Mr. Christopher Oswald, ACI-NA, Airports Subcommittee Chairperson gave the introduction. Participating members and officials were permitted to introduce themselves, as well. He stated that this was the second or third virtual meeting due to unforeseen circumstances like weather and now, the pandemic. This meeting would be conducted as a single day session in awareness of the busy schedules of participants. He noted that the Subcommittee had generated a light set of recommendations from the last meeting.

Ms. Shelley Yak, Director of FAA William J. Hughes Technical Center (WJHTC) made opening remarks. She thanked the Subcommittee members for attending. She discussed the COVID-19 impact status and the WJHTC approach where non-essential personnel have been working remotely on maximum telework posture. Many researchers successfully continued their work remotely. She also noted that there were several laboratories at the WJHTC that were scheduled to open in phases. In Phase Three (3), a majority of employees will be back to work on site. Currently, Phase Zero (0) permitted approximately 200-250 employees to maintain the facilities and conduct National Airspace System (NAS) critical work. Several employees supporting Dr. Michel Hovan in the Airports Technology Research Program (ATR), were available to keep the laboratories operational. These teams moved into Phase 1 with an estimated 500 individuals on site. The ATR will monitor all situations carefully. The ATR has had to address environmental issues as two major storms were experienced and affected the pavement laboratory. These occurrences also impacted the FY22 Budget.

Mr. Steve Summer, Research Portfolio Branch Manager (ANG-E41), provided an update to the FAA Research Landscape plan. He was able to comment on the research drivers that inform the FAA research body and lend to the sustainment of the FAA Research portfolio. The discussions were able to ask questions and gain clarification on areas that were not fully understood. Mr. Summer welcomed input to improve the document or add to research drivers that may have been omitted. As emerging technologies and advances in aviation increase, the FAA Landscape will evolve.

Mr. John Dermody, Director of the FAA Office of Airports Safety and Standards, welcomed and thanked participants for their time and expertise in areas essential to Airport safety programs. He provided a very informative Headquarters Airports Research Program (ARP) update. He mentioned that the key objectives continue to be done where there is best value. He discussed the overall budget, alignment of resources and hot topics within the organization. He stated that it was important to identify redundant research and to leverage various efforts. There were no major issues regarding the budget. The Airports organization was moving to hire a new entrants position. Kerri Lyons fulfilled the role and did very well. AAS-300 Safety and Operations placed Birke Rhodes onboard. He also announced the restructuring of AAS-100. There are two
branches. AAS-110 Airport Design & Structure Branch and AAS-120 Airport Data and Airspace Branch. Mike Myers is the permanent manager of the Division. Steve Debbins is acting for AAS-110. He also shared with the members that Doug Johnson announced his retirement. He noted that he did an excellent job on the pavement side. Mr. Dermody said that he was looking to backfill the position as soon as possible.

Critical topics included perfluoroalkyl and polyfluoroalkyl (PFAS), (PFAS) and Aqueous Fire Fighting Foam (AFFF). These projects were delayed due to the COVID-19 issues and the hope is to get both areas back on track. Mr. Chris Oswald asked Mr. John Dermody how 2020 events may have impacted FY22 and future projects beyond those that were planned. As a member on the Research Executive Board (REB), he stated he was aware of current and planned activities. He said that the Research Landscape activities identified do fit into the proposed research buckets. The Airports portfolio appears to align with the driver project mapping, grouped by category. Shelley Yak noted that the process had been a “bottoms up” approach to identify where there were gaps and to get the conversation started. Mr. Chris Oswald referred to this as “gap identification”.

Recognition was given to Mr. Jim Patterson for his accomplishments on UAS Detection and Mitigation Test & Evaluation at Airports. The Urban Air Mobility (UAM) and Electric Vertical Take-off and Landing (EVTOL) programs were evolving and critical upcoming research. The Airports Branch, ATR, had the foresight to put in a budget request two years ago and it was approved for this FY20 for research that ATR had already started. The budget was 39.2 million in FY20 and 40.9 million will be ATR’s budget for FY21 and FY22. Environmental Planning research requests coming soon to the Subcommittee for review. Mr. Oswald encouraged the Subcommittee members to take a look at the research requests and provide useful comments. He said that he was looking forward to reviewing the input from everyone.

