

MINIMUM SPECIFICATIONS AND BID FORMS
FOR
CUTTING EDGES AND SHOES
FOR GRADERS, PLOWS AND WINGS
FOR
CATTARAUGUS COUNTY DEPARTMENT OF PUBLIC WORKS
HIGHWAY DIVISION

OFFICE OF THE CLERK
CATTARAUGUS COUNTY LEGISLATURE
303 Court Street
Little Valley, NY 14755

TABLE OF CONTENTS

	PAGE
Notice to Bidders.....	1
Instructions to Bidders	2
Detailed Specifications	5-17
Product Index Sheet.....	18
Product Index Bid Form	19
Non-Collusive Bidding Certification.....	20
Legal Status Information	21
Bid for Performance.....	22
Iran Divestment Act of 2012	23

CATTARAUGUS COUNTY

DEPARTMENT OF PUBLIC WORKS

Development – Progress – Workmanship

Joseph T. Pillittere
Commissioner

Ryan J. Ferguson
Deputy Commissioner

Mark C. Burr, P.E.
Director of Engineering



Jack Ellis Drive
8810 Route 242
Little Valley, New York 14755
Phone (716) 938-9121
Fax (716) 938-2753

ADVERTISEMENT FOR BIDS

Sealed bids for the purchase of certain materials, equipment, and/or services, for the Cattaraugus County Department of Public Works, according to specifications, will be received by the undersigned, at the Department of Public Works Facility, 8810 Route 242, Little Valley, New York, until **Friday, August 19, 2016 at 1:45 P.M.** after which they will be publicly opened at **2:00 P.M.** (at the *same location*), by the undersigned, under the direction of the Public Works Committee of the Cattaraugus County Legislature. Each bid, at the time it is received, will be stamped showing date and time of receipt.

ALL BIDS MUST BE SEALED AND CLEARLY MARKED: (Delivered to the address above)
Any bid not clearly marked will not be considered.

DPW BID #60 - Cutting Edges & Shoes for Graders, Plows & Wings

Bidding sheets and instructions may be obtained at the Cattaraugus County Department of Public Works, 8810 Route 242, Little Valley, New York, 14755. Phone Dawn Smith at 938-9121 Ext. 2465.

All bids must be sent or delivered to Cattaraugus County Department of Public Works, 8810 Route 242, Little Valley, NY 14755, Attention: Dawn Smith.

All bids must be accompanied by a NON-COLLUSIVE BIDDING CERTIFICATE. Any bid submitted without such certification will not be accepted.

Any bid not meeting ALL specifications will not be considered. All bids received are subject to all federal and state controls concerning any such equipment, materials and/or services.

The County Legislature reserves the right to reject any or all bids, to waive any informalities, and to accept the lowest responsible bid.

John Searles
County Administrator
County Center - 303 Court Street
Little Valley, New York 14755

INSTRUCTIONS TO BIDDERS

DPW MATERIALS

1. BID FORM

Bid shall be submitted on these Cattaraugus County bid forms or bid will not be considered. Bid must be typed or printed in ink. Original autograph signatures in ink are required. Facsimile or rubber stamp signatures will not be accepted. All blanks must be filled in with required information or, if a bid item, the designation N/B (no bid).

2. CHANGES

Any change in wording or interlineation by a bidder of the inquiry as published by Cattaraugus County shall be reason to reject the proposal of such bidder, or in the event that such change in the Invitation to Bid is not discovered prior to entering into a contract, to void any contract entered into pursuant to such bid.

3. INFORMALITIES

The County may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. The contract award will be made to the responsible bidder submitting the lowest acceptable bid. Conditional bids will not be accepted.

4. BID TIME

Any bid may be withdrawn prior to the above scheduled time for the opening of bids, or authorized postponement thereof. Any bid received after the time specified shall not be considered.

5. INVESTIGATIONS

The County may make such investigations as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the County all such information and data for this purpose as the County may request. The County reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the County that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

6. BID ENVELOPE

Each bid must be submitted in a sealed envelope clearly marked as to contents therein, bearing on the outside the name and address of the bidder. If sent by mail, the sealed envelope containing the bid must be enclosed in another envelope labeled as specified.

7. NON-COLLUSIVE CERTIFICATION

Non-collusive bidding certification shall be made by each bidder in the form provided and shall be submitted as a part of the bid. Bids submitted without non-collusive bidding certification will be considered irregular and may be rejected by the County.

8. CONTRACT AWARD

Contract(s) or purchase order(s) will be awarded after due consideration of the suitability of goods and/or services bid to satisfy these specifications, the total cost of such goods and/or services including all cost elements, and the timeliness of the agreed delivery date.

9. REFERENCES

A list of references for whom the bidder has done work in the past must accompany the bid. If a bidder cannot provide a list of references, including at least one reference located in Western New York, the County reserves the right to require a performance bond in an amount to be determined by the Public Works Committee in a format acceptable to the County Attorney. The cost of such bond shall be absorbed by the bidder.

10. EXECUTORY CLAUSE

This executory clause shall be a part of any agreement entered into pursuant to this bid:

It is understood by the parties that this agreement shall be executory only to the extent of the monies available to the County of Cattaraugus and appropriated therefor, and no liability on account thereof shall be incurred by the County beyond the monies available and appropriated for the purpose thereof.

11. DELIVERY SCHEDULE

Failure to meet delivery schedule as per accepted bid may result in legal action by Cattaraugus County to recover damages.

12. PRICES

Prices shall be quoted F.O.B. destination delivered inside and installed, or in the manner mentioned in specifications. "Tailgate delivery" will not be accepted unless specified by the County.

13. TRANSPORTATION CHARGES

Collect transportation charges will not be paid by the County. All freight, cartage, rigging, postage or other transportation charges shall be prepaid, unless otherwise stated in the Detailed Specifications herein.

14. TAXES

No taxes are to be billed to the County. Bid shall not include any Federal, State, or local excise, sales, transportation, or other tax unless Federal or State law specifically levies such tax on purchases made by a political subdivision. Any applicable taxes from which the County is not exempt shall be listed separately as cost elements, and added into the total net bid.

15. COMPLIANCE WITH LAWS

The successful bidder shall comply with all laws, rules, regulations and ordinances of the Federal Government, the State of New York and any other political subdivision or regulatory body which may apply to its performance under this contract.

16. DISCRIMINATION

The successful bidder agrees:

- (a) that in the hiring of employees for the performance of work under this contract or any subcontract hereunder, no contractor, subcontractor, nor any person acting on behalf of such contractor or subcontractor, shall by reason of race, creed, color, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;
- (b) that no contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, creed, color, sex or national origin;
- (c) that there may be deducted from the amount payable to the contractor by Cattaraugus County under this contract a penalty of fifty dollars for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the contract;
- (d) that this contract may be canceled or terminated by Cattaraugus County and all monies due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this section of the contract; and
- (e) the aforesaid provisions of this section covering every contract for or on behalf of Cattaraugus County for the manufacture, sale or distribution of materials, equipment or supplies shall be limited to operations performed within the territorial limits of the State of New York.

(N.Y. State Labor Law Article 8 Section 220-e)

17. CONTRACT ASSIGNMENTS

The bidder shall not assign, transfer, sublet, or otherwise dispose of this contract, or of its right, title or interest in the contract, or its power to execute the same, to any other person or corporation without the previous consent, in writing, of the Chairman of the Cattaraugus County Legislature.

18. CASH DISCOUNT

Any cash discount which is a part of a bid will be considered as a reduction in the bid prices in determining the award of the bid. Date of invoice must not precede date of delivery. The County policy is to pay all claims in a timely manner within the specified time. However, if for some reason payment is delayed, the County will take the discount when payment is made. If this is unsatisfactory, please quote net. The County will not pay any interest charges.

19. MANUFACTURERS

Where required on an individual bid sheet, the bidder must specify the trade name of the material on which the price is quoted.

