



Drainage Reports

Abbreviated Water and Sewer Needs

Water Study

Wastewater Study

Stormwater Waiver Application

PRELIMINARY SEWER BASIS OF DESIGN REPORT FOR THE IVY - SCOTTSDALE

Scottsdale, Arizona

05 September 2019

PREPARED FOR

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

DEVELOPER

10435 Scottsdale, LLC
7340 East Main Street, #200
Scottsdale, Arizona 85251

SITE ADDRESS

10345 North Scottsdale Road
Scottsdale, Arizona 85258

PREPARED BY

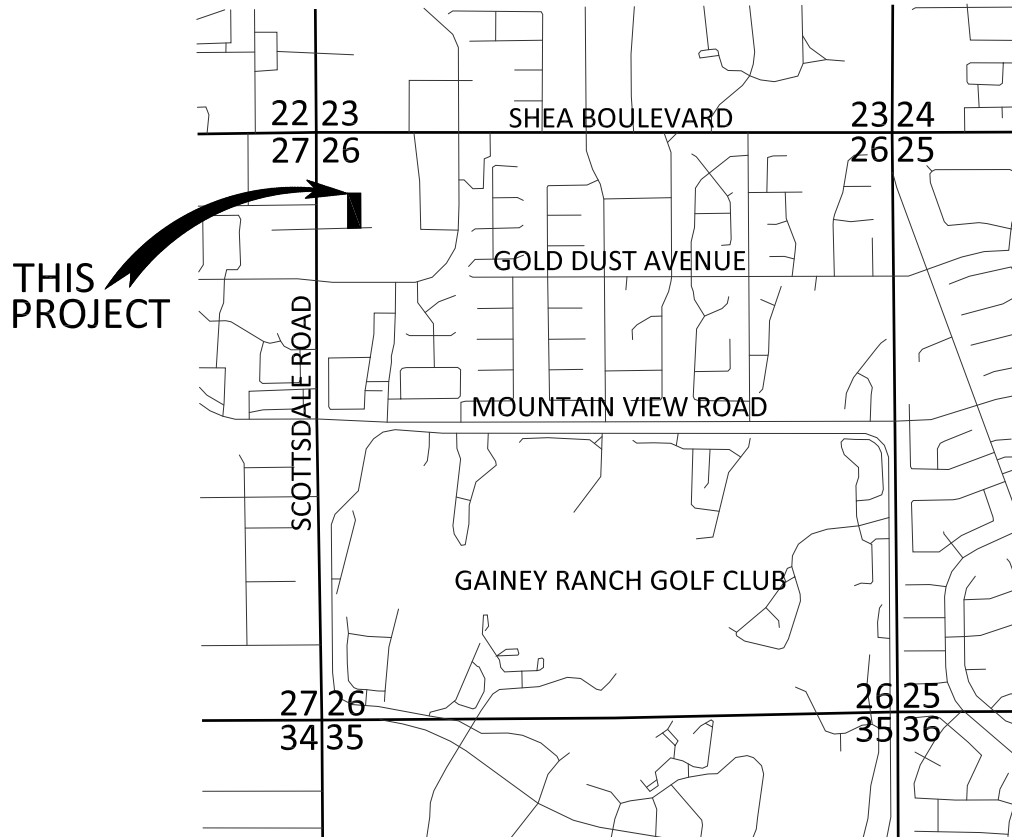
CYPRESS
CIVIL DEVELOPMENT
strength + sustainability

4450 north 12th street, #228

phoenix, arizona 85014

CYPRESS # 18.12





IN THE NW 1/4 OF THE NW 1/4 OF SECTION 26,
T. 3 N., R. 4 E., G.&S.R.M.,
CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA

LOCATION MAP

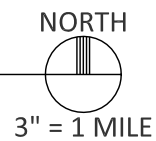


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- A City of Scottsdale Water & Sewer Quarter Section Map
- B Preliminary Floor Plan
- C Preliminary Improvement Plan

INTRODUCTION: PROJECT DESCRIPTION AND LOCATION

The Project is known as 'The Ivy – Scottsdale' and is located at 10345 North Scottsdale Road in Scottsdale, Arizona. The project is also known as Tract A of Paradise Valley Plaza (herein referred to as the "Development").

The proposed project consists of the redevelopment of a single-story commercial building to contain three suites with the required paved parking, utility and drainage improvements, and amenity landscaping.

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

EXISTING CONDITIONS

Per available utility maps and as-built records, existing sewer mains are located in Scottsdale Road to the west of the project, within the existing alley east of the project, and within Gold Dust Avenue to the south of the project. An 8" VCP sewer main is tapped from a manhole within Scottsdale Road to the west of the project and supplies sewer service to the interior of the shopping center via laterals from each of the buildings fronting Scottsdale Road. The existing building has two 4" existing service laterals connected to the 8" VCP sewer main. Refer to Appendix A for City of Scottsdale Sewer Quarter Section Map.

PROPOSED CONDITIONS

There is a single existing building intended to be redeveloped onsite to contain three suites – two commercial/retail suites and one office suite. The redeveloped building will have a footprint of 10,911 square feet. 6,457 square feet will be commercial/retail space and 4,454 square feet will be office space. The design team intends to abandon the two existing 4" sewer laterals and install one new 6" service lateral from the 8" main to the buildings with a minimum slope of 1.0%. This 6" line shall branch into two 6" service connections to the buildings. This is anticipated to provide adequate sizing to supply the three suites within the building. Refer to Appendix B for Preliminary Floor Plan and to Appendix C for Preliminary Improvement Plans.

REQUIRED COMPUTATIONS

EXISTING SEWER DEMAND:

Average Day Demand (Commercial/Retail): $0.5 \text{ GPD/SF} \times 15,774 \text{ SF} = 7,887 \text{ GPD}$

Peak Demand: $3 \times 7,887 = 23,661 \text{ GPD}$

PROPOSED SEWER DEMAND:

Average Day Demand

(Commercial/Retail): $0.5 \text{ GPD/SF} \times 6,457 \text{ SF} = 3,228.5 \text{ GPD}$

(Office): $0.5 \text{ GPD/SF} \times 4,454 \text{ SF} = 2,227 \text{ GPD}$

Total: 5,455.5 GPD

Peak Demand: $3 \times 5,455.5 = 16,366.5 \text{ GPD}$

The proposed demand shall be less than the existing demand. Thus, it is expected that the new sewer infrastructure will be sufficient to serve the redeveloped building, as it will size up the existing 4" service to a 6" service.

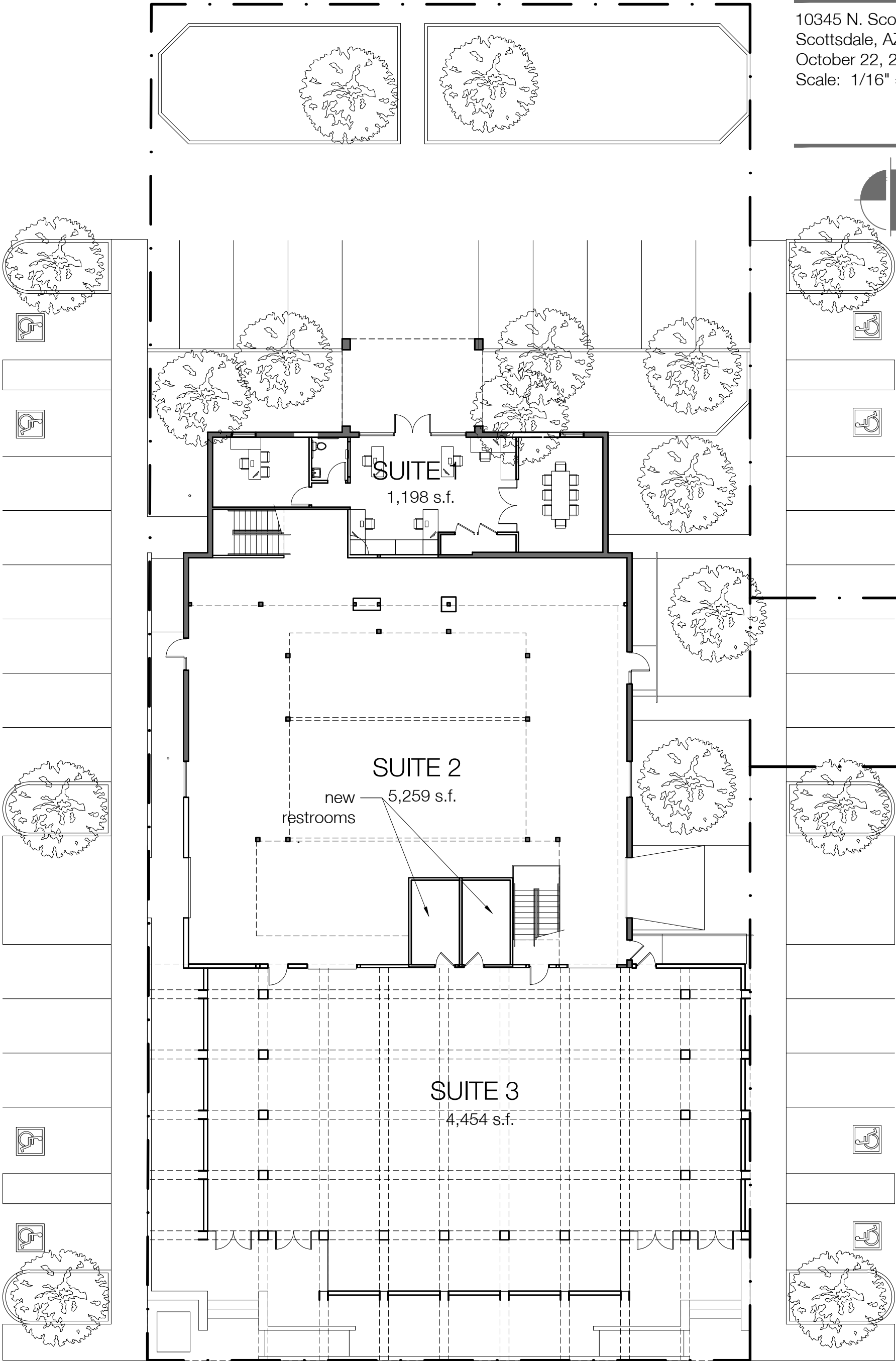
CONCLUSION

CYPRESS respectfully submits this report as the Preliminary Wastewater Design Report for the proposed The Ivy – Scottsdale Development. The proposed wastewater system shall be designed in accordance with ADEQ, International Building Code, and the City of Scottsdale standards.

Appendix A
City of Scottsdale Water & Sewer Quarter Section Map

Appendix B
Preliminary Floor Plan

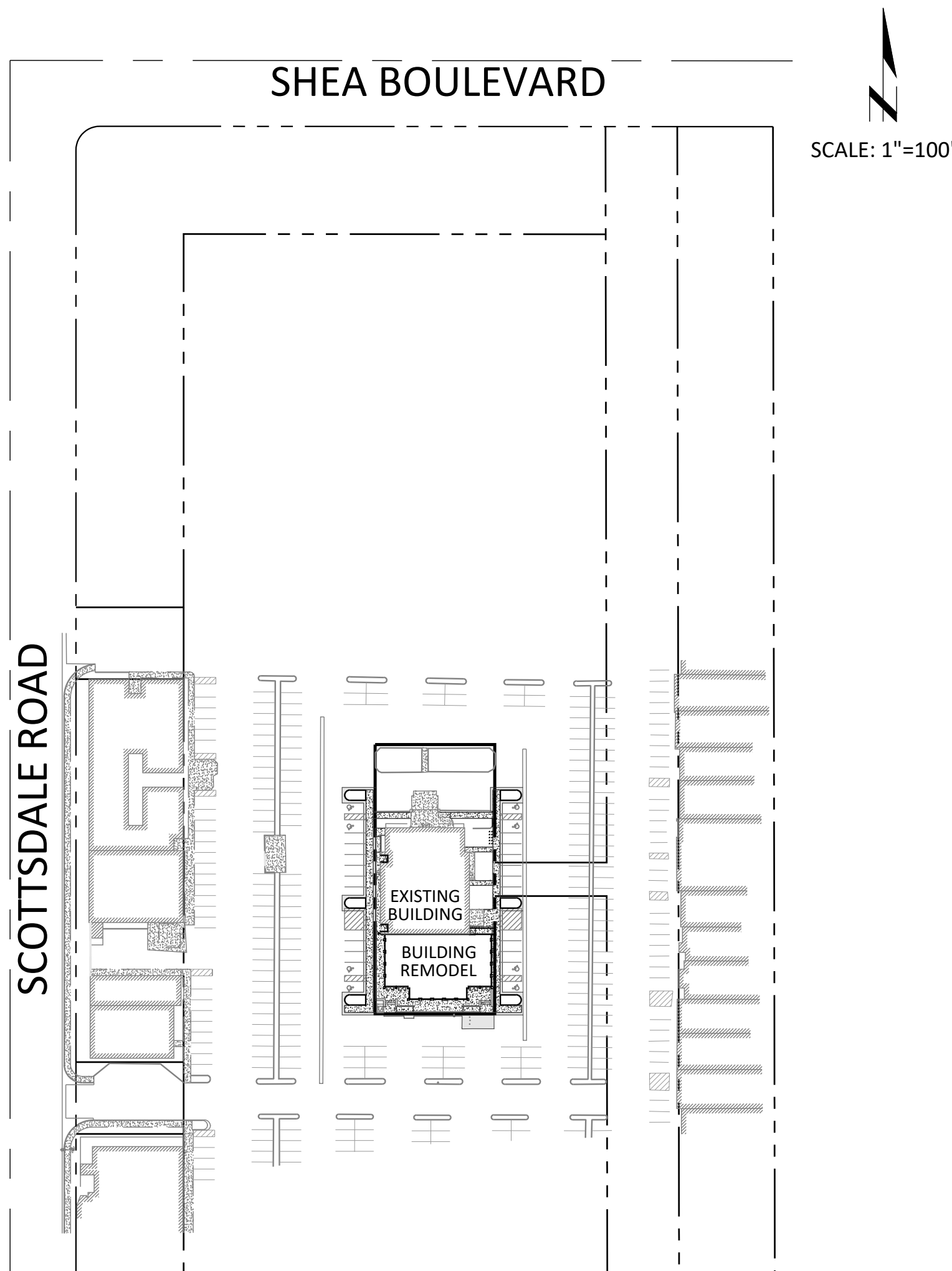
10345 N. Scottsdale Rd.
Scottsdale, AZ 85253
October 22, 2018
Scale: 1/16" = 1'-0"



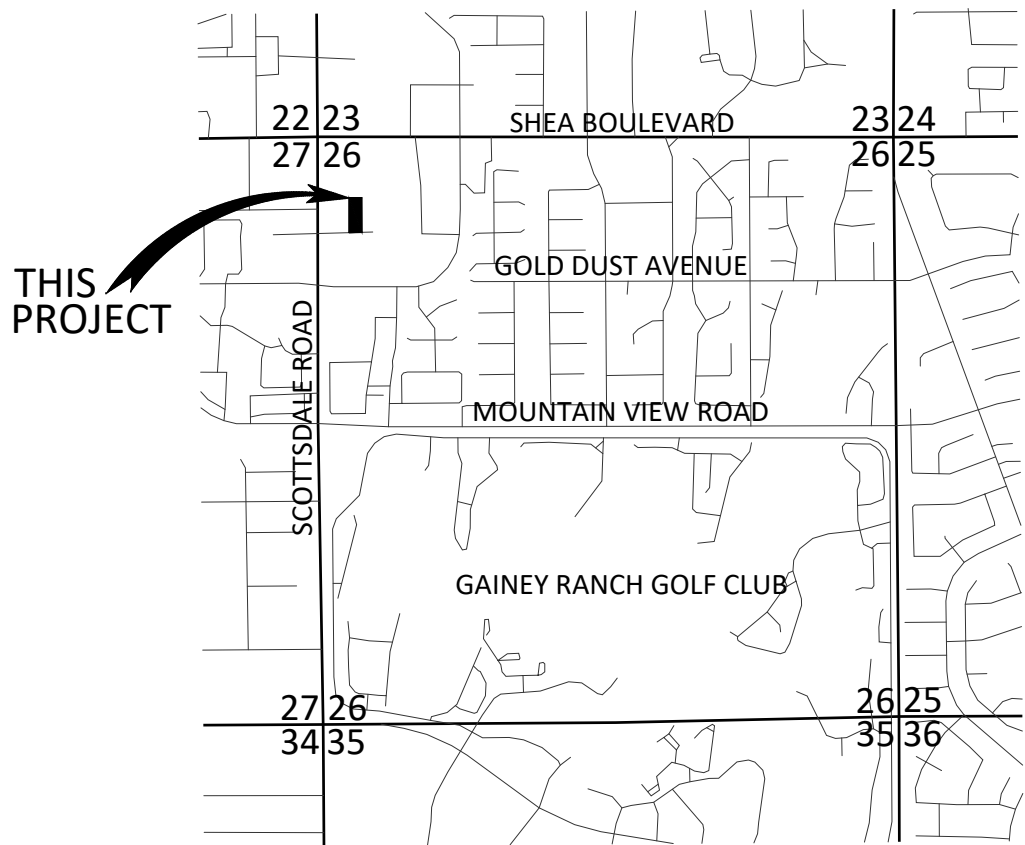
Appendix C
Preliminary Improvement Plan

PRELIMINARY IMPROVEMENT PLAN for THE IVY - SCOTTSDALE ROAD

10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
A PORTION NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE
GILA AND SALT RIVER MERIDIAN MARICOPA COUNTY, ARIZONA



