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January 28, 2022

City of Scottsdale Engineering Division  
 9379 E. San Salvador  
 Scottsdale, AZ 85258

RE: Basis of Design Report for Water and Wastewater.

The Panera Bakery Café #6263 is a proposed redevelopment of a commercial site located at 8970 East Shea Blvd, Scottsdale, AZ.

The project is a redevelopment of an existing commercial site, previously a Red Robin Restaurant. The redevelopment of the site will include a complete tear down of the existing 7,612 SF building, construction of a new 3,949 SF Panera Café, and the addition of drive through lanes.

There is an existing 1.5 inch diameter water service line connecting to the building. This water line will be extended to the proposed building.


The existing fire hydrant at the corner of N 89<sup>th</sup> Place and East Shea Blvd was used to perform a fire flow test. The hydrant met the required static pressure of 72 psi with a 15 psi safety factor.

Currently, the existing wastewater lateral size is unknown. The City of Scottsdale requires redevelopment projects to have a 6 inch diameter gravity sewer lateral for wastewater, if the existing lateral is smaller than 6" it will be replaced.

There is an existing grease trap on the site that will be used by the new building. The proposed restaurant will require less grease removal than the former restaurant, therefore the existing grease trap will provide adequate capacity.

The proposed building will have less floor area and seating capacity than the previous building at the site. It will be a quick-serve restaurant with an emphasis on drive-thru and mobile order customers, compared to the previous building being a sit-down restaurant. With these parameters in mind, the belief is that the proposed development will have less water and wastewater demand than the previous site and the existing water and wastewater infrastructure will be adequate in providing the needed capacity.

Please see attached Site Plan and fire flow test results for further reference.

<p><b>FINAL Basis of Design Report</b></p> <p><input type="checkbox"/> APPROVED</p> <p><input checked="" type="checkbox"/> APPROVED AS NOTED</p> <p><input type="checkbox"/> REVISE AND RESUBMIT</p>	 <p>9379 E San Salvador Dr. Scottsdale, AZ 85258</p>
<p><small>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.</small></p>	
<p>BY rsacks</p>	<p>DATE 2/9/2022</p>

Show existing backflow preventer on site plan



# Flow Test Summary

Project Name: EJFT 22026.1 - Scottsdale Panera  
Project Address: 8970 E Shea Blvd, Scottsdale, AZ 85260  
Date of Flow Test: 2022-01-28  
Time of Flow Test: 7:30 AM  
Data Reliable Until: 2022-07-28  
Conducted By: Austin Gourley & Caleb Crabbs (EJ Flow Tests) 602.999.7637  
Witnessed By: Vincent Cusumano (City of Scottsdale) 606.828.0847  
City Forces Contacted: City of Scottsdale (602.828.0847)  
Permit Number: C67298

**Note** Scottsdale requires a max static pressure of 72 psi for safety factor.

## Raw Flow Test Data

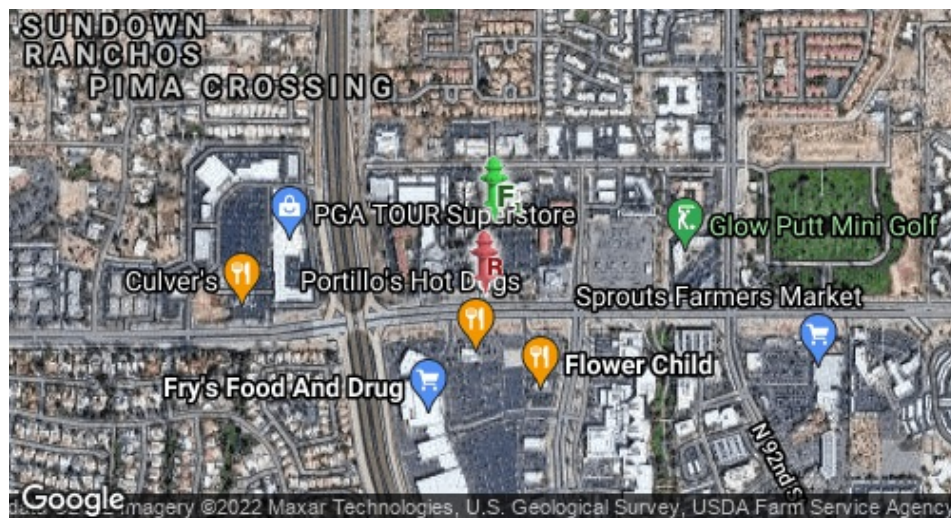
Static Pressure: 87.0 PSI  
Residual Pressure: 56.0 PSI  
Flowing GPM: 1,590  
GPM @ 20 PSI: 2,411



## Data with a 15 PSI Safety Factor

Static Pressure: 72.0 PSI  
Residual Pressure: 41.0 PSI  
Flowing GPM: 1,590  
GPM @ 20 PSI: 2,102

