

# WATER BASIS OF DESIGN REPORT FOR PEPIN RESTAURANT REMODEL

Scottsdale, Arizona

19 May 2021

PREPARED FOR  
Aline Architecture Concepts  
7340 East Main Street, #210  
Scottsdale, Arizona 85251

DEVELOPER  
Pepin Restaurant  
7363 East 2<sup>nd</sup> Street  
Scottsdale, Arizona 85251

SITE ADDRESS  
7363 East 2<sup>nd</sup> Street  
Scottsdale, Arizona 85251

## 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 Idillon

DATE 8/9/2021

Address comments below on final plans:

- 1) Add adequately sized fire sprinkler line for proposed development.
- 2) If possible, coordinate new connections to the public water main with replacement of the main occurring as part of the civic center plaza redesign project being executed as a City bond project.

PREPARED BY



4450 north 12<sup>th</sup> street, #228  
phoenix, arizona 85014  
CYPRESS # 21.091



29-DR-2021  
7/14/2021

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## **INTRODUCTION: PROJECT DESCRIPTION AND LOCATION**

The Project is known as 'Pepin Restaurant Remodel' and is located at 7363 East 2<sup>nd</sup> Street in Scottsdale, Arizona. The proposed project consists of the renovation and remodel of the existing Pepin restaurant building and patio.

The utility provider for water facilities is the City of Scottsdale.

## **EXISTING CONDITIONS**

Per available utility maps and as-built records, an existing 8" ACP water main is located in the dedicated pedestrian area east of the Project. The existing building is 5,326 sf and is connected to the said main for domestic service via a 2" meter. Refer to Appendix A for City of Scottsdale Water Quarter Section Map & Offsite Improvement Plan.

## **FIRE FLOW REQUIREMENTS**

The total building area after the redevelopment will be 7,826 square feet. The building is type VB construction. Per the International Fire Code, Table B105.1, the existing building with the new expansion requires a minimum fire flow of 2,500 GPM for a 2-hour duration. The redeveloped building will have automatic sprinklers installed resulting in an allowable 50% reduction in fire flow requirements. Required fire flow will be 1,500 GPM for a 2-hour duration. A flow test was completed on April 29<sup>th</sup>, 2021 on the existing fire hydrant immediately east of the restaurant. 3,266 GPM is available at the existing fire hydrant after accounting for City of Scottsdale required PSI and Safety Factor adjustments. Refer to Appendix B for Fire Flow Results.

## **PROPOSED CONDITIONS**

The existing building is intended to be redeveloped by the current user and to maintain its restaurant use. An addition of approximately 2,500 sf of patio space on the upper level is to be included as part of the redevelopment. The redeveloped building will have 7,826 square feet, including patio area. The design team intends to retain and reuse the existing 2" water service connection east of the redeveloped building. This is anticipated to provide adequate sizing and pressure to supply the intended domestic service to the building. Refer to Appendix C for Preliminary Floor Plan.

