Appendix O-2: Preliminary Water Report

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PRELIMINARY WATER REPORT

Green River Ranch Business Park
City of Corona, County of Riverside, California

PREPARED FOR:

Western Realco
500 Newport Center Drive, #630
Newport Beach, CA 92660
(949) 720-0369

November 2021

PREPARED BY:

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www.kwcengineers.com

Brandon M. Barnett, RCE 78472

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Section

1
INTRODUCTION

1.1 PURPOSE OF STUDY

The purpose of this report is to discuss the water facility needs of Green River Ranch Business Park Development (Project) as it relates to the City of Corona's plans for the domestic water system. More specifically, this report will present the existing water system, the estimated project water demands, and proposed pipelines needed to support the proposed project and adjacent developments. It will also identify the approximate water distribution line alignments and pipe sizes, as well as proposed reservoir and pump station locations and sizes. The project water demands are based on the proposed land use and the City of Corona 2005 Water Master Plan. **Figure 1-1** provides a location map for the project.

1.2 PROJECT DESCRIPTION

The Project site is comprised of 159.1 acres of vacant land situated in the hills to the northwest of the City of Corona in Riverside County, adjacent to Green River Road. The site is located on the south side of the 91 freeway, just west of the 71 freeway, and approximately 5 miles west of Interstate 15 (I-15). **Figure 1-2** provides a vicinity map of the area illustrating the location of the project and the surrounding land uses in the area.

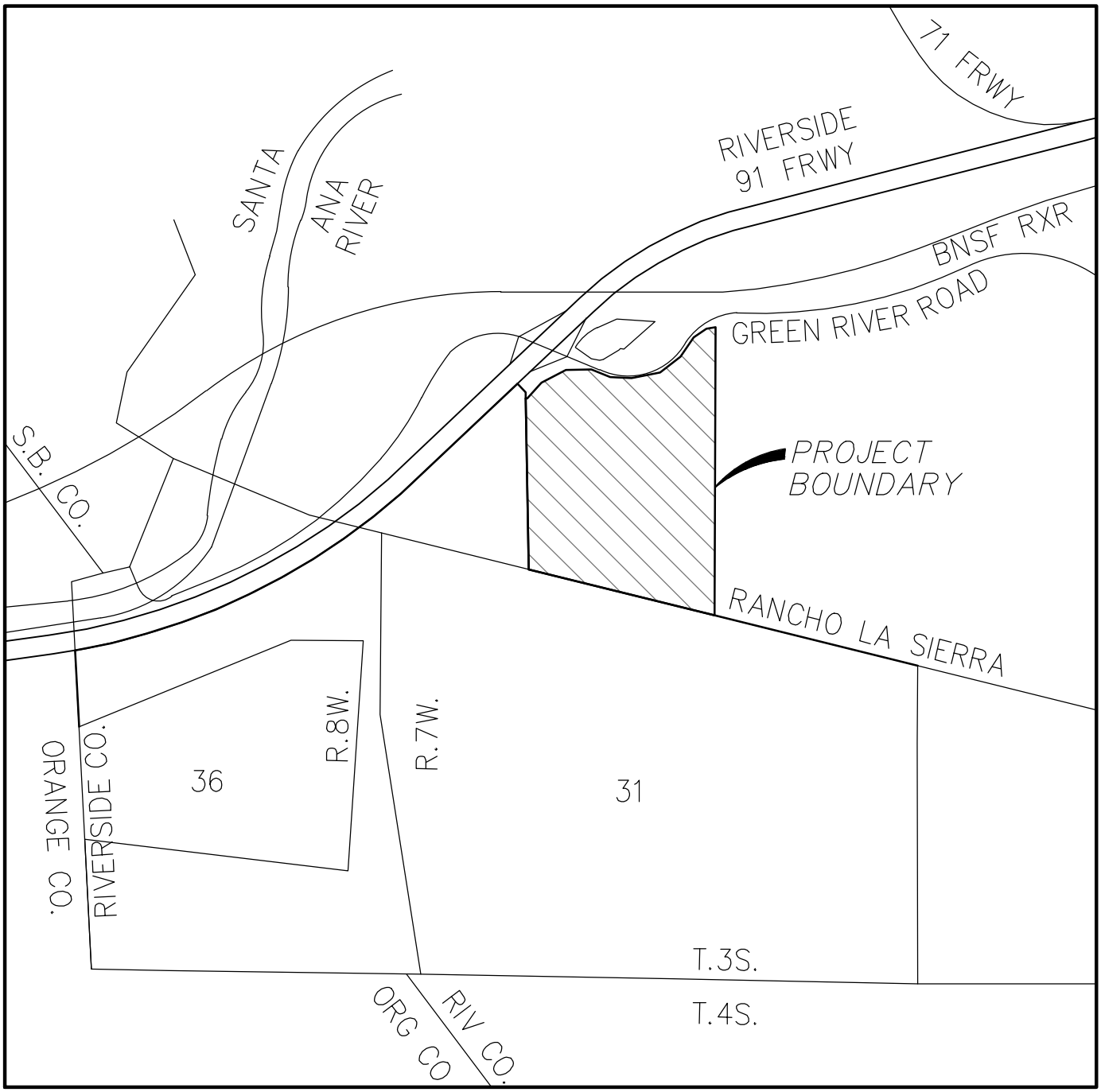
The Project is within the Green River Ranch Specific Plan, bounded to the north by Green River Road and the 91 freeway. The Project is bounded on the south by hillside, and to the west and east by vacant land. The site consists of sparsely vegetated and otherwise undeveloped land with the exception of some dirt roads. The site is characterized by relatively flat topography on the north end of the site with hillside on the south end of the site which introduces offsite flow into the site. Small ravines are present which convey the natural drainage through the project site.

The proposed development plan for the Project consists of five industrial buildings that are 80,320 square feet (SF), 93,868 SF, 124,693 SF, 125,521 SF, and 284,698 SF within the business industrial designation. Only a portion of the site will be graded for development based on the tentative map provided in **Appendix B** for reference. In addition, this study includes the analysis for the future 5.5 acre general commercial parcel north of Green River Road and the 89 acres of Estate Residential situated on the southern portion of the property.

1.3 RELATED STUDIES

The City of Corona Water Master Plan, prepared by AKM Consulting Engineers in September 2005, provides a regional study identifying existing and future proposed water supply, storage,

and transmission facilities within the City's ultimate service area. The study also presents design criteria to be utilized in evaluating water supply, system pressures, pipeline velocities, fire flow criteria, storage volumes, and pump capacities. The report also provides information on the City's planning and evaluation criteria that can be utilized to determine projected water demands.



LOCATION MAP

NOT TO SCALE

KWC ENGINEERS
CIVIL ENGINEERS ● PLANNERS ● SURVEYORS
1880 COMPTON AVENUE, SUITE 100 ● CORONA, CA. 92881-3370 ● 951-734-2130

FIGURE 1-1

R:\19\1886\PRELIM\REPORTS\WAT\FIGURES\FIGURE 1-1 LOCATION MAP.dwg 02/05/2020 09:54

FIGURE 1-2

VICINITY MAP

KWC ENGINEERS

R:\19\1886\PRELIM\REPORTS\WAT\FIGURES\FIGURE 1-2 VICINITY MAP.dwg 11/15/2021 17:28

Section

2
DESIGN CRITERIA

This section presents the design criteria used to evaluate recommended water system improvements required for Green River Ranch. The criteria utilized in this study are in accordance with the City of Corona 2005 Water Master Plan, and the 2012 Department of Water and Power Design Policy.

2.1.1 WATER DUTY FACTORS

The water duty factors used in projecting average day water demands for the project are based on 1,500 gpd/ac for Business Industrial, 1,610 gpd/ac for Commercial, 1,200 gpd/ac for Estate Residential, and 1,000 gpd/ac for Open Space. As discussed with City DWP staff, this project will not have reclaimed water facilities to connect into and therefore will use domestic water to irrigate the proposed landscaped areas within the project site.

2.1.2 PEAKING FACTORS

Per the 2012 DWP Design Policy, the maximum day demand (MDD) Peaking Factor is 1.8 times the average day demand (ADD). Factors for peak hour demand (PHD) vary by pressure zone and are influenced by demographics and the magnitude of demand within each zone. Per the Water Master plan, Zone 5 has a Peak Hour factor 1.67.

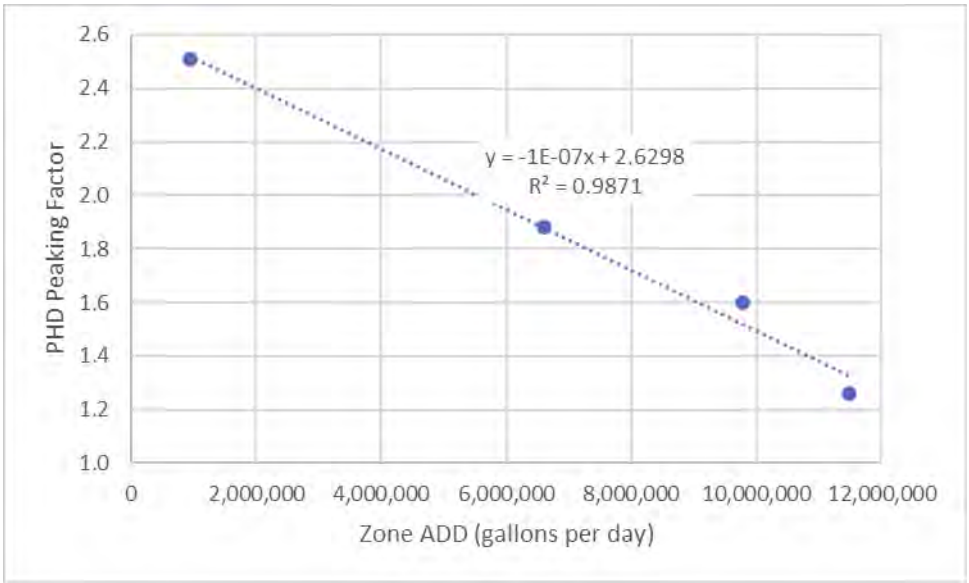
Four existing pressure zones (2, 3, 4 and 6) have demographics similar to the proposed development (i.e. predominantly residential). Per the water master plan, ADD and PHD Peaking Factors for these pressure zones are provided in **Table 2-1.**

Table 2-1 – Peak Hour Demand Summary

Zone	ADD (gpd)	PHD PF
2	11,486,090	1.26
3	9,773,810	1.60
4	6,602,020	1.88
6	944,220	2.51

A plot of ADD vs PHD Peaking Factor results in the curve shown in **Figure 2-2.**

Figure 2-2 – ADD vs PHD Peaking Factor



The curve in Figure 2-2 can be described using the following equation:

$$PHD\ Peaking\ Factor = 2.63 - 1.135x10^{-7}ADD$$

The Water Master Plan establishes PHD peaking factors per zone, but states that they are a factor of ADD. After reviewing the factors provided, it is clear that the peak hour factor should be multiplied by MDD to get the PHD. The reason for this being that the PHD factors provided are often lower than the MDD factor of 1.80. If the PHD were to occur on or near the MDD, it would be expected that the PHD peaking factor would be greater than 1.80 times the ADD. Therefore, the peak hour demand will be calculated using the following equation:

Peak Hour Demand = PHD Peaking factor x MDD
Or
Peak Hour Demand = PHD Peaking Factor x (1.80 ADD)

The Zone 1B PHD is calculated as follows:

Zone 1B PHD** = 2.25 x (1.80 ADD) = **4.05 ADD

2.2 PLANNING CRITERIA

The planning criteria are used to evaluate the proposed water system to ensure that adequate service is provided under all demand scenarios considered. A list of planning criteria used in the evaluation of this project is shown in **Table 2-2.**

TABLE 2-2

PLANNING CRITERIA		
Description	**Value**	**Unit**
Peaking Factor MDD	1.80 x ADD	unitless
Peaking Factor PHD in Zone 1B	4.05 x ADD	unitless
Maximum Pressure	120	psi
Minimum Residual Pressure		
Average Day	50	psi
Maximum Day and Peak Hour	40	psi
MDD + Fire Flow	20	psi
Static Pressure Requiring Pressure Regulators	80	psi
Maximum Pipeline Velocity		
Average Day Analysis	5	fps
Maximum Day and Peak Hour Analysis	7	fps
Fire Flow Analysis	12	fps
Fire Fighting Capabilities		
Single Family Residential – 2 hours duration	1,500	gpm
Commercial / Industrial / Mixed Use – 4 hours duration	3,500	gpm
Operational Reservoir Storage Volume	0.5 MDD	-
Fire Suppression Storage Volume	100% Fire Flow Demand	-
Terminal Storage Volume	10% Reservoir Storage Volume	-

2.3 SYSTEM PRESSURES

The water distribution system has been designed to maintain static pressures between 60 psi and 120 psi when possible. This criteria is used to initially divide a project between water service zones. **Appendix C** presents relevant pages from the City's 2011 Water System Atlas, which illustrates the general pressure zone boundaries within the City's service area. The proposed project area is within pressure zones 1B and 2. **Figure 2-1** presents a Proposed Water System Pressure Zone Map, which identifies the proposed pressure zone boundaries for Green River Ranch.

Head loss in water lines is calculated using the Hazen-Williams equation with a "C" value of 110 for analysis of new pipes less than 24-inch in diameter. Computer modeling is performed to ensure that adequate residual pressures are obtained under all demand conditions. The system has been designed to yield minimum residual pressures of approximately 50 psi and 40 psi during maximum day and peak hour demands, respectively, and a minimum of 20 psi during

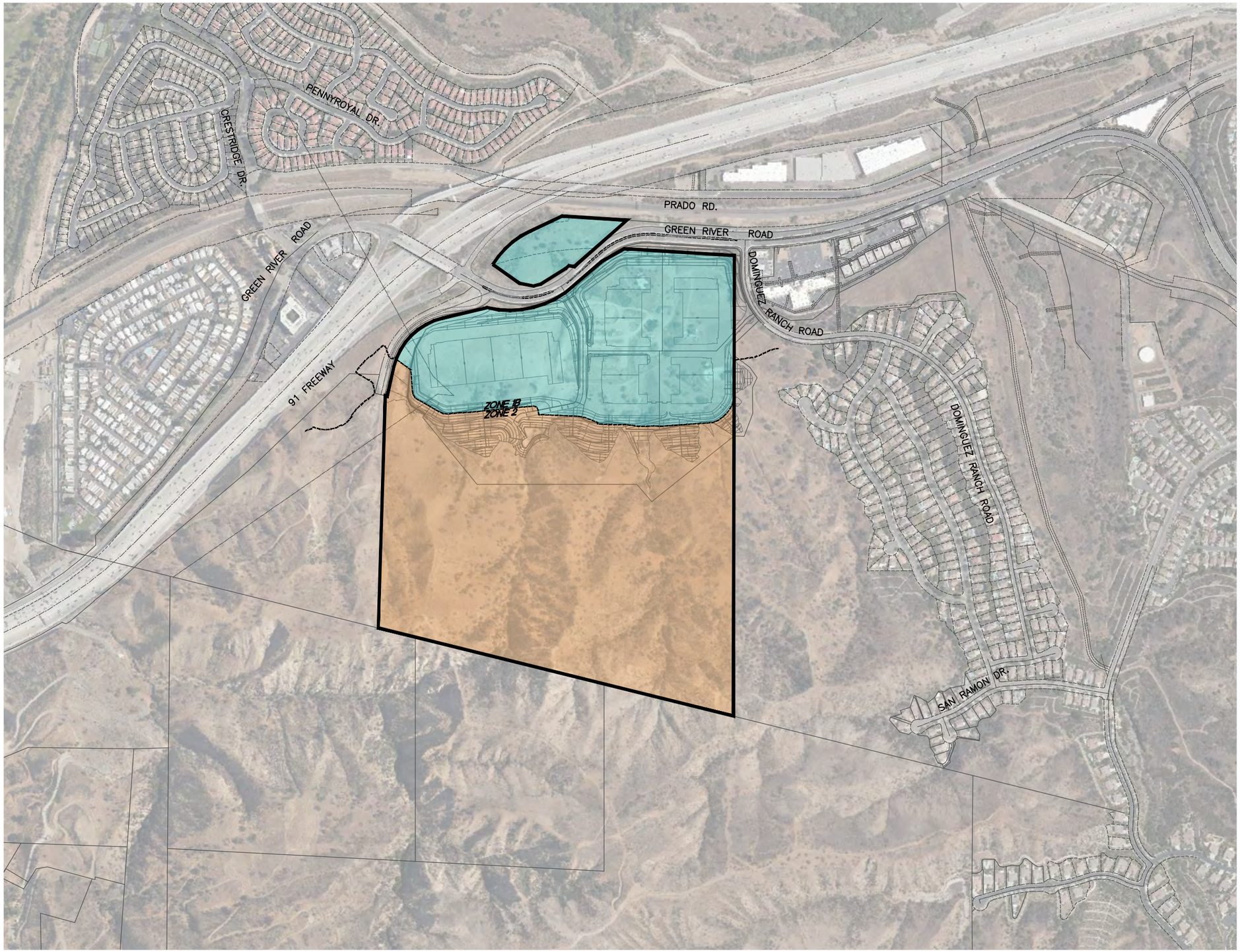
maximum day demand plus fire flow conditions. Only locations where customers are served need to meet such pressure requirements.

2.4 PIPELINE VELOCITIES

Distribution pipelines are designed for a maximum velocity of 5 fps for the ADD non-fire scenarios. The maximum velocity can increase to 7 fps for Maximum Day and Peak Hour non-fire scenarios. For fire flow scenarios, the pipe shall not exceed a maximum velocity of 12 fps.

2.5 STORAGE VOLUMES

The total required volume of storage in a water system consists of water for operational storage, fire flow storage and terminal storage. As per the 2005 Water Master Plan, the project's operational storage and terminal storage is required to be equivalent to 50 percent of the maximum day demand and 10 percent of the reservoir storage volume, respectively. Fire flow and duration requirements were assumed to be 1,500 gpm for 2-hour duration, or 0.18 MG, for single family residential developments and 3,500 gpm for 4-hour duration, or 0.84 MG, for commercial/industrial developments**.** Water reservoir storage requirements are evaluated on a zone-by-zone basis.



LEGEND

PRESSURE ZONE 1B

PRESSURE ZONE 2

N

700' 0 700'

SCALE

GREEN RIVER RANCH

FIGURE 2-1

PARCEL MAP NO. _____

PRESSURE ZONE MAP

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R:\19\1886\PRELIM\REPORTS\WAT\FIGURES\FIGURE 2-1 PRESSURE ZONE MAP.dwg 07/29/2021 10:43

Section

3

EXISTING AND PROPOSED WATER SYSTEM FACILITIES

This section discusses the existing and proposed master plan water facilities as identified in the City of Corona 2005 Water Master Plan report.

3.1 EXISTING FACILITIES

The proposed Green River Ranch project is located in the hills adjacent to the Cleveland National Forest and Green River Road in the City of Corona. The project is in the City's northwestern water service area. The existing water facilities in the vicinity of the project are located within the Zone 1B pressure system in Green River Road to the north and Zones 2 through 4 pressure systems within the existing public and gated communities to the east. **Figure 3-1** provides the existing water facilities in the vicinity of the project.

There is an existing 1.5 MG Zone 1B reservoir located east of the project. This reservoir supplies the 16-inch Zone 1B line in Green River Road and Zone 1B lines north and west of the Project. The Zone 2 system in the area is located east of the project. Zone 2 water lines are located within Kraft Ranch and supplied from Zone 3/Zone 2 pressure reducing stations. A Zone 2/Zone 1B pressure reducing station is located at the intersection of Dominguez Ranch Road and Green River Road. This pressure reducing station is normally closed but will open if a large demand condition develops within Zone 1B.

3.2 PROPOSED FACILITIES

Figure 3-2 provides the Proposed Water Facilities Plan, which illustrates the proposed public and private water facility improvements and their relative sizes based on the water system model results. The proposed project will construct water facilities in Zone 1B (725' HWL) and Zone 2 (905' HWL) to supply the necessary system pressures for the development. These water facilities include a proposed network of 12-inch public water mains looped within the project site with one point of connection to the City's existing 16-inch Zone 1B water line in Green River Road and one point of connection to an existing 10-inch Zone 2 water system in Dominguez Ranch Road. A pressure reducing station will be proposed where the Zone 2 line is connected with the Zone 1B line near the project entry road and future residential access. Proposed buildings will construct domestic water service connections from the public water main in the main entry road. Looped 12-inch private fire water lines will also be connected to the public water main for each building complex as shown on the proposed water facilities plan.

The undeveloped area in the southern portion of the site is proposed for future Estate Residential development consisting of 32 residential lots as part of Green River Ranch Specific Plan. Two proposed 12-inch public water mains are proposed to serve this future development area. These

lines will be fed from the existing Zone 2 water line in Dominguez Ranch Road. The first line is proposed as part of Green River Ranch Business Park project and the second line will be constructed when required to serve the future estate residential lots.

GREEN RIVER RANCH BUSINESS PARK
EXISTING WATER FACILITIES PLAN

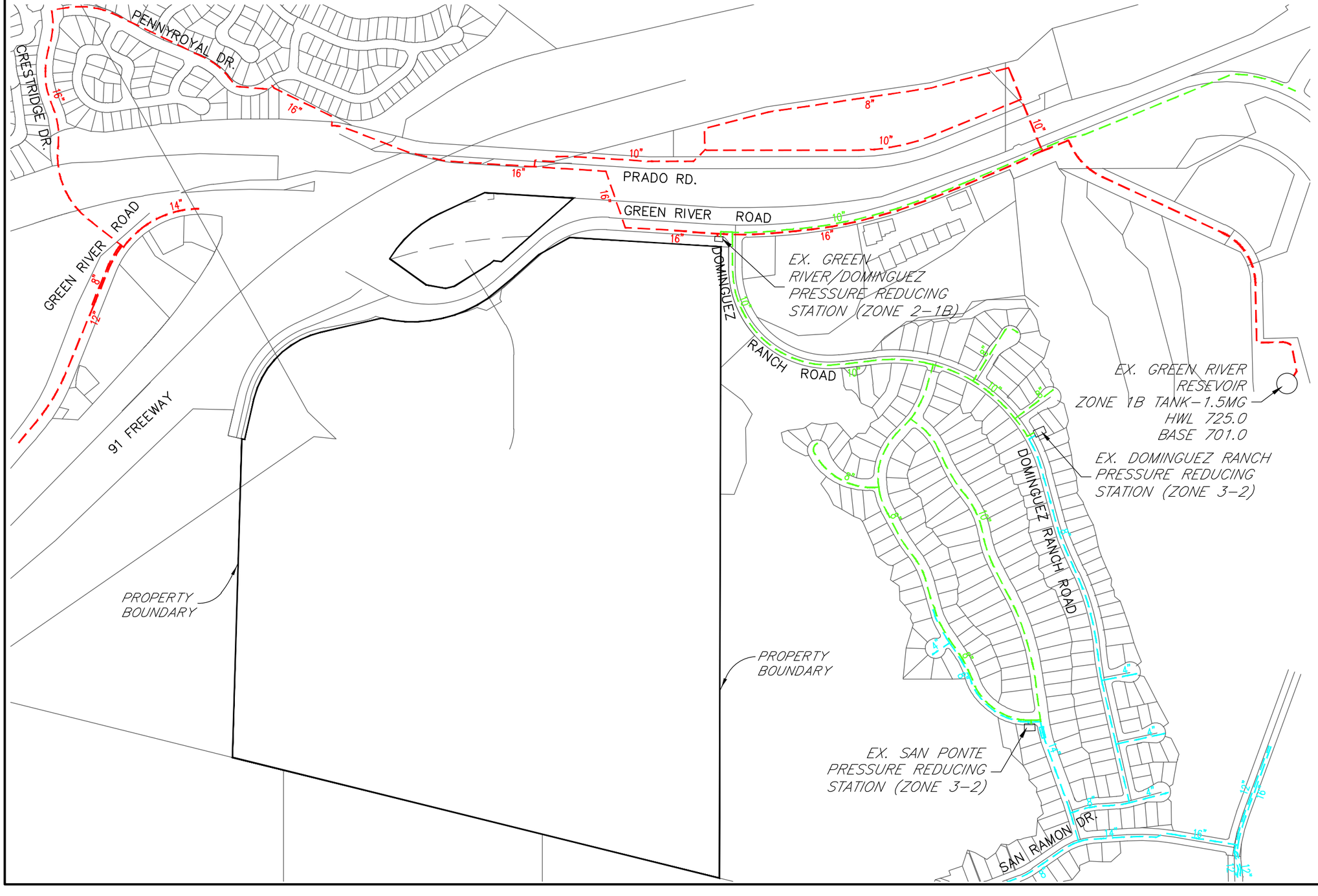

FIGURE 3-1

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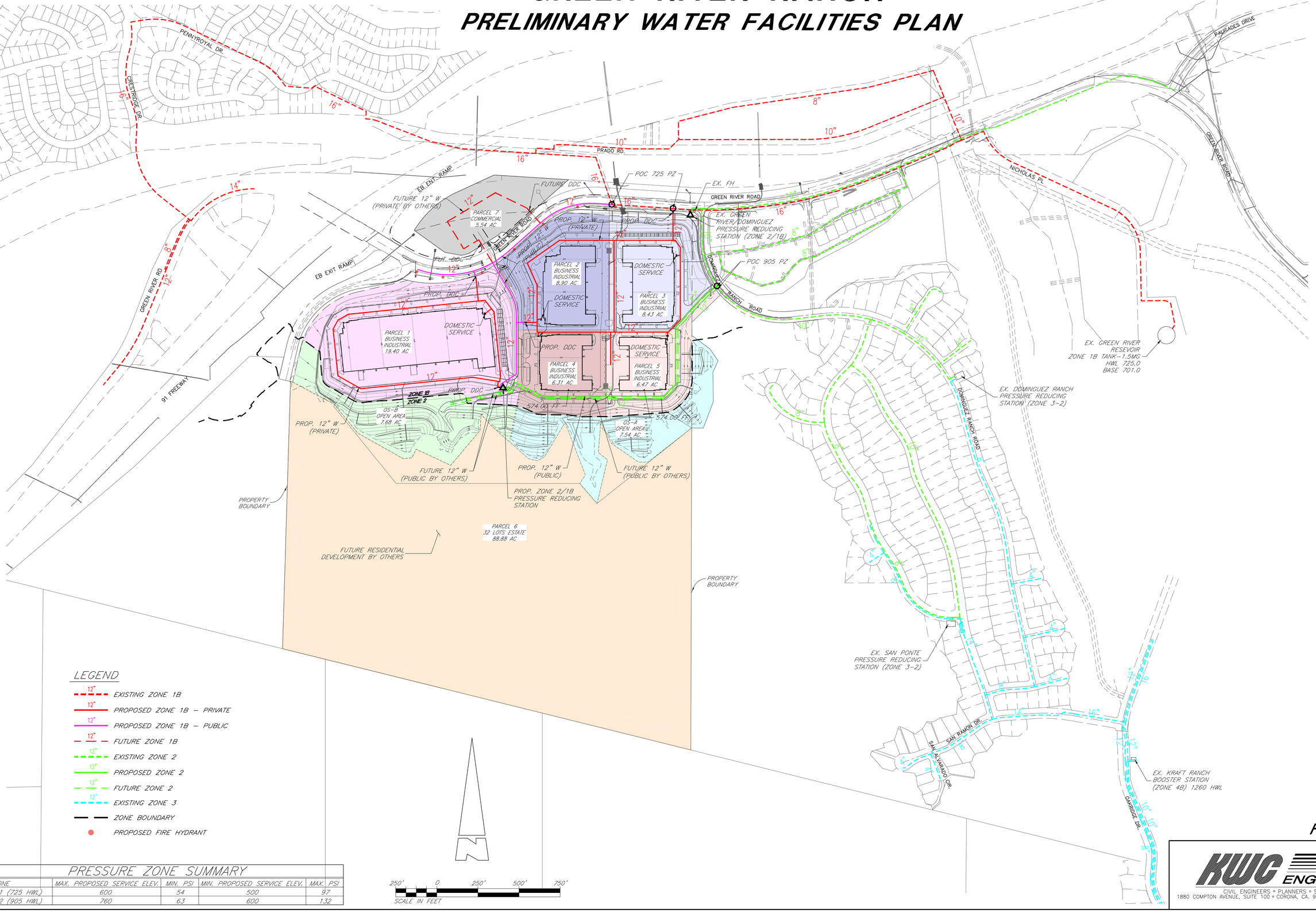
GREEN RIVER RANCH

PRELIMINARY WATER FACILITIES PLAN



LEGEND

- EXISTING ZONE 1B
- PROPOSED ZONE 1B – PRIVATE
- PROPOSED ZONE 1B – PUBLIC
- FUTURE ZONE 1B
- EXISTING ZONE 2
- PROPOSED ZONE 2
- FUTURE ZONE 2
- EXISTING ZONE 3
- ZONE BOUNDARY
- PROPOSED FIRE HYDRANT

PRESSURE ZONE SUMMARY

ZONE	MAX. PROPOSED SERVICE ELEV.	MIN. PSI	MIN. PROPOSED SERVICE ELEV.	MAX. PSI
ZONE 1 (725 HWL)	600	54	500	97
ZONE 2 (905 HWL)	760	63	600	132

250' 0 250' 500' 750'

SCALE IN FEET

FIGURE 3-2

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R:\19\1886\PRELIM\REPORTS\WAT\FIGURES\FIGURE 3-2 PROPOSED.dwg 11/15/2021 12:03

Section

4

WATER DEMANDS AND SIZING OF FACILITIES

This section provides the projected water demand for the project and Green River Ranch Specific Plan area and presents the recommended pipe sizes.

4.1 PROJECTED WATER DEMANDS

The water duty factors used in projecting water demands for the project were presented in **Section 2**. These factors were used to determine the average day demands for the project.

Table 4-1 summarizes the projected average day, maximum day, and peak hour demands for the Project. **Appendix D** provides the land use zoning for the area and **Appendix E** provides a more detailed water demand breakdown.

TABLE 4-1

Water Demand Summary

Tributary Area Designation	Area (acres)	Water Duty Factor (gpd/ac)	Average Day Demand (gpm)	Maximum Day Demand (gpm)	Peak Hour Demand (gpm)
Parcel 2 (Business Industrial)	8.90	1,500	9.27	16.68	37.54
Parcel 3 (Business Industrial)	8.43	1,500	8.78	15.81	35.57
Parcel 4 & 5 (Business Industrial)	12.78	1,500	13.32	23.97	53.93
Parcel 1 (Business Industrial)	19.40	1,500	20.21	36.38	81.85
Open Area A (Open Space)	7.54	1,000	5.24	9.43	11.88
Open Area B (Open Space)	7.68	1,000	5.34	9.61	12.10
Parcel 7 (Gen. Commercial)	5.54	1,610	6.20	11.16	25.10
Parcel 6 (Estate Res.)	88.88	1,200	74.07	133.32	167.98
Total	**159.16**		**142.41**	**256.35**	**425.95**

4.2 WATER SYSTEM MODEL & RESULTS

The analysis performed to determine the recommended onsite water system for Green River Ranch consists of computer modeling that utilizes the Innovyze InfoWater 12.4 program Hydraulic Modeling Software. The solution to the computer model is based upon the design criteria as provided in Section 2. A model was created to analyze the proposed water system conditions and numerous demand conditions were calculated to determine the proposed system pressures and recommended line sizes within each of the proposed service zones. A summary of the demand conditions modeled are as follows:

1) Average Day Demand
2) Maximum Day Demand
3) Peak Hour Demand
4) Maximum Day Demand plus 1,500 gpm fire flow at Node FFJ140
5) Maximum Day Demand plus 3,500 gpm fire flow at Node FFJ160
6) Maximum Day Demand plus 3,500 gpm fire flow at Node FFJ202
7) Maximum Day Demand plus 3,500 gpm fire flow at Node FFJ220

Note: Critical fire flow model nodes are chosen based on highest elevation and farthest distance from supply source.

Fire flow modeling was obtained near the intersection of Dominguez Ranch Road and Green River Road and is included in **Appendix F** for reference. These results were used to establish the settings for the Zone 2/Zone 1B pressure reducing station at this location. In the hydraulic model, this station was set to remain closed during non-fire flow scenarios but will open during a fire flow scenario to supplement the supply to Zone 1B.

The proposed private water lines within the business industrial and commercial parcels were included in the hydraulic model. To simulate losses through the backflow preventers at these sites, a valve was included in the model with a head loss curve that approximates the losses through these devices at various flow rates. A typical double check detector assembly (DCDA) with head loss curve has been included in **Appendix E** for reference.

4.3 GREEN RIVER RANCH SPECIFIC PLAN AMENDMENT

As proposed by the Green River Ranch Specific Plan Amendment, the property was planned for business industrial area, commercial area, and some estate residential development. Business industrial and commercial connections to the water system will be made to the existing Zone 1B pipeline in Green River Road while water demands for the proposed 32 estate residential lots in Green River Ranch will be served by the existing Zone 2 system in Dominguez Ranch Road.

Table 4-2 summarizes the anticipated static pressures within each pressure zone. The results of the computer analysis are provided in **Appendix F** and indicate that the recommended piping has been sized to adequately serve the project. Residual pressures in excess of 20 psi are obtained during all maximum day demand plus fire flow scenarios. The proposed pipeline velocities are below the 5 fps requirement during the average day scenario and below 7 fps during maximum

day and peak hour demand scenarios. In addition, the velocities in the lines do not exceed 12 fps during a maximum day demand plus fire flow condition. The proposed piping in these planning areas will consist of 12-inch distribution line.

TABLE 4-2

Water Service Zone Static Pressure Summary				
	Building Pad Elevation (ft)		Static Pressure 100% Tank Level (psi)	
Water Zone ID	Min	Max	Min.	Max.
Green River Ranch				
Zone 1B (725' HWL)	500	581	62	97
Zone 2 (905' HWL)	600	760	63	132

Section

5
PHASING & CONCLUSIONS

This section discusses the anticipated construction phasing of the proposed water infrastructure needed to support Green River Ranch Business Park project and future development areas identified in the Green River Ranch Specific Plan. It also identifies and summarizes the water infrastructure required.

5.1 PROJECT PHASING

The domestic water infrastructure facilities will be constructed in two phases based on the needs of the project site. Two independent sources of water will be provided to each zone as required by the City of Corona DWP.

Proposed Project Infrastructure Improvements by Phase

- Phase 1 –
    - Construction of approximately 1,900 feet of offsite distribution water pipelines on Green River Road and Fresno Road to supply the Zone 1B Green River Ranch site. Construction of approximately 820 feet of Zone 1B public onsite water distribution pipelines in main entry road and necessary pressure reducing station.
    - Public fire hydrants will be added along Green River Road
    - Construction of 6,800 feet onsite network of private looped fire lines around buildings 1 through 5
    - Construction of approximately 1,820 feet of Zone 2 public onsite water distribution pipeline to serve landscape slope to the south and provide secondary point source to Zone 1B.
- Phase 2 (by others)
    - Future construction of approximately 2,500 feet of public onsite distribution water pipelines to Parcel 6 estate residential in Zone 2.
    - Future construction of approximately 1,100 feet of private onsite fire water pipelines for Parcel 7 in Zone 1B.

5.2 CONCLUSIONS

The development of Green River Ranch Business Park will require the following Water Infrastructure to be constructed for the build-out condition:

Proposed Project Infrastructure Improvements

- Construction of a proposed onsite and offsite 12-inch public distribution pipeline approximately 7,040 feet in length, including public fire hydrants along Green River Road.

- Construction of proposed onsite 12-inch private fire water distribution pipelines with a combined length of approximately 7,900 feet in length.

