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Brooke Roslindale Charter School
190 Cummins HWY
Roslindale, MA 02131
July 31, 2015

Commissioner of Elementary and Secondary Education or
Board of Elementary and Secondary Education
Massachusetts Department of Elementary and Secondary Education
75 Pleasant Street
Malden, MA 02148

Dear Commissioner and Board,

On behalf of the Board of Trustees of Brooke Roslindale, Brooke Mattapan, and Brooke East Boston, I respectfully request your approval of an amendment to change our charter to consolidate our existing charters, expand the grades served to include high school, and expand our maximum enrollment. These changes to our charter(s) will be effective upon approval of the Board of Elementary and Secondary Education and the Commissioner.

The Brooke Board of Trustees wishes to make this change in order to make possible the creation of a Brooke High School, which existing Brooke students will have the opportunity to attend.

The Brooke Board of Trustees voted to approve this request on Tuesday, July 21st, at a meeting held in compliance with Massachusetts Open Meeting Law G.L. c. 30A, §§ 18-25. At that meeting, the Board of Trustees authorized me to submit this request on their behalf.

The Brooke Board of Trustees also authorized the school to work with the Department to make any minor technical changes to the amendment submitted for approval **if** such changes are necessary to meet the requirements of statute or regulations, and are codified in Department guidance that was not adhered to in our submission. The Brooke Board of Trustees agrees to permit such minor technical changes to the policy submitted for approval, and to support any additional consultation and coordination with the Department that will be required to align our policy with requirements.

All three Brooke charter schools qualify as academic successes, are viable organizations, and are faithful to the terms of their charters. On the 2014 MCAS tests, Brooke once again led the state in multiple grades and subjects, with proficiency rates at or near 100%. This year also marked the highest percentage of students scoring advanced in math and ELA in the history of Brooke Charter Schools. Among the highlights at each school:

- 91% of our sixth graders in East Boston scored at the advanced level in math – the highest proportion of students scoring advanced on that test in any school in the Commonwealth over the last 9 years.

- 86% of our fifth graders in Roslindale scored at the advanced level in math and 65% of them scored at the advanced level in ELA - higher proportions than at any other school in the Commonwealth.
- 100% of Brooke Mattapan 7th graders were proficient in ELA, making them the highest ranking school in the Commonwealth.

Despite the oft-repeated charge that charter schools “push students out”, the average attrition rate at the three Brooke schools last year was lower than at any other non-exam school in Boston serving middle grades.

Strong and steady board leadership and executive leadership across the Brooke network has helped put the schools in a strong financial position, with zero dependence on philanthropic support for annual operating expenses and with accumulated reserves in excess of 3 months of operating expenses. All three Brooke campuses are housed in renovated permanent facilities capable of serving those schools under full enrollment and with annual carrying costs equivalent to under ten percent of annual tuition revenue.

The Brooke Board of Trustees requests that the Board of Elementary and Secondary Education approve this request at the next possible meeting during the 2015-16 school year in accordance with the Board’s policy and procedures on enrollment expansion requests.

Please contact Jon Clark (jclark@ebrooke.org, 857-891-5755) you have any questions about this request.

Sincerely,

Jon Clark
Co-
Director

Cc: Cliff Chuang, Associate Commissioner of the Office of Charter Schools and School Redesign

**Brooke Charter Schools Major Amendment Request to Add a High School and Consolidate Charters
Submitted July 31, 2015**

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Overview

Brooke Charter Schools currently enrolls students in grades K-8, with maximum enrollment set at 1,530 students (no more than 1,360 of which can be Boston seats, and no more than 170 of which can be Chelsea seats). Under the following amendment request, we are requesting permission to expand enrollment from K-8 to encompass grades K-12, with an additional 659 Boston seats and 52 Chelsea seats. Under this proposal, our maximum allowable enrollment would grow to 2,221 students (1,999 in Boston and 222 in Chelsea).

Mission and Key Design Elements

The mission of each of the existing Brooke Charter Schools is to provide an academically rigorous education to students from the cities of Boston (and Chelsea) that will ensure that students are prepared to succeed in high school and graduate from college. As such, the extension of the Brooke program into high school is a natural and logical addition.

Brooke Charter Schools is committed to the proposition that great teaching can close the achievement gap. In practice, we believe that realizing that goal requires that we develop a shared and unified vision of what great teaching looks like and pursue that vision with a singular determination, blocking out all other distractions. We believe that fidelity to that approach has been the primary driver of student achievement gains across the Brooke network.

We are committed to developing a high school that further builds on this proposition. Our vision of what great teaching looks like in high school will not diverge from our vision of great middle school teaching – but the context will.

As in middle school, we believe that great high school instruction requires that we challenge our scholars and prioritize rigor. In high school, that will require that we work backward from AP and ACT benchmarks, with a particularly high bar for writing proficiency.

As in middle school, we believe that great high school instruction will require that students feel known. In high school, answering that challenge will require doing so while simultaneously moving away from the semi-self-contained classroom structure we have utilized in middle school. We have designed our high school advisory program (described further below) with this goal in mind. Similarly, our approach to teaching writing has been designed so as to maximize the capacity of teachers to provide individualized feedback to a relatively small number of students.

Finally, just as in middle school, we believe that great high school teaching requires that students develop independence and a sense of agency in the world. In the context of high school, that will require that we scaffold our approach to teaching independence while working backwards from standards of college readiness.

As in middle school, our first priority will be to build a culture of instruction, in which teaching is revered, and in which continuous feedback and improvement is prioritized. As in middle school, this will mean creating supportive and professional working conditions and manageable student loads that allow teachers to deliver individualized support and feedback. But, at the high school level, the necessity of increased subject specialization will make it more difficult, but still manageable, to create co-planning structures for teachers.

Expanded Opportunities for High School Students

The table below illustrates the high school graduation rates, college matriculation rates, and 6-year post HS college graduation rates for black and Latino students in the BPS high school class of 2005 vs. the Brooke high school class of 2010. (source of BPS data: 9th grade BPS enrollees among class of 2005 from DESE. All other figures are from TBF report, *Getting Closer to the Finish Line, January 2013*). Among Brooke’s first classes, 98% have graduated from high school and 40% are on track to graduate from college. While Brooke’s numbers are already comparatively strong, we know we could make them stronger still if we had the opportunity to serve our students all the way through high school.

Metric	Boston Public Schools	Brooke
High School Graduation	46%	98%
College Enrollment	34%	78%
College Graduation	11%	40%*

**Students in Brooke’s HS class of 2010 were first eligible to graduate from a 4-year college in spring 2014.*

Demand for enrollment at Brooke schools has grown steadily over the last several years. There are currently approximately 3,000 unique names on Brooke waiting lists.

But the biggest demand for a Brooke High School comes from existing parents. We have long known this to be the case. Our earliest survey to Brooke families on this question was administered in 2004. At that time, 86% of respondents indicated that they would send their children to a Brooke high school should it be created.

Given the short time window for submission of this amendment request, we did not endeavor to conduct a survey of parents of the entire student body for the purposes of this request. Instead, we attempted to survey all parents of current 7th graders rising into 8th grade and asked them to agree or disagree with the following statement: **I support the creation of a Brooke High School and want my child to be able to attend a Brooke High School.** We were able to elicit responses from 93% of those families (we were unable to contact 6 of these families this summer). 100% of those responding indicated agreement with this statement.

**Survey of Families of Rising Brooke 7th Graders
July 2015**

Please indicate whether you agree or disagree with the following statement: I support the creation of a Brooke High School and want my child to be able to attend a Brooke High School.	
Agree	100%
Disagree	0%
111 of 119 Responding	

We have also long known that our staff support the creation of a Brooke High School and see that possibility as the best possible strategy we could undertake (that we are not currently undertaking) to help us better realize our mission of college readiness and success for all of our students. This summer, we surveyed existing Brooke staff and asked them to agree or disagree with the following statement: **Launching a Brooke high school is the most important thing we could do as an organization in order to better ensure that our students are better prepared to enter into and succeed in college.** Despite the fact that many teachers were away this summer, we were able to collect responses from 115 of our 139 returning staff members. 100% indicated agreement with this statement.

**Survey of Returning Brooke Staff
July 2015**

Please indicate whether you agree or disagree with the following statement: Launching a Brooke high school is the most important thing we could do as an organization in order to better ensure that our students are better prepared to enter into and succeed in college.	
Agree	100%
Disagree	0%
115 of 139 Responding	

Track Record of Faithfulness to Charter (Mission and Design Elements)

The mission and the fundamental design elements laid out in our charter applications for Brooke Mattapan and Brooke East Boston remain unchanged, as they do in our multiple charter amendment requests for Brooke Roslindale. Site visits conducted by the Department of Elementary and Secondary Education have confirmed the consistent application and faithful execution of those design elements and the record of academic success for all three schools over the past few years is evidence of their successful execution.

Track Record of Academic Success

All three current Brooke schools have exceptionally strong records of academic achievement. That record is highlighted in the CHART data for Brooke Roslindale and in the DESE profiles for Brooke Mattapan and Brooke East Boston. Rather than present that data again here, we instead would like to highlight two trends relative to that data:

1. Academic achievement has improved as the Brooke network has grown beyond the initial flagship campus in Roslindale. MCAS growth rates at Brooke East Boston and Brooke Mattapan have surpassed what was ever accomplished previously at Brooke Roslindale. And in terms of absolute achievement, students at Brooke Roslindale have surpassed their previous highs in almost every subject and at almost every grade level prior to expansion.

- The accomplishments of Brooke students and teachers have garnered national attention. As a portfolio member of the Charter School Growth Fund, which funds some of the highest performing charter networks in the nation, Brooke has been recognized for the extraordinarily strong achievements of its students relative to other Charter Management Organizations nationally. Among all school networks in the CSGF portfolio, Brooke has been found to have the highest differential between its students and students from the sending district, and the second highest differential in math. (The math differential is arguably limited at Brooke in part because the district average in Boston is higher relative to other charter networks around the country).

Enrollment

The table below shows the additional seats we are requesting by district in order to accommodate the addition of a Brooke High School.

	Currently Authorized Seats	Additional Requested Seats
Boston	1340	659
Chelsea	170	52

The table below shows the enrollment plan by grade throughout the expansion process.

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
K	180	180	180	180	180	180	180	180	180
1	180	180	180	180	180	180	180	180	180
2	180	180	180	180	180	180	180	180	180
3	180	180	180	180	180	180	180	180	180
4	172	180	180	180	180	180	180	180	180
5	180	180	180	180	180	180	180	180	180
6	168	180	180	180	180	180	180	180	180
7	135	168	180	180	180	180	180	180	180
8	120	135	168	180	180	180	180	180	180
9	0	108	122	151	162	162	162	162	162
10	0	0	103	115	144	154	154	154	154
11	0	0	0	97	110	136	146	146	146
12	0	0	0	0	93	104	130	139	139
TOTAL	1495	1671	1832	1984	2128	2177	2212	2221	2221
Total New Seats	0	141	302	454	598	647	682	691	691
K-8 Only	1495	1563	1608	1620	1620	1620	1620	1620	1620

High School Only	0	108	224	364	508	557	592	601	601
Boston	1360	1504	1649	1786	1915	1959	1991	1999	1999
Non-Boston (inc Chelsea)	135	167	183	198	213	218	221	222	222
TOTAL	1495	1671	1832	1984	2128	2177	2212	2221	2221

Key Enrollment Assumptions:

- We propose that beginning in 2016-17, Brooke would “backfill” enrollment for all grades K-8 (current law would require backfilling through grade 6 only).
- We assume that between 8th and 9th grade, there would be student attrition of approximately 10%. This is in line with (or lower than) historical attrition rates at Boston charter schools that enroll students in both middle school grades and high school grades. We expect that attrition rate to be higher than in other grades because we expect to lose some students who gain enrollment to Boston Latin School and/or to reputable independent schools.¹
- We assume that in grades 9-12, we will experience total annual attrition of approximately 5%. This is also in line with (or lower than) historical attrition rates at Boston charter schools that enroll students in both middle school grades and high school grades.
- We assume that 10% of total enrollment will be non-Boston enrollment, including Chelsea. Currently, the department mandates that one-third of Brooke East Boston enrollment be outside of Boston, which is equivalent to one-ninth of the overall enrollment across the Brooke network. Our projections show that we can safely fall under the 10% cap of non-Boston enrollment, particularly after combining in non-Boston enrollment at Brooke Mattapan and Brooke Roslindale.

Increased Access in Upper Grades

Currently, all three Brooke campuses “backfill” students through 4th grade. If this amendment were to be approved, Brooke would be required under the existing statute to backfill through 6th grade.

We are proposing under this request to backfill students through 8th grade in order to expand access to Boston and Chelsea families in higher grades. Doing so requires that we ask for nearly the maximum number of seats currently available for distribution in Boston.

Were the seats available, we would propose backfilling through 10th grade. According to our projections, using the same assumptions outlined in the table above, we would need the following number of new seats in order to backfill through 10th grade under this amendment request:

¹ We will explicitly encourage families who gain admission to Boston Exam Schools to continue to enroll at Brooke.

	Currently Authorized Seats	Additional Requested Seats (if backfilling through 10th grade)
Boston	1340	742
Chelsea	170	61

Enrollment Policy

The following represents a summary of changes under the attached proposed enrollment policy.

- Brooke would hold one lottery each year and all applicants would be assigned one lottery number for the grade to which they are applying.
- When a space becomes available at a Brooke campus, the family with the lowest lottery number would be offered the spot, regardless of the campus.
- When families are offered an enrollment spot at a Brooke campus that is not their preferred campus, families may defer admission if or until they are offered a spot at their preferred campus without forfeiting their lottery spot. Because Brooke waitlists are renewed and replaced each year after the lottery, families who defer admission are not guaranteed a placement and risk losing their current lottery position if a space does not become available at their preferred campus by the end of the current school year.
- While we will work to ensure that families are enrolled at their preferred campuses upon admission, Brooke reserves the right to assign families to a given campus and/or to transfer students from one campus to another. Families who accept enrollment at a non-preferred campus cannot and should not expect that they will be subsequently transferred to their preferred campus.
- Notwithstanding all of the above, Chelsea families will only be eligible to attend the East Boston campus.

Because all Brooke waitlists are renewed each year, no existing waitlists would be impacted by the consolidation process.

High School Program Delivery

Brooke’s proposed high school would share the essential characteristics that have made the three current Brooke schools exceptionally effective and will transfer those essential beliefs to the new context of a high school. Many of the details of the program are outlined below.

Student Schedule Overview

All students will take a core six-period academic schedule consisting of math, English, science, Spanish, social studies, and computer science. Electives, extra-curricular activities, tutoring, and sports all happen during the before-school or after-school blocks as outlined below. This arrangement maximizes our ability to provide flexible enrichment offerings and tutoring while simultaneously simplifying the scheduling process for the core academic day.

Student Schedule: Monday, Tuesday, Thursday, Friday

Periods 1-6 are all academic:

- Math
- English
- Science

- social studies
- Spanish
- computer science

All physical education, arts, community service, and tutoring (office hours) takes place outside this 6-period schedule (either before or after).

7:40 – 8:25	Office Hours (all teachers) and Selected Extra-Curriculars (Non-teaching staff only, maximum 2 meetings per week for each activity)
8:25 – 8:40	Morning Advisory
8:45 – 9:40	1 st Period
9:45 – 10:40	2 nd Period
10:45 – 11:40	3 rd Period
11:40 – 12:10	Lunch
12:10 – 1:05	4 th Period
1:10 – 2:05	5 th Period
2:10 – 3:05	6 th Period
3:05 – 3:30	Afternoon Advisory & Reading
3:30 – 5:00	Sports, Extra-Curriculars, Office Hours

Student Schedule (W)

No Spanish or Computer Science on Wednesdays

7:40 – 8:25	Office Hours (all teachers) and Selected Extra-Curriculars (Non-teaching staff only)
8:25 – 8:50	Community Meeting
8:55 – 9:50	1 st Period
9:55 – 10:50	2 nd Period
10:55 – 11:50	3 rd Period
11:50 – 12:20	Lunch
12:20 – 1:15	4 th Period
1:15 – 2:00	Afternoon Advisory & Character Ed
2:00 – 4:00	Teacher PD and Selected Extra-Curriculars (Non-teaching staff only)

Course Requirements

All students must meet the following course requirements to graduate.

- 4 years of English
- 4 years of math
- 4 years of Spanish
- 3 years of computer science
- 3 years of science
- 3 years of social studies

- 4 years of sports (min. one trimester per year)
- 4 years of extra-curriculars (min. one trimester per year)
- 4 years of community service (min. one trimester per year)
- Minimum 3 AP classes
- Full course load each year (i.e. students who take 3 years of social studies will take 5 years of science)

AP Courses Offered

All students must take and pass at least one AP course. Students will be strongly encouraged to enroll for multiple AP courses. The following AP courses will be offered:

- English Language and Composition
- English Literature and Composition
- World History
- US History
- Spanish
- AB Calculus
- BC Calculus
- Computer Science
- Chemistry
- Biology

Teacher Load/Schedule

Teachers will have responsibility for the following:

- 1-2 preparations (when a teacher has two preps, that teacher takes the lead for planning only one of them – a colleague takes the lead on the other)
- Advisory
- Daily office hours
- Option to lead an extra-curricular club or coach a sport (stipend).

The following staffing plan was constructed with that teaching load in mind, along with the projection of class sections (below) as well as the student schedule (subsequent section)

Staffing Plan

Grade	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
9	41	80	94	111	168	168	168	168	168
10	0	37	72	84	100	151	151	151	151
11	0	0	33	65	76	90	136	136	136
12	0	0	0	30	58	68	81	122	122
TOTAL HS	41	116	199	289	402	477	536	578	578

Principal	1	1	1	1	1	1	1	1	1
Office Manager	**	1	1	1	1	1	1	1	1
Director of Ops	**	1	1	1	1	1	1	1	1
Dean of Students	0	1	1	1	1	1	1	1	1
Assistant Principal	0	1	1	1	2	2	2	2	2
Student Support Staff	1	2	2	3	3	3	3	3	3
Enrichment Coordinator	0	1	1	1	1	1	1	1	1
Associate Teachers	2	2	4	6	8	9	10	10	10
	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
Math Teachers	1	2	3	4	6	7	8	9	9
Science Teachers	1	2	3	4	6	7	8	8	8
ELA teachers	2	3	4	6	8	9	10	10	10
SS teachers	0	1	2	3	3	4	5	6	6
Spanish**	0.5	1.5	3	4	5	7	8	8	9
Computer Science**	0.5	1.5	3	4	5	6	7	8	8
Total Classroom Teachers	5	11	18	25	33	40	46	49	50
** Shared with middle school in year 1									

Projected Class Sections

	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
Math									
Algebra 1	0	0	1	1	2	2	2	2	2
Geometry	2	4	4	5	7	8	8	8	8
Algebra 2/Trig	0	2	4	4	5	7	8	8	8
Pre-Calculus	0	0	2	4	4	5	7	8	8
AB Calculus	0	0	0	2	2	2	3	3	4
BC Calculus	0	0	0	0	2	2	2	2	2
Statistics	0	0	0	0	0	0	0	2	2
English									
9th Grade Humanities	2	4	4	5	8	8	8	8	8
10th Grade English	0	2	4	4	5	8	8	8	8
AP Language and Comp.	0	0	2	4	3	5	8	8	8
AP Literature and Comp.	0	0	0	2	3	3	3	6	6
11th/12th Grade Electives	0	0	0	0	2	2	2	2	2
History/SS									
AP World History	0	2	4	4	5	8	8	8	8
AP US History	0	0	2	4	4	4	8	8	8
11th/12th Grade Electives	0	0	0	2	3	4	4	8	8

	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
Spanish									
Intro to Spanish	1	2	2	1	2	2	2	2	2
Spanish 2	1	3	4	6	7	8	8	8	8
Spanish 3	0	1	3	4	6	7	8	8	8
Spanish 4	0	0	1	2	4	6	7	8	8
AP Spanish	0	0	0	2	2	3	6	7	8
Computer Science									
Computer Science 1	2	4	4	5	8	8	8	8	8
Computer Science 2	0	2	4	4	5	8	8	8	8
Computer Science 3	0	0	2	4	4	5	8	8	8
AP Computer Science	0	0	0	2	4	4	5	8	8
Science									
Biology	2	2	4	5	8	8	8	8	8
Chemistry	0	4	4	4	5	8	8	8	8
Physics	0	0	2	4	4	5	8	8	8
AP Biology	0	0	0	1	2	2	3	4	4
AP Chemistry	0	0	0	1	2	2	2	4	4

Instructional Culture Overview

As at the K-8 level, our instructional culture will be driven by our organizational values and our commitment to constant improvement and collaboration. Our vision of excellent teaching at the high school level will continue to be defined, as it is in grades K-8, by the Brooke Standards of Excellent Teaching, and by the Brooke Elements of Effective Instruction, which describes what excellent lessons look like in the context of each subject area.

As in grades K-8, principals at the high school level will be responsible for observing teachers regularly (at least once every 2 weeks) and providing teachers with same-day, in-person feedback. Teachers will have the opportunity to view and debrief video of their own teaching at least 10 times each year. Teachers will have the opportunity to observe, be observed, and to debrief with a peer observation partner 20 times per year. And teachers will engage in annual pre-service professional development (7-10 days) and weekly professional development on Wednesday afternoons (early release days).

Co-Planning

One of our primary staffing goals is to ensure that every teacher has a co-planning partner who teaches the same class or classes. As we approach our full enrollment, it will become increasingly easy to create co-planning situations while also limiting teachers to one daily course preparation. However, that won't be possible in the early years, when there will be a few teachers who will not have co-planning partners within the school. In a few cases, we can create co-planning situations from the start (i.e. 9th grade humanities). In the 2nd and 3rd years of the school, we can create co-planning situations in some cases by assigning two preparations to teachers instead of one.

Standards

The Co-Director for Academics will lead and organize the work of laying out the learning standards by discipline for the Brooke High School, as she currently does for Brooke's K-8 schools. In doing so, she

will assemble a team with deep content knowledge and teaching experience in each of the classes within each of the six core Brooke subject areas (English, math, science, social studies, Spanish, computer science). In doing so, she will work from an existing rigorous set of standards that are already aligned to ACT and AP benchmarks (Noble St. Charter Network or Great Hearts Charter Network are leading candidates) and will ensure that those frameworks are also aligned to the Massachusetts Curriculum Frameworks.

ACT and AP as End-Goals

We believe that great high school instruction requires that we challenge our scholars and prioritize rigor. Curriculum for core courses will be designed backward from AP and ACT benchmarks, with a particularly high bar for writing proficiency. Despite the fact that the SAT is the predominant college admission test in the Northeast, we will use the ACT for two primary reasons: (1) the SAT is in flux and therefore hard to plan backwards from, and (2) the ACT has an existing and established set of interim assessments going back to 8th grade (ACT-Explore) and continuing through to 10th grade (ACT-PLAN) that can be used to determine ACT growth from year to year. We will not plan backwards from MCAS or PARCC assessments.

STEM and Coding

We will explicitly encourage students to pursue courses of study in STEM fields with the goal of maximizing the percentage of students who major in STEM fields in college. Through advisory, we will lay out for all students the long-term career and financial advantages of STEM majors and degrees. Through advisory, we will also lay out a clear and concrete sense of the array of potential career paths that STEM degrees would allow them to pursue. Our graduation requirements (4 years math, 4 years computer science, 3 years science) will help ensure that all of our students have the necessary foundation in place to pursue as STEM course of study.

College-Ready Writing

We will use a rubric similar to the one developed at Achievement First (and aligned with the AP language and composition exam and the ACT) as an end-goal towards which we will aim our writing instruction. In order to ensure that students have the intense individualized feedback they need to make rapid improvements in writing, we have structured the 9th grade course schedule to minimize the total student load that English teachers will carry (approximately 40 students), thereby allowing them the opportunity to provide intensive one-on-one coaching.

All freshmen will take a 9th grade humanities course, taught by one teacher, that incorporates a study of literature, history, and composition. The purpose of this structure is not to align history and literature instruction, but to ensure that teachers have the time and opportunity to provide intensive writing coaching to their students. Humanities courses will be 2 periods long each day (even on Wednesdays). Approximately half of that time will be devoted to writing and coaching in-class. Humanities teachers will co-plan such that one teacher takes the lead on literature instruction and the other takes the lead on history instruction.

In grades 10-12, when English and social studies are taught by different teachers, and where total student loads become larger (approximately 80 for each teacher), English and social studies teachers will divide primary responsibility for writing coaching between them, such that each teacher continues to have the primary coaching responsibility for approximately 40 students.

Scope and Sequence

Brooke curriculum is created by teachers and completely aligned to the Brooke standards. The Brooke standards will be created by adopting the Common Core standards in ELA and Math, as stated in the 2011 Massachusetts Curriculum Frameworks. Our science standards will be driven by the adoption of the new Massachusetts Science and Technology/Engineering Standards. We will then examine which standards must be added to the Massachusetts Frameworks to ensure student success on the ACTs and in AP exams. Because these additional standards will be backwards planned from final course expectations (ACTs and AP exams), we will develop all Brooke standards in one process and any revisions will be evaluated for vertical alignment. Additionally, because we aim to align social studies and literacy instruction, we must ensure that those standards are also horizontally aligned.

