

**JACKSON OUTER HARBOR  
CHICAGO PARK DISTRICT  
TECHNICAL SPECIFICATIONS  
FOR SHEETING ALTERNATE**

LOCATION OF PROJECT

This project is located at Jackson Park along the shore of Lake Michigan near 6400 South Coast Guard Drive in Chicago, Illinois 60649.

DESCRIPTION OF PROJECT

The scope of work for the alternate involves construction of a steel sheet pile wall in front of the existing deadman wall and rockwall at this location, which will arrest further erosion of the parkland. The sheet pile wall will have a one-foot thick cast-in-place cap. Eroded areas between the sheet pile wall and the lakefront trail will be filled with porous granular embankment, top soil and with sod.

GENERAL CONSTRUCTION CONSIDERATIONS

The following Detailed Specifications supplement the Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction" adopted April 1, 2016, (hereinafter referred to as the Standard Specifications) and applicable Supplemental Specifications and Recurring Special Provisions. In addition, the following documents shall apply to the construction of this project:

- A) "Illinois Manual on Uniform Traffic Control Traffic Devices for Street and Highways" in effect on the date of invitation for bids.
- B) "Manual of Test Procedures for Materials" in effect on the date of invitation of bids.
- C) Local Roads and Streets Special Provisions, and Bureau of Design & Environment (BDE) Special Provisions indicated on the Check Sheet included herein.
- D) The Current City of Chicago "Regulations for Openings, Construction and Repair in the Public Way."

These documents shall govern the construction of this project, and in case of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and shall govern.

All materials and construction methods used on this contract shall conform to the project-governing documents listed above. All materials testing shall conform to IDOT requirements, except as modified by the Special Provisions.

CONSTRUCTION PERMITS

The Contractor shall be responsible for obtaining all construction permits that may be necessary for access to the job site, for storage of materials and equipment and for construction operation. The cost of complying with the requirements of this section shall be considered incidental to the Contract except as noted below.

Permits from the following agencies will be secured by the Chicago Park District:

- U.S. Army Corps of Engineers (USACE)
- Illinois Department of Natural Resources (IDNR), Office of Water Resources
- Illinois Environmental Protection Agency's (IEPA)
- City of Chicago Harbor Permit

Depending on the requirements of Permit issued by the USACE, a Soil Erosion and Sediment Control Plan Review and Inspection may be required by the Will/South Cook Soil and Water Conservation District (SWCD). The Chicago Park District will submit the application and the associated fee. The Contractor shall follow up with SWCD and provide additional information or changes, as required. The Contractor shall notify the SWCD in writing prior to the commencement of construction and shall follow all recommendations provided by the SWCD.

City of Chicago Office of Underground Coordination (OUC) Existing Facility Protection Review is not required.

An NPDES Storm Water Permit should NOT be required, since the disturbance area is less than one (1) acre.

The Contractor shall follow all conditions listed in the associated permits. Refer to Attachment B for permits.

#### STATUS OF UTILITIES TO BE ADJUSTED

Utilities companies involved in this project have provided the following estimated durations:

None Anticipated.

The above represents the best information available to the Park District and is included for the convenience of the bidder. The applicable portions of Articles 105.07 and 107.31 of the Standard Specifications shall apply.

**Chicago Park District**  
**PROJECT SPECIFICATION**  
**Sheet Pile Wall**

**PART 1 - GENERAL**

**1.01 Scope**

- A. The work includes furnishing and constructing permanent steel sheet pile wall with cast-in-place concrete cap to the Chicago Park District where designated, including unloading, all complete and subject to terms and conditions of the contract.

**PART 2 - PRODUCTS**

**2.01 Materials**

- A. Steel Sheet Pile Wall shall be in accordance with ASTM A572 Grade 50.
- B. Concrete shall be in accordance with the following:
  - 1. Class SI Concrete in accordance with Article 1020 of the IDOT Standard Specifications. The mix design shall be suitable for marine exposure.
  - 2. Minimum required compression strength (f'c) at 28 days as indicated in the plans.
- C. Reinforcing Steel shall be in accordance with ASTM A706 Grade 60. Epoxy coating shall be in accordance with ASTM A775.
- D. Stud Shear Connectors shall be granular or solid flux filled headed studs conforming to Article 1006.32 of the IDOT Standard Specifications.
- E. Porous Granular Backfill shall be in accordance with the following:
  - 3. Fine Aggregate Article 1003.04 of the IDOT Standard Specifications
  - 4. Coarse Aggregate Article 1004.05 of the IDOT Standard Specifications

