ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
January 24, 2018

The Chairman called the meeting to order at 1:31 P.M.

Board Members Present
Darcy Kennedy
Mike Garnsey
Sue Sandstrom
Dennis Lyon
LaDonna Jurgensen

Others Present
Dale Connors, Ellwood Associates
Andrew Fiegel, Ellwood Associates
Cindy Birley, Davis Graham & Stubbs, LLP
Leslie Thompson, Gabriel Roeder Smith
Dana Woolfrey, Gabriel Roeder Smith
Erik Burge, Finance
Lew Quigley, Plan Administrator

Consent Agenda
Mr. Garnsey made a motion to approve the consent agenda; Mr. Lyon seconded the motion. The Board Chair called the vote and the motion carried.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201712	$15,051.26	Plan Administrator
Davis Graham & Stubbs, LLP	751666	$252.00	Plan Matters
JP Morgan Asset Management	20171231-26714-A	$10,180.25	Investment Fee
Milliman	016ACR0118	$6,750.00	License Fee
Tortoise		$48,716.40	Investment Fees
IMA	1130992	$11,395.00	Liability Insurance
Total Expenditures		$80,949.91	

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
1	Retirements as described in detail	
2	Vested Withdrawals	$43,681.07
16	Non Vested Withdrawals	$87,570.07
1	Death Benefits	$13,056.36
	Total Disbursements	$144,307.74

Ellwood Associates
Ellwood Associates
Mr. Fiegel brought the Board up to date on the Fund Performance as of December 31, 2017. Preliminary results show the Plan was ahead of its one and five-year benchmarks, making its 7.5% rate of return showing a net positive return for the year, ending with a total of $303,588,831.00. December was a solid month with continued earnings, the S&P up 1% for December. For 2017, the U.S. market had positive returns for all twelve months. MLP's did bounce back in the month of December although did finish the year in the red. Overall equity markets were very strong for the year. The Plan was up 12.1% for the year with a five year annualized rate of 7.8%. Actual 2017 results cannot be finalized until earnings are received for the real estate investments. The Plans holdings are in line with their targets although we are holding

funds to fund Parametric when it comes online. For 2017, net cash outflow was just over $8M, with returns over $33M thus resulting in positive net earnings.

Mr. Connors brought in Ellwood's just released Investment Outlook for 2018. Ellwood expects economic conditions to be supportive of equities, with valuations leading to favor international developed and emerging markets relative to a more neutral view on U.S. markets. Within below investment grade corporate credit markets, Ellwood favors the floating rate structure of leveraged loans relative to high yield bonds. With the potential for inflation to trend higher in 2018, there appears to be an opportunity for real assets to contribute to portfolio returns.

Next, Mr. Connors brought before the Board the Real Asset education piece going through the available options. The first question was "what are Real Assets", and that can be broadly defined by the following characteristics:

- Tangible assets, generally priced based on its intrinsic value as an input to production
- Higher correlation with inflation than financial assets - investments in the asset class should preserve capital better during rising inflationary environments
- Includes a spectrum of risk and return opportunities – from TIPS to commodities to real estate

These assets can be accessed through both private partnerships and marketable securities. There are broad groupings such as energy, MLP's, Commodities, Mining and Metals, Infrastructure, Agriculture, Timber and Forestry Investments, and finally Real Estate Investment Trust (REITs). These can be either liquid or illiquid and each have characteristics, which may provide Inflation Protection, Historical returns, Volatility, Liquidity, and Ease of Implementation. There are tradeoffs for each of these characteristics and should be considered when building a diversified and balanced portfolio. The benefits of adding Real Assets to the Plans holding would be:

- Diversification to a traditional portfolio consisting of equities and fixed income
- Storage of value during economic and political crises
- Hedge against inflation
- Investments can have a high income component – real estate, timberland, infrastructure

The risk factors can be broken up between Liquid and illiquid exposure.

Liquid exposure could be that real assets to be very volatile, returns tend to be driven by current stages of the global business cycle, and these tend to be hypersensitive to geopolitical tensions.

Illiquid exposure typically means that your capital is locked for extended period, 12 to 15 years, manager selection is particularly critical, requires a very specific skill set to be successful, very difficult to read the commodity demand 12 to 15 years into the future, to name a few.

In general, public markets do not perform as well as private markets and the broad sectors have varying types of investing. Energy has three stages of investing, upstream, midstream, and downstream with a wide variance of market returns. While MLPs participate in all phases of the energy production process, generally a greater emphasis is placed on the midstream part of the energy value chain focused on the transportation of the commodity after extraction. Commodity futures are typically a derivative accessed through futures contracts. Commodities have three strategy types, passive, enhanced index, and active. Mining and metals strategies emphasize commodities with strong, predictable demand as an input to production; these types can be accessed through equites as well as future contracts. Infrastructure is characterized by stable and predictable long-term cash flows. As investors favor lower-risk investments, many have pivoted towards the asset class. Power, energy, and water continue to be the most compelling opportunities within the segment. Activity that is more recent has been dominated by the shale gas and renewable energy boom. Agriculture asset class falls into two subcategories, which are row crops, and permanent crops. Indirect investments are accessed through public markets. Opportunities range from farmland services (John Deere) to fertilizer (Archer Daniels Midland), as well as derivative contracts. Timber and forestry investments are used extensively throughout the economy. Most closely associated with housing, other uses include paper and food packaging. These are a cyclical asset class, with prices tied to global GDP and increasingly the marginal demand is coming from emerging markets. Can be accessed through public markets – Timberland Investment Management Organizations (TIMOs) invest in timberland and have restructured as REITs. Finally, Real Estate Investment Trust, REIT's can be accessed through private ownership, as well as marketable securities. They provide liquid exposure to an illiquid asset class – A valuable tool for investors who wish to be more flexible with their real estate exposure.

The Board found the information to be helpful, and want to keep this asset in mind as they move forward in trying to maximize returns and maintaining a diversified portfolio.

Mr. Fiegel and Mr. Connors brought before the Board possible Emerging Market managers in light of past performance of Aberdeen Emerging Markets as it might be a good time to review that holding and to see what other opportunities exist in the market.

Arapahoe County Retirement Plan currently has a 5% target allocation ($15.8M) to emerging markets through the Aberdeen Emerging Markets Equity strategy. Since inception in the Plan in September of 2010, Aberdeen has outperformed the MSCI Emerging Markets Index 5.8% vs. 4.9%. The underperformance of Aberdeen in 2017 (30.2% vs. 37.3% for MSCI EM Index) has weighed on the strategy's three and 5-year relative performance numbers. However, the strategy ranks in the second percentile of the Morningstar emerging markets manager universe over the last 10 years.

Ellwood profiled the following emerging markets strategies as potential replacements for Aberdeen in the portfolio:

– DFA Emerging Markets Core
– GQG Partners Emerging Markets Fund
– TT Emerging Markets Opportunities Fund

Volatility was muted throughout the year, as 2017 was the first calendar year in the past 20 years that the MSCI EM Index did not experience at least one -10% drawdown. Year 2017 was a challenging year for value in emerging markets. The MSCI EM Value Index (+28.3%) underperformed its growth counterpart by 18.7% last year.

In comparing the four managers brought before the Board, Ellwood expressed an opinion on each:

Aberdeen has one of the deepest emerging markets equity teams in the world with investment professionals located in seven offices across the globe. Fundamental research is the cornerstone of the investment process and the GEM Equity Team will typically complete over 1,600 company visits in a given year.

DFA has a strong culture, a disciplined process and a stable investment team, and has a highly diversified and competitively priced solution designed to consistently focus on areas of higher expected returns — lower relative price, smaller capitalization and higher profitability.

GQG's philosophy focuses on the core belief that long-term, stable, and sustainable earnings growth drives long-term investment returns. • GQG also believes that compounding wealth requires preserving capital in subpar market environments and that high quality companies can provide downside protection. One issue is the one individual controlling interest and the possibility that there be too much reliance on one core individual.

TT International has a history of high conviction investing across its strategies since inception. The process blends top-down and bottom-up research. The bottom-up process is simplified using the acronym VVC (valuation, verification, catalyst). From a valuation perspective, the team relies heavily on free cash flow. The Emerging Markets team has a truly balanced process that has been able to add alpha through its top-down, bottom-up, and currency positions over time.

When all said and done the consensus was, there was not any compelling reason to make a change now, with the viewed recovery from Aberdeen over the past sixty days. Ms. Jurgensen made a motion to stay the course with Aberdeen, but to reserve the right to review in the future. Mr. Garnsey seconded the motion. The Board Chair call the vote and the motion passed.

Davis Graham & Stubbs LLP

Ms. Birley brought before the Board an update on the re-hiring of retirees, the refund of contributions and the sixty-day waiting period, and the revision of retirement forms. In addition, she commented that she had reviewed the Clifton Larson Allen engagement letter for 2017 Audit, the requested changes were made and a final version of the engagement letter was presented for signature.

Ms. Birley did bring the Board up to speed on a contentious divorce that will be reflected on the future bills under participant matters.

Other Business

Ms. Kennedy brought up the BOCC Study Session, which will be on Monday, February 12, 2018 @ 1:00 pm in the West Hearing Room. The Board decided that it would re-visit the July 2017 Study Session materials. Ms. Thompson felt that some items to cover might be projections of investments, benefit comparison, DB vs DC plans. Ms. Jurgensen thought it might be a good idea to show the BOCC what the Plan should have been funding verses what it has actually been funding. Ms. Woolfrey did make clear that it's a different environment in the private sector vs the public sector in regards to pension plans and the continuation or termination. Copies of the 2017 Board Summary Report, BSR, will be available for distribution. In addition, Ms. Thompson with GRS will put together a summary of talking points, and Mr. Connors will have the December Fund Performance Report as well as the 2018 Investment Outlook as reference pieces.

Mr. Quigley did request a new B/W printer, which would be purchased through the Treasurer's Office, and the Plan would reimburse the Treasurer's Office for the cost of the printer, this way the printer will be compatible with the County's hardware/software.

Board Member Comments

Mr. Garnsey did want to congratulate Ms. Jurgensen on her retirement from the Board and thank her for her service.

Plan Administrator Comments

Mr. Quigley informed the Board of the ETeam presentation on January 10, 2018 announcing the Re-hire of Retirees, effective January 1, 2018. The ETeam was appreciative of the presentation.

Member Questions

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:33 p.m.