These proposed water infrastructure facilities with respect to their proximate locations, alignments, and sizes are consistent with the City's 2005 Water Master Plan and related water system studies in the City's service area. The proposed project onsite water facilities presented in this report are preliminary estimates of the anticipated water facilities necessary to service the project needs. A detailed water facilities report shall be prepared during final design to confirm actual required sizes of pipelines, valving, pumps, and other related appurtenances.

A
REFERENCES

City of Corona General Plan – Land Use and Zoning Map, City of Corona, adopted in December 6, 1993, maps updated in June 2010.

City of Corona Water Master Plan, AKM Consulting Engineers, September 2005.

City of Corona Department of Water and Power Design Policy, November 2012.

Appendix

B

GREEN RIVER RANCH BUSINESS PARK TENTATIVE MAP

DPR 2019-0029

GREEN RIVER RANCH BUSINESS PARK
TENTATIVE TRACT MAP NO. 37963
PRECISE PLAN

IN THE CITY OF CORONA, COUNTY OF RIVERSIDE
JULY 2020

LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF CORONA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

THAT PORTION OF RANCHO LA SIERRA YORBA, SET APART AND ALLOTTED TO JOHN J. SCULLY IN THE DECREE OF PARTITION IN THE CASE OF CHAVES, ET AL., VS. SCULLY, ET AL., ACTION NO. 7939 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF WHICH APPEARS OF RECORD IN BOOK 637, PAGE 432 OF DEEDS, RIVERSIDE COUNTY RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT STATION NO. 1 AT THE SOUTHWEST CORNER OF TRACT "C" ON SAID MAP; THENCE NORTH 1,813.60 FEET TO STATION NO. 2; THENCE NORTH 43°20-3/4'00" WEST, 137.40 FEET TO STATION NO. 3; THENCE EAST, 1,030.00 FEET TO STATION NO. 4; THENCE SOUTH 2,147.40 FEET TO STATION NO. 5; THENCE NORTH 76°39'00" WEST, 964.30 FEET TO THE POINT OF BEGINNING, SAID PARCEL BEING A PORTION OF TRACT "C" AS SHOWN ON SAID MAP.

EXCEPT ANY PORTION WITHIN THE LAND CONVEYED TO THE STATE OF CALIFORNIA FOR FREEWAY PURPOSES BY DEED RECORDED FEBRUARY 04, 1969 AS INSTRUMENT NO. 10880 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION AS DESCRIBED IN FINAL ORDER OF CONDEMNATION, CASE NO. RIC445638, RECORDED JANUARY 29, 2009 AS INSTRUMENT NO. 2009-0042968 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

ALSO EXCEPTING ANY MOBILE HOMES ON SAID LAND.

APN: 101-180-014-8

PARCEL 2:

THAT PORTION OF RANCHO LA SIERRA YORBA, SET APART AND ALLOTTED TO JOHN J. SCULLY IN THE DECREE OF PARTITION IN THE CASE OF CHAVES, ET AL., VS. SCULLY, ET AL., ACTION NO. 7939 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF WHICH APPEARS OF RECORD IN BOOK 637, PAGE 432 OF DEEDS, RIVERSIDE COUNTY RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT STATION NO. 1 AT THE SOUTHWEST CORNER OF TRACT "D" ON SAID MAP; THENCE NORTH 3,247.40 FEET TO THE SOUTHERLY LINE OF THE COUNTY HIGHWAY AS GRANTED TO THE COUNTY OF RIVERSIDE BY FINAL ORDER OF CONDEMNATION IN ACTION NO. 7448 IN SAID COURT, A CERTIFIED COPY OF WHICH ORDER APPEARS OF RECORD IN BOOK 433, PAGE 180 OF DEEDS, RIVERSIDE COUNTY RECORDS; THENCE EAST ALONG THE SOUTHERLY LINE OF SAID HIGHWAY 1,499.00 FEET TO STATION NO. 3; THENCE SOUTH 3,630.00 FEET TO STATION NO. 4; THENCE NORTH 76°39'00" WEST, 1,534.60 FEET TO THE POINT OF BEGINNING, SAID PARCEL BEING DESIGNATED AS TRACT "D" ON SAID MAP.

EXCEPTING THEREFROM THAT PORTION LYING WITHIN THAT PORTION CONDEMNED BY THE STATE OF CALIFORNIA FOR A STATE HIGHWAY IN ACTION NO. 31106 IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF FINAL ORDER OF CONDEMNATION BEING RECORDED OCTOBER 01, 1941 IN BOOK 518, PAGE 227, AND IN BOOK 519, PAGE 12, RESPECTIVELY OF OFFICIAL RECORDS, RIVERSIDE COUNTY RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION LYING WITHIN THAT PORTION CONDEMNED BY ORANGE COUNTY FLOOD CONTROL DISTRICT IN ACTION NO. 31309 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF FINAL ORDER OF CONDEMNATION BEING RECORDED JUNE 10, 1941 IN BOOK 508, PAGE 94 OF OFFICIAL RECORDS, RIVERSIDE COUNTY.

ALSO EXCEPTING THEREFROM ANY PORTION WITHIN THE LAND CONVEYED TO THE STATE OF CALIFORNIA FOR FREEWAY PURPOSES BY DEED RECORDED FEBRUARY 04, 1969 AS INSTRUMENT NO. 10880 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION LYING WITHIN THE FOLLOWING:

COMMENCING AT THE SOUTHWESTERLY TERMINUS OF SAID COURSE "B" AS DESCRIBED IN THE DEED RECORDED FEBRUARY 04, 1969 AS INSTRUMENT NO. 10880 OF OFFICIAL RECORDS; THENCE ALONG SAID COURSE "B", NORTH 48°26'24" EAST 90.46 FEET; THENCE AT RIGHT ANGLES, NORTH 41°33'36" WEST, 100.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 81°21'55" WEST 39.05 FEET TO A LINE PARALLEL WITH AND DISTANT 130 FEET, MEASURED AT RIGHT ANGLES, FROM SAID COURSE "B"; THENCE ALONG SAID PARALLEL LINE, SOUTH 48°26'24" WEST, 71.99 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE NORTHERLY AND HAVING A RADIUS OF 400 FEET; THENCE WESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 79°55'16", AN ARC DISTANCE OF 557.96 FEET; THENCE COURSE "C" NORTHEASTERLY ALONG A 600-FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY FROM A TANGENT BEARING NORTH 23°32'39" EAST, THROUGH A CENTRAL ANGLE OF 41°31'23" AN ARC DISTANCE OF 434.82 FEET; THENCE COURSE "D", NORTH 65°04'02" EAST 248.32 FEET TO THE SOUTHERLY LINE OF SAID LAND CONDEMNED BY THE ORANGE COUNTY FLOOD CONTROL DISTRICT IN SAID ACTION NO. 31309; THENCE EASTERLY ALONG LAST SAID SOUTHERLY LINE TO A LINE BEARING NORTH 48°40'29" EAST FROM SAID TRUE POINT OF BEGINNING; THENCE SOUTH 48°40'29" WEST 490.55 FEET, MORE OR LESS, TO SAID TRUE POINT OF BEGINNING.

ALSO EXCEPTING THEREFROM THAT PORTION AS DESCRIBED IN FINAL ORDER OF CONDEMNATION, CASE NO. RIC445638, RECORDED JANUARY 29, 2009 AS INSTRUMENT NO. 2009-0042968 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

ALSO EXCEPTING ANY MOBILE HOMES ON SAID LAND.

APN: 101-180-037-9; 101-180-038-0

PARCEL 3:

THAT PORTION OF TRACT "C" MARKED "A. B. NO. 5", IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED OF THE PARTITION OF MARIA JESUS Y DE SCULLY ESTATE, FILED IN ACTION NO. 7939 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF WHICH DECREE APPEARS OF RECORD IN BOOK 637, PAGE 432 OF DEEDS, RIVERSIDE COUNTY RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID TRACT "C" MARKED "A. B. NO. 5", AS SHOWN ON SAID MAP, BEING STATION NO. 2 ON SAID MAP; THENCE SOUTHERLY ON THE WESTERLY LINE OF SAID TRACT "C", 1,100.00 FEET TO STATION NO. 1; THENCE EASTERLY, 1,030.00 FEET TO STATION NO. 4; THENCE NORTHERLY ON THE EASTERLY LINE OF SAID TRACT "C", 1,100.00 FEET TO STATION NO. 3, BEING THE SOUTHERLY LINE OF COUNTY ROAD AS SHOWN ON SAID MAP; THENCE WESTERLY ON SOUTHERLY LINE OF SAID COUNTY ROAD, BEING THE NORTHERLY LINE OF SAID TRACT "C", 1,030.00 FEET TO THE POINT OF BEGINNING, BEING THE PARCEL OF LAND ALLOTTED TO ADOLFO BOTILLER BY DECREE IN SAID PARTITION ACTION AND AS DESCRIBED IN THE CERTIFIED COPY OF SAID DECREE RECORDED IN BOOK 637, PAGE 432 OF DEEDS, RIVERSIDE COUNTY RECORDS.

EXCEPTING THEREFROM THAT PORTION LYING WITHIN THAT PORTION CONDEMNED BY THE STATE OF CALIFORNIA FOR A STATE HIGHWAY IN ACTION NO. 31106 IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF FINAL ORDER OF CONDEMNATION BEING RECORDED OCTOBER 01, 1941 IN BOOK 518, PAGE 227, AND IN BOOK 519, PAGE 12, RESPECTIVELY OF OFFICIAL RECORDS, RIVERSIDE COUNTY RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION LYING WITHIN THAT PORTION CONDEMNED BY ORANGE COUNTY FLOOD CONTROL DISTRICT IN ACTION NO. 31309 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF FINAL ORDER OF CONDEMNATION BEING RECORDED JUNE 10, 1941 IN BOOK 508, PAGE 94 OF OFFICIAL RECORDS, RIVERSIDE COUNTY.

ALSO EXCEPTING THEREFROM ANY PORTION WITHIN THE LAND CONVEYED TO THE STATE OF CALIFORNIA FOR FREEWAY PURPOSES BY DEED RECORDED FEBRUARY 04, 1969 AS INSTRUMENT NO. 10880 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION LYING WITHIN THE FOLLOWING:

BEING THAT CERTAIN PARCEL EXCEPTED IN THE DEED RECORDED FEBRUARY 04, 1969 AS INSTRUMENT NO. 10880 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWESTERLY TERMINUS OF SAID COURSE "B" AS DESCRIBED IN THE DEED RECORDED FEBRUARY 04, 1969 AS INSTRUMENT NO. 10880 OF OFFICIAL RECORDS; THENCE ALONG SAID COURSE "B", NORTH 48°26'24" EAST 90.46 FEET; THENCE AT RIGHT ANGLES, NORTH 41°33'36" WEST, 100.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 81°21'55" WEST 39.05 FEET TO A LINE PARALLEL WITH AND DISTANT 130 FEET, MEASURED AT RIGHT ANGLES, FROM SAID COURSE "B"; THENCE ALONG SAID PARALLEL LINE, SOUTH 48°26'24" WEST, 71.99 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE NORTHERLY AND HAVING A RADIUS OF 400 FEET; THENCE WESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 79°55'16", AN ARC DISTANCE OF 557.96 FEET; THENCE COURSE "C" NORTHEASTERLY ALONG A 600-FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY FROM A TANGENT BEARING NORTH 23°32'39" EAST, THROUGH A CENTRAL ANGLE OF 41°31'23" AN ARC DISTANCE OF 434.82 FEET; THENCE COURSE "D", NORTH 65°04'02" EAST 248.32 FEET TO THE SOUTHERLY LINE OF SAID LAND CONDEMNED BY THE ORANGE COUNTY FLOOD CONTROL DISTRICT IN SAID ACTION NO. 31309; THENCE EASTERLY ALONG LAST SAID SOUTHERLY LINE TO A LINE BEARING NORTH 48°40'29" EAST FROM SAID TRUE POINT OF BEGINNING; THENCE SOUTH 48°40'29" WEST 490.55 FEET, MORE OR LESS, TO SAID TRUE POINT OF BEGINNING

ALSO EXCEPTING THEREFROM THAT PORTION AS DESCRIBED IN FINAL ORDER OF CONDEMNATION, CASE NO. RIC445638, RECORDED JANUARY 29, 2009 AS INSTRUMENT NO. 2009-0042968 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

ALSO EXCEPTING ANY MOBILE HOMES ON SAID LAND.

APN: 101-180-015-9

NUMBERED LOTS:

LOT NUMBER	PROPOSED GROSS AREA	LAND USE
1	17.35 AC	PRIVATE LOT
2	8.43 AC	PRIVATE LOT
3	8.42 AC	PRIVATE LOT
4	6.13 AC	PRIVATE LOT
5	8.29 AC	PRIVATE LOT
6	83.52 AC	OPEN SPACE
7	20.42 AC	FUTURE RESIDENTIAL
LOT "A"	1.23 AC	PRIVATE STREET

STREET LOTS:

STREET NAME	℄ LENGTH	REMARKS
"A" (PRIVATE)	750 L.F.	FULL

NOTES:
LETTERED LOTS ARE TO BE MAINTAINED BY PROPERTY OWNER ASSOCIATION UNLESS OTHERWISE ACCOUNTED FOR.

PROJECT TOTALS

	SF	ACRES
TOTAL PROJECT AREA	6,691,216	153.61
TOTAL AREA DISTURBED	2,623,136	60.22
TOTAL AREA TO REMAIN NATURAL	4,068,080	93.39

TOTAL SITE ESTIMATED CUT/FILL VOLUMES

CUT VOLUME (RAW)	1,267,300 CY
FILL VOLUME (RAW)	1,120,300 CY
NET TOTAL (UNADJUSTED)	147,000 CY (CUT)

NOTES:
1) EARTHWORK VOLUMES ARE ESTIMATED BASED ON-SITE AND OFFSITE GRADING BOUNDARIES.
2) EARTHWORK VOLUMES BASED ON COMPARISON TO EXISTING TOPO DATED MAY, 2019

EASEMENTS:

PLOTTABLE EASEMENTS ARE SHOWN FROM AN OWNER-SUPPLIED TITLE REPORT INDICATED BY A "⬡"; NON-PLOTTABLE EASEMENTS ARE INDICATED BY "□" ALL WITHIN THE "EXCEPTION" ITEMS OF THE TITLE REPORT.

[2] A RIGHT OF WAY OVER AND THROUGH THE LAND HEREIN DESCRIBED FOR THE CONSTRUCTION OF SUCH MINOR DITCHES AS MAY BE NECESSARY AND CONVENIENT FOR THE PURPOSE OF CONDUCTING WATER FROM THE MAIN DITCH TO ANY PART OF THE ALLOTMENTS MADE BY DECREE OF PARTITION HEREBY MENTIONED LYING BELOW SAID LAND, FOR THE IRRIGATION OF SUCH ALLOTMENTS, TOGETHER WITH THE RIGHT TO CONSTRUCT AND FOREVER MAINTAIN SUCH MINOR DITCHES, AS SET OUT IN DECREE OF PARTITION RECORDED JULY 16, 1878 IN BOOK U, PAGE(S) 239 OF DEEDS, RECORDS OF SAN BERNARDINO COUNTY.
TO REMAIN

[3] AN EASEMENT FOR PUBLIC UTILITIES PURPOSES, IN FAVOR OF THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY, RECORDED JULY 26, 1912 IN BOOK 356, PAGE 229 OF DEEDS.
TO REMAIN

⟨5⟩ THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY DOCUMENT RECORDED SEPTEMBER 28, 1950 AS INSTRUMENT NO. 3603 OF O.R.
TO REMAIN

⟨6⟩ THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY DOCUMENT RECORDED FEBRUARY 04, 1969 AS INSTRUMENT NO. 10880 OF O.R.
TO REMAIN

⟨9⟩ AN EASEMENT FOR STORM DRAIN PURPOSES, IN FAVOR OF THE CITY OF CORONA, RECORDED NOVEMBER 01, 2012 AS INSTRUMENT NO. 2012-0525229 OF O.R.
TO REMAIN

⟨10⟩ AN EASEMENT FOR SLOPE PURPOSES, IN FAVOR OF THE CITY OF CORONA, RECORDED NOVEMBER 01, 2012 AS INSTRUMENT NO. 2012-0525230 OF O.R.
TO REMAIN

[11] AN EASEMENT FOR TELECOMMUNICATIONS PURPOSES, IN FAVOR OF LEVEL 3 COMMUNICATIONS, LLC, RECORDED AUGUST 29, 2013 AS INSTRUMENT NO. 2013-0423943 OF O.R.
TO REMAIN

⟨12⟩ RIGHTS OF THE PUBLIC TO ANY PORTION OF THE LAND LYING WITHIN THE AREA COMMONLY KNOWN AS GREEN RIVER ROAD
TO REMAIN

[13] AN EASEMENT FOR PUBLIC UTILITIES PURPOSES, IN FAVOR OF SPRINT COMMUNICATIONS COMPANY, RECORDED DECEMBER 16, 2013 AS INSTRUMENT NO. 2013-0581753, OF O.R.
TO REMAIN

⟨A⟩ PROPOSED EASEMENT "A" FOR ACCESS & DRAINAGE PURPOSES IN FAVOR OF CITY OF CORONA.

⟨B⟩ PROPOSED EASEMENT "B" FOR ACCESS & DRAINAGE MAINTENANCE PURPOSES IN FAVOR OF PROPERTY OWNER ASSOCIATION (P.O.A.).

⟨C⟩ PROPOSED EASEMENT "C" FOR ACCESS & STORM DRAIN PURPOSES IN FAVOR OF CITY OF CORONA.

⟨D⟩ PROPOSED EASEMENT "D" FOR ACCESS & WATER UTILITY PURPOSES IN FAVOR OF CITY OF CORONA.

⟨E⟩ PROPOSED EASEMENT "E" FOR ACCESS & SEWER UTILITY PURPOSES IN FAVOR OF CITY OF CORONA.

⟨F⟩ PROPOSED EASEMENT "F" FOR ACCESS & PUBLIC UTILITY PURPOSES IN FAVOR OF CITY OF CORONA.

⟨G⟩ PROPOSED EASEMENT "G" FOR ACCESS & SLOPE MAINTENANCE PURPOSES IN FAVOR OF PROPERTY OWNER ASSOCIATION (P.O.A.).

⟨H⟩ PROPOSED EASEMENT "H" FOR MAINTENANCE ACCESS PURPOSES IN FAVOR OF PROPERTY OWNER ASSOCIATION (P.O.A.).

BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS MAP WAS TAKEN FROM A LINE BETWEEN THE CITY OF CORONA GPS POINTS 1183 AND 1165, AND BEING N.29°42'51"W. UNLESS NOTED OTHERWISE ALL DIMENSIONS SHOWN ARE GROUND DISTANCES. TO OBTAIN GRID DISTANCE, MULTIPLY THE GROUND DISTANCE BY A FACTOR OF 0.999974771.

BENCHMARK:

BENCH MARK NO. C-93; ELEVATION: 512.36 MSL; VERTICAL DATUM: NGVD 29. A 2-1/2" BRASS DISK STAMPED "C-93" SET IN THE TOP OF WESTERLY CURB OF DOMINGUEZ ROAD, 25' SOUTHERLY OF THE E.C.R. IN THE SOUTHWEST CORNER OF THE INTERSECTION OF DOMINGUEZ ROAD AND GREEN RIVER ROAD.

ASSESSOR PARCEL NO:

101-180-014-8,
101-180-037-9,
101-180-038-0,
101-180-015-9

LEGEND:

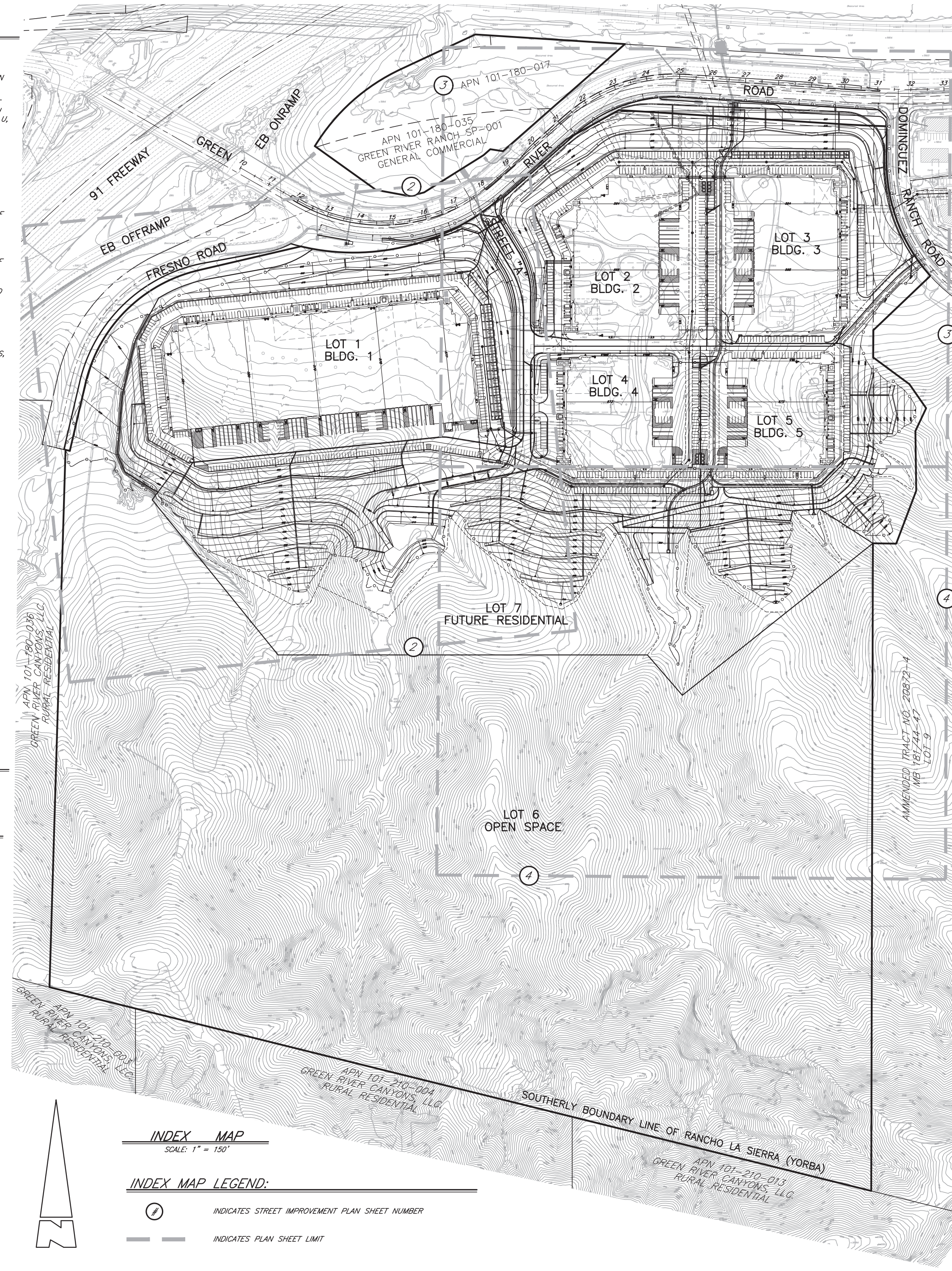
SYMBOLS

○—☼	STREET LIGHT	ICV	IRRIGGATION CONTROL VALVE
☼	LIGHT	IRRG	IRRIGATION
☼ TS	TRAFFIC SIGNAL	N'LY	NORTHERLY
□ CB	CATCH BASIN	PAV	PAVEMENT
□ DI	DROP INLET	P.P.	POWER POLE
○ S	SIGN	PT	POINT
F/H	FIRE HYDRANT	RET	RETAINING
-○- PP	POWER POLE	SW	SIDEWALK
-○- TPP	TEMPORARY POWER POLE	SMH	SEWER MANHOLE
□ M	METER	SD	STORM DRAIN
○	POST	S'LY	SOUTHERLY
○ V	VALVE	W'LY	WESTERLY
B.O.	BLOW OFF	CLF	CHAIN LINK FENCE
A/V	AIR RELEASE VALVE	WIF	WROUGHT IRON FENCE
○ MH	MANHOLE		
□ UB	UTILITY BOX		
○ U/O	UNDEFINED OBJECT ROUND		
□ U/O	UNDEFINED OBJECT SQUARE		
ASPH	ASPHALT		
BLDG	BUILDING		
C&G	CURB & GUTTER		
CL	CENTERLINE		
CONC	CONCRETE		
COR	CORNER		
DWY	DRIVEWAY		
E'LY	E'LY = EASTERLY		
EP	EDGE OF PAVEMENT		
(OH)	OVERHEAD UTILITY		

NOTE: NOT ALL SYMBOLS/ ABBREVIATIONS MAY BE USED.

LINE TYPES

- RIGHT OF WAY/PARCEL LINE
- BOUNDARY
- BUILDING SETBACK
- CENTERLINE
- EASEMENT
- FENCE
- RETAINING WALL
- PROP. CURB AND GUTTER
- PROP. CURB
- PROP. V-GUTTER
- PROP. WATER
- PROP. SEWER
- PROP. STORM DRAIN
- PATH-OF-TRAVEL



INDEX MAP
SCALE: 1" = 150'

INDEX MAP LEGEND:

(#) INDICATES STREET IMPROVEMENT PLAN SHEET NUMBER

INDICATES PLAN SHEET LIMIT

OWNER:

PSIP WR GREEN RIVER, LLC
500 NEWPORT CENTER DR #630
NEWPORT BEACH, CA 92660
(949) 720-0369
CONTACT: JEREMY MAPE

DEVELOPER:

WESTERN REALCO
500 NEWPORT CENTER DR #630
NEWPORT BEACH, CA 92660
(949) 720-0369
CONTACT: JEREMY MAPE

ENGINEER:

KWC ENGINEERS
1880 COMPTON AVENUE
CORONA, CA. 92881-3370
(951) 734-2130
CONTACT: BRANDON M. BARNETT, P.E.

UTILITY NOTES:

WATER:	CITY OF CORONA DEPARTMENT OF WATER AND POWER 815 W. 6th STREET CORONA, CA. 91720 (909) 736-2321
SEWER:	CITY OF CORONA DEPARTMENT OF WATER AND POWER 815 W. 6th STREET CORONA, CA. 91720 (909) 736-2321
POWER:	SOUTHERN CALIFORNIA EDISON CO. 1351 E. FRANCIS ONTARIO, CA. 91761 (800) 930-8591
GAS:	SOUTHERN CALIFORNIA GAS CO. P.O. BOX 3003 REDLANDS, CA. 92373 (800) 427-2200
PHONE:	AT&T 1265 N. VAN BUREN ST., #180 ANAHEIM, CA 92807 (714) 666-5423
CABLE TV:	TIME WARNER CABLE 1500 AUTO CENTER DRIVE ONTARIO, CA 91761 (909) 975-3396

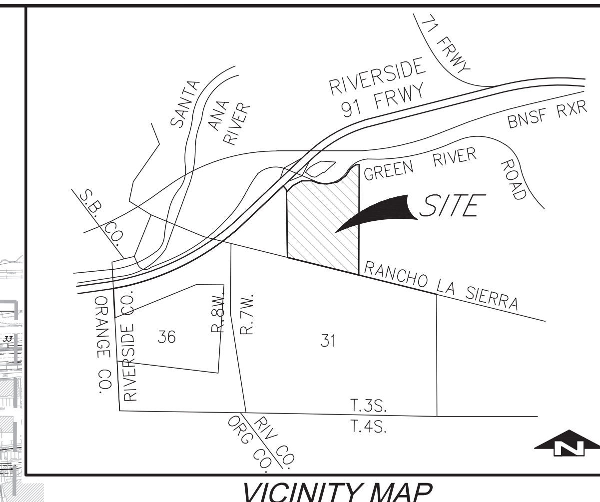
STATEMENT OF PREPARER

I HEREBY STATE THAT THIS MAP WAS PREPARED UNDER MY SUPERVISION AND THAT THE OWNER OF RECORD HAS KNOWLEDGE OF AND CONSENTS TO THE FILING OF THIS MAP.

______________________ DATE ________
BRANDON M. BARNETT, P.E.

REGISTERED PROFESSIONAL ENGINEER · BRANDON M. BARNETT · No.78472 · CIVIL · STATE OF CALIFORNIA

DATE IDENTIFIER
DATE OF LATEST CHANGE TO THIS MAP: 7/13/21 BY: CRA
DATE OF THIS PLOT: 7/13/21



VICINITY MAP

TTM SHEET INDEX

SHEET 1..........................TITLE SHEET
SHEET 2-4......................GRADING PLAN SHEET
SHEET 5..........................GRADING SECTION SHEET

GENERAL NOTES:

1. PREPARED: JULY 2020

2. TOTAL PROJECT GROSS ACREAGE IS 153.61 ACRES.

3. ACREAGE SUMMARY

ITEM	ACREAGE	PERCENT
A. INDUSTRIAL NET AREA	50.23 AC	32.70%
B. PRIVATE/PUBLIC STREETS	1.44 AC	0.94%
C. ESTATE RESIDENTIAL	101.94 AC	66.36%
TOTAL	153.61 AC	100.0%

4. PROPOSED NO. OF LOTS: 6 LOTS

6. EXISTING GENERAL PLAN DESIGNATION: MUNICIPAL STANDARDS AND GREEN RIVER SPECIFIC PLAN

7. PROPOSED GENERAL PLAN DESIGNATION: GREEN RIVER RANCH SPECIFIC PLAN AMENDMENT

8. EXISTING LAND USE: VACANT

9. PROPOSED LAND USE: GREEN RIVER RANCH SPA

10. EXISTING ZONING: GREEN RIVER RANCH SP

11. PROPOSED ZONING: GREEN RIVER RANCH SPA

12. ADJACENT LAND USE:
NORTH:
GENERAL PLAN - GREEN RIVER SP
ZONING - GREEN RIVER SP
EXISTING USE - OPEN SPACE
SOUTH:
GENERAL PLAN - OPEN SPACE GENERAL
ZONING - R-R
EXISTING USE - OPEN SPACE
EAST:
GENERAL PLAN - OPEN SPACE GENERAL, LDR
ZONING - OPEN SPACE/LOW DENSITY RESIDENTIAL SP-85-2
EXISTING USE - RESIDENTIAL
WEST:
GENERAL PLAN - OPEN SPACE
ZONING - R-R
EXISTING USE - OPEN SPACE

13. SOURCE OF TOPOGRAPHY IS AERIAL TOPOGRAPHY FLOWN ON MAY 28, 2019 BY ARROWHEAD MAPPING CORPORATION.

14. ALL LOT LINES AND DIMENSIONS ARE APPROXIMATE.

15. ALL EXISTING EASEMENTS AND IRREVOCABLE OFFERS OF DEDICATION THAT AFFECT THE PROPERTY BEING SUBDIVIDED ARE SHOWN ON THIS TENTATIVE TRACT MAP.

16. ALL EXISTING EASEMENTS ARE TO REMAIN IN THEIR DESIGNATED LOCATIONS UNLESS NOTED OTHERWISE.

17. SCHOOL DISTRICT: CORONA-NORCO SCHOOL DISTRICT

18. STREETS GRADES: 0.6% MINIMUM, 12% MAXIMUM.

19. ALL CONC. GUTTERS AND SWALES SHALL HAVE A MINIMUM GRADE OF: 0.6%

20. ALL A.C. PAVING SHALL HAVE A MINIMUM GRADE OF: 1.0%

21. CONCRETE PAVEMENT SHALL BE PROVIDED FOR ALL ROADWAYS THAT HAVE STREET GRADES EXCEEDING 10% OR AS APPROVED BY THE CITY OF CORONA AND/OR THE FIRE DEPARTMENT.

22. ALL SLOPES ADJACENT TO STREET R.O.W. TO BE MAINTAINED BY P.O.A.

23. ALL SLOPES SHOWN HEREON ARE 2:1 MAXIMUM UNLESS OTHERWISE NOTED.

24. ALL MAJOR SLOPES OR COMMON AREAS, OPEN SPACE, PRIVATE DRAINAGE FACILITIES, FUEL MODIFICATION, ROAD ACCESS EASEMENTS, AND ANY OTHER COMMON AMENITIES SHALL BE MAINTAINED BY A PROPERTY OWNER ASSOCIATION OR ESTABLISHED SUBJECT TO CURRENT STATE LAWS AND BE SUBJECT TO THE APPROVAL OF THE CITY OF CORONA WHO SHALL REVIEW ALL CC&R'S AND RULES FOR THEIR CC&R'S, PROPERTY OWNER ASSOCIATION DOCUMENTS AND ALL DOCUMENTS TO CONVEY TITLE TO THE PROPERTY OWNER ASSOCIATION.

25. FENCING SHALL BE INSTALLED ON SITE AS NECESSARY TO RESTRICT PUBLIC ACCESS TO PROPOSED OPEN SPACE AREAS. REFER TO WALL AND FENCE PLAN FOR LOCATIONS.

26. THERE ARE NO KNOWN ACTIVE EARTHQUAKE FAULTS IMPACTING THE PROJECT SITE. REFER TO SOILS REPORT FOR ADDITIONAL INFORMATION.

27. PROPOSED WATER TO HAVE TWO POINTS OF CONNECTION TO EXISTING WATER SYSTEM.

28. DRAINAGE SYSTEM WILL BE DEVELOPED IN ACCORDANCE WITH THE CITY OF CORONA AND RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT STANDARDS AND SPECIFICATIONS. DRAINAGE ON THIS SITE WILL BE CONVEYED BY MEANS OF A STORM DRAIN SYSTEM CONSISTING OF VARYING SIZES OF STORM DRAIN PIPES. STORM FLOWS TRIBUTARY TO THE SITE SHALL BE INTERCEPTED AND CONVEYED AROUND THE SITE VIA THE STORM DRAIN SYSTEMS SHOWN HEREON. ALL STORM DRAIN SHOWN HEREON ARE PRELIMINARY.

29 PROPOSED FLOW-BY/DETENTION BASINS AND WQMP BASINS MAY BE MAINTAINED BY FUTURE POA OR CFD FORMED SPECIFICALLY FOR DEVELOPMENT . THE MAINLINE STORM DRAIN, INLETS, AND OUTLET STRUCTURES SHALL BE PUBLICLY MAINTAINED VIA A PROPOSED DEDICATED DRAINAGE EASEMENT.

30. THE SUBJECT PROPERTY IS WITHIN AN UNMAPPED FLOOD ZONE X.

31. THE SUBJECT PROPERTY IS WITHIN A SPECIAL FIRE HAZARD ZONE.

32. THE SUBJECT PROPERTY IS WITHIN A SANTA ANA RIVER WATERSHED.

33. ALL PARTIES HAVING A BENEFICIARY INTEREST IN THE PROPERTY BEING SUBDIVIDED ARE AWARE OF AND CONSENT TO THE FILING OF THIS TENTATIVE TRACT MAP.