20. ALTERNATE MANUFACTURERS

Bid offering material other than that of specified manufacturer or trade name will be considered unless stated otherwise. The use of the name of a particular manufacturer, trade name, or brand in describing an item does not restrict a bidder to that manufacturer or specific article. However, the substituted article on which a proposal is submitted must be of such character or quality that it would serve the purpose for which it is to be used equally as well as the manufacturer or brand specified. Proposals will be accepted in accordance with specifications on file or approved equal.

21. ALTERNATE ITEMS

If material or services other than those specified in this bid document are offered, the bidder must so state and furnish at the time of bid opening, if so requested, and as part of his bid the following information in duplicate:

- (a) Complete description of the item offered, and detailed explanation of the differences between the item specified and the item offered. If, in the opinion of the Department Head, sufficient detail is not presented as a part of the sealed bid to permit definite evaluation of any substitute item, the bid will not be considered.
- (b) Descriptive literature of item offered, for evaluation.
- (c) List of installations in Cattaraugus County of the item offered.
- (d) List of other installations.

22. ADDITIONAL INFORMATION

Any additional information which bidder desires to add to the bid shall be written on a separate sheet of paper, attached to, and submitted with, the formal sealed bid, to be read at the formal opening.

23. WORKMANSHIP

Workmanship must meet with the approval of the department head or heads involved, and shall be first class in every respect without exception and shall be equal to the best modern practices. Materials furnished are to be new and unused. All materials furnished or work performed are to be guaranteed free from defects. Anything found defective or not meeting specifications, no matter in what state of completion, may be rejected and shall be made good by the bidder at his own expense.

24. HOLD HARMLESS

The successful bidder to whom the bid is awarded shall indemnify and hold harmless Cattaraugus County and its agents and employees from and against all claims, damages, losses or causes of action arising out of or resulting from such vendor's performance pursuant to this bid.

25. BID VALIDITY

This bid is firm and irrevocable for a period of 45 days from the date and time of the bid opening. If a contract is not awarded within the 45 day period, a bidder to whom the bid has not been awarded, may withdraw his bid by serving written notice of his intention to do so upon the Clerk of the County Legislature. Upon withdrawal of the bid pursuant to this paragraph, the County will forthwith return the bidder's security deposit.

26. CONTRACT INTEREST

No official, or employee of the County, who is authorized in such capacity, and on behalf of the County, to negotiate, make, accept or approve or to take part in negotiating, making, accepting, or approving this contract shall become directly or indirectly interested personally in this contract or in any part hereof. No officer or employee of, or for the County, who is authorized in such capacity, and on behalf of the County, to exercise any supervisory, administrative, or other function, in connection with this contract, shall become directly or indirectly interested personally in this contract or in any part hereof.

27. OTHER CUSTOMERS

Prices charged to Cattaraugus County are to be no higher than those offered to any other governmental or commercial consumer. If a bidder has a New York State or a Federal GSA contract for any of the items covered in this bid or any similar items, he shall so indicate that he has said contract on these bid papers and supply a copy of this contract within 5 days if so requested by the County.

28. PRICE IS FIRM

The unit prices bid shall remain firm, and any other charges bid shall also remain firm, for delivery of the equipment, material, work, or services described in this bid with the exception of the asphalt, aluminum, propane gas, diesel fuel, kerosene and gasoline bids, which are permitted escalator prices in accordance with the detailed specifications for those products. No cost increase shall be charged for any reason whatsoever.

29. BIDDER AFFIRMATION

In executing this bid, the bidder affirms that all of the requirements of the specifications are understood and accepted by the bidder, and that the prices quoted include all required materials and services. The undersigned has checked all of the bid figures, and understands that the County will not be responsible for any errors or omissions on the part of the undersigned in preparing this bid. Mistakes or errors in the estimates, calculations or preparation of the bid shall not be grounds for the withdrawal or correction of the bid or bid security. In case of error in extension of prices in the bid, the unit price will govern.

30. STATE CONTRACTS:

The County reserves the right to purchase the commodity being bid, from State Contract when it is most beneficial to the County to do so.

31. LITIGATION:

In the event any litigation shall arise from this contract, the laws of the State of New York shall control any litigation, regardless of which party shall institute such action.

32. MUNICIPAL EXTENSION:

The contract if awarded will be to the lowest responsive/responsible bidder(s) in part or in whole who meet(s) all the terms of the specifications. The County guarantees no minimum or maximum purchases or contracts as a result of award of this bid. Cattaraugus County reserves the right to allow all municipal and not for profit organizations authorized under the General Municipal Laws of the State of New York, to purchase any goods (materials and equipment) and/or services awarded as a result of this bid in accordance with the latest amendments to NYS GML 100 through 104 and County Law Section 408-a. However, it is understood that the extension of such contracts are at the discretion of the vendor and the vendor is only bound to the contract between Cattaraugus County and the vendor.

33. ALTERNATE SOURCE:

Where a New York State bid or a bid from another municipality results in an award for an item herein at a total price which is more favorable than that of the bidder to whom an award is made herein, and such price is available to County, County reserves the right to purchase from the State bid or from such other, alternate bid, notwithstanding its award to the lowest responsible bidder herein, after offering the County bid awardee an opportunity to meet or better the item price.

*MINIMUM SPECIFICATIONS FOR
CUTTING EDGES FOR GRADERS,
PLOWS, AND WINGS*

REVISED 7/16

NOTE:

PRICE ADJUSTMENTS:

At no time may the contract pricing changes be raised in excess of the Consumer Price Index OR Producer Price Index as calculated by Cattaraugus County. Prices covered under this bid or any extensions thereof shall not be raised more than once per item in a twelve month period. No prices shall be raised within the first six months of the contract or any renewal extension. If, in the opinion of the County, any price alteration request is in excess of that acceptable to the County, the County reserves the right to seek new pricing for that item(s) or the entire bid as covered by GML 103 and 104b. The burden of proof of such adjustment is the sole responsibility of the vendor.

SPECIFICATIONS Cutting Edges for shoes for GRADERS, PLOWS, WINGS

CONTRACT October 1, to September 30, of the following year.

QUANTITY Indefinite - as required

DELIVERY 30 days F.O.B. any point in Cattaraugus County, N.Y.

MATERIAL Steel analysis for all cutting edges shall be S.A.E. 1080-1090 carbon steel with Brinell hardness of 250-325 unless otherwise stated.

PRODUCT REFERENCES "Or Equal"

The County shall be the sole judge as to whether a proposed equivalent or substitution is to be approved and the bidder shall have the burden of proving same, at his own expense, to the satisfaction of the County. Any deviations shall be noted with explanations of change including equipment name brand, etc. Deviations shall be equal or better and so noted throughout specifications.

AWARD

- a.) Cattaraugus County reserves the right to accept or reject any or all bids, to waive bid inconsistencies, and to accept the bids deemed most advantageous to the County in accordance with General Municipal Law. Explanations of County decisions shall not be required except as otherwise provided for by law.
- b.) The award will be made to the lowest responsible bid meeting specifications for the commodities proposed, taking into consideration the reliability of the bidder, the quality of the materials, services, equipment, or supplies to be furnished, their conformity with the specifications, the purposes for which required, and the terms of delivery.
- c.) Samples may be requested by the County. After acceptance of the sample the delivered material must be the same as the sample provided. See "SAMPLE." Product Substitution, revisions, or alterations in materials or manufacturing, WILL NOT be permitted or accepted and result in termination of awarded contract. Additional costs incurred due to failure to supply awarded product will be borne solely by vendor.
- d.) Multiple awards are possible when Bid Proposal(s) Form is broken into different categories/groups mandating such. All terms and conditions apply to each separate award.
- e.) Where Vendor would like to bid more than 1-brand for same group; copy bid form and designate that form as "Alternate Bid"

SAMPLE

- a.) Samples, when required, must be submitted strictly in accordance with instructions, otherwise, bid may not be considered. If samples are requested subsequent to bid opening, they shall be delivered within ten (10) days of the request, or as directed, for bid to have consideration. Samples must be furnished free of charge and must be accompanied by descriptive memorandum invoices indicating if the bidder desires their return and specifying the address to which they are to be returned provided they have not been used or made useless by test. **Award samples may be held for comparison with deliveries. After sample has been accepted the delivered product must be the same as the sample that was provided.** The County will not be responsible for any samples destroyed or mutilated by examination or testing. Samples shall be removed by the bidder at his

expense. Samples not removed within fifteen (15) days after written notice to the bidder will be regarded as abandoned and the County shall have the right to dispose of them as its own property.

