

RETENTION CALCULATIONS  
(SEE SHEET C-2 FOR DRAINAGE AREA DELINEATIONS)

MARICOPA COUNTY 100-YEAR, 2-HOUR STORM  
VOLUME REQUIRED =  $A * P / 12 * C$   
WHERE: A = AREA (S.F.)  
P = 100-YEAR, 2-HOUR RAINFALL = 2.20"  
C = RUNOFF COEFFICIENT = 0.90 (COMMERCIAL)

DRAINAGE AREA A

AREA = 94,359 S.F.  
VOLUME REQUIRED =  $94,359 * 2.20 / 12 * 0.90 = 15,569$  C.F.  
VOLUME PROVIDED = 15,622 C.F. - 199 L.F. OF 10' DIAMETER PIPE  
DRYWELLS PROVIDED = 2

DRAINAGE AREA B

AREA = 47,077 S.F.  
VOLUME REQUIRED =  $47,077 * 2.20 / 12 * 0.90 = 7,768$  C.F.  
VOLUME PROVIDED = 7,772 C.F. - 99 L.F. OF 10' DIAMETER PIPE  
DRYWELLS PROVIDED = 1

DRAINAGE AREA C

AREA = 85,859 S.F.  
VOLUME REQUIRED =  $85,859 * 2.20 / 12 * 0.90 = 14,167$  C.F.  
VOLUME PROVIDED = 14,287 C.F. - 182 L.F. OF 10' DIAMETER PIPE  
DRYWELLS PROVIDED = 2

DRYWELL CALCULATIONS

ASSUMED DRYWELL PERCOLATION RATE = 0.1 CFS (MINIMUM PER MCDDM SECTION 9)  
REQUIRED DISPOSAL TIMELINE = 36 HOURS  
PERCOLATION VOLUME PER DRYWELL =  $0.1 * 3600 * 36 = 12,960$  C.F.

DRYWELL NOTES

- THIS PROJECT HAS PROPOSED DRYWELLS TO BLEED-OFF THE UNDERGROUND RETENTION SYSTEM IN THIRTY-SIX (36) HOURS AS THESE ARE NO PUBLIC STORM DRAIN SYSTEM AVAILABLE THAT ULTIMATELY CONVEY TO A REGIONAL DRAINAGE SYSTEM. THE SYSTEM OF DISPOSAL HAS RECEIVED PRIOR APPROVAL PURSUANT TO THE MASTER AND OFF-SITE DRAINAGE REPORT.
- ALL DRYWELLS SHOWN ON THIS PROJECT SHALL BE MAINTAINED BY THE OWNERS AND ARE TO BE REPLACED BY THE OWNERS WHEN THEY CEASE TO DRAIN THE SURFACE WATER IN A 36-HOUR PERIOD. REGULAR MAINTENANCE OF THE DRYWELL SILTING CHAMBER IS REQUIRED TO ACHIEVE THE BEST OPERATION OF THE DRYWELL.
- A CONSTANT HEAD PRESSURE TEST SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, AND MUST BE PROVIDED TO THE ENGINEER OF RECORD. THE FIELD OBSERVED PERCOLATION RATE SHALL BE DIVDED (DE-RATED) BY THE FOLLOWING VALUE BASED ON IN-SITU SOIL CONDITIONS.
  - 2 - COARSE GRAINED SOILS (COBBLES, GRAVELS AND SANDS)
  - 3 - FINE GRAINED SOILS (SILTS AND LOAMS)
  - 5 - CLAY SOILSTHE RESULTS OF THE FIELD PERCOLATION TEST SHALL BE RECORDED ON THE AS-BUILT DRAWINGS AND CERTIFIED BY THE ENGINEER OF RECORD. THE OWNER IS RESPONSIBLE FOR INSTALLING ADDITIONAL DRYWELL(S) IF THE DE-RATED PERCOLATION RATE IS LESS THAN THE ASSUMED 0.1 CFS.

PROJECT DESCRIPTION

THIS PROJECT IS LOCATED WITHIN THE OVERALL MIXED USE GALLERY PARK DEVELOPMENT WHICH WAS ENTITLED AND APPROVED BY THE CITY OF MESA ON MAY 20TH, 2019 CASE #ZON 18-00775 & ANX 18-00502. THIS PHASE CONSIST OF PROPOSED BUILDING 15 (HOTEL) AND A FUTURE PAD ALONG WITH ONSITE GRADING/DRAINAGE, PUBLIC WATER & SEWER EXTENSIONS, ONSITE UNDERGROUND RETENTION SYSTEM AND OTHER SITE INFRASTRUCTURE TO SUPPORT THE DEVELOPMENT OF THE HOTEL. ALL DRAINAGE CONVEYANCE RETENTION AND THE EXTENSION OF WATER AND SEWER LINES IS IN SUBSTANTIAL CONFORMANCE TO THE APPROVED MASTER DRAINAGE AND SEWER AND WATER REPORTS WITH NO CHANGES TO THE MASTER REPORTS.

