

PRELIMINARY WATER BASIS OF DESIGN REPORT

For
MERCADO VILLAGE
10301 N. 92nd Street
Scottsdale, AZ 85254

Prepared For:



CALIBER
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Scottsdale, AZ 85258
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PRELIMINARY Basis of Design Report

- ☐ ACCEPTED
☒ ACCEPTED AS NOTED
☐ REVISE AND RESUBMIT

Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission.
For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY jcampo DATE 2/8/2024

Prepared by:



The provided Fire Hydrant Flow test is almost 3 years old. Hydrant flow test will need to be redone to include current data for DR case and plan review. All fire flow calculations and models will need to be subsequently updated.

Sustainability Engineering Group
5240 N. 16th Street, Suite 105
Phoenix, AZ 85016
480.588.7226 www.azSEG.com

Project Number: 210414

Date Submitted: 01-09-2024 (Zoning)

Case No: 6-ZN-2021
1-ZN-2024

Plan Check No.: TBD

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1. EXECUTIVE SUMMARY

Mercado Courtyards proposes to rezone 6.06 acres of commercial property located south and east of the Shea Boulevard and 92nd Street intersection. More generally the site lies south of the Sprouts shopping center.

Existing structures will be razed making way for a new 3-story high-density residential facility with 255 units. The building will have a central at-grade/below grade parking garage.

The western portion of the property is presently zoned PUD; the eastern lot is zoned C-O PCD. The site is proposed to be rezoned as R-5.

Located within the City of Scottsdale corporate boundary, this site will receive domestic water and fire service from the City of Scottsdale by connecting to a 10" ACP water line in N. 92nd Street. A new 8" DIP line extended into the site from 92nd Street along the south property line tapping the existing 8" DIP on the 94 Hundred Shea site just east of the Mercado Courtyard property line. That existing 8" offsite water line extends north under a proposed fire lane. Another reach of 8" DIP will be installed along the north property line connecting an existing 6" water line at the NWC of the site to the existing offsite 8" water line on the 94 Hundred Shea site. A reach of 6" ACP running through the site will need to be removed. The proposed 6" fire line will be tapped off the 10" ACP water line in N. 92nd Street.

All water improvements will be designed and constructed to the most recent City of Scottsdale and Maricopa County Environmental Services Department design requirements.

2. INTRODUCTION

2.1 PLAN OBJECTIVE:

The purpose of this report is to provide information and calculations supporting the water system design. Preparation of this report has been done in accordance with Chapters 6 of the City's Design Standards & Policies Manual².

2.2 SITE LOCATION

The 6.06 acre subject property consists of five contiguous parcels whose APN's are:

- 217-39-536, -537A, -537B and -537C
- 217-36-989B

The Site is bounded by:

- N. 92nd Street on the west
- The Sprouts shopping center on the north
- A parking area and cleared area to the east (a proposed 9400 Shea residential project)
- Medical office development to the south

Refer to **FIGURE 1** for a vicinity map.

2.3 EXISTING SITE DESCRIPTION

The western portion of the site is developed with two commercial buildings and parking. The eastern lot is open undeveloped land with minor scrub vegetation. The property gently slopes to the

southwest at approximately 0.7%. Refer to **FIGURE 2** for an aerial of the site and **FIGURE 3** for an ALTA.

2.4 EXISTING WATER SYSTEM

A 10" ACP water line exists along the west side of N. 92nd Street. A public 6" water line off 92nd Street runs along the south lot line and up through the site to provide a loop with the Sprouts commercial center. Three fire hydrants are presently available to the site; one located at the southwest corner of the property along 92nd Street and two on the north-south 6" loop near the center of the site. An existing 4" water meter will be removed with development fee credit requested to offset fees for the new water service. Refer to **FIGURE 4** for the City's sewer quarter-section map¹.

2.5 PROPOSED DEVELOPMENT

Once cleared, the site will be graded and developed for a high-density residential building consisting of 255 units. The project will need to abandon the onsite 12' wide water line easement and 6" pipe. A new 8" pipe will be tapped off the 10" ACP in 92nd Street at the southwest corner of the property and extended into the site connecting to the existing 8" water line on the 94 Hundred Shea site. A second connection to the existing 8" water line will extend west along the north Mercado Courtyard site and connect to the existing 6" water line relocating an existing fire hydrant and fire line to the adjacent shopping center. A 20' water easement is proposed on 9400 Shea.

Refer to **APPENDIX II** for the Preliminary Utility Plan.

3. DESIGN CRITERIA

3.1 DEVELOPMENT CRITERIA

Demands, system layout, pressures, velocities, head losses and required fire flow will all be in accordance with the City's DS&PM and the International Fire Code. The final design report will model the new water line layout using Bentley OpenFlows WaterCAD® CONNECT Edition Update 3.

4. DEMANDS

4.1 PROPOSED DEMANDS

The tables below show the existing and proposed site water demands using calculations based on design criteria in the City's DS&PM.

Table 1: WATER DEMANDS

| | Avg. Day Demand (gpm) | Units | Max Day Peaking Factor | Peak Hour Peaking Factor |
|--------------------------|-----------------------|-------------|------------------------|--------------------------|
| Office | 8.34E-04 | Per sq. ft. | 2 | 3.5 |
| High Density Residential | 0.27 | Per Unit | 2 | 3.5 |

Table 2: EXISTING WATER DEMAND CALCULATIONS

| | Area (sf) | Avg. Day Demand (gpm/sf or unit) | Max Day Peaking Factor | Peak Hour Peaking Factor | Avg. Day Demand (gpm) | Max. Day Demand (gpm) | Peak Hour Demand (gpm) |
|--------|-----------|----------------------------------|------------------------|--------------------------|-----------------------|-----------------------|------------------------|
| Office | 58,048 | 8.34E-04 | 2 | 3.5 | 48.4 | 96.8 | 169.4 |
| Office | 14,480 | 8.34E-04 | 2 | 3.5 | 12.1 | 24.2 | 42.3 |
| Totals | | | | | 60.5 | 121.0 | 211.7 |

Table 3: PROPOSED WATER DEMAND CALCULATIONS

| | Units | Avg. Day Demand (gpm/unit) | Max Day Peaking Factor | Peak Hour Peaking Factor | Avg. Day Demand (gpm) | Max. Day Demand (gpm) | Peak Hour Demand (gpm) |
|-------------|-------|----------------------------|------------------------|--------------------------|-----------------------|-----------------------|------------------------|
| Residential | 255 | 0.27 | 2 | 3.5 | 68.9 | 137.7 | 241.0 |
| Office | 5,000 | 8.34E-04 | 2 | 3.5 | 4.2 | 8.3 | 14.6 |
| Totals | | | | | 73.0 | 146.0 | 255.6 |

Note: the average day demand is less than 100,000 gallons so the Water Demand Exhibit is not required.

4.2 FIRE FLOW DEMAND

A previous submittal included a fire hydrant flow test was performed by Arizona Flow Testing LLC on April 16, 2021, at 7:00 am. That test will be updated with the final submittal of this report. Results of the earlier test are included in **FIGURE 5**. The static pressure was recorded at 80 psi with a residual pressure of 60 psi flowing at 2,015 gpm. The calculated flow at 20 psi is 3,648 gpm. Per the DS+PM the water model in the final design report will utilize this data with a 10% safety factor (typically NFES design).

The residential building will likely be Type V-A construction and accounting for the area of three consecutive floors results in a fire flow demand of 8000 gpm per Appendix B of the International Fire Code³. The City allows for a 75% reduction for fully automated sprinkler systems resulting in a system demand of 2,000 gpm. A 500 gpm hose train allowance will be added along with the maximum day demand for the water model.

NFPA 1 allows for the fire flow to be provided concurrently by the available fire hydrants to the building. The final water model will configure a concurrent 1,250 gpm demand at two adjacent hydrants along with the maximum day demand.

4.3 WATER ZONE

According to the City of Scottsdale DS&PM Sec. 6-1, the site is within Pressure Zone 2.

4.4 PHASING OF PROJECT

Infrastructure for this project is anticipated to be constructed in a single phase.

5. PROPOSED INFRASTRUCTURE

5.1 WATER DISTRIBUTION SYSTEM

As stated earlier, the 6" onsite water line will be removed and replaced with an 8" line along the south property and north property line. A new 8" pipe will be installed along the north and south portions of the site looping the Sprouts Shopping Center around the Mercado Courtyards, connecting to the existing 10" water line in 92nd Street. Fire hydrants will be spaced to comply with DS+PM requirements. Refer to **APPENDIX II** for the Preliminary Utility Plan.

A new water meter will be installed near the southwest driveway area and include a reduced pressure principle backflow preventer and pressure regulator per COS DS+PM Sec. 6-1.417 and 6-1.407; likewise for an irrigation service. A 6" fire line will connect to the existing 10" pipe near mid-site.

Table 4: WATERCAD RESULTS

| Scenario | Demand (gpm) | Minimum Pressure (psi) | Maximum Pressure (psi) |
|---------------|--------------|------------------------|------------------------|
| MD + FF Split | 2,646 | 24 | 42 |

5.2 MAINTENANCE AND OWNERSHIP

All new water lines, meters and fire hydrants will be within 20-foot wide water easements dedicated to the City.

6. WATER COMPUTATIONS

6.1 MODELING

The new water system will be designed to meet the criteria of COS Water, the Arizona Department of Environmental Quality, and Maricopa County Environmental Services Department.

Preliminary water modeling will only include results of the max day plus fire flow for the Zoning Case. Full demand scenarios will be provided with the Final Water Report. The fire analysis described in Section 4.2 was split among two hydrants that will be near the building. Metered demand was placed off the new 8" DIP water line near the southwest corner of the site. The results of water modeling are included in **APPENDIX III** and show compliance with Scottsdale's design criteria.

7. SUMMARY / CONCLUSIONS

Sufficient city water capacity is available in the proposed water system layout to support domestic and fire service to the project. The project's MEP will determine if domestic or fire pumps are required or desired to serve the buildings.

