

Palm Lane Residences

Phase 1 and 2 MasterWastewater Basis of Design Report

7320 & 7300 E Palm Lanes

Scottsdale, AZ 85257



PRELIMINARY Basis of Design Report	
<input type="checkbox"/> ACCEPTED	
<input checked="" type="checkbox"/> ACCEPTED AS NOTED	
<input type="checkbox"/> REVISE AND RESUBMIT	
<small>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.</small>	
BY Levi Dillon	DATE 4/9/2025

Developer:

Curve Development

Attn: Preston Cooling

1661 E Camelback Road, Suite 175

Phoenix, AZ 85016

Prepared By:

RCC Design Group, LLC

16815 S. Desert Foothills Pkwy., Suite 138

Phoenix, AZ 85048

480.598.0270

Date: September 26, 2024

Revised January 23, 2025

Revised March 13, 2025

6-ZN-2024



Expires 12/31/25

Address the following comments :

- 1) **Stipulation:** All Phase 1 and 2 public sewer infrastructure will be required to be constructed and accepted by the City before a Phase 1 construction permit can be issued or applicable City permission is granted to proceed otherwise.
- 2) **Stipulation:** Dedicate 20 foot wide combined water and sewer line easements as indicated on the utility plan on all internal drives.
- 3) **Stipulation:** Provide a minimum width 12 foot water and sewer line easement along the eastern parcel boundary for the proposed sewer line. This easement is shown on the utility plan but the width is not called out (other proposed water and sewer easement to be 20ft wide as shown).
- 4) **Stipulation:** where sewer lines having manholes and water mains are in parallel the pipelines shall be separated by at least 9ft to ensure 6ft separation at the manholes as shown in the utility plan. DS&PM 7-1.407, A.
- 5) Offset the sewer cleanouts from adjacent service connections by 3ft. DS&PM 7-1.405, H.
- 6) Confirm the private sewer service for the amenity building will not conflict with detention basin and SD pipes.
- 7) Address comments and markups on the BOD utility plan.

Sewer Basis of Design Report Table of Contents

- A. Introduction
 - a. Legal Description
 - b. Existing and Proposed Uses and Site Zoning
- B. Existing Conditions
 - a. Existing Zoning and Land Use
 - b. Existing Site Conditions
 - c. Existing Utilities Discussion
- C. Proposed Conditions
 - a. Site Plan
 - b. Proposed Connections to City Sewer System
- D. Computations
 - a. Sewer Demands
- E. Summary
 - a. Design Standards have been met
 - b. Project Schedule
- F. Supporting Maps
 - a. Vicinity Map
 - b. Utility Plan

A. Introduction

a. Legal Description

Phase 1 of the project includes 0.25 acres of land on Palm Lane west of 74th Street with and Phase 2 is approximately 2.5 acres located at the northwest corner of Palm Lane and 74th Street. Being a portion of the southeast quarter of Section 35, Township 2 North, Range 3 East, of the Gila and Salt River Base and Meridian, Maricopa County Arizona

b. Existing and Proposed Uses and Site Zoning

Phase 1 is zoned R-5 and Phase 2 is zoned R1-7 and will be rezoned to R-3, a higher density residential district. The existing use is a former church campus and single-family residence. The proposed use will be for 22 detached condominium units on Phase 2 and 3 units on Phase 1

B. Existing Conditions

a. Existing Zoning and Land Use

Phase 1 site is zoned R-5 and Phase 2 site is zoned R1-7. The existing Phase 1 site is a single-family residence, and the Phase 2 existing use is a church campus with building and associated surface parking lot.

b. Existing Site Conditions

The existing site is currently a single-family residence and church campus with surface parking.

c. Existing Utilities Discussion

There is an existing 8" sewer main in 74th Street on the east side of the property that will serve this project.

