

March 16, 2021  
School Building Committee

A meeting of the School Building Committee was held on Tuesday, March 16, 2021 at 5:00 pm. Due to current health department restrictions, the meeting was held through remote participation.

Members present by roll call:

|                       | <u>Present</u> |
|-----------------------|----------------|
| Donald Humason, Jr.   | X              |
| Stefan Czaporowski    | X              |
| Stacy Burgess         | X              |
| Shannon Barry         | X              |
| Chris Carey           | X              |
| Ramon Diaz            | X              |
| Ralph Figy            | X              |
| Bryan Forrette        | X              |
| Shelly Hazlett        | X              |
| Bridget Matthews-Kane | X              |
| Bill Parks            | X              |
| Brian Sullivan        | X              |
| Cindy Sullivan        | X              |
| Tammy Tefft           | X              |
| Chris Tolpa           | X              |
| Lisa Benoit           | <u>X</u>       |
|                       | 16             |



Also in attendance:

OPM-P3 Representative: Dan Pallotta

Caolo & Bieniek Representatives: Jim Hannifin, Bert Gardner

Cindy Minicucci, Superintendent's Secretary

At 5:00 pm Chairman Donald Humason called the meeting to order.

1. Public participation

Jeffrey Gosselin, Elm Street, Westfield, MA

Mr. Gosselin stated that he was a local educator and worked with Kathy Palmer.

He suggested that a theatre quality/art stage be included in the building plans. He was wondering if anyone gave this any thought. Since this elementary school would be in the downtown area, he felt this would be a great addition.

Dan Pallotta reported that the Massachusetts School Building Authority (MSBA) doesn't reimburse for theatre/art stage at the elementary level. Reimbursement for a theatre/stage is only available at the high school levels. The auditorium/cafeteria plan will be reviewed but will not be a theatre quality stage.

2. Audio recording or video recording of open session: video recording for Channel 15

3. Approval of February 23, 2021 School Building Committee meeting minutes:

Ralph Figy moved, Cindy Sullivan seconded to approve the February 23, 2021 School Building Committee meeting minutes, as presented.

|                       | <u>YES</u> | <u>NO</u>     |
|-----------------------|------------|---------------|
| Donald Humason, Jr.   | X          |               |
| Stefan Czaprowski     | X          |               |
| Stacy Burgess         | X          |               |
| Shannon Barry         | X          |               |
| Chris Carey           | X          |               |
| Ramon Diaz            | X          |               |
| Ralph Figy            | X          |               |
| Bryan Forrette        | X          |               |
| Shelly Hazlett        | X          |               |
| Bridget Matthews-Kane | X          |               |
| Bill Parks            | X          |               |
| Brian Sullivan        | X          |               |
| Cindy Sullivan        | X          |               |
| Tammy Tefft           | X          |               |
| Chris Tolpa           | X          |               |
| Lisa Benoit           | X          |               |
|                       | 16         | motion passes |

4. Update on PSR including design alternatives:

Dan Pallotta reported that, at the request of the Massachusetts School Building Authority (MSBA), the schedule was adjusted by one week. The preferred schematics are now due on Wednesday, April 21, 2021.

Bert Gardner reported that a few representatives visited a renovated elementary school in Hanover, Massachusetts on March 10, 2021.

A PowerPoint presentation was shared (attached). The presentation covered the following topics:

- CBA workflow
- Sustainability Path - LEEDS for Schools and NE CHPS (pros and cons)
- Project Goals
- Neighborhood concepts
- Base Repair
- Add - Reno, 1-story, staggered move
- New Construction, 1-story, staggered move
- New Construction, 2-story, staggered move
- New Construction, 3-story, staggered move
- New Construction, 2-story, single move
- Concept Plan

5. LEEDS vs CHPS preference

The LEEDS for Schools and CHPS compliance paths were reviewed with committee members in the PowerPoint presentation (#4). Pro's and Con's were reviewed. A vote would be in order, at a future meeting, to select LEEDS or CHPS.

6. Set upcoming meeting schedules

Tammy Tefft shared the following School Building Committee meeting dates:

Monday, March 29, 2021 (5-7pm)

Tuesday, April 6, 2021 (5-7pm)

Friday, April 16, 2021 (5-6pm)

She informed committee members that at the April 16, 2021 meeting, two (2) votes would be in order. One vote was needed to select either LEEDS or CHPS and another vote for the Preferred Schematic Design to be submitted to MSBA.

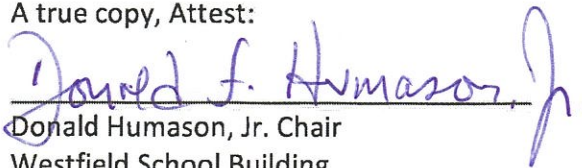
7. Any other items not reasonably anticipated 48 hours prior to the meeting.

8. Adjourn

At 6:15 pm Ramon Diaz moved, Ralph Figy seconded to adjourn the meeting.

|                       | <u>YES</u>      | <u>NO</u>     |
|-----------------------|-----------------|---------------|
| Donald Humason, Jr.   | X               |               |
| Stefan Czaprowski     | X               |               |
| Stacy Burgess         | X               |               |
| Shannon Barry         | X               |               |
| Chris Carey           | left at 5:30 pm |               |
| Ramon Diaz            | X               |               |
| Ralph Figy            | X               |               |
| Bryan Forrette        | X               |               |
| Shelly Hazlett        | X               |               |
| Bridget Matthews-Kane | X               |               |
| Bill Parks            | X               |               |
| Brian Sullivan        | X               |               |
| Cindy Sullivan        | X               |               |
| Tammy Tefft           | X               |               |
| Chris Tolpa           | X               |               |
| Lisa Benoit           | <u>X</u>        |               |
|                       | 15              | motion passes |

A true copy, Attest:

  
 \_\_\_\_\_  
 Donald Humason, Jr. Chair  
 Westfield School Building  
 Westfield School Committee

DH/cm

Minutes approved: April 6 2021

# Westfield Elementary School Project

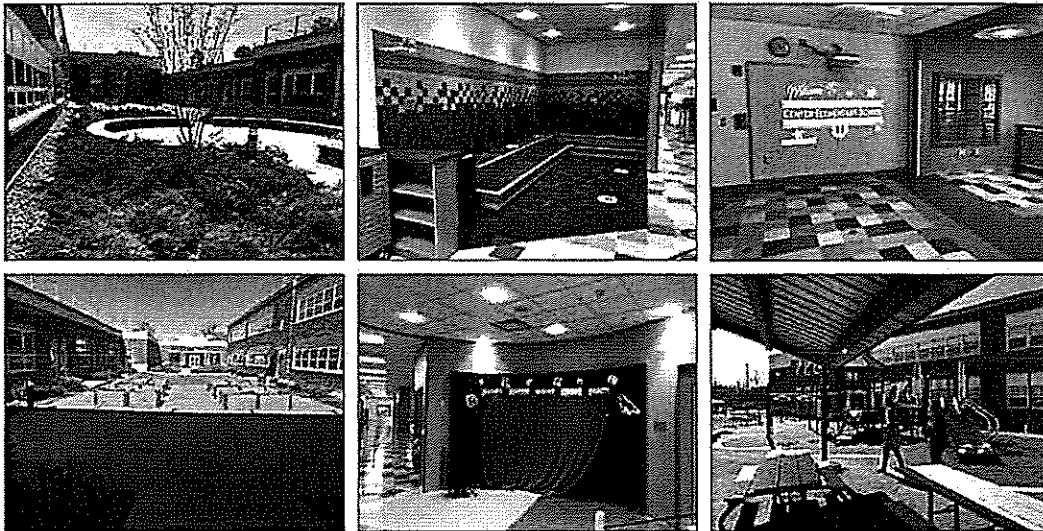
## Informational Update

School Building Committee Meeting  
March 16, 2021



**CAOLO & BIENIEK ASSOCIATES, INC.**  
ARCHITECTURE PLANNING INTERIOR DESIGN  
521 East Street  
Chicopee, Massachusetts 01020  
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### Hanover Field Trip:



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# CBA Workflow:

## School Building Committee:

- Meet Monthly, or as Required
- Approve All Major Design Decisions, Typically Based on Recommendations of Sub-Committees

## School Department Design Sub-Committee:

- Share Project Developments Electronically Between Meetings
- Meet Approximately Every Two Weeks
- Advise On Educational Needs and Responsiveness of Design Options Developed

## Public Outreach:

- Purpose:
  - Describe the MSBA Process
  - Describe the Design Process
  - Provide Updated Project Information and Forum for Community Feedback
  - Timing of Information?



