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How to finance the airport we need—without FAA grants

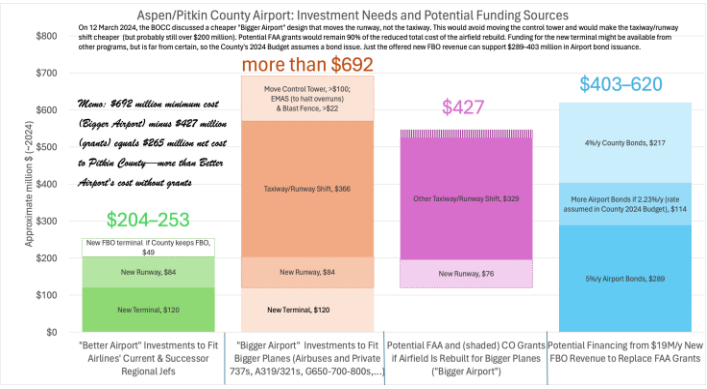
Executive Summary

Our airport can finance all the investments it needs for a new terminal, runway, and other infrastructure, without relying on FAA grants that demand unwanted expansion for more, bigger, mostly private planes. The $19⁺ million of new annual airport revenue now offered by the FBO (Fixed Base Operation) can solidly support all that financing by three methods.

Pitkin County has been trying for over a decade to let bigger planes into our airport, because in 2013 it thought the existing regional jets were about to retire and no replacements were available. Both those beliefs proved wrong, but the policy continues, perhaps encouraged by owners of private jets too big to fly into Aspen. The Federal Aviation Administration (FAA) wants to add bigger planes (ostensibly commercial airliners, but not requested by the airlines). *If and only if the County keeps requesting them* (a key point both parties conveniently ignore), the FAA would require a half-billion-dollar rebuild to make the airfield as roomy and safe for 118-foot wingspans as it is now for the FAA-approved 95-foot wingspans. The FAA's threat to withhold discretionary grants until that rebuild has coerced three Commissioners who think they need the grants. But meanwhile, the Fixed Base Operation (FBO) serving private planes—83% of the airport's flights—is eager to renew its lucrative 30-year monopoly contract, and has offered to pay the airport at least $19 million more per year. (Returning the FBO to public control instead—a good idea for many reasons—could extract even more revenue, or reduce the FBO's high prices, or both.) **This analysis shows how that new revenue could finance the airport's investment needs—new passenger terminal, runway, even a new FBO terminal—thus replacing any lost FAA grants and restoring the County's freedom to make our airport better but not bigger.**

Official cost estimates in the 2024 County Budget provide data to assess the airport's investment needs under two scenarios: (1) the "Bigger Airport" officially proposed, and (2) "Better Airport," achieving modernity without bigger planes—just current and newer airline regional jets in numbers that fit historical data. Better Airport costs about $200–250 million. Bigger Airport costs more than $690 million. Two-thirds of that may get 90% FAA grants, but the FAA wouldn't fund the other third. Thus Better Airport would cost the County less than Bigger Airport (or maybe a bit more than a far simpler Bigger Airport)—and restore independence from unwanted FAA growth mandates that put at risk the character, values, and expressed goals of the community.

So do we need FAA grants? Market interest rates show how much financing the FBO's $19+ million of new annual revenue could support by three separate options. While these estimates have many uncertainties and cannot replace the detailed and sophisticated analyses that an actual financing would require, they do clearly show that **the offered FBO revenues could finance twice the entire investment needed to build Better Airport, fully replacing the FAA grants that this choice could forego**.



Better Airport (left, green) costs about $200 million—plus $50 million if we keep the FBO in order to earn even more revenue, align policy, provide transparency and accountability, and improve service and fairness (especially to local pilots).
Bigger Airport (second, brown) adds about $488+ million in *extra* costs, mostly to relocate most main airport assets, including the control tower, which the FAA has said it won't pay for (more than $100 million). A faster-to-approve version (to meet grant deadlines) with lower but unstated costs was just proposed; please see note at top.
FAA grants (third, magenta) could pay 90% (+ CO grants 5%) of airfield-rebuild-and-wider-runway costs to fit bigger planes. That would leave more than $265M for the County to pay if the $120-million terminal, as the County's 2024 Budget assumes, didn't win a separate grant.
Financing from the minimum $19M/year of new revenue offered by the FBO operator could fund Better Airport's new terminal and runway twice over without grants. It would be needed anyway to fund Bigger Airport despite grants. The County could bond $200+M more if needed.

Better Airport (green) costs about one-third as much as Bigger Airport (brown). FAA's partial 90% grants (magenta) plus 5% Colorado grants could reduce Bigger Airport's net cost to the County to just above Better Airport's maximum cost. Thus on present plans, **Bigger Airport *with* grants costs the County more than Better Airport *without* grants.** By switching to a cheaper design—say $100 million less for taxiway/runway shift, and no >$100-million control-tower move—Better Airport might cost slightly more than Bigger Airport, but would also buy independence from the FAA except on safety issues. The County could finance its share of either design (aqua) from the new FBO revenue, as its 2024 Budget assumes for the new passenger terminal.

Thus there's no need to put money before community—to rush a $0.7-billion public expenditure to allow in more, bigger, mainly private planes in order to get FAA grants we don't need for a bigger airfield that we don't need and the airlines haven't asked for. Sound financing can fund the better, not bigger, airport we *do* want and need—at our own pace, without needing FAA grants or burdening taxpayers or airport users—while advancing the community's goals for character, environment, and equity. That seems the wiser course. It merits prompt, deep, and open public discussion before official plans proceed further down the wrong track.

Pitkin County Commissioners' latest discussions with the FAA, reported[1] in a 12 March 2024 Work Session with no public comment opportunity, have reinforced three views, based on the premise that the Aspen/Pitkin County Airport urgently needs a new airfield to expand for bigger planes by moving the runway and taxiway 80′ further apart:

- Our airport can't operate without big grants that the FAA offers to rebuild a new airfield but not to sustain the existing one. A fully functional airport with commercial service can't be sustained without FAA grants.
- There's too little time to apply for grants (expiring in 2026) unless the move-the-taxiway Airport Layout Plan being negotiated with the FAA last summer is abandoned and replaced by a slight update to the already-approved 2016 ALP that moves the runway instead. That would override the community's safety concerns about getting too close to Shale Bluffs, but the FAA and a safety consultant approve. Moving the runway would reduce complexity and cost (and the percentage-based grants). Some citizens who worked hard on ASE Vision might wonder why they bothered[2], but could be told that conditions have changed.
- In short, the overriding goal is now money and grant application schedule: how to move fast and seek the FAA grants needed to build the airfield the FAA wants and, by obedience, earn future discretionary grants.

Meanwhile, two dots that many folks may not yet have connected add important information documented below:

- The prospective Fixed Base Operation firm's previously secret contract offer was reported last September[3] when its expiring contract was temporarily extended while layout and lease arrangements are clarified. The operator, we learned, is offering to pay the airport at least $19 million more per year than previously—a 20-fold increase—that must all be spent on the airport. County Staff claim that's far too little to meet the airport's spending needs, but perhaps they forgot about leveraging income using finance.
- Also in September and October 2023, the County's 2024 Budget revealed projected (though necessarily fuzzy) 10-year projections of airport construction costs and funding, including a new 30-year Airport Enterprise Fund bond planned to pay for a new $120-million passenger terminal, unless it gets a very competitive grant from the $2-billion federal terminal fund.

These and other County data, plus discussions with financial experts, now enable this new independent analysis. It shows that the three premises at the top of this page are all incorrect, as well as the posited need for bigger planes[4]:

- *We don't need those FAA grants, and it's cheaper and smarter not to accept them.* Adopting the FAA's status-quo layout offer[5], but still modernizing the airport, would cost *less* with no grants than building the currently proposed new airfield for bigger planes would cost *with* grants—simply because that design adds more cost than it adds grants. A simplified design, with smaller grants in proportion to its lower cost, might modestly reverse that cost comparison, but not by much. Any extra cost would be the price of regaining community independence in building the airport we need for the planes we have—not the airport the FAA wants for more, bigger, mostly private planes. Whether defending our community from further crowding—on the mountain, in restaurants and lodging, on our streets and highways—costs or saves money, the amount is not large either way, but the stakes are. The airport is an FAA project; this Valley is our home.
- Whether the County rebuilds the airfield or simply renews the passenger terminal and runway, it'll still need to borrow money—as its 2024 budget already plans to do for the terminal, despite assuming $405 million in airfield-rebuild grants paid for by taxpayers elsewhere.
- Fortunately, the new $19 million of annual airport revenue now offered by the FBO operator can finance either approach, without further burdens on airport users or taxpayers. It can finance a modern terminal and new runway *twice over*. "Free money" is nice, but if it comes with unwanted strings, we're also free to decline it and choose to pay our own way from our airport's new income streams. And if the BOCC made the further choice to keep the FBO under public control, the airport could get even *more* net revenue.
- The right answer about whether to move the taxiway or the runway is to move neither—just sustain both right where they are. We shouldn't be debating the best way to do something that's not worth doing.
- If Commissioners don't like this approach, voters in November might override their discretion that the FAA is trying to coerce, and thereby undercut the FAA's rationale for withholding future grants.

In short, new data have upended the traditional dogma of FAA grant dependency and opened up a new, financially sound, operationally robust airport future. The math now says that we don't need the FAA grants, so we don't need to rush to apply for them, so we can take the time to do it right and create the airport we want. Three deep breaths.

Now let's explore how the logic works—especially the hard-nosed financial arithmetic.

The dilemma: costly, fast, bigger, and FAA-dictated, or cheap, slower, right-sized, and fitting community needs?

The FAA threatens to suspend grants if our airport isn't rebuilt for bigger planes, as County Staff has urged for more than a dozen years and business and other interests have sought for at least thirty years (but voters soundly rejected when last asked, in 1995). For its own reasons of expanding aviation and standardizing out annoying exceptions to bureaucratic uniformity, the FAA now concurs, though it wouldn't force the rebuild if the County stopped asking[6].

So does the airport really *need*[7] those FAA grants to thrive, improve, and (some unaccountably still claim) sustain commercial air service[8]? At least three Pitkin County Commissioners[9] and many citizens think so. But this Essay shows *it's not true: the grants are nice but optional*, and on current plans, they'd lead to a costlier airport even after crediting the grants. In other words, the grants are too costly to accept. The four or five Commissioners who say they don't want bigger planes can get their wish *and* protect the community by combining evidence, arithmetic, and finance. Here's how. Anyone with a home mortgage or business loan will be able to follow the logic.

