DRAINAGE REPORT
FOR
FAIRMONT SCOTTSDALE PRINCESS
PARKING GARAGE

June 2, 2023
WP# 215319.40

STIPULATION SET
RETAIN FOR RECORDS
APPROVED

08/22/2023 _____
DATE APPROVED BY

STAMPED ON BEHALF OF J. LYNCH

EXPIRES 06-30-25

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EXPIRES 06-30-25

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Y:\WP\Reports\Commercial\215319.40 FSP Parking Structure Drainage Report.docx

1.0 INTRODUCTION

1.1 General Background

The Fairmont Scottsdale Princess Parking Garage (Site) is a proposed multi-level parking structure on approximately 3.9 acres of the approximate 9.02 parcel of the FMT Scottsdale Owner LLC in the City of Scottsdale (APN#215-08-694). The project will include hardscape, landscape, and utility improvements to support the development. This Site is east of Princess Drive and South of Princess Boulevard within Section 35, Township 4 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Refer to Exhibit 1 – *Vicinity Map* for the project location. The existing property, zoned C-2, is an existing parking lot with sidewalks and landscaping.

This Drainage Report has been prepared in accordance with Wood, Patel & Associates, Inc.'s (WOODPATEL's) understanding of the City of Scottsdale technical drainage requirements (Ref. 1) and the *Drainage Design Manuals for Maricopa County Hydrology and Hydraulics (2018)* (Ref. 3 and 4), as applicable to the Site.

1.2 FEMA Regulated Flood Zones

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Map (FIRM) information for communities that adhere to FEMA regulations. The FEMA FIRM panel for this Site is 04013C1320L, effective date October 16, 2013, and indicates the Site falls within "Zone AO" shaded (Refer to Exhibit 2 – *FEMA FIRM*).

"Zone AO" shaded is defined by FEMA as follows:

> *"Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined".*

It is WOODPATEL's understanding, based on experience and interpretations of the City of Scottsdale floodplain ordinance, that development of land within FEMA Zone "AO" is acceptable if the lowest finish floor elevation is above or properly protected from the anticipated 100-year water surface elevation. This Site will be designed in accordance with the City's floodplain ordinance to comply with Federal and State regulations.

2.0 HYDROLOGY ANALYSIS

2.1 Offsite Hydrology

The proposed Site receives offsite flows from the half street of Princess Drive along its historical path. This flow is conveyed overland to two (2) proposed 4-foot curb openings where it enters the Site. In addition, offsite flows from Princess Boulevard and the properties north of Princess Boulevard do not enter the Site per an analysis of the topographic survey performed onsite. The stormwater flow entering the curb opening are 1.9 cfs for A-2 and 0.9 cfs for A-4 for the 10-year storm and 3.3 cfs for A-2 and 1.7 cfs for A-4 for the 100-year storm, respectively. (Refer to Appendix D – *Hydrologic and Hydraulic Calculations*)

Offsite peak flow rates for the proposed development were calculated using the Rational Method, as outlined in the *Drainage Design Manual for Maricopa County, Arizona: Volume I – Hydrology (*Ref 3). NOAA Atlas 14 precipitation data was obtained and utilized to develop Intensity-Duration-Frequency (I-D-F) curves for the Site. Rational Method peak flows were computed at concentration points within the Site at key design locations. Runoff coefficients were estimated to reflect post-development land use conditions for the 2-year, 10-year, and 100-year events. (Refer to Appendix D – *Hydrologic and Hydraulic Calculations*)

2.2 Onsite Hydrology

Per the existing stormwater waiver approved for the Site, no stormwater retention is existing or required. Refer to Appendix A - *Storm Water Storage Waiver / Proposed Drainage Improvements Exhibit.* Although retention is not required, the City of Scottsdale requires the First Flush Volume to be captured and treated to comply with Federal and State regulations. The First Flush Volume will be treated by the Contech CDS3020-6-C treatment system (CDS). Refer to Appendix F - *Contech CDS3020-6-C Treatment System* for the manufacturer's details. The CDS was sized based on the treatment rate of the system compared to the flow rate of the First Flush volume as calculated from Section 6.4.1 of the *Drainage Policies and Standards for Maricopa County* (Ref. 5). Refer to Appendix D - *Hydrologic and Hydraulic Calculations*, for the First Flush flow rate calculation. The First Flush flow required to be treated is 0.52 cfs for the proposed stormwater system.

Onsite peak flow rates for the proposed development were calculated using the Rational Method, as outlined in the *Drainage Design Manual for Maricopa County, Arizona: Volume I – Hydrology (*Ref 3). NOAA Atlas 14 precipitation data was obtained and utilized to develop Intensity-Duration-Frequency (I-D-F) curves for the Site. Rational Method peak flows were computed at concentration points within the Site at key design locations. Runoff coefficients were estimated to reflect post-development land use conditions for the 2-year, 10-year, and 100-year events. (Refer to Appendix D – *Hydrologic and Hydraulic Calculations*)

The proposed drainage system will include five (5) M.A.G. 535 catch basins, a 12-inch inlet concrete flared end section, a 30-inch outlet concrete flared end section, two (2) 48-inch storm drain manholes, a 60-inch precast concrete junction box, H.D.P.E pipe, RCP pipe, and the CDS. (Refer to Exhibit 4 – *Proposed Drainage Area Map*) The existing 24-inch CMP pipe culvert will be replaced with 30-inch RCP with the same length of pipe and at the same slope and inverts. The increase in size and pipe type normalizes the flow for the 10-year storm event. (Refer to Appendix E – *StormCAD Modeling Results*)

2.3 Establishing Lowest Finish Floor (LFF88 Elevations)

The Grading and Drainage Plan has been designed to comply with the City of Scottsdale floodplain ordinance for a Zone "AO" floodplain. It is our understanding, unless other flood-proof measures are presented and approved, the proposed Lowest habitable Finished Floor (LFF) elevation must be designed a minimum of 1-foot above the anticipated 100-year flood elevation plus the City of Scottsdale

requires an additional 1-foot above the flood depth, which results in a minimum finished floor elevation of 2 feet above the Highest Adjacent natural Grade (HAG) which is the regulatory flood elevation. Since the Site was disturbed after the Zone "AO" Special Flood Hazard Zone was established, the current condition of the Site could not determine the HAG. The HAG uses topographical information showing the pre-disturbed condition of the Site. (Refer to Appendix B - *Regional Contour Map / Opinion of Existing Highest Natural Grade Elevation*)

Utilizing Curry's Corner 7.5-minute Topographic Survey Map by USGS from 1964 for the pre-disturbed condition (Refer to Appendix C - *Curry's Corner Quadrangle Map*) with a contour interval of 10 feet, the approximate highest natural grade of this Site would require the conversion of NAVD29 datum to the NAVD88 datum by adding 1.749 feet to the NAVD29 datum.

Using AutoCAD Civil 3D, the quad map was aligned to the Site using common monument lines and previously surveyed monuments by WOODPATEL. The 10-foot interval contours were digitized, adjusted to NAVD88, and applied to a surface model. The surface model was supplemented with break lines at estimated ridge and flowline locations and used to display interpolated 1-foot contours for the pre-disturbed condition. The proposed parking garage was overlaid on the contour map to determine the HAG elevation of 1561.48. The regulatory flood elevation was calculated to be 1563.48. The proposed finish floor elevation for the second floor is 1566.50 which is 3.02 feet above the regulatory flood elevation. Refer to Appendix B - *Regional Contour Map / Opinion of Existing Highest Natural Grade Elevation* and Appendix C - *Curry's Corner Quadrangle Map.*

3.0 HYDRAULIC ANALYSIS

The existing storm drain system was designed to capture runoff through overland flow to an existing 24-inch CMP pipe culvert which discharges to an existing earthen channel that conveys it to the TPC Golf Course. With the runoff from the proposed improvements remaining virtually the same, the proposed storm drain system will capture the 100-year storm event through catch basins and convey it through a proposed treatment structure, Contech CDS3020-6-C. This system will treat the First Flush volume and discharge to the proposed 30-inch RCP, (Refer to Appendix F - *Contech CDS3020-6-C Treatment System)* to size the Contech model identified, the First Flush volume needed to be converted to a flow rate to compare the treatment rate of the model selected. The First Flush flow rate for the Site is 0.52 cfs. (Refer to Appendix D, Table 6 – *First Flush Flow*). Application of the calculated values noted in Appendix D – *Hydrologic and Hydraulic Calculations* were modeled in StormCAD with results shown in Appendix E – *StormCAD Modeling Results*. A total of 22.39 cfs was calculated using the Rational Method for the 10-year storm event. Per the plumbing engineer, the surface drainage for the roof (Area A-1) will be conveyed to a grease interceptor with a sump pump which will discharge to the proposed storm drain system at a rate of 2,900 gpm or 6.5 cfs. This is reflected for both the 10-year and 100-year storms. The storm drain network discharges to the existing channel southeast of the Site at a flow rate of 22.39 cfs and 38.78 cfs for the 10- and 100-year storm events respectively.

4.0 MAINTENANCE

Ongoing maintenance of the designed or recommended drainage systems is required to preserve the design integrity and purpose of the drainage system. Failure to provide maintenance can prevent the drainage system from performing to its intended design purpose and can result in reduced performance. Maintenance within the public right-of-way is the responsibility of the governing municipality. However, it is the responsibility of landowners (such as private developers or property owners' associations) for facilities on private property. Prior to ultimate condition build-out upstream of drainage structures, additional maintenance may be required due to an increase in sedimentation build-up. A regular maintenance program is required to have drainage systems perform to the level of protection or service, as presented in this report and the projects' plans and specifications.

5.0 CONCLUSIONS

Based on our analysis of the Site, the following conclusions can be made:

1. This Drainage Report has been prepared in accordance with WOODPATEL's understanding of the City of Scottsdale technical drainage requirements and the *Drainage Design Manuals for Maricopa County Hydrology and Hydraulics (2018)*, as applicable to the Site.

2. The Site is within a FEMA designated "Zone AO" shaded.

3. The Site is protected from offsite flows from the north by improvements, as outlined in the approved stormwater storage waiver.

4. No stormwater retention has been provided for this project, per the approved stormwater waiver.

5. The proposed Contech CDS3020-6-C treatment structure will treat the First Flush flow rate of 0.52 cfs.

6. The onsite 100-year storm event is to be conveyed southeast along its historic path through a proposed 30-inch RCP pipe culvert connected to the existing earthen channel which ultimately discharges to the existing TPC Golf Course.

7. The HAG is 1561.48 and the regulatory flood elevation is 1563.48 per the attached calculations. The first-floor elevation of the proposed parking garage is below the regulatory flood elevation and will be subject to additional requirements. The second-floor elevation is 3.02 feet above the regulatory flood elevation.

8. The proposed stormwater system will discharge 22.39 cfs of stormwater into the existing channel to the south east.

9. Ongoing maintenance is required for the existing drainage systems to maintain design performance. Maintenance is the responsibility of the private parties involved.

6.0 REFERENCES

1. *Design Standards & Policies Manual*, City of Scottsdale, 2018

2. *Curry's Corner Quadrangle, 7.5 Minute Series Topographic Map, USGS, 1964*

3. *Drainage Design Manual for Maricopa County*, *Volume I Hydrology*, Arizona, 2018

4. *Drainage Design Manual for Maricopa County, Volume II Hydraulics,* Arizona, 2018

5. *Drainage Policies and Standards for Maricopa County,* Arizona, 2016

APPENDIX A – STORM WATER STORAGE WAIVER / PROPOSED DRAINAGE IMPROVMENTS EXHIBIT

~~PRINCESS~~

10/22

Request for Stormwater Storage Waiver

292-SA-2007

City of Scottsdale Case Numbers:

___ - PA - ___ ___ - ZN - ___ ___ - UP - ___ ___ - DR - ___ ___ - PP - ___ PC# 6332-07-7

The applicant/developer must complete and submit this form to the city for processing and obtain approval of waiver request ***before submitting Improvement plans.*** Denial of the waiver may require the developer to submit a revised site plan to the Development Review Board.

Date 7/14/08 **Project Name** Fairmont Scottsdale Princess Resort

Project Location 7575 East Princess Drive Scottsdale, AZ 85255

Applicant Contact John Bulka **Company Name** Wood Patel & Associates

Phone 480-834-3300 Fax 480-834-3320 E-mail jbulka@woodpatel.com

Address 1855 N. Stapley Mesa, AZ 85203

Waiver Criteria

A waiver is an intentional relinquishment of a claim or right. A project must meet at least one of six criteria listed below for the city to consider waiving some or all required stormwater storage. Check the applicable box and provide a signed engineering report and supporting engineering analyses that demonstrate the project meets the criteria *and* that the effect of a waiver will not increase the potential for flooding on any property.

☐ 1. The runoff for the project has been included in a storage facility at another location. The applicant must demonstrate that the stormwater storage facility was specifically designed to accommodate runoff from the subject property and that the runoff will be conveyed to this location through an adequately designed conveyance facility.

☒ 2. The development is adjacent to a watercourse or channel that an engineering analysis shows is designed and constructed to handle the additional runoff without increasing the potential for flood damage to the subject property or to any other property.

☐ 3. The development is on a parcel less than one-half acre in size in an area where the engineering analysis demonstrates there is no significant increase in potential for flood damage due to its development.

☐ 4. Stormwater storage requirements conflict with requirements of the Environmentally Sensitive Lands Ordinance (ESLO). The applicant must demonstrate there is no increased potential for flood damage to the subject property or to any other property. Such conflicts with ESLO may include:

- Total land requirements for storage basin, easements, setbacks, and NAOS prevent building allowable footprint per zoning.
- Topography prevents building storage basin.
- Creating a storage facility requires wash modification.
- Instances where the Zoning Administrator cannot allow a modification to ESL requirements.

☐ 5. The project is located within the Downtown Fee Reduction Area as described and approved by City Council Resolution #6238 (see map). The applicant must demonstrate there is no increased potential for flood damage to any property. Even if the project is located in the Downtown area, if the project creates additional potential for increased flood damage, the developer must provide alternative mitigation methods to prevent the damage.

☐ 6. The project is located within a watershed that drains directly to the Salt River Pima-Maricopa Indian Community (SRPMIC) (see map). The project must provide the pre-development peak discharge flow to the SRPMIC, and attenuate flows over and above pre-development.

By signing below, I certify that the stated project meets the waiver criteria selected above as demonstrated by the attached documentation.

John Bulka

Developer or Engineer (circle one)

7-16-08

Date

Planning & Development Services Department

7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 • Phone: 480-312-7000 • Fax: 480-312-7088

SWW

6332-07-7

Request for Stormwater Storage Waiver

292-SA-2007

City of Scottsdale Case Numbers:

___ - PA - ___ ___ - ZN - ___ ___ - UP - ___ ___ - DR - ___ ___ - PP - ___ PC#___

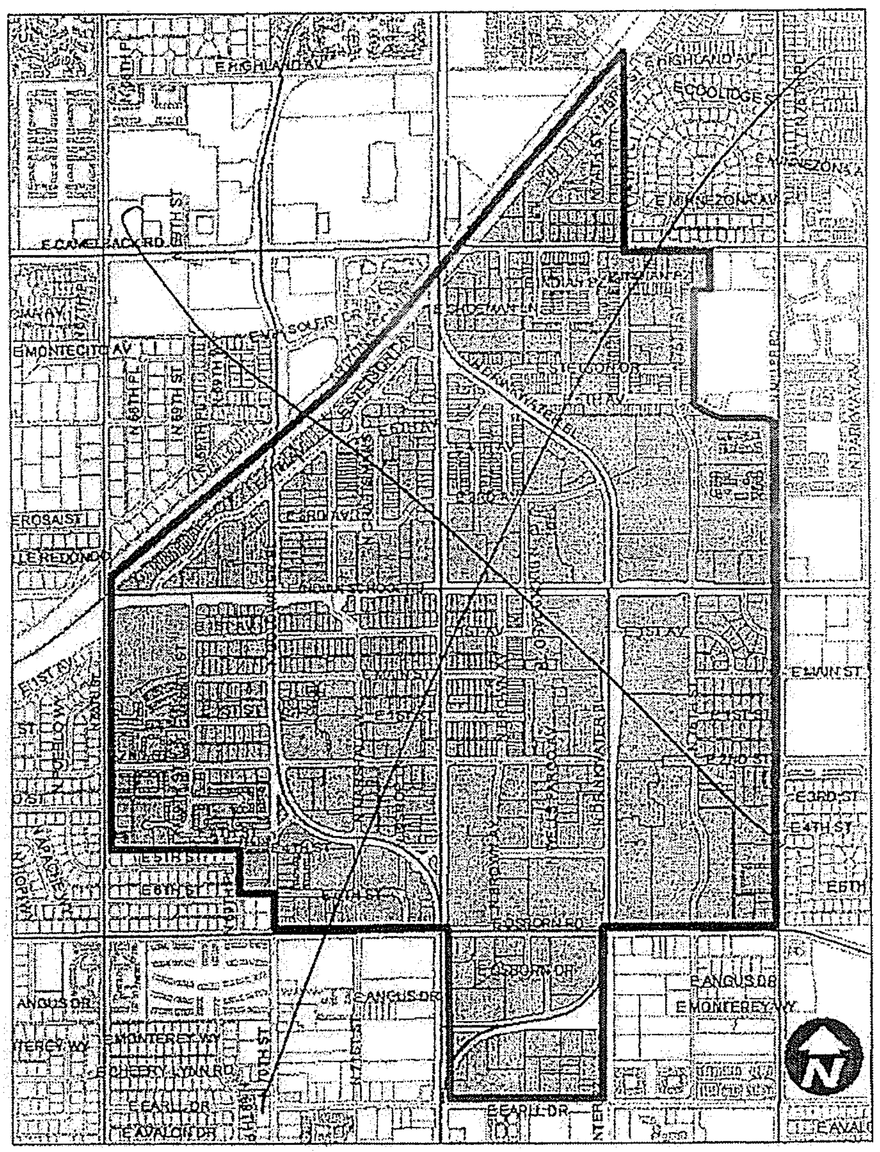

Figure 1. Designated Area for Downtown Stormwater Storage Waivers

NOT APPLICABLE

Planning & Development Services Department

7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 • Phone: 480-312-7000 • Fax: 480-312-7088

Request for Stormwater Storage Waiver

City of Scottsdale Case Numbers:

___ - PA - ____ ____ - ZN - ____ ____ - UP - ____ ____ - DR - ____ ____ - PP - ____ PC#_____

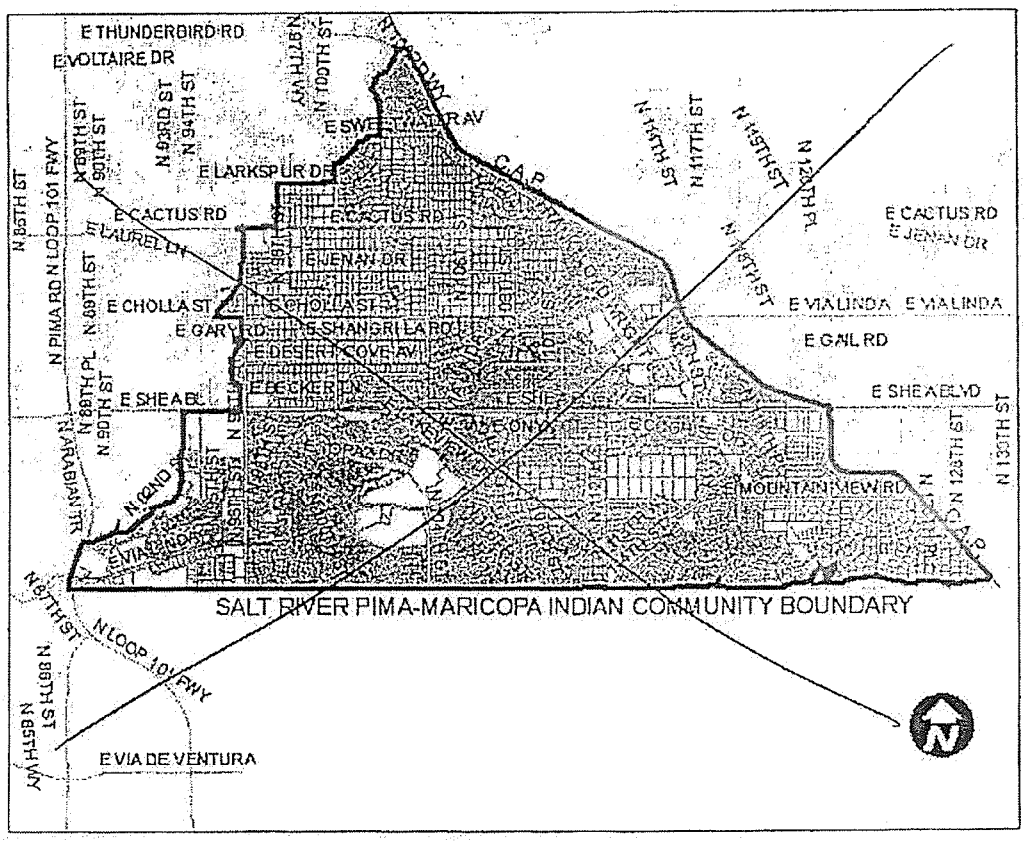

Figure 2. Watersheds Draining to Salt River Pima-Maricopa Indian Community

NOT APPLICABLE

Planning & Development Services Department

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Request for Stormwater Storage Waiver

292-SA-2007

City of Scottsdale Case Numbers:

___-PA-___ ___-ZN-___ ___-UP-___ ___-DR-___ ___-PP-___ PC#_____

CITY STAFF TO COMPLETE THIS PAGE

Project Name FAIRMONT SCOTTSDALE PRINCESS RESORT

Check Appropriate Boxes:

☐ Meets waiver criteria (specify): ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

☑ Recommend approve waiver.

☐ Recommend deny waiver:
- ☐ None of waiver criteria met.
- ☐ Downstream conditions prohibit waiver of any storage.
- ☐ Other:

Explain: _____

☐ Return waiver request:
- ☐ Insufficient data provided.
- ☐ Other: _____

Explain: _____

Recommended Conditions of Waiver:
- ☒ All storage requirements waived.
- ☐ Pre development conditions must be maintained.
- ☑ Other:

Explain: In land improvements exceed cost of in-lieu fee.

☒ **Waiver approved per above conditions.**

☐ **Waiver denied.**

C. Ashley Couch — 10/23/08

Floodplain Administrator or Designee — Date

Planning & Development Services Department
7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 • Phone: 480-312-7000 • Fax: 480-312-7088

Request for Stormwater Storage Waiver

292-SA-2007 City of Scottsdale Case Numbers:

___ - PA - ___ ___ - ZN - ___ ___ - UP - ___ ___ - DR - ___ ___ - PP - ___ PC#_____

In-Lieu Fee and In-Kind Contributions

If the city grants a waiver, the developer is required to calculate and contribute an In-Lieu Fee based on what it would cost the city to provide the waived storage volume, including costs such as land acquisition, construction, landscaping, design, construction management, and maintenance over a 75-year design life. For FY 2007/2008, this cost is $3.22 per cubic foot of stormwater stored. This unit cost will be updated annually, but the city reserves the right to revise the unit cost at any time at its sole discretion.

The Floodplain Administrator considers in-kind contributions on a case-by-case basis. An in-kind contribution can serve as part of or instead of the calculated in-lieu fee. The Floodplain Administrator or designee must approve in-lieu fees and in-kind contributions.

Project Name Fairmont Scottsdale Princess Resort

The waived stormwater storage volume is calculated as follows:

V = CRA; where
V = stormwater storage volume required, in cubic feet,
C = weighted average runoff coefficient over disturbed area,
R = 100-year/2-hour precipitation depth, in feet (2.82 inches, or 0.235 feet, for all regions of Scottsdale), and
A = area of disturbed ground, in square feet

Furthermore,

$V_w = V - V_p$; where
V_w = volume waived,
V = volume required, and
V_p = volume provided

C = 0.9
A = 424,753
V = 89,826
V_p = 0
V_w = 89,826

☐ An In-Lieu Fee will be paid, based on the following calculations and supporting documentation:
In-lieu fee ($) = V_w (cu. ft.) x $3.22 per cubic foot = 289,240

☒ An In-Kind Contribution will be made, as follows:
See attachment. Princess Drive Bridge Reconstruction, in accordance with approved plans.

