Crossroads South Mixed-Use Development
Scottsdale, Arizona

PRELIMINARY

Basis of Design
Water and Wastewater Needs Report

Accepted for
City of Scottsdale
Water Resources Administration
9379 E. San Salvador
Scottsdale, AZ 85258

Doug Mann 4.14.16
(See Comments)

Prepared for:
JLB Partners
9237 E Via de Ventura
Suite 215
Scottsdale, Arizona 85258

Prepared by:
Kimley-Horn and Associates, Inc.
7740 North 16th Street
Suite 300
Phoenix, Arizona 85020

Registered Professional Engineer (Civil)
CERTIFICATE NO.
52738
TRAVER
JONES
DATE SIGNED 3/31/16
ARIZONA U.S.A.
Expires: 9/30/17

191447017
March 2016

Kimley»Horn

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INTRODUCTION

Kimley-Horn and Associates, Inc. has prepared this water and wastewater report for the proposed Crossroads South Mixed-Use Development at the SEC of Scottsdale Road and Chauncey Lane as required per the City of Scottsdale.

The proposed project encompasses approximately 11.3 acres with 49,725 S.F. of mixed commercial use and a multi-story residential apartment building totaling 294 units.

DOMESTIC WATER SUPPY

A 16" DIP water main exists in Scottsdale Road and a 12" DIP water main exists in Chauncey Lane adjacent to the site. The 16" water main within Scottsdale Road includes an 8" DIP stub to the proposed development. An 8" DIP water main loop will be constructed on-site that will serve new on-site fire hydrants and 8" firelines to the proposed buildings. This on-site water main will be connected to the 12" water main in Chauncey Lane and will be looped to the existing 8" DIP water main stub along Scottsdale Road. Domestic water supplies are proposed to serve the mixed-use commercial and apartment buildings. See Appendix C for the Preliminary Utility Plan. public w/L in 20' wide ESMT

DOMESTIC WATER DEMANDS

clear of All parking spaces

According to the guidelines provided in Figure 6.1-2 of the City of Scottsdale *Standards and Policies, Chapter 6, Water*, the proposed building will add the following demands to the City of Scottsdale's existing system:

		Inside Demand	Outside Demand	Total Demand	ADD (GPM)	Peak Hour (GPM)	Maximum Day (GPM)
High Density Condo	294 Dwelling Units (DU)	155.3 (GPD/DU)	30 (GPD/DU)	185.3 (GPD/DU)	37.6	131.6	75.2
Commercial/ Retail	33,050 S.F.	0.7 (GPD/SF)	0.1 (GPD/SF)	0.8 (GPD/SF)	18.2	63.7	36.4
Restaurant	16,675 S.F.	1.2 (GPD/SF)	0.1 (GPD/SF)	1.3 (GPD/SF)	15.0	52.5	30.0
TOTAL					70.8	247.8	141.6

The Peak Hour demand is 3.5 times the Average Daily Demand (ADD). The Maximum Day Demand is two times the ADD.

According to the 2012 International Fire Code (IFC), fire flow to Group R (residential) buildings may be reduced by 75% if an approved fire sprinkler system is installed. A fire sprinkler system will be installed with all buildings. The largest proposed building is 516,743 S.F. with a III-B Construction Type. Therefore, the required maximum building fire flow rate for the proposed buildings is 2,000 gallons per minute. Refer to Appendix A for the 2012 IFC excerpts.

Line hydraulics + FH flow test provided w/ Final Report to be Accepted prior to submittal of plans to the 1-Stop Shop.

WASTERWATER COLLECTION SYSTEM

A 15" VCP sewer main exists within Scottsdale Road. This sewer main includes an 8" stub to the site. A new 8" PVC private sewer main and sewer services are proposed on-site that will connect to the 8" PVC stub. See Appendix C for the Preliminary Utility Plan. The following demand calculations are based on Figure 7.1-2 of the City of Scottsdale *Design Standards and Policies Manual.*

		Demand	ADD (GPM)	Peaking Factor	Peak Demand (GPM)	Maximum Day (GPM)
High Density Condo	294 Dwelling Units	140 (GPD/DU)	28.4	4.5	127.8	56.8
Commercial/ Retail	33,050 S.F.	0.5 (GPD/S.F.)	11.4	3	34.2	22.8
Restaurant	16,675 S.F.	1.2 (GDP/S.F.)	13.8	6	82.8	27.6
TOTAL			53.6		244.8	107.2

The Maximum Day Demand is two times the Average Day Demand (ADD).

CONCLUSION

Water
This development proposes to connect to City of Scottsdale water mains located adjacent to the site in Scottsdale Road and Chauncey Lane. The water main serving the Crossroads South Mixed-Use Development will be a looped system.

Wastewater
This development proposes to connect the building sewer services to the 8" PVC sewer main in Scottsdale Road via a new on-site 8" PVC sewer main. The proposed 8" PVC private sewer main has adequate capacity for the flows generated by the proposed buildings and their associated uses. Refer to Appendix B for the Sewer Capacity Calculations.

STATUS OF Any requested payback in 73rd
Or is the ~~sewer~~ water At the sole cost of this developer.

I Believe you Need An Additional FH in the center of the site (but ex site plan appears to conform to our criteria) All RDCs must be w/in 200' OF A FH

Appendix A
2012 International Fire Code

SECTION B105 FIRE-FLOW REQUIREMENTS FOR BUILDINGS

B105.1 One- and two-family dwellings.
The minimum fire-flow and flow duration requirements for one- and two-family *dwellings* having a fire-flow calculation area that does not exceed 3,600 square feet (344.5 m^2) shall be 1,000 gallons per minute (3785.4 L/min) for 1 hour. Fire-flow and flow duration for *dwellings* having a fire-flow calculation area in excess of 3,600 square feet (344.5m^2) shall not be less than that specified in Table B105.1.

Exception: A reduction in required fire-flow of 50 percent, as *approved,* is allowed when the building is equipped with an *approved automatic sprinkler system.*

TABLE B105.1 MINIMUM REQUIRED FIRE-FLOW AND FLOW DURATION FOR BUILDINGS

FIRE-FLOW CALCULATION AREA (square feet)					FIRE-FLOW (gallons per minute)[b]	FLOW DURATION (hours)
Type IA and IB[a]	Type IIA and IIIA[a]	Type IV and V-A[a]	Type IIB and IIIB[a]	Type V-B[a]		
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	3
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	
164,201-	92,401-	59,101-	42,701-	26,301-	4,500	

183,400	103,100	66,000	47,700	29,300		
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750	
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	
—	—	115,801-125,500	83,701-90,600	51,501-55,700	6,250	
—	—	125,501-135,500	90,601-97,900	55,701-60,200	6,500	
—	—	135,501-145,800	97,901-106,800	60,201-64,800	6,750	
—	—	145,801-156,700	106,801-113,200	64,801-69,600	7,000	
—	—	156,701-167,900	113,201-121,300	69,601-74,600	7,250	
—	—	167,901-179,400	121,301-129,600	74,601-79,800	7,500	
—	—	179,401-191,400	129,601-138,300	79,801-85,100	7,750	
—	—	191,401-Greater	138,301-Greater	85,101-Greater	8,000	

For SI: 1 square foot = 0.0929 m^2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the *International Building Code.*

b. Measured at 20 psi residual pressure.

