180. 3.58	177. 3.58	176. 3.58	173. 3.58	170. 3.58
2 COMBINED AT													
+	CP3-Q2	1.73	1	FLOW TIME	878. 3.58	863. 3.58	840. 3.58	815. 3.58	805. 3.58	798. 3.58	794. 3.58	786. 3.58	776. 3.58
ROUTED TO													
+	RCP3-Q2	1.73	1	FLOW TIME	873. 3.58	858. 3.58	834. 3.58	810. 3.58	800. 3.58	792. 3.58	788. 3.58	781. 3.58	771. 3.58
HYDROGRAPH AT													
+	3-H1	.12	1	FLOW TIME	257. 3.58	253. 3.58	246. 3.58	238. 3.58	235. 3.58	233. 3.58	232. 3.58	230. 3.58	227. 3.58
2 COMBINED AT													
+	CP3-H1	1.85	1	FLOW TIME	1130. 3.58	1111. 3.58	1080. 3.58	1048. 3.58	1035. 3.58	1026. 3.58	1020. 3.58	1010. 3.58	997. 3.58
ROUTED TO													
+	RCP3-H1	1.85	1	FLOW TIME	1124. 3.58	1105. 3.58	1073. 3.58	1041. 3.58	1029. 3.58	1019. 3.58	1013. 3.58	1004. 3.58	991. 3.58
HYDROGRAPH AT													
+	3-I1	.30	1	FLOW TIME	538. 3.67	528. 3.67	513. 3.67	497. 3.67	491. 3.67	487. 3.67	484. 3.67	479. 3.67	473. 3.67
3 COMBINED AT													
+	CP3.9	2.37	1	FLOW TIME	2108. 3.58	2071. 3.58	2012. 3.58	1950. 3.58	1927. 3.58	1908. 3.58	1898. 3.58	1878. 3.58	1855. 3.58
ROUTED TO													
+	RCP9	2.37	1	FLOW TIME	2090. 3.58	2054. 3.58	1993. 3.58	1932. 3.58	1908. 3.58	1890. 3.58	1879. 3.58	1860. 3.58	1836. 3.58
HYDROGRAPH AT													
+	3-H2	.10	1	FLOW TIME	197. 3.58	194. 3.58	188. 3.58	182. 3.58	180. 3.58	178. 3.58	177. 3.58	175. 3.58	173. 3.58
ROUTED TO													
+	RCPH2	.10	1	FLOW TIME	190. 3.58	186. 3.58	181. 3.58	175. 3.58	173. 3.58	171. 3.58	170. 3.58	168. 3.58	166. 3.58
HYDROGRAPH AT													
+	3-I2	.12	1	FLOW TIME	211. 3.67	208. 3.67	202. 3.67	196. 3.67	194. 3.67	192. 3.67	191. 3.67	189. 3.67	187. 3.67
2 COMBINED AT													
+	CP3.10A	.22	1	FLOW TIME	398. 3.58	391. 3.58	380. 3.58	368. 3.58	364. 3.58	360. 3.58	358. 3.58	354. 3.58	350. 3.58
2 COMBINED AT													
+	CP3.10	2.59	1	FLOW	2488.	2445.	2373.	2300.	2272.	2250.	2238.	2215.	2186.

				ALTA-SDN3.OUT									
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO													
+	RCP3.10	2.59	1	FLOW	2473.	2431.	2359.	2287.	2259.	2236.	2224.	2201.	2173.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT													
+	3-0	.08	1	FLOW	187.	184.	178.	173.	171.	170.	169.	167.	165.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO													
+	R3-0	.08	1	FLOW	177.	174.	169.	164.	162.	160.	159.	158.	156.
				TIME	3.50	3.50	3.50	3.50	3.50	3.58	3.50	3.50	3.50
HYDROGRAPH AT													
+	3-P1	.19	1	FLOW	419.	411.	400.	388.	383.	380.	377.	373.	369.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT													
+	CP3-P	.27	1	FLOW	596.	586.	569.	552.	545.	540.	537.	531.	524.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO													
+	RCP3-P	.27	1	FLOW	577.	566.	551.	536.	528.	523.	522.	515.	508.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT													
+	3-Q	.10	1	FLOW	202.	199.	193.	187.	184.	182.	181.	179.	177.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT													
+	CP3-Q	.37	1	FLOW	779.	765.	743.	723.	712.	705.	703.	694.	685.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO													
+	RCP3-Q	.37	1	FLOW	767.	754.	733.	713.	701.	697.	695.	684.	676.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT													
+	3-H3	.14	1	FLOW	252.	247.	240.	233.	230.	228.	226.	224.	221.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT													
+	CP3.11	3.10	1	FLOW	3492.	3432.	3332.	3233.	3190.	3161.	3145.	3108.	3070.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO													
+	RCSHFH-9	3.10	1	FLOW	3352.	3277.	3178.	3079.	3057.	3019.	2992.	2972.	2941.
				TIME	3.58	3.58	3.58	3.58	3.58	3.67	3.67	3.58	3.67
2 COMBINED AT													
+	CRCSWFH9	11.66	1	FLOW	6897.	6770.	6588.	6408.	6350.	6293.	6248.	6191.	6125.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO													
+	RCRCSWFH	11.66	1	FLOW	6856.	6728.	6544.	6363.	6305.	6249.	6204.	6145.	6078.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT													
+	11A-1	.21	1	FLOW	241.	235.	227.	218.	214.	212.	210.	207.	203.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
2 COMBINED AT													
+	C11A-1	11.87	1	FLOW	7092.	6959.	6766.	6576.	6515.	6456.	6409.	6348.	6276.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO													
+	RC11A-1	11.87	1	FLOW	7018.	6882.	6684.	6496.	6436.	6370.	6322.	6263.	6192.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.75
HYDROGRAPH AT													
+	11A-3	.19	1	FLOW	285.	279.	270.	260.	257.	254.	252.	249.	245.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
2 COMBINED AT													
+	C11A-3	12.07	1	FLOW	7303.	7161.	6954.	6756.	6692.	6624.	6574.	6512.	6433.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO													
+	RC11A-3	12.07	1	FLOW	7180.	7049.	6849.	6655.	6588.	6526.	6480.	6418.	6341.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT													
+	3A	.18	1	FLOW	203.	198.	190.	182.	179.	177.	176.	173.	170.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
2 COMBINED AT													
+	C3A	12.24	1	FLOW	7372.	7237.	7029.	6827.	6758.	6694.	6646.	6582.	6502.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75

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ROUTED TO													
+	RC3A	12.24	1	FLOW TIME	7113. 3.92	6991. 3.92	6796. 3.92	6604. 3.92	6534. 3.92	6477. 3.92	6434. 3.92	6372. 3.92	6296. 3.92
HYDROGRAPH AT													
+	3B-1	.26	1	FLOW TIME	248. 3.67	242. 3.67	231. 3.67	221. 3.67	216. 3.67	213. 3.67	211. 3.67	208. 3.67	204. 3.67
2 COMBINED AT													
+	C3B-1	12.50	1	FLOW TIME	7286. 3.92	7159. 3.92	6958. 3.92	6759. 3.92	6687. 3.92	6627. 3.92	6583. 3.92	6519. 3.92	6440. 3.92
ROUTED TO													
+	RC3B-1	12.50	1	FLOW TIME	7256. 3.92	7128. 3.92	6925. 3.92	6724. 3.92	6652. 3.92	6590. 3.92	6548. 3.92	6485. 3.92	6402. 3.92
HYDROGRAPH AT													
+	11B-2	.44	1	FLOW TIME	433. 3.83	423. 3.83	407. 3.83	391. 3.83	384. 3.83	380. 3.83	377. 3.83	371. 3.83	365. 3.83
ROUTED TO													
+	R11B-2	.44	1	FLOW TIME	428. 3.92	419. 3.92	403. 3.92	387. 3.92	381. 3.92	377. 3.92	374. 3.92	368. 3.92	362. 3.92
HYDROGRAPH AT													
+	11B-1	.39	1	FLOW TIME	514. 3.67	503. 3.67	485. 3.67	467. 3.67	459. 3.67	454. 3.67	451. 3.67	445. 3.67	437. 3.67
2 COMBINED AT													
+	C11B-1	.84	1	FLOW TIME	886. 3.75	867. 3.75	834. 3.75	802. 3.75	789. 3.75	780. 3.75	773. 3.75	763. 3.75	750. 3.75
ROUTED TO													
+	RC11B-1	.84	1	FLOW TIME	872. 3.75	853. 3.75	820. 3.75	788. 3.75	776. 3.75	767. 3.75	761. 3.75	750. 3.75	737. 3.83
HYDROGRAPH AT													
+	8B-1	.30	1	FLOW TIME	373. 3.75	366. 3.75	353. 3.75	340. 3.75	335. 3.75	331. 3.75	328. 3.75	324. 3.75	319. 3.75
2 COMBINED AT													
+	C8B-1	1.14	1	FLOW TIME	1246. 3.75	1219. 3.75	1173. 3.75	1128. 3.75	1111. 3.75	1098. 3.75	1089. 3.75	1075. 3.75	1056. 3.75
ROUTED TO													
+	RC8B-1	1.14	1	FLOW TIME	1222. 3.83	1195. 3.75	1152. 3.83	1110. 3.83	1090. 3.83	1081. 3.83	1071. 3.83	1055. 3.83	1040. 3.83
HYDROGRAPH AT													
+	8B-2	.42	1	FLOW TIME	574. 3.75	564. 3.75	547. 3.75	530. 3.75	523. 3.75	518. 3.75	515. 3.75	510. 3.75	503. 3.75
2 COMBINED AT													
+	C8B-2	1.56	1	FLOW TIME	1795. 3.75	1758. 3.75	1697. 3.75	1632. 3.75	1610. 3.75	1593. 3.75	1578. 3.75	1562. 3.75	1533. 3.75
ROUTED TO													
+	RC8B-2	1.56	1	FLOW TIME	1774. 3.83	1736. 3.83	1681. 3.83	1618. 3.83	1593. 3.83	1582. 3.83	1565. 3.83	1547. 3.83	1522. 3.83
HYDROGRAPH AT													
+	11A-2	.29	1	FLOW TIME	433. 3.58	424. 3.58	409. 3.58	394. 3.58	388. 3.58	384. 3.58	381. 3.58	376. 3.58	370. 3.58
ROUTED TO													
+	R11A-2	.29	1	FLOW TIME	422. 3.67	413. 3.67	393. 3.67	378. 3.67	372. 3.67	368. 3.67	365. 3.67	360. 3.67	354. 3.67
HYDROGRAPH AT													
+	8A	.31	1	FLOW TIME	384. 3.67	375. 3.67	361. 3.67	347. 3.67	341. 3.67	337. 3.67	335. 3.67	330. 3.67	324. 3.67
2 COMBINED AT													
+	C8A	.60	1	FLOW TIME	805. 3.67	788. 3.67	755. 3.67	725. 3.67	713. 3.67	705. 3.67	700. 3.67	690. 3.67	679. 3.67
ROUTED TO													
+	RC8A	.60	1	FLOW TIME	751. 3.75	734. 3.75	704. 3.75	675. 3.75	664. 3.75	657. 3.75	651. 3.75	643. 3.75	632. 3.75
HYDROGRAPH AT													
+	3B-2A	.24	1	FLOW TIME	329. 3.67	322. 3.67	311. 3.67	300. 3.67	295. 3.67	292. 3.67	290. 3.67	286. 3.67	282. 3.67
2 COMBINED AT													
+	C3B-2A	.84	1	FLOW TIME	1040. 3.75	1018. 3.75	977. 3.75	939. 3.75	924. 3.75	914. 3.75	907. 3.75	895. 3.75	880. 3.75

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2 COMBINED AT													
+	CC3B-2A	2.40	1	FLOW TIME	2803. 3.75	2743. 3.75	2644. 3.75	2540. 3.75	2505. 3.75	2476. 3.75	2453. 3.75	2428. 3.75	2384. 3.75
ROUTED TO													
+	RCC3B-2A	2.40	1	FLOW TIME	2769. 3.83	2725. 3.83	2623. 3.83	2515. 3.83	2493. 3.83	2463. 3.83	2431. 3.83	2413. 3.83	2367. 3.83
HYDROGRAPH AT													
+	3B-2B	.27	1	FLOW TIME	271. 3.75	265. 3.75	254. 3.75	244. 3.75	240. 3.75	237. 3.75	235. 3.75	231. 3.75	227. 3.75
2 COMBINED AT													
+	C3B-2B	2.67	1	FLOW TIME	3025. 3.83	2975. 3.83	2863. 3.83	2746. 3.83	2720. 3.83	2687. 3.83	2653. 3.83	2632. 3.83	2582. 3.83
2 COMBINED AT													
+	CC3B-2B	15.17	1	FLOW TIME	10066. 3.92	9893. 3.92	9590. 3.92	9287. 3.92	9192. 3.92	9097. 3.92	9028. 3.92	8945. 3.92	8816. 3.92
ROUTED TO													
+	RCC3B-2B	15.17	1	FLOW TIME	10039. 3.92	9863. 3.92	9554. 3.92	9238. 3.92	9149. 3.92	9049. 3.92	8982. 3.92	8894. 3.92	8763. 3.92
HYDROGRAPH AT													
+	SF2-C	.39	1	FLOW TIME	294. 3.92	287. 3.92	275. 3.92	263. 3.92	259. 3.92	255. 3.92	253. 3.92	249. 3.92	245. 3.92
2 COMBINED AT													
+	CSF2-C	15.56	1	FLOW TIME	10333. 3.92	10149. 3.92	9828. 3.92	9501. 3.92	9407. 3.92	9305. 3.92	9235. 3.92	9143. 3.92	9008. 3.92
ROUTED TO													
+	RCSF2-C	15.56	1	FLOW TIME	10265. 3.92	10086. 3.92	9760. 3.92	9427. 3.92	9323. 3.92	9218. 3.92	9154. 3.92	9054. 3.92	8917. 3.92
HYDROGRAPH AT													
+	SW11	.59	1	FLOW TIME	759. 3.75	743. 3.75	717. 3.75	691. 3.75	680. 3.75	673. 3.75	668. 3.75	660. 3.75	649. 3.75
ROUTED TO													
+	RSW11	.59	1	FLOW TIME	754. 3.75	738. 3.75	712. 3.75	686. 3.75	676. 3.75	668. 3.75	663. 3.75	655. 3.75	644. 3.75
HYDROGRAPH AT													
+	SW17	.36	1	FLOW TIME	479. 3.67	469. 3.67	452. 3.67	436. 3.67	429. 3.67	424. 3.67	421. 3.67	416. 3.67	409. 3.67
2 COMBINED AT													
+	CSW17	.94	1	FLOW TIME	1221. 3.75	1196. 3.75	1153. 3.75	1111. 3.75	1095. 3.75	1083. 3.75	1075. 3.75	1061. 3.75	1044. 3.75
ROUTED TO													
+	RCSW17	.94	1	FLOW TIME	1211. 3.75	1186. 3.75	1143. 3.75	1101. 3.75	1083. 3.75	1073. 3.75	1063. 3.75	1051. 3.75	1035. 3.75
HYDROGRAPH AT													
+	SW18	.41	1	FLOW TIME	519. 3.67	507. 3.67	489. 3.67	470. 3.67	463. 3.67	457. 3.67	454. 3.67	448. 3.67	440. 3.67
2 COMBINED AT													
+	CSW18	1.35	1	FLOW TIME	1718. 3.75	1682. 3.75	1622. 3.75	1562. 3.75	1537. 3.75	1521. 3.75	1508. 3.75	1490. 3.75	1467. 3.75
ROUTED TO													
+	RCSW18	1.35	1	FLOW TIME	1610. 3.92	1576. 3.92	1520. 3.92	1464. 3.92	1441. 3.92	1426. 3.92	1414. 3.92	1397. 3.92	1375. 3.92
HYDROGRAPH AT													
+	12A	.39	1	FLOW TIME	576. 3.67	565. 3.67	547. 3.67	529. 3.67	521. 3.67	516. 3.67	513. 3.67	507. 3.67	500. 3.67
2 COMBINED AT													
+	C12A	1.74	1	FLOW TIME	2046. 3.83	2003. 3.83	1932. 3.83	1861. 3.83	1832. 3.83	1813. 3.83	1798. 3.83	1776. 3.83	1748. 3.83
ROUTED TO													
+	RC12A	1.74	1	FLOW TIME	2025. 3.92	1983. 3.92	1913. 3.92	1843. 3.92	1815. 3.92	1796. 3.92	1782. 3.92	1760. 3.92	1732. 3.92
HYDROGRAPH AT													
+	12B	.26	1	FLOW TIME	387. 3.67	380. 3.67	367. 3.67	355. 3.67	350. 3.67	347. 3.67	344. 3.67	340. 3.67	335. 3.67
2 COMBINED AT													
+	C12B	2.00	1	FLOW TIME	2259. 3.83	2212. 3.83	2134. 3.83	2056. 3.83	2024. 3.83	2002. 3.83	1987. 3.83	1962. 3.83	1931. 3.83
ROUTED TO													