PRICES

ALL PRICING IS TO BE FIGURED ACCORDING TO THE ORDER SIZE, PER SHOE OR BLADE, AND NOT ACCORDING TO WEIGHT, AND PLACE ON PAGE 18.

The County will NOT PAY additional service or delivery charges such as "FUEL SUR-CHARGES".

EACH PRODUCT WILL HAVE AN "INDEX NUMBER", USED ON PAGES 17-18.

A - CARBON GRADER BLADES

(sheared, mitered, and punched)

hole type, size and spacing as per order

Carbon Grader - double bevel curved Item - price per foot

5/8" x 8"

B - CARBON PLOW & WING BLADES

(Round Hole type, drilled for 5/8 cap screw 12" centers)

Carbon plow & wing blades Item – Price per foot

3/4" x 6"

(Material - Steel analysis for cutting edges will be carbon .70 - .80 with minimum Brinell hardness 600.)

5/8" x 8" x 132" FSE
45/64" Square Punch
13/16" Square Die
5/8" Carriage Bolt
13 Holes
Center Punched



D - CARBIDE COMBINATION BLADES (see attached drawing)

Acceptable brand: Kueper SX or approved equal

1 Description

1.1 This specification covers snowplow blades with carbide inserts within steel holders, encased in rubber between two plates of Hardox 400 steel.

1.2 This product shall be bonded/molded together as 1 unit.

2 Materials

2.1 Steel Plates and Carbide Holder:

- 2.1.1 Front and rear steel plate
Thickness = .32 in. (8mm)
Material = Hardox 400 (Dilidur 400v)
- 2.1.2 Steel Carbide Holder
Thickness = .6 in. (15mm)
Height = 2.04 in. (51mm)
Length = 9.72 in. (243 mm) nominal length, varies to match length of blade piece
Steel grade – AISI 1075 (C75)

2.2 Tungsten Carbide Inserts:

- 2.2.1 Length = 1.936 in. (48.4)
- 2.2.2 Width = .32 in. (8mm)
- 2.2.3 Height = .7 in. (17.5 mm)
- 2.2.4 Density – 14.4 g/cm³
- 2.2.5 Hardness = 1100-1300 HV10 ISO 3878 Vickers Hardness Test
- 2.2.6 Traverse rupture strength = 391,000 psi (2700N/mm² ISO 3327)
- 2.2.7 Inserts per section of steel holder – equivalent to full length of holder (99.6% of length)

2.3 Rubber Matrix

- 2.3.1 Ultimate elongation = 572% DIN 53504
- 2.3.2 Shore A Durometer = 60
- 2.3.3 Compression Set = 19.5% 70⁰ C DIN ISO 815
- 2.3.4 Brittleness = no cracks at -40⁰ C

3 Finished Specifications

- 3.1 Thickness = 1.6 in. (40mm)
- 3.2 Height = 7.48 in. (187 mm)
- 3.3 Lengths = 3 ft. and 4 ft.
- 3.4 Weight = 19.8 lbs. per foot
- 3.5 Mounting Holes – 11/16 in square punch holes; standard AASHTO spacing (3”-3”-12”-12”-3”-3” (3’ blade))
- 3.6 Mounting holes – 11/16 in. square punch holes; standard AASHTO spacing (3”-3”-12”-12”-12”-3”-3” (4’ blade))
- 3.7 Triangular shape cooling holes in front face, round cooling holes in rear face
- 3.8 Steel surfaces painted
- 3.9 Serial number on each blade piece

4 Drawing

4.1 Carbide Combination Blade Dimensions

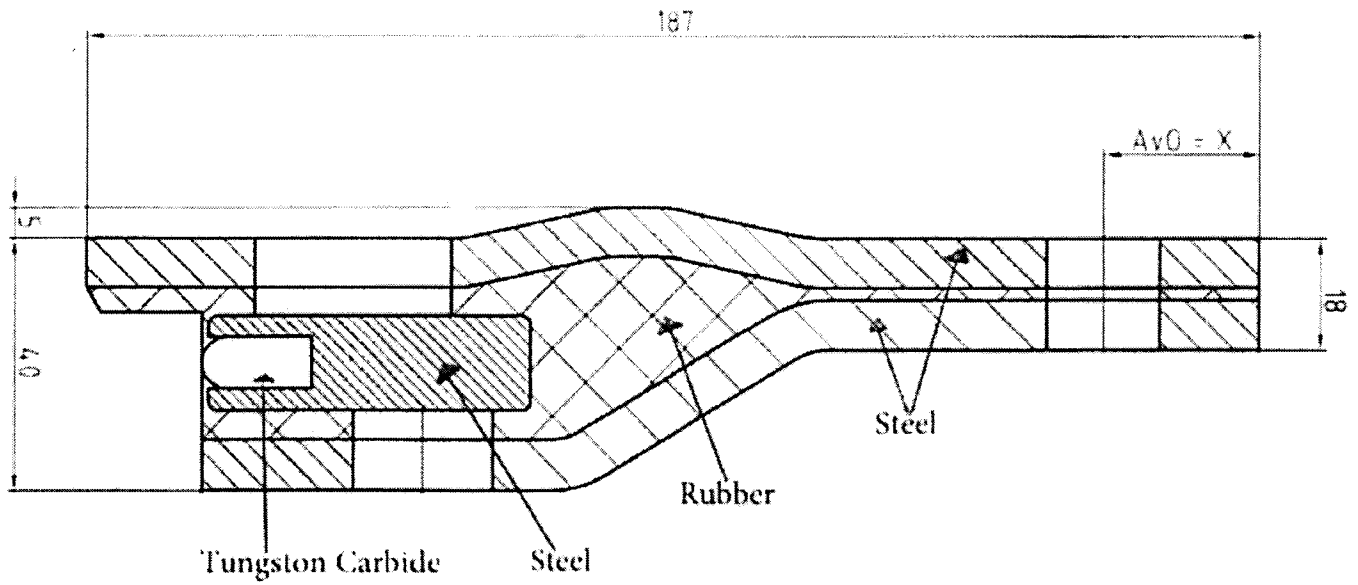
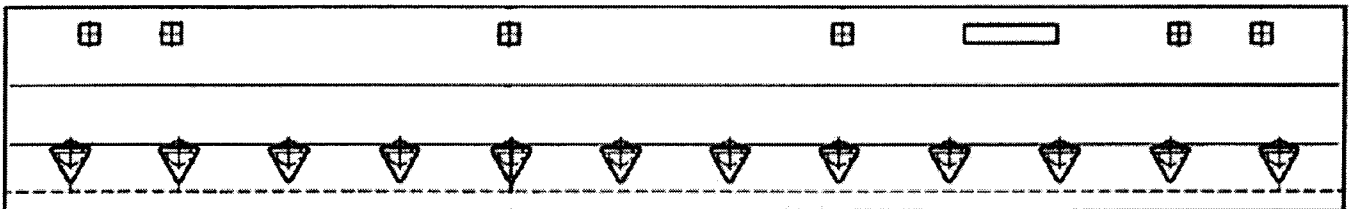


Figure 2: AASHTO Hole Positioning (4')



E - TUCA SX UNDERBODY SCRAPER WING BLADE (see attached drawing)