PROJECT OVERVIEW



IN THE NW 1/4 OF THE NW 1/4 OF SECTION 26,
T. 3 N., R. 4 E., G.&S.R.M.,
CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA

LOCATION MAP

LEGEND

---	RIGHT-OF-WAY	⊗	EXISTING SEWER CLEANOUT
---	PROJECT BOUNDARY LINE	⊗	EXISTING WATER VALVE
---	OTHER PARCEL LINE	⊗	EXISTING WATER METER
---	ROADWAY CENTERLINE	⊗	EXISTING FIRE HYDRANT
---	SECTION LINE	⊗	EXISTING FIRE CONNECTION
---	FLOW-LINE	⊗	EXISTING TRANSFORMER
---	EXISTING EASEMENT	⊗	EXISTING SIGN
---	NEW EASEMENT	⊗	EXISTING SITE LIGHT
---	EXISTING CONTOUR	⊗	SURVEY MONUMENT AS NOTED
---	NEW CONTOUR	⊗	SPOT ELEV. (EXIST. GRADE)
---	EXISTING CONCRETE	⊗	SPOT ELEV. (NEW GRADE)
---	NEW ASPHALT	⊗	RIGHT-OF-WAY
---	NEW CONCRETE	⊗	RECORDED VALUE
---	NEW RETAINING WALL	⊗	MEASURED VALUE
---	EXISTING CURB	⊗	CALCULATED VALUE
---	EXISTING PAINT STRIPE	⊗	RADIUS
---	NEW CURB	⊗	PAVEMENT (ASPHALT)
---	NEW PAINT STRIPE	⊗	CONCRETE
---	EXISTING UNDERGROUND ELECTRIC	⊗	GUTTER
---	EXISTING SEWER LINE	⊗	TOP OF CURB
---	EXISTING WATER LINE	⊗	FINISHED GRADE
---	EXISTING FIRE SERVICE	⊗	LOW POINT
---	EXISTING GAS LINE	⊗	HIGH POINT
		⊗	GRADE BREAK
		⊗	FINISHED FLOOR ELEVATION
		⊗	PUBLIC UTILITY EASEMENT
		⊗	LENGTH
		⊗	SLOPE

PROJECT INFORMATION

- PROJECT DESCRIPTION:
THE PROJECT CONSISTS OF THE REPURPOSING OF THE EXISTING STRUCTURE FOR THE USE OF A NEW RESTAURANT WITH ALL PAVING, GRADING & DRAINAGE, UTILITY AND PARKING IMPROVEMENTS.
- ADDRESS:
10345 NORTH SCOTTSDALE ROAD
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A
- ZONING: C-3
- SITE AREA: 22,502 SF (0.52 AC)

SURVEY NOTES

- THE SURVEY FOR THIS PROJECT WAS PERFORMED BY:
HUNTER ENGINEERING
10450 NORTH 74TH STREET, SUITE 200
SCOTTSDALE, ARIZONA 85258
PH: 480-991-3985
CONTACT: JERRY D. HEATH JR., R.L.S.
- THE BASIS OF BEARINGS FOR THIS PROJECT IS THE BEARING OF N 00°00'00" E, ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, ACCORDING TO THE PLAT OF PARADISE VALLEY PLAZA, RECORDED IN BOOK 94, PAGE 15, MARICOPA COUNTY RECORDS, ARIZONA.
- THE BASIS OF ELEVATION FOR THIS PROJECT IS THE BRASS CAP IN HANDHOLE WITH ID #3272 AT THE INTERSECTION OF SCOTTSDALE ROAD AND SHEA BOULEVARD WITH AN ELEVATION 1351.26' (NAVD 88).

LEGAL DESCRIPTION

PARCEL NO. 1
TRACT A, OF PARADISE VALLEY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 94 OF MAPS, PAGE 15.
PARCEL NO. 2
AN UNDIVIDED 1/90TH INTEREST IN AND TO TRACTS B AND C, OF PARADISE VALLEY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 94 OF MAPS, PAGE 15.

BENCHMARK

THE BENCHMARK USED FOR THIS PLAN IS THE BRASS CAP IN HANDHOLE WITH ID #3272 AT THE INTERSECTION OF SCOTTSDALE ROAD AND SHEA BOULEVARD WITH AN ELEVATION 1351.26' (NAVD 88).

DRAINAGE STATEMENT

-SITE IS IN A SPECIAL FLOOD HAZARD AREA - NO
-OFFSITE FLOWS AFFECT THIS SITE - NO
-RETENTION IS EXISTING AND NO ADDITIONAL RETENTION ANTICIPATED AS PART OF THIS PROJECT
-EXTREME STORM OUTFALLS THE SITE AT THE SOUTHWEST CORNER AT THE ELEVATION OF 1347.14

FLOODPLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANEL NUMBER 04013C1760L, DATED OCTOBER 16, 2013 THE PARCEL IS LOCATED IN THE ZONE X (SHADED) AREA, WHICH IS DEFINED AS AREAS OF AS AREAS OUTSIDE THE 1% ANNUAL CHANCE FLOODPLAIN, AREAS OF 1% ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1% ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD BY LEVEES. NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE. INSURANCE PURCHASE IS NOT REQUIRED IN THESE ZONES.

OWNER/DEVELOPER

10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

CIVIL ENGINEER

CYPRESS CIVIL DEVELOPMENT
4450 NORTH 12TH STREET, #228
PHOENIX, ARIZONA 85014
PH: 623-282-2498
ATTN: JEFF HUNT

ARCHITECT

ALINE ARCHITECTURE CONCEPTS
7340 EAST MAIN STREET, #210
SCOTTSDALE, ARIZONA 85251
PH: 480-225-7359
ATTN: BRIAN KROB

UTILITIES

WATER:	CITY OF SCOTTSDALE
SEWER:	CITY OF SCOTTSDALE
ELECTRIC:	SALT RIVER PROJECT
GAS:	SOUTHWEST GAS
TELEPHONE:	CENTURY LINK
CABLE:	COX COMMUNICATIONS

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e: jphunt@cypresscivil.com

CYPRESS PROJECT NO: 18.124



NO.	DATE	REVISION

PRELIMINARY IMPROVEMENT PLAN for
THE IVY - SCOTTSDALE ROAD
10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
cover

DEVELOPER

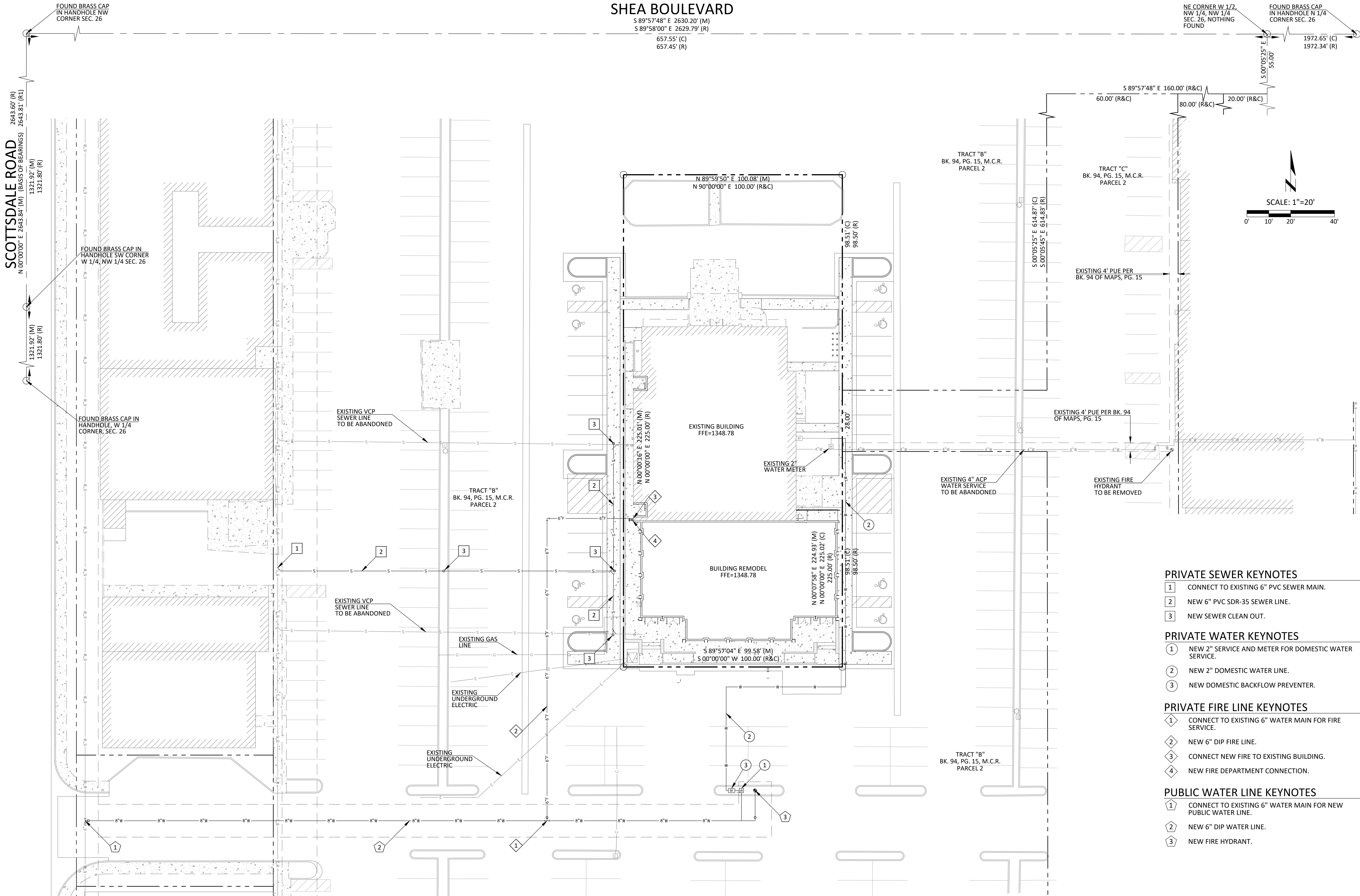
10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

SITE ADDRESS

10345 NORTH SCOTTSDALE RD.
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A

SHEET NUMBER





SHEA BOULEVARD

S 89°57'48" E 2630.20' (M)
S 89°58'00" E 2629.79' (R)
657.55' (C)
657.45' (R)

NE CORNER W 1/2,
NW 1/4, NW 1/4
SEC. 26, NOTHING
FOUND

FOUND BRASS CAP
IN HANDHOLE N 1/4
CORNER SEC. 26

1972.65' (C)
1972.34' (R)

S 00°05'25" E
55.00'

SCALE: 1"=20'
0' 10' 20' 40'

PRIVATE SEWER KEYNOTES

- 1 CONNECT TO EXISTING 6" PVC SEWER MAIN.
- 2 NEW 6" PVC SDR-35 SEWER LINE.
- 3 NEW SEWER CLEAN OUT.

PRIVATE WATER KEYNOTES

- 1 NEW 2" SERVICE AND METER FOR DOMESTIC WATER SERVICE.
- 2 NEW 2" DOMESTIC WATER LINE.
- 3 NEW DOMESTIC BACKFLOW PREVENTER.

PRIVATE FIRE LINE KEYNOTES

- 1 CONNECT TO EXISTING 6" WATER MAIN FOR FIRE SERVICE.
- 2 NEW 6" DIP FIRE LINE.
- 3 CONNECT NEW FIRE TO EXISTING BUILDING.
- 4 NEW FIRE DEPARTMENT CONNECTION.

PUBLIC WATER LINE KEYNOTES

- 1 CONNECT TO EXISTING 6" WATER MAIN FOR NEW PUBLIC WATER LINE.
- 2 NEW 6" DIP WATER LINE.
- 3 NEW FIRE HYDRANT.

CYPRESS
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strength + sustainability

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phoenix, arizona 85014
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e: jphunt@cypresscivil.com

CYPRESS PROJECT NO: 18.124



NO. DATE REVISION

NO.	DATE	REVISION

PRELIMINARY IMPROVEMENT PLAN for
THE IVY - SCOTTSDALE ROAD
10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
onsite utility plan

DEVELOPER

10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

SITE ADDRESS

10345 NORTH SCOTTSDALE RD.
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A

SHEET NUMBER



THESE PLANS ARE PRELIMINARY AND ARE NOT FOR CONSTRUCTION OR RECORDING.

PRELIMINARY WATER BASIS OF DESIGN REPORT FOR THE IVY - SCOTTSDALE

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 9/11/2019

Scottsdale, Arizona

05 September 2019

PREPARED FOR

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

DEVELOPER

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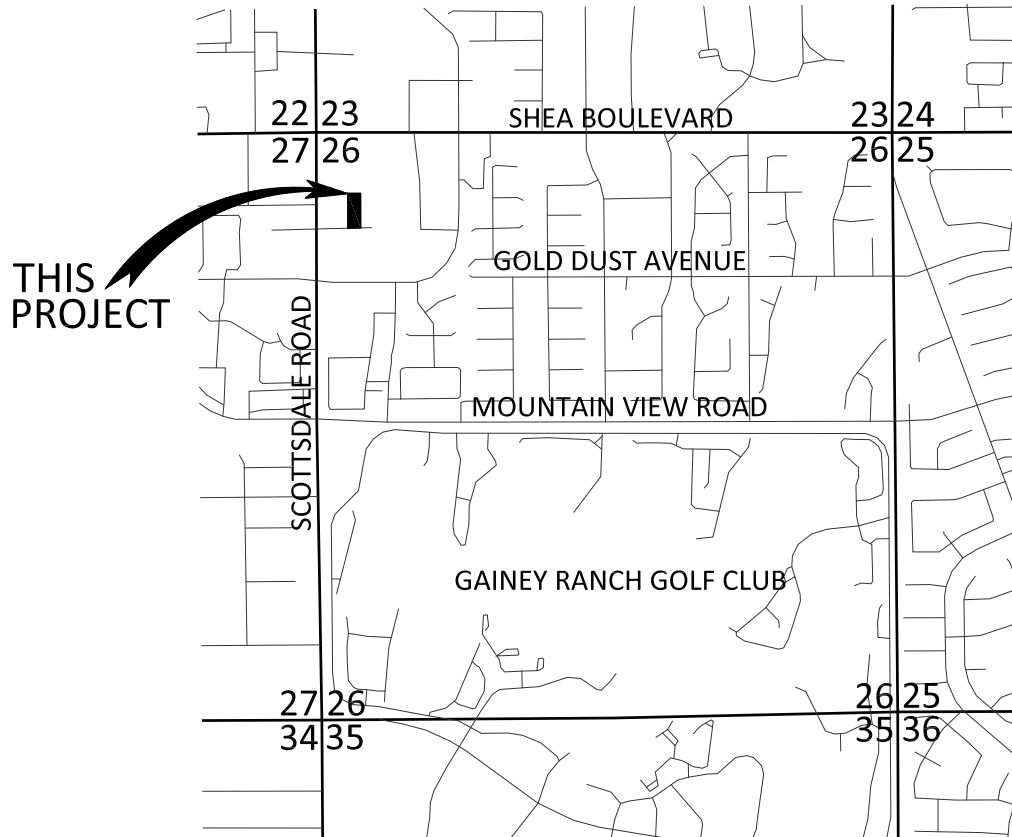
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IN THE NW 1/4 OF THE NW 1/4 OF SECTION 26,
T. 3 N., R. 4 E., G.&S.R.M.,
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LOCATION MAP

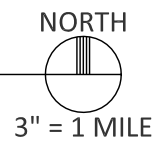


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APPENDICES

- A City of Scottsdale Water & Sewer Quarter Section Map
- B Preliminary Floor Plan
- C Preliminary Improvement Plan

INTRODUCTION: PROJECT DESCRIPTION AND LOCATION

The Project is known as 'The Ivy – Scottsdale' and is located at 10345 North Scottsdale Road in Scottsdale, Arizona. The project is also known as Tract A of Paradise Valley Plaza (herein referred to as the "Development").

