


**PRELIMINARY WASTEWATER DISTRIBUTION SYSTEM
BASIS OF DESIGN REPORT**

PRELIMINARY Basis of Design Report <input type="checkbox"/> ACCEPTED <input checked="" type="checkbox"/> ACCEPTED AS NOTED <input type="checkbox"/> REVISE AND RESUBMIT	 <p>CITY OF SCOTTSDALE SCOTTSDALE WATER 9379 E San Salvador Dr. Scottsdale, AZ 85268</p>
<p>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.</p>	
BY Idillon	DATE 7/1/2021

FOR

Palo on 75th

3961 N. 75th Street

Scottsdale, Arizona

May 9, 2021



Prepared for

DE MIRANDA LUX LLC
8325 E WETHERSFIELD RD
SCOTTSDALE, AZ 85260
Robert Miranda

- 1.) Stipulation: New 6" sewer service required per MAG 440-3
- 2.) Stipulation: Onsite sewer line will be private and within private drive
- 3.) Provide utility plan with final BOD showing private sewer, unit connections and connection to 6" primary private service line and public sewer . DSPM 7-1.201&202

JACOBS WALLACE, LLC
ENGINEERING PLANNING MANAGEMENT

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JACOBS WALLACE, LLC
ENGINEERING PLANNING MANAGEMENT

INTRODUCTION

The proposed project consists of a multi-story multi-family building and associated site improvements. There is an existing building located on the lot currently that will be demolished. There currently is no retention provided and the site drains to the north and south with a small portion of the roof draining to the west.

The 0.22-acre site is located at the southeast corner of 75th St and McKnight Ave at 3961 N 75th Street. The site is bordered to the north by McKnight Ave, to the west by 75th St., to the south by existing multifamily development and to the east by commercial development.

The site lies within the Northwest Quarter of Section 26, Township 2 North, Range 4 East of Gila and Salt River Base and Meridian. See the Appendix for a vicinity map.

EXISTING CONDITIONS

There is an existing 8" VCP sewer main within the alley located on the south side of this property that will be utilized for this project.

PROPOSED CONDITIONS

The proposed project will install a new 6" private sewer to service the project. There will be a new 6" sewer connection made to the existing 8" VCP sewer on the south side within the alley. The new private 6" line serving the project will be installed at 1% minimum slope. The existing service to the property will be capped and abandoned ← **at the property line**

The private sewer line construction and design will conform to Uniform Plumbing Code.

WASTEWATER ANALYSIS

Residential: 6 units

Unit Daily Flows:

Residential: 140 gpd/unit

Average Daily Flow:

Residential: 6 units * 140 gpd/unit=840 gpd

Peak Daily Flow:

840 gpd * 4.5= **3,780 gpd = 2.625 gpm**

SUMMARY

A 6" line with a slope of 1.0% flowing at 75% full carries 229 gpm with a velocity of 3.2 fps. A 6" line carrying 2.625 gpm flows with a velocity of 0.912 fps. See attached calculations in the Appendix. These parameters fall within acceptable ranges as set forth in the City of Scottsdale guidelines.

