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Town of Weston, Massachusetts
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Executive Summary

Project Background
Weston, Massachusetts is a suburb of Boston with an ancient, rolling landscape and a reputation for its fine public school system. The Town’s center is twofold - with a political and commercial destination and a second recreational and educational gathering place. The latter consists of a ‘campus’, including three school buildings, public library, community center, town farm and school district administration offices – all set in a verdant country landscape.

“a ‘big picture’ summary of the many design initiatives & innovations that respond to the specific needs of the Town”

The arrangement of the schools is unique to the Town with two, pre-kindergarten through grade 3, lower schools feeding a single, grades four and five, intermediate school – all within proximity of one another. This project called for the razing of the existing Field intermediate school, its replacement by a new 350 student school building and the creation of a new recreational arboretum park. The commission involved the programming and design of the school together with the re-conception of the entire campus including its interconnections and recreational amenities.
Educational Program: Collaboration for the 21st Century

The programming began with the essence of the Weston school system’s educational excellence – its collaborative teaching method. The faculty and administration were deeply aware of the profound changes underway in the delivery of educational content through new technology and new modes of individuated instruction and collaboration. Chief among the results of these community-wide investigations were three features which differentiate the project as a leader in 21st century education:

- Most fundamental to the new school’s educational culture is the building block unit of the paired classroom with shared breakout space facilitating collaboration between teachers and among students. The break-out space, with its operable partitions, can be added to either classroom separately, opened up entirely to combine the full suite or used separately as a freestanding corridor-accessed mentoring or collaborative space.
- Secondly, the school’s library was reconceived as an ‘Information Commons’ which is at the center of things – immediately visible from the main entrance and fully accessible from all sides – a place of visible learning and palpable excitement about intellectual exploration.
- Finally, building on its excellent landscape situation, the building’s life is centered around a functioning outdoor academic courtyard with four learning pavilions and defined outdoor classrooms extending the information commons into the out of doors.

Site & Building: Unifying the Campus & Harvesting Daylight

In order to maximize the valuable playing fields which are shared by all in the town, the school was set back to the north site perimeter over steeply sloped woodland. This sectional condition allows for connections between the level 1 cafeteria windows and the level 2 courtyard spaces using a stepped outdoor amphitheater. So that the building itself did not become a barrier between the two lower schools and the shared playgrounds, a continuous covered outdoor passage with stair was created through the heart of the footprint in order to invite passage and to foster community between the three schools. Though traffic access may have dictated otherwise, the new school’s main parking and entry were placed on the south side in order to create a warm micro-climate for parents and students lingering in conversation while entering and leaving the building.

The main plan form consists of two parallel wings for the classrooms which are oriented optimally to the sun to harvest daylight. Regular classrooms are located on the external faces of the wings while special education spaces and mentoring rooms are arranged in undulating ribbons around the internal courtyard with varying geometries, which relieve repetition and create conversational and display eddies along the corridor. The classroom wings are connected by a headpiece containing the core program areas: gymnasium, information commons, administration, arts and music. To support semi-annual 1,000 person community gatherings, the gymnasium and cafeteria can be opened to one another through a monumental operable wall.

Daylight, Fresh Air & Educational Outcomes

The delivery of 100% natural daylight during regular school hours both enhances student performance and dramatically reduces operating costs. The daylight scheme relies on the creation of outward projected pavilions with white roofs at the regular classroom perimeter. These form light shelves, which through extensive clerestory glass, bounce light off of the 14-foot exposed deck ceilings, towards the depths of the classroom. Unwanted daylight is mitigated by a continuous ironwood sunshade at the South side of the building. East and West glare at the information commons and gym is deflected by suspended translucent panels. The daylight is further supplemented by corridor skylights with clerestory interior glazing and light shelves sharing light with the adjacent classrooms.

Mechanical distribution utilizes ‘displacement ventilation’ with silent low-volume airflow providing many times the fresh air of that available through conventional unit ventilators. The high volume of air supports reduced student absenteeism and increased alertness. Distribution trunks are located low in the corridors feeding through the walls to the classrooms. Clad with casework these form continuous benches used by students, teachers and parents for mingling before class.

Scope of Work & Budget

The Town of Weston’s total project budget for the new Field School project was $31,504,016 including construction and soft costs. This budget was approved by both the School Building Committee and School Committee on August 17, 2011. A warrant article authorizing funding was approved at the regularly scheduled Town Meeting held in November, 2011 after state approval.

Project Type & Location: New Public Elementary School, Grades 4-5, Weston, MA

Participation: Weston Committees, School Department, Faculty, Students, Massachusetts School Building Authority (MSBA)

Construction: Public Process Low Bid/Build Public Procurement

Size: 65,390sf

Construction Cost: $25M, $220/sf building cost, $109 site and other costs
Community Engagement

Process Overview
Development of the school’s objectives and design were governed by the deliberations and actions of the core statutory-constituted Field School Building Committee (FSBC) in collaboration with the owner’s project manager and the design team. Through individual outreach, meeting inclusion or special visiting attendance with other public groups, the committee sought input and consensus from a number of professional and lay bodies within the Town. At the Town administrative level, advice and agreement was sought from the offices of:

- School Department
- Field School Administration
- Town Administrator
- Town Planner
- Police Chief
- Fire Chief
- Building Inspector
- Public Works
- Conservation Officer

Together with individual conferences, input from this group was largely gained from inclusion in regular FSBC meetings, at first, for general information, and then later, when relevant topics presented themselves. Meeting discussions were followed with specific responses to comments whether in writing or by changes in the design.

General information sessions with requests for comments were held for:

- Neighbors
- Town-wide forum
- Teachers and staff
- Parents

Publicly constituted committees with a special interest in the project were approached and visits to their sessions arranged for:

- School Committee
- Local Historical Commission
- Permanent Building Committee
- Conservation Commission
- Library Board of Trustees
- Traffic and Sidewalk Committee

In sum, the key decision points were defined by:

- The continued support of the School Committee in terms of the fit between the developed project and the near and long term programmatic needs of the district.
- The continued support of the School Building Committee in terms of the proposed project’s initial cost, anticipated lifecycle cost and overall maintainability.
- The agreement and support of the Weston Historical Commission concerning the replacement of the existing school by a new building.