The proposed project consists of the redevelopment of a single-story commercial building to contain three suites with the required paved parking, utility and drainage improvements, and amenity landscaping.

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

EXISTING CONDITIONS

The project is located at the southeast corner of Shea Boulevard and Scottsdale Road, within the center of the existing Paradise Valley Plaza Shopping Center. Per available utility maps and as-built records, existing water mains are located in Scottsdale Road to the west of the project, within the existing alley east of the project, within Gold Dust Avenue to the south of the project, and within Shea Boulevard to the north of the project. The existing building is connected to the 6" ACP water main within the alley to the east via a 6" DIP tap and 4" ACP extension to the east side of the building. Based on observations, the 4" ACP line supplies both the domestic water and fire service to the existing building. A 2" domestic water line with a 2" meter branches off the 4" line just before connecting to the building. Refer to Appendix A for City of Scottsdale Water Quarter Section Maps.

At the time of this report, no fire flow test has been conducted in Scottsdale Road. It is assumed that the existing water line in Scottsdale road shall provide sufficient pressure and capacity to serve the Project.

PROPOSED CONDITIONS

There is a single existing building onsite intended to be redeveloped with the southern part of it being demolished and rebuilt as a new structure. The combined proposed building shall contain three suites – two commercial/retail suites and one office suite. The design team intends to abandon the existing 4" ACP distribution line to the 6" main and instead install a new public 6" main from the water main in Scottsdale Road to a new fire hydrant south of the building. A new 6" fire service and a new 2" water service shall extend from the new building to this new 6" main. The project shall have approximately 110 linear feet of private fire line 6" distribution pipe beyond the nearest hydrant east of the existing building. This is anticipated to provide adequate

sizing and pressure to supply the intended domestic and fire services to the building. Refer to Appendix C for Preliminary Floor Plan and Appendix D for Preliminary Improvement Plans.

REQUIRED COMPUTATIONS

EXISTING WATER DEMAND:

The existing building has a total square footage of 15,774 SF and is construction type V-B. Per the International Fire Code, Table B105.1, the building requires a minimum fire flow of 3,500 GPM for a 2-hour duration. The new building will have automatic sprinklers installed which typically result in an allowable 50% reduction in fire flow requirements. Therefore, the required fire flow will be 1,750 GPM for a 2-hour duration.

Average Day Demand (Commercial/Retail unit): $0.00111/\text{SF} \times 15,774 \text{ SF} = 17.51 \text{ GPM}$

Peak Hour Demand: $3.5 \times 17.51 = 61.29 \text{ GPM}$

Maximum Day Demand + Fire Flow Demand: $2 \times (17.51 \text{ GPM}) + 1,750 \text{ GPM} = 1,785.02 \text{ GPM}$

PROPOSED WATER DEMAND:

The proposed building has a total square footage of 10,911 SF and is construction type V-B. Per the International Fire Code, Table B105.1, the building requires a minimum fire flow of 2,750 GPM for a 2-hour duration. The new building will have automatic sprinklers installed which typically result in an allowable 50% reduction in fire flow requirements, but the fire flow cannot be less than 1,500 GPM. Therefore, the required fire flow will be 1,500 GPM for a 2-hour duration. A fire flow test was conducted on February 8, 2019 and the existing fire line was shown to have a static pressure over 60 PSI and 1,576 GPM available at 20 PSI, exceeding the minimum fire flow requirements. Refer to Appendix C for Fire Flow Test Results.

Average Day Demand

(Commercial/Retail unit): $0.00111/\text{SF} \times 6,457 \text{ SF} = 7.17 \text{ GPM}$

(Office unit): $0.000834/\text{SF} \times 4,454 \text{ SF} = 3.71 \text{ GPM}$

Total: 10.88 GPM

Peak Hour Demand: $3.5 \times 10.88 = 38.08 \text{ GPM}$

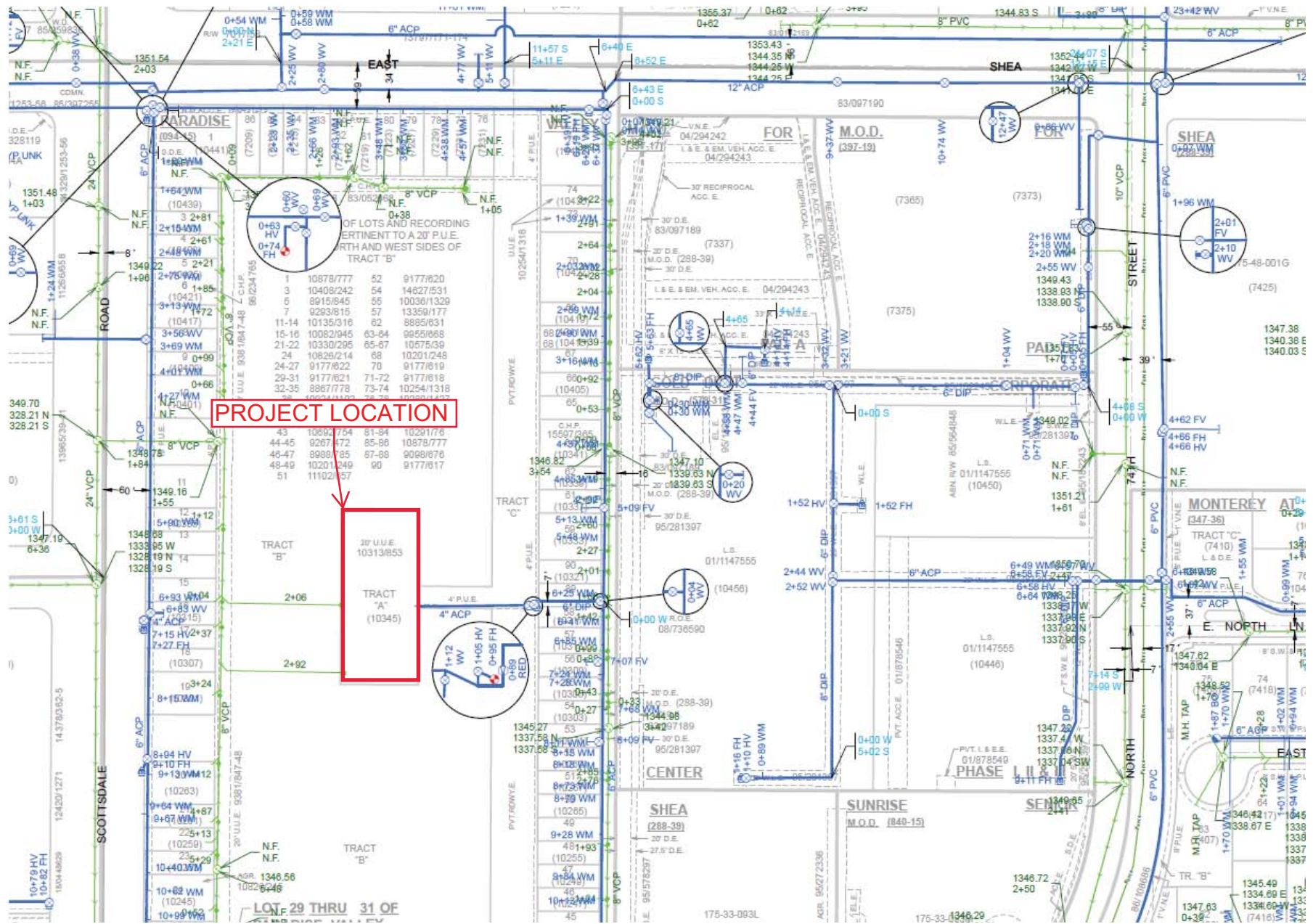
Maximum Day Demand + Fire Flow Demand: $2 \times (10.88 \text{ GPM}) + 1,500 \text{ GPM} = 1,521.76 \text{ GPM}$

The proposed condition will have a lower demand than it does in the existing condition. Thus, it is expected that the existing water infrastructure will be sufficient to serve the redeveloped building.

CONCLUSION

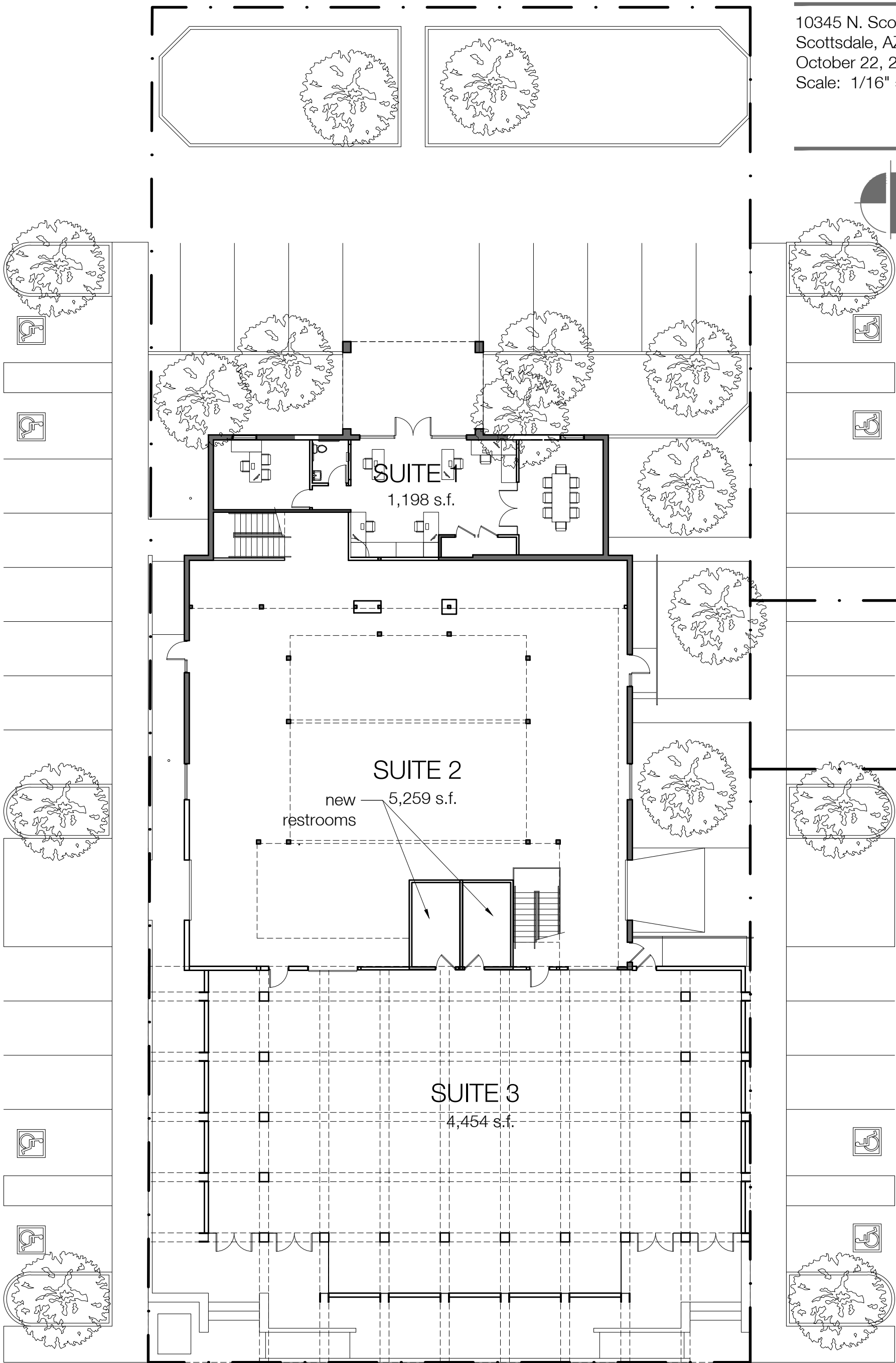
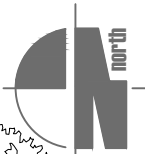
CYPRESS respectfully submits this report as the Preliminary Water Design Report for the proposed The Ivy – Scottsdale Development. The proposed water system shall be designed in accordance with ADEQ, International Building Code, and the City of Scottsdale standards.

Appendix A
City of Scottsdale Water & Sewer Quarter Section Map



Appendix B
Preliminary Floor Plan

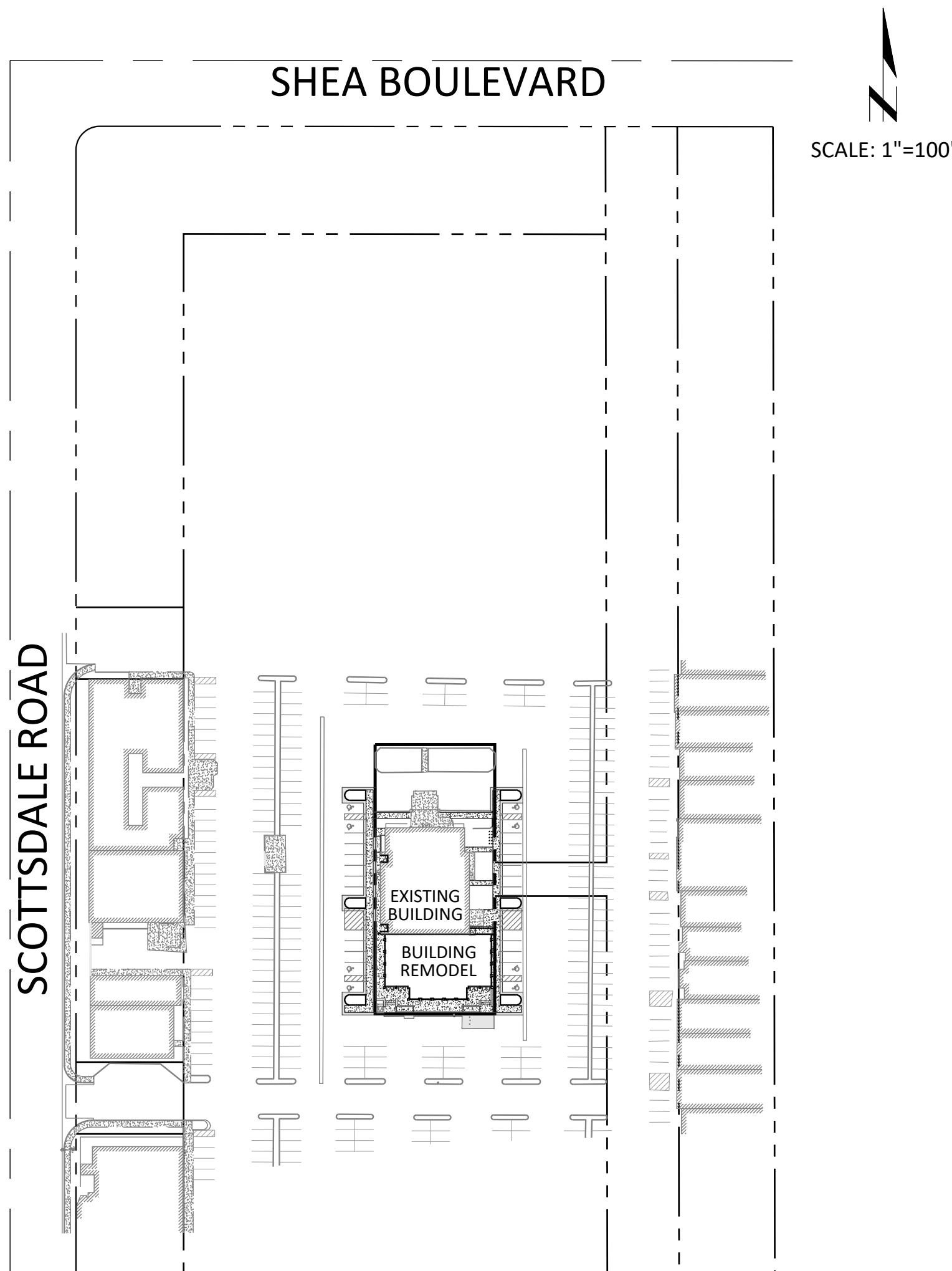
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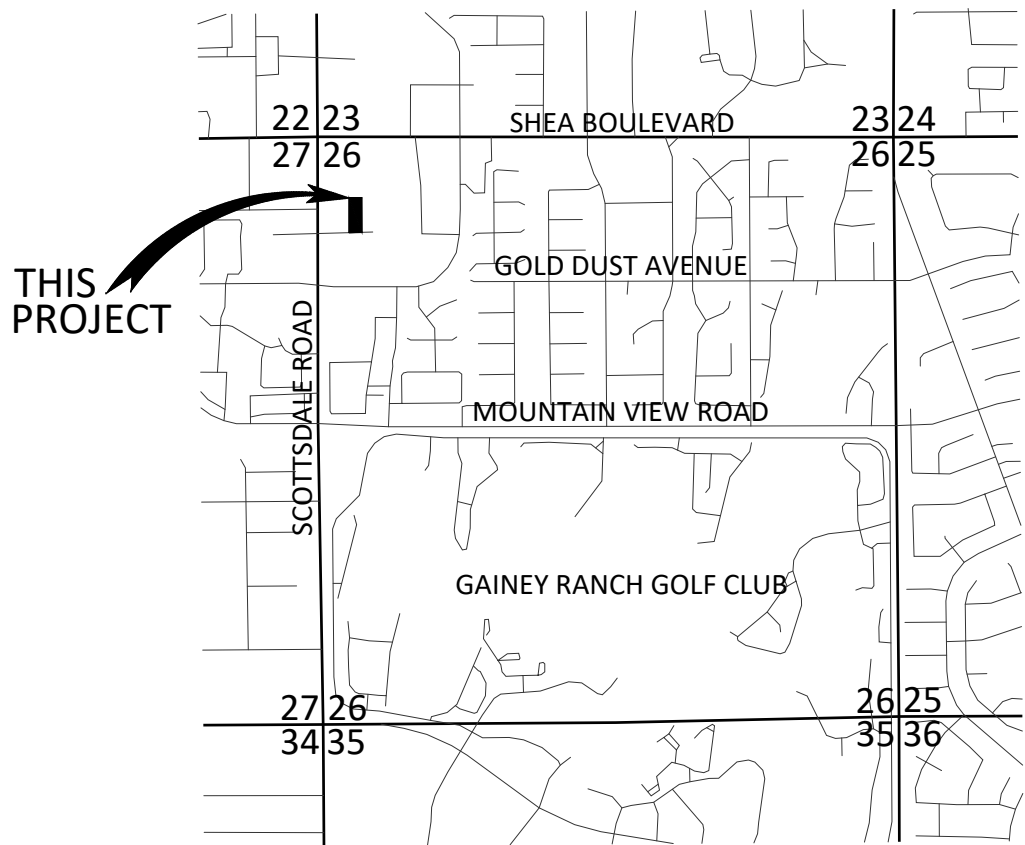
Appendix C
Preliminary Improvement Plan