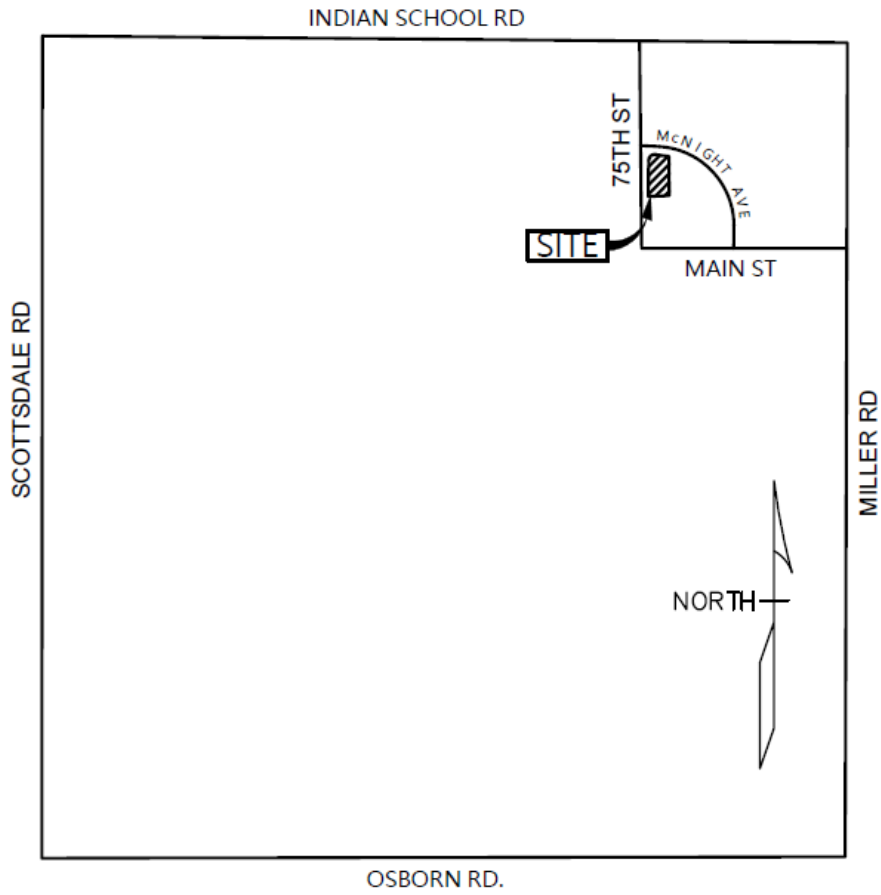
yes

at the property line

private 6" onsite building sewer in private drive

APPENDIX

Vicinity Map



VICINITY MAP

Calculations

JACOBS WALLACE, LLC
ENGINEERING PLANNING MANAGEMENT

Palo on 75th

75% full

Set units: m mm ft in [\[Hide this line\]](#)

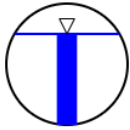
Inputs

Pipe diameter, d_0	6	in	X
Manning roughness, n	0.013		X
Pressure slope (possibly ? equal to pipe slope), S_0	1	% rise/run	X
Percent of (or ratio to) full depth (100% or 1 if flowing full)	75	%	X

Results

Flow, Q (See notes)	229.6187	gpm	X
Velocity, v	3.2389	ft/sec	X
Velocity head, h_v	1.9565	in H2O	X
Flow area	22.7467	sq. in.	X
Wetted perimeter	12.5664	in	X
Hydraulic radius	1.8101	in	X
Top width, T	5.1962	in	X
Froude number, F	0.95		X
Shear stress (tractive force), τ	4.5085	N/m ²	X

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Palo on 75th

Design

Set units: m mm ft in [\[Hide this line\]](#)

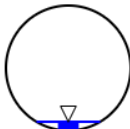
Inputs

Pipe diameter, d_0	6	in	X
Manning roughness, n	0.013		X
Pressure slope (possibly ? equal to pipe slope), S_0	1	% rise/run	X
Percent of (or ratio to) full depth (100% or 1 if flowing full)	71	%	X

Results

Flow, Q (See notes)	2.4750	gpm	X
Velocity, v	0.9127	ft/sec	X
Velocity head, h_v	0.1554	in H2O	X
Flow area	0.8701	sq. in.	X
Wetted perimeter	3.2132	in	X
Hydraulic radius	0.2708	in	X
Top width, T	3.0618	in	X
Froude number, F	1.05		X
Shear stress (tractive force), τ	0.6744	N/m ²	X