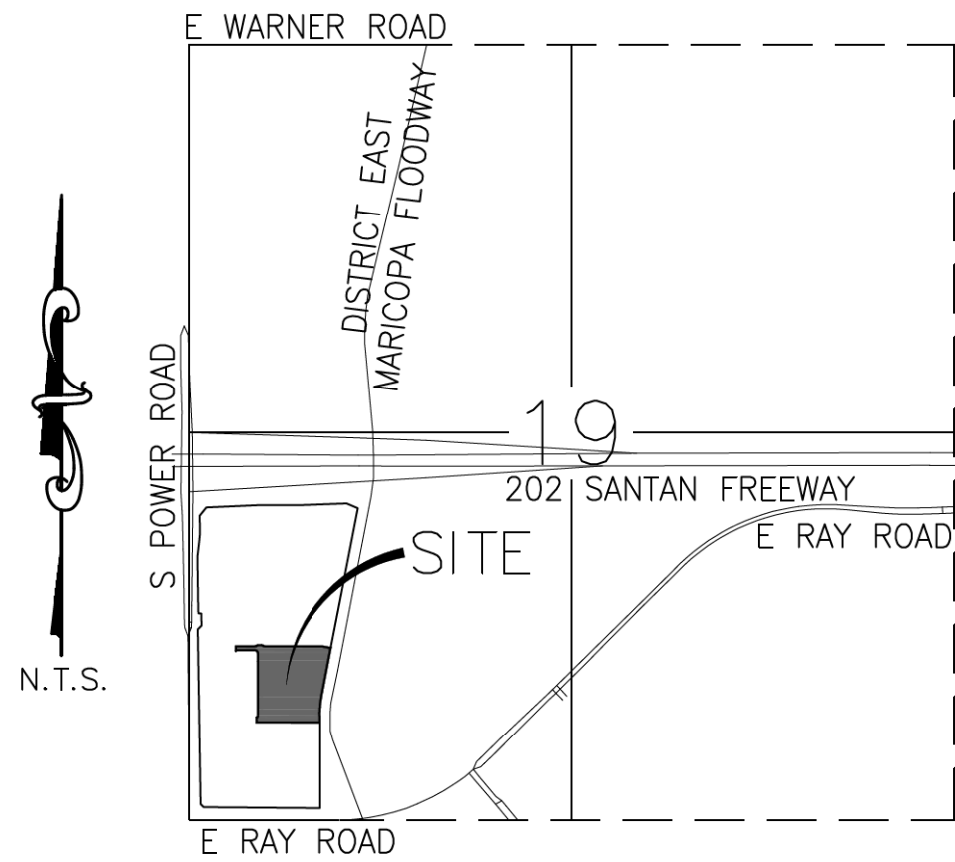
NOTE:

THIS PROPOSED DEVELOPMENT IS IN SUBSTANTIAL CONFORMANCE TO THE APPROVED GALLERY PARK MASTER DRAINAGE AND OFF-SITE DRAINAGE, WATER AND SEWER REPORTS WITH NO FURTHER UPDATES NEEDED TO THOSE REPORTS. ALL OFF-SITE DRAINAGE CONVEYANCE INCLUDING RETENTION WAS APPROVED PER THE OFF-SITE IMPROVEMENT PLANS PMT-19-11269.

PRELIMINARY GRADING, DRAINAGE AND UTILITY PLAN  
FOR  
GALLERY PARK HGI & HWS DUAL BRAND HOTEL  
BUILDING 21 - 5057 S. POWER ROAD  
BUILDING 20 - 5027 S. POWER ROAD  
MESA, ARIZONA 85212

A PORTION OF LOT 5 OF GALLERY PARK REPLAT 2 BOOK 1615, PAGE 1  
N.E.C. OF POWER ROAD AND RAY ROAD  
MESA, ARIZONA 85212

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19, TOWNSHIP 1 SOUTH, RANGE 7 EAST OF  
THE GILA & SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



VICINITY MAP

SWC 19, T. 1 S, R. 7 E.

