



# CITY OF EL MIRAGE

## DEVELOPMENT APPLICATION FORM

### Official Use

Case No: \_\_\_\_\_ Date Received: \_\_\_\_\_ Planning & Zoning Commission Meeting: \_\_\_\_\_ City Council Meeting: \_\_\_\_\_

#### PURPOSE

Development Applications are reviewed by the Technical Advisory Committee (TAC) with the intent to provide the applicant specific information in preparation to meeting the City's technical standards and requirements for the proposed development project. Information provided by TAC is based on applicant submittals and should be considered actual and detailed in nature.


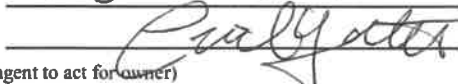
#### ACTION REQUESTED (Check one)

- |  |  |
|--|--|
| <input type="checkbox"/> Conditional Use Permit  | <input type="checkbox"/> Site Plan Approval    |
| <input type="checkbox"/> General Plan Amendment: <input type="checkbox"/> Major <input type="checkbox"/> Minor | <input type="checkbox"/> Site Plan Amendment   |
| <input type="checkbox"/> Planned Area Development (PAD)  | <input type="checkbox"/> Preliminary Plat      |
| <input type="checkbox"/> Planned Area Development Amendment  | <input checked="" type="checkbox"/> Final Plat |
| <input type="checkbox"/> Rezoning  | <input type="checkbox"/> Other: _____          |

#### PROPERTY INFORMATION:

Name of Project: The Fairways Unit II Acreage: 2.71  
 Property Address/Location: Vicinity of Northwest corner of 17th Avenue and Park Place in the City of El Mirage, AZ  
 Assessor's Parcel Number: 501-86-558A, 501-85-931A, & 501-85-810B

#### APPLICANT / OWNER INFORMATION:

Applicant: <u>SKG Enterprises, Inc. (Shakir Gushgari)</u>	Owner: <u>Roberts Resorts</u>
Address: <u>9260 E. Raintree Dr. Suite 140</u>	Address: <u>6991 E. Raintree Dr. Suite C312</u>
City/ST/Zip: <u>Scottsdale, AZ 85060</u>	City/ST/Zip: <u>Scottsdale, AZ 85260</u>
Phone: <u>480-998-5600</u>	Phone: <u>480-425-8696</u>
Email: <u>ShakirG@SKGAZ.com</u>	Email: <u>CYates@RobertsResorts.com</u>
Signature: 	Signature: 
(Agreement to act as agent for owner)	(Authorization for agent to act for owner)

- Application Form
- Comprehensive Site Plan
- Deed and/or Title Report
- Drainage Report
- A.L.T.A. Survey
- Phase I Environment Site Assessment
- Preliminary Landscape Plans
- Filing Fee (see Fee Schedule starting on page 9)

# Zoning Application Submittal

for

## The Fairways Unit II at Pueblo El Mirage RV Resort

To allow for the development of a 21-lot single-family residential development on approximately 2.71 acres located at the vicinity of the northwest corner of 17<sup>th</sup> Avenue and Park Place in City of El Mirage, Arizona

APN Numbers 501-86-558A, 501-85-931A & 501-85-810B

### VICINITY MAP

Google Maps vicinity Map



Imagery ©2020 Landsat / Copernicus, Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2020 2000 ft

**Submittal date:**  
April 15, 2020



n.t.s.

## **Introduction & Purpose of Request:**

This application seeks an approval for developing a 21 Single Family Residential development known as The Fairways Unit II at Pueblo El Mirage RV Resort on approximately 2.71 acres located at the vicinity of the northwest corner of 17<sup>th</sup> Avenue and Park Place in the City of El Mirage, Maricopa County, Arizona.

The APN are 501-86-558A, 501-85-931A & 501-85-810B.

The site was originally part of the Fairways subdivision development and was encumbered by FEMA (Federal Emergency Management Agency) defined special flood hazard zone "AE" designation. To facilitate an easier development for the Fairways, the developer had elected, back then, to remove these specific 21 lots from the Fairways development so that all developed lots are completely outside the special flood-hazard "AE" zone. The Fairways development proceeded on that basis and was City approved and its final plat was recorded at Maricopa County Recorder Office in Book 775, Page 43, M.C.R. The Fairways development has since been developed.

Since that time, the Flood Control District of Maricopa County (FCDMC) has designed and built a regional stormwater detention facility located directly upstream of the Fairways development (southwest corner of El Mirage Road Cactus Roads) and re-mapped the entire floodplain limit inclusive of the floodplain limits within Pueblo El Mirage RV Resort. This re-mapping process, due to the installation of the regional stormwater storage facility, resulted in a large reduction of flow and floodplain limits. The re-mapping process was County and FEMA approved and was adopted by FEMA and as such the FEMA floodplain limit lines were reduced in width causing the area of the originally excluded 21 lots of the Fairways to be removed from the original floodplain limits.

Now that these originally excluded 21 lot of the Fairways are outside the FEMA defined floodplain limits, the property owners elected to develop them, as was the original intend back in 2007, hence this approval request.

Included with this zoning application narrative report submittal are:

1. The zoning application
2. The proposed 21 lots final plat named as The Fairways Unit II
3. Development drainage report outlining the proposed stormwater management and all floodplain relate data
4. Development sewer design "basis of design" report outlining the proposed wastewater management system

5. Development water distribution system “basis of design” report outlining the proposed water distribution system
6. Processing Fee

It should be noted that access to these proposed 21 lots shall be through the existing fully improved street known as 17<sup>th</sup> Avenue, where all of these 21 lots directly abut.

**Site Information:**

APN: 501-86-558A, 501-85-931A & 501-85-810B  
Site Size: 2.71 acres  
Location: Vicinity of the northwest corner of 17<sup>th</sup> Avenue and Park Place, in the City of El Mirage, Arizona

**Applicant:**

SKG Enterprises, Inc.  
ATTN: Shakir Gushgari, PE  
9260 E. Raintree Drive, Suite 140  
Scottsdale, AZ 85260

Phone: 480-998-5600  
Fax: 480-998-5603  
Email: [shakirg@skgaz.com](mailto:shakirg@skgaz.com)

**WASTEWATER (SEWER) COLLECTION SYSTEM  
BASIS OF DESIGN REPORT**

For  
**The Fairway II Improvement Plan  
Pueblo El Mirage RV Resort**

Prepared By:  
SKG Enterprises, Inc.  
9260 E. Raintree Drive  
Suite 140  
Scottsdale, Arizona 85260

April 2020



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## EXHIBITS

EXHIBIT	DESCRIPTION
1	Parcel Location Map
2	Hydraulic Calculation
3	Improvement Plans "Fairways II"

APPENDIX	DESCRIPTION
A	COEM Collection System Design Criteria

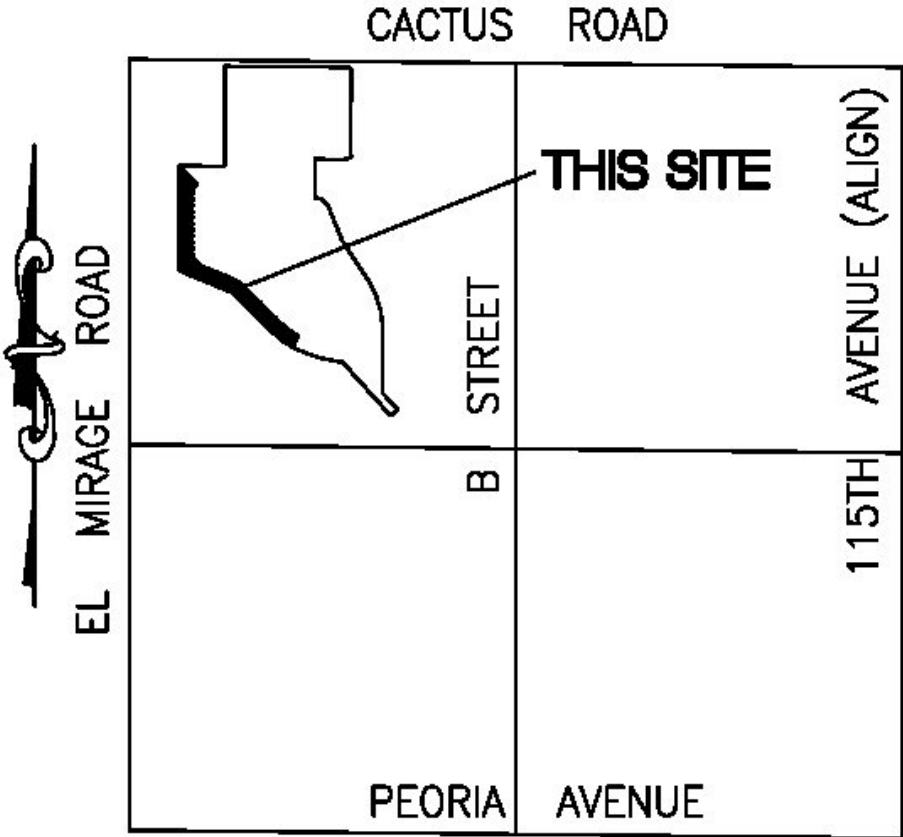


## 1.0 INTRODUCTION

This wastewater (sewer) basis of design (BOD) report is generated in order to analyze the hydraulics of the proposed sanitary sewer system described herein. The purpose of this proposed sanitary sewer system is to provide wastewater services to the 21 lots within the property located directly to the southwest of the existing development known as “The fairways” as recorded in Book 775, Page 43, of Maricopa County Recorder Office, Maricopa County, Arizona. This project is referred to as “The Fairways II” within the Pueblo El Mirage R.V. Resort and is approximately 2.71-acre in size. It falls within the City of El Mirage Quarter Section map number 20-02. A parcel location map is given in “Exhibit 1” below.

Currently there is no wastewater generated from the parcel described above. The proposed sewer system involves the addition of 1,375 of 8” (PVC-SDR-35) of sewer line material to ultimately tie-in to an existing manhole located adjacent to the southeast corner of the project parcel. As such, this wastewater (sewer) BOD report is generated to support the sewer system project denoted “The Fairways II Improvement Plan”.

The proposed “Fairways II improvement plan” and more specifically the Sewer plans within the improvement plan set is discussed in greater detail in subsequent sections of this report.



**VICINITY MAP**  
N.T.S.

Exhibit 1 – Parcel Location Map

## 2.0 PROPOSED WASTEWATER COLLECTION SYSTEM

The existing sewer manhole to tie into is located within the existing development of the Fairways (as recorded in Book 775, Page 43, M.C.R.) and consists of an 8” PVC sewer with the following existing data:

### Existing Manhole (Southeastern section within APN 501-86-408A)

1. Existing Rim Elevation                      1112.32
2. Existing Flow Line Elevation (E)        1104.32
3. Existing Manhole depth                    8 feet
4. Sewer Line Size                              8-inch diameter

The proposed sewer line is proposed to be of (1) 1,375’ of 8-inch diameter PVC-SDR-35 material sloping at a minimum of 0.33%, (2) 3-each of 4” sewer cleanouts, (3) 21-each of 4” sewer services and (4) 3-each of 4’ diameter manholes. The line will be designed to attain a minimum scouring velocity of 2.0 feet-per-second (fps) when flowing full (d/D = 0.65) and a minimum slope rate of 0.33%. Once the proposed Sewer plans are city approved, it is the intent that construction activity will commence shortly thereafter.

## 3.0 ESTIMATED PEAK DISCHARGE

The estimated wastewater generation from the subject development (21 residential lots) is estimated based on the parameters shown in the table below.

Land use	Person/ House Hold	Average Daily Flow/ House Hold	Total Average Daily Flow	Peak Factor	Peak Flow/ House Hold	Total Peak Flow (dry)	Wet Weather Factor	Total Peak Flow (wet)
Residential	3.4	210 gpd	4,410 gpd	4.0	840 gpd	17,640 gpd	1.17	20,639 gpd

gpd: gallons per day

It should be noted that the proposed 8" line capacity exceeds both the estimated total average daily flow and the estimated total peak flow generated from the contributing 21 lots into this sewer system. Exhibit 2 presents hydraulic calculation of the proposed 8" sewer line with the estimated total average daily flow of 4,410 gpd (or 0.01 CFS), the estimated total peak flow (dry) of 17,640 gpd (or 0.03 CFS), the estimated total peak flow (wet) of 20,639 gpd (or 0.04 CFS), and the flow at maximum volume ( $d/D=0.65$ ).

City of El Mirage requirements state dry weather peak flow must not exceed a  $d/D$  of 0.50 and wet weather peak flow must not exceed a  $d/D$  of 0.90. Under the proposed design, dry weather peak flow  $d/D = 0.15$ , and wet weather peak flow  $d/D = 0.16$ , both of which are well within the maximum limits set forth by the City of El Mirage.

The proposed improvement plans for The Fairways II are shown in Exhibit 3 of this report.

#### **4.0 CONCLUSIONS**

- The project is located in City of El Mirage corporate limit.
- The proposed sewer system is designed in accordance with the City of El Mirage and Policies and designed to be composed of 8-inch diameter pipe of a PVC, SDR-35 material with a minimum slope rate of 0.33%.