☐ No In-Lieu Fee is required. Reason:

Approved by: C. Ashley Conklin 10/23/08

Floodplain Administrator or Designee — Date

Planning & Development Services Department
7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 • Phone: 480-312-7000 • Fax: 480-312-7088

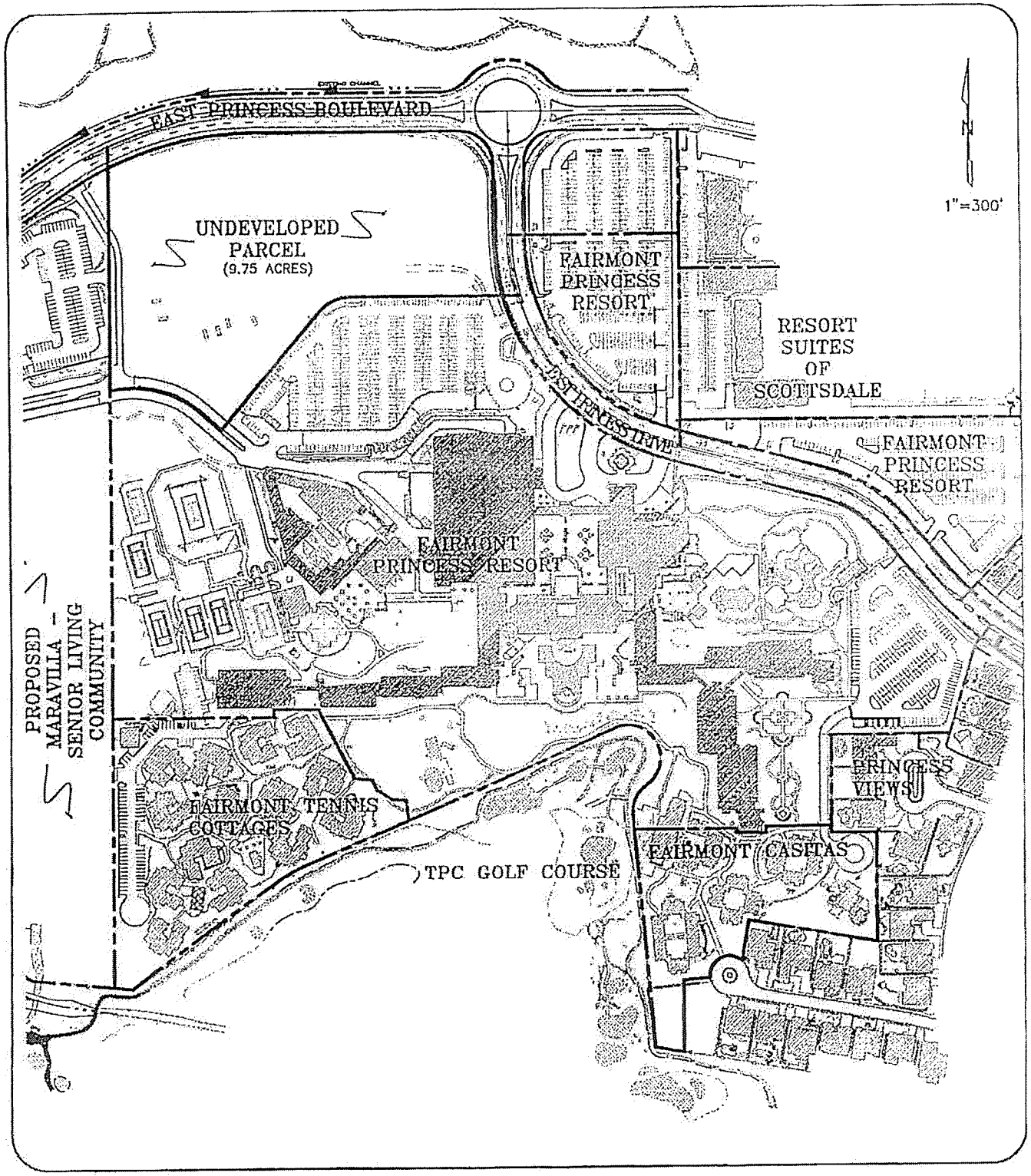


EXHIBIT 1

FAIRMONT SCOTTSDALE PRINCESS RESORT

ENGINEER	J. Bulka
DESIGNER	J. Haywood
CAD TECHNICIAN	J. Sanchez
SCALE	1"=300'
DATE	07/14/08
JOB NUMBER	07910
REF. SHEET	1 OF 1

WOOD/PATEL & ASSOCIATES INC.
Civil Engineers, Hydrologists and Land Surveyors
1855 North Stapley Drive
Mesa, Arizona 85203
(480) 834-3300
(480) 834-3320 FAX

Attachment to Stormwater Storage Waiver Request
for Fairmont Scottsdale Princess Resort & Regional Flood Control

The Fairmont Scottsdale Princess Resort (Site) is a 60 acre resort located near the southwest corner of Princess Boulevard and Princess Drive. The Site is bounded by the Princess Blvd. to the north, the Maravilla Scottsdale Senior Living Community to the east, the TPC Golf Course to the south and existing residential developments to the west (see Exhibit 1, attached). The existing Fairmont Scottsdale Princess Resort consists of multiple hotel buildings, a ballroom, spa, tennis cottages, tennis courts, and parking. A majority of the site is developed and portions are being updated and renovated. At the north end of the site there is a 9.75 acre portion of the property that has yet to be developed, and other portions are scheduled for upgrades.

It is Wood/Patel's understanding that the ownership of the Fairmont Scottsdale Princess Resort, Strategic Hotels and Resorts, has agreed to fund regional flood control improvements to the public road/channel crossing at Princess Blvd and Scottsdale Road, in return for the City approving this waiver and it being applicable to the entire site. The improvements consist of removing the existing concrete box culvert crossing and replacing it with a bridge structure. The cost of a new bridge structure is estimated at $1,053,000.

City of Scottsdale In-Lieu Fees:

V(req) Volume required = CRA = (0.90) x (0.235 feet) x (9.75 acres) = 89,826 cu-ft.

C (Runoff Coefficient) = 0.90

R (100-year/2-hour precipitation depth) = 0.235 feet

Site area = 9.75 acres

City of Scottsdale In-Lieu Fees = V(req) x $3.22 = (89,826 cu-ft) x $3.22 = $289,240

Summary:

Public Drainage Improvements = $1,053,000 (*)

City of Scottsdale in Lieu Fee = $289,240

(*) See Sheet 2 of 2 Engineering Preliminary Opinion of Probable Cost

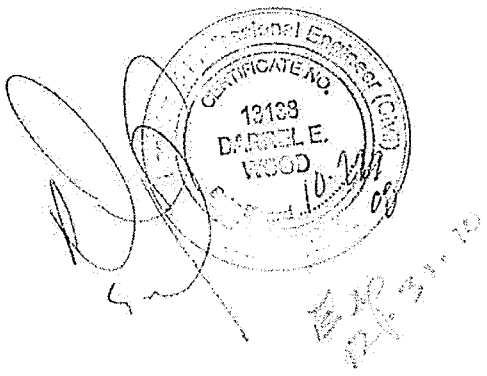
Attachment to Stormwater Storage Waiver Request
for Fairmont Scottsdale Princess Resort & Regional Flood Control

Engineering Preliminary Opinion of Probable Cost (*)

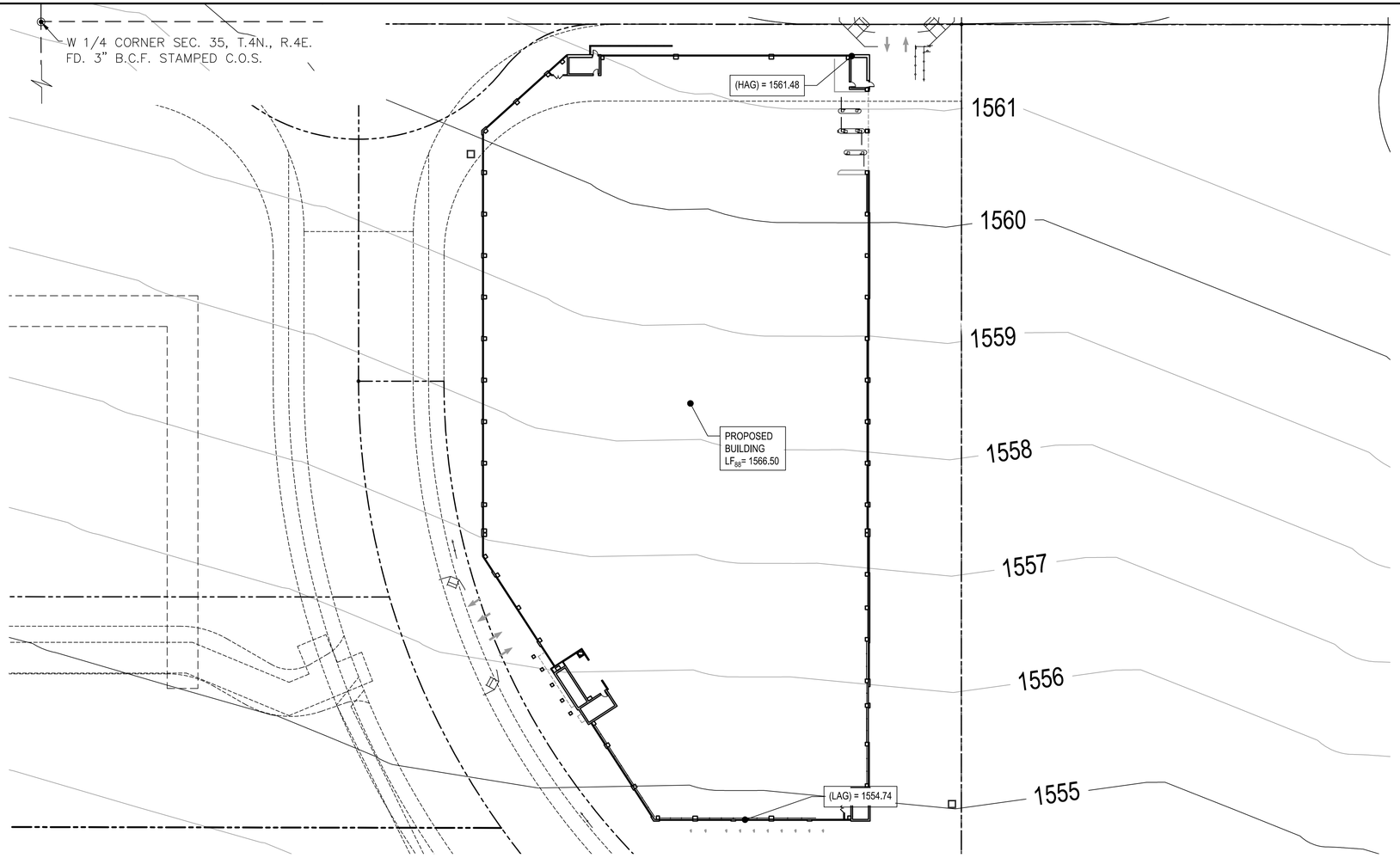
Prepared Bridge Structure at Princess Drive, just east of Scottsdale Road serving unnamed wash.

Estimated Bridge Surface = 8,100 square feet x $130/s.f. $1,053,000

(*) Offered without the benefit of construction documents and specifications.



APPENDIX B – REGIONAL CONTOUR MAP / OPINION OF EXISTING HIGHEST NATURAL GRADE ELEVATION



LEGEND

———	PROPOSED BUILDING OUTLINE
—·—·—	BOUNDARY LINE
- - - -	SECTION LINE
—1550—	ESTIMATED 5' CONTOUR NAVD88 DATUM
—1541—	ESTIMATED 1' CONTOUR NAVD88 DATUM
1551.75	ORIGINAL 1964 CURRYS CORNER CONTOURS ON NAVD88 DATUM
HAG	HIGHEST ADJACENT NATURAL GRADE
LAG	LOWEST ADJACENT NATURAL GRADE
RFD	REGULATORY FLOOD DEPTH = HAG +2' (ZONE AO DEPTH (1') = 1' FREEBOARD)
LGF	LOWEST GARAGE FLOOR

ELEVATION STATEMENT

THE WORK PRODUCT PRESENTED IS THE RESULT OF OBTAINING BEST AVAILABLE HISTORICAL ELEVATION INFORMATION, AND EMPLOYING PROFESSIONAL JUDGMENT TO BEST PRESENT IN SITE GROUND ELEVATIONS. ELEVATIONS ARE BASED ON 1964 CURRYS CORNER NGVD29 DATUM CONVERTED TO NAVD88 USING MARICOPA LAND SURVEY CONVERSION OF 1.749 FT.

BENCHMARK

THE VERTICAL DATUM FOR THIS EXHIBIT IS BASED ON GDACS POINT 43017-1, 3 INCH CITY OF SCOTTSDALE BRASS CAP FLUSH LOCATED ON SCOTTSDALE ROAD SOUTH OF PRINCESS DRIVE HAVING AN ELEVATION OF 1552.985, CITY OF SCOTTSDALE NAVD88 DATUM.

FEMA SUMMARY TABLE								
NAME	ADDRESS	LOWEST FINISHED FLOOR ELEVATION (LF88)	HIGHEST ADJACENT NATURAL GRADE	LOWEST ADJACENT NATURAL GRADE	REGULATORY FLOOD ELEVATION	FEMA REQUIREMENTS		
BUILDINGS						FLOOD VENTING	WET FLOODPROOFING	OTHER
VILLA 1	7575	1566.50	1,561.48	1,554.74	1,563.48	NO VENT	NOT REQUIRED	N/A

N

0 40 80

Horz. 1 in. = 40 ft.

1) WHEN REQUIRED AS INDICATED ABOVE, FLOOD VENTS SHALL BE PROVIDED ON AT LEAST 2 SEPARATE WALLS. THE FLOOD VENTS SHALL HAVE ONE SQUARE INCH OF OPENING SPACE FOR EVERY SQUARE FOOT OF ENCLOSED SPACE BELOW THE REGULATORY FLOOD ELEVATION, OR AS NOTED ABOVE. SEE ARCHITECTURAL PLANS FOR VENTS OPENINGS. PROPOSED GRADE ADJACENT TO BUILDING MAY EFFECT VENT LOCATIONS, CONSULT ENGINEER PRIOR TO CONSTRUCTION WITH ANY QUESTIONS.
2) WHEN REQUIRED AS INDICATED ABOVE, WET FLOODPROOFING SHALL BE PROVIDED UP TO THE REGULATORY FLOOD DEPTH. WET FLOODPROOFING CONSIST OF CONSTRUCTION WITH FLOOD RESISTANT MATERIALS.
3) WHEN REQUIRED AS NOTED ABOVE, ELECTRICAL AND MECHANICAL EQUIPMENT SHALL BE ELEVATED ABOVE THE REGULATORY FLOOD DEPTH.
4) PROPOSED BUILDING M1 WILL BE A STRUCTURALLY INDEPENDENT NON-RESIDENTIAL STRUCTURE.
5) FEMA DEFINES DRY FLOODPROOFING AS A COMBINATION OF MEASURES THAT RESULT IN A STRUCTURE, INCLUDING THE ATTENDANT UTILITIES AND EQUIPMENT, BEING WATERTIGHT WITH ALL ELEMENTS SUBSTANTIALLY IMPERMEABLE TO THE ENTRANCE OF FLOODWATER AND WITH STRUCTURAL COMPONENTS HAVING THE CAPACITY TO RESIST FLOOD LOADS.

WOOD/PATEL
MISSION: CLIENT SERVICE ®
(602) 335-8500
WWW.WOODPATEL.COM

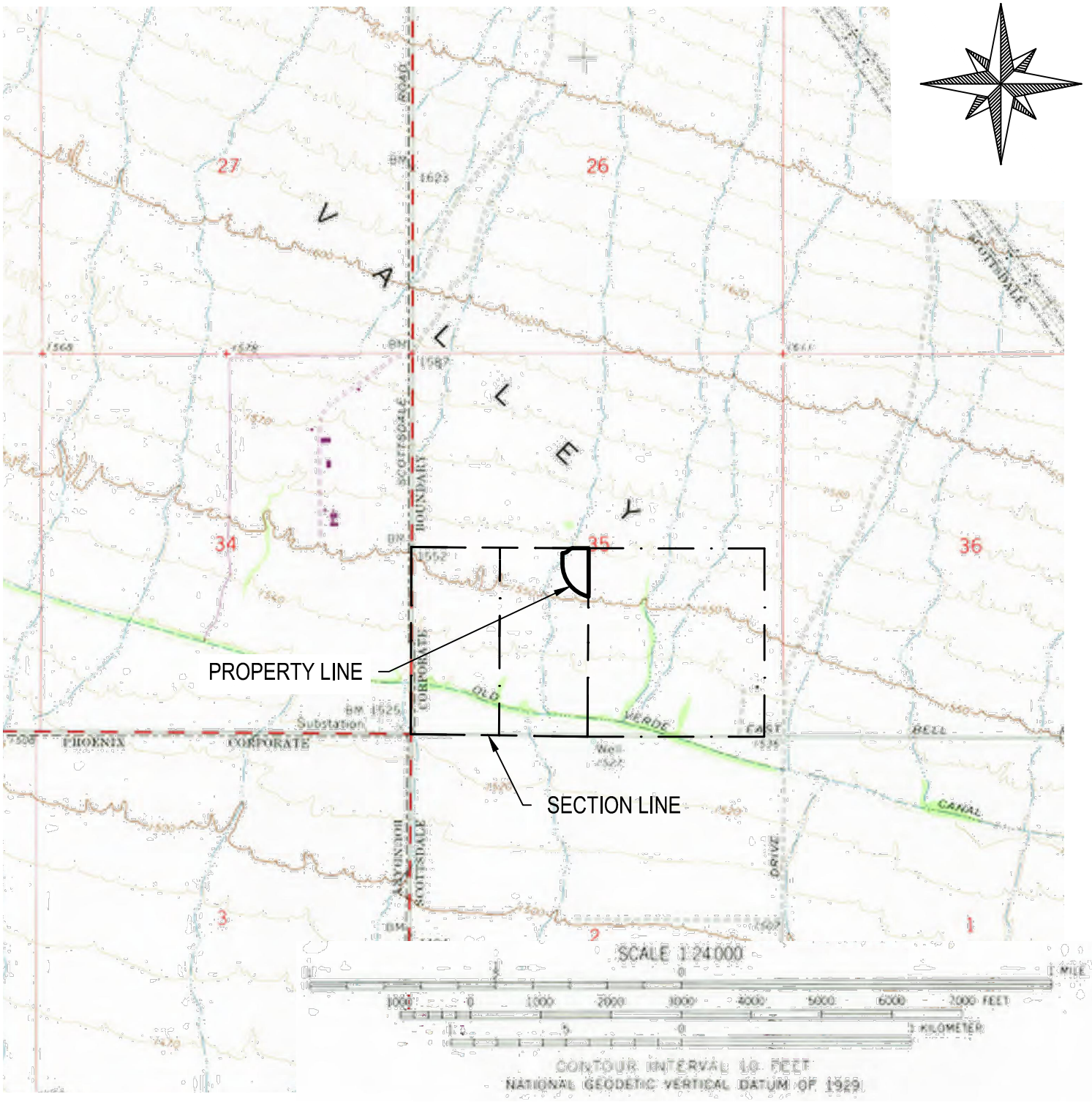
FAIRMONT SCOTTSDALE PRINCESS

PARKING GARAGE EXHIBIT

NOT FOR CONSTRUCTION OR RECORDING

COMPLETED SURVEY FIELD WORK ON: N/A
CHECKED BY: RS
CAD TECHNICIAN: AJS
SCALE: 1' = 40'
DATE: 06/02/2023
JOB NUMBER: 215319.40
SHEET: 1 OF 2

Z:\2021\215319\Project Support\Reports\5319.40 - Parking Structure\Drainage\Exhibits\5319.40-Lowest Floor Elevation Exhibit.dwg



NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD PATEL

PARKING GARAGE EXHIBIT

REGIONAL CONTOUR MAP/OPINION OF EXISTING HIGHEST NATURAL GRADE ELEVATION

DATE	06/02/2023	SCALE	1" = 1'	SHEET	2 OF 2
JOB NO.	215319.40	DESIGN	RS	CHECK	RS
		DRAWN	AJS	RFI #	N/A

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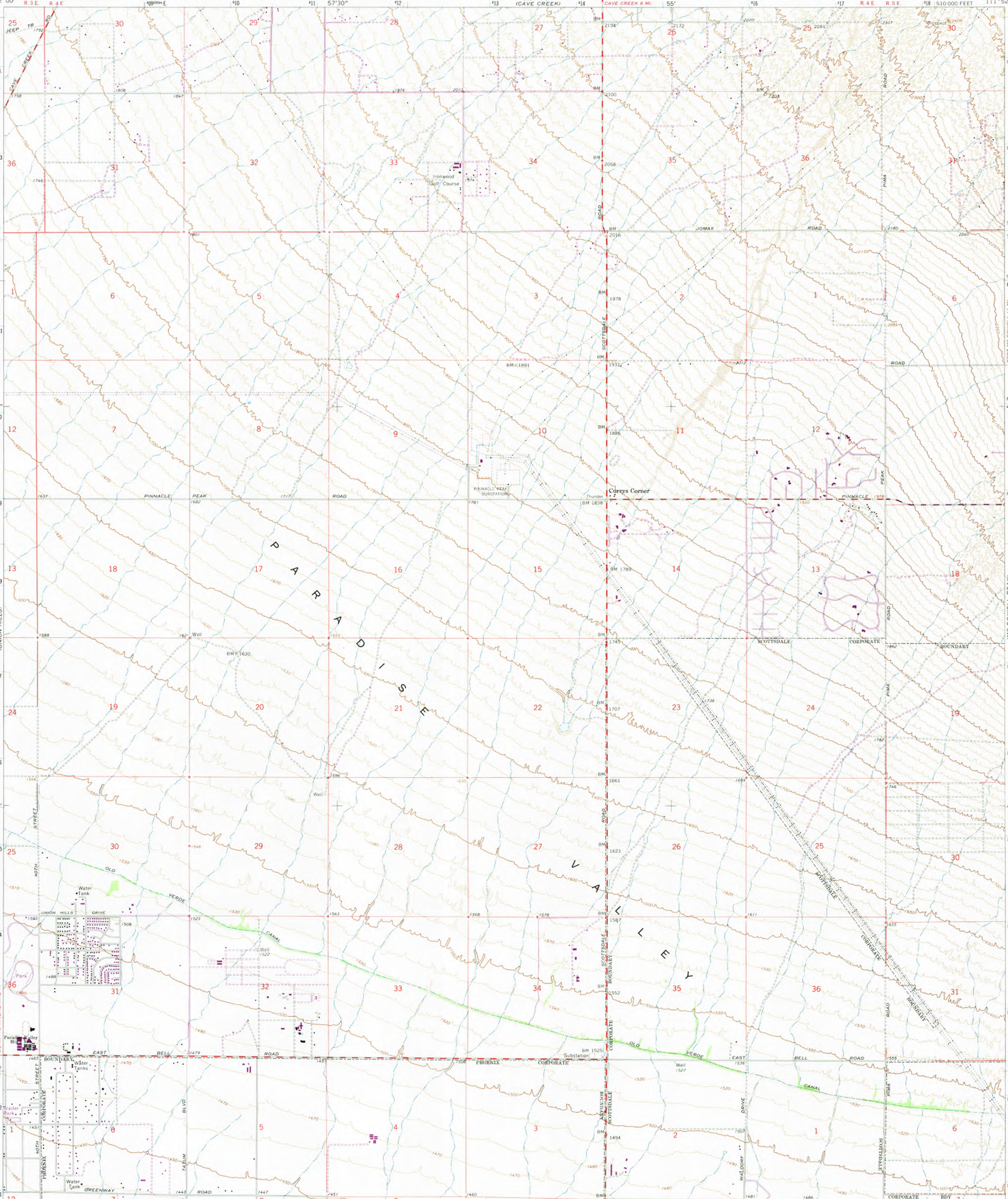
APPENDIX C – CURRY'S CORNER QUADRANGLE MAP

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CURRYS CORNER QUADRANGLE
ARIZONA—MARICOPA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1962. Field checked 1964

Polyconic projection. 1927 North American datum
10,000-foot grid based on Arizona coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

Revisions shown in purple compiled from aerial photographs taken 1973. This information not field checked

UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION
Medium-duty — Light-duty
Unimproved dirt

QUADRANGLE LOCATION

CURRYS CORNER, ARIZ.
N3337.5—W11152.5/7.5

1964
PHOTOREVISED 1973
AMS 3651 III NW—SERIES V898

2560

APPENDIX D – HYDROLOGIC AND HYDRAULIC CALCULATIONS

IDF DATA FROM FCDMC NOAA – ATLAS 14 PRECIPITATION DATA

WOOD PATEL

SITE I-D-F CURVE

Project Fairmont Scottsdale Princess - Parking Structure
Location Scottsdale AZ
Project Number 215319.4
Project Engineer Darin Moore, PE

RAINFALL DEPTHS, INCHES

Duration	Average Reccurence Interval (years)					
	2	5	10	25	50	100
5-min	0.255	0.344	0.413	0.505	0.576	0.649
10-min	0.389	0.524	0.629	0.769	0.876	0.987
15-min	0.481	0.650	0.779	0.953	1.090	1.220
30-min	0.648	0.875	1.050	1.280	1.460	1.650
60-min	0.802	1.080	1.300	1.590	1.810	2.040
2-hr	0.927	1.230	1.470	1.790	2.030	2.290
3-hr	1.010	1.330	1.570	1.920	2.190	2.480
6-hr	1.200	1.540	1.800	2.160	2.440	2.740
12-hr	1.350	1.710	1.990	2.360	2.650	2.950
24-hr	1.590	2.060	2.430	2.950	3.360	3.780

RAINFALL INTENSITY, INCHES/HOUR

Duration minutes	Frequency, years					
	2	5	10	25	50	100
5	3.06	4.13	4.96	6.06	6.91	7.79
10	2.33	3.14	3.77	4.61	5.26	5.92
15	1.92	2.60	3.12	3.81	4.36	4.88
30	1.30	1.75	2.10	2.56	2.92	3.30
60	0.80	1.08	1.30	1.59	1.81	2.04
120	0.46	0.62	0.74	0.90	1.02	1.15
180	0.34	0.44	0.52	0.64	0.73	0.83
360	0.20	0.26	0.30	0.36	0.41	0.46
720	0.11	0.14	0.17	0.20	0.22	0.25
1440	0.07	0.09	0.10	0.12	0.14	0.16

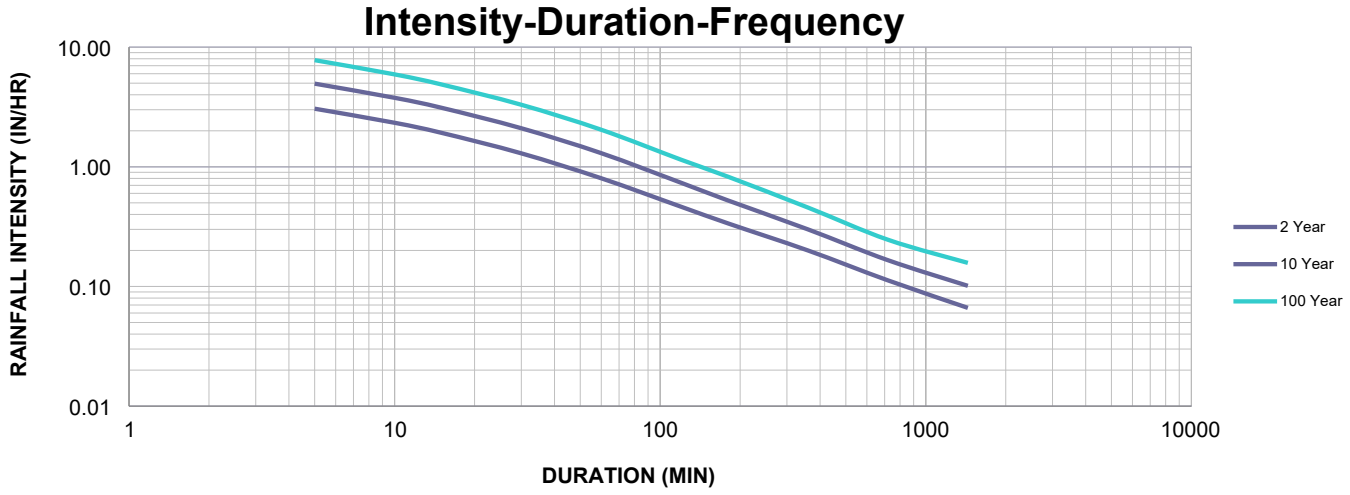


TABLE 1 – EXISTING WEIGHTED C VALUES

WOOD PATEL

COMPOSITE WEIGHTED "C" FACTOR CALCULATIONS
100 YEAR

Project	Fairmont Scottsdale Princess - Parking Structure
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Darin Moore, PE