ARCHITECT

UPWARD ARCHITECTS  
1155 WEST RIO SALADO PARKWAY,  
SUITE B-101  
TEMPE, AZ 85281  
PHONE: (602) 753-5222  
CONTACT: LORI KNUDSON

ENGINEER:

OPTIMUS CIVIL DESIGN GROUP  
4650 EAST COTTON CENTER BLVD.,  
SUITE 200  
PHOENIX, ARIZONA 85040  
PHONE: (602) 393-5234  
FAX: (602) 286-9400  
CONTACT: JEFF BEHRANA P.E.

OWNER/DEVELOPER

POWER 202 MIXED-USE, LLC  
C/O VIVO DEVELOPMENT PARTNERS, LLC  
4650 EAST COTTON CENTER BLVD.,  
SUITE 200  
PHOENIX, ARIZONA 85040  
PHONE: (602) 393-9364  
FAX: (602) 393-5899  
CONTACT: JOSE POMBO

APN NUMBER

304-30-064 (EXISTING LOT 5)

AREAS

GROSS & NET: 1,332,730 S.F. OR 30.595 AC. (LOT 5)

DISTURBED AREA: 5.22 ACRES  
EXISTING ZONING: PAD

LEGAL DESCRIPTION

A PORTION OF LOT 5 OF THE FINAL PLAT OF GALLERY PARK REPLAT 2 AS RECORDED IN BOOK 1615, PAGE 1, RECORDS OF MARICOPA COUNTY, LYING WITHIN THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 1 SOUTH, RANGE 7 EAST OF THE GILA RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

BASIS OF BEARINGS

THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 19, TOWNSHIP 1 SOUTH, RANGE 7 EAST OF THE GILA RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA.

