City of Hammond
Purchasing Department

RFP # 14-12
Playground Equipment
for Jackson Park
710 Barnes Street, Hammond, LA (Delivery Address)

Sealed bids shall be received by

Purchasing Department
City of Hammond
310 East Charles Street
P.O. Box 2788
Hammond, Louisiana 70404-2788

until

10:00 A.M. on JANUARY 31, 2014

at which time all bids will be opened and read aloud.

Ernest Peters, Sr., Purchasing Agent
(985)-277-5632

This is the Bid Package of:

Date: _____

Firm: _____

Contact: _____

Address _____

City _____ **State** _____ **Zip Code** _____

Phone: _____ **Fax:** _____

E-mail _____

Non-Discrimination:

By submitting and signing this bid, Bidder certifies that he agrees to adhere to the mandates dictated by Title VI and VII of the Civil Rights Act of 1964, as amended; the Vietnam Era Veterans Readjustment Assistance Act of 1974; Section 503 of the Rehabilitation Act of 1973; Section 202 of Executive Order 11246, as amended; and the Americans with Disabilities Act of 1990. Bidder agrees to keep informed of and comply with all Federal, State and Local Laws, Ordinances and Regulations which affect His Employees or Prospective Employees.

Playground Equipment Specifications
Jackson Park

BACKGROUND
The City of Hammond has received a $20,000 KaBOOM!/Dr. Pepper Snapple Group Let's Play City Construction Grant. Grant funds will be used to install a new playground within Jackson Park at 710 Barnes Street, Hammond, Louisiana. Local funding, including community donations, is being used as a match for the project, budgeted around $60,000.

GRANT REQUIREMENTS
The grant requires that the City contract with a KaBOOM!-preferred playground equipment vendor, identified as BCI Burke, Landscape Structures, Inc., Miracle Recreation Equipment Company, or Playworld Systems. The City must work directly with a local representative of the selected preferred vendor.

The grant also requires that the selected preferred vendor agree to receive payments from the City and KaBOOM! separately. KaBOOM! will make its payment directly to the vendor from a final invoice issued to the City and showing the playground equipment order, the City's payment, and a remaining balance of $20,000.

COMMUNITY BUILD REQUIREMENTS
Jackson Playground is a community-build project organized by the City. Accordingly, the bidder must have experience with community builds and must provide a Project Manager to oversee the build. The Project Manager must be:

1. a graduate of the Playground Construction School;
2. a Certified Playground Safety Inspector; and
3. a licensed contractor in the State of Louisiana.

Additionally, ALL on-site employees of the successful bidder must be certified installers of the proposed playground equipment. The bidder will also be responsible for the installation of playground surfacing. Community volunteers will assist with equipment installation only.

The City has targeted April 4 – April 5, 2014 as its Community Build Days.

BIDDER REQUIREMENTS

The City worked with Playworld Systems in preparing these specifications. Parts from the Playworld Systems Catalog are included herein as guides only and are not intended to restrict bids in any way. The City will consider "equal-to" parts in its evaluation of bids.

General Requirements

The bidder must:

1. be insured;
2. be an ISO-9001-certified company;
3. be an ISO-14001-certified company;
4. possess at least 5 years of experience installing playgrounds—including community-built playgrounds;
5. provide documentation of the above with its bid;
6. provide 2D diagrams and, optionally, 3D renderings, of its proposed playground equipment with its bid;
7. list any non-equal-to deviation from these specifications—and an explanation for each—with its bid.

Site visits are optional. They may be scheduled by calling the Grants Department at 985-277-5650.

Warranty

Proposed playground equipment must be warrantied as follows:

1. LIFETIME on steel and aluminum posts, all stainless steel hardware, clamps, deck hangers, post caps and cast aluminum parts, except as otherwise noted under Detailed Specifications;
2. 25-YEAR WARRANTY on all Spring Mates (or equal) aluminum castings;
3. 15-YEAR WARRANTY on all perforated steel decks and stairs, steel rails, loops and rungs, sheet steel, rotationally-molded and sheet plastic components, recycled plastic lumber, panels, roofs, stainless steel slides, aluminum slides, and tubular parts;
4. 10-YEAR WARRANTY on fiberglass signage, climbing wall handholds, accessible swing seats, steel-core cable, precast concrete, PolyFiberCrete (or equal), and glass fiber reinforced concrete (GFRC) products (note: minor chips, hairline cracks, and efflorescence are excepted from this warranty);
5. 5-YEAR WARRANTY on swing seats, ground-based play moving parts, border timbers (or equal), steel coil springs, steel C-springs, and all site furnishings, including benches, tables, litter receptacles, bike racks, etc.; and
6. 2-YEAR WARRANTY on all other moving parts and any other materials not described above.

Playground Equipment

The City has reserved a space of approximately 1400 sq. ft. in Jackson Park for an ADA-compliant playground structure with 3 levels.

The upper, 8 or 9-ft level must feature the following:

- 1 360° spiral slide;
- 1 balcony;
- 2 game, puzzle, or activity panels;
- 1 climber to the lower, 4-ft level; and
- safety pipe wall.

The lower, 4-ft level must feature the following:

- 1 slide;
- 1 game, puzzle, or activity panel;
- 1 climber to ground level;
- ADA-compliant stairs; and
- safety pipe wall.

The ground level must feature the following:

- poured-in-place surfacing;
- 1 transfer station (with step);

- 1 access gate;
- 1 horizontal ladder;
- 1 twisting motion platform;
- 1 climbing wall (this item may be freestanding); and
- 1 freestanding sign displaying the age-appropriateness of playground equipment, playground rules, and other information required for compliance with current CPSC guidelines.

Swings
The City has reserved a space of approximately 1,750 sq. ft. in Jackson Park for a single-post expandable swing set, approximately 8 ft. high and 36 ft. wide, and featuring:

- 4 belt swing seats;
- 4 cushioned wear mats (1 under each belt swing seat); and
- 2 infant/toddler swing seats.

The space must be ADA-compliant with a ramp and an engineered wood-fiber surface. Loose fill material must be retained by border timbers (or equal).

DETAILED SPECIFICATIONS

General Requirements

1. All playground equipment must be installed according to the manufacturer's recommendations.
2. Expanded metal decks are unacceptable and will not be considered.
3. Dry-blended or mold-in plastics are unacceptable and will not be considered.
4. Upright support posts with a bolt-through design are unacceptable and will not be considered.
5. Urethane, lacquer, and enamel paints, as well as paints that could encourage mildew or other fungal growth where children play, are unacceptable and will not be considered.
6. All playground equipment must be 99.9% PVC-free.
7. Following the Community Build Days, the successful bidder must restrict access to the playground structure and swings with, at a minimum, heavy-duty, commercial-grade, orange barrier fencing until both have been completed, safety-inspected, and safety-approved.

Deviations
Any non-equal-to deviation from the following specifications should be formatted as follows:

LIST OF DEVIATIONS

Playworld Systems Item -- Proposed Deviation and Detailed Explanation

Measurements & Formulations
ALL measurements and formulations are the responsibility of the successful bidder. The City will NOT authorize ANY change order resulting from inaccurate measurements or formulations.

Materials
All materials shall have a demonstrated record of durability in the playground or similar outdoor setting. All metals shall be painted, galvanized, or otherwise treated to inhibit rust. Black steel is not acceptable.

Hardware
All required hardware for assembly of the structure shall be included. All fasteners shall be18-8-grade stainless steel (300 series). Capped lock nuts which cover bolts ends shall be included. Tamper-resistant hardware shall be used on principle clamping mechanisms. Special tools shall be provided for assembly and maintenance. Clamp connection disassembly and slippage shall be eliminated by using drive rivets. Physical locking devices shall be used on all exposed and accessible connection points (e.g. lock nuts). A nylon thread-locking patch shall be applied to certain hardware. Liquid thread-lock shall also be used to hinder fastener removal.

