

CONCRETE SIDEWALK REPAIRS BUTLER MIDDLE SCHOOL

PREPARED FOR:
LOWELL PUBLIC SCHOOLS

DRAWING LIST:

- G-001 COVER SHEET
- C-101 CONSTRUCTION PLAN
- C-501 CONSTRUCTION DETAILS
- C-701 SPECIFICATIONS
- C-702 SPECIFICATIONS



City of Lowell
Public Schools

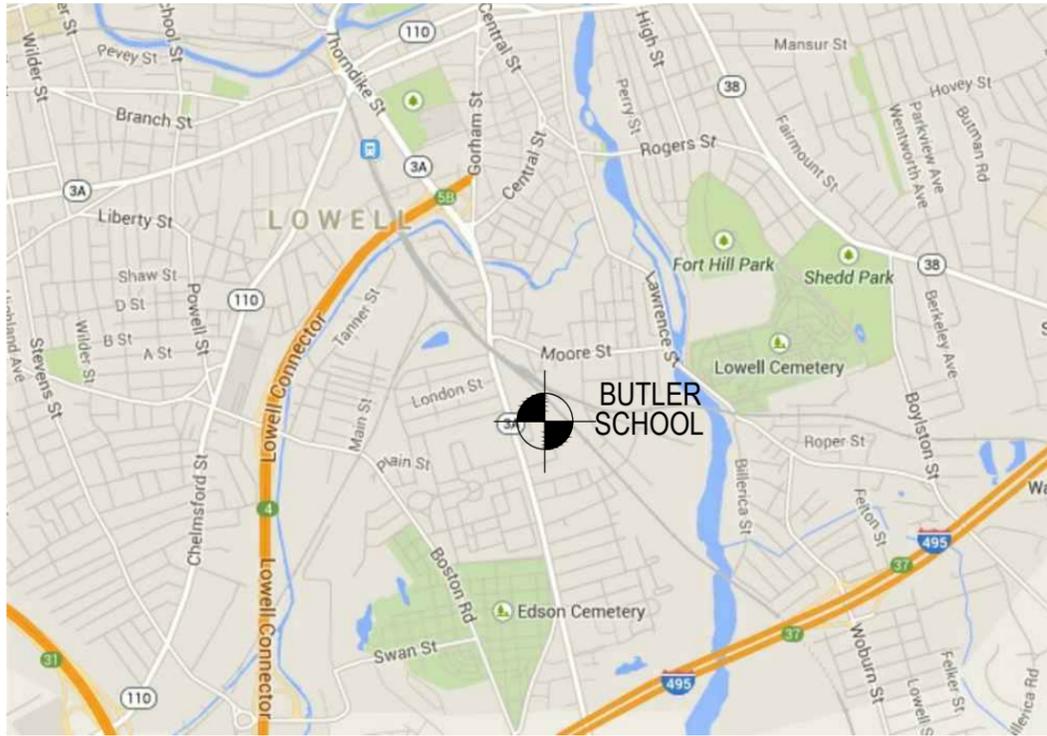


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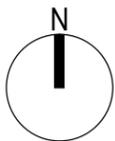
**CONCRETE SIDEWALK
REPAIRS
BUTLER
MIDDLE SCHOOL
LOWELL PUBLIC
SCHOOLS
COVER SHEET**