**Exhibit 2**  
*Hydraulic Calculations*

# Channel Report

8", 4,410 GPD Flow

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

**The Fairways II**

<Name>

### Circular

Diameter (ft) = 0.67

Invert Elev (ft) = 1000.00

Slope (%) = 0.33

N-Value = 0.013

### Calculations

Compute by: Known Q

Known Q (cfs) = 0.01

### Highlighted

Depth (ft) = 0.06

Q (cfs) = 0.010

Area (sqft) = 0.02

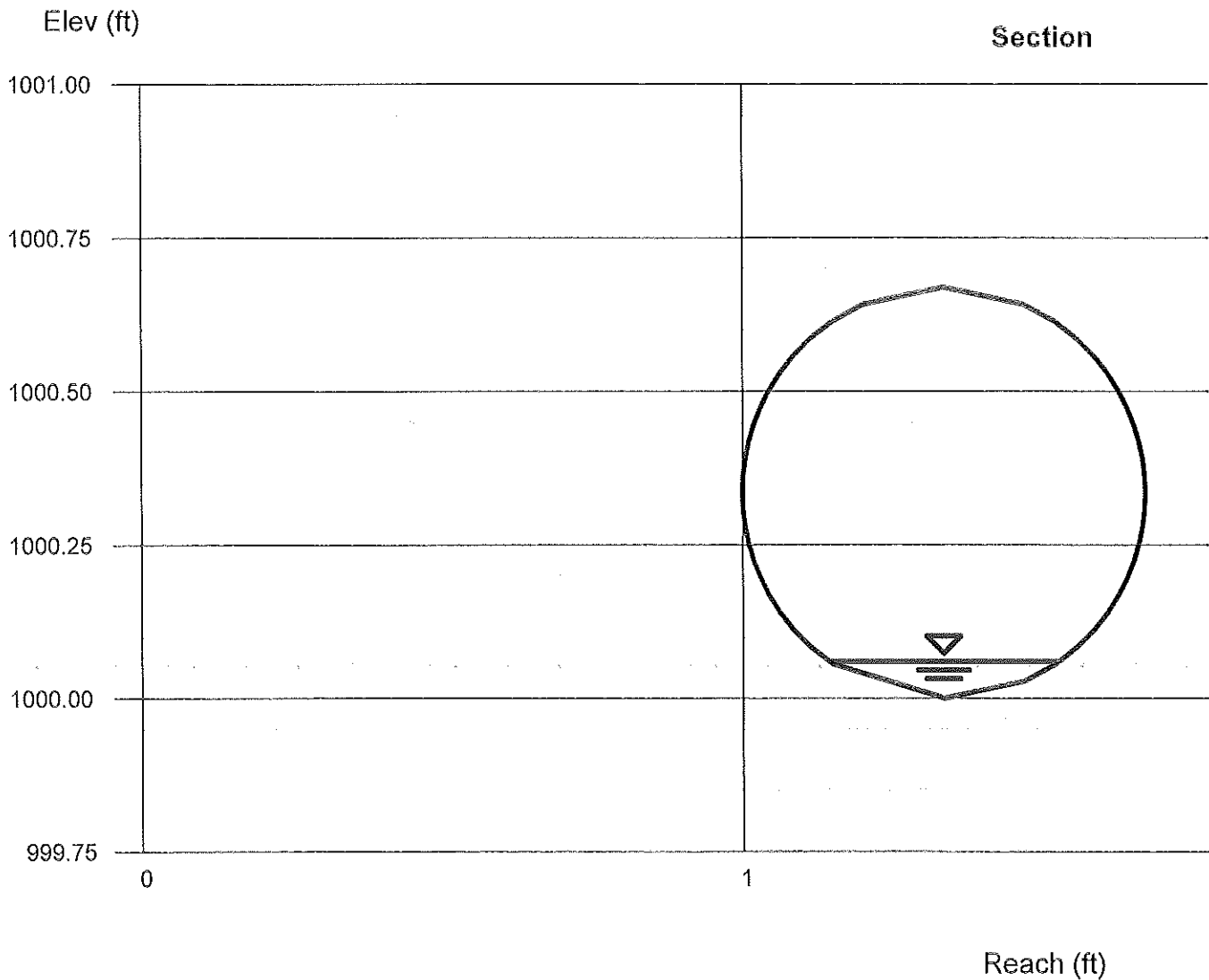
Velocity (ft/s) = 0.63

Wetted Perim (ft) = 0.41

Crit Depth, Yc (ft) = 0.05

Top Width (ft) = 0.38

EGL (ft) = 0.07



**TOTAL AVERAGE DAILY FLOW**

# Channel Report

8", 17,640 GPD Flow

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

**The Fairways II**

<Name>

### Circular

Diameter (ft) = 0.67

Invert Elev (ft) = 1000.00

Slope (%) = 0.33

N-Value = 0.013

### Calculations

Compute by: Known Q

Known Q (cfs) = 0.03

### Highlighted

Depth (ft) = 0.10

Q (cfs) = 0.030

Area (sqft) = 0.03

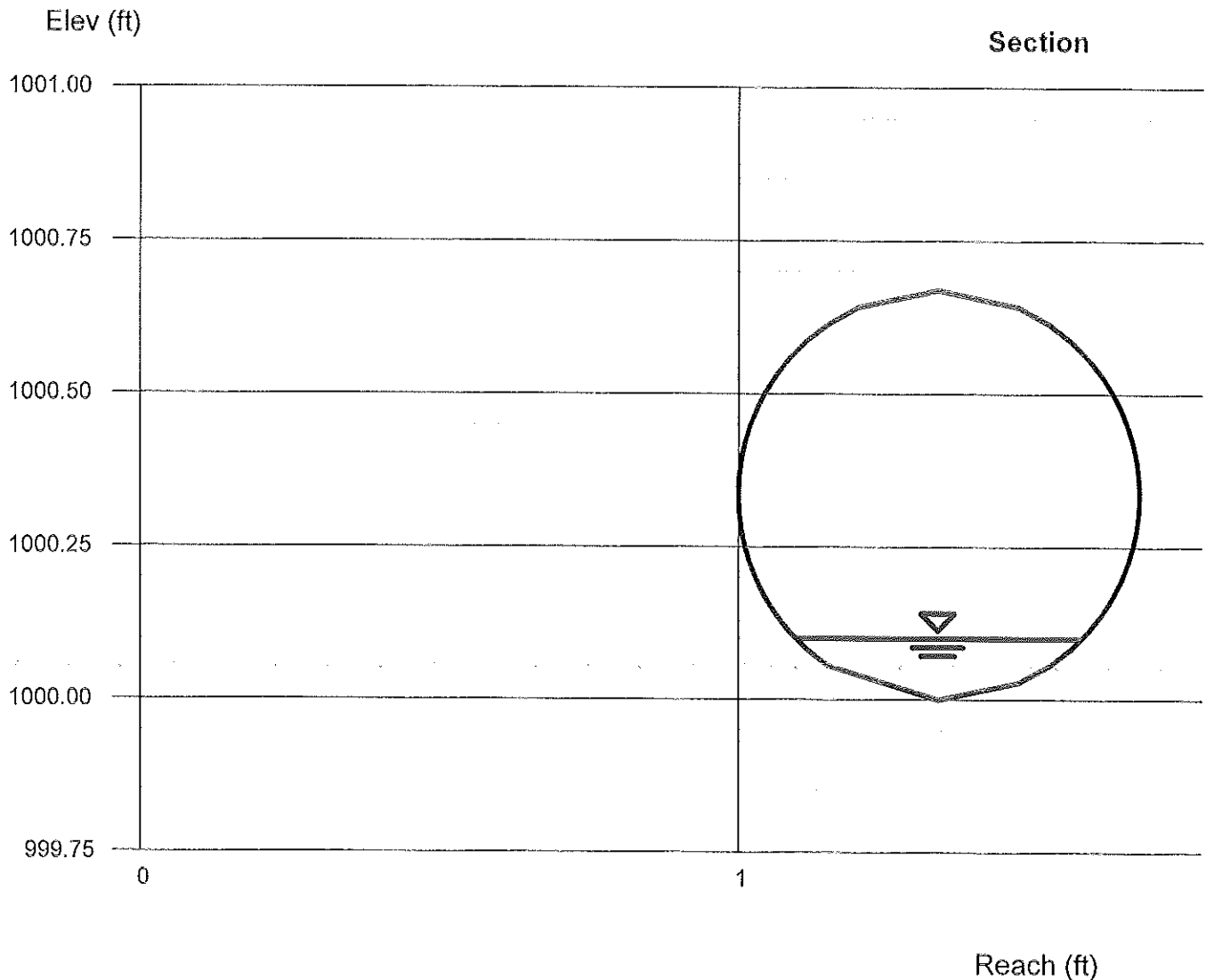
Velocity (ft/s) = 0.91

Wetted Perim (ft) = 0.53

Crit Depth, Yc (ft) = 0.08

Top Width (ft) = 0.48

EGL (ft) = 0.11



**TOTAL PEAK FLOW (DRY)**

# Channel Report

8", 22,639 GPD Flow

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

**The Fairways II**

<Name>

### Circular

Diameter (ft) = 0.67

Invert Elev (ft) = 1000.00

Slope (%) = 0.33

N-Value = 0.013

### Calculations

Compute by: Known Q

Known Q (cfs) = 0.04

### Highlighted

Depth (ft) = 0.11

Q (cfs) = 0.040

Area (sqft) = 0.04

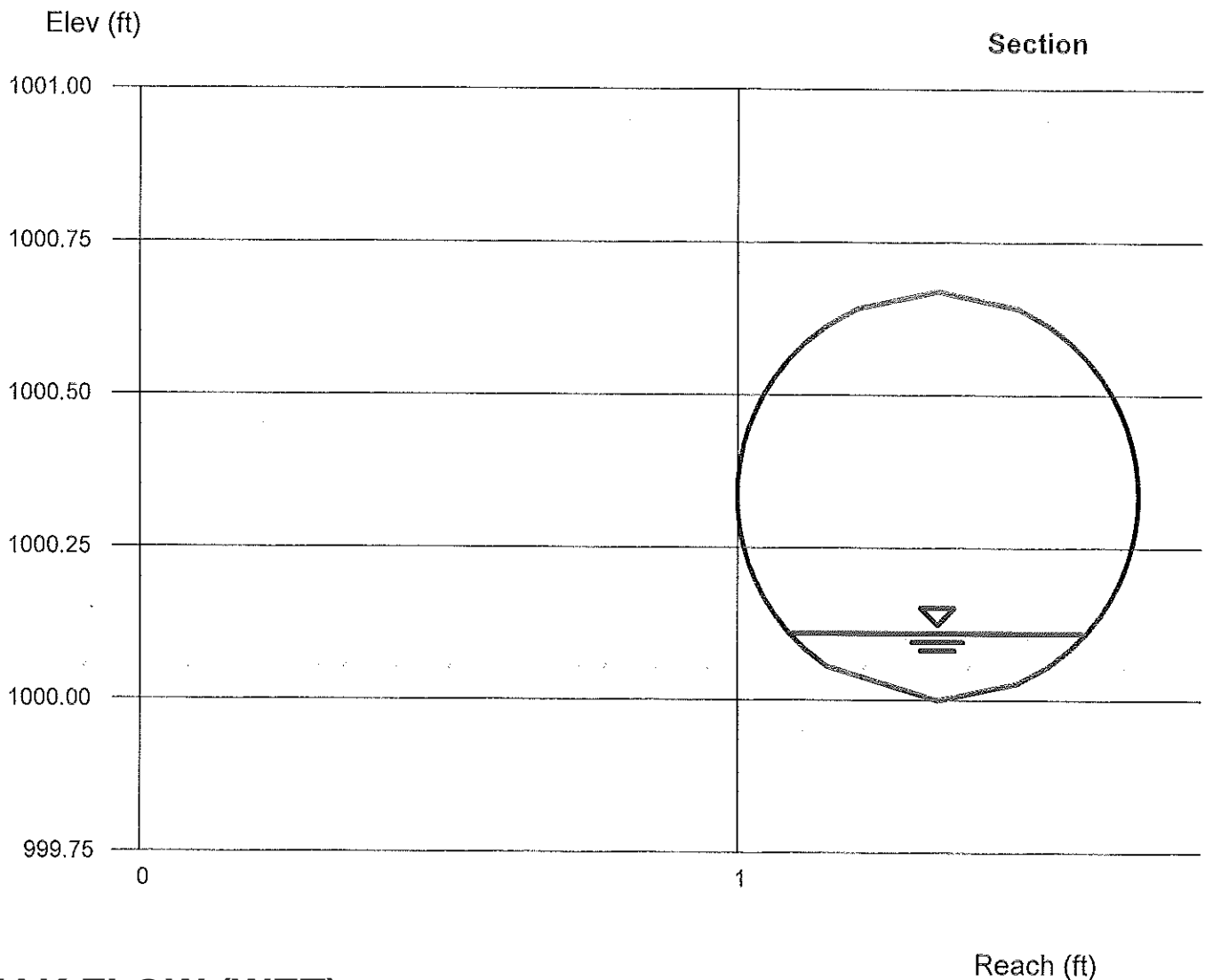
Velocity (ft/s) = 1.06

Wetted Perim (ft) = 0.56

Crit Depth, Yc (ft) = 0.09

Top Width (ft) = 0.50

EGL (ft) = 0.13



**TOTAL PEAK FLOW (WET)**

# Channel Report

8", Maximum Volume

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

**The Fairways II**

<Name>

### Circular

Diameter (ft) = 0.67

Invert Elev (ft) = 1000.00

Slope (%) = 0.33

N-Value = 0.013

### Calculations

Compute by: Known Depth

Known Depth (ft) = 0.44

### Highlighted

Depth (ft) = 0.44

Q (cfs) = 0.540

Area (sqft) = 0.25

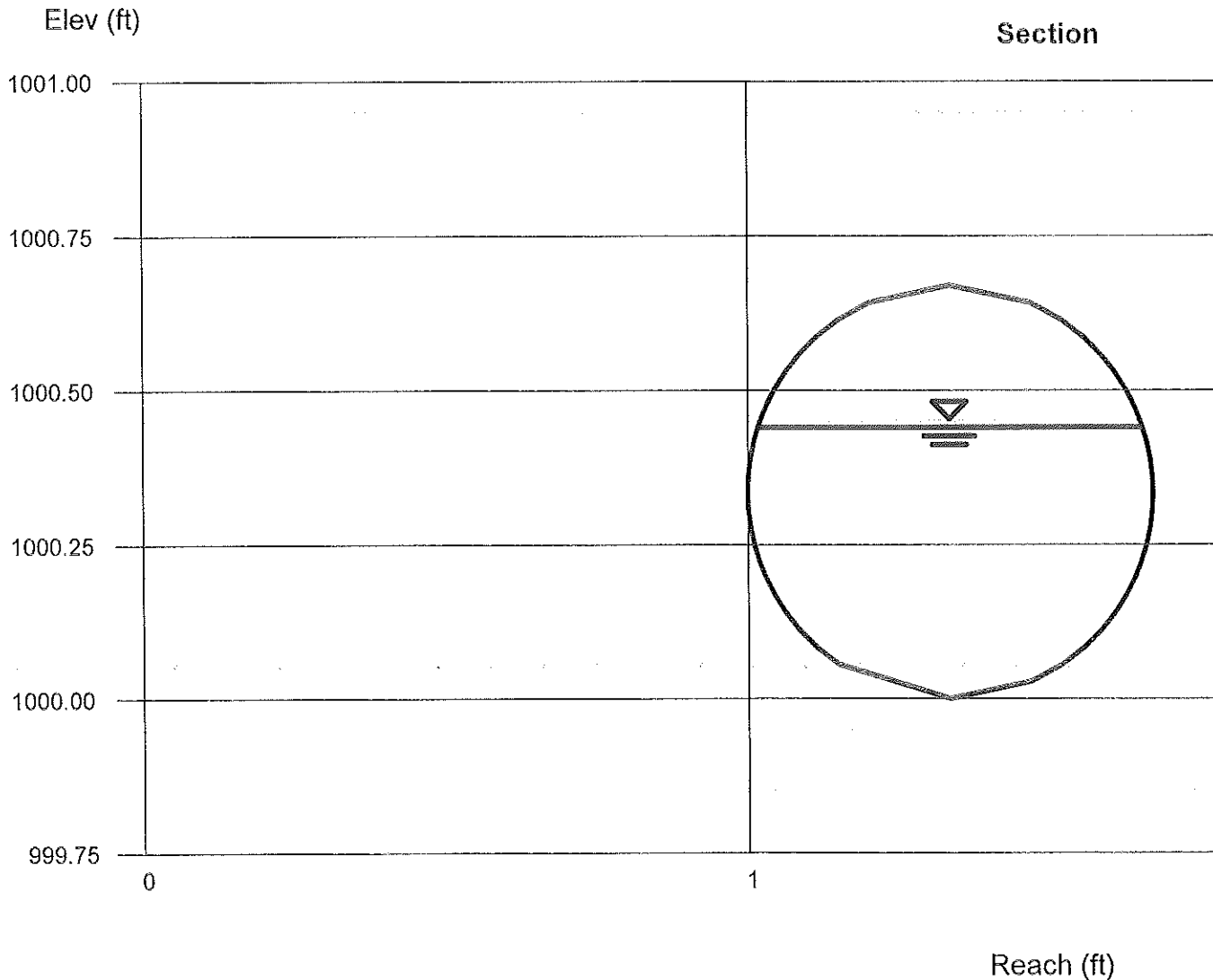
Velocity (ft/s) = 2.20

Wetted Perim (ft) = 1.27

Crit Depth, Yc (ft) = 0.35

Top Width (ft) = 0.64

EGL (ft) = 0.52



**MAX VOLUME**

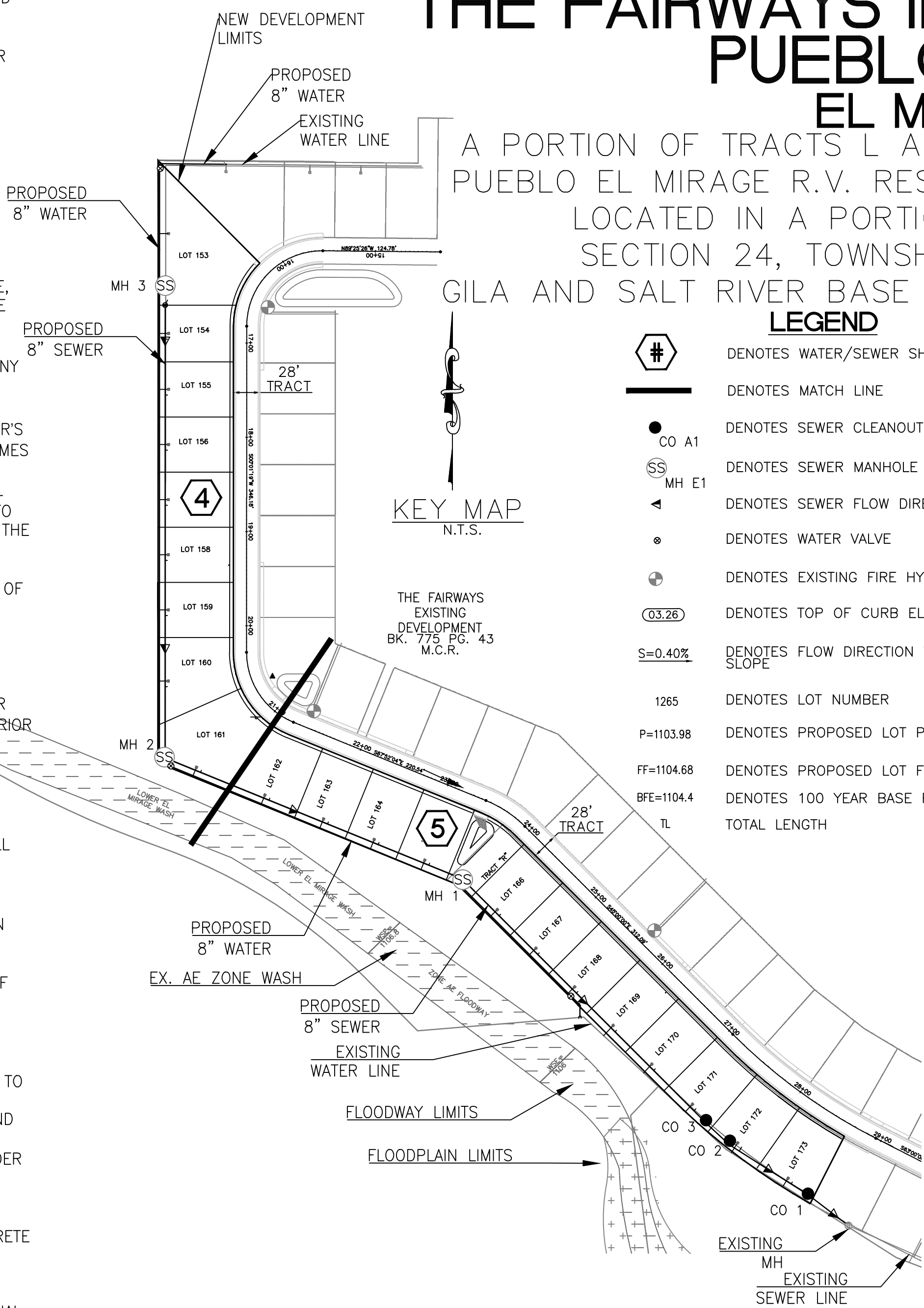
**Exhibit 3**  
*Improvement Plans For  
The Fairways II*

**CITY OF EL MIRAGE GENERAL NOTES:**

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS, UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION (MAG). CITY OF EL MIRAGE GENERAL NOTES AND DETAILS, CITY OF PEORIA INFRASTRUCTURE GUIDE AND STANDARD DETAILS WILL CONTINUE TO APPLY WHERE SUCH DETAILS WERE NOT ADOPTED OR INCLUDED BY MAG. ALTERNATE DETAILS AND SPECIFICATIONS MAY BE SUBMITTED FOR REVIEW AND ACCEPTANCE BY THE ENGINEERING DEPARTMENT. IF ACCEPTED, ALTERNATE DETAILS WILL BE SHOWN AS PART OF THE APPROVED PLANS/DETAIL SHEETS.
- THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH CITY REQUIREMENTS PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS. HOWEVER, SUCH REVIEW SHALL NOT PREVENT THE CITY ENGINEER FROM REQUIRING CORRECTION OF ERRORS OR OMISSIONS IN PLANS FOUND TO BE IN VIOLATION OF ANY LAW OR ORDINANCE.
- APPROVAL BY THE CITY ENGINEER MEANS FOR GENERAL LAYOUT IN RIGHT-OF-WAY ONLY. THIS APPROVAL OF CONSTRUCTION PLANS IS VALID FOR A PERIOD OF NINE (9) MONTHS. CONSTRUCTION PERMITS SHALL BE OBTAINED WITHIN THIS PERIOD OR THE PLANS SHALL BE RESUBMITTED FOR APPROVAL. WORK SHALL ALSO BE CONTINUOUSLY PURSUED IN ORDER TO MAINTAIN A VALID PLAN APPROVAL AND PERMIT. APPROVAL IS ONLY FOR WORK WITHIN THE JURISDICTION OF THE CITY OF EL MIRAGE.
- THE CITY ENGINEER DOES NOT WARRANT ANY QUANTITIES SHOWN ON THESE PLANS.
- OFF-SITE PERMITS FOR ANY WORK WITHIN THE RIGHT-OF-WAY AND EASEMENTS, AND ANY GRADING AND DRAINAGE, WHETHER ON-SITE OR OFF-SITE, ARE REQUIRED PRIOR TO COMMENCING WORK. THE BUILDING PERMIT SHALL NOT BE CONSTRUED IN ANY WAY AS PERMISSION TO COMMENCE WORK COVERED BY AN OFF-SITE PERMIT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER TO UNDERSTAND THE WORK COVERED BY VARIOUS PERMITS.
- THE ENGINEERING DEPARTMENT, INSPECTION SECTION, SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO ANY CONSTRUCTION WORK BY TELEPHONE AT (623) 876-2977. ANY WORK CONCEALED WITHOUT INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S/DEVELOPER'S EXPENSE.
- AN APPROVED SET OF PLANS MUST BE AVAILABLE ON THE JOB SITE AT ALL TIMES. THE CONTRACTOR'S/DEVELOPER'S REPRESENTATIVE (CAPABLE OF COMMUNICATING WITH THE CITY'S REPRESENTATIVES) SHALL BE ON THE JOB AT ALL TIMES THE WORK IS BEING PURSUED.
- THE CONTRACTOR/DEVELOPER IS RESPONSIBLE TO PROVIDE EMERGENCY TELEPHONE NUMBERS TO THE CITY OF EL MIRAGE AT TIME OF ISSUANCE OF OFF-SITE/ON-SITE PERMITS AND HAVE PERSONNEL AVAILABLE 24-HOURS A DAY TO RESPOND TO EMERGENCIES. IF THE CITY IS REQUIRED TO RESPOND AND MAKE EMERGENCY REPAIRS ON BEHALF OF THE CONTRACTOR/DEVELOPER, THE CONTRACTOR/DEVELOPER IS RESPONSIBLE TO REIMBURSE THE CITY FOR ALL COSTS INCURRED.
- IT SHALL BE THE RESPONSIBILITY OF THE PERMITEE TO ARRANGE FOR THE RELOCATION AND RELOCATION COSTS OF ALL UTILITIES, AND SUBMIT A UTILITY RELOCATION SCHEDULE PRIOR TO THE ISSUANCE OF A CONSTRUCTION PERMIT.
- ALL UNDERGROUND TANKS REQUIRE A PERMIT FROM THE FIRE DEPARTMENT PRIOR TO REMOVAL.
- THE PROCEDURES AND METHODS USED TO SAMPLE, TEST MATERIALS, AND REPORT TEST RESULTS WILL BE DETERMINED BY THE ENGINEERING DEPARTMENT. FOR ALL PHASES OF CONSTRUCTION, THE TYPE, SCHEDULING, FREQUENCY AND LOCATION OF ALL MATERIALS TESTING AND SAMPLING SHALL BE DETERMINED BY THE ENGINEERING DEPARTMENT. ALL TEST RESULTS SHALL BE REPORTED DIRECTLY (IN WRITING) TO THE ENGINEERING DEPARTMENT. FOR EACH PHASE OF CONSTRUCTION, TEST RESULTS (IN WRITING) MUST BE RECEIVED FROM THE TESTING LABORATORY, PRIOR TO THE START OF THE NEXT PHASE OF CONSTRUCTION. ROCK CORRECTIONS ARE REQUIRED FOR EACH IN-PLACE DENSITY TEST. NUCLEAR/SAND CONE CORRELATIONS ARE REQUIRED WITH ONE (1) SAND CONE TEST FOR EVERY TEN (10) NUCLEAR DENSITY TESTS TAKEN ON-SITE. SEE CITY OF EL MIRAGE MATERIALS TESTING GUIDELINES FOR MORE INFORMATION.
- THE EXCAVATING CONTRACTOR MUST GIVE LOCATION FOR WASTING EXCESS EXCAVATION AND A LETTER FROM THE OWNER GIVING PERMISSION FOR DUMPING PRIOR TO STARTING ON-SITE CONSTRUCTION. DEVELOPER'S ENGINEER SHALL SUBMIT CERTIFICATION OF CONSTRUCTION BUILDING PAD ELEVATIONS PRIOR TO CITY ACCEPTANCE OF PROJECT.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY THE PRESENCE AND LOCATION OF ALL EXISTING OVERHEAD AND/OR UNDERGROUND UTILITIES THAT MAY INTERFERE WITH THIS CONSTRUCTION, WHETHER OR NOT SAID UTILITIES ARE SHOWN ON THE CONSTRUCTION PLANS FOR THIS PROJECT AND TO ADEQUATELY PROTECT AND MAINTAIN ANY SUCH UTILITIES.
- THE ENGINEERING DEPARTMENT DOES NOT ASSUME ANY LIABILITY FOR ERRORS OF LINE AND/OR GRADE ON ANY STAKING WHICH HAS BEEN DISTURBED IN ANY WAY, NOR DOES THE ENGINEER ASSUME ANY LIABILITY FOR ERRORS OF LINE AND/OR GRADE ON ANY STAKING THAT HAS BEEN IN PLACE FOR A PERIOD OF TWENTY-FOUR (24) HOURS OR MORE WITHOUT THE COMMENCEMENT OF THE CONSTRUCTION FOR WHICH IT WAS SET.
- THE CONTRACTOR SHALL CONTACT BLUE STAKE (602) 263-1100 PRIOR TO CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CURRENT BLUE STAKE MARKINGS THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT THE CUSTOMER SERVICE DEPARTMENT AT 623-876-2966 OR 623-876-2967 TO OBTAIN A FIRE HYDRANT METER FOR CONSTRUCTION AND TO SCHEDULE THE RELOCATION OF HYDRANT METERS. CONTRACTORS SHALL NOT RELOCATE HYDRANT METERS THEMSELVES. THE CONTRACTOR SHALL INSTALL A SUPPORT AND CERTIFIED BACKFLOW PREVENTOR AND SUBMIT THE CERTIFICATION TO THE CITY INSPECTOR PRIOR TO USE.
- ALL CONTRACTORS/DEVELOPERS ARE RESPONSIBLE TO CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES IN ORDER TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAYS OR STREETS. GRAVEL TRACK-OUT PADS SHALL MEET CURRENT MARICOPA COUNTY STANDARDS. THE CONTRACTOR/DEVELOPER SHALL IMMEDIATELY REMOVE ANY SEDIMENT TRACKED ONTO PUBLIC RIGHTS-OF-WAYS OR STREETS.
- ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTION DITCHES, PIPES, PROTECTIVE BERMS, CONCRETE CHANNELS OR OTHER MEASURES DESIGNED TO PROTECT IMPROVEMENTS, WHETHER EXISTING OR PROPOSED, FROM RUNOFF OR DAMAGE FROM STORM WATER, MUST BE CONSTRUCTED PRIOR TO THE CONSTRUCTION OF ANY IMPROVEMENTS.
- TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITIONS OF THE CITY OF PHOENIX TRAFFIC BARRICADE MANUAL, MUTCD, AND THE CITY OF PEORIA INFRASTRUCTURE DEVELOPMENT GUIDELINES. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN PER THE PHOENIX TRAFFIC BARRICADE MANUAL. BARRICADES MUST BE CONTINUALLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. IF ANY PART OF THE TRAFFIC CONTROL PLAN FALLS WITHIN 300' OF A SIGNALIZED INTERSECTION, AN OFF-DUTY OFFICER WILL BE REQUIRED FOR TRAFFIC CONTROL. A TRAFFIC CONTROL PLAN (TCP) SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT AND ACCEPTED A MINIMUM OF 48-HOURS PRIOR TO CONSTRUCTION. AN ACCEPTED TCP WILL BE STAMPED AND A COPY RETURNED TO THE CONTRACTOR. A COPY OF THE ACCEPTED PLAN MUST REMAIN ON THE JOB SITE AT ALL TIMES.
- ANY AND ALL OBSTRUCTIONS WITHIN THE RIGHTS-OF-WAY AND EASEMENTS SHALL BE REMOVED BEFORE ANY CONSTRUCTION IS COMMENCED.
- ALL CONTRACTORS/DEVELOPERS ARE RESPONSIBLE TO OBTAIN A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS, INCLUDING NOTICE OF INTENT (NOI), NOTICE OF TERMINATION (NOT), AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A COPY OF THE NOI AND SWPPP SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
- ALL CONTRACTORS/DEVELOPERS ARE RESPONSIBLE TO OBTAIN THE NECESSARY 401 AND 404 PERMITS. A COPY OF THE PERMIT SHALL BE SUBMITTED TO THE CITY PRIOR TO APPROVAL OF THE GRADING AND DRAINAGE PLANS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER TO OBTAIN ANY AND ALL OTHER PERMITS AND MEET ANY REQUIREMENTS SET FORTH BY OTHER AGENCIES OR UTILITIES, WHICH HAVE JURISDICTION, AT THE CONTRACTOR'S/DEVELOPER'S EXPENSE, INCLUDING OSHA. CONTRACTOR SHALL MEET OSHA STANDARDS FOR TRENCH SAFETY.
- AS A REMINDER, MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT HAS ASKED THE CITY TO INFORM ALL CONTRACTORS/DEVELOPERS WORKING IN THE CITY OF EL MIRAGE OF THE FOLLOWING:  
PER THE MARICOPA COUNTY AIR POLLUTION CONTROL RULES AND REGULATIONS ON EARTH MOVING EQUIPMENT PERMITS, NO PERSON SHALL CAUSE OR PERMIT THE USE OF ANY POWER OR MECHANICAL EQUIPMENT FOR COMMERCIAL PURPOSES TO CLEAR, EXCAVATE OR LEVEL LAND, INCLUDING BUT NOT LIMITED TO BLASTING, DEMOLITION, ROAD AND STREET CONSTRUCTION, SWIMMING POOL EXCAVATING, TRENCHING, VEGETATION REMOVAL, OR ENGAGE IN ANY OTHER EARTH MOVING ACTIVITIES WITHOUT FIRST OBTAINING A PERMIT FROM THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT. THE PROPERTY OWNER, LESSEE, DEVELOPER OR PRIME CONTRACTOR WILL BE RESPONSIBLE FOR ACQUIRING THE PERMIT.
- ALSO AS A REMINDER, IF THE ABOVE REFERENCED DEVELOPMENT HAS WORK THAT NEEDS TO BE DONE IN THE MARICOPA COUNTY RIGHTS-OF-WAY, PLEASE OBTAIN ALL PERMITS FROM THE MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION. THE OFF-SITE PERMITS ISSUED BY THE CITY OF EL MIRAGE DO NOT COVER THE MARICOPA COUNTY RIGHTS-OF-WAY.
- FIRE ACCESS TO BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION AS REQUIRED BY THE CITY OF EL MIRAGE FIRE DEPARTMENT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER TO SCHEDULE WATER AND SEWER TESTING WITH THE CITY INSPECTOR PER THE WATER AND SEWER GUIDELINES. NO TESTING SHALL BE ACCEPTED BY THE INSPECTOR UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN INSTALLED.
- ANY EXISTING LANDSCAPING AND/OR IRRIGATION SYSTEM DISTURBED BY CONSTRUCTION SHALL BE REPLACED IN KIND BY THE CONTRACTOR. THE CONTRACTOR SHALL CALL AND COORDINATE THIS WORK WITH THE CITY OF EL MIRAGE'S PARKS SUPERVISOR AT 623-980-9404.

# THE FAIRWAYS II IMPROVEMENT PLANS PUEBLO EL MIRAGE EL MIRAGE, ARIZONA

A PORTION OF TRACTS L AND T AND LOTS 1380 THRU 1392, INCLUSIVE  
PUEBLO EL MIRAGE R.V. RESORT, BOOK 275 OF MAPS, PAGE 45, M.C.R.  
LOCATED IN A PORTION OF THE NORTHWEST QUARTER OF  
SECTION 24, TOWNSHIP 3 NORTH, RANGE 1 WEST, OF THE  
GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA



**LEGEND**

- # DENOTES WATER/SEWER SHEET NUMBER
- DENOTES MATCH LINE
- CO A1 DENOTES SEWER CLEANOUT AND NUMBER
- SS MH E1 DENOTES SEWER MANHOLE AND NUMBER
- ◀ DENOTES SEWER FLOW DIRECTION
- DENOTES WATER VALVE
- ⊕ DENOTES EXISTING FIRE HYDRANT
- 03.26 DENOTES TOP OF CURB ELEVATION
- S=0.40% DENOTES FLOW DIRECTION WITH SLOPE
- 1265 DENOTES LOT NUMBER
- P=1103.98 DENOTES PROPOSED LOT PAD ELEVATION
- FF=1104.68 DENOTES PROPOSED LOT FINISH FLOOR ELEVATION
- BFE=1104.4 DENOTES 100 YEAR BASE FLOOD ELEVATION
- TL TOTAL LENGTH

**AREA TABLE**

THIS PROPERTY CONTAINS 117,261.64 SQUARE FEET OR 2.692 ACRES MORE OR LESS.  
TRACT "R" IS FOR RETENTION-3,870.03 SQUARE FEET OR 0.888 ACRES LOTS 153-173 ZONING: MP

**FLOOD ZONE**

THIS PROPERTY IS LOCATED ON THE FLOOD INSURANCE RATE MAP(FIRM) ZONE X. COMMUNITY NUMBER 040041 MAP NUMBER AND SUFFIX 04013C0680L PANEL NUMBER 0680 EFFECTIVE DATE OF FIRM OCTOBER 16, 2013. AND LOMAR 14-09-2996P EFFECTIVE DATE OF FEBRUARY 27, 2015.

**LEGAL DESCRIPTION**

SEE SHEET 2 FOR LEGAL DESCRIPTION.

**SPECIAL NOTE**

THESE PLANS ARE FOR "OFFICIAL USE" ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED FOR THE CONSTRUCTION OF THE PUBLIC WORKS FACILITIES SHOWN HEREON. THE PROJECT OWNER, AND THE OWNER'S LENDERS, CONSULTANTS, CONTRACTORS AND SUBCONTRACTORS ARE PROHIBITED FROM DISCLOSING THE PLANS AND SPECIFICATIONS TO ANY PERSONS OTHER THAN THOSE WHO HAVE A NEED TO KNOW THE INFORMATION FOR THE PURPOSES OF THE PROJECT.

**NOTES**

- THE WATER SYSTEM SHOWN HEREIN, HAS BEEN DESIGNED TO ADEQUATELY SUPPLY WATER IN SUFFICIENT QUANTITY AND PRESSURE TO MEET LOCAL FIRE PROTECTION REQUIREMENTS BASED ON CITY RECORDS AND AVAILABLE DATA.
- SIGNS REQUIRE SEPARATE APPROVALS AND PERMITS.
- ALL RIP-RAP SHALL BE NATIVE AND GROUTED, IF APPLICABLE.
- ALL CUTS AND FILLS SHALL BE CONTOURED TO BLEND WITH THE EXISTING ADJACENT NATURAL TERRAIN.
- FIRE HYDRANTS SHALL CLEAR THE SIDEWALK BY 2' MINIMUM.
- CONTRACTOR MUST FIELD VERIFY ALL EXISTING UNDER AND ABOVE GROUND FEATURES AND UTILITIES PRIOR TO COMMENCEMENT OF ANY AND ALL CONSTRUCTION ACTIVITIES. ANY FOUND CONFLICTS MUST BE REPORTED TO THE OWNER AND ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION. CONTRACTOR SHALL ASSUME ALL RESPONSIBILITIES, OTHERWISE.
- ALL SEWER STUBS OFF THE MAIN SHALL BE AT A 2% MIN. SLOPE.
- ALL SEWER CLEAN-OUTS SHALL BE INSTALLED NO GREATER THAN 150' APART.

**ENGINEER'S NOTES**

- THE ESTIMATED QUANTITIES SHOWN ARE FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETENESS AND ACCURACY OF A DETAILED ESTIMATE BASED ON THESE PLANS, CURRENT CODES AND SITE VISITATION.
- AN ATTEMPT HAS BEEN MADE TO SHOW THE LOCATIONS OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OBSTRUCTIONS AND UTILITY LINES ENCOUNTERED DURING CONSTRUCTION AND SHALL DETERMINE THE EXACT LOCATION OF UTILITIES IN ADVANCE OF CONSTRUCTION.
- ALL EARTHWORK CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAILS AND/OR SPECIFICATION INCLUDING AND SUPPLEMENT THERETO.
- A SOILS REPORT MUST BE PROVIDED PRIOR TO LOT GRADING CONSTRUCTION ACTIVITY TO SPECIFY THE NEEDED COMPACTION AND TO VERIFY THE NATURE OF THE EXISTING SOILS WITHIN THE LOTS' AREA.

**ESTIMATED QUANTITIES:**

**WATER:**

- 8" PVC WATER LINE 1,243 LF
- VALVE, BOX & COVER 3 EA
- 22.50" BEND 1 EA
- 45.00" BEND 2 EA
- 90.00" BEND 1 EA
- 1" WATER SERVICE 21 EA
- 10" TEE 1 EA
- 8"x6" REDUCER 1 EA
- 10"x8" REDUCER 1 EA

**SEWER:**

- 8" SEWER LINE 1,374 LF
- 4" SEWER CLEANOUT 3 EA
- 4" SEWER SERVICE 21 EA
- 4' MANHOLE 3 EA

**PAVING:**

- RIP RAP 4 SY
- 4' SIDEWALK 5,022 SF
- RETAINING WALL 192 LF

**SHEET INDEX**

- COVER SHEET 1
- NOTES & LEGAL DESCRIPTION SHEET 2
- GRADING PLAN SHEET 3
- WATER AND SEWER PLAN SHEETS 4-5

**UTILITIES/SERVICE PROVIDERS**

- WATER: CITY OF EL MIRAGE
- ELECTRIC: AZ PUBLIC SERVICE
- TELEPHONE: QWEST TELEPHONE COMPANY
- SEWER: CITY OF EL MIRAGE
- CABLE: COX COMMUNICATIONS
- GAS: SOUTHWEST GAS
- NOTE: ALL ONSITE WATER AND SEWER SYSTEMS ARE PRIVATE.

**AS-BUILT CERTIFICATION:**

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENT AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR / ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

REGISTRATION NUMBER \_\_\_\_\_

**APPROVALS**

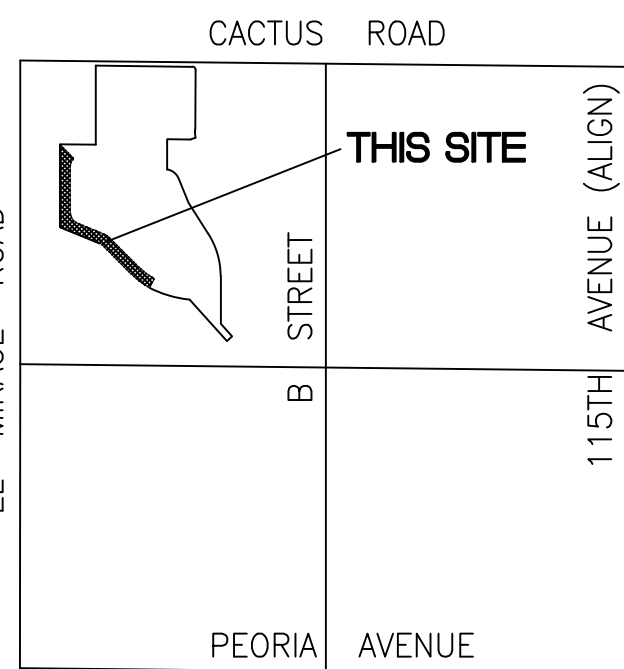
MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT FOR WATER AND SEWER \_\_\_\_\_ DATE \_\_\_\_\_

WATER NUMBER: \_\_\_\_\_

SEWER NUMBER: \_\_\_\_\_

CITY ENGINEER \_\_\_\_\_

DATE \_\_\_\_\_



**ENGINEER**

SKG ENTERPRISES INC.  
ATTN.: SHAKIR GUSHGARI  
9260 EAST RAINTREE DRIVE  
SUITE 140  
SCOTTSDALE, AZ. 85260  
(480) 998-5600

**DEVELOPER**

ROBERTS RESORTS  
6991 E. CAMELBACK,  
SUITE C312  
SCOTTSDALE, AZ. 85260  
PHONE: (480) 425-8696  
FAX: (480)-425-8652  
CONTACT: NIELS ROBERTS

**BENCHMARK**

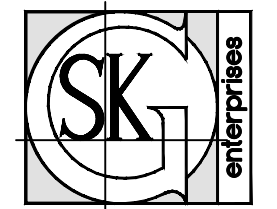
FOUND 3" MARICOPA COUNTY BRASS CAP FLUSH IN CONCRETE STAMPED 2003 S13 AND S24 RLS #36563. THE NORTH QUARTER OF SECTION 24, T3N., R1W. ELEVATION=1109.555(G.D.A.C.S. PT.# 30783-Z1 NAVD '88 DATUM).

