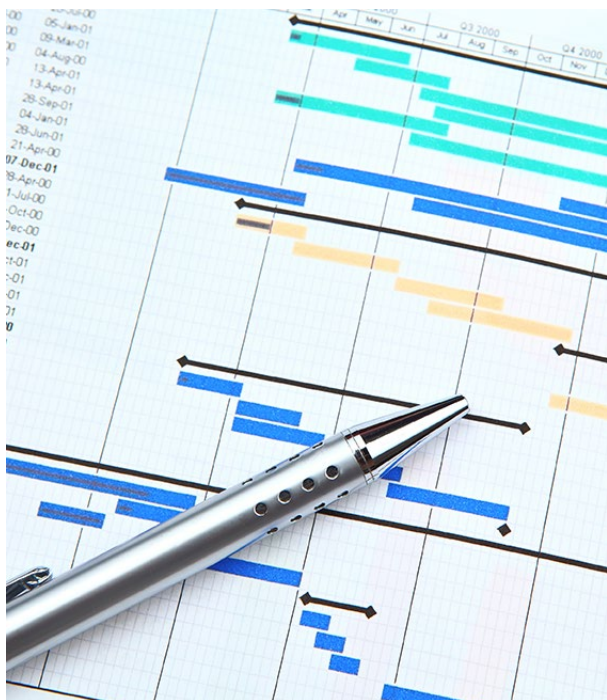


REVISED

SBBC Workshop Scheduling Overview



Agenda

- 1 Fundamentals of Scheduling
- 2 New Milestone Baseline Schedule
- 3 Single Point of Entry (SPE) Schedule
- 4 Summary & Path Forward





Fundamentals of Scheduling

Fundamentals of Scheduling

Development and regular validation of project/program schedules are the foundation of successfully managing the SMART program.

- Schedules must be **Milestone** Based
- **Milestones** are Contractual and Process based
 - Contractual: PSAs and Construction contracts
 - Process: Board approvals, advertisements, NTPs, and others
- Duration represents the **timeframe between each milestone**
- Durations must be accurately projected based on **factors impacting each project**
- Once established, projects are managed to the **Milestone Baseline Schedules**
- Milestones should not be changed, rather they should be **validated and updated monthly**



Fundamentals of Scheduling

The chart below explains the **key milestones** used to distinguish stages within a project's timeline:





The New Milestone Baseline Schedule

The New Milestone Baseline Schedule

- A team was established to perform a comprehensive assessment, and validation of the SMART schedule
- **Collaboration** with Procurement & Warehousing Services (PWS), BCPS Building Department, and the Office of Facilities & Construction (OF&C)
- Reviewed the schedule milestones for each school and each individual project
- Required an assessment of every duration in order to identify necessary adjustments
 - ✓ **Design durations** based on historical data and experience to-date
 - ✓ **Construction procurements** were evaluated to promote manageable release of bids
 - ✓ **Construction durations** adjusted to reflect scope of work, site conditions and school-specific dynamics
- **Considered** original funding year from the ADEFP
- **Other factors considered** include market conditions, availability of contractors, school enrollment, cashflow, statistical data, algorithms, long lead items, end user coordination requirements, site and building access, and others.



Durations Adjusted



Design Phase

- Based on **historical data and experience to-date**
- Historical durations from ATP to LOR were used to **establish new durations**
- Duration from ATP to LOR **increased on average 282 days**



Hire Contractor Phase

- **Adjusted** to mitigate vertical procurement (i.e. Pig in the python phenomenon)
- Reflects consideration of **market capacity** of available contractors.
- **Based on manageable number of projects** being advertised for bid at a given time averaging 8 projects per month.