Tubing
Steel tubing shall be cold rolled, electric resistance welded tubing. Tubing shall be triple coated for maximum exterior protection with a hot dipped Flo-Coat uniform zinc galvanized coating, a chromate conversion coating, and a clear polymer coating. Galvanized exterior coating weight shall be within the range of .4 oz./sq. ft. and .6 oz./sq. ft. Tubing shall have a corrosion resistant, zinc-rich paint interior coating. ASTM Specifications: A-315, A-500, A-513, and E-8.

Aluminum tubing for support posts and sleeves shall be of 6061-T6 extruded seamless aluminum alloy tubing. ASTM Specifications: A-315, A-500, A-513, B-221, QQ-A-200/8, and E-8.

Aluminum tubing for arches shall be an all-welded assembly fabricated of 6063-T4 extruded seamless aluminum alloy tubing.

RockBlocks

RockBlocks shall have a realistic stone texture and finish. RockBlocks shall provide molded through holes for mounting hand grips having a surrounding wall thickness of .25". RockBlocks shall be rotationally molded from first-quality polyethylene and be manufactured from color-compounded resins having solid color molecules for ultraviolet (UV) and impact resistant. Color-compounded polyethylene is 23 times stronger than dry blended resins—providing better bonding strength with greater surface contact. Polyethylene shall be ultraviolet (UV) stabilized to UV-8 and also have antistatic additives. Dry blended or molded-in resins are not acceptable. RockBlocks shall have a cross-sectional design with a minimum wall thickness of .25" and double-wall construction. Flat sheet plastic construction is not acceptable. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D 648 (Heat Distortion Temperature), D-790 (Flexural Modulus), D-1693 (Environmental Stress Crack Resistance), and D-2565 (Ultraviolet).

Rotationally Molded Plastic Parts

Plastic parts shall be rotationally molded from color-compounded, first-quality, linear low-density polyethylene. Color-compounded polyethylene is stronger than dry blended resins—providing better bonded strength with greater surface contact. Compounded color provides superior colorfastness, ultraviolet (UV) resistance, and impact resistance with solid color molecules. Polyethylene shall be ultraviolet (UV) stabilized to UV-8 and have antistatic additives. Dry-blended or molded-in resins are not acceptable. Cross-sectional design shall be .25" (6 mm) nominal thickness, double-wall construction. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature), D-790 (Flexural Modulus), D-1693 (Environmental Stress Crack Resistance), and D-2565 (Ultraviolet). Plastics shall meet the UL94HB Horizontal Burn Test, Arm Test for impact strength at minus 40°C and .25" thickness, and QUV color change criteria at 500 hours per SAE 1960-89.

Die Cast Clamps / Castings

Clamps / castings shall be die cast of high-strength 413 aluminum alloy and finished with a shot blast and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Tenzalloy (40-E, 315.0) is not acceptable as a load-bearing clamp material. Ultimate tensile strength shall be 43 ksi. Die casting operation shall be quality sampled every hour. Clamps shall be provided as hinged assemblies to facilitate structure assembly. A unique S-lap design shall eliminate all string entanglement points at connection. A single-bolt fastening system with built-in threads shall eliminate T nuts and simplify installation. Clamp connection disassembly and slippage shall be eliminated by using drive rivets. A double-banded design shall provide the highest clamping pressure around the entire clamp. ASTM Specifications: B-85.

Cast Almag Clamps / Castings

Clamps and castings shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy and finished with a 420 micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Tenzalloy (40-E, 315.0) is not acceptable as a load-bearing clamp material. Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Clamps shall be provided as hinged assemblies to facilitate structure assembly. Clamps shall be permanently fastened to the support post with a drive rivet to eliminate disassembly and slippage. Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems. ASTM Specifications: B-26. Federal specifications: QQ-A-601.

Coated Finish

The coated finish shall be 45-55 mils on the wear surfaces of all coated parts and 30 mils on all other surfaces. Prior to coating, components shall be thoroughly cleaned in a hot-pressure washer, then heated to 450°. The hot part shall then be dipped into a polyethylene copolymer-based thermoplastic powder until the coating reaches its target thickness. The coating shall then go through a flow oven to even the coating thickness and improve the finish. Since no curing is necessary, the coating’s properties and performance shall be very consistent and uniform. The environmentally-sensitive—PVC- and phthalate-free—coating shall be made of an ultraviolet (UV) stabilized polyethylene material and meet California, Washington, and other state and federal requirements for phthalates and heavy metal content. The coating shall produce no dioxins if burned. Discarded product and waste production material shall be recyclable into other products (Recycling Symbol 2).

The coating shall contain no volatile organic compounds (VOCs). ASTM D-4060 (Taber Abrasion) tests shall show that the PE coating abrasion resistance is over 1.7 times the abrasion resistance of PVC. Warranty shall be the same as PVC-coated products. Durable extreme cold (i.e. -20° F) cycle tests shall indicate no cracking or loss of adhesion to the metal substrate. The coating shall be less porous than PVC—making the surface less conducive to the growth of mold and collection of ground-in dirt. The coating shall be easier to clean while having a slip-resistant, textured finish for enhanced traction, with a .74 coefficient of friction per ASTM 1679. The ADA prescribes a 0.5 coefficient of friction or higher for slip-resistance. Coating damage shall be easily repaired with the included repair kit. No chemicals or special curing shall be required. Technical Specifications: a slip-resistant, textured, functionalized polyethylene copolymer-based thermoplastic powder coating designed for maximum mechanical performance, impact resistance, and ultraviolet (UV) stability. ASTM Specifications: D-522 (Conical Mandrel) with no cracks greater than 32% at 1/8", D-4541 (Adhesion) of 800 psi, D-2794 (Impact Resistance) greater than 320 inch-pounds, D-523 (Gloss) of 12, D-4060 (Taber Abrasion) of 26 (mg loss, CS 17 wheel), D-638 (Tensile Strength) of 3482 psi, D-638 (Elongation) of 13%, D-2247 (Humidity Resistance) with no blistering or loss of gloss after 1000 hours, B-117 (Salt Spray) with no significant change in color or gloss at 2000 hours, G-53 (QUV) with no significant change in color or gloss at 2000 hours.

PrismCoat / Superdurable Polyester Powder Coat Finish

Powder coating shall be electrostatically applied at a thickness of 2-5 mils (.002-.005). Powder coating produces a highly decorative finish having a hard, smooth surface which is resistant to abrasion, corrosion, and mechanical damage. All galvanized tubing shall have a factory-applied clear acrylic polymer coating. All components shall be free of excess weld and weld spills. After fabrication, all weld joints shall be thoroughly cleaned using a chipping hammer and wire brush to remove all weld slag from weld joints. Prior to finishing, components shall be cleaned with a three-stage alkaline bath and a ECLPS 2400 sealer for adhesion and a rust inhibitor during the preparation process. Components shall be thoroughly dried before being coated with Superdurable TGIC polyester powder and cured at temperatures between 375° and 400° F. Epoxy or hybrid paints are not acceptable. Finish quality shall conform to ASTM Specifications B-117 and D1654 (Salt Spray Resistance) with a rating of 6 or greater at 4,000 hours, D-2794 (Impact Resistance) at a rating minimum of 80 inch-pounds, D-1734 (Mandrel Flexibility), D-2247 (Humidity Resistance), D-822 (Weatherability), D-3363 (Pencil Hardness), D-3359-B, Method B (Crosshatch Adhesion) at a rating of 5B, "checkered," D-2454 (Overbake Resistance), D-522 (Conical Mandrel) at 1/8", D-523 (Gloss) at 60°, D-3363 (Hardness) at a rating of 2H, and G-154 (UV Exposure) at a rating 2dE with 90% gloss retention under a 340 bulb at 3,000 hours. Standard durability of polyester powder coatings typically retain 80% of their original gloss after 1 year and 50% of their original gloss after 18 months of Florida outdoor exposure. Superdurable polyester powder coatings typically retain 90% of their original gloss after 1 year and 50% of their original gloss after 5 years of Florida outdoor exposure. Superdurable colors are expected to retain 80% of their gloss after 2 years of outdoor exposure. These coatings shall also be shaded with high-grade, light-stable pigments that will shift less than 2dE after 2 years.