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Darcy Kennedy, Chairperson

ARAPAHOE COUNTY BOARD OF RETIREMENT MINUTES

February 21, 2018

The Chair called the meeting to order at 1:30 P.M.

Board Members Present
Darcy Kennedy
Mike Garnsey
Sue Sandstrom
Dennis Lyon
Richard Harris

Others Present
Dale Connors, Ellwood Associates
Andrew Fiegel, Ellwood Associates
Leslie Thompson, GRS
Erik Burge - Finance
Lew Quigley, Plan Administrator

Consent Agenda

A motion was made by Ms. Sandstrom to approve the consent agenda; Mr. Lyon seconded this. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201801	$10,410.84	Plan Administrator
US Bank	10844730	$16,533.62	Custodial Fees
Davis Graham & Stubbs LLP	752694	$12,800.00	Plan Matters
Davis Graham & Stubbs LLP	752695	$1,880.00	Annual Retainer
Davis Graham & Stubbs LLP	752696	$1,476.00	Participant Matters
Davis Graham & Stubbs LLP	752697	$568.00	Investment Matters
Ellwood		$20,000.00	Investment Services
Gabriel, Roeder, Smith & Company	436226	$6,996.00	Actuarial Services
Clifton Larson Allen	1710257	$7,500.00	Audit Fees
Total Expenditures		$77,894.46	

Acknowledgment of reimbursement to Lew Quigley for $240.33 for the recognition award for LaDonna Jurgensen.

Acknowledgment of a reimbursement to the Arapahoe County Treasurer for $40.00, the SkillSoft license fee required for each employee.

Acknowledgement of reimbursement to Ms. Sue Sandstrom for travel expenses associated with her attendance to the 2018 Opal Group Public Funds Summit, January 7 - 10, 2018 held in Scottsdale, AZ.

- Vested/Non-Vested Withdrawals

Number	Reason	Total
5	Retirements	
1	Vested Withdrawals	$30,000.00
7	Non Vested Withdrawals	$41,945.42
	Total Expenditures	$71,945.42

Ellwood Associates

Mr. Fiegel and Mr. Connors brought before the Board the January Fund Performance, whereby most sectors were positive with the exception of Fixed Income, which had negative returns for the month. Total fund came in with an adjusted rate of return of 3.1% vs. the index at 3.3%, trailing one year 13.7%. The Plan ended the month of January with holdings of $312,158,924. Thus far, in February those gains realized in January have been wiped out by February's negative activity, although the month will end on a positive note. An Allocation study will be upcoming once the final numbers have come in.

The Board was presented the fourth quarter review of 2017, whereby the year produced positive results in the equity markets as synchronized global economic growth and rising corporate profits produced a new sense of optimism to the markets. In both the developed and emerging markets, the technology sector was the largest contributor to the equity markets as innovation and potential spurred the top performers in the sector.

Global GDP in 2017 saw an uptick in growth compared to 2016 with both Advanced Economies and EM/Developing Economies increasing. Global central banks remained accommodative in their policies in hopes of advancing their country's economic outlooks. When reviewing the largest twenty countries GDP in relationship to expansionary growth it appears that between 80 to 100% of those under review actually experienced expansionary growth.

Along with this trend was that of strong corporate earnings the key driver being an acceleration of earnings per share, the strongest since 2011, driven by strong revenue growth, profit margin expansion, share buybacks, and a stabilization of oil prices. Global earnings are forecasted to grow by double digits in 2018 with U.S. corporate tax cuts having the potential to add an additional 5% to 10% to U.S. domiciled company's earnings, while U.S. companies with a significant portion of sales outside the U.S. experienced faster earnings growth.

In the area of technological innovation the improving global growth and innovation drove technology and tech-related (e.g. Amazon, Alibaba) stocks to record highs in 2017. The technology sector returned 39% in 2017 and earnings per share growth was meaningfully higher than the broad market. Energy, the sector with the highest EPS growth, was rebounding from negative earnings in 2016. The economic recovery outside the U.S. combined with a declining dollar was also a tailwind for non-U.S. tech companies.

When reviewing the S&P 500 is was evident that Technology, Materials, Consumer Discretionary, Financials, Health Care, and Industrials all ended the year 2017 with a return over 21%. When looking at the Market with a birds eye view Emerging Markets lead the pack with 37.3% rate of return, International developed Markets at 25%, and U.S. Large Cap coming in at 21.8%.

Market indicators show that U.S. Equities still tend to be at high valuations at 24.4 times versus Emerging Markets coming in at just 15.1 times, demonstrating that there are better values outside of the U.S. market. U.S. Dollar was down when compared to foreign currencies, which did help when going outside the U.S. In Fixed Market, long term bonds were did better than short-term holdings.

The Plan ended the year with returns of 12.5%, doing better than the assumed 7.5% long-term average. Allocation targets are right on, although the Plan may need to reallocate due to a bit heavy in equities. U.S. Bank has been asked to do a revised yearend statement for Blackstone to clarify the sale and reinvestment of the $17.5M. When looking at the risk comparison, Mr. Harris did comment that it was more important to view the relationship of the Plan to its indexes and not so much as when compared to other like Plans.

Other Business

The Board did go over the BOCC Study Session and felt that a quarterly report might be helpful to send to the BOCC; Mr. Connors stated that his firm would be able to prepare and provide a report, which would be forwarded on to BOCC Administrator. The Board will go before the BOCC at its annual study session in June or July with an update and to restate the request of the next .25% increase in contributions.

The Actuarial services contract was awarded to Gabriel Roeder Smith & Co. for another five year period. The contract process has been initiated between Ms. Birley's staff and GRS. The contract should be ready for signature at the March 28 meeting.

Administrative Services expenses were presented for review, and will be forwarded on to BOCC Administration, the only suggestion was to consolidate the Investment fees.

Board Member Comments

Ms. Sandstrom did recount the Opal Group Funds Summit, and felt that it was interesting and worthwhile, and has attended and felt was worthwhile. In addition, Ms. Sandstrom will be bringing on the Colorado Coalition of Public Plans, which will be held the end of August.

Plan Administrator Comments

Year-end data has been sent to the auditor and the actuary for their purposes, and they both are moving forward with their individual processes.

Year-end statements were posted the first week of February, which prompted a lot of interest in employees MARC accounts, with the issuance of a number of passwords and usernames.

Consultant/Vendor evaluations were provided to the Board members for their review and will be back on the agenda for Board discussion in March.

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:20 p.m.

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Darcy Kennedy, Board Chair

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
March 28, 2018

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Darcy Kennedy
Mike Garnsey - Absent
Sue Sandstrom
Dennis Lyon
Richard Harris
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Others Present
Dale Connors, Ellwood
Rodney Bialkin – J.P. Morgan
Shawn Parris – J.P. Morgan
Scott Smith - Principal
Michelle Fang – Principal
Kyle Vanourny – Tortoise
Tamara Boykin – Tortoise
Jim Carrol – Fidelity
Christine Thorpe -Fidelity
Vincent Ortega – Capital Group
Kent Chan – Capital Group
Erik Burge - Finance
Lew Quigley, Plan Administrator

Consent Agenda

Mr. Lyon made a motion to approve the consent agenda with a change to the minutes under Ellwood's section at Mr. Harris's request; this was seconded by Ms. Sandstrom. The Chair called the vote and the motion carries.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201802	$12,958.27	Plan Administrator
Davis Graham & Stubbs LLP	754006	$11,493.00	Plan Matters
Davis Graham & Stubbs LLP	754007	$2,661.50	Annual Retainer
Davis Graham & Stubbs LLP	754008	$4,509.52	Participant Matters
Davis Graham & Stubbs LLP	754009	$148.00	Investment Matters
Gabriel Roeder Smith & Co.	436857	$7,882.50	Actuarial Services
Life Status360	128447	$22.35	Address Search
Fidelity Investments	20171231-805-A	$31,219.66	Investment Fees
Total Expenditures		$70,894.80	

- Acknowledgment of registration fee in the amount of $2,710.00 for Dennis Lyon to attend the IFEBP Annual Conference, October 13-17, 2018 New Orleans, LA
- Acknowledgment of transportation expense in the amount of $314.96 for Dennis Lyon to attend the IFEBP Annual Conference, October 13-17, 2018 New Orleans, LA

- Vested/Non-Vested Withdrawals

Number	Reason	Total
5	Retirements	
4	Vested Withdrawal	$297,294.68
8	Non Vested Withdrawals	$59,237.41
	Total Expenditures	$356,532.09

Money Manager Roundtable

Ms. Michelle Fang and Mr. Scott Smith presented comments in regards to the Real Estate market namely commercial real estate whereby core office and industrial are at or below equilibrium vacancy rates. Multi family is furthest along in the cycle and probably past peak performance; and Retail remains the most challenging area. In the four areas there appears to be a couple keys thoughts, Apartments appear to be peaking in 2018, may still be worth investing. Industrial Markets are a favorite space and still have positive vale with strong rent growth; Office space is a bit flat but still decent demand; and Retail remains a challenge with the disappearance of brick and motor and the movement to online retailers. Leverage is still trending but appears to be near its plateau. Going forward there will be slower appreciation and the volume is trending down but still healthy. There are still near term opportunities and sub debt remains largely a relative value play. Can still be found attractive/acceptable deals from a credit perspective but must "meet the market. The returns still look attractive to other comparable risk investments and there is a growing debate as to whether higher volatility will drive out investors, opening up great opportunity.

Mr. Vincent Ortega and Mr. Kent Chan with Capital Group/American Funds stated that their firm felt that the global economy is gaining momentum; but the U.S. economy is expensive but strong. They believe there is still opportunity in global and emerging markets, and review bond portfolios. In the area of the U.S. economy, the outlook remains healthy, there may be an increase in inflation, although slight; and, valuations are at or near multiyear highs. Internationally conditions are improving and valuations are relatively attractive and continue to outpace the U.S. When reviewing Emerging Markets, there appears to be room to take off with the attractive valuations and increasing profits. Although some central banks are tightening policy as expectations rise. In the Fixed Income sector, the outlook in the U.S. is that interest rates will remain within acceptable ranges, and the bias of the central bank is to remain supportive of economic growth with the Fed to take a gradual approach to rates. When questioned about the possibility or a trade war and the effects of the tariffs, the feeling is that there will not be a trade war and it's too soon to tell if the tariff's will have much of an impact, these effects may not play out for another five to ten years.