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# Sustainability Path – LEED for Schools:

| 1                            | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11  | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21  | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31                                   | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41  | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51  | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61                                      | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|------------------------------|---|---|---|---|---|---|---|---|----|---|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|--------------------------------------|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| <b>1 INTEGRATION PROCESS</b> |   |   |   |   |   |   |   |   |    | <b>11 MATERIALS &amp; RESOURCES</b>   |    |    |    |    |    |    |    |    |    | <b>21 SUSTAINABLE SITES</b>                     |    |    |    |    |    |    |    |    |    | <b>31 WATER EFFICIENCY</b>           |    |    |    |    |    |    |    |    |    | <b>41 ENERGY EFFICIENCY</b>                     |    |    |    |    |    |    |    |    |    | <b>51 INDOOR ENVIRONMENTAL QUALITY</b>      |    |    |    |    |    |    |    |    |    | <b>61 REGIONAL ECONOMIC DEVELOPMENT</b> |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-1 Integrated Process      |   |   |   |   |   |   |   |   |    | MR-1 Range and Collection of Materials  |    |    |    |    |    |    |    |    |    | SS-1 Construction Activity Pollution Prevention |    |    |    |    |    |    |    |    |    | WE-1 Outdoor Water Use Reduction     |    |    |    |    |    |    |    |    |    | EA-1 Fundamental Commissioning and Verification |    |    |    |    |    |    |    |    |    | RE-1 Regional Economic Development Location |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-2                         |   |   |   |   |   |   |   |   |    | MR-2 Construction and Demolition Waste Management Planning  |    |    |    |    |    |    |    |    |    | SS-2 Environmental Site Assessment              |    |    |    |    |    |    |    |    |    | WE-2 Indoor Water Use Reduction      |    |    |    |    |    |    |    |    |    | EA-2 Minimum Energy Performance                 |    |    |    |    |    |    |    |    |    | RE-2 Building Level Water Efficiency        |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-3                         |   |   |   |   |   |   |   |   |    | MR-3 Building Material Selection  |    |    |    |    |    |    |    |    |    | SS-3 Site Assessment                            |    |    |    |    |    |    |    |    |    | WE-3 Building Level Water Efficiency |    |    |    |    |    |    |    |    |    | EA-3 Building Level Energy Modeling             |    |    |    |    |    |    |    |    |    | RE-3 Building Level Water Efficiency        |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-4                         |   |   |   |   |   |   |   |   |    | MR-4 Building Product Disclosure and Optimization - SPO   |    |    |    |    |    |    |    |    |    | SS-4 Site Design/Construction/Operation         |    |    |    |    |    |    |    |    |    | WE-4 Indoor Water Use Reduction      |    |    |    |    |    |    |    |    |    | EA-4 Fundamental Pollution Management           |    |    |    |    |    |    |    |    |    | RE-4 Building Level Water Efficiency        |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-5                         |   |   |   |   |   |   |   |   |    | MR-5 Building Product Disclosure and Optimization - Low Volatile Organic Compounds and Greenhouse Gas Emissions |    |    |    |    |    |    |    |    |    | SS-5 Stormwater Management                      |    |    |    |    |    |    |    |    |    | WE-5 Indoor Water Use Reduction      |    |    |    |    |    |    |    |    |    | EA-5 Fundamental Pollution Management           |    |    |    |    |    |    |    |    |    | RE-5 Building Level Water Efficiency        |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-6                         |   |   |   |   |   |   |   |   |    | MR-6 Building Product Disclosure and Optimization - Material Ingredients  |    |    |    |    |    |    |    |    |    | SS-6 Water Conservation                         |    |    |    |    |    |    |    |    |    | WE-6 Indoor Water Use Reduction      |    |    |    |    |    |    |    |    |    | EA-6 Fundamental Pollution Management           |    |    |    |    |    |    |    |    |    | RE-6 Building Level Water Efficiency        |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-7                         |   |   |   |   |   |   |   |   |    | MR-7 Construction and Demolition Waste Management   |    |    |    |    |    |    |    |    |    | SS-7 Water Conservation                         |    |    |    |    |    |    |    |    |    | WE-7 Indoor Water Use Reduction      |    |    |    |    |    |    |    |    |    | EA-7 Fundamental Pollution Management           |    |    |    |    |    |    |    |    |    | RE-7 Building Level Water Efficiency        |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-8                         |   |   |   |   |   |   |   |   |    | MR-8  |    |    |    |    |    |    |    |    |    | SS-8  |    |    |    |    |    |    |    |    |    | WE-8                                 |    |    |    |    |    |    |    |    |    | EA-8  |    |    |    |    |    |    |    |    |    | RE-8  |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-9                         |   |   |   |   |   |   |   |   |    | MR-9  |    |    |    |    |    |    |    |    |    | SS-9  |    |    |    |    |    |    |    |    |    | WE-9                                 |    |    |    |    |    |    |    |    |    | EA-9  |    |    |    |    |    |    |    |    |    | RE-9  |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-10                        |   |   |   |   |   |   |   |   |    | MR-10   |    |    |    |    |    |    |    |    |    | SS-10   |    |    |    |    |    |    |    |    |    | WE-10                                |    |    |    |    |    |    |    |    |    | EA-10   |    |    |    |    |    |    |    |    |    | RE-10                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-11                        |   |   |   |   |   |   |   |   |    | MR-11   |    |    |    |    |    |    |    |    |    | SS-11   |    |    |    |    |    |    |    |    |    | WE-11                                |    |    |    |    |    |    |    |    |    | EA-11   |    |    |    |    |    |    |    |    |    | RE-11                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-12                        |   |   |   |   |   |   |   |   |    | MR-12   |    |    |    |    |    |    |    |    |    | SS-12   |    |    |    |    |    |    |    |    |    | WE-12                                |    |    |    |    |    |    |    |    |    | EA-12   |    |    |    |    |    |    |    |    |    | RE-12                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-13                        |   |   |   |   |   |   |   |   |    | MR-13   |    |    |    |    |    |    |    |    |    | SS-13   |    |    |    |    |    |    |    |    |    | WE-13                                |    |    |    |    |    |    |    |    |    | EA-13   |    |    |    |    |    |    |    |    |    | RE-13                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-14                        |   |   |   |   |   |   |   |   |    | MR-14   |    |    |    |    |    |    |    |    |    | SS-14   |    |    |    |    |    |    |    |    |    | WE-14                                |    |    |    |    |    |    |    |    |    | EA-14   |    |    |    |    |    |    |    |    |    | RE-14                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-15                        |   |   |   |   |   |   |   |   |    | MR-15   |    |    |    |    |    |    |    |    |    | SS-15   |    |    |    |    |    |    |    |    |    | WE-15                                |    |    |    |    |    |    |    |    |    | EA-15   |    |    |    |    |    |    |    |    |    | RE-15                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-16                        |   |   |   |   |   |   |   |   |    | MR-16   |    |    |    |    |    |    |    |    |    | SS-16   |    |    |    |    |    |    |    |    |    | WE-16                                |    |    |    |    |    |    |    |    |    | EA-16   |    |    |    |    |    |    |    |    |    | RE-16                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-17                        |   |   |   |   |   |   |   |   |    | MR-17   |    |    |    |    |    |    |    |    |    | SS-17   |    |    |    |    |    |    |    |    |    | WE-17                                |    |    |    |    |    |    |    |    |    | EA-17   |    |    |    |    |    |    |    |    |    | RE-17                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-18                        |   |   |   |   |   |   |   |   |    | MR-18   |    |    |    |    |    |    |    |    |    | SS-18   |    |    |    |    |    |    |    |    |    | WE-18                                |    |    |    |    |    |    |    |    |    | EA-18   |    |    |    |    |    |    |    |    |    | RE-18                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-19                        |   |   |   |   |   |   |   |   |    | MR-19   |    |    |    |    |    |    |    |    |    | SS-19   |    |    |    |    |    |    |    |    |    | WE-19                                |    |    |    |    |    |    |    |    |    | EA-19   |    |    |    |    |    |    |    |    |    | RE-19                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-20                        |   |   |   |   |   |   |   |   |    | MR-20   |    |    |    |    |    |    |    |    |    | SS-20   |    |    |    |    |    |    |    |    |    | WE-20                                |    |    |    |    |    |    |    |    |    | EA-20   |    |    |    |    |    |    |    |    |    | RE-20                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-21                        |   |   |   |   |   |   |   |   |    | MR-21   |    |    |    |    |    |    |    |    |    | SS-21   |    |    |    |    |    |    |    |    |    | WE-21                                |    |    |    |    |    |    |    |    |    | EA-21   |    |    |    |    |    |    |    |    |    | RE-21                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-22                        |   |   |   |   |   |   |   |   |    | MR-22   |    |    |    |    |    |    |    |    |    | SS-22   |    |    |    |    |    |    |    |    |    | WE-22                                |    |    |    |    |    |    |    |    |    | EA-22   |    |    |    |    |    |    |    |    |    | RE-22                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-23                        |   |   |   |   |   |   |   |   |    | MR-23   |    |    |    |    |    |    |    |    |    | SS-23   |    |    |    |    |    |    |    |    |    | WE-23                                |    |    |    |    |    |    |    |    |    | EA-23   |    |    |    |    |    |    |    |    |    | RE-23                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-24                        |   |   |   |   |   |   |   |   |    | MR-24   |    |    |    |    |    |    |    |    |    | SS-24   |    |    |    |    |    |    |    |    |    | WE-24                                |    |    |    |    |    |    |    |    |    | EA-24   |    |    |    |    |    |    |    |    |    | RE-24                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-25                        |   |   |   |   |   |   |   |   |    | MR-25   |    |    |    |    |    |    |    |    |    | SS-25   |    |    |    |    |    |    |    |    |    | WE-25                                |    |    |    |    |    |    |    |    |    | EA-25   |    |    |    |    |    |    |    |    |    | RE-25                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-26                        |   |   |   |   |   |   |   |   |    | MR-26   |    |    |    |    |    |    |    |    |    | SS-26   |    |    |    |    |    |    |    |    |    | WE-26                                |    |    |    |    |    |    |    |    |    | EA-26   |    |    |    |    |    |    |    |    |    | RE-26                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-27                        |   |   |   |   |   |   |   |   |    | MR-27   |    |    |    |    |    |    |    |    |    | SS-27   |    |    |    |    |    |    |    |    |    | WE-27                                |    |    |    |    |    |    |    |    |    | EA-27   |    |    |    |    |    |    |    |    |    | RE-27                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-28                        |   |   |   |   |   |   |   |   |    | MR-28   |    |    |    |    |    |    |    |    |    | SS-28   |    |    |    |    |    |    |    |    |    | WE-28                                |    |    |    |    |    |    |    |    |    | EA-28   |    |    |    |    |    |    |    |    |    | RE-28                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-29                        |   |   |   |   |   |   |   |   |    | MR-29   |    |    |    |    |    |    |    |    |    | SS-29   |    |    |    |    |    |    |    |    |    | WE-29                                |    |    |    |    |    |    |    |    |    | EA-29   |    |    |    |    |    |    |    |    |    | RE-29                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-30                        |   |   |   |   |   |   |   |   |    | MR-30   |    |    |    |    |    |    |    |    |    | SS-30   |    |    |    |    |    |    |    |    |    | WE-30                                |    |    |    |    |    |    |    |    |    | EA-30   |    |    |    |    |    |    |    |    |    | RE-30                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-31                        |   |   |   |   |   |   |   |   |    | MR-31   |    |    |    |    |    |    |    |    |    | SS-31   |    |    |    |    |    |    |    |    |    | WE-31                                |    |    |    |    |    |    |    |    |    | EA-31   |    |    |    |    |    |    |    |    |    | RE-31                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-32                        |   |   |   |   |   |   |   |   |    | MR-32   |    |    |    |    |    |    |    |    |    | SS-32   |    |    |    |    |    |    |    |    |    | WE-32                                |    |    |    |    |    |    |    |    |    | EA-32   |    |    |    |    |    |    |    |    |    | RE-32                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-33                        |   |   |   |   |   |   |   |   |    | MR-33   |    |    |    |    |    |    |    |    |    | SS-33   |    |    |    |    |    |    |    |    |    | WE-33                                |    |    |    |    |    |    |    |    |    | EA-33   |    |    |    |    |    |    |    |    |    | RE-33                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-34                        |   |   |   |   |   |   |   |   |    | MR-34   |    |    |    |    |    |    |    |    |    | SS-34   |    |    |    |    |    |    |    |    |    | WE-34                                |    |    |    |    |    |    |    |    |    | EA-34   |    |    |    |    |    |    |    |    |    | RE-34                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-35                        |   |   |   |   |   |   |   |   |    | MR-35   |    |    |    |    |    |    |    |    |    | SS-35   |    |    |    |    |    |    |    |    |    | WE-35                                |    |    |    |    |    |    |    |    |    | EA-35   |    |    |    |    |    |    |    |    |    | RE-35                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-36                        |   |   |   |   |   |   |   |   |    | MR-36   |    |    |    |    |    |    |    |    |    | SS-36   |    |    |    |    |    |    |    |    |    | WE-36                                |    |    |    |    |    |    |    |    |    | EA-36   |    |    |    |    |    |    |    |    |    | RE-36                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-37                        |   |   |   |   |   |   |   |   |    | MR-37   |    |    |    |    |    |    |    |    |    | SS-37   |    |    |    |    |    |    |    |    |    | WE-37                                |    |    |    |    |    |    |    |    |    | EA-37   |    |    |    |    |    |    |    |    |    | RE-37                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-38                        |   |   |   |   |   |   |   |   |    | MR-38   |    |    |    |    |    |    |    |    |    | SS-38   |    |    |    |    |    |    |    |    |    | WE-38                                |    |    |    |    |    |    |    |    |    | EA-38   |    |    |    |    |    |    |    |    |    | RE-38                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-39                        |   |   |   |   |   |   |   |   |    | MR-39   |    |    |    |    |    |    |    |    |    | SS-39   |    |    |    |    |    |    |    |    |    | WE-39                                |    |    |    |    |    |    |    |    |    | EA-39   |    |    |    |    |    |    |    |    |    | RE-39                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-40                        |   |   |   |   |   |   |   |   |    | MR-40   |    |    |    |    |    |    |    |    |    | SS-40   |    |    |    |    |    |    |    |    |    | WE-40                                |    |    |    |    |    |    |    |    |    | EA-40   |    |    |    |    |    |    |    |    |    | RE-40                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-41                        |   |   |   |   |   |   |   |   |    | MR-41   |    |    |    |    |    |    |    |    |    | SS-41   |    |    |    |    |    |    |    |    |    | WE-41                                |    |    |    |    |    |    |    |    |    | EA-41   |    |    |    |    |    |    |    |    |    | RE-41                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-42                        |   |   |   |   |   |   |   |   |    | MR-42   |    |    |    |    |    |    |    |    |    | SS-42   |    |    |    |    |    |    |    |    |    | WE-42                                |    |    |    |    |    |    |    |    |    | EA-42   |    |    |    |    |    |    |    |    |    | RE-42                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-43                        |   |   |   |   |   |   |   |   |    | MR-43   |    |    |    |    |    |    |    |    |    | SS-43   |    |    |    |    |    |    |    |    |    | WE-43                                |    |    |    |    |    |    |    |    |    | EA-43   |    |    |    |    |    |    |    |    |    | RE-43                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-44                        |   |   |   |   |   |   |   |   |    | MR-44   |    |    |    |    |    |    |    |    |    | SS-44   |    |    |    |    |    |    |    |    |    | WE-44                                |    |    |    |    |    |    |    |    |    | EA-44   |    |    |    |    |    |    |    |    |    | RE-44                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-45                        |   |   |   |   |   |   |   |   |    | MR-45   |    |    |    |    |    |    |    |    |    | SS-45   |    |    |    |    |    |    |    |    |    | WE-45                                |    |    |    |    |    |    |    |    |    | EA-45   |    |    |    |    |    |    |    |    |    | RE-45                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-46                        |   |   |   |   |   |   |   |   |    | MR-46   |    |    |    |    |    |    |    |    |    | SS-46   |    |    |    |    |    |    |    |    |    | WE-46                                |    |    |    |    |    |    |    |    |    | EA-46   |    |    |    |    |    |    |    |    |    | RE-46                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-47                        |   |   |   |   |   |   |   |   |    | MR-47   |    |    |    |    |    |    |    |    |    | SS-47   |    |    |    |    |    |    |    |    |    | WE-47                                |    |    |    |    |    |    |    |    |    | EA-47   |    |    |    |    |    |    |    |    |    | RE-47                