Epoxy/Polyester Primer

The epoxy/polyester primer shall be a powder coating that is electrostatically applied at a thickness of 2-5 mils (.002-.005). This coating shall produce a finish having a "tooth" which readily accepts a coating of superdurable polyester powder. The primer coating adds an additional AL level of protection that is resistant to abrasion, corrosion, and mechanical damage. All components shall be free of excess weld and weld spalls. All edges shall be eased by tumbling (or comparable) to eliminate a sharp edge. After fabrication, all weld joints shall be thoroughly cleaned using a chipping hammer and wire brush to remove all weld slag from weld joints. Prior to finishing, components shall be cleaned with a three-stage alkaline bath and an ECLPS 2400 sealer for adhesion and a rust inhibitor during the preparation process. Components shall be thoroughly dried before being coated with the epoxy/polyester primer powder and shall be set cured at temperatures between 375° and 400° F through an infrared oven prior to being top-coated with the superdurable polyester powder finish.

Installation Instructions and Maintenance Guidelines

Installation instructions and maintenance guidelines shall be provided. These shall include detailed top-view and footing drawings, as well as written instructions that will ensure proper installation of all equipment. Maintenance guidelines—including inspection checklists—shall also be provided. The provided installation instructions and maintenance guidelines shall be project-specific, with information about components used in the playground design.

Poured-in-place Surface

The poured-in-place surface must be troweled to provide a resilient, seamless surface over a concrete slab. When cured, this surface must be stable, slip-resistant, and ADA-compliant.

Materials

1-3 mm Black EPDM Impact Course

SBR or EPDM select rubber. The impact layer is to be a precise combination of recycled black rubber and polyurethane binder.

PRODUCT DESCRIPTION	Granulated cured Black EPDM compound, 1-3 mm in size, having a normal specific gravity of 1.25, free of fabric and foreign material.			
	PRODUCT ANALYSIS		TEST METHOD ASTM	
CHEMICAL PROPERTIES	MIN.	MAX.		
ACETONE EXTRACT	--	--		
ASH CONTENT	0.0	20.0	D-297	
CARBON BLACK CONTENT	20.0			
RUBBER HYDROCARBON	--	--	DIFFERENCE	
PHYSICAL PROPERTIES	U.S. STANDARD			
SIEVE ANALYSIS			SCREEN	% RETAINED D-5644
			6 MESH	0-15%
			10 MESH	60-85%
			18 MESH	10-30%
			PAN	0-5%
			SPECIFIC GRAVITY	1.10-1.50 D-297
			MOISTURE	1% Max. D-1509
			BULK DENSITY	35# ± 2#/cu. ft.
			FREE FLOWING AGENT ADDITIVE:	2-4%/wt. Max.
PACKAGING:	Standard packaging: 55 lb. Kraft Bags/2,200#/skid			

1-3 mm Colored EPDM Poured Cap

EPDM pigmented synthetic rubber granules (1-3 mm peroxide cured) with a minimum EPDM content of 25% by weight and certified letter from manufacturer stating this content. STRAND, SHAVED, CHIPPED OR SHREDDED RUBBER IS NOT ACCEPTABLE IN THE POURED CAP.

PRODUCT DESCRIPTION	Granulated cured Colored EPDM sheet stock, 1-3mm in size, having a normal specific gravity of 1.56, free of fabric and foreign material, Shore A Hardness 60±5.			
	PRODUCT ANALYSIS		TEST METHOD ASTM	
CHEMICAL PROPERTIES	MIN.	MAX.		
ACETONE EXTRACT	--	--		
ASH CONTENT	35.0	65.0	D-297	
CARBON BLACK CONTENT	--	--		
RUBBER HYDROCARBON	20.0		DIFFERENCE	
PHYSICAL PROPERTIES	U.S. STANDARD			
SIEVE ANALYSIS			SCREEN	% RETAINED D-5644
			6 MESH	0-15%
			10 MESH	60-85%
			18 MESH	10-30%
			PAN	0-5%
			SPECIFIC GRAVITY	1.56 ± .03 D-297
			MOISTURE	1% Max. D-1509
			BULK DENSITY	41# ± 2#/ cu. ft.
			FREE FLOWING AGENT ADDITIVE:	2%/wt. Max.
PACKAGING	Standard packaging: 55 lb. Kraft Bags/2,200#/skid			

Flexithane 702 Polyurethane Primer and Binder

100% Single Component Polyurethane Binding Agent - Methylene Dephenyl Isocyanate (MDI) based binder.

PRODUCT DESCRIPTION	Polyurethane Binder used for the encapsulation of granulated rubber. This is a moisture activated curing one-component resin free of TDI and is intended for use in warm areas with moderate to high humidity.		
PRODUCT ANALYSIS			
CHEMICAL PROPERTIES			
ISOCYANATE CONTENT	10% - 30.0%		
FREE TDI MONOMER	0%		
PHYSICAL PROPERTIES	APPEARANCE	LIQUID	
	COLOR	CLEAR BROWN	
	FLASH POINT	>200° C	
	NCO VALUE	9.0-10.0%	
	SOLUBILITY IN WATER	NOT SOLUBLE	

% VOLATILE BY VOLUME	NEGLIGIBLE
SPECIFIC GRAVITY	1.10 ± .05
VISCOSITY	2600-3200 mPas @ 25° C
BULK DENSITY	9#/gal.
PACKAGING	55 gal. Drums, or 5 gal. Pails

Installation

The safety surface shall be installed after the playground equipment is installed and after the subsurface is ready to receive safety surface. The temperature should be 40° and rising during installation of surface.

Total depth of the surface shall be as required by the fall heights of each piece of equipment and the ASTM guidelines. Surface thickness may vary in the impact course according to fall height.

The bidder is responsible to contact the equipment manufacturer to determine exact fall height requirements.

Impact Course

The impact course must be composed of recycled rubber and be free of foreign matter. The impact course will be poured in place by means of screeding and hand-trowelled to maintain a seamless application. All rubber in the impact course will be of a select quality and consistent blend of recycled rubber sizing to achieve maximum porosity and minimum residue. Rubber quality and sizing will be reviewed during the submittal process. Installation method shall use a measured screed rod 1/16" thicker than the required depth. The poured in place rubber shall be installed according to the use zone of the equipment with specific attention to the edges (see below).

Poured Cap

The 3/8" minimum poured cap material shall be composed of EPDM granular rubber only. The cap will have a minimum weight of 2.2 lb./sq. ft.. The cap will be poured in place by means of screeding and hand-trowelled to maintain a seamless application. All rubber shall remain consistent in gradation and size. COLOR TINTED BINDER WILL NOT BE ALLOWED. Installation method shall use a measured screed rod 1/16” thicker than the required depth.

Large Areas

There shall be no single cap color area that exceeds 2,000 sq. ft. All cap areas that cannot be poured in the same day shall be a separate color. There shall be no cold joints of the same color. Professional crew shall plan for these restrictions. It is the bidder’s responsibility to visit the site and determine the method and volume of poured in place installation. The City is not responsible for bidder’s miscalculations.

Edges

Surface edges shall be tapered to provide safe transition over a 6" width beyond the use zone. After the safety surface has surpassed the required distance according to use zone guidelines, it shall transition down to a 3/8" depth over a 6" distance to the concrete mow strip which should be 12” wide.

Colors

The poured in place cap shall be a 50%-standard-color (of the City's choice)/50%-black mix. There shall be a scalloped edge within the use zone measuring 1-2’ wide that will be a 50%-standard-color (of the City’s choice)/50%-black mix. And there shall be "puddles of color" at the bottom of each slide and each climber consisting of a 50%-standard-color (of the City’s choice)/50%-black mix.

The entire subsurface shall be clean, dry, and free from any foreign and loose material.

Concrete Slab

The City requests that bidders submit a SEPARATE cost estimate for the concrete slab, including installation. The City may elect to install the slab itself.

