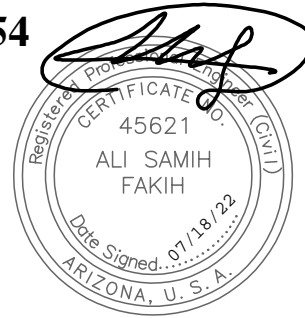


PRELIMINARY WATER BASIS OF DESIGN REPORT

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



Prepared For:



CALIBER

8280 E. Mountain View Road, Suite 150
Scottsdale, AZ 85258
480.455.6480

Prepared by:



PRELIMINARY Basis of Design Report

ACCEPTED
 ACCEPTED AS NOTED
 REVISE AND RESUBMIT


CITY OF SCOTTSDALE
SCOTTSDALE WATER
9379 E San Salvador Dr.
Scottsdale, AZ 85258

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 RSacks DATE 9/19/2022

Submit current hydrant flow test under DR submittal

Sustainability Engineering Group
8280 E. Gelding Drive, Suite 101
Scottsdale, AZ 85260
480.588.7226 www.azSEG.com

Project Number: 210414

Date Submitted: 05-03-2021

Resubmitted: 07-28-2022

Case No: 6-ZN-2021

Plan Check No.: TBD

Use current zoning case number 12-ZN-2022

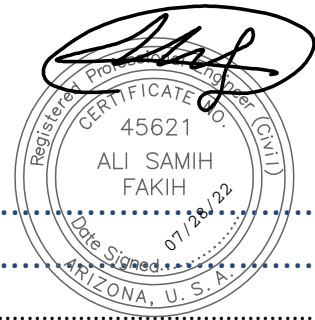


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1. EXECUTIVE SUMMARY

Mercado Courtyard proposes to rezone 7.83 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 high-density residential facility with 273 units. The building will have a central at-grade parking garage.

The western portion of the property is presently zoned PUD; the eastern lot is zoned C-O PCD.

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 and a with a new 8" DIP line extended into the site along the south property line will tap 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 the existing 6" water line at the NWC of the site to the existing 8" water line at the NEC of the site. A reach of 6" ACP running though the site will need to be removed.

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 four contiguous parcels whose APN's are:

- 217-39-535, -536 and -537
- 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 some 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 273 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 preserving an existing fire hydrant and fire line to the adjacent shopping center.

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	273	0.27	2	3.5	73.7	147.4	258.0
Totals					73.7	147.4	258.0

4.2 FIRE FLOW DEMAND

A fire hydrant flow test was performed by Arizona Flow Testing LLC on April 16, 2021, at 7:00 am. Results of the 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. Both pipes will tap into the existing 8" DIP located on the 94 Hundred Shea property. Fire hydrants will be spaced to comply with DS+PM requirements. Refer to **APPENDIX I** 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.

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 II**.

7. SUMMARY / CONCLUSIONS

Sufficient city water capacity is available in the proposed water system layout to support domestic and fire service to the project.

8. REFERENCES

1. COS QS number 28-50
2. City of Scottsdale Design Standards & Policies Manual, 2018 (Chapter 6 – Water)
3. 2015 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



“LEED®ing and Developing Smart Projects”

FIGURES



8280 E. Gelding Dr., Suite 101
Scottsdale, AZ 85260

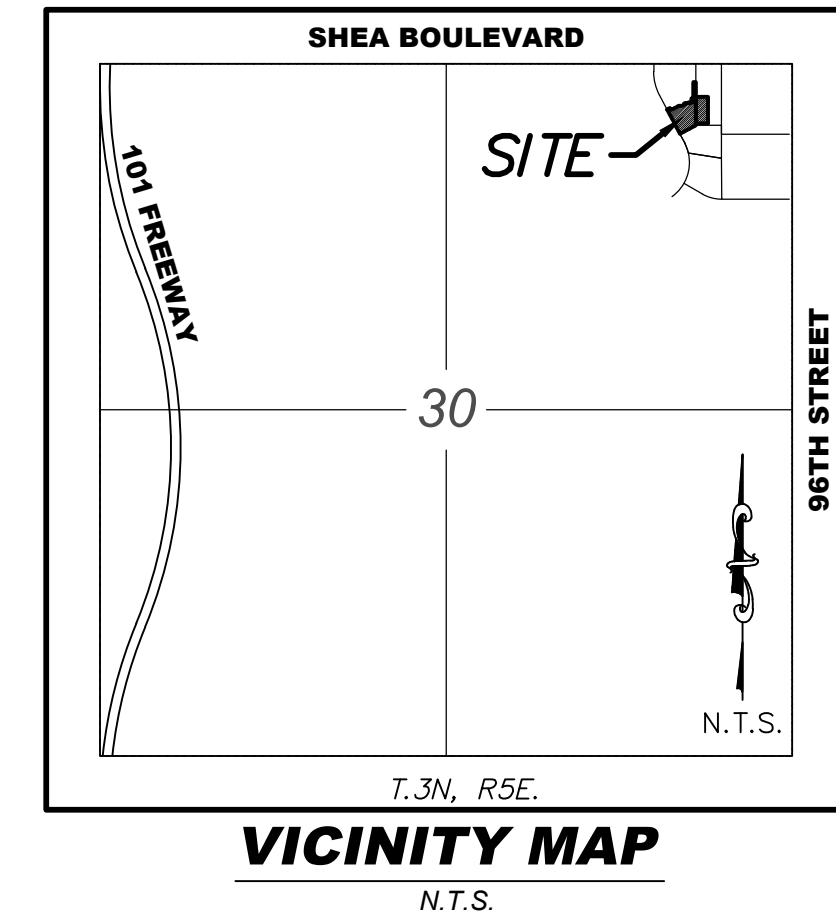


**FIGURE 2 –
Aerial**

8280 E. Gelding Dr., Suite 101
Scottsdale, AZ 85260

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
FAX (480) 922-0781
WWW.SIGSURVEYAZ.COM

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, RESTRICTIONS 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 ATTORNEYS 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 ATTORNEYS 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

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

FIGURE 3

**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

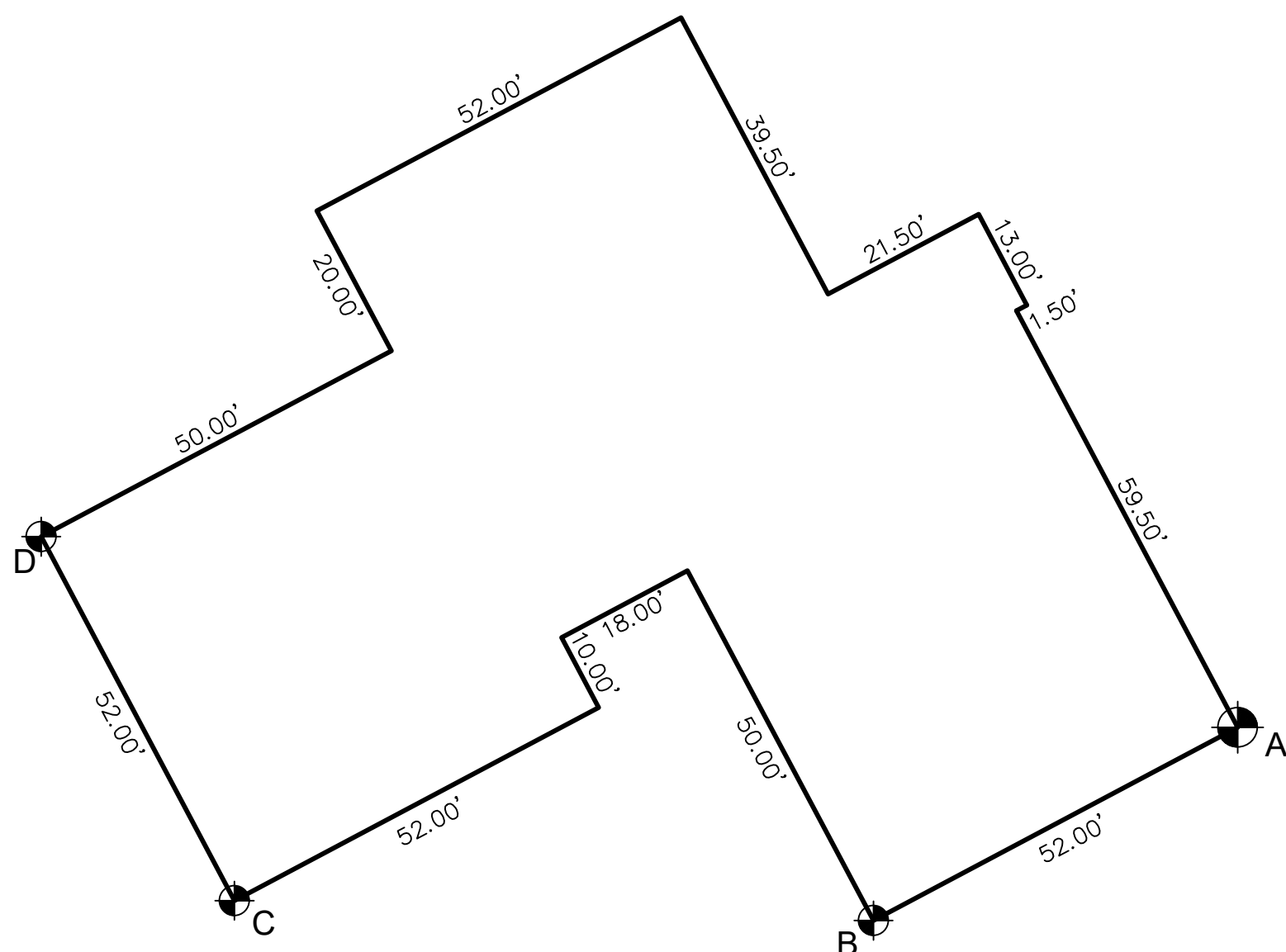
DATE: 3/29/21

SCALE: N.T.S.