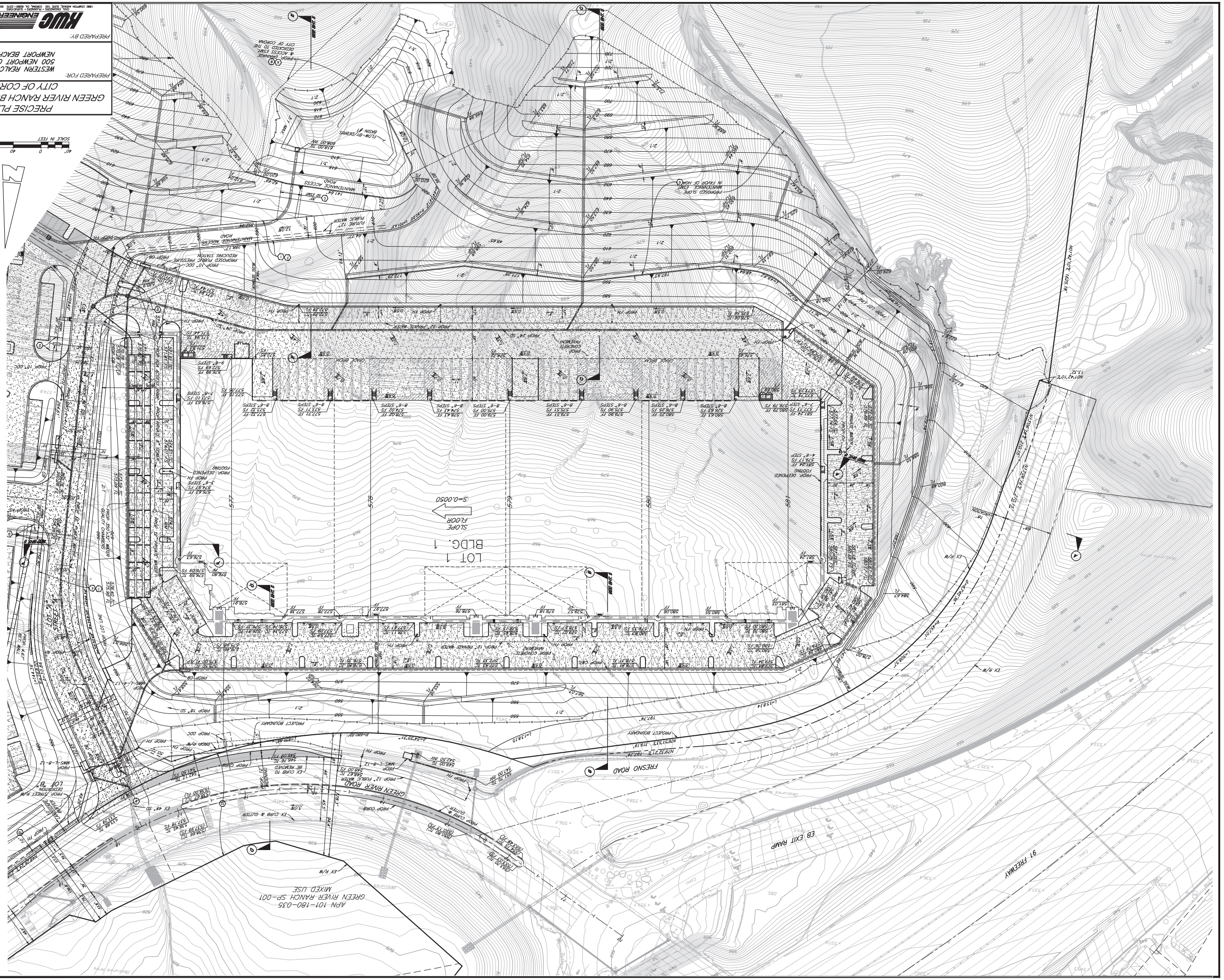
PRECISE PLAN
GREEN RIVER RANCH BUSINESS PARK
CITY OF CORONA

PREPARED FOR:
WESTERN REALCO
500 NEWPORT CENTER DR #630
NEWPORT BEACH, CA 92660

PREPARED BY:
KWC ENGINEERS
CIVIL ENGINEERS • PLANNERS • SURVEYORS
1880 COMPTON AVENUE, SUITE 100 CORONA, CA. 92881-3370 951-734-2130

SHEET 1 OF 5 SHEET

JN 19.1886.2 R:\19\1886\PRELIM\MAPS\PREC PLAN\1886 PRECISE PLAN 01.DWG



PRECISE PLAN
GREEN RIVER RANCH BUSINESS PARK
CITY OF CORONA

PREPARED FOR:

WESTERN REALCO
500 NEWPORT CENTER DR #630
NEWPORT BEACH, CA 92660

PREPARED BY:

KWC ENGINEERS
CIVIL ENGINEERS • PLANNERS • SURVEYORS
1880 COMPTON AVENUE, SUITE 100 CORONA, CA. 92881-3370 951-734-2130

SHEET
2 OF 5
SHEET

JN 19.1886.2 R:\19\1886\PRELIM\MAPS\PREC PLAN\1886 PRECISE PLAN 02.DWG

PRECISE PLAN
GREEN RIVER RANCH BUSINESS PARK
CITY OF CORONA

PREPARED FOR:

WESTERN REALCO
500 NEWPORT CENTER DR #630
NEWPORT BEACH, CA 92660

PREPARED BY:

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1880 COMPTON AVENUE, SUITE 100 CORONA, CA. 92881-3370 951-734-2130

SHEET
3 OF 5
SHEET

JN 19.1886.2 R:\19\1886\PRELIM\MAPS\PREC PLAN\1886 PRECISE PLAN 03.DWG

PRECISE PLAN
GREEN RIVER RANCH BUSINESS PARK
CITY OF CORONA

PREPARED FOR:
WESTERN REALCO
500 NEWPORT CENTER DR #630
NEWPORT BEACH, CA 92660

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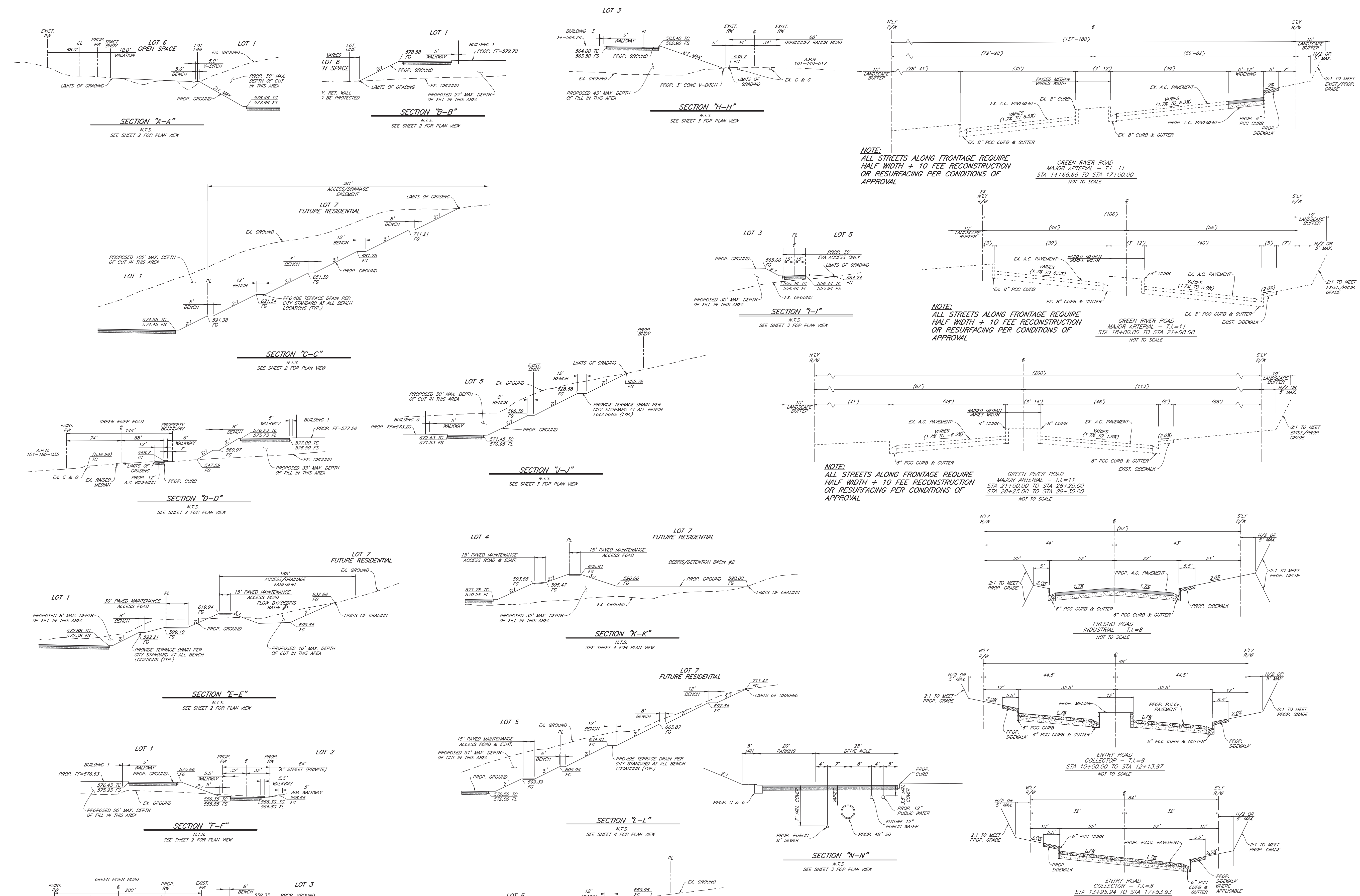
1880 COMPTON AVENUE, SUITE 100 CORONA, CA. 92881-3370 951-734-2130

SHEET
4 OF 5
SHEET

JN 19.1886.1 R:\19\1886\PRELIM\MAPS\PREC PLAN\1886 PRECISE PLAN 04.DWG


SECTION "A-A"
N.T.S.
SEE SHEET 2 FOR PLAN VIEW
SECTION "B-B"
N.T.S.
SEE SHEET 2 FOR PLAN VIEW
SECTION "H-H"
N.T.S.
SEE SHEET 3 FOR PLAN VIEW
SECTION "C-C"
N.T.S.
SEE SHEET 2 FOR PLAN VIEW
SECTION "I-I"
N.T.S.
SEE SHEET 3 FOR PLAN VIEW
SECTION "D-D"
N.T.S.
SEE SHEET 2 FOR PLAN VIEW
SECTION "J-J"
N.T.S.
SEE SHEET 3 FOR PLAN VIEW
SECTION "E-E"
N.T.S.
SEE SHEET 2 FOR PLAN VIEW
SECTION "K-K"
N.T.S.
SEE SHEET 4 FOR PLAN VIEW
SECTION "F-F"
N.T.S.
SEE SHEET 2 FOR PLAN VIEW
SECTION "L-L"
N.T.S.
SEE SHEET 4 FOR PLAN VIEW
SECTION "N-N"
N.T.S.
SEE SHEET 3 FOR PLAN VIEW
SECTION "G-G"
N.T.S.
SEE SHEET 3 FOR PLAN VIEW
SECTION "M-M"
N.T.S.
SEE SHEET 4 FOR PLAN VIEW
NOTE:
ALL STREETS ALONG FRONTAGE REQUIRE HALF WIDTH + 10 FEE RECONSTRUCTION OR RESURFACING PER CONDITIONS OF APPROVAL
GREEN RIVER ROAD
MAJOR ARTERIAL – T.I.=11
STA 14+66.66 TO STA 17+00.00
NOT TO SCALE
GREEN RIVER ROAD
MAJOR ARTERIAL – T.I.=11
STA 18+00.00 TO STA 21+00.00
NOT TO SCALE
GREEN RIVER ROAD
MAJOR ARTERIAL – T.I.=11
STA 21+00.00 TO STA 26+25.00
STA 28+25.00 TO STA 29+30.00
NOT TO SCALE
FRESNO ROAD
INDUSTRIAL – T.I.=8
NOT TO SCALE
ENTRY ROAD
COLLECTOR – T.I.=8
STA 10+00.00 TO STA 12+13.87
NOT TO SCALE
ENTRY ROAD
COLLECTOR – T.I.=8
STA 13+95.94 TO STA 17+53.93
NOT TO SCALE
DOMINGUEZ RANCH ROAD
COLLECTOR – T.I.=8
NOT TO SCALE
SCALE IN FEET

PRECISE PLAN
GREEN RIVER RANCH BUSINESS PARK
CITY OF CORONA

PREPARED FOR:
WESTERN REALCO
500 NEWPORT CENTER DR #630
NEWPORT BEACH, CA 92660

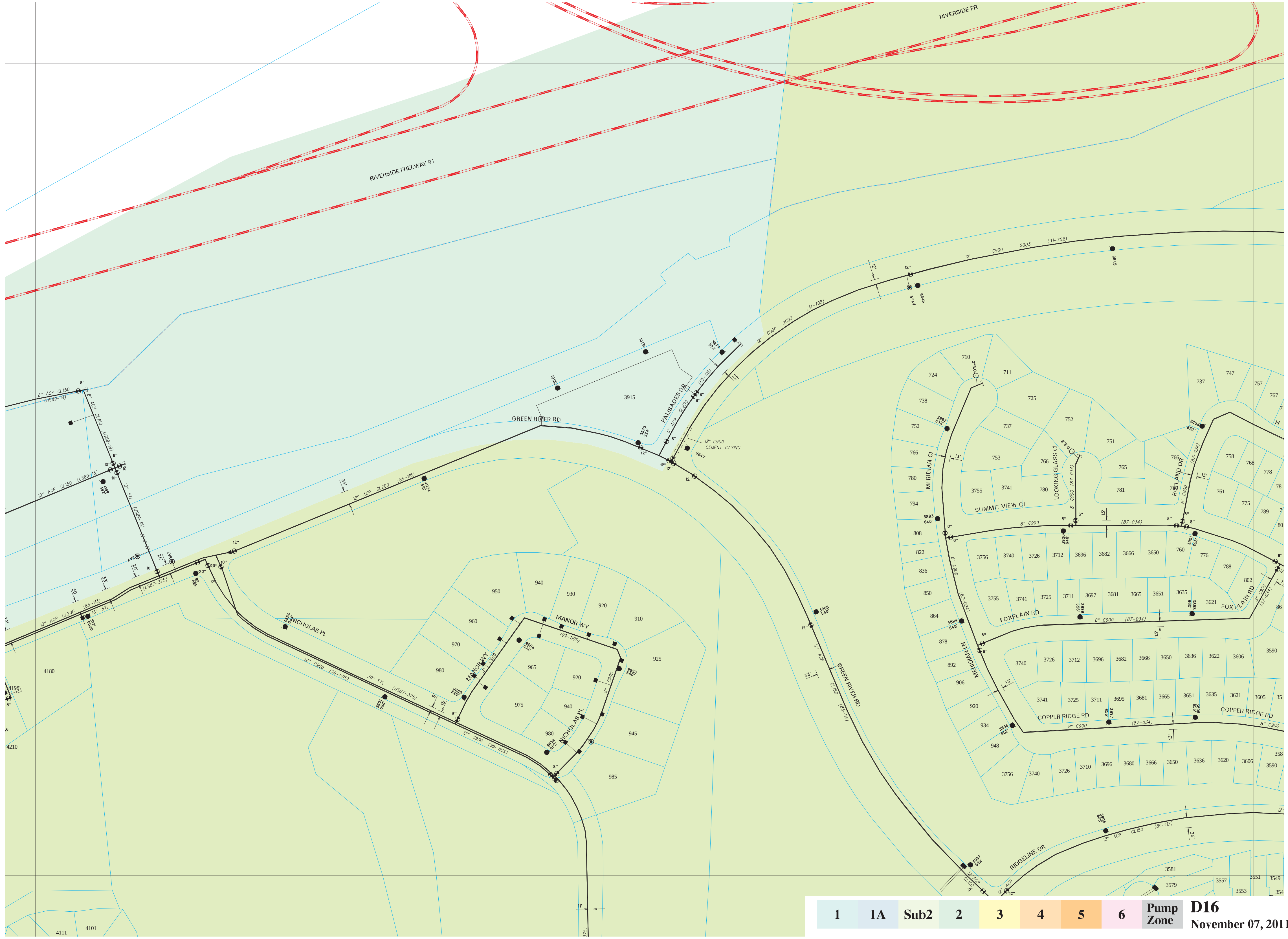
PREPARED BY:
KWC ENGINEERS

SHEET 5 OF 5 SHEET

Appendix

C

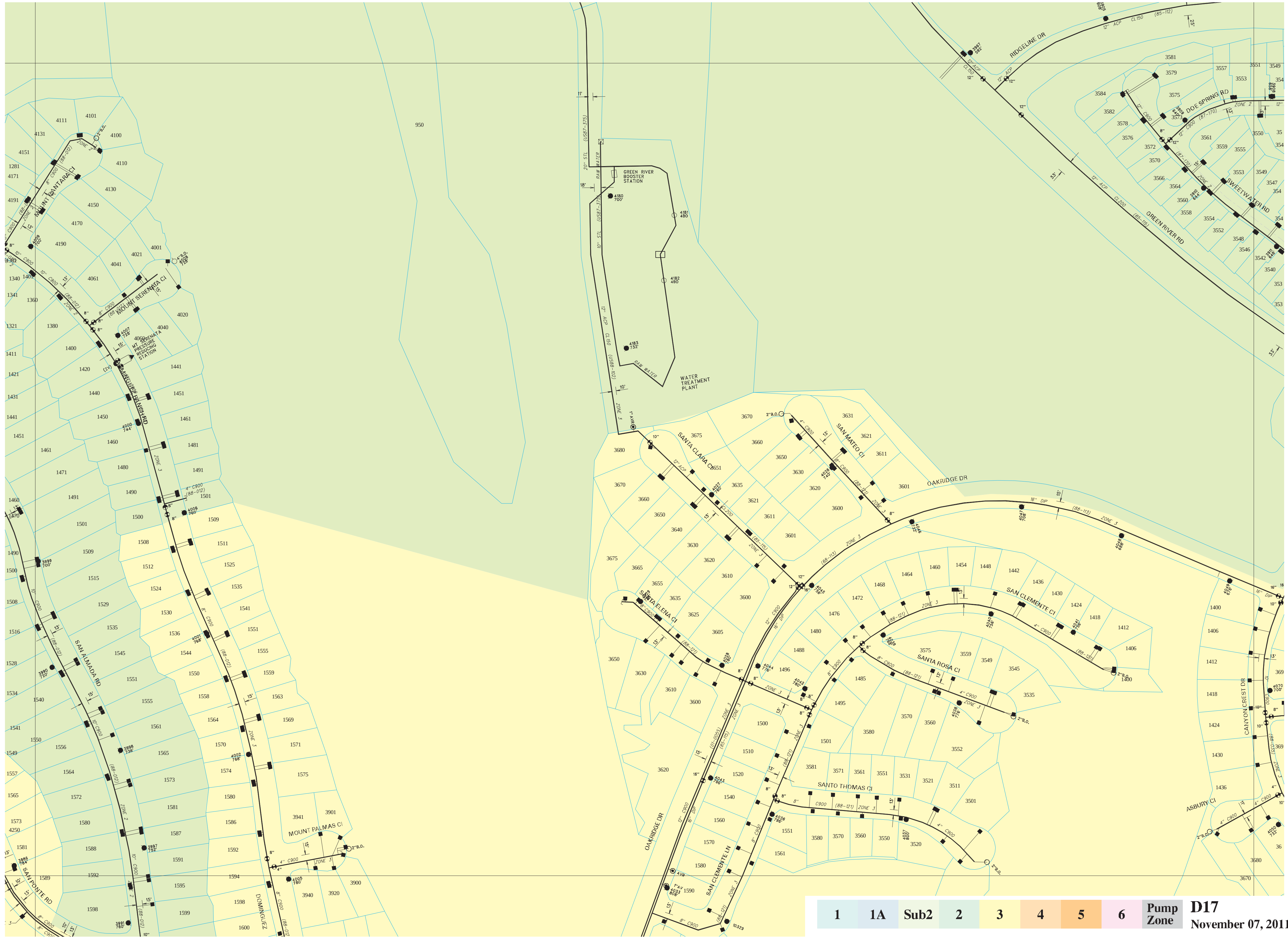
CITY OF CORONA WATER SYSTEM ATLAS AND PRESSURE ZONE MAP



1	1A	Sub2	2	3	4	5	6	Pump Zone

D16

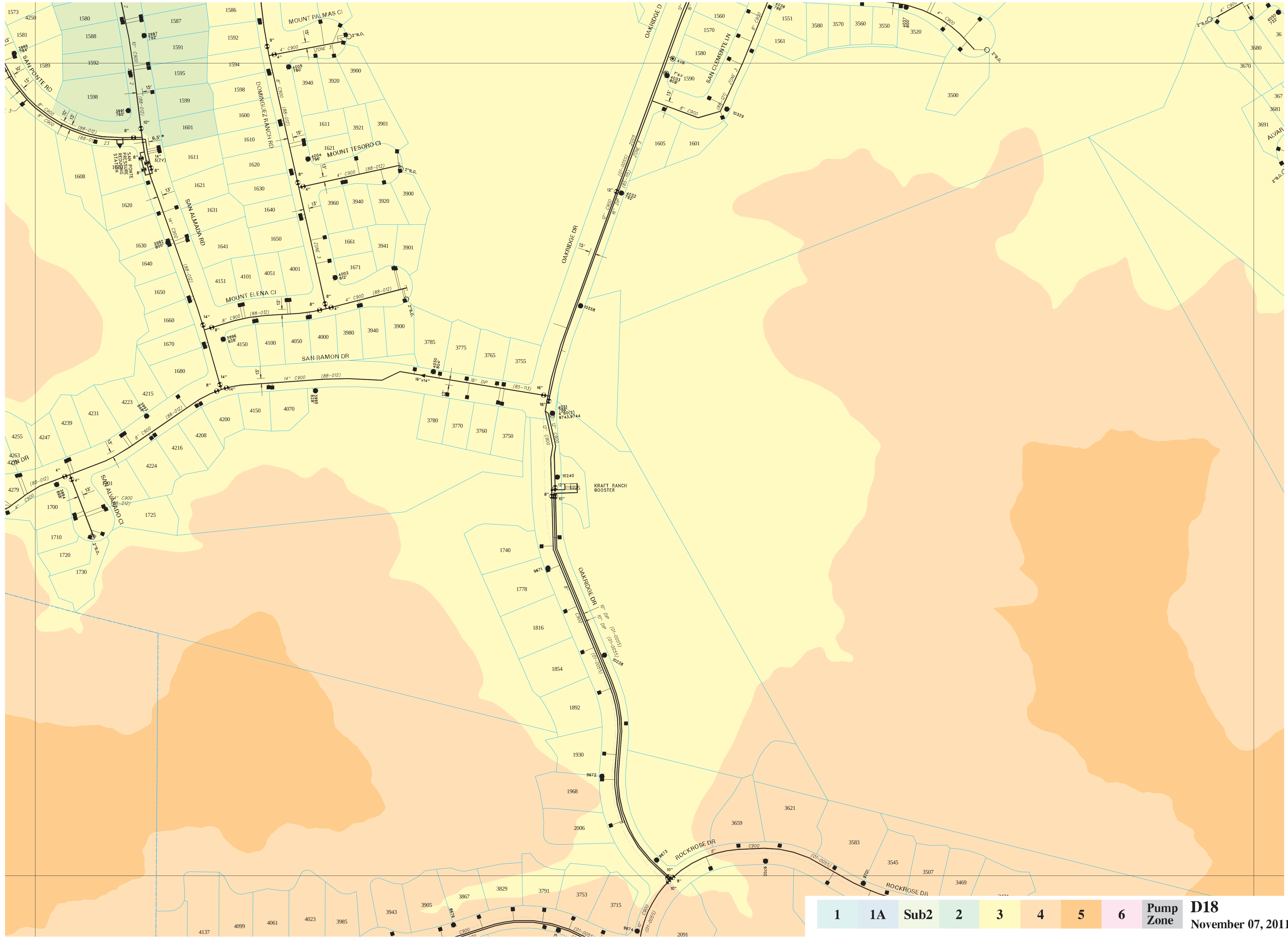
November 07, 2011



1	1A	Sub2	2	3	4	5	6	Pump Zone

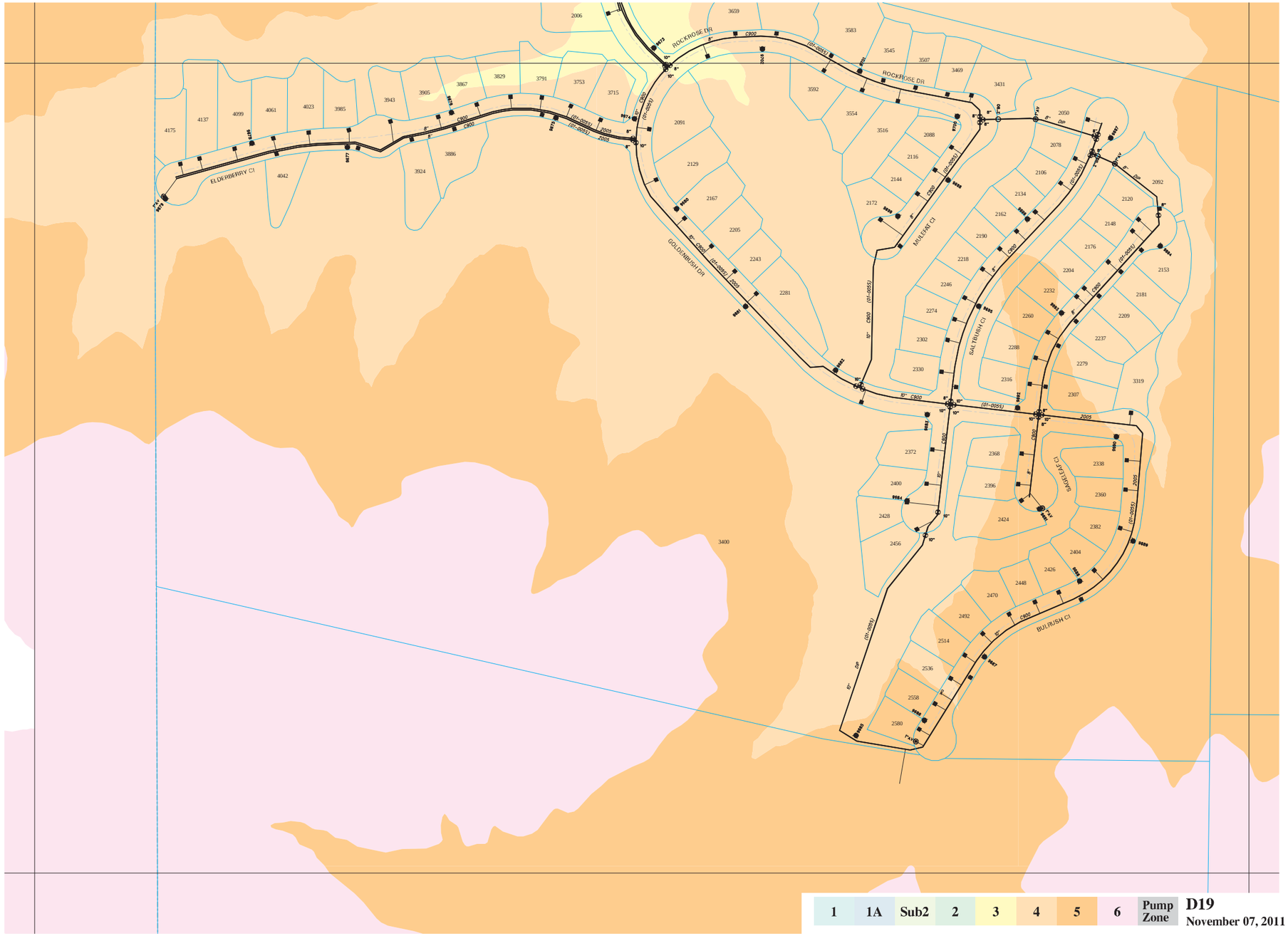
D17

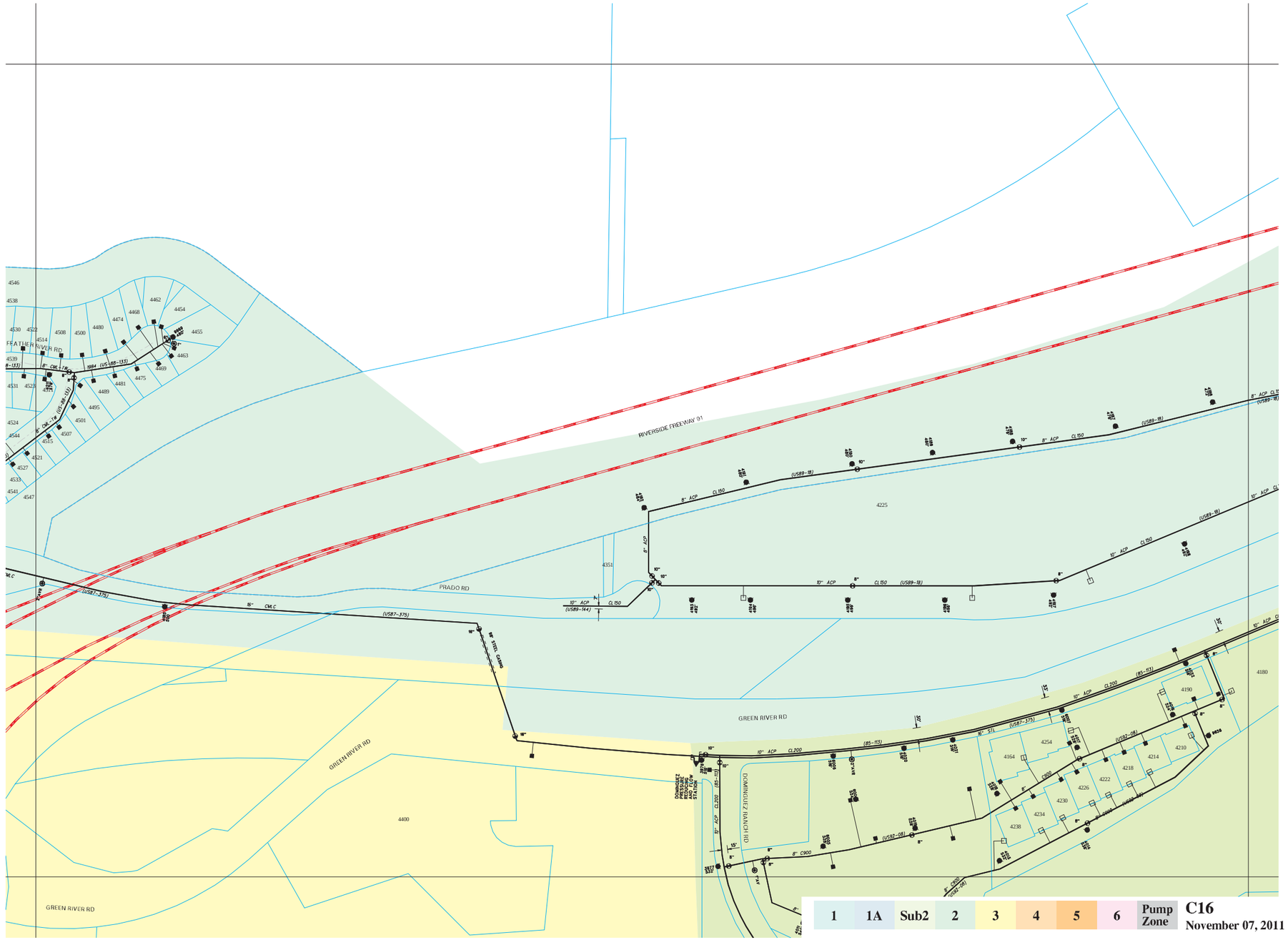
November 07, 2011



1	1A	Sub2	2	3	4	5	6	Pump Zone

D18
November 07, 2011


ROCKROSE DR
ELDERBERRY CI
GOLDENBUSH DR
MULTEAN CI
SALTBUSH CI
SAGEBRUSH CI
BULRUSH CI
1 1A Sub2 2 3 4 5 6 Pump Zone
D19
November 07, 2011


FEATHER RIVER RD
RIVERSIDE FREEWAY 91
PRADO RD
GREEN RIVER RD
DOMINGUEZ RANCH RD
DOMINGUEZ PRESSURE REDUCING STATION AND FLOW CONTROL
4546
4538
4530
4522
4514
4508
4500
4480
4474
4468
4462
4454
4455
4463
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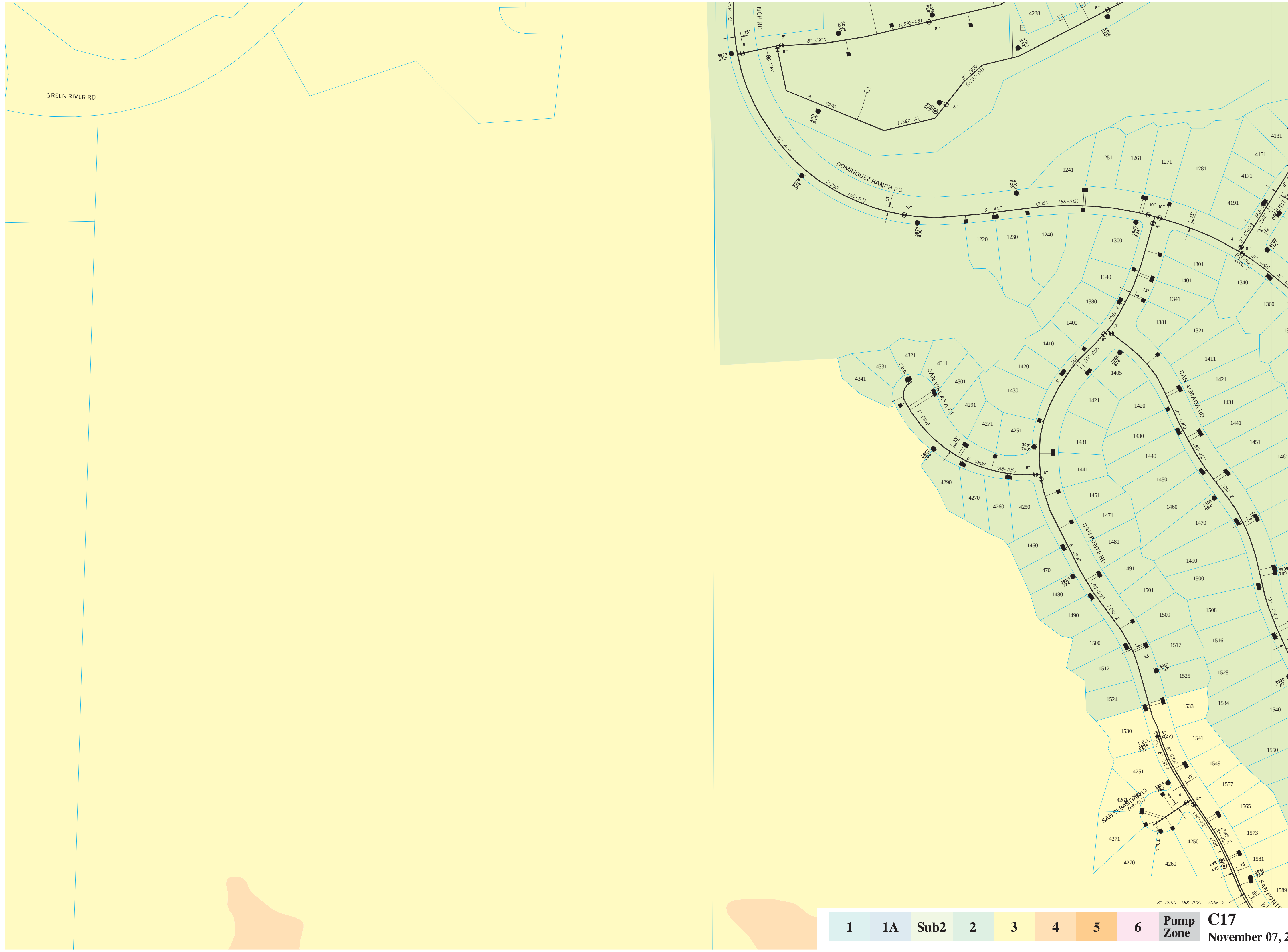
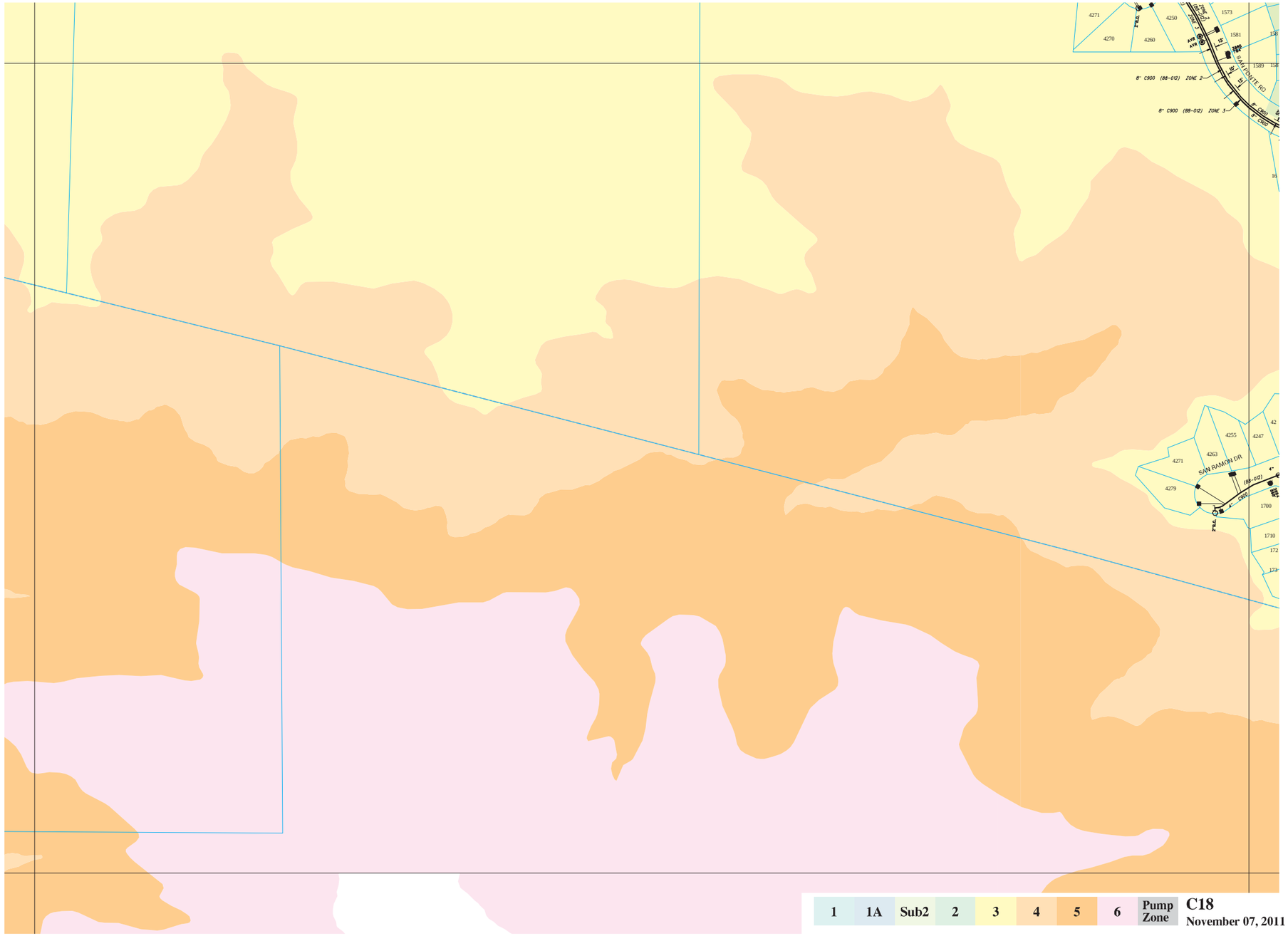
4544
4225
4351
4400
4180
4190
4164
4254
4210
4214
4218
4222
4226
4230
4234
4238
8" ACP CL150 (US89-18)
10" ACP CL150 (US89-18)
10" ACP CL200 (US87-375)
8" C900 (US92-08)
10" ACP CL150 (US89-144)
16" CML&C (US87-375)
16" STEEL CLMRC
1 1A Sub2 2 3 4 5 6 Pump Zone
C16
November 07, 2011



