

Seal  
  
 EXPIRES 3/31/26

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Rev.	Date	By	Description

# PRELIMINARY GRADING, DRAINAGE, & UTILITY PLAN

## FOR

# MESA ROYALE PHASE 4

## MESA, ARIZONA

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 1 NORTH, RANGE 5 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA  
 644 W. MAIN STREET

**LEGEND**

**PROPOSED**

- CURB AND GUTTER
- REVERSE GUTTER
- MANHOLE
- CURB / YARD DROP INLET
- FLARED END SECTION
- FIRE HYDRANT
- VALVE
- REDUCER
- TEE
- BEND
- SIAMENSE CONNECTION
- STORM DRAINAGE LINE
- SANITARY SEWER LINE
- WATER LINE
- CLEANOUT
- SPOT ELEVATION

TC = TOP OF CURB  
 TB = TOP OF BANK  
 FL = FLOW LINE  
 EP = EDGE OF PAVEMENT  
 TW = TOP OF WALL  
 P = PAVEMENT  
 SW = SIDEWALK  
 TF = TOP OF FOOTING  
 BW = BOTTOM OF WALL

- CONCRETE WALK
- HEAVY DUTY CONCRETE
- HEAVY DUTY PAVEMENT
- SWALE
- PROPERTY LINE
- ROADWAY CENTERLINE
- LIGHTPOLE
- WATER METER
- BACKFLOW PREVENTER
- 1' CONTOUR
- 10' CONTOUR
- DRAINAGE FLOW DIRECTION

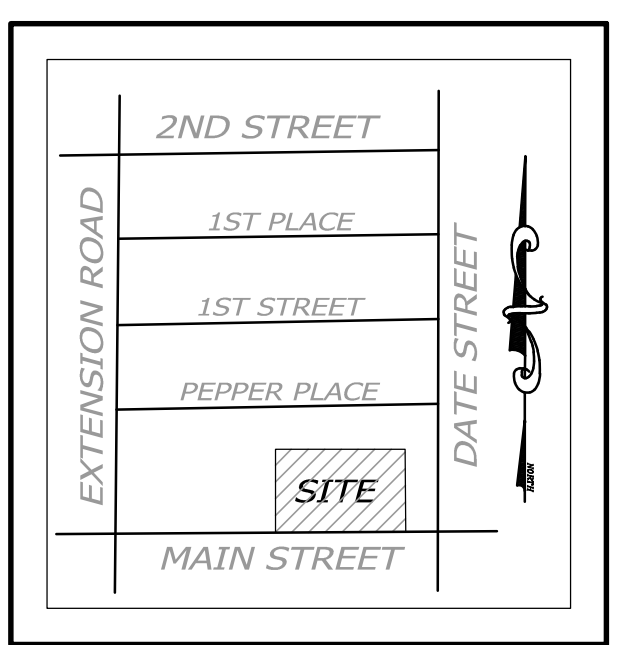
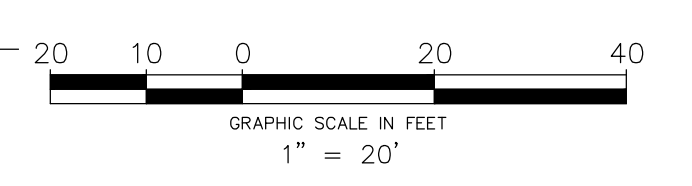
**PRELIMINARY DRAINAGE CALCULATIONS:**  
 SITE IS IN DOWNTOWN REDEVELOPMENT AREA  
 RETAIN 1/3 OF 100 YEAR 2 HOUR VOLUME  
 A=3.21 ACRES  
 C=0.95  
 P=2.16" (1/4")=1.44"  
 $Vr=(P/12)(C)(A)$   
 $Vr=(1.44/12)(3.21)(0.95)=0.36$  AC.FT = 15,940 C.F.  
 USE MC7200 STORMTECH CHAMBERS  
 58 CHAMBERS, 6 ENDCAPS  
 $Vp=58(267.3)+6(115.3)= 16,195$  C.F.  
 DRAIN RETENTION WITH DEWATERING PUMP INTO NEARBY STREET INLET

**MESA ROYALE PHASE 4**  
 644 W. Main St.  
 Mesa, AZ 85201  
 CHICANOS POR LA CAUSA  
 1008 EAST BUCKEYE ROAD,  
 STE 115 Phoenix, AZ 85034

Project  
 Drawn/Checked  
**LJR / JSR**  
 Date  
**07/08/2024**  
 Project Number  
**21-081-50**  
 Sheet Number

**RCC DESIGN GROUP, LLC**  
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 16815 S. DESERT FOOTHILLS PKWY., SUITE 138  
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 480.598.0270  
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**PRELIMINARY GRADING AND DRAINAGE PLAN**