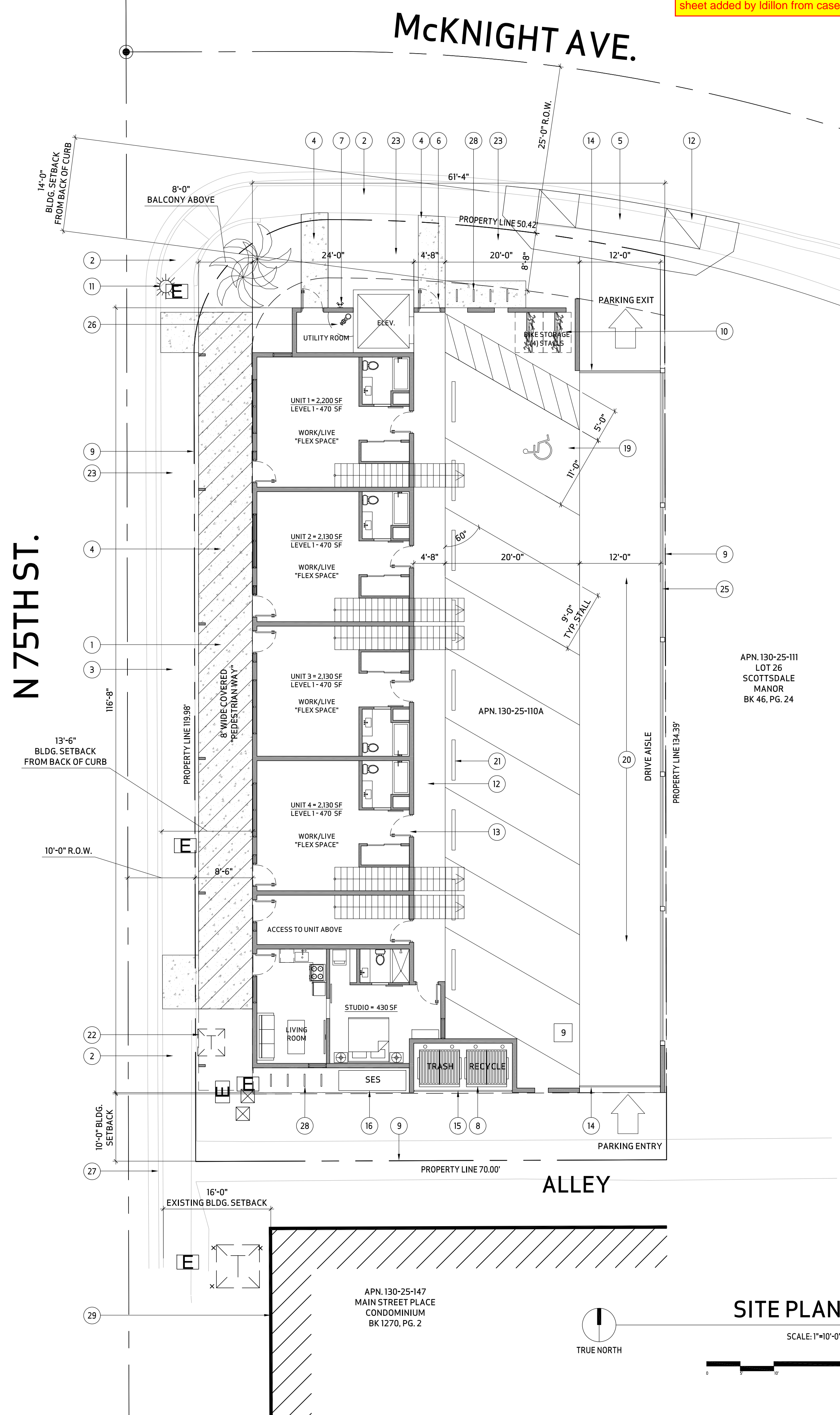
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Aerial Map



sheet added by Idillon from case file



GENERAL NOTES:

