

**Bid Tabulation - PA Turnpike Commission**

**Bid 166000-2019-B  
9/4/2019**

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|---|
| Winter Equipment Company, Inc<br>Willoughby, OH<br>1010 |
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| Material                   | Primary Mfg Part Number | Description   | Estimated Quantity (1-year usage) | Lead Time (days or weeks) | Vendor Product Number         | Unit Price | Estimated Total Price |
|----------------------------|-------------------------|---|-----------------------------------|---------------------------|-------------------------------|------------|-----------------------|
| <b>LOT 2: Blade System</b> |                         |   |                                   |                           |                               |            |                       |
| 10878                      | CF40585 JOMA            | BOLT, CARRIAGE, 5/8 IN.-11 X 4 IN., GRADE 8, FOR BLADE SYSTEM   | 750 EA                            | 14 Days                   | CF40585 WINTER EQUIPMENT      | \$1.28     | \$960.00              |
| 10879                      | PB30475 JOMA            | BOLT, PLOW, 5/8 IN.-11 X 2 1/2 IN., GRADE 8, FOR CARBIDE ADAPTOR BLADE PLOW BLADE SYSTEM  | 400 EA                            | 14 Days                   | PB30475 WINTER EQUIPMENT      | \$0.65     | \$260.00              |
| 11503                      | NS-111-JM-UA IRONHAWK   | NOSE PIECE,NUMBER 38 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 3 HOLES, ONE ON MOLD- BOARD SECTION, AND TWO ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED JULY 2012      | 25 EA                             | 21 Days                   | NP40111-JM WINTER EQUIPMENT   | \$56.44    | \$1,411.00            |
| 11504                      | NS-110-JM-UA IRONHAWK   | NOSE PIECE,NUMBER 53 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 2 HOLES, ONE ON MOLD- BOARD SECTION, AND ONE ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED SEPTEMBER 2012 | 15 EA                             | 21 Days                   | NP40110-JM WINTER EQUIPMENT   | \$56.44    | \$846.60              |
| 11993                      | AB36A7 IRONHAWK         | CARBIDE ADAPTOR BLADE, 3/4 IN. X 7 IN. X 36 IN., 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE  | 20 EA                             | 14-21 Days                | CB3031523JAB WINTER EQUIPMENT | \$291.33   | \$5,826.60            |
| 11994                      | LE36 IRONHAWK           | BLADE, 7/8 IN. X 6 IN. X 36 IN. FOR 3 FT LAKE EFFECT BLADE.   | 70 EA                             | 14-21 Days                | JM20315 WINTER EQUIPMENT      | \$542.40   | \$37,968.00           |
| 11995                      | LE36CB IRONHAWK         | STRAP, (CLAMP BAR), 3 FT., FOR LAKE EFFECT PLOW BLADE.  | 70 EA                             | 14-21 Days                | JM20315-S WINTER EQUIPMENT    | \$20.91    | \$1,463.70            |
| 11996                      | AB48A7 IRONHAWK         | BLADE, CARBIDE ADAPTER, 3/4 IN. X 7 IN. X 48 IN., LAKE EFFECT PLOW BLADE.   | 25 EA                             | 14-21 Days                | CB3041523JAB WINTER EQUIPMENT | \$388.44   | \$9,711.00            |
| 11997                      | PBA-LE12 IRONHAWK       | PLOW BLADE, 12 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE48 4 FT. LAKE EFFECT BLADE, 3 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT.  | 20 EA                             | 14-21 Days                | SYS-JM12 WINTER EQUIPMENT     | \$3,371.01 | \$67,420.20           |
| 11998                      | LE48 IRONHAWK           | BLADE, 7/8 IN. X 6 IN. X 48 IN. LAKE EFFECT PLOW BLADE SYSTEM.  | 150 EA                            | 14-21 Days                | JM20415 WINTER EQUIPMENT      | \$723.20   | \$108,480.00          |
| 11999                      | LE48CB IRONHAWK         | STRAP, (CLAMP BAR), 4 FT., FOR LAKE EFFECT PLOW BLADE.  | 150 EA                            | 14-21 Days                | JM20415-S WINTER EQUIPMENT    | \$28.02    | \$4,203.00            |
| 12000                      | SG126112LL IRONHAWK     | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN LEFT LAKE EFFECT.   | 30 EA                             | 14-21 Days                | CR6312FL WINTER EQUIPMENT     | \$86.81    | \$2,604.30            |
| 12001                      | SG126112LR IRONHAWK     | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN RIGHT FOR LAKE EFFECT.  | 40 EA                             | 14-21 Days                | CR6312FR WINTER EQUIPMENT     | \$86.81    | \$3,472.40            |