**BASIS OF BEARING**

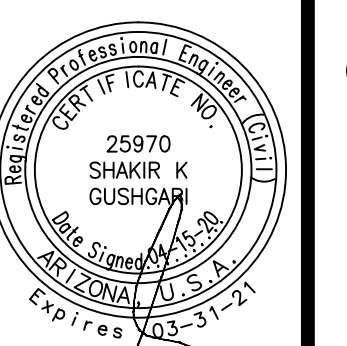
THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 24, T3N., R1W ACCORDING TO THE FINAL PLAT OF THE FAIRWAYS RECORDED IN BOOK 775 OF MAPS, PAGE 43 M.C.R. AND PUEBLO R.V. RESORT BOOK 275 OF MAPS, PAGE 45, M.C.R. THE LINE WHICH BEARS SOUTH 00° 01' 19" WEST.

**ESTIMATED EARTH WORK**

CUT = 1,800 CY  
FILL = 800 CY  
SHRINKAGE FACTOR = 20%  
NET = 800 CY (CUT)  
\*EXCESS MATERIAL SHALL BE EXPORTED TO THE FUTURE "THE LEGACY" DEVELOPMENT LOCATED WITHIN THE SAME PUEBLO EL MIRAGE R.V. RESORT COMMUNITY.



SKG ENTERPRISES, INC.  
9260 E. RAINTREE DRIVE  
SUITE 140  
SCOTTSDALE, AZ. 85260  
PH) 480-998-5600  
FAX) 480-998-5603  
WWW.SKGAZ.COM



25970  
SHAKIR K. GUSHGARI  
Professional Engineer  
No. 25970  
State of Arizona  
Expires 03-31-21



Contact Arizona 911 at least two full working days before you begin excavation

**PUEBLO EL MIRAGE R.V. RESORT COVER SHEET**

**THE FAIRWAYS II IMPROVEMENT PLANS CITY OF EL MIRAGE, MARICOPA COUNTY, ARIZONA**

job no. 127-13  
design SKG  
approved SKG  
date 04/2020

revisions

sheet

PROJECT NO. PUEBLO EL MIRAGE R.V. RESORT - THE FAIRWAYS II IMPROVEMENT PLANS

**CITY OF EL MIRAGE WATER NOTES**

1. ACCEPTABLE WATER LINE MATERIALS:
  - a. DUCTILE IRON PIPE, PRESSURE CLASS 350, IS ACCEPTABLE FOR WATER LINES SIZES SIX (6) INCHES THROUGH TWELVE (12) INCHES IN DIAMETER. ALL DUCTILE IRON PIPE SHALL BE POLYWRAPPED IN CONFORMANCE WITH SECTION 610.5 OF THE MAG STANDARD SPECIFICATIONS.
  - b. DUCTILE IRON PIPE, PRESSURE CLASS 250 MINIMUM, IS ACCEPTABLE FOR WATER LINES 16 INCHES IN DIAMETER AND LARGER. ALL DUCTILE IRON PIPE SHALL BE POLYWRAPPED IN CONFORMANCE WITH SECTION 610.5 OF THE MAG STANDARD SPECIFICATIONS.
  - c. PVC PIPE, AWWA C-900 PRESSURE CLASS 200, IS ACCEPTABLE FOR WATER LINES SIZES SIX (6) INCHES AND EIGHT (8) INCHES IN DIAMETER. (PRIVATE ONLY)
2. TRENCH EXCAVATION, BACKFILLING AND COMPACTION SHALL CONFORM TO MAG STANDARD SPECIFICATION SECTION 601 EXCEPT AS MODIFIED HEREIN.
3. BEDDING AND BACKFILL FOR WATER LINES SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE CITY OF EL MIRAGE STANDARD DETAIL 406, BEDDING AND BACKFILL FOR ALL PIPELINES.
4. BACKFILL SHALL BE TYPE I AS DEFINED IN SECTION 601 OF THE MAG STANDARD SPECIFICATIONS.
5. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY THE PROJECT ENGINEER BEFORE THE WATER LINE OR FITTINGS ARE COVERED, SO "AS-BUILT" MEASUREMENTS MAY BE TAKEN. ANY CHANGES TO THE APPROVED PLANS MUST BE AUTHORIZED BY THE PROJECT ENGINEER AND THE CITY ENGINEER BEFORE THE CHANGE IS MADE IN THE FIELD.
6. SIX-(6) INCH AND EIGHT (8) INCH WATERLINES LOCATED IN STREETS SHALL HAVE A MINIMUM COVER OF 48 INCHES OVER THE TOP OF THE PIPE TO FINISH GRADE. SIX (6) INCH AND EIGHT (8) INCH WATERLINES IN LOCATIONS OTHER THAN STREETS SHALL HAVE A MINIMUM COVER OF 36 INCHES OVER THE TOP OF THE PIPE TO FINISH GRADE, UNLESS DESIGN CONDITIONS WARRANT ADDITIONAL COVER.
7. TWELVE (12) INCH WATERLINES LOCATED IN STREETS SHALL HAVE A MINIMUM COVER OF 60 INCHES OVER THE TOP OF THE PIPE TO FINISH GRADE. TWELVE (12) INCH WATERLINES IN LOCATIONS OTHER THAN STREETS SHALL HAVE A MINIMUM COVER OF 48 INCHES OVER THE TOP OF THE PIPE TO FINISH GRADE, UNLESS DESIGN CONDITIONS WARRANT ADDITIONAL COVER.
8. SIXTEEN (16) INCH WATERLINES SHALL HAVE A MINIMUM COVER OF 60 INCHES OVER THE TOP OF THE PIPE TO FINISH GRADE, UNLESS DESIGN CONDITIONS WARRANT ADDITIONAL COVER.
9. ALL STUB-OUTS SHALL HAVE A TWO (2) INCH BRASS BALL CORP STOP AS A BLOW-OFF, LEFT IN PLACE WITH A TWO (2) INCH RISER, PER MAG STANDARD DETAIL 390, TYPE 'A', AND SHALL BE ACCESSIBLE TO USE.
10. FIRE HYDRANTS SHALL CONFORM TO CITY OF EL MIRAGE STANDARD DETAIL 360. THE FIRE HYDRANT MANUFACTURER MUST BE APPROVED BY THE CITY OF EL MIRAGE PRIOR TO THE INSTALLATION OF THE FIRE HYDRANT.
11. ALL VALVES 16 INCHES AND UNDER SHALL BE RESILIENT SEAT AWWA APPROVED GATE VALVES AND SHALL OPEN BY TURNING TO THE LEFT.
12. VALVES SHALL NOT BE LOCATED IN SIDEWALKS, GUTTERS, CURB, OR VALLEY GUTTERS.
13. ALL WATER VALVES SHALL HAVE A VALVE BOX AND COVER PER MAG STANDARD DETAIL 391-1, TYPE 'A' AND 392, TYPE 'A'. ADJUSTMENTS SHALL CONFORM TO CITY OF EL MIRAGE DETAIL 393.
14. CONTRACTORS SHALL NOT OPERATE VALVES ON THE EXISTING CITY SYSTEM.
15. WATER LINES SHALL BE INSTALLED IN SUCH A MANNER TO ELIMINATE DIPS OR HIGH POINTS. WATER LINES CONSTRUCTED ON LINEAR STREETS SHALL NOT HAVE HORIZONTAL ALIGNMENT DEFLECTIONS. ALL HORIZONTAL DEFLECTIONS IN WATER LINES (CONSTRUCTED IN NONLINEAR STREETS) SHALL COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS FOR DEFLECTION AT JOINTS.
16. THRUST RESTRAINT SHALL BE INSPECTED PRIOR TO BACKFILL. REINFORCING STEEL AND FORM WORK SHALL BE INSPECTED PRIOR TO PLACING CONCRETE FOR THRUST BLOCKS. THRUST RESTRAINT SHALL CONFORM TO MAG STANDARD SPECIFICATION 610.4 AND MAG STANDARD DETAILS 301, 380 AND 381.
17. WATER SERVICES TWO (2) INCHES AND SMALLER IN DIAMETER SHALL CONFORM TO CITY OF EL MIRAGE STANDARD DETAIL 325. THE MINIMUM SERVICE CONNECTION SHALL BE ONE (1) INCH. SINGLE FAMILY RESIDENCES MAY USE A MINIMUM ONE-(1) INCH SERVICE CONNECTION. WATER SERVICE SADDLE MANUFACTURER AND MODEL MUST BE APPROVED BY THE CITY OF EL MIRAGE PRIOR TO INSTALLATION.
18. WATER SERVICES SHALL NOT BE LOCATED UNDER DRIVEWAYS, OR UNDER CONCRETE APRONS ADJACENT TO DRIVEWAYS.
19. AN APPROVED METALLIC LOCATOR TAPE AND TRACING WIRE SHALL BE INSTALLED WITH ALL WATER LINES AND SERVICES (LINEAR AND NONLINEAR). AND ATTACHED TO VALVE BOXES.
20. ALL PAVEMENT REPLACEMENT SHALL CONFORM WITH MAG STANDARD DETAIL 200-1 MODIFIED WITH A ONE-HALF (1/2) SACK PORTLAND CEMENT ABC SLURRY, WHICH CONFORMS TO MAG STANDARD SPECIFICATION 728, (MODIFIED FOR ONE-HALF SACK PORTLAND CEMENT), FOR TRENCH BACKFILL FROM ONE (1) FOOT ABOVE THE TOP OF PIPE TO THE EXISTING PAVEMENT SUBGRADE. USE TYPE 'A' FOR LONGITUDINAL TRENCH REPAIR AND USE "T TOP" FOR TRANSVERSE TRENCH REPAIR OR WHEN A TRENCH RUNS THROUGH AN INTERSECTION. PAVEMENT REPLACEMENT THICKNESS SHALL BE 1.5 TIMES THE EXISTING ASPHALT THICKNESS. AC MIX DESIGN SHALL BE PER THE CITY OF PHOENIX C-3/4" MIX. CRACK SEALING IS REQUIRED.
21. PRESSURE TESTING SHALL NOT BE CONDUCTED UNTIL AFTER THE CONTRACTOR HAS PRETESTED 100% OF THE LINES. INSPECTION TESTING MUST BE CALLED FOR TWENTY-FOUR (24) HOURS IN ADVANCE. WATER LINES MUST PASS PRESSURE TESTING PRIOR TO PAVING.
22. ALL MAINS SHALL BE CHLORINATED IN CONFORMANCE WITH SECTION 611 OF MAG STANDARD SPECIFICATIONS. SAMPLES WILL BE TAKEN IN CONFORMANCE WITH MAG STANDARD SPECIFICATION SECTION 611.
23. THE CONTRACTOR SHALL NOT TIE INTO EXISTING MAINS WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER OR HIS/HER DESIGNEE.
24. THE FOLLOWING MAG UNIFORM STANDARD DETAILS ARE SPECIFICALLY NOT APPROVED.
  - NO. 345-2 4", 6" WATER METER WITH ON-SITE FIRE HYDRANTS
  - NO. 360-1 DRY BARREL FIRE HYDRANT INSTALLATION
  - NO. 360-2 WET BARREL FIRE HYDRANT INSTALLATION
  - NO. 360-3 FIRE HYDRANT INSTALLATION DETAILS
  - NO. 389 CURB STOP WITH VALVE BOX AND COVER
  - NO. 391-1 VALVE BOX INSTALLATION AND GRADE ADJUSTMENT - TYPES 'B' & 'C'
25. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MEET OSHA STANDARDS FOR "TRENCH SAFETY".
26. IN ACCORDANCE WITH AAC R18-4-119, ALL MATERIALS ADDED AFTER JANUARY 1, 1993, WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61.
27. NO WATER LINES SHALL BE LOCATED WITHIN RETENTION/DETENTION BASINS.
28. ALL WATER VALVES LOCATED OUTSIDE PAVED AREAS SHALL HAVE A 'CURVE-FLEX' UTILITY MARKER AS MANUFACTURED BY CARSONITE (CFRM-400-BLUE).
29. AN "ENGINEER'S CERTIFICATE OF COMPLETION" ISSUED BY THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT, IS REQUIRED PRIOR TO FINAL PROJECT ACCEPTANCE.
30. A COPY OF THE APPROVAL TO CONSTRUCT (ATC) ISSUED BY MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT (MCESD) IS REQUIRED WITHIN NINETY (90) DAYS OF ISSUANCE OF THE OFF-SITE PERMIT.
31. A COPY OF THE APPROVAL OF CONSTRUCT (AOC) ISSUED BY MCESD IS REQUIRED PRIOR TO FINAL PROJECT ACCEPTANCE.
32. ALL MATERIALS SHALL BE LEAD FREE AS DEFINED IN AAC R18-5-504 AND R-18-4-101.

**LEGAL DESCRIPTION**

PORTION OF TRACT L AND LOTS 1380 THRU 1392, INCLUSIVE OF PUEBLO EL MIRAGE R.V. RESORT, AS RECORDED IN BOOK 275 OF MAPS, PAGE 45, IN THE OFFICE OF THE COUNTY RECORDER, MARICOPA COUNTY, ARIZONA, LOCATED IN THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 1 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MORE PARTICULARLY DESCRIBES AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 24 FROM WHENCE THE WEST QUARTER BEARS SOUTH 00 DEGREES 01 MINUTES 19 SECONDS WEST RECORD, A RECORD DISTANCE OF 2637.53 FEET A MEASURED DISTANCE OF 2637.84 FEET.

THENCE SOUTH 00 DEGREES 01 MINUTES 19 SECONDS WEST ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, A DISTANCE OF 650.13 FEET AS SHOWN ON THE FINAL PLAT OF THE FAIRWAYS RECORDED IN BOOK 775 OF MAPS, PAGE 43 IN THE OFFICE OF THE COUNTY RECORDER, MARICOPA COUNTY, ARIZONA;

THENCE DEPARTING SAID WEST LINE ON A BEARING OF SOUTH 89 DEGREES 25 MINUTES 26 SECONDS EAST, DISTANCE OF 378.99 FEET AS SHOWN ON THE FINAL PLAT OF THE FAIRWAYS RECORDED IN BOOK 775 OF MAPS, PAGE 43 IN THE OFFICE OF THE COUNTY RECORDER, MARICOPA COUNTY, ARIZONA TO THE NORTHWESTERLY MOST CORNER OF LOT 16 AS SHOWN ON THE FINAL PLAT OF THE FAIRWAYS RECORDED IN BOOK 775 OF MAPS, PAGE 43 IN THE OFFICE OF THE COUNTY RECORDER, MARICOPA COUNTY, ARIZONA, SAID POINT BEING THE POINT OF BEGINNING;

THENCE ALONG THE WESTERLY LINE OF SAID LOT 16 ON A BEARING OF SOUTH 44 DEGREES 24 MINUTES 04 SECONDS EAST, A DISTANCE OF 153.27 FEET TO A POINT ON A CURVE RADIAL WITH THE AFOREMENTIONED BEARING HAVING A RADIUS DISTANCE OF 94.00 FEET;

**CITY OF EL MIRAGE SEWER NOTES**

1. ACCEPTABLE SEWER LINE MATERIALS:
  - A. PVC SDR 35 SEWER PIPE, WHICH CONFORMS TO SECTION 745 OF THE MAG STANDARD SPECIFICATIONS, IS ACCEPTABLE FOR SEWER LINE SIZES EIGHT (8) INCHES THROUGH FIFTEEN (15) INCHES IN DIAMETER. BEDDING AND BACKFILL SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE CITY OF EL MIRAGE STANDARD DETAIL 406, BEDDING AND BACKFILL FOR PIPELINES.
  - B. NEW SEWER TAPS SHALL BE PER MAG STANDARD DETAIL 440-1 (TYPE 'A'), EXCEPT THAT MATERIALS SHALL BE SCHEDULE 40, NOT SDR 35.
2. THE CONTRACTOR SHALL UNCOVER ALL EXISTING LINES TO BE CONNECTED AND VERIFY GRADES BEFORE ANY OTHER CONSTRUCTION.
3. ALL UTILITY INSTALLATIONS IN CONFLICT WITH THESE PLANS SHALL BE REMOVED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. ANY UTILITY REMOVALS OR RELOCATIONS MUST BE APPROVED BY THE GOVERNING MUNICIPALITY OR AGENCY.
4. TRENCH EXCAVATION, BACKFILLING AND COMPACTION SHALL CONFORM TO MAG STANDARD SPECIFICATION SECTION 601 EXCEPT AS MODIFIED HEREIN.
5. BEDDING AND BACKFILL FOR SEWER LINES SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE CITY OF EL MIRAGE STANDARD DETAIL 406, BEDDING AND BACKFILL FOR ALL PIPELINES.
6. BACKFILL SHALL BE TYPE I AS DEFINED IN SECTION 601 OF THE MAG STANDARD SPECIFICATIONS.
7. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY THE PROJECT ENGINEER BEFORE THE SEWER LINE IS COVERED, SO "AS-BUILT" MEASUREMENTS MAY BE TAKEN. ANY CHANGES TO THE APPROVED PLANS MUST BE AUTHORIZED BY THE PROJECT ENGINEER AND THE CITY ENGINEER BEFORE THE CHANGE IS MADE IN THE FIELD.
8. SERVICE LINE CONNECTIONS TO THE SEWER MAIN SHALL HAVE A "Y" FITTING. SADDLES ARE NOT ACCEPTABLE.
9. SEWER SERVICES SHALL NOT BE LOCATED UNDER DRIVEWAYS.
10. AN APPROVED METALLIC LOCATOR TAPE AND TRACING WIRE SHALL BE INSTALLED ON ALL SEWER LINES AND SERVICES (LINEAR OR NON-LINEAR).
11. MANHOLES WHICH EXCEED TEN (10) FEET IN DEPTH, OR ARE ON ARTERIAL STREETS SHALL BE FIVE (5) FEET IN DIAMETER, WITHOUT STEPS, AND SHALL BE EPOXY COATED PER RAVEN 405, SAUERREISEN SEWERGARD NO. 210 OR AN APPROVED EQUAL.
12. ALL PVC SEWER MANHOLE CONNECTIONS SHALL HAVE AN APPROVED WATER STOP.
13. ALL PAVEMENT REPLACEMENT SHALL CONFORM WITH MAG STANDARD DETAIL 200-1 MODIFIED WITH A ONE-HALF (1/2) SACK PORTLAND CEMENT ABC SLURRY, WHICH CONFORMS TO MAG STANDARD SPECIFICATION 728, (MODIFIED FOR ONE-HALF SACK PORTLAND CEMENT), FOR TRENCH BACKFILL FROM ONE (1) FOOT ABOVE THE TOP OF PIPE TO THE EXISTING PAVEMENT SUBGRADE. USE TYPE 'A' FOR LONGITUDINAL TRENCH REPAIR AND USE "T TOP" FOR TRANSVERSE TRENCH REPAIR OR WHEN A TRENCH RUNS THROUGH AN INTERSECTION. PAVEMENT REPLACEMENT THICKNESS SHALL BE 1.5 TIMES THE EXISTING ASPHALT THICKNESS. AC MIX DESIGN SHALL BE PER THE CITY OF PHOENIX C-3/4" MIX. CRACK SEALING IS REQUIRED.
14. MANHOLES, WHICH ARE LOCATED IN A PAVED AREA, SHALL BE ADJUSTED TO THE FINISH GRADE UPON THE COMPLETION OF PAVEMENT WORK.
15. PRIOR TO ANY CONCRETE OR STREET WORK AND PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL DO THE FOLLOWING: LAMP 100% OF THE SEWER LINES, MANDREL AND AIR PRESSURE TEST 100% OF THE SEWER LINES, AND PROVIDE A VIDEO INSPECTION (DVD) OF 100% OF THE SEWER LINES. ONE-HOUR PRIOR TO VIDEOING, THE SEWER LINES SHALL HAVE A SUFFICIENT VOLUME OF WATER PASSED THROUGH THEM TO IDENTIFY "DIPS". THE CAMERA UNIT SHALL HAVE A "MEASURING DEVICE" ATTACHED THAT IS VISIBLE TO THE TAPE VIEWER. AT A MINIMUM, THE DEVICE SHALL BE MARKED IN INCREMENTS OF 1/2". THE DVD SHALL BE SUBMITTED WITH A LOG DETAILING (SHOWING DISTANCES FROM PREVIOUS MANHOLES) FOR ANY DIPPED SECTIONS, DEPTH OF DIPPED SECTION AND SERVICE LOCATIONS. LINES SHALL BE CLEAN PRIOR TO ANY TESTING OR VIDEOING.
16. SEWER LINES SHALL REMAINED "PLUGGED" AT THE POINT(S) OF CONNECTION TO EXISTING LINES (OUTFALLS) UNTIL ALL PHASES OF THE PROJECT HAVE BEEN ACCEPTED BY THE CITY ENGINEER.
17. THE CONTRACTOR SHALL NOT MAKE A TIE-IN TO EXISTING MAINS UNTIL AFTER ALL TESTS HAVE BEEN PASSED AND APPROVED BY THE CITY OFF-SITE INSPECTOR.
18. THE FOLLOWING MAG UNIFORM STANDARD DETAILS ARE SPECIFICALLY NOT APPROVED:
  - NO. 425 24" ALUMINUM MANHOLE FRAME AND COVER
  - NO. 428 MANHOLE STEPS - "CAST IRON" OPTION
  - NO. 440-2 SEWER BUILDING CONNECTION - TYPE 'B'
  - NO. 441 SEWER CLEANOUT - "SEWER TAP AT CLEANOUT" OPTION
19. THE OWNER WILL BE RESPONSIBLE FOR THE SEWER SERVICE LINE FROM THE MAIN TO SERVICE FACILITY.
20. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MEET OSHA STANDARDS FOR "TRENCH SAFETY".
21. ANY TAP PROPOSED TO BE MADE DIRECTLY INTO A 12-INCH OR LARGER SEWER MUST BE APPROVED BY THE CITY OF EL MIRAGE ENGINEERING DEPARTMENT. THE CITY HAS THE RIGHT TO REQUEST THAT THE TAP BE MADE DIRECTLY INTO A MANHOLE.
22. NO SEWER LINES SHALL BE LOCATED WITHIN RETENTION/DETENTION BASINS.
23. ALL MANHOLES LOCATED OUTSIDE PAVED AREAS SHALL HAVE A 'CURVE-FLEX' UTILITY MARKER AS MANUFACTURED BY CARSONITE (CFRM-400-GREEN).
24. ALL MANHOLES LOCATED OUTSIDE PAVED AREAS SHALL HAVE LOCKING COVERS.
25. AN "ENGINEER'S CERTIFICATE OF COMPLETION" ISSUED BY THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT, IS REQUIRED PRIOR TO FINAL PROJECT ACCEPTANCE.
26. WORKMANSHIP ON MANHOLE BOTTOMS WILL BE CLOSELY INSPECTED FOR UNIFORMITY AND SMOOTHNESS OF CHANNEL. THE PREFERRED METHOD FOR CONSTRUCTION OF MANHOLE INVERT CHANNELS SHALL BE PIPE PLACEMENT IN MANHOLE BOTTOM AND REMOVAL OF TOP OF PIPE AFTER MANHOLE IS CONSTRUCTED. FAILURE TO PROVIDE SMOOTH, UNIFORM CHANNELS SHALL BE CAUSE FOR REJECTION, REMOVAL AND RE-CONSTRUCTION.
27. A COPY OF THE APPROVAL TO CONSTRUCT (ATC) ISSUED BY MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT (MCESD) IS REQUIRED WITHIN NINETY (90) DAYS OF ISSUANCE OF THE OFF-SITE PERMIT.
28. A COPY OF THE APPROVAL OF CONSTRUCT (AOC) ISSUED BY MCESD IS REQUIRED PRIOR TO FINAL PROJECT ACCEPTANCE.

THENCE CONCAVE TO THE SOUTHEAST THROUGH A CENTRAL ANGLE OF 45 DEGREES 16 MINUTES 38 SECONDS, AN ARC LENGTH OF 74.28 FEET TO A POINT ON TANGENT ON THE WEST RIGHT OF WAY LINE OF 17TH AVENUE AS RECORDED ON THE FINAL PLAT OF THE FAIRWAYS RECORDED IN BOOK 775 OF MAPS, PAGE 43 IN THE OFFICE OF THE COUNTY RECORDER, MARICOPA COUNTY, ARIZONA;

THENCE SOUTH 00 DEGREES 01 MINUTES 19 SECONDS WEST A DISTANCE OF 346.18 FEET TO A POINT OF CURVATURE CONCAVE TO THE NORTHWEST FROM WHENCE THE RADIUS BEARS SOUTH 89 DEGREES 58 MINUTES 41 SECONDS, A RADIUS DISTANCE OF 94.00 FEET;

THENCE THROUGH A CENTRAL ANGLE OF 67 DEGREES 53 MINUTES 23 SECONDS, AN ARC DISTANCE OF 111.38 FEET;

THENCE SOUTH 67 DEGREES 52 MINUTES 04 SECONDS EAST, A DISTANCE OF 220.54 FEET TO A POINT ON A CURVATURE CONCAVE TO THE SOUTHWEST FROM WHENCE THE RADIUS BEARS SOUTH 22 DEGREES 07 MINUTES 56 SECONDS, A RADIUS DISTANCE OF 111.00 FEET;

THENCE THROUGH A CENTRAL ANGLE OF 22 DEGREES 52 MINUTES 04 SECONDS, AN ARC DISTANCE OF 44.30 FEET;

THENCE SOUTH 45 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 312.09 FEET TO A POINT OF CURVATURE CONCAVE TO THE NORTHEAST FROM WHENCE THE RADIUS BEARS NORTH 45 DEGREES 00 MINUTES 00 SECONDS EAST, A RADIUS DISTANCE OF 614.00 FEET;

THENCE THROUGH A CENTRAL ANGLE OF 15 DEGREES 08 MINUTES 18 SECONDS, AN ARC DISTANCE OF 162.23 FEET;

THENCE ON A RADIAL BEARING OF SOUTH 27 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 80.15 FEET TO A POINT ON A CURVE FROM WHENCE THE RADIUS BEARS NORTH 27 DEGREES 00 MINUTES 00 SECONDS EAST, A RADIUS DISTANCE OF 695.38 FEET;

THENCE THROUGH A CENTRAL ANGLE OF 15 DEGREES 27 MINUTES 28 SECONDS, AN ARC DISTANCE OF 187.61 FEET;

THENCE NORTH 45 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 318.24 FEET;

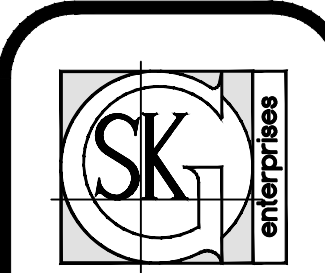
THENCE NORTH 67 DEGREES 52 MINUTES 04 SECONDS WEST, A DISTANCE OF 343.59 FEET;

THENCE NORTH 00 DEGREES 01 MINUTES 19 SECONDS EAST, A DISTANCE OF 638.88 FEET TO THE NORTHWESTERLY MOST CORNER OF LOT 16 AS SHOWN ON THE FINAL PLAT OF THE FAIRWAYS RECORDED IN BOOK 775 OF MAPS, PAGE 43 IN THE OFFICE OF THE COUNTY RECORDER, MARICOPA COUNTY, ARIZONA, SAID POINT BEING THE POINT OF BEGINNING.

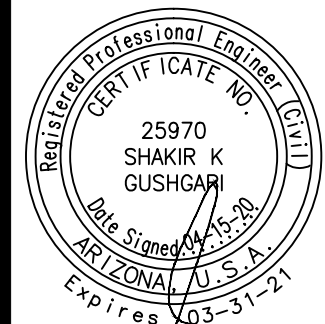
SAID PARCEL BEING IN MARICOPA COUNTY, ARIZONA AND COMPRISING AN ARE OF 117,261.64 SQUARE FEET OF 2.692 ACRES MORE OR LESS.