1	1A	Sub2	2	3	4	5	6	Pump Zone

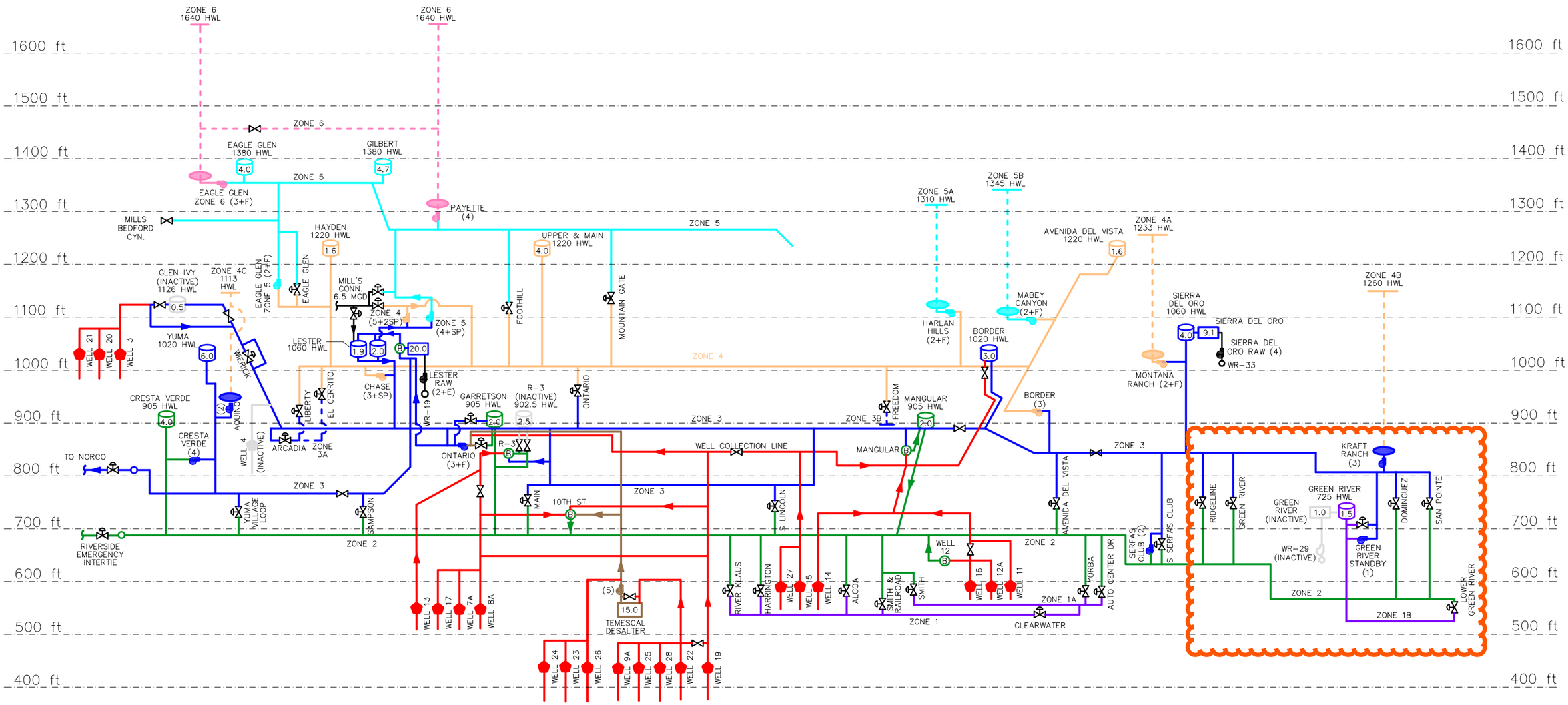
C17

November 07, 2011



1	1A	Sub2	2	3	4	5	6	Pump Zone

C18
November 07, 2011



LEGEND

- 750/820/725 ZONE (ZONE 1, 1A, & 1B)
- 905 ZONE (ZONE 2)
- 1060/1100 ZONE (ZONE 3, 3A, & 3B)
- 1220 ZONE (ZONE 4, 4A, 4B, & 4C)
- 1380 ZONE (ZONE 5, 5A, & 5B)
- 1640 ZONE (ZONE 6)
- WELL COLLECTION
- MWD–WMWD SUPPLY
- TEMESCAL DESALTER LINE
- CLOSED ZONE
- INACTIVE OR FUTURE FACILITY

- PRV
- PUMP STATION WITH NUMBER OF PUMPS
  E=EMERGENCY PUMP
  F=FIRE PUMP
  SP=SPARE PUMP
- WELL
- NORMALLY CLOSED VALVE
- RESERVOIR WITH CAPACITY IN MG
- HYDROPNEUMATIC RESERVOIR
- TREATMENT PLANT WITH CAPACITY IN MGD
- CONN TO MWD
- BLENDING STATION

SERVICE ELEVATIONS

ZONE	FROM	TO
1	430'	600'
2	600'	760'
3	760'	900'
4	900'	1100'
5	1100'	1260'
6	1260'	1520'

WATER SUPPLY

WELLS (LESS DESALTER)	20.0 MGD
DESALTER	15.0 MGD
LESTER WTP	20.0 MGD
SDO WTP	9.1 MGD
MILL'S CONNECTION	6.5 MGD
TOTAL SUPPLY	70.6 MGD

AKM

Project No. 0760562.10

Date: September 2005

City of Corona Water Master Plan

Existing Water System Hydraulic Profile

Figure 4–2

D

CITY OF CORONA GENERAL PLAN LAND USE AND ZONING MAP

City of Corona
Zoning and Specific Plans

Legend

- Agricultural
- Single Family Residential
- Medium Density Residential
- High Density Residential
- Planned Community Development
- Commercial
- Mixed Use
- Light Industrial
- Industrial
- Open Space
- Utilities
- Flood Control
- Schools
- Parks
- Fire Stations
- Specific Plans Boundaries
- City Boundary
- City Sphere

City of Corona
Geographic Information Services
Last Update On: 08/11/2014

N W E S

This map is intended for general information and planning purposes. The City of Corona is not responsible for any errors or omissions.

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City of Corona
Zoning and Specific Plans

Specific Plans

GDPA85-1 - Brookwood Specific Plan
SP-00-01 - Green River Ranch Specific Plan
SP-01-1 - Crown Ranch Estates Specific Plan
SP-01-2 - Corona Magnolia Specific Plan
SP-04-01 - Sierra Bella Specific Plan
SP-81-1 - Lincoln Business Center Specific Plan
SP-81-2 - Northeast Corona Specific Plan
SP-82-1 - Township in Corona Specific Plan
SP-82-2 - Birtcher Business Center Specific Plan
SP-83-1 - Crown Ridge Specific Plan
SP-84-1 - Concordia Specific Plan
SP-84-2 - Parkview Specific Plan
SP-85-1 - Prado Point Specific Plan
SP-85-2 - Sierra Del Oro Specific Plan
SP-85-3 - Crown Ranch Specific Plan
SP-87-1 - Westgate Specific Plan
SP-89-1 - Mountaingate Specific Plan
SP-89-2 - Chase Ranch Specific Plan
SP-90-05 - Corona Vista Specific Plan
SP-90-1 - The Plaza on Sixth Street Specific Plan
SP-90-2 - Todd Ranch Specific Plan
SP-90-3 - Cherokke Ranch Specific Plan
SP-90-4 - Empire Homes Specific Plan
SP-90-6 - Eagle Glen Specific Plan
SP-91-1 - Main Street South Plaza Specific Plan
SP-91-2 - El Cerrito Specific Plan
SP-95-1 - Cimarron Specific Plan
SP-98-1 - Downtown Revitalization Specific Plan
SP-99-1 - North Main Street District Specific Plan
SP-99-3 - Dos Lagos Specific Plan
SP-09-001 - Arantine Hills

Zoning Codes

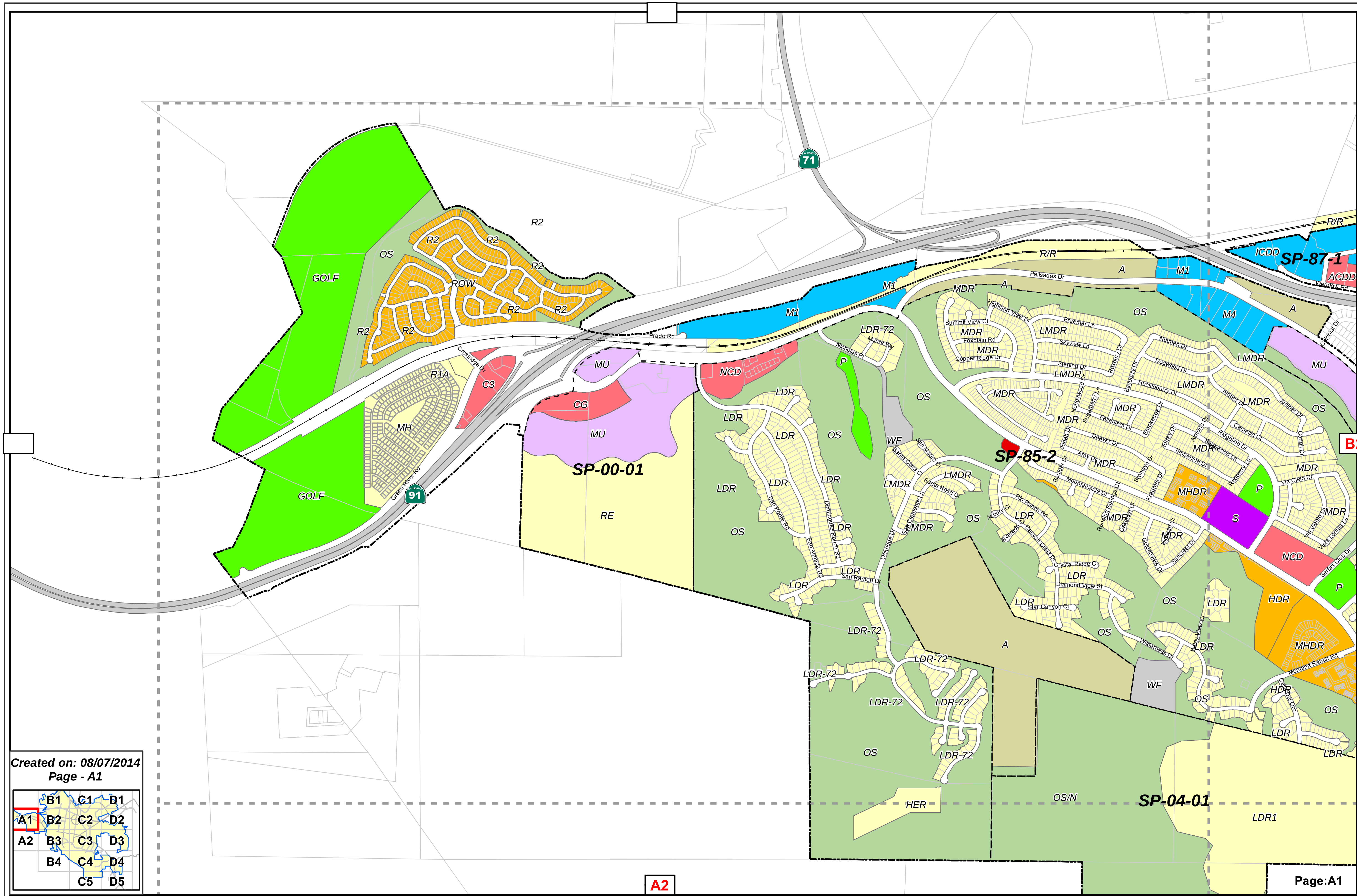
A - Agricultural
A-14.4 - Agricultural (14,400 sq. lot min)
A/HD - Agricultural/Hillside Development
ACDD - Automotive Commercial Development District
BL1 - Block1 (Lincoln Business Center)
BL1-O - Block1-Overlay (Lincoln Business Center)
BL2 - Block2 - (Lincoln Business Center)
BL3 - Block3 (Lincoln Business Center)
BLK1 - Block1 (Main Street South)
BLK2 - Block2 (Main Street South)
BLK3 - Block3 (Main Street South)
BLK4 - Block 4 (Main Street South)
BLK5 - Block 5 (Main Street South)
BLK6 - Block6 (Main Street South)
BP - Business Park
C - Commercial
C2 - Restricted Commercial
C3 - Restricted Commercial
CC - Commercial Center
CG - Commercial General
CO/BP - Commercial Office/Business Park Flex
CP - Professional and Office
CR - Commercial Retail District
CS - Community Services
D - Downtown
DB - Downtown Basin
E - Estate
EC - Entertainment Commercial
ER - Estate Residential
ER1 - Estate Residential Block 1
ER2 - Estate Residential Block 2
FC - Flood Control
FP1 - Flood Plain
FS - Fire Station
GB - Gateway Business
GB1 - Gateway Business 1
GC - General Commercial SP98-1
GOLF - Golf Course
HDR - High Density Residential
HDR16 - High Density Residential (16 du/ac)
HDR21 - High Density Residential (21 du/ac)
HDR22 - High Density Residential (22 du/ac)
HDR23 - High Density Residential (23 du/ac)
HER - Hillside Estate Residential
I - Industrial District
ICDD - Industrial Commercial Development District
IP - Industrial Park
L - Low Density Residential
LCI - Limited Commercial - Industrial
LDR - Low Density Residential
LDR 1 - Low Density Residential 1
LDR 2 - Low Density Residential 2
LDR-72 - Low Density Residential (7200 sq. ft. lot min)
LI - Light Industrial
LM - Low Density Residential
LMDR - Low Medium Density Residential
M - Medium Density Residential
M1 - Light Manufacturing
M2 - General Manufacturing
M2/O - General Manufacturing (Oil)
M3 - Heavy Manufacturing
M3/MR - Heavy Manufacturing (Mineral Resource)
M4 - Industrial Park
MDR - Medium Density Residential
MDR10 - Medium Density Residential (10 du/ac)
MDR12 - Medium Density Residential (12 du/ac)
MDR13 - Medium Density Residential (13 du/ac)
MDR22 - Medium Density Residential (22 du/ac)
MDR7 - Medium Density Residential (7 du/ac)
MDR8 - Medium Density Residential (8 du/ac)
MF1 - Multi Family Residential 1
MF2 - Multi Family Residential 2
MF4 - Multi Family Residential 4
MFR - Multi Family Residential
MH - Mobile Home
MHDR - Medium High Density Residential
MI - Medium Industrial
MP - Mobile Home Park
MSI - Medium Service Industrial
MU - Mixed Use
MU-I - Mixed Use 1 Commercial/Residential
MU-II - Mixed Use 2 Commercial/Industrial
MWD - MWD Easement
NC - Neighborhood Commercial
NCD - Neighborhood Commercial District
OP - Office Park
OS - Open Space
OS/N - Open Space Natural
P - Park
PCD - Planned Community Development
QP - Quasi Public
R - Residential
R-G - Multiple Dweling Zones
R/R - Railroad
R1 - Single Family Residential
R1-12 - Single Family Residential (12,000 sq. lot min)
R1-14.4 - Single Family Residential (14,400 sq. lot min)
R1-20 - Single Family Residential (20,000 sq. lot min)
R1-7.2 - Single Family Residential (7,200 sq. lot min)
R1-8.4 - Single Family Residential (8,400 sq. lot min)
R1-9.6 - Single Family Residential (9,600 sq. lot min)
R1-A1/HD - Single Family Residential (1ac. min.) Hillside
R1A - Single Family Residential (1ac. min.)
R1A/HD - Single Family Residential (1ac. min.) Hillside
R2 - Low Density Multiple Family Residential
R3 - Multiple Family Residential
RE - Residential Estate
RE-35 Residential Estate 35
RESERVOIR
RO - Residential Office
ROW - Right of Way
RR - Resort Residential
S - School
SC - Support Commercial
SCF - Support Commercial Freeway
SCI - Support Commercial Industrial
SCR - Senior Citizen Residential
SF - Single Family
SF1 - Single Family (Block1)
SF2 - Single Family (Block2)
SF3 - Single Family (Block3)
SFA - Single Family Attached
SFC - Single Family Condominium
SFD - Single Family Detached Residential
SFR - Single Family Residential
SFR-5 - Single Family (5,000 sq. min. lot)
SFR-6 - Single Family (6,000 sq. min. lot)
SFR-7 - Single Family (7,000 sq. min. lot)
SFR-84 - Single Family (8,400 sq. min. lot)
SFR-9 - Single Family (9,000 sq. min. lot)
SFR-9.6 - Single Family (9,600 sq. min. lot)
SRSC - Subregional Shopping Center
TC - Transitional Commercial District
TR - Transitional Retail District
U - Utility
UDR - Urban Density Residential District
W - Water
WF - Water Facility
WWTP - Wastewater Treatment Plant

N
W E
S

PLANNING DIRECTOR

6/22/09
DATE

City of Corona
Geographic Information Services
Last Update On: 9/12/2013



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Page - A1
Page:A1
A2
B2
SP-00-01
SP-85-2
SP-87-1
SP-04-01
71
91
GOLF
OS
R2
ROW
R1A
C3
CG
MU
MH
RE
NCD
LDR
LDR-72
LMDR
MDR
MHDR
HDR
HER
LDR1
OS/N
A
M1
M4
ICDD
ACDD
R/R
P
S
WF
Palisades Dr
Prado Rd
Green River Rd
Crestridge Dr
Highland View Dr
Braemar Ln
Skyview Ln
Sterling Dr
Dogwood Dr
Nutmeg Dr
Huckleberry Dr
Mountainside Dr
Montana Ranch Rd
Crystal Ridge Ct
Diamond View St
Star Canyon Ct
San Ramon Dr
Nicholas Dr
Manor Wy
Wardlow Rd
B1
C1
D1
A1
C2
D2
B3
C3
D3
B4
C4
D4
C5
D5

Appendix

E

ULTIMATE CONDITION MODEL DEMANDS AND MAP

GREEN RIVER RANCH - WATER DEMAND SUMMARY TABLE										
Node No.	**Land Area No.**	**Land Use Category**	**Equivalent Dwelling Units**	**Tributary Area (ac)**	**Average Day Demand (GPD)**	**Average Day Demand (gpm)**	**Max Day Factor**	**Maximum Day Demand (gpm)**	**Peak Hour Factor**	**Peak Hour Demand (gpm)**
ZONE 1B										
J206	Parcel 1	Business Industrial	--	19.40	29,103	20.21	1.80	36.38	4.05	81.85
J240	Parcel 2	Business Industrial	--	8.90	13,346	9.27	1.80	16.68	4.05	37.54
J168	Parcel 3	Business Industrial	--	8.43	12,646	8.78	1.80	15.81	4.05	35.57
J156	Parcel 4&5	Business Industrial	--	12.78	19,175	13.32	1.80	23.97	4.05	53.93
J184	Parcel 7	Commercial (C)	--	5.54	8,926	6.20	1.80	11.16	4.05	25.10
ZONE 2										
J116	OS-A	Open Space (OS)	--	7.54	7,541	5.24	1.80	9.43	2.27	11.88
J128	OS-B	Open Space (OS)	--	7.68	7,685	5.34	1.80	9.61	2.27	12.10
FFJ140	Parcel 6	Residential Low Density (LDR)	32	88.88	106,656	74.07	1.80	133.32	2.27	167.98
Total:			--	159.16	205,078	142.41		256.35		425.95

1) Average Day Demand based on 1610 gpd/ac for GCC, 1500 gpd/ac for Business Industrial, 1200 gpd/ac for Estate Residential, and 1000 gpd/ac for OS.
2) Maximum Day Demand is 1.8xADD.
3) Peak Hour Demand is 4.05xADD (2.25xMDD) for Zone 1B and 2.27xADD (1.26xMDD) for Zone 2.
4) Fire flow is 3500 gpm for 4 hours for project site.
5) Fire flow is 1500 gpm for 2 hours for residential site.

For Non-Health Hazard Applications

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Series 774DCDA

Double Check Detector Assemblies

Sizes 2½" – 12" (65 – 300mm)

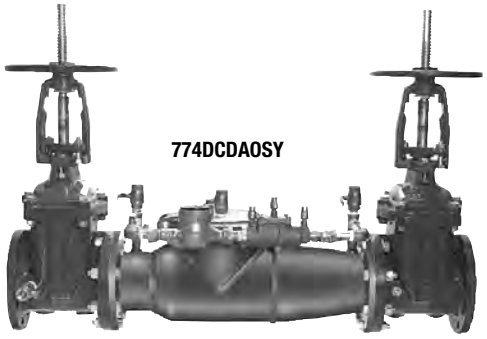
Series 774DCDA Double Check Detector Assemblies are designed for use in accordance with water utility non-health hazard containment requirements. It is mandatory to prevent the reverse flow of fire protection system substances, i.e., glycerin wetting agents, stagnant water and water of non-potable quality from being pumped or siphoned into the potable water supply.

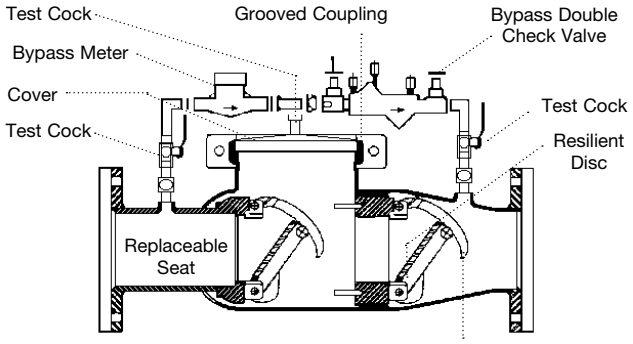
Features

- Torsion spring check valve provides low head loss
- Short lay length is ideally suited for retrofit installations
- Stainless steel body is half the weight of competitive designs reducing installation and shipping cost
- Stainless steel construction provides long term corrosion protection and maximum strength
- Single top access cover with two-bolt grooved style coupling for ease of maintenance
- Thermoplastic and stainless steel check valves for trouble-free operation
- No special tools required for servicing
- Compact construction allows for smaller vaults and enclosures
- Furnished with ⅝" x ¾" (16x19mm) bronze meter (gpm or cfm)
- Detects underground leaks and unauthorized water use
- May be installed horizontal or vertical "flow up" position

Specifications

A Double Check Detector Assembly shall be installed on fire protection systems when connected to a potable water supply. Degree of hazard present is determined by the local authority having jurisdiction. The assembly shall consist of two positive seating check valves located between two resilient seated shutoffs with a hydraulically balanced bypass line and four test cocks. The main valve body shall be manufactured from 300 Series stainless steel to provide corrosion resistance. The check valves shall be of thermoplastic construction with stainless steel hinge pins, cam arm and cam bearing. The check valves shall utilize a single torsion spring design to minimize pressure drop through the assembly. The check valves shall be modular and shall seal to the main valve body by the use of an O-ring. There shall be no brass or bronze parts used within the check valve assembly. The check valve seats shall be of molded thermoplastic construction. The use of seat screws as a retention method is prohibited. All internal parts shall be accessible through a single cover on the valve assembly. The valve cover shall be held in place through the use of a single grooved style two-bolt coupling. The bypass line shall be hydraulically sized to accurately measure low flow. The bypass line shall consist of a meter, a small diameter double check assembly with test cocks and isolation valves. The bypass line double check valve shall have two independently operating modular poppet check valves, and top mounted test cocks. The assembly shall be a Watts Series 774DCDA.





Laser Cut Polished Cam Arm

Available Models

Suffix:

LF –	without shutoff valves
OSY –	UL/FM outside stem and yoke resilient seated gate valves
*OSY FxG –	flanged inlet gate connection and grooved outlet gate connection
*OSY GxF –	grooved inlet gate connection and flanged outlet gate connection
*OSY GxG –	grooved inlet gate connection and grooved outlet gate connection
CFM –	cubic feet per minute meter
GPM –	gallons per minute meter

Available with grooved NRS gate valves - consult factory*
Post indicator plate and operating nut available - consult factory*
*Consult factory for dimensions

Now Available
WattsBox Insulated Enclosures.
For more information, send for literature ES-WB.

NOTICE

Inquire with governing authorities for local installation requirements

WATTS®

Materials

All internal metal parts: 300 Series stainless steel, Main valve body: 300 Series stainless steel, Check assembly: Noryl® Flange dimensions in accordance with AWWA Class D.

Pressure - Temperature

Temperature Range: 33°F – 110°F (0.5°C – 43°C) continuous
Pressure Range: 175psi (12.1 bar)

Standards

AWWA C510, CSA B64.5

Approvals

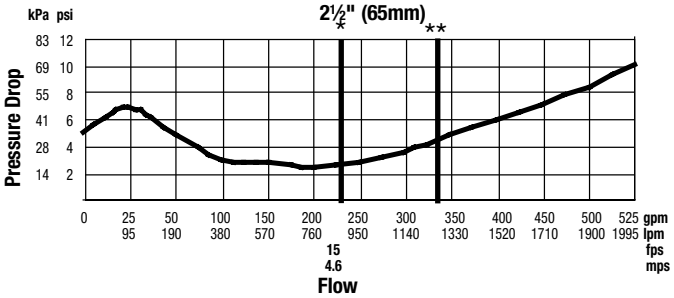
(2½" - 10" only)
(65 - 250mm)

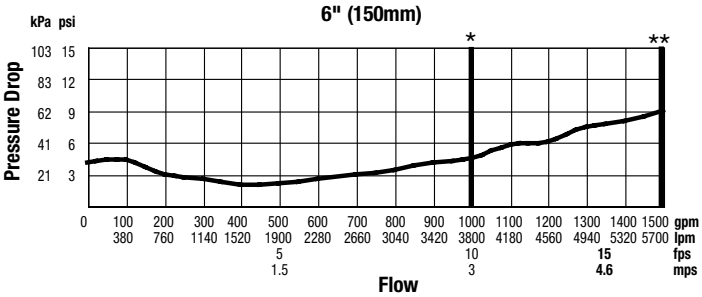
1048

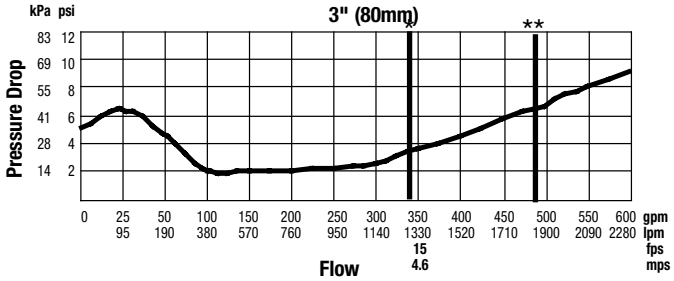
(OSY only)

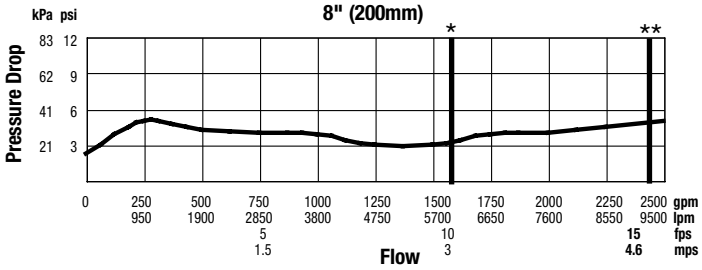
Capacity

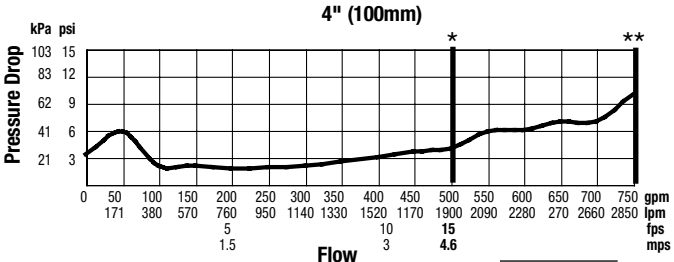
Flow curves as tested by Underwriters Laboratory per UL 1469, 1996 * Rated flow **UL Tested

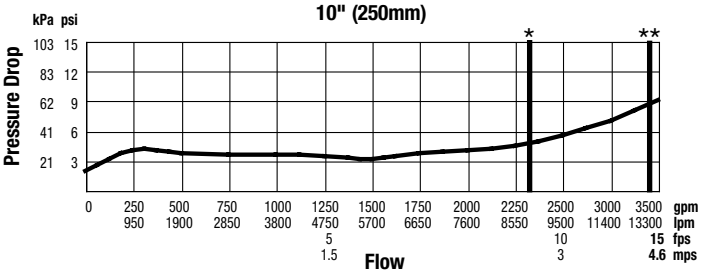


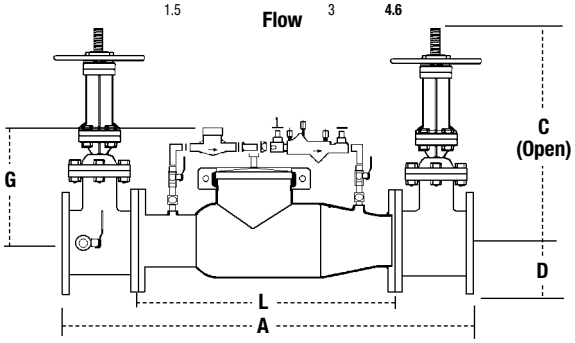


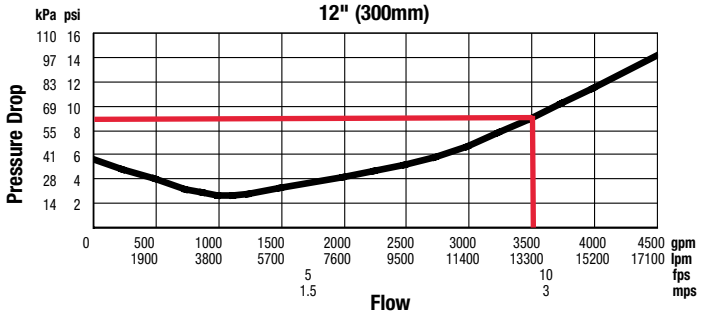


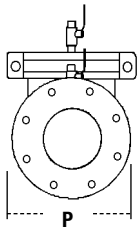












SIZE (DN)		DIMENSIONS												WEIGHT			
		A		C (OSY)		D		G		L		P		w/Gates		w/o Gates	
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*	*lbs.*	*kgs.*
2½	65	37	940	16⅜	416	3½	89	10	250	22	559	12½	318	155	70	68	31
3	80	38	965	18⅞	479	3¾	95	10	250	22	559	13	330	230	104	70	32
4	100	40	1016	22¾	578	4½	114	10	250	22	559	14½	368	240	109	73	33
6	150	48½	1232	30⅛	765	5½	140	15	381	27½	699	15½	394	390	177	120	54
8	200	52½	1334	37¾	959	6¾	171	15	381	29½	749	18¼	464	572	259	180	82
10	250	55½	1410	45¾	1162	8	200	15	381	29½	749	19½	495	774	351	190	86
12	300	57½	1461	53⅛	1349	9½	241	15	381	29½	749	21	533	1044	474	220	100

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Appendix

F

ULTIMATE CONDITION ANALYSIS, NODE AND PIPE DIAGRAM

ONSITE WATER DEMANDS ANALYSIS RESULTS

Average Daily Demand (ADD)