The Board of County Commissioners (BOCC)-approved 2024 County Budget[10] projects building a $120-million new terminal in 2026–28 without FAA grants. Those might be available from a federal terminal fund, but are quite uncertain and hence are prudently not budgeted. Instead, the Budget projects their funding by new 30-year Airport Enterprise Fund bonds costing $5.56 million per year to repay principal and interest. But meanwhile, the proposed FBO operator has offered to pay the airport more than triple that amount—*$19 million* of new income every year for 31 years. As we'll see, *that new FBO income, never before received, could finance a new terminal, a new runway, a new FBO terminal if desired, and everything else that a modern (but not bigger) airport needs.* The airport could also earn even more money if the BOCC wisely chose to keep the FBO[11] rather than return it to a private monopoly, because then we wouldn't need to pay that monopoly's private-equity shareholders, but could keep the money in town and on the airport.

Here's the math—based on County-published cost estimates, Pitkin County's and other airports' recent financings, the airport financing proposed in the County's 2024 Budget, and informal advice from municipal bond experts (underwriters, buyer, and issuer all familiar with Pitkin County's finances, plus an eminent outside bond counsel). It's detailed and documented below. Even without the precision of a formal funding design, it shows why informed airport choices must now replace secret conclaves and redacted papers with public, open, independent analysis.

The BOCC's 12 March 2024 Work Session made clear that grant money and grant schedules are now driving airport design: the existing Airport Layout Plan approved by the FAA in 2016 is likely to be amended and resubmitted in place of the currently proposed new ALP. That means moving the runway rather than the taxiway—opposite to the ASE Vision process's recommendation—in order to save a year of approvals processes and hence complete an acceptable ALP in time to apply in 2025 for Infrastructure Act grants expiring in 2026[12]. The FAA confirmed when approving the 2016 ALP, and a County airspace consultant agrees, that taking flight paths nearer Shale Bluffs isn't unsafe and won't create a hazard as ASE Vision thought. If so, that could be a sensible alternative: it's been obvious for more than a year that moving the taxiway would entail moving most of the airport's major assets at great additional expense and complexity. Either way, the runway reconstruction would be costly and require two highly disruptive four-month summer shutdowns whose implications have been little discussed[13].

However, the basic premise that the airport *must* move either the runway or the taxiway to let in bigger planes, because otherwise it can't get the FAA grants to pay for 90% of that project, is backwards and incorrect. It's understandable until one uses the latest data to analyze whether the airport can remain financially sound, operationally safe, and functionally vibrant *using funding sources other than FAA grants*, and whether a rebuild with grants will cost more or less than modernizing the terminal and renewing the runway without grants. If these basic questions have been considered, that's secret. But since the County has published no such analysis, Aspen Fly Right has performed its own analysis, publishds here to inform consideration by Commissioners and citizens.

Let's first assess the County's projected airport investment needs, then three ways to finance them.

Our airport needs to invest about $250 million in a new passenger terminal, runway, and FBO terminal to get the better but not bigger airport County residents want and deserve—or about $200 million if the FBO operator remained the private-monopoly operator and hence funded its own new private terminal as it proposes to do.

If this community chooses *not* to build a new airfield for bigger planes and move many costly assets out of the way, what infrastructure investment *will* our airport need to stay safe, become modern, and work superlatively? Let's call

this the "Better Airport." It starts with an all-new, doubled-size terminal of around 80,000 square feet—not (to be conservative) a cheaper complete refurbishment as some have suggested. The County's 2024 Budget costs that new terminal at ~$120 million[14]—one-fifth more than the $101 million estimated in 2021. For an all-new runway to replace the deteriorating old one, the County's 2021 estimate[15], $70 million, would rise to $84 million if similarly escalated. Thus the County's latest published costs show that these two core elements of a modern airport would cost very roughly $204 million today. If the County also chose to keep control of the FBO (as Aspen Fly Right considers wise and prudent[16]) and rebuild its General Aviation terminal at County expense, that would add ~$41 million more, escalating to ~$49 million[17] and bringing the total cost of "Better Airport" to about a quarter-billion dollars. That would drop to about $200 million, though, if the County kept the FBO a private monopoly.

By comparison, the County's 2024 Budget estimates that what we'll call "Bigger Airport"—the expansion so far endorsed by the BOCC—would cost at least $570 million. That doesn't include the necessary cost (just revealed to exceed $100 million[18]) of relocating the control tower at County expense, nor some further projects the County wants but the FAA won't pay for. These would bring the total cost to more than $692 million—over three times the entire 2024 Pitkin County Budget for everything.

That impressive cost comprises:

- $450 million for the "runway/taxiway shift"[19] to let in bigger planes, but not otherwise required[20],
- $120 million for the separately listed new passenger terminal but, we assume here to match current County policy, not including a new FBO terminal that its private operator would instead build and maintain,
- the more than $100 million cost[21] of moving the control tower that the FAA now says the currently proposed layout would require but it won't pay for—building a modern control tower more than 100′ high, up against or across Highway 82 to the north and east of the present site, and
- at least $22 million for an "EMAS" system (a crushable-foam zone to halt aircraft that are overrunning the Buttermilk end of the runway) and a blast fence to deflect and diffuse jet blast now blowing towards the south unimpeded[22]—both options the County sensibly wants but the FAA doesn't require.

That could raise the gross cost of Bigger Airport to more than $692 million—triple the roughly $200–250-million cost of Better Airport. It's unclear whether these Bigger Airport estimated costs fully include the various ancillary investments to improve the existing landside layout—roads, parking, intermodal transportation integration, landscaping, signage, etc.—but we think they probably do, and anyway, they're relatively small. Better Airport would need much smaller ancillary investments because all significant airport assets would remain in place, needing only minor improvements and routine maintenance.

To be sure, if Bigger Airport were chosen, as three County Commissioners now favor, $405 million of FAA grants would normally pay 90% of the roughly $450 million cost of the runway/taxiway shift and new runway, and Colorado grants would traditionally pay another 5% (shown as a shaded bar in the graphic on p. 1). But should we do the wrong thing just because US and Colorado taxpayers will pay for 95% of it? If rebuilding the airfield for bigger planes provides little or no public benefit; if its claimed environmental benefits demanded by the Core Community Goals and Common Ground Recommendations are false[23] and likely to be overachieved anyway by other developments not considered[24]; if, as we unexpectedly found, Bigger Airport costs more than Better Airport *even after receiving huge grants that the FAA wouldn't provide for Better Airport*; and if voters don't want it (a hypothesis likely to be tested this November); then why not consider whether funding sources other than FAA discretionary grants could keep the airport in good shape and develop it to match local needs and wishes, not the FAA's one-size-fits-all aviation growth ambitions, required to conform to a national model fitting GDP growth?

There's no business case for the biggest forecasted commercial airliner (the Airbus A220-300[25]) that would drive the whole airfield redesign and would need the runway to be widened from 100 to 150′. The bigger planes for which proponents want the extra third of a billion dollars of public investment are apparently *not commercial airliners but private jets* whose owners can't stand the 12-minute hop in a smaller executive jet from Rifle. Pervasive arguments about *commercial* air service are a head fake. The airliners aren't asking for bigger planes. Private owners are, though they're too bashful to say so publicly. They just want several hundred million dollars of public funds to be spent for their own benefit. That's trickle-up economics, politically indefensible, and hardly in the public interest.

However, if the County chose Better Airport instead, then roughly $366 million of costs to rebuild the airfield for larger, mostly private planes would vanish, along with grants for 95% of their cost, all from taxpayers and future generations whose resources we as fellow-citizens and good ancestors have a responsibility to help conserve.

Of course, all these cost estimates are rough and may change. They depend on many undecided layout details and on future inflation and escalation. But all the costs we've used so far *are the County's current best estimates, not ours.* For all airport configurations, we rely entirely on the County's sparse published cost data. More-detailed cost estimates, including any for other potential layouts, would be extremely useful but have not been released.

One new development, featured in the note at the top of the graphic on p. 1, merits emphasis. Mainly to condense the approvals schedule by a year, but also to reduce cost and complexity, the BOCC has just been asked, and seems minded, to abandon the Airport Layout Plan sent to the FAA last summer, and switch back to the already-approved 2016 version, plus minor amendments not requiring a new Environmental Impact Statement[26]. That simplified Bigger Airport design, premised on and driven by desperately seeking FAA grants, may cost substantially less than the version in the second column of the graph on p 1. Net of its correspondingly smaller grants, a simplified version might even cost modestly less than Better Airport. We can't analyze it without cost data that the County hasn't yet released. However, we don't think it would change our conclusion that choosing the right airfield design shouldn't depend on FAA grants, because Bigger *vs.* Better Airport would have broadly similar net costs. Rather, it should depend on what our community needs and wants, and whether we want to be able to choose our own destiny rather than have it dictated by a Federal agency whose aviation-only goals entirely disregard our community's unique conditions, constraints, needs, and desires.

Summarizing so far: Bigger Airport as now proposed would need about three times as much public funding as Better Airport, whether paid by airport users or by federal and state taxpayers. Bigger Airport would shift primary funding responsibility from Pitkin County to the Federal Government, but would add more costs than it adds grants, so on current plans it would cost more (or if greatly simplified might cost modestly less) than Better Airport. Conversely, Better Airport would replace FAA coercion with County independence, restoring far greater control over the future of the $130-million airport asset and over the growth patterns, quality of life, and values of our community. But could Better Airport really work financially without those FAA grants?

How to pay for Better Airport even if choosing it blocked all future FAA discretionary grants

The needed airport investments can be financed from new revenue streams from the FBO, no matter who controls or operates it. To understand how, let's now turn from what Better Airport would cost to how those costs could be paid for. We assess that alternative airport revenues already offered to the County, but not projected in its future budget because the County hasn't yet accepted the offer and signed the contract, could amply finance all the new infrastructure that our airport needs. Interestingly, such financing would be needed even if Bigger Airport were chosen (in any plausible variant), because its prospective grants fall so far short of its actual total costs.

Last May, Aspen Fly Right was criticized for estimating[27] that the FBO could pay the County at least $15 million a year—about four times the estimates then prevalent. Yet our estimate proved conservative. Last September's contract extension revealed that the operator has offered to guarantee a minimum payment of *$18 million* a year[28] earned by selling aviation fuel for several times its cost[29]. That's *150 times* the same operator's previous guaranteed minimum "fuel flowage fee" of $0.012 million a year. Sounds like they really want the FBO contract.