Ms. Christine Thorpe and Jim Carroll brought the Board their view of the equity market both in the U.S. and in foreign markets. There is a feeling that there may be a spike in volatility after the near perfect 2017. A near-perfect backdrop of steady global growth, low inflation, and accommodative monetary policies defined year 2017. Going forward expect that there will be a coordinated global expansion will continue, but may give policy makers the incentive to shift toward reducing monetary accommodation, which has the potential to create volatility from the extremely low levels of the past. Overall, Non-U.S. looks to be better than U.S. offerings, and midcap looks to be better performing than small cap; and, Europe looks to be outperforming Asia at present. At the current time, they are not seeing any dramatic shifts in holdings, and in some cases, the recent volatility has been a good thing. There seems to be a wait and see attitude when it comes to the trade war and tariff discussions, again like others this may take some time to see if there are any long-term effects.

Mr. Shawn Parris and Mr. Rodney Bialkin with JP Morgan brought before the Board some key takeaways whereby the feeling is that there above trend growth and a very strong global economy. One of the key changes is that in 2017 there was an issuance of approximately $550 billion, while the 2018 issuance is expected to be approximately $1.4 trillion, which may have an impact on other holdings where investors will be taking money from other investments to put into the bond market. The feeling is that the returns should be muted going forward but steady going forward. There is a feeling that U.S. fiscal expansion has the potential to pull growth forward. The feeling that U.S. fiscal policy will lift growth in 2018 and 2019, thus the Fed is likely to oppose additional fiscal stimulus. There is an expectation that the U.S. budget deficit to rise above 5% in 2019 and that tax reform and the budget deal will boost the GDP growth by .5% per year for the next two years.

Mr. Kyle Vanourny and Ms. Tamara Boykin with Tortoise did feel that eventually the fundamentals of the production and supply of energy would win out in the end. The five-year outlook is that production is at an all-time high, and that the energy sector in the US is here to stay. As society moves forward technology has made it possible to increase production multi fold with a fewer number of actual production sites. When asked how long it would be for the "fundamentals" to be back in favor, the thought was it should have happened by now, but of course, there is no crystal ball.

With that, the Board thanked all of the money managers for their information. When asked what the probability of a recession was going forward, not one of the money managers thought that was positive and the second question asked had to do with the possibility of meeting a 7.25% return on investment, of which three out of the five thought was possible over the long term.

Ellwood

Ms. Kennedy asked that in the future Money Managers bring a one-page summary and not the multi-page presentation materials. Mr. Connors will request in the future that managers not bring the multi-page presentation.

As far as monthly performance review, volatility was the word for the day, although growth is doing better than value. The feeling that the market is operating in a very narrow area reminiscent of 1999. Many of the sectors were negative for the month, wiping out all of the positive gains from January. The Plan will be rolling off 2013 returns in the five year smoothing, so returns will be muted going forward when looking at the 1, 3 and 5 year returns.

The MLP update which came out on March 22, 2018, stated that the Federal Energy Regulatory Commission (FERC) ruled that it will no longer allow Master Limited Partnerships (MLPs) to recover an income tax allowance in their cost of service rate contracts.

As a result of this ruling, the Alerian MLP Index declined by 4.6% on March 15, 2018, as investors Are concerned that the rule could materially affect MLP earnings. Since the ruling was announced, Ellwood has reached out to several MLP managers for their thoughts and potential impact of the ruling. As such, the following memo provides detail on the ruling as well as Ellwood's current assessment of the MLP landscape taking into account input received from several MLP managers.

The Asset Allocation Study was presented for review and Board members were asked to bring back to the April meeting for further discussion. Based upon some of the modeling that was used to produce the asset allocation presented may or may not actually reflect what some of the Board members believe is actually happening, and voiced some concerns. Mr. Lyon specifically expressed some concern as to the fact that when compared to other like plans that even though the plan made money we still fell into the bottom quartiles when reviewing one, three, five and ten year returns. Mr. Lyon questioned whether our Plan's tendency to stay in the bottom quartile is really in keeping with the Board's willingness to take risk. Understanding that prior Boards have expressed the Plan should make what it can but without too much risk may have driven the Plan to its current placement when viewed against other like plans. Now is possibly the time to take a hard look at the direction of the Plan and the Boards direction to the Investment Consultant, as decisions and concerns expressed by Boards following the financial collapse of 2008, may not be relevant now since this is an entirely different Board. Mr. Connor has stated that investments in MLP was in accordance with the research and the Efficient Frontier. Mr. Lyon stated that regardless of what research suggests, it is time to evaluate actual performance. Mr. Harris did state that it is hard in today's environment to meet obligations when essentially the Plans "hands" are tied because of certain restraints.

Real Asset review was given out to the Board and will be brought back to the Board for discussion at the April meeting. Ms. Sandstrom did voice that she would like to see more than two offerings in this particular study as well as other prior offerings and felt that there were others to choose from in the market.

Other Business
None

Board Comments
Mr. Harris asked about the issue surrounding the raising of contribution rate by the County, both Ms. Sandstrom and Ms. Kennedy tried to explain the reasoning as they see it from the Long Range Budget presentations and unfortunately the retirement plan has been low on the priority of the Board of County Commissioners funding goals. This along with the fact that the County is one of only eight counties yet to de-Bruce does provide some additional challenges.

Plan Administrator Comments
Mr. Quigley did let the Board know that he is working with Human Resources – Benefits and have scheduled the annual Pre Retirement Education session for Friday, July 20, 2018 in the East Hearing Room.

GRS is working on the Annual Valuation and are on track to deliver to the Board during the April meeting.

Plan Member Comments and Questions
None

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:51 p.m.

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Darcy Kennedy, Chairperson

ARAPAHOE COUNTY BOARD OF RETIREMENT

MINUTES

April 25, 2018

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present

Darcy Kennedy
Mike Garnsey
Sue Sandstrom
Dennis Lyon
Richard Harris

Others Present

Leslie Thompson, Gabriel Roeder Smith & Co.
Dana Woolfrey, Gabriel Roeder Smith & Co.
Dale Connors, Ellwood
Andrew Fiegel, Ellwood
Jeff Baker, Commissioner
Erik Burge, Finance
Lew Quigley, Plan Administrator

Consent Agenda

Mr. Harris made a motion to accept the Consent Agenda; Ms. Sandstrom seconded the motion. The Chairman called the vote and the motion carried with Mr. Garnsey abstaining due to his non-attendance at the March meeting.

Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201803	$10,410.85	Plan Administrator
Milliman	016ACR0418	$6,750.00	License Fee
J.P. Morgan	20180331-26714-A	$10,076.09	Investment Fees
Gabriel Roeder Smith & Co.	438050	$4,370.00	Actuarial Consulting
Ellwood	N/A	$20,422.00	Consultant Fees
Davis Graham & Stubbs, LLP	755136	$3,414.00	Plan Matters
Davis Graham & Stubbs, LLP	755137	$111.00	Participant matters
Tortoise	N/A	$44,008.60	Investment Fees
Crown Trophy	37053	$63.01	Name Tags
Total Expenditures		$99,625.55	

- Acknowledgement of reimbursement to Lew Quigley in the amount of $574.73 for travel expense associated with attendance to the IFEBP Annual Conference, Oct, 13-17, 2018 in New Orleans, LA
- Acknowledgement of reimbursement to Lew Quigley in the amount of $366.48 for office supplies, paper, and toner.

- Vested/Non-Vested Withdrawals

Number	Reason	Total
2	Retirements	
2	Vested Withdrawal	$68,042.55
8	Non Vested Withdrawals	$82,969.61
	Total Expenditures	$151,012.16

Gabriel Roeder Smith & Co.

Ms. Thompson and Ms. Woolfrey went through the Annual Valuation Report for the year ending December 31, 2017. Looking back to 2017, the Board made and adopted recommended assumption changes based upon information provided by GRS. These assumptions changes implemented new mortality and mortality improvement assumptions, reduced the discount rate from 7.50% to 7.25%, and, explicitly recognized the administrative expenses. In addition, there was an increase in the employer/employee shared contribution rate from 8.0% to 8.25%, potentially increasing to 9% in 2021. The demographic data was as expected, and asset and liability experience produced immaterial changes to the results. The funded ratio did decrease as was expected with the new assumption implementation. The Plan' s funded ratio on a smoothed basis as of January 1, 2018 was 63.07% down from 65.76% as of January 1, 2017, all due to the implementation of the new set of assumptions. On a market basis, the Plan was sitting at 63.10% January 2018 vs. 62.97% January 2017. Even with the increased contribution rates, the contribution shortfall continued to rise from 2.95% in January 2017 to 4.59% January 2018. In looking at the thirty-year projection assuming that investment return on assets in 7.25% the anticipated funded ratio in 2046 is upwards of 81.9% not quite the 85 to 90% but moving in the right direction. Alongside this projection was one done using a return on investments of 6.75% and the funded ratio in 2046 only went up to 65.8%, illustrating that returns one way or the other have a big effect on the Plan. In summary, there were small asset gains on a market value basis, which had a positive effect on the funded trajectory. That said the Board would continue to monitor closely the Plans performance.

The Board asked that a "FINAL" version be made available, which will be distributed to the Board members as well as the BOCC. In addition, the Board requested that GRS prepare the presentation materials to be used during the annual study session with the BOCC. The Board requested that if possible to schedule the BOCC Study Session the end of June, and Mr. Quigley reiterated that this study session would be a follow-up to the previous session held in February and would be more of an update. Commissioner Baker concurred that would be helpful and what the BOCC would be expecting.

Ellwood Associates

Mr. Connors and Mr. Fiegel went over the March performance, which like February was a bit challenging; in fact there were eleven trading days in the negative, which hasn't helped to move the Equity market out of the negative in 2018. International Equity down for the month and in most cases down for the year; Hedge Funds down for the month but up for the year. Looking at Inflation strategies these are down for the month and year to date with little evidence of inflation. Fixed Income up for the month, but down year to date. Year to date the Plan is down eighty basis points ending below the starting year balance at $300,346,189.

Mr. Connors did invite the Board members to a meeting with the Financial Officer from Tortoise in regards to the MLP holdings on Friday the 27th @ 2:00 pm at the Ellwood Offices. Mr. Harris made a point to ask Ellwood if they would recommend a board to hire Tortoise as an investment option and the answer was yes. Mr. Lyon expressed his opinion that how long should the Board have to wait for Tortoise to turn around, knowing that the Board has had this discussion over the past couple of years due to their lack luster performance.