The project Team presented the schematic design at the Weston Historical Commission (WHC). At this meeting the WHC agreed to not oppose the Town’s request to demolish the existing Field School. Several items of mitigation were discussed including planting trees near the building footprint to restore the scenic roadway. Weston Public Schools and WHC each wrote letters to the Massachusetts Historical Commission (MHC) in support of moving forward and identifying the proposed mitigation discussed. MHC reviewed the letters and provided a Memorandum of Understanding to offset a previous Adverse Affect letter for building demolition.

- The agreement and support of the Town Library Trustees for the modifications to their facility’s parking and site configuration.

Each of the above decision points was discussed and publicly supported by each of the publicly constituted committee.

Program Development
Concurrent with the survey and data collection, the design team undertook a series of initiatives aimed at probing the current and future needs for the building and the site. This involved both the specific functional requirements as well as understanding the culture and overall mission at the Town, neighborhood and school community scales.

Efforts were made to reach out to all principal constituencies including Town leadership, Town-wide school administration, Field School administration, faculty, parents and staff.

The process was kicked off with a visioning session, attended by 45 participants representing a sampling of the above stakeholders, sought to evaluate the current program as well as project the future, both near and far term, of teaching and community at the school. The day long session was divided into two parts with the morning session considering pedagogical and community issues in the abstract and the afternoon session looking at physical planning precedents and possible conclusions. Subsequent to the visioning session the design team undertook a series of ‘focus group’ interview/discussion sessions aimed at intensifying the input of the various sub-communities whom the school will serve. Two to three hour sessions were conducted for the following groups:

- Town school facility heads: maintenance, athletics, technology
- Town administrations: Planning, Inspectional Svcs, Fire Chief, Police Chief
- Case campus (neighboring civic buildings) directors: recreation center, senior center, library
- School campus principals, Woodland School, Country School Parents, PTO leadership and invited membership
- Field School team department leaders: music, art, athletics, special education, health
- Field School teaching team leaders & faculty
In addition to the focus groups the design team worked closely with Superintendent of Schools, Dr. Cheryl Maloney and with Field School Principal, Matt Lucey, to gain insight into their philosophies of education and their individual hopes for the benefits the new school would offer Weston’s children and the community. The views of individual teachers and staff were also solicited and recorded in a distributed survey.

The above widely gathered input was parsed, debated and synthesized in the biweekly meetings of the Building Committee which included individuals who could offer the perspectives of the Town’s Board of Selectmen, School Committee, Permanent Building Committee and Planning Department. The committee enjoyed the regular attendance of Superintendent Maloney and Principal Lucey as well as key community participants with extensive experience in planning and construction. The committee extended open invitations to the local Historical Commission and others of the Selectmen to attend all meetings and to offer their unique input. The committee work was organized in detail and coordinated by the Owner’s Project Manager for schedule, deliverables and relevance to the state regulatory agency’s process.

Program Themes: Behind the Educational Specification

Technology
In sum the larger programming process highlighted the changes to physical planning which are immanent due to the emergence and perceived future acceleration of technology usage. It was envisioned that all students will soon have laptops and that the tendency toward project based learning with a mix of physical and virtual learning. The result in physical terms will be an array of spaces where students can come together with technology either through individual study or in groups – either formally or on a self-directed needs basis.

The community also imagined that display surfaces will almost certainly proliferate far beyond the current day ‘smart board’ so that a variety of surfaces at varying scales making up the student environment will become interactive instructional fields. There was a desire expressed to design the classroom and public space interiors with an eye to this future transformation. One immediate use which was identified for large opening needed to be found which would allow visual continuity of further extending this flexibility to allow possible combinations of up to four classrooms. It was agreed that combining classrooms didn’t necessarily imply being wholly open to each other but that some size of large opening needed to be found which would allow visual continuity while practically limiting acoustic transfer.

A larger discussion on the state of the classroom included speculation that, with collaboration, technology and individualized learning, the classroom unit of instruction was gaining irrelevance. However, the needs of supervision for students of this age seem to dictate that some scale of bounded area, probably approximating the size of a contemporary classroom, will persist even into the distant future.

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Library/Study Center

The evolution of the library in a world moving away from hard copy information occupied a number of focus sessions. Various futures were considered from utilizing the library as a multi-media resource center including books and discs to an area empty of hard media and serving as a kind of communal study space. The latter might include areas and alcoves for a variety of study configurations from class size to small conferences and individuals. Precedents which furnished the study center entirely with reconfigurable floor-oriented soft seating such as bean bags were discussed. More speculatively, the physical bounds of the library were questioned and it was suggested that the library might act more like a contiguous system interspersed through the building with a central hub and radiating arms and substations.

Team Teaching

The participants also took time to look carefully at the qualities which distinguish the pedagogy of the Field School. Prime among these is the effort embodied in the team teaching structure, which is placed on reviewing and reinventing the curriculum on an on-going basis. The school is organized into four teaching teams – two per grade. Each team is directed by a team leader. The team meets regularly to review each other’s work, to speculate about improvements and to determine mechanisms for mutual support. The team structure implies geometry of clusters of four classrooms with a further grouping of two clusters per grade. The cluster subgroupings ideally would each be served by dedicated teacher workspace and by special small group or project-based ‘breakout’ space.

The ‘Classroom’

It is apparent, for a number of reasons, that a strong desire exists to be able to pair classrooms. In so doing, larger groups can be drawn from and can share project-based work. Paired classrooms also allow options for teacher supervision and mutual support. Indeed, mention was made of further extending this flexibility to allow possible combinations of up to four classrooms. It was agreed that combining classrooms didn’t necessarily imply being wholly open to each other but that some size of large opening needed to be found which would allow visual continuity while practically limiting acoustic transfer.

In meeting with teachers it also became clear that the pastoral setting of the Field School is seen as an asset and that classes were eager to vary their environments by moving easily from indoors to outdoors when...
seasons permit. This opened up consideration of the outdoor classroom and what features of landscape and relationships between landscape and building would support outdoor learning.

