

Visitation Data Committee Report to Philipstown Board

June 6, 2024

Introduction

- Our names are Jeff Robins and Phil Cotennec and we are the Philipstown representatives to the HHFT Visitation Data Committee or “VDC.”
 - I, Jeff Robins, live at 2058 Route 9D which is just outside of Cold Spring right between Haldane and Little Stony Point. My wife and I have lived there for about 10 years. I work in the city as a partner at the firm of Debevoise and Plimpton practicing regulatory law in the financial services sector.
 - Phil has lived in Cold Spring since 1963 and currently lives on Route 301, just outside the Village.
- We volunteered for the Visitation Data Committee because we believe we can be of service to the community using our analytical skills to facilitate a critical view of the Sponsor’s impact assessment. Also, as I live on the 9D corridor next to the proposed project, I am very cognizant of its potential impacts on the local communities, both positive and negative. We both believe that a project of this magnitude deserves a sustained and informed community discussion and that it is incumbent on the plan sponsor to develop credible estimates of potential costs as well as benefits in order to satisfy its responsibilities to the local communities.
- Since this is the first time Phil and I have formally presented to the Board on the activities and findings of the VDC we thought we’d present on three topics.
 - First, we’ll provide a brief overview of the activities of the VDC to date, touching specifically on what has been completed and where we are currently. The VDC is reviewing three HHFT studies: a pedestrian visitation baseline study, a pedestrian visitation projections study, and a traffic baseline and projections study. So we’ll talk about where we are in the review process for those three studies.
 - Second, we’ll summarize the VDC consultation around the first of the 3 studies, the 2023 Visitor Utilization Study, which was conducted by ORCA with some data from AKRF and which we will call the “Baseline Study.” That study looks at

current pedestrian conditions, and our basic concern with that study is that it may not have adequately captured peak visitation conditions in Cold Spring due to a limited sample size and some bad luck on weather and timing.

- Third, we'll discuss the substance of the initial VDC consultation and public statements about the second study conducted by ORCA, which we will call the "Projections Study" and some of the concerns we have identified with respect to that report. We'll note that HHFT presented the results of that report to the public on April 3 and that we, along with the representatives of Cold Spring and Nelsonville, produced a public statement shortly thereafter questioning the validity of ORCA's results. We'll discuss a number of specific issues with the methodology and actual calculations that ORCA performed which lead us to provisionally believe that the published draft of that study substantially understates the visitation we should expect.
- Time permitting, we'll also touch briefly on the Alternatives Routes Analysis report that was presented to the VDC for background rather than for feedback, but which is an important document worth highlighting to the community.

I. Activities To Date:

- The VDC was appointed in July and August of last year as a result of a commitment that HHFT made at a joint public meeting on May 8th 2023.
- Initial meetings took place in August and September at which time, an initial agenda was discussed and negotiated and HHFT confirmed that it would provide for the VDC to have an expert consultant as a resource for its review. Initially it was proposed that the VDC would conduct 6 meetings with HHFT through January. However, a number of initial obstacles delayed timing.
 - HHFT was initially reluctant to allow the municipal representatives to meet with the committee consultant independently and separately from HHFT, with HHFT viewing itself and its staff as part of the committee and wishing to participate in all communications. The town and village representatives understood ourselves to be municipal representatives separate from the HHFT and commissioned to perform an audit role requiring separate discussion with our consultant in order

to engage with HHFT on data quality issues on an independent and knowledgeable basis.

- Because HHFT initially proposed a very limited role for a separate consultant, there was also a fairly substantial negotiation over the scope and terms of the proposed contract with our consultant with the town and village representatives proposing significant edits prior to the RFP that HHFT eventually sent out to bidders.
- That negotiation and the actual solicitation of bids and hiring of a consultant extended through early November. Eventually, the firm of BFJ was hired as the VDC's consultant, with Georges Jacquemart, a founder and principal of the firm serving as the project lead and liaison to the group.
- The final proposal that was approved by HHFT called for a fairly limited scope of services for the VDC consultant: (i) review of the Masterplan Draft; (ii) conducting a single field visit with the VDC; and (iii) conducting a technical review of each of the 3 data reports, with each review including one "study session" just with BFJ and one meeting with HHFT and its consultants to discuss our questions and comments. BFJ was also engaged to provide a memo to HHFT reflecting the questions and comments of the VDC coming out of each study session.
- Also, during the course of August through October HHFT presented the VDC with a number of background materials including an overview of the 2020 Master Plan, an introduction to their two primary consultants (ORCA and AKRF), and their Alternative Routes Analysis.
- The first report for active review, the Baseline Study, focused on pedestrian foot traffic in Cold Spring, though counts were also taken at FT-adjacent parks and trailheads. That report was provided to the Committee in mid-December, with meetings conducted in January.
- A summary version of the second report, the Projections Study, was provided to the committee on March 7th. After an internal study session on March 12th, BFJ sent initial VDC questions and observations to HHFT on March 21st and a discussion session was held on March 28th where ORCA provided responses verbally and via screen share. A

written copy of the responses we saw in screen share have yet to be provided as requested.