Construction Phase

- Based on scope of work and historical construction data available on a **trade-by-trade basis** (i.e. roofing, HVAC)
- Considered the **unique dynamics** at each school (i.e. student enrollment, school capacity, facility availability restrictions, facility availability restrictions, phasing requirements, etc.)
- Duration from Construction NTP to Substantial Completion **increased by an average of 125 days. Takes summer work into consideration**



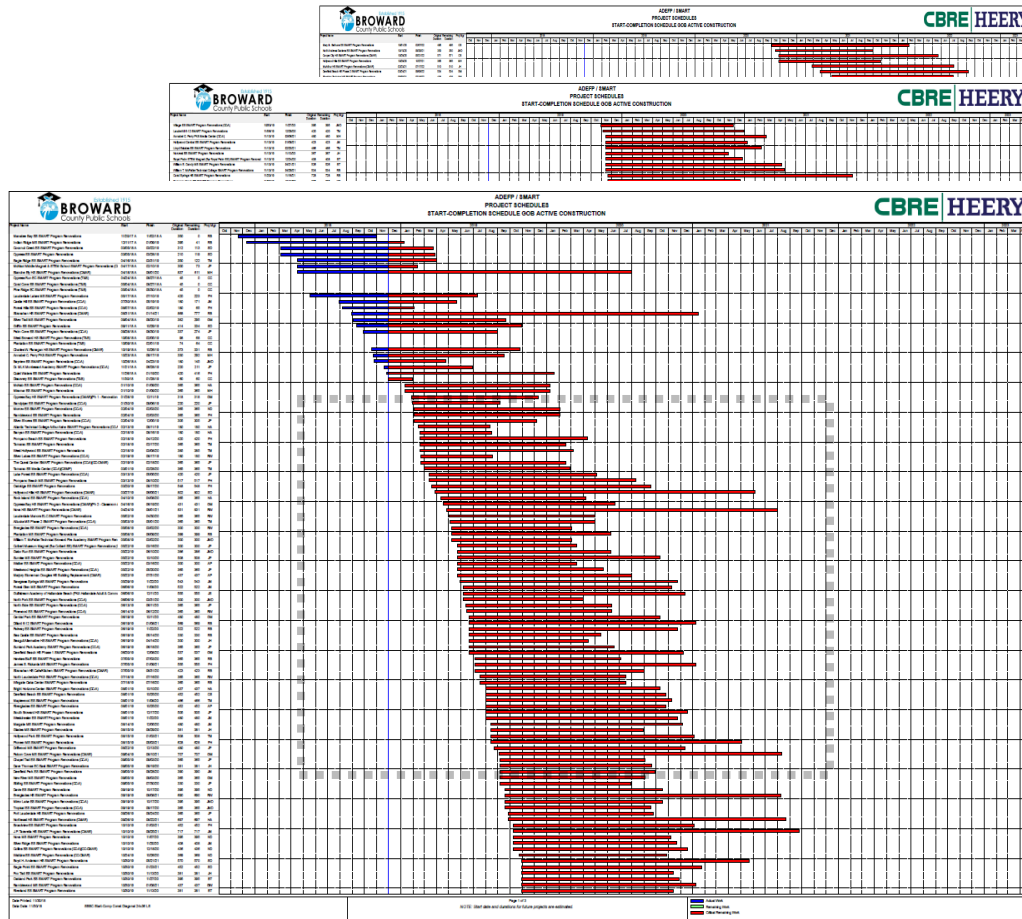
Durations Adjusted

Average Durations

Phase	Original Planned Duration (Avg. Days)	New Planned Duration (Avg. Days)	Variance (+/-) (Avg. Days)
 Design ATP to LOR	233	515	+282
 Hire Contractor LOR to NTP	201	194	-7
 Construction NTP-Completion	312	437	+125



