



August 11, 2017

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

ATTN: Mrs. Elizabeth Nijkamp

RE: Drainage Letter for Falcon High School – Building Expansion

Dear Elizabeth:

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,

A handwritten signature in blue ink, appearing to read "Matthew Larson", is written over a horizontal line.

Matthew Larson
Project Manager

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
Kyle R Campbell, Colorado P.E. #29794

11.8.17
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 (Signature): Brett Ridgway
By (Print): Brett Ridgway
Title: CBO - Assistant Treasurer
Address: 10850 E Woodmen Road
Peyton, CO 80831

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.

Jennifer Irvine, P.E.
County Engineer / ECM Administrator

Date

Conditions:

PPR 17-048



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 for Londonderry Drive and Lambert Road, 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” and the “Final Drainage Report for Meridian Ranch Filing 11A” (EPC Planning No. SF 13-014). 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. There is no documentation on file with El Paso County for the site-specific drainage report for the existing Falcon High School and ‘interim’ detention pond at the south-east corner of the site.



The downstream detention and water quality Pond E (across Londonderry Drive and not on school property) is owned and maintained by the Meridian Service Metropolitan District (MSMD), per the approved “Final Drainage Report for Meridian Ranch Filing 11A” by Tech Contractors, March 2014. As no modification is being made to the existing facilities and the runoff rate has not been increased with the proposed development, we respectfully request that nothing else is required at this time for these existing conditions and existing detention & water quality facilities.

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 any new on-site water quality or detention. The downstream Pond E (off-site, south of Londonderry Drive) provides water quality and detention for the entire Falcon High school parcel, including the area of expansion and site improvements. Maintenance agreement is on file (SF 13-014).

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).

DRAINAGE AND BRIDGE FEES

Haegler Ranch Drainage Basin

This site lies within the Haegler Ranch Drainage Basin boundaries. As the existing Falcon High School sits on a parcel larger than 35 acres, a final plat has not been and is not required and therefore no Basin fees are required.