Acceptable brand: Kueper SX or approved equal

1. Description:

- 1.1.1 This specification covers snow plow blades for underbody plows with carbide inserts free floating in vulcanized rubber with the configuration of STEEL-RUBBER-CARBIDE-RUBBER-STEEL.
- 1.1.2 **This product shall be bonded/molded together as 1 unit.**

2. Materials:

- 2.1.1 **Front Steel Plate:** Wear resistant steel with an average hardness of 400HB
- 2.1.2 Plate thickness of 8mm
- 2.1.3 Hardness: 400HB (43 Rockwell C, 114 Rockwell B)
- 2.1.4 Tensile Strength: U>T>S> = 1300 MPa
- 2.1.5 Yield Point: Y.P. = 1000 MPa
- 2.1.6 Tolerances according to specification of Dillidur 400V
- 2.1.7 Triangular openings as wear indicator

- 2.2.1 **Back Steel Plate:** Wear resistant steel with an average hardness of 400HB
- 2.2.2 Plate thickness of 6mm
- 2.2.3 Hardness: 400HB (43 Rockwell C, 114 Rockwell B)
- 2.2.4 Tensile Strength: U.T.S. = 1300 MPa
- 2.2.5 Yield Point: Y.P. = 1000 MPa
- 2.2.6 Tolerances according to specification of Dillidur 400V

- 2.3.1 **Rubber:** The blade shall have a wear resistant rubber body, vulcanized between two steel plates with tungsten carbide holders inserts embedded within the rubber.

- 2.4.1 **Tungsten Carbide inserts:**
- 2.4.2 Tungsten carbide inserts shall be centrically embedded on the lower end of a steel plate (= steel carbide holder)
- 2.4.3 The inserts shall be high shock EC Grade of tungsten and shall meet Virgin Tungsten Carbide quality specification and the following requirements
- 2.4.4 Hardness: 1100-1300 HV10 ISO3878
- 2.4.5 Bending Strength: 2700 N7mm (squared) ISO3327
- 2.4.6 Average Grain Size: 5-7µm
- 2.4.7 Inserts Dimension: a. Height 17,5mm b. Width 8mm
- 2.4.8 The groove for the carbide shall be milled in the center of the steel carbide holder. The groove shall be milled to a depth that will allow the inserts to be brazed flush with the bottom edge of the carbide holder.
- 2.4.9 The inserts shall be brazed on all contact surfaces consistent with sound brazing practice with no evidence of voids or use of shims. Brazing shall be of such strength and quality as required to prevent movement or loss of the inserts during use.

3. Finished Blades:

- 3.1.1 **Overall Blade Dimensions:**
- 3.1.2 Overall blade height 125mm (tolerance ±2mm)
- 3.1.3 Overall blade thickness 36mm (tolerance ± 2mm)
- 3.1.4 Overall blade length according to customer and plow requirements
- 3.1.5 The hole position and design must be according to customer and plow requirements

4. Physical Requirements:

- 4.1.1 All blades shall be straight and free from flaws and injurious defects, and shall have workmanlike finish.
- 4.2.1 Tungsten carbide holders shall be placed free-floating in the rubber body. Thus there has to be a gap between two holders in order for the holders to act independently of one another and “flex”. In length carbide inserts should cover no less than 90% of the total length of the blade.
- 4.3.1 Punching shall be square or round holes. Details, location, and spacing of the holes shall be to customer requirements.
- 4.4.1 Blade punching will be of such accuracy, both for the spacing between holes and for the spacing between the end hole and the end of the blade, that the blades will fit the moldboards, thus making the blade sections interchangeable.
- 4.5.1 Blades shall be painted red/orange and any paint used to coat the blades shall be dry prior to shipment and shall not smear or track during handling.
- 4.6.1 Each blade element should provide the name of the manufacturer and a serial number for quality control.
- 4.7.1 Finished blade sections shall be provided in units of three (3) feet, four (4) feet, five (5) feet, or any other measure in length.
- 4.8.1 The finished blade section shall be fully assembled by the manufacturer and require no additional assembly, no additional parts or hardware, and no mounting hardware other than bolts and nuts.

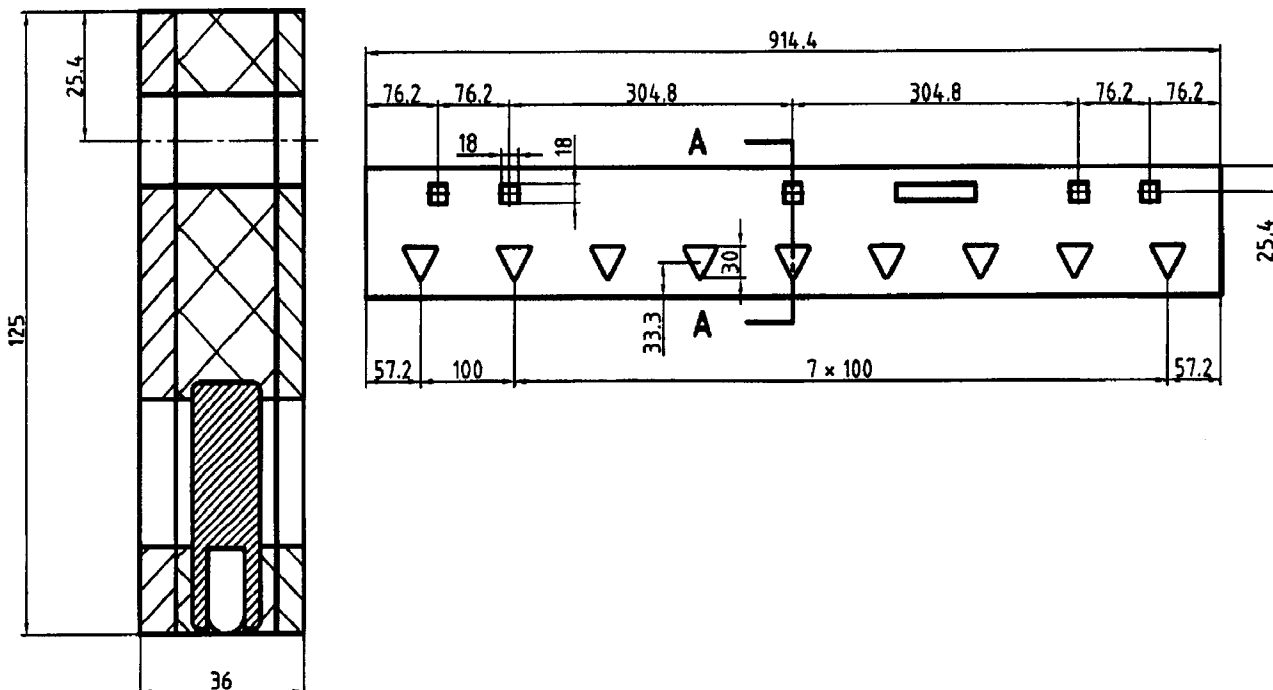
5. Pricing:

- 5.1.1 TUCA wing 11ft set includes: Two (2) 48” sections and One (1) 36” section (3-3-12-3-3 universal reversible punch)
PRICE PER SET

6. Drawing:

- 6.1.1 The drawing displays only the blade measurements in mm, the inlay design and positions are only for presentation purposes.

TUCA SX Underbody 3’ example



F - TUNGSTEN CARBIDE BLADES FOR PLOWS AND GRADERS

Acceptable brands/part #'s or latest revision thereof; Kennametal PB136 & PB148.

1. BLADE

- 1.1 The blade shall be flat hot-rolled finished steel to meet or exceed specifications for A36 or 1020 type steels.
- 1.2 Punching shall be 11/16" square holes with countersink to receive 5/8" diameter plow bolts. Location and spacing of the holes shall be as specified by the user.
- 1.3 The groove for the carbide inserts shall be milled in the center of the blade edge.
- 1.4 Center of holes shall be in line within 1/32" of established horizontal centerline and 1/16" of established vertical centerline.