B105.2 Buildings other than one- and two-family dwellings.
The minimum fire-flow and flow duration for buildings other than one- and two-family *dwellings* shall be as specified in Table B105.1.

Exception: A reduction in required fire-flow of up to 75 percent, as *approved,* is allowed when the building is provided with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. The resulting fire-flow shall not be less than 1,500 gallons per minute (5678 L/min) for the prescribed duration as specified in Table B105.1.

Appendix B
Sewer Capacity Calculations

Worksheet for 6" PVC Max. Slope

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.010	
Channel Slope	4.53	%
Normal Depth	0.50	ft
Diameter	6.00	in
Discharge	697	gpm

Results

Discharge	697	gpm
Normal Depth	0.50	ft
Flow Area	0.20	ft²
Wetted Perimeter	1.57	ft
Hydraulic Radius	0.13	ft
Top Width	0.00	ft
Critical Depth	0.49	ft
Percent Full	100.0	%
Critical Slope	0.04168	ft/ft
Velocity	7.91	ft/s
Velocity Head	0.97	ft
Specific Energy	1.47	ft
Froude Number	0.00	
Maximum Discharge	1.67	ft³/s
Discharge Full	1.55	ft³/s
Slope Full	0.04530	ft/ft
Flow Type	SubCritical	

Final calcs to show Actual Flow, velocity & D/d in each pipe segment.

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

On site system will require county review.

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Worksheet for 6" PVC Max. Slope

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.50	ft
Critical Depth	0.49	ft
Channel Slope	4.53	%
Critical Slope	0.04168	ft/ft

Worksheet for 6" PVC Min. Slope

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.010	
Channel Slope	1.10	%
Normal Depth	0.50	ft
Diameter	6.00	in
Discharge	343	gpm

Results

Discharge	343	gpm
Normal Depth	0.50	ft
Flow Area	0.20	ft^2
Wetted Perimeter	1.57	ft
Hydraulic Radius	0.13	ft
Top Width	0.00	ft
Critical Depth	0.44	ft
Percent Full	100.0	%
Critical Slope	0.00998	ft/ft
Velocity	3.90	ft/s
Velocity Head	0.24	ft
Specific Energy	0.74	ft
Froude Number	0.00	
Maximum Discharge	0.82	ft^3/s
Discharge Full	0.76	ft^3/s
Slope Full	0.01100	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Worksheet for 6" PVC Min. Slope

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.50	ft
Critical Depth	0.44	ft
Channel Slope	1.10	%
Critical Slope	0.00998	ft/ft

Worksheet for 8" PVC Max. Slope

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.010	
Channel Slope	2.02	%
Normal Depth	0.67	ft
Diameter	8.00	in
Discharge	1002	gpm

Results

Discharge	1002	gpm
Normal Depth	0.67	ft
Flow Area	0.35	ft²
Wetted Perimeter	2.09	ft
Hydraulic Radius	0.17	ft
Top Width	0.00	ft
Critical Depth	0.64	ft
Percent Full	100.0	%
Critical Slope	0.01759	ft/ft
Velocity	6.40	ft/s
Velocity Head	0.64	ft
Specific Energy	1.30	ft
Froude Number	0.00	
Maximum Discharge	2.40	ft³/s
Discharge Full	2.23	ft³/s
Slope Full	0.02020	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Worksheet for 8" PVC Max. Slope

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.67	ft
Critical Depth	0.64	ft
Channel Slope	2.02	%
Critical Slope	0.01759	ft/ft

Worksheet for 8" PVC Min. Slope

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.40	%
Normal Depth	0.67	ft
Diameter	8.00	in
Discharge	446	gpm

Results

Discharge	446	gpm
Normal Depth	0.67	ft
Flow Area	0.35	ft^2
Wetted Perimeter	2.09	ft
Hydraulic Radius	0.17	ft
Top Width	0.00	ft
Critical Depth	0.47	ft
Percent Full	100.0	%
Critical Slope	0.00551	ft/ft
Velocity	2.85	ft/s
Velocity Head	0.13	ft
Specific Energy	0.79	ft
Froude Number	0.00	
Maximum Discharge	1.07	ft^3/s
Discharge Full	0.99	ft^3/s
Slope Full	0.00400	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Worksheet for 8" PVC Min. Slope

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.67	ft
Critical Depth	0.47	ft
Channel Slope	0.40	%
Critical Slope	0.00551	ft/ft

See redLines

Appendix C
Preliminary Utility Plan

FOUND BRASS CAP IN HAND HOLE NW CORNER SERCTION 35, T4N R4E

EXST. 12" DIP WATER MAIN

N90°00'00"E 885.02'

11.6'

17.9'

EXST. 3'X8' DOUBLE-BARREL BOX CULVERT

EXST. 8" PVC SEWER MAIN

CHAUNCEY LANE

EXST. SIGN, TYP.

PROP. 6' SIDEWALK

EXST. APS UG ELEC. LINE

N90°00'00"E 441.07'

30' BLDG. SETBACK

N45°04'44"E 59.48'

75.00' N89°50'31"W

EXST. FIBER OPTIC LINE

73.0'

EXST. 8" SEWER MAIN

8.7'

EXST. 16" DIP WATER MAIN

EXST. 50' ASLD DRNG ESMT TO BE RELEASED

18.8'

EXST. FIRE HYDRANT, TYP.

EXST. APS UG ELEC. LINE

2640.37' S0°09'29"W

N0°09'29"E 545.14'

PROP. DRAINAGE CHANNEL

PROP. 10' SIDEWALK

SCOTTSDALE ROAD

EXST. STREETLIGHT, TYP.

PROP. DRAINAGE ESMT.

