

**APPENDIX 3.1.9-1**  
*Overview of Water*



**OVERVIEW OF WATER  
FOR THE  
ESCONDIDO COUNTRY CLUB PROJECT  
IN THE CITY OF ESCONDIDO**

May 23, 2017

Prepared for:  
New Urban West, Inc.  
16935 West Bernardo Drive, Suite 260  
San Diego, CA 92127

**Prepared by:**  
**Dexter Wilson Engineering, Inc.**  
**2234 Faraday Avenue**  
**Carlsbad, CA 92008**

Job No. 736-015

## **INTRODUCTION**

This report provides an overview of water service for the Escondido Country Club project in the City of Escondido. This report will develop conceptual water service plans for the project with recommended required on-site facilities to accommodate the project.

## **PROJECT OVERVIEW**

The Escondido Country Club project is located in the northwestern section of the City of Escondido west of Interstate 15, and north of El Norte Parkway. Figure 1 presents a vicinity map showing the subject property.

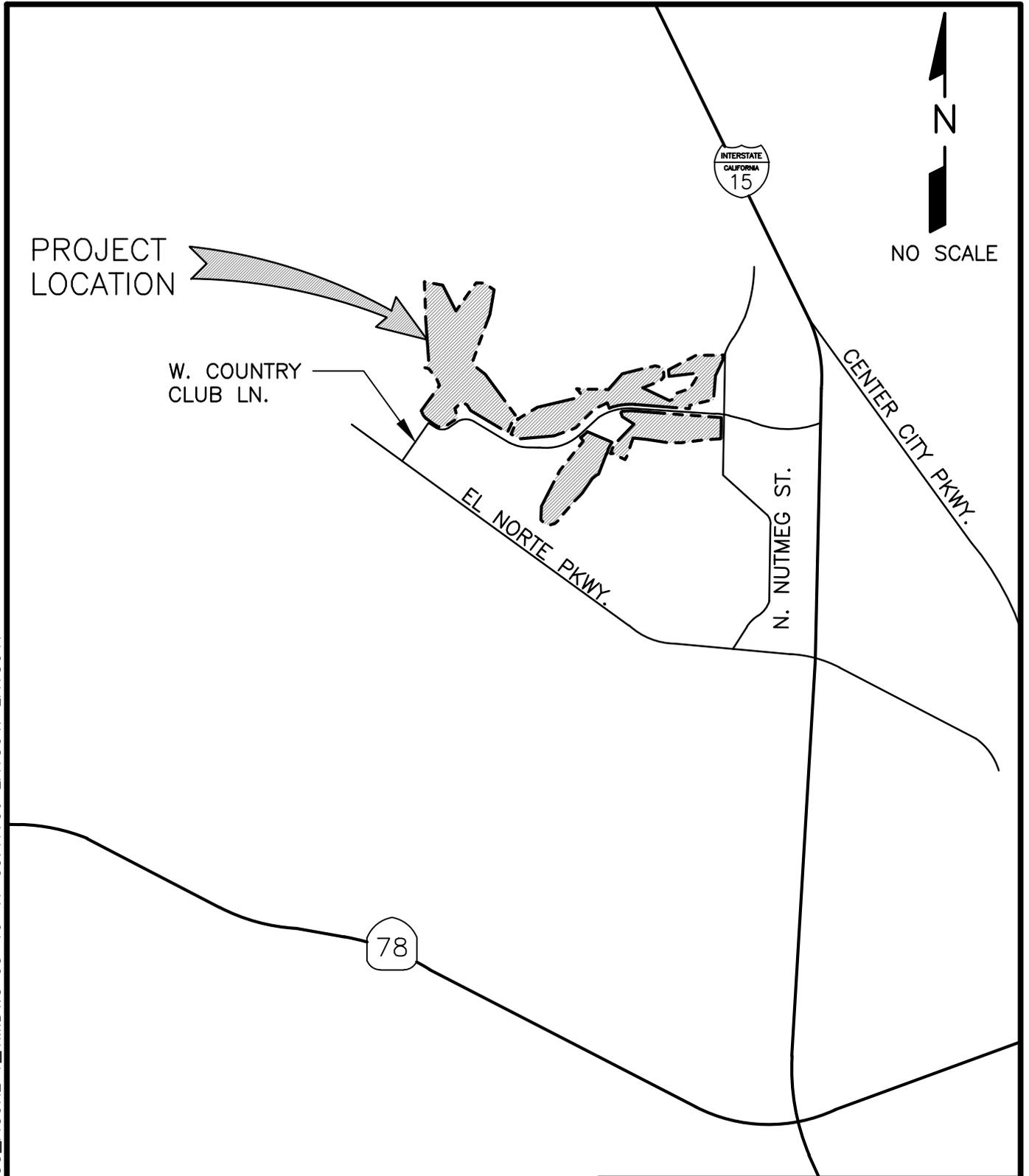
## **DEVELOPMENT PLAN**

The Escondido Country Club project plans to develop the site into 392 dwelling units on approximately 109 acres.

## **TOPOGRAPHY**

The existing topography on the property ranges in elevation from a low of approximately 725 feet to a high of approximately 785 feet. The topography generally increases from south to north.

\\ARTIC\DWG\736015\ECC\_FIGURE 1\_VM.DWG 03-10-17 09:17:06 LAYOUT: LAYOUT1



DEXTER WILSON ENGINEERING, INC.  
CONSULTING ENGINEERS  
(760) 438-4422

**FIGURE 1**  
**VICINITY MAP**  
ESCONDIDO COUNTRY CLUB

## **WATER SERVICE**

Water service to the Escondido Country Club project will be provided by the Rincon del Diablo Water District and the City of Escondido. The project is situated in the northwestern section of the City of Escondido. The project area is designated as being within two separate service areas. The western portion of the project area is located in the City of Escondido Water Service Area (Escondido Exchange Area) and the eastern portion is within the Rincon Del Diablo Municipal Water District Service Area. The Rincon del Diablo Water District will provide water supply to the Escondido Exchange Area via master meters. The project is designated as being within the Rincon del Diablo 958 Zone. The water supply to this area originates from the R-3A Reservoir and the R-3B Reservoir. These facilities are located next to each other, northeast of the project.

As mentioned above, water will be supplied to the Escondido Exchange Area via four master meters. There are currently three master meters serving the area and one will be added. The existing master meters are located on Gary Lane/Fuerte Lane, Country Club Drive, and Cortez/Escondido Golf Course. One master meter is proposed in the project boundary, east of Gary Lane.

Since the project lies within two separate service areas (Rincon del Diablo Water District and the City of Escondido) the design criteria used to generate potable water demands is based on Section 2 of the Rincon del Diablo Water District Water Master Plan, updated June 2014, and the City of Escondido Water System Design Standards, updated April 2014. Average day domestic water demands are based on land use for both of these documents; the estimated potable water demands are presented in Table 1 on the following page.

<b>TABLE 1 POTABLE WATER DEMANDS</b>						
<b>Land Use (Service Area)</b>	<b>Quantity (Units)</b>	<b>Water Duty Factor</b>	<b>Average Demand (gpm)</b>	<b>Max Day Demand (gpm)</b>	<b>Peak Hour Demand (gpm)</b>	<b>Fire Flow (gpm)</b>
Residential (Escondido)	177 DU	800 gpd/DU	98.3	177.0	477.9	2,500
Residential (Rincon del Diablo)	215 DU	510 gpd/DU	76.1	129.4	220.8	5,000 (2,500 gpm simultaneously)
Club House	4.1 acres	2,300 gpd/ac	6.5	11.8	31.8	-
Farm/Farm Stand	1.1 acres	3,000 gpd/ac	2.3	4.1	11.1	-
Irrigation	29 acres	3,000 gpd/ac	60.4	108.8	293.6	-
<b>TOTAL</b>			<b>243.6</b>	<b>431.1</b>	<b>1035.3</b>	

Computer modeling of the proposed onsite and existing offsite water system for the Escondido Country Club project was performed to determine the pipe sizes necessary to provide adequate domestic and fire protection service. The water system was analyzed under average day demand, peak hour demand, and maximum day demand plus fire flow. Recycled water is expected to supply the irrigation demand; however, the irrigation demand was included in the potable water analysis to simulate a worst-case scenario in the event that recycled water is not available.

Figure 2 shows the improvements required to serve the project. A piping system consisting of 8-inch and 12-inch lines is required to provide the Escondido Country Club project with adequate flow and pressure. All proposed lines will connect to existing infrastructure. There are a total of eight proposed connections for the project: three connections in Gary Lane, three connections in Country Club Lane, one connection in La Brea Street, and one connection will occur at the Cortez/Escondido Golf Course Meter.

### **Fire Flows**

Fire hydrant flow requirements vary by the type of land use for both the Rincon del Diablo Water District and the City of Escondido. The fire flow requirements vary by type of land

use and are established in Section 2 of the Rincon del Diablo Water District Water Master Plan, updated June 2014, and the City of Escondido Water System Design Standards, updated April 2014. Table 1 on the previous page presents the fire flow requirement for the Escondido Country Club project.

For the portion of the Escondido Country Club project within the Rincon del Diablo Water District service, two fire flow scenarios were modeled. The first fire flow scenario modeled simultaneous fire flows of 2,500 gpm for a total fire flow of 5,000 gpm plus maximum day demands. The second fire flow scenario modeled a 2,500 gpm plus maximum day demands.

