MANAGEMENT
PARTNERS, LLC

Hastings Elementary School – Early Schedule Study and Evaluation

Executive Summary

As was requested in the October 5th, 2016, PBC/SBC meeting, the team (OPM- Dore & Whittier Management Partners and Architect- DiNisco Design) was asked to study and look at the potential ways that we could achieve a Hasting Elementary School move-in date of September 2019. In our evaluation, we looked at acceleration options that could be available to the team to facilitate reaching this target date. Additionally, we took the Estabrook project schedule and overlaid that projects' timeline to compare it to our current building project while also identifying key differences that exist between the 2 sites and program project spaces.
A few of these differences in the building site and program requirements have significant impacts to the project schedule and are worth highlighting:

1. The Estabrook site was basically flat and wetland free, while the Hastings site is pitched requiring site retaining structures and has wetlands requiring full Conservation Commission Review and approval.
2. The available building locations on the Hastings Elementary site are limited to 2 distinct locations, and limit options for building shape/configuration.
3. The school's program differs in enrollment numbers and SPED program requirements which may significantly influence the basis of design.
4. The code has changed in the past 5 years and the energy code requirements are more stringent than they were when the Estabrook design was bid, so many of the envelope materials and details will need to be revised in order to reach desired or elevated LEED-S or MCHP's goals.
5. Building standards in Lexington for sustainability and energy consumption could result in some "systems" redesign, for example; the exterior wall system or the HVAC system.
6. Local Funding approval is a Critical Path item in some of the Hasting Elementary Schedules.

We have many versions of schedule studies performed by both the OPM and Architect. We have had meetings with the Town Facilities Department to review our ideas and to challenge each assumption to validate the benefits and risks of each schedule. The selected "draft" working documentation is attached for your review and include versions that seemed to be relevant and reasonable "what if" schedule models and their potential move-in dates. The 5 attached schedules are:

A. Model School Schedule A – "Estabrook" Model (with 3 extra classrooms) No significant changes, has seasonal construction issues that could increase schedule

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- Move-in October 2019, project complete June 2020

B. Estabrook Schedule B - modified to include Conservation Commission Approval on our timeline, has seasonal construction issues
    - Move-in November/December 2019, project complete July 2020

C. Accelerated Design Schedule C - "Estabrook Hybrid" MSBA core program building schedule, allow some design changes, has seasonal construction issues
    - Move-in October/November 2019, project complete June 2020

D. Hastings Schedule D - with typical design duration, but carries seasonal construction issues
    - Move-in November/December 2019, project complete June 2020

E. Hasting Schedule E – CM@R or Design Bid Build – Typical Design durations & avoid winter construction conditions
    - Move-in April 2020, project complete October 2020

*Important to note: There could be significant unknown variables at this early point that could impact our forecasted move-in dates.
The schedules generally have some common basic fundamental assumptions in terms of duration that will be challenged as we move forward. As this process unfolds and decisions are made by the Town of Lexington, we will be updating the schedule to reflect our forecast on the turnover dates. Some of our fundamental assumptions are listed below.

1. Design durations
    a. Feasibility (MSBA Board 2/15/17)
    b. Schematic Design ( MSBA Board 6/29/17 OR 8/23/17) NOT ON Critical path
    c. Design Development – 4 to 6 Months (depending on MSBA submission requirements)
    d. Construction Documents – 7 to 9 months (depending on MSBA submission requirements)
2. Permitting
    a. Conservation Commission – 4 months, but final Conservation Commission permit set submission MUST not be before building footprint and elevations are finalized (NOT TO CHANGE) and the local funding has been approved.
    b. Other local permits are not considered to be schedule impacting at this time
3. Construction durations
    a. Early Release Packages – Site Work, Utilities, Foundations, Structural Steel – 7 to 8 months
    b. Building Construction – After Structural Steel Complete – 14 months
    c. Existing Building Remediation/Demo/Site Improve/Landscaping – Varies based on seasonal restrictions

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Based on numerous early versions of Hastings Elementary School schedules developed by the project team, it appears that the September 2019 building turnover date is not likely and that the realistic turnover dates are in the fall/winter 2019/2020. Knowing that this is not meeting one of the committee's key goals, we will look for ways to improve schedule as we go forward. We will continue to update this schedule against scope decisions and process requirements to look for efficiencies and time savings. At this early phase of the project, we are forecasting a move-in date that is between November, 2019, and February, 2020. If we find opportunities to save time, as we go through the MSBA Module and the Town of Lexington Committees' approval process, we hope improve on the forecasted turnover date.

