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REFUNDING REPORT
FOR
ANTHEM WATER SYSTEM IMPROVEMENTS
SR-0005
CITY OF HENDERSON

Prepared for:
City of Henderson
Department of Utility Services
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Henderson, Nevada 89015

June 19, 2009

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EXECUTIVE SUMMARY

This report analyzes the amount of excess potable water available in the 2500, 2760 and higher pressure zones for use by other developments outside of Del Webb Anthem and the associated cost per Equivalent Dwelling Unit.

The excess amount available was determined by subtracting the total demand required by Del Webb Anthem from the capacities of the various projects.

Costs for water service are broken down by facility. Cost sharing between Del Webb Anthem and potential other users, was assigned in proportion to the beneficial use of each pipeline. Cost allocations are based on an Equivalent Development Unit (EDU) as has been the City's practice.

The cost allocation for the refunding area is $98 per EDU.

INTRODUCTION

The purpose of this report is to establish the general methodology with which to equitably allocate the refunding costs for the oversizing of potable water infrastructure near Del Webb Anthem.

A program was developed by the City of Henderson (City) that provides for distribution of the cost of the system to those developers that benefit from the water system through a special refunding agreement. This agreement is based on Henderson Municipal Code Title 14 Section 16 . This Municipal Code is a method for refunding costs associated with the design and construction of major backbone infrastructure. This Municipal Code allows the City to financially participate in partnership with developers in the design and construction of facilities at projected ultimate demand.

The Municipal Code requires that each Special Refunding Area is based on a Refunding Report completed in accordance with the Utility Services Department's Service Rules and adopted by the City Council. The Report shall define the boundary of the Special Refunding Area, type and route of backbone infrastructure to be included, methods of cost sharing, refunding amounts, depreciation schedules and any other information required by the City Council. A copy of Municipal Code Title 14 Section 16 is provided in Appendix A.

The Special Refunding Area is not an assessment district. It is a process that provides for construction cost refunding when developers/landowners and/or the City building infrastructure at a size and capacity well in excess of their needs. The developer/City building the oversized facilities will be eligible for refunding subsequent to City acceptance of the constructed facilities and when developers/landowners utilize these facilities.

This Refunding Report establishes the general methodology with which to equitably allocate the refunding costs for water infrastructure for the Special refunding Area known as "Anthem Water System Improvements". The amounts eligible for refunding will be determined and collected according to the methodology developed by this report. The City Council approved the Anthem Water System Improvements Refunding Area (SR-0005) Engineer's Report on August 16, 2005. A "Special Refunding Agreement" will be executed between the City and developer for the projects identified in this Report. The costs included in this Refunding Report are the final construction costs, as identified in the Anthem Water System Improvements Special Refunding Area SR-0005 Final Audit Report dated January 27, 2009, prepared by Gomez Consulting Group, Inc.

GENERAL CONCEPT

The concept of infrastructure refunding was implemented by the City in 1993 and is now an established practice. It is based on the successful water and sewer main extensions refunding program used for small water and sewer extensions constructed by individual homeowners/small developers. City Ordinance No 1440 added a new section to Title 13 of the Henderson Municipal Code to further expand the refunding concept to include major backbone systems. An update to the Henderson Municipal Code has since repealed and replaced the original Title 13 with Title 14 in accordance with Henderson Ordinance No. 2536.

The Anthem Water System Improvements Refunding Area is comprised of residential and commercial zoning of land that is developed and is under development located generally at the terminus of South Eastern Avenue, south of Green Valley Parkway.

This report outlines procedures which will allow the major developer who fronted the costs of building the backbone infrastructure needed to serve outside Anthem by oversizing the water system infrastructure, and sets in motion the mechanism to equitably estimate oversizing costs. The method used must be fair and equitable to share in the cost of the infrastructure based on the proportionate benefit of that improvement.

There is a distinct accounting method for water refunding. The water refunding will generally allocate costs based upon the following concepts:

1. Costs of infrastructure necessary to bring supply to the refunding area will be allocated equally to the potential users based upon an Equivalent Dwelling Unit (EDU). See Appendix B. (This chart is the unit duties and equivalent development units that were applicable at the time of the approval by City Council)
2. Refunding area is analyzed and ultimate build out demands estimated. Demand is allocated to the distinct pressure zone whereby backbone facilities are determined. The zone is then reduced to the number of EDU's of demand within the zone. Property not included in the Del Webb Anthem master planned developments within the zone would be charged the refunding amount per EDU at time of approval of final map or improvement drawings, whichever occurs first.
3. Major developers in the refunding area are designing and constructing and/or financially sharing responsibilities for the water facilities. These developers agree that as segments are completed, they will pay their total share of a segment upon City approval of the constructed facilities.
4. Potential users outside of Anthem will be determined by the location of parcels within the 2500, 2760, 2870, 2980, 3090, 3200 and 3310 Pressure Zones in relation to likely connection points or currently approved plans.
5. Funds collected from these users are refunded to the developer that constructed the facility in accordance with Henderson Municipal Code.
6. The City collects the total refunding amount from respective developers at the time the first connection is made to the system. Funds collected from these users are refunded to the developer that constructed the facility in accordance with Henderson Municipal Code (See Appendix A).

The total facility cost will be indexed to reflect inflation. The depreciation schedule will be based on the following replacement schedule for the facilities as listed below:

Pump Stations	25 years
Reservoirs	25 years

Pipelines	50 years

Total facility cost will be determined as defined in Title 14 and include the following items:

1. Construction Cost (including administration and safety and traffic control measures)
2. Pre-design, design and inspection costs
3. Permits and fees.
4. Performance and related bond costs not included in construction costs.
5. Actual financing costs related to items 1-4 of this section
6. All fees and expenses reasonably incurred concerning the preparation of the Special Refunding Agreement.

The City Council and Director of Utility Services have determined that Item two shall not exceed 15% of the construction cost.

The values in the subsequent table are taken from the report *Evaluation Audit and Summary of Costs Eligible for Refunding by City of Henderson Title 14 Section 16 Anthem Water System Improvements Special Refunding Area SR-0005* prepared by Gomez Consulting Group dated January 27, 2009 All projects were reviewed and approved by the City prior to advertising and awarding the projects for construction.

BACKBONE WATER INFRASTRUCTURE

The refunding area is shown on Exhibit 1. Proportionate cost shares are based on methodology presented previously in the "Concept" section of this report. Exhibit 1 also generally indicates the pressure zone boundaries. The pressure zone is important in that refunding costs will be calculated in relation to the pressure zone area and infrastructure necessary to supply the pressure zones.