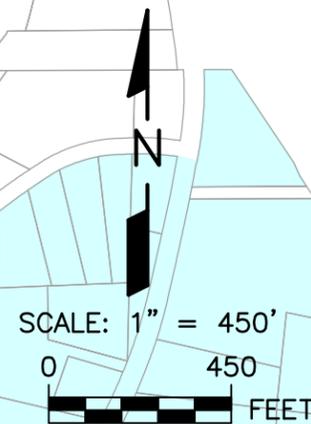
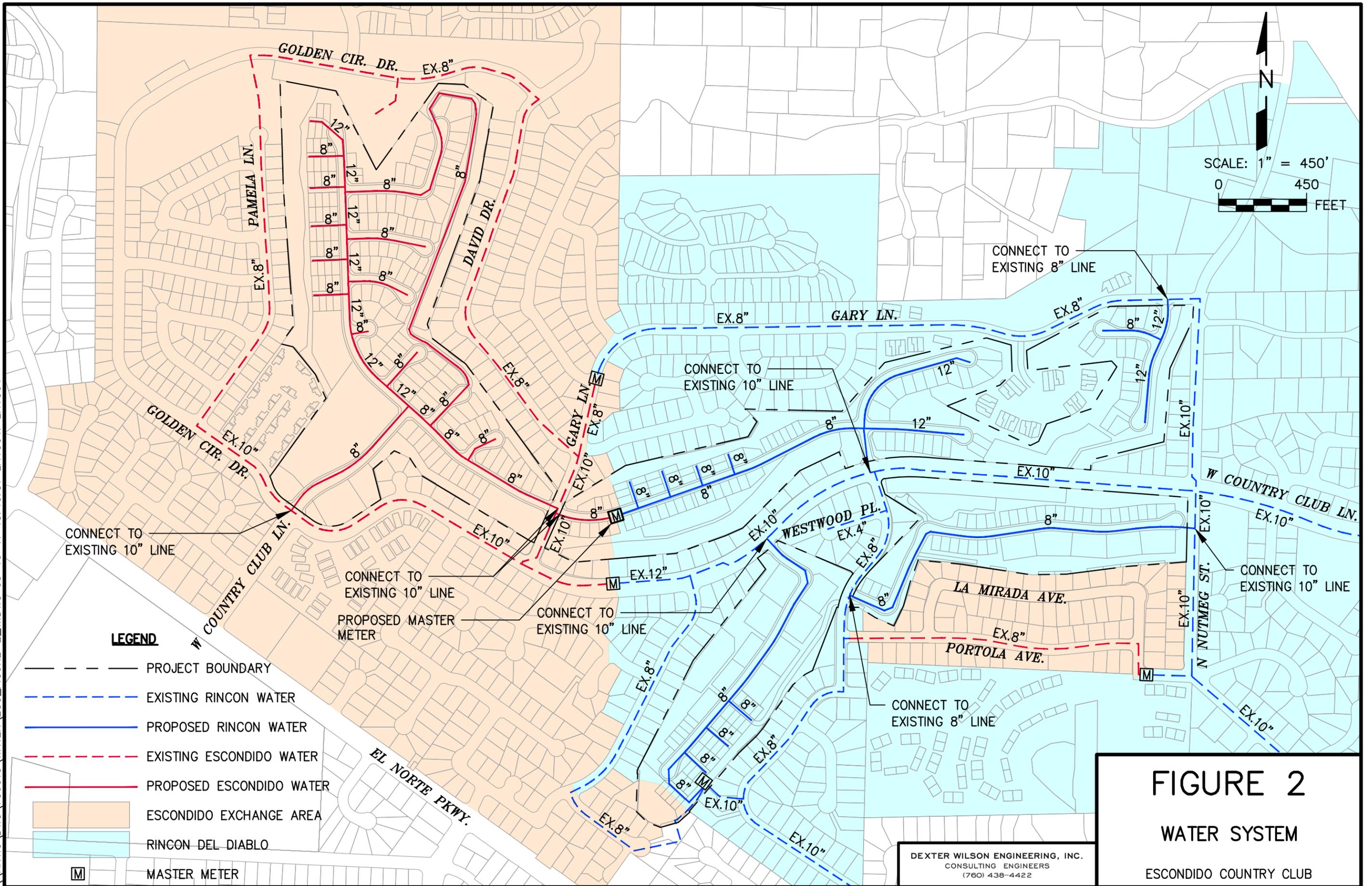
The 5,000 gpm fire flow for the first maximum day plus fire flow scenario was split between computer model Nodes 68, 72, and 500. A 1,000 gpm fire flow demand was placed at Node 68, a 1,500 gpm fire flow at Node 72, and a 2,500 gpm fire flow at Node 500 for a total of 5,000 gpm. The water modeling results for this fire flow scenario indicate a minimum expected pressure of 20.1 psi, which is greater than the minimum allowable pressure of 20 psi.

The second maximum day plus fire flow scenario was modeled with a total of 2,500 gpm split between computer model Nodes 108 and 112. The water modeling results indicate that the minimum expected pressure in the system is 42.5 psi.

For the portion of the Escondido Country Club project within the City of Escondido service area a 2,500 gpm fire flow was modeled between computer model Nodes 380 and 384. The minimum expected pressure under this scenario is 22.6 psi, which is greater than the minimum allowable pressure of 20 psi.

Appendix A provides the results of the computer model for the analyzed water system. Exhibit A provides the corresponding Node and Pipe Diagram of the analyzed water system.

\\ARTIC\DWG\736015\WATER\ECC\_FIGURE-2\_W.DWG 03-10-17 15:40:37 LAYOUT: LAYOUT



- LEGEND**
- PROJECT BOUNDARY
  - - - EXISTING RINCON WATER
  - PROPOSED RINCON WATER
  - - - EXISTING ESCONDIDO WATER
  - PROPOSED ESCONDIDO WATER
  - ESCONDIDO EXCHANGE AREA
  - RINCON-DEL DIABLO
  - M MASTER METER

**FIGURE 2**  
**WATER SYSTEM**  
 ESCONDIDO COUNTRY CLUB

DEXTER WILSON ENGINEERING, INC.  
 CONSULTING ENGINEERS  
 (760) 438-4422

**APPENDIX A**

**COMPUTER MODEL RESULTS**

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

FLOWRATE IS EXPRESSED IN GPM AND PRESSURE IN PSIG

A SUMMARY OF THE ORIGINAL DATA FOLLOWS

PIPE NO.	NODE NOS.	LENGTH (FEET)	DIAMETER (INCHES)	ROUGHNESS	MINOR LOSS K	FIXED GRADE
1	0 4	1800.0	16.0	130.0	.00	983.00
5	4 8	2290.0	14.0	130.0	.00	
7	8 10	1040.0	10.0	130.0	.00	
9	10 12	2140.0	10.0	130.0	.00	
13	12 16	1930.0	10.0	130.0	.00	
17	16 20	750.0	10.0	130.0	.00	
21	20 24	520.0	12.0	130.0	.00	
23	24 26	2000.0	8.0	130.0	.00	
25	24 28	1040.0	12.0	130.0	.00	
27	26 144	730.0	10.0	130.0	.00	
29	28 32	440.0	10.0	130.0	.00	
33	32 36	1030.0	10.0	130.0	.00	
37	12 40	1140.0	10.0	130.0	.00	
41	40 46	180.0	8.0	130.0	.00	
49	46 52	2000.0	8.0	130.0	.00	
53	52 56	830.0	8.0	130.0	.00	
57	56 60	1300.0	8.0	130.0	.00	
61	60 64	370.0	10.0	130.0	.00	
65	64 28	420.0	10.0	130.0	.00	
69	16 68	260.0	12.0	130.0	.00	
73	68 76	630.0	12.0	130.0	.00	
77	68 72	840.0	12.0	130.0	.00	
81	46 80	150.0	12.0	130.0	.00	
85	80 84	320.0	8.0	130.0	.00	
89	80 88	500.0	12.0	130.0	.00	
101	16 100	790.0	8.0	130.0	.00	
105	100 104	280.0	8.0	130.0	.00	
109	104 108	470.0	8.0	130.0	.00	
113	108 112	1560.0	8.0	130.0	.00	
125	20 120	1200.0	8.0	130.0	.00	
127	120 122	170.0	8.0	130.0	.00	
129	120 124	200.0	8.0	130.0	.00	
133	124 128	170.0	8.0	130.0	.00	
137	124 132	200.0	8.0	130.0	.00	
141	132 136	170.0	8.0	130.0	.00	
145	132 140	140.0	8.0	130.0	.00	
149	140 144	280.0	8.0	130.0	.00	
201	68 200	790.0	8.0	130.0	.00	
205	200 204	130.0	8.0	130.0	.00	
209	200 208	210.0	8.0	130.0	.00	
213	208 212	130.0	8.0	130.0	.00	
217	208 216	210.0	8.0	130.0	.00	
221	216 220	170.0	8.0	130.0	.00	
225	216 224	210.0	8.0	130.0	.00	
229	224 228	170.0	8.0	130.0	.00	
233	224 64	520.0	8.0	130.0	.00	
301	64 300	600.0	8.0	130.0	.00	
305	300 304	220.0	8.0	130.0	.00	

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

309	300	308	290.0	8.0	130.0	.00
313	308	316	170.0	8.0	130.0	.00
317	316	36	940.0	8.0	130.0	.00
321	316	320	180.0	12.0	130.0	.00
325	320	324	270.0	8.0	130.0	.00
329	320	328	370.0	12.0	130.0	.00
331	328	332	110.0	8.0	130.0	.00
333	328	336	320.0	12.0	130.0	.00
337	336	340	210.0	8.0	130.0	.00
341	336	344	340.0	8.0	130.0	.00
343	336	346	130.0	12.0	130.0	.00
345	346	348	210.0	8.0	130.0	.00
349	346	352	130.0	12.0	130.0	.00
353	352	356	460.0	8.0	130.0	.00
355	352	358	90.0	12.0	130.0	.00
357	358	360	210.0	8.0	130.0	.00
361	358	364	200.0	12.0	130.0	.00
365	364	368	210.0	8.0	130.0	.00
369	364	372	220.0	12.0	130.0	.00
373	372	376	210.0	8.0	130.0	.00
377	372	380	100.0	12.0	130.0	.00
381	380	384	230.0	12.0	130.0	.00
385	364	388	1300.0	8.0	130.0	.00
389	388	356	940.0	8.0	130.0	.00
391	356	344	300.0	8.0	130.0	.00
393	344	324	330.0	8.0	130.0	.00
395	324	312	360.0	8.0	130.0	.00
397	312	308	350.0	8.0	130.0	.00
501	8	500	2940.0	8.0	130.0	.00
505	500	504	2420.0	8.0	130.0	.00
509	504	508	460.0	14.0	130.0	.00
513	508	512	1500.0	20.0	130.0	.00
517	512	516	2940.0	10.0	130.0	.00
521	516	10	2050.0	12.0	130.0	.00
525	512	520	2790.0	20.0	130.0	.00
529	520	524	4030.0	12.0	130.0	.00
533	524	528	1070.0	12.0	130.0	.00
537	528	532	1070.0	10.0	130.0	.00
541	532	536	1610.0	10.0	130.0	.00
545	536	112	950.0	10.0	130.0	.00
547	112	12	200.0	10.0	130.0	.00
549	536	540	2220.0	8.0	130.0	.00
551	540	100	320.0	8.0	130.0	.00
553	540	544	1150.0	8.0	130.0	.00
557	544	144	410.0	10.0	130.0	.00
561	544	532	3740.0	10.0	130.0	.00
571	0	550	1340.0	16.0	130.0	.00
575	550	554	1400.0	10.0	130.0	.00
579	554	500	1610.0	8.0	130.0	.00

