

**MASTER DRAINAGE STUDY
UPDATE #2 (ADDENDUM NO. 2)**

Skye Canyon
City of Las Vegas, Nevada

Job No.: OLY1401.001
Date: October 2015

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

Prepared For:
Ninety-Five Management, LLC
11411 Southern Highlands Parkway, Suite 300
Las Vegas, NV 89141
Phone: 702-220-6565 • Fax: 702-220-6566



Steve Jones, P.E.
NV Professional Engineer No. 19638

Assisted By: Erick Mata, E.I.

DRAINAGE STUDY INFORMATION FORM

Name of Development: Sky Canyon Master Drainage Study – Update #2
 (Addendum #2) Date: October 2015
 Location of Development: a) Descriptive (Cross Streets): North/South: Puli Road
 East/West: Grand Teton Drive
 b) Section: 12 Township: 19 South Range: 59 East
 Section: 6, 7 Township: 19 South Range: 60 East
 c) APN: 125-06-101-001; 125-06-401-001; 125-06-501-001; 125-06-701-001; 125-07-101-005;
 125-07-201-001, 002, 003; 125-07-301-001, 002; 125-07-401-001, 002; 125-07-501-005;
 125-07-602-001, 003, 004, 005; 126-12-000-001; 125-07-310-001, 002; 125-07-410-001
 KAG Development South, LLC; Section 12, LLC; MF Land, LLC; G Land, LLC; Northland, LLC; Eastland,
 Name of Owner/Developer: LLC; East of 95, LLC
 Telephone No.: 702-220-6565 Fax No.: 702-220-6566 E-mail Address: mbolduc@olympiacompanies.com
 Address: 11411 Southern Highlands Parkway, Suite 300; Las Vegas, NV 89141

Contact Person – Name: Steve Jones, P.E. Telephone No.: 702-284-5300
 *E-mail Address: sjones@shg-inc.com Fax No.: 702-284-5399
 Firm: Slater Hanifan Group
 Address: 5740 S. Arville Street, Suite 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	☐ Master Drainage Study

1. Total Owned Land Area: At Site: 1,662 +/- Acres Being Developed/Disturbed: All
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.): Residential, Commercial, Schools, Parks, Roadways, Gaming, etc.
5. Approximate upstream land area which drains to the subject site: 6.1 sq. miles +/-
6. Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: Master Drainage Study & Update #1 for Kyle Canyon (SHG, DS4420)
 Master Drainage Study for Kyle Canyon (GCW, DS4091)
7. If known, please briefly identify the proposed discharge point(s) of runoff from the site:
 Intersections of Moccasin, Log Cabin, O'Hare, Iron Mountain, Brent and Horse along Fort Apache Road,
 Future Sheep Mountain Parkway alignment north of Moccasin,
 U.S. Highway 95 right-of-way
8. Briefly describe your proposed schedule for the subject project: N/A



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

Revision	Date

Local Entity File No.

REFERENCE: SHG Job No. OLY1401.001

STANDARD FORM 1

Updated 05/01/2008

OLY1401.001

October 15, 2015

Oh Sang Kwon, P.E.
Flood Control Project Manager
City of Las Vegas Department of Public Works
333 N. Rancho Drive
Las Vegas, Nevada 89106

**Subject: Addendum #2 to the Master Drainage Study Update #2 for Skye Canyon
(CLV # DS4420)**

Dear Mr. Kwon:

The following are responses to comments contained in the August 12, 2015 review memorandum, regarding the above referenced project. A copy of the City of Las Vegas (CLV) comment letter has been provided in Appendix A of this submittal. The comments have been individually addressed as follows:

City of Las Vegas will not allow further development outside of the limits of Phase I at this time. This is a temporary hold of any further development until the National Monument Grant issues are resolved. Flood Control cannot issue any further drainage study approvals until given clearance to do so. We are working with CCRFCD to help identify and alleviate these impacts.

Response: After coordination in a 8/26/2015 meeting with CLV, SHG understands that the utilization of Moccasin Road for conveyance of Skye Canyon runoff is no longer feasible due to the National Monument. Further investigation is required to determine alternatives for accommodating drainage patterns for the property. Summary notes from the meeting have been included in Appendix A for reference.

In the 8/26/2015 meeting, it was also discussed that the Detention Basin 1 (DS4698) and Detention Basin 2 projects (future design) are currently shown with an outfall alignment perpetuated toward the unacceptable Moccasin conveyance. However, it is noted that during the interim, the runoff from these projects is directed across US-95 to the east without re-direction to Moccasin. CLV and SHG recognize that an increase in peak runoff or attenuation of the runoff directed toward the east and the existing elementary schools adjacent to Fort Apache Road is considered an adverse impact. Because the peak 100-year discharge from Detention Basin 1 and Detention Basin 2 are planned to be reduced compared to the existing condition by 727 cfs and 624 cfs, respectively, it is anticipated the adverse impact will occur by the attenuated runoff. The table below summarizes the attenuated 100-year runoff determined past the typical 6 hour storm event that is the result of the two detention basins, and represents the design flow for the additional interim facilities that are now required by Skye Canyon to mitigate for the continuation of detention basin runoff to the east until ultimate condition MPU drainage patterns in Moccasin are

resolved. Refer to re-included proposed condition HEC-1 for detailed output regarding the below summarized attenuated runoff, and the HEC-1 rating curves have been updated to reflect the final design of Detention Basin 1.

Summary of Attenuated Peak Runoff from Detention Basins	
Detention Basin Number	Q₁₀₀ (cfs)
1	70
2	76

Therefore, the following additional facilities shown on an exhibit in Appendix B are proposed to accommodate the interim impacts resulting from Skye Canyon development perpetuated east.

- Detention Basin 1 outfall discharges into a wash that is perpetuated across US-95 to the east south of Brent Lane. A sump drop inlet and 30-inch RCP storm drain facility is conceptually proposed on the Skye Canyon property to receive the 70 cfs prior to discharge into the Brent Lane right-of-way and continuation toward further downstream property. An existing 48-inch RCP storm drain in Fort Apache Road is intended to be the receiving facility for the proposed 30-inch RCP. After review of the *Spring Mountain Ranch – Fort Apache Road* improvement plans that constructed the 48-inch RCP, and the subsequent Horse Drive / US-95 Interchange improvement plans, it is anticipated there is capacity for Skye Canyon to discharge 70 cfs into the existing storm drain. However, removal and replacement of an existing 18-inch and 24-inch lateral from the 48-inch RCP is required to route the proposed 30-inch RCP into the existing 48-inch storm drain. Refer to Appendix B for further demonstration of the concept, and further technical analysis of the proposed connection will be provided by the Detention Basin 1 project.
- Detention Basin 2 outfall discharges into a wash that is perpetuated across US-95 toward the intersection of Iron Mountain Road and Tee Pee Lane. A ditch is conceptually proposed on the Skye Canyon property to collect and route the outflow to a 42-inch culvert opening in sump that connects into an existing 42-inch equivalent HERCP in Iron Mountain at its intersection with Fort Apache Road. Refer to Appendix B for further demonstration of the concept, and further technical analysis of the proposed connection will be provided by the future Detention Basin 2 project.

Additionally Phase 2 (DS4739 currently under review) has been commented similarly, and will show in its technical study that after completion of its build-out condition that the peak flow rate does not exceed existing condition at the pertinent discharge locations toward downstream property. Also the additional Detention Basin 1 storm drain improvements discussed above will also be in place prior to or concurrently with Phase 2 to mitigate for the attenuated outflow downstream impacts.

As a result, in accordance with discussion in the 8/26/2015 coordination meeting with CLV, this remark will be re-written to allow for Detention Basin 1, Detention Basin 2 and Phase 2 developments to proceed since they do not directly impact the National Monument after completion.

1. **Comment:** Flood Control cannot support further review of infrastructure or phasing plans without first addressing the changes to the overall Master Study. Flood Control has reviewed Addendum #1 to Update #2 and noted discrepancies with the submitted Exhibits and the corresponding flows since the previous submittals. These new Exhibits have adjusted the facility sizes and flow rates without any accompanying hydrology. It appears that some basin and land uses are different as well as the facility network. No analysis or supporting data has been presented nor has there been any discussion provided explaining the changes to the Master Study. The Master Land Use Plan and the corresponding hydrology shall be updated to verify the required facility flows and conceptual facility sizes. Flood Control requests a meeting to discuss the impacts prior to the next submittal to review the new system parameters.

Some examples of changes on Exhibit J are:

Facility	Previous Q ₁₀₀	New Q ₁₀₀
Facility P48W	568 cfs	698 cfs
Facility P32E	3426 cfs	1888 cfs
Facility P57W	1543 cfs	1232 cfs
Facility P28E	760 cfs	Replaced with New P27E Q ₁₀₀ - 655 cfs
Facility P38-40E	New interim facilities with flows lower than the contributing P32E facility	

Response: After coordination with the reviewer, it was determined that the above discrepancies with Facilities P48W, P32E, P57W and P28E had been supported by HEC-1 analyses and the updated land plan included in the 1st submittal of *Master Drainage Study Update #2* submitted 3/16/2015.

Facilities P32E, P34E, P38E and P39E have been updated to return to the ultimate condition flow rates and conceptual facility sizes presented in the 3/16/2015 *Master Drainage Study Update #2* submittal. Facility P40E remains identified with the flow rate of 2,589 cfs or the Skye Canyon produced runoff to Moccasin instead of the total flow rate inclusive of the future condition runoff from Kyle Canyon Road (Facility F-2). The previously approved Master Drainage Study identified that the developer was only responsible for installing a facility in Moccasin to protect downstream properties and facilities against the Skye Canyon produced runoff; therefore, maintaining a 2,589 cfs design flow rate for Facility P40E is considered acceptable.

2. **Comment:** The **Master Land Use Plan** has been provided however, the accompanying Facility Exhibits and Drainage Maps do not match the proposed roadway networks shown on the **Master Land Use Plan**. Flood Control understands that these new roadway networks shown on the Exhibits are the facilities currently proposed. Provide a copy of the current Master Land Use Plan.

Response: After coordination with the reviewer, it is agreed that the flood control facility networks and drainage basins match the current approved land plan, re-included in Appendix D; therefore, no further revisions are necessary.

3. **Comment:** *With this Master Drainage Study - Update #2, page 3, "this project now proposes a RCB conveyance facility intended to maintain all discharge within the existing grant from BLM that extends from **Fort Apache Road** to the existing **Upper Las Vegas** levee, located east of **Durango Drive**, designed to accommodate the runoff from **Skye Canyon**". This proposed RCB facility (shown as P40E on Exhibit J) shall be shown on all plans and exhibits as being constructed with this development. This facility extension is needed to convey flows from the Skye Canyon development without impacting the existing BLM lands within the newly designated National Monument. The design of this facility shall be permanent in nature and constructed per CCRFCD criteria. The plan conceptually shows this facility along the north ½ of the Moccasin alignment. Flood Control requires that this interim facility, which will become a part of the ultimate CCRFCD facility, be located within the south ½ of the Moccasin alignment in order to allow for the remainder of the CCRFCD facility to convey the flows within the north ½ of the alignment. This allows for the continued implementation of the Future MPU facilities.*

Response: Facilities P38E thru P40E have been re-designated on Exhibit J as proposed CCRFCD facilities. However, these facilities remain orange in color to identify that the total CCRFCD regional flow in the Moccasin alignment is greater than the capacity of Facilities P38E thru P40E and the red F-3 and F-4 facilities represent the parallel facilities required in the future. It is acknowledged that the City has requested the alignment of P40E be located in a position where a future parallel facility can fit in the alignment but the conceptual profile has not been updated due to the future challenges of the National Monument.

4. **Comment:** *Provide a copy of the approved 404 Permit from the Army Corps of Engineers prior to the release of any further grading permits.*

Response: The renewed 404 permit received from the U.S. Army Corps of Engineers has been included in Appendix C of this submittal. Note that the 401 permit has also been filed and approval from NDEP will be forwarded upon receipt.

5. **Comment:** *Revise Exhibit J; CCRFCD Regional Facilities Map, in the "Legend" block. Revise "Temporary" to "Proposed" next to the Orange line. This Exhibit identifies the Regional Facilities that the Master Developer shall design and construct per the Master Development Agreement.*

Response: The orange facilities have been re-named in the legend as requested, per Response to Comment No. 3.

6. **Comment:** *Flood Control has reviewed the provided Phasing Plan that identified the preliminary drainage infrastructure necessary for each phase of development. Flood Control requires an interim condition drainage analysis in support of the Phasing Plan that clearly shows the impacts to each Phase, existing washes, upstream concentration points and the downstream concentration points. Flood Control needs to make sure that each Phase of Development is protected during the interim and full build-out of this overall project. The current Phasing Plan does not adequately address these issues.*

Response: After coordination with the reviewer and discussing in the 8/26/2015 coordination meeting, the implementation of the drainage infrastructure to protect Phase 3 has been adjusted. The phase line denoting when Phase 3 occurs and the new Phase 7 has been re-drawn. Phase 3 is now located entirely outside of the shadow of protection of Detention Basin 2 and the major offsite flow impacting the property near the intersection of Iron Mountain Road and Skye Village Drive; therefore, the completion of the infrastructure comprising of the continuation of the Detention Basin 2 outfall is not required until after Phase 3. Note that Detention Basin No. 2 is now denoted as required for Phase 4 because its shadow of protection spans through Phase 4 and all following phases identified on Exhibit K.

Note that the interim improvements intended for accommodating the attenuated discharge of the detention basins will be performed in conjunction of when the detention basins are required for shadow of protection on the property.

As denoted on the Phasing Exhibit, further analysis of the infrastructure required for protection of each phase must be addressed in technical analysis of each phase's infrastructure projects. However, the adjustments described above are considered adequate to defer these detailed technical analyses.

7. **Comment:** *The interim conditions of the Phasing Plan needs to address the impact of the long term discharge from the outfall of the detention basins. Existing flow conditions do not have a drawn out discharge from a detention basin. This discharge impact must be accounted for in the interim condition without negatively impacting the existing downstream neighborhoods.*

Response: Refer to Responses to Comment No. 1 and 6 for discussion regarding how the phasing plan affects the detention basins and their infrastructure required for mitigating downstream impacts of the attenuated outflows.

8. **Comment:** *CCRFCD concurrence has been provided for Update #1. A new concurrence for Update #2 shall be required of CCRFCD after Conditional Approval by the City of Las Vegas.*

Response: CCRFCD concurrence review requirement is acknowledged.

9. **Comment:** *CCPW concurrence has been provided.*

Response: Acknowledged.

10. **Comment:** *NDOT concurrence has been provided.*

Response: Acknowledged.

The following comments are repeated until they are complete:

1. Please note that the Traffic Study must be approved prior to final approval of the Master Drainage Study. If the street layout does not match the Master Drainage Study, an update to the Master Drainage Study must be submitted to address the changes.
2. Per a meeting held in August 18, 2011 between the developer and the *City of Las Vegas*, it was agreed that NV Energy's approval of any proposed drainage facilities within their access easements (such as the proposed detention basins) must be obtained prior to the final approval of the Master Drainage Study. Please provide documentation for such approval or acknowledgment.
3. Please note that any future technical drainage study submittals that differ from the Master Drainage Study (ie. Changes in pods, infrastructure, flows etc.) will require an update to the Master Drainage Study and this update must be approved by the *City of Las Vegas Flood Control Section* prior to final approval of technical drainage study.
4. The proposed detention basins will require coordination with the State of Nevada, Division of Water Resources Dam Safety and will require the State's approval prior to permitting.
5. Please obtain necessary 404 permits from Army Corps of Engineers and provide a copy of the permit to Flood Control prior to issuance of the grading permit. The contact information for Army Corps of Engineers is listed below:

Patricia L. McQueary
 Chief, USACE S. George Regulatory Office
 US Army Corps of Engineers
 321 North Mall Drive
 Suite L-101
 St. George, UT 84790

(435) 986-3979 (Office)
 (435) 986-3981 (FAX)
Patricia.L.McQueary@usace.army.mil

6. Please note that the proposed 100-year flood protection facilities identified on Exhibit F must be constructed by the Master Developer as a part of the master planned infrastructure. Technical drainage studies are required for each phase of the master planned infrastructure improvements. The technical drainage studies for the infrastructure improvements may be submitted with conditional approval of this Master Drainage Study. However, final approval for the Master Drainage Study must be obtained prior to conditional approval of the infrastructure drainage studies.
7. Technical drainage studies are required for each of the Pod's. The technical drainage studies for the Pod's may not be submitted until the conditional approval of the pertinent infrastructure drainage study is obtained. Final approval for the infrastructure drainage

study must be obtained prior to conditional approval of the impacted Pod drainage studies.

8. Building permits for the homes within the individual POD's will not be issued until construction of the street and flood control infrastructure around the POD is substantially complete or interim protection is provided per the approved technical drainage study.
9. This project no longer proposes to surface discharge flows onto U.S. Bureau of Land Management (BLM) property. Therefore, BLM concurrence is no longer required prior to final approval of the Master Drainage Study.
10. The design of debris basins at all major culvert entrances to limit the amount of sediment and debris entering the storm drain facilities will be required in a future infrastructure study.
11. Please note that all detention basins must be designed per CCRFCD criteria including a low flow facility around the detention basin.
12. Please note that all proposed interim facilities must be maintained by the master developer.
13. Provide a legal description of the proposed detention basins prior to recordation of the parent final map.
14. Coordinate the proposed drainage facilities with *Sheep Mountain Parkway* project. Please contact Greg McDermott, P.E., at 702-229-2143 to coordinate the proposed drainage facilities.

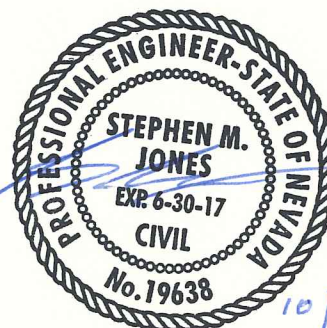
If you have any questions or require additional information, please do not hesitate to contact us at 284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP

Steve Jones, P.E.
Project Manager - Flood Control Division

cc: Marc Bolduc – Olympia Companies
Jerry Slater – SHG
Mark Failla – SHG



APPENDIX CONTENTS

Appendix A CLV Coordination

- 8/12/2015 Comment Letter
- 8/26/2015 Meeting Summary Notes

Appendix B Additional Improvements (Detention Basin Attenuated Outflow Mitigation)

- Proposed Condition HEC-1 Output (with DB Outflow Hydrograph)
- Detention Basin 1
- Detention Basin 2
- Summary Exhibit for Interim Condition Facilities (Detention Attenuated Outflow)

Appendix C USACE 404 Permit

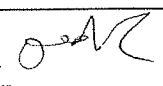
Appendix D Revised Drainage Exhibits

- Exhibit H – Ultimate Condition Facilities
- Exhibit J – CCRFCD Regional Facilities
- Exhibit K – Shadow of Protection & Phasing
- Current Master Land Use Plan

APPENDIX A

CLV Coordination

- 8/12/2015 Comment Letter
- 8/26/2015 Meeting Summary Notes

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: REVISED August 12, 2015
TO: Land Development Services Department of Public Works			FROM: Oh Sang Kwon, P.E.  Flood Control Section Department of Public Works
SUBJECT:	Drainage Study for:		COPIES TO:
Skye Canyon Master Drainage Study – Update #2 to Kyle Canyon Master Drainage Study			Slater Hanifan Group
Cross Streets:	Fort Apache Road & Moccasin Road		KAG Development South, LLC
File Number:	F:\Depot\DSMemos\DS4420K.doc		Bart Anderson, P.E., DevCo
Parcel Number:	125-06-001-001		CCRFC
Zoning Action:			CCPW
FEMA Flood Zone	YES	NO X	NDOT; NV Energy
Proposed Storm Drain	YES X	NO	PB America, Inc.

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Transaction #
1 st Submittal	6/22/2010	7/13/2010	Not Approved	\$1,000.00	147216: \$1000
2 nd Submittal	9/17/2010	10/4/2010	Not Approved	\$400.00	153788: \$400
3 rd Submittal	10/15/2011	11/14/2011	Not Approved	\$400.00	153788: \$400
4 th Submittal	2/13/2012	3/1/2012	Conditional Approval	\$400.00	274196: \$400
CCRFC	5/23/2012	5/24/2012	Concurrence Recv'd	N/C	N/C
5 th Submittal NDOT Comments	9/10/2012	9/19/2012	Conditional Approval	N/C	N/C
6 th Submittal	12/4/2014	12/30/2014	Conditional Approval	\$400.00	378889: \$400
7 th Submittal	2/17/2015	3/3/2015	Conditional Approval	\$400.00	385987: \$400
8 th Submittal	3/16/2015	4/6/2015	See Comments Below	\$400.00	388961: \$400
CCRFC	4/2/2015	4/6/2015	Concurrence Recv'd	N/C	N/C
9 th Submittal	6/23/2015	7/21/2015	See Comments Below	\$400.00	403025: \$400
Revised Memo	8/12/2015	8/12/2015	See Comments Below	N/A	N/A
TOTAL FEES (LDDRS):				\$3,800.00	----

REMARKS: Revised Memo – National Monument Drainage Impacts

The City of Las Vegas will not allow further development outside of the limits of Phase I at this time. This is a temporary hold of any further development until the National Monument Grant issues are resolved. Flood Control cannot issue any further drainage study approvals until given clearance to do so. We are working with CCRFC to help identify and alleviate these impacts.

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

	is approved subject to conformance to all City standards and the following conditions:
X	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 Department of Public Works concurrence.
	is conditionally approved subject to Nevada Department of Transportation concurrence.
	is conditionally approved subject to BLM concurrence/approval.

The following comments are from the previous memo dated July 21, 2015.

A Flood Control Master Plan Amendment (MPA) has been approved that covers the Skye Canyon Development. Future changes to the identified Master Plan facilities may require further review and/or the submittal of an MPA based upon CCRFCD requirements.

1. Flood Control cannot support further review of infrastructure or phasing plans without first addressing the changes to the overall Master Study. Flood Control has reviewed Addendum #1 to Update #2 and noted discrepancies with the submitted Exhibits and the corresponding flows since the previous submittals. These new Exhibits have adjusted the facility sizes and flow rates without any accompanying hydrology. It appears that some basin and land uses are different as well as the facility network. No analysis or supporting data has been presented nor has there been any discussion provided explaining the changes to the Master Study. The Master Land Use Plan and the corresponding hydrology shall be updated to verify the required facility flows and conceptual facility sizes. Flood Control requests a meeting to discuss the impacts prior to the next submittal to review the new system parameters.

Some examples of changes on Exhibit J are:

Facility P48W	Previous Q ₁₀₀ – 568 cfs	New Q ₁₀₀ – 698 cfs
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4. Provide a copy of the approved 404 Permit from the Army Corps of Engineers **prior to the release of any further grading permits.**
5. Revise Exhibit J; CCRFCD Regional Facilities Map, in the “Legend” block. Revise “Temporary” to “Proposed” next to the Orange line. This Exhibit identifies the Regional Facilities that the Master Developer shall design and construct per the Master Development Agreement.
6. Flood Control has reviewed the provided Phasing Plan that identified the preliminary drainage infrastructure necessary for each phase of development. Flood Control requires an interim condition drainage analysis in support of the Phasing Plan that clearly shows the impacts to each Phase,

existing washes, upstream concentration points and the downstream concentration points. Flood Control needs to make sure that each Phase of Development is protected during the interim and full build-out of this overall project. The current Phasing Plan does not adequately address these issues.

7. The interim conditions of the Phasing Plan needs to address the impact of the long term discharge from the outfall of the detention basins. Existing flow conditions do not have a drawn out discharge from a detention basin. This discharge impact must be accounted for in the interim condition without negatively impacting the existing downstream neighborhoods.
8. CCRFCD concurrence has been provided for Update #1. A new concurrence for Update #2 shall be required of CCRFCD after Conditional Approval by the City of Las Vegas.
9. CCPW concurrence has been provided.
10. NDOT concurrence has been provided.

The following comments are repeated until they are complete:

1. Please note that the Traffic Study must be approved prior to final approval of the Master Drainage Study. If the street layout does not match the Master Drainage Study, an update to the Master Drainage Study must be submitted to address the changes.
2. Per a meeting held in August 18, 2011 between the developer and the *City of Las Vegas*, it was agreed that NV Energy's approval of any proposed drainage facilities within their access easements (such as the proposed detention basins) must be obtained prior to the final approval of the Master Drainage Study. Please provide documentation for such approval or acknowledgment.
3. Please note that any future technical drainage study submittals that differ from the Master Drainage Study (ie. Changes in pods, infrastructure, flows etc.) will require an update to the Master Drainage Study and this update must be approved by the *City of Las Vegas Flood Control Section* prior to final approval of technical drainage study.
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Patricia L. McQueary
Chief, USACE S. George Regulatory Office
US Army Corps of Engineers
321 North Mall Drive
Suite L-101
St. George, UT 84790

(435) 986-3979 (Office)

(435) 986-3981 (FAX)

Patricia.L.McQueary@usace.army.mil

6. Please note that the proposed 100-year flood protection facilities identified on Exhibit F must be constructed by the Master Developer as a part of the master planned infrastructure. Technical drainage studies are required for each phase of the master planned infrastructure improvements. The technical drainage studies for the infrastructure improvements may be submitted with conditional

approval of this Master Drainage Study. However, final approval for the Master Drainage Study must be obtained prior to conditional approval of the infrastructure drainage studies.

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9. This project no longer proposes to surface discharge flows onto U.S. Bureau of Land Management (BLM) property. Therefore, BLM concurrence is no longer required prior to final approval of the Master Drainage Study.
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11. Please note that all detention basins must be designed per CCRFCD criteria including a low flow facility around the detention basin.
12. Please note that all proposed interim facilities must be maintained by the master developer.
13. Provide a legal description of the proposed detention basins prior to recordation of the parent final map.
14. Coordinate the proposed drainage facilities with *Sheep Mountain Parkway* project. Please contact Greg McDermott, P.E., at 702-229-2143 to coordinate the proposed drainage facilities.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved master drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Amendment 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

osk

T/R/S: T19S/R60E/6 & 7
AREA G-6, 7, & F-12

MEETING NOTES

Project Number: OLY1401.001

Project Name: Skye Canyon

Meeting Date: 8/26/2015

Meeting Location: CLV Public Works – Turquoise Room

Meeting Topic: National Monument Drainage Impacts

Attendees:	Company Name:
Oh Sang Kwon	CLV
Peter Jackson	CLV
Lucien Paet	CLV
Jeremy Leavitt	CLV
Jerry Slater	SHG
Steve Jones	SHG
Marc Bolduc	Olympia
Bobby Williamson	Olympia

Meeting Notes:

Item:	Discussion:
1	Enactment of the National Monument (Master Drainage Study provision) – CLV identified due to the act that passed the National Monument, regulation prohibits the rights of the City to perform any improvements within the area, including utilizing Moccasin Road for drainage conveyance of Skye Canyon runoff as currently proposed in the Master Drainage Study. Therefore, the City is requiring that SHG and Olympia to engineer an alternative design that does not utilize Moccasin Road for drainage conveyance.
2	Phase 2 and Detention Basin 1 Projects – The Master Drainage Study comment memo indicates that no other project beyond Phase 1 can proceed, and CLV noted that this comment was generated because other development on the property including Phase 2 and Detention Basin 1 is currently shown with an ultimate condition drainage pattern to Moccasin and the drainage conveyance through the National Monument area. SHG and CLV agreed that although Phase 2 and Detention Basin 1 has no interim impacts to Moccasin, an ultimate solution must be presented that removes the necessity for the ultimate condition outfall alignment currently routed to Moccasin. It is agreed that the proposed discharge point for Phase 2 and Detention Basin 1 does not impact Moccasin by way it is routed toward the existing elementary school(s) on the east side of US-95; however, CLV considers that the lengthiness of an attenuated flow occurring after completion of Detention Basin 1 (required for Phase 2 shadow) in front of the school an adverse impact. CLV is requiring that SHG and Olympia provide a design with Phase 2 to alleviate the impact since the ultimate outfall alignment is no longer toward Moccasin and directed at the school until a time that the future US-95 regional facility is constructed which eventually cuts off the flows in the highway.
3	Detention Basin 2 Project – SHG and Olympia identified that it has begun work on Detention Basin 2 and its currently planned outfall alignment is similar to Detention Basin 1: interim toward the school and ultimate toward Moccasin. SHG and Olympia is required to propose a concept with the response to comments on the current Master Drainage Study to alleviate its impact of the attenuated flows in front of the school.

Action Items:

Item:	Discussion:
1	Enactment of the National Monument (Master Drainage Study provision) – SHG and Olympia to investigate alternative design that does not utilize Moccasin as drainage conveyance for the runoff from Skye Canyon. Upon completion of the investigation, SHG to re-schedule meeting with the City to discuss impacts and/or future Master Drainage Study Update requirements. The City's comments pertaining to the current Master Drainage Study Update (Update #2) will be completed to still show the routing of Skye Canyon runoff to Moccasin; however, with additional facilities/improvements proposed

Prepared By: Steve Jones, SHG

Please notify the preparer if you have any questions, concerns or additions to these minutes within 2 days. After 2 days the content of this document will be considered accurate and accepted as the final recordation.

Item:	Discussion:
	adjacent to the existing schools on the east side of US-95 to show that the Moccasin outfall is not required for construction of the detention basins to have no adverse impacts downstream. With the additional facilities shown on the exhibits, the City will write the approval letter with conditions that allows for Olympia to proceed with construction of Phase 2, Detention Basin 1 and Detention Basin 2. The condition remaining will halt all other development beyond Phase 1, Phase 2 and the detention basins until an alternative solution avoiding the National Monument in Moccasin is provided to the City.
2	Phase 2 and Detention Basin 1 Projects – CLV to issue comments for Phase 2. Design will be proposed by SHG and Olympia to remove the adverse impact of attenuated flow in front of the school from its projects with Phase 2 thru CLV comment. Preliminary concepts agreed to in the meeting, pending technical calculation support, is extending existing facilities or adding new facility to remove the flows from the Brent right-of-way.
3	Detention Basin 2 Project – SHG to add concept design to remove flows from the Brent and Iron Mountain right-of-ways to the current Master Drainage Study Update.

Prepared By: Steve Jones, SHG

Please notify the preparer if you have any questions, concerns or additions to these minutes within 2 days. After 2 days the content of this document will be considered accurate and accepted as the final recordation.

APPENDIX B

Additional Improvements (Detention Basin Attenuated Outflow Mitigation)

Proposed Condition HEC-1 Output
(with DB Outflow Hydrographs)

```

*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* JUN 1998 *
* VERSION 4.1 *
* RUN DATE 28SEP15 TIME 15:14:32 *
*****

Proposed.OUT

*****
* 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
X X X X X
X X X X X
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), HECIGS, HECIDB, AND HECIKW.

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

1 HEC-1 INPUT PAGE 1

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

*DIAGRAM
1 ID SLATER HANIFAN GROUP
2 ID OLYMPIA COMPANIES
3 ID SKYE CANYON - MASTER DRAINAGE STUDY UPDATE
4 ID OVERALL PROPERTY PROPOSED DRAINAGE CONDITION
5 ID
6 ID RETURN PERIOD ----- 100 & 10-YEAR
7 ID DISTRIBUTION ----- 6-HOUR SDN3
8 ID PROJECT NO. ----- OLY1401.001
9 ID FILENAME ----- Proposed.H1
10 ID DATE ----- 9/28/2015
11 ID MODELED BY ----- SMJ/ETM
12 ID
13 ID SIX HOUR DEPTH-AREA REDUCTION FACTORS
14 ID DRAINAGE AREA (MI^2) DARF
15 ID 0.0-0.49 1.00
16 ID 0.5-0.99 0.98
17 ID 1.0-1.99 0.97
18 ID 2.0-3.99 0.93
19 ID 4.0-5.99 0.91
20 ID 6.0-7.99 0.90
21 ID 25-YR 0.70
22 ID 10-YR 0.57
23 ID
24 IT 5 0 0 300
25 IO 5 0 0
26 IN 5 0 0
27 JR PREC 1.00 0.98 0.97 0.93 0.91 0.90 0.70 0.57
*

28 KK WOFF1
29 KM EXISTING OFFSITE DRAINAGE BASIN
30 KM DISCHARGES INTO DETENTION BASIN "DB1"
31 PB 3.00
32 PC 0 0.020 0.057 0.070 0.087 0.108 0.124 0.130 0.130 0.130
33 PC 0.130 0.130 0.130 0.133 0.140 0.142 0.148 0.158 0.172 0.181
34 PC 0.190 0.197 0.199 0.200 0.201 0.204 0.214 0.229 0.241 0.249
35 PC 0.251 0.256 0.270 0.278 0.281 0.283 0.295 0.322 0.352 0.409
36 PC 0.499 0.590 0.710 0.744 0.781 0.812 0.819 0.835 0.851 0.856
37 PC 0.860 0.868 0.876 0.888 0.910 0.926 0.937 0.950 0.970 0.976
38 PC 0.982 0.985 0.987 0.989 0.990 0.993 0.993 0.994 0.995 0.998
39 PC 0.998 0.999 1
40 BA .4291
41 LS 0 86.1
42 UD 0.420
*

43 KK WOFF2
44 KM EXISTING OFFSITE DRAINAGE BASIN
45 KM DISCHARGES INTO DETENTION BASIN "DB1"
46 BA .0419
47 LS 0 84.0
48 UD 0.150
*

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1 HEC-1 INPUT PAGE 2

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

49 KK WOFF3
50 KM EXISTING OFFSITE DRAINAGE BASIN
51 KM DISCHARGES INTO DETENTION BASIN "DB1"
52 BA .0259
53 LS 0 86.2
54 UD 0.112
*

55 KK CP1
56 KM COMBINE WOFF1, WOFF2, AND WOFF3
57 HC 3
*

58 KK WOFF4
59 KM EXISTING OFFSITE DRAINAGE BASIN
60 KM DISCHARGES INTO DETENTION BASIN "DB1"
61 BA .0581
62 LS 0 86.2
63 UD 0.136
*

64 KK WOFF5
65 KM EXISTING OFFSITE DRAINAGE BASIN
66 KM DISCHARGES INTO DETENTION BASIN "DB1"
67 BA .2569
68 LS 0 86.5
69 UD 0.419
*

70 KK WOFF6
71 KM EXISTING OFFSITE DRAINAGE BASIN
72 KM DISCHARGES INTO DETENTION BASIN "DB1"
73 BA .0399
74 LS 0 86.2
75 UD 0.121
*

76 KK ON1
77 KM PROPOSED ONSITE DRAINAGE BASIN
78 BA .0303

```


				Proposed.OUT
166	LS	0	84.0	
167	UD	.099		
	*			
168	KK	HORSE2		
169	BA	.0126		
170	PB	3.00		
171	LS	0	98.0	
172	UD	.103		
	*			
173	KK	DUMMY		
174	HC	3		
	*			
175	KK	PH2PK2		
176	BA	.0025		
177	PB	3.00		
178	LS	0	84.0	
179	UD	.061		
	*			
180	KK	PH2ML4		
181	BA	.0354		
182	PB	3.00		
183	LS	0	93.1	
184	UD	.110		
	*			
185	KK	SHAUM1		
186	BA	.0066		
187	PB	3.00		
188	LS	0	98.0	
189	UD	.155		
	*			
1	HEC-1 INPUT			PAGE 6
LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10			
190	KK	HU-HO		
191	KM	TOTAL FLOW AT INTERSECTION OF HUALAPAI AND HORSE		
192	KM	ROUTED NORTH IN HUALAPAI		
193	HC	4		
	*			
194	KK	WML6		
195	BA	.0231		
196	PB	3.00		
197	LS	0	95.0	
198	UD	.094		
	*			
199	KK	AROY5		
200	BA	.0021		
201	PB	3.00		
202	LS	0	88.0	
203	UD	.100		
	*			
204	KK	SHEP1B		
205	BA	.0490		
206	PB	3.00		
207	LS	0	88.0	
208	UD	.168		
	*			
209	KK	DUMMY		
210	HC	3		
	*			
211	KK	WSCHL2		
212	BA	.0185		
213	PB	3.00		
214	LS	0	91.0	
215	UD	.100		
	*			
216	KK	STRT5		
217	BA	.0053		
218	PB	3.00		
219	LS	0	98.0	
220	UD	.083		
	*			
221	KK	WL3		
222	BA	.0257		
223	PB	3.00		
224	LS	0	90.0	
225	UD	.113		
	*			
1	HEC-1 INPUT			PAGE 7
LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10			
226	KK	AROY6		
227	BA	.0056		
228	PB	3.00		
229	LS	0	88.0	
230	UD	.100		
	*			
231	KK	DUMMY		
232	HC	5		
	*			
233	KK	WPRK3		
234	BA	.0033		
235	PB	3.00		
236	LS	0	84.0	
237	UD	.075		
	*			
238	KK	WL4		
239	BA	.0237		
240	PB	3.00		
241	LS	0	90.0	
242	UD	.175		
	*			
243	KK	STRT4		
244	BA	.0043		
245	PB	3.00		
246	LS	0	98.0	
247	UD	.069		
	*			
248	KK	DUMMY		
249	HC	5		
	*			
250	KK	WML5		
251	BA	.0388		
252	PB	3.00		
253	LS	0	95.0	
254	UD	.116		

Proposed.OUT

255 KK HUAL2B
 256 BA .0154
 257 PB 3.00
 258 LS 0 98.0
 259 UD .241
 *

1 HEC-1 INPUT PAGE 8

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

260 KK DUMMY
 261 HC 3
 *

262 KK AROY4
 263 KM DOWNSTREAM OF NORTHERN MAINTAINED ARROYO OUTFALL DISCHARGE
 264 BA .0075
 265 PB 3.00
 266 LS 0 88.0
 267 UD .100
 *

268 KK WML2
 269 BA .0514
 270 PB 3.00
 271 LS 0 95.0
 272 UD .123
 *

273 KK WPRK4
 274 BA .0075
 275 PB 3.00
 276 LS 0 84.0
 277 UD .087
 *

278 KK SHAUM2
 279 BA .0068
 280 PB 3.00
 281 LS 0 98.0
 282 UD .110
 *

283 KK DUMMY
 284 HC 4
 *

285 KK WL1
 286 BA .0243
 287 PB 3.00
 288 LS 0 90.0
 289 UD .126
 *

290 KK HORS1A
 291 BA .0107
 292 PB 3.00
 293 LS 0 98.0
 294 UD .111
 *

1 HEC-1 INPUT PAGE 9

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

295 KK SH-HO
 296 KM TOTAL FLOW AT INTERSECTION OF SHAUMBER AND HORSE
 297 KM ROUTED NORTH IN SHAUMBER
 298 HC 3
 *

299 KK WOFF7
 300 KM EXISTING OFFSITE DRAINAGE BASIN
 301 KM DISCHARGES INTO DETENTION BASIN "DB2"
 302 BA .0068
 303 LS 0 86.2
 304 UD 0.100
 *

305 KK WOFF8
 306 KM EXISTING OFFSITE DRAINAGE BASIN
 307 KM DISCHARGES INTO DETENTION BASIN "DB2"
 308 BA .2141
 309 LS 0 86.3
 310 UD 0.302
 *

311 KK CP2
 312 KM COMBINE WOFF7, AND WOFF8
 313 HC 2
 *

314 KK WOFF9
 315 KM EXISTING OFFSITE DRAINAGE BASIN
 316 KM DISCHARGES INTO DETENTION BASIN "DB2"
 317 BA .1164
 318 LS 0 86.2
 319 UD 0.203
 *

320 KK WOFF10
 321 KM EXISTING OFFSITE DRAINAGE BASIN
 322 KM DISCHARGES INTO DETENTION BASIN "DB2"
 323 BA .6524
 324 LS 0 86.6
 325 UD 0.615
 *

326 KK ON2
 327 KM PROPOSED ONSITE DRAINAGE BASIN
 328 BA .0315
 329 LS 0 92.8
 330 UD 0.084
 *

1 HEC-1 INPUT PAGE 10

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

331 KK DB2
 332 KM COMBINE CP2, WOFF9, WOFF10 AND ON2
 333 HC 4
 *

334 KK RDB2
 335 KM OUTLET = 27" ORIFICE @ INVERT ELEVATION = 2993-FT
 336 KO 1
 337 RS 1
 338 SV 0 3.27 6.87 10.63 27.34 46.77 75.03
 339 SE 2993 2994 2995 2996 3000 3004 3009
 340 SQ 0 17.95 27.43 34.38 40.15 45.18 57.71 67.97 76.88
 341 SE 2993 2996 2997 2998 2999 3000 3003 3006 3009
 *

Proposed.OUT

342	KK	WPRK7	
343	BA	.0037	
344	PB	3.00	
345	LS	0	84.0
346	UD	.069	
	*		
347	KK	WL2	
348	BA	.0447	
349	PB	3.00	
350	LS	0	90.0
351	UD	.126	
	*		
352	KK	DUMMY	
353	HC	4	
	*		
354	KK	SHAUM3	
355	BA	.0036	
356	PB	3.00	
357	LS	0	98.0
358	UD	.088	
	*		
359	KK	IRON1A	
360	BA	.0049	
361	PB	3.00	
362	LS	0	98.0
363	UD	.083	
	*		
364	KK	IR-SH	
365	KM	TOTAL FLOW AT INTERSECTION OF IRON MOUNTAIN AND SHAUMBER	
366	KM	ROUTED EAST IN IRON MOUNTAIN	
367	HC	3	
	*		

1

HEC-1 INPUT

1

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

368	KK	WML3	
369	BA	.0250	
370	PB	3.00	
371	LS	0	95.0
372	UD	.100	
	*		
373	KK	HORS1B	
374	BA	.0037	
375	PB	3.00	
376	LS	0	98.0
377	UD	.050	
	*		
378	KK	WPRK5	
379	BA	.0022	
380	PB	3.00	
381	LS	0	84.0
382	UD	.086	
	*		
383	KK	DUMMY	
384	HC	3	
	*		
385	KK	WSCHL1	
386	BA	.0585	
387	PB	3.00	
388	LS	0	91.0
389	UD	.118	
	*		
390	KK	IRON1B	
391	BA	.0073	
392	PB	3.00	
393	LS	0	98.0
394	UD	.101	
	*		
395	KK	WML4	
396	BA	.0108	
397	PB	3.00	
398	LS	0	95.0
399	UD	.083	
	*		
400	KK	DUMMY	
401	HC	5	
	*		

HEC-1 INPUT

1

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

402	KK	SHEP1C	
403	BA	.0224	
404	PB	3.00	
405	LS	0	88.0
406	UD	.150	
	*		
407	KK	HU-IR	
408	KM	TOTAL FLOW AT INTERSECTION OF HUALAPAI AND IRON MOUNTAIN	
409	KM	ROUTED NORTH IN REGIONAL FACILITY ALIGNMENT	
410	HC	3	
	*		
411	KK	OFFG	
412	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY	
413	BA	.0397	
414	PB	2.79	
415	LS	0	86.5
416	UD	0.186	
	*		
417	KK	WPT40	
418	KM	COMBINE HU-IR, OFFG	
419	HC	2	
	*		
420	KK	OFF10	
421	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY	
422	BA	.6710	
423	PB	3.39	
424	LS	0	86.2
425	UD	0.573	
	*		
426	KK	ROFF10	
427	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY	
428	KM	STEPS	
429	RM	7	0.583 0.15
	*		
430	KK	OFFFA	

431 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY Proposed.OUT
 432 BA .9938
 433 PB 3.19
 434 LS 0 83.8
 435 UD 0.441
 *

436 KK ROFFFA
 437 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 438 KM STEPS K X-FACTOR
 439 RM 3 0.238 0.15
 *

1 HEC-1 INPUT PAGE 13

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

440 KK OFFFB
 441 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 442 BA .5974
 443 PB 2.89
 444 LS 0 84.1
 445 UD 0.490
 *

446 KK COFFF1
 447 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 448 KM COMBINE OFF10, OFFFA, OFFFB
 449 HC 3
 *

450 KK WPRK6
 451 KM IRON MOUNTAIN PARK
 452 BA .0157
 453 PB 2.79
 454 LS 0 84.0
 455 UD 0.084
 *

456 KK COFFF2
 457 KM COMBINE WPT40, COFFF1 AND WPRK6
 458 HC 3
 *

459 KK OFFE
 460 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 461 BA .0382
 462 PB 2.78
 463 LS 0 77.4
 464 UD 0.232
 *

465 KK OFFV
 466 BA .0056
 467 PB 2.77
 468 LS 0 77.0
 469 UD 0.156
 *

470 KK CKCS
 471 KM COMBINE COFFF2, OFFE, OFFV
 472 HC 3
 *

473 KK DCKC5
 474 KM DIVERT ALL FLOWS ACROSS US-95
 475 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 476 DT DCKC7
 477 DI 0 100 500 1000 5000
 478 DQ 0 100 500 1000 5000
 *

1 HEC-1 INPUT PAGE 14

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

479 KK OFF17B
 480 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 481 KM ADDED FROM HORSE INTERCHANGE MODEL
 482 BA .0080
 483 PB 2.773
 484 LS 0 92.1
 485 UD 0.069
 *

486 KK OFF17A
 487 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 488 KM ADDED FROM HORSE INTERCHANGE MODEL
 489 BA .0305
 490 PB 2.773
 491 LS 0 92.1
 492 UD 0.104
 *

493 KK COFF17
 494 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 495 KM ADDED FROM HORSE INTERCHANGE MODEL
 496 KM COMBINE OFF17A, OFF17B
 497 KM CULVERT AT BASIN OFF24B
 498 HC 2
 *

499 KK DCOF17
 500 KM FACILITY E-14
 501 KM FLOW SPLIT AT VTN CULVERT 8
 502 KM FLOW SPLITS TO BETWEEN FRONTAGE AND SB ROADS OF US-95
 503 KM ALL FLOW DIVERTED - DEVELOPMENT EXISTS ADJACENT TO FRONTAGE ROAD
 504 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
 505 DT DVCUL8
 506 DI 0 5000
 507 DQ 0 5000
 *

508 KK ON1
 509 KM START CENTENNIAL POINT HEC-1 DATA
 510 BA .0042
 511 PB 2.86
 512 LS 0 91.2
 513 UD 0.085
 *

514 KK ON4A
 515 BA .0045
 516 LS 0 91.2
 517 UD 0.077
 *

1 HEC-1 INPUT PAGE 15

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

518 KK C1
 519 KM COMBINE ON1 AND ON4A
 520 HC 2
 *

521 KK D1

Proposed.OUT

522	KM	DIVERT FLOW INTO BASIN ON6	
523	DT	DIV1	
524	DI	0	16
525	DQ	0	13
	*		
526	KK	ON5	
527	BA	.0052	
528	LS	0	91.2
529	UD	0.080	
	*		
530	KK	C2	
531	KM	COMBINE C1 AND ON5	
532	HC	2	
	*		
533	KK	D1A	
534	KM	DIVERT FLOW FOR LATER USE IN HEC-1 RUN	
535	DT	DIV1A	
536	DI	0	50
537	DQ	0	50
	*		
538	KK	ON4B	
539	BA	.0031	
540	LS	0	91.2
541	UD	0.085	
	*		
542	KK	RET1	
543	KM	RETRIEVE FLOW FROM D1	
544	DR	DIV1	
	*		
545	KK	ON6	
546	BA	.0039	
547	LS	0	91.2
548	UD	0.074	
	*		
549	KK	C3	
550	KM	COMBINE RET1 AND ON6	
551	HC	2	
	*		

1

HEC-1 INPUT

PAGE 16

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

552	KK	D1B	
553	KM	DIVERT FLOW FOR LATER USE IN HEC-1 RUN	
554	DT	DIV1B	
555	DI	0	50
556	DQ	0	50
	*		
557	KK	ON2	
558	BA	.0050	
559	LS	0	91.2
560	UD	0.080	
	*		
561	KK	ON3	
562	BA	.0063	
563	LS	0	91.5
564	UD	0.079	
	*		
565	KK	ON9	
566	BA	.0045	
567	LS	0	91.4
568	UD	0.096	
	*		
569	KK	C4	
570	KM	COMBINE ON2, ON3 AND ON9	
571	HC	3	
	*		
572	KK	D2	
573	KM	DIVERT FLOW INTO BASIN ON8	
574	DT	DIV2	
575	DI	0	29
576	DQ	0	24
	*		
577	KK	ON10	
578	BA	.0025	
579	LS	0	91.5
580	UD	0.071	
	*		
581	KK	C5	
582	KM	COMBINE C4 AND ON10	
583	HC	2	
	*		
584	KK	D3	
585	KM	DIVERT FLOW INTO BASIN ON7	
586	DT	DIV3	
587	DI	0	10
588	DQ	0	8
	*		

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HEC-1 INPUT

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

589	KK	ON11	
590	BA	.0025	
591	LS	0	91.5
592	UD	0.067	
	*		
593	KK	C6	
594	KM	COMBINE C5 AND ON11	
595	HC	2	
	*		
596	KK	D1C	
597	KM	DIVERT FLOW FOR LATER USE IN HEC-1 RUN	
598	DT	DIV1C	
599	DI	0	50
600	DQ	0	50
	*		
601	KK	CD1C	
602	KM	COMBINE D1A, ON4B, D1B AND D1C	
603	KM	PICK UP AT OFF23	
604	HC	4	
	*		
605	KK	RCD1C	
606	KM	ROUTE CD1C TO BASIN OFF23	
607	RK	2640 0.0346 0.02	
	*		

TRAP 100 2

Proposed.OUT

608 KK DRCD1C
 609 KM DIVERT FLOW TO BASIN OFF23
 610 DT DOFF23
 611 DI 0 50 100
 612 DQ 0 50 100
 *
 613 KK ON8
 614 BA .0042
 615 LS 0 83.5
 616 UD 0.074
 *
 617 KK RET2
 618 KM RETRIEVE FLOW FROM D2
 619 DR DIV2
 *
 620 KK C7
 621 KM COMBINE ON11 AND RET2
 622 HC 2
 *

1

HEC-1 INPUT

PAGE 18

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

623 KK RET3
 624 KM RETRIEVE FLOW FROM D3
 625 DR DIV3
 *
 626 KK ON7
 627 BA .0073
 628 LS 0 91.3
 629 UD 0.077
 *
 630 KK C8
 631 KM COMBINE C7, RET3 AND ON7
 632 HC 3
 *
 633 KK RET1A
 634 KM RETRIEVE FLOW FROM DIA IN TEE PEE
 635 DR DIV1A
 *
 636 KK RET1B
 637 KM RETRIEVE FLOW FROM D1B IN TEE PEE
 638 DR DIV1B
 *
 639 KK RET1C
 640 KM RETRIEVE FLOW FROM D1C IN TEE PEE
 641 DR DIV1C
 *
 642 KK C9
 643 KM COMBINE C8, RET1A, RET1B, RET1C IN TEE PEE
 644 KM END CENTENNIAL POINT HEC-1 DATA
 645 HC 3
 *
 646 KK ON2D
 647 KM START GRAND CANYON APARTMENTS HEC-1 DATA
 648 BA .0105
 649 PB 2.90
 650 LS 0 95
 651 UD 0.094
 *
 652 KK ON5D
 653 BA .0038
 654 LS 0 95
 655 UD 0.067
 *

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HEC-1 INPUT

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

656 KK CP1
 657 KM COMBINE ON2D AND ON5D
 658 HC 2
 *
 659 KK ON3D
 660 BA .0036
 661 LS 0 95
 662 UD 0.084
 *
 663 KK CP2
 664 KM COMBINE CP1 AND ON3D
 665 HC 2
 *
 666 KK ON1D
 667 BA .0075
 668 LS 0 95
 669 UD 0.079
 *
 670 KK ON4D
 671 BA .0041
 672 LS 0 95
 673 UD 0.096
 *
 674 KK CP3
 675 KM COMBINE ON1D AND ON4D
 676 HC 2
 *
 677 KK CP4
 678 KM COMBINE CP2 AND CP3
 679 KM END GRAND CANYON APARTMENTS HEC-1 DATA
 680 HC 2
 *
 681 KK CENGCA
 682 KM COMBINE DRCD1C, C8, C9, CP4
 683 KM CD1C IS DIVERSION OF FLOW ON TEE PEE FROM CENTENNIAL POINT
 684 KM CP4 AND C9 ARE ENDING OF THE APARTMENT COMPLEX AND DEVELOPMENT
 685 HC 4
 *
 686 KK PH2ML3
 687 BA .0448
 688 PB 3.00
 689 LS 0 92.7
 690 UD .121
 *

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HEC-1 INPUT

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LINE	Proposed.out									
	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10									
691	KK	PH2L6								
692	BA	.0468								
693	PB	3.00								
694	LS	0	89.6							
695	UD	.128								
	*									
696	KK	EGAN1								
697	BA	.0058								
698	PB	3.00								
699	LS	0	98.0							
700	UD	.104								
	*									
701	KK	DUMMY								
702	HC	3								
	*									
703	KK	PH2L5								
704	BA	.0043								
705	PB	3.00								
706	LS	0	90.0							
707	UD	.087								
	*									
708	KK	PH2L7								
709	BA	.0130								
710	PB	3.00								
711	LS	0	90.0							
712	UD	.097								
	*									
713	KK	RACL1A								
714	BA	.0059								
715	PB	3.00								
716	LS	0	98.0							
717	UD	.084								
	*									
718	KK	RA-EG								
719	KM	TOTAL FLOW AT INTERSECTION OF RACEL AND EGAN CREST								
720	KM	ROUTED EAST IN RACEL								
721	HC	4								
	*									
722	KK	PH2ML1								
723	BA	.0294								
724	PB	3.00								
725	LS	0	95.0							
726	UD	.101								
	*									

1 HEC-1 INPUT PAGE 21

LINE	HEC-1 INPUT									
	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10									
727	KK	PH2ML2								
728	BA	.0283								
729	PB	3.00								
730	LS	0	94.9							
731	UD	.091								
	*									
732	KK	PH2L1								
733	BA	.0272								
734	PB	3.00								
735	LS	0	90.0							
736	UD	.126								
	*									
737	KK	PH2L2								
738	BA	.0180								
739	PB	3.00								
740	LS	0	90.0							
741	UD	.103								
	*									
742	KK	DUMMY								
743	HC	5								
	*									
744	KK	PH2L3A								
745	BA	.0164								
746	PB	3.00								
747	LS	0	90.0							
748	UD	.102								
	*									
749	KK	HUAL1								
750	BA	.0070								
751	PB	3.00								
752	LS	0	98.0							
753	UD	.130								
	*									
754	KK	RACL1B								
755	BA	.0051								
756	PB	3.00								
757	LS	0	98.0							
758	UD	.070								
	*									
759	KK	HUAL2A								
760	BA	.0063								
761	PB	3.00								
762	LS	0	98.0							
763	UD	.129								
	*									

1 HEC-1 INPUT PAGE 22

LINE	HEC-1 INPUT									
	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10									
764	KK	RA-HU								
765	KM	TOTAL FLOW AT INTERSECTION OF RACEL AND HUALAPAI								
766	KM	ROUTED EAST IN RACEL								
767	HC	5								
	*									
768	KK	PH1-3								
769	KM	ONSITE BASIN NORTH OF RACEL AND WEST OF CONQUISTADOR								
770	PB	2.93								
771	BA	.0232								
772	LS	0	91.2							
773	UD	0.116								
	*									
774	KK	CONQ								
775	KM	STREET BASIN FOR CONQUISTADOR ST								
776	PB	2.93								
777	BA	.0035								
778	LS	0	92.5							
779	UD	0.133								
	*									

Proposed.OUT

780 KK DUMMY
781 KM COMBINES RA-HU, PHI-3 AND CONQ
782 HC 3
*

783 KK PHI-5
784 KM SOUTHWEST QUAD ONSITE BASIN
785 PB 2.93
786 BA .0583
787 LS 0 94.6
788 UD 0.139
*

789 KK PHIPRK
790 KM ONSITE BASIN FOR COMMUNITY PARK
791 PB 2.93
792 BA .0028
793 LS 0 81.5
794 UD 0.082
*

795 KK RACLIC
796 BA .0071
797 PB 2.93
798 LS 0 92.5
799 UD .097
*

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HEC-1 INPUT

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

800 KK DUMMY
801 KM COMBINES DUMMY, PHI-5, PHIPRK AND RACLIC
802 HC 4
*

803 KK PHI-4
804 KM ONSITE BASIN NORTH OF RACEL AND EAST OF CONQUISTADOR ST
805 PB 2.93
806 BA .0252
807 LS 0 94.6
808 UD 0.105
*

809 KK PHI-6
810 KM SOUTHEAST QUAD ONSITE BASIN
811 PB 2.93
812 BA .0505
813 LS 0 94.6
814 UD 0.128
*

815 KK GCD
816 BA .0053
817 PB 2.93
818 LS 0 93.8
819 UD .137
*

820 KK CP26
821 KM KYLE CANYON DEVELOPMENT TOTAL DISCHARGE AT GRAND CANYON AND OSTINATO
822 KM ROUTED THRU CENTENNIAL POINT TOWARD US-95
823 HC 4
*

824 KK CCP4
825 KM COMBINE CENGCA, CP26
826 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
827 HC 2
*

828 KK OFF21B
829 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
830 KM BASIN IS DEVELOPED, CHECK FOR REFERENCE MATERIAL
831 BA .0414
832 PB 2.775
833 LS 0 95
834 UD 0.110
*

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HEC-1 INPUT

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

835 KK COF21B
836 KM COMBINE OFF21B WITH FLOW FROM CENTENNIAL POINT AND GRAND CANYON APTS
837 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
838 HC 2
*

839 KK DOF21B
840 KM FACILITY E-15
841 KM FLOW SPLIT AT VTN CULVERT 9
842 KM FLOW SPLITS TO BETWEEN FRONTAGE AND SB ROADS OF US-95
843 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
844 DT DVCUL9
845 DI 0 5000
846 DQ 0 5000
*

847 KK ROFF23
848 KM RETRIEVE FLOW FROM DIVOFF23
849 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
850 DR DOFF23
*

851 KK OFF23
852 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
853 BA .0091
854 PB 2.787
855 LS 0 95
856 UD 0.109
*

857 KK COFF23
858 KM COMBINE OFF23,DOF21B, DOFF23, DCOFF17
859 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
860 HC 4
*

861 KK DCOF23
862 KM FACILITY E-16
863 KM FLOW SPLIT AT VTN CULVERT 10
864 KM DIVERSION TO BETWEEN FRONTAGE AND SB ROADS OF US-95
865 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
866 DT DCUL10
867 DI 0 300 600 748 1080 1398 1614
868 DQ 0 299 599 700 799 859 891
*

869 KK GT1
870 BA .0243
871 PB 3.00
872 LS 0 98.0
873 UD .256

1

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Proposed.OUT

965	KM	FACILITY E-11	
966	KM	FLOW SPLIT AT VTN CULVERT 4	
967	KM	FLOW SPLITS TO BETWEEN NB AND SB ROADS OF US-95	
968	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY	
969	DT	DCHD48	
970	DI	0	611 811 1102 1379 1647
971	DQ	0	611 733 855 977 1099
	*		
972	KK	WMLA1	
973	BA	.0338	
974	PB	2.93	
975	LS	0	95.0
976	UD	.099	
	*		
977	KK	WML8	
978	BA	.0302	
979	PB	2.93	
980	LS	0	95.0
981	UD	.102	
	*		
982	KK	WPRK8	
983	BA	.0030	
984	PB	2.93	
985	LS	0	84.0
986	UD	.078	
	*		

1 HEC-1 INPUT PAGE 28

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
987	KK STRT2
988	BA .0037
989	PB 2.93
990	LS 0
991	UD .080
	*
992	KK DUMMY
993	HC 4
	*
994	KK GRAND3
995	BA .0117
996	PB 2.93
997	LS 0
998	UD .124
	*
999	KK WBU2
1000	BA .0181
1001	PB 2.93
1002	LS 0
1003	UD .088
	*
1004	KK WMLA2
1005	BA .0185
1006	PB 2.93
1007	LS 0
1008	UD .083
	*
1009	KK WPT48
1010	KM TOTAL KYLE CANYON DEVELOPMENT DISCHARGE TOWARD VTN CULVERT 5
1011	HC 4
	*
1012	KK 95-7A
1013	KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1014	BA .0069
1015	PB 2.77
1016	LS 0
1017	UD 0.075
	*
1018	KK CHD05B
1019	KM COMBINE RDHD48, WPT48, 95-7A
1020	KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1021	KM DISCHARGE DIRECTLY INTO EXISTING US-95 INTERIM MPU FACILITY
1022	HC 3
	*

1 HEC-1 INPUT PAGE 29

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1023	KK WML7
1024	BA .0309
1025	PB 2.93
1026	LS 0
1027	UD .088
	*
1028	KK STRT1
1029	BA .0048
1030	PB 2.93
1031	LS 0
1032	UD .086
	*
1033	KK WBU1
1034	BA .0528
1035	PB 2.93
1036	LS 0
1037	UD .106
	*
1038	KK DUMMY
1039	HC 3
	*
1040	KK PH1-1
1041	KM NORTHWEST QUAD ONSITE BASIN
1042	PB 2.93
1043	BA .0278
1044	LS 0
1045	UD 0.114
	*
1046	KK PH1-2
1047	KM NORTHEAST QUAD ONSITE BASIN
1048	PB 2.93
1049	BA .0301
1050	LS 0
1051	UD 0.152
	*
1052	KK GRAND2
1053	BA .0033
1054	PB 2.93
1055	LS 0
1056	UD .146
	*

1057		KK	HORSE3		
1058		BA	.0117		
1059		PB	2.93		
1060		LS	0	98.0	
1061		UD	.098		
		*			
				HEC-1 INPUT	PAGE 30
1	LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10			
1062		KK	WPT46		
1063		KM	TOTAL KYLE CANYON DEVELOPMENT DISCHARGE TOWARD VTN CULVERT 6		
1064		HC	5		
		*			
1065		KK	95-8A		
1066		KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY		
1067		BA	.0052		
1068		PB	2.77		
1069		LS	0	92.6	
1070		UD	0.064		
		*			
1071		KK	OFF14		
1072		KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY		
1073		BA	.0145		
1074		PB	2.77		
1075		LS	0	88.0	
1076		UD	0.108		
		*			
1077		KK	CHD06B		
1078		KM	COMBINE WPT46, 95-8A, OFF14		
1079		KM	REVISED FROM GCW MASTER DRAINAGE STUDY		
1080		KM	TO ACCOUNT FOR DIRECT CONNECTION FROM CHD05B TO US-95 INTERIM MPU FACILITY		
1081		HC	3		
		*			
1082		KK	RCHD6B		
1083		KM	FLOW SPLIT INTO US-95 MPU FACILITY		
1084		KM	33% FLOW INTO 8'X6' MPU FACILITY		
1085		DT	DCMPU6		
1086		DI	0	425	
1087		DQ	0	142	
		*			
1088		KK	DHD06B		
1089		KM	FACILITY E-13		
1090		KM	FLOW SPLIT AT VTN CULVERT 6		
1091		KM	FLOW SPLITS TO BETWEEN NB AND SB ROADS OF US-95		
1092		KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY		
1093		DT	DCHD6B		
1094		DI	0	580	881
1095		DQ	0	580	725
		*			
1096		KK	95-9A		
1097		KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY		
1098		BA	.0110		
1099		PB	2.77		
1100		LS	0	92.6	
1101		UD	0.098		
		*			

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HEC-1 INPUT

LINE	ID	1	2	3	4	5	6	7	8	9	10	
1102	KK	CHD07B										
1103	KM	COMBINE RDHD6B, 95-9A										
1104	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY										
1105	HC	2										
	*											
1106	KK	OFF15										
1107	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY										
1108	BA	.0348										
1109	PB	2.77										
1110	LS	0 86.9										
1111	UD	0.126										
	*											
1112	KK	CHD7B2										
1113	KM	COMBINE CHD05B, CHD07B, OFF15										
1114	KM	COMBINE FLOWS IN MPU FACILITY										
1115	KM	REVISED FROM GCW MASTER DRAINAGE STUDY										
1116	KM	TO ACCOUNT FOR DIRECT CONNECTION FROM CHD05B TO US-95 INTERIM MPU FACILITY										
1117	HC	3										
	*											
1118	KK	CRET8										
1119	KM	RETRIEVE FLOW FROM DVCUL8										
1120	KM	FLOW BETWEEN FRONTAGE AND US-95, NOT IN FACILITY										
1121	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY										
1122	DR	DVCUL8										
	*											
1123	KK	DCRET8										
1124	KM	FACILITY E-14A										
1125	KM	FLOW SPLIT AT VTN CULVERT 8										
1126	KM	DIVERSION TO BETWEEN NB AND SB ROADS OF US-95										
1127	KM	BECAUSE PROPOSED MPU FACILITY REDUCES FLOW AT CULVERT 8,										
1128	KM	SIDE WEIR RAISED TO MATCH EXISTING DIVERSION AS MUCH AS POSSIBLE										
1129	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY										
1130	DT	DIV8A										
1131	DI	0	117	240	431	556	618	1137				
1132	DQ	0	117	159	179	207	219	329				
	*											
1133	KK	RET9										
1134	KM	RETRIEVE FLOW FROM DVCUL9										
1135	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY										
1136	DR	DVCUL9										
	*											
1137	KK	CRET9										
1138	KM	COMBINE RET9 AND RET8										
1139	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY										
1140	HC	2										

HEC-1 INPUT

LINE	ID	1	2	3	4	5	6	7	8	9	10	
1141	KK	DCCUL9										
1142	KM	FACILITY E-15A										
1143	KM	FLOW SPLIT AT VTN CULVERT 9										
1144	KM	DIVERSION TO EAST SIDE OF US-95										
1145	KM	BECAUSE PROPOSED MPU FACILITY REDUCES FLOW AT CULVERT 9,										
1146	KM	SIDE WEIR RAISED TO MATCH EXISTING DIVERSION										
1147	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY										
1148	DT	DIV9A										
1149	DI	0	165	377	791	920	1065	2170				
1150	DQ	0	165	203	241	250	260	437				

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Proposed.OUT

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*
1151 KK RET10
1152 KM RETRIEVE FLOW FROM DCUL10
1153 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1154 DR DCUL10
*

1155 KK CRET10
1156 KM COMBINE RET10 AND RDCUL9
1157 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1158 HC 2
*

1159 KK DCU10A
1160 KM FACILITY E-16A
1161 KM FLOW SPLIT AT VTN CULVERT 10
1162 KM DIVERSION TO EAST SIDE OF US-95
1163 KM BECAUSE PROPOSED MPU FACILITY REDUCES FLOW AT CULVERT 10,
1164 KM SIDE WEIR RAISED TO MATCH EXISTING DIVERSION
1165 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1166 DT DIV10A
1167 DI 0 146 312 675 1424 2223
1168 DQ 0 146 291 360 437 583
*

1169 KK RET11
1170 KM RETRIEVE FLOW FROM DCUL11
1171 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1172 DR DCUL11
*

1173 KK RET6
1174 KM RETRIEVE FLOW THAT SPLITS INTO MPU FACILITY AT VTN CULVERT 6
1175 DR DCMPU6
*

1176 KK DIV11A
1177 KM COMBINE RET11, RDCU10, CHD7B2, RET6
1178 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1179 HC 4
*

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

1180 KK DUMMY
1181 KM CLEAR HEC-1 STACK
1182 HC 2
*

1183 KK RETD1B
1184 KM RETRIEVE FLOW FROM VTN CULVERT 1
1185 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1186 DR DCHD1B
*

1187 KK DHD1C
1188 KM FACILITY E-9A
1189 KM FLOW SPLIT AT VTN CULVERT 1
1190 KM DIVERSION TO EAST SIDE OF US-95
1191 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1192 DT DCHD1C
1193 DI 0 10 50
1194 DQ 0 10 50
*

1195 KK RETD2B
1196 KM RETRIEVE FLOW FROM VTN CULVERT 2
1197 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1198 DR DCHD2B
*

1199 KK CHD02C
1200 KM COMBINE DCHD2B, RDHD1C
1201 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1202 HC 2
*

1203 KK DHD2C
1204 KM FACILITY E-10A
1205 KM FLOW SPLIT AT VTN CULVERT 2
1206 KM DIVERSION TO EAST SIDE OF US-95
1207 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1208 DT DCHD2C
1209 DI 0 100 200 250 400 500 600 700 800 900
1210 DI 1000
1211 DQ 0 65 100 122 201 258 323 384 447 514
1212 DQ 581
*

1213 KK RETD4B
1214 KM RETRIEVE FLOW FROM VTN CULVERT 4
1215 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1216 DR DCHD4B
*

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

1217 KK CHD04C
1218 KM COMBINE DCHD4B, RDHD2C
1219 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1220 HC 2
*

1221 KK DHD4C
1222 KM FACILITY E-11A
1223 KM FLOW SPLIT AT VTN CULVERT 4
1224 KM DIVERSION TO EAST SIDE OF US-95
1225 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1226 DT DCHD4C
1227 DI 0 200 400 600 800 1000 1200 1400 1600 1800
1228 DI 2000
1229 DQ 0 181 212 262 336 416 503 609 719 823
1230 DQ 933
*

1231 KK DHD5C
1232 KM FACILITY E-12A
1233 KM FLOW SPLIT AT VTN CULVERT 5
1234 KM DIVERSION TO EAST SIDE OF US-95
1235 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1236 DT DCHD5C
1237 DI 0 150 300 450 600 750 800 1050 1200 1350
1238 DI 1500
1239 DQ 0 132 171 193 208 232 245 321 380 444
1240 DQ 513
*

1241 KK RETD6B
1242 KM RETRIEVE FLOW FROM VTN CULVERT 6
1243 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1244 DR DCHD6B
*

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1245	KK	CHD06C
1246	KM	COMBINE DCHD68, RDHD5C
1247	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY
1248	HC #	2
1249	KK	DHD6C
1250	KM	FACILITY E-13A
1251	KM	FLOW SPLIT AT VTN CULVERT 6
1252	KM	DIVERSION TO EAST SIDE OF US-95
1253	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY
1254	DT	DCHD6C
1255	DI	0 200 400 600 800 1000 1200 1400 1600 1680
1256	DI	2000
1257	DQ	0 199.9 399.9 560 647 713 786 860 948 988
1258	DQ #	1142

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

1290	KK	EMLA1	
1291	BA	.0174	
1292	PB	2.93	
1293	LS	0	95.0
1294	UD	.115	
	*		

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

1327	KK	EPF1	
1328	BA	.0016	
1329	PB	2.93	
1330	LS	0	95.0
1331	UD	.050	
	+		

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

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1333 1334 1335	KM KM HC *	Proposed.OUT TOTAL KYLE CANYON DEVELOPMENT DISCHARGE AT INTERSECTION OF BRENT LANE AND FOR PROPOSED FLOW SPLIT INTO EXISTING STORM DRAIN SOUTH		
		3		
1336	KK	SOUTH		
1337	KM	FLOW SPLIT AT BRENT/FT. APACHE		
1338	KM	DIVERT STORM DRAIN DESIGN FLOW 65 CFS SOUTH IN FORT APACHE		
1339	DT	BRENT		
1340	DI	0	205	411
1341	DQ	0	149	362
	*			
1342	KK	SKY1		
1343	BA	.0025		
1344	PB	2.93		
1345	LS	0	98.0	
1346	UD	.053		
	*			
1347	KK	HORSE4		
1348	BA	.0063		
1349	PB	2.93		
1350	LS	0	98.0	
1351	UD	.050		
	*			
1352	KK	EGC3A		
1353	BA	.0184		
1354	PB	2.93		
1355	LS	0	95.0	
1356	UD	.101		
	*			
1357	KK	EGC4		
1358	BA	.0050		
1359	PB	2.93		
1360	LS	0	95.0	
1361	UD	.055		
	*			
1362	KK	DUMMY		
1363	HC	5		
	*			
1364	KK	95-98		
1365	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY		
1366	BA	.0133		
1367	PB	2.77		
1368	LS	0	92.6	
1369	UD	0.139		
	*			
1		HEC-1 INPUT		
LINE	ID	1.....2.....3.....4.....5.....6.....7.....8.....9.....10		PAGE 38
1370	KK	CP45		
1371	KM	TOTAL KYLE CANYON DISCHARGE AT INTERSECTION OF FORT APACHE AND HORSE		
1372	KM	PROPOSED FLOW SPLIT AT INTERSECTION		
1373	HC	2		
	*			
1374	KK	HORSE		
1375	KM	FLOW SPLIT AT HORSE/RACEL		
1376	KM	DIVERT NWNS 101 CFS SOUTH IN FORT APACHE/RACEL		
1377	DT	RACEL		
1378	DI	0	101	1000
1379	DQ	0	101	101
	*			
1380	KK	RETC4C		
1381	KM	RETRIEVE FLOW FROM VTN CULVERT 4		
1382	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY		
1383	DR	DCHD4C		
	*			
1384	KK	RETC2C		
1385	KM	RETRIEVE FLOW FROM VTN CULVERT 2		
1386	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY		
1387	DR	DCHD2C		
	*			
1388	KK	SHEP2A		
1389	BA	.0114		
1390	PB	2.77		
1391	LS	0	77.0	
1392	UD	.208		
	*			
1393	KK	DUMMY		
1394	HC	2		
	*			
1395	KK	EGC2		
1396	BA	.0084		
1397	PB	2.77		
1398	LS	0	98.0	
1399	UD	.145		
	*			
1400	KK	IRON2		
1401	BA	.0084		
1402	PB	2.77		
1403	LS	0	98.0	
1404	UD	.145		
	*			
1		HEC-1 INPUT		
LINE	ID	1.....2.....3.....4.....5.....6.....7.....8.....9.....10		PAGE 39
1405	KK	OFFH		
1406	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY		
1407	BA	.0074		
1408	PB	2.77		
1409	LS	0	89.5	
1410	UD	0.082		
	*			
1411	KK	SK-IR		
1412	KM	COMBINE DCHD4C,SHEP2A, EGC2, IRON2, OFFH		
1413	HC	5		
	*			
1414	KK	EMLA2		
1415	BA	.0234		
1416	PB	2.77		
1417	LS	0	94.6	
1418	UD	.115		
	*			
1419	KK	TP2		
1420	BA	.0009		
1421	PB	2.93		
1422	LS	0	98.0	
1423	UD	.079		
	*			