**CITY OF EL MIRAGE GRADING AND DRAINAGE NOTES:**

1. THE GRADING AND DRAINAGE PLANS MUST BE APPROVED BY THE CITY ENGINEER. THE CITY ENGINEER'S OFFICE SHALL BE NOTIFIED AT (623) 876-2977 OR 623-980-9987, 48 HOURS BEFORE ANY ON-SITE CONSTRUCTION BEGINS.
2. A SEPARATE PERMIT IS REQUIRED PRIOR TO ANY ON-SITE GRADING, INCLUDING CUSTOM HOMES.
3. GRADING AND DRAINAGE PLAN APPROVAL INCLUDES:
  - A. CONSTRUCTION OF ALL SURFACE IMPROVEMENTS SHOWN ON THE APPROVED GRADING AND DRAINAGE PLAN, INCLUDING BUT NOT LIMITED TO, RETENTION AREAS AND/OR OTHER DRAINAGE FACILITIES, DRAINAGE PATTERNS, CHANNELS, WALLS, CURBING, ASPHALT PAVEMENT, BANK PROTECTION AND CHANNELIZATION, AND BUILDING FLOOR ELEVATIONS.
  - B. CONTRACTOR SHALL PROVIDE MINIMUM SLOPE TO THE BOTTOM IN ALL RETENTION BASINS AT ELEVATIONS AS SHOWN ON THE PLANS. RETENTION BASIN SIDE SLOPES SHALL NOT EXCEED 2:1 ON PRIVATE PROPERTY AND 6:1 ADJACENT TO PUBLIC RIGHT-OF-WAY UNLESS NOTED OTHERWISE ON PLANS. RETENTION BASINS SHALL NOT EXCEED 3 FEET IN DEPTH WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER OR THEIR DESIGNEE.
  - C. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTOR DITCHES, PIPES, PROTECTIVE BERMS, CONCRETE CHANNELS OR OTHER MEASURES DESIGNED TO PROTECT HOMES OR OTHER IMPROVEMENTS WHETHER EXISTING OR PROPOSED, FROM RUNOFF OR DAMAGE FROM STORM WATER, MUST BE CONSTRUCTED PRIOR TO THE CONSTRUCTION OF ANY IMPROVEMENTS.
  - D. DRYWELLS MUST BE DRILLED A MINIMUM OF TEN (10) FEET INTO PERMEABLE POROUS STRATA AND PERCOLATION TESTS WILL BE REQUIRED. THE OFF-SITE INSPECTOR MUST BE PRESENT BEFORE BACKFILL OR WALL PIPES ARE PLACED WITHIN ANY DRYWELL. PERCOLATION TESTS MUST BE CONDUCTED BY AN INDEPENDENT LABORATORY AND RESULTS PROVIDED TO THE ENGINEERING DEPARTMENT. ALL DRYWELLS MUST BE REGISTERED WITH ADEQ. COPIES OF DRILLING LOGS AND ADEQ REGISTRATION INFORMATION MUST BE PROVIDED TO THE CITY.
  - E. ALL FINISH FLOOR ELEVATIONS SHOWN ARE A MINIMUM OF 14-INCHES ABOVE THE POINT OF OUTFALL OR ONE (1) FOOT ABOVE THE 100-YEAR BASE FLOOD ELEVATION AS SHOWN ON THE APPROVED PLAN.
  - F. A FEMA ELEVATION CERTIFICATE FOR ALL NEW AND SUBSTANTIALLY IMPROVED CONSTRUCTION IN THE FLOODPLAIN SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT
  - G. SOILS COMPACTION TEST RESULTS MUST BE SUBMITTED TO THE CITY ENGINEER'S OFFICE FOR ALL BUILDING PADS THAT HAVE ONE (1) FOOT OR MORE OF FILL MATERIAL INDICATED.
  - H. STAKING PAD AND/OR FINISH FLOOR ELEVATIONS IS THE RESPONSIBILITY OF THE DEVELOPER AND HIS ENGINEER. NO MINIMUM FINISH FLOOR ELEVATION WILL BE RAISED OR LOWERED WITHOUT APPROVAL OF THE CITY ENGINEER. IN NON-CRITICAL AREAS, THE DEVELOPER'S ENGINEER SHALL SUBMIT CERTIFICATION OF CONSTRUCTED BUILDING PAD ELEVATIONS PRIOR TO REQUEST FOR FINAL INSPECTION. IN CRITICAL DRAINAGE AREAS, OR IN THE 100-YEAR FLOODPLAIN, SUBSTITUTE BUILDING FLOOR ELEVATION IN ABOVE NOTE, OR FEMA ELEVATION CERTIFICATE.
  - I. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND CONFIRMING DEPTH OF ALL EXISTING UTILITY LINES WITHIN PROPOSED RETENTION AND DRAINAGE FACILITY AREAS. IF THE DRAINAGE FACILITIES CANNOT BE CONSTRUCTED PER PLAN AS A RESULT OF CONFLICT WITH UNDERGROUND UTILITIES, THE CONTRACTOR SHOULD CONTACT THE CITY ENGINEER AND THE DESIGN ENGINEER AND REQUEST MODIFICATION OF THE DRAINAGE FACILITY DESIGN.
  - J. ALL BANK PROTECTION AND CHANNELIZATION MUST BE COMPLETED PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
  - K. A SEPARATE HAUL PERMIT SHALL BE REQUIRED WHENEVER HAULING IN EXCESS OF 500 CUBIC YARDS OF MATERIAL IN OR OUT OF A SITE. A HAUL ROUTE MUST BE SUBMITTED AND APPROVED BY THE ENGINEERING DEPARTMENT. ADDITIONAL REQUIREMENTS AS SET FORTH BY THE ENGINEERING DEPARTMENT SHALL BE MET.
  - L. ALL CONTRACTORS/DEVELOPERS ARE RESPONSIBLE TO OBTAIN A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS, INCLUDING NOTICE OF INTENT (NOI), NOTICE OF TERMINATION (NOT), AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A COPY OF THE NOI AND SWPPP SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
  - M. ONCE AN EXISTING SHOULDER IS DISTURBED BY THE GRADING OPERATION OR ANY OTHER PHASE OF CONSTRUCTION, THE SHOULDER SHALL BE BARRICADED. SUCH BARRICADING SHALL REMAIN IN PLACE UNTIL FINAL ACCEPTANCE OF THE PROJECT.



SKG ENTERPRISES, INC.  
9260 E. RAINTREE DRIVE  
SUITE 140  
SCOTTSDALE, AZ. 85260  
PH) 480-998-5600  
FAX) 480-998-5603  
WWW.SKGAZ.COM



25970  
SHAKIR K  
GUSHON  
Professional Engineer  
No. 25970  
Arizona, U.S.A.  
Expires 03-31-21



Contact Arizona 811 at least two full working days before you begin excavation  
Call 811 or click Arizona811.com

**PUEBLO EL MIRAGE R.V. RESORT**

**NOTES & LEGAL DESCRIPTION  
THE FAIRWAYS II IMPROVEMENT PLANS  
CITY OF EL MIRAGE, MARICOPA COUNTY, ARIZONA**

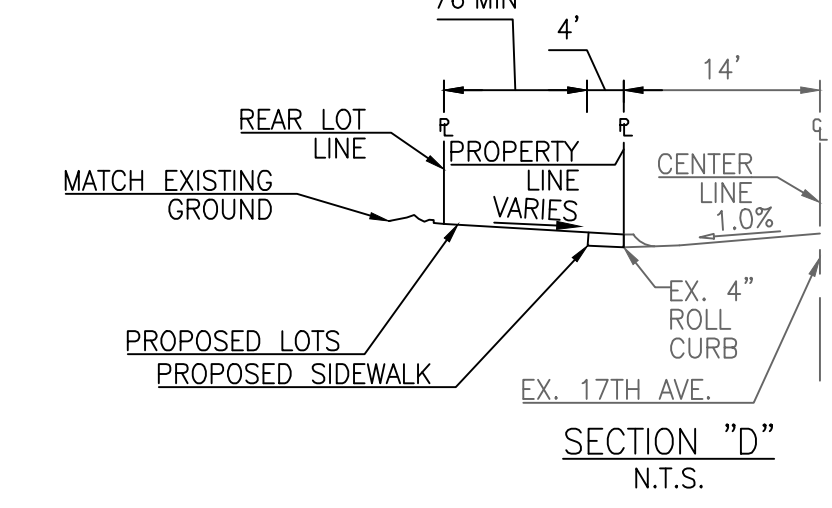
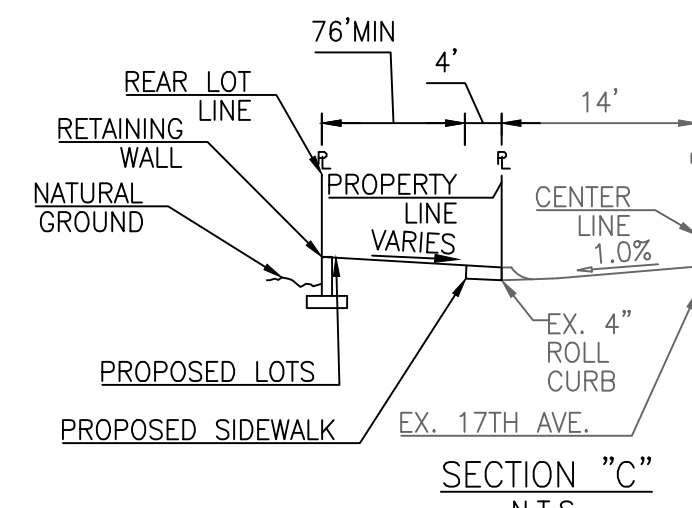
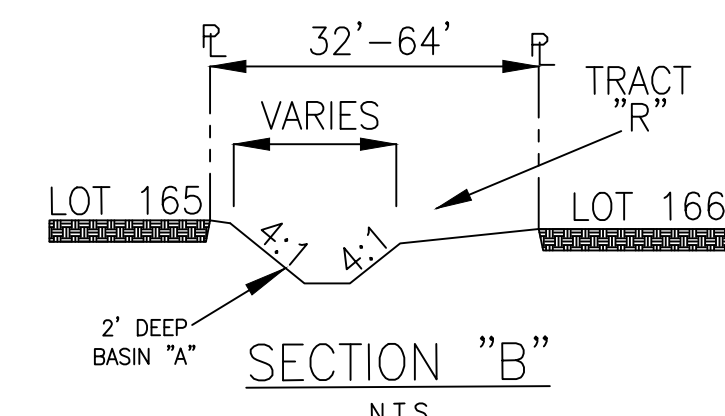
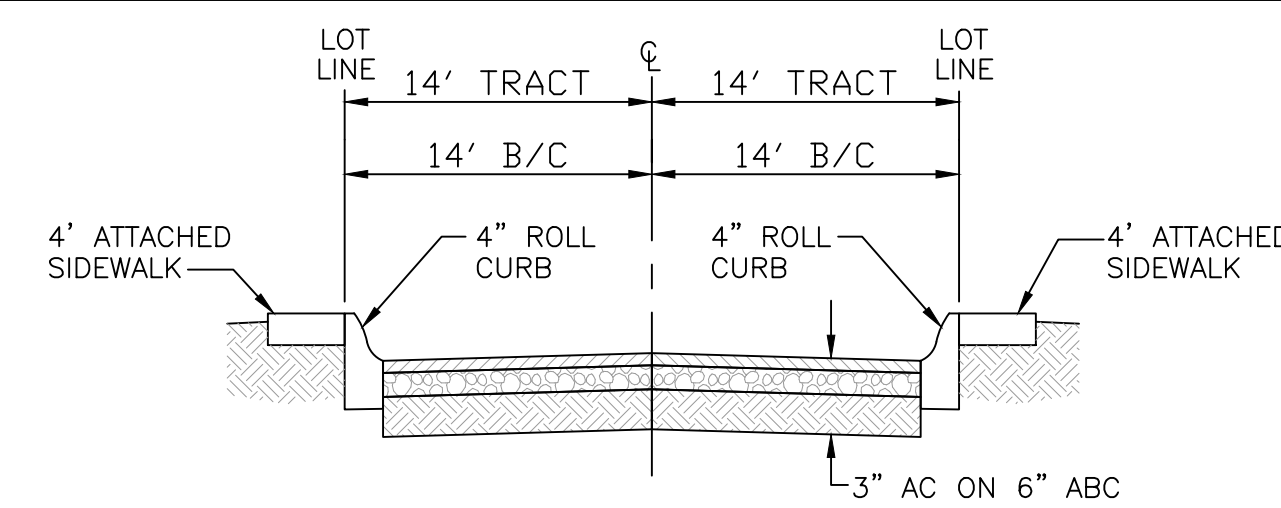
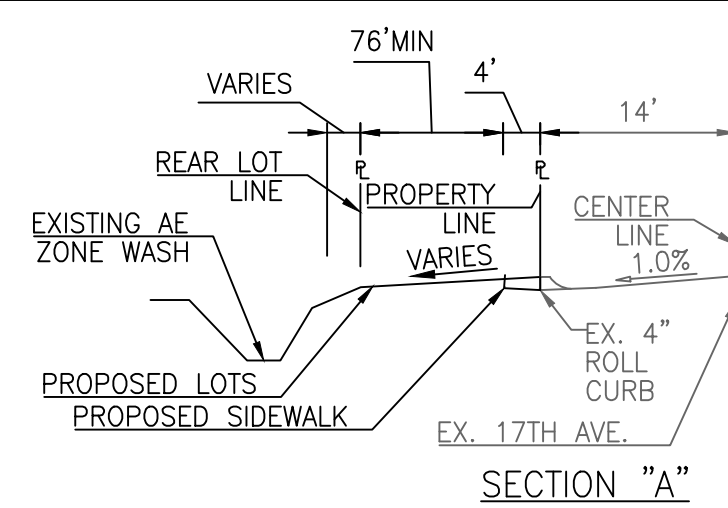
job no. 127-13  
design SKG  
approved SKG  
date 04/2020

revisions

sheet

**17TH AVE. CENTERLINE  
CURVE DATA**

LINE	DELTA	RADIUS	LENGTH
C1	90°33'15"	80.00'	126.44'
C2	55°42'32"	80.00'	77.78'
C3	12°10'51"	80.00'	17.01'
C4	22°52'04"	125.00'	49.89'
C5	18°00'00"	600.00'	188.50'



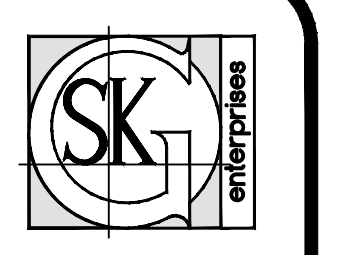
NOTE:  
UPON COMPLETION OF GRADING ACTIVITIES, DUST CONTROL SHALL BE ACHIEVED THROUGH REGULAR APPLICATION OF WATER ON THE EXPOSED SOIL UNTIL LANDSCAPING HAS OCCURRED.

NOTE:  
ALL ELEVATIONS INCLUDING BOTH SURVEY CONTOUR DATA AND FIMA FLOODPLAIN BASE FLOOD ELEVATIONS WERE SET ON VERTICAL DATUM NAVD88.

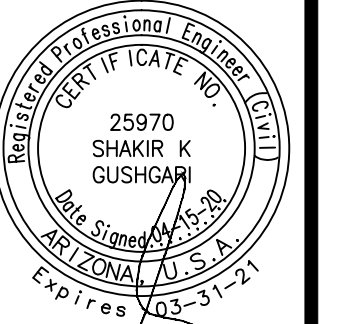
NOTE:  
1. ELEVATIONS SHOWN ON LOTS ARE FINISH FLOOR ELEVATIONS. PAD ELEVATIONS ARE 0.67' BELOW FINISH FLOOR ELEVATIONS.  
2. NO WALLS SHALL BE INSTALLED ALONG THE REAR END OF LOTS ABUTTING THE EXISTING WASH, BEGINNING AT THE SOUTH LEG OF LOT 161 EAST TO LOT 173 AS TO NOT OBSTRUCT DRAINAGE FLOWS.

NOTE:  
NO DRAINAGE FROM PROPOSED LOTS TO PROP. BASIN A. PROP. BASIN A WILL BE CONSTRUCTED TO CAPTURE STORMWATER FLOW FROM THE EXISTING STREET.

NOTES:  
1. ALL LOTS SHALL BE GRADED IN ACCORDANCE WITH LOT GRADING DETAILS PER PLAN.  
2. LANDSCAPE MATERIAL WITHIN EACH LOT MUST NOT BLOCK, IMPEDE OR OTHERWISE CHANGE DRAINAGE PATTERN WITHIN LOT AS SHOWN ON PLAN.  
3. HOMEOWNERS ASSOCIATION AND/OR HOMEOWNER MUST MAINTAIN BASINS, CULVERTS, AND DRAINAGE WAYS CLEAN OF ALL DEBRIS, SEDIMENTATION AND OBSTRUCTION OF BASINS, CULVERTS, DRAINAGE STRUCTURES AND DRAINAGE WAYS AT ALL TIMES AND AFTER EACH RAINFALL STORM TO ALLOW DRAINAGE FLOW CONTINUITY AT ALL TIMES.  
4. RETAINING WALL DETAILS SHALL BE PROVIDED PRIOR TO PLAN APPROVAL.  
5. A SOILS REPORT MUST BE PROVIDED PRIOR TO LOT GRADING CONSTRUCTION ACTIVITY TO SPECIFY THE NEEDED COMPACTION AND TO VERIFY THE NATURE OF THE EXISTING SOIL WITHIN THE LOTS' AREA.



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Contact Arizona 911 at least two full working days before you begin excavation  
Call 911 or click Arizona911.com

**PUEBLO EL MIRAGE R.V. RESORT**  
GRADING PLANS  
THE FAIRWAYS II IMPROVEMENT PLANS  
CITY OF EL MIRAGE, MARICOPA COUNTY, ARIZONA

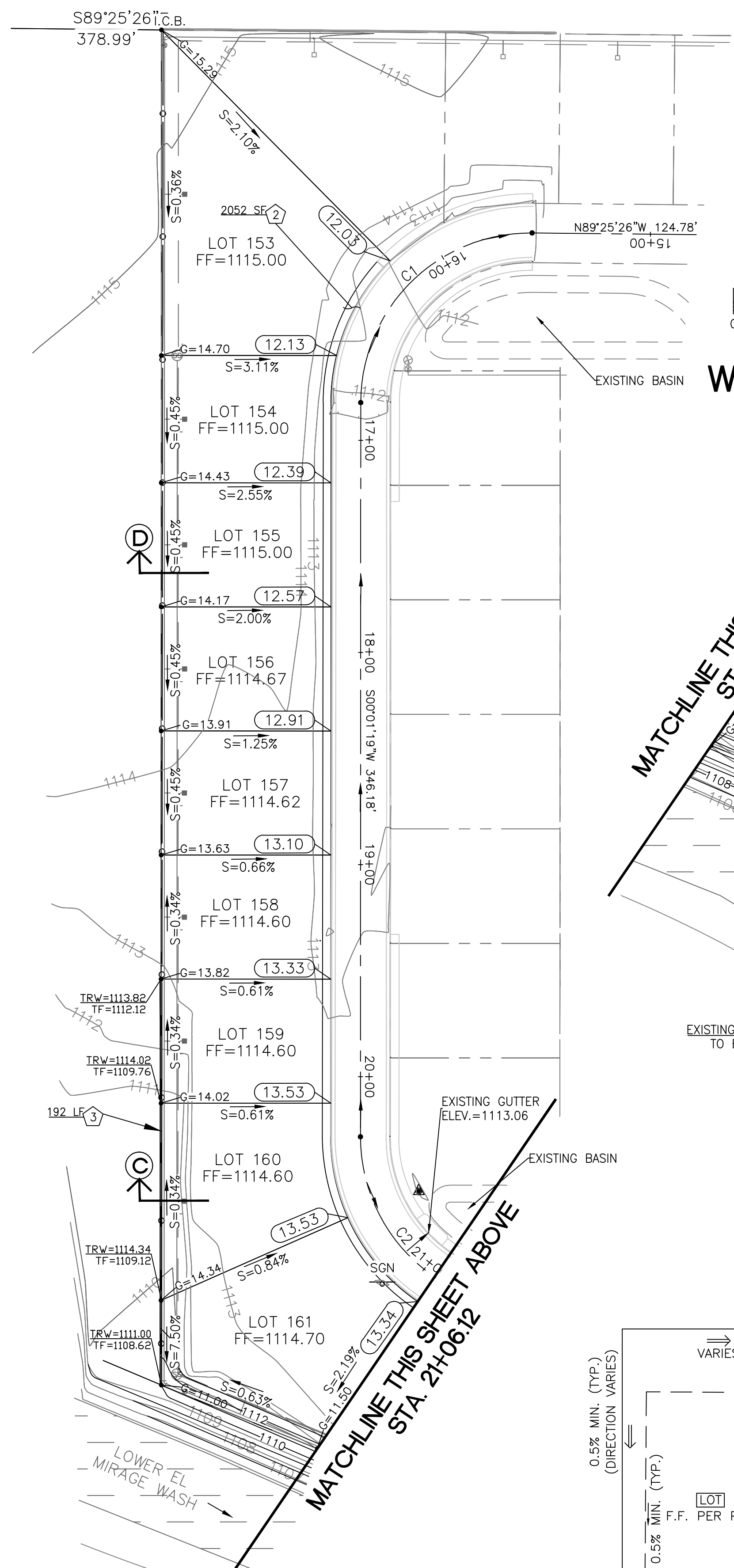
job no. 127-13  
design SKG  
approved SKG  
date 04/2020

revisions

sheet

3 of 5

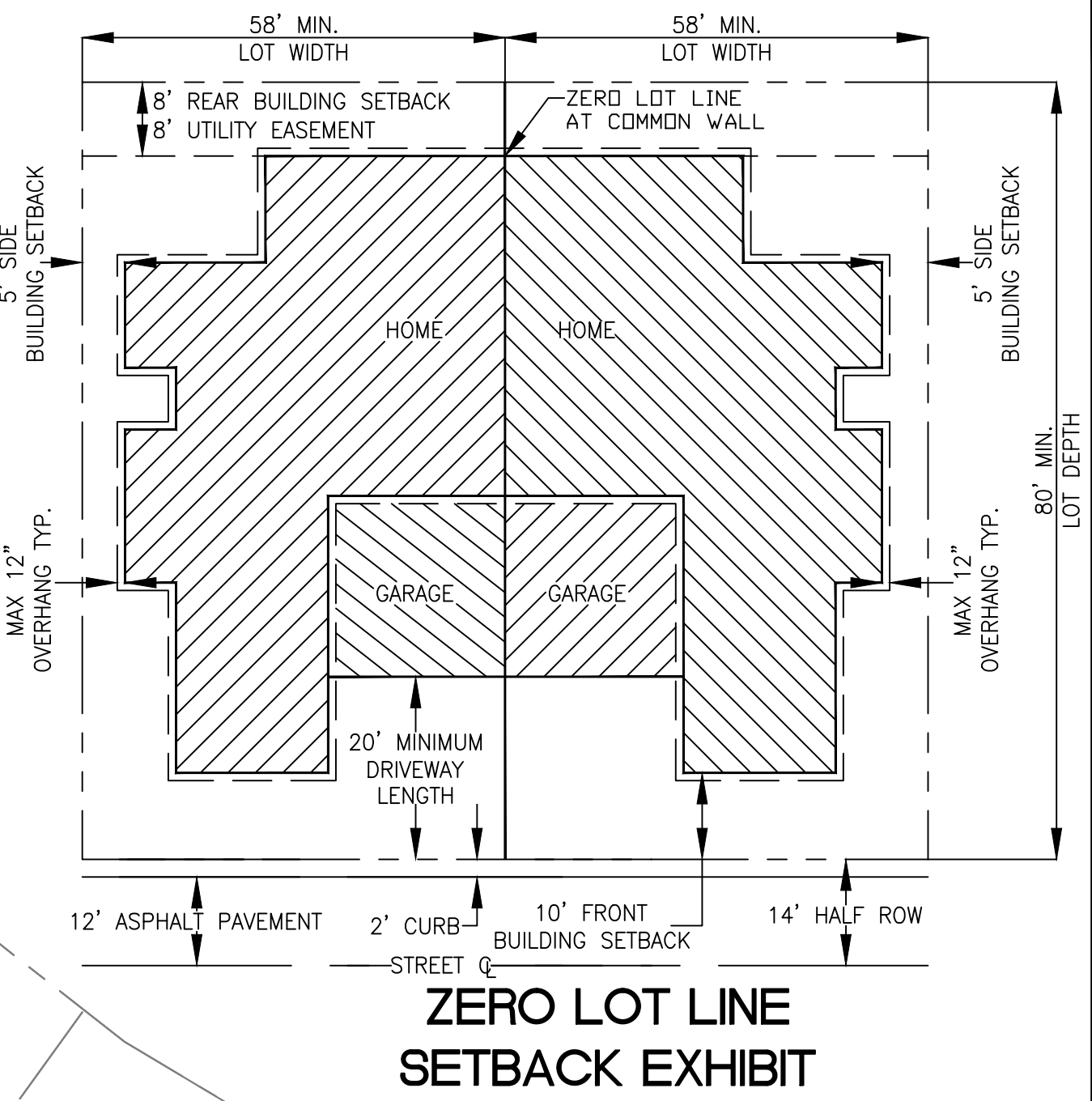
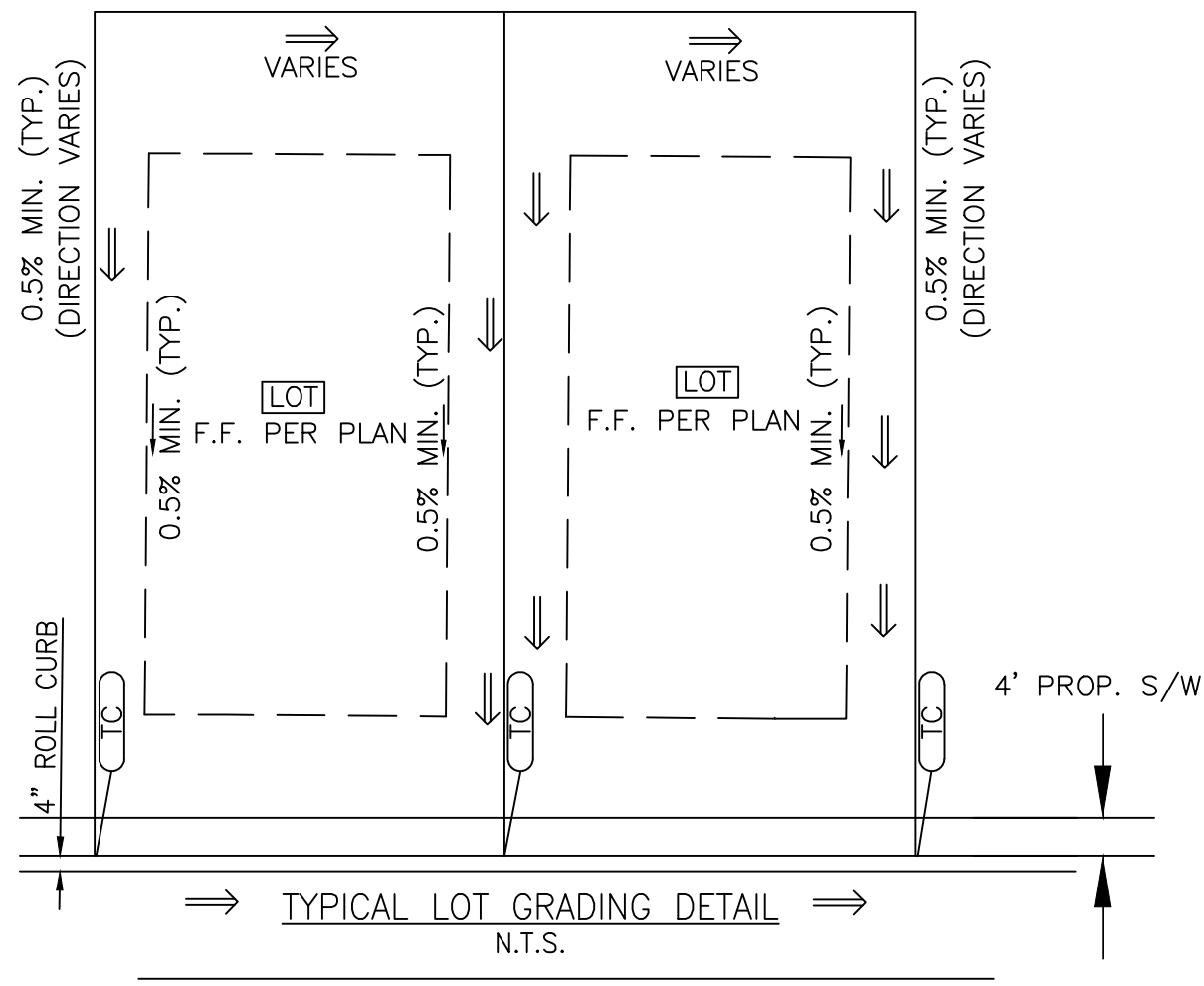
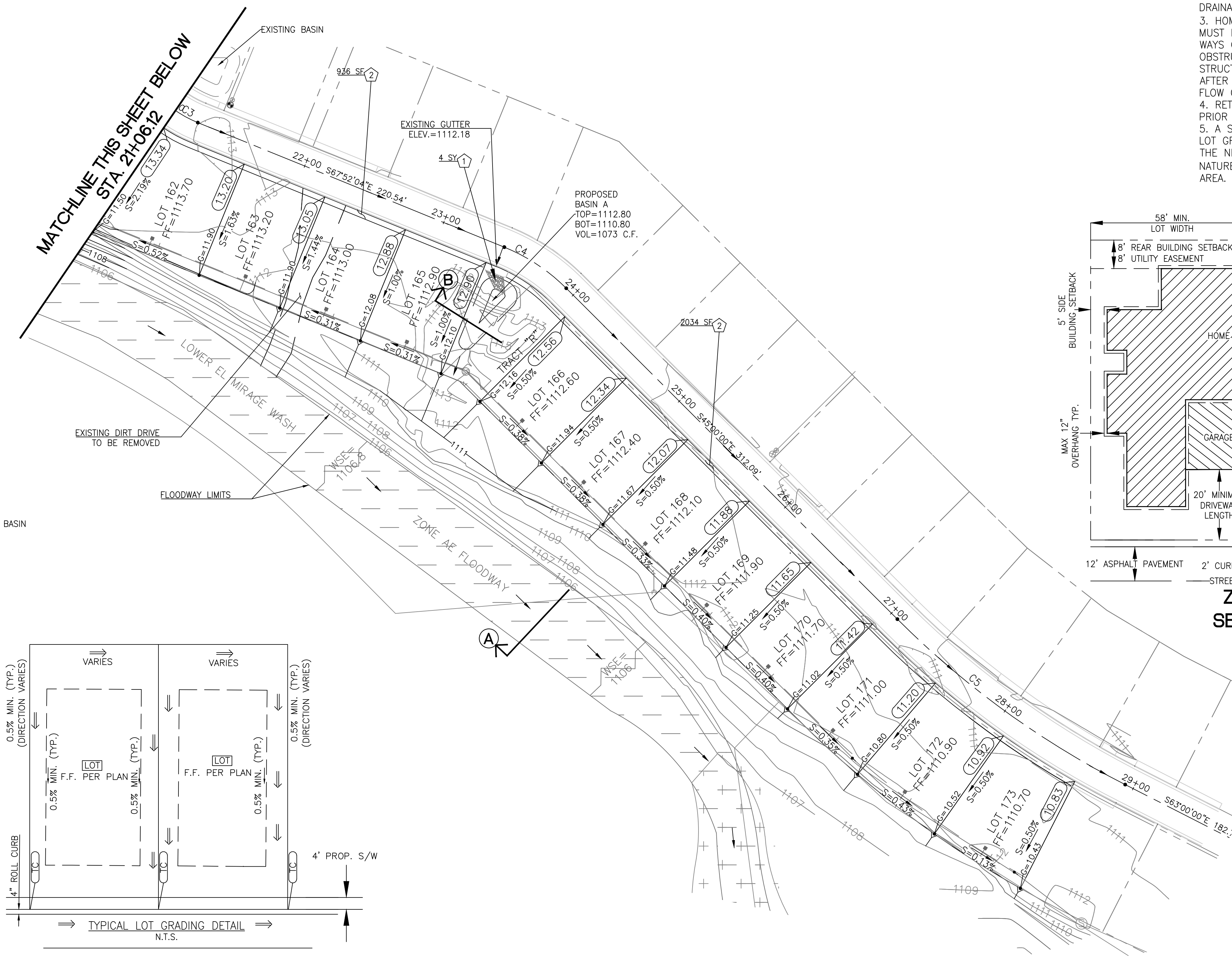
PROJECT NO. PUEBLO EL MIRAGE R.V. RESORT - THE FAIRWAYS II IMPROVEMENT PLANS