Their offer also includes an annual base rent of $1.375 million—more than five times, or about $1.125 million a year[30], higher than previously, though it's less than half a consultant's 2012 assessment of market value[31]. Thus the new annual income from the FBO would be $17.88 million + 1.125 million = *$19 million* that the airport never got before. That's a *20-fold* increase in revenues from the FBO operator, while continuing to reward its owner's share-holders and support all the FBO's expenses, including restoring pavements and replacing the FBO terminal.

As we'll see, even larger FBO revenues could probably be extracted, or excessive charges moderated, or both, if the County chose to keep the FBO rather than return it to private monopoly control. But even if not, the airport stands to receive an entirely new income stream of at least $19 million per year. **What needed airport infrastructure could the airport finance on standard 30-year mortgage terms[32] from that new income?** At least three complementary options should be considered. Some financing option(s) will be needed *no matter what airport design is chosen.*

Three ways to finance airport infrastructure from new FBO income

DOT loans. The cheapest financing available for a new passenger terminal is probably the US Department of Transportation's TIFIA program[33]. Rural airports like ours can get direct loans at half the 10-year Treasury rate and on extremely attractive terms[34]. Such loans currently cost 2.05% per year (%/y), and could cover up to 49% of a $10-million to $100-million project[35]. Two such slices, raising a total of $98 million if skillfully defined as parts of a larger total project, would be just 23% of the borrowings supportable by $19 million/y of debt service. (In a smaller example now halfway through an expected 11-month negotiation, Sacramento's airport, with a $1.3-billion capital program, expects to use $32 million in 2%/y rural TIFIA loans to help finance a $140-million walkway system for its new ~$300-million terminal; that plus traditional TIFIA borrowing is expected to save a total of $115 million over 30 years[36].) Any TIFIA loans could combine with the following two kinds of market-priced commercial or private-placement borrowings (plus any non-FAA grants) to form a least-cost package, so long as the income supporting them didn't overlap.

Airport bonds. Pitkin County's debt-free[37] Airport Enterprise Fund could issue its own bonds[38]. The Fund receives the FBO income and all other airport revenues, and can borrow against those separate, airport-restricted funds without burdening County taxpayers or the County's debt capacity[39]. Depending on potential County credit enhancements[40] and the capital market's assessment of the quality of management and governance, Fund revenues, and the creditworthiness of the FBO operator and its giant private-equity owner KKR[41], an estimated bond rate around 5%/y might apply[42], reducing the proceeds borrowable against $19 million/y debt service to $295 million, minus 2% of issuance and insurance costs[43], yielding about $289 million net. However, the Pitkin County Finance Department apparently estimates a Fund bond rate of just 2.33%/y[44], so we show both rates. At the County's own estimated placeholder rate, subject to normal coverage and other standards[45], and before subtracting any cheaper TIFIA proceeds supported by the same revenues, the Fund's new $19 million/y FBO income stream could service (19/5.56) × $120 million = $410 million of borrowing, minus 2% issuance and insurance costs, yielding roughly $403 million net—about twice the cost of a new terminal and runway[46]. The graph on p 1 shows this as an incremental addition to the $289 million net proceeds of a 5%/y issuance.

County bonds. A larger and more routine financing option is tax-free County municipal bonds with various maturities up to 30 years. Under FAA Grant Assurances, Airport Enterprise Fund revenues can't pay County general expenses (with one unexplored but potentially useful exception[47]), and the airport's operations are funded by its own revenues, not by the County's taxing power. Thus although the County would rather preserve its debt capacity for general purposes, County bonds could independently add to Fund-bond and TIFIA financings if needed, and the County could loan the proceeds to the airport. Pitkin County is traditionally debt-averse, with strong bond ratings[48] and liquidity[49]. The County has only $54 million of outstanding debt (down from nearly $68 million in 2020), and uses only about one-fourth of its legal financing authority for General Obligation bonds[50]. During 2013–20, too, the County refunded $20 million of past bonds at or before maturity, rolling over the principal (shrunken by inflation[51]) at lower interest rates. Instead, conservatively amortizing so the bonds are all paid off by year 30, and subject to any indenture or other caps, a standard bond issue at a nominal 4%/y rate could support a $332 million issuance from $19 million/y of debt service, or about $325 million net. That ~4%/y estimated rate was recommended in underwriters' informal judgment as broadly consistent with the County's financial condition[52]. It's the same rate[53] the County paid for its 2020 Sales Tax Revenue Refunding Bonds[54]—backed by a revenue base that was only 23% of the County's total 2022 General Fund revenues.

Total. Therefore the total financing potential summarized above, combining these sources without overlap, is more than sufficient to fund Better Airport's $200–250 million cost and a modern, better-but-not-bigger Aspen / Pitkin County Airport. And we consider these estimates of potential financing to be conservative, as detailed next.

Our estimates understate likely financing capacity in six ways

Though based on the latest published County data, these cost and revenue estimates are obviously imprecise. Many uncertainties remain to be assessed by underwriters and borne by bond buyers. Many deal structures are possible. Market conditions will shift. Many financial, political, timing, and market considerations will influence officials' desire and capacity to finance a project of this complexity; they may choose to borrow less than is permissible. However, we believe the cost analysis summarized here reveals three crucial points: that Better Airport could cost severalfold less than Bigger Airport, that either could be financed from conventional revenue streams, and that our revenue analysis conservatively *under*states potential financing capacity in at least six ways:

1. **Non-FBO airport revenues.** The airport in 2023 got $26.8 million of total revenue,[55] including $14.8 million from charges and fees *other than* for selling fuel[56]. The total revenues covered $25.5 million of

expenses[57] (including $5 million for one-time projects)[58] with $1.3 million left over. The airport's 2024 expenses are budgeted at $32.7 million including $7 million of one-time airfield repairs, with a $6.6 million projected surplus. In other words, operating revenues are roughly ten times FAA entitlement grants. Our analysis doesn't draw on any operating surplus, but simply assumes that as in the past, diversified traditional revenues will continue to cover ordinary operating expenses, excluding airfield maintenance and new major facilities. The FAA expects and requires fees and charges to hold this balance and keep the airport "as financially sustainable as possible." However, our airport has significant leeway to charge more than now—especially by adopting the sound[59] financial practice of funding depreciation each year, rather than having to scramble for capital whenever old assets need replacement. Charges for non-aeronautical services (other than terminal rentals) can also be above-cost and reflect a market rate, just as fuel prices now notably do. Yet we've assumed no increased fees to any airport users, though many fees' size and allocation are policy variables, and some traditional allocations may not be justifiable[60]. The FAA has endorsed a two-part landing fee that could help rebalance ASE's commercial/private air traffic without forbidden "unjust discrimination," since it's based on permitted safety and efficiency distinctions: less airspace congestion would help more people fly on time[61]. Smarter cost allocation and fee structures might actually *reduce* burdens on commercial fliers and locally based pilots. Of course, FBO revenues come entirely from General Aviation airport users.

2. **Non-fuel FBO revenues.** The FBO operator earns about 40% of its total corporate revenue from *non*-fuel sales[62], but has offered to share no such income with the County. Its Aspen-specific data are secret; County Staff claimed not to know the FBO's revenues or profits, even though the contract through last September reportedly entitled County officials to inspect the financial accounts[63]. But for calibration, a nationally experienced local pilot told us in late 2022 that Aspen's FBO charges roughly twice the jet-fuel price and many times the access and parking price of truly competitive airports[64]. Consistent with our analysis[65], the $4.30 jet-fuel markup shown on a ~2021 refueling bill, if applied to the relatively high 2021 fuel flowage of 9.11 million gallons[66] (>99% Jet A), would imply an annual gross profit of $39 million on jet fuel alone—over twice the $18 million minimum payment now offered to the County—plus unknown and unshared but apparently significant profits on other fees and services. Such data might imply annual gross revenues on the order of $150 million. But if the County *kept* FBO ownership and price control, it could achieve many important public-policy goals[67] *and* extract greater fuel and non-fuel profits. How much more? Both the County and the public need to know—if only to dispel any unworthy concern that representatives of the operator's owner KKR, a private-equity empire (the world's biggest in 2022) managing over a half-trillion dollars, might perhaps overmatch the negotiating skills of the thousandfold smaller Pitkin County.

3. **Above-minimum-guarantee fuel sales.** We've assumed only the *minimum* guaranteed payment for fuel flowage. Such contracts normally share profits from excess fuel sales too, often on a rising scale. Although such clauses in the proposed new contract have not yet been disclosed, above-minimum fuel sales have historically been substantial, and would presumably yield additional airport revenues.

4. **Returns to the FBO operator's owner.** That owner, KKR in Plano, Texas, has expected financial returns[68] around 15.5%/y for private equity in the past five years (well over 20% in some recent years), and expects 11.9%/y currently and for the next five years. In mid-2021, KKR paid $4.475 billion to buy Atlantic Aviation[69], implying an expectation of over $600 million of annual returns to its shareholders. The share attributable to Aspen's FBO is secret, but evidently the operator plans to meet KKR's expectation *after* paying $19 million more to the County each year. But if the County kept and directed the FBO instead of leasing it to Atlantic, *it could avoid paying those KKR shareholder returns and could keep that money on the airport*. This, plus the ability to finance FBO renewal at tax-free rather than taxed commercial rates, should yield the County much more than the $19 million/y minimum now offered—or could reduce the unfair prices and practices alleged by some local pilots.

5. **Permanence of FAA grant suspension.** Our assumption of zero FAA discretionary grants forever is probably too gloomy. The FAA would find it legally, politically, and morally hard to keep starving Colorado's #3 airport for maintenance and facility funds to punish its rejection and coerce its acceptance of the FAA's expansion ambitions—especially if County citizens had so voted. The FAA's decision process, and even its authority to appoint itself Developer-in-Chief in communities that have long struggled to manage growth, would then risk withering scrutiny and expose tensions with its safety-and-efficiency mission. Recall our local history. When the FAA withheld airport grants in

1993–94 to try to abolish Aspen's night curfew, the BOCC stood up; its Chair, a CPA, threatened to go our own way and dispense with FAA discretionary grants; a fair, effective, and permanent curfew for all was adopted; and grants resumed in 1995. That November, voters rejected 3:2 an airport expansion like the one the FAA now seeks. Aspen also fought the EPA over the Smuggler Superfund designation, and won that fight too. Does the FAA hear footsteps? What relationship does it seek in our Valley?

