



August 11, 2017

El Paso County  
Planning and Community Development Department  
2880 International Circle, Suite 110  
Colorado Springs, CO 80910

ATTN: Mr. Jeff Rice

RE: Drainage Letter for Falcon High School – Building Expansion

Dear Jeff:

Please consider this the Drainage Letter for the new building expansion at the existing Falcon High School - 10255 Lambert Rd., Peyton, CO. This letter is being written to discuss the level of grading and construction disturbance area (approximately 2.18 acres) associated with the 2017 building expansion onto Falcon High School and show compliance with previous reports.

This Letter will identify the overall area of new construction on the existing campus and the existing downstream facilities that were installed per the approved drainage report titled, "Final Drainage Report for Londonderry Drive & Lambert Road," by PBS&J dated May 2007.

Thanks,

Matthew Larson  
Project Manager

Please add El Paso County  
project number , PPR 17-048.

# DRAINAGE LETTER FOR FALCON HIGH SCHOOL

## DRAINAGE LETTER STATEMENT

### ENGINEER'S STATEMENT:

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the El Paso County for drainage reports and said report is in conformity with the master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors, or omissions on my part in preparing this report.

\_\_\_\_\_  
Kyle R Campbell, Colorado P.E. #29794

\_\_\_\_\_  
Date

### DEVELOPER'S STATEMENT:

I, the developer, have read and will comply with all of the requirements specified in this drainage report and plan.

Business Name: School District 49

By: \_\_\_\_\_

Title: \_\_\_\_\_

Address: 10850 E Woodmen Road

Peyton, CO 80831

← Please add a place  
for the school rep to  
sign.

### EL PASO COUNTY ONLY:

Filed in accordance with the requirements of the Drainage Criteria Manual, Volumes 1 and 2, El Paso County Engineering Criteria Manual and Land Development Code as amended.

\_\_\_\_\_  
Elizabeth Nijkamp, P.E.  
County Engineer / ECM Administrator

\_\_\_\_\_  
Date

Conditions:

← Please change to  
Jennifer Irvine, PE



# **DRAINAGE LETTER FOR FALCON HIGH SCHOOL**

## **GENERAL DESCRIPTION**

The existing Falcon High School at 10255 Lambert Road building sits on an approximate 70-acre parcel within the County of El Paso, and State of Colorado. A proposed 15,960 square foot building expansion on the south-east corner of the existing high school is proposed. The existing school is approximately 141,200 square feet; therefore, the proposed building expansion is approximately 11% of the current building footprint. A new concrete driveway and concrete pad will be installed on the north end of the building expansion, but no other significant modifications to the existing surrounding infrastructure is required. The overall land disturbance area for this project is approximately 2.18 acres.

During the original construction of the High School, a “Final Drainage Report for Londonderry Drive & Lambert Road,” was prepared by PBS&J in May 2007 that included the Falcon High School campus within the study area. According to the Soil Survey of El Paso County Area, Colorado, prepared by the US Department of Agriculture Natural Resources Conservation Service, the soils underlying the project area consist of Type “A” Columbine gravelly sandy loam.

## **EXISTING DRAINAGE CONDITIONS**

The site is located within the Haegler Ranch Drainage Basin. Historically, and per the original school construction and referenced report, the developed runoff from the site drains to the south via on-site private storm sewer pipes and drainage swales to an on-site detention pond located north of the Londonderry Drive and Eastonville Road intersection. The release of the onsite facility is to the south, across Londonderry Drive into another detention/water quality facility. Both the on-site pond and downstream facility were designed/installed using the ultimate build-out conditions of the Falcon High School, which include the proposed building expansion area. The existing school site is within Basin EH11 (Interim Conditions Map) and Basin FH10 (Future Conditions Map) from the previously approved “Final Drainage Report for Londonderry Drive and Lambert Road.” The area of the proposed building expansion currently is undeveloped with native grass seed and an existing gravel driveway that drains to the south-east onto the existing parking lot and drive aisles east of the school.