For potable water transmission, there is a 54-inch pipeline that was constructed to convey water from the Parkway Rate of Flow Control Facility (ROFC) to the existing Reservoir 19 (R19) in the 2500 Pressure Zone. Additionally, Reservoir 19A (R-19A) has been constructed in the 2500 Pressure Zone of the City's service area and will be a forebay for Pump Station 19A (P-19A) and for storage in the 2500 Pressure Zone. P-19A and the proceeding 42-inch discharge pipeline are oversized backbone facilities for water transmission serving the 2760 Pressure Zone and all the upper zones in Anthem. From P-19A, a 42-inch pipeline follows Eastern Avenue to the intersection of Anthem Parkway and Eastern Avenue, and reduces to a 30-inch pipeline to Reservoir 21S (R-21S) for storage for the 2760 Pressure Zone. Pump Station 21S (P-21S) is located at Site 21 and has a 24-inch discharge line that follows Anthem Parkway to Hampton Road and goes west to the site of Reservoir 22 (R-22) which serves as storage for the 2870 Pressure Zone. At Site 22, Pump Station 22 (P-22) has a 24-inch discharge pipeline that goes to the intersection of Hampton Road and Anthem Parkway. The pipeline then goes south on Anthem Parkway to Atchley Drive and then east to the site of Reservoir 23 (R-23) which services the 2980 Pressure Zone. At this site, Pump Station 23 (P-23) has a 20-inch discharge pipeline that goes west to service the 3090 Pressure Zone and east to fill Reservoir 24 (R-24) which has storage for the 3090 Pressure Zone. At Site 24, P-24 services the 3310 and 3200 Pressure Zones with a 16-inch inlet line to the site of R-26 which is located in the southeast. A 20-inch outlet pipeline extends to the west to serve the 3310 and 3200 Pressure Zones. All the facilities mentioned above are shown on Exhibit 1.

The projected buildout demands for the areas in the various pressure zones are found in Appendix C.

WATER DISTRIBUTION SYSTEM

1-P. 54-inch Pipeline – Parkway ROFC to R-19

This 54-inch pipeline was installed to convey water form the Parkway Rate of Flow Control Facility (ROFC) to the existing Reservoir 19 (R-19). It also serves as a distribution main for the 2500 Pressure Zone. Users in the 2500, 2760 and higher pressure zones will share the cost of this facility. Approximately 42.49% will go to the higher zones within the Anthem development, 1.75% will go to Seven Hills in the higher zone, 4.81% will go to Madeira Canyons and the remaining 50.95% will go to other developments in the 2500 and higher pressure zones. The total cost of the project is $2,034,600.77

3-P 42-inch Pipeline - P-19A to Anthem Parkway

This facility is an existing 42-inch steel pipeline (MLCP). It conveys 37 mgd of water from P-19A to the intersection of Anthem Parkway and Eastern Avenue. Of the total 25,694 gpm capacity, approximately 57.42% will be used for Del Webb, 2.36% will be used for Seven Hills, 6.50% will be used for Madiera Canyons, and 33.72% will be used for development in West Henderson. The total cost of the project is $1,206,133.49.

These projects are tabulated in Table 1.

REFUNDING PROGRAM

The refunding program for calculating actual fees to be collected and refunded to the developer and/or the City is described below:

> The refunding program for the backbone facilities is between the City and Del Webb Anthem. Refunding and proportionate cost sharing will be based on the demands established in the Anthem Master Water Plan dated April 2003 and in the addendum dated June 2005 which is included in Appendix C.
>
> For consistency, the maximum day demand values will be used since the system was designed to this maximum day capacity.

These values will be used to allocate costs for the facilities discussed in the previous section for the water distribution system. To calculate the proportionate share, the total maximum day demand must be allocated to the entire pressure zone. The developer and the City have determined that water system infrastructure cost allocations be equitable based on the following principles:

Water Pipeline – The ratio of user's maximum day flow through the pipeline to the maximum day design flow of the pipelines. See Table 2.

Water Pump Stations – The ratio of a user's maximum day flow through the pump station to the maximum day design flow of the pump station. See Table 2.

Water Reservoir – The ratio of a user's maximum day flow in a pressure zone to the maximum day flow in that pressure zone for which the reservoir(s) is (are) designed. .See Table 3.

7. The EDU annual consumption for a single-family residential master plan is 0.86 AFY, and 1 EDU is equal to a maximum day demand of 1.085 gpm and is used to calculate the cost share per EDU. The 0.86 AFY is from Exhibit B of the City's water allocation ordinance, included in Appendix B. (This chart is the unit duties and equivalent development units that were applicable at the time of the approval by City Council)

METHOD OF CALCULATION FOR COST SHARE PER EQUIVALENT DEVELOPMENT UNIT (EDU)

Two distinct methods are used to determine the cost share for pump stations and pipelines, and the cost share for reservoirs.

Table 4 will be used for calculating the cost share based on maximum day demand through the pressure zone for each developer and the percentage share for each developer. This table is used for calculating the proportionate cost share of pump stations and pipelines.

Table 5 will be used for calculating the cost share based on maximum day demand in a pressure zone for each developer and the percentage share for each developer. This table is used for calculating the proportionate cost share of reservoirs.

Table 6 is the summary of the costs associated with each project according to project and pressure zone.

TABLES

TABLE 1
FACILITY COSTS

NO.	PROJECT**	DESIGN	CONSTRUCTION COST	RELATED COST	PROJECT COST*
1 -P	54-inch Pipeline	-	$2,034,601	-	$2,034,600.77
3 -P	42-inch Pipeline	-	$1,206,133	-	$1,206,133.49

** Cost taken from Final Audit Report dated January 27, 2009*
***Other projects described in report are not subject to refunding*

TOTAL **$3,240,734.26**

Table 2

EDU THROUGH THE ZONES

2500 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	15813	8431	14755
Seven Hills	650	347	607
Madeira Canyons	1790	954	1670
Other Parts of the Zone*	18958	10109	17690
Total	**37211**	**19841**	**34722**
2760 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	15813	8431	14755
Seven Hills	650	347	607
Madeira Canyons	1790	954	1670
Other Parts of the Zone**	9283	4950	8662
Total	**27536**	**14682**	**25694**
2870 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	12400	6611	11570
Madeira Canyons	1790	954	1670
Total	**14189**	**7566**	**13240**
2980 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	8610	4591	8034
Madeira Canyons	1790	954	1670
Total	**10400**	**5545**	**9704**
3090 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	5163	2753	4818
Madeira Canyons	1790	954	1670
Total	**6953**	**3708**	**6488**
3310/3200 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	1381	736	1288
Madeira Canyons	1767	942	1649
Other	424	226	396
Total	**3572**	**1905**	**3333**