1424 KK IR-TP
1425 KM COMBINE SK-IR, EMLA2, TP2
1426 HC 3
*

1427	KK	ES1	
1428	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY	
1429	BA	.0173	
1430	PB	2.77	
1431	LS	0	92.7
1432	UD	0.109	
	*		

1433	KK	IRON3	
1434	BA	.0022	
1435	PB	2.93	
1436	LS	0	98.0
1437	UD	.062	
	*		

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1438      KK      IR-FT
1439      KM      COMBINE IR-TP, ES1, IRON3
1440      HC      3
          *

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1

HEC-1 INPUT

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

1441	KK	FTNOR		
1442	KM	FLOW SPLIT AT IRON MOUNTAIN/FORT APACHE		
1443	KM	DIVERT FLOW EAST IN IRON MOUNTAIN ROAD		
1444	KM	DIVERT MAX. SD FLOW + MAX. STREET FLOW (118/98 CFS) LESS THAN NWN5 235/98 CFS		
1445	OT	IREAST		
1446	OI	0	124	267
1447	OQ	0	98	118

1448	KK	FTNOR	
1449	DT	FTNOR	
1450	DI	0	1000
1451	DQ	0	1000
	*		

1452	KK	DUMMY
1453	HC	4
	#	

```

1454      KK  RETC1C
1455      KM   RETRIEVE FLOW FROM VTN CULVERT 1
1456      KM   REFERENCED FROM GCW MASTER DRAINAGE STUDY
1457      DR  DCHD1C
          #

```

1458	KK	SHEP2B	
1459	BA	.0886	
1460	PB	2.77	
1461	LS	0	77.0
1462	UD	0.229	
	*		

1463 KK LC-SM
1464 KM TOTAL FLOW AT INTERSECTION OF LOG CABIN AND SKY
1465 KM FLOW ROUTED EAST IN LOG CABIN
1466 HC 2

1467	KK	EGC1	
1468	BA	.0077	
1469	PB	2.77	
1470	LS	0	92.0
1471	UD	.078	
	*		

1472	KK	IRON1	
1473	BA	.0037	
1474	PB	2.77	
1475	LS	0	98.0
1476	UD	.087	
	*		

1

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

1477	KK	EL8	
1478	BA	.0463	
1479	PB	2.77	
1480	LS	0	82.0
1481	UD	.151	
	*		

1482	KK	DUMMY
1483	HC	4
	☆	

1484	KK	LOG1A	
1485	BA	.0063	
1486	PB	2.77	
1487	LS	0	98.0
1488	UD	.069	
	*		

1489	KK	STRT6A	
1490	BA	.0027	
1491	PB	2.77	
1492	LS	0	98.0
1493	UD	.114	
	*		

1494	KK	DUMMY
1495	HC	3

1496	KK	EL1	
1497	BA	.0392	
1498	PB	2.77	
1499	LS	0	82.0
1500	UD	.169	

1501	KK	EML1	
1502	BA	.0288	
1503	PB	2.77	
1504	LS	0	92.0
1505	UD	.116	
	*		

1506	KK	EL2	
1507	BA	.0400	
1508	PB	2.77	
1509	LS	0	82.0
1510	UD	.172	

1

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Proposed.OUT											
LINE	ID	1	2	3	4	5	6	7	8	9	10
1511	KK	EML2									
1512	BA	.0356									
1513	PB	2.77									
1514	LS	0	92.0								
1515	UD	.121									
	*										
1516	KK	DUMMY									
1517	HC	5									
	*										
1518	KK	STRT9									
1519	BA	.0077									
1520	PB	2.77									
1521	LS	0	98.0								
1522	UD	.123									
	*										
1523	KK	DUMMY									
1524	HC	2									
	*										
1525	KK	EL7									
1526	BA	.0387									
1527	PB	2.77									
1528	LS	0	82.0								
1529	UD	.139									
	*										
1530	KK	EL6									
1531	BA	.0424									
1532	PB	2.77									
1533	LS	0	82.0								
1534	UD	.164									
	*										
1535	KK	TP3									
1536	BA	.0046									
1537	PB	2.77									
1538	LS	0	98.0								
1539	UD	.095									
	*										
1540	KK	STRT68									
1541	BA	.0019									
1542	PB	2.77									
1543	LS	0	98.0								
1544	UD	.050									
	*										

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LINE	ID	1	2	3	4	5	6	7	8	9	10
1545	KK	DUMMY									
1546	HC	4									
	*										
1547	KK	TP4									
1548	BA	.0028									
1549	PB	2.77									
1550	LS	0	98.0								
1551	UD	.118									
	*										
1552	KK	ESCHL1									
1553	BA	.0231									
1554	PB	2.77									
1555	LS	0	84.0								
1556	UD	.123									
	*										
1557	KK	LOG18									
1558	BA	.0034									
1559	PB	2.77									
1560	LS	0	98.0								
1561	UD	.050									
	*										
1562	KK	EPRK2									
1563	BA	.0072									
1564	PB	2.77									
1565	LS	0	69.0								
1566	UD	.115									
	*										
1567	KK	LC-TP									
1568	KM	TOTAL FLOW AT INTERSECTION OF LOG CABIN AND TEE PEE									
1569	KM	FLOW ROUTED EAST IN LOG CABIN									
1570	HC	5									
	*										
1571	KK	FTNOR									
1572	DR	FTNOR									
	*										
1573	KK	EL5									
1574	BA	.0414									
1575	PB	2.77									
1576	LS	0	82.0								
1577	UD	.165									
	*										

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LINE	ID	1	2	3	4	5	6	7	8	9	10
1578	KK	EL4									
1579	BA	.0311									
1580	PB	2.77									
1581	LS	0	82.0								
1582	UD	.142									
	*										
1583	KK	STRT7									
1584	BA	.0033									
1585	PB	2.77									
1586	LS	0	98.0								
1587	UD	.060									
	*										
1588	KK	DUMMY									
1589	HC	4									
	*										
1590	KK	RFTLC									
1591	KM	DIVERT FLOW SPLIT INTO O'HARE ROAD									
1592	DT	OHARE									
1593	DT	0	52	224							
1594	DQ	0	0	47							
	*										
1595	KK	EL3									

1596 BA .0481 Proposed.OUT
1597 PB 2.77
1598 LS 0 82.0
1599 UD .163
*
1600 KK FORT1
1601 BA .0091
1602 PB 2.77
1603 LS 0 98.0
1604 UD .238
*
1605 KK LOG2
1606 BA .0057
1607 PB 2.77
1608 LS 0 98.0
1609 UD .063
*
1610 KK FT-LC
1611 KM TOTAL FLOW AT INTERSECTION OF FORT APACHE AND LOG CABIN
1612 KM FLOW ROUTED NORTH IN FORT APACHE
1613 HC 5

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

1614 KK R2FTLC
1615 KM DIVERT FLOW SPLIT INTO LOG CABIN WAY
1616 DT LOGCAB
1617 DI 0 127 370
1618 DQ 0 73 187
*
1619 KK FORT2
1620 BA .0089
1621 PB 2.77
1622 LS 0 98.0
1623 UD .253
*
1624 KK EML3
1625 BA .0385
1626 PB 2.77
1627 LS 0 92.0
1628 UD .124
*
1629 KK EML4
1630 BA .0322
1631 PB 2.77
1632 LS 0 92.0
1633 UD .143
*
1634 KK DUMMY
1635 HC 5
*
1636 KK SHEEP4
1637 BA .0144
1638 PB 2.77
1639 LS 0 77.0
1640 UD .209
*
1641 KK FT-MO
1642 KM TOTAL KYLE CANYON DEVELOPMENT DISCHARGE IN FORT APACHE @ MOCCASIN
1643 KM FLOW ROUTED EAST ADJACENT TO MOCCASIN
1644 HC 2
*
1645 KK OFFC
1646 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1647 BA .1333
1648 PB 2.79
1649 LS 0 77.4
1650 UD 0.313
*

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

1651 KK 95-3
1652 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1653 BA .0095
1654 PB 2.77
1655 LS 0 89.1
1656 UD 0.095
*
1657 KK OFFB
1658 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1659 BA .1337
1660 PB 2.81
1661 LS 0 77.4
1662 UD 0.392
*
1663 KK 95-2
1664 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1665 BA .0044
1666 PB 2.77
1667 LS 0 89.1
1668 UD 0.090
*
1669 KK DUMMY
1670 HC 4
*
1671 KK OFFA
1672 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1673 BA .0203
1674 PB 2.77
1675 LS 0 77.4
1676 UD 0.149
*
1677 KK 95-1
1678 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1679 BA .0042
1680 PB 2.77
1681 LS 0 89.1
1682 UD 0.069
*
1683 KK CP27B
1684 KM REFERENCED FROM GCW MASTER DRAINAGE STUDY
1685 KM COMBINE OFFC, 95-3, OFFB, 95-2, OFFA, 95-1
1686 HC 3
*

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Proposed.OUT

LINE	ID	1	2	3	4	5	6	7	8	9	10
1687	KK	OFFZ									
1688	BA	.0522									
1689	PB	2.77									
1690	LS	0	77.0								
1691	UD	0.223									
	*										
1692	KK	COFFZ									
1693	KM	COMBINE	CP27B, OFFZ								
1694	HC	2									
	*										
1695	KK	OFFDA									
1696	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY									
1697	BA	.6430									
1698	PB	3.09									
1699	LS	0	77.4								
1700	UD	0.530									
	*										
1701	KK	ROFFDA									
1702	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY									
1703	KM	STEPS	K X-FACTOR								
1704	RM	5	0.400	0.15							
	*										
1705	KK	OFFDB									
1706	KM	REFERENCED FROM GCW MASTER DRAINAGE STUDY									
1707	BA	.4948									
1708	PB	2.84									
1709	LS	0	77.4								
1710	UD	0.522									
	*										
1711	KK	CP27A									
1712	KM	COMBINE OFFDA, OFFDB									
1713	HC	2									
	*										
1714	KK	DKC7									
1715	KM	RETRIEVE FLOW THAT CROSSES US-95 IN CCRCD FACILITY									
1716	DR	DKC7									
	*										
1717	KK	OFFFX									
1718	BA	.0177									
1719	PB	2.77									
1720	LS	0	77.0								
1721	UD	0.187									
	*										

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LINE	ID	1	2	3	4	5	6	7	8	9	10
1722	KK	EPT16									
1723	KM	TOTAL OFFSITE & KC WEST FLOW CONVEYED THRU EAST-SHEEP MOUNTAIN PKWY									
1724	KM	COMBINE CP27A, DCKC7, OFFX									
1725	HC	3									
	*										
1726	KK	HUAL3									
1727	BA	.0038									
1728	PB	2.77									
1729	LS	0	98.0								
1730	UD	.177									
	*										
1731	KK	EMLA4									
1732	BA	.0683									
1733	PB	2.77									
1734	LS	0	92.0								
1735	UD	.162									
	*										
1736	KK	STRT10									
1737	BA	.0035									
1738	PB	2.77									
1739	LS	0	98.0								
1740	UD	.057									
	*										
1741	KK	EMLA3									
1742	BA	.0145									
1743	PB	2.77									
1744	LS	0	92.0								
1745	UD	.095									
	*										
1746	KK	STRT11									
1747	BA	.0086									
1748	PB	2.77									
1749	LS	0	98.0								
1750	UD	.178									
	*										
1751	KK	DUMMY									
1752	HC	5									
	*										
1753	KK	SHEEP3									
1754	BA	.0441									
1755	PB	2.77									
1756	LS	0	77.0								
1757	UD	.247									
	*										

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LINE	ID	1	2	3	4	5	6	7	8	9	10
1758	KK	EMLA5									
1759	BA	.0731									
1760	PB	2.77									
1761	LS	0	92.0								
1762	UD	.149									
	*										
1763	KK	EPRK1									
1764	BA	.0015									
1765	PB	2.77									
1766	LS	0	69.0								
1767	UD	.095									
	*										
1768	KK	DUMMY									
1769	HC	5									
	*										
1770	KK	SM-MO									
1771	KM	TOTAL KYLE CANYON DEVELOPMENT DISCHARGE IN SHEEP MOUNTAIN PKWY @ MOCCASIN									
1772	HC	2									
	*										

1773 KK CP43
 1774 KM TOTAL
 1775 HC 2
 1776 ZZ

1

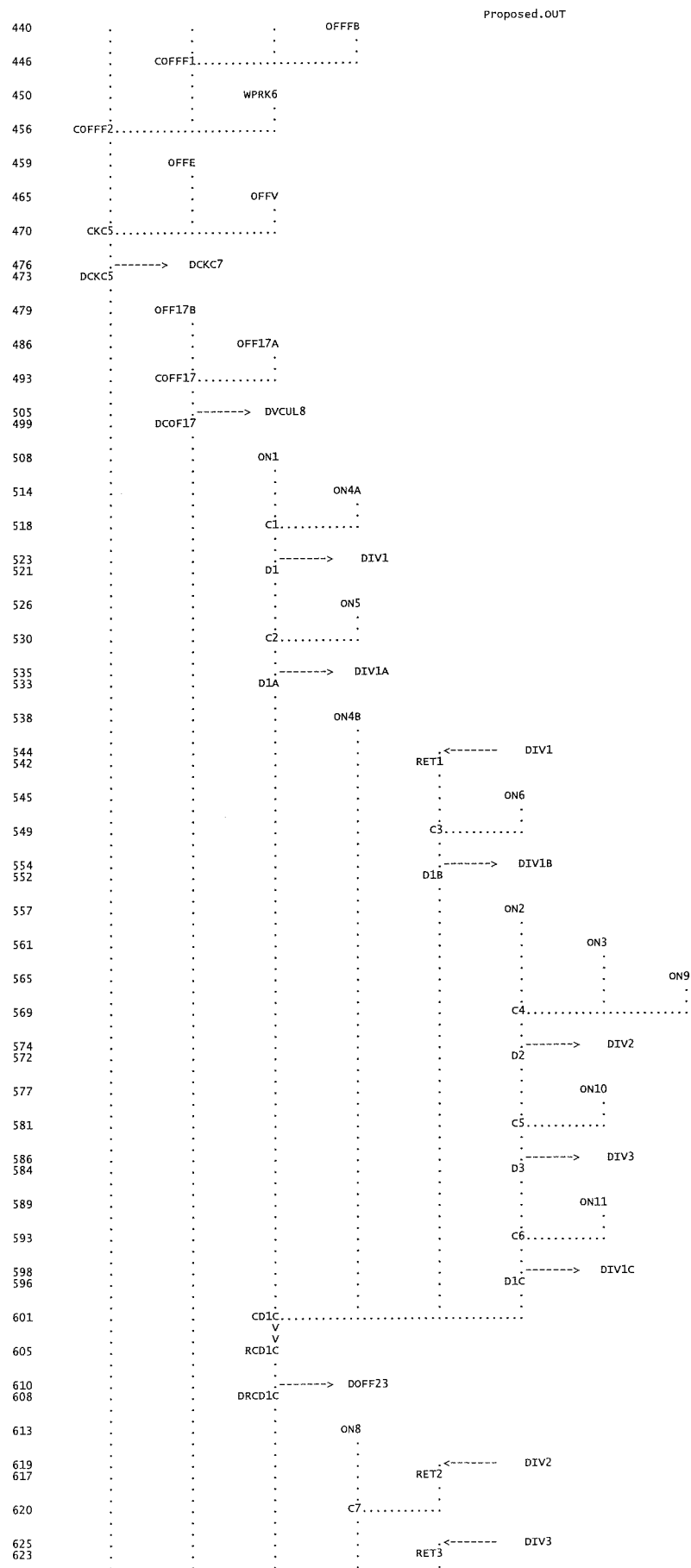
SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
 NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW

```

28 WOFF1
43 . WOFF2
49 . WOFF3
55 CP1-----
58 . WOFF4
64 . WOFF5
70 . WOFF6
76 . ON1
81 DB1-----
84 V
RDB1
92 . AROY1
98 . WML1
103 . SHEP1A
109 . AROY2
115 DUMMY-----
117 . PH2L4
122 . PH2L8
127 DUMMY-----
129 . PH2L9
134 . WPF1
139 . EGAN2
144 DUMMY-----
146 . WPRK2
151 . PH2PK1
156 . PH2L3B
161 DUMMY-----
163 . PH2PK
168 . HORSE2
173 DUMMY-----
175 . PH2PK2
180 . PH2ML4
185 . SHAUM1
190 HU-HO-----
194 . WML6
199 . AROY5
204 . SHEP1B
209 DUMMY-----
211 . WSCHL2
216 . STRT5
221 . WL3
226 . AROY6
231 DUMMY-----
  
```

233	.	.	WPRK3	.	.
238	.	.	.	WL4	.
243	.	.	.	.	STRT4
248	DUMMY	.	.	.	.
250	.	.	WML5	.	.
255	.	.	HUAL2B	.	.
260	DUMMY	.	.	.	.
262	.	.	AROY4	.	.
268	.	.	WML2	.	.
273	.	.	.	WPRK4	.
278	.	.	.	.	SHAUM2
283	DUMMY	.	.	.	.
285	.	.	WL1	.	.
290	.	.	.	HORS1A	.
295	SH-HO	.	.	.	.
299	.	.	WOFF7	.	.
305	.	.	.	WOFF8	.
311	.	.	CP2	.	.
314	.	.	.	WOFF9	.
320	.	.	.	.	WOFF10
326	.	.	.	.	ON2
331	.	.	DB2	.	.
334	.	.	V	.	.
	.	.	RDB2	.	.
342	.	.	.	WPRK7	.
347	.	.	.	.	WL2
352	DUMMY	.	.	.	.
354	.	.	SHAUM3	.	.
359	.	.	.	IRON1A	.
364	IR-SH	.	.	.	.
368	.	.	WML3	.	.
373	.	.	.	HORS1B	.
378	.	.	.	.	WPRK5
383	DUMMY	.	.	.	.
385	.	.	WSCHL1	.	.
390	.	.	.	IRON1B	.
395	.	.	.	.	WML4
400	DUMMY	.	.	.	.
402	.	.	SHEP1C	.	.
407	HU-IR	.	.	.	.
411	.	.	OFFG	.	.
417	WPT40	.	.	.	.
420	.	.	OFF10	.	.
	.	.	V	.	.
426	.	.	ROFF10	.	.
430	.	.	OFFFA	.	.
	.	.	V	.	.
436	.	.	ROFFFA	.	.
	.	.	.	.	.



Proposed.OUT

626	.	.	.	.	Proposed.OUT	
	.	.	.	.	ON7	
630	.	.	.	C8		
635	.	.	.	.		
633	.	.	.	RET1A	<----- DIV1A	
638	.	.	.	.		
636	.	.	.	RET1B	<----- DIV1B	
641	.	.	.	.		
639	.	.	.	RET1C	<----- DIV1C	
642	.	.	.	C9		
646	.	.	.	.	ON2D	
652	.	.	.	.	ON5D	
656	.	.	.	CP1		
659	.	.	.	.	ON3D	
663	.	.	.	CP2		
666	.	.	.	.	ON1D	
670	.	.	.	.	ON4D	
674	.	.	.	CP3		
677	.	.	.	CP4		
681	.	.	.	CENGCA		
686	.	.	.	PH2ML3		
691	.	.	.	PH2L6		
696	.	.	.	EGAN1		
701	.	.	.	DUMMY		
703	.	.	.	PH2L5		
708	.	.	.	PH2L7		
713	.	.	.	RACL1A		
718	.	.	.	RA-EG		
722	.	.	.	PH2ML1		
727	.	.	.	PH2ML2		
732	.	.	.	PH2L1		
737	.	.	.	PH2L2		
742	.	.	.	DUMMY		
744	.	.	.	PH2L3A		
749	.	.	.	HUAL1		
754	.	.	.	RACL1B		
759	.	.	.	HUAL2A		
764	.	.	.	RA-HU		
768	.	.	.	PH1-3		
774	.	.	.	CONQ		
780	.	.	.	DUMMY		
783	.	.	.	PH1-5		
789	.	.	.	PH1PRK		
795	.	.	.	RACL1C		
800	.	.	.	DUMMY		
803	.	.	.	PH1-4		
809	.	.	.	PH1-6		
815	.	.	.	GCD		
820	.	.	.	CP26		

824	CCP4			
828		OFF21B		
835	COF21B			
844			DVCUL9	
839	DOF21B			
850		ROFF23	DOFF23	
847				
851			OFF23	
857	COFF23			
866		DCUL10		
861	DCOF23			
869		GT1		
874		OFFU		
881	CP26WT			
890		DCUL11		
884	DC26WT			
893		95-5		
905			DCHD1B	
900	DHD01B			
908		OFF8		
914			OFFY	
919				WGED2
924	CHD02B			
933			DCHD2B	
928	DHD02B			
936		WGED1		
941			STRT3	
946		WPT49		
949			95-6	
955				OFFW
960	CHD04B			
969			DCHD4B	
964	DHD04B			
972		WMLA1		
977			WML8	
982				WPRK8
987				STRT2
992	DUMMY			
994		GRAND3		
999			WBU2	
1004				WMLA2
1009	WPT48			
1012		95-7A		
1018	CHD05B			
1023		WML7		
1028			STRT1	
1033				WBU1
1038	DUMMY			
1040		PH1-1		
1046				PH1-2

				Proposed.OUT		
1052	.	.	.	.	GRAND2	.
1057	.	.	.	.		HORSE3
1062	.	.	WPT46	.....		
1065	.	.			95-8A	
1071	.	.				OFF14
1077	.	.	CHD06B	.....		
1085	.	.		----->	DCMPU6	
1082	.	.	RCHD6B			
1093	.	.		----->	DCHD6B	
1088	.	.	DHD06B			
1096	.	.			95-9A	
1102	.	.	CHD07B	.....		
1106	.	.			OFF15	
1112	.	.	CHD7B2	.....		
1122	.	.		<-----	DVCUL8	
1118	.	.	CRET8			
1130	.	.		----->	DIV8A	
1123	.	.	DCRET8			
1136	.	.		<-----	DVCUL9	
1133	.	.				
1137	.	.	CRET9	.....		
1148	.	.		----->	DIV9A	
1141	.	.	DCCUL9			
1154	.	.		<-----	DCUL10	
1151	.	.				
1155	.	.	CRET10	.....		
1166	.	.		----->	DIV10A	
1159	.	.	DCU10A			
1172	.	.		<-----	DCUL11	
1169	.	.				
1175	.	.		<-----	DCMPU6	
1173	.	.				
1176	.	.	DIV11A	.....		
1180	.	.	DUMMY	.....		
1186	.	.		<-----	DCHD1B	
1183	.	.	RETD1B			
1192	.	.		----->	DCHD1C	
1187	.	.	DHD1C			
1198	.	.		<-----	DCHD2B	
1195	.	.	RETD2B			
1199	.	.	CHD02C	.....		
1208	.	.		----->	DCHD2C	
1203	.	.	DHD2C			
1216	.	.		<-----	DCHD4B	
1213	.	.	RETD4B			
1217	.	.	CHD04C	.....		
1226	.	.		----->	DCHD4C	
1221	.	.	DHD4C			
1236	.	.		----->	DCHD5C	
1231	.	.	DHD5C			
1244	.	.		<-----	DCHD6B	
1241	.	.	RETD6B			
1245	.	.	CHD06C	.....		
1254	.	.		----->	DCHD6C	
1249	.	.	DHD6C			
1259	.	.	DUMMY			
1265	.	.		<-----	DCHD5C	
1262	.	.	RETC5C			
1266	.	.			95-7B	

Proposed.OUT

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1272      C95-7B.....
1279      RETC6C<----- DCHD6C
1276      .
1280      .          95-8B
1286      .          C95-8B.....
1290      .          EMLA1
1295      .          .          TP1
1300      BR-TP.....
1304      .          ES2
1310      .          BRENT1
1315      .          .          EGC3B
1320      DUMMY.....
1322      .          HORSE5
1327      .          .          EPF1
1332      CP44.....
1339      .          .          BRENT
1336      SOUTH----->
1342      .          SKY1
1347      .          .          HORSE4
1352      .          .          EGC3A
1357      .          .          .          EGC4
1362      DUMMY.....
1364      .          95-9B
1370      CP45.....
1377      .          .          RACEL
1374      HORSE----->
1383      RETC4C<----- DCHD4C
1380      .
1387      .          RETC2C<----- DCHD2C
1384      .          .          SHEP2A
1388      .          .          DUMMY.....
1393      .          .          EGC2
1395      .          .          .          IRON2
1400      .          .          .          .          OFFH
1405      .          .          .          .          .
1411      SK-IR.....
1414      .          EMLA2
1419      .          .          TP2
1424      IR-TP.....
1427      .          ES1
1433      .          .          IRON3
1438      IR-FT.....
1445      .          .          IREAST
1441      FTNOR----->
1449      .          .          FTNOR
1448      FTNOR----->
1452      DUMMY.....
1457      RETC1C<----- DCHD1C
1454      .
1458      .          SHEP2B
1463      LC-SM.....

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1467	.	.	EGC1	.	.	.
1472	.	.	IRON1	.	.	.
1477	.	.	.	EL8	.	.
1482	DUMMY	.	.	.	.	.
1484	.	.	LOG1A	.	.	.
1489	.	.	STRT6A	.	.	.
1494	DUMMY	.	.	.	.	.
1496	.	.	EL1	.	.	.
1501	.	.	EML1	.	.	.
1506	.	.	.	EL2	.	.
1511	.	.	.	.	EML2	.
1516	DUMMY	.	.	.	.	.
1518	.	.	STRT9	.	.	.
1523	DUMMY	.	.	.	.	.
1525	.	.	EL7	.	.	.
1530	.	.	EL6	.	.	.
1535	.	.	.	TP3	.	.
1540	.	.	.	.	STRT6B	.
1545	DUMMY	.	.	.	.	.
1547	.	.	TP4	.	.	.
1552	.	.	ESCHL1	.	.	.
1557	.	.	.	LOG1B	.	.
1562	.	.	.	.	EPRK2	.
1567	LC-TP	.	.	.	.	.
1572	.	.	FTNOR	FTNOR	.	.
1573	.	.	.	EL5	.	.
1578	.	.	.	.	EL4	.
1583	.	.	.	.	STRT7	.
1588	DUMMY	.	.	.	.	.
1592	.	.	RFTLC	OHARE	.	.
1590	.	.	.	.	.	.
1595	.	.	.	EL3	.	.
1600	.	.	.	.	FORT1	.
1605	.	.	.	.	LOG2	.
1610	FT-LC	.	.	.	.	.
1616	.	.	R2FTLC	LOGCAB	.	.
1614	.	.	.	.	.	.
1619	.	.	FORT2	.	.	.
1624	.	.	.	EML3	.	.
1629	.	.	.	.	EML4	.
1634	DUMMY	.	.	.	.	.
1636	.	.	SHEEP4	.	.	.
1641	FT-MO	.	.	.	.	.
1645	.	.	OFFC	.	.	.
1651	.	.	95-3	.	.	.
1657	.	.	.	OFFB	.	.
1663	.	.	.	.	.	.

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Proposed.OUT
1669      .      .      .      .      .
      DUMMY.....
1671      .      .      .      .      .
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1677      .      .      .      .      .
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1683      .      .      .      .      .
      CP27B.....
1687      .      .      .      .      .
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1692      .      .      .      .      .
      COFFZ.....
1695      .      .      .      .      .
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1701      .      .      .      .      .
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1773      .      .      .      .      .
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

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1*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 28SEP15 TIME 15:14:32
*
*****

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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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SLATER HANIFAN GROUP
OLYMPIA COMPANIES
SKYE CANYON - MASTER DRAINAGE STUDY UPDATE
OVERALL PROPERTY PROPOSED DRAINAGE CONDITION

RETURN PERIOD ----- 100 & 10-YEAR
DISTRIBUTION ----- 6-HOUR SDN3
PROJECT NO. ----- OLY1401.001
FILENAME ----- Proposed.H1
DATE ----- 9/28/2015
MODELED BY ----- SMJ/ETM

SIX HOUR DEPTH-AREA REDUCTION FACTORS	
DRAINAGE AREA (MI^2)	DARF
0.0-0.49	1.00
0.5-0.99	0.98
1.0-1.99	0.97
2.0-3.99	0.93
4.0-5.99	0.91
6.0-7.99	0.90
25-YR	0.70
10-YR	0.57

```

25 IO      OUTPUT CONTROL VARIABLES
      IPRINT 5 PRINT CONTROL
      IPLOT 0 PLOT CONTROL
      QSCAL 0 HYDROGRAPH PLOT SCALE

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

JR	MULTI-RATIO OPTION							
	RATIOS OF PRECIPITATION							
	1.00	.98	.97	.93	.91	.90	.70	.57

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*****
*
84 KK          RDB1
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86 KO      OUTPUT CONTROL VARIABLES
            IPRNT      1  PRINT CONTROL
            IPLOT      0  PLOT CONTROL
            QSCAL      0. HYDROGRAPH PLOT SCALE

```

HYDROGRAPH ROUTING DATA

87 RS	STORAGE ROUTING		
	NSTPS	1	NUMBER OF SUBREACHES
	ITYP	ELEV	TYPE OF INITIAL CONDITION
	RSVRIC	3025.50	INITIAL CONDITION
	X	.00	WORKING R AND D COEFFICIENT

88 SA	AREA	4.7	5.6	5.7	5.9	6.1	7.0	7.5	8.4	9.3	10.7
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89 SE	ELEVATION	3025.50	3027.00	3028.00	3029.00	3030.00	3035.00	3037.00	3040.00	3043.00	3046.00
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90 SQ	DISCHARGE	50.	61.	71.	75.	1436.	3921.	7136.
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91 SE	ELEVATION	3025.50	3030.00	3035.00	3037.00	3040.00	3043.00	3046.00
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☆☆☆

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	7.67	13.32	19.15	25.16	57.91	72.38	96.09	122.60	152.58
ELEVATION	3025.50	3027.00	3028.00	3029.00	3030.00	3035.00	3037.00	3040.00	3043.00	3046.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	7.67	13.32	19.15	25.16	57.91	72.38	96.09	122.60	152.58
OUTFLOW	49.70	53.33	55.76	58.18	60.60	70.80	74.50	1436.00	3920.50	7136.30
ELEVATION	3025.50	3027.00	3028.00	3029.00	3030.00	3035.00	3037.00	3040.00	3043.00	3046.00

HYDROGRAPH AT STATION RDB1
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*
1		0000	1	50.	-0	3025.5	*	1		0820	101	67.	45.6	3033.1	*	1		1640	201	52.	4.4	3026.4	*
1		0005	2	50.	-2	3025.5	*	1		0825	102	67.	45.1	3033.0	*	1		1645	202	52.	4.1	3026.3	*
1		0010	3	50.	-2	3025.5	*	1		0830	103	67.	44.6	3033.0	*	1		1650	203	51.	3.7	3026.2	*
1		0015	4	50.	-2	3025.5	*	1		0835	104	67.	44.2	3032.9	*	1		1655	204	51.	3.4	3026.1	*
1		0020	5	50.	-2	3025.5	*	1		0840	105	66.	43.7	3032.8	*	1		1700	205	51.	3.0	3026.0	*
1		0025	6	50.	-2	3025.5	*	1		0845	106	66.	43.3	3032.8	*	1		1705	206	51.	2.7	3026.0	*
1		0030	7	50.	-2	3025.5	*	1		0850	107	66.	42.8	3032.7	*	1		1710	207	51.	2.3	3026.0	*
1		0035	8	50.	-2	3025.5	*	1		0855	108	66.	42.4	3032.6	*	1		1715	208	51.	2.0	3025.9	*
1		0040	9	50.	-2	3025.5	*	1		0900	109	66.	41.9	3032.6	*	1		1720	209	50.	1.6	3025.8	*
1		0045	10	50.	-2	3025.5	*	1		0905	110	66.	41.5	3032.5	*	1		1725	210	50.	1.3	3025.8	*
1		0050	11	50.	-2	3025.5	*	1		0910	111	66.	41.0	3032.4	*	1		1730	211	50.	0.9	3025.7	*
1		0055	12	50.	-2	3025.5	*	1		0915	112	65.	40.5	3032.3	*	1		1735	212	50.	.6	3025.6	*
1		0100	13	50.	-2	3025.5	*	1		0920	113	65.	40.1	3032.3	*	1		1740	213	50.	-.2	3025.5	*
1		0105	14	50.	-2	3025.5	*	1		0925	114	65.	39.6	3032.2	*	1		1745	214	50.	-.1	3025.5	*
1		0110	15	50.	-2	3025.5	*	1		0930	115	65.	39.2	3032.1	*	1		1750	215	50.	-.1	3025.5	*
1		0115	16	50.	-2	3025.5	*	1		0935	116	65.	38.7	3032.1	*	1		1755	216	50.	-.2	3025.5	*
1		0120	17	50.	-2	3025.5	*	1		0940	117	65.	38.3	3032.0	*	1		1800	217	50.	-.2	3025.5	*
1		0125	18	50.	-2	3025.5	*	1		0945	118	65.	37.9	3031.9	*	1		1805	218	50.	-.2	3025.5	*
1		0130	19	50.	-2	3025.5	*	1		0950	119	64.	37.4	3031.9	*	1		1810	219	50.	-.2	3025.5	*
1		0135	20	50.	-2	3025.5	*	1		0955	120	64.	37.0	3031.8	*	1		1815	220	50.	-.2	3025.5	*
1		0140	21	50.	-2	3025.5	*	1		1000	121	64.	36.5	3031.7	*	1		1820	221	50.	-.2	3025.5	*
1		0145	22	50.	-2	3025.5	*	1		1005	122	64.	36.1	3031.7	*	1		1825	222	50.	-.2	3025.5	*
1		0150	23	50.	-2	3025.5	*	1		1010	123	64.	35.6	3031.6	*	1		1830	223	50.	-.2		

Proposed.OUT																			
1	0535	68	71.	58.4	3035.1	*	1	1355	168	57.	16.8	3028.6	*	1	2215	268	50.	-2	3025.5
1	0540	69	71.	58.4	3035.1	*	1	1400	169	57.	16.4	3028.5	*	1	2220	269	50.	-2	3025.5
1	0545	70	71.	58.3	3035.1	*	1	1405	170	57.	16.0	3028.5	*	1	2225	270	50.	-2	3025.5
1	0550	71	71.	58.2	3035.0	*	1	1410	171	57.	15.7	3028.4	*	1	2230	271	50.	-2	3025.5
1	0555	72	71.	58.0	3035.0	*	1	1415	172	57.	15.3	3028.3	*	1	2235	272	50.	-2	3025.5
1	0600	73	71.	57.8	3035.0	*	1	1420	173	56.	14.9	3028.3	*	1	2240	273	50.	-2	3025.5
1	0605	74	71.	57.5	3034.9	*	1	1425	174	56.	14.5	3028.2	*	1	2245	274	50.	-2	3025.5
1	0610	75	71.	57.2	3034.9	*	1	1430	175	56.	14.1	3028.1	*	1	2250	275	50.	-2	3025.5
1	0615	76	70.	56.9	3034.8	*	1	1435	176	56.	13.7	3028.1	*	1	2255	276	50.	-2	3025.5
1	0620	77	70.	56.5	3034.8	*	1	1440	177	56.	13.3	3028.0	*	1	2300	277	50.	-2	3025.5
1	0625	78	70.	56.1	3034.7	*	1	1445	178	56.	12.9	3027.9	*	1	2305	278	50.	-2	3025.5
1	0630	79	70.	55.7	3034.7	*	1	1450	179	55.	12.6	3027.9	*	1	2310	279	50.	-2	3025.5
1	0635	80	70.	55.3	3034.6	*	1	1455	180	55.	12.2	3027.8	*	1	2315	280	50.	-2	3025.5
1	0640	81	70.	54.9	3034.5	*	1	1500	181	55.	11.8	3027.7	*	1	2320	281	50.	-2	3025.5
1	0645	82	70.	54.4	3034.5	*	1	1505	182	55.	11.4	3027.7	*	1	2325	282	50.	-2	3025.5
1	0650	83	70.	54.0	3034.4	*	1	1510	183	55.	11.0	3027.6	*	1	2330	283	50.	-2	3025.5
1	0655	84	69.	53.5	3034.3	*	1	1515	184	55.	10.7	3027.5	*	1	2335	284	50.	-2	3025.5
1	0700	85	69.	53.0	3034.3	*	1	1520	185	54.	10.3	3027.5	*	1	2340	285	50.	-2	3025.5
1	0705	86	69.	52.6	3034.2	*	1	1525	186	54.	9.9	3027.4	*	1	2345	286	50.	-2	3025.5
1	0710	87	69.	52.1	3034.1	*	1	1530	187	54.	9.5	3027.3	*	1	2350	287	50.	-2	3025.5
1	0715	88	69.	51.6	3034.0	*	1	1535	188	54.	9.2	3027.3	*	1	2355	288	50.	-2	3025.5
1	0720	89	69.	51.2	3034.0	*	1	1540	189	54.	8.8	3027.2	*	2	0000	289	50.	-2	3025.5
1	0725	90	69.	50.7	3033.9	*	1	1545	190	54.	8.4	3027.1	*	2	0005	290	50.	-2	3025.5
1	0730	91	68.	50.2	3033.8	*	1	1550	191	54.	8.1	3027.1	*	2	0010	291	50.	-2	3025.5
1	0735	92	68.	49.7	3033.8	*	1	1555	192	53.	7.7	3027.0	*	2	0015	292	50.	-2	3025.5
1	0740	93	68.	49.3	3033.7	*	1	1600	193	53.	7.3	3026.9	*	2	0020	293	50.	-2	3025.5
1	0745	94	68.	48.8	3033.6	*	1	1605	194	53.	7.0	3026.9	*	2	0025	294	50.	-2	3025.5
1	0750	95	68.	48.3	3033.5	*	1	1610	195	53.	6.6	3026.8	*	2	0030	295	50.	-2	3025.5
1	0755	96	68.	47.9	3033.5	*	1	1615	196	53.	6.2	3026.7	*	2	0035	296	50.	-2	3025.5
1	0800	97	68.	47.4	3033.4	*	1	1620	197	52.	5.9	3026.6	*	2	0040	297	50.	-2	3025.5
1	0805	98	67.	46.9	3033.3	*	1	1625	198	52.	5.5	3026.6	*	2	0045	298	50.	-2	3025.5
1	0810	99	67.	46.5	3033.3	*	1	1630	199	52.	5.2	3026.5	*	2	0050	299	50.	-2	3025.5
1	0815	100	67.	46.0	3033.2	*	1	1635	200	52.	4.8	3026.4	*	2	0055	300	50.	-2	3025.5

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)	(CFS)			
+	71.	5.58	68.	57.	57.	57.
			(INCHES)	2.398	2.478	2.478
			(AC-FT)	34.	113.	117.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	58.	5.58	49.	18.	18.	18.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3035.07	5.58	3033.62	3028.62	3028.50	3028.50
CUMULATIVE AREA =				.88 SQ MI		

HYDROGRAPH AT STATION RDB1
PLAN 1, RATIO = .98

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	50.	.0	3025.5	*	1	0820	101	66.	43.6	3032.8	*	1	1640	201	51.	2.9	3026.1			
1	0005	2	50.	-2	3025.5	*	1	0825	102	66.	43.1	3032.7	*	1	1645	202	51.	2.6	3026.0			
1	0010	3	50.	-2	3025.5	*	1	0830	103	66.	42.7	3032.7	*	1	1650	203	51.	2.2	3025.9			
1	0015	4	50.	-2	3025.5	*	1	0835	104	66.	42.2	3032.6	*	1	1655	204	51.	1.9	3025.8			
1	0020	5	50.	-2	3025.5	*	1	0840	105	66.	41.8	3032.6	*	1	1700	205	50.	1.5	3025.8			
1	0025	6	50.	-2	3025.5	*	1	0845	106	66.	41.3	3032.5	*	1	1705	206	50.	1.2	3025.7			
1	0030	7	50.	-2	3025.5	*	1	0850	107	65.	40.8	3032.4	*	1	1710	207	50.	.8	3025.7			
1	0035	8	50.	-2	3025.5	*	1	0855	108	65.	40.4	3032.3	*	1	1715	208	50.	.5	3025.6			
1	0040	9	50.	-2	3025.5	*	1	0900	109	65.	39.9	3032.3	*	1	1720	209	50.	.1	3025.5			
1	0045	10	50.	-2	3025.5	*	1	0905	110	65.	39.5	3032.2	*	1	1725	210	50.	-2	3025.5			
1	0050	11	50.	-2	3025.5	*	1	0910	111	65.	39.1	3032.1	*	1	1730	211	50.	-2	3025.5			
1	0055	12	50.	-2	3025.5	*	1	0915	112	65.	38.6	3032.1	*	1	1735	212	50.	-2	3025.5			
1	0100	13	50.	-2	3025.5	*	1	0920	113	65.	38.2	3032.0	*	1	1740	213	50.	-2	3025.5			
1	0105	14	50.	-2	3025.5	*	1	0925	114	65.	37.7	3031.9	*	1	1745	214	50.	-2	3025.5			
1	0110	15	50.	-2	3025.5	*	1	0930	115	64.	37.3	3031.8	*	1	1750	215	50.	-2	3025.5			
1	0115	16	50.	-2	3025.5	*	1	0935	116	64.	36.8	3031.8	*	1	1755	216	50.	-2	3025.5			
1	0120	17	50.	-2	3025.5	*	1	0940	117	64.	36.4	3031.7	*	1	1800	217	50.	-2	3025.5			
1	0125	18	50.	-2	3025.5	*	1	0945	118	64.	35.9	3031.6	*	1	1805	218	50.	-2	3025.5			
1	0130	19	50.	-2	3025.5	*	1	0950	119	64.	35.5	3031.6	*	1	1810	219	50.	-2	3025.5			
1	0135	20	50.	-2	3025.5	*	1	0955	120	64.	35.1	3031.5	*	1	1815	220	50.	-2	3025.5			
1	0140	21	50.	-2	3025.5	*	1	1000	121	64.	34.6	3031.4	*	1	1820	221	50.	-2	3025.5			
1	0145	22	50.	-2	3025.5	*	1	1005	122	63.	34.2	3031.4	*	1	1825	222	50.	-2	3025.5			
1	0150	23	50.	-2	3025.5	*	1	1010	123	63.	33.8	3031.3	*	1	1830	223	50.	-2	3025.5			
1	0155	24	50.	-2	3025.5	*	1	1015	124	63.	33.3	3031.2	*	1	1835	224	50.	-2	3025.5			
1	0200	25	50.	-2	3025.5	*	1	1020	125	63.	32.9	3031.2	*	1	1840	225	50.	-2	3025.5			
1	0205	26	50.	-2	3025.5	*	1	1025	126	63.	32.5	3031.1	*	1	1845	226	50.	-2	3025.5			
1	0210	27	50.	-2	3025.5	*	1	1030	127	63.	32.0	3031.0	*	1	1850	227	50.	-2	3025.5			
1	0215	28	50.	-2	3025.5	*	1	1035	128	63.	31.6	3031.0	*	1	1855	228	50.	-2	3025.5			
1	0220	29	50.	-2	3025.5	*	1	1040	129	62.	31.2	3030.9	*	1	1900	229	50.	-2	3025.5			
1	0225	30	50.	-2	3025.5	*	1	1045	130	62.	30.7	3030.8	*	1	1905	230	50.	-2	3025.5			
1	0230	31	50.	-2	3025.5	*	1	1050	131	62.	30.3	3030.8	*	1	1910	231	50.	-2	3025.5			
1	0235	32	50.	-2	3025.5	*	1	1055	132	62.	29.9	3030.7	*	1	1915	232	50.	-2	3025.5			
1	0240	33	50.	-2	3025.5	*	1	1100	133	62.	29.4	3030.7	*	1	1920	233	50.	-2	3025.5			
1	0245	34	50.	-2	3025.5	*	1	1105	134	62.	29.0	3030.6	*	1	1925	234	50.	-2	3025.5			
1	0250	35	50.	-1	3025.5	*	1	1110	135	62.	28.6	3030.5	*	1	1930	235	50.	-2	3025.5			
1	0255	36	50.	-1	3025.5	*	1	1115	136	62.	28.2	3030.5	*	1	1935	236	50.	-2	3025.5			
1	0300	37	50.	-1	3025.5	*	1	1120	137	61.	27.7	3030.4	*	1	1940	237	50.	-2	3025.5			
1	0305	38	50.	.0	3025.5	*	1	1125	138	61.	27.3	3030.3	*	1	1945	238	50.	-2	3025.5			
1	0310	39	50.	.2	3025.5	*	1	1130	139	61.	26.9	3030.3	*	1	1950	239	50.	-2	3025.5			
1	0315	40	50.	.6	3025.6	*	1	1135	140	61.	26.5	3030.2	*	1	1955	240	50.	-2	3025.5			
1	0320	41	50.	1.6	3025.8	*	1	1140	141	61.	26.1	3030.1	*	1	2000	241	50.	-2	3025.5			
1	0325	42	51.	2.2	3026.1	*	1	1145	142	61.	25.6	3030.1	*	1	2005	242	50.	-2	3025.5			
1	0330	43	52.	3.8	3026.6	*	1	1150	143	61.	25.2	3030.0	*	1	2010	243	50.	-2	3025.5			
1	0335	44	54.	9.5	3027.3	*	1	1155	144	60.	24.8	3029.9	*	1	2015	244	50.	-2	3025.5			
1	0340	45	56.	13.8	3028.1	*	1	1200	145	60.	24.4	3029.9	*	1	2020	245	50.	-2	3025.5			
1	0345	46	58.	18.3	3028.9	*	1	1205	146	60.	24.0	3029.8	*	1	2025	246	50.	-2	3025.5			
1	0350	47	60.	23.0	3029.6	*	1	1210	147	60.	23.6	3029.7	*	1	2030	247	50.	-2	3025.5			
1	0355	48	61.	27.4	3030.3	*	1	1215	148	60.	23.3	3029.7	*	1	2035	248	50.	-2	3025.5			
1	0400	49	63.	31.4	3031.0	*	1	1220	149	60.	22.7	3029.6	*	1	2040	249	50.	-2	3025.5			
1	0405	50	64.	35.0	3031.5	*	1	1225	150	59.	22.3	3029.5	*	1	2045	250	50.	-2	3025.5			
1	0410	51	65.	38.0	3032.0	*	1	1230	151	59.	21.9	3029.5	*	1	2050	251	50.	-2	3025.5			
1	0415	52	66.	40.4	3032.3	*	1	1235	152	59.	21.5	3029.4	*	1	2055	252	50.	-2	3025.5			
1	0420	53	66.	42.3	3032.6	*	1	1240	153	59.	21.2	3029.3	*	1	2060	253	50.	-2	3025.5			
1	0425	54	66.	43.9	3032.9	*	1	1245	154	59.	20.7	3029.3	*	1	2105	254	50.	-2	3025.5			
1	0430	55	67.	45.3	3033.1	*	1	1250	155	59.	20.3	3029.2	*	1	2110	255	50.	-2	3025.5			
1	0435	56	67.	46.6	3033.3	*	1	1255	156	58.	19.9	3029.1	*	1	2115	256	50.	-2	3025.5			
1	0440	57	68.	47.8	3033.5	*	1	1300	157	58.	19.5	3029.1	*	1	2120	257	50.	-2	3025.5			
1	0445	58	68.	48.9	3033.6	*	1	1305	158	58.	19.1	3029.0	*	1	2125	258	50.	-2	3025.5			
1	0450	59	68.	50.1	3033.8	*	1	1310	159	58.	18.7	3028.9	*	1	2130	259	50.	-2	3025.5			
1	0455	60	69.	51.3	3034.0	*	1	1315	160	58.	18.3	3028.9	*	1	2135	260	50.	-2	3025.5			
1	0500	61	69.	52.4	3034.2	*	1	1320	161	58.	17.9	3028.8	*	1	2140	261	50.	-2	3025.5			
1	0505	62	69.	53.5	3034.3	*	1	1325	162	57.	17.5	3028.7	*	1	2145	262	50.	-2	3025.5			
1	0510	63	70.	54.3	3034.4	*	1	1330	163	57.	17.1	3028.6	*	1	2150	263	50.	-2	3025.5			
1	0515	64	70.	55.1	3034.6	*	1	1335	164	57.	16.7	3028.6	*	1	2155	264	50.	-2	3025.5			
1	0520	65	70.	55.6	3034.7	*	1	1340	165	57.	16.3	3028.5	*	1	2200	265	50.	-2	3025.5			
1	0525	66	70.	56.0	3034.7	*	1	1345	166	57.	15.9	3028.4	*	1	2205	266	50.	-2	3025.5			
1	0530	67	70.	56.3	3034.7	*	1	1350	167	57.	15.5	3028.4	*	1	2210	267	50.	-2	3025.5			
1	0535	68	70.	56.4	3034.8	*	1	1355	168	57.	15.1	3028.3	*	1	2215	268	50.	-2	3025.5			
1	0540	69	70.	56.4	3034.8	*	1	1400	169	56.	14.7	3028.2	*	1	2220	269	50.	-2	3025.5			
1	0545	70	70.	56.3	3034.8	*	1	1405	170	56.	14.4	3028.2	*	1	2225	270	50.	-2	3025.5			
1	0550	71	70.	56.1	3034.7	*	1	1410	171	56.	14.0	3028.1	*	1	2230	271	50.	-2	3025.5			

MITIGATION REQUIRED FOR 70 CFS ATTENUATED OUTFLOW FROM DBI

										Proposed OUT									
1	0555	72	70	55.9	3034.7	*	1	1415	172	56.	13.6	3028.0	*	1	2235	272	50.	-2	3025.5
1	0600	73	70	55.7	3034.7	*	1	1420	173	56.	13.2	3028.0	*	1	2240	273	50.	-2	3025.5
1	0605	74	70	55.4	3034.6	*	1	1425	174	56.	12.8	3027.9	*	1	2245	274	50.	-2	3025.5
1	0610	75	70	55.1	3034.6	*	1	1430	175	55.	12.4	3027.8	*	1	2250	275	50.	-2	3025.5
1	0615	76	70	54.8	3034.5	*	1	1435	176	55.	12.1	3027.8	*	1	2255	276	50.	-2	3025.5
1	0620	77	70	54.4	3034.5	*	1	1440	177	55.	11.7	3027.7	*	1	2300	277	50.	-2	3025.5
1	0625	78	70	54.1	3034.4	*	1	1445	178	55.	11.3	3027.6	*	1	2305	278	50.	-2	3025.5
1	0630	79	69	53.7	3034.4	*	1	1450	179	55.	10.9	3027.6	*	1	2310	279	50.	-2	3025.5
1	0635	80	69	53.2	3034.3	*	1	1455	180	55.	10.5	3027.5	*	1	2315	280	50.	-2	3025.5
1	0640	81	69	52.8	3034.2	*	1	1500	181	54.	10.2	3027.4	*	1	2320	281	50.	-2	3025.5
1	0645	82	69	52.4	3034.2	*	1	1505	182	54.	9.8	3027.4	*	1	2325	282	50.	-2	3025.5
1	0650	83	69	51.9	3034.1	*	1	1510	183	54.	9.4	3027.3	*	1	2330	283	50.	-2	3025.5
1	0655	84	69	51.4	3034.0	*	1	1515	184	54.	9.1	3027.2	*	1	2335	284	50.	-2	3025.5
1	0700	85	69	51.0	3033.9	*	1	1520	185	54.	8.7	3027.2	*	1	2340	285	50.	-2	3025.5
1	0705	86	68	50.5	3033.9	*	1	1525	186	54.	8.3	3027.1	*	1	2345	286	50.	-2	3025.5
1	0710	87	68	50.0	3033.8	*	1	1530	187	53.	7.9	3027.0	*	1	2350	287	50.	-2	3025.5
1	0715	88	68	49.6	3033.7	*	1	1535	188	53.	7.6	3027.0	*	1	2355	288	50.	-2	3025.5
1	0720	89	68	49.1	3033.7	*	1	1540	189	53.	7.2	3026.9	*	2	0000	289	50.	-2	3025.5
1	0725	90	68	48.7	3033.6	*	1	1545	190	53.	6.8	3026.8	*	2	0005	290	50.	-2	3025.5
1	0730	91	68	48.2	3033.5	*	1	1550	191	53.	6.5	3026.8	*	2	0010	291	50.	-2	3025.5
1	0735	92	68	47.7	3033.4	*	1	1555	192	53.	6.1	3026.7	*	2	0015	292	50.	-2	3025.5
1	0740	93	67	47.3	3033.4	*	1	1600	193	52.	5.8	3026.6	*	2	0020	293	50.	-2	3025.5
1	0745	94	67	46.8	3033.3	*	1	1605	194	52.	5.4	3026.6	*	2	0025	294	50.	-2	3025.5
1	0750	95	67	46.3	3033.2	*	1	1610	195	52.	5.0	3026.5	*	2	0030	295	50.	-2	3025.5
1	0755	96	67	45.9	3033.2	*	1	1615	196	52.	4.7	3026.4	*	2	0035	296	50.	-2	3025.5
1	0800	97	67	45.4	3033.1	*	1	1620	197	52.	4.4	3026.3	*	2	0040	297	50.	-2	3025.5
1	0805	98	67	44.9	3033.0	*	1	1625	198	51.	4.0	3026.3	*	2	0045	298	50.	-2	3025.5
1	0810	99	67	44.5	3033.0	*	1	1630	199	51.	3.6	3026.2	*	2	0050	299	50.	-2	3025.5
1	0815	100	66.	44.0	3032.9	*	1	1635	200	51.	3.3	3026.1	*	2	0055	300	50.	-2	3025.5

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	72-HR	24.92-HR
+	(CFS)	(HR)				
+	70.	5.58	(CFS)	67.	57.	56.
			(INCHES)	.710	2.382	2.462
			(AC-FT)	33.	112.	116.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	56.	5.58	47.	17.	17.	17.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3034.77	5.58	3033.32	3028.45	3028.34	3028.34
CUMULATIVE AREA =			.88 SQ MI			

HYDROGRAPH AT STATION RDB1 PLAN 1, RATIO = .97

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	* DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	* DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	50.	.0	3025.5	*	1	0820	101	66.	42.6	3032.7	*	1	1640	201	51.	2.1	3025.9	
1	0005	2	50.	-.2	3025.5	*	1	0825	102	66.	42.1	3032.6	*	1	1645	202	51.	1.8	3025.9	
1	0010	3	50.	-.2	3025.5	*	1	0830	103	66.	41.7	3032.5	*	1	1650	203	50.	1.4	3025.8	
1	0015	4	50.	-.2	3025.5	*	1	0835	104	66.	41.2	3032.5	*	1	1655	204	50.	1.1	3025.7	
1	0020	5	50.	-.2	3025.5	*	1	0840	105	65.	40.8	3032.4	*	1	1700	205	50.	.8	3025.6	
1	0025	6	50.	-.2	3025.5	*	1	0845	106	65.	40.3	3032.3	*	1	1705	206	50.	.4	3025.6	
1	0030	7	50.	-.2	3025.5	*	1	0850	107	65.	39.9	3032.2	*	1	1710	207	50.	.1	3025.5	
1	0035	8	50.	-.2	3025.5	*	1	0855	108	65.	39.4	3032.2	*	1	1715	208	50.	-.2	3025.5	
1	0040	9	50.	-.2	3025.5	*	1	0900	109	65.	39.0	3032.1	*	1	1720	209	50.	-.2	3025.5	
1	0045	10	50.	-.2	3025.5	*	1	0905	110	65.	38.5	3032.0	*	1	1725	210	50.	-.2	3025.5	
1	0050	11	50.	-.2	3025.5	*	1	0910	111	65.	38.1	3032.0	*	1	1730	211	50.	-.2	3025.5	
1	0055	12	50.	-.2	3025.5	*	1	0915	112	64.	37.6	3031.9	*	1	1735	212	50.	-.2	3025.5	
1	0100	13	50.	-.2	3025.5	*	1	0920	113	64.	37.2	3031.8	*	1	1740	213	50.	-.2	3025.5	
1	0105	14	50.	-.2	3025.5	*	1	0925	114	64.	36.8	3031.8	*	1	1745	214	50.	-.2	3025.5	
1	0110	15	50.	-.2	3025.5	*	1	0930	115	64.	36.3	3031.7	*	1	1750	215	50.	-.2	3025.5	
1	0115	16	50.	-.2	3025.5	*	1	0935	116	64.	35.9	3031.6	*	1	1755	216	50.	-.2	3025.5	
1	0120	17	50.	-.2	3025.5	*	1	0940	117	64.	35.4	3031.6	*	1	1800	217	50.	-.2	3025.5	
1	0125	18	50.	-.2	3025.5	*	1	0945	118	64.	35.0	3031.5	*	1	1805	218	50.	-.2	3025.5	
1	0130	19	50.	-.2	3025.5	*	1	0950	119	64.	34.6	3031.4	*	1	1810	219	50.	-.2	3025.5	
1	0135	20	50.	-.2	3025.5	*	1	0955	120	63.	34.1	3031.4	*	1	1815	220	50.	-.2	3025.5	
1	0140	21	50.	-.2	3025.5	*	1	1000	121	63.	33.7	3031.3	*	1	1820	221	50.	-.2	3025.5	
1	0145	22	50.	-.2	3025.5	*	1	1005	122	63.	33.2	3031.2	*	1	1825	222	50.	-.2	3025.5	
1	0150	23	50.	-.2	3025.5	*	1	1010	123	63.	32.8	3031.2	*	1	1830	223	50.	-.2	3025.5	
1	0155	24	50.	-.2	3025.5	*	1	1015	124	63.	32.4	3031.1	*	1	1835	224	50.	-.2	3025.5	
1	0200	25	50.	-.2	3025.5	*	1	1020	125	63.	31.9	3031.0	*	1	1840	225	50.	-.2	3025.5	
1	0205	26	50.	-.2	3025.5	*	1	1025	126	63.	31.5	3031.0	*	1	1845	226	50.	-.2	3025.5	
1	0210	27	50.	-.2	3025.5	*	1	1030	127	62.	31.1	3030.9	*	1	1850	227	50.	-.2	3025.5	
1	0215	28	50.	-.2	3025.5	*	1	1035	128	62.	30.7	3030.8	*	1	1855	228	50.	-.2	3025.5	
1	0220	29	50.	-.2	3025.5	*	1	1040	129	62.	30.2	3030.8	*	1	1900	229	50.	-.2	3025.5	
1	0225	30	50.	-.2	3025.5	*	1	1045	130	62.	29.8	3030.7	*	1	1905	230	50.	-.2	3025.5	
1	0230	31	50.	-.2	3025.5	*	1	1050	131	62.	29.4	3030.6	*	1	1910	231	50.	-.2	3025.5	
1	0235	32	50.	-.2	3025.5	*	1	1055	132	62.	28.9	3030.6	*	1	1915	232	50.	-.2	3025.5	
1	0240	33	50.	-.2	3025.5	*	1	1100	133	62.	28.5	3030.5	*	1	1920	233	50.	-.2	3025.5	
1	0245	34	50.	-.2	3025.5	*	1	1105	134	62.	28.1	3030.4	*	1	1925	234	50.	-.2	3025.5	
1	0250	35	50.	-.2	3025.5	*	1	1110	135	61.	27.7	3030.4	*	1	1930	235	50.	-.2	3025.5	
1	0255	36	50.	-.1	3025.5	*	1	1115	136	61.	27.2	3030.3	*	1	1935	236	50.	-.2	3025.5	
1	0300	37	50.	-.1	3025.5	*	1	1120	137	61.	26.8	3030.3	*	1	1940	237	50.	-.2	3025.5	
1	0305	38	50.	0	3025.5	*	1	1125	138	61.	26.4	3030.2	*	1	1945	238	50.	-.2	3025.5	
1	0310	39	50.	.1	3025.5	*	1	1130	139	61.	26.0	3030.1	*	1	1950	239	50.	-.2	3025.5	
1	0315	40	50.	.6	3025.6	*	1	1135	140	61.	25.5	3030.1	*	1	1955	240	50.	-.2	3025.5	
1	0320	41	50.	1.5	3025.8	*	1	1140	141	61.	25.2	3030.0	*	1	2000	241	50.	-.2	3025.5	
1	0325	42	51.	3.1	3026.1	*	1	1145	142	60.	24.7	3029.9	*	1	2005	242	50.	-.2	3025.5	
1	0330	43	52.	5.7	3026.6	*	1	1150	143	60.	24.3	3029.9	*	1	2010	243	50.	-.2	3025.5	
1	0335	44	54.	9.2	3027.3	*	1	1155	144	60.	23.9	3029.8	*	1	2015	244	50.	-.2	3025.5	
1	0340	45	56.	13.4	3028.0	*	1	1200	145	60.	23.5	3029.8	*	1	2020	245	50.	-.2	3025.5	
1	0345	46	58.	17.9	3028.8	*	1	1205	146	60.	23.1	3029.7	*	1	2025	246	50.	-.2	3025.5	
1	0350	47	60.	22.5	3029.6	*	1	1210	147	60.	22.7	3029.6	*	1	2030	247	50.	-.2	3025.5	
1	0355	48	61.	26.9	3030.3	*	1	1215	148	59.	22.3	3029.5	*	1	2035	248	50.	-.2	3025.5	
1	0400	49	62.	30.8	3030.9	*	1	1220	149	59.	21.8	3029.4	*	1	2040	249	50.	-.2	3025.5	
1	0405	50	63.	34.3	3031.4	*	1	1225	150	59.	21.4	3029.4	*	1	2045	250	50.	-.2	3025.5	
1	0410	51	64	37.3	3031.9	*	1	1230	151	59.	21.0	3029.3	*	1	2050	251	50.	-.2	3025.5	
1	0415	52	65	39.6	3032.2	*	1	1235	152	59.	20.6	3029.2	*	1	2055	252	50.	-.2	3025.5	
1	0420	53	66.	41.6	3032.5	*	1	1240	153	59.	20.2	3029.2	*	1	2100	253	50.	-.2	3025.5	
1	0425	54	66.	43.1	3032.7	*	1	1245	154	58.	19.8	3029.1	*	1	2105	254	50.	-.2	3025.5	
1	0430	55	67.	44.5	3032.9	*	1	1250	155	58.	19.4	3029.0	*	1	2110	255	50.	-.2	3025.5	
1	0435	56	67.	45.9	3033.1	*	1	1255	156	58.	19.0	3028.9	*	1	2115	256	50.	-.2	3025.5	
1	0440	57	67.	46.9	3033.3	*	1	1300	157	58.	18.6	3028.9	*	1	2120	257	50.	-.2	3025.5	
1	0445	58	68.	48.1	3033.5	*	1	1305	158	58.	18.2	3028.8	*	1	2125	258	50.	-.2	3025.5	
1	0450	59	68.	49.2	3033.7	*	1	1310	159	58.	17.8	3028.8	*	1	2130	259	50.	-.2	3025.5	
1	0455	60	68.	50.4	3033.8	*	1	1315	160	57.	17.4	3028.7	*	1	2135	260	50.	-.2	3025.5	
1	0500	61	69.	51.5	3034.0	*	1	1320	161	57.	17.0	3028.6	*	1	2140	261	50.	-.2	3025.5	
1	0505	62	69.	52.6	3034.2	*	1	1325	162	57.	16.6	3028.6	*	1	2145	262	50.	-.2	3025.5	
1	0510	63	70.	53.4	3034.3	*	1	1330	163	57.	16.2	3028.5	*	1	2150	263	50.	-.2	3025.5	
1	0515	64	70.	54.1	3034.4	*	1	1335	164	57.	15.9	3028.4	*	1	2155	264	50.	-.2	3025.5	
1	0520	65	70.	54.6	3034.5	*	1	1340	165	57.	15.5	3028.4	*	1	2200	265	50.	-.2	3025.5	
1	0525	66	70.	55.0	3034.6	*	1	1345	166	56.	15.1	3028.3	*	1	2205	266	50.	-.2	3025.5	
1	0530	67	70.	55.2	3034.6	*	1	1350	167	56.	14.7	3028.2	*	1	2210	267	50.	-.2	3025.5	
1	0535	68	70.	55.3	3034.6	*	1	1355	168	56.	14.3	3028.2	*	1	2215	268	50.	-.2	3025.5	
1	0540	69	70.	55.3	3034.6	*	1	1400	169	56.	13.9	3028.1	*	1	2220	269	50.	-.2	3025.5	
1	0545	70	70.	55.2	3034.6	*	1	1405	170	56.	13.5	3028.0	*	1	2225	270	50.	-.2	3025.5	
1	0550	71	70.	55.1	3034.6	*	1	1410	171	56.	13.1	3027.9	*	1	2230	271	50.	-.2	3025.5	
1	0555	72	70.	54.9	3034.5	*	1	1415	172	56.	12.8	3027.8	*	1	2235	272	50.	-.2	3025.5	
1	0600	73	70.	54.7	3034.5	*	1	1420	173	55.	12.4	3027.7	*	1	2240	273	50.	-.2	3025.5	
1	0605	74	70.	54.4	3034.5	*	1	1425	174	55.	12.0	3027.8	*	1	2245	274	50.	-.2	3025.5	
1	0610	75	70.	54.1	3034.4	*	1	1430	175	55.	11.6	3027.7	*	1	2250	275	50.	-.2	3025.5	

														Proposed OUT					
1	0615	76	70.	53.8	3034.4	*	1	1435	176	55.	11.2	3027.6	*	1	2255	276	50.	-2	3025.5
1	0620	77	69.	53.4	3034.3	*	1	1440	177	55.	10.9	3027.6	*	1	2300	277	50.	-2	3025.5
1	0625	78	69.	53.0	3034.3	*	1	1445	178	55.	10.5	3027.5	*	1	2305	278	50.	-2	3025.5
1	0630	79	69.	52.6	3034.2	*	1	1450	179	54.	10.1	3027.4	*	1	2310	279	50.	-2	3025.5
1	0635	80	69.	52.2	3034.1	*	1	1455	180	54.	9.7	3027.4	*	1	2315	280	50.	-2	3025.5
1	0640	81	69.	51.8	3034.1	*	1	1500	181	54.	9.4	3027.3	*	1	2320	281	50.	-2	3025.5
1	0645	82	69.	51.3	3034.0	*	1	1505	182	54.	9.0	3027.2	*	1	2325	282	50.	-2	3025.5
1	0650	83	69.	50.9	3033.9	*	1	1510	183	54.	8.6	3027.2	*	1	2330	283	50.	-2	3025.5
1	0655	84	68.	50.4	3033.9	*	1	1515	184	54.	8.3	3027.1	*	1	2335	284	50.	-2	3025.5
1	0700	85	68.	50.0	3033.8	*	1	1520	185	53.	7.9	3027.0	*	1	2340	285	50.	-2	3025.5
1	0705	86	68.	49.5	3033.7	*	1	1525	186	53.	7.5	3026.9	*	1	2345	286	50.	-2	3025.5
1	0710	87	68.	49.0	3033.6	*	1	1530	187	53.	7.1	3026.9	*	1	2350	287	50.	-2	3025.5
1	0715	88	68.	48.6	3033.6	*	1	1535	188	53.	6.8	3026.8	*	1	2355	288	50.	-2	3025.5
1	0720	89	68.	48.1	3033.5	*	1	1540	189	53.	6.4	3026.8	*	2	0000	289	50.	-2	3025.5
1	0725	90	68.	47.6	3033.4	*	1	1545	190	53.	6.1	3026.7	*	2	0005	290	50.	-2	3025.5
1	0730	91	67.	47.2	3033.4	*	1	1550	191	52.	5.7	3026.6	*	2	0010	291	50.	-2	3025.5
1	0735	92	67.	46.7	3033.3	*	1	1555	192	52.	5.3	3026.5	*	2	0015	292	50.	-2	3025.5
1	0740	93	67.	46.2	3033.2	*	1	1600	193	52.	5.0	3026.5	*	2	0020	293	50.	-2	3025.5
1	0745	94	67.	45.8	3033.1	*	1	1605	194	52.	4.6	3026.4	*	2	0025	294	50.	-2	3025.5
1	0750	95	67.	45.3	3033.1	*	1	1610	195	52.	4.3	3026.3	*	2	0030	295	50.	-2	3025.5
1	0755	96	67.	44.9	3033.0	*	1	1615	196	52.	3.9	3026.3	*	2	0035	296	50.	-2	3025.5
1	0800	97	67.	44.4	3032.9	*	1	1620	197	51.	3.6	3026.2	*	2	0040	297	50.	-2	3025.5
1	0805	98	66.	43.9	3032.9	*	1	1625	198	51.	3.2	3026.1	*	2	0045	298	50.	-2	3025.5
1	0810	99	66.	43.5	3032.8	*	1	1630	199	51.	2.8	3026.1	*	2	0050	299	50.	-2	3025.5
1	0815	100	66.	43.0	3032.7	*	1	1635	200	51.	2.5	3026.0	*	2	0055	300	50.	-2	3025.5

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	72-HR	24.92-HR
+	(CFS)	(HR)			
+	70.	5.58			
	(CFS)				
	(INCHES)				
	(AC-FT)				
		67.	56.	56.	56.
		107	2.375	2.455	2.455
		33.	112.	115.	115.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	72-HR	24.92-HR
+	(AC-FT)	(HR)			
+	55.	5.58			
		46.	17.	16.	16.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	72-HR	24.92-HR
+	(FEET)	(HR)			
+	3034.61	5.58			
		3033.17	3028.37	3028.26	3028.26
CUMULATIVE AREA =		.88 SQ MI			

HYDROGRAPH AT STATION RDB1 PLAN 1, RATIO = .93

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	50.		.0	3025.5	*	1	0820	101	65.	38.7	3032.1	*	1	1640	201	50.		-2	3025.5	
1	0005	2	50.		-.2	3025.5	*	1	0825	102	65.	38.2	3032.0	*	1	1645	202	50.		-2	3025.5	
1	0010	3	50.		-.2	3025.5	*	1	0830	103	65.	37.8	3031.9	*	1	1650	203	50.		-2	3025.5	
1	0015	4	50.		-.2	3025.5	*	1	0835	104	64.	37.4	3031.9	*	1	1655	204	50.		-2	3025.5	
1	0020	5	50.		-.2	3025.5	*	1	0840	105	64.	36.9	3031.8	*	1	1700	205	50.		-2	3025.5	
1	0025	6	50.		-.2	3025.5	*	1	0845	106	64.	36.5	3031.7	*	1	1705	206	50.		-2	3025.5	
1	0030	7	50.		-.2	3025.5	*	1	0850	107	64.	36.0	3031.7	*	1	1710	207	50.		-2	3025.5	
1	0035	8	50.		-.2	3025.5	*	1	0855	108	64.	35.6	3031.6	*	1	1715	208	50.		-2	3025.5	
1	0040	9	50.		-.2	3025.5	*	1	0900	109	64.	35.1	3031.5	*	1	1720	209	50.		-2	3025.5	
1	0045	10	50.		-.2	3025.5	*	1	0905	110	64.	34.7	3031.5	*	1	1725	210	50.		-2	3025.5	
1	0050	11	50.		-.2	3025.5	*	1	0910	111	63.	34.3	3031.4	*	1	1730	211	50.		-2	3025.5	
1	0055	12	50.		-.2	3025.5	*	1	0915	112	63.	33.8	3031.3	*	1	1735	212	50.		-2	3025.5	
1	0100	13	50.		-.2	3025.5	*	1	0920	113	63.	33.4	3031.3	*	1	1740	213	50.		-2	3025.5	
1	0105	14	50.		-.2	3025.5	*	1	0925	114	63.	33.0	3031.2	*	1	1745	214	50.		-2	3025.5	
1	0110	15	50.		-.2	3025.5	*	1	0930	115	63.	32.5	3031.1	*	1	1750	215	50.		-2	3025.5	
1	0115	16	50.		-.2	3025.5	*	1	0935	116	63.	32.1	3031.1	*	1	1755	216	50.		-2	3025.5	
1	0120	17	50.		-.2	3025.5	*	1	0940	117	63.	31.7	3031.0	*	1	1800	217	50.		-2	3025.5	
1	0125	18	50.		-.2	3025.5	*	1	0945	118	62.	31.2	3030.9	*	1	1805	218	50.		-2	3025.5	
1	0130	19	50.		-.2	3025.5	*	1	0950	119	62.	30.8	3030.9	*	1	1810	219	50.		-2	3025.5	
1	0135	20	50.		-.2	3025.5	*	1	0955	120	62.	30.4	3030.8	*	1	1815	220	50.		-2	3025.5	
1	0140	21	50.		-.2	3025.5	*	1	1000	121	62.	30.0	3030.7	*	1	1820	221	50.		-2	3025.5	
1	0145	22	50.		-.2	3025.5	*	1	1005	122	62.	29.5	3030.7	*	1	1825	222	50.		-2	3025.5	
1	0150	23	50.		-.2	3025.5	*	1	1010	123	62.	29.1	3030.6	*	1	1830	223	50.		-2	3025.5	
1	0155	24	50.		-.2	3025.5	*	1	1015	124	62.	28.7	3030.5	*	1	1835	224	50.		-2	3025.5	
1	0200	25	50.		-.2	3025.5	*	1	1020	125	62.	28.2	3030.5	*	1	1840	225	50.		-2	3025.5	
1	0205	26	50.		-.2	3025.5	*	1	1025	126	61.	27.8	3030.4	*	1	1845	226	50.		-2	3025.5	
1	0210	27	50.		-.2	3025.5	*	1	1030	127	61.	27.4	3030.3	*	1	1850	227	50.		-2	3025.5	
1	0215	28	50.		-.2	3025.5	*	1	1035	128	61.	27.0	3030.3	*	1	1855	228	50.		-2	3025.5	
1	0220	29	50.		-.2	3025.5	*	1	1040	129	61.	26.6	3030.2	*	1	1900	229	50.		-2	3025.5	
1	0225	30	50.		-.2	3025.5	*	1	1045	130	61.	26.1	3030.1	*	1	1905	230	50.		-2	3025.5	
1	0230	31	50.		-.2	3025.5	*	1	1050	131	61.	25.7	3030.1	*	1	1910	231	50.		-2	3025.5	
1	0235	32	50.		-.2	3025.5	*	1	1055	132	61.	25.3	3030.0	*	1	1915	232	50.		-2	3025.5	
1	0240	33	50.		-.2	3025.5	*	1	1100	133	60.	24.9	3030.0	*	1	1920	233	50.		-2	3025.5	
1	0245	34	50.		-.2	3025.5	*	1	1105	134	60.	24.5	3029.9	*	1	1925	234	50.		-2	3025.5	
1	0250	35	50.		-.2	3025.5	*	1	1110	135	60.	24.1	3029.8	*	1	1930	235	50.		-2	3025.5	
1	0255	36	50.		-.2	3025.5	*	1	1115	136	60.	23.7	3029.7	*	1	1935	236	50.		-2	3025.5	
1	0300	37	50.		-.2	3025.5	*	1	1120	137	60.	23.2	3029.7	*	1	1940	237	50.		-2	3025.5	
1	0305	38	50.		-.1	3025.5	*	1	1125	138	60.	22.8	3029.6	*	1	1945	238	50.		-2	3025.5	
1	0310	39	50.		.0	3025.5	*	1	1130	139	59.	22.4	3029.5	*	1	1950	239	50.		-2	3025.5	
1	0315	40	50.		.4	3025.6	*	1	1135	140	59.	22.0	3029.5	*	1	1955	240	50.		-2	3025.5	
1	0320	41	50.		1.2	3025.7	*	1	1140	141	59.	21.6	3029.4	*	1	2000	241	50.		-2	3025.5	
1	0325	42	51.		2.6	3026.0	*	1	1145	142	59.	21.2	3029.3	*	1	2005	242	50.		-2	3025.5	
1	0330	43	52.		5.0	3026.5	*	1	1150	143	59.	20.8	3029.3	*	1	2010	243	50.		-2	3025.5	
1	0335	44	54.		8.4	3027.1	*	1	1155	144	59.	20.4	3029.2	*	1	2015	244	50.		-2	3025.5	
1	0340	45	55.		12.3	3027.8	*	1	1200	145	59.	20.0	3029.1	*	1	2020	245	50.		-2	3025.5	
1	0345	46	57.		16.4	3028.5	*	1	1205	146	58.	19.6	3029.1	*	1	2025	246	50.		-2	3025.5	
1	0350	47	58.		20.7	3029.3	*	1	1210	147	58.	19.2	3029.0	*	1	2030	247	50.		-2	3025.5	
1	0355	48	60.		24.8	3029.9	*	1	1215	148	58.	18.8	3028.9	*	1	2035	248	50.		-2	3025.5	
1	0400	49	62.		28.5	3030.5	*	1	1220	149	58.	18.4	3028.9	*	1	2040	249	50.		-2	3025.5	
1	0405	50	63.		31.8	3031.0	*	1	1225	150	58.	18.0	3028.8	*	1	2045	250	50.		-2	3025.5	
1	0410	51	64.		34.5	3031.4	*	1	1230	151	58.	17.6	3028.8	*	1	2050	251	50.		-2	3025.5	
1	0415	52	67.		37.3	3031.8	*	1	1235	152	57.	17.2	3028.7	*	1	2055	252	50.		-2	3025.5	
1	0420	53	65.		38.5	3032.0	*	1	1240	153	57.	16.8	3028.6	*	1	2100	253	50.		-2	3025.5	
1	0425	54	65.		40.0	3032.3	*	1	1245	154	57.	16.4	3028.5	*	1	2105	254	50.		-2	3025.5	
1	0430	55	66.		41.2	3032.5	*	1	1250	155	57.	16.0	3028.5	*	1	2110	255	50.		-2	3025.5	
1	0435	56	66.		42.4	3032.6	*	1	1255	156	57.	15.6	3028.5	*	1	2115	256	50.		-2	3025.5	
1	0440	57	68.		43.9	3032.8	*	1	1300	157	57.	15.2	3028.4	*	1	2120	257	50.		-2	3025.5	
1	0445	58	67.		44.6	3033.0	*	1	1305	158	56.	14.8	3028.3	*	1	2125	258	50.		-2	3025.5	
1	0450	59	67.		45.6	3033.1	*	1	1310	159	56.	14.4	3028.2	*	1	2130	259	50.		-2	3025.5	
1	0455	60	67.		46.7	3033.3	*	1	1315	160	56.	14.1	3028.1	*	1	2135	260	50.		-2	3025.5	
1	0500	61	68.		47.8	3033.5	*	1	1320	161	56.	13.7	3028.1	*	1	2140	261	50.		-2	3025.5	
1	0505	62	68.		48.3	3033.6	*	1	1325	162	56.	13.3	3028.0	*	1	2145	262	50.		-2	3025.5	
1	0510	63	68.		48.5	3033.7	*	1	1330	163	56.	12.9	3027.9	*	1	2150	263	50.		-2	3025.5	
1	0515	64	68.		50.2	3033.8	*	1	1335	164	55.	12.5	3027.9	*	1	2155	264	50.		-2	3025.5	
1	0520	65	69.		50.7	3033.9	*	1	1340	165	55.	12.1	3027.8	*	1	2200	265	50.		-2	3025.5	
1	0525	66	69.		51.0	3033.9	*	1	1345	166	55.	11.8	3027.7	*	1	2205	266	50.		-2	3025.5	
1	0530	67	69.		51.2	3034.0	*	1	1350	167	55.	11.4	3027.7	*	1	2210	267	50.		-2	3025.5	
1	0535	68	69.		51.3	3034.0	*	1	1355	168	55.	11.0	3027.6	*	1	2215	268	50.		-2	3025.5	
1	0540	69	69.		51.3	3034.0	*	1	1400	169	55.	10.6	3027.5	*	1	2220	269	50.		-2	3025.5	
1	0545	70	69.		51.2	3034.0	*	1	1405	170	54.	10.2	3027.5	*	1	2225	270	50.		-2	3025.5	
1	0550	71	69.		51.0	3033.9	*	1	1410	171	54.	9.9	3027.4	*	1	2230	271	50.		-2	3025.5	
1	0555	72	69.		50.8	3033.9	*	1	1415	173	54.	9.5	3027.3	*	1	2235	272	50.		-2	3025.5	
1	0600	73	69.		50.6	3033.9	*	1	1420	173	54.											