C. Proposed Conditions

a. Site Plan

The Utility Plan for the proposed development is included with the submittal package.

b. Proposed Connections to City Sewer System

A new 8" public sewer line will be extended from the existing manhole on 74th Street through the site and into the right-of-way of Palm Lane and then to the west to provide service for Phase 1. Each unit in Phase 2 will have a direct service connection to the proposed public sewer within a dedicated water and sewer facilities easements. The three units in Phase 2 will have a single 6" private service connection that will be shared. A 20' water and sewer easement will be dedicated over the public sewer line and the public waterline through Phase 2 site. This easement for Phase 2 is within the common driveway tract. to provide sewer service for the condominium units. The public sewer extension service Phase 1 will need to be extended through Phase 2 to have service. The smaller western parcel is designated as Phase 1 because those units are planned to be constructed first, but that will require the completion of the public sewer extension.

D. Computations

For design purposes, flows are based on Section 7-1.403 of the DSPM cultural land use of 100 gpd/person.

Sewer System Analysis

Project: Palm Lane Condos

Project Description: 25-unit residential condominium development

Location: 7320 E Palm Lane

Sanitary Sewer Demand Calculations:

Phase 1: 3 residential units at 100 gpd/per with 2.5 persons/unit.

Phase 2: 22 residential units at 100 gpd/per with 2.5 persons/unit.

Total of 25 residential units

Average Flow: $25 \times 100 \text{ gpd/person} \times 2.5 \text{ people/unit} = 6,250 \text{ gpd}$

Peak factor = 4.0 (per DS&PM)

Max Flow: $6,250 \text{ gpd} (4.0) = 25,000 \text{ gpd} / 24 / 60 = 17.4 \text{ gpm} + 100 \text{ gpm (pool backwash)} = 117.4 \text{ gpm}$

Sanitary sewer service for this site is provided by extending an 8" public sewer line through the project and within a portion of Palm Lane and connecting to the 8" public main in 74th Street on the east side of Phase 2.

Pipe capacity analysis

$117.4 \text{ gpm} = 0.26 \text{ cfs}$. d/D in a 8" line at 0.% is 0.38 or 3.1"

E. Summary

- a. Design Standards have been met

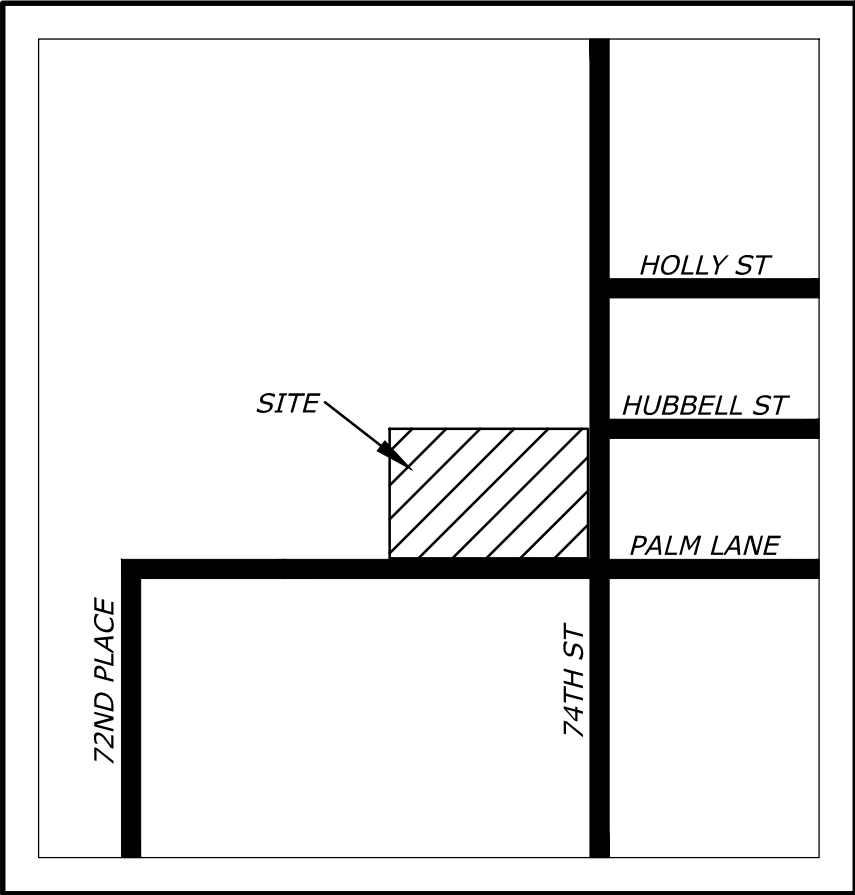
The new line will be designed and constructed in accordance with City of Scottsdale, MAG, and UPC requirements as appropriate.