983.00

JUNCTION NUMBER	DEMAND	ELEVATION	CONNECTING	PIPES
4	.00	880.00	1	5
8	.00	780.00	5	7 501
10	.00	782.00	7	9 521

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

12	.00	752.00	9	13	37	547
16	.00	733.00	13	17	69	101
20	.00	742.00	17	21	125	
24	.00	726.00	21	23	25	
26	.00	726.00	23	27		
28	.00	721.00	25	29	65	
32	.00	725.00	29	33		
36	.00	722.00	33	317		
40	.00	775.00	37	41		
46	.00	780.00	41	49	81	
52	.00	775.00	49	53		
56	.00	752.00	53	57		
60	.00	733.00	57	61		
64	.00	726.00	61	65	233	301
68	.00	740.00	69	73	77	201
72	6.92	790.00	77			
76	6.92	750.00	73			
80	.00	770.00	81	85	89	
84	6.92	780.00	85			
88	11.46	765.00	89			
100	.00	767.00	101	105	551	
104	6.92	760.00	105	109		
108	6.92	745.00	109	113		
112	6.92	750.00	113	545	547	
120	.00	742.00	125	127	129	
122	11.92	743.00	127			
124	.00	745.00	129	133	137	
128	11.92	746.00	133			
132	.00	744.00	137	141	145	
136	11.92	742.00	141			
140	.00	740.00	145	149		
144	6.91	740.00	27	149	557	
200	.00	732.00	201	205	209	
204	4.54	730.00	205			
208	.00	730.00	209	213	217	
212	4.54	730.00	213			
216	.00	730.00	217	221	225	
220	4.54	730.00	221			
224	.00	730.00	225	229	233	
228	4.54	730.00	229			
300	.00	725.00	301	305	309	
304	7.56	730.00	305			
308	.00	730.00	309	313	397	
312	7.56	737.00	395	397		
316	8.84	735.00	313	317	321	
320	.00	737.00	321	325	329	
324	7.56	740.00	325	393	395	
328	.00	740.00	329	331	333	
332	7.56	745.00	331			
336	.00	750.00	333	337	341	343
340	7.56	750.00	337			
344	12.10	750.00	341	391	393	
346	.00	752.00	343	345	349	
348	12.10	750.00	345			
352	.00	755.00	349	353	355	

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

356	12.10	760.00	353	389	391		
358	.00	757.00	355	357	361		
360	12.10	760.00	357				
364	.00	760.00	361	365	369	385	
368	12.10	765.00	365				
372	.00	760.00	369	373	377		
376	7.56	765.00	373				
380	.00	770.00	377	381			
384	7.57	770.00	381				
388	7.57	780.00	385	389			
500	.00	727.00	501	505	579		
504	.00	713.00	505	509			
508	.00	712.00	509	513			
512	.00	758.00	513	517	525		
516	.00	784.00	517	521			
520	.00	681.00	525	529			
524	.00	770.00	529	533			
528	.00	740.00	533	537			
532	.00	752.00	537	541	561		
536	.00	768.00	541	545	549		
540	.00	760.00	549	551	553		
544	.00	748.00	553	557	561		
550	.00	834.00	571	575			
554	.00	772.00	575	579			

OUTPUT SELECTION: ALL RESULTS ARE OUTPUT EACH PERIOD  
 5 VALUES ARE OUTPUT FOR MAXIMUM AND MINIMUM PRESSURES

THIS SYSTEM HAS 97 PIPES WITH 82 JUNCTIONS , 14 LOOPS AND 2 FGNS

THE RESULTS ARE OBTAINED AFTER 8 TRIALS WITH AN ACCURACY = .00119

**Escondido Country Club  
 Average Day Demands**

PIPE NO.	NODE NOS.	FLOWRATE	HEAD LOSS	PUMP HEAD	MINOR LOSS	VELOCITY	HL/1000
1	0 4	187.81	.05	.00	.00	.30	.03
5	4 8	187.81	.12	.00	.00	.39	.05
7	8 10	177.56	.26	.00	.00	.73	.25
9	10 12	143.57	.36	.00	.00	.59	.17
13	12 16	72.34	.09	.00	.00	.30	.05
17	16 20	55.66	.02	.00	.00	.23	.03
21	20 24	59.75	.01	.00	.00	.17	.01
23	24 26	-21.73	-.03	.00	.00	-.14	-.02
25	24 28	81.48	.03	.00	.00	.23	.02
27	26 144	-21.73	.00	.00	.00	-.09	-.01
29	28 32	56.85	.01	.00	.00	.23	.03
33	32 36	56.85	.03	.00	.00	.23	.03

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

37	12	40	47.64	.03	.00	.00	.19	.02
41	40	46	47.64	.01	.00	.00	.30	.07
49	46	52	29.26	.05	.00	.00	.19	.03
53	52	56	29.26	.02	.00	.00	.19	.03
57	56	60	29.26	.03	.00	.00	.19	.03
61	60	64	29.26	.00	.00	.00	.12	.01
65	64	28	-24.63	.00	.00	.00	-.10	-.01
69	16	68	51.09	.00	.00	.00	.14	.01
73	68	76	6.92	.00	.00	.00	.02	.00
77	68	72	6.92	.00	.00	.00	.02	.00
81	46	80	18.38	.00	.00	.00	.05	.00
85	80	84	6.92	.00	.00	.00	.04	.00
89	80	88	11.46	.00	.00	.00	.03	.00
101	16	100	-34.42	-.03	.00	.00	-.22	-.04
105	100	104	-18.56	.00	.00	.00	-.12	-.01
109	104	108	-25.48	-.01	.00	.00	-.16	-.02
113	108	112	-32.40	-.05	.00	.00	-.21	-.03
125	20	120	-4.08	.00	.00	.00	-.03	.00
127	120	122	11.92	.00	.00	.00	.08	.00
129	120	124	-16.00	.00	.00	.00	-.10	-.01
133	124	128	11.92	.00	.00	.00	.08	.00
137	124	132	-27.92	.00	.00	.00	-.18	-.02
141	132	136	11.92	.00	.00	.00	.08	.00
145	132	140	-39.84	-.01	.00	.00	-.25	-.05
149	140	144	-39.84	-.01	.00	.00	-.25	-.05
201	68	200	37.25	.03	.00	.00	.24	.04
205	200	204	4.54	.00	.00	.00	.03	.00
209	200	208	32.71	.01	.00	.00	.21	.03
213	208	212	4.54	.00	.00	.00	.03	.00
217	208	216	28.17	.01	.00	.00	.18	.02
221	216	220	4.54	.00	.00	.00	.03	.00
225	216	224	23.63	.00	.00	.00	.15	.02
229	224	228	4.54	.00	.00	.00	.03	.00
233	224	64	19.09	.01	.00	.00	.12	.01
301	64	300	72.99	.09	.00	.00	.47	.14
305	300	304	7.56	.00	.00	.00	.05	.00
309	300	308	65.43	.03	.00	.00	.42	.12
313	308	316	36.87	.01	.00	.00	.24	.04
317	316	36	-56.85	-.08	.00	.00	-.36	-.09
321	316	320	84.88	.00	.00	.00	.24	.03
325	320	324	16.06	.00	.00	.00	.10	.01
329	320	328	68.82	.01	.00	.00	.20	.02
331	328	332	7.56	.00	.00	.00	.05	.00
333	328	336	61.26	.00	.00	.00	.17	.01
337	336	340	7.56	.00	.00	.00	.05	.00
341	336	344	-1.32	.00	.00	.00	-.01	.00
343	336	346	55.02	.00	.00	.00	.16	.01
345	346	348	12.10	.00	.00	.00	.08	.01
349	346	352	42.92	.00	.00	.00	.12	.01
353	352	356	2.13	.00	.00	.00	.01	.00
355	352	358	40.79	.00	.00	.00	.12	.01
357	358	360	12.10	.00	.00	.00	.08	.01
361	358	364	28.69	.00	.00	.00	.08	.00
365	364	368	12.10	.00	.00	.00	.08	.01
369	364	372	15.13	.00	.00	.00	.04	.00

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

373	372	376	7.56	.00	.00	.00	.05	.00
377	372	380	7.57	.00	.00	.00	.02	.00
381	380	384	7.57	.00	.00	.00	.02	.00
385	364	388	1.46	.00	.00	.00	.01	.00
389	388	356	-6.11	.00	.00	.00	-.04	.00
391	356	344	-16.08	.00	.00	.00	-.10	-.01
393	344	324	-29.50	-.01	.00	.00	-.19	-.03
395	324	312	-21.00	-.01	.00	.00	-.13	-.01
397	312	308	-28.56	-.01	.00	.00	-.18	-.03
501	8	500	10.25	.01	.00	.00	.07	.00
505	500	504	66.09	.29	.00	.00	.42	.12
509	504	508	66.09	.00	.00	.00	.14	.01
513	508	512	66.09	.00	.00	.00	.07	.00
517	512	516	-33.99	-.03	.00	.00	-.14	-.01
521	516	10	-33.99	-.01	.00	.00	-.10	.00
525	512	520	100.08	.01	.00	.00	.10	.00
529	520	524	100.08	.14	.00	.00	.28	.04
533	524	528	100.08	.04	.00	.00	.28	.04
537	528	532	100.08	.09	.00	.00	.41	.09
541	532	536	46.01	.03	.00	.00	.19	.02
545	536	112	15.73	.00	.00	.00	.06	.00
547	112	12	-23.59	.00	.00	.00	-.10	-.01
549	536	540	30.29	.06	.00	.00	.19	.03
551	540	100	15.86	.00	.00	.00	.10	.01
553	540	544	14.42	.01	.00	.00	.09	.01
557	544	144	68.49	.02	.00	.00	.28	.04
561	544	532	-54.06	-.10	.00	.00	-.22	-.03
571	0	550	55.84	.00	.00	.00	.09	.00
575	550	554	55.84	.04	.00	.00	.23	.03
579	554	500	55.84	.14	.00	.00	.36	.09

JUNCTION NUMBER	DEMAND	GRADE LINE	ELEVATION	PRESSURE
4	.00	982.95	880.00	44.61
8	.00	982.83	780.00	87.89
10	.00	982.56	782.00	86.91
12	.00	982.20	752.00	99.75
16	.00	982.11	733.00	107.95
20	.00	982.09	742.00	104.04
24	.00	982.08	726.00	110.97
26	.00	982.11	726.00	110.98
28	.00	982.06	721.00	113.12
32	.00	982.04	725.00	111.39
36	.00	982.01	722.00	112.67
40	.00	982.18	775.00	89.78
46	.00	982.17	780.00	87.60
52	.00	982.11	775.00	89.75
56	.00	982.09	752.00	99.71
60	.00	982.06	733.00	107.92
64	.00	982.05	726.00	110.96
68	.00	982.11	740.00	104.91
72	6.92	982.11	790.00	83.25
76	6.92	982.11	750.00	100.58
80	.00	982.17	770.00	91.94
84	6.92	982.16	780.00	87.60

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

88	11.46	982.16	765.00	94.10
100	.00	982.14	767.00	93.23
104	6.92	982.14	760.00	96.26
108	6.92	982.15	745.00	102.77
112	6.92	982.20	750.00	100.62
120	.00	982.09	742.00	104.04
122	11.92	982.09	743.00	103.60
124	.00	982.09	745.00	102.74
128	11.92	982.09	746.00	102.31
132	.00	982.10	744.00	103.17
136	11.92	982.09	742.00	104.04
140	.00	982.10	740.00	104.91
144	6.91	982.12	740.00	104.92
200	.00	982.08	732.00	108.37
204	4.54	982.07	730.00	109.23
208	.00	982.07	730.00	109.23
212	4.54	982.07	730.00	109.23
216	.00	982.06	730.00	109.23
220	4.54	982.06	730.00	109.23
224	.00	982.06	730.00	109.23
228	4.54	982.06	730.00	109.23
300	.00	981.97	725.00	111.35
304	7.56	981.97	730.00	109.19
308	.00	981.93	730.00	109.17
312	7.56	981.92	737.00	106.13
316	8.84	981.93	735.00	107.00
320	.00	981.92	737.00	106.13
324	7.56	981.92	740.00	104.83
328	.00	981.91	740.00	104.83
332	7.56	981.91	745.00	102.66
336	.00	981.91	750.00	100.49
340	7.56	981.91	750.00	100.49
344	12.10	981.91	750.00	100.49
346	.00	981.91	752.00	99.63
348	12.10	981.91	750.00	100.49
352	.00	981.91	755.00	98.33
356	12.10	981.91	760.00	96.16
358	.00	981.91	757.00	97.46
360	12.10	981.91	760.00	96.16
364	.00	981.91	760.00	96.16
368	12.10	981.91	765.00	93.99
372	.00	981.91	760.00	96.16
376	7.56	981.91	765.00	93.99
380	.00	981.91	770.00	91.83
384	7.57	981.91	770.00	91.83
388	7.57	981.91	780.00	87.49
500	.00	982.81	727.00	110.85
504	.00	982.53	713.00	116.79
508	.00	982.52	712.00	117.23
512	.00	982.52	758.00	97.29
516	.00	982.55	784.00	86.04
520	.00	982.51	681.00	130.66
524	.00	982.37	770.00	92.03
528	.00	982.33	740.00	105.01
532	.00	982.24	752.00	99.77

