

## Land Dedication Fee-in-Lieu Analysis – Greeley-Evans School District 6 Western Demographics, Inc. - 1/12/20

**Introduction** – This report illustrates the acreage, costs and methodology associated with implementing a land dedication and fee-in-lieu of land dedication fee system for the Greeley-Evans School District (Weld 6). The report identifies specific cost elements analyzed and collected by Western Demographics Inc., an acknowledged expert on the topic in the State of Colorado. The report analyzes the number of students that come from housing of various types in the district and estimates an acreage per new single family home of 0.0159 acres per unit and a fee-in-lieu of this land of \$2,498.02 per unit. Lower acreages and fees have been calculated for denser housing types and a slightly higher fee and acreage is associated with mobile homes which tend to produce more students.

**History** - The majority of Front Range school districts have had land dedication or fee-in-lieu of land dedication systems for decades. These systems have been implemented by many City and County jurisdictions as listed in the following sample table. Two of these districts, SD27J and Douglas County have voluntary capital cost recovery fees, which also collect revenue for actual school construction in addition to funds for land acquisition. Given the typical smaller size of most land developments along the Front Range, the majority of these districts are collecting Fee-In-Lieu instead of receiving school land. This revenue is consolidated so that appropriate sites may be purchased in the best locations to serve student growth needs.

### Figure 1 Sample List of Front Range Districts Collecting Fee-In-Lieu

- Adams 12 (Thornton)
- Adams 12 (Westminster)
- Adams 12 (Broomfield)
- Aurora Public Schools
- Boulder Valley (Erie)
- Cherry Creek (Aurora)
- Cherry Creek (Arapahoe County)
- Cherry Creek (Centennial)
- Cherry Creek (Greenwood Village & Cherry Hills Village)
  - Cherry Creek (Glendale)
    - Cherry Creek
- Colorado Springs District 11
  - Douglas County
  - Poudre School District
  - St. Vrain (Longmont)
  - St. Vrain (Weld)
  - Thompson Valley
- SD27J (Brighton, Thornton)
  - SD27J (Aurora)
  - SD27J (Commerce City)
  - SD27J (Adams County)
- SD27J (Capital Facility Fee - for all municipalities)

**Remaining Land Development Potential in Greeley 6 School District**

Given the scale of remaining vacant land in Greeley, it makes sense for a fee ordinance to be implemented at this time. The combined effect of vacant land in Greeley, Evans and the currently unincorporated areas on the east side of the district will produce significant student impact. Cobblestone, Westgate, Triple Creek, Cardinal Acres, City Center West, Gateway Park and Northridge Estates are pending developments that will produce thousands of additional homes and potential school impacts that will not be addressed by existing schools. If a land dedication and fee-in-lieu of land dedication systems were implemented, these developments and others in the future could contribute to a funding base that would allow Greeley 6 to purchase appropriate school sites in smart locations.

**Developing Areas – Greeley – 2019 – 2028:** The City of Greeley expects new developments to produce over 2,000 new homes during the next eight years, predominantly on the west side of the community. The Greeley / Evans area has emerged as a prime address for young families seeking affordable housing and employment opportunities and much of this housing is targeted for families with these demographics. Figure 2 identifies the names of developing areas.