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10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
A PORTION NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE
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PROJECT OVERVIEW



IN THE NW 1/4 OF THE NW 1/4 OF SECTION 26,
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LOCATION MAP

LEGEND

---	RIGHT-OF-WAY	⊙	EXISTING SEWER CLEANOUT
---	PROJECT BOUNDARY LINE	⊙	EXISTING WATER VALVE
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---	EXISTING FIRE SERVICE	⊙	LOW POINT
---	EXISTING GAS LINE	⊙	HIGH POINT
---		⊙	GRADE BREAK
---		⊙	FINISHED FLOOR ELEVATION
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PROJECT INFORMATION

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THE PROJECT CONSISTS OF THE REPURPOSING OF THE EXISTING STRUCTURE FOR THE USE OF A NEW RESTAURANT WITH ALL PAVING, GRADING & DRAINAGE, UTILITY AND PARKING IMPROVEMENTS.
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SCOTTSDALE, ARIZONA 85258
PH: 480-991-3985
CONTACT: JERRY D. HEATH JR., R.L.S.
- THE BASIS OF BEARINGS FOR THIS PROJECT IS THE BEARING OF N 00°00'00" E, ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, ACCORDING TO THE PLAT OF PARADISE VALLEY PLAZA, RECORDED IN BOOK 94, PAGE 15, MARICOPA COUNTY RECORDS, ARIZONA.
- THE BASIS OF ELEVATION FOR THIS PROJECT IS THE BRASS CAP IN HANDHOLE WITH ID #3272 AT THE INTERSECTION OF SCOTTSDALE ROAD AND SHEA BOULEVARD WITH AN ELEVATION 1351.26' (NAVD 88).

LEGAL DESCRIPTION

PARCEL NO. 1
TRACT A, OF PARADISE VALLEY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 94 OF MAPS, PAGE 15.
PARCEL NO. 2
AN UNDIVIDED 1/90TH INTEREST IN AND TO TRACTS B AND C, OF PARADISE VALLEY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 94 OF MAPS, PAGE 15.

BENCHMARK

THE BENCHMARK USED FOR THIS PLAN IS THE BRASS CAP IN HANDHOLE WITH ID #3272 AT THE INTERSECTION OF SCOTTSDALE ROAD AND SHEA BOULEVARD WITH AN ELEVATION 1351.26' (NAVD 88).

DRAINAGE STATEMENT

-SITE IS IN A SPECIAL FLOOD HAZARD AREA - NO
-OFFSITE FLOWS AFFECT THIS SITE - NO
-RETENTION IS EXISTING AND NO ADDITIONAL RETENTION ANTICIPATED AS PART OF THIS PROJECT
-EXTREME STORM OUTFALLS THE SITE AT THE SOUTHWEST CORNER AT THE ELEVATION OF 1347.14

FLOODPLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANEL NUMBER 04013C1760L, DATED OCTOBER 16, 2013 THE PARCEL IS LOCATED IN THE ZONE X (SHADED) AREA, WHICH IS DEFINED AS AREAS OF AS AREAS OUTSIDE THE 1% ANNUAL CHANCE FLOODPLAIN, AREAS OF 1% ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1% ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD BY LEVEES. NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE. INSURANCE PURCHASE IS NOT REQUIRED IN THESE ZONES.

OWNER/DEVELOPER

10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

CIVIL ENGINEER

CYPRESS CIVIL DEVELOPMENT
4450 NORTH 12TH STREET, #228
PHOENIX, ARIZONA 85014
PH: 623-282-2498
ATTN: JEFF HUNT

ARCHITECT

ALINE ARCHITECTURE CONCEPTS
7340 EAST MAIN STREET, #210
SCOTTSDALE, ARIZONA 85251
PH: 480-225-7359
ATTN: BRIAN KROB

UTILITIES

WATER:	CITY OF SCOTTSDALE
SEWER:	CITY OF SCOTTSDALE
ELECTRIC:	SALT RIVER PROJECT
GAS:	SOUTHWEST GAS
TELEPHONE:	CENTURY LINK
CABLE:	COX COMMUNICATIONS

CYPRESS
CIVIL DEVELOPMENT
strength + sustainability

4450 north 12th street, #228
phoenix, arizona 85014
p: 623.282.2498
e: jphunt@cypresscivil.com

CYPRESS PROJECT NO: 18.124



NO.	DATE	REVISION

PRELIMINARY IMPROVEMENT PLAN for
THE IVY - SCOTTSDALE ROAD
10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
cover

DEVELOPER

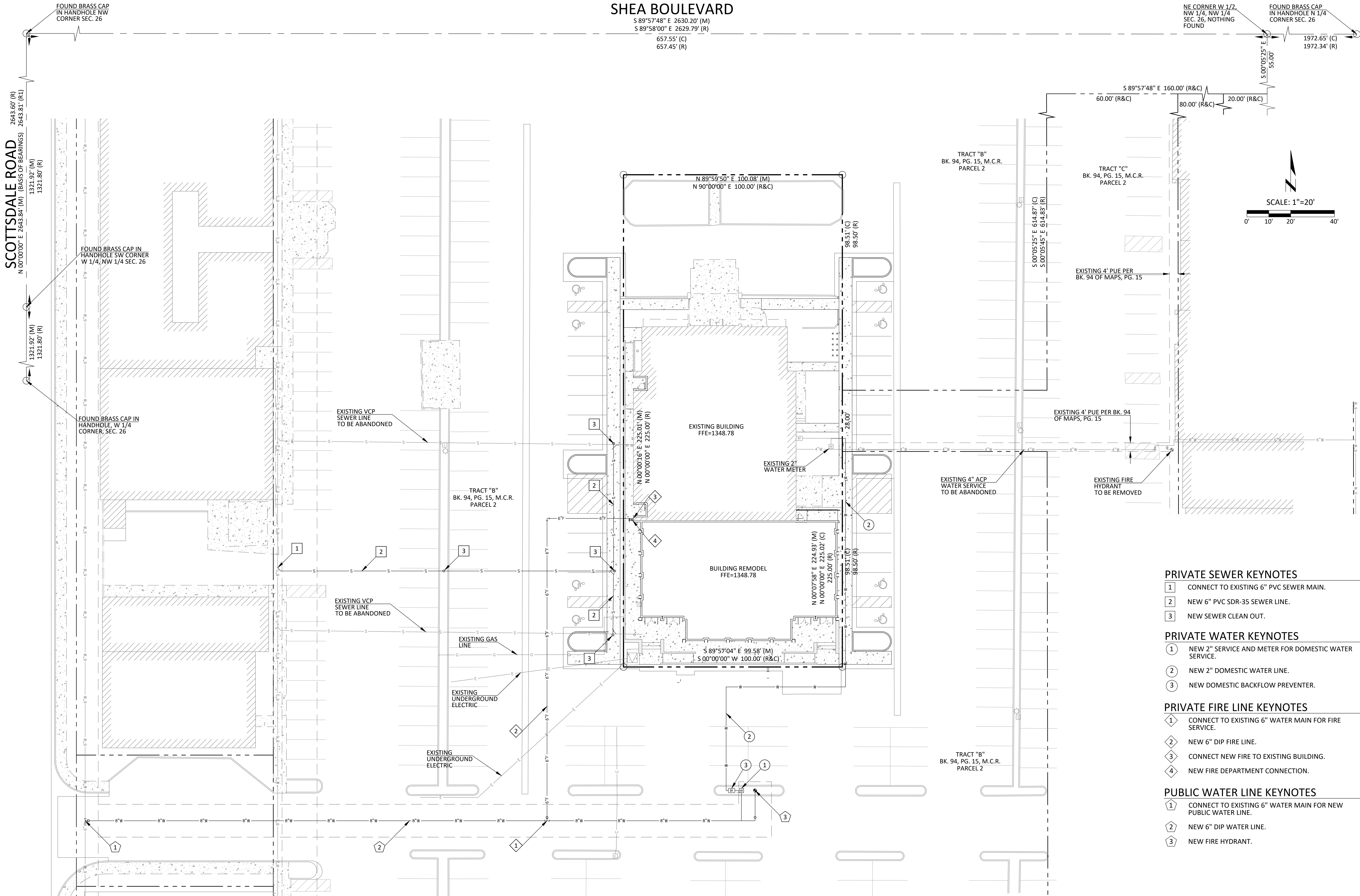
10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

SITE ADDRESS

10345 NORTH SCOTTSDALE RD.
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A

SHEET NUMBER





SHEA BOULEVARD

S 89°57'48" E 2630.20' (M)
S 89°58'00" E 2629.79' (R)
657.55' (C)
657.45' (R)

NE CORNER W 1/2,
NW 1/4, NW 1/4
SEC. 26, NOTHING
FOUND

FOUND BRASS CAP
IN HANDHOLE N 1/4
CORNER SEC. 26

1972.65' (C)
1972.34' (R)

SCALE: 1"=20'
0' 10' 20' 40'

PRIVATE SEWER KEYNOTES

- 1 CONNECT TO EXISTING 6" PVC SEWER MAIN.
- 2 NEW 6" PVC SDR-35 SEWER LINE.
- 3 NEW SEWER CLEAN OUT.

PRIVATE WATER KEYNOTES

- 1 NEW 2" SERVICE AND METER FOR DOMESTIC WATER SERVICE.
- 2 NEW 2" DOMESTIC WATER LINE.
- 3 NEW DOMESTIC BACKFLOW PREVENTER.

PRIVATE FIRE LINE KEYNOTES

- 1 CONNECT TO EXISTING 6" WATER MAIN FOR FIRE SERVICE.
- 2 NEW 6" DIP FIRE LINE.
- 3 CONNECT NEW FIRE TO EXISTING BUILDING.
- 4 NEW FIRE DEPARTMENT CONNECTION.

PUBLIC WATER LINE KEYNOTES

- 1 CONNECT TO EXISTING 6" WATER MAIN FOR NEW PUBLIC WATER LINE.
- 2 NEW 6" DIP WATER LINE.
- 3 NEW FIRE HYDRANT.

CYPRESS
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strength + sustainability

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p: 623.282.2498
e: jphunt@cypresscivil.com

CYPRESS PROJECT NO: 18.124



NO.	DATE	REVISION

PRELIMINARY IMPROVEMENT PLAN for
THE IVY - SCOTTSDALE ROAD
10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
onsite utility plan

DEVELOPER

10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

SITE ADDRESS

10345 NORTH SCOTTSDALE RD.
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A

SHEET NUMBER



THESE PLANS ARE PRELIMINARY AND ARE NOT FOR CONSTRUCTION OR RECORDING.

PRELIMINARY WATER BASIS OF DESIGN REPORT FOR THE IVY - SCOTTSDALE

Scottsdale, Arizona

05 September 2019

PREPARED FOR

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

DEVELOPER

10435 Scottsdale, LLC
7340 East Main Street, #200
Scottsdale, Arizona 85251

SITE ADDRESS

10345 North Scottsdale Road
Scottsdale, Arizona 85258

PREPARED BY

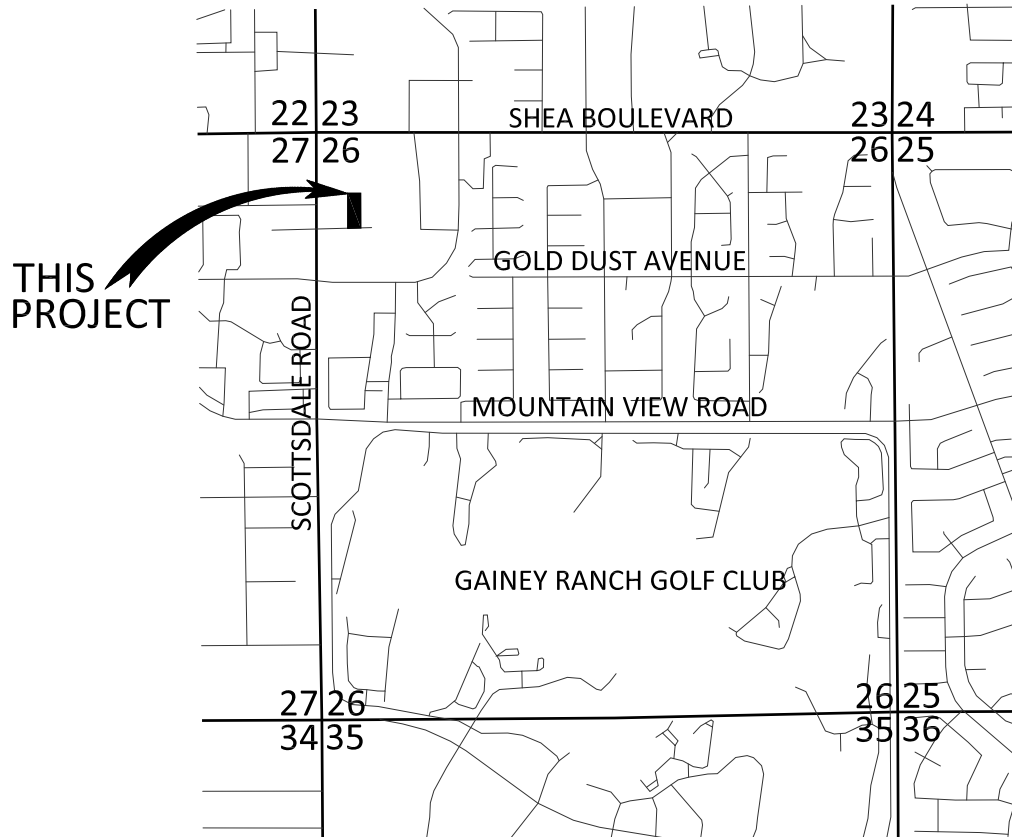
CYPRESS
CIVIL DEVELOPMENT
strength + sustainability

4450 north 12th street, #228

phoenix, arizona 85014

CYPRESS # 18.12





IN THE NW 1/4 OF THE NW 1/4 OF SECTION 26,
T. 3 N., R. 4 E., G.&S.R.M.,
CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA

LOCATION MAP

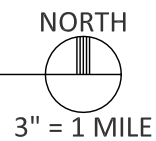


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REQUIRED COMPUTATIONS	3
CONCLUSION	4

APPENDICES

- A City of Scottsdale Water & Sewer Quarter Section Map
- B Preliminary Floor Plan
- C Preliminary Improvement Plan

INTRODUCTION: PROJECT DESCRIPTION AND LOCATION

The Project is known as 'The Ivy – Scottsdale' and is located at 10345 North Scottsdale Road in Scottsdale, Arizona. The project is also known as Tract A of Paradise Valley Plaza (herein referred to as the "Development").