**WEST 17TH AVENUE**

MATCHLINE THIS SHEET BELOW  
STA. 2H06.12

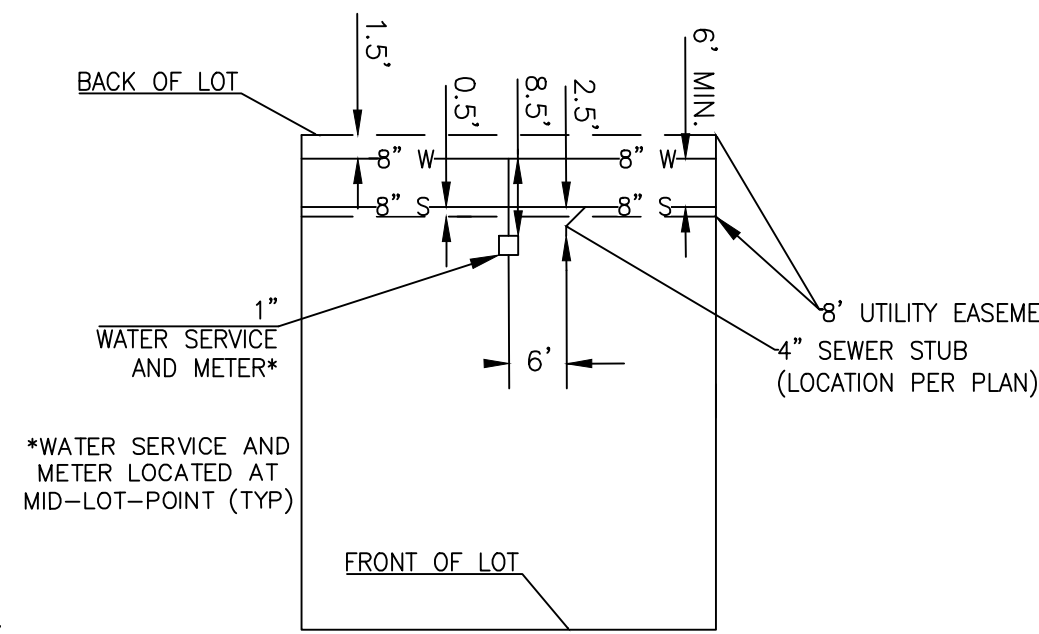
MATCHLINE THIS SHEET ABOVE  
STA. 2H06.12



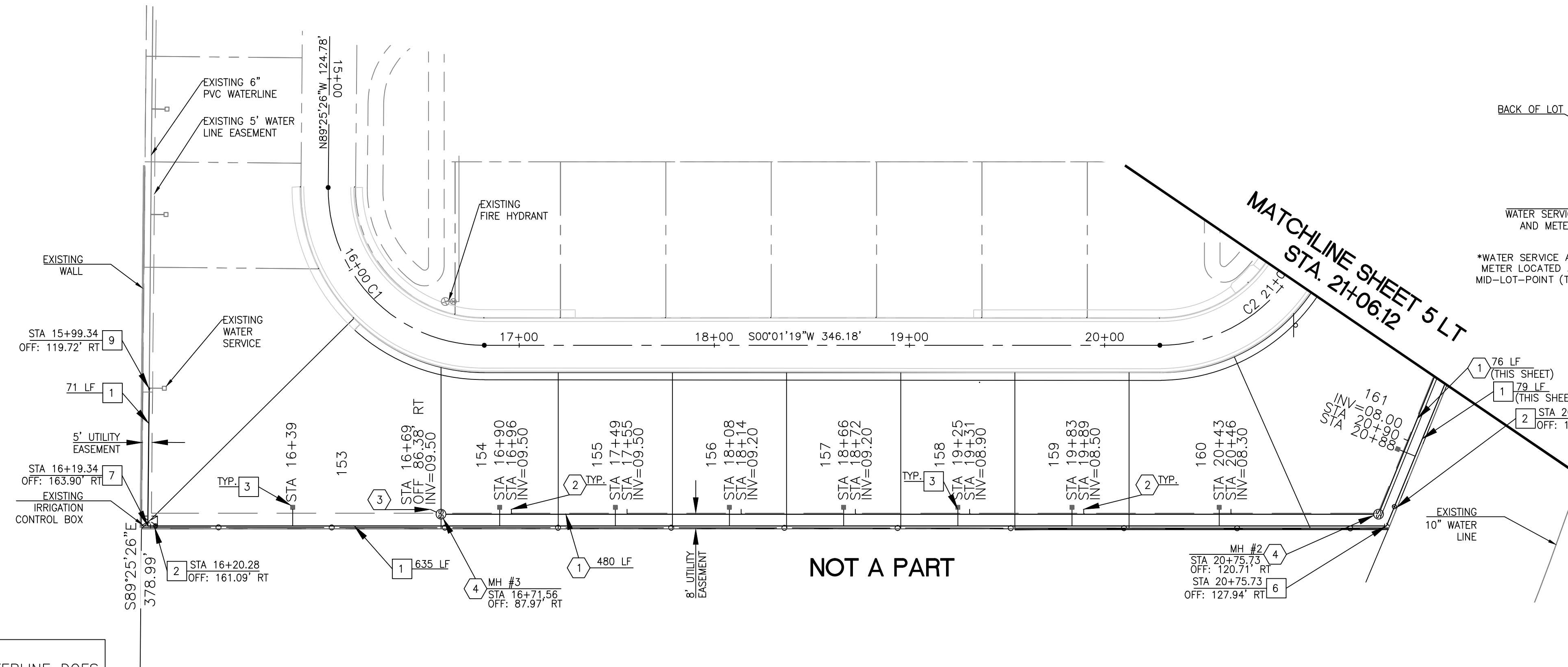
- CONSTRUCTION NOTES:
1. INSTALL RIP RAP D50=6" WITH FILTER FABRIC UNDERNEATH.
  2. INSTALL 4' CONCRETE SIDEWALK.
  3. INSTALL RETAINING WALL.

**17TH AVE. CENTERLINE  
CURVE DATA**

LINE	DELTA	RADIUS	LENGTH
C1	90°33'15"	80.00'	126.44'
C2	55°42'32"	80.00'	77.78'



**TYPICAL BACK OF LOT UTILITY EASEMENT DETAIL**



**WEST 17TH AVENUE**

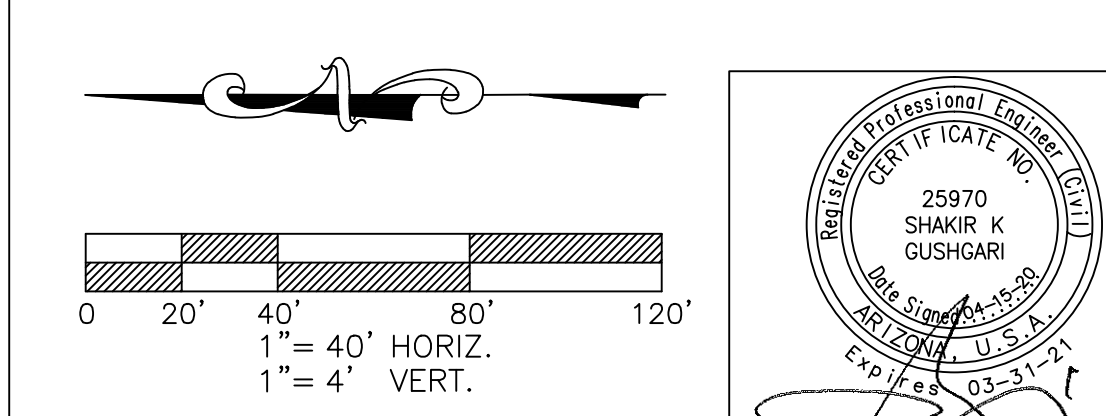
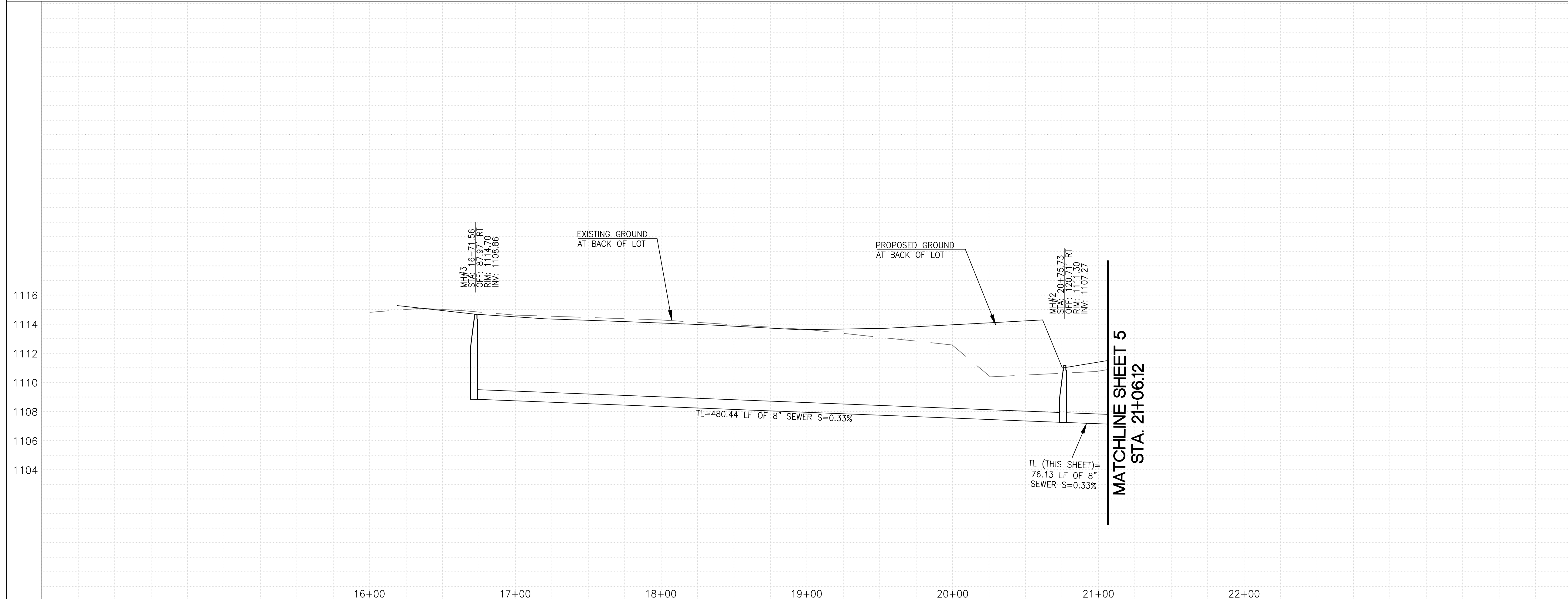
\*NOTE:  
CONTRACTOR TO ENSURE WATERLINE DOES NOT INTERFERE WITH EXISTING IRRIGATION CONTROL BOX AT NORTHWEST CORNER OF LOT 153.

\*\*NOTE:  
INVERT-IN AND INVERT-OUT OF ALL MANHOLES ARE EQUAL. BOTTOM OF MANHOLES SHALL BE SLOPED AT THE AVERAGE SLOPE OF THE UPSTREAM AND DOWNSTREAM SANITARY SEWER PIPE TO MAINTAIN POSITIVE FLOW.

**CONSTRUCTION NOTES:**

- SEWER**
- INSTALL 8" PVC (SDR 35) SEWER LINE.
  - INSTALL 4" SEWER SERVICE PER M.A.G. STD. DTL. 440-1 "TYPE A". ALL SEWER SERVICES SHALL BE INSTALLED WITH BACKWATER VALVES.
  - INSTALL 4" SEWER SERVICE IN MANHOLE PER M.A.G. STD. DTL. 440-1 "TYPE A". ALL SEWER SERVICES SHALL BE INSTALLED WITH BACKWATER VALVES.
  - INSTALL 4" DIA. CONC. MANHOLE PER C.O.E.M. STD. DTL EM-420 WITH 24" RING AND COVER. COVER SHALL BE LABELED AS "PRIVATE SEWER".
  - INSTALL 4" SEWER CLEANOUT PER M.A.G. STD. DTL. 441.
  - CONNECT TO EXISTING 4' MANHOLE. CONTRACTOR TO VERIFY EXACT INVERT & LOCATION.
- WATER**
- INSTALL 8" PVC WATERLINE, AWWA C-900, CLASS 200 (4' MIN. COVER UNDER PAVEMENT & 3' MIN. COVER FOR ALL OTHER CONDITIONS).
  - INSTALL 8" V. B. & C. PER M.A.G. STD. DTL. 391-1 "TYPE B".
  - INSTALL 1" WATER SERVICE "TYPE K" COPPER PER C.O.E.M. STD. DETAIL 325.
  - INSTALL 8" 11.25' BEND PER M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2.
  - INSTALL 8" 22.50' BEND PER M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2.
  - INSTALL 8" 45.00' BEND PER M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2.
  - INSTALL 8" 90.00' BEND PER M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2.
  - INSTALL 10"x10"x10" TEE AT LOCATION SHOWN TO TIE INTO EXISTING 10" WATER LINE. ALL FITTINGS SHALL CONFORM TO M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2. CONTRACTOR TO VERIFY EXACT INVERT & LOCATION.
  - INSTALL 8"x6" REDUCER TO END OF EXISTING 6" WATER LINE. ALL FITTINGS SHALL CONFORM TO M.A.G. SPECS. SECTION 750.4. CONTRACTOR TO VERIFY EXACT INVERT LOCATION.
  - INSTALL 10"x8" REDUCER. ALL FITTINGS SHALL CONFORM TO M.A.G. SPECS. SECTION 750.4.

- NOTES:**
- ALL SEWER LINES AND SERVICES (LINEAR OR NON-LINEAR) SHALL HAVE APPROVED METALLIC LOCATOR TAPE INSTALLED PER MANUFACTURE.
  - M.A.G. STD. DTL. 404 SHALL APPLY TO WATER AND SERVICES AS WELL AS MAIN LINES.
  - SCHEDULE 40 PIPE SHALL BE USED FOR ALL SEWER SERVICES



DATE	REVISION

**SKG ENTERPRISES, INC.**  
CONSULTING CIVIL ENGINEERS  
9260 E. Raintree Drive • Suite 140 • Scottsdale, Az. • 85260 • (480) 998-5600

DSN: SKG  
CKD: SKG

**PUEBLO EL MIRAGE R.V. RESORT**  
WATER & SEWER PLANS  
PLAN AND PROFILE  
CITY OF EL MIRAGE, MARICOPA COUNTY, ARIZONA

JOB# 127-13  
SHEET 4 of 5

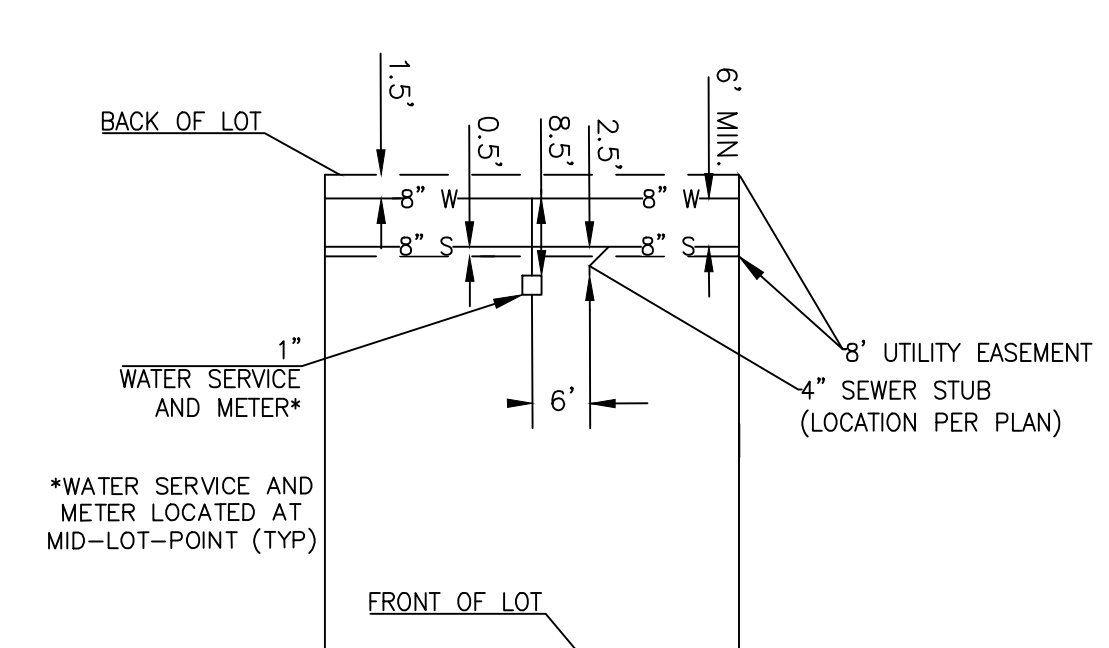
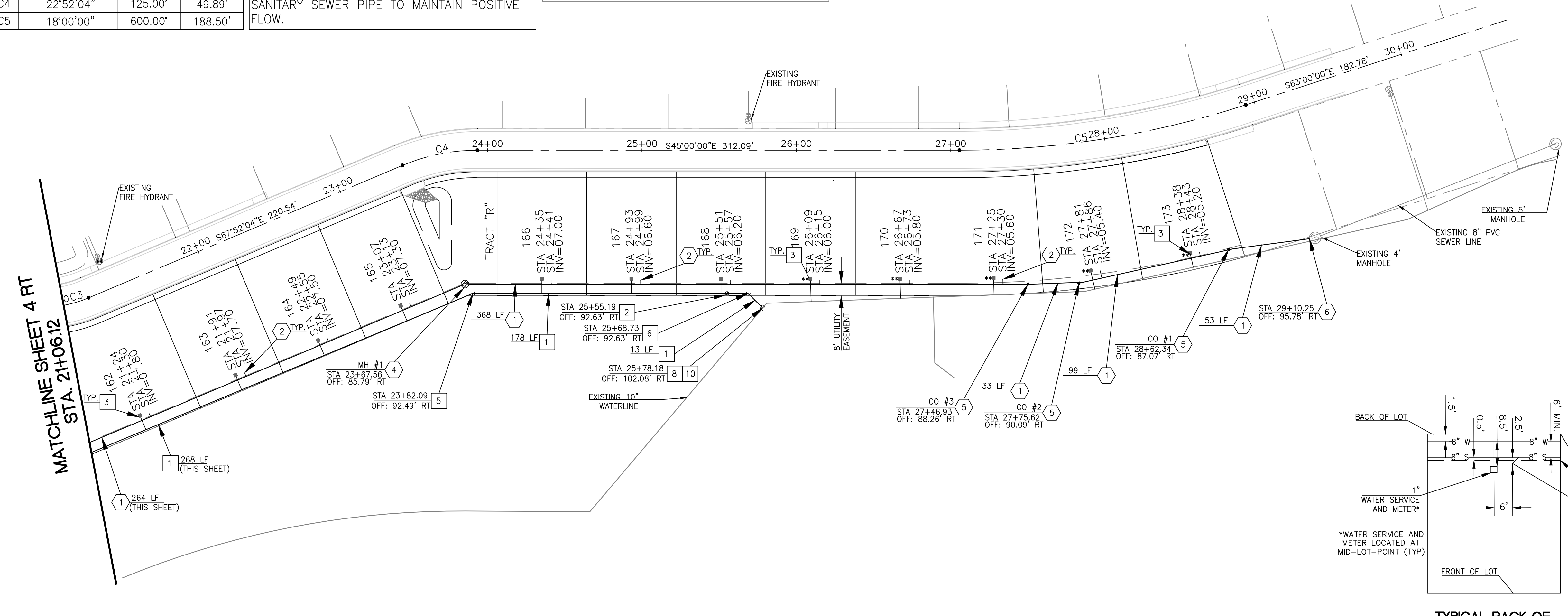
PROJECT NO. PUEBLO EL MIRAGE R.V. RESORT - THE FAIRWAYS II IMPROVEMENT PLANS

**17TH AVE. CENTERLINE  
CURVE DATA**

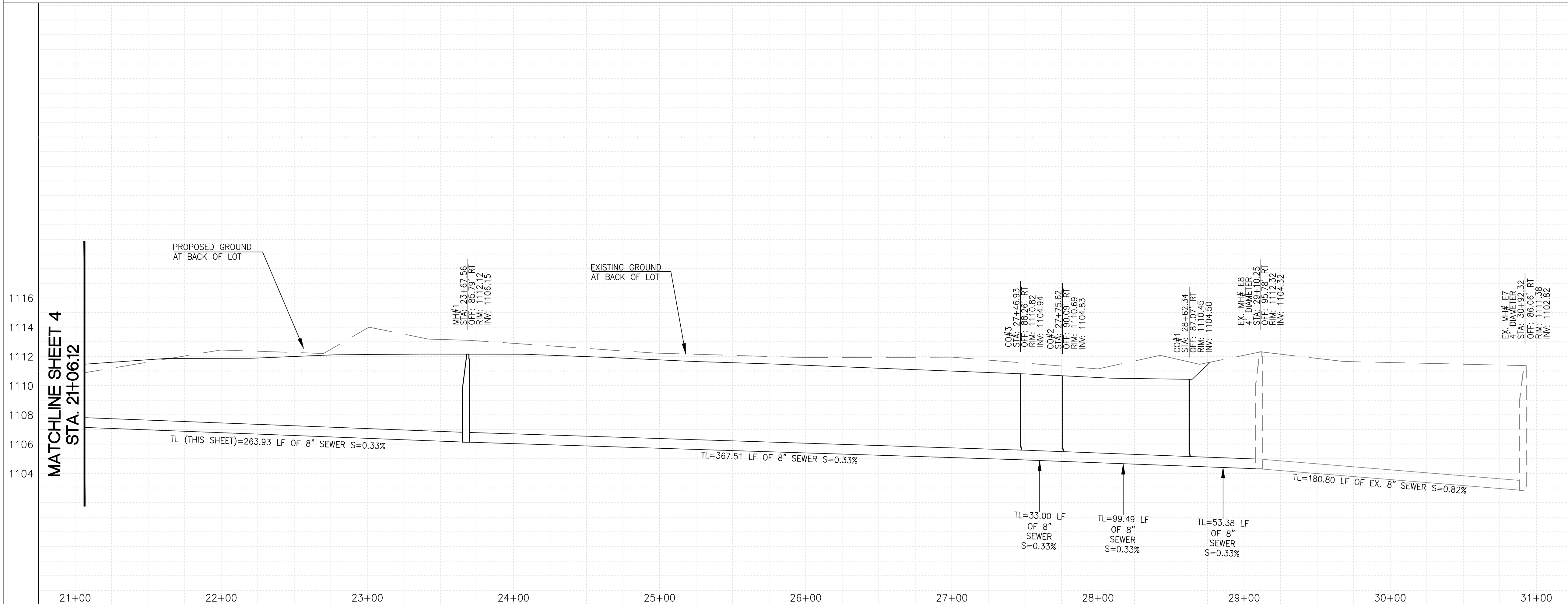
LINE	DELTA	RADIUS	LENGTH
C3	12°10'51"	80.00'	17.01'
C4	22°52'04"	125.00'	49.89'
C5	18°00'00"	600.00'	188.50'

\*NOTE:  
INVERT-IN AND INVERT-OUT OF ALL  
MANHOLES ARE EQUAL. BOTTOM OF MANHOLES  
SHALL BE SLOPED AT THE AVERAGE SLOPE  
OF THE UPSTREAM AND DOWNSTREAM  
SANITARY SEWER PIPE TO MAINTAIN POSITIVE  
FLOW.

\*\*NOTE  
1" WATER SERVICE FOR LOTS 169-173 ARE  
TYING INTO AN EXISTING 10" WATERLINE  
LOCATED AT THE BACK OF LOT. CONTRACTOR  
TO VERIFY EXACT INVERT AND LOCATION.