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# Hastings Model School Schedule Study - A

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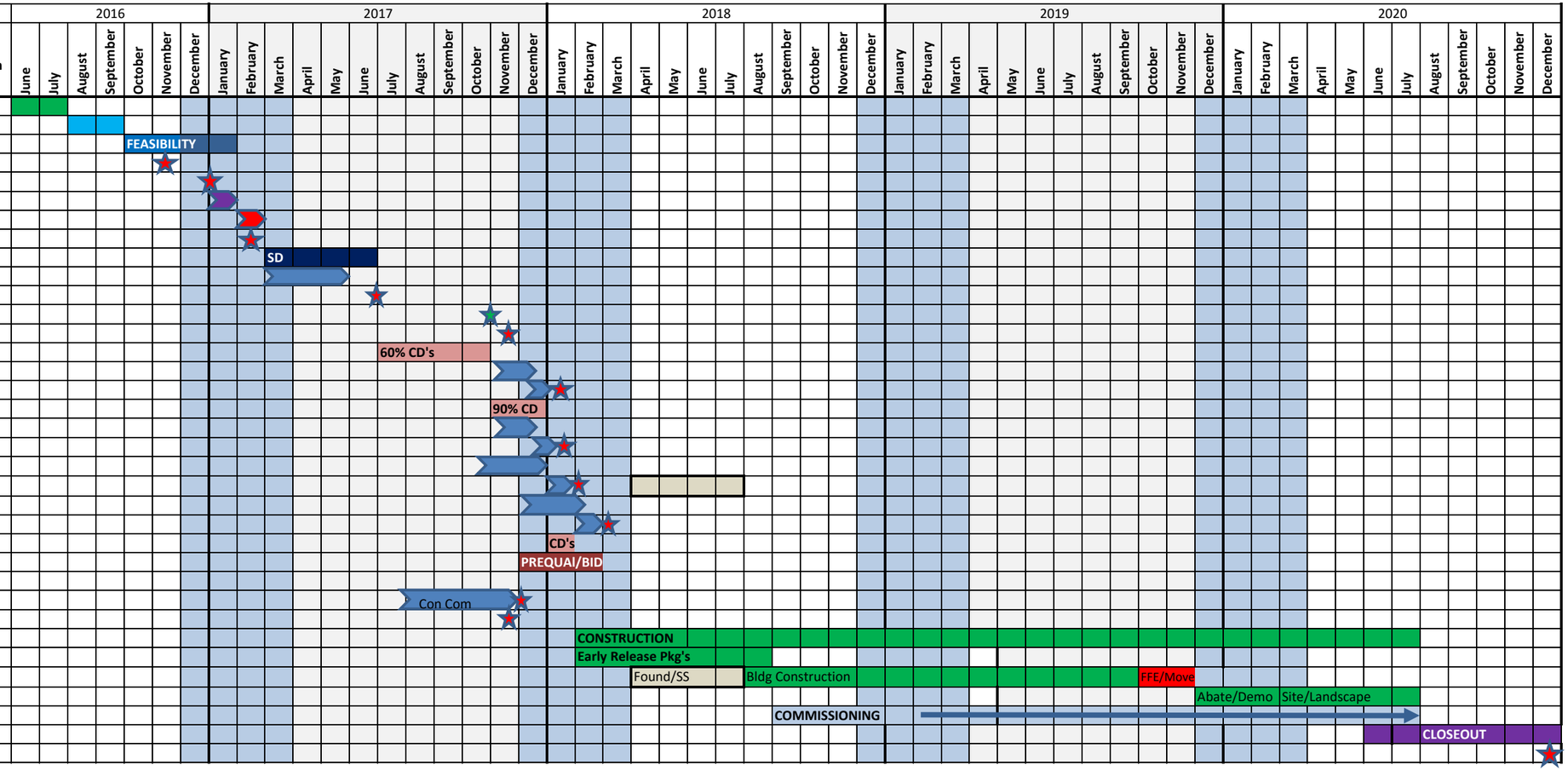
| Hastings Model School Schedule Study - A (CM@R) | Duration in Months |
|---|---|
| **Hire OPM** | 2 |
| **Select Architect** | 2 |
| **Feasibility** | 4 |
| MSBA Preliminary Design Program Submission | |
| MSBA Preferred Schematic Report - due Jan 4, 2017 | |
| MSBA Model School REVIEW - FAS Jan 18, 2017 | |
| District Arch Selection For MODEL SCHOOL - After FAS Mtg | |
| MSBA BOARD Recommendation to proceed into Schematic Design - Fe | |
| **Schematic Design** | 4 |
| MSBA Schematic Design Submission - due May 18, 2017 | |
| MSBA Board Approval of Schematic Design - June 29, 2017 | |
| Town Approval - 120 days after Board Mtg. | |
| MSBA Issues Project Funding Agreement ($$ committed) | |
| **60% Constrction Document Development** | 4 |
| **ERP 1 - Site Enabling CD's Phase 1** | |
| **Bid Phase 1** | |
| **90 % Construction Documents** | 2 |
| **ERP 2 - Site Utilities** | |
| **Bid Phase 2** | |
| **ERP 3 - Bldg Found/Steel** | |
| **Bid Phase 3** | |
| **ERP 4 - Waterloop & Duct Bank** | |
| **Bid Phase 4** | |
| **100% Construction Documents** | 1 |
| **Prequalify and Bid Documents** | 3 |
| **Permitting** | |
| **Con Com - Critical Path to starting on Site** | 4 |
| **ZBA- letter** | |
| **Construction** | 27 |
| **ERP 1 - 4 : SS is Critical Path** | 7 |
| **Building Construction after SS is complete** | 14 |
| **Abate/Demo/Stie/Landscaping** | 7 |
| **Project Commissioning** | TBD |
| **Final Closeout with MSBA** | TBD |
| **Project Complete** | TBD |