- b. Project Schedule

Construction is expected to start in fall of 2025.

F. Supporting Maps / Documentation

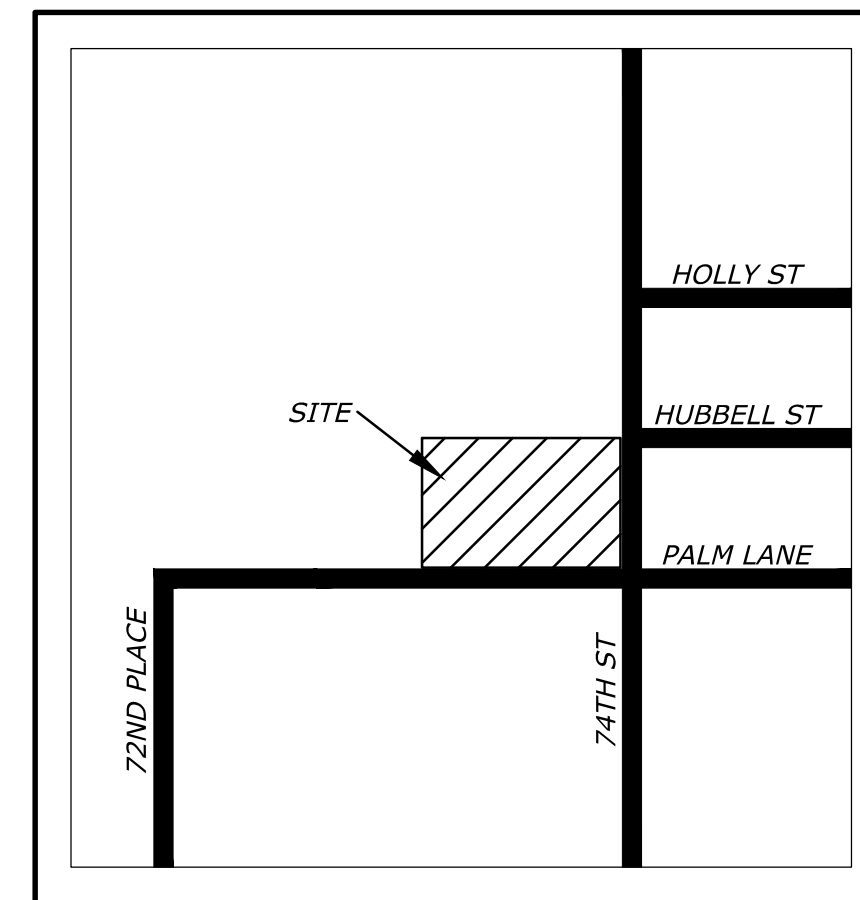
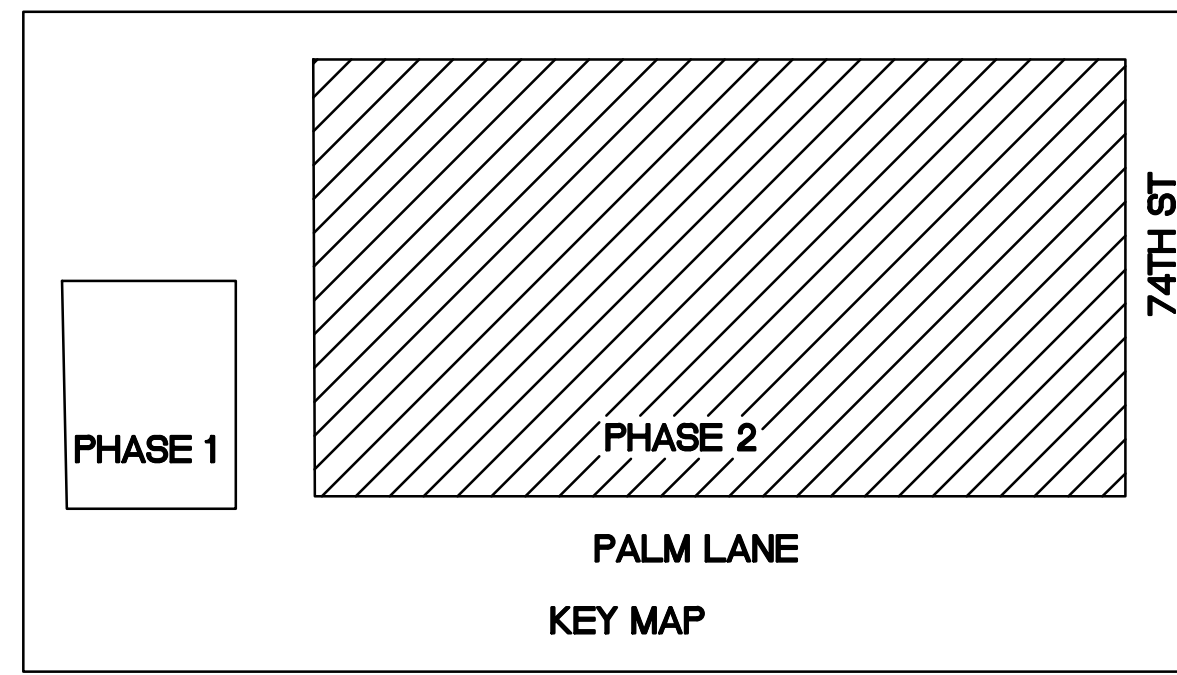
- a. Vicinity Map
- b. Utility Plan