Proposed OUT																			
1	0635	80	68.	48.1	3033.5	*	1	1455	180	53.	6.6	3026.8	*	1	2315	280	50.	-2	3025.5
1	0640	81	68.	47.7	3033.4	*	1	1500	181	53.	6.2	3026.7	*	1	2320	281	50.	-2	3025.5
1	0645	82	67.	47.3	3033.4	*	1	1505	182	52.	5.8	3026.6	*	1	2325	282	50.	-2	3025.5
1	0650	83	67.	46.8	3033.3	*	1	1510	183	52.	5.5	3026.6	*	1	2330	283	50.	-2	3025.5
1	0655	84	67.	46.4	3033.2	*	1	1515	184	52.	5.1	3026.5	*	1	2335	284	50.	-2	3025.5
1	0700	85	67.	45.9	3033.2	*	1	1520	185	52.	4.7	3026.4	*	1	2340	285	50.	-2	3025.5
1	0705	86	67.	45.5	3033.1	*	1	1525	186	52.	4.4	3026.4	*	1	2345	286	50.	-2	3025.5
1	0710	87	67.	45.0	3033.0	*	1	1530	187	52.	4.0	3026.3	*	1	2350	287	50.	-2	3025.5
1	0715	88	67.	44.6	3033.0	*	1	1535	188	51.	3.7	3026.2	*	1	2355	288	50.	-2	3025.5
1	0720	89	67.	44.1	3032.9	*	1	1540	189	51.	3.3	3026.2	*	2	0000	289	50.	-2	3025.5
1	0725	90	66.	43.7	3032.8	*	1	1545	190	51.	3.0	3026.1	*	2	0005	290	50.	-2	3025.5
1	0730	91	66.	43.2	3032.8	*	1	1550	191	51.	2.6	3026.0	*	2	0010	291	50.	-2	3025.5
1	0735	92	66.	42.7	3032.7	*	1	1555	192	51.	2.3	3025.9	*	2	0015	292	50.	-2	3025.5
1	0740	93	66.	42.3	3032.6	*	1	1600	193	51.	1.9	3025.9	*	2	0020	293	50.	-2	3025.5
1	0745	94	66.	41.8	3032.5	*	1	1605	194	50.	1.6	3025.8	*	2	0025	294	50.	-2	3025.5
1	0750	95	66.	41.4	3032.5	*	1	1610	195	50.	1.2	3025.7	*	2	0030	295	50.	-2	3025.5
1	0755	96	66.	40.9	3032.4	*	1	1615	196	50.	.9	3025.7	*	2	0035	296	50.	-2	3025.5
1	0800	97	65.	40.5	3032.3	*	1	1620	197	50.	.5	3025.6	*	2	0040	297	50.	-2	3025.5
1	0805	98	65.	40.0	3032.3	*	1	1625	198	50.	.2	3025.5	*	2	0045	298	50.	-2	3025.5
1	0810	99	65.	39.6	3032.2	*	1	1630	199	50.	-.1	3025.5	*	2	0050	299	50.	-2	3025.5
1	0815	100	65.	39.1	3032.1	*	1	1635	200	50.	-.2	3025.5	*	2	0055	300	50.	-2	3025.5

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)					
+	69.	5.58				
		(CFS)	66.	56.	55.	55.
		(INCHES)	.694	2.345	2.425	2.425
		(AC-FT)	33.	110.	114.	114.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)					
+	51.	5.58				
			42.	15.	14.	14.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)					
+	3033.99	5.58				
			3032.59	3028.05	3027.96	3027.96
CUMULATIVE AREA = .88 SQ MI						

HYDROGRAPH AT STATION RDB1 PLAN 1, RATIO = .91

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	50.	.0	3025.5	*	1	0820	101	64.	36.8	3031.8	*	1	1640	201	50.	-2	3025.5			
1	0005	2	50.	-.2	3025.5	*	1	0825	102	64.	36.3	3031.7	*	1	1645	202	50.	-2	3025.5			
1	0010	3	50.	-.2	3025.5	*	1	0830	103	64.	35.9	3031.6	*	1	1650	203	50.	-2	3025.5			
1	0015	4	50.	-.2	3025.5	*	1	0835	104	64.	35.5	3031.6	*	1	1655	204	50.	-2	3025.5			
1	0020	5	50.	-.2	3025.5	*	1	0840	105	64.	35.0	3031.5	*	1	1700	205	50.	-2	3025.5			
1	0025	6	50.	-.2	3025.5	*	1	0845	106	64.	34.6	3031.4	*	1	1705	206	50.	-2	3025.5			
1	0030	7	50.	-.2	3025.5	*	1	0850	107	63.	34.1	3031.3	*	1	1710	207	50.	-2	3025.5			
1	0035	8	50.	-.2	3025.5	*	1	0855	108	63.	33.7	3031.3	*	1	1715	208	50.	-2	3025.5			
1	0040	9	50.	-.2	3025.5	*	1	0900	109	63.	33.3	3031.2	*	1	1720	209	50.	-2	3025.5			
1	0045	10	50.	-.2	3025.5	*	1	0905	110	63.	32.8	3031.2	*	1	1725	210	50.	-2	3025.5			
1	0050	11	50.	-.2	3025.5	*	1	0910	111	63.	32.4	3031.1	*	1	1730	211	50.	-2	3025.5			
1	0055	12	50.	-.2	3025.5	*	1	0915	112	63.	32.0	3031.0	*	1	1735	212	50.	-2	3025.5			
1	0100	13	50.	-.2	3025.5	*	1	0920	113	62.	31.5	3030.9	*	1	1740	213	50.	-2	3025.5			
1	0105	14	50.	-.2	3025.5	*	1	0925	114	62.	31.1	3030.9	*	1	1745	214	50.	-2	3025.5			
1	0110	15	50.	-.2	3025.5	*	1	0930	115	62.	30.7	3030.8	*	1	1750	215	50.	-2	3025.5			
1	0115	16	50.	-.2	3025.5	*	1	0935	116	62.	30.3	3030.8	*	1	1755	216	50.	-2	3025.5			
1	0120	17	50.	-.2	3025.5	*	1	0940	117	62.	29.8	3030.7	*	1	1800	217	50.	-2	3025.5			
1	0125	18	50.	-.2	3025.5	*	1	0945	118	62.	29.4	3030.6	*	1	1805	218	50.	-2	3025.5			
1	0130	19	50.	-.2	3025.5	*	1	0950	119	62.	29.0	3030.6	*	1	1810	219	50.	-2	3025.5			
1	0135	20	50.	-.2	3025.5	*	1	0955	120	62.	28.5	3030.5	*	1	1815	220	50.	-2	3025.5			
1	0140	21	50.	-.2	3025.5	*	1	1000	121	62.	28.1	3030.5	*	1	1820	221	50.	-2	3025.5			
1	0145	22	50.	-.2	3025.5	*	1	1005	122	61.	27.7	3030.4	*	1	1825	222	50.	-2	3025.5			
1	0150	23	50.	-.2	3025.5	*	1	1010	123	61.	27.3	3030.3	*	1	1830	223	50.	-2	3025.5			
1	0155	24	50.	-.2	3025.5	*	1	1015	124	61.	26.9	3030.3	*	1	1835	224	50.	-2	3025.5			
1	0200	25	50.	-.2	3025.5	*	1	1020	125	61.	26.4	3030.2	*	1	1840	225	50.	-2	3025.5			
1	0205	26	50.	-.2	3025.5	*	1	1025	126	61.	26.0	3030.1	*	1	1845	226	50.	-2	3025.5			
1	0210	27	50.	-.2	3025.5	*	1	1030	127	61.	25.6	3030.1	*	1	1850	227	50.	-2	3025.5			
1	0215	28	50.	-.2	3025.5	*	1	1035	128	61.	25.2	3030.0	*	1	1855	228	50.	-2	3025.5			
1	0220	29	50.	-.2	3025.5	*	1	1040	129	60.	24.8	3029.9	*	1	1900	229	50.	-2	3025.5			
1	0225	30	50.	-.2	3025.5	*	1	1045	130	60.	24.3	3029.9	*	1	1905	230	50.	-2	3025.5			
1	0230	31	50.	-.2	3025.5	*	1	1050	131	60.	23.9	3029.8	*	1	1910	231	50.	-2	3025.5			
1	0235	32	50.	-.2	3025.5	*	1	1055	132	60.	23.5	3029.7	*	1	1915	232	50.	-2	3025.5			
1	0240	33	50.	-.2	3025.5	*	1	1100	133	60.	23.1	3029.7	*	1	1920	233	50.	-2	3025.5			
1	0245	34	50.	-.2	3025.5	*	1	1105	134	60.	22.7	3029.6	*	1	1925	234	50.	-2	3025.5			
1	0250	35	50.	-.2	3025.5	*	1	1110	135	59.	22.3	3029.5	*	1	1930	235	50.	-2	3025.5			
1	0255	36	50.	-.2	3025.5	*	1	1115	136	59.	21.9	3029.5	*	1	1935	236	50.	-2	3025.5			
1	0300	37	50.	-.2	3025.5	*	1	1120	137	59.	21.5	3029.4	*	1	1940	237	50.	-2	3025.5			
1	0305	38	50.	-.2	3025.5	*	1	1125	138	59.	21.1	3029.3	*	1	1945	238	50.	-2	3025.5			
1	0310	39	50.	.0	3025.5	*	1	1130	139	59.	20.7	3029.3	*	1	1950	239	50.	-2	3025.5			
1	0315	40	50.	.3	3025.6	*	1	1135	140	59.	20.3	3029.2	*	1	1955	240	50.	-2	3025.5			
1	0320	41	50.	1.0	3025.7	*	1	1140	141	58.	19.9	3029.1	*	1	2000	241	50.	-2	3025.5			
1	0325	42	51.	2.4	3026.0	*	1	1145	142	58.	19.4	3029.0	*	1	2005	242	50.	-2	3025.5			
1	0330	43	52.	4.7	3026.4	*	1	1150	143	58.	19.0	3029.0	*	1	2010	243	50.	-2	3025.5			
1	0335	44	53.	7.9	3027.0	*	1	1155	144	58.	18.6	3028.9	*	1	2015	244	50.	-2	3025.5			
1	0340	45	55.	11.7	3027.7	*	1	1200	145	58.	18.2	3028.8	*	1	2020	245	50.	-2	3025.5			
1	0345	46	57.	15.7	3028.4	*	1	1205	146	58.	17.9	3028.8	*	1	2025	246	50.	-2	3025.5			
1	0350	47	58.	19.9	3029.1	*	1	1210	147	57.	17.5	3028.7	*	1	2030	247	50.	-2	3025.5			
1	0355	48	60.	23.8	3029.8	*	1	1215	148	57.	17.1	3028.6	*	1	2035	248	50.	-2	3025.5			
1	0400	49	61.	27.4	3030.3	*	1	1220	149	57.	16.7	3028.6	*	1	2040	249	50.	-2	3025.5			
1	0405	50	62.	30.6	3030.8	*	1	1225	150	57.	16.3	3028.5	*	1	2045	250	50.	-2	3025.5			
1	0410	51	63.	33.2	3031.2	*	1	1230	151	57.	15.9	3028.4	*	1	2050	251	50.	-2	3025.5			
1	0415	52	64.	35.3	3031.6	*	1	1235	152	57.	15.5	3028.4	*	1	2055	252	50.	-2	3025.5			
1	0420	53	64.	37.1	3031.8	*	1	1240	153	56.	15.1	3028.3	*	1	2100	253	50.	-2	3025.5			
1	0425	54	65.	38.5	3032.0	*	1	1245	154	56.	14.7	3028.2	*	1	2105	254	50.	-2	3025.5			
1	0430	55	65.	39.7	3032.2	*	1	1250	155	56.	14.3	3028.1	*	1	2110	255	50.	-2	3025.5			
1	0435	56	65.	40.8	3032.4	*	1	1255	156	56.	13.9	3028.1	*	1	2115	256	50.	-2	3025.5			
1	0440	57	66.	41.9	3032.5	*	1	1300	157	56.	13.6	3028.0	*	1	2120	257	50.	-2	3025.5			
1	0445	58	66.	42.9	3032.7	*	1	1305	158	56.	13.2	3028.0	*	1	2125	258	50.	-2	3025.5			
1	0450	59	66.	43.9	3032.9	*	1	1310	159	56.	12.8	3027.9	*	1	2130	259	50.	-2	3025.5			
1	0455	60	67.	44.9	3033.0	*	1	1315	160	55.	12.4	3027.8	*	1	2135	260	50.	-2	3025.5			
1	0500	61	67.	45.9	3033.2	*	1	1320	161	55.	12.0	3027.8	*	1	2140	261	50.	-2	3025.5			
1	0505	62	67.	46.9	3033.3	*	1	1325	162	55.	11.6	3027.7	*	1	2145	262	50.	-2	3025.5			
1	0510	63	68.	47.6	3033.4	*	1	1330	163	55.	11.3	3027.6	*	1	2150	263	50.	-2	3025.5			
1	0515	64	68.	48.3	3033.5	*	1	1335	164	55.	10.9	3027.6	*	1	2155	264	50.	-2	3025.5			
1	0520	65	68.	48.7	3033.6	*	1	1340	165	55.	10.5	3027.5	*	1	2200	265	50.	-2	3025.5			
1	0525	66	68.	49.1	3033.7	*	1	1345	166	54.	10.1	3027.4	*	1	2205	266	50.	-2	3025.5			
1	0530	67	68.	49.3	3033.7	*	1	1350	167	54.	9.8	3027.4	*	1	2210	267	50.	-2	3025.5			
1	0535	68	68.	49.3	3033.7	*	1	1355	168	54.	9.4	3027.3	*	1	2215	268	50.	-2	3025.5			
1	0540	69	68.	49.3	3033.7	*	1	1400	169	54.	9.0	3027.2	*	1	2220	269	50.	-2	3025.5			
1	0545	70	68.	49.2	3033.7	*	1	1405	170	54.	8.6	3027.2	*	1	2225	270	50.	-2	3025.5			
1	0550	71	68.	49.0	3033.6	*	1	1410	171	53.	8.2	3027.1	*	1	2230	271	50.	-2	3025.5			
1	0555	72	68.	48.8	3033.6	*	1	1415	172	53.	7.9	3027.0	*	1	2235	272	50.	-2	3025.5			
1	0600	73	68.	48.6	3033.6	*	1	1420	173	53.	7.5											

														Proposed OUT					
1	0655	84	67.	44.4	3032.9	*	1	1515	184	51.	3.6	3026.2	*	1	2335	284	50.	-2	3025.5
1	0700	85	66.	44.0	3032.9	*	1	1520	185	51.	3.2	3026.1	*	1	2340	285	50.	-2	3025.5
1	0705	86	66.	43.5	3032.8	*	1	1525	186	51.	2.9	3026.1	*	1	2345	286	50.	-2	3025.5
1	0710	87	66.	43.1	3032.7	*	1	1530	187	51.	2.5	3026.0	*	1	2350	287	50.	-2	3025.5
1	0715	88	66.	42.6	3032.7	*	1	1535	188	51.	2.2	3025.9	*	1	2355	288	50.	-2	3025.5
1	0720	89	66.	42.2	3032.6	*	1	1540	189	51.	1.8	3025.9	*	2	0000	289	50.	-2	3025.5
1	0725	90	66.	41.7	3032.5	*	1	1545	190	50.	1.5	3025.8	*	2	0005	290	50.	-2	3025.5
1	0730	91	66.	41.3	3032.5	*	1	1550	191	50.	1.1	3025.7	*	2	0010	291	50.	-2	3025.5
1	0735	92	65.	40.8	3032.4	*	1	1555	192	50.	.8	3025.7	*	2	0015	292	50.	-2	3025.5
1	0740	93	65.	40.4	3032.3	*	1	1600	193	50.	.4	3025.6	*	2	0020	293	50.	-2	3025.5
1	0745	94	65.	39.9	3032.3	*	1	1605	194	50.	.1	3025.6	*	2	0025	294	50.	-2	3025.5
1	0750	95	65.	39.5	3032.2	*	1	1610	195	50.	-.2	3025.5	*	2	0030	295	50.	-2	3025.5
1	0755	96	65.	39.0	3032.1	*	1	1615	196	50.	-.2	3025.5	*	2	0035	296	50.	-2	3025.5
1	0800	97	65.	38.6	3032.0	*	1	1620	197	50.	-.2	3025.5	*	2	0040	297	50.	-2	3025.5
1	0805	98	65.	38.1	3032.0	*	1	1625	198	50.	-.2	3025.5	*	2	0045	298	50.	-2	3025.5
1	0810	99	64.	37.7	3031.9	*	1	1630	199	50.	-.2	3025.5	*	2	0050	299	50.	-2	3025.5
1	0815	100	64.	37.2	3031.8	*	1	1635	200	50.	-.2	3025.5	*	2	0055	300	50.	-2	3025.5

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE	FLOW	24.92-HR
+	(CFS)	(HR)	(CFS)		
+	68.	5.58			
			(INCHES)		
			(AC-FT)		
			65.	55.	55.
			.688	2.331	2.411
			32.	110.	113.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE	STORAGE	24.92-HR
+	(AC-FT)	(HR)			
+	49.	5.58			
			40.	14.	13.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE	STAGE	24.92-HR
+	(FEET)	(HR)			
+	3033.69	5.58			
			3032.31	3027.90	3027.81
			CUMULATIVE AREA =	.88 SQ MI	

HYDROGRAPH AT STATION RDB1 PLAN 1, RATIO = .90

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	50.	.0	3025.5	*	1	0820	101	64.	35.8	3031.6	*	1	1640	201	50.	-2	3025.5			
1	0005	2	50.	-.2	3025.5	*	1	0825	102	64.	35.4	3031.6	*	1	1645	202	50.	-2	3025.5			
1	0010	3	50.	-.2	3025.5	*	1	0830	103	64.	35.0	3031.5	*	1	1650	203	50.	-2	3025.5			
1	0015	4	50.	-.2	3025.5	*	1	0835	104	64.	34.5	3031.4	*	1	1655	204	50.	-2	3025.5			
1	0020	5	50.	-.2	3025.5	*	1	0840	105	63.	34.1	3031.4	*	1	1700	205	50.	-2	3025.5			
1	0025	6	50.	-.2	3025.5	*	1	0845	106	63.	33.6	3031.3	*	1	1705	206	50.	-2	3025.5			
1	0030	7	50.	-.2	3025.5	*	1	0850	107	63.	33.2	3031.2	*	1	1710	207	50.	-2	3025.5			
1	0035	8	50.	-.2	3025.5	*	1	0855	108	63.	32.8	3031.2	*	1	1715	208	50.	-2	3025.5			
1	0040	9	50.	-.2	3025.5	*	1	0900	109	63.	32.3	3031.1	*	1	1720	209	50.	-2	3025.5			
1	0045	10	50.	-.2	3025.5	*	1	0905	110	63.	31.9	3031.0	*	1	1725	210	50.	-2	3025.5			
1	0050	11	50.	-.2	3025.5	*	1	0910	111	63.	31.5	3031.0	*	1	1730	211	50.	-2	3025.5			
1	0055	12	50.	-.2	3025.5	*	1	0915	112	62.	31.0	3030.9	*	1	1735	212	50.	-2	3025.5			
1	0100	13	50.	-.2	3025.5	*	1	0920	113	62.	30.6	3030.8	*	1	1740	213	50.	-2	3025.5			
1	0105	14	50.	-.2	3025.5	*	1	0925	114	62.	30.2	3030.8	*	1	1745	214	50.	-2	3025.5			
1	0110	15	50.	-.2	3025.5	*	1	0930	115	62.	29.8	3030.7	*	1	1750	215	50.	-2	3025.5			
1	0115	16	50.	-.2	3025.5	*	1	0935	116	62.	29.3	3030.6	*	1	1755	216	50.	-2	3025.5			
1	0120	17	50.	-.2	3025.5	*	1	0940	117	62.	28.9	3030.6	*	1	1800	217	50.	-2	3025.5			
1	0125	18	50.	-.2	3025.5	*	1	0945	118	62.	28.5	3030.5	*	1	1805	218	50.	-2	3025.5			
1	0130	19	50.	-.2	3025.5	*	1	0950	119	62.	28.1	3030.4	*	1	1810	219	50.	-2	3025.5			
1	0135	20	50.	-.2	3025.5	*	1	0955	120	61.	27.6	3030.4	*	1	1815	220	50.	-2	3025.5			
1	0140	21	50.	-.2	3025.5	*	1	1000	121	61.	27.2	3030.3	*	1	1820	221	50.	-2	3025.5			
1	0145	22	50.	-.2	3025.5	*	1	1005	122	61.	26.8	3030.2	*	1	1825	222	50.	-2	3025.5			
1	0150	23	50.	-.2	3025.5	*	1	1010	123	61.	26.4	3030.2	*	1	1830	223	50.	-2	3025.5			
1	0155	24	50.	-.2	3025.5	*	1	1015	124	61.	26.0	3030.1	*	1	1835	224	50.	-2	3025.5			
1	0200	25	50.	-.2	3025.5	*	1	1020	125	61.	25.5	3030.1	*	1	1840	225	50.	-2	3025.5			
1	0205	26	50.	-.2	3025.5	*	1	1025	126	61.	25.1	3030.0	*	1	1845	226	50.	-2	3025.5			
1	0210	27	50.	-.2	3025.5	*	1	1030	127	60.	24.7	3029.9	*	1	1850	227	50.	-2	3025.5			
1	0215	28	50.	-.2	3025.5	*	1	1035	128	60.	24.3	3029.9	*	1	1855	228	50.	-2	3025.5			
1	0220	29	50.	-.2	3025.5	*	1	1040	129	60.	23.9	3029.8	*	1	1900	229	50.	-2	3025.5			
1	0225	30	50.	-.2	3025.5	*	1	1045	130	60.	23.5	3029.7	*	1	1905	230	50.	-2	3025.5			
1	0230	31	50.	-.2	3025.5	*	1	1050	131	60.	23.0	3029.6	*	1	1910	231	50.	-2	3025.5			
1	0235	32	50.	-.2	3025.5	*	1	1055	132	60.	22.6	3029.6	*	1	1915	232	50.	-2	3025.5			
1	0240	33	50.	-.2	3025.5	*	1	1100	133	59.	22.2	3029.5	*	1	1920	233	50.	-2	3025.5			
1	0245	34	50.	-.2	3025.5	*	1	1105	134	59.	21.8	3029.4	*	1	1925	234	50.	-2	3025.5			
1	0250	35	50.	-.2	3025.5	*	1	1110	135	59.	21.4	3029.4	*	1	1930	235	50.	-2	3025.5			
1	0255	36	50.	-.2	3025.5	*	1	1115	136	59.	21.0	3029.3	*	1	1935	236	50.	-2	3025.5			
1	0300	37	50.	-.2	3025.5	*	1	1120	137	59.	20.6	3029.2	*	1	1940	237	50.	-2	3025.5			
1	0305	38	50.	-.2	3025.5	*	1	1125	138	59.	20.2	3029.2	*	1	1945	238	50.	-2	3025.5			
1	0310	39	50.	-.1	3025.5	*	1	1130	139	58.	19.8	3029.1	*	1	1950	239	50.	-2	3025.5			
1	0315	40	50.	-.3	3025.6	*	1	1135	140	58.	19.4	3029.0	*	1	1955	240	50.	-2	3025.5			
1	0320	41	50.	1.0	3025.7	*	1	1140	141	58.	19.0	3029.0	*	1	2000	241	50.	-2	3025.5			
1	0325	42	51.	2.4	3026.0	*	1	1145	142	58.	18.6	3028.9	*	1	2005	242	50.	-2	3025.5			
1	0330	43	52.	4.6	3026.4	*	1	1150	143	58.	18.2	3028.8	*	1	2010	243	50.	-2	3025.5			
1	0335	44	53.	7.7	3027.0	*	1	1155	144	58.	17.8	3028.8	*	1	2015	244	50.	-2	3025.5			
1	0340	45	55.	11.4	3027.7	*	1	1200	145	57.	17.4	3028.7	*	1	2020	245	50.	-2	3025.5			
1	0345	46	54.	15.4	3028.4	*	1	1205	146	57.	17.0	3028.6	*	1	2025	246	50.	-2	3025.5			
1	0350	47	58.	19.4	3029.0	*	1	1210	147	57.	16.6	3028.6	*	1	2030	247	50.	-2	3025.5			
1	0355	48	60.	23.3	3029.7	*	1	1215	148	57.	16.2	3028.5	*	1	2035	248	50.	-2	3025.5			
1	0400	49	61.	26.8	3030.3	*	1	1220	149	57.	15.8	3028.4	*	1	2040	249	50.	-2	3025.5			
1	0405	50	62.	29.9	3030.7	*	1	1225	150	57.	15.4	3028.4	*	1	2045	250	50.	-2	3025.5			
1	0410	51	63.	32.5	3031.1	*	1	1230	151	56.	15.0	3028.3	*	1	2050	251	50.	-2	3025.5			
1	0415	52	64.	34.6	3031.4	*	1	1235	152	56.	14.6	3028.2	*	1	2055	252	50.	-2	3025.5			
1	0420	53	64.	36.3	3031.7	*	1	1240	153	56.	14.3	3028.2	*	1	2100	253	50.	-2	3025.5			
1	0425	54	65.	37.7	3031.9	*	1	1245	154	56.	13.9	3028.1	*	1	2105	254	50.	-2	3025.5			
1	0430	55	65.	38.9	3032.1	*	1	1250	155	56.	13.5	3028.0	*	1	2110	255	50.	-2	3025.5			
1	0435	56	65.	40.0	3032.4	*	1	1255	156	56.	13.1	3028.0	*	1	2115	256	50.	-2	3025.5			
1	0440	57	66.	41.0	3032.7	*	1	1300	157	56.	12.7	3027.9	*	1	2120	257	50.	-2	3025.5			
1	0445	58	66.	42.0	3032.6	*	1	1305	158	55.	12.3	3027.8	*	1	2125	258	50.	-2	3025.5			
1	0450	59	66.	43.0	3032.7	*	1	1310	159	55.	12.0	3027.8	*	1	2130	259	50.	-2	3025.5			
1	0455	60	66.	44.1	3032.9	*	1	1315	160	55.	11.6	3027.7	*	1	2135	260	50.	-2	3025.5			
1	0500	61	67.	45.0	3033.0	*	1	1320	161	55.	11.2	3027.6	*	1	2140	261	50.	-2	3025.5			
1	0505	62	67.	45.9	3033.2	*	1	1325	162	55.	10.8	3027.6	*	1	2145	262	50.	-2	3025.5			
1	0510	63	67.	46.7	3033.3	*	1	1330	163	54.	10.4	3027.5	*	1	2150	263	50.	-2	3025.5			
1	0515	64	68.	47.3	3033.4	*	1	1335	164	54.	10.1	3027.4	*	1	2155	264	50.	-2	3025.5			
1	0520	65	68.	47.8	3033.5	*	1	1340	165	54.	9.7	3027.4	*	1	2200	265	50.	-2	3025.5			
1	0525	66	68.	48.1	3033.5	*	1	1345	166	54.	9.3	3027.3	*	1	2205	266	50.	-2	3025.5			
1	0530	67	68.	48.3	3033.5	*	1	1350	167	54.	9.0	3027.2	*	1	2210	267	50.	-2	3025.5			
1	0535	68	68.	48.4	3033.5	*	1	1355	168	54.	8.6	3027.2	*	1	2215	268	50.	-2	3025.5			
1	0540	69	68.	48.3	3033.5	*	1	1400	169	53.	8.2	3027.1	*	1	2220	269	50.	-2	3025.5			
1	0545	70	68.	48.2	3033.5	*	1	1405	170	53.	7.9	3027.0	*	1	2225	270	50.	-2	3025.5			
1	0550	71	68.	48.0	3033.5	*	1	1410	171	53.	7.5	3027.0	*	1	2230	271	50.	-2	3025.5			
1	0555	72	68.	47.8	3033.5	*	1	1415	172	53.	7.1	3026.9	*	1	2235	272	50.	-2	3025.5			
1	0600	73	68.	47.6	3033.4	*	1	1420	173	53.	6.8	3026.8	*	1	2240	273	50.	-2	3025.5			
1	0605	74	67.	47.3	3033.3	*	1	1425	174	53.	6.4	3026.7	*	1	2245	274	50.	-2	3025.5			
1	0610	75	67.	47.0	3033.3	*	1	1430	175	53.	6.0	3026.7	*	1	2250	275	50.	-2	3025.5			
1	0615	76	67.	46.7	3033.3	*	1	1435	176	52.	5.7	3026.6	*	1	2255	276	50.	-2	3025.5			
1	0620	77																				

Proposed.OUT																			
1	0715	88	66.	41.6	3032.5	*	1	1535	188	50.	1.4	3025.8	*	1	2355	288	50.	-2	3025.5
1	0720	89	66.	41.2	3032.4	*	1	1540	189	50.	1.1	3025.7	*	2	0000	289	50.	-2	3025.5
1	0725	90	65.	40.7	3032.4	*	1	1545	190	50.	.7	3025.6	*	2	0005	290	50.	-2	3025.5
1	0730	91	65.	40.3	3032.3	*	1	1550	191	50.	.4	3025.6	*	2	0010	291	50.	-2	3025.5
1	0735	92	65.	39.8	3032.2	*	1	1555	192	50.	.0	3025.5	*	2	0015	292	50.	-2	3025.5
1	0740	93	65.	39.4	3032.2	*	1	1600	193	50.	-2	3025.5	*	2	0020	293	50.	-2	3025.5
1	0745	94	65.	38.9	3032.1	*	1	1605	194	50.	-2	3025.5	*	2	0025	294	50.	-2	3025.5
1	0750	95	65.	38.5	3032.0	*	1	1610	195	50.	-2	3025.5	*	2	0030	295	50.	-2	3025.5
1	0755	96	65.	38.0	3032.0	*	1	1615	196	50.	-2	3025.5	*	2	0035	296	50.	-2	3025.5
1	0800	97	64.	37.6	3031.9	*	1	1620	197	50.	-2	3025.5	*	2	0040	297	50.	-2	3025.5
1	0805	98	64.	37.2	3031.8	*	1	1625	198	50.	-2	3025.5	*	2	0045	298	50.	-2	3025.5
1	0810	99	64.	36.7	3031.7	*	1	1630	199	50.	-2	3025.5	*	2	0050	299	50.	-2	3025.5
1	0815	100	64.	36.3	3031.7	*	1	1635	200	50.	-2	3025.5	*	2	0055	300	50.	-2	3025.5

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)	(CFS)			
+	68.	5.58	65.	55.	55.	55.
			(INCHES)	2.324	2.404	2.404
			(AC-FT)	109.	113.	113.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	48.	5.58	39.	13.	13.	13.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3033.54	5.58	3032.17	3027.83	3027.74	3027.74
CUMULATIVE AREA = .88 SQ MI						

HYDROGRAPH AT STATION RDB1
PLAN 1, RATIO = .70

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*
1	0000	1	50.	.0	3025.5	*	1	0820	101	57.	17.5	3028.7	*	1	1640	201	50.	-2	3025.5				
1	0005	2	50.	-2	3025.5	*	1	0825	102	57.	17.1	3028.6	*	1	1645	202	50.	-2	3025.5				
1	0010	3	50.	-2	3025.5	*	1	0830	103	57.	16.7	3028.6	*	1	1650	203	50.	-2	3025.5				
1	0015	4	50.	-2	3025.5	*	1	0835	104	57.	16.3	3028.5	*	1	1655	204	50.	-2	3025.5				
1	0020	5	50.	-2	3025.5	*	1	0840	105	57.	15.9	3028.4	*	1	1700	205	50.	-2	3025.5				
1	0025	6	50.	-2	3025.5	*	1	0845	106	57.	15.5	3028.4	*	1	1705	206	50.	-2	3025.5				
1	0030	7	50.	-2	3025.5	*	1	0850	107	56.	15.1	3028.3	*	1	1710	207	50.	-2	3025.5				
1	0035	8	50.	-2	3025.5	*	1	0855	108	56.	14.7	3028.2	*	1	1715	208	50.	-2	3025.5				
1	0040	9	50.	-2	3025.5	*	1	0900	109	56.	14.3	3028.2	*	1	1720	209	50.	-2	3025.5				
1	0045	10	50.	-2	3025.5	*	1	0905	110	56.	13.9	3028.1	*	1	1725	210	50.	-2	3025.5				
1	0050	11	50.	-2	3025.5	*	1	0910	111	56.	13.6	3028.0	*	1	1730	211	50.	-2	3025.5				
1	0055	12	50.	-2	3025.5	*	1	0915	112	56.	13.2	3028.0	*	1	1735	212	50.	-2	3025.5				
1	0100	13	50.	-2	3025.5	*	1	0920	113	56.	12.8	3027.9	*	1	1740	213	50.	-2	3025.5				
1	0105	14	50.	-2	3025.5	*	1	0925	114	55.	12.4	3027.8	*	1	1745	214	50.	-2	3025.5				
1	0110	15	50.	-2	3025.5	*	1	0930	115	55.	12.0	3027.8	*	1	1750	215	50.	-2	3025.5				
1	0115	16	50.	-2	3025.5	*	1	0935	116	55.	11.7	3027.7	*	1	1755	216	50.	-2	3025.5				
1	0120	17	50.	-2	3025.5	*	1	0940	117	55.	11.3	3027.6	*	1	1800	217	50.	-2	3025.5				
1	0125	18	50.	-2	3025.5	*	1	0945	118	55.	10.9	3027.6	*	1	1805	218	50.	-2	3025.5				
1	0130	19	50.	-2	3025.5	*	1	0950	119	55.	10.5	3027.5	*	1	1810	219	50.	-2	3025.5				
1	0135	20	50.	-2	3025.5	*	1	0955	120	54.	10.1	3027.4	*	1	1815	220	50.	-2	3025.5				
1	0140	21	50.	-2	3025.5	*	1	1000	121	54.	9.8	3027.4	*	1	1820	221	50.	-2	3025.5				
1	0145	22	50.	-2	3025.5	*	1	1005	122	54.	9.4	3027.3	*	1	1825	222	50.	-2	3025.5				
1	0150	23	50.	-2	3025.5	*	1	1010	123	54.	9.0	3027.2	*	1	1830	223	50.	-2	3025.5				
1	0155	24	50.	-2	3025.5	*	1	1015	124	54.	8.7	3027.2	*	1	1835	224	50.	-2	3025.5				
1	0200	25	50.	-2	3025.5	*	1	1020	125	54.	8.3	3027.1	*	1	1840	225	50.	-2	3025.5				
1	0205	26	50.	-2	3025.5	*	1	1025	126	53.	7.9	3027.0	*	1	1845	226	50.	-2	3025.5				
1	0210	27	50.	-2	3025.5	*	1	1030	127	53.	7.5	3026.9	*	1	1850	227	50.	-2	3025.5				
1	0215	28	50.	-2	3025.5	*	1	1035	128	53.	7.2	3026.9	*	1	1855	228	50.	-2	3025.5				
1	0220	29	50.	-2	3025.5	*	1	1040	129	53.	6.8	3026.8	*	1	1900	229	50.	-2	3025.5				
1	0225	30	50.	-2	3025.5	*	1	1045	130	53.	6.5	3026.8	*	1	1905	230	50.	-2	3025.5				
1	0230	31	50.	-2	3025.5	*	1	1050	131	53.	6.1	3026.7	*	1	1910	231	50.	-2	3025.5				
1	0235	32	50.	-2	3025.5	*	1	1055	132	52.	5.7	3026.6	*	1	1915	232	50.	-2	3025.5				
1	0240	33	50.	-2	3025.5	*	1	1100	133	52.	5.4	3026.5	*	1	1920	233	50.	-2	3025.5				
1	0245	34	50.	-2	3025.5	*	1	1105	134	52.	5.0	3026.5	*	1	1925	234	50.	-2	3025.5				
1	0250	35	50.	-2	3025.5	*	1	1110	135	52.	4.7	3026.4	*	1	1930	235	50.	-2	3025.5				
1	0255	36	50.	-2	3025.5	*	1	1115	136	52.	4.3	3026.3	*	1	1935	236	50.	-2	3025.5				
1	0300	37	50.	-2	3025.5	*	1	1120	137	52.	3.9	3026.3	*	1	1940	237	50.	-2	3025.5				
1	0305	38	50.	-2	3025.5	*	1	1125	138	51.	3.6	3026.2	*	1	1945	238	50.	-2	3025.5				
1	0310	39	50.	-2	3025.5	*	1	1130	139	51.	3.2	3026.1	*	1	1950	239	50.	-2	3025.5				
1	0315	40	50.	-1	3025.5	*	1	1135	140	51.	2.9	3026.1	*	1	1955	240	50.	-2	3025.5				
1	0320	41	50.	-2	3025.5	*	1	1140	141	51.	2.5	3026.0	*	1	2000	241	50.	-2	3025.5				
1	0325	42	50.	.9	3025.7	*	1	1145	142	51.	2.2	3025.9	*	1	2005	242	50.	-2	3025.5				
1	0330	43	51.	2.2	3025.9	*	1	1150	143	51.	1.8	3025.9	*	1	2010	243	50.	-2	3025.5				
1	0335	44	52.	4.1	3026.3	*	1	1155	144	50.	1.5	3025.8	*	1	2015	244	50.	-2	3025.5				
1	0340	45	53.	6.4	3026.8	*	1	1200	145	50.	1.1	3025.7	*	1	2020	245	50.	-2	3025.5				
1	0345	46	54.	8.9	3027.2	*	1	1205	146	50.	.8	3025.7	*	1	2025	246	50.	-2	3025.5				
1	0350	47	55.	11.5	3027.7	*	1	1210	147	50.	.4	3025.6	*	1	2030	247	50.	-2	3025.5				
1	0355	48	56.	14.0	3028.1	*	1	1215	148	50.	-1	3025.5	*	1	2035	248	50.	-2	3025.5				
1	0400	49	57.	16.2	3028.5	*	1	1220	149	50.	-2	3025.5	*	1	2040	249	50.	-2	3025.5				
1	0405	50	58.	18.2	3028.8	*	1	1225	150	50.	-2	3025.5	*	1	2045	250	50.	-2	3025.5				
1	0410	51	58.	19.9	3029.1	*	1	1230	151	50.	-2	3025.5	*	1	2050	251	50.	-2	3025.5				
1	0415	52	59.	21.2	3029.3	*	1	1235	152	50.	-2	3025.5	*	1	2055	252	50.	-2	3025.5				
1	0420	53	59.	22.3	3029.5	*	1	1240	153	50.	-2	3025.5	*	1	2100	253	50.	-2	3025.5				
1	0425	54	60.	23.1	3029.7	*	1	1245	154	50.	-2	3025.5	*	1	2105	254	50.	-2	3025.5				
1	0430	55	60.	23.8	3029.8	*	1	1250	155	50.	-2	3025.5	*	1	2110	255	50.	-2	3025.5				
1	0435	56	60.	24.5	3029.9	*	1	1255	156	50.	-2	3025.5	*	1	2115	256	50.	-2	3025.5				
1	0440	57	61.	25.1	3030.0	*	1	1300	157	50.	-2	3025.5	*	1	2120	257	50.	-2	3025.5				
1	0445	58	61.	25.7	3030.1	*	1	1305	158	50.	-2	3025.5	*	1	2125	258	50.	-2	3025.5				
1	0450	59	61.	26.4	3030.2	*	1	1310	159	50.	-2	3025.5	*	1	2130	259	50.	-2	3025.5				
1	0455	60	61.	27.0	3030.3	*	1	1315	160	50.	-2	3025.5	*	1	2135	260	50.	-2	3025.5				
1	0500	61.	61.	27.6	3030.4	*	1	1320	161	50.	-2	3025.5	*	1	2140	261	50.	-2	3025.5				
1	0505	62	62.	28.1	3030.5	*	1	1325	162	50.	-2	3025.5	*	1	2145	262	50.	-2	3025.5				
1	0510	63	62.	28.6	3030.6	*	1	1330	163	50.	-2	3025.5	*	1	2150	263	50.	-2	3025.5				
1	0515	64	62.	28.9	3030.6	*	1	1335	164	50.	-2	3025.5	*	1	2155	264	50.	-2	3025.5				
1	0520	65	62.	29.2	3030.6	*	1	1340	165	50.	-2	3025.5	*	1	2200	265	50.	-2	3025.5				
1	0525	66	62.	29.3	3030.6	*	1	1345	166	50.	-2	3025.5	*	1	2205	266	50.	-2	3025.5				
1	0530	67	62.	29.3	3030.6	*	1	1350	167	50.	-2	3025.5	*	1	2210	267	50.	-2	3025.5				
1	0535	68	62.	29.3	3030.6	*	1	1355	168	50.	-2	3025.5	*	1	2215	268	50.	-2	3025.5				
1	0540	69	62.	29.2	3030.6	*	1	1400	169	50.	-2	3025.5	*	1	2220	269	50.	-2	3025.5				
1	0545	70	62.	29.0	3030.6	*	1	1405	170	50.	-2	3025.5	*	1	2225	270	50.	-2	3025.5				
1	0550	71	62.	28.8	3030.6	*	1	1410	171	50.	-2	3025.5	*	1	2230	271	50.	-2	3025.5				
1	0555	72	62.	28.6	3030.5	*	1	1415	172	50.	-2	3025.5	*	1	22								

1	0735	92	59.	21.1	3029.3	*	1	1555	192	50.	-2	3025.5	*	2	0015	292	50.	-2	3025.5
1	0740	93	59.	20.7	3029.5	*	1	1600	193	50.	-2	3025.5	*	2	0020	293	50.	-2	3025.5
1	0745	94	59.	20.3	3029.2	*	1	1605	194	50.	-2	3025.5	*	2	0025	294	50.	-2	3025.5
1	0750	95	58.	19.9	3029.1	*	1	1610	195	50.	-2	3025.5	*	2	0030	295	50.	-2	3025.5
1	0755	96	58.	19.5	3029.1	*	1	1615	196	50.	-2	3025.5	*	2	0035	296	50.	-2	3025.5
1	0800	97	58.	19.1	3029.0	*	1	1620	197	50.	-2	3025.5	*	2	0040	297	50.	-2	3025.5
1	0805	98	58.	18.7	3028.9	*	1	1625	198	50.	-2	3025.5	*	2	0045	298	50.	-2	3025.5
1	0810	99	58.	18.3	3028.8	*	1	1630	199	50.	-2	3025.5	*	2	0050	299	50.	-2	3025.5
1	0815	100	58.	17.9	3028.8	*	1	1635	200	50.	-2	3025.5	*	2	0055	300	50.	-2	3025.5

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	72-HR	24.92-HR
+	(CFS)	(HR)			
+	62.	5.50	59. (INCHES) 62.2 (AC-FT) 29.	52. 2,206 104.	52. 2,286 108.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	72-HR	24.92-HR
+	(AC-FT)	(HR)			
+	29.	5.50	22.	6.	6.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	72-HR	24.92-HR
+	(FEET)	(HR)			
+	3030.64	5.50	3029.38	3026.59	3026.55
CUMULATIVE AREA =			.88 SQ MI		

HYDROGRAPH AT STATION RDB1
PLAN 1, RATIO = .57

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*
1	0000	1	50.	.0	3025.5	*	1	0820	101	53.	6.5	3026.8	*	1	1640	201	50.	-2	3025.5				
1	0005	2	50.	-2	3025.5	*	1	0825	102	53.	6.2	3026.7	*	1	1645	202	50.	-2	3025.5				
1	0010	3	50.	-2	3025.5	*	1	0830	103	52.	5.8	3026.6	*	1	1650	203	50.	-2	3025.5				
1	0015	4	50.	-2	3025.5	*	1	0835	104	52.	5.4	3026.6	*	1	1655	204	50.	-2	3025.5				
1	0020	5	50.	-2	3025.5	*	1	0840	105	52.	5.1	3026.5	*	1	1700	205	50.	-2	3025.5				
1	0025	6	50.	-2	3025.5	*	1	0845	106	52.	4.7	3026.4	*	1	1705	206	50.	-2	3025.5				
1	0030	7	50.	-2	3025.5	*	1	0850	107	52.	4.4	3026.4	*	1	1710	207	50.	-2	3025.5				
1	0035	8	50.	-2	3025.5	*	1	0855	108	52.	4.0	3026.3	*	1	1715	208	50.	-2	3025.5				
1	0040	9	50.	-2	3025.5	*	1	0900	109	51.	3.7	3026.2	*	1	1720	209	50.	-2	3025.5				
1	0045	10	50.	-2	3025.5	*	1	0905	110	51.	3.3	3026.1	*	1	1725	210	50.	-2	3025.5				
1	0050	11	50.	-2	3025.5	*	1	0910	111	51.	3.0	3026.1	*	1	1730	211	50.	-2	3025.5				
1	0055	12	50.	-2	3025.5	*	1	0915	112	51.	2.6	3026.0	*	1	1735	212	50.	-2	3025.5				
1	0100	13	50.	-2	3025.5	*	1	0920	113	51.	2.3	3025.9	*	1	1740	213	50.	-2	3025.5				
1	0105	14	50.	-2	3025.5	*	1	0925	114	51.	1.9	3025.9	*	1	1745	214	50.	-2	3025.5				
1	0110	15	50.	-2	3025.5	*	1	0930	115	50.	1.6	3025.8	*	1	1750	215	50.	-2	3025.5				
1	0115	16	50.	-2	3025.5	*	1	0935	116	50.	1.2	3025.7	*	1	1755	216	50.	-2	3025.5				
1	0120	17	50.	-2	3025.5	*	1	0940	117	50.	.9	3025.7	*	1	1800	217	50.	-2	3025.5				
1	0125	18	50.	-2	3025.5	*	1	0945	118	50.	.5	3025.6	*	1	1805	218	50.	-2	3025.5				
1	0130	19	50.	-2	3025.5	*	1	0950	119	50.	-2	3025.5	*	1	1810	219	50.	-2	3025.5				
1	0135	20	50.	-2	3025.5	*	1	0955	120	50.	-2	3025.5	*	1	1815	220	50.	-2	3025.5				
1	0140	21	50.	-2	3025.5	*	1	1000	121	50.	-2	3025.5	*	1	1820	221	50.	-2	3025.5				
1	0145	22	50.	-2	3025.5	*	1	1005	122	50.	-2	3025.5	*	1	1825	222	50.	-2	3025.5				
1	0150	23	50.	-2	3025.5	*	1	1010	123	50.	-2	3025.5	*	1	1830	223	50.	-2	3025.5				
1	0155	24	50.	-2	3025.5	*	1	1015	124	50.	-2	3025.5	*	1	1835	224	50.	-2	3025.5				
1	0200	25	50.	-2	3025.5	*	1	1020	125	50.	-2	3025.5	*	1	1840	225	50.	-2	3025.5				
1	0205	26	50.	-2	3025.5	*	1	1025	126	50.	-2	3025.5	*	1	1845	226	50.	-2	3025.5				
1	0210	27	50.	-2	3025.5	*	1	1030	127	50.	-2	3025.5	*	1	1850	227	50.	-2	3025.5				
1	0215	28	50.	-2	3025.5	*	1	1035	128	50.	-2	3025.5	*	1	1855	228	50.	-2	3025.5				
1	0220	29	50.	-2	3025.5	*	1	1040	129	50.	-2	3025.5	*	1	1900	229	50.	-2	3025.5				
1	0225	30	50.	-2	3025.5	*	1	1045	130	50.	-2	3025.5	*	1	1905	230	50.	-2	3025.5				
1	0230	31	50.	-2	3025.5	*	1	1050	131	50.	-2	3025.5	*	1	1910	231	50.	-2	3025.5				
1	0235	32	50.	-2	3025.5	*	1	1055	132	50.	-2	3025.5	*	1	1915	232	50.	-2	3025.5				
1	0240	33	50.	-2	3025.5	*	1	1100	133	50.	-2	3025.5	*	1	1920	233	50.	-2	3025.5				
1	0245	34	50.	-2	3025.5	*	1	1105	134	50.	-2	3025.5	*	1	1925	234	50.	-2	3025.5				
1	0250	35	50.	-2	3025.5	*	1	1110	135	50.	-2	3025.5	*	1	1930	235	50.	-2	3025.5				
1	0255	36	50.	-2	3025.5	*	1	1115	136	50.	-2	3025.5	*	1	1935	236	50.	-2	3025.5				
1	0300	37	50.	-2	3025.5	*	1	1120	137	50.	-2	3025.5	*	1	1940	237	50.	-2	3025.5				
1	0305	38	50.	-2	3025.5	*	1	1125	138	50.	-2	3025.5	*	1	1945	238	50.	-2	3025.5				
1	0310	39	50.	-2	3025.5	*	1	1130	139	50.	-2	3025.5	*	1	1950	239	50.	-2	3025.5				
1	0315	40	50.	-2	3025.5	*	1	1135	140	50.	-2	3025.5	*	1	1955	240	50.	-2	3025.5				
1	0320	41	50.	-1	3025.5	*	1	1140	141	50.	-2	3025.5	*	1	2000	241	50.	-2	3025.5				
1	0325	42	50.	-2	3025.5	*	1	1145	142	50.	-2	3025.5	*	1	2005	242	50.	-2	3025.5				
1	0330	43	50.	-2	3025.5	*	1	1150	143	50.	-2	3025.5	*	1	2010	243	50.	-2	3025.5				
1	0335	44	51.	2.1	3025.9	*	1	1155	144	50.	-2	3025.5	*	1	2015	244	50.	-2	3025.5				
1	0340	45	51.	3.6	3026.2	*	1	1200	145	50.	-2	3025.5	*	1	2020	245	50.	-2	3025.5				
1	0345	46	52.	5.2	3026.5	*	1	1205	146	50.	-2	3025.5	*	1	2025	246	50.	-2	3025.5				
1	0350	47	53.	6.9	3026.8	*	1	1210	147	50.	-2	3025.5	*	1	2030	247	50.	-2	3025.5				
1	0355	48	54.	8.5	3027.1	*	1	1215	148	50.	-2	3025.5	*	1	2035	248	50.	-2	3025.5				
1	0400	49	54.	10.0	3027.4	*	1	1220	149	50.	-2	3025.5	*	1	2040	249	50.	-2	3025.5				
1	0405	50	55.	11.3	3027.6	*	1	1225	150	50.	-2	3025.5	*	1	2045	250	50.	-2	3025.5				
1	0410	51	55.	12.4	3027.8	*	1	1230	151	50.	-2	3025.5	*	1	2050	251	50.	-2	3025.5				
1	0415	52	56.	13.2	3028.0	*	1	1235	152	50.	-2	3025.5	*	1	2055	252	50.	-2	3025.5				
1	0420	53	56.	13.9	3028.1	*	1	1240	153	50.	-2	3025.5	*	1	2100	253	50.	-2	3025.5				
1	0425	54	56.	14.4	3028.2	*	1	1245	154	50.	-2	3025.5	*	1	2105	254	50.	-2	3025.5				
1	0430	55	56.	14.8	3028.3	*	1	1250	155	50.	-2	3025.5	*	1	2110	255	50.	-2	3025.5				
1	0435	56	57.	15.2	3028.3	*	1	1255	156	50.	-2	3025.5	*	1	2115	256	50.	-2	3025.5				
1	0440	57	57.	15.6	3028.4	*	1	1300	157	50.	-2	3025.5	*	1	2120	257	50.	-2	3025.5				
1	0445	58	57.	16.0	3028.5	*	1	1305	158	50.	-2	3025.5	*	1	2125	258	50.	-2	3025.5				
1	0450	59	57.	16.3	3028.5	*	1	1310	159	50.	-2	3025.5	*	1	2130	259	50.	-2	3025.5				
1	0455	60	57.	16.7	3028.6	*	1	1315	160	50.	-2	3025.5	*	1	2135	260	50.	-2	3025.5				
1	0500	61	57.	17.1	3028.6	*	1	1320	161	50.	-2	3025.5	*	1	2140	261	50.	-2	3025.5				
1	0505	62	57.	17.4	3028.7	*	1	1325	162	50.	-2	3025.5	*	1	2145	262	50.	-2	3025.5				
1	0510	63	58.	17.6	3028.7	*	1	1330	163	50.	-2	3025.5	*	1	2150	263	50.	-2	3025.5				
1	0515	64	58.	17.8	3028.8	*	1	1335	164	50.	-2	3025.5	*	1	2155	264	50.	-2	3025.5				
1	0520	65	58.	17.9	3028.8	*	1	1340	165	50.	-2	3025.5	*	1	2200	265	50.	-2	3025.5				
1	0525	66	58.	17.9	3028.8	*	1	1345	166	50.	-2	3025.5	*	1	2205	266	50.	-2	3025.5				
1	0530	67	58.	17.9	3028.8	*	1	1350	167	50.	-2	3025.5	*	1	2210	267	50.	-2	3025.5				
1	0535	68	58.	17.8	3028.8	*	1	1355	168	50.	-2	3025.5	*	1	2215	268	50.	-2	3025.5				
1	0540	69	58.	17.6	3028.7	*	1	1400	169	50.	-2	3025.5	*	1	2220	269	50.	-2	3025.5				
1	0545	70	57.	17.4	3028.7	*	1	1405	170	50.	-2	3025.5	*	1	2225	270	50.	-2	3025.5				
1	0550	71	57.	17.2	3028.7	*	1	1410	171	50.	-2	3025.5	*	1	2230	271	50.	-2	3025.5				
1	0555	72	57.	16.9	3028.6	*	1	1415	172	50.	-2	3025.5	*	1	2235	272	50.	-2	3025.5				
1	0600	73	5																				

1 0755 96 54. 8.4 3027.1 * 1 1615 196 50. Proposed.OUT
1 0800 97 53. 8.0 3027.1 * 1 1620 197 50. -2 3025.5 * 2 0035 296 50. -2 3025.5
1 0805 98 53. 7.6 3027.0 * 1 1625 198 50. -2 3025.5 * 2 0040 297 50. -2 3025.5
1 0810 99 53. 7.3 3026.9 * 1 1630 199 50. -2 3025.5 * 2 0045 298 50. -2 3025.5
1 0815 100 53. 6.9 3026.8 * 1 1635 200 50. -2 3025.5 * 2 0050 299 50. -2 3025.5
1 0815 100 53. 6.9 3026.8 * 1 1635 200 50. -2 3025.5 * 2 0055 300 50. -2 3025.5

PEAK FLOW TIME 6-HR MAXIMUM AVERAGE FLOW 24.92-HR
+ (CFS) (HR) 24-HR 72-HR
+ 58. 5.42 (CFS) 55. 51. 51. 51.
(INCHES) .577 2.149 2.229 2.229
(AC-FT) 27. 101. 105. 105.
PEAK STORAGE TIME 6-HR MAXIMUM AVERAGE STORAGE 24.92-HR
+ (AC-FT) (HR) 24-HR 72-HR
+ 18. 5.42 11. 3. 3. 3.
PEAK STAGE TIME 6-HR MAXIMUM AVERAGE STAGE 24.92-HR
+ (FEET) (HR) 24-HR 72-HR
+ 3028.79 5.42 3027.58 3026.02 3026.00 3026.00
CUMULATIVE AREA = .88 SQ MI

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* RDB2 *
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336 KO OUTPUT CONTROL VARIABLES
IPRNT 1 PRINT CONTROL
IPLST 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

337 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP VOL TYPE OF INITIAL CONDITION
RSVRIC -1.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT
338 SV STORAGE .0 3.3 6.9 10.6 27.3 46.8 75.0
339 SE ELEVATION 2993.00 2994.00 2995.00 2996.00 3000.00 3004.00 3009.00
340 SQ DISCHARGE 0. 18. 27. 34. 40. 45. 58. 68. 77.
341 SE ELEVATION 2993.00 2996.00 2997.00 2998.00 2999.00 3000.00 3003.00 3006.00 3009.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE .00 3.27 6.87 10.63 14.81 18.99 23.16 27.34 41.91 46.77
OUTFLOW .00 5.98 11.97 17.95 27.43 34.38 40.15 45.18 57.71 61.13
ELEVATION 2993.00 2994.00 2995.00 2996.00 2997.00 2998.00 2999.00 3000.00 3003.00 3004.00
STORAGE 58.07 75.03
OUTFLOW 67.97 76.88
ELEVATION 3006.00 3009.00

WARNING --- ROUTED OUTFLOW (77.) IS GREATER THAN MAXIMUM OUTFLOW (77.) IN STORAGE-OUTFLOW TABLE
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HYDROGRAPH AT STATION RDB2
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	* *	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	* *	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	2993.0	*	1	0820	101	71.	64.6	3007.2	*	1	1640	201	42.	25.0	2999.4			
1	0005	2	0.	.0	2993.0	*	1	0825	102	71.	64.1	3007.1	*	1	1645	202	42.	24.7	2999.4			
1	0010	3	0.	.0	2993.0	*	1	0830	103	71.	63.6	3007.0	*	1	1650	203	42.	24.4	2999.3			
1	0015	4	0.	.0	2993.0	*	1	0835	104	71.	63.1	3006.9	*	1	1655	204	41.	24.1	2999.2			
1	0020	5	0.	.0	2993.0	*	1	0840	105	70.	62.6	3006.8	*	1	1700	205	41.	23.9	2999.2			
1	0025	6	0.	.0	2993.0	*	1	0845	106	70.	62.1	3006.7	*	1	1705	206	41.	23.6	2999.1			
1	0030	7	0.	.0	2993.0	*	1	0850	107	70.	61.7	3006.6	*	1	1710	207	40.	23.3	2999.0			
1	0035	8	0.	.1	2993.0	*	1	0855	108	70.	61.2	3006.6	*	1	1715	208	40.	23.0	2999.0			
1	0040	9	0.	.1	2993.0	*	1	0900	109	69.	60.7	3006.5	*	1	1720	209	40.	22.7	2998.9			
1	0045	10	0.	.1	2993.0	*	1	0905	110	69.	60.2	3006.4	*	1	1725	210	39.	22.5	2998.8			
1	0050	11	0.	.1	2993.0	*	1	0910	111	69.	59.8	3006.3	*	1	1730	211	39.	22.2	2998.8			
1	0055	12	0.	.1	2993.0	*	1	0915	112	69.	59.3	3006.2	*	1	1735	212	38.	21.9	2998.7			
1	0100	13	0.	.2	2993.0	*	1	0920	113	68.	58.8	3006.1	*	1	1740	213	38.	21.7	2998.6			
1	0105	14	0.	.2	2993.1	*	1	0925	114	68.	58.3	3006.0	*	1	1745	214	38.	21.4	2998.6			
1	0110	15	0.	.2	2993.1	*	1	0930	115	68.	57.9	3006.0	*	1	1750	215	37.	21.2	2998.5			
1	0115	16	0.	.2	2993.1	*	1	0935	116	68.	57.4	3005.9	*	1	1755	216	37.	20.9	2998.5			
1	0120	17	0.	.3	2993.1	*	1	0940	117	67.	56.9	3005.8	*	1	1800	217	37.	20.6	2998.4			
1	0125	18	1.	.3	2993.1	*	1	0945	118	67.	56.5	3005.7	*	1	1805	218	36.	20.4	2998.3			
1	0130	19	1.	.4	2993.1	*	1	0950	119	67.	56.0	3005.6	*	1	1810	219	36.	20.1	2998.3			
1	0135	20	1.	.5	2993.1	*	1	0955	120	66.	55.6	3005.6	*	1	1815	220	36.	19.9	2998.2			
1	0140	21	1.	.6	2993.2	*	1	1000	121	66.	55.1	3005.5	*	1	1820	221	35.	19.7	2998.2			
1	0145	22	1.	.7	2993.2	*	1	1005	122	66.	54.6	3005.4	*	1	1825	222	35.	19.4	2998.1			
1	0150	23	2.	.9	2993.3	*	1	1010	123	66.	54.2	3005.3	*	1	1830	223	35.	19.2	2998.0			
1	0155	24	2.	1.1	2993.3	*	1	1015	124	65.	53.7	3005.2	*	1	1835	224	34.	18.9	2998.0			
1	0200	25	2.	1.3	2993.4	*	1	1020	125	65.	53.3	3005.2	*	1	1840	225	34.	18.7	2997.9			
1	0205	26	3.	1.4	2993.4	*	1	1025	126	65.	52.8	3005.1	*	1	1845	226	34.	18.5	2997.9			
1	0210	27	3.	1.6	2993.5	*	1	1030	127	65.	52.4	3005.0	*	1	1850	227	33.	18.2	2997.8			
1	0215	28	3.	1.8	2993.5	*	1	1035	128	64.	52.0	3004.9	*	1	1855	228	33.	18.0	2997.8			
1	0220	29	4.	2.0	2993.6	*	1	1040	129	64.	51.5	3004.8	*	1	1900	229	32.	17.8	2997.7			

										Proposed OUT									
1	0225	30	4.	2.3	2993.7	*	1	1045	130	64.	51.1	3004.8	*	1	1905	230	32.	17.6	2997.7
1	0230	31	5.	2.6	2993.8	*	1	1050	131	63.	50.6	3004.7	*	1	1910	231	32.	17.3	2997.6
1	0235	32	5.	2.9	2993.9	*	1	1055	132	63.	50.2	3004.6	*	1	1915	232	31.	17.1	2997.6
1	0240	33	6.	3.2	2994.0	*	1	1100	133	63.	49.8	3004.5	*	1	1920	233	31.	16.9	2997.5
1	0245	34	6.	3.5	2994.1	*	1	1105	134	63.	49.3	3004.5	*	1	1925	234	31.	16.7	2997.5
1	0250	35	7.	3.9	2994.2	*	1	1110	135	62.	48.9	3004.4	*	1	1930	235	30.	16.5	2997.4
1	0255	36	8.	4.3	2994.3	*	1	1115	136	62.	48.5	3004.3	*	1	1935	236	30.	16.3	2997.4
1	0300	37	8.	4.7	2994.4	*	1	1120	137	62.	48.1	3004.2	*	1	1940	237	30.	16.1	2997.3
1	0305	38	9.	5.1	2994.5	*	1	1125	138	62.	47.6	3004.2	*	1	1945	238	29.	15.9	2997.3
1	0310	39	10.	5.6	2994.6	*	1	1130	139	61.	47.2	3004.1	*	1	1950	239	29.	15.7	2997.2
1	0315	40	11.	6.3	2994.8	*	1	1135	140	61.	46.8	3004.0	*	1	1955	240	29.	15.5	2997.2
1	0320	41	13.	7.7	2995.1	*	1	1140	141	61.	46.4	3003.9	*	1	2000	241	28.	15.3	2997.1
1	0325	42	15.	9.1	2995.6	*	1	1145	142	61.	45.9	3003.8	*	1	2005	242	28.	15.1	2997.1
1	0330	43	20.	11.6	2996.2	*	1	1150	143	60.	45.5	3003.7	*	1	2010	243	28.	14.9	2997.0
1	0335	44	28.	15.0	2997.1	*	1	1155	144	60.	45.1	3003.7	*	1	2015	244	27.	14.7	2997.0
1	0340	45	35.	19.1	2998.0	*	1	1200	145	60.	44.7	3003.6	*	1	2020	245	27.	14.5	2996.9
1	0345	46	41.	23.6	2999.1	*	1	1205	146	59.	44.3	3003.5	*	1	2025	246	26.	14.3	2996.9
1	0350	47	46.	28.3	3000.2	*	1	1210	147	59.	43.9	3003.4	*	1	2030	247	26.	14.2	2996.8
1	0355	48	50.	33.0	3001.2	*	1	1215	148	59.	43.5	3003.3	*	1	2035	248	26.	14.0	2996.8
1	0400	49	54.	37.5	3002.1	*	1	1220	149	59.	43.1	3003.2	*	1	2040	249	25.	13.8	2996.8
1	0405	50	58.	41.8	3003.0	*	1	1225	150	58.	42.7	3003.2	*	1	2045	250	25.	13.6	2996.7
1	0410	51	60.	45.8	3003.8	*	1	1230	151	58.	42.3	3003.1	*	1	2050	251	24.	13.5	2996.7
1	0415	52	63.	49.4	3004.5	*	1	1235	152	58.	41.9	3003.0	*	1	2055	252	24.	13.3	2996.6
1	0420	53	65.	52.5	3005.0	*	1	1240	153	57.	41.5	3002.9	*	1	2100	253	24.	13.1	2996.6
1	0425	54	66.	55.2	3005.5	*	1	1245	154	57.	41.1	3002.8	*	1	2105	254	23.	13.0	2996.6
1	0430	55	68.	57.6	3005.9	*	1	1250	155	57.	40.7	3002.7	*	1	2110	255	23.	12.8	2996.5
1	0435	56	69.	59.8	3006.3	*	1	1255	156	56.	40.3	3002.7	*	1	2115	256	23.	12.7	2996.5
1	0440	57	70.	61.8	3006.7	*	1	1300	157	56.	39.9	3002.6	*	1	2120	257	22.	12.5	2996.4
1	0445	58	71.	63.7	3007.0	*	1	1305	158	56.	39.5	3002.5	*	1	2125	258	22.	12.4	2996.4
1	0450	59	72.	65.4	3007.3	*	1	1310	159	55.	39.1	3002.4	*	1	2130	259	22.	12.2	2996.4
1	0455	60	73.	67.1	3007.6	*	1	1315	160	55.	38.8	3002.4	*	1	2135	260	21.	12.1	2996.3
1	0500	61	74.	68.7	3007.9	*	1	1320	161	55.	38.4	3002.3	*	1	2140	261	21.	11.9	2996.3
1	0505	62	74.	70.2	3008.1	*	1	1325	162	54.	38.0	3002.2	*	1	2145	262	21.	11.8	2996.3
1	0510	63	75.	71.5	3008.4	*	1	1330	163	54.	37.6	3002.1	*	1	2150	263	20.	11.6	2996.2
1	0515	64	76.	72.7	3008.6	*	1	1335	164	54.	37.3	3002.0	*	1	2155	264	20.	11.5	2996.2
1	0520	65	76.	73.7	3008.8	*	1	1340	165	53.	36.9	3002.0	*	1	2200	265	20.	11.4	2996.2
1	0525	66	77.	74.5	3008.9	*	1	1345	166	53.	36.5	3001.9	*	1	2205	266	19.	11.2	2996.1
1	0530	67	77.	75.2	3009.0	*	1	1350	167	53.	36.2	3001.8	*	1	2210	267	19.	11.1	2996.1
1	0535	68	77.	75.7	3009.1	*	1	1355	168	52.	35.8	3001.7	*	1	2215	268	19.	11.0	2996.1
1	0540	69	77.	76.1	3009.2	*	1	1400	169	52.	35.4	3001.7	*	1	2220	269	18.	10.8	2996.0
1	0545	70	78.	76.3	3009.2	*	1	1405	170	52.	35.1	3001.6	*	1	2225	270	18.	10.7	2996.0
1	0550	71	78.	76.4	3009.2	*	1	1410	171	52.	34.7	3001.5	*	1	2230	271	18.	10.6	2996.0
1	0555	72	78.	76.5	3009.3	*	1	1415	172	51.	34.4	3001.4	*	1	2235	272	18.	10.5	2996.0
1	0600	73	78.	76.4	3009.2	*	1	1420	173	51.	34.0	3001.4	*	1	2240	273	17.	10.3	2995.9
1	0605	74	78.	76.3	3009.2	*	1	1425	174	51.	33.7	3001.3	*	1	2245	274	17.	10.2	2995.9
1	0610	75	77.	76.2	3009.2	*	1	1430	175	50.	33.3	3001.2	*	1	2250	275	17.	10.1	2995.9
1	0615	76	77.	76.0	3009.2	*	1	1435	176	50.	33.0	3001.2	*	1	2255	276	17.	10.0	2995.8
1	0620	77	77.	75.7	3009.1	*	1	1440	177	50.	32.6	3001.1	*	1	2300	277	17.	9.9	2995.8
1	0625	78	77.	75.4	3009.1	*	1	1445	178	49.	32.3	3001.0	*	1	2305	278	17.	9.8	2995.8
1	0630	79	77.	75.0	3009.0	*	1	1450	179	49.	32.0	3001.0	*	1	2310	279	16.	9.6	2995.7
1	0635	80	77.	74.7	3008.9	*	1	1455	180	49.	31.6	3000.9	*	1	2315	280	16.	9.5	2995.7
1	0640	81	76.	74.3	3008.9	*	1	1500	181	49.	31.3	3000.8	*	1	2320	281	16.	9.4	2995.7
1	0645	82	76.	73.8	3008.8	*	1	1505	182	48.	31.0	3000.7	*	1	2325	282	16.	9.3	2995.6
1	0650	83	76.	73.4	3008.7	*	1	1510	183	48.	30.6	3000.7	*	1	2330	283	16.	9.2	2995.6
1	0655	84	76.	72.9	3008.6	*	1	1515	184	48.	30.3	3000.6	*	1	2335	284	16.	9.1	2995.6
1	0700	85	76.	72.5	3008.5	*	1	1520	185	47.	30.0	3000.5	*	1	2340	285	15.	9.0	2995.6
1	0705	86	75.	72.0	3008.5	*	1	1525	186	47.	29.6	3000.5	*	1	2345	286	15.	8.9	2995.5
1	0710	87	75.	71.5	3008.4	*	1	1530	187	47.	29.3	3000.4	*	1	2350	287	15.	8.8	2995.5
1	0715	88	75.	71.0	3008.3	*	1	1535	188	47.	29.0	3000.3	*	1	2355	288	15.	8.7	2995.5
1	0720	89	75.	70.5	3008.2	*	1	1540	189	46.	28.7	3000.3	*	2	0000	289	15.	8.6	2995.5
1	0725	90	74.	70.0	3008.1	*	1	1545	190	46.	28.4	3000.2	*	2	0005	290	15.	8.5	2995.4
1	0730	91	74.	69.5	3008.0	*	1	1550	191	46.	28.0	3000.1	*	2	0010	291	14.	8.4	2995.4
1	0735	92	74.	69.0	3007.9	*	1	1555	192	46.	27.7	3000.1	*	2	0015	292	14.	8.3	2995.4
1	0740	93	73.	68.5	3007.9	*	1	1600	193	45.	27.4	3000.0	*	2	0020	293	14.	8.2	2995.3
1	0745	94	73.	68.0	3007.8	*	1	1605	194	45.	27.1	2999.9	*	2	0025	294	14.	8.1	2995.3
1	0750	95	73.	67.6	3007.7	*	1	1610	195	45.	26.8	2999.9	*	2	0030	295	14.	8.0	2995.3
1	0755	96	73.	67.1	3007.6	*	1	1615	196	44.	26.5	2999.9	*	2	0035	296	14.	7.9	2995.3
1	0800	97	72.	66.6	3007.5	*	1	1620	197	44.	26.2	2999.7	*	2	0040	297	13.	7.8	2995.2
1	0805	98	72.	66.1	3007.4	*	1	1625	198	43.	25.9	2999.7	*	2	0045	298	13.	7.7	2995.2
1	0810	99	72.	65.6	3007.3	*	1	1630	199	43.	25.6	2999.6	*	2	0050	299	13.	7.6	2995.2
1	0815	100	72.	65.1	3007.2	*	1	1635	200	43.	25.3	2999.5	*	2	0055	300	13.	7.5	2995.2