The slab shall have the specific minimum slope (2%) and shall vary no more than 1/8" when measured in any direction with a 10' foot straight edge. New concrete shall be allowed to cure a minimum of 7 days prior to commencement of surfacing.

Concrete work shall be executed in accordance with the latest edition of the American Concrete Building Code, ACI 318. All reinforcement shall confirm to ASTM A-615, Grade 60.

Reinforcing steel shall be detailed, fabricated, and placed in accordance with the latest ACI Detailing Manual and Manual of Standard Practice.

Forming, Pouring, and Finishing

The concrete slab shall be poured to the use zone of the equipment with an additional 6"-wide area for rubber surfacing sloped transition and 12"-wide concrete mow strip along outer edge of area. The edge of the concrete slab shall be edged with an edging tool around the perimeter so as to provide a rounded edge. The concrete slab shall be at least 4" thick and at least 3,000 psi. The concrete mix must include a fiber mesh additive; wire mesh is neither required nor preferred.

The elevation of the slab shall encourage proper drainage and also shall aid in the elevation requirements for the playground equipment according to the current ASTM standards for playground equipment (e.g. slides must have proper exit elevation). The entire slab shall have no standing water after completion. After the slab has cured, ALL forms must be removed. The perimeter outside the new slab shall be free from debris and the earth/dirt raked flat leaving no holes.

The concrete slab shall have a fully-staked, metal keyway that forms a cross in the approximate middle of the form and creates 4 approximately equal sections under the playground equipment.

The slab shall have a light broom finish. The successful bidder is responsible for correct use zone measurements. It is the bidder’s responsibility to visit the site to determine the method of concrete installation. The City is not responsible for the bidder’s miscalculations.

Engineered Wood-fiber Surface

IPEMA Certified. Installed to 12” depth, compacted.

Materials

WOODCARPET Engineered Wood-Fiber Playground Surfacing

Composition
- 100% pre-consumer recovered wood.
- Free of soil, leaves, twigs, and other contaminates which hasten decomposition.
- Free of chemical treatments and additives.

Dimensions
- Randomly sized. Per sieve analysis EWF standard ASTM F2075: Meets criteria.

Hazardous Metal Properties
- ASTM F 2075-09/4.5: Meets criteria.

Tramp Metal Properties
- ASTM F 2075-09/4.6: Meets criteria.

Coefficient of Permeability
- ASTM D 2434: Greater than 0.6 cm/s.

Moisture Absorption
- Maximum of 150%/wt.

Moisture Content
- 25-60 %/wt.

Density
- 15-24 lb./cu. ft.

Impact
- ASTM F 1292-09: Meets criteria.

Accessibility
- ASTM F 1951-08: Meets criteria.

Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials
- D2859: Meets criteria.

Playground Equipment

Unless otherwise specified, playground equipment is surface-mounted.

3.5" OD x 88" Steel Post with Cap

3.5" Support Post
Shall be fabricated of 3.5" outside diameter, 13-ga. galvanized steel tubing with a .38" flat steel surface mount plate (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Crown/Post/End Cap
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy and finished with a 420 micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Each crown and post cap shall be fastened to the end of the tubing with drive rivets. Plastic post end caps and plastic rivets are unacceptable. ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

Drive Rivet
The rivet shall be fabricated of 2117 aluminum alloy. The pin shall be fabricated of 7075 aluminum alloy.

3.5" OD, 13-ga Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	39.01 lb.
Pre-Consumer Recycle:	7.80 lb.
Post-Consumer Recycle:	15.99 lb.
CO2e Footprint:	48.80 kg

3.5" OD x 100" Steel Post with Cap

3.5" Support Post
Shall be fabricated of 3.5" outside diameter, 13-ga. galvanized steel tubing with a .38" flat steel surface mount plate (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Crown/Post/End Cap
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy and finished with a 420 micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Each crown and post cap shall be fastened to the end of the tubing with drive rivets. Plastic post end caps and plastic rivets are unacceptable. ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

Drive Rivet
The rivet shall be fabricated of 2117 aluminum alloy. The pin shall be fabricated of 7075 aluminum alloy.

3.5" OD, 13-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000

Component Weight:	31.81 lb.
Pre-Consumer Recycle:	6.36 lb.
Post-Consumer Recycle:	13.04 lb.
CO2e Footprint:	53.40 kg

3.5" OD x 166" Steel Post with Cap

3.5" Support Post
Shall be fabricated of 3.5" outside diameter, 13-ga. galvanized steel tubing with a .38" flat steel surface mount plate (see Tubing) and Finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Crown/Post/End Cap
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy and finished with a 420 micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Each crown and post cap shall be fastened to

the end of the tubing with drive rivets. Plastic post end caps and plastic rivets are unacceptable. ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

Drive Rivet
The rivet shall be fabricated of 2117 aluminum alloy. The pin shall be fabricated of 7075 aluminum alloy.

3.5" OD, 13-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	61.51 lb.
Pre-Consumer Recycle:	12.30 lb.
Post-Consumer Recycle:	25.22 lb.
CO2e Footprint:	80.00 kg

Square-Coated Deck Assembly

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Coated Deck / Platform
Shall be an all-welded assembly fabricated of 12-ga. hot rolled, pickled, and oiled flat steel. Deck surfaces and sides shall be die formed from a single sheet of 12-ga. hot rolled, pickled, and oiled flat steel. Deck surfaces shall have .34" (9mm) perforated holes. Entire weldment shall have a protective coating (see Coated Finish).

Component Weight:	54.86 lb.
Number of Users:	3
Pre-Consumer Recycle:	4.38 lb.
Post-Consumer Recycle:	13.90 lb.
CO2e Footprint:	173.80 kg

Triangular Coated Deck Assembly

Coated Deck / Platform
Shall be an all-welded assembly fabricated of 12-ga. hot rolled, pickled, and oiled flat steel. Deck surface and sides shall be die formed from a single sheet of 12-ga. hot rolled, pickled, and oiled flat steel. Deck surface shall have .34" (9mm) perforated holes. Entire weldment shall have a protective coating (see Coated Finish).

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Component Weight:	29.90 lb.
Number of Users:	2
Pre-Consumer Recycle:	2.61 lb.
Post-Consumer Recycle:	7.95 lb.
CO2e Footprint:	119.90 kg

1/2 Hex-Coated Deck Assembly

Coated Deck / Platform
Shall be an all-welded assembly fabricated of 12-ga. hot rolled, pickled, and oiled flat steel. Deck surfaces and sides shall be die formed from a single sheet of 12-ga. hot rolled, pickled, and oiled flat steel. Deck surfaces

shall have .34" (9mm) perforated holes. Entire weldment shall have a protective coating (see Coated Finish).

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Component Weight:	78.32 lb.
Number of Users:	4
Pre-Consumer Recycle:	6.06 lb.
Post-Consumer Recycle:	19.52 lb.
CO2e Footprint:	251.90 kg

Transfer Station with Tall Guardrail (36" Deck)

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Accessible Stair Guardrail
Shall be an all-welded assembly fabricated of 1.029" outside diameter, 14-ga. galvanized steel tubing and 1.315" outside diameter, 14-ga. galvanized steel tubing (see Tubing) and finished with a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish). All tube-to-tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially-flattened tubing weld connections are not acceptable.

Transfer Deck Support Leg (SM)
Shall be an all-welded assembly fabricated of 2.375" outside diameter, 12-ga. galvanized steel tubing, .25" hot rolled flat steel, and .188" hot rolled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Grabbit (SM/M)
Shall be an all-welded assembly fabricated of 2.375" outside diameter, 12-ga. galvanized steel tubing, 1.029" outside diameter, 14-ga. galvanized steel tubing, .188" zinc-plated, hot rolled, pickled, and oiled flat steel, and .25" zinc-plated, hot rolled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Coated Transfer Deck (SM Holes)
Shall be an all-welded assembly die formed from a single sheet of 12-ga., hot rolled, pickled, and oiled flat steel. Deck surface shall have .344" holes. Entire deck weldment shall have a protective coating (see Coated Finish).