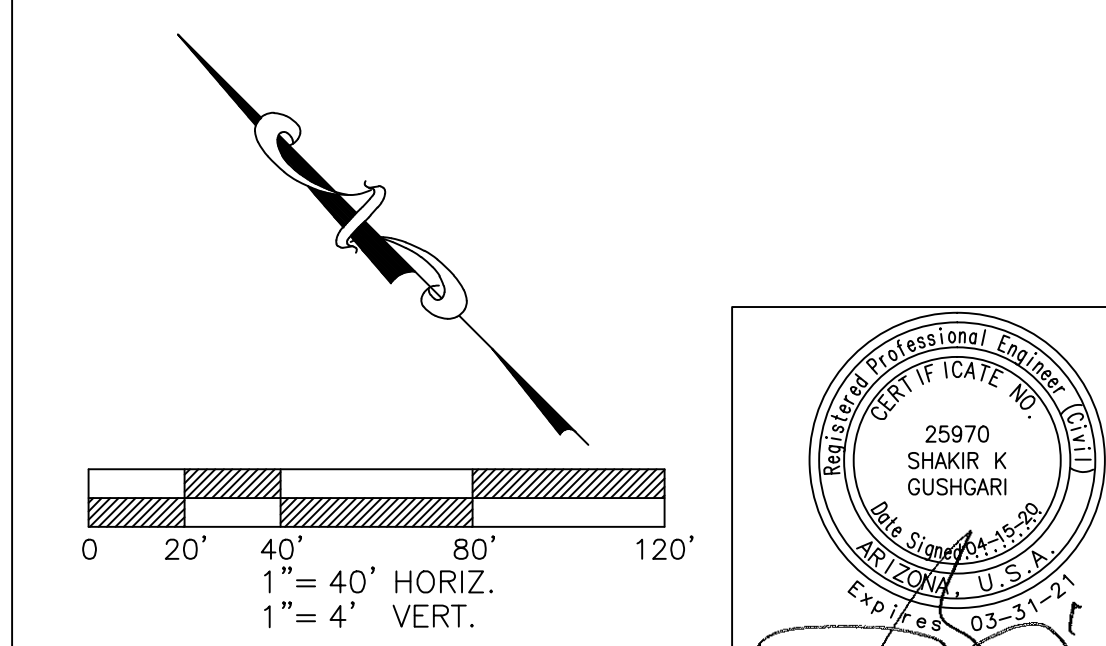


**WEST 17TH AVENUE**



- CONSTRUCTION NOTES:**
- SEWER**
- INSTALL 8" PVC (SDR 35) SEWER LINE.
  - INSTALL 4" SEWER SERVICE PER M.A.G. STD. DTL. 440-1 "TYPE A". ALL SEWER SERVICES SHALL BE INSTALLED WITH BACKWATER VALVES.
  - INSTALL 4" SEWER SERVICE IN MANHOLE PER M.A.G. STD. DTL. 440-1 "TYPE A". ALL SEWER SERVICES SHALL BE INSTALLED WITH BACKWATER VALVES.
  - INSTALL 4' DIA. CONC. MANHOLE PER C.O.E.M. STD. DTL EM-420 WITH 24" RING AND COVER. COVER SHALL BE LABELED AS "PRIVATE SEWER".
  - INSTALL 4" SEWER CLEANOUT PER M.A.G. STD. DTL. 441.
  - CONNECT TO EXISTING 4' MANHOLE. CONTRACTOR TO VERIFY EXACT INVERT & LOCATION.
- WATER**
- INSTALL 8" PVC WATERLINE, AWWA C-900, CLASS 200 (4' MIN. COVER UNDER PAVEMENT & 3' MIN. COVER FOR ALL OTHER CONDITIONS).
  - INSTALL 8" V. B. & C. PER M.A.G. STD. DTL. 391-1 "TYPE B".
  - INSTALL 1" WATER SERVICE "TYPE K" COPPER PER C.O.E.M. STD. DETAIL 325.
  - INSTALL 8" 11.25' BEND PER M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2.
  - INSTALL 8" 22.50' BEND PER M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2.
  - INSTALL 8" 45.00' BEND PER M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2.
  - INSTALL 8" 90.00' BEND PER M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2.
  - INSTALL 10"x10"x10" TEE AT LOCATION SHOWN TO TIE INTO EXISTING 10" WATER LINE. ALL FITTINGS SHALL CONFORM TO M.A.G. SECTION 750.4 AND M.A.G. STD. DTL. 303-2. CONTRACTOR TO VERIFY EXACT INVERT & LOCATION.
  - INSTALL 8"x6" REDUCER TO END OF EXISTING 6" WATER LINE. ALL FITTINGS SHALL CONFORM TO M.A.G. SPECS. SECTION 750.4. CONTRACTOR TO VERIFY EXACT INVERT LOCATION.
  - INSTALL 10"x8" REDUCER. ALL FITTINGS SHALL CONFORM TO M.A.G. SPECS. SECTION 750.4.

- NOTES:**
- ALL SEWER LINES AND SERVICES (LINEAR OR NON-LINEAR) SHALL HAVE APPROVED METALLIC LOCATOR TAPE INSTALLED PER MANUFACTURE.
  - M.A.G. STD. DTL. 404 SHALL APPLY TO WATER AND SERVICES AS WELL AS MAIN LINES.
  - SCHEDULE 40 PIPE SHALL BE USED FOR ALL SEWER SERVICES



DATE	REVISION

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**PUEBLO EL MIRAGE R.V. RESORT**  
**WATER & SEWER PLANS**  
**PLAN AND PROFILE**  
CITY OF EL MIRAGE, MARICOPA COUNTY, ARIZONA

JOB# 127-13  
SHEET 5 of 5

PROJECT NO. PUEBLO EL MIRAGE R.V. RESORT -THE FAIRWAYS II IMPROVEMENT PLANS

**Appendix A**  
*COEM Collection System*  
*Design Criteria*

<b>TABLE 4-9: COLLECTION SYSTEM DESIGN CRITERIA SUMMARY</b>	
<b>PARAMETER</b>	<b>CRITERIA</b>
<b>Flow Velocity in feet per second (fps)</b>	
Gravity Mains	2 fps $\leq$ V $\leq$ 6 fps* *For controlling odors Maximum of 8 fps
Force Mains	3 fps $\leq$ V $\leq$ 7 fps
<b>Flow Depth, d/D (for dry weather peak hour flows)</b>	
d/D for new sewers with diameters less than 10 inches	0.50
d/D for new sewers with diameters above 12 inches	0.75 (A.A.C. R18-9-E301.D.e.iii)
<b>Peaking Factors (See Section 4.4.1)</b>	
Dry Weather Peak Factors (Applied to Average Flows)	Per A.A.C. R18-9-E301-D
Wet Weather Peak Factors (Applied to Peak Flows)	1.17
<b>Flow Depth, d/D (for wet weather peak hour flows)</b>	
d/D for designing new sewer pipes	<0.90
d/D for evaluating existing pipes in developed areas	<1.00
<b>Headloss in Existing Pipes</b>	
Gravity Pipes	Manning's n = 0.013
Pressure Pipes	Hazen Williams's C = 120
<b>Changes in Pipe Size</b>	
When smaller sewer joins a larger one	Sewer crowns will be matched
<b>Headloss at Manholes</b>	
Manholes with pipelines intersecting at $\geq$ 90 degrees	Provide 0.2' Invert Drop
Manholes with pipelines intersecting at < 90 degrees	Provide 0.1' Invert Drop

#### 4.4.2 Peaking Factors

For sewer collection system planning, dry weather peaking factors were applied to the projected average day sewer flows. Peaking factor equations were obtained from the Arizona Administrative Code Section R18-9-E301-D. **Table 4-10** briefly summarizes the peaking factors equations utilized.

<b>TABLE 4-10: PEAKING FACTORS FOR COLLECTION SYSTEM DESIGN</b>	
<b>Upstream Population</b>	<b>Dry Weather Peaking Factor</b>
100	3.62
200	3.14
300	2.90
400	2.74
500	2.64
600	2.56
700	2.50
800	2.46
900	2.42
1,000	2.38
1,001 to 10,000	$PF = (6.330 \times p^{-0.231}) + 1.094$
10,001 to 100,000	$PF = (6.117 \times p^{-0.233}) + 1.128$
PF = Dry Weather Peaking Factor P = Upstream Population Source: Arizona Administrative Code R18-9-E301-D	

**Figure 4-3** illustrates the peak dry peaking factors based on average flows. The flows were calculated based on the upstream population, presented in **Table 4-10** and the adopted GPCD of 58.5 for the area north of Peoria Avenue.

Wet weather factors were then applied to the predicted dry weather flows. The evaluation of the hourly influent flows to El Mirage WWTP during rainfall events in the month of July 2013 resulted in a wet weather peaking factor of 17% of the average daily sewer flow. Data collected and the analysis results are presented in **Appendix H**. The adopted wet weather factor is similar to factors used by surrounding cities in the Phoenix Metropolitan Area for master planning purposes.

WATER DISTRIBUTION SYSTEM  
BASIS OF DESIGN REPORT  
FOR  
THE FAIRWAYS II

*Prepared For:*

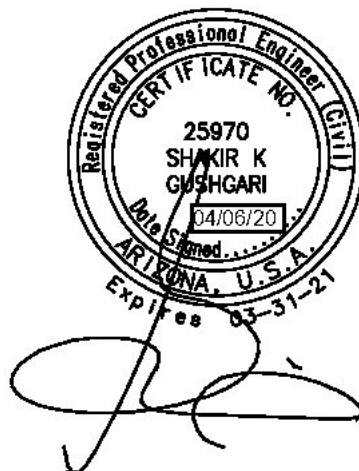
Pueblo El Mirage RV Resort  
8350 E. Raintree Drive  
Suite 220  
Scottsdale, AZ 85260

*Prepared By:*



**SKG ENTERPRISES, INC.**

9260 E. Raintree Drive  
Suite 140  
Scottsdale, AZ 85260  
Ph: (480) 998-5600  
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[www.skgaz.com](http://www.skgaz.com)



SKG Job No. 127-13  
April 2020

**COEM#: E xx-xxxx**

**TABLE OF CONTENTS**

1.0 INTRODUCTION .....3  
2.0 EXISTING WATER DISTRIBUTION SYSTEM.....4  
3.0 WATER DEMAND .....4  
4.0 PROPOSED ONSITE WATER DISTRIBUTION SYSTEM.....5  
5.0 CONCLUSIONS.....6

**EXHIBITS**

- Exhibit 1 - Site Location Map
- Exhibit 2 - Proposed Onsite Water System Schematic

**APPENDICIES**

- Appendix A - Fire Hydrant Flow Test Results
- Appendix B - International Fire Code 2018, Section B105, Table B105.1(1)
- Appendix C – Hydraulic Modeling Results
- Appendix D – City of El Mirage Water System Sizing Criteria
- Appendix E – Arizona Administrative Code, Title 18, Chapter 9



## 1.0 INTRODUCTION

This report is prepared in partial fulfillment of the improvement plans submittal requirement for the development of 21 lots denoted “The Fairways II” within the master planned community “Pueblo El Mirage RV Resort” in El Mirage, Arizona. The proposed lot design is located along the southeast corners of an existing development known as The Fairways as recorded in Book 775, Page 43 of Maricopa County Recorder Office, Maricopa County, Arizona, and consisting of 2.71 acres in size. The Fairways II proposed Development lies within the City of El Mirage Quarter Section number 20-02. See Vicinity Map (Exhibit 1) for the general site location.

The Fairways II development consists of 21-residential units of 58’ wide by 80’ deep in dimension. The general terrain of the subject parcel slopes from northeast to southwest at a relatively flat slope rate.

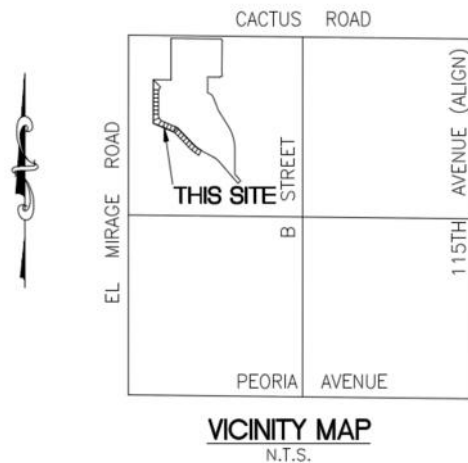


Exhibit 1 – Site Location Map

The purpose of this report is to describe the water distribution system proposed for this project including water demand and connection to the existing water distribution system.

## 2.0 EXISTING WATER DISTRIBUTION SYSTEM

According to “IMPROVEMENT PLANS FOR THE FAIRWAYS AT EL MIRAGE R.V. RESORT” originally prepared by SKG Enterprises, Inc., a 6” polyvinyl chloride (PVC) waterline exists near the proposed Fairways II easterly boundary line. The proposed development of the Fairways II will connect to this existing 10” PVC, as depicted in Exhibit 2 of this report.

## 3.0 WATER DEMAND

As noted, the Fairways II site is a single family residential development, comprising of 21 lots. The average day and peak day demand for these lots were calculated based on the City of El Mirage Water and Wastewater Master Plan dated December 2014 and fire flow demand were adopted as per Appendix B, Section B105, Table B105.1(1) of the 2018 International fire code are summarized in below tables.

Average day demand (gallon/day/unit)	250
Maximum Day Demand	1.7x average day demand
Peak Hour Demand	1.7 x max day demand
Fire flow (gallons per minute)	1,500

While Table B105.1(1) of Appendix B dictates a fire flow of 1,000 GPM, for conservative purposes a fire flow value of 1,500 GPM was used for fire flow modeling and analysis. Detailed demand computation for each junction is summarized in Appendix C of this report.

#### **4.0 PROPOSED ONSITE WATER DISTRIBUTION SYSTEM**

The proposed onsite water distribution system shall consist of installing an 8” PVC-AWWA-C900 (PVC) pressure class 200 waterline within the 8’ rear lot setback, and installation of 1” “Type K” copper water service from the individual lots to the aforementioned proposed 8” PVC waterline. The water line is proposed to be designed within a proposed 8’ wide easement. The proposed onsite water system is shown on Exhibit 2 of this report.

A fire hydrant test was conducted by Hydra Contracting on February 19, 2019.

According to Hydra Contracting test results, the tested two fire hydrants (#F7 & #F67) recorded a static pressure of 70-psi each and a residual pressure of 55 and 48-psi, respectively with a test flow of 1060 and 918-gpm respectively (see Appendix A). The fire hydrant test results were utilized to model the onsite water distribution system using WaterCAD. Four scenarios were modeled:

1. Average day
2. Maximum (peak) day
3. Maximum (peak) day + Fire Flow (1,500 gpm)
4. Peak hour

The proposed onsite water distribution is presented on Exhibit 2 and the hydraulic modeling results are included in Appendix D. Based on these results, the proposed onsite water system meets minimum and maximum pressure requirement of 40 pounds per square inch (psi) and 100 psi, respectively for all scenarios.

Automated fire flow analysis was performed using WaterCAD software by assigning demand of 1500 gpm for each node. Maximum velocity is found to be 7.36 fps in pipe P-8 when a demand of 1500 gpm is applied at junction J-7. Fire flow results are included in Appendix C of this report.

## 5.0 CONCLUSIONS

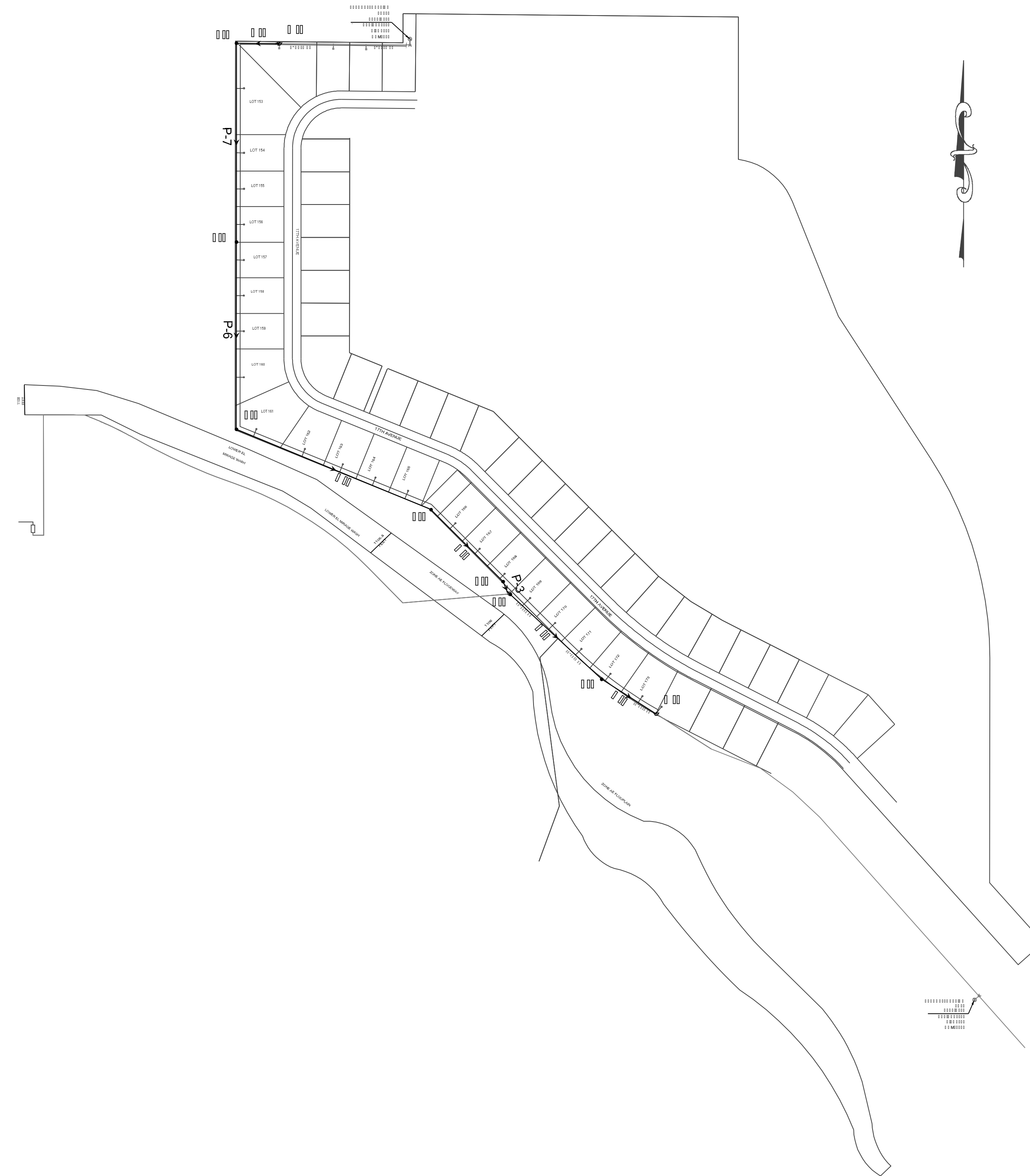
Construct the onsite potable water and fire lines as shown on Exhibit 2. The proposed onsite water system is in general conformance with the requirements outlined in the City of El Mirage Development Standards and Summary of results are tabulated below.

### Summary of Water System Analysis Results

Scenarios	Total Demand gpm	Velocity (ft/s)		Pressure (psi)		Head loss (ft/1000 ft)	
		Maximum	Max. Permissible	Minimum	Min. Permissible	Maximum	Max. Permissible
<b>Average Day</b>	3.65	2.62	5	70	40	0.93	10
<b>Maximum Day</b>	6.20	2.63	5	70	40	0.93	10
<b>Maximum Day + Fire Flow</b>	1506.20	7.36	10	67	20	0.93	10
<b>Peak Hour</b>	10.54	2.64	7	70	40	0.92	10

**EXHIBIT 2**  
**Proposed Onsite Water**  
**System**

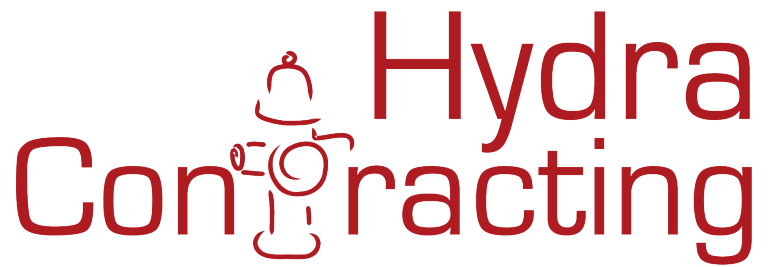
PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Exhibit 2 Proposed Water System Schematic



**APPENDIX A**  
**Fire Hydrant Flow Test**  
**Results**

# Fire Hydrant Service Report

PO Box 979  
Tempe, Arizona 85280  
480-242-8402



## Location

**Client**  
PUEBLO EL MIRAGE  
**Hydrant #**  
F7  
**Address**  
11201 N. El Mirage rd

**City**  
El Mirage  
**State**  
AZ  
**Zip Code**  
85335

## Hydrant Assessment

**Type of Hydrant**  
Mueller

**Summary of Hydrant disfunction**  
No deficiencies

### Assessment Photo



## Trouble Codes

### Trouble Codes

ND = no deficiencies

## Repair

# Fire Hydrant Service Report

PO Box 979  
Tempe, Arizona 85280  
480-242-8402



- Upper Barrel
- Lower Barrel
- Hydrant Greased

- Hydrant Flushed
- Hydrant Painted

Repair summary

## After Service



## GPS Location



## Summary

# Fire Hydrant Service Report

PO Box 979  
Tempe, Arizona 85280  
480-242-8402



## Notes & Comments

STATIC-70

RESIDUAL-55

PITOT-40

GPM 1060

Hydrant Technician

David Munoz

## Project Manager

David Munoz ROC #283661, UFM4 #CSA21277

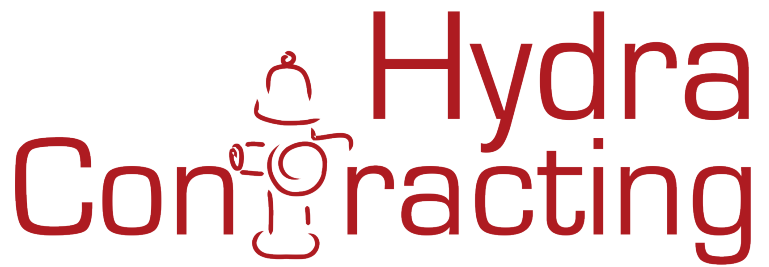
exp 6/20

Date

02/19/2019

# Fire Hydrant Service Report

PO Box 979  
Tempe, Arizona 85280  
480-242-8402



## Location

**Client**  
PUEBLO EL MIRAGE  
**Hydrant #**  
F67  
**Address**  
11201 N. El Mirage rd

**City**  
El Mirage  
**State**  
AZ  
**Zip Code**  
85335

## Hydrant Assessment

**Type of Hydrant**  
Mueller

**Summary of Hydrant disfunction**  
No deficiencies

### Assessment Photo



## Trouble Codes

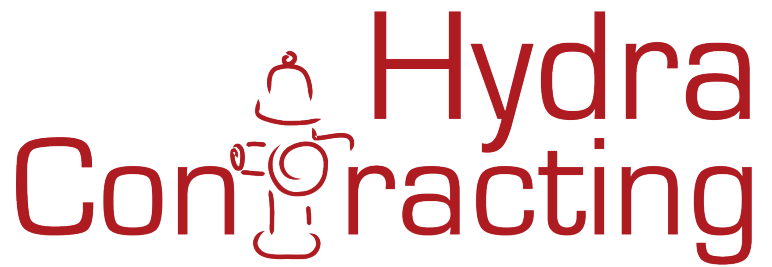
### Trouble Codes

ND = no deficiencies

## Repair

# Fire Hydrant Service Report

PO Box 979  
Tempe, Arizona 85280  
480-242-8402



- Upper Barrel
- Lower Barrel
- Hydrant Greased

- Hydrant Flushed
- Hydrant Painted

Repair summary

## After Service



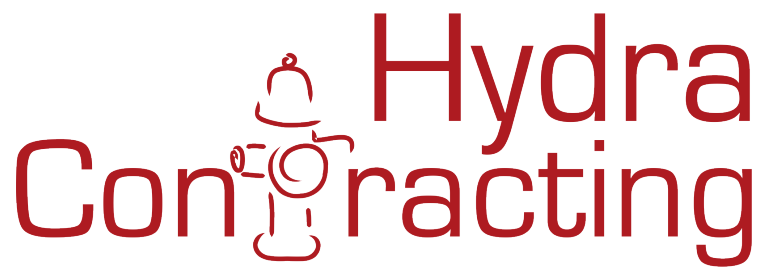
## GPS Location



## Summary

# Fire Hydrant Service Report

PO Box 979  
Tempe, Arizona 85280  
480-242-8402



## Notes & Comments

STATIC-70

RESIDUAL-48

PITOT-30

GPM 918

Hydrant Technician

David Munoz

## Project Manager

David Munoz ROC #283661, UFM4 #CSA21277

exp 6/20

## Date

02/19/2019

**APPENDIX B**  
**International Fire Code 2018,**  
**Section B105, Table B105.1(1)**

# 2012 International Fire Code

(Sixth Printing: Apr 2014)

## APPENDIX B FIRE-FLOW REQUIREMENTS FOR BUILDINGS

### SECTION B105 FIRE-FLOW REQUIREMENTS FOR BUILDINGS

#### B105.1 One- and two-family dwellings.

The minimum fire-flow and flow duration requirements for one- and two-family *dwellings* having a fire-flow calculation area that does not exceed 3,600 square feet (344.5 m<sup>2</sup>) shall be 1,000 gallons per minute (3785.4 L/min) for 1 hour. Fire-flow and flow duration for *dwellings* having a fire-flow calculation area in excess of 3,600 square feet (344.5m<sup>2</sup>) shall not be less than that specified in Table B105.1.

**Exception:** A reduction in required fire-flow of 50 percent, as *approved*, is allowed when the building is equipped with an *approved automatic sprinkler system*.

TABLE B105.1  
MINIMUM REQUIRED FIRE-FLOW AND FLOW DURATION FOR BUILDINGS

FIRE-FLOW CALCULATION AREA (square feet)					FIRE-FLOW (gallons per minute) <sup>b</sup>	FLOW DURATION (hours)
Type IA and IB <sup>a</sup>	Type IIA and IIIA <sup>a</sup>	Type IV and V-A <sup>a</sup>	Type IIB and IIIB <sup>a</sup>	Type V-B <sup>a</sup>		
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	3
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750	
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	
—	—	115,801-125,500	83,701-90,600	51,501-55,700	6,250	
—	—	125,501-135,500	90,601-97,900	55,701-60,200	6,500	
—	—	135,501-145,800	97,901-106,800	60,201-64,800	6,750	
—	—	145,801-156,700	106,801-113,200	64,801-69,600	7,000	
—	—	156,701-167,900	113,201-121,300	69,601-74,600	7,250	
—	—	167,901-179,400	121,301-129,600	74,601-79,800	7,500	
—	—	179,401-191,400	129,601-138,300	79,801-85,100	7,750	
—	—	191,401-Greater	138,301-Greater	85,101-Greater	8,000	

For SI: 1 square foot = 0.0929 m<sup>2</sup>, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the *International Building Code*.

b. Measured at 20 psi residual pressure.

#### B105.2 Buildings other than one- and two-family dwellings.

The minimum fire-flow and flow duration for buildings other than one- and two-family *dwellings* shall be as specified in Table B105.1.