**PART 3 - EXECUTION**

**3.01 Permanent Sheet Piling**

- A. The Contractor shall furnish sheet piling with a published section modulus which meets or exceeds the required section modulus specified on the plans or in the approved design. The Contractor shall drive the sheeting to the tip elevation(s) specified on the plans. The Engineer's approval will be required prior to driving any sheet piling. All driven sheeting not approved by the Engineer shall be removed at the Contractor's expense.
- B. The sheet piling shall be driven, at a minimum, to the tip elevation(s) specified, or according to the Contractor's approved design for sheet piling, prior to commencing any related construction. If unable to reach the minimum tip elevation, the adequacy of the sheet piling design will require re-evaluation by the Park District prior to allowing construction adjacent to the sheet piling in question.
- C. Sheet piling shall be installed according to the following. The selection of the sheet pile section shall not relieve the Contractor of the responsibility to satisfy all details including minimum clearances, cover, reinforcement, shear stud locations, interlocking, and field cutting. Any modifications of the plans to accommodate the Contractor's selection shall be at no additional cost to the Park District and will be subject to the approval of the Engineer.

### **3.02 Concrete Structures**

- A. Concrete placement shall comply with ACI 304R, ACI 304.2R and ACI 301. Place concrete as soon as practicable after the forms and the reinforcement have been installed. Do not place concrete when weather conditions prevent proper placement and consolidation; in uncovered areas during periods of precipitation; or in standing water. No concrete shall be placed on ice, snow, or frozen foundation material. Prior to placing concrete, remove dirt, construction debris, water, snow, and ice from within the forms. Deposit concrete as close as practicable to the final position in the forms. Place concrete in one continuous operation from one end of the structure towards the other or lifts for vertical construction.
- B. The method and manner of placing concrete shall be such as to avoid segregation or separation of the aggregates or the displacement of the reinforcement. The external surface of all concrete shall be thoroughly worked during the operations of placing in such a manner as to work the mortar against the forms to produce a smooth finish free of honeycomb and with a minimum of water and air pockets.

Concrete shall not be exposed to the action of water before setting or deposited in water. When concrete is deposited underwater, it shall be carefully placed in its final position by means of a tremie and shall not be disturbed after being deposited. Still water shall be maintained at the point of deposit and all form work designed to retain concrete underwater shall be watertight. The consistency of the concrete shall be carefully regulated, and segregation of the materials shall be prevented. The method of depositing concrete shall produce approximately horizontal surfaces.

The tremie shall consist of a tube having a diameter of not less than 10 in. (250 mm) and constructed in sections having flanged couplings fitted with gaskets. The means of supporting the tremie shall permit the free movement of the discharge end over the entire top surface of the work and shall permit it to be rapidly lowered when necessary to choke off or retard the flow. The discharge end shall be entirely sealed at all times and the tremie tube kept full to the bottom of the hopper. When a batch is dumped into the hopper, the tremie shall be raised slightly to induce the flow of concrete but the lower end shall be kept below the top of the deposited concrete until the batch is discharged. The flow shall then be stopped by lowering the tremie.

At the Contractor's option, pumping equipment may be used in lieu of a tremie to deposit concrete underwater. The Engineer will approve the concrete pumping equipment and its piping before the work is started.

### **3.03 Porous Granular Backfill**

- A. The backfill volume shall be backfilled to the required elevation as shown on the plans. The backfill volume shall be placed in convenient lifts for the full width to be backfilled. Mechanical compaction will not be required.
- B. The granular backfill shall be brought to the finished grade as shown on the plans. When concrete is to be cast on top of the granular backfill, the Contractor, subject to approval of the Engineer, may prepare the top surface of the fill to receive the concrete as he/she deems necessary for satisfactory placement

**END OF PROJECT SPECIFICATION**

**Chicago Park District**  
**STANDARD SPECIFICATION NO. 1223**  
**SEEDING and SODDING (revised 7-22-2015)**

**Part 1 - GENERAL**

**1.01 Scope**

- A. The work includes furnishing and placing black earth (topsoil), fertilizer, seed and/or sod as stated in the project specifications, and performing all operations in connection with seeding and sodding, all complete and subject to the terms and conditions of the contract.