**Schedule benefits and concerns as a basis of schedule:**

**Schedule benefits**

- The "Estabrook model" option has the best schedule, by 1 month, maybe more, further study would be reqired.

**Schedule concerns**

- Major Site differences from the "Estabrook model" site which could eliminate "Model" as an option
- The Hastings SPED Program has significant differences from the "Estabrook model" site which could eliminate "Model" as an option
- Winter Conditions for sitework have deffinate time and cost increase risks
- Design time frames are very short and will prevent owner input in the process
- Model floor plans may not support Lexington Educational Program GOALS
- Move-in does not line up well with the school year

# Estabrook Schedule overlay to Hasting timeline - B - with Conservation Commission Approval

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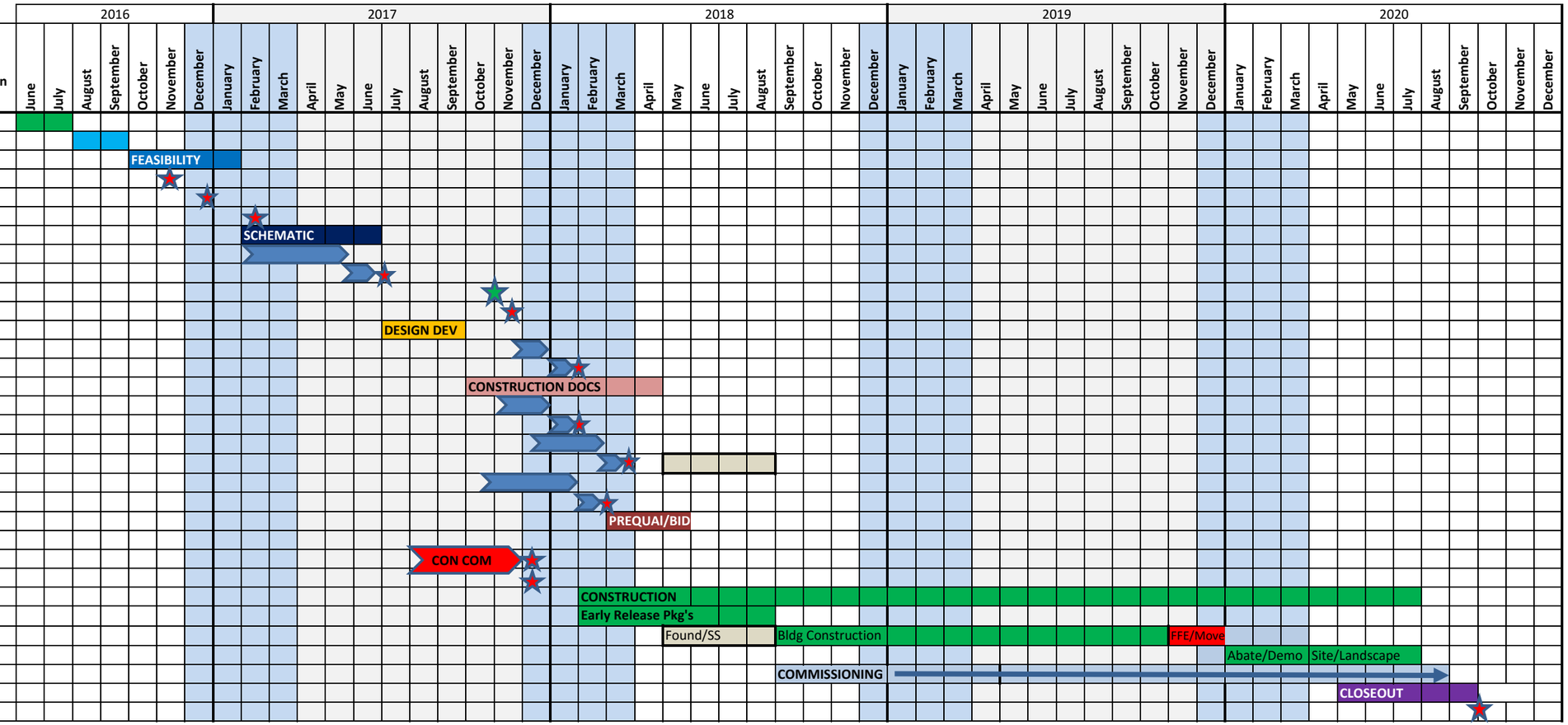
| Estabrook Schedule Overlay to Hastings timeline - B - With CON COM Approval change DUE TO WETLANDS ON SITE | Duration in Months |
|---|---|
| **Hire OPM** | 2 |
| **Select Architect** | 2 |
| **Feasibility** | 4 |
| MSBA Preliminary Design Program Submission | |
| MSBA Preferred Schematic Report | |
| MSBA Recommendation to proceed into Schematic Design | |
| **Schematic Design** | 5 |
| MSBA Schematic Design Submission | |