Existing C Factor

Drainage Subbasin ID	**Area**	**Paved**		**Desert**		**100 YR Runoff Coefficient**
(Description/ID)	**(Acres)**	**%**	**"C"**	**%**	**"C"**	**"C"**
A-1	5.37	81.84	0.95	18.16	0.83	**0.93**

TABLE 2 – PROPOSED WEIGHTED C VALUES 100-YEAR

WOOD PATEL

COMPOSITE WEIGHTED "C" FACTOR CALCULATIONS
100 YEAR

Project	Fairmont Scottsdale Princess - Parking Structure
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Darin Moore, PE

Existing C Factor

Drainage Subbasin ID	**Area**	**Paved**		**Desert**		**100 YR Runoff Coefficient**
(Description/ID)	**(Acres)**	**%**	**"C"**	**%**	**"C"**	**"C"**
A-1	2.62	100	0.95	0	0.83	**0.95**
A-2	0.94	65	0.95	35	0.83	**0.91**
A-3	0.49	74	0.95	26	0.83	**0.92**
A-4	0.46	47	0.95	53	0.83	**0.89**
A-5	0.51	70	0.95	30	0.83	**0.91**
A-6	0.16	62	0.95	38	0.83	**0.90**
A-7	0.19	58	0.95	42	0.83	**0.90**

TABLE 3 – PROPOSED WEIGHTED C VALUES 10-YEAR

WOOD PATEL

COMPOSITE WEIGHTED "C" FACTOR CALCULATIONS
10 YEAR

Project	Fairmont Scottsdale Princess - Parking Structure
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Darin Moore, PE

Existing C Factor

Drainage Subbasin ID	**Area**	**Paved**		**Desert**		**10 YR Runoff Coefficient**
(Description/ID)	**(Acres)**	**%**	**"C"**	**%**	**"C"**	**"C"**
A-1	2.62	100	0.90	0	0.63	**0.90**
A-2	0.94	65	0.90	35	0.63	**0.81**
A-3	0.49	74	0.90	26	0.63	**0.83**
A-4	0.46	47	0.90	53	0.63	**0.76**
A-5	0.51	70	0.90	30	0.63	**0.82**
A-6	0.16	62	0.90	38	0.63	**0.80**
A-7	0.19	58	0.90	42	0.63	**0.79**

TABLE 4 – EXISTING RATIONAL METHOD

WOOD PATEL

RATIONAL METHOD SUMMARY

100 YEAR, 10 YEAR

Project	Fairmont Scottsdale Princess - Parking Structure
Location	Scottsdale AZ
Project Number	215319.4
Project Engineer	Darin Moore, PE

EXISTING ON-SITE WATERSHEDS

										100 YEAR				10 YEAR			
Drainage Subbasin ID	**Longest Watercourse 'L' (ft)**	**Longest Watercourse 'L' (mi)**	**Drainage Area 'A' (sf)**	**Drainage Area 'A' (Acres)**	**'K_b' Type[1]**	**Watershed Resistance Coefficient 'K_b'**	**Top Elevation**	**Bottom Elevation**	**Basin Slope 'S' (ft/mi)**	**Calculated Q100 'Tc' (See Note 2) (min)**	**100 YEAR Intensity 'i' (in/hr)**	**100 YR Runoff Coefficient 'C'**	**Q100 Flow (cfs)**	**Calculated Q10 'Tc' (See Note 2) (min)**	**10 YEAR Intensity 'i' (in/hr)**	**10 YR Runoff Coefficient 'C'**	**Q10 Flow (cfs)**
A1	617	0.117	233,883	5.37	A	0.0354	63.8	53.5	88.2	5.0	7.79	0.93	**38.8**	5.7	4.79	0.93	**23.9**
													38.8				**23.9**

Notes

1. Per Drainage Design Manual for Maricopa County, Vol. I, Hydrology (2013), Table 3.1: Equation for Estimating Kb in the Tc Equation
2. Minimum Tc is 5 minutes.

TABLE 5 – PROPOSED RATIONAL METHOD

WOOD PATEL

STORMCEPTOR RATIONAL METHOD SUMMARY

100 YEAR, 10 YEAR

Project Fairmont Scottsdale Princess - Parking Structure
Location Scottsdale AZ
Project Number 215319.4
Project Engineer Darin Moore, PE

PROPOSED ON-SITE WATERSHEDS

Drainage Subbasin ID	Longest Watercourse 'L' (ft)	Longest Watercourse 'L' (mi)	Drainage Area 'A' (sf)	Drainage Area 'A' (Acres)	'K_b' Type[1]	Watershed Resistance Coefficient 'K_b'	Top Elevation	Bottom Elevation	Basin Slope 'S' (ft/mi)	100 YEAR Calculated Q100 'Tc' (See Note 2) (min)	100 YEAR Intensity 'i' (in/hr)	100 YR Runoff Coefficient 'C'	Q100 Flow (cfs)	10 YEAR Calculated Q10 'Tc' (See Note 2) (min)	10 YEAR Intensity 'i' (in/hr)	10 YR Runoff Coefficient 'C'	Q10 Flow (cfs)
A-1	300	0.057	114,201	2.62	A	0.0374	3.0	0.0	52.8	5.0	7.79	0.95	**19.4**	5.0	4.96	0.90	**11.7**
A-2	424	0.080	40,881	0.94	A	0.0402	63.5	53.5	124.5	5.0	7.79	0.91	**6.6**	5.0	4.96	0.81	**3.7**
A-3	305	0.058	21,269	0.49	A	0.0419	63.4	54.5	154.1	5.0	7.79	0.92	**3.5**	5.0	4.96	0.83	**2.0**
A-4	395	0.075	20,017	0.46	A	0.0421	58.0	54.6	45.5	5.1	7.75	0.91	**3.2**	6.1	4.70	0.76	**1.6**
A-5	228	0.043	22,082	0.51	A	0.0418	56.0	55.3	16.2	5.3	7.68	0.91	**3.6**	6.4	4.63	0.82	**1.9**
A-6	72	0.014	6,916	0.16	A	0.0450	66.0	53.5	916.7	5.0	7.79	0.89	**1.1**	5.0	4.96	0.80	**0.6**
A-7	120	0.023	8,282	0.19	A	0.0445	66.0	53.5	550.0	5.0	7.79	0.91	**1.4**	5.0	4.96	0.79	**0.7**
Total			233,649	5.36									38.78				22.39

Notes

1. Per Drainage Design Manual for Maricopa County, Vol. I, Hydrology (2013), Table 3.1: Equation for Estimating Kb in the Tc Equation
2. Minimum Tc is 5 minutes.

TABLE 6 – FIRST FLUSH FLOW

WOOD PATEL

First Flush Flow

Project	Fairmont Scottsdale Princess - Parking Structure
Location	Scottsdale AZ
Project Number	215319.4
Project Engineer	Darin Moore, PE

Proposed First Flush Flow

Drainage Subbasin ID	Runoff Coefficient 'C'	Time of Concentration 'T_C' (min)	First Flush Intensity 'I_{FF}' (in/hr)	Drainage Area 'A' (Acres)	First Flush Flow 'Q_{FF}' (cfs)
A-1	1.00	5.00	0.100	2.62	0.26
A-2	1.00	5.00	0.100	0.94	0.09
A-3	1.00	5.00	0.100	0.49	0.05
A-4	1.00	6.12	0.082	0.46	0.04
A-5	1.00	6.43	0.078	0.51	0.04
A-6	1.00	5.00	0.100	0.16	0.02
A-7	1.00	5.00	0.100	0.19	0.02
Total					0.52

Notes

1. Per Drainage Policies and Standards for Maricopa County, AZ, June 2016, Standard 6.4.1: First Flush

$$Q_{FF}=CI_{FF}A$$

$$I_{FF}=P_{FF}/T_C$$

$$P_{FF}=0.5 \text{ inches}$$

TABLE 7 – CATCH BASIN INLET SUMMARY

WOOD PATEL

CATCH BASIN INLET SUMMARY

CATCH BASIN INTERCEPTION CAPACITY AND BY-PASS FLOWS

Project Fairmont Scottsdale Princess - Parking Structure
Location Scottsdale AZ
Project Number 215319.40
Project Engineer Darin Moore, PE

Catch Basin ID	Catch Basin Type	On-Grade or Sump	Post Q10 Flow (cfs)	Post Q100 Flow (cfs)	Intercept Capacity (cfs)
CB-A3	MAG 535	Sump	2.2	3.4	5.0
CB-A4	MAG 535	Sump	1.3	2.0	5.0
CB-A5	MAG 535	Sump	2.1	3.6	5.0
CB-A6	MAG 535	Sump	0.7	1.1	5.0
CB-A7	MAG 535	Sump	0.9	1.4	5.0

Notes

APPENDIX E – STORMCAD MODELING RESULTS

FlexTable: Conduit Table

Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Manning's n	Headloss (ft)	Flow (cfs)	Velocity (ft/s)
CO-1	CB-A1	1,556.00	CB-A3	1,554.40	120.3	0.013	15.0	0.013	1.22	6.50	5.30
CO-2	CB-A3	1,554.40	CB-A5	1,552.40	204.5	0.010	15.0	0.013	3.46	8.40	6.84
CO-3	CB-A5	1,552.40	MH-5	1,552.22	35.8	0.005	15.0	0.013	0.77	9.50	7.74
CO-4	MH-5	1,552.22	MH-6	1,551.90	66.6	0.005	15.0	0.013	1.44	9.50	7.74
CO-5	MH-6	1,551.90	MH-7	1,551.74	33.0	0.005	24.0	0.013	0.05	10.80	5.40
CO-6	MH-7	1,551.74	O-1	1,551.35	192.5	0.002	30.0	0.013	0.30	16.00	4.23
CO-7	H-A2	1,553.50	MH-8	1,552.60	196.1	0.005	12.0	0.013	2.12	3.70	4.71
CO-8	MH-8	1,552.60	CB-A4	1,552.52	31.3	0.003	12.0	0.013	0.34	3.70	4.71
CO-9	CB-A4	1,552.52	MH-7	1,551.74	138.9	0.006	12.0	0.013	2.96	5.20	6.62
CO-10	CB-A6	1,552.25	MH-6	1,551.90	68.5	0.005	12.0	0.013	0.02	0.60	0.76
CO-11	CB-A7	1,552.15	MH-6	1,551.90	48.6	0.005	12.0	0.013	0.02	0.70	0.89

Catch Basin FlexTable: CatchBasin Table

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Additional Subsurface) (cfs)	Flow (Total Out) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-A1	1,563.79	1,556.00	6.50	6.50	1,559.33	1,559.33
CB-A3	1,559.40	1,554.40	1.90	8.40	1,558.11	1,558.11
CB-A4	1,554.60	1,552.52	1.50	5.20	1,554.60	1,554.60
CB-A5	1,554.65	1,552.40	1.10	9.50	1,554.65	1,554.65
CB-A6	1,554.25	1,552.25	0.60	0.60	1,553.72	1,553.72
CB-A7	1,554.45	1,552.15	0.70	0.70	1,553.72	1,553.72

FlexTable: Manhole Table

Label	Elevation (Rim) (ft)	Flow (Total Out) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Absolute Headloss (ft)
MH-5	1,554.91	9.50	1,554.91	1,554.91	0.00
MH-6	1,555.91	10.80	1,553.70	1,553.70	0.00
MH-7	1,557.04	16.00	1,553.65	1,553.65	0.00
MH-8	1,554.86	3.70	1,554.86	1,554.86	0.00

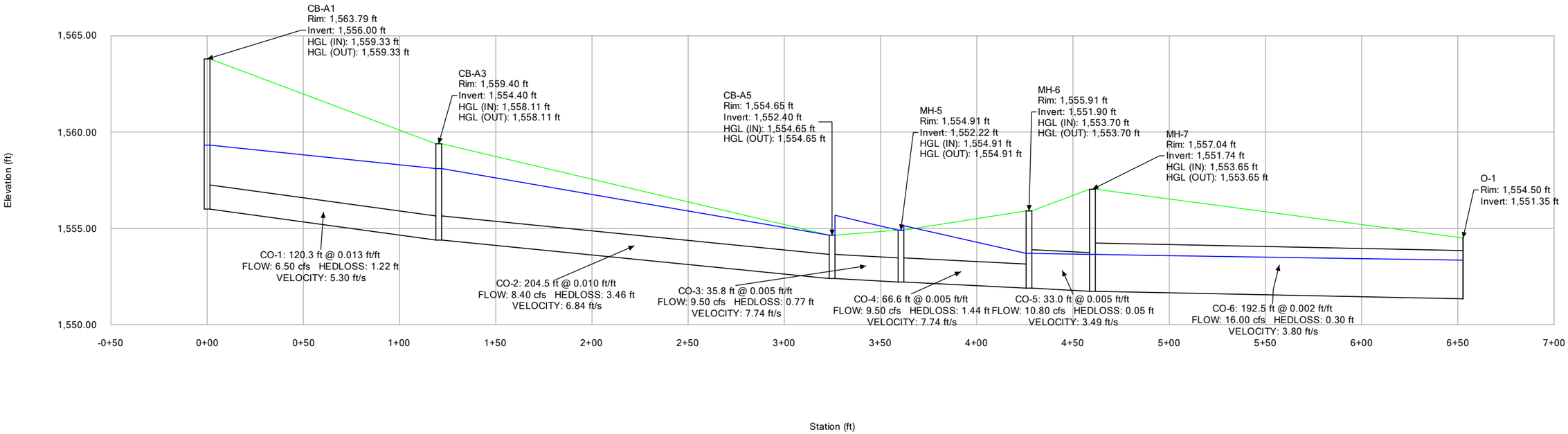
FlexTable: Headwall Table

Label	Elevation (Invert) (ft)	Elevation (Ground) (ft)	Flow (Total Out) (cfs)	Boundary Condition Type	Network Boundary Type
H-A2	1,553.50	1,555.00	3.70	Free Outfall	Inlet

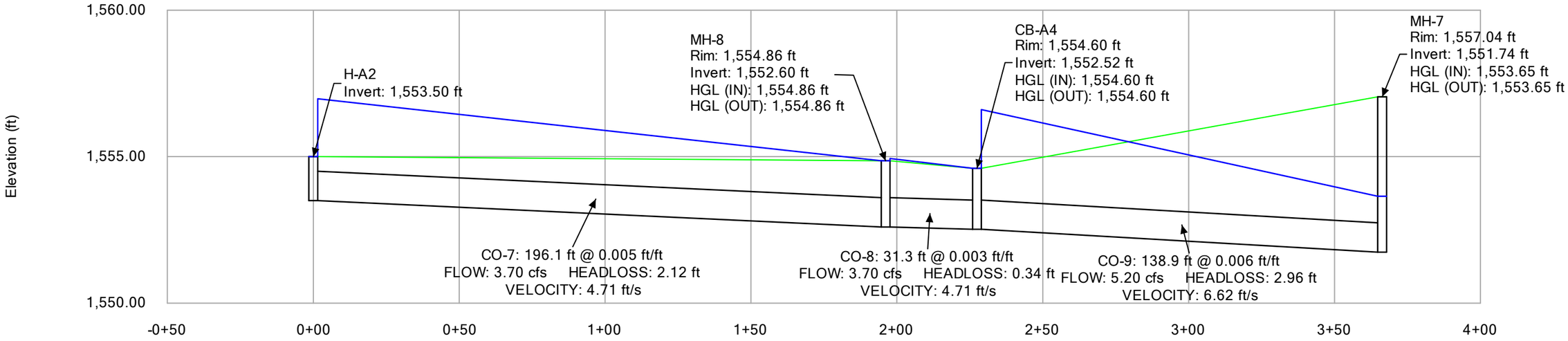
FlexTable: Outfall Table

Label	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Boundary Condition Type	Elevation (User Defined Tailwater) (ft)	Hydraulic Grade (ft)	Flow (Total Out) (cfs)
O-1	1,554.50	1,551.35	User Defined Tailwater	1,553.35	1,553.35	16.00

Profile Report
Engineering Profile - CB-A1 TO O-1 (5319.40-StormCAD.stsw)



Profile Report
Engineering Profile - H-A2 TO MH-7 (5319.40-StormCAD.stsw)



APPENDIX F – CONTECH CDS3020-6-C TREATMENT SYSTEM

HYDRAULIC DESIGN SUMMARY
FOR INLINE MODEL
CDS3020

The following hydraulic summary supports the design of the CDS model proposed on the FAIRMONT SCOTTSDALE PRINCESS – SUNSET VILLAS & BUNGALOWS project located in SCOTTSDALE, AZ . The attached hydraulic calculations supporting the proposed CDS structure's design serve two purposes.

1. To ensure the proposed CDS model will achieve the design treatment capacity under the site-specific hydraulic conditions.

   The proposed CDS model CDS3020 unit is designed to process a treatment flow of 0.54-cfs. Under the site-specific conditions, the proposed 17-inch tall diversion weir will generate the operational energy necessary to achieve the 0.54-cfs design treatment flow rate.

2. To quantify the hydraulic losses introduced to the conveyance system under peak design conditions.

   A flow of 22.39-cfs represents the peak discharge generated by the contributing drainage area for a design storm having a 10 year return interval. Under these peak design conditions, all of the 22.39-cfs flow is assumed to be conveyed over the diversion weir. This conservative assumption predicts the worst-case resulting hydraulic condition and preserves the integrity of this calculation even if the structure is not properly maintained.

   Based on the information provided, the proposed CDS model CDS3020 is predicted to increase the upstream Hydraulic Gradeline (ΔHGL) by 2.57 ft for the above cited peak design flow.

   $$\Delta HGL = H_{CDS} = \quad 2.57 \text{ ft}$$

   The effective headloss coefficient across the proposed CDS model CDS3020 for the 10-year storm event may be estimated as a function of the velocity in the downstream pipe.

   where,

   K_{CDS} = CDS Headloss Coefficient:
   = $H_{CDS} / [V_{d/s}^2 / 2 \bullet g]$
   = 3.52

   If a software program is being used to develop the Hydraulic Gradeline (HGL) for the upstream conveyance system, the values listed above for HCDS and/or KCDS can be used as either a headloss factor to be multipled by the downstream velocity head, or input the headloss amount for the proposed CDS model at the corresponding node.

Reference: Contech Engineered Solutions CDS Design - Ver 2.2

INLINE
HYDRAULIC CALCULATIONS

FAIRMONT SCOTTSDALE PRINCESS – SUNSET VILLAS & BUNGALOWS
SCOTTSDALE, AZ
742047-20

DESIGN PARAMETERS

CDS Model No. =	CDS3020	
Design Treatment Flow =	**0.5**	cfs
Peak Design Flow =	22.39	cfs
Peak Design Return Interval =	10	year
Rim Elevation @ US Structure	1557.59	ft

DETAILED CALCULATIONS

TREATMENT FLOW

Tailwater Condition at Outfall, EL_0

EL_0 = 1,551.80 ft (invert plus depth of flow at D/S outlet)

Exit Loss from DownStream Pipe, h_1

$h_1 = k * [V^2 / (2*g)]$

where,

k = 1.00

$V = Q / A_F$

= 1.98 fps

h_1 = 0.06 ft

$EGL_1 = EL_0 + h_1$

= 1551.86 ft

Head Loss Through Downstream Pipe, h_2

Friction Losses, h_2

$h_2 = S_{EGL} * L$

where,

L = 20 ft

$S_{EGL} = [(Q * n) / (1.49 * A_F * R^{2/3})]^2$

where,

Pipe Characteristics

Dia. =	30	in
S_{PIPE} =	0.0100	ft/ft
n =	0.013	

Flow Characteristics

d_F =	0.26	ft
A_F =	0.27	sf
P_W =	1.65	ft
R =	0.17	ft

Head Loss Through Downstream Pipe, h_2 (cont.'d)

S_{EGL} = 0.00327 ft / ft

h_2 = 0.0654 ft

EGL_2' = $EGL_1 + h_2$
= 1551.93 ft

Check Entrance Condition for Critical Depth Control

$EL_{CDS\ Inv.}$ = 1551.74 ft

d_c = 0.25 ft

EGL_C = $EL_{CDS\ Inv.} + d_c + V_{dc}^2 / (2*g)$
= 1552.06 ft

Identify Controling EGL

Friction based EGL controls.
EGL_2 = 1551.93 ft

Re-entry Loss into DownStream Pipe, h_3

$h_3 = k * [V^2 / (2*g)]$

where,

k = 0.20
V = Q / A
= 1.98 fps (area based on flow depth)

h_3 = 0.01 ft

EGL_3' = $EGL_2 + h_3$
= 1551.94 ft

Oil Baffle Loss, h_4

$h_4 = k * [V^2 / (2*g)]$

where,

k = 1.00
A_{Baffle} = **6.49** sf
V = Q / Abaffle
= 0.08 fps

h_4 = 0.0001 ft

EGL_4 = $EGL_3 + h_4$
= 1551.94 ft

Check Standard Weir Elevation

HL_{CDS} = 0.50 ft

EL_W' = $EGL_4 + HL_{CDS}$
= 1552.44 ft

H_W' = $EL_W' - EL_{CDS\ INV.}$
= 0.70 ft, or 8.40 in

Std. Weir Height = 17.0 in
Status **OK**

Use H_W = **17** in, or 1.42 ft

EL_W = $EL_{CDS\ INV.} + H_W$
= 1553.16 ft

PEAK CONVEYANCE FLOW

Tailwater Condition at Outfall, EL_0

EL_0 = **1,552.81** ft (invert plus depth of flow at D/S outlet)

Exit Loss from DownStream Pipe, h_1

$h_1 = k * [V^2 / (2*g)]$

where,

k = 1.00

V = Q / A_F

= 8.97 fps

h_1 = 1.25 ft

$EGL_1 = EL_0 + h_1$

= 1554.06 ft

Head Loss Through Downstream Pipe, h_2

Friction Losses, h_2

$h_2 = S_{EGL} * L$

where,

L = 20 ft

$S_{EGL} = [(Q * n) / (1.49 * A_F * R^{2/3})]^2$

where,

Pipe Characteristics

Dia. = 30 in

S_{PIPE} = 0.0100 ft/ft

n = 0.013

Flow Characteristics

d_n = 1.27 ft

A_F = 2.49 sf

P_W = 3.96 ft

R = 0.63 ft

S_{EGL} = 0.0114 ft / ft

h_2 = 0.23 ft

$EGL_2' = EGL_1 + h_2$

= 1554.28 ft

Check Entrance Condition for Critical Depth Control

$EL_{CDS\ Inv.}$ = 1551.74 ft

d_c = 1.58 ft

$EGL_C = EL_{CDS\ Inv.} + d_c + V_{dc}^2 / (2*g)$

= 1554.05 ft

Identify Controling EGL

Flow enters pipe at critical depth, EGLc controls.

EGL_2 = 1554.05 ft

Re-entry Loss into DownStream Pipe, h_3

$h_3 = k * [V^2 / (2*g)]$

where,

k = 0.20

V = Q / A_F

= 6.85 fps (area based on critical depth)

h_3 = 0.15 ft

$EGL_3 = EGL_2 + h_3$

= 1554.19 ft

Oil Baffle Loss, h_4

$h_4 = k * [V^2 / (2*g)]$

where,

k = 0.00 (Skirted-baffle model)

A_{Baffle} = 6.49 sf

V = Q / A_{Baffle}

= 3.45 fps

h_4 = 0.00 ft

$EGL_4 = EGL_3 + h_4$

= 1554.19 ft

$HGL_4 = EGL_4 - [V_P^2 / (2*g)]$

= 1553.47 ft

Head over Diversion Weir, h_5

Elevation of Weir

EL_{Weir} = 1553.16 ft (established above)

Headloss for Free Discharge Condition

$h_{5a} = [Q / (C * L)]^{2/3}$

where,

C = 3.1

L = 3.00 ft

h_{5a} = 1.80 ft

$EGL_{5a} = EL_{Weir} + h_{5a}$

= 1554.96 ft

Headloss for Submerged Condition

d_{Sub} = 0.31 ft (depth of submergence)

h_{5b} = 2.18 ft (separate submerged weir calc.)

$EGL_{5b} = EGL_4 + h_{5b}$

= 1556.38 ft

Identify EGL U/S of Weir

The discharge condition is Submerged, therefore

EGL_5 = 1556.38 ft

Expansion Loss from U/S Pipe, h_6

$h_6 = k * [V^2 / (2*g)]$

where,

$k =$ 0.30

$V = Q / A_F$

$=$ 7.13 fps

$h_6 =$ 0.24 ft

$EGL_6 = EGL_5 + h_6$

$=$ 1556.61 ft

Head Loss Through Upstream Pipe, h_7

Friction Losses, h_7

$h_7 = S_{EGL} * L$

where,

$L =$ 20 ft

$S_{EGL} = [(Q * n) / (1.49 * A_F * R^{2/3})]^2$

where,

Pipe Characteristics

Dia. = 24 in

$S_{PIPE} =$ 0.0100 ft/ft

$n =$ 0.013

Flow Characteristics

$d_n =$ 2.00 ft

$A_F =$ 3.14 sf

$P_W =$ 6.28 ft

$R =$ 0.50 ft

$S_{EGL} =$ 0.0098 ft / ft

$h_7 =$ 0.20 ft

$EGL_7' = EGL_6 + h_7$

$=$ 1556.81 ft

Check Entrance Condition for Critical Depth Control

$EL_{U/S\ Inv.} =$ 1551.94 ft

$d_c =$ 1.67 ft

$EGL_C = EL_{CDS\ Inv.} + d_c + V_{dc}^2 / (2*g)$

$=$ 1554.60 ft

Identify Controling EGL

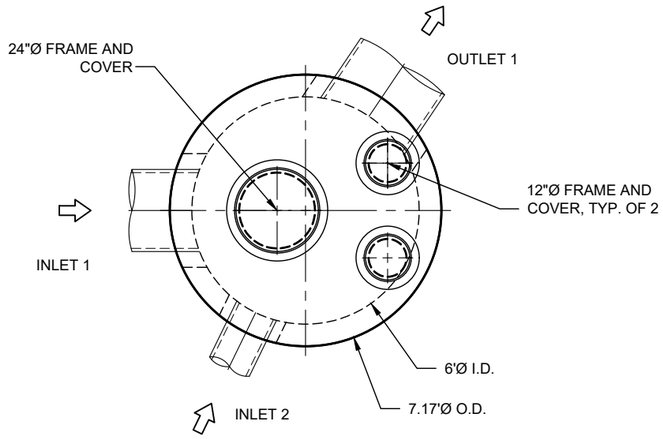
Friction based EGL controls.