Junction Pressures @ Steady State Analysis					
ID	Demand (gpm)	Elevation (ft)	Head (ft)	Pressure (psi)	
J100	0.00	514.00	904.48	169.20	<- Existing Node
J102	0.00	529.15	724.98	84.85	
J104	0.00	546.34	904.48	155.18	<- Existing Node
J106	0.00	547.44	904.48	154.71	<- Existing Node
J108	0.00	563.90	904.48	147.57	<- Zone 2 Public
J110	0.00	563.51	904.48	147.74	<- Zone 2 Public
J112	0.00	569.22	904.47	145.27	<- Existing Node
J114	0.00	569.03	904.47	145.35	<- Existing Node
J116	5.24	570.37	904.47	144.77	<- Zone 2 Public
J118	0.00	570.15	904.47	144.86	<- Zone 2 Public
J120	0.00	570.26	904.47	144.81	<- Zone 2 Public
J122	0.00	570.16	904.47	144.86	<- Zone 2 Public
J124	0.00	568.11	904.46	145.74	<- Zone 2 Public
J126	0.00	567.50	904.47	146.01	<- Zone 2 Public
J128	5.34	567.18	904.46	146.15	<- Zone 2 Public
J130	0.00	568.46	724.98	67.82	
J131	0.00	569.24	724.98	67.48	
J134	0.00	567.79	904.46	145.88	<- Zone 2 Public
J136	0.00	578.39	904.47	141.29	<- Zone 2 Public
J138	0.00	608.80	904.46	128.11	<- Zone 2 Public
J140	74.07	608.62	904.46	128.19	<- Zone 2 Public
J142	0.00	569.15	724.98	67.52	
J144	0.00	568.50	724.98	67.80	
J146	0.00	566.57	724.98	68.64	
J148	0.00	553.12	724.98	74.47	
J152	0.00	560.68	724.98	71.19	
J154	0.00	559.70	724.98	71.62	
J156	13.32	562.73	724.98	70.30	
J158	0.00	562.78	724.98	70.28	
J160	0.00	565.16	724.98	69.25	
J162	0.00	564.42	724.98	69.57	
J164	0.00	561.69	724.98	70.76	
J166	0.00	557.63	724.98	72.51	
J168	8.78	558.00	724.98	72.35	
J170	0.00	558.00	724.98	72.35	
J172	0.00	559.00	724.98	71.92	
J174	0.00	506.35	724.99	94.73	
J180	0.00	512.55	724.98	92.05	
J184	6.20	518.30	724.98	89.56	
J186	0.00	534.62	724.98	82.48	
J188	0.00	549.79	724.98	75.91	
J198	0.00	576.95	724.98	64.14	
J200	0.00	577.56	724.98	63.88	
J202	0.00	575.34	724.98	64.84	
J204	0.00	573.64	724.98	65.58	
J206	20.21	572.69	724.98	65.99	
J208	0.00	573.16	724.98	65.78	
J210	0.00	559.72	724.98	71.61	
J212	0.00	558.67	724.98	72.06	
J216	0.00	560.76	724.98	71.16	
J218	0.00	508.50	724.98	93.80	
J220	0.00	519.99	724.98	88.82	
J222	0.00	514.72	724.98	91.11	
J224	0.00	574.45	724.98	65.23	
J226	0.00	543.15	724.98	78.79	
J232	0.00	549.77	904.48	153.70	<- Zone 2 Public
J234	0.00	549.94	904.48	153.62	<- Zone 2 Public
J238	0.00	542.69	724.98	78.99	
J240	9.27	550.67	724.98	75.53	
J242	0.00	483.00	724.99	104.85	
J244	0.00	476.00	724.99	107.89	
J246	0.00	480.95	724.99	105.74	
J248	0.00	481.38	724.99	105.56	

J250	0.00	483.00	724.99	104.85	
J252	0.00	480.00	724.99	106.15	
J254	0.00	482.00	724.99	105.29	
J256	0.00	478.00	724.99	107.02	
J258	0.00	480.45	724.99	105.96	
J26	0.00	505.00	724.99	95.32	
J260	0.00	488.50	724.99	102.47	
J262	0.00	489.84	724.99	101.89	
J264	0.00	487.22	724.99	103.02	
J266	0.00	491.07	724.99	101.36	
J268	0.00	538.98	724.98	80.59	
J28	0.00	506.71	724.99	94.58	
J30	0.00	506.00	724.99	94.89	
J34	0.00	696.00	725.00	12.57	<- Existing Node
J36	0.00	506.71	904.48	172.35	<- Existing Node
J38	0.00	545.00	904.48	155.76	<- Existing Node
J40	0.00	505.00	724.99	95.32	
J42	0.00	515.00	724.99	90.99	
J44	0.00	724.00	993.95	116.97	
J46	0.00	806.00	993.95	81.44	
J48	0.00	808.00	993.95	80.57	
J50	0.00	821.00	993.95	74.94	
J52	0.00	828.00	993.99	71.92	
J54	0.00	760.00	993.81	101.31	
J56	0.00	764.00	993.81	99.57	
J58	0.00	764.00	993.80	99.57	
J60	0.00	671.00	904.64	101.24	
J62	0.00	661.00	904.57	105.54	
J64	0.00	764.00	904.77	61.00	
J66	0.00	764.00	904.78	61.00	
J68	0.00	761.00	993.82	100.88	
J72	0.00	532.22	724.98	83.52	
J88	0.00	724.00	904.57	78.24	
J94	0.00	515.00	904.48	168.76	<- Existing Node
J96	0.00	510.05	904.48	170.91	<- Existing Node
J98	0.00	539.00	904.48	158.36	<- Existing Node

Tank Results @ Steady State Analysis

ID	Flow (gpm)	Elevation (ft)	Head (ft)	% Full (%)	Level (ft)
T5000	-57.78	701.00	725.00	100.00	24.00
T5002	0.00	817.00	832.00	100.00	15.00
T5004	-84.66	979.00	994.00	100.00	15.00

Valve Results @ Steady State Analysis

ID	Diameter (in)	Elevation (ft)	Upstream Pressure (psi)	Downstream Pressure (psi)	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Status	Setting	
V70	12.00	568.00	68.02	145.79	0.00	0.00	0.00	Closed	68.00	<- PRV
V72	8.00	515.00	90.99	168.76	0.00	0.00	0.00	Closed	91.00	<- PRV
V74	8.00	724.00	116.97	78.24	0.00	0.00	0.00	Closed	65.00	<- PRV
V76	8.00	764.00	99.57	61.00	84.65	0.54	89.02	Active	61.00	<- PRV
V80	12.00	539.00	80.59	80.59	12.67	0.04	0.00	Active	0.00	<- DCDA
V82	12.00	569.00	67.59	67.59	-7.54	0.02	0.00	Active	0.00	<- DCDA
V84	12.00	554.08	74.05	74.05	-9.76	0.03	0.00	Active	0.00	<- DCDA
V86	12.00	508.58	93.77	93.77	31.86	0.09	0.00	Active	0.00	<- DCDA
V88	12.00	519.92	88.85	88.85	3.08	0.01	0.00	Active	0.00	<- DCDA
V90	12.00	516.88	90.17	90.17	-9.28	0.03	0.00	Active	0.00	<- DCDA

ONSITE WATER DEMANDS ANALYSIS RESULTS

Average Daily Demand (ADD)

Pipe Pressures @ Steady State Analysis										
ID	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P101	J96	J100	1197.30	10.00	110.00	0.00	0.00	0.00	0.00	Open
P109	J58	V76	8.08	8.00	110.00	84.65	0.54	0.00	0.26	Open
P111	J44	V74	8.21	8.00	110.00	0.00	0.00	0.00	0.00	Open
P113	J42	V72	7.49	8.00	110.00	0.00	0.00	0.00	0.00	Open
P115	V74	J88	7.79	8.00	110.00	0.00	0.00	0.00	0.00	Open
P117	V76	J66	6.84	8.00	110.00	84.65	0.54	0.00	0.26	Open
P119	V72	J94	8.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P121	T5000	J34	32.53	16.00	110.00	57.78	0.09	0.00	0.00	Open
P123	T5002	J98	31.29	10.00	110.00	0.00	0.00	0.00	0.00	Closed
P125	T5004	J52	52.18	8.00	110.00	84.66	0.54	0.01	0.26	Open
P127	J28	J42	13.30	8.00	110.00	0.00	0.00	0.00	0.00	Open
P131	J104	J106	9.91	10.00	110.00	-44.33	0.18	0.00	0.02	Open
P133	J106	J62	992.09	10.00	110.00	-84.65	0.35	0.09	0.09	Open
P135	J174	J28	98.75	16.00	110.00	-45.20	0.07	0.00	0.00	Open
P137	J180	J72	327.02	12.00	110.00	16.64	0.05	0.00	0.00	Open
P139	J220	J218	340.80	12.00	110.00	-9.28	0.03	0.00	0.00	Open
P141	J218	J222	212.61	12.00	110.00	-9.28	0.03	0.00	0.00	Open
P147	J220	J102	193.53	12.00	110.00	9.28	0.03	0.00	0.00	Open
P149	J102	J184	107.38	12.00	110.00	9.28	0.03	0.00	0.00	Open
P155	J186	J72	51.02	12.00	110.00	-16.64	0.05	0.00	0.00	Open
P157	J206	J198	852.15	12.00	110.00	-2.34	0.01	0.00	0.00	Open
P169	J200	J202	281.96	12.00	110.00	-2.34	0.01	0.00	0.00	Open
P171	J202	J224	157.02	12.00	110.00	-2.34	0.01	0.00	0.00	Open
P173	J224	J204	98.31	12.00	110.00	-2.34	0.01	0.00	0.00	Open
P175	J204	J142	791.86	12.00	110.00	-2.34	0.01	0.00	0.00	Open
P177	J130	J144	49.71	12.00	110.00	-7.54	0.02	0.00	0.00	Open
P179	J144	J146	52.37	12.00	110.00	-7.54	0.02	0.00	0.00	Open
P181	J146	J148	313.87	12.00	110.00	-7.54	0.02	0.00	0.00	Open
P187	J152	J154	54.60	12.00	110.00	-3.41	0.01	0.00	0.00	Open
P189	J154	J156	448.00	12.00	110.00	-3.41	0.01	0.00	0.00	Open
P191	J156	J158	21.00	12.00	110.00	-16.73	0.05	0.00	0.00	Open
P193	J158	J162	328.37	12.00	110.00	-9.75	0.03	0.00	0.00	Open
P195	J162	J164	105.94	12.00	110.00	-9.75	0.03	0.00	0.00	Open
P197	J164	J172	438.58	12.00	110.00	-9.75	0.03	0.00	0.00	Open
P199	J172	J170	52.65	12.00	110.00	-9.75	0.03	0.00	0.00	Open
P201	J170	J168	13.94	12.00	110.00	-9.75	0.03	0.00	0.00	Open
P207	J166	J168	358.04	12.00	110.00	-13.33	0.04	0.00	0.00	Open
P209	J212	J166	332.07	12.00	110.00	-6.35	0.02	0.00	0.00	Open
P21	J28	J30	1729.62	16.00	110.00	-45.20	0.07	0.00	0.00	Open
P211	J210	J212	239.99	12.00	110.00	-6.35	0.02	0.00	0.00	Open
P213	J216	J210	147.78	12.00	110.00	-6.35	0.02	0.00	0.00	Open
P215	J152	J216	230.51	12.00	110.00	-6.35	0.02	0.00	0.00	Open
P217	J160	J156	205.27	12.00	110.00	0.00	0.00	0.00	0.00	Open
P219	J158	J166	558.00	12.00	110.00	-6.98	0.02	0.00	0.00	Open
P221	J206	J208	116.69	12.00	110.00	-5.20	0.01	0.00	0.00	Open
P223	J186	J226	198.28	12.00	110.00	7.05	0.02	0.00	0.00	Open
P225	J208	J142	411.04	12.00	110.00	-5.20	0.01	0.00	0.00	Open
P227	J142	V82	25.57	12.00	110.00	-7.54	0.02	0.00	0.00	Open
P229	J131	J130	10.00	12.00	110.00	-7.54	0.02	0.00	0.00	Open
P235	J134	J124	12.11	12.00	110.00	-33.75	0.10	0.00	0.01	Open
P237	J124	J128	45.00	12.00	110.00	-33.75	0.10	0.00	0.01	Open
P239	J136	J126	52.00	12.00	110.00	-40.32	0.11	0.00	0.01	Open
P241	J136	J138	376.61	12.00	110.00	40.32	0.11	0.00	0.01	Open
P243	J140	J134	371.72	12.00	110.00	-33.75	0.10	0.00	0.01	Open
P245	J126	J122	186.26	12.00	110.00	-40.32	0.11	0.00	0.01	Open
P247	J128	J120	193.90	12.00	110.00	-39.09	0.11	0.00	0.01	Open
P249	J122	J118	742.63	12.00	110.00	-40.32	0.11	0.01	0.01	Open
P25	J30	J34	2050.25	16.00	110.00	-57.78	0.09	0.01	0.00	Open
P251	J118	J114	107.86	12.00	110.00	-40.32	0.11	0.00	0.01	Open
P253	J114	J108	349.43	12.00	110.00	-40.32	0.11	0.00	0.01	Open
P255	J232	J104	74.82	12.00	110.00	-44.33	0.13	0.00	0.01	Open
P257	J234	J106	73.87	12.00	110.00	-40.32	0.11	0.00	0.01	Open
P259	J110	J232	282.91	12.00	110.00	-44.33	0.13	0.00	0.01	Open

P261	J108	J234	277.93	12.00	110.00	-40.32	0.11	0.00	0.01	Open
P263	J112	J110	349.34	12.00	110.00	-44.33	0.13	0.00	0.01	Open
P265	J116	J112	99.58	12.00	110.00	-44.33	0.13	0.00	0.01	Open
P267	J120	J116	736.13	12.00	110.00	-39.09	0.11	0.01	0.01	Open
P27	J36	J38	486.91	10.00	110.00	0.00	0.00	0.00	0.00	Open
P275	J188	J238	265.60	12.00	110.00	0.00	0.00	0.00	0.00	Open
P277	J238	J268	110.21	12.00	110.00	0.00	0.00	0.00	0.00	Open
P279	J226	J240	90.55	12.00	110.00	7.05	0.02	0.00	0.00	Open
P281	J240	J148	113.24	12.00	110.00	-2.22	0.01	0.00	0.00	Open
P283	J130	V70	7.26	12.00	110.00	0.00	0.00	0.00	0.00	Open
P285	V70	J124	34.69	12.00	110.00	0.00	0.00	0.00	0.00	Open
P287	J242	J30	284.79	10.00	110.00	-12.58	0.05	0.00	0.00	Open
P289	J266	J26	292.74	16.00	110.00	12.58	0.02	0.00	0.00	Open
P29	J40	J174	373.31	16.00	110.00	-13.34	0.02	0.00	0.00	Open
P291	J242	J244	173.50	8.00	110.00	4.31	0.03	0.00	0.00	Open
P293	J244	J256	406.73	8.00	110.00	4.31	0.03	0.00	0.00	Open
P295	J256	J258	837.21	8.00	110.00	4.31	0.03	0.00	0.00	Open
P297	J258	J246	338.75	8.00	110.00	4.31	0.03	0.00	0.00	Open
P299	J246	J248	107.31	8.00	110.00	4.31	0.03	0.00	0.00	Open
P301	J248	J250	85.21	10.00	110.00	12.58	0.05	0.00	0.00	Open
P303	J250	J260	700.67	10.00	110.00	12.58	0.05	0.00	0.00	Open
P305	J260	J262	122.94	10.00	110.00	12.58	0.05	0.00	0.00	Open
P307	J262	J264	198.09	16.00	110.00	0.00	0.00	0.00	0.00	Open
P309	J266	J262	365.10	16.00	110.00	-12.58	0.02	0.00	0.00	Open
P31	J44	J46	1968.92	8.00	110.00	0.00	0.00	0.00	0.00	Open
P311	J242	J254	489.39	10.00	110.00	8.27	0.03	0.00	0.00	Open
P313	J254	J252	382.47	10.00	110.00	8.27	0.03	0.00	0.00	Open
P315	J252	J248	782.20	10.00	110.00	8.27	0.03	0.00	0.00	Open
P317	J138	J140	10.00	12.00	110.00	40.32	0.11	0.00	0.01	Open
P319	J268	J186	129.68	12.00	110.00	-12.67	0.04	0.00	0.00	Open
P321	J268	V80	39.89	12.00	110.00	12.67	0.04	0.00	0.00	Open
P323	V80	J206	133.76	12.00	110.00	12.67	0.04	0.00	0.00	Open
P325	V82	J131	17.69	12.00	110.00	-7.54	0.02	0.00	0.00	Open
P327	J148	V84	50.64	12.00	110.00	-9.76	0.03	0.00	0.00	Open
P329	V84	J152	75.36	12.00	110.00	-9.76	0.03	0.00	0.00	Open
P33	J46	J48	205.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P331	J174	V86	51.81	12.00	110.00	31.86	0.09	0.00	0.01	Open
P333	V86	J168	141.98	12.00	110.00	31.86	0.09	0.00	0.01	Open
P335	J184	V88	53.93	12.00	110.00	3.08	0.01	0.00	0.00	Open
P337	V88	J186	109.71	12.00	110.00	3.08	0.01	0.00	0.00	Open
P339	J222	V90	38.57	12.00	110.00	-9.28	0.03	0.00	0.00	Open
P341	V90	J180	84.29	12.00	110.00	-9.28	0.03	0.00	0.00	Open
P343	J200	J198	139.86	12.00	110.00	2.34	0.01	0.00	0.00	Open
P35	J50	J46	305.84	8.00	110.00	0.00	0.00	0.00	0.00	Open
P37	J50	J52	152.73	8.00	110.00	-84.66	0.54	0.04	0.26	Open
P39	J54	J56	793.35	8.00	110.00	0.00	0.00	0.00	0.00	Open
P41	J56	J58	6.38	8.00	110.00	84.65	0.54	0.00	0.26	Open
P43	J60	J62	301.77	8.00	110.00	84.65	0.54	0.08	0.26	Open
P45	J60	J64	1753.68	8.00	110.00	-43.19	0.28	0.13	0.07	Open
P47	J60	J64	1,891.65	8.00	110.00	-41.46	0.26	0.13	0.07	Open
P49	J66	J64	15.09	8.00	110.00	84.65	0.54	0.00	0.26	Open
P51	J56	J68	63.37	8.00	110.00	-84.65	0.54	0.02	0.26	Open
P55	J40	J180	463.89	12.00	110.00	25.91	0.07	0.00	0.00	Open
P77	J62	J88	656.68	8.00	110.00	0.00	0.00	0.00	0.00	Open
P79	J38	J104	3.92	10.00	110.00	0.00	0.00	0.00	0.00	Open
P83	J26	J40	10.82	16.00	110.00	12.58	0.02	0.00	0.00	Open
P93	J68	J50	489.59	8.00	110.00	-84.65	0.54	0.13	0.26	Open
P95	J94	J36	83.4	10.00	110.00	0.00	0.00	0.00	0.00	Open
P97	J36	J96	1,836.85	10.00	110.00	0.00	0.00	0.00	0.00	Open
P99	J98	J96	258.47	10.00	110.00	0.00	0.00	0.00	0.00	Open

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD)

Junction Pressures @ Steady State Analysis					
ID	Demand (gpm)	Elevation (ft)	Head (ft)	Pressure (psi)	
J100	0.00	514.00	903.89	168.94	<- Existing Node
J102	0.00	529.15	724.95	84.84	
J104	0.00	546.34	903.89	154.93	<- Existing Node
J106	0.00	547.44	903.89	154.45	<- Existing Node
J108	0.00	563.90	903.88	147.31	<- Zone 2 Public
J110	0.00	563.51	903.88	147.48	<- Zone 2 Public
J112	0.00	569.22	903.87	145.00	<- Existing Node
J114	0.00	569.03	903.87	145.09	<- Existing Node
J116	9.43	570.37	903.87	144.50	<- Zone 2 Public
J118	0.00	570.15	903.87	144.60	<- Zone 2 Public
J120	0.00	570.26	903.85	144.54	<- Zone 2 Public
J122	0.00	570.16	903.85	144.59	<- Zone 2 Public
J124	0.00	568.11	903.84	145.47	<- Zone 2 Public
J126	0.00	567.50	903.85	145.74	<- Zone 2 Public
J128	9.61	567.18	903.84	145.88	<- Zone 2 Public
J130	0.00	568.46	724.95	67.81	
J131	0.00	569.24	724.95	67.47	
J134	0.00	567.79	903.84	145.61	<- Zone 2 Public
J136	0.00	578.39	903.84	141.02	<- Zone 2 Public
J138	0.00	608.80	903.83	127.84	<- Zone 2 Public
J140	133.32	608.62	903.83	127.92	<- Zone 2 Public
J142	0.00	569.15	724.95	67.51	
J144	0.00	568.50	724.95	67.79	
J146	0.00	566.57	724.95	68.63	
J148	0.00	553.12	724.95	74.45	
J152	0.00	560.68	724.95	71.18	
J154	0.00	559.70	724.95	71.60	
J156	23.97	562.73	724.95	70.29	
J158	0.00	562.78	724.95	70.27	
J160	0.00	565.16	724.95	69.24	
J162	0.00	564.42	724.95	69.56	
J164	0.00	561.69	724.95	70.74	
J166	0.00	557.63	724.95	72.50	
J168	15.81	558.00	724.95	72.34	
J170	0.00	558.00	724.95	72.34	
J172	0.00	559.00	724.95	71.91	
J174	0.00	506.35	724.96	94.72	
J180	0.00	512.55	724.95	92.03	
J184	11.16	518.30	724.95	89.54	
J186	0.00	534.62	724.95	82.47	
J188	0.00	549.79	724.95	75.90	
J198	0.00	576.95	724.95	64.13	
J200	0.00	577.56	724.95	63.86	
J202	0.00	575.34	724.95	64.83	
J204	0.00	573.64	724.95	65.56	
J206	36.38	572.69	724.95	65.97	
J208	0.00	573.16	724.95	65.77	
J210	0.00	559.72	724.95	71.59	
J212	0.00	558.67	724.95	72.05	
J216	0.00	560.76	724.95	71.14	
J218	0.00	508.50	724.95	93.79	
J220	0.00	519.99	724.95	88.81	
J222	0.00	514.72	724.95	91.09	
J224	0.00	574.45	724.95	65.21	
J226	0.00	543.15	724.95	78.77	
J232	0.00	549.77	903.89	153.44	<- Zone 2 Public
J234	0.00	549.94	903.89	153.37	<- Zone 2 Public
J238	0.00	542.69	724.95	78.97	
J240	16.68	550.67	724.95	75.52	
J242	0.00	483.00	724.97	104.85	
J244	0.00	476.00	724.97	107.88	
J246	0.00	480.95	724.97	105.73	
J248	0.00	481.38	724.97	105.55	

J250	0.00	483.00	724.96	104.84	
J252	0.00	480.00	724.97	106.14	
J254	0.00	482.00	724.97	105.28	
J256	0.00	478.00	724.97	107.01	
J258	0.00	480.45	724.97	105.95	
J26	0.00	505.00	724.96	95.31	
J260	0.00	488.50	724.96	102.46	
J262	0.00	489.84	724.96	101.88	
J264	0.00	487.22	724.96	103.01	
J266	0.00	491.07	724.96	101.34	
J268	0.00	538.98	724.95	80.58	
J28	0.00	506.71	724.96	94.57	
J30	0.00	506.00	724.97	94.88	
J34	0.00	696.00	725.00	12.57	<- Existing Node
J36	0.00	506.71	903.89	172.10	<- Existing Node
J38	0.00	545.00	903.89	155.51	<- Existing Node
J40	0.00	505.00	724.96	95.31	
J42	0.00	515.00	724.96	90.98	
J44	0.00	724.00	993.84	116.92	
J46	0.00	806.00	993.84	81.39	
J48	0.00	808.00	993.84	80.53	
J50	0.00	821.00	993.84	74.89	
J52	0.00	828.00	993.96	71.91	
J54	0.00	760.00	993.42	101.14	
J56	0.00	764.00	993.42	99.41	
J58	0.00	764.00	993.42	99.41	
J60	0.00	671.00	904.38	101.12	
J62	0.00	661.00	904.15	105.36	
J64	0.00	764.00	904.76	60.99	
J66	0.00	764.00	904.77	61.00	
J68	0.00	761.00	993.47	100.73	
J72	0.00	532.22	724.95	83.51	
J88	0.00	724.00	904.15	78.06	
J94	0.00	515.00	903.89	168.51	<- Existing Node
J96	0.00	510.05	903.89	170.65	<- Existing Node
J98	0.00	539.00	903.89	158.11	<- Existing Node

Tank Results @ Steady State Analysis

ID	Flow (gpm)	Elevation (ft)	Head (ft)	% Full (%)	Level (ft)
T5000	-104.00	701.00	725.00	100.00	24.00
T5002	0.00	817.00	832.00	100.00	15.00
T5004	-152.36	979.00	994.00	100.00	15.00

Valve Results @ Steady State Analysis

ID	Diameter (in)	Elevation (ft)	Upstream Pressure (psi)	Downstream Pressure (psi)	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Status	Setting	
V70	12.00	568.00	68.01	145.52	0.00	0.00	0.00	Closed	68.00	<- PRV
V72	8.00	515.00	90.98	168.51	0.00	0.00	0.00	Closed	91.00	<- PRV
V74	8.00	724.00	116.92	78.06	0.00	0.00	0.00	Closed	65.00	<- PRV
V76	8.00	764.00	99.40	61.00	152.36	0.97	88.63	Active	61.00	<- PRV
V80	12.00	539.00	80.57	80.57	22.78	0.06	0.00	Active	0.00	<- DCDA
V82	12.00	569.00	67.57	67.57	-13.60	0.04	0.00	Active	0.00	<- DCDA
V84	12.00	554.08	74.04	74.04	-17.29	0.05	0.00	Active	0.00	<- DCDA
V86	12.00	508.58	93.76	93.76	57.07	0.16	0.00	Active	0.00	<- DCDA
V88	12.00	519.92	88.84	88.84	5.59	0.02	0.00	Active	0.00	<- DCDA
V90	12.00	516.88	90.16	90.16	-16.75	0.05	0.00	Active	0.00	<- DCDA

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD)

Pipe Pressures @ Steady State Analysis										
ID	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P101	J96	J100	1197.30	10.00	110.00	0.00	0.00	0.00	0.00	Open
P109	J58	V76	8.08	8.00	110.00	152.36	0.97	0.01	0.76	Open
P111	J44	V74	8.21	8.00	110.00	0.00	0.00	0.00	0.00	Open
P113	J42	V72	7.49	8.00	110.00	0.00	0.00	0.00	0.00	Open
P115	V74	J88	7.79	8.00	110.00	0.00	0.00	0.00	0.00	Open
P117	V76	J66	6.84	8.00	110.00	152.36	0.97	0.01	0.77	Open
P119	V72	J94	8.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P121	T5000	J34	32.53	16.00	110.00	104.00	0.17	0.00	0.01	Open
P123	T5002	J98	31.29	10.00	110.00	0.00	0.00	0.00	0.00	Closed
P125	T5004	J52	52.18	8.00	110.00	152.36	0.97	0.04	0.76	Open
P127	J28	J42	13.30	8.00	110.00	0.00	0.00	0.00	0.00	Open
P131	J104	J106	9.91	10.00	110.00	-79.79	0.33	0.00	0.08	Open
P133	J106	J62	992.09	10.00	110.00	-152.36	0.62	0.26	0.26	Open
P135	J174	J28	98.75	16.00	110.00	-81.36	0.13	0.00	0.01	Open
P137	J180	J72	327.02	12.00	110.00	30.19	0.09	0.00	0.01	Open
P139	J220	J218	340.80	12.00	110.00	-16.75	0.05	0.00	0.00	Open
P141	J218	J222	212.61	12.00	110.00	-16.75	0.05	0.00	0.00	Open
P147	J220	J102	193.53	12.00	110.00	16.75	0.05	0.00	0.00	Open
P149	J102	J184	107.38	12.00	110.00	16.75	0.05	0.00	0.00	Open
P155	J186	J72	51.02	12.00	110.00	-30.19	0.09	0.00	0.00	Open
P157	J206	J198	852.15	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P169	J200	J202	281.96	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P171	J202	J224	157.02	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P173	J224	J204	98.31	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P175	J204	J142	791.86	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P177	J130	J144	49.71	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P179	J144	J146	52.37	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P181	J146	J148	313.87	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P187	J152	J154	54.60	12.00	110.00	-5.96	0.02	0.00	0.00	Open
P189	J154	J156	448.00	12.00	110.00	-5.96	0.02	0.00	0.00	Open
P191	J156	J158	21.00	12.00	110.00	-29.93	0.08	0.00	0.01	Open
P193	J158	J162	328.37	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P195	J162	J164	105.94	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P197	J164	J172	438.58	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P199	J172	J170	52.65	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P201	J170	J168	13.94	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P207	J166	J168	358.04	12.00	110.00	-23.82	0.07	0.00	0.00	Open
P209	J212	J166	332.07	12.00	110.00	-11.32	0.03	0.00	0.00	Open
P21	J28	J30	1729.62	16.00	110.00	-81.36	0.13	0.01	0.01	Open
P211	J210	J212	239.99	12.00	110.00	-11.32	0.03	0.00	0.00	Open
P213	J216	J210	147.78	12.00	110.00	-11.32	0.03	0.00	0.00	Open
P215	J152	J216	230.51	12.00	110.00	-11.32	0.03	0.00	0.00	Open
P217	J160	J156	205.27	12.00	110.00	0.00	0.00	0.00	0.00	Open
P219	J158	J166	558.00	12.00	110.00	-12.50	0.04	0.00	0.00	Open
P221	J206	J208	116.69	12.00	110.00	-9.38	0.03	0.00	0.00	Open
P223	J186	J226	198.28	12.00	110.00	12.99	0.04	0.00	0.00	Open
P225	J208	J142	411.04	12.00	110.00	-9.38	0.03	0.00	0.00	Open
P227	J142	V82	25.57	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P229	J131	J130	10.00	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P235	J134	J124	12.11	12.00	110.00	-60.75	0.17	0.00	0.02	Open
P237	J124	J128	45.00	12.00	110.00	-60.75	0.17	0.00	0.02	Open
P239	J136	J126	52.00	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P241	J136	J138	376.61	12.00	110.00	72.57	0.21	0.01	0.03	Open
P243	J140	J134	371.72	12.00	110.00	-60.75	0.17	0.01	0.02	Open
P245	J126	J122	186.26	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P247	J128	J120	193.90	12.00	110.00	-70.36	0.20	0.00	0.03	Open
P249	J122	J118	742.63	12.00	110.00	-72.57	0.21	0.02	0.03	Open
P25	J30	J34	2050.25	16.00	110.00	-104.00	0.17	0.03	0.01	Open
P251	J118	J114	107.86	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P253	J114	J108	349.43	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P255	J232	J104	74.82	12.00	110.00	-79.79	0.23	0.00	0.03	Open
P257	J234	J106	73.87	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P259	J110	J232	282.91	12.00	110.00	-79.79	0.23	0.01	0.03	Open

P261	J108	J234	277.93	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P263	J112	J110	349.34	12.00	110.00	-79.79	0.23	0.01	0.03	Open
P265	J116	J112	99.58	12.00	110.00	-79.79	0.23	0.00	0.03	Open
P267	J120	J116	736.13	12.00	110.00	-70.36	0.20	0.02	0.03	Open
P27	J36	J38	486.91	10.00	110.00	0.00	0.00	0.00	0.00	Open
P275	J188	J238	265.60	12.00	110.00	0.00	0.00	0.00	0.00	Open
P277	J238	J268	110.21	12.00	110.00	0.00	0.00	0.00	0.00	Open
P279	J226	J240	90.55	12.00	110.00	12.99	0.04	0.00	0.00	Open
P281	J240	J148	113.24	12.00	110.00	-3.69	0.01	0.00	0.00	Open
P283	J130	V70	7.26	12.00	110.00	0.00	0.00	0.00	0.00	Open
P285	V70	J124	34.69	12.00	110.00	0.00	0.00	0.00	0.00	Open
P287	J242	J30	284.79	10.00	110.00	-22.65	0.09	0.00	0.01	Open
P289	J266	J26	292.74	16.00	110.00	22.65	0.04	0.00	0.00	Open
P29	J40	J174	373.31	16.00	110.00	-24.29	0.04	0.00	0.00	Open
P291	J242	J244	173.50	8.00	110.00	7.76	0.05	0.00	0.00	Open
P293	J244	J256	406.73	8.00	110.00	7.76	0.05	0.00	0.00	Open
P295	J256	J258	837.21	8.00	110.00	7.76	0.05	0.00	0.00	Open
P297	J258	J246	338.75	8.00	110.00	7.76	0.05	0.00	0.00	Open
P299	J246	J248	107.31	8.00	110.00	7.76	0.05	0.00	0.00	Open
P301	J248	J250	85.21	10.00	110.00	22.65	0.09	0.00	0.01	Open
P303	J250	J260	700.67	10.00	110.00	22.65	0.09	0.01	0.01	Open
P305	J260	J262	122.94	10.00	110.00	22.65	0.09	0.00	0.01	Open
P307	J262	J264	198.09	16.00	110.00	0.00	0.00	0.00	0.00	Open
P309	J266	J262	365.10	16.00	110.00	-22.65	0.04	0.00	0.00	Open
P31	J44	J46	1968.92	8.00	110.00	0.00	0.00	0.00	0.00	Open
P311	J242	J254	489.39	10.00	110.00	14.89	0.06	0.00	0.00	Open
P313	J254	J252	382.47	10.00	110.00	14.89	0.06	0.00	0.00	Open
P315	J252	J248	782.20	10.00	110.00	14.89	0.06	0.00	0.00	Open
P317	J138	J140	10.00	12.00	110.00	72.57	0.21	0.00	0.02	Open
P319	J268	J186	129.68	12.00	110.00	-22.78	0.06	0.00	0.00	Open
P321	J268	V80	39.89	12.00	110.00	22.78	0.06	0.00	0.00	Open
P323	V80	J206	133.76	12.00	110.00	22.78	0.06	0.00	0.00	Open
P325	V82	J131	17.69	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P327	J148	V84	50.64	12.00	110.00	-17.29	0.05	0.00	0.00	Open
P329	V84	J152	75.36	12.00	110.00	-17.29	0.05	0.00	0.00	Open
P33	J46	J48	205.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P331	J174	V86	51.81	12.00	110.00	57.07	0.16	0.00	0.02	Open
P333	V86	J168	141.98	12.00	110.00	57.07	0.16	0.00	0.02	Open
P335	J184	V88	53.93	12.00	110.00	5.59	0.02	0.00	0.00	Open
P337	V88	J186	109.71	12.00	110.00	5.59	0.02	0.00	0.00	Open
P339	J222	V90	38.57	12.00	110.00	-16.75	0.05	0.00	0.00	Open
P341	V90	J180	84.29	12.00	110.00	-16.75	0.05	0.00	0.00	Open
P343	J200	J198	139.86	12.00	110.00	4.22	0.01	0.00	0.00	Open
P35	J50	J46	305.84	8.00	110.00	0.00	0.00	0.00	0.00	Open
P37	J50	J52	152.73	8.00	110.00	-152.36	0.97	0.12	0.76	Open
P39	J54	J56	793.35	8.00	110.00	0.00	0.00	0.00	0.00	Open
P41	J56	J58	6.38	8.00	110.00	152.36	0.97	0.00	0.77	Open
P43	J60	J62	301.77	8.00	110.00	152.36	0.97	0.23	0.76	Open
P45	J60	J64	1753.68	8.00	110.00	-77.74	0.50	0.38	0.22	Open
P47	J60	J64	1,891.65	8.00	110.00	-74.62	0.48	0.38	0.20	Open
P49	J66	J64	15.09	8.00	110.00	152.36	0.97	0.01	0.76	Open
P51	J56	J68	63.37	8.00	110.00	-152.36	0.97	0.05	0.76	Open
P55	J40	J180	463.89	12.00	110.00	46.93	0.13	0.01	0.01	Open
P77	J62	J88	656.68	8.00	110.00	0.00	0.00	0.00	0.00	Open
P79	J38	J104	3.92	10.00	110.00	0.00	0.00	0.00	0.00	Open
P83	J26	J40	10.82	16.00	110.00	22.65	0.04	0.00	0.01	Open
P93	J68	J50	489.59	8.00	110.00	-152.36	0.97	0.37	0.76	Open
P95	J94	J36	83.4	10.00	110.00	0.00	0.00	0.00	0.00	Open
P97	J36	J96	1,836.85	10.00	110.00	0.00	0.00	0.00	0.00	Open
P99	J98	J96	258.47	10.00	110.00	0.00	0.00	0.00	0.00	Open