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-48                        |   |   |   |   |   |   |   |   |    | MR-48   |    |    |    |    |    |    |    |    |    | SS-48   |    |    |    |    |    |    |    |    |    | WE-48                                |    |    |    |    |    |    |    |    |    | EA-48   |    |    |    |    |    |    |    |    |    | RE-48                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-49                        |   |   |   |   |   |   |   |   |    | MR-49   |    |    |    |    |    |    |    |    |    | SS-49   |    |    |    |    |    |    |    |    |    | WE-49                                |    |    |    |    |    |    |    |    |    | EA-49   |    |    |    |    |    |    |    |    |    | RE-49                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-50                        |   |   |   |   |   |   |   |   |    | MR-50   |    |    |    |    |    |    |    |    |    | SS-50   |    |    |    |    |    |    |    |    |    | WE-50                                |    |    |    |    |    |    |    |    |    | EA-50   |    |    |    |    |    |    |    |    |    | RE-50                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-51                        |   |   |   |   |   |   |   |   |    | MR-51   |    |    |    |    |    |    |    |    |    | SS-51   |    |    |    |    |    |    |    |    |    | WE-51                                |    |    |    |    |    |    |    |    |    | EA-51   |    |    |    |    |    |    |    |    |    | RE-51                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-52                        |   |   |   |   |   |   |   |   |    | MR-52   |    |    |    |    |    |    |    |    |    | SS-52   |    |    |    |    |    |    |    |    |    | WE-52                                |    |    |    |    |    |    |    |    |    | EA-52   |    |    |    |    |    |    |    |    |    | RE-52                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-53                        |   |   |   |   |   |   |   |   |    | MR-53   |    |    |    |    |    |    |    |    |    | SS-53   |    |    |    |    |    |    |    |    |    | WE-53                                |    |    |    |    |    |    |    |    |    | EA-53   |    |    |    |    |    |    |    |    |    | RE-53                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-54                        |   |   |   |   |   |   |   |   |    | MR-54   |    |    |    |    |    |    |    |    |    | SS-54   |    |    |    |    |    |    |    |    |    | WE-54                                |    |    |    |    |    |    |    |    |    | EA-54   |    |    |    |    |    |    |    |    |    | RE-54                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-55                        |   |   |   |   |   |   |   |   |    | MR-55   |    |    |    |    |    |    |    |    |    | SS-55   |    |    |    |    |    |    |    |    |    | WE-55                                |    |    |    |    |    |    |    |    |    | EA-55   |    |    |    |    |    |    |    |    |    | RE-55                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-56                        |   |   |   |   |   |   |   |   |    | MR-56   |    |    |    |    |    |    |    |    |    | SS-56   |    |    |    |    |    |    |    |    |    | WE-56                                |    |    |    |    |    |    |    |    |    | EA-56   |    |    |    |    |    |    |    |    |    | RE-56                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-57                        |   |   |   |   |   |   |   |   |    | MR-57   |    |    |    |    |    |    |    |    |    | SS-57   |    |    |    |    |    |    |    |    |    | WE-57                                |    |    |    |    |    |    |    |    |    | EA-57   |    |    |    |    |    |    |    |    |    | RE-57                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-58                        |   |   |   |   |   |   |   |   |    | MR-58   |    |    |    |    |    |    |    |    |    | SS-58   |    |    |    |    |    |    |    |    |    | WE-58                                |    |    |    |    |    |    |    |    |    | EA-58   |    |    |    |    |    |    |    |    |    | RE-58                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-59                        |   |   |   |   |   |   |   |   |    | MR-59   |    |    |    |    |    |    |    |    |    | SS-59   |    |    |    |    |    |    |    |    |    | WE-59                                |    |    |    |    |    |    |    |    |    | EA-59   |    |    |    |    |    |    |    |    |    | RE-59                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-60                        |   |   |   |   |   |   |   |   |    | MR-60   |    |    |    |    |    |    |    |    |    | SS-60   |    |    |    |    |    |    |    |    |    | WE-60                                |    |    |    |    |    |    |    |    |    | EA-60   |    |    |    |    |    |    |    |    |    | RE-60                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-61                        |   |   |   |   |   |   |   |   |    | MR-61   |    |    |    |    |    |    |    |    |    | SS-61   |    |    |    |    |    |    |    |    |    | WE-61                                |    |    |    |    |    |    |    |    |    | EA-61   |    |    |    |    |    |    |    |    |    | RE-61                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-62                        |   |   |   |   |   |   |   |   |    | MR-62   |    |    |    |    |    |    |    |    |    | SS-62   |    |    |    |    |    |    |    |    |    | WE-62                                |    |    |    |    |    |    |    |    |    | EA-62   |    |    |    |    |    |    |    |    |    | RE-62                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-63                        |   |   |   |   |   |   |   |   |    | MR-63   |    |    |    |    |    |    |    |    |    | SS-63   |    |    |    |    |    |    |    |    |    | WE-63                                |    |    |    |    |    |    |    |    |    | EA-63   |    |    |    |    |    |    |    |    |    | RE-63                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-64                        |   |   |   |   |   |   |   |   |    | MR-64   |    |    |    |    |    |    |    |    |    | SS-64   |    |    |    |    |    |    |    |    |    | WE-64                                |    |    |    |    |    |    |    |    |    | EA-64   |    |    |    |    |    |    |    |    |    | RE-64                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-65                        |   |   |   |   |   |   |   |   |    | MR-65   |    |    |    |    |    |    |    |    |    | SS-65   |    |    |    |    |    |    |    |    |    | WE-65                                |    |    |    |    |    |    |    |    |    | EA-65   |    |    |    |    |    |    |    |    |    | RE-65                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-66                        |   |   |   |   |   |   |   |   |    | MR-66   |    |    |    |    |    |    |    |    |    | SS-66   |    |    |    |    |    |    |    |    |    | WE-66                                |    |    |    |    |    |    |    |    |    | EA-66   |    |    |    |    |    |    |    |    |    | RE-66                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-67                        |   |   |   |   |   |   |   |   |    | MR-67   |    |    |    |    |    |    |    |    |    | SS-67   |    |    |    |    |    |    |    |    |    | WE-67                                |    |    |    |    |    |    |    |    |    | EA-67   |    |    |    |    |    |    |    |    |    | RE-67                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-68                        |   |   |   |   |   |   |   |   |    | MR-68   |    |    |    |    |    |    |    |    |    | SS-68   |    |    |    |    |    |    |    |    |    | WE-68                                |    |    |    |    |    |    |    |    |    | EA-68   |    |    |    |    |    |    |    |    |    | RE-68                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-69                        |   |   |   |   |   |   |   |   |    | MR-69   |    |    |    |    |    |    |    |    |    | SS-69   |    |    |    |    |    |    |    |    |    | WE-69                                |    |    |    |    |    |    |    |    |    | EA-69   |    |    |    |    |    |    |    |    |    | RE-69                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-70                        |   |   |   |   |   |   |   |   |    | MR-70   |    |    |    |    |    |    |    |    |    | SS-70   |    |    |    |    |    |    |    |    |    | WE-70                                |    |    |    |    |    |    |    |    |    | EA-70   |    |    |    |    |    |    |    |    |    | RE-70                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-71                        |   |   |   |   |   |   |   |   |    | MR-71   |    |    |    |    |    |    |    |    |    | SS-71   |    |    |    |    |    |    |    |    |    | WE-71                                |    |    |    |    |    |    |    |    |    | EA-71   |    |    |    |    |    |    |    |    |    | RE-71                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-72                        |   |   |   |   |   |   |   |   |    | MR-72   |    |    |    |    |    |    |    |    |    | SS-72   |    |    |    |    |    |    |    |    |    | WE-72                                |    |    |    |    |    |    |    |    |    | EA-72   |    |    |    |    |    |    |    |    |    | RE-72                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-73                        |   |   |   |   |   |   |   |   |    | MR-73   |    |    |    |    |    |    |    |    |    | SS-73   |    |    |    |    |    |    |    |    |    | WE-73                                |    |    |    |    |    |    |    |    |    | EA-73   |    |    |    |    |    |    |    |    |    | RE-73                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-74                        |   |   |   |   |   |   |   |   |    | MR-74   |    |    |    |    |    |    |    |    |    | SS-74   |    |    |    |    |    |    |    |    |    | WE-74                                |    |    |    |    |    |    |    |    |    | EA-74   |    |    |    |    |    |    |    |    |    | RE-74                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-75                        |   |   |   |   |   |   |   |   |    | MR-75   |    |    |    |    |    |    |    |    |    | SS-75   |    |    |    |    |    |    |    |    |    | WE-75                                |    |    |    |    |    |    |    |    |    | EA-75   |    |    |    |    |    |    |    |    |    | RE-75                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-76                        |   |   |   |   |   |   |   |   |    | MR-76   |    |    |    |    |    |    |    |    |    | SS-76   |    |    |    |    |    |    |    |    |    | WE-76                                |    |    |    |    |    |    |    |    |    | EA-76   |    |    |    |    |    |    |    |    |    | RE-76                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-77                        |   |   |   |   |   |   |   |   |    | MR-77   |    |    |    |    |    |    |    |    |    | SS-77   |    |    |    |    |    |    |    |    |    | WE-77                                |    |    |    |    |    |    |    |    |    | EA-77   |    |    |    |    |    |    |    |    |    | RE-77                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-78                        |   |   |   |   |   |   |   |   |    | MR-78   |    |    |    |    |    |    |    |    |    | SS-78   |    |    |    |    |    |    |    |    |    | WE-78                                |    |    |    |    |    |    |    |    |    | EA-78   |    |    |    |    |    |    |    |    |    | RE-78                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-79                        |   |   |   |   |   |   |   |   |    | MR-79   |    |    |    |    |    |    |    |    |    | SS-79   |    |    |    |    |    |    |    |    |    | WE-79                                |    |    |    |    |    |    |    |    |    | EA-79   |    |    |    |    |    |    |    |    |    | RE-79                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-80                        |   |   |   |   |   |   |   |   |    | MR-80   |    |    |    |    |    |    |    |    |    | SS-80   |    |    |    |    |    |    |    |    |    | WE-80                                |    |    |    |    |    |    |    |    |    | EA-80   |    |    |    |    |    |    |    |    |    | RE-80                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-81                        |   |   |   |   |   |   |   |   |    | MR-81   |    |    |    |    |    |    |    |    |    | SS-81   |    |    |    |    |    |    |    |    |    | WE-81                                |    |    |    |    |    |    |    |    |    | EA-81   |    |    |    |    |    |    |    |    |    | RE-81                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-82                        |   |   |   |   |   |   |   |   |    | MR-82   |    |    |    |    |    |    |    |    |    | SS-82   |    |    |    |    |    |    |    |    |    | WE-82                                |    |    |    |    |    |    |    |    |    | EA-82   |    |    |    |    |    |    |    |    |    | RE-82                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-83                        |   |   |   |   |   |   |   |   |    | MR-83   |    |    |    |    |    |    |    |    |    | SS-83   |    |    |    |    |    |    |    |    |    | WE-83                                |    |    |    |    |    |    |    |    |    | EA-83   |    |    |    |    |    |    |    |    |    | RE-83                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-84                        |   |   |   |   |   |   |   |   |    | MR-84   |    |    |    |    |    |    |    |    |    | SS-84   |    |    |    |    |    |    |    |    |    | WE-84                                |    |    |    |    |    |    |    |    |    | EA-84   |    |    |    |    |    |    |    |    |    | RE-84                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-85                        |   |   |   |   |   |   |   |   |    | MR-85   |    |    |    |    |    |    |    |    |    | SS-85   |    |    |    |    |    |    |    |    |    | WE-85                                |    |    |    |    |    |    |    |    |    | EA-85   |    |    |    |    |    |    |    |    |    | RE-85                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-86                        |   |   |   |   |   |   |   |   |    | MR-86   |    |    |    |    |    |    |    |    |    | SS-86   |    |    |    |    |    |    |    |    |    | WE-86                                |    |    |    |    |    |    |    |    |    | EA-86   |    |    |    |    |    |    |    |    |    | RE-86                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-87                        |   |   |   |   |   |   |   |   |    | MR-87   |    |    |    |    |    |    |    |    |    | SS-87   |    |    |    |    |    |    |    |    |    | WE-87                                |    |    |    |    |    |    |    |    |    | EA-87   |    |    |    |    |    |    |    |    |    | RE-87                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-88                        |   |   |   |   |   |   |   |   |    | MR-88   |    |    |    |    |    |    |    |    |    | SS-88   |    |    |    |    |    |    |    |    |    | WE-88                                |    |    |    |    |    |    |    |    |    | EA-88   |    |    |    |    |    |    |    |    |    | RE-88                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-89                        |   |   |   |   |   |   |   |   |    | MR-89   |    |    |    |    |    |    |    |    |    | SS-89   |    |    |    |    |    |    |    |    |    | WE-89                                |    |    |    |    |    |    |    |    |    | EA-89   |    |    |    |    |    |    |    |    |    | RE-89                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-90                        |   |   |   |   |   |   |   |   |    | MR-90   |    |    |    |    |    |    |    |    |    | SS-90   |    |    |    |    |    |    |    |    |    | WE-90                                |    |    |    |    |    |    |    |    |    | EA-90   |    |    |    |    |    |    |    |    |    | RE-90                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-91                        |   |   |   |   |   |   |   |   |    | MR-91   |    |    |    |    |    |    |    |    |    | SS-91   |    |    |    |    |    |    |    |    |    | WE-91                                |    |    |    |    |    |    |    |    |    | EA-91   |    |    |    |    |    |    |    |    |    | RE-91                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-92                        |   |   |   |   |   |   |   |   |    | MR-92   |    |    |    |    |    |    |    |    |    | SS-92   |    |    |    |    |    |    |    |    |    | WE-92                                |    |    |    |    |    |    |    |    |    | EA-92   |    |    |    |    |    |    |    |    |    | RE-92                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-93                        |   |   |   |   |   |   |   |   |    | MR-93   |    |    |    |    |    |    |    |    |    | SS-93   |    |    |    |    |    |    |    |    |    | WE-93                                |    |    |    |    |    |    |    |    |    | EA-93   |    |    |    |    |    |    |    |    |    | RE-93                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-94                        |   |   |   |   |   |   |   |   |    | MR-94   |    |    |    |    |    |    |    |    |    | SS-94   |    |    |    |    |    |    |    |    |    | WE-94                                |    |    |    |    |    |    |    |    |    | EA-94   |    |    |    |    |    |    |    |    |    | RE-94                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-95                        |   |   |   |   |   |   |   |   |    | MR-95   |    |    |    |    |    |    |    |    |    | SS-95   |    |    |    |    |    |    |    |    |    | WE-95                                |    |    |    |    |    |    |    |    |    | EA-95   |    |    |    |    |    |    |    |    |    | RE-95                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-96                        |   |   |   |   |   |   |   |   |    | MR-96   |    |    |    |    |    |    |    |    |    | SS-96   |    |    |    |    |    |    |    |    |    | WE-96                                |    |    |    |    |    |    |    |    |    | EA-96   |    |    |    |    |    |    |    |    |    | RE-96                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-97                        |   |   |   |   |   |   |   |   |    | MR-97   |    |    |    |    |    |    |    |    |    | SS-97   |    |    |    |    |    |    |    |    |    | WE-97                                |    |    |    |    |    |    |    |    |    | EA-97   |    |    |    |    |    |    |    |    |    | RE-97                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-98                        |   |   |   |   |   |   |   |   |    | MR-98   |    |    |    |    |    |    |    |    |    | SS-98   |    |    |    |    |    |    |    |    |    | WE-98                                |    |    |    |    |    |    |    |    |    | EA-98   |    |    |    |    |    |    |    |    |    | RE-98                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-99                        |   |   |   |   |   |   |   |   |    | MR-99   |    |    |    |    |    |    |    |    |    | SS-99   |    |    |    |    |    |    |    |    |    | WE-99                                |    |    |    |    |    |    |    |    |    | EA-99   |    |    |    |    |    |    |    |    |    | RE-99                                       |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| PI-100                       |   |   |   |   |   |   |   |   |    | MR-100  |    |    |    |    |    |    |    |    |    | SS-100  |    |    |    |    |    |    |    |    |    | WE-100                               |    |    |    |    |    |    |    |    |    | EA-100  |    |    |    |    |    |    |    |    |    | RE-100                                      |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |



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 521 East Street  
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## DESIGN ALTERNATIVE SUMMARY:

Preliminary Design Program (PDP) Is Complete and Preferred Schematic (PSR) Is Focusing On a Consolidated School

### PSR Design Alternatives:

- **Base Repair** – Required by MSBA to Serve as a Baseline Model
- **Add-Reno**, Single Story
- **New Construction, 1-Story w/ Staggered Move-In**
- **New Construction, 2-Story w/ Staggered Move-In**
  
- **New Construction, 3-Story w/ Single Move-In**
- **New Construction, 2-Story w/ Single Move-In**



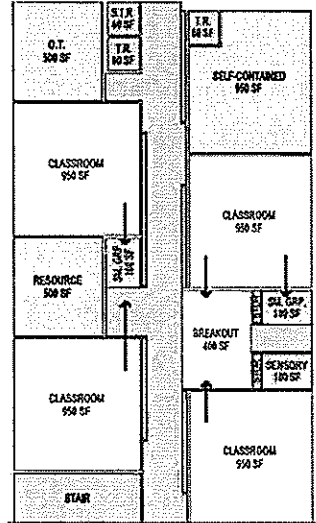
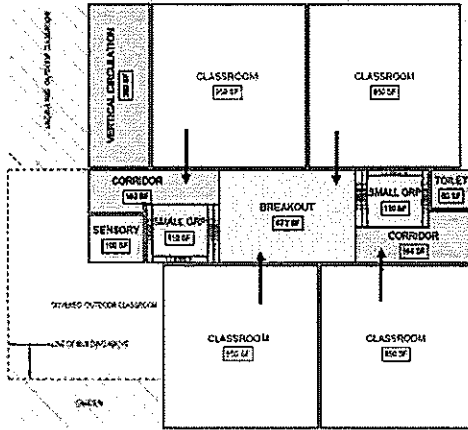
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## PROJECT GOALS:

- Provide **Healthy, Flexible Environment** for Learning
- Support the **Educational Program**
- Foster **Positive Relationship** between **School and Community**
- Introduce **Pre-K Program** to Franklin Avenue
- Support Increased **Project-Based Learning**
- Provide Connections to **the Natural World**
- Support **Anytime-Anywhere Learning**
- Organize Grade Levels into **Academic Neighborhoods**
- Support **Robust Counseling** Program
- Provide Clear **Public** and **Academic Zones**
- Support **Large** and **Small Performances**
- Increase **Presence on Franklin Street** and Minimize Traffic in Neighborhood



# NEIGHBORHOOD CONCEPTS:



# BASE REPAIR

## Pros:

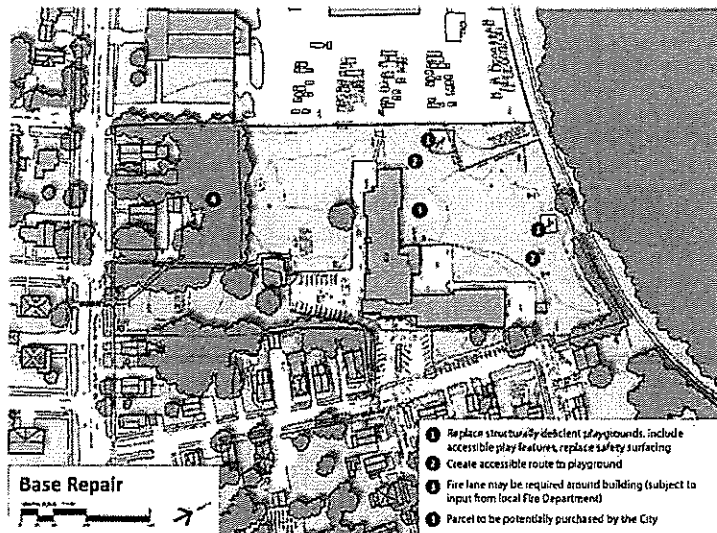
- Structurally Sound
- Code Compliant
- Barrier-Free

## Cons:

- No Educational Benefits
- No Site Improvements (Access, Parking, Etc.)
- Excludes Abner Gibbs Students

## Building Stabilization/ Code Compliance

- Gross Square Footage: 33,003 gsf
- Program Square Footage: 22,203 nsf
- Grossing Factor: 1.49