SHEET: 1 OF 3

BASIS OF BEARING
 N89°56'30"E(R2,R7,M) 2642.28'(R7,M) N89°59'59"E(R5) 2642.42'(R5) N89°59'24"E(R1)
 821.38'(R1,R2) 822.25'(C)

**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

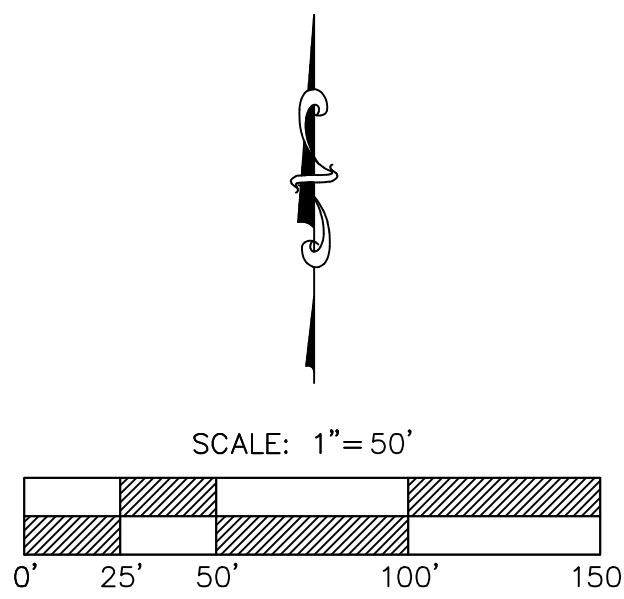
BOUNDARY LINE
ADJACENT BOUNDARY LINE
CENTER LINE
EASEMENT LINE

- 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	(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

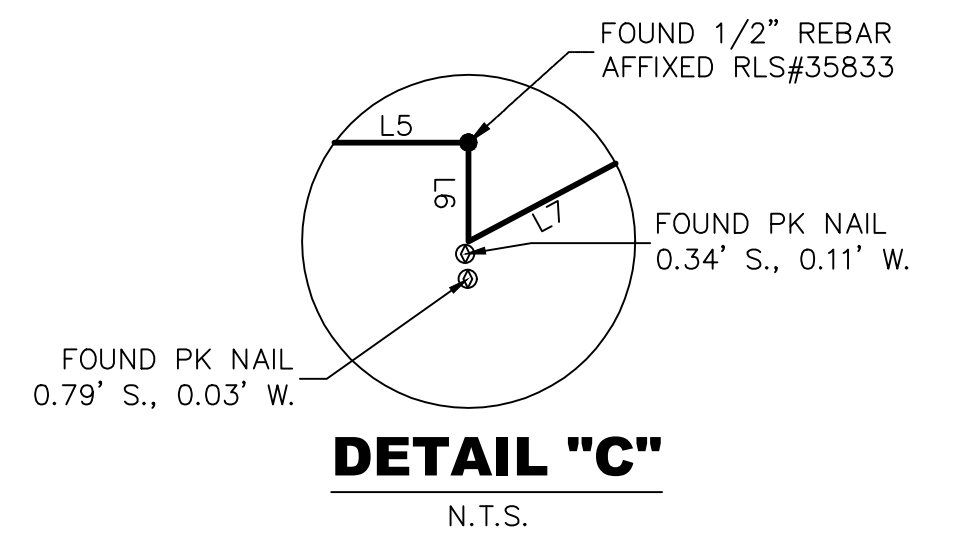
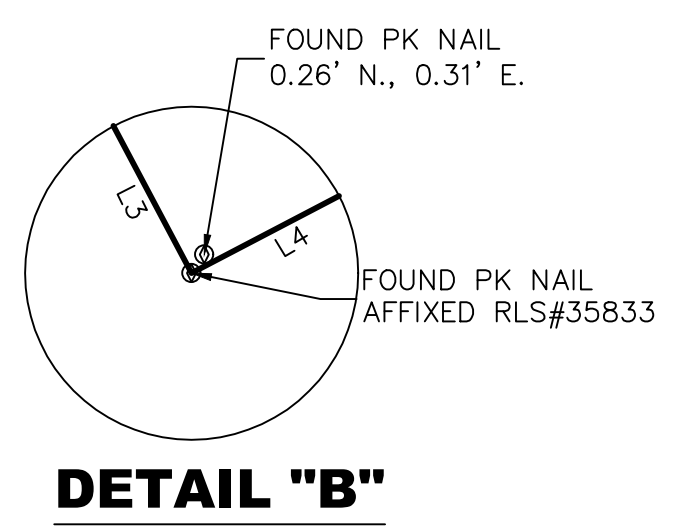
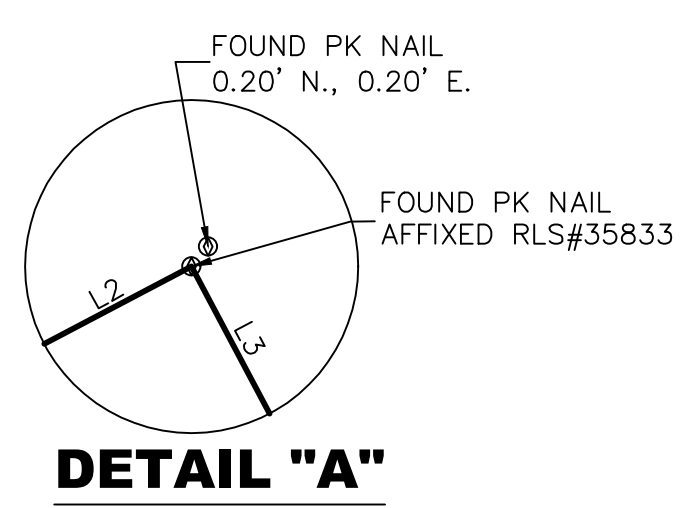
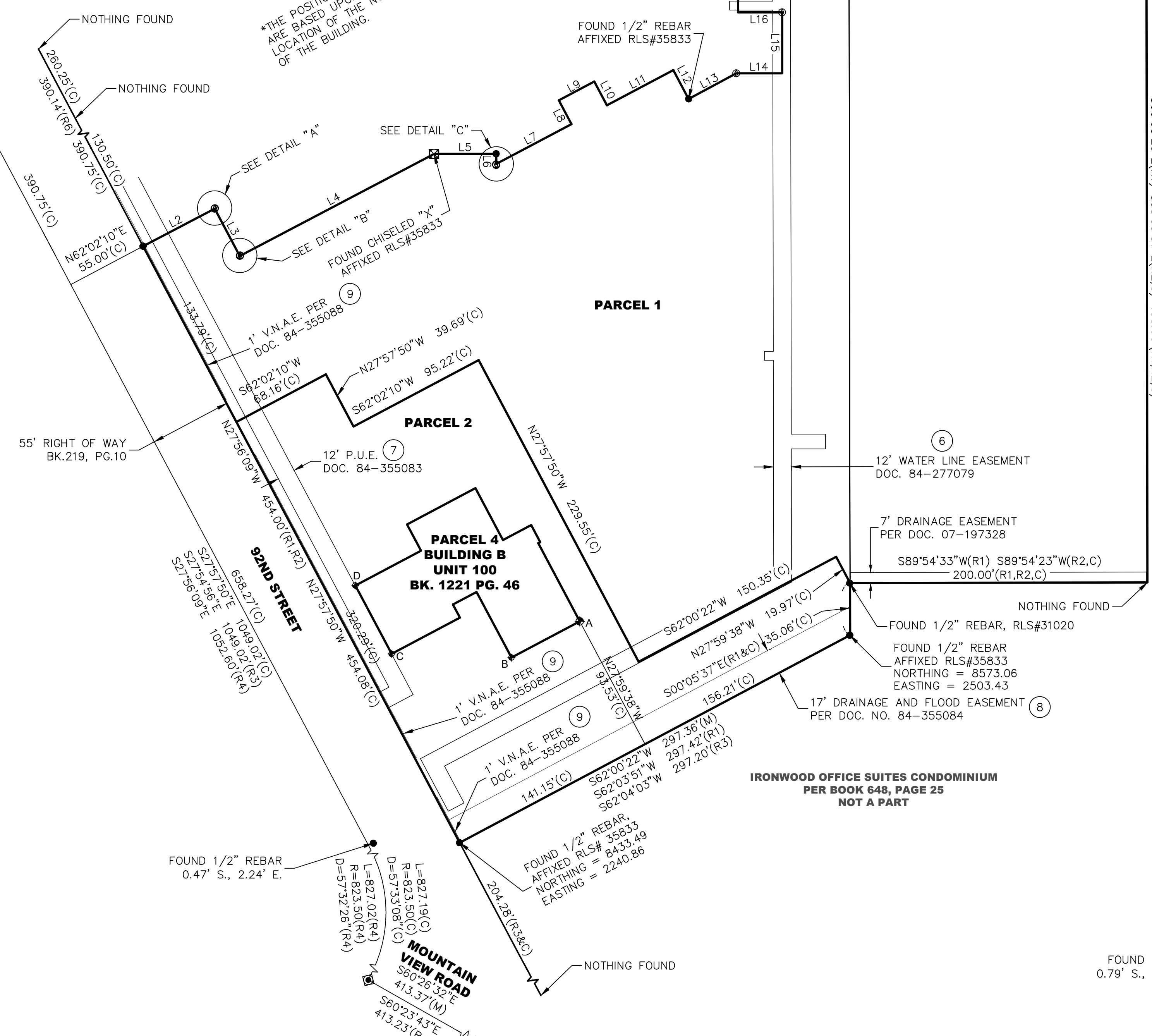
FOUND BRASS CAP IN HANDHOLE
 NORTHEAST CORNER
 SECTION 30, T3N, R5E
 POINT OF COMMENCEMENT



