

# Sewer Basis of Design

For  
Self Storage  
FLW / Hayden Rd Self Storage  
Scottsdale, AZ

## FINAL Basis of Design Report

- APPROVED
- APPROVED AS NOTED
- REVISE AND RESUBMIT



Disclaimer: If approved; the approval is granted under the condition that the final construction documents submitted for city review will match the information herein. Any subsequent changes in the water or sewer design that materially impact design criteria or standards will require re-analysis, re-submittal, and approval of a revised basis of design report prior to the plan review submission.; this approval is not a guarantee of construction document acceptance.  
For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY RSacks

DATE 2/24/2022

Scottsdale Case:  
Job: 528  
February 2022  
8-ZN-2021

Prepared by:

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EXPIRES 9-30-23

**Sewer Basis of Design  
FOR  
Self Storage  
FLW / Hayden Self Storage  
Scottsdale, Arizona**

- A. INTRODUCTION**
- B. DESIGN DOCUMENTATION**
- C. EXISTING CONDITIONS**
- D. PROPOSED CONDITIONS**
- E. COMPUTATIONS**
- F. SUMMARY**
- G. SUPPORTING MAPS / REFERENCES**

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### **C. Introduction**

The proposed site is located north of the intersection of Frank Lloyd Wright and Hayden Road within the City of Scottsdale, Arizona. The site is situated within the Southeast Quarter of Section 1, Township 3 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. The site is currently a vacant remnant land parcel left over from original construction of the Central Arizona Project. This site is bounded by CAP property to the north, retail property on the south and public streets on the east and west end. This project will develop a self storage building on the site.

### **D. Design Documentation**

Project will be analyzed using the design criteria from the DSPM. Sewer demand of 0.4 gal per sf per day for office uses for the approx 3600 SF office. The only area within the project that generates sewer is the office area. Peak factor of 3.0 will be used. Project does not involve high peak uses (such as restaurants, hotels or condos).

### **C. Existing Conditions**

Currently, the site is a vacant site with an 24" public sewer along the east boundary. This public line flows south as part of the network of the city's sewer system.

### **D. Proposed Conditions**

The building will be placed centrally in the site with the office in the southeast corner of the first floor. A single 6" private sewer service will exit the building and flow to the west and south to connect the existing public line at the existing manhole on the north side of the intersection of FLW and Hayden Rd. A tap in the existing manhole will be installed.

All onsite sewer lines shall be private.

### **E. Computations**

Office Areas: 3600 SF

Average Day Sewer Demand: 0.4 gallons per SF= 1440 gal per day

Peak Factor: 3x

Peak Day Demand: 3x Average Day Sewer Demand = 3 x 1440= 4320 gal per day  
(Peak Demand based on conservative 10 hour operational day) = **7 gpm**

Proposed 6" private main at 1.04% slope capacity=**256 GPM** (0.57 CFS)

## **F. Summary**

- This project is the construction of single commercial storage building with a 3600 SF office.
- Office area is the only wastewater generator on the site.
- The project will install a new 6" commercial sewer service connecting to the public sewer manhole at the north leg of the intersection at FLW / Hayden Rd.