**Please call out ownership and maintenance responsibility for the ponds. Please also provide an exhibit that shows the location of the ponds.**



## PROPOSED DRAINAGE CONDITIONS

An attached Drainage Letter map shows the building expansion area and disturbance limits. The existing drainage patterns are maintained with construction of the building expansion with a new concrete drainage pan being installed around the building to provide drainage away from the foundation and building entry points. All new roof gutters will daylight onto splash blocks and drain to the new concrete drainage pan which outfall to the existing downstream school storm system and asphalt parking. A concrete driveway and pad are proposed on the north side of the building expansion with drains to the east to another concrete drain pan and existing parking lot. There are no other changes to the existing drive aisles, surface features, or storm sewer system. As previously mentioned the proposed building expansion, along with another approximate mirrored layout of this expansion, have been used in the previous drainage studies and downstream infrastructure design/installation. This includes the on-site (Falcon High) detention pond and the downstream detention/water quality facility (Pond E). Therefore, there are no additional on-site detention or water quality measures needed for the proposed building expansion.

## STORM WATER QUALITY/DETENTION

Per the above statement, the proposed building expansion and surrounding site work does not warrant on-site water quality or detention. ←

## DRAINAGE CRITERIA

This Drainage Letter was prepared in accordance with the El Paso County Drainage Criteria Manual as revised in November 1991 and October 1994.

## FLOODPLAIN STATEMENT

No portion of the site is within a designated F.E.M.A. 100-year floodplain, indicated on Map No. 08041 CO575F of the Federal Emergency Management Agency's Flood Insurance Rate Map of the City of Colorado Springs, El Paso County, Colorado, prepared by the National Flood Insurance Program Effective March 17, 1997 (see attached).

Would it be more accurate to state that WQ and detention is already accounted for in existing pond E and the existing pond known as Falcon High (or maybe state that no "additional" WQ...). Please also confirm (and state here) that maintenance agreements are already on file with El Paso County for these two existing ponds. If no agreements are on file, ones will be needed please.



## **DRAINAGE AND BRIDGE FEES**

### **Haegler Ranch Drainage Basin**

This site lies within the Haegler Ranch Drainage Basin boundaries. As the site is a public school site, we propose that no drainage fees are required.

This basin has a fee established. Please explain why you wouldn't be required to pay fees. Hint: you are over 35 acres, as such you are not required to plat, therefore not required to pay fees.

## **SUMMARY**

The Londonderry and Lambert drainage report detail the drainage patterns of the existing Falcon High School and surrounding developments/roadways. The proposed building expansion is within the previously assumed and quantified building used in the previous report and downstream detention pond design. The proposed construction does not change any of the existing drainage patterns or infrastructure. This letter confirms adherence to the previous report, and that no impact from proposed development will be realized.

If you have any questions or comments regarding this drainage, please do not hesitate to call.