Teachers will devise a course syllabus with units that cover all grade level subject standards. Syllabi will be reviewed by the principal and the department chairs. Lesson plans will be created around these standards, and when principals and department chairs are observing lessons, they will evaluate the lesson partially based on alignment to standards. Department chairs will be responsible for ensuring that curriculum is vertically aligned and the Co-Director for Academics will oversee that alignment work in addition to bearing responsibility for horizontal alignment.

Course syllabi will also include details about how they will align with the WIDA ELD standards. The network ELL Coordinator will be in charge of training all teachers of ELLs on how to use the WIDA ELD standards to drive instruction, support learning, and evaluate instruction.

Assessment

Interim assessments will be administered approximately every 8 weeks in all subject areas. The process of developing those assessments will be lead and coordinated by the Network Co-Director for Academics. After scholars complete the assessments, the principal and assistant principal will lead data meetings with classroom teachers responsible for that content. These meetings will be used to identify gaps in scholars' knowledge and skills in order to target instruction and realign curriculum where necessary. This is the same process that is used and has been proven effective in our middle schools.

Support for English Language Learners and Special Education Students

The following lays out our general approach to supporting English Language Learners and students with IEP's across our K-8 schools as well as our proposed high school. Under the current proposal, all students matriculating to ninth grade would have previously been enrolled at a Brooke campus. Therefore, the needs of our students should generally be well-known to us as we embark on year one of our high school plan. However, we recognize that we must maintain flexibility for the unknown and unexpected as we enter the high school realm. As such, we have planned our budget to provide maximum flexibility with staffing in order to provide additional support staff should that become necessary. The current budgetary assumptions include a high school student support coordinator, an additional high school student support staff member, and ELL coordinator, and additional related service capacity.

We meet the needs of all students through a universal design that allows us to provide differentiated instruction (an essential element of great teaching). Our school day allows our staff ample time for differentiation so that all students receive support on their own instructional level.

English Language Learners: When new students are admitted to Brooke Charter Schools, we provide them with a home language survey. If a student speaks or hears a language other than English at home,

the English Language Learner (ELL) Coordinator administers the MODEL to that child. Then, the ELL Coordinator and a team of staff members use those results, teacher input, conversations with parents and prior academic performance to determine whether the child qualifies as English Language Learner (ELL). If a child is designated as ELL, the ELL Coordinator and the teacher team devise an instructional plan for providing direct ESL support by a licensed ESL teacher and Sheltered English Instruction (SEI).

We serve ELLs differently depending on their needs and their level of English proficiency. For students who are at levels 1 and 2, we provide small group or individualized English language development for at least 2.5 hours each day to ensure rapid acquisition of English skills. This is provided by a licensed ESL teacher. Students more proficient in English receive predominantly mainstreamed instruction with additional ESL support (between 30 minutes to 1 hour of daily support) to meet the specific child's needs. Core academic teachers for ELLs hold the SEI endorsement or are enrolled in a SEI course to obtain the endorsement. ELL Coordinators work with ELLs in small groups using a curriculum that is aligned with WIDA standards. The curriculum addresses listening, speaking, reading and writing skills. In addition to administering the ACCESS in January, ELL Coordinators also administer the WIDA MODEL to all ELLs in June. This provides staff with at least two data points to use when evaluating the ELL program's effectiveness. We evaluate the success of our ELL and sheltered English instruction based on how quickly we can enable students to proficiently access the complete curriculum in English.

We strive to have all ELLs reclassified within three years at our school. We will consider reclassify ELLs when they have earned an overall composite score on ACCESS of at least a 5 with reading and writing scores at least a 4.0 and are able to demonstrate the ability to perform ordinary class work in English. We review data from network assessments and report cards (which show mastery towards grade level standards) when considering reclassifying students. Teacher input is also a vital part of the reclassification process.

Students with disabilities: The first step in identifying students with special needs is determining which ones already have IEPs when entering Brooke Charter School. We use formal school records, data gathered from Edwin Analytics and communication with parents to determine whether a student already has an IEP; if they do, we receive the IEP from either the past school or the family. Within two weeks of receiving the IEP, we arrange a parent meeting to discuss the IEP. We then provide the necessary services until the IEP is revisited and revised.

For students who do not already have an IEP but who demonstrate potential support needs, we initially provide a period of intervention and an evaluation of response to intervention. During the period of intervention, we provide additional academic support from the classroom teacher, the student support coordinator, or any other needed professionals (e.g., speech therapy) for a minimum of six weeks. We do our best to provide students with researched based interventions (e.g. Duet Reading, Wilson Reading Program, etc.) whenever possible and often use Aimsweb as a progress monitoring tool. We then assess students against goals to determine if there has been a positive response to intervention. Anytime thereafter, if the student support coordinator, related services provider, parent, or classroom teacher determine that the intervention is not enabling the student to made adequate progress, the student will be referred for special education testing. We then follow all laws and regulations regarding the assessment and potential creation of an IEP. If parents request testing, then we will begin testing rather than starting with an intervention period.

Within our network, we employ two full-time speech and language pathologist, three school psychologists, and an occupational therapist. We contract out for physical therapy needs and other

services as needed. All services are provided in the least restrictive environment (usually the classroom, but a range of options are provided as needed). Special academic services are typically provided by student support coordinators who are highly qualified special education teachers. When we suspect a student no longer requires special education services, we will initiate an evaluation and hold a team meeting to determine if services are still needed. We discontinue an IEP when the team has determined services are no longer needed. We evaluate the success of our program not based on how many students remain in special education, but instead on the academic success of our special education and former special education population.

Culture and Family Engagement

We will be intentional in our efforts to build a student culture centered on love of learning, the value of hard work, and mutual support and respect. As in our K-8 schools, we will steer clear of extrinsic rewards and incentives and will focus instead on the celebration of accomplishment and discovery. Weekly community meetings will focus on those themes, as will daily advisory and weekly advisory meetings. For all of the below, we will monitor and evaluate success as we grow and modify each program element as needed.

Advisory System

One unique challenge of applying the Brooke approach at the high school context is moving away from the semi-self-contained classroom style of middle school, while still accomplishing the key goal of making students feel known. In response, the Brooke High School will implement an advisory system starting in the first year. These advisories will be single gender, led by teachers and possibly other staff members, and will each contain 12-15 scholars.

Advisories will be mixed grade level (beginning in year 2) in order to promote cross-grade-level support and role modeling from upperclassmen, and scholars will keep the same advisor for all four years. The role of advisor will be an integral part of the Brooke community, and advisors will serve in a number of capacities. Advisors will keep track of their advisees' progress towards high school graduation. They will also serve as the hub for parent communication and will be required to conference with each advisee's families twice a year. Advisors will serve as front-line college counselors, and will be trained and supported by college planning staff.

Advisories will meet twice daily. Each day will begin with a 15 minute check in, and end with a 25 minute advisory session. Additionally, advisories will participate in weekly Wednesday classes designed around college information and character education. Advisories will also attend college visits together. A bulleted list of advisory characteristics follows:

- Single Gender
- 12-15 advisees per group
- Advisories contain mixed grade levels (eventually 3-4 students from each grade) in order to ensure cross-grade-level support and role modeling from upperclassmen, as well as to ensure a smaller college placement burden each year for advisors.
- Same advisor all 4 years
- Advisors are front-line college counselors. They are trained and supported by college placement staff

- Advisors ensure that students are meeting the requirements for team sports, extra-curricular activities, and community service.
- All parent communication goes through advisors, including conferences twice per year.
- Advisors track all of the following for individual students and for the advisory: GPA, homework averages, attendance, detention, college acceptance, college enrollment

Advisory Curriculum

- Each day begins with 15 minutes of advisory for check-in, ensuring organization, etc.
- Each day ends with 25 minutes of advisory, including check-in and silent reading time
- Weekly Wednesday Classes
 - College info, college visits, etc.
 - Character Ed reading (text-based and product-based lessons)
 - Health/Sex Ed.

Rules and Consequences

Our disciplinary code will be enforced via a traditional demerit/detention system. That structure will be maintained throughout all 4 years, but we hope and intend that it will be employed far less frequently as students mature. We will develop a set of privileges that students may earn when they demonstrate the ability to meet responsibilities (attendance, HW, GPA) and impose the self-discipline needed to comply with school rules consistently (low detentions and demerits).

Dean of Students

Our current plan is to have one dean of students for the school. It is possible that we will add another dean at some point in our growth. Deans will be responsible for overseeing the administration of school-wide behavioral rules and procedures, including coordinating detention and suspension. However, all parent contact regarding student behavior goals and problem-solving will be done through advisors.

Homework Completion Program

Students whose homework grades fall below threshold levels will be required to attend the homework completion program after school each day until their homework grades reach acceptable levels. The homework completion room will be staffed by school administrators. We have not yet determined whether homework completion will take place starting at 3:30 each day (thereby displacing students from extra-curricular classes and sports) or whether it will take place at 5 PM each day.

Family Engagement

We believe that the most meaningful parent and family engagement happens in the context of strong relationships between teachers and students. Building those relationships becomes more of a challenge in high school where teachers are more specialized and where parents are increasingly hands-off and less likely to be closely involved at their kids' school. Our advisory system is designed to ensure that parents have a teaching staff member at school who knows their child very well and whom they can trust. Advisors will stick with their advisees throughout the tenure of their advisees and will be the front-line academic support person for advisees and their parents, as well as their front-line consultant during the college application process.

Network Oversight

Consolidation will require no effective change to the way network leadership currently oversees schools or campuses in the Brooke network. Currently, the network Co-Directors officially serve as the heads of school for each Brooke charter, and divide accountability between all academic and non-academic responsibilities. Principals at each school have complete ownership over the performance of their campuses and report directly to the Network Co-Director for Academics. Under this proposed amendment, the only change to this structure will be the addition of a high school principal who will report directly to the Network Co-Director for Academics.

We believe that the improved performance of each of the Brooke campuses throughout the period of expansion is attributable to the collaborative professional communities we have been able to build across the campuses, including:

- A well-knit and close working group of principals who plan professional development together, meet and visit a Brooke campus together weekly, and communicate constantly.
- A well-knit group of school-based directors of operations who meet together every three weeks, plan network operations professional development together, and constantly monitor and discuss performance relative to operational audits, attendance targets, and teacher and parents survey results.
- Network-wide teacher groups who meet regularly to review school-based data on interim assessments and plan curriculum.

High School Leadership

The high school principal will have complete responsibility and accountability for the school's performance. The high school principal will report to the network's Co-Director for Academics.

The principal will serve as instructional leader at the school. In order to contain the number of teachers directly reporting to the principal, we will add department chairs as enrollment and therefore staff numbers grow.

Brooke currently has a deep bench of principals in waiting who we believe are ready to serve as instructional leaders. However, none of those principal candidates has significant high school experience, and given the short turnaround under this proposal (high school opening in August 2016), we have developed a leadership transition plan for year one. Our plan for year one is to make our Network Co-Director the acting principal while training and working closely with a strong high school principal fellow. We have yet to select who that fellow will be.

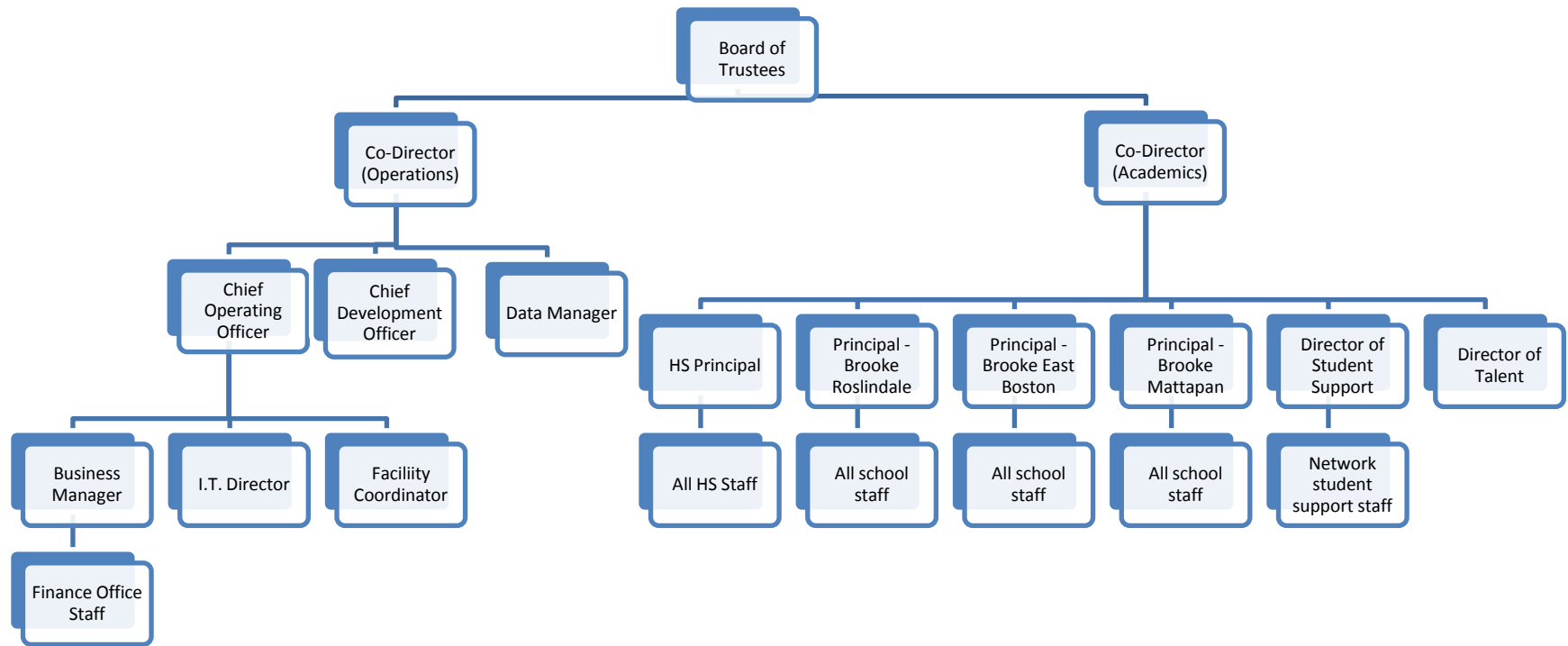
Evaluating High School Program Success

We will ultimately evaluate the success of our high school program success on the basis of 6-year college graduation rates. In the interim, operational success will be evaluated using the same metrics we currently use in our accountability plan. Academic success will be evaluated by the following:

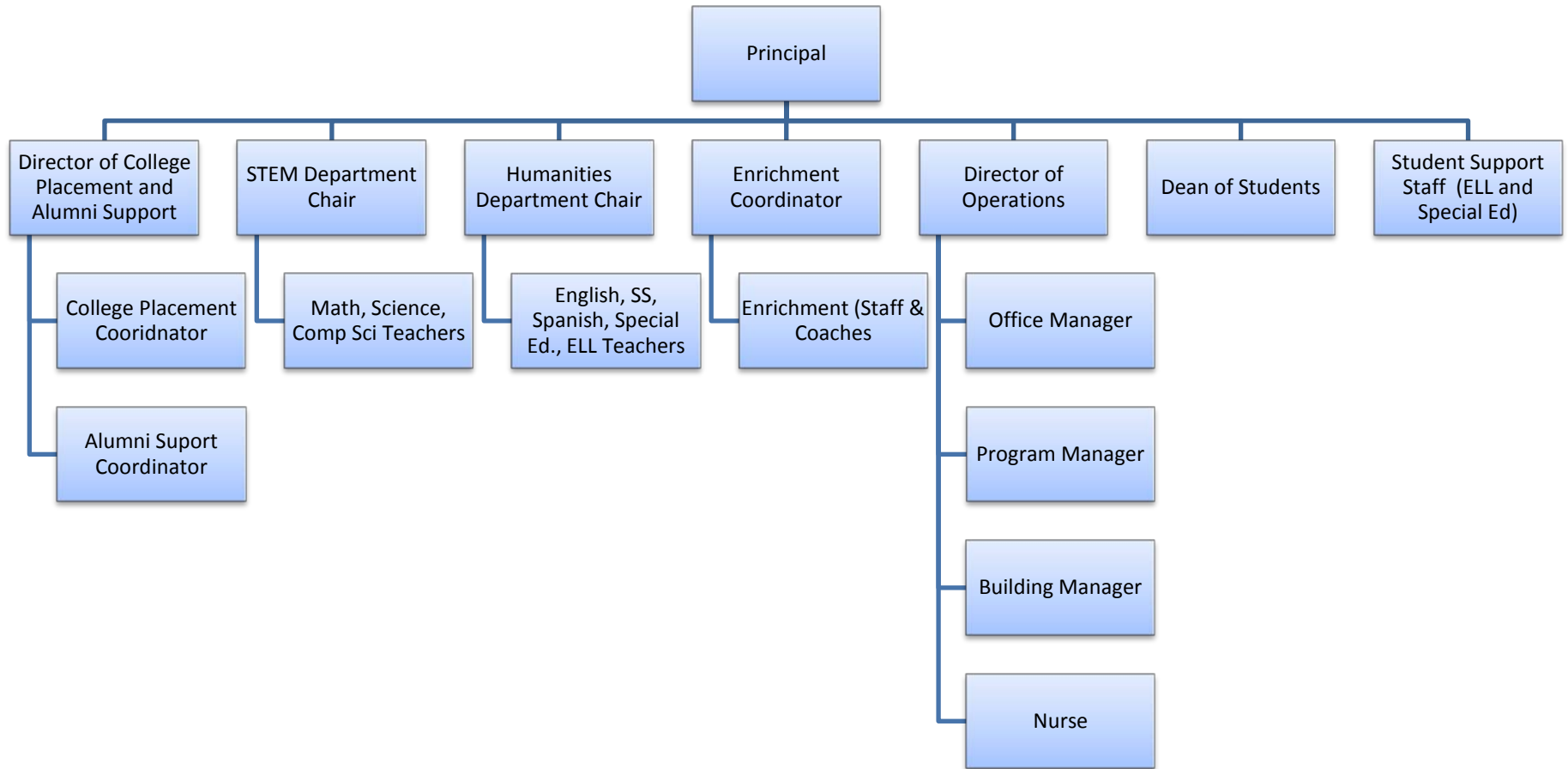
- Results on interim assessments aligned to AP and ACT standards
- Results on state-administered assessments (PARCC or MCAS)
- Results on AP tests
- Results on ACT tests and ACT designed annual benchmarks (ACT-Explore and ACT-PLAN)

The principal is ultimately accountable for the success of the program and for generating buy-in and investment from staff, students and parents. He or she will be supported in that effort by the Network Co-Director for Academics and the professional learning community of existing Brooke principals.

Brooke Network Organizational Chart (Including High School)

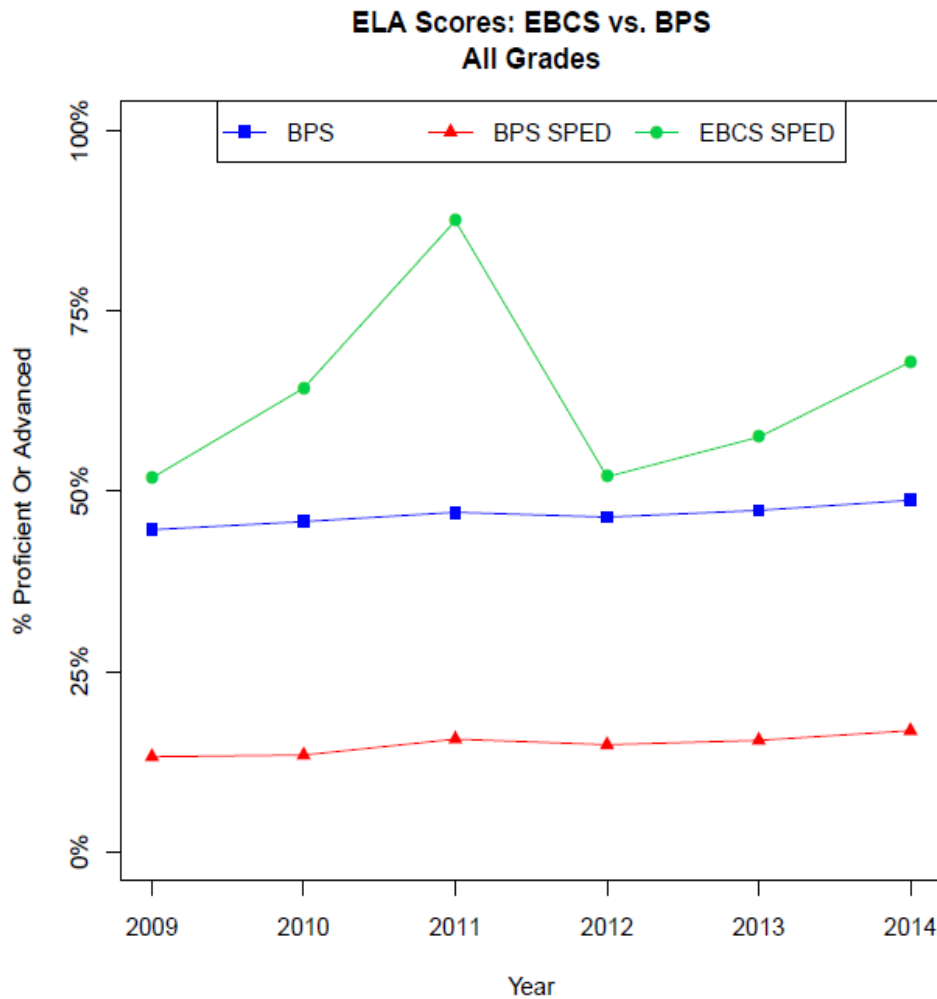


Brooke High School Organizational Chart
 (When full size)

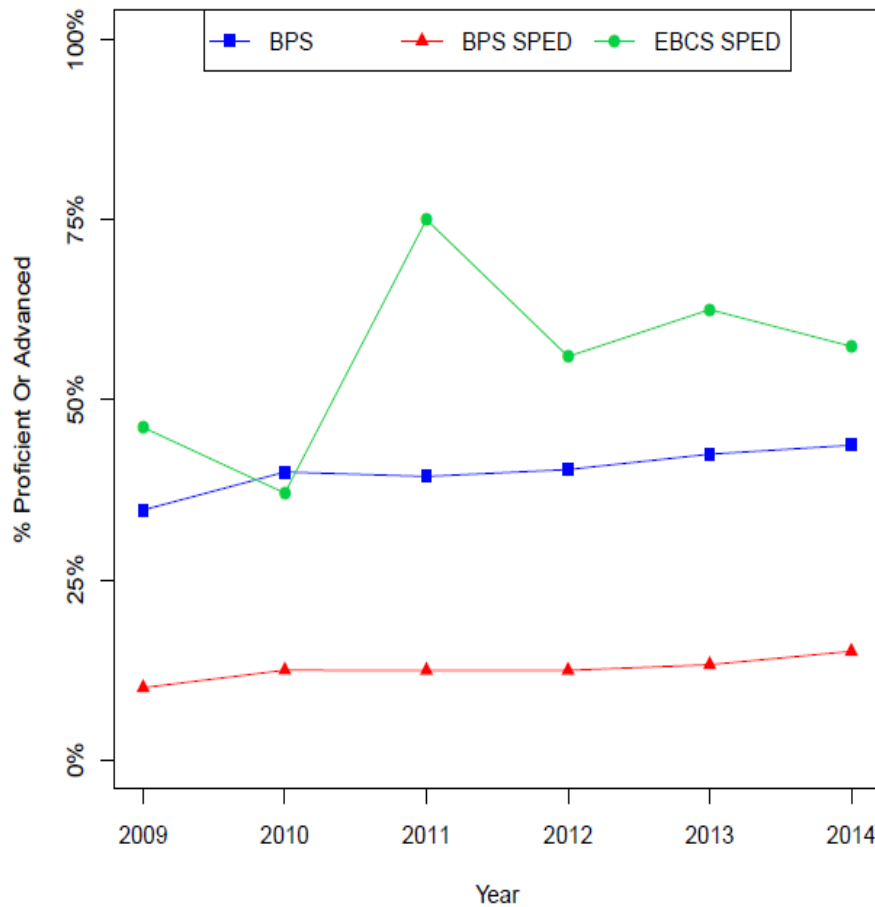


Special Education Access and Enrollment

Brooke has a school-wide support and intervention model that supports all students and deliberately minimizes and reduces the proportion of students on IEP's. This approach results in dramatically strong academic performance among students with disabilities, as outlined in the CHART data, and outlined in the graph below. In short, students with disabilities at Brooke consistently outperform the general population from the sending district and often outperform the general population across the state.