$EGL_7 =$ 1556.81 ft

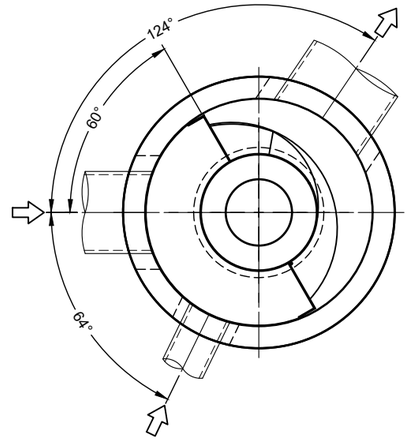
$HGL_7 = EGL_7 - [V^2 / (2*g)]$

$=$ 1556.02 ft

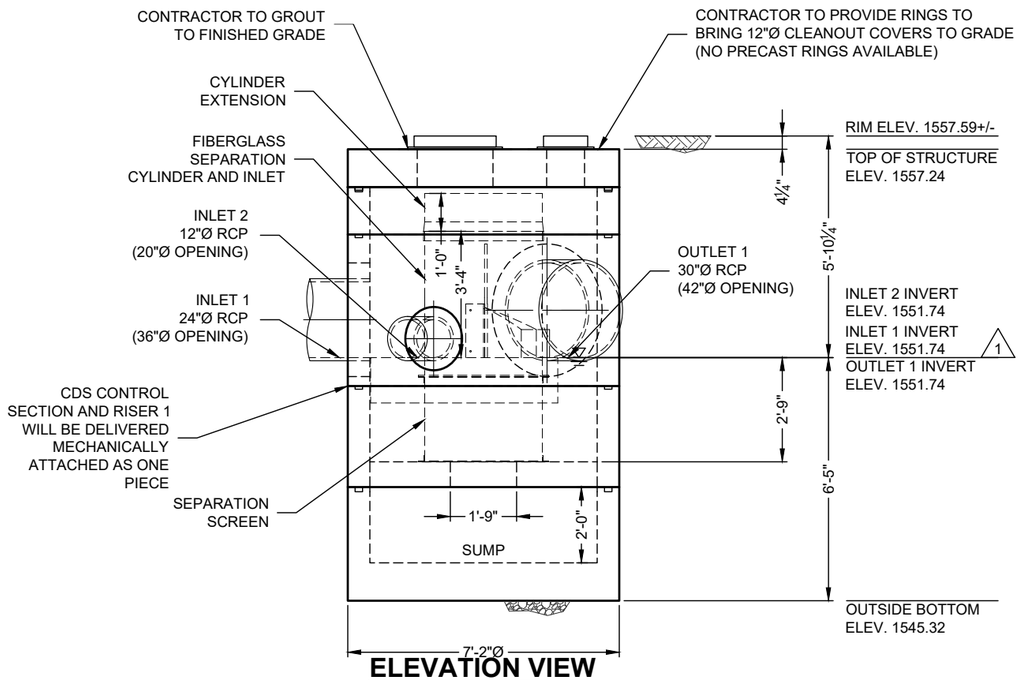
Freeboard = 1.57 ft (at first upstream structure)



PLAN VIEW
INTERNALS NOT SHOWN



PLAN VIEW FOR PIPE ORIENTATION
TOP SLAB NOT SHOWN



ELEVATION VIEW

1 **MATERIAL LIST** (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	3020-6 CONCENTRIC FIBERGLASS INSERT	CONTECH
1	3020, 2400 micron, 3.1' O.D. x 2.25' SCREEN, GREEN FLANGE UP	CONTECH
1	20, 30, 40 SERIES HARDWARE KIT	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1	24"Ø X 4" FRAME AND COVER, EJ #41600389, OR EQUIV.	CONTRACTOR
2	12"Ø X 4" FRAME AND COVER, EJ #41610201, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

	2 MAX	
WATER QUALITY FLOW RATE	0.52 CFS	2 CFS
PEAK FLOW RATE	22.39 CFS	25 CFS
RETURN PERIOD OF PEAK FLOW	10 YRS	

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 13500 LBS.
STRUCTURE IS DELIVERED IN 4 PIECES

MAX FOOTPRINT = 7.17'Ø

CONTECH
PROPOSAL
DRAWING

PRECS
LAYOUT 4A

MARK	DATE	REVISION DESCRIPTION	BY
2	06/02/23	QTREAT AND PEAK FOLW REV.	DAH
1	04/28/23	LAYOUT REVISED TO ORIGINAL	DAH

CDS3020-6-C - 742047-20
FAIRMONT SCOTTSDALE PRINCESS – SUNSET VILLAS & BUNGALOWS
SCOTTSDALE, AZ
SITE DESIGNATION: OPTION 4

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
11815 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

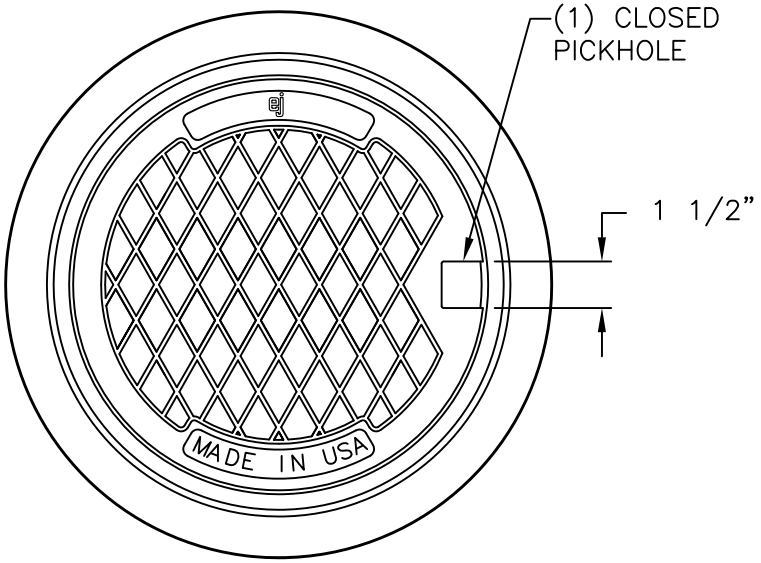
FOR PATENT INFORMATION, GO TO www.ContechES.com/IP

DATE: 04/27/23

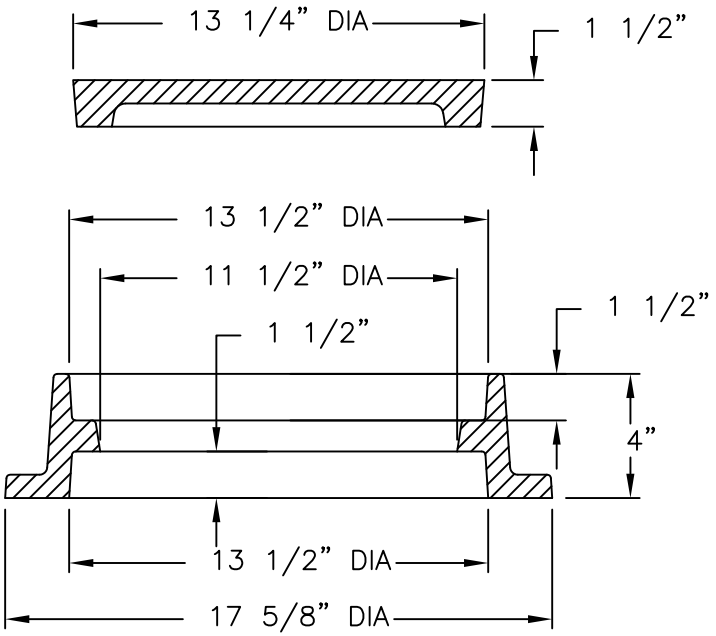
DESIGNED:	DRAWN:
DAH	DAH
CHECKED:	APPROVED:
DAH	DAH
PROJECT No.:	SEQUENCE No.:
742047	20

SHEET: 1 OF 1

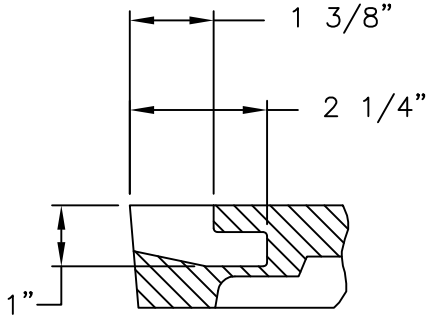
V1610-2BF RG V1610-2CV Assembly



BOTTOM FLANGE VIEW



SECTION VIEW



PICKHOLE DETAIL

NOTE:
RING IS REVERSIBLE AND CAN BE INSTALLED AS A TOP FLANGE UNIT

Product Number
41610201

Design Features
-Materials
Cleanout/Monument Box Frame
Gray Iron (CL35B)
Cleanout/Monument Box Cover
Gray Iron (CL35B)

-Design Load
Heavy Duty
-Open Area
n/a
-Coating
Undipped
-√Designates Machined Surface

Certification
- ASTM A48
-
-
-Country of Origin: USA

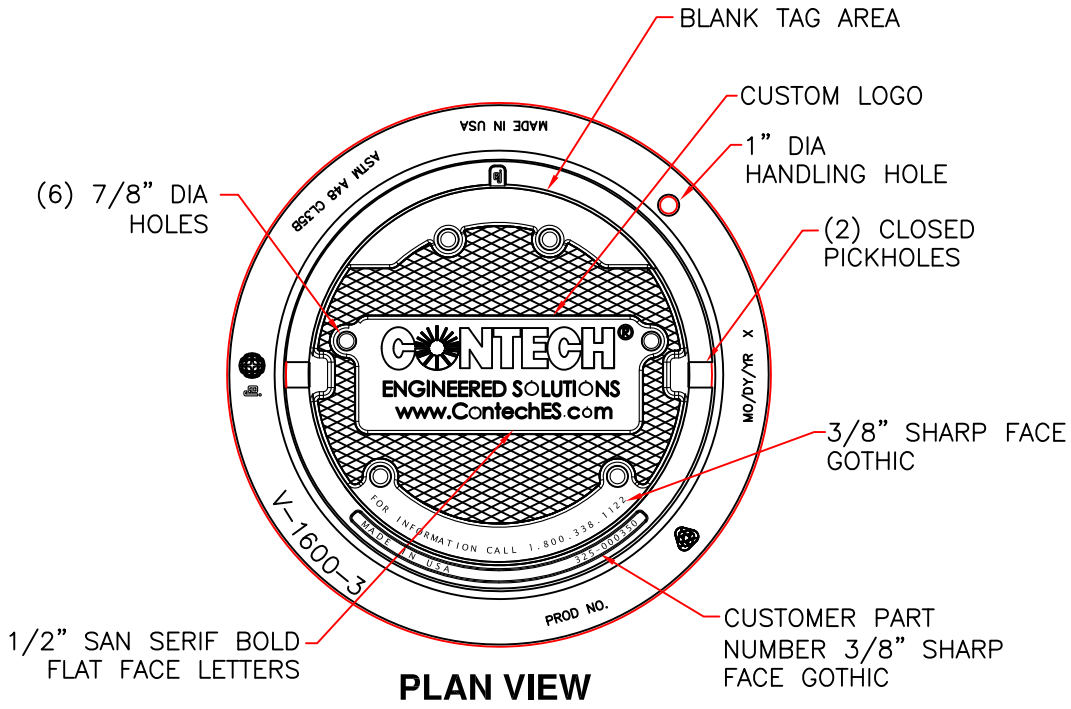
Major Components
41610210
41610220

Drawing Revision
06/12/2003 Designer: DAL
09/09/2015 Revised By: DVD

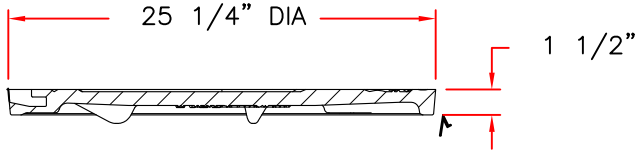
Disclaimer
Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

Contact
800 626 4653
ejco.com

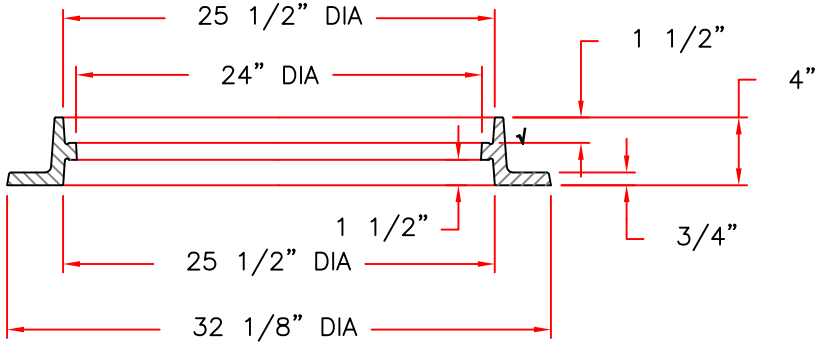
V1600-3 V1610-3 Assembly



PLAN VIEW



COVER SECTION



RING SECTION

Product Number

41600389

Design Features

-Materials
  Frame
    Gray Iron (CL35B)
  Cover
    Gray Iron (CL35B)

-Design Load
  Heavy Duty
-Open Area
  n/a
-Coating
  Undipped
-√Designates Machined Surface

Certification

-
-ASTM A48
-
-Country of Origin: USA

Major Components

41600310
41600374

Drawing Revision

05/02/2008 Designer: DEW
6/20/2017 Revised By: DAE

Disclaimer

Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

Contact

800 626 4653
ejco.com

APPENDIX G – FAIRMONT SCOTTSDALE PRINCESS – PARKING GARAGE CONSTRUCTION DOCUMENTS

FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
A PORTION OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

ENGINEER'S NOTES

1. MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION INCLUDING LATEST REVISION AND CURRENT SUPPLEMENTALS THEREOF PER THE LOCAL TOWN OR CITY) ARE INCORPORATED INTO THIS PLAN IN THEIR ENTIRETY.
2. ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION COVERED BY THIS PLAN SHALL BE IN ACCORDANCE WITH THE M.A.G. STANDARD SPECIFICATIONS AND DETAILS AND CURRENT SUPPLEMENTS THEREOF PER THE LOCAL CITY OR TOWN UNLESS SPECIFIED OTHERWISE IN THESE PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENTS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH ALL REQUIRED STANDARD SPECIFICATIONS, DETAILS AND SUPPLEMENTS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE IN THE CONTRACT.
4. THE CONTRACTOR IS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS APPLICABLE TO THE CONSTRUCTION COVERED BY THIS PLAN.
5. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE ALL WORK COVERED BY THIS PLAN.
6. THE QUANTITIES AND SITE CONDITIONS DEPICTED IN THESE PLANS ARE FOR GENERAL INFORMATIONAL PURPOSES ONLY AND MIGHT NOT REFLECT ACTUAL QUANTITIES AND SITE CONDITIONS. CONTRACTORS SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
7. A REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THEIR CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL CALL 48 HOURS IN ADVANCE FOR BLUE STAKE (1-800-STAKE-IT) PRIOR TO ANY EXCAVATION.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION AFFECTING UTILITIES AND THE COORDINATION OF ANY NECESSARY UTILITY RELOCATION WORK.
9. ALL PAVING, GRADING, EXCAVATION, TRENCHING, PIPE BEDDING, CUT FILL AND BACKFILL SHALL COMPLY WITH THE RECOMMENDATIONS SET FORTH IN THE SOILS (GEOTECHNICAL) REPORT FOR THIS PROJECT IN ADDITION TO THE REFERENCED REQUIRED SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL BE AWARE THAT CERTAIN UTILITIES REQUIRE PROPER ATTENTION AND CAREFUL PLANNING DURING SITE CONSTRUCTION. PLEASE NOTE THAT UTILITIES ON THESE PLANS MAY NOT EXHIBIT THE FULL PROTECTIVE COVER REQUIRED DURING THE SUBGRADE PREPARATION PHASE OF THE CONSTRUCTION. IN SUCH INSTANCES, THE CONTRACTOR SHALL PROVIDE ADDITIONAL PROTECTION (SUCH AS RAMPING) OR INCREASED PIPE STRENGTH TO PROVIDE THE NECESSARY PROTECTION REQUIRED TO PREVENT DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL HOLD THE ENGINEER HARMLESS IN ALL CASES FOR DAMAGES TO UTILITIES WHERE INADEQUATE PROTECTIVE MEASURES OCCUR.
10. THE CONTRACTOR IS TO VERIFY THE LOCATION AND THE ELEVATIONS OF ALL EXISTING UTILITIES AT POINTS OF TIE-IN PRIOR TO COMMENCING ANY NEW CONSTRUCTION. SHOULD ANY LOCATION OR ELEVATION DIFFER FROM THAT SHOWN ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S AGENT.
11. CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND SITE LAYOUT WITH ARCHITECT'S FINAL SITE PLAN AND FINAL BUILDING DIMENSIONS BEFORE STARTING WORK. REPORT DISCREPANCIES TO OWNER'S AGENT.
12. COORDINATION BETWEEN ALL PARTIES IS ESSENTIAL PART OF CONTRACT.
13. CONTRACTOR IS RESPONSIBLE FOR PROJECT AND SITE CONDITIONS, AND TO WORK WITH WEATHER CONDITIONS AS THE PROJECT SITE MAY BE LOCATED IN A FLOOD PRONE AREA AND SUBJECT TO FLOODING AND ITS HAZARDS.
14. THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING, PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER, OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS, ELEVATIONS, CONDITION, OR PAVEMENT CROSS-SLOPE DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIGN INTENT REFLECTED ON THESE PLANS NOT ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.
15. CONTRACTOR IS RESPONSIBLE TO COORDINATE UTILITY CROSSINGS AT CULVERT CROSSINGS BEFORE STARTING WORK ON CULVERT. COORDINATE WITH OWNER REPRESENTATIVE. VERIFY UTILITY LINES AND/OR CONDUITS ARE IN PLACE BEFORE STARTING CULVERT WORK.
16. CONSTRUCT RETENTION BASIN AS SHOWN. CONTRACTOR TO SCARIFY BOTTOM OF BASIN TWO FEET DEEP AND NOT ALLOW COMPACTION OVER 80%.
17. THIS PROJECT REQUIRES A REGULAR ONGOING MAINTENANCE PROGRAM FOR THE DESIGNED DRAINAGE SYSTEM(S) TO PRESERVE THE DESIGN INTEGRITY AND THE ABILITY TO PERFORM ITS OPERATIONAL INTENT. FAILURE TO PROVIDE MAINTENANCE WILL JEOPARDIZE THE DRAINAGE SYSTEM(S)' PERFORMANCE AND MAY LEAD TO IT'S INABILITY TO PERFORM PROPERLY AND/OR CAUSE DAMAGE ELSEWHERE IN THE PROJECT.
18. SEWER LINES DESIGNED IN PROFILE AND PUBLIC WATER LINES ARE REQUIRED TO BE ASBUILT AND THE INSTALLATION AND TESTING WITNESSED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODES R18-9-E301 "4.01 GENERAL PERMIT: SEWAGE COLLECTIONS SYSTEMS" AND R18-5-507 AND 508 "APPROVAL OF CONSTRUCTION" AND "RECORD DRAWINGS", RESPECTIVELY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY OWNER 72 HOURS IN ADVANCE WHEN THOSE SYSTEMS ARE READY TO BE WITNESSED.
19. THE WORK PRODUCT PRESENTED IS BELIEVED TO BE COMPLIANT WITH THE INTENT OF THE CURRENT AMERICANS DISABILITIES ACT (ADA) REQUIREMENTS AS INTERPRETED BY THE REVIEWING AGENCY(S). IF CONSTRUCTION OF THE PROJECT IS DELAYED, THIS WORK PRODUCT SHOULD BE UPDATED TO ACCOUNT FOR ANY RELEVANT ADA UPDATES BEFORE CONSTRUCTION BEGINS.
20. LOWEST FLOOR (LF) REFERS TO EITHER FLOOR/SLAB ELEVATION OR TOP OF BASEMENT SLAB. LF ELEVATIONS ON THE GRADING AND DRAINAGE PLANS FOR RESIDENTIAL UNITS REFLECT SLAB ON GRADE CONDITIONS AND CANNOT BE LOWERED WITHOUT AGENCY APPROVAL IN LOCATIONS WHERE 'SPECIAL FLOOD HAZARD AREAS' EXIST. IN NON-FLOOD HAZARD LOCATIONS, TO ENSURE THAT ADEQUATE RESIDENTIAL LOT DRAINAGE CAN BE ACHIEVED, A PROFESSIONAL ENGINEER SHOULD BE CONSULTED IF THE LF FOR THE SLAB IS PROPOSED TO BE LOWERED, OR IF A BASEMENT IS TO BE CONSTRUCTED.

Z:\2021\215319\Dwg\Imp\5319.40 - Parking Structure\5319.40-CV-PS.dwg

EARTHWORK QUANTITIES (ESTIMATED)

RAW CUT:	15,888	CY
RAW FILL:	2,804	CY

QUANTITIES ARE ESTIMATED IN PLACE. NO PRECOMPACTION, SHRINK OR SWELL IS ASSUMED.

CITY OF SCOTTSDALE NOTES

PLEASE REFER TO SHEET C-102 FOR CITY OF SCOTTSDALE NOTES.

QUANTITIES

PLEASE REFER TO SHEET C-102 FOR ESTIMATED QUANTITIES FOR WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS.

LEGEND

PLEASE REFER TO SHEET C-102 FOR LEGEND AND LIST OF ABBREVIATIONS.

UTILITY NOTES

1. THESE PLANS HAVE BEEN SUBMITTED TO THE FOLLOWING UTILITY COMPANIES FOR APPROVAL WITHIN THEIR AREA OF INTEREST. THE SIZE AND LOCATIONS, AS SHOWN, OF THE GAS, TELEPHONE AND POWER LINES, AND CONNECTIONS AGREE WITH THE FURNISHED INFORMATION CONTAINED IN THE UTILITY COMPANY'S RECORDS. WHERE THE WORK TO BE DONE CONFLICTS WITH ANY OF THESE UTILITIES, THE CONFLICTS SHALL BE RESOLVED AS SPECIFIED IN THE SPECIAL PROVISIONS AND/OR AS OTHERWISE NOTED ON THESE PLANS. CONFLICTS ARISING DURING THE COURSE OF CONSTRUCTION FROM UNFORESEEN CIRCUMSTANCES SHALL BE REPORTED TO THE INTERESTED UTILITY COMPANY AND BE RESOLVED BY THEM AND THE DESIGN ENGINEER.
2. THE CITY WILL NOT PARTICIPATE IN THE COST OF CONSTRUCTION OR UTILITY RELOCATION.

FEMA FIRM NOTE (ZONE AO)

ACCORDING TO FEMA FLOOD INSURANCE RATE MAPPING, THE SUBJECT PROPERTY IS LOCATED IN 'SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD' "ZONE AO". ZONE AO IS DESCRIBED AS: "FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETERMINED."

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

MAP NUMBER	COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM	INDEX DATE	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
04013C	045012	1320	L	10/16/2013	07/20/2021	AO	1

ENGINEER'S CERTIFICATION

ENGINEER'S CERTIFICATION: THE LOWEST FLOOR ELEVATION(S) AND/OR FLOOD PROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE-HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE REVISED CODE, CHAPTER 37-FLOODPLAIN AND STORMWATER REGULATIONS.

Darin L. Moore — 06/02/2023

ENGINEER SIGNATURE — DATE

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/ LAND SURVEYOR — DATE

SEAL

PARCEL DESCRIPTION

LOT 2 OF FAIRMONT SCOTTSDALE PRINCESS, AS SHOWN ON MINOR SUBDIVISION PLAT RECORDED IN BOOK 1104, PAGE 3, MARICOPA COUNTY RECORDS (MCR), LYING WITHIN SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST, OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA.

SOILS REPORT NOTE

A SOILS GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED GEOTECHNICAL ENGINEERING REPORT - FAIRMONT SCOTTSDALE PRINCESS - PARKING STRUCTURE ADDITION BY ALPHA GEOTECHNICAL & MATERIALS, INC. DATED APRIL 24, 2023. REPORT NO. 22-G-13162.

STIPULATION CONFORMANCE STATEMENT

"THE ENGINEER OF RECORD ON THESE PLANS HAS RECEIVED A COPY OF THE APPROVED STIPULATIONS FOR THIS PROJECT AND HAS DESIGNED THESE PLANS IN CONFORMANCE WITH THE APPROVED STIPULATIONS."

Darin L. Moore — 06/02/2023

ENGINEER SIGNATURE — DATE

FINISH FLOOR ELEVATION CALCULATION

HAG = 1561.48
LAG = 1554.74
FF=1566.50
RFD=1563.48
ALL ELECTROMECHANICAL EQUIPMENT SHALL BE ELEVATED TO RFD ELEVATION

NO CONFLICT SIGNATURE BLOCK

UTILITY	UTILITY COMPANY	NAME OF COMPANY REPRESENTATIVE	TELEPHONE NUMBER	DATE CONTACTED	DATE SIGNED
ELECTRIC	ARIZONA PUBLIC SERVICE	HAILEY PARKS	602-493-4401	06/02/2023	
TELEPHONE	LUMEN	JEANETTE DEBOARD	480-221-7810	06/02/2023	
NATURAL GAS	SOUTHWEST GAS	ANDY SAKS	480-730-3857	06/02/2023	
CABLE TV	COX COMMUNICATIONS	JACOB HORSMAN	-	06/02/2023	
OTHER	MCI	RICHARD YOUNG	602-615-8995	06/02/2023	

ENGINEER'S CERTIFICATION

I DARIN L. MOORE, P.E. , AS THE ENGINEER OF RECORD FOR THIS DEVELOPMENT, HEREBY CERTIFY THAT ALL UTILITY COMPANIES LISTED ABOVE HAVE BEEN PROVIDED FINAL IMPROVEMENT PLANS FOR REVIEW, AND THAT ALL CONFLICTS IDENTIFIED BY THE UTILITIES HAVE BEEN RESOLVED. IN ADDITION, "NO CONFLICT" FORMS HAVE BEEN OBTAINED FROM EACH UTILITY COMPANY AND ARE INCLUDED IN THIS SUBMITTAL.