**Figure 2 - Developing Areas – Greeley**

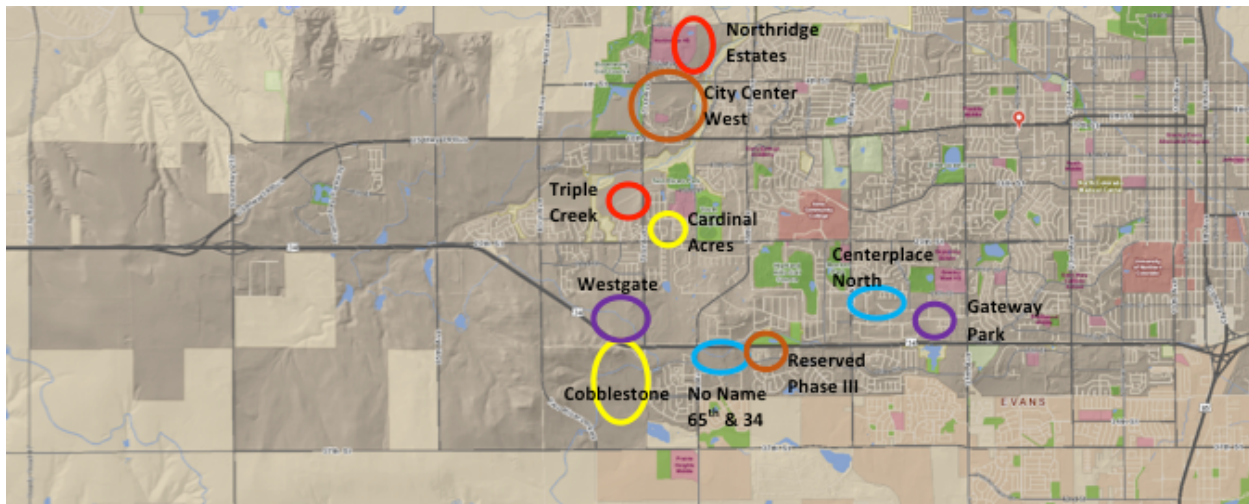


Figure 3 indicates the number of new homes expected in the areas identified on the map above as well as in the Evans area. The City of Evans expects new developments to produce over 1,500 new homes during the next five years.

**Figure 3 - Development Absorption Quantities – Greeley and Evans – 2019 – 2028**

			<b>Units</b>
<b>Greeley</b>	<b>Units</b>	Centerplace North	133
Cobblestone	675	Gateway Park	144
Westgate	500	Northridge Estates	232
Triple Creek	36		
Cardinal Acres	15	<b>Evans</b>	<b>Units</b>
City Center West	545	Prairie View	155
		Other Vacant Land	1,000s

**Land Dedication Acreage Calculation** - The methodology for calculating the amount of acreage needed for new schools given various new housing dwelling types is illustrated in the following table. Student yields per house are calculated based on samples of housing areas in which students who reside in the area are compared with the total unit count in a study area in order to produce a students per house estimate or yield. In the case of Greeley-Evans 6, approximately 0.64 students are expected from each single new family home based upon existing samples. Student yields for town homes and duplexes are calculated at 0.31 students per unit. Yields for mobile homes and apartments are estimated to be 0.62 and 0.14 respectively.

The formula for calculation addresses the number of students per new school based on district policy and the desired acreage of a new school site. The student yield is multiplied by site acreage and divided by students per school at each level – elementary, middle and high school. The results for all three levels are then added together to determine the acreage. Figure 4 illustrates the calculation given various dwelling types.

**Figure 4**

<b>Greeley-Evans School District - Initial Land Dedication Fee-In_Lieu Calculations</b>				
<b>Western Demographics, Inc. - 1/12/20 - Scenario #8</b>				
<b>Calculation Element</b>	<b>Elementary School</b>	<b>Middle School</b>	<b>High School</b>	<b>Totals</b>
A1 - Students per School - (SFD)	700	900	1800	
A2 - Greeley-Evans SD Student Yeild Per SFD Dwelling Unit	0.33	0.13	0.18	<b>0.64</b>
A3 - Site Acreage by Level	15.5	27.5	46.0	
<b>A6 - Acreage Per Unit by Level - SFD</b>	0.0073	0.0040	0.0046	<b>0.0159</b>
B2 - Greeley-Evans SD Student Yeild Per TH/Duplex Dwelling Unit	0.17	0.07	0.07	<b>0.31</b>
<b>B6 - Acreage Per Unit by Level - TH/Duplex</b>	0.0038	0.0021	0.0018	<b>0.0077</b>
F2 - Greeley-Evans SD Student Yeild Per Manufactured Home Dwelling Unit	0.30	0.15	0.17	<b>0.62</b>
<b>F6 - Acreage Per Unit by Level - MANUF HM</b>	0.0066	0.0046	0.0043	<b>0.0156</b>
G2 - Greeley-Evans SD Student Yeild Per Apartment Unit	0.07	0.03	0.04	<b>0.14</b>
<b>G6 - Acreage Per Unit by Level - APT</b>	0.0016	0.0009	0.0010	<b>0.0035</b>