The specifics of classroom configurations are indicated in the educational specification. These include the special need at Field for a dedicated Spanish language classroom and places for music ensemble instruction. A collection of Room Data Sheets was created from this program development.

**Flexibility into the Future**

A further form of flexibility loomed large in various conversations – the needed flexibility of use that will make a 50- to 75-year building appropriate to unforeseen future needs. According to some this is made particularly poignant by the school’s current configuration as a dedicated grades 4 and 5 school – one of only a few in the state. In the event that this configuration should change, it was discussed how important it would be that the arrangement of classrooms be able to accommodate new groupings without classrooms isolated or ‘orphans’ from others with which they would be naturally grouped. Such flexibility would also be able to anticipate the coming changes in technology, possible evolutions in the nature of the classroom itself and resulting changes in classroom aggregations together with associated support and small group spaces.

**Culture**

While there was some critical discussion of the highly specific nature of the grades 4 and 5 model, there was general affirmation, arising out of previous formal studies and based on years of positive experience, that creating a school for this particular age group celebrates a unique developmental moment – a time of blossoming intellectual self-awareness and the arousal of critical thinking. As part of this celebration, a high emphasis is placed on the acknowledgement and personal recognition of each individual student and each student’s intellectual and cultural persona.

As such, the arts are deeply valued as part of the identity of the school community. Instrumental music is a prominent feature of school life with 99% participation among the students. The visual arts are highlighted in extensive displays and ‘opening’ events. In the case of both music and art, the appreciation and student efforts is honored beyond the bounds of the school with invitations to the larger parent and general community to engage.

In response to this prominence of the arts as inspired and sustained by Principal Lucey, it was strongly recommended that culture play a role in the first impression of the building. A mini ‘cultural’ complex including the gathering of music, art, library, performance and exhibit areas should be at the heart of the school and near its entry. Such an aggregation would express the emerging maturity of the students as culturally aware and aspiring minds ready to bridge into the more advanced accomplishments of middle school.

**Community**

With repeated emphasis the various groups that were approached described the continuing need for the entire school community including parents, relatives and interested townspeople to come together for student events. These events gather as many as 1,000 in the audience. This need was not being adequately met by the existing gymnasium. It was hoped that during schematic design, a method could be found to combine the gymnasium with the cafetorium in order to provide the necessary capacity for these events.

Similarly there are a number of events which bring parents to the school around student displays and exhibits. These reception-like events would ideally take place in a gallery capable public space such as an expanded lobby. PTO and other functions are frequent at the Field School and will need to be accommodated in a multi-functional space such as the teacher’s lounge, cafetorium or study center. It was suggested that such a space would include a modest lockable food service area for parent use.

**Campus(es)**

On the site planning scale it is evident that the Field School exists functionally at the intersection between two campuses. The Case campus has become, in a very real sense, the non-commercial center of the Weston community. With its recreational center, senior center, library and the School’s gymnasium and fields, it is a common destination that brings together many ages and many types of people from around the Town. Each of the campus’ buildings benefits from proximity to one another and to the School. There is a synergy of use with the density and activity of each destination reinforcing and combining with the others. A common theme that arose in discussions of the possible transformational civic role of a renovated or new school was a desire to enrich the ties of the campus through careful consideration of parking, open spaces and pedestrian links.

Similarly, the School is part of a unique ensemble of grade schools at the north and west of the site – the ‘school campus’. As articulated by the three school principals, the schools exist as a unit with a common identity. This common identity needs expression in the system of outdoor space and pathways that connect the different buildings.

While the prior existing building’s location offered limited opportunities to address the school campus issue, a new northwest corner sitewould be capable of rounding out and completing both Case and school campus systems. Such a site could be developed with a dual frontality addressing both the schools to the north and the civic buildings to the south.
Evaluation of Alternatives
Classroom Building Blocks

The design team’s consideration of alternative design solutions began with Weston’s team teaching approach and the need for suites of educational spaces including classroom combinability and potential areas for break-out learning, project learning, distance learning and specialized instruction. An array of five alternative classroom configurations was developed which could then be applied to the overall building plan options:

Classroom Suite Alternative ‘A’ – A corridor based approach which could be adapted to the renovation/addition option. Four adjacent classrooms share a corridor accessed breakout space and an associated teacher workroom. The classrooms can be paired, but only with adjoining non-team classrooms. There is no access to outdoor space.

Classroom Suite Alternative ‘B’ – Reflecting teacher interest in access to outdoor learning space, this option groups a flexible number of classrooms around a bounded outdoor courtyard which identifies the classroom ‘neighborhood’. The courtyard hosts shared breakout and teacher workroom areas which open out onto it. Classrooms within the team structure can be paired to form, in the term coined by the committee, ‘dyads’.

Classroom Suite Alternative ‘C’ – In this linear scheme all classrooms would be located on the south side of a shared corridor with all support spaces on the north. Outdoor access would be through a vestibule between two classrooms at the ground floor. At the second floor, terraces would be mixed in with support spaces to allow outdoor learning. A break-out space or study alcove is situated between pairs of classrooms and openable on either side to the adjoining space. In this way the break-out space can serve independently with access from the corridor, combined with either classroom or with both. The break-out space also serves as an acoustic buffer mitigating the acoustic leakage inherent in the operating openings.

Classroom Suite Alternative ‘D’ – A further courtyard scheme acknowledging the desirability of direct outdoor access. This suite anticipates gathering two teams around an enlarged courtyard. The courtyards would be themed by ‘pavilions’ which would contain pairs of break-out spaces with associated workrooms and offices. The paired break-out spaces could be opened to each other to allow collaboration between two sets of four classroom teams. Additional small group instruction space is provided in between classrooms in exterior wall bays. As above, classrooms within teams can also be paired using moveable walls.