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

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

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



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

**ALTANSPS LAND TITLE SURVEY
 92ND STREET WEST
 SCOTTSDALE, ARIZONA**

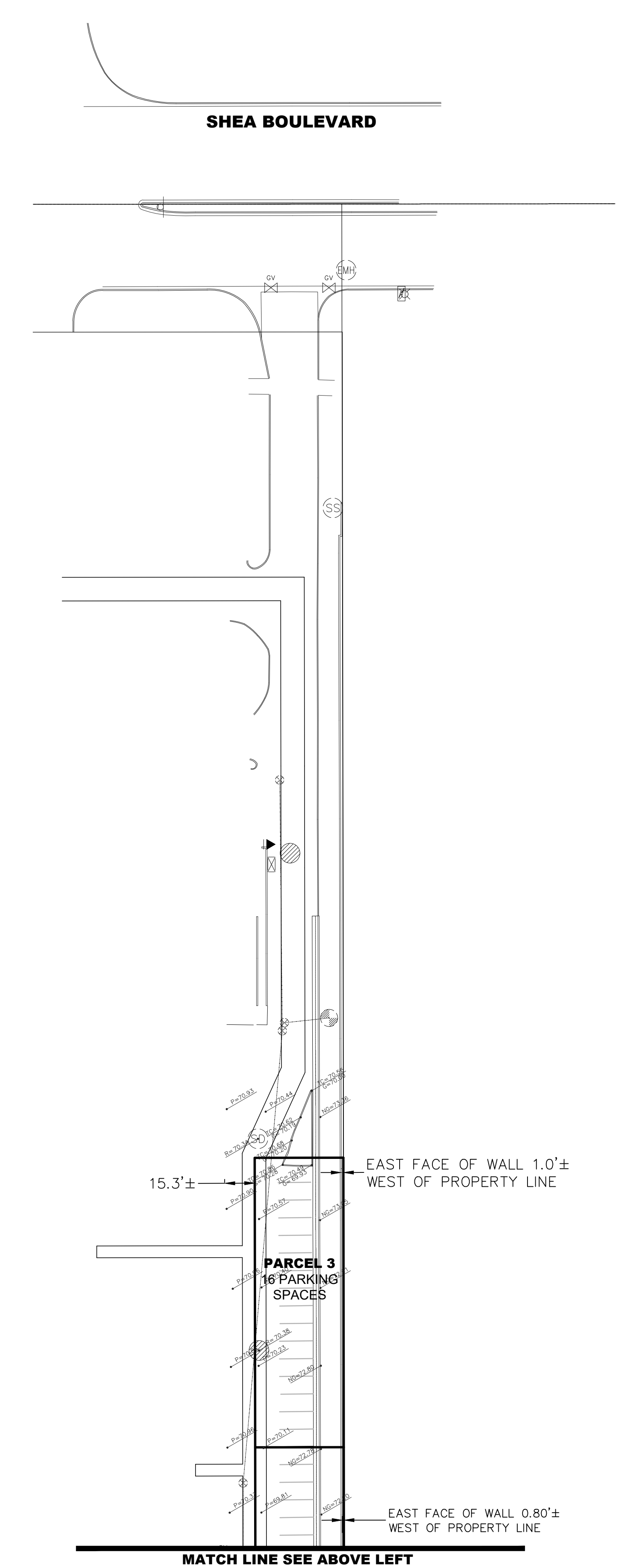
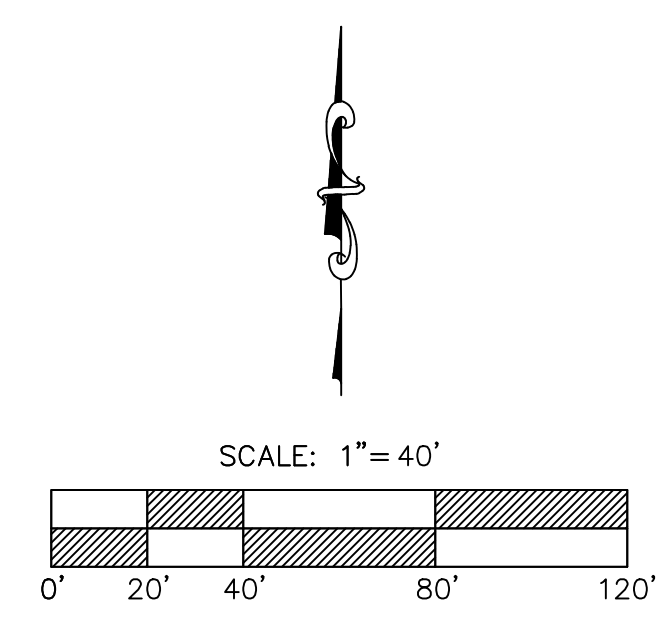
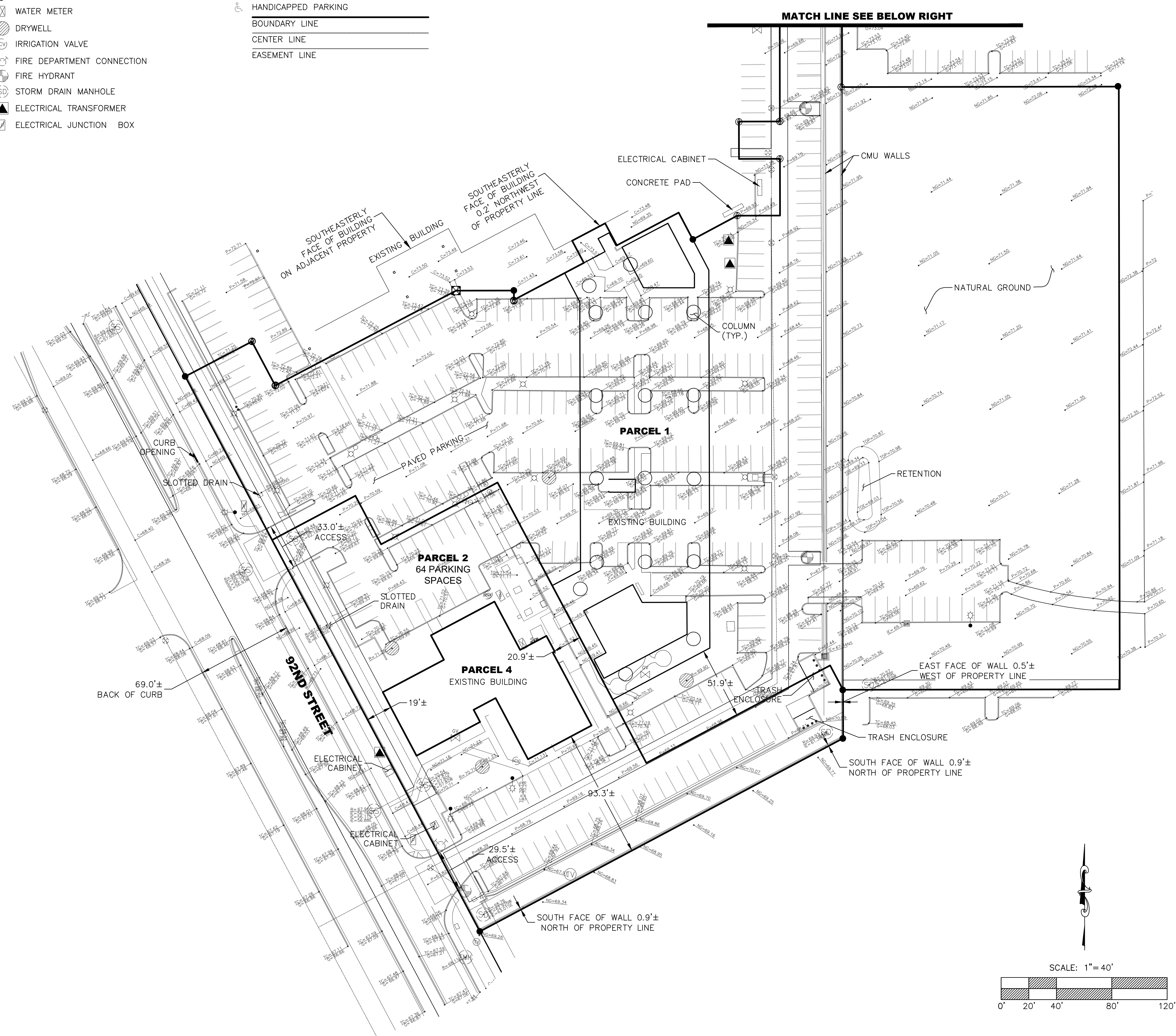
REVISIONS:

▲	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

LEGEND

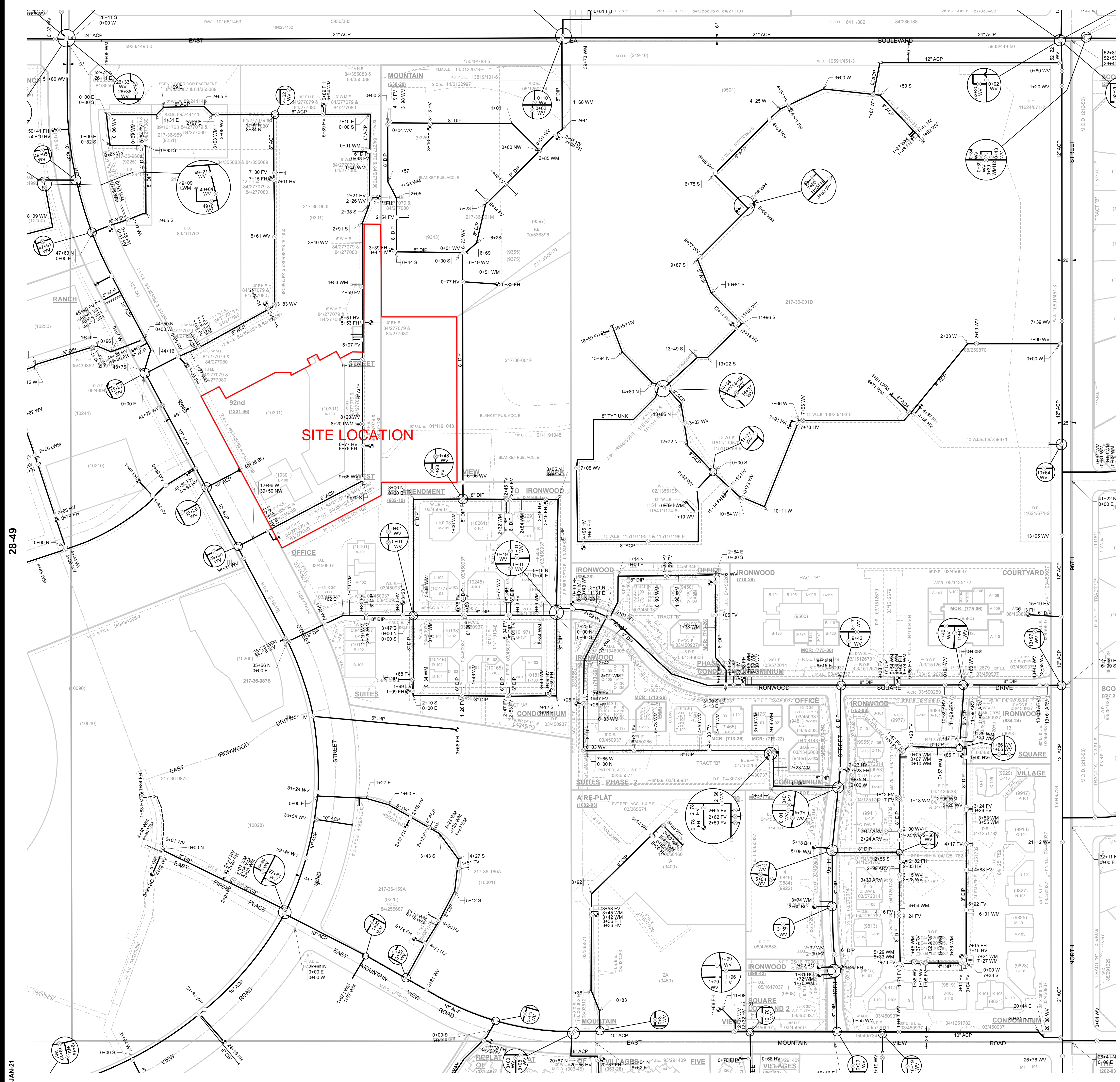
- FOUND BRASS CAP FLUSH
- FOUND PK NAIL
- FOUND 1/2" REBAR
- ⊠ FOUND CHISELED X IN CONCRETE
- ⊠ FOUND BRASS CAP IN HANDHOLE
- SET 1/2" REBAR WITH RLS 35833
- ⊝ SANITARY SEWER MANHOLE
- ⊝ WATER VALVE
- ⊝ CLEANOUT
- ⊝ WATER METER
- ⊝ DRYWELL
- ⊝ IRRIGATION VALVE
- ⊝ FIRE DEPARTMENT CONNECTION
- ⊝ FIRE HYDRANT
- ⊝ STORM DRAIN MANHOLE
- ▲ ELECTRICAL TRANSFORMER
- ⊠ ELECTRICAL JUNCTION BOX
- ⊙ LIGHT POLE WITH MAST
- ⊙ LIGHT POLE
- BOLLARD
- ⊝ CATV RISER
- ⊝ CATCH BASIN
- ⊝ ELECTRICAL MANHOLE
- ⊝ GAS VALVE
- ▶ AIR RELIEF VALVE
- ⊝ SIGN
- ♿ HANDICAPPED PARKING
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE



**ALTANSPS LAND TITLE SURVEY
92ND STREET WEST
SCOTTSDALE, ARIZONA**

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WWW.SIGSURVEYAZ.COM

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	

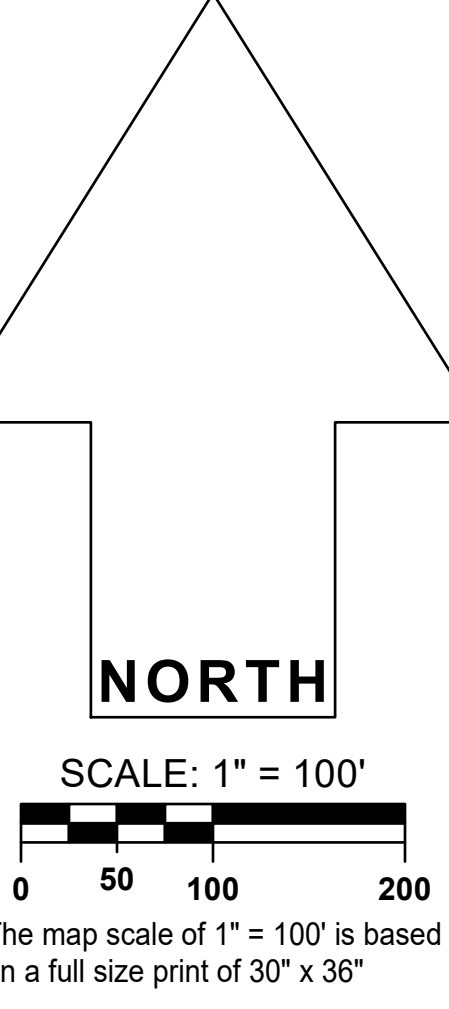
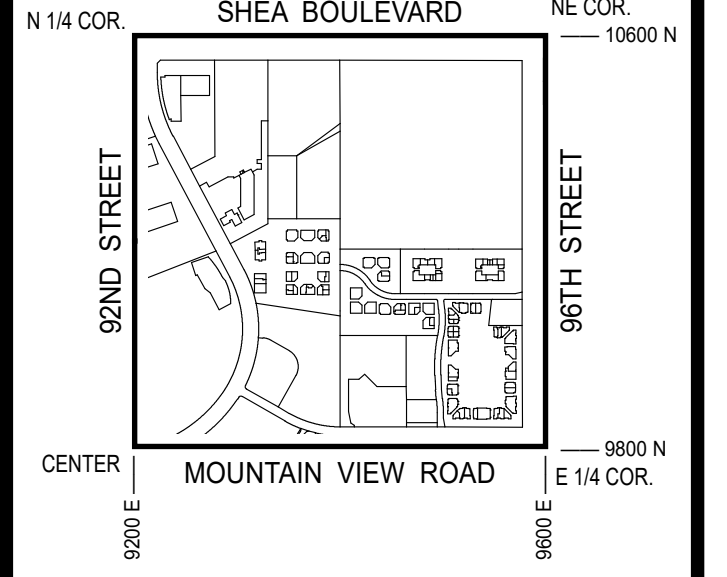