| MSBA Board Approval of Schematic Design | |
| Town Approval | |
| MSBA Issues Project Funding Agreement ($$ committed) | |
| **Design Development** | 3 |
| **ERP 1 - Site Enabling CD's Phase 1** | |
| **Bid Phase 1** | |
| **Construction Documents** | 6.5 |
| **ERP 2 - Site Utilities** | |
| **Bid Phase 2** | |
| **ERP 3 - Bldg Found/Steel** | |
| **Bid Phase 3** | |
| **ERP 4 - Waterloop & Duct Bank** | |
| **Bid Phase 4** | |
| **Prequalify and Bid Documents** | 3 |
| **Permitting** | |
| **Con Com FULL APPROVAL PROCESS - BLDG FOOTPRINT CAN'T CHAN** | 5 |
| **ZBA- letter ASSUME NO VARRIANCE** | |
| **Construction** | 28 |
| **ERP 1 - 4 : SS is the Critical Path** | 7 |
| **Building Construction after SS is complete** | 14 |
| **Abate/Demo/Stie/Landscaping** | 7 |
| **Project Commissioning** | TBD |
| **Final Closeout with MSBA** | TBD |
| **Project Complete** | TBD |




**Schedule benefits and concerns as a basis of schedule:**

**Schedule benefits**

- The Estabrook design schedule was proven to work but was extremely tight, DiNisco requires further study as a possibility.
- Move-in lines up well with the holiday break

**Schedule concerns**

- Winter Conditions for sitework have deffinate time and cost increase risks
- Design time frames are very short and will prevent owner input in the process and potential building changes

