NOTE TO CONSULTANTS: Edit with Track Changes turned on, any text in this section that appears in bold and italics then turn off the bold and italics for the final approved version. (Remove this Note).

PART 1 - GENERAL

1.01 Scope of Work: Furnish all labor, materials and equipment required to install the Grandstand Bleachers as specified herein or as otherwise approved by the Engineer. Said work shall include any incidentals required to provide a finished job. Work described under this Section may require a Building Permit from the City of Seattle Department of Planning and Development (DPD).

1.02 Submittals: Submit the following seven (7) days following award of contract.

A. Submit the following samples:

1. Seatboard
2. Footboard
3. Riserboard
4 Handrail support post end cap
5. 12-inch (12”) by 12-inch (12”) sample of chain link fabric

B. Seating Plan indicating aisles, walkways, seating sections and exits.

C. End Elevation indicating rise and row depth, deck configuration, railings, size of framing members, and walkways.

D. Schedule of Work Experience, including names of contacts and phone numbers (5 jobs minimum).

E. Resume including: Corporate Officers, Sales Representatives, Technical Advisor, Project Manager and Job Site Superintendent.

F. Project Schedule, including phasing with other trades and designation for all tasks, milestone dates for drawing submittal, fabrication time, key material delivery dates and designated dates of installation.

G. All structural calculations, shop drawings and product submittals shall be stamped and signed by a Structural Engineer (PE) licensed in the State of Washington.

1.03 Approvals: Any deviation from any item in overall specs shall be submitted to the Engineer no later than seven (7) days prior to installation for approval. This submittal shall include calculations by a Professional Engineer (PE) showing that the deviations meet or exceed the specified items that they are intending to replace. Failure of the Contractor to comply with this requirement is cause for rejection of the product submittal.

1.04 Design Criteria:

A. All materials and workmanship shall be in accordance with the following:

1. Aluminum Association of America
2. Uniform Building Code

B. Design Loads:

Dead Load	6 psf	seat and foot boards risers, steel frame, etc.
Live Load	120 psf	to structural member
	160 psf	seat boards over a 6 foot span, multi-span condition
	140 psf	footboards (individually) over a 6 foot span, multi-span condition
Wind	30 psf	on projected vertical surface
Sway	24 psf	parallel per foot of seat parallel to seat run
	10 psf	perpendicular per foot of seat

C. Understanding Criteria: The following criteria are used to establish a minimum requirement for strength, stiffness, and rigidity of the understructure components.

	Vertical	Horizontal
Moment of inertia	0.822	0.734
Section Modulus	0.576	0.863
Radius of Gyration	0.975	0.909

D. Code Compliance:

Work executed under this Section shall comply with all local, state and federal governing codes, ordinances, and regulations.

1.05 Quality Assurance:

A. Manufacturer: Company specializing in spectator seating with a minimum of 10 years experience in manufacturing bleacher seating.

B. Engineer Qualifications: Grandstand bleacher shall be designed under the supervision of a registered professional engineer. All plans shall be reviewed, stamped and signed by a structural engineer, registered in the State of Washington.

C. Product liability: Certification of Insurance coverage for the life of the product.

D. Warranty: Bleachers shall be guaranteed for five years against defective material or workmanship. Damage resulting from abnormal use, vandalism, or incorrect installation (if done by other than an installer of the manufacturer) is not applicable.

PART 2 - PRODUCTS

2.01 General: The same manufacturer shall manufacture all components of the grandstand bleacher system. Components shall be shipped in their original packing crates.