60' SCENIC CORRIDOR

EXST. 75' R/W

EXST. 36" RCP STORM DRAIN

PROP. 3'X8' BOX CULVERT

MH #2
RIM: 64.01
INV: 60.49(E)
INV: 60.39(S)

PROP. 20' WATER ESMT

PROP. 20' WATER ESMT

PROP. RETAIL / RESTAURANT
9,200 SF
LF_{88}=1573.24

PROP. RETAIL / RESTAURANT
8,050 SF
LF_{88}=1573.24

PROP. TRASH ENCLOSURE

PROP. 20' WATER ESMT

PROP. STORM DRAIN SYSTEM, REF GRADING AND DRAINAGE PLANS

INV: 67.70

INV: 67.70

269 LF S=1.08%

87 LF S=1.10%

MH #5
RIM: 70.09
INV: 66.74(W)
INV: 66.74(E)
INV: 66.08(S)

58 LF S=3.92%

60 LF S=1.87%

87 LF S=2.39%

WYE CONNECTION #2
RIM: 66.20
INV: 64.96(N)
INV: 65.62(W)
INV: 64.96(S)

79 LF S=1.87%

MH #3
RIM: 67.50
INV: 63.49(S)
INV: 63.49(N)
INV: 64.15(E)
INV: 63.39(W)

56 LF S=1.51%

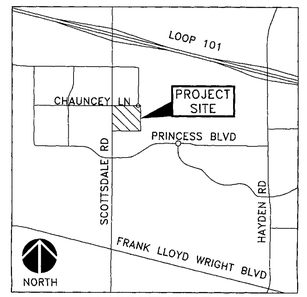
PRIVATE DOMESTIC WATER NOTES

1. BUILDING DOMESTIC WATER CONNECTION, REF MEP PLANS FOR CONTINUATION.
2. 2" SCH 40 PVC DOMESTIC WATER SERVICE.
3. 2" DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY PER COS STD DET 2352.

PRIVATE FIRELINE NOTES

1. 4" CLASS 350 DIP WATER MAIN POLYWRAPPED WITH TRACER WIRE, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
2. 4" GATE VALVE PER MAG STD DET 391-1 TYPE 'C'.
3. BUILDING FIRELINE CONNECTION, REF MEP PLANS FOR CONTINUATION. FIRELINE RISER AND BACKFLOW PREVENTOR PER COS STD DET 2368 TO BE LOCATED IN FIRE RISER ROOM.

MATCHLINE: SEE SHEET UT3



VICINITY MAP
SCOTTSDALE, AZ
N.T.S.

PUBLIC WATER MAIN NOTES

1. 8" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
3. 8"X8" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.
4. 8" BEND WITH RESTRAINED JOINTS PER MAG STD DET 303.
9. 6" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
10. 8"X6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.
11. FIRE HYDRANT ASSEMBLY PER MAG STD DET 360.
13. 8" WATER MAIN GATE VAVLE PER MAG STD DET 360.
14. 8"X4" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.
15. 2" WATER SERVICE LINE CONNECTION PER COS STD DET 2330. METER TO BE INSTALLED BY CITY FORCES.

PRIVATE SEWER NOTES

1. 8" SDR 35 PVC PRIVATE SEWER MAIN, LENGTH AND SLOPE PER PLAN.
2. 48" SEWER MANHOLE PER MAG STD DET 420-2, INVERTS PER PLAN.
3. "WYE" CONNECTION, INVERT PER PLAN.
5. CONNECT TO BUILDING SEWER AT TWO-WAY CLEANOUT, INVERT PER PLAN. REF MEP PLANS FOR CONTINUATION.
6. 6" SDR 35 PVC SEWER SERVICE, LENGTH AND SLOPE PER PLAN.

MATCHLINE: SEE SHEET UT2

CIVIL ENGINEER
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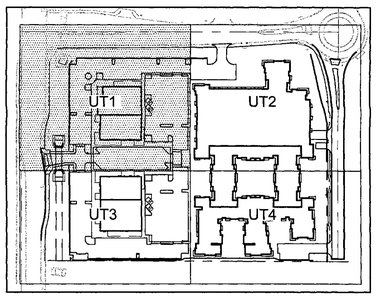


KEY MAP
N.T.S.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

Kimley»Horn © 2016
7740 North 16th Street, Suite 300
Phoenix, Arizona 85020 (602) 944-5500

JB PARTNERS

PRELIMINARY UTILITY PLAN

SEC SCOTTSDALE ROAD AND CHAUNCEY LANE
SCOTTSDALE, ARIZONA

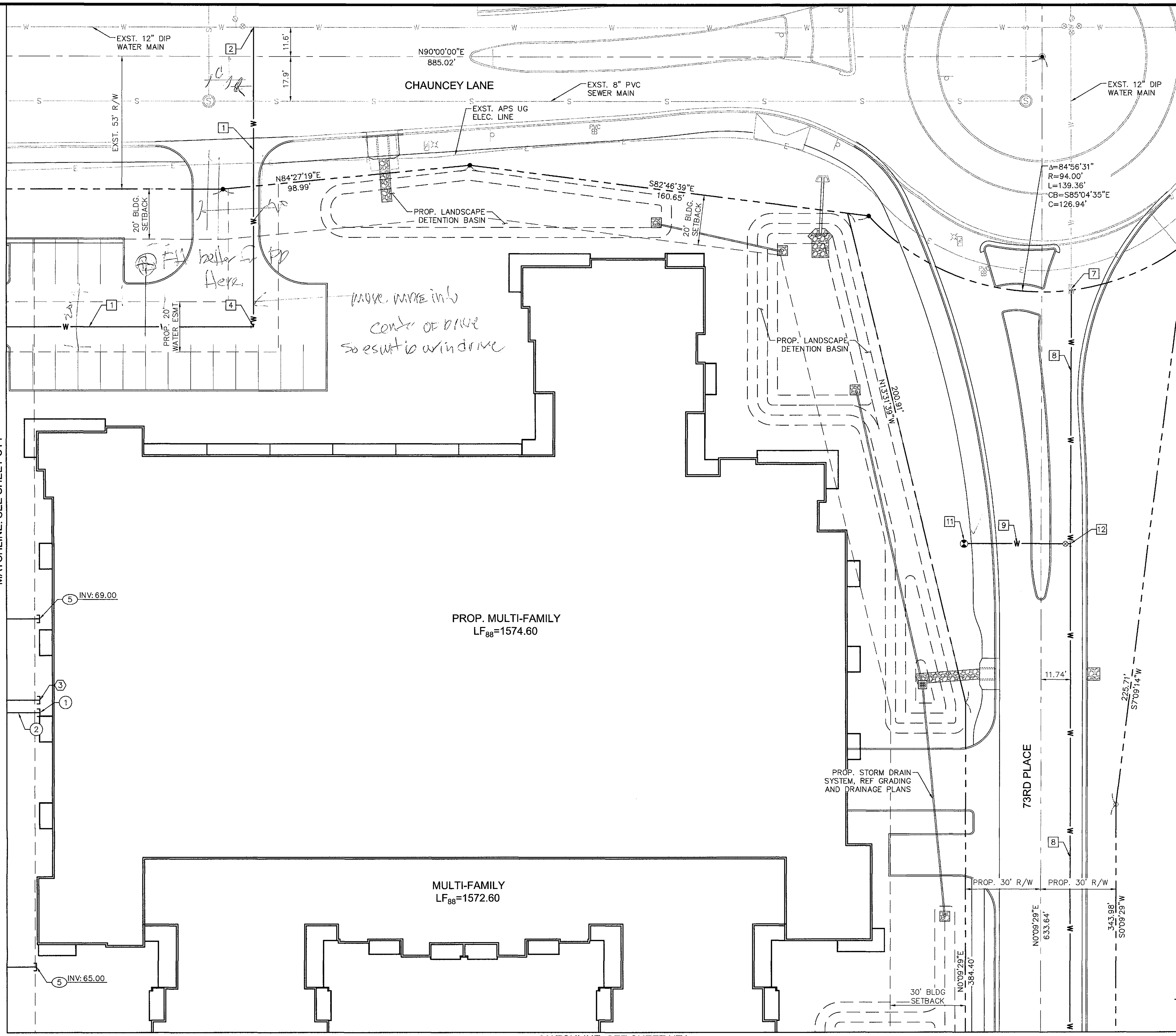
PROJECT No.	191447014
SCALE (H):	1"=20'
SCALE (V):	NONE
DRAWN BY:	CGF
DESIGN BY:	TMJ
CHECK BY:	SEH
DATE:	3/31/16