Sample Calculation (master plan):
2911 EDU's x .86 AFY/EDU x .62 gpm/AFY = 1552 gpm ave. day
1552 gpm x 1.75 max day/ave. day = 2716 gpm max day

* 2500 Pressure Zone - capacity of the system is 50 MGD, other parts of the zone is what remains after Anthem, Seven Hills and Madeira Canyon demands are deducted from 50 MGD

** 2760 Pressure Zone - capacity of the system is 37 MGD, other parts of the zone is what remains after Anthem, Seven Hills and Madeira Canyon demands are deducted from 37 MGD

Table 3

EDU IN THE ZONES

2500 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Other Parts of the Zone*	9675	5159	9028
Total	**9675**	**5159**	**9028**
2760 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	3414	1821	3186
Seven Hills	650	347	607
Other Parts of the Zone**	9283	4950	8662
Total	**13347**	**7117**	**12455**
2870 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	3790	2021	3536
Total	**3790**	**2021**	**3536**
2980 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	3445	1837	3215
Total	**3445**	**1837**	**3215**
3090 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	3783	2017	3530
Madeira Canyons	23	12	22
Total	**3806**	**2030**	**3552**
3310/3200 PRESSURE ZONE			
Development	**EDU's**	**Average Day Demand (gpm)**	**Maximum Day Demand (gpm)**
Del Webb	1381	736	1288
Madeira Canyons	1767	942	1649
Other	424	226	396
Total	**3572**	**1905**	**3333**

* 2500 Pressure Zone - from Table 2 calculated by taking demand through the 2500 Zone and subtracting the demand in the 2760 Zone

** 2760 Pressure Zone - capacity of the system is 37 MGD, other parts of the zone is what remains after Anthem, Seven Hills and Madeira Canyon demands are deducted from 37 MGD

TABLE 4
GPM AND PERCENTAGE DEMAND THROUGH EACH PRESSURE ZONE

PRESSURE ZONE	DEL WEBB		SEVEN HILLS		MADEIRA CANYONS		OTHERS		MAX DAY TOTAL GPM
2500	14755	42.49%	607	1.75%	1670	4.81%	17690	50.95%	34722
2760	14755	57.42%	607	2.36%	1670	6.50%	8662	33.71%	25694
2870	11570	87.39%	0	0.00%	1670	12.61%	0	0.00%	13240
2980	8034	82.79%	0	0.00%	1670	17.21%	0	0.00%	9704
3090	4818	74.26%	0	0.00%	1670	25.74%	0	0.00%	6488
3310/3200	1288	38.65%	0	0.00%	1649	49.47%	396	11.88%	3333

TABLE 5
GPM AND PERCENTAGE DEMAND IN EACH PRESSURE ZONE

PRESSURE ZONE	DEL WEBB		SEVEN HILLS		MADEIRA CANYONS		OTHERS		MAX DAY TOTAL GPM
2760	3186	25.58%	607	4.87%	0	0.00%	8662	69.55%	12455
2870	3536	100.00%	0	0.00%	0	0.00%	0	0.00%	3536
2980	3215	100.00%	0	0.00%	0	0.00%	0	0.00%	3215
3090	3530	99.39%	0	0.00%	22	0.61%	0	0.00%	3552
3310/3200	1288	38.65%	0	0.00%	1649	49.47%	396	11.88%	3333