**APPENDIX C**  
**Hydraulic Modeling Results**

## APPENDIX C

### Water Demand Computation - THE FAIRWAYS II

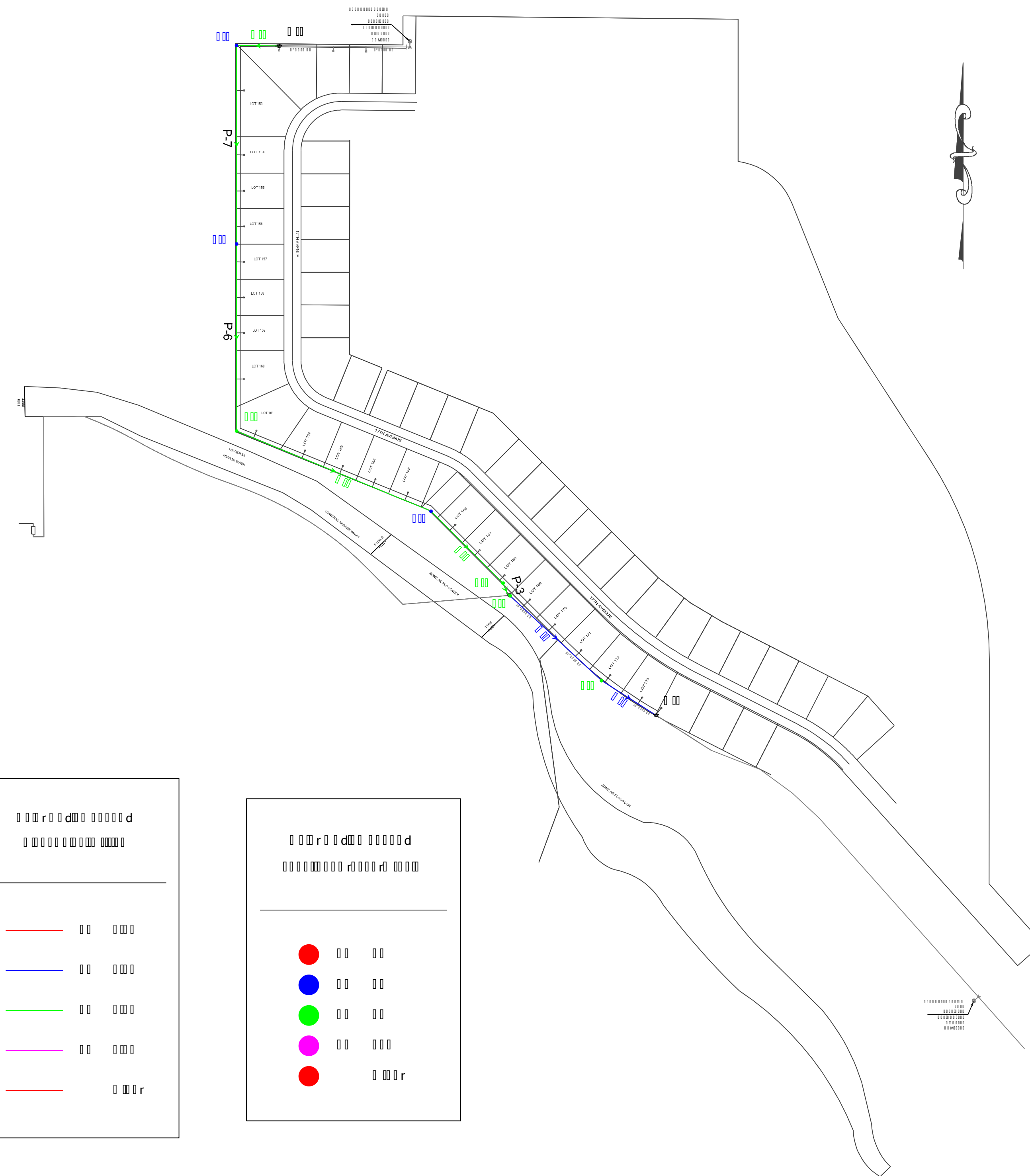
Junction #	Number of Units	Average Day Demand (gpd)	Average Day Flow (gpm)	Maximum Day Demand (gpm)	Peak Hour Flow (gpm)
<b>A</b>	<b>B</b>	<b>C=B X 250</b>	<b>D=C/1440</b>	<b>E=D*1.7</b>	<b>F=E*1.7</b>
1	3	750	0.52	0.89	1.51
2	2	500	0.35	0.59	1.00
3	2	500	0.35	0.59	1.00
4	4	1000	0.69	1.18	2.01
5	5	1250	0.87	1.48	2.51
6	3	750	0.52	0.89	1.51
7	2	500	0.35	0.59	1.00

Design Criteria:

1. Average Daily Consumption = 250 gpd
2. Average total daily consumption = No. of Units X 250 gpd
4. Maximum Day Flow Rate = 1.7 X Avg Day Flow
5. Peak Hour Flow Rate = 1.7 X Peak Day Flow
- 5. Fire Flow = 1500 gpm for Mobile home/Trailer**
6. Hazen-Williams Co-efficient for PVC, C=150

**Average Day  
Scenario  
Flow Results**

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Average Day**



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**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Average Day**

**Current Time: 0.000 hours**

Label	Diameter (in)	ID	Material	Hazen-Williams C	Status (Initial)	Start Node	Stop Node	Length (User Defined) (ft)	Flow (gpm)	Velocity (ft/s)	Hydraulic Grade (Start) (ft)	Hydraulic Grade (Stop) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)
P-1	10.0	38	PVC	150.0	Open	J-1	R-1	106.29	407.26	1.66	1,269.08	1,268.98	0.001	0.10
P-2	10.0	39	PVC	150.0	Open	J-2	J-1	317.13	407.78	1.67	1,269.36	1,269.08	0.001	0.28
P-3	8.0	40	PVC	150.0	Open	J-3	J-2	23.30	408.13	2.60	1,269.42	1,269.36	0.003	0.06
P-4	8.0	41	PVC	150.0	Open	J-4	J-3	168.21	408.48	2.61	1,269.87	1,269.42	0.003	0.45
P-5	8.0	42	PVC	150.0	Open	J-5	J-4	346.49	409.17	2.61	1,270.80	1,269.87	0.003	0.93
P-6	8.0	43	PVC	150.0	Open	J-6	J-5	307.41	410.04	2.62	1,271.63	1,270.80	0.003	0.83
P-8	8.0	66	PVC	150.0	Open	R-2	J-7	320.37	410.91	2.62	1,272.68	1,271.82	0.003	0.86
P-7	8.0	67	PVC	150.0	Open	J-7	J-6	70.57	410.56	2.62	1,271.82	1,271.63	0.003	0.19

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Average Day**

**Current Time: 0.000 hours**

Label	Elevation (ft)	Hydraulic Grade (ft)	Pressure (psi)	Pressure Head (ft)	Demand (gpm)
J-1	1,105.60	1,269.08	71	163.48	0.52
J-2	1,106.38	1,269.36	71	162.98	0.35
J-3	1,106.87	1,269.42	70	162.55	0.35
J-4	1,108.98	1,269.87	70	160.89	0.69
J-5	1,105.66	1,270.80	71	165.14	0.87
J-6	1,110.03	1,271.63	70	161.60	0.52
J-7	1,111.14	1,271.82	70	160.68	0.35

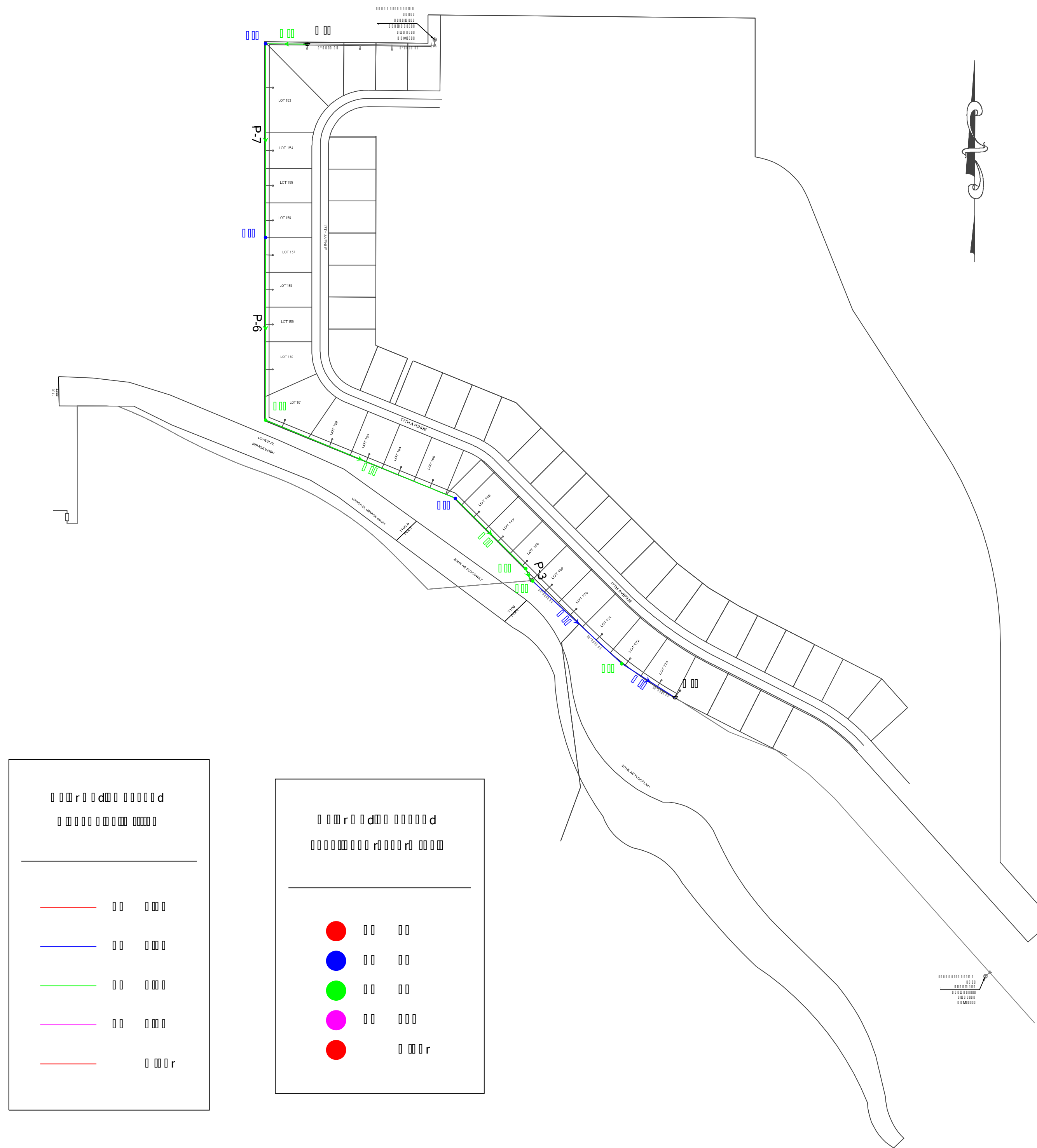
**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Average Day**

**Current Time: 0.000 hours**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,268.98	-407.26	1,268.98
R-2	1,272.68	410.91	1,272.68

**Maximum Day  
Scenario  
Flow Results**

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Maximum Day**



**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Maximum Day**

**Current Time: 0.000 hours**

Label	Diameter (in)	ID	Material	Hazen-Williams C	Status (Initial)	Start Node	Stop Node	Length (User Defined) (ft)	Flow (gpm)	Velocity (ft/s)	Hydraulic Grade (Start) (ft)	Hydraulic Grade (Stop) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)
P-1	10.0	38	PVC	150.0	Open	J-1	R-1	106.29	405.63	1.66	1,269.07	1,268.98	0.001	0.09
P-2	10.0	39	PVC	150.0	Open	J-2	J-1	317.13	406.52	1.66	1,269.36	1,269.07	0.001	0.28
P-3	8.0	40	PVC	150.0	Open	J-3	J-2	23.30	407.11	2.60	1,269.42	1,269.36	0.003	0.06
P-4	8.0	41	PVC	150.0	Open	J-4	J-3	168.21	407.70	2.60	1,269.87	1,269.42	0.003	0.45
P-5	8.0	42	PVC	150.0	Open	J-5	J-4	346.49	408.88	2.61	1,270.79	1,269.87	0.003	0.93
P-6	8.0	43	PVC	150.0	Open	J-6	J-5	307.41	410.36	2.62	1,271.62	1,270.79	0.003	0.83
P-8	8.0	66	PVC	150.0	Open	R-2	J-7	320.37	411.84	2.63	1,272.68	1,271.81	0.003	0.87
P-7	8.0	67	PVC	150.0	Open	J-7	J-6	70.57	411.25	2.62	1,271.81	1,271.62	0.003	0.19

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Maximum Day**

**Current Time: 0.000 hours**

Label	Elevation (ft)	Hydraulic Grade (ft)	Pressure (psi)	Pressure Head (ft)	Demand (gpm)
J-1	1,105.60	1,269.07	71	163.47	0.89
J-2	1,106.38	1,269.36	71	162.98	0.59
J-3	1,106.87	1,269.42	70	162.55	0.59
J-4	1,108.98	1,269.87	70	160.89	1.18
J-5	1,105.66	1,270.79	71	165.13	1.48
J-6	1,110.03	1,271.62	70	161.59	0.89
J-7	1,111.14	1,271.81	70	160.67	0.59

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Maximum Day**

**Current Time: 0.000 hours**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,268.98	-405.63	1,268.98
R-2	1,272.68	411.84	1,272.68

**Maximum Day +  
FIRE Flow  
Scenario  
Flow Results.**

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Maximum Day+Fire Flow**



# PUEBLO EL MIRAGE R.V. RESORT THE FAIRWAYS II

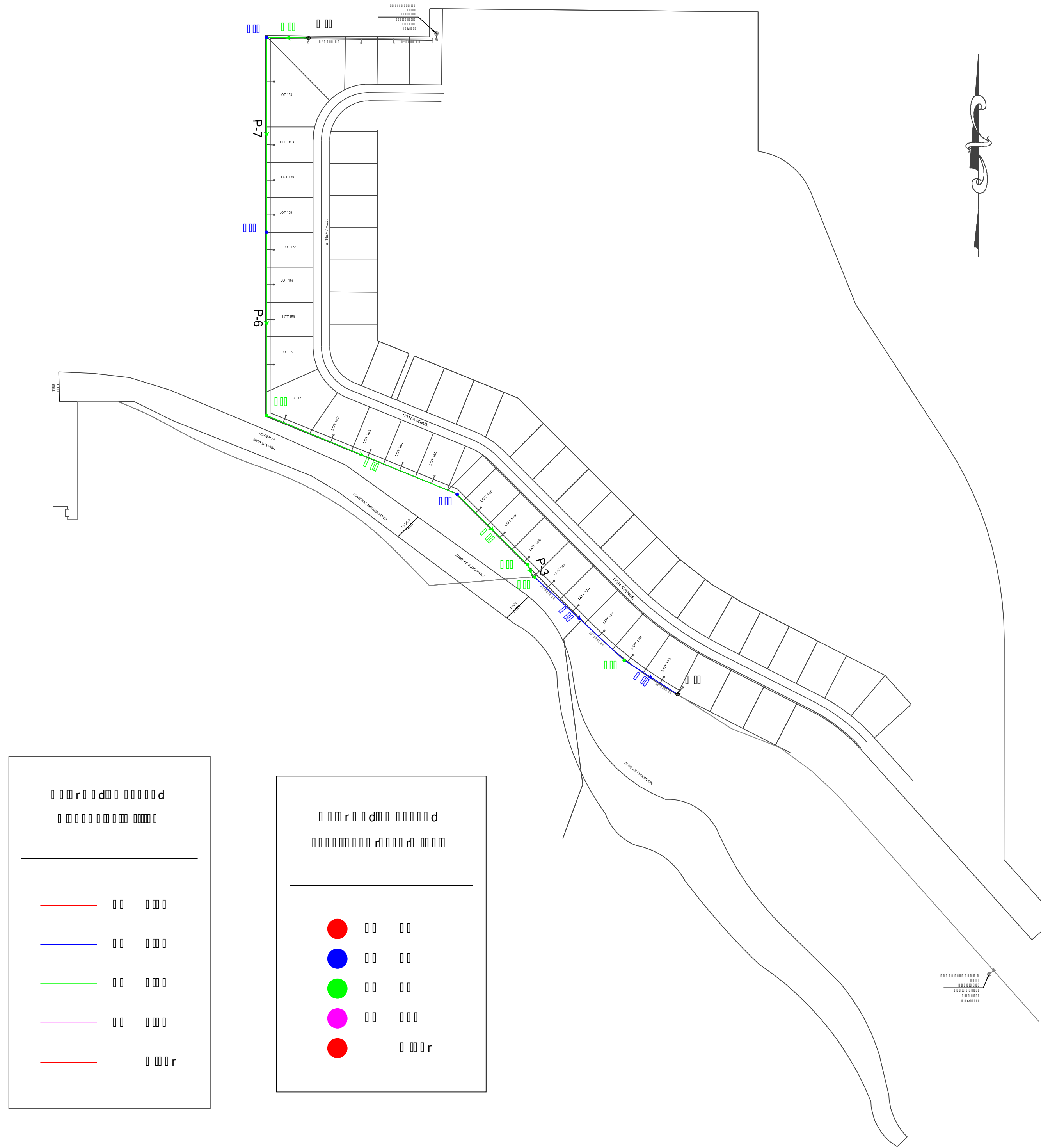
## Active Scenario: Maximum Day+Fire Flow

Current Time: 0.000 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Junction w/ Minimum Pressure (Zone)	Is Fire Flow Run Balanced?	Velocity of Maximum Pipe (ft/s)
J-1	True	1,500.00	1,501.00	1,500.89	1,501.89	20	70	J-4	True	4.32
J-2	True	1,500.00	1,501.00	1,500.59	1,501.59	20	70	J-4	True	3.94
J-3	True	1,500.00	1,501.00	1,500.59	1,501.59	20	69	J-4	True	6.03
J-4	True	1,500.00	1,501.00	1,501.18	1,502.18	20	68	J-7	True	5.31
J-5	True	1,500.00	1,501.00	1,501.48	1,502.48	20	69	J-7	True	5.61
J-6	True	1,500.00	1,501.00	1,500.89	1,501.89	20	68	J-7	True	6.95
J-7	True	1,500.00	1,501.00	1,500.59	1,501.59	20	67	J-6	True	7.36

**Peak Hour  
Scenario  
Flow Results**

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Peak Hour**



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**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Peak Hour**

**Current Time: 0.000 hours**

Label	Diameter (in)	ID	Material	Hazen-Williams C	Status (Initial)	Start Node	Stop Node	Length (User Defined) (ft)	Flow (gpm)	Velocity (ft/s)	Hydraulic Grade (Start) (ft)	Hydraulic Grade (Stop) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)
P-1	10.0	38	PVC	150.0	Open	J-1	R-1	106.29	402.87	1.65	1,269.07	1,268.98	0.001	0.09
P-2	10.0	39	PVC	150.0	Open	J-2	J-1	317.13	404.38	1.65	1,269.35	1,269.07	0.001	0.28
P-3	8.0	40	PVC	150.0	Open	J-3	J-2	23.30	405.38	2.59	1,269.41	1,269.35	0.003	0.06
P-4	8.0	41	PVC	150.0	Open	J-4	J-3	168.21	406.38	2.59	1,269.86	1,269.41	0.003	0.44
P-5	8.0	42	PVC	150.0	Open	J-5	J-4	346.49	408.39	2.61	1,270.78	1,269.86	0.003	0.92
P-6	8.0	43	PVC	150.0	Open	J-6	J-5	307.41	410.90	2.62	1,271.61	1,270.78	0.003	0.83
P-8	8.0	66	PVC	150.0	Open	R-2	J-7	320.37	413.41	2.64	1,272.68	1,271.81	0.003	0.87
P-7	8.0	67	PVC	150.0	Open	J-7	J-6	70.57	412.41	2.63	1,271.81	1,271.61	0.003	0.19

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Peak Hour**

**Current Time: 0.000 hours**

Label	Elevation (ft)	Hydraulic Grade (ft)	Pressure (psi)	Pressure Head (ft)	Demand (gpm)
J-1	1,105.60	1,269.07	71	163.47	1.51
J-2	1,106.38	1,269.35	71	162.97	1.00
J-3	1,106.87	1,269.41	70	162.54	1.00
J-4	1,108.98	1,269.86	70	160.88	2.01
J-5	1,105.66	1,270.78	71	165.12	2.51
J-6	1,110.03	1,271.61	70	161.58	1.51
J-7	1,111.14	1,271.81	70	160.67	1.00

**PUEBLO EL MIRAGE R.V. RESORT  
THE FAIRWAYS II  
Active Scenario: Peak Hour**

**Current Time: 0.000 hours**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,268.98	-402.87	1,268.98
R-2	1,272.68	413.41	1,272.68

**APPENDIX D**  
**City of El Mirage Water System**  
**Sizing Criteria**

**TABLE 3-11: WATER SYSTEM SIZING CRITERIA**

Item	Demand Type	Sizing Criteria
Storage	Max Day (1.7 times Average Day)	Equalization plus Fire Reserve plus Emergency Reserve
Booster Pumps	Peak Hour (1.7 times Max Day)	Max Day plus Fire Flow plus 10% or Peak Hour Firm Capacity
Well Production Facilities	Max Day	Max Day Demand with largest well out of service
Pipelines	Peak Hour (1.7 times Max Day)	<u>Max Day Conditions:</u> Max Velocity < 5 fps
		<u>Peak Hour Conditions:</u> Max Velocity ≤ 7 fps.
		Max Head Loss of 10 feet per 1,000 feet pipe.
		Min System Pressure of 40 psi.
	Max Day Plus Fire Flow	Min Residual Pressure of 20 psi.
Fire Flows	Single Family (SF) Residential	1,500 gpm for 2 hours
	Any Land Use Other Than SF Residential	3,500 gpm for 4 hours

## 3.5 Water System Facility Requirements

### 3.5.1 Well Production Requirements

The required well production capacity was calculated by comparing the projected maximum day demands with the existing well capacity with the largest well out of service. It was assumed that the two wells in the City of Surprise would continue to be owned and operated by the City of El Mirage, and the currently served area within the City of Surprise would continue to be served by the City of El Mirage. **Table 3-12** presents the existing and required well capacities for each planning year. **Figure 3-5** presents the well production phasing graphically.

**APPENDIX E**  
**Arizona Administrative Code,**  
**Title 18, Chapter 9**

Hotel/motel Without kitchen	Bed (2 person)	50
With kitchen	Bed (2 person)	60
Industrial facility Without showers	Employee	25
With showers	Employee	35
Cafeteria, add	Employee	5
Institutions Resident	Person	75
Nursing home	Person	125
Rest home	Person	125
Laundry Self service	Wash cycle	50
Commercial	Washing machine	Per manufacturer, if consistent with this Chapter
Office Building	Employee	20
Park (temporary use) Picnic, with showers, flush toilets	Parking space	40
Picnic, with flush toilets only	Parking space	20
Recreational vehicle, no water or sewer connections	Vehicle space	75
Recreational vehicle, with water and sewer connections	Vehicle space	100
Mobile home/Trailer	Space	250
Restaurant/Cafeteria With toilet, add	Employee	20
Kitchen waste, add	Customer	7
Garbage disposal, add	Meal	6
Cocktail lounge, add	Meal	1
Kitchen waste disposal service, add	Customer	2
	Meal	2
Restroom, public	Toilet	200
School Staff and office	Person	20
Elementary, add	Student	15
Middle and High, add	Student	20
with gym & showers, add	Student	5
with cafeteria, add	Student	3
Boarding, total flow	Person	100
Service Station with toilets	First bay	1000
	Each additional bay	500
Shopping Center, no food or laundry	Square foot of retail space	0.1
Store	Employee	20
Public restroom, add	Square foot of retail space	0.1
Swimming Pool, Public	Person	10
Theater Indoor	Seat	5
Drive-in	Car space	10

Note: Unit flow rates published in standard texts, literature sources, or relevant area or regional studies are considered by the Department, if appropriate to the project.

**Historical Note**

New Section adopted by final rulemaking at 7 A.A.R. 235, effective January 1, 2001 (Supp. 00-4). Amended by final rulemaking at 11 A.A.R. 4544, effective November 12, 2005 (05-3).

**ARTICLE 4. NITROGEN MANAGEMENT GENERAL PERMITS**

**R18-9-401. Definitions**

In addition to the definitions established in A.R.S. §§ 49-101 and 49-201 and A.A.C. R18-9-101, the following terms apply to this Article:

1. “Application of nitrogen fertilizer” means any use of a substance containing nitrogen for the commercial production of a crop or plant. The commercial production of a

crop or plant includes commercial sod farms and nurseries.

2. “Contact stormwater” means stormwater that comes in contact with animals or animal wastes within a concentrated animal feeding operation.
3. “Crop or plant needs” means the amount of water and nitrogen required to meet the physiological demands of a crop or plant to achieve a defined yield.
4. “Crop or plant uptake” means the amount of water and nitrogen that can be physiologically absorbed by the roots

# FINAL PLAT "FAIRWAYS UNIT II"

A PORTION OF TRACTS L AND T AND LOTS 1380 THRU 1392, INCLUSIVE OF PUEBLO EL MIRAGE R.V. RESORT, BOOK 275 OF MAPS, PAGE 45, M.C.R. LOCATED IN A PORTION OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 1 WEST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA

### DEDICATION

STATE OF ARIZONA) )  
COUNTY OF MARICOPA)

KNOWN ALL MEN BY THESE PRESENTS: PUEBLO EL MIRAGE, LLC., A CALIFORNIA LIMITED LIABILITY COMPANY, AS OWNER HAS SUBDIVIDED UNDER THE NAME "FAIRWAYS UNIT II", A RE-SUBDIVISION A PORTION OF TRACTS L AND T AND LOTS 1380 THRU 1392 INCLUSIVE OF "PUEBLO EL MIRAGE R.V. RESORT" ACCORDING TO BOOK 275 OF MAPS, PAGE 45, OFFICIAL RECORDS OF MARICOPA COUNTY, BEING A PORTION OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 1 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, AS SHOWN AND PLATTED HEREON AND HEREBY PUBLISHES THIS PLAT AS THE PLAT OF "FAIRWAYS UNIT II" AND HEREBY DECLARES THAT SAID PLAT SETS FORTH THE LOCATIONS AND GIVES THE DIMENSIONS OF ALL LOTS, STREETS AND EASEMENTS CONSTITUTING SAME AND EACH LOT AND STREET SHALL BE KNOWN BY THE NUMBER OR NAME GIVEN EACH RESPECTIVELY ON SAID PLAT. PUEBLO EL MIRAGE, LLC, AS OWNER, HEREBY DEDICATES TO THE PUBLIC FOR USE AS SUCH THE EASEMENTS AS SHOWN HEREON, UPON OFFICIAL ACCEPTANCE BY THE CITY.

A PUBLIC UTILITIES EASEMENT, INGRESS AND EGRESS FOR REFUSE COLLECTION, EMERGENCY AND SERVICE TYPE ACCESS ARE HEREBY DEDICATED OVER "TRACT "R". MAINTENANCE OF THE EASEMENTS SHALL BE THE RESPONSIBILITY OF THE OWNER.

TRACTS SHALL BE OWNED AND MAINTAINED BY THE OWNERS.

TRACT "R" IS HEREBY DEDICATED TO AND OWNED BY THE HOMEOWNERS ASSOCIATION (HOA) FOR THE PURPOSE OF RETENTION AND DRAINAGE EASEMENT. THE HOMEOWNERS ASSOCIATION IS RESPONSIBLE FOR MAINTENANCE OF THE RETENTION AND DRAINAGE EASEMENT

ALL WATER AND SANITARY SEWER LINES AND APPURTENANCES WITHIN THE SUBDIVISION ARE PRIVATE UNLESS OTHERWISE NOTED. THE HOMEOWNERS ASSOCIATION IS RESPONSIBLE FOR MAINTENANCE OF THE PRIVATE SANITARY SEWER AND WATER MAINS, SERVICES AND APPURTENANCES

OWNER WARRANTS AND REPRESENTS TO THE CITY OF EL MIRAGE TO BE THE SOLE OWNERS OF THE PROPERTY COVERED AND HEREBY AND THAT ANY HOMEOWNERS ASSOCIATION, LENDER, EASEMENT HOLDER OR OTHER PERSON OR ENTITY HAVING AN INTEREST IN SAID PROPERTY HAS CONSENTED TO AND JOINED IN THIS PLAT, AS EVIDENCED BY INSTRUMENTS RECORDED WITH THE MARICOPA COUNTY RECORDERS OFFICE OR WHICH OWNERS WILL RECORD, NOT LATER THAN THE DATE ON WHICH THE PLAT IS RECORDED.

IN WITNESS WHEREOF, PUEBLO EL MIRAGE, LLC, AS OWNER, HAS HEREUNDER CAUSED ITS NAME TO BE SIGNED AND THE SAME TO BE ATTESTED BY THE SIGNATURE OF \_\_\_\_\_ ITS THEREUNTO DULY AUTHORIZED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2020.

BY \_\_\_\_\_  
BY: PUEBLO EL MIRAGE, LLC., A CALIFORNIA LIMITED LIABILITY COMPANY

### ACKNOWLEDGEMENT

STATE OF ARIZONA) )  
COUNTY OF MARICOPA)

BEFORE ME THIS DAY OF \_\_\_\_\_ OF \_\_\_\_\_, 2020. THAT PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, WHO ACKNOWLEDGED HIMSELF/HERSELF TO BE THE MANAGING MEMBER OF THE PUEBLO EL MIRAGE, LLC, THE LEGAL OWNER OF THE PROPERTY PLATTED HEREON AND ACKNOWLEDGED THAT HE/SHE AS SUCH, EXECUTED THIS INSTRUMENT FOR THE PURPOSE HEREIN CONTAINED.

IN WITNESS WHEREOF: I HEREUNTO SET MY HAND AND OFFICIAL SEAL.