## **REQUIRED COMPUTATIONS**

### **EXISTING WATER DEMAND:**

**Average Day Demand (Bar/Restaurant unit):**  $0.00181/\text{SF} \times 5,326 \text{ SF} = 9.64 \text{ GPM}$

**Peak Hour Demand:**  $3.5 \times 9.64 = 33.74 \text{ GPM}$

**Maximum Day Demand + Fire Flow Demand:**  $2 \times (9.64 \text{ GPM}) + 1,500 \text{ GPM} = 1,519.28 \text{ GPM}$

### **PROPOSED WATER DEMAND:**

**Average Day Demand (Bar/Restaurant unit):**  $0.00181/\text{SF} \times 7,826 \text{ SF} = 14.17 \text{ GPM}$

**Peak Hour Demand:**  $3.5 \times 14.17 = 49.58 \text{ GPM}$

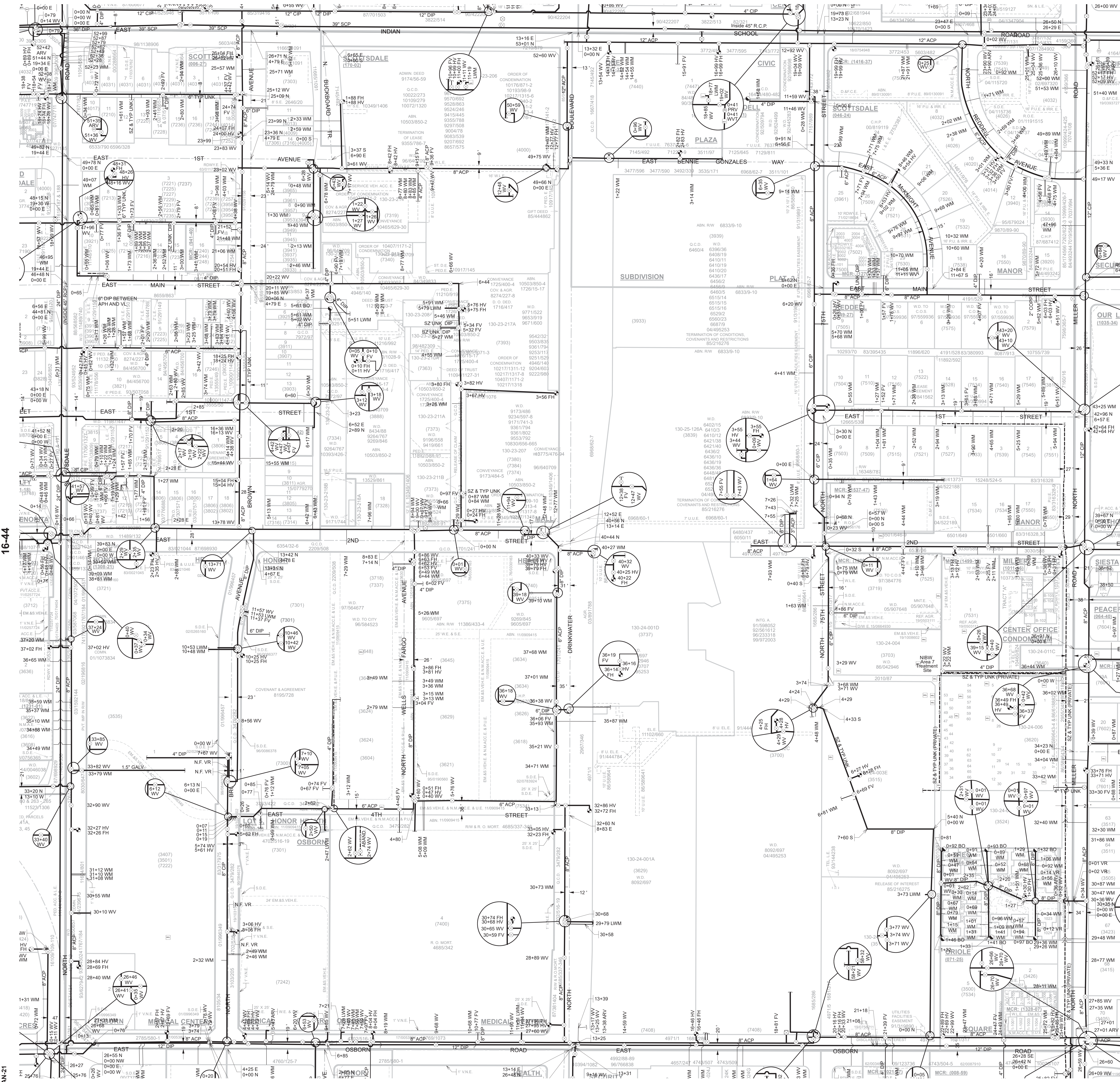
**Maximum Day Demand + Fire Flow Demand:**  $2 \times (14.17 \text{ GPM}) + 1,500 \text{ GPM} = 1,528.34 \text{ GPM}$

Per the City of Scottsdale Design Standards & Policies Manual, Section 6-1.416 –M, minimum meter size is 1". The existing 2" water service from the east will be sufficient to support the minimum meter requirement.