**Part 2 - PRODUCTS**

**2.01 Materials**

- A. Black Earth (topsoil) if required by project specification, shall be fertile, friable, natural surface soil to be capable or producing satisfactory agricultural crops. Black Earth shall conform to the Chicago Park District Standard Specification No. 1022 "Black Earth."
- B. Fertilizer
  - 1. Fertilizer shall be delivered to the site in unopened, original containers, each bearing name and address of the manufacturer, name brand or trademark and manufacturer's guaranteed analysis.
  - 2. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted.
  - 3. Seeding
    - a. Fertilizer for seed shall be an organic seed starter fertilizer, dry and free flowing, equal to "Bio-Seed Starter" as manufactured by BioGreen LLC, 30937 Gilmer Rd., Volo IL 60073 (847-740-9637).
    - b. Organic seed starter fertilizer is to have the following NPK analysis: 4.5-13.5-0
    - c. Organic seed starter fertilizer is to be formulated as follows:

Nitrogen	4.5%
Available phosphate (P <sub>2</sub> O <sub>5</sub> )	13.5%
Calcium (Ca)	12.3%
Protein	23.0%
Carbohydrates	16.5%
Humic Acids	3.4%
Soil Microbial Cultures	1.0%
    - d. The balance of the fertilizer shall be organic materials usually present in such a product.
  - 4. Sodding
    - a. Fertilizer for sod shall be an organic starter fertilizer, dry and free flowing, equal to "Super Sod Starter" as manufactured by BioGreen LLC, 30937 Gilmer Rd., Volo IL 60073 (847-740-9637).
    - b. Organic sod starter fertilizer is to have the following NPK analysis: 7.7-2.7-0

c. Organic sod starter fertilizer is to be formulated as follows:

Total Nitrogen (N)	7.7%
Urea N	1.4%
Ammoniacal N	0.5%
Nitrate N	1.5%
Water insoluble N	4.3%
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	2.7%
Calcium (Ca)	8.0%
Protein	23.0%
Carbohydrates	12.0%
Humic Acids	2.5%
Soil Microbial Cultures	1.0%

d. The balance of the fertilizer shall be organic materials usually present in such a product.

C. Grass Seed

1. Grass Seed shall be recleaned fresh seed of the most recent seed crop. All seed shall meet the requirements established by the State and Federal Seed and Weed Control Laws, covering law on "Agricultural Seed." Seeds shall meet the following requirements in respect to purity and germination.

Seed Variety	Purity %	Pure Live Seed %	Weed Seed %
	Minimum	Minimum	Maximum
Alkaligrass, "Fults"	98	85	0.10
Buffalograss	75	72	0.50
Fescue, Creeping Red	75	82	1.00
Fescue, Fine-Leaf	92	85	0.10
Fescue, Hard	97	85	0.10
Fescue, Red	97	85	0.10
Fescue, Tall	92	88	1.00
Kentucky Bluegrass	75	72	0.50
Redtop	75	78	1.80
Ryegrass, Annual	92	88	0.50
Ryegrass, Perennial	92	88	0.50

2. The percentage of hard seed included as a part of the germination percentage of any lot of seed, shall not exceed twenty. Kentucky Blue Grass seed shall weigh a minimum of 21 pounds to the measured bushel and for all seeding shall be of the crop year indicated in the project specifications.
3. Packing and Marking: All seed shall be delivered in sacks unmixed. Seeds shall be packed for delivery in suitable bags in accordance with standard commercial practice. Each bag shall be tagged or labeled as required by the law of the State of Illinois. The vendor's name shall show on or be attached to each bag, together with a statement signed by the vendor, showing:
  - a. The kind of seed contained;
  - b. The percentage of purity and germination;
  - c. The percentage of hard seed, if any;
  - d. A statement conforming to the laws of the State of Illinois as hereinbefore mentioned, showing percentage of weed seeds if any.

#### 4. Grass Seed Mixes

The seed shall be mixed thoroughly in the following proportions, by weight. Where specified varieties are not available, alternative varieties must be approved in writing by the CPD project manager prior to ordering.

- a. General Turf/Athletic Field Grass Seed Mix
  - “Appalachian” Kentucky Bluegrass 20%
  - “Elfkin” Perennial Ryegrass 20%
  - “Esquire” Perennial Ryegrass 20%
  - “Fourtuna” Kentucky Bluegrass 20%
  - “Rugby” M Kentucky Bluegrass 20%
- b. Shade Tolerant Grass Seed Mix
  - “Rose” Creeping Red Fescue 30%
  - “Esquire” Perennial Ryegrass 20%
  - “Wrigley’s” Chewings Fescue 15%
  - “Geronimo” Kentucky Bluegrass 15%
  - “Appalachian” Kentucky Bluegrass 10%
  - “Ridu” Hard Fescue 10%
- c. Low-Mow Grass Seed Mix
  - “Bighorn” Sheeps Fescue 25%
  - “Discovery” Hard Fescue 25%
  - “Shademaster II” Creeping Red Fescue 25%
  - “Tiffany” Chewings Fescue 25%
- d. Salt Tolerant Grass Seed Mix
  - ‘Fults’ Weeping Alkaligrass (*Puccinellia distans*) 30%
  - 85/80 Kentucky Bluegrass 30%
  - VNS Creeping Red Fescue 20%
  - Turf type Perennial Ryegrass VNS 10%
  - ‘Discovery’ Hard Fescue 10%