Coated Transfer Stair (SM Holes)
Shall be an all-welded assembly fabricated of 14-ga. hot rolled, pickled, and oiled flat steel for the step treads, and 11-ga. hot rolled, pickled, and oiled flat steel for the stringers. Step surfaces shall have .34" holes. Entire stair weldment shall have a protective coating (see Coated Finish).

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

2.375" OD, 12-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	144.50 lb.
Number of Users:	2
Pre-Consumer Recycle:	16.06 lb.
Post-Consumer Recycle:	41.82 lb.
CO2e Footprint:	298.70 kg

Glide Slide (48" Deck)

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating. (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

1.315" x 14-ga. Tie Rod
Shall be fabricated of 1.3159" outside diameter, 14-ga. galvanized steel tubing (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

3.5" Exit Support Post with Plate
Shall be an all-welded assembly fabricated of 3.5" outside diameter, 13-ga. galvanized steel tubing, .25" hot rolled flat steel, and 11-ga. zinc-plated steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Glide Slide Canopy
Shall be rotationally molded from Exxon CP-812 polyethylene (see Rotationally Molded Plastic Parts) and have molded-in threaded inserts and 1.315" outside diameter, 14-ga. galvanized steel tubing color-matched to the plastic. Dry-blended or molded-in color resins are not acceptable. Tubing shall be finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Glide Slide
Shall be rotationally molded from Exxon CP-812 polyethylene (see Rotationally Molded Plastic Parts). Dry-blended or molded-in color resins are not acceptable.

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

3.5" OD, 13-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	116.93 lb.
Number of Users:	3
Pre-Consumer Recycle:	2.87 lb.
Post-Consumer Recycle:	5.95 lb.
CO2e Footprint:	487.80 kg

Slither Slide Balcony Entry/Exit

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Barrier (Balcony)
Shall be fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing, 1.029" outside diameter, 14-ga. galvanized steel tubing, and 7-ga. hot rolled, pickled, and oiled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). All tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tube weld connections are not acceptable.

Rail with Inserts
Shall be fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing (see Tubing), have factory-installed crimped threaded inserts at each end, and finished with a baked-on polyester powder coating (see PrismCoat / Super Durable Polyester Powder Coat Finish).

3.5" Exit Support Post with Plate
Shall be an all-welded assembly fabricated of 3.5" outside diameter, 13-ga. galvanized steel tubing, .25" hot rolled flat steel and 11-ga. zinc-plated steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Rotomolded Slide
Shall be rotationally-molded from linear low density polyethylene (see Rotationally Molded Plastic Parts). Dry-blended or molded-in color resins are not acceptable.

Glide Slide Canopy
Shall be rotationally-molded from Exxon CP-812 polyethylene (see Rotationally Molded Plastic Parts) and have molded-in threaded inserts and1.315" outside diameter, 14-ga. galvanized steel tubing color-matched to the plastic. Dry-blended or molded-in color resins are not acceptable. Tubing shall be finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Coated Deck / Platform
Shall be an all-welded assembly fabricated of 14-ga. hot rolled, pickled, and oiled flat steel. Deck surfaces and sides shall be die formed from a single sheet of 14-ga. hot rolled, pickled, and oiled flat steel. Deck surfaces shall have .34" (9mm) holes. Entire weldment shall have a protective coating (see Coated Finish).

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

3.5" OD, 13-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	159.26 lb.
Number of Users:	2
Pre-Consumer Recycle:	14.65 lb.
Post-Consumer Recycle:	32.85 lb.
CO2e Footprint:	629.00 kg

Centerline Pipe Wall Barrier

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Pipe Wall Barrier (SM Rungs)
Shall be an all-welded assembly fabricated of 3/16" hot rolled, pickled, and oiled flat steel, 1.029" outside diameter, 14-ga. galvanized steel tubing, and .815" outside diameter, 15-ga. galvanized steel tubing (see

Tubing) and finished with a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

.815" OD, 15-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	28.74 lb.
Pre-Consumer Recycle:	0.60 lb.
Post-Consumer Recycle:	1.30 lb.
CO2e Footprint:	70.80 kg

Access Gate

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Barrier Gate (Upper)
Shall be fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing and 7-ga. hot rolled, pickled, and oiled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). All tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tube weld connections are not acceptable.

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	17.34 lb.
Pre-Consumer Recycle:	3.60 lb.
Post-Consumer Recycle:	7.45 lb.
CO2e Footprint:	65.30 kg

Tic-Tac-Toe Activity Wall

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Tie Rod
Shall be fabricated of 1.029" outside diameter, 14-ga. galvanized steel tubing (see Tubing) and finished with a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

.5" Activity Panel Plastic Parts
Shall be fabricated from colored marine-grade, .5" (13 mm) high-density polyethylene and machined, ultraviolet (UV) stabilized, and meet FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature), D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact), D-746 (Brittleness), and D-1525 (Softening Point).

Rotomolded Cylinder
Shall be rotationally molded from polyethylene (see Rotationally Molded Plastic Parts). Dry-blended or molded-in color resins are not acceptable.

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	46.02 lb.
Number of Users:	2
Pre-Consumer Recycle:	4.62 lb.
Post-Consumer Recycle:	8.90 lb.
CO2e Footprint:	342.10 kg

Balcony

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Barrier (Balcony)
Shall be an all-welded assembly fabricated of 1.029" outside diameter, 14-ga. galvanized steel tubing and 0.815" outside diameter, 15-ga. galvanized steel tubing (see Tubing) and finished with a baked on polyester powder coating. (see PrismCoat / Superdurable Polyester Powder Coat Finish). All tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tubing weld connections are not acceptable.

Coated Deck / Platform
Shall be an all-welded assembly fabricated of 12-ga. hot rolled, pickled, and oiled flat steel. Deck surfaces and sides shall be die formed from a single sheet of 12-ga. hot rolled, pickled, and oiled flat steel. Deck surfaces shall have .34 in. (9mm) diameter holes. Entire weldment shall have a protective coating (see Coated Finish).

.815" OD, 15-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	71.66 lb.
Number of Users:	2
Pre-Consumer Recycle	11.09 lb.
Post-Consumer Recycle:	25.27 lb.
CO2e Footprint:	213.70 kg

Upper Silo Climber Extended Barrier

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

1.029" OD / .815" OD , 7-ga. Barrier
Shall be an all-welded assembly fabricated of .815" outside diameter, 15-ga. galvanized steel tubing, 1.029" outside diameter, 14-ga. galvanized steel tubing, and 7-ga. hot rolled, pickled, and oiled flat steel (see Tubing)

and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

.815" OD, 15-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	30.28 lb.
Number of Users:	1
Pre-Consumer Recycle:	6.19 lb.
Post-Consumer Recycle:	12.76 lb.
CO2e Footprint:	75.30 kg

Drum Panel

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Panel Connector
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy (see Cast Almag Clamps / Castings) and finished with a 420 micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

.75" Plastic Panel
Shall be fabricated from colored marine-grade, .75" high-density polyethylene and machined, ultraviolet (UV) stabilized, and meet FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature), D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact), D-746 (Brittleness), and D-1525 (Softening Point).

Rotomolded Drum
Shall be rotationally molded from linear low-density polyethylene (see Rotationally Molded Plastic Parts). Dry-blended or molded-in color resins are not acceptable. Threaded inserts are molded into the plastic to provide attachment points for the drum.

Component Weight:	43.92 lb.
Number of Users:	2
Pre-Consumer Recycle:	8.51 lb.
Post-Consumer Recycle:	1.65 lb.
CO2e Footprint:	374.40 kg

Containment Pipe Wall (Hex Tower)

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Spacer / Connector
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy (see Cast Almag Clamps / Castings) and finished with a 420 micro finish and a baked-on polyester powder coating (see Super Durable Polyester

Powder Coat Finish).