## **CONCLUSION**

CYPRESS respectfully submits this report as the Preliminary Water Design Report for the proposed Pepin Restaurant Remodel Development. The proposed water system shall be designed in accordance with ADEQ, International Building Code, and the City of Scottsdale standards.

Appendix A  
City of Scottsdale Water & Offsite Improvement Plan

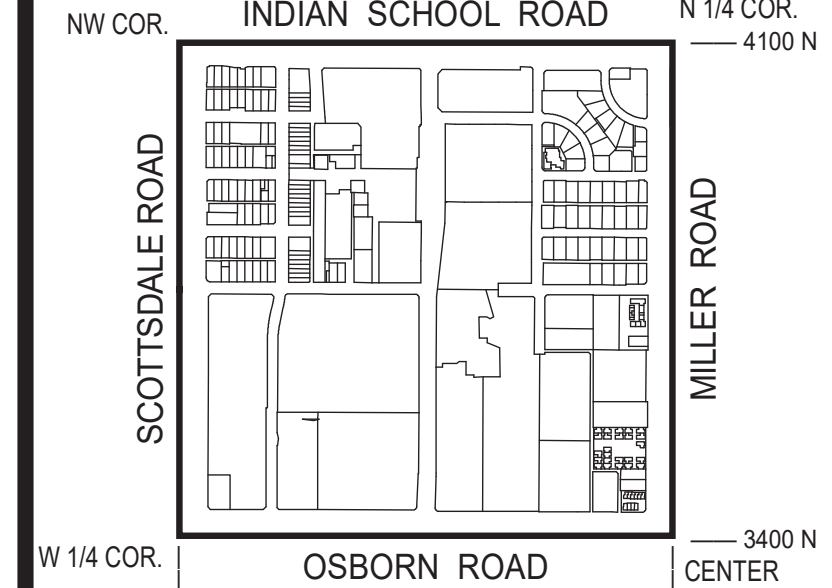


**GENERAL NOTES:**  
 \* THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE CITY OF SCOTTSDALE GIS DEPARTMENT AT (480) 312-7792.  
 \* THE SECTION LINE BEARING AND DISTANCES ARE BASED ON THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER, 1991. BEARINGS ARE MADE TO GRID AND DISTANCES ARE FLATTENED TO GROUND. WHERE NO CORNER WAS FOUND THE DIMENSIONS ARE GIVEN TO CALCULATED SECTION CORNERS AND ARE NOTED AS CALCULATED ON THE MAP.

**LEGEND:**

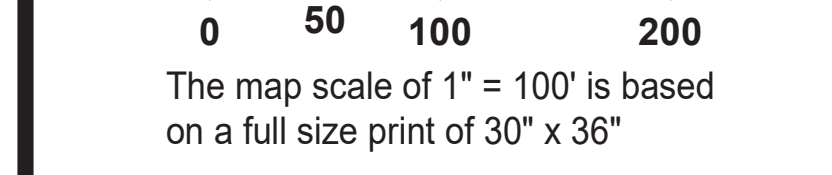
- Air Release Valve
- Non-potable Air Release Valve
- Blowoff
- Cap
- Cathodic Protection
- Fill Drain
- Fire Hydrant
- Non-GPS Point
- Pressure Reducing Valve
- Pump
- Reducer
- Sample Station
- Water Manhole
- Non-Potable Manhole
- Valve
- Non-potable Valve
- Vault
- Water Main
- Non-Potable Main
- Fire / Private Main
- Non-Scottsdale Main

**VICINITY MAP**



**NORTH**

SCALE: 1" = 100'



**WATER  
 QUARTER SECTION MAP**

**16-45**

NW 1/4 SEC. 26 T2N R4E

THIS DOCUMENT IS PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY. THE CITY OF SCOTTSDALE DOES NOT WARRANT THE ACCURACY OF THE INFORMATION. NO LIABILITY SHALL BE ASSUMED FOR ANY PARTICULAR PURPOSE. IT SHOULD NOT BE RELIED UPON WITHOUT FIELD VERIFICATION.  
 THE CITY OF SCOTTSDALE  
 10-JAN-21