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+	RC12B	2.00	1	FLOW TIME	2194. 4.00	2148. 4.00	2073. 4.00	1998. 4.00	1967. 4.00	1946. 4.00	1931. 4.00	1907. 4.00	1877. 4.00
HYDROGRAPH AT													
+	57B-3	.31	1	FLOW TIME	267. 3.75	260. 3.75	248. 3.75	237. 3.75	233. 3.75	230. 3.75	227. 3.75	224. 3.75	219. 3.75
2 COMBINED AT													
+	C57B-3	2.31	1	FLOW TIME	2394. 4.00	2344. 4.00	2261. 4.00	2177. 4.00	2144. 4.00	2120. 4.00	2104. 4.00	2077. 4.00	2044. 4.00
ROUTED TO													
+	RC57B-3	2.31	1	FLOW TIME	2375. 4.00	2325. 4.00	2242. 4.00	2158. 4.00	2125. 4.00	2101. 4.00	2085. 4.00	2058. 4.00	2025. 4.00
HYDROGRAPH AT													
+	57B-2	.36	1	FLOW TIME	338. 3.75	329. 3.75	316. 3.75	302. 3.75	297. 3.75	293. 3.75	291. 3.75	286. 3.75	281. 3.75
2 COMBINED AT													
+	C57B-2	2.67	1	FLOW TIME	2626. 4.00	2570. 4.00	2477. 4.00	2384. 4.00	2347. 4.00	2321. 4.00	2302. 4.00	2273. 4.00	2236. 4.00
ROUTED TO													
+	RC57B-2	2.67	1	FLOW TIME	2609. 4.00	2553. 4.00	2460. 4.00	2367. 4.00	2330. 4.00	2304. 4.00	2285. 4.00	2256. 4.00	2219. 4.00
HYDROGRAPH AT													
+	13B-1	.25	1	FLOW TIME	354. 3.67	347. 3.67	336. 3.67	325. 3.67	321. 3.67	318. 3.67	315. 3.67	312. 3.67	307. 3.67
ROUTED TO													
+	RC13B-1	.25	1	FLOW TIME	354. 3.75	347. 3.75	336. 3.75	324. 3.75	320. 3.75	317. 3.75	314. 3.83	311. 3.83	307. 3.83
HYDROGRAPH AT													
+	13B-2	.22	1	FLOW TIME	310. 3.67	304. 3.67	294. 3.67	283. 3.67	279. 3.67	277. 3.67	274. 3.67	271. 3.67	267. 3.67
2 COMBINED AT													
+	C13B-2	.47	1	FLOW TIME	634. 3.75	622. 3.75	602. 3.75	581. 3.75	573. 3.75	567. 3.75	563. 3.75	557. 3.75	549. 3.75
ROUTED TO													
+	RC13B-2	.47	1	FLOW TIME	641. 3.83	628. 3.83	607. 3.83	586. 3.83	578. 3.83	572. 3.83	568. 3.83	561. 3.83	553. 3.83
HYDROGRAPH AT													
+	19A	.25	1	FLOW TIME	318. 3.75	312. 3.75	301. 3.75	291. 3.75	287. 3.75	284. 3.75	282. 3.75	278. 3.75	274. 3.75
ROUTED TO													
+	R19A	.25	1	FLOW TIME	319. 3.92	313. 3.92	302. 3.92	292. 3.92	288. 3.92	285. 3.92	283. 3.92	280. 3.92	276. 3.92
HYDROGRAPH AT													
+	13A-1	.22	1	FLOW TIME	308. 3.75	303. 3.75	293. 3.75	283. 3.75	279. 3.75	277. 3.75	275. 3.75	272. 3.75	268. 3.75
2 COMBINED AT													
+	C13A-1	.48	1	FLOW TIME	595. 3.83	583. 3.83	564. 3.83	545. 3.83	537. 3.83	532. 3.83	528. 3.83	522. 3.83	514. 3.83
ROUTED TO													
+	RC13A-1	.48	1	FLOW TIME	581. 3.92	569. 3.92	551. 3.92	532. 3.92	524. 3.92	519. 3.92	515. 3.92	509. 3.92	502. 3.92
HYDROGRAPH AT													
+	13A-2	.19	1	FLOW TIME	272. 3.67	267. 3.67	258. 3.67	249. 3.67	246. 3.67	243. 3.67	241. 3.67	238. 3.67	235. 3.67
2 COMBINED AT													
+	C13A-2	.66	1	FLOW TIME	782. 3.83	766. 3.83	740. 3.83	715. 3.83	704. 3.83	697. 3.83	692. 3.83	684. 3.83	673. 3.83
ROUTED TO													
+	RC13A-2	.66	1	FLOW TIME	781. 3.92	765. 3.92	738. 3.92	712. 3.92	702. 3.92	694. 3.92	689. 3.92	681. 3.92	670. 3.92
HYDROGRAPH AT													
+	PIC-C	.24	1	FLOW TIME	280. 3.83	274. 3.83	265. 3.83	256. 3.83	252. 3.83	250. 3.83	248. 3.83	245. 3.83	241. 3.83
2 COMBINED AT													
+	CPIC-C	.91	1	FLOW TIME	1041. 3.92	1020. 3.92	985. 3.92	951. 3.92	937. 3.92	927. 3.92	920. 3.92	909. 3.92	895. 3.92
ROUTED TO													
+	RCPIC-C	.91	1	FLOW	1030.	1009.	975.	940.	922.	915.	908.	896.	881.

				ALTA-SDN3.OUT									
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
HYDROGRAPH AT													
+	PIC-A	.36	1	FLOW	356.	349.	338.	326.	322.	318.	316.	312.	308.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
2 COMBINED AT													
+	CPIC-A	1.27	1	FLOW	1386.	1359.	1313.	1266.	1243.	1233.	1224.	1208.	1188.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
2 COMBINED AT													
+	CCPIC-A	1.73	1	FLOW	1997.	1959.	1895.	1830.	1800.	1785.	1772.	1750.	1723.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
ROUTED TO													
+	RCCPIC-A	1.73	1	FLOW	1974.	1921.	1874.	1792.	1776.	1769.	1758.	1721.	1690.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT													
+	57B-1	.20	1	FLOW	199.	194.	186.	179.	176.	174.	172.	170.	167.
				TIME	3.67	3.67	3.67	3.67	3.75	3.75	3.75	3.75	3.75
2 COMBINED AT													
+	C57B-1	1.93	1	FLOW	2106.	2049.	2004.	1912.	1900.	1876.	1862.	1824.	1791.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	4.00	4.00	4.00
2 COMBINED AT													
+	CC57B-1	4.60	1	FLOW	4702.	4591.	4447.	4268.	4213.	4179.	4148.	4080.	4011.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
ROUTED TO													
+	RCC57B-1	4.60	1	FLOW	4694.	4583.	4439.	4260.	4205.	4170.	4139.	4071.	4002.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT													
+	57B-4	.20	1	FLOW	262.	257.	248.	239.	236.	233.	231.	229.	225.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
2 COMBINED AT													
+	C57B-4	4.80	1	FLOW	4813.	4700.	4553.	4371.	4314.	4278.	4246.	4177.	4107.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT													
+	PIC-B	.44	1	FLOW	442.	433.	419.	405.	399.	395.	392.	388.	382.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
ROUTED TO													
+	RPIC-B	.44	1	FLOW	439.	431.	416.	402.	396.	392.	390.	385.	379.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
2 COMBINED AT													
+	CC57B-4	5.24	1	FLOW	5243.	5122.	4961.	4765.	4702.	4663.	4628.	4554.	4479.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
ROUTED TO													
+	RCC57B-4	5.24	1	FLOW	5225.	5104.	4944.	4747.	4686.	4644.	4606.	4534.	4460.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT													
+	38A	.35	1	FLOW	374.	367.	355.	343.	338.	335.	333.	329.	324.
				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
ROUTED TO													
+	R38A	.35	1	FLOW	368.	364.	350.	337.	333.	331.	330.	327.	320.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
HYDROGRAPH AT													
+	38B	.44	1	FLOW	492.	483.	467.	452.	446.	442.	439.	434.	428.
				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
2 COMBINED AT													
+	C38B	.79	1	FLOW	856.	842.	810.	784.	775.	769.	764.	753.	740.
				TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT													
+	57BA	.32	1	FLOW	186.	180.	171.	163.	159.	157.	155.	152.	149.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
ROUTED TO													
+	R57BA	.32	1	FLOW	185.	179.	171.	162.	158.	156.	154.	151.	148.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
HYDROGRAPH AT													
+	3C	.15	1	FLOW	218.	214.	207.	201.	198.	196.	195.	193.	190.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
2 COMBINED AT													
+	C3C	.47	1	FLOW	358.	350.	335.	322.	316.	312.	309.	305.	299.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75

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ROUTED TO
+ RC3C .47 1 FLOW 358. 350. 336. 322. 316. 312. 310. 305. 300.
TIME 3.83 3.83 3.83 3.83 3.83 3.83 3.83 3.83 3.83

HYDROGRAPH AT
+ AP .67 1 FLOW 450. 438. 418. 398. 390. 385. 381. 375. 367.
TIME 3.83 3.83 3.83 3.83 3.83 3.83 3.83 3.83 3.83

5 COMBINED AT
+ ANGLPKIN 22.74 1 FLOW 16940. 16614. 16068. 15479. 15294. 15118. 14997. 14813. 14584.
TIME 3.92 3.92 3.92 3.92 3.92 3.92 3.92 3.92 3.92

ROUTED TO
+ ANGLPKDB 22.74 1 FLOW 5953. 5463. 4569. 3862. 3606. 3430. 3310. 3134. 2936.
TIME 5.42 5.50 5.58 5.75 5.83 5.83 5.92 6.00 6.08

** PEAK STAGES IN FEET **

1 STAGE 2620.21 2620.14 2620.01 2619.88 2619.83 2619.80 2619.78 2619.74 2619.71
TIME 5.42 5.50 5.58 5.75 5.83 5.83 5.92 6.00 6.08

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	DT (MIN)	INTERPOLATED TO COMPUTATION INTERVAL		VOLUME (IN)
							PEAK (CFS)	TIME TO PEAK (MIN)	
FOR PLAN = 1	RATIO=	.00							
R3-1	MANE	2.67	2312.79	243.40	2.37	5.00	2311.00	245.00	2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2811E+03 EXCESS= .0000E+00 OUTFLOW= .2812E+03 BASIN STORAGE= .7057E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00
R3-1	MANE	2.70
		2269.49
		242.74
		2.32
		5.00
		2269.47
		245.00
		2.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2751E+03 EXCESS= .0000E+00 OUTFLOW= .2751E+03 BASIN STORAGE= .7657E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00
R3-1	MANE	2.74
		2185.83
		243.50
		2.24
		5.00
		2184.24
		245.00
		2.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2651E+03 EXCESS= .0000E+00 OUTFLOW= .2651E+03 BASIN STORAGE= .7911E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00
R3-1	MANE	2.78
		2108.26
		241.58
		2.15
		5.00
		2104.30
		245.00
		2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2551E+03 EXCESS= .0000E+00 OUTFLOW= .2551E+03 BASIN STORAGE= .8044E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00
R3-1	MANE	2.79
		2078.61
		243.05
		2.12
		5.00
		2077.34
		245.00
		2.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2511E+03 EXCESS= .0000E+00 OUTFLOW= .2511E+03 BASIN STORAGE= .7668E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00
R3-1	MANE	2.81
		2053.14
		241.29
		2.10
		5.00
		2050.03
		245.00
		2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2483E+03 EXCESS= .0000E+00 OUTFLOW= .2483E+03 BASIN STORAGE= .7990E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00
R3-1	MANE	2.81
		2040.66
		242.04
		2.08
		5.00
		2038.22
		245.00
		2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2463E+03 EXCESS= .0000E+00 OUTFLOW= .2464E+03 BASIN STORAGE= .6825E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00
R3-1	MANE	2.83
		2014.32
		243.25
		2.05
		5.00
		2013.08
		245.00
		2.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2432E+03 EXCESS= .0000E+00 OUTFLOW= .2432E+03 BASIN STORAGE= .6882E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00
R3-1	MANE	2.85
		1983.59
		241.95
		2.02
		5.00
		1980.60
		245.00
		2.02

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .2392E+03 EXCESS= .0000E+00 OUTFLOW= .2392E+03 BASIN STORAGE= .8923E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.27 2380.40 247.72 2.36 5.00 2379.26 245.00 2.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3075E+03 EXCESS= .0000E+00 OUTFLOW= .3075E+03 BASIN STORAGE= .1013E-01 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.30 2345.75 245.24 2.31 5.00 2342.41 245.00 2.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3008E+03 EXCESS= .0000E+00 OUTFLOW= .3009E+03 BASIN STORAGE= .1024E-01 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.37 2260.70 244.49 2.22 5.00 2259.16 245.00 2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2899E+03 EXCESS= .0000E+00 OUTFLOW= .2899E+03 BASIN STORAGE= .1066E-01 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.43 2167.25 248.02 2.14 5.00 2162.14 245.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2788E+03 EXCESS= .0000E+00 OUTFLOW= .2789E+03 BASIN STORAGE= .1142E-01 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.45 2147.94 244.80 2.10 5.00 2147.40 245.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2745E+03 EXCESS= .0000E+00 OUTFLOW= .2745E+03 BASIN STORAGE= .8838E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.47 2116.25 246.04 2.08 5.00 2105.94 245.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2715E+03 EXCESS= .0000E+00 OUTFLOW= .2715E+03 BASIN STORAGE= .1060E-01 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.48 2099.65 246.59 2.06 5.00 2086.72 245.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2692E+03 EXCESS= .0000E+00 OUTFLOW= .2693E+03 BASIN STORAGE= .9971E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.50 2073.84 247.77 2.04 5.00 2065.69 245.00 2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2658E+03 EXCESS= .0000E+00 OUTFLOW= .2658E+03 BASIN STORAGE= .1131E-01 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.1 MANE 4.53 2043.80 244.79 2.00 5.00 2043.49 245.00 2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2614E+03 EXCESS= .0000E+00 OUTFLOW= .2615E+03 BASIN STORAGE= .1212E-01 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .53 2561.90 245.13 2.39 5.00 2561.61 245.00 2.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3542E+03 EXCESS= .0000E+00 OUTFLOW= .3542E+03 BASIN STORAGE= .1140E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .53 2521.55 245.56 2.34 5.00 2520.22 245.00 2.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3467E+03 EXCESS= .0000E+00 OUTFLOW= .3467E+03 BASIN STORAGE= .1167E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.3 MANE .54 2432.75 245.20 2.25 5.00 2431.94 245.00 2.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3342E+03 EXCESS= .0000E+00 OUTFLOW= .3342E+03 BASIN STORAGE= .1100E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RCP3.3	MANE	.55	2331.05	245.47	2.17	ALTA-SDN3.OUT 5.00	2330.21	245.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3216E+03 EXCESS= .0000E+00 OUTFLOW= .3216E+03 BASIN STORAGE= .1148E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.3	MANE	.55	2313.63	245.61	2.14	5.00	2312.17	245.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3167E+03 EXCESS= .0000E+00 OUTFLOW= .3167E+03 BASIN STORAGE= .1141E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.3	MANE	.55	2270.60	245.18	2.11	5.00	2269.74	245.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3132E+03 EXCESS= .0000E+00 OUTFLOW= .3132E+03 BASIN STORAGE= .1110E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.3	MANE	.55	2251.10	245.47	2.10	5.00	2249.43	245.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3107E+03 EXCESS= .0000E+00 OUTFLOW= .3107E+03 BASIN STORAGE= .1160E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.3	MANE	.56	2227.87	245.32	2.07	5.00	2226.63	245.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3068E+03 EXCESS= .0000E+00 OUTFLOW= .3068E+03 BASIN STORAGE= .1174E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.3	MANE	.56	2203.07	245.24	2.04	5.00	2201.67	245.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3019E+03 EXCESS= .0000E+00 OUTFLOW= .3019E+03 BASIN STORAGE= .1160E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	3.25	374.88	214.50	2.38	5.00	368.11	215.00	2.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2196E+02 EXCESS= .0000E+00 OUTFLOW= .2201E+02 BASIN STORAGE= .6410E-02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	3.50	376.36	213.50	2.33	5.00	363.09	215.00	2.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2156E+02 EXCESS= .0000E+00 OUTFLOW= .2161E+02 BASIN STORAGE= .5205E-02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	3.50	363.45	213.50	2.25	5.00	351.27	215.00	2.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2079E+02 EXCESS= .0000E+00 OUTFLOW= .2083E+02 BASIN STORAGE= .5137E-02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	3.75	351.19	213.75	2.17	5.00	339.83	215.00	2.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2003E+02 EXCESS= .0000E+00 OUTFLOW= .2008E+02 BASIN STORAGE= .6923E-02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	3.75	346.04	213.75	2.13	5.00	335.05	215.00	2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1972E+02 EXCESS= .0000E+00 OUTFLOW= .1977E+02 BASIN STORAGE= .6885E-02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	3.75	342.43	213.75	2.11	5.00	331.71	215.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1951E+02 EXCESS= .0000E+00 OUTFLOW= .1955E+02 BASIN STORAGE= .6859E-02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO= .00									
R3-3	MANE	3.75	339.86	213.75	2.09	5.00	329.32	215.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1935E+02 EXCESS= .0000E+00 OUTFLOW= .1940E+02 BASIN STORAGE= .6840E-02 PERCENT ERROR= -.3									

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FOR PLAN = 1	RATIO= .00								
R3-3	MANE	3.75	335.73	213.75	2.07	5.00	325.50	215.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1911E+02 EXCESS= .0000E+00 OUTFLOW= .1915E+02 BASIN STORAGE= .6809E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
R3-3	MANE	3.75	330.58	213.75	2.03	5.00	320.72	215.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1880E+02 EXCESS= .0000E+00 OUTFLOW= .1885E+02 BASIN STORAGE= .6770E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.50	749.58	213.50	2.41	5.00	729.73	215.00	2.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4430E+02 EXCESS= .0000E+00 OUTFLOW= .4439E+02 BASIN STORAGE= .8475E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.50	734.42	213.50	2.36	5.00	715.62	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4337E+02 EXCESS= .0000E+00 OUTFLOW= .4346E+02 BASIN STORAGE= .8409E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.50	709.14	213.50	2.27	5.00	692.08	215.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4182E+02 EXCESS= .0000E+00 OUTFLOW= .4190E+02 BASIN STORAGE= .8298E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.75	686.66	213.75	2.19	5.00	669.65	215.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4028E+02 EXCESS= .0000E+00 OUTFLOW= .4036E+02 BASIN STORAGE= .6852E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.75	676.54	213.75	2.16	5.00	660.15	215.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3967E+02 EXCESS= .0000E+00 OUTFLOW= .3974E+02 BASIN STORAGE= .6815E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.75	669.46	213.75	2.13	5.00	653.50	215.00	2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3924E+02 EXCESS= .0000E+00 OUTFLOW= .3931E+02 BASIN STORAGE= .6789E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.75	664.40	213.75	2.12	5.00	648.75	215.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3893E+02 EXCESS= .0000E+00 OUTFLOW= .3900E+02 BASIN STORAGE= .6771E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.75	656.31	213.75	2.09	5.00	641.15	215.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3844E+02 EXCESS= .0000E+00 OUTFLOW= .3851E+02 BASIN STORAGE= .6740E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-4	MANE	3.75	646.19	213.75	2.06	5.00	631.64	215.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3782E+02 EXCESS= .0000E+00 OUTFLOW= .3790E+02 BASIN STORAGE= .6703E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
R3-5	MANE	2.92	620.66	212.92	2.35	5.00	601.40	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3678E+02 EXCESS= .0000E+00 OUTFLOW= .3681E+02 BASIN STORAGE= .3514E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
R3-5	MANE	2.94	596.05	214.50	2.30	5.00	586.87	215.00	2.30