Respectfully submitted,

Matthew Larson

Project Manager

AG/2366.92/drainage letter.docx



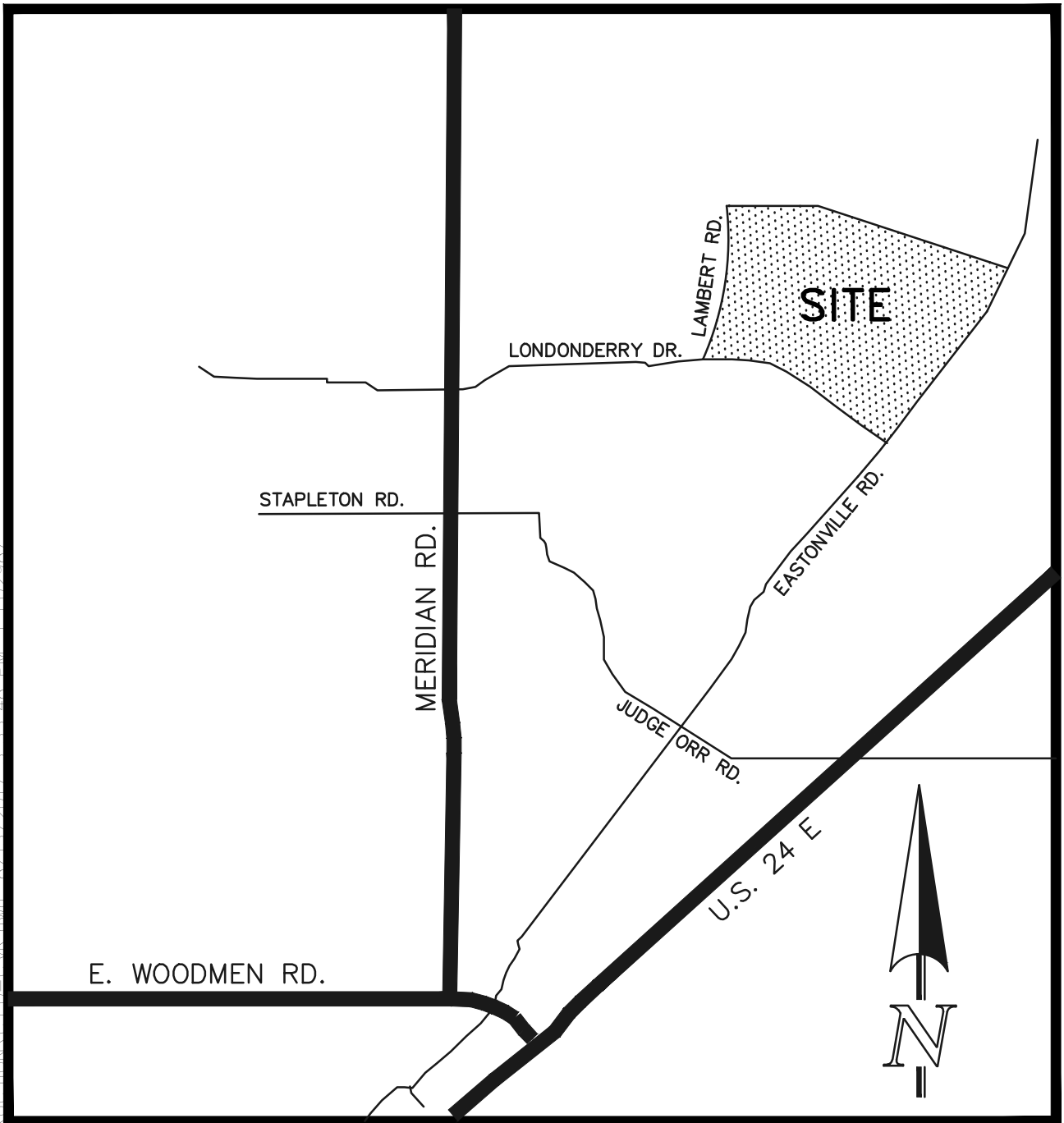
## REFERENCES

1. El Paso County Drainage Criteria Manual Volume 1, as revised November 1991 and October 1994.
2. “Final Drainage Report for Londonderry Drive and Lambert Road,” by PBS&J dated May 2007.