# Accellerated Design Hastings Schedule C

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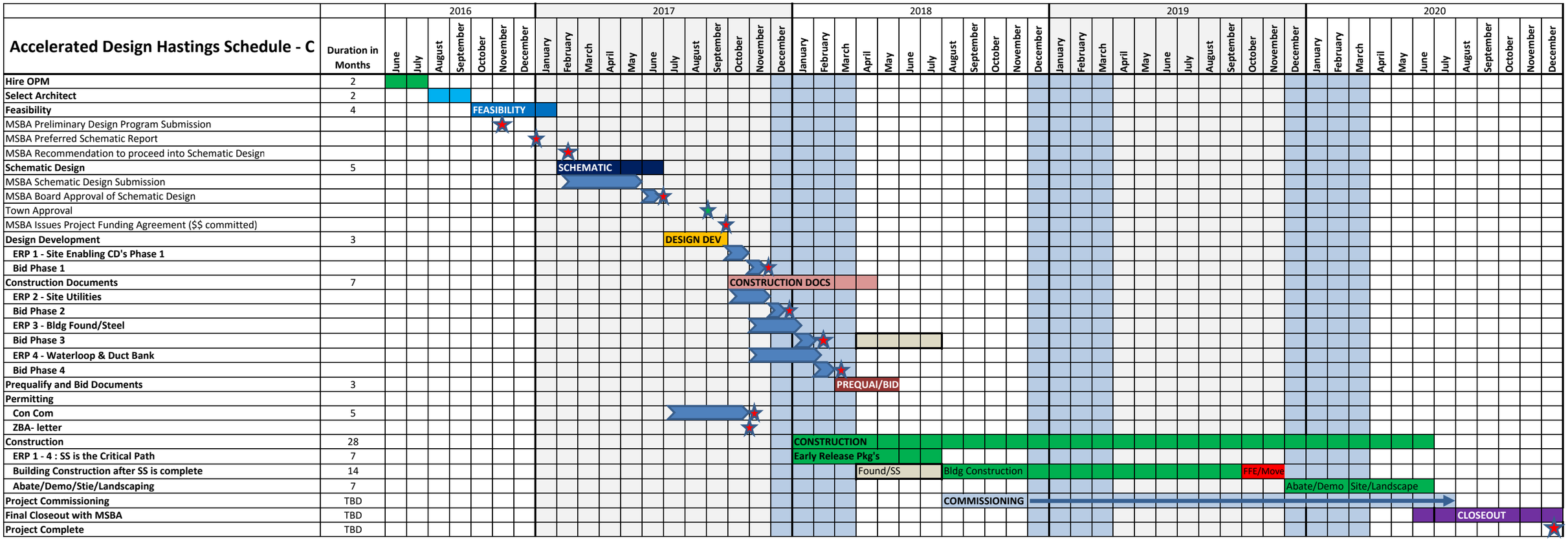


**Schedule benefits and concerns as a basis of schedule:**

**Schedule benefits**

- The Accelerated Design option turns the building over close to the desired September 2019 date,
  'further study would be reqired.

**Schedule concerns**

- Winter Conditions for sitework have deffinate time and cost increase risks
- Design time frames are very short and will prevent owner input in the process
- Local Funding would need to be appropriated in August or September to support the schedule, which may not be ideal.

# Hastings Schedule D - with Winter Construction Conditions

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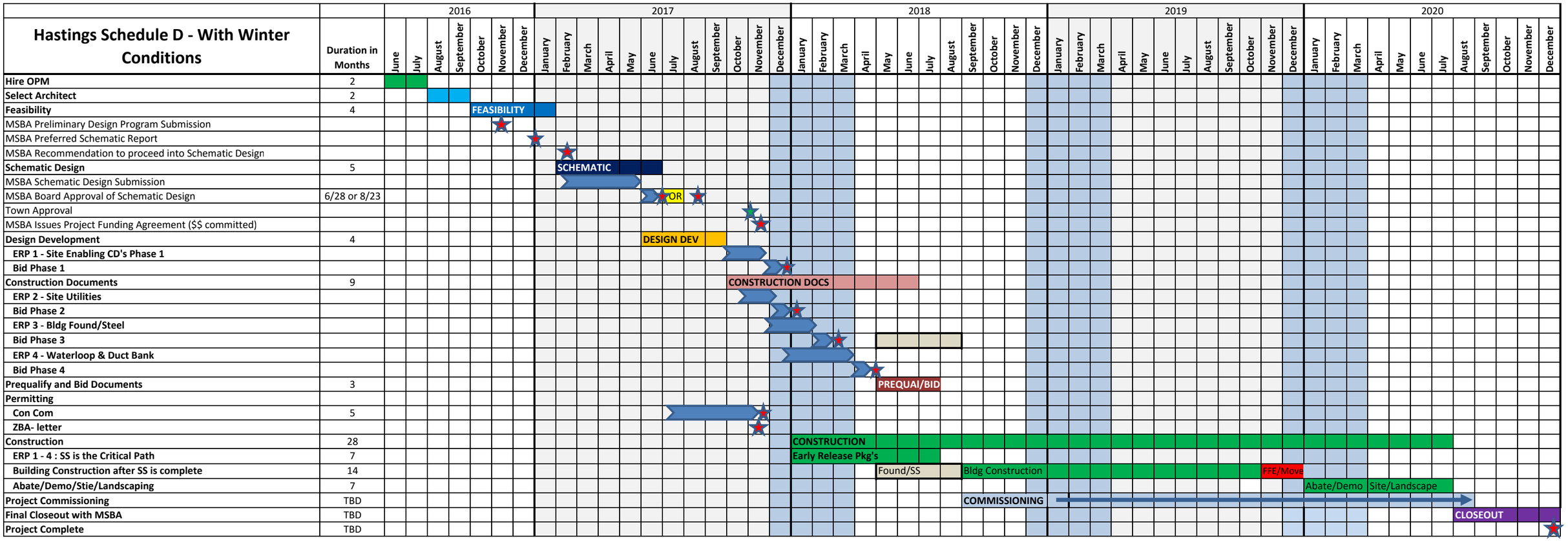