- A. KNOX BOX WILL BE REQUIRED FOR FIRE DEPARTMENT EMERGENCY ACCESS KEYS. LOCATION OF BOX TO BE DETERMINED WITH FIRE INSPECTOR APPROVAL.
- B. SLOPE ALL SIDEWALKS AWAY FROM BUILDING MINIMUM 1% AND NOT TO EXCEED 2% MAXIMUM.
- C. PROVIDE FIRE LANE SIGNAGE AT LOCATIONS REQUIRED BY THE FIRE MARSHALL AND FILED INSPECTOR.
- D. LANDSCAPE LIGHTING NOT SHOWN ON ELECTRICAL SITE LIGHTING PLAN. LANDSCAPE LIGHTING AND CONTROLS WILL BE INCORPORATED INTO THE DESIGN USED AS ACCENT LIGHTING.

KEY NOTES:

- 1. NEW COVERED PEDESTRIAN WAY.
- 2. EXISTING SIDEWALK TO REMAIN.
- 3. EXISTING SIDEWALK TO BE REMOVED - REPLACE WITH NEW LANDSCAPING.
- 4. NEW CONCRETE SIDEWALK.
- 5. NEW DRIVEWAY. SEE CIVIL FOR MORE INFORMATION.
- 6. GATE / DOOR.
- 7. LOCATION OF F.D.C.
- 8. TRASH / RECYCLING ENCLOSURE WITH CONCRETE PAD.
- 9. PROPERTY LINE
- 10. SECURED BICYCLE RACK.
- 11. EXISTING STREET LIGHT TO REMAIN.
- 12. SITE VISIBILITY TRIANGLE.
- 13. UNIT ENTRY DOOR.
- 14. ELECTRIC ROLL UP GATE.
- 15. ROLL UP GATE TO SCREEN TRASH.
- 16. S.E.S. LOCATION.
- 17. ASPHALT PAVING.
- 18. ROOF AND OVERFLOW DRAIN TO DISCHARGE ONTO PAVING.
- 19. ADA PARKING AND ACCESSIBLE AISLE.
- 20. PAVED PARKING STALLS AND DRIVE AISLE WITH CONCRETE.
- 21. PARKING STOP. TYPICAL.
- 22. EXISTING ELECTRICAL TRANSFORMER.
- 23. NEW GRADE PLANTER. SEE LANDSCAPE PLAN.
- 24. EXISTING FIRE HYDRANT TO REMAIN.
- 25. STEEL MESH SCREEN.
- 26. FIRE RISER LOCATION.
- 27. EXISTING CURB AND ENTRY DRIVEWAY TO REMAIN.
- 28. BICYCLE RACK PER CITY OF SCOTTSDALE STANDARD DETAIL.
- 29. EXISTING BLDG. - APN 130-25-147

* PEDESTRIAN WAY: PROVIDED PER CITY OF SCOTTSDALE DESIGN STANDARDS AND POLICY MANUAL 5-8.200.

APN. 130-25-111
LOT 26
SCOTTSDALE
MANOR
BK 46, PG. 24

APN. 130-25-110A

APN. 130-25-147

SITE PLAN

SCALE: 1"=10'-0"

CODE REVIEW

AUTHORITY	CITY OF SCOTTSDALE, ARIZONA
CODE	2012 INTERNATIONAL BUILDING CODE W/AMENDMENTS 2012 INTERNATIONAL FIRE CODE 2012 INTERNATIONAL MECHANICAL CODE 2012 INTERNATIONAL PLUMBING CODE 2011 NATIONAL ELECTRICAL CODE 2006 INTERNATIONAL CONSERVATION CODE
OCCUPANCY	R-2
CONSTRUCTION TYPE	V-B