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

536	.00	982.20	768.00	92.82
540	.00	982.14	760.00	96.26
544	.00	982.13	748.00	101.46
550	.00	983.00	834.00	64.56
554	.00	982.95	772.00	91.41

MAXIMUM PRESSURES

520	.00	982.51	681.00	130.66
508	.00	982.52	712.00	117.23
504	.00	982.53	713.00	116.79
28	.00	982.06	721.00	113.12
36	.00	982.01	722.00	112.67

MINIMUM PRESSURES

4	.00	982.95	880.00	44.61
550	.00	983.00	834.00	64.56
72	6.92	982.11	790.00	83.25
516	.00	982.55	784.00	86.04
10	.00	982.56	782.00	86.91

THE NET SYSTEM DEMAND = 243.65

SUMMARY OF INFLOWS(+) AND OUTFLOWS(-) FROM FIXED GRADE NODES

PIPE NUMBER	FLOWRATE
1	187.81
571	55.84

THE NET FLOW INTO THE SYSTEM FROM FIXED GRADE NODES = 243.65

THE NET FLOW OUT OF THE SYSTEM INTO FIXED GRADE NODES = .00

A SUMMARY OF CONDITIONS SPECIFIED FOR THE NEXT SIMULATION FOLLOWS

THE DEMANDS ARE CHANGED FROM ORIGINAL VALUES BY A FACTOR = 4.25

THE RESULTS ARE OBTAINED AFTER 2 TRIALS WITH AN ACCURACY = .00003

**Escondido Country Club  
 Peak Hour Demands**

PIPE NO.	NODE NOS.	FLOWRATE	HEAD LOSS	PUMP HEAD	MINOR LOSS	VELOCITY	HL/1000
1	0 4	797.84	.74	.00	.00	1.27	.41
5	4 8	797.84	1.80	.00	.00	1.66	.79
7	8 10	754.29	3.80	.00	.00	3.08	3.66
9	10 12	609.89	5.28	.00	.00	2.49	2.47
13	12 16	307.30	1.34	.00	.00	1.26	.69
17	16 20	236.46	.32	.00	.00	.97	.43
21	20 24	253.81	.10	.00	.00	.72	.20

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

23	24	26	-92.32	-.44	.00	.00	-.59	-.22
25	24	28	346.13	.37	.00	.00	.98	.36
27	26	144	-92.32	-.05	.00	.00	-.38	-.07
29	28	32	241.49	.20	.00	.00	.99	.44
33	32	36	241.49	.46	.00	.00	.99	.44
37	12	40	202.39	.36	.00	.00	.83	.32
41	40	46	202.39	.17	.00	.00	1.29	.95
49	46	52	124.32	.77	.00	.00	.79	.38
53	52	56	124.32	.32	.00	.00	.79	.38
57	56	60	124.32	.50	.00	.00	.79	.38
61	60	64	124.32	.05	.00	.00	.51	.13
65	64	28	-104.64	-.04	.00	.00	-.43	-.09
69	16	68	217.05	.04	.00	.00	.62	.15
73	68	76	29.40	.00	.00	.00	.08	.00
77	68	72	29.40	.00	.00	.00	.08	.00
81	46	80	78.08	.00	.00	.00	.22	.02
85	80	84	29.40	.01	.00	.00	.19	.03
89	80	88	48.68	.00	.00	.00	.14	.01
101	16	100	-146.21	-.41	.00	.00	-.93	-.52
105	100	104	-78.83	-.05	.00	.00	-.50	-.17
109	104	108	-108.22	-.14	.00	.00	-.69	-.30
113	108	112	-137.62	-.72	.00	.00	-.88	-.46
125	20	120	-17.35	-.01	.00	.00	-.11	-.01
127	120	122	50.64	.01	.00	.00	.32	.07
129	120	124	-67.99	-.03	.00	.00	-.43	-.13
133	124	128	50.64	.01	.00	.00	.32	.07
137	124	132	-118.62	-.07	.00	.00	-.76	-.35
141	132	136	50.64	.01	.00	.00	.32	.07
145	132	140	-169.26	-.10	.00	.00	-1.08	-.68
149	140	144	-169.26	-.19	.00	.00	-1.08	-.68
201	68	200	158.26	.47	.00	.00	1.01	.60
205	200	204	19.29	.00	.00	.00	.12	.01
209	200	208	138.97	.10	.00	.00	.89	.47
213	208	212	19.29	.00	.00	.00	.12	.01
217	208	216	119.68	.08	.00	.00	.76	.36
221	216	220	19.29	.00	.00	.00	.12	.01
225	216	224	100.40	.05	.00	.00	.64	.26
229	224	228	19.29	.00	.00	.00	.12	.01
233	224	64	81.11	.09	.00	.00	.52	.17
301	64	300	310.07	1.25	.00	.00	1.98	2.09
305	300	304	32.11	.01	.00	.00	.20	.03
309	300	308	277.95	.49	.00	.00	1.77	1.71
313	308	316	156.64	.10	.00	.00	1.00	.59
317	316	36	-241.49	-1.24	.00	.00	-1.54	-1.31
321	316	320	360.57	.07	.00	.00	1.02	.38
325	320	324	68.22	.03	.00	.00	.44	.13
329	320	328	292.36	.10	.00	.00	.83	.26
331	328	332	32.11	.00	.00	.00	.20	.03
333	328	336	260.24	.07	.00	.00	.74	.21
337	336	340	32.11	.01	.00	.00	.20	.03
341	336	344	-5.50	.00	.00	.00	-.04	.00
343	336	346	233.63	.02	.00	.00	.66	.17
345	346	348	51.40	.02	.00	.00	.33	.07
349	346	352	182.22	.01	.00	.00	.52	.11
353	352	356	8.91	.00	.00	.00	.06	.00

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

355	352	358	173.32	.01	.00	.00	.49	.10
357	358	360	51.40	.02	.00	.00	.33	.07
361	358	364	121.92	.01	.00	.00	.35	.05
365	364	368	51.40	.02	.00	.00	.33	.07
369	364	372	64.27	.00	.00	.00	.18	.02
373	372	376	32.11	.01	.00	.00	.20	.03
377	372	380	32.16	.00	.00	.00	.09	.00
381	380	384	32.16	.00	.00	.00	.09	.00
385	364	388	6.24	.00	.00	.00	.04	.00
389	388	356	-25.91	-.02	.00	.00	-.17	-.02
391	356	344	-68.41	-.04	.00	.00	-.44	-.13
393	344	324	-125.31	-.13	.00	.00	-.80	-.39
395	324	312	-89.20	-.07	.00	.00	-.57	-.21
397	312	308	-121.32	-.13	.00	.00	-.77	-.37
501	8	500	43.54	.16	.00	.00	.28	.06
505	500	504	280.73	4.20	.00	.00	1.79	1.74
509	504	508	280.73	.05	.00	.00	.59	.11
513	508	512	280.73	.03	.00	.00	.29	.02
517	512	516	-144.40	-.50	.00	.00	-.59	-.17
521	516	10	-144.40	-.14	.00	.00	-.41	-.07
525	512	520	425.13	.12	.00	.00	.43	.04
529	520	524	425.13	2.10	.00	.00	1.21	.52
533	524	528	425.13	.56	.00	.00	1.21	.52
537	528	532	425.13	1.35	.00	.00	1.74	1.26
541	532	536	195.47	.48	.00	.00	.80	.30
545	536	112	66.81	.04	.00	.00	.27	.04
547	112	12	-100.20	-.02	.00	.00	-.41	-.09
549	536	540	128.66	.91	.00	.00	.82	.41
551	540	100	67.38	.04	.00	.00	.43	.12
553	540	544	61.28	.12	.00	.00	.39	.10
557	544	144	290.93	.26	.00	.00	1.19	.63
561	544	532	-229.66	-1.51	.00	.00	-.94	-.40
571	0	550	237.19	.06	.00	.00	.38	.04
575	550	554	237.19	.60	.00	.00	.97	.43
579	554	500	237.19	2.05	.00	.00	1.51	1.27

JUNCTION NUMBER	DEMAND	GRADE LINE	ELEVATION	PRESSURE
4	.00	982.26	880.00	44.31
8	.00	980.46	780.00	86.86
10	.00	976.65	782.00	84.35
12	.00	971.38	752.00	95.06
16	.00	970.04	733.00	102.72
20	.00	969.72	742.00	98.68
24	.00	969.61	726.00	105.57
26	.00	970.06	726.00	105.76
28	.00	969.25	721.00	107.57
32	.00	969.05	725.00	105.76
36	.00	968.59	722.00	106.86
40	.00	971.01	775.00	84.94
46	.00	970.84	780.00	82.70
52	.00	970.07	775.00	84.53
56	.00	969.75	752.00	94.36
60	.00	969.25	733.00	102.38
64	.00	969.21	726.00	105.39

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

---

68	.00	970.00	740.00	99.67
72	29.40	970.00	790.00	78.00
76	29.40	970.00	750.00	95.33
80	.00	970.84	770.00	87.03
84	29.40	970.83	780.00	82.69
88	48.68	970.83	765.00	89.19
100	.00	970.45	767.00	88.16
104	29.40	970.50	760.00	91.21
108	29.40	970.64	745.00	97.78
112	29.40	971.36	750.00	95.92
120	.00	969.73	742.00	98.68
122	50.64	969.72	743.00	98.24
124	.00	969.76	745.00	97.39
128	50.64	969.74	746.00	96.96
132	.00	969.83	744.00	97.86
136	50.64	969.81	742.00	98.72
140	.00	969.92	740.00	99.63
144	29.35	970.11	740.00	99.72
200	.00	969.53	732.00	102.93
204	19.29	969.52	730.00	103.79
208	.00	969.43	730.00	103.75
212	19.29	969.42	730.00	103.75
216	.00	969.35	730.00	103.72
220	19.29	969.35	730.00	103.72
224	.00	969.30	730.00	103.70
228	19.29	969.29	730.00	103.69
300	.00	967.95	725.00	105.28
304	32.11	967.95	730.00	103.11
308	.00	967.46	730.00	102.90
312	32.11	967.33	737.00	99.81
316	37.55	967.36	735.00	100.69
320	.00	967.29	737.00	99.79
324	32.11	967.25	740.00	98.48
328	.00	967.19	740.00	98.45
332	32.11	967.19	745.00	96.28
336	.00	967.13	750.00	94.09
340	32.11	967.12	750.00	94.08
344	51.40	967.13	750.00	94.09
346	.00	967.10	752.00	93.21
348	51.40	967.09	750.00	94.07
352	.00	967.09	755.00	91.91
356	51.40	967.09	760.00	89.74
358	.00	967.08	757.00	91.03
360	51.40	967.06	760.00	89.73
364	.00	967.07	760.00	89.73
368	51.40	967.05	765.00	87.56
372	.00	967.07	760.00	89.73
376	32.11	967.06	765.00	87.56
380	.00	967.07	770.00	85.40
384	32.16	967.06	770.00	85.39
388	32.16	967.07	780.00	81.06
500	.00	980.29	727.00	109.76
504	.00	976.09	713.00	114.01
508	.00	976.04	712.00	114.42
512	.00	976.01	758.00	94.47