The proposed project consists of the redevelopment of a single-story commercial building to contain three suites with the required paved parking, utility and drainage improvements, and amenity landscaping.

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

EXISTING CONDITIONS

The project is located at the southeast corner of Shea Boulevard and Scottsdale Road, within the center of the existing Paradise Valley Plaza Shopping Center. Per available utility maps and as-built records, existing water mains are located in Scottsdale Road to the west of the project, within the existing alley east of the project, within Gold Dust Avenue to the south of the project, and within Shea Boulevard to the north of the project. The existing building is connected to the 6" ACP water main within the alley to the east via a 6" DIP tap and 4" ACP extension to the east side of the building. Based on observations, the 4" ACP line supplies both the domestic water and fire service to the existing building. A 2" domestic water line with a 2" meter branches off the 4" line just before connecting to the building. Refer to Appendix A for City of Scottsdale Water Quarter Section Maps.

At the time of this report, no fire flow test has been conducted in Scottsdale Road. It is assumed that the existing water line in Scottsdale road shall provide sufficient pressure and capacity to serve the Project.

PROPOSED CONDITIONS

There is a single existing building onsite intended to be redeveloped with the southern part of it being demolished and rebuilt as a new structure. The combined proposed building shall contain three suites – two commercial/retail suites and one office suite. The design team intends to abandon the existing 4" ACP distribution line to the 6" main and instead install a new public 6" main from the water main in Scottsdale Road to a new fire hydrant south of the building. A new 6" fire service and a new 2" water service shall extend from the new building to this new 6" main. The project shall have approximately 110 linear feet of private fire line 6" distribution pipe beyond the nearest hydrant east of the existing building. This is anticipated to provide adequate

sizing and pressure to supply the intended domestic and fire services to the building. Refer to Appendix C for Preliminary Floor Plan and Appendix D for Preliminary Improvement Plans.

REQUIRED COMPUTATIONS

EXISTING WATER DEMAND:

The existing building has a total square footage of 15,774 SF and is construction type V-B. Per the International Fire Code, Table B105.1, the building requires a minimum fire flow of 3,500 GPM for a 2-hour duration. The new building will have automatic sprinklers installed which typically result in an allowable 50% reduction in fire flow requirements. Therefore, the required fire flow will be 1,750 GPM for a 2-hour duration.

Average Day Demand (Commercial/Retail unit): $0.00111/\text{SF} \times 15,774 \text{ SF} = 17.51 \text{ GPM}$

Peak Hour Demand: $3.5 \times 17.51 = 61.29 \text{ GPM}$

Maximum Day Demand + Fire Flow Demand: $2 \times (17.51 \text{ GPM}) + 1,750 \text{ GPM} = 1,785.02 \text{ GPM}$

PROPOSED WATER DEMAND:

The proposed building has a total square footage of 10,911 SF and is construction type V-B. Per the International Fire Code, Table B105.1, the building requires a minimum fire flow of 2,750 GPM for a 2-hour duration. The new building will have automatic sprinklers installed which typically result in an allowable 50% reduction in fire flow requirements, but the fire flow cannot be less than 1,500 GPM. Therefore, the required fire flow will be 1,500 GPM for a 2-hour duration. A fire flow test was conducted on February 8, 2019 and the existing fire line was shown to have a static pressure over 60 PSI and 1,576 GPM available at 20 PSI, exceeding the minimum fire flow requirements. Refer to Appendix C for Fire Flow Test Results.

Average Day Demand

(Commercial/Retail unit): $0.00111/\text{SF} \times 6,457 \text{ SF} = 7.17 \text{ GPM}$

(Office unit): $0.000834/\text{SF} \times 4,454 \text{ SF} = 3.71 \text{ GPM}$

Total: 10.88 GPM

Peak Hour Demand: $3.5 \times 10.88 = 38.08 \text{ GPM}$

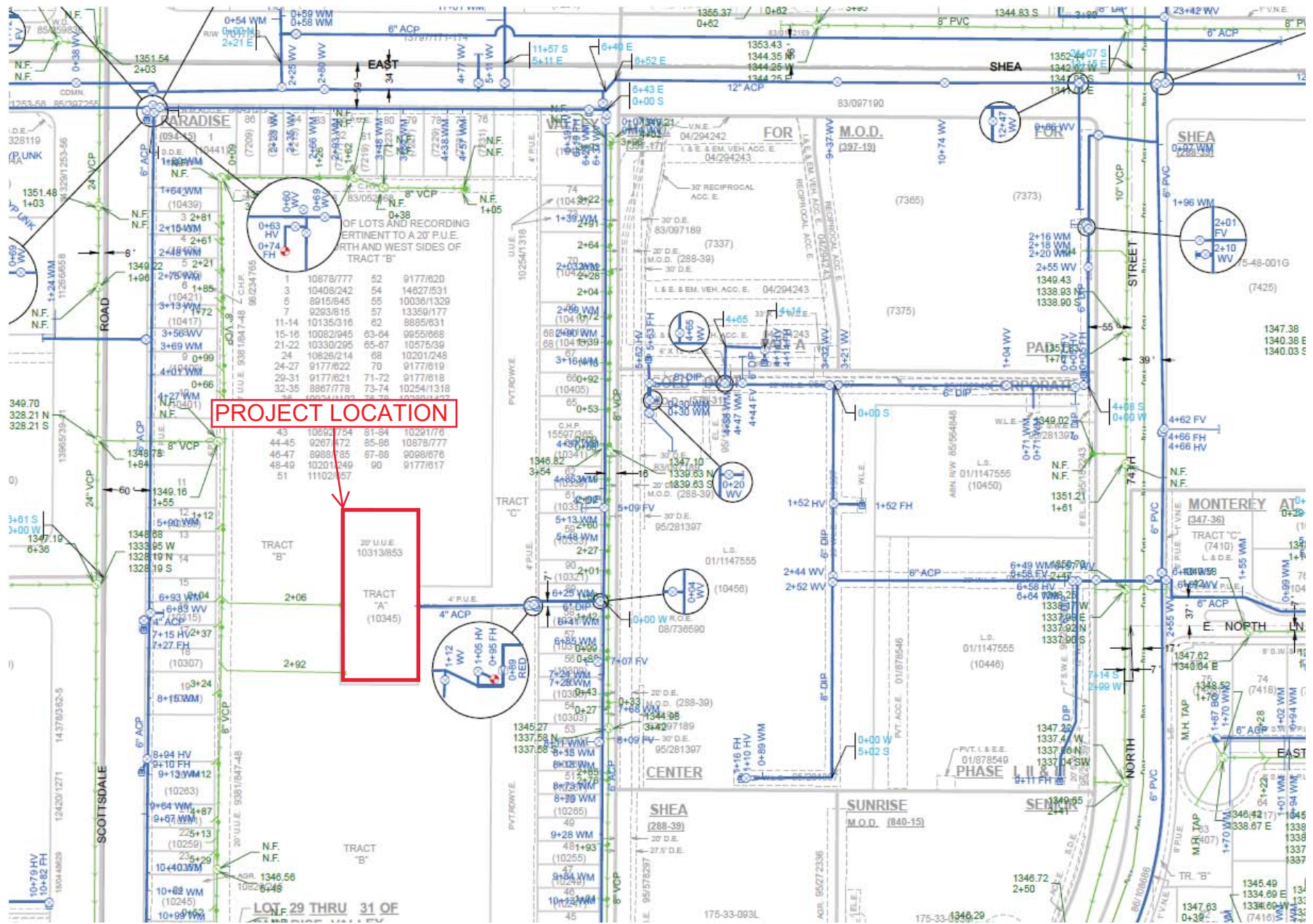
Maximum Day Demand + Fire Flow Demand: $2 \times (10.88 \text{ GPM}) + 1,500 \text{ GPM} = 1,521.76 \text{ GPM}$

The proposed condition will have a lower demand than it does in the existing condition. Thus, it is expected that the existing water infrastructure will be sufficient to serve the redeveloped building.

CONCLUSION

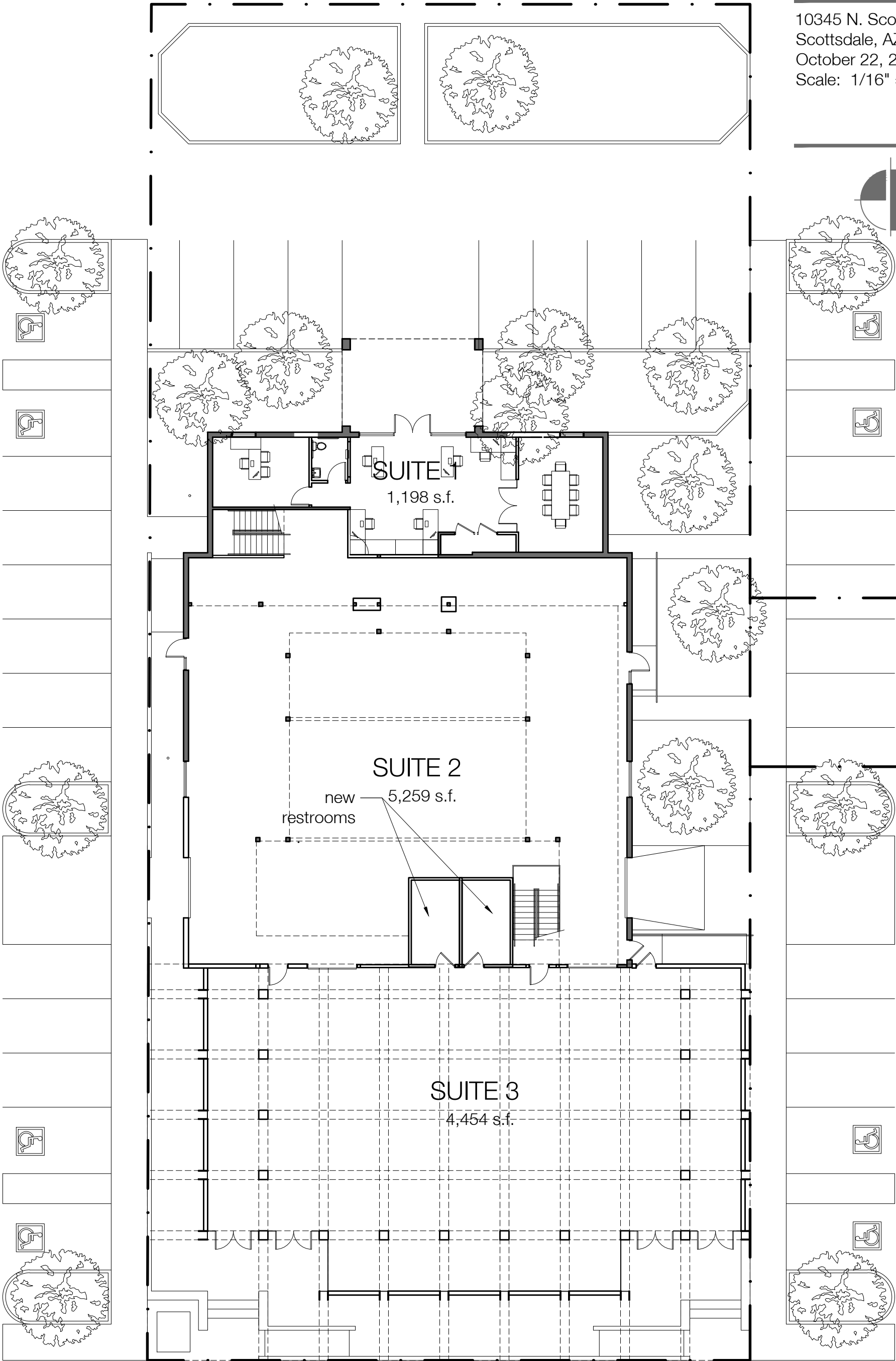
CYPRESS respectfully submits this report as the Preliminary Water Design Report for the proposed The Ivy – Scottsdale Development. The proposed water system shall be designed in accordance with ADEQ, International Building Code, and the City of Scottsdale standards.

Appendix A
City of Scottsdale Water & Sewer Quarter Section Map



Appendix B
Preliminary Floor Plan

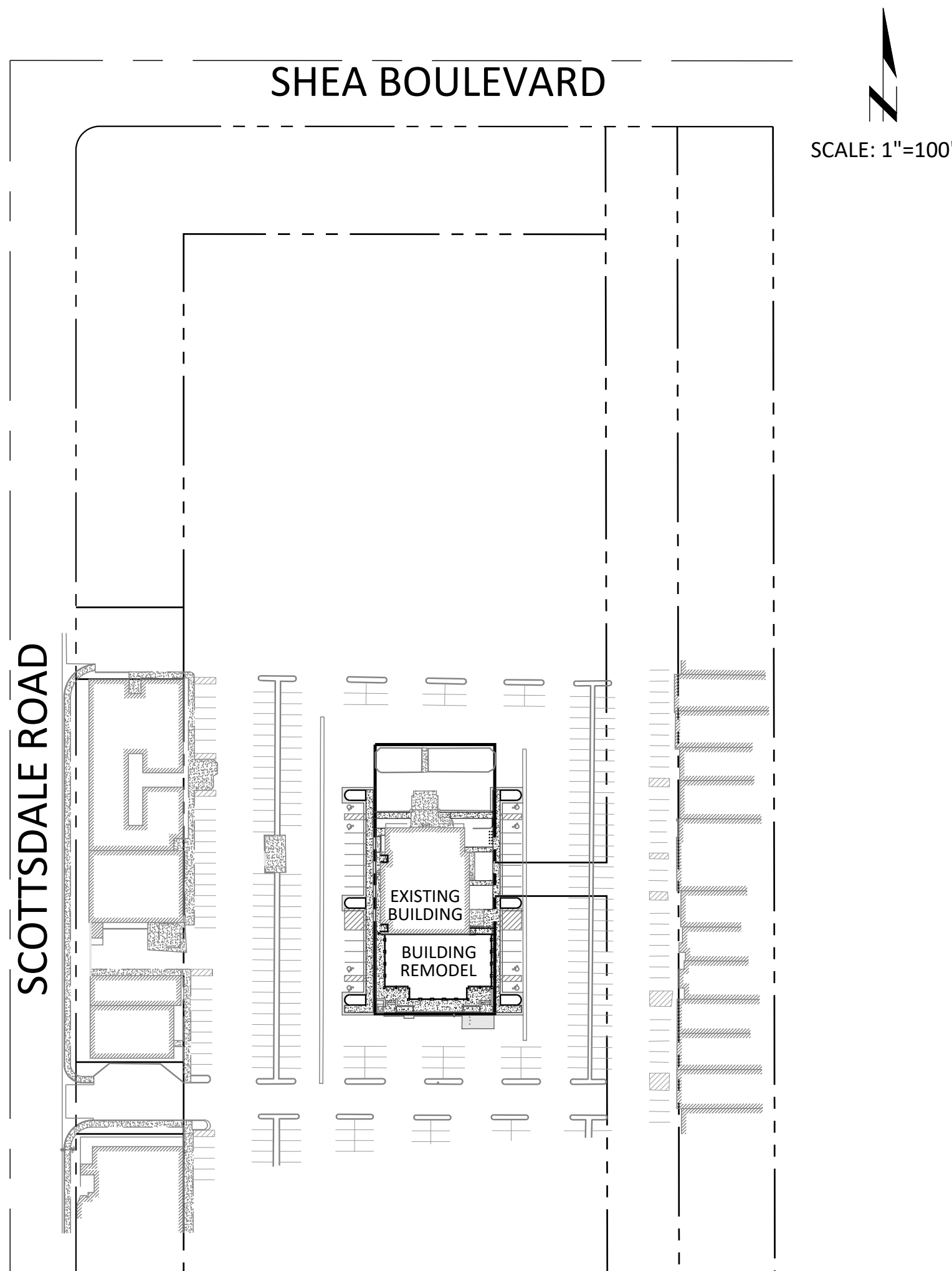
10345 N. Scottsdale Rd.
Scottsdale, AZ 85253
October 22, 2018
Scale: 1/16" = 1'-0"