Containment Barrier
Shall be an all-welded assembly fabricated of .815" outside diameter, 15-ga. galvanized steel tubing, 1.029" outside diameter, 14-ga. galvanized steel tubing, and .188", zinc-plated hot rolled flat steel and finished with a baked-on polyester powder coat or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

.815" OD, 15-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	36.60 lb.
Pre-Consumer Recycle:	7.53 lb.
Post-Consumer Recycle:	15.33 lb.
CO2e Footprint:	102.00 kg

72" Horizontal Spiral Ladder

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Horizontal Spiral Ladder
Shall be an all-welded assembly fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing, 3.5" outside diameter, 8-ga. galvanized steel tubing, and 14-ga. galvanized steel plate (see Tubing) and finished with a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

3.5" OD, 8-ga. Steel Tubing
Tensile strength shall be 48,000 psi. Yield strength shall be 45,000 psi.

Component Weight:	63.32 lb.
Number of Users:	2
Pre-Consumer Recycle:	10.52 lb.
Post-Consumer Recycle:	21.71 lb.
CO2e Footprint:	151.30 kg

Overhead Event Access Ladder (3 Rungs)

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Overhead Access Ladder (SM/M)
Shall be an all-welded assembly fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing, 1.029" outside diameter, 14-ga. galvanized steel tubing, and .188", zinc-plated hot rolled flat steel (see Tubing) and finished with a baked-on polyester powder coat or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	27.12 lb.
Number of Users:	1
Pre-Consumer Recycle:	5.58 lb.
Post-Consumer Recycle:	11.51 lb.
CO2e Footprint:	70.60 kg

Twister

3.5" Cast Clamp Band
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy and finished with a 420 micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Traction Pad
Traction pads shall be manufactured of polyurethane and are uniquely textured for slip resistance. Traction pads must be also formulated to withstand extreme impacts and be highly resistant to ultraviolet (UV) light and chemicals. Traction pads material must be manufactured from materials having a proven record in the climbing industry. Each traction pad shall be recessed into the climbing structure with a shape unique to the individual hand grip. Traction pads not recessed can rotate or turn and are not acceptable. Traction pads shall have a Lifetime Warranty.

Anchor Post with Plate
Shall be an all-welded assembly fabricated of 3.5" outside diameter, 13-ga. galvanized steel tubing and .25" hot rolled flat steel plate (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Platform (Bottom)
Shall be fabricated from 2" outside diameter x 1.5" inside diameter steel tubing, .25" zinc-plated hot rolled, pickled, and oiled flat steel and Olite bearing. Tubing shall comply with ASTM Specification A513 and shall have a yield strength of 64,670 psi and the tensile strength of 80,910 psi.

Ratchet
Shall be fabricated from 1.9" outside diameter, 13-ga. galvanized steel tubing, 2.375" outside diameter, 12-ga. galvanized steel tubing, zinc-plated .25" hot rolled, pickled, and oiled flat steel, 7-ga. hot rolled, pickled, and oiled flat steel, 1018 cold rolled steel, 1215 steel, and .5" and .75" high-density sheet polyethylene (see Tubing and Rotationally Molded Plastic Parts).

Olite Bearing
Shall be Teflon coated with a self-contained lubrication feature. Yield strength shall be 22,000 psi. Tensile strength shall be 22,000 psi.

.5" Plastic Panel
Shall be fabricated of .50" (12 mm) high-density sheet polyethylene, ultraviolet (UV) stabilized, and meet FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505(Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature), D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact), D-746 (Brittleness), and D-1525 (Softening Point).

.75" Plastic Panel
Shall be fabricated from colored marine-grade, .75" high-density polyethylene and machined, ultraviolet (UV) stabilized, and meet FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature), D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact), D-746 (Brittleness), and D-1525 (Softening Point).

1.9" OD, 13-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000psi.

2.375" OD, 12-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000psi.

3.5" OD, 13-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000psi.

Component Weight:	104.80 lb.
Number of Users:	1
Amount of Concrete:	0.05 Yds.
Pre-Consumer Recycle:	12.26 lb.
Post-Consumer Recycle:	26.13 lb.
CO2e Footprint:	681.00 kg

Geo Vertical Climber (48" Deck)

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Climber
Shall be an all-welded assembly fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing, 12-ga. galvanized steel, and 8-ga. flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Barrier Gate
Shall be fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing and 7-ga. hot rolled, pickled, and oiled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). All tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tube weld connections are not acceptable.

75" Plastic Panel
Shall be fabricated from colored marine-grade, .75" high-density polyethylene and machined, be ultraviolet (UV) stabilized, and meet FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature), D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact), D-746 (Brittleness), and D-1525 (Softening Point).

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	57.76 lb.
Number of Users:	1
Pre-Consumer Recycle:	12.79 lb.
Post-Consumer Recycle:	19.66 lb.
CO2e Footprint:	217.20 kg

Upper Silo Climber

Connector
Shall be cast of regular 319 (319.0-F) aluminum and finished with a 420micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Silo Climber (using Connector)
Shall be fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing, 1.029" outside diameter, 14-ga. galvanized steel tubing, and 11-ga. hot rolled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). ASTM Specifications: A-135, A-500 and E-8.

Infill barrier (SM Rungs)
Shall be an all-welded assembly fabricated of 1.029" outside diameter, 14-ga. galvanized steel tubing, .815" outside diameter, 15-ga. galvanized steel tubing, and .188 x 2" hot rolled flat steel (See Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Super Durable Polyester Powder Coat Finish).

Barrier Gate
Shall be fabricated of 1.315" outside diameter, 14-ga. galvanized steel tubing, 11-ga. hot rolled steel, and 7-ga. hot rolled, pickled, and oiled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). All tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tube weld connections are not acceptable.

In-fill Deck
Shall be an all-welded assembly fabricated of 12-ga. hot rolled, pickled, and oiled steel. Entire deck shall have a protective coating (see Coated Finish).

.815" OD, 15-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	136.94 lb.
Number of Users:	1
Pre-Consumer Recycle:	23.55 lb.
Post-Consumer Recycle:	48.63 lb.
CO2e Footprint:	258.90 kg

12" Access Stepped Platform (Deck to Deck)

3.5" Die Cast Alloy Clamp
Shall be die cast of high-strength 380 aluminum alloy and finished with a shot blast and a powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement (see Die Cast Clamps / Castings). Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a bolt-through design are not acceptable. The use of two-piece steel half clamps is not acceptable due to poor weatherability and inherent rust problems.

Barrier (SM Rungs)
Shall be an all-welded assembly fabricated of .815" outside diameter, 15-ga. galvanized steel tubing and 1.029" outside diameter, 14-ga. galvanized steel tubing and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Coated Stair / Accessible Stair
Shall be an all-welded assembly fabricated of 14-ga. hot rolled, pickled, and oiled flat steel and 11-ga. hot rolled, pickled, and oiled flat steel. Stair surfaces shall have .34" (9 mm) holes. Entire stair assembly shall have a protective coating (see Coated Finish).

Angle Clip / Plank
Shall be fabricated of 12-ga. hot rolled, pickled, and oiled flat steel and have a protective coating (see Coated Finish).

.815" OD, 15-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	70.28 lb.
Number of Users:	1
Pre-Consumer Recycle:	10.35 lb.
Post-Consumer Recycle:	24.40 lb.
CO2e Footprint:	277.00 kg

RockBlocks Deck Access Support (36-48" Deck)

Support Access
Shall be an all-welded assembly fabricated of 1.029" outside diameter, 14-ga. galvanized steel tubing, 10-ga. galvanized hot rolled steel, and .375" hot rolled flat steel (see Tubing) and finished with a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Label
Design shall be printed on pressure-sensitive white vinyl with fade resistant inks. Shall have a P-12 adhesive backing. Printed design shall be laminated with .5 mil clear Mylar for weather resistance.