6. **Market cost of capital.** We've assumed debt costs reflecting recent high inflation. Credit markets expect interest rates to abate starting this year, with increased confidence that shocks from Putin's War have faded. Past and widely expected future interest rates are thus much lower than those used here.

Public process. The County's negotiations, data, and thinking about the FBO remain a deathly secret—lest, as Commissioner Child said, public participation mess up the negotiations. The "open, public" process promised in 2022[70] never happened, and no disclosures are planned until *after* a long-term contract is irrevocably signed with no public evidence or discussion—if ever. But now that the framework has been negotiated between two known parties and its main terms have been published, why leave only the public in the dark? Obvious flaws[71] in declared reasons for not returning the FBO to public control have not been acknowledged, but strengthen the case for public input to ensure that Commissioners' facts and logic are soundly based and the best ideas are properly considered.

We must get this one right. The FBO is a nine-figure-a-year business. Its profits over a 30-year contract could be on the order of a billion dollars. Its annual profits may far exceed our airport's operating budget[72]. This financial and structural decision, perhaps the County's biggest ever, is too important to merit public confidence if analyzed and made in secret. That's why, when County Staff refused to discuss or release their consultants' analyses, and offered documents almost entirely redacted to conceal even the broad topics of discussion[73], Aspen Fly Right published this independent analysis here to stimulate informed discussion. If you think we're wrong, please specify where.

Existing plans may not survive November, when voters will choose three Commissioners and may get to vote on a ballot measure. Today's Commissioners should require and publish alternative airport budgets, with and without an airfield rebuilt for bigger planes, and realistically analyzing financial alternatives such as those discussed here. The community needs choices, not threats. And our honest Commissioners should no longer tolerate false and misleading advertising[74] written and approved by anonymous officials in the County's name and at public expense.

Conclusions. Now that we know Pitkin County can use FBO income *without FAA grants* to finance a better but not bigger airport, even if it renews the FBO contract on the terms proposed—and even more if it doesn't—what looked like a routine and nerdy airport operational matter has suddenly become the strategic enabler of far larger benefits. The prospect of gaining the funds to develop our own airport in our own way at our own pace to meet our own needs has made the FBO choice critical to this community's future by engaging all issues about growth, health, wealth, equity, size, and basic values. We hope this linkage will stimulate a fundamental, prompt, and transparent reassessment of the public interest in the airport's structural and financial futures.

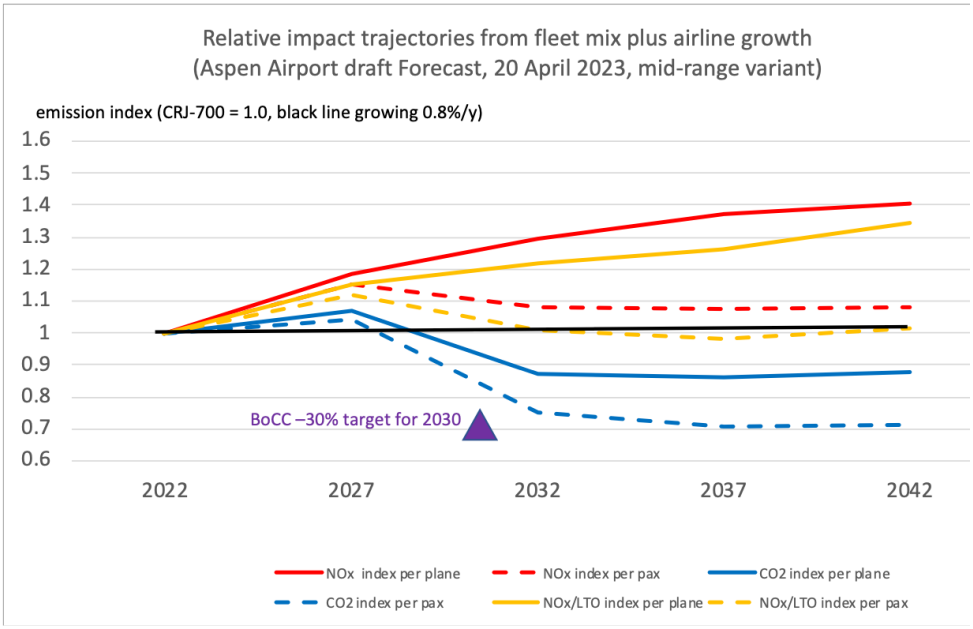
If the financial math is anything like shown here, then the case for using FBO revenues—and ideally control and policy—to declare financial independence from the FAA (while retaining its vital safety regulation) seems overwhelming. Let the whole community benefit from engaging robust public discussion before our Commissioners choose. Instead of re-debating whether to move the runway or the taxiway to separate them for bigger planes, citizens could vote to move neither, but to require a new Airport Layout Plan (starting with an evidence-based forecast and fleet mix) that sustains both airfield elements where they are and saves hundreds of billions of dollars of public funds. Alternatively or additionally, the BOCC could change its mind or, in November's election, its membership. So let's all get on the same page about hidden opportunities meriting a fresh look, and thoughtfully explore together the choices that really matter to our Valley's future.

Our airport's health does *not* depend on FAA grants. Those can be replaced by wisely using, or better still keeping, FBO revenues. Ladies and gentlemen, start your calculators.

Amory B. Lovins is President of Aspen Fly Right—an independent nonprofit scientific, educational, and charitable organization, funded by local donations, that informs the community about why, how, and when to make the Aspen/Pitkin County Airport better, not bigger. Its documented research, synthesized in popular articles and fact-checks, is free at aspenflyright.org.

[1] Item IX of agenda at https://pitkincoco.portal.civicclerk.com/event/6279/overview; video begins at 4:03 at https://pitkincounty.ompnetwork.org/embed/sessions/287012/bocc-work-session-03-12-2024l; press reports by S. Condon, "Pitkin County reopens debate on ASE runway placement," *Aspen Daily News*, 13 Mar 2024, https://www.aspendailynews.com/news/pitkin-county-reopens-debate-on-ase-runway-placement/article_9c9b0458-e10d-11ee-9660-b366a1e67442.html#:~:text=County%20officials%20have%20reopened%20debate,it%20in%20its%20present%20location.&text=Pitkin%20County%20officials%20decided%20Tuesday,could%20have%20major%20financial%20implications, and J. Taris, "Airport board to consider shifting runway, and not taxiway, after feedback from federal officials," *Aspen Times*, 12 Mar 2024, https://www.aspentimes.com/news/airport-board-to-consider-shifting-runway-and-not-taxiway-after-feedback-from-federal-officials/#:~:text=Feedback%20from%20the%20Federal%20Aviation,the%20runway%2C%20not%20the%20taxiway.

[2] County Staff continue to claim by oral briefs and by a green checkmark in a goals matrix (e.g. https://pitkincounty.com/DocumentCenter/View/30674/Common-Ground-Recommendations---Aspen-Airport, pp 15ff), and AAB members and Commissioners continue uncritically to accept, that the official plan achieves the Common Ground Recommendations' ≥30% reductions by ≤2030 in noise, CO_2, and air pollution—reiterated by the County Manager, to his credit, in place of the vague qualitative goals stated elsewhere in Resolution 105-2020 (BOCC/ABB Work Session, 12 Mar 2024, at 4:11, https://www.youtube.com/watch?v=fqTiFvw70Io&t=14543s). In fact, the plan achieves *none* of those goals, as documented on pp 2–7 of Aspen Fly Right, Essay #15, "Crucial aviation forecast fudges facts, ignores Aspen conditions, scraps local choice," https://aspenflyright.org/wp-content/uploads/2023/12/Essay15_Forecast_dr12.pdf. Its summary, Exh 1b on p 6, shows the major environmental shortfalls, both in the per-airplane terms specified by the BOCC (to reflect impacts as perceived by people on the ground) and using the per-passenger metric introduced by Staff or consultants to try to make the results look twofold better due to doubled-capacity future planes:



Average noise would meanwhile fall by ~0.3 EPNLdB, while the demanded 30% reduction would require ~5 dB. The official plan also fails to meet the community's expressed targets for airplane takeoff weight, seat capacity, and enplanement growth rate. As summarized in n 25 at https://aspenflyright.org/1223opeddoc.pdf (where footnotes to the table are posted):

Category	*Core Community Goal*	*County's plan*
Noise per Landing & Takeoff	≥30% (~5 dBA) less by 2030	1.3 or 3.4 dBA *noisier* in 2030
Air pollution (NO_x)	≥30% less by 2030	15% *higher* in 2030
Global warming (CO_2)	≥30% less by 2030	13% less in 2030 if same routes (longer likely)
Maximum Takeoff Weight	not above 140,000 lb	156,300 lb (A220-300)
Seats per plane	not above 100–120	130–160 (A220-300[2])
Av. passenger growth 2022-42	~0.8% per year	1.3% per year

Official statements that current plans meet these specific Core Community Goals and Common Ground Recommendations are thus false—though County Staff prefer to cite vague qualitative goals that can be met by any improvement, however small.

[3] J. Taris, "PitCo, Atlantic agree to one-year lease extension while FBO contract continues negotiations," *Aspen Times*, 14 Sep 2023, https://www.aspentimes.com/news/pitco-atlantic-agree-to-one-year-lease-extension-while-fbo-contract-continues-negotiations/#:~:text=The%20term%20of%20the%20Lease,fees%20for%20the%20extension%20term.

