

**RICE RANCH**  
**EL PASO COUNTY, CO**  
**FINAL DRAINAGE REPORT**

**Submittal Date: May 10, 2018**  
**Revision Date:**

**OWNER/APPLICANT**

**RICE RANCH LLC**  
PO Box 26571  
Colorado Springs, Colorado 80936  
719-640-0232

**CONSULTANT**

**CD Civil Design LLC**  
2013 Stoneleigh Trail 2013 Stoneleigh Trail  
Monument, CO 80132  
Phone: 719-271-1175  
Email: cdxtwo@gmail.com

**CD Civil Project No. 18002**

**PPR-18-024**

Also see  
comment  
letter.



There are no known irrigation facilities which will influence local drainage.

*Sub-basin Description*

On the Rice Ranch site, the drainage historically sheet flows generally from the northeast to the southwest, and collects in the lake along the south and west edges of the property. There are no concentrated flows on the site.

address whether or not lake is "waters of the state"

There is no off-site drainage that enters Rice Ranch property, and hence no impact to the development.

very little from north?

**Drainage Design Criteria**

*Development Criteria Reference and Constraints*

Peak existing flows are derived from the Rational Method as described on page 5-5 of the Drainage Criteria Manual, Volume I.

There are no previous drainage studies for Rice Ranch.

The drainage patterns will remain sheet flow throughout the site. As mentioned, the flow pattern is generally from the northeast to the southwest. There are no proposed streets, utilities or structures that will be impacted by the sheet flow.



The proposed runoff rates for the 5 and 100 year storms are 43.29 cfs and 106.20 cfs respectfully. This is summarized on the page entitled "Hydrologic Summary, Rice Ranch Proposed Conditions", found in the appendices of this report.

As the drainage patterns will remain unchanged from historic conditions, there will be no impacts on existing or proposed improvements and facilities.

Also, there will be no proposed drainage facilities as the site will drain via overland flow from the northeast to the southwest, through a wooded, vegetated buffer, and into the existing retention pond (lake).

**Address buffer maintenance requirements and easement agreement.**

While there will be no proposed drainage measures, and hence no maintenance required, the improved portion of the site will be accessible by truck or similar maintenance vehicle.

As mentioned, there will be no detention facility proposed as part of this project. Hence there are not storage and outlet designs presented in this report.

A cost estimate of the proposed facilities is not included with this report, as there will be no drainage facilities constructed.

There are no basin or bridge fees listed on the El Paso County Drainage Basin Fees, Resolution No. 17-348 for 2018 for East Big Johnson drainage basin.



## **References**

"Drainage Basins", map published by El Paso County, 2005.

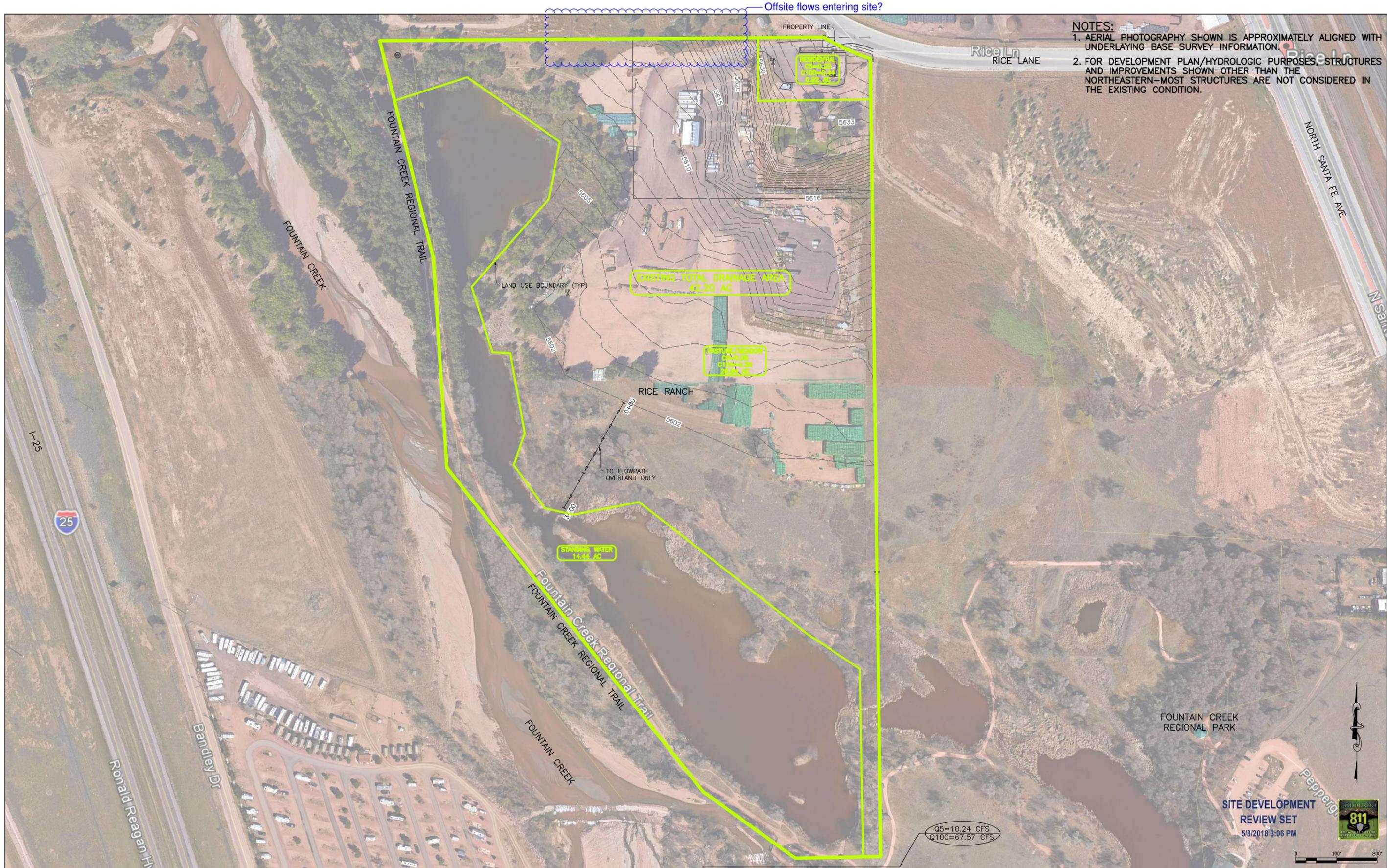
"Drainage Criteria Manual, Volume I", by El Paso County, October 14, 1994.

