

Neshaminy School District  
PURSHASING DEPARTMENT  
2001 Old Lincoln Highway  
Langhorne, PA 19047



**Addendum No. 1 dated May 12, 2022**  
**For**  
**Bid #23-14**  
**Concrete Replacement – Sidewalks and Curbs**

The following items are clarifications, additions, and/or revisions to the original Bid documents. This Addendum forms a part of the Contract Documents for the above referenced project, and hereby modifies and takes precedence over the original Bid documents as though originally included therein. Proposers shall acknowledge receipt of this Addendum by indicating the Addendum number and date in your Proposal cover letter.

1. Attached is the square footage spreadsheet. It includes each location and the square footage of the sidewalks needing replacement and the linear feet of curbing needed, if any.
2. Also included is the technical specifications for the concrete.(Included in proposal but wrong file uploaded.)
3. There will be no budgetary constraints. We will be doing all projects. Please cost it out accordingly.
4. There was talk of another Pre-Bid meeting. This is off the table. We are moving forward.

Please sign and send this back with the solicitation packet and make sure you keep a copy for your records.

Signature \_\_\_\_\_ Date \_\_\_\_\_

<u>Building</u>	<u>Area</u>	<u>Sq Ft. Sidewalk</u>	<u>Lin ft. Curb</u>
<b>High School</b>			
	A	4	
	B	24	
	C	33	
	D	132	
	E	66	
	F	132	
<b>*Extra thick area</b>	G	60*	
	H	20	
	<b>Total</b>	<b>411</b>	
<b>Maple Point Middle</b>			
	A	3	
	B	77	
	C	84	
	D	1	
	E	105	
	<b>Total</b>	<b>270</b>	
<b>Poquessing Middle</b>			
<b>Curb</b>	A		10
<b>Curb</b>	B		3.5
<b>Curb</b>	C		6
<b>Curb</b>	E		10
	F	310.75	
	G	33.75	
<b>Curb</b>	I		18
<b>Curb</b>	J		11
<b>w/ red ADA truncated dome tile</b>	K	28	
	<b>Total</b>	<b>372.5</b>	<b>58.5</b>
<b>Poquessing Middle</b>			
	D	450	
	H	369	
	<b>Total</b>	<b>819</b>	

<b>Ferdarbar Elementary</b>			
w/ red ADA truncated dome tile	A	66	
	<b>Total</b>	<b>66</b>	
<b>Sandburg Middle</b>			
	A	1	
	B	9	
	C	10	
	D	1	
	<b>Total</b>	<b>21</b>	
<b>Schweitzer Elementary</b>			
	A	5	
	B	16	
	C	126	
	D	12	
Curb	E		2.5
Curb	F		2
Curb	G		7
	<b>Total</b>	<b>159</b>	<b>11.5</b>
<b>Tawanka Elementary</b>			
	A	102	
	<b>Total</b>	<b>102</b>	
<b>Buck Elementary</b>			
	A	45	
	B	176	
	C	68	
	D	130	
	E	52.5	
	F	20	
	G	49.5	
	H	32	
	I	16	
	K	34	
	<b>Total</b>	<b>623</b>	

<b>Buck Elementary</b>			
	J	668	
	<b>Total</b>	<b>668</b>	
<b>Hoover Elementary</b>			
	A	21	
	B	5.25	
	C	56	
<b>Curb</b>	D		7
	<b>Total</b>	<b>82.25</b>	<b>7</b>
<b>Miller Elementary</b>			
	A	7.5	
	B	4	
	C	55	
	D	16.5	
<b>Curb</b>	E		5.5
	F	20.25	
	G	34	
	H	36	
	I	32	
	<b>Total</b>	<b>205.25</b>	<b>5.5</b>
<b>Facilities</b>			
	A	40	
	B	15	
	C	40	
	D	84	
	E	8	
	F	25	
	<b>Total</b>	<b>212</b>	

CONCRETE REPLACEMENT – Sidewalks and Curbs  
NESHAMINY SCHOOL DISTRICT

PORTLAND CEMENT CONCRETE PAVING

1PART        GENERAL

1.1            SECTION DESCRIPTION

    A.        The Work of This Section Includes:

1.     Concrete Sidewalks/Steps
2.     Concrete Curbs

1.2            RELATED SECTIONS

NOT USED

1.3            QUALITY ASSURANCE

    A.        Reference Standards

1.     American Concrete Institute: ACI 301, 318
2.     American Society for Testing and Materials (ASTM):
  - A615    Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
  - C31     Practices for Making and Curing Concrete Test Specimens in the Field
  - C39     Test Method for Compressive Strength of Cylindrical Concrete Specimens
  - C42     Methods of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
  - C172    Method of Sampling Freshly Mixed Concrete
  - C260    Specification for Air-Entraining Admixtures for Concrete
  - D946    Specification for Penetration – Graded Asphalt Cement for Use in Pavement Construction
3.     Pennsylvania Department of Transportation Publication 408 Specifications

    B.        Testing Laboratory

1.     Compressive strength tests shall be performed by an independent testing laboratory engaged by and paid for by Owner.