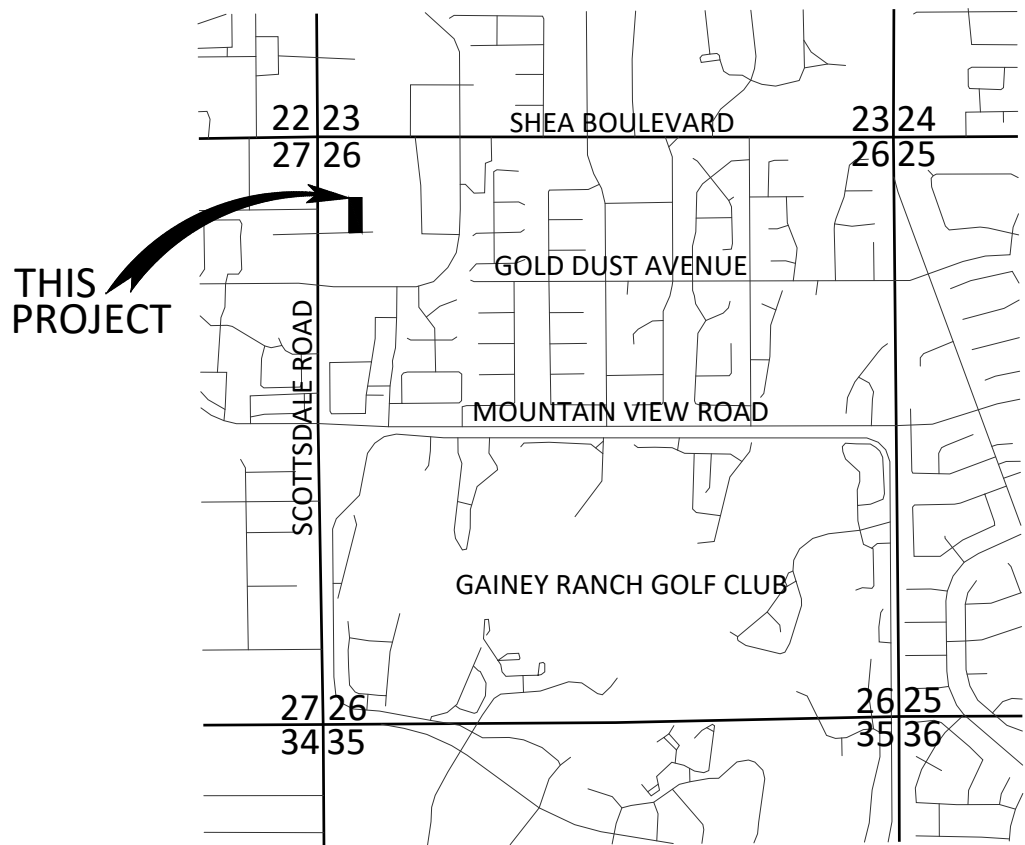
Appendix C
Preliminary Improvement Plan

PRELIMINARY IMPROVEMENT PLAN for THE IVY - SCOTTSDALE ROAD

10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
A PORTION NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE
GILA AND SALT RIVER MERIDIAN MARICOPA COUNTY, ARIZONA



PROJECT OVERVIEW



IN THE NW 1/4 OF THE NW 1/4 OF SECTION 26,
T. 3 N., R. 4 E., G.&S.R.M.,
CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA

LOCATION MAP

LEGEND

---	RIGHT-OF-WAY	⊗	EXISTING SEWER CLEANOUT
---	PROJECT BOUNDARY LINE	⊗	EXISTING WATER VALVE
---	OTHER PARCEL LINE	⊗	EXISTING WATER METER
---	ROADWAY CENTERLINE	⊗	EXISTING FIRE HYDRANT
---	SECTION LINE	⊗	EXISTING FIRE CONNECTION
---	FLOW-LINE	⊗	EXISTING TRANSFORMER
---	EXISTING EASEMENT	⊗	EXISTING SIGN
---	NEW EASEMENT	⊗	EXISTING SITE LIGHT
---	EXISTING CONTOUR	⊗	SURVEY MONUMENT AS NOTED
---	NEW CONTOUR	⊗	SPOT ELEV. (EXIST. GRADE)
---	EXISTING CONCRETE	⊗	SPOT ELEV. (NEW GRADE)
---	NEW ASPHALT	⊗	RIGHT-OF-WAY
---	NEW CONCRETE	⊗	RECORDED VALUE
---	NEW RETAINING WALL	⊗	MEASURED VALUE
---	EXISTING CURB	⊗	CALCULATED VALUE
---	EXISTING PAINT STRIPE	⊗	RADIUS
---	NEW CURB	⊗	PAVEMENT (ASPHALT)
---	NEW PAINT STRIPE	⊗	CONCRETE
---	EXISTING UNDERGROUND ELECTRIC	⊗	GUTTER
---	EXISTING SEWER LINE	⊗	TOP OF CURB
---	EXISTING WATER LINE	⊗	FINISHED GRADE
---	EXISTING FIRE SERVICE	⊗	LOW POINT
---	EXISTING GAS LINE	⊗	HIGH POINT
		⊗	GRADE BREAK
		⊗	FINISHED FLOOR ELEVATION
		⊗	PUBLIC UTILITY EASEMENT
		⊗	LENGTH
		⊗	SLOPE

PROJECT INFORMATION

- PROJECT DESCRIPTION:
THE PROJECT CONSISTS OF THE REPURPOSING OF THE EXISTING STRUCTURE FOR THE USE OF A NEW RESTAURANT WITH ALL PAVING, GRADING & DRAINAGE, UTILITY AND PARKING IMPROVEMENTS.
- ADDRESS:
10345 NORTH SCOTTSDALE ROAD
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A
- ZONING: C-3
- SITE AREA: 22,502 SF (0.52 AC)

SURVEY NOTES

- THE SURVEY FOR THIS PROJECT WAS PERFORMED BY:
HUNTER ENGINEERING
10450 NORTH 74TH STREET, SUITE 200
SCOTTSDALE, ARIZONA 85258
PH: 480-991-3985
CONTACT: JERRY D. HEATH JR., R.L.S.
- THE BASIS OF BEARINGS FOR THIS PROJECT IS THE BEARING OF N 00°00'00" E, ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, ACCORDING TO THE PLAT OF PARADISE VALLEY PLAZA, RECORDED IN BOOK 94, PAGE 15, MARICOPA COUNTY RECORDS, ARIZONA.
- THE BASIS OF ELEVATION FOR THIS PROJECT IS THE BRASS CAP IN HANDHOLE WITH ID #3272 AT THE INTERSECTION OF SCOTTSDALE ROAD AND SHEA BOULEVARD WITH AN ELEVATION 1351.26' (NAVD 88).

LEGAL DESCRIPTION

PARCEL NO. 1
TRACT A, OF PARADISE VALLEY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 94 OF MAPS, PAGE 15.
PARCEL NO. 2
AN UNDIVIDED 1/90TH INTEREST IN AND TO TRACTS B AND C, OF PARADISE VALLEY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 94 OF MAPS, PAGE 15.

BENCHMARK

THE BENCHMARK USED FOR THIS PLAN IS THE BRASS CAP IN HANDHOLE WITH ID #3272 AT THE INTERSECTION OF SCOTTSDALE ROAD AND SHEA BOULEVARD WITH AN ELEVATION 1351.26' (NAVD 88).

DRAINAGE STATEMENT

-SITE IS IN A SPECIAL FLOOD HAZARD AREA - NO
-OFFSITE FLOWS AFFECT THIS SITE - NO
-RETENTION IS EXISTING AND NO ADDITIONAL RETENTION ANTICIPATED AS PART OF THIS PROJECT
-EXTREME STORM OUTFALLS THE SITE AT THE SOUTHWEST CORNER AT THE ELEVATION OF 1347.14

FLOODPLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANEL NUMBER 04013C1760L, DATED OCTOBER 16, 2013 THE PARCEL IS LOCATED IN THE ZONE X (SHADED) AREA, WHICH IS DEFINED AS AREAS OF AS AREAS OUTSIDE THE 1% ANNUAL CHANCE FLOODPLAIN, AREAS OF 1% ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1% ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD BY LEVEES. NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE. INSURANCE PURCHASE IS NOT REQUIRED IN THESE ZONES.

OWNER/DEVELOPER

10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

CIVIL ENGINEER

CYPRESS CIVIL DEVELOPMENT
4450 NORTH 12TH STREET, #228
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PH: 623-282-2498
ATTN: JEFF HUNT

ARCHITECT

ALINE ARCHITECTURE CONCEPTS
7340 EAST MAIN STREET, #210
SCOTTSDALE, ARIZONA 85251
PH: 480-225-7359
ATTN: BRIAN KROB

UTILITIES

WATER: CITY OF SCOTTSDALE
SEWER: CITY OF SCOTTSDALE
ELECTRIC: SALT RIVER PROJECT
GAS: SOUTHWEST GAS
TELEPHONE: CENTURY LINK
CABLE: COX COMMUNICATIONS

CYPRESS
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4450 north 12th street, #228
phoenix, arizona 85014
p: 623.282.2498
e: jphunt@cypresscivil.com

CYPRESS PROJECT NO: 18.124



NO.	DATE	REVISION

PRELIMINARY IMPROVEMENT PLAN for
THE IVY - SCOTTSDALE ROAD
10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
cover

DEVELOPER

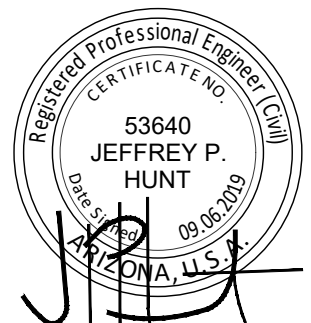
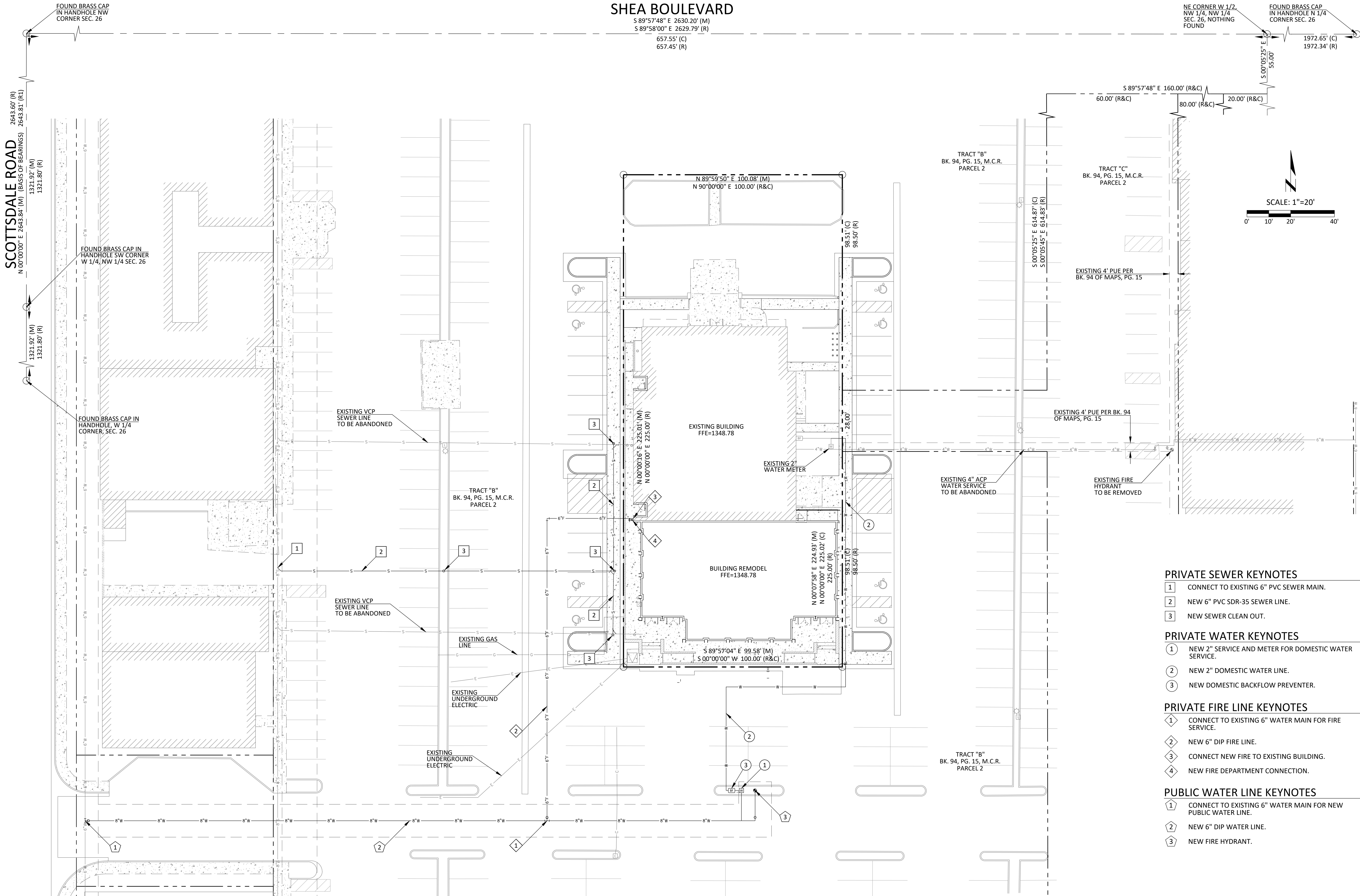
10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

SITE ADDRESS

10345 NORTH SCOTTSDALE RD.
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A

SHEET NUMBER





NO.	DATE	REVISION

**PRELIMINARY IMPROVEMENT PLAN for
THE IVY - SCOTTSDALE ROAD**
10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA

onsite utility plan

PRIVATE SEWER KEYNOTES

- 1 CONNECT TO EXISTING 6" PVC SEWER MAIN.
- 2 NEW 6" PVC SDR-35 SEWER LINE.
- 3 NEW SEWER CLEAN OUT.

PRIVATE WATER KEYNOTES

- 1 NEW 2" SERVICE AND METER FOR DOMESTIC WATER SERVICE.
- 2 NEW 2" DOMESTIC WATER LINE.
- 3 NEW DOMESTIC BACKFLOW PREVENTER.

PRIVATE FIRE LINE KEYNOTES

- 1 CONNECT TO EXISTING 6" WATER MAIN FOR FIRE SERVICE.
- 2 NEW 6" DIP FIRE LINE.
- 3 CONNECT NEW FIRE TO EXISTING BUILDING.
- 4 NEW FIRE DEPARTMENT CONNECTION.

PUBLIC WATER LINE KEYNOTES

- 1 CONNECT TO EXISTING 6" WATER MAIN FOR NEW PUBLIC WATER LINE.
- 2 NEW 6" DIP WATER LINE.
- 3 NEW FIRE HYDRANT.



THESE PLANS ARE PRELIMINARY AND ARE NOT FOR CONSTRUCTION OR RECORDING.