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

PPR 17-048

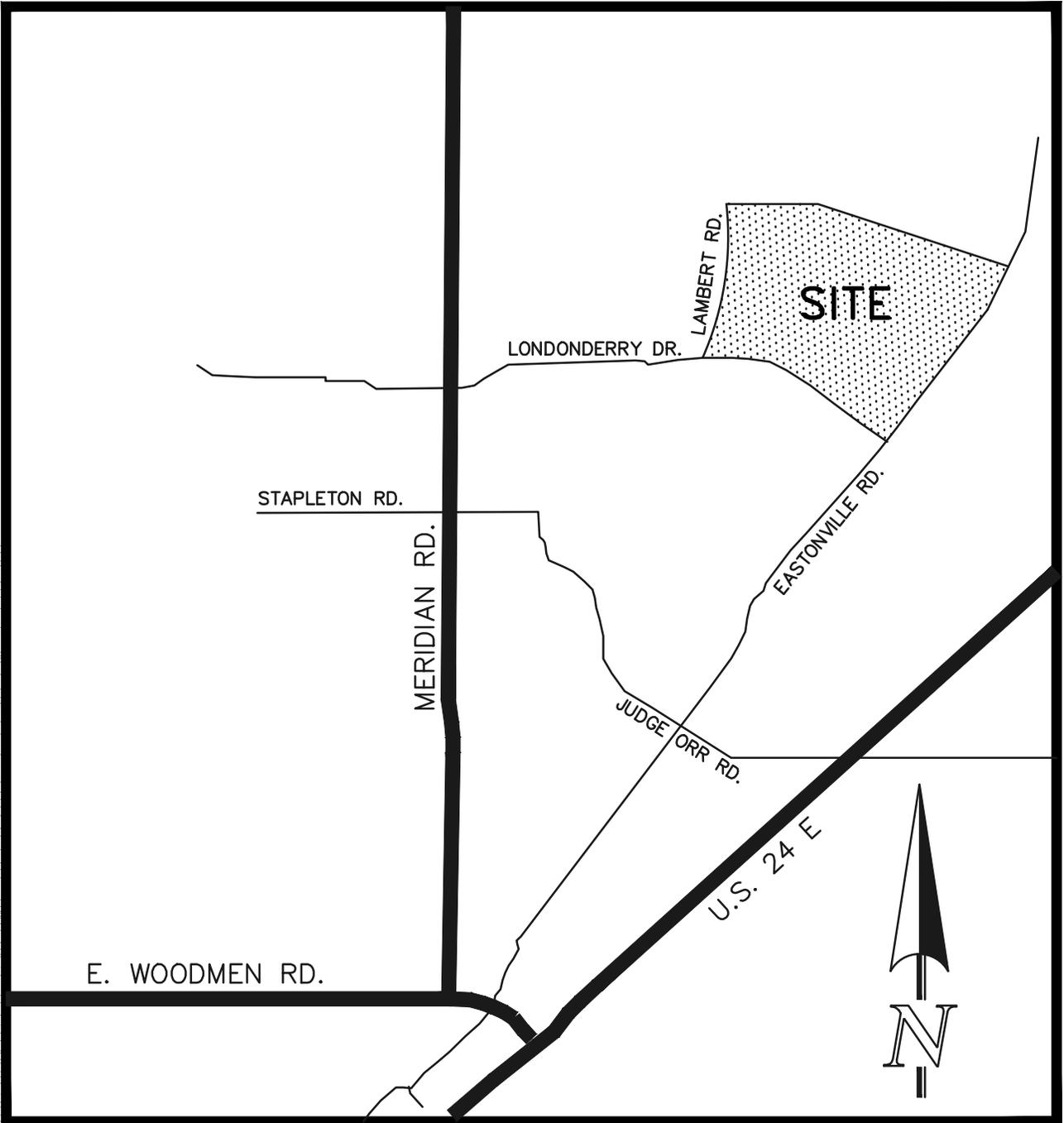


REFERENCES

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, El Paso County approved on June 6, 2007. CDR-07-002
3. “Final Drainage Report for Meridian Ranch Filing 11A,” by Tech Contractors, dated March 2014, El Paso County approved on March 20, 2014. SF-13-014

