

Water Basis of Design

For

Lot 8 of DC Ranch Corporate Center



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 scan

DATE 7/13/2021

Prepared for:

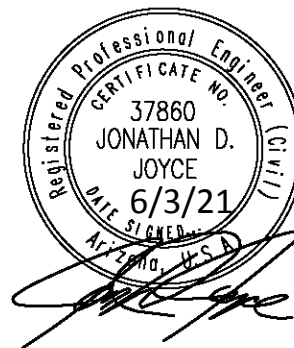
Randy Shell

Shell Commercial Real Estate
1640 N 91st Street, Suite 112
Scottsdale Az. 85260
480-443-3992

Prepared by:

Four Peaks Design Group

15806 N 107th Place
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602-738-4201



Basis of Design - Water

Lot 8 of DC Ranch Corporate Center

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EXHIBITS

A	Vicinity Aerial Map	C	Water/Sewer QS Map
B	Recorded Plat	D	Fire Hydrant Test

SECTION 1: INTRODUCTION

1.1 Purpose

The purpose of this report is to provide a water analysis as required by the City of Scottsdale to support development of this 1.341 acre project site. This report will analyze existing onsite and offsite water needs and supply and well as proposed improvements in order to ensure that all buildings can and will be serviced by the City of Scottsdale

1.2 Project Location

This project is located within the Corporate Center of DC Ranch, in particular Lot 8. More specifically, this project is located within a portion of the north half of the south half of Section 31, Township 4 North, Range 3 East of Maricopa County, Arizona, with an address of 9270 E Hidden Spur Trail, Scottsdale Arizona 85255. See Exhibits A and B.

The project is bounded by the public right-of-way for E Hidden Spur Trail to the northwest, the fully developed commercial lots (Lots 7 and 9 of said Corporate Center) to the north and west, by an Apartment complex to the east and by land owned by undeveloped land owned by the City of Scottsdale to the south.

1.3 Project Development

The project site (hereafter referred to as the subject site) is currently Zoned Ind-1 (Planned Industrial Zoning District). The proposed use is consistent with the current zoning and no changes are being proposed.

This development will consists of two buildings, one 12,515 sf and one 8,884 sf for a total under roof of 21,399 sf. The larger building is completed dedicated for vehicle storage with the smaller building having 7,750 sf dedicated for vehicle storage along with 1,134 sf dedicated for office space.

SECTION 2: EXISTING WATER SUPPLY

2.1 City of Scottsdale Services

The City of Scottsdale has an 8" DIP Water Main in E Hidden Spur Trail. The site has two water meters, one Fire Line blow-off valve and an Air Release Valve. This project will relocate said water meters out of proposed driveway and will remove blow off valve to connect fire system. See Exhibit C.

2.2 Fire Hydrant Flow Test

A fire flow test was performed by EJ Flow Tests, LLC at 7 am on June 4, 2021. Water flow test was witnessed by the COS Water Resources Department. The results of said flow test are included as Exhibit C. The system shall be designed to maintain 30 psi min pressure at the

Basis of Design - Water

Lot 8 of DC Ranch Corporate Center

hydrant under fire flow conditions, and a minimum of 1,500 gpm shall be supplied for commercial, industrial and multi-family properties.

As shown within said Exhibit D the Pressure shown at Fire Hydrant F1 was 45 psi under fire flow condition and 2,392 gpm is available at 20 psi (includes a 10% safety factor)

SECTION 3: PROPOSED IMPROVEMENTS

3.1 Site Plan

A utility Site Plan is presented as Exhibit D. A looped 6" ductile iron fire loop is proposed with a 6" backflow preventer. A 1.5" water meter and domestic water line is proposed to service the office area/break room.

3.2 Demand

The storage facilities shall be fire sprinklered but besides fire will not require any additional water service. Conservatively applying 1.88 GPM per Arce (this site is 1.341 acres) yields 2.521 GPM.