VICINITY MAP
NOT TO SCALE

PRELIMINARY UTILITY PLAN FOR PALM LANE TOWNHOMES PHASE II SCOTTSDALE, ARIZONA

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 35, TOWNSHIP 2 NORTH,
RANGE 3 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN,
MARICOPA COUNTY, ARIZONA
7320 E. PALM LANE



**VICINITY MAP
NOT TO SCALE**

SHEET INDEX:
C1 - COVER SHEET
C2 - PRELIMINARY UTILITY PLAN

OWNER / DEVELOPER:
CURVE DEVELOPMENT
1661 E CAMELBACK RD SUITE 175
PHOENIX, AZ 85016
ATTN: PRESTON COOLING
PRESTONC@CURVEDEVELOPMENT.COM

ENGINEER:
RCC DESIGN GROUP, LLC
ATTN: STUART W. RAYBURN, P.E.
16815 S. DESERT FOOTHILLS PKWY., SUITE 138
PHOENIX, AZ 85048
480.598.0270
480.598.0273 FAX

APN: 131-19-002

SITE AREA:
GROSS SITE AREA = 120,313 SF OR 2.762 ACRES
NET SITE AREA = 98,570 SF OR 2.263 ACRES

LEGEND

	PROPOSED
CURB AND GUTTER	
REVERSE GUTTER	
MANHOLE	
CURB / YARD DROP INLET	
FLARED END SECTION	
FIRE HYDRANT	
VALVE	
REDUCER	
TEE	
BEND	
SIAMESE CONNECTION	
STORM DRAINAGE LINE	
SANITARY SEWER LINE	
WATER LINE	
CLEANOUT	
SPOT ELEVATION	
CONCRETE WALK	
HEAVY DUTY CONCRETE	
HEAVY DUTY PAVEMENT	
SWALE	
PROPERTY LINE	
ROADWAY CENTERLINE	
LIGHTPOLE	
WATER METER	
BACKFLOW PREVENTER	
1' CONTOUR	
10' CONTOUR	
DRAINAGE FLOW DIRECTION	

TC = TOP OF CURB
TB = TOP OF BANK
FL = FLOW LINE
EP = EDGE OF PAVEMENT
TW = TOP OF WALL
P = PAVEMENT
SW = SIDEWALK
TF = TOP OF FOOTING
BW = BOTTOM OF WALL

BASIS OF SURVEY

THE FOLLOWING PARAMETERS WERE SET FOR THE BASIS OF THIS SURVEY:

SYSTEM: UNITED STATES STATE PLANE NAD83
ZONE: ARIZONA CENTRAL
DATUM: NORTH AMERICAN 1983

UNITS = INTERNATIONAL FEET (1 FOOT =0.3048 METERS EXACTLY)