VICINITY MAP

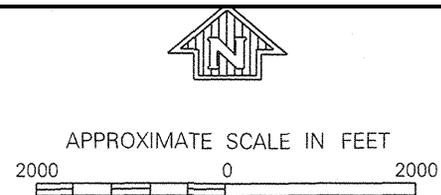
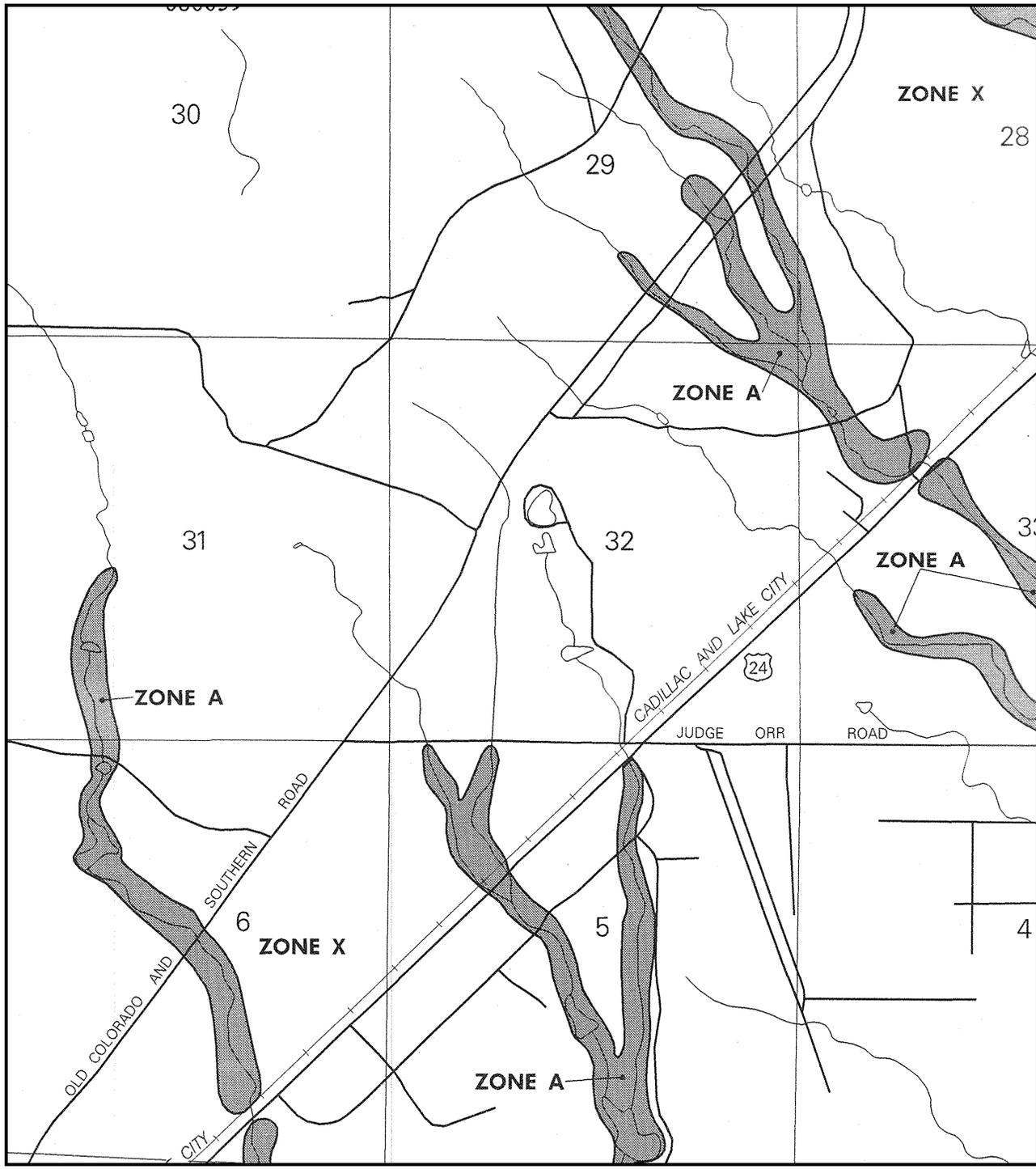
N:\236692\DRAWINGS\CONSTRUCTION\C10-CVR.dwg 8/13/2017 3:35:48 PM 1-102987



VICINITY MAP
NOT TO SCALE

F.E.M.A. FLOODPLAIN MAP





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
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

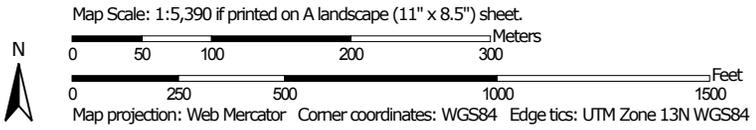
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program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

N.R.C.S. SOILS MAP

Hydrologic Soil Group—El Paso County Area, Colorado



Soil Map may not be valid at this scale.



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%
Totals for Area of Interest			131.9	100.0%