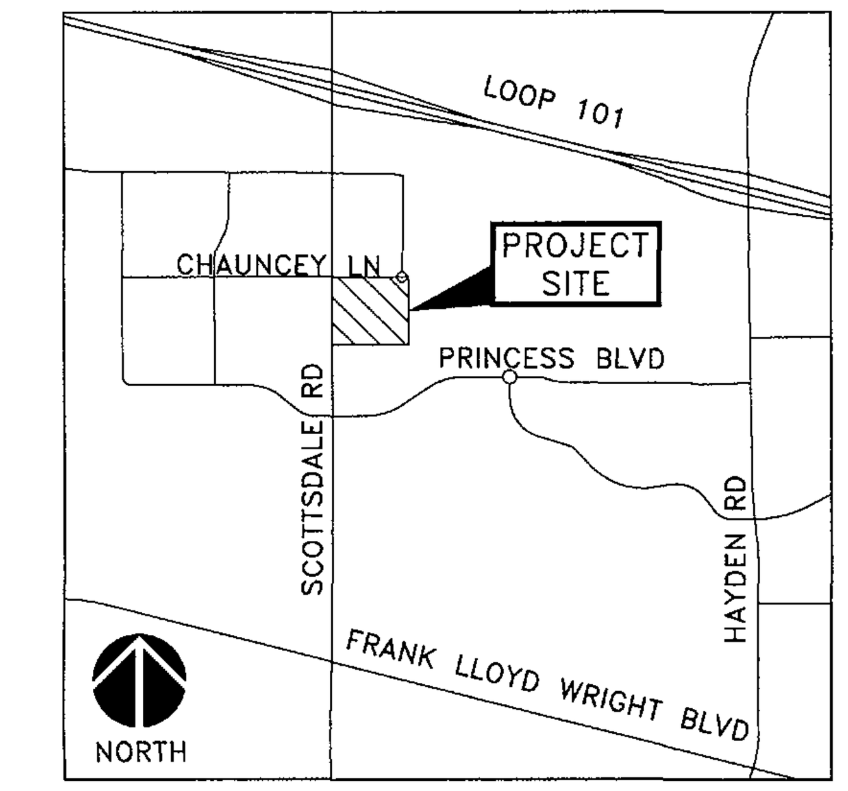
PRELIMINARY
FOR REVIEW ONLY
NOT FOR CONSTRUCTION
Kimley»Horn
ENGINEER S. HANEY
PE NO. 37059, DATE 03/16

447014Pre-UT.dwg

UT1
1 OF 4 SHEETS

APPR	DATE	BY	DESCRIPTION	REV





VICINITY MAP
SCOTTSDALE, AZ
N.T.S.

PUBLIC WATER MAIN NOTES

- [1] 8" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
- [2] 12"X8" TS&V.
- [4] 8" BEND WITH RESTRAINED JOINTS PER MAG STD DET 303.
- [7] CONNECT TO EXISTING 12" WATER MAIN STUB.
- [8] 12" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
- [9] 6" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
- [11] FIRE HYDRANT ASSEMBLY PER MAG STD DET 360.
- [12] 12"X6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.

PRIVATE SEWER NOTES

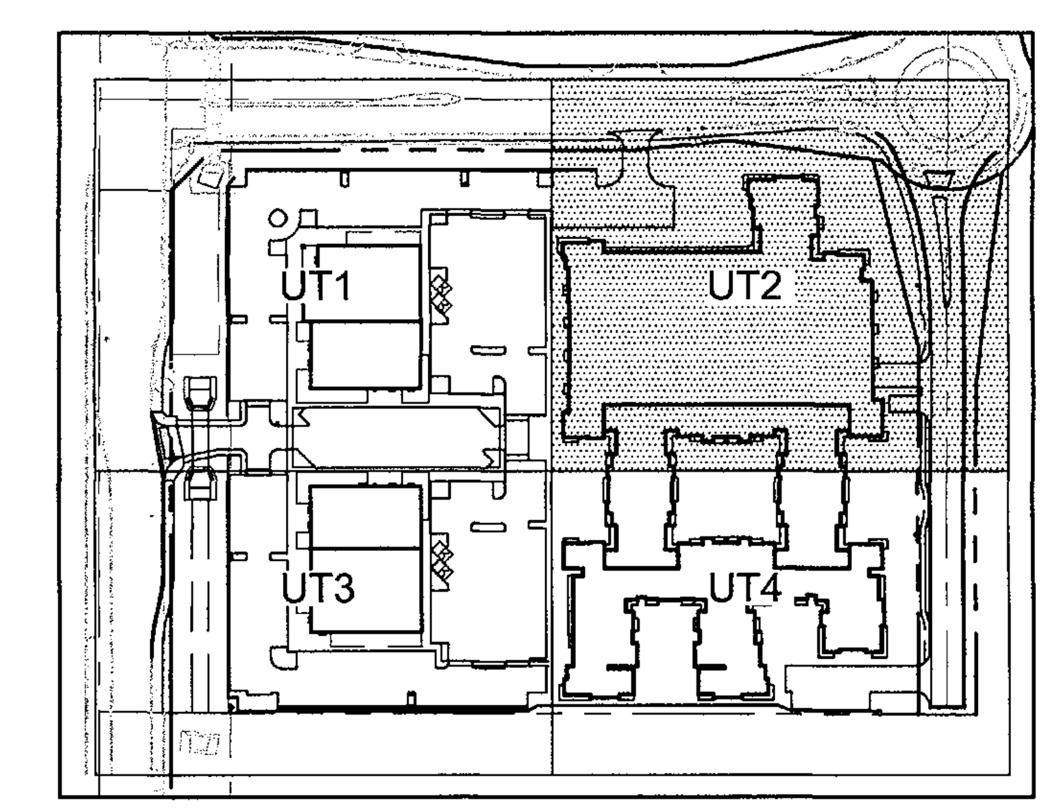
- (5) CONNECT TO BUILDING SEWER AT TWO-WAY CLEANOUT, INVERT PER PLAN. REF MEP PLANS FOR CONTINUATION.