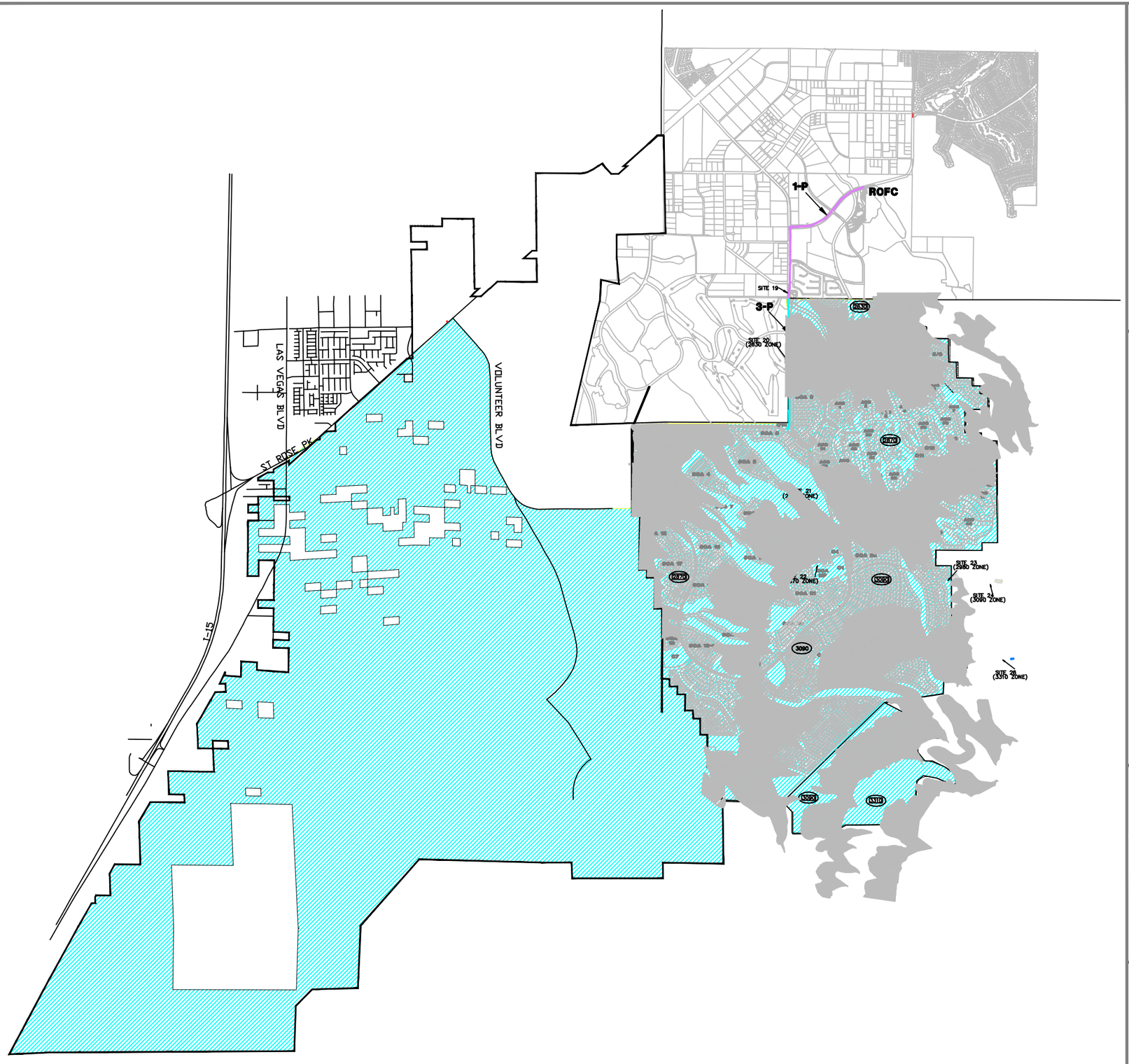
SUMMARY OF REFUNDS
TABLE 6
REFUNDING FOR WATER FACILITIES BY DEVELOPMENT

NO.		PROJECT	TOTAL PROJECT COST	DEL WEBB	SEVEN HILLS	MADEIRA CANYONS	OTHERS
		2500 Pressure Zone					
1	-P	54-inch Pipeline	$2,034,600.77	$864,501.87	$35,605.51	$97,864.30	$1,036,629.09
		2760 Pressure Zone					
3	-P	42-Inch Pipeline	$1,206,133.49	$692,622.16	$28,488.87	$78,398.68	$406,623.78
TOTAL COST			**$3,240,734.26**	**$1,557,124.02**	**$64,094.39**	**$176,262.97**	**$1,443,252.88**

SUMMARY OF REFUNDS
TABLE 7
EDU COST SHARE SUMMARY

NO.		PROJECT	TOTAL PROJECT COST	TOTAL EDU IN	**TOTAL EDU THROUGH**	All Zones
1	-P	54-inch Pipeline	$2,034,600.77		37211	$55
3	P	42-Inch Pipeline	$1,206,133.49		27536	$44
TOTAL COST			**$3,240,734.26**			**$98**

EXHIBITS



NORTH

SCALE 1" = 3000'

ANTHEM WATER SYSTEM IMPROVEMENTS REFUNDING AREA

LEGEND

P – PIPELINE

– REFUNDING AREA

WATER REFUNDING MAP

EXHIBIT 1

G.C. WALLACE, INC.
Engineers/Planners/Surveyors
1555 SOUTH RAINBOW BLVD./LAS VEGAS, NEVADA 89146
TELEPHONE: (702) 804-2000• FAX: (702) 804-2299

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APPENDIX A

Title 14 UTILITY SERVICES

Chapter 14.16 REFUNDING REGULATIONS

14.16.010 General provisions.

A. Purpose and Policy. This chapter sets forth responsibility, authority, and provisions to provide a mechanism for the orderly development of the utility system through refunding of costs associated with the design and construction of utility infrastructure.
B. Scope. The provisions of this chapter shall apply to all residents of the city, a responsible party operating, maintaining, repairing, relocating, removing, and/or disconnecting the public water system and/or publicly owned treatment works, and/or users of city provided utilities.
C. Administration. Except as otherwise provided herein, the director shall administer, implement, and enforce the provisions of this chapter. Any powers granted or duties imposed upon the director may be delegated by the director to persons acting in the beneficial interest of the city.
D. Compliance. All provisions of this chapter are subject to compliance procedures as outlined in this title and the department service rules. (Ord. 2676 § 11 (part), 2008; Ord. 2536 § 84, 2006)

14.16.020 Cost for infrastructure.

The cost to design and construct any water, sewer, and/or reclaimed infrastructure required in connection with the extension of the public utility system to serve the customer shall be advanced by the customer requesting such service. (Ord. 2536 § 85, 2006)

14.16.030 Construction specifications.

All utility extensions, facilities and/or infrastructure to be constructed by the customer shall conform to adopted standards. (Ord. 2536 § 86, 2006)

14.16.040 Standard refunding.

A. Standard Refunding Agreements.
1. The city may enter into an agreement which provides for repayment of a portion of the cost of the main extension lying between the original point of supply and the customer's property from main frontage fees collected from other properties frontage to the main extension covered by such agreement during the term provided in the agreement or until the amount advanced by the customer has been satisfied, as determined in accordance with the provisions of this title and/or the department's service rules.
2. The following items may be eligible for standard refunding:

a. Water, sewer, and reclaimed water main extensions to a project;
b. Water, sewer, and reclaimed water main extensions adjacent to a project; and/or
c. Water, sewer, and reclaimed water mains replacing existing mains.
3. The period during which refunds are due shall be twenty years, commencing on the date when the infrastructure covered by the agreement is completed, tested, and accepted by the city.
4. Construction shall be deemed to be complete when the utility infrastructure is constructed according to the approved plans and satisfies all applicable testing and acceptance criteria.
5. The city council shall grant the director the authority to enter into and execute any standard refunding agreement in which the city is not a participant. Should the city be a participant in a standard refunding agreement, such agreement must be approved according to city standard operating procedures and policies.
B. Standard Refunding Conditions.
1. Application for standard refunding agreement shall be submitted to the department in writing accompanied by documentation as required by the city from customer(s) constructing such infrastructure covered by the agreement. This application shall be submitted within ninety days of date of acceptance by the city of the infrastructure to be covered by such agreement.
2. All customers entering into any refunding agreement with the city shall pay all fees as outlined in this title and/or the department service rules. These fees are due and payable at the time of the execution of the agreement.
3. Customers may be eligible for a refund of main frontage fees collected by the city from other properties in accordance with this title.
4. All standard refunding calculations shall be rounded to the nearest foot and shall be assessed based on the frontage of the applicant's property, as indicated by the most current data in the Clark County assessor office records, adjacent to the right-of-way or easement where the existing water, sewer, or reclaimed water main is located in accordance with this title and/or the department's service rules.
5. After execution of a valid standard refunding agreement, all main frontage fees collected in accordance with this title and/or department service rules shall be paid within sixty days from the date of collection.
6. In the event any expense is incurred by the city within a period of one year after acceptance of the infrastructure installed by the customer covered by a standard refunding agreement due to defective materials or workmanship the amount of such expense shall be deducted from any refund(s) that may become due to the customer thereafter. (Ord. 2536 § 87, 2006)

