

**VILLAGE OF ALLEGANY  
SPECIFICATIONS FOR AN HYDRAULICALLY OPERATED  
HOPPER TYPE MATERIAL SPREADER**

It is the intent of these specifications to describe a truck engine powered, hydraulically controlled all purpose conveyor type hopper body spreader for salt, sand, chlorides, mixtures and chips.

The material spreader is to be used for sanding icy highways. All parts and attachments not specifically mentioned but necessary to furnish complete equipment shall be included.

The exact machine design and/or model quoted on shall have been in successful use for five or more years. Proto-type or unproven units may not be acceptable. Bids that do not fully comply with these minimum specification requirements may not be considered.

Bidders must respond to each section of the specification with a "yes" or "no" for each section. If the "yes" box is checked, the bidder is expected to supply exactly what is described. If the "no" box is checked, a detailed explanation of the deviation must be provided, on this form or on a separate sheet of paper, no matter how minor it may be. Failure to respond to either "yes" or "no", the bid may be rejected for non-compliance.

<b>YES</b>	<b>NO</b>
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**HOPPER:**

The hopper shall have a minimum level capacity of 5.5 cubic yards.

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The hopper shall be fully welded construction of 10 gauge type 304 stainless steel and have 45° side slopes.

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The hopper side sheet and conveyor shall be constructed from one sheet of steel so there are no horizontal welded seams that are prone to rust, corrosion or cracking.

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The hopper discharge shall have a 90° slope and the rear wall a slope of 23°.

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The hopper cross sills shall be a minimum of 3" formed channel with a minimum thickness of 7 gauge.

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SPECIFICATIONS FOR AN HYDRAULICALLY OPERATED HOPPER TYPE MATERIAL SPREADER CONTINUED

YES	NO
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The top edge of the hopper at front, rear and sides shall be formed to produce a strong, non-conforming reinforced edge.

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The hopper body shall be arranged for receiving hinged top screens and/or "built-in" hopper extensions.

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The hopper dimensions not to exceed 9 feet in length, 82 inches in width and 52 inches in height.

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**CONVEYOR:**

Material shall be conveyed from hopper to distributor disc by means of a 24" wide conveyor.

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Flights shall be not more than 4 1/2" on center and 3/8" x 1 1/2" in cross sections.

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Conveyor shall operate on a 3/16" thick stainless steel slide in replaceable wear plate, which is fully supported by angle welded to the underside of the wear plate.

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The wear plate shall be equipped with rear conveyor chain wiper and flexible conveyor seal at opposite ends.

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Formed 10 gauge stainless steel aprons/shields shall protect the conveyor chain.

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The discharge gate shall have 204 square inches of area with crank actuated jack control.

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Lower edge of feed gate shall be fitted with flexible seal and shall be bolted to discharge wall.

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SPECIFICATIONS FOR AN HYDRAULICALLY OPERATED HOPPER TYPE MATERIAL SPREADER CONTINUED

YES	NO
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A spring-cushioned front conveyor roller idler shall be provided adjustable for tension adjustment over a 4" range and shall be self-compensating.

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The bearings shall be relubricable type and be easily accessible for service.

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**HYDRAULIC MOTOR POWERED CONVEYOR & DISTRIBUTOR DISC:**

The conveyor drive shall be a direct coupled hydraulic motor and provide variable speeds.

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The conveyor motor shall have an R.P.M / G.P.M factor not greater than 52.

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It shall have a maximum pressure rating of 2000 PSI and shall develop a minimum torque of 1050 inch pounds at 1500 PSI.

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The worm drive reduction unit shall have a ratio of 50:1 to operate the chain conveyor.

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The driving, or tail shaft of the conveyor assembly shall be constructed out of 1/4" thick type 304 stainless steel.

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The conveyor assembly shall be an integral part of the power transfer assembly and shall incorporate a 2" diameter drive shaft supported by a flange bearing.

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The drive shaft shall have two (2) dropped forged sprockets with 8 teeth with a 5.875" pitch diameter.

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The worm drive assembly, including the 2" diameter tail shaft, shall be removable from the spreader without requiring the shifting or removal of either conveyor sprockets or any bearings.