#### D. Sod

##### 1. General

- a. Sod shall be Nursery grown of the type and variety specified and be a minimum of two years growth.
- b. It shall contain no bent grass, quack grass or other noxious weed growth and shall be free from fungus and other pests and/or diseases.
- c. It shall be of firm, tough texture, having a compact growth of grass and good root development.
- d. The sod root zone shall be of good, fertile, natural field soil and free from stones and debris and the sod shall contain sufficient moisture to maintain its vitality during transportation.
- e. Types of sod
  - 1) Standard sod
  - 2) Big-Roll Sod

## 2. Harvesting of Sod

- a. Mowing: Before being cut and lifted, the sod shall have been mowed at least twice with a lawn mower, with the final mowing not more than seven days before the sod is cut.
- b. Cutting
  - 1) Standard sod: Sod shall be carefully cut into uniform strips one inch thick, and 36" in length. All strips shall be of the same width, which may be from 12-inches to 18-inches. Strips less than 12-inches or more than 18-inches in width will not be accepted. Each strip shall be rolled as compactly as is possible without breaking the turf.
  - 2) Standard-cut Big-Roll sod: Sod shall be mechanically cut into uniform strips 1" thick, 42" wide and 90 ft. long.
  - 3) Thick-cut Big-Roll sod: Sod shall be mechanically cut into uniform strips; specified thickness will vary from 1.5" to 3"; strips are to be cut to uniform specified depth. Length of roll will vary depending on thickness.
- c. Sod shall be installed within 24 hours of harvesting.

## 3. Inspection of Sod

- a. The sod will be inspected at the source, by the chief engineer of the Park District or his authorized representative, hereinafter called the engineer, before cutting; and areas that fail to meeting with his approval shall not be cut for the purpose of supplying material under the contract. The engineer shall be permitted to take such samples as he may select.
- b. Sod shall be installed within 24 hours of harvesting; all sod shall be fresh and green when placed. Any sod that is dried out, burned, inferior in quality to said samples, or in any way failing to meet the requirements of these specifications will be rejected and the contractor shall immediately remove such rejected material from the premises of the Park District and supply suitable material in its place.

## **Part 3 - EXECUTION**

### **3.01 Site Preparation**

- A. Spreading and Rough Grading of Black Earth (if required). The contractor shall spread and rough grade the areas to an elevation approximately 0.2 feet plus or minus below the finish grade as directed by the engineer. All equipment used for spreading and rough grading work shall be as approved by the engineer.
- B. Filling: All areas to be seeded or sodded shall be thoroughly prepared to a minimum required depth of six inches, by disking, harrowing or by other approved means. Limited areas shown on the drawing, which are too small to make these operations practicable shall receive special scarification prior to final tilling. Tilling shall continue until the condition of the soil is acceptable to the engineer as suitable for the specified type of seeding or sodding. When conditions are such, by reason of drought, excess moisture, or other factors that satisfactory results are not likely to be obtained, the work will be stopped by the engineer and shall be resumed only when directed. Undulations or irregularities in the surface, that would interfere with further contractor's operations or maintenance, shall be leveled before the next specified operation.
- C. Cleanup: After completion of tilling operations, the surface shall be cleared of all stones, stumps or other objects larger than 1-inch in thickness of diameter and of roots, brush, wire, grade stakes



and other objects that may be a hindrance to maintenance operations. Adjacent paved areas shall be kept clean and soil or other dirt that may be brought upon the surface shall be removed promptly.

- D. Fine Grading: Final grades on the areas to be seeded or sodded are shown on the drawings by contour lines. The surfaces shall be left at the indicated grades in an even and properly compacted condition which insofar as practicable, will not provide dips or pockets where water may stand. Upon completion of tilling operations and immediately prior to sowing seed or placing sod, the area shall be finish graded as needed to correct surface irregularities produced by the preceding operations or by other cause and to restore design grades.

### **3.02 Seeding**

#### **A. General**

##### **1. Types of Seed Installation**

- a. Broadcast seeding
- b. Hydro-Seeding
- c. Slit-Seeding (interseeding or overseeding)

##### **2. Timing of Grass Seed Installation (Sowing)**

- a. Sowing of grass seed shall be performed only when daytime temperatures are consistently between 60° F and 75° F and nighttime temperatures do not exceed 70° F.
- b. Generally, these acceptable temperature ranges occur from approximately April 15 through May 31 and from approximately September 15 through October 31 of each year.
- c. No sowing of grass seed will be permitted beyond the specified dates and/or acceptable temperature ranges.