PRELIMINARY WATER BASIS OF DESIGN REPORT FOR THE IVY - SCOTTSDALE

Scottsdale, Arizona

03 May 2019

PREPARED FOR

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

DEVELOPER

10435 Scottsdale, LLC
7340 East Main Street, #200
Scottsdale, Arizona 85251

SITE ADDRESS

10345 North Scottsdale Road
Scottsdale, Arizona 85258

PREPARED BY

CYPRESS
CIVIL DEVELOPMENT
strength + sustainability

4450 north 12th street, #228

phoenix, arizona 85014

CYPRESS # 18.12

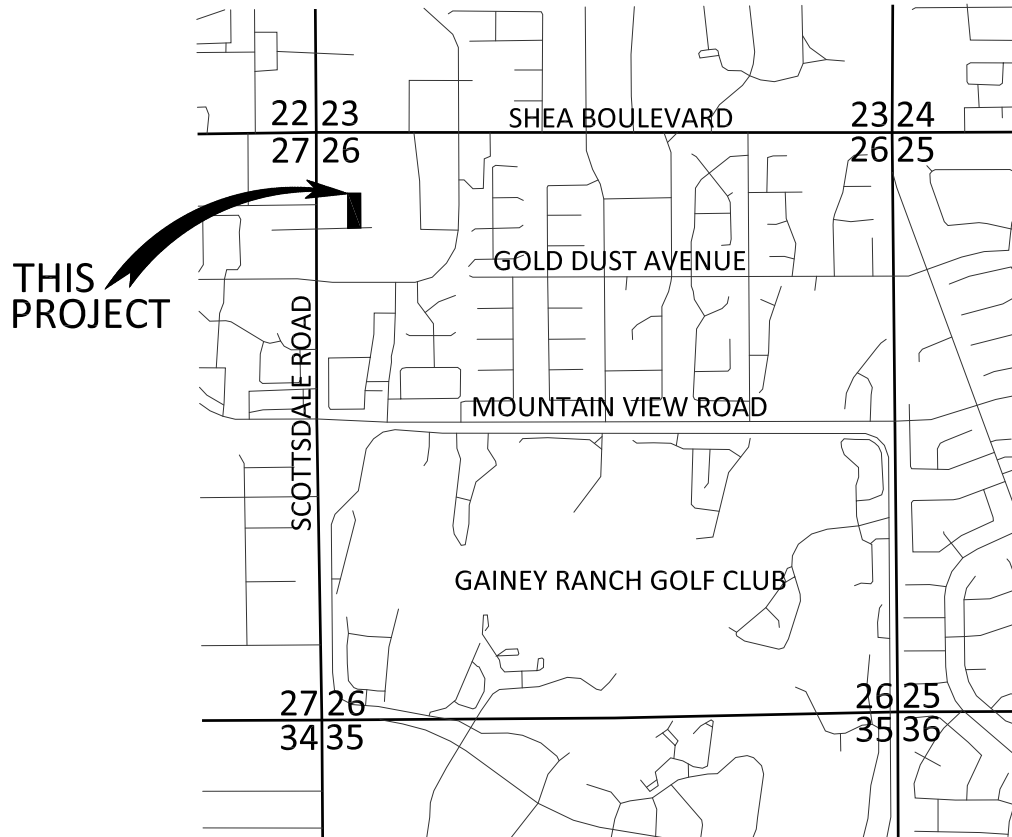


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EXISTING CONDITIONS	2
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REQUIRED COMPUTATIONS	3
CONCLUSION	4

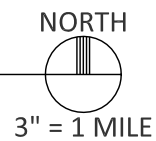
APPENDICES

- A City of Scottsdale Water & Sewer Quarter Section Map
- B Fire Flow Test Results
- C Preliminary Floor Plan
- D Preliminary Improvement Plan



IN THE NW 1/4 OF THE NW 1/4 OF SECTION 26,
T. 3 N., R. 4 E., G.&S.R.M.,
CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA

LOCATION MAP



INTRODUCTION: PROJECT DESCRIPTION AND LOCATION

The Project is known as 'The Ivy – Scottsdale' and is located at 10345 North Scottsdale Road in Scottsdale, Arizona. The project is also known as Tract A of Paradise Valley Plaza (herein referred to as the "Development").

The proposed project consists of the redevelopment of a single-story commercial building to contain three suites with the required paved parking, utility and drainage improvements, and amenity landscaping.

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

EXISTING CONDITIONS

The project is located at the southeast corner of Shea Boulevard and Scottsdale Road, within the center of the existing Paradise Valley Plaza Shopping Center. Per available utility maps and as-built records, existing water mains are located in Scottsdale Road to the west of the project, within the existing alley east of the project, within Gold Dust Avenue to the south of the project, and within Shea Boulevard to the north of the project. The existing building is connected to the 6" ACP water main within the alley to the east via a 6" DIP tap and 4" ACP extension to the east side of the building. Based on observations, the 4" ACP line supplies both the domestic water and fire service to the existing building. A 2" domestic water line with a 2" meter branches off the 4" line just before connecting to the building. Refer to Appendix A for City of Scottsdale Water Quarter Section Maps.

A fire flow test was conducted on February 8, 2019 and the existing fire line was shown to have a static pressure over 60 PSI and 1,576 GPM available at 20 PSI. Refer to Appendix B for Fire Flow Test Results.

PROPOSED CONDITIONS

There is a single existing building intended to be redeveloped onsite to contain three suites – two commercial/retail suites and one office suite. The design team intends to utilize the existing 4" ACP distribution line with fire service and 2" water service connections. The project has approximately 200 linear feet of 4" distribution pipe beyond the nearest hydrant east of the existing building. From the point of connection to the 4" distribution line to the existing 2" water connection to the new building, the distance is less than 50'. This is anticipated to provide adequate sizing and pressure to supply the intended domestic and fire services to the building. A new hydrant will be required and will be added within the Marshall Way right-of-way, north of

**Relocate new 6" line from Scottsdale Rd.
east into development with easement**

the existing alley. Refer to Appendix C for Preliminary Floor Plan and Appendix D for Preliminary Improvement Plans.

REQUIRED COMPUTATIONS

EXISTING WATER DEMAND:

The existing building has a total square footage of 15,774 SF and is construction type V-B. Per the International Fire Code, Table B105.1, the building requires a minimum fire flow of 3,500 GPM for a 2-hour duration. The new building will have automatic sprinklers installed which typically result in an allowable 50% reduction in fire flow requirements. Therefore, the required fire flow will be 1,750 GPM for a 2-hour duration.

Average Day Demand (Commercial/Retail unit): $0.00111/\text{SF} \times 15,774 \text{ SF} = 17.51 \text{ GPM}$

Peak Hour Demand: $3.5 \times 17.51 = 61.28 \text{ GPM}$

Maximum Day Demand + Fire Flow Demand: $2 \times (17.51 \text{ GPM}) + 1,750 \text{ GPM} = 1,785.02 \text{ GPM}$

PROPOSED WATER DEMAND:

The proposed building has a total square footage of 10,911 SF and is construction type V-B. Per the International Fire Code, Table B105.1, the building requires a minimum fire flow of 2,750 GPM for a 2-hour duration. The new building will have automatic sprinklers installed which typically result in an allowable 50% reduction in fire flow requirements, but the fire flow cannot be less than 1,500 GPM. Therefore, the required fire flow will be 1,500 GPM for a 2-hour duration. A fire flow test was conducted on February 8, 2019 and the existing fire line was shown to have a static pressure over 60 PSI and 1,576 GPM available at 20 PSI, exceeding the minimum fire flow requirements. Refer to Appendix C for Fire Flow Test Results.

Average Day Demand

(Commercial/Retail unit): $0.00111/\text{SF} \times 6,457 \text{ SF} = 7.17 \text{ GPM}$

(Office unit): $0.000834/\text{SF} \times 4,454 \text{ SF} = 3.71 \text{ GPM}$

Total: 10.88 GPM

Peak Hour Demand: $3.5 \times 10.88 = 38.08 \text{ GPM}$

Maximum Day Demand + Fire Flow Demand: $2 \times (10.88 \text{ GPM}) + 1,500 \text{ GPM} = 1,521.76 \text{ GPM}$

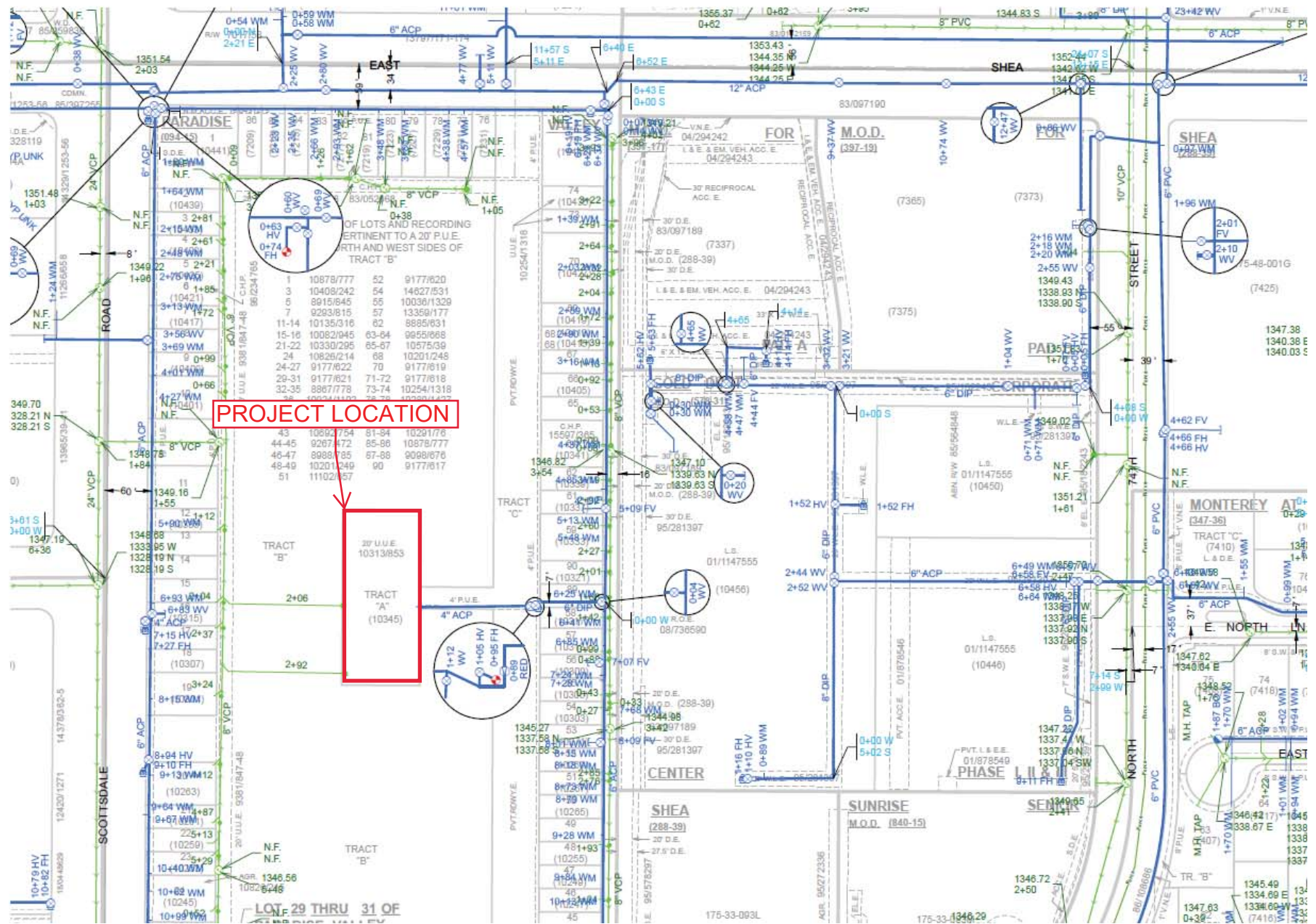
The proposed condition will have a lower demand than the existing condition. Thus, it is expected that the existing water infrastructure will be sufficient to serve the redeveloped building.

**Rerun hydrant flow test using 2 hydrants
on Scottsdale Rd.**

CONCLUSION

CYPRESS respectfully submits this preliminary report as the Water Design Report for the proposed The Ivy – Scottsdale 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 & Sewer Quarter Section Map



Appendix B

Fire Flow Test Results

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	Not Provided
Project Address:	Scottsdale Road and Shea Blvd., Scottsdale, Arizona 85253
Client Project No.:	Not Provided
Arizona Flow Testing Project No.:	19047
Flow Test Permit No.:	C57304
Date and time flow test conducted:	February 8, 2019 at 7:30 AM
Data is current and reliable until:	August 8, 2019
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Gary Hayden – City of Scottsdale-Inspector (602-908-9046)

Raw Test Data

Static Pressure: **94.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **42.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **12.0 PSI**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Hose Monster
(Measured in inches)

Coefficient of Diffuser: 0.7875

Flowing GPM: **1,302 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **1,576 GPM**

Data with 22PSI Safety Factor

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

Residual Pressure: **20.0 PSI**
(Measured in pounds per square inch)