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .3591E+02 EXCESS= .0000E+00 OUTFLOW= .3595E+02 BASIN STORAGE= .3501E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 2.98 577.94 214.27 2.21 5.00 566.11 215.00 2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3460E+02 EXCESS= .0000E+00 OUTFLOW= .3464E+02 BASIN STORAGE= .3896E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.02 559.29 214.09 2.13 5.00 546.25 215.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3331E+02 EXCESS= .0000E+00 OUTFLOW= .3335E+02 BASIN STORAGE= .4267E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.03 543.67 212.22 2.10 5.00 542.35 215.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3287E+02 EXCESS= .0000E+00 OUTFLOW= .3290E+02 BASIN STORAGE= .3075E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.04 552.78 213.03 2.08 5.00 536.73 215.00 2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3251E+02 EXCESS= .0000E+00 OUTFLOW= .3255E+02 BASIN STORAGE= .3961E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.05 544.85 213.62 2.06 5.00 529.47 215.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3220E+02 EXCESS= .0000E+00 OUTFLOW= .3223E+02 BASIN STORAGE= .3461E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.07 532.15 214.57 2.03 5.00 525.37 215.00 2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3180E+02 EXCESS= .0000E+00 OUTFLOW= .3184E+02 BASIN STORAGE= .4047E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-5 MANE 3.08 527.35 212.70 2.00 5.00 516.83 215.00 2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3133E+02 EXCESS= .0000E+00 OUTFLOW= .3137E+02 BASIN STORAGE= .2881E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.53 1650.92 217.37 2.38 5.00 1649.78 215.00 2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1032E+03 EXCESS= .0000E+00 OUTFLOW= .1033E+03 BASIN STORAGE= .4157E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.55 1618.62 216.42 2.33 5.00 1594.49 215.00 2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1009E+03 EXCESS= .0000E+00 OUTFLOW= .1010E+03 BASIN STORAGE= .4004E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.58 1563.67 216.58 2.24 5.00 1538.95 215.00 2.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9727E+02 EXCESS= .0000E+00 OUTFLOW= .9734E+02 BASIN STORAGE= .3694E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.61 1511.30 216.68 2.16 5.00 1483.77 215.00 2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9369E+02 EXCESS= .0000E+00 OUTFLOW= .9374E+02 BASIN STORAGE= .4645E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.62 1496.98 217.61 2.13 5.00 1483.61 215.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9237E+02 EXCESS= .0000E+00 OUTFLOW= .9243E+02 BASIN STORAGE= .3548E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.63 1475.90 215.80 2.11 5.00 1453.02 215.00 2.10

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .9123E+02 EXCESS= .0000E+00 OUTFLOW= .9129E+02 BASIN STORAGE= .4285E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.64 1463.67 216.55 2.09 5.00 1434.74 215.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9045E+02 EXCESS= .0000E+00 OUTFLOW= .9051E+02 BASIN STORAGE= .4974E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.65 1451.90 217.37 2.07 5.00 1429.08 215.00 2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8949E+02 EXCESS= .0000E+00 OUTFLOW= .8955E+02 BASIN STORAGE= .4089E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.2 MANE 2.67 1423.59 215.94 2.03 5.00 1397.42 215.00 2.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8787E+02 EXCESS= .0000E+00 OUTFLOW= .8793E+02 BASIN STORAGE= .4247E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.33 4655.99 220.72 2.41 5.00 4625.98 220.00 2.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5621E+03 EXCESS= .0000E+00 OUTFLOW= .5621E+03 BASIN STORAGE= .3211E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.34 4528.25 220.21 2.36 5.00 4516.65 220.00 2.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5501E+03 EXCESS= .0000E+00 OUTFLOW= .5501E+03 BASIN STORAGE= .3760E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.36 4377.84 220.45 2.27 5.00 4351.86 220.00 2.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5304E+03 EXCESS= .0000E+00 OUTFLOW= .5305E+03 BASIN STORAGE= .3313E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.38 4226.58 220.65 2.19 5.00 4193.48 220.00 2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5109E+03 EXCESS= .0000E+00 OUTFLOW= .5109E+03 BASIN STORAGE= .3541E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.38 4186.11 221.44 2.16 5.00 4161.35 220.00 2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5035E+03 EXCESS= .0000E+00 OUTFLOW= .5035E+03 BASIN STORAGE= .3412E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.39 4126.55 221.33 2.13 5.00 4093.85 220.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4976E+03 EXCESS= .0000E+00 OUTFLOW= .4976E+03 BASIN STORAGE= .3309E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.40 4089.82 220.54 2.12 5.00 4060.41 220.00 2.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4936E+03 EXCESS= .0000E+00 OUTFLOW= .4937E+03 BASIN STORAGE= .3467E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.40 4061.73 221.24 2.09 5.00 4024.55 220.00 2.09

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4880E+03 EXCESS= .0000E+00 OUTFLOW= .4880E+03 BASIN STORAGE= .3786E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.4 MANE 1.41 3966.31 221.62 2.06 5.00 3945.04 220.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4797E+03 EXCESS= .0000E+00 OUTFLOW= .4797E+03 BASIN STORAGE= .3380E-02 PERCENT ERROR= .0

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FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	189.75	217.00	2.36	5.00	187.55	220.00	2.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1112E+02 EXCESS= .0000E+00 OUTFLOW= .1118E+02 BASIN STORAGE= .9511E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	185.75	217.00	2.31	5.00	184.17	220.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1089E+02 EXCESS= .0000E+00 OUTFLOW= .1095E+02 BASIN STORAGE= .9455E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	179.09	217.00	2.23	5.00	178.51	220.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1050E+02 EXCESS= .0000E+00 OUTFLOW= .1056E+02 BASIN STORAGE= .9358E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	172.86	220.50	2.15	5.00	172.80	220.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1011E+02 EXCESS= .0000E+00 OUTFLOW= .1017E+02 BASIN STORAGE= .9260E-02 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	170.63	220.50	2.12	5.00	170.50	220.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9952E+01 EXCESS= .0000E+00 OUTFLOW= .1001E+02 BASIN STORAGE= .9220E-02 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	169.05	220.50	2.09	5.00	168.89	220.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9843E+01 EXCESS= .0000E+00 OUTFLOW= .9901E+01 BASIN STORAGE= .9191E-02 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.50	167.92	220.50	2.08	5.00	167.73	220.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9766E+01 EXCESS= .0000E+00 OUTFLOW= .9823E+01 BASIN STORAGE= .9171E-02 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.75	164.95	217.50	2.05	5.00	163.11	220.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9650E+01 EXCESS= .0000E+00 OUTFLOW= .9706E+01 BASIN STORAGE= .1162E-01 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO=	.00							
R3-6	MANE	3.75	162.38	217.50	2.02	5.00	160.80	220.00	2.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9496E+01 EXCESS= .0000E+00 OUTFLOW= .9549E+01 BASIN STORAGE= .1157E-01 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	374.64	214.27	2.27	5.00	356.78	210.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2068E+02 EXCESS= .0000E+00 OUTFLOW= .2072E+02 BASIN STORAGE= .3650E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	367.86	211.25	2.22	5.00	348.18	210.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2023E+02 EXCESS= .0000E+00 OUTFLOW= .2027E+02 BASIN STORAGE= .3287E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.31	363.28	211.94	2.13	5.00	334.32	210.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1947E+02 EXCESS= .0000E+00 OUTFLOW= .1951E+02 BASIN STORAGE= .3053E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	341.63	211.25	2.05	5.00	323.08	210.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1875E+02 EXCESS= .0000E+00 OUTFLOW= .1878E+02 BASIN STORAGE= .3202E-02 PERCENT ERROR= -.2									

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FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	336.39	211.25	2.02	5.00	318.77	215.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1845E+02 EXCESS= .0000E+00 OUTFLOW= .1849E+02 BASIN STORAGE= .3185E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	332.73	211.25	2.00	5.00	315.77	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1825E+02 EXCESS= .0000E+00 OUTFLOW= .1828E+02 BASIN STORAGE= .3173E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	330.11	211.25	1.98	5.00	313.63	215.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1810E+02 EXCESS= .0000E+00 OUTFLOW= .1814E+02 BASIN STORAGE= .3164E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	325.92	211.25	1.96	5.00	310.20	215.00	1.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1787E+02 EXCESS= .0000E+00 OUTFLOW= .1790E+02 BASIN STORAGE= .3150E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	3.25	320.69	211.25	1.93	5.00	305.91	215.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1758E+02 EXCESS= .0000E+00 OUTFLOW= .1761E+02 BASIN STORAGE= .3132E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.23	407.13	220.18	2.14	5.00	405.98	220.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2799E+02 EXCESS= .0000E+00 OUTFLOW= .2802E+02 BASIN STORAGE= .5348E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.27	391.41	217.82	2.09	5.00	387.76	220.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2732E+02 EXCESS= .0000E+00 OUTFLOW= .2735E+02 BASIN STORAGE= .6000E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.33	378.55	221.07	2.01	5.00	375.20	220.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2627E+02 EXCESS= .0000E+00 OUTFLOW= .2630E+02 BASIN STORAGE= .7261E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.40	371.83	220.08	1.94	5.00	371.24	220.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2532E+02 EXCESS= .0000E+00 OUTFLOW= .2535E+02 BASIN STORAGE= .6157E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.43	356.86	221.47	1.90	5.00	353.80	220.00	1.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2482E+02 EXCESS= .0000E+00 OUTFLOW= .2485E+02 BASIN STORAGE= .7096E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.45	352.93	218.01	1.88	5.00	350.16	220.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2455E+02 EXCESS= .0000E+00 OUTFLOW= .2458E+02 BASIN STORAGE= .6111E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.46	357.07	218.71	1.87	5.00	351.96	220.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2440E+02 EXCESS= .0000E+00 OUTFLOW= .2443E+02 BASIN STORAGE= .7770E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
R3-7	MANE	4.49	356.50	219.85	1.84	5.00	355.58	220.00	1.85

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .2410E+02 EXCESS= .0000E+00 OUTFLOW= .2413E+02 BASIN STORAGE= .6596E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
R3-J MANE 4.52 341.84 221.30 1.81 5.00 337.72 220.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2362E+02 EXCESS= .0000E+00 OUTFLOW= .2365E+02 BASIN STORAGE= .7521E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.20 884.43 216.38 2.23 5.00 864.76 215.00 2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6003E+02 EXCESS= .0000E+00 OUTFLOW= .6004E+02 BASIN STORAGE= .1467E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.20 859.02 216.85 2.17 5.00 843.71 215.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5858E+02 EXCESS= .0000E+00 OUTFLOW= .5858E+02 BASIN STORAGE= .1343E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.22 831.71 216.40 2.09 5.00 811.68 215.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5641E+02 EXCESS= .0000E+00 OUTFLOW= .5642E+02 BASIN STORAGE= .1424E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.24 804.96 216.51 2.02 5.00 783.48 215.00 2.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5446E+02 EXCESS= .0000E+00 OUTFLOW= .5447E+02 BASIN STORAGE= .1554E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.25 783.97 216.88 1.98 5.00 766.46 215.00 1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5338E+02 EXCESS= .0000E+00 OUTFLOW= .5338E+02 BASIN STORAGE= .1564E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.25 783.71 216.31 1.96 5.00 762.48 215.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5279E+02 EXCESS= .0000E+00 OUTFLOW= .5279E+02 BASIN STORAGE= .1387E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.25 777.27 216.63 1.95 5.00 755.92 215.00 1.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5246E+02 EXCESS= .0000E+00 OUTFLOW= .5246E+02 BASIN STORAGE= .1353E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.26 772.90 216.23 1.92 5.00 749.59 215.00 1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5188E+02 EXCESS= .0000E+00 OUTFLOW= .5189E+02 BASIN STORAGE= .1428E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.5 MANE 1.27 748.76 216.84 1.89 5.00 728.91 215.00 1.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5083E+02 EXCESS= .0000E+00 OUTFLOW= .5083E+02 BASIN STORAGE= .1387E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.00 1126.68 219.09 2.40 5.00 1118.62 220.00 2.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8172E+02 EXCESS= .0000E+00 OUTFLOW= .8176E+02 BASIN STORAGE= .4399E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-8 MANE 3.02 1103.08 220.67 2.35 5.00 1102.07 220.00 2.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8002E+02 EXCESS= .0000E+00 OUTFLOW= .8005E+02 BASIN STORAGE= .4359E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00

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R3-8	MANE	3.06	1066.78	220.33	2.27	5.00	1064.96	220.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7714E+02 EXCESS= .0000E+00 OUTFLOW= .7717E+02 BASIN STORAGE= .3354E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R3-8	MANE	3.10	1029.53	220.05	2.18	5.00	1029.15	220.00	2.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7427E+02 EXCESS= .0000E+00 OUTFLOW= .7431E+02 BASIN STORAGE= .3631E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
R3-8	MANE	3.12	1017.54	218.08	2.15	5.00	1013.50	220.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7316E+02 EXCESS= .0000E+00 OUTFLOW= .7320E+02 BASIN STORAGE= .4008E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
R3-8	MANE	3.13	1004.28	218.89	2.12	5.00	997.87	220.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7234E+02 EXCESS= .0000E+00 OUTFLOW= .7237E+02 BASIN STORAGE= .3339E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
R3-8	MANE	3.14	995.00	219.47	2.11	5.00	990.40	220.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7176E+02 EXCESS= .0000E+00 OUTFLOW= .7179E+02 BASIN STORAGE= .4184E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
R3-8	MANE	3.15	983.24	220.41	2.08	5.00	981.04	220.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7085E+02 EXCESS= .0000E+00 OUTFLOW= .7088E+02 BASIN STORAGE= .3387E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
R3-8	MANE	3.17	971.99	218.45	2.05	5.00	966.45	220.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6974E+02 EXCESS= .0000E+00 OUTFLOW= .6977E+02 BASIN STORAGE= .3725E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.58	3314.16	220.74	2.41	5.00	3295.38	220.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2546E+03 EXCESS= .0000E+00 OUTFLOW= .2546E+03 BASIN STORAGE= .2976E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.59	3248.42	220.84	2.35	5.00	3227.38	220.00	2.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2491E+03 EXCESS= .0000E+00 OUTFLOW= .2491E+03 BASIN STORAGE= .2954E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.61	3144.70	221.87	2.27	5.00	3118.63	220.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2404E+03 EXCESS= .0000E+00 OUTFLOW= .2404E+03 BASIN STORAGE= .3586E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.63	3052.88	221.20	2.19	5.00	3016.02	220.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2319E+03 EXCESS= .0000E+00 OUTFLOW= .2319E+03 BASIN STORAGE= .3548E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.64	2992.89	221.05	2.16	5.00	2966.69	220.00	2.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2281E+03 EXCESS= .0000E+00 OUTFLOW= .2281E+03 BASIN STORAGE= .3598E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3.6	MANE	1.64	2963.36	221.89	2.13	5.00	2932.72	220.00	2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2257E+03 EXCESS= .0000E+00 OUTFLOW= .2258E+03 BASIN STORAGE= .2929E-02 PERCENT ERROR= .0									

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FOR PLAN = 1	RATIO= .00								
RCP3.6	MANE	1.65	2932.57	220.80	2.12	5.00	2915.17	220.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2241E+03 EXCESS= .0000E+00 OUTFLOW= .2241E+03 BASIN STORAGE= .2965E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP3.6	MANE	1.65	2929.30	221.45	2.09	5.00	2883.28	220.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2214E+03 EXCESS= .0000E+00 OUTFLOW= .2215E+03 BASIN STORAGE= .3394E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP3.6	MANE	1.66	2869.52	221.41	2.06	5.00	2829.40	220.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2177E+03 EXCESS= .0000E+00 OUTFLOW= .2177E+03 BASIN STORAGE= .3377E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.53	479.65	215.83	2.59	5.00	475.03	215.00	2.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3230E+02 EXCESS= .0000E+00 OUTFLOW= .3231E+02 BASIN STORAGE= .2281E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.54	470.99	215.84	2.54	5.00	466.45	215.00	2.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3168E+02 EXCESS= .0000E+00 OUTFLOW= .3169E+02 BASIN STORAGE= .2315E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.56	454.51	215.39	2.46	5.00	452.65	215.00	2.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3065E+02 EXCESS= .0000E+00 OUTFLOW= .3066E+02 BASIN STORAGE= .2186E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.58	443.91	216.56	2.38	5.00	438.21	215.00	2.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2962E+02 EXCESS= .0000E+00 OUTFLOW= .2963E+02 BASIN STORAGE= .2024E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.59	437.12	216.09	2.35	5.00	431.94	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2920E+02 EXCESS= .0000E+00 OUTFLOW= .2921E+02 BASIN STORAGE= .2337E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.59	429.72	215.29	2.32	5.00	428.47	215.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2892E+02 EXCESS= .0000E+00 OUTFLOW= .2892E+02 BASIN STORAGE= .2359E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.60	429.18	215.86	2.31	5.00	425.31	215.00	2.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2870E+02 EXCESS= .0000E+00 OUTFLOW= .2871E+02 BASIN STORAGE= .2033E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.61	423.85	216.79	2.28	5.00	420.97	215.00	2.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2838E+02 EXCESS= .0000E+00 OUTFLOW= .2839E+02 BASIN STORAGE= .2575E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R3-M	MANE	1.61	420.67	216.35	2.25	5.00	414.62	215.00	2.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2797E+02 EXCESS= .0000E+00 OUTFLOW= .2798E+02 BASIN STORAGE= .2280E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCSWAA-1	MANE	1.02	2965.02	271.26	2.43	5.00	2959.46	275.00	2.43

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .9428E+03 EXCESS= .0000E+00 OUTFLOW= .9428E+03 BASIN STORAGE= .3022E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-1 MANE 1.03 2862.15 291.50 2.38 5.00 2860.00 290.00 2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9231E+03 EXCESS= .0000E+00 OUTFLOW= .9231E+03 BASIN STORAGE= .2775E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-1 MANE 1.08 2561.88 300.33 2.29 5.00 2561.72 300.00 2.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8904E+03 EXCESS= .0000E+00 OUTFLOW= .8904E+03 BASIN STORAGE= .2825E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-1 MANE 1.12 2337.00 296.06 2.21 5.00 2335.80 295.00 2.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8584E+03 EXCESS= .0000E+00 OUTFLOW= .8584E+03 BASIN STORAGE= .2883E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-1 MANE 1.12 2307.71 296.41 2.18 5.00 2306.88 295.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8456E+03 EXCESS= .0000E+00 OUTFLOW= .8456E+03 BASIN STORAGE= .3009E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-1 MANE 1.13 2285.09 296.45 2.15 5.00 2284.27 295.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8360E+03 EXCESS= .0000E+00 OUTFLOW= .8361E+03 BASIN STORAGE= .2803E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-1 MANE 1.13 2271.16 296.07 2.14 5.00 2269.97 295.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8297E+03 EXCESS= .0000E+00 OUTFLOW= .8297E+03 BASIN STORAGE= .2748E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-1 MANE 1.13 2248.49 296.13 2.11 5.00 2247.31 295.00 2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8201E+03 EXCESS= .0000E+00 OUTFLOW= .8201E+03 BASIN STORAGE= .2801E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-1 MANE 1.14 2220.09 295.35 2.08 5.00 2219.84 295.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8064E+03 EXCESS= .0000E+00 OUTFLOW= .8064E+03 BASIN STORAGE= .2868E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.45 3194.35 290.81 2.43 5.00 3193.61 290.00 2.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1032E+04 EXCESS= .0000E+00 OUTFLOW= .1032E+04 BASIN STORAGE= .4703E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.46 3106.44 228.27 2.37 5.00 3103.53 230.00 2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1011E+04 EXCESS= .0000E+00 OUTFLOW= .1011E+04 BASIN STORAGE= .4649E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.47 3042.40 228.62 2.29 5.00 3042.25 230.00 2.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9751E+03 EXCESS= .0000E+00 OUTFLOW= .9752E+03 BASIN STORAGE= .4502E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.49 2982.11 230.45 2.21 5.00 2981.62 230.00 2.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9402E+03 EXCESS= .0000E+00 OUTFLOW= .9402E+03 BASIN STORAGE= .4383E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.49 2959.09 231.19 2.18 5.00 2956.16 230.00 2.18