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	78.	5.92	(CFS)	72.	43.	42.	42.
			(INCHES)	.659	1.578	1.578	1.578
			(AC-FT)	36.	86.	86.	86.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	76.	5.92	67.	33.	32.	32.	
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	3009.26	5.92	3007.50	3000.76	3000.47	3000.47	
CUMULATIVE AREA =				1.02	SQ MI		

															Proposed.OUT									
1	0245	34	6.	3.3	2994.0	*	1	1105	134	61.	47.3	3004.1	*	1	1925	234	29.	15.7	2997.2					
1	0250	35	7.	3.7	2994.1	*	1	1110	135	61.	46.9	3004.0	*	1	1930	235	29.	15.5	2997.2					
1	0255	36	7.	4.0	2994.2	*	1	1115	136	61.	46.5	3003.9	*	1	1935	236	28.	15.3	2997.1					
1	0300	37	8.	4.4	2994.3	*	1	1120	137	61.	46.1	3003.9	*	1	1940	237	28.	15.1	2997.1					
1	0305	38	9.	4.8	2994.4	*	1	1125	138	60.	45.7	3003.8	*	1	1945	238	28.	15.0	2997.0					
1	0310	39	9.	5.3	2994.6	*	1	1130	139	60.	45.2	3003.7	*	1	1950	239	27.	14.8	2997.0					
1	0315	40	10.	6.0	2994.7	*	1	1135	140	60.	44.8	3003.6	*	1	1955	240	27.	14.6	2996.9					
1	0320	41	12.	7.0	2995.0	*	1	1140	141	59.	44.4	3003.5	*	1	2000	241	26.	14.4	2996.9					
1	0325	42	15.	8.7	2995.5	*	1	1145	142	59.	44.0	3003.4	*	1	2005	242	26.	14.2	2996.9					
1	0330	43	19.	11.1	2996.1	*	1	1150	143	59.	43.6	3003.3	*	1	2010	243	26.	14.0	2996.8					
1	0335	44	27.	14.4	2996.9	*	1	1155	144	59.	43.2	3003.3	*	1	2015	244	25.	13.9	2996.8					
1	0340	45	33.	18.4	2997.7	*	1	1200	145	58.	42.8	3003.2	*	1	2020	245	25.	13.7	2996.7					
1	0345	46	40.	22.8	2998.9	*	1	1205	146	58.	42.4	3003.1	*	1	2025	246	25.	13.5	2996.7					
1	0350	47	45.	27.3	3000.0	*	1	1210	147	58.	42.0	3003.0	*	1	2030	247	24.	13.4	2996.6					
1	0355	48	49.	31.9	3000.9	*	1	1215	148	57.	41.6	3002.9	*	1	2035	248	24.	13.2	2996.6					
1	0400	49	53.	36.3	3001.8	*	1	1220	149	57.	41.2	3002.9	*	1	2040	249	23.	13.0	2996.6					
1	0405	50	56.	40.4	3002.7	*	1	1225	150	57.	40.8	3002.8	*	1	2045	250	23.	12.9	2996.5					
1	0410	51	59.	44.3	3003.5	*	1	1230	151	56.	40.4	3002.7	*	1	2050	251	23.	12.7	2996.5					
1	0415	52	62.	47.7	3007.2	*	1	1235	152	56.	40.0	3002.6	*	1	2055	252	22.	12.6	2996.5					
1	0420	53	64.	50.8	3004.7	*	1	1240	153	56.	39.6	3002.5	*	1	2100	253	22.	12.4	2996.4					
1	0425	54	65.	53.4	3005.2	*	1	1245	154	55.	39.3	3002.5	*	1	2105	254	22.	12.3	2996.4					
1	0430	55	67.	55.8	3005.6	*	1	1250	155	55.	38.9	3002.4	*	1	2110	255	21.	12.1	2996.4					
1	0435	56	68.	57.9	3006.0	*	1	1255	156	55.	38.5	3002.3	*	1	2115	256	21.	11.9	2996.3					
1	0440	57	69.	59.8	3006.3	*	1	1300	157	54.	38.1	3002.2	*	1	2120	257	21.	11.8	2996.3					
1	0445	58	70.	61.6	3006.6	*	1	1305	158	54.	37.8	3002.1	*	1	2125	258	20.	11.7	2996.2					
1	0450	59	71.	63.3	3006.9	*	1	1310	159	54.	37.4	3002.1	*	1	2130	259	20.	11.5	2996.2					
1	0455	60	72.	65.0	3007.2	*	1	1315	160	53.	37.0	3002.0	*	1	2135	260	20.	11.4	2996.2					
1	0500	61	72.	66.5	3007.5	*	1	1320	161	53.	36.6	3001.9	*	1	2140	261	19.	11.3	2996.2					
1	0505	62	73.	67.9	3007.7	*	1	1325	162	53.	36.3	3001.8	*	1	2145	262	19.	11.1	2996.1					
1	0510	63	74.	69.2	3008.0	*	1	1330	163	53.	35.9	3001.8	*	1	2150	263	19.	11.0	2996.1					
1	0515	64	74.	70.4	3008.2	*	1	1335	164	52.	35.6	3001.7	*	1	2155	264	18.	10.9	2996.1					
1	0520	65	75.	71.3	3008.3	*	1	1340	165	52.	35.2	3001.6	*	1	2200	265	18.	10.7	2996.0					
1	0525	66	75.	72.1	3008.5	*	1	1345	166	52.	34.8	3001.5	*	1	2205	266	18.	10.6	2996.0					
1	0530	67	76.	72.8	3008.6	*	1	1350	167	51.	34.5	3001.5	*	1	2210	267	18.	10.5	2996.0					
1	0535	68	76.	73.3	3008.7	*	1	1355	168	51.	34.1	3001.4	*	1	2215	268	18.	10.4	2995.9					
1	0540	69	76.	73.6	3008.8	*	1	1400	169	51.	33.8	3001.3	*	1	2220	269	17.	10.3	2995.9					
1	0545	70	76.	73.8	3008.8	*	1	1405	170	50.	33.4	3001.3	*	1	2225	270	17.	10.1	2995.9					
1	0550	71	76.	74.0	3008.8	*	1	1410	171	50.	33.1	3001.2	*	1	2230	271	17.	10.0	2995.8					
1	0555	72	76.	74.0	3008.8	*	1	1415	172	50.	32.7	3001.1	*	1	2235	272	17.	9.9	2995.8					
1	0600	73	76.	74.0	3008.8	*	1	1420	173	50.	32.4	3001.0	*	1	2240	273	17.	9.8	2995.8					
1	0605	74	76.	73.9	3008.8	*	1	1425	174	49.	32.1	3001.0	*	1	2245	274	16.	9.7	2995.7					
1	0610	75	76.	73.7	3008.8	*	1	1430	175	49.	31.7	3000.9	*	1	2250	275	16.	9.6	2995.7					
1	0615	76	76.	73.5	3008.7	*	1	1435	176	49.	31.4	3000.8	*	1	2255	276	16.	9.5	2995.7					
1	0620	77	76.	73.2	3008.7	*	1	1440	177	48.	31.1	3000.8	*	1	2300	277	16.	9.3	2995.7					
1	0625	78	76.	72.9	3008.6	*	1	1445	178	48.	30.7	3000.7	*	1	2305	278	16.	9.2	2995.6					
1	0630	79	76.	72.6	3008.6	*	1	1450	179	48.	30.4	3000.6	*	1	2310	279	16.	9.1	2995.6					
1	0635	80	75.	72.2	3008.5	*	1	1455	180	48.	30.1	3000.6	*	1	2315	280	15.	9.0	2995.6					
1	0640	81	75.	71.8	3008.4	*	1	1500	181	47.	29.7	3000.5	*	1	2320	281	15.	8.9	2995.5					
1	0645	82	75.	71.4	3008.4	*	1	1505	182	47.	29.4	3000.4	*	1	2325	282	15.	8.8	2995.5					
1	0650	83	75.	71.0	3008.3	*	1	1510	183	47.	29.1	3000.4	*	1	2330	283	15.	8.7	2995.5					
1	0655	84	75.	70.5	3008.2	*	1	1515	184	46.	28.8	3000.3	*	1	2335	284	15.	8.6	2995.5					
1	0700	85	74.	70.1	3008.1	*	1	1520	185	46.	28.5	3000.2	*	1	2340	285	15.	8.5	2995.4					
1	0705	86	74.	69.6	3008.0	*	1	1525	186	46.	28.1	3000.2	*	1	2345	286	14.	8.4	2995.4					
1	0710	87	74.	69.1	3008.0	*	1	1530	187	46.	27.8	3000.1	*	1	2350	287	14.	8.3	2995.4					
1	0715	88	74.	68.6	3007.9	*	1	1535	188	45.	27.5	3000.0	*	1	2355	288	14.	8.2	2995.4					
1	0720	89	73.	68.1	3007.8	*	1	1540	189	45.	27.2	3000.0	*	1	2360	289	14.	8.1	2995.3					
1	0725	90	73.	67.7	3007.7	*	1	1545	190	45.	26.9	2999.9	*	2	0000	289	14.	8.0	2995.3					
1	0730	91	72.	67.2	3007.6	*	1	1550	191	44.	26.6	2999.8	*	2	0010	291	14.	7.9	2995.3					
1	0735	92	72.	66.7	3007.5	*	1	1555	192	44.	26.3	2999.7	*	2	0015	292	13.	7.8	2995.3					
1	0740	93	72.	66.2	3007.4	*	1	1600	193	44.	26.0	2999.7	*	2	0020	293	13.	7.7	2995.2					
1	0745	94	72.	65.7	3007.3	*	1	1605	194	43.	25.7	2999.6	*	2	0025	294	13.	7.6	2995.2					
1	0750	95	72.	65.2	3007.2	*	1	1610	195	43.	25.4	2999.5	*	2	0030	295	13.	7.5	2995.2					
1	0755	96	71.	64.7	3007.1	*	1	1615	196	42.	25.1	2999.5	*	2	0035	296	13.	7.4	2995.1					
1	0800	97	71.	64.2	3007.1	*	1	1620	197	42.	24.8	2999.4	*	2	0040	297	13.	7.3	2995.1					
1	0805	98	71.	63.7	3007.0	*	1	1625	198	42.	24.5	2999.3	*	2	0045	298	13.	7.2	2995.1					
1	0810	99	71.	63.3	3006.9	*	1	1630	199	41.	24.2	2999.3	*	2	0050	299	12.	7.1	2995.1					
1	0815	100	70.	62.8	3006.8	*	1	1635	200	41.	23.9													

MITIGATION REQUIRED FOR 76 cfs ATTENUATED OUTFLOW FROM DB2

										Proposed OUT									
1	0305	38	8.	4.6	2994.4	*	1	1125	138	60.	44.7	3003.6	*	1	1945	238	27.	14.5	2996.9
1	0310	39	9.	5.1	2994.5	*	1	1130	139	59.	44.3	3003.5	*	1	1950	239	26.	14.3	2996.9
1	0315	40	10.	5.8	2994.7	*	1	1135	140	59.	43.9	3003.4	*	1	1955	240	26.	14.2	2996.8
1	0320	41	12.	6.8	2995.0	*	1	1140	141	59.	43.5	3003.3	*	1	2000	241	26.	14.0	2996.8
1	0325	42	14.	8.4	2995.4	*	1	1145	142	59.	43.0	3003.2	*	1	2005	242	25.	13.8	2996.8
1	0330	43	18.	10.9	2996.1	*	1	1150	143	58.	42.6	3003.2	*	1	2010	243	25.	13.6	2996.7
1	0335	44	26.	14.1	2996.8	*	1	1155	144	58.	42.2	3003.1	*	1	2015	244	24.	13.5	2996.7
1	0340	45	33.	18.0	2997.8	*	1	1200	145	58.	41.8	3003.0	*	1	2020	245	24.	13.3	2996.6
1	0345	46	39.	22.3	2998.8	*	1	1205	146	57.	41.5	3002.9	*	1	2025	246	24.	13.1	2996.6
1	0350	47	45.	26.8	2999.9	*	1	1210	147	57.	41.1	3002.8	*	1	2030	247	23.	13.0	2996.6
1	0355	48	49.	31.3	3000.8	*	1	1215	148	57.	40.7	3002.7	*	1	2035	248	23.	12.8	2996.5
1	0400	49	52.	35.6	3001.7	*	1	1220	149	56.	40.3	3002.7	*	1	2040	249	22.	12.7	2996.5
1	0405	50	56.	39.7	3002.5	*	1	1225	150	56.	39.9	3002.6	*	1	2045	250	22.	12.5	2996.4
1	0410	51	59.	43.5	3003.3	*	1	1230	151	56.	39.5	3002.5	*	1	2050	251	22.	12.3	2996.4
1	0415	52	61.	46.9	3004.0	*	1	1235	152	55.	39.1	3002.4	*	1	2055	252	22.	12.2	2996.4
1	0420	53	63.	49.9	3004.6	*	1	1240	153	55.	38.7	3002.3	*	1	2100	253	21.	12.0	2996.3
1	0425	54	65.	52.5	3005.0	*	1	1245	154	55.	38.4	3002.3	*	1	2105	254	21.	11.9	2996.3
1	0430	55	66.	54.8	3005.4	*	1	1250	155	54.	38.0	3002.2	*	1	2110	255	21.	11.8	2996.3
1	0435	56	67.	56.9	3005.8	*	1	1255	156	54.	37.6	3002.1	*	1	2115	256	20.	11.6	2996.2
1	0440	57	68.	58.8	3006.1	*	1	1300	157	54.	37.2	3002.0	*	1	2120	257	20.	11.5	2996.2
1	0445	58	69.	60.6	3006.4	*	1	1305	158	53.	36.9	3002.0	*	1	2125	258	20.	11.3	2996.1
1	0450	59	70.	62.3	3006.7	*	1	1310	159	53.	36.5	3001.9	*	1	2130	259	19.	11.2	2996.1
1	0455	60	71.	63.9	3007.0	*	1	1315	160	53.	36.1	3001.8	*	1	2135	260	19.	11.1	2996.1
1	0500	61	72.	65.4	3007.3	*	1	1320	161	52.	35.8	3001.7	*	1	2140	261	19.	11.0	2996.1
1	0505	62	73.	66.8	3007.5	*	1	1325	162	52.	35.4	3001.7	*	1	2145	262	18.	10.8	2996.0
1	0510	63	73.	68.1	3007.8	*	1	1330	163	52.	35.1	3001.6	*	1	2150	263	18.	10.7	2996.0
1	0515	64	74.	69.2	3008.0	*	1	1335	164	52.	34.7	3001.5	*	1	2155	264	18.	10.6	2996.0
1	0520	65	74.	70.1	3008.1	*	1	1340	165	51.	34.4	3001.4	*	1	2200	265	18.	10.5	2996.0
1	0525	66	75.	70.9	3008.3	*	1	1345	166	51.	34.0	3001.4	*	1	2205	266	17.	10.3	2995.9
1	0530	67	75.	71.6	3008.4	*	1	1350	167	51.	33.7	3001.3	*	1	2210	267	17.	10.2	2995.9
1	0535	68	75.	72.1	3008.5	*	1	1355	168	50.	33.3	3001.2	*	1	2215	268	17.	10.1	2995.9
1	0540	69	75.	72.4	3008.5	*	1	1400	169	50.	33.0	3001.2	*	1	2220	269	17.	10.0	2995.8
1	0545	70	76.	72.6	3008.6	*	1	1405	170	50.	32.6	3001.1	*	1	2225	270	17.	9.9	2995.8
1	0550	71	76.	72.8	3008.6	*	1	1410	171	49.	32.3	3001.0	*	1	2230	271	17.	9.7	2995.8
1	0555	72	76.	72.8	3008.6	*	1	1415	172	49.	31.9	3000.9	*	1	2235	272	16.	9.6	2995.7
1	0600	73	76.	72.6	3008.6	*	1	1420	173	49.	31.6	3000.9	*	1	2240	273	16.	9.5	2995.7
1	0605	74	76.	72.6	3008.6	*	1	1425	174	49.	31.3	3000.8	*	1	2245	274	16.	9.4	2995.7
1	0610	75	76.	72.5	3008.5	*	1	1430	175	48.	30.9	3000.7	*	1	2250	275	16.	9.3	2995.6
1	0615	76	75.	72.3	3008.5	*	1	1435	176	48.	30.6	3000.7	*	1	2255	276	16.	9.2	2995.6
1	0620	77	75.	72.0	3008.5	*	1	1440	177	48.	30.3	3000.6	*	1	2300	277	15.	9.1	2995.6
1	0625	78	75.	71.7	3008.4	*	1	1445	178	47.	29.9	3000.5	*	1	2305	278	15.	9.0	2995.5
1	0630	79	75.	71.4	3008.4	*	1	1450	179	47.	29.6	3000.5	*	1	2310	279	15.	8.9	2995.5
1	0635	80	75.	71.0	3008.3	*	1	1455	180	47.	29.3	3000.4	*	1	2315	280	15.	8.8	2995.5
1	0640	81	75.	70.6	3008.2	*	1	1500	181	47.	29.0	3000.3	*	1	2320	281	15.	8.7	2995.5
1	0645	82	74.	70.2	3008.1	*	1	1505	182	46.	28.7	3000.3	*	1	2325	282	15.	8.6	2995.5
1	0650	83	74.	69.8	3008.0	*	1	1510	183	46.	28.3	3000.2	*	1	2330	283	15.	8.5	2995.4
1	0655	84	74.	69.3	3008.0	*	1	1515	184	46.	28.0	3000.1	*	1	2335	284	14.	8.4	2995.4
1	0700	85	74.	68.8	3007.9	*	1	1520	185	45.	27.7	3000.1	*	1	2340	285	14.	8.3	2995.4
1	0705	86	73.	68.4	3007.8	*	1	1525	186	45.	27.4	3000.0	*	1	2345	286	14.	8.2	2995.3
1	0710	87	73.	67.9	3007.7	*	1	1530	187	45.	27.1	2999.9	*	1	2350	287	14.	8.1	2995.3
1	0715	88	73.	67.4	3007.7	*	1	1535	188	45.	26.8	2999.9	*	1	2355	288	14.	8.0	2995.3
1	0720	89	73.	67.0	3007.6	*	1	1540	189	44.	26.5	2999.8	*	1	0000	289	13.	7.9	2995.3
1	0725	90	72.	66.5	3007.5	*	1	1545	190	44.	26.2	2999.7	*	2	0005	290	13.	7.8	2995.2
1	0730	91	72.	66.0	3007.4	*	1	1550	191	43.	25.9	2999.6	*	2	0010	291	13.	7.7	2995.2
1	0735	92	72.	65.5	3007.3	*	1	1555	192	43.	25.6	2999.6	*	2	0015	292	13.	7.6	2995.2
1	0740	93	72.	65.0	3007.2	*	1	1600	193	43.	25.3	2999.5	*	2	0020	293	13.	7.5	2995.2
1	0745	94	71.	64.5	3007.1	*	1	1605	194	42.	25.0	2999.4	*	2	0025	294	13.	7.4	2995.1
1	0750	95	71.	64.1	3007.1	*	1	1610	195	42.	24.7	2999.4	*	2	0030	295	13.	7.3	2995.1
1	0755	96	71.	63.6	3007.0	*	1	1615	196	42.	24.4	2999.3	*	2	0035	296	13.	7.3	2995.1
1	0800	97	71.	63.1	3006.9	*	1	1620	197	41.	24.1	2999.2	*	2	0040	297	12.	7.2	2995.1
1	0805	98	70.	62.6	3006.8	*	1	1625	198	41.	23.8	2999.2	*	2	0045	298	12.	7.1	2995.0
1	0810	99	70.	62.1	3006.7	*	1	1630	199	41.	23.6	2999.1	*	2	0050	299	12.	7.0	2995.0
1	0815	100	70.	61.6	3006.6	*	1	1635	200	40.	23.3	2999.0	*	2	0055	300	12.	6.9	2995.0

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)	(CFS)				
+ 76.	5.92	71.	41.	40.	40.	
		.642	1.511	1.511	1.511	
		35.	82.	82.	82.	
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 73.	5.92	63.	31.	30.	30.	
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 3008.60	5.92	3006.89	3000.35	3000.08	3000.08	
CUMULATIVE AREA =		1.02 SQ MI				

HYDROGRAPH AT STATION RDB2 PLAN 1, RATIO = .93

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	2993.0	*	1	0820	101	67.	56.6	3005.7	*	1	1640	201	36.	20.5	2998.4	
1	0005	2	0.	.0	2993.0	*	1	0825	102	67.	56.2	3005.7	*	1	1645	202	36.	20.2	2998.3	
1	0010	3	0.	.0	2993.0	*	1	0830	103	67.	55.7	3005.6	*	1	1650	203	36.	20.0	2998.2	
1	0015	4	0.	.0	2993.0	*	1	0835	104	66.	55.3	3005.5	*	1	1655	204	35.	19.7	2998.2	
1	0020	5	0.	.0	2993.0	*	1	0840	105	66.	54.8	3005.4	*	1	1700	205	35.	19.5	2998.2	
1	0025	6	0.	.0	2993.0	*	1	0845	106	64.	54.3	3005.3	*	1	1705	206	35.	19.3	2998.2	
1	0030	7	0.	.0	2993.0	*	1	0850	107	65.	53.9	3005.3	*	1	1710	207	34.	19.0	2998.0	
1	0035	8	0.	.1	2993.0	*	1	0855	108	65.	53.4	3005.2	*	1	1715	208	34.	18.8	2997.9	
1	0040	9	0.	.1	2993.0	*	1	0900	109	65.	53.0	3005.1	*	1	1720	209	34.	18.5	2997.9	
1	0045	10	0.	.1	2993.0	*	1	0905	110	65.	52.5	3005.0	*	1	1725	210	33.	18.3	2997.8	
1	0050	11	0.	.1	2993.0	*	1	0910	111	64.	52.0	3004.9	*	1	1730	211	33.	18.1	2997.8	
1	0055	12	0.	.1	2993.0	*	1	0915	112	64.	51.7	3004.9	*	1	1735	212	33.	17.9	2997.7	
1	0100	13	0.	.1	2993.0	*	1	0920	113	64.	51.2	3004.8	*	1	1740	213	32.	17.6	2997.7	
1	0105	14	0.	.1	2993.0	*	1	0925	114	64.	50.8	3004.7	*	1	1745	214	32.	17.4	2997.6	
1	0110	15	0.	.1	2993.0	*	1	0930	115	63.	50.3	3004.6	*	1	1750	215	31.	17.2	2997.6	
1	0115	16	0.	.1	2993.0	*	1	0935	116	63.	49.9	3004.6	*	1	1755	216	31.	17.0	2997.5	
1	0120	17	0.	.2	2993.0	*	1	0940	117	63.	49.4	3004.5	*	1	1800	217	31.	16.8	2997.5	
1	0125	18	0.	.2	2993.1	*	1	0945	118	63.	49.0	3004.4	*	1	1805	218	30.	16.6	2997.4	
1	0130	19	0.	.2	2993.1	*	1	0950	119	62.	48.6	3004.3	*	1	1810	219	30.	16.4	2997.4	
1	0135	20	1.	.3	2993.1	*	1	0955	120	62.	48.2	3004.3	*	1	1815	220	30.	16.1	2997.3	
1	0140	21	1.	.4	2993.1	*	1	1000	121	62.	47.8	3004.2	*	1	1820	221	29.	15.9	2997.3	
1	0145	22	1.	.5	2993.2	*	1	1005	122	61.	47.3	3004.1	*	1	1825	222	29.	15.7	2997.3	
1	0150	23	1.	.6	2993.2	*	1	1010	123	61.	46.9	3004.0	*	1	1830	223	29.	15.5	2997.2	
1	0155	24	1.	.8	2993.2	*	1	1015	124	61.	46.5	3003.9	*	1	1835	224	28.	15.3	2997.1	
1	0200	25	2.	.9	2993.3	*	1	1020	125	61.	46.1	3003.9	*	1	1840	225	28.	15.2	2997.1	
1	0205	26	2.	1.1	2993.3	*	1	1025	126	60.	45.7	3003.8	*	1	1845	226	28.	15.0	2997.0	
1	0210	27	2.	1.2	2993.4	*	1	1030	127	60.	45.2	3003.7	*	1	1850	227	27.	14.8	2997.0	
1	0215	28	2.	1.3	2993.4	*	1	1035	128	59.	44.8	3003.7	*	1	1855	228	27.	14.6	2996.9	
1	0220	29	2.	1.5	2993.5	*	1	1040	129	59.	44.4	3003.5	*	1	1900	229	27.	14.4	2996.9	
1	0225	30	3.	1.8	2993.5	*	1	1045	130	59.	44.0	3003.4	*	1	1905	230	26.	14.2	2996.9	
1	0230	31	4.	2.0	2993.6	*	1	1050	131	59.	43.6	3003.3	*	1	1910	231	26.	14.0	2996.8	
1	0235	32	4.	2.3	2993.7	*	1	1055	132	59.	43.2	3003.3	*	1	1915	232	25.	13.9	2996.8	
1	0240	33	5.	2.5	2993.8	*	1	1100	133	58.	42.8	3003.2	*	1	1920	233	25.	13.7	2996.8	
1	0245	34	5.	2.8	2993.9	*	1	1105	134	58.	42.4	3003.1	*	1	1925	234	25.	13.5	2996.7	
1	0250	35	6.	3.1	2994.0	*	1	1110	135	58.	42.0	3003.0	*	1	1930	235	24.	13.4	2996.7	
1	0255	36	6.	3.4	2994.0	*	1	1115	136	57.	41.6	3002.9	*	1	1935	236	24.	13.2	2996.6	
1	0300	37	7.	3.8	2994.1	*	1	1120	137	57.	41.2	3002.9	*	1	1940	237	23.	13.0	2996.6	
1	0305	38	7.	4.1	2994.2	*	1	1125	138	57.	40.8	3002.8	*	1	1945	238	23.	12.9	2996.5	
1	0310	39	8.	4.5	2994.4	*	1	1130	139	56.	40.4	3002.7	*	1	1950	239	23.	12.7	2996.5	
1	0315	40	9.	5.2	2994.5	*	1	1135	140	56.	40.0	3002.6	*	1	1955	240	22.	12.6	2996.5	
1	0320	41	11.	6.1	2994.8	*	1	1140	141	56.	39.7	3002.5	*	1	2000	241	22.	12.4	2996.4	

Proposed.out																								
1	0325	42	13.	7.6	2995.2	*	1	1145	142	55.	39.3	3002.5	*	1	2005	242	22.	12.3	2996.4					
1	0330	43	17.	9.9	2995.8	*	1	1150	143	55.	38.9	3002.4	*	1	2010	243	21.	12.1	2996.4					
1	0335	44	23.	12.9	2996.6	*	1	1155	144	55.	38.5	3002.3	*	1	2015	244	21.	12.0	2996.3					
1	0340	45	30.	16.6	2997.4	*	1	1200	145	54.	38.1	3002.2	*	1	2020	245	21.	11.8	2996.3					
1	0345	46	37.	20.6	2998.4	*	1	1205	146	54.	37.8	3002.1	*	1	2025	246	20.	11.7	2996.3					
1	0350	47	42.	24.8	2999.4	*	1	1210	147	54.	37.4	3002.1	*	1	2030	247	20.	11.5	2996.2					
1	0355	48	47.	29.0	3000.3	*	1	1215	148	54.	37.0	3002.0	*	1	2035	248	20.	11.4	2996.2					
1	0400	49	50.	33.1	3001.2	*	1	1220	149	53.	36.7	3001.9	*	1	2040	249	19.	11.3	2996.2					
1	0405	50	53.	36.9	3002.0	*	1	1225	150	53.	36.3	3001.8	*	1	2045	250	19.	11.1	2996.1					
1	0410	51	56.	40.5	3002.7	*	1	1230	151	53.	35.9	3001.8	*	1	2050	251	19.	11.0	2996.1					
1	0415	52	59.	43.7	3003.4	*	1	1235	152	52.	35.6	3001.7	*	1	2055	252	18.	10.9	2996.1					
1	0420	53	61.	46.5	3003.9	*	1	1240	153	52.	35.2	3001.6	*	1	2100	253	18.	10.7	2996.0					
1	0425	54	62.	48.9	3004.4	*	1	1245	154	52.	34.8	3001.5	*	1	2105	254	18.	10.6	2996.0					
1	0430	55	64.	51.1	3004.8	*	1	1250	155	51.	34.5	3001.5	*	1	2110	255	18.	10.5	2996.0					
1	0435	56	65.	53.0	3005.1	*	1	1255	156	51.	34.1	3001.4	*	1	2115	256	18.	10.4	2995.9					
1	0440	57	66.	54.8	3005.4	*	1	1300	157	51.	33.8	3001.3	*	1	2120	257	17.	10.3	2995.9					
1	0445	58	67.	56.5	3005.7	*	1	1305	158	50.	33.4	3001.2	*	1	2125	258	17.	10.1	2995.9					
1	0450	59	68.	58.1	3006.0	*	1	1310	159	50.	33.1	3001.2	*	1	2130	259	17.	10.0	2995.8					
1	0455	60	69.	59.6	3006.3	*	1	1315	160	50.	32.8	3001.1	*	1	2135	260	17.	9.9	2995.8					
1	0500	61	70.	61.0	3006.5	*	1	1320	161	50.	32.4	3001.0	*	1	2140	261	17.	9.8	2995.8					
1	0505	62	70.	62.4	3006.8	*	1	1325	162	49.	32.1	3001.0	*	1	2145	262	16.	9.7	2995.7					
1	0510	63	71.	63.5	3007.0	*	1	1330	163	49.	31.7	3000.9	*	1	2150	263	16.	9.6	2995.7					
1	0515	64	71.	64.6	3007.2	*	1	1335	164	49.	31.4	3000.8	*	1	2155	264	16.	9.5	2995.7					
1	0520	65	72.	65.5	3007.3	*	1	1340	165	48.	31.1	3000.8	*	1	2200	265	16.	9.3	2995.7					
1	0525	66	72.	66.2	3007.4	*	1	1345	166	48.	30.7	3000.7	*	1	2205	266	16.	9.2	2995.6					
1	0530	67	73.	66.8	3007.5	*	1	1350	167	48.	30.4	3000.6	*	1	2210	267	16.	9.1	2995.6					
1	0535	68	73.	67.3	3007.6	*	1	1355	168	48.	30.1	3000.6	*	1	2215	268	15.	9.0	2995.6					
1	0540	69	73.	67.6	3007.7	*	1	1400	169	47.	29.7	3000.5	*	1	2220	269	15.	8.9	2995.5					
1	0545	70	73.	67.8	3007.7	*	1	1405	170	47.	29.4	3000.4	*	1	2225	270	15.	8.8	2995.5					
1	0550	71	73.	67.9	3007.7	*	1	1410	171	47.	29.1	3000.4	*	1	2230	271	15.	8.7	2995.5					
1	0555	72	73.	67.9	3007.7	*	1	1415	172	46.	28.8	3000.3	*	1	2235	272	15.	8.6	2995.5					
1	0600	73	73.	67.9	3007.7	*	1	1420	173	46.	28.5	3000.2	*	1	2240	273	15.	8.5	2995.4					
1	0605	74	73.	67.8	3007.7	*	1	1425	174	46.	28.1	3000.2	*	1	2245	274	14.	8.4	2995.4					
1	0610	75	73.	67.6	3007.7	*	1	1430	175	46.	27.8	3000.1	*	1	2250	275	14.	8.3	2995.4					
1	0615	76	73.	67.4	3007.6	*	1	1435	176	45.	27.5	3000.0	*	1	2255	276	14.	8.2	2995.4					
1	0620	77	73.	67.1	3007.6	*	1	1440	177	45.	27.2	3000.0	*	1	2300	277	14.	8.1	2995.3					
1	0625	78	73.	66.8	3007.5	*	1	1445	178	45.	26.9	2999.9	*	1	2305	278	14.	8.0	2995.3					
1	0630	79	72.	66.5	3007.5	*	1	1450	179	44.	26.6	2999.8	*	1	2310	279	14.	7.9	2995.3					
1	0635	80	72.	66.1	3007.4	*	1	1455	180	44.	26.3	2999.7	*	1	2315	280	13.	7.8	2995.3					
1	0640	81	72.	65.8	3007.4	*	1	1500	181	44.	26.0	2999.6	*	1	2320	281	13.	7.7	2995.2					
1	0645	82	72.	65.4	3007.3	*	1	1505	182	43.	25.7	2999.6	*	1	2325	282	13.	7.6	2995.2					
1	0650	83	72.	64.9	3007.2	*	1	1510	183	43.	25.4	2999.5	*	1	2330	283	13.	7.5	2995.2					
1	0655	84	71.	64.5	3007.1	*	1	1515	184	42.	25.1	2999.5	*	1	2335	284	13.	7.4	2995.1					
1	0700	85	71.	64.1	3007.1	*	1	1520	185	42.	24.8	2999.4	*	1	2340	285	13.	7.3	2995.1					
1	0705	86	71.	63.6	3007.0	*	1	1525	186	42.	24.5	2999.3	*	1	2345	286	13.	7.2	2995.1					
1	0710	87	71.	63.2	3006.9	*	1	1530	187	41.	24.2	2999.3	*	1	2350	287	12.	7.1	2995.1					
1	0715	88	70.	62.7	3006.8	*	1	1535	188	41.	23.9	2999.2	*	1	2355	288	12.	7.0	2995.0					
1	0720	89	70.	62.2	3006.7	*	1	1540	189	41.	23.7	2999.1	*	2	0000	289	12.	6.9	2995.0					
1	0725	90	70.	61.8	3006.7	*	1	1545	190	40.	23.4	2999.1	*	2	0005	290	12.	6.8	2995.0					
1	0730	91	70.	61.3	3006.6	*	1	1550	191	40.	23.1	2999.0	*	2	0010	291	12.	6.7	2995.0					
1	0735	92	69.	60.8	3006.5	*	1	1555	192	40.	22.8	2998.9	*	2	0015	292	12.	6.6	2995.0					
1	0740	93	69.	60.4	3006.4	*	1	1600	193	39.	22.6	2998.9	*	2	0020	293	12.	6.5	2994.9					
1	0745	94	69.	59.9	3006.3	*	1	1605	194	39.	22.3	2998.8	*	2	0025	294	12.	6.4	2994.9					
1	0750	95	69.	59.4	3006.2	*	1	1610	195	39.	22.0	2998.7	*	2	0030	295	11.	6.3	2994.9					
1	0755	96	68.	59.0	3006.2	*	1	1615	196	38.	21.8	2998.7	*	2	0035	296	11.	6.2	2994.8					
1	0800	97	68.	58.5	3006.1	*	1	1620	197	38.	21.5	2998.6	*	2	0040	297	11.	6.1	2994.8					
1	0805	98	68.	58.0	3006.0	*	1	1625	198	37.	21.2	2998.5	*	2	0045	298	11.	6.0	2994.8					
1	0810	99	68.	57.5	3005.9	*	1	1630	199	37.	21.0	2998.5	*	2	0050	299	11.	5.9	2994.8					
1	0815	100	67.	57.1	3005.8	*	1	1635	200	37.	20.7	2998.4	*	2	0055	300	11.	5.8	2994.8					

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
(CFS)	(HR)		24-HR	72-HR
73.	5.92	68. 619 34.	39. 1.422 77.	38. 1.422 77.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
(AC-FT)	(HR)		24-HR	72-HR
68.	5.92	59.	28.	27.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
(FEET)	(HR)		24-HR	72-HR
3007.74	5.92	3006.09	2999.81	2999.56
CUMULATIVE AREA = 1.02 SQ MI				

HYDROGRAPH AT STATION RDB2
PLAN 1, RATIO = .91

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	2993.0	*	1	0820	101	66.	54.4	3005.3	*	1	1640	201	35.	19.3	2998.1			
1	0005	2	0.	0.	2993.0	*	1	0825	102	65.	53.9	3005.3	*	1	1645	202	34.	19.0	2998.0			
1	0010	3	0.	0.	2993.0	*	1	0830	103	65.	53.5	3005.2	*	1	1650	203	34.	18.8	2997.9			
1	0015	4	0.	0.	2993.0	*	1	0835	104	65.	53.1	3005.1	*	1	1655	204	33.	18.6	2997.9			
1	0020	5	0.	0.	2993.0	*	1	0840	105	65.	52.6	3005.0	*	1	1700	205	33.	18.3	2997.8			
1	0025	6	0.	0.	2993.0	*	1	0845	106	64.	52.2	3005.0	*	1	1705	206	33.	18.1	2997.8			
1	0030	7	0.	0.	2993.0	*	1	0850	107	64.	51.7	3004.9	*	1	1710	207	33.	17.9	2997.7			
1	0035	8	0.	0.	2993.0	*	1	0855	108	64.	51.1	3004.8	*	1	1715	208	32.	17.7	2997.7			
1	0040	9	0.	1.	2993.0	*	1	0900	109	64.	50.8	3004.7	*	1	1720	209	32.	17.4	2997.6			
1	0045	10	0.	1.	2993.0	*	1	0905	110	63.	50.4	3004.6	*	1	1725	210	31.	17.2	2997.6			
1	0050	11	0.	1.	2993.0	*	1	0910	111	63.	50.0	3004.6	*	1	1730	211	31.	17.0	2997.5			
1	0055	12	0.	1.	2993.0	*	1	0915	112	63.	49.5	3004.5	*	1	1735	212	31.	16.8	2997.5			
1	0100	13	0.	1.	2993.0	*	1	0920	113	63.	49.1	3004.4	*	1	1740	213	30.	16.6	2997.5			
1	0105	14	0.	1.	2993.0	*	1	0925	114	62.	48.7	3004.3	*	1	1745	214	30.	16.4	2997.4			
1	0110	15	0.	1.	2993.0	*	1	0930	115	62.	48.2	3004.3	*	1	1750	215	30.	16.2	2997.3			
1	0115	16	0.	1.	2993.0	*	1	0935	116	62.	47.8	3004.2	*	1	1755	216	29.	16.0	2997.3			
1	0120	17	0.	1.	2993.0	*	1	0940	117	62.	47.4	3004.1	*	1	1800	217	29.	15.8	2997.2			
1	0125	18	0.	2.	2993.1	*	1	0945	118	61.	47.0	3004.0	*	1	1805	218	29.	15.6	2997.2			
1	0130	19	0.	2.	2993.1	*	1	0950	119	61.	46.5	3004.0	*	1	1810	219	28.	15.4	2997.1			
1	0135	20	0.	3.	2993.1	*	1	0955	120	61.	46.1	3003.9	*	1	1815	220	28.	15.2	2997.1			
1	0140	21	1.	4.	2993.1	*	1	1000	121	60.	45.7	3003.8	*	1	1820	221	28.	15.0	2997.0			
1	0145	22	1.	5.	2993.1	*	1	1005	122	60.	45.3	3003.7	*	1	1825	222	27.	14.8	2997.0			
1	0150	23	1.	6.	2993.2	*	1	1010	123	60.	44.9	3003.6	*	1	1830	223	26.	14.6	2997.0			
1	0155	24	1.	7.	2993.2	*	1	1015	124	60.	44.5	3003.5	*	1	1835	224	27.	14.4	2996.9			
1	0200	25	1.	8.	2993.3	*	1	1020	125	59.	44.1	3003.4	*	1	1840	225	26.	14.2	2996.9			
1	0205	26	2.	1.0	2993.3	*	1	1025	126	59.	43.7	3003.4	*	1	1845	226	26.	14.1	2996.8			
1	0210	27	2.	1.1	2993.3	*	1	1030	127	59.	43.2	3003.3	*	1	1850	227	25.	13.9	2996.8			
1	0215	28	2.	1.2	2993.4	*	1	1035	128	58.	42.8	3003.2	*	1	1855	228	25.	13.7	2996.8			
1	0220	29	3.	1.3	2993.4	*	1	1040	129	58.	42.4	3003.1	*	1	1900	229	25.	13.5	2996.7			
1	0225	30	3.	1.6	2993.5	*	1	1045	130	58.	42.0	3003.0	*	1	1905	230	24.	13.4	2996.7			
1	0230	31	3.	1.8	2993.6	*	1	1050	131	57.	41.6	3002.9	*	1	1910	231	24.	13.2	2996.6			
1	0235	32	4.	2.1	2993.6	*	1	1055	132	57.	41.3	3002.9	*	1	1915	232	23.	13.0	2996.6			
1	0240	33	4.	2.3	2993.7	*	1	1100	133	57.	41.0	3002.8	*	1	1920	233	23.	12.9	2996.6			
1	0245	34	4.	2.6	2993.8	*	1	1105	134	56.	40.5	3002.7	*	1	1925	234	23.	12.7	2996.5			
1	0250	35	5.	2.9	2993.9	*	1	1110	135	56.	40.1	3002.6	*	1	1930	235	22.	12.6	2996.5			
1	0255	36	6.	3.2	2994.0	*	1	1115	136	56.	39.7	3002.5	*	1	1935	236	22.	12.4	2996.4			
1	0300	37	6.	3.5	2994.1	*	1	1120	137	55.	39.3	3002.4	*	1	1940	237	22.	12.2	2996.4			
1	0305	38	7.	3.8	2994.2	*	1	1125	138	55.	38.9	3002.3	*	1	1945	238	21.	12.1	2996.4			
1	0310	39	7.	4.3	2994.3	*	1	1130	139	55.	38.6	3002.3	*	1	1950	239	21.	12.0	2996.3			
1	0315	40	9.	4.9	2994.4	*	1	1135	140	54.	38.2	3002.2	*	1	1955	240	21.	11.8	2996.3			
1	0320	41	10.	5.8	2994.7	*	1	1140	141	54.	37.8	3002.2	*	1	2000	241	20.	11.7	2996.3			
1	0325	42	13.	7.2	2995.1	*	1	1145	142	54.	37.4	3002.1	*	1	2005	242	20.	11.6	2996.3			
1	0330	43	16.	9.4	2995.7	*	1	1150	143	53.	37.0	3002.0	*	1	2010	243	20.	11.4	2996.2			
1	0335	44	18.	12.3	2996.4	*	1	1155	144	53.	36.7	3001.9	*	1	2015	244	19.	11.3	2996.2			
1	0340	45	29.	15.9	2997.3	*	1	1200	145	53.	36.3	3001.9	*	1	2020	245	19.	11.1	2996.2			

Proposed.O.U.T																			
1	0345	46	35.	19.8	2998.2	*	1	1205	146	53.	36.0	3001.8	*	1	2025	246	19.	11.0	2996.1
1	0350	47	41.	23.9	2999.2	*	1	1210	147	52.	35.6	3001.7	*	1	2030	247	19.	10.9	2996.0
1	0355	48	46.	27.9	3000.1	*	1	1215	148	52.	35.2	3001.6	*	1	2035	248	18.	10.8	2996.0
1	0400	49	49.	31.8	3000.9	*	1	1220	149	52.	34.9	3001.6	*	1	2040	249	18.	10.6	2996.0
1	0405	50	52.	35.5	3001.7	*	1	1225	150	51.	34.7	3001.5	*	1	2045	250	18.	10.5	2996.0
1	0410	51	55.	39.0	3002.4	*	1	1230	151	51.	34.2	3001.4	*	1	2050	251	18.	10.4	2995.9
1	0415	52	58.	42.1	3003.0	*	1	1235	152	51.	33.8	3001.3	*	1	2055	252	17.	10.3	2995.9
1	0420	53	60.	44.8	3003.6	*	1	1240	153	50.	33.5	3001.3	*	1	2100	253	17.	10.2	2995.9
1	0425	54	61.	47.2	3004.1	*	1	1245	154	50.	33.1	3001.2	*	1	2105	254	17.	10.1	2995.9
1	0430	55	63.	49.3	3004.4	*	1	1250	155	50.	32.7	3001.1	*	1	2110	255	17.	9.9	2995.8
1	0435	56	64.	51.1	3004.8	*	1	1255	156	50.	32.4	3001.1	*	1	2115	256	17.	9.8	2995.8
1	0440	57	65.	52.9	3005.1	*	1	1300	157	49.	32.1	3001.0	*	1	2120	257	16.	9.7	2995.7
1	0445	58	66.	54.5	3005.4	*	1	1305	158	49.	31.8	3000.9	*	1	2125	258	16.	9.6	2995.7
1	0450	59	67.	56.0	3005.6	*	1	1310	159	49.	31.4	3000.8	*	1	2130	259	16.	9.5	2995.7
1	0455	60	68.	57.5	3005.9	*	1	1315	160	48.	31.1	3000.8	*	1	2135	260	16.	9.4	2995.7
1	0500	61	68.	58.9	3006.1	*	1	1320	161	48.	30.8	3000.7	*	1	2140	261	16.	9.2	2995.6
1	0505	62	69.	60.1	3006.4	*	1	1325	162	48.	30.4	3000.6	*	1	2145	262	16.	9.1	2995.6
1	0510	63	70.	61.3	3006.6	*	1	1330	163	48.	30.1	3000.6	*	1	2150	263	15.	9.0	2995.6
1	0515	64	70.	62.3	3006.7	*	1	1335	164	47.	29.8	3000.5	*	1	2155	264	15.	8.9	2995.5
1	0520	65	71.	63.2	3006.9	*	1	1340	165	47.	29.5	3000.4	*	1	2200	265	15.	8.8	2995.5
1	0525	66	71.	63.9	3007.0	*	1	1345	166	47.	29.1	3000.4	*	1	2205	266	15.	8.7	2995.5
1	0530	67	71.	64.4	3007.1	*	1	1350	167	46.	28.8	3000.3	*	1	2210	267	15.	8.6	2995.5
1	0535	68	72.	64.9	3007.2	*	1	1355	168	46.	28.5	3000.2	*	1	2215	268	15.	8.5	2995.4
1	0540	69	72.	65.2	3007.3	*	1	1400	169	46.	28.2	3000.2	*	1	2220	269	14.	8.4	2995.4
1	0545	70	72.	65.4	3007.3	*	1	1405	170	46.	28.0	3000.2	*	1	2225	270	14.	8.3	2995.3
1	0550	71	72.	65.5	3007.3	*	1	1410	171	45.	27.5	3000.0	*	1	2230	271	14.	8.2	2995.4
1	0555	72	72.	65.5	3007.3	*	1	1415	172	45.	27.2	3000.0	*	1	2235	272	14.	8.1	2995.3
1	0600	73	72.	65.4	3007.3	*	1	1420	173	45.	26.9	2999.9	*	1	2240	273	14.	8.0	2995.3
1	0605	74	72.	65.3	3007.3	*	1	1425	174	44.	26.6	2999.8	*	1	2245	274	14.	7.9	2995.3
1	0610	75	72.	65.2	3007.3	*	1	1430	175	44.	26.3	2999.8	*	1	2250	275	14.	7.8	2995.3
1	0615	76	72.	65.0	3007.2	*	1	1435	176	44.	26.0	2999.7	*	1	2255	276	14.	7.7	2995.3
1	0620	77	71.	64.7	3007.2	*	1	1440	177	43.	25.7	2999.6	*	1	2300	277	13.	7.7	2995.2
1	0625	78	71.	64.4	3007.1	*	1	1445	178	43.	25.4	2999.5	*	1	2305	278	13.	7.6	2995.2
1	0630	79	71.	64.1	3007.1	*	1	1450	179	43.	25.1	2999.5	*	1	2310	279	13.	7.5	2995.2
1	0635	80	71.	63.7	3007.0	*	1	1455	180	42.	24.8	2999.4	*	1	2315	280	13.	7.4	2995.1
1	0640	81	71.	63.4	3006.9	*	1	1500	181	42.	24.5	2999.3	*	1	2320	281	13.	7.4	2995.1
1	0645	82	71.	63.0	3006.9	*	1	1505	182	41.	24.3	2999.3	*	1	2325	282	13.	7.2	2995.1
1	0650	83	71.	62.5	3006.8	*	1	1510	183	41.	24.0	2999.2	*	1	2330	283	12.	7.1	2995.1
1	0655	84	70.	62.1	3006.7	*	1	1515	184	41.	23.7	2999.1	*	1	2335	284	12.	7.0	2995.0
1	0700	85	70.	61.7	3006.6	*	1	1520	185	40.	23.4	2999.1	*	1	2340	285	12.	7.0	2995.0
1	0705	86	70.	61.2	3006.6	*	1	1525	186	40.	23.1	2999.0	*	1	2345	286	12.	6.9	2995.0
1	0710	87	69.	60.8	3006.5	*	1	1530	187	40.	22.9	2998.9	*	1	2350	287	12.	6.8	2995.0
1	0715	88	69.	60.3	3006.4	*	1	1535	188	39.	22.6	2998.9	*	1	2355	288	12.	6.7	2995.0
1	0720	89	69.	59.9	3006.3	*	1	1540	189	39.	22.3	2998.8	*	2	0000	289	12.	6.6	2994.9
1	0725	90	69.	59.4	3006.2	*	1	1545	190	39.	22.0	2998.7	*	2	0005	290	11.	6.6	2994.9
1	0730	91	68.	59.0	3006.2	*	1	1550	191	38.	21.8	2998.7	*	2	0010	291	11.	6.5	2994.9
1	0735	92	68.	58.5	3006.1	*	1	1555	192	38.	21.5	2998.6	*	2	0015	292	11.	6.6	2994.9
1	0740	93	68.	58.0	3006.0	*	1	1600	193	38.	21.3	2998.5	*	2	0020	293	11.	6.3	2994.8
1	0745	94	68.	57.6	3005.9	*	1	1605	194	37.	21.0	2998.5	*	2	0025	294	11.	6.2	2994.8
1	0750	95	67.	57.1	3005.8	*	1	1610	195	37.	20.8	2998.4	*	2	0030	295	11.	6.2	2994.8
1	0755	96	67.	56.7	3005.8	*	1	1615	196	36.	20.5	2998.4	*	2	0035	296	11.	6.1	2994.8
1	0800	97	67.	56.2	3005.7	*	1	1620	197	36.	20.2	2998.3	*	2	0040	297	10.	6.0	2994.8
1	0805	98	67.	55.8	3005.6	*	1	1625	198	36.	20.0	2998.2	*	2	0045	298	10.	5.9	2994.7
1	0810	99	66.	55.3	3005.5	*	1	1630	199	35.	19.8	2998.2	*	2	0050	299	10.	5.9	2994.7
1	0815	100	66.	54.8	3005.4	*	1	1635	200	35.	19.5	2998.1	*	2	0055	300	10.	5.8	2994.7

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	72.	5.92			
	(CFS)	67.	38.	36.	36.
	(INCHES)	608	1.377	1.377	1.377
	(AC-FT)	33.	75.	75.	75.
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				
+	65.	5.92			
		56.	27.	26.	26.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
+	3007.31	5.92			
		3005.70	2999.55	2999.30	2999.30
CUMULATIVE AREA =		1.02 SQ MI			

HYDROGRAPH AT STATION RDB2 PLAN 1, RATIO = .90																						

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	2993.0	*	1	0820	101	65.	53.3	3005.2	*	1	1640	201	34.	18.7	2997.9			
1	0005	2	0.	0.	2993.0	*	1	0825	102	65.	52.8	3005.1	*	1	1645	202	33.	18.5	2997.9			
1	0010	3	0.	0.	2993.0	*	1	0830	103	65.	52.4	3005.0	*	1	1650	203	33.	18.2	2997.8			
1	0015	4	0.	0.	2993.0	*	1	0835	104	64.	51.9	3004.9	*	1	1655	204	33.	18.0	2997.8			
1	0020	5	0.	0.	2993.0	*	1	0840	105	64.	51.5	3004.8	*	1	1700	205	32.	17.8	2997.7			
1	0025	6	0.	0.	2993.0	*	1	0845	106	64.	51.1	3004.8	*	1	1705	206	32.	17.6	2997.7			
1	0030	7	0.	0.	2993.0	*	1	0850	107	63.	50.6	3004.7	*	1	1710	207	32.	17.3	2997.6			
1	0035	8	0.	0.	2993.0	*	1	0855	108	63.	50.2	3004.6	*	1	1715	208	31.	17.1	2997.6			
1	0040	9	0.	.1	2993.0	*	1	0900	109	63.	49.8	3004.5	*	1	1720	209	31.	16.9	2997.5			
1	0045	10	0.	.1	2993.0	*	1	0905	110	63.	49.3	3004.5	*	1	1725	210	31.	16.7	2997.5			
1	0050	11	0.	.1	2993.0	*	1	0910	111	62.	48.9	3004.4	*	1	1730	211	30.	16.5	2997.4			
1	0055	12	0.	.1	2993.0	*	1	0915	112	62.	48.5	3004.3	*	1	1735	212	30.	16.3	2997.4			
1	0100	13	0.	.1	2993.0	*	1	0920	113	62.	48.0	3004.2	*	1	1740	213	30.	16.1	2997.3			
1	0105	14	0.	.1	2993.0	*	1	0925	114	62.	47.6	3004.1	*	1	1745	214	29.	15.9	2997.3			
1	0110	15	0.	.1	2993.0	*	1	0930	115	61.	47.2	3004.1	*	1	1750	215	29.	15.7	2997.2			
1	0115	16	0.	.1	2993.0	*	1	0935	116	61.	46.8	3004.0	*	1	1755	216	29.	15.5	2997.2			
1	0120	17	0.	.1	2993.0	*	1	0940	117	61.	46.3	3003.9	*	1	1800	217	28.	15.3	2997.1			
1	0125	18	0.	.1	2993.0	*	1	0945	118	61.	45.9	3003.8	*	1	1805	218	28.	15.1	2997.1			
1	0130	19	0.	.2	2993.1	*	1	0950	119	60.	45.5	3003.7	*	1	1810	219	28.	14.9	2997.0			
1	0135	20	0.	.2	2993.1	*	1	0955	120	60.	45.1	3003.7	*	1	1815	220	27.	14.7	2997.0			
1	0140	21	1.	.3	2993.1	*	1	1000	121	60.	44.7	3003.6	*	1	1820	221	27.	14.5	2996.9			
1	0145	22	1.	.4	2993.1	*	1	1005	122	59.	44.3	3003.5	*	1	1825	222	26.	14.3	2996.9			
1	0150	23	1.	.5	2993.2	*	1	1010	123	59.	43.9	3003.4	*	1	1830	223	26.	14.2	2996.8			
1	0155	24	1.	.7	2993.2	*	1	1015	124	59.	43.5	3003.3	*	1	1835	224	26.	14.0	2996.8			
1	0200	25	1.	.8	2993.2	*	1	1020	125	59.	43.3	3003.2	*	1	1840	225	25.	13.9	2996.8			
1	0205	26	2.	1.0	2993.3	*	1	1025	126	58.	42.7	3003.2	*	1	1845	226	25.	13.6	2996.7			
1	0210	27	2.	1.0	2993.3	*	1	1030	127	58.	42.3	3003.1	*	1	1850	227	24.	13.5	2996.7			
1	0215	28	2.	1.2	2993.4	*	1	1035	128	58.	41.9	3003.0	*	1	1855	228	24.	13.3	2996.6			
1	0220	29	2.	1.3	2993.4	*	1	1040	129	57.	41.5	3002.9	*	1	1900	229	24.	13.1	2996.6			
1	0225	30	3.	1.5	2993.5	*	1	1045	130	57.	41.2	3002.8	*	1	1905	230	23.	12.9	2996.6			
1	0230	31	3.	1.8	2993.5	*	1	1050	131	57.	40.7	3002.7	*	1	1910	231	23.	12.8	2996.5			
1	0235	32	4.	2.0	2993.6	*	1	1055	132	56.	40.3	3002.7	*	1	1915	232	23.	12.7	2996.5			
1	0240	33	4.	2.2	2993.7	*	1	1100	133	56.	39.9	3002.6	*	1	1920	233	22.	12.5	2996.4			
1	0245	34	5.	2.5	2993.8	*	1	1105	134	56.	39.5	3002.5	*	1	1925	234	22.	12.3	2996.4			
1	0250	35	5.	2.8	2993.9	*	1	1110	135	55.	39.1	3002.4	*	1	1930	235	22.	12.2	2996.4			
1	0255	36	6.	3.1	2993.9	*	1	1115	136	55.	38.8	3002.3	*	1	1935	236	21.	12.0	2996.3			
1	0300	37	6.	3.3	2994.0	*	1	1120	137	55.	38.4	3002.3	*	1	1940	237	21.	11.9	2996.3			
1	0305	38	7.	3.7	2994.1	*	1	1125	138	54.	38.0	3002.2	*	1	1945	238	21.	11.8	2996.3			
1	0310	39	7.	4.1	2994.2	*	1	1130	139	54.	37.6	3002.1	*	1	1950	239	20.	11.6	2996.2			
1	0315	40	8.	4.7	2994.4	*	1	1135	140	54.	37.3	3002.0	*	1	1955	240	20.	11.5	2996.2			
1	0320	41	10.	5.6	2994.7	*	1	1140	141	54.	36.9	3002.0	*	1	2000	241	20.	11.3	2996.2			
1	0325	42	12.	7.0	2995.0	*	1	1145	142	53.	36.5	3001.9	*	1	2005	242	19.	11.2	2996.1			
1	0330	43	16.	9.2	2995.6	*	1	1150	143	53.	36.2	3001.8	*	1	2010	243	19.	11.1	2996.1			
1	0335	44	21.	12.1	2996.3	*	1	1155	144	52.	35.8	3001.7	*	1	2015	244	19.	11.0	2996.1			
1	0340	45	29.	15.5	2997.2	*	1	1200	145	52.	35.4	3001.7	*	1	2020	245	18.	10.8	2996.0			
1	0345	36	35.	19.4	2998.1	*	1	1205	146	52.	35.2	3001.6	*	1	2025	246	18.	10.7	2996.0			
1	0350	47	40.	23.4	2999.0	*	1	1210	147	52.	34.7	3001.5	*	1	2030	247	18.	10.6	2996.0			
1	0355	48	45.	27.3	3000.0	*	1	1215	148	51.	34.4	3001.4	*	1	2035	248	18.	10.5	2996.0			
1	0400	49	48.	31.2	3000.8	*	1	1220	149	51.	34.0	3001.4	*	1	2040	249	17.	10.3	2995.0			

Proposed_OUT																			
1	0405	50	52.	34.9	3001.5	*	1	1225	150	51.	33.7	3001.3	*	1	2045	250	17.	10.2	2995.9
1	0410	51	55.	38.2	3002.2	*	1	1230	151	50.	33.3	3001.2	*	1	2050	251	17.	10.1	2995.9
1	0415	52	57.	41.3	3002.9	*	1	1235	152	50.	33.0	3001.2	*	1	2055	252	17.	10.0	2995.8
1	0420	53	59.	44.0	3003.4	*	1	1240	153	50.	32.6	3001.1	*	1	2100	253	17.	9.9	2995.8
1	0425	54	61.	46.3	3003.9	*	1	1245	154	49.	32.3	3001.0	*	1	2105	254	17.	9.7	2995.8
1	0430	55	62.	48.3	3004.3	*	1	1250	155	49.	31.9	3000.9	*	1	2110	255	16.	9.6	2995.7
1	0435	56	63.	50.2	3004.6	*	1	1255	156	49.	31.6	3000.9	*	1	2115	256	16.	9.5	2995.7
1	0440	57	64.	51.9	3004.9	*	1	1300	157	49.	31.3	3000.8	*	1	2120	257	16.	9.4	2995.7
1	0445	58	65.	53.5	3005.2	*	1	1305	158	48.	30.9	3000.7	*	1	2125	258	16.	9.3	2995.6
1	0450	59	66.	55.0	3005.5	*	1	1310	159	48.	30.6	3000.7	*	1	2130	259	16.	9.2	2995.6
1	0455	60	67.	56.4	3005.7	*	1	1315	160	48.	30.3	3000.6	*	1	2135	260	15.	9.1	2995.6
1	0500	61	68.	57.8	3005.9	*	1	1320	161	47.	30.0	3000.5	*	1	2140	261	15.	9.0	2995.6
1	0505	62	68.	59.0	3006.2	*	1	1325	162	47.	29.6	3000.5	*	1	2145	262	15.	8.9	2995.5
1	0510	63	69.	60.2	3006.4	*	1	1330	163	47.	29.3	3000.4	*	1	2150	263	15.	8.8	2995.5
1	0515	64	70.	61.2	3006.5	*	1	1335	164	47.	29.0	3000.3	*	1	2155	264	15.	8.7	2995.5
1	0520	65	70.	62.0	3006.7	*	1	1340	165	46.	28.7	3000.3	*	1	2200	265	15.	8.6	2995.5
1	0525	66	70.	62.7	3006.8	*	1	1345	166	46.	28.3	3000.2	*	1	2205	266	15.	8.5	2995.4
1	0530	67	71.	63.3	3006.9	*	1	1350	167	46.	28.0	3000.1	*	1	2210	267	14.	8.4	2995.4
1	0535	68	71.	63.7	3007.0	*	1	1355	168	46.	27.7	3000.1	*	1	2215	268	14.	8.3	2995.4
1	0540	69	71.	64.0	3007.0	*	1	1400	169	45.	27.4	3000.0	*	1	2220	269	14.	8.2	2995.3
1	0545	70	71.	64.2	3007.1	*	1	1405	170	45.	27.1	2999.9	*	1	2225	270	14.	8.1	2995.3
1	0550	71	71.	64.3	3007.1	*	1	1410	171	45.	26.8	2999.9	*	1	2230	271	14.	8.0	2995.3
1	0555	72	71.	64.3	3007.1	*	1	1415	172	44.	26.5	2999.8	*	1	2235	272	14.	7.9	2995.3
1	0600	73	71.	64.2	3007.1	*	1	1420	173	44.	26.2	2999.7	*	1	2240	273	13.	7.8	2995.2
1	0605	74	71.	64.1	3007.1	*	1	1425	174	43.	25.9	2999.6	*	1	2245	274	13.	7.7	2995.2
1	0610	75	71.	64.0	3007.0	*	1	1430	175	43.	25.6	2999.6	*	1	2250	275	13.	7.6	2995.2
1	0615	76	71.	63.8	3007.0	*	1	1435	176	43.	25.3	2999.5	*	1	2255	276	13.	7.5	2995.2
1	0620	77	71.	63.5	3007.0	*	1	1440	177	42.	25.0	2999.4	*	1	2300	277	13.	7.4	2995.1
1	0625	78	70.	63.2	3006.9	*	1	1445	178	42.	24.7	2999.4	*	1	2305	278	13.	7.3	2995.1
1	0630	79	70.	62.9	3006.9	*	1	1450	179	42.	24.4	2999.3	*	1	2310	279	13.	7.3	2995.1
1	0635	80	70.	62.5	3006.8	*	1	1455	180	41.	24.1	2999.2	*	1	2315	280	12.	7.2	2995.1
1	0640	81	70.	62.2	3006.7	*	1	1500	181	41.	23.8	2999.2	*	1	2320	281	12.	7.1	2995.1
1	0645	82	70.	61.8	3006.7	*	1	1505	182	41.	23.6	2999.1	*	1	2325	282	12.	7.0	2995.0
1	0650	83	70.	61.4	3006.6	*	1	1510	183	40.	23.3	2999.0	*	1	2330	283	12.	6.9	2995.0
1	0655	84	69.	60.9	3006.5	*	1	1515	184	40.	23.0	2999.0	*	1	2335	284	12.	6.8	2995.0
1	0700	85	69.	60.5	3006.4	*	1	1520	185	40.	22.7	2998.9	*	1	2340	285	12.	6.8	2995.0
1	0705	86	69.	60.1	3006.4	*	1	1525	186	39.	22.5	2998.8	*	1	2345	286	12.	6.7	2994.9
1	0710	87	69.	59.6	3006.3	*	1	1530	187	39.	22.2	2998.8	*	1	2350	287	12.	6.6	2994.9
1	0715	88	69.	59.2	3006.2	*	1	1535	188	38.	21.9	2998.7	*	1	2355	288	11.	6.5	2994.9
1	0720	89	68.	58.7	3006.1	*	1	1540	189	38.	21.7	2998.6	*	2	0000	289	11.	6.4	2994.9
1	0725	90	68.	58.3	3006.0	*	1	1545	190	38.	21.4	2998.6	*	2	0005	290	11.	6.4	2994.9
1	0730	91	68.	57.8	3006.0	*	1	1550	191	37.	21.1	2998.5	*	2	0010	291	11.	6.3	2994.8
1	0735	92	68.	57.4	3005.9	*	1	1555	192	37.	20.9	2998.5	*	2	0015	292	11.	6.2	2994.8
1	0740	93	67.	56.9	3005.8	*	1	1600	193	37.	20.6	2998.4	*	2	0020	293	11.	6.1	2994.8
1	0745	94	67.	56.4	3005.7	*	1	1605	194	36.	20.4	2998.3	*	2	0025	294	11.	6.1	2994.8
1	0750	95	67.	56.0	3005.6	*	1	1610	195	36.	20.1	2998.3	*	2	0030	295	10.	6.0	2994.8
1	0755	96	66.	55.5	3005.6	*	1	1615	196	36.	19.9	2998.2	*	2	0035	296	10.	5.9	2994.8
1	0800	97	66.	55.1	3005.5	*	1	1620	197	35.	19.6	2998.2	*	2	0040	297	10.	5.8	2994.7
1	0805	98	66.	54.6	3005.4	*	1	1625	198	35.	19.4	2998.1	*	2	0045	298	10.	5.8	2994.7
1	0810	99	66.	54.2	3005.3	*	1	1630	199	35.	19.2	2998.0	*	2	0050	299	10.	5.7	2994.7
1	0815	100	65.	53.7	3005.2	*	1	1635	200	34.	18.9	2998.0	*	2	0055	300	10.	5.6	2994.7

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW				
+ (CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR	
+ 71.	5.92	(CFS)	66.	37.	36.	36.
		(INCHES)	1.602	1.355	1.355	1.355
		(AC-FT)	33.	74.	74.	74.
PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE				
+ (AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR	
+ 64.	5.92	55.	27.	26.	26.	
PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE				
+ (FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR	
+ 3007.10	5.92	3005.50	2999.42	2999.18	2999.18	
CUMULATIVE AREA =		1.02 SQ MI				