**MTH Scores: EBCS vs. BPS
All Grades**



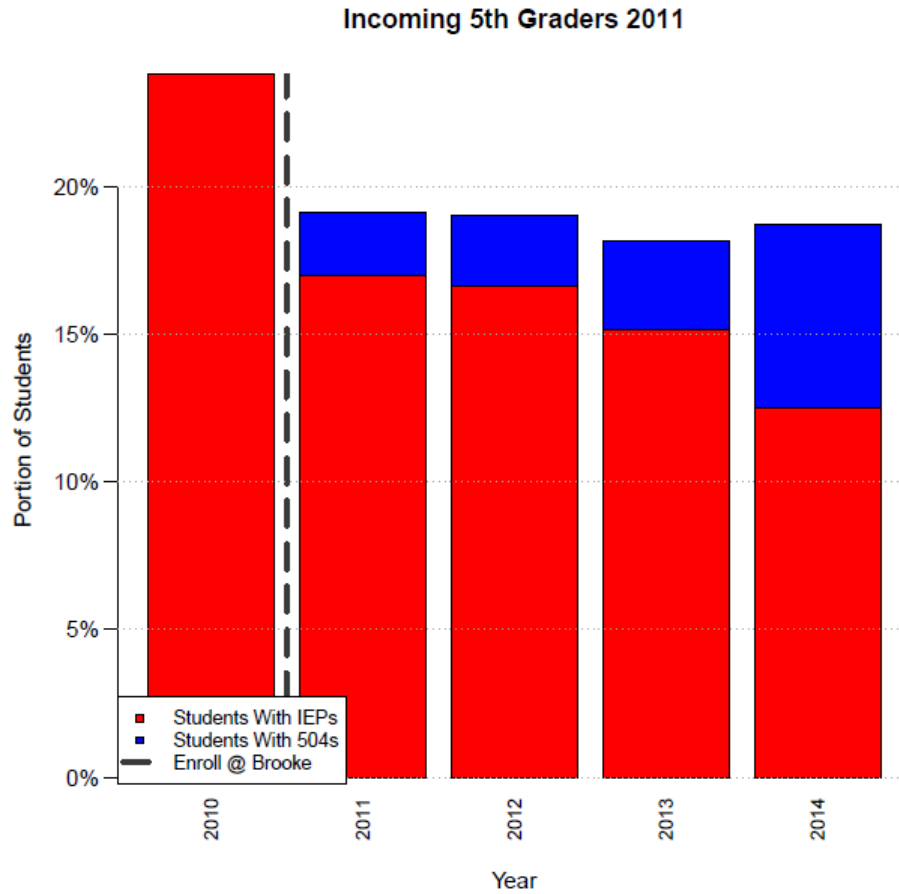
Source: DESE School and District Profiles

In addition to resulting in high achievement among special education students, this approach also demonstrably results in a lower proportion of students on IEP's than occurs in most other schools, district and charter alike. As the CHART data highlights, the proportion of students on IEP's at Brooke Roslindale has hovered between 6% and 8% over the last several years. The rates at Brooke East Boston and Brooke Mattapan have been similarly low.

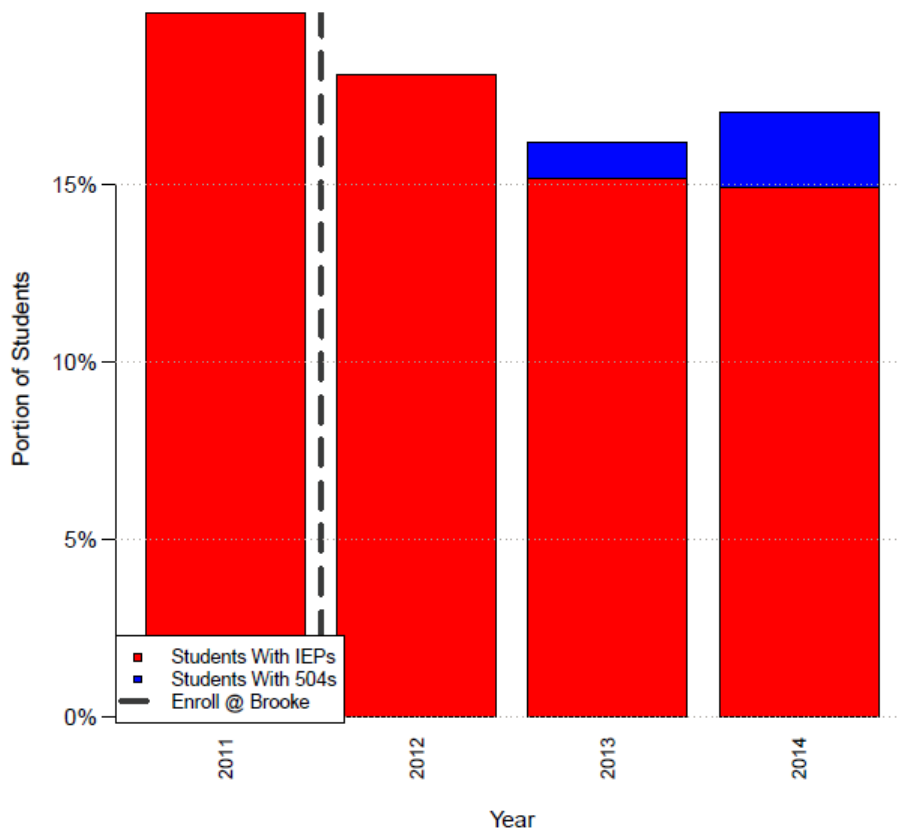
The proportion of students on IEP's at Brooke Roslindale has not always been so low. Between 2003 and 2006, when Brooke Roslindale was only a middle school, the proportion of students on IEP's routinely fluctuated between 14% and 17%. However, beginning in 2006, when the elementary school at Brooke Roslindale opened for the first time, the overall proportion of students on IEP's fell to 10%. Over the next few years, as the size of the elementary school increased and the relative size of the middle school decreased, that overall proportion of students on IEP's continued to decline (see data on DESE school profiles).

Throughout these years, Brooke continued to admit new cohorts of fifth graders (anywhere from 48 to 60 students) at one or more of its campuses. The data shows that when students come to Brooke as

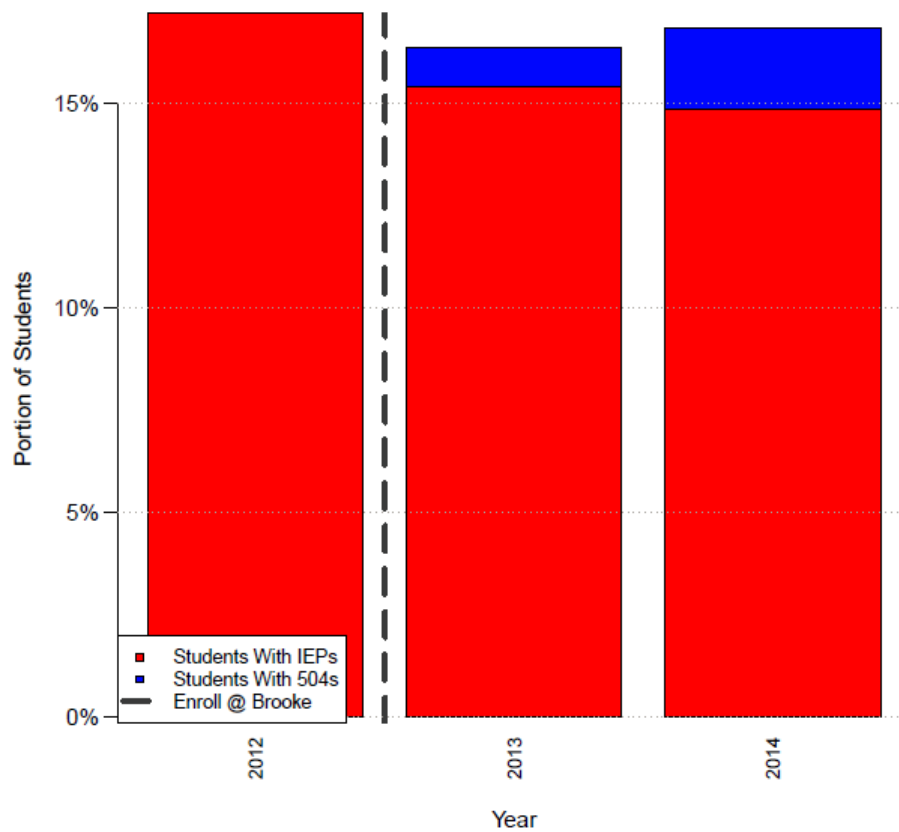
middle school students, having already attended district schools for many years, they arrive at Brooke with rates of special education identification that were very similar to the district. The three graphs below show the cohort data for the three most recent cohorts of fifth graders who arrived at Brooke as new 5th graders.



Incoming 5th Graders 2012



Incoming 5th Graders 2013



Source: Edwin Analytics

On each of the above graphs, the dotted line represents the division between the years these students spent at Brooke (after the dotted line) and the years they spent in school before Brooke (before the line). Several things stand out about the data for all three cohorts:

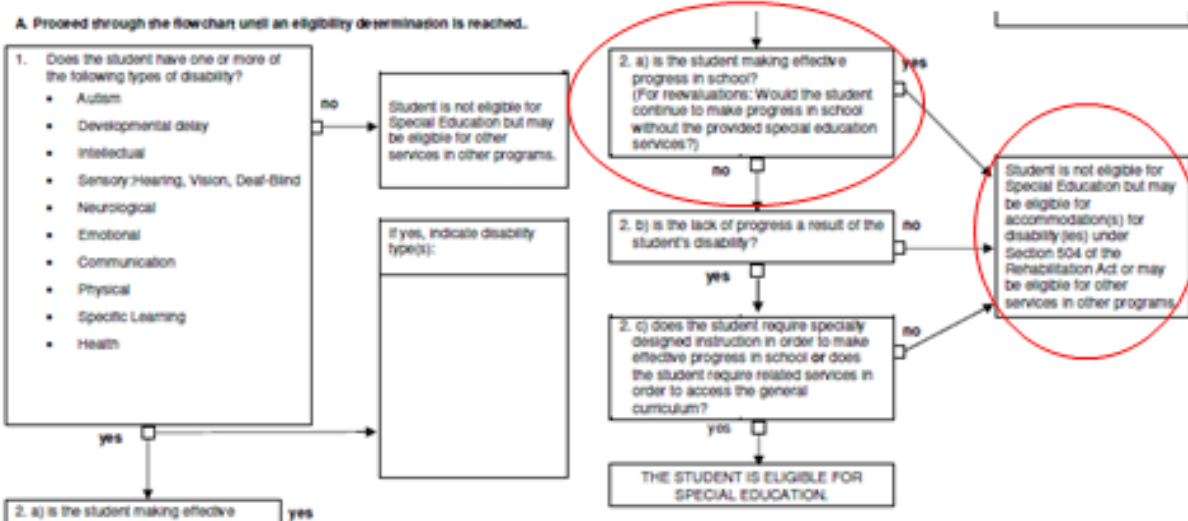
- 18% to 23% of these students came to Brooke having with IEP’s (at the end of their 4th grade year). This is equivalent to or higher than the district average and substantially higher than the comparison index on CHART.
- The proportion of students on IEP’s among this cohort immediately dropped in their 5th grade year at Brooke as several students exited special education. The proportion continued to decline during subsequent years as additional students were removed from special education.
- Some of the students who exited special education were instead placed on 504 plans. The proportion of students on 504 plans also increased over time.

The fact that overall special education rates at Brooke have been substantially lower than 18-23% is due to two primary factors:

1. The removal of middle school students on IEP’s
2. The very low special education identification rates in the Brooke elementary grades, where typically 5% of incoming Kindergartners arrive at Brooke with IEP’s, and where very few additional students are placed on IEP’s during their time at Brooke.

The low special education identification rates at Brooke are due primarily to our school-wide support and intervention model designed to create the capacity for all teachers to support all of their students. It is also due to Brooke’s strict adherence to department guidelines on special education placement and persistence. In short, students who are making effective progress at Brooke are not eligible for special education.

DESE Prescribed Special Education Identification Process



Source: DESE

When students are making effective progress in school but are found to have a disability, those students are often placed on a 504 plan at Brooke rather than an IEP. These students are eligible for and receive a full range of supports, including “related services” (speech and language, occupational therapy, physical therapy, etc.). Approximately 25% of the student caseload of related service providers at Brooke is represented by students who are NOT on IEP’s. While we do not have access to comparison data for other schools and districts, we believe that this is an unusual practice.

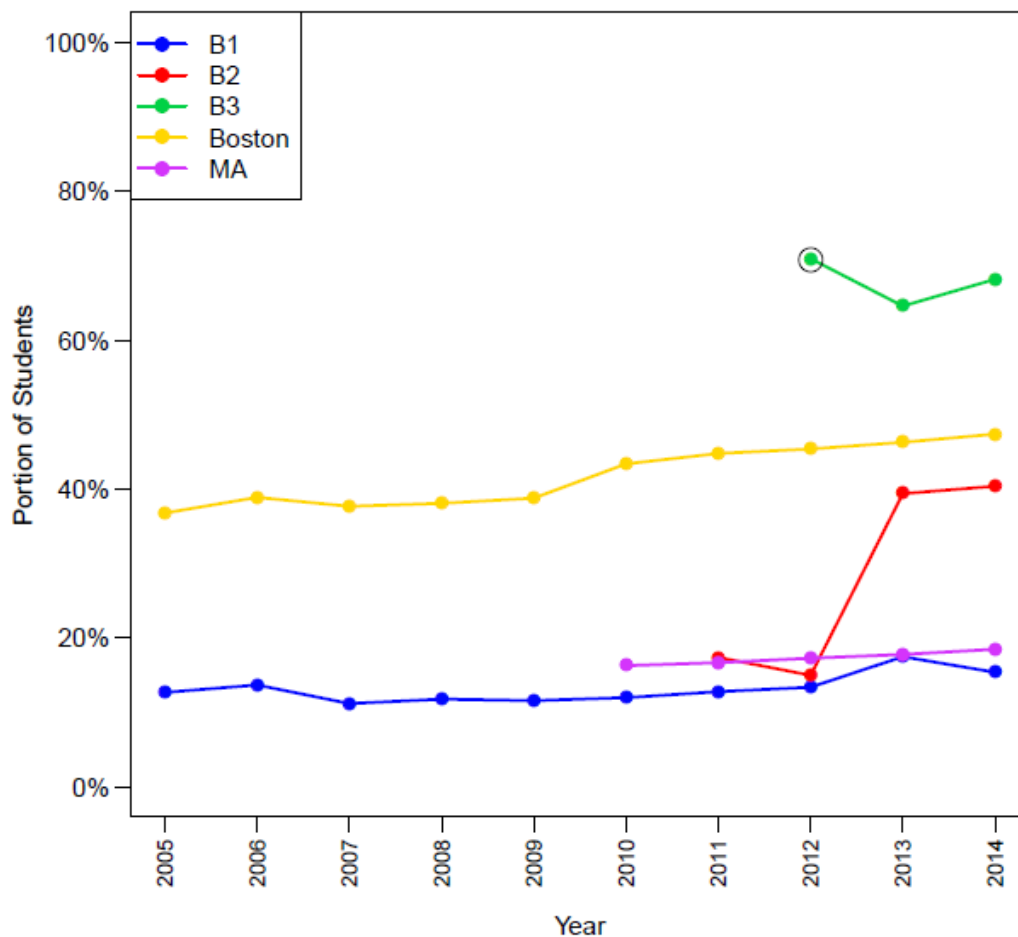
ELL Identification and Persistence

Brooke is committed to serving families of students who have historically been underserved, including families who are non-native English speakers. It was for that reason that we decided to open a third campus in East Boston to serve families in East Boston and Chelsea. Although we had historically served

an underserved population at Brooke Roslindale, consisting primarily of families who were both low-income and African-American, we were eager to also serve families who were non-native English speakers as well. Approximately 65% of students at Brooke East Boston identify as FLNE, a much higher proportion than at BPS. However, only about 14% of students at Brooke East Boston are ELL's. So how can this discrepancy be explained and understood?

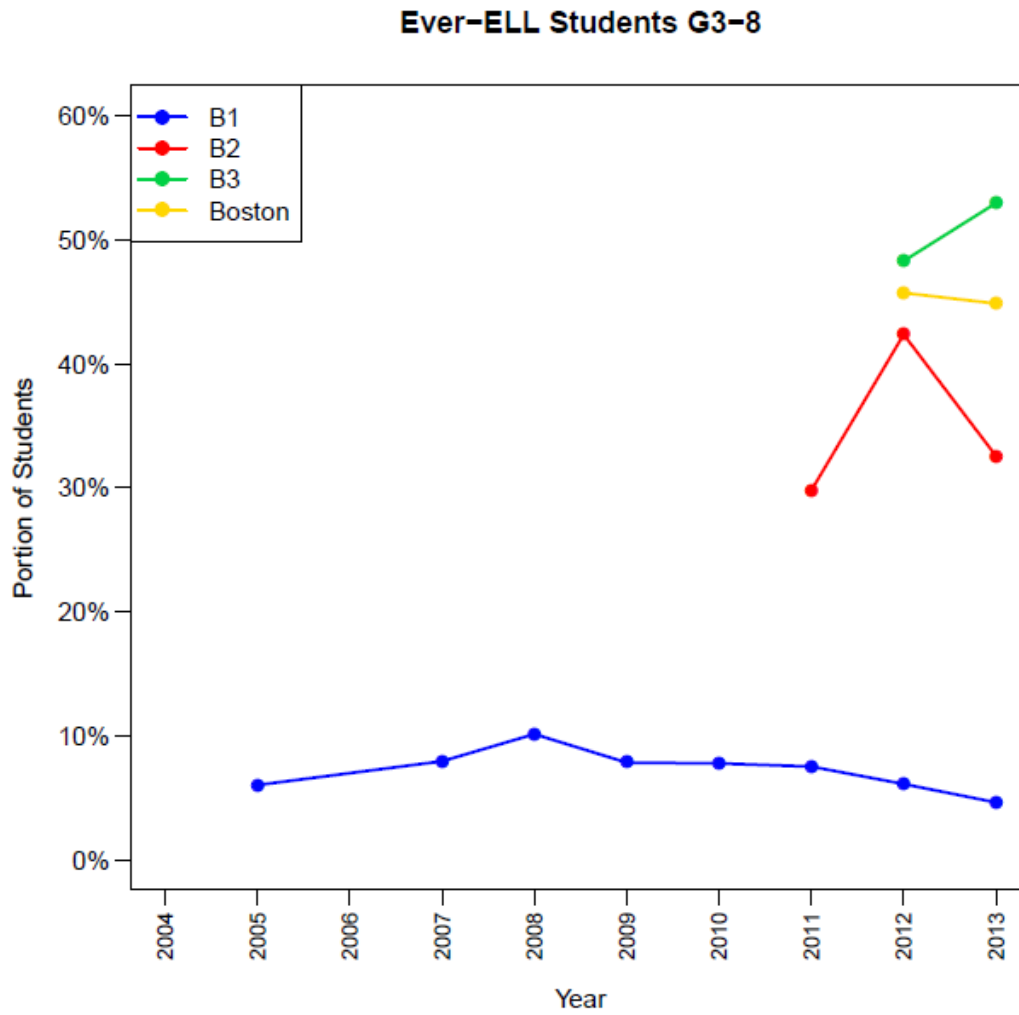
The data shows that FLNE students at Brooke have historically been much less likely to be identified as ELL at Brooke. And once designated, ELL students have maintained the label for a much shorter duration than appears to be the case in the sending district. As is the case with special education, our approach to identification and service to identified ELL students explains a great deal of the discrepancy between the proportion of students who are ELL's at Brooke versus the sending district.

First Language Not English



The graph below shows the proportion of students at each Brooke campus and at BPS who are “Ever ELL's.” Note that the proportion of Ever-ELL's is actually HIGHER at Brooke East Boston than at BPS, despite the fact that the proportion of current ELL's is much lower at Broke East Boston than in the district. This suggests that students may keep the ELL designation much longer in the sending district

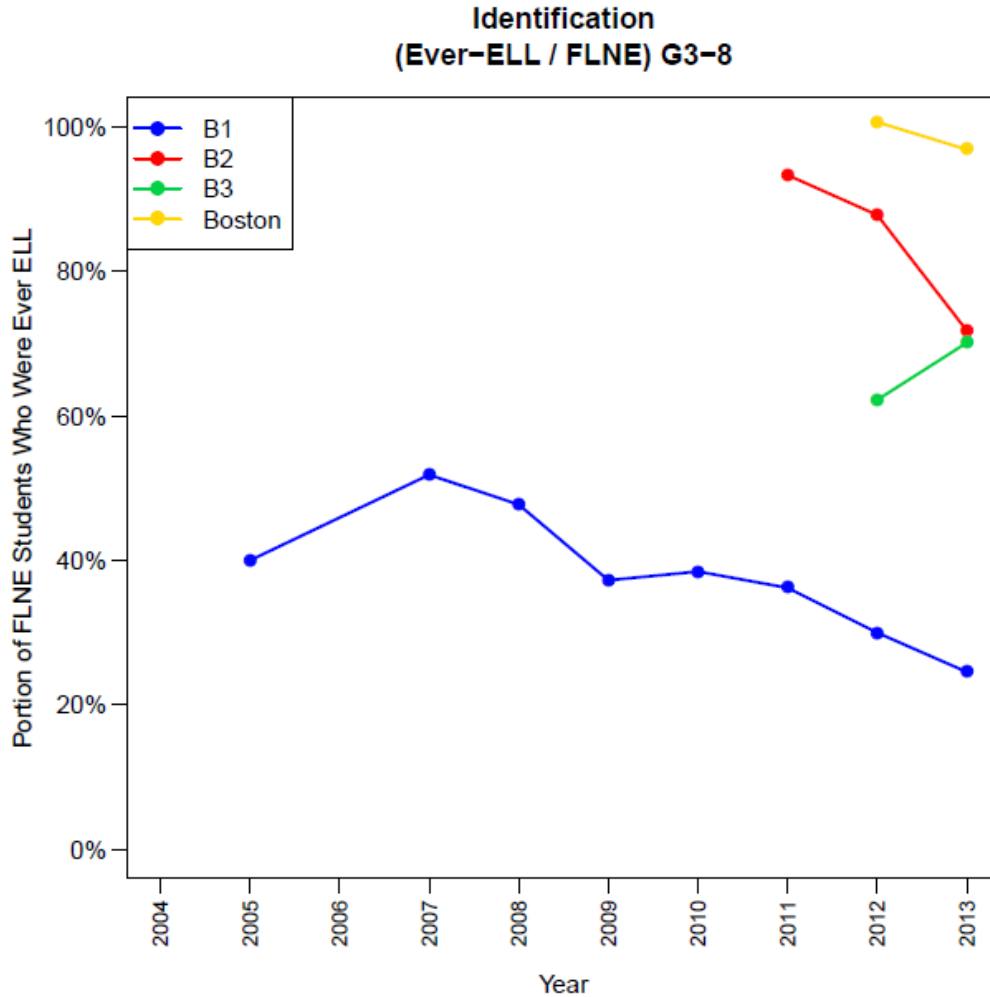
than they do at Brooke East Boston.



The graph below shows the % of all FLNE students that are “ever ELL’s”. This is the best comparison measure we could devise to show how likely an FLNE student is to be identified as an ELL, while simultaneously removing the variable of how likely students are to maintain that designation. The following trends stand out:

- At BPS, the rate of identification in 2012 and 2013 was between 95% and 100%.
- At Brooke East Boston and Brooke Mattapan, the rates have converged around 65%. (The Brooke Mattapan rate was initially higher because that campus initially used a much more limited definition of FLNE that it has since expanded to reflect district practice and the practice at the other two Brooke campuses).
- At Brooke Roslindale, at its peak, the identification rate was just over 50%. That rate fell in conjunction with the founding of the Brooke Roslindale elementary program and its subsequent expansion. In other words, as the proportion of students who had spent time in district schools decrease over time, the proportion of students who had ever been identified as ELL has fallen as

well. For that reason, we expect the proportion of students who were ever identified as ELL at Brooke Mattapan and Brooke East Boston to decline over time as well.