**Schedule benefits and concerns as a basis of schedule:**

**Schedule benefits**

- Schedule allows for Design options/development & still benefits from Estabrook design, schedule improvement requires further study.
- Local Funding vote date may align better with the Town's typical fall calander
- The building turn-over aligns well with the student return after the winter holiday

**Schedule concerns**

- Winter Conditions for sitework have deffinate time and cost increase risks

# Hastings Schedule E

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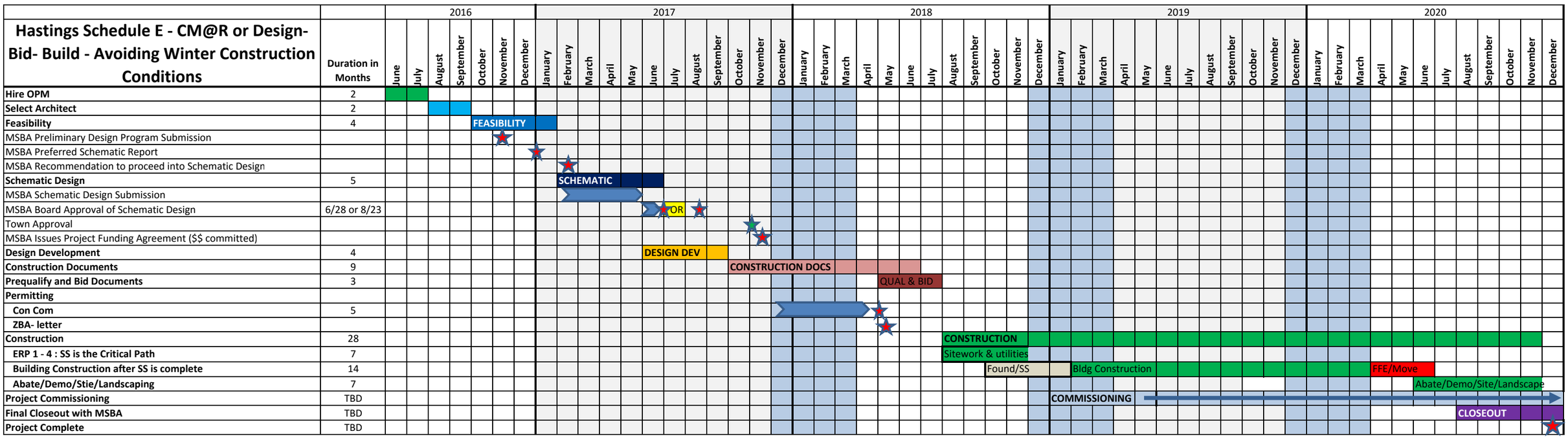


**Schedule benefits and concerns as a basis of schedule:**

| Schedule benefits | Schedule concerns |
|---|---|
| - Schedule allows for Design options/development & still benefits from Estabrook design, schedule improvement requires further study.<br>- Local Funding vote date may align better with the Town's typical fall calander<br>- The delivery method can be either CM@ Risk or Design Bid Build<br>- Winter construction activies align well, Structural Steel is a good Winter activity<br>- The building turn-over aligns well with the student return in the fall | - Longest project schedule considered, may not support the school system enrollment needs/issues |