SAID LINE BEARS NORTH 00° 55' 11" WEST

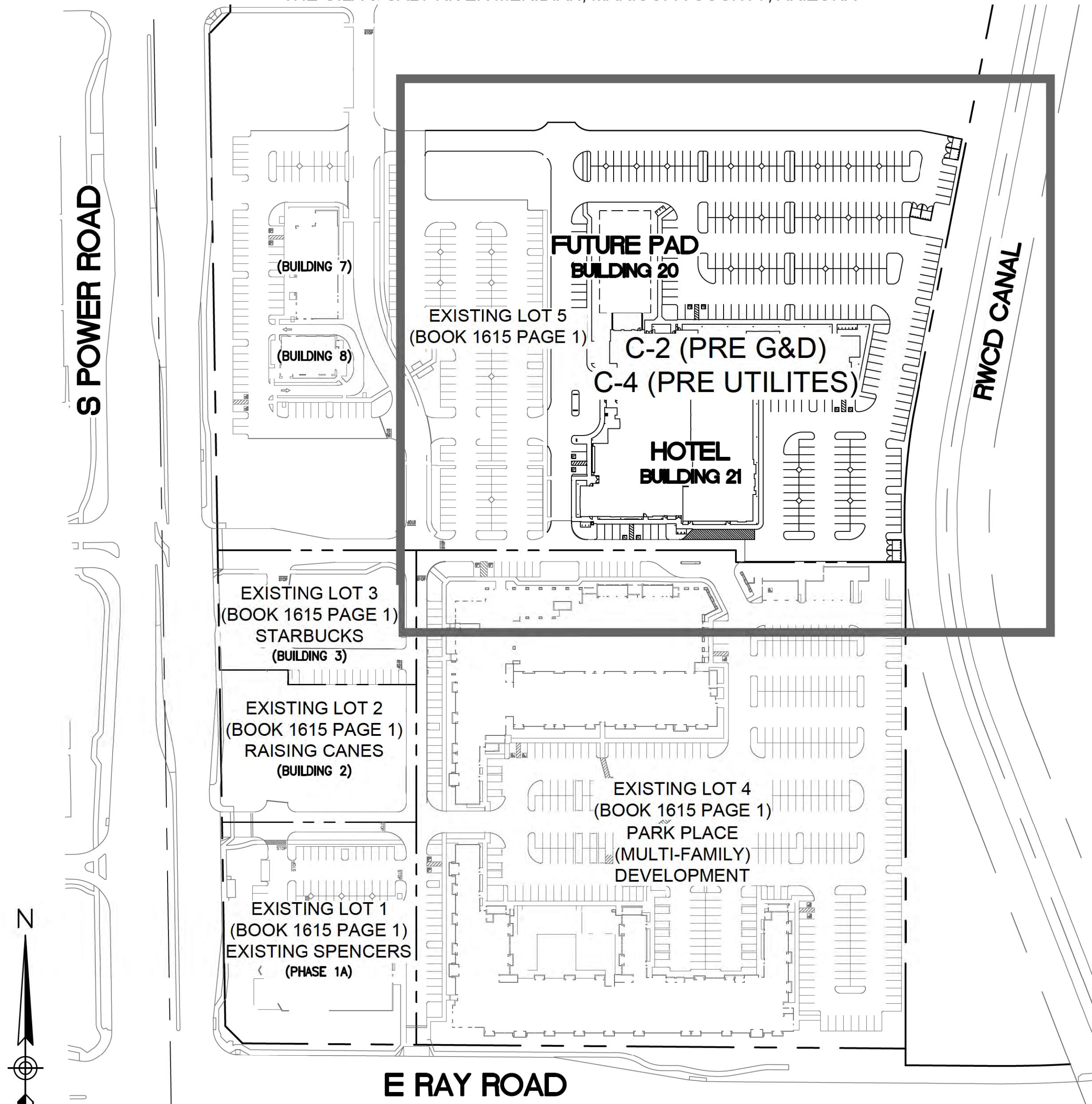
BENCHMARK

BRASS TAG, TOP OF CURB, NORTHEAST CORNER OF LOOP 202 AND POWER ROAD.

ELEVATION=1324.10' (NAVD '88, CITY OF MESA DATUM)

FLOOD ZONE

ACCORDING TO THE FLOOD INSURANCE RATE MAP #04013C2760L, DATED OCTOBER 16, 2013, THIS PROPERTY IS LOCATED IN FLOOD ZONE "X".



KEY MAP

INDEX OF PLAN SHEETS

- |   |       |                                       |
|---|-------|---------------------------------------|
| 1 | (C-1) | COVER SHEET                           |
| 2 | (C-2) | PRELIMINARY GRADING AND DRAINAGE PLAN |
| 3 | (C-3) | SECTIONS SHEET                        |
| 4 | (C-4) | PRELIMINARY UTILITY PLAN              |

LEGEND

	FOUND BRASS CAP IN HAND HOLE		EASEMENT LINE		EXISTING CATCH BASIN		EXISTING BACKFLOW PREVENTER		EXISTING TELEPHONE MANHOLE		C CONCRETE ELEVATION
	FOUND BRASS CAP FLUSH		PROPERTY LINE		EXISTING STORM DRAIN MANHOLE		EXISTING WATER VALVE		EXISTING LIGHT POLE		CO CURB OPENING ELEVATION
	FOUND MONUMENT AS SHOWN		BOUNDARY LINE		EXISTING SIGN		EXISTING UTILITY POLE		EXISTING OVERHEAD ELECTRIC		GR GRATE ELEVATION
	SET 1/2" REBAR WITH CAP		RIGHT OF WAY		EXISTING POST		EXISTING STORM DRAIN		PROPOSED STORM DRAIN		P PAVEMENT ELEVATION
					EXISTING SANITARY SEWER MANHOLE		EXISTING SHUT OFF SWITCH		PROPOSED WATER LINE		W PROPOSED STORM DRAIN
					EXISTING SEWER CLEANOUT		EXISTING PULL/JUNCTION BOX		PROPOSED SEWER LINE		S PROPOSED SEWER LINE
					EXISTING TRAFFIC SIGNAL		EXISTING ELECTRIC UTILITY				O PROPOSED SEWER CLEANOUT
					EXISTING FIRE HYDRANT						
									PROPOSED CATCH BASIN		
									PROPOSED STORM DRAIN MANHOLE		
									PROPOSED RETENTION AREA BOUNDARY		
									RETENTION DRAINAGE AREA DESIGNATOR		

NO.	REVISION	DATE

VIVO  
Development Partners

GALLERY PARK  
HGI & HWS DUAL BRAND HOTEL  
COVER SHEET

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19,  
TOWNSHIP 1 SOUTH, RANGE 7 EAST, OF THE GILA AND SALT  
RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