#### **B. Seed Installation**

##### **1. Broadcast seeding**

- a. Broadcast seeding is the method of sowing seed by evenly scattering (broadcasting) seed onto a prepared seed bed.
- b. Seed shall be broadcast either by hand or sowing equipment. Method of sowing and equipment shall be approved by the engineer. Application rates and operations are to be sufficient to produce a minimum of 98% grass coverage.
- c. Seed shall be applied at the following rates.
  - 1) General Turf/Athletic Field Grass Seed Mix: 5 to 7 lbs/1000 sq ft
  - 2) Shade Tolerant Grass Seed Mix: 5 to 7 lbs/1000 sq ft
  - 3) Low-Mow Grass Seed Mix: 5 to 7 lbs/1000 sq ft
  - 4) Salt Tolerant Grass Seed Mix: 5 to 7 lbs/1000 sq ft
- d. Installation
  - 1) Half the seed shall be sown with the sower moving in one direction and the remainder shall be sown with the sower moving at right angles to the first sowing.
  - 2) The seeded area shall be lightly raked, being careful not to rake seed from one area to another thus causing an uneven seeding. The seed shall be covered to a depth from 1/8-inch to 1/4-inch.

- 3) Seeding shall be done by workers experienced in this type of work.
  - 4) No seeding shall be done on an area compacted by rain until the soil is brought back to a friable condition.
  - 5) No seed shall be sown during high winds.
  - e. Fertilizer: After seed has been spread and raked in, and prior to application of mulch, organic seed starter fertilizer shall be distributed uniformly over the seed bed at a rate of 10 lbs per 1,000 sqft (435 lbs/acre) using a steel-gear rotary spreader.
  - f. Mulching
    - 1) Mulching shall be done immediately after seeding.
    - 2) Mulch shall consist of approved mulch blanket material installed per manufacturer's recommendations, OR straw free from weed seeds and foreign materials spread uniformly over the seeded areas at a rate of one bale per 1,000 square feet.
    - 3) After the grass has germinated and is ½-inch high, the mulch blanket is to be removed per manufacturer's recommendations, OR the majority of the straw mulch shall be removed using a flexible wire rake.
2. Hydro-Seeding
- a. Hydro-seeding consists of applying a mixture of wood fiber mulch, grass seed, fertilizer and stabilizing emulsion with hydro-mulch equipment to a prepared seed bed.
  - b. Seed mixture to be used for hydro-seeding operations is to be approved by the CPD project manager prior to installation.
  - c. Installation
    - 1) Hydro-seeding is to be performed with the appropriate equipment.
    - 2) Mulch, seed, fertilizer and emulsion-to-water ratio(s) are to conform with industry standards to produce good to excellent results.
    - 3) Seed-to-water ratio and application rates are to be sufficient to produce a minimum of 98% grass coverage.
3. Slit-Seeding (interseeding or overseeding)
- a. Slit-seeding is the procedure for interseeding or overseeding areas of existing turf.
  - b. Seed mixture to be used for slit-seeding operations is to be approved by the CPD project manager prior to installation.
  - c. Seed shall be applied at the following rates.
    - 1) General Turf/Athletic Field Grass Seed Mix: 3 to 5 lbs/1000 sq ft
    - 2) Shade Tolerant Grass Seed Mix: 3 to 5 lbs/1000 sq ft
    - 3) Low-Mow Grass Seed Mix: 3 to 5 lbs/1000 sq ft
    - 4) Salt Tolerant Grass Seed Mix: 3 to 5 lbs/1000 sq ft
  - d. Installation
    - 1) Prior to interseeding, all areas of existing turf to be interseeded shall be mowed one or more times to a height of not more than 3 inches. The mowing equipment used shall be capable of completely and cleanly severing all growth at the cutting height and distributing it evenly over the mowed area.

- 2) Slit-seeding is to be performed using approved slit-seeding equipment. Slit-seeders shall be self-propelled or tractor-drawn and shall be designed specifically for no-till interseeding of turf grass seed into existing turf.
- 3) Apply organic seed starter fertilizer at a rate of 10 lbs per 1,000 sqft (435 lbs/acre) using a steel-gear rotary spreader.