The New Milestone Baseline Schedule

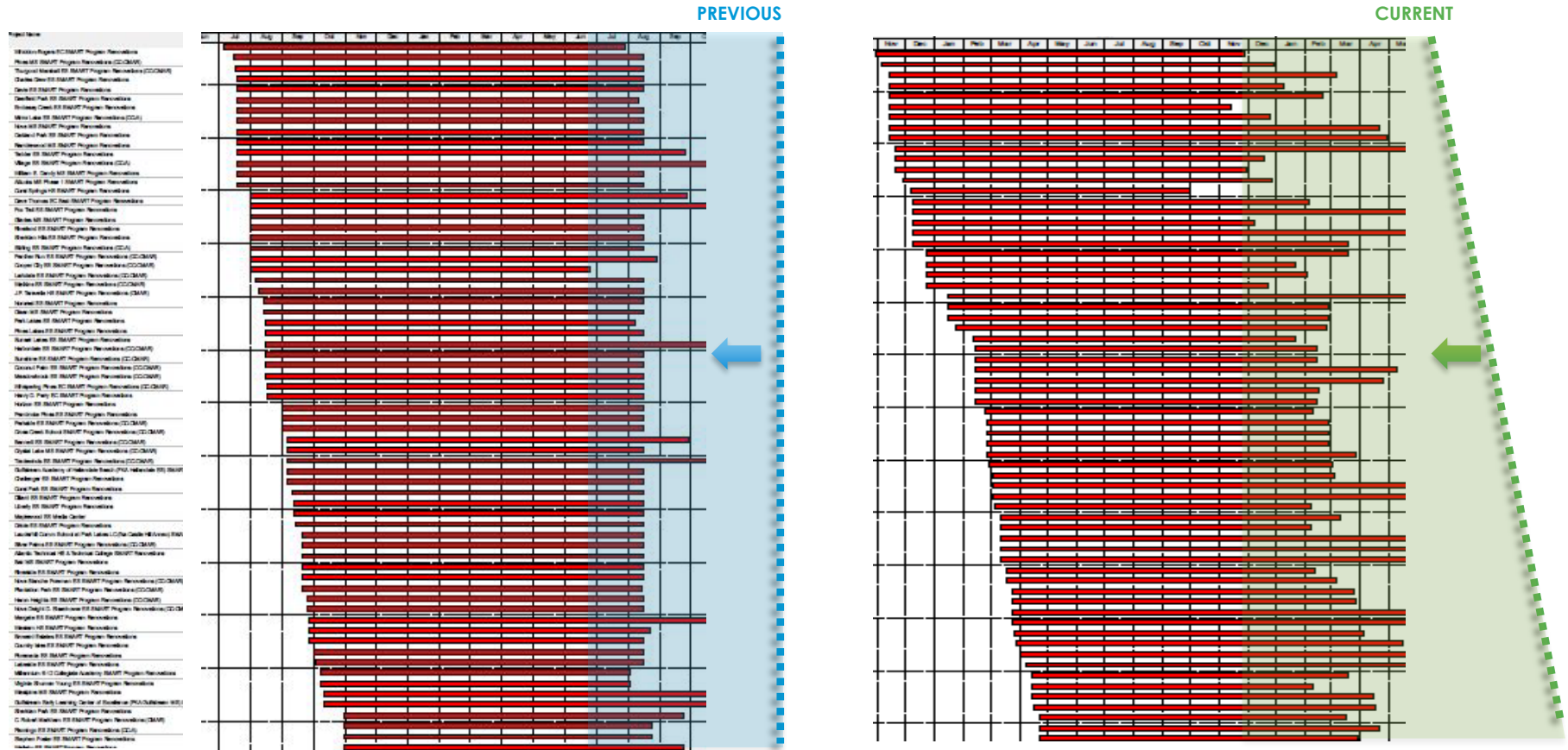


- A **New Milestone Baseline Schedule** has been created with projects entering the Construction Phase on a more staggered timeline
- This shift should serve to:
 - **Ease flow** of projects moving through the design phase
 - **Avoid overabundance** of projects being launched simultaneously
 - **Lighten demand** on an oversaturated construction and labor market