Has this report been approved by the County? Please provide the county project name or number so that I may locate the report.

## VICINITY MAP

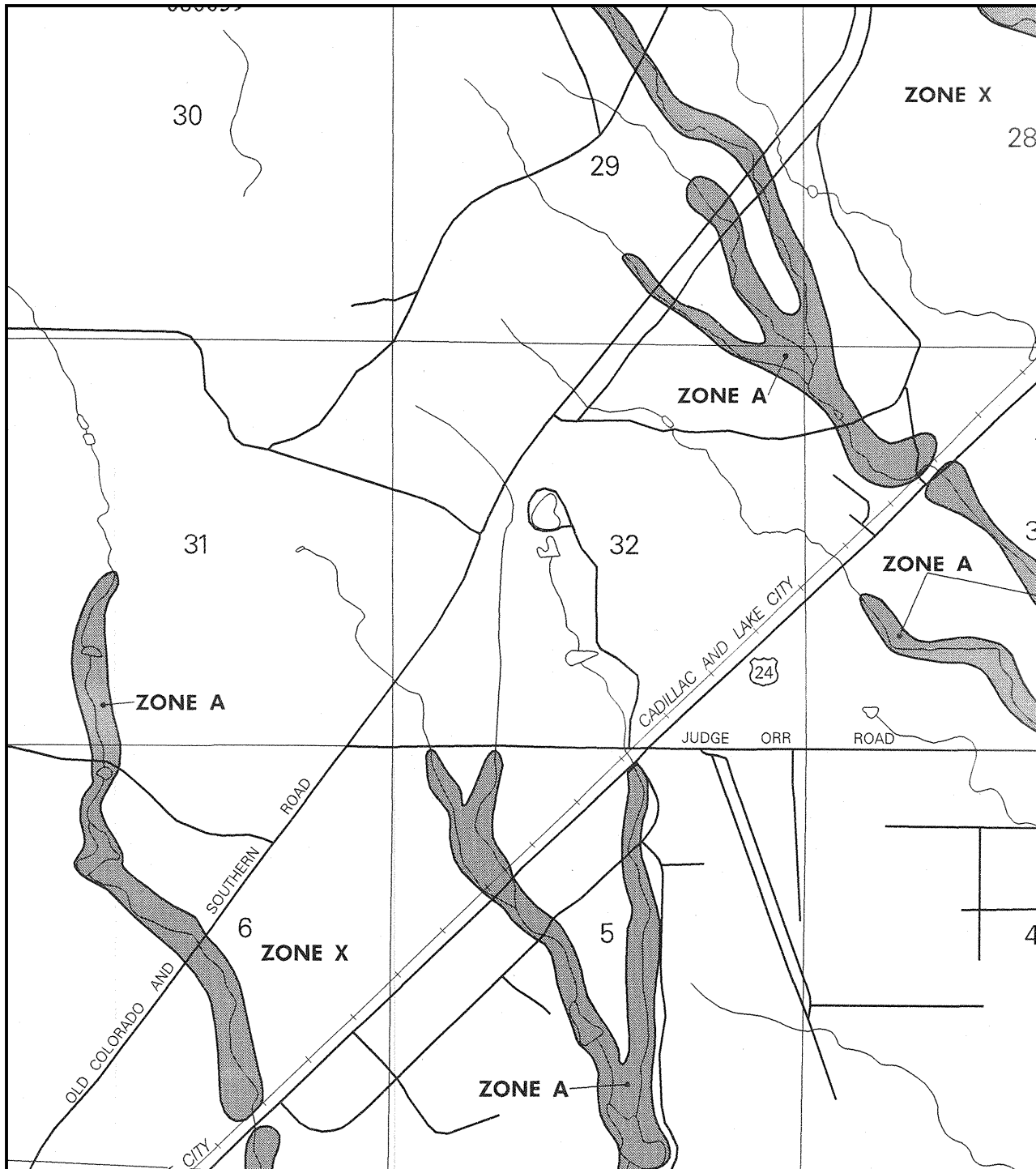
N:\236692\DRAWINGS\CONSTRUCTION\C10-CVR.dwg 8/13/2017 3:35:48 PM 1-102987