1.4 SUBMITTALS

A. Certificates:

1. Submit certification from the concrete producer attesting that the concrete conforms to Section 704, Publication 408 Specifications for the class of concrete being used.
2. Submit certified results of compressive strength tests performed by an independent testing laboratory.

2PART PRODUCTS

2.1 MATERIALS

A. Forms:

1. Forms shall be straight, free from warp and of sufficient strength to resist the pressure of concrete without springing. Forms and template which are worn, bent, warped, or broken shall not be used.
2. For sidewalks, steps, pads and driveway aprons, use forms of wood or steel profiled to suite conditions.
3. For curbs, use forms of steel except for sharp curves and short tangent sections where wood forms may be used when approved by the Resident Project Representative. Metal forms shall be of approved sections and shall have a flat surface on top and wood forms shall be of a depth equal to the depth of the curb, designed to permit secure fastening of the face and back forms at the tops. These fastenings shall be constructed in a manner that will not obstruct satisfactory finishing and edging of the top of the curb but will permit removal of the inside or face forms. The outside or back forms shall be straight from top to bottom. The inside of the face forms shall have a batter from the top of the curb to the finished surface line of the pavement, as indicated on the drawings, and shall be straight from this line to the bottom.

B. Expansion Joint Filler: 1/2" thickness conforming to Section 705.1, Publication 408 Specifications.

C. Joint Sealing Material: Liquid Asphalt Cement, ASTM D-946.

D. Concrete Curing Material/Compound: Section 711.1 and 711.2(a), Publication 408 Specifications. (Aquron 2000 Cure and Seal)

E. Coarse Aggregate: Type C or better, No. 2A or 0GS per Section 703.2, Publication 408 Specifications.

F. Reinforcement Bars: ASTM A615; Grade [40] [60], deformed billet steel bars, finish conforming to Section 709.1, Publication 408 Specifications.

- G. Welded Steel Wire Fabric: [Plain] [Deformed] type; unfinished, [coiled rolls] [flat sheets], conforming to gage and mesh size as noted on the Drawings and Sections 709.3 and 709.4, Publication 408 Specifications.

## 2.2 CONCRETE MIX (4000 mix)

- A. Ready-mixed, conforming to Section 704, Publication 408 Specifications.

- 1. Requirements for State approved batch plants, design computations and plant inspection shall not apply. The acceptability of concrete will be based on conformance with the Cement Concrete Criteria specified below and the results of the specified tests.

- B. Cement Concrete Criteria:

- 1. All Concrete shall be Class A.
  - a. Compressive strength @ 7 days: 2750 psi
  - b. Compressive strength @ 28 days: 3500 psi
  - c. Slump: 3+1 inches except for slip forming of curbs which shall be a maximum of 1-1/2 inches
  - d. The air content of air-entrained concrete shall be 6% + 1% by volume.  
Air-Entraining Agents shall conform to ASTM C260
- 2. Cement Factor and Maximum Water-Cement Ratio conforming to Table A, Section 704.1, Publication 408 Specifications.
- 3. Concrete design mix shall be submitted to Maintenance Supervisor for approval prior to work commencement. No concrete shall be placed until Maintenance Supervisor has approved the design mix.

## 3PART EXECUTION

### 3.1 EXAMINATION AND PREPARATION

- A. Subgrade Preparation

- 1. Verify gradients and elevations of subgrade.
- 2. Soft, spongy, organic or other unsuitable material shall be removed from the subgrade and replaced with dry, firm material.
- 3. Compact subbase and/or subgrade to a firm unyielding surface at the required depth below the finished line and grade of the required construction work as shown on the Drawings.

- B. Aggregate Placement

- 1. Spread aggregate on prepared subgrade to form a bed of the required depth
- 2. Compact aggregate thoroughly using mechanical tamping device.