Classroom Suite Alternative ‘E’ – This scheme attempts to arrange the classrooms around the geometric center of the shared break-out space. The break-out space is imagined as a corridor termination that would offer the possibility of light and view while still being ‘buried’ and immediately convenient between the classrooms. Each classroom in the ‘cluster’ type arrangement would have its own distinctive orientation and access to light and view along two sides. There is no access to the outdoors.
Site Design
Subsequent to the establishment of clear educational programming and community goals the team undertook the exploration of a series of highly detailed schematic alternatives for site design, building design and internal program accommodation as described below:

Renovation/Addition Option: This option required minimal changes to the existing site plan. Based on the traffic study, new parking for the school would need to be added. The preferred location for this additional paving is at the south end of the classroom wing extending to the west into the playground. The existing recess and play equipment area would be constrained. But, with further study this might be achievable with fencing and plantings creating a clearer boundary between vehicle and children’s areas. The parking at the northwest corner of the school would also require enlargement.

The bus and parent drop off patterns, whether retained as before or reversed, will be supported by curb cuts and drive alignments roughly in their current locations. The reversed approach would have parent drop off entering from Alphabet Lane, queued in the field access loop and using the side entrance for access. The advantages for reducing traffic conflicts and back-ups may be considered at a later stage.

Because of conflicts between library and school traffic and parking, the school community expressed the need to separate the library access points and parking from the school. As a result, if this option proceeds, there will need to be an analysis of any additional dedicated parking needs for the library. Such additional library parking is not reflected in the alternative ‘A’ site plan.

New School Options: As a result of the traffic study it was determined that one approach to traffic flow seemed to hold the most promise and would be shared among all schemes. Because the area to the north of the site is already highly congested and because a north orientation as the primary entrance to the building would be cold and unwelcoming, the primary parent drop off and daily parking activity for these options is placed on the west boundary of the Case campus. This will access a southeast facing school entrance and will be at the desired playfield elevation, which will be the primary building level for all schemes.

Bus drop off will be at the lower level on the north side of the building entirely separated from parent and teacher vehicular movements. Because of the double entry concept unifying the school and Case campuses as described above, a suitable entrance will be available in this location for children coming by bus.

For most schemes, service access, as determined by the kitchen loading and basement entrance locations, will be to the west with the possibility of using a retaining wall as a screening element. An exception is Alternative ‘E’ whose separate cafetorium and kitchen at the east makes possible service access through the adjoining library parking lot.

Each of the new building alternatives locates the building over the presently unused sloped area of the site in order to maximize the availability of level open space for recreation and athletics. The sloped site also allows development of economical ‘walk-out basement’ space for program areas requiring daylighting from only one side. Pathways will connect the new building to the schools to the north and to campus buildings to the south and east.

The new building footprints which were studied overlapped the location of the septic field for the Woodland School. Through careful adjustment of the site plan this field was ultimately retained in its previous location.

Coordination with the ‘Greater Case Campus’ Masterplan: For the purposes of the Field School project scope the site was defined as the graded and landscaped areas immediately around the new footprint, the bus drop off area, the new staff/visitor parking for 70 vehicles on the east side of Alphabet Lane, the athletic field, the realignment and reconfiguration of the Alphabet Lane intersection and the grading and seeding of the existing school demolition site including removed pavements.

The developed site plans for the new alternatives as shown here include speculations about potential concept site plan extensions beyond the school site proper. These extensions constitute the separate but related project of the ‘Greater Case Campus Masterplan’. The Town finally pursued the masterplan on a schedule which allowed coordination with and mutual enhancement of the school project.

Features of the masterplan that enhance the school project include additional recreational open space, Case campus pathways, Case campus solutions to the overall surrounding traffic flow and parking issues, relocation of the Woodland School septic field off the Case Campus, additional parking bridging over Alphabet Lane to the Case Estates parcel and new vehicle access roadways through the Case Estates parcel and the Woodland School site to help alleviate both parent and bus traffic issues which are constrained by the existing limited access points.
Building Alternatives

Alternative ‘A’ – ‘Renovation/Addition’

Arising out of a series of three previous concepts which studied varied addition locations, the developed renovation/addition option proposed a single major addition directly to the rear of the lobby as well as floor plate extensions at the classroom wing.

The major addition adds missing cafeterium space in a central location visible from the lobby. The new cafeterium is created as a welcoming atrium and busy common space with a linear skylight introducing daylight against the dark wall of the existing gymnasium and offering views to the playing field beyond. The addition also houses new art and music spaces. The art and music spaces together with the newly relocated library over the entry form an ensemble of cultural activities on the balcony level.

A key feature of the renovation approach is the mitigation of the currently undersized and improperly proportioned classroom spaces by extending the classroom wing volume to the east and west. This increase in floor depth allows functional classroom areas with every other column aligned with partitions and the remaining columns engaged with the corridor wall. A break-out space and teacher’s work room is provided at every floor. Current windowless student occupied spaces in the basement have been eliminated.

Evaluation. After technical evaluation it was apparent that only a small portion of the existing fabric could be maintained mitigating the benefits of any residual value in the existing structure. Compounding this cost challenge were required major structural reinforcements and the necessary programmatic abandonment of major below grade

Alternative ‘B’ – ‘Outdoor Classroom’

The first of two one-story proposals, this school is arranged such that all classrooms are arrayed on a single plane to allow flexibility for current and future team groupings. Classrooms are paired according to Classroom Suite Alternative ‘B’ and are clustered around small courtyards or ‘outdoor classrooms’ each with its own associated indoor break out space. A grouping of art, music and library spaces, together with administration, forms the heart of the school. On the lower level, portions of the building to avoid placing children and teachers in windowless spaces for decades of future use. These abandoned spaces would nevertheless consume some portion of the renovation cost. The extent of the renovation would also require the cost burden of fully relocating the school in temporary facilities during the period of construction.

Tentative analysis of these options leads to the most plausible approach requiring that the 4th grade be moved to the current Country/Woodland school and the 5th grade moving to the Middle School requiring a temporary modular compound at each school to accommodate approximately 360 students. After this investment, the School would still not comport with important components of the educational program including incompatibility with the team teaching structure, lack of future flexibility, column encumbered classrooms, lack of outdoor access, inability to house community assemblies and a life cycle cost burden due to the poor east/west orientation of the classrooms and the large unusable areas which will nevertheless need to be maintained. The existing building’s location was also an obstacle to solving the profound traffic and access issues afflicting this increasingly used destination in the Town and affecting student safety.