G-001

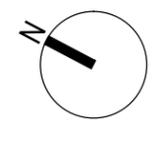
SHEET 1 OF 5



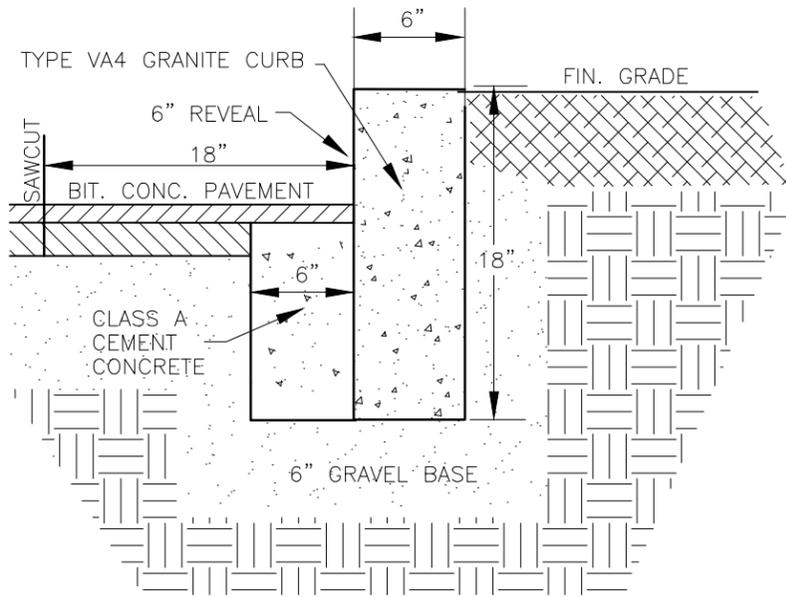
LOCUS MAP



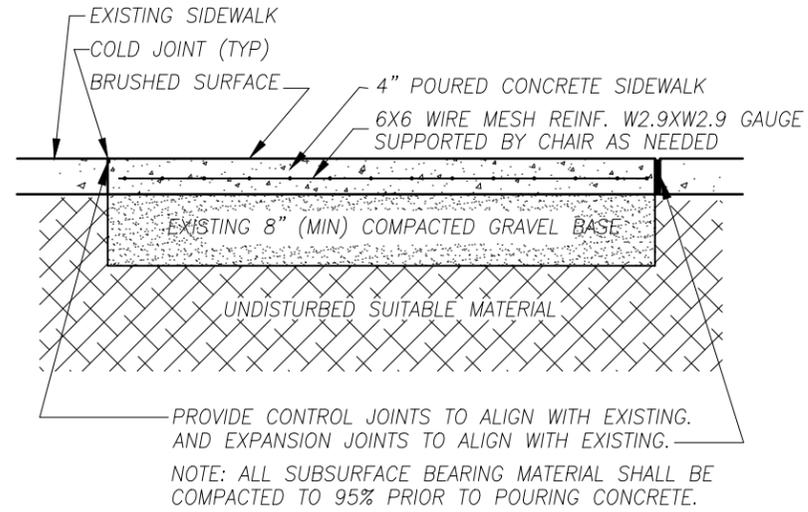
BUTLER SCHOOL FRONT ENTRANCE



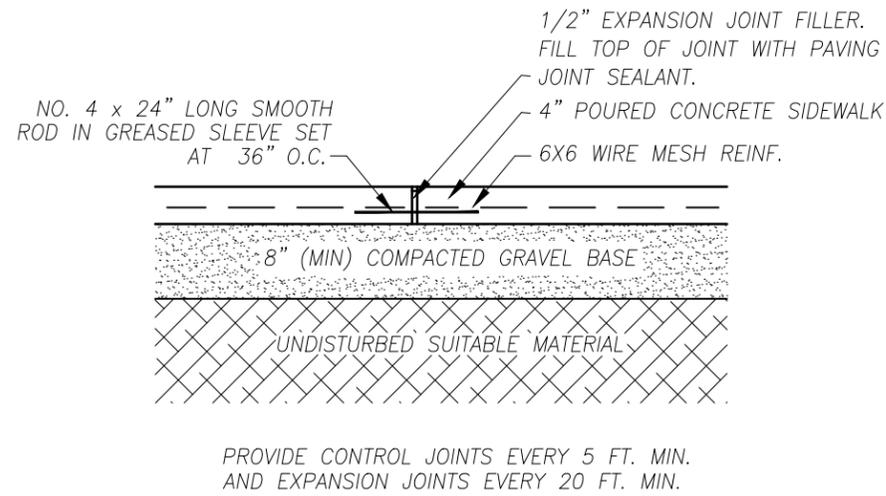
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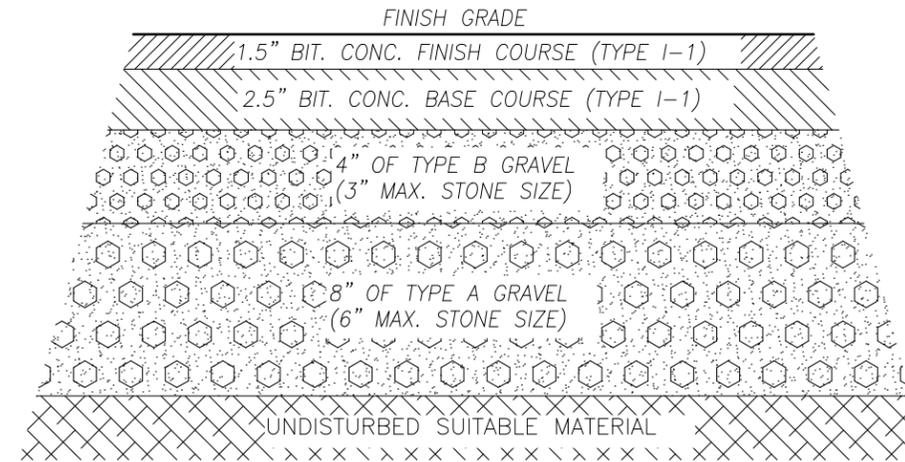
1 GRANITE CURB (NOT USED)
NTS