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| Material | Primary Mfg Part Number | Description  | Estimated Quantity (1-year usage) | Lead Time (days or weeks) | Vendor Product Number     | Unit Price | Estimated Total Price |
|----------|-------------------------|--|-----------------------------------|---------------------------|---------------------------|------------|-----------------------|
| 12002    | SG126112 IRONHAWK       | CENTER GUARD, ARTICULATING BLADE PROTECTOR FOR LAKE EFFECT PLOW SYSTEM.  | 35 EA                             |                           |                           | \$200.00   | \$7,000.00            |
| 13114    | PBA-LE11 IRONHAWK       | PLOW BLADE, 11 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 1 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE36 3 FT. LAKE EFFECT BLADE, 1 EA #LE36CB 3 FT. CLAMP BAR, 2 EA #AB48AX 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT                          | 5 EA                              | 14-21 Days                | SYS-JM11 WINTER EQUIPMENT | \$3,110.99 | \$15,554.95           |
| 13126    | PBA-LE9 IRONHAWK        | PLOW BLADE, 9 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE36 3 FT. LAKE EFFECT BLADE, 3 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT   | 5 EA                              | 14-21 Days                | SYS-JM9 WINTER EQUIPMENT  | \$2,591.11 | \$12,955.55           |
| 13127    | PBA-LE10 IRONHAWK       | PLOW BLADE, 10 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE48 4 FT. LAKE EFFECT BLADE, 1 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT. | 5 EA                              | 14-21 Days                | SYS-JM10 WINTER EQUIPMENT | \$2,851.12 | \$14,255.60           |
| 13128    | PBA-LE14 IRONHAWK       | PLOW BLADE, 14 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 2 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE14 LAKE EFFECT BOLT KIT. | 1 EA                              | 14-21 Days                | SYS-JM14 WINTER EQUIPMENT | \$3,890.89 | \$3,890.89            |
| 13645    | FW580 IRONHAWK          | WASHER, 5/8 IN., STRUCTURAL FLAT, FOR LAKE EFFECT BLADE INSTALLATION.  | 1,000 EA                          | 14 Days                   | FW70505 WINTER EQUIPMENT  | \$0.19     | \$190.00              |

TESTING/EVALUATION: After discussion of the blade system approval process, we have determined that there are two systems that require additional testing before they can be considered an "approved" system for contract award. We would like to take an approach similar to the way we tested the Lake Effect blades from Ironhawk before we adopt them as an acceptable standard. It is Maintenance's intention to perform coordinated tests of both the Nordik and Kueper blade systems across the system. The intention is not to stock or assign material numbers for any of these products at this time.

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**Bid 166000-2019-B  
9/4/2019**

IronHawk Industrial  
Euclid OH  
4160

| Material                   | Primary Mfg Part Number  | Description   | Lead Time (days or weeks) | Vendor Product Number | Unit Price | Estimated Total Price |
|----------------------------|--------------------------|---|---------------------------|-----------------------|------------|-----------------------|
| <b>LOT 2: Blade System</b> |                          |   |                           |                       |            |                       |
| 10878                      | CF40585 JOMA             | BOLT, CARRIAGE, 5/8 IN.-11 X 4 IN., GRADE 8, FOR BLADE SYSTEM   |                           |                       | \$1.40     | \$1,050.00            |
| 10879                      | PB30475 JOMA             | BOLT, PLOW, 5/8 IN.-11 X 2 1/2 IN., GRADE 8, FOR CARBIDE ADAPTOR BLADE PLOW BLADE SYSTEM  |                           |                       | \$0.70     | \$280.00              |
| 11503                      | NS-111-JM-UA<br>IRONHAWK | NOSE PIECE,NUMBER 38 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 3 HOLES, ONE ON MOLD- BOARD SECTION, AND TWO ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED JULY 2012      |                           |                       | \$62.52    | \$1,563.00            |
| 11504                      | NS-110-JM-UA<br>IRONHAWK | NOSE PIECE,NUMBER 53 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 2 HOLES, ONE ON MOLD- BOARD SECTION, AND ONE ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED SEPTEMBER 2012 |                           |                       | \$59.63    | \$894.45              |
| 11993                      | AB36A7 IRONHAWK          | CARBIDE ADAPTOR BLADE, 3/4 IN. X 7 IN. X 36 IN., 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE  |                           |                       | \$236.48   | \$4,729.60            |
| 11994                      | LE36 IRONHAWK            | BLADE, 7/8 IN. X 6 IN. X 36 IN. FOR 3 FT LAKE EFFECT BLADE.   |                           |                       | \$435.60   | \$30,492.00           |
| 11995                      | LE36CB IRONHAWK          | STRAP, (CLAMP BAR), 3 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |                       | \$35.16    | \$2,461.20            |
| 11996                      | AB48A7 IRONHAWK          | BLADE, CARBIDE ADAPTER, 3/4 IN. X 7 IN. X 48 IN., LAKE EFFECT PLOW BLADE.   |                           |                       | \$315.30   | \$7,882.50            |
| 11997                      | PBA-LE12 IRONHAWK        | PLOW BLADE, 12 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE48 4 FT. LAKE EFFECT BLADE, 3 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT.  |                           |                       | \$3,018.94 | \$60,378.80           |
| 11998                      | LE48 IRONHAWK            | BLADE, 7/8 IN. X 6 IN. X 48 IN. LAKE EFFECT PLOW BLADE SYSTEM.  |                           |                       | \$580.80   | \$87,120.00           |
| 11999                      | LE48CB IRONHAWK          | STRAP, (CLAMP BAR), 4 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |                       | \$40.78    | \$6,117.00            |
| 12000                      | SG126112LL<br>IRONHAWK   | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN LEFT LAKE EFFECT.   |                           |                       | \$79.15    | \$2,374.50            |
| 12001                      | SG126112LR<br>IRONHAWK   | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN RIGHT FOR LAKE EFFECT.  |                           |                       | \$79.15    | \$3,166.00            |