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

516	.00	976.51	784.00	83.42
520	.00	975.89	681.00	127.78
524	.00	973.79	770.00	88.31
528	.00	973.23	740.00	101.07
532	.00	971.88	752.00	95.28
536	.00	971.40	768.00	88.14
540	.00	970.49	760.00	91.21
544	.00	970.37	748.00	96.36
550	.00	982.94	834.00	64.54
554	.00	982.34	772.00	91.15

MAXIMUM PRESSURES

520	.00	975.89	681.00	127.78
508	.00	976.04	712.00	114.42
504	.00	976.09	713.00	114.01
500	.00	980.29	727.00	109.76
28	.00	969.25	721.00	107.57

MINIMUM PRESSURES

4	.00	982.26	880.00	44.31
550	.00	982.94	834.00	64.54
72	29.40	970.00	790.00	78.00
388	32.16	967.07	780.00	81.06
84	29.40	970.83	780.00	82.69

THE NET SYSTEM DEMAND = 1035.03

SUMMARY OF INFLOWS(+) AND OUTFLOWS(-) FROM FIXED GRADE NODES

PIPE NUMBER	FLOWRATE
1	797.84
571	237.19

THE NET FLOW INTO THE SYSTEM FROM FIXED GRADE NODES = 1035.03  
 THE NET FLOW OUT OF THE SYSTEM INTO FIXED GRADE NODES = .00

A SUMMARY OF CONDITIONS SPECIFIED FOR THE NEXT SIMULATION FOLLOWS

THE DEMANDS ARE CHANGED FROM ORIGINAL VALUES BY A FACTOR = 1.76

THE FOLLOWING SPECIFIC DEMAND CHANGES ARE MADE :

JUNCTION NUMBER	DEMAND
68	1500.00
72	1000.00
500	2500.00

THE RESULTS ARE OBTAINED AFTER 4 TRIALS WITH AN ACCURACY = .00073

**Escondido Country Club Project  
Water System Analysis (736015C4)  
Average Day, Maximum Day, Peak Hour, and  
Fire Flow Scenarios**

**May 23, 2017  
Dexter Wilson Engr., Inc.  
Job No. 736-015**

**Escondido Country Club  
Maximum Day Demands plus Fire Flow  
5000 GPM Fire Flow between Nodes 68 72 and 520**

PIPE NO.	NODE NOS.	FLOWRATE	HEAD LOSS	PUMP HEAD	MINOR LOSS	VELOCITY	HL/1000
1	0 4	3744.30	12.97	.00	.00	5.97	7.20
5	4 8	3744.30	31.61	.00	.00	7.80	13.80
7	8 10	2719.68	40.88	.00	.00	11.11	39.31
9	10 12	1862.50	41.72	.00	.00	7.61	19.50
13	12 16	1113.84	14.52	.00	.00	4.55	7.52
17	16 20	-443.72	-1.03	.00	.00	-1.81	-1.37
21	20 24	-129.28	-.03	.00	.00	-.37	-.06
23	24 26	-314.92	-4.30	.00	.00	-2.01	-2.15
25	24 28	185.64	.12	.00	.00	.53	.11
27	26 144	-314.92	-.53	.00	.00	-1.29	-.73
29	28 32	101.56	.04	.00	.00	.41	.09
33	32 36	101.56	.09	.00	.00	.41	.09
37	12 40	393.33	1.25	.00	.00	1.61	1.09
41	40 46	393.33	.58	.00	.00	2.51	3.24
49	46 52	360.98	5.54	.00	.00	2.30	2.77
53	52 56	360.98	2.30	.00	.00	2.30	2.77
57	56 60	360.98	3.60	.00	.00	2.30	2.77
61	60 64	360.98	.35	.00	.00	1.47	.93
65	64 28	-84.09	-.03	.00	.00	-.34	-.06
69	16 68	2226.04	2.90	.00	.00	6.31	11.16
73	68 76	12.18	.00	.00	.00	.03	.00
77	68 72	1000.00	2.13	.00	.00	2.84	2.54
81	46 80	32.35	.00	.00	.00	.09	.00
85	80 84	12.18	.00	.00	.00	.08	.01
89	80 88	20.17	.00	.00	.00	.06	.00
101	16 100	-668.48	-6.85	.00	.00	-4.27	-8.66
105	100 104	-374.31	-.83	.00	.00	-2.39	-2.96
109	104 108	-386.49	-1.48	.00	.00	-2.47	-3.14
113	108 112	-398.67	-5.19	.00	.00	-2.54	-3.33
125	20 120	-314.44	-2.57	.00	.00	-2.01	-2.14
127	120 122	20.98	.00	.00	.00	.13	.01
129	120 124	-335.42	-.48	.00	.00	-2.14	-2.42
133	124 128	20.98	.00	.00	.00	.13	.01
137	124 132	-356.40	-.54	.00	.00	-2.27	-2.70
141	132 136	20.98	.00	.00	.00	.13	.01
145	132 140	-377.38	-.42	.00	.00	-2.41	-3.01
149	140 144	-377.38	-.84	.00	.00	-2.41	-3.01
201	68 200	-286.14	-1.42	.00	.00	-1.83	-1.80
205	200 204	7.99	.00	.00	.00	.05	.00
209	200 208	-294.13	-.40	.00	.00	-1.88	-1.89
213	208 212	7.99	.00	.00	.00	.05	.00
217	208 216	-302.12	-.42	.00	.00	-1.93	-1.99
221	216 220	7.99	.00	.00	.00	.05	.00
225	216 224	-310.11	-.44	.00	.00	-1.98	-2.09
229	224 228	7.99	.00	.00	.00	.05	.00
233	224 64	-318.10	-1.14	.00	.00	-2.03	-2.19
301	64 300	126.96	.24	.00	.00	.81	.40
305	300 304	13.31	.00	.00	.00	.08	.01

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

309	300	308	113.65	.09	.00	.00	.73	.33
313	308	316	63.70	.02	.00	.00	.41	.11
317	316	36	-101.56	-.25	.00	.00	-.65	-.26
321	316	320	149.70	.01	.00	.00	.42	.08
325	320	324	28.50	.01	.00	.00	.18	.03
329	320	328	121.20	.02	.00	.00	.34	.05
331	328	332	13.31	.00	.00	.00	.08	.01
333	328	336	107.89	.01	.00	.00	.31	.04
337	336	340	13.31	.00	.00	.00	.08	.01
341	336	344	-2.21	.00	.00	.00	-.01	.00
343	336	346	96.80	.00	.00	.00	.27	.03
345	346	348	21.30	.00	.00	.00	.14	.01
349	346	352	75.50	.00	.00	.00	.21	.02
353	352	356	3.70	.00	.00	.00	.02	.00
355	352	358	71.81	.00	.00	.00	.20	.02
357	358	360	21.30	.00	.00	.00	.14	.01
361	358	364	50.51	.00	.00	.00	.14	.01
365	364	368	21.30	.00	.00	.00	.14	.01
369	364	372	26.63	.00	.00	.00	.08	.00
373	372	376	13.31	.00	.00	.00	.08	.01
377	372	380	13.32	.00	.00	.00	.04	.00
381	380	384	13.32	.00	.00	.00	.04	.00
385	364	388	2.59	.00	.00	.00	.02	.00
389	388	356	-10.74	.00	.00	.00	-.07	.00
391	356	344	-28.34	-.01	.00	.00	-.18	-.02
393	344	324	-51.85	-.03	.00	.00	-.33	-.08
395	324	312	-36.65	-.01	.00	.00	-.23	-.04
397	312	308	-49.96	-.02	.00	.00	-.32	-.07
501	8	500	1024.61	56.18	.00	.00	6.54	19.11
505	500	504	196.96	2.18	.00	.00	1.26	.90
509	504	508	196.96	.03	.00	.00	.41	.06
513	508	512	196.96	.02	.00	.00	.20	.01
517	512	516	-857.19	-13.62	.00	.00	-3.50	-4.63
521	516	10	-857.19	-3.91	.00	.00	-2.43	-1.91
525	512	520	1054.15	.65	.00	.00	1.08	.23
529	520	524	1054.15	11.27	.00	.00	2.99	2.80
533	524	528	1054.15	2.99	.00	.00	2.99	2.80
537	528	532	1054.15	7.27	.00	.00	4.31	6.79
541	532	536	440.31	2.17	.00	.00	1.80	1.35
545	536	112	55.52	.03	.00	.00	.23	.03
547	112	12	-355.34	-.18	.00	.00	-1.45	-.91
549	536	540	384.79	6.92	.00	.00	2.46	3.12
551	540	100	294.16	.61	.00	.00	1.88	1.89
553	540	544	90.63	.25	.00	.00	.58	.21
557	544	144	704.47	1.32	.00	.00	2.88	3.22
561	544	532	-613.84	-9.33	.00	.00	-2.51	-2.50
571	0	550	1672.35	2.17	.00	.00	2.67	1.62
575	550	554	1672.35	22.36	.00	.00	6.83	15.97
579	554	500	1672.35	76.23	.00	.00	10.67	47.35

JUNCTION NUMBER	DEMAND	GRADE LINE	ELEVATION	PRESSURE
4	.00	970.03	880.00	39.01
8	.00	938.42	780.00	68.65
10	.00	897.54	782.00	50.07