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cafetorium and gymnasium are placed adjacent to one another to allow for potential combination. The lower level placement of the gym minimizes the profile of the building at the Case campus. The primary entrance is from the south facing the fields and the parking. Exterior stairs oriented to the northern school campus penetrate through the building to access a second north facing entrance into the lobby.

Evaluation - This scheme’s strength is addressing future classroom grouping flexibility. The central ‘culture’ and administration ensemble, ability to accommodate community assemblies and ease of access to outdoors are further advantages. Some concern was raised about the potential additional perimeter posed by the courtyard space as well as their maintainability. There was also some question as to whether there are any demonstrably inherent lifecycle cost consequences for one story construction.

Alternative ‘C’ – ‘Schoolyard’
A transitional outdoor space or ‘schoolyard’ forms an intermediate supervised play and recess area between the open playfields and the classroom wing for this two story with walkout basement alternative. All classrooms are oriented to the south overlooking the case campus and fields with all support spaces north facing. In the manner of Classroom Suite Alternative ‘C’, pairs of classrooms share a buffering multi-functional breakout space and can be completely opened to one another. The cafetorium and administration is placed in a perpendicular wing with extensive views to the schoolyard space. The single entrance point serves both the Case Campus orientation and the School Campus with an exterior stair descending under a corridor bridge to welcome arrivals from the lower Alphabet Lane level. The gymnasium, art and music space are grouped together on the lower level visible from above through an interior stair hall which also showcases the classroom oriented library.

Evaluation - With its welcoming exterior stair and single entrance for both orientations this proposal best addressed the complex double faced nature of program and site - integrating both upper and lower campuses. It also provided the best light and view orientation for the classrooms while suggesting an efficient and highly convenient scheme for relating support spaces to the main teaching areas. Deficiencies included the inherent separation between floors, the attendant removal of half the students from outdoor access, cultural activities and library somewhat disengaged from one another and the entrance and a limited capacity for accommodating community events.

Alternative ‘D’ – ‘Courtyard Pavilion’
This second one-story scheme consolidated the light and ventilation-giving courtyard spaces of Alternative ‘B’ into two areas for outdoor instruction. The teaching spaces demonstrate the arrangement of Classroom Suite Alternative ‘D’ with flexible groupings of classrooms oriented to a shared breakout or ‘courtyard pavilion’. The central library also benefits from fronting on courtyard space. In this proposal a wide interior stair connects the upper and lower campus levels in essence creating a two story lobby. The upper level administration and gymnasium and lower level cafetorium form a ‘head component’ terminating and providing supervision for the ‘tails’ of the classroom wings. The corridors are slightly curved to alleviate the typicality of the classrooms and to animate views to the courtyards.

Evaluation - With the typical one story advantages of outdoor access and inherent programmatic flexibility (though less so that Alternative
Evaluation - This scheme’s appropriateness to the current diagram of teaching space relationships was also its disadvantage – it is highly specific and therefore awkwardly adaptable to future changes in grade and teaching aggregations. However, the clustering provided the most central and convenient location for the breakout space within each teaching team. The terraced library with its welcoming presentation to visitors to the school campus was seen as a major asset for this approach. Administration is prominent and with the associated entrance convenient to the upper level parking. The separated cafetorium and gymnasium are inherently uncombineable for community events. As with Alternative ‘C’ access to the outdoors is limited and future flexibility further limited by segregation of program areas onto two floors.

Conclusion – Preferred Alternative

In reviewing the above evaluations and based on the extensive programmatic research, site and existing conditions investigations, a summary decision-making matrix was created to reflect the general consensus arrived at among the stakeholders through our various meetings in the Town.

While, from the standpoints of initial sustainability, historic preservation and intuitive cost efficiency there was a tremendous effort to rationalize the renovation and addition to the existing fabric; in-depth scrutiny of this alternative revealed significant drawbacks. Chief among these was cost. Taking into account the extensive selective demolition and replacement of the existing construction, structural upgrades, hazardous materials abatement and relocation costs, a 15% cost premium seemed likely. This premium did not take into account the considerable addition risk to cost and schedule that would need to be assumed. Of equal concern was the compromise to the educational program that would be perpetuated for decades to come, including poorly configured classrooms, poorly configured and inflexible aggregations of classrooms, an undesirable library location, inability to accommodate community assemblies, limited access to the outdoors and restricted and awkwardly distributed small group instruction spaces.

With the demolition of the existing school, all the new construction alternatives, through advantageous placement and greater site efficiency, offered the exciting possibility of opening up new recreational open space and restoring the kind of green, tree shaded landscape so characteristic of the Town along the designated scenic way of School Street.
Of these alternatives for new construction, the building configurations fell into two major categories – those with all classroom spaces on a single level and those with two level classroom wings. Dividing the classrooms between two floors would present two kinds of obstacles to the educational program. First, it would inhibit the spirit of team teaching and educational community building by isolating two groups of students and teachers from one another. Second, it would forever restrict future flexibility of new classroom and team groupings creating the prospect of ‘orphaned’ classrooms and teaching spaces. For this primary reason and because of equally facilitated access to the outdoors for all students, the one story classroom grouping approach was preferred. Among those, the ‘matrix’ approach, Alternative ‘B’, offered even greater flexibility by allowing relationships among classrooms to spread in more than one dimension. In addition, Alternative ‘B’ included a highly centralized ‘cultural center’ visible to the entrance and easily accessible from all teaching areas. Alternative ‘B’ also incorporated, on its lower level, a combinable cafetorium and gymnasium – a feature highly desired by the school community. By retaining the lowest possible building profile, Alternative ‘B’ proffered the most contextually sensitive approach to the historic Case Estate environment.

For the above reasons Alternative ‘B’ was designated by the building and school committees as the preferred approach.
Site Planning: Fitting into the Community Context

The Greater Case Campus Master Plan (GCCMP)
The new Field School’s location in concert with the Case Campus and the two nearby elementary schools gave rise to the need for coordination with the long term planning of the larger town site. The need for this coordination was further expanded by the on-going town wide preparation for acquisition of the large adjacent tract of land known as the Case Estates. A separate planning project was created for this larger effort and run parallel to the schematic design phase of the school proper. The intention was to identify any components needed for the new school which could be affected by the future organization of the larger campus, as well as to understand the opportunities afforded by the new school’s site plan in resolving problems shared between the various adjacent facilities.