- That Projections Study was discussed and disseminated to the public as part of the HHFT’s public information session held at Dutchess Manor on April 3rd, even though the VDC has shared many material concerns with that report during our prior meeting. The local VDC members felt it was important to share our statement of concern after HHFT made that public presentation, as it is part of our stated role to keep “respective municipal officials and other stakeholders, as appropriate, informed of key process and decision points along the way for transparency.” Although HHFT has since said that they would further review the projections and stated that the local VDC members spoke out before the process was finished, we were given no prior assurances that our concerns were going to be addressed. In fact, at the public meeting, HHFT staff stated that they “were comfortable” with the report’s numbers. This reflected a pattern of very limited acknowledgment of our concerns at the end of each of our data reviews.
- After Philipstown, Cold Spring and Nelsonville VDC representatives released our statement, we understand that HHFT engaged the municipal leaders from the Town of Fishkill and City of Beacon. Those municipalities have since been allotted one additional representative each, giving them a total of 6 (previously they had been allotted 4 but only actually appointed 1). Cold Spring and Philipstown have remained at 2 each and we understand that Nelsonville was reduced to 1, giving a majority of representation to the 2 northern municipalities.
- On May 21st, the VDC received a letter from Amy Kacala announcing these changes, and 7 further meetings through August, including a meeting to revisit the Pedestrian Study. The letter from Kacala also calls for the VDC’s consultant to produce a “close out” report at the end of discussing each study, which HHFT proposed is intended to summarize the final consensus of the committee. In response, municipal leaders and TVR members of the data committee stated that they are responsible to report their independent conclusions faithfully to their respective municipalities.

II. ORCA Visitor Utilization Study

- As we understand, this study is intended to serve two purposes: (i) data collected at the parks and trailheads adjacent to the planned FT was used to generate visitation projections and (ii) pedestrian counts were taken in the Village of Cold Spring to assess current impacts and develop strategies that could be implemented by Cold Spring, HHFT and/or NY State Parks to mitigate crowding and related negative impacts. Consistent

with this dual purpose, separate versions of the Baseline Study were produced, with one focused specifically on Cold Spring.

- To address Cold Spring concerns with pedestrian crowding, ORCA used methodologies promulgated by the Highway Capacity Manual (“HCM”) published by the Transportation Research Board. Two types of conditions were assessed: (i) pedestrian flow conditions reflecting the ease or difficulty of moving down a sidewalk of given width and (ii) “pedestrian at one time” densities at specific locations (“PAOT”). The first was measured by counting the number of Main Street intersection crossings per hour and observing the effective widths of local sidewalks, the second by counting number of pedestrians accumulated on a particular block of Main Street or Fair Street at a given time. Intersection counts were taken using cameras over 8 days in May, July and September, and PAOT counts were taken manually on 14 days during the period from Memorial Day to October 10th, with a little bit of supplemental data on October 28th. Visitation to local parks (including Dockside and Little Stony Point) and trailheads was also counted. ORCA also conducted an App-based survey of park and trail users to collect data about visitor demographics and use patterns.
- Summary data can be found in the reports and we are happy to provide copies, with the caveat that we understand that ORCA will make revisions. AKRF data basically showed highest pedestrian crossing numbers in May with peaks around noon (but stopped counting at 1 p.m.). ORCA found the highest PAOT numbers were on their single decent October weekend day, October 8th, with the peak between 2 and 3 p.m. that peak was around 465 for all of Main Street, with that number being substantially higher than the next highest actual peak counted (either 350 or 400 depending on which chart you use).
- In consultation with BFJ, the VDC developed two primary comments to the report in addition to asking a number of questions to understand the data collected.
 - First, BFJ noted that ORCA used HCM “level of service” or “LOS” standards to qualitatively grade conditions in Cold Spring from “A” to “F” with A being best and F being gridlock. Most blocks in Cold Spring were graded “A” or “B” with a few “Cs”. However, these LOS standards were developed around commuters in dense urban areas rather than leisure groups in a scenic environment. The dynamics of pedestrian groups in these two contexts are very different, and acceptable crowding on an urban street during rush hour as people try to get from point A to point B is not the same as an acceptable condition on a tourist sidewalk where people are sightseeing. Accordingly, the ORCA grading was

considered unreflective of actual experienced conditions, with areas coded by ORCA as B sometimes being experienced as Fs in practice. ORCA agreed that LOS coding was not an accurate reflection of experienced conditions and agreed to remove this coding from the final report. Instead, ORCA agreed to acknowledge that conditions are crowded and provides pictures. However, that report has not yet been released to the public to our knowledge.