SECTION 4: CONCLUSIONS

The existing COS water system is adequate to meet both the domestic and fire flow needs without additional improvements.

SECTION 5: REFERENCES

1. City of Scottsdale Revised Code
2. City of Scottsdale Design Standards and Policies Manual

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THE CITY OF SCOTTSDALE

02-SEP-2010

37-49



36-50

17800 N

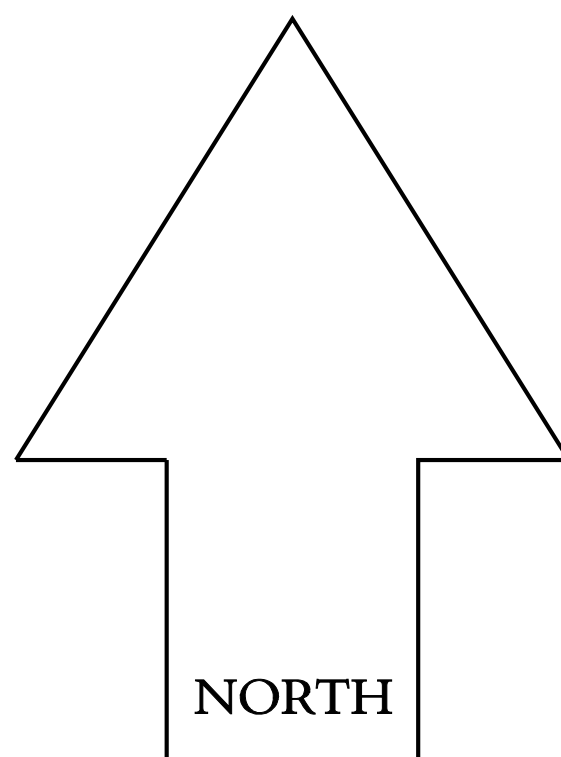
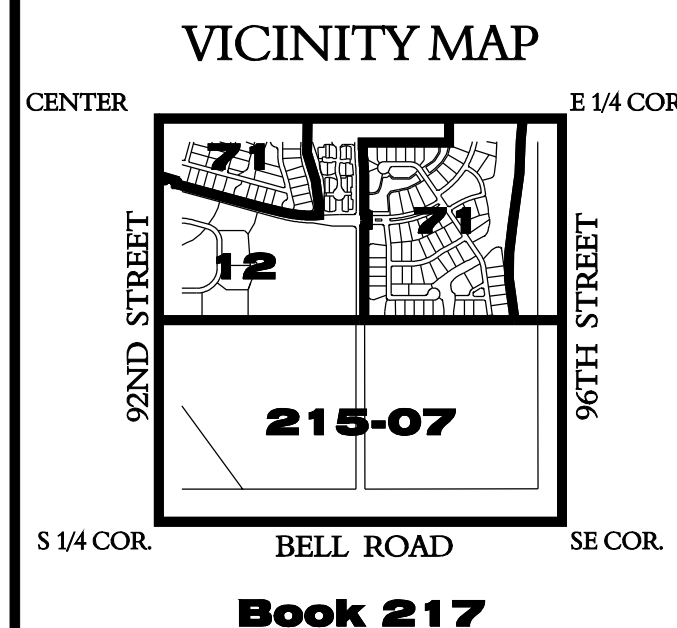
17000 N

9600 E

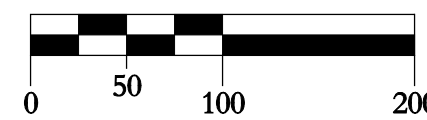
- GENERAL NOTES:
- THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE SCOTTSDALE RECORDS DEPARTMENT AT (480) 312-2356.
 - THE SECTION LINE BEARING AND DISTANCES ARE BASED ON THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER 1991. BEARINGS ARE MAGNETIC GRID. DISTANCES ARE FLATTENED TO GROUND. WHERE NO CORNER WAS FOUND THE DIMENSIONS ARE GIVEN TO CALCULATED SECTION CORNERS AND ARE NOTED AS "CALCULATED" ON THE MAP.