HYDROGRAPH AT STATION RDB2 PLAN 1, RATTO = .70

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	2993.0	*	1	0820	101	50.	32.6	3001.1	*	1	1640	201	17.	9.8	2995.8			
1	0005	2	0.	0.	2993.0	*	1	0825	102	49.	32.2	3001.0	*	1	1645	202	17.	9.7	2995.8			
1	0010	3	0.	0.	2993.0	*	1	0830	103	49.	31.9	3000.9	*	1	1650	203	16.	9.6	2995.7			
1	0015	4	0.	0.	2993.0	*	1	0835	104	49.	31.6	3000.9	*	1	1655	204	16.	9.5	2995.7			
1	0020	5	0.	0.	2993.0	*	1	0840	105	49.	31.2	3000.8	*	1	1700	205	16.	9.4	2995.7			
1	0025	6	0.	0.	2993.0	*	1	0845	106	48.	30.9	3000.7	*	1	1705	206	16.	9.3	2995.6			
1	0030	7	0.	0.	2993.0	*	1	0850	107	48.	30.6	3000.7	*	1	1710	207	16.	9.2	2995.6			
1	0035	8	0.	0.	2993.0	*	1	0855	108	48.	30.2	3000.6	*	1	1715	208	15.	9.1	2995.6			
1	0040	9	0.	0.	2993.0	*	1	0900	109	47.	29.9	3000.5	*	1	1720	209	15.	9.0	2995.6			
1	0045	10	0.	0.	2993.0	*	1	0905	110	47.	29.6	3000.5	*	1	1725	210	15.	8.9	2995.5			
1	0050	11	0.	0.	2993.0	*	1	0910	111	47.	29.3	3000.4	*	1	1730	211	15.	8.8	2995.5			
1	0055	12	0.	0.	2993.0	*	1	0915	112	47.	28.9	3000.3	*	1	1735	212	15.	8.7	2995.5			
1	0100	13	0.	0.	2993.0	*	1	0920	113	46.	28.6	3000.3	*	1	1740	213	15.	8.6	2995.4			
1	0105	14	0.	0.	2993.0	*	1	0925	114	46.	28.3	3000.2	*	1	1745	214	14.	8.5	2995.4			
1	0110	15	0.	0.	2993.0	*	1	0930	115	46.	28.0	3000.1	*	1	1750	215	14.	8.4	2995.4			
1	0115	16	0.	0.	2993.0	*	1	0935	116	45.	27.7	3000.1	*	1	1755	216	14.	8.3	2995.4			
1	0120	17	0.	0.	2993.0	*	1	0940	117	45.	27.4	3000.0	*	1	1800	217	14.	8.2	2995.3			
1	0125	18	0.	0.	2993.0	*	1	0945	118	45.	27.1	2999.9	*	1	1805	218	14.	8.1	2995.3			
1	0130	19	0.	0.	2993.0	*	1	0950	119	44.	26.7	2999.9	*	1	1810	219	14.	8.0	2995.3			
1	0135	20	0.	1.	2993.0	*	1	0955	120	44.	26.4	2999.8	*	1	1815	220	14.	7.9	2995.3			
1	0140	21	0.	1.	2993.0	*	1	1000	121	44.	26.1	2999.7	*	1	1820	221	13.	7.8	2995.2			
1	0145	22	0.	1.	2993.0	*	1	1005	122	43.	25.8	2999.6	*	1	1825	222	13.	7.7	2995.2			
1	0150	23	0.	1.	2993.0	*	1	1010	123	43.	25.5	2999.6	*	1	1830	223	13.	7.6	2995.2			
1	0155	24	0.	2.	2993.1	*	1	1015	124	43.	25.2	2999.5	*	1	1835	224	13.	7.5	2995.2			
1	0200	25	0.	2.	2993.1	*	1	1020	125	42.	25.0	2999.4	*	1	1840	225	13.	7.4	2995.1			
1	0205	26	0.	2.	2993.1	*	1	1025	126	42.	24.7	2999.4	*	1	1845	226	13.	7.3	2995.1			
1	0210	27	0.	3.	2993.1	*	1	1030	127	42.	24.4	2999.3	*	1	1850	227	12.	7.2	2995.1			
1	0215	28	1.	3.	2993.1	*	1	1035	128	41.	24.1	2999.2	*	1	1855	228	12.	7.1	2995.0			
1	0220	29	1.	3.	2993.1	*	1	1040	129	41.	23.8	2999.2	*	1	1900	229	12.	7.1	2995.1			
1	0225	30	1.	4.	2993.1	*	1	1045	130	41.	23.5	2999.1	*	1	1905	230	12.	7.0	2995.0			
1	0230	31	1.	6.	2993.2	*	1	1050	131	40.	23.2	2999.0	*	1	1910	231	12.	6.9	2995.0			
1	0235	32	1.	7.	2993.2	*	1	1055	132	40.	23.0	2998.9	*	1	1915	232	12.	6.8	2995.0			
1	0240	33	1.	8.	2993.2	*	1	1100	133	40.	22.7	2998.9	*	1	1920	233	12.	6.7	2995.0			
1	0245	34	2.	9.	2993.3	*	1	1105	134	39.	22.4	2998.8	*	1	1925	234	12.	6.6	2994.9			
1	0250	35	2.	1.	2993.3	*	1	1110	135	39.	22.2	2998.8	*	1	1930	235	11.	6.6	2994.9			
1	0255	36	2.	1.2	2993.4	*	1	1115	136	38.	21.9	2998.7	*	1	1935	236	11.	6.5	2994.9			
1	0300	37	3.	1.4	2993.4	*	1	1120	137	38.	21.6	2998.6	*	1	1940	237	11.	6.4	2994.9			
1	0305	38	3.	1.5	2993.5	*	1	1125	138	38.	21.4	2998.6	*	1	1945	238	11.	6.4	2994.9			
1	0310	39	3.	1.8	2993.5	*	1	1130	139	37.	21.1	2998.5	*	1	1950	239	11.	6.3	2994.8			
1	0315	40	4.	2.1	2993.6	*	1	1135	140	37.	20.9	2998.5	*	1	1955	240	11.	6.1	2994.8			
1	0320	41	5.	2.7	2993.8	*	1	1140	141	37.	20.6	2998.4	*	1	2000	241	11.	6.1	2994.8			
1	0325	42	6.	3.5	2994.1	*	1	1145	142	36.	20.4	2998.3	*	1	2005	242	11.	6.1	2994.8			
1	0330	43	9.	4.9	2994.5	*	1	1150	143	36.	20.1	2998.3	*	1	2010	243	11.	6.0	2994.8			
1	0335	44	12.	6.8	2995.0	*	1	1155	144	36.	19.9	2998.2	*	1	2015	244	10.	5.9	2994.7			
1	0340	45	15.	9.1	2995.6	*	1	1200	145	35.	19.6	2998.2	*	1	2020	245	10.	5.8	2994.7			
1	0345	46	20.	11.6	2996.2	*	1	1205	146	35.	19.4	2998.1	*	1	2025	246	10.	5.8	2994.7			
1	0350	47	26.	14.3	2996.9	*	1	1210	147	35.	19.1	2998.0	*	1	2030	247	10.	5.7	2994.7			
1	0355	48	31.	16.9	2997.5	*	1	1215	148	34.	18.9	2998.0	*	1	2035	248	10.	5.6	2994.7			
1	0400	49	35.	19.5	2998.1	*	1	1220	149	34.	18.7	2997.9	*	1	2040	249	10.	5.6	2994.6			
1	0405	50	38.	21.9	2998.7	*	1	1225	150	33.	18.4	2997.9	*	1	2045	250	10.	5.5	2994.6			
1	0410	51	41.	24.2	2999.2	*	1	1230	151	32.	18.2	2997.8	*	1	2050	251	10.	5.4	2994.6			
1	0415	52	44.	26.2	2999.7	*	1	1235	152	33.	18.0	2997.8	*	1	2055	252	9.	5.4	2994.6			
1	0420	53	46.	28.0	3000.1	*	1	1240	153	32.	17.7	2997.7	*	1	2100	253	9.	5.3	2994.4			

Proposed.out																			
1	0425	54	47.	29.6	3000.5	*	1	1245	154	32.	17.5	2997.7	*	1	2105	254	9.	5.2	2994.5
1	0430	55	48.	30.9	3000.7	*	1	1250	155	32.	17.3	2997.6	*	1	2110	255	9.	5.2	2994.5
1	0435	56	49.	32.2	3001.0	*	1	1255	156	31.	17.1	2997.5	*	1	2115	256	9.	5.1	2994.5
1	0440	57	50.	33.3	3001.2	*	1	1300	157	31.	16.9	2997.5	*	1	2120	257	9.	5.0	2994.5
1	0445	58	51.	34.4	3001.4	*	1	1305	158	30.	16.7	2997.4	*	1	2125	258	9.	5.0	2994.5
1	0450	59	52.	35.4	3001.7	*	1	1310	159	30.	16.5	2997.4	*	1	2130	259	9.	4.9	2994.5
1	0455	60	53.	36.4	3001.9	*	1	1315	160	30.	16.3	2997.3	*	1	2135	260	9.	4.9	2994.4
1	0500	61	54.	37.3	3002.0	*	1	1320	161	29.	16.0	2997.3	*	1	2140	261	9.	4.8	2994.4
1	0505	62	54.	38.1	3002.2	*	1	1325	162	29.	15.8	2997.2	*	1	2145	262	8.	4.7	2994.4
1	0510	63	55.	38.9	3002.4	*	1	1330	163	29.	15.6	2997.2	*	1	2150	263	8.	4.7	2994.4
1	0515	64	56.	39.6	3002.5	*	1	1335	164	28.	15.4	2997.2	*	1	2155	264	8.	4.6	2994.4
1	0520	65	56.	40.1	3002.6	*	1	1340	165	28.	15.3	2997.1	*	1	2200	265	8.	4.6	2994.4
1	0525	66	57.	40.6	3002.7	*	1	1345	166	28.	15.1	2997.1	*	1	2205	266	8.	4.5	2994.3
1	0530	67	57.	40.9	3002.8	*	1	1350	167	28.	14.9	2997.0	*	1	2210	267	8.	4.5	2994.3
1	0535	68	57.	41.2	3002.8	*	1	1355	168	27.	14.7	2997.0	*	1	2215	268	8.	4.5	2994.3
1	0540	69	57.	41.3	3002.9	*	1	1400	169	27.	14.5	2996.9	*	1	2220	269	8.	4.4	2994.3
1	0545	70	57.	41.4	3002.9	*	1	1405	170	26.	14.3	2996.9	*	1	2225	270	8.	4.3	2994.3
1	0550	71	57.	41.5	3002.9	*	1	1410	171	26.	14.1	2996.8	*	1	2230	271	8.	4.2	2994.3
1	0555	72	57.	41.4	3002.9	*	1	1415	172	25.	14.0	2996.8	*	1	2235	272	8.	4.2	2994.3
1	0600	73	57.	41.3	3002.9	*	1	1420	173	25.	13.8	2996.8	*	1	2240	273	7.	4.1	2994.2
1	0605	74	57.	41.2	3002.9	*	1	1425	174	25.	13.6	2996.7	*	1	2245	274	7.	4.1	2994.2
1	0610	75	57.	41.1	3002.8	*	1	1430	175	24.	13.4	2996.7	*	1	2250	275	7.	4.0	2994.2
1	0615	76	57.	40.9	3002.8	*	1	1435	176	24.	13.3	2996.6	*	1	2255	276	7.	4.0	2994.2
1	0620	77	57.	40.6	3002.7	*	1	1440	177	24.	13.1	2996.6	*	1	2300	277	7.	3.9	2994.2
1	0625	78	56.	40.4	3002.7	*	1	1445	178	23.	13.0	2996.6	*	1	2305	278	7.	3.9	2994.2
1	0630	79	56.	40.1	3002.6	*	1	1450	179	23.	12.8	2996.5	*	1	2310	279	7.	3.8	2994.2
1	0635	80	56.	39.8	3002.6	*	1	1455	180	23.	12.6	2996.5	*	1	2315	280	7.	3.8	2994.1
1	0640	81	56.	39.5	3002.5	*	1	1500	181	22.	12.5	2996.4	*	1	2320	281	7.	3.8	2994.1
1	0645	82	55.	39.2	3002.4	*	1	1505	182	22.	12.3	2996.4	*	1	2325	282	7.	3.7	2994.1
1	0650	83	55.	38.9	3002.4	*	1	1510	183	21.	12.2	2996.4	*	1	2330	283	7.	3.7	2994.1
1	0655	84	55.	38.5	3002.3	*	1	1515	184	21.	12.0	2996.3	*	1	2335	284	7.	3.6	2994.1
1	0700	85	55.	38.2	3002.2	*	1	1520	185	20.	11.9	2996.3	*	1	2340	285	6.	3.6	2994.1
1	0705	86	54.	37.8	3002.2	*	1	1525	186	20.	11.7	2996.3	*	1	2345	286	6.	3.5	2994.1
1	0710	87	54.	37.5	3002.1	*	1	1530	187	20.	11.6	2996.2	*	1	2350	287	6.	3.5	2994.1
1	0715	88	54.	37.1	3002.0	*	1	1535	188	20.	11.5	2996.2	*	1	2355	288	6.	3.4	2994.0
1	0720	89	53.	36.8	3001.9	*	1	1540	189	20.	11.3	2996.2	*	2	0000	289	6.	3.4	2994.0
1	0725	90	53.	36.4	3001.9	*	1	1545	190	19.	11.2	2996.1	*	2	0005	290	6.	3.4	2994.0
1	0730	91	53.	36.1	3001.8	*	1	1550	191	19.	11.1	2996.1	*	2	0010	291	6.	3.3	2994.0
1	0735	92	52.	35.7	3001.7	*	1	1555	192	19.	10.9	2996.1	*	2	0015	292	6.	3.3	2994.0
1	0740	93	52.	35.4	3001.7	*	1	1600	193	18.	10.8	2996.0	*	2	0020	293	6.	3.2	2994.0
1	0745	94	52.	35.0	3001.6	*	1	1605	194	18.	10.7	2996.0	*	2	0025	294	6.	3.2	2994.0
1	0750	95	51.	34.7	3001.5	*	1	1610	195	18.	10.6	2996.0	*	2	0030	295	6.	3.1	2994.0
1	0755	96	51.	34.3	3001.4	*	1	1615	196	18.	10.4	2995.9	*	2	0035	296	6.	3.1	2994.0
1	0800	97	51.	34.0	3001.4	*	1	1620	197	17.	10.3	2995.9	*	2	0040	297	6.	3.1	2993.9
1	0805	98	51.	33.6	3001.3	*	1	1625	198	17.	10.2	2995.9	*	2	0045	298	6.	3.0	2993.9
1	0810	99	50.	33.3	3001.2	*	1	1630	199	17.	10.1	2995.9	*	2	0050	299	5.	3.0	2993.9
1	0815	100	50.	32.9	3001.2	*	1	1635	200	17.	10.0	2995.8	*	2	0055	300	5.	3.0	2993.9

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	57.	5.83	(CFS)	51.	25.	24.	24.
			(INCHES)	.467	.913	.913	.913
			(AC-FT)	25.	50.	50.	50.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	41.	5.83	35.	16.	15.	15.	
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	3002.91	5.83	3001.47	2997.02	2996.87	2996.87	
CUMULATIVE AREA =			1.02 SQ MI				

HYDROGRAPH AT STATION RDB2
PLAN 1, RATIO = .57

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*
1	0000	1	0.	0.	0	2993.0	*	1	0820	101	37.	21.1	2998.5	*	1	1640	201	11.	6.3	2994.8			
1	0005	2	0.	0.	0	2993.0	*	1	0825	102	37.	20.9	2998.4	*	1	1645	202	11.	6.2	2994.8			
1	0010	3	0.	0.	0	2993.0	*	1	0830	103	37.	20.6	2998.4	*	1	1650	203	11.	6.1	2994.8			
1	0015	4	0.	0.	0	2993.0	*	1	0835	104	36.	20.4	2998.3	*	1	1655	204	10.	6.1	2994.8			
1	0020	5	0.	0.	0	2993.0	*	1	0840	105	36.	20.1	2998.3	*	1	1700	205	10.	6.0	2994.8			
1	0025	6	0.	0.	0	2993.0	*	1	0845	106	36.	19.9	2998.2	*	1	1705	206	10.	5.9	2994.7			
1	0030	7	0.	0.	0	2993.0	*	1	0850	107	35.	19.6	2998.2	*	1	1710	207	10.	5.8	2994.7			
1	0035	8	0.	0.	0	2993.0	*	1	0855	108	35.	19.4	2998.1	*	1	1715	208	10.	5.8	2994.7			
1	0040	9	0.	0.	0	2993.0	*	1	0900	109	35.	19.1	2998.0	*	1	1720	209	10.	5.7	2994.7			
1	0045	10	0.	0.	0	2993.0	*	1	0905	110	34.	18.9	2997.9	*	1	1725	210	10.	5.6	2994.7			
1	0050	11	0.	0.	0	2993.0	*	1	0910	111	34.	18.7	2997.9	*	1	1730	211	10.	5.6	2994.6			
1	0055	12	0.	0.	0	2993.0	*	1	0915	112	33.	18.4	2997.9	*	1	1735	212	10.	5.5	2994.6			
1	0100	13	0.	0.	0	2993.0	*	1	0920	113	33.	18.2	2997.8	*	1	1740	213	10.	5.4	2994.6			
1	0105	14	0.	0.	0	2993.0	*	1	0925	114	33.	18.0	2997.8	*	1	1745	214	9.	5.4	2994.6			
1	0110	15	0.	0.	0	2993.0	*	1	0930	115	32.	17.8	2997.7	*	1	1750	215	9.	5.3	2994.6			
1	0115	16	0.	0.	0	2993.0	*	1	0935	116	32.	17.5	2997.7	*	1	1755	216	9.	5.2	2994.5			
1	0120	17	0.	0.	0	2993.0	*	1	0940	117	32.	17.3	2997.6	*	1	1800	217	9.	5.2	2994.5			
1	0125	18	0.	0.	0	2993.0	*	1	0945	118	31.	17.1	2997.5	*	1	1805	218	9.	5.1	2994.5			
1	0130	19	0.	0.	0	2993.0	*	1	0950	119	31.	16.9	2997.5	*	1	1810	219	9.	5.0	2994.5			
1	0135	20	0.	0.	0	2993.0	*	1	0955	120	31.	16.7	2997.4	*	1	1815	220	9.	5.0	2994.5			
1	0140	21	0.	0.	0	2993.0	*	1	1000	121	30.	16.5	2997.4	*	1	1820	221	9.	4.9	2994.5			
1	0145	22	0.	0.	0	2993.0	*	1	1005	122	30.	16.3	2997.3	*	1	1825	222	9.	4.9	2994.4			
1	0150	23	0.	0.	0	2993.0	*	1	1010	123	29.	16.1	2997.3	*	1	1830	223	9.	4.8	2994.4			
1	0155	24	0.	0.	0	2993.0	*	1	1015	124	29.	15.8	2997.2	*	1	1835	224	9.	4.7	2994.4			
1	0200	25	0.	0.	0	2993.0	*	1	1020	125	29.	15.6	2997.2	*	1	1840	225	8.	4.7	2994.4			
1	0205	26	0.	0.	0	2993.0	*	1	1025	126	29.	15.5	2997.2	*	1	1845	226	8.	4.6	2994.4			
1	0210	27	0.	0.	0	2993.0	*	1	1030	127	28.	15.3	2997.1	*	1	1850	227	8.	4.6	2994.4			
1	0215	28	0.	0.	0	2993.0	*	1	1035	128	28.	15.1	2997.1	*	1	1855	228	8.	4.5	2994.3			
1	0220	29	0.	0.	0	2993.0	*	1	1040	129	28.	14.9	2997.0	*	1	1860	229	8.	4.5	2994.3			
1	0225	30	0.	0.	0	2993.0	*	1	1045	130	27.	14.7	2997.0	*	1	1905	230	8.	4.4	2994.3			
1	0230	31	0.	0.	0	2993.1	*	1	1050	131	27.	14.5	2996.9	*	1	1910	231	8.	4.4	2994.3			
1	0235	32	0.	0.	0	2993.1	*	1	1055	132	26.	14.3	2996.9	*	1	1915	232	8.	4.3	2994.3			
1	0240	33	0.	0.	0	2993.1	*	1	1100	133	26.	14.1	2996.8	*	1	1920	233	8.	4.2	2994.3			
1	0245	34	1.	0.	0	2993.1	*	1	1105	134	26.	14.0	2996.8	*	1	1925	234	8.	4.1	2994.2			
1	0250	35	1.	0.	0	2993.1	*	1	1110	135	25.	13.8	2996.8	*	1	1930	235	7.	4.1	2994.2			
1	0255	36	1.	0.	0	2993.1	*	1	1115	136	25.	13.6	2996.7	*	1	1935	236	7.	4.1	2994.2			
1	0300	37	1.	0.	0	2993.2	*	1	1120	137	24.	13.4	2996.7	*	1	1940	237	7.	4.0	2994.2			
1	0305	38	1.	0.	0	2993.2	*	1	1125	138	24.	13.3	2996.6	*	1	1945	238	7.	4.0	2994.2			
1	0310	39	1.	0.	0	2993.2	*	1	1130	139	24.	13.1	2996.6	*	1	1950	239	7.	3.9	2994.1			
1	0315	40	2.	0.	0	2993.3	*	1	1135	140	23.	13.0	2996.6	*	1	1955	240	7.	3.9	2994.2			
1	0320	41	2.	0.	0	2993.4	*	1	1140	141	23.	12.8	2996.5	*	1	2000	241	7.	3.8	2994.2			
1	0325	42	3.	0.	0	2993.6	*	1	1145	142	23.	12.6	2996.5	*	1	2005	242	7.	3.8	2994.1			
1	0330	43	5.	0.	0	2993.8	*	1	1150	143	22.	12.5	2996.4	*	1	2010	243	7.	3.8	2994.1			
1	0335	44	7.	0.	0	2994.2	*	1	1155	144	22.	12.3	2996.4	*	1	2015	244	7.	3.7	2994.1			
1	0340	45	5.	0.	0	2994.6	*	1	1200	145	21.	12.0	2996.3	*	1	2020	245	7.	3.7	2994.1			
1	0345	46	13.	0.	0	2995.1	*	1	1205	146	21.	12.0	2996.3	*	1	2025	246	7.	3.6	2994.1			
1	0350	47	16.	0.	0	2995.6	*	1	1210	147	21.	11.9	2996.3	*	1	2030	247	6.	3.6	2994.1			
1	0355	48	19.	0.	0	2996.1	*	1	1215	148	20.	11.8	2996.3	*	1	2035	248	6.	3.5	2994.1			
1	0400	49	23.	0.	0	2996.5	*	1	1220	149	20.	11.6	2996.2	*	1	2040	249	6.	3.5	2994.0			
1	0405	50	30.	0.	0	2996.9	*	1	1225	150	20.	11.5	2996.2	*	1	2045	250	6.	3.5	2994.0			
1	0410	51	30.	0.	0	2997.3	*	1	1230	151	20.	11.3	2996.2	*	1	2050	251	6.	3.4	2994.0			
1	0415	52	32.	0.	0	2997.6	*	1	1235	152	19.	11.2	2996.1	*	1	2055	252	6.	3.4	2994.0			
1	0420	53	34.	0.	0	2997.9	*	1	1240	153	19.	11.1	2996.1	*	1	2100	253	6.	3.3	2994.0			
1	0425	54	36.	0.	0	2998.2	*	1	1245	154	19.	10.9	2996.1	*	1	2105	254	6.	3.3	2994.0			
1	0430	55	37.	0.	0	2998.4	*	1	1250	155	18.	10.8	2996.0	*	1	2110	255	6.	3.2	2994.0			
1	0435	56	37.	0.	0	2998.6	*	1	1255	156	18.	10.7	2996.0	*	1	2115	256	6.	3.2	2994.0			
1	0440	57	39.	0.	0	2998.8	*	1	1300	157	18.	10.6	2996.0	*	1	2120	257	6.	3.1	2994.0			

										Proposed_OUT									
1	0445	58	40.	23.2	2999.0	*	1	1305	158	18.	10.4	2996.0	*	1	2125	258	6.	3.1	2994.0
1	0450	59	41.	24.0	2999.2	*	1	1310	159	17.	10.3	2995.9	*	1	2130	259	6.	3.1	2993.9
1	0455	60	42.	24.7	2999.4	*	1	1315	160	17.	10.2	2995.9	*	1	2135	260	6.	3.0	2993.9
1	0500	61	43.	25.3	2999.5	*	1	1320	161	17.	10.1	2995.9	*	1	2140	261	5.	3.0	2993.9
1	0505	62	43.	25.9	2999.7	*	1	1325	162	17.	10.0	2995.8	*	1	2145	262	5.	3.0	2993.9
1	0510	63	44.	26.4	2999.8	*	1	1330	163	17.	9.9	2995.8	*	1	2150	263	5.	2.9	2993.9
1	0515	64	45.	26.9	2999.9	*	1	1335	164	17.	9.7	2995.8	*	1	2155	264	5.	2.9	2993.9
1	0520	65	45.	27.3	3000.0	*	1	1340	165	16.	9.6	2995.7	*	1	2200	265	5.	2.8	2993.9
1	0525	66	45.	27.6	3000.1	*	1	1345	166	16.	9.5	2995.7	*	1	2205	266	5.	2.8	2993.9
1	0530	67	46.	27.8	3000.1	*	1	1350	167	16.	9.4	2995.7	*	1	2210	267	5.	2.8	2993.8
1	0535	68	46.	28.0	3000.1	*	1	1355	168	16.	9.3	2995.6	*	1	2215	268	5.	2.7	2993.8
1	0540	69	46.	28.1	3000.2	*	1	1400	169	16.	9.2	2995.6	*	1	2220	269	5.	2.7	2993.8
1	0545	70	46.	28.2	3000.2	*	1	1405	170	15.	9.1	2995.6	*	1	2225	270	5.	2.7	2993.8
1	0550	71	46.	28.1	3000.2	*	1	1410	171	15.	9.0	2995.6	*	1	2230	271	5.	2.7	2993.8
1	0555	72	46.	28.1	3000.2	*	1	1415	172	15.	8.9	2995.5	*	1	2235	272	5.	2.6	2993.8
1	0600	73	46.	28.0	3000.1	*	1	1420	173	15.	8.8	2995.5	*	1	2240	273	5.	2.6	2993.8
1	0605	74	46.	27.9	3000.1	*	1	1425	174	15.	8.7	2995.5	*	1	2245	274	5.	2.5	2993.8
1	0610	75	46.	27.8	3000.1	*	1	1430	175	15.	8.6	2995.4	*	1	2250	275	5.	2.5	2993.8
1	0615	76	45.	27.6	3000.1	*	1	1435	176	14.	8.5	2995.4	*	1	2255	276	5.	2.5	2993.8
1	0620	77	45.	27.4	3000.0	*	1	1440	177	14.	8.4	2995.4	*	1	2300	277	4.	2.4	2993.7
1	0625	78	45.	27.2	3000.0	*	1	1445	178	14.	8.3	2995.4	*	1	2305	278	4.	2.4	2993.7
1	0630	79	45.	27.0	2999.9	*	1	1450	179	14.	8.2	2995.3	*	1	2310	279	4.	2.4	2993.7
1	0635	80	44.	26.7	2999.9	*	1	1455	180	14.	8.1	2995.3	*	1	2315	280	4.	2.4	2993.7
1	0640	81	44.	26.5	2999.8	*	1	1500	181	14.	8.0	2995.3	*	1	2320	281	4.	2.3	2993.7
1	0645	82	44.	26.2	2999.7	*	1	1505	182	14.	7.9	2995.3	*	1	2325	282	4.	2.3	2993.7
1	0650	83	44.	26.0	2999.7	*	1	1510	183	13.	7.8	2995.2	*	1	2330	283	4.	2.3	2993.7
1	0655	84	43.	25.7	2999.6	*	1	1515	184	13.	7.7	2995.2	*	1	2335	284	4.	2.2	2993.7
1	0700	85	43.	25.4	2999.5	*	1	1520	185	13.	7.6	2995.2	*	1	2340	285	4.	2.2	2993.7
1	0705	86	43.	25.2	2999.5	*	1	1525	186	13.	7.5	2995.2	*	1	2345	286	4.	2.2	2993.7
1	0710	87	42.	24.9	2999.4	*	1	1530	187	13.	7.4	2995.1	*	1	2350	287	4.	2.2	2993.7
1	0715	88	42.	24.6	2999.3	*	1	1535	188	13.	7.3	2995.1	*	1	2355	288	4.	2.1	2993.7
1	0720	89	42.	24.3	2999.3	*	1	1540	189	13.	7.2	2995.1	*	2	0000	289	4.	2.1	2993.6
1	0725	90	41.	24.1	2999.2	*	1	1545	190	12.	7.2	2995.1	*	2	0005	290	4.	2.1	2993.6
1	0730	91	41.	23.8	2999.1	*	1	1550	191	12.	7.1	2995.1	*	2	0010	291	4.	2.1	2993.6
1	0735	92	41.	23.5	2999.1	*	1	1555	192	12.	7.0	2995.0	*	2	0015	292	4.	2.0	2993.6
1	0740	93	40.	23.2	2999.0	*	1	1600	193	12.	6.9	2995.0	*	2	0020	293	4.	2.0	2993.6
1	0745	94	40.	23.0	2999.0	*	1	1605	194	12.	6.8	2995.0	*	2	0025	294	4.	2.0	2993.6
1	0750	95	40.	22.7	2998.9	*	1	1610	195	12.	6.7	2995.0	*	2	0030	295	4.	2.0	2993.6
1	0755	96	39.	22.4	2998.8	*	1	1615	196	12.	6.7	2994.9	*	2	0035	296	4.	1.9	2993.6
1	0800	97	39.	22.2	2998.8	*	1	1620	197	11.	6.6	2994.9	*	2	0040	297	3.	1.9	2993.6
1	0805	98	38.	21.9	2998.7	*	1	1625	198	11.	6.5	2994.9	*	2	0045	298	3.	1.9	2993.6
1	0810	99	38.	21.6	2998.6	*	1	1630	199	11.	6.4	2994.9	*	2	0050	299	3.	1.9	2993.6
1	0815	100	38.	21.4	2998.6	*	1	1635	200	11.	6.4	2994.9	*	2	0055	300	3.	1.8	2993.6

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	72-HR	24.92-HR
+	(CFS)	(HR)				
+	46.	5.75	(CFS)			
			(INCHES)			
			(AC-FT)			
			39.	18.	17.	17.
			.358	.638	.638	.638
			19.	35.	35.	35.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	28.	5.75	23.	10.	10.	10.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3000.17	5.75	2998.92	2995.72	2995.62	2995.62
CUMULATIVE AREA = 1.02 SQ MI						

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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 1.00	RATIO 2 .98	RATIO 3 .97	RATIO 4 .93	RATIO 5 .91	RATIO 6 .90	RATIO 7 .70	RATIO 8 .57
HYDROGRAPH AT	WOFF1	.43	1 FLOW	387.	376.	370.	347.	335.	330.	218.	150.
+			TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.92
HYDROGRAPH AT	WOFF2	.04	1 FLOW	54.	53.	52.	48.	47.	46.	30.	20.
+			TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	WOFF3	.03	1 FLOW	38.	37.	36.	34.	33.	33.	22.	15.
+			TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT	CP1	.50	1 FLOW	430.	417.	411.	386.	373.	367.	243.	167.
+			TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT	WOFF4	.06	1 FLOW	84.	82.	81.	76.	73.	72.	48.	34.
+			TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	WOFF5	.26	1 FLOW	236.	229.	226.	212.	205.	201.	134.	93.
+			TIME	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.92
HYDROGRAPH AT	WOFF6	.04	1 FLOW	59.	57.	56.	53.	51.	50.	34.	24.
+			TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	ON1	.03	1 FLOW	55.	54.	53.	50.	49.	48.	35.	27.
+			TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
5 COMBINED AT	DB1	.88	1 FLOW	758.	735.	724.	679.	657.	646.	429.	297.
+			TIME	3.75	3.75	3.75	3.75	3.75	3.75	3.83	3.83
ROUTED TO	RDB1	.88	1 FLOW	71.	70.	70.	69.	68.	68.	62.	58.
+			TIME	5.58	5.58	5.58	5.58	5.58	5.58	5.50	5.42
				** PEAK STAGES IN FEET **							
+			1 STAGE	3035.07	3034.77	3034.61	3033.99	3033.69	3033.54	3030.64	3028.79
			TIME	5.58	5.58	5.58	5.58	5.58	5.58	5.50	5.42
HYDROGRAPH AT	AROY1	.00	1 FLOW	2.	2.	2.	2.	2.	2.	1.	1.
+			TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	WML1	.01	1 FLOW	13.	13.	13.	12.	12.	12.	9.	7.
+			TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	SHEPIA	.03	1 FLOW	44.	43.	42.	40.	39.	38.	26.	18.
+			TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	AROY2	.01	1 FLOW	13.	13.	13.	12.	12.	11.	8.	6.
+			TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50

Proposed,OUT												
+ 5 COMBINED AT	DUMMY	.93	1	FLOW TIME	125. 3.58	123. 3.58	121. 3.58	117. 3.58	115. 3.58	114. 3.58	94. 3.58	81. 3.58
+ HYDROGRAPH AT	PH2L4	.02	1	FLOW TIME	33. 3.50	32. 3.50	32. 3.50	30. 3.50	29. 3.50	29. 3.50	20. 3.50	15. 3.50
+ HYDROGRAPH AT	PH2L8	.01	1	FLOW TIME	22. 3.50	21. 3.50	21. 3.50	20. 3.50	19. 3.50	19. 3.50	13. 3.50	10. 3.50
+ 3 COMBINED AT	DUMMY	.96	1	FLOW TIME	176. 3.58	172. 3.58	171. 3.58	164. 3.58	160. 3.58	159. 3.58	126. 3.58	105. 3.58
+ HYDROGRAPH AT	PH2L9	.03	1	FLOW TIME	47. 3.50	46. 3.50	45. 3.50	43. 3.50	42. 3.50	41. 3.50	29. 3.50	21. 3.50
+ HYDROGRAPH AT	WPF1	.00	1	FLOW TIME	6. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	4. 3.50	3. 3.50
+ HYDROGRAPH AT	EGAN2	.00	1	FLOW TIME	10. 3.50	10. 3.50	10. 3.50	10. 3.50	9. 3.50	9. 3.50	7. 3.50	6. 3.50
+ 4 COMBINED AT	DUMMY	.99	1	FLOW TIME	238. 3.50	233. 3.50	231. 3.50	221. 3.50	216. 3.50	213. 3.50	164. 3.50	133. 3.50
+ HYDROGRAPH AT	WPRK2	.01	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	5. 3.50	3. 3.50
+ HYDROGRAPH AT	PH2PK1	.01	1	FLOW TIME	13. 3.50	12. 3.50	12. 3.50	11. 3.50	11. 3.50	11. 3.50	7. 3.50	5. 3.50
+ HYDROGRAPH AT	PH2L3B	.01	1	FLOW TIME	17. 3.50	16. 3.50	16. 3.50	15. 3.50	15. 3.50	15. 3.50	10. 3.50	8. 3.50
+ 4 COMBINED AT	DUMMY	1.01	1	FLOW TIME	277. 3.50	270. 3.50	267. 3.50	255. 3.50	249. 3.50	246. 3.50	186. 3.50	148. 3.50
+ HYDROGRAPH AT	PH2PK	.02	1	FLOW TIME	29. 3.50	28. 3.50	27. 3.50	25. 3.50	25. 3.50	24. 3.50	15. 3.50	10. 3.58
+ HYDROGRAPH AT	HORSE2	.01	1	FLOW TIME	27. 3.50	26. 3.50	26. 3.50	25. 3.50	24. 3.50	24. 3.50	19. 3.50	15. 3.50
+ 3 COMBINED AT	DUMMY	1.05	1	FLOW TIME	332. 3.50	324. 3.50	321. 3.50	305. 3.50	298. 3.50	294. 3.50	220. 3.50	174. 3.50
+ HYDROGRAPH AT	PH2PK2	.00	1	FLOW TIME	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	3. 3.50	2. 3.50	2. 3.50
+ HYDROGRAPH AT	PH2ML4	.04	1	FLOW TIME	66. 3.50	64. 3.50	64. 3.50	61. 3.50	59. 3.50	58. 3.50	42. 3.50	32. 3.50
+ HYDROGRAPH AT	SHAUM1	.01	1	FLOW TIME	13. 3.58	13. 3.58	13. 3.58	12. 3.58	12. 3.58	12. 3.58	9. 3.58	7. 3.58
+ 4 COMBINED AT	HU-HO	1.09	1	FLOW TIME	414. 3.50	405. 3.50	400. 3.50	381. 3.50	371. 3.50	367. 3.50	273. 3.50	214. 3.50
+ HYDROGRAPH AT	WML6	.02	1	FLOW TIME	48. 3.50	47. 3.50	46. 3.50	44. 3.50	43. 3.50	43. 3.50	32. 3.50	25. 3.50
+ HYDROGRAPH AT	AROY5	.00	1	FLOW TIME	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	2. 3.50	1. 3.50
+ HYDROGRAPH AT	SHEP1B	.05	1	FLOW TIME	72. 3.58	70. 3.58	69. 3.58	65. 3.58	63. 3.58	62. 3.58	42. 3.58	30. 3.58
+ 3 COMBINED AT	DUMMY	.07	1	FLOW TIME	117. 3.58	114. 3.58	113. 3.58	107. 3.58	104. 3.58	102. 3.58	73. 3.58	54. 3.58
+ HYDROGRAPH AT	WSCHL2	.02	1	FLOW TIME	34. 3.50	33. 3.50	32. 3.50	31. 3.50	30. 3.50	29. 3.50	21. 3.50	15. 3.50
+ HYDROGRAPH AT	STRT5	.01	1	FLOW TIME	12. 3.50	12. 3.50	12. 3.50	11. 3.50	11. 3.50	11. 3.50	8. 3.50	7. 3.50
+ HYDROGRAPH AT	WL3	.03	1	FLOW TIME	43. 3.58	42. 3.58	41. 3.58	39. 3.58	38. 3.58	37. 3.58	26. 3.58	20. 3.58
+ HYDROGRAPH AT	AROY6	.01	1	FLOW TIME	9. 3.50	9. 3.50	9. 3.50	8. 3.50	8. 3.50	8. 3.50	5. 3.50	4. 3.50
+ 5 COMBINED AT	DUMMY	.13	1	FLOW TIME	210. 3.58	205. 3.58	202. 3.58	191. 3.58	186. 3.58	183. 3.58	131. 3.58	97. 3.58
+ HYDROGRAPH AT	WPRK3	.00	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	5. 3.50	4. 3.50	4. 3.50	3. 3.50	2. 3.50
+ HYDROGRAPH AT	WL4	.02	1	FLOW TIME	37. 3.58	36. 3.58	35. 3.58	33. 3.58	32. 3.58	32. 3.58	22. 3.58	16. 3.58
+ HYDROGRAPH AT	STRT4	.00	1	FLOW TIME	10. 3.50	10. 3.50	10. 3.50	9. 3.50	9. 3.50	9. 3.50	7. 3.50	6. 3.50
+ 5 COMBINED AT	DUMMY	1.25	1	FLOW TIME	670. 3.50	654. 3.50	646. 3.50	614. 3.50	598. 3.50	590. 3.50	431. 3.50	330. 3.50
+ HYDROGRAPH AT	WML5	.04	1	FLOW TIME	75. 3.50	73. 3.50	72. 3.50	69. 3.50	67. 3.50	66. 3.50	49. 3.58	39. 3.58
+ HYDROGRAPH AT	HUAL2B	.02	1	FLOW TIME	26. 3.67	25. 3.67	25. 3.67	24. 3.67	24. 3.67	23. 3.67	18. 3.67	14. 3.67
3 COMBINED AT												

+	DUMMY	1.31	1	FLOW TIME	765. 3.50	747. 3.50	Proposed. 738. 3.50	701. 3.50	683. 3.50	674. 3.50	494. 3.50	380. 3.58
+	HYDROGRAPH AT AROY4	.01	1	FLOW TIME	12. 3.50	12. 3.50	12. 3.50	11. 3.50	11. 3.50	11. 3.50	7. 3.50	5. 3.50
+	HYDROGRAPH AT WML2	.05	1	FLOW TIME	98. 3.58	96. 3.58	95. 3.58	91. 3.58	89. 3.58	88. 3.58	66. 3.58	51. 3.58
+	HYDROGRAPH AT WPRK4	.01	1	FLOW TIME	11. 3.50	11. 3.50	10. 3.50	10. 3.50	9. 3.50	9. 3.50	6. 3.50	4. 3.50
+	HYDROGRAPH AT SHAUM2	.01	1	FLOW TIME	14. 3.50	14. 3.50	14. 3.50	13. 3.50	13. 3.50	13. 3.50	10. 3.50	8. 3.50
+	4 COMBINED AT DUMMY	.07	1	FLOW TIME	134. 3.50	131. 3.50	129. 3.50	123. 3.50	120. 3.50	118. 3.50	87. 3.58	68. 3.58
+	HYDROGRAPH AT WL1	.02	1	FLOW TIME	41. 3.58	40. 3.58	39. 3.58	37. 3.58	36. 3.58	35. 3.58	25. 3.58	18. 3.58
+	HYDROGRAPH AT HORS1A	.01	1	FLOW TIME	22. 3.50	22. 3.50	22. 3.50	21. 3.50	20. 3.50	20. 3.50	15. 3.50	12. 3.50
+	3 COMBINED AT SH-HO	.11	1	FLOW TIME	195. 3.58	191. 3.58	188. 3.58	179. 3.58	175. 3.58	172. 3.58	127. 3.58	98. 3.58
+	HYDROGRAPH AT WOFF7	.01	1	FLOW TIME	10. 3.50	10. 3.50	10. 3.50	9. 3.50	9. 3.50	9. 3.50	6. 3.50	4. 3.50
+	HYDROGRAPH AT WOFF8	.21	1	FLOW TIME	230. 3.75	223. 3.75	220. 3.75	206. 3.75	200. 3.75	196. 3.75	131. 3.75	90. 3.75
+	2 COMBINED AT CP2	.22	1	FLOW TIME	235. 3.75	228. 3.75	225. 3.75	211. 3.75	204. 3.75	201. 3.75	134. 3.75	93. 3.75
+	HYDROGRAPH AT WOFF9	.12	1	FLOW TIME	144. 3.58	140. 3.58	138. 3.58	129. 3.67	125. 3.67	123. 3.67	82. 3.67	57. 3.67
+	HYDROGRAPH AT WOFF10	.65	1	FLOW TIME	481. 4.08	467. 4.08	460. 4.08	432. 4.08	418. 4.08	411. 4.08	274. 4.08	190. 4.08
+	HYDROGRAPH AT ON2	.03	1	FLOW TIME	64. 3.50	62. 3.50	62. 3.50	59. 3.50	57. 3.50	56. 3.50	41. 3.50	31. 3.50
+	4 COMBINED AT DB2	1.02	1	FLOW TIME	733. 3.83	711. 3.83	700. 3.83	657. 3.83	636. 3.83	625. 3.83	415. 3.83	287. 3.83
+	ROUTED TO RDB2	1.02	1	FLOW TIME	78. 5.92	76. 5.92	76. 5.92	73. 5.92	72. 5.92	71. 5.92	57. 5.83	46. 5.75
				** PEAK STAGES IN FEET **								
			1	STAGE	3009.26 5.92	3008.82 5.92	3008.60 5.92	3007.74 5.92	3007.31 5.92	3007.10 5.92	3002.91 5.83	3000.17 5.75
+	HYDROGRAPH AT WPRK7	.00	1	FLOW TIME	6. 3.50	6. 3.50	6. 3.50	5. 3.50	5. 3.50	5. 3.50	3. 3.50	2. 3.50
+	HYDROGRAPH AT WL2	.04	1	FLOW TIME	75. 3.58	73. 3.58	72. 3.58	68. 3.58	66. 3.58	65. 3.58	46. 3.58	34. 3.58
+	4 COMBINED AT DUMMY	1.18	1	FLOW TIME	302. 3.58	294. 3.58	290. 3.58	274. 3.58	266. 3.58	262. 3.58	187. 3.58	141. 3.58
+	HYDROGRAPH AT SHAUM3	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	6. 3.50	4. 3.50
+	HYDROGRAPH AT IRON1A	.00	1	FLOW TIME	11. 3.50	11. 3.50	11. 3.50	10. 3.50	10. 3.50	10. 3.50	8. 3.50	6. 3.50
+	3 COMBINED AT IR-SH	1.19	1	FLOW TIME	318. 3.58	310. 3.58	306. 3.58	289. 3.58	281. 3.58	277. 3.58	198. 3.58	149. 3.58
+	HYDROGRAPH AT WML3	.03	1	FLOW TIME	51. 3.50	50. 3.50	49. 3.50	47. 3.50	46. 3.50	45. 3.50	34. 3.50	26. 3.50
+	HYDROGRAPH AT HORS1B	.00	1	FLOW TIME	9. 3.50	9. 3.50	9. 3.50	9. 3.50	8. 3.50	8. 3.50	6. 3.50	5. 3.50
+	HYDROGRAPH AT WPRK5	.00	1	FLOW TIME	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	2. 3.50	1. 3.50
+	3 COMBINED AT DUMMY	.03	1	FLOW TIME	63. 3.50	62. 3.50	61. 3.50	58. 3.50	57. 3.50	56. 3.50	42. 3.50	33. 3.50
+	HYDROGRAPH AT WSCHL1	.06	1	FLOW TIME	101. 3.58	98. 3.58	97. 3.58	92. 3.58	90. 3.58	88. 3.58	63. 3.58	47. 3.58
+	HYDROGRAPH AT IRON1B	.01	1	FLOW TIME	16. 3.50	15. 3.50	15. 3.50	15. 3.50	14. 3.50	14. 3.50	11. 3.50	9. 3.50
+	HYDROGRAPH AT WML4	.01	1	FLOW TIME	23. 3.50	23. 3.50	22. 3.50	21. 3.50	21. 3.50	21. 3.50	15. 3.50	12. 3.50
+	5 COMBINED AT DUMMY	1.29	1	FLOW TIME	512. 3.50	499. 3.50	493. 3.50	467. 3.50	455. 3.50	448. 3.50	323. 3.50	243. 3.50
+	HYDROGRAPH AT SHEP1C	.02	1	FLOW TIME	34. 3.58	33. 3.58	33. 3.58	31. 3.58	30. 3.58	29. 3.58	20. 3.58	14. 3.58
+	3 COMBINED AT HU-IR	2.62	1	FLOW TIME	1307. 3.50	1275. 3.50	1259. 3.50	1196. 3.50	1164. 3.50	1148. 3.50	834. 3.50	638. 3.58
+	HYDROGRAPH AT OFFG	.04	1	FLOW	47. 3.50	46. 3.50	45. 3.50	42. 3.50	41. 3.50	40. 3.50	26. 3.50	18. 3.50

				TIME	3.58	3.58	Proposed.OUT 3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	WPT40	2.66	1	FLOW	1346.	1312.	1295.	1229.	1197.	1180.	858.	655.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.58	3.58
HYDROGRAPH AT	OFF10	.67	1	FLOW	608.	591.	582.	547.	530.	521.	352.	248.
+				TIME	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.08
ROUTED TO	ROFF10	.67	1	FLOW	548.	532.	524.	493.	477.	469.	318.	224.
+				TIME	4.58	4.58	4.58	4.58	4.58	4.58	4.67	4.67
HYDROGRAPH AT	OFFFA	.99	1	FLOW	870.	843.	830.	776.	750.	736.	479.	322.
+				TIME	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
ROUTED TO	ROFFFA	.99	1	FLOW	819.	793.	781.	730.	705.	693.	450.	303.
+				TIME	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17
HYDROGRAPH AT	OFFFB	.60	1	FLOW	428.	414.	407.	379.	366.	359.	229.	152.
+				TIME	3.92	3.92	3.92	3.92	3.92	3.92	4.00	4.00
3 COMBINED AT	COFFF1	2.26	1	FLOW	1469.	1423.	1400.	1310.	1265.	1242.	809.	549.
+				TIME	4.17	4.17	4.17	4.17	4.17	4.17	4.25	4.25
HYDROGRAPH AT	WPRK6	.02	1	FLOW	21.	20.	20.	18.	18.	17.	11.	7.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT	COFFF2	4.94	1	FLOW	1794.	1745.	1720.	1620.	1571.	1547.	1070.	777.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OFFE	.04	1	FLOW	26.	25.	25.	22.	21.	21.	11.	6.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.75
HYDROGRAPH AT	OFFV	.01	1	FLOW	4.	4.	4.	4.	4.	3.	2.	1.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.67
3 COMBINED AT	CKC5	4.99	1	FLOW	1822.	1771.	1746.	1644.	1594.	1568.	1081.	783.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
DIVERSION TO	DCKC7	4.99	1	FLOW	1822.	1771.	1746.	1644.	1594.	1568.	1081.	783.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	DCKC5	4.99	1	FLOW	0.	0.	0.	0.	0.	0.	0.	0.
+				TIME	.00	.00	.00	.00	.00	.00	.00	.00
HYDROGRAPH AT	OFF17B	.01	1	FLOW	15.	15.	15.	14.	14.	13.	10.	7.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	OFF17A	.03	1	FLOW	51.	50.	49.	47.	45.	45.	32.	24.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	COFF17	.04	1	FLOW	66.	65.	64.	61.	59.	58.	42.	31.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
DIVERSION TO	DVCUL8	.04	1	FLOW	66.	65.	64.	61.	59.	58.	42.	31.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	DCOF17	.04	1	FLOW	0.	0.	0.	0.	0.	0.	0.	0.
+				TIME	.00	.00	.00	.00	.00	.00	.00	.00
HYDROGRAPH AT	ON1	.00	1	FLOW	8.	7.	7.	7.	7.	7.	5.	4.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	ON4A	.00	1	FLOW	8.	8.	8.	8.	7.	7.	5.	4.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	C1	.01	1	FLOW	16.	16.	15.	15.	14.	14.	10.	7.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
DIVERSION TO	DIV1	.01	1	FLOW	13.	13.	13.	12.	12.	11.	8.	6.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	D1	.01	1	FLOW	3.	3.	3.	3.	3.	3.	2.	1.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	ON5	.01	1	FLOW	10.	9.	9.	9.	9.	8.	6.	4.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	C2	.01	1	FLOW	13.	12.	12.	12.	11.	11.	8.	6.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
DIVERSION TO	DIV1A	.01	1	FLOW	13.	12.	12.	12.	11.	11.	8.	6.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	D1A	.01	1	FLOW	0.	0.	0.	0.	0.	0.	0.	0.
+				TIME	.00	.00	.00	.00	.00	.00	.00	.00
HYDROGRAPH AT	ON4B	.00	1	FLOW	6.	5.	5.	5.	5.	5.	3.	3.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	RET1	.00	1	FLOW	13.	13.	13.	12.	12.	11.	8.	6.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	ON6	.00	1	FLOW	7.	7.	7.	7.	7.	6.	5.	3.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	C3	.00	1	FLOW	20.	20.	20.	19.	18.	18.	13.	9.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
DIVERSION TO	DIV1B	.00	1	FLOW	20.	20.	20.	19.	18.	18.	13.	9.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	D1B	.00	1	FLOW	0.	0.	0.	0.	0.	0.	0.	0.
+				TIME	.00	.00	.00	.00	.00	.00	.00	.00

Proposed.OUT												
HYDROGRAPH AT +	ON2	.00	1	FLOW TIME	9. 3.50	9. 3.50	9. 3.50	8. 3.50	8. 3.50	8. 3.50	6. 3.50	4. 3.50
HYDROGRAPH AT +	ON3	.01	1	FLOW TIME	12. 3.50	12. 3.50	11. 3.50	11. 3.50	10. 3.50	10. 3.50	7. 3.50	6. 3.50
HYDROGRAPH AT +	ON9	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50
3 COMBINED AT +	C4	.02	1	FLOW TIME	29. 3.50	28. 3.50	28. 3.50	26. 3.50	26. 3.50	25. 3.50	18. 3.50	13. 3.50
DIVERSION TO +	DIV2	.02	1	FLOW TIME	24. 3.50	23. 3.50	23. 3.50	22. 3.50	21. 3.50	21. 3.50	15. 3.50	11. 3.50
HYDROGRAPH AT +	D2	.02	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	5. 3.50	4. 3.50	4. 3.50	3. 3.50	2. 3.50
HYDROGRAPH AT +	ON10	.00	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	4. 3.50	4. 3.50	4. 3.50	3. 3.50	2. 3.50
2 COMBINED AT +	C5	.02	1	FLOW TIME	10. 3.50	10. 3.50	9. 3.50	9. 3.50	9. 3.50	9. 3.50	6. 3.50	5. 3.50
DIVERSION TO +	DIV3	.02	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50
HYDROGRAPH AT +	D3	.02	1	FLOW TIME	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	1. 3.50	1. 3.50
HYDROGRAPH AT +	ON11	.00	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	4. 3.50	4. 3.50	4. 3.50	3. 3.50	2. 3.50
2 COMBINED AT +	C6	.02	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50	4. 3.50	3. 3.50
DIVERSION TO +	DIV1C	.02	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50	4. 3.50	3. 3.50
HYDROGRAPH AT +	D1C	.02	1	FLOW TIME	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00
4 COMBINED AT +	CD1C	.04	1	FLOW TIME	6. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	3. 3.50	3. 3.50
ROUTED TO +	RCD1C	.04	1	FLOW TIME	5. 3.67	5. 3.67	5. 3.67	5. 3.75	5. 3.75	4. 3.75	3. 3.75	2. 3.83
DIVERSION TO +	DOFF23	.04	1	FLOW TIME	5. 3.67	5. 3.67	5. 3.67	5. 3.75	5. 3.75	4. 3.75	3. 3.75	2. 3.83
HYDROGRAPH AT +	DRCD1C	.04	1	FLOW TIME	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00
HYDROGRAPH AT +	ON8	.00	1	FLOW TIME	6. 3.50	6. 3.50	6. 3.50	5. 3.50	5. 3.50	5. 3.50	3. 3.50	2. 3.50
HYDROGRAPH AT +	RET2	.00	1	FLOW TIME	24. 3.50	23. 3.50	23. 3.50	22. 3.50	21. 3.50	21. 3.50	15. 3.50	11. 3.50
2 COMBINED AT +	C7	.00	1	FLOW TIME	30. 3.50	29. 3.50	29. 3.50	27. 3.50	26. 3.50	26. 3.50	18. 3.50	13. 3.50
HYDROGRAPH AT +	RET3	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50
HYDROGRAPH AT +	ON7	.01	1	FLOW TIME	14. 3.50	13. 3.50	13. 3.50	12. 3.50	12. 3.50	12. 3.50	9. 3.50	6. 3.50
3 COMBINED AT +	C8	.01	1	FLOW TIME	51. 3.50	50. 3.50	49. 3.50	47. 3.50	45. 3.50	45. 3.50	32. 3.50	23. 3.50
HYDROGRAPH AT +	RET1A	.00	1	FLOW TIME	13. 3.50	12. 3.50	12. 3.50	12. 3.50	11. 3.50	11. 3.50	8. 3.50	6. 3.50
HYDROGRAPH AT +	RET1B	.00	1	FLOW TIME	20. 3.50	20. 3.50	20. 3.50	19. 3.50	18. 3.50	18. 3.50	13. 3.50	9. 3.50
HYDROGRAPH AT +	RET1C	.00	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50	4. 3.50	3. 3.50
3 COMBINED AT +	C9	.00	1	FLOW TIME	40. 3.50	39. 3.50	38. 3.50	36. 3.50	35. 3.50	35. 3.50	25. 3.50	18. 3.50
HYDROGRAPH AT +	ON2D	.01	1	FLOW TIME	21. 3.50	21. 3.50	20. 3.50	19. 3.50	19. 3.50	19. 3.50	14. 3.50	11. 3.50
HYDROGRAPH AT +	ON5D	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	6. 3.50	4. 3.50
2 COMBINED AT +	CP1	.01	1	FLOW TIME	29. 3.50	29. 3.50	28. 3.50	27. 3.50	26. 3.50	26. 3.50	19. 3.50	15. 3.50
HYDROGRAPH AT +	ON3D	.00	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50
2 COMBINED AT +	CP2	.02	1	FLOW TIME	37. 3.50	36. 3.50	36. 3.50	34. 3.50	33. 3.50	33. 3.50	24. 3.50	19. 3.50
HYDROGRAPH AT +	ON1D	.01	1	FLOW TIME	16. 3.50	15. 3.50	15. 3.50	15. 3.50	14. 3.50	14. 3.50	10. 3.50	8. 3.50

Proposed.OUT												
HYDROGRAPH AT	ON4D	.00	1	FLOW	8.	8.	8.	8.	7.	7.	5.	4.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	CP3	.01	1	FLOW	24.	23.	23.	22.	21.	21.	16.	12.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	CP4	.03	1	FLOW	61.	59.	59.	56.	55.	54.	40.	31.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
4 COMBINED AT	CENGCA	.08	1	FLOW	152.	148.	146.	139.	135.	134.	97.	73.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	PH2ML3	.04	1	FLOW	81.	79.	78.	74.	72.	71.	52.	40.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	PH2L6	.05	1	FLOW	77.	75.	74.	70.	68.	67.	47.	34.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	EGAN1	.01	1	FLOW	12.	12.	12.	11.	11.	11.	9.	7.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT	DUMMY	.10	1	FLOW	170.	165.	163.	155.	151.	149.	107.	81.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	PH2L5	.00	1	FLOW	8.	8.	8.	7.	7.	7.	5.	4.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	PH2L7	.01	1	FLOW	23.	22.	22.	21.	20.	20.	14.	10.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	RACL1A	.01	1	FLOW	13.	13.	13.	12.	12.	12.	9.	7.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
4 COMBINED AT	RA-EG	.12	1	FLOW	209.	204.	201.	191.	186.	183.	132.	100.
+				TIME	3.50	3.50	3.50	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	PH2ML1	.03	1	FLOW	60.	58.	58.	55.	54.	53.	40.	31.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	PH2ML2	.03	1	FLOW	59.	58.	57.	55.	53.	53.	39.	31.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	PH2L1	.03	1	FLOW	45.	44.	44.	41.	40.	40.	28.	21.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	PH2L2	.02	1	FLOW	31.	30.	30.	28.	28.	27.	19.	14.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
5 COMBINED AT	DUMMY	.22	1	FLOW	402.	392.	387.	367.	358.	353.	255.	192.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	PH2L3A	.02	1	FLOW	29.	28.	27.	26.	25.	25.	17.	13.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	HUAL1	.01	1	FLOW	14.	14.	14.	13.	13.	13.	10.	8.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	RACL1B	.01	1	FLOW	12.	12.	12.	11.	11.	11.	8.	7.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	HUAL2A	.01	1	FLOW	13.	12.	12.	12.	12.	11.	9.	7.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
5 COMBINED AT	RA-HU	.26	1	FLOW	469.	457.	451.	429.	417.	412.	298.	226.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	PH1-3	.02	1	FLOW	39.	38.	38.	36.	35.	34.	25.	18.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	CONQ	.00	1	FLOW	6.	6.	6.	6.	5.	5.	4.	3.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT	DUMMY	.28	1	FLOW	513.	500.	494.	469.	457.	450.	326.	246.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	PH1-5	.06	1	FLOW	107.	104.	103.	98.	96.	95.	71.	55.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	PH1PRK	.00	1	FLOW	4.	3.	3.	3.	3.	3.	2.	1.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	RACL1C	.01	1	FLOW	13.	13.	13.	12.	12.	12.	8.	6.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
4 COMBINED AT	DUMMY	.35	1	FLOW	630.	615.	607.	577.	561.	554.	402.	305.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.58
HYDROGRAPH AT	PH1-4	.03	1	FLOW	49.	47.	47.	45.	44.	43.	32.	25.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	PH1-6	.05	1	FLOW	93.	91.	90.	86.	84.	83.	62.	48.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	GCD	.01	1	FLOW	10.	9.	9.	9.	9.	8.	6.	5.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
4 COMBINED AT	CP26	.43	1	FLOW	777.	759.	749.	712.	694.	684.	498.	381.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.58
2 COMBINED AT	CCP4	.52	1	FLOW	929.	907.	896.	851.	829.	818.	595.	451.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT												

+	OFF21B	.04	1	FLOW TIME	75.	73.	Proposed.	OUT	67.	66.	49.	38.
					3.50	3.50	72.	69.	3.50	3.50	3.50	3.50
+	2 COMBINED AT											
+	COF21B	.56	1	FLOW TIME	1004.	980.	968.	920.	896.	884.	644.	489.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	DIVERSION TO											
+	DVCUL9	.56	1	FLOW TIME	1004.	980.	968.	920.	896.	884.	644.	489.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	HYDROGRAPH AT											
+	DOF21B	.56	1	FLOW TIME	0.	0.	0.	0.	0.	0.	0.	0.
					.00	.00	.00	.00	.00	.00	.00	.00
+	HYDROGRAPH AT											
+	ROFF23	.00	1	FLOW TIME	5.	5.	5.	5.	5.	4.	3.	2.
					3.67	3.67	3.67	3.75	3.75	3.75	3.75	3.83
+	HYDROGRAPH AT											
+	OFF23	.01	1	FLOW TIME	17.	16.	16.	15.	15.	15.	11.	8.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	4 COMBINED AT											
+	COFF23	.61	1	FLOW TIME	19.	18.	18.	17.	17.	16.	11.	9.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.50
+	DIVERSION TO											
+	DCUL10	.61	1	FLOW TIME	19.	18.	18.	17.	17.	16.	11.	8.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.50
+	HYDROGRAPH AT											
+	DCOF23	.61	1	FLOW TIME	0.	0.	0.	0.	0.	0.	0.	0.
					3.58	3.58	3.58	3.58	3.58	3.58	3.50	3.50
+	HYDROGRAPH AT											
+	GT1	.02	1	FLOW TIME	40.	39.	39.	37.	36.	36.	28.	22.
					3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
+	HYDROGRAPH AT											
+	OFFU	.04	1	FLOW TIME	246.	245.	244.	241.	240.	239.	226.	218.
					3.58	3.58	3.58	3.58	3.58	3.58	3.67	3.67
+	3 COMBINED AT											
+	CP26WT	.67	1	FLOW TIME	286.	284.	283.	278.	276.	275.	254.	241.
					3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
+	DIVERSION TO											
+	DCUL11	.67	1	FLOW TIME	285.	283.	282.	277.	275.	274.	253.	240.
					3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67
+	HYDROGRAPH AT											
+	DC26WT	.67	1	FLOW TIME	1.	1.	1.	1.	1.	1.	1.	1.
					.00	.00	.00	.00	.00	.00	.00	.00
+	HYDROGRAPH AT											
+	95-5	.03	1	FLOW TIME	26.	25.	24.	22.	21.	21.	12.	6.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
+	DIVERSION TO											
+	DCHD1B	.03	1	FLOW TIME	23.	22.	22.	20.	19.	19.	10.	6.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
+	HYDROGRAPH AT											
+	DHD01B	.03	1	FLOW TIME	3.	2.	2.	2.	2.	2.	1.	1.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
+	HYDROGRAPH AT											
+	OFF8	.01	1	FLOW TIME	19.	19.	19.	18.	17.	17.	12.	8.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
+	HYDROGRAPH AT											
+	OFFY	.01	1	FLOW TIME	7.	6.	6.	6.	6.	5.	3.	2.
					3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.75
+	HYDROGRAPH AT											
+	WGED2	.04	1	FLOW TIME	66.	64.	63.	60.	58.	58.	42.	31.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.58
+	4 COMBINED AT											
+	CHD02B	.09	1	FLOW TIME	92.	90.	89.	84.	82.	80.	57.	41.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
+	DIVERSION TO											
+	DCHD2B	.09	1	FLOW TIME	92.	89.	88.	83.	81.	80.	56.	41.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
+	HYDROGRAPH AT											
+	DHD02B	.09	1	FLOW TIME	1.	1.	1.	1.	1.	1.	1.	0.
					3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
+	HYDROGRAPH AT											
+	WGED1	.02	1	FLOW TIME	33.	32.	32.	31.	30.	29.	22.	17.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	HYDROGRAPH AT											
+	STRT3	.00	1	FLOW TIME	4.	4.	4.	4.	4.	4.	3.	2.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	2 COMBINED AT											
+	WPT49	.02	1	FLOW TIME	37.	36.	36.	34.	33.	33.	25.	19.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	HYDROGRAPH AT											
+	95-6	.01	1	FLOW TIME	17.	16.	16.	15.	15.	14.	10.	7.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	HYDROGRAPH AT											
+	OFFW	.01	1	FLOW TIME	9.	8.	8.	7.	7.	7.	4.	2.
					3.58	3.67	3.67	3.67	3.67	3.67	3.67	3.67
+	4 COMBINED AT											
+	CHD04B	.13	1	FLOW TIME	61.	60.	59.	56.	54.	53.	38.	28.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	DIVERSION TO											
+	DCHD4B	.13	1	FLOW TIME	61.	60.	59.	56.	54.	53.	38.	28.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	HYDROGRAPH AT											
+	DHD04B	.13	1	FLOW TIME	0.	0.	0.	0.	0.	0.	0.	0.
					.00	.00	.00	.00	.00	.00	.00	.00
+	HYDROGRAPH AT											
+	WMLA1	.03	1	FLOW TIME	67.	66.	65.	62.	60.	60.	45.	35.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	HYDROGRAPH AT											
+	WML8	.03	1	FLOW TIME	59.	58.	57.	55.	53.	53.	39.	31.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	HYDROGRAPH AT											
+	WPRK8	.00	1	FLOW TIME	4.	4.	4.	4.	4.	4.	2.	2.
					3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
+	HYDROGRAPH AT											
+	STRT2	.00	1	FLOW	8.	8.	8.	8.	8.	7.	6.	5.