PRIVATE FIRELINE NOTES

- (3) BUILDING FIRELINE CONNECTION, REF MEP PLANS FOR CONTINUATION. FIRELINE RISER AND BACKFLOW PREVENTOR PER COS STD DET 2368 TO BE LOCATED IN FIRE RISER ROOM.

PRIVATE DOMESTIC WATER NOTES

- (1) BUILDING DOMESTIC WATER CONNECTION, REF MEP PLANS FOR CONTINUATION.
- (2) 2" SCH 40 PVC DOMESTIC WATER SERVICE.



KEY MAP
N.T.S.

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1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

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JLB PARTNERS

SEC SCOTTSDALE ROAD AND CHAUNCEY LANE
PRELIMINARY UTILITY PLAN
SCOTTSDALE, ARIZONA

PROJECT No.	191447014
SCALE (H):	1"=20'
SCALE (V):	NONE
DRAWN BY:	CGF
DESIGN BY:	TMJ
CHECK BY:	SEH
DATE:	3/31/16

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NOT FOR CONSTRUCTION
Kimley»Horn
ENGINEER S. HANEY
PE NO. 37059 DATE 03/16

447014Pre-UT.dwg
UT2
2 OF 4 SHEETS

REV	DESCRIPTION	BY	DATE	APPR

K:\PHX_Civil\191447014 – JLB Crossroads South\CADD\447014Pre-UT.dwg, Layout:UT2 Mar 31, 2016 – 4:21pm Ethan.Costerton
XREFS: X447014VF X447014BM X447014GD X447014TB X447014UT

FOUND BRASS CAP IN HAND HOLE NW CORNER SERCTION 35, T4N R4E

EXST. 12" DIP WATER MAIN

N90°00'00"E 885.02'

11.6'

17.9'

EXST. 3'X8' DOUBLE-BARREL BOX CULVERT

EXST. 8" PVC SEWER MAIN

CHAUNCEY LANE

EXST. SIGN, TYP.

PROP. 6' SIDEWALK

EXST. APS UG ELEC. LINE

N90°00'00"E 441.07'

30' BLDG. SETBACK

N45°04'44"E 59.48'

75.00' N89°50'31"W

EXST. FIBER OPTIC LINE

73.0'

EXST. 8" SEWER MAIN

8.7'

EXST. 16" DIP WATER MAIN

EXST. 50' ASLD DRNG ESMT TO BE RELEASED

18.8'

EXST. FIRE HYDRANT, TYP.

EXST. APS UG ELEC. LINE

2640.37' S0°09'29"W

N0°09'29"E 545.14'

PROP. DRAINAGE CHANNEL

PROP. 10' SIDEWALK

EXST. STREETLIGHT, TYP.

PROP. DRAINAGE ESMT.

60' SCENIC CORRIDOR

EXST. 75' R/W

EXST. 36" RCP STORM DRAIN

PROP. 3'X8' BOX CULVERT

MH #2
RIM: 64.01
INV: 60.49(E)
INV: 60.39(S)

SCOTTSDALE ROAD

PROP. 20' WATER ESMT.

PROP. 20' WATER ESMT

PRIVATE DOMESTIC WATER NOTES

1. BUILDING DOMESTIC WATER CONNECTION, REF MEP PLANS FOR CONTINUATION.
2. 2" SCH 40 PVC DOMESTIC WATER SERVICE.
3. 2" DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY PER COS STD DET 2352.

PROP. RETAIL / RESTAURANT
9,200 SF
LF_{88}=1573.24

PROP. RETAIL / RESTAURANT
8,050 SF
LF_{88}=1573.24

PRIVATE FIRELINE NOTES

1. 4" CLASS 350 DIP WATER MAIN POLYWRAPPED WITH TRACER WIRE, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
2. 4" GATE VALVE PER MAG STD DET 391-1 TYPE 'C'.
3. BUILDING FIRELINE CONNECTION, REF MEP PLANS FOR CONTINUATION. FIRELINE RISER AND BACKFLOW PREVENTOR PER COS STD DET 2368 TO BE LOCATED IN FIRE RISER ROOM.

INV: 67.70

INV: 67.70

PROP. TRASH ENCLOSURE

PROP. 20' WATER ESMT

6" SDR 35 PVC SEWER SERVICE, 58 LF, S=3.92%

87 LF S=1.10%

MH #5
RIM: 70.09
INV: 66.74(W)
INV: 66.74(E)
INV: 66.08(S)

60 LF S=1.87%

87 LF S=2.39%

WYE CONNECTION #2
RIM: 66.20
INV: 64.96(N)
INV: 65.62(W)
INV: 64.96(S)

79 LF S=1.87%

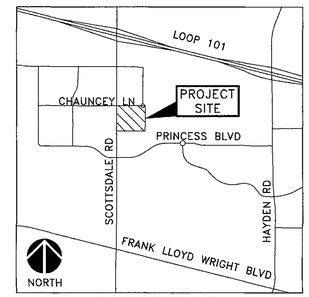
MH #3
RIM: 67.50
INV: 63.49(S)
INV: 63.49(N)
INV: 64.15(E)
INV: 63.39(W)

269 LF S=1.08%

56 LF S=1.51%

PROP. STORM DRAIN SYSTEM, REF GRADING AND DRAINAGE PLANS

MATCHLINE: SEE SHEET UT3



VICINITY MAP
SCOTTSDALE, AZ
N.T.S.

PUBLIC WATER MAIN NOTES

1. 8" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
3. 8"X8" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.
4. 8" BEND WITH RESTRAINED JOINTS PER MAG STD DET 303.
9. 6" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
10. 8"X6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.
11. FIRE HYDRANT ASSEMBLY PER MAG STD DET 360.
13. 8" WATER MAIN GATE VAVLE PER MAG STD DET 360.
14. 8"X4" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.
15. 2" WATER SERVICE LINE CONNECTION PER COS STD DET 2330. METER TO BE INSTALLED BY CITY FORCES.