Other Business

Mr. Lyon asked and expressed a concern as to what is the responsibility and expectation of the Board as it relates to Investment selections; furthermore, Mr. Harris asked why the Plan is low performing during good as well as bad years. Mr. Lyon asked to have Ellwood look into the asset allocation of City of Aurora and possibly look at what they might be doing different. Ms. Sandstrom did comment that sometimes she felt that the Board tends to be on the backside instead of the leading edge in investments, and stock selection. Mr. Harris stated that just one month ago the Board sat in front of a number Investment Managers who as a group laid out a "rosy" picture and yet when looking at the future realistically the indicators don't appear that "rosy", so what's one to believe. Mr. Connors did stress that Ellwood is only doing what it believe is the direction of the Board operating with a constraints put on Ellwood by the Board, which does limit the opportunities available.

Ms. Kennedy expressed her opinion not to focus on the past and to focus on the future and to what options might be available. She stated that maybe it's time to take a look at the Board's risk tolerance, and if need be adjust the risk tolerance factor, which may in turn open up more opportunities. Mr. Connors cautioned that with risk comes volatility (risk), and in the current market the trend is towards very high volatility (risk) and everything but MLP's is priced high and now is not a good time to make major changes to asset allocation strategies or direction, until the markets start to swing back to a more normal behavior.

Mr. Fiegel did provide historical information detailing the number of options brought before the Board that were rejected in the past, thus limiting the options available in the low risk environment that the Board currently operates. For the Board's risk tolerance, Mr. Fiegel stated that the Plan has done well in that environment when compared to others with like risk tolerance.

Mr. Harris made a comment that in his opinion he felt that some of the concern appears to be comparison to other like size plans, and that it might be a more desirable to focus on the Plans benchmark and meeting or beating its benchmark and not so much as what other Plans might be achieving.

Mr. Connors did ask for some guidance in going forward with the Asset Allocation; Mr. Harris stated that the study should go forward with the return assumption of 7.25%. When looking at the Asset Allocation Study, Mr. Connors stated that if directed he could move the Policy Targets to a set percentage, which would result in a re-allocation of the investment mix. At a future meeting, Ellwood will do a pacing model with a 10% allocation to Private Equity, as well getting into the Private Credit market, changing the 50/50 allocation of U.S. vs. Non-U.S. Equities as well as MLP's.

Board Member Comments

Ms. Sandstrom did relate the importance of looking into additional staff to support the Retirement Administration and that the Board needs to focus on this issue and can no longer put off for future consideration. Ms. Kennedy will talk over the availability of space with Mr. Ken Morris with Facility and Fleet Maintenance to see what is available; in addition Mr. Quigley will gather information and put together a couple of job descriptions for possible staff. Ms. Kennedy did request that this topics be a recurring agenda item so not to be forgotten.

Plan Administrator Comments

Mr. Quigley did ask the Board if they were satisfied with the amount of information being provided, i.e. podcast, webinars, meeting notices etc. which are received on a daily basis. The Board felt that they were open to receiving information from actual providers only.

Plan Members Questions

None

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:50 p.m.

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Darcy Kennedy, Chair

ARAPAHOE COUNTY BOARD OF RETIREMENT

MINUTES

May 23, 2018

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Darcy Kennedy
Mike Garnsey
Sue Sandstrom
Dennis Lyon
Richard Harris

Others Present
Dale Connors, Ellwood
Andrew Fiegel, Ellwood
Dana Woolfrey, Gabriel Roeder Smith & Co.
Cindy Birley, Davis Graham & Stubbs, LLP
Dan Perkins, Co. Attorney
Nancy Sharpe, Commissioner
Erik Burge, Finance
Shawn Sonnkalb, Finance
Lew Quigley, Plan Administrator

Consent Agenda

A motion was made by Mr. Lyon to approve the consent agenda; Ms. Sandstrom seconded this. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201804	$10,410.84	Plan Administrator
Davis Graham & Stubbs LLP	756765	$5,502.50	Plan Matters
Davis Graham & Stubbs LLP	756766	$488.00	Investment Matters
US Bank	10991405	$16,170.20	Custodial Services
Gabriel Roeder Smith & Co	438447	$24,526.00	Actuarial Services
Fidelity Investments	20180331-805-A	$31,787.70	Investment Fees
Total Expenditures		$88,885.24	

- Vested/Non-Vested Withdrawals

Number	Reason	Total
8	Retirements	
3	Vested Withdrawal	$168,182.25
18	Non Vested Withdrawals	$153,138.75
	Total Expenditures	$321,321.00

Gabriel Roeder Smith & Co.

Ms. Woolfrey representing GRS & Co. brought before the Board the DRAFT presentation that will be made to the BOCC on July 2, 2018 during the annual study session whereby the Retirement Board will provide the annual update of the Plan and the continued support of the quarter percent step up in the employee/employer shared contribution rate. The Board made a few suggestions to the power point presentation, which will be incorporated in the final presentation.

Ms. Birley did remind the Board that at a prior meeting it was mentioned that Adams County was receiving a portion of the Plans administrative expenses as a reimbursement. In case the BOCC should ask for other methods of funding, Ms. Birley would mention this as an alternative.

In addition, Ms. Birley did ask the Board if they would like to consider the changing of the Plan Document to reflect the assumption changes made to the Plan. Ms. Woolfrey will provide some numbers so that the Board has something to review to determine if the assumption changes should carry over to the MARC software. Mr. Quigley will try to get an estimate of the cost to implement these changes into the MARC software.

Davis Graham & Stubbs, LLP
Back in late December 2015 the PATH Act was enacted. The Board did not have enough time to adopt the required plan changes by December 31, 2015. Hence the Board filed for and received a favorable compliance statement from the IRS under the IRS's voluntary correction program.

This was done during a period when the IRS had eliminated the ability to file for a determination letter. During this process the IRS essentially forgot about the change in law in 2015 and did not issue remedial relief for the PATH Act. Prospectively, the IRS is to issue an annual required amendments list which started in 2016.

In addition, the IRS has issued a field directive to its examiners on required minimum distributions ("RMDs"). The guidelines are such that the Plan Administrator should search all available plan records, use an outside search method such as commercial locator, a credit-reporting agency or a proprietary internet search tool, and attempt contact via United States Postal Service certified mail to that last known mailing address. IRS examiners who discover that there are individuals who are due a payment are directed not to disqualify a plan for failure to distribute RMDs if all these steps are taken via IRS Internal Memorandum, October 19, 2017. Mr. Quigley did state that there is one Disabled Deferred Vested member that he had not heard from in a couple of years and would follow-up with a certified letter.

Ellwood
Mr. Fiegel went over the April Fund Performance, which was up for the month .7%, and year to date up .2%, with most indices up with the exception of Fixed Income. Public equity holdings continue to be on the high end of the policy range, while all others are within policy ranges and most right on or a bit below the target. For the month of April, the operating account had a net cash flow of $165K, which is typical for a mature plan. Looking towards the month of May, S&P is up 2.7% year to date.

Mr. Fiegel went over the 1st Quarter Review with the Board, and to say that the first three months have been active is an understatement; January saw growing confidence in the global economy which boost equities while inflation concerns drag down the fixed income market. February brought a fear of accelerating inflation resulting in a 10% decline in the S&P 500; then March had the equity markets show an initial recovery, but was short lived because of the concerns over potential trade wars. The impact of new tariffs on inflation and production – such as supply chain disruptions or rising input costs – also represent potential material negative outcomes.

Additionally, the Federal Reserve met for the first time on March 21 under new Chairman Jerome Powell. As expected, the Fed announced its first interest rate increase of the year to a target of 1.50% – 1.75%. This is the sixth hike since December of 2015.

While reviewing the overall Market, only two sectors, Emerging Markets and Hedge Funds had positive returns, all others where negative for the first quarter. When comparing size vs: style in the global market it didn't make any difference the size as all sectors, Large Cap or SMID Cap were in negative territory the first three months. As far as style, it was split 50/50 Growth ahead of Value in the U.S., in the non-U.S. Developed both were negative, and in the non-U.S. Emerging Value and Growth were on the positive side.

In the Fixed Income sector, Bond returns by sector or duration made no difference as all were in negative territory for the first quarter. Same with Real Assets when reviewing the index all were in negative territory, some significantly, although crude oil prices has risen slightly.

Total Fund Performance is down .5% for the first quarter as compared to -1.2% when looking to the index. Note that this is the first time that 2008's poor performing quarters are starting to roll off and there may be upward movement when looking at the ten year numbers. For the first quarter, the Fund was down $3.9M due to net cash outflows and net investment changes. When looking at total fund allocations, Public Equity is slightly over the target, but within the acceptable policy range.

In review, the Asset Allocation Study was brought back for discussion, which was focused around the return vs. risk, which was shown in the Efficient Frontier modeling. The result showing that to get to the desired result of 7.25% there would need to the willingness to take on additional risk, and in some cases quite a bit of risk.

Mr. Connors did mention that the representatives from Tortoise were in their offices right after the April meeting, those in attendance did question as to the continued outlook and why investors should continue to participate in MLP's. The representative continued to paint a rosy picture and felt that within the next year there would be favorable action.

- **Mr. Harris made a motion to reduce the MLP target from 10% to 5% and to increase the Private Equity target to 10% and to facilitate that take $10M from Tortoise and allocate to Vanguard Institutional Index to be held to fund future Private Equity calls. Mr. Garnsey seconded the motion, the Chair called the vote and the motion passed.**

Private Capital Pacing forecast was started in 2015, whereby the Plan originally funded Aberdeen US PE VI and Horsley Bridge XI Venture, then in 2016 the Plan picked up Siguler Guff SBOF III and Weathergage IV. There were no new allocations were done in 2017 as both Siguler Guff and Weathergage are 2016/2017 vintage funds. Buyout managers have been quicker on the draw, than Venture Capital players, but either way it appears that the J-curve appears to be eight years. The above-mentioned motion will be the allocation for year 2018.

Running long the Core Real Estate replacement discussion was put off until the June 27, 2018 Board meeting.

Other Business

Ms. Kennedy did bring the Board up to date on staffing and office space, explaining that the request for a proposal for a position was put together and submitted to HR for review and assigning a cost. In addition, there has been a continued discussion as to the availability of office space within the Lima Plaza. The Board will come back in June with comments and/or questions, and a continuation of the discussion.