- Second, members of the VDC familiar with local conditions questioned the adequacy of data collection efforts to capture peak conditions. The AKRF counts were only through September, and only until 1 pm (with 2-3 pm being the daily peak times observed by ORCA). ORCA attempted counts in October, but the only good weather weekend day fully captured was October 8th. October 28th was the actual peak day in Cold Spring, but ORCA only took a single 11 am PAOT count in Cold Spring that day.
 - That single piece of data, reflecting a PAOT of 400 people which was double the next highest number collected for the same hour on a different date. Similarly, trail data, where somewhat more extensive October 28th data was obtained, shows that average and maximum PAOTs at Washburn on that day were substantially higher that day than any other date measured, though ORCA attributed that to a medical emergency at the location. Data at other locations was more mixed and fragmented.
 - Accordingly, it appeared to members of the VDC that ORCA likely failed, due to poor luck and poor weather, to fully capture peak day dynamics in Cold Spring in 2023. Instead, the ORCA “peaks” were October 8th (at around 2 pm) and Memorial and Labor Day weekends.

III. ORCA Visitation Projections Study

- To frame our observations of the Projections Study: HHFT and ORCA have acknowledged that visitation levels at peak times are high, and that the FT will add to them visitation. In essence, their message has been that spreading out visits geographically by adding new paths and efforts they will make to mitigate the impacts of over-visitation will effectively offset the additional visitation they will create even as natural increases may continue. They are also suggesting that they can do that using a primarily “indirect”

visitation management strategy, meaning they plan to influence visitor behavior via messaging rather than rationing access. In particular wayfinding and encouraging people to switch the timing of visits to avoid crowds. So the principal question is how much volume that kind of strategy can mitigate vs the amount of actual pedestrian and automobile traffic growth that is projected. Obviously, the actual amount of volume anticipated is a critical input that analysis.

- For purposes of recent demonstrations (including animations that ORCA showed at the April 3rd meeting and that HHFT now has posted to its website) ORCA used a total growth amount of 18% over 10 years as its expected growth amount before adding in the effect of the FT to make the case that HHFT's strategies would be adequate to manage visitation growth .
- Based on our review of the projection analysis so far, that projection seems at best extremely optimistic and is certainly not representative of the range of possible outcomes suggested by the data. We have significant questions about the validity of that projection, which appears to be very materially lower than what BFJ's and our own initial review of the data indicates are plausible. We also have many questions about the projected impact of building the FT itself.
- Before getting to the substance, one process point.
 - To date, ORCA and HHFT have only provided the VDC with a 14 page summary report that describes their methodology for producing their projections and provides the results of some interim calculations and the final total numbers they purport to have calculated. It's the same summary report that is posted on the HHFT website. ORCA did not provide the VDC with the underlying data or their actual calculations, so we haven't been able to adequately assess how they say they applied their methodology to generate their results. We requested that information but haven't yet received it.
 - So what we are reporting here is what we've been able to deduce from scrutinizing the methodology they described, back-testing the growth rates they say they used against the totals they provided and comparing the underlying data they reported against NYS Parks data which we accessed directly from state websites. BFJ has also independently confirmed our calculations.

- When we performed those tests, we observed a number of discrepancies in the ORCA data and questionable choices in setting up scenarios. In virtually all such cases, ORCA’s approach shifted the projections downward materially.
- In addition, though ORCA does project a fairly sizeable impact of building the FT on total visitation numbers--between 165,600 and 248,300 per year--the methodology for developing those numbers was largely unexplained and we had no way to valid their reliability.
- The methodology ORCA reported can be summarized as follows:
 - They first used Breakneck Ridge (BNR) visitation numbers observed by trail stewards on weekends for the period from Memorial Day through late October, and ORCA’s own counts on the FT-adjacent trailheads and parks on a few select days to come up with ratios of BNR to non-BNR visitors, and then used those ratios for the days where they counted to estimate total visitation to the other trails and parks for all days where they had BNR numbers.
 - Notably, the BNR trailhead was closed for construction through June 30th, though the steward data shows BNR counts for May and June. ORCA did not appear to make efforts to validate the quality of these or other trail steward counts.
 - They then used ratios of weekend to weekday and on-season to offseason visitation seen at other parks in order to fill in the missing days and come up with a total 2023 visitation number for all parks and trailheads adjacent to the FT.
 - They then purported to use the 6-year historical average annual growth rates at 5 reference parks they deemed reasonably comparable to our area in order to create a range of projected growth rates for the area. Those “comparables” were (i) Eastern US National Parks (in aggregate), (ii) Hudson Highlands State Parks Preserve, (iii) Walkway over the Hudson, (iv) Susequehanna River Walk, and (v) Buffalo Valley Trail.
 - Finally, they estimated the effect of building the FT and added that to their natural growth or “no build” projection to come up with totals.
- The questions and discrepancies we identified were as follows.