The significant areas of coordination involved:
• Compatibility of the new school’s local traffic pattern with the potential future improved GCCMP traffic patterns, including possible new connection points at the community center
• Coordination with new parking arrangements including expansion of the existing Country School parking and the introduction of new central overflow parking on the Case Estates property
• Coordination of the local site plan with the new inner and outer pedestrian ‘ring’ paths for more coherent symbiotic connection between the Case Campus buildings
• Exploration of alternative approaches to storm water and waster water management made possible by viewing the larger Town campus needs
• Exploration of alternative traffic flows including new ingress and egress points as understood in the context of the overall area demands

Traffic, Parking & Access
Given that the new Field school supports the same population as the old, the design team approached the new traffic pattern with the goal that queueing and traffic conflicts would be the same or better than existing. A major improvement is the separation of bus and parent drop off locations. The bus drop off occurs on the north side of the building while the parent drop off and staff parking occur at the south side. Unlike the prior school’s arrangement, the new site plan provides for complete separation between student foot traffic and vehicles. Curb drop off, whether from bus or car, is also maintained at the vehicle passenger side with direct paths to the school entrance. Based on current occupancy levels, parking is provided for all teachers and staff. To accommodate the new school location, revisions to the adjacent Country and Community building parking areas were provided in order to restore parking counts to current levels.

Service access to the building is designated separately from bus and cars at the west end of the building. The service area is screened by a retaining wall which also allows access to the lower service level of the building. The design of this area was coordinated with the Town’s facility director to assure ease of maintenance and snow removal and to accommodate typical delivery and trash removal operations. Service vehicle turning radii were studied in the design of the supporting roadways including the need for occasional tractor-trailer movements.
Building Footprint & Orientation
Coming out of the concept alternatives, the overall building orientation and configuration were determined in order to maximize daylighting of the classrooms, maximize solar shading and minimize unequal heating and cooling loads of the various surfaces of the elevations. The two main classroom wings are therefore oriented east to west with long elevations facing north and south. The building is placed over an unused sloped portion of the site in order to increase the level playing field area, minimize disturbance of existing septic fields and in order to promote communication with the nearby Country and Woodland schools. The main building entrance for parent drop off and visitors is placed at the south side so the entry can be hospitably warmed and illuminated by the sun. The sloped site section was employed to create a walkout basement for a portion of the building’s common space thereby minimizing the massing of the gymnasium. Cut and fill at the main excavation areas is balanced in order to avoid any export or import of fill materials.

Landscaping, Contours & Drainage
Play areas are located at the south elevation with convenient relationships to the open athletic field. The play area is in three sections for basketball, hard surface and equipment activities taking into account avoiding equipment foundation conflicts with the underlying septic fields.

The new landscaping uses indigenous species to the extent practical. Trees are employed generously at parking areas, to punctuate the rhythm of the building elevations and to create spatial definition for the athletic field. A heavily planted buffer area to the east creates a visual screen from the library as well as restoring a grouping of memorial trees planted by library patrons.

The new academic courtyard is planted with low maintenance tall grasses and ground cover. The tall grasses give shape to the outdoor instruction areas. A focus of the site and the building, the courtyard is organized around a sectional shift from the upper to the lower levels of the building. This sectional change is developed as an outdoor amphitheater facing the cafetorium made functional by tiered pre-cast benches with handicap accessibility to the lower, middle and upper seating. A path bisects the courtyard and creates a link between the lower terrace/performance area and the upper covered porch instruction areas whose canopies are constructed of manufacturer’s prefabricated light transmitting roofs.
A major generator of the site plan geometry, a north-south pedestrian path penetrates the building and connects the lower school campus, including the two nearby PK-3 elementary schools, with the building entrances, courtyard, play fields and upper civic campus. Instead of becoming a barrier, the new school becomes a connector, facilitating the functional relationships between the various components of Weston’s community and academic activities.

Other site walkways at the south portion of the site connect the new Field School to the student used library to the east and community center to the south while at the same time forming the first link of the envisioned GCCMP inner ring surrounding the playing field.
Educational Intent & the Educational Environment

The inspiration for the organization of the new Field School derives from the spirit of community present in the teaching and learning community. This community reflects the interdependency of individuals and aggregations of individuals on one another in creative collaboration – sharing the excitement of knowledge and discovery. Following from this, is the principle, now well understood by advanced educators, and repeatedly espoused by Field School Principal Matt Lucey and Weston Superintendent Cheryl Maloney, of making learning visible. Therefore, within the first order of planning criteria for the building was the creation of openness, the programmed use of public spaces and the visible celebration of student learning and achievement. This is evident in the numerous 'break-out' or public student project spaces distributed through the building, in the windows into classrooms, the ample 3D, paper and electronic display areas and the shared prominence of the central academic courtyard – a place conceived not as a visual amenity, but, following from the outdoor activities of the existing school, a place of active learning.

"the school’s inspiration is the interdependency of individuals & aggregations of individuals on one another in creative collaboration – sharing the excitement of knowledge & discovery"
Together with this question of openness, the design team considered the difficult problem of the school library or, as it came to be known for the new Field, the ‘information commons’. This conventionally required program space is, today, in the moment of radical transformation. In the face of virtual learning, book collections are dwindling. The purpose of the library is subject to redefinition. The specifics of the library space are explained in greater detail below. However, in sum, far from being eliminated, the Field School’s information commons is the heart of the school and is the point of departure for its plan organization. The information commons is considered as an open lobby and living room for learning. It is exposed and unavoidable; on the path of all movements within the building and frontally present in the academic courtyard. Similarly, in terms of visibility, the highly valued cultural learning spaces, art and music, are joined with the information commons at the major north corridor intersection.

Forming the building’s public ‘core’, the information commons, cafetorium, gymnasium and administration form a compact functional unit with ease of flexible access between them. Furthering this functionality, in response to the needs of regular school community-wide gatherings, which are larger than can be accommodated by a regulation size cafetorium, the gym and cafetorium are positioned so that they can be opened to one another and function as a single space.