8. REFERENCES

1. COS QS number 28-50
2. City of Scottsdale Design Standards & Policies Manual, 2018 (Chapter 6 – Water)
3. 2018 International Fire Code, Appendix B
4. NFPA 1 – Minimum Number of Fire Hydrants for Fire Flow

9. FIGURES

- FIGURE 1 - Vicinity Map
- FIGURE 2 - Aerial
- FIGURE 3 - ALTA
- FIGURE 4 - Q-S Map 28-50
- FIGURE 5 - Fire Hydrant Flow Test

10. APPENDICIES

- APPENDIX I - Site Plan
- APPENDIX II - Preliminary Utility Plan
- APPENDIX III - Water Model and Fire Scenario Reports

FIGURES

FIGURE I – Vicinity Map

FIGURE II – Aerial

FIGURE III – ALTA

FIGURE IV – Sewer Q-S Maps

FIGURE V – Fire Hydrant Flow Test

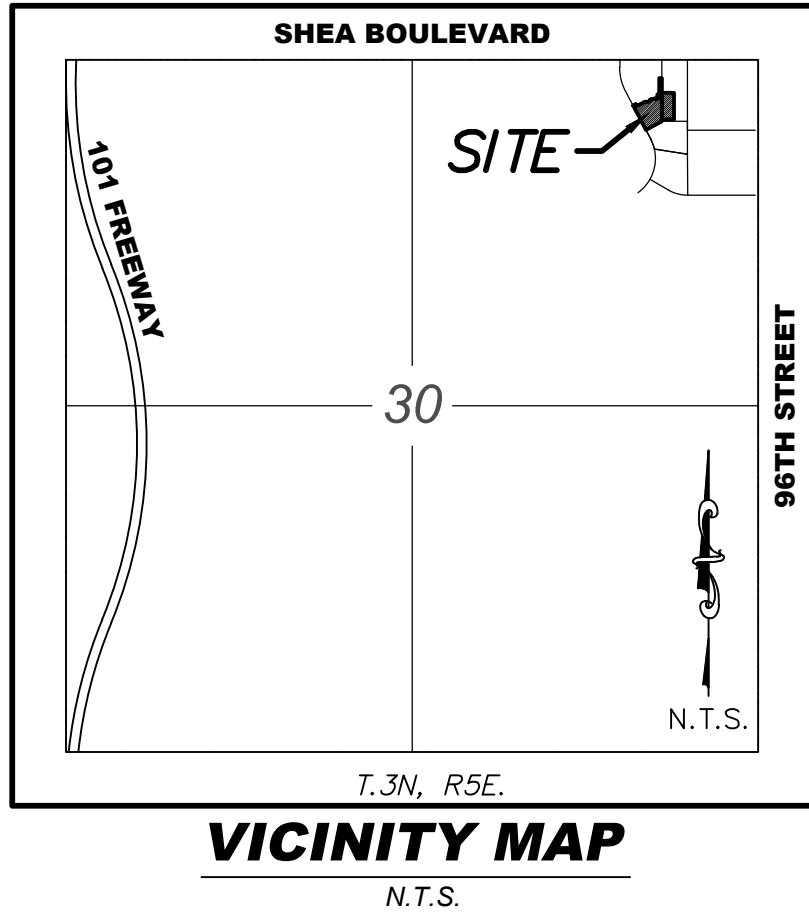




**FIGURE 2 –
Aerial**

ALTA / NSPS LAND TITLE SURVEY
92ND STREET WEST

A PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 NORTH, RANGE 5 EAST OF THE
GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.



SIG
SURVEY INNOVATION
GROUP, INC
Land Surveying Services
22425 N. 16th ST., SUITE 1
PHOENIX, ARIZONA 85024
PHONE (480) 922-0780
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WWW.SIGSURVEYAZ.COM

ALTANSPS LAND TITLE SURVEY
92ND STREET WEST
SCOTTSDALE, ARIZONA

NOTES

1. THE SURVEYOR'S SCOPE-OF-SERVICES IS LIMITED TO PROVIDING SERVICES IN A MANNER CONSISTENT WITH THE DEGREE OF CARE AND SKILL ORDINARILY EXERCISED BY MEMBERS OF THE LAND SURVEY PROFESSION CURRENTLY PRACTICING UNDER SIMILAR CONDITIONS. SCHEDULE "B" ITEM DOCUMENTS MAY CONTAIN ENCUMBRANCES WHICH AFFECT THE SUBJECT PROPERTY IN A MANNER THE SURVEYOR IS NOT QUALIFIED TO INTERPRET AND/OR ARE NOT WITHIN THE SURVEYOR'S SCOPE-OF-SERVICES. IT IS RECOMMENDED THAT INTERESTED AND AFFECTED PARTIES OBTAIN LEGAL COUNSEL FOR ADDITIONAL INTERPRETATION OF ALL SCHEDULE "B" DOCUMENTS REFERENCED IN THE TITLE REPORT.

2. THE SURVEYOR HAS RELIED SOLELY ON INFORMATION SUPPLIED TO THE SURVEYOR FROM EITHER THE CLIENT OR THE TITLE COMPANY AND HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR ADDITIONAL EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER MATTERS THAT MAY AFFECT THE SUBJECT PROPERTY.

3. THIS SURVEY WAS COMPLETED USING GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT. THE MONUMENTS LOCATED ARE WITHIN THE POSITIONAL TOLERANCES RECOMMENDED AND SHOWN IN SECTION 3E OF THE MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS EFFECTIVE FEBRUARY 23, 2021.
NOTE: IF THE RELATIVE POSITIONAL PRECISION EXCEEDS THE MAXIMUM ALLOWED, THEN THE REASON MUST BE STATED IN THIS NOTE.

5. PARCEL 1, PARCEL 2 AND PARCEL 3 HAVE PHYSICAL ACCESS TO AN ABUTTING STREET, HIGHWAY, OR OTHER PUBLIC OR PRIVATE WAY (92ND STREET) AS OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY FIELDWORK.
PARCEL 4 DOES NOT HAVE PHYSICAL ACCESS TO AN ABUTTING STREET, HIGHWAY, OR OTHER PUBLIC OR PRIVATE WAY AS OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY FIELDWORK.

6. PURSUANT TO TABLE "A" ITEM 6, THE SURVEYOR HAS SHOWN THE ZONING CLASSIFICATION AS SET FORTH BY THE LOCAL AGENCY OF JURISDICTION AND OR IDENTIFIED IN A ZONING REPORT OR LETTER AS PROVIDED TO THE SURVEYOR BY THE CLIENT OR CLIENT'S REPRESENTATIVE AS REFERENCED ON THIS SURVEY.

7. PURSUANT TO TABLE "A" ITEM 7, THE BUILDING LINES AND DIMENSIONS SHOWN DEPICT THE EXTERIOR BUILDING FOOTPRINT AT GROUND OR NEAR GROUND LEVEL BASED ON FIELD MEASUREMENTS. THIS INFORMATION IS INTENDED TO DEPICT THE GENERAL CONFIGURATION OF THE BUILDING AT GROUND LEVEL AND MAY OR MAY NOT BE THE BUILDING FOUNDATION. THE BUILDING AREA SHOWN IS BASED ON THE EXTERIOR BUILDING FOOTPRINT AND IS NOT INTENDED TO REFLECT THE INTERIOR OR LEASE AREA.

8. PURSUANT TO TABLE "A" ITEM 16, THE SURVEYOR DID NOT OBSERVE RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK

9. PURSUANT TO TABLE "A" ITEM 17, THE SURVEYOR HAS NOT BEEN INFORMED OF ANY CHANGES IN THE PROPOSED RIGHTS OF WAY. ADDITIONALLY, ANY CHANGES IN RIGHTS OF WAY, WHICH HAVE ALREADY OCCURRED, SHOULD BE VERIFIED BY ADDITIONAL TITLE SEARCH. THE SURVEYOR HAS NOT OBSERVED ANY RECENT STREET OR SIDEWALK CONSTRUCTION IN THE PROCESS OF CONDUCTING THE FIELDWORK.

10. THIS SURVEY IS BASED ON COMMITMENT FOR TITLE INSURANCE ISSUED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY NO. 21000696-040-BN1-A98, DATED MARCH 17, 2021.

11. FIELD WORK WAS COMPLETED JUNE 26, 2014.

LEGAL DESCRIPTION

SCHEDULE 'B' ITEMS

1. PROPERTY TAXES, WHICH ARE A LIEN NOT YET DUE AND PAYABLE, INCLUDING ANY ASSESSMENTS COLLECTED WITH TAXES TO BE LEVIED FOR THE YEAR 2021.
*NOT A SURVEY MATTER

2. RESERVATIONS, EXCEPTIONS AND PROVISIONS CONTAINED IN THE PATENT FROM THE UNITED STATES OF AMERICA, AND IN THE ACTS AUTHORIZING THE ISSUANCE THEREOF. RECORDING DATE: JUNE 9, 1923 RECORDING NO: BOOK 175 OF DEEDS, PAGE 556
*NOT A SURVEY MATTER

3. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.
*NOT A SURVEY MATTER

4. COVENANTS, CONDITIONS AND RESTRICTIONS BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, SOURCE OF INCOME, GENDER, GENDER IDENTITY, GENDER EXPRESSION, MEDICAL CONDITION, OR GENETIC INFORMATION, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH IN THE DOCUMENT
RECORDED: DECEMBER 1, 1980
RECORDING NO: DOCKET 14863, PAGE 1238
THEREAFTER A DELEGATION RIGHTS RECORDED JUNE 3, 1987, AS RECORDING NO. 87-348552.
*AFFECTS PROPERTY, BLANKET IN NATURE, NOT GRAPHICALLY PLOTTED HEREON.

5. COVENANTS, CONDITIONS AND RESERVATIONS BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, SOURCE OF INCOME, GENDER, GENDER IDENTITY, GENDER EXPRESSION, MEDICAL CONDITION, OR GENETIC INFORMATION, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH IN THE DOCUMENT
RECORDED: DECEMBER 1, 1980
RECORDING NO: DOCKET 14863, PAGE 1258
SAID DOCUMENT PROVIDES, AMONG OTHER THINGS, FOR THE LEVY OF SPECIAL USE FEES BY MCCORMICK RANCH PROPERTY OWNERS' ASSOCIATION, AN ARIZONA CORPORATION
*AFFECTS PROPERTY, BLANKET IN NATURE, NOT GRAPHICALLY PLOTTED HEREON.

6. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF SCOTTSDALE
PURPOSE: WATER LINE, WATER METERS AND FIRE HYDRANTS
RECORDING DATE: JUNE 26, 1984
RECORDING NO: 84-277079
AFFECTS: THE COMMON AREA
*GRAPHICALLY PLOTTED HEREON.

7. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF SCOTTSDALE
PURPOSE: SEWER LINE
RECORDING DATE: AUGUST 14, 1984
RECORDING NO: 84-355083
AFFECTS: THE COMMON AREA
*GRAPHICALLY PLOTTED HEREON.

8. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF SCOTTSDALE
PURPOSE: DRAINAGE AND FLOOD CONTROL
RECORDING DATE: AUGUST 14, 1984
RECORDING NO: 84-355084
AFFECTS: THE COMMON AREA
*GRAPHICALLY PLOTTED HEREON.

9. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF SCOTTSDALE
PURPOSE: VEHICULAR NON-ACCESS
RECORDING DATE: AUGUST 14, 1984
RECORDING NO: 84-355088
AFFECTS: THE COMMON AREA ALONG 92ND STREET
*GRAPHICALLY PLOTTED HEREON.

10. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: ARIZONA PUBLIC SERVICE COMPANY
PURPOSE: ELECTRIC LINES AND FACILITIES
RECORDING DATE: NOVEMBER 15, 1984
RECORDING NO: 84-497474
AFFECTS: THE COMMON AREA
*BLANKET IN NATURE, NOT GRAPHICALLY PLOTTED HEREON.

SCHEDULE 'B' ITEMS

11. COVENANTS, CONDITIONS AND RESTRICTIONS BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, SOURCE OF INCOME, GENDER, GENDER IDENTITY, GENDER EXPRESSION, MEDICAL CONDITION, OR GENETIC INFORMATION, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH IN THE DOCUMENT
RECORDING DATE: DECEMBER 5, 1985
RECORDING NO: 85-577841
RE-RECORDED: MARCH 12, 1986
RECORDING NO.: 86-118301
THEREAFTER A SUPPLEMENT RECORDED APRIL 20, 1989, AS RECORDING NO. 89-180814. THEREAFTER AMENDED IN A FIRST AMENDMENT RECORDED APRIL 7, 1995, AS RECORDING NO. 95-0193629, AND RE-RECORDED JANUARY 22, 1996, AS RECORDING NO. 96-0042420.
*BLANKET IN NATURE, NOT GRAPHICALLY PLOTTED HEREON.