Source: Edwin Analytics

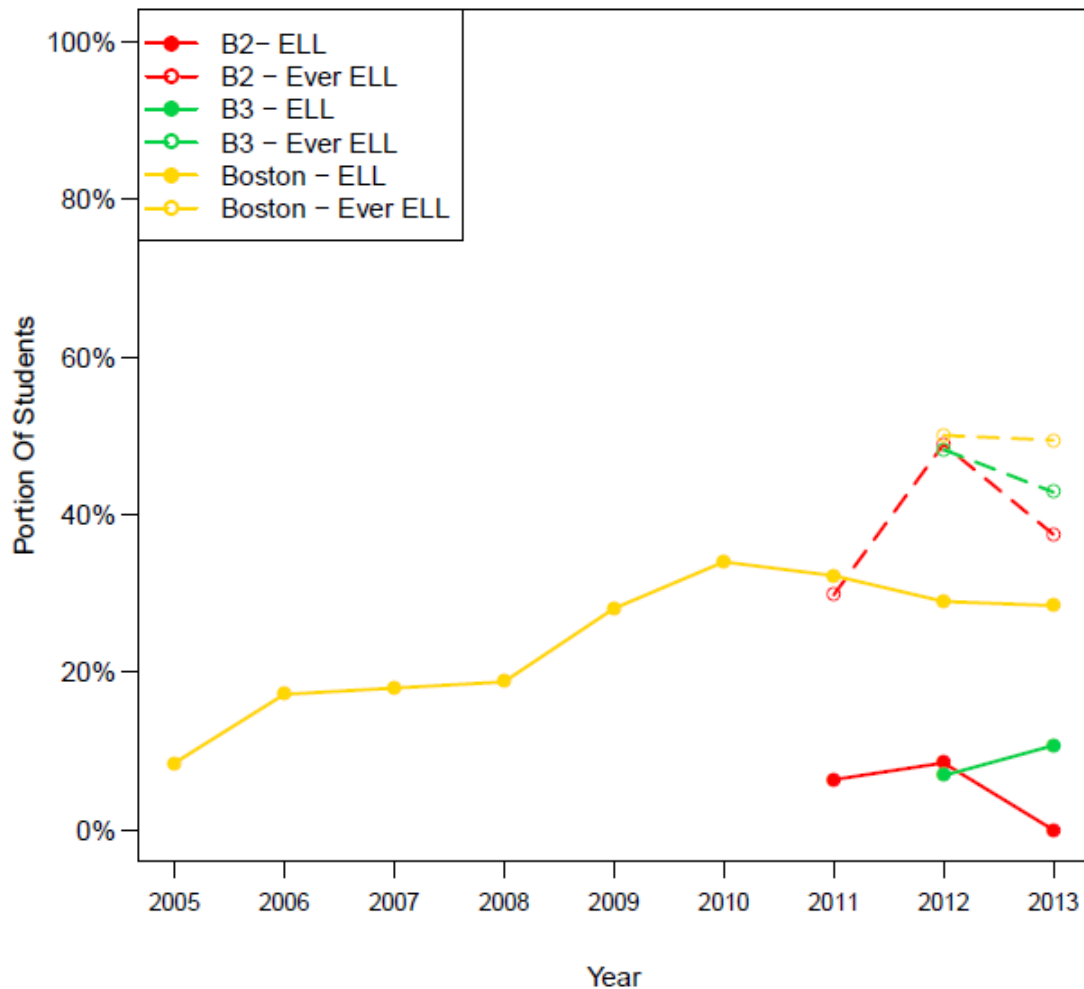
ELL Recruitment

Because the data on ELL identification and persistence is inconsistent at best, we believe that this issue merits further study from an independent source. However, the data that is available show conclusively that the rates of ELL incidence at Brooke vs. district are likely not attributable to differing recruitment and retention practices nearly so much as they are attributable to issues of identification and persistence.

To highlight this fact further, the graph below looks at both the incidence of ELL students and Ever-ELL’s among incoming classes of new 5th graders at Brooke for the three most recent years of available data. We think these cohorts are worth looking at particularly closely because for the most part, whether or not they are identified as ELL’s has already been determined by the district (as opposed to students in elementary grades, where Brooke is most likely the party responsible for identification).

If we look strictly at ELL's among these cohorts, there seems to be a large discrepancy between Brooke and the district. Casual observers might assume that Brooke is not able to recruit or attract ELL's. But when we look instead at the incidence of Ever-ELL's, that discrepancy all but goes away. The reason for this discrepancy is clear enough to us. As a matter of practice, we have found that a large proportion of ELL students arriving at Brooke in 5th grade are eligible to exit their ELL status, and we have removed the designation.

G5 ELL vs. Ever ELL



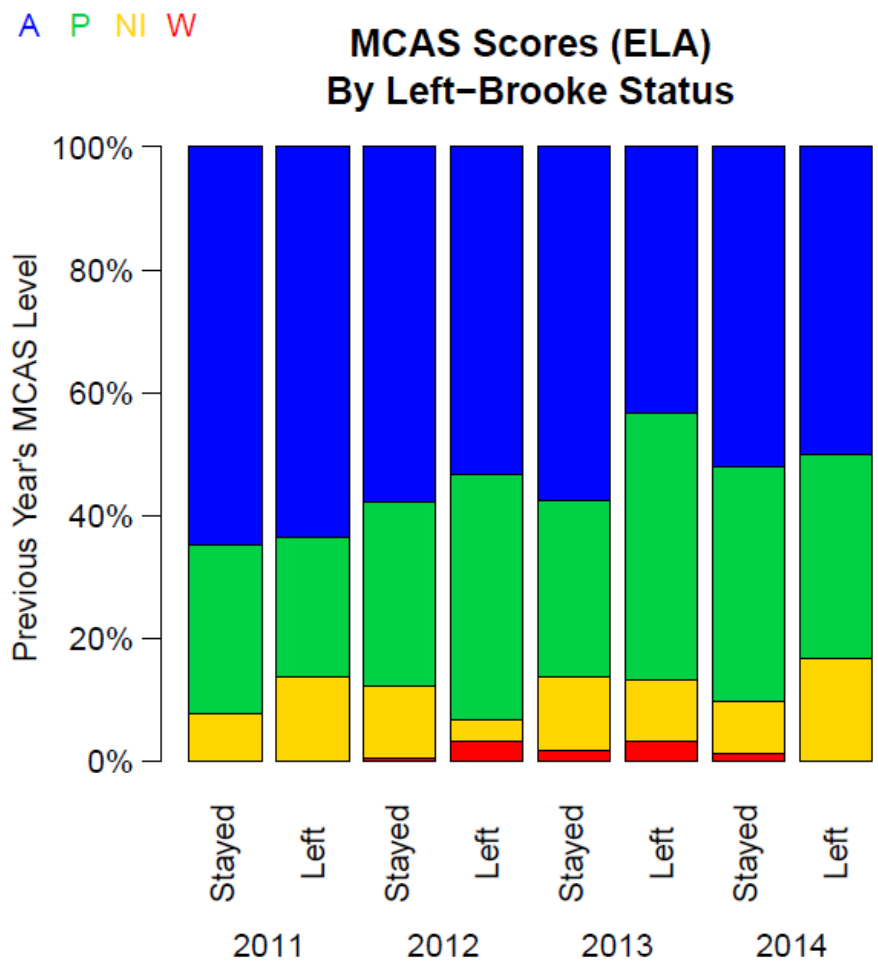
At Brooke Mattapan, where all families are new to the school within the last few years, approximately 40% of families identify as FLNE. And at Brooke Roslindale, that proportion has been increasing and is now up to 17.5%. We believe that the biggest reason for this increase has been the ability we were granted starting in 2011 to have access to mailing list of age-eligible families in the district, and to send direct mailings in four different languages to all of those families asking them to consider applying to Brooke. We have also employed multiple other outreach strategies over the last few years, as laid out in our recruitment and retention plan, including advertising in Spanish in local newspapers, door-to-door

recruiting, and partnering with community organizations to get information in the hands of parents.

At Roslindale, as demonstrated in the CHART data, the proportion of students at Brooke Roslindale identified as ELL has been historically low and between 0% and 1% over the last several years. In part, this low proportion is attributable to the practices related to identification and persistence outlined above. But at Brooke Roslindale, that discrepancy has also been attributable to the fact that we have served a higher proportion of low-income African American families as compared to low-income Latino families at that campus. Consequently, despite the fact that the proportion of families eligible for free and reduced-price lunch has been high, the proportion of families designated as FLNE has been low (11% to 13% at Brooke Roslindale vs. 38% to 45% at BPS).

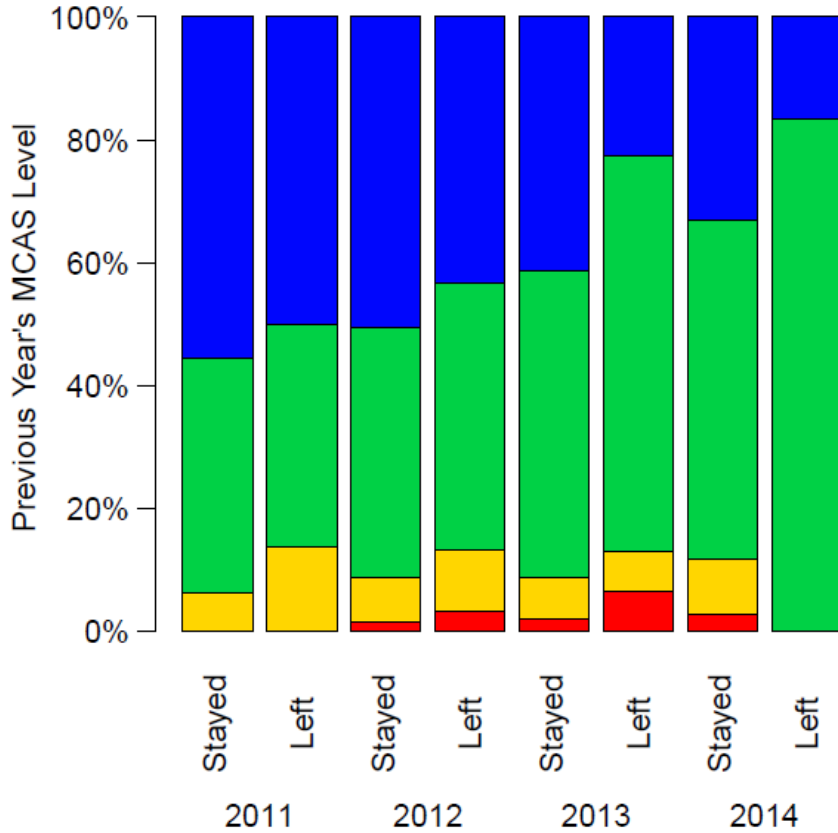
Attrition and Suspension

As highlighted in the CHART data, student attrition rates at Brooke are among the lowest in the city among district and charter schools alike, and are essentially no different for high-needs students than for others. Furthermore, even the small numbers of students who do leave Brooke each year are just as likely to be performing well academically as their peers who persist, as demonstrated in the graphs below.



A P NI W

MCAS Scores (MTH) By Left-Brooke Status

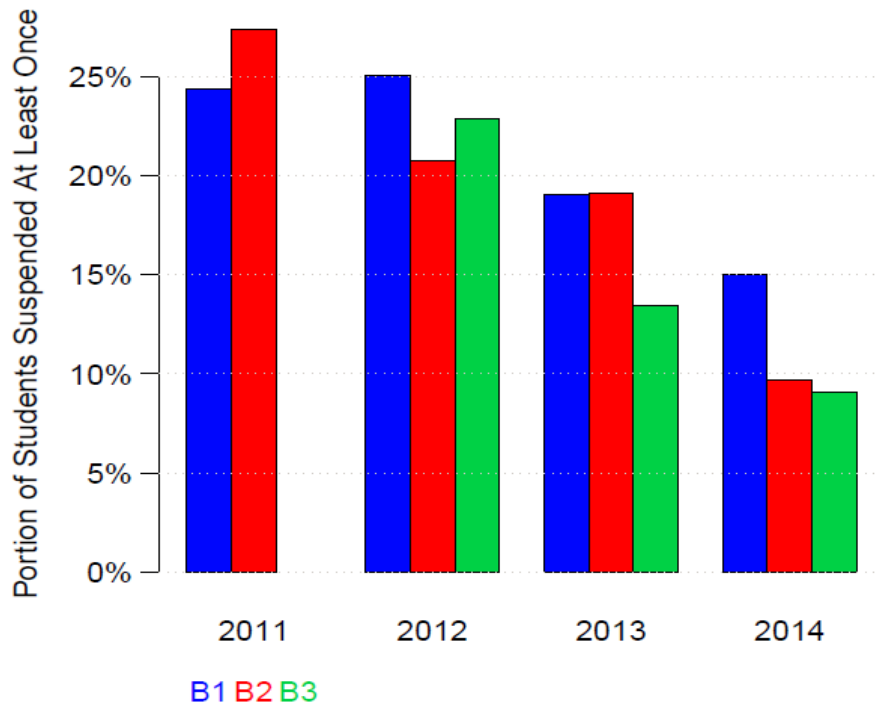


Source: Internal Data

As the CHART data highlights, the suspension rate at Brooke Roslindale has been higher over the last several years than the sending district. However, as highlighted in the previous section, those suspension rates have not resulted in high rates of attrition at Brooke – just the opposite.

We use suspension as one element of a proactive approach to building positive school climates in which students and teachers can focus on teaching and learning and in which ALL of our students can feel safe. Over time, the suspension rates at all three Brooke campuses have fallen significantly, as shown in the graph below. However, we believe that suspension has a place as one element in our approach to building safe and positive school climates in which ALL students can succeed, and all available evidence shows that our practices have done exactly that.

Suspensions Fall 2011 – Spring 2015



Source: DESE data

Dissemination

As part of the school's faithfulness to charter efforts, and in alignment with the DESE Charter School Performance Criteria, Brooke Charter Schools have taken the following actions over the course of the past five years to disseminate best practices and provide innovative models for replication to other public schools in Boston and beyond. With consolidation and expansion, Brooke will maintain and grow many of these initiatives, including site visits, Internet-based resource dissemination, and partnerships as we develop into a K-12 network and continue strengthening our model and innovating in the classroom.

2011-2012

In the 2011-12 school year, Brooke Charter Schools redesigned its website to make it as easy as possible to share our best practices with other schools. The website more clearly articulated the school's vision of great teaching, delineated Brooke's approach to professional development, and highlighted other key elements of the school's model (e.g., character education, extended day). The website redesign also included helpful, easy-to-find resources for other educators, including Brooke's academic standards for all grades in science, math, reading, and writing; character education standards; teaching excellence rubric; and other key resources to support teacher success. Complementing the website, Brooke produced a video that concisely explains the school's approach to excellent teaching.

2012-2013

In order to share Brooke's work on developing effective teaching, the network of schools significantly increased the materials and resources available to other schools and districts on the Brooke website. Those additions included, but were not limited to, the following:

- A complete list of Brooke's K-8 learning standards
- Brooke's standards of excellent teaching and an accompanying rubric
- Brooke's standards of instructional leadership
- Brooke's character education standards
- Instructional resources pages including an array of sample unit and lesson plans
- A "How We Teach" section laying out in detail the Brooke approach to teacher professional development

Further, Brooke shared all of its curriculum resources (unit plans, lesson plans, etc.) with any school who requested them across the state and country. In Boston, that meant sharing large swaths of curriculum resources with UP Academy, the BTU Pilot School, Rogers Middle School, and Boston Renaissance Charter School.

In the 2012-2013 school year, across all three campuses, Brooke Charter Schools hosted 128 visits by 89 individual organizations. Some Boston-institutions of note that visited Brooke Charter Schools in the 2012-2013 year included the following: Trotter Elementary (BPS), Dudley Street Neighborhood Charter School, Bridge Boston Charter Schools, Conservatory Lab Charter Schools, KIPP MA, and City Year.

2013-2014

During the 2013-2014 school year, Brooke assessed expanding the materials and documentation available to the general public via the website and upon request. Specifically, Brooke began steps to make available the most commonly requested information including additional details on teacher

professional development, the associate teacher program, and an expanded library of online instructional.

In the 2013-2014 school year, Brooke Charter Schools hosted 474 visitors participating in 156 visits representing 98 individual organizations (across all three campuses). Some Boston-based institutions of note that visited Brooke Charter Schools in the 2103-2014 school year included the following: Boston Preparatory Charter School, Boston Public Schools, Bridge Boston Charter Schools, City Year, Excel Academies, Match, and UP Schools.

2014-2015 (and beyond)

Over the next several years, a major institutional priority for the Brooke Schools is to codify and disseminate the components of our success (for example, the essential elements of an effective lesson, a clear guide for classroom leadership, skill progressions for new teachers, and an outline of our associate teacher program). A key element of this plan is the development of a comprehensive video library that will provide examples of these components in action.

The video library will help document methods of effective classroom instruction, management, and culture, for the purpose of disseminating best practices, as well as developing and supporting teachers internally. The video library will assist principals with supporting new and veteran teachers across all-grade levels and would work to contextualize and illustrate Brooke's standards. For example, Brooke plans to document evidence of what the school's highest performing teachers do to positively set-up classroom culture at the beginning of the year, and document lessons related to various elements of effective instruction. Principals could utilize the video library as a key resource for new teacher orientations as well as ongoing professional development, as a tool to support struggling teachers, and to coach high-performing teachers through ongoing reflection and discussion.

In order to support greater partnerships with Boston Public Schools and students' positive reading habits, Brooke Charter Schools along with the Eliot K-8 Innovation School and the Orchard Gardens K-8 Pilot School partnered in 2015 to organize a joint book club that pairs students from both schools with adults who love to read. Participation involves reading a great book on your own time and the opportunity to discuss with a small group of enthusiastic student readers over dinner. The partnership began with Brooke Roslindale and East Boston, but there are plans to expand to Brooke Mattapan as well.

In addition, Brooke Charter Schools has embarked on an ambitious initiative to offer computer science instruction for all students in grades K through 8. A sequence of age-appropriate activities will be put in place to help students build digital literacy, contextual knowledge, and computer programming skills from one year to the next. All activities will be aligned with the Massachusetts technology literacy standards (Massachusetts Department of Elementary and Secondary Education, 2008), as well as the national standards promulgated by the Computer Science Teachers Association (CSTA, 2011), and will be made publicly available for use by any district, charter, or private school.

During 2014-2015 school year, Brooke Charter Schools hosted 181 visits representing 54 organizations (across all three campuses) that observed and met with school faculty and leadership.

The founding group of Midtown Charter Public School (MCPS) in Mississippi visited Brooke in 2014. Following their visit, they asked for permission to model their school along the lines of Brooke and for our help providing materials that would assist in their planning. In 2015, the founding principal of MCPS,

Adam Mangana, traveled to Brooke for a 3-week residency to prepare for opening in August 2015.

Charter School Growth Fund has identified Brooke as among the highest performing charter networks in its national portfolio. Through our relationship with Charter School Growth Fund, we have had over 25 visits to Brooke from charter networks from across the country.

During the 2014-15 school year, Brooke has partnered with several other Boston charter schools and Generation Teach to develop a summer teaching fellowship program for the summer of 2015 that will provide college students with an opportunity to learn how to teach, under the guidance of experienced coaches, in a summer program for Boston charter school students. Among the teaching fellows are five Brooke charter school alumni. We are excited about the potential this program has to inspire Boston-raised college-age students to consider starting their careers in teaching.

Governance

Experience Overseeing Multiple Campuses

The Brooke Board of Trustees began overseeing multiple charter schools in 2011, with the opening of Brooke Mattapan. Throughout this period of growth, the board has maintained a sharp focus on issues of governance versus management. Over the first four years, it has used its committee structure to research and make strong decisions relative to governance (charter amendments, Co-Director reviews, new board member recruitment), finance (budgets that ensure a strong financial position, strong annual audits), development (helping to successfully meet the target of a \$3.6 million capital campaign), and the acquisition and development of two new permanent facilities while simultaneously refinancing a third.

The school's finance committee, in conjunction with network staff, has developed and approved annual budgets and five-year budgets that have controlled spending and conservatively projected revenues, thereby ensuring a strong financial position for the school, as certified in the school's annual audits from Alexander, Aaronson, and Finning.

Finally, at a very early stage, the board's facility committee identified feasible sites for two permanent facility projects, helping to analyze the necessary diligence and to manage some of the acquisition negotiation as well. By moving early, the school was able to identify two affordable projects for excellent facilities while simultaneously securing allocations of federal Qualified Zone Academy Bonds (QZAB's), New Markets Tax Credits (NMTCs) and State Historical Tax Credits (HTC's), all of which combined to significantly reduce annual payments. Both projects were completed in July, 2014 under budget and on-time.

Board Role in Planning Expansion and Monitoring Success

The Brooke board identified expansion to high school as a foundational organizational priority as early as 2010, when it declared its intention to add a high school program to the DESE (in its charter applications for a 2nd, 3rd, and 4th charter). Since that time, commitment to that priority has only grown and is a central theme of conversation each year at the board's annual retreat.

Neither consolidation nor expansion will change in any way the board's current approach to oversight of campuses within the Brooke network. The board evaluates the Co-Directors on the basis of the success of all schools or campuses in the Brooke network. The expansion to high school will require that the board add additional metrics to its evaluation of the Co-Directors, including ACT and AP performance,

for instance. The board already evaluates the Co-Directors in part on the basis of post-graduation success, which will continue to be the case after the expansion to high school.

Leader Evaluation and Board Self-Evaluation

In the first three years of managing multiple charter schools, the board utilized the Race-To-The-Top evaluation procedures dictated by the Commonwealth's Race to The Top Application. (Although Brooke Mattapan and Brooke East Boston were not RTTT signatories, Brooke Roslindale was). During the 2014-15 school year, the board returned to a review process dictated by the board, including interviews with the direct reports to both Co-Directors, thereby allowing the board to provide more targeted and constructive feedback to the Co-Directors.

The board periodically conducts a self-evaluation to measure the extent to which the board is meeting the goals it has established for itself. Under that process, the governance committee develops a self-evaluation rubric and distributes it to board members (members evaluate both their own performance and the performance of the body of the group as a whole). Results are then synthesized and reviewed at the annual retreat meeting.

Succession Planning

The governance committee is responsible for thinking about and planning for succession at the board level. The board recruits non-board members to serve on board committees in order to ensure that an existing bench of the requisite skills is available to move to the board level in the event of the departure of a key board member. When board members move off the board, they are generally expected to identify a strong candidate to succeed them.

As part of its annual evaluation of the Co-Directors each year, the board asks the Co-Directors to identify who their successors should be (among internal candidates) and the extent to which those candidates are ready and able to assume those responsibilities. Similarly, one of the standards that principals are evaluated by is their work to develop the capacity of their direct reports, including developing successors.

Financial Projections, FY16 – FY20

Overview

The consolidated profit and loss for the three existing Brooke K-8 schools along with the central office achieves a positive cash balance through the forecast period of FY16 through FY20. The same holds for projections that include expansion resulting from the addition of a Brooke High School. In addition, as a result of Brooke Charter Schools' historically conservative budgeting strategy, sufficient reserves will be available throughout the FY16 to FY20 budget window, and beyond, to support the schools in the event of a significant unanticipated decrease in public funding. Further, reserves are available to support strategic growth initiatives, contingency costs related to the schools' compensation model, and anticipated capital improvements.

In the years beyond the FY20 budget window, long-term financial projections anticipate possible net losses for the Brooke East Boston campus. The primary cause of possible future deficits is derived from the City of Chelsea's lower per-pupil tuition rates. The financial projections assume the City of Chelsea's per-pupil tuition rate will remain significantly below that of the City of Boston, on the order of \$2,500 to

\$3,000 less per pupil. However, financial projections anticipate annual positive changes in net position of the consolidated network of schools, which, coupled with reserves, will help to provide additional financial support to the East Boston campus. Should some portion of reserves or net income be needed to maintain high quality teaching and learning at Brooke East Boston, all necessary steps will be taken to comply with state and federal regulations and ensure resources from the sending districts of Chelsea and Boston are committed to students from those districts.

Two of three campuses (Brooke Roslindale and Brooke East Boston) will reach their maximum enrollment of 510 respectively in FY16. All three existing Brooke Schools will be fully enrolled at 510 students per campus by FY17, for a total of 1530 K-8 grade students. Given the demand for seats, as demonstrated by waitlist data across all three schools, the financial projections anticipate each of the K-8 schools will remain fully enrolled through FY20 and beyond. Further, the financial projections account for the addition of a Brooke High School, with enrollment starting at 108 students in FY17 and reaching maximum enrollment of 601 students in FY23.

As demonstrated in prior proposals for expansion submitted by Brooke Charter Schools, the organization has committed significant time and effort toward generating fiscally conservative financial projections that are both realistic and also provide contingencies to mitigate possible budgetary challenges that may surface in the initial years of operation.

Financial projections for the expansion to a High School assume expenditures in the initial fiscal year (FY17) of \$2.4 million, growing to \$9 million by FY20. The financial model further reflects revenue levels for the High School's first four fiscal years (FY17-FY20) sufficient to maintain positive cash balances through the budget window. This trend of anticipated positive cash balances continues through a ten year period, the entire long-term budget window.

As in previous proposals, a conservative budget approach was utilized in preparing the financial projections reflecting an expansion of Brooke Charter Schools to include a High School. This approach includes the following:

- **Conservative tuition assumptions:** The financial projections anticipate revenues of approximately \$2.5 million in FY17, the first year of expansion, rising to \$9.3 million in year four (FY20). The majority of funding is generated through Commonwealth Tuition Revenue, approximately 69% of total revenues in FY17 and rising to 90% by FY20. The model's per-pupil blended (i.e., Boston and non-Boston) tuition rate utilized in the baseline year (FY17) is \$15,318. This estimate is achieved by assuming that, conservatively, the FY17 rate will be 95% of the FY16 tuition rate for a comparable Boston-based charter high school. The FY17 estimate of blended per-pupil tuition is also below the three year average (FY13-FY15) of the Boston-based charter high school used as a comparison. The projections also reflect that 11% of pupils will be non-Boston residents, and therefore assumes a per-student tuition rate for these pupils that is more than 17% lower than the Boston rate.
- **Limited reliance on private funding:** In the first four years of the high school's operation, philanthropy (private grants/donations) accounts for 2.2% of total funding. Furthermore, the revenue (\$500,000 in total) is already committed through a Charter School Growth Fund grant. For years one and two (FY17 and FY18), the projections also anticipate the transfer of \$125,000 and \$100,000 respectively from network reserves.