NOTES:

PHOTO DATE:
NOVEMBER 2007



SCALE: 1" = 100'



Note: The map scale of 1" = 100' is based on a full size print of 30" x 36'.

AERIAL
QUARTER SECTION MAP
37 - 50
SE 1/4 SEC. 31 T4N R5E

EXHIBIT A

E-W. MID-SECTION LINE SEC. 31, T.4N., R.5E. N89°58'59"E(M) 5030.11'(M)
3960.53'(M)

NW COR., N.E. 1/4, S.W. 1/4,
SEC. 31, T.4N., R.5E. PER (R1) DATA
FND. 1/2" REBAR, RLS 27239

E. 1/4 COR.,
SEC.31, T.4N., R.5E.
FND. M.C. BRASS
CAP FLUSH, RLS 33307

LEGEND:

- BRASS CAP IN HANDHOLE
- FOUND AS NOTED
- BRASS CAP FLUSH
- SET 1/2" REBAR WITH CAP STAMPED "RLS 45835"
- W. 1/4 COR., SEC.31, T.4N., R.5E. FND. M.C. BRASS CAP FLUSH, STAMPED "RLS 33307"
- FND. 1/2" REBAR WITH CAP STAMPED "RLS 33860"
- EXISTING EASEMENT LINE
- MONUMENT LINE
- SUBJECT PROPERTY LINE
- ADJOINER PROPERTY LINE
- TRACT "A" PRIVATE ACCESS LINE

- (R1) RECORDED DATA ACCORDING TO THE FINAL PLAT OF "CORPORATE CENTER AT DC RANCH", RECORDED IN BOOK 959, PAGE 36, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA.
- (R2) RECORDED DATA ACCORDING TO THE REPLAT OF "CORPORATE CENTER AT DC RANCH", RECORDED IN BOOK 1024, PAGE 23, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA.
- (R3) RECORDED DATA PER STATE PLAT NO. 16, CORE SOUTH RECORDED IN BOOK 324, PAGE 50, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA.

- (R4) RECORDED DATA ACCORDING TO THE FINAL PLAT OF "DC RANCH - PARCEL 11", RECORDED IN BOOK 657, PAGE 16, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA.
- (R5) RECORDED DATA PER THE PLSS SUBDIVISION RECORD OF SURVEY "MARICOPA COUNTY GEODETIC DENSIFICATION AND CADASTRAL SURVEY AS RECORDED IN BK. 700, PG. 12, M.C.R.
- (M) MEASURED INFORMATION FROM FIELD DATA COLLECTION.
- (C) CALCULATED INFORMATION FROM RECORDED DOCUMENTS AS NOTED.
- ESMT. EASEMENT
R/W RIGHT OF WAY
M.C.R. MARICOPA COUNTY RECORDS

BOUNDARY CURVE TABLE			
LINE	BEARING	DISTANCE	
L1	S89°58'20"W	1129.39'	
L2	S00°01'40"E	18.00'	
L3	N43°43'32"W	40.66'	

BOUNDARY CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG. & LENGTH
C1 (R1,M)	207.04'	220.00'	53°55'16"	S63°04'02"E 199.49'
C2 (R1,R2,M)	267.04'	170.00'	90°00'00"	N44°58'20"E 240.42'
C3	175.51'	188.00'	53°29'16"	N63°13'42"E 169.20'
C4	57.77'	188.00'	17°38'18"	N45°17'13"E 57.64'
C5	117.74'	188.00'	35°52'58"	N72°01'51"E 115.82'
C6	102.52'	238.00'	24°40'46"	S77°41'17"E 101.73'

LOT 16

BK. 959, PG. 36, M.C.R.
A.P.N. 217-55-719
DEED NO. 20110128852, M.C.R.

LOT 7

BK. 1024, PG. 23, M.C.R.
A.P.N. 217-55-724
DEED NO. 20110254460, M.C.R.