## **G. Supporting Maps / References**

1. City of Scottsdale, Design Standards and Procedures Manual, 2018.
2. QS map 35-48



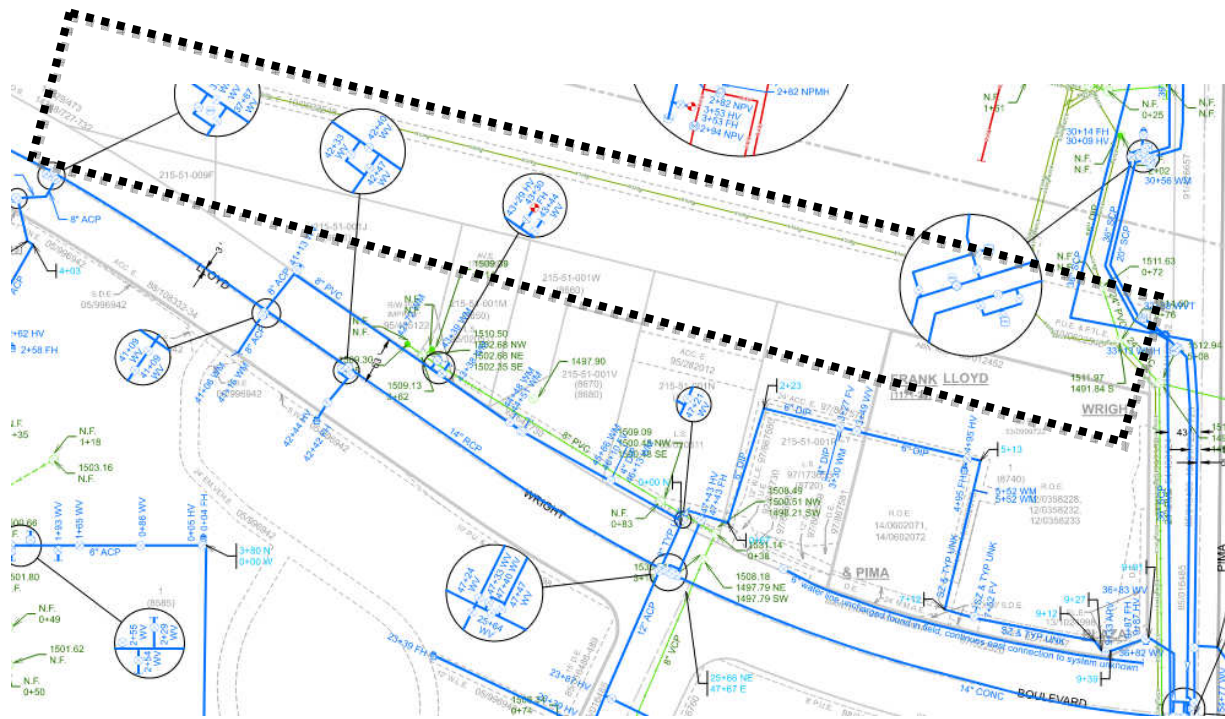
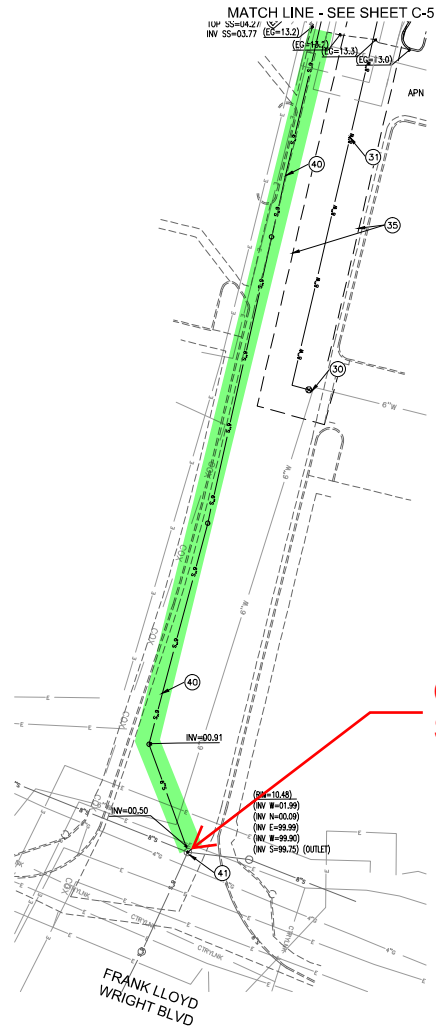
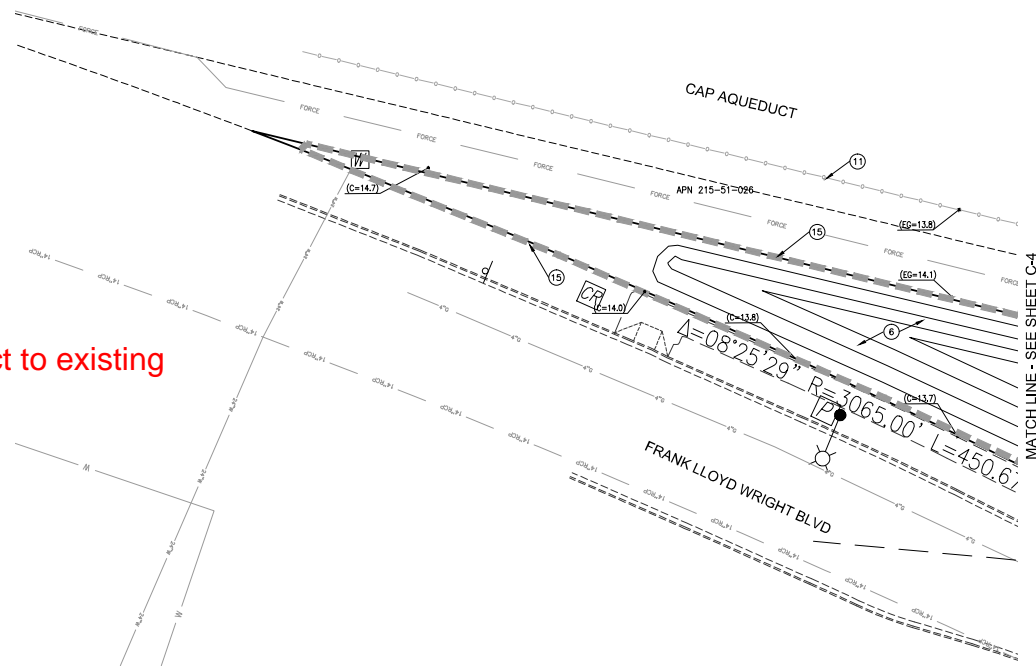