Darin L. Moore — 06/02/2023

SIGNATURE — DATE

SHEET INDEX

C-101	COVER SHEET
C-102	NOTES AND QUANTITIES
C-103	INDEX MAP
C-104-C-105	DEMOLITION PLAN
C-106-C-107	GRADING AND DRAINAGE PLAN
C-108	WATER PLAN
C-109-C-110	SIGNING AND STRIPING PLAN
C-111-C-113	DETAILS AND SECTIONS

BENCHMARK

CITY OF SCOTTSDALE BRASS CAP FLUSH 450'± NORTH OF PRINCESS DRIVE ON SCOTTSDALE ROAD, BEING THE WEST QUARTER CORNER OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST.
CITY OF SCOTTSDALE DATUM, NAVD88 DATUM
ELEVATION=1553.22'.

I HEREBY CERTIFY THAT ALL ELEVATIONS REPRESENTED ON THIS PLAN ARE BASED ON NAVD 1988, MCDOT, AND MEET THE FEMA BENCHMARK MAINTENANCE (BMM) CRITERIA.

PUBLIC UTILITIES

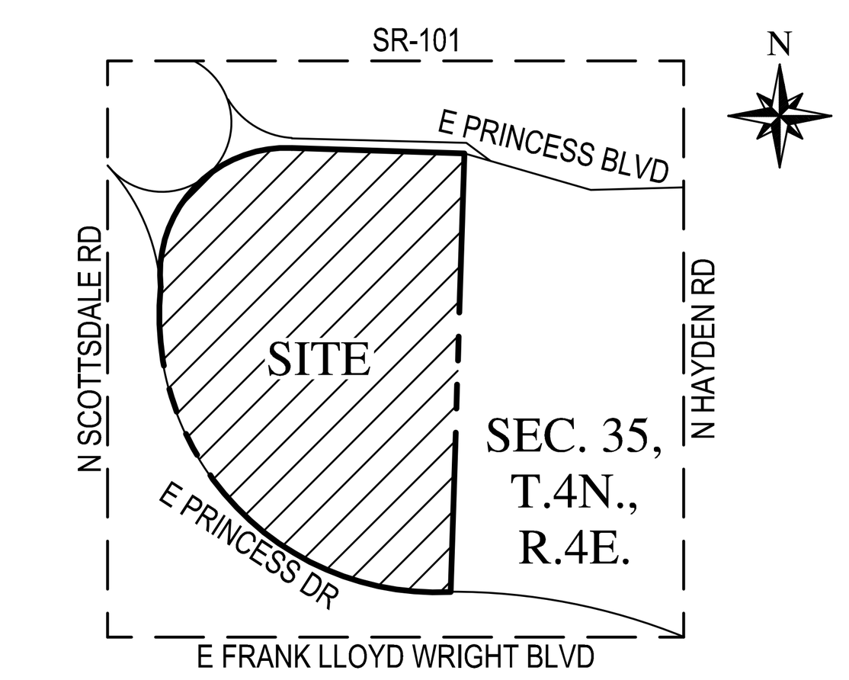
WATER	CITY OF SCOTTSDALE
SEWER	CITY OF SCOTTSDALE
ELECTRIC	APS
TELEPHONE	LUMEN
NATURAL GAS	SOUTHWEST GAS
CABLE TV	COX COMMUNICATIONS

CITY OF SCOTTSDALE CIVIL APPROVAL

REVIEW & RECOMMENDED APPROVAL BY:

PAVING		SIGNS & MARKINGS	
GRADING & DRAINAGE		PLANNING	
WATER & SEWER		FIRE	
RETAINING WALLS		SIGNALS & STREET	

ENGINEERING DEPARTMENT MANAGER — DATE



VICINITY MAP
N.T.S.

OWNER / DEVELOPER

STRATEGIC HOTELS & RESORTS
150 NORTH RIVERSIDE PLAZA, SUITE 4270
CHICAGO, IL 60606
CONTACT: TIMOTHY TAYLOR
PHONE: (312) 658-6038

ENGINEER

WOOD, PATEL & ASSOCIATES, INC.
2051 WEST NORTHERN AVENUE, SUITE 100
PHOENIX, ARIZONA 85021
CONTACT: DARIN MOORE, P.E.
PHONE: (602) 335-8500
FAX: (602) 335-8580

ARCHITECT

KOLLIN ALTOMARE ARCHITECTS
4265 E. CONANT STREET, SUITE 101
LONG BEACH, CA 90808
CONTACT: PAUL ALTOMARE
PHONE: (562) 597-8760

PROJECT SITE DATA

ASSESSOR PARCEL NUMBER(S):
215-08-694
PROJECT SITE ADDRESS:
7575 E PRINCESS BLVD
SCOTTSDALE, ARIZONA 85255
PROJECT SITE AREA(S):
NET AREA = 9.02 AC
DISTURBED AREA = 5± AC
ZONING:
C2

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Land Survey
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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA

COVER SHEET

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil) — CERTIFICATE NO. 36382 — DARIN L. MOORE — Date Signed 06/02/23 — ARIZONA, U.S.A.
EXPIRES 06-30-25

SCALE (HORIZ.)	N/A
SCALE (VERT.)	N/A
DATE	06/02/2023
JOB NUMBER	215319.40
SHEET	C-101 OF 13

CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

ISSUED FOR:
SUBMITTAL

ISSUANCE	DATE

ARCHITECT OF RECORD
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Long Beach, CA 90808
t: 562.597.8760
kollinaltomare.com
Chicago
900 N. Franklin Street, Suite 405-B
Chicago, IL 60610
t: 312.471.8760

PROJECT

FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE

7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

JOB NUMBER
2022-22

DATE
06/02/2023

SHEET NAME
COVER SHEET

SHEET NUMBER
C-101

CITY OF SCOTTSDALE NOTES

GENERAL CONSTRUCTION NOTES FOR CAPITAL PROJECTS

1. ALL IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THE 2020 MARICOPA COUNTY ASSOCIATION OF GOVERNMENTS STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE SUPPLEMENTAL STANDARD SPECIFICATIONS AND DETAILS AND CITY OF SCOTTSDALE'S DESIGN STANDARDS & POLICIES MANUAL (DS&PM). IF THERE IS A CONFLICT, THE LATTER SHALL APPLY. ALL FACILITIES CONSTRUCTION SHALL COMPLY WITH THE LATEST BUILDING CODES AS AMENDED AND ADOPTED BY THE CITY OF SCOTTSDALE.
2. THE ENGINEERING DESIGNS ON THESE PLANS ARE APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. BASED ON THE INFORMATION SUBMITTED ON THE PLANS AND ASSOCIATED DOCUMENTS, THE CITY HAS REVIEWED AND FOUND THEM TO BE IN ACCORDANCE WITH THE SCOTTSDALE REVISED CODE AND ARE ACCEPTABLE FOR PERMIT ISSUANCE. THIS ACCEPTANCE BY THE CITY DOES NOT AUTHORIZE VIOLATIONS OF ANY APPLICABLE CODE, ORDINANCE OR STANDARD AS ADOPTED BY THE SCOTTSDALE REVISED CODE.
4. APPROVAL OF THE PLANS BY THE CITY IS VALID FOR SIX MONTHS. IF A PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS OF REVIEW, THE PLANS SHALL BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
5. ANY DEVIATION FROM THE APPROVED PLANS SHALL BE REVIEWED AND APPROVED BY THE CITY PRIOR TO THAT CHANGE BEING INCORPORATED INTO THE PROJECT.
6. A CITY CAPITAL PROJECTS INSPECTOR WILL INSPECT ALL WORK WITHIN THE CITY RIGHTS-OF-WAY, EASEMENTS AND FACILITIES.
7. ANY SPECIAL INSPECTION REQUIRED SHALL BE IN ADDITION TO ANY ROUTINE INSPECTION BY THE CITY.
8. CITY ENCROACHMENT AND BUILDING PERMITS ARE REQUIRED FOR WORK IN PUBLIC RIGHTS-OF-WAY, EASEMENTS GRANTED FOR PUBLIC PURPOSES AND FACILITIES. PERMITS WILL BE ISSUED BY THE CITY THROUGH THE CITY'S ONE STOP SHOP. COPIES OF ALL PERMITS SHALL BE RETAINED ON-SITE AND SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE WORK STOPPAGE UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR SALVAGING PROTECTED NATIVE PLANTS PRIOR TO THE START OF CONSTRUCTION.
10. CONTRACTOR SHALL CONTACT AZ 811 TWO FULL WORKING DAYS PRIOR TO BEGINNING EXCAVATION.
11. ALL EXCAVATION AND GRADING WHICH IS NOT IN PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC PURPOSES MUST CONFORM TO SECTION 1803 AND APPENDIX J OF THE LATEST INTERNATIONAL CODE COUNCIL AS ADOPTED AND AMENDED BY THE CITY OF SCOTTSDALE. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE CITY.
12. THRUST RESTRAINT, WHERE REQUIRED, ON ALL CITY WATER LINES SHALL BE PROVIDED USING MEGALUG MECHANICAL JOINT RESTRAINTS OR CITY-APPROVED EQUAL.
13. ANY ASPHALT MIX DESIGN USED ON CITY PROJECTS SHALL HAVE BEEN APPROVED FOR THAT USE PER SECTION 5-10 OF THE CITY'S DS&PM AND APPEAR ON THE "APPROVED LIST OF ASPHALT MIXES" AS DISTRIBUTED BY THE EAST VALLEY ASPHALT COMMITTEE (EVAC).
14. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND REPLACE, AT NO ADDITIONAL COST TO THE CITY, ANY AND ALL PAVEMENT, SIDEWALK, CURB AND GUTTER, DRAINAGE STRUCTURES, ETC. OUTSIDE THE PAY LIMIT THAT ARE DAMAGED DUE TO THEIR ACTIVITIES ON THE PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO, THE REMOVAL AND REPLACEMENT OF NEWLY CRACKED ROADWAY INFRASTRUCTURE, THE REMOVAL AND REPLACEMENT OF EXISTING CRACKED ROADWAY INFRASTRUCTURE WHERE THE CRACKS HAVE BEEN ENLARGED DUE TO THE CONTRACTOR'S OPERATIONS, THE REMOVAL AND REPLACEMENT OF DEFORMED ROADWAY INFRASTRUCTURE. ALL SAWCUTS USED FOR THE REMOVAL OF THESE ITEMS SHALL BE PERPENDICULAR AND PARALLEL TO THE CENTERLINE CONTROLLING THAT ITEM, OR AT THE DIRECTION OF THE CITY'S CAPITAL PROJECTS INSPECTOR.
15. ALL CAPITAL IMPROVEMENT PROJECTS SHALL MEET THE PROCEDURES AND STANDARDS FOR THE USE OF TEMPORARY/SECURITY FENCING AROUND THE PERIMETER OF CONSTRUCTION SITES, AS DEFINED IN THE CITY'S ZONING ORDINANCE, ARTICLE VII, SECTION 7.700.

GENERAL NOTES FOR PUBLIC WORKS CONSTRUCTION

1. ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MAG UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE CITY'S SUPPLEMENTAL STANDARD DETAILS WILL GOVERN.
2. THE CITY ONLY APPROVES THE SCOPE, NOT THE DETAIL, OF ENGINEERING DESIGNS; THEREFORE, IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. THE APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF A RIGHT-OF-WAY PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN THIS TIME FRAME, THE PLANS MUST BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
4. A CITY INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY OF SCOTTSDALE. NOTIFY INSPECTION SERVICES 72 HOURS BEFORE BEGINNING WORK.
5. WHENEVER EXCAVATION IS NECESSARY, CALL THE BLUE STAKE CENTER, 811, TWO WORKING DAYS BEFORE EXCAVATION BEGINS.
6. PERMISSION TO WORK IN THE RIGHT-OF-WAY (PWR) PERMITS ARE REQUIRED FOR ALL WORKS WITHIN THE RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. COPIES OF ALL PERMITS MUST BE RETAINED ON-SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE SUSPENSION OF ALL WORK UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.

FIRE NOTE:

1. ALL PRIVATE STREETS AND DRIVES SHALL CONFORM TO THE FIRE DEPARTMENT GUIDELINES FOR EMERGENCY VEHICLE ACCESS.

WATER NOTE:

1. THE WATER SYSTEM SHOWN HEREIN HAS BEEN DESIGNED TO ADEQUATELY SUPPLY WATER IN SUFFICIENT QUANTITY AND PRESSURE TO MEET LOCAL FIRE REQUIREMENTS.

PAVING QUANTITIES (ESTIMATED)

2.5" A.C. OVER 6" A.B.C.	1,698	SY
4" A.C. OVER 6" A.B.C.	2,117	SY
6" VERTICAL CURB & GUTTER	17	LF
6" SINGLE CURB	1,942	LF
6" SINGLE CURB (MODIFIED)	59	LF
CONCRETE SCUPPER	2	EA
CONCRETE SIDEWALK	9,524	SF
DRIVEWAY (C.O.S. STD. DET. 2257-2)	2	EA
DRIVEWAY (C.O.S. STD. DET. 2257-1)	1	EA
VALLEY GUTTER	264	LF
SIDEWALK RAMP	6	EA
CURB OPENING	2	EA
SAWCUT, REMOVE & REPLACE EXISTING PAVEMENT	66	SY
GROUTED RIPRAP	25	SY
LOOSE RIPRAP	13	SY

PRIVATE WATER QUANTITIES (ESTIMATED)

6" DOUBLE CHECK BACK FLOW RETENTION	1	EA
6" GATE VALVE	1	EA
6" POLYWRAPPED D.I.P. PRESSURE CLASS 350 WATER LINE	47	LF
CONNECT TO EXISTING WATERLINE	1	EA

LEGEND

EXISTING SURVEY

- SECTION LINE
- RIGHT OF WAY
- PROPERTY LINE
- ROAD CENTERLINE
- EASEMENT
- SURVEY MARKER
- UG ELECTRIC (BURIED CABLE)
- UG ELECTRIC (CONDUIT)
- UG ELECTRIC (DUCT BANK)
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- UG TELEPHONE
- CABLE TELEVISION
- OVERHEAD CABLE TELEVISION
- TELEPHONE DUCT BANK
- BARBED WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- BLOCK WALL
- GAS LINE
- SEWER LINE
- STORM DRAIN PIPE
- IRRIGATION LINE
- WATER LINE
- CURB
- SIDEWALK
- MAJOR CONTOUR
- MINOR CONTOUR
- VEGETATION
- BUILDING
- SEWER MANHOLE
- STORM DRAIN MANHOLE
- TELEPHONE MANHOLE
- SPOT ELEVATION
- SIGN
- JUNCTION BOX/RISER
- FIRE HYDRANT
- WATER VALVE
- STREET/PARKING LIGHT
- UTILITY POLE
- CATCH BASIN

PROPOSED GRADING, DRAINAGE & PAVING

- MAJOR CONTOUR
- MINOR CONTOUR
- SPOT ELEVATIONS
- STORM DRAIN PIPE
- STORM DRAIN CATCH BASIN
- SLOPE ARROW
- GRADE BREAK/RIDGE
- RIP RAP
- WALL ELEVATION
- ROOF DRAIN/DRAIN ARROW
- DRYWELL
- SITE ULTIMATE OUTFALL LOCATION & ELEVATION
- WALL
- CONCRETE SIDEWALK
- CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- STREET/PARKING LIGHT
- ADA PARKING SYMBOL

PROPOSED WATER & SEWER

- WATER LINE
- WATER LINE FITTINGS
- BACKFLOW PREVENTION DEVICE
- WATER VALVE
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT
- WATER METER
- PLUG
- REDUCER
- TAPPING SLEEVE & VALVE
- CURB STOP
- PRESSURE RELEASE VALVE
- AIR/VACUUM RELEASE VALVE
- SEWER LINE
- SEWER MANHOLE
- CLEANOUT

BACK OF CURB CURVE TABLE

CURVE	DELTA	RADIUS	ARC	TANGENT	CHORD
BC1	89°50'32"	24.50'	38.42'	24.43'	34.60'
BC2	89°19'57"	24.83'	38.71'	24.54'	34.91'
BC3	90°00'00"	1.50'	2.36'	1.50'	2.12'
BC4	180°00'00"	0.67'	2.09'	INF'	1.33'
BC5	91°17'01"	5.17'	8.24'	5.29'	7.39'
BC6	90°00'00"	3.50'	5.50'	3.50'	4.95'
BC7	87°37'37"	5.17'	7.90'	4.96'	7.15'
BC8	87°37'09"	5.17'	7.90'	4.96'	7.15'
BC9	180°00'00"	1.40'	4.39'	INF'	2.79'
BC10	90°00'00"	1.50'	2.36'	1.50'	2.12'
BC11	179°59'52"	1.40'	4.39'	72929.16'	2.79'
BC12	116°03'42"	24.50'	49.63'	39.26'	41.57'
BC13	76°55'36"	24.55'	32.96'	19.50'	30.54'
BC14	89°43'32"	3.50'	5.48'	3.48'	4.94'
BC15	108°47'11"	25.00'	47.47'	34.91'	40.65'

BACK OF CURB CURVE TABLE

CURVE	DELTA	RADIUS	ARC	TANGENT	CHORD
BC16	85°29'31"	25.00'	37.30'	23.11'	33.94'
BC17	179°59'56"	0.59'	1.85'	63070.23'	1.18'
BC18	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC19	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC20	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC21	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC22	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC23	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC24	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC25	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC26	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC27	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC28	90°00'00"	2.00'	3.14'	2.00'	2.83'
BC29	90°00'00"	2.00'	3.14'	2.00'	2.83'

ABBREVIATIONS

BB	BOTTOM OF BANK
C	CONCRETE ELEVATION
COS	CITY OF SCOTTSDALE
E.S.V.A.E.	EMERGENCY VEHICLE ACCESS EASEMENT
EX	EXISTING
FG	FINISHED GROUND
FL	FLOW LINE ELEVATION
G	GUTTER ELEVATION
GB	GRADE BREAK
INV	INVERT ELEVATION
IRR	IRRIGATION
LF	LINEAR FEET
LFF	LOWEST FINISHED FLOOR ELEVATION
MIN	MINIMUM
NG	NATURAL GROUND ELEVATION
N.T.S.	NOT TO SCALE
P	PAVEMENT ELEVATION
PL	PROPERTY LINE
RIM	RIM ELEVATION
S	SLOPE
SD	STORM DRAIN
SE	SEWER EASEMENT
SS	SEWER SERVICE
STD	STANDARD
TB	TOP OF BANK
TC	TOP OF CURB
TF	TOP OF FOOTING ELEVATION
TW	TOP OF WALL ELEVATION
U.E.	UTILITY EASEMENT
UG	UNDERGROUND
W.I.	WROUGHT IRON

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
NOTES AND QUANTITIES

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO. 36382
DARIN L. MOORE
Date Signed 06/02/23
ARIZONA, U.S.A.
EXPIRES 06-30-25

SCALE (HORIZ.)	N/A
SCALE (VERT.)	N/A
DATE	06/02/2023
JOB NUMBER	215319.40
SHEET	C-102 OF 13

CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

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ISSUED FOR:
SUBMITTAL

ISSUANCE	DATE

ARCHITECT OF RECORD
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PROJECT
FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

JOB NUMBER
2022-22

DATE
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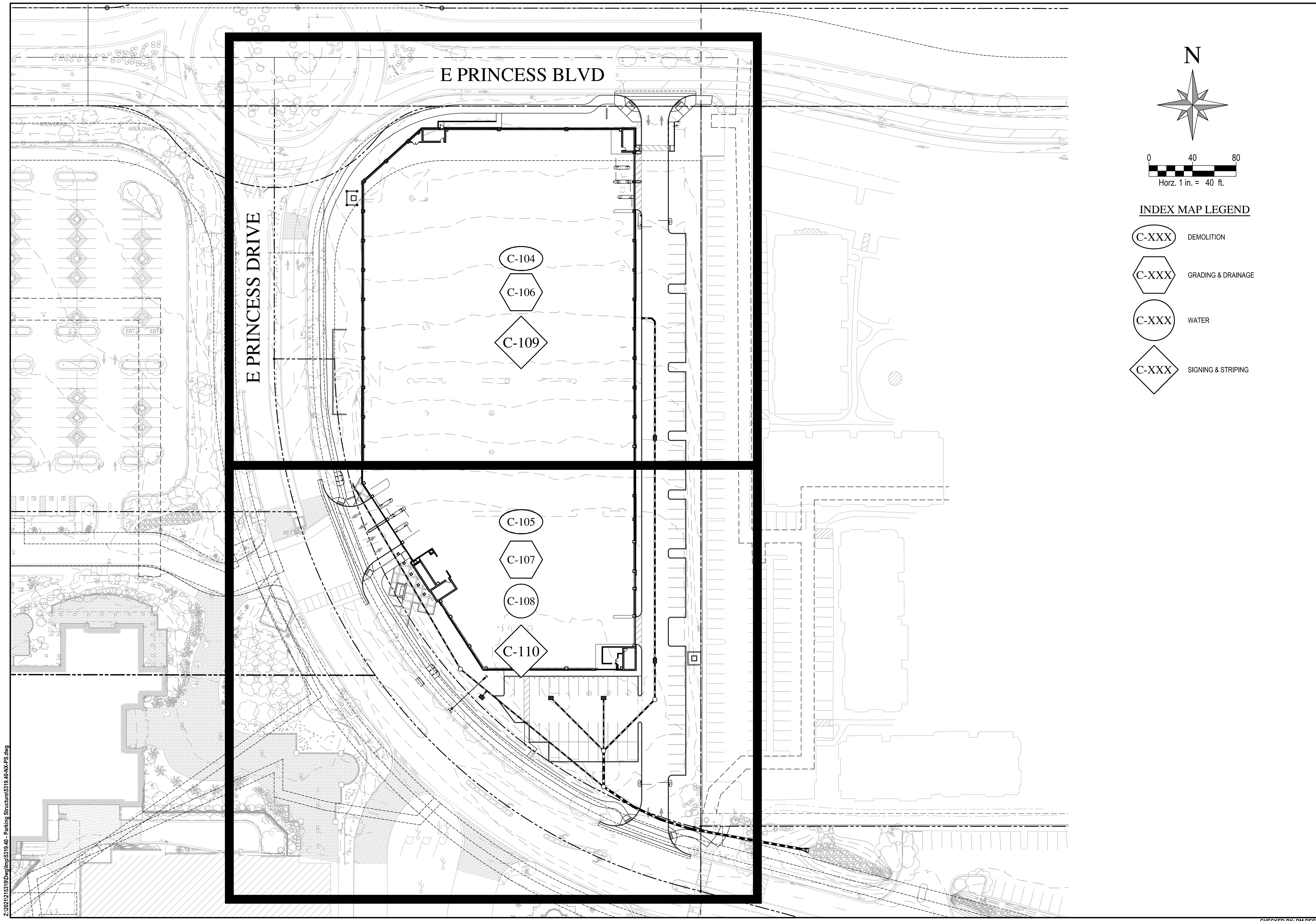

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
INDEX MAP

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SHEET	C-103 OF 13

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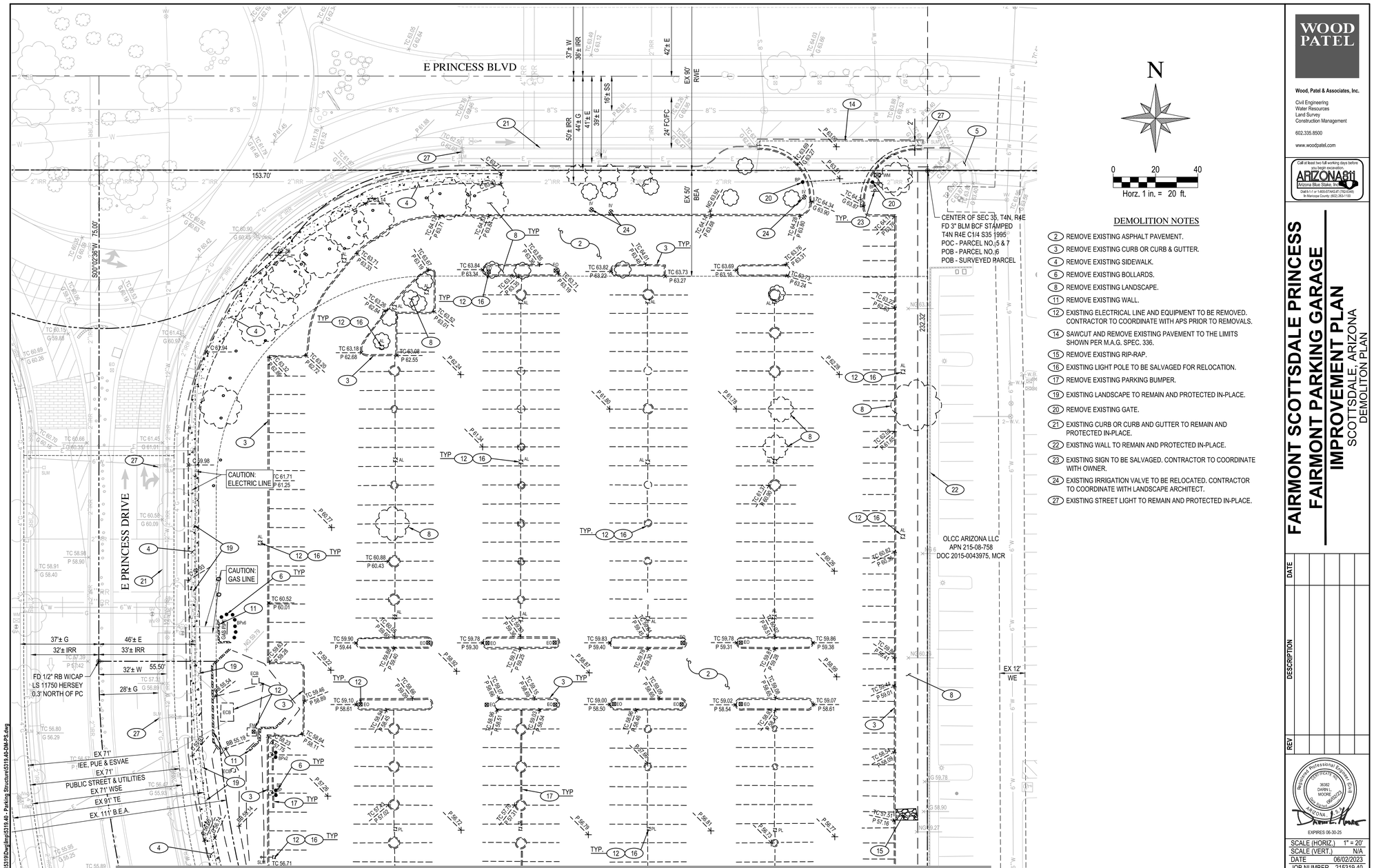
06/02/2023

SHEET NAME
INDEX MAP

SHEET NUMBER
C-103



N

0 20 40

Horz. 1 in. = 20 ft.