GENERAL NOTES:
 * THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE CITY OF SCOTTSDALE GIS DEPARTMENT AT (480) 312-7792.
 * THE SECTION LINE BEARING AND DISTANCES ARE BASED ON THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER, 1991. BEARINGS ARE NAD 83 GRID AND DISTANCES ARE FLATTENED 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

VICINITY MAP



WATER
 QUARTER SECTION MAP
28-50
 NE 1/4 SEC. 30 T3N R5E

FIGURE 4

NOTICE
 THIS DOCUMENT IS PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY. THE CITY OF SCOTTSDALE DOES NOT WARRANT ITS ACCURACY, COMPLETENESS OR SUITABILITY FOR ANY PARTICULAR PURPOSE. IT SHOULD NOT BE RELIED UPON WITHOUT FIELD VERIFICATION.
 THE CITY OF SCOTTSDALE
 10-JAN-21

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, LLC (480-250-8154)
Coordinated by:	Jared Berry – City of Scottsdale Inspector (602-541-4942)

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)

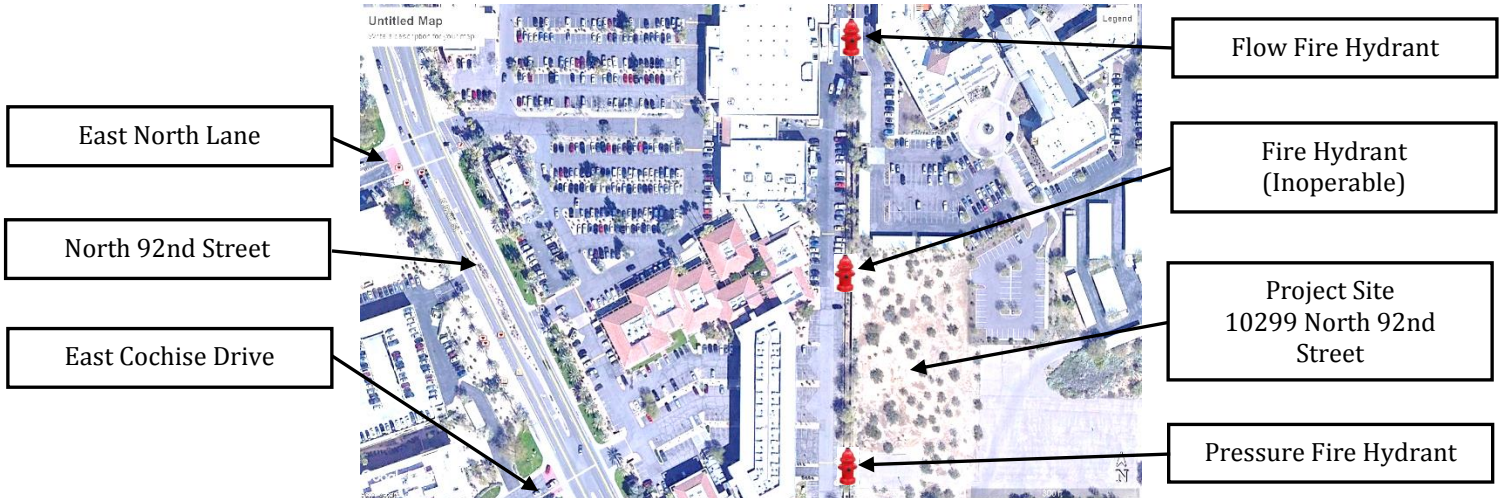
Distance between hydrants: Approx.: 650 Feet