Figure 2-WATER-SEWER QS MAP

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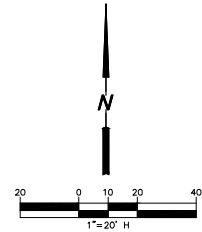


Connect to existing SSMH



⊗ GRADING PLAN NOTES

1. ONSITE ASPHALT PAVING
2. CONSTRUCT ONSITE STORM DRAIN
3. CONSTRUCT STORM INLET
4. CONSTRUCT CURB PER MAG STD DET 222
5. CONSTRUCT DRIVE PER COS STD DET 2251-2
6. CONSTRUCT SURFACE BASIN
7. CONSTRUCT DUAL CHAMBER DRYWELL
8. INSTALL 96" CMP UG RETENTION. INVERT OF PIPE SHALL BE FLUSH PER COS STD DET 2254
9. SAWCUT AND MATCH ONSITE PRIVATE EXISTING DRIVE
10. LIMIT OF DISTURBANCE
11. EXISTING CAP SECURITY FENCE
12. CONSTRUCT REFUSE ENCLOSURE
13. NEW BUILDING
14. RELOCATE PUBLIC STREET LIGHT
15. DRAINAGE AREA
16. 12" STORM DRAIN TO DRYWELL. FLOW MUST BE POSITIVE TO DRYWELL. DRAINAGE EASEMENT BY SEP INSTRUMENT OR MOU
30. CONNECT TO EXISTING WATER
31. NEW 8" PUBLIC WATER
32. NEW PUBLIC FIRE HYDRANT
33. NEW WATER METERS
34. NEW PRIVATE FIRELINE
35. 20" PUBLIC WATER ESMT
40. NEW 6" PRIVATE SEWER SERVICE - MIN SLOPE 1.04%
41. CONNECT TO EXISTING SEWER MH.



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TWO WORKING DAYS BEFORE YOU DIG.  
 CALL FOR THE BLUE STAKES  
 1-800-782-5348  
 BLUE STAKE CENTER

RELEASE DATE	BY
3-30-21	PREL ENGR
4-28-21	REV SP
9-30-21	CITY COMMENTS
1-11-22	REV SP

NO.	DATE	DESCRIPTION

PROJECT NAME  
 SELF STORAGE  
 PROJECT ADDRESS  
 FLW / Hayden  
 SCOTTSDALE, ARIZONA  
 85260  
 PROJECT AREA

HELIX JOB NUMBER: 528  
 IN HOUSE:  MT  
 DESIGNED BY: SB  
 CHECKED BY: SB

SHEET TITLE: PRELIMINARY G / D PLAN

SHEET: C-3 PAGE: 3 OF 6

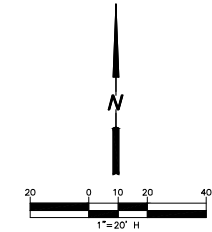
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COS 8-24-2021