PRIVATE SEWER NOTES

1. 8" SDR 35 PVC PRIVATE SEWER MAIN, LENGTH AND SLOPE PER PLAN.
2. 48" SEWER MANHOLE PER MAG STD DET 420-2, INVERTS PER PLAN.
3. "WYE" CONNECTION, INVERT PER PLAN.
5. CONNECT TO BUILDING SEWER AT TWO-WAY CLEANOUT, INVERT PER PLAN. REF MEP PLANS FOR CONTINUATION.
6. 6" SDR 35 PVC SEWER SERVICE, LENGTH AND SLOPE PER PLAN.

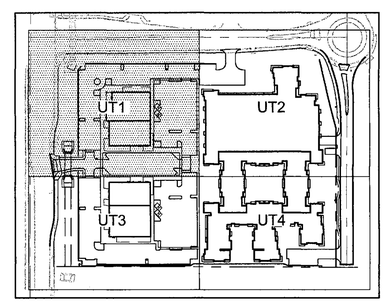
MATCHLINE: SEE SHEET UT2

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
7740 N. 16TH STREET, SUITE 300
PHOENIX, ARIZONA 85020
TEL. NO. (602) 944-5500
CONTACT: STEVE HANEY, PE

ARCHITECT
HENSLEY LAMKIN RACHEL, INC.
11200 BROADWAY, SUITE 2749
PEARLAND, TEXAS 77584
PH: (832) 379-2983
CONTACT: ROBERT BOOTH

LAND SURVEYOR
SURVEY INNOVATION GROUP, INC
7301 EAST EVANS ROAD
SCOTTSDALE, ARIZONA 85260
PH: (480) 922-0780
CONTACT: JASON SEGNERI, P.L.S.

DEVELOPER/OWNER
JLB PARTNERS
9237 E VIA DE VENTURA, SUITE 215
SCOTTSDALE, ARIZONA 85258
PH: (480) 800-3070
CONTACT: KEVIN RANSIL



KEY MAP
N.T.S.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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JLB PARTNERS

SEC SCOTTSDALE ROAD AND CHAUNCEY LANE

PRELIMINARY UTILITY PLAN

SCOTTSDALE, ARIZONA

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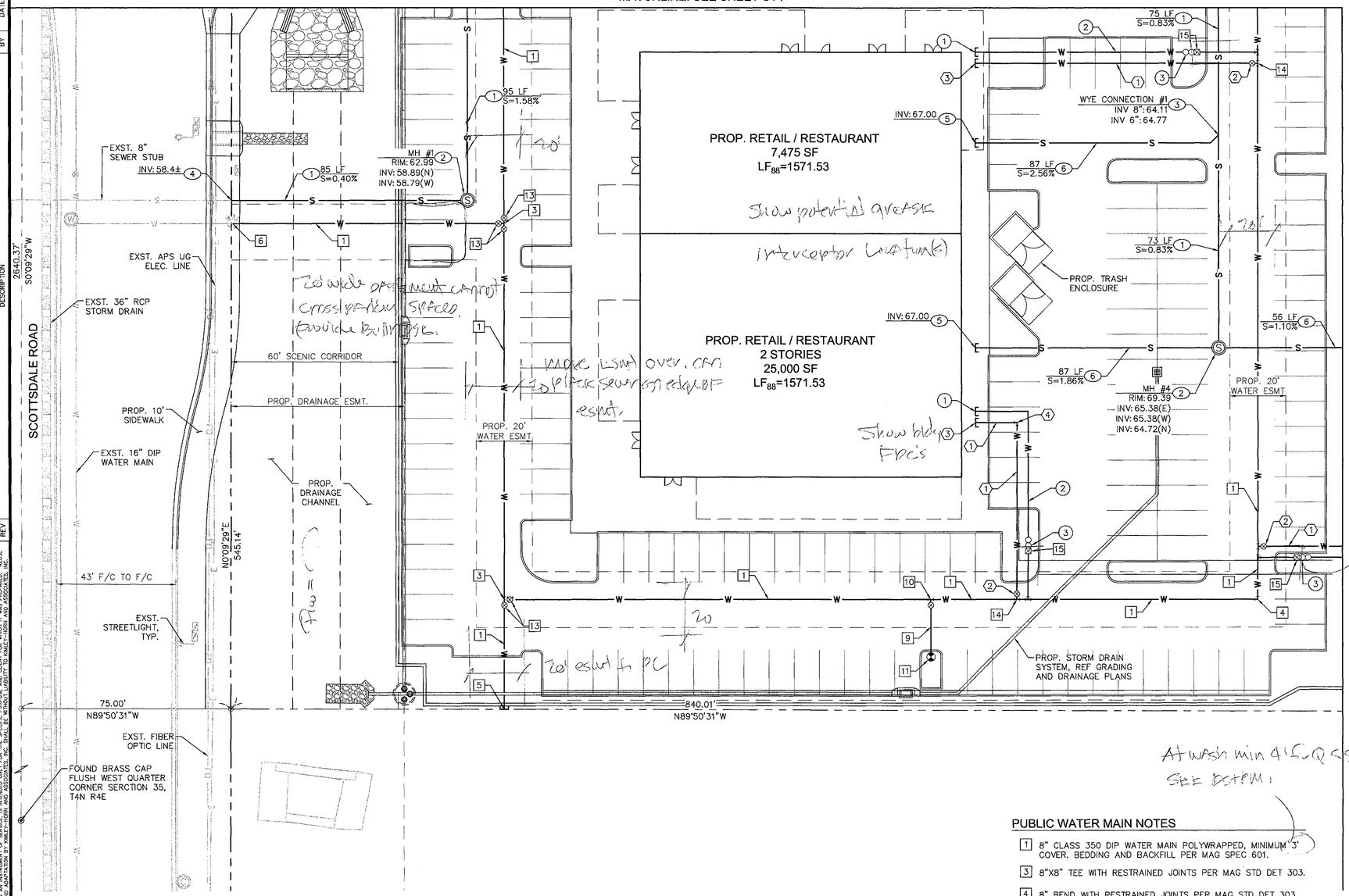
PE NO. 37059 DATE 03/16

4470149re-UT.dwg

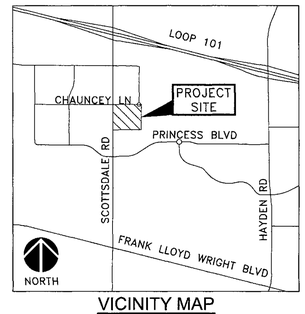
UT1
1 OF 4 SHEETS

APPR | DATE | BY | DESCRIPTION | REV

MATCHLINE: SEE SHEET UT1



MATCHLINE: SEE SHEET UT4



VICINITY MAP
SCOTTSDALE, AZ
N.T.S.