ONSITE WATER DEMANDS ANALYSIS RESULTS

Peak Hour Demand (PHD)

Junction Pressures @ Steady State Analysis					
ID	Demand (gpm)	Elevation (ft)	Head (ft)	Pressure (psi)	
FFJ140	167.98	608.62	903.33	127.70	<- Existing Node
J100	0.00	514.00	903.42	168.73	
J102	0.00	529.15	724.78	84.77	<- Existing Node
J104	0.00	546.34	903.42	154.72	<- Existing Node
J106	0.00	547.44	903.42	154.25	<- Zone 2 Public
J108	0.00	563.90	903.40	147.11	<- Zone 2 Public
J110	0.00	563.51	903.40	147.27	<- Existing Node
J112	0.00	569.22	903.38	144.79	<- Existing Node
J114	0.00	569.03	903.39	144.88	<- Zone 2 Public
J116	11.88	570.37	903.38	144.29	<- Zone 2 Public
J118	0.00	570.15	903.39	144.39	<- Zone 2 Public
J120	0.00	570.26	903.35	144.33	<- Zone 2 Public
J122	0.00	570.16	903.35	144.37	<- Zone 2 Public
J124	0.00	568.11	903.34	145.26	<- Zone 2 Public
J126	0.00	567.50	903.35	145.52	<- Zone 2 Public
J128	12.10	567.18	903.34	145.66	
J130	0.00	568.46	724.77	67.73	
J131	0.00	569.24	724.77	67.39	<- Zone 2 Public
J134	0.00	567.79	903.34	145.39	<- Zone 2 Public
J136	0.00	578.39	903.35	140.80	<- Zone 2 Public
J138	0.00	608.80	903.33	127.62	<- Zone 2 Public
J142	0.00	569.15	724.77	67.43	
J144	0.00	568.50	724.77	67.71	
J146	0.00	566.57	724.77	68.55	
J148	0.00	553.12	724.78	74.38	
J152	0.00	560.68	724.78	71.10	
J154	0.00	559.70	724.78	71.53	
J156	53.93	562.73	724.78	70.22	
J158	0.00	562.78	724.78	70.19	
J160	0.00	565.16	724.78	69.16	
J162	0.00	564.42	724.78	69.48	
J164	0.00	561.69	724.78	70.67	
J166	0.00	557.63	724.78	72.43	
J168	35.57	558.00	724.79	72.27	
J170	0.00	558.00	724.79	72.27	
J172	0.00	559.00	724.79	71.83	
J174	0.00	506.35	724.81	94.66	
J180	0.00	512.55	724.79	91.96	
J184	25.10	518.30	724.78	89.47	
J186	0.00	534.62	724.78	82.39	
J188	0.00	549.79	724.77	75.82	
J198	0.00	576.95	724.77	64.05	
J200	0.00	577.56	724.77	63.79	
J202	0.00	575.34	724.77	64.75	
J204	0.00	573.64	724.77	65.49	
J206	81.85	572.69	724.77	65.90	
J208	0.00	573.16	724.77	65.69	
J210	0.00	559.72	724.78	71.52	
J212	0.00	558.67	724.78	71.98	
J216	0.00	560.76	724.78	71.07	
J218	0.00	508.50	724.78	93.72	
J220	0.00	519.99	724.78	88.74	
J222	0.00	514.72	724.78	91.02	
J224	0.00	574.45	724.77	65.13	
J226	0.00	543.15	724.78	78.70	
J232	0.00	549.77	903.41	153.23	<- Zone 2 Public
J234	0.00	549.94	903.42	153.16	<- Zone 2 Public
J238	0.00	542.69	724.77	78.90	
J240	37.54	550.67	724.78	75.44	
J242	0.00	483.00	724.87	104.80	
J244	0.00	476.00	724.87	107.83	
J246	0.00	480.95	724.85	105.68	
J248	0.00	481.38	724.84	105.49	

J250	0.00	483.00	724.84	104.79	
J252	0.00	480.00	724.86	106.10	
J254	0.00	482.00	724.86	105.23	
J256	0.00	478.00	724.86	106.97	
J258	0.00	480.45	724.85	105.90	
J26	0.00	505.00	724.81	95.24	
J260	0.00	488.50	724.82	102.40	
J262	0.00	489.84	724.81	101.81	
J264	0.00	487.22	724.81	102.95	
J266	0.00	491.07	724.81	101.28	
J268	0.00	538.98	724.77	80.50	
J28	0.00	506.71	724.82	94.51	
J30	0.00	506.00	724.88	94.84	
J34	0.00	696.00	725.00	12.56	<- Existing Node
J36	0.00	506.71	903.42	171.89	<- Existing Node
J38	0.00	545.00	903.42	155.30	<- Existing Node
J40	0.00	505.00	724.81	95.24	
J42	0.00	515.00	724.82	90.91	
J44	0.00	724.00	993.76	116.89	
J46	0.00	806.00	993.76	81.36	
J48	0.00	808.00	993.76	80.49	
J50	0.00	821.00	993.76	74.86	
J52	0.00	828.00	993.94	71.90	
J54	0.00	760.00	993.11	101.01	
J56	0.00	764.00	993.11	99.27	
J58	0.00	764.00	993.11	99.27	
J60	0.00	671.00	904.16	101.03	
J62	0.00	661.00	903.81	105.21	
J64	0.00	764.00	904.75	60.99	
J66	0.00	764.00	904.77	61.00	
J68	0.00	761.00	993.19	100.61	
J72	0.00	532.22	724.78	83.44	
J88	0.00	724.00	903.81	77.91	
J94	0.00	515.00	903.42	168.30	<- Existing Node
J96	0.00	510.05	903.42	170.45	<- Existing Node
J98	0.00	539.00	903.42	157.90	<- Existing Node

Tank Results @ Steady State Analysis

ID	Flow (gpm)	Elevation (ft)	Head (ft)	% Full (%)	Level (ft)
T5000	-233.99	701.00	725.00	100.00	24.00
T5002	0.00	817.00	832.00	100.00	15.00
T5004	-191.96	979.00	994.00	100.00	15.00

Valve Results @ Steady State Analysis

ID	Diameter (in)	Elevation (ft)	Upstream Pressure (psi)	Downstream Pressure (psi)	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Status	Setting	
V70	12.00	568.00	67.93	145.30	0.00	0.00	0.00	Closed	68.00	<- PRV
V72	8.00	515.00	90.91	168.30	0.00	0.00	0.00	Closed	91.00	<- PRV
V74	8.00	724.00	116.89	77.91	0.00	0.00	0.00	Closed	65.00	<- PRV
V76	8.00	764.00	99.27	61.00	191.96	1.23	88.32	Active	61.00	<- PRV
V80	12.00	539.00	80.50	80.50	51.20	0.15	0.00	Active	0.00	<- DCDA
V82	12.00	569.00	67.50	67.50	-30.65	0.09	0.00	Active	0.00	<- DCDA
V84	12.00	554.08	73.96	73.96	-37.92	0.11	0.00	Active	0.00	<- DCDA
V86	12.00	508.58	93.69	93.69	127.42	0.36	0.01	Active	0.00	<- DCDA
V88	12.00	519.92	88.76	88.76	12.73	0.04	0.00	Active	0.00	<- DCDA
V90	12.00	516.88	90.08	90.09	-37.83	0.11	0.00	Active	0.00	<- DCDA

ONSITE WATER DEMANDS ANALYSIS RESULTS

Peak Hour Demand (PHD)

Pipe Pressures @ Steady State Analysis										
ID	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P101	J96	J100	1197.30	10.00	110.00	0.00	0.00	0.00	0.00	Open
P109	J58	V76	8.08	8.00	110.00	191.96	1.23	0.01	1.17	Open
P111	J44	V74	8.21	8.00	110.00	0.00	0.00	0.00	0.00	Open
P113	J42	V72	7.49	8.00	110.00	0.00	0.00	0.00	0.00	Open
P115	V74	J88	7.79	8.00	110.00	0.00	0.00	0.00	0.00	Open
P117	V76	J66	6.84	8.00	110.00	191.96	1.23	0.01	1.18	Open
P119	V72	J94	8.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P121	T5000	J34	32.53	16.00	110.00	233.99	0.37	0.00	0.06	Open
P123	T5002	J98	31.29	10.00	110.00	0.00	0.00	0.00	0.00	Closed
P125	T5004	J52	52.18	8.00	110.00	191.96	1.23	0.06	1.17	Open
P127	J28	J42	13.30	8.00	110.00	0.00	0.00	0.00	0.00	Open
P131	J104	J106	9.91	10.00	110.00	-100.52	0.41	0.00	0.12	Open
P133	J106	J62	992.09	10.00	110.00	-191.96	0.78	0.39	0.39	Open
P135	J174	J28	98.75	16.00	110.00	-183.02	0.29	0.00	0.04	Open
P137	J180	J72	327.02	12.00	110.00	68.74	0.20	0.01	0.02	Open
P139	J220	J218	340.80	12.00	110.00	-37.83	0.11	0.00	0.01	Open
P141	J218	J222	212.61	12.00	110.00	-37.83	0.11	0.00	0.01	Open
P147	J220	J102	193.53	12.00	110.00	37.83	0.11	0.00	0.01	Open
P149	J102	J184	107.38	12.00	110.00	37.83	0.11	0.00	0.01	Open
P155	J186	J72	51.02	12.00	110.00	-68.74	0.20	0.00	0.03	Open
P157	J206	J198	852.15	12.00	110.00	-9.50	0.03	0.00	0.00	Open
P169	J200	J202	281.96	12.00	110.00	-9.50	0.03	0.00	0.00	Open
P171	J202	J224	157.02	12.00	110.00	-9.50	0.03	0.00	0.00	Open
P173	J224	J204	98.31	12.00	110.00	-9.50	0.03	0.00	0.00	Open
P175	J204	J142	791.86	12.00	110.00	-9.50	0.03	0.00	0.00	Open
P177	J130	J144	49.71	12.00	110.00	-30.65	0.09	0.00	0.00	Open
P179	J144	J146	52.37	12.00	110.00	-30.65	0.09	0.00	0.01	Open
P181	J146	J148	313.87	12.00	110.00	-30.65	0.09	0.00	0.01	Open
P187	J152	J154	54.60	12.00	110.00	-12.81	0.04	0.00	0.00	Open
P189	J154	J156	448.00	12.00	110.00	-12.81	0.04	0.00	0.00	Open
P191	J156	J158	21.00	12.00	110.00	-66.74	0.19	0.00	0.02	Open
P193	J158	J162	328.37	12.00	110.00	-38.84	0.11	0.00	0.01	Open
P195	J162	J164	105.94	12.00	110.00	-38.84	0.11	0.00	0.01	Open
P197	J164	J172	438.58	12.00	110.00	-38.84	0.11	0.00	0.01	Open
P199	J172	J170	52.65	12.00	110.00	-38.84	0.11	0.00	0.01	Open
P201	J170	J168	13.94	12.00	110.00	-38.84	0.11	0.00	0.01	Open
P207	J166	J168	358.04	12.00	110.00	-53.02	0.15	0.01	0.02	Open
P209	J212	J166	332.07	12.00	110.00	-25.12	0.07	0.00	0.00	Open
P21	J28	J30	1729.62	16.00	110.00	-183.02	0.29	0.06	0.04	Open
P211	J210	J212	239.99	12.00	110.00	-25.12	0.07	0.00	0.00	Open
P213	J216	J210	147.78	12.00	110.00	-25.12	0.07	0.00	0.00	Open
P215	J152	J216	230.51	12.00	110.00	-25.12	0.07	0.00	0.00	Open
P217	J160	J156	205.27	12.00	110.00	0.00	0.00	0.00	0.00	Open
P219	J158	J166	558.00	12.00	110.00	-27.90	0.08	0.00	0.00	Open
P221	J206	J208	116.69	12.00	110.00	-21.15	0.06	0.00	0.00	Open
P223	J186	J226	198.28	12.00	110.00	30.27	0.09	0.00	0.01	Open
P225	J208	J142	411.04	12.00	110.00	-21.15	0.06	0.00	0.00	Open
P227	J142	V82	25.57	12.00	110.00	-30.65	0.09	0.00	0.00	Open
P229	J131	J130	10.00	12.00	110.00	-30.65	0.09	0.00	0.01	Open
P235	J134	J124	12.11	12.00	110.00	-76.54	0.22	0.00	0.03	Open
P237	J124	J128	45.00	12.00	110.00	-76.54	0.22	0.00	0.03	Open
P239	J136	J126	52.00	12.00	110.00	-91.44	0.26	0.00	0.04	Open
P241	J136	J138	376.61	12.00	110.00	91.44	0.26	0.02	0.04	Open
P243	FFJ140	J134	371.72	12.00	110.00	-76.54	0.22	0.01	0.03	Open
P245	J126	J122	186.26	12.00	110.00	-91.44	0.26	0.01	0.04	Open
P247	J128	J120	193.90	12.00	110.00	-88.64	0.25	0.01	0.04	Open
P249	J122	J118	742.63	12.00	110.00	-91.44	0.26	0.03	0.04	Open
P25	J30	J34	2050.25	16.00	110.00	-233.99	0.37	0.12	0.06	Open
P251	J118	J114	107.86	12.00	110.00	-91.44	0.26	0.00	0.04	Open
P253	J114	J108	349.43	12.00	110.00	-91.44	0.26	0.01	0.04	Open
P255	J232	J104	74.82	12.00	110.00	-100.52	0.29	0.00	0.05	Open
P257	J234	J106	73.87	12.00	110.00	-91.44	0.26	0.00	0.04	Open
P259	J110	J232	282.91	12.00	110.00	-100.52	0.29	0.01	0.05	Open

P261	J108	J234	277.93	12.00	110.00	-91.44	0.26	0.01	0.04	Open
P263	J112	J110	349.34	12.00	110.00	-100.52	0.29	0.02	0.05	Open
P265	J116	J112	99.58	12.00	110.00	-100.52	0.29	0.00	0.05	Open
P267	J120	J116	736.13	12.00	110.00	-88.64	0.25	0.03	0.04	Open
P27	J36	J38	486.91	10.00	110.00	0.00	0.00	0.00	0.00	Open
P275	J188	J238	265.60	12.00	110.00	0.00	0.00	0.00	0.00	Open
P277	J238	J268	110.21	12.00	110.00	0.00	0.00	0.00	0.00	Open
P279	J226	J240	90.55	12.00	110.00	30.27	0.09	0.00	0.01	Open
P281	J240	J148	113.24	12.00	110.00	-7.27	0.02	0.00	0.00	Open
P283	J130	V70	7.26	12.00	110.00	0.00	0.00	0.00	0.00	Open
P285	V70	J124	34.69	12.00	110.00	0.00	0.00	0.00	0.00	Open
P287	J242	J30	284.79	10.00	110.00	-50.97	0.21	0.01	0.03	Open
P289	J266	J26	292.74	16.00	110.00	50.97	0.08	0.00	0.00	Open
P29	J40	J174	373.31	16.00	110.00	-55.60	0.09	0.00	0.00	Open
P291	J242	J244	173.50	8.00	110.00	17.47	0.11	0.00	0.01	Open
P293	J244	J256	406.73	8.00	110.00	17.47	0.11	0.01	0.01	Open
P295	J256	J258	837.21	8.00	110.00	17.47	0.11	0.01	0.01	Open
P297	J258	J246	338.75	8.00	110.00	17.47	0.11	0.00	0.01	Open
P299	J246	J248	107.31	8.00	110.00	17.47	0.11	0.00	0.01	Open
P301	J248	J250	85.21	10.00	110.00	50.97	0.21	0.00	0.03	Open
P303	J250	J260	700.67	10.00	110.00	50.97	0.21	0.02	0.03	Open
P305	J260	J262	122.94	10.00	110.00	50.97	0.21	0.00	0.03	Open
P307	J262	J264	198.09	16.00	110.00	0.00	0.00	0.00	0.00	Open
P309	J266	J262	365.10	16.00	110.00	-50.97	0.08	0.00	0.00	Open
P31	J44	J46	1968.92	8.00	110.00	0.00	0.00	0.00	0.00	Open
P311	J242	J254	489.39	10.00	110.00	33.50	0.14	0.01	0.02	Open
P313	J254	J252	382.47	10.00	110.00	33.50	0.14	0.01	0.02	Open
P315	J252	J248	782.20	10.00	110.00	33.50	0.14	0.01	0.02	Open
P317	J138	FFJ140	10.00	12.00	110.00	91.44	0.26	0.00	0.04	Open
P319	J268	J186	129.68	12.00	110.00	-51.20	0.15	0.00	0.01	Open
P321	J268	V80	39.89	12.00	110.00	51.20	0.15	0.00	0.02	Open
P323	V80	J206	133.76	12.00	110.00	51.20	0.15	0.00	0.01	Open
P325	V82	J131	17.69	12.00	110.00	-30.65	0.09	0.00	0.01	Open
P327	J148	V84	50.64	12.00	110.00	-37.92	0.11	0.00	0.01	Open
P329	V84	J152	75.36	12.00	110.00	-37.92	0.11	0.00	0.01	Open
P33	J46	J48	205.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P331	J174	V86	51.81	12.00	110.00	127.42	0.36	0.00	0.08	Open
P333	V86	J168	141.98	12.00	110.00	127.42	0.36	0.01	0.08	Open
P335	J184	V88	53.93	12.00	110.00	12.73	0.04	0.00	0.00	Open
P337	V88	J186	109.71	12.00	110.00	12.73	0.04	0.00	0.00	Open
P339	J222	V90	38.57	12.00	110.00	-37.83	0.11	0.00	0.01	Open
P341	V90	J180	84.29	12.00	110.00	-37.83	0.11	0.00	0.01	Open
P343	J200	J198	139.86	12.00	110.00	9.50	0.03	0.00	0.00	Open
P35	J50	J46	305.84	8.00	110.00	0.00	0.00	0.00	0.00	Open
P37	J50	J52	152.73	8.00	110.00	-191.96	1.23	0.18	1.17	Open
P39	J54	J56	793.35	8.00	110.00	0.00	0.00	0.00	0.00	Open
P41	J56	J58	6.38	8.00	110.00	191.96	1.23	0.01	1.18	Open
P43	J60	J62	301.77	8.00	110.00	191.96	1.23	0.35	1.17	Open
P45	J60	J64	1753.68	8.00	110.00	-97.94	0.63	0.59	0.34	Open
P47	J60	J64	1,891.65	8.00	110.00	-94.02	0.60	0.59	0.31	Open
P49	J66	J64	15.09	8.00	110.00	191.96	1.23	0.02	1.17	Open
P51	J56	J68	63.37	8.00	110.00	-191.96	1.23	0.07	1.17	Open
P55	J40	J180	463.89	12.00	110.00	106.57	0.30	0.03	0.05	Open
P77	J62	J88	656.68	8.00	110.00	0.00	0.00	0.00	0.00	Open
P79	J38	J104	3.92	10.00	110.00	0.00	0.00	0.00	0.00	Open
P83	J26	J40	10.82	16.00	110.00	50.97	0.08	0.00	0.00	Open
P93	J68	J50	489.59	8.00	110.00	-191.96	1.23	0.57	1.17	Open
P95	J94	J36	83.4	10.00	110.00	0.00	0.00	0.00	0.00	Open
P97	J36	J96	1,836.85	10.00	110.00	0.00	0.00	0.00	0.00	Open
P99	J98	J96	258.47	10.00	110.00	0.00	0.00	0.00	0.00	Open

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD) plus Fire Flow at FFJ160

Junction Pressures @ Steady State Analysis					
ID	Demand (gpm)	Elevation (ft)	Head (ft)	Pressure (psi)	
J100	0.00	514.00	903.89	168.94	<- Existing Node
J102	0.00	529.15	691.29	70.25	
J104	0.00	546.34	903.89	154.93	<- Existing Node
J106	0.00	547.44	903.89	154.45	<- Existing Node
J108	0.00	563.90	903.88	147.31	<- Zone 2 Public
J110	0.00	563.51	903.88	147.48	<- Zone 2 Public
J112	0.00	569.22	903.87	145.00	<- Existing Node
J114	0.00	569.03	903.87	145.09	<- Existing Node
J116	9.43	570.37	903.87	144.50	<- Zone 2 Public
J118	0.00	570.15	903.87	144.60	<- Zone 2 Public
J120	0.00	570.26	903.85	144.54	<- Zone 2 Public
J122	0.00	570.16	903.85	144.59	<- Zone 2 Public
J124	0.00	568.11	903.84	145.47	<- Zone 2 Public
J126	0.00	567.50	903.85	145.74	<- Zone 2 Public
J128	9.61	567.18	903.84	145.88	<- Zone 2 Public
J130	0.00	568.46	690.08	52.70	
J131	0.00	569.24	690.09	52.36	
J134	0.00	567.79	903.84	145.61	<- Zone 2 Public
J136	0.00	578.39	903.84	141.02	<- Zone 2 Public
J138	0.00	608.80	903.83	127.84	<- Zone 2 Public
J140	133.32	608.62	903.83	127.92	<- Zone 2 Public
J142	0.00	569.15	690.27	52.48	
J144	0.00	568.50	690.04	52.66	
J146	0.00	566.57	690.00	53.48	
J148	0.00	553.12	689.75	59.20	
J152	0.00	560.68	687.65	55.02	
J154	0.00	559.70	687.35	55.31	
J156	23.97	562.73	684.87	52.92	
J158	0.00	562.78	685.19	53.04	
J160	3500.00	565.16	677.66	48.74	
J162	0.00	564.42	686.54	52.91	
J164	0.00	561.69	686.97	54.28	
J166	0.00	557.63	687.63	56.33	
J168	15.81	558.00	689.04	56.78	
J170	0.00	558.00	688.98	56.76	
J172	0.00	559.00	688.77	56.23	
J174	0.00	506.35	695.35	81.89	
J180	0.00	512.55	692.14	77.82	
J184	11.16	518.30	691.20	74.92	
J186	0.00	534.62	690.93	67.73	
J188	0.00	549.79	690.81	61.10	
J198	0.00	576.95	690.40	49.16	
J200	0.00	577.56	690.39	48.89	
J202	0.00	575.34	690.36	49.84	
J204	0.00	573.64	690.34	50.57	
J206	36.38	572.69	690.48	51.04	
J208	0.00	573.16	690.43	50.81	
J210	0.00	559.72	687.65	55.43	
J212	0.00	558.67	687.64	55.88	
J216	0.00	560.76	687.65	54.98	
J218	0.00	508.50	691.72	79.39	
J220	0.00	519.99	691.44	74.29	
J222	0.00	514.72	691.89	76.77	
J224	0.00	574.45	690.35	50.22	
J226	0.00	543.15	690.34	63.78	
J232	0.00	549.77	903.89	153.44	<- Zone 2 Public
J234	0.00	549.94	903.89	153.37	<- Zone 2 Public
J238	0.00	542.69	690.81	64.18	
J240	16.68	550.67	690.07	60.40	
J242	0.00	483.00	704.45	95.96	
J244	0.00	476.00	704.07	98.82	
J246	0.00	480.95	700.64	95.19	
J248	0.00	481.38	700.40	94.90	

J250	0.00	483.00	699.95	94.00	
J252	0.00	480.00	702.32	96.33	
J254	0.00	482.00	703.25	95.87	
J256	0.00	478.00	703.19	97.58	
J258	0.00	480.45	701.37	95.73	
J26	0.00	505.00	695.21	82.42	
J260	0.00	488.50	696.22	90.01	
J262	0.00	489.84	695.57	89.14	
J264	0.00	487.22	695.57	90.28	
J266	0.00	491.07	695.37	88.52	
J268	0.00	538.98	690.81	65.79	
J28	0.00	506.71	695.92	81.98	
J30	0.00	506.00	705.97	86.65	
J34	0.00	696.00	724.70	12.44	<- Existing Node
J36	0.00	506.71	903.89	172.10	<- Existing Node
J38	0.00	545.00	903.89	155.51	<- Existing Node
J40	0.00	505.00	695.21	82.42	
J42	0.00	515.00	695.92	78.39	
J44	0.00	724.00	993.84	116.92	
J46	0.00	806.00	993.84	81.39	
J48	0.00	808.00	993.84	80.53	
J50	0.00	821.00	993.84	74.89	
J52	0.00	828.00	993.96	71.91	
J54	0.00	760.00	993.42	101.14	
J56	0.00	764.00	993.42	99.41	
J58	0.00	764.00	993.42	99.41	
J60	0.00	671.00	904.38	101.12	
J62	0.00	661.00	904.15	105.36	
J64	0.00	764.00	904.76	60.99	
J66	0.00	764.00	904.77	61.00	
J68	0.00	761.00	993.47	100.73	
J72	0.00	532.22	691.09	68.84	
J88	0.00	724.00	904.15	78.06	
J94	0.00	515.00	903.89	168.51	<- Existing Node
J96	0.00	510.05	903.89	170.65	<- Existing Node
J98	0.00	539.00	903.89	158.11	<- Existing Node

Tank Results @ Steady State Analysis

ID	Flow (gpm)	Elevation (ft)	Head (ft)	% Full (%)	Level (ft)
T5000	-3604.00	701.00	725.00	100.00	24.00
T5002	0.00	817.00	832.00	100.00	15.00
T5004	-152.36	979.00	994.00	100.00	15.00

Valve Results @ Steady State Analysis

ID	Diameter (in)	Elevation (ft)	Upstream Pressure (psi)	Downstream Pressure (psi)	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Status	Setting	
V70	12.00	568.00	52.90	145.52	0.00	0.00	0.00	Closed	64.06	<- PRV
V72	8.00	515.00	78.39	168.51	0.00	0.00	0.00	Closed	87.00	<- PRV
V74	8.00	724.00	116.92	78.06	0.00	0.00	0.00	Closed	65.00	<- PRV
V76	8.00	764.00	99.40	61.00	152.36	0.97	88.63	Active	61.00	<- PRV
V80	12.00	539.00	65.76	65.69	487.89	1.38	0.17	Active	0.00	<- DCDA
V82	12.00	569.00	52.54	52.47	451.51	1.28	0.15	Active	0.00	<- DCDA
V84	12.00	554.08	58.65	58.08	1355.06	3.84	1.33	Active	0.00	<- DCDA
V86	12.00	508.58	80.60	79.10	2184.72	6.20	3.46	Active	0.00	<- DCDA
V88	12.00	519.92	74.20	74.13	446.17	1.27	0.14	Active	0.00	<- DCDA
V90	12.00	516.88	75.85	75.91	-457.33	1.30	0.15	Active	0.00	<- DCDA

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD) plus Fire Flow at FFJ160

Pipe Pressures @ Steady State Analysis										
ID	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P101	J96	J100	1197.30	10.00	110.00	0.00	0.00	0.00	0.00	Open
P109	J58	V76	8.08	8.00	110.00	152.36	0.97	0.01	0.76	Open
P111	J44	V74	8.21	8.00	110.00	0.00	0.00	0.00	0.00	Open
P113	J42	V72	7.49	8.00	110.00	0.00	0.00	0.00	0.00	Open
P115	V74	J88	7.79	8.00	110.00	0.00	0.00	0.00	0.00	Open
P117	V76	J66	6.84	8.00	110.00	152.36	0.97	0.01	0.77	Open
P119	V72	J94	8.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P121	T5000	J34	32.53	16.00	110.00	3604.00	5.75	0.30	9.14	Open
P123	T5002	J98	31.29	10.00	110.00	0.00	0.00	0.00	0.00	Closed
P125	T5004	J52	52.18	8.00	110.00	152.36	0.97	0.04	0.76	Open
P127	J28	J42	13.30	8.00	110.00	0.00	0.00	0.00	0.00	Open
P131	J104	J106	9.91	10.00	110.00	-79.79	0.33	0.00	0.08	Open
P133	J106	J62	992.09	10.00	110.00	-152.36	0.62	0.26	0.26	Open
P135	J174	J28	98.75	16.00	110.00	-2822.09	4.50	0.57	5.81	Open
P137	J180	J72	327.02	12.00	110.00	961.95	2.73	1.05	3.21	Open
P139	J220	J218	340.80	12.00	110.00	-457.33	1.30	0.28	0.81	Open
P141	J218	J222	212.61	12.00	110.00	-457.33	1.30	0.17	0.81	Open
P147	J220	J102	193.53	12.00	110.00	457.33	1.30	0.16	0.81	Open
P149	J102	J184	107.38	12.00	110.00	457.33	1.30	0.09	0.81	Open
P155	J186	J72	51.02	12.00	110.00	-961.95	2.73	0.16	3.21	Open
P157	J206	J198	852.15	12.00	110.00	140.00	0.40	0.08	0.09	Open
P169	J200	J202	281.96	12.00	110.00	140.00	0.40	0.03	0.09	Open
P171	J202	J224	157.02	12.00	110.00	140.00	0.40	0.01	0.09	Open
P173	J224	J204	98.31	12.00	110.00	140.00	0.40	0.01	0.09	Open
P175	J204	J142	791.86	12.00	110.00	140.00	0.40	0.07	0.09	Open
P177	J130	J144	49.71	12.00	110.00	451.51	1.28	0.04	0.79	Open
P179	J144	J146	52.37	12.00	110.00	451.51	1.28	0.04	0.79	Open
P181	J146	J148	313.87	12.00	110.00	451.51	1.28	0.25	0.79	Open
P187	J152	J154	54.60	12.00	110.00	1290.66	3.66	0.30	5.54	Open
P189	J154	J156	448.00	12.00	110.00	1290.66	3.66	2.48	5.54	Open
P191	J156	J158	21.00	12.00	110.00	-2233.31	6.34	0.32	15.30	Open
P193	J158	J162	328.37	12.00	110.00	-1096.72	3.11	1.35	4.10	Open
P195	J162	J164	105.94	12.00	110.00	-1096.72	3.11	0.43	4.10	Open
P197	J164	J172	438.58	12.00	110.00	-1096.72	3.11	1.80	4.10	Open
P199	J172	J170	52.65	12.00	110.00	-1096.72	3.11	0.22	4.10	Open
P201	J170	J168	13.94	12.00	110.00	-1096.72	3.11	0.06	4.10	Open
P207	J166	J168	358.04	12.00	110.00	-1072.19	3.04	1.41	3.93	Open
P209	J212	J166	332.07	12.00	110.00	64.40	0.18	0.01	0.02	Open
P21	J28	J30	1729.62	16.00	110.00	-2822.09	4.50	10.05	5.81	Open
P211	J210	J212	239.99	12.00	110.00	64.40	0.18	0.01	0.02	Open
P213	J216	J210	147.78	12.00	110.00	64.40	0.18	0.00	0.02	Open
P215	J152	J216	230.51	12.00	110.00	64.40	0.18	0.00	0.02	Open
P217	J160	J156	205.27	12.00	110.00	-3500.00	9.93	7.21	35.15	Open
P219	J158	J166	558.00	12.00	110.00	-1136.58	3.22	2.44	4.38	Open
P221	J206	J208	116.69	12.00	110.00	311.51	0.88	0.05	0.40	Open
P223	J186	J226	198.28	12.00	110.00	920.23	2.61	0.59	2.96	Open
P225	J208	J142	411.04	12.00	110.00	311.51	0.88	0.16	0.40	Open
P227	J142	V82	25.57	12.00	110.00	451.51	1.28	0.02	0.79	Open
P229	J131	J130	10.00	12.00	110.00	451.51	1.28	0.01	0.79	Open
P235	J134	J124	12.11	12.00	110.00	-60.75	0.17	0.00	0.02	Open
P237	J124	J128	45.00	12.00	110.00	-60.75	0.17	0.00	0.02	Open
P239	J136	J126	52.00	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P241	J136	J138	376.61	12.00	110.00	72.57	0.21	0.01	0.03	Open
P243	J140	J134	371.72	12.00	110.00	-60.75	0.17	0.01	0.02	Open
P245	J126	J122	186.26	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P247	J128	J120	193.90	12.00	110.00	-70.36	0.20	0.00	0.03	Open
P249	J122	J118	742.63	12.00	110.00	-72.57	0.21	0.02	0.03	Open
P25	J30	J34	2050.25	16.00	110.00	-3604.00	5.75	18.74	9.14	Open
P251	J118	J114	107.86	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P253	J114	J108	349.43	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P255	J232	J104	74.82	12.00	110.00	-79.79	0.23	0.00	0.03	Open
P257	J234	J106	73.87	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P259	J110	J232	282.91	12.00	110.00	-79.79	0.23	0.01	0.03	Open