2. TUNGSTEN CARBIDE INSERTS

- 2.1 The inserts shall be a high shock WC grade of tungsten carbide with (11 to 12 1/2) percent cobalt content.
Density: 14.1 Minimum to 14.6 Maximum
Hardness: 87.5 Minimum to 89.0 Maximum
Rc. "A" Scale
Transverse Rupture Strength (p.s.i.): 350,000 Minimum
Porosity: (Based on testing in accordance with ASTM designation B276-79)
A06
B02
C00
- 2.2 The carbide insert manufacturer to furnish certification to the State Highway Department that the inserts meet the specifications as set forth in 2.1.
- 2.3 The inserts shall be a trapezoid design of the following dimensions:
Height: .635" +/- .005 (long side)
Width: .365" +/- .010
Length: 1" Nominal
Bottom Angle: 25 degrees with a nose radius of 1/16" minimum
- 2.4 A metallurgical evaluation of the carbide insert shall show no evidence of cross grade contamination. Evaluation to be based on a photomicrograph of a polished and etched specimen at 500x magnification.

3. BRAZING

- 3.1 The brazing material shall be a high strength alloy type.
- 3.2 The tungsten carbide inserts shall be positioned in the milled groove at approximately .010 between the inserts the entire length of each cutting edge section.
- 3.3 The inserts shall be brazed on all sides consistent with sound brazing practice with no evidence of voids or use of shims.
- 3.4 Each blade section to contain one insert, one inch nominal length for each inch of blade section length. Due to the thickness of the braze joints between inserts it may be necessary for several inserts to be slightly shorter or longer than the nominal 1" length to insure the carbide insert runs the entire length of the blade without protruding from the end of the steel body.

4. SPECIFIC REQUIREMENTS

- 4.1 The difference between the highest and lowest tip point (on any two adjacent inserts) not to exceed 1/32" on any given blade assembly.
- 4.2 The finished blade section shall be free of warpage and longitudinal deviation not to exceed 1/8" in a four-foot blade section.
- 4.3 Each blade section shall be identified with manufacturer's identification stamp.
- 4.4 The finished blade sections shall have marking showing the front edge of the blade to avoid improper mounting.

5. TYPE I - Price per set

3 piece set No. D.B. 48-36-48 carbide plow blade (round holes)

G - RUBBER SNOW PLOW BLADES

Wing Blade, Extruded & Vulcanized Styrene-Butadiene Rubber:

Minimum Tensile Strength (ASTM D-412): 2,145 PSI

Minimum Elongation (ASTM D-412): 519%

Modulus @ 300% Elongation (ASTM D-412): 1,001 PSI

Hardness-Shore A.Duro (ASTM D-2240): 62

Specific Gravity (ASTM D297): 1.19

1.5 inch by 10 inch by 11 feet

Standard Highway Punch - Slotted

PLOW and WING SHOES

for Viking Plow

H - PLOW SHOE

2 1/4" x 8" x 14"

Min. weight 36 lbs.

Hole size 13/16" recessed for
square head bolt.

A) CAST ALLOY ABRASIVE SHOES must meet or exceed minimum surface hardness of 475 Brinell, minimum core hardness 325 Brinell, minimum tensile strength 45,000 PSI, minimum impact strength Charpy, 28 ft. lbs., minimum density 25 lbs per cubic inch.

I - WING SHOE

12" 10 Degree

Min. weight 37 lbs.

Hole size 3/4"

A) CAST ALLOY ABRASIVE SHOES must meet or exceed minimum surface hardness of 475 Brinell, minimum core hardness 325 Brinell, minimum tensile strength 45,000 PSI, minimum impact strength Charpy, 28 ft. lbs., minimum density 25 lbs per cubic inch.

J - STEEL WING SHOES: as described

Steel Wing Shoes (Model MSCO MSO60)

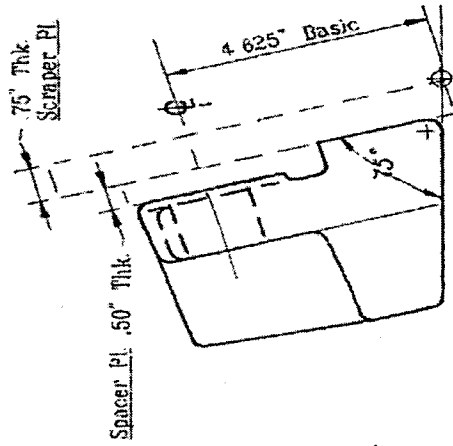
Flame Cut and Flame Hardened shoe with a minimum 50,000 lb. yield strength. Shoe will fit Viking, Tenco, Everest,

Frink wings with 12 inch centers.

K - NIHARD WING SHOE (see attached drawing)

8" Center Punched

3/4" x 12" O/C,



Quality Specifications

- Material : Cr-Ni Alloy

C: min 2.7 - max 3.2

Mn: min 0.5 - max 0.7

Ni: min 0.2 - max 0.5

Si: min 0.4 - max 1.0

N301-34

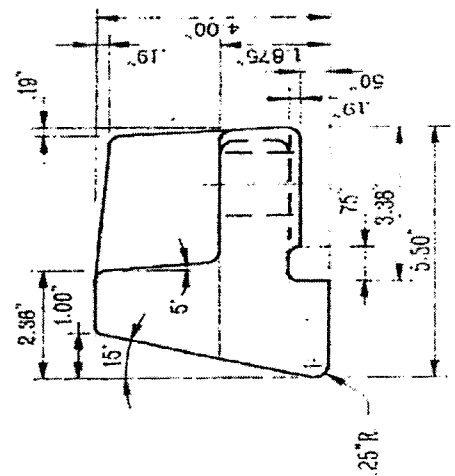
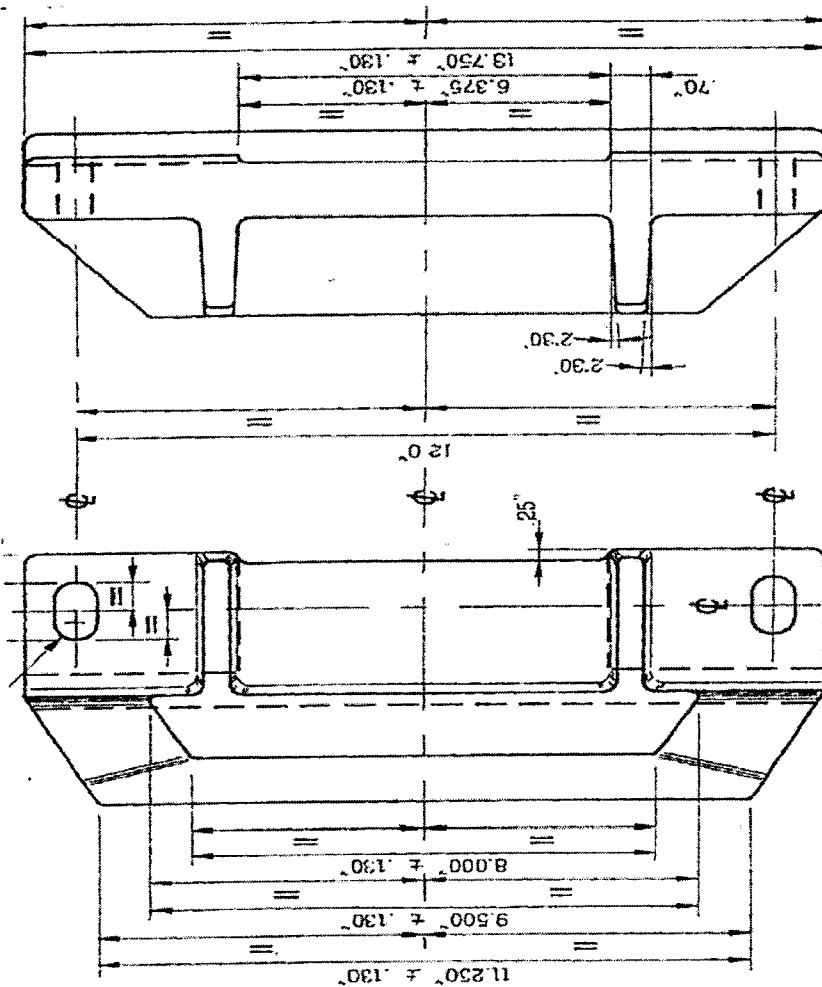
Nihard Wing Shoe