				TIME	3.50	3.50	Proposed. 3.50	OUT 3.50	3.50	3.50	3.50	3.50	3.50
+	4 COMBINED AT	DUMMY	.07	1 FLOW TIME	139. 3.50	136. 3.50	135. 3.50	128. 3.50	125. 3.50	124. 3.50	92. 3.50	71. 3.50	
+	HYDROGRAPH AT	GRAND3	.01	1 FLOW TIME	23. 3.58	23. 3.58	22. 3.58	21. 3.58	21. 3.58	21. 3.58	16. 3.58	13. 3.58	
+	HYDROGRAPH AT	WBU2	.02	1 FLOW TIME	37. 3.50	37. 3.50	36. 3.50	34. 3.50	34. 3.50	33. 3.50	25. 3.50	19. 3.50	
+	HYDROGRAPH AT	WMLA2	.02	1 FLOW TIME	39. 3.50	38. 3.50	37. 3.50	36. 3.50	35. 3.50	34. 3.50	26. 3.50	20. 3.50	
+	4 COMBINED AT	WPT48	.12	1 FLOW TIME	238. 3.50	233. 3.50	230. 3.50	220. 3.50	214. 3.50	212. 3.50	158. 3.50	124. 3.50	
+	HYDROGRAPH AT	95-7A	.01	1 FLOW TIME	13. 3.50	13. 3.50	13. 3.50	12. 3.50	12. 3.50	11. 3.50	8. 3.50	6. 3.50	
+	3 COMBINED AT	CHD05B	.26	1 FLOW TIME	251. 3.50	246. 3.50	243. 3.50	232. 3.50	226. 3.50	223. 3.50	167. 3.50	130. 3.50	
+	HYDROGRAPH AT	WML7	.03	1 FLOW TIME	64. 3.50	62. 3.50	62. 3.50	59. 3.50	57. 3.50	57. 3.50	42. 3.50	33. 3.50	
+	HYDROGRAPH AT	STR11	.00	1 FLOW TIME	11. 3.50	10. 3.50	10. 3.50	10. 3.50	10. 3.50	9. 3.50	7. 3.50	6. 3.50	
+	HYDROGRAPH AT	WBU1	.05	1 FLOW TIME	102. 3.50	100. 3.50	99. 3.50	94. 3.50	92. 3.50	91. 3.50	68. 3.50	53. 3.50	
+	3 COMBINED AT	DUMMY	.09	1 FLOW TIME	177. 3.50	173. 3.50	171. 3.50	163. 3.50	159. 3.50	157. 3.50	117. 3.50	92. 3.50	
+	HYDROGRAPH AT	PH1-1	.03	1 FLOW TIME	47. 3.58	46. 3.58	45. 3.58	43. 3.58	42. 3.58	41. 3.58	29. 3.58	22. 3.58	
+	HYDROGRAPH AT	PH1-2	.03	1 FLOW TIME	45. 3.58	44. 3.58	44. 3.58	41. 3.58	40. 3.58	39. 3.58	27. 3.58	19. 3.58	
+	HYDROGRAPH AT	GRAND2	.00	1 FLOW TIME	6. 3.58	6. 3.58	6. 3.58	6. 3.58	6. 3.58	6. 3.58	4. 3.58	4. 3.58	
+	HYDROGRAPH AT	HORSE3	.01	1 FLOW TIME	25. 3.50	24. 3.50	24. 3.50	23. 3.50	22. 3.50	22. 3.50	17. 3.50	14. 3.50	
+	5 COMBINED AT	WPT46	.16	1 FLOW TIME	294. 3.50	287. 3.50	284. 3.50	270. 3.50	263. 3.50	260. 3.50	191. 3.50	146. 3.50	
+	HYDROGRAPH AT	95-8A	.01	1 FLOW TIME	10. 3.50	10. 3.50	10. 3.50	9. 3.50	9. 3.50	9. 3.50	7. 3.50	5. 3.50	
+	HYDROGRAPH AT	OFF14	.01	1 FLOW TIME	20. 3.50	20. 3.50	20. 3.50	18. 3.50	18. 3.50	18. 3.50	12. 3.58	8. 3.58	
+	3 COMBINED AT	CHD06B	.18	1 FLOW TIME	325. 3.50	317. 3.50	313. 3.50	298. 3.50	290. 3.50	286. 3.50	209. 3.50	159. 3.50	
+	DIVERSION TO	DCMPU6	.18	1 FLOW TIME	109. 3.50	106. 3.50	105. 3.50	99. 3.50	97. 3.50	96. 3.50	70. 3.50	53. 3.50	
+	HYDROGRAPH AT	RCHD6B	.18	1 FLOW TIME	216. 3.50	211. 3.50	209. 3.50	198. 3.50	193. 3.50	191. 3.50	139. 3.50	106. 3.50	
+	DIVERSION TO	DCHD6B	.18	1 FLOW TIME	216. 3.50	211. 3.50	209. 3.50	198. 3.50	193. 3.50	191. 3.50	139. 3.50	106. 3.50	
+	HYDROGRAPH AT	DHD06B	.18	1 FLOW TIME	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	
+	HYDROGRAPH AT	95-9A	.01	1 FLOW TIME	19. 3.50	19. 3.50	18. 3.50	18. 3.50	17. 3.50	17. 3.50	12. 3.50	9. 3.50	
+	2 COMBINED AT	CHD07B	.19	1 FLOW TIME	19. 3.50	19. 3.50	18. 3.50	18. 3.50	17. 3.50	17. 3.50	12. 3.50	9. 3.50	
+	HYDROGRAPH AT	OFF15	.03	1 FLOW TIME	47. 3.58	45. 3.58	45. 3.58	42. 3.58	41. 3.58	40. 3.58	27. 3.58	19. 3.58	
+	3 COMBINED AT	CHD7B2	.49	1 FLOW TIME	314. 3.50	306. 3.50	303. 3.50	288. 3.50	280. 3.50	277. 3.50	203. 3.50	155. 3.50	
+	HYDROGRAPH AT	CRET8	.00	1 FLOW TIME	66. 3.50	65. 3.50	64. 3.50	61. 3.50	59. 3.50	58. 3.50	42. 3.50	31. 3.50	
+	DIVERSION TO	DIV8A	.00	1 FLOW TIME	66. 3.50	65. 3.50	64. 3.50	61. 3.50	59. 3.50	58. 3.50	42. 3.50	31. 3.50	
+	HYDROGRAPH AT	DCRET8	.00	1 FLOW TIME	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	
+	HYDROGRAPH AT	RET9	.00	1 FLOW TIME	1004. 3.50	980. 3.50	968. 3.50	920. 3.50	896. 3.50	884. 3.50	644. 3.50	489. 3.50	
+	2 COMBINED AT	CRET9	.00	1 FLOW TIME	1004. 3.50	980. 3.50	968. 3.50	920. 3.50	896. 3.50	884. 3.50	644. 3.50	489. 3.50	
+	DIVERSION TO	DIV9A	.00	1 FLOW TIME	256. 3.50	254. 3.50	253. 3.50	250. 3.50	248. 3.50	247. 3.50	228. 3.50	213. 3.50	
+	HYDROGRAPH AT	DCCUL9	.00	1 FLOW TIME	748. 3.50	726. 3.50	715. 3.50	670. 3.50	648. 3.50	636. 3.50	417. 3.50	276. 3.50	

Proposed.OUT												
HYDROGRAPH AT +	RET10	.00	1	FLOW TIME	19. 3.58	18. 3.58	18. 3.58	17. 3.58	17. 3.58	16. 3.58	11. 3.58	8. 3.50
2 COMBINED AT +	CRET10	.00	1	FLOW TIME	766. 3.50	743. 3.50	732. 3.50	686. 3.50	663. 3.50	652. 3.50	428. 3.50	285. 3.50
DIVERSION TO +	DIV10A	.00	1	FLOW TIME	369. 3.50	367. 3.50	366. 3.50	361. 3.50	358. 3.50	356. 3.50	313. 3.50	267. 3.50
HYDROGRAPH AT +	DCU10A	.00	1	FLOW TIME	397. 3.50	376. 3.50	366. 3.50	325. 3.50	306. 3.50	296. 3.50	115. 3.50	18. 3.50
HYDROGRAPH AT +	RET11	.00	1	FLOW TIME	285. 3.67	283. 3.67	282. 3.67	277. 3.67	275. 3.67	274. 3.67	253. 3.67	240. 3.67
HYDROGRAPH AT +	RET6	.00	1	FLOW TIME	109. 3.50	106. 3.50	105. 3.50	99. 3.50	97. 3.50	96. 3.50	70. 3.50	53. 3.50
4 COMBINED AT +	DIV11A	.49	1	FLOW TIME	1085. 3.50	1053. 3.50	1037. 3.50	972. 3.50	941. 3.50	926. 3.50	627. 3.50	455. 3.50
2 COMBINED AT +	DUMMY	1.16	1	FLOW TIME	1086. 3.50	1054. 3.50	1038. 3.50	973. 3.50	942. 3.50	927. 3.50	628. 3.50	456. 3.50
HYDROGRAPH AT +	RETD18	.00	1	FLOW TIME	23. 3.58	22. 3.58	22. 3.58	20. 3.58	19. 3.58	19. 3.58	10. 3.58	6. 3.58
DIVERSION TO +	DCHD1C	.00	1	FLOW TIME	23. 3.58	22. 3.58	22. 3.58	20. 3.58	19. 3.58	19. 3.58	10. 3.58	6. 3.58
HYDROGRAPH AT +	DHD1C	.00	1	FLOW TIME	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00
HYDROGRAPH AT +	RETD28	.00	1	FLOW TIME	92. 3.58	89. 3.58	88. 3.58	83. 3.58	81. 3.58	80. 3.58	56. 3.58	41. 3.58
2 COMBINED AT +	CHD02C	.00	1	FLOW TIME	92. 3.58	89. 3.58	88. 3.58	83. 3.58	81. 3.58	80. 3.58	56. 3.58	41. 3.58
DIVERSION TO +	DCHD2C	.00	1	FLOW TIME	59. 3.58	58. 3.58	57. 3.58	54. 3.58	52. 3.58	52. 3.58	36. 3.58	27. 3.58
HYDROGRAPH AT +	DHD2C	.00	1	FLOW TIME	32. 3.58	31. 3.58	31. 3.58	29. 3.58	28. 3.58	28. 3.58	20. 3.58	14. 3.58
HYDROGRAPH AT +	RETD48	.00	1	FLOW TIME	61. 3.50	60. 3.50	59. 3.50	56. 3.50	54. 3.50	53. 3.50	38. 3.50	28. 3.50
2 COMBINED AT +	CHD04C	.00	1	FLOW TIME	93. 3.50	91. 3.50	89. 3.50	85. 3.50	82. 3.50	81. 3.50	57. 3.50	42. 3.50
DIVERSION TO +	DCHD4C	.00	1	FLOW TIME	84. 3.50	82. 3.50	81. 3.50	76. 3.50	74. 3.50	73. 3.50	51. 3.50	38. 3.50
HYDROGRAPH AT +	DHD4C	.00	1	FLOW TIME	9. 3.50	9. 3.50	8. 3.50	8. 3.50	8. 3.50	8. 3.50	5. 3.50	4. 3.50
DIVERSION TO +	DCHD5C	.00	1	FLOW TIME	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50
HYDROGRAPH AT +	DHD5C	.00	1	FLOW TIME	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	1. 3.50	0. 3.50
HYDROGRAPH AT +	RETD68	.00	1	FLOW TIME	216. 3.50	211. 3.50	209. 3.50	198. 3.50	193. 3.50	191. 3.50	139. 3.50	106. 3.50
2 COMBINED AT +	CHD06C	.00	1	FLOW TIME	217. 3.50	212. 3.50	210. 3.50	199. 3.50	194. 3.50	191. 3.50	140. 3.50	107. 3.50
DIVERSION TO +	DCHD6C	.00	1	FLOW TIME	217. 3.50	212. 3.50	209. 3.50	199. 3.50	194. 3.50	191. 3.50	140. 3.50	107. 3.50
HYDROGRAPH AT +	DHD6C	.00	1	FLOW TIME	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50	0. 3.50
2 COMBINED AT +	DUMMY	1.16	1	FLOW TIME	1086. 3.50	1054. 3.50	1038. 3.50	973. 3.50	942. 3.50	927. 3.50	628. 3.50	456. 3.50
HYDROGRAPH AT +	RETC5C	.00	1	FLOW TIME	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50
HYDROGRAPH AT +	95-78	.01	1	FLOW TIME	15. 3.50	14. 3.50	14. 3.50	13. 3.50	13. 3.50	13. 3.50	9. 3.50	7. 3.50
2 COMBINED AT +	C95-78	.01	1	FLOW TIME	22. 3.50	22. 3.50	22. 3.50	21. 3.50	20. 3.50	20. 3.50	14. 3.50	11. 3.50
HYDROGRAPH AT +	RETC6C	.00	1	FLOW TIME	217. 3.50	212. 3.50	209. 3.50	199. 3.50	194. 3.50	191. 3.50	140. 3.50	107. 3.50
HYDROGRAPH AT +	95-88	.00	1	FLOW TIME	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	4. 3.50	3. 3.50
2 COMBINED AT +	C95-88	.00	1	FLOW TIME	224. 3.50	218. 3.50	216. 3.50	205. 3.50	200. 3.50	197. 3.50	144. 3.50	110. 3.50
HYDROGRAPH AT +	EMLA1	.02	1	FLOW TIME	33. 3.50	32. 3.50	32. 3.50	30. 3.50	29. 3.50	29. 3.50	22. 3.50	17. 3.58
HYDROGRAPH AT +	TP1	.00	1	FLOW TIME	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	1. 3.50	1. 3.50

Proposed.OUT												
4 COMBINED AT	BR-TP	.03	1	FLOW TIME	281. 3.50	274. 3.50	271. 3.50	257. 3.50	251. 3.50	247. 3.50	181. 3.50	138. 3.50
HYDROGRAPH AT	ES2	.05	1	FLOW TIME	84. 3.58	82. 3.58	81. 3.58	77. 3.58	75. 3.58	74. 3.58	55. 3.58	43. 3.58
HYDROGRAPH AT	BRENT1	.00	1	FLOW TIME	5. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	3. 3.50	3. 3.50
HYDROGRAPH AT	EGC3B	.02	1	FLOW TIME	36. 3.50	35. 3.50	35. 3.50	33. 3.50	32. 3.50	32. 3.50	24. 3.50	19. 3.50
4 COMBINED AT	DUMMY	.10	1	FLOW TIME	398. 3.50	388. 3.50	384. 3.50	365. 3.50	356. 3.50	351. 3.50	258. 3.50	197. 3.50
HYDROGRAPH AT	HORSE5	.00	1	FLOW TIME	9. 3.50	9. 3.50	9. 3.50	9. 3.50	8. 3.50	8. 3.50	6. 3.50	5. 3.50
HYDROGRAPH AT	EPF1	.00	1	FLOW TIME	4. 3.50	4. 3.50	4. 3.50	3. 3.50	3. 3.50	3. 3.50	3. 3.50	2. 3.50
3 COMBINED AT	CP44	.10	1	FLOW TIME	411. 3.50	401. 3.50	396. 3.50	377. 3.50	367. 3.50	363. 3.50	267. 3.50	205. 3.50
DIVERSION TO	BRENT	.10	1	FLOW TIME	362. 3.50	352. 3.50	347. 3.50	327. 3.50	317. 3.50	312. 3.50	213. 3.50	149. 3.50
HYDROGRAPH AT	SOUTH	.10	1	FLOW TIME	56. 3.75	56. 3.75	56. 3.75	56. 3.33	56. 3.33	55. 3.33	56. 3.42	56. 3.50
HYDROGRAPH AT	SKY1	.00	1	FLOW TIME	6. 3.50	6. 3.50	6. 3.50	6. 3.50	6. 3.50	5. 3.50	4. 3.50	3. 3.50
HYDROGRAPH AT	HORSE4	.01	1	FLOW TIME	16. 3.50	15. 3.50	15. 3.50	14. 3.50	14. 3.50	14. 3.50	11. 3.50	9. 3.50
HYDROGRAPH AT	EGC3A	.02	1	FLOW TIME	36. 3.50	36. 3.50	35. 3.50	33. 3.50	33. 3.50	32. 3.50	24. 3.50	19. 3.50
HYDROGRAPH AT	EGC4	.00	1	FLOW TIME	12. 3.50	11. 3.50	11. 3.50	11. 3.50	10. 3.50	10. 3.50	8. 3.50	6. 3.50
5 COMBINED AT	DUMMY	.14	1	FLOW TIME	118. 3.50	117. 3.50	117. 3.50	114. 3.50	113. 3.50	113. 3.50	101. 3.50	93. 3.50
HYDROGRAPH AT	95-9B	.01	1	FLOW TIME	22. 3.58	21. 3.58	21. 3.58	20. 3.58	19. 3.58	19. 3.58	14. 3.58	10. 3.58
2 COMBINED AT	CP45	.15	1	FLOW TIME	138. 3.50	137. 3.50	136. 3.50	133. 3.50	131. 3.50	130. 3.50	113. 3.50	102. 3.50
DIVERSION TO	RACEL	.15	1	FLOW TIME	101. 3.33	101. 3.33	101. 3.33	101. 3.33	101. 3.33	101. 3.33	101. 3.42	101. 3.50
HYDROGRAPH AT	HORSE	.15	1	FLOW TIME	37. 3.50	36. 3.50	35. 3.50	32. 3.50	30. 3.50	29. 3.50	12. 3.50	1. 3.50
HYDROGRAPH AT	RETC4C	.00	1	FLOW TIME	84. 3.50	82. 3.50	81. 3.50	76. 3.50	74. 3.50	73. 3.50	51. 3.50	38. 3.50
HYDROGRAPH AT	RETC2C	.00	1	FLOW TIME	59. 3.58	58. 3.58	57. 3.58	54. 3.58	52. 3.58	52. 3.58	36. 3.58	27. 3.58
HYDROGRAPH AT	SHEP2A	.01	1	FLOW TIME	8. 3.67	8. 3.67	7. 3.67	7. 3.67	6. 3.67	6. 3.67	3. 3.67	2. 3.67
2 COMBINED AT	DUMMY	.01	1	FLOW TIME	67. 3.58	65. 3.58	64. 3.58	60. 3.58	58. 3.58	58. 3.58	39. 3.58	28. 3.58
HYDROGRAPH AT	EGC2	.01	1	FLOW TIME	15. 3.58	15. 3.58	15. 3.58	14. 3.58	14. 3.58	14. 3.58	11. 3.58	9. 3.58
HYDROGRAPH AT	IRON2	.01	1	FLOW TIME	15. 3.58	15. 3.58	15. 3.58	14. 3.58	14. 3.58	14. 3.58	11. 3.58	9. 3.58
HYDROGRAPH AT	OFFH	.01	1	FLOW TIME	12. 3.50	12. 3.50	12. 3.50	11. 3.50	11. 3.50	11. 3.50	7. 3.50	5. 3.50
5 COMBINED AT	SK-IR	.04	1	FLOW TIME	190. 3.50	185. 3.50	182. 3.50	172. 3.50	168. 3.50	165. 3.50	116. 3.50	86. 3.58
HYDROGRAPH AT	EMLA2	.02	1	FLOW TIME	41. 3.50	40. 3.50	39. 3.50	38. 3.50	37. 3.50	36. 3.50	27. 3.58	21. 3.58
HYDROGRAPH AT	TP2	.00	1	FLOW TIME	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	2. 3.50	1. 3.50	1. 3.50
3 COMBINED AT	IR-TP	.06	1	FLOW TIME	233. 3.50	227. 3.50	224. 3.50	212. 3.50	206. 3.50	203. 3.50	144. 3.50	108. 3.58
HYDROGRAPH AT	ES1	.02	1	FLOW TIME	29. 3.50	28. 3.50	28. 3.50	27. 3.50	26. 3.50	25. 3.50	18. 3.50	14. 3.50
HYDROGRAPH AT	IRON3	.00	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	4. 3.50	3. 3.50
3 COMBINED AT	IR-FT	.08	1	FLOW TIME	267. 3.50	260. 3.50	257. 3.50	243. 3.50	237. 3.50	233. 3.50	166. 3.50	124. 3.50
DIVERSION TO	IREAST	.08	1	FLOW TIME	118. 3.50	117. 3.50	117. 3.50	115. 3.50	114. 3.50	113. 3.50	104. 3.50	98. 3.50
HYDROGRAPH AT												

+	FTNOR	.08	1	FLOW TIME	Proposed		OUT		123. 3.50	120. 3.50	63. 3.50	26. 3.50
					149. 3.50	143. 3.50	140. 3.50	129. 3.50				
+	DIVERSION TO FTNOR	.08	1	FLOW TIME	149. 3.50	143. 3.50	140. 3.50	129. 3.50	123. 3.50	120. 3.50	63. 3.50	26. 3.50
+	HYDROGRAPH AT FTNOR	.08	1	FLOW TIME	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00	0. .00
+	4 COMBINED AT DUMMY	6.37	1	FLOW TIME	1123. 3.50	1090. 3.50	1073. 3.50	1005. 3.50	972. 3.50	956. 3.50	641. 3.50	457. 3.50
+	HYDROGRAPH AT RETC1C	.00	1	FLOW TIME	23. 3.58	22. 3.58	22. 3.58	20. 3.58	19. 3.58	19. 3.58	10. 3.58	6. 3.58
+	HYDROGRAPH AT SHEP2B	.09	1	FLOW TIME	59. 3.67	57. 3.67	56. 3.67	51. 3.67	48. 3.67	47. 3.67	25. 3.67	14. 3.75
+	2 COMBINED AT LC-SM	.09	1	FLOW TIME	76. 3.67	73. 3.67	72. 3.67	66. 3.67	63. 3.67	61. 3.67	34. 3.67	18. 3.67
+	HYDROGRAPH AT EGC1	.01	1	FLOW TIME	14. 3.50	14. 3.50	14. 3.50	13. 3.50	13. 3.50	12. 3.50	9. 3.50	7. 3.50
+	HYDROGRAPH AT IRON1	.00	1	FLOW TIME	8. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50
+	HYDROGRAPH AT EL8	.05	1	FLOW TIME	48. 3.58	46. 3.58	45. 3.58	42. 3.58	41. 3.58	40. 3.58	24. 3.58	15. 3.58
+	4 COMBINED AT DUMMY	.15	1	FLOW TIME	142. 3.58	136. 3.58	134. 3.58	123. 3.58	118. 3.58	116. 3.58	68. 3.58	40. 3.58
+	HYDROGRAPH AT LOG1A	.01	1	FLOW TIME	14. 3.50	13. 3.50	13. 3.50	13. 3.50	12. 3.50	12. 3.50	10. 3.50	8. 3.50
+	HYDROGRAPH AT STR76A	.00	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	4. 3.50	3. 3.50
+	3 COMBINED AT DUMMY	.16	1	FLOW TIME	156. 3.58	151. 3.58	148. 3.58	137. 3.58	132. 3.58	129. 3.58	78. 3.58	49. 3.58
+	HYDROGRAPH AT EL1	.04	1	FLOW TIME	39. 3.58	37. 3.58	37. 3.58	34. 3.58	33. 3.58	32. 3.58	20. 3.58	12. 3.58
+	HYDROGRAPH AT EML1	.03	1	FLOW TIME	46. 3.58	45. 3.58	45. 3.58	42. 3.58	41. 3.58	41. 3.58	29. 3.58	22. 3.58
+	HYDROGRAPH AT EL2	.04	1	FLOW TIME	39. 3.58	38. 3.58	37. 3.58	34. 3.58	33. 3.58	32. 3.58	20. 3.58	12. 3.58
+	HYDROGRAPH AT EML2	.04	1	FLOW TIME	57. 3.58	56. 3.58	55. 3.58	52. 3.58	51. 3.58	50. 3.58	36. 3.58	27. 3.58
+	5 COMBINED AT DUMMY	.30	1	FLOW TIME	338. 3.58	327. 3.58	322. 3.58	300. 3.58	290. 3.58	284. 3.58	183. 3.58	122. 3.58
+	HYDROGRAPH AT STR79	.01	1	FLOW TIME	14. 3.58	14. 3.58	14. 3.58	13. 3.58	13. 3.58	13. 3.58	10. 3.58	8. 3.58
+	2 COMBINED AT DUMMY	.31	1	FLOW TIME	352. 3.58	341. 3.58	336. 3.58	314. 3.58	303. 3.58	297. 3.58	192. 3.58	130. 3.58
+	HYDROGRAPH AT EL7	.04	1	FLOW TIME	41. 3.58	40. 3.58	39. 3.58	36. 3.58	35. 3.58	34. 3.58	21. 3.58	13. 3.58
+	HYDROGRAPH AT EL6	.04	1	FLOW TIME	43. 3.58	41. 3.58	40. 3.58	37. 3.58	36. 3.58	35. 3.58	21. 3.58	13. 3.58
+	HYDROGRAPH AT TP3	.00	1	FLOW TIME	9. 3.50	9. 3.50	9. 3.50	9. 3.50	8. 3.50	8. 3.50	6. 3.50	5. 3.50
+	HYDROGRAPH AT STR76B	.00	1	FLOW TIME	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	3. 3.50	2. 3.50
+	4 COMBINED AT DUMMY	.09	1	FLOW TIME	94. 3.58	91. 3.58	90. 3.58	83. 3.58	80. 3.58	79. 3.58	50. 3.58	33. 3.58
+	HYDROGRAPH AT TP4	.00	1	FLOW TIME	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	5. 3.50	4. 3.50	3. 3.50
+	HYDROGRAPH AT ESCHL1	.02	1	FLOW TIME	27. 3.58	27. 3.58	26. 3.58	24. 3.58	24. 3.58	23. 3.58	15. 3.58	10. 3.58
+	HYDROGRAPH AT LOG1B	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50
+	HYDROGRAPH AT EPRK2	.01	1	FLOW TIME	4. 3.58	3. 3.58	3. 3.58	3. 3.58	3. 3.58	3. 3.58	1. 3.58	0. 3.75
+	5 COMBINED AT LC-TP	.12	1	FLOW TIME	135. 3.58	130. 3.58	128. 3.58	120. 3.58	115. 3.58	113. 3.58	72. 3.58	48. 3.58
+	HYDROGRAPH AT FTNOR	.00	1	FLOW TIME	149. 3.50	143. 3.50	140. 3.50	129. 3.50	123. 3.50	120. 3.50	63. 3.50	26. 3.50
+	HYDROGRAPH AT EL5	.04	1	FLOW TIME	42. 3.58	40. 3.58	39. 3.58	36. 3.58	35. 3.58	34. 3.58	21. 3.58	13. 3.58
+	HYDROGRAPH AT EL4	.03	1	FLOW TIME	33. 3.58	32. 3.58	31. 3.58	29. 3.58	28. 3.58	27. 3.58	17. 3.58	11. 3.58
+	HYDROGRAPH AT STR77	.00	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	7. 3.50	5. 3.50	4. 3.50

				TIME	3.50	3.50	Proposed.OUT 3.50	3.50	3.50	3.50	3.50	3.50
4 COMBINED AT	DUMMY	.08	1	FLOW TIME	224. 3.58	215. 3.58	211. 3.58	195. 3.58	186. 3.58	182. 3.58	102. 3.58	52. 3.58
+ DIVERSION TO	OHARE	.08	1	FLOW TIME	47. 3.58	45. 3.58	44. 3.58	39. 3.58	37. 3.58	36. 3.58	14. 3.58	0. 3.58
+ HYDROGRAPH AT	RFTLC	.08	1	FLOW TIME	177. 3.58	171. 3.58	168. 3.58	156. 3.58	150. 3.58	147. 3.58	88. 3.58	52. 3.58
+ HYDROGRAPH AT	EL3	.05	1	FLOW TIME	48. 3.58	47. 3.58	46. 3.58	43. 3.58	41. 3.58	40. 3.58	24. 3.58	15. 3.58
+ HYDROGRAPH AT	FORT1	.01	1	FLOW TIME	14. 3.67	14. 3.67	14. 3.67	13. 3.67	13. 3.67	13. 3.67	10. 3.67	8. 3.67
+ HYDROGRAPH AT	LOG2	.01	1	FLOW TIME	13. 3.50	12. 3.50	12. 3.50	12. 3.50	12. 3.50	11. 3.50	9. 3.50	7. 3.50
5 COMBINED AT	FT-LC	.26	1	FLOW TIME	382. 3.58	370. 3.58	363. 3.58	338. 3.58	326. 3.58	320. 3.58	200. 3.58	127. 3.58
+ DIVERSION TO	LOGCAB	.26	1	FLOW TIME	193. 3.58	187. 3.58	184. 3.58	172. 3.58	166. 3.58	163. 3.58	107. 3.58	73. 3.58
+ HYDROGRAPH AT	R2FTLC	.26	1	FLOW TIME	189. 3.58	183. 3.58	179. 3.58	166. 3.58	160. 3.58	156. 3.58	93. 3.58	54. 3.58
+ HYDROGRAPH AT	FORT2	.01	1	FLOW TIME	14. 3.67	13. 3.67	13. 3.67	13. 3.67	12. 3.67	12. 3.67	9. 3.67	8. 3.67
+ HYDROGRAPH AT	EML3	.04	1	FLOW TIME	62. 3.58	61. 3.58	60. 3.58	57. 3.58	55. 3.58	54. 3.58	39. 3.58	29. 3.58
+ HYDROGRAPH AT	EML4	.03	1	FLOW TIME	51. 3.58	50. 3.58	49. 3.58	47. 3.58	45. 3.58	45. 3.58	32. 3.58	24. 3.58
5 COMBINED AT	DUMMY	.65	1	FLOW TIME	668. 3.58	647. 3.58	636. 3.58	595. 3.58	574. 3.58	564. 3.58	365. 3.58	245. 3.58
+ HYDROGRAPH AT	SHEEP4	.01	1	FLOW TIME	10. 3.67	10. 3.67	9. 3.67	9. 3.67	8. 3.67	8. 3.67	4. 3.67	2. 3.67
2 COMBINED AT	FT-MO	.66	1	FLOW TIME	677. 3.58	656. 3.58	645. 3.58	603. 3.58	582. 3.58	572. 3.58	369. 3.58	246. 3.58
+ HYDROGRAPH AT	OFFC	.13	1	FLOW TIME	80. 3.75	77. 3.75	75. 3.75	69. 3.75	66. 3.75	64. 3.75	36. 3.83	20. 3.83
+ HYDROGRAPH AT	95-3	.01	1	FLOW TIME	15. 3.50	14. 3.50	14. 3.50	13. 3.50	13. 3.50	13. 3.50	9. 3.50	6. 3.50
+ HYDROGRAPH AT	OFFB	.13	1	FLOW TIME	73. 3.83	70. 3.83	68. 3.83	63. 3.83	60. 3.83	58. 3.83	32. 3.92	18. 3.92
+ HYDROGRAPH AT	95-2	.00	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	6. 3.50	6. 3.50	6. 3.50	4. 3.50	3. 3.50
4 COMBINED AT	DUMMY	.28	1	FLOW TIME	158. 3.75	152. 3.75	149. 3.75	137. 3.83	131. 3.83	128. 3.83	72. 3.83	40. 3.83
+ HYDROGRAPH AT	OFFA	.02	1	FLOW TIME	17. 3.58	16. 3.58	16. 3.58	14. 3.58	14. 3.58	13. 3.58	7. 3.58	4. 3.58
+ HYDROGRAPH AT	95-1	.00	1	FLOW TIME	7. 3.50	7. 3.50	7. 3.50	7. 3.50	6. 3.50	6. 3.50	4. 3.50	3. 3.50
3 COMBINED AT	CP27B	.31	1	FLOW TIME	173. 3.75	166. 3.75	163. 3.75	149. 3.75	142. 3.75	139. 3.75	77. 3.75	44. 3.83
+ HYDROGRAPH AT	OFFZ	.05	1	FLOW TIME	35. 3.67	34. 3.67	33. 3.67	30. 3.67	29. 3.67	28. 3.67	15. 3.67	8. 3.75
2 COMBINED AT	COFFZ	.36	1	FLOW TIME	206. 3.75	198. 3.75	194. 3.75	178. 3.75	170. 3.75	166. 3.75	92. 3.75	52. 3.83
+ HYDROGRAPH AT	OFFDA	.64	1	FLOW TIME	357. 4.00	343. 4.00	337. 4.00	310. 4.00	296. 4.00	290. 4.00	166. 4.00	97. 4.08
+ ROUTED TO	ROFFDA	.64	1	FLOW TIME	330. 4.42	317. 4.42	311. 4.42	286. 4.42	274. 4.42	268. 4.42	153. 4.42	90. 4.50
+ HYDROGRAPH AT	OFFDB	.49	1	FLOW TIME	235. 4.00	226. 4.00	221. 4.00	202. 4.00	193. 4.00	189. 4.00	104. 4.00	59. 4.08
2 COMBINED AT	CP27A	1.14	1	FLOW TIME	492. 4.25	473. 4.25	463. 4.25	426. 4.33	408. 4.33	398. 4.33	227. 4.33	131. 4.42
+ HYDROGRAPH AT	DCKC7	.00	1	FLOW TIME	1822. 3.58	1771. 3.58	1746. 3.58	1644. 3.58	1594. 3.58	1568. 3.58	1081. 3.58	783. 3.58
+ HYDROGRAPH AT	OFFX	.02	1	FLOW TIME	13. 3.67	12. 3.67	12. 3.67	11. 3.67	10. 3.67	10. 3.67	6. 3.67	3. 3.67
3 COMBINED AT	EPT16	1.16	1	FLOW TIME	2255. 4.08	2184. 4.08	2148. 4.08	2007. 4.08	1937. 4.08	1902. 4.08	1230. 4.08	830. 4.50
+ HYDROGRAPH AT	HUAL3	.00	1	FLOW TIME	7. 3.58	7. 3.58	6. 3.58	6. 3.58	6. 3.58	6. 3.58	5. 3.58	4. 3.58
+ HYDROGRAPH AT	EMLA4	.07	1	FLOW TIME	105. 3.58	103. 3.58	101. 3.58	96. 3.58	93. 3.58	92. 3.58	66. 3.58	49. 3.58

Proposed.OUT												
HYDROGRAPH AT	STRT10	.00	1	FLOW TIME	8.3.50	8.3.50	8.3.50	7.3.50	7.3.50	7.3.50	6.3.50	4.3.50
HYDROGRAPH AT	EMLA3	.01	1	FLOW TIME	25.3.50	24.3.50	24.3.50	23.3.50	22.3.50	22.3.50	16.3.50	12.3.50
HYDROGRAPH AT	STRT11	.01	1	FLOW TIME	15.3.58	15.3.58	15.3.58	14.3.58	14.3.58	13.3.58	10.3.58	8.3.58
5 COMBINED AT	DUMMY	.10	1	FLOW TIME	154.3.58	151.3.58	149.3.58	141.3.58	138.3.58	136.3.58	98.3.58	75.3.58
HYDROGRAPH AT	SHEEP3	.04	1	FLOW TIME	28.3.67	27.3.67	27.3.67	24.3.67	23.3.67	23.3.67	12.3.75	7.3.75
HYDROGRAPH AT	EMLA5	.07	1	FLOW TIME	115.3.58	112.3.58	111.3.58	105.3.58	102.3.58	101.3.58	72.3.58	54.3.58
HYDROGRAPH AT	EPRK1	.00	1	FLOW TIME	1.3.58	1.3.58	1.3.58	1.3.58	1.3.58	1.3.58	0.3.58	0.3.75
5 COMBINED AT	DUMMY	1.37	1	FLOW TIME	2325.4.08	2252.4.08	2216.4.08	2071.4.08	1999.4.08	1964.4.08	1300.3.58	933.3.58
2 COMBINED AT	SM-MO	1.73	1	FLOW TIME	2455.4.08	2377.4.08	2338.4.08	2185.4.08	2108.4.08	2070.4.08	1372.3.58	971.3.58
2 COMBINED AT	CP43	2.39	1	FLOW TIME	3090.3.58	2996.3.58	2949.3.58	2763.3.58	2671.3.58	2625.3.58	1741.3.58	1217.3.58
1 SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)												
ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	DT	COMPUTATION PEAK	INTERPOLATED TO INTERVAL TIME TO PEAK	VOLUME			
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)			
FOR PLAN = 1	RATIO=	1.00										
RCD1C	MANE	5.00	5.67	221.08	.16	5.00	5.16	220.00	.16			
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3238E+00 EXCESS= .0000E+00 OUTFLOW= .3523E+00 BASIN STORAGE= .1286E-03 PERCENT ERROR= -8.8												
FOR PLAN = 1	RATIO=	.98										
RCD1C	MANE	5.00	5.11	219.85	.15	5.00	5.11	220.00	.15			
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3150E+00 EXCESS= .0000E+00 OUTFLOW= .3298E+00 BASIN STORAGE= .1227E-03 PERCENT ERROR= -4.7												
FOR PLAN = 1	RATIO=	.97										
RCD1C	MANE	5.00	5.16	220.26	.15	5.00	5.04	220.00	.15			
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3106E+00 EXCESS= .0000E+00 OUTFLOW= .3258E+00 BASIN STORAGE= .1231E-03 PERCENT ERROR= -4.9												
FOR PLAN = 1	RATIO=	.93										
RCD1C	MANE	5.00	4.93	223.66	.14	5.00	4.64	225.00	.14			
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2932E+00 EXCESS= .0000E+00 OUTFLOW= .3030E+00 BASIN STORAGE= .1264E-03 PERCENT ERROR= -3.4												
FOR PLAN = 1	RATIO=	.91										
RCD1C	MANE	5.00	4.66	225.48	.13	5.00	4.59	225.00	.13			
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2845E+00 EXCESS= .0000E+00 OUTFLOW= .2939E+00 BASIN STORAGE= .1102E-03 PERCENT ERROR= -3.4												
FOR PLAN = 1	RATIO=	.90										
RCD1C	MANE	5.00	4.29	226.36	.13	5.00	4.22	225.00	.13			
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2801E+00 EXCESS= .0000E+00 OUTFLOW= .2856E+00 BASIN STORAGE= .1289E-03 PERCENT ERROR= -2.0												
FOR PLAN = 1	RATIO=	.70										
RCD1C	MANE	4.95	3.43	226.03	.09	5.00	3.07	225.00	.09			
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1951E+00 EXCESS= .0000E+00 OUTFLOW= .2013E+00 BASIN STORAGE= .1055E-03 PERCENT ERROR= -3.2												
FOR PLAN = 1	RATIO=	.57										
RCD1C	MANE	5.00	2.44	230.11	.07	5.00	2.42	230.00	.07			
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1422E+00 EXCESS= .0000E+00 OUTFLOW= .1470E+00 BASIN STORAGE= .1296E-03 PERCENT ERROR= -3.5												
*** NORMAL END OF HEC-1 ***												

Detention Basin 1

DEPARTMENT OF PUBLIC WORKS



Mayor:
OSCAR B. GOODMAN

City Council:
GARY REESE, MAYOR PRO-TEM.
LARRY BROWN
STEVE WOLFSON
LOIS TARKANIAN
STEVEN D. ROSS
RICKI Y. BARLOW

City Manager:
DOUGLAS A. SELBY

Director of Public Works:
JORGE CERVANTES, P.E.

Acting City Engineer:
CHERI EDELMAN, PE

HORSE DRIVE IMPROVEMENTS

HORSE DRIVE/U.S. 95 INTERCHANGE

BID NUMBER: 09.1730.07

FUNDED BY:
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA,
SURFACE TRANSPORTATION PROGRAM,
CITY OF LAS VEGAS SANITATION,
CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT
AND
NEVADA DEPARTMENT OF TRANSPORTATION

REVIEWED

Cheri Edel 10/21/08
City Engineer, Acting Date

Mary Jane 10/7/08
City Traffic Engineer Date

Rafael M. G. MAS 10/16/08
City Project Manager Date

Geli On. Fraser, II 7/8/2008
Clark County Regional Date
Flood Control District

 7-1-08
Regional Transportation Commission Date
Of Southern Nevada

Peggy Miller 7-1-08
Cox Communications Las Vegas, Inc. Date

 Embarq Telephone

 7/3/08
 Date

THE AFFIXED EMBARGO NEVADA APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION STANDARD REGULATIONS.

Margie M. Cello 7/7/08
Nevada Power Company-Distribution Date

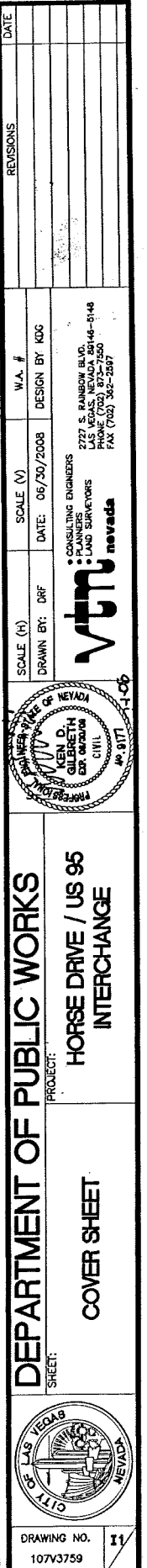
NEVADA POWER ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NEVADA POWER RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

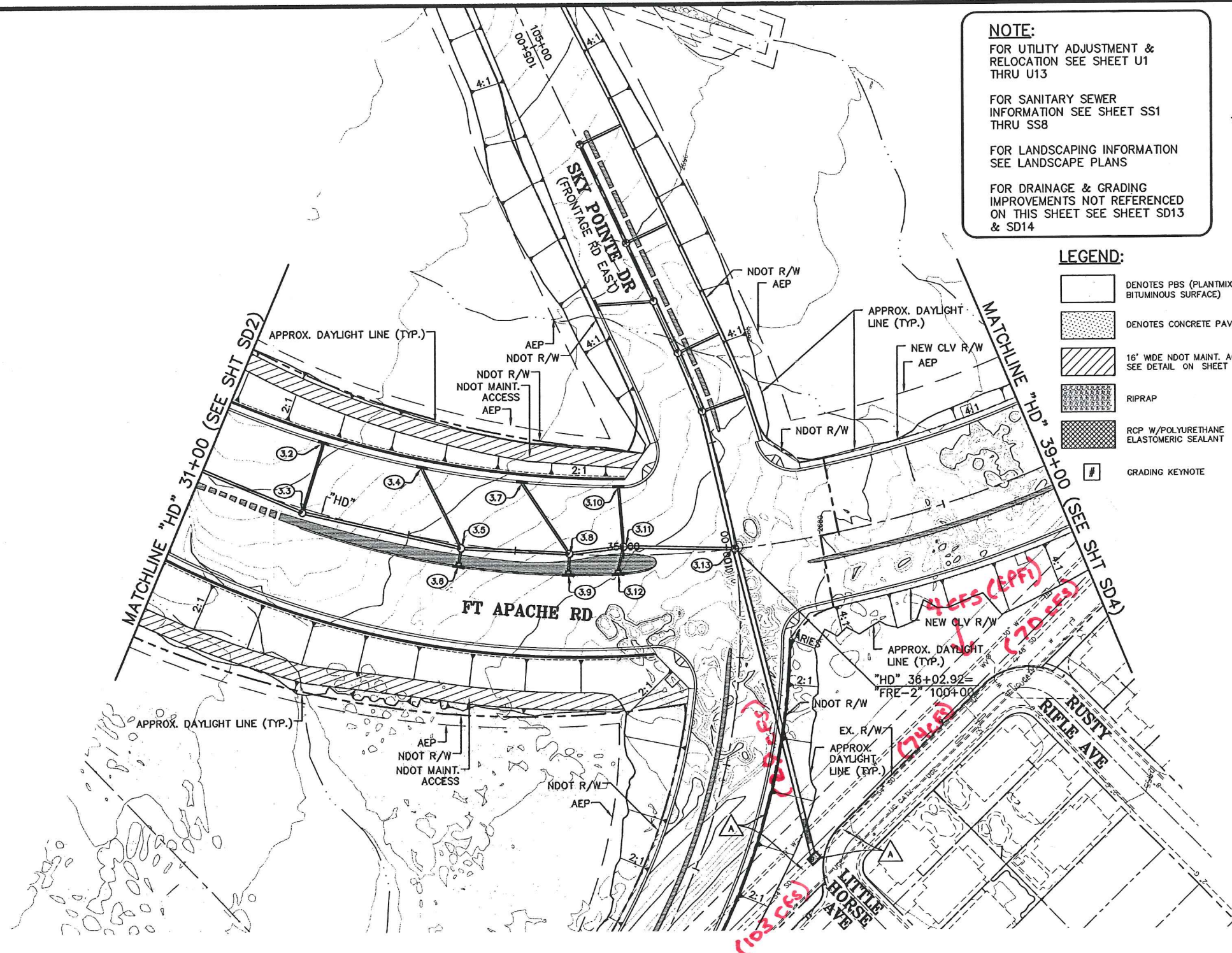
Southwest Gas Corporation 7/7/08
Date

Joseph Morgan 7/14/08
Las Vegas Valley Water District Date

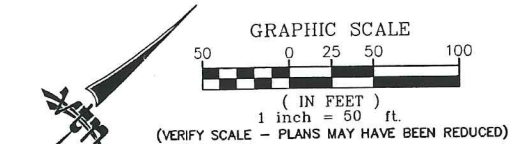
LVWD PROJECT # H80315

SHEETS: I1, I3, R2-R6, U1, U4, U2, U4-U7, U10, U11
 C6A, C7, C8, C20, C21, C24, C25, P1, P3, P3A,
 P4, P7, P8, P11, P15, S51, S56, S61, S61A,
 SD3-SD5, SD7-SD8A, SD2L, SD13, SD1
 SD26, SD31, SD32, SD34, SD3C, RW1-RW3,
 RW6-RW9, RW20, RW21, RW24, RW28, RW31





NOTE:
FOR UTILITY ADJUSTMENT & RELOCATION SEE SHEET U1 THRU U13
FOR SANITARY SEWER INFORMATION SEE SHEET SS1 THRU SS8
FOR LANDSCAPING INFORMATION SEE LANDSCAPE PLANS
FOR DRAINAGE & GRADING IMPROVEMENTS NOT REFERENCED ON THIS SHEET SEE SHEET SD13 & SD14



DRAINAGE CONSTRUCTION NOTES:

- (3.1) NOTE NOT USED
- (3.2) "HD" 32+00.00, 63.50' LT. INSTALL NDOT TYPE 3 DROP INLET (PER NDOT STD. DWG. R-4.2.3) INSTALL 61.52 L.F. 18" RCP SEE SHEET SD25
- (3.3) "HD" 32+00.00, 4.00' RT. INSTALL NDOT 72" TYPE 2 MODIFIED MANHOLE (PER NDOT STD. DWG. R-4.3.1) INSTALL 144.46 L.F. 24" RCP SEE SHEET SD24 & SD25
- (3.4) "HD" 33+00.00, 63.50' LT. INSTALL NDOT TYPE 3 DROP INLET (PER NDOT STD. DWG. R-4.2.3) INSTALL 77.42 L.F. 18" RCP SEE SHEET SD25
- (3.5) "HD" 33+50.00, 4.00' RT. INSTALL NDOT 72" TYPE 2 MODIFIED MANHOLE (PER NDOT STD. DWG. R-4.3.1) INSTALL 94.23 L.F. 24" RCP SEE SHEET SD24 & SD25
- (3.6) "HD" 34+50.00, 20.36' RT. INSTALL 8" TYPE "A" DROP INLET INSTALL 10.35 L.F. 18" RCP SEE SHEET SD25
- (3.7) "HD" 34+00.00, 63.50' LT. INSTALL NDOT TYPE 3 DROP INLET (PER NDOT STD. DWG. R-4.2.3) INSTALL 73.78 L.F. 18" RCP SEE SHEET SD25
- (3.8) "HD" 34+50.00, 0.50' LT. INSTALL NDOT 72" TYPE 2 MODIFIED MANHOLE (PER NDOT STD. DWG. R-4.3.1) INSTALL 44.32 L.F. 24" RCP SEE SHEET SD24 & SD25
- (3.9) "HD" 34+50.00, 18.50' RT. INSTALL 8" TYPE "A" DROP INLET INSTALL 13.01 L.F. 18" RCP SEE SHEET SD25
- (3.10) "HD" 34+95.00, 63.50' LT. INSTALL NDOT TYPE 3 DROP INLET (PER NDOT STD. DWG. R-4.2.3) INSTALL 49.97 L.F. 18" RCP SEE SHEET SD25
- (3.11) "HD" 35+00.00, 7.75' LT. INSTALL NDOT 72" TYPE 2 MODIFIED MANHOLE (PER NDOT STD. DWG. R-4.3.1) INSTALL 97.13 L.F. 24" RCP SEE SHEET SD24 & SD25
- (3.12) "HD" 34+95.00, 18.67' RT. INSTALL 8" TYPE "A" DROP INLET INSTALL 19.03 L.F. 18" RCP SEE SHEET SD25
- (3.13) "HD" 36+02.92, 0' RT.= "FRE-2" 100+00.00, 0' RT. INSTALL 72" NDOT TYPE 2 MODIFIED MANHOLE (PER NDOT STD. DWG. R-4.3.1) (SAME AS NOTE #13.8) SEE SHEET SD24 & SD31

- LEGEND:**
- [Symbol] DENOTES PBS (PLANTMIX BITUMINOUS SURFACE)
 - [Symbol] DENOTES CONCRETE PAVEMENT
 - [Symbol] 16' WIDE NDOT MAINT. ACCESS SEE DETAIL ON SHEET SD1
 - [Symbol] RIPRAP
 - [Symbol] RCP W/POLYURETHANE ELASTOMERIC SEALANT
 - [Symbol] # GRADING KEYNOTE

NOTE TO CONTRACTOR REGARDING FINISHED GRADES:
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADJUST THE CONCRETE INLET APRON AND/OR GRATE TO THE FINISHED GROUND SURFACE OR TO THE FINISHED GRADE OF THE ROADWAY SURFACE (WHICHEVER IS APPLICABLE). IF THE APRON AND/OR GRATE IS CONSTRUCTED PRIOR TO FINALIZING THE FINISHED GRADE, AND THE APRON EDGES AND CORNERS AND/OR GRATE IS BEYOND 0.02' VERTICAL TOLERANCE TO THE FINISHED GRADE, THE CONTRACTOR SHALL REMOVE AND REPLACE THE APRONS AND/OR GRATE AT HIS OWN EXPENSE TO WITH IN THIS TOLERANCE IF THIS CONDITION OCCURS.

NOTE:
A PROTECT IN PLACE

APPROVED
[Signature] 7/14/08
LAS VEGAS VALLEY WATER DISTRICT
LVWD PROJECT # H80315

Call before you Dig
1-702-227-2029
NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

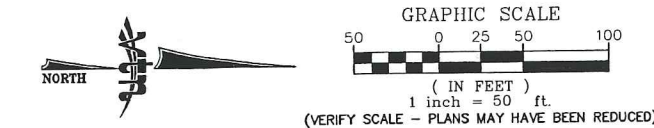
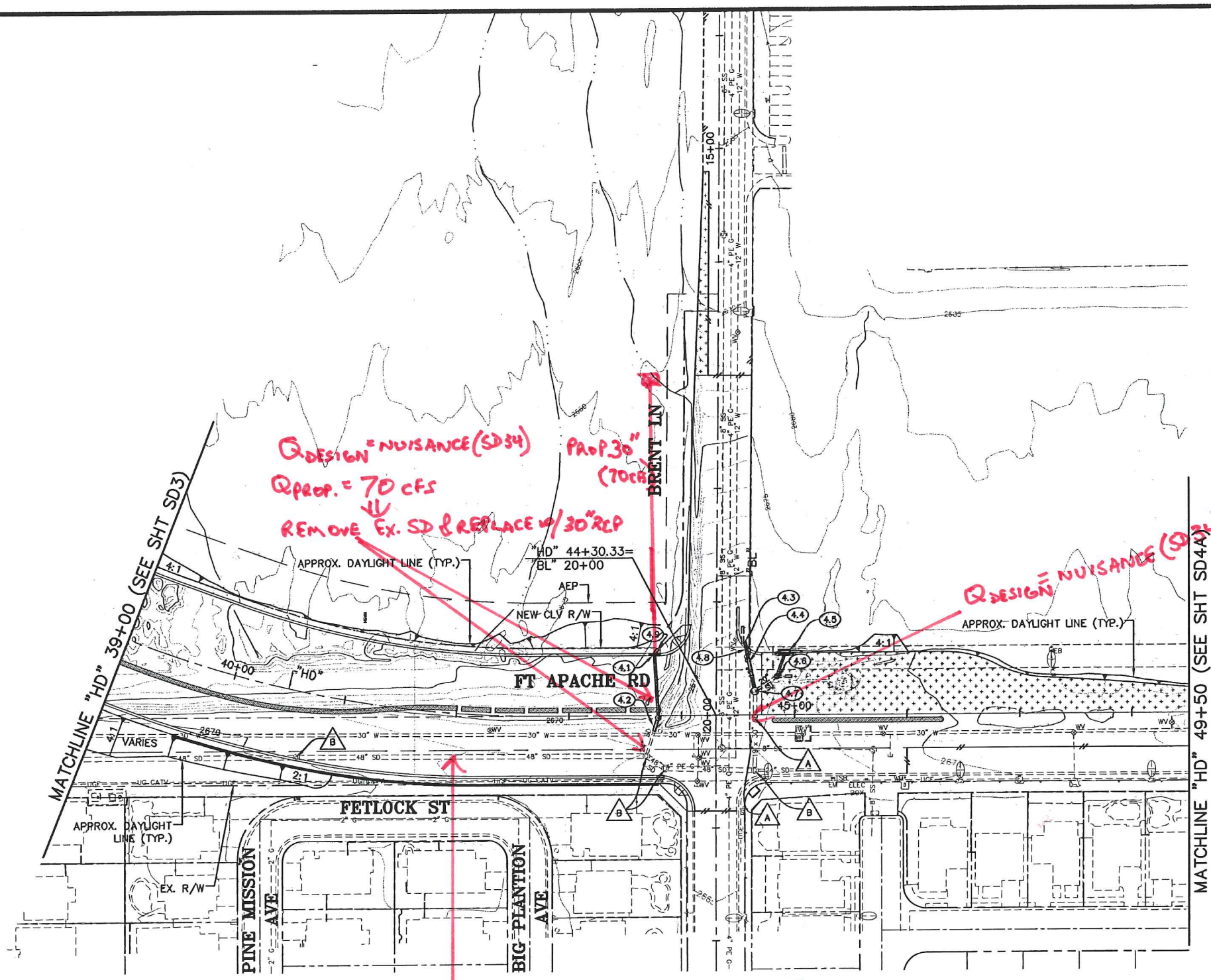


SHEET
SD3
112 OF 113 SHEETS
DRAWING NO.
107V3769

PUBLIC WORKS DEPARTMENT
CITY OF LAS VEGAS, NV
400 E. STEWART AVE.
LAS VEGAS, NV 89101
702-228-6272

STORM DRAIN AND GRADING PLAN
"HD" 31+00 TO "HD" 39+00
HORSE DRIVE / US 95 INTERCHANGE

DRAWN BY: 06/20/2008
DESIGNED BY: 06/20/2008
CHECKED BY: 06/20/2008
PROJECT NO: 6500
SCALE: 1"=50' N/A



- LEGEND:**
- [Symbol] DENOTES PBS (PLANTMIX BITUMINOUS SURFACE)
 - [Symbol] DENOTES CONCRETE PAVEMENT
 - [Symbol] 16' WIDE NDOT MAINT. ACCESS SEE DETAIL ON SHEET SD1
 - [Symbol] RIPRAP
 - [Symbol] RCP W/POLYURETHANE ELASTOMERIC SEALANT
 - [Symbol] GRADING KEYNOTE

- DRAINAGE CONSTRUCTION NOTES:**
- "HD" 43+75.89, 54.50' LT. INSTALL NDOT TYPE 3 DROP INLET (PER NDOT STD. DWG. R-4.2.3) INSTALL 52.51' L.F. 24" RCP SEE SHEET SD34
 - "HD" 43+76.55, 10.33' RT. INSTALL 48" NDOT TYPE 1 MODIFIED MANHOLE (PER NDOT STD. DWG. R-4.3.1) INSTALL 10.15' L.F. 24" RCP CONNECT TO EXISTING 24" RCP SEE SHEET SD34
 - "HD" 44+56.02, 64.75' LT. INSTALL 41.55' L.F. 24" RCP INSTALL PRECAST RCP PLUG (PER DETAIL SHEET SD39) SEE SHEET SD34
 - "HD" 44+54.93, 63.12' LT. TO "HD" 44+64.03, 23.98' LT. REMOVE EXISTING DROP INLET REMOVE 40.20± L.F. EXISTING 12" RCP
 - "HD" 44+90.89, 55.00' LT. INSTALL 10.00' TYPE "CM2" DROP INLET (PER DETAIL SHEET SD43) INSTALL 18.13' L.F. 18" RCP SEE SHEET SD34
 - "HD" 44+84.31, 34.01' LT. REMOVE EXISTING DROP INLET INSTALL 48" NDOT TYPE 1 MODIFIED MANHOLE (PER NDOT STD. DWG. R-4.3.1) CONNECT TO EXISTING 20" RCP SEE SHEET SD34
 - "HD" 44+64.71, 21.06' LT. REMOVE EXISTING SDMH INSTALL 72" NDOT TYPE 2 MODIFIED MANHOLE (PER NDOT STD. DWG. R-4.3.1) CONNECT TO EXISTING 19" x 30" RCP SEE SHEET SD34
 - "HD" 44+60.00, 49.43' LT. TO "HD" 44+56.02, 64.75' LT. RCP TO BE SEALED WITH POLYURETHANE ELASTOMERIC SEALANT WHEN WITHIN 10' OF WATERLINE. CONTRACTOR TO SUBMIT MATERIAL FOR "LAS VEGAS VALLEY WATER DISTRICT" APPROVAL
 - "HD" 43+78.72, 58.62' LT. INSTALL 5.00' L.F. 24" RCP W/24" PLUG TO BE REMOVED IN FUTURE SEE SHEET SD34

NOTE TO CONTRACTOR REGARDING FINISHED GRADES:
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- NOTES:**
- FOR UTILITY ADJUSTMENT & RELOCATION SEE SHEET U1 THRU U13
 - FOR SANITARY SEWER INFORMATION SEE SHEET SS1 THRU SS8
 - FOR LANDSCAPING INFORMATION SEE LANDSCAPE PLANS

- NOTE:**
- [Symbol] PROTECT IN PLACE
 - [Symbol] ADJUST SDMH RIM TO GRADE

APPROVED

Joseph Morgan 7/24/08
LAS VEGAS VALLEY WATER DISTRICT
LVVWD PROJECT # H80315

Call before you Dig
Avoid Overhead Power Line Contact
It's costly

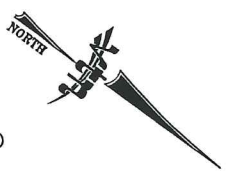
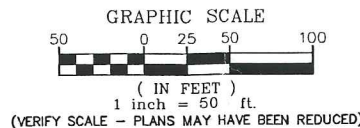
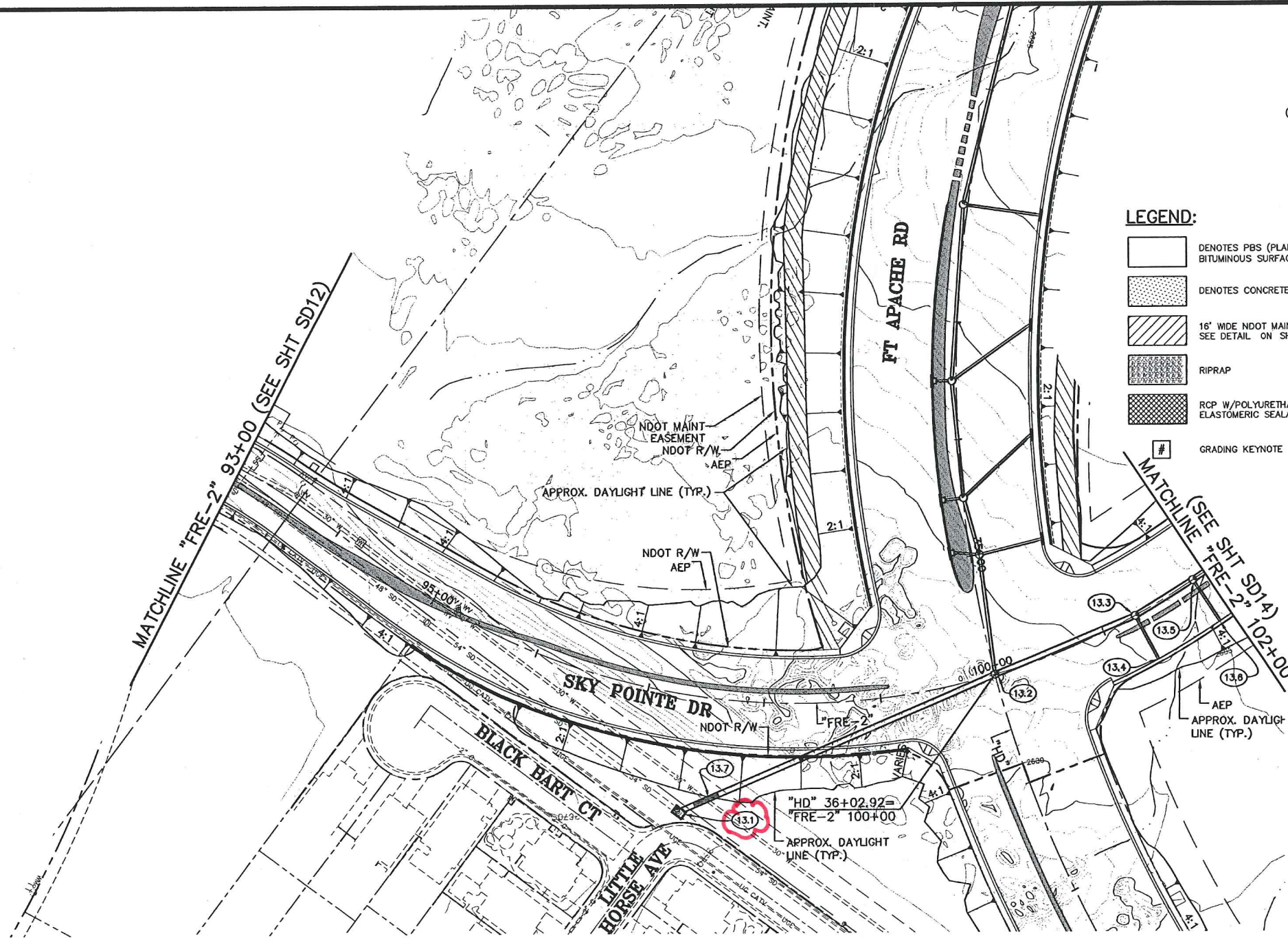
Call before you Overhead

1-702-227-2929
NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

1-800-227-2600
OR
1-702-455-7544

PUBLIC WORKS DEPARTMENT CITY OF LAS VEGAS, NV 400 E. STEWART AVE. LAS VEGAS, NV 89101 702-228-6272		STORM DRAIN AND GRADING PLAN "HD" 39+00 TO "HD" 44+81±		HORSE DRIVE / US 95 INTERCHANGE	
DRAWN BY: JF	DESIGNED BY: JF	CHECKED BY: JF	PROJECT NO: 6500	SCALE: 1"=50'	HORIZ. VERT. N/A
PROFESSIONAL ENGINEER-SEAL LANT K. LEAVITT EXP. 12/24/08 CIVIL No. 18257 7/22/08			SHEET SD4 113 OF 153 SHEETS DRAWING NO. 107V3769		

114285



LEGEND:

- [Pattern] DENOTES PBS (PLANTMIX BITUMINOUS SURFACE)
- [Pattern] DENOTES CONCRETE PAVEMENT
- [Pattern] 16' WIDE NDOT MAINT. ACCESS SEE DETAIL ON SHEET SD1
- [Pattern] RIPRAP
- [Pattern] RCP W/POLYURETHANE ELASTOMERIC SEALANT
- [Symbol] GRADING KEYNOTE

NOTE:
△ PROTECT IN PLACE

- NOTES:**
1. FOR UTILITY ADJUSTMENT & RELOCATION SEE SHEET U1 THRU U13
 2. FOR SANITARY SEWER INFORMATION SEE SHEET SS1 THRU SS8
 3. FOR LANDSCAPING INFORMATION SEE LANDSCAPE PLANS
 4. FOR DRAINAGE & GRADING IMPROVEMENTS NOT REFERENCED ON THIS SHEET SEE SHEET SD3

DRAINAGE CONSTRUCTION NOTES:

- 13.1 "FRE-2" 97+41.10, 140.17' RT. REMOVE EXIST. MANHOLE. INSTALL NDOT TYPE 4 MANHOLE (PER NDOT STD. DWG. R-4.3.2) (SAME AS NOTE 13.13) CONNECT TO EXIST. 54" RCP SEE SHEET SD31
- 13.2 "HD" 36x42, 0' RT. "FRE-2" 100+00.00, 0' RT. INSTALL 72" NDOT TYPE 2 MANHOLE (PER NDOT STD. DWG. R-4.3.1) INSTALL 288.53 L.F. 36"x60" HERCP SEE SHEET SD24 & SD31
- 13.3 "FRE-2" 101+30.00, 0' RT. INSTALL 72" NDOT TYPE 2 MANHOLE (PER NDOT STD. DWG. R-4.3.1) INSTALL 123.74 L.F. 48" RCP SEE SHEET SD31
- 13.4 "FRE-2" 101+30.00, 42.00' RT. INSTALL 39.00 L.F. 18" RCP W/18" PLUG TO BE REMOVED IN FUTURE SEE SHEET SD31
- 13.5 "FRE-2" 101+88.16, 0' RT. INSTALL 72" NDOT TYPE 2 MANHOLE (PER NDOT STD. DWG. R-4.3.1) INSTALL 52.14 L.F. 48" RCP SEE SHEET SD31
- 13.6 "FRE-2" 101+88.16, 42.00' RT. INSTALL 39.00 L.F. 18" RCP W/18" PLUG TO BE REMOVED IN FUTURE SEE SHEET SD31
- 13.7 "FRE-2" 97+69.37, 81.09' RT. TO "FRE-2" 97+52.03, 92.49' RT. RCP TO BE CONSTRUCTED W/PRECAST REINFORCED CONCRETE SECTIONS, INSTALLED W/WATERTIGHT JOINTS USING AGENCY APPROVED ELASTOMERIC JOINT SEALANT W/PROVISIONS TO INSURE AGAINST DIFFERENTIAL SETTLEMENT OF THE STORM DRAIN. (SEE UDACS SEC. 2.19.02C)

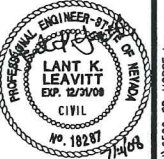
NOTE TO CONTRACTOR REGARDING FINISHED GRADES:

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APPROVED
[Signature]
LAS VEGAS VALLEY WATER DISTRICT
LYVWD PROJECT # H803J5
DATE 7/14/08

Call before you Dig
IT'S COSTLY
1-702-227-2929
LAS VEGAS VALLEY WATER DISTRICT
SAFETY SERVICES DEPARTMENT

Call before you Dig
IT'S COSTLY
1-800-227-2600
NEVADA POWER ENVIRONMENT AND
SAFETY SERVICES DEPARTMENT

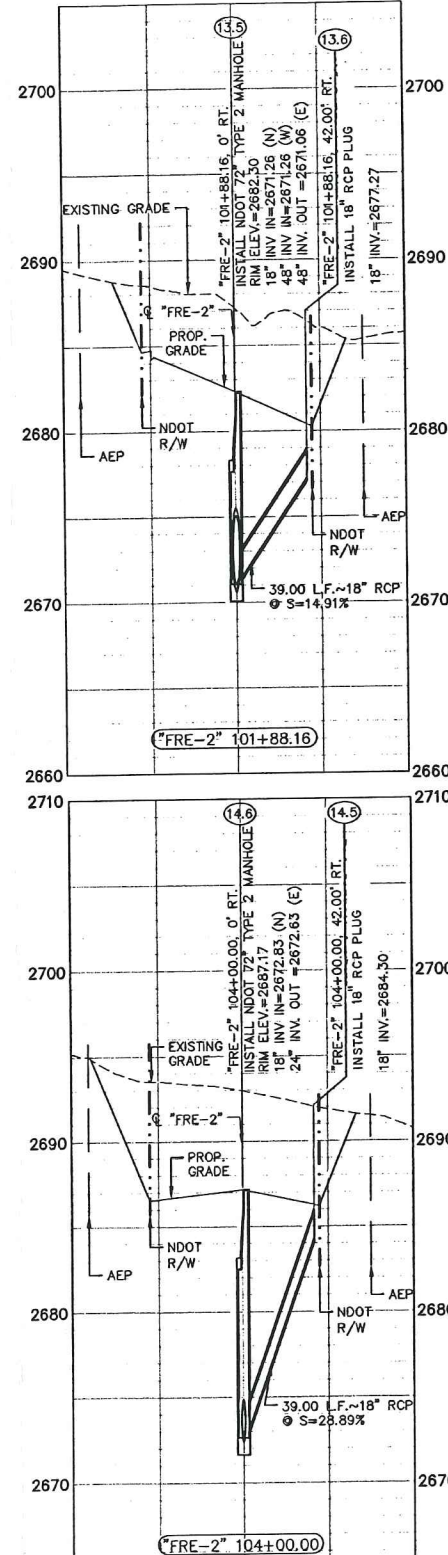
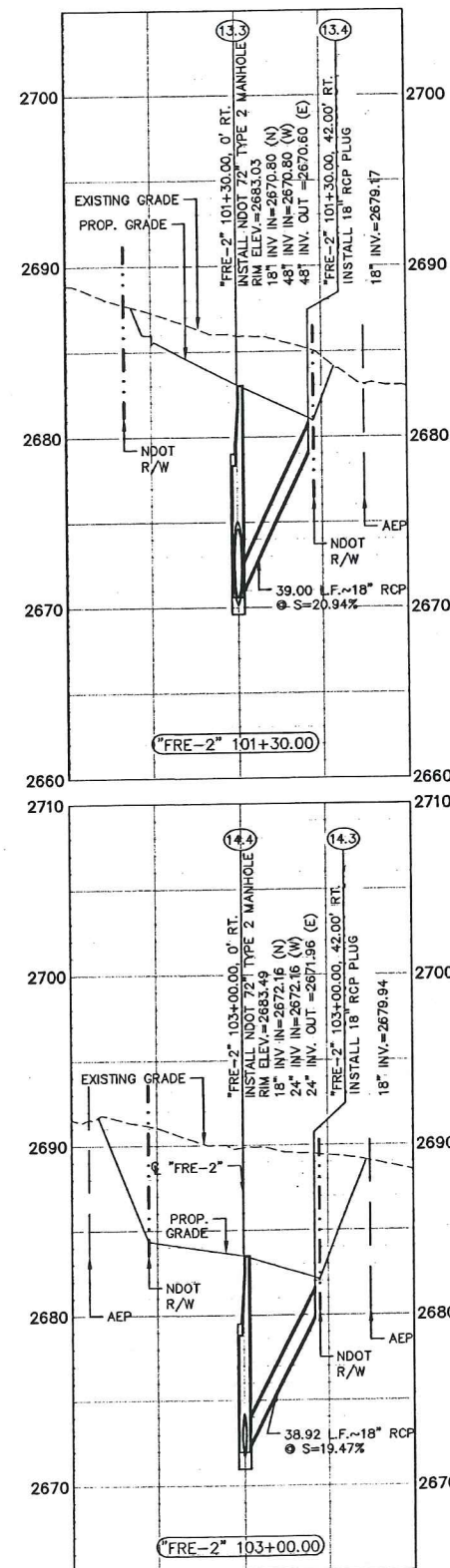
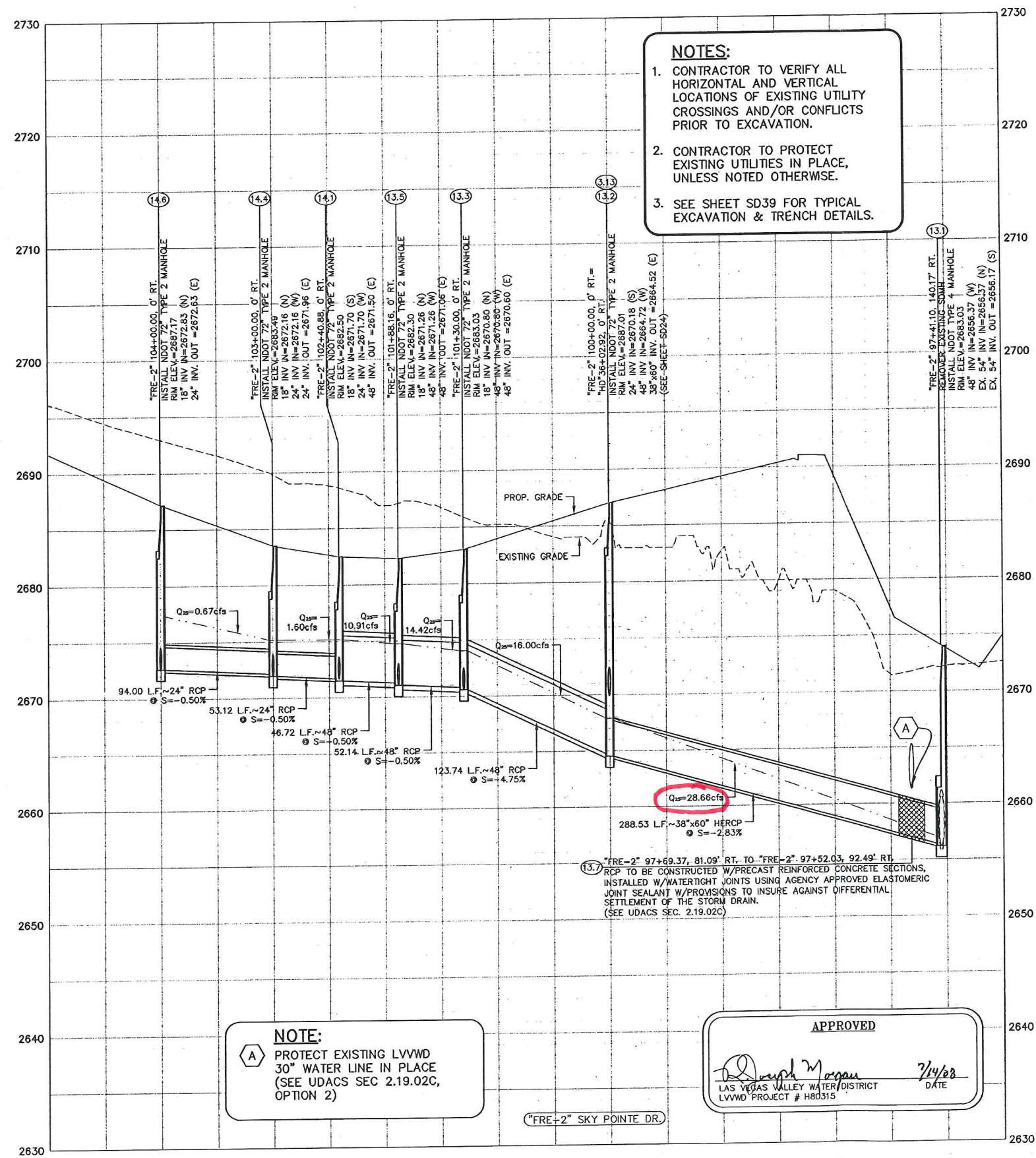


SHEET
SD13
137 OF 153 SHEETS
DRAWING NO.
107V3769

PUBLIC WORKS DEPARTMENT
CITY OF LAS VEGAS, NV
400 E. STEWART AVE.
LAS VEGAS, NV 89101
702-229-6272

STORM DRAIN AND GRADING PLAN
"FRE-2" 93+00 TO "FRE-2" 102+00

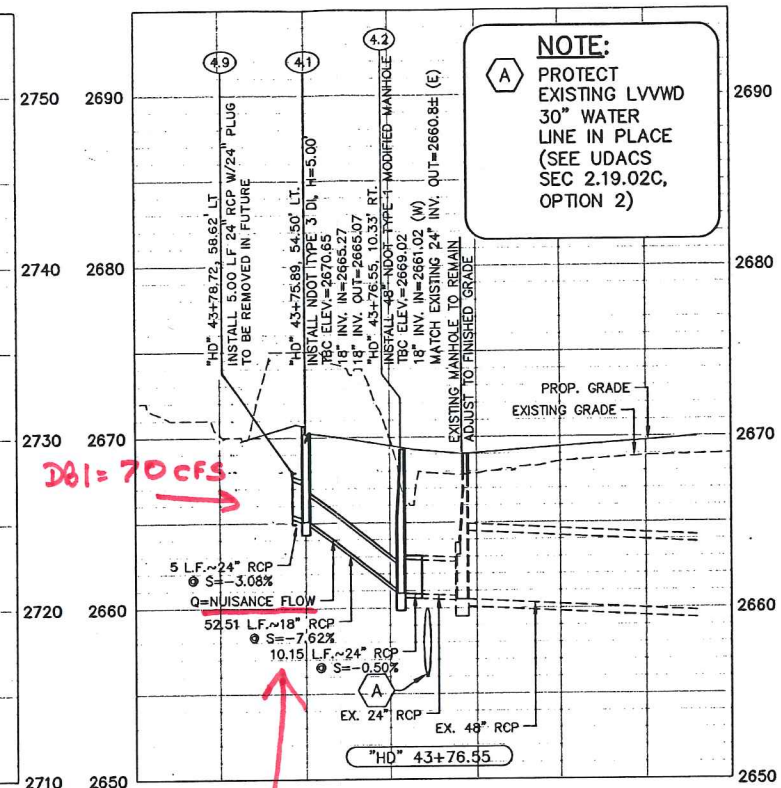
HORSE DRIVE / US 95 INTERCHANGE



Call before you Dig
Avoid Overhead Power Line Contact
IT'S COSTLY
Call 811
1-702-227-2929
NEVADA POWER ENVIRONMENT AND
SAFETY SERVICES DEPARTMENT

Call before you Dig
Avoid cutting underground
utility lines. It's costly.
Call 811
1-800-227-2600
CLARK COUNTY UTILITY OPERATIONS
1-702-455-7544

PUBLIC WORKS DEPARTMENT			
CITY OF LAS VEGAS, NV			
400 E. STEWART AVE. LAS VEGAS, NV 89101 702-229-6272			
277 SOUTH RAMPART BOULEVARD LAS VEGAS, NEVADA 89146 PH (702) 702-7550 FAX (702) 385-2587			
nevada CONSULTING ENGINEERS & PLANNERS • LAS VEGAS, NV			
STORM DRAIN PROFILES		HORSE DRIVE / US 95 INTERCHANGE	
DRAWN BY:	6/30/2008	DESIGNED BY:	6/30/2008
CHECKED BY:	6/30/2008	PROJECT NO.:	SCALE: 1"=50'
SHEET SD31		OF 453 SHEETS	
DRAWING NO. 107V3769		REVISION	



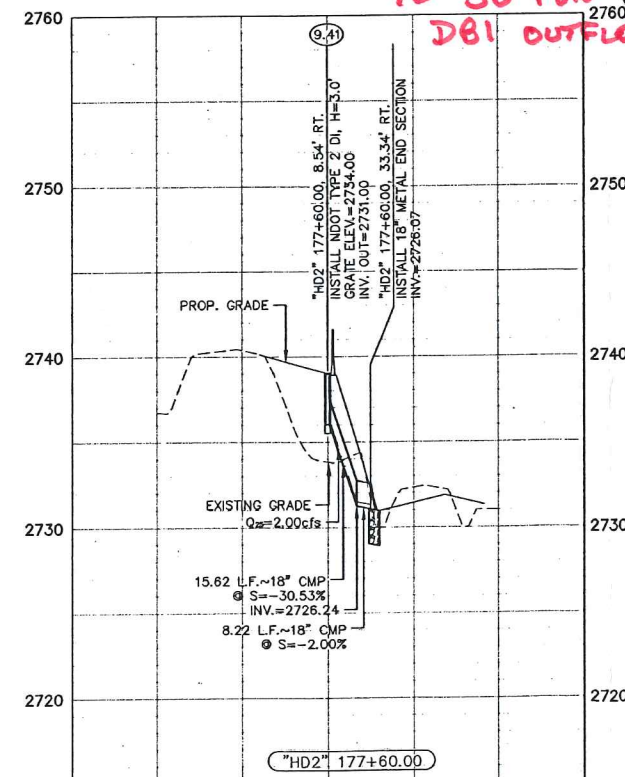
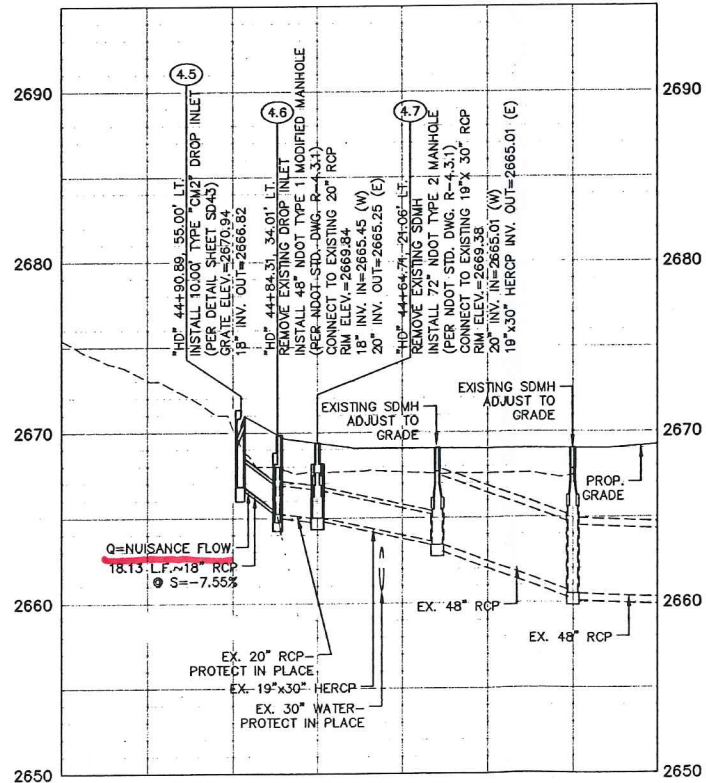
NOTE:
PROTECT
EXISTING LVVWD
30" WATER
LINE IN PLACE
(SEE UDACS
SEC 2.19.02C,
OPTION 2)

DBI = 70 CFS

18" x 24" PIPES
REQUIRE UPSIZING
TO 30" FOR
DBI OUTFLOW

APPROVED

Joseph Morgan 7/24/03
LAS VEGAS VALLEY WATER DISTRICT DATE
LWWD PROJECT # H80315



NOTES:

1. CONTRACTOR TO VERIFY ALL HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITY CROSSINGS AND/OR CONFLICTS PRIOR TO EXCAVATION.
2. CONTRACTOR TO PROTECT EXISTING UTILITIES IN PLACE, UNLESS NOTED OTHERWISE.
3. SEE SHEET SD39 FOR TYPICAL EXCAVATION & TRENCH DETAILS.

AVOID OVERHEAD POWER LINE CONTACT
IT'S COSTLY

**Call
before you
Overhead**

Call before you Dig
Avoid cutting underground utility lines. It's costly.

Call
811

DRAWN BY: JR	6/20/2007
DESIGNED BY: JLB	6/20/2007
CHECKED BY: LKL	6/20/2007
PROJECT NO: 6500	SCALE: 1"=50' 1"=5'
	HORIZ. VERT.

PROFESSIONAL ENGINEER-STATE OF NEVADA
LANT K. LEAVITT
 EXP. 12/31/08
 CIVIL
 No. 18287
 7/22/08

SHEET
SD34
148 OF 453 SHEETS
DRAWING NO.