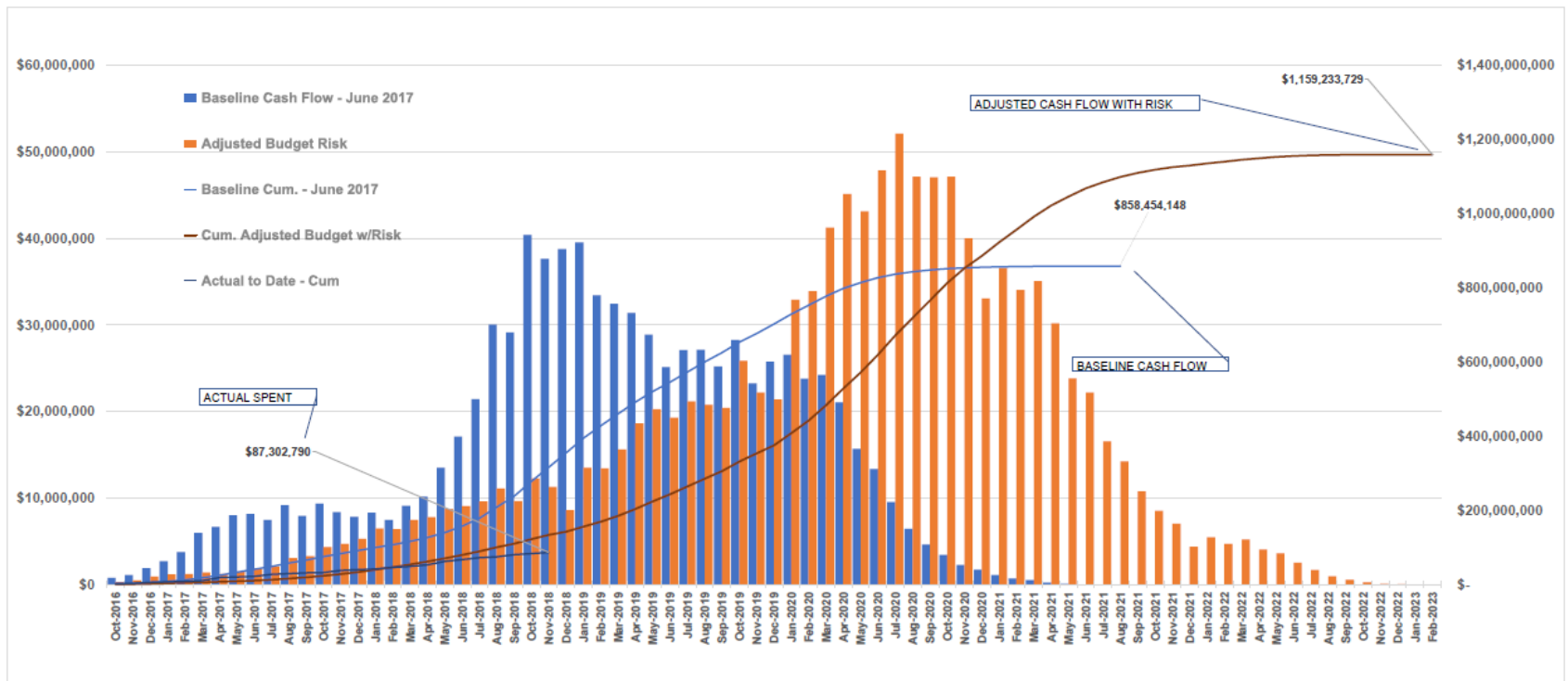


The New Milestone Baseline Schedule

- Comparing a **previous schedule (left)** with the **new schedule (right)**, the staggered, diagonal bend of the new schedule shows projects staggered to relieve pressure on the periods of launch and completion.



Cashflow Management





Single Point of Entry (SPE) Schedule

SPE Schedule Assessment



Single Point of Entry (SPE) projects were also evaluated to validate the schedule and to make any necessary adjustments.

Majority of projects projected for **completion by end of first quarter 2019 (March 2019)**

- ✓ **Sixteen (16) projects expected to be completed by the end of second quarter 2019 (June 2019)**
- ✓ **Seven (7) projects expected to be completed by end of third quarter 2019 (September 2019)**
- ✓ **Final project expected to be completed by early 2020**





Summary & Path Forward

Summary & Path Forward

- **Majority of all schools completed by 2022**
 - 26 schools completed in 2022
 - 3 schools completed in first quarter 2023
- **Monthly validation** and updates to reflect actual data
 - Monthly report to Board Members
 - Quarterly report to Bond Oversight Committee
 - Simplified reporting
- Monitor and **adjust to fluctuating market** conditions
- **Communicate** updated schedule and project status to the District & school communities





Questions & Answers



The School Board of Broward County, FL

Heather P. Brinkworth, Chair
Donna P. Korn , Vice Chair
Lori Alhadeff
Robin Bartleman
Patricia Good
Laurie Rich Levinson
Ann Murray
Dr. Rosalind Osgood
Nora Rupert

Robert W. Runcie, Superintendent of Schools

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