

Sanitary Sewer Design Report

Black Rifle Coffee Company – E Shea

7139 East Shea Boulevard
Scottsdale, Arizona

PREPARED FOR:

Black Rifle Coffee Company
1144 S. 500 W.
Salt Lake City, UT 84101

PREPARED BY:

Larson Design Group
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LDG Project No.12940-009

August 2022
Revised January 6, 2023

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 rsacks

DATE 1/17/2023



29-DR-2022

1/13/23

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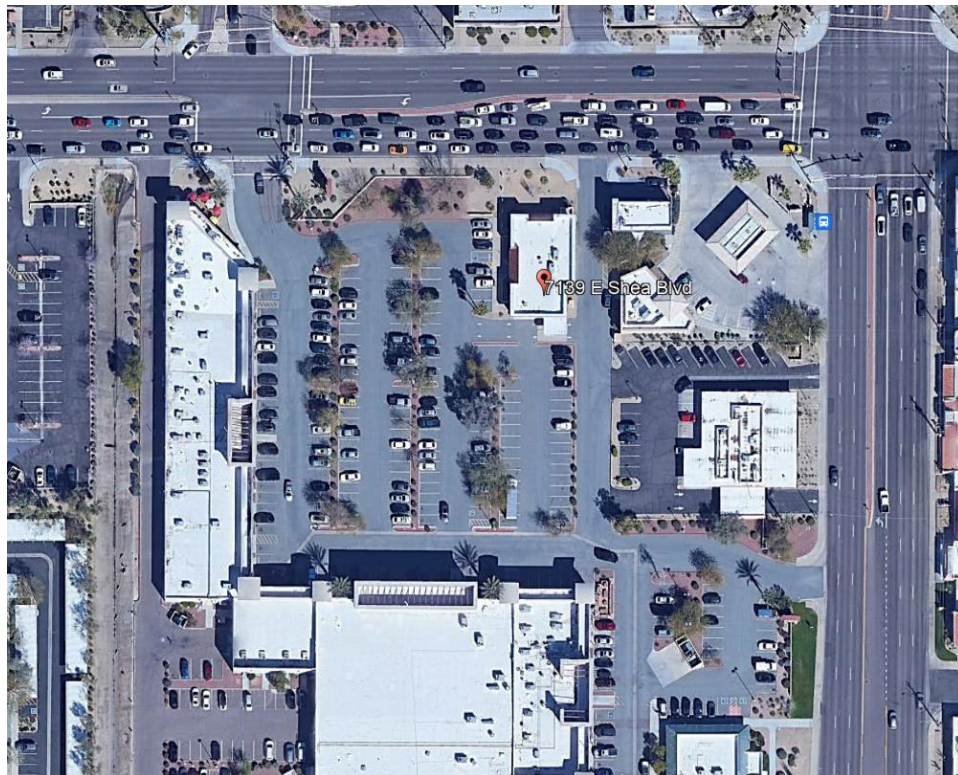
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Introduction

The purposed Black Rifle Coffee Company (The Project) will be located at 7139 East Shea Boulevard, Scottsdale, AZ. The project consists of the demolition and clearing of an existing site containing a 3,961-sf bank building, curbing, refuse container, utilities, and landscaping. A 2,438-sf Black Rifle Coffee building is proposed along with drive thru, parking, landscaping, outdoor seating, and landscaping improvements. The surrounding area at this location will be commercial businesses and consist of other retail services. See the location map below:



The project will consist of the demolition of the existing building to construct a new 2,428 sq ft retail store which includes a drive-thru and 1,470 sq ft of outdoor patio space.

Design Documentation

This Project will connect to the existing sewer system along East Shea Boulevard.

The wastewater system for this project will consist of a gravity sewer service connecting the existing sewer main is owned and operated by the City of Scottsdale. The project lies within the city's wastewater service area.