Dr. Michel Hovan noted that this had been a challenging and “interesting” year. The pandemic has had a big impact on the employees, programs and facilities. He noted that the ATR staff were established long term professionals. The shutdown created challenges for new employees and families. Michel Hovan added that the WJH Tech Center has a detailed process on contact tracing.

Mr. Murphy Flynn noted that on any day there are 30-50 additional contractors working at remote offices. Airport Safety R&D ANG-E261 was impacted by COVID 19 Delays. Visual Guidance had several projects delayed or halted as well. Mr. Jeff Gagnon worked to get as much testing done as they could. ATR cannot bring contractors for site visit.

The Subcommittee meetings used to be two full days. The new transition to all virtual presentations has changed how the current meeting will take place. The compressed schedule will permit presentations and discussions of nineteen (19) of the most critical programs at this time. Mr. Chris Oswald encouraged the Subcommittee members to let ATR know if they needed a more specific briefing. ATR can address those issues if they arise.

Dr. Hovan told the members that there was a large number of projects grouped into Research Project Areas (RPAs) for the various programs. He noted that the budget was stabilizing.
Executing the budget through contractors, five years task orders for the next five years will be the process utilized. Contracts were separated into smaller components to customize and target smaller contracts vehicles. This inclusion permitted opportunities to specify more designate areas of expertise. The Broad Agency Announcements (BAAs) enabled opportunities to facilitate contracts to support the Airports programs. No one could anticipate a COVID year, and only 50% of contracts were awarded. There were two vacancies; a Civil Engineer on the Safety side, and an Electrical Engineer to fill by the end of September, FY21. The addition of these positions will increase the employee number to twenty-six (26), one for UAS and one for the new pavement laboratory. On the horizon will be EVTOL, UAS, ARFF, etc., in field. On August 4, 2020, seven employees were authorized to return to work on an intermittent weekly schedule, but not on-site daily.

Also important was the incident that occurred at the National Aviation Pavement and Materials Testing Center (NAPMTC). NAPMTC repairs were an emergency and an exception. The facility experienced damage from the April 13, 2020 storm and then again from the August 4, 2020 storm. Pictures of the damages were shown to members and other participants. The ATR plans to repair the structure and will consider wind predictors to minimize the probability of recurrence.

Dr. Navneet Garg discussed that there was also damage on the other end of the NAPMTC facility. ATR needs to replace the roller door. Planned for September/October 2020, the ATR will also install air vents so there is airflow to prevent damage in the future. The cost of the roof and door is $150k. Mr. Murphy Flynn noted that the door was 48 feet by 20 feet wide and it was removed from its tracks when wind caused an airburst in the building. ATR stabilized the door as best as possible and force gave way and resulted in damage in two locations. Only the fabric was damaged, not the structure. Mr. Flynn displayed a video showing the inside of the door blowing out.

During the remainder of the afternoon, several other briefings occurred, Jim Patterson shared a presentation on “Airport Safety Technology R&D”. He also provided status on the submitted Findings and Recommendations. Currently, all pending items were closed.

Dr. Garg discussed Emerging Pavement Materials & Additives, Remediation Strategies, and State Specifications for Airport Pavements. Mr. Gary Mitchell inquired about “real world” examples. He stated that this is acceptable on a small scale, but is interested in understanding how things will be implemented. He noted that they have looked at statewide systems as far as pavement management systems plans. Smaller airports cannot find this information as records are not kept well. According to him, they need engineering consultants. He would like to see data on full scale testing. Dr. Garg was able to share with him that a report will be made available and that he will disseminate it for Mr. Mitchell’s review.

