

PRELIMINARY SEWER BASIS OF DESIGN REPORT

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

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 jcampa

DATE 2/12/2024

Prepared For:

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Project Number: 210414

Date Submitted: 01-09-2024 (Zoning)

Case No: 6-ZN-2021

Plan Check No.: TBD

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1. EXECUTIVE SUMMARY

Mercado Village 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 high-density residential facility with 255 units. The building will have a central at-grade parking garage and rise to three floors.

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 wastewater service from the City of Scottsdale by a 6" service connection to the existing 8" PVC sewer line fronting the site along in N. 92nd Street.

Onsite sewer improvements will only consist of the private service connection complying with the most recent City of Scottsdale and Maricopa County Environmental Services Department design standards and policies.

2. INTRODUCTION

2.1 PLAN OBJECTIVE:

The purpose of this report is to provide information and calculations supporting the sewer system design. Preparation of this report has been done in accordance with Chapter 7 of the City's design manual².

2.2 SITE LOCATION

The 6.06-acre subject property consists of four 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 PROPOSED DEVELOPMENT

Once cleared, the site will be graded and developed for a 3-story high-density residential building consisting of 255 units. The building will envelope an at grade parking structure and pool recreation area.

3. DESIGN DOCUMENTATION

3.1. DESIGN COMPLIANCE:

All sewer improvements will be designed and constructed to the most recent Plumbing Codes and the City of Scottsdale and MCESD design standards and policies.

3.2. SOFTWARE ACKNOWLEDGEMENT:

Sewer pipe capacity calculations utilize Bentley® FlowMaster® V8i (SELECTseries 1) software.

4. EXISTING INFRASTRUCTURE

4.1. EXISTING UTILITIES:

An 8" PVC sewer runs along the site's frontage to 92nd Street and an 8" VCP sewer parallels it under the northbound lane of 92nd Street. Refer to **FIGURE 4** for the City's Sewer Q-S Maps showing the local service area north of Via Linda. Coordination of all dry utility needs are being coordinated with the respective agencies.

4.2. SEWER FLOW MONITORING:

RDH Environmental monitored flows in an 8" pipe under 91st Street just north of Via Linda Drive from June 24 to July 7, 2021. This test will be updated and verified with the final reports submittal, The summary included in **APPENDIX IV** shows a maximum flow of 117.5 gpm and an average flow of 50.6 gpm. Velocities ranged from 1.3 fps to 3.0 fps with an average of 2.3 fps.

5. PROPOSED CONDITIONS

5.1. PROPOSED SEWER SYSTEM:

The 6" sewer service line will connect to an existing manhole located near the southwest of the site. All existing sewer service lines to the site will be removed and plugged per City requirements. Refer to **APPENDIX II** for the Preliminary Utility Plan.

5.2. MAINTENANCE RESPONSIBILITIES:

The onsite 6" sewer service will be private; owned, operated and maintained by the owner. All existing public sewers are located within rights-of-ways or dedicated easements and are maintained by the City.

5.3. SEWER DEMANDS:

Table 1: SEWER DEMANDS

	Avg. Day Demand (gpd)	Units	Peaking Factor
Office	0.4	Per sq. ft.	3.0
High Density Residential	140.0	Per Unit	4.5
Pool Backwash	144,000.0	Per Pool	n/a

Table 2: HISTORIC ONSITE SEWER DEMAND CALCULATIONS

	Area (sf)	Avg. Day Demand (gpm/sf)	Peaking Factor	Avg. Day Demand (gpd)	Avg. Day Demand (gpm)	Peak Demand (gpm)
Office	58,048	0.4	3.0	23,219	16.1	48.4
Office	14,480	0.4	3.0	5,792	4.0	12.1
Totals				29,011	20.1	60.4

Historic demand calculations are for reference only as the 2021 aerial does not show any cars in the parking lot, so the building is assumed not occupied.

Table 3: PROPOSED ONSITE SEWER DEMAND CALCULATIONS

	Units	Avg. Day Demand (gpm/unit)	Peaking Factor	Avg. Day Demand (gpd)	Avg. Day Demand (gpm)	Peak Demand (gpm)
Residential	255	140.00	4.5	35,700	24.8	111.6
Office	5,000	0.40	3.0	2,000	1.4	4.2
Pool Backwash	1	100.00	n/a	144,000	100.0	100.0
Totals				181,700	126.2	215.7

The above tables indicate the proposed high-density residential project will increase the historical average day flow to the 92nd Street sewer by 6.1 gpm (26.2 – 20.1) and peak flow demand by 55.3 gpm (115.7 – 60.4). Additionally, a 100-gpm pool backwash allowance is to be included in the capacity calculations.

5.4. VARIANCE FROM STATED DESIGN FLOWS:

No variance from the stated design flows is requested for this project.

5.5. SEWER CAPACITY CALCULATIONS

For comparative purposes, Table 4 represents the offsite sewer demand from only the shopping center to the north as evaluated using floor areas listed on the Maricopa County Assessor's Parcel Viewer site along with the DS+PM unit demands. The combined peak flow from just the shopping center is approximately 1 ½ times (177.8 gpm vs. 117.5 gpm) the flow monitored for the entire service area prior to connection with the 15" VCP in Via Linda Drive. The hydraulic calculations shown in **APPENDIX I** will use the monitored flow results plus the DS+PM calculated peak demand from Table 3 above with and without the pool backwash.

Table 4: EXISTING OFFSITE SEWER DEMAND CALCULATIONS (north of the site)

	Area (sf)	Avg. Day Demand (gpm/sf)	Peaking Factor	Avg. Day Demand (gpd)	Avg. Day Demand (gpm)	Peak Demand (gpm)
Commercial/Retail	83,108	0.5	3.0	41,554	28.9	86.6
Restaurant	18,245	1.2	6.0	21,894	15.2	91.2
			Totals	63,448	44.1	177.8

Table 5 shows the calculated DS+PM demands to be added to the monitored flow in the 8" pipe along 92nd Street.

Table 5: 92nd STREET SEWER HYDRAULICS

	Peak Demand (gpm)
Monitored Peak Flow	117.5
Proposed Marcado Site	115.7
Subtotal	233.2
Pool Backwash	100.0
Total	333.2

5.6. SEWER SYSTEM ANALYSIS:

APPENDIX III shows the proposed sewer hydraulic calculations for the 6" service line and the 8" VCP along 91st Street prior to connecting with the trunk line in Via Linda Drive.