12. THE MATTERS SET FORTH IN THE DOCUMENT SHOWN BELOW WHICH, AMONG OTHER THINGS, CONTAINS OR PROVIDES FOR:
CERTAIN EASEMENTS; LIENS AND THE SUBORDINATION THEREOF; PROVISIONS RELATING TO PARTITION; RESTRICTIONS ON SEVERABILITY OF COMPONENT PARTS; AND COVENANTS, CONDITIONS AND RESTRICTIONS BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING, BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, SOURCE OF INCOME, GENDER, GENDER IDENTITY, GENDER EXPRESSION, MEDICAL CONDITION, OR GENETIC INFORMATION, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW.
ENTITLED: CONDOMINIUM DECLARATION FOR 92ND STREET WEST, A CONDOMINIUM
RECORDING DATE: APRIL 2, 2015
RECORDING NO: 20150226207
RE-RECORDED: APRIL 13, 2015
RECORDING NO: 20150250915
*BLANKET IN NATURE, NOT GRAPHICALLY PLOTTED HEREON.

13. AN UNRECORDED LEASE WITH CERTAIN TERMS, COVENANTS, CONDITIONS AND PROVISIONS SET FORTH THEREIN AS DISCLOSED BY THE DOCUMENT
ENTITLED: TENANT SUBORDINATION, NON-DISTURBANCE AND ATTORNMEN AGREEMENT
LESSOR: PARANTAP LLC
LESSEE: HONOR HEALTH
RECORDING DATE: MAY 20, 2015
RECORDING NO: 2015-354706
*NOT A SURVEY MATTER

14. AN UNRECORDED LEASE WITH CERTAIN TERMS, COVENANTS, CONDITIONS AND PROVISIONS SET FORTH THEREIN AS DISCLOSED BY THE DOCUMENT
ENTITLED: TENANT SUBORDINATION, NON-DISTURBANCE AND ATTORNMEN AGREEMENT
LESSOR: PARANTAP LLC
LESSEE: ARIZONA UROLOGY SPECIALISTS, PLLC
RECORDING DATE: MAY 20, 2015
RECORDING NO: 2015-354707
*NOT A SURVEY MATTER

15. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: NOTICE OF FUNDING OF 92ND STREET WEST CONDOMINIUM ASSOCIATION
COMMON ELEMENTS EXPENSES
RECORDING DATE: JUNE 30, 2020
RECORDING NO: 20200580941
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
*NOT A SURVEY MATTER

16. ANY RIGHTS OF THE PARTIES IN POSSESSION OF A PORTION OF, OR ALL OF, SAID LAND, WHICH RIGHTS ARE NOT DISCLOSED BY THE PUBLIC RECORDS.
*NOT A SURVEY MATTER

17. MATTERS WHICH MAY BE DISCLOSED BY AN INSPECTION AND/OR BY A CORRECT ALTA/NSPS LAND TITLE SURVEY OF SAID LAND THAT IS SATISFACTORY TO THE COMPANY, AND/OR BY INQUIRY OF THE PARTIES IN POSSESSION THEREOF.
*NOT A SURVEY MATTER

FLOOD ZONE

ACCORDING TO THE FLOOD INSURANCE RATE MAP #04013C1760 L, DATED OCTOBER 16, 2013, THIS PROPERTY IS LOCATED IN FLOOD ZONE "X". AREAS OF 500-YEAR FLOOD; AREAS OF 100-YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 100-YEAR FLOOD.

AREA

PARCEL NO. 1 = 201,373 SQ.FT. OR 4.623 ACRES NET

PARCEL NO. 2 = 47,038 SQ.FT. OR 1.284 ACRES NET

PARCEL NO. 3 = 6,621 SQ.FT. OR 0.152 ACRES NET

PARCEL NO. 4 = 8,913 SQ.FT. OR 1.079 ACRES NET.

ZONING

ZONE CODE PUD (CITY OF SCOTTSDALE ZONING JURISDICTION)
OBTAINED FROM MARICOPA COUNTY ASSESSOR'S WEB SITE.

ADDRESS

10301 NORTH 92ND STREET
SCOTTSDALE, ARIZONA 85258

BASIS OF BEARING

THE NORTH LINE OF NORTHWEST QUARTER OF SECTION 30, TOWNSHIP 3 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, SAID LINE BEARS NORTH 89 DEGREES 56 MINUTES 30 SECONDS EAST.

CERTIFICATION

TO: KUSYCO, INC., AN ARIZONA CORPORATION; WISHING WELL RESIDENTIAL, LLC, AN ARIZONA LIMITED LIABILITY COMPANY, AS TO PARCEL 1; PARANTAP, LLC, AN ARIZONA LIMITED LIABILITY COMPANY, AS TO PARCEL 2; AND 92ND ST EAST TOWER LLC, AN ARIZONA LIMITED LIABILITY COMPANY, AS TO PARCEL 3; FIRST ARIZONA TITLE AGENCY; FIRST AMERICAN TITLE INSURANCE COMPANY; KEYSTONE REAL ESTATE LENDING FUND, L.P., A DELAWARE LIMITED PARTNERSHIP, AND ITS SUCCESSOR AND ASSIGNS.

THIS IS TO CERTIFY THAT THIS MAP AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(A), 8, 9, 13, 16 AND 17 OF TABLE A THEREOF.

FIELD WORK WAS COMPLETED JUNE, 2014

JASON SEGNERI DATE
7301 EAST EVANS ROAD
SCOTTSDALE, ARIZONA, 85260
PHONE: 480-922-0780
JASONS@SIGSURVEYAZ.COM

FIGURE 3

| |
|-----------------------------------|
| REVISIONS: |
| <div>△ 4/9/21</div> |
| ADDED TOPOGRAPHY |
| <div>△</div> |
| <div>△</div> |
| <div>△</div> |
| DRAWING NAME: 13-186 ALTA 2/21 |
| JOB NO. 13186 |
| DRAWN: RMH |
| CHECKED: JAS |
| DATE: 3/29/21 |
| SCALE: N.T.S. |
| SHEET: 1 OF 3 |

PARCEL 4
BUILDING B
UNIT 100

| POINT | NORTHING | EASTING |
|-------|----------|---------|
| A | 8582.33 | 2321.59 |
| B | 8557.94 | 2275.67 |
| C | 8560.45 | 2195.08 |
| D | 8606.38 | 2170.70 |

LEGEND

- FOUND BRASS CAP FLUSH
- ⊙ FOUND PK NAIL
- FOUND 1/2" REBAR
- ⊠ FOUND CHISELED X IN CONCRETE
- ⊡ FOUND BRASS CAP IN HANDHOLE
- SET 1/2" REBAR WITH CAP, RLS 35833
- ▲ BUILDING CORNER COORDINATE

| |
|------------------------|
| BOUNDARY LINE |
| ADJACENT BOUNDARY LINE |
| CENTER LINE |
| EASEMENT LINE |

- V.N.A.E. VEHICULAR NON-ACCESS EASEMENT
P.U.E. PUBLIC UTILITY EASEMENT
(R1) RECORD DATA PER TITLE COMMITMENT
(R2) RECORD DATA PER BOOK 705 PAGE 41 M.C.R.
(R3) RECORD DATA PER BOOK 648 PAGE 25 M.C.R.
(R4) RECORD DATA PER BOOK 219 PAGE 10 M.C.R.
(R5) RECORD DATA PER BOOK 185 PAGE 44 M.C.R.
(R6) RECORD DATA PER DOC. 2006-640767 M.C.R.
(R7) RECORD DATA PER BOOK 1221 PAGE 46 M.C.R.
(M) MEASURED DATA PER THIS SURVEY
(C) CALCULATED DATA PER THIS SURVEY

| LINE TABLE | | | |
|------------|---------------------|---------------------|---------------------|
| LINE | (R1) | (R2) | (M/C) |
| L1 | | | N27°59'38"W 40.00' |
| L2 | N62°19'22"E 54.50' | N62°16'17"E 54.55' | N62°19'22"E 54.37' |
| L3 | S27°56'09"E 36.00' | S27°55'33"E 36.04' | S27°56'09"E 36.00' |
| L4 | N62°19'22"E 147.48' | N62°24'22"E 147.52' | N62°19'22"E 147.65' |
| L5 | N89°54'23"E 41.76' | N89°54'23"E 41.76' | N89°54'23"E 41.76' |
| L6 | S00°05'37"E 7.54' | S00°05'37"E 6.77' | |
| L7 | N62°03'51"E 57.50' | N62°03'51"E 57.50' | N62°05'02"E 57.19' |
| L8 | N27°56'09"W 18.08' | N27°56'09"W 18.08' | N27°56'09"W 18.08' |
| L9 | N62°03'51"E 27.00' | N62°03'51"E 27.00' | N62°05'02"E 27.00' |
| L10 | S27°56'09"E 18.08' | S27°56'09"E 18.08' | S27°56'09"E 18.08' |
| L11 | N62°03'51"E 50.35' | N62°03'51"E 50.35' | N62°05'02"E 50.58' |
| L12 | S27°56'09"E 21.68' | S27°56'09"E 21.68' | S27°38'36"E 21.95' |
| L13 | N62°03'51"E 36.12' | N62°03'51"E 36.13' | N61°48'01"E 36.44' |
| L14 | | N89°54'23"E 31.12' | N89°54'23"E 30.95' |
| L15 | N00°05'37"W 41.00' | N00°05'37"W 41.00' | N00°05'37"W 41.00' |
| L16 | S89°54'23"W 30.00' | S89°54'23"W 30.00' | S89°54'23"W 29.63' |
| L17 | N00°05'37"W 27.00' | N00°05'37"W 27.00' | N00°05'37"W 27.00' |
| L18 | N89°54'23"E 30.00' | N89°54'23"E 30.00' | N89°54'23"E 29.63' |
| L19 | N89°54'23"E 45.00' | N89°54'23"E 45.00' | N89°54'23"E 45.00' |
| L20 | | | S89°54'23"W 45.00' |

FOUND BRASS CAP IN HANDHOLE
NORTH QUARTER CORNER
SECTION 30, T3N, R5E

S00°03'32"E 149.65'(C)
N00°00'01"E 150.00'(R5)

L=487.58(C)
R=1000.00'(C)
D=27°56'11"(C)
L=487.58(R5)
R=1000.00'(R5)
D=27°56'10"(R5)

APN 217-36-960-L
OWNER: SHEA AND 92ND OPCO LLC
NOT A PART

*THE POSITION OF LINES L7, L11 AND L12
ARE BASED UPON THE MEASURED
LOCATION OF THE NORTHWESTERLY FACE
OF THE BUILDING.

PARCEL 1

PARCEL 2

PARCEL 4
BUILDING B
UNIT 100
BK. 1221 PG. 46

SHEA BOULEVARD

APN 217-36-001-M
OWNER: 94 HUNDRED SHEA LLLP
NOT A PART

SCALE: 1"=50'
0' 25' 50' 100' 150'

APN 217-36-001-P
OWNER: 94 HUNDRED SHEA LLLP
NOT A PART

DETAIL "A"

N.T.S.

DETAIL "B"

N.T.S.

DETAIL "C"

N.T.S.