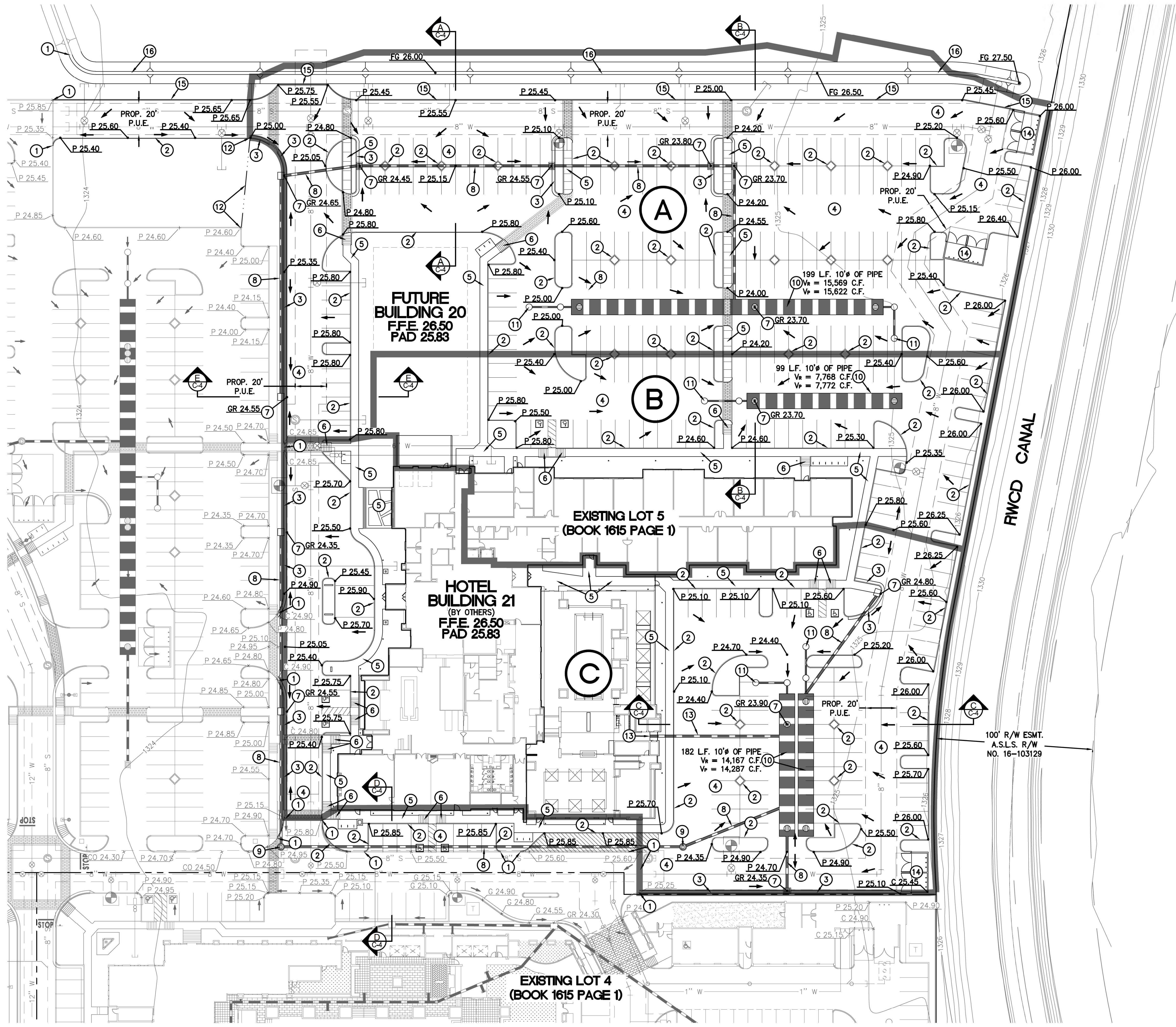
OPTIMUS  
CIVIL DESIGN GROUP  
4650 E COTTON CENTER BLVD.,  
SUITE 200  
PHOENIX, AZ 85040  
PH: (602) 286-9300 FAX: (602) 286-9400

DESIGNED: AJR  
DRAWN: JK,DB  
CHECKED: JDB  
DATE: 11/2021  
JOB NO.: 191333

DRAWING NO

C-1

1 OF 4



CONSTRUCTION NOTES

- 1 MATCH EXISTING.
- 2 PROPOSED VERTICAL CURB.
- 3 PROPOSED CURB AND GUTTER.
- 4 PROPOSED PAVEMENT.
- 5 PROPOSED SIDEWALK/HARDSCAPE.
- 6 PROPOSED ACCESS RAMP.
- 7 PROPOSED CATCH BASIN.
- 8 PROPOSED STORM DRAIN.
- 9 PROPOSED STORM DRAIN MANHOLE.
- 10 PROPOSED UNDERGROUND RETENTION PIPE WITH ACCESS MANHOLES ON EACH END.
- 11 PROPOSED DRYWELL.
- 12 PROPOSED DEPRESSED CURB AND SWALE.
- 13 PROPOSED STORM DRAIN STUB TO SERVE HOTEL AMENITY/POOL REGION.
- 14 PROPOSED TRASH ENCLOSURE.
- 15 PROPOSED EXTRUDED CURB.
- 16 PROPOSED 1.5' HIGH TEMPORARY BERM.

