

July 31, 2014

Memorandum to: Councilwoman Kathee Burke-Gonzalez  
From: Airport Planning Committee, Noise Sub-committee  
Re: Sixth Preliminary Findings and Recommendations – 4-22 Taxiway and Obstacle Clearing Update.

*4-22 Taxiway.*

The original recommendation and premise of the 4-22 taxiway repair was that a temporary and inexpensive solution would allow time for the completion of the full parallel taxiway A, for the main runway, without risk of damage to taxiing aircraft, particularly jets.

Originally, DY suggested that such a temporary repair could be effected for approximately \$60,000. Subsequently, DY reported that this was not possible and proposed instead a \$270,000 repair with a ten-year useful life, far beyond the time needed to complete taxiway A.

The justification for the additional expense is that it will not be wasted if and when 4-22 is repaved as a runway. However, as explained in this committee's Fourth Findings, the cost justification for repaving 4-22 as a runway is likely unsupportable. There is a wind coverage justification offered by pilots, but this is not supported by any analysis at all. Dennis Yap repeated at the last meeting that either secondary runway affords adequate wind coverage exceeding FAA standards, and this is the finding of the Airport Master Plan report. The seasonal effects claimed by pilots have never been documented, although this could be done easily, and the magnitude of the seasonality, if

there is any, is almost certainly immaterial. We can say this with confidence as both secondary runway headings provide coverage in excess of 95%. This means that the total number of days in the year when either does not afford adequate coverage is approximately 15. It is inconceivable that the seasonal effect applies to all such days. Thus, the likely seasonal swing cannot be significant in a best case.

There is, therefore, a significant likelihood that when all capital projects are ranked properly, with the benefit of professional assistance, as to their importance to safe and efficient airport operations, repaving 4-22 as a runway will fall at or near the bottom of the list if it can be justified at all. Given capital demands, the project may never be done or may be so far in the future that the taxiway paving is wasted. In any case, it would absorb hundreds of thousands of dollars in the present that should be expended on much higher priorities.

This state of affairs prompted the committee to make an informal investigation, with professional sources, of the claims currently being made for the 4-22 taxiway project. These are our findings:

1. The projected cost of the 10-year project is likely too low. A better estimate for this project is \$325,000, bearing in mind that the professionals who shared with us their views are not familiar with the 4-22 surface and any peculiarities of local costs. Those could drive the price higher.

2. Contrary to what DY has said, that the full taxiway is a project requiring a year or more from start to finish, the engineering for the full taxiway can be completed in approximately two months. The project can be started with preliminary groundwork

slightly before the opening of asphalt plants in the spring and would take not more than three months to complete. This means completion by the end of June 2015. The project can be staged with the tie-ins to the secondary runway and 4-22 taxiway complete first so that there is minimal disruption to airport operations.

3. There is in fact a “band-aid” approach that would give 4-22 at least a year of useful life for neither a cost estimated at nor more than \$100,000. This would involve crack filling and a slurry seal. This is without question an approach that would not normally be followed as it has a very short useful life. However, if the alternative is the waste of the additional \$225,000+ required for the ten-year life repair, it is none-the-less cost-effective in these circumstances.

4. There is also what was described as a “super band-aid” approach, with a cost estimated at \$150,000 - \$175,000. Whether this approach would be preferred for safety reasons depends on the condition of the service. It would involve crack filling and a surface coat of asphalt to a 2 inch, or possible 1-inch depth, saving significantly on the costs of asphalt. Furthermore, given the short expected lifetime, a “highway mix” of asphalt could be used rather than an “aviation mix” with additional cost savings. Aviation mix requires a stronger bond, due to the weight requirements, and thus is more expensive. But given the short intended useful life, there would be no need for the stronger mix. In addition, using highway mix, the project could likely be done by the Town Highway Department and would not require detailed engineering for additional cost savings.

In light of these findings, it is strongly recommended that this project, which cannot in any case be completed before the end of the summer season, be deferred until

the engineering consultant to be hired can review the alternatives. Otherwise, the potential exists for the waste of \$150,000 - \$225,000 of the airport fund.

*Obstacle Clearing.*

As discussed in the Fourth Findings, the ground below the TERPS surfaces has never been cleared to Category C and D specifications, only to Category A and B specifications. As the Critical Design Aircraft is a Category B aircraft, there is no reason partially to design and rebuild the airport to C and D standards. Those exceed the requirements of the Critical Design Aircraft. And, there are in any case very few nighttime C or D landings.

Clearing obstacles to A and B standards requires clearing only approximately two acres of trees. This does not require “engineering.” It requires that a licensed surveyor stake the trapezoid under the TERPS surface and that trees within the trapezoid be cleared and those outside be left alone. Because of the boundaries that the Town owns, it is unlikely that trees that penetrate the TERPS surface further than 1,200 feet from the runway ends, the present clearing distance, can be cleared.

Relatively few trees are higher than 65 feet. Clearing to 1,200 feet from the runway end addresses trees up to 50 feet in height. For trees between 50 feet and 60 feet in height, the practicable approach is to adjust the gradient of the TERPS surface, which would require FAA consent. The standard 20:1 ratio is an angle of 2.86 degrees. To clear 60 feet at a distance of 1,200 feet from the runway end requires an angle of 3.43 degrees. This is technically realistic with the adjustment of the PAPI glide slope indicator. At a 3.43 degree slope, it requires only an additional 83 feet of longitude to

clear a 65-foot obstacle. The numbers of these within that distance is likely to be manageable.

Accordingly, the practicable approach is to clear to 1,200 feet, adjust the PAPI to 3.43 degrees, and identify and hopefully remove, with private owner cooperation, individual higher trees penetrating the TERPS surface.

However, a successful plan must remove all obstacles or mitigate them to the satisfaction of the FAA. It therefore makes no sense to proceed with tree-clearing until the FAA has accepted a comprehensive plan for obstacles that addresses Daniels Hole Road, with lighting, tree-clearing to A and B standards, and the re-grading shown to be necessary near the runway 28 end.

We therefore recommend that DY be requested to draft a letter to the FAA stating what East Hampton Airport proposes to do with respect to all known TERPS surface penetrations to A and B standards and stating clearly that obstacles will not be mitigated to comply with C and D standards that exceed the demands of the Critical Design Aircraft.

The FAA may accept the proposal or may require modifications. Only when agreement has been reached with the FAA should projects be designed. Otherwise, design work and cost may be wasted.

Respectfully submitted,

Airport Planning Committee,  
Noise Sub-committee