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .9262E+03 EXCESS= .0000E+00 OUTFLOW= .9263E+03 BASIN STORAGE= .4710E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.50 2939.08 230.26 2.15 5.00 2938.72 230.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9158E+03 EXCESS= .0000E+00 OUTFLOW= .9159E+03 BASIN STORAGE= .4675E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.50 2927.79 230.65 2.14 5.00 2926.25 230.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9088E+03 EXCESS= .0000E+00 OUTFLOW= .9089E+03 BASIN STORAGE= .4275E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.50 2909.58 231.26 2.11 5.00 2906.07 230.00 2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8983E+03 EXCESS= .0000E+00 OUTFLOW= .8984E+03 BASIN STORAGE= .4103E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSWAA-2 MANE 1.51 2880.17 230.65 2.08 5.00 2878.44 230.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8835E+03 EXCESS= .0000E+00 OUTFLOW= .8835E+03 BASIN STORAGE= .4021E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.74 466.94 212.17 2.65 5.00 460.95 215.00 2.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3136E+02 EXCESS= .0000E+00 OUTFLOW= .3137E+02 BASIN STORAGE= .2462E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.75 458.93 213.70 2.60 5.00 452.31 215.00 2.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3078E+02 EXCESS= .0000E+00 OUTFLOW= .3079E+02 BASIN STORAGE= .2628E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.77 445.55 212.79 2.51 5.00 439.91 215.00 2.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2978E+02 EXCESS= .0000E+00 OUTFLOW= .2979E+02 BASIN STORAGE= .2804E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.80 432.02 213.71 2.43 5.00 425.22 215.00 2.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2880E+02 EXCESS= .0000E+00 OUTFLOW= .2881E+02 BASIN STORAGE= .2246E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.81 426.49 213.01 2.40 5.00 421.05 215.00 2.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2839E+02 EXCESS= .0000E+00 OUTFLOW= .2841E+02 BASIN STORAGE= .2652E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.81 422.44 213.79 2.38 5.00 416.28 215.00 2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2813E+02 EXCESS= .0000E+00 OUTFLOW= .2814E+02 BASIN STORAGE= .2236E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.82 419.35 212.54 2.36 5.00 414.65 215.00 2.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2792E+02 EXCESS= .0000E+00 OUTFLOW= .2793E+02 BASIN STORAGE= .2427E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCP3.8 MANE 1.82 415.92 213.45 2.33 5.00 409.06 215.00 2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2762E+02 EXCESS= .0000E+00 OUTFLOW= .2763E+02 BASIN STORAGE= .2447E-02 PERCENT ERROR= -.1

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FOR PLAN = 1	RATIO=	.00							
RCP3.8	MANE	1.83	409.68	212.77	2.30	5.00	405.10	215.00	2.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2722E+02 EXCESS= .0000E+00 OUTFLOW= .2723E+02 BASIN STORAGE= .2342E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.70	1279.96	225.58	2.12	5.00	1277.33	225.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1089E+03 EXCESS= .0000E+00 OUTFLOW= .1089E+03 BASIN STORAGE= .1414E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.71	1251.96	225.41	2.07	5.00	1249.75	225.00	2.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1065E+03 EXCESS= .0000E+00 OUTFLOW= .1065E+03 BASIN STORAGE= .1505E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.72	1205.50	225.16	1.99	5.00	1204.42	225.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1025E+03 EXCESS= .0000E+00 OUTFLOW= .1025E+03 BASIN STORAGE= .1380E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.73	1162.19	225.72	1.92	5.00	1159.50	225.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9845E+02 EXCESS= .0000E+00 OUTFLOW= .9845E+02 BASIN STORAGE= .1414E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.74	1143.87	225.67	1.89	5.00	1141.21	225.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9685E+02 EXCESS= .0000E+00 OUTFLOW= .9685E+02 BASIN STORAGE= .1419E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.74	1129.32	225.20	1.86	5.00	1128.10	225.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9573E+02 EXCESS= .0000E+00 OUTFLOW= .9574E+02 BASIN STORAGE= .1493E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.74	1120.23	225.92	1.85	5.00	1119.07	225.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9494E+02 EXCESS= .0000E+00 OUTFLOW= .9494E+02 BASIN STORAGE= .1451E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.74	1107.40	225.61	1.82	5.00	1104.84	225.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9366E+02 EXCESS= .0000E+00 OUTFLOW= .9366E+02 BASIN STORAGE= .1415E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-A	MANE	.75	1089.27	225.59	1.79	5.00	1086.73	225.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9207E+02 EXCESS= .0000E+00 OUTFLOW= .9207E+02 BASIN STORAGE= .1404E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.31	327.74	215.63	2.80	5.00	323.37	215.00	2.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2339E+02 EXCESS= .0000E+00 OUTFLOW= .2339E+02 BASIN STORAGE= .1664E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.32	322.71	215.81	2.75	5.00	317.72	215.00	2.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2296E+02 EXCESS= .0000E+00 OUTFLOW= .2296E+02 BASIN STORAGE= .1568E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.34	312.87	215.70	2.66	5.00	308.27	215.00	2.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2224E+02 EXCESS= .0000E+00 OUTFLOW= .2225E+02 BASIN STORAGE= .1674E-02 PERCENT ERROR= .0									

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FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.36	303.20	215.64	2.58	5.00	298.89	215.00	2.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2152E+02 EXCESS= .0000E+00 OUTFLOW= .2153E+02 BASIN STORAGE= .1719E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.36	299.35	216.72	2.54	5.00	295.62	215.00	2.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2124E+02 EXCESS= .0000E+00 OUTFLOW= .2124E+02 BASIN STORAGE= .1544E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.37	298.40	216.11	2.52	5.00	292.82	215.00	2.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2104E+02 EXCESS= .0000E+00 OUTFLOW= .2104E+02 BASIN STORAGE= .1524E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.37	295.28	216.66	2.50	5.00	291.19	215.00	2.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2089E+02 EXCESS= .0000E+00 OUTFLOW= .2090E+02 BASIN STORAGE= .1572E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.38	293.68	216.18	2.47	5.00	288.04	215.00	2.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2066E+02 EXCESS= .0000E+00 OUTFLOW= .2067E+02 BASIN STORAGE= .1515E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-B	MANE	1.38	289.02	215.92	2.44	5.00	283.77	215.00	2.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2038E+02 EXCESS= .0000E+00 OUTFLOW= .2038E+02 BASIN STORAGE= .1608E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.33	533.78	210.43	2.89	5.00	533.50	215.00	2.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3700E+02 EXCESS= .0000E+00 OUTFLOW= .3700E+02 BASIN STORAGE= .4573E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.33	525.08	210.51	2.83	5.00	524.47	215.00	2.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3635E+02 EXCESS= .0000E+00 OUTFLOW= .3635E+02 BASIN STORAGE= .4507E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.33	510.42	210.57	2.75	5.00	509.86	215.00	2.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3526E+02 EXCESS= .0000E+00 OUTFLOW= .3526E+02 BASIN STORAGE= .4543E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.33	495.75	210.68	2.66	5.00	495.53	215.00	2.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3417E+02 EXCESS= .0000E+00 OUTFLOW= .3417E+02 BASIN STORAGE= .4499E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.34	489.89	210.67	2.63	5.00	489.64	215.00	2.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3373E+02 EXCESS= .0000E+00 OUTFLOW= .3373E+02 BASIN STORAGE= .4682E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.34	485.75	214.76	2.61	5.00	485.40	215.00	2.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3342E+02 EXCESS= .0000E+00 OUTFLOW= .3342E+02 BASIN STORAGE= .4675E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R3-G1	MANE	.34	482.86	214.94	2.59	5.00	482.59	215.00	2.59

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .3321E+02 EXCESS= .0000E+00 OUTFLOW= .3321E+02 BASIN STORAGE= .4710E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .34 478.15 214.76 2.56 5.00 477.82 215.00 2.57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3286E+02 EXCESS= .0000E+00 OUTFLOW= .3286E+02 BASIN STORAGE= .4819E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-G1 MANE .34 472.30 214.79 2.53 5.00 471.92 215.00 2.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3242E+02 EXCESS= .0000E+00 OUTFLOW= .3242E+02 BASIN STORAGE= .4455E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .65 673.96 214.97 2.34 5.00 673.87 215.00 2.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1978E+03 EXCESS= .0000E+00 OUTFLOW= .1978E+03 BASIN STORAGE= .9690E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .65 664.08 214.91 2.30 5.00 663.91 215.00 2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1936E+03 EXCESS= .0000E+00 OUTFLOW= .1937E+03 BASIN STORAGE= .9656E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .66 648.64 214.99 2.22 5.00 648.63 215.00 2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1869E+03 EXCESS= .0000E+00 OUTFLOW= .1869E+03 BASIN STORAGE= .9689E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .66 632.44 215.14 2.13 5.00 632.14 215.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1801E+03 EXCESS= .0000E+00 OUTFLOW= .1801E+03 BASIN STORAGE= .9705E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .67 625.53 215.35 2.10 5.00 625.25 215.00 2.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1774E+03 EXCESS= .0000E+00 OUTFLOW= .1774E+03 BASIN STORAGE= .9704E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .67 620.93 215.33 2.08 5.00 620.58 215.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1755E+03 EXCESS= .0000E+00 OUTFLOW= .1755E+03 BASIN STORAGE= .9697E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .67 618.16 215.09 2.06 5.00 617.93 215.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1741E+03 EXCESS= .0000E+00 OUTFLOW= .1741E+03 BASIN STORAGE= .9631E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .67 612.83 215.15 2.04 5.00 612.49 215.00 2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1720E+03 EXCESS= .0000E+00 OUTFLOW= .1720E+03 BASIN STORAGE= .9710E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-G1 MANE .68 605.98 215.39 2.01 5.00 605.64 215.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1693E+03 EXCESS= .0000E+00 OUTFLOW= .1693E+03 BASIN STORAGE= .9639E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3-Q2 MANE .52 874.93 215.56 2.29 5.00 872.94 215.00 2.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2111E+03 EXCESS= .0000E+00 OUTFLOW= .2111E+03 BASIN STORAGE= .8643E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

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RCP3-Q2	MANE	.53	860.47	215.46	2.24	5.00	857.83	215.00	2.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2067E+03 EXCESS= .0000E+00 OUTFLOW= .2067E+03 BASIN STORAGE= .8698E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-Q2	MANE	.53	835.69	215.19	2.16	5.00	833.86	215.00	2.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1993E+03 EXCESS= .0000E+00 OUTFLOW= .1993E+03 BASIN STORAGE= .8666E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-Q2	MANE	.54	811.14	215.62	2.08	5.00	809.65	215.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1920E+03 EXCESS= .0000E+00 OUTFLOW= .1920E+03 BASIN STORAGE= .8705E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-Q2	MANE	.54	801.12	215.62	2.05	5.00	799.56	215.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1891E+03 EXCESS= .0000E+00 OUTFLOW= .1891E+03 BASIN STORAGE= .8665E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-Q2	MANE	.54	794.41	215.28	2.03	5.00	792.11	215.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1870E+03 EXCESS= .0000E+00 OUTFLOW= .1870E+03 BASIN STORAGE= .8643E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-Q2	MANE	.54	789.67	215.20	2.01	5.00	787.78	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1856E+03 EXCESS= .0000E+00 OUTFLOW= .1856E+03 BASIN STORAGE= .8659E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-Q2	MANE	.55	783.31	215.53	1.99	5.00	780.52	215.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1833E+03 EXCESS= .0000E+00 OUTFLOW= .1833E+03 BASIN STORAGE= .8660E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-Q2	MANE	.55	773.34	215.55	1.95	5.00	770.60	215.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1804E+03 EXCESS= .0000E+00 OUTFLOW= .1804E+03 BASIN STORAGE= .8716E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	.47	1126.66	215.39	2.31	5.00	1123.87	215.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2286E+03 EXCESS= .0000E+00 OUTFLOW= .2286E+03 BASIN STORAGE= .8540E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	.47	1107.17	215.49	2.27	5.00	1104.95	215.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2238E+03 EXCESS= .0000E+00 OUTFLOW= .2238E+03 BASIN STORAGE= .8526E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	.47	1074.52	215.11	2.19	5.00	1073.06	215.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2159E+03 EXCESS= .0000E+00 OUTFLOW= .2159E+03 BASIN STORAGE= .8535E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	.48	1043.93	215.27	2.11	5.00	1041.28	215.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2081E+03 EXCESS= .0000E+00 OUTFLOW= .2081E+03 BASIN STORAGE= .8574E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP3-H1	MANE	.48	1031.58	215.38	2.08	5.00	1028.73	215.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2049E+03 EXCESS= .0000E+00 OUTFLOW= .2049E+03 BASIN STORAGE= .8590E-03 PERCENT ERROR= .0									

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FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	.48	1021.16	215.21	2.05	5.00	1018.89	215.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2027E+03 EXCESS= .0000E+00 OUTFLOW= .2027E+03 BASIN STORAGE= .8582E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	.49	1015.33	215.21	2.04	5.00	1013.01	215.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2012E+03 EXCESS= .0000E+00 OUTFLOW= .2012E+03 BASIN STORAGE= .8536E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	.49	1006.00	215.54	2.01	5.00	1004.14	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1987E+03 EXCESS= .0000E+00 OUTFLOW= .1987E+03 BASIN STORAGE= .8569E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-H1	MANE	.49	992.73	215.17	1.98	5.00	990.71	215.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1956E+03 EXCESS= .0000E+00 OUTFLOW= .1956E+03 BASIN STORAGE= .8574E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.52	2100.96	215.59	2.39	5.00	2089.69	215.00	2.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3031E+03 EXCESS= .0000E+00 OUTFLOW= .3031E+03 BASIN STORAGE= .1220E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.52	2066.35	215.54	2.34	5.00	2053.98	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2970E+03 EXCESS= .0000E+00 OUTFLOW= .2970E+03 BASIN STORAGE= .1220E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.53	2004.78	215.42	2.26	5.00	1993.14	215.00	2.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2867E+03 EXCESS= .0000E+00 OUTFLOW= .2868E+03 BASIN STORAGE= .1229E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.54	1943.68	215.45	2.18	5.00	1931.94	215.00	2.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2766E+03 EXCESS= .0000E+00 OUTFLOW= .2766E+03 BASIN STORAGE= .1220E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.54	1919.36	215.39	2.15	5.00	1908.34	215.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2725E+03 EXCESS= .0000E+00 OUTFLOW= .2725E+03 BASIN STORAGE= .1225E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.54	1899.07	215.70	2.13	5.00	1889.74	215.00	2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2697E+03 EXCESS= .0000E+00 OUTFLOW= .2697E+03 BASIN STORAGE= .1228E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.54	1890.49	215.64	2.11	5.00	1879.50	215.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2677E+03 EXCESS= .0000E+00 OUTFLOW= .2677E+03 BASIN STORAGE= .1228E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.54	1871.70	215.43	2.09	5.00	1860.09	215.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2644E+03 EXCESS= .0000E+00 OUTFLOW= .2644E+03 BASIN STORAGE= .1228E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP9	MANE	.55	1848.01	215.43	2.06	5.00	1836.45	215.00	2.06

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .2604E+03 EXCESS= .0000E+00 OUTFLOW= .2604E+03 BASIN STORAGE= .1227E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.74 193.29 217.49 2.59 5.00 189.55 215.00 2.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1383E+02 EXCESS= .0000E+00 OUTFLOW= .1384E+02 BASIN STORAGE= .1726E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.75 190.79 217.29 2.54 5.00 186.10 215.00 2.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1357E+02 EXCESS= .0000E+00 OUTFLOW= .1358E+02 BASIN STORAGE= .1862E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.77 185.52 216.40 2.46 5.00 180.65 215.00 2.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1314E+02 EXCESS= .0000E+00 OUTFLOW= .1315E+02 BASIN STORAGE= .1896E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.80 179.48 217.33 2.38 5.00 174.69 215.00 2.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1271E+02 EXCESS= .0000E+00 OUTFLOW= .1271E+02 BASIN STORAGE= .1912E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.81 178.19 216.64 2.34 5.00 172.84 215.00 2.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1253E+02 EXCESS= .0000E+00 OUTFLOW= .1254E+02 BASIN STORAGE= .1854E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.81 175.31 217.43 2.32 5.00 170.83 215.00 2.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1241E+02 EXCESS= .0000E+00 OUTFLOW= .1241E+02 BASIN STORAGE= .1900E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.82 173.74 216.18 2.30 5.00 169.89 215.00 2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1232E+02 EXCESS= .0000E+00 OUTFLOW= .1233E+02 BASIN STORAGE= .1668E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.82 173.42 217.09 2.28 5.00 167.98 215.00 2.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1219E+02 EXCESS= .0000E+00 OUTFLOW= .1219E+02 BASIN STORAGE= .1674E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCPH2 MANE 1.83 170.37 216.42 2.25 5.00 165.91 215.00 2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1201E+02 EXCESS= .0000E+00 OUTFLOW= .1202E+02 BASIN STORAGE= .1615E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .28 2483.29 215.36 2.42 5.00 2473.32 215.00 2.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3345E+03 EXCESS= .0000E+00 OUTFLOW= .3345E+03 BASIN STORAGE= .6990E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .28 2438.69 215.17 2.37 5.00 2430.66 215.00 2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3277E+03 EXCESS= .0000E+00 OUTFLOW= .3277E+03 BASIN STORAGE= .6981E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .28 2367.92 215.20 2.29 5.00 2358.86 215.00 2.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3166E+03 EXCESS= .0000E+00 OUTFLOW= .3166E+03 BASIN STORAGE= .7008E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .29 2297.36 215.32 2.21 5.00 2286.93 215.00 2.21