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NO.	DATE	REVISIONS

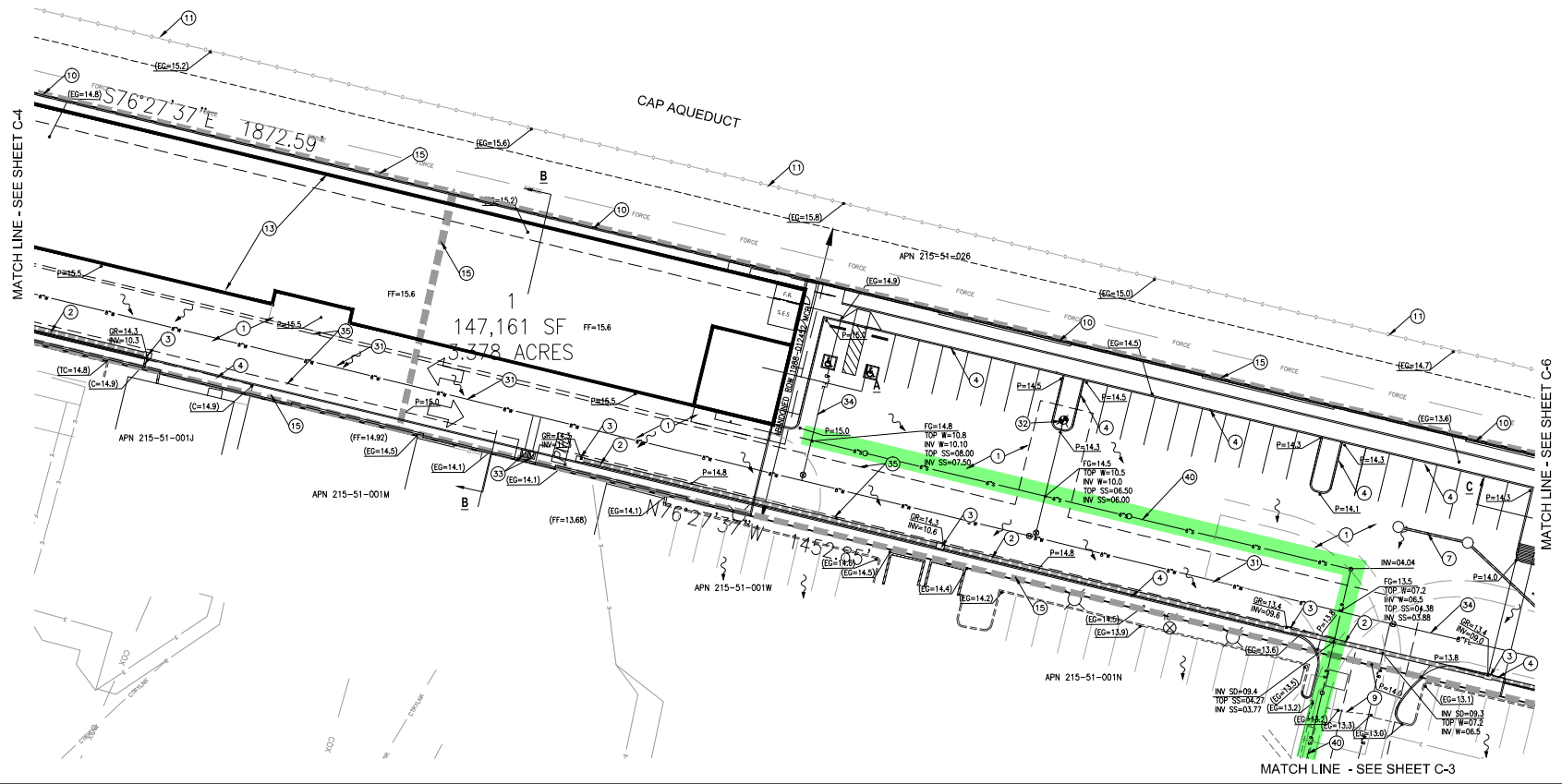
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SHEET **C-5** PAGE **5 OF 6**

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COS 8-20-2021