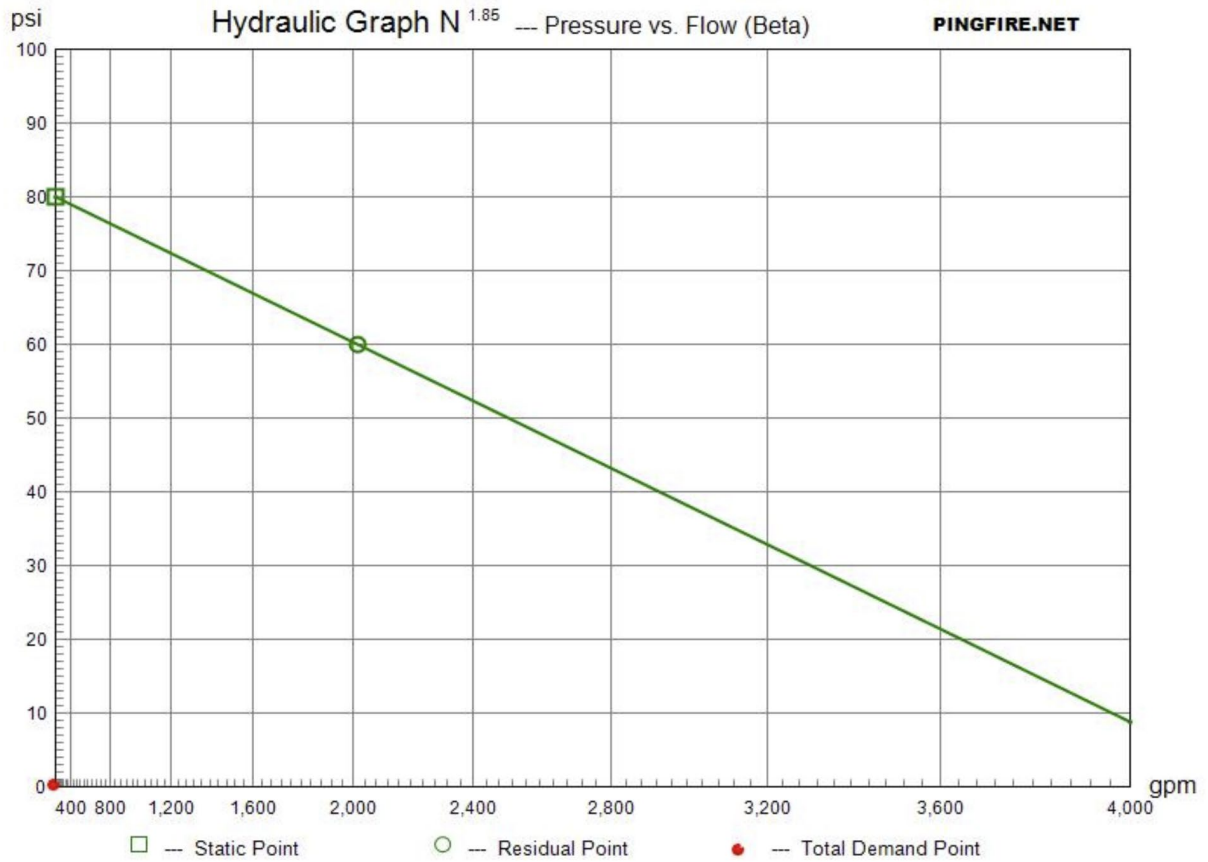
Main size: Not Provided

Flowing GPM: **2,015 GPM**

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

Flow Test Location

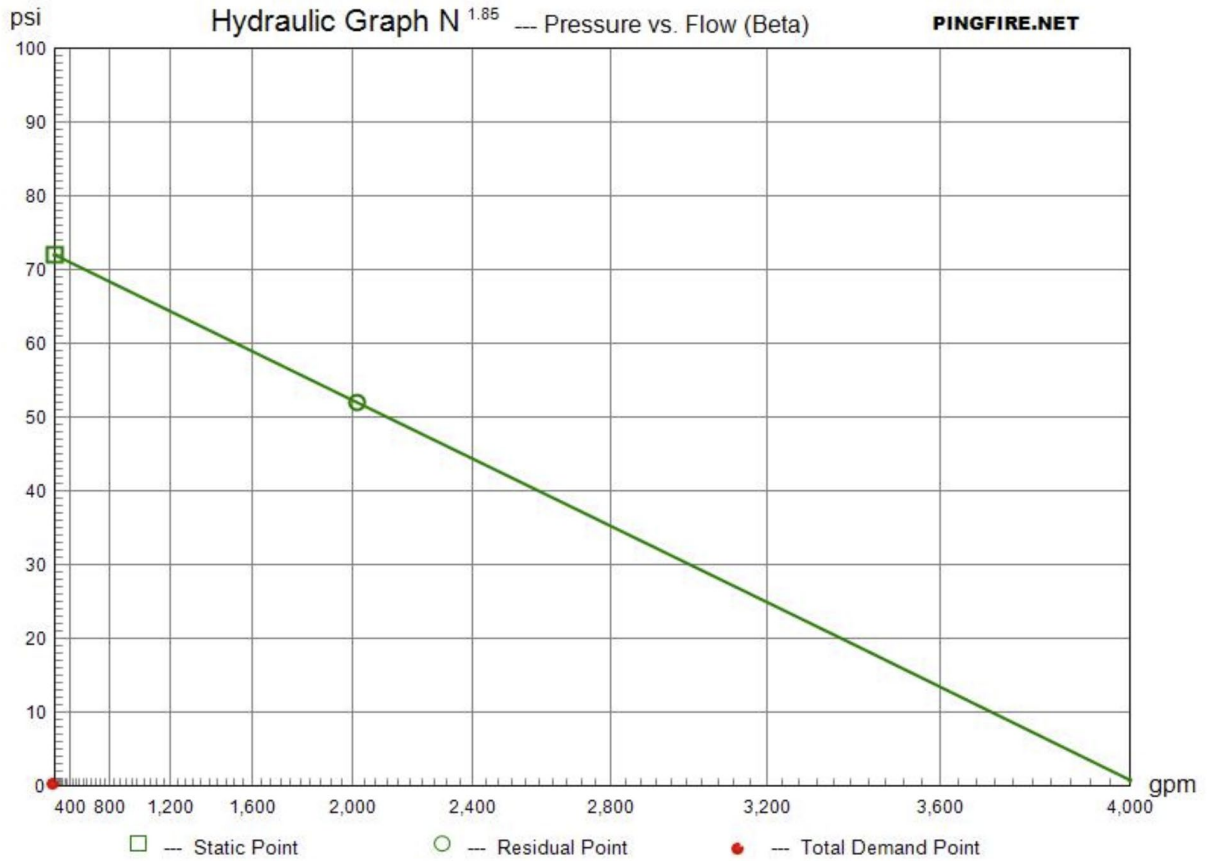




Project Location:

Flow Test: Hydrant Elev.= ft., Static Pressure= psi, Residual Pressure= psi, Flow= gpm

FIGURE 5 – Fire Hydrant Flow Test



Project Location:

Flow Test: Hydrant Elev.= ft., Static Pressure= psi, Residual Pressure= psi, Flow= gpm





FIGURE 5 – Fire Hydrant Flow Test

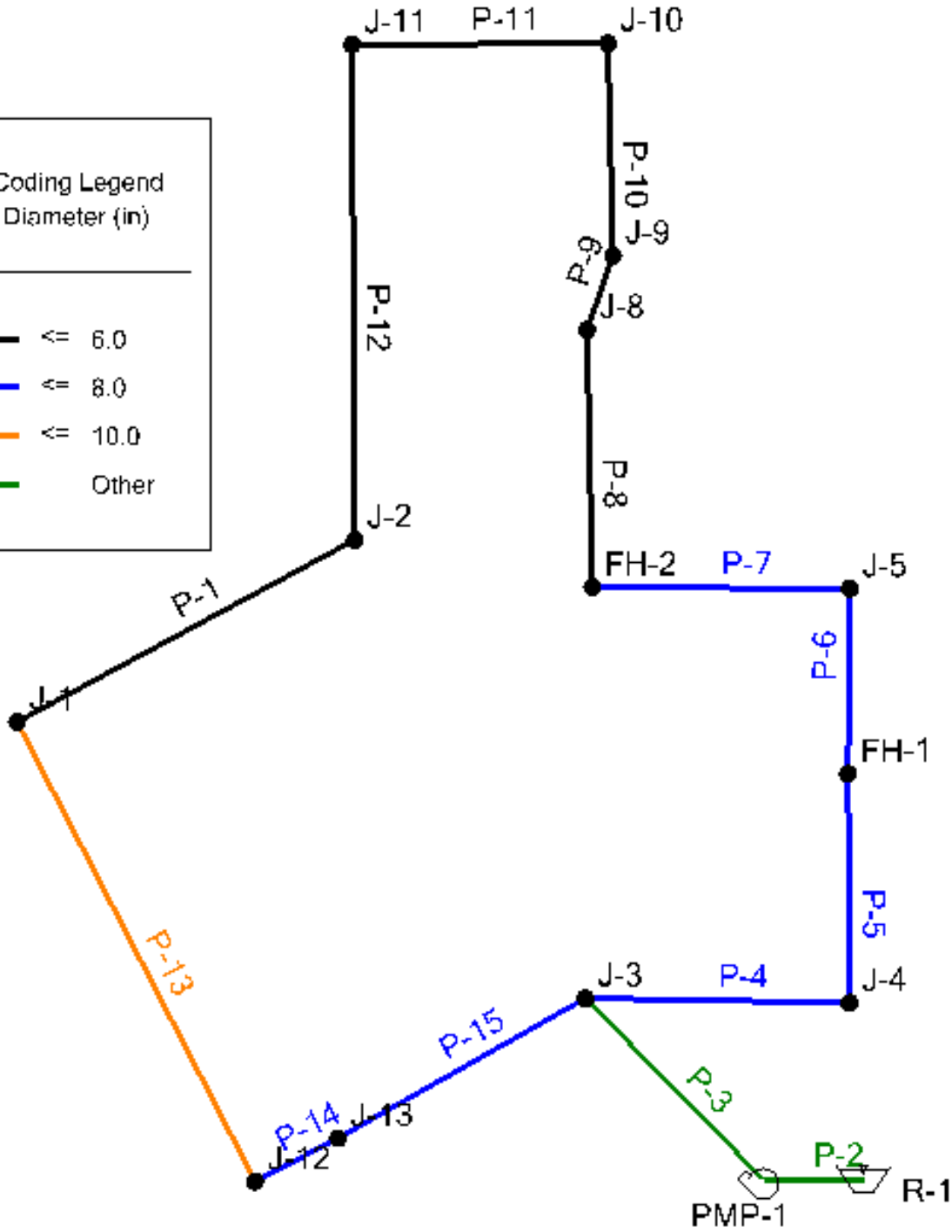


“LEED®ing and Developing Smart Projects”

APPENDIX I.

Calculations

Color Coding Legend	
Pipe: Diameter (in)	
	≤ 6.0
	≤ 8.0
	≤ 10.0
	Other



Water Model

2022-07-27 Mercado Courtyard-v3.wtg

Average Day Demand

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,368.50	0	1,542.55	75
J-2	1,370.50	0	1,542.56	74
J-3	1,370.60	0	1,542.58	74
J-4	1,370.40	0	1,542.58	74
FH-1	1,372.40	0	1,542.58	74
J-5	1,372.70	0	1,542.58	73
FH-2	1,373.10	0	1,542.58	73
J-8	1,370.50	0	1,542.57	74
J-9	1,371.00	0	1,542.57	74
J-10	1,372.00	0	1,542.57	74
J-11	1,371.80	0	1,542.56	74
J-12	1,366.80	0	1,542.55	76
J-13	1,369.20	73	1,542.55	75

2022-07-27 Mercado Courtyard-v3.wtg

Average Day Demand

Pipe Table - Time: 0.00 hours

Label	Diameter (in)	Material	Length (Scaled) (ft)	Start Node	Stop Node	Hazen-Williams C	Velocity (ft/s)
P-1	6.0	ACP	378	J-1	J-2	130.0	0.12
P-2	24.0	ACP	99	R-1	PMP-1	130.0	0.05
P-3	24.0	ACP	250	PMP-1	J-3	130.0	0.05
P-4	8.0	DIP	260	J-3	J-4	130.0	0.07
P-5	8.0	DIP	226	J-4	FH-1	130.0	0.07
P-6	8.0	DIP	182	FH-1	J-5	130.0	0.07
P-7	8.0	DIP	254	J-5	FH-2	130.0	0.07
P-8	6.0	ACP	254	FH-2	J-8	130.0	0.12
P-9	6.0	ACP	78	J-8	J-9	130.0	0.12
P-10	6.0	ACP	210	J-9	J-10	130.0	0.12
P-11	6.0	ACP	252	J-10	J-11	130.0	0.12
P-12	6.0	ACP	488	J-11	J-2	130.0	0.12
P-13	10.0	ACP	510	J-1	J-12	130.0	0.04
P-14	8.0	DIP	92	J-12	J-13	130.0	0.07
P-15	8.0	DIP	280	J-13	J-3	130.0	0.40

2022-07-27 Mercado Courtyard-v3.wtg

Average Day Demand

Pump Table - Time: 0.00 hours

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	1,376.40	1,542.58	73	166.18

2022-07-27 Mercado Courtyard-v3.wtg

Average Day Demand

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,376.40	73	1,376.40

2022-07-27 Mercado Courtyard-v3.wtg

Maximum Day Demand

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,368.50	0	1,542.21	75
J-2	1,370.50	0	1,542.23	74
J-3	1,370.60	0	1,542.32	74
J-4	1,370.40	0	1,542.31	74
FH-1	1,372.40	0	1,542.31	74
J-5	1,372.70	0	1,542.31	73
FH-2	1,373.10	0	1,542.31	73
J-8	1,370.50	0	1,542.29	74
J-9	1,371.00	0	1,542.29	74
J-10	1,372.00	0	1,542.27	74
J-11	1,371.80	0	1,542.26	74
J-12	1,366.80	0	1,542.21	76
J-13	1,369.20	147	1,542.21	75