TRIMBLE R10/R12 GPS EQUIPMENT AND TRIMBLE S7 WAS USED FOR ALL FIELD MEASUREMENTS. DIRECT SATELLITE MEASUREMENTS WERE MADE ON EACH POINT ON THE NORTH AMERICAN DATUM OF 1983 WITH AUTOMATIC TRANSLATIONS MADE TO THE STATE PLANE GRID SYSTEM.

GPS CALIBRATION AND TRANSLATION TO THE SURFACE WAS PERFORMED BY LAND SURVEY SOFTWARE. A GRID ADJUSTMENT FACTOR OF 1.00015 AND SCALE ORIGIN VALUES OF N=0.00, E=0.00

ALL BEARINGS ARE GROUND/GRID BEARINGS
ALL DISTANCES ARE GROUND DISTANCES (INTERNATIONAL FEET)
ALL COORDINATES ARE GROUND VALUES (INTERNATIONAL FEET)

BASIS OF BEARING

FOR THIS PROJECT IS N89°51'31"E FOR THE EAST-WEST CENTER LINE OF THE OF SECTION 35, TOWNSHIP 2 NORTH, RANGE 4 EAST OF THE GILA & SALT RIVER MERIDIAN AS CALCULATED FROM A PLSS SUBDIVISION RECORD OF SURVEY MARICOPA COUNTY GEODETIC DENSIFICATION AND CADASTRAL SURVEY RECORDED IN BOOK 734, PAGE 10, MARICOPA COUNTY RECORDS.

BENCHMARKS

BENCHMARK (MCDOT POINT ID 3887)
3" CITY OF SCOTTSDALE BRASS CAP IN HAND HOLE, NO STAMPING, LOCATED AT THE INTERSECTION OF N. SCOTTSDALE ROAD AND E. OAK STREET.
(NAVD 88) ELEVATION=1235.88'

SITE CONTROL NO. 1
BRASS CAP FLUSH, NO STAMPING, LOCATED AT THE INTERSECTION OF E. PALM LANE AND N.74TH STREET.
(NAVD 88) ELEVATION=1222.77'

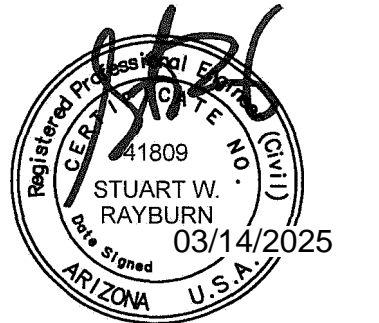
SITE CONTROL NO. 2
BRASS CAP FLUSH, NO STAMPING, LOCATED AT THE INTERSECTION OF E. HUBBELL STREET/PALM LANE AND N.74TH STREET.
(NAVD 88) ELEVATION=1223.00'

I HEREBY CERTIFY THAT ALL ELEVATIONS PRESENTED ON THIS PLAN ARE BASED ON NAVD-1988 AND MEET THE FEMA BENCHMARK (BMM) CRITERIA.

