

Douglas County Schools

Douglas County School District
620 Wilcox Street
Castle Rock, CO 80104



ACC Parker Feasibility Study/Test Fit - Addendum

Issue Date: November 16th, 2021

Cunningham

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ACC Parker Feasibility Study/Test Fit - Addendum

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Introduction

Cunningham and our technical consultants are pleased to submit this Feasibility Analysis and Test Fit report to the Douglas County School District (DCSD). We understand this is just one step in the possible acquisition and conversion of the Arapahoe Community College (ACC) Parker Campus property into a District Alternative High School. We are prepared to answer questions on the contents of this report and to provide further analysis if needed.

Executive Summary

Douglas County School District staff contacted Cunningham to request assistance with a feasibility analysis and test fit for the ACC Parker building located at 15653 Brookstone Drive, Parker, CO. Please note that although the mailing address for the facility is Parker, the site is technically west of and outside the limits of the town. The site and building have many natural advantages that make such an effort reasonable.

- Approximately 22,000 gross square feet available, in comparison to 23,000 s.f. Alternative High School designed for Pine Drive
- Location immediately adjacent to Chaparral High School in DCSD
- Quality materials and finishes throughout with a high degree of durability
- Ten existing classrooms and two science labs that are ready for use by DCSD students, almost completely as is
- Expansive site with more than enough parking spaces and convenient access
- Open central space that unites both floors, which can be used as a student commons

Cunningham staff, augmented by five specialty engineering/technical consultants representing three different firms, visited the site twice to evaluate the condition of the building and its suitability for the proposed new uses. Key findings from these experts are:

- Changing the Building Code Occupancy Use from Assembly and Office to Education should not impose especially costly changes.
- Building infrastructure of electrical service and mechanical capacity are adequate for the proposed uses.
- The exterior weathering surfaces (roofs and walls) are in generally good condition but do need some maintenance.
- The proposed uses fit well in the existing structure and Alternative High School staff are very satisfied with the potential floor plans
- The site including pavements and landscaping are in good condition
- The proposed uses will require a new vehicular access around the building to an overhead door into one classroom space

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- Design, Permitting, and Construction would require approximately 14 months for a full build-out.

Within the short time duration of this study, Cunningham and its consultants have provided input on probable construction costs where appropriate. In order to provide the District with a useful Opinion of Probable Cost, our team worked closely with a local general contractor who is familiar with local market conditions and district standards.

Process Summary

Cunningham staff walked the site, in the company of DCSD staff, on September 28, 2021 to assess the issues and challenges. Within days, Cunningham contacted three additional consulting firms and received proposals for their services. Those services were submitted along with Cunningham's services to DSCD for approval. DCSD immediately approved that. Services were to be completed by October 22, 2021.

Two consulting firms visited the site to familiarize themselves with the property. Every mechanical room and electrical room was viewed and the roof was observed. DCSD involved many of their own department staff in the analysis and site visits, including security, IT, maintenance, environmental, and planning. Preliminary test fit plans were presented to District staff on October 6 and October 14.

The Cunningham team confirmed with the Douglas County Building Department that they would have jurisdiction for a building permit on the renovation project. This Due Diligence report was delivered to DCSD on October 22, 2021.

Traffic

After contacting Douglas County, it has been determined that a formal traffic study will not be required. Refer to the attached letter from our traffic consultant – Felsburg, Holt & Ullevig – for more information.

Avigation

DCSD staff have checked into the possibility of a conflict with the intended use of the facility due to its proximity to the nearby Centennial Airport. It is approximately 2.38 miles from the western facade of the building to the closest point on the north south runway at Centennial. DCSD staff have determined that the site lies outside the defined 65 db contour for the airport and therefore our proposed educational use is acceptable. Cunningham has determined that the Colorado Department of Education guidelines do not include recommendations regarding location, including proximity to airports.

ACC Parker Preliminary Project Schedule

Schematic Design (SD)	1 month
SD Review	1 week
Design Development (DD)	1 month
DD Review	1 week
Construction Documents (CD)	2 months
CD review	2 weeks
Design/Documents subtotal	5 months
Permit, Bid, and Negotiation	2 months
Construction	5 months
Total Start of Design to Substantial Completion	12 months

Assumptions:

Permitting will be through Douglas County Building Department.

Design will start in January 2022.

Delivery method will be Construction Manager/General Contractor (CM/GC)

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MEMORANDUM

TO: Paul Hutton, FAIA, NCARB, LEED Fellow BD+C
 Director of Regenerative Design, Cunningham Group

FROM: Philip Dunham, PE, PTOE
 Paul Brown, PE, PTOE

DATE: November 10, 2021

SUBJECT: Douglas County Schools Due Diligence – ACC Parker Campus
 FHU Reference No. 121397-01

The Douglas County School District (DCSD) is exploring the possibility of operating a 150-student alternative high school campus on the Arapahoe Community College (ACC) Parker Campus. The ACC Campus is located at the northeast corner of the South Chambers Road and Brookstone Drive intersection in unincorporated Douglas County. The Felsburg Holt & Ullevig (FHU) team has performed a high-level analysis of potential traffic issues at this site to inform DCSD’s due diligence for the potential redevelopment. These evaluations include trip generation, parking generation, site circulation, and the potential need for offsite traffic-related improvements.