DEMOLITION NOTES

(2) REMOVE EXISTING ASPHALT PAVEMENT.
(3) REMOVE EXISTING CURB OR CURB & GUTTER.
(4) REMOVE EXISTING SIDEWALK.
(6) REMOVE EXISTING BOLLARDS.
(8) REMOVE EXISTING LANDSCAPE.
(11) REMOVE EXISTING WALL.
(12) EXISTING ELECTRICAL LINE AND EQUIPMENT TO BE REMOVED. CONTRACTOR TO COORDINATE WITH APS PRIOR TO REMOVALS.
(14) SAWCUT AND REMOVE EXISTING PAVEMENT TO THE LIMITS SHOWN PER M.A.G. SPEC. 336.
(15) REMOVE EXISTING RIP-RAP.
(16) EXISTING LIGHT POLE TO BE SALVAGED FOR RELOCATION.
(17) REMOVE EXISTING PARKING BUMPER.
(19) EXISTING LANDSCAPE TO REMAIN AND PROTECTED IN-PLACE.
(20) REMOVE EXISTING GATE.
(21) EXISTING CURB OR CURB AND GUTTER TO REMAIN AND PROTECTED IN-PLACE.
(22) EXISTING WALL TO REMAIN AND PROTECTED IN-PLACE.
(23) EXISTING SIGN TO BE SALVAGED. CONTRACTOR TO COORDINATE WITH OWNER.
(24) EXISTING IRRIGATION VALVE TO BE RELOCATED. CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT.
(27) EXISTING STREET LIGHT TO REMAIN AND PROTECTED IN-PLACE.

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CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
DEMOLITON PLAN

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
DANIEL L. MOORE
36382
CERTIFICATE NO.
ARIZONA U.S.A.
EXPIRES 06-30-25

SCALE (HORIZ.) 1" = 20'
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FAIRMONT PARKING GARAGE
7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

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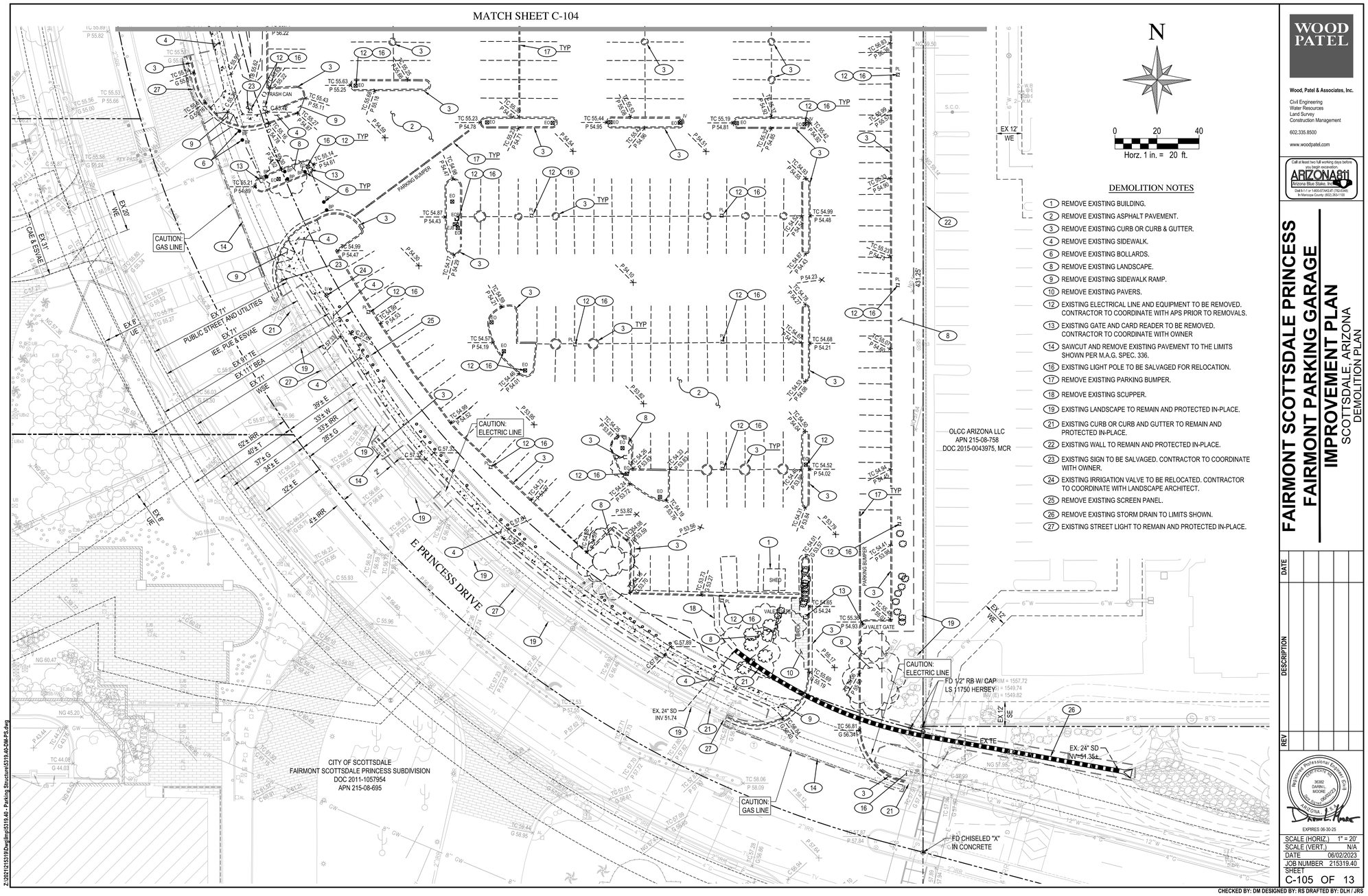
DATE 06/02/2023
SHEET NAME DEMOLITON PLAN
SHEET NUMBER C-104



DEMOLITION NOTES

1. REMOVE EXISTING BUILDING.
2. REMOVE EXISTING ASPHALT PAVEMENT.
3. REMOVE EXISTING CURB OR CURB & GUTTER.
4. REMOVE EXISTING SIDEWALK.
6. REMOVE EXISTING BOLLARDS.
8. REMOVE EXISTING LANDSCAPE.
9. REMOVE EXISTING SIDEWALK RAMP.
10. REMOVE EXISTING PAVERS.
12. EXISTING ELECTRICAL LINE AND EQUIPMENT TO BE REMOVED. CONTRACTOR TO COORDINATE WITH APS PRIOR TO REMOVALS.
13. EXISTING GATE AND CARD READER TO BE REMOVED. CONTRACTOR TO COORDINATE WITH OWNER
14. SAWCUT AND REMOVE EXISTING PAVEMENT TO THE LIMITS SHOWN PER M.A.G. SPEC. 336.
16. EXISTING LIGHT POLE TO BE SALVAGED FOR RELOCATION.
17. REMOVE EXISTING PARKING BUMPER.
18. REMOVE EXISTING SCUPPER.
19. EXISTING LANDSCAPE TO REMAIN AND PROTECTED IN-PLACE.
21. EXISTING CURB OR CURB AND GUTTER TO REMAIN AND PROTECTED IN-PLACE.
22. EXISTING WALL TO REMAIN AND PROTECTED IN-PLACE.
23. EXISTING SIGN TO BE SALVAGED. CONTRACTOR TO COORDINATE WITH OWNER.
24. EXISTING IRRIGATION VALVE TO BE RELOCATED. CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT.
25. REMOVE EXISTING SCREEN PANEL.
26. REMOVE EXISTING STORM DRAIN TO LIMITS SHOWN.
27. EXISTING STREET LIGHT TO REMAIN AND PROTECTED IN-PLACE.

CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
DEMOLITION PLAN

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO.
36382
DARIN L. MOORE
ARIZONA
EXPIRES 06-30-25

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	06/02/2023
JOB NUMBER	215319.40
SHEET	C-105 OF 13

ISSUED FOR:

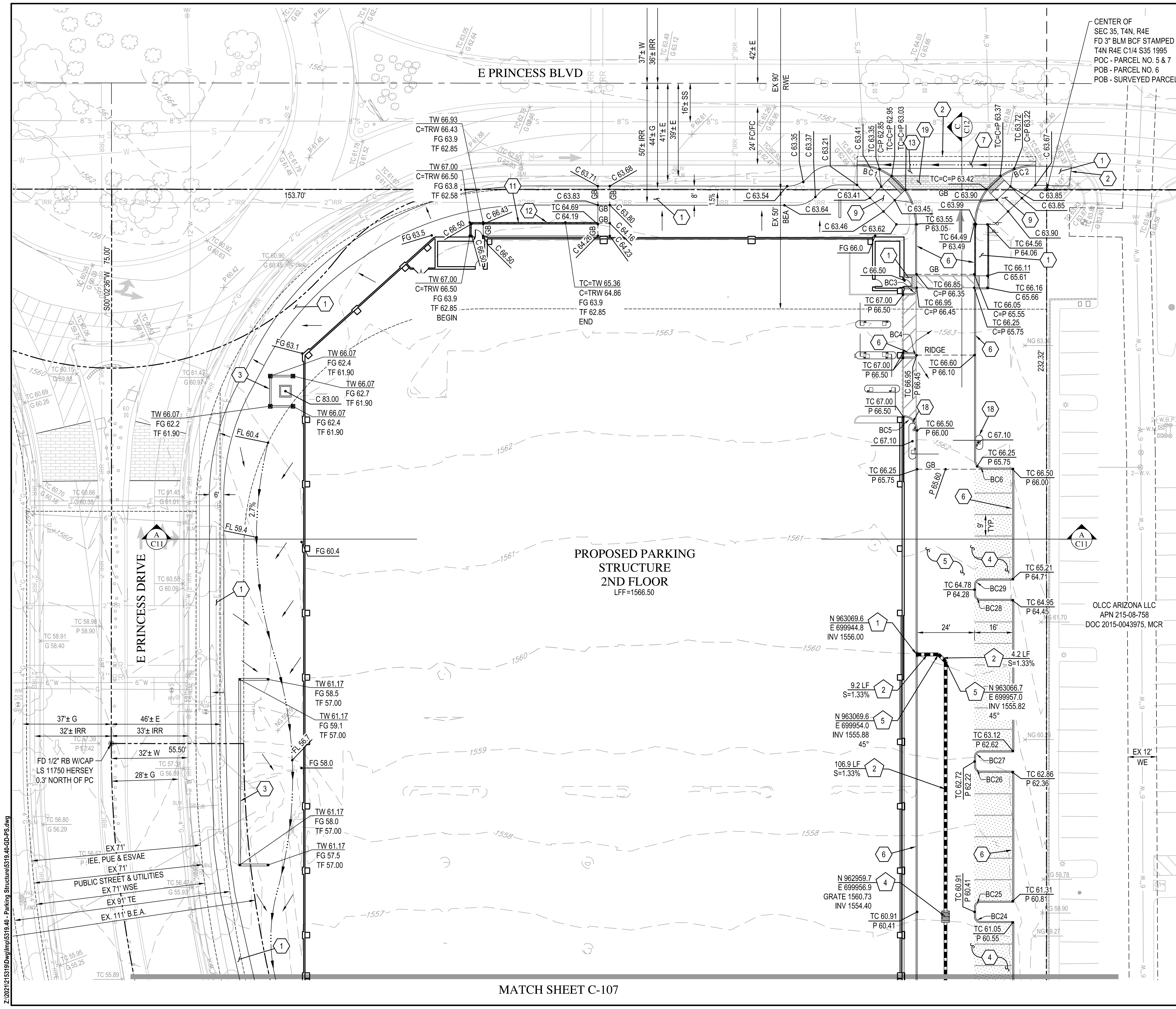
SUBMITTAL

⚠ ISSUANCE	DATE

ARCHITECT OF RECORD
Kollin Altomare Architects
Long Beach
4265 E. Conant Street, Suite 101
Long Beach, CA 90808
t: 562.597.8750
kollinaltomare.com
Chicago
900 N. Franklin Street, Suite 405-B
Chicago, IL 60610
t: 312.471.8760

PROJECT
FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

JOB NUMBER	2022-22
DATE	06/02/2023
SHEET NAME	DEMOLITION PLAN
SHEET NUMBER	C-105



N

0 20 40

Horz. 1 in. = 20 ft.

PAVING NOTES

1. CONSTRUCT SIDEWALK PER M.A.G. STD. DET. 230. SEE LANDSCAPE PLANS SHEET L2.01 FOR COLOR & FINISH.
2. MATCH EXISTING ELEVATIONS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. CONSTRUCT SCREEN WALL PER DETAIL 5 ON SHEET L2.51 OF THE LANDSCAPE PLAN.
4. INSTALL LIGHT DUTY PAVEMENT, 2.5" A.C. PAVEMENT OVER 6" A.B.C. PER GEOTECHNICAL REPORT.
5. INSTALL HEAVY DUTY PAVEMENT, 4" A.C. PAVEMENT OVER 6" A.B.C. PER GEOTECHNICAL REPORT.
6. CONSTRUCT 6" SINGLE CURB PER MAG STD. DET. 222, TYPE A.
7. CONSTRUCT VALLEY GUTTER PER M.A.G. STD. DET. 240 MODIFIED TO A WIDTH OF 3'.
9. CONSTRUCT SIDEWALK RAMP PER C.O.S. STD. DET. 2234.
11. CONSTRUCT RETAINING WALL. SEE DETAIL B ON SHEET S-401 OF THE ARCHITECTURAL PLANS.
12. CONSTRUCT SINGLE CURB PER M.A.G. STD. DETAIL 222, TYPE 'A', MODIFIED PER THE DETAIL ON SHEET C-111.
13. CONSTRUCT DRIVEWAY PER C.O.S. STD. DETAIL 2257-2, CH6, MODIFIED TO HAVE 25' RADIUS CURB RETURNS AND 12' DRIVE LANES.
18. CONSTRUCT CONCRETE PAD PER M.A.G. STD. DETAIL 230 MODIFIED TO A CONCRETE THICKNESS OF 12".
19. INSTALL PAVERS PER COS STD. DETAIL 2239, TYPE 'B'. SEE LANDSCAPE PLAN SHEET L2.01 FOR PAVER COLOR.

STORM DRAIN NOTES

1. SEE PLUMBING PLANS FOR CONTINUATION. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION WITH PLUMBING PLAN PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. INSTALL 16" H.D.P.E. PIPE WITH WATER TIGHT JOINTS.
4. INSTALL CATCH BASIN PER M.A.G. STD. DETAIL 535.
5. INSTALL BEND. SIZE PER ADJOINING PIPE DIAMETER. ANGLE PER PLAN.

NOTE:
1. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
2. CONTRACTOR TO VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE ROAD MEETS OR EXCEEDS THE 83,000 LB REQUIREMENT.
3. REFER TO SHEET C1 FOR HAG, LAG, AND RFD ELEVATION INFORMATION.
4. REFER TO SHEET C-102 FOR BACK OF CURB CURVE TABLE.

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
GRADING AND DRAINAGE PLAN

REV	DESCRIPTION	DATE

36382 DARIN L. MOORE 06/02/23 ARIZONA, U.S.A.

EXPIRES 06-30-25

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	06/02/2023
JOB NUMBER	215319.40
SHEET	C-106 OF 13

CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

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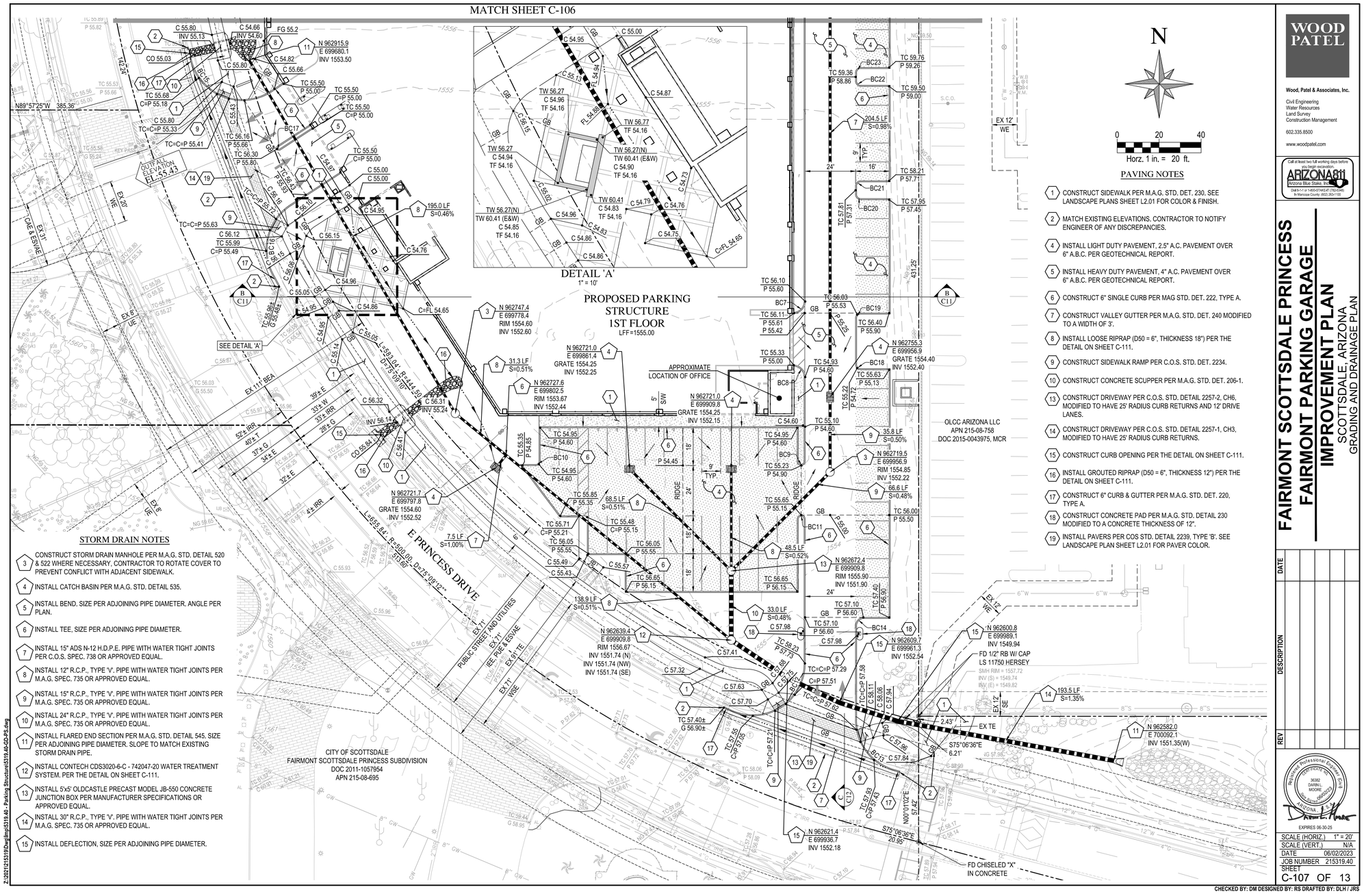
PROJECT
FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

JOB NUMBER
2022-22

DATE
06/02/2023

SHEET NAME
GRADING AND DRAINAGE PLAN

SHEET NUMBER
C-106



STORM DRAIN NOTES

3. CONSTRUCT STORM DRAIN MANHOLE PER M.A.G. STD. DETAIL 520 & 522 WHERE NECESSARY, CONTRACTOR TO ROTATE COVER TO PREVENT CONFLICT WITH ADJACENT SIDEWALK.
4. INSTALL CATCH BASIN PER M.A.G. STD. DETAIL 535.
5. INSTALL BEND. SIZE PER ADJOINING PIPE DIAMETER. ANGLE PER PLAN.
6. INSTALL TEE. SIZE PER ADJOINING PIPE DIAMETER.
7. INSTALL 15" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
8. INSTALL 12" R.C.P., TYPE 'V'. PIPE WITH WATER TIGHT JOINTS PER M.A.G. SPEC. 735 OR APPROVED EQUAL.
9. INSTALL 15" R.C.P., TYPE 'V'. PIPE WITH WATER TIGHT JOINTS PER M.A.G. SPEC. 735 OR APPROVED EQUAL.
10. INSTALL 24" R.C.P., TYPE 'V'. PIPE WITH WATER TIGHT JOINTS PER M.A.G. SPEC. 735 OR APPROVED EQUAL.
11. INSTALL FLARED END SECTION PER M.A.G. STD. DETAIL 545. SIZE PER ADJOINING PIPE DIAMETER. SLOPE TO MATCH EXISTING STORM DRAIN PIPE.
12. INSTALL CONTECH CDS3020-6-C - 742047-20 WATER TREATMENT SYSTEM. PER THE DETAIL ON SHEET C-111.
13. INSTALL 5'x5' OLDCASTLE PRECAST MODEL JB-550 CONCRETE JUNCTION BOX PER MANUFACTURER SPECIFICATIONS OR APPROVED EQUAL.
14. INSTALL 30" R.C.P., TYPE 'V'. PIPE WITH WATER TIGHT JOINTS PER M.A.G. SPEC. 735 OR APPROVED EQUAL.
15. INSTALL DEFLECTION, SIZE PER ADJOINING PIPE DIAMETER.

N

0 20 40

Horz. 1 in. = 20 ft.

PAVING NOTES

1. CONSTRUCT SIDEWALK PER M.A.G. STD. DET. 230, SEE LANDSCAPE PLANS SHEET L2.01 FOR COLOR & FINISH.
2. MATCH EXISTING ELEVATIONS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
4. INSTALL LIGHT DUTY PAVEMENT, 2.5" A.C. PAVEMENT OVER 6" A.B.C. PER GEOTECHNICAL REPORT.
5. INSTALL HEAVY DUTY PAVEMENT, 4" A.C. PAVEMENT OVER 6" A.B.C. PER GEOTECHNICAL REPORT.
6. CONSTRUCT 6" SINGLE CURB PER MAG STD. DET. 222, TYPE A.
7. CONSTRUCT VALLEY GUTTER PER M.A.G. STD. DET. 240 MODIFIED TO A WIDTH OF 3'.
8. INSTALL LOOSE RIPRAP (D50 = 6", THICKNESS 18") PER THE DETAIL ON SHEET C-111.
9. CONSTRUCT SIDEWALK RAMP PER C.O.S. STD. DET. 2234.
10. CONSTRUCT CONCRETE SCUPPER PER M.A.G. STD. DET. 206-1.
13. CONSTRUCT DRIVEWAY PER C.O.S. STD. DETAIL 2257-2, CH6, MODIFIED TO HAVE 25' RADIUS CURB RETURNS AND 12' DRIVE LANES.
14. CONSTRUCT DRIVEWAY PER C.O.S. STD. DETAIL 2257-1, CH3, MODIFIED TO HAVE 25' RADIUS CURB RETURNS.
15. CONSTRUCT CURB OPENING PER THE DETAIL ON SHEET C-111.
16. INSTALL GROUTED RIPRAP (D50 = 6", THICKNESS 12") PER THE DETAIL ON SHEET C-111.
17. CONSTRUCT 6" CURB & GUTTER PER M.A.G. STD. DET. 220, TYPE A.
18. CONSTRUCT CONCRETE PAD PER M.A.G. STD. DETAIL 230 MODIFIED TO A CONCRETE THICKNESS OF 12".
19. INSTALL PAVERS PER COS STD. DETAIL 2239, TYPE 'B'. SEE LANDSCAPE PLAN SHEET L2.01 FOR PAVER COLOR.

REV	DESCRIPTION	DATE

Registered Professional Engineer
36382
DARIN L. MOORE
ARIZONA
EXPIRES 06-30-25

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	06/02/2023
JOB NUMBER	215319.40
SHEET	C-107 OF 13

CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
GRADING AND DRAINAGE PLAN

ISSUED FOR:

SUBMITTAL

ISSUANCE	DATE

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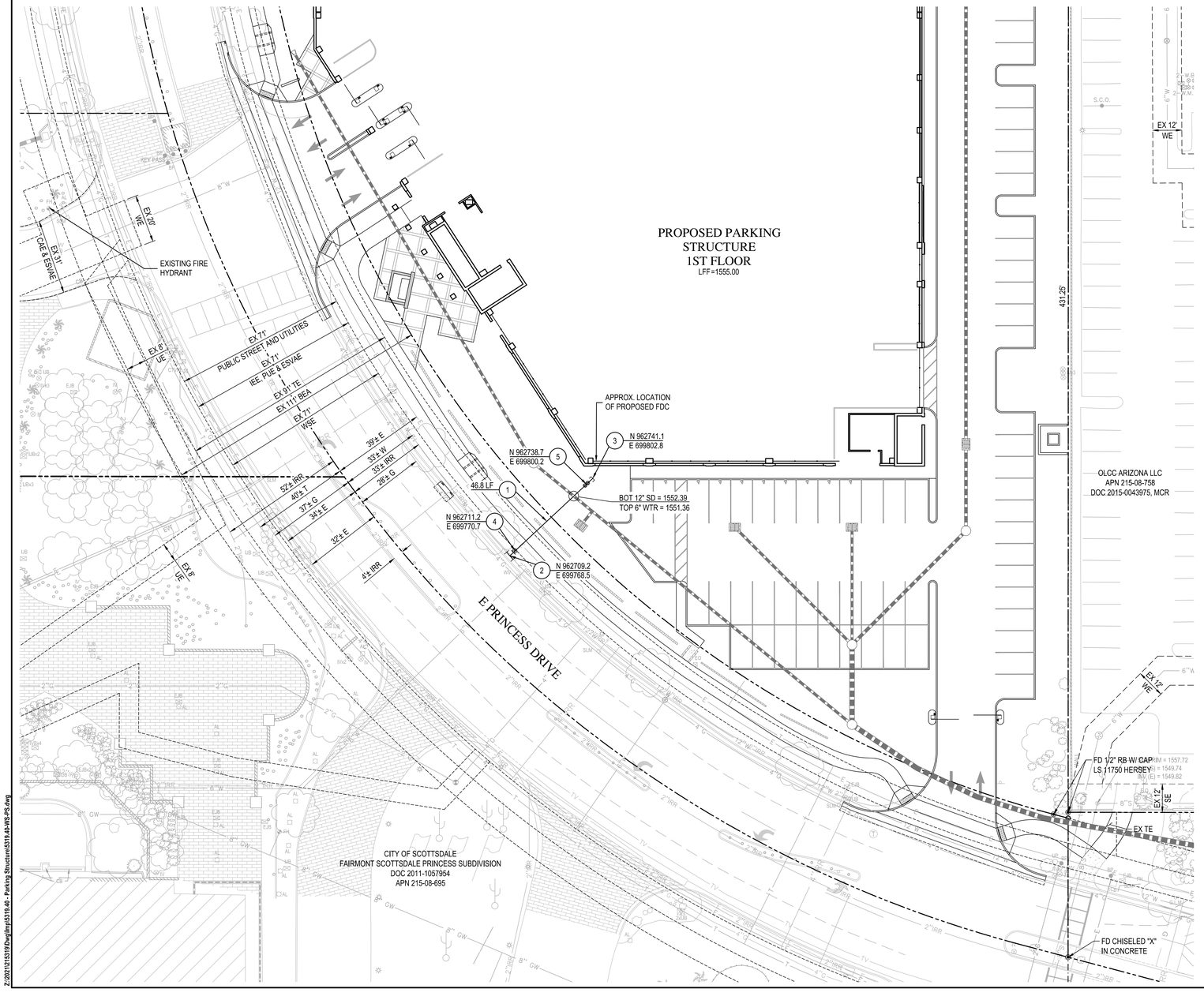
PROJECT
FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

JOB NUMBER 2022-22

DATE 06/02/2023

SHEET NAME
GRADING AND DRAINAGE PLAN

SHEET NUMBER
C-107



WATER NOTES

1. INSTALL 6" POLYWRAPPED D.I.P. PRESSURE CLASS 350 WATERLINE PER M.A.G. SPEC. SECTION 610. 3' MINIMUM COVER UNLESS NOTED ON PLAN.
2. CONNECT TO EXISTING WATER LINE. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. SEE PLUMBING PLANS FOR CONTINUATION. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
4. INSTALL 6" GATE VALVE WITH FLANGES, VALVE BOX, AND COVER PER M.A.G. STD. DETAIL 391-1 (VALVE TO MATCH WATERLINE SIZE).
5. EXISTING 6" BACKFLOW PREVENTER TO BE RELOCATED OUTSIDE THE PROPOSED SIDEWALK.