- **Compounded start-up costs:** The financial projections show four years (FY17-FY20) of “start-up costs,” spanning from approximately \$237,000 in FY17 to more than \$310,000 in FY20. These expenditures include costs for personnel, facilities, technology equipment, and instructional materials that may be encumbered prior to the start of the first school year through the fourth year of the High School. These expenses are assumed to be above and beyond the expenditures for personnel, facilities, technology equipment, and instructional materials already accounted for in the four year budget window. These budgeted costs, along with a nearly 2% contingency for further unanticipated expenses, creates a sufficient buffer to mitigate potential higher-than-expected costs in the first four years of operation.
- **Contingency planning:** As a result of Brooke Charter Schools’ historically conservative budgeting strategy, sufficient reserves will be available throughout the FY16 to FY20 budget window, and beyond, to support the High School in the event of a significant unanticipated decrease in public funding. At FY15 year end, the network of schools has reserved more than \$4.8 million. Further, the projections assume that per-pupil tuition rates will increase, on average, less than 2% year over year while most expenses are budgeted to increase between 5% and 8% annually.

Underlying Key Assumptions

From the founding of our first school, budgeting and financial planning has upon several key principles. Those same key principles persist in the development of financial projections for the proposed expansion.

With regard to revenues, the financial model in the immediate and long-term revolves around two key principles. First, financial projections provide for conservative, yet realistic assumptions for state tuition payments, as further detailed below in the “Major Revenue Assumptions” section.

Second, the model is minimally dependent on private grants and donations. A pre-existing grant commitment from the Charter School Growth Fund will account for \$500,000 of revenue for the proposed expansion in year one (FY 17). From FY 17 through FY20 and beyond, the estimate for fundraising revenue (i.e., private grants and donations) for the entire network is set at the five year (FY11-FY15) average, or \$340,000 per year. Across all schools and the network, this accounts for 1% or less of total revenues in each of the fiscal years from 2017 to 2020 and beyond. This approach protects the school from any significant reliance on annual fundraising income, which is a highly variable revenue source.

With regard to expenditures, on average over a ten-year long-term budget window, facility and personnel costs combined account for more than 70% of expenses. In light of this context, expenditure assumptions in the model center on one key principle. Namely, the projections seek to adequately manage and minimize facility expenses, including debt service, and allocate personnel expenditures in a way that will maximize student achievement. With the help of allocations of federal Qualified Zone Academy Bonds (QZAB), New Markets Tax Credits (NMTC) and Federal and State Historical Tax Credits (HTC), Brooke Charter Schools has been able to effectively manage the debt service payments associated with their existing facilities. This trend is projected to continue, and further improve, over the long-term budget window. With respect to personnel costs, the financial projections provide adequate funding levels to support the school’s compensation model implemented in FY14 and designed to maximize student achievement and reward great teaching.

Major Revenue Assumptions

Tuition Forecasts: The projections continue fiscally conservative, yet realistic, assumptions for tuition and tuition growth. For a baseline K-8 tuition rate estimate in FY15, the projections assume an average per student Boston tuition rate of \$14,286, which is approximately 95% of the actual FY 15 Q4 Boston tuition rate and below the three year average per-pupil Boston tuition rate for Brooke’s existing K-8 schools. As noted in previous sections, the projections estimate a significantly lower per-pupil Chelsea tuition rate, \$11,816 in baseline FY15, which is 95% of the FY15 Q4 actual of \$12,861. The projections assume a per-pupil tuition growth rate of less than 1.75% from FY16 through the end of the long-term budget window, which is below the average annual per student tuition rate increase across Brooke Schools over the prior three fiscal years (FY13-FY15). For the baseline High School tuition rate estimate in its initial year (FY17), the projections assume a blended (Boston and non-Boston) per student tuition rate of \$15,319. Again, to be conservative, this rate is nearly 4% below the average per pupil tuition rate for an existing, comparable Boston-based Charter High School over a three year period (FY13 to FY 15).

Fundraising: Despite the fact that Brooke High School will be in start-up mode in FY 17, the projections include only the committed Charter School Growth Fund grant of \$500,000 in the initial two fiscal years (\$450,000 in FY17 and \$50,000 in FY18). The model anticipates additional private grants and contributions at the network level of \$340,000 annually from FY17 to the end of the long-term budget window. This estimate reflects the five year historical average for private grant and donation revenue from FY11 to FY15, and accounts for 1% or less of total revenues in each of the fiscal years from 2017 to 2020 and beyond.

Charter School Program Start-Up Grant: The financial projects anticipate zero availability of CSP start-up funds.

Federal Entitlements: The financial projections assume K-8 Brooke Schools will collect, on average, \$886 per student in Federal entitlement grants in FY16, which is the approximate per pupil Federal entitlement income across all existing Brooke Schools in FY15. The financial model further anticipates that Federal funding will remain flat at \$886 per pupil through the entire long-term budget window. The projections assume a modest 5% differential between K-8 and High School Federal entitlement funding, bringing the per pupil federal grant funding estimate per High School student to \$930 in FY17, and remaining flat in future fiscal years.

Central Office Fees: The FY16 to FY20 financial assumptions maintain a 10% “network tuition charge,” calculated as 10% of the tuition received at each school. The funds from this charge are used to pay central office staff and operations that provide services and support to all Brooke campuses.

Reserves: Fiscally conservative budgeting spanning from the inception of Brooke Charter Schools has enabled the development of a significant reserve base. This reserve is reflected in the financial projections, and funds are drawn from reserves over the span of the FY16-FY20 budget window and beyond for capital improvements, as well as contingency costs that may arise from the start-up of Brooke High School and the continuation of the Schools’ compensation model.

Major Expenditure Assumptions

Personnel: Given that personnel expenditures represent such a large share of the budget, the financial projections endeavor to reflect fiscally conservative personnel-related assumptions. The projections estimate an average instructional salary at \$61,646 in FY 16 (based on budget actuals FY15). The

financial model assumes an average annual salary increase of 2.5% across all roles. To provide for an additional conservative assumption, the model also budgets an additional 7% annually as a contingency for salary increases across all roles.

Facilities: Brooke is presently sub-leasing 17,758 square feet of property to a Boston-based charter school utilizing the space as the temporary location for their high school. The sub-tenant is expected to vacate the space in July 2016. Brooke presently holds an option to extend the prime lease for another year, from August 1, 2016 to July 31, 2017. Brooke intends to exercise its option to continue the lease, thereby providing Brooke High School with temporary space at a known lease rate for the initial year, and potentially year two. The facility is accessible to individuals with physical disabilities, and will be able to accommodate all students in the initial year (FY17) and possible year two (FY18). The financial projections further assume the High School will transition to a permanent facility in FY18 or FY19, resulting in an increase in overall debt service payments that carries forward through the end of the long-term budget window. The projections depict a steady annual debt service payment based on existing financing arrangements with lenders, accounting for approximately 5% of total expenditures on average.

Transportation: Neither consolidation nor expansion will result in significant changes to Brooke student transportation policy as it currently exists at each Brooke campus, nor will either result in added expenditures. High school students will be eligible for T passes but not for school bus transportation (as is the case with 7th and 8th graders currently). The budget reflects the current Brooke policy of providing bus regional bus transportation for Chelsea students to the Brooke East Boston campus.

Other Key Assumptions: The majority of remaining spending assumptions in the financial projections reflect either a per-pupil calculation (e.g., school lunch, instructional supplies) per-employee calculation (e.g., fringe benefits) or per-square-foot calculation (e.g., utilities, cleaning services) based on figures spanning back to FY12 and budget actuals for FY15 for the existing Brooke Schools. Depending on the nature of the good or service, the financial projections reflect inflationary cost increases of 2%, 5%, or 8%. For key service-based expenditures, such as health care costs and consultants, the model utilizes the higher percentages for an inflationary increase.

Projections for Short-term and Long-Term Financing: Through the combination of conservative budgeting, the strategic use of existing reserves, and realistic fundraising revenue assumptions, Brooke does not anticipate the need for short-term financing to cover operating expenditures. As noted above, the annual debt service payment for existing facilities over the long-term budget window is manageable (5% of total expenditures on average) and the projections anticipate an additional expense for the long-term financing of a permanent High School facility. For future facility-related financing associated with acquisition and/or construction of a permanent High School building, the School intends to engage the services of its financial consultant, Dwight Berg of Public Economics, Inc. Mr. Berg has assisted Brooke in financing all three of its current facilities, and has more than 20 years of experience in applied economic and financial research, with special expertise in tax credit financings for public education agencies, including charter schools.

Balance Sheet: Even with the conservative assumptions made throughout the financial model, projections yield a surplus for each year of Brooke High School's operation from FY16 to FY20. Further, the projections anticipate positive cash balances across the entire network of schools through the same period. At each of the existing Brooke K-8 schools, similar budgeting assumptions have frequently led to greater than anticipated annual surpluses, which have been instrumental in the School's ability to build

reserves for use in expansion, capital improvements, facility debt financing, and compensation contingencies.

CONSOLIDATED NETWORK P&L (FY 16-FY20)

	FY	16	17	18	19	20
	SY	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Schools in Network		4	4	4	4	4
Student Enrollment		1894	2038	2087	2122	2131
Total Personnel		245	261	268	275	275
NET INCOME						
Brooke Roslindale	\$	378,931	\$ 323,221	\$ 261,977	\$ 196,775	\$ 126,129
Brooke Mattapan	\$	309,131	\$ 424,216	\$ 366,873	\$ 305,743	\$ 239,349
Brooke East Boston	\$	127,404	\$ 9,268	\$ 6,613	\$ 3,024	\$ 1,493
Brooke High School	\$	-	\$ 2,609	\$ 17,641	\$ 162,862	\$ 269,831
Central Office	\$	137,436	\$ 1,939	\$ 46,090	\$ 240,345	\$ 108,653
Total	\$	952,902	\$ 761,254	\$ 699,195	\$ 908,748	\$ 745,456

LONG-TERM FINANCIAL PROJECTIONS SUMMARY (FY16-FY20)

	FY 16	17	18	19	20
	SY 2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Schools in Network	3	4	4	4	4
Student Enrollment	1516	1638	1754	1894	2038
Total Personnel	206	220	230	245	261

REVENUES

Philanthropy (Private Grants/Donations)	\$ 1,035,841	\$ 790,000	\$ 390,000	\$ 340,000	\$ 340,000
Competitive Grants (Inc. Startup Grants)	\$ -	\$ -	\$ -	\$ -	\$ -
Foundation Loan Forgiveness	\$ -	\$ -	\$ -	\$ -	\$ -
Federal Entitlements	\$ 1,343,164	\$ 1,456,039	\$ 1,563,953	\$ 1,694,194	\$ 1,828,156
Commonwealth Per Pupil Revenue	\$ 21,733,196	\$ 23,829,940	\$ 26,069,491	\$ 28,777,999	\$ 31,650,771
Federal School Lunch Program	\$ 820,484	\$ 904,242	\$ 987,644	\$ 1,087,805	\$ 1,193,921
Misc. Income	\$ 392,923	\$ 441,191	\$ 489,205	\$ 547,234	\$ 608,794
Network Tuition Charges	\$ 2,173,320	\$ 2,382,994	\$ 2,606,949	\$ 2,877,800	\$ 3,165,077
Network Facilities Charges	\$ 2,160,000	\$ 2,435,249	\$ 2,500,000	\$ 2,670,000	\$ 2,830,000
Related Service Providers Charges	\$ 329,491	\$ 337,728	\$ 346,171	\$ 354,825	\$ 363,696
Regional Trans. Reimbursement	\$ 68,194	\$ 105,579	\$ 107,691	\$ 109,845	\$ 112,042
TOTAL	\$ 30,056,612	\$ 32,682,962	\$ 35,061,105	\$ 38,459,703	\$ 42,092,457

EXPENDITURES

Payroll and Benefit Expenses	\$ 15,979,503	\$ 17,541,621	\$ 18,928,917	\$ 20,698,642	\$ 22,639,759
Instructional Expenses	\$ 1,076,357	\$ 1,298,544	\$ 1,533,678	\$ 1,821,761	\$ 2,129,126
Student Services	\$ 1,066,022	\$ 1,212,492	\$ 1,302,781	\$ 1,409,566	\$ 1,524,901
Nutrition Program	\$ 1,032,667	\$ 1,138,086	\$ 1,243,057	\$ 1,369,120	\$ 1,502,678
Facility Expenses (Non-Debt Service)	\$ 1,173,806	\$ 1,380,242	\$ 1,439,171	\$ 1,502,608	\$ 1,757,268
Facility Expenses (Debt Service)	\$ 2,151,636	\$ 1,958,058	\$ 2,072,507	\$ 2,221,177	\$ 2,653,239
Operating Expenses	\$ 1,852,269	\$ 1,992,583	\$ 2,134,527	\$ 2,253,572	\$ 2,421,779
Facilities Fee	\$ 2,160,000	\$ 2,435,249	\$ 2,500,000	\$ 2,670,000	\$ 2,830,000
Network Tuition Charge	\$ 2,173,320	\$ 2,382,994	\$ 2,606,949	\$ 2,877,800	\$ 3,165,077
Total Start-Up Expenses	\$ -	\$ 236,626	\$ 254,262	\$ 297,216	\$ 310,341
Contingency	\$ 438,131	\$ 490,238	\$ 528,055	\$ 576,405	\$ 632,085
TOTAL	\$ 29,103,710	\$ 32,066,732	\$ 34,543,903	\$ 37,697,866	\$ 41,566,253

School Surplus (Deficit)	\$ 815,466	\$ 759,315	\$ 653,105	\$ 668,404	\$ 636,803
Network Surplus (Deficit)	\$ 137,436	\$ 1,939	\$ 46,090	\$ 240,345	\$ 108,653

CONSOLIDATED ANNUAL SURPLUS (DEFICIT) \$ 952,902 \$ 616,230 \$ 517,201 \$ 761,836 \$ 526,204

Reserves (FY 15)**

Foundation Unrestricted Reserves	\$ 561,895
Brooke Roslindale Unrestricted Reserves	\$ 934,048
Brooke Mattapan Unrestricted Reserves	\$ 1,146,730
Brooke East Boston Unrestricted Reserves	\$ 568,060
Network Unrestricted Reserves	\$ 1,270,017
TOTAL	\$ 4,480,750

** Unrestricted, excludes funds set aside for 2 month operating reserve.

Future Expenditures

Contingency Compensation Plan Costs	\$ 209,670	\$ 229,251	\$ 246,271	\$ 267,979	\$ 291,609
Network Expansion	\$ -	\$ 100,000	\$ 150,000	\$ -	\$ -
Capital Improvements (B1)	\$ 1,069,200	\$ 454,000	\$ 100,000	\$ 555,775	\$ 251,925
Capital Improvements (B2)	\$ 266,000	\$ 174,500	\$ 128,100	\$ 206,400	\$ -
Capital Improvements (B3)	\$ 175,000	\$ -	\$ -	\$ -	\$ -
Contingency Start Up Costs	\$ -	\$ 35,493.88	\$ 38,139.29	\$ 44,582.38	\$ 46,551.12

Brooke Charter Schools Amendment TOTAL \$ 1,719,870 \$ 993,245 \$ 662,510 \$ 1,074,737 \$ 890,085

REMAINING RESERVES \$ 3,363,006 \$ 2,985,991 \$ 2,840,682 \$ 2,527,782 \$ 2,463,900

Finance

Board of Trustees: Overview and Recent Highlights

The Board's Finance Committee has developed and approved annual budgets that have controlled spending and conservatively projected revenues, thereby ensuring a strong financial position for the school, as certified in the school's annual audits from Alexander, Aaronson, and Finning. The Board's Facility Committee identified feasible sites for two recent permanent facility projects, helping to conduct a portion of the necessary diligence and acquisition negotiations. With the support and input of the Board, Brooke was able to identify and execute affordable projects for the development of high-quality education facilities. With the Board's assistance, Brooke financed the two facility projects with the help of allocations of federal Qualified Zone Academy Bonds (QZAB), New Markets Tax Credits (NMTC) and Federal and State Historical Tax Credits (HTC). These sources combined to significantly reduce annual debt service payments.

As demonstrated through these recent facility transactions, the Board and its committees are well-positioned to assist the staff and leadership of Brooke Schools in completing a future Brooke High School acquisition and construction project – on time, within budget, and through sustainable financing structures.

Brooke Finance Office

In alignment with the organizational structure of the Brooke Charter Schools "network," roles for staff, administration, and board members are clearly defined. Under the management of the Co-Director for Operations, the network Finance Office includes a Chief Operating Officer, Associate Director of Finance and Operations, Associate Business Manager, HR and Finance Manager, and a Finance Associate. Together, these roles provide support and guidance to leadership and staff at each Brooke campus on myriad issues including, but not limited to, budgeting, purchasing, procurement, grant funding, and compliance. The Finance Office manages accounts payable, accounts receivable, payroll, benefits administration, and cash management for each school. The Finance Office prepares regular financial statements for school leaders and network leadership, and school-based operational leadership collect and track school-based cash and receipts, approve expenses, and manage the budget. In addition, the network Finance Office regularly interfaces with the school's independent audit firm for the completion of quarterly financial reviews and an annual audit, which is submitted to the Department of Elementary and Secondary Education. The network Finance Office also engages the services of a third-party accounting firm to perform monthly reviews of the School's books, records, and accounts. Two members of the Finance Office staff have completed Public Contract Training through the Massachusetts Certified Public Purchasing Official Program. These staff members are available to provide guidance and support to school-based staff responsible for purchasing and procurement. The Finance Office, with support from school-based operations personnel, participate in DESE compliance visits, site evaluations, and program reviews as they pertain to the financial management of the school.

Budget Processes

Each year, the network Finance Office coordinates with school-based leadership at each Brooke School (Principals, Assistant Principals, and Directors of Operations) to develop a budget workbook for the forthcoming fiscal year. The Finance Office conducts a thorough analysis of past budget trends, and provides recommendations and support to school leaders in preparing the annual proposed budget. School-level financial planning decisions are bound by certain network-wide parameters on

compensation, procurement, facilities, and minimum reserve requirements. The Finance Committee of the Board of Trustees is then presented with the proposed budget. Upon consideration by the Committee, the budget is then presented to the full board for consideration during a meeting open to the public. Once the budget is approved and implemented, the Network Finance Office meets monthly with school-based leadership to review each line item, provide a budget versus actual analysis, and to generally monitor the fiscal position of the school throughout the year. To-date, Brooke Schools have maintained a very successful record of cash flow management.

In general, the actual net income for Brooke Schools has been higher than budgeted. This outcome is attributed, in large part, to the Brooke Schools' use of conservative revenue projections in terms of student enrollment and tuition. The schools are not currently dependent on private fundraising to meet their financial obligations.

Financial Oversight & Compliance

The Brooke Charter Schools Board of Trustees maintains an active Finance Committee. The Committee has the duty and responsibility to consider and make recommendations to the board on matters relating to the finances of the schools, including the annual school budget, resolutions for fund transfers, contracts, and facilities. The meeting dates, agendas, and minutes of the full board and the Finance Committee are made publicly available on the Brooke Charter Schools website, and are also reviewed by the independent auditor on an annual basis. The Board of Trustees is responsible for the approval of the annual budget and audit for Brooke Charter Schools. The Board of Trustees also plays a role in authorizing contracts and expenditures above a certain threshold.

Financial statements are prepared monthly by the Finance Office, and reviewed quarterly by the Finance Committee and full Board of Trustees. The statements show budget versus actual income statements, cash flow, tuition estimates, and the balance sheet. Annually, the Finance Committee sets its agenda and topics for consideration, including but not limited to, a review of discrete internal controls and policies, finance staffing, cash management, capital budgeting, short to long-term budget outlooks, and audit reviews. The Board's Treasurer, who is a member of the Finance Committee, also regularly assists with oversight.

Brooke Charter Schools follow all the applicable laws and regulations that govern Charter Schools within the Commonwealth of Massachusetts, as well as any federal laws and regulations related to grant funding. To provide an accurate and auditable record of all financial transactions, the School's books, records, and accounts are maintained in conformity with generally accepted accounting principles as required by the state statutes, applicable to charter schools. Brooke Schools adhere to state conflict of interest laws, as well as regulations regarding purchasing and procurement. The Fiscal Policies and Procedures of Brooke Charter Schools were adopted in 2002, and have since been updated in 2003, 2004, 2010, 2011, 2012, and 2013 to reflect changes in state or federal requirements, such as GASB Accounting Standards, AICPA Statement of Auditing Standards, the DESE charter school audit guide, and accounting best practices. A comprehensive review of the policies and procedures is planned for 2015-2016. The Board of Trustees, members of the Finance Committee, and the Finance Office utilize these policies and procedures as a basis for their fiscal governance and ongoing oversight

FY2013 & FY2014 Audits

In Fiscal Years 2013 and 2014 Brooke Charter Schools received an audit finding regarding General Ledger Maintenance and Massachusetts Teachers' Retirement System disbursements.

With regard to General Ledger Maintenance, during FY13 Brooke Charter Schools executed several significant facility acquisitions and refinancing activities. Brooke consulted closely with their auditors to ensure the complex multi-million dollar financing transactions were accurately recorded, reviewed, and reconciled. The adjusting journal entries resulting from this review process are reflected as a “Significant Deficiency” in the FY13 audit. In light of the finding, Brooke management took steps to improve the reconciliation and review of accounts related to the financing transactions.

In FY 14, a number of correcting journal entries were required related to the financing transactions initiated in 2013 and 2014 and other general ledger accounts, which precipitated the finding of “Material Weakness.” In light of the finding, Brooke management identified additional policies, procedures, and oversight to ensure journal entries related to the financing transactions, as well as other significant accounts, are properly recorded. At the start of FY15, Brooke management initiated new monthly and quarterly closing procedures for all accounts to ensure proper, timely reconciliation. Brooke has also increased the capacity of its Finance Office with the addition of an Associate Business Manager who is also a Certified Public Accountant. Duties for this position include ensuring consistent, timely, and accurate account reconciliations. Finally, Brooke has engaged the services of an audit firm to perform a quarterly review of its financial statements to monitor the effectiveness of new closing procedures and, ultimately, to avoid any future adjusting entries. Brooke management is confident its FY15 audit will be fully compliant under GAAS and be free of any findings.

With regard to MTRS Disbursements, during FY14, four MTRS payments were not made prior to the 10th day of the following month per DESE regulations, which resulted in a finding of an “instance of non-compliance with GAAS.” The Schools were adjusting to additional requirements pertaining to the remittance of payroll deductions for MTRS. The Schools have created an MTRS payment tracker to ensure payments are made in a timely fashion. In addition, the Associate Business Manager has begun cross training on the reporting requirements of MTRS and will, in time, assume reporting responsibilities for some, if not all, Schools starting in FY16.

Brooke Roslindale: Financial Dashboard Metrics

The DESE Financial Dashboard for Brooke Charter School Roslindale in FY 14 shows three measures of “potentially high risk.” The following descriptions provide further context regarding the financial structure of the schools, and mitigate the purported risk shown on the dashboard.

Per the DESE Financial Dashboard, “Percentage of Program Paid by Tuition” measures the percentage of Brooke Roslindale’s total expenses that are funded entirely by tuition (calculated as Tuition + In-Kind Contributions divided by Total Expenses). The three Brooke Schools (Roslindale, Mattapan, and East Boston) are separate entities, but Brooke Roslindale (the first of the three schools) is the “flagship” through which many financial transactions are channeled. For example, in FY 14, Brooke Roslindale was the “owner” of their facility, as well as the Mattapan and East Boston buildings. In addition, Brooke Roslindale “hosts” the operations of network staff.

As a result of this structure, the “percentage of program paid by tuition” measure can be misleading. For example, more than \$5.8 million of Brooke Roslindale’s \$17.2 million total revenue for FY 14 was generated through facilities and network charges received from all three Brooke Schools, but appearing on Brooke Roslindale’s financial statements as revenue for the school. These funds, in turn, are used to pay property leases and debt service for the facilities “owned” by Brooke Roslindale, as well as expenses generated through activities at the network level. In addition, as the “owner” of Brooke Mattapan, Brooke Roslindale’s financial statements show more than \$1.9 million in revenue related to QZAB

subsidies and NMTC/HTC transaction revenues. These two revenue sources combined account for approximately 45% of total revenues for Brooke Roslindale. Similarly, “Percentage of Program Paid by Tuition & Federal Grants” measures the percentage of Brooke Roslindale’s total expenses that are funded by tuition and federal grants (calculated as Tuition + In-Kind Contributions + Federal Grants divided by Total Expenses). Again, given Brooke Roslindale’s “flagship” status, a significant portion of revenues and expenditures are passed-through the school, which creates a misleading measurement on the DESE Financial Dashboard. The majority of revenues used for true school-based expenses at Brooke Roslindale are derived from tuition, state and federal grants, and in-kind contributions – totaling more than \$8.8 million in revenue in FY 14.

The DESE Financial Dashboard also measures the “Percentage of Total Revenue Expended on Facilities,” which is the percentage of Total Revenue spent on Operation & Maintenance and Non-Operating Financing Expenses of Plant (calculated as Operation & Maintenance plus Non-Operating Financing Expenses of Plant divided by Total Revenues). Again, because of Brooke Roslindale’s flagship status, all of the expenses for property leases, debt payments, and depreciation of facilities appear on Brooke Roslindale’s financial statements. This structure inflates the DESE Financial Dashboard measure of total revenue expended on facilities.