Trip Generation

A key component of the planned reuse of the ACC Campus is an evaluation in the change in trips that would result from the change in land use. Trip generation estimates for both land uses were developed using weekday data contained in *Trip Generation, 10th Edition*, Institute of Transportation Engineers (ITE), 2017. It should be noted that schools often do not generate peak levels of traffic at the same time as the peak hour traffic on the surrounding roadway network. This is most common in the afternoon when school dismissal is typically earlier than evening commuting along the adjacent roadways. To be conservative, the trip generation estimates presented in this memorandum represent AM and PM trip generation for the peak hour of the generator.

The estimated trip generation for the existing community college is presented in **Table I**. As shown, the ACC facility is estimated to generate 1,202 daily trips, 143 AM peak hour trips, and 109 PM peak hour trips.

Table I also shows the forecasted trip generation for the proposed high school use, which is estimated to generate 527 daily trips, 160 AM peak hour trips, and 93 PM peak hour trips.

Table I. ACC Parker Trip Generation

Land Use (Trip Generation Category)	Students	Daily Vehicle Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing Community College Use								
Junior/Community College (ITE Land Use 540)	300	1,202	91	52	143	61	48	109
Proposed Alternative School Use								
High School (ITE Land Use 530)	150	527	109	51	160	30	63	93
Numeric Difference		-675	18	-1	17	-31	15	-16
Percentage Difference		-56%	20%	-2%	12%	-51%	31%	-15%

As these data show, the forecasted high school daily trip generation is less than half of the estimated community college trip generation. The differences are less pronounced in the peak hours, with the forecasted AM high school trips being 12 percent higher than the community college estimate, and the forecasted PM high school trips being 15 percent lower than the community college estimate. However, these differences are small (less than 20 trips in the AM peak hour and less than 40 trips in the PM peak hour) and would not be expected to significantly affect traffic operations in the area.

Parking Generation

Another key component of the planned reuse of the ACC campus is an evaluation in the change in parking demand that would result from the change in land use. Parking generation estimates were developed using weekday data contained in *Parking Generation*, 5th Edition, Institute of Transportation Engineers (ITE), 2019. The peak parking demand for a 150-student high school is estimated at 44 parking spaces. The existing parking lot for the ACC Campus provides approximately 190 spaces (including 6 handicapped spaces), significantly more than the forecasted need. Hence, parking demand is not expected to be a concern with the change in land use.

Site Access and Circulation

Access to the existing site is provided via two driveways from a north/south access road between the ACC site and Chaparral High School. This roadway originates at Brookstone Drive on the south and terminates into a 138-space parking lot on the north side of Chaparral High School. No turn lanes are provided into or out of the ACC site. It is not anticipated that they would be needed for the high school given forecasted volumes accessing the site and a lack of significant through traffic along the access road.

As noted previously, it is anticipated that the proposed use would likely reduce overall daily traffic, but the peak hours are more similar between the college and high school uses. The hourly increases anticipated for inbound trips in the AM and outbound trips in the PM are fewer than 20. It is unlikely that these moderate differences would have significant impact on traffic operations. The eastbound left turn lane from Brookstone Drive onto the north/south access road between the ACC site and Chaparral High School provides 100 feet of queuing, enough for four vehicles. Both the southbound left turn lane and the northbound right turn lane from Chambers Road onto Brookstone Drive provide 275 feet of queuing, enough for 11 vehicles. It is unlikely that these lanes need to be modified for 20 additional peak hour vehicles. However, a more formal analysis would be needed to confirm these observations. It should also be noted that the north/south access road serves only the ACC site and Chaparral High School, so it is unlikely that the volume along this roadway will increase over time.

DCSD will not be providing regular busing for students at this facility. However, occasional field trips and other events may use small buses. The existing parking lot was not designed and constructed to accommodate buses since busing is typically not provided for community colleges. The northern of the two parking lot access drives has a row of parking that is centered on and parallel to the driveway. This would make navigating the driveway difficult for larger vehicles. Given the anticipated parking surplus on the site, the redesign or removal of this parking could allow improved bus circulation. Although regular student drop-off and pick-up is not anticipated for this site, changes at this driveway could also facilitate improved circulation for occasional drop-off and pick-up maneuvers and for deliveries. This should be considered further during future site design efforts.

Conclusions

FHU has reviewed the plans for converting the ACC Parker Campus into an alternative high school for DCSD. This cursory review of the potential innovation campus has identified the following traffic conclusions:

- Trip generation estimates for the high school are lower than the current land use.
- Adequate parking is forecasted to be available for the high school land use.
- No potential site access and/or offsite access improvements were identified during our cursory access and circulation review. These items may need to be further evaluated at the request of reviewing agencies.

We believe that the proposed change in use at this site would be appropriate given the nearby high school and that there would not be significant traffic impacts attributable to the change in use.