## Hydrant F<sub>1</sub>

Pitot Pressure (1): 25 PSI  
Coefficient of Discharge (1): 0.9  
Hydrant Orifice Diameter (1): 2.5 inches  
Pitot Pressure (2): 20 PSI  
Coefficient of Discharge (2): 0.9  
Hydrant Orifice Diameter (2): 2.5 inches



 Static-Residual Hydrant  
 Flow Hydrant  
Distance Between F<sub>1</sub> and R  
509 ft (measured linearly)  
Static-Residual Elevation  
1371 ft (above sea level)  
Flow Hydrant (F<sub>1</sub>) Elevation  
1375 ft (above sea level)  
Elevation & distance values are approximate

## Static-Residual Hydrant



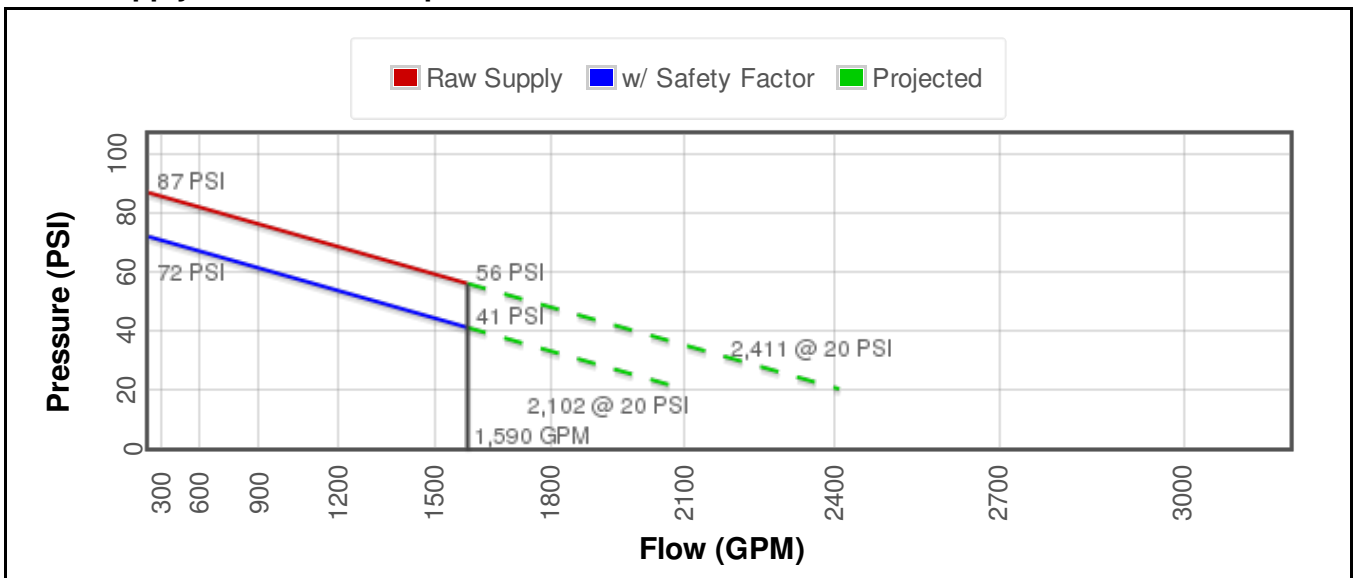
## Flow Hydrant (only hydrant F1 shown for clarity)