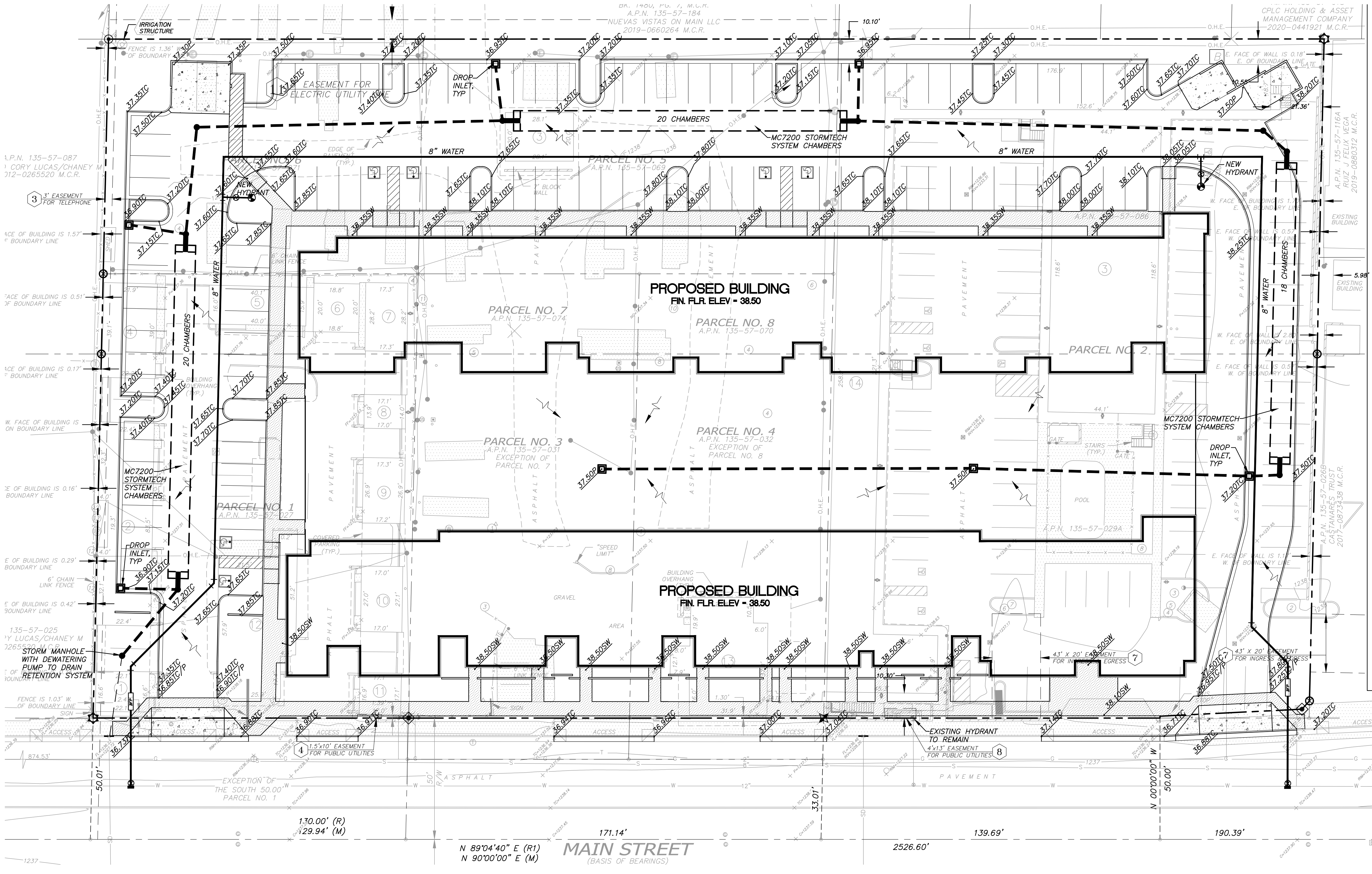
**VICINITY MAP**  
NOT TO SCALE

**OWNER / DEVELOPER:**  
 CHICANOS POR LA CAUSA  
 1008 EAST BUCKEYE ROAD, SUITE 116  
 PHOENIX, AZ 85034

**ENGINEER:**  
 RCC DESIGN GROUP, LLC  
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 16815 S. DESERT FOOTHILLS PKWY., SUITE 138  
 PHOENIX, AZ 85048  
 480.598.0270  
 480.598.0273 FAX

**BENCHMARK:**  
 THE BENCHMARK USED FOR THIS SURVEY IS THE CITY OF MESA, BEING A 3" BRASS TAG, LOCATED AT THE INTERSECTION OF COUNTRY CLUB DRIVE AND UNIVERSITY DRIVE, HAVING AN ELEVATION OF 1243.55 FEET, (NAVD88).

**SITE AREA:**  
 NET SITE AREA = 140,010 SF  
 OR 3.214 ACRES



130.00' (R)  
 129.94' (M)

171.14'

**MAIN STREET**  
 (BASIS OF BEARINGS)  
 N 89°04'40" E (R1)  
 N 90°00'00" E (M)

2526.60'

139.69'

190.39'