- Regarding the “no-build” projections:
 - First, the comparability of the 5 sets of parks chosen as reference parks was not adequately justified based on the similarity of their characteristics to this area and the proposed FT, such as the direct commuter train access in close proximity to NYC (population 8.3 million). Buffalo Valley in particular (which had effectively zero growth reported), does not bear a strong similarity to the local conditions as it is in the middle of a fairly a rural part of central Pennsylvania between Lewisburg/Milton (combined population 12,000) and Mifflinburg (population 3,500)¹. Further, Hudson Highlands State Park, was weighed equally with the other reference parks, despite appearing to be a much more relevant data point than the others.
 - Second, in two cases, Hudson Highlands and Walkway, the annual increases reported by ORCA were materially lower than NY State Parks own data. For Hudson Highlands, ORCA reported a 7.6% annual growth rate, whereas the Parks number, as validated by BFJ is 10.73%. For Walkway the difference was 1.0% vs. 2.09%. Taking these differences into account creates an annual increase for the reference parks of 5.61% rather than 4.2% reported by ORCA.
 - Third, ORCA then purported to create local growth scenarios based on historical growth rates seen at the reference parks, which they labelled as a “high,” “medium” and “low” scenario. This essentially describes what they see as the range of possible scenarios. Crucially, rather than using the historical growth rate at reference parks as the basis for the “medium” local scenario, which would be an unbiased approach recognizing that future growth might be either higher or lower than the 6-year historical average, ORCA purported to use this average as the basis for its “high” growth scenario, setting its medium growth scenario at 1.6% per year (for a total of 18% over 10 years) and its low growth scenario at negative 1.1% per year. There was little justification provided for capping the projection at the purported historical average, which obviously created a much lower range than an unbiased approach. The explanation we were given was that ORCA had observed through its local survey data that many visitors to our region are from locations with declining populations (e.g., Manhattan), which apparently led them to dismiss the possibility that quite

¹ The closest “big” urban areas are Allentown, Williamsport, Harrisburg and Scranton, with Philadelphia farther away.

sustained historical growth rates would continue or see increases, including for Hudson Highlands.

- Fourth, ORCA’s calculation of the “high” growth scenario did not actually use the 4.2% rate they reported. Looking purely at the results of their math, we discovered that the rate they actually used was 3.7%. Again, this was confirmed by BFJ.
- In sum, ORCA’s own “high” scenario shows annual visitation growing from 440,300 to 623,000. However, using the corrected 5.61% rate creates a total of 747,012. That is a 71% increase over 10 years, as compared to the 44% rate that ORCA calculated for its high and the 18% that HHFT has apparently started topublicize as the likely scenario. Moreover, if one were to follow an unbiased methodology and use the historical data as the “medium” growth scenario, and then plan for the possibility that future growth rates could be higher than the recent average, that scenario would be substantially higher, quite possibly somewhere in the vicinity of a 900,000 or a 100% growth rate over 10 years.
- Regarding projections of the additional impact of building the FT, ORCA estimates between 165,000 and 248,300 added new visits in year 1. While those numbers are substantial they are largely unexplained. ORCA states part of the number is based on their survey results asking current visitors whether they would visit more often if the HHFT was built. That seems reasonable as far as it goes, but we don’t have the ability to validate their survey. As for totally new visits, that part is essentially unexplained. ORCA seems to have simply assigned a number based on a percentage of visitation to the adjacent parks and explains that they think it will skew toward an older population than the population visiting local trails currently. This is also questionable given that the FT is intended to be geared to families with children and cyclists as well as being ADA-compliant.
- Adding all of that together, the revised visitation estimate after the FT is built could possibly exceed 1,100,000 per year (vs. a high estimate of 871,283 for ORCA, and a “medium” estimate of 716,000, which is what they have implied should be the expectation). While those are strikingly high numbers, and we certainly don’t claim to know that this is the likely projection, again they are the numbers actually implied by the ORCA methodology correcting for what appear to be possible errors and insufficiently or unjustified downward adjustments.