ALTANSPS LAND TITLE SURVEY
92ND STREET WEST
SCOTTSDALE, ARIZONA

REVISIONS:

4/9/21

ADDED TOPOGRAPHY

DRAWING NAME:

13-186 ALTA 2/21

JOB NO. 13186

DRAWN: RMH

CHECKED: JAS

DATE: 3/29/21

SCALE: 1"=50'

SHEET: 2 OF 3

SIG
SURVEY INNOVATION
GROUP, INC
Land Surveying Services
22425 N. 16th ST., SUITE 1
PHOENIX, ARIZONA 85024
PHONE (480) 922-0780
FAX (480) 922-0781
WWW.SIGSURVEYAZ.COM

LEGEND

- FOUND BRASS CAP FLUSH
-
- FOUND PK NAIL

●

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⊠

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LIGHT POLE WITH MAST

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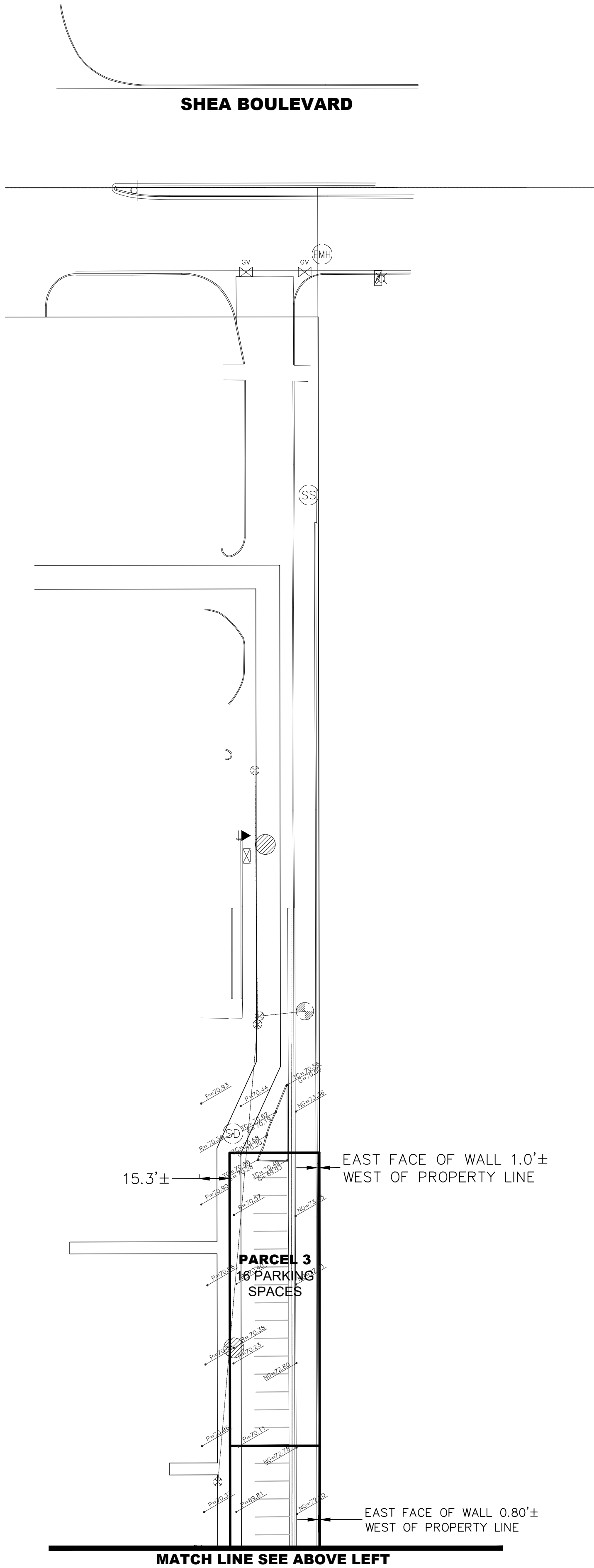
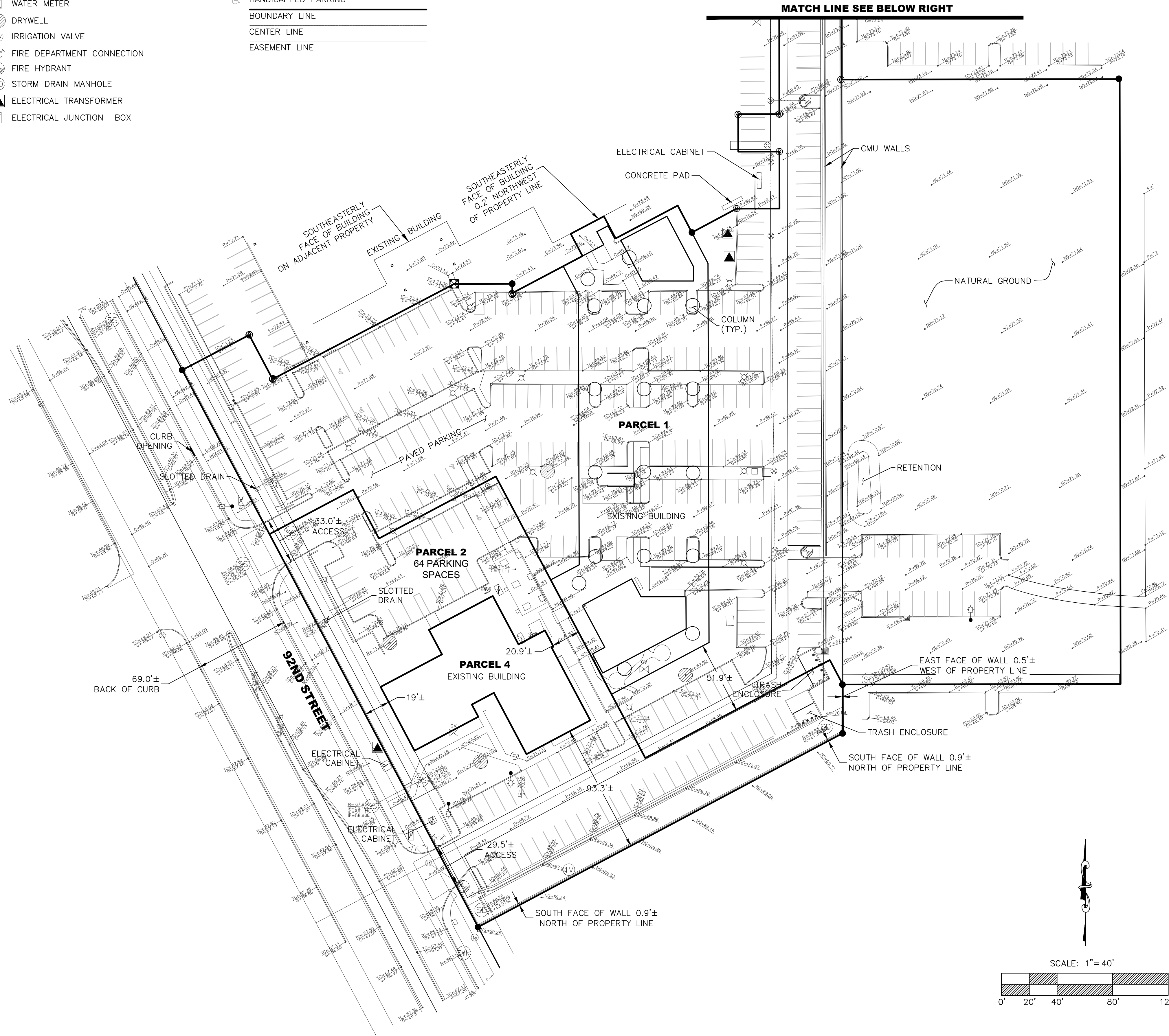
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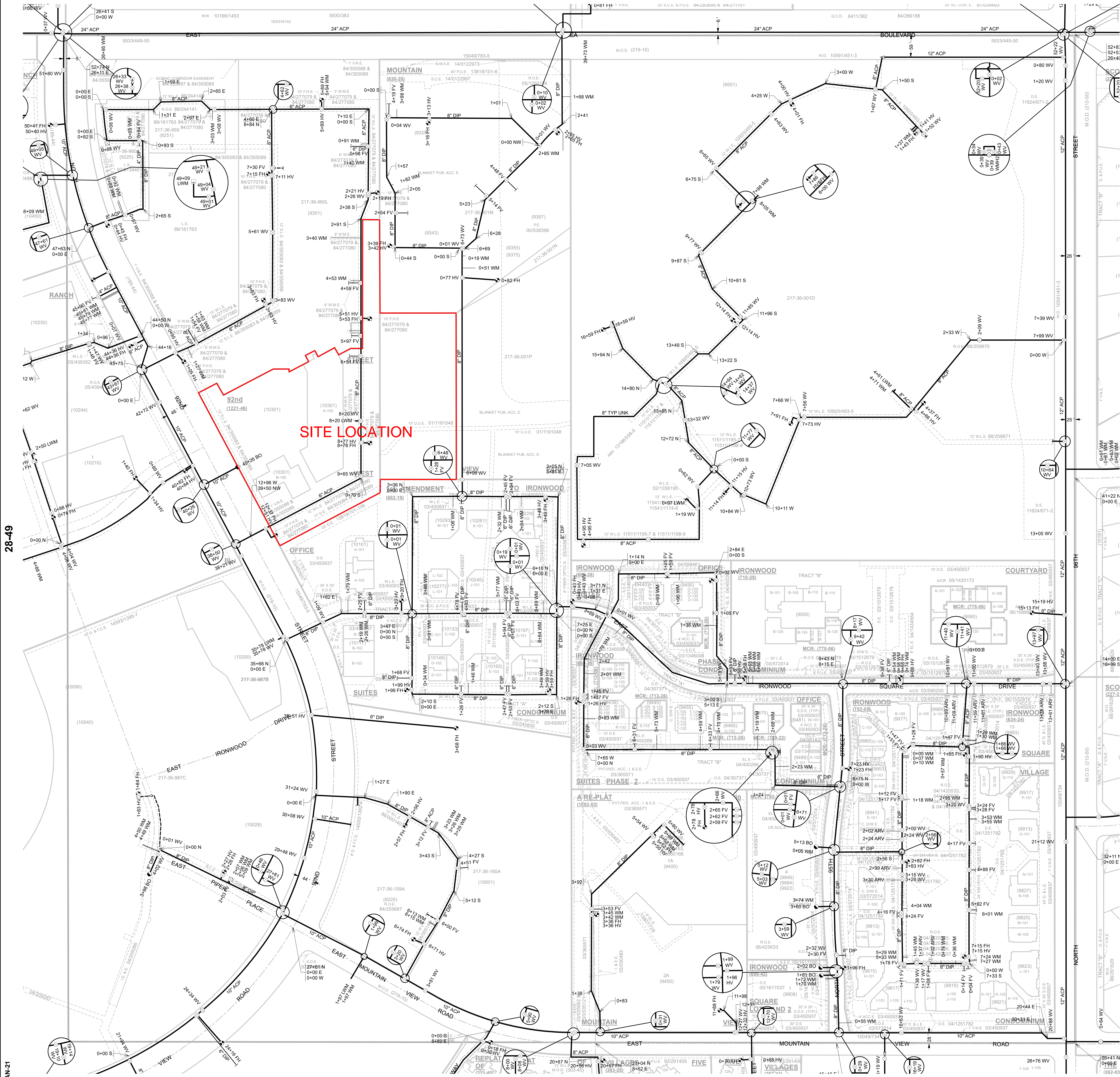
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ALTANSPS LAND TITLE SURVEY
92ND STREET WEST
SCOTTSDALE, ARIZONA

| |
|-----------------------------------|
| REVISIONS: |
| 4/9/21 |
| ADDED TOPOGRAPHY |
| |
| |
| |
| DRAWING NAME: 13-186 ALTA 2/21 |
| JOB NO. 13186 |
| DRAWN: RMH |
| CHECKED: JAS |
| DATE: 3/29/21 |
| SCALE: 1"=40' |
| SHEET: 3 OF 3 |