Cr: min 12

P+S: max 0.1

- Hardness: 500 HB min

- Dark Blue Surface Coating

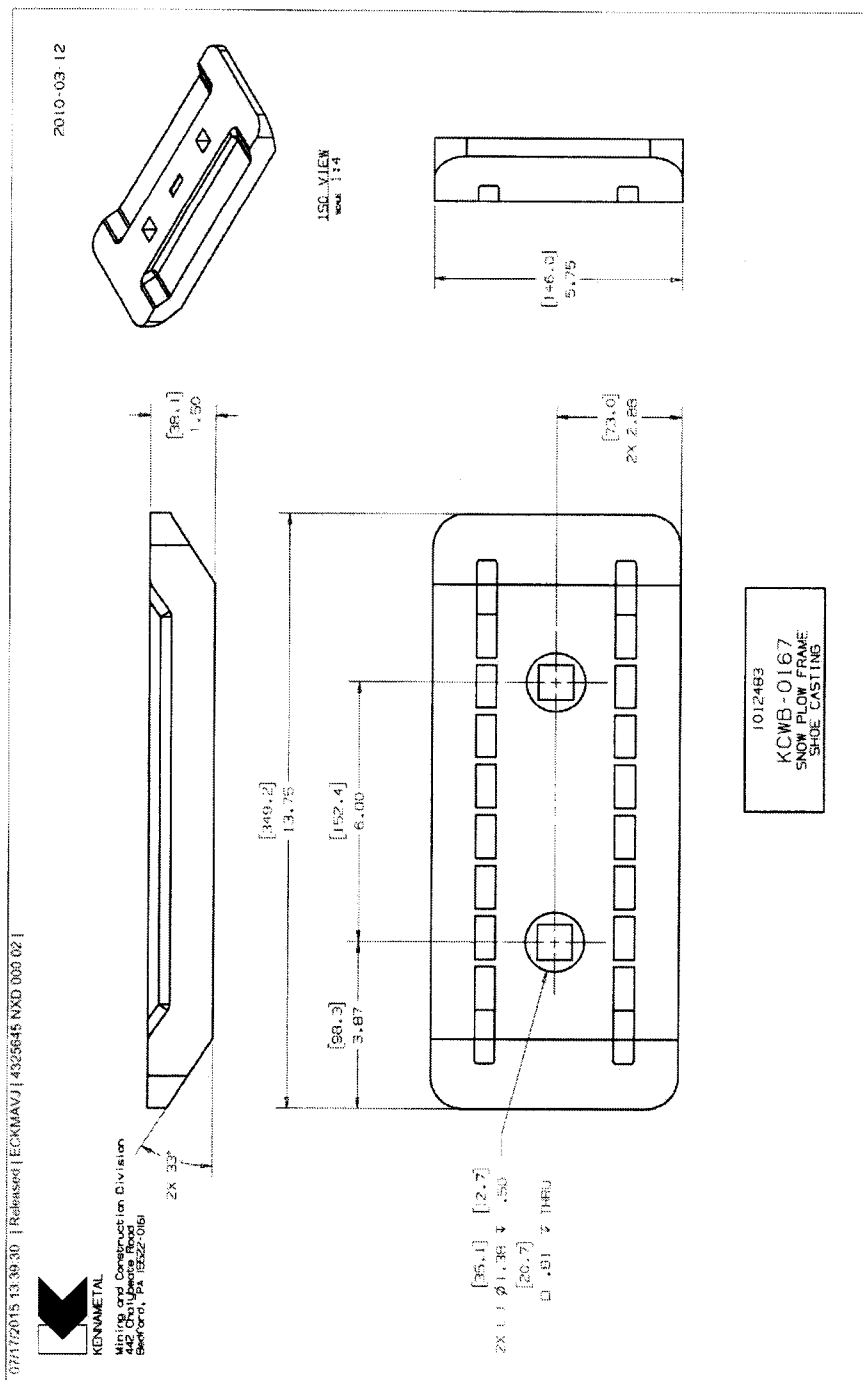


L - CAST STEEL, CARBIDE INSERT, SNOW PLOW FRAME SHOES (Kennametal KCWB 0167 or approved equal)

Shoes shall have an overall length of 13.75" minimum, width of 5.75" minimum, thickness of 1.50" minimum with 2 square holes on 6" centers countersunk to accept 3/4" diameter plow bolts. The shoe shall contain a minimum of 16 carbide inserts, of a rectangular shape 1" long, 3/4" width, .250" thick +/- .005.

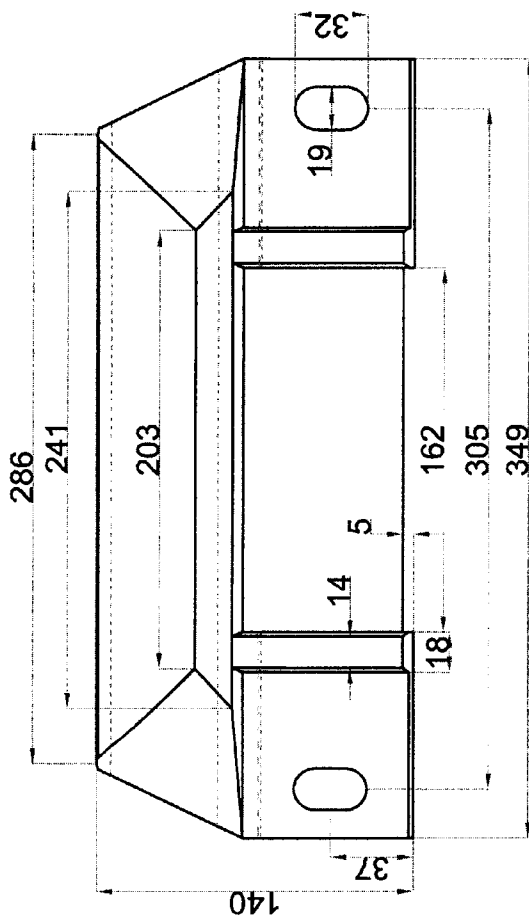
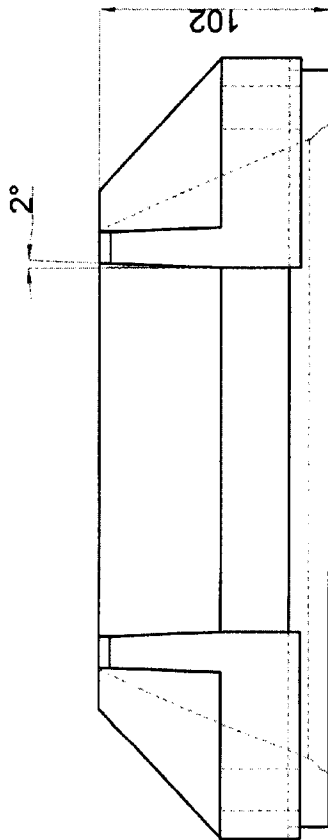
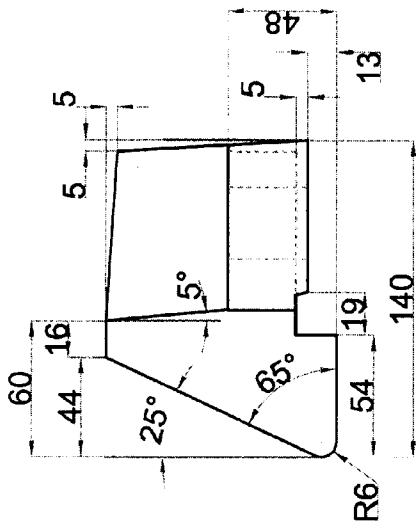
Carbide inserts shall be bonded to the shoe by either brazing or being cast in to place And Run Lengthwise.