2 CONCRETE SIDEWALK
NTS



3 CONCRETE EXPANSION JOINT
NTS



4 PAVEMENT DETAIL (NOT USED)
NTS



City of Lowell
Public Schools



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CONCRETE SIDEWALK
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SCHOOLS
CONSTRUCTION DETAILS

C-501

07 18 00
TRAFFIC COATINGS
(PEDESTRIAN TRAFFIC MEMBRANE)

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

A. The Pedestrian Traffic Membrane shall be acrylic deck coating system specifically designed to provide a waterproof surface for exterior and interior pedestrian traffic areas, such as walking decks, balconies, stairways and mechanical rooms.

1.2 SCOPE

- A. Work Included
 1. Preparation of substrate.
 2. Preparation of cracks, joints and metal flashing.
 3. Application of the Excel-Coat Pedestrian Membrane System.
- B. Related Work Specified Elsewhere
 1. Concrete
 2. Concrete Repair

1.3 QUALITY ASSURANCE

A. The waterproofing materials that compose the Pedestrian Traffic Membrane System shall be as manufactured and furnished by Excellent Coatings International, or approved equal. All component materials are tested and evaluated by an independent testing agency (U. S. Testing Company).

1.4 SUBMITTALS

- A. Samples: The Contractor must provide a sample of coating system and color chart from the manufacturer.
- B. Product Data: Provide manufacturer's written data sheet, detail drawings, maintenance instructions and cleaning instructions.

1.5 DELIVERY, STORAGE & HANDLING

- A. Delivery: Materials shall be delivered to the job site in sealed, undamaged containers. Each container shall be clearly marked with manufacturer's label showing type of material, expiration date, color and batch number.
- B. Storage: Store all coating materials in a cool dry place with a temperature range of 55°F to 90° F.
- C. Handling: Handle all products carefully to avoid damage to the containers. Read all labels and Material Safety Data Sheets prior to use.

1.6 PROJECT JOBSITE CONDITIONS

- A. Before any work is started, the Contractor shall inspect all surfaces for any deficiencies. Should any deficiencies exist, the Architect, Owner or General Contractor shall be notified in writing and any corrections necessary shall be made.
- B. No coating shall be applied during inclement weather or when the temperature falls below 55° F or rises above 95° F.

1.7 WARRANTY

A. A warranty package for the manufacturer of the Pedestrian Traffic Membrane System shall be provided in the Project Closeout Documents. Once all inspections (before, during and after the installation) have been completed, the Contractor shall issue a written warranty and maintenance program. The manufacturer's warranty will be contingent upon the Owner's adherence to the maintenance program. This warranty covers the product performance of the waterproof deck coating only. Liability for damage to property, buildings and their contents, or to any third party is specifically excluded.