The 6" service line will have sufficient capacity at 2% slope to convey the site's peak demand including the pool backwash.

The 8" VCP sewer line at 0.004'/' slope has sufficient capacity to convey the 229.1 gpm peak flow from the service area with a velocity of 2.3 fps and d/D = 0.60 which is below the City's d/D = 0.65 criteria. Adding a 100 gpm pool backwash increases the velocity to 2.5 fps with d/D = 0.79 which is below the City's d/D = 0.80 criteria for pipes with pool backwash included.

The 8" PVC pipe has a slope greater than 2% and therefore, has capacity.

6. SUMMARY

6.1. SUMMARY OF PROPOSED SEWER IMPROVEMENTS:

Sufficient city sewer capacity is available in the 8" PVC line adjacent to the site and south to the sewer trunk line in Via Linda Drive meet the proposed peak flow.

6.2. PROJECT SCHEDULE:

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

7. REFERENCES

1. COS QS number 28-50, 27-50 & 27-49
2. City of Scottsdale Design Standards & Policies Manual, 2018 (Chapter 7 – Sewer)

8. FIGURES

- | | | |
|----------|---|----------------|
| FIGURE 1 | - | Vicinity Map |
| FIGURE 2 | - | Aerial |
| FIGURE 3 | - | ALTA |
| FIGURE 4 | - | Sewer Q-S Maps |

9. APPENDICES

- | | | |
|--------------|---|-----------------------------|
| APPENDIX I | - | Site Plan |
| APPENDIX II | - | Preliminary Utility Plan |
| APPENDIX III | - | Pipe Hydraulic Calculations |
| APPENDIX IV | - | Flow Monitoring Results |

FIGURES

FIGURE I – Vicinity Map

FIGURE II – Aerial

FIGURE III – ALTA

FIGURE IV – Sewer Q-S Maps





**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.

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: 84-27709
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
RECORDED 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, AS SET FORTH IN THE DOCUMENT
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 ATTORNMENT 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 ATTORNMENT 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, DRAWN 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 0.1079 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.

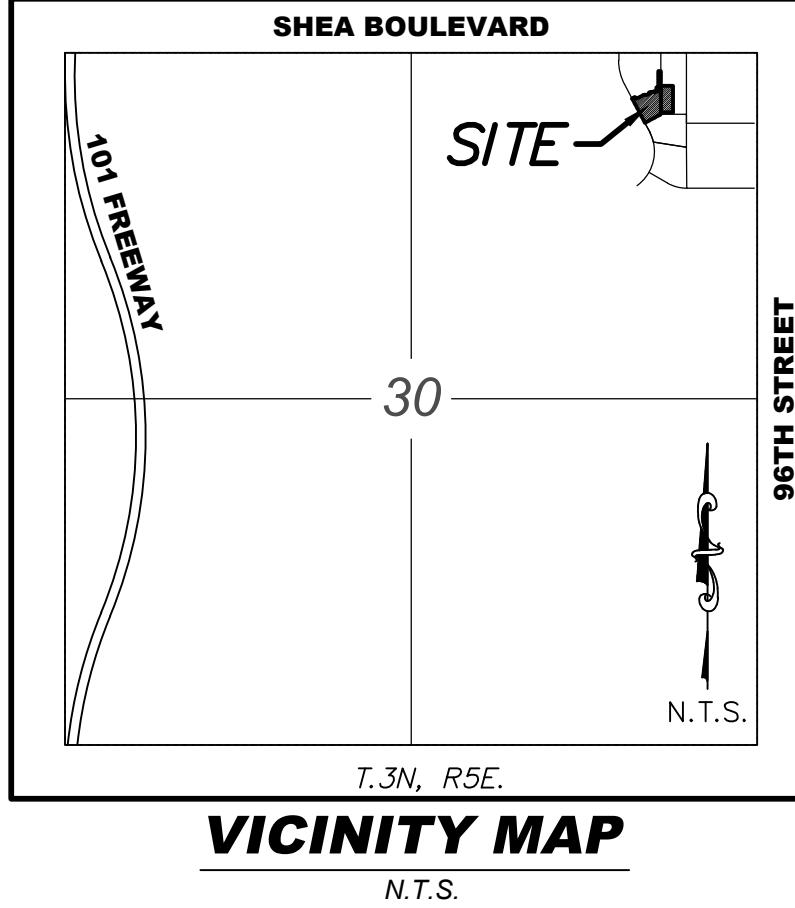
THIS IS TO CERTIFY THAT THIS MAP AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(A), 8, 9, 13, 16 AND 17 OF TABLE A THEREOF.