Appendix B  
Fire Flow Test Results



# Arizona Flow Testing LLC

## HYDRANT FLOW TEST REPORT

Project Name: Not Provided  
Project Address: 7363 East Scottsdale Mall, Scottsdale, Arizona 85251  
Arizona Flow Testing Project No.: 21223  
Client Project No.: Not Provided  
Flow Test Permit No.: C65148  
Date and time flow test conducted: April 29, 2021 at 8:40 AM  
Data is current and reliable until: October 29, 2021  
Conducted by: Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)  
Witnessed by: Chris Mendez –City of Scottsdale-Inspector (602-9028-9046)

### Raw Test Data

Static Pressure: **85.0 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **67.0 PSI**  
(Measured in pounds per square inch)

Pitot Pressure: **24.0 PSI**  
(Measured in pounds per square inch)

Diffuser Orifice Diameter: 4 Inch Hose Monster  
(Measured in inches)

Coefficient of Diffuser: 0.7875

Flowing GPM: **1,842 GPM**  
(Measured in gallons per minute)

GPM @ 20 PSI: **3,685 GPM**

### Data with 13 PSI Safety Factor

Static Pressure: **72.0 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **54.0 PSI**  
(Measured in pounds per square inch)

Distance between hydrants: Approx. 200 Feet

Main size: Not Provided

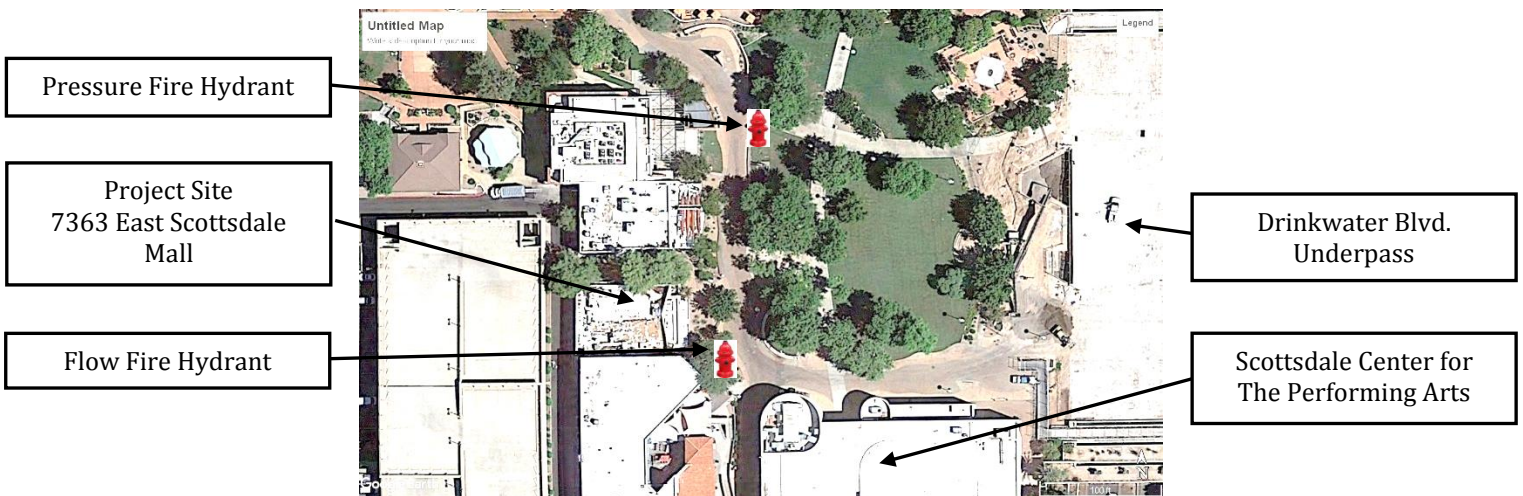
Flowing GPM: **1,842 GPM**

GPM @ 20 PSI: **3,266 GPM**

Scottsdale requires a maximum Static Pressure of 72 PSI for AFES Design.