LOT 11

BK. 959, PG. 36, M.C.R.
A.P.N. 217-55-714
DEED NO. 20110254460, M.C.R.

LOT 10 A

43,290 SQ.FT.±
0.994 AC.±

LOT 9 A

45,612 SQ.FT.±
1.047 AC.±

LOT 8 B

58,426 SQ.FT.±
1.341 AC.±

E.S.V.A.E. & C.A.E. LINE TABLE							
LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING
L4 (TIE)	S43°43'32"E	10.09'	L16 (TIE)	S00°00'00"E	48.10'	L28	N00°00'00"E
L5	S46°32'18"E	35.71'	L17	S90°00'00"E	18.50'	L29	N53°07'48"E
L6	N90°00'00"E	39.68'	L18	N51°44'24"W	37.26'	L30	N90°00'00"E
L7	N44°34'47"E	0.89'	L19 (TIE)	N43°43'32"W	30.57'	L31	N34°10'31"W
L8	N90°00'00"E	16.96'	L20	S28°58'20"E	18.51'		
L9	S00°00'00"E	27.00'	L21	N90°00'00"E	18.50'		
L10	S00°00'00"E	6.00'	L22 (TIE)	N00°00'00"E	24.00'		
L11	S90°00'00"W	13.83'	L23	S90°00'00"W	26.34'		
L12	S00°00'00"E	7.50'	L24	S00°00'00"E	5.33'		
L13	N90°00'00"W	9.00'	L25	N90°00'00"W	13.83'		
L14	N00°00'00"E	12.50'	L26	N00°00'00"E	5.33'		
L15	S90°00'00"W	13.00'	L27 (TIE)	N00°00'00"E	48.21'		

TRACT 23
STATE PLAT NO. 16, CORE SOUTH
BK. 324, PG. 50, M.C.R.
A.P.N. 215-07-023D
DEED NO. 20051651323, M.C.R.

E.S.V.A.E. & C.A.E. CURVE TABLE							
CURVE	LENGTH	RADIUS	DELTA	CURVE	LENGTH	RADIUS	DELTA
C7 (TIE)	16.15'	198.00'	4°40'23"	C16 (TIE)	13.34'	198.00'	3°51'39"
C8	31.21'	198.00'	9°01'56"	C17	2.23'	3.00'	42°23'00"
C9	16.24'	20.00'	46°32'18"	C18	4.71'	3.00'	90°00'00"
C10	4.71'	3.00'	90°00'00"	C19	4.71'	3.00'	90°00'00"
C11	5.08'	5.00'	58°10'46"	C20	4.71'	3.00'	90°00'00"
C12	3.14'	2.00'	90°00'00"	C21	4.71'	3.00'	90°00'00"
C13	4.71'	3.00'	90°00'00"	C22	31.21'	198.00'	9°01'55"
C14	4.71'	3.00'	90°00'00"	C23 (TIE)	80.82'	198.00'	23°23'13"
C15	1.81'	2.00'	51°44'24"	C24	1.79'	3.00'	34°10'31"

EXHIBIT B

MINOR LAND DIVISION PLAT

LOTS 8, 9 & 10 OF CORPORATE CENTER AT DC RANCH
BEING A REPLAT OF LOTS 9 AND 10 OF THE FINAL PLAT OF "CORPORATE CENTER AT DC RANCH", RECORDED IN BOOK 959, PAGE 36, AND LOT 8 OF THE REPLAT OF "CORPORATE CENTER AT DC RANCH", RECORDED IN BOOK 1024, PAGE 23, RECORDS OF MARICOPA COUNTY, ARIZONA, LOCATED WITHIN A PORTION OF THE NORTH HALF OF THE SOUTH HALF OF BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

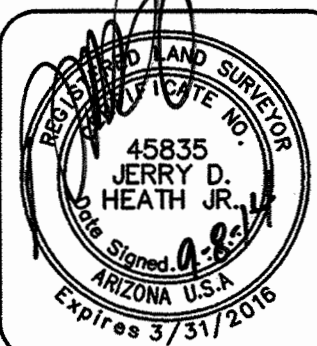
SECTION: 31
TWN: 4N.
RANGE: 5E.