Distance between hydrants: See Below

Main size: Not Provided

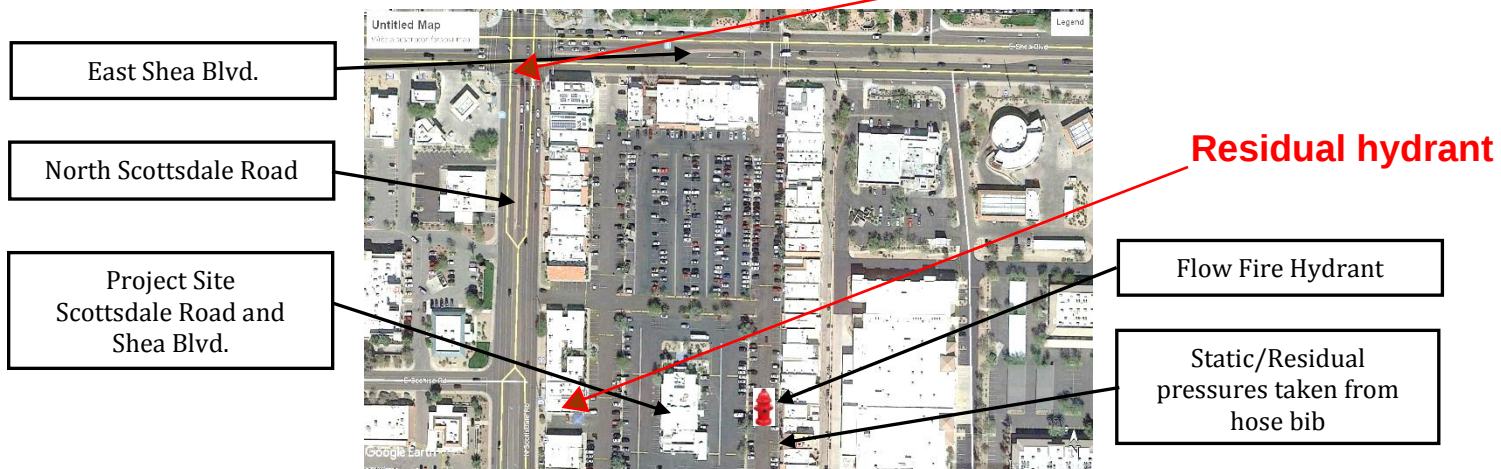
Flowing GPM: **1,302 GPM**

GPM @ 20 PSI: **1,302 GPM**

Flow Test Location

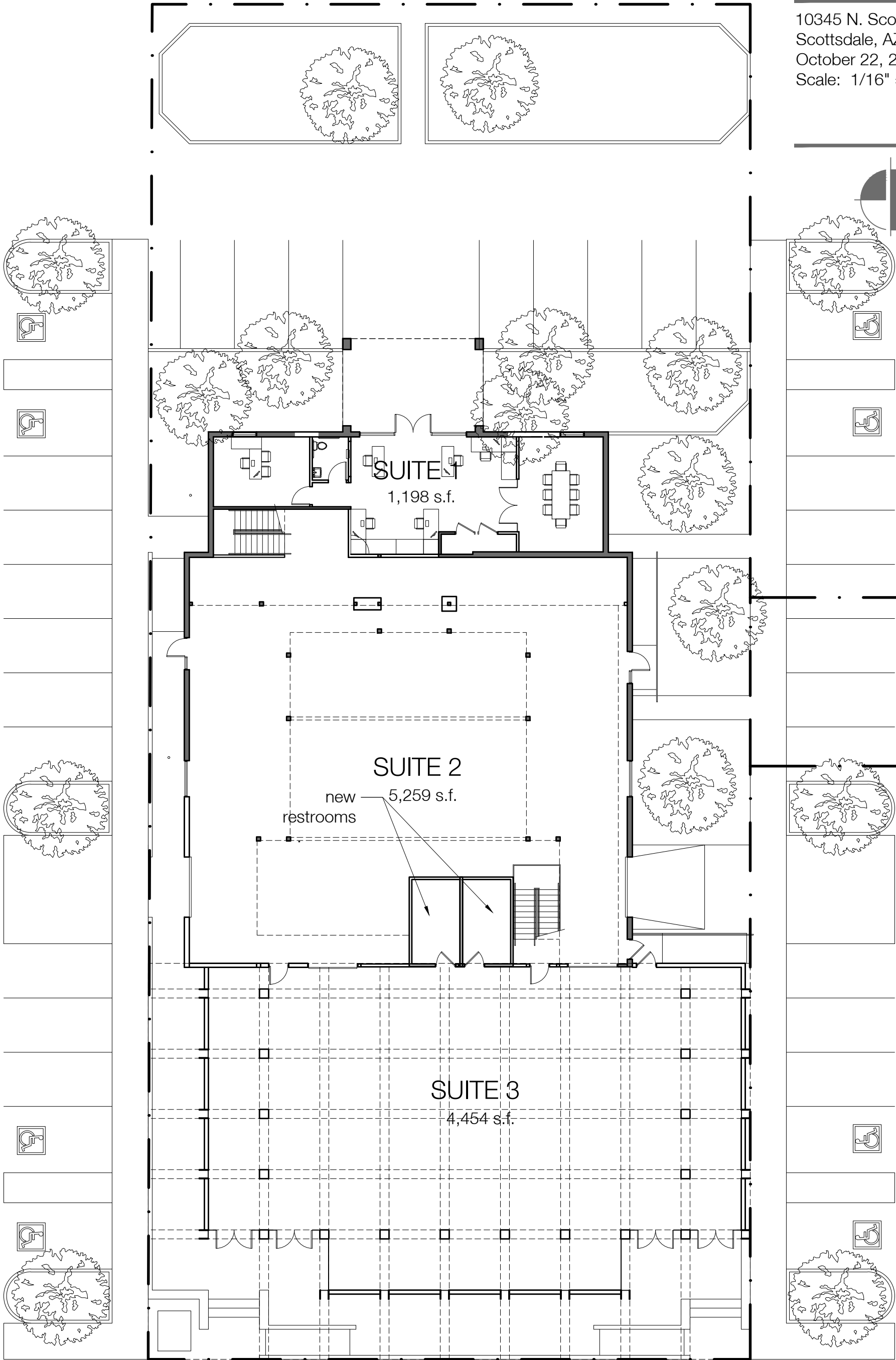
North ↑

Flow hydrant



Appendix C
Preliminary Floor Plan

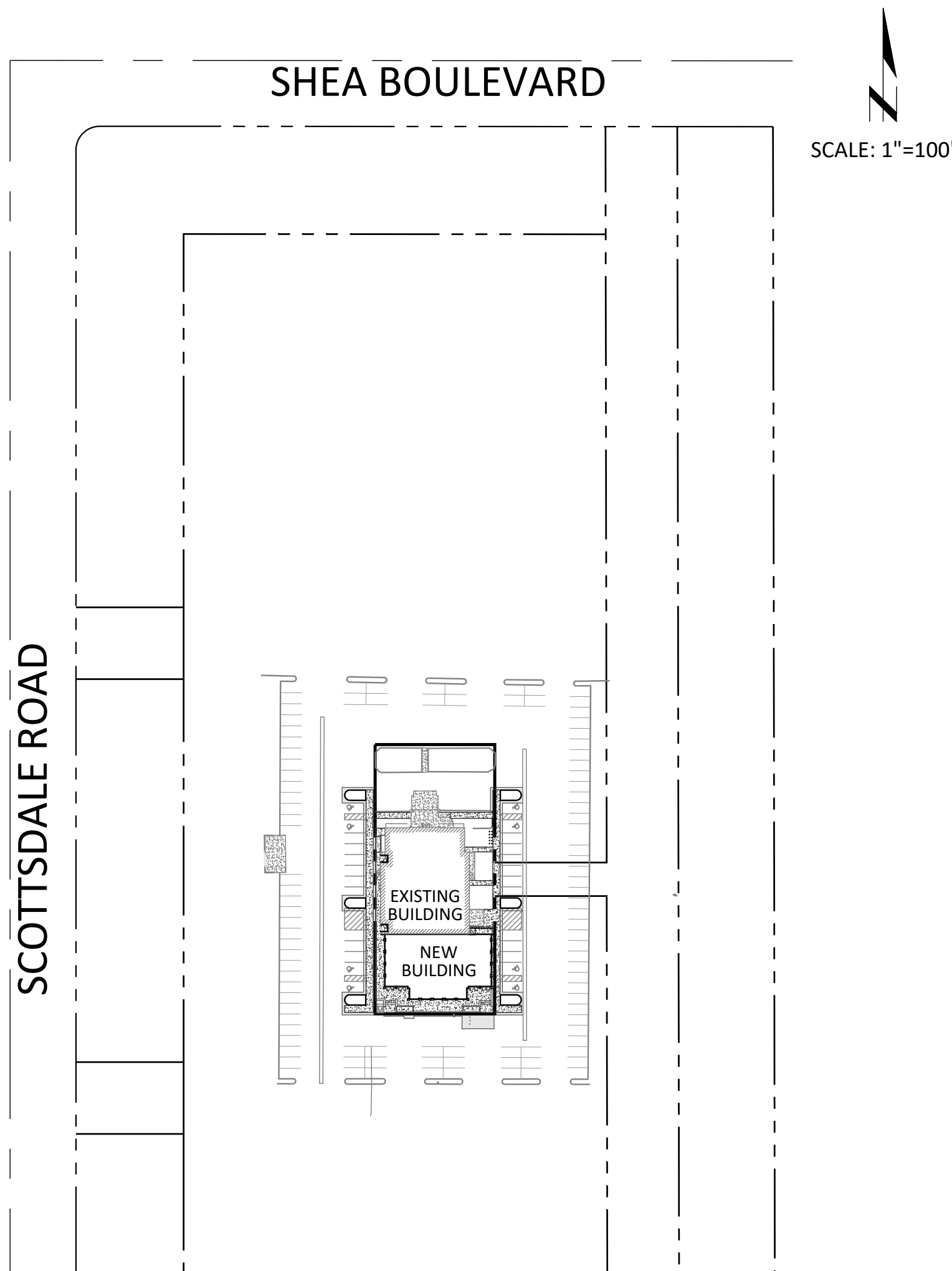
10345 N. Scottsdale Rd.
Scottsdale, AZ 85253
October 22, 2018
Scale: 1/16" = 1'-0"



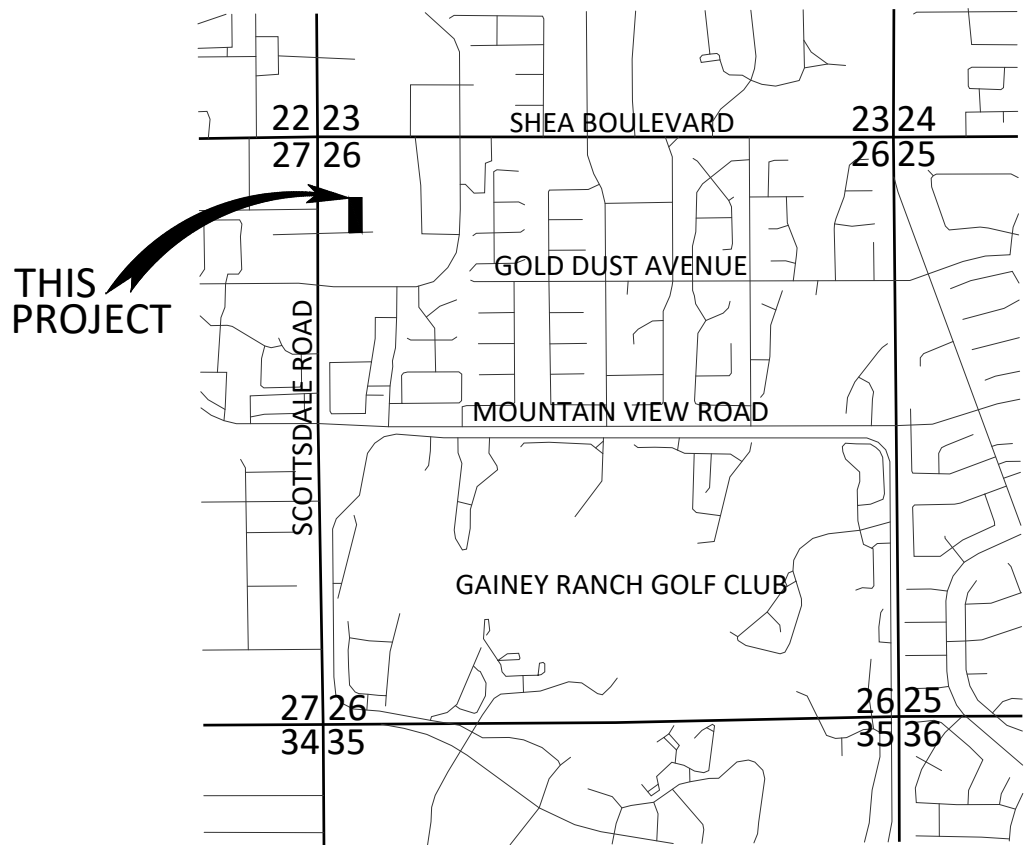
Appendix D
Preliminary Improvement Plan

PRELIMINARY IMPROVEMENT PLAN for THE IVY - SCOTTSDALE ROAD

10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
A PORTION NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE
GILA AND SALT RIVER MERIDIAN MARICOPA COUNTY, ARIZONA

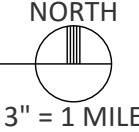


PROJECT OVERVIEW



IN THE NW 1/4 OF THE NW 1/4 OF SECTION 26,
T. 3 N., R. 4 E., G. & S. R. M.,
CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA

LOCATION MAP



LEGEND

---	RIGHT-OF-WAY	⊗	EXISTING SEWER CLEANOUT
---	PROJECT BOUNDARY LINE	⊗	EXISTING WATER VALVE
---	OTHER PARCEL LINE	⊗	EXISTING WATER METER
---	ROADWAY CENTERLINE	⊗	EXISTING FIRE HYDRANT
---	SECTION LINE	⊗	EXISTING FIRE CONNECTION
---	FLOW-LINE	⊗	EXISTING TRANSFORMER
---	EXISTING EASEMENT	⊗	EXISTING SIGN
---	NEW EASEMENT	⊗	EXISTING SITE LIGHT
---	EXISTING CONTOUR	⊗	SURVEY MONUMENT AS NOTED
---	NEW CONTOUR	⊗	SPOT ELEV. (EXIST. GRADE)
---	EXISTING CONCRETE	⊗	SPOT ELEV. (NEW GRADE)
---	NEW ASPHALT	⊗	RIGHT-OF-WAY
---	NEW CONCRETE	⊗	RECORDED VALUE
---	NEW RETAINING WALL	⊗	MEASURED VALUE
---	EXISTING CURB	⊗	CALCULATED VALUE
---	EXISTING PAINT STRIPE	⊗	RADIUS
---	NEW CURB	⊗	PAVEMENT (ASPHALT)
---	NEW PAINT STRIPE	⊗	CONCRETE
---	EXISTING UNDERGROUND ELECTRIC	⊗	GUTTER
---	EXISTING SEWER LINE	⊗	TOP OF CURB
---	EXISTING WATER LINE	⊗	FINISHED GRADE
---	EXISTING FIRE SERVICE	⊗	LOW POINT
---	EXISTING GAS LINE	⊗	HIGH POINT
		⊗	GRADE BREAK
		⊗	FINISHED FLOOR ELEVATION
		⊗	PUBLIC UTILITY EASEMENT
		⊗	LENGTH
		⊗	SLOPE

PROJECT INFORMATION

- PROJECT DESCRIPTION:
THE PROJECT CONSISTS OF THE REPURPOSING OF THE EXISTING STRUCTURE FOR THE USE OF A NEW RESTAURANT WITH ALL PAVING, GRADING & DRAINAGE, UTILITY AND PARKING IMPROVEMENTS.
- ADDRESS:
10345 NORTH SCOTTSDALE ROAD
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A
- ZONING: C-3
- SITE AREA: 22,502 SF (0.52 AC)

SURVEY NOTES

- THE SURVEY FOR THIS PROJECT WAS PERFORMED BY:
HUNTER ENGINEERING
10450 NORTH 74TH STREET, SUITE 200
SCOTTSDALE, ARIZONA 85258
PH: 480-991-3985
CONTACT: JERRY D. HEATH JR., R.L.S.
- THE BASIS OF BEARINGS FOR THIS PROJECT IS THE BEARING OF N 00°00'00" E, ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, ACCORDING TO THE PLAT OF PARADISE VALLEY PLAZA, RECORDED IN BOOK 94, PAGE 15, MARICOPA COUNTY RECORDS, ARIZONA.
- THE BASIS OF ELEVATION FOR THIS PROJECT IS THE BRASS CAP IN HANDHOLE WITH ID #3272 AT THE INTERSECTION OF SCOTTSDALE ROAD AND SHEA BOULEVARD WITH AN ELEVATION 1351.26' (NAVD 88).

LEGAL DESCRIPTION

PARCEL NO. 1
TRACT A, OF PARADISE VALLEY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 94 OF MAPS, PAGE 15.
PARCEL NO. 2
AN UNDIVIDED 1/90TH INTEREST IN AND TO TRACTS B AND C, OF PARADISE VALLEY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 94 OF MAPS, PAGE 15.

BENCHMARK

THE BENCHMARK USED FOR THIS PLAN IS THE BRASS CAP IN HANDHOLE WITH ID #3272 AT THE INTERSECTION OF SCOTTSDALE ROAD AND SHEA BOULEVARD WITH AN ELEVATION 1351.26' (NAVD 88).

DRAINAGE STATEMENT

-SITE IS IN A SPECIAL FLOOD HAZARD AREA - NO
-OFFSITE FLOWS AFFECT THIS SITE - NO
-RETENTION IS EXISTING AND NO ADDITIONAL RETENTION ANTICIPATED AS PART OF THIS PROJECT
-EXTREME STORM OUTFALLS THE SITE AT THE SOUTHWEST CORNER AT THE ELEVATION OF 1347.14

FLOODPLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANEL NUMBER 04013C1760L, DATED OCTOBER 16, 2013 THE PARCEL IS LOCATED IN THE ZONE X (SHADED) AREA, WHICH IS DEFINED AS AREAS OF AS AREAS OUTSIDE THE 1% ANNUAL CHANCE FLOODPLAIN, AREAS OF 1% ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1% ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD BY LEVEES. NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE. INSURANCE PURCHASE IS NOT REQUIRED IN THESE ZONES.

OWNER/DEVELOPER

10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

CIVIL ENGINEER

CYPRESS CIVIL DEVELOPMENT
4450 NORTH 12TH STREET, #228
PHOENIX, ARIZONA 85014
PH: 623-282-2498
ATTN: JEFF HUNT

ARCHITECT

ALINE ARCHITECTURE CONCEPTS
7340 EAST MAIN STREET, #210
SCOTTSDALE, ARIZONA 85251
PH: 480-225-7359
ATTN: BRIAN KROB

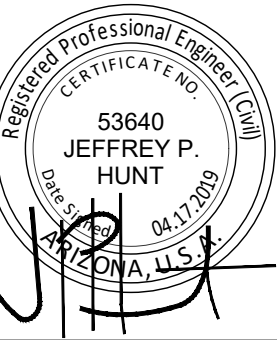
UTILITIES

WATER: CITY OF SCOTTSDALE
SEWER: CITY OF SCOTTSDALE
ELECTRIC: SALT RIVER PROJECT
GAS: SOUTHWEST GAS
TELEPHONE: CENTURY LINK
CABLE: COX COMMUNICATIONS

CYPRESS
CIVIL DEVELOPMENT
strength + sustainability

4450 north 12th street, #228
phoenix, arizona 85014
p: 623.282.2498
e: jphunt@cypresscivil.com

CYPRESS PROJECT NO: 18.124



NO.	DATE	REVISION

PRELIMINARY IMPROVEMENT PLAN for
THE IVY - SCOTTSDALE ROAD
10345 NORTH SCOTTSDALE ROAD SCOTTSDALE, ARIZONA
cover

DEVELOPER

10435 SCOTTSDALE, LLC
7340 EAST MAIN STREET, #200
SCOTTSDALE, ARIZONA 85251
PH: 480-941-2260
ATTN: TOM FRENKEL

SITE ADDRESS

10345 NORTH SCOTTSDALE RD.
SCOTTSDALE, ARIZONA 85253
APN: 175-33-090A

SHEET NUMBER





Existing 6"

New 6" water line from Scottsdale Rd. and hydrant