14.16.050 Special refunding.

A. Special Refunding Agreements.
1. The city may enter into a special refunding agreement which provides for repayment of a portion of the cost of that backbone infrastructure lying between the original point of supply and the customer's property from special refunding fees to be collected by the city from other customers obtaining direct or indirect service from the backbone infrastructure during the term provided in the special refunding agreement, pursuant to this title, or until the proportional cost of design and construction advanced by the customer has been repaid, whichever is earlier.
2. Any special refunding agreement entered into by the city must be based upon a refunding report completed in accordance with the department service rules and adopted by the city council.
3. The term of any special refunding agreement shall be twenty years, which will commence on the date the infrastructure covered by the special refunding agreement is completed, tested and accepted by the city.
4. Application for special refunding agreement shall be submitted to the director in writing accompanied by documentation as required by the city within ninety days of the date of acceptance of the pre-design report by the city for the infrastructure to be covered by such agreement. All final costs are subject to verification by the city.
5. The amount subject to repayment under a special refunding agreement shall be the amount of the actual cost of the work as verified by the city. The final cost of the work shall be the basis for the determination and calculation of refunds under the special refunding agreement. Final costs that are eligible for inclusion in the special refunding agreement are:
a. Actual construction costs (including administration and safety and traffic control measures);
b. Design engineering costs and inspection costs not to exceed an aggregate fifteen percent of item 5 of this section;

c. Permits and fees;
d. Performance and related bond costs to the extent not included in item 5 of this section;
e. Actual financing costs related to subsections (A)(5)(a) through (A)(5)(d) of this section. Said financing costs shall be computed through the date of final acceptance of the backbone infrastructure by the city; and
f. All fees and expenses reasonably incurred concerning the preparation of the special refunding agreement shall be added to the refunding amount.
6. Construction shall be deemed to be complete when the utility infrastructure is constructed according to the approved plans and satisfies all applicable testing and approval criteria.
B. Special Refunding Conditions.
1. Customers entering into any special refunding agreement with the city shall pay all fees as outlined in this title and/or the department service rules. These fees are due and payable upon execution of the agreement.
2. After execution of a valid special refunding agreement, special refunding fees collected in accordance with this title and/or department service rules shall be paid to the customer within thirty days from the last business day of the quarter in which such fees were collected and will be issued in accordance to the procedures outlined in the department service rules.
3. Special refunding fees collected by the city shall be computed as follows:
a. As to the portion of cost attributable to the holder of the special refunding agreement, advances shall be accrued quarterly with interest equal to one-fourth the prime rate plus two percentage points with a maximum of ten percent per year. The prime rate that is published in the Wall Street Journal or a similar publication approved by the city's finance director for utilization in the refunding report and being the prime rate published at the last business day of each calendar quarter for the subsequent quarter.
b. As to the portion of cost attributable to city, advances shall be accrued quarterly with interest equal to one-fourth the Merrill Lynch Bond Index for tax-exempt thirty-year A-rated revenue bonds as printed in the Wall Street Journal or a similar publication approved by the city's finance director for utilization in the refunding report with a maximum of ten percent per year. The rate shall be based upon the index rate published the last business day of each calendar quarter for the subsequent quarter.
c. The amount that makes up the actual final cost of work shall be depreciated annually over forty years using the straight-line method of depreciation or such time line as recommended and approved in the refunding report. The net book value of the infrastructure shall become the base for purposes of calculating amounts to be refunded and of computing the addition of accrued interest.
4. Special refunding fees, as allocated in the refunding report to a customer, will only be made for utility infrastructure that service areas not only of the customers but areas designated in the approved refunding report.
5. Special refunding fees will be made from fees collected from other customers or the city whose properties are served by the backbone infrastructure and paid prior to final issuance of a certificate of occupancy.
6. In the event two or more customers have designed the same backbone infrastructure, those eligible costs, or an applicable portion thereof, paid by the customer who has submitted a performance bond to the city for construction of the relevant system or facility and has completed said construction shall be refunded.
7. In the event any expense is incurred by the city within a period of one year after acceptance of the infrastructure installed by the customer covered by a special refunding agreement due to defective materials or workmanship on, the amount of such expense shall be deducted from any refund(s) that may become due to the customer thereafter. (Ord. 2676 § 11 (part), 2008; Ord. 2536 § 88, 2006)

14.16.060 Violations.

Any person who fails or refuses to comply with any provision of this chapter or department's service rules or who provides false information to the city shall be deemed to be in violation of this title and shall be subject to discontinuance of service; subject to any penalties and charges assessed in accordance with this title and/or department's service rules; and subject to all compliance procedures as proscribed within this title. (Ord. 2536 § 89, 2006)

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APPENDIX B

CITY OF HENDERSON
UNIT DUTIES AND EQUIVALENT DEVELOPMENT UNITS (EDUs)
FOR WATER RESOURCE PLANNING
September 11, 1991 (AFY = Acre Feet Per Year)

ZONING	UNIT DUTIES CONSUMPTION (AFY)	EDU
RESIDENTIAL		
SINGLE FAMILY RES. MASTER PLAN	.86/LOT	1.0
RS-6	.82/LOT	1.0
RS-1 through RS-4	1.25/LOT	1.5
MULTI-FAMILY RES. MASTER PLAN	.52/UNIT	.6
RM-16 AND LESS	.70/UNIT	.81
RM-18 AND GREATER	.45/UNIT	.52
COMMERCIAL		
HOTEL/MOTEL	.26/ROOM	.30/ROOM
COMMERCIAL BELOW 500,000 SQ. FT. (FLOOR AREA)	.25/1,000 SQ. FT.	.29/1,000 SQ. FT.
COMMERCIAL ABOVE 500,000 SQ. FT. (FLOOR AREA)	.11/1,000 SQ. FT.	.13/1,000 SQ. FT.
TURF IRRIGATION	7.00/ACRE	8.14/ACRE
INDUSTRIAL	CASE BY CASE	

Unit duties shall be reviewed by the Director of Public Works annually and may be revised by City Council action.