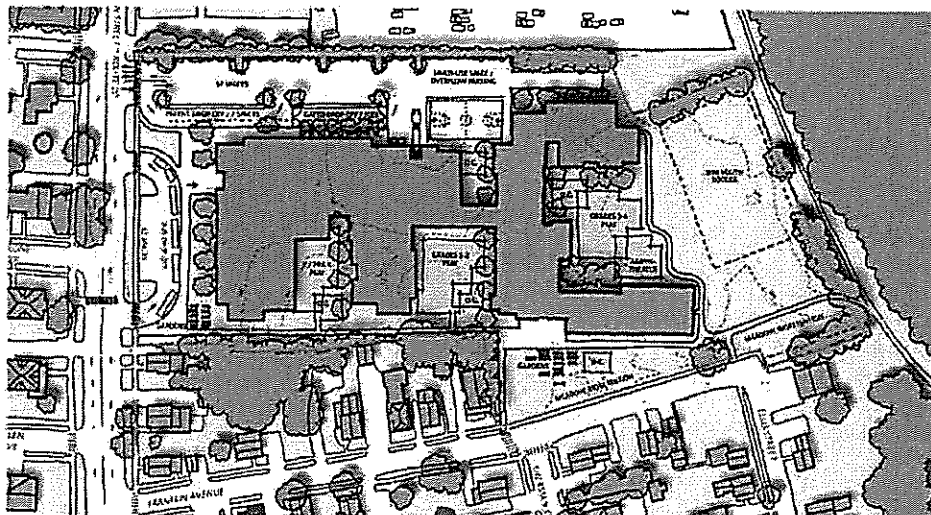
## ADD-RENO, 1-STORY, STAGGERED MOVE

**Pros:**

- Healthy Environment
- Flexible Spaces
- Franklin St. Presence
- Single Story
- Pre-K
- PBL Opportunities
- Robust Counseling
- Performance Options
- Anytime Anywhere Learning

**Cons:**

- Limited Outdoor Space
- Compromised Neighborhoods
- Compromised Zoning
- Footprint/ Envelope



Consolidated Enrollment; Addition - Renovation

Gross Square Footage: 95,195 gsf

Program Square Footage: 64,366 nsf

Grossing Factor: 1.48



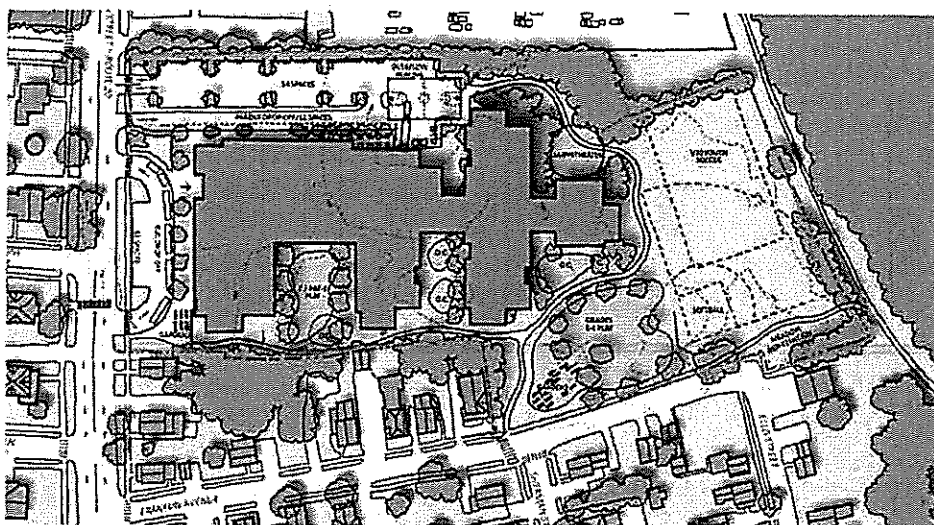
## NEW CONSTRUCTION, 1-STORY, STAGGERED MOVE

**Pros:**

- Healthy Environment
- Flexible Spaces
- Franklin St. Presence
- Single Story
- Pre-K
- Neighborhoods
- Clear Zoning
- PBL Opportunities
- Robust Counseling
- Performance Options
- Nature Connections
- Anytime Anywhere Learning

**Cons:**

- Footprint/ Envelope
- Staggered Move



Consolidated Enrollment; New Construction

Gross Square Footage: 88,014 gsf

Program Square Footage: 59,559 nsf

Grossing Factor: 1.48



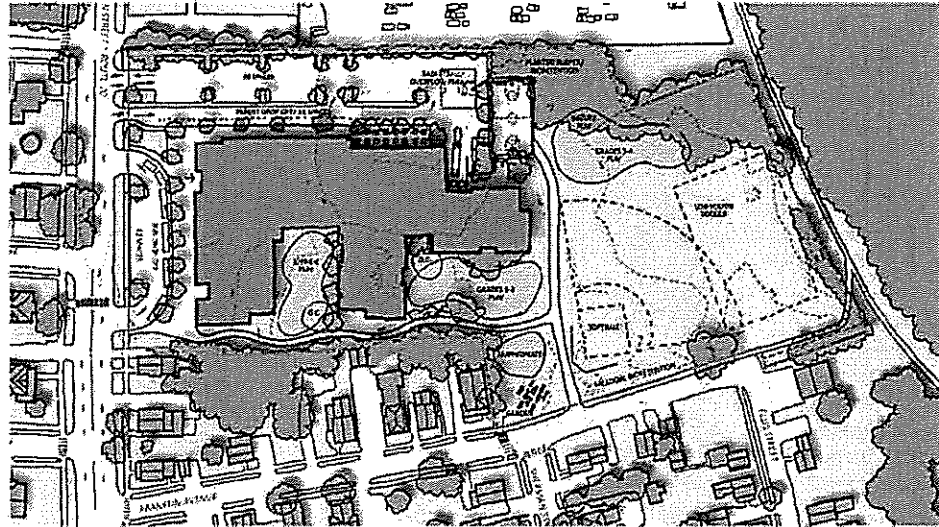
## NEW CONSTRUCTION, 2-STORY, STAGGERED MOVE

**Pros:**

- Healthy Environment
- Flexible Spaces
- Franklin St. Presence
- Pre-K
- Neighborhoods
- Clear Zoning
- PBL Opportunities
- Robust Counseling
- Performance Options
- Nature Connections
- Smaller Footprint
- Anytime Anywhere Learning

**Cons:**

- Staggered Move



Consolidated Enrollment; New Construction

Gross Square Footage: 88,995 gsf

Program Square Footage: 59,559 nsf

Grossing Factor: 1.49



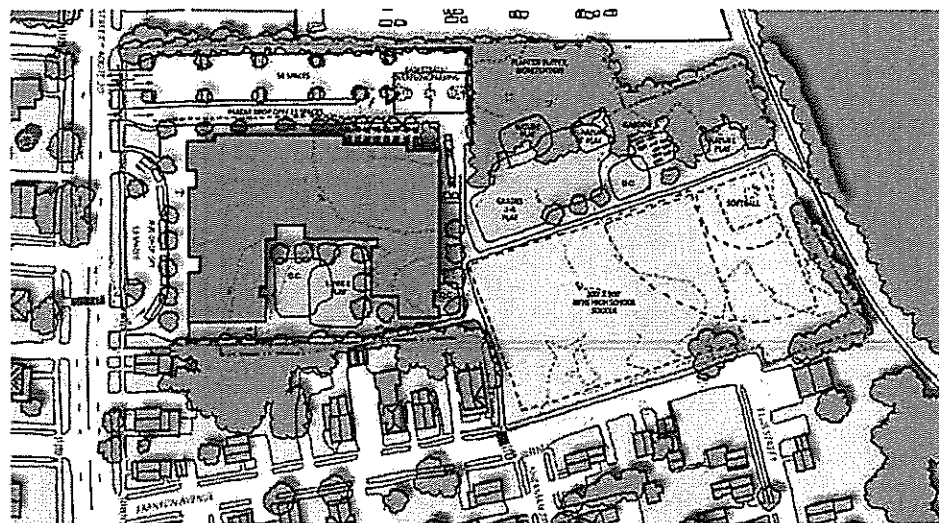
## NEW CONSTRUCTION, 3-STORY, SINGLE MOVE