Similar to many higher education campuses, the classroom wings flow out from the information commons on rows which are punctuated by break out spaces and access points to the academic courtyard. All primary classrooms are located on a single floor in order to join all students and teachers into a single flexible arrangement. Classrooms are placed in regular repetitions on the outside of the wings – prioritized for maximum access to light and long views. Special instruction spaces, offices and bathrooms are clustered around the academic courtyard and are specially shaped in order to increase the intimacy and playfulness of the cloistered, child-oriented teaching garden.

Section
The overall building section follows from the site topography and features vertically angled visual and locomotive connections which help bind together and make mutually present the otherwise isolated floor levels. In the east-west direction these angled views connect the gym and cafetorium to the performance terrace to the academic courtyard and the classrooms, with the upper level information commons presiding over and present to all. In the north-south direction, the key section is exterior, connecting, at the building scale, the upper and lower level entries, and at the site scale, connecting the upper and lower campuses. From the interior, glazed corridor ‘bridges’ overlook these connections.
Circulation & Way-finding

As a building type frequently used by newcomers and visitors, the elementary school requires a layout and circulation diagram which is instantly comprehensible to encourage community and parent participation. Prime in responding to this functional need is the academic courtyard, which is consistently visible as a guide to location and orientation. The main circulation path is a continuous loop which encircles the courtyard. The continuity of the loop, made possible by the breezeway which connects the ends of the classroom wings, facilitates collegial interactions and promotes flexibility of classroom grade aggregations, as the two wings are not isolated from one another. At the other end of the courtyard, communication between the wings is via the information commons corridor, thus regularly engaging the students and faculty in its shared events and information.

“the continuity of the main circulation loop facilitates collegial interactions & promotes flexibility of classroom grade aggregations”

Vertical circulation is provided by two symmetrical monumental stairs, easily visible from the entries, classroom corridors and information commons. These open stairs land on the lower level between the gym and cafetorium allowing independent access to each.

Security

In terms of observation, school security is provided by the open layout with the administration and reception directly open to the main entry lobby. Observation is further facilitated by the straight line corridors and extensive glazing from all building areas to the enclosed courtyard.

Safety compartmentalization of the building is made possible by strategically located separate entries, gates, internal bulkheads and metal coil curtains. This compartmentalization allows the building to be independently or collectively occupied by a variety of school and community use groups according to a complex schedule. The gym and cafetorium are each separately accessible for extracurricular athletics and assemblies. Similarly, each of the separate classroom wings, music room, information commons and administration are all separately accessible and securable from one another.
Classroom Planning
As described earlier, focus group programming sessions with teachers highlighted the importance of team teaching as a main feature of the teaching culture in the school. Accordingly, the building block of the classroom wings is the teaching suite – an aggregation of two regular classrooms sharing a student project vestibule. The vestibule is separated from the adjoining classrooms by acoustic folding partitions. This allows the vestibule to be open to both classrooms creating a larger suite, open to one classroom as a project space or closed to both classrooms and separately accessed from the corridor as a break-out space.

Classroom and vestibule entries are approached through an alcove which relieves corridor congestion and allows for the kind of small scale activities which are often associated with classroom thresholds such as informal conversation and small group assembly prior to entering or leaving.

The shape of the classroom is given by angling the entry doors to ease access. The entry door angle is reflected with a similar built out corner on the opposite wall creating a chase that serves to house mechanical distribution apparatus. The room’s height is varied, with a lower ceiling at the corridor side housing mechanical trunks and an upper portion with exposed structure capturing and reflecting light at the exterior wall. Below the light reflecting exterior shelf, a low ceiling alcove provides a scale appropriate to children and houses the wall length project bench and storage.

Windows for Children
The ventilating window units are awning types to minimize damage to interior finishes during inclement weather and to maximize the vent opening area which is limited by the four-inch aperture for safety. Opening spacings are randomized to create a sense of variety and playfulness for each classroom. Every classroom has one corner side wall window to increase the sense of openness and relation to the exterior. At the corridor wall, continuous channel-glazed transom windows borrow light from the corridor skylights.

Teaching Locations/Display Surfaces
Each classroom has a continuous writeable and magnetic dry-erase surface with marker tray on the front wall and one side wall for instruction. The side wall is centered on the built-in smart board with surrounding tackable panels. A tackable strip wraps continuously around the head of the teaching surfaces providing ample self-healing display space. With the folding partition taking up a large amount of wall space, its surface is also coated with writeable, magnetic material.
Storage
Coordinated with the ventilating window locations, a continuous wall to wall counter or project ‘bench’ lines the exterior wall. The bench has deep shelving below for storing 18-inch deep storage bins for educational materials. The storage is economically closed by sliding panels with no maintenance intensive hardware or hinges. In addition to the folding project vestibule partition, the non-teaching side wall includes door-accessed teacher storage and a built-in sink/bubbler.

Classroom Finishes
The continuous marker tray surrounds the room with brightly colored high gloss paint over durable medium density particle board. Above this is the typical writeable/magnetic painted field of teaching surface capped by a continuous artificial uplight soffit. All classroom walls meet stringent state acoustic standards to maintain a high degree of language intelligibility. The ceiling is either suspended regular edge fiberglass acoustic ceiling planks or exposed deep flute acoustic metal decking. The deep flutes assist in the classroom acoustics.