- We also note that these are numbers for FT and the adjacent parks and trailheads ex-Cold Spring. Cold Spring visitation that is independent from park visitation was not part of the projections put together by ORCA, though they recently applied their 18% total expected increase for the parks to Cold Spring itself to produce animated simulations of the expected impact on Cold Spring.

In summary, it appears that the amount of visitation that the HHFT, the Municipalities and the FT itself would need to ameliorate through spreading visitation and the planned “indirect” management strategies may be much higher than what HHFT is currently discussing, raising the prospect of inadequate management or a need to move to rationing access in some way. Obviously, this discussion is ongoing and will also need to take account of traffic data once those studies are made available to us.

IV. Alternatives Route Analysis

The completed Alternatives Routes Analysis was provided us as background rather than for input to the final report. As such it does not reflect any VDC commentary. We mention it only because we believe it is an important document for the public to understand what HHFT considered as the range of options worthy of study and discussion and how they went about “grading those options.” While the range of options north of Breakneck Ridge appear to be largely uncontroversial, the choices at Breakneck Ridge and to the southern are obviously much more so.

In general, what that report shows is that the criteria that HHFT set as the required elements of the FT and the factors on which it was graded basically made it a foregone conclusion that the “preferred” route would start from Dockside and go over the water to Breakneck Ridge. That is because:

- A. The characteristics of the FT designated as mandatory included, (a) that it be a single, contiguous, multi-use trail with lanes for pedestrians and bikes going in each direction without any separation between them, (b) that it be 10-14 feet wide at all locations, (c) that slopes not exceed 5% for more than 50 feet, (d) that the surface be highly smooth and stable.
 - With that set of mandatory requirements, options like Fair Street were automatically downgraded, because using sidewalks on either side of the street or using the main road for bikes wasn’t consistent with the criterial. In addition, options for getting around the Breakneck Ridge tunnel were limited to starting

on the water side or building a large bridge over the tunnel (with very long gradual slopes). Notably, other options like stairs, spiral ramps and tunnels were dismissed as impractical without any apparent consideration).

- B. The criteria used to grade the options assessed were heavily weighted toward amenities and the user experience on the trail itself rather than surrounding impact. Of the 10 grading criteria used, 6 focused amenities/user experience entirely or in good part, while 1 focused on safety, 1 focused on environmental impact and 1 focused on “congestion management” at “pulse points.”

One take away is that is the analysis discounted obvious alternatives like Fair Street due to artificial constraints like thinking of the FT as a single contiguous trail at all points. Another, is that local discussion of the FT has often commented on possible routing options that might be good at addressing local problems and priorities (safety, environmental protection, an alternative to 9D), but that simply weren't studied by HHFT and its consultants at all as part of this analysis because they would have required compromise on what the report set as the minimum criteria for the trail. These options were effectively taken off the table, make discussion difficult. A third take away, is that such seriously considering such alternative solutions might require a contemplating a different balancing of these local priorities vs. the types and amounts of amenities to be provided as well as more creative solutions to the area just south of Breakneck Ridge in particular.

Reports

The following reports have been provided to, or produced by the VDC.

Hudson Highlands Fjord Trail, Visitor Utilization Study and Survey Results (ORCA December 1, 2023). This report is not currently public and includes elements ORCA has agreed to revise.

Hudson Highlands Fjord Trail, Village of Cold Spring Visitation Management: Observations, Study Results and Recommendations (ORCA Draft Reports, November 28, 2023). This report is not currently public and includes elements ORCA has agreed to revise.

BFJ/VDC Memo to HHFT, January 3rd, 2024. This memorandum includes observations about the two above ORCA reports. BFJ and the VDC received an annotated version of this report from ORCA and AKRF dated February 28th, 2024 which included responses from BFJ and ORCA.

Report: Fjord Trail Use Projection (ORCA, March 6, 2024) available at: <https://hhft.org/wp-content/uploads/2024/03/Fjord-Trail-Use-Projections-Report.pdf>.

BFJ/VDC Memo to HHFT, March 21, 2024. This memorandum includes observations about the projection reports. Differences between the report data and NYS Parks data were discovered and reported to ORCA and HHFT after the date of this memorandum, as well as the discrepancy between the reference park data averages and the averages actually used in the ORCA report. These additional issues were reported to HHFT by email from BFJ.