"Custom Soil Resource Report for El Paso County Area, Colorado", NRCS, April 24, 2018.

"Flood Insurance Rate Map", Panels 953 and 954, FEMA, March 17, 1997.

**Add Hyponex/Scotts Industrial Permit (COR9006888)  
and pollution prevention plan.**





**NOTES:**  
 1. AERIAL PHOTOGRAPHY SHOWN IS APPROXIMATELY ALIGNED WITH UNDERLYING BASE SURVEY INFORMATION.  
 2. FOR DEVELOPMENT PLAN/HYDROLOGIC PURPOSES, STRUCTURES AND IMPROVEMENTS SHOWN OTHER THAN THE NORTHEASTERN-MOST STRUCTURES ARE NOT CONSIDERED IN THE EXISTING CONDITION.

Q5=10.24 CFS  
 Q100=67.57 CFS

**SITE DEVELOPMENT  
 REVIEW SET**  
 5/8/2018 3:06 PM



COMPUTER FILE INFORMATION	
CREATION DATE: 2016/01	INITIALS: CDCD
LAST MODIFICATION DATE:	INITIALS: 5/8/2018 3:06 PM
FULL PATH AND DRAWING NAME	SHT FILES\
ACAD VER. 2013	SCALE: UNIT SCALE 1"=100'