[4] A little history: The supposed need for bigger planes lacks support from historical commercial passenger data, runway replacement needs, airline desires, commercial aviation trends and market conditions, or public requests from the General Aviation industry. The FAA wants an airfield rebuilt for bigger planes only because the County has long requested them. The FAA has twice told the BOCC (n 5 below) that without that request, our airport can keep its current layout and 95′ wingspan

limit, on pain of losing future FAA discretionary grants. These incontrovertible facts are documented in Aspen Fly Right, Essay #14, 4 May 2023, "Fact-checking Airport claims: over half are false," https://aspenflyright.org/wp-content/uploads/2023/12/Essay14_Fact-checking-claims_rev15Dec2023.pdf. To be sure, once the County asked for bigger planes (in the mistaken belief it would need them to keep commercial air service—cf. Aspen Fly Right, Essay #4, 15 Dec 2023, "The airlines' planes aren't vanishing," https://aspenflyright.org/wp-content/uploads/2023/12/Essay4_Fleet_15Dec2023.pdf, and the centrality of the 93′11″-wingspan brand-new successor regional jet, Embraer's E175LR, in the ASE forecast sent to and accepted by the FAA in 2023), the FAA realized that a full ADG(III) layout could be squeezed into the ASE site, albeit expensively, awkwardly, and eliminating the required-if-feasible option of a second FBO long sought by competitors. FAA has so far subordinated those drawbacks to its desire for greater "access"—more planes of more kinds. The FAA dictated the key terms of the underlying forecast of airline enplanement growth and fleet mix, apparently unaware that the County's consultants' preferred low-range forecast fitted the historical data—we later showed the BOCC a remarkable 98% correlation with pillow count—while the mid-range forecast's correlation with a spurious variable (Colorado personal income) did not (71%). The County transmitted and the FAA approved a forecast with triple the growth rate justifiable from historical data. The County's originally preferred evidence-based 0.6%/y forecast was unacceptable to the FAA, which considers none of Aspen's severe constraints such as lodging, congestion, or highways. The BOCC's Airport Advisory Board (AAB) did not discuss, and the BOCC cursorily considered for six minutes, a severely critical technical review (Essay #15, ref 23 below) before sending the fatally flawed forecast to the FAA without approving it or, apparently, transmitting our review. (We did send it to the FAA, which didn't acknowledge it and appears not to have considered it. This flawed process violates the FAA's rules and Federal law, and renders all subsequent decisions infirm as arbitrary and capricious. Our cordial offers to the County and FAA to help improve their analysis of important local conditions were all ignored.) The result is that the FAA has applied its one-size-fits-all forecasting perspective and its assumption of zero lodging constraints to the resort community with perhaps the strictest land-use controls and most-constrained land availability in the nation. It thus proposes a huge public investment for infrastructure to serve imaginary visitors who will sleep on imaginary pillows, flying in doubled-capacity airplanes with no airline interest or business case. Unraveling these indefensible steps, to support a new status-quo ALP, would require a shift in BOCC policy to reinstruct its Staff and consultants, replace the current forecast and fleet mix study with the originally desired low-range forecast that does fit the historical evidence, explain to the FAA why that's correct and the mid-range forecast isn't, request a return to the agency's reasoned and evidence-based decision-making process, encourage the FAA to accept that the cost and difficulty of full ADG(III) compliance and the importance of preserving the second-FBO option override theoretical feasibility, and accept the FAA's repeated offer to let ASE keep its current layout and Modification of Standard for 95′ wingspan limit (n 5 below). Changes in the composition or mindset of the BOCC, or a citizen initiative, could force these changes at the November 2024 election.

[5] The FAA's John Bauer explicitly confirmed to the BOCC (11 Apr 2023 Work Session / Special Meeting, https://pitkincounty.ompnetwork.org/embed/sessions/266309/04-11-2023-bocc-work-session-special-meeting-04-11-2023, at 2:19:36–2:21:55 (answer at 2:21:37–2:21:53), and reinforced at 2:42:50–2:43:34, that the 1999 Modification of Standard (and its accompanying Ordinance approved to enforce the 95′ wingspan limit) could remain in force if the County didn't insist on bigger planes. Even the County's own digest of those 11 April remarks, distributed to the Airport Advisory Board on 20 Apr 2023, asks, "Could ASE maintain the existing 320-foot runway/taxiway separation (34:36)?" and Mr. Bauer answers, "Yes, you can. But again, we then go into kind of an entitlement [grants] only situation"—i.e. the FAA won't force the County to give up its current wingspan limit or layout, but will merely block discretionary grants if it doesn't. This Essay #17 shows how to replace those grants by financing from new FBO revenues, vitiating the FAA's financial threat and making status-quo layout realistic.

[6] See n 5 above.

[7] All discretionary grants—but not the automatic enplanements-based "entitlement grants" budgeted at $2.4 million in 2024 (Pitkin County 2024 Budget, p 109), augmented in 2024 by $1.8 million "banked" from prior years.

[8] The County's currently posted "ASE Modernization Facts" (https://www.aspenairport.com/fact-sheet/) states: "The FAA has stated to keep commercial service ASE needs to meet Group III airport design standards." County Staff has been unable or unwilling to specify where the FAA made such a statement, citing only the 2.8-hour entirety of John Bauer's 11 April 2023 BOCC meeting (https://www.youtube.com/watch?v=d2Sp9S8RRIM), in which it does not occur. Aspen Fly Right has been unable to find such an FAA statement anywhere. Similarly, official statements that the FAA *requires* the proposed airfield upgrade for "safety," or at all, consistently omit the punchline "…if the County insists on bigger planes." As for FAA grant funding, the County's 28 April 2023 internal response to Aspen Fly Right's 20–21 April 2023 newspaper ad "Who is Asking for Bigger Planes?" (https://aspenflyright.org/wp-content/uploads/2023/04/AFR_Ad13_WhoIsAskingForBiggerPlanes_4-20-23.pdf) states: "Given large expenses, both capital and operating, in the airport's future such as maintaining aging airfield pavement, the prospects of future pavement reconstruction, the cost of a new commercial passenger terminal/intermodal facility, and the capital and start-up costs associated with a county-owned and operated FBO (should the county proceed with this option), discretionary federal funds would be more critical than ever. Without them, expenses would be passed on to airport customers and/or projects like the new commercial passenger terminal would likely need to be deferred. / As the county embarks on a lengthy and expensive redevelopment, federal funding will play a critical role. The larger point is that in order to increase safety and continue commercial service, changes to the airside of the airport—like increasing the separation between the runway and taxiway—are required. If the county forfeits its relationship, including receiving federal funds, with the FAA, the airport would likely become a facility that services General Aviation aircraft only." That misinformation, presumably provided to the BOCC as well as to the public, contains a plethora of myths and untruths documented in three papers: Aspen Fly Right's Essay #14, 4 May 2023, "Fact-checking Airport claims: over half are false," https://aspenflyright.org/wp-content/uploads/2023/12/Essay14_Fact-checking-claims_rev15Dec2023.pdf; https://aspenflyright.org/1223opeddoc.pdf; and https://aspenflyright.org/tvopeddocs.pdf. The BOCC, as a matter of public integrity, should take responsibility for ensuring that its employees' and consultants' statements are truthful.

[9] This fragile majority's funding anxieties were lately reinforced by impeccably timed news of big airfield repair needs (J. Taris, "ASE will be on the hook for $1.5 million in previously unbudgeted runway repairs," *Aspen Times*, 20 Jan 2024, https://www.aspentimes.com/news/ase-will-be-on-the-hook-for-1-5-million-in-previously-unbudgeted-runway-repairs," and "FAA will not continue funding airport runway repairs," *Aspen* Times, 2 Mar 2024, https://www.aspentimes.com/news/faa-will-not-continue-funding-airport-runway-repairs/). The May 2023 structural evaluation of the runway was reported in Quality Engineering Solutions (Conneaut Lake PA), *Heavy Weight Deflectometer Testing, PCR Determination, and Remaining Life Analysis Runway 15/33*, report to Kimley-Horn (Orlando FL) for Aspen/Pitkin County Airport, 16 Aug 2023, augmented by Ground Engineering's 8-page 17 Dec 2021 core-sample report (Job #21-6600) to Kimley-Horn (Broomfield CO). Pavement problems include including a cracked FBO ramp that somehow eluded the airport's daily inspections for months, until just after the operator's temporary contract extension strangely dropped its longstanding maintenance responsibility. As Ms. Taris reports, the FAA won't fund further runway repairs because past ones failed so soon (0.5–2 years rather than the expected 10+). Could the County have maintained airport surfaces better for the past decade, or more actively discouraged heavier planes (which highly stress the pavements) by better structuring its landing fees? Such questions are not being asked or answered, but repairs are due.

[10] *Pitkin County 2024 Budget*, p 246, 10 Oct 2023 (with the airport portion briefed to the AAB 21 Sep 2024, n 44 below), https://drive.google.com/file/d/1BYnMApKWAvxjVGAckBt1nbkJCAjxa3ZL/view. We verified the other details stated here with official sources, since they're not mentioned in the Budget. See also n 14 below.

[11] The County could exercise its "proprietary exclusive right" (Aspen Fly Right, Essay #3, "Runway robbery?," 29 Dec 2022, https://aspenflyright.org/wp-content/uploads/2023/12/Essay3_FBO_dr21_29Dec2022rev15Dec2023.pdf, p. 5) to provide FBO services using its own staff, or could reject private monopoly and hire an accountable contractor under County price and policy direction. Of 1,562 US public airports that owned their own FBOs in 2019, three-fourths were run by municipal or county governments: National Academies of Sciences, Engineering, and Medicine 2020, *Characteristics of the FBO Industry 2018-2019*, p 28, Washington, DC: The National Academies Press, https://doi.org/10.17226/25846.

44[12] BOCC/ABB Work Session, 12 Mar 2024, at 4:21ff, https://www.youtube.com/watch?v=fqTiFvw70Io&t=14543s.

[13] BOCC/ABB Work Session, 12 Mar 2024, at 5:07, https://www.youtube.com/watch?v=fqTiFvw70Io&t=14543s.

[14] The County's 2024 Budget (ref 10), p 139, projects $120 million for "Terminal Building" (lasting 50 years) in 2026–28, and $450 million for "runway/taxiway shift" in 2026–29 (all in nominal dollars and described on p 245 as "placeholders"), while $7 million is budgeted for 2024 runway pavement maintenance (p 245). P 246 projects $304 million in intergovernmental Capital Improvement Grants in 2026–28 to help pay for expenditures of ~$120 million for "Buildings" and $338 million for "Infrastructure" (whose other $112 million is spent in 2029 as shown on p 139, presumably with a matching Grant item); the 21 Sep 2023 AAB budget brief (n 44 below) confirms that the 2026–29 assumed grant receipts total $405 million.