#### C. Maintenance During Seed Establishment

1. All turf seed installations are to be maintained by the Contractor through establishment and final acceptance of the turf; the Contractor's responsibility for maintenance ends only upon final acceptance of the successfully established turf.
2. Required maintenance during establishment of all seeded areas will include, but may not be limited to:
  - a. Watering
  - b. Mowing
  - c. Protection
3. Watering
  - a. All seeded areas shall be watered daily with a fine spray until germination. The seed bed shall be kept moist but not wet during the period of seed germination. Care must be taken that the seed bed does not dry out in spots.
  - b. During germination, the water shall penetrate to a depth of 1-inch into the seed bed.
  - c. After germination, as the grass roots penetrate more deeply into the soil, the quantity of water shall be increased so that the depth of penetration is a minimum of 3-inches.
  - d. Water shall be applied in such a way as to prevent damage to or flooding of the areas being watered and/or adjacent surfaces.
  - e. Water will be supplied by the Park District for watering purposes where available. If water is not available on site, the contractor shall supply water from his own source. The contractor shall furnish the hose and proper equipment for watering purposes. Contractor shall have the necessary city permits in order to obtain water from city hydrants.
4. Mowing
  - a. The contractor shall cut grass starting when the grass becomes 3-inches high, and once a week thereafter, or as often as necessary to maintain the grass height at 3", without removing more than 1/3 of the leaf blade at any cutting.
  - b. The contractor shall maintain a height of not less than 3 inches.
  - c. The contractor shall be responsible for at least THREE cuttings prior to final inspection.
  - d. Included in the cutting of grass shall be the cutting and trimming required around trees, baseball backstops, drainage structures, curbs and all areas that grass abuts, as required or directed by the engineer. Trash and other debris is to be removed from turf areas prior to mowing operations. All mowing equipment shall be maintained in excellent operation condition, with all cutting edges sharp and in proper adjustment.
5. Protection of Seeded Areas
  - a. The contractor is responsible for the proper care of the seeded areas during the period when the vegetation is being established.

- b. The Contractor shall be responsible for protecting the seeded areas from vehicular, pedestrian and other traffic, run-off, erosion and any other events, occurrences and/or uses that may compromise the work.
- c. Site protection is to consist of temporary landscape protection fencing (wire or plastic mesh fabric), at least 48" in height, OR other barrier as approved by the CPD project manager.
- d. "NEWLY SEEDED" or other appropriate approved warning placards shall be posted until all work under the contract is completed and accepted.
- e. Site protection is to be put in place when work begins and be maintained for the duration of the work; the Contractor's responsibility for site protection ends only upon final acceptance of the successfully established turf.
- f. Damage to the turf resulting from inadequate site protection will be repaired by the Contractor at no additional charge to the Park District.

D. Repair

- 1. If at any time before completion and acceptance of the entire work covered by this contract, any portion of the surface becomes gullied or otherwise damaged following seeding, dies due to lack of water, becomes rutted due to improper protection, has been winter-killed or otherwise damaged or destroyed, the affected portion shall be repaired to re-establish the condition and grade of the soil prior to seeding and shall then be reseeded as specified hereinbefore by the contractor, at no additional cost to the Park District.

**3.03 Sodding**

A. General

- 1. Sod shall be installed within 24 hours of harvesting; Contractor assumes all responsibility for timely transport, delivery and installation of sod. Delivered and/or installed sod which exhibits evidence of stress or other damage related to improper transport or delivery will be replaced by the Contractor at no additional charge to the Park District.
- 2. Big-Roll Sod is to be delivered and installed using the appropriate vehicles and equipment as specified by the producer.
- 3. Fertilizer: After fine grading, organic sod starter fertilizer shall be distributed uniformly at a rate of 8 lbs per 1,000 sqft (350 lbs/acre) over the areas to be sodded, using a rotary or drop spreader with 1/2" to 5/8" opening.

B. Installation

1. General

- a. The surface on which sod is to be laid shall be firm and free from footprints or other depressions.
- b. Sod is to be rolled after placement to ensure continuous, even contact between the soil surface and the sod base. Rolling equipment shall be specifically designed for this use. Rolling operations are to be performed in such a manner and under suitable site conditions to preclude damage or rutting of the sod and/or soil base.
- c. Sod shall be thoroughly watered immediately after installation.
- d. All laid sod shall be protected from usage by workmen or equipment, so as not to disturb joints or cause depressions through footprints or vehicle ruts.
- e. Any disturbed areas shall be redone to conform to grade.

2. Standard Sod

- a. Sod shall be laid in such a manner that joints between courses do not coincide. Sod shall be tightly fitted, tamped lightly and rolled to ensure contact with the surface of the soil at all points.
- b. On slopes steeper than 2 and 1 and elsewhere where so directed, the sod shall be fastened in place with suitable wooden pins or by other approved methods.