Mr. Murphy Flynn discussed carbon Nano tubes and scale-up. ATR was pursuing key areas that were representative. Gary Mitchel commented that it was an interesting project. He shared that he encourages the FAA to keep looking into the benefit of Nano particles.
Dr. David Brill discussed rigid pavements with 40 years lifecycle. Individuals are yet looking for ways to understand performance before visual damage to surface. Dr. Brill also provided a briefing on FAARFIELD 2.0. He shared the major updates and redesign. There was no change in the thickness design. Expanded topics included FA SR 3D, GUI Modernization, User defined artifacts, ICAO Aerodromes, etc. Mr. Oswald indicated that the Subcommittee may want to have a deep-dive in the future.

Mike Myers has a modifications standards tool that permitted to look at trends. The FAA has a database that may be able to provide project data.

Marci Greenberger discussed PFAS 02-91 New Development of Forensic Guidelines PFAS Source Difficulties at Airports. There is a look at sources around airports. Other projects being addressed include UAS, Pavement, EMAS, Airside Automated Ground Vehicle Technology (AGVT), and Commercial Space Vehicles Emissions.

Mr. Mike Paglione, ANG-E2 discussed that several groups experienced similar experiences. Many locations were shut down. Space separation/isolation was in place and best practices were applied throughout the WJH Technical Center.

Additional program leads spoke to the various obstacles and challenges resultant from the pandemic. Ms. Lauren Vitagliano discussed “Runway Deviation Safety” study as being impacted by COVID-19. She shared that the effort to address the effects on the project.

Mr. Keith Bagot discussed AFFF Replacement and COVID Impacts. Some testing events were not able to take place. Four efforts in the timeline were affected. BAAs have assisted with mitigation efforts for this program. He expressed that it is not physically possible to meet the deadlines projected for 2021. He also spoke about live fire testing and Tyndall Chemical Analysis.

Mr. Chris Oswald requested the list of the group of people in Mr. Bagot’s meetings. He thought it would be helpful to note the multiple research projects impacting the congressionally established deadlines. He would like to get feedback from other Subcommittee members.

Mr. Justin Barkowski thought it would be hard to push back dealing with all the litigation going on. Asked how realistic it was to move deadlines due to political sensitivity.

Mr. Gary Mitchell informed the members that they have made previous recommendations. Sound advice can be formulated by the experts on panel. He stated, “We can’t make up slip in deadline. Need to make folks aware of the problem to meet schedule.”

Mr. Nick Subbotin gave a presentation on EMAS Signage Research, Flight Simulator Test & Evaluation, EMAS R&D, Considerations to Educate Pilots, and a generalization of recommendations.
Mr. Joe Breen gave a presentation on “Evaluation of Solar Lighting Systems for Airports”, and “Aircraft Braking Friction Research”.

Mr. Mike Paglione discussed Big Data Analytics and Machine Learning which permits access to large quantities of data. Encouraged by the program’s researchers for using for Aircraft Safety.

Mr. Chris Oswald commented that they were resolving Intellectual Property (IP) issues and non-disclosure agreements. He noted that there will always be some site value through this practice of Big Data Sets.

Mr. Jonathan Torres discussed Vertiport Design Standards for Advanced Air Mobility. Mr. Chris Oswald suggested that he keep Justin Barkowski in the loop. Let him know if he can be of assistance. He is working on Interagency Group for EVOL aircraft.

Mr. (s) Mike DiPilato and Jim Patterson discussed “UAS Airport Applications”. Mike DiPilato wanted to move more quickly to publish. They have acknowledged that next Spring, a lot of works needs to be done.

Mr. Jim Patterson discussed “UAS Detection and Mitigation Update”. The attempt of Section 383 was to develop plan. Also talked about Technology Evaluation, Highlights of ARP’s Plan for PH1, and COVID Impacts not affected.

Final Comments:

Mr. Gary Mitchell commented on FAARFIELD 2.0 as an observation to recognize the work the WJH Tech Center has done.