JOB NO.:
LGEC158-MS

SCALE
1"=30'

SHEET
2 OF 2

HUNTER
ENGINEERING
CIVIL AND SURVEY
10450 N. 74TH ST., SUITE 200
SCOTTSDALE, AZ 85258
T 480 991 3986
F 480 991 3986



1320.05'(C)
1321.11'(R3)
1321.71'(R1)
N00°05'59"W(R1) N00°04'54"W(M) (BASIS OF BEARING) E. LINE, S.E. 1/4, SEC. 31, T.4N., R.5E. 2642.03'(R1) 2641.76'(M)

S.E. COR. OF N.E. 1/4 OF S.E. 1/4
SEC.31, T.4N., R.5E. PER (R1,R4) DATA &
N.E. COR. TRACT 23 STATE PLAT NO. 16,
CORE SOUTH, PER (R3) DATA
NO MONUMENT FND.

S.E. COR., SEC.31, T.4N., R.5E.
FND. M.C. BRASS CAP FLUSH,
STAMPED "RLS 33307"

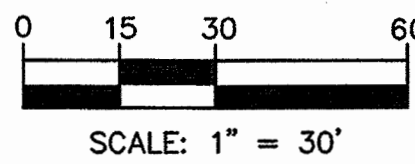
S. LINE, S.E. 1/4, SEC. 31, T.4N., R.5E.
S89°59'12"W(M) 2643.85'(M)
S89°58'14"W(R5) 2643.83'(R5)

BELL ROAD

S. 1/4 COR., SEC.31, T.4N., R.5E.
FND. M.C. BRASS CAP FLUSH,
STAMPED "RLS 33307"

S. LINE, S.W. 1/4, SEC. 31, T.4N., R.5E.
N89°59'56"W(C) 2390.43'(C)
S89°59'06"W(R5) 2390.41'(R5)

S.W. COR., SEC.31, T.4N., R.5E.
FND. ALUMINUM CAP FLUSH
N81°18'41"W, 2.14' FROM RECORDED
POSITION (NOT ACCEPTED)



FND. BRASS
CAP FLUSH
STAMPED
"LS 33860"

FND. BRASS
CAP FLUSH
STAMPED
"LS 33860"

FND. BRASS
CAP FLUSH
STAMPED
"LS 33860"

10' PUBLIC UTILITY
EASEMENT & PUBLIC
ACCESS EASEMENT
BK.959, PG.36, M.C.R.

18' PUBLIC UTILITY EASEMENT &
EMERGENCY AND SERVICE VEHICLE
ACCESS EASEMENT BK.959, PG.36, M.C.R.

FND. BRASS
CAP FLUSH
STAMPED
"LS 33860"

18' PUBLIC UTILITY EASEMENT &
EMERGENCY AND SERVICE VEHICLE
ACCESS EASEMENT BK.959, PG.36, M.C.R.

FND. BRASS CAP FLUSH
STAMPED "LS 33860"

18' PUBLIC UTILITY EASEMENT &
EMERGENCY AND SERVICE VEHICLE
ACCESS EASEMENT BK.959, PG.36, M.C.R.

10' PUBLIC UTILITY
EASEMENT & PUBLIC
ACCESS EASEMENT
BK.959, PG.36, M.C.R.

15' PRIVATE DRAINAGE
EASEMENT BK.959,
PG.36, M.C.R.

15' PRIVATE DRAINAGE
EASEMENT BK.959,
PG.36, M.C.R.

20' S.L.E. PER
BK. 959,
PG. 36, M.C.R.

20' S.L.E. PER
BK. 959,
PG. 36, M.C.R.