[15] That's somewhat overstated because it includes an unknown sum for north taxiways and for all taxiways' design. Ricondo Associates, "Airport Update Recap and Path Forward," brief to BOCC Executive Session, 21 (and/or possibly 14) Sep 2021, p 34, "ASE Modernization Program—'Landside Improvements First'"—a rare unredacted page in a document obtained 16 Oct 2022 under a Colorado Open Records Act (CORA) request. These 2021 estimates for the landside-first sequence that the County would wish to follow, if not forced by the FAA to do airfield improvements first or simultaneously, would have designed the terminal in 2022 and built it in 2023–24 for an unescalated nominal cost totaling $101 million, and the relocated (therefore from-scratch) runway in 2025–29 for $70 million. The total rough 2021 budget for the "ASE Modernization program" was $404 million, which could well be ~$450 million today or perhaps more, though a minor portion is already spent. However, the estimated budget line-items show that $41 million is for a new FBO, which under current County policy the operator would pay for. A further $28 million is for a new Ops Center, $34 million for a new commercial apron, $13 million for parking and landscaping, and $22 million for 2030 south and center taxiways not previously included. It could be reasonable to escalate these 2021 estimates by ~20+%. Relocation of the FAA-owned control tower (which the FAA has recently said it wouldn't pay for, but the Budget writers may not have known that last September) was not budgeted, but would not be needed if the airside isn't redesigned for bigger planes, thereby triggering that and many other costly relocations and reconstructions of current assets. So when sums around $400–500 million are bandied about (the higher value probably still not including a new control tower), they must refer to Bigger Airport, not Better Airport. Better Airport's ~2024 County-estimated costs would be only on the order of $120 million for a new terminal and $84 million for a new runway including some taxiways, or roughly $200 million total for these two chief elements of a truly modern, attractive, durably functional, and financially sound but not bigger airport.

[16] Aspen Fly Right, Essay #3, "Runway robbery? Big decisions on private aviation," 20 Dec 2022, https://aspenflyright.org/wp-content/uploads/2023/12/Essay3_FBO_dr21_29Dec2022rev15Dec2023.pdf.

[17] Oddly, the FBO terminal rebuild was included in the 2021 capital budget for "airport modernization" in 2026–28 even though it wasn't planned to be a County expense, but under the proposed new 30-year contract would be paid for by the FBO operator.

[18] BOCC/ABB Work Session, 12 Mar 2024, at 4:20, https://www.youtube.com/watch?v=fqTiFvw70Io&t=14543s.

[19] That was estimated at $337.5 million in the 2021 airport modernization budget (n 15), rising to roughly $405 million now if we used the earlier one-fifth escalator, but the 2024 Budget, seeing supply-chain and escalation challenges, estimates $450 million.

[20] Claims that the FAA requires this change for "safety" or for other reasons are not true and have never been true—unless the County continues to call for longer-wingspan planes, which of course would need a more spacious airfield, with greater taxiway/runway separation, so they don't collide. Without bigger planes, no new airfield is needed. Details are in n 8 above. Please see also n 20 at https://aspenflyright.org/1223opeddoc.pdf.

[21] Ref 18 above.

[22] BOCC/ABB Work Session, 12 Mar 2024, at 4:34–36, https://www.youtube.com/watch?v=fqTiFvw70Io&t=14543s. That Buttermilk-bound jet blast raises public-health concerns described in Aspen Fly Right, Essay #10, "Aspen Airport, air pollution, and public health," 16 Mar 2023, https://aspenflyright.org/wp-content/uploads/2023/12/Essay10_Air-Quality_rev15Dec2023.pdf.

[23] Aspen Fly Right, Essay #15, pp 2–7, "Crucial aviation forecast fudges facts, ignores Aspen conditions, scraps local choice," 17 May 2023, https://aspenflyright.org/wp-content/uploads/2023/12/Essay15_Forecast_dr12.pdf. In 2042, the officially forecast fleet would be imperceptibly (~0.3 dB) quieter, and ~40% more NO_x- and 12% less CO_2-emitting, than the current CRJ-700s. The 2030 comparison is the table at the end of n 2 above.

[24] Aspen Fly Right, Essay #5, "Flight without fossil fuel," 12 Jan 2023, https://aspenflyright.org/wp-content/uploads/2023/12/ABL-essay_5.New-fleet_25Dec2023.pdf, was collegially briefed to and discussed with Brad Jacobsen, Bill Flock, Abe Oommen, and Airport Director Dan Jacobsen at their invitation on 19 Oct 2022 (https://aspenflyright.org/wp-content/uploads/2023/01/PitcoFleetMixBrief19Oct2022r.pdf), to their considerable excitement. It showed how the community's goals for noise, CO_2, and air pollution progress were likely to be far surpassed, the proposed new airfield rendered unfit for purpose, and its larger fossil-fueled planes tipped into increasing uncompetitiveness, by superefficient and electrically propelled aircraft—plausibly before the new airside could even be built (~2032). For the year and a half since then, County Staff, who control the AAB's schedule, agenda, and information, have blocked my mutually promised presentation of this material to the AAB, on which the BOCC relies to advise it on aviation trends. (Staff promised to brief the AAB on my 19 Oct 2022 brief, but conveyed just one sentence representing it as my "philosophy," omitting all its substance, and not mentioning that it's technical and contradicted what they'd told the AAB.) The FAA doesn't include any aircraft newer than 2016 in its Aspen forecast because they're not yet certified, but the AAB and BOCC can and should use aviation innovation trends to inform County strategy. If they learned about this cutting-edge material, they'd realize that their environmental plans are being rapidly overtaken by events in the marketplace, invalidating Staff's claim that Bigger Airport is the only way to achieve the community's environmental goals.

[25] Essay #15, ref 23, pp 30 and 32. (P 29 says this type hasn't yet been approved to fly to Aspen. A contrary statement was recently made to the AAB, but the County's consultants haven't replied to a request for clarification.) The County's lead forecaster, Bill Flock, told the BOCC on 27 June 2023 that in his personal opinion, the A220-330 was unlikely to serve Aspen (as documented in Essay #5). Of course, the County's originally preferred low-range aviation forecast called for no Airbuses—only regional jets—and hence no rebuild of the airfield. The FAA reportedly rejected this forecast variant based on severely flawed analysis, but the AAB ignored and the BOCC briefly dismissed our detailed analysis of those flaws (Essay #15 and Lovins 27 June 2023 BOCC brief), apparently because three Commissioners felt the airport required continued FAA grants, so the quest for them must at all costs be kept on track.

[26] Please see n 1 above.

[27] Aspen Fly Right, Essay #14 (4 May 2023), "Fact-checking Airport claims: over half are false," https://aspenflyright.org/wp-content/uploads/2023/12/Essay14_Fact-checking-claims_rev15Dec2023.pdf, pp. 5–6. We sent this to the BOCC on 5 May 2023.

[28] Minimum Annual Guarantee, quoting the operator's manager: J. Taris, "PitCo, Atlantic agree to one-year lease extension while FBO contract continues negotiations," *Aspen Times,* 14 Sep 2023. For the first year of lease extension, the payment is $12 million plus a $6 million "signing bonus" to bring the total minimum guaranteed payment from fuel flowage fees to the agreed long-term $18 million per year, effectively making the renewed lease last 31 years at $18 million minimum fuel flowage fee per year.

[29] The jet-fuel markup is explored in Essay #3 (ref 5), pp 9–13.

[30] The operator (Taris, Ref 28) reportedly agreed to raise its previous base rent to $1.375 million per year from the net $0.239 million budgeted for FY2022 (not disclosed in the County's general budget but shown in Aspen Pitkin County Airport (ASE), "Preliminary Budget FY 2022 Rates and Charges as of September 30, 2021," 22 Oct 2021 Preliminary Draft, p 10). Estimating 2022–23 (pre-contract-extension) escalation to perhaps $0.25 million (it's the greater of CPI-U or 4%/y), we infer additional offered FBO rental revenue of about $1.125 million/y. This apparently doesn't include the separately shown $0.212 million of FY2021 airport revenue from "Monthly Patio Shelters Maint[enance] Fees"—an example of conservatism #2 on p 7 above. A broader perspective on airport revenues is on p D16 of the most recently published County accounts, *Pitkin County Annual Comprehensive Financial Report For the fiscal year ended December 31, 2022* (https://www.pitkincounty.com/ArchiveCenter/ViewFile/Item/612). (The "regulated leases" shown returned regulated revenues totaling $5.8 million (p D17), but that category is described as referring to [commercial] airlines.)

[31] Essay #3 (ref 11), p 4, documents an airport management consultant's 2012 market value of at least $3 million in annual rent, escalating thereafter.

[32] We used the flexible online mortgage calculator at https://www.mortgagecalculator.org (because it can exceed a 30-year tenor) and have checked against others. Lacking a more sophisticated calculator, our calculations necessarily assume monthly amortization and payments (favoring the borrower) even though the bonds themselves would pay on the traditional semiannual schedule.

[33] The Transportation Infrastructure Finance and Innovation Act (TIFIA) provides credit assistance for qualified projects of regional and national significance. It can provide secured direct loans, loan guarantees, and standby lines of credit. Many kinds of applicants are eligible including local governments and special authorities and districts, with total federal assistance up to 80% of total project cost. Rural airport terminals, like Sacramento's planned one (in a rural Census tract like Aspen's) fall within TIFIA's Rural Project Initiative and hence pay just ~2%/y interest (at 3 Mar 2023, 2.093%)—half the normal rate (which is fixed at one basis point or 0.01 percentage point above the 10-year Treasury rate)—for a project costing $10–100 million. A partial summary is at https://www.transportation.gov/buildamerica/airports. This program is not identical to the 2022–26, $1b/y Airport Terminals Program in the 2021 Bipartisan Infrastructure Law (BIL). That law enabled the Build America Bureau, previously funding surface transportation projects, to consider TIFIA or RRIF loans for airport-related projects too. Airport surface-transportation projects such as intermodal and rental-car facilities can also be eligible for other DOT financing programs. TIFIA and RRIF credit assistance or loans require compliance with numerous Federal requirements, but airports already meet those by FAA engagement.

[34] TIFIA loans' interest generally doesn't start to accrue until funds are drawn. Amortization is up to 35 years—or up to 75 years for projects with an estimated life over 50 years, which modern buildings can do, like RMI's hundred-year Basalt Innovation Center; that is of great interest for a current LAX project, and a current DOT rulemaking will clarify such long amortizations (80 *FR* 4880–4884, 25 Jan 2024, https://www.federalregister.gov/documents/2024/01/25/2024-01243/amendment-to-the-railroad-

rehabilitation-and-improvement-financing-program-and-transportation). Rural-TIFIA-loan interest payments needn't start until five years after substantial project completion, and there's no prepayment penalty. The loan is Federally guaranteed, and a 10-year standby line of credit is available. Our rural TIFIA calculation assumed a 35-year term starting in January 2031, due to the 5-year interest-start deferral.