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
WATER PLAN

REV	DESCRIPTION	DATE

Professional Engineer
36382
DARIN L. MOORE
ARIZONA
EXPIRES 06-30-25

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	06/02/2023
JOB NUMBER	215319.40
SHEET	C-108 OF 13

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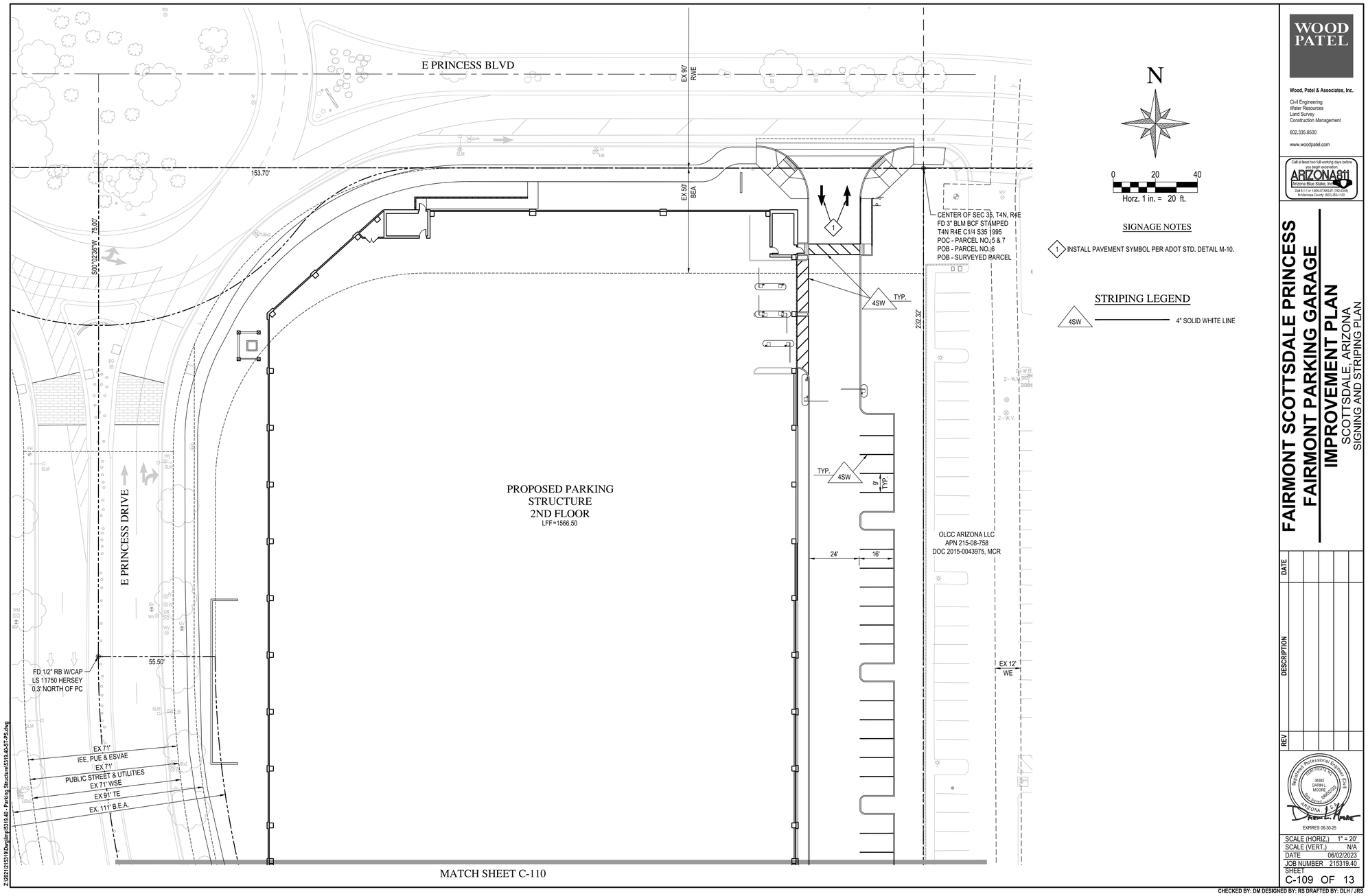
PROJECT
FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

JOB NUMBER
2022-22

DATE
06/02/2023

SHEET NAME
WATER PLAN

SHEET NUMBER
C-108



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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
SIGNING AND STRIPING PLAN

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
36382
DAWN L. MOORE
CIVIL
ARIZONA
EXPIRES 06-30-25

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	06/02/2023
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SHEET	C-109 OF 13

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2022-22

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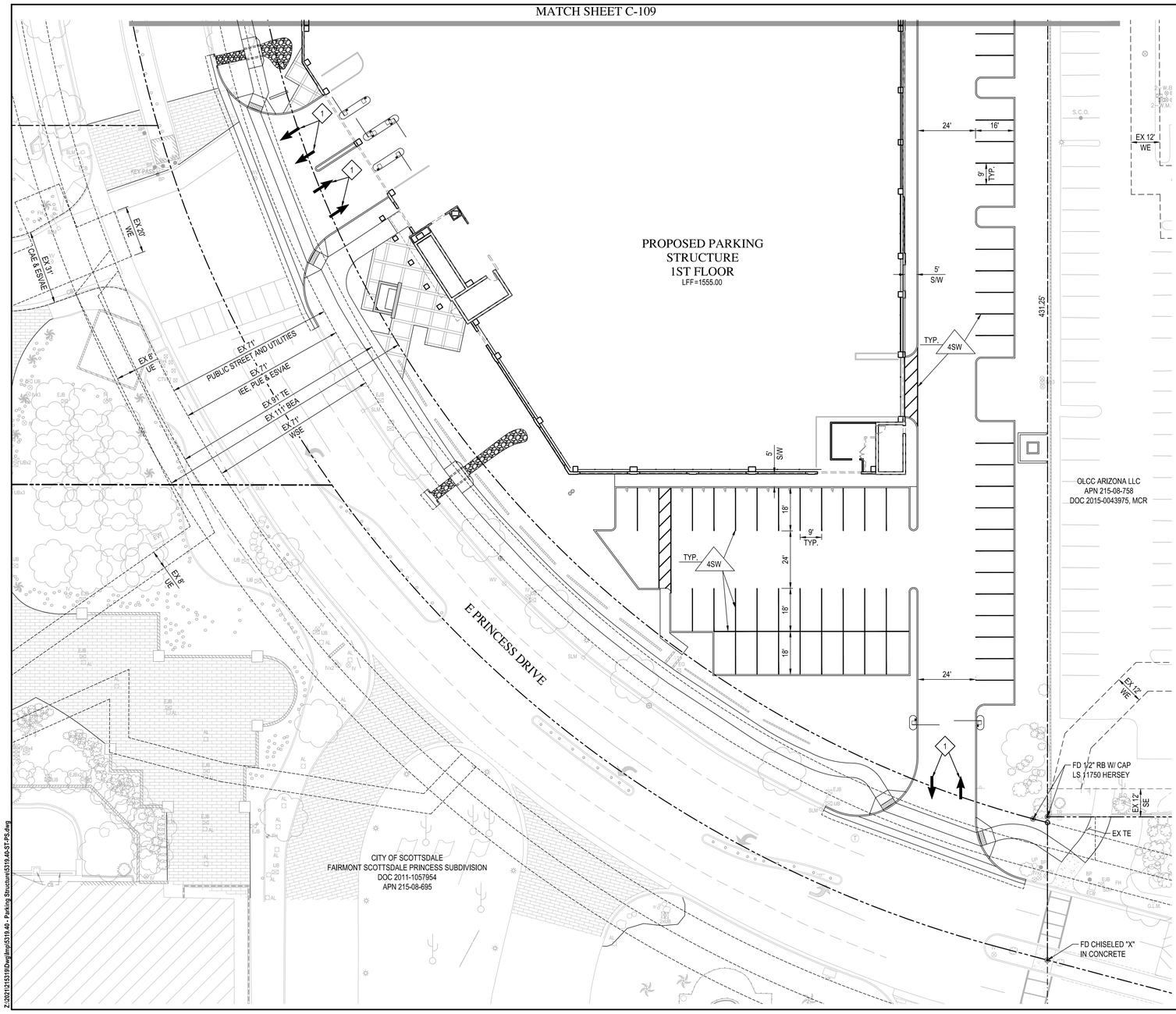
SHEET NUMBER
C-109

MATCH SHEET C-109



N

0 20 40

Horz. 1 in. = 20 ft.

SIGNAGE NOTES

1 INSTALL PAVEMENT SYMBOL PER ADOT STD. DETAIL M-10.

STRIPING LEGEND

4SW ——— 4" SOLID WHITE LINE

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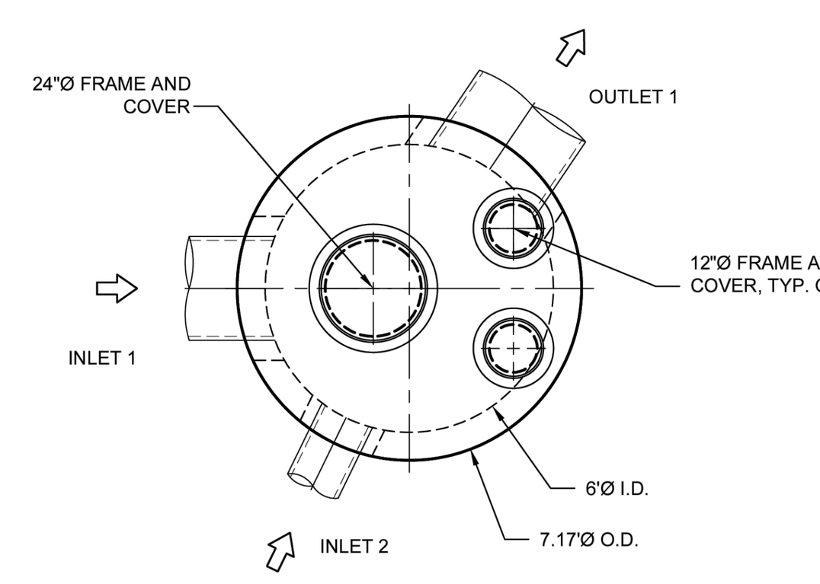
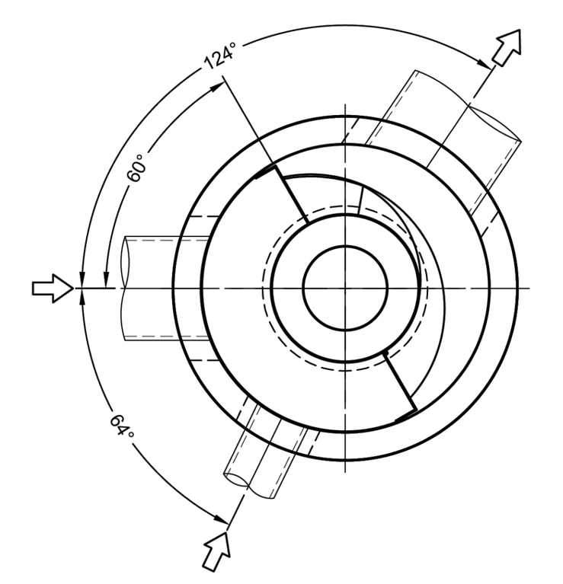
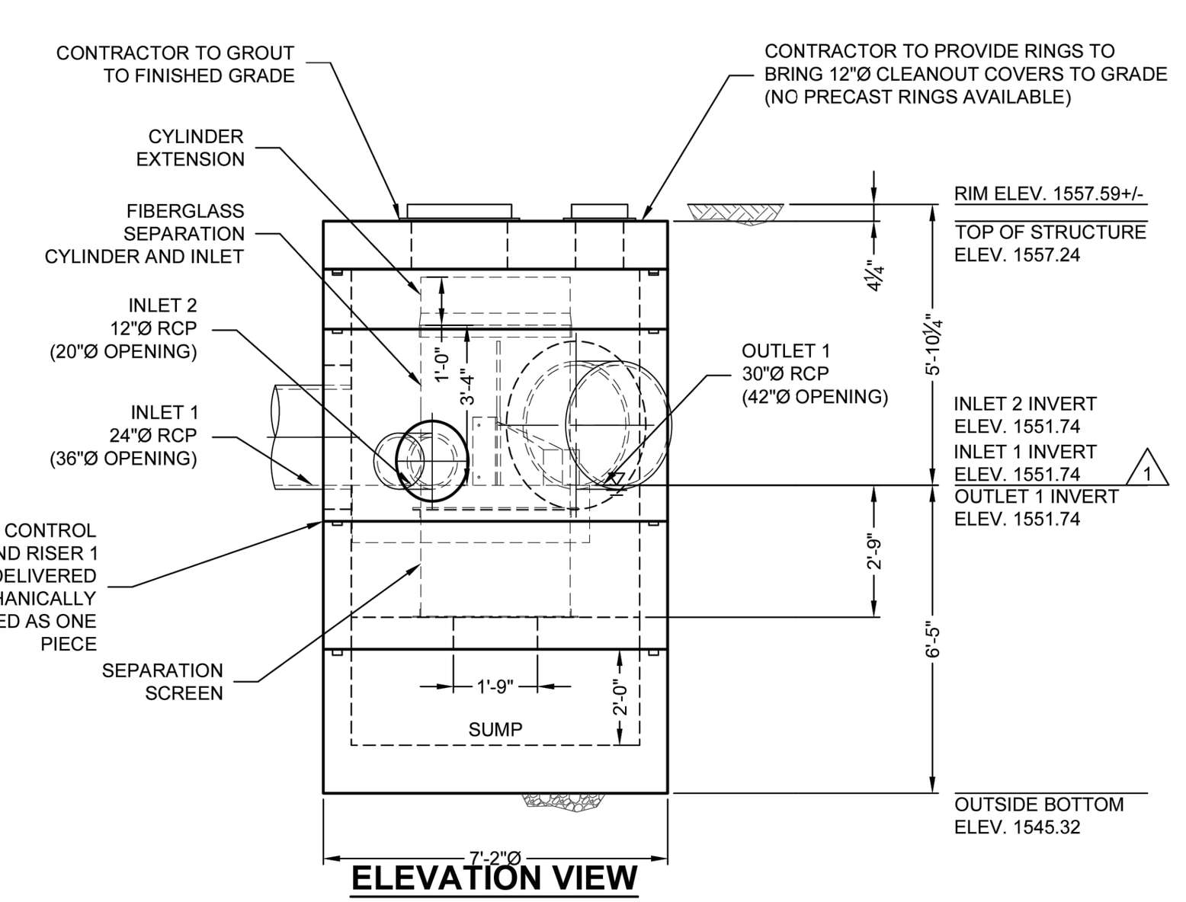


PLAN VIEW
INTERNALS NOT SHOWN



PLAN VIEW FOR PIPE ORIENTATION
TOP SLAB NOT SHOWN



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	3020-6 CONCENTRIC FIBERGLASS INSERT	CONTECH
1	3020, 2400 micron, 3.1' O.D. x 2.25' SCREEN, GREEN FLANGE UP	CONTECH
1	20, 30, 40 SERIES HARDWARE KIT	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1	24"Ø X 4" FRAME AND COVER, EJ #41600389, OR EQUIV.	CONTRACTOR
2	12"Ø X 4" FRAME AND COVER, EJ #41610201, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

		MAX
WATER QUALITY FLOW RATE	0.52 CFS	2 CFS
PEAK FLOW RATE	22.39 CFS	25 CFS
RETURN PERIOD OF PEAK FLOW	10 YRS	

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 13500 LBS.
STRUCTURE IS DELIVERED IN 4 PIECES

MAX FOOTPRINT = 7.17'Ø

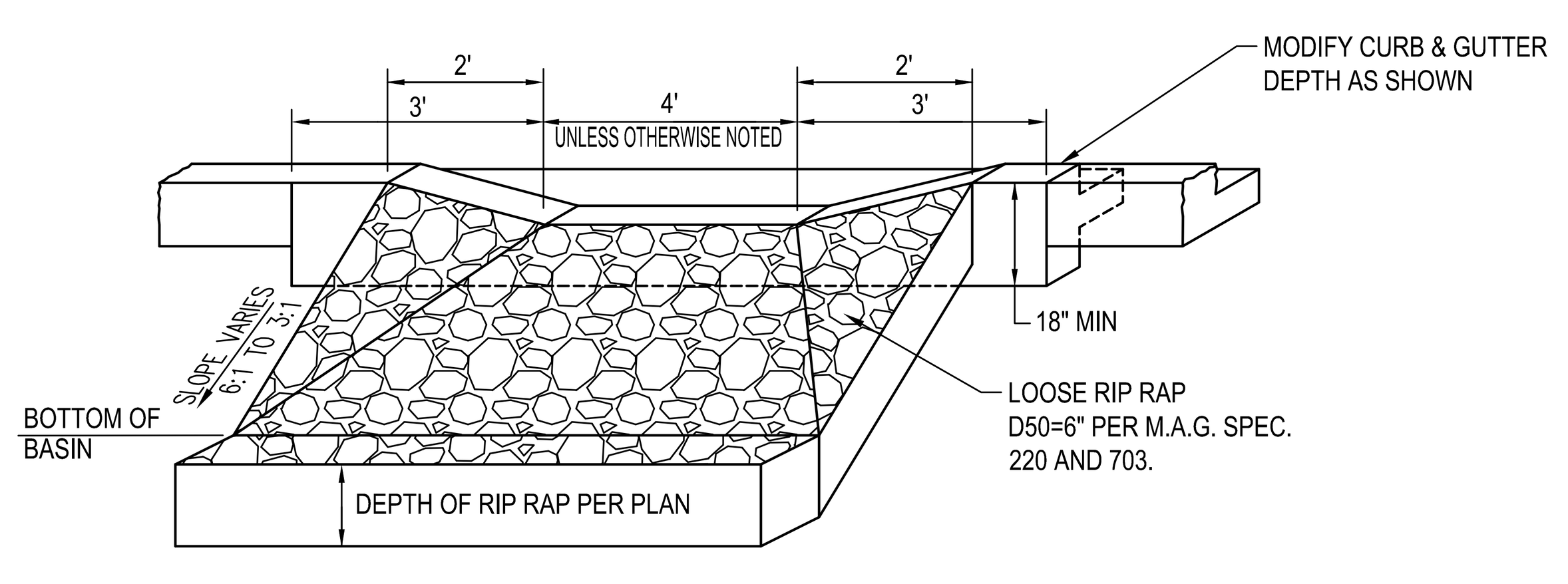
CONTECH **PROPOSAL** DRAWING

PRECS LAYOUT 4A

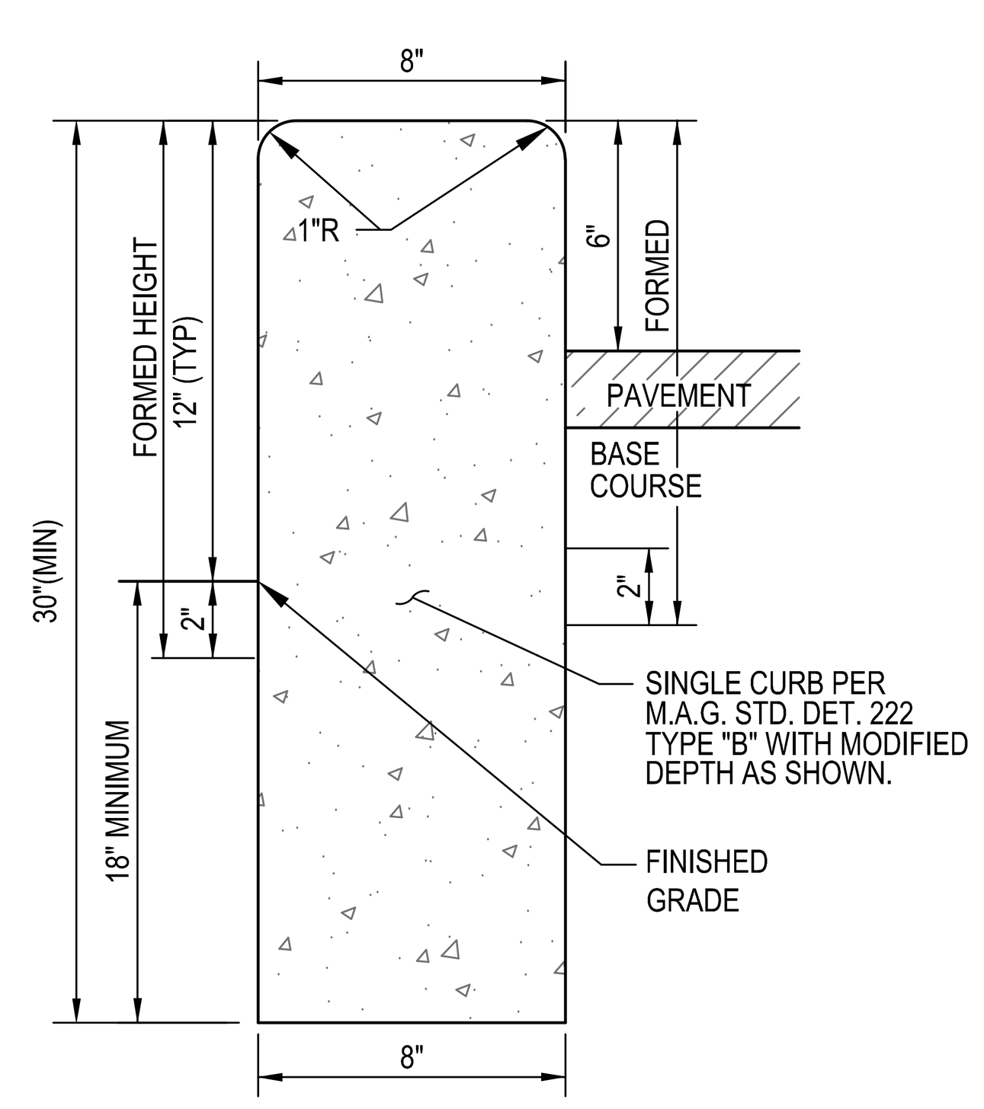
CDS3020-6-C - 742047-20
FAIRMONT SCOTTSDALE PRINCESS – SUNSET VILLAS & BUNGALOWS
SCOTTSDALE, AZ
SITE DESIGNATION: OPTION 4

CONTECH ENGINEERED SOLUTIONS LLC www.ContechES.com

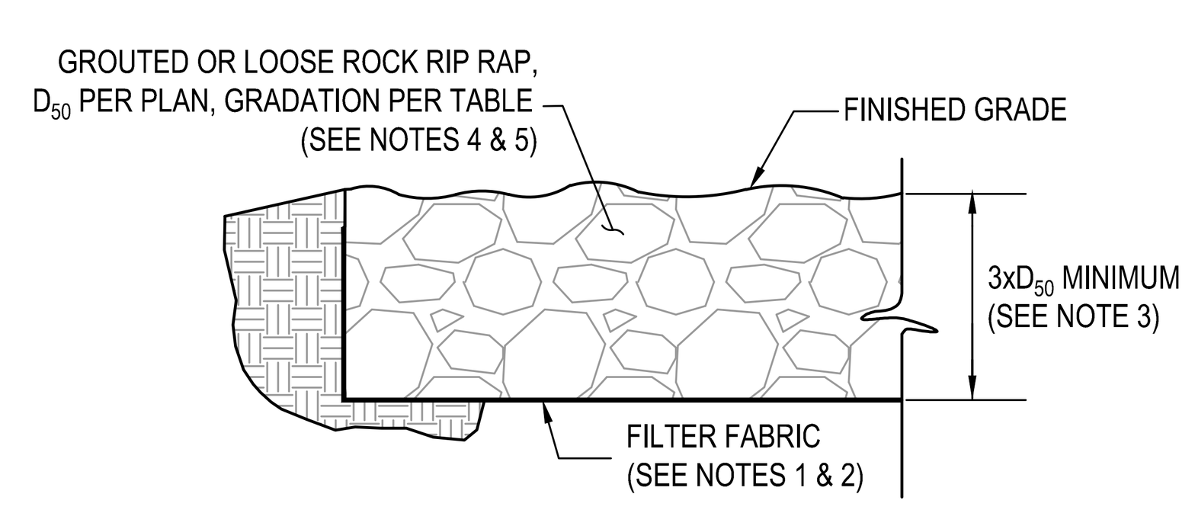
DATE: 04/27/23 | DESIGNED: DAH | DRAWN: DAH | CHECKED: DAH | APPROVED: DAH | PROJECT No.: 742047 | SEQUENCE No.: 20 | SHEET: 1 OF 1



CURB OPENING AND SPILLWAY DETAIL
N.T.S.