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

12	.00	855.82	752.00	44.99
16	.00	841.30	733.00	46.93
20	.00	842.33	742.00	43.47
24	.00	842.36	726.00	50.42
26	.00	846.66	726.00	52.28
28	.00	842.24	721.00	52.54
32	.00	842.20	725.00	50.79
36	.00	842.11	722.00	52.05
40	.00	854.57	775.00	34.48
46	.00	853.99	780.00	32.06
52	.00	848.45	775.00	31.83
56	.00	846.16	752.00	40.80
60	.00	842.56	733.00	47.48
64	.00	842.21	726.00	50.36
68	1500.00	838.40	740.00	42.64
72	1000.00	836.27	790.00	20.05
76	12.18	838.40	750.00	38.31
80	.00	853.99	770.00	36.40
84	12.18	853.99	780.00	32.06
88	20.17	853.99	765.00	38.56
100	.00	848.15	767.00	35.16
104	12.18	848.97	760.00	38.56
108	12.18	850.45	745.00	45.70
112	12.18	855.64	750.00	45.78
120	.00	844.90	742.00	44.59
122	20.98	844.90	743.00	44.16
124	.00	845.38	745.00	43.50
128	20.98	845.38	746.00	43.06
132	.00	845.92	744.00	44.17
136	20.98	845.92	742.00	45.03
140	.00	846.34	740.00	46.08
144	12.16	847.18	740.00	46.45
200	.00	839.82	732.00	46.72
204	7.99	839.82	730.00	47.59
208	.00	840.22	730.00	47.76
212	7.99	840.22	730.00	47.76
216	.00	840.64	730.00	47.94
220	7.99	840.64	730.00	47.94
224	.00	841.07	730.00	48.13
228	7.99	841.07	730.00	48.13
300	.00	841.97	725.00	50.69
304	13.31	841.97	730.00	48.52
308	.00	841.88	730.00	48.48
312	13.31	841.85	737.00	45.44
316	15.56	841.86	735.00	46.31
320	.00	841.85	737.00	45.43
324	13.31	841.84	740.00	44.13
328	.00	841.83	740.00	44.13
332	13.31	841.83	745.00	41.96
336	.00	841.81	750.00	39.79
340	13.31	841.81	750.00	39.79
344	21.30	841.81	750.00	39.79
346	.00	841.81	752.00	38.92
348	21.30	841.81	750.00	39.78
352	.00	841.81	755.00	37.62

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

356	21.30	841.81	760.00	35.45
358	.00	841.81	757.00	36.75
360	21.30	841.80	760.00	35.45
364	.00	841.80	760.00	35.45
368	21.30	841.80	765.00	33.28
372	.00	841.80	760.00	35.45
376	13.31	841.80	765.00	33.28
380	.00	841.80	770.00	31.11
384	13.32	841.80	770.00	31.11
388	13.32	841.80	780.00	26.78
500	2500.00	882.24	727.00	67.27
504	.00	880.06	713.00	72.39
508	.00	880.03	712.00	72.81
512	.00	880.02	758.00	52.87
516	.00	893.64	784.00	47.51
520	.00	879.37	681.00	85.96
524	.00	868.10	770.00	42.51
528	.00	865.11	740.00	54.21
532	.00	857.84	752.00	45.86
536	.00	855.67	768.00	37.99
540	.00	848.75	760.00	38.46
544	.00	848.51	748.00	43.55
550	.00	980.83	834.00	63.63
554	.00	958.47	772.00	80.80

MAXIMUM PRESSURES

520	.00	879.37	681.00	85.96
554	.00	958.47	772.00	80.80
508	.00	880.03	712.00	72.81
504	.00	880.06	713.00	72.39
8	.00	938.42	780.00	68.65

MINIMUM PRESSURES

72	1000.00	836.27	790.00	20.05
388	13.32	841.80	780.00	26.78
384	13.32	841.80	770.00	31.11
380	.00	841.80	770.00	31.11
52	.00	848.45	775.00	31.83

THE NET SYSTEM DEMAND = 5416.65

SUMMARY OF INFLOWS(+) AND OUTFLOWS(-) FROM FIXED GRADE NODES

PIPE NUMBER	FLOWRATE
1	3744.30
571	1672.35

THE NET FLOW INTO THE SYSTEM FROM FIXED GRADE NODES = 5416.65

THE NET FLOW OUT OF THE SYSTEM INTO FIXED GRADE NODES = .00

A SUMMARY OF CONDITIONS SPECIFIED FOR THE NEXT SIMULATION FOLLOWS

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

THE DEMANDS ARE CHANGED FROM ORIGINAL VALUES BY A FACTOR = 1.76

THE FOLLOWING SPECIFIC DEMAND CHANGES ARE MADE :

JUNCTION NUMBER	DEMAND
108	1000.00
112	1500.00

THE RESULTS ARE OBTAINED AFTER 4 TRIALS WITH AN ACCURACY = .00104

**Escondido Country Club  
 Maximum Day Demands plus Fire Flow  
 2500 GPM Fire Flow between Nodes 108 and 112**

PIPE NO.	NODE NOS.	FLOWRATE	HEAD LOSS	PUMP HEAD	MINOR LOSS	VELOCITY	HL/1000
1	0 4	2239.47	5.01	.00	.00	3.57	2.78
5	4 8	2239.47	12.20	.00	.00	4.67	5.33
7	8 10	2119.63	25.76	.00	.00	8.66	24.77
9	10 12	1729.97	36.39	.00	.00	7.07	17.01
13	12 16	267.15	1.03	.00	.00	1.09	.53
17	16 20	-50.11	-.02	.00	.00	-.20	-.02
21	20 24	33.11	.00	.00	.00	.09	.00
23	24 26	-99.61	-.51	.00	.00	-.64	-.26
25	24 28	132.72	.06	.00	.00	.38	.06
27	26 144	-99.61	-.06	.00	.00	-.41	-.09
29	28 32	99.80	.04	.00	.00	.41	.09
33	32 36	99.80	.09	.00	.00	.41	.09
37	12 40	121.13	.14	.00	.00	.49	.12
41	40 46	121.13	.07	.00	.00	.77	.37
49	46 52	88.78	.41	.00	.00	.57	.21
53	52 56	88.78	.17	.00	.00	.57	.21
57	56 60	88.78	.27	.00	.00	.57	.21
61	60 64	88.78	.03	.00	.00	.36	.07
65	64 28	-32.92	.00	.00	.00	-.13	-.01
69	16 68	63.34	.00	.00	.00	.18	.02
73	68 76	12.18	.00	.00	.00	.03	.00
77	68 72	12.18	.00	.00	.00	.03	.00
81	46 80	32.35	.00	.00	.00	.09	.00
85	80 84	12.18	.00	.00	.00	.08	.01
89	80 88	20.17	.00	.00	.00	.06	.00
101	16 100	253.92	1.14	.00	.00	1.62	1.44
105	100 104	606.77	2.03	.00	.00	3.87	7.24
109	104 108	594.59	3.28	.00	.00	3.79	6.97
113	108 112	-405.41	-5.35	.00	.00	-2.59	-3.43
125	20 120	-83.21	-.22	.00	.00	-.53	-.18
127	120 122	20.98	.00	.00	.00	.13	.01
129	120 124	-104.19	-.06	.00	.00	-.66	-.28
133	124 128	20.98	.00	.00	.00	.13	.01
137	124 132	-125.17	-.08	.00	.00	-.80	-.39
141	132 136	20.98	.00	.00	.00	.13	.01
145	132 140	-146.15	-.07	.00	.00	-.93	-.52
149	140 144	-146.15	-.15	.00	.00	-.93	-.52
201	68 200	38.98	.04	.00	.00	.25	.04

**Escondido Country Club Project  
Water System Analysis (736015C4)  
Average Day, Maximum Day, Peak Hour, and  
Fire Flow Scenarios**

**May 23, 2017  
Dexter Wilson Engr., Inc.  
Job No. 736-015**

205	200	204	7.99	.00	.00	.00	.05	.00
209	200	208	30.99	.01	.00	.00	.20	.03
213	208	212	7.99	.00	.00	.00	.05	.00
217	208	216	23.00	.00	.00	.00	.15	.02
221	216	220	7.99	.00	.00	.00	.05	.00
225	216	224	15.01	.00	.00	.00	.10	.01
229	224	228	7.99	.00	.00	.00	.05	.00
233	224	64	7.02	.00	.00	.00	.04	.00
301	64	300	128.72	.25	.00	.00	.82	.41
305	300	304	13.31	.00	.00	.00	.08	.01
309	300	308	115.41	.10	.00	.00	.74	.33
313	308	316	65.10	.02	.00	.00	.42	.12
317	316	36	-99.80	-.24	.00	.00	-.64	-.26
321	316	320	149.34	.01	.00	.00	.42	.07
325	320	324	28.22	.01	.00	.00	.18	.02
329	320	328	121.12	.02	.00	.00	.34	.05
331	328	332	13.31	.00	.00	.00	.08	.01
333	328	336	107.81	.01	.00	.00	.31	.04
337	336	340	13.31	.00	.00	.00	.08	.01
341	336	344	-2.29	.00	.00	.00	-.01	.00
343	336	346	96.79	.00	.00	.00	.27	.03
345	346	348	21.30	.00	.00	.00	.14	.01
349	346	352	75.50	.00	.00	.00	.21	.02
353	352	356	3.69	.00	.00	.00	.02	.00
355	352	358	71.81	.00	.00	.00	.20	.02
357	358	360	21.30	.00	.00	.00	.14	.01
361	358	364	50.51	.00	.00	.00	.14	.01
365	364	368	21.30	.00	.00	.00	.14	.01
369	364	372	26.63	.00	.00	.00	.08	.00
373	372	376	13.31	.00	.00	.00	.08	.01
377	372	380	13.32	.00	.00	.00	.04	.00
381	380	384	13.32	.00	.00	.00	.04	.00
385	364	388	2.59	.00	.00	.00	.02	.00
389	388	356	-10.74	.00	.00	.00	-.07	.00
391	356	344	-28.34	-.01	.00	.00	-.18	-.02
393	344	324	-51.93	-.03	.00	.00	-.33	-.08
395	324	312	-37.01	-.01	.00	.00	-.24	-.04
397	312	308	-50.32	-.03	.00	.00	-.32	-.07
501	8	500	119.83	1.06	.00	.00	.76	.36
505	500	504	784.83	28.23	.00	.00	5.01	11.66
509	504	508	784.83	.35	.00	.00	1.64	.76
513	508	512	784.83	.20	.00	.00	.80	.13
517	512	516	-389.67	-3.16	.00	.00	-1.59	-1.08
521	516	10	-389.67	-.91	.00	.00	-1.11	-.44
525	512	520	1174.50	.79	.00	.00	1.20	.28
529	520	524	1174.50	13.77	.00	.00	3.33	3.42
533	524	528	1174.50	3.65	.00	.00	3.33	3.42
537	528	532	1174.50	8.88	.00	.00	4.80	8.30
541	532	536	714.73	5.33	.00	.00	2.92	3.31
545	536	112	563.72	2.03	.00	.00	2.30	2.13
547	112	12	-1341.69	-2.12	.00	.00	-5.48	-10.62
549	536	540	151.01	1.22	.00	.00	.96	.55
551	540	100	352.85	.85	.00	.00	2.25	2.65
553	540	544	-201.84	-1.08	.00	.00	-1.29	-.94
557	544	144	257.93	.21	.00	.00	1.05	.50

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

561	544	532	-459.76	-5.47	.00	.00	-1.88	-1.46
571	0	550	665.00	.39	.00	.00	1.06	.29
575	550	554	665.00	4.05	.00	.00	2.72	2.89
579	554	500	665.00	13.82	.00	.00	4.24	8.58