A metallurgical evaluation of the carbide insert shall show no evidence of cross grade contamination. Evaluation is to be based on a photomicrograph of a polished and etched specimen at 500X magnification. Inserts to be a high shock WC grade of tungsten carbide with a 11-12.5% cobalt content; Density of 14.0 Minimum – 14.6 Maximum; Hardness between 87.5 Minimum – 89.0 Maximum RC. "A" Scale; Minimum Transverse Rupture Strength 350,000 psi; Porosity (based on testing in accordance with ASTM designation B276-79) A06, B02, COD.



M - NIHARD MOLDBOARD SHOE (see attached drawing)

- C: Min 2.7 – max 3.2
- Mn: min 0.5 –max 0.7
- Ni: min 0.2 – max 1.5
- Si: min 1.4 – max 1.0
- Cr: min 12
- P+S: max 0.1
- Hardness: 500 HB min
- Dark Blue Surface Coating



Quality Specifications	N301-34A
- Material : Cr-Ni Alloy	Nihard Moldboard Shoe
C: min 2.7 - max 3.2	Cr: min 12
Mn: min 0.5 - max 0.7	P+S: max 0.1
Ni: min 0.2 - max 0.5	- Hardness: 500 HB min
Si: min 0.4 - max 1.0	- Dark Blue Surface Coating

N - NIHARD MUSHROOM SHOE (see attached drawing)

C: Min 2.7 – max 3.2

Mn: min 0.5 –max 0.7

Ni: min 0.2 – max 1.5

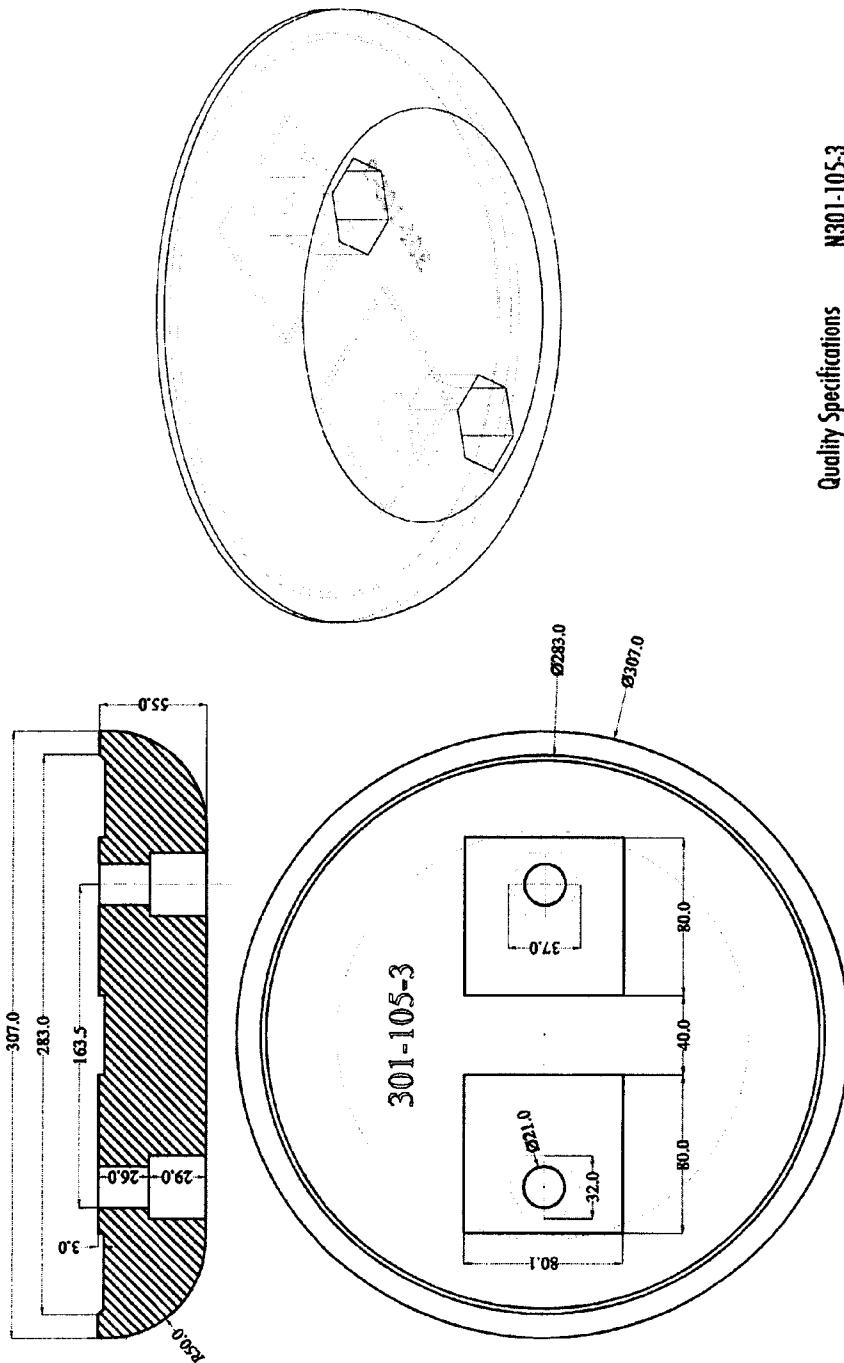
Si: min 1.4 – max 1.0

Cr: min 12

+S: max 0.1

Hardness: 500 HB min

-Dark Blue Surface Coating



N301-105-3
Nihard Mushroom Shoe

Cr: min 12
P+S: max 0.1
- Hardness: 500 HB min
- Dark Blue Surface Coating

Quality Specifications
- Material : Cr-Ni Alloy

C: min 2.7 - max 3.2
Mn: min 0.5 - max 0.7
Ni: min 0.2 - max 0.5
Si: min 0.4 - max 1.0

V - PLOW NOSE PIECE

Fit Viking One Way Snow plow

PRODUCT INDEX SHEET
CUTTING EDGES FOR GRADER, PLOWS, AND WINGS

INDEX NO.	DESCRIPTION
A =	<u>CARBON GRADER BLADES</u> (sheared, mitered and punched) hole type, size and spacing as per order Carbon Grader - double bevel curved Item PRICE PER FOOT:
A-8L	5/8" x 8" LESS THAN 10 SETS
A-8G	5/8" x 8" 10 SETS & GREATER
B =	<u>CARBON PLOW & WING BLADES</u> (Round Hole type, drilled for 5/8 cap screw 12" centers) Carbon plow & wing blades Item Price per foot
B-6L	3/4" X 6" LESS THAN 50 BLADES
B-6G	3/4" X 6" 50 BLADES & GREATER
C =	<u>COVER BLADE FOR WINGS</u> (see attached drawing)
C-8L	5/8" X 8" LESS THAN 50 BLADES
C-8G	5/8" X 8" 50 BLADES & GREATER
D =	<u>CARBIDE COMBINATION PLOW BLADES</u> (see attached drawing)
D-3	Carbide Combination Blades 3 ft
D-4	Carbide Combination Blades 4 ft
E =	<u>TUCA WING BLADE</u> (see drawing)
E-3	TUCA wing 11ft set includes: Two (2) 48" sections and One (1) 36" section (3-3-12-3-3 universal reversible punch) PRICE PER SET
F =	<u>TUNGSTEN CARBIDE BLADES FOR PLOWS AND GRADERS</u>
F-2	3 piece set No. D.B. 48-36-48 carbide plow blade PRICE PER SET
G =	<u>WING BLADE, RUBBER</u> (1.5" X 10" X 11') Standard Highway Punch - Slotted
G-RL	Rubber Blades LESS THAN 50 BLADES
G-RG	Rubber Blades 50 BLADES & GREATER