FIELD WORK WAS COMPLETED JUNE, 2014

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

DATE
13-186 ALTA 2/21

JOB NO. 13186
DRAWN: RMH
CHECKED: JAS
DATE: 3/29/21
SCALE: N.T.S.
SHEET: 1 OF 3

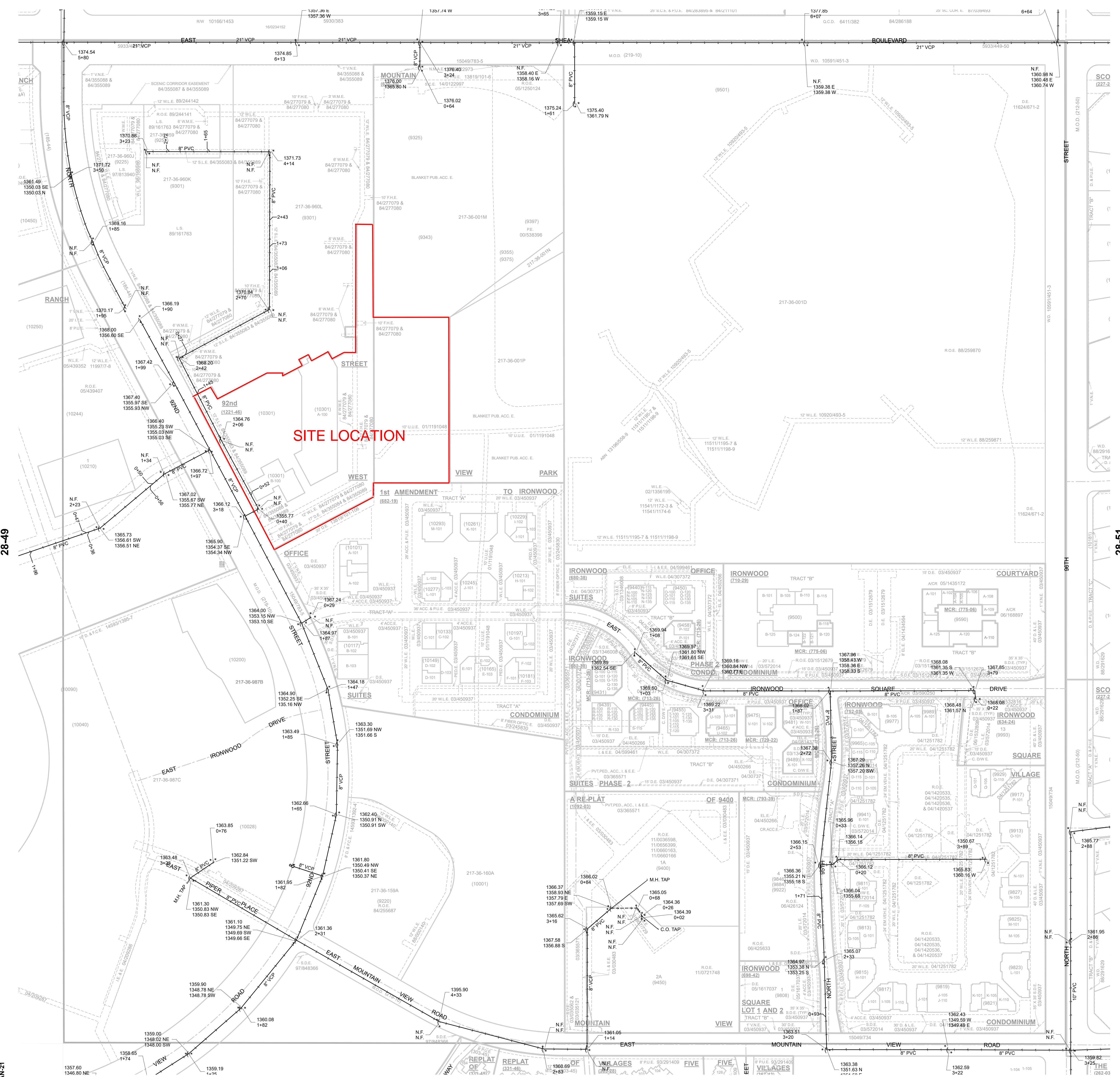


**ALTA/NSPS LAND TITLE SURVEY
92ND STREET WEST
SCOTTSDALE, ARIZONA**

22425 N. 16th St., Suite 1
Phoenix, Arizona 85024
Phone (480) 922-0780
Fax (480) 922-0781
www.sigsurveyaz.com

**SIG
SURVEY INNOVATION GROUP, INC.**
Land Surveying Services

FIGURE 3



GENERAL NOTES:
• THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE CITY OF SCOTTSDALE GIS DEPARTMENT AT (480) 312-7792.
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LEGEND:

- Cleanout
- Lift Station
- Manhole
- Non-GPS Point
- Plug
- Sewer Service Point
- Sewer Tap Point
- Sewer Valve
- Treatment Plant
- Sewer Main - Gravity
- Sewer Main - Force
- Sewer Main - Private