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight:	42.86 lb.
Number of Users:	1
Pre-Consumer Recycle:	2.52 lb.
Post-Consumer Recycle:	9.24 lb.
CO2e Footprint:	79.00 kg

Approach Step for Transfer Station

Kick plate / Nose Bracket
Shall be fabricated from a single sheet of 14-ga. galvanized sheet steel, have a minimum G60 galvanizing and regular spangle commercial quality, and be finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

2.375" Support Post with Plate
Shall be fabricated of 2.375" outside diameter, 12-ga. galvanized steel tubing, .125" zinc-plated, hot rolled flat steel, and 8" diameter, .25" hot rolled flat steel (see Tubing) and finished with a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Approach Step
Shall be an all-welded assembly fabricated of 11-ga. and 14-ga. hot rolled, pickled, and oiled flat steel. Approach step surfaces and sides shall be die-formed from a single sheet of 12-ga. hot rolled, pickled, and oiled flat steel. Approach step surfaces shall have .344" (8 mm) diameter holes. Entire deck weldment shall have a protective coating (see Coated Finish).

2.375" OD, 12-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	41.73 lb.
Number of Users:	1
Pre-Consumer Recycle:	4.83 lb.
Post-Consumer Recycle:	12.23 lb.
CO2e Footprint:	68.30 kg

Coated Deck to Deck Connection Kit

Hardware Reference
See General Hardware specifications.

Component Weight:	0.29 lb.
Pre-Consumer Recycle:	0.00 lb.
Post-Consumer Recycle:	0.00 lb.
CO2e Footprint:	3.80 kg

Slither Slide (Straight Section)

Rotomolded Slide Section
Shall be rotationally molded from linear low-density polyethylene and 1.315" outside diameter, 14-ga. galvanized steel tubing (see Tubing and Rotationally Molded Plastic Parts). Dry-blended or molded-in color resins are not acceptable.

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	19.59 lb.
Pre-Consumer Recycle:	.20 lb.
Post-Consumer Recycle:	0.41 lb.
CO2e Footprint:	128.10 kg

Slither Slide (Right 120° Section)

Rotomolded Slide Section
Shall be rotationally molded from linear low-density polyethylene and 1.315" outside diameter, 14-ga. galvanized steel tubing (see Tubing and Rotationally Molded Plastic Parts). Dry-blended or molded-in color resins are not acceptable.

1.315" OD, 14-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	41.68 lb.
Pre-Consumer Recycle:	0.20 lb.
Post-Consumer Recycle:	0.41 lb.
CO2e Footprint:	231.50 kg

66" Slither Slide Support Leg (Left)

Casting
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy and finished with a 420 micro finish and a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish). Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi.

Slide Support Post without Plate (SM)
Shall be an all-welded assembly fabricated of 2.375" outside diameter, 12-ga. galvanized steel tubing, and .375" hot rolled, pickled, and oiled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

2.375" OD, 12-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	26.51 lb.
Pre-Consumer Recycle:	5.63 lb.
Post-Consumer Recycle:	10.91 lb.
CO2e Footprint:	72.30 kg

30" Slither Slide Support Leg (Left)

Casting
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy and finished with a 420 micro finish and a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish). Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi.

Slide Support Post without Plate (SM)
Shall be an all-welded assembly fabricated of 2.375" outside diameter, 12-ga. galvanized steel tubing, and .375" hot rolled, pickled, and oiled flat steel (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

2.375" OD, 12-ga. Steel Tubing
Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

Component Weight:	19.91 lb.
Pre-Consumer Recycle:	4.31 lb.
Post-Consumer Recycle:	8.21 lb.
CO2e Footprint:	61.30 kg

Telescope Pipe Wall Mount

Steering Wheel Clamp
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy (see Cast Almag Clamps / Castings) and finished with a 420 micro finish and a baked-on polyester powder coating or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Telescope - Cast Aluminum
Shall be cast of regular 319 (319.0-F) aluminum and finished with a 420 micro finish and a baked-on polyester powder coating baked on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. ASTM Specifications: B-26. Federal Specifications: QQ-A- 601.

Casting
Shall be cast of regular 319 (319.0-F) aluminum and finished with a 420 micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish). Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

Bracket (Pipe Wall)
Shall be an all-welded assembly fabricated of 1.029" outside diameter, 14-ga. galvanized steel tubing and .188" zinc-plated, hot rolled flat steel (see Tubing) and finished with a baked-on polyester powder coat or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

1.029" OD, 14-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

Component Weight	12.23 lb.
Number of Users:	1
Pre-Consumer Recycle:	2.60 lb.
Post-Consumer Recycle:	4.14 lb.
CO2e Footprint:	60.50 kg

60-84" RockBlocks Wall (90°)

Handhold
Hand grips shall be manufactured of polyurethane and are uniquely textured for slip resistance. Hand grips

must be also formulated to withstand extreme impacts and be highly resistant to ultraviolet (UV) light and chemicals. Hand grip material must be manufactured from materials having a proven record in the climbing industry. Each hand grip shall be recessed into the climbing structure with a shape unique to the individual hand grip. Hand grips not recessed can rotate or turn and are not acceptable. Hand grips must have a bolt-through design which connect and secure opposing hand grips to each other. A single wall bolt-on design can collapse and tear out the plastic structure and is not acceptable. Hand grips shall have a Lifetime Warranty.

Wall Section
Shall be rotationally molded from linear low-density polyethylene (see RockBlocks). Dry-blended or molded-in color resins are not acceptable.

Component Weight:	119.07 lb.
Number of Users:	4
Pre-Consumer Recycle:	0.00 lb.
Post-Consumer Recycle:	0.00 lb.
CO2e Footprint:	824.20 kg

Surfacing Warning Label Kit

Surfacing Warning Label
Shall be a pressure-sensitive adhesive white vinyl label laminated with clear Mylar for weather resistance and feature the following text: Warning! Installation over a hard surface such as concrete, asphalt, or packed earth may result in serious injury or death from falls. The label shall be tamper resistant.

Component Weight:	0.05 lb.
Pre-Consumer Recycle:	0.00 lb.
Post-Consumer Recycle:	0.00 lb.
CO2e Footprint:	0.50 kg

Pipe Systems Maintenance Kit

Surfacing Warning Label
Shall be a pressure-sensitive adhesive white vinyl label laminated with clear Mylar for weather resistance and feature the following text: Warning! Installation over a hard surface such as concrete, asphalt, or packed earth may result in serious injury or death from falls. The label shall be tamper resistant.

CD
Shall contain all installation and maintenance information for the ordered equipment, as well as web links and other pertinent information.

Aerosol Paint (4.5-oz. Can)
Shall contain aerosol spray paint matching the component / post color for touch-ups.

Aerosol Primer (4.5-oz. Can)
Shall contain rust-resistant gray aerosol spray primer to apply as a first coat for touch-ups.

Graffiti Removal Kit
Shall contain 12 premoistened towelettes. Ingredients shall be environmentally safe, biodegradable, and VOC compliant.

Sandpaper
Shall consist of 1 sheet each of 80, 100, and 150 grit sandpaper.

Hardware Kit
Shall include assorted hardware, hex wrenches, and screw driver bits common to composite playground structures (see Hardware).

Maintenance Program Box
Shall contain all appropriate documentation and repair materials for the ordered equipment and be labeled with the name of the playground.

Component Weight: 13.07 lb.
Pre-Consumer Recycle: 0.08 lb.
Post-Consumer Recycle: 0.41 lb.
CO2e Footprint: 89.80 kg

Additional Tools and Parts Kit

Aerosol Paint (4.5-oz. Can)
Shall contain aerosol spray paint matching the component / post color for touch-ups.

Hardware Kit
Shall include assorted hardware, hex wrenches, and screw driver bits common to composite playground structures (see Hardware).

Component Weight: 3.46 lb.
Pre-Consumer Recycle: 0.00 lb.
Post-Consumer Recycle: 0.00 lb.
CO2e Footprint: 74.50 kg

36 x 36 x 1.5" Wear Mat

Cushion Mat
Shall be manufactured of recycled SBR rubber with a polyurethane binder, contain no less than 88% recycled tire rubber by weight, and be rated for a 4' (1220 mm) critical fall height (ASTM F-1292). Tensile Strength shall be 187 psi (ASTM D- 412). Tear Strength shall be 64 psi (ASTM D-642).