### Flow Test Location

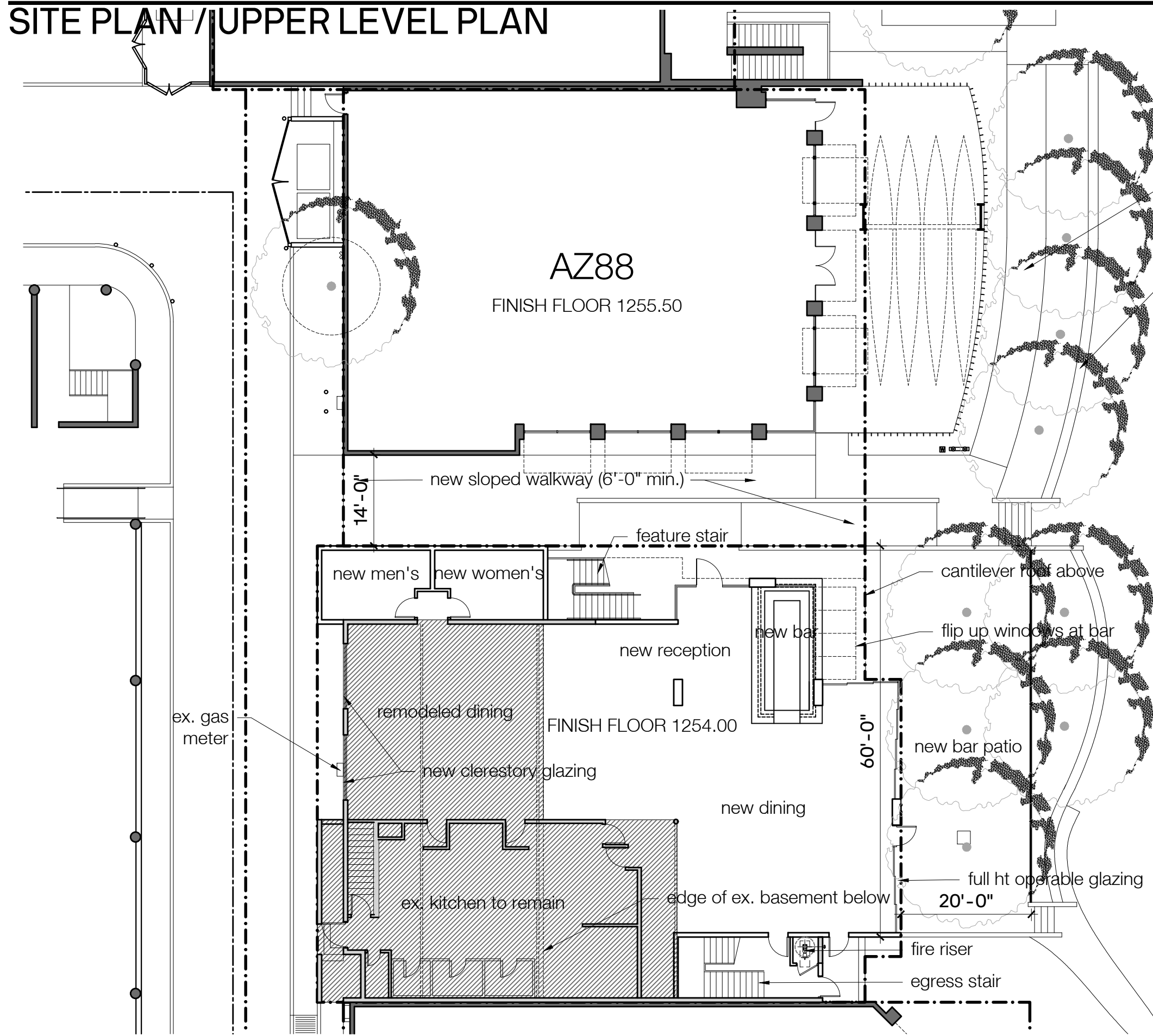
North ↑



Appendix C  
Preliminary Floor Plan

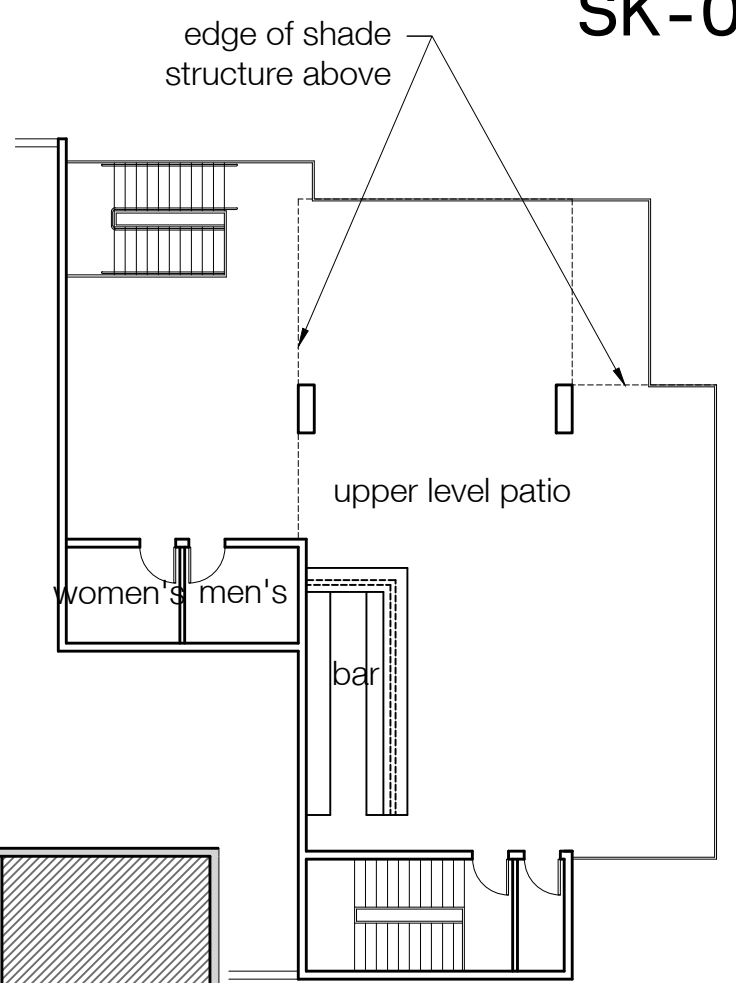
# SITE PLAN / UPPER LEVEL PLAN

SK-01

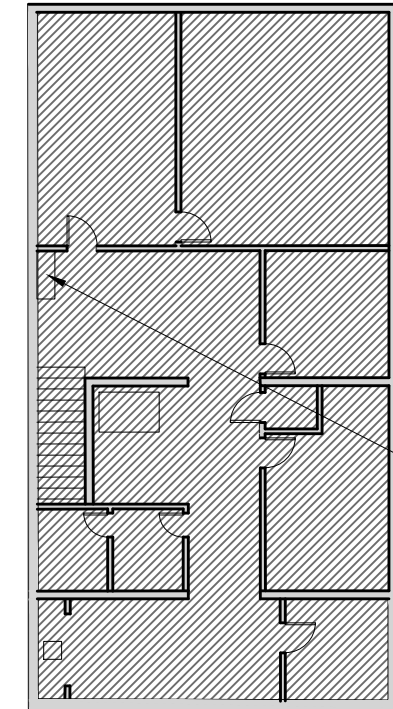


new 6'-0" w. sloped walkway

adaptations to park hardscape / landscape



UPPER LEVEL



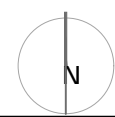
EX. BASEMENT LEVEL

7363 CIVIC CENTER MALL  
 SCOTTSDALE, AZ 85251  
 SEPTEMBER 17, 2020  
 SCALE: 1/16" = 1'-0"

7340 EAST MAIN STREET #210  
 SCOTTSDALE, ARIZONA 85251  
 MADEWITHALINE.COM

GROUND LEVEL

PEPIN REMODEL



**ALINE**  
 ARCHITECTURE

20-DR-2021  
 7/14/2021