APPENDIX C

TABLE 6-1
ANTHEM EXISTING DEVELOPMENT

EXISTING DEVELOPMENT								
COMMUNITY	PARCEL	MW PARCEL ID	NODE	LOTS	ACREAGE	Average Day (gpm)	Maximum Day (gpm)	Peak Hour (gpm)
2760 PRESSURE ZONE								
COVENTRY	UNIT 1/UNIT 2	C23.1	23,30	283		150.9	264.1	448.9
COVENTRY	UNIT 3/UNIT 4	C25.1	27,28	334		178.1	311.7	529.8
COVENTRY	UNIT 6	C26.1	42,43	167		89.0	155.8	264.9
COVENTRY	UNIT 7	C27.1/C27.2/C	24,25	159		84.8	148.4	252.2
SCA	UNIT 3	S89.1/S90.1	31,32	207		110.4	193.2	328.4
SCA	UNIT 3A	S89.1/S90.1	21	112		59.7	104.5	177.7
SCA	UNIT 4 PHASE 3	S94.1	35,36	214		114.1	199.7	339.5
SCA	UNIT 8	S93.1	33,34	87		46.4	81.2	138.0
SCA	UNIT 8A	S93.1	33	15		8.0	14.0	23.8
SCA	UNIT 10	S95.1	39,40	228		121.6	212.7	361.7
SCA	UNIT 11	S100.1	37,38	88		46.9	82.1	139.6
SCA	UNIT 12	S162.1	41	221		117.8	206.2	350.6
SCA	UNIT 17	S139.1	41	64		34.1	59.7	101.5
SCA	Detention Basin/Park	C30.1	26	-	70.2	231.66	405.4	689.2
SCA	Golf Course Greens	S115.1	44		8	34.4	60.2	102.3
ACC	Golf Course Greens	T78.1	29		8	34.4	60.2	102.3
	Trailhead	C36.1	22		0.82	2.2	3.9	6.6
	Anthem Parkway Irrigation		22		14.47	62.8	109.9	186.8
-	C9-School	C32.1/C31.1	27	-	23.7	78.21	136.9	232.7
-	C8-Commercial	C34.1/C35.1	22	-	55.3	182.49	319.4	542.9
-	C14-Golf Course Ma	T43.1	29	-	2.01	5.4	9.5	16.1
	C13-CHURCH		22		10	27.0	47.3	80.3
	TOTAL			**2179**	**192.5**	**1820.4**	**3185.8**	**5415.8**
2870 PRESSURE ZONE								
COVENTRY	UNIT 6	C26.2	24	172		91.7	160.5	272.8
SCA	UNIT 2	S98.1/S99.1	36	260		138.6	242.6	412.4
SCA	UNIT-3	S89.2/S90.2/S	15	236		125.8	220.2	374.4
SCA	UNIT 4 PHASE 1	S96.1/S97.1	42	224		119.4	209.0	355.3
SCA	UNIT 5	S92.1	35	148		78.9	138.1	234.8
SCA	UNIT 6		39	26		13.9	24.3	41.2
SCA	UNIT 7	S101.1	44	19		10.1	17.7	30.1
SCA	UNIT 12	S162.2	47	108		57.6	100.8	171.3
SCA	UNIT 15	S140.1/S161.	56	215		114.6	200.6	341.0
SCA	UNIT 15A		46	26		13.9	24.3	41.2
SCA	UNIT 16 (Phase 1)	S140.1/S161.	57	186		99.2	173.6	295.0
SCA	UNIT 17	S139.1	48	283		150.9	264.1	448.9
SCA	UNIT 18	S148.1	49	96		51.2	89.6	152.3
SCA	UNIT 19A	S147.2	49-1	49		26.1	45.7	77.7
SCA	UNIT 19 PHASE 1	S149.1/S149.	58, 59	222		118.4	207.1	352.2
ACC	UNIT 1	T41.1	32	121		64.5	112.9	191.9
ACC	UNIT 2	T42.1	30	54		28.8	50.4	85.7
ACC	UNIT 3	T44.1	20	14		7.5	13.1	22.2
ACC	UNIT 4	T45.1	29	61		32.5	56.9	96.8
ACC	UNIT 5	T46.1	28	64		34.1	59.7	101.5
ACC	UNIT 6	T47.1	23	49		26.1	45.7	77.7
ACC	UNIT 7	T48.1	25	42		22.4	39.2	66.6
ACC	UNIT 20	T56.1	16	89		47.5	83.0	141.2
ACC	UNIT 21	T55.1	31	52		27.7	48.5	82.5
	UNIT 23		18	12		6.4	11.2	19.0
ACC	UNIT 28	T49.1	27	27		14.4	25.2	42.8
ACC	UNIT 29	T50.1	24	48		25.6	44.8	76.1
ACC	UNIT 30	T51.1	19	27		14.4	25.2	42.8
ACC	UNIT 31	T53.1	19	24		12.8	22.4	38.1
ACC	UNIT 32	T52.1	17	17		9.1	15.9	27.0
ACC	UNIT 33	T54.1	16	13		6.9	12.1	20.6
	UNIT 34		18	5		2.7	4.7	7.9
	C5-COMMERCIAL		50		21.9	59.1	103.5	175.9
	C10-COMMERCIAL		34		2.8	7.6	13.2	22.5
	C11-FITNESS CENTER		21		5	13.5	23.6	40.2
	C12-CLUB HOUSE	T76.1	21		12.65	34.2	59.8	101.6
	C14- GOLF MAINTE	T43.1	29		2.01	5.4	9.5	16.1
	COMMONS	T75.1	21		7.04	30.6	53.5	90.9
	TRAILHEAD	T80.1	26		0.98	2.6	4.6	7.9
	Anthem Parkway Irrigation		14		14.47	62.8	109.9	186.8
	Utility/PS	S138.1			1.43			
	TOTAL			**2989**		**1809.5**	**3166.6**	**5383.3**