3. Big-Roll Sod

- a. The surface on which sod is to be laid shall be firm and free from footprints or other depressions.
- b. Sod shall be laid in such a manner that joints between courses do not coincide. Sod shall be tightly fitted, tamped lightly and rolled to ensure contact with the surface of the soil at all points.
- c. Sod is to be rolled after placement to ensure continuous, even contact between the soil surface and the sod base. Rolling equipment shall be specifically designed for this use. Rolling operations are to be performed in such a manner and under suitable site conditions to preclude damage or rutting of the sod and/or soil base.
- d. On slopes steeper than 3:1 and elsewhere as directed, the sod shall be fastened in place with suitable wooden pins or by other approved methods.
- e. All laid sod shall be protected from usage by workmen or equipment, so as not to disturb joints or cause depressions through footprints or vehicle ruts.
- f. Any disturbed areas shall be redone to conform to grade.

C. Maintenance During Sod Establishment

- 1. All turf sod installations are to be maintained by the Contractor through establishment and final acceptance of the turf; the Contractor's responsibility for maintenance ends only upon final acceptance of the successfully established turf.
- 2. Required maintenance during establishment of all sodded areas will include, but may not be limited to:
  - a. Watering
  - b. Mowing
  - c. Protection
- 3. Watering
  - a. Sod shall be thoroughly watered immediately after installation.
  - b. Water shall be applied as often as necessary to ensure the healthy establishment and growth of the sod. Sufficient water shall be applied to wet the sod bed at least 2-inches deep.
  - c. Water shall be applied in such a way as to prevent damage to or flooding of the areas being watered and/or adjacent surfaces.
  - d. Water will be supplied by the Park District for watering purposes where available. If water is not available on site, the contractor shall supply water from his own source. The contractor shall furnish the hose and proper equipment for watering purposes. Contractor shall have the necessary city permits in order to obtain water from city hydrants.

#### 4. Mowing

- a. The contractor shall cut grass starting when the grass becomes 3-inches high, and once a week thereafter, or as often as necessary to maintain the grass height at 3", without removing more than 1/3 of the leaf blade at any cutting.
- b. The contractor shall maintain a height of not less than 3 inches.
- c. The contractor shall be responsible for at least THREE cuttings prior to final inspection.
- d. Included in the cutting of grass shall be the cutting and trimming required around trees, baseball backstops, drainage structures, curbs and all areas that grass abuts, as required or directed by the engineer. Trash and other debris is to be removed from turf areas prior to mowing operations. All mowing equipment shall be maintained in excellent operation condition, with all cutting edges sharp and in proper adjustment.

#### 5. Protection of Sodded Areas

- a. The contractor is responsible for the proper care of the sodded areas during the period when the vegetation is being established.
- b. The Contractor shall be responsible for protecting the sodded areas from vehicular, pedestrian and other traffic, run-off, erosion and any other events, occurrences and/or uses that may compromise the work.
- c. Site protection is to consist of temporary landscape protection fencing (wire or plastic mesh fabric), at least 48" in height, OR other barrier as approved by the CPD project manager.
- d. "NEWLY SODDED" or other appropriate approved warning placards shall be posted until all work under the contract is completed and accepted.
- e. Site protection is to be put in place when work begins and be maintained for the duration of the work; the Contractor's responsibility for site protection ends only upon final acceptance of the successfully established turf.
- f. Damage to the turf resulting from inadequate site protection will be repaired by the Contractor at no additional charge to the Park District.

- D. Repair: If at any time before completion and acceptance of the entire work covered by this contract, any portion of the sodded surface becomes damaged, dies due to lack of water, becomes rutted due to improper protection, has been winter-killed or otherwise damaged or destroyed, the affected portion shall be repaired to re-establish the condition and grade of the soil prior to sodding and shall then be resodded as specified hereinbefore by the contractor, at no additional cost to the Park District.

### 3.04 Final Inspection & Acceptance of Established Turf

#### A. General

1. Final inspection of the established turf will occur after at least three mowings have taken place, and will be performed by the CPD project manager and Contractor.
2. Fall-installed turf seed or sod which has not become sufficiently established to require 3 mowings prior to dormancy will be the Contractor's responsibility through the dormant period and into the next growing season, until establishment and mowing requirements are achieved.
3. Site protection shall remain in place until CPD project manager acknowledges final acceptance.