Board Member Comments

Mr. Garnsey did share with the Board a request from Sheriff HR Manager Jon Takayama, if the Retirement Plan has taken into consideration making Plan improvements for current and future employees. Mr. Garnsey did provide documentation explaining that the Plan is not currently considering and Plan Design changes either positive or negative, and is focused on meeting the current obligations and striving to improve the Plans funded status.

It was also mentioned that the Total Compensation statements were mailed out to all employees and was an "eye opener" whereby employees can see what other benefits are included in "total compensation" besides just salary. Mr. Harris asked if someone could provide a copy for review, Mr. Garnsey stated that he would be willing to share.

It was noted that Commissioner Sharpe attended and Board member Mr. Harris wanted to express the Board's appreciation for their interest and asked if that could be relayed to the BOCC, of which Ms. Sandstrom stated that she would pass that on.

Plan Administrator Comments

Mr. Quigley did state that he would be out of the office June 1-11th, returning on the 12th and that the office would be closed. In addition that he would be meeting with Human Services Office Administration staff during their regularly schedule staff meeting to expound on the virtues of the ACG Retirement Plan.

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:36 p.m.

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Darcy Kennedy, Chair

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
June 27, 2018

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Darcy Kennedy
Mike Garnsey
Sue Sandstrom - Absent
Dennis Lyon
Richard Harris

Others Present
Dale Connors, Ellwood
Andrew Fiegel, Ellwood
Dana Woolfrey, GRS
Cindy Birley, DGS
Tina Seberg, US Bank
Dan Perkins, Co. Attorney
Erik Berge, Finance

Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Mr. Lyon to approve the consent agenda; Mr. Garnsey seconded this. The motion carried and Chairman so ordered. Mr. Lyon did ask in the future that motions be bulleted and highlighted so that they can be picked out more readily.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201805	$15,616.26	Plan Administrator
Davis Graham & Stubbs, LLP	758066	$5,060.50	Plan Matters
Life Status 360	128732	$800.00	Death Audit Service
Gabriel Roeder Smith & Co.	438990	$350.00	Actuarial Services
Total Expenditures		$21,826.76	

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
8	Retirements	
6	Vested Withdrawal	$285,484.95
25	Non Vested Withdrawals	$173,627.54
	Total Expenditures	$459,112.49

Gabriel Roeder Smith & Co.
As requested, Ms. Woolfrey brought back before the Board examples of the difference the new assumptions would actually make to the benefit calculations. These

Davis Graham & Stubbs, LLP

Ms. Birley did comment on the assumption changes and to which provisions these could be made, as discussed at prior meeting it was Ms. Birley's opinion that the one provision that could not be changed was that of the Partial Lump Sum (PLS).

PEPTA is

Ellwood

May's performance has been chaotic due to trade wars, global trade issue, thus creating a stronger US Dollar. Global Equities down approximately .2%, Emerging Markets down 2.6%, US Equities are up May had the Plan up 1% YTD, looking at the five year numbers the Plan is showing 6.5% just below the expected 7.5%. May ended with the Plan at approximately $304M.

Mr. Connors and Mr. Fiegel brought before the Board a review of and replacement options for UBS Trumbull CORE Real Estate holding. In today's market, real estate can be held in a number of ways, public or private and as either ownership or lending. The purpose of this review is to replace UBS Trumbull CORE Real Estate with a Private Equity holding focused on income generation over capital appreciation. A couple of highlights are that the US economy is in its seventh year of expansion with no immediate sign of excesses, there seems to be a strong capital market environment this past year, for the first time it appears that the world is in a phase of synchronized growth. When looking at the risk and return characteristics, the volatility has been low, because of the income being the primary contributor to total return and the inherent smoothing used in appraisals. It should be noted that real estate is considered an inflation-hedging investment, since rates are adjusted to compensate for inflation.

Ellwood brought before the Board three qualified investment managers who meet the firm's criteria and are the best fit with the existing asset allocation and strategy. The three managers are as follows:

1. CBRE Global Investors – U.S. Core Partners Fund
   This is an open-ended fund, using a core real estate strategy, with a targeted return of 7 to 9%, a graduated fee schedule, and a minimum$5M investment, Ellwood would be considered as one client. Current Holding $2.65B, approximately 30 properties, the portfolio manager has a lot of control of the entire fund, and the fund tends to rather risk oriented. Ms. Kennedy did raise this as a concern.

2. Core and Value Advisors, LLC – Smart Markets Fund
   This is an open-ended fund, using a core real estate strategy with a targeted return of 7 to 9%, a graduated fee schedule, and a minimum investment of $2M although would be willing to negotiate. Current Holdings $2.08B, approximately 60 properties, portfolio is managed by a committee who are seasoned real estate managers.

3. Principal Real Estate Investors – Principal U.S. Property Account

This is an open-ended fund, using a core real estate strategy with a targeted return of 6 to 8%, a graduated fee schedule, and a minimum investment of $1M although would be willing to negotiate. Current holdings $10B, largest of the group with hundreds of properties.

Mr. Harris asked if there was one reason why CBRE has tended to outperform in relationship to the Risk vs. Return. Mr. Connors felt that it goes back to the original fund setup due to the fact that the fund was based upon very good properties, going forward they really know what they are doing and are actually imbedded in the markets they are actually working. One of the concerns is that CBRE's success could lead to mediocrity while trying to duplicate past success.

Mr. Lyon asked how long it would take to get out of CBRE if needed, Mr. Connors though one quarter, Principal has daily liquidity, Core and Value takes two quarters.

Mr. Lyon asked the Board that once the Board makes a choice would it beneficial to bring in the actual portfolio manager for a face-to-face. Ms. Kennedy asked that the Board narrow the choice and then decide if it warrants a face-to-face.

The Board requested that representatives from CBRE and Principal come to the next meeting for a face-to-face. Mr. Connors will request their attendance at the July meeting.

<u>US Bank</u>

Ms. Seberg did bring the Board up to date on the Banks performance, total review grew 3.4% year over year. Payment services grew 6.5% and Trust and investment management revenue increased 8.2%. US Bank is increasing its digital offerings, was listed as a Best Employer for Diversity by Forbes.

<u>Other Business</u>

Mr. Harris, wanted to share with the Board a condensed version of Assets and Liabilities reporting

<u>Board Member Comments</u>

Ms. Kennedy gave an update on the Plan Administrator Admin Assistant position has been approved, the next step would be to explore the space issue. A tour of space will be scheduled the end of July.

<u>Plan Administrator Comments</u>

Just a reminder that the BOCC Study Session is Monday, July 2, 2018 at 2:00 pm in the West Hearing Room.

<u>Plan Member Questions and Comments</u>

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:30 p.m.

Darcy Kennedy, Chair

ARAPAHOE COUNTY BOARD OF RETIREMENT

MINUTES

July 25, 2018

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present

Darcy Kennedy
Mike Garnsey - Absent
Sue Sandstrom
Dennis Lyon
Richard Harris

Others Present

Dale Connors, Ellwood
Andrew Fiegel, Ellwood
Cindy Birley, Davis Graham & Stubbs, LLP
Tim Rawal, Clifton Larson Allen, LLP
Kimberly Hourihan, CBRE
Steven Yeh, CBRE
Michelle Fang, Principal
John Berg, Principal
Lew Quigley, Plan Administrator

Consent Agenda

A motion was made by Mr. Lyon to approve the consent agenda; this was seconded by Ms. Sandstrom. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201806	$10,410.85	Plan Administrator
Davis Graham & Stubbs, LLP	759322	$382.50	Plan
Davis Graham & Stubbs, LLP	759323	$2,125.00	Annual Retainer
Davis Graham & Stubbs, LLP	759324	$370.00	Investment
Ellwood Associates		$20,422.00	Consulting Services
JP Morgan	20180630-26714-A	$10,065.12	Investment Fees
Tortoise		$43,289.13	Investment Fees
Fidelity	20180630-805-A	$32,649.25	Investment Fees
Total Expenditures		$119,713.85	

- Vested/Non-Vested Withdrawals

Number	Reason	Total
3	Retirements	
2	Vested Withdrawal	$240,021.58
15	Non Vested Withdrawals	$196,191.20
	Total Expenditures	$436,212.78

Clifton Larson Allen LLP

Mr. Tim Rawal with CliftonLarsonAllen LLP brought before the Board the findings of the annual audit of the Arapahoe County Retirement Plan. There are two documents which were the Governance Letter and the Financial Statements that comprise the materials as related to the audit. Mr. Rawal once again brought to the Board's attention the continued shortage in contributions. The other item is the mis-statement and reclassification of investments as prepared by the finance department. Neither of these are material deficiencies but should be monitored.

Mr. Rawal did review the financial statements again noting that there was minimal increase in the liability and that contributions are continuing to run behind and that the Board needs to keep this in mind and be aware of the shortfall when looking forward. Mr. Harris did want to point out that the assumption changes alone were responsible for the increase in the total Pension Liability by $22M. In regards to Investment Fees, Ms. Sandstrom did ask how CLA calculates those "hidden" investment fees. Mr. Rawal did describe the process whereby they prepare numbers based upon actuals of what the appropriate and normal investment fees would be for those not reported. When those were compared with, the fees indicated by Ellwood, they were very close if not right on. Mr. Lyon asked that in the future the Governance Letter be provided in hard copy along with the hard copy of the financial notes; this will be noted for next year.

Davis Graham & Stubbs, LLP

Ms. Birley did research the method by which the Plan came up with the interest rate used for the Partial Lump Sum calculation. Prior to 1984, the Plan had a different interest rate. The reason this was changed was the Retirement Equity Act of 1984. At that time the Plan adopted two changes, one was to offer Spousal Consent and the second was to adopt the PBGC rate tie in, these were not required, but the Board at that time decided to make them provisions of the Plan. Moving forward these were included in the Determination letters that the Plan received from the IRS. Then in year 2000, when the Partial Lump Sum was added to the Plan, this provision was specifically cited at that time. As of late, the IRS no longer issues Determination Letters, and Plans are allowed to operate under the latest Determination Letter as long as they do not go back and change an existing provision of the Plan. Having said that, it is DGS's opinion that if the Plan were to change the interest rate on the Partial Lump Sum for vested existing employees, the Board might open itself for litigation of what might be construed as a contractual right under the existing Plan. The Board could change the interest rate assumption as of a specific date going forward for new eligible employees.

The Board directed Ms. Birley to draft an amendment to change the interest rate to 7.25% for PLS and continue to use the 1994 GAM 50/50 mortality tables. Ms. Birley will bring back an amendment for review and adoption at a future meeting, at which point direction will be given to Milliman to make the change to the MARC system with an effective date of January 1, 2019 for new hires only. In addition the Board did ask if Ms. Woolfrey could run some examples of what the new calculation would do as far as cost savings (if any) vs: the old calculation for PLS.