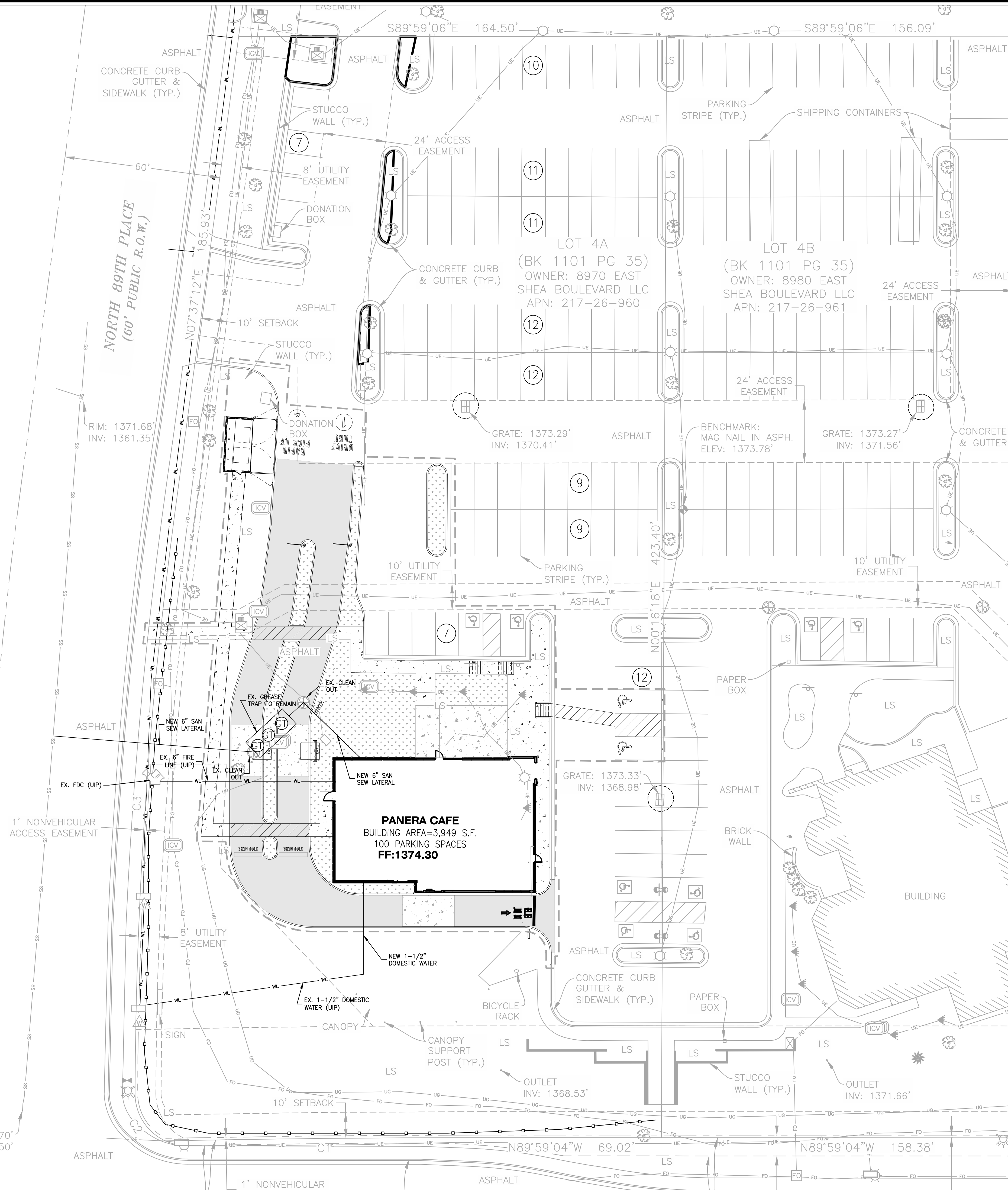
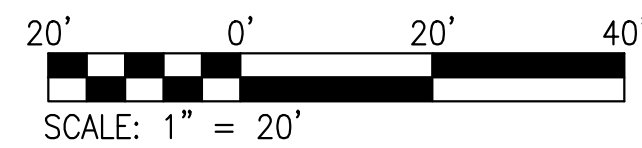


## Approximate Project Site



## Water Supply Curve N<sup>1.85</sup> Graph





USER: Paul Henderson TAB: C6.0  
 DATE: January 5, 2022 - 9:53:32 AM  
 DRAWING: S:\JOBS\2021\21-0067\21-0067\21-0067\21-0067.dwg

**THIS SHEET IS NOT A FINAL SITE PLAN  
IT IS FOR REVIEW OF UTILITIES ONLY**

<b>COLE</b> <small>CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE</small> <small>601 S. 18th Street, St. Louis, MO 63103, 314.984.9887 tel / www.colestl.com</small>													
<b>ST. LOUIS</b> 401 S. 18th Street St. Louis, MO 63103 314.984.9887 tel / www.colestl.com	<b>LANDSCAPE ARCHITECTURE</b> 8970 E. SHEA BLVD. SCOTSDALE, AZ 85260												
<b>UTILITY PLAN</b>													
<b>PANERA BAKERY CAFE #6263</b>													
<b>DEVELOPER/OWNER:</b> <b>PANERA LLC</b> <b>3630 SOUTH GUYER ROAD, SUITE 100</b> <b>ST. LOUIS, MO 63127</b> <b>(314) 984-1000</b>													
<small>THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON IS AN INDICATION OF HIS OR HER PERSONAL AND INDEPENDENT PROFESSIONAL JUDGMENT AND CONFORMANCE WITH THE PROFESSIONAL STANDARDS OF THE PROFESSION TO WHICH HE OR SHE BELONGS. THIS DOCUMENT IS NOT TO BE USED FOR ANY OTHER PROJECT OR PURPOSE OF THE PROJECT TO WHICH THIS SEAL APPLIES.</small>													
DESIGN/CALC BY: PGB DRAWN BY: PGB CHECKED BY: CAW DRAWING SCALE: AS SHOWN DATE: 1/5/2022 Job Number: 21-0067 Sheet Number:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>REVISION DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	REVISION DESCRIPTION	DATE									
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