PROJECT TEAM

OWNER:	DE MIRANDA LUX, LLC 3961 N. 75TH STREET SCOTTSDALE AZ, 85251 CONTACT: ROBERT MIRANDA PHONE: 602.326.4351
ARCHITECT:	TOMECAK DESIGN 4368 NORTH CIVIC CENTER PLAZA SUITE 201 SCOTTSDALE, ARIZONA 85251 CONTACT: MARK TOMCEK PHONE: 602.619.7751
CIVIL ENGINEER:	JACOBS WALLACE, LLC 2233 WEST BETHANY HOME ROAD PHOENIX, ARIZONA 85015 CONTACT: CHUCK JACOBS PHONE: 602.757.5964
LANDSCAPE ARCHITECT:	T.J. MCQUEEN 8433 EAST CHOLLA STREET SCOTTSDALE, ARIZONA 85260 CONTACT: TIM MCQUEEN PHONE: 602.266.6619
ELECTRICAL ENGINEER:	RLM DESIGN, LLC 820 SOUTH BRIDGER DRIVE CHANDLER, ARIZONA 85225 CONTACT: BOBBY MARIN PHONE: 602.741.047

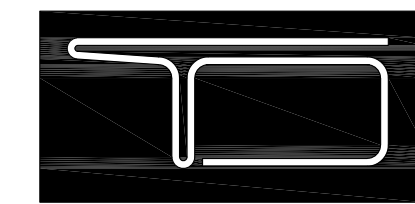
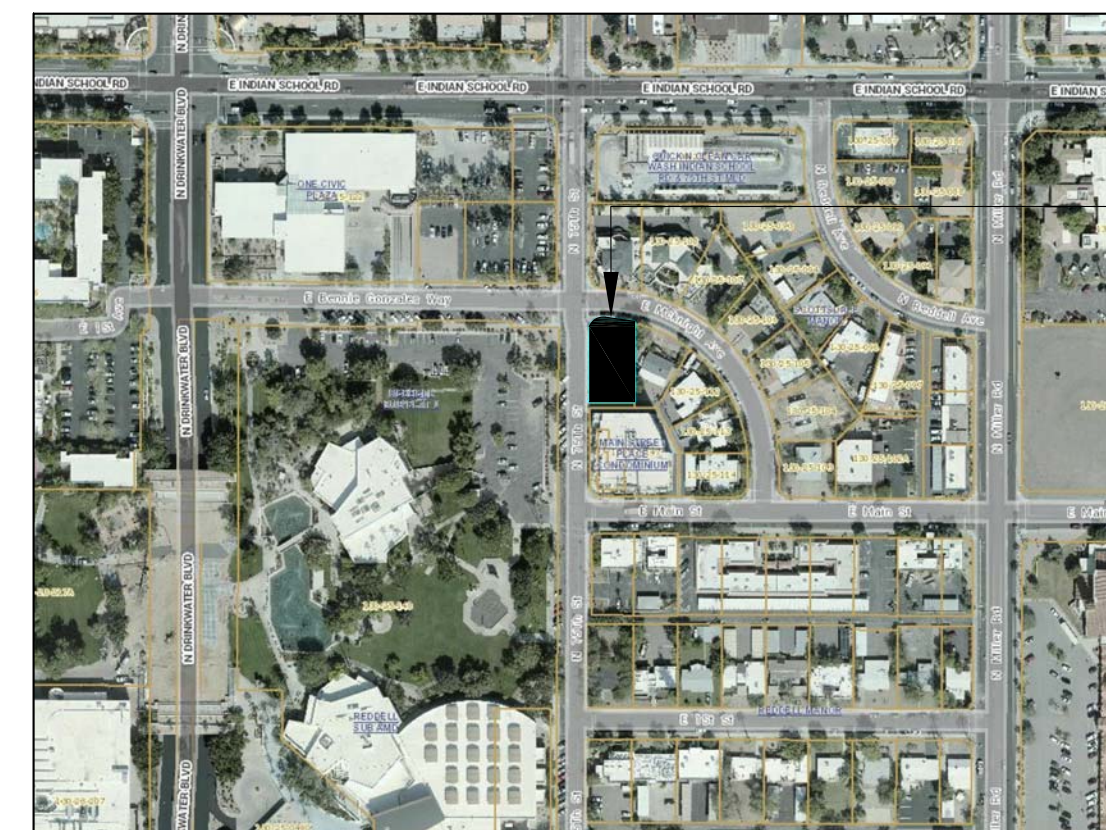
PROJECT INFORMATION