**Fee-in-Lieu of Land Dedication Calculation – Raw Land** - The fee-in-lieu element of the calculation converts the acreage needed per housing unit into a cost per acre of developed land that would support a school. This calculation is based upon a raw land cost based on comparable sales of parcels between eight and sixty acres in size in the Greeley area and a cost to convert raw land into a usable site that would support an institutional building with minimal infrastructure available in the form of water, sewer, electrical, gas and an adequate, paved street. The land sales used range in age from three to six years given the limited number of sales of appropriate size. A reasonable land appreciation rate of five percent was applied in order to convert the cost of these comparable sites into current dollars. Given the eleven comparable sites available, an average cost of \$69,236.52 was obtained. Figure 5 illustrates the comparables and the calculation of the average raw land cost. Figure 6 combines the cost of the raw land with approximately \$88,000 of additional cost required to obtain developed land with reasonable adjacent infrastructure. Most school districts implementing fees have calculated developed land costs and used them in the formula.

**Figure 5**

Parcel Num	ACCTTYPE	Sales Price	Sale Date	GIS_Acres	Price per Acre	Annual Appreciation	Years of Appreciation	Appreciation Multiplier	Parcel Cost with Appreciation
80305400012	Residential	\$500,000	2/25/16	8.5	\$58,926	0.05	3	1.15	\$575,000
80305300002	Agricultural	\$700,000	1/7/16	61.3	\$11,416	0.05	3	1.15	\$805,000
70931334001	Commercial	\$750,000	11/2/15	41.8	\$17,945	0.05	4	1.2	\$900,000
80306000033	Agricultural	\$900,000	3/17/15	28.1	\$32,075	0.05	4	1.2	\$1,080,000
80306400040	Agricultural	\$1,804,700	2/12/15	11.0	\$164,025	0.05	4	1.2	\$2,165,640
80306108001	Agricultural	\$375,000	12/15/14	15.2	\$24,707	0.05	5	1.25	\$468,750
70929300010	Agricultural	\$2,300,000	7/1/14	8.4	\$274,562	0.05	5	1.25	\$2,875,000
70929300011	Agricultural	\$2,300,000	7/1/14	9.7	\$238,141	0.05	5	1.25	\$2,875,000
70929300012	Agricultural	\$2,300,000	7/1/14	11.9	\$193,143	0.05	5	1.25	\$2,875,000
80305000040	Agricultural	\$600,000	10/24/13	21.2	\$28,259	0.05	6	1.3	\$780,000
80305000027	Residential	\$251,600	8/9/13	10.1	\$24,843	0.05	6	1.3	\$327,080
<b>Totals</b>		<b>\$12,781,300</b>		<b>227.1</b>	<b>\$56,270</b>				<b>\$15,726,470</b>
<b>Average Cost Per Acre with Annual Appreciation</b>									<b>\$69,236.52</b>

**Fee-in-Lieu of Land Dedication Calculation - Developed Land** - The estimated cost per acre to convert raw land into developed sites viable for an institutional building adds to the cost of an acre of school land. Figure 6 illustrates the \$88,076 required to provide water, sewer, storm sewer, electric, gas and telephone / broadband to a site along one side of a square acre. This is the typical formula for calculating linear cost, some districts use two sides of a square acre given the significant cost to make raw land usable.