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

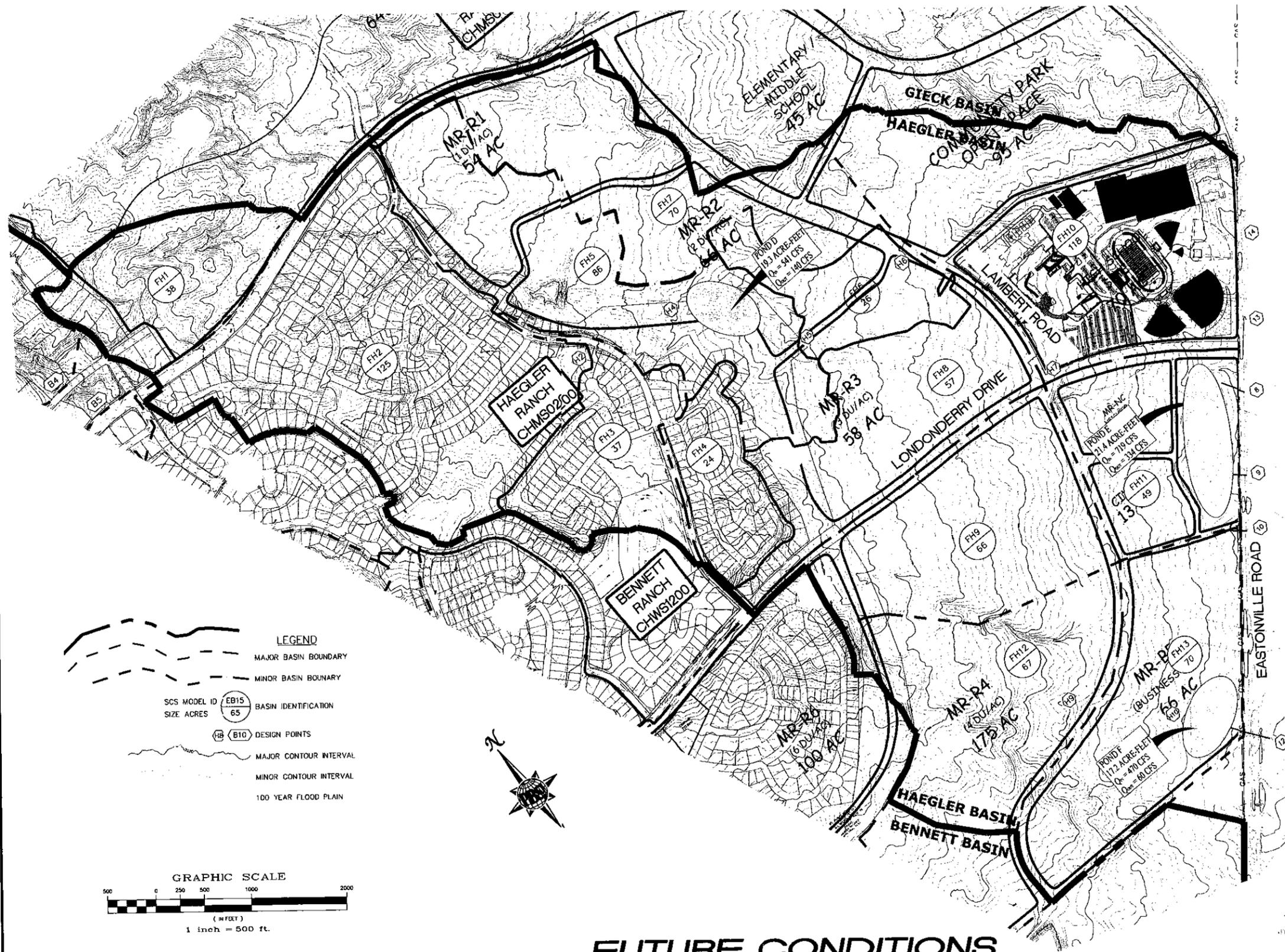
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

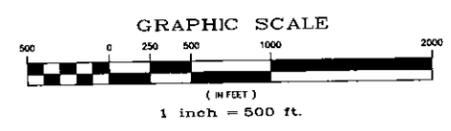
DRAINAGE MAP

SCS DRAINAGE MAP LONDONDERRY DRIVE AND LAMBERT ROAD



LEGEND

- MAJOR BASIN BOUNDARY
- MINOR BASIN BOUNDARY
- SCS MODEL ID **EB15** / SIZE ACRES **65** BASIN IDENTIFICATION
- DESIGN POINTS
- MAJOR CONTOUR INTERVAL
- MINOR CONTOUR INTERVAL
- 100 YEAR FLOOD PLAIN



FUTURE CONDITIONS

PBSJ 1 South Nevada Avenue
Suite 205
Colorado Springs, Colorado 80903
Telephone: 719/227-1275
Fax: 719/227-7286