[35] A project can be defined as a freestanding building or, surprisingly, as one or more of its cost categories, so one building can comprise more than one project, and conversely, more than one project can be funded within the same building. Thus a "project" isn't necessarily a standalone investment like a terminal, with "independent utility" (which means it "has logical starting and end points and would have a useful purpose without relying on other transportation improvements": see §4(a), FAA 50504B, 28 Apr 2006, Ch 2, "Special NEPA Requirements and Responsibilities for Airport Actions," https://www.faa.gov/sites/faa.gov/files/2022-07/chapter2.pdf). With DOT approval—according to a senior out-of-state county official now financing a major airport project with these tools—a "project" could also be a line-item cost category for a facility, such as its engineering and design services, core-and-shell, or interior. In skilled hands, therefore, more than one loan can be sought for different parts or cost categories of an over-$100-million facility. This could permit loans for more than one ≤$100-million "slice" of, say, a terminal.

[36] K. Webster, "Sacramento County wants to pioneer TIFIA route for airports," 20 Jul 2023, https://www.bondbuyer.com/news/sacramento-county-wants-to-pioneer-tifia-route-for-airports. USDOE's Transportation Infrastructure Finance and Innovation Act program, formerly used for intermodal transport, has now been extended to airport concourses and terminals. Airports in rural Census tracts, including Sacramento and Aspen, qualify for TIFIA loans at half the usual rate, or 2% in Sacramento's case, so its $140 million in total TIFIA borrowings are projected to save $115 million over 30 years compared with Sacramento Airports revenue bonds at about 6%/y—a rate elevated by ~$730 million of outstanding airport revenue bonds and Sacramento County's billions in General Obligation bonds, so the former (subordinated and contingent) bonds are rated one notch lower than the latter (senior). Sacramento's overall indenture provisions constrain its further issuances. Pitkin County's debt burdens are far lighter.

[37] Its last outstanding debt balance was $404,620 in 2013: p K19, Pitkin County *Annual Comprehensive Financial Report For the fiscal year ended December 31, 2022*, https://www.pitkincounty.com/ArchiveCenter/ViewFile/Item/612.

[38] The County would normally prefer a costlier Certificate of Participation to avoid risking a public vote. However, that avoidance and higher cost would not be necessary if a status-quo airport layout plan were being submitted and built—hence triggering the FAA's threatened grant suspensions—as required by a vote of the people. A Fund bond would be secured solely by Fund revenues—chiefly or wholly the $19 million/y new FBO revenues—making political approval even more likely than for tax-funded debt. The airlines would get what they want—a better airport for the regional jets they profitably and durably operate. The only disappointed constituency would be owners and operators of oversized private jets who may be strong covert supporters of expansion but seem unwilling to admit it publicly.

[39] Minus any cheaper TIFIA bonds and an unknown but plausibly three-figure number of millions for traditional TIFIA debt, most easily for intermodal surface transportation, which isn't assessed here for lack of cost data.

[40] For example, by subordinating non-fuel-flowage airport revenues paid to the County (as Eagle does to compensate for its high leverage from its 2017 terminal expansion), or by some level of backup guarantee using its order-of-magnitude-larger non-airport revenues. Optimal bond design involves many complex variables and is best left to municipal finance experts.

[41] Bonds can be secured solely by fuel flowage fees, where monopoly provision is considered a financial strength, as in SFO Airport's 1997 Special Facilities Lease Revenue Bonds issued by SFO Fuel Company, LLC (with $83 million rated A3 by Moody's on 28 Mar 2014, but a step-up provision to cover shortfalls by airlines' pledge of facilities rent, and a debt service reserve fund).

[42] Approximately estimated by underwriters familiar with Pitkin County's financial position but without formal analysis of the Airport Enterprise Fund, on the principle that the Fund, having a narrower and more volatile revenue base, could be considered riskier than the sales and property tax revenues of the County. However, it may not be necessary to assume, and we didn't assume, revenue coverage of say 1.2× issuance value, because the revenue is guaranteed by a KKR subsidiary, and there are many backup revenue streams (ref 40). It's reassuring that the Airport Enterprise Fund, albeit with Federal grants, proved quite resilient in the pandemic despite a steep revenue drop just after $8.9 million of 2019 capital projects funded from cashflow.

[43] We assume a standard allowance of roughly 1% for all issuance costs, plus, conservatively, a further 1% fee for bond insurance (analogous to a home mortgage's Private Mortgage Insurance) in case credit enhancements (nn 40, 41, and 46) were insufficient.

[44] The County's 2024 budget (*Pitkin County 2024 Budget*, p 246, https://drive.google.com/file/d/1BYnMApKWAvxjVGAckBt1nbkJCAjxa3ZL/view), presented to the AAB 21 Sep 2023 (at 1:44–54, https://drive.google.com/drive/folders/1aRJzDIKTL7xTyQFLRFBG9_oAFAKaP1rl, includes a new $5.56 million annual debt-service expense starting in 2026—confirmed to be a placeholder for a projected $120-million 30-year bond (mainly for the terminal, on the assumption it may get no federal grants, while the airfield is assumed to be 90% funded by FAA grants). Back-calculating with a standard mortgage model (using monthly rather than normal semiannual bond payments, and not adjusting for the minor issuance or insurance costs), these parameters imply an estimated bond cost (at presumed lower interest rates two years hence) of just 2.33%/y. We express no opinion on the plausibility of that rate, but take it as the County's view.

[45] We did not analyze the complex legal question of whether Airport Enterprise Fund bonds would be federally tax-exempt. That seems plausible, since the funds would be used for a publicly owned and used airport and serviced by cashflows that the FAA restricts to airport uses, but it would need checking.

[46] To be sure, the Airport Enterprise Fund's 2023 revenues were only 16% those of the whole County or 58% those of the County General Fund, so Fund underwriters may well want credit enhancement. The County's financial advisors could structure many options. One common method would reserve up to 15% of the issuance proceeds to increase bond-buyers' security, earn incidental income, and optimize the issuance's overall size and cost. Using a different approach, Eagle County Air Terminal

Corporation runs the nearest significant airport, serves a smaller, more seasonal, and less diversified economy, and is supported by Aa1-rated Eagle County, which subordinates lease and agreements to the County to debt-service obligation. That raises ECAT's rating two notches from Ba1 to Baa2, following underwriter logic analogous to considerations for a hypothetical Aspen Airport bond financing: Moody's Investors Service, Credit Opinion, 18 Oct 2023, "Eagle County Air Terminal Corporation, CO." Similarly, Pitkin County's distributions of 1% sales tax to municipalities and RFTA are subordinated to debt service.

[47] As described on pp 12–15 of Aspen Fly Right's Essay #12, "Using smart regulation and siting to cut Airport impacts," 13 Apr 2023, https://aspenflyright.org/wp-content/uploads/2023/04/Essay-12-Regulation-dr-7.pdf. The Airport Investment Partnership Act (AIPP) enabled by terse and highly permissive 2018 legislation enables some potentially creative and advantageous structural options that the Essay discusses but the County has not reacted to, despite saying it was eager to receive the Essay 11 months ago. In certain circumstances that may apply to Pitkin County conditions, net lease proceeds could be used for general governmental purposes. While such Public Private Partnerships (P3) have not yet been widely used—the US Virgin Islands airport is following Puerto Rico's early lead—and some such as Gary and Denver were terminated after flawed execution (e.g. https://www.bondbuyer.com/news/analysis-of-failed-denver-airport-p3-aims-to-help-others-avoid-pitfalls, 29 Aug 2022), the principle remains sound and the potential structural mechanisms look highly flexible and worth exploring. It is not necessary to fully privatize an airport under a long-term lease as the libertarian Reason Foundation suggests (R. Poole, "Study: Leasing 31 U.S. airports would generate $131 billion to fund other infrastructure and pay debt," 26 Aug 2021, https://reason.org/policy-study/study-leasing-31-us-airports-would-generate-131-billion-to-fund-other-infrastrucutre-and-pay-debt/); indeed, as Essay #12 shows, no private party need be involved and ownership of the airport need not materially change, but public participation and benefit can still be greatly improved by better use of current public-sector structures and assets. Colorado law enabled P3 structures in 2022 (C. Devitt, "Colorado enacts broad P3 law, Illinois eyes similar move," 6 Jul 2022, https://www.bondbuyer.com/news/colorado-enacts-broad-pe-law-illinois-eyes-similar-move), although TABOR presents some complications requiring careful drafting, including for Enterprise Funds since 2020 (R. Williamson, "Colorado takes detour around voters for landmark transportation bill," 7 Jun 2021, https://www.bondbuyer.com/news/coloraro-takes-detour-around-voters-for-landmark-transportation-bill).

[48] Moody's Aaa on its senior General Obligation and Series 2021 bonds, Moody's Aa1 and S&P A on its sales-tax bonds, and Moody's Aa1 as a long-term issuer with stable outlook. These 2021–23 ratings wouldn't normally be updated until an issuance was planned. Many factors overlap those of Aspen, whose Aaa general-obligation rating (18 Mar 2021) is based on "a strong local economy, wealth levels that are amongst the highest in the nation, anchored by an internally renowned ski resort, health liquidity and reserve levels, which are likely to remain stable given conservative budgeting practices and the demonstrated willingness of voters to repeatedly approve additional revenue measures that provide a key source of funding to the district." For comparison, Moody's 20 Nov 2023 "Medians" profile cited in n 53 below rates DEN's Airport Revenue as Aa3, its Subordinate Airport Revenue as A1, Eagle Airport as Baa2, and Grand Junction Airport as Baa2, so Pitkin County has relatively strong financials among its region's airports.

[49] According to the County's 2024 Budget, p 39, the Airport Enterprise Fund ended 2023 with $19 million of fund balance and projects $27 million at the end of 2024. For the County's separate General Fund, those numbers are respectively $15 and $14 million, and for all County funds combined, $135 and $128 million.

[50] Des Moines similarly chose, with an 80%-favorable public vote last November, to issue $350 million in lower-interest general obligation bonds for its new $445 million, 17-gate, 8-remote-stand, 4-million-passenger/y terminal, even though its airport could have issued its own aviation revenue bonds. This choice saved nearly $76 million: https://www.desmoinesregister.com/story/news/politics/elections/2023/11/07/des-moines-2023-election-results-airport-referendum-bond-issue-approved-polk-county/71383546007/.