PROJECT NAME:	PALO ON 75TH	BUILDING HEIGHT:	ALLOWED: 66'-0" HIGH PROPOSED: 38'-0" HIGH
ADDRESS:	3961 N. 75TH STREET SCOTTSDALE AZ, 85251	ALLOWABLE AREA:	9,500 SF PER FLOOR 300% INCREASE FOR SPRINKLERS (PER STORY) 28,500 SF
APN:	130-25-110A	TOTAL AREA ALLOWED:	50 DWELLING UNITS PER ACRE 6 DWELLING UNITS
ZONING:	DOWNTOWN MIXED-USE	PROPERTY DENSITY:	ALLOWABLE: 50 DWELLING UNITS PER ACRE PROPOSED: 6 DWELLING UNITS
GROSS SITE AREA:	13,117.69 SF (0.30 ACRES)	BUILDING SETBACKS:	FRONT SETBACK: 14'-0" (FROM MCKNIGHT AVE. BACK OF CURB) FRONT SETBACK: 13'-6" (FROM 75TH ST. BACK OF CURB) SIDE SETBACK: 0'-0" REAR SETBACK: 10'-0" (FROM CENTERLINE OF ALLEY)
NET SITE AREA:	9,622.82 SF (0.22 ACRES)	GFAR:	ALLOWABLE: 1.3 (2.0 WITH BONUS) PROPOSED: 11,305 SF / 13,118 SF = 0.86-1.3
STORIES:	(3) THREE STORIES	PARKING:	2/3 BEDROOM UNITS X 2 SPACES = 10 SPACES STUDIO UNIT X 1 SPACES = 1 SPACE TOTAL PARKING REQUIRED 11 SPACES TOTAL PARKING PROVIDED 9 SPACES ADA PARKING REQUIRED (4%) 1 SPACE ADA PARKING PROVIDED 1 SPACE BICYCLE PARKING PROVIDED 12 STALLS TOTAL (4) BICYCLE STALLS EQUALS 1 PARKING STALL
BUILDING AREA:	1ST FLOOR: 2,635 SF 2ND FLOOR: 5,790 SF 3RD FLOOR: 2,880 SF TOTAL AREA: 11,305 SF		
NUMBER OF UNITS:	6 DWELLING UNITS		
USE:	RESIDENTIAL		
OCCUPANCY USE:	SEPARATED		
FIRE SPRINKLERS:	YES		
FIRE ALARM:	YES		

LEGAL DESCRIPTION

LOT 25, OF SCOTTSDALE MANOR, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 46 OF MAPS, PAGE 24.
EXCEPT A PERPETUAL EASEMENT AND RIGHT OF WAY TO CONSTRUCT, OPERATE AND MAINTAIN AN ALLEY AND ANY PUBLIC UTILITY LINES, PIPES OR POLES OVER THE SOUTH 10 FEET OF LOT 25, OF SCOTTSDALE MANOR, RECORDED IN BOOK 46 OF MAPS, PAGE 24.

VICINITY MAP



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4368 NORTH CIVIC CENTER PLAZA
SUITE 201
SCOTTSDALE, ARIZONA 85251
T 602.619.7751
F 480.718.8387
E INFO@TOMECAKDESIGN.COM



EXPIRES 3.31.2023

PROJECT:
PALO ON 75TH
3961 N. 75TH STREET
SCOTTSDALE, ARIZONA 85251

REVISED:

JOB #.: 2105

DATE: 06.03.2021

CONTENTS: SITE PLAN

SHEET No: **CS0.1**