Table 4-1

TABLE 6-1
ANTHEM EXISTING DEVELOPMENT

COMMUNITY	PARCEL	MW PARCEL ID	NODE	LOTS	ACREAGE	Average Day (gpm)	Maximum Day (gpm)	Peak Hour (gpm)
2980 PRESSURE ZONE								
SCA	UNIT 1/1B	S103.1	47	41		21.9	38.3	65.0
SCA	UNIT 1A	S103.1	47	58		30.9	54.1	92.0
SCA	UNIT 4 PHASE 2	S96.2	79	103		54.9	96.1	163.4
SCA	UNIT 6	S151.1	79	39		20.8	36.4	61.9
SCA	UNIT 9	S141.1	50	75		40.0	70.0	119.0
SCA	UNIT 15		80	162		86.4	151.2	257.0
SCA	UNIT 16		82	179		95.4	167.0	283.9
SCA	UNIT 19A	S147.1	54	50		26.7	46.7	79.3
SCA	UNIT 19 PHASE 2	S149.3	83	161		85.8	150.2	255.4
SCA	UNIT 21	S142.1	51	23		12.3	21.5	36.5
SCA	UNIT 22 PHASE I		43	115		61.3	107.3	182.4
ACC	UNIT 8	T74.1	75	43		22.9	40.1	68.2
ACC	UNIT 9	T72.1	75	10		5.3	9.3	15.9
ACC	UNIT 10	T71.1	74	46		24.5	42.9	73.0
ACC	UNIT 11		73	12		6.4	11.2	19.0
ACC	UNIT 12		72	7		3.7	6.5	11.1
ACC	UNIT 13		72	40		21.3	37.3	63.5
ACC	UNIT 14	T63.1	68	29		15.5	27.1	46.0
ACC	UNIT 15	T62.1	69	48		25.6	44.8	76.1
ACC	UNIT 16		65	15		8.0	14.0	23.8
ACC	UNIT 17	T59.1	64	73		38.9	68.1	115.8
ACC	UNIT 18		64	88		46.9	82.1	139.6
ACC	UNIT 19	T58.1	67	32		17.1	29.9	50.8
ACC	UNIT 22	T57.1	64	19		10.1	17.7	30.1
ACC	UNIT 24	T60.1	63	13		6.9	12.1	20.6
ACC	UNIT 25	T61.1	62	32		17.1	29.9	50.8
ACC	UNIT 26	T64.1	62	29		15.5	27.1	46.0
ACC	UNIT 27	T73.1	74	16		8.5	14.9	25.4
ACC	UNIT 38		73	77		41.1	71.8	122.1
ACC	UNIT 39	T69.1	74	14		7.5	13.1	22.2
ACC	UNIT 40		78	17		9.1	15.9	27.0
ACC	UNIT 41		78	5		2.7	4.7	7.9
	C2-CLUBHOUSE	S150.1	44		8.52	23.0	40.3	68.4
	C3- RECREATION C	S107.1/S152.1	44		26.5	71.6	125.2	212.9
	C4- COMMERCIAL		44		3.4	9.2	16.1	27.3
	Anthem Parkway Irrigation		45		14.47	62.8	109.9	186.8
	TOTAL			**1671**		**1057.5**	**1850.6**	**3146.1**
3090 PRESSURE ZONE								
SCA	UNIT 20	S143.1	18	173		92.2	161.4	274.4
SCA	UNIT 21	S142.1	17	252		134.4	235.1	399.7
SCA	UNIT 22 PHASE II	S118.2	13	112		59.7	104.5	177.7
ACC	UNIT 10		31	31		16.5	28.9	49.2
ACC	UNIT 11		32	49		26.1	45.7	77.7
ACC	UNIT 12		33	55		29.3	51.3	87.2
ACC	UNIT 43		32	114		60.8	106.4	180.8
ACC	UNIT 42		31	13		6.9	12.1	20.6
	C1-COMMERCIAL	S153.1	14		10	27.0	47.3	80.3
	Multi Family		14	236	15.8	109.0	190.8	324.3
	Anthem Parkway Irrigation		19		14.47	62.8	109.9	186.8
	Subtotal			**1035**	**40.27**	**624.8**	**1093.5**	**1858.9**
	GRAND TOTAL			**7874**				
	Summary for Zones	**2760**				**1,820.4**	**3,185.8**	**5,415.8**
		2870				**1,809.5**	**3,166.6**	**5,383.3**
		2980				**1,057.5**	**1,850.6**	**3,146.1**
		3090				**624.8**	**1,093.5**	**1,858.9**

Table 6+J57-1

DEL WEBB COMMUNITIES
ANTHEM -MASTER WATER UPDATE
Table 6-2a UPDATED JULY 2005
Demands Projections WITHOUT Madeira Canyons

Parcel	Node	Acreage	Units	Demand (gpm)		
				Ave. Day	Max. Day	Peak Hour
2760 Pressure Zone						
Existing Demands			**2179**	**1820.4**	**3185.8**	**5415.8**
2870 Pressure Zone						
Anthem Highlands	52		99	52.8	92.4	157.0
	53		99	52.8	92.4	157.0
	54		99	52.8	92.4	157.0
	55		99	52.8	92.4	157.0
Subtotal			**396**	**211.1**	**369.5**	**628.2**
* **Existing Demands**			**2989**	**1809.5**	**3166.6**	**5383.3**
TOTAL			**3385**	**2020.7**	**3536.1**	**6011.4**
2980 Pressure Zone						
Solera	56	64.5	129	68.8	120.4	204.6
	57		129	68.8	120.4	204.6
	58		128	68.2	119.4	203.0
Anthem Highlands	59		203	108.2	189.4	322.0
	59		203	108.2	189.4	322.0
	60		203	108.2	189.4	322.0
	61		203	108.2	189.4	322.0
	93		203	108.2	189.4	322.0
School	92			32.4	56.7	96.4
Subtotal			**1401.0**	**779.4**	**1364.0**	**2318.8**
Existing Demands			**1671**	**1057.5**	**1850.6**	**3146.1**
TOTAL			**3072.0**	**1836.9**	**3214.6**	**5464.8**
3090 Pressure Zone						
Solera	21	232.5	255	136.0	237.9	404.5
	22		255	136.0	237.9	404.5
	23		255	136.0	237.9	404.5
	24		220	117.3	205.3	349.0
	25		218	116.2	203.4	345.8
Anthem Highlands	26	63.2	236	125.8	220.2	374.4
Sun City	11	235.8	200	106.6	186.6	317.3
	15		284	151.4	265.0	450.5
	27		284	151.4	265.0	450.5
	28		284	151.4	265.0	450.5
Multi Family	29	20	105	45.3	79.4	134.9
Rec Center	20	7		18.9	33.1	56.2
Subtotal			**2596.0**	**1392.5**	**2436.8**	**4142.5**
Existing Demands			**1035.0**	**624.8**	**1093.5**	**1858.9**
TOTAL			**3631.0**	**2017.3**	**3530.3**	**6001.5**
3200 Pressure Zone						
Solera	270	19.1	143	76.2	133.4	226.8
Sun City	1100	234.9	202	107.7	188.5	320.4
	260		456	243.1	425.5	723.3
	270		457	243.7	426.4	724.9
Rec Center	255	4.5		12.2	21.3	36.1
Madeira Canyons						
Total		258.5	**1258**	**682.9**	**1195.1**	**2031.7**
3310 Pressure Zone						
Sun City	280	35.9	100	53.3	93.3	158.6
Madeira Canyons						
Total	320	35.9	**100**	**53.3**	**93.3**	**158.6**
Total 3200/3310 Zone			**1358.0**	**736.2**	**1288.4**	**2190.3**
GRAND TOTAL			**13625.0**	**8431.6**	**14755.2**	**25083.9**