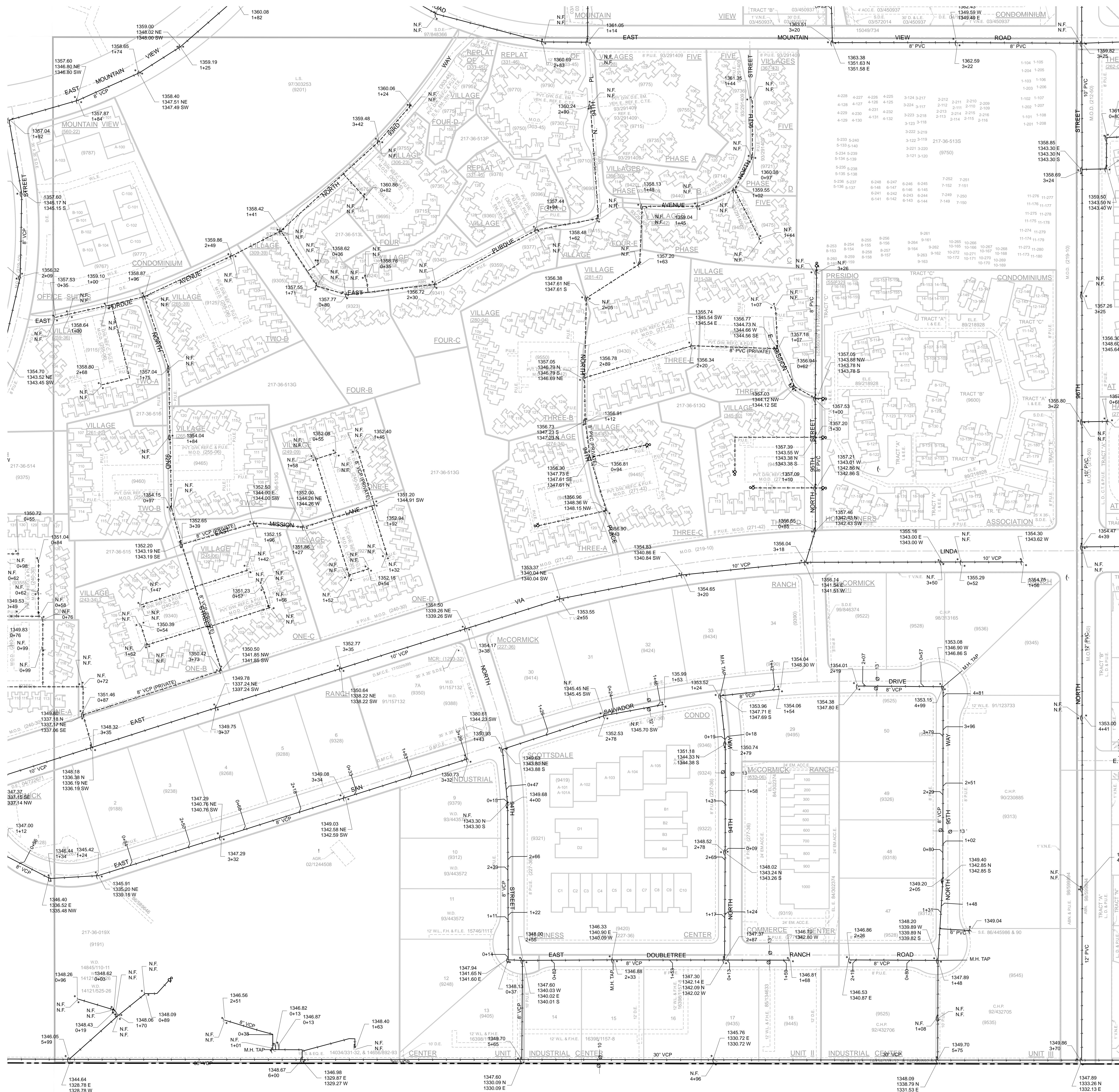
28-50

27-49

26-50

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THE CITY OF SCOTTSDALE



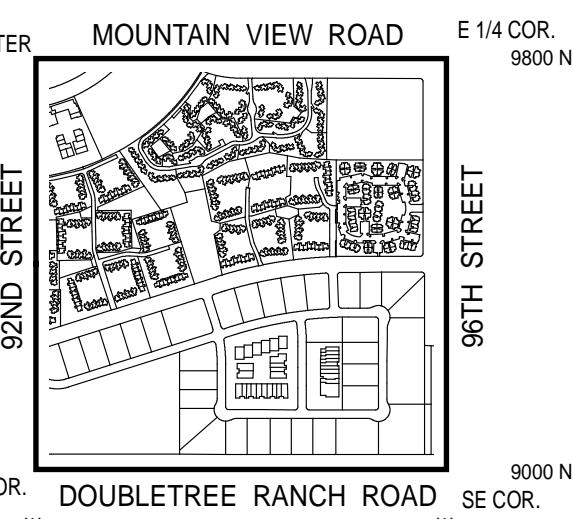
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DIMENSIONS ARE GIVEN TO CALCULATED SECTION
CORNERS AND ARE NOTED AS 'CALCULATED' ON THE MAP.

LEGEND:

- | | |
|---------------------|-----------------------------|
| eanout | ! |
| t Station |) _{LS} |
| anhole | (_S _S |
| n-GPS Point | , |
| ug | & |
| ewer Service Point | " |
| ewer Tap Point | ! |
| ewer Valve | O |
| reatment Plant | D |
| ewer Main - Gravity | — 1 — 1 — |
| ewer Main - Force | — Force — |
| ewer Main - Private | — 1 — — 1 — |