**Figure 6**

<b>Greeley-Evans School District - Initial Land Dedication Fee-In_Lieu Calculations - DRAFT</b>				
<b>Western Demographics, Inc. - 1/12/20 Scenario #8</b>				
Cost Element	Elementary School	Middle School	High School	Totals
A1 - Students per School - (SFD)	700	900	1800	
A2 - Greeley-Evans SD Student Yeild Per SFD Dwelling Unit	0.33	0.13	0.18	<b>0.64</b>
A3 - Site Acreage by Level	15.5	27.5	46.0	
A4 - Developed Land Cost	\$157,312	\$157,312	\$157,312	
A5 - Cost Per Unit by Level - SFD	\$ 1,149.50	\$ 624.88	\$ 723.64	<b>\$ 2,498.02</b>
B2 - Greeley-Evans SD Student Yeild Per Townhome/Duplex Dwelling Unit	0.17	0.07	0.07	<b>0.31</b>
B5 - Cost Per Unit by Level - TH/Duplex	\$ 592.17	\$ 336.47	\$ 281.41	<b>\$ 1,210.05</b>
F2 - Greeley-Evans SD Student Yeild Per Manufactured Home Dwelling Unit	0.30	0.15	0.17	<b>0.62</b>
F5 - Cost Per Unit by Level - MANUF HM	\$ 1,045.00	\$ 721.01	\$ 683.43	<b>\$ 2,449.45</b>
G2 - Greeley-Evans SD Student Yeild Per Apartment Unit	0.07	0.03	0.04	<b>0.14</b>
G5 - Cost Per Unit by Level - APT	\$ 243.83	\$ 144.20	\$ 160.81	<b>\$ 548.84</b>
<b>Raw Land Cost / Acre Based on 10 Recent Sales - With Annual Inflation</b>				<b>\$69,237</b>
<b>Basic Infrastructure Cost / Acre - Low Impact Western Demographics Model</b>	<b>Cost Per Linear Foot (lf)</b>	<b>Linear Feet Along One Side of a Square Acre</b>	<b>Subtotal / Acre</b>	
Electric, Gas Telephone	\$46.00	208.71	\$9,601	
Street Improvements	\$250.00	208.71	\$52,178	
Water and Sewer	\$66.00	208.71	\$13,775	
Storm Sewer	\$60.00	208.71	\$12,523	
<b>Total Cost - Basic Infrastructure</b>				<b>\$88,076</b>
<b>Developed Land Cost Including Basic Infrastructure</b>				<b>\$157,312</b>

**Developed Land Cost – Details** – Figure 7 displays the comparables and engineering cost estimates that are the background data for the infrastructure costs used to calculate developed land cost. Western Demographics collected infrastructure data from recent projects including the Eaton Recreation Center, Severance High School and Prairie Heights Middle School along with additional data from Northern Engineering (a regional authority on Weld County institutional construction costs) and developed reasonable and conservative cost estimates for four major infrastructure categories. Linear footage-based costs were converted into the \$88,076 per acre figure.

Western Demographics, Inc. - Developed School Land Calculation Comparables and Samples - 8/19/19 - DRAFT