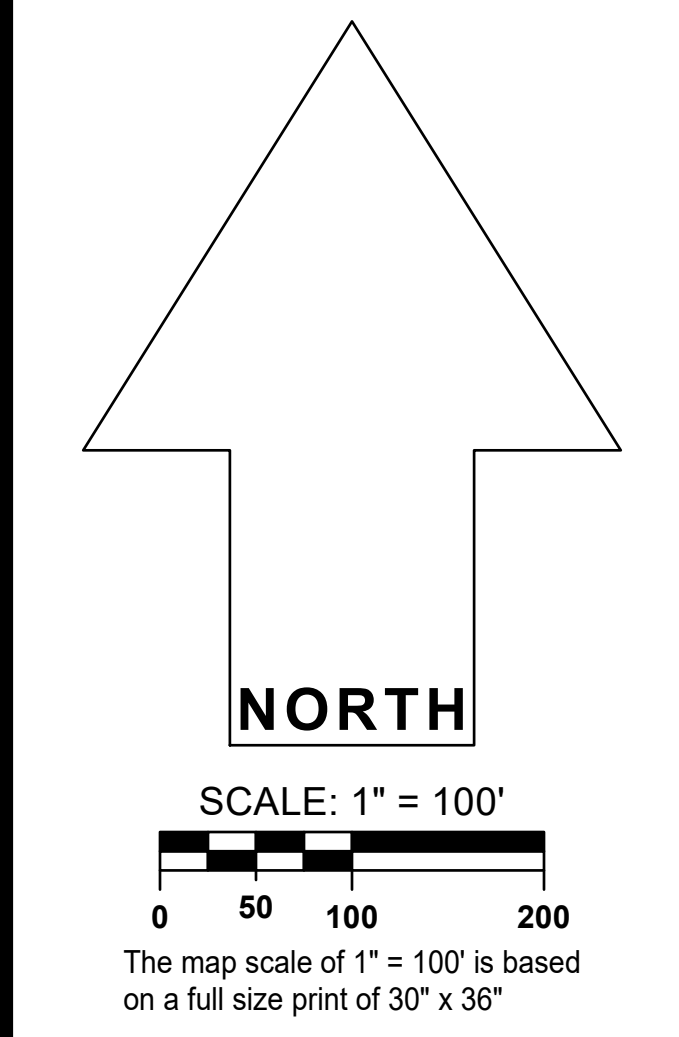
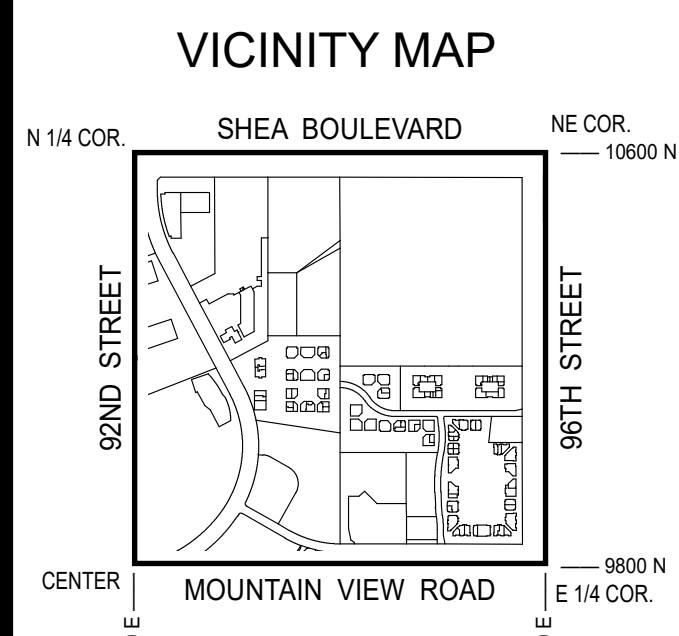
SIG
SURVEY INNOVATION
GROUP, INC
Land Surveying Services
22425 N. 16th ST., SUITE 1
PHOENIX, ARIZONA 85024
PHONE (480) 922-0780
FAX (480) 922-0781
WWW.SIGSURVEYAZ.COM



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- THE SECTION LINE BEARING AND DISTANCES ARE BASED ON THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER, 1991. BEARINGS ARE NAD 83 GRID AND DISTANCES ARE FLATTENED TO GROUND. WHERE NO CORNER WAS FOUND THE DIMENSIONS ARE GIVEN TO CALCULATED SECTION CORNERS AND ARE NOTED AS "CALCULATED" ON THE MAP.

| LEGEND: | |
|-------------------------------|--|
| Air Release Valve | |
| Non-potable Air Release Valve | |
| Blowoff | |
| Cap | |
| Cathodic Protection | |
| Fill Drain | |
| Fire Hydrant | |
| Non-GPS Point | |
| Pressure Reducing Valve | |
| Pump | |
| Reducer | |
| Sample Station | |
| Water Manhole | |
| Non-Potable Manhole | |
| Well | |
| Valve | |
| Non-potable Valve | |
| Vault | |
| Water Main | |
| Non-Potable Main | |
| Fire / Private Main | |
| Non-Scottsdale Main | |



WATER

QUARTER SECTION MAP

28-50

NE 1/4 SEC. 30 T3N R5E

FIGURE 4

NOTICE

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Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name: 92nd & Shea
Project Address: 10299 North 92nd Street, Scottsdale, Arizona, 85258
Client Project No.: Not Provided
Arizona Flow Testing Project No.: 21181
Flow Test Permit No.: C64978
Date and time flow test conducted: April 16, 2021 at 7:00 AM
Data is current and reliable until: October 16, 2021
Conducted by: Floyd Vaughan – Arizona Flow Testing
Coordinated by: Jared Berry – City of Scottsdale-Inspection

This test is almost 3 years old. Hydrant flow test will need to be redone to include current data for DR case. All fire flow calculations and models will need to be updated too.

Raw Test Data

Static Pressure: **80.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **60.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **22.0 PSI**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Pollard Diffuser
(Measured in inches)

Coefficient of Diffuser: 0.9

Flowing GPM: **2,015 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **3,648 GPM**

Data with 10% Safety Factor

Static Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **52.0 PSI**
(Measured in pounds per square inch)