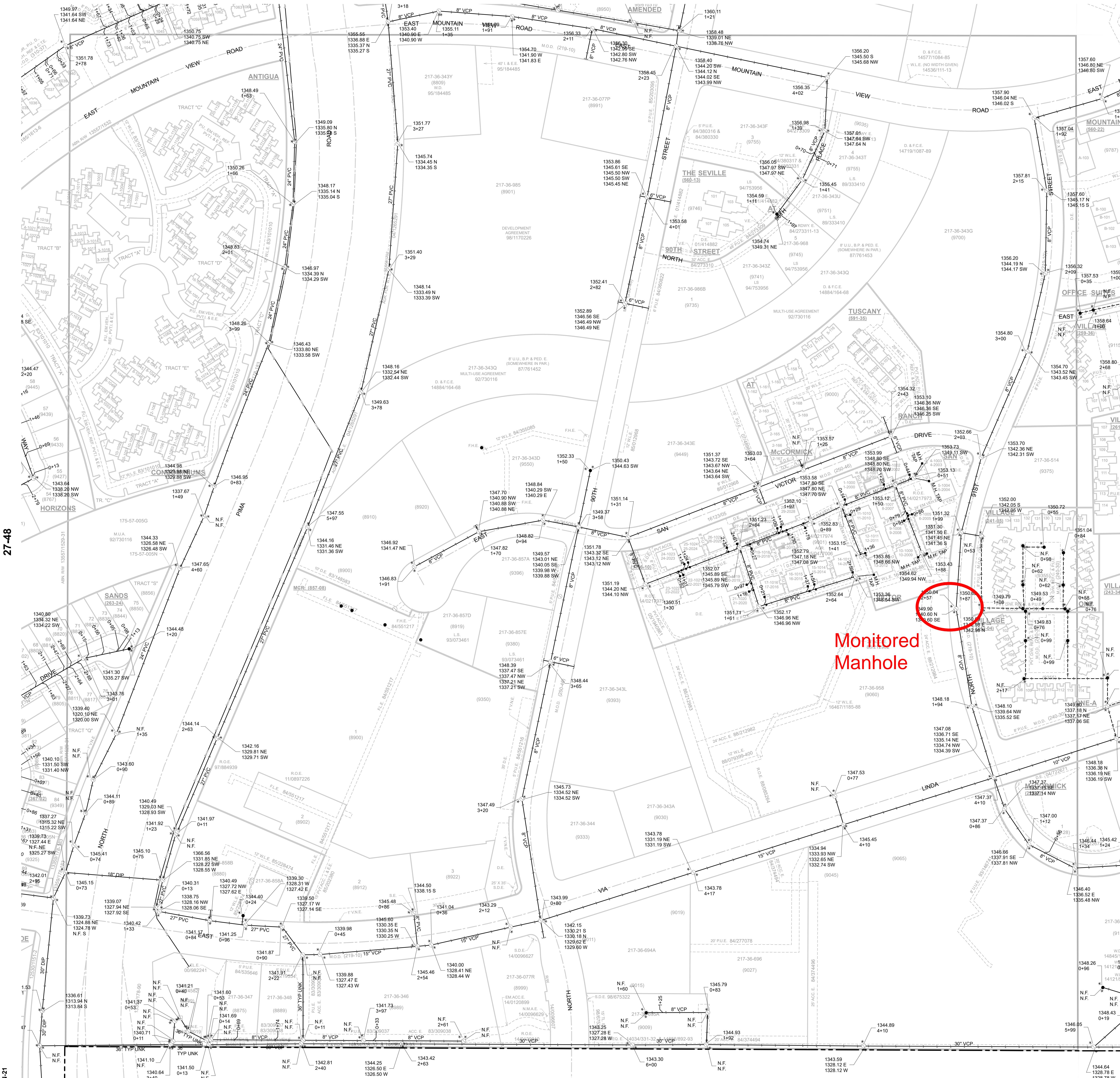
VICINITY MA



A scale bar diagram consisting of a horizontal line with tick marks. The first two tick marks are black, and the remaining tick marks are white. Below the line, numerical values 50, 100, and 200 are placed under the first, second, and fourth black tick marks respectively. The text "SCALE: 1\" data-bbox="106 78 490 110" style="font-size: 1.5em; font-weight: bold;">" is at the top left, and "in" data-bbox="106 110 490 140" style="font-size: 0.8em; margin-left: 10px;">is at the top right.

**SEWER
QUARTER SECTION MAP
27-50
SE 1/4 SEC. 30 T3N R5E**

FIGURE 4

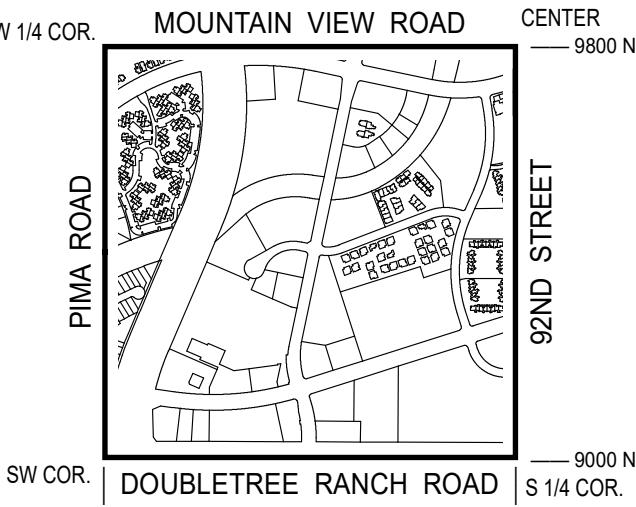


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LEGEND:

Cleanout	●
Lift Station	■
Manhole	○
Non-GPS Point	△
Plug	■
Sewer Service Point	□
Sewer Tap Point	●
Sewer Valve	○
Treatment Plant	■
Sewer Main - Gravity	—
Sewer Main - Force	—
Sewer Main - Private	—

VICINITY MAP



NORTH

SCALE: 1" = 100'
0 50 100 200

The map scale of "1" = 100' is based on a full size print of 30" x 36"

SEWER QUARTER SECTION MAP

27-49

SW 1/4 SEC. 30 T3N R5E

FIGURE 4

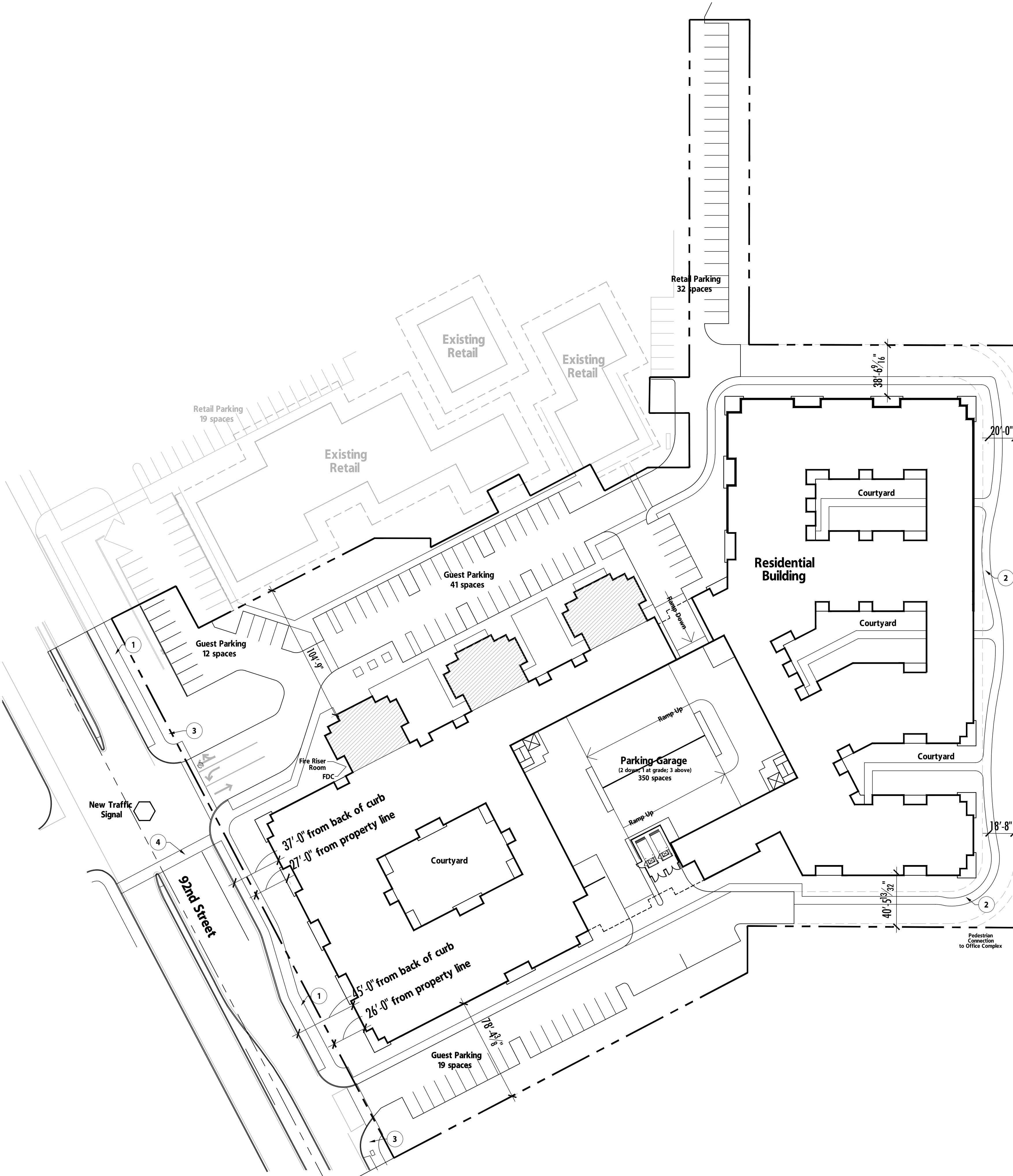
APPENDICIES

APPENDIX I – Site Plan

APPENDIX II – Preliminary Utility Plan

APPENDIX III – Pipe Hydraulic Calculations

APPENDIX IV – 91st St. Manhole Monitoring



MERCADO VILLAGE- Scottsdale, Arizona

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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