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SPECIFICATIONS FOR AN HYDRAULICALLY OPERATED HOPPER TYPE MATERIAL SPREADER CONTINUED

YES	NO
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Distributor disc shall be constructed out of poly and a minimum size of 20" diameter and have at least six molded vanes that are directional, discs with non directional vanes will not be acceptable.

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A direct-coupled hydraulic motor shall drive the distributor disc.

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Distributor chute assembly shall be constructed out of 10 gauge type 304 stainless steel, be fully enclosed and have two internal deflectors to provide desired spread pattern to the right, left, or directly behind the spreader.

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The internal deflectors shall be constructed of 10 gauge stainless steel.

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The spinner disc motor shall have an R.P.M. / G.P.M. factor not greater than 107.

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It shall have a torque rating not less than 68 inch pounds at 200 PSI

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Four deflectors shall be provided to regulate the pattern of spread from 8 to 40 feet and the deflectors and distributor disc shall be adjustable vertically.

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Three out of the four material deflectors shall be adjustable. The front shall be fixed (toward truck). The four material deflectors shall not overlap at the comers.

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The deflectors shall be controlled by a sliding flat bar assembly eaisily adjustable without tools.

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The distributor disc and chute assembly can be easily tipped up or removed for unloading unused material, for stockpiling, windrowing, or for ground storage.

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SPECIFICATIONS FOR AN HYDRAULICALLY OPERATED HOPPER TYPE MATERIAL SPREADER CONTINUED

YES	NO
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High and low pressure hydraulic lines complete with no drip quick couplers and dust caps adequately long to reach truck frame rear cross members shall be provided.

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Hydraulic system designed for an existing dual flow cab control valve.

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**DUMP BODY MOUNTING:**

The hopper shall have four clamps made of 3/8" x 3" steel with treaded rod take-up to lock it to the dump body sides. There shall be a tailgate latch bar made of 1" shaft welded to 3/8" angle iron to secure the rear of the hopper to the dump body tailgate latch.

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**TOP SCREENS:**

Hopper shall be equipped with heavy duty top screens, hinged from a center longitudinal structural pipe of not less than 4" in diameter.

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Screen shall be fabricated of 3/8" high tensile steel rods and 1/4" x 2" flat iron, on edge, welded into frame of 1/4" x 2" steel and securely hinged to the central longitudinal tubular member with pins of no less than 3/4" diameter.

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Screens shall have maximum openings of 2 1/2"

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Screen shall not extend over the edge of the hopper and shall be pitched not less than 3 5/8" from center.

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Top screens shall be primed and then painted with rust inhibitive paint.

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**OPTIONAL - STAINLESS STEEL SAFETY LIGHT BAR:**

Spreader shall be equipped with a 58" wide safety light bar constructed out of 14 gauge type 304 stainless steel.

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SPECIFICATIONS FOR AN HYDRAULICALLY OPERATED HOPPER TYPE MATERIAL SPREADER CONTINUED

<b>YES</b>	<b>NO</b>
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All lights shall have a protective 14 gauge type 304 stainless steel cover to prevent material overflow from damaging the lights.

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The following lights shall be included with the light bar:

A center cluster consisting of at least three (3) led lights (colors to be determined).

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Two (2) stop/directional lights

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Two (2) amber 7" diameter led flasher lights

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Two (2) white 4" diameter adjustable spot lights

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All electrical wiring behind the light bar shall be contained in a 3/4" diameter convoluted loom and protected with robber grommets where applicable.

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The electrical wiring leaving the light bar shall be heavy duty 12/7 electrical wire with a non-corrosive protective cover, which is secured to the light bar with a wire clamp. The use of metal conduit to protect the electrical wires is not acceptable.

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The light bar shall include a male and female plastic housing 7-prong electrical connector.

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**PAINTING:**

The entire material spreader shall be properly prepared, cleaned, polished and left unpainted stainless steel. All other surfaces shall be properly prepared, primed and be painted.

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<b>YES</b>	<b>NO</b>
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**DELIVERY:**

Equipment shall be furnished fully serviced and assembled.

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Operators and parts manual shall be supplied covering the entire material spreader.

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**WARRANTY:**

A one year warranty covering the material spreader for materials and workmanship is to be included in the bid price.

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Distributor or representative shall have a service and parts facility within 100 miles of the end user's garage.

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The distributor facility must have adequate stock of parts and mechanics trained to work on their material spreader(s).

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Please Indicate Location of Service / Parts Facility:

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