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .3054E+03 EXCESS= .0000E+00 OUTFLOW= .3054E+03 BASIN STORAGE= .7006E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .29 2267.69 215.21 2.18 5.00 2258.59 215.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3010E+03 EXCESS= .0000E+00 OUTFLOW= .3010E+03 BASIN STORAGE= .6984E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .29 2244.57 215.19 2.16 5.00 2236.14 215.00 2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2979E+03 EXCESS= .0000E+00 OUTFLOW= .2979E+03 BASIN STORAGE= .7010E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .29 2233.81 215.37 2.14 5.00 2223.89 215.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2957E+03 EXCESS= .0000E+00 OUTFLOW= .2957E+03 BASIN STORAGE= .6985E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .29 2210.24 215.40 2.11 5.00 2200.66 215.00 2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2922E+03 EXCESS= .0000E+00 OUTFLOW= .2922E+03 BASIN STORAGE= .7018E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP3.10 MANE .29 2184.04 215.32 2.08 5.00 2173.50 215.00 2.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2877E+03 EXCESS= .0000E+00 OUTFLOW= .2877E+03 BASIN STORAGE= .6982E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.57 185.52 212.10 2.83 5.00 177.12 210.00 2.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1216E+02 EXCESS= .0000E+00 OUTFLOW= .1217E+02 BASIN STORAGE= .1553E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.58 182.69 211.96 2.78 5.00 174.17 210.00 2.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1195E+02 EXCESS= .0000E+00 OUTFLOW= .1195E+02 BASIN STORAGE= .1709E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.60 176.18 211.22 2.70 5.00 169.04 210.00 2.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1158E+02 EXCESS= .0000E+00 OUTFLOW= .1159E+02 BASIN STORAGE= .1737E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.62 172.08 212.14 2.61 5.00 163.88 210.00 2.61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1121E+02 EXCESS= .0000E+00 OUTFLOW= .1122E+02 BASIN STORAGE= .1747E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.63 170.43 211.54 2.58 5.00 162.24 210.00 2.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1108E+02 EXCESS= .0000E+00 OUTFLOW= .1108E+02 BASIN STORAGE= .1685E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.63 168.35 212.27 2.56 5.00 160.39 215.00 2.56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1097E+02 EXCESS= .0000E+00 OUTFLOW= .1097E+02 BASIN STORAGE= .1731E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R3-O MANE 1.64 166.47 212.80 2.54 5.00 159.39 210.00 2.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1090E+02 EXCESS= .0000E+00 OUTFLOW= .1090E+02 BASIN STORAGE= .1476E-02 PERCENT ERROR= -.1

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FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.64	166.09	212.01	2.51	5.00	157.86	210.00	2.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1078E+02 EXCESS= .0000E+00 OUTFLOW= .1078E+02 BASIN STORAGE= .1484E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R3-O	MANE	1.65	163.49	211.43	2.48	5.00	155.94	210.00	2.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1063E+02 EXCESS= .0000E+00 OUTFLOW= .1064E+02 BASIN STORAGE= .1409E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.14	594.55	211.74	2.77	5.00	576.86	215.00	2.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3947E+02 EXCESS= .0000E+00 OUTFLOW= .3948E+02 BASIN STORAGE= .1828E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.15	583.88	212.03	2.72	5.00	566.15	215.00	2.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3875E+02 EXCESS= .0000E+00 OUTFLOW= .3876E+02 BASIN STORAGE= .1690E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.17	566.63	212.22	2.64	5.00	550.76	215.00	2.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3757E+02 EXCESS= .0000E+00 OUTFLOW= .3758E+02 BASIN STORAGE= .1645E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.18	551.29	211.29	2.55	5.00	536.21	215.00	2.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3637E+02 EXCESS= .0000E+00 OUTFLOW= .3638E+02 BASIN STORAGE= .2078E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.19	543.41	211.09	2.52	5.00	528.37	215.00	2.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3589E+02 EXCESS= .0000E+00 OUTFLOW= .3590E+02 BASIN STORAGE= .1746E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.19	538.79	211.91	2.50	5.00	523.06	215.00	2.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3555E+02 EXCESS= .0000E+00 OUTFLOW= .3556E+02 BASIN STORAGE= .2125E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.19	536.41	211.24	2.48	5.00	522.09	215.00	2.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3532E+02 EXCESS= .0000E+00 OUTFLOW= .3533E+02 BASIN STORAGE= .1685E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.20	529.81	212.09	2.45	5.00	514.75	215.00	2.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3493E+02 EXCESS= .0000E+00 OUTFLOW= .3494E+02 BASIN STORAGE= .1938E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-P	MANE	1.20	523.30	211.97	2.42	5.00	507.92	215.00	2.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3445E+02 EXCESS= .0000E+00 OUTFLOW= .3446E+02 BASIN STORAGE= .1669E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.87	772.27	213.70	2.70	5.00	767.16	215.00	2.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5316E+02 EXCESS= .0000E+00 OUTFLOW= .5318E+02 BASIN STORAGE= .3373E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.89	756.86	213.41	2.65	5.00	754.21	215.00	2.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5217E+02 EXCESS= .0000E+00 OUTFLOW= .5219E+02 BASIN STORAGE= .3760E-02 PERCENT ERROR= -.1									

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FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.91	737.38	213.94	2.56	5.00	732.71	215.00	2.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5054E+02 EXCESS= .0000E+00 OUTFLOW= .5056E+02 BASIN STORAGE= .3323E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.93	715.08	214.44	2.48	5.00	713.37	215.00	2.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4891E+02 EXCESS= .0000E+00 OUTFLOW= .4893E+02 BASIN STORAGE= .3893E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.94	705.79	213.73	2.45	5.00	701.33	215.00	2.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4825E+02 EXCESS= .0000E+00 OUTFLOW= .4827E+02 BASIN STORAGE= .3699E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.95	698.13	214.57	2.42	5.00	696.87	215.00	2.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4777E+02 EXCESS= .0000E+00 OUTFLOW= .4779E+02 BASIN STORAGE= .3855E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.95	695.32	214.84	2.41	5.00	694.95	215.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4749E+02 EXCESS= .0000E+00 OUTFLOW= .4751E+02 BASIN STORAGE= .3610E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.96	687.90	214.02	2.38	5.00	683.67	215.00	2.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4693E+02 EXCESS= .0000E+00 OUTFLOW= .4695E+02 BASIN STORAGE= .3494E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP3-Q	MANE	1.97	675.78	215.18	2.35	5.00	675.61	215.00	2.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4627E+02 EXCESS= .0000E+00 OUTFLOW= .4629E+02 BASIN STORAGE= .3398E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCSHFH-9	MANE	2.15	3461.10	217.19	2.46	5.00	3352.31	215.00	2.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4074E+03 EXCESS= .0000E+00 OUTFLOW= .4074E+03 BASIN STORAGE= .2627E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSHFH-9	MANE	2.16	3367.90	218.46	2.41	5.00	3277.21	215.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3992E+03 EXCESS= .0000E+00 OUTFLOW= .3992E+03 BASIN STORAGE= .2582E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSHFH-9	MANE	2.18	3269.46	218.47	2.33	5.00	3177.86	215.00	2.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3858E+03 EXCESS= .0000E+00 OUTFLOW= .3858E+03 BASIN STORAGE= .2563E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSHFH-9	MANE	2.21	3173.22	218.47	2.25	5.00	3079.30	215.00	2.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3724E+03 EXCESS= .0000E+00 OUTFLOW= .3725E+03 BASIN STORAGE= .2663E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSHFH-9	MANE	2.22	3160.08	217.25	2.22	5.00	3056.96	215.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3672E+03 EXCESS= .0000E+00 OUTFLOW= .3672E+03 BASIN STORAGE= .2643E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSHFH-9	MANE	2.22	3116.56	217.91	2.20	5.00	3018.83	220.00	2.20

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .3633E+03 EXCESS= .0000E+00 OUTFLOW= .3634E+03 BASIN STORAGE= .2597E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSHFH-9 MANE 2.23 3092.41 218.28 2.18 5.00 2991.51 220.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3607E+03 EXCESS= .0000E+00 OUTFLOW= .3607E+03 BASIN STORAGE= .2645E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSHFH-9 MANE 2.24 3057.97 216.91 2.16 5.00 2971.60 215.00 2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3565E+03 EXCESS= .0000E+00 OUTFLOW= .3566E+03 BASIN STORAGE= .2634E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSHFH-9 MANE 2.25 3029.85 217.81 2.12 5.00 2940.55 220.00 2.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3511E+03 EXCESS= .0000E+00 OUTFLOW= .3512E+03 BASIN STORAGE= .2631E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .57 6885.66 220.45 2.42 5.00 6855.96 220.00 2.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1503E+04 EXCESS= .0000E+00 OUTFLOW= .1503E+04 BASIN STORAGE= .1536E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .57 6757.83 220.86 2.37 5.00 6728.00 220.00 2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1472E+04 EXCESS= .0000E+00 OUTFLOW= .1472E+04 BASIN STORAGE= .1530E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .58 6577.53 220.84 2.28 5.00 6544.37 220.00 2.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1421E+04 EXCESS= .0000E+00 OUTFLOW= .1421E+04 BASIN STORAGE= .1522E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .58 6399.12 220.83 2.20 5.00 6362.76 220.00 2.20

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1370E+04 EXCESS= .0000E+00 OUTFLOW= .1370E+04 BASIN STORAGE= .1533E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .58 6336.30 221.00 2.17 5.00 6305.09 220.00 2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1350E+04 EXCESS= .0000E+00 OUTFLOW= .1350E+04 BASIN STORAGE= .1515E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .59 6289.93 220.59 2.15 5.00 6248.93 220.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1335E+04 EXCESS= .0000E+00 OUTFLOW= .1335E+04 BASIN STORAGE= .1538E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .59 6244.86 220.60 2.13 5.00 6204.12 220.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1325E+04 EXCESS= .0000E+00 OUTFLOW= .1325E+04 BASIN STORAGE= .1521E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .59 6184.58 220.76 2.11 5.00 6145.35 220.00 2.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1310E+04 EXCESS= .0000E+00 OUTFLOW= .1310E+04 BASIN STORAGE= .1517E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCRCSWFH MANE .59 6114.06 220.47 2.07 5.00 6077.59 220.00 2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1289E+04 EXCESS= .0000E+00 OUTFLOW= .1289E+04 BASIN STORAGE= .1521E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

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RC11A-1	MANE	.86	7086.73	220.90	2.41	5.00	7018.44	220.00	2.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1523E+04 EXCESS= .0000E+00 OUTFLOW= .1523E+04 BASIN STORAGE= .2227E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	.87	6945.49	220.73	2.36	5.00	6881.78	220.00	2.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1492E+04 EXCESS= .0000E+00 OUTFLOW= .1492E+04 BASIN STORAGE= .2232E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	.87	6757.44	221.30	2.27	5.00	6684.18	220.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1440E+04 EXCESS= .0000E+00 OUTFLOW= .1440E+04 BASIN STORAGE= .2184E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	.88	6572.15	221.01	2.19	5.00	6495.99	220.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1388E+04 EXCESS= .0000E+00 OUTFLOW= .1388E+04 BASIN STORAGE= .2188E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	.89	6512.51	220.90	2.16	5.00	6435.86	220.00	2.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1368E+04 EXCESS= .0000E+00 OUTFLOW= .1368E+04 BASIN STORAGE= .2222E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	.89	6447.54	221.64	2.14	5.00	6370.22	220.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1353E+04 EXCESS= .0000E+00 OUTFLOW= .1353E+04 BASIN STORAGE= .2213E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	.89	6403.74	221.35	2.12	5.00	6321.70	220.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1343E+04 EXCESS= .0000E+00 OUTFLOW= .1343E+04 BASIN STORAGE= .2236E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	.90	6342.65	221.25	2.10	5.00	6262.69	220.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1327E+04 EXCESS= .0000E+00 OUTFLOW= .1327E+04 BASIN STORAGE= .2234E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC11A-1	MANE	.90	6272.08	221.28	2.06	5.00	6192.12	225.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1306E+04 EXCESS= .0000E+00 OUTFLOW= .1306E+04 BASIN STORAGE= .2224E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC3B-1	MANE	.84	7271.12	235.62	2.37	5.00	7256.13	235.00	2.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1580E+04 EXCESS= .0000E+00 OUTFLOW= .1580E+04 BASIN STORAGE= .2242E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC3B-1	MANE	.84	7142.53	235.48	2.32	5.00	7127.55	235.00	2.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1547E+04 EXCESS= .0000E+00 OUTFLOW= .1547E+04 BASIN STORAGE= .2277E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC3B-1	MANE	.85	6940.58	235.46	2.24	5.00	6924.66	235.00	2.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1493E+04 EXCESS= .0000E+00 OUTFLOW= .1493E+04 BASIN STORAGE= .2272E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC3B-1	MANE	.86	6741.27	235.46	2.16	5.00	6724.26	235.00	2.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1439E+04 EXCESS= .0000E+00 OUTFLOW= .1439E+04 BASIN STORAGE= .2247E-02 PERCENT ERROR= .0									

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FOR PLAN = 1	RATIO= .00								
RC3B-1	MANE	.86	6670.74	235.55	2.13	5.00	6651.52	235.00	2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1418E+04 EXCESS= .0000E+00 OUTFLOW= .1418E+04 BASIN STORAGE= .2275E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RC3B-1	MANE	.87	6609.01	235.48	2.10	5.00	6590.39	235.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1402E+04 EXCESS= .0000E+00 OUTFLOW= .1402E+04 BASIN STORAGE= .2249E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RC3B-1	MANE	.87	6568.42	236.07	2.09	5.00	6548.11	235.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1391E+04 EXCESS= .0000E+00 OUTFLOW= .1391E+04 BASIN STORAGE= .2279E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RC3B-1	MANE	.87	6504.95	236.06	2.06	5.00	6484.51	235.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1375E+04 EXCESS= .0000E+00 OUTFLOW= .1375E+04 BASIN STORAGE= .2247E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RC3B-1	MANE	.88	6420.18	236.27	2.03	5.00	6402.17	235.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1353E+04 EXCESS= .0000E+00 OUTFLOW= .1353E+04 BASIN STORAGE= .2253E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R11B-2	MANE	1.74	432.82	231.81	1.83	5.00	428.05	235.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4297E+02 EXCESS= .0000E+00 OUTFLOW= .4297E+02 BASIN STORAGE= .7517E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R11B-2	MANE	1.76	422.64	231.68	1.78	5.00	418.53	235.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4198E+02 EXCESS= .0000E+00 OUTFLOW= .4198E+02 BASIN STORAGE= .7518E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R11B-2	MANE	1.78	406.68	232.69	1.71	5.00	403.18	235.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4033E+02 EXCESS= .0000E+00 OUTFLOW= .4033E+02 BASIN STORAGE= .8417E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R11B-2	MANE	1.80	390.91	231.99	1.65	5.00	387.28	235.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3870E+02 EXCESS= .0000E+00 OUTFLOW= .3870E+02 BASIN STORAGE= .7641E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R11B-2	MANE	1.81	384.08	233.18	1.62	5.00	381.04	235.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3805E+02 EXCESS= .0000E+00 OUTFLOW= .3805E+02 BASIN STORAGE= .8572E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R11B-2	MANE	1.81	380.16	232.20	1.60	5.00	376.74	235.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3759E+02 EXCESS= .0000E+00 OUTFLOW= .3759E+02 BASIN STORAGE= .8574E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R11B-2	MANE	1.82	376.67	232.81	1.58	5.00	373.68	235.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3727E+02 EXCESS= .0000E+00 OUTFLOW= .3727E+02 BASIN STORAGE= .7490E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
R11B-2	MANE	1.83	371.60	231.96	1.56	5.00	368.48	235.00	1.56

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .3675E+02 EXCESS= .0000E+00 OUTFLOW= .3675E+02 BASIN STORAGE= .8736E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R11B-2 MANE 1.84 365.07 233.20 1.54 5.00 362.28 235.00 1.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3611E+02 EXCESS= .0000E+00 OUTFLOW= .3611E+02 BASIN STORAGE= .7971E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.40 883.38 226.09 1.89 5.00 872.46 225.00 1.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8405E+02 EXCESS= .0000E+00 OUTFLOW= .8405E+02 BASIN STORAGE= .8520E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.41 864.78 226.22 1.84 5.00 853.32 225.00 1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8215E+02 EXCESS= .0000E+00 OUTFLOW= .8215E+02 BASIN STORAGE= .7761E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.43 831.15 226.04 1.77 5.00 820.48 225.00 1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7899E+02 EXCESS= .0000E+00 OUTFLOW= .7900E+02 BASIN STORAGE= .7591E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.45 798.42 227.34 1.70 5.00 788.39 225.00 1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7585E+02 EXCESS= .0000E+00 OUTFLOW= .7586E+02 BASIN STORAGE= .8747E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.46 786.55 227.03 1.68 5.00 776.20 225.00 1.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7460E+02 EXCESS= .0000E+00 OUTFLOW= .7460E+02 BASIN STORAGE= .7608E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.46 779.08 226.36 1.66 5.00 767.11 225.00 1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7373E+02 EXCESS= .0000E+00 OUTFLOW= .7373E+02 BASIN STORAGE= .8798E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.46 771.33 226.96 1.64 5.00 760.85 225.00 1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7310E+02 EXCESS= .0000E+00 OUTFLOW= .7310E+02 BASIN STORAGE= .7538E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.47 762.60 226.40 1.62 5.00 750.48 225.00 1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7211E+02 EXCESS= .0000E+00 OUTFLOW= .7211E+02 BASIN STORAGE= .8373E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC11B-1 MANE 1.48 747.99 226.12 1.59 5.00 737.12 230.00 1.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7087E+02 EXCESS= .0000E+00 OUTFLOW= .7087E+02 BASIN STORAGE= .8673E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.10 1240.77 227.14 1.90 5.00 1221.66 230.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1153E+03 EXCESS= .0000E+00 OUTFLOW= .1153E+03 BASIN STORAGE= .1547E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.12 1212.24 228.67 1.86 5.00 1194.55 225.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1127E+03 EXCESS= .0000E+00 OUTFLOW= .1127E+03 BASIN STORAGE= .1282E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.14 1166.96 227.09 1.78 5.00 1152.27 230.00 1.78