2022-07-27 Mercado Courtyard-v3.wtg

Maximum Day Demand

Pipe Table - Time: 0.00 hours

Label	Diameter (in)	Material	Length (Scaled) (ft)	Start Node	Stop Node	Hazen-Williams C	Velocity (ft/s)
P-1	6.0	ACP	378	J-1	J-2	130.0	0.23
P-2	24.0	ACP	99	R-1	PMP-1	130.0	0.10
P-3	24.0	ACP	250	PMP-1	J-3	130.0	0.10
P-4	8.0	DIP	260	J-3	J-4	130.0	0.13
P-5	8.0	DIP	226	J-4	FH-1	130.0	0.13
P-6	8.0	DIP	182	FH-1	J-5	130.0	0.13
P-7	8.0	DIP	254	J-5	FH-2	130.0	0.13
P-8	6.0	ACP	254	FH-2	J-8	130.0	0.23
P-9	6.0	ACP	78	J-8	J-9	130.0	0.23
P-10	6.0	ACP	210	J-9	J-10	130.0	0.23
P-11	6.0	ACP	252	J-10	J-11	130.0	0.23
P-12	6.0	ACP	488	J-11	J-2	130.0	0.23
P-13	10.0	ACP	510	J-1	J-12	130.0	0.08
P-14	8.0	DIP	92	J-12	J-13	130.0	0.13
P-15	8.0	DIP	280	J-13	J-3	130.0	0.80

2022-07-27 Mercado Courtyard-v3.wtg

Maximum Day Demand

Pump Table - Time: 0.00 hours

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	1,376.40	1,542.32	147	165.92

2022-07-27 Mercado Courtyard-v3.wtg

Maximum Day Demand

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,376.40	147	1,376.40

2022-07-27 Mercado Courtyard-v3.wtg

Peak Hour Demand

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,368.50	0	1,541.36	75
J-2	1,370.50	0	1,541.42	74
J-3	1,370.60	0	1,541.66	74
J-4	1,370.40	0	1,541.65	74
FH-1	1,372.40	0	1,541.64	73
J-5	1,372.70	0	1,541.63	73
FH-2	1,373.10	0	1,541.62	73
J-8	1,370.50	0	1,541.58	74
J-9	1,371.00	0	1,541.57	74
J-10	1,372.00	0	1,541.54	73
J-11	1,371.80	0	1,541.50	73
J-12	1,366.80	0	1,541.35	76
J-13	1,369.20	257	1,541.35	74

2022-07-27 Mercado Courtyard-v3.wtg

Peak Hour Demand

Pipe Table - Time: 0.00 hours

Label	Diameter (in)	Material	Length (Scaled) (ft)	Start Node	Stop Node	Hazen-Williams C	Velocity (ft/s)
P-1	6.0	ACP	378	J-1	J-2	130.0	0.41
P-2	24.0	ACP	99	R-1	PMP-1	130.0	0.18
P-3	24.0	ACP	250	PMP-1	J-3	130.0	0.18
P-4	8.0	DIP	260	J-3	J-4	130.0	0.23
P-5	8.0	DIP	226	J-4	FH-1	130.0	0.23
P-6	8.0	DIP	182	FH-1	J-5	130.0	0.23
P-7	8.0	DIP	254	J-5	FH-2	130.0	0.23
P-8	6.0	ACP	254	FH-2	J-8	130.0	0.41
P-9	6.0	ACP	78	J-8	J-9	130.0	0.41
P-10	6.0	ACP	210	J-9	J-10	130.0	0.41
P-11	6.0	ACP	252	J-10	J-11	130.0	0.41
P-12	6.0	ACP	488	J-11	J-2	130.0	0.41
P-13	10.0	ACP	510	J-1	J-12	130.0	0.15
P-14	8.0	DIP	92	J-12	J-13	130.0	0.23
P-15	8.0	DIP	280	J-13	J-3	130.0	1.41

2022-07-27 Mercado Courtyard-v3.wtg

Peak Hour Demand

Pump Table - Time: 0.00 hours

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	1,376.40	1,541.66	257	165.26

2022-07-27 Mercado Courtyard-v3.wtg

Peak Hour Demand

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,376.40	257	1,376.40

2022-07-27 Mercado Courtyard-v3.wtg

Fire Flow Demand

Fire Flow Results Table - Time: 0.00 hours

Label	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Fire Flow (Available) (gpm)	Max Day + Fire Flow at Junction (gpm)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)
J-1	False	2,500	1,861	1,861	48	J-2	10.00
J-2	False	2,500	1,379	1,379	54	J-11	10.00
J-3	True	2,500	3,000	3,000	30	FH-2	2.18
J-4	False	2,500	1,811	1,811	51	FH-2	10.00
FH-1	False	2,500	1,916	1,916	45	J-5	10.00
J-5	False	2,500	1,987	1,987	41	FH-2	10.00
FH-2	False	2,500	2,077	2,077	38	J-8	10.00
J-8	False	2,500	1,348	1,348	52	J-9	10.00
J-9	False	2,500	1,402	1,402	50	J-10	10.00
J-10	False	2,500	1,554	1,554	45	J-11	10.00
J-11	False	2,500	1,758	1,758	38	J-10	10.00
J-12	False	2,500	1,792	1,792	52	J-1	10.00
J-13	False	2,573	1,751	1,824	54	J-1	10.00

2022-07-27 Mercado Courtyard-v3.wtg

MD+ SPLIT FF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,368.50	0	1,462.37	41
J-2	1,370.50	0	1,454.76	36
J-3	1,370.60	0	1,465.93	41
J-4	1,370.40	0	1,448.68	34
FH-1	1,372.40	1,250	1,433.71	27
J-5	1,372.70	0	1,431.73	26
FH-2	1,373.10	1,250	1,428.97	24
J-8	1,370.50	0	1,434.08	28
J-9	1,371.00	0	1,435.64	28
J-10	1,372.00	0	1,439.86	29
J-11	1,371.80	0	1,444.94	32
J-12	1,366.80	0	1,463.23	42
J-13	1,369.20	147	1,463.68	41

2022-07-27 Mercado Courtyard-v3.wtg

MD+ SPLIT FF

Pipe Table - Time: 0.00 hours

Label	Diameter (in)	Material	Length (Scaled) (ft)	Start Node	Stop Node	Hazen-Williams C	Velocity (ft/s)
P-1	6.0	ACP	378	J-1	J-2	130.0	5.61
P-2	24.0	ACP	99	R-1	PMP-1	130.0	1.88
P-3	24.0	ACP	250	PMP-1	J-3	130.0	1.88
P-4	8.0	DIP	260	J-3	J-4	130.0	12.80
P-5	8.0	DIP	226	J-4	FH-1	130.0	12.80
P-6	8.0	DIP	182	FH-1	J-5	130.0	4.82
P-7	8.0	DIP	254	J-5	FH-2	130.0	4.82
P-8	6.0	ACP	254	FH-2	J-8	130.0	5.61
P-9	6.0	ACP	78	J-8	J-9	130.0	5.61
P-10	6.0	ACP	210	J-9	J-10	130.0	5.61
P-11	6.0	ACP	252	J-10	J-11	130.0	5.61
P-12	6.0	ACP	488	J-11	J-2	130.0	5.61
P-13	10.0	ACP	510	J-1	J-12	130.0	2.02
P-14	8.0	DIP	92	J-12	J-13	130.0	3.16
P-15	8.0	DIP	280	J-13	J-3	130.0	4.10

2022-07-27 Mercado Courtyard-v3.wtg

MD+ SPLIT FF

Pump Table - Time: 0.00 hours

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	1,376.35	1,466.06	2,647	89.72

2022-07-27 Mercado Courtyard-v3.wtg

MD+ SPLIT FF

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,376.40	2,647	1,376.40



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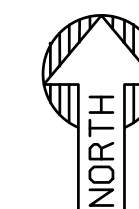
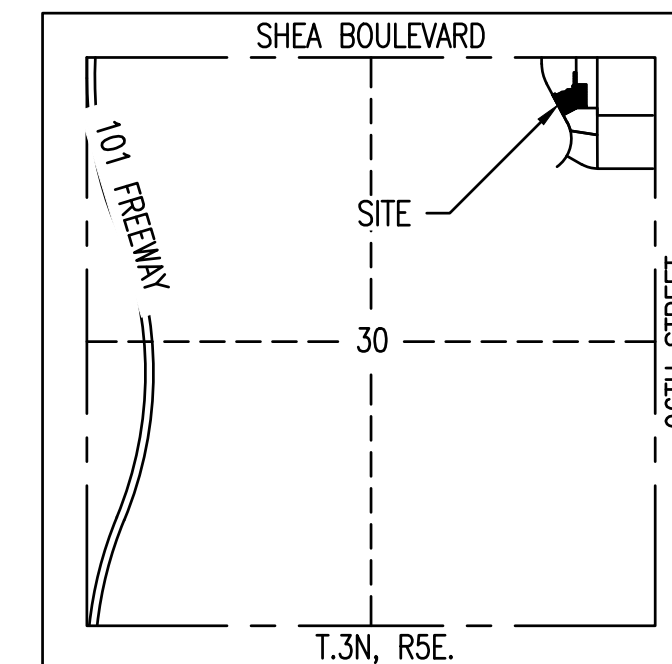
APPENDIX II.