NO.

REVISION

DATE

VIVO

Development Partners

GALLERY PARK

HGI & HWS DUAL BRAND HOTEL

PRELIMINARY GRADING AND DRAINAGE PLAN

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19,  
TOWNSHIP 1 SOUTH, RANGE 7 EAST, OF THE GILA AND SALT  
RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

Professional Engineer

19095

JAMSHIED D. BEHRANA

11/1/21

ARIZONA U.S.A.

EXPRES 3-31-2023

OPTIMUS

CIVIL DESIGN GROUP

4450 E. COCHISE AVENUE, SUITE 200

PHOENIX, AZ 85040

PH: (602) 266-9300 FAX: (602) 266-9400

DESIGNED: AJR

DRAWN: JK,DB

CHECKED: JDB

DATE: 11/2021

JOB NO.: 191333

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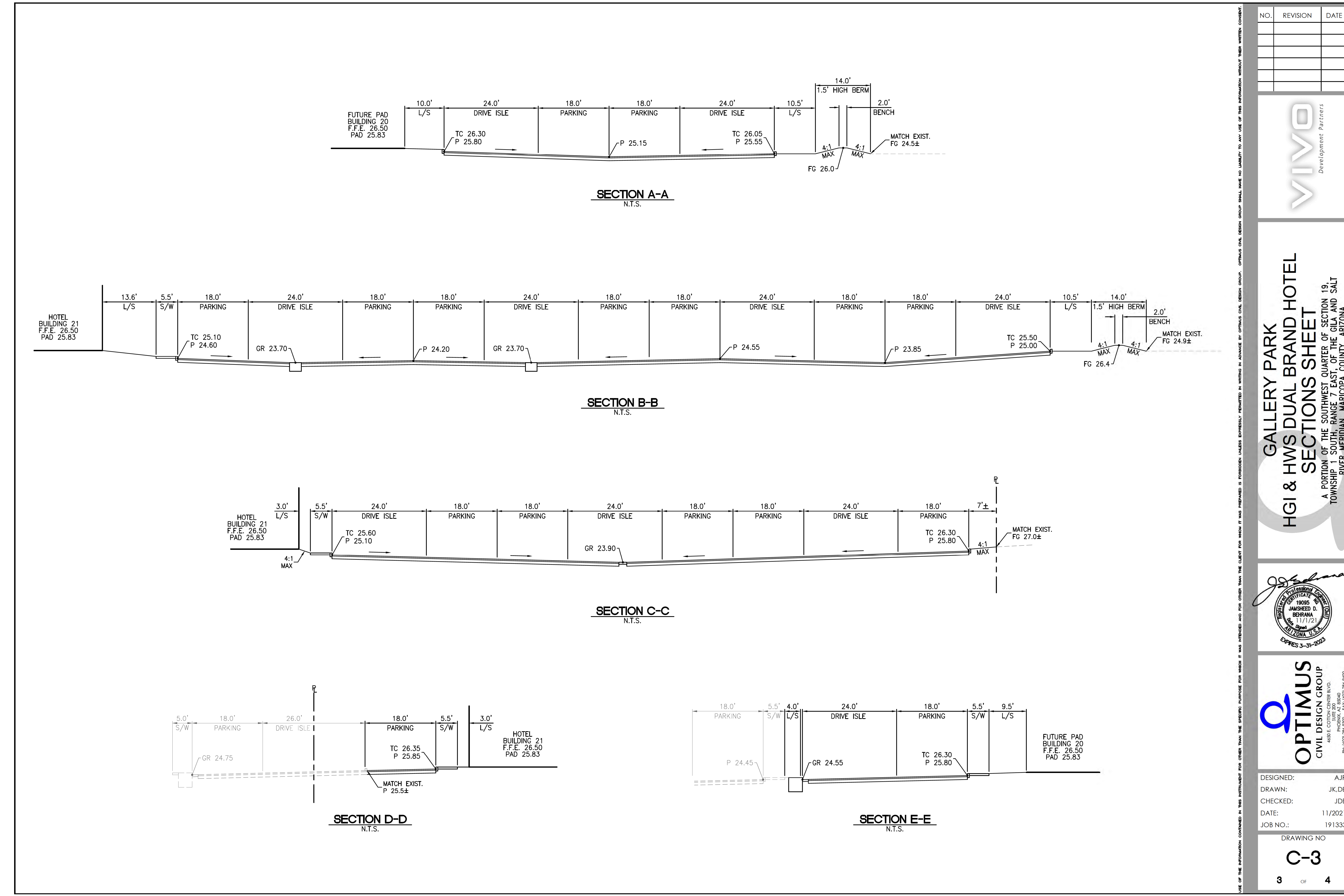
C-2