BY: NOTARY PUBLIC \_\_\_\_\_ MY COMMISSION EXPIRES: \_\_\_\_\_

### APPROVAL BY CITY COUNCIL

APPROVED BY THE COUNCIL OF THE CITY OF EL MIRAGE, ARIZONA. THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2020.

BY: \_\_\_\_\_ ATTEST: \_\_\_\_\_  
MAYOR CITY CLERK

### APPROVAL OF CITY ENGINEER

DATE ON THIS PLAT REVIEWED AND APPROVED ON THIS DAY \_\_\_\_\_ OF \_\_\_\_\_, 2020. BY THE CITY ENGINEER OF EL MIRAGE, ARIZONA.

\_\_\_\_\_  
CITY ENGINEER

### CERTIFICATE OF COMPLIANCE

THIS PLAT IS FULL COMPLIANCE WITH THE ORIGINAL PRELIMINARY PLAT APPROVED BY THE CITY OF EL MIRAGE PLANNING AND ZONING COMMISSION ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 2020.

THE FINAL PLAT REVIEWED AND APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2020.

\_\_\_\_\_  
PLANNING AND ZONING COMMISSION CHAIRPERSON

\_\_\_\_\_  
PLANNING DIRECTOR

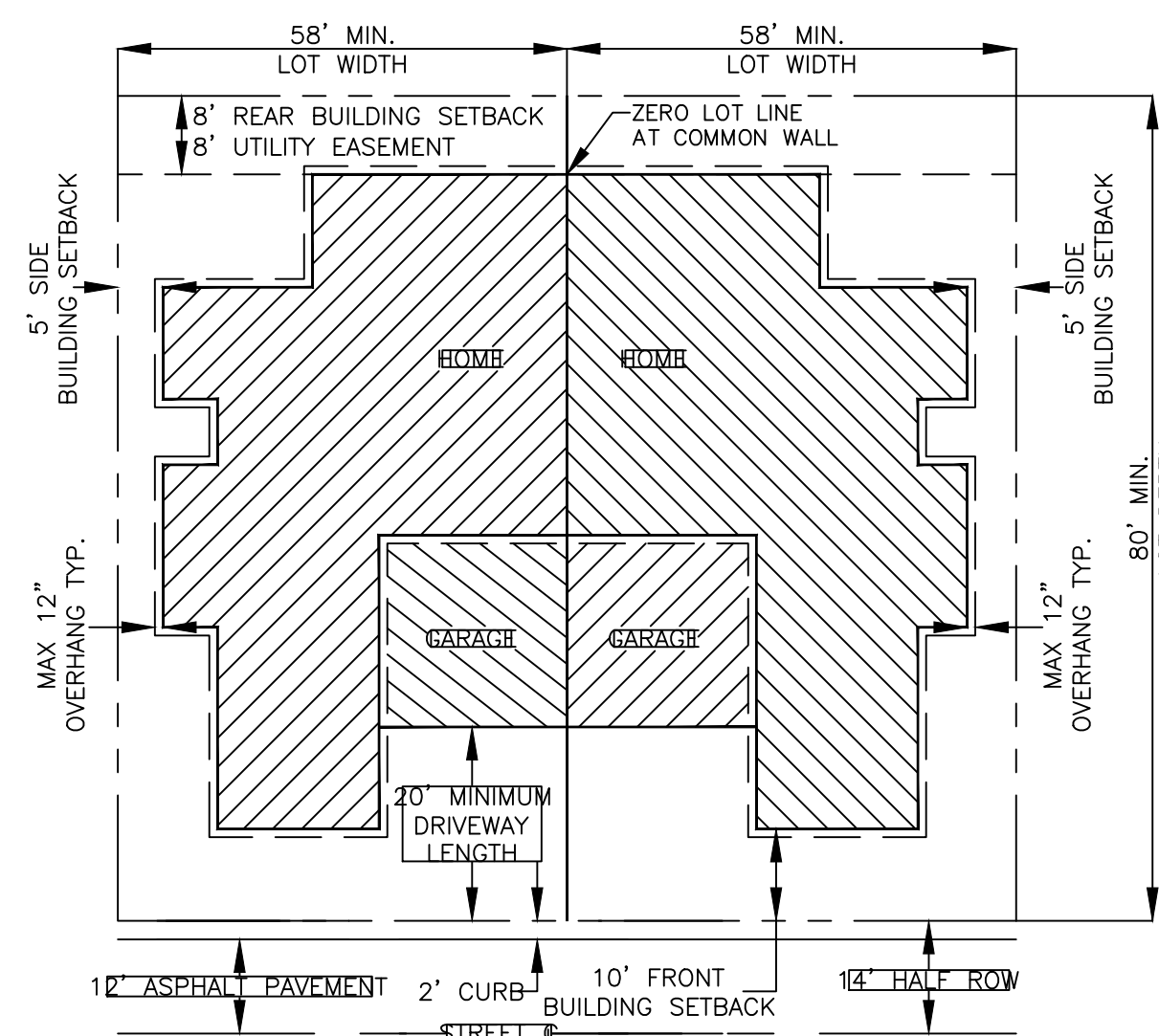
### ABBREVIATIONS:

ASSESSOR'S PARCEL NUMBER	APN
MARICOPA COUNTY RECORDS	MCR
MEASURED	(M)
RECORDED	(R)
CALCULATED	(C)
RIGHT-OF-WAY	ROW
EASEMENT	ESMT
DRAINAGE EASEMENT	DE
WATER AND SEWER EASEMENT	W&S ESMT.
SIGHT VISIBILITY TRIANGLE	SVE
1' VEHICULAR NON-ACCESS EASEMENT	VNAE

### LEGEND

●	MONUMENT TO BE SET
●	PROPERTY CORNER TO BE SET 1/2" REBAR L.S.# 32788
BCF	BRASS CAP FLUSH
BCHH	BRASS CAP HAND HOLE
_____	SECTION LINE
_____	CENTER LINE
_____	SUBDIVISION BOUNDARY
_____	RIGHT OF WAY LINE
_____	PROPERTY LINE
_____	EASEMENT LINE

LOT #	SQ. FT.	AC.
LOT 153	9,999.0	0.23
LOT 154	4,824.8	0.11
LOT 155	4,680.0	0.11
LOT 156	4,680.0	0.11
LOT 157	4,680.0	0.11
LOT 158	4,680.0	0.11
LOT 159	4,680.0	0.11
LOT 160	6,137.2	0.14
LOT 161	7,942.8	0.18
LOT 162	5,459.2	0.13
LOT 163	4,640.0	0.11
LOT 164	4,640.0	0.11
LOT 165	4,640.0	0.11
LOT 166	4,647.5	0.11
LOT 167	4,647.5	0.11
LOT 168	4,647.5	0.11
LOT 169	4,647.5	0.11
LOT 170	4,647.5	0.11
LOT 171	4,864.7	0.11
LOT 172	4,895.6	0.11
LOT 173	4,979.9	0.11
TRACT R	3,870.0	0.09



### ZERO LOT LINE SETBACK EXHIBIT NOT TO SCALE

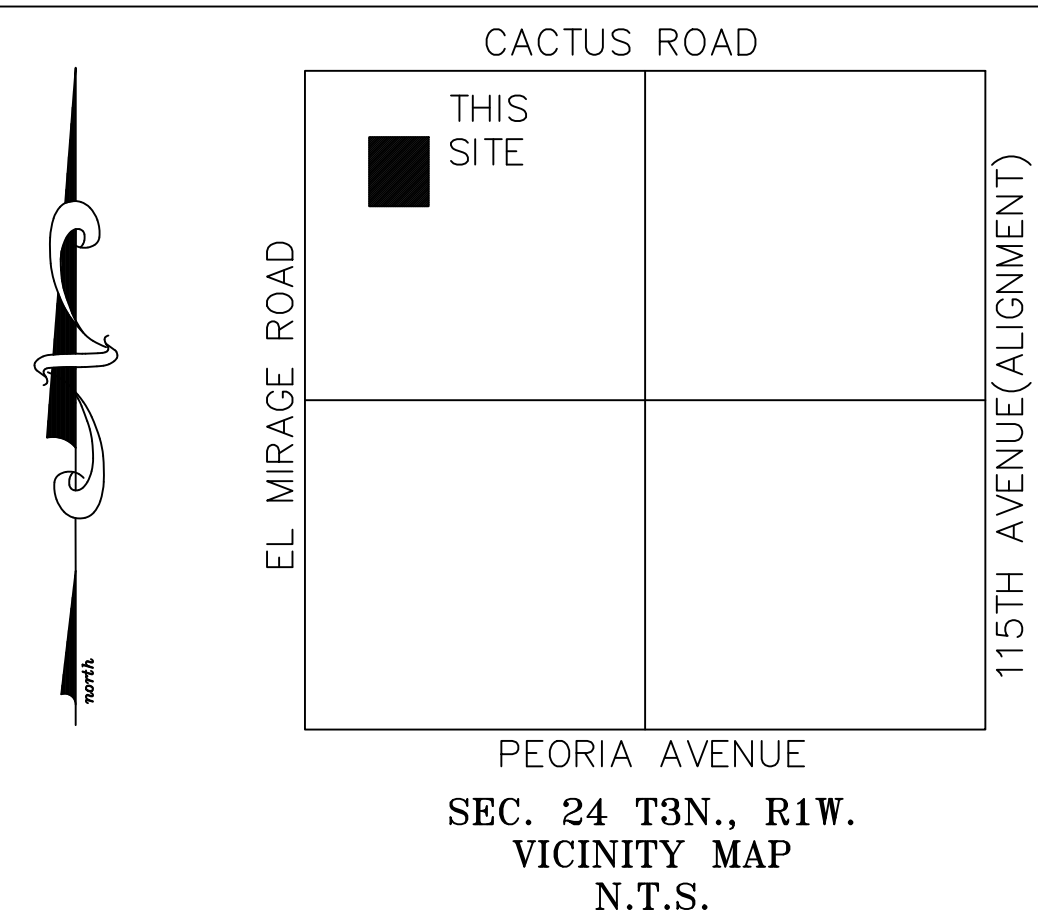
### NOTICE OF MILITARY OVER FLIGHTS

THIS SUBDIVISION LIES WITHIN THE VICINITY OF A MILITARY AIRPORT AS DESCRIBED IN SECTION 28-8481 OF THE ARIZONA REVISED STATUTES AND IS SUBJECT TO DIRECT OVER FLIGHTS AND NOISE BY JET AIRCRAFT. FOR MORE INFORMATION CONTACT LUKE AIR FORCE BASE.

### PLAT CERTIFICATION

THIS IS TO CERTIFY THAT THE SUBDIVISION PLAT OF THE PREMISES DESCRIBED AND PLATTED HEREON WAS MADE UNDER MY DIRECTION DURING THE MONTH OF APRIL, 2020. USING SURVEY INFORMATION OBTAINED BY EXTREME LAND SURVEYING, INC., THAT THE PLAT IS TRUE AND COMPLETE AS SHOWN AND THE INFORMATION SHOWN ON THE PLAT IS SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACTED.

MIKE F. JENNINGS, R.L.S. #32788 DATE: 08-19-2020



### BASIS OF BEARING

THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 24, T3N., R1W ACCORDING TO THE FINAL PLAT OF THE FAIRWAYS RECORDED IN BOOK 775 OF MAPS, PAGE 43 M.C.R. AND PUEBLO R.V. RESORT BOOK 275 OF MAPS, PAGE 45, M.C.R. THE LINE WHICH BEARS SOUTH 00° 01' 19" WEST.

### BENCHMARK

FOUND 3" MARICOPA COUNTY BRASS CAP FLUSH IN CONCRETE STAMPED 2003 S13 AND S24 RLS #36563. THE NORTH QUARTER OF SECTION 24, T3N., R1W. ELEVATION=1109.555(G.D.A.C.S. PT.# 30783-Z1 NAVD '88 DATUM).

### PERTINENT DOCUMENTS

- 1.) WARRANTY DEED #1996-0457184 M.C.R.
- 2.) SPECIAL WARRANTY DEED #2009-0817864 M.C.R.
- 3.) WARRANTY DEED #2015-0474254 M.C.R.
- 4.) FINAL PLAT OF FAIRWAYS RECORDED IN BOOK 775 OF MAPS, PAGE 43 M.C.R.(R2)
- 5.) FINAL PLAT OF PUEBLO EL MIRAGE RV RESORT RECORDED IN BOOK 275 OF MAPS, PAGE 45 M.C.R.(R1)

### AREA TABLE

THIS PROPERTY CONTAINS 117,261.64 SQUARE FEET OR 2.692 ACRES MORE OR LESS. TRACT "R" IS FOR RETENTION-3,870.03 SQUARE FEET OR 0.888 ACRES LOTS 153-173 ZONING: MP

### FLOOD ZONE

THIS PROPERTY IS LOCATED ON THE FLOOD INSURANCE RATE MAP(FIRM) ZONE X(SHADED). COMMUNITY NUMBER 040041 MAP NUMBER AND SUFFIX 04013C1680L PANEL NUMBER 1680 EFFECTIVE DATE OF FIRM OCTOBER 16, 2013. AND LOMAR 14-09-2966P EFFECTIVE DATE OF FEBRUARY 27, 2015.

### NOTES

- ALL STREETS SHOWN HEREON ARE PRIVATE AND ARE TO BE OWNED AND MAINTAINED BY PUEBLO EL MIRAGE RV HOMEOWNERS ASSOCIATION.
- ALL NEW AND EXISTING UTILITY, ELECTRICAL FACILITIES LESS THAN 69 KVA, CABLE T.V., TELECOMMUNICATIONS FIBER OPTICS, CELLULAR, GAS, ETC. SHALL BE INSTALLED UNDERGROUND AS PART OF THE STREET IMPROVEMENTS.
- MAINTENANCE OF SURFACE AND UNDERGROUND DRAINAGE FACILITIES WITHIN ALL TRACTS, EASEMENTS AND RIGHTS-OF-WAY SHALL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION.
- ALL LOT CORNERS SHALL BE MONUMENTED WITH 1/2" REBAR AND CAPPED OR TAGGED BEARING THE REGISTRATION NUMBER OF THE SURVEYOR RESPONSIBLE FOR THEIR PLACEMENT.
- SIGNS, FENCES, WALLS, UTILITY BOXES, STRUCTURES, SHRUBS, HEDGES OR OTHER PLANTS, BUT EXCLUDING TREES OVER 30-INCHES IN HEIGHT SHALL NOT BE PERMITTED WITHIN VIEW EASEMENTS OR THE SIGHT DISTANCE TRIANGLES. NO LIMBS, LEAVES, NEEDLES OR OTHER FOLIAGE ABOVE 30-INCHES IN HEIGHT OR BELOW 84-INCHES ARE PERMITTED.
- THIS SUBDIVISION IS LOCATED WITHIN THE CITY OF EL MIRAGE SEWER SERVICE AREA.
- THIS SUBDIVISION IS LOCATED WITHIN THE VICINITY OF A MILITARY AIRPORT.
- THIS SUBDIVISION IS LOCATED IN THE VICINITY OF A DESIGNATED TRUCK ROUTE. EL MIRAGE ROAD, CACTUS ROAD AND PEORIA AVENUE ARE DESIGNATED AS A TRUCK ROUTES BY THE CITY OF EL MIRAGE.
- NO STRUCTURE OF ANY KIND SHALL BE CONSTRUCTED, OR ANY VEGETATION BE PLANTED, NOR BE ALLOWED TO GROW WITHIN THE DRAINAGE EASEMENT OR TRACT, WHICH WOULD IMPEDE THE FLOW OF WATER OVER, UNDER, OR THROUGH THE EASEMENT OR TRACT.
- THIS SUBDIVISION IS LOCATED WITHIN THE CITY OF EL MIRAGE WATER SERVICE AREA AND HAS BEEN DESIGNATED AS HAVING AN ASSURED WATER SUPPLY.
- NO STRUCTURES OF ANY KIND WILL BE CONSTRUCTED ON, OVER, OR PLACED WITHIN THE PUBLIC UTILITY EASEMENT EXCEPT ASPHALT PAVING, WOODEN, WIRE, OR REMOVABLE SECTION TYPE FENCING. NO VEGETATION SHALL BE PLANTED WITHIN THE EASEMENT EXCEPT GRASS AND/OR GROUND COVER APPROVED BY THE CITY OF EL MIRAGE SENIOR PLANNER.
- DEVELOPMENT OF SITE WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES.
- LANDSCAPE AREAS WILL NOT BE MAINTAINED BY THE CITY OF EL MIRAGE, LANDSCAPE AREAS ARE TO BE MAINTAINED BY THE PUEBLO EL MIRAGE, LLC OR ROBERTS RESORTS OF THE "FAIRWAYS UNIT II.

### DEVELOPER

ROBERTS RESORTS  
6991 EAST CAMELBACK ROAD SUITE C312  
SCOTTSDALE, ARIZONA 85260  
CONTACT: SCOTT ROBERTS  
PHONE: (480)425-8696

### OWNER

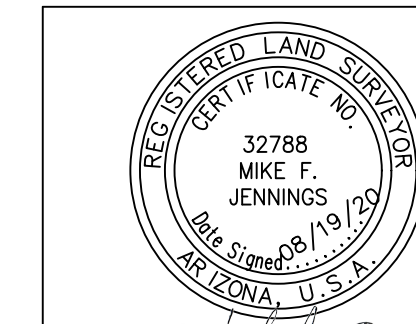
PUEBLO EL MIRAGE, LLC.  
A CALIFORNIA LIMITED LIABILITY COMPANY  
11201 NORTH EL MIRAGE ROAD  
EL MIRAGE, ARIZONA 85335  
CONTACT: SCOTT ROBERTS

### CIVIL ENGINEER

SKG ENTERPRISES, INC.  
9260 EAST RAIN TREE DRIVE SUITE #140  
SCOTTSDALE, ARIZONA 85335  
CONTACT: SHAKIR GUSHGARI, P.E.  
PHONE: (480)998-5600

### LAND SURVEYOR

EXTREME LAND SURVEYING, INC.  
4022 EAST GREENWAY ROAD SUITE #11 PMB #208  
PHOENIX, ARIZONA 85032  
CONTACT: MIKE F. JENNINGS, R.L.S.  
PHONE: (602)574-6171



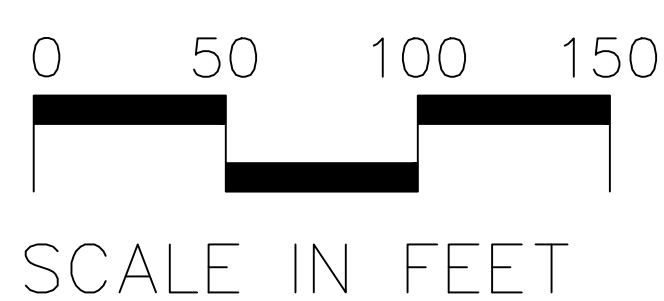
### EXTREME LAND SURVEYING, INC.

4022 EAST GREENWAY ROAD STE. 11 #208 • PHOENIX, ARIZONA 85032  
PHONE 602.574.6171 • PHONE 208.558.0143  
E-MAIL: M3KJENNINGS@GMAIL.COM

DSN: M.J.  
CKD: M.J.  
DATE: 04/01/20  
SCALE:  
HORIZ: 1"=50'  
VERT: N.A.

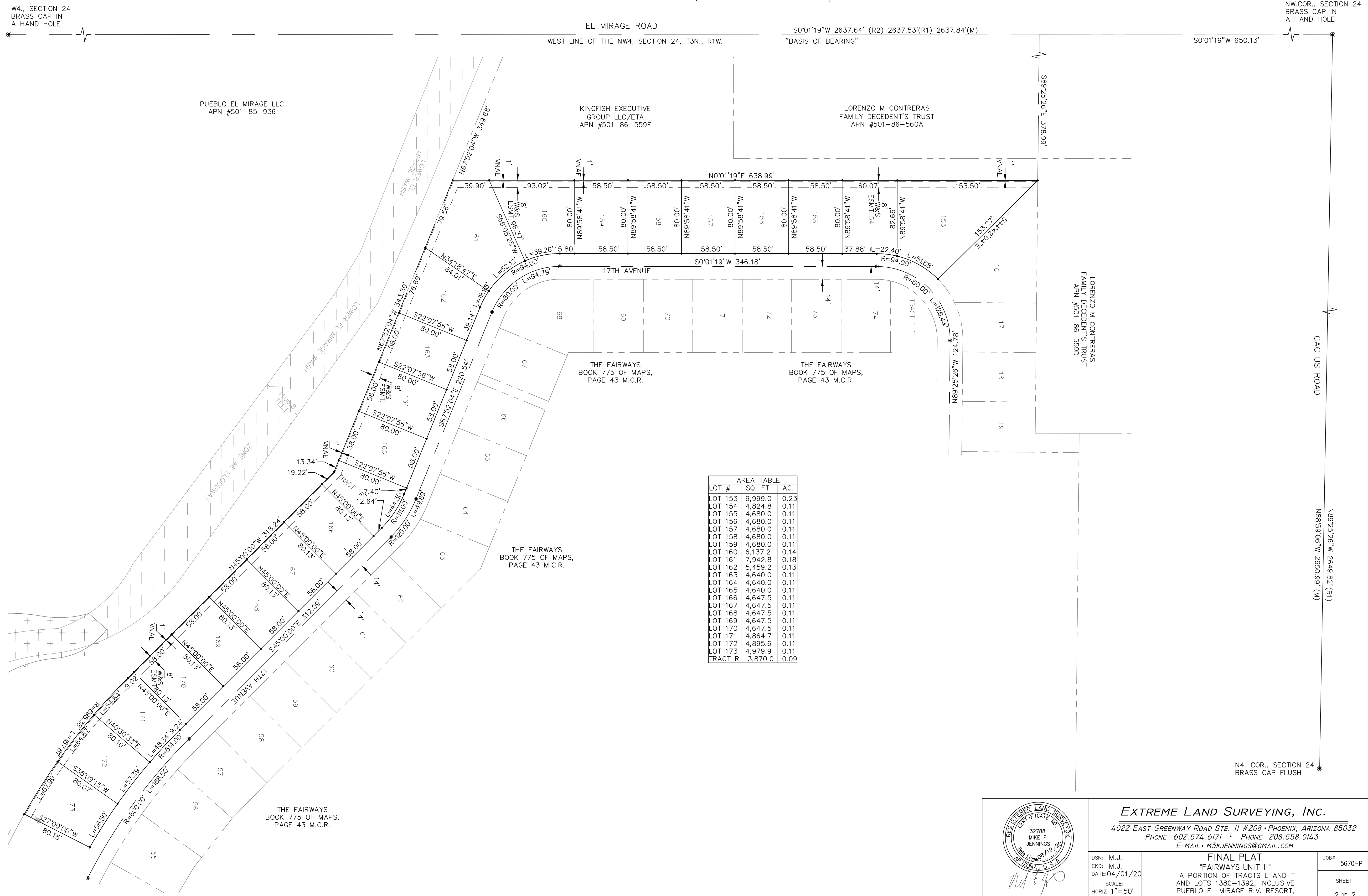
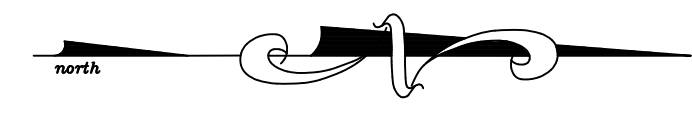
FINAL PLAT  
"FAIRWAYS UNIT II"  
A PORTION OF TRACTS L AND T  
AND LOTS 1380-1392 INCLUSIVE  
PUEBLO EL MIRAGE R.V. RESORT,  
BOOK 275 OF MAPS, PAGE 45, M.C.R.

JOB# 5670-P  
SHEET  
1 of 2



# FINAL PLAT "FAIRWAYS UNIT II"

A PORTION OF TRACT L AND T AND LOTS 1380 THRU 1392, INCLUSIVE  
PUEBLO EL MIRAGE R.V. RESORT, BOOK 275 OF MAPS, PAGE 45, M.C.R.  
LOCATED IN A PORTION OF THE NORTHWEST QUARTER OF  
SECTION 24, TOWNSHIP 3 NORTH, RANGE 1 WEST, OF THE  
GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA



W4, SECTION 24  
BRASS CAP IN  
A HAND HOLE

NW.COR., SECTION 24  
BRASS CAP IN  
A HAND HOLE

PUEBLO EL MIRAGE LLC  
APN #501-85-936

KINGFISH EXECUTIVE  
GROUP LLC/ETA  
APN #501-86-559E

LORENZO M CONTRERAS  
FAMILY DECEDENT'S TRUST  
APN #501-86-560A

LORENZO M CONTRERAS  
FAMILY DECEDENT'S TRUST  
APN #501-86-559D

THE FAIRWAYS  
BOOK 775 OF MAPS,  
PAGE 43 M.C.R.

THE FAIRWAYS  
BOOK 775 OF MAPS,  
PAGE 43 M.C.R.

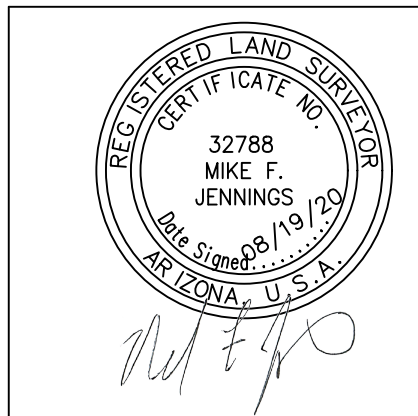
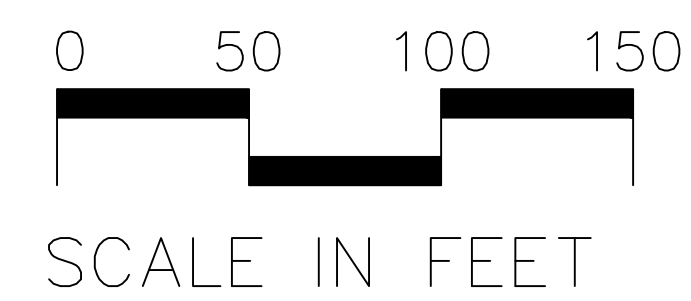
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AREA TABLE		
LOT #	SQ. FT.	AC.
LOT 153	9,999.0	0.23
LOT 154	4,824.8	0.11
LOT 155	4,680.0	0.11
LOT 156	4,680.0	0.11
LOT 157	4,680.0	0.11
LOT 158	4,680.0	0.11
LOT 159	4,680.0	0.11
LOT 160	6,137.2	0.14
LOT 161	7,942.8	0.18
LOT 162	5,459.2	0.13
LOT 163	4,640.0	0.11
LOT 164	4,640.0	0.11
LOT 165	4,640.0	0.11
LOT 166	4,647.5	0.11
LOT 167	4,647.5	0.11
LOT 168	4,647.5	0.11
LOT 169	4,647.5	0.11
LOT 170	4,647.5	0.11
LOT 171	4,864.7	0.11
LOT 172	4,895.6	0.11
LOT 173	4,979.9	0.11
TRACT R	3,870.0	0.09

- LEGEND**
- MONUMENT
  - PROPERTY CORNER
  - BCF BRASS CAP FLUSH
  - BOHH BRASS CAP HAND HOLE
  - SECTION LINE
  - CENTER LINE
  - RIGHT OF WAY LINE
  - PROPERTY LINE
  - - - EASEMENT LINE

- ABBREVIATIONS:**
- |                                  |           |
|----------------------------------|-----------|
| ASSESSORS PARCEL NUMBER          | APN       |
| MARICOPA COUNTY RECORDS          | MCR       |
| MEASURED                         | (M)       |
| RECORD                           | (R)       |
| CALCULATED                       | (C)       |
| RIGHT-OF-WAY                     | ROW       |
| EASEMENT                         | ESMT      |
| DRAINAGE EASEMENT                | DE        |
| WATER AND SEWER EASEMENT         | W&S ESMT. |
| SIGHT VISIBILITY TRIANGLE        | SVE       |
| 1' VEHICULAR NON-ACCESS EASEMENT | VNAE      |



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DSN: M.J. CKD: M.J. DATE 04/01/20	<p style="text-align: center;">FINAL PLAT "FAIRWAYS UNIT II"</p> <p style="text-align: center;">A PORTION OF TRACTS L AND T AND LOTS 1380-1392, INCLUSIVE PUEBLO EL MIRAGE R.V. RESORT, BOOK 275 OF MAPS, PAGE 45, M.C.R.</p>	JOB# 5670-P SHEET 2 OF 2
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