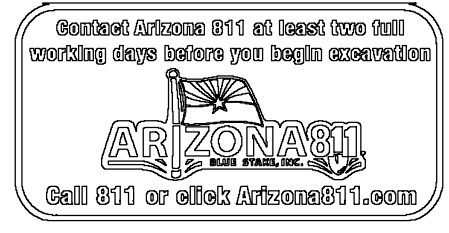
THE LOWEST FLOOR ELEVATION(S) AND/OR FLOOD PROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A 100-YR STORM, AND ARE IN ACCORDANCE WITH SCOTTSDALE REVISED CODE, CHAPTER 37- STORMWATER AND FLOODPLAIN MANAGEMENT.



16815 S. DESERT FOOTHILLS PKWY., SUITE 138
PHOENIX, AZ 85048
480.598.0270
480.598.0273 FAX
CIVIL & SITE ENGINEERING SERVICES



Expires 12/31/25



ARIZONA

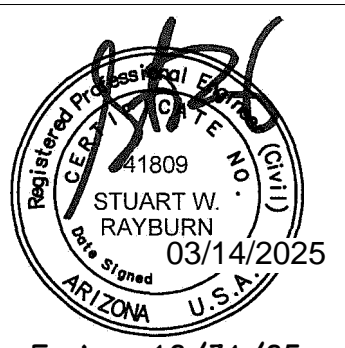
PRELIMINARY UTILITY PLAN
FOR
PALM LANES RESIDENCES PHASE 2
7320 E PALM LANE
SCOTTSDALE

PROJECT NO. 24-034-50
DRAWING NO. 00000
DATE: 7/22/24
DRAWN BY: LJR/SWR
CHECKED BY: JSR/SWR
REVISIONS:

SHEET NO.
PRELIMINARY
UTILITY PLAN

C1U

28-DR-2024



Expires 12/31/25



ARIZONA

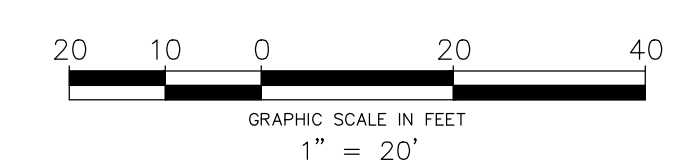
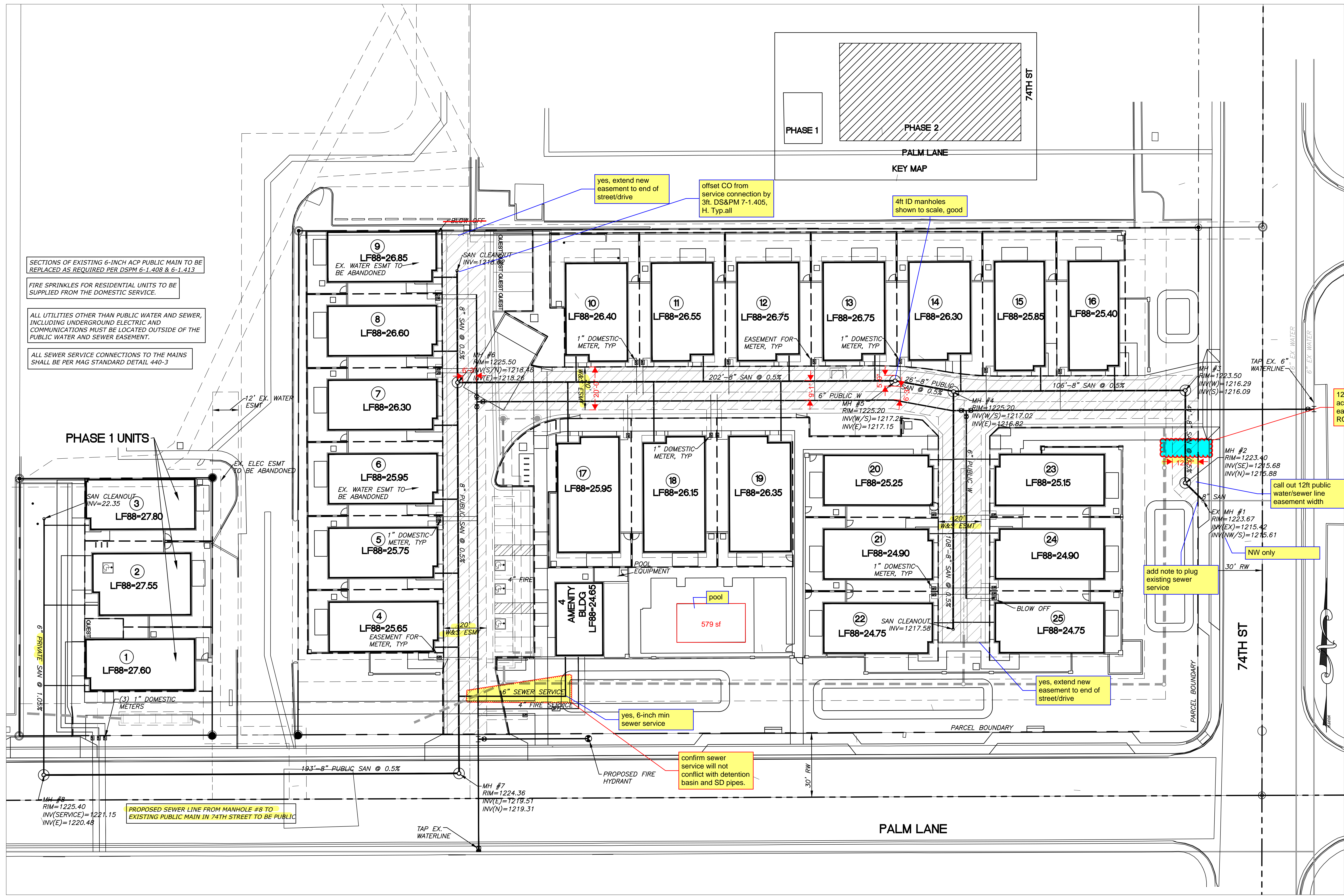
PRELIMINARY UTILITY PLAN
FOR
PALM LANES RESIDENCES PHASE 2
7320 E PALM LANE
SCOTTSDALE

PROJECT NO. 24-034-50
DRAWING NO. 00000
DATE: 7/22/24
DRAWN BY: LJR/SWR
CHECKED BY: JSR/SWR
REVISIONS:

SHEET NO.
PRELIMINARY
UTILITY PLAN

C2U

28-DR-2024



SECTIONS OF EXISTING 6-INCH ACP PUBLIC MAIN TO BE REPLACED AS REQUIRED PER DSPM 6-1.408 & 6-1.413

FIRE SPRINKLES FOR RESIDENTIAL UNITS TO BE SUPPLIED FROM THE DOMESTIC SERVICE.

ALL UTILITIES OTHER THAN PUBLIC WATER AND SEWER, INCLUDING UNDERGROUND ELECTRIC AND COMMUNICATIONS MUST BE LOCATED OUTSIDE OF THE PUBLIC WATER AND SEWER EASEMENT.

ALL SEWER SERVICE CONNECTIONS TO THE MAINS SHALL BE PER MAG STANDARD DETAIL 440-3

PROPOSED SEWER LINE FROM MANHOLE #8 TO EXISTING PUBLIC MAIN IN 74TH STREET TO BE PUBLIC