*Existing Demands from Table 1

DEL WEBB COMMUNITIES
ANTHEM -MASTER WATER UPDATE
Table 6-2 UPDATED JULY, 2005
Demands Projections with Madeira Canyons

Parcel	Node	Acreage	Units	Demand (gpm)		
				Ave. Day	Max. Day	Peak Hour
2760 Pressure Zone						
Existing Demands			2179	1820.4	3185.8	5415.8
2870 Pressure Zone						
Anthem Highlands	52		99	52.8	92.4	157.0
	53		99	52.8	92.4	157.0
	54		99	52.8	92.4	157.0
	55		99	52.8	92.4	157.0
Subtotal			396	211.1	369.5	628.2
Existing Demands			2989	1809.5	3166.6	5383.3
TOTAL			3385	2020.7	3536.1	6011.4
2980 Pressure Zone						
Solera	56	64.5	129	68.8	120.4	204.6
	57		129	68.8	120.4	204.6
	58		128	68.2	119.4	203.0
Anthem Highlands	59		203	108.2	189.4	322.0
	59		203	108.2	189.4	322.0
	60		203	108.2	189.4	322.0
	61		203	108.2	189.4	322.0
	93		203	108.2	189.4	322.0
School	92			32.4	56.7	96.4
Subtotal			1401.0	779.4	1364.0	2318.8
Existing Demands			1671	1057.5	1850.6	3146.1
TOTAL			3072.0	1836.9	3214.6	5464.8
3090 Pressure Zone						
Solera	21	232.5	255	136.0	237.9	404.5
	22		255	136.0	237.9	404.5
	23		220	117.3	205.3	349.0
	24		255	136.0	237.9	404.5
	25		218	116.2	203.4	345.8
Anthem Highlands	26	63.2	236	125.8	220.2	374.4
Sun City	11	235.8	200	106.6	186.6	317.3
	15		284	151.4	265.0	450.5
	27		284	151.4	265.0	450.5
	28		284	151.4	265.0	450.5
Multi Family	29	20	105	45.3	79.4	134.9
Rec Center	20	7		18.9	33.1	56.2
Madeira Canyons	34,35	80	23	12.3	21.5	36.5
Subtotal			2619.0	1404.7	2458.3	4179.0
Existing Demands			1035.0	624.8	1093.5	1858.9
TOTAL			3654.0	2029.6	3551.7	6037.9
3200 Pressure Zone						
Solera	270	19.1	143	76.2	133.4	226.8
Sun City	1100	234.9	202	107.7	188.5	320.4
	260		456	243.1	425.5	723.3
	270		457	243.7	426.4	724.9
Rec Center	255	4.5		12.2	21.3	36.1
Madeira Canyons	350,360	272	1051.0	560.4	980.7	1667.2
Park		18.78		81.5	142.6	242.5
School		11.75		30.9	54.1	92.0
Rec Center		5.18		15.5	27.1	46.0
Total		566.21	2309	1371.2	2399.6	4079.3
3310 Pressure Zone						
Sun City	280	35.9	100	53.3	93.3	158.6
Madeira Canyons	305,325	140	476	253.8	444.2	755.1
Total	320	175.9	576	307.1	537.5	913.7
Total 3200/3310 Zone			2885.0	1678.3	2937.1	4993.0
GRAND TOTAL			15175.0	9385.9	16425.3	27923.1
Madeira Canyons						
3090 Zone		80	23.0	12.3	21.5	36.5
3200 Zone		272	1051.0	688.3	1204.5	2047.7
3310 Zone		140	476.0	253.8	444.2	755.1
Total		492	1550.0	954.4	1670.1	2839.2

*Existing Demands from Table 1

APPENDIX D

Appendix D

APPRECIATION/DEPRECIATION SAMPLE CALCULATION

Refunding Amount	$500,000
Facility Service Life	25 Years
Number of EDU's (estimated)	2700

Year	Quarter	Straight Line Depreciation	*Quarterly Interest Rate	Index	Refunding Amount	Value per EDU
0	1	$500,000.00	1.5	1.0000	$500,000.00	$185.19
	2	$495,000.00	1.5	1.0150	$500,000.00	$185.19
	3	$490,000.00	1.5	1.0302	$500,000.00	$185.19
	4	$485,000.00	1.5	1.0457	$500,000.00	$185.19
1	1	$480,000.00	1.5	1.0614	$509,454.50	$188.69
	2	$475,000.00	1.5	1.0773	$511,709.90	$189.52
	3	$470,000.00	1.5	1.0934	$513,918.33	$190.34
	4	$465,000.00	1.5	1.1098	$516,077.88	$191.14
2	1	$460,000.00	1.5	1.1265	$518,186.59	$191.92
	2	$455,000.00	1.5	1.1434	$520,242.44	$192.68
	3	$450,000.00	1.5	1.1605	$522,243.37	$193.42
	4	$445,000.00	1.5	1.1779	$524,187.28	$194.14
3	1	$440,000.00	1.5	1.1956	$526,072.00	$194.84
	2	$435,000.00	1.5	1.2136	$527,895.31	$195.52
	3	$430,000.00	1.5	1.2318	$529,654.96	$196.17
	4	$425,000.00	1.5	1.2502	$531,348.63	$196.80
4	1	$420,000.00	1.5	1.2690	$532,973.93	$197.40
	2	$415,000.00	1.5	1.2880	$534,528.44	$197.97
	3	$410,000.00	1.5	1.3073	$536,009.66	$198.52
	4	$405,000.00	1.5	1.3270	$537,415.05	$199.04
5	1	$400,000.00	1.5	1.3469	$538,742.00	$199.53
	2	$395,000.00	1.5	1.3671	$539,987.84	$200.00
	3	$390,000.00	1.5	1.3876	$541,149.84	$200.43
	4	$385,000.00	1.5	1.4084	$542,225.20	$200.82

*Appreciation index used for City of Henderson is the Merril Lynch Bond Index per Ordinance 1495

Appreciation/Depreciation are shown to start immediately however are not effective until year one