2

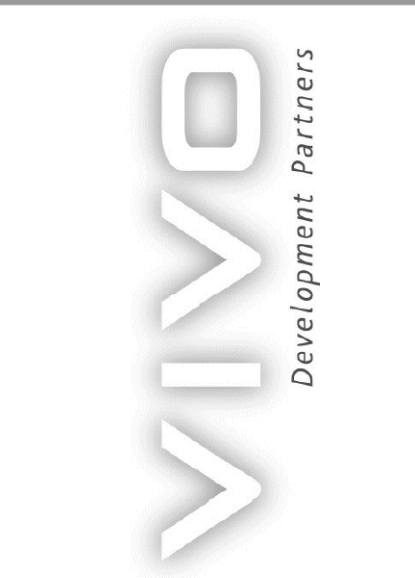
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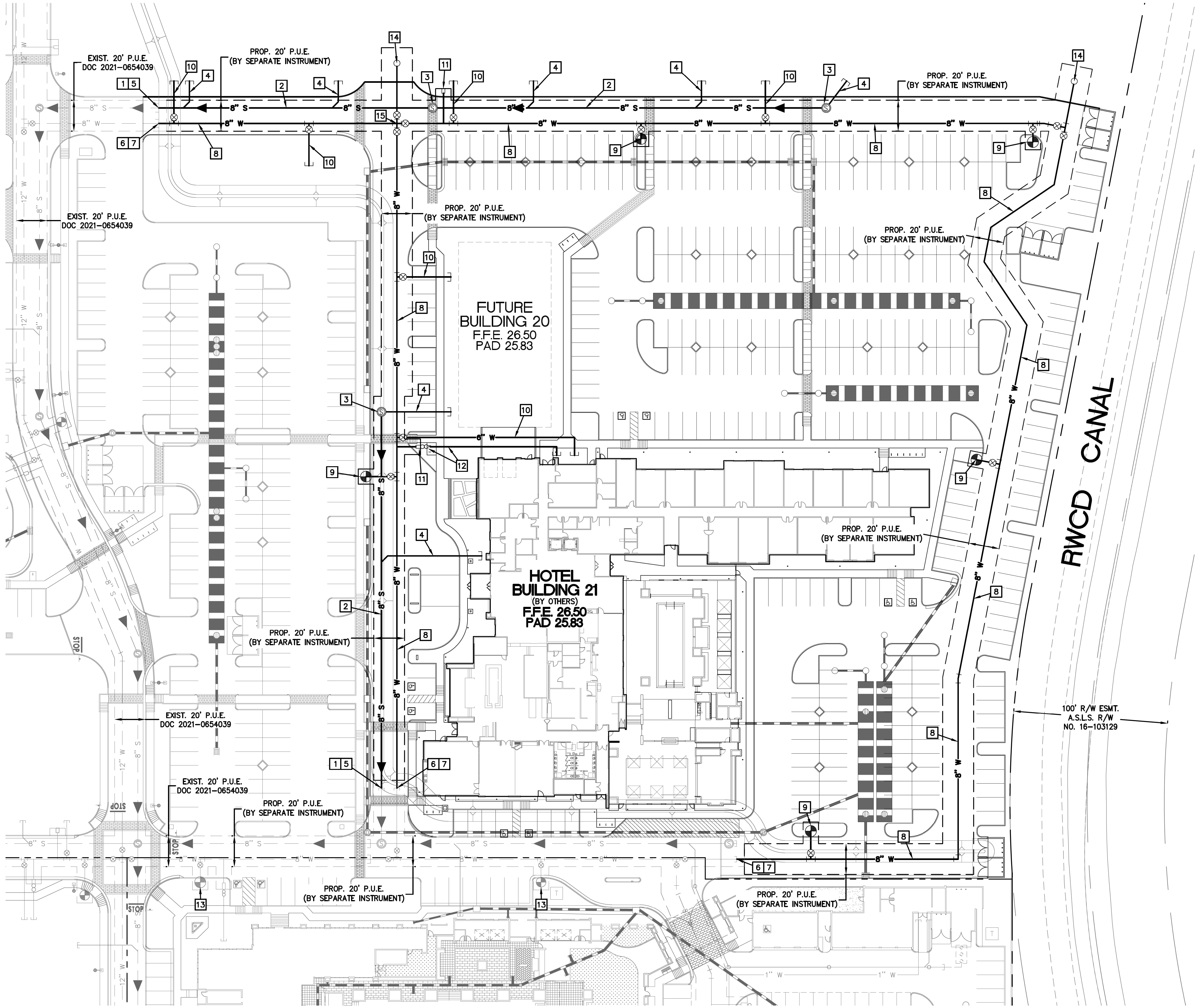