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .1084E+03 EXCESS= .0000E+00 OUTFLOW= .1084E+03 BASIN STORAGE= .1347E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.17 1123.17 227.67 1.71 5.00 1110.05 230.00 1.71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1041E+03 EXCESS= .0000E+00 OUTFLOW= .1041E+03 BASIN STORAGE= .1393E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.18 1105.92 228.75 1.69 5.00 1089.75 230.00 1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1024E+03 EXCESS= .0000E+00 OUTFLOW= .1024E+03 BASIN STORAGE= .1371E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.19 1092.65 227.38 1.67 5.00 1080.77 230.00 1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1012E+03 EXCESS= .0000E+00 OUTFLOW= .1012E+03 BASIN STORAGE= .1478E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.19 1084.40 227.94 1.65 5.00 1070.88 230.00 1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1004E+03 EXCESS= .0000E+00 OUTFLOW= .1004E+03 BASIN STORAGE= .1266E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.20 1069.79 228.88 1.63 5.00 1055.43 230.00 1.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9903E+02 EXCESS= .0000E+00 OUTFLOW= .9904E+02 BASIN STORAGE= .1265E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-1 MANE 2.21 1051.40 227.91 1.60 5.00 1040.19 230.00 1.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9734E+02 EXCESS= .0000E+00 OUTFLOW= .9734E+02 BASIN STORAGE= .1560E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.25 1793.62 226.62 2.03 5.00 1774.04 230.00 2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1688E+03 EXCESS= .0000E+00 OUTFLOW= .1688E+03 BASIN STORAGE= .1643E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.25 1756.43 227.06 1.99 5.00 1736.01 230.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1652E+03 EXCESS= .0000E+00 OUTFLOW= .1652E+03 BASIN STORAGE= .1642E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.27 1696.43 227.39 1.91 5.00 1681.17 230.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1592E+03 EXCESS= .0000E+00 OUTFLOW= .1592E+03 BASIN STORAGE= .1632E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.29 1631.27 226.73 1.84 5.00 1618.15 230.00 1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1532E+03 EXCESS= .0000E+00 OUTFLOW= .1532E+03 BASIN STORAGE= .1801E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.29 1608.59 226.52 1.81 5.00 1593.49 230.00 1.82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1509E+03 EXCESS= .0000E+00 OUTFLOW= .1509E+03 BASIN STORAGE= .1853E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC8B-2 MANE 1.30 1592.83 227.42 1.79 5.00 1581.64 230.00 1.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1492E+03 EXCESS= .0000E+00 OUTFLOW= .1492E+03 BASIN STORAGE= .1649E-02 PERCENT ERROR= .0

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FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.30	1577.06	226.88	1.78	5.00	1564.58	230.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1480E+03 EXCESS= .0000E+00 OUTFLOW= .1480E+03 BASIN STORAGE= .1608E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.31	1560.43	226.40	1.76	5.00	1546.77	230.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1461E+03 EXCESS= .0000E+00 OUTFLOW= .1461E+03 BASIN STORAGE= .1804E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RC8B-2	MANE	1.32	1532.83	227.88	1.73	5.00	1522.44	230.00	1.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1438E+03 EXCESS= .0000E+00 OUTFLOW= .1438E+03 BASIN STORAGE= .1582E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.50	427.96	220.50	2.00	5.00	421.61	220.00	2.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3084E+02 EXCESS= .0000E+00 OUTFLOW= .3086E+02 BASIN STORAGE= .1671E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.50	418.94	220.50	1.95	5.00	412.66	220.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3017E+02 EXCESS= .0000E+00 OUTFLOW= .3019E+02 BASIN STORAGE= .1651E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.25	403.33	221.00	1.88	5.00	393.43	220.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2903E+02 EXCESS= .0000E+00 OUTFLOW= .2904E+02 BASIN STORAGE= .1456E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.75	389.43	223.25	1.81	5.00	377.89	220.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2792E+02 EXCESS= .0000E+00 OUTFLOW= .2794E+02 BASIN STORAGE= .1715E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.75	383.70	223.25	1.78	5.00	372.03	220.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2748E+02 EXCESS= .0000E+00 OUTFLOW= .2750E+02 BASIN STORAGE= .1701E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.75	379.69	223.25	1.76	5.00	367.92	220.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2717E+02 EXCESS= .0000E+00 OUTFLOW= .2719E+02 BASIN STORAGE= .1691E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.75	376.83	223.25	1.74	5.00	364.99	220.00	1.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2695E+02 EXCESS= .0000E+00 OUTFLOW= .2697E+02 BASIN STORAGE= .1684E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.75	372.24	223.25	1.72	5.00	360.30	220.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2660E+02 EXCESS= .0000E+00 OUTFLOW= .2662E+02 BASIN STORAGE= .1672E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
R11A-2	MANE	4.75	366.52	223.25	1.69	5.00	354.44	220.00	1.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2616E+02 EXCESS= .0000E+00 OUTFLOW= .2618E+02 BASIN STORAGE= .1658E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.49	2790.80	228.73	1.98	5.00	2769.18	230.00	1.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2531E+03 EXCESS= .0000E+00 OUTFLOW= .2532E+03 BASIN STORAGE= .3124E-02 PERCENT ERROR= .0									

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FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.50	2725.89	227.87	1.94	5.00	2725.04	230.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2477E+03 EXCESS= .0000E+00 OUTFLOW= .2477E+03 BASIN STORAGE= .2796E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.54	2629.50	228.17	1.87	5.00	2622.87	230.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2385E+03 EXCESS= .0000E+00 OUTFLOW= .2385E+03 BASIN STORAGE= .3179E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.57	2528.90	228.71	1.79	5.00	2515.19	230.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2293E+03 EXCESS= .0000E+00 OUTFLOW= .2293E+03 BASIN STORAGE= .3620E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.58	2500.10	229.76	1.77	5.00	2493.37	230.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2259E+03 EXCESS= .0000E+00 OUTFLOW= .2259E+03 BASIN STORAGE= .3724E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.59	2463.34	230.66	1.75	5.00	2462.72	230.00	1.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2233E+03 EXCESS= .0000E+00 OUTFLOW= .2233E+03 BASIN STORAGE= .2905E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.60	2442.90	228.80	1.73	5.00	2430.63	230.00	1.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2214E+03 EXCESS= .0000E+00 OUTFLOW= .2214E+03 BASIN STORAGE= .3234E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.61	2422.44	229.57	1.71	5.00	2412.75	230.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2187E+03 EXCESS= .0000E+00 OUTFLOW= .2187E+03 BASIN STORAGE= .3704E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2A	MANE	2.62	2371.07	228.35	1.68	5.00	2367.37	230.00	1.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2150E+03 EXCESS= .0000E+00 OUTFLOW= .2151E+03 BASIN STORAGE= .3535E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.53	10041.28	235.49	2.29	5.00	10039.40	235.00	2.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1856E+04 EXCESS= .0000E+00 OUTFLOW= .1856E+04 BASIN STORAGE= .4635E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.54	9865.36	235.49	2.25	5.00	9862.62	235.00	2.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1817E+04 EXCESS= .0000E+00 OUTFLOW= .1817E+04 BASIN STORAGE= .4648E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.56	9554.01	235.13	2.17	5.00	9553.54	235.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1752E+04 EXCESS= .0000E+00 OUTFLOW= .1752E+04 BASIN STORAGE= .4748E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.58	9266.41	236.41	2.09	5.00	9238.21	235.00	2.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1689E+04 EXCESS= .0000E+00 OUTFLOW= .1689E+04 BASIN STORAGE= .4682E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC3B-2B	MANE	1.58	9159.87	235.74	2.06	5.00	9148.51	235.00	2.06

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .1664E+04 EXCESS= .0000E+00 OUTFLOW= .1664E+04 BASIN STORAGE= .4802E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2B MANE 1.59 9068.71 236.66 2.03 5.00 9049.24 235.00 2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1645E+04 EXCESS= .0000E+00 OUTFLOW= .1645E+04 BASIN STORAGE= .4660E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2B MANE 1.59 8995.01 235.74 2.02 5.00 8982.38 235.00 2.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1632E+04 EXCESS= .0000E+00 OUTFLOW= .1632E+04 BASIN STORAGE= .4675E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2B MANE 1.60 8925.50 236.56 1.99 5.00 8893.60 235.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1614E+04 EXCESS= .0000E+00 OUTFLOW= .1614E+04 BASIN STORAGE= .4758E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC3B-2B MANE 1.61 8793.20 236.24 1.96 5.00 8763.08 235.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1587E+04 EXCESS= .0000E+00 OUTFLOW= .1587E+04 BASIN STORAGE= .4731E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.37 10304.92 236.19 2.27 5.00 10264.69 235.00 2.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1886E+04 EXCESS= .0000E+00 OUTFLOW= .1886E+04 BASIN STORAGE= .4176E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.37 10122.43 236.41 2.22 5.00 10085.53 235.00 2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1846E+04 EXCESS= .0000E+00 OUTFLOW= .1846E+04 BASIN STORAGE= .4185E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.39 9799.28 236.49 2.15 5.00 9759.91 235.00 2.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1780E+04 EXCESS= .0000E+00 OUTFLOW= .1780E+04 BASIN STORAGE= .4282E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.41 9464.42 236.69 2.07 5.00 9426.71 235.00 2.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1715E+04 EXCESS= .0000E+00 OUTFLOW= .1715E+04 BASIN STORAGE= .4339E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.41 9382.03 236.17 2.04 5.00 9322.53 235.00 2.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1691E+04 EXCESS= .0000E+00 OUTFLOW= .1691E+04 BASIN STORAGE= .4228E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.42 9267.39 235.72 2.01 5.00 9217.62 235.00 2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1671E+04 EXCESS= .0000E+00 OUTFLOW= .1671E+04 BASIN STORAGE= .4323E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.42 9217.46 236.38 2.00 5.00 9154.20 235.00 2.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1658E+04 EXCESS= .0000E+00 OUTFLOW= .1658E+04 BASIN STORAGE= .4209E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCSF2-C MANE 1.43 9109.54 235.84 1.97 5.00 9054.00 235.00 1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1639E+04 EXCESS= .0000E+00 OUTFLOW= .1639E+04 BASIN STORAGE= .4239E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

					ALTA-SDN3.OUT				
RCSF2-C	MANE	1.44	8968.99	235.73	1.94	5.00	8916.51	235.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1612E+04 EXCESS= .0000E+00 OUTFLOW= .1612E+04 BASIN STORAGE= .4217E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.02	755.16	226.24	2.08	5.00	753.82	225.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6522E+02 EXCESS= .0000E+00 OUTFLOW= .6522E+02 BASIN STORAGE= .1654E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.03	740.95	226.07	2.03	5.00	738.42	225.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6380E+02 EXCESS= .0000E+00 OUTFLOW= .6381E+02 BASIN STORAGE= .1696E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.05	714.15	226.19	1.96	5.00	712.14	225.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6145E+02 EXCESS= .0000E+00 OUTFLOW= .6145E+02 BASIN STORAGE= .1622E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.06	686.99	226.38	1.88	5.00	685.95	225.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5911E+02 EXCESS= .0000E+00 OUTFLOW= .5911E+02 BASIN STORAGE= .1763E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.07	677.33	225.62	1.85	5.00	675.73	225.00	1.85
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5818E+02 EXCESS= .0000E+00 OUTFLOW= .5818E+02 BASIN STORAGE= .1832E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.07	669.72	225.52	1.83	5.00	668.38	225.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5752E+02 EXCESS= .0000E+00 OUTFLOW= .5752E+02 BASIN STORAGE= .1613E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.08	665.29	226.22	1.82	5.00	663.31	225.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5706E+02 EXCESS= .0000E+00 OUTFLOW= .5706E+02 BASIN STORAGE= .1791E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.08	656.69	226.27	1.79	5.00	654.91	225.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5631E+02 EXCESS= .0000E+00 OUTFLOW= .5632E+02 BASIN STORAGE= .1761E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RSW11	MANE	1.09	645.82	225.54	1.76	5.00	644.50	225.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5539E+02 EXCESS= .0000E+00 OUTFLOW= .5539E+02 BASIN STORAGE= .1816E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCSW17	MANE	1.65	1211.98	225.57	2.06	5.00	1210.68	225.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1040E+03 EXCESS= .0000E+00 OUTFLOW= .1040E+03 BASIN STORAGE= .3928E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCSW17	MANE	1.66	1187.90	225.78	2.02	5.00	1185.71	225.00	2.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1018E+03 EXCESS= .0000E+00 OUTFLOW= .1018E+03 BASIN STORAGE= .3507E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCSW17	MANE	1.68	1144.91	225.68	1.94	5.00	1143.40	225.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9799E+02 EXCESS= .0000E+00 OUTFLOW= .9800E+02 BASIN STORAGE= .3522E-02 PERCENT ERROR= .0									

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FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.71	1102.37	225.64	1.87	5.00	1101.22	225.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9424E+02 EXCESS= .0000E+00 OUTFLOW= .9424E+02 BASIN STORAGE= .3477E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.72	1087.77	227.00	1.84	5.00	1083.30	225.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9278E+02 EXCESS= .0000E+00 OUTFLOW= .9279E+02 BASIN STORAGE= .3927E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.73	1077.08	226.26	1.82	5.00	1072.79	225.00	1.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9172E+02 EXCESS= .0000E+00 OUTFLOW= .9173E+02 BASIN STORAGE= .3817E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.73	1069.06	226.95	1.81	5.00	1062.80	225.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9100E+02 EXCESS= .0000E+00 OUTFLOW= .9101E+02 BASIN STORAGE= .3937E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.74	1055.75	226.36	1.78	5.00	1050.97	225.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8979E+02 EXCESS= .0000E+00 OUTFLOW= .8980E+02 BASIN STORAGE= .3511E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCSW17	MANE	1.75	1037.25	226.05	1.75	5.00	1034.51	225.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8830E+02 EXCESS= .0000E+00 OUTFLOW= .8831E+02 BASIN STORAGE= .3912E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	353.60	225.00	2.27	5.00	353.60	225.00	2.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3020E+02 EXCESS= .0000E+00 OUTFLOW= .3021E+02 BASIN STORAGE= .1566E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	346.83	225.00	2.23	5.00	346.83	225.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2960E+02 EXCESS= .0000E+00 OUTFLOW= .2961E+02 BASIN STORAGE= .1548E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	335.54	225.00	2.15	5.00	335.54	225.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2860E+02 EXCESS= .0000E+00 OUTFLOW= .2861E+02 BASIN STORAGE= .1518E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	324.25	225.00	2.08	5.00	324.25	225.00	2.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2760E+02 EXCESS= .0000E+00 OUTFLOW= .2762E+02 BASIN STORAGE= .1489E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	319.73	225.00	2.05	5.00	319.73	225.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2721E+02 EXCESS= .0000E+00 OUTFLOW= .2722E+02 BASIN STORAGE= .1476E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	316.57	225.00	2.03	5.00	316.57	225.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2693E+02 EXCESS= .0000E+00 OUTFLOW= .2694E+02 BASIN STORAGE= .1468E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13B-1	MANE	5.00	314.32	230.00	2.01	5.00	314.32	230.00	2.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2673E+02 EXCESS= .0000E+00 OUTFLOW= .2675E+02 BASIN STORAGE= .1462E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-1 MANE 5.00 310.89 230.00 1.99 5.00 310.89 230.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2641E+02 EXCESS= .0000E+00 OUTFLOW= .2643E+02 BASIN STORAGE= .1452E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-1 MANE 5.00 306.61 230.00 1.96 5.00 306.61 230.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2602E+02 EXCESS= .0000E+00 OUTFLOW= .2603E+02 BASIN STORAGE= .1440E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 640.80 230.00 2.18 5.00 640.80 230.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5392E+02 EXCESS= .0000E+00 OUTFLOW= .5398E+02 BASIN STORAGE= .5817E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 628.20 230.00 2.13 5.00 628.20 230.00 2.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5282E+02 EXCESS= .0000E+00 OUTFLOW= .5288E+02 BASIN STORAGE= .5767E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 607.17 230.00 2.06 5.00 607.17 230.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5100E+02 EXCESS= .0000E+00 OUTFLOW= .5105E+02 BASIN STORAGE= .5683E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 586.10 230.00 1.99 5.00 586.10 230.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4918E+02 EXCESS= .0000E+00 OUTFLOW= .4923E+02 BASIN STORAGE= .5597E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 578.31 230.00 1.96 5.00 578.31 230.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4845E+02 EXCESS= .0000E+00 OUTFLOW= .4850E+02 BASIN STORAGE= .7165E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 572.39 230.00 1.94 5.00 572.39 230.00 1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4794E+02 EXCESS= .0000E+00 OUTFLOW= .4799E+02 BASIN STORAGE= .7136E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 568.15 230.00 1.92 5.00 568.15 230.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4758E+02 EXCESS= .0000E+00 OUTFLOW= .4763E+02 BASIN STORAGE= .7115E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 561.38 230.00 1.90 5.00 561.38 230.00 1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4700E+02 EXCESS= .0000E+00 OUTFLOW= .4705E+02 BASIN STORAGE= .6748E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13B-2 MANE 5.00 552.90 230.00 1.87 5.00 552.90 230.00 1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4628E+02 EXCESS= .0000E+00 OUTFLOW= .4632E+02 BASIN STORAGE= .6707E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 318.89 235.00 2.18 5.00 318.89 235.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2936E+02 EXCESS= .0000E+00 OUTFLOW= .2938E+02 BASIN STORAGE= .2006E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 312.72 235.00 2.13 5.00 312.72 235.00 2.13

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .2875E+02 EXCESS= .0000E+00 OUTFLOW= .2877E+02 BASIN STORAGE= .1983E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 302.45 235.00 2.06 5.00 302.45 235.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2774E+02 EXCESS= .0000E+00 OUTFLOW= .2776E+02 BASIN STORAGE= .1945E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 292.17 235.00 1.98 5.00 292.17 235.00 1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2673E+02 EXCESS= .0000E+00 OUTFLOW= .2675E+02 BASIN STORAGE= .1906E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 288.05 235.00 1.95 5.00 288.05 235.00 1.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2633E+02 EXCESS= .0000E+00 OUTFLOW= .2635E+02 BASIN STORAGE= .1891E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 285.17 235.00 1.93 5.00 285.17 235.00 1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2605E+02 EXCESS= .0000E+00 OUTFLOW= .2606E+02 BASIN STORAGE= .1880E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 283.11 235.00 1.92 5.00 283.11 235.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2585E+02 EXCESS= .0000E+00 OUTFLOW= .2586E+02 BASIN STORAGE= .1872E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 279.82 235.00 1.89 5.00 279.82 235.00 1.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2553E+02 EXCESS= .0000E+00 OUTFLOW= .2554E+02 BASIN STORAGE= .1860E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
R19A MANE 5.00 275.71 235.00 1.86 5.00 275.71 235.00 1.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2513E+02 EXCESS= .0000E+00 OUTFLOW= .2514E+02 BASIN STORAGE= .1844E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 780.51 235.00 2.18 5.00 780.51 235.00 2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7731E+02 EXCESS= .0000E+00 OUTFLOW= .7736E+02 BASIN STORAGE= .8795E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 764.75 235.00 2.14 5.00 764.75 235.00 2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7572E+02 EXCESS= .0000E+00 OUTFLOW= .7577E+02 BASIN STORAGE= .8721E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 738.48 235.00 2.06 5.00 738.48 235.00 2.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7309E+02 EXCESS= .0000E+00 OUTFLOW= .7314E+02 BASIN STORAGE= .8303E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 712.20 235.00 1.99 5.00 712.20 235.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7047E+02 EXCESS= .0000E+00 OUTFLOW= .7051E+02 BASIN STORAGE= .8180E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC13A-2 MANE 5.00 701.68 235.00 1.96 5.00 701.68 235.00 1.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6942E+02 EXCESS= .0000E+00 OUTFLOW= .6947E+02 BASIN STORAGE= .8130E-02 PERCENT ERROR= -.1