WINDGATE

LEGEND:

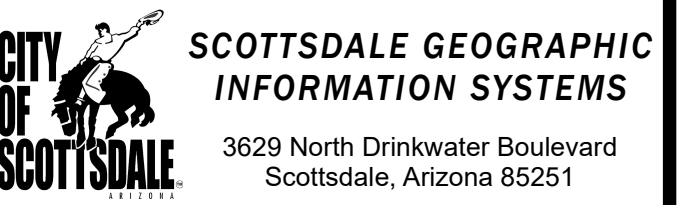
- ### VICINITY MAP
-
- CENTER
- E 1/4 COR.
- 17800 N
- 52ND STREET
- 96TH STREET
- BELL ROAD
- 17000 N
- S 1/4 COR.
- E
- E

SCALE: 1" = 100'



map scale of 1" = 100' is based
full size print of 30" x 36"

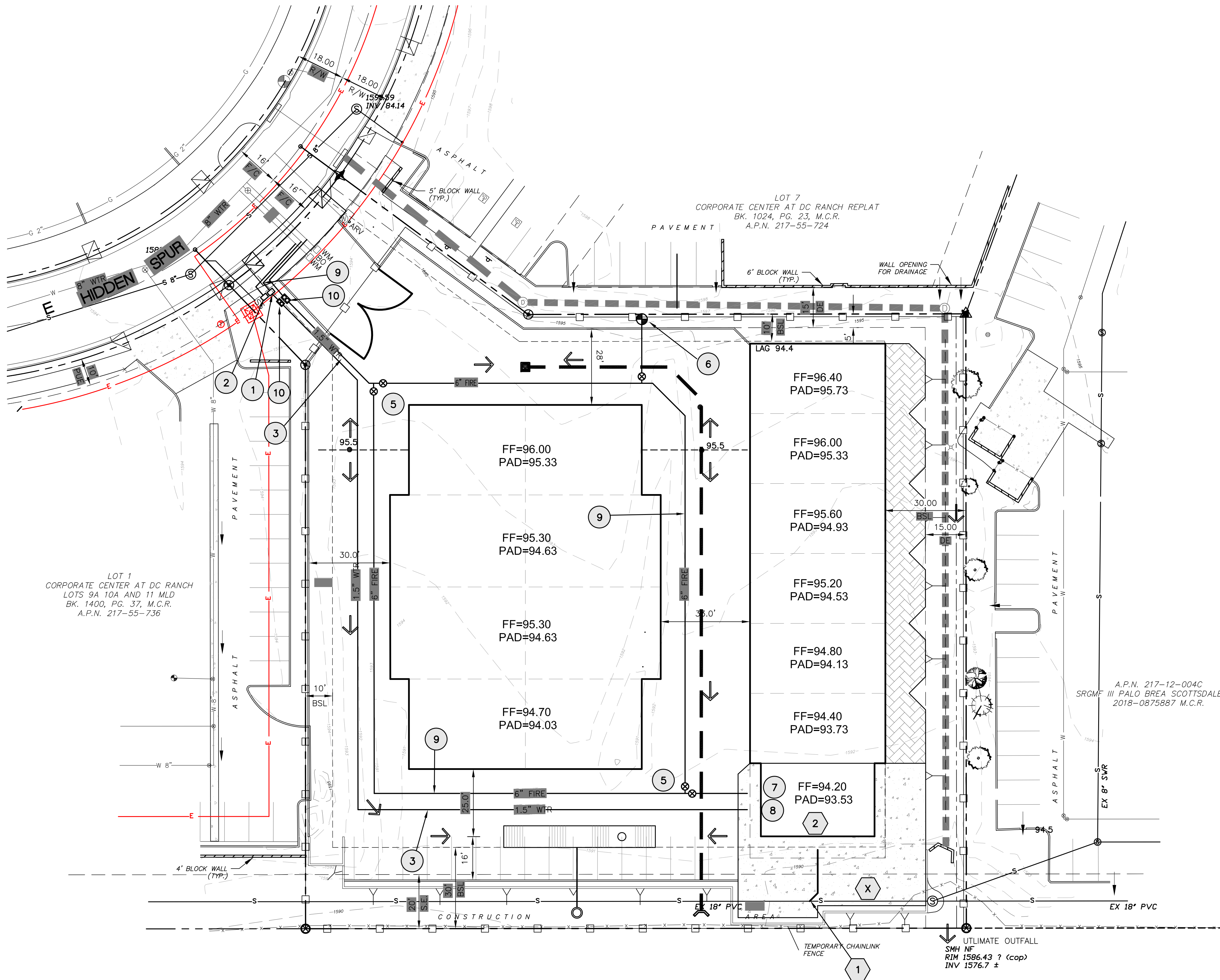
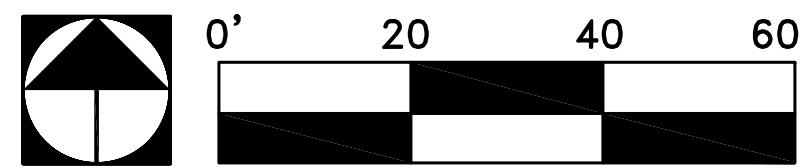
**WATER &
SEWER**
QUARTER SECTION MAP
37-50
SE 1/4 SEC. 31 T4N R5E