PUBLIC WORKS DEPARTMENT
100 E. STEWART AVE.
LAS VEGAS, NV 89101

00 E. STEWART AVE.
LAS VEGAS, NV 89101

02-228-6272
CITY OF LAS VEGAS, NV
1

2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597

novada CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS

STORM DRAIN PROFILES

**HORSE DRIVE / US 95
INTERCHANGE**

CITY OF LAS VEGAS
STATE OF NEVADA

3606 N. RANCHO STE. 102
LAS VEGAS, NEVADA, 89130
(702) 647-2660

ADJACENT PARCEL
APN# 125-07-602-002

LEGAL DESCRIPTION

A PORTION OF LOT 8 OF SPRING MOUNTAIN RANCH LOCATED IN THE SOUTH HALF (S 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 8, TOWNSHIP 19 SOUTH, RANGE 80 EAST, N.D.M., CITY OF LAS VEGAS, NEVADA.

NEW BENCHMARK

CITY OF LAS VEGAS BENCHMARK BLV90-BNES=(1LV90-BNES)
BLW BRASS CAP LOCATED AT DURANGO DRIVE
AND IRON MOUNTAIN ROAD
NAVDS88 ELEVATION = 771.9489 METERS (2532.63 FEET) BLV90-BNES (NEW)
NAVDA8 ELEVATION = 771.9689 METERS (2532.70 FEET) 1LV90-BNES (OLD)

ORIGINAL BENCHMARK: (NO LONGER EXISTS)

C.L.V. BM #7, STA. 1LV9017NES
BLM BRASS CAP AT INTERSECTION OF
DURANGO DRIVE AND GRAND TETON DRIVE
ELEVATION = 2541.392 (NAVD 88)
ELEVATION = 774.6178 METERS

BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH, AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83) EAST ZONE (2701) AS DETERMINED BY CLARK COUNTY US CONTROL POINTS 801, 802, AND 804.

Avoid hitting underground utility lines. It's easy.

Call
before you
Dig

1-800-227-2600

**Call
before you
Overhead**
1-702-593-6111

APPROVALS

CITY ENGINEER CHARLIE KAJKOWSKI PER 4784 DATE 3/26/03

APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED BY THE DEDICATED RIGHT OF WAY AND/OR OVERLAP EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEViate FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIFICALLY LISTED UNDER DEVIATIONS FROM STANDARD THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE CURRENT STANDARD DRAWINGS AND SPECIFICATIONS CLARK COUNTY ARIZONA.

MWB 3/14/03
M. Maria Wheeler, AICP, Current Planning Manager DATE

PLANNING
THIS PLAN MEETS THE APPLICABLE STANDARDS
OF THE PLANNING AND DEVELOPMENT DEPARTMENT

CITY OF CHICAGO 7705 DAT

[Signature] No District Facilities 3.7.03
LAS VEGAS VALLEY WATER DISTRICT 12.38-11 DAT

Quanda Oddio 37003
NEVADA POWER COMPANY DATE

NEVADA POWER COMPANY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NEVADA POWER COMPANY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

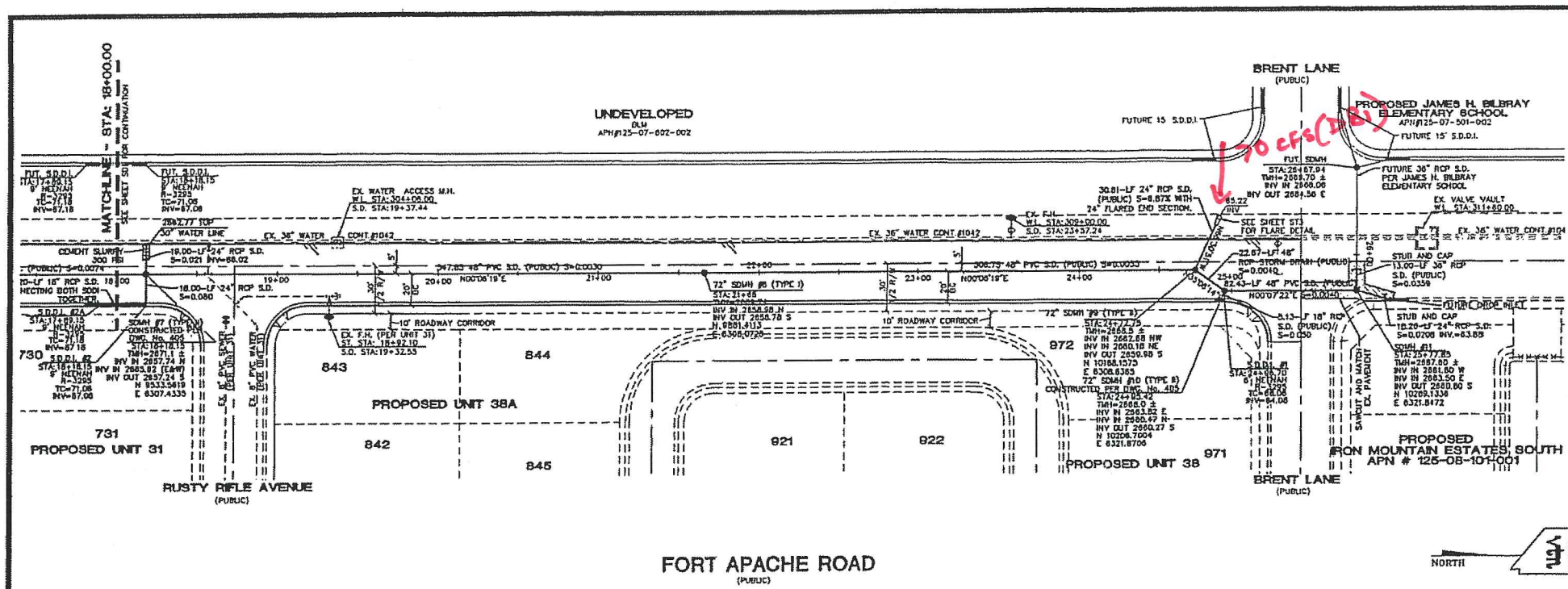
7-13-03
DATE

Ladonna Brennan 3-10-03
COV. COLLABORATION INC. LAS VEGAS DATE

DATE 3/10/03

SPRINT DEAN T. WITMAN DAVID MORENO DATE
THE AFFIXED SPRINT NEVADA APPROVAL DOES NOT
ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN
CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS.
RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT
TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR
PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.

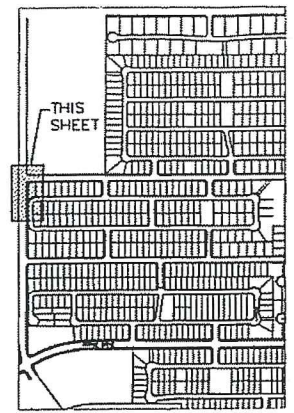
SEAL NATIONAL BOARD OF PROFESSIONAL ENGINEERS KENNETH H. JOHNSON CIVIL NO. 10668 STATE OF NEVADA EXPIRES 12-31-03	DRAWN BY: _____ DATE: _____ JAN 2003	SHEET 1 of 12 SHEETS DRAMING NO. 107 Y 4518 - F	DESIGNED BY: _____ DATE: _____ JAN 2003	CHECKED BY: _____ DATE: _____ JAN 2003	PROJECT NO: _____ SCALE: 1"=40' HORZ.	7 6 5 4 3 2 1		
	COVER SHEET				REAL HOMES 3000 W. 10TH STREET LAS VEGAS, NEVADA 89150 (702) 847-2540		CITY OF LAS VEGAS	
	TITLE SPRING MOUNTAIN RANCH FORT APACHE ROAD				2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146-5148 PH (702) 872-7550 FAX (702) 332-1337 			



DISCLAIMER NOTE
UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD 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 OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

Call before you Dig
1-800-227-2600

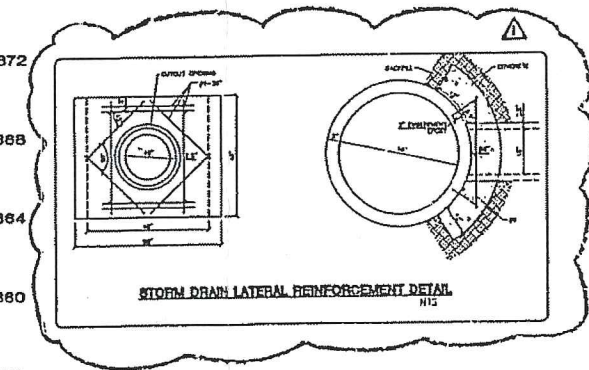
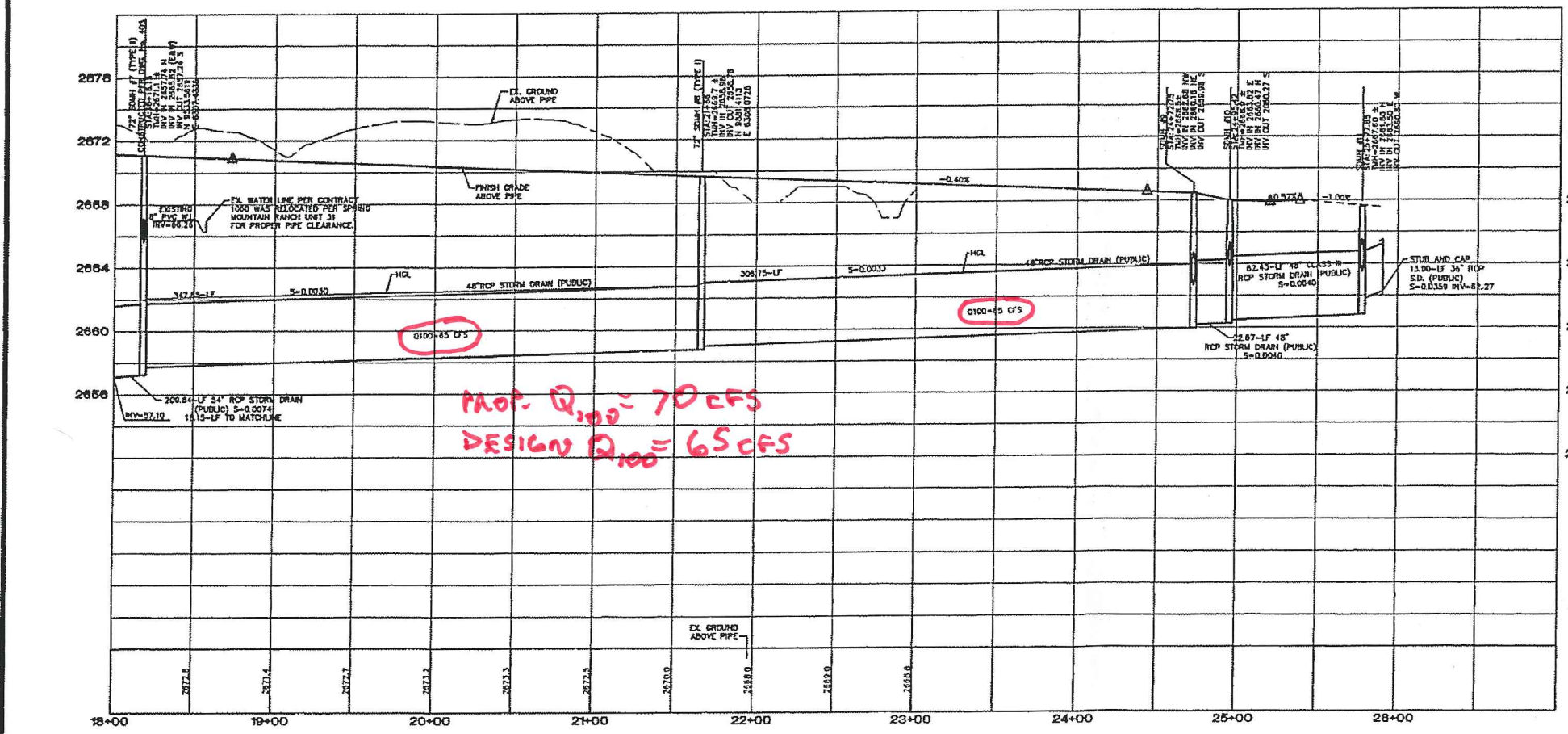
Call before you Overhead
1-702-593-6111



KEY MAP
GRAPHIC SCALE
1" = 40'

PROFILE SCALES:
HORIZ = 1" = 40'
VERT = 1" = 4'

FOR QUANTITIES SEE SHEET 501



LEGAL DESCRIPTION
A PORTION OF LOT 9 OF SPRING MOUNTAIN RANCH LOCATED IN THE SOUTH HALF (S 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 8, TOWNSHIP 19 SOUTH, RANGE 90 EAST, M.D.M., CITY OF LAS VEGAS, NEVADA.

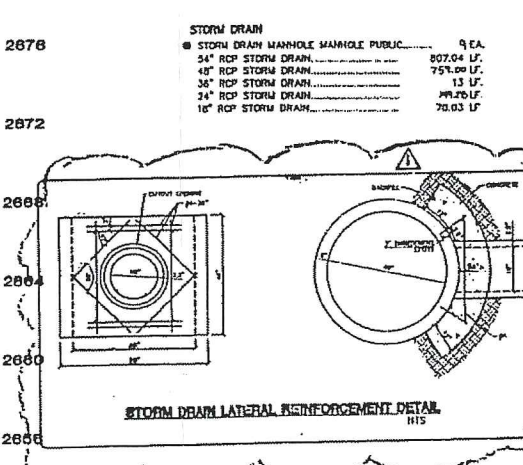
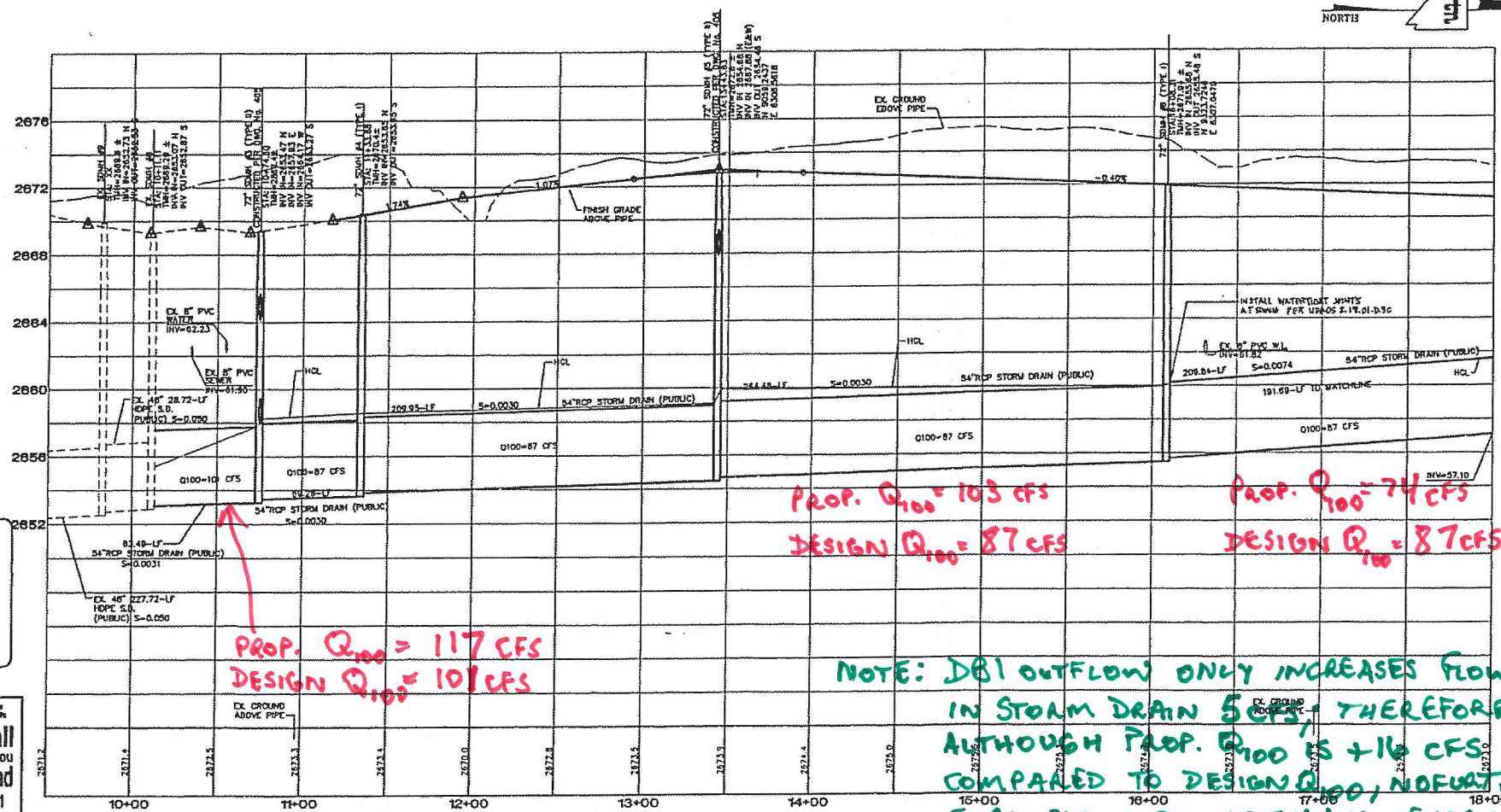
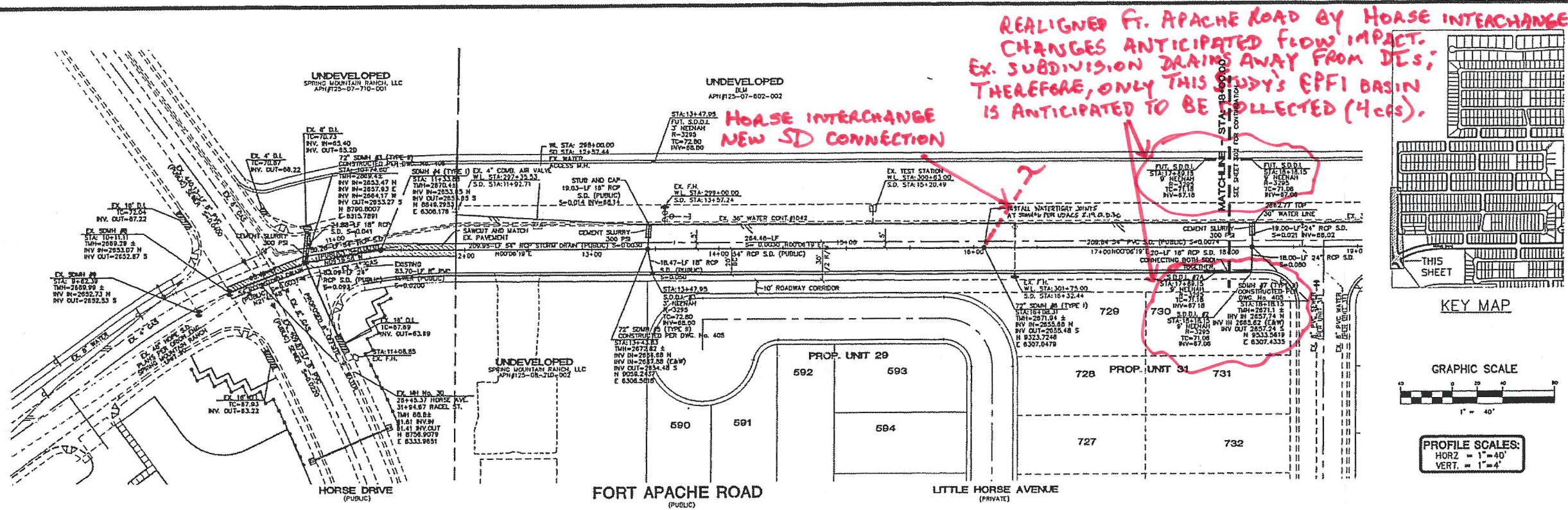
NEW BENCHMARK
CITY OF LAS VEGAS BENCHMARK BLV90-BNES=(1LV90-BNES) BLM BRASS CAP LOCATED AT DURANGO DRIVE AND IRON MOUNTAIN ROAD
NAVD88 ELEVATION = 771.9469 METERS (2532.63 FEET) BLV90-BNES (NEW)
NAVD88 ELEVATION = 771.9689 METERS (2532.70 FEET) 1LV90-BNES (OLD)

ORIGINAL BENCHMARK: (NO LONGER EXISTS)
C.L.V. BM #7, STA. 1LV8017NES
BLM BRASS CAP AT INTERSECTION OF DURANGO DRIVE AND GRAND TETON DRIVE
ELEVATION = 2541.392 (NAVD 88)
ELEVATION = 774.6179 METERS

BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH, AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83) EAST ZONE. (ZT01) AS DETERMINED BY CLARK COUNTY GIS CONTROL POINTS 801, 802, AND 806

CITY OF LAS VEGAS		2727 SOUTH RANCHO BOULEVARD LAS VEGAS, NEVADA 89146-3148 PH. (702) 813-7550 FAX (702) 382-2537	
REAL HOMES		vtn nevada CONSULTING ENGINEERS & PLANNERS • LAND SURVEYORS	
STORM DRAIN PLAN AND PROFILE		SPRING MOUNTAIN RANCH	
FORT APACHE ROAD		FORT APACHE ROAD	
STA: 18+00.00 TO 26+04.13		STA: 18+00.00 TO 26+04.13	
DESIGNED BY:	DESIGNED BY:	CHECKED BY:	CHECKED BY:
DATE:	DATE:	DATE:	DATE:
PROJECT NO:	PROJECT NO:	SCALE:	SCALE:
SHEET		SHEET	
SD2		SD2	
9 OF 12 SHEETS		9 OF 12 SHEETS	
DRAWING NO.		DRAWING NO.	
3274 4518-FA		3274 4518-FA	

30651 52323



LEGAL DESCRIPTION
 A PORTION OF LOT 9 OF SPRING MOUNTAIN RANCH LOCATED IN THE SOUTH HALF (S 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 8, TOWNSHIP 19 SOUTH, RANGE 50 EAST, N.M.S., CITY OF LAS VEGAS, NEVADA.

NEW BENCHMARK
 CITY OF LAS VEGAS BENCHMARK BLV90-BNES=(BLV90-BNES) BLM BRASS CAP LOCATED AT DURANGO DRIVE AND IRON MOUNTAIN ROAD
 NAVD83 ELEVATION = 771.9489 METERS (2532.63 FEET) BLV90-BNES (NEW)
 NAVD83 ELEVATION = 771.9689 METERS (2532.70 FEET) BLV90-BNES (OLD)

ORIGINAL BENCHMARK: (NO LONGER EXISTS)
 C.L.V. BM #7, STA. 1LV9017HES
 BLM BRASS CAP LOCATED AT INTERSECTION OF DURANGO DRIVE AND GRAND TETON DRIVE
 ELEVATION = 2541.392 (NAVD 88)
 ELEVATION = 774.6179 METERS

BASIS OF BEARINGS:
 THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH, AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NAD83) EAST ZONE (2703), AS DETERMINED BY CLARK COUNTY GIS CONTROL POINTS 801, 803, AND 804.

REAL HOMES
 3000 N. RANCHO STE 102
 3000 N. RANCHO STE 102
 LAS VEGAS, NV 89130
 (702) 447-2550

STORM DRAIN PLAN AND PROFILE
FORT APACHE ROAD
STA: 8+50.00 TO 18+00.00

SPRING MOUNTAIN RANCH
FORT APACHE ROAD

CITY OF LAS VEGAS
 2727 SOUTH RANCHO BOULEVARD LAS VEGAS, NEVADA 89146-3148
 PH. (702) 673-2550 FAX (702) 342-2557

nvtn
 nevada CONSULTING ENGINEERS & PLANNERS & LAND SURVEYORS

DESIGNED BY: JAN 2003
CHECKED BY: JAN 2003
PROJECT NO.: 6086
SCALE: 1" = 4' HORIZ.
 1" = 4' VERT.

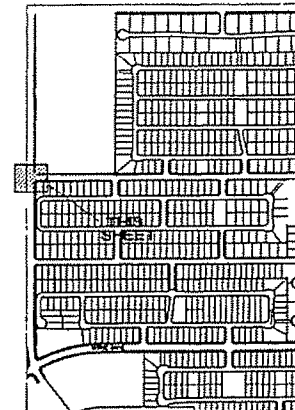
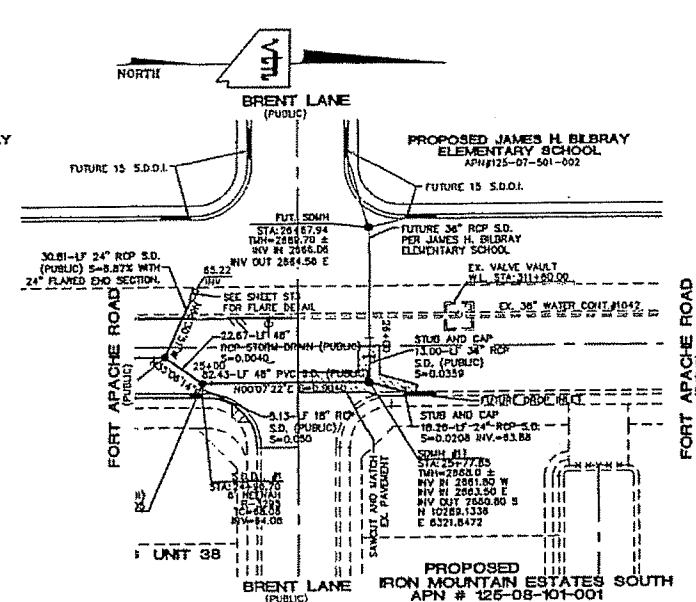
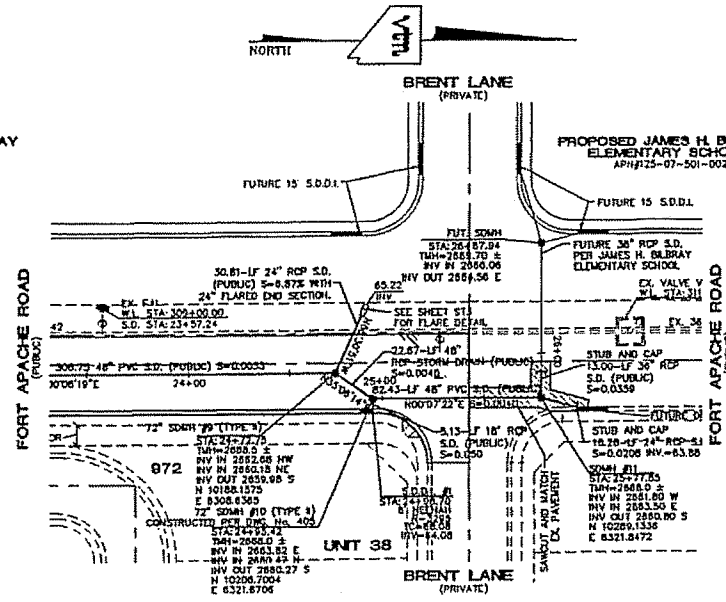
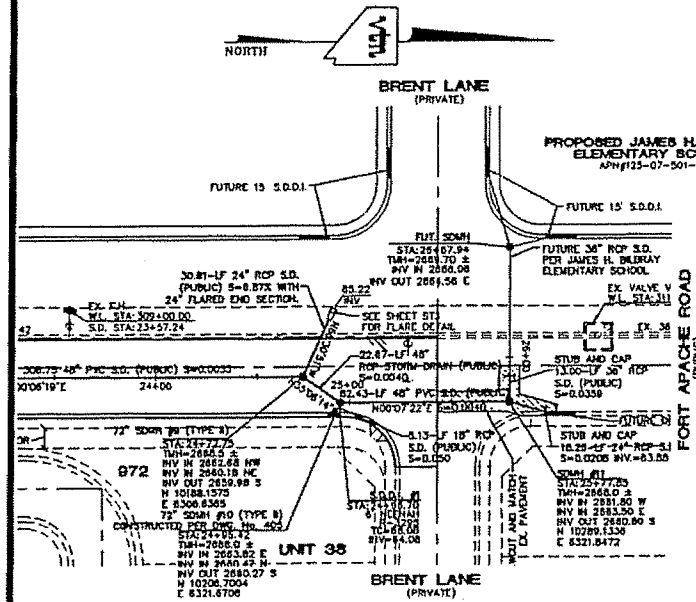
SHEET
SD1
8 OF 12 SHEETS
DRAWING NO.
327 Y 4518-FA

DISCLAIMER NOTE
 UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD 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 OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

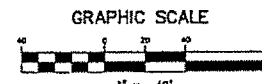
Call before you Dig
 1-800-227-2600

Call before you Overhead
 1-702-593-6111

50650 51324



KEY MAP



PROFILE SCALES:
HORIZ. = 1"=40'
VERT. = 1"=4'

FOR QUANTITIES SEE SHEET SD1

DISCLAIMER NOTE
UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD 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 OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

Call before you Dig
1-800-227-2600

Call before you Overhead
1-702-593-6111

LEGAL DESCRIPTION

A PORTION OF LOT 8 OF SPRING MOUNTAIN RANCH LOCATED IN THE SOUTH HALF (S 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 2, TOWNSHIP 18 SOUTH, RANGE 80 EAST, W.D.M., CITY OF LAS VEGAS, NEVADA.

NEW BENCHMARK

CITY OF LAS VEGAS BENCHMARK 8LV90-BNES=(1LV90-BNES)
BLM BRASS CAP LOCATED AT DURANGO DRIVE
AND IRON MOUNTAIN ROAD
NAVDB8 ELEVATION = 771 9469 METERS (2532.63 FEET) 8LV90-BNES (NEW)
NAVDB8 ELEVATION = 771 9689 METERS (2532.70 FEET) 1LV90-BNES (OLD)

ORIGINAL BENCHMARK: (NO LONGER EXISTS)

CLV, BM #7, STA. 1LV9017NES
BLM BRASS CAP AT INTERSECTION OF
DURANGO DRIVE AND GRAND TETON DRIVE
ELEVATION = 2541.392 (NAVDB8)
ELEVATION = 774 6179 METERS

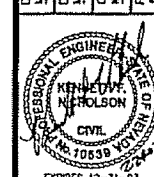
BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83) EAST ZONE (2701) AS DETERMINED BY CLARK COUNTY GIS CONTROL, POINTS 801, 802, AND 803.

REAL HOME
DROP INLET PLAN AND PROFILES
FORT APACHE ROAD

SPRING MOUNTAIN RANCH
FORT APACHE ROAD

DRAWN BY: MJD
DESIGNED BY: MJD
CHECKED BY: MJD
PROJECT NO: 8008
SCALE: 1"=40' HORIZ. 1"=4' VERT.
SHEET
SD4
11 OF 12 SHEETS
DRAWING NO: 327Y 4518-FA



CITY OF LAS VEGAS
2777 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2397
www.cityoflasvegas.com
CITY ENGINEER

Brent Lane SD Extension Worksheet for Circular Channel

Project Description	
Worksheet	Brent Lane SD Extension
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Input Data	
Mannings Coefficient	0.013
Channel Slope	0.030000 ft/ft
Diameter	30.0 in

Results	
Depth	2.50 ft
Discharge	71.04 cfs
Flow Area	4.9 ft ²
Wetted Perimeter	7.85 ft
Top Width	0.00 ft
Critical Depth	2.44 ft
Percent Full	100.0 %
Critical Slope	0.026733 ft/ft
Velocity	14.47 ft/s
Velocity Head	3.25 ft
Specific Energy	5.75 ft
Froude Number	0.00
Maximum Discharge	76.42 cfs
Discharge Full	71.04 cfs
Slope Full	0.030000 ft/ft
Flow Type	N/A

→ PROPOSED Q = 70 cfs, SIZE OK

T1 Brent-Apache - OLY1401.004										SD
T2 Proposed Conditions										
SO	1000.0002652.970	54	.013		2657.47					
R	1085.4002653.370	54	.013						15.00	1
JX	1085.4002653.370	54 18	.013	14.0	2653.37			60.0	15.00	1
R	1144.6502653.850	54	.013						00.00	1
R	1354.6002654.680	54	.013						00.00	1
R	1618.0802655.680	54	.013						00.00	1
JX	1618.0802655.680	54 24	.013	29.0	2655.68			45.0	00.00	1
R	1819.9202657.500	54	.013						00.00	1
JX	1819.9202657.500	48 24	.013	4.0	2657.50			90.0	00.00	1
R	2167.5702658.880	48	.013						60.00	1
R	2474.3202660.040	48	.013							
SH	2474.3202660.040	48								
CD	18 4 1	.000	1.500	.000	.000	.000	.00			
CD	24 4 1	.000	2.000	.000	.000	.000	.00			
CD	48 4 1	.000	4.000	.000	.000	.000	.00			
CD	54 4 1	.000	4.500	.000	.000	.000	.00			
Q		70.000	.0							
nn										

* WSPG MODEL PERFORMED TO EVALUATE ADDED FLOW IMPACTS
TO FORT APACHE SD TRUNK UTILIZED FOR DBI OUTFLOW

* STARTING WSE ASSUMED TOP OF PIPE; INSPECTION OF
HGL DESIGN IN PIPE IS 1/2 FULL, THEREFORE ADDED FLOW
MAKES ASSUMPTION ACCEPTABLE

CARD	SECT	CHN	NO OF	AVE PTER	HEIGHT 1	ZL	ZR	WATER SURFACE PROFILE - CHANNEL DEFINITION	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	
CODE	NO	TYPE	PIR/PIP	WIDTH	DIAMETER	WIDTH			INV.	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
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99	24	4	1	2,000

CD	48	4	1	4,000	W S P G W	PAGE NO	1
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CD	54	4	1				

HEADING LINE NO 1 IS -
WATER SURFACE PROFILE - TITLE CARD LISTING
Brent-Apache - 0LY1401.004

HEADING LINE NO 2 IS -	HEADING LINE NO 3 IS -	Proposed Conditions

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO	1 IS A SYSTEM OUTLET *	**	INVERT	SECT	
	II/S DATA STATION				W S ELEV CCEB 470

ELEMENT NO	2	TS A	REACH	1000.000	2652.970	54	2657.470
				*	*	*	

ELEMENT NO	STATION	INVERT	SECT	N	RADIUS	ANGLE	CHANG PT	MAIN
4	1085.400	2653.370	54	.013	.000	.000	15.000	1
5								

[illegible]

	THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV	-WARNING
	THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV	-WARNING
		.000
		.000

THE ABOVE ELEMENT CONTAINED AN ELEMENT NO. 4 IS A REACH	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT
ELEMENT NO	U/S DATA				.000	.000	MAN
1144	650	2653	850	54			15.000
							1

ELEMENT NO	5 IS A REACH	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT
	U/S DATA					.000	.000	.000
		1354	600	2654	680			1
				54				

ELEMENT NO	6 IS A REACH	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN
	U/S DATA					.000	.000	.000	1
		1618.080	2655.680	54	.013				

ELEMENT NO	7 IS A JUNCTION U/S DATA	STATION	INVERT	SECT	LAT-2	N	Q3	Q4	INVERT-4	PHI 3	PHI 4
1010.00	*	1618	080	54	24	0	.013	.000	2655.680	.000	45.000
2035.00	*	1618	080	54	24	0	.013	.000	2655.680	.000	45.000

DATE	TIME	INVERT ELEV	PREVIOUS INVERT ELEV	-WARNING	RADIUS	ANGLE
10/16/00	20:57:00	5.1	5.1		.000	.000

[illegible][illegible]

U/S DATA	STATION	DATE	TIME	ANGLE	RADIUS
1819.920	2657.500	48	24	0	.013
					4.000
					.000
					2657.500
					.000
					90.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO	10	15	A	REACH	STATION	TWVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN
WATER SURFACE PROFILE - ELEMENT CARD LISTING												

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ELEMENT NO	IS A SYSTEM HEADWORKS	* INVERT	SECT	W S ELEV
U/S DATA		INVERT		.013
STATION		2474.320	48	.000
60.000				

U/S DATA	STATION	INVERT	SEC.
	2474.320	2660.040	48
			.000

‡ FILE: SD.WSW

***** PROPOSED CONDUCTIONS *****														*****														*****													
Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT or I.D.	Base Wt	No Wth Prs/Pip																												
L/Elem	Ch Slope					SF AVE	HF	SE DPTH	Froude N	Norm Dp	"N"	X-Fall	Type Ch																												
1000.000	2652.970	4.500	2657.470	117.00	7.36	.84	2658.31	.00	3.18	.00	4.500	.000	1 .0																												
63.635	.0047	-	-	-	-	.0035	.22	4.50	.00	3.24	.013	.00	PIPE																												
1063.635	2653.268	4.500	2657.768	117.00	7.36	.84	2658.61	.00	3.18	.00	4.500	.000	1 .0																												
211.765	.0047	-	-	-	-	.0034	.07	4.50	.00	3.24	.013	.00	PIPE																												
1085.400	2653.370	4.469	2657.840	117.00	7.36	.84	2658.68	.00	3.18	.74	4.500	.000	1 .0																												
JUNCT STR	.0000	-	-	-	-	.0030	.00	4.47	.28	-	.013	.00	PIPE																												
1085.400	2653.370	4.741	2658.111	103.00	6.48	.65	2658.76	.00	2.98	.00	4.500	.000	1 .0																												
56.847	.0081	-	-	-	-	.0027	.15	4.74	.00	2.47	.013	.00	PIPE																												
1142.247	2653.831	4.500	2658.331	103.00	6.48	.65	2658.98	.00	2.98	.00	4.500	.000	1 .0																												
2.403	.0081	-	-	-	-	.0027	.01	4.50	.00	2.47	.013	.00	PIPE																												
1144.650	2653.850	4.486	2658.336	103.00	6.48	.65	2658.99	.00	2.98	.51	4.500	.000	1 .0																												
209.950	.0040	-	-	-	-	.0025	.52	4.49	.20	3.14	.013	.00	PIPE																												
1354.600	2654.680	4.126	2658.806	103.00	6.74	.71	2659.51	.00	2.98	2.48	4.500	.000	1 .0																												
136.186	.0038	-	-	-	-	.0025	.34	4.13	.48	3.19	.013	.00	PIPE																												
1490.786	2655.197	3.874	2659.071	103.00	7.07	.78	2659.85	.00	2.98	3.11	4.500	.000	1 .0																												
111.449	.0038	-	-	-	-	.0027	.30	3.87	.58	3.19	.013	.00	PIPE																												
1602.235	2655.620	3.669	2659.289	103.00	7.42	.85	2660.14	.00	2.98	3.49	4.500	.000	1 .0																												
15.845	.0038	-	-	-	-	.0028	.04	3.67	.66	3.19	.013	.00	PIPE																												
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Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Base Wt Dia.-FT or I.D.	No Wth Prs/Pip		
L/Elem	Ch Slope					SF Ave	HF	SE DPTH	Froude N	Norm Dp	"N"	X-Fall	ZL	Type Ch
1618.080	2655.680	3.641	2659.321	103.00	7.47	.87	2660.19	.00	2.98	3.54	4.500	.000	.00	1 .0
JUNCT STR	.0000	-	-	-	-	.0020	.00	3.64	.67	-	.013	.00	.00	PIPE
1618.080	2655.680	4.114	2659.794	74.00	4.85	.37	2660.16	.00	2.51	2.52	4.500	.000	.00	1 .0
27.519	.0090	-	-	-	-	.0013	.04	4.11	.35	1.97	.013	.00	.00	PIPE
1645.599	2655.928	3.864	2659.792	74.00	5.09	.40	2660.19	.00	2.51	3.14	4.500	.000	.00	1 .0
21.294	.0090	-	-	-	-	.0014	.03	3.86	.42	1.97	.013	.00	.00	PIPE
1666.892	2656.120	3.661	2659.781	74.00	5.34	.44	2660.22	.00	2.51	3.51	4.500	.000	.00	1 .0
17.812	.0090	-	-	-	-	.0015	.03	3.66	.47	1.97	.013	.00	.00	PIPE
1684.705	2656.281	3.483	2659.764	74.00	5.60	.49	2660.25	.00	2.51	3.76	4.500	.000	.00	1 .0
15.021	.0090	-	-	-	-	.0017	.03	3.48	.53	1.97	.013	.00	.00	PIPE

1699.725	2656.416	3.324	2659.740	74.00	5.87	.54	2660.28	.00	2.51	3.95	4.500	.000	.00	1	.0
12.788	.0090	-	-	-	-	.0019	.02	3.32	.58	1.97	.013	.00	.00	PIPE	
1712.513	2656.531	3.179	2659.710	74.00	6.16	.59	2660.30	.00	2.51	4.10	4.500	.000	.00	1	.0
10.983	.0090	-	-	-	-	.0021	.02	3.18	.63	1.97	.013	.00	.00	PIPE	
1723.496	2656.630	3.044	2659.675	74.00	6.46	.65	2660.32	.00	2.51	4.21	4.500	.000	.00	1	.0
.052	.0090	-	-	-	-	.0022	.00	3.04	.69	1.97	.013	.00	.00	PIPE	
1723.548	2656.631	3.044	2659.675	74.00	6.46	.65	2660.32	.00	2.51	4.21	4.500	.000	.00	1	.0
		-	-	-	-	-	-	-	-	-	-	-	-	-	

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WATER SURFACE PROFILE LISTING																		
Brent-Proposed Conditions																		
Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Base wt Dia.-FT or I.D.	No Wth Prs/Pip						
L/Elem	Ch Slope												Type Ch					
1723.548	2656.631	2.050	2658.681	74.00	10.49	1.71	2660.39	.00	2.51	4.48	4.500	.000	.00	1	.0			
25.221	.0090	-	-	-	-	.0076	.19	2.05	1.47	1.97	.013	.00	.00	PIPE				
1748.769	2656.858	2.079	2658.938	74.00	10.30	1.65	2660.58	.00	2.51	4.49	4.500	.000	.00	1	.0			
35.175	.0090	-	-	-	-	.0070	.25	2.08	1.43	1.97	.013	.00	.00	PIPE				
1783.944	2657.176	2.157	2659.333	74.00	9.82	1.50	2660.83	.00	2.51	4.50	4.500	.000	.00	1	.0			
18.800	.0090	-	-	-	-	.0061	.12	2.16	1.34	1.97	.013	.00	.00	PIPE				
1802.744	2657.345	2.239	2659.584	74.00	9.36	1.36	2660.94	.00	2.51	4.50	4.500	.000	.00	1	.0			
10.443	.0090	-	-	-	-	.0054	.06	2.24	1.24	1.97	.013	.00	.00	PIPE				
1813.186	2657.439	2.325	2659.764	74.00	8.92	1.24	2661.00	.00	2.51	4.50	4.500	.000	.00	1	.0			
5.278	.0090	-	-	-	-	.0048	.03	2.33	1.16	1.97	.013	.00	.00	PIPE				
1818.465	2657.487	2.415	2659.902	74.00	8.51	1.12	2661.03	.00	2.51	4.49	4.500	.000	.00	1	.0			
1.455	.0090	-	-	-	-	.0042	.01	2.42	1.08	1.97	.013	.00	.00	PIPE				
1819.920	2657.500	2.511	2660.011	74.00	8.11	1.02	2661.03	.00	2.51	4.47	4.500	.000	.00	1	.0			
JUNCT STR	.0000	-	-	-	-	.0038	.00	2.51	1.00	.013	.00	.00	.00	PIPE				
1819.920	2657.500	2.724	2660.224	70.00	7.68	.92	2661.14	.00	2.53	3.73	4.000	.000	.00	1	.0			
99.832	.0040	-	-	-	-	.0038	.38	2.72	.87	2.64	.013	.00	.00	PIPE				
1919.752	2657.896	2.641	2660.538	70.00	7.95	.98	2661.52	.00	2.53	3.79	4.000	.000	.00	1	.0			
247.818	.0040	-	-	-	-	.0040	.98	2.64	.92	2.64	.013	.00	.00	PIPE				
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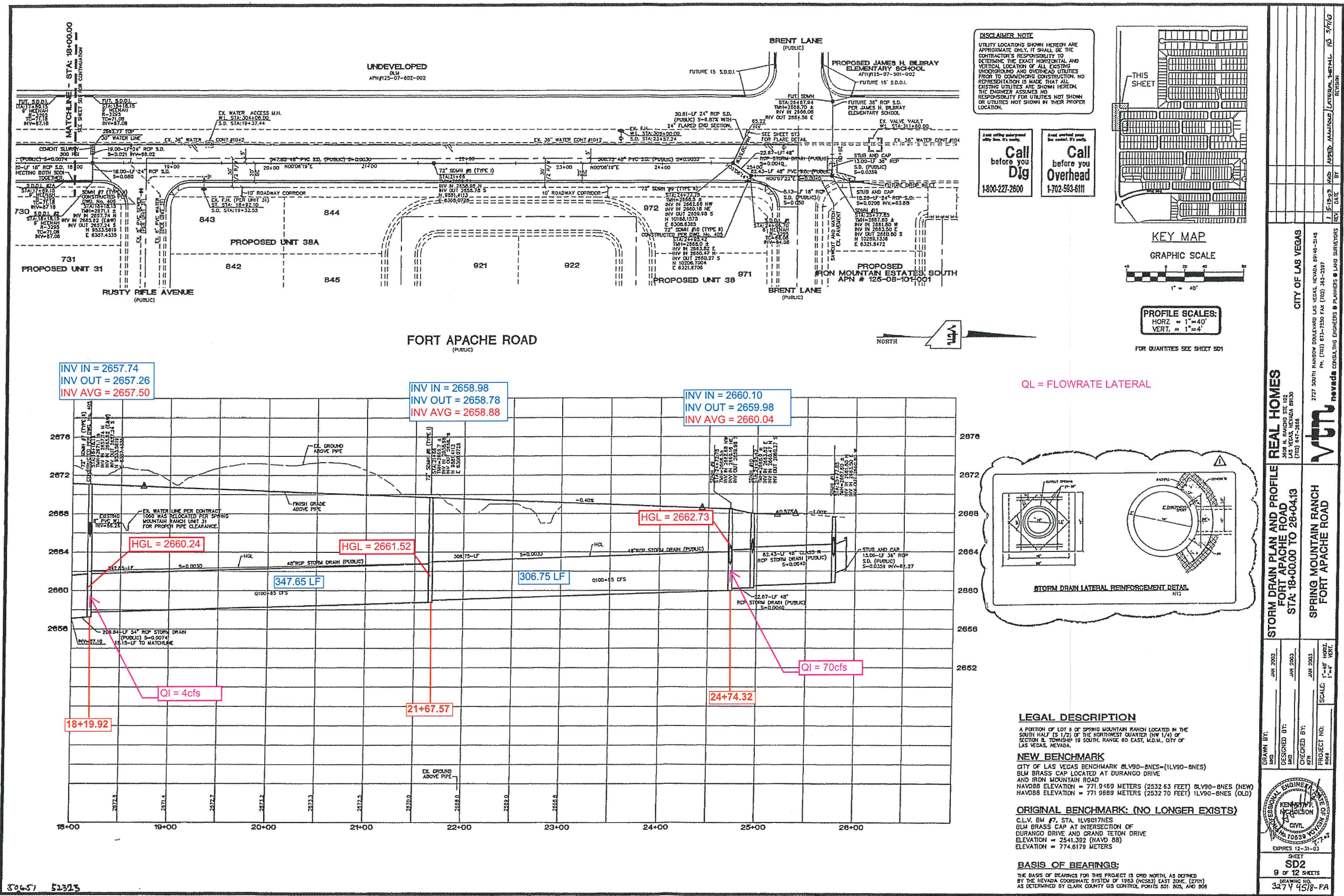
Brent-Apache - QLY1401.004															
Proposed Conditions															
Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Base wt Dia.-FT or I.D.	No Wth Prs/Pip			
L/Elem	Ch Slope					SF Ave	HF	SE depth	Froude N	Norm DP	"N"	X-Fall	Type Ch		
2167.570	2658.880	2.641	2661.521	70.00	7.95	.98	2662.50	.00	2.53	3.79	4.000	.000	.00	1	.0
97.470	.0038	-	-	-	-	.0039	.38	2.64	.92	2.69	.013	.00	.00	PIPE	
2265.040	2659.249	2.688	2661.936	70.00	7.80	.94	2662.88	.00	2.53	3.76	4.000	.000	.00	1	.0
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[illegible]

2. STATIONS FOR POINTS A

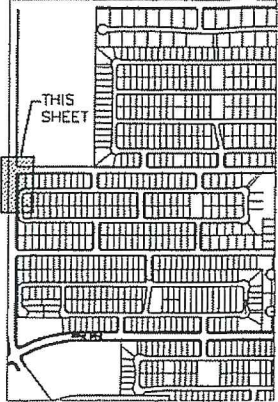
2. STATIONS FOR POINTS AT A JUMP MAY NOT BE PLOTTED EXACTLY



DISCLAIMER NOTE
UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD 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 OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

Call before you Dig
1-800-227-2600

Call before you Overhead
1-702-593-6111

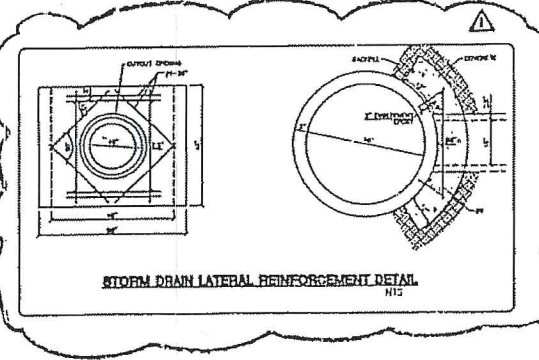


KEY MAP
GRAPHIC SCALE
1" = 40'

PROFILE SCALES:
HORIZ = 1" = 40'
VERT. = 1" = 4'

FOR QUANTITIES SEE SHEET 501

QL = FLOWRATE LATERAL



LEGAL DESCRIPTION
A PORTION OF LOT 8 OF SPRING MOUNTAIN RANCH LOCATED IN THE SOUTH HALF (S 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 8, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, NEVADA.

NEW BENCHMARK
CITY OF LAS VEGAS BENCHMARK BLV90-BNES=(1LV90-BNES) BLV BRASS CAP LOCATED AT DURANGO DRIVE AND IRON MOUNTAIN ROAD
NAV088 ELEVATION = 771.9469 METERS (2532.63 FEET) BLV90-BNES (NEW)
NAV088 ELEVATION = 771.9689 METERS (2532.70 FEET) 1LV90-BNES (OLD)

ORIGINAL BENCHMARK: (NO LONGER EXISTS)
C.L.V. BM #7, STA. 1LV9017NES
BLV BRASS CAP LOCATED AT INTERSECTION OF DURANGO DRIVE AND GRAND TETON DRIVE
ELEVATION = 2541.392 (NAV088)
ELEVATION = 774.6179 METERS

BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH, AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NAD83) EAST ZONE, (2703) AS DETERMINED BY CLARK COUNTY GIS CENTER, POINTS 001, 002, AND 003

DESIGNED BY:	CITY OF LAS VEGAS
CHECKED BY:	PH. (702) 813-7550 FAX (702) 382-2037
PROJECT NO:	2727 SOUTH HARBOR BOULEVARD LAS VEGAS, NEVADA 89146-5148
SCALE:	1" = 40' HORIZ. 1" = 4' VERT.
DATE:	NOV 12 2003
BY:	327V 458R-FA

Detention Basin 2

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: November 28, 2003
TO: Land Development Services Department of Public Works		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	COPIES TO:
	James H. Bilbray Elementary School - Update	G.C. Wallace
Cross Streets:	NEC of Brent Lane & Tee Pee Lane	JMA Architecture
FILE NO.	F:\Depot\DSMEMOS\DS3082E.doc	Bart Anderson, DEVCO
Parcel Number:	125-07-501-002	
Zoning Action:		
FEMA Flood Zone	YES No X	
Proposed Storm Drain	YES X No	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID G.R. #
1 st Submittal	1/15/2002	1/29/2002	Not Acceptable	\$250.00	---
2 nd Submittal	2/22/2002	3/8/2002	Not Acceptable	\$250.00	---
3 rd Submittal	3/18/2002	4/1/2002	Acceptable	\$250.00	---
4 th Submittal	6/17 & 7/7/2003	7/7/2003	Acceptable	N/C	N/C
5 th Submittal	10/28 & 11/24/2003	11/25/2003	See Comments Below	\$100.00	113523: \$100
			TOTAL FEES (LDDRS):	\$850.00	Balance: \$750

REMARKS:

5th Submittal: Update to i) eliminate a 21'-drop inlet in Iron Mountain Road at Sta 22+61.71 and upslope a 3' drop inlet to 6' in sump condition in Fort Apache Road at Sta 10+73.89; ii) Revise to provide full half-street improvement in Iron Mountain Road from Sta 19+90.07 to the intersection

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

X	is acceptable in concept subject to conformance to all City standards and the following conditions.
	must be resubmitted or supplemented including the following:
	Must have Clark County Regional Flood Control District concurrence

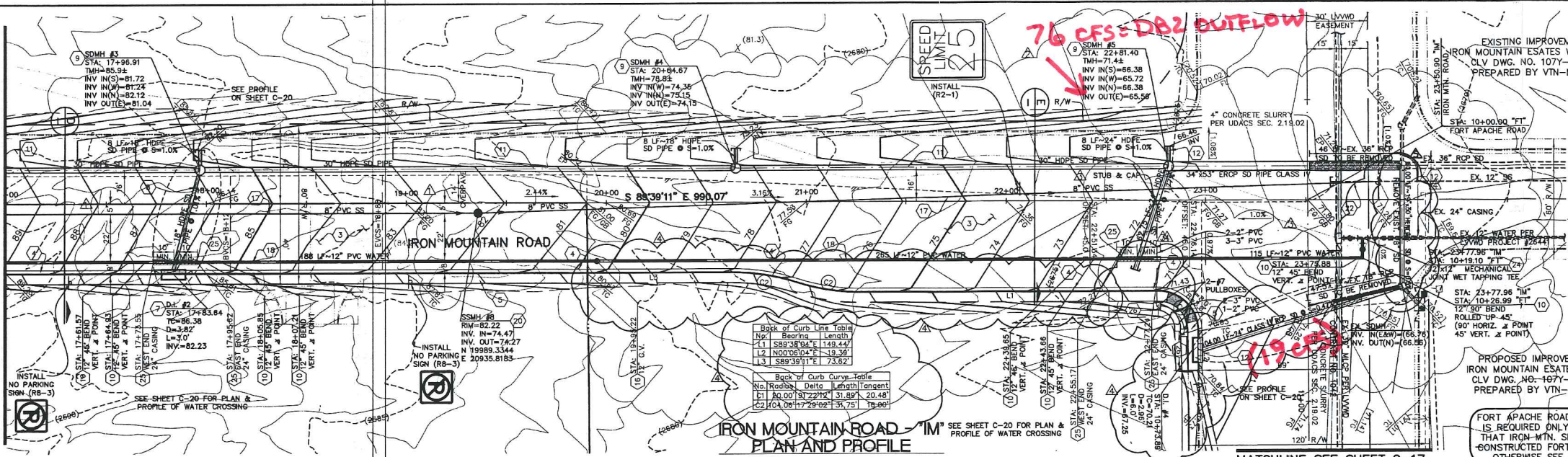
- Further development of the site will require an update to this drainage study.

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 Amendment 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.

END OF REMARKS
Rac/ays

T/R/S: T19S/R60E/07
AREA G-07

IRON MOUNTAIN ROAD
MATCHLINE 17+00.00 - SEE SHEET C-13



Back of Curb Line Table

No.	Radius	Delta	Length	Tangent
1	589.39' (17.72)	149.44'	149.44'	20.48'
2	1000.00' (30.48)	19.34'	19.34'	73.62'
3	589.39' (17.72)	149.44'	149.44'	20.48'

Back of Curb Curve Table

No.	Radius	Delta	Length	Tangent
1	589.39' (17.72)	149.44'	149.44'	20.48'
2	1000.00' (30.48)	19.34'	19.34'	73.62'
3	589.39' (17.72)	149.44'	149.44'	20.48'

IRON MOUNTAIN ROAD - 17" SEE SHEET C-20 FOR PLAN & PROFILE OF WATER CROSSING

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

CALL BEFORE YOU DIG
1-702-593-6111

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT DATE

NOTE:
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER MANUFACTURER'S INSTRUCTIONS.

PROPOSED IMPROVEMENTS
IRON MOUNTAIN ESATES SOUTH
CLV DWG. NO. 107Y-4621-2
PREPARED BY VTN-NEVADA

FORT APACHE ROAD CONSTRUCTION IS REQUIRED ONLY IN THE EVENT THAT IRON-MTN. SPRING HAS NOT CONSTRUCTED FORT APACHE ROAD. OTHERWISE SEE SHEET C-28.

MATCHLINE SEE SHEET C-17
FORT APACHE ROAD

CONSTRUCTION NOTES

- CONSTRUCT COMMERCIAL DRIVEWAY, 8' WIDE VALLEY GUTTER, AND HANDICAP RAMP CASE I PER USDOCA DWG. NO. 222A, 228, & 235.
- MATCH EXISTING EDGE OF AC PAVING.
- CONSTRUCT TYPICAL STREET SECTION PER DETAIL HEREON.
- CONSTRUCT "L" TYPE CURB PER USDOCA DWG. NO. 216.
- CONSTRUCT 4" THICK SIDEWALK PER USDOCA NO. 234. SEE PLAN FOR WIDTH.
- INSTALL CUT OFF WALL PER DETAIL 7 SHEET C-19.
- INSTALL 3" TYPE "CM" DROP INLET PER DETAIL 2 SHEET C-20.
- INSTALL 18" H.D.P.E. STORM DRAIN PIPE.
- INSTALL 60" TYPE III MANHOLE PER USDOCA DWG. NO. 404 (POINT-A-MOONSHOON DUCTILE IRON LOCKING FRAME AND COVER FOR SDMH #5 AT STA: 22+81.40 "IM" ONLY).
- INSTALL BEND IN 12" WATER LINE WITH THRUST BLOCKS PER UDACS PLATE NO. 5. SEE PLAN FOR DEGREE.
- INSTALL 30" H.D.P.E. STORM DRAIN PIPE.
- INSTALL 10"x30" HERCOP STORM DRAIN.

- CONSTRUCT HANDICAP RAMP CASE I PER USDOCA DWG. NO. 235. SEE PLAN FOR A & B DIMENSIONS.
- CONSTRUCT HANDICAP RAMP CASE II PER USDOCA DWG. NO. 235.
- INSTALL 60" TYPE III MANHOLE PER USDOCA DWG. NO. 404 WITH NEENAH RIM & COVER MODEL #R-2540 OR EQUAL.
- INSTALL 12" GATE VALVE.
- INSTALL 8" PVC SANITARY SEWER.
- INSTALL 12" PVC WATER LINE.
- INSTALL 12" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE # 4.
- INSTALL STANDARD ECCENTRIC SANITARY SEWER MANHOLE PER DCSWCS DWG. SD-1.
- CONSTRUCT 21" TYPE "CM" DROP INLET PER DETAIL 2 SHEET C-20.
- REMOVE PROPOSED/EXISTING 10" SS STUB AND REPLACE WITH 8" SS.
- REMOVE CAP TO INSTALL 8" TEE W/ 8"x12" INCREASER. INSTALL 8" GATE VALVE, 10 LF-8" PVC WATERLINE STUB, AND REPLACE CAP & BLOWOFF AT END.
- INSTALL 12"x12" MECHANICAL JOINT WET TAPPING TEE WITH 12" TAPPING VALVE.
- INSTALL 24" CASING SLEEVE PER DETAIL 11 & 12 SHEET C-19.
- LIMITS OF CONSTRUCTION IF FORT APACHE IS CONSTRUCTED BY DEVELOPER OF IRON MOUNTAIN ESATES SOUTH. SEE SHEET C-28.

HDPE CONSTRUCTION NOTE:
CONTRACTOR SHALL PROVIDE 30" MIN. COVER OVER PIPE PRIOR TO VEHICLE LOADING DURING CONSTRUCTION. TRENCH WIDTH MUST BE WIDE ENOUGH TO ACCOMMODATE COMPACTION EQUIPMENT. SEE MANUFACTURER'S GUIDELINES (PRODUCT NOTE 3.115) AND ASTM D2321. CONTRACTOR SHALL NOT USE HYDRO-HAMMER TYPE COMPACTION OVER PIPE TRENCH AREA.

NOTE:
THE THICKNESS OF THE PIPES IN THE VERTICAL DIRECTION IS EXAGGERATED FOR VIEWING PURPOSES ONLY DUE TO THE 10:1 SCALE.

NOTE:
ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.19 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

BASIS OF BEARINGS
NORTH 001°49' WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN FILE 87, PAGE 9 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

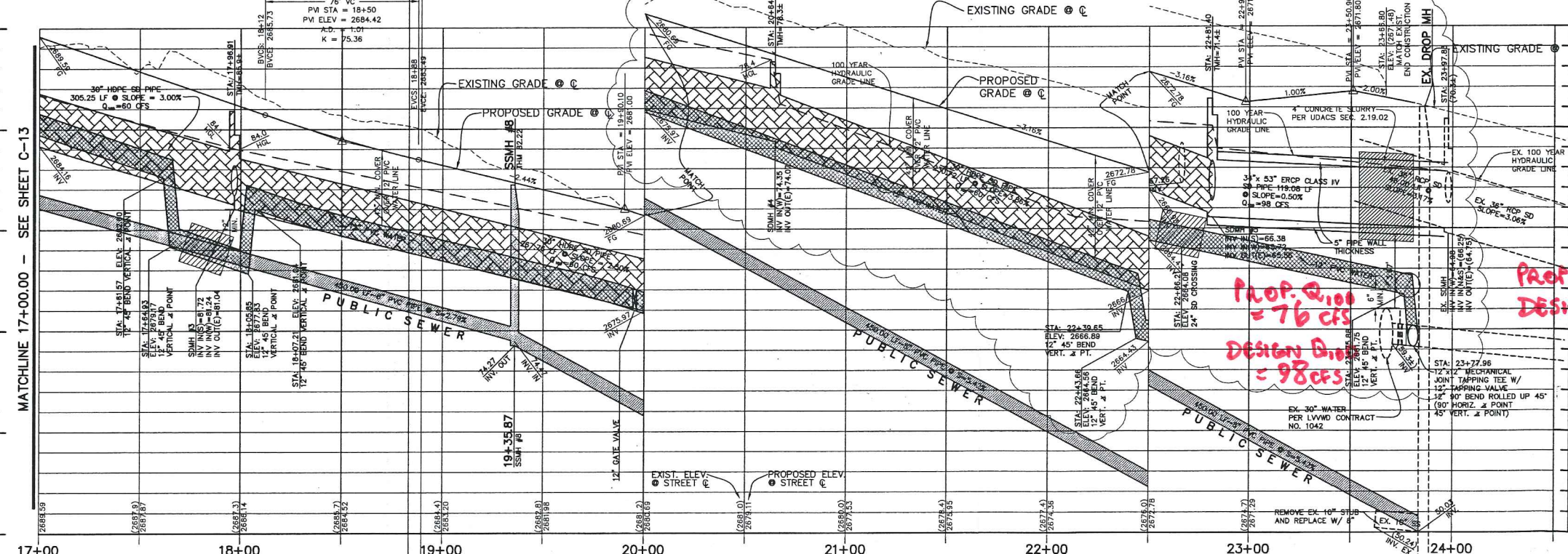
BENCHMARK #OC90 7N6
BENCHMARK NO. OC90 7N6 AS PER CLARK COUNTY BENCH BOOK. A RIVET AND SQUARE ALUMINUM PLATE IN TOP CENTER OF HEADWALL ON THE WEST SIDE OF U.S. 95 NEAR MILE MARKER 91.5. SECTION 7, TOWNSHIP 19 SOUTH, RANGE 60 EAST. ELEVATION: 833.844 METERS / 2736.03 FEET ** JUNE 25, 2001 ** 833.9106 METERS / 2735.92 FEET ** JUNE 3, 2002 ** NAVD 88 DATUM.

ALL EXISTING TOPO. SPOT ELEV. AND CONTOURS AS WELL AS GRADING PLAN ELEV. AND CONTOURS ARE BASED ON THE BENCHMARK DATUM DATED JUNE 25, 2001 ELEV. OF 2736.03 FEET. THE REVISED BENCHMARK DATUM DATED JUNE 3, 2002 ELEV. OF 2735.92 FEET IS NOTED BY **.

REVISED DATUM = USED DATUM - 0.11 FEET

80' WIDE STREET SECTION (R=60 MIN.)
IRON MOUNTAIN ROAD - SEE USDOCA DWG. NO. 205
NOT TO SCALE

32' TEMPORARY ACCESS ROAD
IRON MOUNTAIN ROAD - SEE USDOCA DWG. NO. 209
NOT TO SCALE



PLAN AND PROFILE
SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

CLARK COUNTY SCHOOL DISTRICT
JAMES H. BILBRAY ELEMENTARY SCHOOL
IRON MOUNTAIN ROAD - PLAN AND PROFILE II
STA: 17+00.00 TO 24+50.00
SHEET C-14
15 OF 31 SHTS
DATE: 12/1/07
DESIGN: G.C. WALLACE, INC.
CHECK: G.C. WALLACE, INC.
ISSUE DATE: 12/1/07
PLOT DATE: 12-08-03
PLOT TIME: 11:26:41
G:\919-287\Gis\IronMtn\BEB014.dwg

G.C. Wallace, Inc.

Hydraulic Calculations for Example in Section 807.2 of CCRFCD Manual

DATE: 06/12/03 FILE: REV_HGL_3.3.wb3

Date Printed: 12-Jun-03



G. C. WALLACE, INC.
Engineers • Planners • Surveyors

G. C. WALLACE, PE/SE, PLS
JAMES A. DUDDLESTEN, PE
MICHAEL D. ROSS, PE
CHRISTOPHER W. ANDERSON, PE
CALVIN L. BLACK, PE, PLS
E. ROBERT PETERSON
SCOTT R. PLUMMER, PE
BENJAMIN C. SMITH, PE
EUGENE W. WRIGHT, PE
THOMAS P. DYSON, PE
DOUGLAS M. HANKEL
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RICKEY D. HUNSAKER, PE, LC
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MARVIN W. MAIZE
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S. WILLIAM NEIGHBORS, PE
THOMAS R. NICHOLS, PE
FREDERICK W. ORBAN, PLS
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BRIAN L. SCHMIDT, PE
JEFF W. STAYTON, PE
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HOWARD K. VANDER MEER, PE, WRS
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F. EDUARDO VILLALOBOS, PE/SE
PAUL J. VILLALUZ, PE
KEVIN W. WALLACE, PLS
GLENN B. WATANABE, PE
STEPHEN L. WEATHERMAN, PE
MANSON W. WONG, PE, PTOE

AFFILIATE OFFICE IN
SACRAMENTO, CA

619.287

October 28, 2003

Albert Sung, P.E.
Flood Control Project Engineer
City of Las Vegas
731 South Fourth Street
Las Vegas, Nevada 89101

Subject: Amendment - Bilbray Elementary School (DS 3062)

Dear Mr. Sung,

The drainage study for the subject project was approved by the City of Las Vegas on April 1, 2003. The project includes construction of improvements around the Iron Mountain Road/Fort Apache Road intersection. Due to a utility conflict it is proposed to revise the storm drain and also revise a portion of the street improvements near that intersection. This letter constitutes an amendment to the approved drainage study to address these changes.

* The revisions consist of eliminating the 21-foot long type CM drop inlet on the southwest corner of the intersection, abandoning in place the existing 24-inch lateral at that point, upsizing the 3-foot drop inlet to a 5.5-foot long Type CM inlet, and replacing the existing 18-inch RCP lateral to that inlet with 24-inch HDPE pipe. This change is necessitated by a conflict with the previously unknown Nevada Power conduit bank in Iron Mountain Road.

* The road revisions consist of eliminating the roadside ditch and cutoff wall in Iron Mountain Road between Station 19+00.07 and the improvements at the southwest corner of the intersection. The proposed change consists of construction of the complete half-street paving, curb and gutter and sidewalk along this portion of Iron Mountain Road.

19+90.07
The design flow to the approved 21-foot long is 19 cfs. It is now proposed to allow this flow to drain to the sump condition inlet on Fort Apache Road. The 5.5-foot long drop inlet has the capacity for the 19 cfs with ponding of approximately 0.80 feet. This flow will be confined to the west side of Fort Apache Road and will not overtop the crown. The previous inlet at this point was only designed for nuisance flow, so the design flow does not increase at this point from the 19 cfs. The existing 18-inch outlet pipe will be removed and replaced with a 24-inch storm drain in order to convey the 19 cfs. Calculations for the pipe capacity (a WSPG model) and the drop inlet calculation are attached. A portion of the main line storm drain in Iron Mountain Road now conveys less flow and the Standard Form 6 calculation for the hydraulic grade line has been adjusted. That calculation is also attached.

Field: 10/28/03
DS 3062-2
G-27
\$100

DEPARTMENT OF PUBLIC WORKS



Mayor:
OSCAR B. GOODMAN

City Council:
GARY REESE, MAYOR PRO-TEM.
LARRY BROWN
STEVE WOLFSON
LOIS TARKANIAN
STEVEN D. ROSS
RICKI Y. BARLOW

City Manager:
DOUGLAS A. SELBY

Director of Public Works:
JORGE CERVANTES, P.E.

Acting City Engineer:
CHERI EDELMAN, PE

HORSE DRIVE IMPROVEMENTS
HORSE DRIVE/U.S. 95 INTERCHANGE

BID NUMBER: 09.1730.07

FUNDED BY:
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA,
SURFACE TRANSPORTATION PROGRAM,
CITY OF LAS VEGAS SANITATION,
CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT
AND
NEVADA DEPARTMENT OF TRANSPORTATION

REVIEWED

Chris Edel 10/21/08
City Engineer, Acting Date

City Traffic Engineer Date 10/7/08

Rafael M. Chell MAS 10/16/08
City Project Manager Date

Geli W. Fraser, II 7/8/2008
 Clark County Regional Date

Flood Control District

[Signature] 7-1-08

Regional Transportation Commission Date
Of Southern Nevada

Peggy Miller 7-1-08
Cox Communications Las Vegas, Inc. Date

Mar Kay Suw 7/3/08
Embargo Telephone Date

THE AFFIXED EMBARGO NEVADA APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION STANDARD REGULATIONS.