P261	J108	J234	277.93	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P263	J112	J110	349.34	12.00	110.00	-79.79	0.23	0.01	0.03	Open
P265	J116	J112	99.58	12.00	110.00	-79.79	0.23	0.00	0.03	Open
P267	J120	J116	736.13	12.00	110.00	-70.36	0.20	0.02	0.03	Open
P27	J36	J38	486.91	10.00	110.00	0.00	0.00	0.00	0.00	Open
P275	J188	J238	265.60	12.00	110.00	0.00	0.00	0.00	0.00	Open
P277	J238	J268	110.21	12.00	110.00	0.00	0.00	0.00	0.00	Open
P279	J226	J240	90.55	12.00	110.00	920.23	2.61	0.27	2.96	Open
P281	J240	J148	113.24	12.00	110.00	903.55	2.56	0.32	2.86	Open
P283	J130	V70	7.26	12.00	110.00	0.00	0.00	0.00	0.00	Open
P285	V70	J124	34.69	12.00	110.00	0.00	0.00	0.00	0.00	Open
P287	J242	J30	284.79	10.00	110.00	-781.91	3.19	1.52	5.32	Open
P289	J266	J26	292.74	16.00	110.00	781.91	1.25	0.16	0.54	Open
P29	J40	J174	373.31	16.00	110.00	-637.37	1.02	0.14	0.37	Open
P291	J242	J244	173.50	8.00	110.00	267.96	1.71	0.38	2.17	Open
P293	J244	J256	406.73	8.00	110.00	267.96	1.71	0.88	2.17	Open
P295	J256	J258	837.21	8.00	110.00	267.96	1.71	1.82	2.17	Open
P297	J258	J246	338.75	8.00	110.00	267.96	1.71	0.74	2.17	Open
P299	J246	J248	107.31	8.00	110.00	267.96	1.71	0.23	2.17	Open
P301	J248	J250	85.21	10.00	110.00	781.91	3.19	0.45	5.32	Open
P303	J250	J260	700.67	10.00	110.00	781.91	3.19	3.73	5.32	Open
P305	J260	J262	122.94	10.00	110.00	781.91	3.19	0.65	5.32	Open
P307	J262	J264	198.09	16.00	110.00	0.00	0.00	0.00	0.00	Open
P309	J266	J262	365.10	16.00	110.00	-781.91	1.25	0.20	0.54	Open
P31	J44	J46	1968.92	8.00	110.00	0.00	0.00	0.00	0.00	Open
P311	J242	J254	489.39	10.00	110.00	513.95	2.10	1.20	2.45	Open
P313	J254	J252	382.47	10.00	110.00	513.95	2.10	0.94	2.45	Open
P315	J252	J248	782.20	10.00	110.00	513.95	2.10	1.91	2.45	Open
P317	J138	J140	10.00	12.00	110.00	72.57	0.21	0.00	0.02	Open
P319	J268	J186	129.68	12.00	110.00	-487.89	1.38	0.12	0.91	Open
P321	J268	V80	39.89	12.00	110.00	487.89	1.38	0.04	0.91	Open
P323	V80	J206	133.76	12.00	110.00	487.89	1.38	0.12	0.91	Open
P325	V82	J131	17.69	12.00	110.00	451.51	1.28	0.01	0.79	Open
P327	J148	V84	50.64	12.00	110.00	1355.06	3.84	0.31	6.06	Open
P329	V84	J152	75.36	12.00	110.00	1355.06	3.84	0.46	6.06	Open
P33	J46	J48	205.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P331	J174	V86	51.81	12.00	110.00	2184.72	6.20	0.76	14.68	Open
P333	V86	J168	141.98	12.00	110.00	2184.72	6.20	2.08	14.68	Open
P335	J184	V88	53.93	12.00	110.00	446.17	1.27	0.04	0.77	Open
P337	V88	J186	109.71	12.00	110.00	446.17	1.27	0.09	0.77	Open
P339	J222	V90	38.57	12.00	110.00	-457.33	1.30	0.03	0.81	Open
P341	V90	J180	84.29	12.00	110.00	-457.33	1.30	0.07	0.81	Open
P343	J200	J198	139.86	12.00	110.00	-140.00	0.40	0.01	0.09	Open
P35	J50	J46	305.84	8.00	110.00	0.00	0.00	0.00	0.00	Open
P37	J50	J52	152.73	8.00	110.00	-152.36	0.97	0.12	0.76	Open
P39	J54	J56	793.35	8.00	110.00	0.00	0.00	0.00	0.00	Open
P41	J56	J58	6.38	8.00	110.00	152.36	0.97	0.00	0.77	Open
P43	J60	J62	301.77	8.00	110.00	152.36	0.97	0.23	0.76	Open
P45	J60	J64	1753.68	8.00	110.00	-77.74	0.50	0.38	0.22	Open
P47	J60	J64	1,891.65	8.00	110.00	-74.62	0.48	0.38	0.20	Open
P49	J66	J64	15.09	8.00	110.00	152.36	0.97	0.01	0.76	Open
P51	J56	J68	63.37	8.00	110.00	-152.36	0.97	0.05	0.76	Open
P55	J40	J180	463.89	12.00	110.00	1419.28	4.03	3.06	6.61	Open
P77	J62	J88	656.68	8.00	110.00	0.00	0.00	0.00	0.00	Open
P79	J38	J104	3.92	10.00	110.00	0.00	0.00	0.00	0.00	Open
P83	J26	J40	10.82	16.00	110.00	781.91	1.25	0.01	0.54	Open
P93	J68	J50	489.59	8.00	110.00	-152.36	0.97	0.37	0.76	Open
P95	J94	J36	83.4	10.00	110.00	0.00	0.00	0.00	0.00	Open
P97	J36	J96	1,836.85	10.00	110.00	0.00	0.00	0.00	0.00	Open
P99	J98	J96	258.47	10.00	110.00	0.00	0.00	0.00	0.00	Open

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD) plus Fire Flow at FFJ202

Junction Pressures @ Steady State Analysis					
ID	Demand (gpm)	Elevation (ft)	Head (ft)	Pressure (psi)	
J100	0.00	514.00	903.89	168.94	<- Existing Node
J102	0.00	529.15	687.39	68.56	
J104	0.00	546.34	903.89	154.93	<- Existing Node
J106	0.00	547.44	903.89	154.45	<- Existing Node
J108	0.00	563.90	903.88	147.31	<- Zone 2 Public
J110	0.00	563.51	903.88	147.48	<- Zone 2 Public
J112	0.00	569.22	903.87	145.00	<- Existing Node
J114	0.00	569.03	903.87	145.09	<- Existing Node
J116	9.43	570.37	903.87	144.50	<- Zone 2 Public
J118	0.00	570.15	903.87	144.60	<- Zone 2 Public
J120	0.00	570.26	903.85	144.54	<- Zone 2 Public
J122	0.00	570.16	903.85	144.59	<- Zone 2 Public
J124	0.00	568.11	903.84	145.47	<- Zone 2 Public
J126	0.00	567.50	903.85	145.74	<- Zone 2 Public
J128	9.61	567.18	903.84	145.88	<- Zone 2 Public
J130	0.00	568.46	683.03	49.64	
J131	0.00	569.24	682.95	49.27	
J134	0.00	567.79	903.84	145.61	<- Zone 2 Public
J136	0.00	578.39	903.84	141.02	<- Zone 2 Public
J138	0.00	608.80	903.83	127.84	<- Zone 2 Public
J140	133.32	608.62	903.83	127.92	<- Zone 2 Public
J142	0.00	569.15	680.60	48.29	
J144	0.00	568.50	683.47	49.81	
J146	0.00	566.57	683.92	50.85	
J148	0.00	553.12	686.65	57.86	
J152	0.00	560.68	689.34	55.75	
J154	0.00	559.70	689.49	56.24	
J156	23.97	562.73	690.68	55.44	
J158	0.00	562.78	690.73	55.44	
J160	0.00	565.16	690.68	54.39	
J162	0.00	564.42	691.19	54.93	
J164	0.00	561.69	691.34	56.18	
J166	0.00	557.63	690.92	57.75	
J168	15.81	558.00	692.04	58.08	
J170	0.00	558.00	692.02	58.07	
J172	0.00	559.00	691.95	57.61	
J174	0.00	506.35	695.42	81.92	
J180	0.00	512.55	689.04	76.47	
J184	11.16	518.30	687.22	73.19	
J186	0.00	534.62	686.68	65.89	
J188	0.00	549.79	685.23	58.68	
J198	0.00	576.95	673.16	41.69	
J200	0.00	577.56	671.92	40.89	
J202	3500.00	575.34	669.43	40.77	
J204	0.00	573.64	672.15	42.69	
J206	36.38	572.69	680.69	46.80	
J208	0.00	573.16	680.67	46.58	
J210	0.00	559.72	689.97	56.44	
J212	0.00	558.67	690.37	57.06	
J216	0.00	560.76	689.72	55.88	
J218	0.00	508.50	688.21	77.87	
J220	0.00	519.99	687.69	72.66	
J222	0.00	514.72	688.54	75.32	
J224	0.00	574.45	671.10	41.88	
J226	0.00	543.15	686.67	62.19	
J232	0.00	549.77	903.89	153.44	<- Zone 2 Public
J234	0.00	549.94	903.89	153.37	<- Zone 2 Public
J238	0.00	542.69	685.23	61.76	
J240	16.68	550.67	686.66	58.92	
J242	0.00	483.00	704.42	95.94	
J244	0.00	476.00	704.03	98.81	
J246	0.00	480.95	700.51	95.14	
J248	0.00	481.38	700.27	94.85	

J250	0.00	483.00	699.81	93.94	
J252	0.00	480.00	702.23	96.29	
J254	0.00	482.00	703.19	95.84	
J256	0.00	478.00	703.12	97.55	
J258	0.00	480.45	701.26	95.68	
J26	0.00	505.00	694.95	82.31	
J260	0.00	488.50	695.99	89.90	
J262	0.00	489.84	695.32	89.03	
J264	0.00	487.22	695.32	90.17	
J266	0.00	491.07	695.12	88.41	
J268	0.00	538.98	685.23	63.37	
J28	0.00	506.71	695.99	82.01	
J30	0.00	506.00	705.97	86.65	
J34	0.00	696.00	724.70	12.44	<- Existing Node
J36	0.00	506.71	903.89	172.10	<- Existing Node
J38	0.00	545.00	903.89	155.51	<- Existing Node
J40	0.00	505.00	694.95	82.30	
J42	0.00	515.00	695.99	78.42	
J44	0.00	724.00	993.84	116.92	
J46	0.00	806.00	993.84	81.39	
J48	0.00	808.00	993.84	80.53	
J50	0.00	821.00	993.84	74.89	
J52	0.00	828.00	993.96	71.91	
J54	0.00	760.00	993.42	101.14	
J56	0.00	764.00	993.42	99.41	
J58	0.00	764.00	993.42	99.41	
J60	0.00	671.00	904.38	101.12	
J62	0.00	661.00	904.15	105.36	
J64	0.00	764.00	904.76	60.99	
J66	0.00	764.00	904.77	61.00	
J68	0.00	761.00	993.47	100.73	
J72	0.00	532.22	687.00	67.07	
J88	0.00	724.00	904.15	78.06	
J94	0.00	515.00	903.89	168.51	<- Existing Node
J96	0.00	510.05	903.89	170.65	<- Existing Node
J98	0.00	539.00	903.89	158.11	<- Existing Node

Tank Results @ Steady State Analysis

ID	Flow (gpm)	Elevation (ft)	Head (ft)	% Full (%)	Level (ft)
T5000	-3604.00	701.00	725.00	100.00	24.00
T5002	0.00	817.00	832.00	100.00	15.00
T5004	-152.37	979.00	994.00	100.00	15.00

Valve Results @ Steady State Analysis

ID	Diameter (in)	Elevation (ft)	Upstream Pressure (psi)	Downstream Pressure (psi)	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Status	Setting	
V70	12.00	568.00	49.84	145.52	0.00	0.00	0.00	Closed	64.06	<- PRV
V72	8.00	515.00	78.42	168.51	0.00	0.00	0.00	Closed	87.00	<- PRV
V74	8.00	724.00	116.92	78.06	0.00	0.00	0.00	Closed	65.00	<- PRV
V76	8.00	764.00	99.40	61.00	152.36	0.97	88.63	Active	61.00	<- PRV
V80	12.00	539.00	63.17	62.04	1889.33	5.36	2.59	Active	0.00	<- DCDA
V82	12.00	569.00	48.45	49.31	-1647.05	4.67	1.97	Active	0.00	<- DCDA
V84	12.00	554.08	57.61	58.36	-1540.39	4.37	1.72	Active	0.00	<- DCDA
V86	12.00	508.58	80.77	79.99	1580.17	4.48	1.81	Active	0.00	<- DCDA
V88	12.00	519.92	72.46	72.33	637.14	1.81	0.29	Active	0.00	<- DCDA
V90	12.00	516.88	74.41	74.54	-648.30	1.84	0.30	Active	0.00	<- DCDA

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD) plus Fire Flow at FFJ202

Pipe Pressures @ Steady State Analysis										
ID	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P101	J96	J100	1197.30	10.00	110.00	0.00	0.00	0.00	0.00	Open
P109	J58	V76	8.08	8.00	110.00	152.36	0.97	0.01	0.76	Open
P111	J44	V74	8.21	8.00	110.00	0.00	0.00	0.00	0.00	Open
P113	J42	V72	7.49	8.00	110.00	0.00	0.00	0.00	0.00	Open
P115	V74	J88	7.79	8.00	110.00	0.00	0.00	0.00	0.00	Open
P117	V76	J66	6.84	8.00	110.00	152.36	0.97	0.01	0.77	Open
P119	V72	J94	8.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P121	T5000	J34	32.53	16.00	110.00	3604.00	5.75	0.30	9.14	Open
P123	T5002	J98	31.29	10.00	110.00	0.00	0.00	0.00	0.00	Closed
P125	T5004	J52	52.18	8.00	110.00	152.37	0.97	0.04	0.76	Open
P127	J28	J42	13.30	8.00	110.00	0.00	0.00	0.00	0.00	Open
P131	J104	J106	9.91	10.00	110.00	-79.79	0.33	0.00	0.08	Open
P133	J106	J62	992.09	10.00	110.00	-152.36	0.62	0.26	0.26	Open
P135	J174	J28	98.75	16.00	110.00	-2811.99	4.49	0.57	5.77	Open
P137	J180	J72	327.02	12.00	110.00	1375.52	3.90	2.04	6.23	Open
P139	J220	J218	340.80	12.00	110.00	-648.30	1.84	0.53	1.55	Open
P141	J218	J222	212.61	12.00	110.00	-648.30	1.84	0.33	1.55	Open
P147	J220	J102	193.53	12.00	110.00	648.30	1.84	0.30	1.55	Open
P149	J102	J184	107.38	12.00	110.00	648.30	1.84	0.17	1.55	Open
P155	J186	J72	51.02	12.00	110.00	-1375.52	3.90	0.32	6.23	Open
P157	J206	J198	852.15	12.00	110.00	1661.07	4.71	7.53	8.84	Open
P169	J200	J202	281.96	12.00	110.00	1661.07	4.71	2.49	8.84	Open
P171	J202	J224	157.02	12.00	110.00	-1838.93	5.22	1.68	10.67	Open
P173	J224	J204	98.31	12.00	110.00	-1838.93	5.22	1.05	10.67	Open
P175	J204	J142	791.86	12.00	110.00	-1838.93	5.22	8.45	10.67	Open
P177	J130	J144	49.71	12.00	110.00	-1647.05	4.67	0.43	8.70	Open
P179	J144	J146	52.37	12.00	110.00	-1647.05	4.67	0.46	8.70	Open
P181	J146	J148	313.87	12.00	110.00	-1647.05	4.67	2.73	8.70	Open
P187	J152	J154	54.60	12.00	110.00	-867.75	2.46	0.14	2.65	Open
P189	J154	J156	448.00	12.00	110.00	-867.75	2.46	1.19	2.66	Open
P191	J156	J158	21.00	12.00	110.00	-891.73	2.53	0.06	2.79	Open
P193	J158	J162	328.37	12.00	110.00	-612.66	1.74	0.46	1.39	Open
P195	J162	J164	105.94	12.00	110.00	-612.66	1.74	0.15	1.39	Open
P197	J164	J172	438.58	12.00	110.00	-612.66	1.74	0.61	1.39	Open
P199	J172	J170	52.65	12.00	110.00	-612.66	1.74	0.07	1.39	Open
P201	J170	J168	13.94	12.00	110.00	-612.66	1.74	0.02	1.40	Open
P207	J166	J168	358.04	12.00	110.00	-951.70	2.70	1.13	3.15	Open
P209	J212	J166	332.07	12.00	110.00	-672.64	1.91	0.55	1.66	Open
P21	J28	J30	1729.62	16.00	110.00	-2811.99	4.49	9.98	5.77	Open
P211	J210	J212	239.99	12.00	110.00	-672.64	1.91	0.40	1.66	Open
P213	J216	J210	147.78	12.00	110.00	-672.64	1.91	0.24	1.66	Open
P215	J152	J216	230.51	12.00	110.00	-672.64	1.91	0.38	1.66	Open
P217	J160	J156	205.27	12.00	110.00	0.00	0.00	0.00	0.00	Open
P219	J158	J166	558.00	12.00	110.00	-279.06	0.79	0.18	0.32	Open
P221	J206	J208	116.69	12.00	110.00	191.89	0.54	0.02	0.16	Open
P223	J186	J226	198.28	12.00	110.00	123.34	0.35	0.01	0.07	Open
P225	J208	J142	411.04	12.00	110.00	191.89	0.54	0.07	0.16	Open
P227	J142	V82	25.57	12.00	110.00	-1647.05	4.67	0.22	8.70	Open
P229	J131	J130	10.00	12.00	110.00	-1647.05	4.67	0.09	8.70	Open
P235	J134	J124	12.11	12.00	110.00	-60.75	0.17	0.00	0.02	Open
P237	J124	J128	45.00	12.00	110.00	-60.75	0.17	0.00	0.02	Open
P239	J136	J126	52.00	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P241	J136	J138	376.61	12.00	110.00	72.57	0.21	0.01	0.03	Open
P243	J140	J134	371.72	12.00	110.00	-60.75	0.17	0.01	0.02	Open
P245	J126	J122	186.26	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P247	J128	J120	193.90	12.00	110.00	-70.36	0.20	0.00	0.03	Open
P249	J122	J118	742.63	12.00	110.00	-72.57	0.21	0.02	0.03	Open
P25	J30	J34	2050.25	16.00	110.00	-3604.00	5.75	18.74	9.14	Open
P251	J118	J114	107.86	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P253	J114	J108	349.43	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P255	J232	J104	74.82	12.00	110.00	-79.79	0.23	0.00	0.03	Open
P257	J234	J106	73.87	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P259	J110	J232	282.91	12.00	110.00	-79.79	0.23	0.01	0.03	Open

P261	J108	J234	277.93	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P263	J112	J110	349.34	12.00	110.00	-79.79	0.23	0.01	0.03	Open
P265	J116	J112	99.58	12.00	110.00	-79.79	0.23	0.00	0.03	Open
P267	J120	J116	736.13	12.00	110.00	-70.36	0.20	0.02	0.03	Open
P27	J36	J38	486.91	10.00	110.00	0.00	0.00	0.00	0.00	Open
P275	J188	J238	265.60	12.00	110.00	0.00	0.00	0.00	0.00	Open
P277	J238	J268	110.21	12.00	110.00	0.00	0.00	0.00	0.00	Open
P279	J226	J240	90.55	12.00	110.00	123.34	0.35	0.01	0.07	Open
P281	J240	J148	113.24	12.00	110.00	106.66	0.30	0.01	0.05	Open
P283	J130	V70	7.26	12.00	110.00	0.00	0.00	0.00	0.00	Open
P285	V70	J124	34.69	12.00	110.00	0.00	0.00	0.00	0.00	Open
P287	J242	J30	284.79	10.00	110.00	-792.01	3.24	1.55	5.45	Open
P289	J266	J26	292.74	16.00	110.00	792.01	1.26	0.16	0.55	Open
P29	J40	J174	373.31	16.00	110.00	-1231.82	1.97	0.47	1.25	Open
P291	J242	J244	173.50	8.00	110.00	271.42	1.73	0.39	2.22	Open
P293	J244	J256	406.73	8.00	110.00	271.42	1.73	0.90	2.22	Open
P295	J256	J258	837.21	8.00	110.00	271.42	1.73	1.86	2.22	Open
P297	J258	J246	338.75	8.00	110.00	271.42	1.73	0.75	2.22	Open
P299	J246	J248	107.31	8.00	110.00	271.42	1.73	0.24	2.22	Open
P301	J248	J250	85.21	10.00	110.00	792.01	3.24	0.46	5.45	Open
P303	J250	J260	700.67	10.00	110.00	792.01	3.24	3.82	5.45	Open
P305	J260	J262	122.94	10.00	110.00	792.01	3.24	0.67	5.45	Open
P307	J262	J264	198.09	16.00	110.00	0.00	0.00	0.00	0.00	Open
P309	J266	J262	365.10	16.00	110.00	-792.01	1.26	0.20	0.55	Open
P31	J44	J46	1968.92	8.00	110.00	0.00	0.00	0.00	0.00	Open
P311	J242	J254	489.39	10.00	110.00	520.59	2.13	1.23	2.51	Open
P313	J254	J252	382.47	10.00	110.00	520.59	2.13	0.96	2.51	Open
P315	J252	J248	782.20	10.00	110.00	520.59	2.13	1.96	2.51	Open
P317	J138	J140	10.00	12.00	110.00	72.57	0.21	0.00	0.03	Open
P319	J268	J186	129.68	12.00	110.00	-1889.33	5.36	1.45	11.22	Open
P321	J268	V80	39.89	12.00	110.00	1889.33	5.36	0.45	11.22	Open
P323	V80	J206	133.76	12.00	110.00	1889.33	5.36	1.50	11.22	Open
P325	V82	J131	17.69	12.00	110.00	-1647.05	4.67	0.15	8.70	Open
P327	J148	V84	50.64	12.00	110.00	-1540.39	4.37	0.39	7.69	Open
P329	V84	J152	75.36	12.00	110.00	-1540.39	4.37	0.58	7.69	Open
P33	J46	J48	205.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P331	J174	V86	51.81	12.00	110.00	1580.17	4.48	0.42	8.06	Open
P333	V86	J168	141.98	12.00	110.00	1580.17	4.48	1.14	8.06	Open
P335	J184	V88	53.93	12.00	110.00	637.14	1.81	0.08	1.50	Open
P337	V88	J186	109.71	12.00	110.00	637.14	1.81	0.16	1.50	Open
P339	J222	V90	38.57	12.00	110.00	-648.30	1.84	0.06	1.55	Open
P341	V90	J180	84.29	12.00	110.00	-648.30	1.84	0.13	1.55	Open
P343	J200	J198	139.86	12.00	110.00	-1661.07	4.71	1.24	8.84	Open
P35	J50	J46	305.84	8.00	110.00	0.00	0.00	0.00	0.00	Open
P37	J50	J52	152.73	8.00	110.00	-152.37	0.97	0.12	0.76	Open
P39	J54	J56	793.35	8.00	110.00	0.00	0.00	0.00	0.00	Open
P41	J56	J58	6.38	8.00	110.00	152.36	0.97	0.00	0.77	Open
P43	J60	J62	301.77	8.00	110.00	152.36	0.97	0.23	0.76	Open
P45	J60	J64	1753.68	8.00	110.00	-77.74	0.50	0.38	0.22	Open
P47	J60	J64	1,891.65	8.00	110.00	-74.62	0.48	0.38	0.20	Open
P49	J66	J64	15.09	8.00	110.00	152.36	0.97	0.01	0.76	Open
P51	J56	J68	63.37	8.00	110.00	-152.36	0.97	0.05	0.76	Open
P55	J40	J180	463.89	12.00	110.00	2023.83	5.74	5.91	12.74	Open
P77	J62	J88	656.68	8.00	110.00	0.00	0.00	0.00	0.00	Open
P79	J38	J104	3.92	10.00	110.00	0.00	0.00	0.00	0.00	Open
P83	J26	J40	10.82	16.00	110.00	792.01	1.26	0.01	0.55	Open
P93	J68	J50	489.59	8.00	110.00	-152.36	0.97	0.37	0.76	Open
P95	J94	J36	83.4	10.00	110.00	0.00	0.00	0.00	0.00	Open
P97	J36	J96	1,836.85	10.00	110.00	0.00	0.00	0.00	0.00	Open
P99	J98	J96	258.47	10.00	110.00	0.00	0.00	0.00	0.00	Open

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD) plus Fire Flow at FFJ220

Junction Pressures @ Steady State Analysis					
ID	Demand (gpm)	Elevation (ft)	Head (ft)	Pressure (psi)	
J100	0.00	514.00	903.89	168.94	<- Existing Node
J102	0.00	529.15	682.04	66.25	
J104	0.00	546.34	903.89	154.93	<- Existing Node
J106	0.00	547.44	903.89	154.45	<- Existing Node
J108	0.00	563.90	903.88	147.31	<- Zone 2 Public
J110	0.00	563.51	903.88	147.48	<- Zone 2 Public
J112	0.00	569.22	903.87	145.00	<- Existing Node
J114	0.00	569.03	903.87	145.09	<- Existing Node
J116	9.43	570.37	903.87	144.50	<- Zone 2 Public
J118	0.00	570.15	903.87	144.60	<- Zone 2 Public
J120	0.00	570.26	903.85	144.54	<- Zone 2 Public
J122	0.00	570.16	903.85	144.59	<- Zone 2 Public
J124	0.00	568.11	903.84	145.47	<- Zone 2 Public
J126	0.00	567.50	903.85	145.74	<- Zone 2 Public
J128	9.61	567.18	903.84	145.88	<- Zone 2 Public
J130	0.00	568.46	688.22	51.89	
J131	0.00	569.24	688.21	51.55	
J134	0.00	567.79	903.84	145.61	<- Zone 2 Public
J136	0.00	578.39	903.84	141.02	<- Zone 2 Public
J138	0.00	608.80	903.83	127.84	<- Zone 2 Public
J140	133.32	608.62	903.83	127.92	<- Zone 2 Public
J142	0.00	569.15	688.02	51.51	
J144	0.00	568.50	688.26	51.89	
J146	0.00	566.57	688.30	52.75	
J148	0.00	553.12	688.56	58.69	
J152	0.00	560.68	690.66	56.32	
J154	0.00	559.70	690.77	56.79	
J156	23.97	562.73	691.71	55.89	
J158	0.00	562.78	691.75	55.88	
J160	0.00	565.16	691.71	54.83	
J162	0.00	564.42	692.12	55.33	
J164	0.00	561.69	692.23	56.56	
J166	0.00	557.63	691.90	58.18	
J168	15.81	558.00	692.79	58.41	
J170	0.00	558.00	692.78	58.40	
J172	0.00	559.00	692.72	57.94	
J174	0.00	506.35	695.44	81.93	
J180	0.00	512.55	687.89	75.98	
J184	11.16	518.30	683.19	71.45	
J186	0.00	534.62	687.46	66.22	
J188	0.00	549.79	687.55	59.69	
J198	0.00	576.95	687.88	48.07	
J200	0.00	577.56	687.89	47.81	
J202	0.00	575.34	687.92	48.78	
J204	0.00	573.64	687.94	49.53	
J206	36.38	572.69	687.80	49.88	
J208	0.00	573.16	687.85	49.69	
J210	0.00	559.72	691.15	56.95	
J212	0.00	558.67	691.46	57.54	
J216	0.00	560.76	690.96	56.41	
J218	0.00	508.50	682.96	75.59	
J220	3500.00	519.99	679.96	69.31	
J222	0.00	514.72	684.82	73.71	
J224	0.00	574.45	687.94	49.17	
J226	0.00	543.15	687.99	62.76	
J232	0.00	549.77	903.89	153.44	<- Zone 2 Public
J234	0.00	549.94	903.89	153.37	<- Zone 2 Public
J238	0.00	542.69	687.55	62.77	
J240	16.68	550.67	688.24	59.61	
J242	0.00	483.00	704.40	95.93	
J244	0.00	476.00	704.01	98.80	
J246	0.00	480.95	700.46	95.11	
J248	0.00	481.38	700.22	94.82	

J250	0.00	483.00	699.75	93.92	
J252	0.00	480.00	702.19	96.28	
J254	0.00	482.00	703.16	95.83	
J256	0.00	478.00	703.10	97.53	
J258	0.00	480.45	701.22	95.66	
J26	0.00	505.00	694.85	82.26	
J260	0.00	488.50	695.89	89.86	
J262	0.00	489.84	695.21	88.99	
J264	0.00	487.22	695.21	90.12	
J266	0.00	491.07	695.01	88.37	
J268	0.00	538.98	687.55	64.37	
J28	0.00	506.71	696.01	82.02	
J30	0.00	506.00	705.97	86.65	
J34	0.00	696.00	724.70	12.44	<- Existing Node
J36	0.00	506.71	903.89	172.10	<- Existing Node
J38	0.00	545.00	903.89	155.51	<- Existing Node
J40	0.00	505.00	694.84	82.26	
J42	0.00	515.00	696.01	78.43	
J44	0.00	724.00	993.84	116.92	
J46	0.00	806.00	993.84	81.39	
J48	0.00	808.00	993.84	80.53	
J50	0.00	821.00	993.84	74.89	
J52	0.00	828.00	993.96	71.91	
J54	0.00	760.00	993.42	101.14	
J56	0.00	764.00	993.42	99.41	
J58	0.00	764.00	993.42	99.41	
J60	0.00	671.00	904.38	101.12	
J62	0.00	661.00	904.15	105.36	
J64	0.00	764.00	904.76	60.99	
J66	0.00	764.00	904.77	61.00	
J68	0.00	761.00	993.47	100.73	
J72	0.00	532.22	687.52	67.29	
J88	0.00	724.00	904.15	78.06	
J94	0.00	515.00	903.89	168.51	<- Existing Node
J96	0.00	510.05	903.89	170.65	<- Existing Node
J98	0.00	539.00	903.89	158.11	<- Existing Node

Tank Results @ Steady State Analysis

ID	Flow (gpm)	Elevation (ft)	Head (ft)	% Full (%)	Level (ft)
T5000	-3604.00	701.00	725.00	100.00	24.00
T5002	0.00	817.00	832.00	100.00	15.00
T5004	-152.36	979.00	994.00	100.00	15.00

Valve Results @ Steady State Analysis

ID	Diameter (in)	Elevation (ft)	Upstream Pressure (psi)	Downstream Pressure (psi)	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Status	Setting	
V70	12.00	568.00	52.09	145.52	0.00	0.00	0.00	Closed	64.06	<- PRV
V72	8.00	515.00	78.43	168.51	0.00	0.00	0.00	Closed	87.00	<- PRV
V74	8.00	724.00	116.92	78.06	0.00	0.00	0.00	Closed	65.00	<- PRV
V76	8.00	764.00	99.40	61.00	152.36	0.97	88.63	Active	61.00	<- PRV
V80	12.00	539.00	64.38	64.43	-424.37	1.20	0.13	Active	0.00	<- DCDA
V82	12.00	569.00	51.58	51.65	-460.75	1.31	0.15	Active	0.00	<- DCDA
V84	12.00	554.08	58.40	58.98	-1355.59	3.85	1.33	Active	0.00	<- DCDA
V86	12.00	508.58	80.82	80.21	1395.37	3.96	1.41	Active	0.00	<- DCDA
V88	12.00	519.92	71.00	72.08	-1855.13	5.26	2.49	Active	0.00	<- DCDA
V90	12.00	516.88	72.92	73.78	-1656.03	4.70	1.99	Active	0.00	<- DCDA

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD) plus Fire Flow at FFJ220

Pipe Pressures @ Steady State Analysis										
ID	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P101	J96	J100	1197.30	10.00	110.00	0.00	0.00	0.00	0.00	Open
P109	J58	V76	8.08	8.00	110.00	152.36	0.97	0.01	0.76	Open
P111	J44	V74	8.21	8.00	110.00	0.00	0.00	0.00	0.00	Open
P113	J42	V72	7.49	8.00	110.00	0.00	0.00	0.00	0.00	Open
P115	V74	J88	7.79	8.00	110.00	0.00	0.00	0.00	0.00	Open
P117	V76	J66	6.84	8.00	110.00	152.36	0.97	0.01	0.77	Open
P119	V72	J94	8.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P121	T5000	J34	32.53	16.00	110.00	3604.00	5.75	0.30	9.14	Open
P123	T5002	J98	31.29	10.00	110.00	0.00	0.00	0.00	0.00	Closed
P125	T5004	J52	52.18	8.00	110.00	152.36	0.97	0.04	0.76	Open
P127	J28	J42	13.30	8.00	110.00	0.00	0.00	0.00	0.00	Open
P131	J104	J106	9.91	10.00	110.00	-79.79	0.33	0.00	0.08	Open
P133	J106	J62	992.09	10.00	110.00	-152.36	0.62	0.26	0.26	Open
P135	J174	J28	98.75	16.00	110.00	-2807.87	4.48	0.57	5.76	Open
P137	J180	J72	327.02	12.00	110.00	552.60	1.57	0.38	1.15	Open
P139	J220	J218	340.80	12.00	110.00	-1656.03	4.70	3.00	8.79	Open
P141	J218	J222	212.61	12.00	110.00	-1656.03	4.70	1.87	8.79	Open
P147	J220	J102	193.53	12.00	110.00	-1843.97	5.23	2.08	10.73	Open
P149	J102	J184	107.38	12.00	110.00	-1843.97	5.23	1.15	10.73	Open
P155	J186	J72	51.02	12.00	110.00	-552.60	1.57	0.06	1.15	Open
P157	J206	J198	852.15	12.00	110.00	-142.86	0.41	0.08	0.09	Open
P169	J200	J202	281.96	12.00	110.00	-142.86	0.41	0.03	0.09	Open
P171	J202	J224	157.02	12.00	110.00	-142.86	0.41	0.01	0.09	Open
P173	J224	J204	98.31	12.00	110.00	-142.86	0.41	0.01	0.09	Open
P175	J204	J142	791.86	12.00	110.00	-142.86	0.41	0.07	0.09	Open
P177	J130	J144	49.71	12.00	110.00	-460.75	1.31	0.04	0.82	Open
P179	J144	J146	52.37	12.00	110.00	-460.75	1.31	0.04	0.82	Open
P181	J146	J148	313.87	12.00	110.00	-460.75	1.31	0.26	0.82	Open
P187	J152	J154	54.60	12.00	110.00	-763.38	2.17	0.11	2.09	Open
P189	J154	J156	448.00	12.00	110.00	-763.38	2.17	0.94	2.09	Open
P191	J156	J158	21.00	12.00	110.00	-787.35	2.23	0.05	2.22	Open
P193	J158	J162	328.37	12.00	110.00	-540.44	1.53	0.36	1.11	Open
P195	J162	J164	105.94	12.00	110.00	-540.44	1.53	0.12	1.10	Open
P197	J164	J172	438.58	12.00	110.00	-540.44	1.53	0.48	1.10	Open
P199	J172	J170	52.65	12.00	110.00	-540.44	1.53	0.06	1.10	Open
P201	J170	J168	13.94	12.00	110.00	-540.44	1.53	0.02	1.10	Open
P207	J166	J168	358.04	12.00	110.00	-839.11	2.38	0.89	2.50	Open
P209	J212	J166	332.07	12.00	110.00	-592.20	1.68	0.43	1.31	Open
P21	J28	J30	1729.62	16.00	110.00	-2807.87	4.48	9.95	5.76	Open
P211	J210	J212	239.99	12.00	110.00	-592.20	1.68	0.31	1.31	Open
P213	J216	J210	147.78	12.00	110.00	-592.20	1.68	0.19	1.31	Open
P215	J152	J216	230.51	12.00	110.00	-592.20	1.68	0.30	1.31	Open
P217	J160	J156	205.27	12.00	110.00	0.00	0.00	0.00	0.00	Open
P219	J158	J166	558.00	12.00	110.00	-246.91	0.70	0.14	0.26	Open
P221	J206	J208	116.69	12.00	110.00	-317.88	0.90	0.05	0.41	Open
P223	J186	J226	198.28	12.00	110.00	-878.16	2.49	0.54	2.71	Open
P225	J208	J142	411.04	12.00	110.00	-317.88	0.90	0.17	0.41	Open
P227	J142	V82	25.57	12.00	110.00	-460.75	1.31	0.02	0.82	Open
P229	J131	J130	10.00	12.00	110.00	-460.75	1.31	0.01	0.82	Open
P235	J134	J124	12.11	12.00	110.00	-60.75	0.17	0.00	0.02	Open
P237	J124	J128	45.00	12.00	110.00	-60.75	0.17	0.00	0.02	Open
P239	J136	J126	52.00	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P241	J136	J138	376.61	12.00	110.00	72.57	0.21	0.01	0.03	Open
P243	J140	J134	371.72	12.00	110.00	-60.75	0.17	0.01	0.02	Open
P245	J126	J122	186.26	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P247	J128	J120	193.90	12.00	110.00	-70.36	0.20	0.00	0.03	Open
P249	J122	J118	742.63	12.00	110.00	-72.57	0.21	0.02	0.03	Open
P25	J30	J34	2050.25	16.00	110.00	-3604.00	5.75	18.74	9.14	Open
P251	J118	J114	107.86	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P253	J114	J108	349.43	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P255	J232	J104	74.82	12.00	110.00	-79.79	0.23	0.00	0.03	Open
P257	J234	J106	73.87	12.00	110.00	-72.57	0.21	0.00	0.03	Open
P259	J110	J232	282.91	12.00	110.00	-79.79	0.23	0.01	0.03	Open