10' 40' 80' 120' 160'



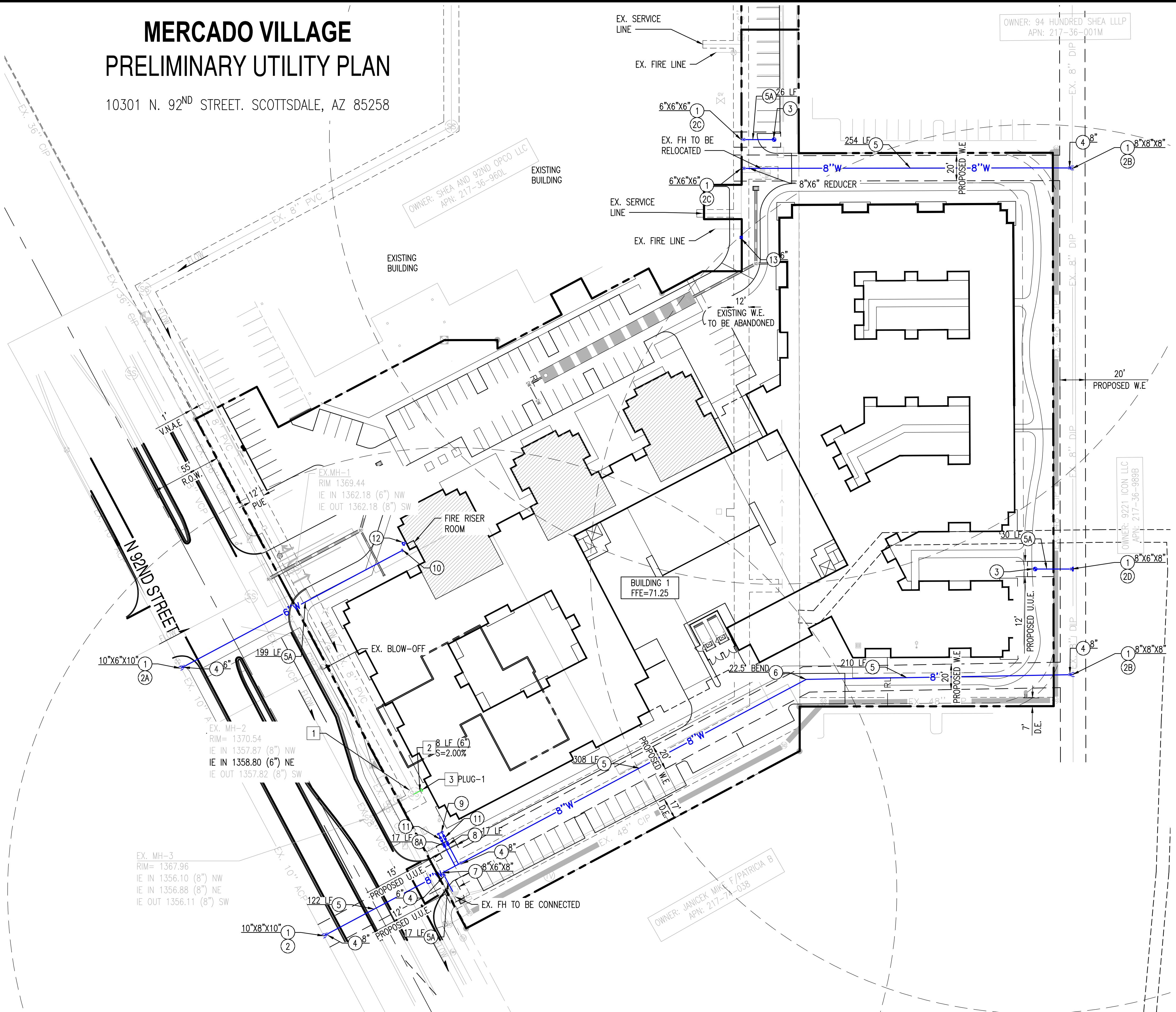
20157- 12-13-23

MERCADO VILLAGE PRELIMINARY UTILITY PLAN

10301 N. 92ND STREET, SCOTTSDALE, AZ 85258

LOCATION: Z:\SHARED\PROJECTS\DAVIS GROUP\MOUNTAIN VIEW RESIDENTIAL - SCOTTSDALE - 92ND & SHEA - 210414\11 CAO (SEG)\11.3 ENTITLEMENT-PLANNING\210414-C4.00.DWG

SAVED BY: AMCG LT16 DATE: 1/11/2024



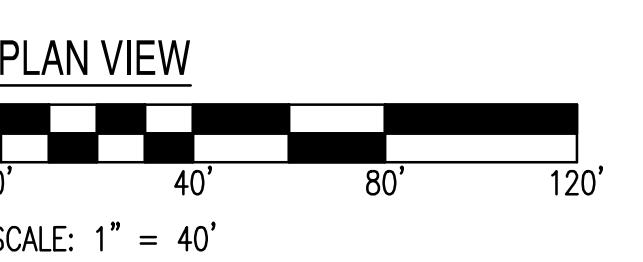
EXISTING LEGEND:

CENTERLINE	EX. S	SEWER LINE	STORM DRAIN LINE	SIGN
EASEMENT LINE AS NOTED	(5)	SEWER MANHOLE	STORM CATCH BASIN	CB
CHAINLINK FENCE	EX. W	WATER LINE	STORM MANHOLE	○
TREE	WV (X)	WATER VALVE	GAS	F.O.
			GAS LINE	
			IRRIGATION LINE	