### 3.2 FORMING

- A. Sidewalks, Steps, Pads and Driveway Aprons

1. Place and secure forms to correct location, dimension and grade in a manner to prevent settlement or displacement. Provide sufficient horizontal and vertical support.
2. Radial forms shall be used for all sidewalks with a radius of less than 250 feet.
3. Clean and treat all forms and templates with an approved material as required to prevent the concrete from adhering thereto. Oil, bituminous paper or other material which will adhere to or discolor the concrete shall not be used.
4. Form sidewalks to provide for separate slabs twenty-four (24) feet in length.
5. Place premolded expansion joint filler in joints between slabs, adjacent to existing structures, between the sidewalk and driveway apron, and between the driveway apron and concrete curb. Place premolded expansion joint material vertical in position, in straight lines for the full depth of the concrete.

#### B. Curbs

1. Place and secure forms to correct location, dimension and grade in a manner to prevent settlement or displacement. Provide sufficient horizontal and vertical support.
2. Clean and treat all forms and templates with an approved material as required to prevent the concrete from adhering thereto. Oil, bituminous paper or other material which will adhere to or discolor the concrete shall not be used.
3. Provide construction joints in uniform lengths not exceeding 15.5 feet except where shorter sections are necessary for closures or curves. No section shall be less than four (4) feet. Saw cut joints may be provided in lieu of hand-formed construction joints.
4. Place premolded expansion joint material, cut to conform to the cross sectional area at all structures and at the end of the day's work.

### 3.3 REINFORCEMENT

#### A. Sidewalks, Steps, Pads and Driveway Apron

1. Place welded wire fabric at the mid-height of sidewalks and driveway aprons.
2. Interrupt reinforcement at expansion joints.

#### C. Curbs

1. Place steel reinforcement at driveway depressions as noted on the Drawings.
2. Interrupt reinforcement at expansion joints.

### 3.4 PLACING AND FINISHING CONCRETE

#### A. General

1. Moisten subbase/subgrade to minimize absorption of water from fresh concrete.
2. For use, proportioning, mixing and placing, and quality of concrete, follow applicable sections of ACI 318.
3. Place concrete in accordance with ACI 301.
4. Do not disturb formwork components or reinforcement during placement of concrete.
5. Place concrete continuously between predetermined joints.
6. Cure and protect exposed concrete construction as specified in Section 501.3(k), Publication 408 Specifications.



## B. Field Tests of Concrete During Construction by Owner.

1. If test cylinders fail to meet strength requirements, the Resident Project Representative may require core tests in accordance with ASTM C42 at the expense of Contractor.
2. Sidewalks, Steps, Pads and Driveway Aprons
  - a. Provide a slope on sidewalks of towards the street as indicated on the Drawings.
  - b. Finish surface to a semi-smooth condition.
  - c. Divide sidewalk slabs between expansion joints into blocks four (4) feet in length by scoring transversely. Divide the width of the driveway apron equally. Score the concrete around any obstructions or structures within the sidewalk area. The scoring shall consist of a block eight (8) inches wider than the maximum dimension of the structure at the sidewalk elevation. Scoring shall extend for a depth of at least one-quarter (1/4) of the thickness of the concrete slab.
3. Curbs
  - a. Place concrete in the forms in horizontal layers not exceeding five (5) inches and spade sufficiently to eliminate all voids. A vibrator may be used when approved by the Resident Project Representative.
  - b. Provide drainage openings through curb at the elevation and of the size required as shown on the Drawings or as directed by the Resident Project Representative.
  - c. Provide depressed curb where shown on the Drawings or as directed by the Resident Project Representative.
  - d. Finish top surface of the curb true to line and grade in a smooth, neat and even manner.
  - e. Round the edges of the face and back of the top surface of the curb to a radius of not more than 3/4 inch and 1/4 inch respectively while the concrete is still plastic.
  - f. Saw cut joints where construction joints have not been hand-formed. Sawing of joints shall be done as soon as practicable after the concrete has set sufficiently to preclude raveling during the sawing operation and before any shrinkage cracking occurs. The saw cut depth may be decreased at the edge adjacent to the pavement to obtain a maximum depth that will avoid damage to the pavement. Provide tooled edges on construction joints.

## 3.5 RESTORATION

### A. Backfilling

1. Perform backfilling in accordance with Section 31 23 33 as required adjacent to the construction following removal of forms in such a way as to not disturb the concrete construction.

### B. Final Grading and Seeding or Sodding

1. Perform final grading and provide seeding or sodding as noted on the Drawings.

C. Concrete Joints at Asphalt Paving

1. Sealing material, AC20, shall be applied at the joint between the concrete and asphalt paving.
2. Apply curing/sealing compound to surface of concrete; contractor to spec. material for our review.