N O T I C E

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THE CITY OF SCOTTSDALE



LEGEND

---	PROPERTY LINE	--->---	ADA ROUTE
- - -	RIGHT OF WAY	⊙	FIRE HYDRANT
- - -	MONUMENT LINE	⊗	WATER VALVE
- - -	EASEMENT	⊙	SEWER MANHOLE
- x - x - x -	FENCE LINE	⊙	POWER POLE
- O H E -	OVERHEAD ELECTRIC	⊙	LIGHT POLE
- E -	ELECTRIC	⊙	PROPERTY CORNER NOTHING FOUND
- W -	WATER LINE	⊙	1/2" REBAR
- S -	SEWER LINE	⊙	NAIL IN WASHER
- SD -	STORM DRAIN	⊙	BRASS CAP FLUSH
- G -	GAS LINE	⊙	BRASS CAP IN HANHOLE
R/W	RIGHT OF WAY	(M)	MEASURED
PUE	PUBLIC UTILITY EASEMENT	(R)	RECORDED
SVT	SIGHT VISIBILITY TRIANGLE	(C)	CALCULATED
TC	TOP OF CURB	ML	MONUMENT LINE
G	GUTTER	CL	CENTERLINE
C	CONCRETE	BSL	BUILDING SETBACK LINE
P	PAVEMENT	DE	DRAINAGE EASEMENT
NG	NATURAL GROUND		

WATER NOTES

1. RELOCATE WATER METER
2. RELOCATE LANDSCAPE METERINSTALL 6" VERTICAL CURB
3. INSTALL 2" DOMESTIC SERVICE
4. INSTALL 6" FIRE LINE
5. INSTALL WVB & C
6. INSTALL FIRE HYDRANT
7. INSTALL FIRE LINE TO 5' SHORT OF BUILDING SEE PLUMBING PLAN FOR CONNECTION
8. INSTALL WATER SERVICE TO 5' SHORT OF BUILDING SEE PLUMBING PLAN FOR CONNECTION
9. EXTEND FIRE LINE
10. INSTALL BACKFLOW PREVENTOR

SEWER NOTES

1. INSTALL 6" SEWER TAP ON EXISTING 18" MAIN
2. EXTEND TO 5' SHORT OF BUILDING SEE PLUMBING PLANS FOR CONNECTION



LOT 8 OF THE CORPORATE CENTER
AT DC RANCH
PRELIMINARY UTILITY EXHIBIT



DRAWING	SPECIFICS
PROJECT:	2110
DATE:	6/03/21
SCALE:	N/A
DRAWN BY:	STAFF
DESIGNED BY:	JDJ
CHECKED BY:	JDJ