TYPE "A"
MODIFIED SINGLE CURB
(N.T.S.)



ROCK RIPRAP SECTION

ROCK RIPRAP GRADATION TABLE

PERCENT PASSING	ROCK SIZE (IN.)			
	D_{50}=4"	D_{50}=6"	D_{50}=8"	D_{50}=12"
100 TO 90	8	12	16	24
85 TO 70	6	9	12	18
50 TO 30	4	6	8	12
15 TO 5	3	4	5	8
5 TO 0	1	2	3	4

NOTES:
1. FOR LOOSE RIPRAP APPLICATIONS INSTALL "MIRAFI 140NL" FILTER FABRIC, OR APPROVED EQUAL, UNDER ALL LOOSE RIPRAP.
2. FOR GROUTED RIPRAP APPLICATIONS OMIT FILTER FABRIC.
3. DEPTH OF LOOSE RIPRAP SHALL BE 3xD_{50} MINIMUM UNLESS OTHERWISE SPECIFIED. DEPTH OF GROUTED RIPRAP SHALL BE 2xD_{50} MINIMUM UNLESS OTHERWISE SPECIFIED.
4. RIPRAP SHALL BE ANGULAR ROCK.
5. REFER TO LANDSCAPE PLAN FOR RIPRAP COLOR.

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Civil Engineering
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Land Survey
Construction Management
602.335.8500
www.woodpatel.com

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ARIZONA811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
DETAILS AND SECITONS

REV	DESCRIPTION	DATE

EXPIRES 06-30-25

SCALE (HORIZ.) N/A
SCALE (VERT.) N/A
DATE 06/02/2023
JOB NUMBER 215319.40
SHEET
C-111 OF 13

CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

Z:\2021\215319\Dwg\Imp\5319.40 - Parking Structure\5319.40-DT-PS.dwg

ISSUED FOR:
SUBMITTAL

ISSUANCE	DATE

ARCHITECT OF RECORD
Kollin Altomare Architects
Long Beach
4265 E. Conant Street, Suite 101
Long Beach, CA 90808
t: 562.597.8760
kollinaltomare.com
Chicago
900 N. Franklin Street, Suite 405-B
Chicago, IL 60610
t: 312.471.8760

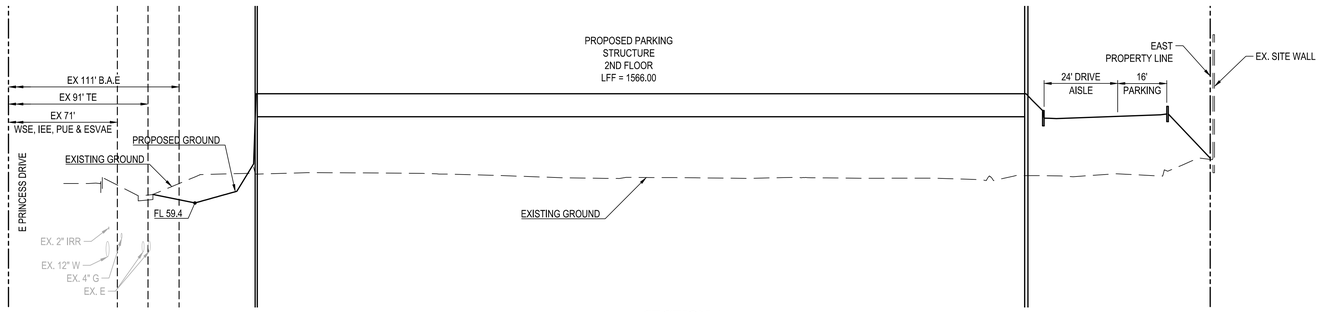
PROJECT
FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

JOB NUMBER
2022-22

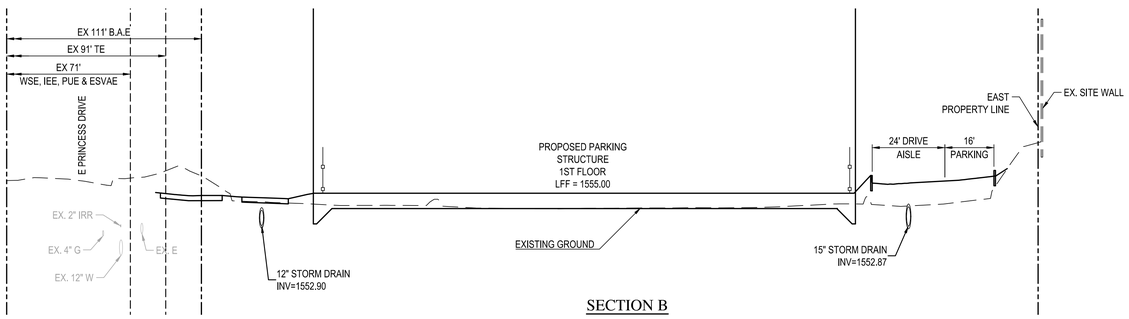
DATE
06/02/2023

SHEET NAME
DETAILS AND SECITONS

SHEET NUMBER
C-111



SECTION A



SECTION B

0 20 40
Horz. 1 in. = 20 ft.
Vert. 1 in. = 4 ft.

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CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
DETAILS AND SECTIONS

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
36382
DAWN L. MOORE
CERTIFICATE NO.
ARIZONA
EXPIRES 06-30-25

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	1" = 4'
DATE	06/02/2023
JOB NUMBER	215319.40
SHEET	C-112 OF 13

ISSUED FOR:

SUBMITTAL

⚠ ISSUANCE	DATE

ARCHITECT OF RECORD
Kollin Altomare Architects
Long Beach
4265 E. Conant Street, Suite 101
Long Beach, CA 90808
t: 562.597.8760
Chicago
300 N. Franklin Street, Suite 405-B
Chicago, IL 60610
t: 312.471.8760
kollinaltomare.com

PROJECT
FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
7575 EAST PRINCESS DRIVE, SCOTTSDALE, AZ 85255
PREPARED FOR: STRATEGIC HOTELS & RESORTS

JOB NUMBER
2022-22

DATE
06/02/2023

SHEET NAME
DETAILS AND SECTIONS

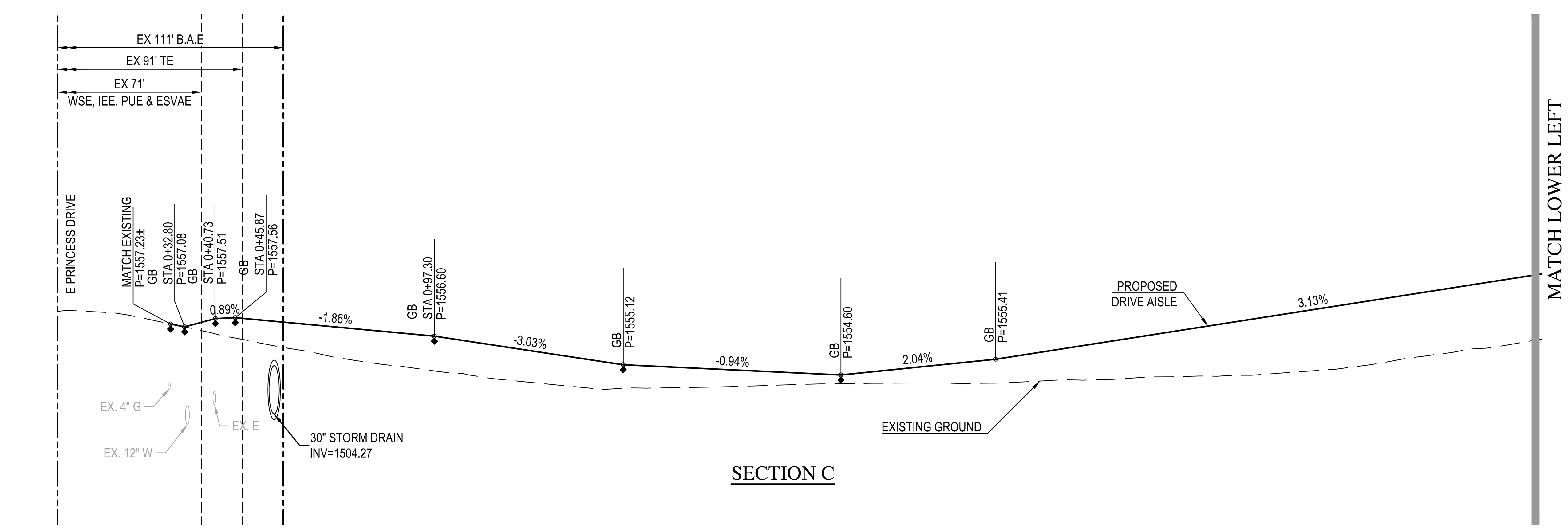
SHEET NUMBER
C-112

ISSUED FOR:

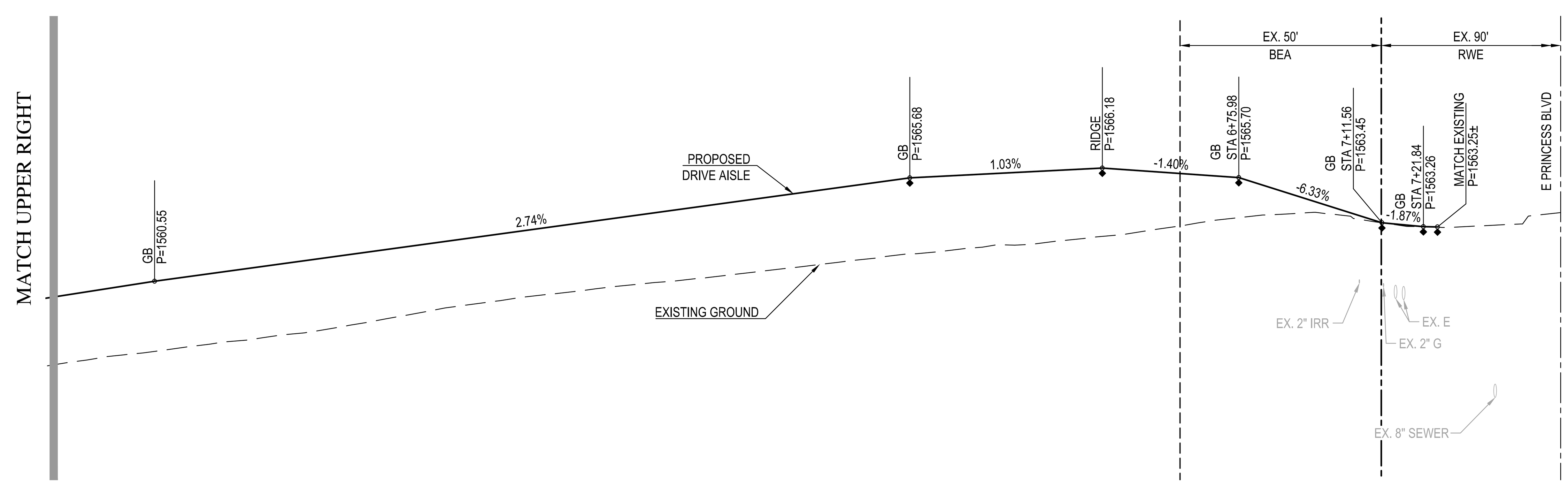
SUBMITTAL

ISSUANCE	DATE

Horz. 1 in. = 20 ft.
Vert. 1 in. = 4 ft.



SECTION C



SECTION C

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FAIRMONT SCOTTSDALE PRINCESS
FAIRMONT PARKING GARAGE
IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
DETAILS AND SECTIONS

REV	DESCRIPTION	DATE

Registered Professional Engineer
36082
DARIN L. MOORE
ARIZONA, U.S.A.
EXPIRES 06-30-25

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	1" = 4'
DATE	06/02/2023
JOB NUMBER	215319.40
SHEET	C-113 OF 13

CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: DLH / JRS

ARCHITECT OF RECORD
Kollin Altomare Architects

Long Beach
4265 E. Conant Street, Suite 101
Long Beach, CA 90808
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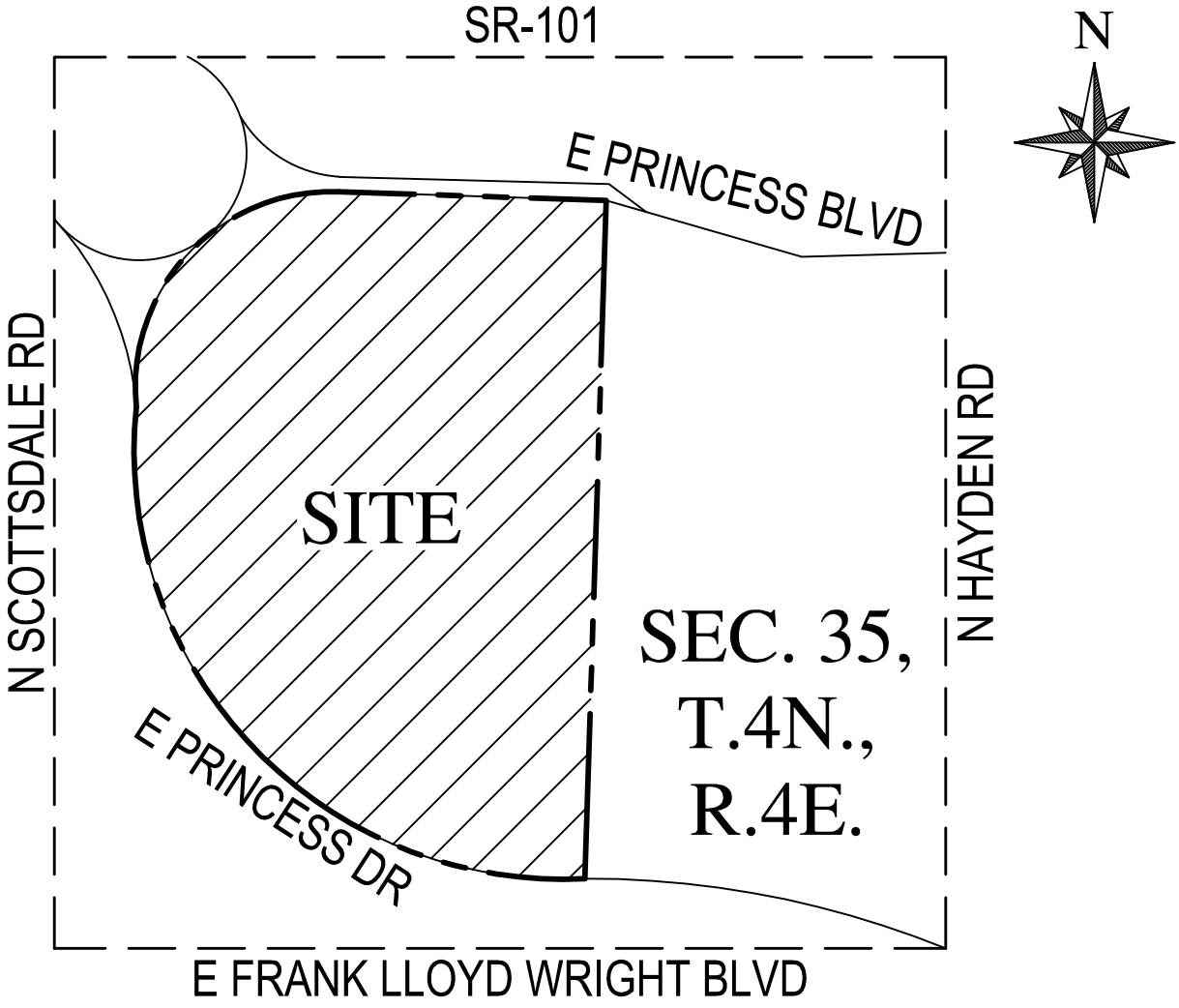
JOB NUMBER
2022-22

DATE
06/02/2023

SHEET NAME
DETAILS AND SECTIONS

SHEET NUMBER
C-113

EXHIBIT 1 – VICINITY MAP



VICINITY MAP

N.T.S.

NOT
FOR
CONSTRUCTION
OR RECORDING

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PARKING GARAGE
VICINITY MAP EXHIBIT

DATE	06/02/2023	SCALE	N.T.S	SHEET	1 OF 1
JOB NO.	215319.40	DESIGN	AJS	CHECK	AJS
		DRAWN	NTS	RFI #	

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EXHIBIT 2 – FEMA FIRM

National Flood Hazard Layer FIRMette

FEMA

111°55'26"W 33°39'5"N

111°54'48"W 33°38'35"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

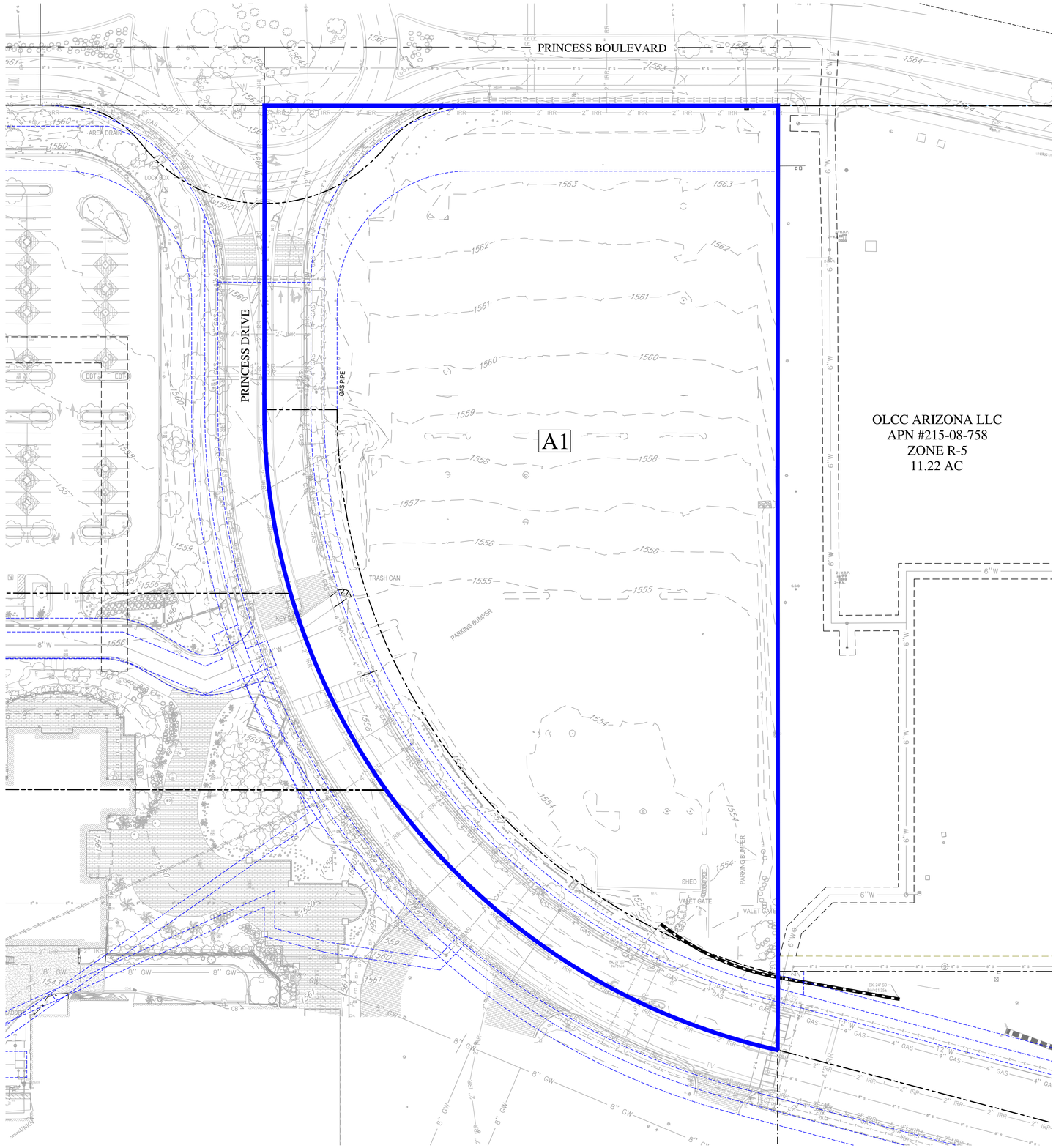
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/2/2023 at 10:49 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

EXHIBIT 3 – EXISTING DRAINAGE AREA MAP



LEGEND

- DRAINAGE AREA BOUNDARY
- [1] DRAINAGE AREA LABEL

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FAIRMONT SCOTTSDALE PRINCESS

EXHIBIT 3 – EXISTING DRAINAGE AREA MAP

DATE	06/02/2023	SCALE	1" = 40'	SHEET	1 OF 1
JOB NO.	215319.40	DESIGN	AJS	DRAWN	AJS

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EXHIBIT 4 – PROPOSED DRAINAGE AREA MAP

PRINCESS BOULEVARD

PRINCESS DRIVE

PROPOSED PARKING GARAGE

A1

A2

A3

A4

A5

A6

A7

Q100 = 6.8CFS

Q100 = 6.5CFS

Q100 = 3.2CFS

Q100 = 1.1CFS

Q100 = 1.4CFS

Q100 = 3.9CFS

OLCC ARIZONA LLC
APN #215-08-758
ZONE R-5
11.22 AC

N

0 40 80

Horz. 1 in. = 40 ft.

LEGEND

DRAINAGE AREA BOUNDARY

1 DRAINAGE AREA LABEL

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CONSTRUCTION
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EXHIBIT 4 – PROPOSED DRAINAGE AREA MAP

DATE	06/02/2023	SCALE	1" = 40'	SHEET	1 OF 1
JOB NO.	215319.40	DESIGN	AJS	DRAWN	AJS

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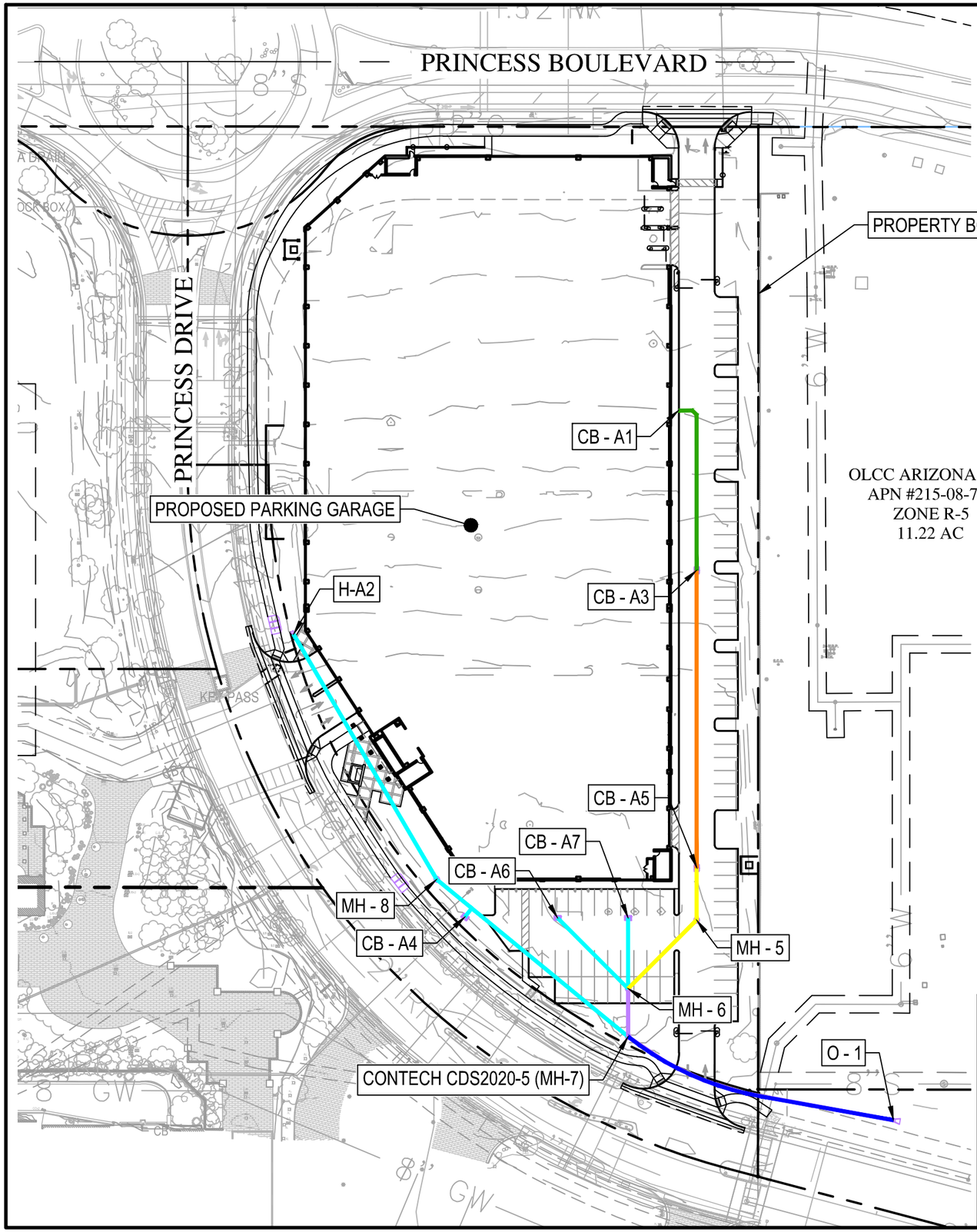
EXHIBIT 5 – STORM DRAIN LAYOUT



N

0 40 80

Horz. 1 in. = 80 ft.

LEGEND

- PROPOSED 12" STORM DRAIN PIPE
- PROPOSED 15" H.D.P.E PIPE
- PROPOSED 15" R.C.P PIPE
- PROPOSED 16" R.C.P PIPE
- PROPOSED 24" R.C.P PIPE
- PROPOSED 30" R.C.P PIPE
- MH-X MANHOLE
- CB-AX CATCH BASIN
- H-AX HEADWALL
- O-X OUTLET

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EXHIBIT 5 – STORM DRAIN LAYOUT

DATE 06/02/2023	SCALE 1" = 80'	SHEET 1 OF 1	
JOB NO. 215319.40	DESIGN AJS	DRAWN AJS	

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