Corridorscape & Breakout Spaces
The corridors at the new Field School are designed as places for living rather than as mere conduits from room to room. As such they include features which invite use and occupation including daylight and places to sit and interact. Corridor wall surfaces are variegated to avoid an institutional sameness. On the regular classroom side, entry alcoves, described above, provide subspaces which introduce the classrooms. The walls here are lined with wood colored open cubbies and continuous benches to allow students to perch while preparing for the classroom. Continuous transom windows allow the space of the classrooms and corridor to flow into one another and to borrow light. Linear skylights diminish the need for artificial lighting and provide accents of daylight along the length of the hall. On the courtyard room side, the corridor wall is subtly angled to allow recesses for built in bench/display areas. The wall is interrupted twice in each wing with wide openings to views of the academic courtyard through the breakout spaces. These are functionally delineated from the corridor by low bench partitions and consist of two parts separated by floor to ceiling glass: an indoor alcove with space for group projects or break out instruction and an exterior covered porch for use during mild weather. The porch is roofed with translucent acrylic to transmit light to the depth of the corridor inside.
Academic Courtyard
The courtyard consists of four outdoor classroom areas, each associated with one of the four porch breakout areas. The cut grass-surfaced outdoor areas are screened from each other by tall grasses and are connected by a meandering path which winds through the center. At the west end of the space the landscape slopes down to the cafetorium terrace – a place for outdoor assemblies and performances. The slope is developed as a seating area using precast concrete benches and a stepped pathway.

Gymnasium & Cafetorium
The gymnasium and cafetorium interiors (like the classrooms) is themed by bands of large clerestory windows with light shelves. In the gym, the lower height of the walls is covered in protection pads, the upper surfaces with perforated metal acoustic paneling. Doors at the northeast corner of the cafetorium allow direct access to buses on days when, due to inclement weather, students assemble indoors. The cafetorium includes lengths of glass storefront affording wide views to the academic courtyard. These two major spaces open to one another to create a large assembly space which can seat 1,300 guests for school wide events with parents and community.

The cafetorium is framed at its two ends by its two component functions. At the north end, a stage alcove is lined with wood and is convenient to the supplemental music instruction space which can be used as a preparation area. In assembly mode, cafeteria tables are stored in the gym partition alcove and loose seating (taken from stacks in the dedicated storage closet) is placed in rows oriented to the stage. At the south end, the servery and kitchen occupy the basement areas below the lobby. Serving, dish return and recycling are co-located along the south wall and can be secured using a continuous metal coil curtain. The kitchen is independently accessible for maintenance and deliveries from the service door and drive.
Lobby & Information Commons

The lobby and the information commons occupy a contiguous structural bay and are perceived as a single space separated by a visually permeable glass screen. The intent is for the student and visitor to arrive and be immersed immediately in the school's culture of learning and exploration. The glass screen is patterned with a translucent mural design representing the Field School and its students.

The lobby itself features a generous weather vestibule and a window bay with soft seating for spontaneous interactions among parents and teachers. On one side of the lobby, the administration desk occupies a wide arch which opens to the administration suite, creating a sense of welcome and participation. A 50’s style faceless clock with direct mounted time marks is installed on the clerestory arch and recalls a similar clock which was designed for the old Field School. The desk itself is detailed with moveable monitor shields which serve the dual purpose of screening the backs of the computer equipment while providing narrow privacy zones for the reception staff. At the same time, the desk is kept low to avoid it becoming a barrier. A coil type metal curtain can be drawn over the entire desk opening when access is not desired.

The opposite wall is treated as a main exhibition space with provisions for both two and three dimensional student work. One of the exhibition cases includes photos, text and artifacts from the demolished school. Reclaimed glass block from the old school is installed above the history case — memorializing one of its most characteristic features.

The information commons occupies the dimension of two regular classrooms in order to provide for possible future conversion in the case of overcrowding. Doors at its opposite ends are provided for this eventuality. The space is experienced as a ‘fishbowl’ with views in from all directions. To the east, as is so often the case in the history of library design, the room looks out onto and incorporates a light filled landscaped garden. The space itself is kept flexible allowing for a variety of uses. Mobile bookshelves occupy the center of the room on near the reception/check-out desk and seating for browsing. The two ends of the information commons is kept free of shelving in order to create activity space – soft seating for study and browsing at one end and tables for projects and classroom type work at the other. At the corridor side, low shelves with display counters, benches and showcases invite participation and allow views to the courtyard. Offices and language classrooms form the back wall.
Special Education
The spaces for special learning and support offices are distributed evenly among the other core learning spaces of the building. In particular they are interspersed along the courtyard. These spaces are treated as the equals of the regular classroom spaces with generous access to light and view and typical teaching surfaces and amenities.

Administration
The visual centerpiece of the administration suite is the glass enclosed conference room. The conference room can be screened with provided wall height curtains. The central workroom borrows light through the conference area to its 12-foot long community work counter. The principal’s corner office contains three subspaces for private conferencing, desk work and soft seating. The nurse’s suite location allows for access either through the administration suite or independently by way of a corridor and waiting room.
Chief among all parties’ goals in the creation of the new Field school was the ability to create a structure which was educationally future-oriented, flexible and which would not be immediately outmoded by changes in pedagogy, technology or district organization.

The project’s seminal concept is the relationship, eloquently articulated by teachers and administration from the beginning, between the faculty’s dedication and time allotted to collaboration in advancing pedagogy specific to student’s needs and the school’s history of high academic achievement. This is a collaboration which formed the backbone of the design as demonstrated in the innovative teaching suites which typify the building’s classroom wings. On post-occupancy evaluation, it is evident that the operating partitions between classrooms and between classrooms and breakout spaces, which serve to variably configure teaching and student collaboration, are intensively used on a daily and weekly basis.

The project site occupies a prominent location on Weston’s Case campus which includes the town library, community center, school department offices and two other elementary schools. As such, the new architecture was intended to be of civic design quality, appropriately deferential to its landscape context and function and in symbiotic relationship to its civic neighbors. Indeed, the operational educational interaction between the components of the civic campus have been enhanced – allowing more effective interaction between the various schools, the library, community building and school department offices. An example of this interaction is the daily flow of students and teachers through the building’s outdoor passageway which creates a safe and engaging campus connection where there might otherwise been a barrier.

In terms of community, the completed project outwardly reflects the high standards and aspirations of the people of Weston and their school system, which is among the highest achieving in the country. This includes accurately responding to the sophisticated, student centered pedagogy of the school. Most importantly, it includes the creation of an environment for children and their learning activities that reinforces the dignified, optimistic and nurturing culture so characteristic of the Field School community as it exists today. As such, the building, flooded with uplifting light and centered around its lush and heavily occupied academic courtyard is acclaimed by it teachers and parents as an inspiration to all who use and visit it.