ENGINEERING PLANNING SURVEYING CONSTRUCTION SERVICES

FIGURE 6

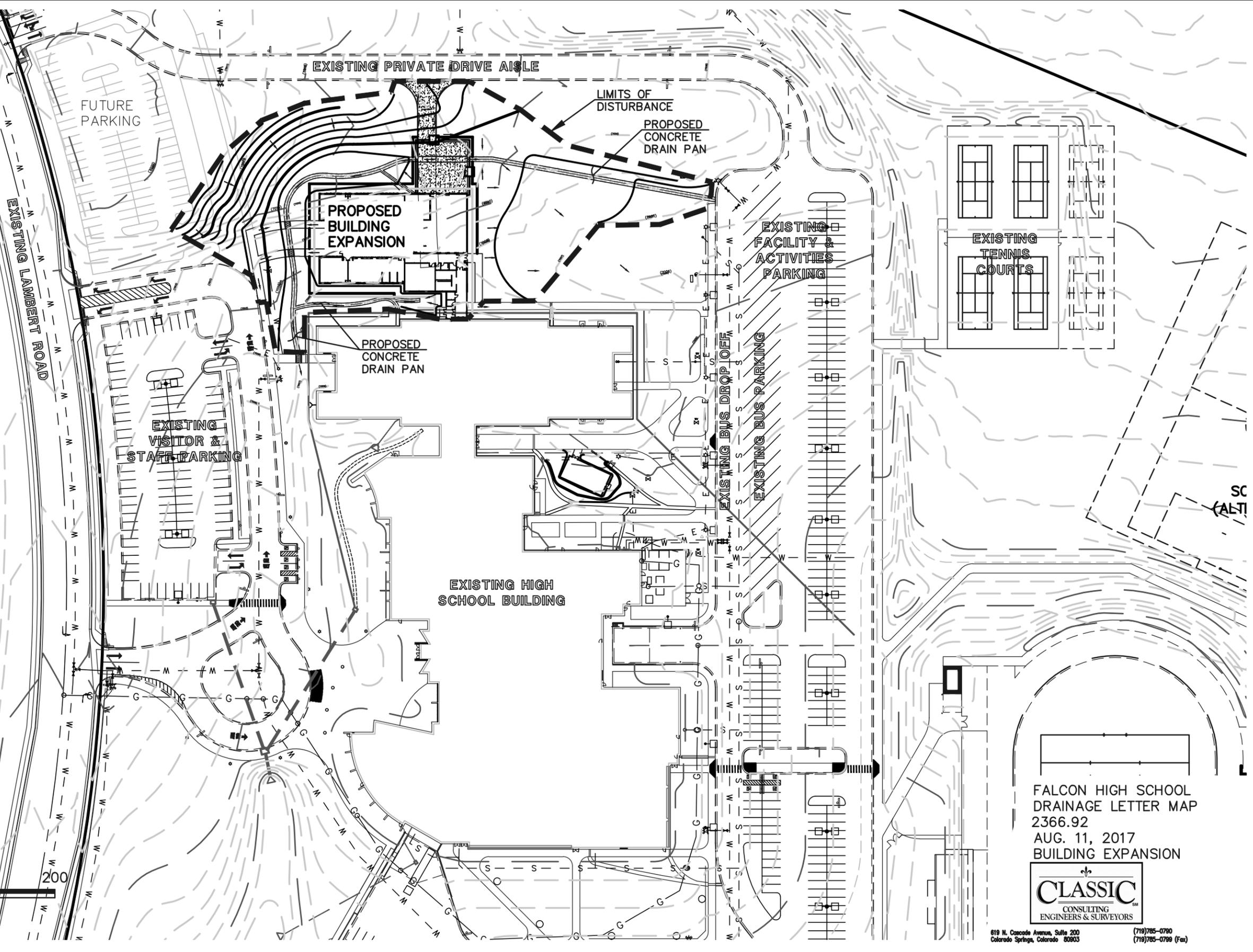
PBSJ PROJECT NUMBER 248162.00

© Copyright 2015 by PBSJ, Inc. All rights reserved. This map is a technical drawing and is not to be used for any other purpose without the written consent of PBSJ, Inc.

N:\36692\DRAWINGS\DEVELOPMENT\DrainageMap.dwg, 8/13/2017 3:30:09 PM, 1:1.04689



SCALE: 1" = 100'



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)



Pld. Bldg.

FALCON HIGH

LAMBERT

LAUNDERRY

EXISTING SCHOOL POND
(Discharges into Pond E)

EXISTING POND E
(Detention + SWQ)