2.02 Acceptable Manufacturers: The grandstand bleacher shall be manufactured by the following:

A. Dant Clayton Corporation
1500 Bernheim Lane
P.O. Box 74008
Louisville, KY 40201-7408
Phone # 1 (800) 626-2177

B. National Recreation Systems
Local Rep.: Sitelines Park & Playground Products (800) 541-0869.

C. Or, approved equal.

2.03 Materials:

A. Understructure:

1. Understructure shall be fabricated from 6061-T6 alloy aluminum extrusions.
2. Vertical members shall be 2-7/8 inch o.d. round tubing or 2-7/8-inch square tubing. Angles, channels, t-shapes, or other configurations are not acceptable.
3. Horizontal members and footboard supports shall be 3-inch by 2-7/8-inch channel.
4. Cross-braces and diagonals shall be 2-1/4 inch by 7/8-inch channel.
5. Handrail support shall be 2-5/8-inch O.D. tubing.
6. The understructure shall be assembled from the above items in an interlocking design with 7/16-inch by 3-1/2-inch hot dipped galvanized bolts.
7. The structure shall be designed so that in the event of accidental damage the sub-component parts may be replaced using common hand tools. Field welding for repair purposes shall not be considered.

B. Guardrail Systems:

1. Handrails shall be of anodized aluminum extruded channel, 3-inches by 2-7/8-inch, 6061-T6 alloy, anodized to clear 204R1.
2. The guardrail system shall be of interlocking design with positive through bolt fastening. The top rail shall be designed to fully cover the rail support posts for a totally snag-free area and eliminate the potential of sharp edge contact with the bleacher users.
3. Grab-rails shall be extruded aluminum pipe of 6061-T6 alloy, 1-15/16-inch O.D.
4. Chain link fence shall be 2-inch mesh, 9-gauge galvanized fabric.

C. Extrusions:

1. Seats shall be 6063-T6 extruded aluminum with a fluted surface and a wall thickness of 0.78 inch. Seatboards shall be a minimum of 9-1/2-inch wide actual, with outside legs of 1-3/4 inch actual vertical height, and shall have two internal legs with a vertical height of 2=5/8-inch. Seatboards shall attach with one 3/8-inch diameter bolt and shall be designed for positive physical fastening. Bolt clips, bolt runners or other friction type fastening devices are not acceptable. Seats shall have a 204R1 anodized finish.
2. Footboards shall be 6063-T6 extruded aluminum with a fluted surface and a wall thickness of 0.078 inch. Each footboard member (individually) shall have two internal legs with 2-1/8 inch actual vertical height. All footboards shall attach without the use of hardware. Attachment shall be positive snap and interlock with the support structure. Use of bolt clips, bolt runners, or other friction type fastening devices is not acceptable. Footboards shall be mill finish.
3. Riserboards shall be 6063-T6 extruded aluminum and shall be anodized 204R1 clear.

D. Aisles: Shall be designed so that all vertical and horizontal areas within the 6-foot bay of the aisles area shall be fully closed.

E. Hardware:

1. Bolts used for field installation shall be hot dipped galvanized.
2. Primary connections, i.e. seat, cross-brace, handrail (rail and posts) shall be made with minimum of 3/8-inch diameter hardware.
3. End Caps: All end caps (seatboard, footboard, and handrail) shall be cast aluminum.

2.04 Typical Components:

Number of rows: ***9***
Overall length: ***33 feet***
Rise per row: ***8-inches***
Depth per row: ***24-inches***
Gross seating capacity: ***162 (based on 18-inches per seat)***
Footboard decking system to be: ***fully closed***
Riserboards shall be: ***2 inch thick by 10 inches wide***
A Handrail/Guardrail Safety System is required at each end of the grandstand, at the rear of the grandstand and at each aisle.

PART 3 - EXECUTION

3.01 Installation:

A. The grandstand bleacher is a free-standing unit. No attachment to the floor or wall is required

B. The grandstand bleacher shall require a minimal expenditure of time to be assembled for use. It will not be necessary to assemble underframe, distinguishing between anodized and mill finishes, field drill, install rivets, attach ground sills, establish overhang distance, or select different hardware.

C. Installation: Shall be handled directly by the manufacturer or by a factory certified installation subcontractor.

D. Erect per the plans, details, shop drawings, specifications and manufacturer's recommendations, as required.

E. Exact location of the bleacher shall be as directed by the Engineer in the field.

3.02 Cleaning:

A. Clean all surfaces according to manufacturer's recommendations.

B. Remove all packaging and construction debris.

END OF SECTION