Distance between hydrants: Approx.: 650 Feet

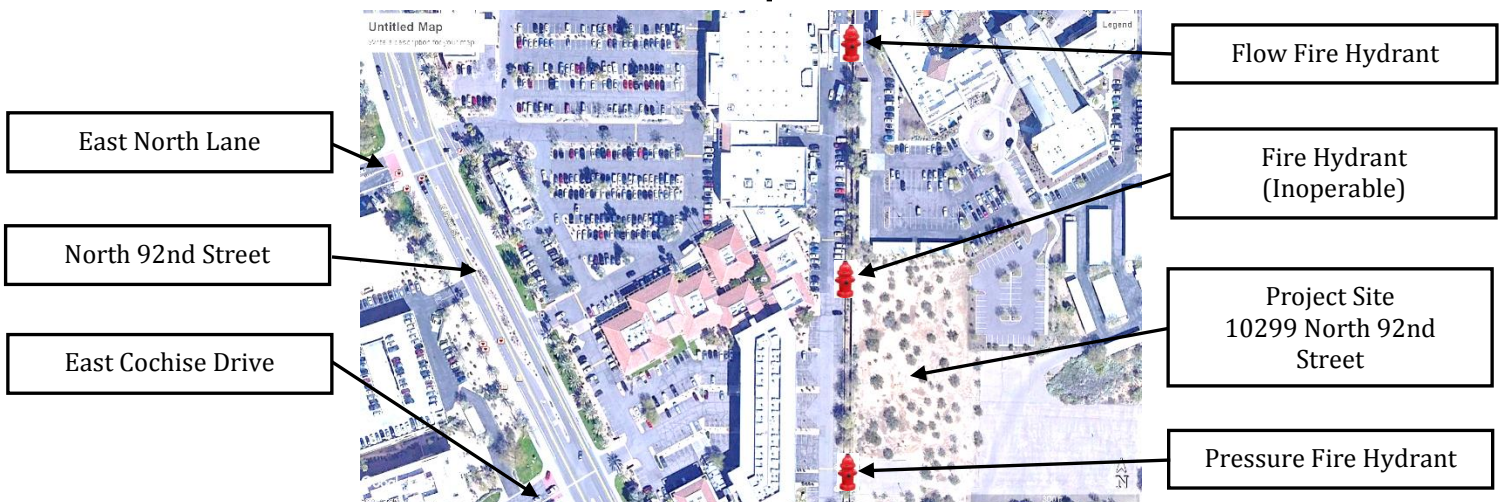
Main size: Not Provided

Flowing GPM: **2,015 GPM**

GPM @ 20 PSI: **3,376 GPM**

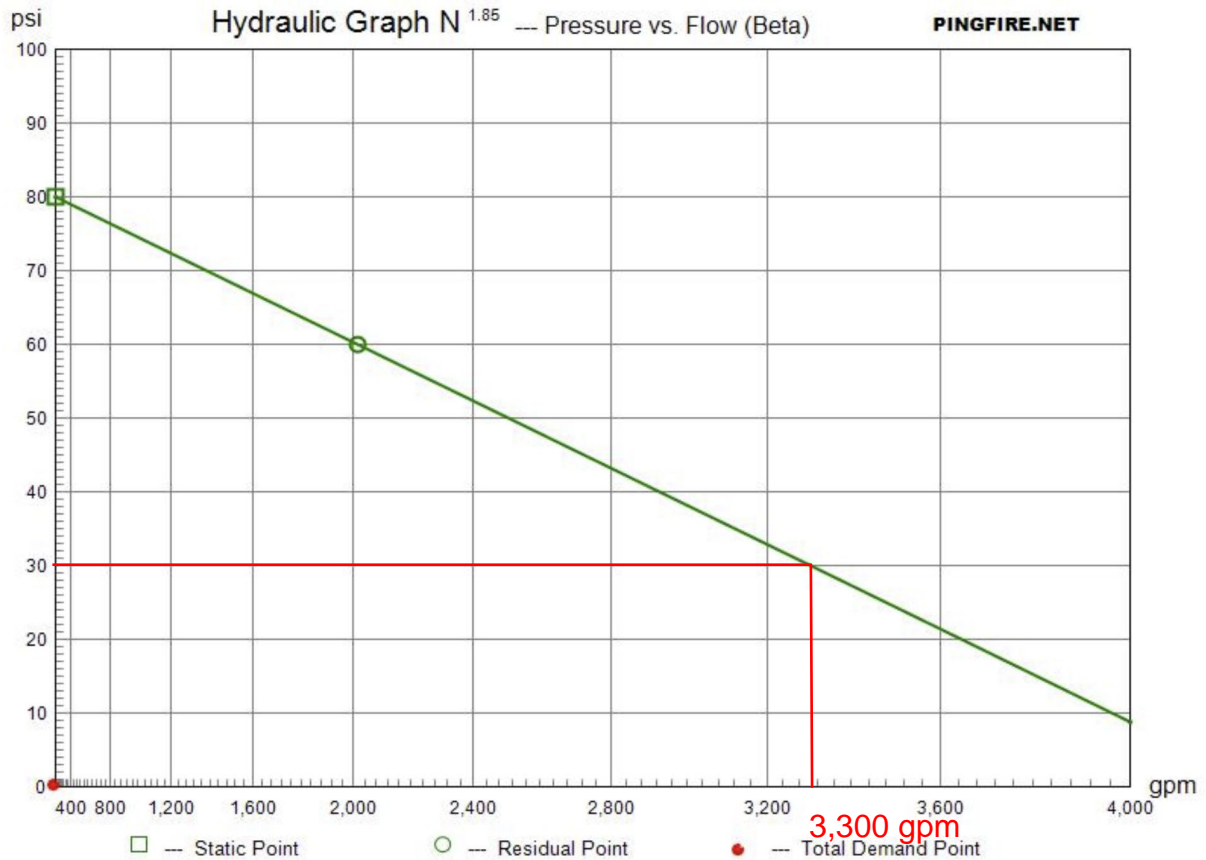
Flow Test Location

North ↑



Arizona Flow Testing LLC 480-250-8154 www.azflowtest.com floyd@azflowtest.com

FIGURE 5
1-ZN-2024
1/29/24



Project Location: 92 Ironwood - Raw Test Data

Flow Test: Hydrant Elev.= 1370.4 ft., Static Pressure= 80.0 psi, Residual Pressure= 60.0 psi, Flow= 2015 gpm

FIGURE 5 – Fire Hydrant Flow Test

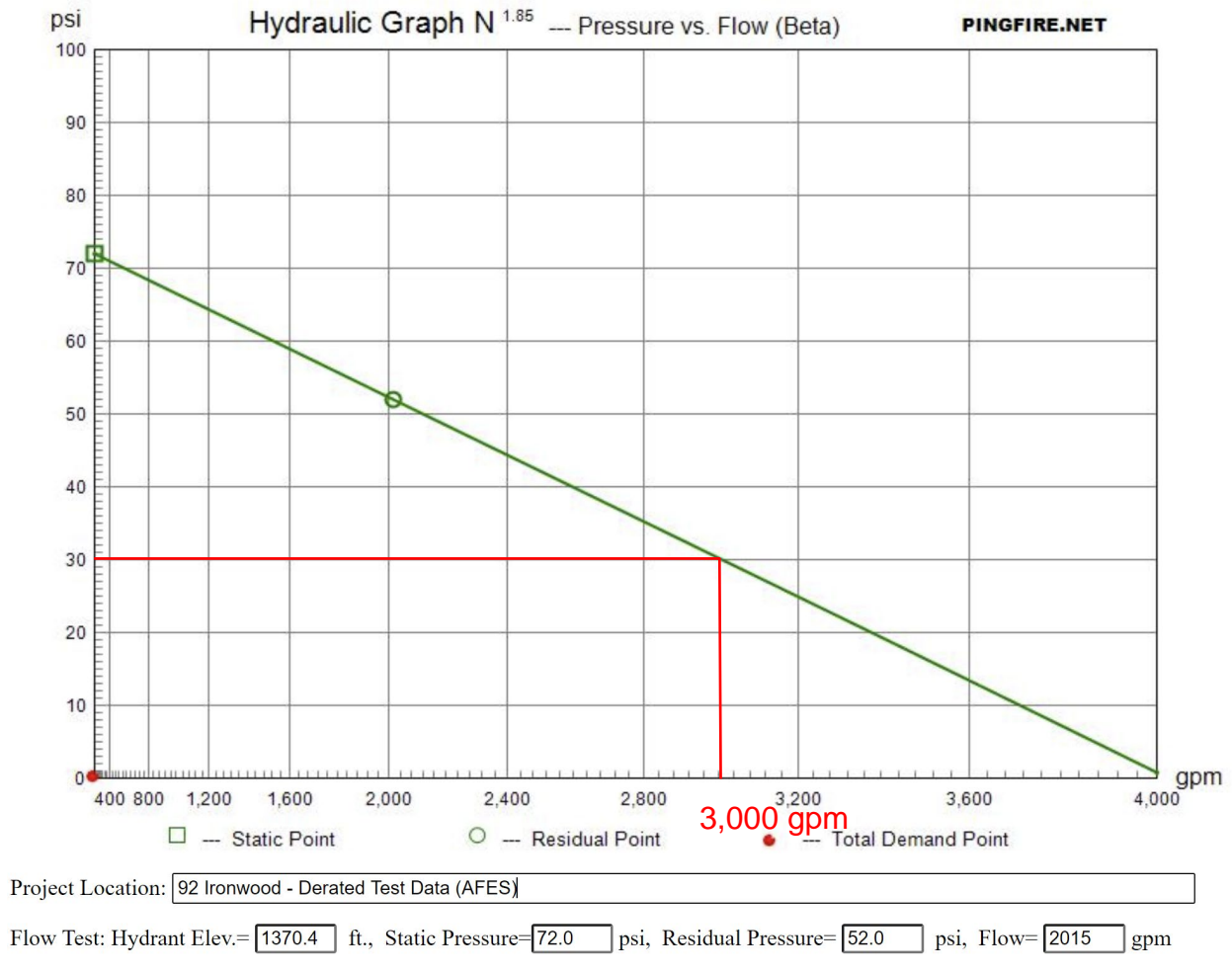


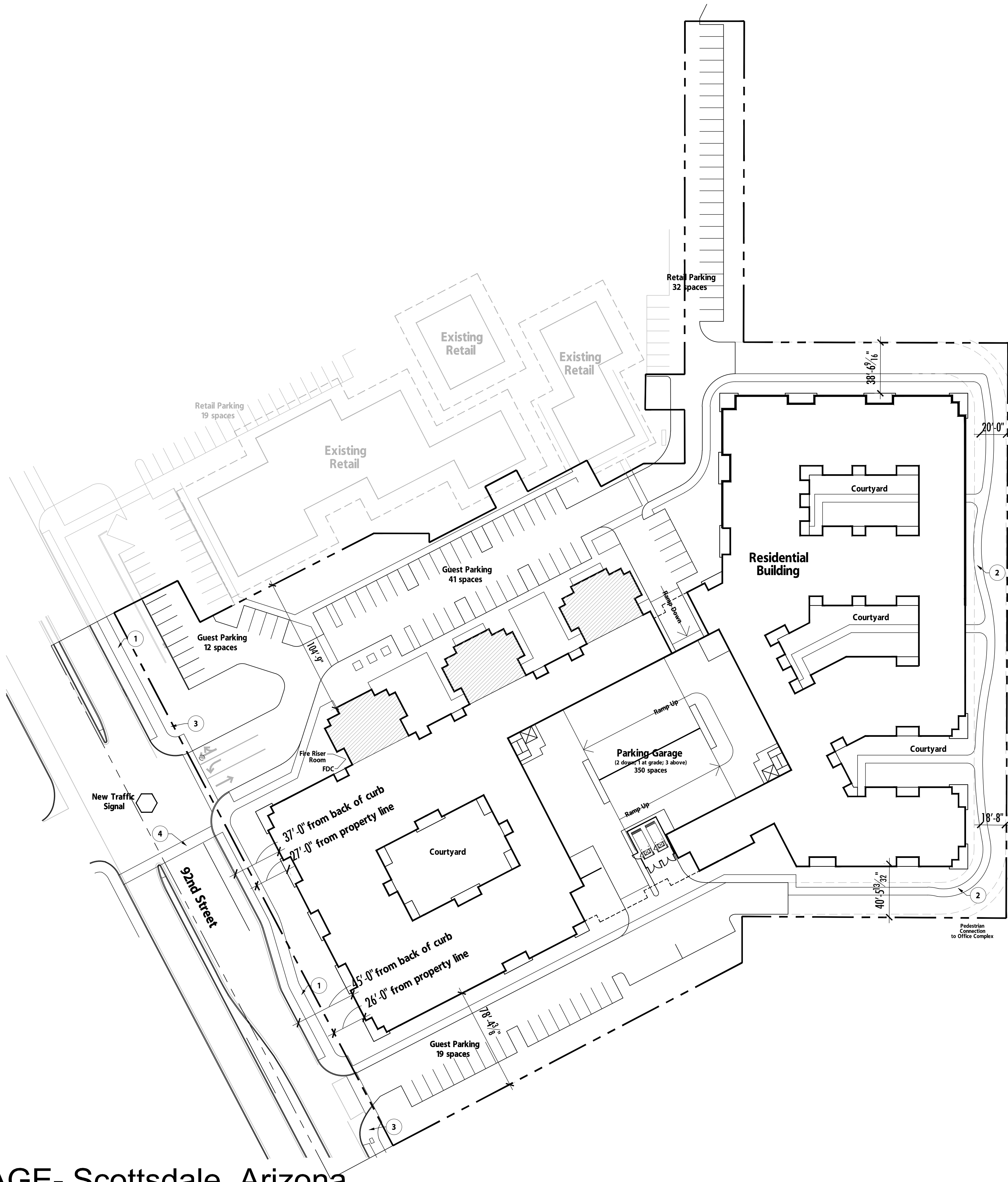
FIGURE 5 – Fire Hydrant Flow Test

APPENDICIES

APPENDIX I – Site Plan

APPENDIX II – Preliminary Utility Plan

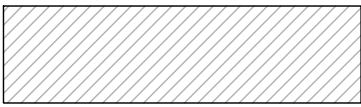
APPENDIX III – Water Model & Reports



Site Plan

| | |
|-------------------------------|--|
| Site Area: | 6.64 acres gross (289,152sf) 6.08 acres net (264,725sf) |
| Residential Area: | 225,355sf rentable |
| Building Height: | 50'-0" (3 Stories) |
| Total Units: | 255 units (884sf average) |
| Density: | 38.40 units / gross acre |
| Co-work Space: | 5,000sf (8 L/W; 195 1-bdrm; 52 2-bdrm.) |
| Residential Parking Required: | 353 spaces (1.3/1-bdrm; 1.7/2-bdrm.) |
| Guest Parking Required: | 43 spaces (1 space / 6 units) |
| Co-work Required: | 17 spaces (1.0/300sf) |
| Total Parking Required: | 413 spaces |
| Parking Provided: | 350 parking garage spaces 72 surface spaces 422 spaces total (1.65 per unit) |

Co-working/Live-work:



KEYNOTES

1. New 8' Detached Concrete Sidewalk
2. 6' wide Sidewalk Connection
3. Visibility Triangle (30" max. landscape height)
4. New Pedestrian Crosswalk with Traffic Signal

