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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 89th 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.



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

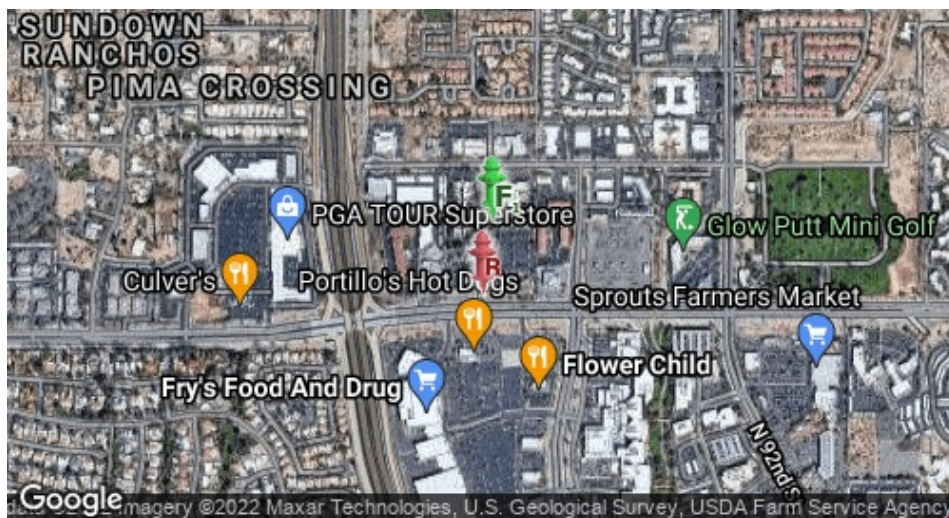
Static Pressure: 87.0 PSI
Residual Pressure: 56.0 PSI
Flowing GPM: 1,590
GPM @ 20 PSI: 2,411



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 F₁

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 F₁ and R
509 ft (measured linearly)
Static-Residual Elevation
1371 ft (above sea level)
Flow Hydrant (F₁) Elevation
1375 ft (above sea level)
Elevation & distance values are approximate

Static-Residual Hydrant



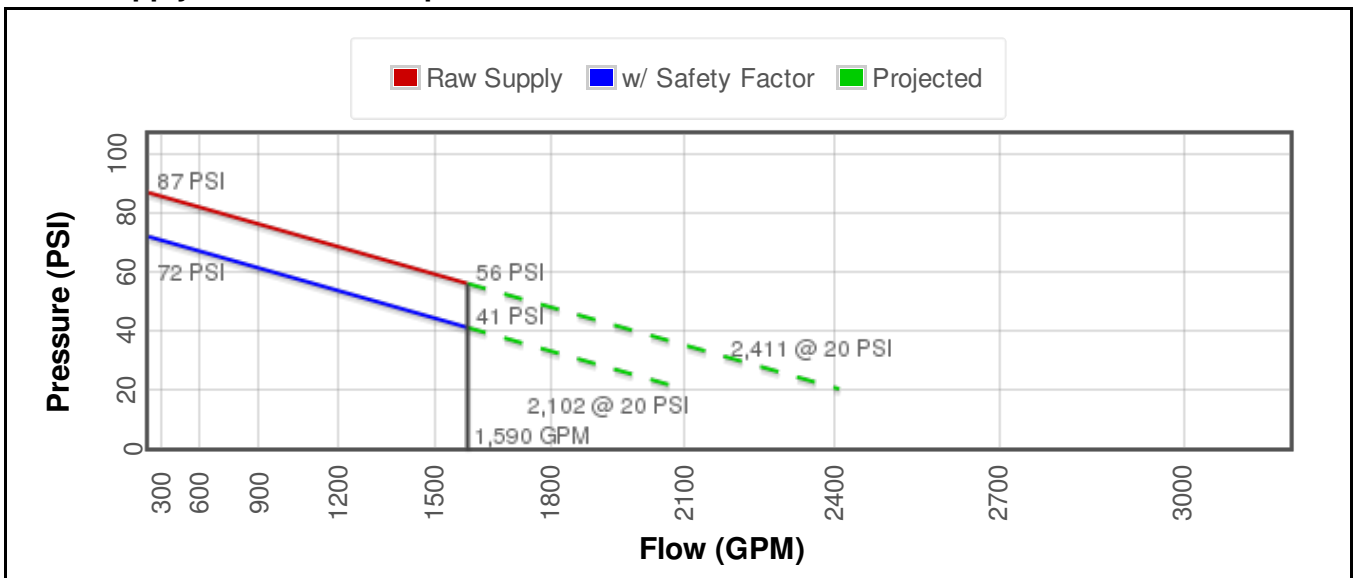
Flow Hydrant (only hydrant F1 shown for clarity)