Consolidation

Since the inception of Brooke Schools, and throughout its expansion to three K-8 campuses, the Board of Trustees, in coordination with finance and operations staff at the school and network level, have taken extraordinary measures to ensure financial resources are allocated efficiently and deliver optimal impact in the classroom. Consolidation of the charters presents a unique opportunity to enhance this efficiency in the following four key ways.

- **Augmenting shared staffing:** Under the existing structure, to achieve a beneficial economy of scale, the central office will pay the salaries and benefits of all related service providers (e.g., counselors, speech and language therapists, facilities manager) and charge each school based on its proportional share of use of these employees. For example, if a speech and language instructor allocates 25% of his/her time at Brooke Mattapan, then Brooke Mattapan will pay 25% of his/her salary and benefits. Consolidation will permit the Schools to hire personnel who will provide services across all schools while streamlining and/or eliminating cumbersome financial accounting structures. Through consolidation, the network of schools will have the opportunity to share staff to a greater extent to provide instructional and non-instructional services in areas common across campuses.
- **Expanding economies of scale:** Presently, operations staffs at the school and network level seek out potential economies of scale in purchasing, bidding, and procurement of goods and services. However, each school is its own Local Education Agency (LEA), with its own tax identification number. This structure often creates complications when attempting to assemble bulk purchases, negotiate service contracts, and otherwise endeavoring to leverage the size of the combined network of schools to achieve improved pricing and/or services. Consolidation will eliminate any existing impediments, and create opportunities to achieve greater operational efficiencies and financial savings.
- **Streamlining accounting procedures:** Once again, under the current structure, each school is its own LEA, and therefore the finance staff is required to maintain three separate accounting systems, general ledgers, and bank accounts – one for each school. Many vendors provide goods and services to multiple campuses. Those goods and services are either directly delivered to a

specific school or in some shared fashion across all three schools. In both instances, vendors will often remit a single invoice, which then must be divided by the proportionate share of the good or service received by each school and paid through three separate checks. Conversely, the finance office may submit payment from one school and then record multiple accounting entries to ensure the correct share is properly registered on each school's general ledger. Through consolidation, the accounting general ledger will be merged into a single system, the time consuming accounting procedures referenced above will largely be eliminated, and the accounts payable/receivable processes will be greatly streamlined. Steps will be taken to maintain school-specific accounting information for purposes of preserving internal financial controls and also providing necessary reports to external entities (e.g., state and federal agencies, donors, and grant funders).

Given the volume of purchasing (in FY15 alone 177 vendors were used by two or more Brooke Charter Schools, totaling \$9.6 million in billing) even a minimal amount of streamlining in the accounting process will yield fairly significant benefits in terms of improving efficiency and enhancing finance office capacity to support other priorities.

- **Improving internal financial controls:** Closely related to streamlined accounting procedures, consolidation will also enhance the maintenance of adequate accounting records and internal control procedures. By eliminating the need for time-consuming additional accounting entries under a structure in which the schools are three separate entities, finance office staff can focus greater time and attention to implementing, monitoring, and augmenting internal financial controls. Further, by eliminating complex accounting processes required in having three separate entities, consolidation inherently reduces risks and exposures intrinsic in an interconnected and overlapping system of accounts. Finance staff will be able to produce more timely and straightforward financial information to board members, school leadership, and state and federal education agencies. In addition, consolidation will forego the need for three separate audits for each school, thereby reducing the level of cost and staff time allocated to the annual audit process without compromising quality or scope.

Affiliated Entities

The Brooke School Foundation, Inc. (hereafter, "the Foundation") is organized and operated exclusively as a charitable organization within the meaning of Section 4(a) of Chapter 180 of the General Laws of the Commonwealth of Massachusetts. The stated purpose of the Foundation includes the enhancement of educational opportunities for children in the Boston area, specifically promoting the financial well-being of Brooke Charter Schools by soliciting, receiving, and administering funds for the construction, operation, and maintenance of the Schools, and to engage in any other charitable activities within the meaning and interpretation of Section 501 (c)(3) of the Internal Revenue Code of 1986 (as amended), which are consistent with the other provisions of the Articles of Organization and permitted for corporations organized under Chapter 180 of the Massachusetts General Laws.

The majority of revenue obtained by the Foundation is restricted to supplementing the resources of the Schools and funding the operation and activities of the Schools. Therefore, for purposes of the annual independent audit, the Foundation is considered a component unit and is discretely presented in the Schools' combined general purpose financial statements.

The Foundation is comprised of a five-member board of directors, which includes the two Co-Directors of Brooke Charter Schools. There is no overlap in membership between the Foundation Board of

Directors and that of the Brooke Schools Board of Trustees.

There is no anticipated change in the relationship between the Foundation and the Schools as it relates to consolidation of charters.

In addition to the Foundation, the following three entities are also considered component units of the School: Brooke Support Corporation, Brooke 2 LLC, and Brooke 2 Master Tenant LLC. These entities were created in June 2014 to facilitate the sale of Federal Historic Tax Credits (HTC) and New Market Tax Credits (NMTC) related to the purchase and construction of the building now occupied by Brooke Charter School Mattapan. Brooke 2 LLC is a Massachusetts limited liability company, and a qualified active low-income community business (QALICB) as defined by Section 45D of the Internal Revenue Code (IRC). Brooke 2 LLC is wholly-owned by Brooke Support Corporation, a Massachusetts nonprofit corporation. Brooke Support Corporation also owns 1% and is the managing member of Brooke 2 Master Tenant LLC. Brooke 2 Master Tenant LLC is a Massachusetts limited liability company.

For purposes of the annual independent audit, the three entities are presented in the Schools' combined general purpose financial statements as component units of the Schools.

Brooke Support Corporation is comprised of a three-member board of directors, which includes three staff members of the Brooke Charter Schools. Members of the Brooke Support Corporation's Board of Directors have no financial interest related to the NMTC/HTC financing transactions or any other activities of the nonprofit corporation. There is no overlap in membership between the Foundation Board of Directors, the Brooke Schools Board of Trustees, or any of the three entities created to facilitate tax credit transactions.

It is expected that the three entities will terminate at the conclusion of the NMTC/HTC compliance periods, or within five to seven years after 2014, and there is no anticipated change in the relationship between the entities and the Schools as it relates to consolidation of charters.

Material Terms of the Charter to be Amended

Consolidated School Name

The name for the consolidated entity will be Brooke Charter Schools. Each of the proposed campuses will have the following identifying secondary names for school community use:

- Brooke Roslindale
- Brooke East Boston
- Brooke Mattapan
- Brooke High School

Districts Specified in Charter

Because Brooke East Boston is a regional school serving both Boston and Chelsea, this consolidation will effectively make the consolidated entity (Brooke Charter Schools) a regional school serving both Boston and Chelsea.

Mission

The only change in mission will be that the consolidated mission statement will say that Brooke will serve families in both Boston and Chelsea (currently, only the Brooke East Boston mission statement references Chelsea).

Board Bylaws

We do not anticipate the need for any substantive changes to the by-laws of the Board of Trustees resulting from consolidation. Minimal amendments may be needed to reflect the names of the schools and the number of charters held by the board. A review of the by-laws will be conducted by legal counsel as part of the Consolidation Action Plan.

Action Plans

Consolidation Action Plan

Action to be Taken	Interim Benchmarks	Point Person	Start Date	Completion Date
LEGAL STATUS				
Engage legal counsel to review and amend, as necessary, the by-laws and relevant governing documents to reflect the change in legal status	N/A	COO	Upon Approval	April 2016
Engage legal counsel to identify necessary actions to be taken with federal and/or state regulatory agencies to reflect the change in legal status (including, but not limited to, IRS, Secretary of State, Department of Education)	N/A	COO	Upon	April 2016
Engage legal counsel to review and amend, as necessary, the articles of organization, by-laws, and/or other governing documents of the Brooke School Foundation to reflect the charter consolidation	N/A			
FINANCE				
Engage independent auditor to advise on any necessary actions to consolidate financial accounting, including the general ledger and chart of accounts.	N/A	COO	Upon Approval	April 2016
Review fiscal policies and procedures manual, and revise to reflect charter consolidation and any other necessary changes	N/A	COO	Upon Approval	April 2016
Notify primary banking institution, review bank accounts and make any necessary changes	N/A	COO	Upon Approval	March 2016
Assess purchasing system and procedures, identify improvements and protocols for engaging vendors at each campus and network-wide	N/A	COO	September 2015	April 2016
Review all current and future potential contracts and agreements with external vendors to identify possible economies of scale to be achieved	N/A	COO	September 2015	April 2016

Direct HR & Finance Mgr. to notify vendors and contractors regarding the consolidation, as needed	N/A	COO	Upon Approval	June 2016
Consult with insurance broker to identify any necessary revisions that may be required to existing and future insurance policies	N/A	COO	Upon Approval	June 2016
Notify lenders and related financial institutions/organizations of the charter consolidation; consult with legal counsel regarding any necessary changes to financing instruments, loans, or operating agreements	N/A	COO	Upon Approval	June 2016
Consult with DESE to make any necessary changes, or prepare for future alignment, of federal pass-through grants (including, Title I, Title IIA, Grant 240 SPED)	N/A	Assoc. Dir. Fin. & Ops.	Upon Approval	May 2016
HUMAN RESOURCES				
Consult with payroll provider and make necessary adjustments to reflect charter consolidation	N/A	Assoc. Dir. Fin. & Ops.	Upon Approval	March 2016
Consult with Massachusetts Teachers' Retirement System (MTRS) to identify and implement any necessary steps to reflect charter consolidation	N/A	Assoc. Dir. Fin. & Ops.	Upon Approval	March 2016
Update the Staff Handbook and other Human Resource documents to reflect language consistent with the charter consolidation	N/A	COO	Upon Approval	March 2016
Coordinate with HR consultant to notify benefits providers of the charter consolidation, and make any necessary modifications to agreements or processes	N/A	COO	Upon Approval	March 2016
STUDENT ENROLLMENT AND RECRUITMENT				
Obtain DESE approval for board approved consolidated enrollment policy.	N/A	COO	Upon Approval	Immediately Upon Approval
Draft and approve internal guidelines for campus assignment and transfers of students from one campus to another	N/A	COO	Upon Approval	Immediately Upon Approval
Update application materials and student recruitment portal on website	N/A	COO	Upon Approval	Immediately Upon Approval

High School Expansion Action Plan

Leadership	Pt Person	Start	End
Identify and hire high school principal	CA	ASAP	ASAP
Code of Conduct, Handbook, Recommended Policies	Pt Person	Start	End
Amend student & family handbook including code of conduct for high school; Obtain board approval of handbook & submit to DESE	COO	3/1/16	4/1/16
Facility	Pt Person	Start	End
Execute option on 7 Elkins St.	COO	3/1/16	3/1/16
Hiring and Personnel	Pt Person	Start	End
Recruit and hire <i>HQ</i> teachers <i>and</i> meet the teacher qualification requirements of the charter school statute	CA	3/1/16	6/30/16
Submit Teacher Qualification Summary (incl. ELL/ESL teachers)	COO	6/1/16	6/1/16
Finalize high school staff handbook	COO	3/1/16	5/1/16
Professional Development	Pt Person	Start	End
Conduct pre-service teacher training	Principal	7/1/16	7/31/16
District Curriculum Accommodation Plan (DCAP)	Pt Person	Start	End
Modify for HS and submit to CSO	DSS	3/1/16	5/31/16
Relationship with a physician and a registered nurse	Pt Person	Start	End
Recruit consulting physician and submit documentation to the CSO	COO	3/1/16	5/31/16
Recruit and hire a registered nurse (submit and maintain copies)	COO	3/1/16	6/30/16
School Wellness Policy	Pt Person	Start	End
Self-assess School Wellness Policy consistent with requirements; Obtain board approval of School Wellness Policy; Submit School Wellness Policy to the CSO	CO	3/1/16	5/31/16
Budget and Cash Flow	Pt Person	Start	End
Update budget for years 1-3 and obtain board approval; Create detailed cash flow projection for years 1-3.; Submit budget and cash flow projections to CSO	COO	3/1/16	5/31/16

BCS supplementary materials were submitted to provide further detail and clarification on the amendment request.

The additional information focused mainly on the structure and character of the proposed high school program and provided some additional financial projections and analysis. The school's additional submission follows on pages 56 through 91.

**Brooke Charter Schools
Supplement to Amendment Request to Add a High School and Consolidate
Existing Charters
January 12, 2016**

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COURSES FOR BROOKE HIGH SCHOOL

ENGLISH:

Four years of English are required for all Brooke High School students. In 9th and 10th grade, all students will take American Literature as part of a combined two-period American History and Literature course. In 11th grade, all students will take AP English Language and Composition (as one of the two AP exams required for graduation). In 12th grade, students will choose between World Literature and AP English Literature and Composition.

COURSES in ENGLISH	Regular	Advanced
9 th	American Literature to 1890 <i>Combined History and Literatures class</i>	
10 th	American Literature 1890 to present <i>Combined History and Literatures class</i>	
11 th	AP English Language and Composition	
12 th	World Literature	AP English Literature and Composition

All Brooke High School English courses will include a strong emphasis on writing. In addition to the literary content, teachers are expected to work with students to develop their analytical writing abilities, as evaluated through the Brooke High School writing rubric. The writing rubric will be based extensively on the Achievement First [Interactive High School Writing Rubric](#) and will be used in both English and History classes. The Brooke High School writing rubric is being created by our Network Academic Director of English Language Arts. She has already created a [writing rubric for grade K-8](#) that is used across the Brooke network for all argumentation writing, and the rubric will be extended to encompass all writing expectations for the high school. Writing performance in all rubric categories (argument, evidence, and language) will be a significant portion of students' grades in all history classes. She will also engage in a thorough process to ensure that the rubric encompasses all of the Massachusetts Writing Standards. The rubric, which will encompass all expectations for 9th – 12th grade, will be completed by June 2016. She will also create an alignment document that demonstrates where each state standard is included in the Brooke writing rubric.

We will also create a narrative writing rubric that will be used to drive our narrative writing instruction. Although analytic writing will be the vast majority of writing that Brooke High School students do, they will also be exposed to narrative writing in each grade level and will be expected to meet the third writing standard regarding narrative text composition, including MA.3.A. We currently have a narrative rubric for grades 1-8, and we will extend that rubric and ensure that it captures all elements of the state narrative writing rubric. The Network Academic Director of English Language Arts will complete the narrative rubric by June 2016.

American Literature (9th and 10th grades):

All 9th and 10th graders will participate in a two-year combined History and Literature course that covers American Literature. Throughout the two year course, students will read literature and literary nonfiction written during or about the time period being studied in the concurrent American History curriculum. For instance, when studying colonial America, students might read “Sinners in the Hands of An Angry God” and the poems of Anne Bradshaw and consider them as literary works as well as using them to gain historical understanding. The 9th and 10th grade History and Literature courses will span two consecutive periods and will be taught by one teacher as an integrated course. This will allow the teacher to integrate the reading, writing, and history, and it also provides a total student load for those History and Literature teachers that is half of the total student load of other teachers. This should allow teachers more writing conferencing time with students and will ensure that they balance writing requirements between literary analysis and historical analysis.

Standards: The Massachusetts Reading Standards for literature and for literary nonfiction (included below) will be used for the 9th and 10th grade classes.

LITERATURE Grades 9–10 students:

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
3. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).
5. Analyze how an author’s choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.
6. Analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature.

Integration of Knowledge and Ideas

7. Analyze the representation of a subject or a key scene in two different artistic mediums, including what is emphasized or absent in each treatment (e.g., Auden’s “Musée des Beaux Arts” and Breughel’s *Landscape with the Fall of Icarus*).
8. (Not applicable to literature)

MA.8.A. Relate a work of fiction, poetry, or drama to the seminal ideas of its time.

9. Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare).

Range of Reading and Level of Text Complexity

10. By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.
By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9–10 text complexity band independently and proficiently.

NONFICTION Grades 9–10 students:

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
3. Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points

are made, how they are introduced and developed, and the connections that are drawn between them.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
5. Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
6. Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Integration of Knowledge and Ideas

7. Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
9. Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts.

Range of Reading and Level of Text Complexity

10. By the end of grade 9, read and comprehend literary nonfiction in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.
By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9–10 text complexity band independently and proficiently.

AP English Language and Composition (11th grade):

In 11th grade, all students will take [AP English Language and Composition](#). This course will focus on analyzing nonfiction writing and engaging deeply with crafting of analytic and argumentative writing. In this course, students will write multiple drafts of various forms on various topics and engage in revisions based on peer and teacher input. They will analyze the craft of other nonfiction writers and use those models to inform and reform their writing styles. At the end of this course, we will require all students to take the AP Language and Composition test.

Standards: The 11th grade English course will cover the Massachusetts Reading Standards for Informational Texts (pasted below) and also meet all the requirements of the AP Course Description. We will engage in the AP Course Audit to ensure that the course hits the rigor bar expected to be identified as an Advanced Placement course. Because this is an intense writing course, the writing standards, as encapsulated in the writing rubric, will guide much of the instruction.

NONFICTION Grades 11–12 students:

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
3. Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).
5. Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.
6. Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text.

Integration of Knowledge and Ideas

7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.
8. Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., *The Federalist*, presidential addresses).
9. Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.

Range of Reading and Level of Text Complexity

10. By the end of grade 11, read and comprehend literary nonfiction in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.
By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently.

World Literature (12th grade):

All seniors will engage in an advanced literary analysis class. World literature will examine novels, poems, short stories, and plays from a variety of times and cultures throughout the world. Text choices will be selected by teachers but will have the rigor level expected of intro level college courses.

Standards: This course will cover the Massachusetts Reading Standards for Literature (pasted below).

LITERATURE Grades 11–12 students:

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.
3. Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)
5. Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.
6. Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).

Integration of Knowledge and Ideas

7. Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.)
8. (Not applicable to literature)
- MA.8.A.** Analyze a work of fiction, poetry, or drama using a variety of critical lenses (e.g., formal, psychological, historical, sociological, feminist).
9. Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.

Range of Reading and Level of Text Complexity

10. By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.
By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11–CCR text complexity band independently and proficiently.

AP English Literature and Composition (12th grade):

Seniors who elect to can take AP English Literature and Composition with permission from their advisor. The AP English Literature class will meet the AP guidelines. We will engage in the AP Course Audit to ensure that the course hits the rigor bar expected to be identified as an Advanced Placement course. Standards: This course will cover the Massachusetts Reading Standards for Literature listed above as well as hitting the expectations established by the College Board for this AP course.

HISTORY:

Three years of history are required for all Brooke High School students – two years of United States History and one year of World History. Students will also have a choice of electives that they can take their senior year. These electives will be determined based on the expertise of the History Department and will be finalized in January of the prior school year; for instance, the courses being offered for 2019-2020 (the first class of seniors) will be determined in January of 2019. The standards for those courses will be established by the end of March of that year.

COURSES in HISTORY	Regular	Advanced
9 th	United States History to 1890 <i>Combined History and Literatures class</i>	
10 th	United States History 1890 to present AP US History exam required for all students <i>Combined History and Literatures class</i>	
11 th	World History	AP World History
12 th <i>Note: only 3 years of History are required</i>	<i>Range of electives based on teacher interest</i>	AP Geography, AP Economics <i>and / or</i> AP US Government

All Brooke High School history courses will include a strong emphasis on writing. In addition to the history content, teachers are expected to work with students to develop their analytical writing abilities, as evaluated through the Brooke High School writing rubric. The writing rubric will be based extensively on the Achievement First [Interactive High School Writing Rubric](#) and will be used in both English and History classes. The Brooke High School writing rubric is being created by our Network Academic Director of English Language Arts. She has already created a [writing rubric for grade K-8](#) that is used across the Brooke network for all argumentation writing, and the rubric will be extended to encompass all writing expectations for the high school. Writing performance in all rubric categories (argument, evidence, and language) will be a significant portion of students' grades in all history classes. Students will also be expected to complete 2 research papers in each of their history courses. The degree of independence required of the students will increase each year.

American History:

All students will take US History in both 9th and 10th grade. The 9th grade course will cover events up to 1890 and the 10th grade class will cover 1890 to present. Students will all take the AP US History exam at the end of their 10th grade year (as one of the two AP exams required for graduation).

Standards: The History standards will be taken from the [AP United States History standards](#) and the [Massachusetts Curricular Frameworks](#). Teachers will cover all the standards in Periods 1 – 6 in the AP United States History Curriculum Frameworks in 9th grade, and 10th grade teachers will cover Periods 7 –

9 from those frameworks. Teachers will also be responsible for covering any standards from the Massachusetts History and Social Studies Curriculum Frameworks from the U.S. History I (1763-1877) that are not included in the AP Curricular Frameworks. In July of 2016, the history teachers will be responsible for conducting a thorough review of the AP Curricular Frameworks and the Massachusetts Curriculum Frameworks and ensuring that all of the MA Frameworks are covered in the AP Frameworks and including all MA Standards that are not covered by the AP course standards.

We will participate in the College Board AP Audit Process to get permission to name the 9th and 10th grade course AP US History.

History teachers will also base their course's expectations on the Reading Standards for Literacy in History. As made explicit in the AP standards and expectations and also in the Massachusetts Frameworks, students are expected to become proficient readers of primary and secondary sources through their history courses. Teachers are expected to include the reading standards below in lesson and unit plans and intentionally and explicitly teach all the following standards to mastery.

Grades 9–10 students:

Key Ideas and Details

1. Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.
3. Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.
5. Analyze how a text uses structure to emphasize key points or advance an explanation or analysis.
6. Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

Integration of Knowledge and Ideas

7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.
8. Assess the extent to which the reasoning and evidence in a text support the author's claims.
9. Compare and contrast treatments of the same topic in several primary and secondary sources.

Range of Reading and Level of Text Complexity

10. By the end of grade 10, read and comprehend history/social studies texts in the grades 9–10 text complexity band independently and proficiently.

World History:

Junior year, students will take World History. Students, with approval from their advisors, can choose to take AP World History. Although the scope of World History is inevitably broad, we will limit the scope through clear standards. Additionally, we will consider revising our middle school history standards to ensure that students are prepared for the content in 11th grade World History. Currently, students in 8th grade cover the Massachusetts standards content for World War II and the Cold War Era, but we may need to transition some of the 8th grade content away from American history and to world history. That middle school standards review process will be conducted by a team of high school history department members and middle school social studies teachers and will be chaired by the network Co-director for Academics.

Standards: The World History standards will be taken from the Massachusetts History and Social Studies Curriculum Frameworks, courses I and II. This means that the course will cover the span from the fall of Rome to present.

The standards for AP World History will be taken from the Standards provided by the College Board for

this course. We will participate in the College Board AP Audit Process to get permission to officially offer AP World History.

History teachers will also base their course’s expectations on the Reading Standards for Literacy in History. Because we are only requiring three years of history, all students (regardless of whether they are in AP or regular world history) are expected to master the reading standards below during the course of their 11th grade world history class. Teachers are expected to include the reading standards below in lesson and unit plans and intentionally and explicitly teach all the following standards to mastery.

Grades 11–12 students:

Key Ideas and Details

1. Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist No. 10*).
5. Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
6. Evaluate authors’ differing points of view on the same historical event or issue by assessing the authors’ claims, reasoning, and evidence.

Integration of Knowledge and Ideas

7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
8. Evaluate an author’s premises, claims, and evidence by corroborating or challenging them with other information.
9. Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.

Range of Reading and Level of Text Complexity

10. By the end of grade 12, read and comprehend history/social studies texts in the grades 11–CCR text complexity band independently and proficiently.

MATH:

All Brooke High School students will be required to take four years of math. For the first two years, the math classes will be untracked – all students will take geometry in 9th grade and all students will take Algebra 2 in 10th grade. Students who have not mastered Algebra 1 in middle school will also take Algebra 1 remediation during 9th grade, meaning that they will have two periods of math most days. Starting in 11th grade, students (with their advisor’s consent) will select between two math pathways – the calculus track or the applied math track.

COURSES in MATH	Regular	Advanced	
9 th	Geometry [students who require Alg 1 will take this as an additional course during 1 st period]		
10 th	Algebra 2		
11 th	Advanced Quantitative Reasoning	Pre-calculus	
12 th	Statistics and Probability	AP AB Calculus	AP BC Calculus

Standards:

Each of the courses in 9th – 11th grade will be based on the Massachusetts Curriculum Frameworks for Mathematics. We will follow the Model Traditional Pathways and use the Common Core Standards outlined for each course. Math teachers will select textbooks that correlate with those standards and will bear responsibility for sequencing the standards into an appropriate and rigorous course.

The 12th grade calculus standards will be taken from the AP AB and BC Calculus Curriculum Framework, including the enduring understandings, the learning objectives, and the essential knowledge.

The 12th grade Statistics and Probability course standards will be created by the math department and will be completed no later than June of 2018, a year before the course will be offered. This will allow time to ensure vertical alignment between the Advanced Quantitative Reasoning class and the Statistics and Probability class.