Category	Northern Engineering	Eaton Rec Center Sample Costs	Severance HS Sample Costs	Prairie Heights MS - Sample Costs	Average of Sample Data	Western Demographics Working Figures	DRAFT - Suggested Cost Per Acre Based on Linear Foot Along One Side of a Square Acre
Dry Utilities	Dry utility budget (electric, gas, telephone) - \$5,000 per single family residential lot (Western Demographics 5 du/acre = \$25,000 / Acre divided by 208.71)	Fiber \$50,000 Gas \$50,000 Electric \$25,000 Total Dry Costs 119.78	Fiber \$7 Xcel Gas \$10 Xcel Electric \$2 Total Dry Costs \$18	Fiber \$100,000 Gas \$50,000 Electric \$40,000 Total Dry Costs \$190,000	\$10 \$5 \$4 \$20	Gas Electric / Cable	\$46.00 \$9,600.66
	Overlot grading for a 36' wide (flowline to flowline) roadway (assume cut to fill 60' wide/LF) - \$12 per Linear Foot (LF) of roadway	Construction of 3rd Street - approximate	Construction of Hidden Valley Parkway to the HS	City of Evans street impact fee		Gradig 3' ROW	
	Asphalt pavement subgrade preparation - \$11 per LF of roadway			Traffic light		4" Rock Base	
	Roller curb and gutter (with subgrade prep) - 2 x \$24 = \$48 per LF of roadway					Paving	
Street Improvements	5' wide sidewalk (with subgrade prep) - 2 x \$30 = \$60 per LF of roadway						
	Asphalt pavement (5.5" HBP over 6" ABC, 38.67' width of pavement) - \$120 per LF of roadway						
		Total Street Costs \$1,000,000	Total Street Costs \$1,700,000	Total Street Costs \$370,000	\$134		\$250.00 \$52,177.50
	8" diameter PVC SDR35 sanitary sewer main (with testing) - \$39 per LF	Water and Sewer taps - Town of Eaton (still needs to be purchased)	North Weld Water - water and tap	Water and tap - previously purchased by the District		Water Line - 6" Steel	
Water and Sewer	4' diameter sanitary sewer manhole - \$3,100 each		Sewer tap - Town of Severance			Sewer Line - 8" Cement	
	4" diameter sanitary sewer service - \$1,000 each						
	8" diameter PVC C900 water main (with testing) - \$26 per LF						
	8" diameter gate valve - \$1,700 each Fire hydrant assembly - \$6,300 each ¾" diameter water service - \$1,700 each	Total Water/ Sewer Cost \$206,000	Total Water/ Sewer Cost \$29.26	Total Water/ Sewer Cost \$62.45	\$0	\$52.24	
Storm Sewer	Total Water/ Sewer Cost 65.00						\$66.00 \$13,774.86
	18" diameter reinforced concrete pipe storm drain - \$60 per LF					18" Storm Sewer Line	\$60.00 \$12,522.60
							\$422.00 \$88,075.62

**Regional Fee Comparable Observations** – Windsor School District has generally led the fee development process for school land in Weld County and many of the sites constructed throughout that district’s rapid growth period were provided via dedication or fee-in-lieu resources and that practice continues. Student yield rates are generally lower as one moves away from the Interstate 25 corridor and school sizes are different in the two districts, therefore fee values proposed in Greeley are a little less than those currently collected in Windsor.

**Figure 8 - School Metrics - Comparative Analysis**

Community	Greeley-Evans	Windsor
Elementary School Size	700	600
Middle School Size	900	900
High School Size	1800	1200
Elementary Site Acreage	15.5	10
Middle School Site Acreage	27.5	25
High School Site Acreage	46	50
Single Family Detached Yield	.64	.70

**Figure 9 - Developed Land Cost Per Acre – Comparative Analysis**

Community	Greeley	Windsor
Developed Land Cost Per Acre	\$157,312	\$156,000

**Figure 10 – Student Yield – Comparative Analysis**

Student Yield	Greeley-Evans	Windsor
Detached	.64	.70
Attached (TH, Duplex)	.31	.30
Multi-family	.14	.36
Mobile Home	.62	.60

**Figure 11 - Comparative Fees**

Housing Type	Greeley-Evans – Scenario #8	Windsor – Adopted 2019
Detached	\$2,498	\$2,916
Attached (TH, Duplex)	\$1,210	\$1,213
Multi-family	\$549	\$1,304
Mobile Home	\$2,449	\$2,457

**Conclusion** – A fee per single family detached unit of \$2,498 seems reasonable given the various costs faced by Greeley-Evans School District 6 as it continues to provide high quality school facilities to its students and families based on a sound methodology using the metrics covered in this report. Comparable sales research for raw land, local engineering costs for infrastructure and locally-collected student yield data have all been used combined with a decades-old formula to produce the suggested fees listed in Figure 11. The fees suggested are slightly lower than those collected in an adjacent district given Greeley-Evans larger school sizes and lower student yields given its university population. The revenue collected would greatly assist the district with its efforts to purchase needed school sites as the community continues to grow.