**VICINITY MAP**  
NOT TO SCALE



## **F.E.M.A. FLOODPLAIN MAP**



APPROXIMATE SCALE IN FEET  
 2000 0 2000

# NATIONAL FLOOD INSURANCE PROGRAM

## **FIRM** FLOOD INSURANCE RATE MAP

EL PASO COUNTY,  
COLORADO AND  
INCORPORATED AREAS

**PANEL 575 OF 1300**

(SEE MAP INDEX FOR PANELS NOT PRINTED)

### CONTAINS: COMMUNITY

NUMBER	PANEL	SUFFIX
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COLORADO SPRINGS, CITY OF	080060	0575	F
EL PASO COUNTY, UNINCORPORATED AREAS	080059	0575	F

**MAP NUMBER**  
**08041C0575 F**

**EFFECTIVE DATE:**  
**MARCH 17, 1997**

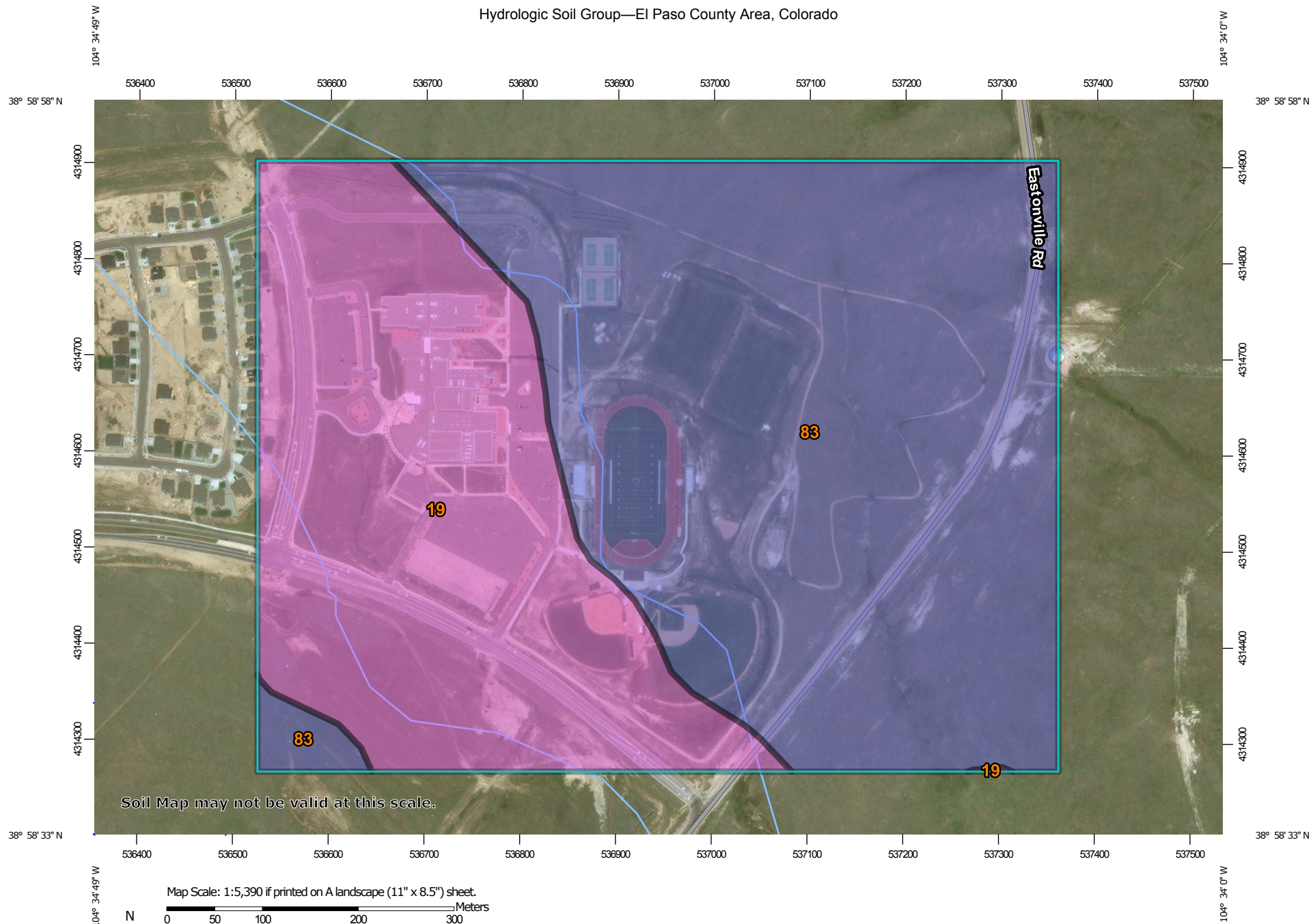


Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)


## **N.R.C.S. SOILS MAP**

# Hydrologic Soil Group—El Paso County Area, Colorado



## MAP LEGEND

### Area of Interest (AOI)









 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons





 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Lines


 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Points






 A  
 A/D  
 B  
 B/D

 C  
 C/D  
 D  
 Not rated or not available


### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Paso County Area, Colorado  
 Survey Area Data: Version 14, Sep 23, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2016—Mar 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — El Paso County Area, Colorado (CO625)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
19	Columbine gravelly sandy loam, 0 to 3 percent slopes	A	51.0	38.7%
83	Stapleton sandy loam, 3 to 8 percent slopes	B	80.9	61.3%
<b>Totals for Area of Interest</b>			<b>131.9</b>	<b>100.0%</b>

### Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

*Aggregation Method:* Dominant Condition

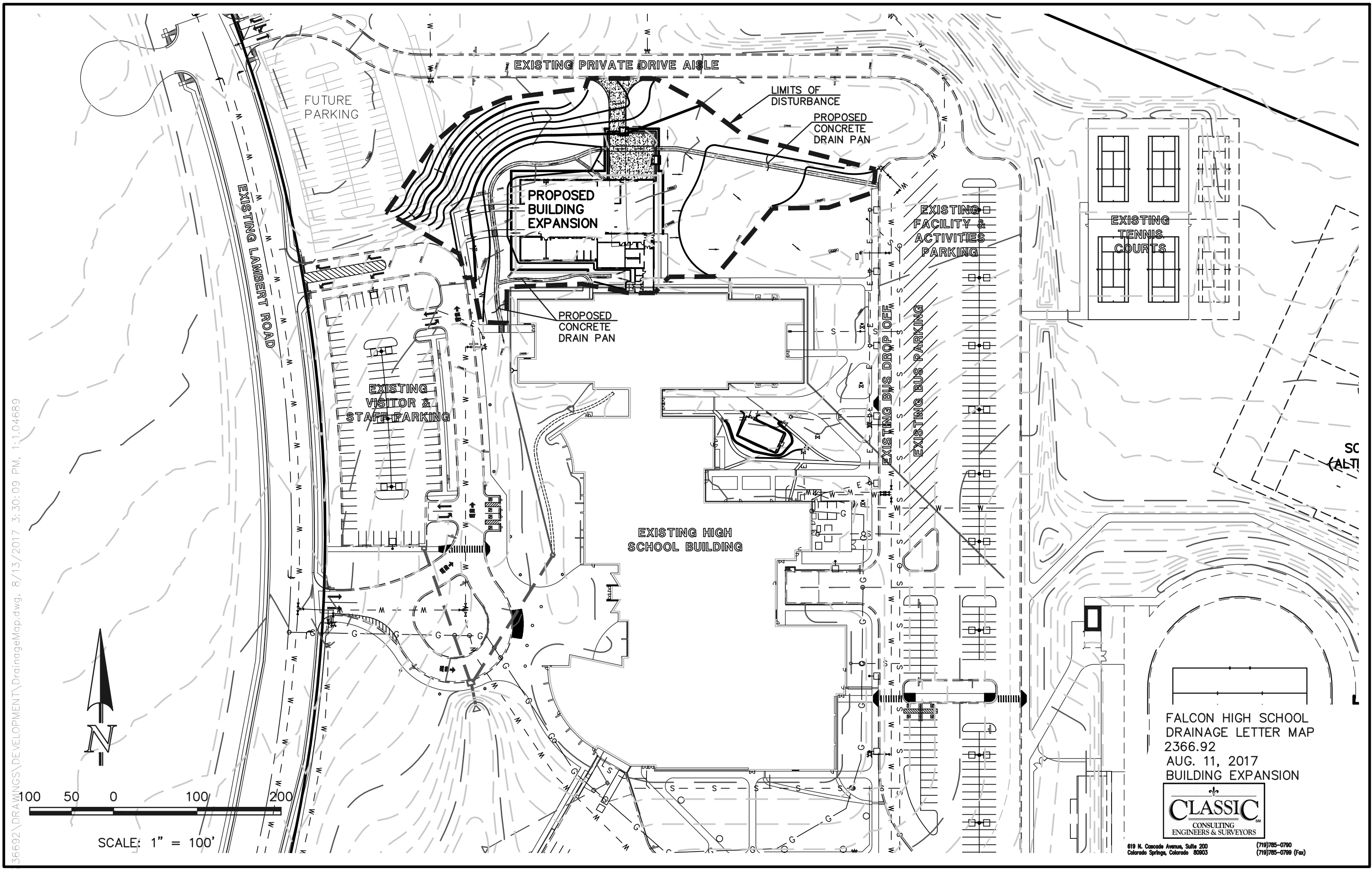
*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

## **DRAINAGE MAP**



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FALCON HIGH SCHOOL  
DRAINAGE LETTER MAP  
2366.92  
AUG. 11, 2017  
BUILDING EXPANSION



619 N. Cascade Avenue, Suite 200  
Colorado Springs, Colorado 80903  
(719) 785-0790  
(719) 785-0799 (Fax)

# Markup Summary

	<b>Subject:</b> Text Box <b>Page Label:</b> 1 <b>Lock:</b> Locked <b>Author:</b> dsdnijkamp	Please add El Paso County project number , PPR 17-048.
	<b>Subject:</b> Callout <b>Page Label:</b> 2 <b>Lock:</b> Locked <b>Author:</b> dsdnijkamp	Please add a place for the school rep to sign.
	<b>Subject:</b> Callout <b>Page Label:</b> 2 <b>Lock:</b> Locked <b>Author:</b> dsdnijkamp	Please change to Jennifer Irvine, PE
	<b>Subject:</b> Callout <b>Page Label:</b> 4 <b>Lock:</b> Locked <b>Author:</b> dsdnijkamp	Would it be more accurate to state that WQ and detention is already accounted for in existing pond E and the existing pond known as Falcon High (or maybe state that no "additional" WQ...). Please also confirm (and state here) that maintenance agreements are already on file with El Paso County for these two existing ponds. If no agreements are on file, ones will be needed please.
	<b>Subject:</b> Callout <b>Page Label:</b> 5 <b>Lock:</b> Locked <b>Author:</b> dsdnijkamp	This basin has a fee established. Please explain why you wouldn't be required to pay fees. Hint: you are over 35 acres, as such you are not required to plat, therefor not required to pay fees.
	<b>Subject:</b> Callout <b>Page Label:</b> 6 <b>Lock:</b> Locked <b>Author:</b> dsdnijkamp	Has this report been approved by the County? Please provide the county project name or number so that I may locate the report.