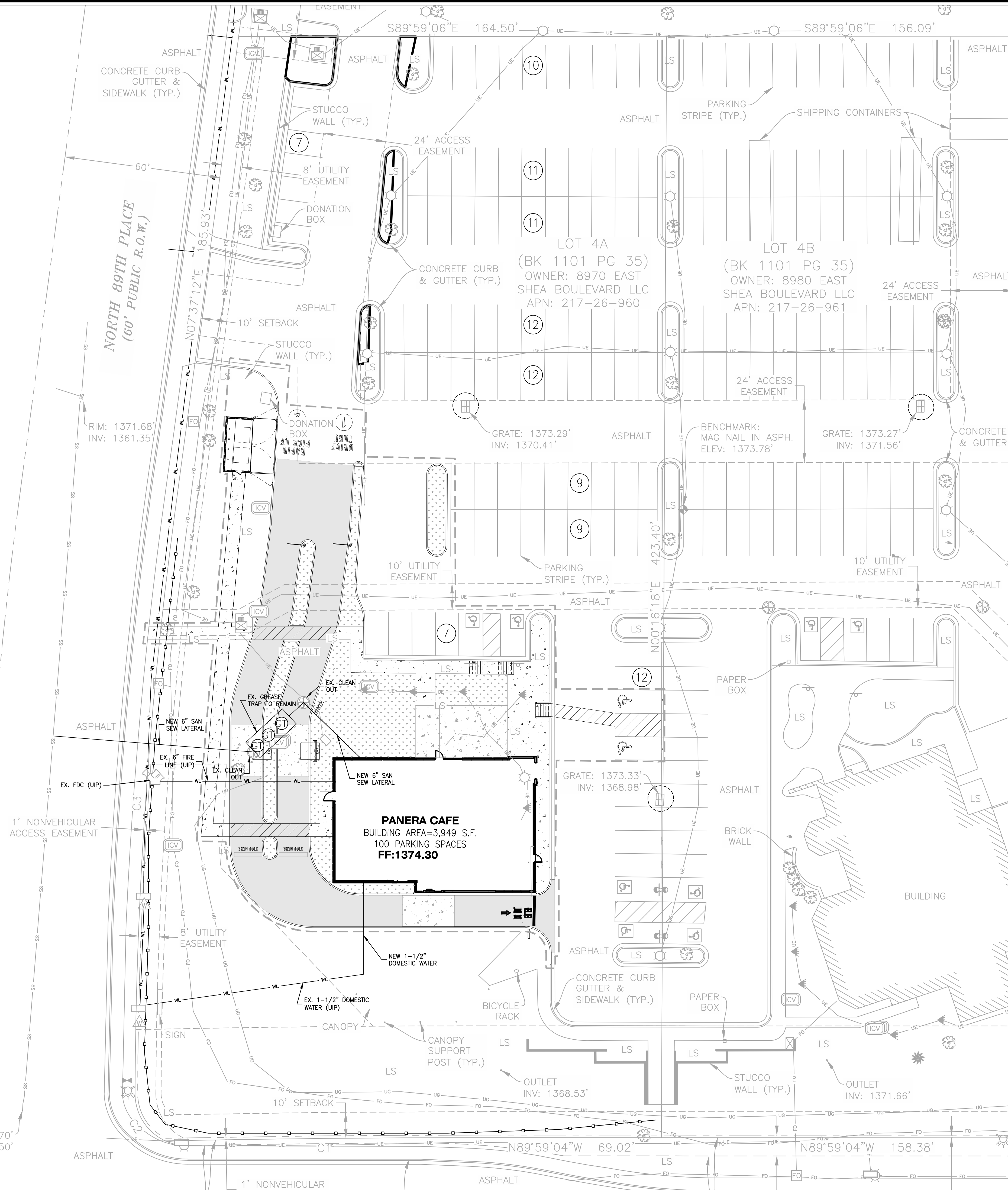
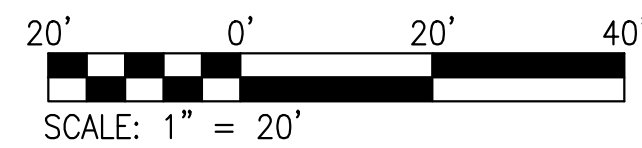


Approximate Project Site



Water Supply Curve N^{1.85} Graph





USER: Paul Henderson TAB: C6.0
 DATE: January 5, 2022 - 9:53:32 AM
 DRAWING: S:\JOBS\Job2021\21-0067\CADD\C-Pan\PlotSheets\0_Plan\WATER_SSMR_21-0067.dwg

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

<p>DEVELOPER/OWNER: PANERA, LLC 3630 SOUTH GUYER ROAD, SUITE 100 ST. LOUIS, MO 63127 (314) 984-1000</p>	<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> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	REVISION DESCRIPTION	DATE												
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<p>UTILITY PLAN</p>																
<p>ST. LOUIS 401 S. 18th Street St. Louis, MO 63103 314.984.9887 tel/ www.colesti.com</p> <p>COLE CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE <small>COLE IS AN EQUAL OPPORTUNITY EMPLOYER. COLE EMPLOYEES ARE NOT TO BE DISCRIMINATED ON THE BASIS OF RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN, ANCESTRY, AGE, OR DISABILITY.</small></p>																
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