JUNCTION NUMBER	DEMAND	GRADE LINE	ELEVATION	PRESSURE
4	.00	977.99	880.00	42.46
8	.00	965.79	780.00	80.51
10	.00	940.03	782.00	68.48
12	.00	903.64	752.00	65.71
16	.00	902.61	733.00	73.50
20	.00	902.62	742.00	69.60
24	.00	902.62	726.00	76.54
26	.00	903.13	726.00	76.76
28	.00	902.56	721.00	78.68
32	.00	902.52	725.00	76.93
36	.00	902.43	722.00	78.19
40	.00	903.50	775.00	55.68
46	.00	903.43	780.00	53.49
52	.00	903.02	775.00	55.48
56	.00	902.85	752.00	65.37
60	.00	902.58	733.00	73.48
64	.00	902.55	726.00	76.51
68	.00	902.60	740.00	70.46
72	12.18	902.60	790.00	48.79
76	12.18	902.60	750.00	66.13
80	.00	903.43	770.00	57.82
84	12.18	903.43	780.00	53.49
88	20.17	903.43	765.00	59.99
100	.00	901.47	767.00	58.27
104	12.18	899.44	760.00	60.42
108	1000.00	896.16	745.00	65.50
112	1500.00	901.51	750.00	65.66
120	.00	902.84	742.00	69.70
122	20.98	902.84	743.00	69.26
124	.00	902.90	745.00	68.42
128	20.98	902.90	746.00	67.99
132	.00	902.98	744.00	68.89
136	20.98	902.97	742.00	69.76
140	.00	903.05	740.00	70.65
144	12.16	903.19	740.00	70.72
200	.00	902.57	732.00	73.91
204	7.99	902.57	730.00	74.78
208	.00	902.56	730.00	74.78
212	7.99	902.56	730.00	74.78
216	.00	902.56	730.00	74.77
220	7.99	902.56	730.00	74.77
224	.00	902.56	730.00	74.77
228	7.99	902.56	730.00	74.77
300	.00	902.31	725.00	76.83
304	13.31	902.31	730.00	74.67
308	.00	902.21	730.00	74.63
312	13.31	902.19	737.00	71.58
316	15.56	902.19	735.00	72.45

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

320	.00	902.18	737.00	71.58
324	13.31	902.17	740.00	70.27
328	.00	902.16	740.00	70.27
332	13.31	902.16	745.00	68.10
336	.00	902.15	750.00	65.93
340	13.31	902.15	750.00	65.93
344	21.30	902.15	750.00	65.93
346	.00	902.14	752.00	65.06
348	21.30	902.14	750.00	65.93
352	.00	902.14	755.00	63.76
356	21.30	902.14	760.00	61.59
358	.00	902.14	757.00	62.89
360	21.30	902.13	760.00	61.59
364	.00	902.14	760.00	61.59
368	21.30	902.13	765.00	59.42
372	.00	902.13	760.00	61.59
376	13.31	902.13	765.00	59.42
380	.00	902.13	770.00	57.26
384	13.32	902.13	770.00	57.26
388	13.32	902.14	780.00	52.93
500	.00	964.74	727.00	103.02
504	.00	936.51	713.00	96.86
508	.00	936.16	712.00	97.14
512	.00	935.96	758.00	77.12
516	.00	939.12	784.00	67.22
520	.00	935.17	681.00	110.14
524	.00	921.40	770.00	65.61
528	.00	917.75	740.00	77.02
532	.00	908.87	752.00	67.98
536	.00	903.54	768.00	58.73
540	.00	902.32	760.00	61.67
544	.00	903.40	748.00	67.34
550	.00	982.61	834.00	64.40
554	.00	978.55	772.00	89.51

MAXIMUM PRESSURES

520	.00	935.17	681.00	110.14
500	.00	964.74	727.00	103.02
508	.00	936.16	712.00	97.14
504	.00	936.51	713.00	96.86
554	.00	978.55	772.00	89.51

MINIMUM PRESSURES

4	.00	977.99	880.00	42.46
72	12.18	902.60	790.00	48.79
388	13.32	902.14	780.00	52.93
84	12.18	903.43	780.00	53.49
46	.00	903.43	780.00	53.49

THE NET SYSTEM DEMAND = 2904.47

SUMMARY OF INFLOWS(+) AND OUTFLOWS(-) FROM FIXED GRADE NODES

PIPE NUMBER	FLOWRATE
1	2239.47

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

571 665.00

THE NET FLOW INTO THE SYSTEM FROM FIXED GRADE NODES = 2904.47  
 THE NET FLOW OUT OF THE SYSTEM INTO FIXED GRADE NODES = .00

A SUMMARY OF CONDITIONS SPECIFIED FOR THE NEXT SIMULATION FOLLOWS

THE DEMANDS ARE CHANGED FROM ORIGINAL VALUES BY A FACTOR = 1.76

THE FOLLOWING SPECIFIC DEMAND CHANGES ARE MADE :

JUNCTION NUMBER	DEMAND
380	1000.00
384	1500.00

THE RESULTS ARE OBTAINED AFTER 4 TRIALS WITH AN ACCURACY = .00045

**Escondido Country Club  
 Maximum Day Demands plus Fire Flow  
 2500 GPM Fire Flow between Nodes 380 and 384**

PIPE NO.	NODE NOS.	FLOWRATE	HEAD LOSS	PUMP HEAD	MINOR LOSS	VELOCITY	HL/1000
1	0 4	2247.34	5.04	.00	.00	3.59	2.80
5	4 8	2247.34	12.28	.00	.00	4.68	5.36
7	8 10	2124.54	25.87	.00	.00	8.68	24.88
9	10 12	1716.85	35.88	.00	.00	7.01	16.77
13	12 16	971.66	11.28	.00	.00	3.97	5.84
17	16 20	896.00	3.77	.00	.00	3.66	5.03
21	20 24	1248.70	1.99	.00	.00	3.54	3.83
23	24 26	-411.49	-7.06	.00	.00	-2.63	-3.53
25	24 28	1660.19	6.74	.00	.00	4.71	6.48
27	26 144	-411.49	-.87	.00	.00	-1.68	-1.19
29	28 32	1212.80	3.88	.00	.00	4.95	8.81
33	32 36	1212.80	9.07	.00	.00	4.95	8.81
37	12 40	528.21	2.15	.00	.00	2.16	1.89
41	40 46	528.21	1.01	.00	.00	3.37	5.60
49	46 52	495.86	9.97	.00	.00	3.16	4.98
53	52 56	495.86	4.14	.00	.00	3.16	4.98
57	56 60	495.86	6.48	.00	.00	3.16	4.98
61	60 64	495.86	.62	.00	.00	2.03	1.68
65	64 28	-447.39	-.58	.00	.00	-1.83	-1.39
69	16 68	615.47	.27	.00	.00	1.75	1.03
73	68 76	12.18	.00	.00	.00	.03	.00
77	68 72	12.18	.00	.00	.00	.03	.00
81	46 80	32.35	.00	.00	.00	.09	.00
85	80 84	12.18	.00	.00	.00	.08	.01
89	80 88	20.17	.00	.00	.00	.06	.00
101	16 100	-539.80	-4.61	.00	.00	-3.45	-5.83
105	100 104	-348.13	-.72	.00	.00	-2.22	-2.59
109	104 108	-360.31	-1.30	.00	.00	-2.30	-2.76

**Escondido Country Club Project  
Water System Analysis (736015C4)  
Average Day, Maximum Day, Peak Hour, and  
Fire Flow Scenarios**

**May 23, 2017  
Dexter Wilson Engr., Inc.  
Job No. 736-015**

113	108	112	-372.49	-4.58	.00	.00	-2.38	-2.93
125	20	120	-352.70	-3.18	.00	.00	-2.25	-2.65
127	120	122	20.98	.00	.00	.00	.13	.01
129	120	124	-373.68	-.59	.00	.00	-2.38	-2.95
133	124	128	20.98	.00	.00	.00	.13	.01
137	124	132	-394.66	-.65	.00	.00	-2.52	-3.27
141	132	136	20.98	.00	.00	.00	.13	.01
145	132	140	-415.64	-.50	.00	.00	-2.65	-3.59
149	140	144	-415.64	-1.01	.00	.00	-2.65	-3.59
201	68	200	591.11	5.45	.00	.00	3.77	6.90
205	200	204	7.99	.00	.00	.00	.05	.00
209	200	208	583.12	1.41	.00	.00	3.72	6.73
213	208	212	7.99	.00	.00	.00	.05	.00
217	208	216	575.13	1.38	.00	.00	3.67	6.56
221	216	220	7.99	.00	.00	.00	.05	.00
225	216	224	567.14	1.34	.00	.00	3.62	6.39
229	224	228	7.99	.00	.00	.00	.05	.00
233	224	64	559.15	3.24	.00	.00	3.57	6.22
301	64	300	1502.39	23.29	.00	.00	9.59	38.82
305	300	304	13.31	.00	.00	.00	.08	.01
309	300	308	1489.09	11.07	.00	.00	9.50	38.19
313	308	316	897.81	2.54	.00	.00	5.73	14.96
317	316	36	-1212.80	-24.55	.00	.00	-7.74	-26.11
321	316	320	2095.06	1.80	.00	.00	5.94	9.98
325	320	324	277.54	.46	.00	.00	1.77	1.70
329	320	328	1817.52	2.84	.00	.00	5.16	7.67
331	328	332	13.31	.00	.00	.00	.08	.01
333	328	336	1804.21	2.42	.00	.00	5.12	7.56
337	336	340	13.31	.00	.00	.00	.08	.01
341	336	344	-231.20	-.41	.00	.00	-1.48	-1.21
343	336	346	2022.11	1.21	.00	.00	5.74	9.34
345	346	348	21.30	.00	.00	.00	.14	.01
349	346	352	2000.81	1.19	.00	.00	5.68	9.16
353	352	356	-272.65	-.76	.00	.00	-1.74	-1.65
355	352	358	2273.46	1.04	.00	.00	6.45	11.61
357	358	360	21.30	.00	.00	.00	.14	.01
361	358	364	2252.17	2.28	.00	.00	6.39	11.41
365	364	368	21.30	.00	.00	.00	.14	.01
369	364	372	2513.31	3.07	.00	.00	7.13	13.98
373	372	376	13.31	.00	.00	.00	.08	.01
377	372	380	2500.00	1.38	.00	.00	7.09	13.84
381	380	384	1500.00	1.24	.00	.00	4.25	5.37
385	364	388	-282.43	-2.28	.00	.00	-1.80	-1.76
389	388	356	-295.76	-1.80	.00	.00	-1.89	-1.91
391	356	344	-589.70	-2.06	.00	.00	-3.76	-6.87
393	344	324	-842.20	-4.39	.00	.00	-5.38	-13.29
395	324	312	-577.97	-2.38	.00	.00	-3.69	-6.62
397	312	308	-591.27	-2.42	.00	.00	-3.77	-6.90
501	8	500	122.79	1.10	.00	.00	.78	.38
505	500	504	790.96	28.63	.00	.00	5.05	11.83
509	504	508	790.96	.36	.00	.00	1.65	.78
513	508	512	790.96	.20	.00	.00	.81	.14
517	512	516	-407.70	-3.44	.00	.00	-1.67	-1.17
521	516	10	-407.70	-.99	.00	.00	-1.16	-.48
525	512	520	1198.65	.82	.00	.00	1.22	.29