[51] At 2%/y inflation, principal shrinks by nearly half over 30 years.

[52] An eminent bond counsel informally suggested a 3¾%/y rate, supporting a $322 million borrowing, or $316 million net; here we assume 4%/y, sufficient to fund over $300 million.

[53] This rate happens to approximate the early-2024 yield-to-worst-change average for the Bloomberg Municipal Bond Index—among the highest levels since 2009. At mid-Feb 2024, 30-year yields were at 4.45% for Treasuries, 3.65% for AAA munis, and 4.10 for A munis (https://www.raymondjames.com/-/media/rj/dotcom/files/wealth-management/market-commentary-and-insights/bond-market-commentary/bond_investor.pdf), or (23 Feb 2024) 3.59% for 30-year AAA munis—82% of the Treasury 30-year rate (https://www.bondbuyer.com/news/primary-muni-bond-market-tops-6b-led-by-nyc-pressure-mounting)—or 3.77% for Aa munis (https://data.bondbuyer.com/Product?id=Municipal%20Market%20Data%20General%20Obligation%20Yields&Tab=8&radioId=61&#displaytable). The US municipal bond market is deep, totaling $4 trillion. The Airports Council International—North America's *2023 U.S. Airports Infrastructure Needs Report* (https://airportscouncil.org/wp-content/uploads/2023/03/2023ACI-NAInfrastructureNeedsReportFINAL.pdf) expects $151 billion of airport financings in the next five years (https://bondbuyer.com/articles/airport-municipal-bond-sales-return-to-calendar-amid-travel-boom, 6 Sep 2023). Median statistics for US airports, and a useful guide to how ratings agency view them, are in Moody's 20 Nov 2023 sector profile "Medians—Revenue growth, credit metrics strengthen with traffic and federal grants," https://www.moodys.com/research/Airports-US-Medians-Revenue-growth-credit-metrics-strengthen-with-traffic--PBC_1387506. For broader context, Moody's Investor Services' 7 Dec 2023 US Airports "2024 Outlook—Stable as slowing economic activity weighs on passenger traffic growth," https://www.moodys.com/researchandratings/market-segment/infrastructure-project-finance/airports/005008010/004003?tb=0&po=1&returnUrl=/researchandratings/market-segment/infrastructure-project-finance/airports/005008010/004003?tb=1, confirms a continuing stable outlook for the airport industry as a whole.

[54] Hypothetically, if the County chose to apply to major infrastructure at the Airport—arguably its most valuable and critical asset—its own past financing strategy of refunding $20 million of debt at favorable interest rates in 2013–20, it may be able to sell what amount in practical effect (if not in formal description) to interest-only bonds. At 4%/y, that could theoretically finance 25 times the annual debt service, or $447 million ($438 million net), subject to refunding the principal by maturity.
[55] Ref 44, p 246.
[56] Due to the September 2023 temporary contract extension (ref 28), this includes $12 million of fuel revenue (plus a $6-million signing bonus if it's renewed in the first year, thus making first-year revenue, for what would then act like a 31-year contract, equivalent to the originally offered $18 million a year). The airport's estimated 2024 budget (p 246) projects $27 million in revenues *other than* from fuel sales: $2.9 million in airline and $4.0 million in General Aviation landing fees, $1.0 million in Federally authorized Passenger Facility Charges (capped at $4.50 since 2000, so it's lost nearly half its original real value but is hard to raise due to airline opposition), $2.1 million in commissions, and $2.0 million from other rentals and fees. An interesting landing-fee-sharing precedent is that in 2020, Friedman Memorial Airport in Hailey, Idaho, serving Sun Valley and Ketchum, won a settlement (over a claim of undercollected landing fees discovered by audit) that includes passing through to the airport 90% of future FBO landing fees: E. Jones, "Friedman settles six-figure dispute with Atlantic Aviation," 10 Jul 2020, www.mtexpress.com/news/transportation/friedman-settles-=six=-figure=dispute-with-atlantic-aviation/article_ea874e6a-c2ef-11ea-8820-2be6c07caea2.html.
[57] Those include, in the 2024 budget, $3 million for terminal redesign, but are in addition to $6.6 million in unspecified capital investments and $13.9 million for the airfield. Those categories could be financed.
[58] The airport often runs at a surplus, but in keeping with FAA rules, breaks even and doesn't accumulate much. L. Geil, "Landing, parking fees increase for GA operators in Aspen," 21 Dec 2023, https://www.aopa.org/news-and-media/all-news/2023/december/21/landing-parking-fees-increase-for-ga-operators-in-aspen. AOPA has protested to the BOCC about "egregious" fees.
[59] According to an FAA staff member we asked, since we were surprised to find the Airport Enterprise Fund doesn't do this as most well-run businesses would do, and p 73 of the 2024 Budget says "Enterprise funds are similar to private sector businesses in their operations and accounting." The Fund's budget doesn't include depreciation (lately around $5 million/y) except in its separate reconciliation to the Generally Accepted Accounting Principles (GAAP) required of US public companies.
[60] The airport formerly allocated 40% of airfield costs to General Aviation (GA), 60% to airlines; the County wouldn't reveal how that was calculated, and has recently switched to a new allocation system that depends on undisclosed personnel data. Yet GA accounts for about 83% of operations (2023) and 62% of weight-based landing fees (2020). Both these parameters should correlate with wear and tear on airfield pavements, emissions, and air pollution. GA operations also cause virtually all accidents or incidents (Federally investigated and associated with ASE, as tabulated by Barry Vaughan, Chair of the AAB's FlightOps Safety Task Force—see Aspen Fly Right's Essay #2), and nearly all noise complaints as officially reported (see Essay #9).
[61] Aspen Fly Right, Essay #12, pp 6–10, 13 Apr 2023, https://aspenflyright.org/wp-content/uploads/2023/04/Essay-12-Regulation-dr-7.pdf.
[62] As of 2020, "Fuel sales historically have been approximately 60% of gross margin while hangar rentals constituted approximately 15% to 20% of gross margin. Other services, including de-icing, aircraft parking, aircraft cleaning, and catering provided the balance." Macquarie Infrastructure 2020 10-K (https://www.sec.gov/ixviewer/ix.html?doc=/Archives/edgar/data/1289790/000162828021002304/mic-20201231.htm), p 8. (Non-fuel fees are illustrated in Essay #3, ref 11, p 9.) Also, "In general, the business has minimal exposure to commodity price fluctuations due to the pricing structure for fuel sales…", which "seeks to maintain and, when possible, increase its dollar-based margin per gallon." Essay #3 (ref 11, p 5) notes that in 2014, fuel sales provided 64% of Atlantic Aviation's total corporate gross profits. Its accounts have not been separately published (let alone by location) since its 2021 sale to KKR.
[63] Essay #3 (ref 11, n 93) documents that the County had apparently never availed itself of its financial inspection rights.
[64] Observing this requires data from airports outside ASE's vicinity, since Atlantic owns several of those FBOs too and aligns their pricing with Aspen's, making it harder to tanker in competitively priced fuel from nearby and creating an incorrect impression that Aspen's prices are competitive in the larger market. The Aspen monopoly is thus exploited regionally, as one would expect of an astute and capably run private monopoly subject to limited oversight.
[65] See ref 29.
[66] 2021 was a high fuel-sales year—2022 showed just 7.45 million gallons of total ASE fuel sales—but the official forecast shows 8% more airline flights and 17% more private flights in 2042 than in 2022, carrying 31% more airline passengers. Our Essay #15 finds a ~12% drop in commercial airline CO_2 emissions during 2022–42 (assuming unchanged routes), but that should be more than offset by increased private flights and by longer commercial routes proposed to be added from the East Coast.
[67] Essay #3 (ref 11, pp 17–19) documents many other public-policy reasons for the County to retain control over the FBO's pricing and policies. These include fairness (to locally based pilots and to all General Aviation users), access (especially to locally based pilots who continue to allege being squeezed out of parking), transparency, accountability, agility, and closer integration with County aviation and transport strategy.
[68] H. McVey, "KKR Outlook for 2024: How Are We Thinking About Expected Returns?," Dec 2023, https://www.kkr.com/insights/outlook-expected-returns, as of the end of Nov 2023.
[69] In a mixture of cash and ~$1 billion of debt assumption: "MIC Announces Closing of Sale of Atlantic Aviation…," 23 Sep 2021, https://www.micinc.com/about/news/2021/mic-announces-closing-sale-atlantic-aviation.html. At the mid-2021 sale date, Atlantic had 69 FBOs; it now has more than 100. Its sale price was 16.2 times 2019 EBITDA, which was therefore ~$276 million; its prior owner's 2014 10-K shows $779 million of revenue; its last reported 1-K revenues (https://www.sec.gov/ixviewer/ix.html?doc=/Archives/edgar/data/1289790/000162828021002304/mic-20201231.htm), for 2020

(a difficult period for aviation), were $667 million, for $195 million of EBITDA and $28 million of net income; its recent revenues are estimated to exceed $500 million (https://incfact.com/company/atlanticaviationfbo-plano-tx/#).
[70] Essay #3 (ref 5), p 15 and n 86.
[71] Three examples of significant flaws unlikely to survive public scrutiny are detailed on pp 16–17 of ref 11.
[72] FBO background and choices are detailed in Aspen Fly Right's 29 Dec 2022 Essay #3, "Runway robbery?," at https://aspenflyright.org/wp-content/uploads/2023/12/Essay3_FBO_dr21_29Dec2022rev15Dec2023.pdf.
[73] Aspen Fly Right, Essay #3, "Runway robbery?," 19 Dec 2023, pp 19–21, https://aspenflyright.org/wp-content/uploads/2023/12/Essay3_FBO_dr21_29Dec2022rev15Dec2023.pdf.
[74] For details, please see Aspen Fly Right's Essay #14, 4 May 2023, "Fact-checking Airport claims: over half are false," https://aspenflyright.org/wp-content/uploads/2023/12/Essay14_Fact-checking-claims_rev15Dec2023.pdf; the other nine topical essays under the Information Resources tab at https://aspenflyright.org; the annotated op-ed "'Modernization' of Aspen airport means more and bigger planes," *Aspen Daily News*, 12 Dec 2023, https://aspenflyright.org/1223opeddoc.pdf; "Lovins: Pitkin County's airport TV ad is false, misleading," *Aspen Times*, 27 Dec 2023, https://aspenflyright.org/tvopeddocs.pdf; and other recent articles posted under aspenflyright.org's News and Insights tab.