Preliminary Utility Plan

MERCADO COURTYARD PRELIMINARY UTILITY PLAN

10301 N. 92ND STREET. SCOTTSDALE, AZ 85258

OWNER: 94 HUNDRED SHEA LLLP
APN: 217-36-001M



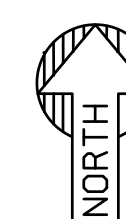
VICINITY MAP
N.T.S.

PRELIMINARY SEWER CONSTRUCTION KEY NOTES

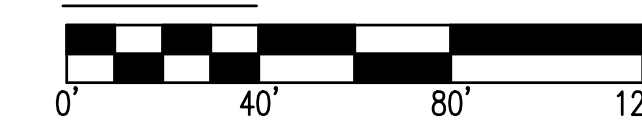
- 1 CONNECTION TO EXISTING SEWER MANHOLE.
- 2 6" PVC SEWER LINE. LENGTH AND SLOPE PER PLAN.
- 3 SEWER CONNECTION TO BUILDING.

PRELIMINARY WATER CONSTRUCTION KEY NOTES

- 1 CONTRACTOR TO VERIFY SIZE AND LOCATION OF EXISTING WATER LINE PRIOR TO CONSTRUCTION.
- 3 FURNISH AND INSTALL 10" X 8" CUT-IN TEE
- 3A FURNISH AND INSTALL 8" X 8" CUT-IN TEE
- 4 FURNISH AND INSTALL 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.
- 5 FURNISH AND INSTALL GATE VALVE WITH VALVE BOX PER MAG STD. DET. 391-1, TYPE "C" WITH LOCKING LID. SIZE PER PLAN.
- 6 FURNISH AND INSTALL 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.
- 6A FURNISH AND INSTALL 6" DUCTILE IRON PIPE, CLASS 350, WITH POLYETHYLENE WRAPPING. LENGTH PER PLAN.
- 7 INSTALL BEND WITH RESTRAINED JOINTS PER MAG 303. OR THRUST BLOCK PER MAG STD. DET. 303 & 380. SIZE AND ANGLE PER PLAN.
- 8 FURNISH AND INSTALL X" 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)
- 10 DOMESTIC CONNECTION TO BUILDING, REFER TO MEP PLAN FOR CONTINUATION.
- 12 FURNISH AND INSTALL REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY (RPPBA) PER C.O.S. STD. DET. 2354. SIZE TO MATCH WATER METER SIZE.



PLAN VIEW



SCALE: 1" = 40'

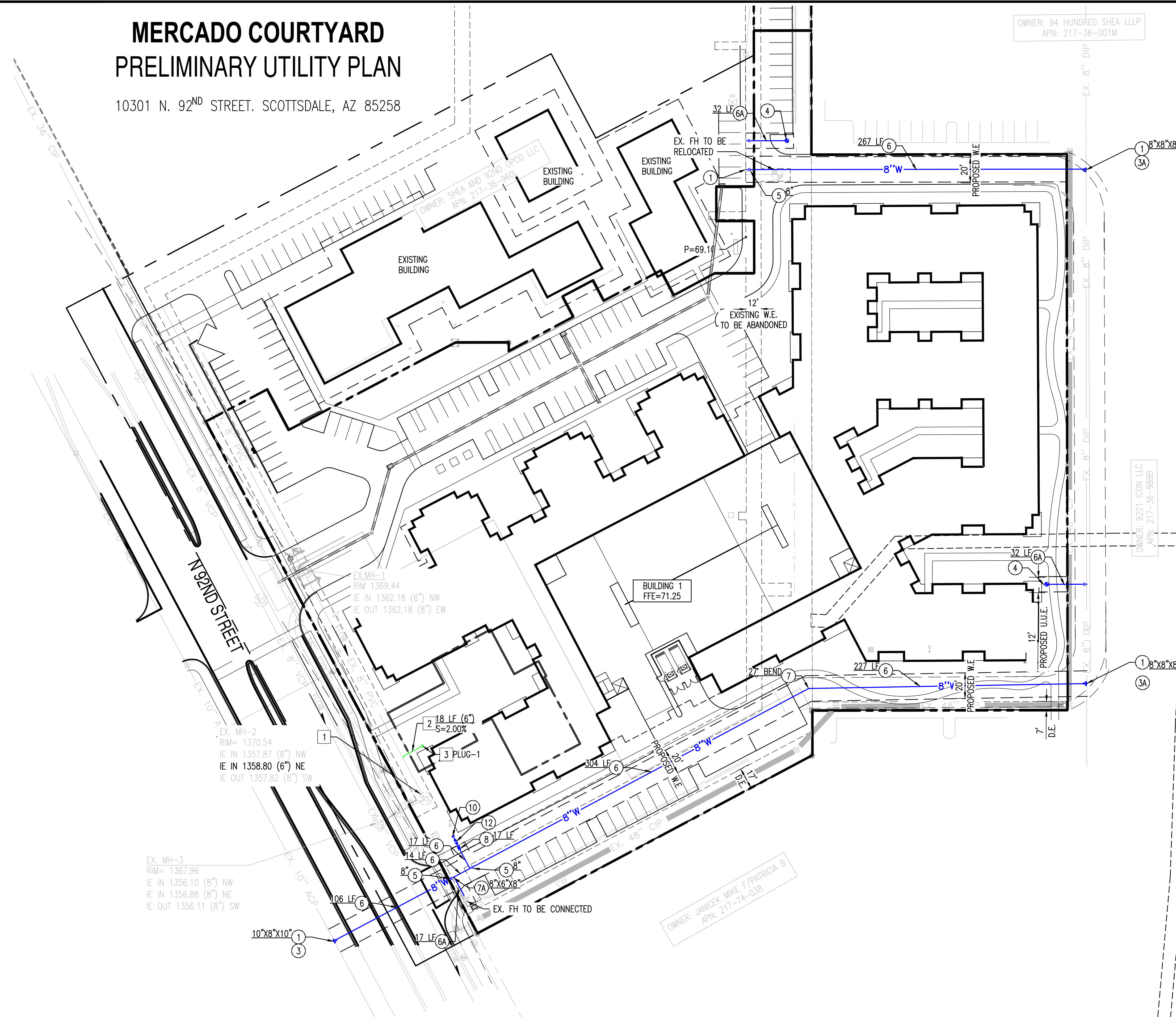
LOCATION: Z:\SHARED\PROJECTS\DAVIS GROUP\MOUNTAIN VIEW RESIDENTIAL - SCOTTSDALE - 92ND & SHEA - 210414\1 CAD (SEG)\11.3 ENTITLEMENT-PLANNING\210414-C4-00.DWG
DATE: 7/28/2022
SAVED BY: AMCG-LT12

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:

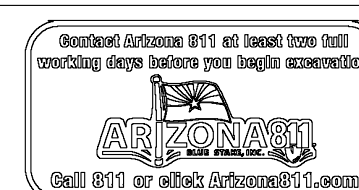
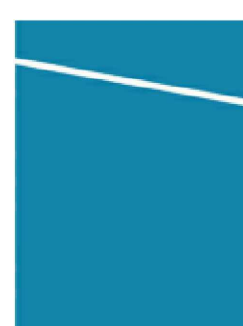
	PROPERTY LINE		FIRE HYDRANT		T.S.V.B.&C		BUILDING CONNECTION
	EASEMENT LINE		FDC		BACK FLOW PREVENTER		SEWER MANHOLE
	WATER LINE		WATER METER		REDUCER		SEWER CLEAN OUT
	SEWER LINE		GATE VALVE		CAP		



PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY
ENGINEERING
GROUP

SEG



PROJECT
MOUNTAIN VIEW RESIDENTIAL

LOCATION
92ND & SHEA,
SCOTTSDALE, AZ 85258

DRAWN: TM 07/28/2022
DESIGNED: TM 07/28/2022
QC: _____
FINAL QC: _____
PROJ. MGR: AF 07/28/2022

DATE: 07/28/2022

ISSUED FOR: ZONING

REVISION NO.: _____ DATE: _____

JOB NO.: 210414

SHEET TITLE:

PRELIMINARY
UTILITY PLAN

PAGE NO.:

SHEET NO.:

1 OF 1

C4.00

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8800 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL: 480.586.7226 FAX: 480.259.3534