Ellwood

Based upon a request from the June 2018 ACG Board meeting, representatives from two Real Estate CORE Managers, CBRE and Principal.

Mr. Yeh and Ms. Hourihan represented CBRE, which has been the in business since 1972 with over $104B and 550 investment clients. This particular fund, of which the Arapahoe County Retirement Plan would be an investor, has been existence since 2013 under the guidance of Ms.

Hourihan. The basis of all investments is research, which goes through a rigorous process and then an additional layer of research that only CBRE provides, whereby contacts are made with local concerns to provide local data to provide a more complete picture. It was noted that currently over 70% of new fund acquisitions have beat the benchmark. CBRE uses a strategic approach to sourcing assets using both a top down and bottom up method.

The fund is marketed heavily to institutional investors, many being pension funds. Looking back over the one, three, and five-year numbers the returns have been above average, averaging above 8%. Currently the holdings are underweight in office, over weight in industrials, right on in retail and just slightly under in multifamily. There are thirty three investments, and when asked going forward if that number was going to go up or down or stay the same, the explanation was there would be a consistent measured growth looking to the future in the targeted markets.

Ms. Fang and Mr. Berg represented Principal, with over $77B and over 375 institutional clients within Principal Real estate Investors. Principal has capabilities across four quadrants of real estate; private and public equity along with public and private debt. Dealing in both equity and debts sides of the business brings a 360-degree perspective of the business. One of the main focuses of the investment has been income and potential income growth, the investment has had an income return of 5.1% which has beat the benchmark for the last one, three, five, and ten years. All holdings are driven by the investment strategy looking backward and projecting forward. Currently the portfolio weight is sitting at Office at 40%, looking to hit 37%, Retail at 15% which is underweight, Multifamily is at 23% and have underperformed the index for twenty two past quarters, and Industrials at 19% which has outperformed over the past 22 quarters. The holdings over the last ten years have been high quality structures in urban markets with high potential for income growth. The fund is looking to decrease the leverage and de-risk and by end of year to below 20%, with a target of 18 to 20%. The performance as compared to the index shows that the fund has outperformed the one, three, five, ten year benchmarks. There are twenty four participants in the ODCE index. When asked how big in relationship to the others, they felt that the firms standing was probably sixth from the top.

Mr. Connors felt that Principal is a more established seasoned manager; while CBRE is smaller, newer and more nimble for now, but may face huge cash inflows in the future which could be problematic. Principal's fees tend to be lower when compared to CBRE, but at the end of the day tend to be comparable.

After some discussion the Board unanimously agreed that CBRE was a better fit

MOTION: Mr. Harris made a motion to terminate the relationship with UBS Trumbull, taking the proceeds and committing $30M to CBRE and investing the remaining $2M in other underweight areas of the portfolio, and subject to review by Ms. Birley. Mr. Lyon seconded the motion. Chairperson called the vote, MOTION PASSED UNANIMOUSLY.

Fund performance has been stagnant for the month of June, but preliminary performance for July looks good. Ellwood is keeping an eye on emerging market performance based upon tariff talks. Final FERC ruling came out favorable thus making the markets stabilize and go into positive territory. Recommendation is to keep the five percent allocation with Tortoise and continue to watch performance.

Other Business
Ms. Kennedy and Mr. Quigley went on a building tour of Lima Plaza with the FFM Manager of Project Operations and asked that he provide a preliminary sketch and cost estimates for two potential buildout areas. The Board will get an update and at the August meeting with along with a presentation.

Board Member Comments
No comment.

Plan Administrator Comments
No comment.

Plan Member Comments or Questions
Nothing to report.

Adjournment
There being no further business to come before the Board, the Chairman adjourned the meeting at 4:04 p.m.

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Darcy Kennedy, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT

MINUTES

August 22, 2018

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present

Darcy Kennedy
Mike Garnsey
Dennis Lyon
Sue Sandstrom
Richard Harris – by phone

Others Present

Dale Connors, Ellwood
Dana Woolfrey, Gabriel Roeder Smith
Dan Perkins, Co. Attorney
Shawn Sonnkalb, Finance
Erik Burge, Finance
Ken Morris, Facilities and Fleet, FFM
Lew Quigley, Plan Administrator

Consent Agenda

A motion was made by Ms. Sandstrom to approve the consent agenda; Mr. Lyon seconded the motion. The Chairman called the vote and the motion carried, with Mr. Garnsey abstaining.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201807	$10,410.84	Plan Administrator
Davis Graham & Stubbs	760587	$1,105.00	Plan
Davis Graham & Stubbs	760588	$1,827.50	Annual Retainer
Davis Graham & Stubbs	760589	$814.00	Investment
Davis Graham & Stubbs	761160	2,893.50	Plan
Davis Graham & Stubbs	761161	$1,955.00	Annual Retainer
Milliman	016ACR0718	$6,750.00	License Fee
US Bank	11133325	$16,694.18	Custodial Services
CliftonLarsonAllen	1884109	$8,500.00	Audit Services
Total Expenditures		$50,950.02	

Acknowledgement of reimbursement to Lew Quigley in the amount of $72.50 for office supplies.

Number	Reason	Total
9	Retirements	
5	Vested Withdrawal	$401,379.20
21	Non Vested Withdrawals	$147,629.90
	Total Expenditures	$549,005.10

Gabriel Roeder Smith

Ms. Woolfrey brought back to the Board the requested comparison of calculation methodology results for the Partial Lump Sum using PBGC interest rates (how it is done currently) vs: using the funding investment return rate of 7.25% to show the difference between the two scenarios. The two options are very different. Switching to the new calculation would be a significant improvement because using the funding investment return rate would reflect the actual cost to the Plan and Partial Lump Sum payments would then be cost-neutral to the Plan. The Board agreed that this change would be effective only for new hires as of January 1, 2019.

Ms. Birley will bring before the Board in October an amendment adopting the use of the funding investment return rate when calculating Partial Lump Sums for new hires effective January 1, 2019.

Ellwood

Mr. Connors brought before the Board the 2nd Qtr. Review. When looking back to the first of the year, confidence in the global economy initially boosted equities, but fears of accelerating inflation roiled markets with a sharp increase in volatility. The U.S. began threats of a possible trade wars that weighed on the equity markets. During the second quarter reports of solid U.S. economic growth, combined with escalating populist rhetoric in Italy, rising U.S. rates, and the threat of trade wars set the stage for material divergence in returns for U.S. and non-U.S. equity markets.

For the most part, economic fundamentals have remained mostly positive during the first half of the year. Although not uniformly robust like in 2017, global GDP growth remains on steady footing, with the IMF estimating global GDP to expand 3.9% in aggregate during 2018. Earnings growth among U.S. companies has steadily increased over the past year and is further supported by tax reform. With the U.S. near full employment and economic growth remaining robust, inflation expectations have increased. With indications of improving economic growth driving an upward acceleration in U.S. inflation, expectations for a more aggressive increase in rates by the Federal Reserve broadly drove global currencies lower against the U.S. Dollar. Twenty-three of the twenty-four currencies in the MSCI Emerging Marker index fell against the U.S. Dollar.

Because of continued talk and implementation of tariffs there has been an escalation of trade tensions. The administration implemented tariffs on $90 billion of exports to the U.S., including washing machines and solar panels, steel and aluminum and $34 billion of Chinese goods. The resulting impact on the global supply chain could be material if trade tensions escalate. In addition, tariffs on autos could significantly affect U.S. business, as auto/parts exports from Mexico and Canada contain a meaningful component of the U.S. production.

When looking at the Market Overview U.S. Equity markets are up when compared to their indices, as well as Hedge Funds; on the negative side, International Developed and Emerging Markets as well as Global Equity, and Fixed Income are trailing. As to cap size, Large and Small Cap are outperforming all other sectors. As to style Growth was the only sector to be positive in both the second quarter and year-to-date.

Year-to-date performance for the fund are up slightly, with the one, three, five and ten years numbers approaching the 7.25% expected rate of return. For the first six months, cash outflows are trending ahead of inflows, which continues to be a concern. Funds are being re-allocated to fund the new CBRE investment, the direction letter is in place, and Davis Graham & Stubbs is currently working on the contracts. Public equities continue to be a drag, Liquid Real Assets have been beneficial, although Real Estate has been a bit negative which can be attributed to UBS.

At the September meeting Ellwood will bring the Private Equity Buyouts and Private Equity Venture candidates.

Fixed Income has been running hot and cold; JP Morgan for example has been out of favor and hasn't done well, Western Asset has done a bit better, but still took a hit. We have two Floating Rate debt funds, Principal Debt Fund I and Debt Fund II. Debt Fund I is winding down, and Debt Fund II continues to provide positive returns. Bain continues to maneuver the market in a positive way.

Low Volatility Strategies namely Blackstone Partners as well as Parametric Defensive Equity are performing as expected. Liquid Real Assets, MLP's will continue to be a point of discussion and revisited in upcoming meetings. Real Estate holdings show Trumbull Property being liquidated, Metropolitan is planning to close out by year end and would finish out flat, whereby the Plan would hopefully get back the initial investment. Harbert Fund V is liquidating the last of its holdings and should be closed out by year-end. Fund VI is still acquiring properties and flipping them for profit, Fund VII is expected to open first quarter 2019.

As far as Total Fund Performance, July was a positive month. With most sectors on the positive side, the month was up 1.9%, year-to-date 2.6%, and the one year is showing 7%. There has been a dramatic reversal of late whereby value has done better than growth, whether this sustainable time will tell. US Equity was positive for July as well as International Equity. Hedge Funds were up and MLP's were up 10% year to date, being one of the better performers, and Fixed Income continues to struggle. The fund was sitting at $303M end of June, and by the end of July the fund was sitting at $307M.

Mr. Connors brought up the volatility of late in the Emerging Market sector and whereby tariffs are a real concern especially for small emerging markets. With the current political conditions, Mr. Connors though that now was the time to discuss the Aberdeen Emerging Market Institutional Index, since there seems to be a considerable amount of "noise" surrounding this particular sector. The Board could decide to either wait out the current situation or liquidate the Aberdeen Emerging Market Institutional Index holding. The proceeds would be placed in the Vanguard Institutional Index Fund temporarily and re-visited in the third quarter. This liquidation would not take the Plan out of the Emerging Market sector, but pull back to be in-line with the policy. This move would bring down the overweight in Emerging Markets and bump up US Stocks. Mr. Connors will bring back to the Board some investment options and recommendations with regards to the Emerging Market investment strategy.