INDEX NO.	DESCRIPTION
	<u>PLOW and WING SHOES</u> for Viking Plow
H =	<u>CAST ALLOY PLOW SHOE</u> (2 1/4" x 8" x 14", Min. weight 36 lbs., Hole size 13/16" recessed for square head bolt.)
H-AG	Cast Alloy Abrasive 50 SHOES & GREATER
H-AL	Cast Alloy Abrasive LESS THAN 50 SHOES
I =	<u>CAST ALLOY WING SHOE</u> (12" O/C, 10 degree, Min. weight 37 lbs., Hole size 3/4", 8" Center Punched)
I-AL	Cast Alloy Abrasive LESS THAN 50 SHOES
I-AG	Cast Alloy Abrasive 50 SHOES & GREATER
J =	<u>STEEL WING SHOE:</u> (Model MSCO MSO60) Flame Cut and Flame Hardened Shoe with a minimum 50,000 lb. yield strength. Shoe will fit Viking, Tenco, Everest, Frink wings with 12 inch centers.
J-SL	Steel LESS THAN 50 SHOES
J-SG	Steel 50 SHOES & GREATER
K =	<u>NIHARD WING SHOE</u> (see attached drawing) (12" O/C, 10 degree, Min. weight 37 lbs., Hole size 3/4", 8" Center Punched)
K-NL	NiHard LESS THAN 50 SHOES
K-NG	NiHard 50 SHOES & GREATER
L =	<u>CAST STEEL, CARBIDE FRAME SHOE</u> (see attached drawing)
L-CL	Carbide LESS THAN 50 SHOES
L-CG	Carbide 50 SHOES & GREATER
M =	<u>NIHARD MOLDBOARD SHOE</u> (see attached drawing)
M-NL	NiHard LESS THAN 50 SHOES
M-NG	NiHard 50 SHOES & GREATER
N =	<u>MUSHROOM SHOES</u> (see attached drawing) Made of Ni-Hard Casting, 12" outside diameter x 2 3/4" high with two bolt holes.
N-AL	Mushroom Shoes LESS THAN 50 SHOES
N-AG	Mushroom Shoes 50 SHOES & GREATER

PLOW NOSE PIECE - FIT VIKING ONE WAY PLOWS

V-NL	LESS THAN 50
V-NG	50 & GREATER

THE COUNTY WILL NOT WAIT LONGER THAN 30 DAYS FOR THIS DELIVERY.

**BID FORMS OMITTED FROM
SPECIFICATION BOOKS**

TO OBTAIN BID FORMS PLEASE CONTACT

DAWN SMITH AT 716-938-9121 EXT. 2465

OR SEND EMAIL REQUEST TO:

dasmith@cattco.org

The following statement must be subscribed by the bidder and affirmed by such bidder as true, under the penalties of perjury.
Pursuant to Section 103-d of the General Municipal Law.

NON-COLLUSIVE BIDDING CERTIFICATION

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor, and

No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.

(For use of individual bidder)

IN WITNESS WHEREOF, I, _____, doing business under the style and name of _____ at _____ have hereunto subscribed my name under the penalties of perjury at _____ on this _____ day of _____, 20 ____.

d/b/a _____

(For use of partnership bidder)

IN WITNESS WHEREOF, this non-collusive bidding certification has been subscribed, under the penalties of perjury, at _____ on this _____ day of _____, 20 ____ by _____, one of the partners or co-partners of the partnership composed of _____ and _____ doing business under the style, partnership, and firm name of _____ at _____.

Partnership Name

By _____
Co-Partner

(For use of corporate bidder)

RESOLVED, that _____ (name of corporation) be authorized to sign and submit the bid or proposal of this corporation for the following project _____ and to include in such bid or proposal the certificate as to non-collusion required by Section 103-d of the General Municipal Law as the act and deed of such corporation, and for any inaccuracies or misstatements in such certificate, this corporate bidder shall be liable, under the penalties of perjury.

The foregoing is a true and correct copy of the Resolution adopted by _____ Corporation at a meeting of its board of directors held on the _____ day of _____, 20 ____.

Dated at _____ on this _____ day of _____, 20 ____.

(SEAL OF THE CORPORATION)

Secretary

Name of Bidder

By _____
Title

LEGAL STATUS INFORMATION

To facilitate correct drawing and execution of contract, bidder shall supply full information concerning legal status:

FIRM NAME: _____

Federal ID No.: _____

PRINCIPAL OFFICE:

Street _____

City, State, Zip _____

Telephone ____ (____) _____ Fax ____ (____) _____

LOCAL OFFICE:

Street _____

City, State, Zip _____

Telephone ____ (____) _____ Fax ____ (____) _____

CONTRACT TO BE SENT TO: Principal Office _____ Local Office _____

CHECK ONE: Corporation _____ Partnership _____ Individual _____

(Incorporated under the Laws of the State of _____)

(If foreign corporation, state if authorized to do business in the State of New York:

Yes _____ No _____ Not Applicable _____)

TRADE NAMES:

NAMES AND ADDRESSES OF PARTNERS:

NAME, TITLE, AND ADDRESS OF PERSON AUTHORIZED TO SIGN CONTRACT ON BEHALF OF BIDDER:

Name: _____

Title: _____

Address: _____

PLEASE TYPE OR PRINT

BID FOR PERFORMANCE OF CONTRACT WITH
CATTARAUGUS COUNTY LEGISLATURE
LITTLE VALLEY, NEW YORK

TO: Cattaraugus County Legislature, Little Valley, New York, herein after called the County.

The undersigned, desiring to interpose a bid to provide services for **Cutting Edges and Shoes for Graders, Plows and Wings** for Cattaraugus County Department of Public Works, does hereby accept all terms, conditions, and agreements contained and set forth in the, Minimum Specifications, Non-Collusive Bidding Certification, Legal Status Information and Bid for Performance of Contract with Cattaraugus County Legislature and does hereby certify, agree and propose as follows:

The undersigned declares that he/she has examined all of the attached documents, and hereby proposes and agrees that, if this bid is accepted, he/she will contract with the County, such contract incorporating the provisions of the documents attached hereto, to furnish all the materials and services and do all the work specified in the attached documents in the manner and time herein specified and according to the requirements as herein set forth, and to take in full payment therefore the bid prices set forth on the preceding specification sheets.

If this proposal is accepted by the County and the undersigned fails to contract as aforesaid, within ten days (not including Sunday) from the date of notice from the County to him/her, then the County may at its option, determine that the bidder has abandoned his/her right to enter into the contract and thereupon the bid and acceptance shall be null and void.

The full name and residences of all persons and parties interested in the foregoing bid as principals are as follows:
(Individuals or partnership bids only)

INDIVIDUAL, PARTNERSHIP OR CORPORATE USE

The undersigned certifies, under penalty of perjury, that he is fully authorized to sign this bid.

Name and Address of Bidder:

Authorized Signature and Title:

Signature

Title

Date

Pursuant to State Finance Law §165-a, the Commissioner of General Services is required to develop a list of persons it determines engage in investment activities in Iran, which is defined as provision of goods, services or credit of \$20,000,000 or more, relating to the energy sector.

General Municipal Law §103-g(4) states as follows:

Every bid or proposal hereafter made to a political subdivision of the state or any public department, agency or official thereof where competitive bidding is required by statute, rule, regulation or local law, for work or service performed or to be performed or goods sold or to be sold, shall contain the following statement subscribed by the bidder and affirmed by such bidder as true under penalties of perjury.

The below signed bidder affirms the following as true under penalties of perjury:

- a. "By submission of this bid, the bidder identified herein and each person signing on behalf of the bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and behalf that this bidder is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the state finance law."

Corporate or Company Name

By:

Signature

Title

Sworn to before me this

____ day of _____, 20 ____

Notary Public