**Pros:**

- One Move
- Healthy Environment
- Flexible Spaces
- Franklin St. Presence
- Pre-K
- Neighborhoods
- Clear Zoning
- PBL Opportunities
- Robust Counseling
- Performance Options
- Nature Connections
- Smaller Footprint
- Anytime Anywhere Learning

**Cons:**

- Disproportionate Scale



Consolidated Enrollment; New Construction

Gross Square Footage: 88,562 gsf

Program Square Footage: 59,559 nsf

Grossing Factor: 1.49



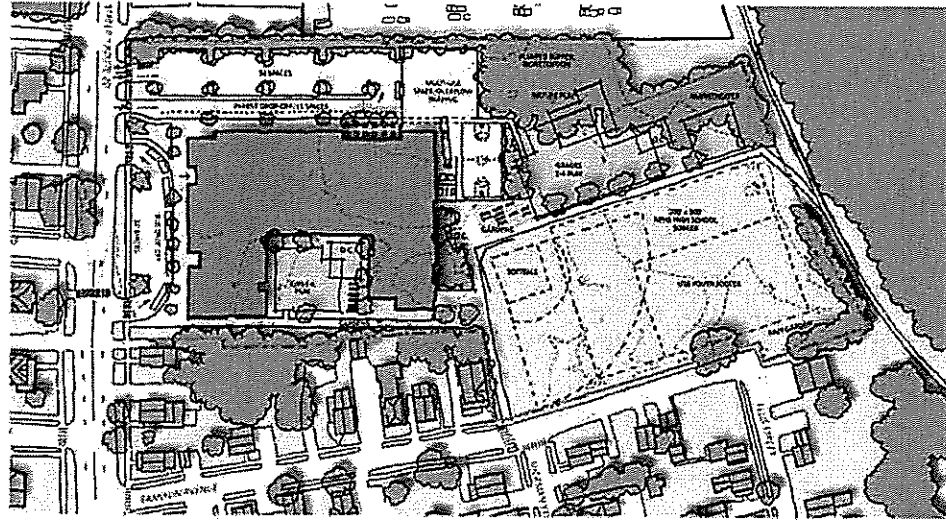
# NEW CONSTRUCTION, 2-STORY, SINGLE MOVE

**Pros:**

- One Move
- Healthy Environment
- Flexible Spaces
- Franklin St. Presence
- Pre-K
- Neighborhoods
- Clear Zoning
- PBL Opportunities
- Robust Counseling
- Performance Options
- Nature Connections
- Smallest Footprint
- Anytime Anywhere Learning

**Cons:**

- Multi-Story Building



Consolidated Enrollment; New Construction

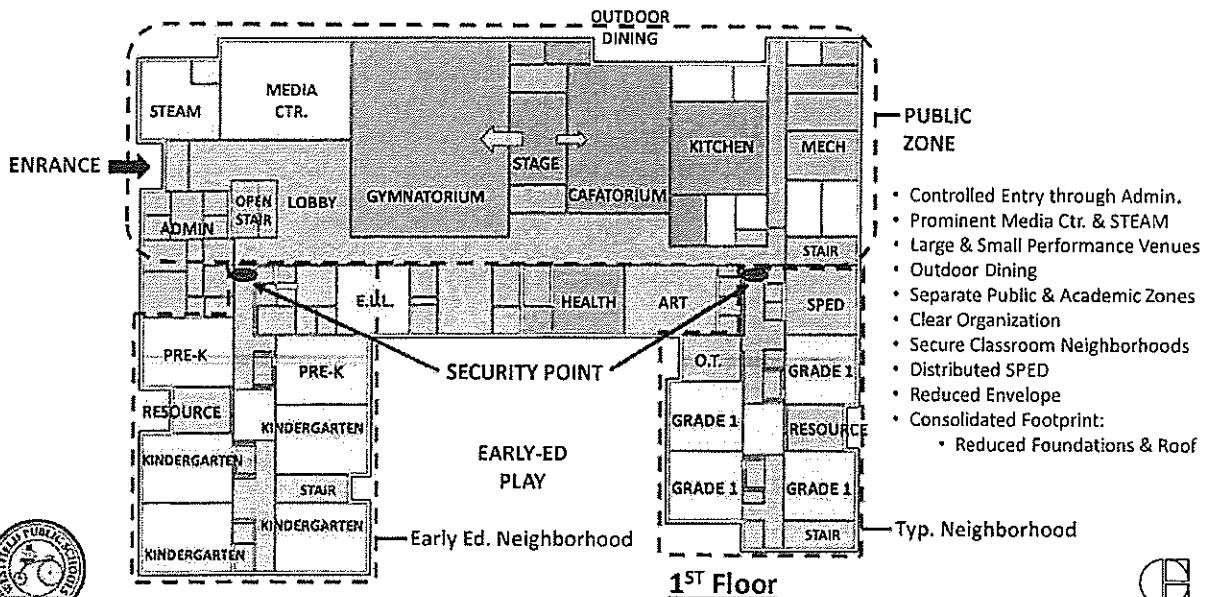
Gross Square Footage: 88,227 gsf

Program Square Footage: 59,559 nsf

Grassing Factor: 1.48



# CONCEPT PLAN



**PUBLIC ZONE**

- Controlled Entry through Admin.
- Prominent Media Ctr. & STEAM
- Large & Small Performance Venues
- Outdoor Dining
- Separate Public & Academic Zones
- Clear Organization
- Secure Classroom Neighborhoods
- Distributed SPED
- Reduced Envelope
- Consolidated Footprint:
  - Reduced Foundations & Roof

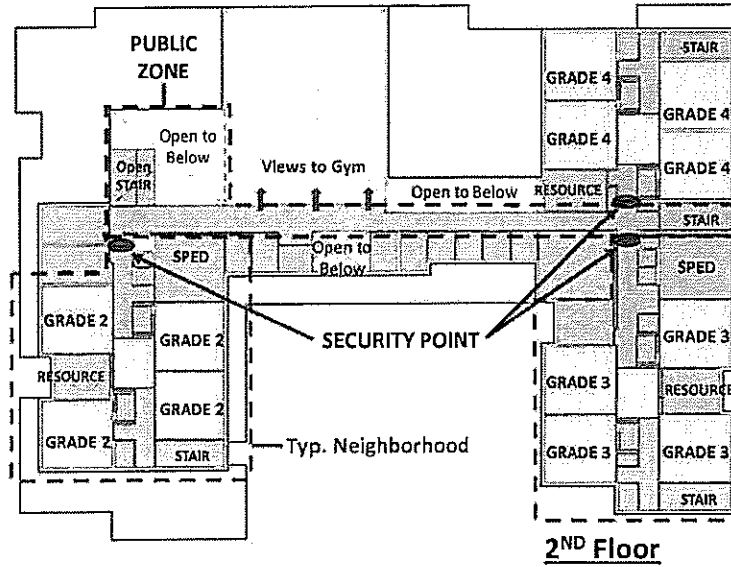
**Early Ed. Neighborhood**

**Typ. Neighborhood**

**1<sup>ST</sup> Floor**



# CONCEPT PLAN



- 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Grade Neighborhoods
- Continued Separation of Public & Academic Zones
- Additional Views into Gym



# THANK YOU