- B. Turf will be considered established and acceptable when ALL of the following criteria are met:
1. Seeded Turf
    - a. Turf has grown enough to require at least three mowings
    - b. Turf is healthy and thriving, with minimum 98% coverage
    - c. All bare and/or thin areas 6 inches in diameter or larger have been repaired to the satisfaction of the CPD project manager
  2. Sodded Turf
    - a. The roots of the sod have knit into the underlying soil to the extent that the sod cannot be easily lifted or separated from the underlying soil
    - b. No gaps along seams between sod pieces are visible
    - c. Turf has been mowed at least three times
    - d. Turf is healthy and thriving, with minimum 98% coverage
    - e. All bare and/or thin areas 6 inches in diameter or larger have been repaired to the satisfaction of the CPD project manager

### **3.05 Steel Curbing**

- A. Materials
1. Where required, steel curbing shall be fabricated of flexible hot rolled strip steel, shall be 3/16-inch thick x 4-inches high and in 20-foot lengths.
  2. Steel curbing shall be equal to “LANDSCAPE BORDER” manufactured by JOSEPH T. RYERSON & SON, INC., as approved. Contractor shall submit a sample for the engineer’s approval prior to ordering and installing.
- B. Installation: Steel border shall be formed to curves shown and installed as per manufacturer’s instructions. Curved lines shall be smooth with no signs of kinks, sharp bends or irregularities after installation and as approved by the engineer.

**End of CPD Standard Specification No. 1223**  
(revised 7-22-2015)

**Chicago Park District**  
**STANDARD SPECIFICATION NO. 1022**  
**BLACK EARTH**

**PART 1 - GENERAL**

**1.01 Scope**

- A. The work includes furnishing and delivering black earth to the Chicago Park District where designated, including unloading, all complete and subject to terms and conditions of the contract.

**1.02 General**

A. Source and Availability

- 1. Black earth shall be obtained from a source outside of the Chicago Park District property, and may be from a field supply or a stockpile supply.
- 2. Contractor shall submit upon request of the Chicago Park District, within a 10-day notice, proof of ownership or control of a sufficient supply (to meet the quantity specified) of black earth of the quality hereinafter specified.

B. Deliveries

- 1. For contract quantities over 2000 cubic yards a minimum of 400 cubic yards a day shall be delivered. For contract quantities under 2000 cubic yards the contractor shall deliver the quantities as requested by the Chicago Park District.

C. Inspection

- 1. Contractor shall submit upon request of the Chicago Park District, the following information.
  - a. The title of the project and the specification number of purchase requisition number.
  - b. The exact location of source of supply (each stockpiled) and approximate quantity of black earth at the source.
- 2. The black earth will be inspected by an authorized representative of the Chicago Park District either at the source supply or as delivered. The authorized representative shall be permitted to take such samples as he may select, and the Chicago Park District, at its discretion and cost, will have an approved testing laboratory make tests.

**PART 2 - PRODUCTS**

**2.01 Materials**

A. Description

- 1. Black Earth shall be uniform in color and texture; free from grass roots, sod, weeds, rocks, stiff clay, clods, or any other substance undesirable to plant growth; loose, friable, and of good tilth.
- 2. When the black earth has been dried at room temperature (70 degrees F.) and the lumps gently disintegrated in a mortar with a wooden pestle, the residue retained on a standard No. 8 sieve shall not be more than 5% by weight. After the removal of material coarser than passing a No. 8 mesh, the black earth shall conform to the following textural grades:

Fine gravel, coarse sand, medium sand.....	20 - 40 percent
Silt.....	25 - 60 percent
Clay.....	5 - 25 percent



3. The black earth shall not be alkaline to litmus paper, and when dried thoroughly at 230 degrees F., the screened soil upon ignition shall lose in weight not less than 10% nor more than 20%.
4. The mechanical analysis will be made as stated in ASTM D 422.

**B. Pulverized Black Earth**

1. If required by the contract specification or the purchase requisition, the black earth shall be pulverized. Contractors bidding on pulverized black earth shall have the equipment necessary to process the minimum quantities required by the specification.

**PART 3 - EXECUTION**

**3.01 Delivery**

- A. Notice of Delivery: The Contractor shall notify the Contract Construction Engineer by telephone 24 hours in advance of making delivery.
- B. Delivery
  1. All deliveries of black earth which in any way fail to meet the requirements of these specifications will be rejected, and the Contractor shall immediately remove such rejected black earth from the premises of the Chicago Park District and supply suitable black earth in its place.
  2. No deliveries will be permitted when weather conditions are unsatisfactory, or if the existing area where black earth is to be dumped is not a satisfactory condition to receive the black earth. No frozen black earth will be accepted.
  3. Trucks making deliveries shall use routes as directed to avoid damage to property. The Contractor shall deliver all black earth in dump trucks having pneumatic tires to the point designated by the authorized representative of the Chicago Park District, and shall be unloaded from the trucks where directed. All black earth that is deposited other than in the place designed or approved by the authorized representative will not be paid for.

**END OF CPD STANDARD SPECIFICATION 1022**