GALLERY PARK  
HGI & HWS DUAL BRAND HOTEL  
SECTIONS SHEET  
A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19,  
TOWNSHIP 1 SOUTH, RANGE 7 EAST, OF THE GILA AND SALT  
RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

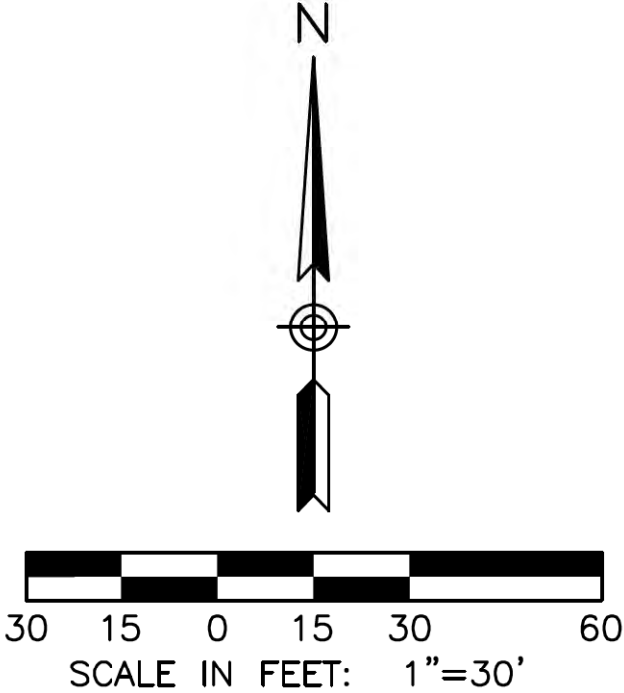


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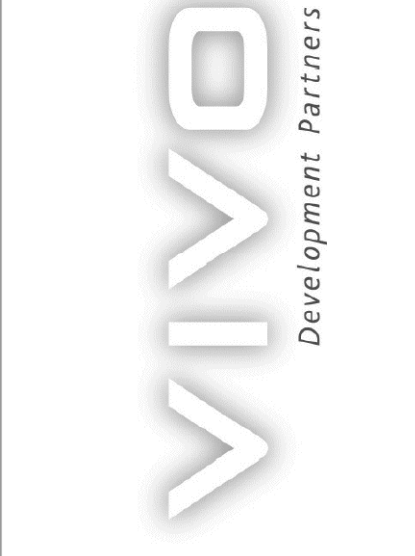
DRAWING NO  
C-3  
3 OF 4



- UTILITY NOTES
- 1 CONNECT TO EXISTING SEWER STUB.
  - 2 PROPOSED 8" SEWER MAIN.
  - 3 PROPOSED SEWER MANHOLE.
  - 4 PROPOSED 6" SEWER SERVICE
  - 5 PROPOSED 8" SEWER STUB BY OTHERS.
  - 6 CONNECT TO EXISTING 8" WATER STUB.
  - 7 PROPOSED 8" WATER STUB BY OTHERS.
  - 8 PROPOSED 8" WATER MAIN.
  - 9 PROPOSED FIRE HYDRANT.
  - 10 PROPOSED FIRE SERVICE.
  - 11 PROPOSED DOMESTIC WATER METER.
  - 12 PROPOSED BACKFLOW AND WATER SERVICE.
  - 13 EXISTING FIRE HYDRANT BY OTHERS.
  - 14 PROPOSED 8" WATER STUB.
  - 15 PROPOSED 8" WATER CROSS.



NO.	REVISION	DATE



GALLERY PARK  
HGI & HWS DUAL BRAND HOTEL  
PRELIMINARY UTILITY PLAN  
A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19,  
TOWNSHIP 1 SOUTH, RANGE 7 EAST, OF THE GILA AND SALT  
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DRAWING NO  
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4 OF 4

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