PROPOSED UTILITY LEGEND:

PROPERTY LINE	EASEMENT LINE	FIRE HYDRANT SPACING	GATE VALVE	CAP
			○	□
			●	△
			■	○
8" W	WATER LINE	FIRE HYDRANT	TSV.B&C	BUILDING CONNECTION
8" S	SEWER LINE	FDC	○	SEWER MANHOLE
		WATER METER	○	SEWER CLEAN OUT
			▲	
			◆	

APPENDIX II



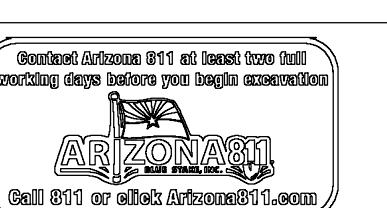
PRELIMINARY
NOT FOR
CONSTRUCTION

SUSTAINABILITY
ENGINEERING
GROUP



5240 N. 16TH STREET SUITE 105, PHOENIX, ARIZONA 85016
WWW.AZSEG.COM TEL: 480.388.7226 FAX: 480.259.3534

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PROJECT	LOCATION
MERCADO VILLAGE	92ND & SHEA, AZ 85258
DRAWN	J.C. 01/09/2024
DESIGNED	J.C. 01/09/2024
QC	S.C. 01/09/2024
FINAL QC	
PROJ. MGR.	A.F. 01/09/2024
DATE:	01/09/2024
ISSUED FOR:	ZONING
REVISION NO.:	
JOB NO.:	210414
SHEET TITLE:	PRELIMINARY UTILITY PLAN
PAGE NO.:	1 OF 1
SHEET NO.:	C4.00

Mercado Courtyard - Pipe Hydraulics
December 21, 2023
6" Service Pipe at 2% - Peak Flow w/o Pool Backwash

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.020 ft/ft
Diameter	6.0 in
Discharge	115.70 gpm

Results

Normal Depth	2.35 in
Flow Area	0.1 ft ²
Wetted Perimeter	0.7 ft
Hydraulic Radius	1.27 in
Top Width	0.49 ft
Critical Depth	3.07 in
Percent Full	39.2 %
Critical Slope	0.008 ft/ft
Velocity	3.61 ft/s
Velocity Head	0.20 ft
Specific Energy	0.40 ft
Froude Number	1.667
Maximum Discharge	383.10 gpm
Discharge Full	356.14 gpm
Slope Full	0.002 ft/ft
Flow Type	Supercritical

APPENDIX III -
Hydraulic Calcs

6" Service Pipe at 2% - Peak Flow with Pool Backwash

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.013
Channel Slope	0.020 ft/ft
Diameter	6.0 in
Discharge	215.70 gpm
Results	
Normal Depth	3.37 in
Flow Area	0.1 ft ²
Wetted Perimeter	0.8 ft
Hydraulic Radius	1.61 in
Top Width	0.50 ft
Critical Depth	4.24 in
Percent Full	56.2 %
Critical Slope	0.010 ft/ft
Velocity	4.23 ft/s
Velocity Head	0.28 ft
Specific Energy	0.56 ft
Froude Number	1.560
Maximum Discharge	383.10 gpm
Discharge Full	356.14 gpm
Slope Full	0.007 ft/ft
Flow Type	Supercritical

APPENDIX III -

Hydraulic Calcs

6" Service Pipe at 2% - Full Flow Capacity

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.013
Channel Slope	0.02000 ft/ft
Normal Depth	6.00 in
Diameter	6.0 in
Discharge	356.1 gpm

Results

Discharge	356.1 gpm
Normal Depth	6.00 in
Flow Area	0.20 ft ²
Wetted Perimeter	1.57 ft
Hydraulic Radius	1.50 in
Top Width	0.0 in
Critical Depth	5.31 in
Percent Full	100.0 %
Critical Slope	0.01788 ft/ft
Velocity	4.04 ft/s
Velocity Head	0.25 ft
Specific Energy	0.75 ft
Froude Number	0.00
Maximum Discharge	383.1 gpm
Discharge Full	356.1 gal/min
Slope Full	0.02000 ft/ft
Flow Type	SubCritical

APPENDIX III -

Hydraulic Calcs

8" 92nd Street Pipe at 0.4% - Peak Flow w/o Pool Backwash

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.004 ft/ft
Diameter	8.0 in
Discharge	233.20 gpm

Results

Normal Depth	4.84 in
Flow Area	0.2 ft ²
Wetted Perimeter	1.2 ft
Hydraulic Radius	2.23 in
Top Width	0.65 ft
Critical Depth	4.05 in
Percent Full	60.5 %
Critical Slope	0.007 ft/ft
Velocity	2.35 ft/s
Velocity Head	0.09 ft
Specific Energy	0.49 ft
Froude Number	0.713
Maximum Discharge	368.98 gpm
Discharge Full	343.01 gpm
Slope Full	0.002 ft/ft
Flow Type	Subcritical

APPENDIX III - Hydraulic Calcs

8" 92nd Street Pipe at 0.4% - Peak Flow with Pool Backwash

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.004 ft/ft
Diameter	8.0 in
Discharge	333.20 gpm

Results

Normal Depth	6.36 in
Flow Area	0.3 ft ²
Wetted Perimeter	1.5 ft
Hydraulic Radius	2.43 in
Top Width	0.54 ft
Critical Depth	4.89 in
Percent Full	79.5 %
Critical Slope	0.008 ft/ft
Velocity	2.49 ft/s
Velocity Head	0.10 ft
Specific Energy	0.63 ft
Froude Number	0.591
Maximum Discharge	368.98 gpm
Discharge Full	343.01 gpm
Slope Full	0.004 ft/ft
Flow Type	Subcritical

APPENDIX III -

Hydraulic Calcs



SL1122 RDH Flow Study Sprouts Plaza

Ali Fakih
Sustainability Engineering Group
8280 E Gelding Dr., Suite 101, Scottsdale AZ 85260

SL1122 RDH Flow Study, 1 site in Scottsdale, AZ Thursday, 06-24-21 to Wednesday 07-07-21.