Sewer Design Flows specific to our project are:

• Commercial Hydraulic Loading	951 gal/acre/day
• Lot Size	0.61 acres
• Building Square Feet	2,428SF
• Average Daily Flow	580 GPD
• Peak Flow	2,308 GPD
• Minimum Full Flow Velocity	2.5 ft/sec
• Maximum Full Flow Velocity	10.0 ft/s
• Manning's Coefficient (n)	0.013

Proposed Conditions

The attached Utility Plan shows the tie in location for the existing sewer lateral. The project proposes to use 6-inch SDR35 PVC pipe. All maintenance of the private onsite system is the responsibility of the Owner.

Calculations

Below are the computations for the projected peak flow discharged into the City's sewer collection system. The proposed sewer service pipe will be 6" diameter, SDR35 PVC will connect into the existing sewer lateral currently serving the existing building. The slope is proposed between 1% and 5% and the depth of cover of the pipe will vary from the proposed building to the connection point.

• Commercial Hydraulic Loading	951 gal/acre/day
• Lot Size	0.61 acres
• Building Square Feet	2,428SF
• Average Daily Flow	580 GPD
• Peak Flow (6x Factor for Restaurants)	3,480 GPD
• Minimum Full Flow Velocity	2.5 ft/sec
• Maximum Full Flow Velocity	10.0 ft/sec
• Manning's Coefficient (n)	0.013

Calculations based on Property Hydraulic Loading

• Peak Daily Flow	2.42 GPM
• Pipe Diameter	6"
• Pipe Service Length	180LF
• Pipe Slope	2%
• Velocity (Calculated via Manning's Equation)	2.85 ft/sec

Calculations based on International Plumbing Code for Fixture Units

• Peak Daily Flow	53.4 GPM
• Pipe Diameter	6"
• Pipe Service Length	180LF

- Pipe Slope **2%**
- Velocity **3.06 ft/sec**

Summary

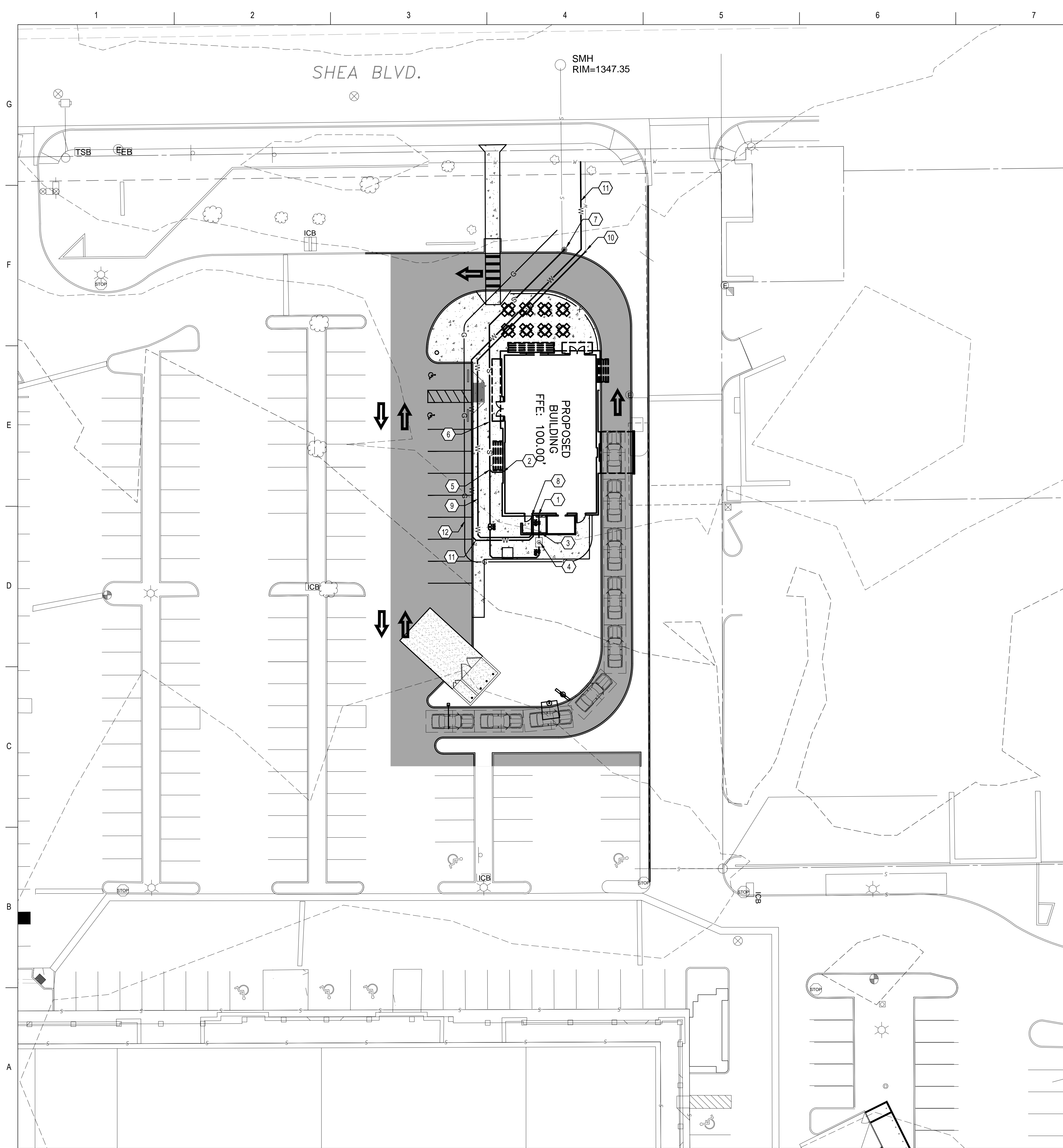
The proposed Sewer conveyance has been analyzed to ensure all requirements are being met.