PART 2 - PRODUCTS

2.1 MATERIALS FOR THE SYSTEM

- A. Pedestrian Traffic Membrane System shall include:
 1. Primer
 2. Fiberglass random chop, fiberglass mat
 3. Base Coat
 4. Texture Coat and Tinted Additive
 5. Retarder (as needed)
 6. Top Coat
- B. Related Materials
 1. Crack repair: Epoxy Crack Repair Material
 2. Sealant: Urethane based, as approved by manufacturer

2.2 MATERIAL PERFORMANCE CRITERIA

1. Tensile Strength 2855 psi ASTM D - 2707 Impact Test No Cracking ASTM D - 3320 Fire Retardant Roofing ASTM E - 108-87 Noncombustible Class A Abrasion Resistance ASTM D - 1242 Volume Loss .25 cm Thickness Loss 2 mils. Water Transmission 22.6/MX 24HRS ASTM E - 1242

PART 3 - EXECUTION

3.1 INSPECTION

- A. Concrete
 1. General
 - a. Concrete surface shall be free of excess roughness, voids, protrusions, loose particles, dust, debris or anything that would impair the adhesion of the Pedestrian Traffic Membrane System.
 - b. Concrete surface must be free from curing agents, bondbreakers, hardeners, oils, grease or foreign matter that may affect the adhesion of the Pedestrian Traffic Membrane System.
 - c. Concrete substrate shall be designed and constructed as to freely drain and eliminate the ponding of water. Slope: 1/4" per foot.

B. New Concrete

1. Curing of concrete shall be by means of water cure or dissipating compounds. Concrete shall be cured a minimum of 28 days prior to installation of membrane.
2. Concrete shall be finished with a light steel trowel and a medium broom.
3. Concrete moisture content shall not exceed 10%. Moisture Vapor Transmission shall not exceed 5 lbs. per square ft. per 24 hours.

C. Old Concrete

1. The following are effective means of cleaning and preparing old concrete prior to the application of the Pedestrian Traffic Membrane System.
2. Surface Grinding: A heavy duty, industrial grinder may be used to cleanse and abrade the concrete when the surface is dry. Loose particles and dust must then be removed by vacuum or blower.
3. Shot Blasting and Sand Blasting: These are both effective means of cleaning concrete surfaces. Before coating, area must be free from dust or any loose particles.
4. Acid Etching: A solution of commercial muriatic acid and water (3 parts water: 1 part muriatic acid) is also a satisfactory method of cleaning concrete. Pour solution over concrete surface and agitate with a firm bristle broom or brush. The solution will react with the concrete causing it to bubble. Once the bubbling has stopped, power wash the deck with water to rinse away residual salts and contaminants. To ensure complete neutralization of the concrete surface, the deck may be brushed with alkali solution (1% ammonia in water) and then rinsed.
5. Commercial Detergents: Commercial detergents, such as Prosooco 2010 All-Purpose Cleaner, or equal, will work well to clean light grease and grime, but these products are not recommended for heavy contamination.

D. Concrete Patching

1. Repairs to old or new concrete may be necessary to correct minor imperfections in the surface (i.e., low spots, holes, ridges and projections).
2. All repair areas shall be cleaned as described above, then filled with patching compound as specified in the CONCRETE REPAIR SECTION.
3. Patching Compound shall cure for the time specified by the manufacturer.
4. Expansion Joints & Cracks
5. Expansion joints shall be cleaned thoroughly and sealed with urethane sealant.
6. Cracks over 1/16 " shall be routed, primed and filled using an epoxy crack repair material.