PRIVATE FIRELINE NOTES

1. 4" CLASS 350 DIP WATER MAIN POLYWRAPPED WITH TRACER WIRE, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
2. 4" GATE VALVE PER MAG STD DET 391-1 TYPE 'C'.
3. BUILDING FIRELINE CONNECTION, REF MEP PLANS FOR CONTINUATION. FIRELINE RISER AND BACKFLOW PREVENTOR PER COS STD DET 2368 TO BE LOCATED IN FIRE RISER ROOM.
4. 4" BEND WITH RESTRAINED JOINTS PER MAG STD DET 303.

PRIVATE DOMESTIC WATER NOTES

1. BUILDING DOMESTIC WATER CONNECTION, REF MEP PLANS FOR CONTINUATION.
2. 2" SCH 40 PVC DOMESTIC WATER SERVICE.
3. 2" DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY PER COS STD DET 2352.

PRIVATE SEWER NOTES

1. 8" SDR 35 PVC PRIVATE SEWER MAIN, LENGTH AND SLOPE PER PLAN.
2. 48" SEWER MANHOLE PER MAG STD DET 420-2, INVERTS PER PLAN.
3. "WYE" CONNECTION, INVERT PER PLAN.
4. CONNECT TO EXISTING 8" SEWER MAIN STUB.
5. CONNECT TO BUILDING SEWER AT TWO-WAY CLEANOUT, INVERT PER PLAN. REF MEP PLANS FOR CONTINUATION.
6. 6" SDR 35 PVC SEWER SERVICE, LENGTH AND SLOPE PER PLAN.

PUBLIC WATER MAIN NOTES

1. 8" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
3. 8"X8" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.
4. 8" BEND WITH RESTRAINED JOINTS PER MAG STD DET 303.
5. 2" BLOWOFF AND CAP.
6. CONNECT TO EXISTING 8" WATER MAIN STUB.
9. 6" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
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11. FIRE HYDRANT ASSEMBLY PER MAG STD DET 360.
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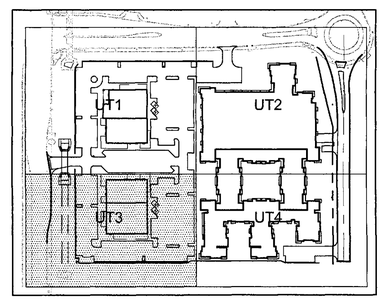
14. 8"X4" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.
15. 2" WATER SERVICE LINE CONNECTION PER COS STD DET 2330. METER TO BE INSTALLED BY CITY FORCES.



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GRAPHIC SCALE IN FEET
0 10 20 40

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JB BARNES

SEC SCOTTSDALE ROAD AND CHAUNCEY LANE

PRELIMINARY UTILITY PLAN

SCOTTSDALE, ARIZONA

PROJECT No.	191447014
SCALE (H):	1"=20'
SCALE (V):	NONE
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PE NO. 37059 DATE 03/16

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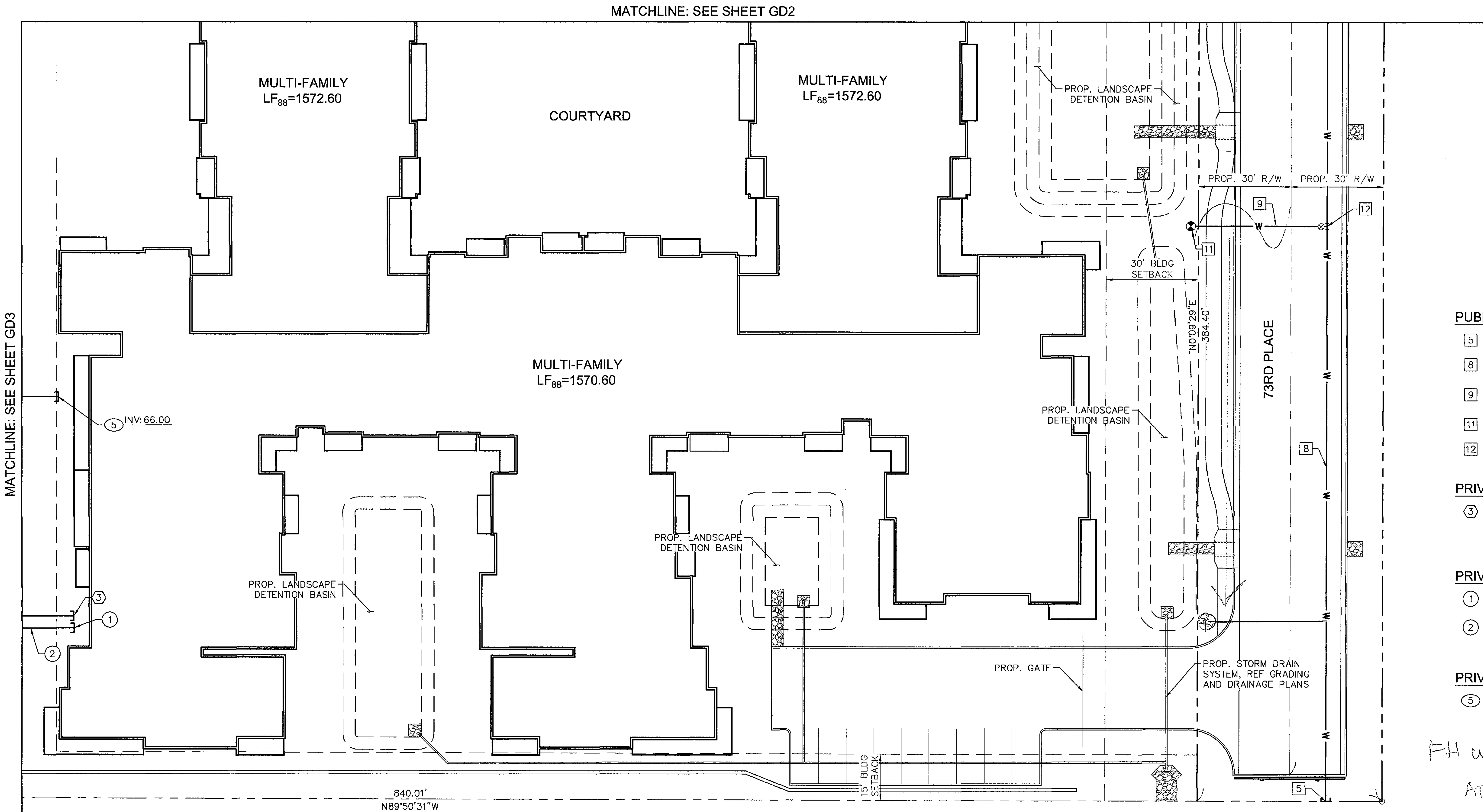
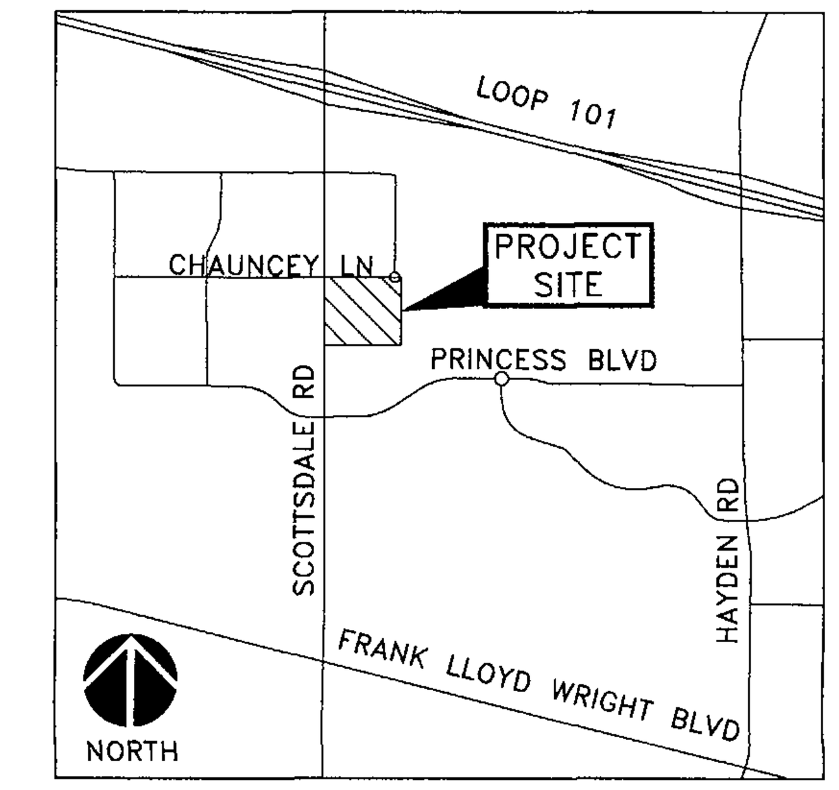
UT3
3 OF 4 SHEETS