The Project is expected to be completed in the first half of 2023.

Enclosed is a Utility Plan for layout and connections.

APPENDIX A

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KEYNOTES

KEYNOTE REFERENCE

- 6" PVC (SDR35) GREASE WASTE PIPING, INV. @ BLDG CONNECTION = 995.90'
- 6" PVC (SDR35) SANITARY SEWER PIPING, INV. @ BLDG CONNECTION = 996.00'
- GREASE TRAP. SEE PLUMBING DRAWINGS
RIM = 100.00'
6" INV IN. = 995.90'
6" INV OUT = 995.80'
- DOUBLE WYE CLEANOUTS (TYPICAL FOR SYMBOL - 3)
- PROVIDE 6" SANITARY WYE FOR CONNECTION.
- 6" PVC (SDR35) SEWER PIPING, @ 2.0% SLOPE
- CONNECT TO EXISTING 6" SANITARY STUB SERVICE. STUB INSTALLED BY OTHERS. CONNECTION INV=XXXX (V.I.F.)
- DOMESTIC WATER CONNECTION TO THE BLDG.
- 2" COPPER WATER SERVICE PIPING
- CONNECT TO EXISTING DOMESTIC WATER STUB WITH 2" CURB STOP AND BOX TO FINISHED GRADE. WATER SERVICE STUB, METER BOX AND REDUCED PRESSURE VALVE TO BE INSTALLED BY OTHERS
- 6" D.I.P. FIRE SERVICE LINE.
- GAS SERVICE TO BUILDING TO BE PROVIDED BY UTILITY COMPANY. ROUTING SHOWN FOR COORDINATION PURPOSES

LEGEND

- S — PROPOSED SANITARY SEWER
- W — PROPOSED WATER MAIN
- G — PROPOSED GAS MAIN



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CLIENT



SEAL

REVISION	DATE	BY	MARK	COMMENTS
1	01/06/2023			REVISED PER CITY OF SCOTTSDALE PLANNING COMMENTS
2	12/02/2022			REVISED PER CITY OF SCOTTSDALE STORMWATER COMMENTS
3	11/02/2022			REVISED PER CITY OF SCOTTSDALE PERMITTING COMMENTS
4	09/07/2022			CLIENT REVIEW SUBMISSION
5	08/30/2022			PLANNING SUBMISSION

BLACK RIFLE COFFEE COMPANY - SCOTTSDALE

7139 E. SHEA BLVD., SCOTTSDALE, AZ 85254

UTILITY PLAN

Project No.: 12940-009

Sheet No.:

CS102