E. Metal Railings

1. Metal rails must be clean and dry, free from grease, oils, dirt and debris prior to application.

F. Installation

- Read the manufacturer's directions prior to application process.
1. Apply Primer per manufacturer's recommendations (concrete surfaces only). Allow to become tacky.
 2. Cover surface with fiberglass mat and saturate mat with Base Coat per the manufacturer's recommendations. Allow material to dry approximately 6-8 hours. Dry times may vary.
 3. Water test: Water test the deck to ensure water slopes to drain.
 4. Apply skid resistant Texture Coat and Tinted Additive at a rate recommended by the manufacturer. Allow material to dry approximately 6-8 hours. Dry times may vary.
 5. Apply two thin coats of Excel-Coat #300 by roller or airless sprayer at the rate of 250 sq. ft. per gallon per coat, for a net yield of 125 sq. ft. per gallon total coverage. Allow material to dry approximately 6-8 hours. Dry times may vary.
 6. Allow completed system to cure 24 hours before heavy foot traffic is permitted and an additional 72 hours before heavy objects are placed on the surface.

3.2 CLEAN UP

- A. Clean area and remove all debris upon completion of work. Dispose of empty containers properly according to current Local, State and Federal regulations.

END SECTION

SECTION 32 91 00
LANDSCAPING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this Section.
- B. Preparation of soil, placement of plant life, seed, hydroseeding, and fertilizer.

1.2 QUALITY CONTROL

- A. Contractor shall employ locally accepted methods and procedures for the establishment of all landscaped areas.

1.3 WARRANTY

- A. Provide warranty through the spring 2015 growing season for all landscaping work and materials used.

1.4 MAINTENANCE SERVICE

- A. Maintain seeded areas for the duration of the project.

PART 2 PRODUCTS

2.1 GRASS

- A. Seed Mixture:
 1. Mixture of rye and Kentucky blue grass approved by the owner.

2.2 GROUND COVER

- A. Cedar Bark Mulch

2.3 SOIL AND SOIL MODIFICATION MATERIALS

- A. Topsoil: Excavated from site and reused if approved by the Engineer. Otherwise use imported material.
- B. Topsoil: Furnish and install 4 inches of fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, free of subsoil, stone greater than 3/8inch, clay or impurities, plants, weeds and roots.
- C. Fertilizer: Dependent on season. Approved by Owner.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that required underground utilities are in proper location.
- B. Prepare subsoil to eliminate uneven areas. Maintain profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- C. Scarify subsoil to a depth of 3 inches.

3.2 PLACING TOPSOIL

- A. Spread topsoil to a minimum depth of 4 inches. Rake smooth.
- B. Grade topsoil to eliminate rough, low, or soft areas, and to ensure positive drainage.
- C. Place topsoil into planters and beds intended for future planting a minimum thickness of 6 inches.
- D. Apply Owner approved fertilizer in accordance with manufacturer's instructions.

3.3 SEEDING

- A. Apply seed and Hydroseed with a seed slurry at a rate specified by the supplier. Spread evenly in two intersecting directions.
- B. Immediately following seeding, apply agricultural mulch to a thickness of 1/8 inches.
- C. Apply water with a fine spray immediately after each area has been mulched.

3.4 PLANTING

- A. Set plants in pits or beds partly filled with prepared topsoil mixture. Backfill soil mixture.
- B. Saturate soil with water when the pit or bed is half full of top soil and again when full.

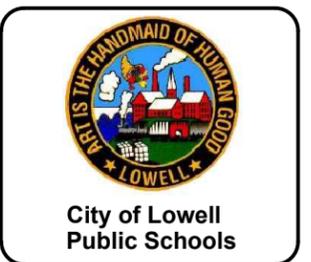
3.5 SCHEDULE _ PLANT LIST

There are no plants specified for this project. Damaged plants will be replaced in kind at the contractor's expense.

3.6 MAINTENANCE

- A. Mow grass at regular intervals to maintain maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at any one mowing.
- B. Water to prevent grass and soil from drying out.
- C. Control growth of weeds.
- D. Establish finish grades and plant grass as soon as possible to stabilize slopes and minimize erosion and dust.

END OF SECTION



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SPECIFICATIONS

C-702
SHEET 5 OF 5

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