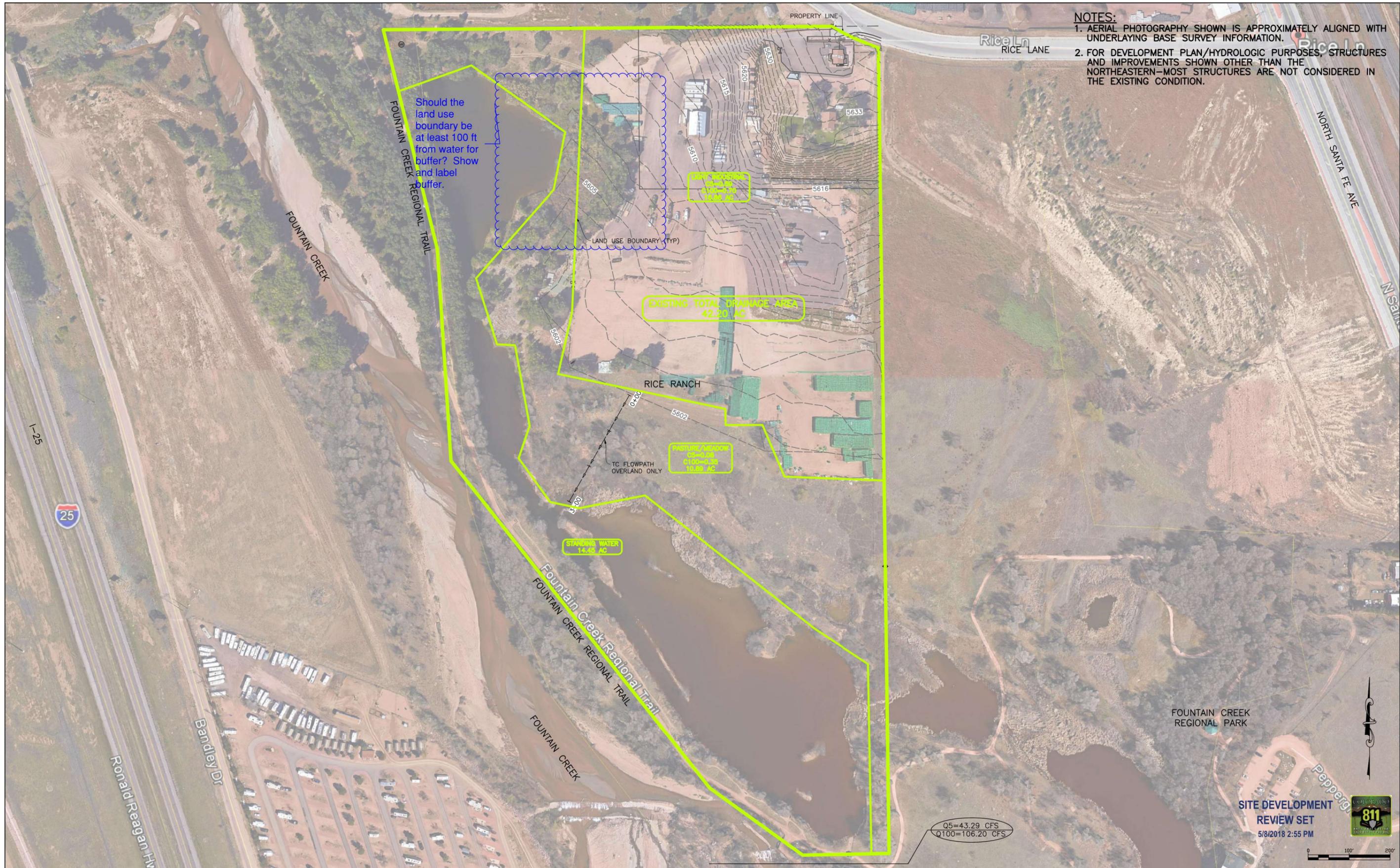
INDEX OF REVISIONS	
0000	



**CIVIL**  
 CD Civil Design LLC  
 2013 Stoneleigh Trail 2013 Stoneleigh Trail  
 Monument, CO 80132  
 Phone: 719-271-1175  
 Email: cdh@cdcivil.com

EXISTING DRAINAGE MAP	
RICE RANCH COLORADO SPRINGS, COLORADO	
DESIGNER:	STRUCTURE NUMBERS
DETAILER:	
SHEET SUBSET:	

PROJECT NO./CODE
Sheet Subset Number
Sheet Number <b>DP-1</b>



**NOTES:**  
 1. AERIAL PHOTOGRAPHY SHOWN IS APPROXIMATELY ALIGNED WITH UNDERLYING BASE SURVEY INFORMATION.  
 2. FOR DEVELOPMENT PLAN/HYDROLOGIC PURPOSES, STRUCTURES AND IMPROVEMENTS SHOWN OTHER THAN THE NORTHEASTERN—MOST STRUCTURES ARE NOT CONSIDERED IN THE EXISTING CONDITION.

COMPUTER FILE INFORMATION	
CREATION DATE: 2016/01	INITIALS: CDCD
LAST MODIFICATION DATE:	INITIALS: 5/8/2018 2:55 PM
FULL PATH AND DRAWING NAME	SHT FILES\
ACAD VER. 2013	SCALE: UNIT SCALE 1"=100'

INDEX OF REVISIONS	
0000	



**CIVIL**  
 CD Civil Design LLC  
 2013 Skowhegan Trail 2013 Skowhegan Trail  
 Monument, CO 80132  
 Phone: 719-271-1175  
 Email: cdh@cdcivil.com

PROPOSED DRAINAGE MAP	
RICE RANCH COLORADO SPRINGS, COLORADO	
DESIGNER:	STRUCTURE NUMBERS
DETAILER:	
SHEET SUBSET:	

PROJECT NO./CODE
Sheet Subset Number
Sheet Number <b>DP-2</b>



0 100' 200'

**SITE DEVELOPMENT REVIEW SET**  
 5/8/2018 2:55 PM

FOUNTAIN CREEK REGIONAL PARK

Pepperidge

Ronald Reagan Hwy

Bandy Ln

25

1-25

NORTH SANTA FE AVE

RICE LANE

PROPERTY LINE

FOUNTAIN CREEK REGIONAL TRAIL

FOUNTAIN CREEK

EXISTING TOTAL DRAINAGE AREA 42.20 AC

RICE RANCH

TC FLOWPATH OVERLAND ONLY

STAGNANT WATER 14.46 AC

Fountain Creek Regional Trail

FOUNTAIN CREEK

Q5=43.29 CFS  
Q100=106.20 CFS

LAND USE BOUNDARY (TYP)

Should the land use boundary be at least 100 ft from water for buffer? Show and label buffer.

EXISTING TOTAL DRAINAGE AREA 42.20 AC

PROPOSED DRAINAGE CONSIDER 73.60 AC

5633

5630

5625

5620

5615

5610

5605

5600

5595

5590

5585

5580

5575

5570

5565

5560

5555

5550

5545

5540

5535

5530

5525

5520

5515

5510

5505

5500