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FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	694.32	235.00	1.94	5.00	694.32	235.00	1.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6869E+02 EXCESS= .0000E+00 OUTFLOW= .6873E+02 BASIN STORAGE= .8095E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	689.06	235.00	1.92	5.00	689.06	235.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6817E+02 EXCESS= .0000E+00 OUTFLOW= .6821E+02 BASIN STORAGE= .7878E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	680.64	235.00	1.90	5.00	680.64	235.00	1.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6733E+02 EXCESS= .0000E+00 OUTFLOW= .6738E+02 BASIN STORAGE= .7838E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC13A-2	MANE	5.00	670.12	235.00	1.87	5.00	670.12	235.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6629E+02 EXCESS= .0000E+00 OUTFLOW= .6633E+02 BASIN STORAGE= .7789E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	2.90	1036.21	237.50	2.15	5.00	1029.58	235.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1041E+03 EXCESS= .0000E+00 OUTFLOW= .1041E+03 BASIN STORAGE= .2599E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	2.92	1018.48	236.21	2.11	5.00	1009.34	235.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1020E+03 EXCESS= .0000E+00 OUTFLOW= .1020E+03 BASIN STORAGE= .2441E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	2.95	983.10	236.05	2.03	5.00	975.10	235.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9842E+02 EXCESS= .0000E+00 OUTFLOW= .9843E+02 BASIN STORAGE= .3029E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	2.99	947.55	235.94	1.96	5.00	940.20	235.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9487E+02 EXCESS= .0000E+00 OUTFLOW= .9488E+02 BASIN STORAGE= .2774E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.00	935.30	237.12	1.93	5.00	921.65	235.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9346E+02 EXCESS= .0000E+00 OUTFLOW= .9347E+02 BASIN STORAGE= .2840E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.01	923.69	237.96	1.91	5.00	914.93	235.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9247E+02 EXCESS= .0000E+00 OUTFLOW= .9248E+02 BASIN STORAGE= .2450E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.02	912.75	235.55	1.90	5.00	907.94	235.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9176E+02 EXCESS= .0000E+00 OUTFLOW= .9177E+02 BASIN STORAGE= .2737E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.03	906.65	236.52	1.87	5.00	895.54	235.00	1.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9064E+02 EXCESS= .0000E+00 OUTFLOW= .9064E+02 BASIN STORAGE= .3045E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPIC-C	MANE	3.05	892.96	237.75	1.84	5.00	880.60	235.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8923E+02 EXCESS= .0000E+00 OUTFLOW= .8924E+02 BASIN STORAGE= .3103E-02 PERCENT ERROR= .0									

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FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.13	1983.36	239.55	2.14	5.00	1973.76	240.00	2.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1978E+03 EXCESS= .0000E+00 OUTFLOW= .1979E+03 BASIN STORAGE= .3981E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.15	1938.89	236.82	2.10	5.00	1921.27	240.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1939E+03 EXCESS= .0000E+00 OUTFLOW= .1939E+03 BASIN STORAGE= .2994E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.20	1889.16	239.25	2.03	5.00	1874.09	240.00	2.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1871E+03 EXCESS= .0000E+00 OUTFLOW= .1871E+03 BASIN STORAGE= .3573E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.24	1811.73	237.58	1.95	5.00	1792.10	240.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1805E+03 EXCESS= .0000E+00 OUTFLOW= .1805E+03 BASIN STORAGE= .3152E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.26	1795.60	238.80	1.93	5.00	1776.02	240.00	1.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1778E+03 EXCESS= .0000E+00 OUTFLOW= .1778E+03 BASIN STORAGE= .3529E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.28	1779.47	239.42	1.90	5.00	1769.23	240.00	1.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1759E+03 EXCESS= .0000E+00 OUTFLOW= .1759E+03 BASIN STORAGE= .3261E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.28	1758.35	239.96	1.89	5.00	1757.54	240.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1745E+03 EXCESS= .0000E+00 OUTFLOW= .1745E+03 BASIN STORAGE= .2864E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.30	1727.34	236.58	1.87	5.00	1721.00	240.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1723E+03 EXCESS= .0000E+00 OUTFLOW= .1723E+03 BASIN STORAGE= .3422E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCCPIC-A	MANE	4.32	1705.19	237.71	1.84	5.00	1690.03	240.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1698E+03 EXCESS= .0000E+00 OUTFLOW= .1698E+03 BASIN STORAGE= .4075E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.36	4696.43	240.17	1.99	5.00	4693.50	240.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4889E+03 EXCESS= .0000E+00 OUTFLOW= .4889E+03 BASIN STORAGE= .8249E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.37	4585.21	240.14	1.95	5.00	4582.56	240.00	1.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4785E+03 EXCESS= .0000E+00 OUTFLOW= .4785E+03 BASIN STORAGE= .8494E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.37	4441.03	240.44	1.88	5.00	4439.00	240.00	1.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4612E+03 EXCESS= .0000E+00 OUTFLOW= .4612E+03 BASIN STORAGE= .8307E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCC57B-1	MANE	.38	4263.77	240.41	1.81	5.00	4260.36	240.00	1.81

ALTA-SDN3.OUT

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4438E+03 EXCESS= .0000E+00 OUTFLOW= .4438E+03 BASIN STORAGE= .8574E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC57B-1 MANE .38 4207.76 240.45 1.78 5.00 4205.23 240.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4371E+03 EXCESS= .0000E+00 OUTFLOW= .4371E+03 BASIN STORAGE= .8613E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC57B-1 MANE .38 4173.99 240.43 1.76 5.00 4170.37 240.00 1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4321E+03 EXCESS= .0000E+00 OUTFLOW= .4321E+03 BASIN STORAGE= .8610E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC57B-1 MANE .38 4143.67 240.34 1.75 5.00 4138.73 240.00 1.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4285E+03 EXCESS= .0000E+00 OUTFLOW= .4285E+03 BASIN STORAGE= .8379E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC57B-1 MANE .38 4075.89 240.30 1.72 5.00 4070.98 240.00 1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4228E+03 EXCESS= .0000E+00 OUTFLOW= .4228E+03 BASIN STORAGE= .8264E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCC57B-1 MANE .38 4006.97 240.31 1.70 5.00 4002.45 240.00 1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4161E+03 EXCESS= .0000E+00 OUTFLOW= .4161E+03 BASIN STORAGE= .8657E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 1.74 439.87 237.27 2.03 5.00 439.01 235.00 2.03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4783E+02 EXCESS= .0000E+00 OUTFLOW= .4783E+02 BASIN STORAGE= .2578E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 1.75 432.13 236.45 1.99 5.00 430.53 235.00 1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4685E+02 EXCESS= .0000E+00 OUTFLOW= .4685E+02 BASIN STORAGE= .2499E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 1.76 417.58 236.27 1.92 5.00 416.38 235.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4522E+02 EXCESS= .0000E+00 OUTFLOW= .4522E+02 BASIN STORAGE= .2493E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 1.78 403.10 236.14 1.85 5.00 402.16 235.00 1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4360E+02 EXCESS= .0000E+00 OUTFLOW= .4360E+02 BASIN STORAGE= .2464E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 1.78 398.34 236.81 1.83 5.00 396.16 235.00 1.83

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4296E+02 EXCESS= .0000E+00 OUTFLOW= .4296E+02 BASIN STORAGE= .2533E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 1.78 393.51 237.29 1.81 5.00 392.22 235.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4251E+02 EXCESS= .0000E+00 OUTFLOW= .4250E+02 BASIN STORAGE= .2248E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RPIC-B MANE 1.79 390.10 235.85 1.79 5.00 389.58 235.00 1.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4218E+02 EXCESS= .0000E+00 OUTFLOW= .4218E+02 BASIN STORAGE= .2523E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

					ALTA-SDN3.OUT				
RPIC-B	MANE	1.79	386.39	236.40	1.77	5.00	385.05	235.00	1.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4167E+02 EXCESS= .0000E+00 OUTFLOW= .4167E+02 BASIN STORAGE= .2662E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RPIC-B	MANE	1.80	380.91	237.10	1.74	5.00	378.99	235.00	1.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4102E+02 EXCESS= .0000E+00 OUTFLOW= .4102E+02 BASIN STORAGE= .2250E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	.95	5230.75	240.36	1.99	5.00	5225.39	240.00	1.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5569E+03 EXCESS= .0000E+00 OUTFLOW= .5569E+03 BASIN STORAGE= .3258E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	.96	5112.86	240.70	1.95	5.00	5103.68	240.00	1.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5451E+03 EXCESS= .0000E+00 OUTFLOW= .5451E+03 BASIN STORAGE= .3352E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	.98	4953.03	240.87	1.88	5.00	4943.52	240.00	1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5254E+03 EXCESS= .0000E+00 OUTFLOW= .5254E+03 BASIN STORAGE= .3569E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	.99	4756.99	240.82	1.81	5.00	4747.09	240.00	1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5057E+03 EXCESS= .0000E+00 OUTFLOW= .5057E+03 BASIN STORAGE= .3477E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.00	4693.23	241.10	1.78	5.00	4685.74	240.00	1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4980E+03 EXCESS= .0000E+00 OUTFLOW= .4981E+03 BASIN STORAGE= .3239E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.00	4655.65	240.91	1.76	5.00	4643.76	240.00	1.76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4924E+03 EXCESS= .0000E+00 OUTFLOW= .4924E+03 BASIN STORAGE= .3626E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.00	4616.52	240.64	1.75	5.00	4606.15	240.00	1.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4883E+03 EXCESS= .0000E+00 OUTFLOW= .4884E+03 BASIN STORAGE= .3343E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.01	4544.81	241.17	1.72	5.00	4533.81	240.00	1.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4819E+03 EXCESS= .0000E+00 OUTFLOW= .4819E+03 BASIN STORAGE= .3307E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCC57B-4	MANE	1.02	4470.09	240.76	1.70	5.00	4459.73	240.00	1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4743E+03 EXCESS= .0000E+00 OUTFLOW= .4743E+03 BASIN STORAGE= .3536E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.40	371.82	233.33	1.97	5.00	367.72	235.00	1.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3705E+02 EXCESS= .0000E+00 OUTFLOW= .3704E+02 BASIN STORAGE= .5912E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.42	366.20	234.24	1.93	5.00	363.58	235.00	1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3630E+02 EXCESS= .0000E+00 OUTFLOW= .3629E+02 BASIN STORAGE= .7495E-03 PERCENT ERROR= .0

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FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.45	349.81	235.00	1.86	5.00	349.76	235.00	1.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3500E+02 EXCESS= .0000E+00 OUTFLOW= .3500E+02 BASIN STORAGE= .5442E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.48	340.07	232.95	1.79	5.00	336.62	235.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3377E+02 EXCESS= .0000E+00 OUTFLOW= .3377E+02 BASIN STORAGE= .5890E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.49	336.35	233.61	1.77	5.00	333.04	235.00	1.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3329E+02 EXCESS= .0000E+00 OUTFLOW= .3329E+02 BASIN STORAGE= .7849E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.50	334.09	234.00	1.75	5.00	331.35	235.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3295E+02 EXCESS= .0000E+00 OUTFLOW= .3295E+02 BASIN STORAGE= .7228E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.51	331.85	234.41	1.74	5.00	330.02	235.00	1.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3270E+02 EXCESS= .0000E+00 OUTFLOW= .3269E+02 BASIN STORAGE= .6781E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.52	326.91	234.96	1.71	5.00	326.77	235.00	1.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3229E+02 EXCESS= .0000E+00 OUTFLOW= .3229E+02 BASIN STORAGE= .5949E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R38A	MANE	4.53	319.99	235.65	1.69	5.00	319.72	235.00	1.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3177E+02 EXCESS= .0000E+00 OUTFLOW= .3177E+02 BASIN STORAGE= .7877E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.09	185.09	236.35	1.09	5.00	184.77	235.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1845E+02 EXCESS= .0000E+00 OUTFLOW= .1845E+02 BASIN STORAGE= .2006E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.10	179.87	235.88	1.06	5.00	179.47	235.00	1.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1792E+02 EXCESS= .0000E+00 OUTFLOW= .1792E+02 BASIN STORAGE= .2150E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.12	170.79	235.52	1.01	5.00	170.52	235.00	1.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1704E+02 EXCESS= .0000E+00 OUTFLOW= .1704E+02 BASIN STORAGE= .1980E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.13	162.17	236.38	.96	5.00	161.73	235.00	.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1618E+02 EXCESS= .0000E+00 OUTFLOW= .1618E+02 BASIN STORAGE= .1994E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.14	158.59	236.53	.94	5.00	158.22	235.00	.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1584E+02 EXCESS= .0000E+00 OUTFLOW= .1584E+02 BASIN STORAGE= .2130E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
R57BA	MANE	1.14	156.34	236.30	.92	5.00	155.84	235.00	.92

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CONTINUITY SUMMARY (AC-FT) - INFLOW= .1560E+02 EXCESS= .0000E+00 OUTFLOW= .1560E+02 BASIN STORAGE= .2186E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R57BA MANE 1.14 154.51 235.81 .91 5.00 154.13 235.00 .91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1543E+02 EXCESS= .0000E+00 OUTFLOW= .1543E+02 BASIN STORAGE= .2141E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R57BA MANE 1.15 151.69 235.72 .90 5.00 151.34 235.00 .90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1516E+02 EXCESS= .0000E+00 OUTFLOW= .1516E+02 BASIN STORAGE= .2144E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
R57BA MANE 1.16 148.37 235.92 .88 5.00 147.94 235.00 .88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1482E+02 EXCESS= .0000E+00 OUTFLOW= .1482E+02 BASIN STORAGE= .2018E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 358.38 230.00 1.43 5.00 358.38 230.00 1.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3592E+02 EXCESS= .0000E+00 OUTFLOW= .3594E+02 BASIN STORAGE= .4407E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 349.93 230.00 1.40 5.00 349.93 230.00 1.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3505E+02 EXCESS= .0000E+00 OUTFLOW= .3507E+02 BASIN STORAGE= .4350E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 335.78 230.00 1.34 5.00 335.78 230.00 1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3361E+02 EXCESS= .0000E+00 OUTFLOW= .3364E+02 BASIN STORAGE= .4259E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 321.84 230.00 1.29 5.00 321.84 230.00 1.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3219E+02 EXCESS= .0000E+00 OUTFLOW= .3221E+02 BASIN STORAGE= .3966E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 316.25 230.00 1.26 5.00 316.25 230.00 1.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3162E+02 EXCESS= .0000E+00 OUTFLOW= .3165E+02 BASIN STORAGE= .3929E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 312.34 230.00 1.25 5.00 312.34 230.00 1.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3123E+02 EXCESS= .0000E+00 OUTFLOW= .3125E+02 BASIN STORAGE= .3902E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 309.53 230.00 1.24 5.00 309.53 230.00 1.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3094E+02 EXCESS= .0000E+00 OUTFLOW= .3097E+02 BASIN STORAGE= .3885E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 305.12 230.00 1.22 5.00 305.12 230.00 1.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3049E+02 EXCESS= .0000E+00 OUTFLOW= .3052E+02 BASIN STORAGE= .3854E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC3C MANE 5.00 299.57 230.00 1.20 5.00 299.57 230.00 1.20

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2993E+02 EXCESS= .0000E+00 OUTFLOW= .2996E+02 BASIN STORAGE= .3817E-02 PERCENT ERROR= -.1

ALTA-SDN3.OUT

*** NORMAL END OF HEC-1 ***

APPENDIX D

Stockpile Plans

APPENDIX E

Electronic Files

Re: Stormwater Construction Permit NVR100000

Site ID: CSW-46759

Project Name: ASCENT

Date: 9/25/2019

Owner: KB HOME LAS VEGAS

Operator: KB HOME LAS VEGAS

PERRY VAUGHN
5795 WEST BADURA AVE

PERRY VAUGHN
5795 WEST BADURA AVE

LAS VEGAS NV 89118

LAS VEGAS NV 89118

Renew NO

*** If this is a Renewal Application, NO filing fee is required.**

Submission of this Electronic Notice of Intent constitutes notice that the Permittee identified in this request intends to be authorized by a permit issued by the State of Nevada and has or will comply with the following:

1. The Permittee will comply with all applicable permit conditions,
2. The Permittee understands that implementation of all controls required under by a General Permit will begin at the time the permittee commences work on the project identified in this application;
3. The Permittee understands that failure to submit the required \$200.00 fee and this signed Certification Page within 30 days of the electronic submittal will result in failure for eligible coverage under the General Permit; and,
4. That Nevada Administrative Code (NAC) 445A requires that a Permittee (discharger) who is covered under a general permit shall pay to the Director/Division an annual services fee on or before July 1 of each year that the discharger is covered under that permit; and,
5. To terminate coverage of a General Permit, the Permittee must submit a Notice of Termination ("NOT") form when their facility no longer has any discharges associated with the site identified in this application for General Permit coverage.

Please mail the filing fee of \$200.00 along with this notice to:

Bureau of Water Pollution Control
Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701-5249

For General Stormwater questions, please call 775-687-9442.

For questions regarding other general permits please call 775-687-9492.

Project located in whole or in part on tribal lands: No

NOI Certification Statement

"I hereby certify that I am familiar with the information contained in the application and that to the best of my knowledge and ability such information is true, complete, and accurate."

Owner or Operator Name (Please Print):

Signature (Please use a Non-Black Ink Color):

Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained by the provisions of Nevada Administrative Code (NAC) 445A, or by any permit, rule, regulation, or order issued pursuant thereto, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the provisions of Nevada Administrative Code (NAC) 445A, inclusive, or by any permit, rule, regulation, or order issued pursuant thereto, is guilty of a gross misdemeanor and shall be punished by a fine of not more than \$10,000 or by imprisonment in the county jail for not more than 1 year, or by both fine and imprisonment.