MOTION: Mr. Garnsey made a motion to terminate the relationship with Aberdeen Emerging Markets, taking the proceeds and placing them into Vanguard Institutional Index Fund. Mr. Lyon seconded the motion. Chairperson called the vote, MOTION PASSED with four for approval, and Mr. Harris abstained.

Other Business

Mr. Ken Morris with Facilities and Fleet came before the Board with an update regarding the remodel of County space available. Ms. Kennedy brought the Board up to speed on the process, the August walk through, at Lima Plaza, and the Budget/payment aspects related to a remodel project. Ms. Kennedy mentioned that she, Mr. Morris and Mr. Quigley met with Todd Weaver, the Finance Department Budget Manager, for direction on budgeting, and procurement questions. Mr. Morris went through the plans, cost estimates, items included, and time line to accomplish the creation of two office spaces in the 6964 building. Ms. Kennedy wanted to acknowledge the considerable effort Mr. Morris has put forth to get this project this far along and in a very short period, and to recognize Ms. Kelly Folks, A/D Works! Division Manager on providing valuable space in 6964 A/D Works! Building at Lima Plaza for the Retirement Plan Administrator (plus one). The hope, if approved, would be to have the space ready in December 2018 and plan to have the Administrative position filled by January 1, 2019. There was a mention of the two conference rooms in the 6964 building that may be available for use, by the Retirement staff for a variety of reasons. After a brief discussion, a motion was put for forth for consideration.

MOTION: Mr. Garnsey made a motion to authorize the expenditure of not more than $60,000 for the design, remodel, and furnishing of offices for the Arapahoe County Retirement Plan and associated staff. Ms. Sandstrom seconded the motion. Chairperson called the vote, MOTION PASSED UNANIMOUSLY.

Mr. Quigley brought before the Board the issuing of an RFP for Legal Services. The Legal Services were next on the list of vendors used by the Arapahoe County Retirement Plan to go out bid if deemed necessary. The Board felt that there is value to having the representation of Davis Graham & Stubbs, and namely Ms. Cindy Birley based on her extensive historical knowledge of the Plan. It was further noted that Ms. Birley is one of a few renowned public plan and Defined Benefit plan experts in the country and well worth the fees paid to her firm. Mr. Quigley stated that those fees have been significantly reduced in past years. In addition, having DGS itemize their billing so that the Plan can actually see where they are incurring expenses, has helped the Plan reduce legal fees. After much discussion, the consensus of the Board was the Plan would be better served to not do a Legal Services RFP and to continue with Davis Graham & Stubbs, using the “Scope of Work” concept and detailed pricing structure as in the past.

Board Member Comments

Mr. Harris requested that at the September meeting he be first after the Consent Agenda to bring before the Board a short PowerPoint presentation regarding a Funding/Liability comparison.

Plan Administrator Comments

No Comments

Plan Member Comments

No Comments

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:19 p.m.

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Darcy Kennedy, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
September 26, 2018

The Chairman called the meeting to order at 1:29 P.M.

Board Members Present	**Others Present**
Darcy Kennedy	Dale Connors, Ellwood
Mike Garnsey	Andy Fiegel, Ellwood
Sue Sandstrom	Tina Seberg, US Bank
Dennis Lyon	Erik Burge, Finance
Richard Harris	Liz Ellis, Communications
	Lew Quigley, Plan Administrator

Consent Agenda

MOTION: Mr. Garnsey made a motion to approve the Consent Agenda, Ms. Sandstrom seconded this; the Chair called the vote and the motion passed unanimously.

1. **Actuarial Assets and Actuarial Liabilities**

Mr. Rich Harris asked to make a presentation on a simplified presentation of the actuarial asset and liabilities comparison used by GRS during their actuarial presentation. Mr. Harris suggested that the Plan continue using this presentation as a forecasting tool and be presented to the BOCC during next year's annual presentation. There was some discussion as to whether this should be placed on the webpage for all employees.

Ms. Sandstrom did inform the Board that going forward the County would be setting aside $100K to get a Financial Wellness program rolled out to employees, of which the Plan would like to be a part, Ms. Sandstrom would keep the Board in the loop as it pertains to the Financial Wellness program.

2. **Ellwood**

Mr. Fiegel presented the preliminary August 2018 performance report.

Ellwood next presented potential emerging markets equity products for use when the Board decides to implement a standalone position again. The Board did not make any decisions on the presentation, and asked that Ellwood come back to the Board with additional options, to include adding to the current investment managers.

The next item of discussion was an updated Private Capital Pacing Model and potential private equity candidates for the 2018 commitments.

MOTION: Mr. Harris made a motion to invest $3.75 with Warburg Pincus Global Growth, and $4.25M to Crestview Partner Fund VIII – Buyout. Mr. Garnsey seconded the motion, the Chair called the vote and the motion passed unanimously.

3. **Other Business**

Ms. Kennedy brought the Board up to date on the space remodel, stating that there has been a delay in the Plan review and may result in the remodel of the space not being completed until late December.
Mr. Lyon asked that once the move takes place would it be possible to move the Board meetings to a Lima Plaza conference room in the future.

Ms. Seberg with US Bank let the Board know that the ASI Benefits Administration with US Bank Pension Payments is looking to expand the capabilities of on-line access and allowing retirees to make their own changes as far as address, tax withholding, direct deposit, etc.

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4. Board Member Comments

Ms. Sandstrom did let the Board know that former County Treasurer and ACG Retirement Board member, Mr. Doug Milliken had passed away unexpectedly while living in Arizona; Mr. Quigley is working with his family on his death benefits.

Mr. Harris asked the Board if there was any reason for the lengthy version of the minutes knowing that they are recorded and available for review for all employees and others by request. After some Board discussion, the consensus was that in the future the minutes should be action oriented and mirror the agenda item by item.

5. Plan Administrator

Mr. Quigley will be representing the Plan at the annual Employee Benefits Fairs during the month of October. Mr. Lyon and Mr. Quigley will be attending the Annual IFEBP Conference in New Orleans, Oct 13 – 17, 2018.

6. Plan Members Questions and Comments

No Comments

7. **Adjournment**

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:50 p.m.

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Darcy Kennedy, Chair

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
October 24, 2018

The Chairman called the meeting to order at 1:34 P.M.

Board Members Present
Darcy Kennedy
Mike Garnsey
Sue Sandstrom
Dennis Lyon
Rich Harris

Others Present
Dale Connors, Ellwood
Cindy Birley, DGS
Dan Perkins, Co. Attorney
Erik Burge, Finance
Liz Ellis, Communications services
Lew Quigley, Plan Administrator

Consent Agenda

- **MOTION: A motion was made by Mr. Garnsey to approve the Consent Agenda; Ms. Sandstrom seconded the motion; the Chair called the vote and the motion carried.**

There was a request to correct the date on the October Agenda, which was done during the meeting.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201809	$10,410.83	Administrator Expense
Davis Graham & Stubbs LLP	762987	$85.00	Plan Matters
Davis Graham & Stubbs LLP	762988	$2,257.00	Investment Matters
J.P. Morgan	20180930-26714-A	$10,114.46	Investment Fees
NCPERS	9766	$250.00	Annual Dues
Ellwood		$20,422.00	Consulting Fees
Tortoise		$31,680.68	Investment Fees
Fidelity	20180930-805-A	$33,685.19	Investment Fees
Milliman	16ACR1018	$6,750.00	License Fee
Total Expenditures		$115,655.16	

Acknowledgment of reimbursement in the amount of $235.26 to Lew Quigley for Office Supplies.
Acknowledgement of reimbursement in the amount of $1,586.44 to Lew Quigley for final expenses associated with attending the annual IFEBP Conference, Oct. 13 – 17, 208.

Vested/Non-Vested Withdrawals

Number	Reason	Total
5	Retirements	
2	Vested Withdrawal	$126,310.77
18	Non Vested	$93,666.31
	Total Expenditures	$219,977.08

1. Ellwood

Mr. Connors brought the Board up to date on the Fund Performance through end of September 2018, whereby the YTD performance for the Plan is sitting at 3.4% ROI.

Two Venture Capital providers were brought before the Board for continued discussion, Warburg Pincus and Crestview Partners; the Warburg Pincus investment is already in place and will be funded timely. Crestview Partners was discussed with regards to the non-tax and off shore implications. Ms. Birley did ask the Board their threshold with the aspect of UBTI. Between the two offerings, Main Fund and Tax Exempt, the Main Fund would be the better choice of the two. The Board chose to go with the Main Fund and a signed direction letter will go to US Bank.

Two Venture Capital offerings were brought before the Board; Greenspring Global Partners, and Horsley Bridge XIII Venture. Mr. Connors was presenting as the Greenspring fund is only open until December 2018 and Ellwood has been afforded capacity for their clients. He didn't feel that a decision was required immediately as Horsley Bridge and potential other venture capital funds will be available in 2019. The Board consensus was to hold off until 2019 before making a decision.

2. Davis Graham & Stubbs

Ms. Birley brought before the Board, Plan Amendment No. 8, revising the interest rate assumption for the purposes of the Actuarial Equivalent for single-sum payments, effective for all new hires on or after January 1, 2019 to be 7.25% until changed by the plan amendment.

- **MOTION: A motion was made by Ms. Sandstrom to approve the adoption of Plan Amendment No. 8 as described above; Mr. Harris seconded the motion; the Chair called the vote and the motion carried.**

The other item was the engagement letter for either a 1, 3, or 5 year contract for legal services rendered by Davis Graham & Stubbs, LLP. The Board would request that this issue be brought back on the November agenda.

3. Other Business

Retirement Talking Points were discussed, this came about from a request from the Sheriff for in-service training presentation. Mr. Harris and Mr. Garnsey both spoke that they would be willing to promote the Plan to employee groups, Mr. Quigley would like to be included since employees generally want to know their retirement situation.

The 2018 Meeting schedule was passed out to the Board members with minor adjustments.

Remodel update is on track with a completion date of late December and moved in by the first week of January.

NCEPERS Code of Conduct and Schedule A was brought before the Board, and the Board chose not to respond.

Cyber Insurance coverage and options will be on the January agenda.

4. Board Member Comments

Mr. Lyon asked that the Board talked about sixty days prior to bringing in any investment managers to see if warranted.