Equipment for Site: Hach 901 Logger with Flo-Dar Sensor (Area Velocity).

The equipment was installed on 6/24/21 with confined space entry, pipe size confirmed, sensor calibrated with 10-inch target and level depth confirmed to the flow level.

Duration of monitoring: 9-days including two weekends.

Monitor: Flow (gpm), Level (in), and Velocity (fps)

Data logging: 5 minutes intervals (No averaged intervals)

Manhole located on North 91st St., off E. Via Linda

60" Diameter, Rim to Invert: 115.00 inches

8" VCP pipe, flowing south

The pipe condition was intact and in good shape

Scum line of 2.75 inches

Flo-Dar installed pointing upstream in the 8" pipe channel

Flow data is valid having no missing, erroneous, or anomalies with data.

Attached is a summary showing Level, Velocity and Flow, and raw data in Excel, logged at 5-minute intervals, during the monitoring period.

RDH Environmental Services

Theresa Hayes

General Manager

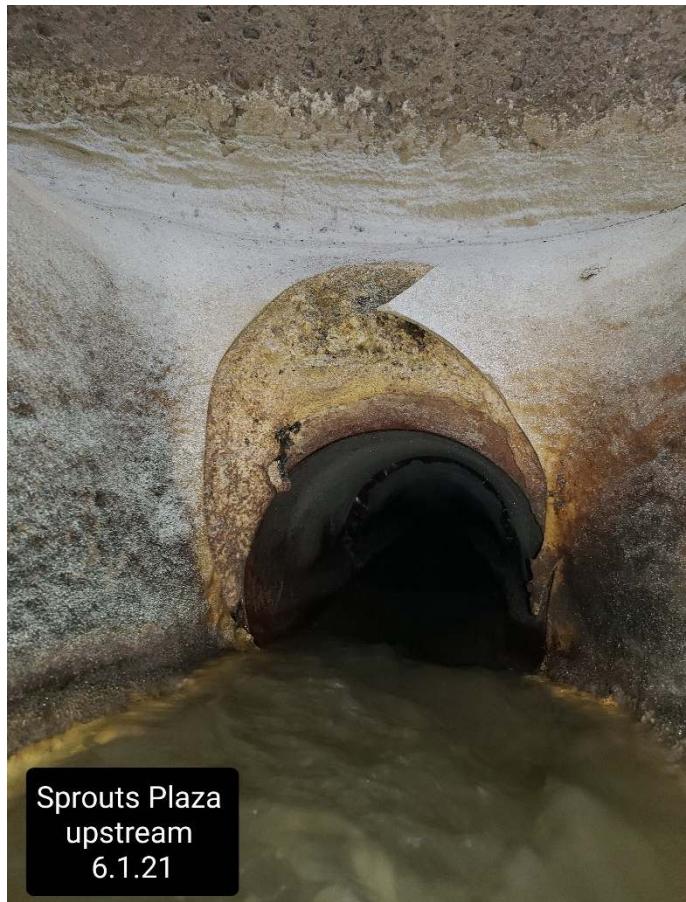
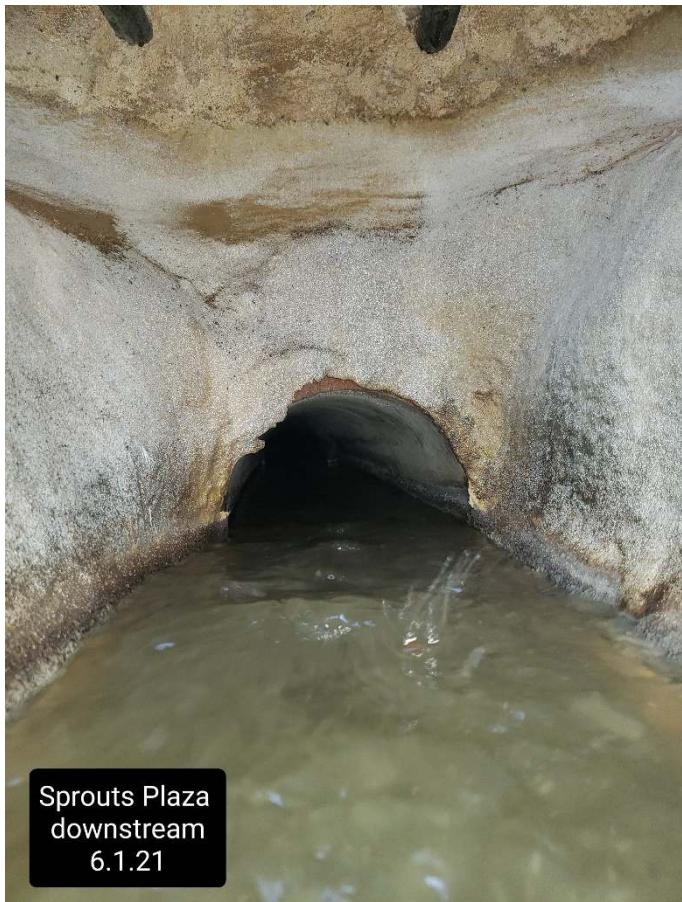
gm@rdh-env.com

APPENDIX IV



SL1122 RDH Flow Study Sprouts Plaza

Pictures:





SL1122 RDH Flow Study Sprouts Plaza

Period Summaries:

Sprouts Plaza Period Summary: Flow				
Measures	Value	Unit	Date	Time
Max.	117.45	gpm	Wednesday, June 30, 2021	12:30 PM
Min.	17.70	gpm	Friday, June 25, 2021	5:30 AM
Avg.	50.61	gpm		
Total	935,340.90	gal		

Sprouts Plaza Period Summary: Level				
Measures	Value	Unit	Date	Time
Max.	2.52	in.	Wednesday, June 30, 2021	12:25 PM
Min.	1.01	in.	Saturday, July 3, 2021	1:15 AM
Avg.	1.57	in.		

Sprouts Plaza Period Summary: Velocity				
Measures	Value	Unit	Date	Time
Max.	3.01	fps.	Wednesday, June 30, 2021	2:40 PM
Min.	1.26	fps.	Friday, July 2, 2021	12:05 AM
Avg.	2.25	fps.		