P261	J108	J234	277.93	12.00	110.00	-72.57	0.21	0.01	0.03	Open
P263	J112	J110	349.34	12.00	110.00	-79.79	0.23	0.01	0.03	Open
P265	J116	J112	99.58	12.00	110.00	-79.79	0.23	0.00	0.03	Open
P267	J120	J116	736.13	12.00	110.00	-70.36	0.20	0.02	0.03	Open
P27	J36	J38	486.91	10.00	110.00	0.00	0.00	0.00	0.00	Open
P275	J188	J238	265.60	12.00	110.00	0.00	0.00	0.00	0.00	Open
P277	J238	J268	110.21	12.00	110.00	0.00	0.00	0.00	0.00	Open
P279	J226	J240	90.55	12.00	110.00	-878.16	2.49	0.25	2.72	Open
P281	J240	J148	113.24	12.00	110.00	-894.84	2.54	0.32	2.81	Open
P283	J130	V70	7.26	12.00	110.00	0.00	0.00	0.00	0.00	Open
P285	V70	J124	34.69	12.00	110.00	0.00	0.00	0.00	0.00	Open
P287	J242	J30	284.79	10.00	110.00	-796.13	3.25	1.57	5.50	Open
P289	J266	J26	292.74	16.00	110.00	796.13	1.27	0.16	0.56	Open
P29	J40	J174	373.31	16.00	110.00	-1412.51	2.25	0.60	1.61	Open
P291	J242	J244	173.50	8.00	110.00	272.83	1.74	0.39	2.25	Open
P293	J244	J256	406.73	8.00	110.00	272.83	1.74	0.91	2.25	Open
P295	J256	J258	837.21	8.00	110.00	272.83	1.74	1.88	2.25	Open
P297	J258	J246	338.75	8.00	110.00	272.83	1.74	0.76	2.25	Open
P299	J246	J248	107.31	8.00	110.00	272.83	1.74	0.24	2.25	Open
P301	J248	J250	85.21	10.00	110.00	796.13	3.25	0.47	5.50	Open
P303	J250	J260	700.67	10.00	110.00	796.13	3.25	3.86	5.50	Open
P305	J260	J262	122.94	10.00	110.00	796.13	3.25	0.68	5.50	Open
P307	J262	J264	198.09	16.00	110.00	0.00	0.00	0.00	0.00	Open
P309	J266	J262	365.10	16.00	110.00	-796.13	1.27	0.20	0.56	Open
P31	J44	J46	1968.92	8.00	110.00	0.00	0.00	0.00	0.00	Open
P311	J242	J254	489.39	10.00	110.00	523.29	2.14	1.24	2.53	Open
P313	J254	J252	382.47	10.00	110.00	523.29	2.14	0.97	2.53	Open
P315	J252	J248	782.20	10.00	110.00	523.29	2.14	1.98	2.53	Open
P317	J138	J140	10.00	12.00	110.00	72.57	0.21	0.00	0.02	Open
P319	J268	J186	129.68	12.00	110.00	424.37	1.20	0.09	0.71	Open
P321	J268	V80	39.89	12.00	110.00	-424.37	1.20	0.03	0.71	Open
P323	V80	J206	133.76	12.00	110.00	-424.37	1.20	0.09	0.71	Open
P325	V82	J131	17.69	12.00	110.00	-460.75	1.31	0.01	0.82	Open
P327	J148	V84	50.64	12.00	110.00	-1355.59	3.85	0.31	6.07	Open
P329	V84	J152	75.36	12.00	110.00	-1355.59	3.85	0.46	6.07	Open
P33	J46	J48	205.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P331	J174	V86	51.81	12.00	110.00	1395.37	3.96	0.33	6.40	Open
P333	V86	J168	141.98	12.00	110.00	1395.37	3.96	0.91	6.40	Open
P335	J184	V88	53.93	12.00	110.00	-1855.13	5.26	0.58	10.85	Open
P337	V88	J186	109.71	12.00	110.00	-1855.13	5.26	1.19	10.85	Open
P339	J222	V90	38.57	12.00	110.00	-1656.03	4.70	0.34	8.79	Open
P341	V90	J180	84.29	12.00	110.00	-1656.03	4.70	0.74	8.79	Open
P343	J200	J198	139.86	12.00	110.00	142.86	0.41	0.01	0.09	Open
P35	J50	J46	305.84	8.00	110.00	0.00	0.00	0.00	0.00	Open
P37	J50	J52	152.73	8.00	110.00	-152.36	0.97	0.12	0.76	Open
P39	J54	J56	793.35	8.00	110.00	0.00	0.00	0.00	0.00	Open
P41	J56	J58	6.38	8.00	110.00	152.36	0.97	0.00	0.76	Open
P43	J60	J62	301.77	8.00	110.00	152.36	0.97	0.23	0.76	Open
P45	J60	J64	1753.68	8.00	110.00	-77.74	0.50	0.38	0.22	Open
P47	J60	J64	1,891.65	8.00	110.00	-74.62	0.48	0.38	0.20	Open
P49	J66	J64	15.09	8.00	110.00	152.36	0.97	0.01	0.76	Open
P51	J56	J68	63.37	8.00	110.00	-152.36	0.97	0.05	0.76	Open
P55	J40	J180	463.89	12.00	110.00	2208.63	6.27	6.95	14.98	Open
P77	J62	J88	656.68	8.00	110.00	0.00	0.00	0.00	0.00	Open
P79	J38	J104	3.92	10.00	110.00	0.00	0.00	0.00	0.00	Open
P83	J26	J40	10.82	16.00	110.00	796.13	1.27	0.01	0.55	Open
P93	J68	J50	489.59	8.00	110.00	-152.36	0.97	0.37	0.76	Open
P95	J94	J36	83.4	10.00	110.00	0.00	0.00	0.00	0.00	Open
P97	J36	J96	1,836.85	10.00	110.00	0.00	0.00	0.00	0.00	Open
P99	J98	J96	258.47	10.00	110.00	0.00	0.00	0.00	0.00	Open

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD) plus Fire Flow at FFJ140

Junction Pressures @ Steady State Analysis					
ID	Demand (gpm)	Elevation (ft)	Head (ft)	Pressure (psi)	
J100	0.00	514.00	850.38	145.75	<- Existing Node
J102	0.00	529.15	724.95	84.84	
J104	0.00	546.34	850.38	131.74	<- Existing Node
J106	0.00	547.44	850.44	131.29	<- Existing Node
J108	0.00	563.90	849.59	123.79	<- Zone 2 Public
J110	0.00	563.51	849.51	123.92	<- Zone 2 Public
J112	0.00	569.22	848.65	121.08	<- Existing Node
J114	0.00	569.03	848.75	121.20	<- Existing Node
J116	9.43	570.37	848.41	120.47	<- Zone 2 Public
J118	0.00	570.15	848.49	120.60	<- Zone 2 Public
J120	0.00	570.26	846.65	119.76	<- Zone 2 Public
J122	0.00	570.16	846.70	119.82	<- Zone 2 Public
J124	0.00	568.11	846.08	120.45	<- Zone 2 Public
J126	0.00	567.50	846.25	120.78	<- Zone 2 Public
J128	9.61	567.18	846.19	120.90	<- Zone 2 Public
J130	0.00	568.46	724.95	67.81	
J131	0.00	569.24	724.95	67.47	
J134	0.00	567.79	846.06	120.57	<- Zone 2 Public
J136	0.00	578.39	846.12	116.01	<- Zone 2 Public
J138	0.00	608.80	845.21	102.44	<- Zone 2 Public
J140	1633.32	608.62	845.19	102.51	<- Zone 2 Public
J142	0.00	569.15	724.95	67.51	
J144	0.00	568.50	724.95	67.79	
J146	0.00	566.57	724.95	68.63	
J148	0.00	553.12	724.95	74.45	
J152	0.00	560.68	724.95	71.18	
J154	0.00	559.70	724.95	71.60	
J156	23.97	562.73	724.95	70.29	
J158	0.00	562.78	724.95	70.27	
J160	0.00	565.16	724.95	69.24	
J162	0.00	564.42	724.95	69.56	
J164	0.00	561.69	724.95	70.74	
J166	0.00	557.63	724.95	72.50	
J168	15.81	558.00	724.95	72.34	
J170	0.00	558.00	724.95	72.34	
J172	0.00	559.00	724.95	71.91	
J174	0.00	506.35	724.96	94.72	
J180	0.00	512.55	724.95	92.03	
J184	11.16	518.30	724.95	89.54	
J186	0.00	534.62	724.95	82.47	
J188	0.00	549.79	724.95	75.90	
J198	0.00	576.95	724.95	64.13	
J200	0.00	577.56	724.95	63.86	
J202	0.00	575.34	724.95	64.83	
J204	0.00	573.64	724.95	65.56	
J206	36.38	572.69	724.95	65.97	
J208	0.00	573.16	724.95	65.77	
J210	0.00	559.72	724.95	71.59	
J212	0.00	558.67	724.95	72.05	
J216	0.00	560.76	724.95	71.14	
J218	0.00	508.50	724.95	93.79	
J220	0.00	519.99	724.95	88.81	
J222	0.00	514.72	724.95	91.09	
J224	0.00	574.45	724.95	65.21	
J226	0.00	543.15	724.95	78.77	
J232	0.00	549.77	850.20	130.17	<- Zone 2 Public
J234	0.00	549.94	850.26	130.13	<- Zone 2 Public
J238	0.00	542.69	724.95	78.97	
J240	16.68	550.67	724.95	75.52	
J242	0.00	483.00	724.97	104.85	
J244	0.00	476.00	724.97	107.88	
J246	0.00	480.95	724.97	105.73	
J248	0.00	481.38	724.97	105.55	

J250	0.00	483.00	724.96	104.84	
J252	0.00	480.00	724.97	106.14	
J254	0.00	482.00	724.97	105.28	
J256	0.00	478.00	724.97	107.01	
J258	0.00	480.45	724.97	105.95	
J26	0.00	505.00	724.96	95.31	
J260	0.00	488.50	724.96	102.46	
J262	0.00	489.84	724.96	101.88	
J264	0.00	487.22	724.96	103.01	
J266	0.00	491.07	724.96	101.34	
J268	0.00	538.98	724.95	80.58	
J28	0.00	506.71	724.96	94.57	
J30	0.00	506.00	724.97	94.88	
J34	0.00	696.00	725.00	12.57	<- Existing Node
J36	0.00	506.71	850.38	148.91	<- Existing Node
J38	0.00	545.00	850.38	132.32	<- Existing Node
J40	0.00	505.00	724.96	95.31	
J42	0.00	515.00	724.96	90.98	
J44	0.00	724.00	972.63	107.73	
J46	0.00	806.00	979.94	75.37	
J48	0.00	808.00	979.94	74.50	
J50	0.00	821.00	981.07	69.36	
J52	0.00	828.00	990.71	70.50	
J54	0.00	760.00	958.88	86.17	
J56	0.00	764.00	958.88	84.44	
J58	0.00	764.00	958.62	84.33	
J60	0.00	671.00	883.66	92.14	
J62	0.00	661.00	871.54	91.23	
J64	0.00	764.00	903.90	60.62	
J66	0.00	764.00	904.51	60.88	
J68	0.00	761.00	961.42	86.84	
J72	0.00	532.22	724.95	83.51	
J88	0.00	724.00	873.98	64.99	
J94	0.00	515.00	850.38	145.32	<- Existing Node
J96	0.00	510.05	850.38	147.46	<- Existing Node
J98	0.00	539.00	850.38	134.92	<- Existing Node

Tank Results @ Steady State Analysis

ID	Flow (gpm)	Elevation (ft)	Head (ft)	% Full (%)	Level (ft)
T5000	-104.00	701.00	725.00	100.00	24.00
T5002	0.00	817.00	832.00	100.00	15.00
T5004	-1652.36	979.00	994.00	100.00	15.00

Valve Results @ Steady State Analysis

ID	Diameter (in)	Elevation (ft)	Upstream Pressure (psi)	Downstream Pressure (psi)	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Status	Setting	
V70	12.00	568.00	68.01	120.49	0.00	0.00	0.00	Closed	64.06	<- PRV
V72	8.00	515.00	90.98	145.32	0.00	0.00	0.00	Closed	87.00	<- PRV
V74	8.00	724.00	107.72	65.00	357.97	2.28	98.58	Active	65.00	<- PRV
V76	8.00	764.00	84.19	61.00	1294.39	8.26	53.52	Active	61.00	<- PRV
V80	12.00	539.00	80.57	80.57	22.78	0.06	0.00	Active	0.00	<- DCDA
V82	12.00	569.00	67.57	67.57	-13.60	0.04	0.00	Active	0.00	<- DCDA
V84	12.00	554.08	74.04	74.04	-17.29	0.05	0.00	Active	0.00	<- DCDA
V86	12.00	508.58	93.76	93.76	57.07	0.16	0.00	Active	0.00	<- DCDA
V88	12.00	519.92	88.84	88.84	5.59	0.02	0.00	Active	0.00	<- DCDA
V90	12.00	516.88	90.16	90.16	-16.75	0.05	0.00	Active	0.00	<- DCDA

ONSITE WATER DEMANDS ANALYSIS RESULTS

Max Day Demand (MDD) plus Fire Flow at FFJ140

Pipe Pressures @ Steady State Analysis										
ID	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P101	J96	J100	1197.30	10.00	110.00	0.00	0.00	0.00	0.00	Open
P109	J58	V76	8.08	8.00	110.00	1294.39	8.26	0.32	40.14	Open
P111	J44	V74	8.21	8.00	110.00	357.97	2.28	0.03	3.72	Open
P113	J42	V72	7.49	8.00	110.00	0.00	0.00	0.00	0.00	Open
P115	V74	J88	7.79	8.00	110.00	357.97	2.28	0.03	3.71	Open
P117	V76	J66	6.84	8.00	110.00	1294.39	8.26	0.27	40.14	Open
P119	V72	J94	8.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P121	T5000	J34	32.53	16.00	110.00	104.00	0.17	0.00	0.01	Open
P123	T5002	J98	31.29	10.00	110.00	0.00	0.00	0.00	0.00	Closed
P125	T5004	J52	52.18	8.00	110.00	1652.36	10.55	3.29	63.09	Open
P127	J28	J42	13.30	8.00	110.00	0.00	0.00	0.00	0.00	Open
P131	J104	J106	9.91	10.00	110.00	-828.72	3.39	0.06	5.93	Open
P133	J106	J62	992.09	10.00	110.00	-1652.36	6.75	21.11	21.28	Open
P135	J174	J28	98.75	16.00	110.00	-81.35	0.13	0.00	0.01	Open
P137	J180	J72	327.02	12.00	110.00	30.19	0.09	0.00	0.01	Open
P139	J220	J218	340.80	12.00	110.00	-16.75	0.05	0.00	0.00	Open
P141	J218	J222	212.61	12.00	110.00	-16.75	0.05	0.00	0.00	Open
P147	J220	J102	193.53	12.00	110.00	16.75	0.05	0.00	0.00	Open
P149	J102	J184	107.38	12.00	110.00	16.75	0.05	0.00	0.00	Open
P155	J186	J72	51.02	12.00	110.00	-30.19	0.09	0.00	0.00	Open
P157	J206	J198	852.15	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P169	J200	J202	281.96	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P171	J202	J224	157.02	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P173	J224	J204	98.31	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P175	J204	J142	791.86	12.00	110.00	-4.22	0.01	0.00	0.00	Open
P177	J130	J144	49.71	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P179	J144	J146	52.37	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P181	J146	J148	313.87	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P187	J152	J154	54.60	12.00	110.00	-5.96	0.02	0.00	0.00	Open
P189	J154	J156	448.00	12.00	110.00	-5.96	0.02	0.00	0.00	Open
P191	J156	J158	21.00	12.00	110.00	-29.93	0.08	0.00	0.01	Open
P193	J158	J162	328.37	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P195	J162	J164	105.94	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P197	J164	J172	438.58	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P199	J172	J170	52.65	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P201	J170	J168	13.94	12.00	110.00	-17.43	0.05	0.00	0.00	Open
P207	J166	J168	358.04	12.00	110.00	-23.82	0.07	0.00	0.00	Open
P209	J212	J166	332.07	12.00	110.00	-11.32	0.03	0.00	0.00	Open
P21	J28	J30	1729.62	16.00	110.00	-81.36	0.13	0.01	0.01	Open
P211	J210	J212	239.99	12.00	110.00	-11.32	0.03	0.00	0.00	Open
P213	J216	J210	147.78	12.00	110.00	-11.32	0.03	0.00	0.00	Open
P215	J152	J216	230.51	12.00	110.00	-11.32	0.03	0.00	0.00	Open
P217	J160	J156	205.27	12.00	110.00	0.00	0.00	0.00	0.00	Open
P219	J158	J166	558.00	12.00	110.00	-12.50	0.04	0.00	0.00	Open
P221	J206	J208	116.69	12.00	110.00	-9.38	0.03	0.00	0.00	Open
P223	J186	J226	198.28	12.00	110.00	12.99	0.04	0.00	0.00	Open
P225	J208	J142	411.04	12.00	110.00	-9.38	0.03	0.00	0.00	Open
P227	J142	V82	25.57	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P229	J131	J130	10.00	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P235	J134	J124	12.11	12.00	110.00	-809.68	2.30	0.03	2.33	Open
P237	J124	J128	45.00	12.00	110.00	-809.68	2.30	0.11	2.34	Open
P239	J136	J126	52.00	12.00	110.00	-823.64	2.34	0.13	2.41	Open
P241	J136	J138	376.61	12.00	110.00	823.64	2.34	0.91	2.41	Open
P243	J140	J134	371.72	12.00	110.00	-809.68	2.30	0.87	2.34	Open
P245	J126	J122	186.26	12.00	110.00	-823.64	2.34	0.45	2.41	Open
P247	J128	J120	193.90	12.00	110.00	-819.29	2.32	0.46	2.39	Open
P249	J122	J118	742.63	12.00	110.00	-823.64	2.34	1.79	2.41	Open
P25	J30	J34	2050.25	16.00	110.00	-104.00	0.17	0.03	0.01	Open
P251	J118	J114	107.86	12.00	110.00	-823.64	2.34	0.26	2.41	Open
P253	J114	J108	349.43	12.00	110.00	-823.64	2.34	0.84	2.41	Open
P255	J232	J104	74.82	12.00	110.00	-828.72	2.35	0.18	2.44	Open
P257	J234	J106	73.87	12.00	110.00	-823.64	2.34	0.18	2.41	Open
P259	J110	J232	282.91	12.00	110.00	-828.72	2.35	0.69	2.44	Open

P261	J108	J234	277.93	12.00	110.00	-823.64	2.34	0.67	2.41	Open
P263	J112	J110	349.34	12.00	110.00	-828.72	2.35	0.85	2.44	Open
P265	J116	J112	99.58	12.00	110.00	-828.72	2.35	0.24	2.44	Open
P267	J120	J116	736.13	12.00	110.00	-819.29	2.32	1.76	2.39	Open
P27	J36	J38	486.91	10.00	110.00	0.00	0.00	0.00	0.00	Open
P275	J188	J238	265.60	12.00	110.00	0.00	0.00	0.00	0.00	Open
P277	J238	J268	110.21	12.00	110.00	0.00	0.00	0.00	0.00	Open
P279	J226	J240	90.55	12.00	110.00	12.99	0.04	0.00	0.00	Open
P281	J240	J148	113.24	12.00	110.00	-3.69	0.01	0.00	0.00	Open
P283	J130	V70	7.26	12.00	110.00	0.00	0.00	0.00	0.00	Open
P285	V70	J124	34.69	12.00	110.00	0.00	0.00	0.00	0.00	Open
P287	J242	J30	284.79	10.00	110.00	-22.65	0.09	0.00	0.01	Open
P289	J266	J26	292.74	16.00	110.00	22.65	0.04	0.00	0.00	Open
P29	J40	J174	373.31	16.00	110.00	-24.29	0.04	0.00	0.00	Open
P291	J242	J244	173.50	8.00	110.00	7.76	0.05	0.00	0.00	Open
P293	J244	J256	406.73	8.00	110.00	7.76	0.05	0.00	0.00	Open
P295	J256	J258	837.21	8.00	110.00	7.76	0.05	0.00	0.00	Open
P297	J258	J246	338.75	8.00	110.00	7.76	0.05	0.00	0.00	Open
P299	J246	J248	107.31	8.00	110.00	7.76	0.05	0.00	0.00	Open
P301	J248	J250	85.21	10.00	110.00	22.65	0.09	0.00	0.01	Open
P303	J250	J260	700.67	10.00	110.00	22.65	0.09	0.01	0.01	Open
P305	J260	J262	122.94	10.00	110.00	22.65	0.09	0.00	0.01	Open
P307	J262	J264	198.09	16.00	110.00	0.00	0.00	0.00	0.00	Open
P309	J266	J262	365.10	16.00	110.00	-22.65	0.04	0.00	0.00	Open
P31	J44	J46	1968.92	8.00	110.00	-357.97	2.28	7.31	3.71	Open
P311	J242	J254	489.39	10.00	110.00	14.89	0.06	0.00	0.00	Open
P313	J254	J252	382.47	10.00	110.00	14.89	0.06	0.00	0.00	Open
P315	J252	J248	782.20	10.00	110.00	14.89	0.06	0.00	0.00	Open
P317	J138	J140	10.00	12.00	110.00	823.64	2.34	0.02	2.41	Open
P319	J268	J186	129.68	12.00	110.00	-22.78	0.06	0.00	0.00	Open
P321	J268	V80	39.89	12.00	110.00	22.78	0.06	0.00	0.00	Open
P323	V80	J206	133.76	12.00	110.00	22.78	0.06	0.00	0.00	Open
P325	V82	J131	17.69	12.00	110.00	-13.60	0.04	0.00	0.00	Open
P327	J148	V84	50.64	12.00	110.00	-17.29	0.05	0.00	0.00	Open
P329	V84	J152	75.36	12.00	110.00	-17.29	0.05	0.00	0.00	Open
P33	J46	J48	205.34	8.00	110.00	0.00	0.00	0.00	0.00	Open
P331	J174	V86	51.81	12.00	110.00	57.07	0.16	0.00	0.02	Open
P333	V86	J168	141.98	12.00	110.00	57.07	0.16	0.00	0.02	Open
P335	J184	V88	53.93	12.00	110.00	5.59	0.02	0.00	0.00	Open
P337	V88	J186	109.71	12.00	110.00	5.59	0.02	0.00	0.00	Open
P339	J222	V90	38.57	12.00	110.00	-16.75	0.05	0.00	0.00	Open
P341	V90	J180	84.29	12.00	110.00	-16.75	0.05	0.00	0.00	Open
P343	J200	J198	139.86	12.00	110.00	4.22	0.01	0.00	0.00	Open
P35	J50	J46	305.84	8.00	110.00	357.97	2.28	1.14	3.71	Open
P37	J50	J52	152.73	8.00	110.00	-1652.36	10.55	9.64	63.09	Open
P39	J54	J56	793.35	8.00	110.00	0.00	0.00	0.00	0.00	Open
P41	J56	J58	6.38	8.00	110.00	1294.39	8.26	0.26	40.14	Open
P43	J60	J62	301.77	8.00	110.00	1294.39	8.26	12.11	40.14	Open
P45	J60	J64	1753.68	8.00	110.00	-660.43	4.22	20.24	11.54	Open
P47	J60	J64	1,891.65	8.00	110.00	-633.96	4.05	20.24	10.70	Open
P49	J66	J64	15.09	8.00	110.00	1294.39	8.26	0.61	40.14	Open
P51	J56	J68	63.37	8.00	110.00	-1294.39	8.26	2.54	40.14	Open
P55	J40	J180	463.89	12.00	110.00	46.93	0.13	0.01	0.01	Open
P77	J62	J88	656.68	8.00	110.00	-357.97	2.28	2.44	3.71	Open
P79	J38	J104	3.92	10.00	110.00	0.00	0.00	0.00	0.00	Open
P83	J26	J40	10.82	16.00	110.00	22.65	0.04	0.00	0.01	Open
P93	J68	J50	489.59	8.00	110.00	-1294.39	8.26	19.65	40.14	Open
P95	J94	J36	83.4	10.00	110.00	0.00	0.00	0.00	0.00	Open
P97	J36	J96	1,836.85	10.00	110.00	0.00	0.00	0.00	0.00	Open
P99	J98	J96	258.47	10.00	110.00	0.00	0.00	0.00	0.00	Open

Legend

Junction
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- Domain
- Inactive

Tank
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TYPE
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- Domain
- Inactive

Valve
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TYPE
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- Domain
- Inactive

Pipe
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- Domain
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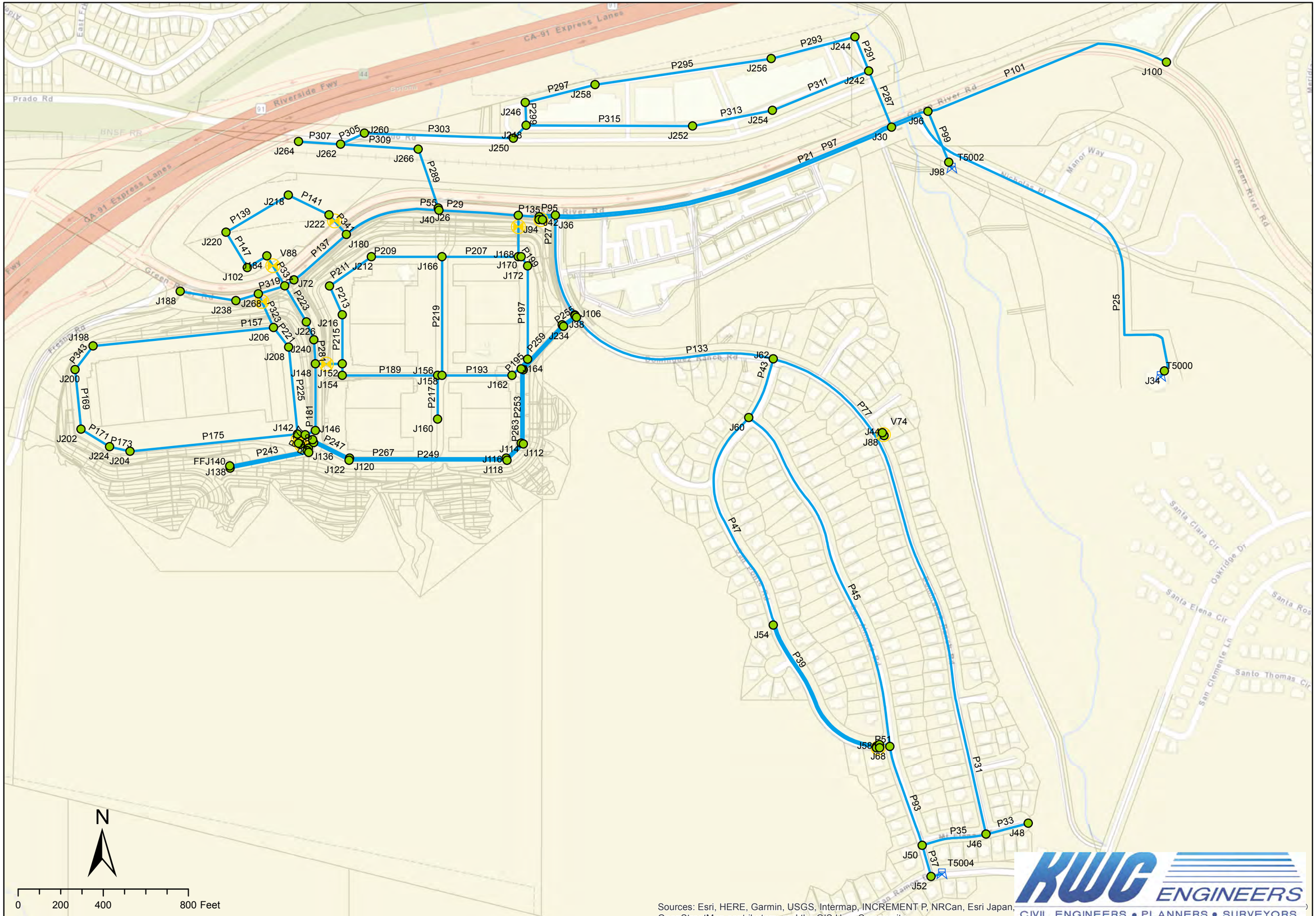

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, OpenStreetMap contributors, and the GIS User Community

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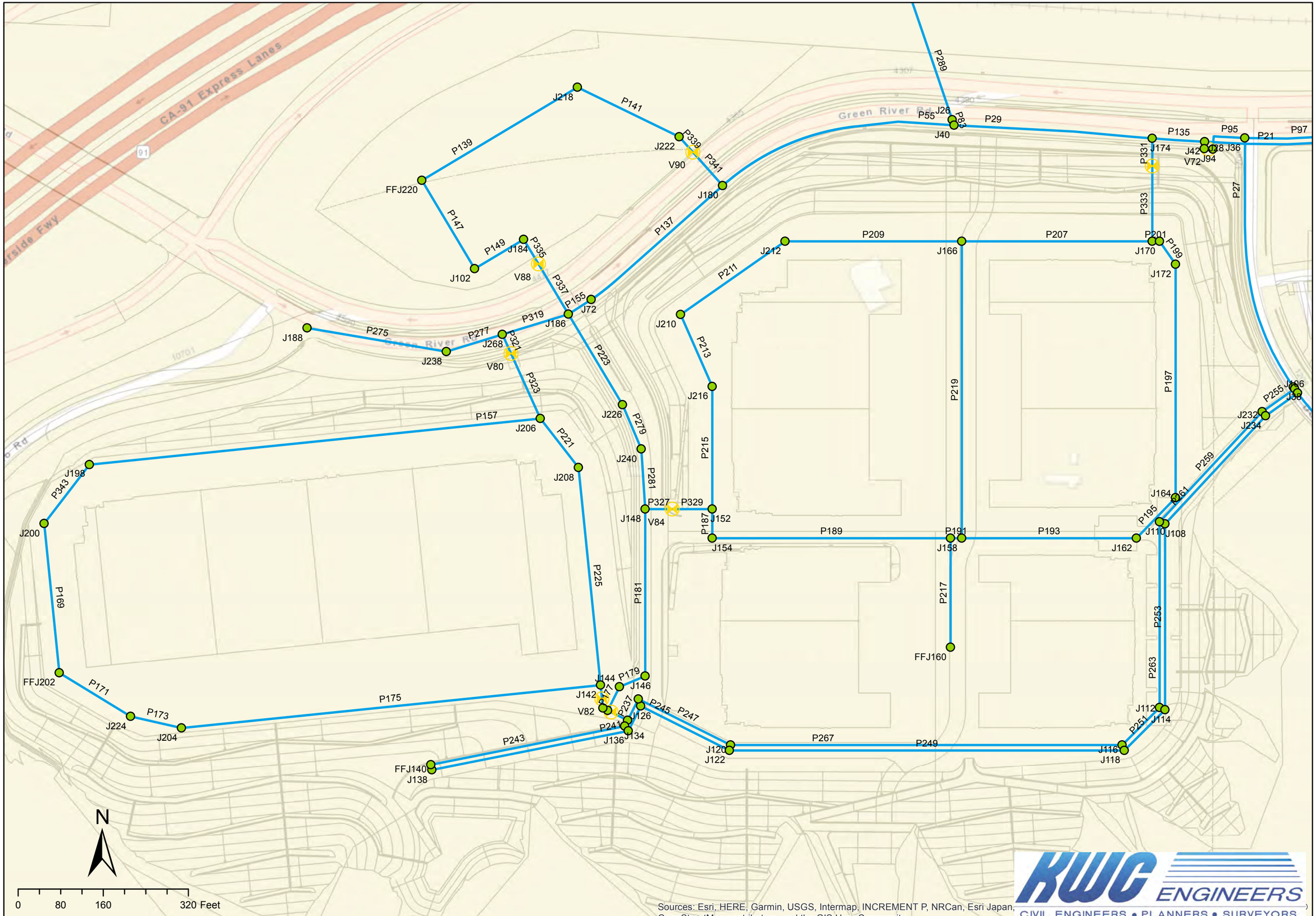

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Valve
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Pipe
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TYPE
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P175
P225
P181
P179
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J146
J144
P227
V82
P177
P325
P229
P283
J131
J130
V70
P285
J128
P237
J126
P247
P239
P245
P235
J124
J134
P243
P241
J136

N

0 10 20 40 Feet

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Legend

Junction
- <all other values>

TYPE
- Active
- Domain
- Inactive

Tank
- <all other values>

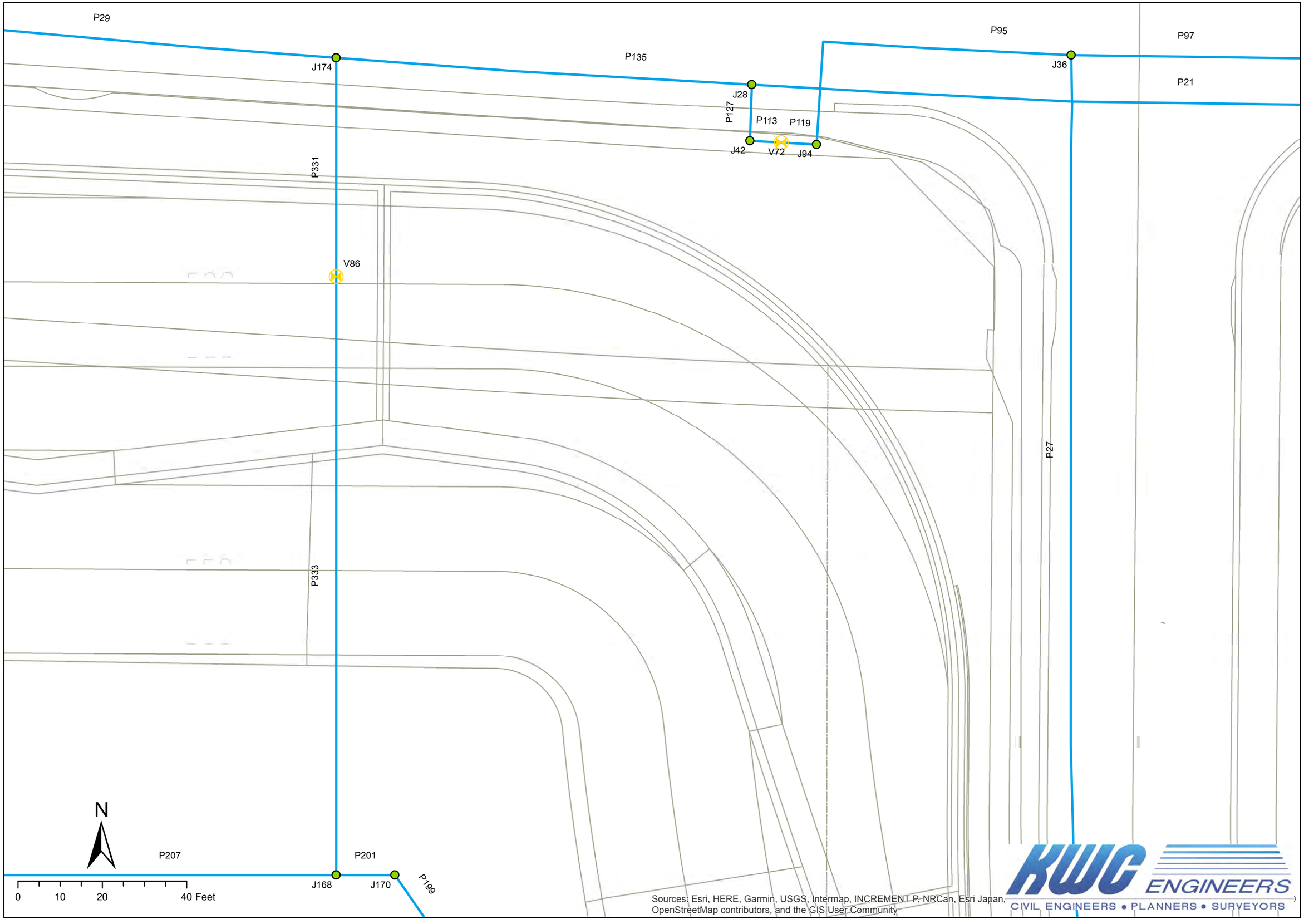
TYPE
- Active
- Domain
- Inactive

Valve
- <all other values>

TYPE
- Active
- Domain
- Inactive

Pipe
- <all other values>

TYPE
- Active
- Domain
- Inactive



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