REV	DESCRIPTION	BY	DATE	APPR



FH would work better for FD.
At d/w entrance



VICINITY MAP
SCOTTSDALE, AZ
N.T.S.

PUBLIC WATER MAIN NOTES

- [5] 2" BLOWOFF AND CAP.
- [8] 12" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
- [9] 6" CLASS 350 DIP WATER MAIN POLYWRAPPED, MINIMUM 3' COVER. BEDDING AND BACKFILL PER MAG SPEC 601.
- [11] FIRE HYDRANT ASSEMBLY PER MAG STD DET 360.
- [12] 12"X6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303.

PRIVATE FIRELINE NOTES

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PRIVATE SEWER NOTES

- (5) CONNECT TO BUILDING SEWER AT TWO-WAY CLEANOUT, INVERT PER PLAN. REF MEP PLANS FOR CONTINUATION.

BENCHMARK

PER SURVEY INNOVATION GROUP, THE BENCHMARK IS CITY OF SCOTTSDALE BRASS CAP IN HANDHOLE AT THE INTERSECTION OF UNION HILLS (MAYO BOULEVARD) AND SCOTTSDALE ROAD.

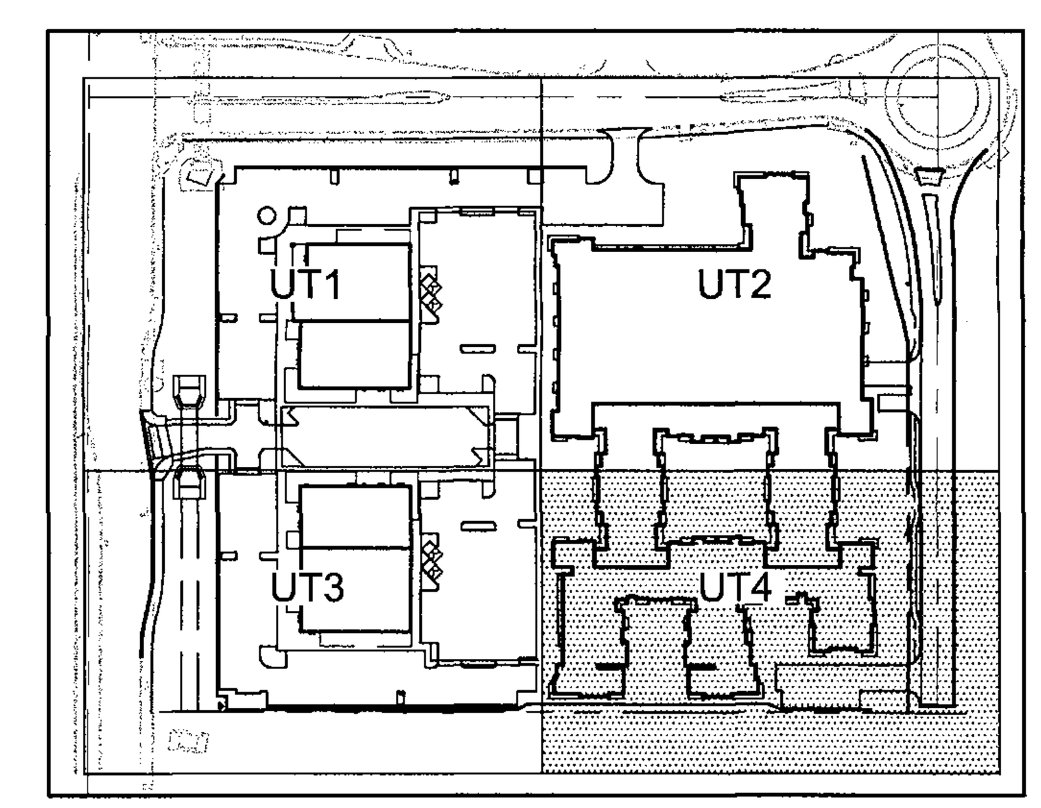
ELEVATION = 1588.43 (NAVD'88)

BASIS OF BEARING

PER SURVEY INNOVATION GROUP, THE BASIS OF BEARING IS THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA. SAID LINE BEARS S00°09'29"W.

LEGEND

- PROPERTY LINE
- RIGHT OF WAY LINE
- STREET CENTERLINE
- EASEMENT LINE
- EXISTING PUBLIC WATER MAIN
- PROPOSED WATER MAIN
- PROPOSED SEWER MAIN
- PROPOSED STORM DRAIN
- EXSTING STORM DRAIN
- HIGH POINT
- PROPOSED CONTOUR
- EXISTING CONTOURS
- PROPOSED PAVEMENT SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING SANITARY SEWER MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED CATCH BASIN



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UT4
4 OF 4 SHEETS

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