Attached File: N/A

Keep The Below Entered Information As Your Record

(New Permit: CSW-46759)

Section 1

Facility / Site Information

Estimated Area to be Disturbed (in acres): **11.74**
Site Name: **ASCENT**
Address Line 1: **KINDLE CORNER AVENUE & CARRIAGE HILL DR.**
Address Line 2:
City / State / Zipcode: **LAS VEGAS, NV 89138-____**
Contact Name (Phone #): **Mr.PERRY VAUGHN (7023016831)**
Email: **PVAUGHN@KBHOME.COM**
Name of Receiving Water and /or Description of Discharge Location: **lake mead**
Frequency of Discharge: **Unlikely**
Estimated Flow in Gallons: **0**
Estimated Begin - End Date: **10/15/2019 - 10/15/2022**

SWPPP Information

Address Line 1: **KINDLE CORNER AVENUE & CARRIAGE HILL DR.**
Address Line 2:
City State / Zipcode: **LAS VEGAS, NV 89138-____**
Contact Name (Phone #): **Mr.PERRY VAUGHN (7023016831)**

Location / GIS Information

Assessor's Parcel Number (APN): **13726112002**
Standard Industrial Classification (SIC) Code: **CNST - Construction General Permit**
County(ies): **Clark**

Section 2, 3 And 4

Owner Name and Address

Is the Owner the Permittee? - **YES**
Owner Name: **KB HOME LAS VEGAS**
Address Line 1: **5795 WEST BADURA AVE**
Address Line 2:
City / State / Zipcode: **LAS VEGAS, NV 89118**
Contact Name: **Mr.PERRY VAUGHN**
Contact Phone #: **7023016831**
Taxpayer ID (TIN): **271934834**
Legal Status: **Public (Other than Federal)**

Operator Name and Address

Is the Operator the Permittee? - **YES**
Operator Name: **KB HOME LAS VEGAS**
Address Line 1: **5795 WEST BADURA AVE**
Address Line 2:
City / State / Zipcode: **LAS VEGAS, NV 89118**
Contact Name: **Mr.PERRY VAUGHN**
Contact Phone #: **7023016831**
Taxpayer ID (TIN): **271934834**
Legal Status: **Public (Other than Federal)**

Billing/Invoicing

Send Annual Billing/Invoicing Information to: **Owner**

Attachments

Attached File Name: **N/A**

Dust Control Operating Permit (DCOP) Application Clark County Department of Air Quality				For DAQ Use Only			
NOTE: Demolition by implosion is not covered by this application -- use Implosion Operating Permit Application.				Invoice Number:			
Application Type (Select One):		Applicant Type (Select One):					
☒ New ☐ Renewal ☐ Modification		☒ Property Owner ☐ Developer ☐ Easement Holder ☐ Contractor ☐ Government					
1. Responsible Official (Applicant) Information:							
Responsible Official Name:		Responsible Official Title:		Permittee (Owner/Company/Organization Name):			
ARIC BONNER		AIR QUALITY RESPONSIBLE OFFICIAL		KB HOME LV INC.			
Permittee Mailing and Email Address Information							
Number:	Direction:	Street:		Street Type:	Suite:	PO Box:	
5795	W	BADURA		AVE	180		
City:	LAS VEGAS			State:	NV	Zip:	89118
Email:	ABONNER@KBHOME.COM			Primary Communication Method: ☒ Email ☐ US Postal			
Phone Numbers							
Office:	702-266-8556	Extension:		Cell:	702-236-4671	Fax:	
2. Construction Site Superintendent or other designated On-site Representative:							
Name:		Title:		Company:			
PERRY VAUGHN		AIR QUALITY MANAGER		KB HOME LV INC.			
Email:	PVAUGHN@KBHOME.COM			Dust Card #:	DC61277	Card Expires:	02/18/2022
Office:	702-266-8480	Extension:		Cell:	702-301-6831	Fax:	
3. Project Information:							
Permit # (For new permit, enter NEW; otherwise, enter existing DCOP #):				NEW			
Project Name (same as signage):		ASCENT		Project Attributes (check all that apply): ☒ Residential ☐ Commercial ☐ Government Facility ☒ Infrastructure Utilities ☐ Flood Control ☐ Airport ☐ Soil Remediation ☐ Structure Demolition ☒ Roadway ☐ Blasting			
Project Description:							
RESIDENTIAL HOMES SECONDARY ON-SITE CONTACTS: DENNIS CHAVEZ (702-373-4318)							
Modification Acreage Added: 0 Modification Acreage Removed: 0							
Project Modification Description:				Projects less than two weeks in duration may qualify for a sign waiver. Does the project qualify for a sign waiver request? ☐ Yes ☒ No Is a sign waiver requested for this project? ☐ Yes ☒ No			
Portable crushing and/or powered screening equipment supporting an on-site single construction activity and remaining onsite for less than 12 months is exempt from the stationary source permitting requirements of AQR Section 12.1 and will instead be subject to the conditions of the Dust Control Operating Permit issued pursuant to AQR Section 94. This exemption does not apply to equipment listed as emission units in a current minor source permit unless the permit states otherwise.							
Will portable crushing or powered screening occur onsite? ☐ Yes ☒ No							
If yes, what is the anticipated date that equipment will be brought onsite?							
What is the duration equipment will remain onsite?							

Project Physical Location

Number:	Direction:	Street:	Street Type:	Suite:
		KINDLE CORNER AVENUE & CARRIAGE HILL DR.		
City:	LAS VEGAS		State:	NV
			Zip:	89138

List major cross streets and the proximity to the intersection:

1st Cross Street:	2nd Cross Street:	Proximity:
FAR HILLS DR.	N CC215 FREEWAY	NW

4. Project Disturbed Surface Area:

a. Project Disturbed Surface Area Information:

Nonlinear Area Disturbed (Acreage in Tenths)

(e.g., project site, stockpiles, staging areas, etc.)

New/Current Total Nonlinear Project Acreage:	6.3	Total Proposed Nonlinear Project Acreage (new/renewal/modifications):	6.3
--	-----	---	-----

Linear Area Disturbed (Not Within Nonlinear Area)

(e.g., new unpaved access roads, off-site that may include trenching for utilities, street development, road work, etc.)

Enter total number of linear segments:	3
--	---

New/Current DCOP Maximum Linear Dimensions: (enter dimensions for new/current DCOP)			Proposed DCOP Maximum Linear Dimensions: (enter dimensions for DCOP modification/renewal DCOP)		
Linear Length:	Length Unit of Measure:	Linear Width (feet):	Linear Length:	Length Unit of Measure:	Linear Width (feet):
525	Feet	40	525	Feet	40
775	Feet	40	775	Feet	40
300	Feet	50	300	Feet	50
New/Current Total Linear Project Acreage:		1.5	Proposed Total Linear Project Acreage:		1.5
(1) Nonlinear Area Acreage Subtotal:	6.3	(2) Linear Area Acreage Subtotal:	1.5	Total Project Area Disturbed (1) + (2):	7.8
				Modification Acreage Increase:	0

b. Project Parcel. List a parcel number for the project. Particulate Emission Potential (PEP) will automatically be determined by the parcel number. If your project spans multiple parcel numbers, DAQ reserves the right to request the parcel number be changed to account for a higher soil PEP.

Parcel Number

Project PEP

13726112002

MODERATE HIGH

If the project acreage is ten acres or more or if project trenching activities are one mile in length or more, a detailed supplement to the Dust Mitigation Plan must be submitted with this application in accordance with Section 94.5.5 of the Clark County Air Quality Regulations (AQRs) and Appendix B of the Construction Activities Dust Control Handbook.

Project Map Must Be Attached to DCOP Application NOTE: Air Quality does not accept engineering drawings.

5. Responsible Official (Applicant) Certification Statement. By signing this permit application, the signatory certifies the following:

- a. As the Responsible Official (applicant), I am authorized on behalf of the Owner Builder/Company/Organization (permittee) listed in Section 1 to apply for this Dust Control Operating Permit (DCOP) and to commit to all of the terms and conditions therein.
- b. Before disturbing soils on a parcel, enacting a grade change, constructing a structure and/or appurtenances, or installing, constructing, or modifying equipment that emits an air pollutant, you must contact and obtain all required permits from Clark County's Department of Comprehensive Planning, Building Department, Department of Air Quality ([Title 30 Notice](#)) and the municipality with jurisdiction.
- c. The permit issued in response to this application is not a substitute for obtaining the property owner's permission to use land associated with the project. Issuance of the DCOP is intended only for controlling the emission of air pollutants and assuring compliance with the AQRs. Clark County cannot be held liable for any unauthorized use of the land.
- d. If applying on behalf of the permittee listed in Section 1, the permittee shall be responsible for complying with requirements of this DCOP and the AQRs. Otherwise, the applicant listed in Section 1 shall be the responsible party.
- e. The permittee accepts responsibility for assuring that all contractors, subcontractors, and other persons on the construction site defined by this permit comply with the terms and conditions of the DCOP, the associated Dust Mitigation Plan and the AQRs.

- f. In accordance with the DCOP and the AQRs, the applicant and the permittee shall consent to inspection of the site during normal hours of operation by DAQ staff without prior notice to determine compliance with the terms and conditions of the DCOP and the AQRs.
- g. If the project has 50 or more acres of actively disturbed soil, the permittee shall notify DAQ and identify the on-site Dust Control Monitor for the project(s). In addition, this notification requirement applies to the following circumstances:
- When the permittee has common control of multiple adjacent projects that individually have less than 50 acres of actively disturbed soil, but the combined project has 50 or more acres of actively disturbed soil; or
 - When the permittee has common control of multiple projects that are not adjacent, but are within a common master-planned community and have 50 or more acres of actively disturbed soil.
- The permittee shall notify DAQ using the current notification form, which is available on the DAQ website and at the front counter of the main office, before disturbing the soil. The Dust Control Monitor must be on-site at all times when construction activities occur and shall manage dust prevention and control on-site.

Applicant Certification

ARIC BONNER		09/26/2019
Responsible Official Name	Applicant's Signature	Signature Date

Advisories

- a. DCOP acreage fee is based on total project acreage of disturbed surface area (Item 4.a. of this application), which is rounded up to the next whole acre. If the project is less than 1 acre, a minimum of 1 acre shall apply to the project for fee purposes. All fees must be paid in full at the time of application; otherwise, the application cannot be accepted.
- b. Any payment made to the department in conjunction with this application may only be refunded to the permittee with the approval of the Board of County Commissioners. Approved refunds may not be issued to a preparer. Only the applicant or permittee may request a refund, which must contain written justification, a completed federal W-9 Form, a copy of the invoice/receipt, a completed Clark County Supplier Addition/Maintenance/Update form, and a copy of the cancelled check (front & back) . The Control Officer shall have sole discretion to approve/disapprove the request for refund approval.
- c. Stormwater Advisory: Be advised that all land disturbances that exceed 1 acre or are adjacent to a waterway must submit a "Notice of Intent" to the Nevada Division of Environmental Protection that certifies a Storm Water Pollution Prevention Plan has been developed and is maintained for the site. Contact NDEP at (775) 687-9429 for an application, information, and instructions.
- d. Payment : Invoice payments must be made by check, money order, or credit card. Checks and money orders must be made payable to **Department of Air Quality or DAQ**. Credit card payment must be made in person at the DAQ main office.



DUST MITIGATION PLAN

Permit # :		NEW	
Project Name:	ASCENT		
Company (Permittee):	KB HOME LV INC.		
Total Project Area Disturbed:	7.8	Particulate Emission Potential (PEP):	MODERATE HIGH
If the project acreage is ten acres or more or if project trenching activities are one mile in length or more, a detailed supplement to the Dust Mitigation Plan must be submitted with this application in accordance with Section 94.5.5 of the Clark County Air Quality Regulations (AQRs) and Appendix B of the Construction Activities Dust Control Handbook.			
Water Source (check all that apply)		Water Application Method (check all that apply)	
☒ Hydrant with Jones Valve ☒ Stand Tanks ☐ Ponds ☐ Well ☐ Other (Describe Below): 		☐ Fire Hose ☒ Water Trucks/Pulls ☐ Other (Describe Below): 	
Project Activities:			
The Dust Mitigation Plan applies to the following project activities: Backfilling (Filling area previously excavated or trenched); Blasting - Abrasive (Sandblasting and/or abrasive blasting); Blasting Soil & Rock (Explosive blasting of soil and rock); Clearing & Grubbing (Clearing and grubbing for site preparation and vacant land cleanup); Clearing Forms, Foundations and Slabs (Clearing and cleaning of forms, foundations and slabs prior to pouring concrete); Crushing (Crushing of construction and demolition debris, rock and soil); Cut and/or Fill (Cut and/or fill soils for site grade preparation); Demolition - Mechanical/Manual (Mechanical and manual demolition of walls, stucco, concrete, freestanding structures, buildings, load-bearing walls and/or removal of transit pipe); Disturbed Soil (Disturbed soil throughout project including between structures); Disturbed Land - Long Term Stabilization (Large tracts of disturbed land that will not have continuing activity for more than 30 days); Dust Suppressants (Selection and use of chemical and organic dust suppressing agents and other dust palliatives); Importing/Exporting Materials (Importing or exporting of soil, aggregate, decorative rock, debris, Type II and other bulk material); Landscaping (Installation of sod, decorative rock, desert or other landscape material); Paving/Subgrade Preparation (Subgrade preparation for paving streets, parking lots, etc.); Sawing/Cutting Material (Sawing or cutting materials such as concrete, asphalt, block or pipe); Screening (Screening of rock, soil or construction debris); Staging Areas (Staging areas, equipment storage, vehicle parking lots, and material storage areas); Stockpiles (Stockpiling of materials, such as Type II, other soils, rock or debris, for future use or export); Trackout Prevention and Cleanup (Prevention and cleanup of mud, silt and soil tracked out onto paved roads); Traffic - Unpaved Routes and Parking (Construction related traffic on unpaved interior and/or access roads and unpaved employee/worker parking areas); Trenching (Trenching with track or wheel mounted excavator, shovel, backhoe or trencher); and Truck Loading (Loading trucks with materials including construction and demolition debris, rock and soil). This DCP Application and Dust Mitigation Plan does not include project activities related to Demolition - Implosion (Implosive demolition of a structure, using explosives).			
Best Management Practices (BMPs) - Control Measures:			
The permittee shall comply with all requirements of Section 94 of the AQRs, all requirements of the current <i>Clark County Dust Control Handbook</i>, and all provisions of the DCOP issued from this application. For each project activity listed in this Dust Mitigation Plan, the permittee shall comply with the requirements for the associated BMPs in the <i>Dust Control Handbook</i>. Where options are listed for a BMP requirement, the permittee shall apply one or more of the control measures to comply with the requirement. The permittee will apply corresponding control measures for the PEP for the project soil type(s).			

ASSENT

ASSESSOR'S PARCELS - CLARK COUNTY, NV.
Briana Johnson - Assessor

137-26-1

N 2 NW 4

26

T20S R59E

127 126 12512
136 137 13813
165 164 16314

Scale: 1" = 200'

Rev: 7/10/2019

CLARK COUNTY, NEVADA

PARCEL BOUNDARY
SUB BOUNDARY
PULD BOUNDARY
ROAD EASEMENT
MATCH/LEADER LINE
HISTORIC LOT LINE
HISTORIC SUB BOUNDARY
SECTION LINE

CONDOMINIUM UNIT
AIR SPACE PCL
RIGHT OF WAY PCL
SUB-SURFACE PCL
PB 24-45 PLAT RECORDING NUMBER
5 BLOCK NUMBER
GLS GOV. LOT NUMBER

001 PARCEL NUMBER
1.00 ACREAGE
202 PARCEL SUB/SEED NUMBER
5 LOT NUMBER

MAP LEGEND

0 100 200 400 600 800

USE THIS SCALE (FEET) WHEN MAP REDUCED FROM 1:11.7 ORIGINAL

NOTES

This map is for assessment use only and does NOT represent a survey.
No liability is assumed for the accuracy of the data delineated herein.
Information on roads and other non-assessed parcels may be obtained from the Road Document Listing in the Assessor's Office.
This map is compiled from official records, including surveys and deeds, but only contains the information required for assessment. See the recorded documents for more detailed legal information.



TAX DIST 200

ON-SITE AREAS:

$$.80 + .46 + .34 = 1.60$$

ON-SITE AREAS:

$$5.65 - .33 - .03 - .20 = 5.09$$

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES. EXCESSIVE SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS ARE TO BE REMOVED TO THE NEAREST APPROPRIATE DISPOSAL SITE.

2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.

3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERATOR PERMIT FOR CONSTRUCTION ACTIVITY NW100000, SECTION 10.

4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERATOR PERMIT FOR CONSTRUCTION ACTIVITY NW100000, SECTION 10.A.12.

5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.



PROPERTY LINE

— (2800) — EXISTING INTERMEDIATE CONTOUR (5FT INTERVAL)

— (2800) — EXISTING INDEX CONTOUR (1FT INTERVAL)

— 2800 — PROPOSED INDEX CONTOUR (5FT INTERVAL)

— 2800 — PROPOSED INTERMEDIATE CONTOUR (5FT INTERVAL)

▲ SCARP

× × TEMPORARY FENCE



FEET

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN COMPLIANCE WITH HBC 2006, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR TO PLACE DURING CONSTRUCTION, ENGINEER/OWNER SHALL BE NOTIFIED OF PRIORITY DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR TO BE RESPONSIBLE FOR REMEDIATING/REPAIRING FACILITIES PRIOR TO CONSTRUCTION. ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMPLETION.
5. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE EXISTING ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.



1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION, ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORAGE WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMITS.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICED:

	HORIZONTAL	VERTICAL COMPACTION	
A. PAVEMENT AREA SUBGRADE	0.1"	+0.0 TO -0.1'	SEE SOILS REPORT
B. ENGINEERED FILL	0.5"	+0.0 TO -0.1'	SEE SOILS REPORT
7. COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.
8. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
9. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
10. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND AVAILABLE CONDITION. DEBRIS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
11. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL FIRST OBTAIN WRITTEN APPROVAL FROM THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

NET (FILL): 33,500 C.Y.
AREA : 3.4 ACRES

1. ALL STOCKPILES ARE TO BE REMOVED AND THE SITE IS TO BE RESTORED N
LATER THAN TWELVE MONTHS FROM THE PERMIT ISSUE DATE.
2. STOCKPILE MATERIALS SHALL CONSIST OF CLEAN FILL UNLESS OTHERWISE
APPROVED BY THE CITY OF LAS VEGAS.
3. STOCKPILES WITH HEIGHT OVER 4 FT MUST BE PROVIDED WITH A TEMPORAR
FENCING.

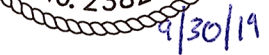
EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXCEPT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CITY OF LAS VEGAS - CITY ENGINEER, ALLEN PAVELKA, P.E. NO. 9029 DATE _____

CITY OF LAS VEGAS - PLANNING DEPARTMENT DATE _____

[illegible]

EX-1

KBH1913-000

SHEET 1 OF 1