COMPUTER SCIENCE:

Students at Brooke High School will be expected to demonstrate growth in their computer science knowledge and skills from year to year, and this growth will be benchmarked against rigorous grade-level learning standards. Although we’re still in the process of rolling out computer science at Brooke’s three K-8 schools, a majority of students would enter a Brooke High School in 2016 having had at least a half year of computer programming instruction. By the time the high school is fully enrolled, nearly every entering student will have had at least four years of computer science as an elementary student at Brooke, with exposure to a variety of introductory coding platforms, including Code.org, Pencil Code, Scratch, LEGO Mindstorms, and App Inventor. Our goal is to prepare every student at Brooke High School to take the new AP Computer Science Principles course, and offer the option for certain students to take the AP Computer Science A course.

PATHS in COMPUTER SCIENCE	Regular	Advanced
9 th	CS 1: Exploring Computer Science	
10 th	CS 2: Physical Computing	
11 th	CS 3: AP Computer Science Principles	
12 th	<i>Possible elective</i>	AP Computer Science A

As with all Brooke curriculum standards, our learning expectations in computer science will be aligned with relevant state and national standards. In particular, computer science instruction at Brooke High School will be aligned with the Commonwealth’s digital literacy and computer science standards, which are currently in draft form. In addition, we will use as guidelines the learning standards developed by national organizations, such as the Computer Science Teachers Association (CSTA) and the International Society for Technology in Education (ISTE). (Members of the panel revising the Massachusetts standards have suggested that the Commonwealth's new standards will resemble those issued by the CSTA.)

In developing its high school computer science curriculum, Brooke will look to adapt best practices from model schools in Massachusetts and around the country. Locally, model programs include the Advanced Math and Science Academy Charter School in Marlborough and Beaver Country Day School in Chestnut Hill. Both have been leaders in computer science instruction for students in grades 6 to 12. AMSA’s model requires computer science in every grade from 6 to 11, covering networking, software design, web design, mobile computing, computer-aided design, and robotics. At Beaver Country Day, computer science is deeply integrated into the school’s “coded curriculum,” with students using computer code to express their ideas and explore topics in subjects ranging from science and math to art and literature.

Nationally, models include the Nashville Academy of Computer Science in Nashville, Tennessee, whose computer science curriculum is focused on preparing students with marketable skills in computer programming, web design, and related fields.

At Brooke High School, we intend to offer four years of computer science, three of which will be required, and one that will be elective. The course sequence will likely follow the following four-year model:

- **Year 1 (Required): Exploring Computer Science.** Developed by a research team headed by UCLA and piloted originally in the Los Angeles Unified School District, Exploring Computer Science is a year-long computer science course, intended for first-year high school students. The curriculum comprises six units: human-computer interaction, problem solving, web design, programming, computing and data analysis, and robotics, each culminating in a final project. Assignments and instruction are placed in real-world contexts, so as to be socially relevant and meaningful for students from diverse backgrounds. The course also emphasizes ethical and social issues in computing, while providing an orientation to careers in computing.
- **Year 2 (Required): Physical Computing.** The second-year computer science course will introduce students to physical computing with programmable microcontrollers, the tiny computers that are increasingly embedded in household appliances, automobiles, and other so-called “smart” products. The curriculum for this course will be hands-on and project-based, using the Arduino control board, which facilitates rapid prototyping of electronics projects based on the Atmel’s ATmega microcontrollers. Students will write text-based code in C for the Arduino, using it to control a variety of low-cost input and output devices, including light emitting diodes, liquid crystal text displays, piezo-electric speakers, and light and temperature sensors. This course will pull together activities from a variety of sources, including university curricula based on the Arduino, as well as projects shared by the growing community of hobbyist “makers.”
- **Year 3 (Required): AP Computer Science Principles.** The College Board’s newest computer science course - AP Computer Science Principles - covers a broad range of topics in computing at a first-year college level: programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. Taking a multidisciplinary approach, the course challenges students to explore the real-world applications of computing and technology. Like the Exploring Computer Science course, the AP Computer Science Principles course is designed to engage students from demographic groups that have traditionally been underrepresented in taking AP computer science and entering computing careers. Several full-year curricula have emerged to meet the new AP standards, including materials from Code.org and a Mobile CS Principles course, based on MIT’s App Inventor technology.
- **Year 4 (Elective): AP Computer Science A.** The AP Computer Science A course is equivalent to a first-semester, university-level computer programming course. Students who score well on the related AP exam can earn college credit at some institutions for their work. Based on Java, the course emphasizes concepts in object-oriented programming: program and class design, design strategies and methodologies, organization of data (data structures), data processing (algorithms), and analysis of potential solutions.

SCIENCE:

All students will be required to take three years of science and will be encouraged to take a fourth year. Classes for the first three years will be heterogeneous but students interested in advanced science can take an AP course in their senior year.

COURSES in SCIENCE	Regular	Advanced
9 th	Biology (Biology MCAS)	
10 th	Chemistry	
11 th	Introductory Physics	
12 th	Earth and Space Science	AP Chemistry and / or AP Biology

All Brooke High science teachers will also be expected to explicitly teach reading comprehension for science texts. As made explicit in the Common Core and therefore in the Massachusetts Frameworks, students are expected to become proficient readers of science texts. Teachers are expected to include the reading standards below in lesson and unit plans and intentionally and explicitly teach all the following standards to mastery. Teachers will use textbooks, articles, lab instructions, and other texts to teach these standards.

Science courses will also focus on the scientific reasoning skills of data representation, experiment design, interpretation of data results, and understanding, analyzing and comparing alternate viewpoints. These are the science content areas assessed on the ACT so we will evaluate our effectiveness teaching these skills using the EXPLORE at the end of 9th grade, the PLAN at the end of 10th grade, and the ACT in the end of 11th grade and the first half of 12th grade.

Standards:

The science content for each high school course in grades 9th – 11th and in Earth and Space Science should be based on the new Massachusetts Science and Engineering Standards to be adopted soon. The standards for an optional AP course for 12th grade students will be based on the AP curriculum. Science teachers will also base their course's expectations on the Reading Standards for Literacy in Science and Technical Subjects.

Biology and chemistry teachers are expected to teach the following standards to mastery.

Reading Standards for Literacy in Science and Technical Subjects: **Grades 9–10 students:**

Key Ideas and Details

1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
2. Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

Craft and Structure

4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 9–10 texts and topics*.
5. Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., *force, friction, reaction force, energy*).
6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

Integration of Knowledge and Ideas

7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
8. Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for

solving a scientific or technical problem.

9. Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.

Range of Reading and Level of Text Complexity

10. By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently.

Physics and electives teachers are expected to teach the following standards to mastery.

Reading Standards for Literacy in Science and Technical Subjects: **Grades 11–12 students:**

Key Ideas and Details

1. Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.
2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Craft and Structure

4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11–12 texts and topics*.
5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.
6. Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.

Integration of Knowledge and Ideas

7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.
9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

Range of Reading and Level of Text Complexity

10. By the end of grade 12, read and comprehend science/technical texts in the grades 11–CCR text complexity band independently and proficiently.

SPANISH:

The creation of Spanish standards and curriculum will be driven by the goal of having all students pass the AP Spanish Language and Culture Exam. The standards will be backwards mapped from that goal and will also align with the Massachusetts Foreign Languages Curriculum Framework.

At full scale, Brooke High will offer 6 Spanish classes: Spanish 1, Spanish 2, Spanish 3, Spanish for Bilinguals, AP Spanish Language, and AP Spanish Literature. All students will take four Spanish courses (one per year) so their terminal courses will be determined by their starting course in 9th grade.

- Students at our Mattapan and East Boston campuses have taken Spanish in 6th, 7th, and 8th grade, and some of them may, therefore, place into a Spanish 2 class their 9th grade year.
- Additionally, many of our students speak Spanish as a first language. We hope to build upon this natural advantage that these native speakers have by offering a Spanish for Bilinguals class that focuses on reading, writing, and grammar rather than on vocabulary acquisition. Spanish for Bilinguals will be a 9th grade course that students can place into through an interview with the Spanish teacher. The goal of Spanish for Bilinguals is to prepare students in one year with the foundational skills they will need to be successful in AP Spanish the following year.

- Most students will place into Spanish 1 in their 9th grade year.

The three pathways for Spanish courses are listed below

PATHS in SPANISH	1 start	2 start	Bilingual
9 th	Spanish 1	Spanish 2	Spanish for Bilinguals
10 th	Spanish 2	Spanish 3	AP Spanish Language
11 th	Spanish 3	AP Spanish Language	AP Spanish Literature
12 th	AP Spanish Language	AP Spanish Literature	TBD

Standards:

Our process for creating the Spanish standards and curriculum stems from this goal of having students pass the AP Spanish Language Exam. During the spring of 2016, we will engage in the work of collecting all of the standards, scope and sequences, and curriculum material choices of schools that have been highly successful with getting their students to pass that exam. For instance, KIPP Academy Lynn had a 100% passing rate on the AP Spanish exam in 2015 and educates a population similar to that of Brooke. Newton Public Schools also had a 100% pass rate with about 70% of test takers scoring a 5; therefore, we will also seek to meet with them and collect their standards and scope and sequence to inform our Spanish curriculum development.

After examining the standards from other schools, we will assemble or create standards for each course for each of the six areas from the AP Language and Culture exam:

- Spoken interpersonal communication
- Written interpersonal communication
- Audio, visual, and audiovisual interpersonal communication
- Written and print interpretive communication
- Spoken presentational communication
- Written presentational communication

The role of the founding Spanish teacher in this process is largely dependent on his or her expertise in standards creation and the timing of when he or she is hired.

AP Spanish Literature will be created to align with that AP exam.

Note that all courses throughout Brooke High School will also be expected to address the Speaking and Listening Standards for 9th – 10th grades or 11th-12th grades. The Principal will conduct professional development on those standards and work with teachers to ensure that they are addressed in all courses every year.

Brooke High School Staffing

TEACHING SCHEDULES:

A full-time teaching load will consist of:

- Teaching four periods (in most cases this will be teaching one or two distinct courses)
- Staffing office hours four days a week during 1st period (1st period does not occur on Mondays because of a shortened day to allow for staff professional development)
- Serving as an advisor

Teachers will have two planning periods during each school day. Teachers will also be expected to attend professional development on Monday afternoons from 2:10 – 4:00.

Full time teacher work hours are 7:45 – 4:00 each day (the entire student school day plus 15 minutes additional time before and after the school day). Teachers can also run extra-curricular clubs or coach sports after-school. Teachers will receive an additional stipend for leading those activities.

Sample schedule for 2016-2017 school year:

period	Hist & Lit 1	Hist & Lit 2	SCIENCE	GEOMETRY	SPANISH	CS	Student support
Advisory 8 – 8:08	Advisory						
1 st	Office hours	Office hours	Office hours	Office hours	Office hours	Office hours	As needed based on IEPs
2 nd	Block 1	Block 1	section 1	planning	section 1 (Spanish 2)	planning	
3 rd			planning	section 1	planning	section 1	
4 th	planning	Planning	section 2	section 2	section 2 (Spanish for Bilinguals?)	section 2	
5 th	Block 2	Block 2	section 3	planning	section 3 (Spanish 2)	planning	
6 th			planning	section 3	planning	section 3	
7 th	planning	Planning	section 4	section 4	section 4 (Spanish 1)	section 4	
	Advisory						

Note: An additional Algebra 1 remedial course will be taught to students needing it during 1st period. The staffing for that position is not yet determined; it may be a part-time teacher or an associate teacher or the Principal Fellow or another staff member.

DEVELOPING GREAT TEACHING:

A commitment to developing great teaching is the driving force behind all design elements at Brooke Charter Schools. Brooke High School will invest in developing great teaching in the following ways:

- *Observation and feedback cycle:* We are committed to providing each teacher with individualized support through our observation and feedback cycle. Each Brooke High School teacher will be observed a minimum of 20 times a year by his/her direct supervisor, which will either be the principal or an assistant principal. After each observation, the teacher and instructional leader will meet to debrief the lesson. This enables ongoing feedback to teachers and support in setting and reaching manageable improvement goals.
- *Weekly professional development:* Each Monday, students will be released early so that teachers can engage in whole school professional development from 2:10 to 4:00. This professional development will be based on staff needs and will include a combination of whole staff training, department meetings, co-planning, data analysis, and school culture development. Professional development will be coordinated by the principal with support from other instructional leaders.
- *Summer professional development:* Each year, teachers will begin their school years a minimum of eight days before students report. This will provide teachers with the time to engage in extensive professional development and preparation time to start the school year strong. In the founding year of the school, we are proposing six weeks of preparation time, with teachers beginning on July 11th and students beginning on August 22nd. This will provide 6 weeks for teachers to align on student culture expectations and norms and prepare the scope and sequence and all unit plans for the year before the school year begins.
- *Faculty collaboration:* We believe that collaboration is an essential element of professional growth. This deep-held belief is one of our four organizational values – articulated as “we grow best together.” Whenever possible we will ensure that all teachers have a co-planning partner who they will work with to devise unit plans, think through lesson plans, debrief lesson successes and shortcomings, and analyze performance data. In the first year of Brooke High, this co-planning structure is limited; only the History & Literature teachers have co-planning partners (and therefore schedules that provide them with opportunities for daily collaboration during their two planning periods). In subsequent years, we will prioritize providing co-planning time and structures for teachers.
- *Content expertise support:* As Brooke High School reaches full size, we will appoint a department chair for each subject area. Those department chairs will be selected based on their content knowledge expertise and will be responsible for supporting content development in their colleagues. These department chairs will also be responsible for ensuring that we have vertical alignment between courses within a department where necessary.

STAFFING ASSUMPTIONS:

Student body size assumptions:

	Year 1	Year 2	Year 3	Year 4	Year 5
9 th	108 (4 sections of 27)	122 (5 sections of 25 OR 6 sections of 20)	151 (6 sections of 25)	162 (7 sections of 23)	162 (7 sections of 23)
10 th	0	103 (4 sections of 26)	115 (5 sections of 23)	144 (6 sections of 24)	154 (6 sections of 26)
11 th	0		97 (4 sections of 24)	110 (5 sections of 22)	136 (6 sections of 23)
12 th	0			93 (4 sections of 23)	104 (4 sections of 26)

Faculty size assumptions:

TEACHING	Year 1	Year 2	Year 3	Year 4	Year 5
History & Literature (9 th and 10 th grades)	2	5	5.5	6.5	6.5
English (11 th and 12 th grades)	0	0	1	3	3
History (11 th and 12 th grades)			1	3	3
Math	1	2.5	4	6	6
Science	1	2.5	4	6	6
CS	1	2.5	4	6	6
Spanish	1	2.5	4	6	6
Student Support	1	1	2	2	2
Associate Teacher	1	2	4	6	6
TOTAL	8	18	29.5	44.5	44.5

ADMINISTRATION	Year 1	Year 2	Year 3	Year 4	Year 5
Principal	1	1	1	1	1
Assistant Principal		1	2	2	2
Dean of Students	1	1	1	1	1
Director of Operations	1	1	1	1	1
Office Manager	1	1	1	1	1
TOTAL	4	5	6	6	6

Many part time teachers will also be hired to teach electives during 1st period.

REVISED SCHEDULE

MONDAY

7:00 – 8:00	DETENTION
8:00 – 8:08	Morning Advisory (all homework turned in during this period for 9 th and 10 th grade; attendance, advisor calls absent parents)
8:10 – 8:55	2 nd Period
9:00 – 9:45	3 rd Period
9:50 – 10:35	4 th Period
10:40 – 11:25	5 th Period
11:30 – 12:15	6 th Period
12:15 – 12:45	Lunch
12:45 – 1:30	7 th Period
1:35 – 2:05	Afternoon Advisory and CHARACTER EDUCATION
2:10 – 4:00	Professional development for teachers; homework support for certain students and early dismissal for all others selected extra-curriculars (including varsity sports)

TUESDAY, WEDNESDAY, THURSDAY:

7:00 – 8:00	DETENTION
8:00 – 8:08	Morning Advisory
8:10 – 8:50	1 st Period: Alg 1, study skills, arts electives 2;
8:55 – 9:50	2 nd Period
9:55 – 10:50	3 rd Period
10:55 – 11:50	4 th Period
11:50 – 12:20	Lunch
12:20 – 1:15	5 th Period
1:20 – 2:15	6 th Period
2:20 – 3:15	7 th Period
3:20 – 3:45	Afternoon Advisory
3:45 – 5:00	Sports, Extra-Curriculars

2 Sample of offerings: music, art, newspaper, debate, chorus, drama

FRIDAY:

7:00 – 8:00	DETENTION
8:00 – 8:08	Morning Advisory
8:10 – 8:50	1 st Period: study skills, arts electives
8:55 – 9:45	2 nd Period
9:50 – 10:40	3 rd Period
10:45 – 11:35	4 th Period
11:35 – 12:05	Lunch
12:05 – 12:55	5 th Period
1:00 – 1:50	6 th Period
1:55 – 2:45	7 th Period
2:50 – 3:15	COMMUNITY MEETING
3:20 – 3:45	Afternoon Advisory
3:45 – 5:00	Sports, Extra-Curriculars

Advisory System

Rationale

One challenge of applying the Brooke approach in a high school setting will be ensuring that students feel known (a fundamental element of our vision of what great teaching looks like) while moving away from semi-self-contained classrooms and toward specialized subject-matter high school classrooms. We have created the Brooke High School advisory system with that challenge in mind. The advisory system has been designed to help create a culture in which each student feels known and supported on his/her journey to college.

Structure and Composition

Advisories will consist of 12-15 scholars, single gender, and will eventually contain students from multiple grade levels. Having students from across grade levels in one advisory will help promote cross-grade-level support and role-modeling from upperclassmen, while simultaneously containing the college advising for advisors to 3-4 students per year. Most teachers and some staff members will serve as advisors, in order to allow us to contain advisories at 12-15 students each.

Daily and Weekly Schedule

Advisories will meet twice daily. Each day will begin with a 10-minute check in, during which advisors will take attendance (including making calls to absent students and their parents). During this time, 9th and 10th grade students will turn in all homework for all classes in advance of attending first period. Each day will end with a 25-minute advisory period. That period will be anchored by the following routines:

- Students notify advisor of their plans for 1st period the following day (if not a regularly scheduled elective, then office hours with a particular teacher, or study hall). Advisor enters the information into a central data base.
- Advisor organizational check-ins (with all students at first, and then with selected students as the year goes on)
- Independent reading
- College counseling conferences (primarily for juniors and seniors)

In order to allow for more informal and unstructured time for the group to interact, each advisory will have a designated day each week on which advisees and advisor eat lunch together.

During one afternoon advisory session per week, we will encourage (but not require) advisors to have a dedicated “gratitude circle” or other kind of advisory group meeting during which members of the advisory communicate to one another (either verbally or in writing) that for which they are grateful to other advisory members.

Character Education

On Monday afternoons, there will be a 30-minute advisory period. During this period, advisors will lead students in a text-based discussion related to one of our character education themes. Texts will generally be short pieces, distributed and read in advisory the prior week. Our character education themes will remain consistent from year to year, but most texts will be new each year (a few “anchor-texts” will likely be read each year). This structure will allow us to revisit the same character education themes in advisory from year to year, thereby reinforcing the same core understandings each year, while exposing students to different texts and ways of considering those same themes. The discussion-based nature of the lessons will not only help maximize student engagement, but will also provide the opportunity for the juniors and seniors within the advisory group to play a leadership role in character education lessons, taking advantage both of their maturity and their experience in previous years

exploring the same character education themes.

What We Value (Our Commitment to Each Other)	
Theme	Sample Texts
We value community and connection. It gives us meaning. It is critical to our ability to be happy, fulfilled, and successful.	<ul style="list-style-type: none"> ➤ Give and Take, Adam Grant, Chapter 3: The Ripple Effect ➤ Bowling Alone, Robert Putnam, Section 3 ➤ Drew Dudley, Everyday Leadership, Ted Talk
We value mutual respect. Respect for our differences. The gift of listening.	<ul style="list-style-type: none"> ➤ How Diversity Makes Us Smarter, Katherine Phillips, Scientific American, 10/1/2014 ➤ Why Are All the Black Kids Sitting Together in the Cafeteria?, Beverly Tatum ➤ The Astonishing Power of Listening, Cara Kaplan, Psychology Today, 4/1/2011
We value integrity.	<ul style="list-style-type: none"> ➤ Nurture Shock, Po Bronson and Ashley Merriman, Chapter 4: Why Kids Lie ➤ The Trust Equation, Ricardo Azziz, Huffington Post, 5/18/2014
How We Succeed	
Theme	Sample Texts
Accomplishing your goals/dreams as a person of color in Boston. What are the obstacles? What do the numbers really say?	<ul style="list-style-type: none"> ➤ TBF, Boston Opportunity Agenda, Annual Report Card ➤ Original list of stats (similar to Harper's Index) on poverty, crime, wealth, and income statistics by race
Goal setting. Knowing what you want and why. Creating a detailed and specific vision of exactly what you want it to look like is extremely important and helpful. Creating a detailed and specific vision about how you will handle the toughest parts is the most helpful. Long-term planning.	<ul style="list-style-type: none"> ➤ Top Dog, Po Bronson and Ashley Merriman, Chapter 8: How One Night of Blackjack Sped Up the World Economy ➤ The Power of Habit, Charles Duhigg, Chapter 5: Starbucks and the Habit of Success
Importance of will-power and delayed gratification. Decisions about sex. Decisions about drugs and alcohol.	<ul style="list-style-type: none"> ➤ Willpower: It's in Your Head, Greg Walton and Carol Dweck, 11/26/2011, NYT ➤ Willpower: Rediscovering the Greatest Human Strength, Roy Baumeister and John Tierney ➤ The Truth About Grit, Jonah Lehrer, Boston.com, 8/2/2009 ➤ DON'T: The Secret of Self-Control, Jonah Lehrer, The New Yorker, 5/18/2009
Growth mindset matters. When people believe (know) they have the capacity to change and grow, they are more successful in their endeavors.	<ul style="list-style-type: none"> ➤ Mindset, Carol Dweck, Chapters 1-3 ➤ Self-Theories, Carol Dweck ➤ When DNA is Not Destiny, Sharon Begley,

	<p>Newsweek, 12/1/2008</p> <ul style="list-style-type: none"> ➤ A Star is Made, Stephen Dubner and Steven Levitt, NYT Magazine, 5/7/2006 ➤ The Making of an Expert, Anders Ericsson, HBR, July/August 2007
Intersection of Growth Mindset Theory and Race and Gender.	<ul style="list-style-type: none"> ➤ Whistling Vivaldi, Robert Steele ➤ None of the Above: What IQ Doesn't Tell You About Race, Malcolm Gladwell, The New Yorker, Dec. 17, 2007 ➤ Reducing the Effects of Stereotype Threat on African-American College Students by Shaping Theories of Intelligence, Joshua Aronson, Journal of Experimental Psychology, July 18, 2001 ➤ Self-Theories, Carol Dweck, Chapter 13: Holding and Forming Stereotypes
Willpower is depletable. It's not just mind over matter. So what can we do about it?	<ul style="list-style-type: none"> ➤ Do You Suffer From Decision Fatigue?, John Tierney, 8/17/2011, NYT ➤ Willpower, Roy Baumeister and John Tierney, Chapter 4: Decision Fatigue
Getting into it matters.	<ul style="list-style-type: none"> ➤ The Winning Edge: Passion and Perseverance ..., Peter Dinklage, Psychology Today, Nov/Dec 2005 ➤ Flourish, Martin Seligman, Chapter 6 ➤ Mihaly Csikszentmihalyi: Flow, the secret to happiness, Ted Talk
Savoring and expressing gratitude.	<ul style="list-style-type: none"> ➤ A Serving of Gratitude May Save the Day, John Tierney, NYT, 11/22/2011 ➤ Flourish, Martin Seligman, Chapter 2
Habits matter (Exercise decision paralysis. Don't think, do).	<ul style="list-style-type: none"> ➤ The Power of Habit, Charles Duhigg ➤ The Power of Habit: Setting up "Triggers" to Sustain Habits, Brendan Burchard, Huffington Post, 5/13/2005
Small, concrete wins and actions. If you have lots of debts, pay off the smallest debt first, even if it has a lower interest rate.	<ul style="list-style-type: none"> ➤ Getting Things Done, David Allen, Chapter 1 ➤ Willpower, Roy Baumeister and John Tierney, Chapter 3: A Brief History of the To-Do List ➤ Switch, Chip Heath and Dan Heath, Chapter 6: Shrink the Change
Self-identification matters. The flywheel effect. Willpower begets more willpower. I don't eat cookies. I eat radishes.	<ul style="list-style-type: none"> ➤ The Power of Habit, Charles Duhigg, Chapter 3 ➤ Switch, Chip Heath and Dan Heath, Chapter 7
Stereotype threat and Self-Identification.	<ul style="list-style-type: none"> ➤ Whistling Vivaldi, Robert Steele ➤ Neutralizing "Stereotype Threat" in

	<p>Middle-School Students, Marshall Memo 168, 1/15/2007</p> <ul style="list-style-type: none"> ➤ Race and The Schooling of Black Americans, Claude Steele, Atlantic Monthly, April 1992, reviewed in Marshall Memo #145
Context matters. Little things mean a lot.	<ul style="list-style-type: none"> ➤ Nudge, Richard Thaler and Cass Sunstein, Chapters 18 and 19 ➤ Switch, Chip Heath and Dan Heath, Chapter 1
Challenge of being a minority on campus.	<ul style="list-style-type: none"> ➤ Who Gets to Graduate?, Paul Tough, NYT Magazine, May 15, 2014 ➤ Beyond SAT's: Finding Success in Numbers, Tina Rosenberg, NYT, Feb. 15, 2012 ➤ Top Dog, Chapter 8: the effect of size of group on performance
How the brain works. Why multi-tasking is a sham.	<ul style="list-style-type: none"> ➤ The Myth of Multi-Tasking and What It Means For Learning, Nick Morrison, Forbes, Nov. 16, 2014 ➤ The Myth of Multi-Tasking, Psychology Today, Nancy Napier, May 12, 2014 ➤ Why Can Some Kids Handle Pressure While Others Fall Apart, Po Bronson and Ashley Merryman, NYT, 2/6/2013

Community Service

Each year, each advisory group will engage in a community service project of their choosing. In order to help create the time for advisory groups to carry the projects out, we will allot three early-release Monday afternoons for community service time throughout the year (advisory groups may choose to carry their projects out at other times outside of the school-day throughout the year as well).