Marcia M. Cotto 7/7/08

Nevada Power Company-Distribution Date

NEVADA POWER ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NEVADA POWER RESERVES THE RIGHT TO MODIFY ANY EXISTING OR FUTURE CONTRACTS PRIOR TO THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

0077

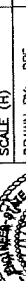
Southwest Gas Corporation Date

Las Vegas Valley Water District 7/4/08
Date

LWMD PROJECT # H80315
SHEETS: I, J, K, RZ-R6, U1, U1A, U2, U4-U7, U10, U11
U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, P1, P3, P3A,

C4A, C7, C8, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C110, C111, C112, C113, C114, C115, C116, C117, C118, C119, C120, C121, C122, C123, C124, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C152, C153, C154, C155, C156, C157, C158, C159, C160, C161, C162, C163, C164, C165, C166, C167, C168, C169, C170, C171, C172, C173, C174, C175, C176, C177, C178, C179, C180, C181, C182, C183, C184, C185, C186, C187, C188, C189, C190, C191, C192, C193, C194, C195, C196, C197, C198, C199, C200, C201, C202, C203, C204, C205, C206, C207, C208, C209, C210, C211, C212, C213, C214, C215, C216, C217, C218, C219, C220, C221, C222, C223, C224, C225, C226, C227, C228, C229, C230, C231, C232, C233, C234, C235, C236, C237, C238, C239, C240, C241, C242, C243, C244, C245, C246, C247, C248, C249, C250, C251, C252, C253, C254, C255, C256, C257, C258, C259, C260, C261, C262, C263, C264, C265, C266, C267, C268, C269, C270, C271, C272, C273, C274, C275, C276, C277, C278, C279, C280, C281, C282, C283, C284, C285, C286, C287, C288, C289, C290, C291, C292, C293, C294, C295, C296, C297, C298, C299, C300, C301, C302, C303, C304, C305, C306, C307, C308, C309, C310, C311, C312, C313, C314, C315, C316, C317, C318, C319, C320, C321, C322, C323, C324, C325, C326, C327, C328, C329, C330, C331, C332, C333, C334, C335, C336, C337, C338, C339, C340, C341, C342, C343, C344, C345, C346, C347, C348, C349, C350, C351, C352, C353, C354, C355, C356, C357, C358, C359, C360, C361, C362, C363, C364, C365, C366, C367, C368, C369, C370, C371, C372, C373, C374, C375, C376, C377, C378, C379, C380, C381, C382, C383, C384, C385, C386, C387, C388, C389, C390, C391, C392, C393, C394, C395, C396, C397, C398, C399, C400, C401, C402, C403, C404, C405, C406, C407, C408, C409, C410, C411, C412, C413, C414, C415, C416, C417, C418, C419, C420, C421, C422, C423, C424, C425, C426, C427, C428, C429, C430, C431, C432, C433, C434, C435, C436, C437, C438, C439, C440, C441, C442, C443, C444, C445, C446, C447, C448, C449, C450, C451, C452, C453, C454, C455, C456, C457, C458, C459, C460, C461, C462, C463, C464, C465, C466, C467, C468, C469, C470, C471, C472, C473, C474, C475, C476, C477, C478, C479, C480, C481, C482, C483, C484, C485, C486, C487, C488, C489, C490, C491, C492, C493, C494, C495, C496, C497, C498, C499, C500, C501, C502, C503, C504, C505, C506, C507, C508, C509, C510, C511, C512, C513, C514, C515, C516, C517, C518, C519, C520, C521, C522, C523, C524, C525, C526, C527, C528, C529, C530, C531, C532, C533, C534, C535, C536, C537, C538, C539, C540, C541, C542, C543, C544, C545, C546, C547, C548, C549, C550, C551, C552, C553, C554, C555, C556, C557, C558, C559, C560, C561, C562, C563, C564, C565, C566, C567, C568, C569, C570, C571, C572, C573, C574, C575, C576, C577, C578, C579, C580, C581, C582, C583, C584, C585, C586, C587, C588, C589, C590, C591, C592, C593, C594, C595, C596, C597, C598, C599, C600, C601, C602, C603, C604, C605, C606, C607, C608, C609, C610, C611, C612, C613, C614, C615, C616, C617, C618, C619, C620, C621, C622, C623, C624, C625, C626, C627, C628, C629, C630, C631, C632, C633, C634, C635, C636, C637, C638, C639, C640, C641, C642, C643, C644, C645, C646, C647, C648, C649, C650, C651, C652, C653, C654, C655, C656, C657, C658, C659, C660, C661, C662, C663, C664, C665, C666, C667, C668, C669, C670, C671, C672, C673, C674, C675, C676, C677, C678, C679, C680, C681, C682, C683, C684, C685, C686, C687, C688, C689, C690, C691, C692, C693, C694, C695, C696, C697, C698, C699, C700, C701, C702, C703, C704, C705, C706, C707, C708, C709, C710, C711, C712, C713, C714, C715, C716, C717, C718, C719, C720, C721, C722, C723, C724, C725, C726, C727, C728, C729, C730, C731, C732, C733, C734, C735, C736, C737, C738, C739, C740, C741, C742, C743, C744, C745, C746, C747, C748, C749, C750, C751, C752, C753, C754, C755, C756, C757, C758, C759, C760, C761, C762, C763, C764, C765, C766, C767, C768, C769, C770, C771, C772, C773, C774, C775, C776, C777, C778, C779, C780, C781, C782, C783, C784, C785, C786, C787, C788, C789, C790, C791, C792, C793, C794, C795, C796, C797, C798, C799, C800, C801, C802, C803, C804, C805, C806, C807, C808, C809, C810, C811, C812, C813, C814, C815, C816, C817, C818, C819, C820, C821, C822, C823, C824, C825, C826, C827, C828, C829, C830, C831, C832, C833, C834, C835, C836, C837, C838, C839, C840, C841, C842, C843, C844, C845, C846, C847, C848, C849, C850, C851, C8

H# 12836

	DEPARTMENT OF PUBLIC WORKS COVER SHEET	PROJECT: HORSE DRIVE / US 95 INTERCHANGE			DATE: 06/30/2008	SCALE (H)	SCALE (V)	W.A. #	DESIGN BY: NOG
					DRAWN BY: DRF	DATE: 06/30/2008	SCALE (H)	SCALE (V)		W.A. #
2727 S. RAINBOW BLVD. LAS VEGAS, NV 89146-5148 PHONE (702) 875-7550 FAX (702) 362-2597									
DATE									
REVISIONS									

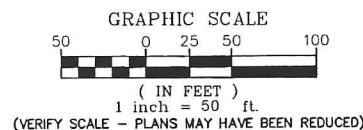
NOTES:

1. FOR UTILITY ADJUSTMENT & RELOCATION SEE SHEET U1 THRU U13
2. FOR SANITARY SEWER INFORMATION SEE SHEET SS1 THRU SS8
3. FOR LANDSCAPING INFORMATION SEE LANDSCAPE PLANS

NOTE:
A PROTECT IN PLACE

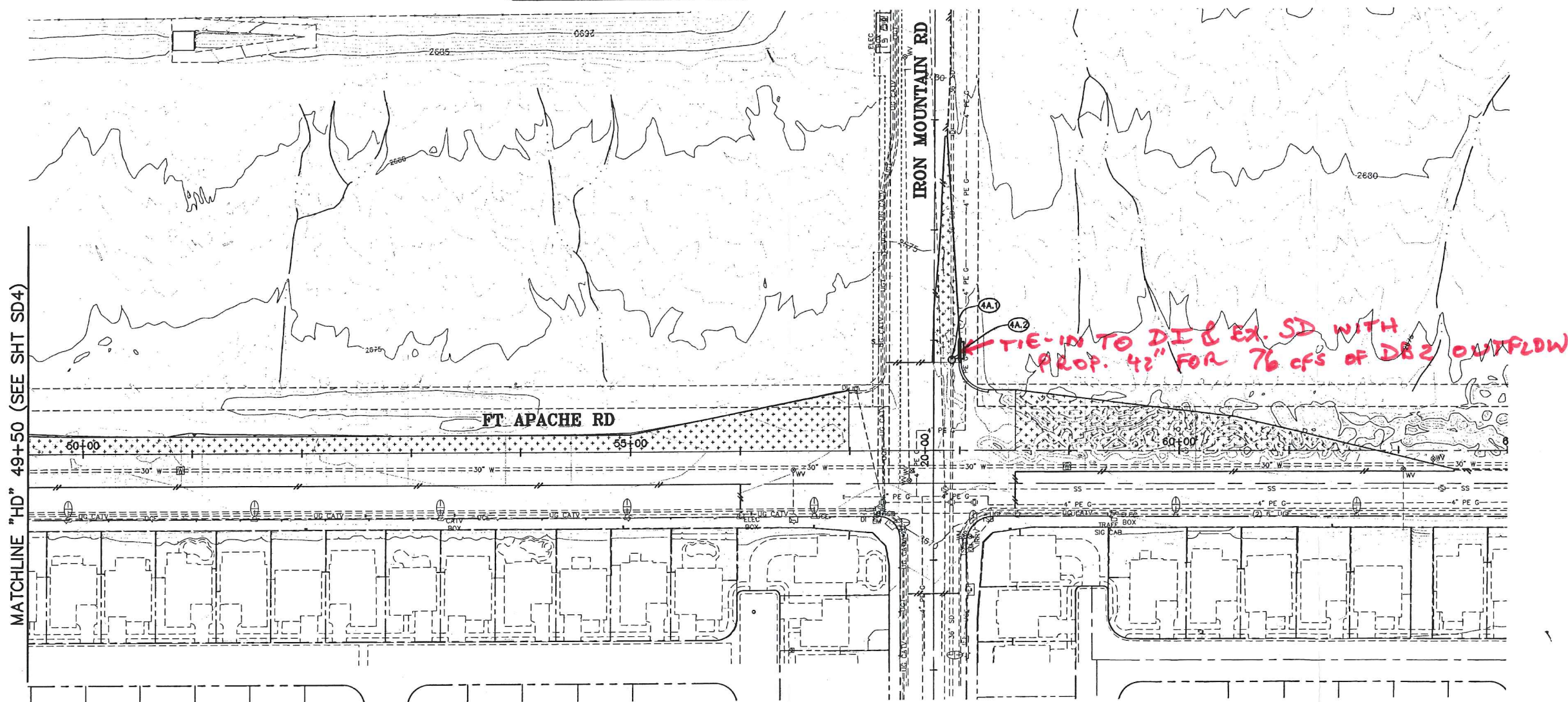
LEGEND:

- DENOTES PBS (PLANTMIX BITUMINOUS SURFACE)
- DENOTES CONCRETE PAVEMENT
- 16' WIDE NDOT MAINT. ACCESS SEE DETAIL ON SHEET SD1
- RIPRAP
- GRADING KEYNOTE



DRAINAGE CONSTRUCTION NOTES:

- 4A.1 "IM" 19+17.70, 18.47' LT.
INSTALL 72" NDOT TYPE 2 MODIFIED MANHOLE
(PER NDOT STD. DWG. R-4.3.1)
CONNECT TO EXISTING 36" RCP
SEE SHEET SD36
- 4A.2 "IM" 19+09.13, 24.93' LT.
INSTALL 15.00' TYPE "CM2" DROP INLET
(PER DETAIL SHEET SD43)
INSTALL 4.11 L.F. 23"x14" HERCP
SEE SHEET SD36



NOTE TO CONTRACTOR REGARDING FINISHED GRADES:

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADJUST THE CONCRETE INLET APRON AND/OR GRATE TO THE FINISHED GROUND SURFACE OR TO THE FINISHED GRADE OF THE ROADWAY SURFACE (WHICHEVER IS APPLICABLE). IF THE APRON AND/OR GRATE IS CONSTRUCTED PRIOR TO FINALIZING THE FINISHED GRADE, AND THE APRON EDGES AND CORNERS AND/OR GRATE IS BEYOND 0.02' VERTICAL TOLERANCE TO THE FINISHED GRADE, THE CONTRACTOR SHALL REMOVE AND REPLACE THE APRONS AND/OR GRATE AT HIS OWN EXPENSE TO WITH IN THIS TOLERANCE IF THIS CONDITION OCCURS.

Call before you Dig
1-800-227-2600
NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

Call before you Dig
1-800-227-2600
CLARK COUNTY PUBLIC UTILITIES DEPARTMENT
1-702-455-7544

PUBLIC WORKS DEPARTMENT
400 E. STEWART AVE
LAS VEGAS, NV 89101
702-253-0672

CITY OF LAS VEGAS, NV
277 SOUTH RIVERS BLVD SUITE 100
LAS VEGAS, NV 89101
702-253-0672

STORM DRAIN AND GRADING PLAN
"HD" 39+00 TO "HD" 44+81#

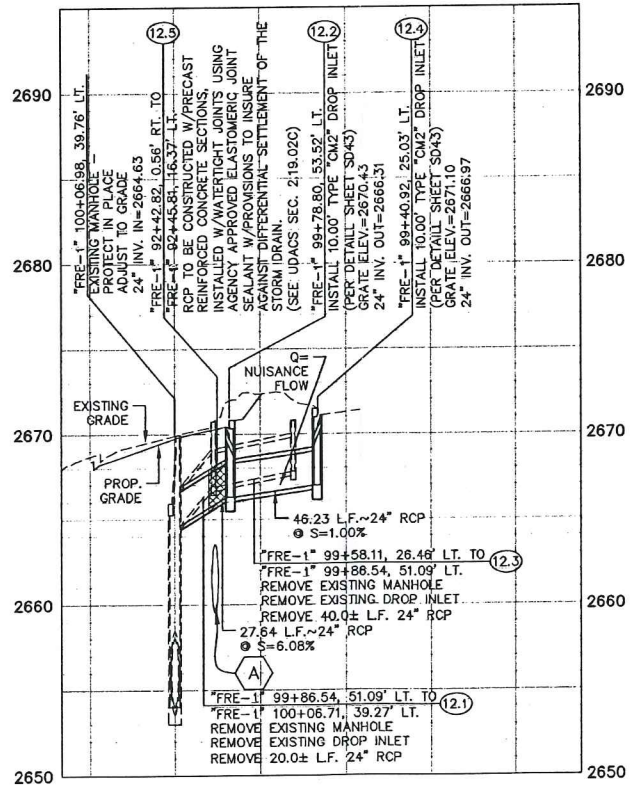
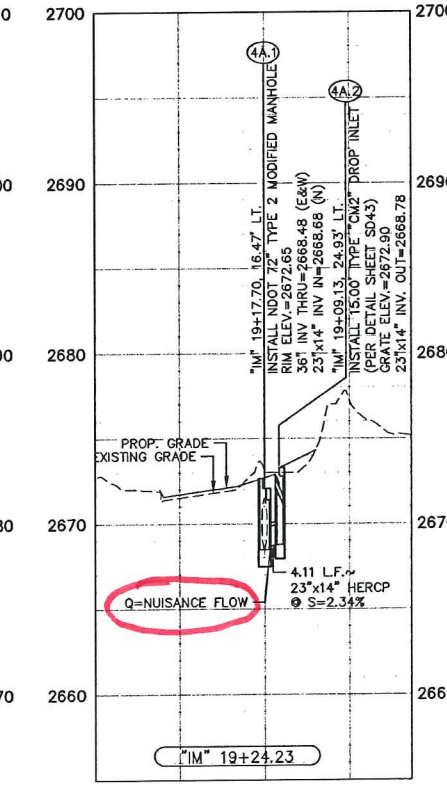
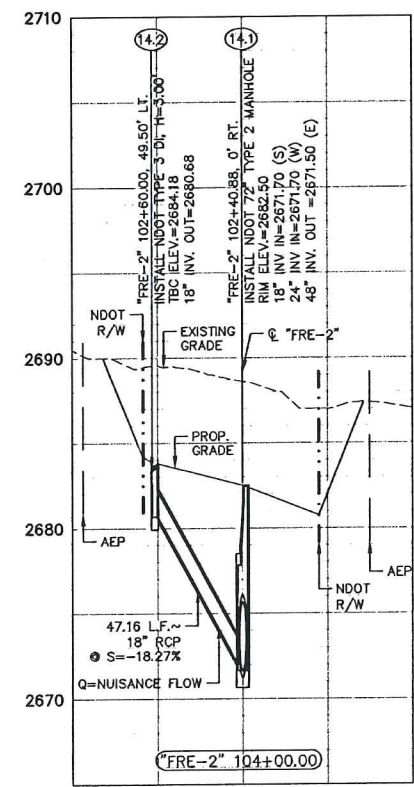
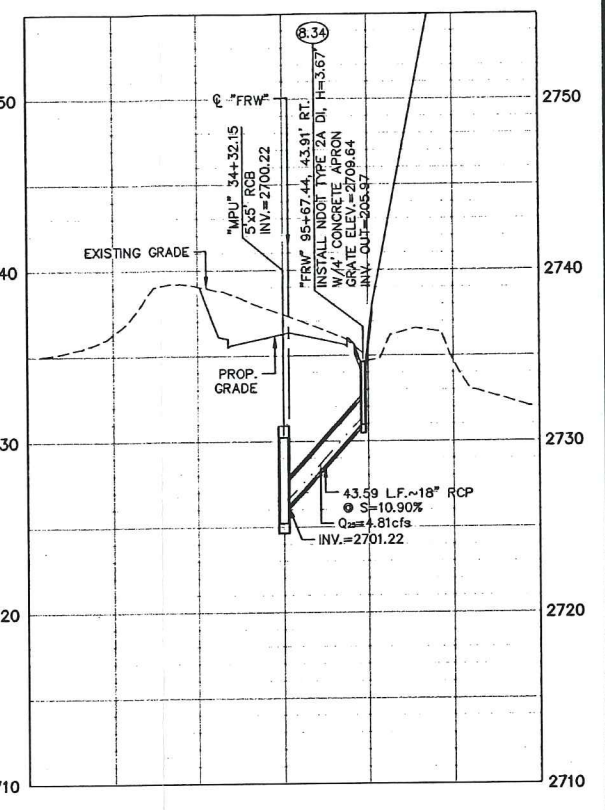
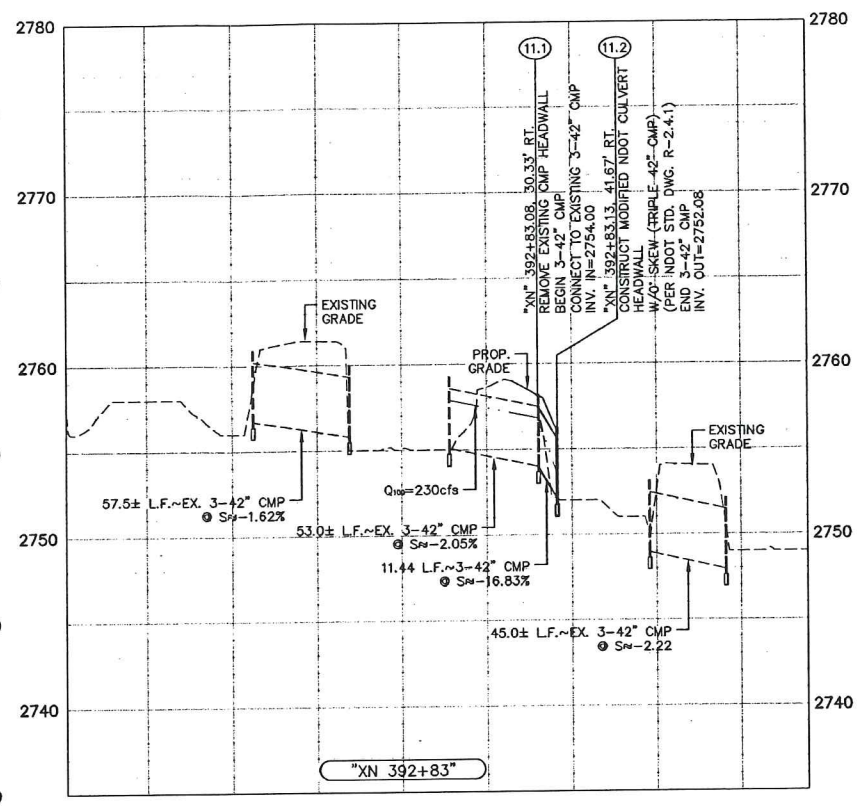
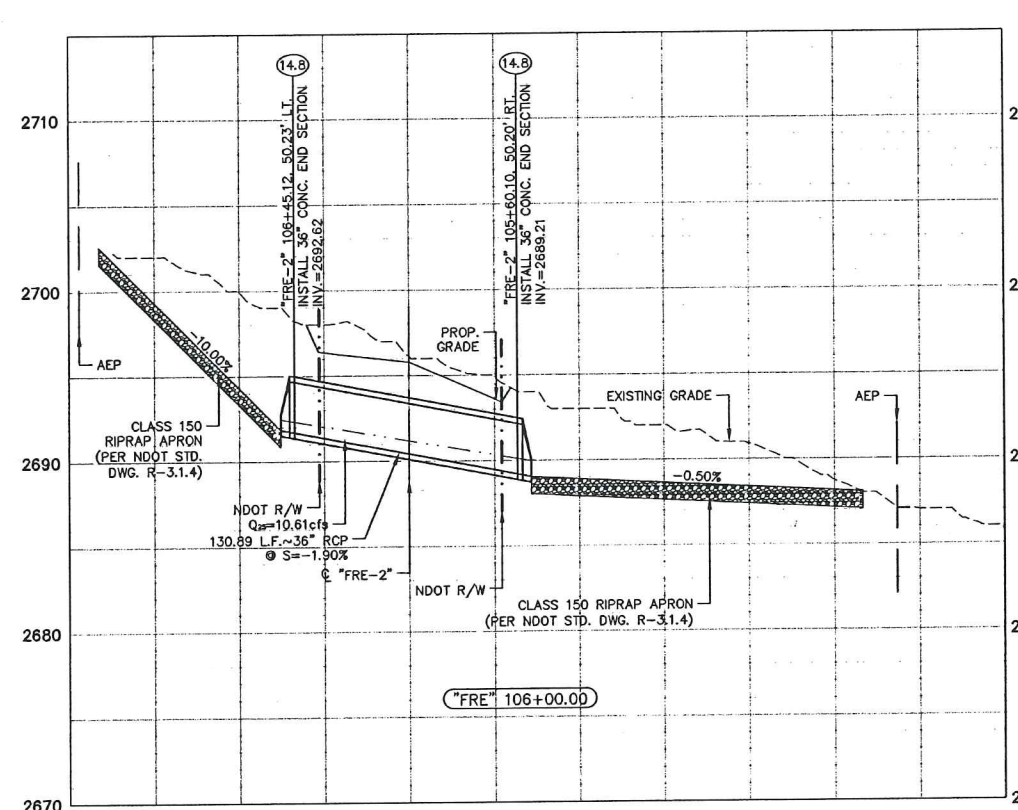
HORSE DRIVE / US 95 INTERCHANGE

DRAWN BY: 06/20/2008
DESIGNED BY: 06/20/2008
CHECKED BY: 06/20/2008
PROJECT NO: 6500
SCALE: 1"=50' HORIZ. VERT. N/A

PROFESSIONAL ENGINEER
LANT K. LEAVITT
EXP. 12/31/09
CIVIL
No. 18287

SHEET
SD4A
114 OF 253 SHEETS
DRAWING NO.
107V3769

1:16000 (VMS) DESIGN 0600-30-HORSE.dwg



NOTE:
 A PROTECT EXISTING LVVWD 24\"/>

- NOTES:**
1. CONTRACTOR TO VERIFY ALL HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITY CROSSINGS AND/OR CONFLICTS PRIOR TO EXCAVATION.
 2. CONTRACTOR TO PROTECT EXISTING UTILITIES IN PLACE, UNLESS NOTED OTHERWISE.
 3. SEE SHEET SD39 FOR TYPICAL EXCAVATION & TRENCH DETAILS.

APPROVED
Joseph Morgan
 LAS VEGAS VALLEY WATER DISTRICT
 LVVWD PROJECT # H80315
 7/24/08
 DATE

Call before you Dig
 Avoid cutting, underground utility lines, it's costly.
Call 811
 1-702-227-2929
 NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT
 1-800-227-2600
 CLARK COUNTY TRAFFIC DIVISION
 1-702-455-7544

PUBLIC WORKS DEPARTMENT 400 E. STAMMART AVE LAS VEGAS, NV 89101 702-229-4272		CITY OF LAS VEGAS, NV 2727 SOUTH HANSON BOULEVARD LAS VEGAS, NEVADA 89144-1448 PH. (702) 872-7500 FAX (702) 382-2587 www.lasvegasnevada.org	
STORM DRAIN PROFILES		HORSE DRIVE / US 95 INTERCHANGE	
DRAWN BY: 6/20/2008	DESIGNED BY: 6/20/2008	CHECKED BY: 6/20/2008	PROJECT NO: SCALE: 1"=50' HORIZ. 1"=5'
SHEET SD36 OF 153 SHEETS DRAWING NO. 107V3759			

DI DOESN'T EAT INTO CAPACITY OF IRON MIN. SD INTENDED TO BE UTILIZED FOR DB2 OUTFLOW

114322

4. Drainage Facilities and Protection

The street flow calculations were utilized to determine protection needed to perimeter and interior walls against flows. The stem walls shown on Iron Mountain Road was specifically taken from the approved *Hydrology Study for Iron Mountain Estates*. The sections on O'Hare also matches the section from the previously approved study. Street flow calculations for Fort Apache show that velocities are non-erosive but 2 coarse solid grout has been called out on the perimeter wall as a pre-cautionary measure. All finish floors are set to twice the flow depth in the fronting street or a minimum of 0.5-feet above top-of-curb. Corner lots were checked against side street and where finish floor elevations were below top-of-curb elevations, the side walls were solid grouted to twice the depth of flow. Weir flow calculations were computed on the upstream side of all drainage easements and adjacent finish floor elevations were set 18-inches above the water surface elevation. All street flow and drainage easement calculations are included in the Appendix.

Storm sewer is proposed in Fort Apache Road and Iron Mountain Road as outlined in the *Northwest Neighborhood Study*. The *Northwest Neighborhood Study* calls out for 18-inch storm sewer within Fort Apache Road and 36-inch storm sewer in Iron Mountain Road. The storm sewer in Fort Apache is divided into two segments. The segment draining to the north is approximately 400-feet long and an inlet has been provided at the corner of Fort Apache and O'Hare. The *Northwest Neighborhood Study* does not show flow values for the storm sewer in Fort Apache so it was assumed that the storm sewer is for nuisance flow control. Since the site does not drain into Fort Apache, there will be no nuisance flows on the east half of Fort Apache. A stub-out has been provided for a future inlet on the west half of Fort Apache where nuisance flow will most likely be collected. The storm sewer terminates at O'Hare Avenue into a temporary daylight channel. In the future, the storm sewer will be extended north of O'Hare Avenue. The segment running south in Fort Apache connects into the storm sewer in Iron Mountain Road. The same type of stub-out will be provided at the upstream end and an inlet at the intersection of Fort Apache and Iron Mountain Road.

The storm sewer in Iron Mountain Road was designed for the 98 cfs shown in the *Northwest Neighborhood Study*. The pipe contains 60 cfs when it reaches the site so inlets designed to capture 38 cfs will be needed at the Fort Apache/Iron Mountain intersection. It was assumed that the future inlets located on the west or upstream side of the intersection will be used to capture the 38 cfs and nuisance flow inlets will be provided on the downstream or east corners of the intersection. The inlet provided on the northeast corner is a type "C" drop inlet with 6-foot of curb opening and 1 grate. An additional nuisance inlet is provided

ESTIMATED QUANTITIES

	PUBLIC	PRIVATE
TYPE I BASE (* IF REQUIRED)	2,247 C.Y.	3,052 C.Y.
TYPE II BASE	1,642 C.Y.	1,788 C.Y.
EXCAVATION	7,228 C.Y.	10,729 C.Y.
2" AC PAVEMENT	----- S.Y.	16,094 S.Y.
3" AC PAVEMENT	10,842 S.Y.	----- S.Y.
CURB & GUTTER	2,618 L.F.	7,923 L.F.
CONCRETE VALLEY GUTTER	----- S.F.	3,078 S.F.
CONCRETE SIDEWALK	12,362 S.F.	26,016 S.F.
STREET LIGHTS	15 EA.	26 EA.

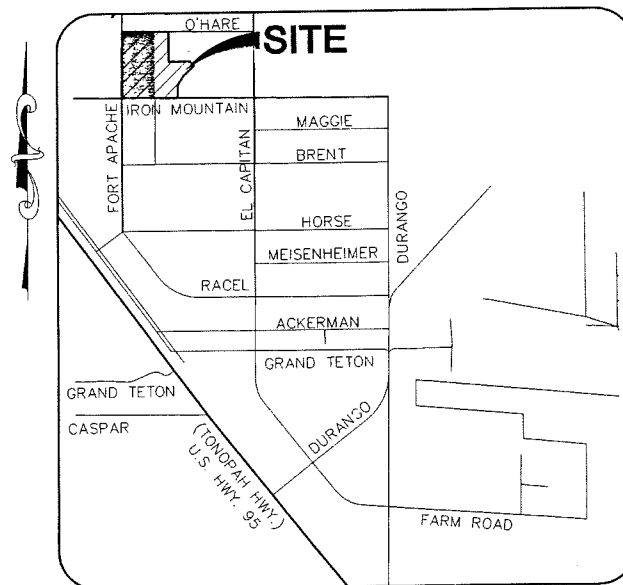
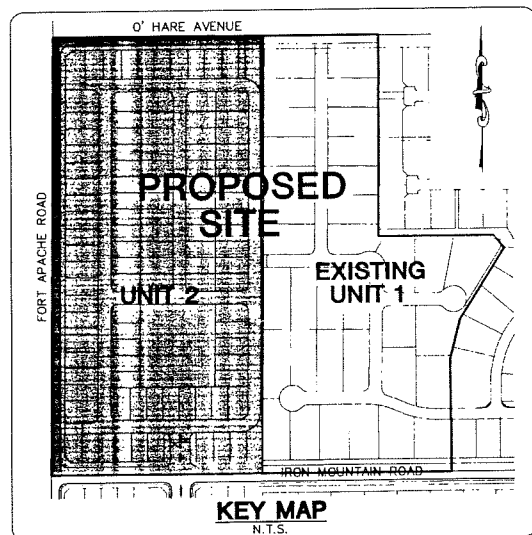
IMPROVEMENT PLANS

FOR

IRON MOUNTAIN ESTATES WEST UNIT 2

CITY OF LAS VEGAS
STATE OF NEVADA

APN# 125-05-401-001



LOCATION MAP

N.T.S.

SHEET INDEX

SHEET#	SHEET	DESCRIPTION
1	C1	COVER SHEET
2	C2	GENERAL NOTES
3	C3	MASTER UTILITY PLAN
4	C4	MASTER UTILITY PLAN
5	G1	GRADING PLAN
6	G2	GRADING PLAN
7	S1	STREET PLAN AND PROFILE - O'HARE AVENUE
8	S2	STREET PLAN AND PROFILE - FORT APACHE ROAD
9	S3	STREET PLAN AND PROFILE - FORT APACHE ROAD
10	S4	STREET PLAN AND PROFILE - IRON MOUNTAIN ROAD
11	S5	SECTION AND DETAILS
12	TS1	TRAFFIC, STREET LIGHTING & STRIPING PLAN
13	TS2	TRAFFIC, STREET LIGHTING & STRIPING PLAN
14	SS1	STREET/SEWER PLAN & PROFILE - NICKLEWOOD AVENUE
15	SS2	STREET PLAN & PROFILE - SOLITAIRE AVENUE
16	SS3	STREET/SEWER PLAN & PROFILE - IRONSTONE AVENUE
17	SS4	STREET/SEWER PLAN & PROFILE - STEELTREE STREET
18	SS5	STREET/SEWER PLAN & PROFILE - STEELTREE STREET
19	SS6	STREET/SEWER PLAN & PROFILE - IRONSEND STREET
20	SS7	STREET/SEWER PLAN & PROFILE - YELLOWSHALE STREET
21	SS8	STREET/SEWER PLAN & PROFILE - YELLOWSHALE STREET
22	SD1	STORM DRAIN PLAN AND PROFILE - FORT APACHE ROAD
23	SD2	STORM DRAIN PLAN AND PROFILE - IRON MOUNTAIN ROAD

OWNER/DEVELOPER

ASTORIA HOMES
9555 DEL WEBB BLVD.
LAS VEGAS, NEVADA 89134
(702) 257-1188
CONTACT- TROY SMITH

APPROVAL

Charles Kaskowski 7-15-2002
CITY ENGINEER - CHARLES KASKOWSKI PE # 4784 DATE

APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHT-OF-WAY AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIFICALLY LISTED UNDER DEVIATIONS FROM STANDARD. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS CLARK COUNTY AREA NEVADA.

John Koswan 6/27/2002
PLANNING - JOHN KOSWAN, CURRENT PLANNING MANAGER DATE

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING AND DEVELOPMENT DEPARTMENT

[Signature] 6.6.02
CITY FIRE MARSHAL DATE

[Signature] 10/17/02
LAS VEGAS VALLEY WATER DISTRICT (SHEET 1-4, 22, 23) DATE

[Signature] 6-10-02
SOUTHWEST GAS CORPORATION Ron Cottle DATE

[Signature] 6/5/02
NEVADA POWER COMPANY DATE

NEVADA POWER COMPANY APPROVAL IS ONLY FOR THE PLACEMENT AND CLEARANCE OF STREET LIGHT AND SIGNAL LIGHT INSTALLATION.

CONTRACTOR NOTE

CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

LEGAL DESCRIPTION

A PORTION OF THE SOUTH HALF (S 1/2) OF SOUTHWEST QUARTER (SW 1/4), OF SECTION 5, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

BASIS OF BEARINGS

THE BASIS OF BEARING FOR THIS PROJECT IS GRID NORTH AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83), EAST ZONE, (2701), DETERMINED BY CLARK COUNTY GIS CONTROL POINTS 802,803, 804, & 805, AS SHOWN ON A RECORD OF SURVEY ON FILE IN THE CLARK COUNTY, NEVADA, RECORDER'S OFFICE, IN BOOK 88 OF SURVEYS, AT PAGE 53.

BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CLARK COUNTY BENCHMARK USC&GS V-169
NAVD88 ELEVATION: 791.316 METERS (2596.17 FEET)
USC&GS BRASS CAP 400 FT. SOUTH OF LOG CABIN WAY AND 100 FT. EAST OF EL CAPITAN WAY JUST EAST OF A BARBED WIRE FENCE.

Avoid cutting underground utility lines. It's costly.
Call before you Dig
1-800-227-2600

Avoid overhead power line contact. It's costly.
Call before you Overhead
1-702-593-6111

These plans and the design criteria contained within these plans are based upon the information presently known by the engineer and intended solely as a general guideline for construction. All construction shall be in conformance with all applicable local, state and federal statutes, laws, codes, regulations and ordinances, including but not limited to the Federal Fair Housing Amendments Act, Americans With Disabilities Act, the Architectural Barriers Act and any applicable uniform standards, specifications or drawings. The person or entity performing the construction shall be solely responsible to make sure construction is in conformance with all local, state and federal statutes, laws, codes, regulations, standards, guidelines and ordinances and further, is in conformance with any applicable design criteria, including but not limited to soils reports, traffic studies, geotechnical reports, architectural plans and specifications, drainage plans or studies and any other criteria, standards or requirements listed in the plans or the general notes related to these plans or provided by anyone in reference to this project.

NEVADA POWER COMPANY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND ASSOCIATED WITH THIS PROJECT. NEVADA POWER COMPANY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

ASTORIA HOMES
9555 DEL WEBB BLVD.
LAS VEGAS, NEVADA 89134
(702) 257-1188

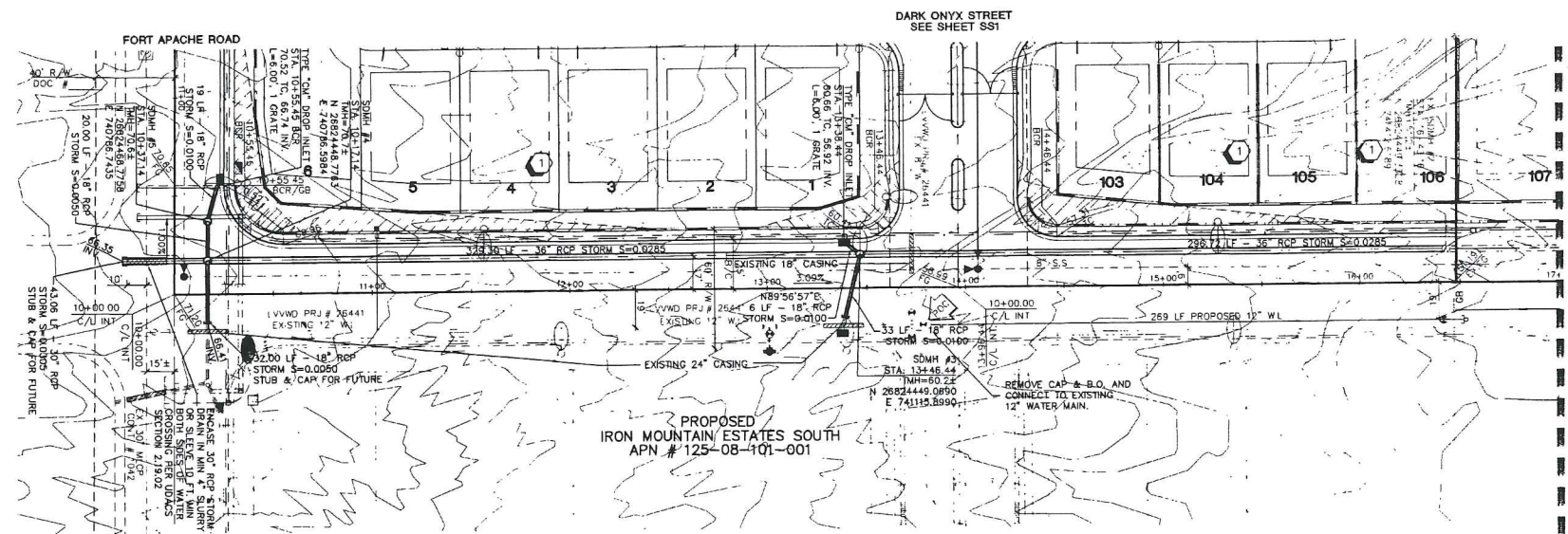
COVER SHEET

IRON MOUNTAIN ESTATES WEST
UNIT 2

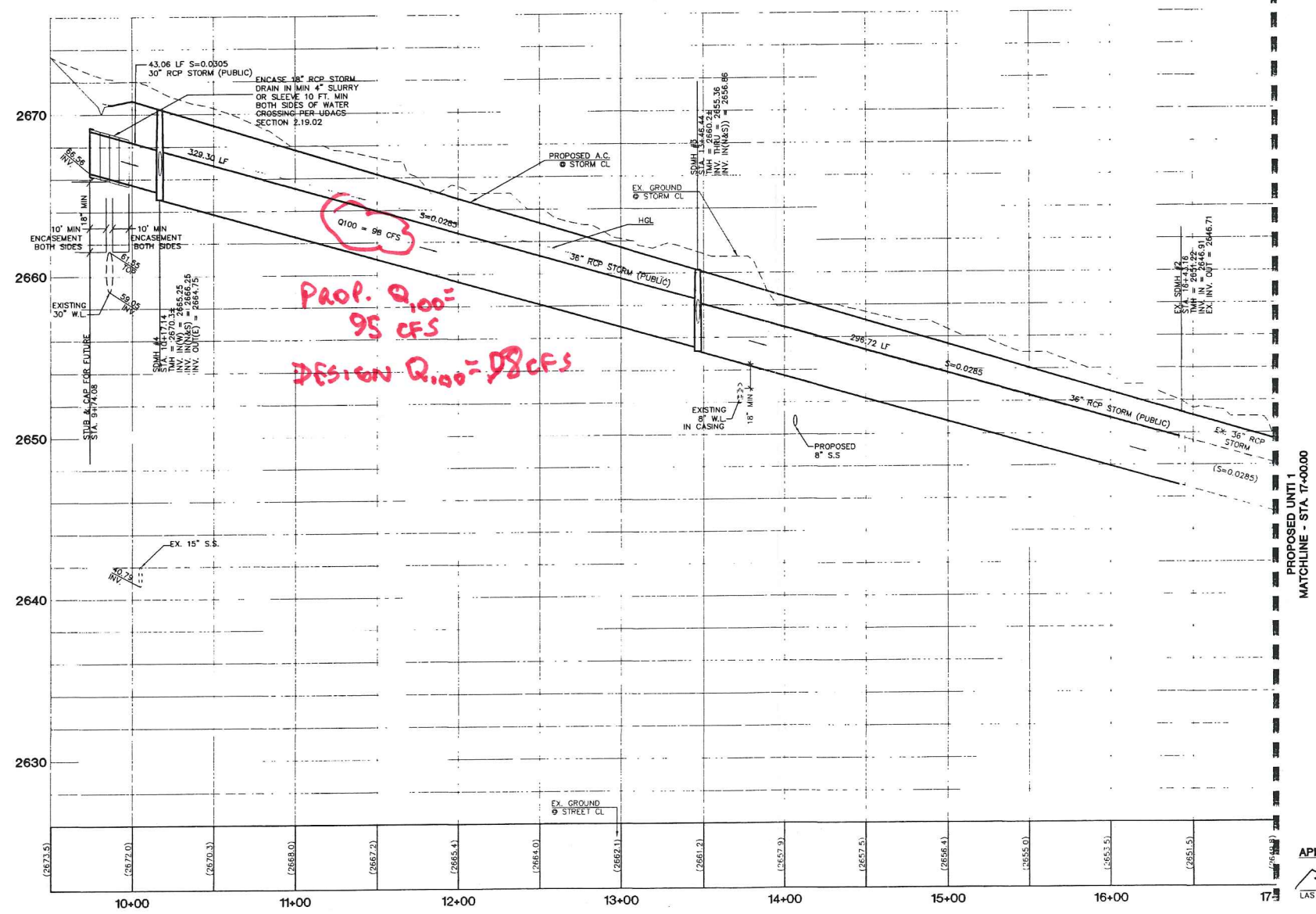
DRAWN BY: 12/04/01
DESIGNED BY: 12/04/01
CHECKED BY: 12/04/01
PROJECT NO: 5463
SCALE: N/A
VERT. 1/4"

PROFESSIONAL ENGINEER - STATE OF NEVADA
No. 13958
6/5/02

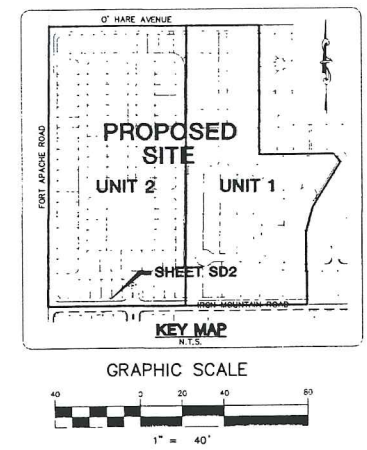
SHEET C1
1 of 23 SHEETS
DRAWING NO. 574-4691-2



IRON MOUNTAIN ROAD
(PUBLIC STREET)



Prop. Q₁₀₀ = 95 CFS
DESIGN Q₁₀₀ = 178 CFS



BASIS OF BEARING
THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83), EAST ZONE, (2701), DETERMINED BY CLARK COUNTY GIS CONTROL POINTS 802,803, 804, & 805, AS SHOWN ON A RECORD OF SURVEY ON FILE IN THE CLARK COUNTY, NEVADA, RECORDER'S OFFICE, IN BOOK 88 OF SURVEYS, AT PAGE 53.

BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88)
CLARK COUNTY BENCHMARK USC&GS V-169
NAV88 ELEVATION: 761.316 METERS (2596.17 FEET)
USC&GS BRASS CAP 400 FT. SOUTH OF LOG CABIN WAY AND 100 FT. EAST OF EL CAPITAN WAY JUST EAST OF OF A BARBED WIRE FENCE.

FOR DETAILS AND SECTIONS
SEE SHEET S5

ALL STORM DRAIN STATIONING
IS BASED ON CENTERLINE STATIONING

CONTRACTOR NOTE:
CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

APPROVED FOR CONSTRUCTION
10/17/12
LAS VEGAS VALLEY WATER DISTRICT

Call before you Dig
1-800-227-2600

Call before you Overhead
1-702-593-6111

ASTORIA HOMES		CITY OF LAS VEGAS, NEVADA	
STORM DRAIN PLAN AND PROFILE		IRON MOUNTAIN ESTATES WEST UNIT 2	
DRAWN BY: dlb	DESIGNED BY: BB/dlb	CHECKED BY: CMB/DP	PROJECT NO.: 5463-4
DATE: SEPT. 2001		SCALE: 1"=40' HORIZ. 1"=4' VERT.	
ENGINEER'S SEAL CHRISTOPHER J. BROWN REGISTERED PROFESSIONAL ENGINEER CIVIL NO. 13956 EXPIRATION DATE: 5/30/02			
SHEET SD2 23 OF 23 SHEETS			
DRAWING NO. 327Y-4691-2			

2984
G05
\$250

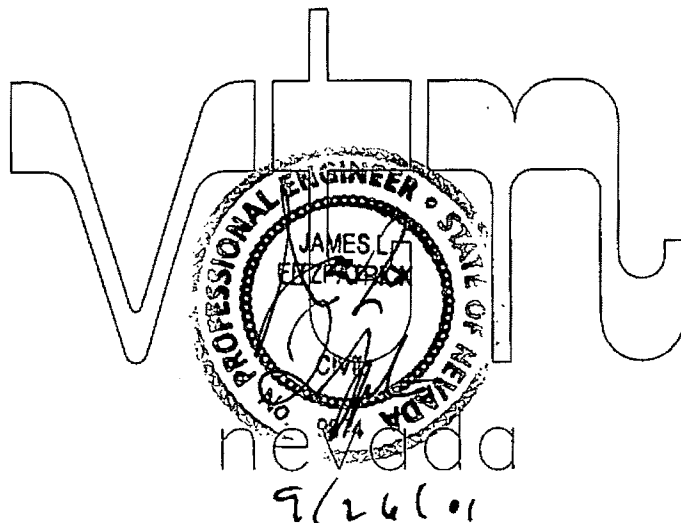
TECHNICAL HYDROLOGY STUDY
FOR
IRON MOUNTAIN ESTATES WEST
CITY OF LAS VEGAS, NEVADA
W.O. #5463-4

Prepared for:

ASTORIA HOMES

Submitted to:

PUBLIC WORKS DEPT.
CITY OF LAS VEGAS, NV.



Ditch North - Segment 1

Worksheet for Trapezoidal Channel

Project Description	
Worksheet	Ditch North - Segment 1
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Mannings Coefficient	0.025
Channel Slope	0.005000 ft/ft
Left Side Slope	3.00 H : V
Right Side Slope	3.00 H : V
Bottom Width	4.00 ft
Discharge	76.00 cfs

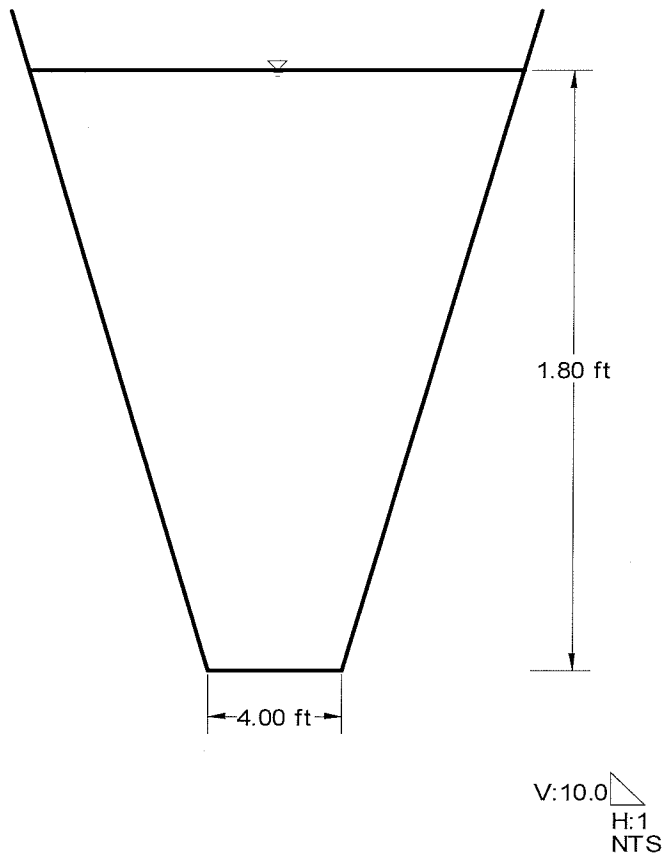
Results	
Depth	1.80 ft
Flow Area	17.0 ft²
Wetted Perimeter	15.40 ft
Top Width	14.82 ft
Critical Depth	1.55 ft
Critical Slope	0.009550 ft/ft
Velocity	4.48 ft/s
Velocity Head	0.31 ft
Specific Energy	2.11 ft
Froude Number	0.74
Flow Type	Subcritical

Ditch North - Segment 1

Cross Section for Trapezoidal Channel

Project Description	
Worksheet	Ditch North - Segment 1
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.025
Channel Slope	0.005000 ft/ft
Depth	1.80 ft
Left Side Slope	3.00 H : V
Right Side Slope	3.00 H : V
Bottom Width	4.00 ft
Discharge	76.00 cfs



Ditch North - Segment 2

Worksheet for Trapezoidal Channel

Project Description	
Worksheet	Ditch North - Segment 2
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Mannings Coefficient	0.025
Channel Slope	0.025000 ft/ft
Left Side Slope	3.00 H : V
Right Side Slope	3.00 H : V
Bottom Width	40.00 ft
Discharge	76.00 cfs

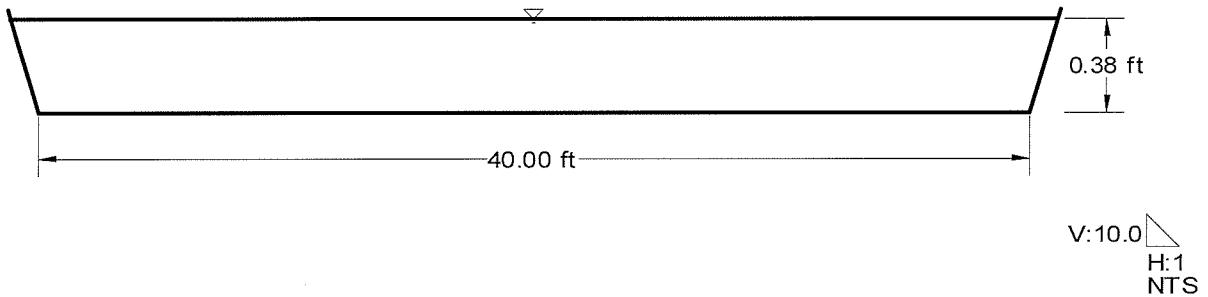
Results	
Depth	0.38 ft
Flow Area	15.7 ft ²
Wetted Perimeter	42.41 ft
Top Width	42.29 ft
Critical Depth	0.48 ft
Critical Slope	0.011850 ft/ft
Velocity	4.84 ft/s
Velocity Head	0.36 ft
Specific Energy	0.75 ft
Froude Number	1.40
Flow Type	Supercritical

Ditch North - Segment 2

Cross Section for Trapezoidal Channel

Project Description	
Worksheet	Ditch North - Segment 2
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

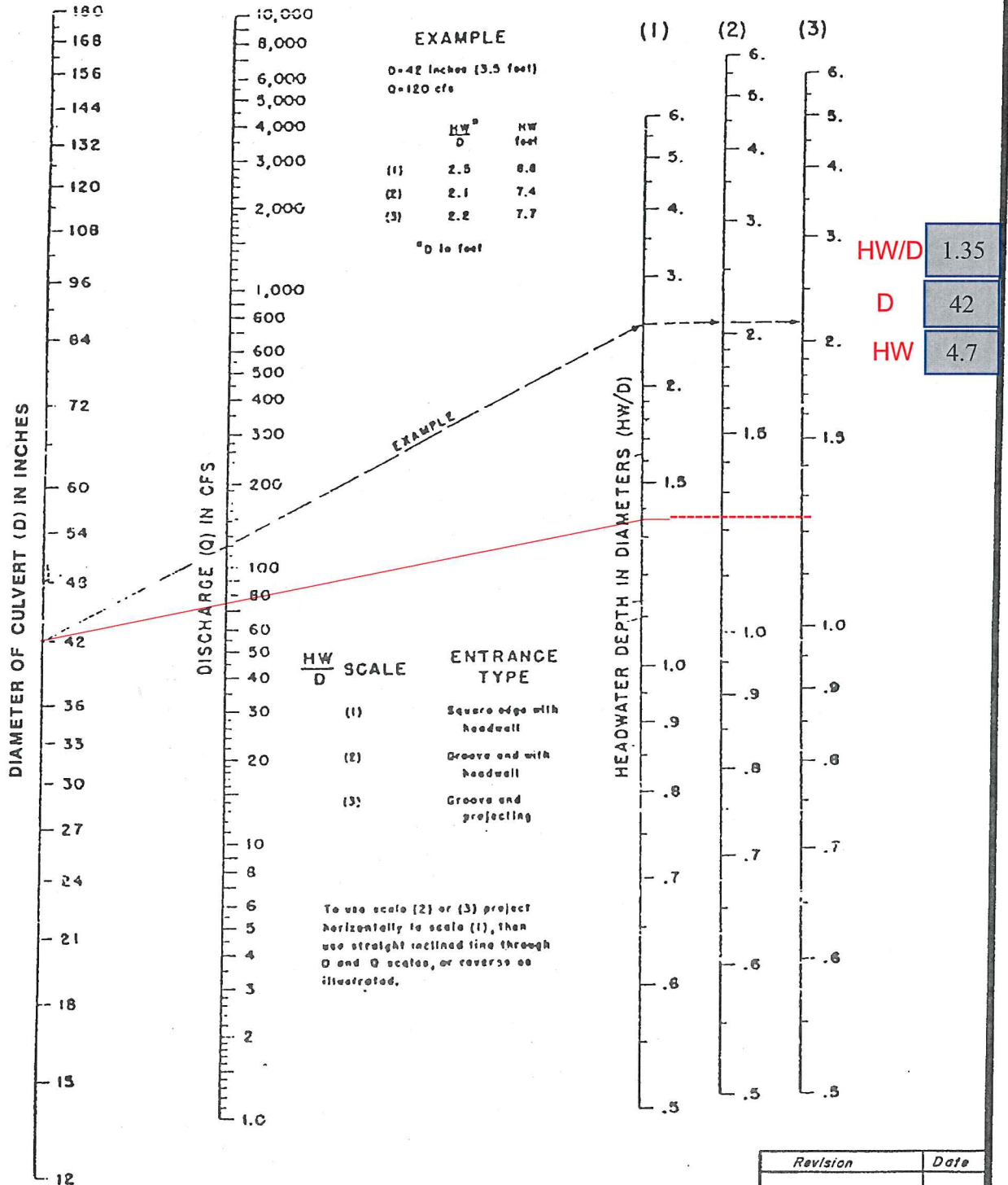
Section Data	
Mannings Coefficient	0.025
Channel Slope	0.025000 ft/ft
Depth	0.38 ft
Left Side Slope	3.00 H : V
Right Side Slope	3.00 H : V
Bottom Width	40.00 ft
Discharge	76.00 cfs



HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

NOMOGRAPH - INLET CONTROL RCP

TOTAL INFLOW: Q=76 CFS



Revision	Date

WRC
ENGINEERING

REFERENCE:

USDOT, FHWA, HDS, No. 5, 1985

FIGURE 1005

Summary Exhibit for Interim Condition Facilities (Detention Basin Attenuated Outflow)

APPENDIX C

USACE 404 Permit



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

August 17, 2015

Regulatory Division SPK-2005-50517

Ninety-Five Management, LLC
11411 Southern Highlands Parkway, Suite 300
Las Vegas, NV 89141

Dear Sir or Madam:

We are responding to your consultant's August 3, 2015 request to modify your Department of the Army permit number SPK-2005-50517. The permit was issued on May 22, 2006 for discharge of dredged or fill material into approximately 1.7 acres of waters of the United States (ephemeral washes) to construct the Kyle Canyon Master Planned Community (Now Skye Canyon Master Plan). The project is located on 1,712 acres in the northwest portion of the Las Vegas Valley within Sections 1 and 12, Township 19 South, Range 59 East, in Clark County, Nevada. The approximately 1,712-acre project site is located several unnamed, ephemeral tributaries of the Las Vegas Wash, Latitude 36.314911°, Longitude - 115.308475°, and can be seen on the NV-TULE SPRINGS PARK USGS Topographic Quadrangle. The modification request involves an extension of time and the addition of 0.10 acres of additional fill for construction of detention basins that have been designed to discharge into the ephemeral washes; thereby allowing flow into the waterways.

Permit number SPK-2005-50517 is hereby modified as follows:

- 1. The time limit for completing the work authorized ends on August 17, 2020. If you find that you need more time to complete the authorized activity, submit a request for a time extension to this office for consideration at least one month before the above date is reached.**
- 2. This permit authorizes fill material in 1.8 acres of ephemeral washes. Mitigation for the previous 1.7 acres of impact has been purchased from Clark County Wetlands In-Lieu Fee Program. The Corps has a receipt of the payment. The additional 0.10 acre impact does not require additional mitigation.**
- 3. This re-authorization is contingent upon application and issuance of a 401 Water quality Certification from the Nevada Department of Environmental Protection.**

All other terms and conditions of the permit remain in full force and effect. Failure to comply with the terms and conditions of this authorization may result in the suspension

or revocation of your permit. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Please refer to identification number SPK-2005-50517 in any correspondence concerning this project. If you have any questions, please contact me at Saint George Regulatory Office, 196 E Tabernacle Street Room 30, St. George, Utah 84770, by email at Patricia.L.McQueary@usace.army.mil, or telephone at 435-986-3979.

Sincerely,



Patricia L. McQueary
Senior Regulatory Project Manager
St. George Regulatory Office
Sacramento District

Enclosures

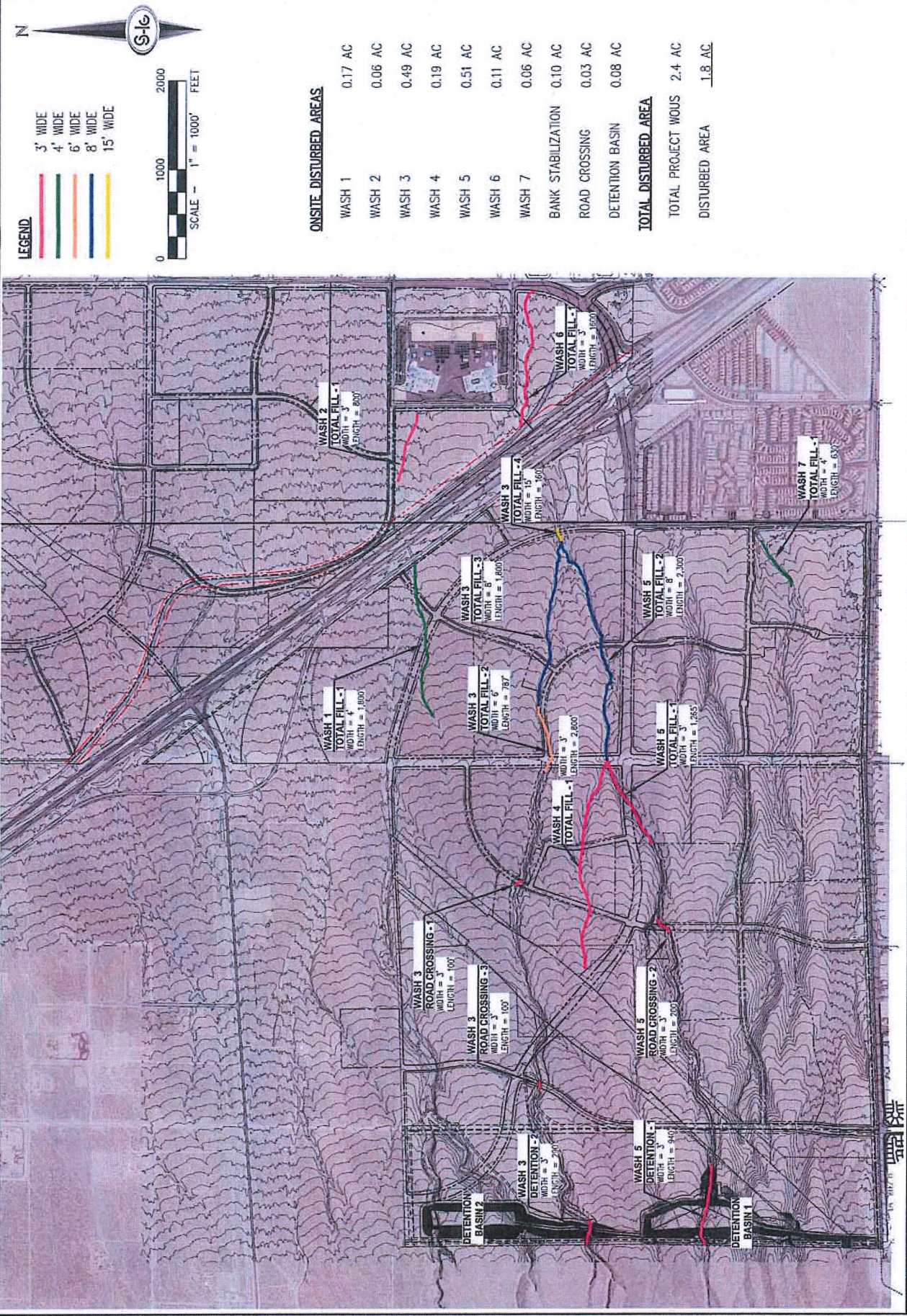
cc: (w/o encls)

Ms. Jean Stone, NDEP, 901 S. Stewart Street Suite 4001, Carson City, Nevada 89701-5249
Mr. Steve Jones, Slater Hanifan Group, Inc., 5740 S. Arville Street, Suite 216, Las Vegas, Nevada 89118

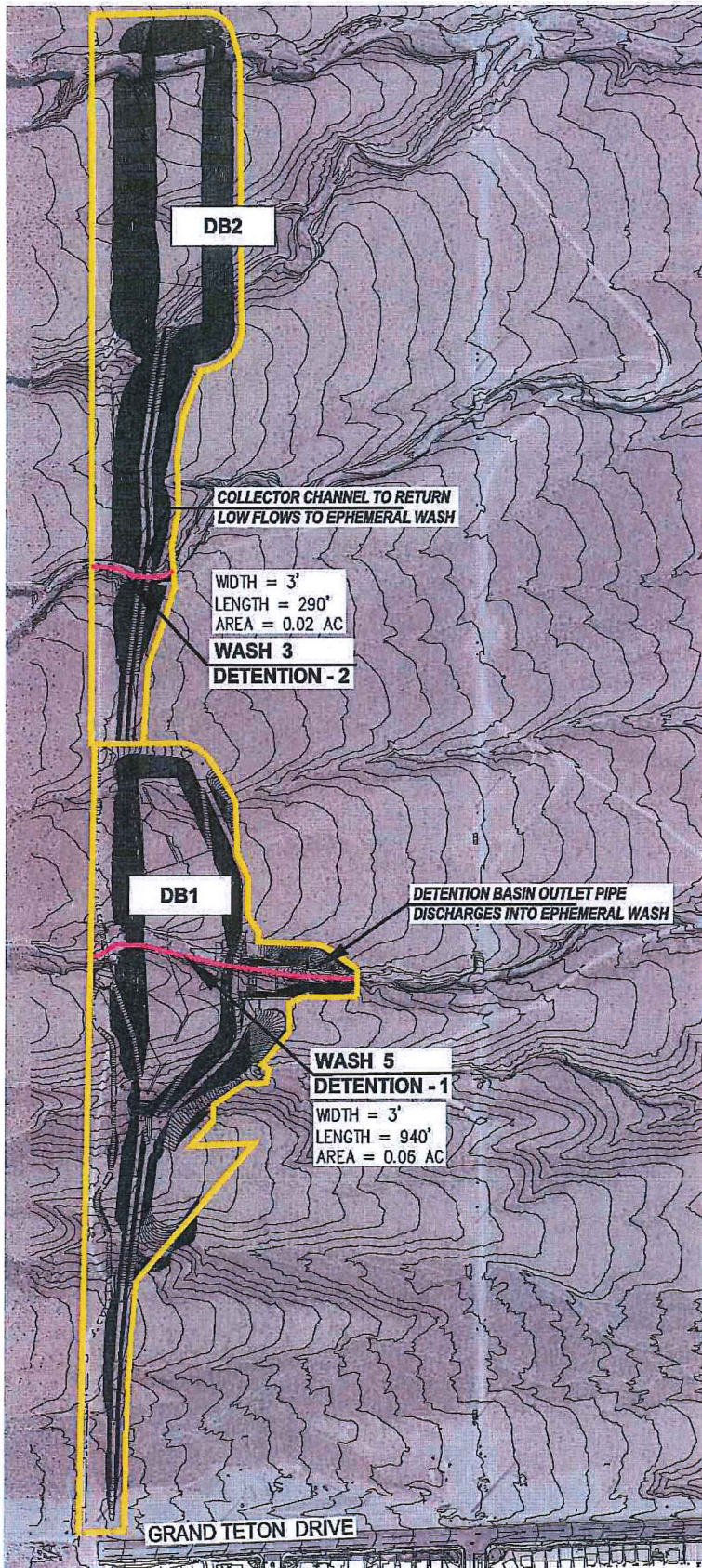
NO.	DESCRIPTION	DATE	BY	APP.

NINETY-FIVE MANAGEMENT, LLC
SKYE CANYON
TOTAL SITE DISTURBANCES TO 404 WATERS

DATE: 7/31/2015
DRAFTER: WRM
DESIGNER: WRM
CHECKED: SMJ
PROJECT NO.: OLY1401.004
FIGURE 5
SHEET 1 OF 1

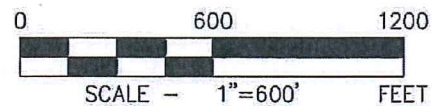
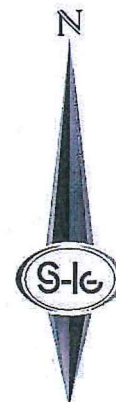


j:\oly1401-004\drainage\404 report\oly1401-004 detention basin exhibit.dwg 8/3/2015 9:00 AM Steve Jones



LEGEND

- US Waters (3' Width)
- Detention Basin Project Boundary



S-I-G SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NINETY-FIVE MANAGEMENT, LLC
SKYE CANYON MASTER PLAN
DETENTION BASIN DISTURBANCES TO 404 WATERS

DATE: 7/31/2015	PROJECT NO. OLY1401.004
DRAFTER: AJH	
DESIGNER: SJ	FIGURE 6
CHECKED: SJ	SHEET 1 OF 1



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
COLORADO/GUNNISON BASIN
REGULATORY OFFICE
400 ROOD AVENUE, ROOM 142
GRAND JUNCTION, COLORADO 81501-2563

COPY

REPLY TO
ATTENTION OF

May 22, 2006

Regulatory Branch (200550517)

Mr. Tom Devore
Kyle Acquisition Group, LLC
3455 Cliff Shadows Parkway, Suite 220
Las Vegas, Nevada 89129

Dear Mr. Devore:

This letter of permission authorizes your proposed discharge of dredged or fill material into approximately 1.7 acres of waters of the United States (ephemeral washes) to construct the Kyle Canyon Master Planned Community, as shown on the drawings accompanying your permit application dated December 15, 2005. The project is located on 1,712 acres in the northwest portion of the Las Vegas Valley within Sections 1 and 12, Township 19 South, Range 59 East, in Clark County, Nevada.

The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer. Work in waters of the United States must be in accordance with the following conditions of authorization:

Special Conditions:

1. To mitigate for the loss of 1.7 acres of waters of the United States (ephemeral washes), you shall agree to purchase 0.425 acre of mitigation credits from the Clark County Wetlands Park. Evidence of this purchase shall be provided to the Corps of Engineers prior to proceeding with any activity otherwise authorized by this permit.

2. This Corps permit does not authorize you to take an endangered species, in particular the Mojave desert tortoise (*Gopherus agassizii*), or designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (e.g., an Endangered Species Act Section 10 permit, or a Biological Opinion under Endangered Species Act Section 7, with "incidental take" provisions with which you must comply).

The enclosed Fish and Wildlife Service Biological Opinion (Number 1-5-06-F-465, dated March 8, 2006), contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the Biological Opinion. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached Biological Opinion, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with the incidental take statement in the Biological Opinion, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The Fish and Wildlife Service is the appropriate authority to determine compliance with the terms and conditions of its Biological Opinion, and with the Endangered Species Act. The permittee must comply with all conditions of this Biological Opinion, including those ascribed to the Corps.

3. If feasible, land clearing shall be conducted outside of the avian breeding season to avoid destruction of migratory birds protected by the Migratory Bird Treaty Act of 1918 (40 Stat. 755, amended: 16 U.S.C. 703 et seq.). If this is not feasible, you shall hire a qualified biologist to survey the project area prior to land clearing. If active nests are located, or if other evidence of nesting (mated pairs, territorial defense, carrying nesting material, transporting food, and so forth) is observed, a protective buffer (the size depending on the requirement of the species) shall be delineated and the entire area shall be avoided to prevent destruction or disturbance to nests until they are no longer active.

4. Best management practices must be followed during and after construction to minimize potential indirect adverse impacts (such as siltation).

General Conditions:

1. The time limit for completing the work authorized ends on June 1, 2009. If you find that you need more time to complete the authorized activity, submit a request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of these requirements if you abandon the permitted activity. This permit may be transferred upon request provided the work complies with the terms and conditions of this authorization. When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Should you wish to cease to maintain the authorized activity or abandon it without a good faith transfer, you must obtain a permit modification from this office.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. You must ensure that the work complies with the conditions of the January 31, 2006, Section 401 water quality certification for this project.

5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- (✓) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

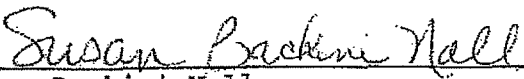
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

This letter of permission becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below. A notice of appeal options is enclosed. Please refer to number 200550517 in any correspondence concerning this permit. If you have any questions, please contact our St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 87490-7310, or telephone 435-986-3979.

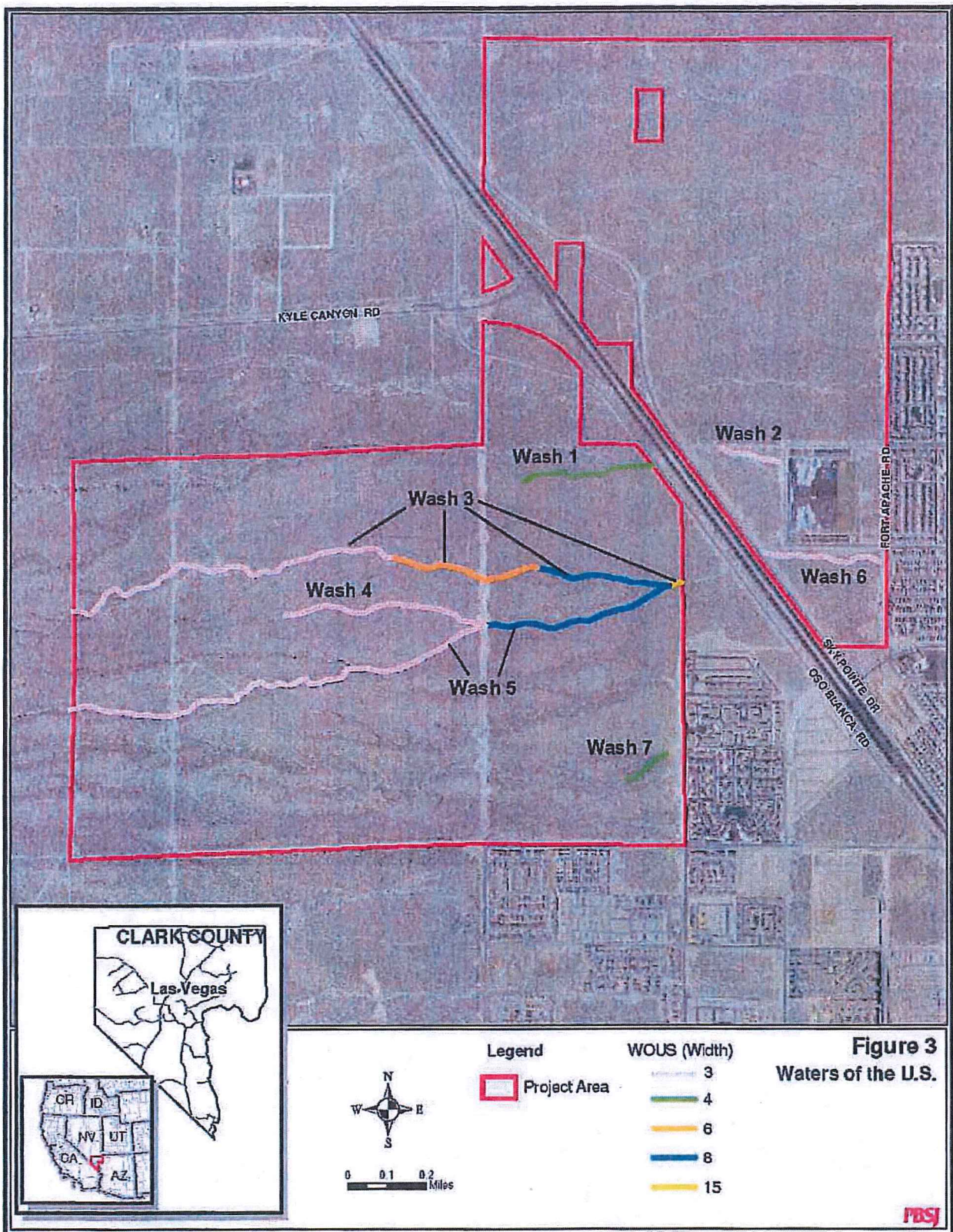
For and on behalf of Ronald N. Light, Colonel, US Army, District Engineer.


Susan Bachini Nall
Acting Chief, St. George Regulatory Office

Enclosures

Copies Furnished Without Enclosures:

Ms. Billye Sisler, PBS&J, 2270 Corporate Circle, Suite 100,
Henderson, Nevada 89074-6382
Ms. Heather Adams, U.S. Fish and Wildlife Service, Nevada Fish
and Wildlife Office, 1340 Financial Boulevard, Suite 234, Reno,
Nevada 89502
Mr. Glen Gentry, Nevada Division of Environmental Protection,
Bureau of Water Quality Planning, 901 South Stewart Street,
Suite 4001, Carson City, Nevada 89701-5249





NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources
Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

September 29, 2015

Mr. Jason Deters
U.S. Army Corps of Engineers
196 E Tabernacle Street Room 30
St. George, Utah 84770-3474

Dear Mr. Deters,

The Nevada Division of Environmental Protection (NDEP) grants 401 Water Quality Certification (NV401-15-041) for the Kyle (Skye) Canyon Master Planned Community in Clark County, Nevada (SPK-2005-50517). Activities will include filling of existing ephemeral drainages and the construction of 2 regional detention basins for flood control. Approximately 1.7 acres of waters of the U.S. considered tributary to the Las Vegas Wash will be impacted within the 1700 acre development.

Photographs which document conditions before, during and after construction should be submitted to the Bureau of Water Quality Planning (BWQP) after project completion and must include BMPs used to prevent erosion, control sediment and protect water quality. Photos taken at each stage of the project should be documented using the same locations, camera position, view angles and zoom. If natural materials such as mulch or straw bales are selected as BMPs they should be certified as weed free. Any modifications to original project submittal must be reviewed and approved by this office prior to implementation.

All conditions of the Temporary Authorization to Discharge (Working in Waterways permit) or other permits issued by NDEP for the project must be followed. A copy of the Final Report submitted to the Bureau of Water Pollution Control (BWPC) for the Temporary Discharge permit will satisfy BWQP's reporting requirement after project completion.

This Section 401 Water Quality Certification is subject to the acquisition of all necessary local, regional, state and federal permits and approvals as required by law. Failure to meet any conditions of this Certification, any other permit required by NDEP for this project or any violation of NAC 445A may result in the revocation of this 401 Water Quality Certification.

If you have any questions, please contact me via jstone@ndep.nv.gov or at (775) 687-9456.

Sincerely yours,

Jeanmarie Stone

Jeanmarie Stone
Environmental Scientist III
Bureau of Water Quality Planning

cc: Marc Bolduc, Ninety-Five Management, LLC
Steve Jones, Slater Hanifan Group
Cliff Lawson, NDEP-BWPC

APPENDIX D

Revised Drainage Exhibits

- Exhibit H – Ultimate Condition Flood Control Facilities
 - Exhibit J – CCRFCD Regional Facilities
- Exhibit K – Shadow of Protection & Phasing
 - Current Master Land Use Plan