Component Weight: 55.01 lb.
Pre-Consumer Recycle: 0.00 lb.
Post-Consumer Recycle: 48.95 lb.
CO2e Footprint: 47.30 kg

Belt Seat with Silver Shield Chain for 96" Top Rail

Chain
Shall have an ASTM B695, Type 1, Class 40 A, 1.7 mil zinc coating equal in corrosion protection to a hot dip galvanized zinc finish and meet ASTM B454 and Mil-C-81562A for mechanical zinc coating required by SATM A-153, Class D.

Swing Seat Belt
Shall be fabricated from .5" (13 mm) thick ethylene propylene diene monomer with a T-301 full hard .020" (.51 mm) carbon steel insert. A triangular galvanized steel bracket and plate shall be secured to seat with galvanized rivets for chain attachments. The seat shall be slash-proof.

Component Weight: 8.80 lb.
Number of Users: 1
Pre-Consumer Recycle: 4.99 lb.
Post-Consumer Recycle: 2.72 lb.
CO2e Footprint: 53.90 kg

Infant Seat with Silver Shield for 96" Top Rail

Chain
Shall be a 4/0 hot dipped galvanized welded link chain made of low-carbon 1008 steel with a Rockwell rating on the B scale of about 90. The working load limit for this chain shall be 670 lb.

Swing Seat for Infant/Toddler
Shall be fabricated from .5" (13 mm) thick ethylene propylene diene monomer with a T-301 full hard .020" (.51 mm) carbon steel insert. A triangular galvanized steel bracket and plate shall be secured to seat with galvanized rivets for chain attachments. The seat shall be slash-proof.

Component Weight:	11.31 lb.
Number of Users:	1
Pre-Consumer Recycle:	1.76 lb.
Post-Consumer Recycle:	0.96 lb.
CO2e Footprint:	89.70 kg

96" Single Post Swing Assembly

Swing Clevis
Shall be manufactured of superior grade cast ductile iron and galvanized and have an integrated bronze bearing.

3.5" Swing Hanger / Band
Shall be manufactured of superior grade cast ductile iron and galvanized and finished with a baked-on polyester powder coat (see PrismCoat / Superdurable Polyester Powder Coat Finish). The swing hanger and band together shall have an ultimate tensile load of 5000 lb.

3.5" Swing Top Rail with 5" Clamps
Shall be an all-welded assembly fabricated of 3.5" outside diameter, 8-ga. galvanized steel tubing and .25" hot rolled flat steel (see Tubing) and finished with a baked-on polyester powder coat or PrismCoat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

5" Cast Clamp Band
Shall be cast of high-strength Almag 35 (535.0-F) aluminum alloy and finished with a 420 micro finish and a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

3.5" OD, 8-ga. Steel Tubing
Tensile strength shall be 48,000 psi. Yield strength shall be 45,000 psi.

5" OD, 11-ga. Steel Tubing
Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

5" Support Post
Shall be fabricated of 5" outside diameter, 11-ga. galvanized steel tubing (see Tubing) and finished with a baked-on polyester powder coating (see PrismCoat / Superdurable Polyester Powder Coat Finish).

Component Weight:	264.58 lb.
Amount of Concrete:	0.26 Yds.
Pre-Consumer Recycle:	48.18 lb.
Post-Consumer Recycle:	98.77 lb.
CO2e Footprint:	471.40 kg

96" Single Post Swing Add-a-Bay

Swing Clevis
Shall be manufactured of superior grade cast ductile iron, zinc-plated for optimal surface protection, have an integrated bronze bearing pressed in after powder coating, and be finished with a baked-on polyester powder coat (see PrismCoat / Superdurable Polyester Powder Coat Finish).

3.5" Swing Hanger / Band
Shall be manufactured of superior grade cast ductile iron and galvanized and finished with a baked-on polyester powder coat (see PrismCoat / Superdurable Polyester Powder Coat Finish). The swing hanger and band together shall have an ultimate tensile load of 5000 lb.

3.5" OD, 8-ga. Steel Tubing
Tensile strength shall be 48,000 psi. Yield strength shall be 45,000 psi.

Component Weight:	174.09 lb.
Amount of Concrete:	0.13 Yds.
Pre-Consumer Recycle:	31.02 lb.
Post-Consumer Recycle:	63.59 lb.

CO2e Footprint:	343.10 kg

Wheelchair Access Ramp for Border Timbers

Anchor Stake
Shall be fabricated of A-36 galvanized steel bar having a tensile strength of 80,000 psi. and yield strength of 36,000 psi.

Rotomolded Wheelchair Access Ramp
Shall be rotationally molded from linear low-density polyethylene (see Rotationally Molded Plastic Parts). Dry-blended or molded-in color resins are not acceptable. Ramp dimensions shall be 79.1 x 50.5 x 11.8".

Plate
Shall be fabricated from a single sheet of 7-ga. hot rolled, pickled, and oiled flat steel and finished with a protective coating (see Coated Finish).

Component Weight:	123.91 lb.
Pre-Consumer Recycle:	2.04 lb.
Post-Consumer Recycle:	7.48 lb.
CO2e Footprint:	494.70 kg

48" Border Timbers with Stake

Blow-molded Component
Shall be blow-molded from linear polyethylene.

Anchor Stake
Shall be fabricated of A-36 galvanized steel bar having a tensile strength of 80,000 psi. and yield strength of 36,000 psi.

Component Weight	10.31 lb.
Pre-Consumer Recycle	7.00 lb.
Post-Consumer Recycle	0.00 lb.
CO2e Footprint	19.90 kg

PlayPod
Shall be a device that allows 24/7 Internet access (via mobile device) to important equipment information. This device MUST be attached DIRECTLY to the equipment or to ASTM-approved signage in the play area.

The device must contain a code that can be easily scanned by a mobile device (e.g. smartphone). Information available from the scan MUST include maintenance documents, part numbers with picture references, local dealer/distributor and manufacturer information, customer service links and contact information, the manufacturer date(s) of equipment, and any drawing or order numbers associated with the equipment.

PlayPod for Specific Design

PlayPod Card Panel
Shall be fabricated of .250" (6 mm) thick Modulite fiberglass-reinforced plastic (FRP) panels. Modulite is a non-yellowing, R-70 clear resin (a UV stabilized, acrylic-modified polyester resin) reinforced with a highly-soluble, chopped-strand, fiberglass mat. Glass content shall be no less than 28% of total sign weight. Glass fibers should not be readily discernible on the sign face, which shall have custom, digitally printed graphics inseparable from the panel to disallow delamination. Ambient temperature range shall be -65-350° F. Minimum Barcol hardness shall be 50. Tensile strength shall be 12,000 psi. Compressive strength shall be 20,000 psi. Flexural strength shall be 18,000 psi. Minimum impact strength shall be 6 ft./lb. Fire resistance shall be 500° F. Material shall not be permanently defaced by steam, acids, aromatics, scratching, inks, or paints and shall be readily cleaned with paint remover and solvents without affecting appearance or legibility of the finish or graphics. Panel shall have a semi-gloss finish. Edges must not be crazed or cracked, but be smooth and clean. Laminated panels are not acceptable.

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Component Weight:	0.46 lb.
Pre-Consumer Recycle:	0.18 lb.
Post-Consumer Recycle:	0.22 lb.
CO2e Footprint:	16.50 kg

SUBMISSION OF BIDS

Bids should be itemized according to the table below. Bidders may choose to include more detail, but, at a minimum, bids MUST include the line items in the table. Installation costs for surfacing should be included with the cost of surfacing. The City requests that bidders submit a SEPARATE cost estimate for the concrete slab, including installation. The City may elect to install the slab itself.

Line Item	Cost
1. Reinforced Wood Fiber Surfacing and Mats (under Swings):	
2. Swings:	
3. Poured-in-place Playground Surfacing (including Installation):	
4. Playground Equipment:	
5. Freight:	
6. Project Management for Community Build:	
Subtotal:	
7. OPTIONAL Concrete Slab (including Installation):	
Total:	