College Visits

We will dedicate one school day each year to advisory group college visits. Despite the large numbers of colleges in the Boston area, there will likely be multiple advisory groups visiting a campus at once, but advisory groups will travel together throughout the visit (i.e. not as one large group). The college visits will be arranged by non-teaching staff (not by advisors).

Parent Relationships and Communication

Each advisor will be the school point-person for communication with parents of advisees. Advisors will arrange pre-year in-person meetings with parents of all advisees and will also hold in-person parent conferences twice each year around report card time. Advisors will send calls or texts in the morning to parents when students are absent from school. Advisors will aim to develop close relationships with parents so that parents feel comfortable reaching out to the school, so that students are known and supported, and so the school can work in partnership with parents to help ensure the success of all students.

Monitoring Progress of Individual Advisees and Advisory Groups

Advisors will hold formal pre-year and mid-year goal setting meetings with all advisees and will check in regularly with advisees on progress toward those goals through the year. Goals will include process goals (habit development) as well as performance goals (grades, homework performance, attendance, etc.)

Advisors will be responsible for ensuring that advisees are meeting graduation requirements, enrolling in extra-curricular activities, and participating in at least one sport each year. Advisors will track the performance of individual advisees through a centralized database that will give them real-time information on GPA, homework, attendance, extra-curricular participation, office-hour attendance, detentions assigned, ACT results, AP results, college acceptance, and college placement. This data will also be available to the principal in order to track the overall performance and growth of each advisory group.

College Advising and Placement

Advisors will serve as front-line college counselors to their advisees, with training and support from the two full-time college counselors employed by the school. In addition to training advisors, counselors are responsible for tracking the college application and matriculation data of all students and monitoring when/where advisors appear to need support. The breakdown of responsibility for the college application process is described in the table below.

	Advisors	College Counselors
Preparing for the ACT	No role	College counselors do all the administrative work to arrange on-site ACT prep classes.
Taking the ACT	Ensuring all students take the ACT, and re-take as needed	College counselors do the administrative work to arrange and plan for administering the ACT at Brooke High, including applying for fee waivers
Visiting colleges	Advisors (some scheduled with advisory group on college visit days, otherwise ensuring students are visiting with parents/families).	College counselors arrange and prepare visits for college-visit days.
Tracking academic performance	Advisors (with training from counselors)	Train advisors
Ensuring enrollment in courses and extra-curricular activities that will appeal to prospective colleges	Advisors (with training from counselors)	Train advisors
Generating list of schools to apply to	Advisors (with training from counselors)	Counselors approve and/or give feedback on each list
Overseeing writing of application essays	Advisors (with training from counselors)	Train advisors
Preparing for interviews	Advisors review written practice interview feedback with advisees	Counselors arrange practice interviews

Ensuring applications are complete and turned in on time	Advisors	Counselors monitor completion through central data base
Applying for financial aid, including application fee waivers	Advisors communicate and connect families with counselors as needed	Counselors ensure families complete financial aid forms and have the support they need to do so.
Choosing where to enroll	Advisors (with training from counselors)	Train advisors
Communicating with parents throughout the process	Advisors	No role

A Day in the Life of a Brooke High Student

We aspire to create a high school experience for our kids that builds on the strengths of the Brooke student experience in grades K-8. We aim to create a high school experience in which our kids are challenged and known.

Day in the Life of a Brooke High Freshman

Gary Walker's alarm clock goes off at his home in Mattapan at 6:40 AM on a Tuesday morning in March. Gary showered the night before and he'll eat breakfast at school, so he gets dressed, says good morning to his mother and sister, and is out the door by 6:55. The MBTA bus near his house picks him up at 7:06 and delivers him to Ruggles Station at 7:40. He makes the 5 minute walk to school from there and arrives by 7:45.

Gary walks through the main entrance and heads to the cafeteria to pick up breakfast, which he brings with him to his morning advisory. He greets his advisor and begins chatting with the other 11 boys in his advisory group. They're all pretty close at this point because of the amount of time they spend together at the start and end of each day and at their weekly lunch. At 8am, advisory officially starts. His advisor, Mr. Jones, checks attendance, collects homework, checks uniform, and leads the boys in their affirmation and focus circle (a ritual that Mr. Jones created and does daily with his boys to get them prepared to be their best selves and to grow their minds and characters every day). Over the next three years, the advisory group will add students in younger grades as well so that the group becomes a cross-grade level group of boys. Mr. Jones will get to know Gary and his parents well and will be their point person in the college application process (supported by a core group of two college guidance counselors whose job it is to train and support advisors in the college application process).

At 8:08, advisory ends and the boys disperse to begin first period. Today is one of Gary's study skills days. During those days, he has to follow a study plan that he has developed with input from his advisor. Yesterday, Gary signed up for office hours with his geometry teacher. He's not required to attend office hours (he could spend the time independently studying instead), but Gary takes advantage of them whenever he can, and geometry is definitely the subject he needs the most help with. Other mornings he'll go to check in with his Spanish teacher or his biology teacher, usually with questions on the homework from the night before. On Tuesdays and Thursdays, Gary reports to drama class, taught and led by a local member of the Footlight Club in Jamaica Plain. The group is working on a production of *Raisin In the Sun* that will be performed in June.

The bell rings at 8:50 and Gary has five minutes to use the bathroom and make it to second period: computer science. All Brooke High Students are required to take a minimum of three years of computer science. Learning to code and program is a foundational skill that all Brooke high students will be proficient in upon graduating. For many, coding will become a passion that will culminate in a fourth

year AP computer science course and will find further outlet in an extra-curricular coding club (and possibly lead to a career in computer science).

After computer science, Gary transitions to History and Literature class, a double-block class that will last until lunch. Ms. Lake, Gary's Hist & Lit teacher, teaches just two of these double-block classes each day. As a result, her total student load is just 50 students, making it possible for her to give lots of writing feedback and support to each of her students. Ms. Lake co-plans for the class each week with her partner, Ms. Jimenez, one taking the lead on American history and one taking the lead on American literature. Both teachers have similar routines and paper-assignment schedules that allow them to hold regular writing-coaching sessions with each of their students. Ms. Lake has been very clear that the big goal that she has for all her students this year is that they become proficient writers who are able to express their thoughts in an organized and compelling way. Gary's writing has come a long way as a result of the work that he and Ms. Lake have both put in.

At 11:50, Hist & Lit class ends and Gary heads to the cafeteria for lunch. Fifth period starts at 12:20, so he has until then to eat and relax. By the time he's a junior, he'll be able to earn the privilege of stepping off campus for lunch each day. For now, he's glad to have the time to eat and sit with friends.

After lunch, it's off to biology (Gary's favorite subject) with Mr. Jones (his favorite teacher and advisor). Sixth period is Spanish. Gary did well in Spanish in middle school, so he placed into second-year Spanish. He loves that from the minute he walks through the door of Mr. Santiago's classroom, it's all-Spanish, all-the-time

The last academic period of the day is geometry, Gary's toughest subject. As in middle school math, each lesson begins with a challenging problem that students dive into before sharing and discussing solutions. Gary is still struggling to understand how to develop a solid geometrical proof, so he's grateful to have access to his teacher at office hours when he needs it.

At 3:20, Gary heads back to Mr. Jones's room for afternoon advisory. On Monday afternoons, there is a group advisory "lesson" or discussion related to building strong character and scholarly habits. But on every other day, students read independently while Mr. Jones conferences with individual students.

At 3:45, Gary heads to Cross-Country practice. The team practices four days a week, doing their long-runs on Wednesday and taking the day off on Thursdays. He loves his coach and he loves the camaraderie on the team. He's never been a stand-out athlete, but he found his passion with Cross-Country, and continues to run and train in the off-season. All HS students must either play a sport for at least one season or commit to one exercise-related extra-curricular per semester.

At 5:00, Gary gets on the T, lugging his backpack over his sweaty running clothes. He arrives home at 6:00 and heads straight to the shower. Then he comes to the kitchen for dinner. During cross-country season, Gary isn't even able to get to his homework until 7:30. He generally has about two hours of homework each night and isn't able to get much of it done at school or on the bus. That makes it a little tight during the season, and as much as he loves running, he's glad that he doesn't play a sport year round.

Gary is asleep by 10:30, which will give him a solid eight hours of sleep before he has to wake up and do it all again on Wednesday.

Revised Financial Projections, FY16 – FY21

Overview

The consolidated profit and loss for the three existing Brooke K-8 schools along with the central office achieves a positive cash balance through the forecast period of FY16 through FY21. The same holds for projections that include expansion resulting from the addition of a Brooke High School. In addition, as a result of Brooke Charter Schools' historically conservative budgeting strategy, sufficient reserves will be available throughout the FY16 to FY21 budget window, and beyond, to support the schools in the event of a significant unanticipated decrease in public funding. Further, reserves are available to support strategic growth initiatives, contingency costs related to the schools' compensation model, and anticipated capital improvements.

In the years beyond the FY21 budget window, long-term financial projections anticipate possible net losses for the Brooke East Boston campus. The primary cause of possible future deficits is derived from the City of Chelsea's lower per-pupil tuition rates. The financial projections assume the City of Chelsea's per-pupil tuition rate will remain significantly below that of the City of Boston, on the order of \$2,500 to \$3,000 less per pupil. However, financial projections anticipate annual positive changes in net position of the consolidated network of schools, which, coupled with reserves, will help to provide additional financial support to the East Boston campus. Should some portion of reserves or net income be needed to maintain high quality teaching and learning at Brooke East Boston, all necessary steps will be taken to comply with state and federal regulations and ensure resources from the sending districts of Chelsea and Boston are committed to students from those districts.

Two of three campuses (Brooke Roslindale and Brooke East Boston) will reach their maximum enrollment of 510 respectively in FY16. All three existing Brooke Schools will be fully enrolled at 510 students per campus by FY17, for a total of 1530 K-8 grade students. Please note that the pending amendment to add a Brooke High School requests an increase in K-8 maximum enrollment to 540 at each campus. However, the financial projections continue to reflect a conservative 95% enrollment level, resulting in total K-8 enrollment of 1530 through the budget window. Given the demand for seats, as demonstrated by waitlist data across all three schools, the financial projections anticipate each of the K-8 schools will remain fully enrolled through FY21 and beyond. Further, the financial projections account for the addition of a Brooke High School, with enrollment starting at 108 students in FY17 and reaching maximum enrollment of 601 students in FY23.

As demonstrated in prior proposals for expansion submitted by Brooke Charter Schools, the organization has committed significant time and effort toward generating fiscally conservative financial projections that are both realistic and also provide contingencies to mitigate possible budgetary challenges that may surface in the initial years of operation.

Financial projections for the expansion to a High School assume start-up expenditures of approximately \$296,000 in FY16, prior to the first school year in 2016-2017. These start-up costs will be funded through existing expansion grants currently held in reserve. The model anticipates expenditures in the first full fiscal year (FY17) of \$2.3 million, growing to \$9.9 million by FY21. The financial model further reflects revenue levels for the High School's first five fiscal years (FY17-FY21) sufficient to maintain positive cash balances through the budget window. This trend of anticipated positive cash balances continues through a ten year period, the entire long-term budget window.

As in previous proposals, a conservative budget approach was utilized in preparing the financial projections reflecting an expansion of Brooke Charter Schools to include a High School. This approach includes the following:

- **Conservative tuition assumptions:** The financial projections anticipate revenues of approximately \$2.3 million in FY17, the first year of expansion, rising to \$10.4 million in year five

(FY21). The majority of funding is generated through Commonwealth Tuition Revenue, approximately 72% of total revenues in FY17 and rising to 90% in FY21. The model's per-pupil blended (i.e., Boston and non-Boston) tuition rate utilized in the baseline year (FY17) is \$15,564. This estimate is achieved by assuming that, conservatively, the FY17 rate will be 95% of the FY16 tuition rate for a comparable Boston-based charter high school. The FY17 estimate of blended per-pupil tuition is also below the three year average (FY13-FY15) of the Boston-based charter high school used as a comparison. The projections also reflect that 11% of pupils will be non-Boston residents, and therefore assumes a per-student tuition rate for these pupils that is more than 17% lower than the Boston rate.

- **Limited reliance on private funding:** In the first five full years of the high school's operation (FY17-FY21), philanthropy (private grants/donations) accounts for less than 2% of total funding. Furthermore, the revenue necessary for the start-up year prior to the first full school year (FY16) is already committed through an existing New Schools Venture Fund Grant. Private grants/donations revenue in the initial two full school years (FY17 and FY18) (approximately \$530,000 in total) is already committed through a Charter School Growth Fund grant (\$500,000) and remaining funds from the New School Ventures Fund Grant. For years one and two (FY17 and FY18), the projections also anticipate the transfer of \$135,000 and \$150,000 respectively from network reserves.
- **Compounded start-up costs:** The financial projections show four years (FY16-FY19) of various "start-up costs," totaling \$760,000. These expenditures include costs for personnel, facilities, technology equipment, and instructional materials that may be encumbered prior to the start of the first school year through the third year of the High School. These expenses are assumed to be above and beyond the expenditures for personnel, facilities, technology equipment, and instructional materials already accounted for in the five year budget window. These budgeted costs, along with a nearly 2% contingency for further unanticipated expenses, creates a sufficient buffer to mitigate potential higher-than-expected costs from FY16 to FY19.
- **Contingency planning:** As a result of Brooke Charter Schools' historically conservative budgeting strategy, sufficient reserves will be available throughout the FY16 to FY21 budget window, and beyond, to support the High School in the event of a significant unanticipated decrease in public funding. As of FY15 year end, the network of schools reserved more than \$5.9 million. Further, the projections assume that per-pupil tuition rates will increase, on average, less than 2% year over year while most expenses are budgeted to increase 6% on average across the entire budget window.

Underlying Key Assumptions

From the founding of our first school, budgeting and financial planning has upon several key principles. Those same key principles persist in the development of financial projections for the proposed expansion.

With regard to revenues, the financial model in the immediate and long-term revolves around two key principles. First, financial projections provide for conservative, yet realistic assumptions for state tuition payments, as further detailed below in the “Major Revenue Assumptions” section.

Second, the model is minimally dependent on private grants and donations. A pre-existing grant commitment from the Charter School Growth Fund will account for \$500,000 of revenue for the proposed expansion in the first full year (FY17). From FY17 through FY21 and beyond, the estimate for fundraising revenue (i.e., private grants and donations) for the entire network is set at the five year (FY11-FY15) average, or \$340,000 per year. Across all schools and the network, this accounts for 1% or less of total revenues in each of the fiscal years from 2019 and beyond. This approach protects the school from any significant reliance on annual fundraising income, which is a highly variable revenue source.

With regard to expenditures, on average over a ten-year long-term budget window, facility and personnel costs combined account for more than 70% of expenses. In light of this context, expenditure assumptions in the model center on one key principle. Namely, the projections seek to adequately manage and minimize facility expenses, including debt service, and allocate personnel expenditures in a way that will maximize student achievement. With the help of allocations of federal Qualified Zone Academy Bonds (QZAB), New Markets Tax Credits (NMTC) and Federal and State Historical Tax Credits (HTC), Brooke Charter Schools has been able to effectively manage the debt service payments associated with their existing facilities. This trend is projected to continue, and further improve, over the long-term budget window. With respect to personnel costs, the financial projections provide adequate funding levels to support the school’s compensation model implemented in FY14 and designed to maximize student achievement and reward great teaching.

Major Revenue Assumptions

Tuition Forecasts: The projections continue fiscally conservative, yet realistic, assumptions for tuition and tuition growth. For a baseline K-8 tuition rate estimate in FY15, the projections assume an average per student Boston tuition rate of \$14,286, which is approximately 95% of the actual FY15 Q4 Boston tuition rate and below the three year average per-pupil Boston tuition rate for Brooke’s existing K-8 schools. As noted in previous sections, the projections estimate a significantly lower per-pupil Chelsea tuition rate, \$11,816 in baseline FY15, which is 95% of the FY15 Q4 actual of \$12,861. The projections assume a per-pupil tuition growth rate of less than 1.75% from FY16 through the end of the long-term budget window, which is below the average annual per student tuition rate increase across Brooke Schools over the prior three fiscal years (FY13-FY15). For the baseline High School tuition rate estimate in its initial year (FY17), the projections assume a blended (Boston and non-Boston) per student tuition rate of \$15,564. Again, to be conservative, this rate is nearly 2% below the average per pupil tuition rate for an existing, comparable Boston-based Charter High School over a three year period (FY13 to FY 15).

Fundraising: Despite the fact that Brooke High School will be in start-up mode in FY17 and FY18, the projections include only the committed Charter School Growth Fund grant of \$500,000 in these initial two fiscal years (\$250,000 in FY17 and \$250,000 in FY18), and approximately \$30,000 in remaining funds from the existing New Schools Venture Fund grant. The model anticipates additional private grants and contributions at the network level of \$340,000 annually from FY17 to the end of the long-term budget window. This estimate reflects the five year historical average for private grant and donation revenue from FY11 to FY15, and accounts for 1% or less of total revenues in each of the fiscal years from 2019 and beyond.

Charter School Program Start-Up Grant: The financial projects anticipate zero availability of CSP start-up funds.

Federal Entitlements: The financial projections assume K-8 Brooke Schools will collect, on average, \$886

per student in Federal entitlement grants in FY16, which is the approximate per pupil Federal entitlement income across all existing Brooke Schools in FY15. The financial model further anticipates that Federal funding will remain flat at \$886 per pupil through the entire long-term budget window. The projections assume a modest 5% differential between K-8 and High School Federal entitlement funding, bringing the per pupil federal grant funding estimate per High School student to \$930 in FY17, and remaining flat in future fiscal years.

Central Office Fees: The FY16 to FY20 financial assumptions maintain a 10% “network tuition charge,” calculated as 10% of the tuition received at each school. The funds from this charge are used to pay central office staff and operations that provide services and support to all Brooke campuses.

Reserves: Fiscally conservative budgeting spanning from the inception of Brooke Charter Schools has enabled the development of a significant reserve base. This reserve is reflected in the financial projections, and funds are drawn from reserves over the span of the FY16-FY21 budget window and beyond for capital improvements, as well as contingency costs that may arise from the start-up of Brooke High School and the continuation of the Schools’ compensation model.

Major Expenditure Assumptions

Personnel: Given that personnel expenditures represent such a large share of the budget, the financial projections endeavor to reflect fiscally conservative personnel-related assumptions. The projections estimate an average instructional salary at \$61,646 in FY16 (based on FY15 actuals). The financial model assumes an average annual salary increase of 2.5% across all roles. To provide for an additional conservative assumption, the model also budgets an additional 7% annually as a contingency for salary increases across all roles.

Facilities: Brooke is presently sub-leasing 17,758 square feet of property to a Boston-based charter school utilizing the space as the temporary location for their high school. The sub-tenant is expected to vacate the space in July 2016. Brooke presently holds an option to extend the prime lease for another year, from August 1, 2016 to July 31, 2017. Brooke intends to exercise its option to continue the lease, thereby providing Brooke High School with temporary space at a known lease rate for the initial year, and potentially year two. The facility is accessible to individuals with physical disabilities, and will be able to accommodate all students in the initial year (FY17) and possibly year two (FY18). The financial projections further assume the High School will transition to a permanent facility in FY18 or FY19, resulting in an increase in overall debt service payments that carries forward through the end of the long-term budget window. The projections depict a steady annual debt service payment based on existing financing arrangements with lenders, accounting for approximately 5% of total expenditures on average.

Transportation: Neither consolidation nor expansion will result in significant changes to Brooke student transportation policy as it currently exists at each Brooke campus. The budget reflects the current Brooke policy of providing regional bus transportation for Chelsea students to the Brooke East Boston campus. High school students from Boston and Chelsea will be eligible for T passes, but not for school bus transportation (as is the case with 7th and 8th graders currently). Boston students residing more than two miles from the location of the permanent site of Brooke High School will receive a MBTA Student Pass through Boston Public Schools Transportation. The pass is valid on Bus, Subway, Express Bus, and Commuter Rail Zones 1, 1A, and 2. The cost of MBTA student passes for Boston students will be reimbursed in full by Boston Public Schools. Boston students requiring “Door to Door” service as part of an IEP will be provided yellow school bus transportation via Boston Public Schools.

Brooke High School will also provide MBTA passes for Chelsea students. Chelsea students requiring “Door to Door” service as part of an IEP will receive yellow school bus transportation, or an equivalent, provided by Brooke High School. Brooke will seek reimbursement for all Chelsea student transportation

costs through the state regional transportation reimbursement program. The model reflects a regional transportation reimbursement rate of 60% across the entire budget window, although there are sufficient contingency funds available for Brooke East Boston and the Brooke High School should the regional transportation reimbursement rate fluctuate year over year.

Other Key Assumptions: The majority of remaining spending assumptions in the financial projections reflect either a per-pupil calculation (e.g., school lunch, instructional supplies) per-employee calculation (e.g., fringe benefits) or per-square-foot calculation (e.g., utilities, cleaning services) based on figures spanning back to FY12 and budget actuals for FY15 for the existing Brooke Schools. Depending on the nature of the good or service, the financial projections reflect inflationary cost increases of 2%, 5%, or 8%. For key service-based expenditures, such as health care costs and consultants, the model utilizes the higher percentages for an inflationary increase.

Projections for Short-term and Long-Term Financing: Through the combination of conservative budgeting, the strategic use of existing reserves, and realistic fundraising revenue assumptions, Brooke does not anticipate the need for short-term financing to cover operating expenditures. As noted above, the annual debt service payment for existing facilities over the long-term budget window is manageable (6% of total expenditures on average) and the projections anticipate an additional expense for the long-term financing of a permanent High School facility. For future facility-related financing associated with acquisition and/or construction of a permanent High School building, the School intends to engage the services of its financial consultant, Dwight Berg of Public Economics, Inc. Mr. Berg has assisted Brooke in financing all three of its current facilities, and has more than 20 years of experience in applied economic and financial research, with special expertise in tax credit financings for public education agencies, including charter schools.

Balance Sheet: Even with the conservative assumptions made throughout the financial model, projections yield a surplus for each full year of Brooke High School's operation from FY17 to FY21. Further, the projections anticipate positive cash balances across the entire network of schools through the same period. At each of the existing Brooke K-8 schools, similar budgeting assumptions have frequently led to greater than anticipated annual surpluses, which have been instrumental in the School's ability to build reserves for use in expansion, capital improvements, facility debt financing, and compensation contingencies.

CONSOLIDATED NETWORK P&L (FY 16-FY21)

	FY 16	17	18	19	20	21
	SY 2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Schools in Network	4	4	4	4	4	4
Student Enrollment	1516	1638	1755	1894	2038	2087
Total Personnel	206	219	231	244	260	260
NET INCOME						
Brooke Roslindale	\$ 366,388	\$ 310,782	\$ 249,698	\$ 184,625	\$ 114,134	\$ 33,814
Brooke Mattapan	\$ 282,582	\$ 397,137	\$ 339,287	\$ 277,589	\$ 210,619	\$ 133,975
Brooke East Boston	\$ 103,000	\$ 4,525	\$ 2,073	\$ 19,702	\$ 14,568	\$ 3,163
Brooke High School	\$ -	\$ 28,547	\$ 98,249	\$ 109,444	\$ 361,300	\$ 556,451
Central Office	\$ 173,657	\$ 214,529	\$ 13,064	\$ 94,566	\$ 14,252	\$ 326,898
Total	\$ 925,627	\$ 955,520	\$ 702,371	\$ 685,926	\$ 714,872	\$ 1,054,301

FY2015 Audit Update

The FY 15 Independent Auditor’s Report on Compliance did not identify any material weaknesses or significant deficiencies with regard to internal control over financial reporting or major programs. The FY15 Audit did include one compliance finding regarding MTRS deductions. In three out of twelve months, MTRS deductions were not remitted by the 10th day of the month following the reporting period. Brooke management has improved upon its procedures for timely remittance of MTRS withholdings, and reports that all MTRS payments since November 2014 have been submitted on time, and, on average, seven-and-a-half days ahead of the monthly deadline. Brooke management is confident it will remain in compliance with MTRS remittance deadlines in FY16.