APPENDIX I

0' 40' 80' 120' 160' NORTH

20157- 12-13-23

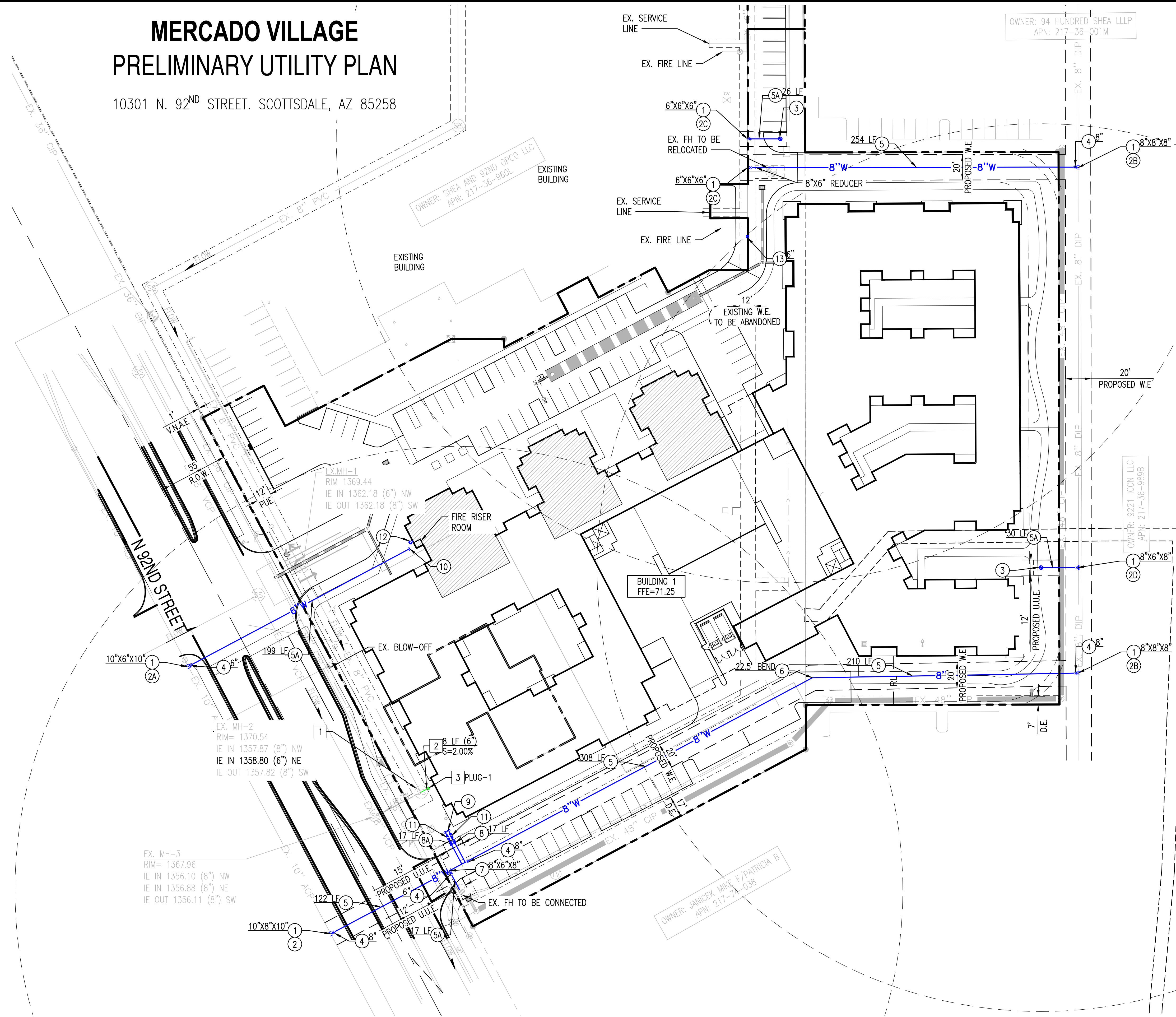


MERCADO VILLAGE- Scottsdale, Arizona

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MERCADO VILLAGE
PRELIMINARY UTILITY PLAN

10301 N. 92ND STREET. SCOTTSDALE, AZ 85258



EXISTING LEGEND:

| | | | | | | | |
|--|------------------------|--|---------------|--|-------------------|--|------------------|
| | CENTERLINE | | SEWER LINE | | STORM DRAIN LINE | | SIGN |
| | EASEMENT LINE AS NOTED | | SEWER MANHOLE | | STORM CATCH BASIN | | STREET LIGHT |
| | CHAINLINK FENCE | | WATER LINE | | STORM MANHOLE | | FIBER OPTIC LINE |
| | TREE | | WATER VALVE | | GAS LINE | | |
| | | | FIRE HYDRANT | | IRRIGATION LINE | | |

PROPOSED UTILITY LEGEND:

| | | | | | | | |
|--|---------------|--|----------------------|--|---------------------|--|---------------------|
| | PROPERTY LINE | | FIRE HYDRANT SPACING | | GATE VALVE | | CAP |
| | EASEMENT LINE | | FIRE HYDRANT | | T.S.V.B&C | | BUILDING CONNECTION |
| | WATER LINE | | FDC | | BACK FLOW PREVENTER | | SEWER MANHOLE |
| | SEWER LINE | | WATER METER | | REDUCER | | SEWER CLEAN OUT |

PRELIMINARY SEWER CONSTRUCTION KEY NOTES

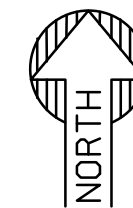
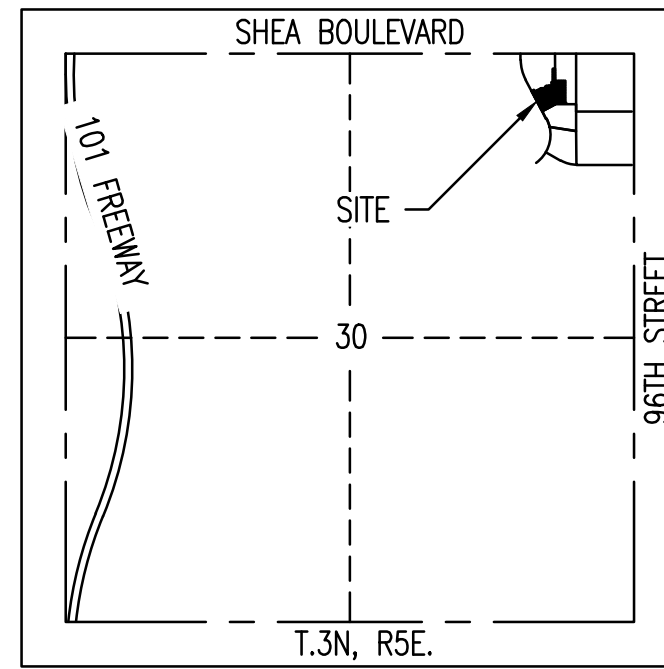
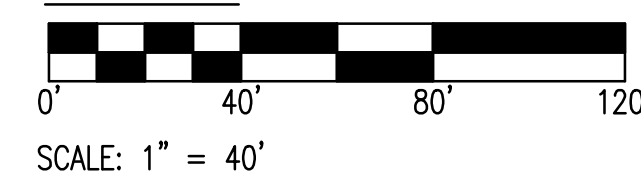
- 1 CONNECTION TO EXISTING SEWER MANHOLE.
- 2 6" PVC SEWER LINE. LENGTH AND SLOPE PER PLAN.
- 3 SEWER CONNECTION TO BUILDING.

PRELIMINARY WATER CONSTRUCTION KEY NOTES

- 1 CONTRACTOR TO VERIFY SIZE AND LOCATION OF EXISTING WATER LINE PRIOR TO CONSTRUCTION.
- 2 10" X 8" CUT-IN TEE
- 2A 10" X 6" CUT-IN TEE
- 2B 8" X 8" CUT-IN TEE
- 2C 6" X 6" CUT-IN TEE
- 2D 8" X6" X8" TSVB&C
- 3 FIRE HYDRANT ASSEMBLY (COMPLETE WITH GATE VALVE, BOX & COVER) PER MAG STD. DET. 360. PROVIDE PAVEMENT MARKER (PM) PER C.O.S. STD. DET. 2363.
- 4 GATE VALVE WITH VALVE BOX PER MAG STD. DET. 391-1, TYPE "C" WITH LOCKING LID. SIZE PER PLAN.
- 5 8" DUCTILE IRON PIPE, CLASS 350, CEMENT MORTAR LINED, WITH POLYETHYLENE WRAPPING. PROVIDE BLUE POLYETHYLENE LOCATING TAPE ABOVE ALL PUBLIC WATER LINES. MAINTAIN 3' MINIMUM COVER. LENGTH PER PLAN.
- 5A 6" DUCTILE IRON PIPE, CLASS 350, WITH POLYETHYLENE WRAPPING. LENGTH PER PLAN.
- 6 BEND WITH RESTRAINED JOINTS PER MAG 303. OR THRUST BLOCK PER MAG STD. DET. 303 & 380. SIZE AND ANGLE PER PLAN.
- 7 TEE WITH MECHANICAL JOINT RESTRAINT PER MAG STD. DET. 303-1 AND 303-2 SIZE PER PLAN.
- 8 2" TYPE "K" COPPER DOMESTIC SERVICE CONNECTION PER C.O.S. STD. DET. 2330. INSTALL "X" METER BOX PER MAG STD. DET. 320 AND 315. (CONNECTION AND METER TO BE INSTALLED BY CITY FORCES)
- 8A 1" TYPE "K" COPPER IRRIGATION SERVICE CONNECTION PER C.O.S. STD. DET. 2330. INSTALL 1" METER BOX PER MAG STD. DET. 320 AND 315. (CONNECTION AND METER TO BE INSTALLED BY CITY FORCES)
- 9 DOMESTIC CONNECTION TO BUILDING, REFER TO MEP PLAN FOR CONTINUATION.
- 10 FIRE CONNECTION TO BUILDING, REFER TO PLAN FOR CONTINUATION.
- 11 REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY (RPPBA) PER C.O.S. STD. DET. 2354. SIZE TO MATCH WATER METER SIZE.
- 12 FIRE DEPARTMENT CONNECTION BY BUILDING CONTRACTOR (FOR REFERENCE ONLY).
- 13 CAP END AND PROVIDE FLUSHING PIPE PER MAG STD. DET. 390, TYPE "B".

APPENDIX II

PLAN VIEW

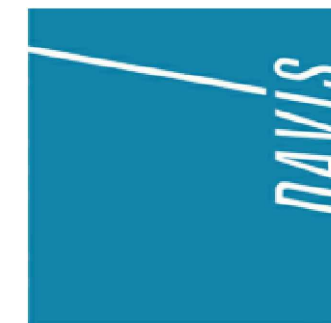


VICINITY MAP
N.T.S.

PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY
ENGINEERING
GROUP

SEG



PROJECT
MERCADO VILLAGE

LOCATION
92ND & SHEA,
SCOTTSDALE, AZ 85258

| | | |
|------------|----|------------|
| DRAWN | JC | 01/09/2024 |
| DESIGNED | JC | 01/09/2024 |
| QC | SC | 01/05/2024 |
| FINAL QC | | |
| PROJ. MGR. | AF | 01/09/2024 |

DATE: 01/09/2024

ISSUED FOR: ZONING

| REVISION NO.: | DATE: |
|---------------|-------|
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| | |
| | |
| | |

JOB NO.: 210414

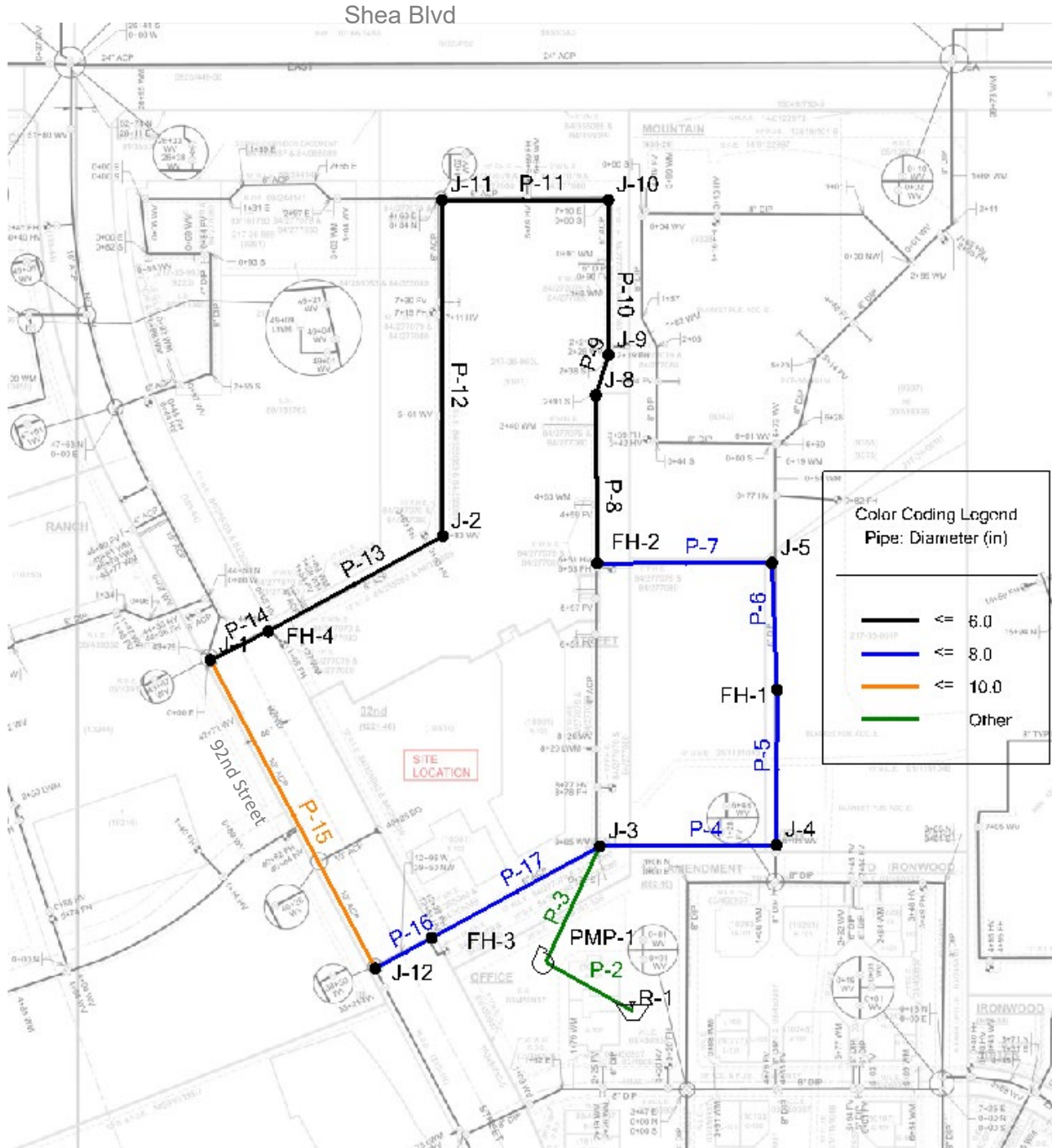
SHEET TITLE:

PRELIMINARY
UTILITY PLAN

PAGE NO.:
1 OF 1

SHEET NO.:
C4.00

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APPENDIX III – Water Model Layout

2023-12-21 Mercado Courtyard-v1.wtg

Active Scenario: PH

FlexTable: Junction Table

| Label | Elevation (ft) | Demand (gpm) | Hydraulic Grade (ft) | Pressure (psi) |
|-------|-------------------|-----------------|-------------------------|-------------------|
| FH-1 | 1,372.40 | 0 | 1,541.65 | 73 |
| FH-2 | 1,373.10 | 0 | 1,541.63 | 73 |
| FH-3 | 1,369.20 | 256 | 1,541.36 | 74 |
| FH-4 | 1,369.07 | 0 | 1,541.39 | 75 |
| J-1 | 1,368.50 | 0 | 1,541.37 | 75 |
| J-2 | 1,370.50 | 0 | 1,541.43 | 74 |
| J-3 | 1,370.60 | 0 | 1,541.67 | 74 |
| J-4 | 1,370.40 | 0 | 1,541.66 | 74 |
| J-5 | 1,372.70 | 0 | 1,541.64 | 73 |
| J-8 | 1,370.50 | 0 | 1,541.59 | 74 |
| J-9 | 1,371.00 | 0 | 1,541.58 | 74 |
| J-10 | 1,372.00 | 0 | 1,541.55 | 73 |
| J-11 | 1,371.80 | 0 | 1,541.51 | 73 |
| J-12 | 1,366.80 | 0 | 1,541.36 | 76 |

2023-12-21 Mercado Courtyard-v1.wtg

Active Scenario: MD+ SPLIT FF

FlexTable: Junction Table

| Label | Elevation (ft) | Demand (gpm) | Hydraulic Grade (ft) | Pressure (psi) |
|-------|-------------------|-----------------|-------------------------|-------------------|
| FH-1 | 1,372.40 | 1,250 | 1,433.93 | 27 |
| FH-2 | 1,373.10 | 1,250 | 1,429.16 | 24 |
| FH-3 | 1,369.20 | 146 | 1,463.78 | 41 |
| FH-4 | 1,369.07 | 0 | 1,460.56 | 40 |
| J-1 | 1,368.50 | 0 | 1,462.46 | 41 |
| J-2 | 1,370.50 | 0 | 1,454.70 | 36 |
| J-3 | 1,370.60 | 0 | 1,466.02 | 41 |
| J-4 | 1,370.40 | 0 | 1,448.94 | 34 |
| J-5 | 1,372.70 | 0 | 1,431.92 | 26 |
| J-8 | 1,370.50 | 0 | 1,434.11 | 28 |
| J-9 | 1,371.00 | 0 | 1,435.35 | 28 |
| J-10 | 1,372.00 | 0 | 1,439.92 | 29 |
| J-11 | 1,371.80 | 0 | 1,444.81 | 32 |
| J-12 | 1,366.80 | 0 | 1,463.31 | 42 |

2023-12-21 Mercado Courtyard-v1.wtg

Active Scenario: MD+ SPLIT FF

FlexTable: Pipe Table

| Label | Start Node | Stop Node | Length (Scaled) (ft) | Diameter (in) | Material | Hazen-Williams C | Flow (gpm) | Velocity (ft/s) | Headloss Gradient (ft/ft) |
|-------|------------|-----------|----------------------|---------------|----------|------------------|------------|-----------------|---------------------------|
| P-2 | R-1 | PMP-1 | 146 | 24.0 | ACP | 130.0 | 2,646 | 1.88 | 0.001 |
| P-3 | PMP-1 | J-3 | 187 | 24.0 | ACP | 130.0 | 2,646 | 1.88 | 0.001 |
| P-4 | J-3 | J-4 | 258 | 8.0 | DIP | 130.0 | 2,005 | 12.80 | 0.066 |
| P-5 | J-4 | FH-1 | 227 | 8.0 | DIP | 130.0 | 2,005 | 12.80 | 0.066 |
| P-6 | FH-1 | J-5 | 185 | 8.0 | DIP | 130.0 | 755 | 4.82 | 0.011 |
| P-7 | J-5 | FH-2 | 255 | 8.0 | DIP | 130.0 | 755 | 4.82 | 0.011 |
| P-8 | FH-2 | J-8 | 245 | 6.0 | ACP | 130.0 | -495 | 5.62 | 0.020 |
| P-9 | J-8 | J-9 | 61 | 6.0 | ACP | 130.0 | -495 | 5.62 | 0.020 |
| P-10 | J-9 | J-10 | 226 | 6.0 | ACP | 130.0 | -495 | 5.62 | 0.020 |
| P-11 | J-10 | J-11 | 242 | 6.0 | ACP | 130.0 | -495 | 5.62 | 0.020 |
| P-12 | J-11 | J-2 | 490 | 6.0 | ACP | 130.0 | -495 | 5.62 | 0.020 |
| P-15 | J-1 | J-12 | 510 | 10.0 | ACP | 130.0 | -495 | 2.02 | 0.002 |
| P-16 | J-12 | FH-3 | 93 | 8.0 | DIP | 130.0 | -495 | 3.16 | 0.005 |
| P-17 | FH-3 | J-3 | 279 | 8.0 | DIP | 130.0 | -641 | 4.09 | 0.008 |
| P-14 | J-1 | FH-4 | 94 | 6.0 | ACP | 130.0 | 495 | 5.62 | 0.020 |
| P-13 | FH-4 | J-2 | 290 | 6.0 | ACP | 130.0 | 495 | 5.62 | 0.020 |

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Active Scenario: MD+ SPLIT FF

FlexTable: Pump Table

| Label | Elevation (ft) | Pump Definition | Status (Initial) | Hydraulic Grade (Suction) (ft) | Hydraulic Grade (Discharge) (ft) | Flow (Total) (gpm) | Pump Head (ft) |
|-------|-------------------|-----------------|---------------------|--------------------------------------|--|-----------------------|----------------------|
| PMP-1 | 1,374.40 | PMP-1 | On | 1,376.32 | 1,466.11 | 2,646 | 89.79 |

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Active Scenario: MD+ SPLIT FF

FlexTable: Reservoir Table

| Label | Elevation (ft) | Hydraulic Grade (ft) | Flow (Out net) (gpm) |
|-------|-------------------|-------------------------|-------------------------|
| R-1 | 1,376.40 | 1,376.40 | 2,646 |

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Active Scenario: MD+Split FF
Pump Definition Detailed Report: PMP-1

| Element Details | | | |
|--------------------------|-----------------------|--------------------------|----------------|
| ID | 60 | Notes | |
| Label | PMP-1 | | |
| Pump Definition Type | | | |
| Pump Definition Type | Standard (3 Point) | Design Head | 120.09 ft |
| Shutoff Flow | 0 gpm | Maximum Operating Flow | 3,376 gpm |
| Shutoff Head | 166.28 ft | Maximum Operating Head | 46.19 ft |
| Design Flow | 2,015 gpm | | |
| Pump Efficiency Type | | | |
| Pump Efficiency Type | Best Efficiency Point | Motor Efficiency | 100.0 % |
| BEP Efficiency | 100.0 % | Is Variable Speed Drive? | False |
| BEP Flow | 0 gpm | | |
| Transient (Physical) | | | |
| Inertia (Pump and Motor) | 0.000 lb·ft² | Specific Speed | SI=25, US=1280 |
| Speed (Full) | 0 rpm | Reverse Spin Allowed? | True |

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Active Scenario: MD+Split FF
Pump Definition Detailed Report: PMP-1