5. Plan Administrator Comments

Mr. Quigley along with Mr. Lyon did attend the 2018 IFEBP Annual Conference, and felt that it was worthwhile and had good information.

6. Members Questions

None

7. Adjournment

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:04 p.m.

Darcy Kennedy, Chairperson

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
November 28, 2018

The Chairperson called the meeting to order at 1:30 P.M.

Board Members Present
Darcy Kennedy
Mike Garnsey
Sue Sandstrom
Dennis Lyon
Richard Harris

Others Present
Dale Connors, Ellwood
Andy Fiegel, Ellwood
Shawn Sonnkalb, Finance
Erik Burge, Finance
Jolene Nagle, BOCC Admin.
Lew Quigley, Plan Administrator

Consent Agenda

- **A motion was made by Mr. Garnsey to approve the consent agenda; Mr. Lyon seconded the motion. The motion carried and Chairman so ordered.**

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201810	$15,616.27	Plan Administrator
US Bank	11273495	$16,998.23	Custodial Fees
Davis Graham & Stubbs, LLP	764300	$429.50	Plan Matters
Davis Graham & Stubbs, LLP	764301	$2,923.00	Investment Matters
Davis Graham & Stubbs, LLP	764860	$5,451.50	Plan Matters
Davis Graham & Stubbs, LLP	764861	$1,854.00	Annual Retainer
Davis Graham & Stubbs, LLP	764862	$3,790.50	Investment Matters
Total Expenditures		$47,063.00	

- Acknowledgment of reimbursement to Dennis Lyon for expenses associated with attending the 2017 IFEBP Annual Conference, October 13-17, 2018, in the amount of $1,072.00.

- Vested/Non-Vested Withdrawals

Number	Reason	Total
5	Retirements	
3	Vested Withdrawal	$202,720.50
18	Non Vested Withdrawals	$149,143.48
	Death Benefits	
	Total Expenditures	$351,863.98

1. Ellwood

Mr. Fiegel did bring up to speed on the first nine months of 2018, whereby the S&P up 10.6%, Non-U.S. down 1.4%, Emerging Markets down 7.7%, and finally Fixed Income down 1.6%. While global growth has remained positive, U.S. has shown an acceleration in economic growth forecast. Style overview has Growth up 17%, Value up 4.2% in the U.S., Non-U.S. Growth up .6% and Value down 3.5% and in the Emerging Market sector Growth is down 10.9% and Value is down 4.3%. As of September 30, 2018 the Plan stood at $308, 822,393 with one of the best risk adjusted returns.

Mr. Connors brought before the Board the October Fund Performance whereby nothing except cash had a positive return. The October performance came in at a negative 4.6% with most of the loss in the Public Equity sector. The big switch was a reversal of value and growth, with value coming out on top.

CBRE Capital Call will come at the end of December, and due to the fact that the Plan did not receive the complete distribution from the liquidation of UBS Trumbull. Three options were presented to the Board to raise the required funds.

- **Mr. Garnsey made a motion to temporarily allow the Real Estate sector to go outside the Investment Policy Statement to 25% and to allow the Liquid Real Asset to go to 0%; Mr. Lyon seconded the motion. The Chair called the vote and the motion passed.**
- **Mr. Garnsey made a motion to do a complete liquidation of the Tortoise holding no later than December 17, 2018 to help fund the CBRE holding, the remainder of the additional funding to be discussed at the December 19, 2018 meeting; Mr. Lyon seconded the motion. The Chair called the vote and the motion passed.**

The Emerging Market search was put off until after the first of the year, at which time Ellwood will make a presentation as to availability.

2. **Other Business**
Ms. Kennedy brought before the Board an updated version of the employee presentation with suggested changes, the Board felt the suggested changes where worthwhile, plus additional slides showing comparison with other Defined Benefit Plans.

Office remodel update, construction started Monday Nov. 26, 2018; phone interviews will be held on Nov. 29th, and face-to-face interviews December 5, 2018.

3. **Board Member Comments**

4. **Plan Administrator Comments**
Mr. Quigley did let the Board know that a Contribution Increase Memo will be in the AC Weekly on Dec. 14 and an altered version on Dec. 21, 2018. In addition, an article on the new location will be in the AC Weekly the 21st and 28th, and again on January 4, 2019.

5. **Plan Member Questions and Comments**

6. **Executive Session Pursuit to C.R.S. 24-6-402 (4)(f)(l) to discuss personnel matters**
At this point Ms. Kennedy made a motion to go into Executive Session pursuant to C.R.S. Section 24-6-402(4)(b) to discuss personnel issues, the motion was seconded by Mr. Garnsey. The Chairman called the vote and the motion passed, the ACG Board went into Executive Session.

Mr. Harris made a motion to accept the Performance Evaluation as prepared by Ms. Kennedy, Ms. Sandstrom seconded the motion. The Chair called the vote and the motion passed.

7. **Adjournment**
There being no further business to come before the Board, the Chairman adjourned the meeting at 3:17 p.m.

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Darcy Kennedy, Board Chair

ARAPAHOE COUNTY BOARD OF RETIREMENT

MINUTES

December 19, 2018

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Darcy Kennedy
Mike Garnsey
Sue Sandstrom
Dennis Lyon
Rich Harris

Others Present
Dale Connors, Ellwood
Andrew Fiegel, Ellwood
Cindy Birley, Davis Graham & Stubbs, LLP
James Law, Davis Graham & Stubbs
Erik Burge, Finance
Dan Perkins, County Attorney
Lew Quigley, Plan Administrator

Consent Agenda

A motion was made by Mr. Lyon to approve the consent agenda; Mr. Garnsey seconded the motion. The Chair called the vote and the motion carried.

Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201811	$10,410.85	Plan Administrator
Davis Graham & Stubbs LLP	766365	$1,366.50	Plan Matters
Davis Graham & Stubbs, LLP	766366	$510.00	Investment Matters
Tortoise	N/A	$20,94418	Investment Fees
Gabriel, Roeder, Smith & Co.	443050	$350.00	Actuarial Services
Total Expenditures		$33,581.53	

- Vested/Non-Vested Withdrawals

Number	Reason	Total
0	Retirements	
2	Vested Withdrawal	$78,061.97
9	Non Vested Withdrawals	$78,768.04
	Total Expenditures	$156,830.01

1. **Ellwood**

   Mr. Fiegel brought the Board up to date on November performance, growth stocks outperformed value, as well as non-US vs US stocks. Through December 18, 2018 the S&P down 3%, when looking at total Plan YTD up 1.6%, three year 6.5%and ten year 8.0%. No manager concerns otherwise no issues.

   CBRE capital call did come in on December 14, 2019 for December 28, 2018; the Plan has approximately $23M in the Operating Account from the partial proceeds from the Trumbull Property Fund.

Mr. Harris made a motion to fund the remainder of the amount needed to fund the CBRE capital call by pulling $4M from American Funds New Perspective, and $5M from FIAM SMID Cap Core. Ms. Sandstrom seconded the motion, the Chair called the vote and the motion passed.

2. **Davis Graham & Stubbs, LLP**

   Ms. Birley brought before the Board a number of items for approval and execution, these items being Amendment No. Nine to the Arapahoe County Retirement Plan, as Amended and Restated Effective January 1, 2014 ("Amendment No. Nine"), and Amendment No. Two to the Arapahoe County Plan Trust Agreement, as Amended and Restated Effective January 1, 2011 ("Amendment No. Two"), and the Arapahoe County Retirement Plan, as Amended and Restated Effective January 1, 2019 (the "Amended and Restated Plan").

   Mr. Harris made a motion to adopt Amendment No. Nine, Amendment No. Two and the Amended and Restated Plan; Mr. Lyon seconded the motion. The Chair called the vote and the motion passed.

   At a prior meeting Ms. Birley did present one, three and five-year contracts for services. The Board did review and request the adoption and execution of the five-year contract.

   Ms. Kennedy made a motion to engage in a five year fee agreement, Mr. Harris seconded the motion. The Chair called the vote and the motion carried.

3. **Other Business**

   Mr. Garnsey is waiting for dates, and Mr. Harris will update the language. The proposed schedule is for first quarter 2019 for meeting with all shifts of the Sherriff's Office and the use of the Power Point Presentation detailing the value of the ACG Retirement Plan.

   The Chair opened the floor for the nomination and election of Board Officers for 2019. Mr. Lyon nominated Ms. Kennedy for the position of Chairman, Ms. Sandstrom seconded the motion; the vote was called and Ms. Kennedy was elected to the position of Chairman. Mr. Lyon nominated Mr. Garnsey for the position of Chairman Pro Tem, Ms. Sandstrom seconded the motion, the vote was called and Mr. Garnsey was elected to the position of Chairman Pro Tem. Mr. Lyon nominated Ms. Sandstrom for the position of Secretary/Treasurer, Ms. Sandstrom seconded the nomination; the vote was called and Ms. Sandstrom was elected to the position of Secretary/Treasurer.

   Ms. Kennedy did bring the Board up to speed on the remodel which is nearing completion and the hiring of the Retirement Plan Assistant, Ms. Mona Goodyear who will start on January 2, 2019.

4. **Board Member Comments**

   Four individuals representing the Plan attended the meeting called by Senator Cooke in regards to the legislative bill that would allow Plans to pull out of the current DC plan, CCOERA. In the state of Colorado approximately 51 County Sheriffs have been forced to participate in CCOERA and would like additional options. Lt. Chad Bingham with Jefferson County who is authoring the bill and did state that the new language would be for DC Plans only. Final language will be passed on to all concerned.

With the move of the Retirement Administration Offices to a new location, the monthly ACG Retirement Board meetings will also be moving. Starting with the February 20, 2019 meeting they will be held in the Arapahoe Room – Lima Plaza, 6954 S. Lima St. Centennial, CO 80112.

It was also noted that the ACG Retirement Plan was fifty years old in 2018, a suggestion was that an article might appear in the AC Weekly and that it be noted on cover of the 2019 Employee Retirement Handbook that should be rolled out in the first quarter 2019.

5. **Plan Administrator Comments**
   Anticipate the completion of the new office space by Dec. 28, 2018 and starting the move on the 29th. Hope to be up and running by Jan. 2, 2019.

6. **Plan Member Comments and/or Questions**
   None

7. **Adjournment**

There being no further business to come before the Board, the Chairman adjourned the meeting at 2:50 p.m.

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Darcy Kennedy, Chair