Mr. Chris Oswald suggested August 24 & 25 of August 2021 for next REDAC Meeting. He did not notice anything rising to the level of recommendations except COVID-19, EVTOL and UAS. They need to be wrapped up into a package of real delays, and real schedule changes. No recommendations for Safety RPA reviews. He will organize a draft to send to everyone. There was nothing in the opening remarks. Pavement and additives next steps constructability, pavement consolidation. Chris Oswald noted that the tight schedule was a General Observation plus consequences.

Mr. Chris Oswald recommended that the Airports program revisit pavement life as a focal point. Will write up elements he would like to see in work input. Frank will send input to pavement group. He recognized the COVID-19 key issues, additional costs and the challenges folks have faced with schedule changes, travel restrictions and NJ State laws for contractors.

Chris Oswald thanked everyone for participating and appreciated the input provided.
Research, Engineering and Development Advisory Committee  
PPT Briefing to Sub-committee on Airports: August 26, 2020

VIRTUAL MEETING (ZOOM Information Provided below)

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<tr>
<th>Time</th>
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<tr>
<td>8:30 pm</td>
<td>Christopher Oswald</td>
<td>Introduction</td>
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<td>ACI-NA, Subcommittee Chairperson</td>
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<tr>
<td>8:45 am</td>
<td>Shelley Yak/</td>
<td>Opening Remarks</td>
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<td>Director, FAA Technical Center</td>
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<td>Steve Summer</td>
<td>Research Landscape Update</td>
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<td>Manager, Research Portfolio Branch</td>
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<td>9:15 am</td>
<td>John Dermody</td>
<td>HQ ARP Update</td>
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<td>Director, FAA Office of Airports Safety and Standards</td>
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<td>9:30 am</td>
<td>Michel Hovan</td>
<td>Airport Technology Program Update</td>
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<td>Manager, FAA Airport Technology Research</td>
<td>Budgets, New Contracting Avenues</td>
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<td>9:45 am</td>
<td>Subcommittee Members and FAA</td>
<td>Review of Outstanding REDAC Recommendations</td>
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<td>Focused RPA Discussions—Airport Pavements</td>
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<td>Emerging Pavement Materials and Additives</td>
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<td>FAARFIELD 2.0</td>
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<td>11:45 am</td>
<td>Marci Greenberger</td>
<td>Lunch Break</td>
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<td>Manager, ACRP Program</td>
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<td>12:15 pm</td>
<td>FAA ATR managers and PM’s</td>
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<td>Break</td>
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<td>Sub-committee Members and FAA</td>
<td>Focused RPA Discussions—Airport Safety and Planning</td>
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<td>Evaluation of Solar Lighting Systems for Airports</td>
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<td>EMAS Research Update – EMAS Education and Best</td>
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<td>Aircraft braking friction research, update</td>
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<td>4:00 pm</td>
<td>Sub-committee Members</td>
<td>Subcommittee Findings &amp; Recommendations</td>
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To Join – we will use ZOOM:

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Attendees:
Susan Kaelin (minutes)
Joe Breen
David Brill
Holly Cyrus
John Dermody
Murphy Flynn
Jeff Gagnon
Keith Bagot
Michel Hovan
Richard Ji
Wesley Major
Jim Patterson
Chris Oswald
Mike Paglione
Wilfredo Villafane
Lauren Vitagliano
Shelley Yak
Jim Make
Evancio Costa
Gary L. Mitchell/Mitchell Farms
Khahil Kodsi
Andrew Sousa
Jeff Sedin
Eric Neiderman
Frank Fee
Scott Marsh
Justin Barkowski
Brett Williams
Ryan King
Mike DiPilato
Steve Summer
Ryan Rutter
Sandi Middleton
John McGrath
Navneet Garg
Jonathan Torres
Quin Jia
Chinita Roundtree-Coleman
Sara Hubbard
Jay Repko
Brett Williams
Matthew Brynick
Shailesh Gongal
Nick Subbotin
Marc Greenberger
Michael Myers
Steve Debban
Al Pollard
Darian Byrd
Jeff Sadine
Ryan King