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

529	520	524	1198.65	14.29	.00	.00	3.40	3.55
533	524	528	1198.65	3.80	.00	.00	3.40	3.55
537	528	532	1198.65	9.22	.00	.00	4.90	8.62
541	532	536	540.93	3.18	.00	.00	2.21	1.97
545	536	112	167.69	.21	.00	.00	.68	.23
547	112	12	-216.98	-.07	.00	.00	-.89	-.36
549	536	540	373.24	6.54	.00	.00	2.38	2.94
551	540	100	191.67	.27	.00	.00	1.22	.86
553	540	544	181.57	.89	.00	.00	1.16	.78
557	544	144	839.29	1.83	.00	.00	3.43	4.45
561	544	532	-657.72	-10.61	.00	.00	-2.69	-2.84
571	0	550	668.16	.40	.00	.00	1.07	.30
575	550	554	668.16	4.09	.00	.00	2.73	2.92
579	554	500	668.16	13.94	.00	.00	4.26	8.66

JUNCTION NUMBER	DEMAND	GRADE LINE	ELEVATION	PRESSURE
4	.00	977.96	880.00	42.45
8	.00	965.68	780.00	80.46
10	.00	939.81	782.00	68.38
12	.00	903.92	752.00	65.83
16	.00	892.65	733.00	69.18
20	.00	888.88	742.00	63.65
24	.00	886.89	726.00	69.72
26	.00	893.94	726.00	72.78
28	.00	880.14	721.00	68.96
32	.00	876.27	725.00	65.55
36	.00	867.20	722.00	62.92
40	.00	901.77	775.00	54.93
46	.00	900.76	780.00	52.33
52	.00	890.80	775.00	50.18
56	.00	886.66	752.00	58.35
60	.00	880.18	733.00	63.78
64	.00	879.56	726.00	66.54
68	.00	892.38	740.00	66.03
72	12.18	892.38	790.00	44.36
76	12.18	892.38	750.00	61.70
80	.00	900.76	770.00	56.66
84	12.18	900.76	780.00	52.33
88	20.17	900.76	765.00	58.83
100	.00	897.26	767.00	56.44
104	12.18	897.98	760.00	59.79
108	12.18	899.28	745.00	66.85
112	12.18	903.85	750.00	66.67
120	.00	892.06	742.00	65.03
122	20.98	892.06	743.00	64.59
124	.00	892.65	745.00	63.98
128	20.98	892.65	746.00	63.55
132	.00	893.30	744.00	64.70
136	20.98	893.30	742.00	65.56
140	.00	893.81	740.00	66.65
144	12.16	894.81	740.00	67.09
200	.00	886.93	732.00	67.14
204	7.99	886.93	730.00	68.00
208	.00	885.52	730.00	67.39

**Escondido Country Club Project  
 Water System Analysis (736015C4)  
 Average Day, Maximum Day, Peak Hour, and  
 Fire Flow Scenarios**

**May 23, 2017  
 Dexter Wilson Engr., Inc.  
 Job No. 736-015**

212	7.99	885.52	730.00	67.39
216	.00	884.14	730.00	66.79
220	7.99	884.14	730.00	66.79
224	.00	882.80	730.00	66.21
228	7.99	882.80	730.00	66.21
300	.00	856.27	725.00	56.88
304	13.31	856.27	730.00	54.71
308	.00	845.19	730.00	49.92
312	13.31	842.78	737.00	45.84
316	15.56	842.65	735.00	46.65
320	.00	840.85	737.00	45.00
324	13.31	840.39	740.00	43.50
328	.00	838.01	740.00	42.47
332	13.31	838.01	745.00	40.31
336	.00	835.59	750.00	37.09
340	13.31	835.59	750.00	37.09
344	21.30	836.01	750.00	37.27
346	.00	834.38	752.00	35.70
348	21.30	834.38	750.00	36.56
352	.00	833.19	755.00	33.88
356	21.30	833.95	760.00	32.04
358	.00	832.14	757.00	32.56
360	21.30	832.14	760.00	31.26
364	.00	829.86	760.00	30.27
368	21.30	829.86	765.00	28.11
372	.00	826.79	760.00	28.94
376	13.31	826.79	765.00	26.77
380	1000.00	825.40	770.00	24.01
384	1500.00	824.17	770.00	23.47
388	13.32	832.15	780.00	22.60
500	.00	964.58	727.00	102.95
504	.00	935.94	713.00	96.61
508	.00	935.59	712.00	96.89
512	.00	935.38	758.00	76.87
516	.00	938.82	784.00	67.09
520	.00	934.56	681.00	109.88
524	.00	920.26	770.00	65.11
528	.00	916.47	740.00	76.47
532	.00	907.25	752.00	67.27
536	.00	904.07	768.00	58.96
540	.00	897.53	760.00	59.60
544	.00	896.64	748.00	64.41
550	.00	982.60	834.00	64.39
554	.00	978.51	772.00	89.49

**MAXIMUM PRESSURES**

520	.00	934.56	681.00	109.88
500	.00	964.58	727.00	102.95
508	.00	935.59	712.00	96.89
504	.00	935.94	713.00	96.61
554	.00	978.51	772.00	89.49

**MINIMUM PRESSURES**

388	13.32	832.15	780.00	22.60
384	1500.00	824.17	770.00	23.47

**Escondido Country Club Project  
Water System Analysis (736015C4)  
Average Day, Maximum Day, Peak Hour, and  
Fire Flow Scenarios**

**May 23, 2017  
Dexter Wilson Engr., Inc.  
Job No. 736-015**

---

380	1000.00	825.40	770.00	24.01
376	13.31	826.79	765.00	26.77
368	21.30	829.86	765.00	28.11

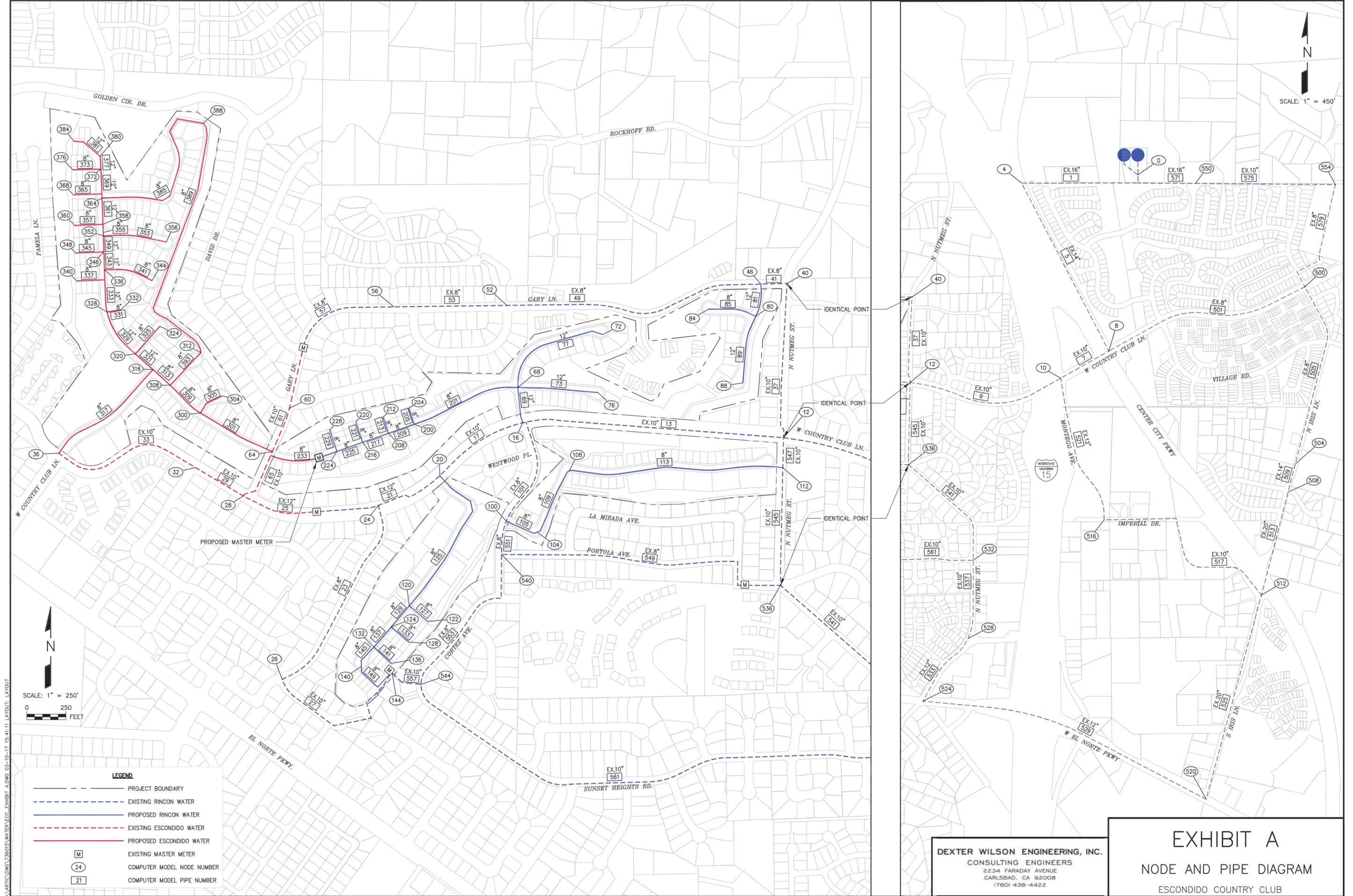
THE NET SYSTEM DEMAND = 2915.50

SUMMARY OF INFLOWS(+) AND OUTFLOWS(-) FROM FIXED GRADE NODES

PIPE NUMBER	FLOWRATE
1	2247.34
571	668.16

THE NET FLOW INTO THE SYSTEM FROM FIXED GRADE NODES = 2915.50

THE NET FLOW OUT OF THE SYSTEM INTO FIXED GRADE NODES = .00



SCALE: 1" = 450'

SCALE: 1" = 250'  
0 250 FEET

- LEGEND**
- PROJECT BOUNDARY
  - - - EXISTING RINCON WATER
  - PROPOSED RINCON WATER
  - - - EXISTING ESCONDIDO WATER
  - PROPOSED ESCONDIDO WATER
  - [M] EXISTING MASTER METER
  - (24) COMPUTER MODEL NODE NUMBER
  - [21] COMPUTER MODEL PIPE NUMBER

**DEXTER WILSON ENGINEERING, INC.**  
CONSULTING ENGINEERS  
2234 FARADAY AVENUE  
CARLSBAD, CA 92008  
(760) 438-4422

**EXHIBIT A**  
**NODE AND PIPE DIAGRAM**  
ESCONDIDO COUNTRY CLUB

ARTIC:DWG\736015\WATER\EC\_C\_EXHIBIT\_A.DWG 03-10-17 15:41:11 LAYOUT: LAYOUT