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|--|
| IronHawk Industrial<br>Euclid OH<br>4160 |
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| Material | Primary Mfg Part Number | Description  | Lead Time (days or weeks) | Vendor Product Number | Unit Price | Estimated Total Price |
|----------|-------------------------|--|---------------------------|-----------------------|------------|-----------------------|
| 12002    | SG126112 IRONHAWK       | CENTER GUARD, ARTICULATING BLADE PROTECTOR FOR LAKE EFFECT PLOW SYSTEM.  |                           |                       | \$100.97   | \$3,533.95            |
| 13114    | PBA-LE11 IRONHAWK       | PLOW BLADE, 11 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 1 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE36 3 FT. LAKE EFFECT BLADE, 1 EA #LE36CB 3 FT. CLAMP BAR, 2 EA #AB48AX 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT                          |                           |                       | \$2,789.30 | \$13,946.50           |
| 13126    | PBA-LE9 IRONHAWK        | PLOW BLADE, 9 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE36 3 FT. LAKE EFFECT BLADE, 3 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT   |                           |                       | \$2,330.02 | \$11,650.10           |
| 13127    | PBA-LE10 IRONHAWK       | PLOW BLADE, 10 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE48 4 FT. LAKE EFFECT BLADE, 1 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT. |                           |                       | \$2,559.66 | \$12,798.30           |
| 13128    | PBA-LE14 IRONHAWK       | PLOW BLADE, 14 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 2 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE14 LAKE EFFECT BOLT KIT. |                           |                       | \$3,496.54 | \$3,496.54            |
| 13645    | FW580 IRONHAWK          | WASHER, 5/8 IN., STRUCTURAL FLAT, FOR LAKE EFFECT BLADE INSTALLATION.  |                           |                       | \$0.12     | \$120.00              |

TESTING/EVALUATION: After discussion of the blade system approval process, we have determined that there are two systems that require additional testing before they can be considered an “approved” system for contract award. We would like to take an approach similar to the way we tested the Lake Effect blades from Ironhawk before we adopt them as an acceptable standard. It is Maintenance’s intention to perform coordinated tests of both the Nordik and Kueper blade systems across the system. The intention is not to stock or assign material numbers for any of these products at this time.

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9/4/2019**

|   |
|---|
| Valk Manufacturing Company<br>New Kingtown, PA<br>874 |
|---|

| Material                   | Primary Mfg Part Number  | Description   | Lead Time (days or weeks) | Vendor Product Number  | Unit Price | Estimated Total Price |
|----------------------------|--------------------------|---|---------------------------|------------------------|------------|-----------------------|
| <b>LOT 2: Blade System</b> |                          |   |                           |                        |            |                       |
| 10878                      | CF40585 JOMA             | BOLT, CARRIAGE, 5/8 IN.-11 X 4 IN., GRADE 8, FOR BLADE SYSTEM   |                           |                        | \$0.00     | \$0.00                |
| 10879                      | PB30475 JOMA             | BOLT, PLOW, 5/8 IN.-11 X 2 1/2 IN., GRADE 8, FOR CARBIDE ADAPTOR BLADE PLOW BLADE SYSTEM  |                           |                        | \$0.00     | \$0.00                |
| 11503                      | NS-111-JM-UA<br>IRONHAWK | NOSE PIECE,NUMBER 38 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 3 HOLES, ONE ON MOLD- BOARD SECTION, AND TWO ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED JULY 2012      |                           | VALK EQN-48H-JM-UA     | \$52.00    | \$1,300.00            |
| 11504                      | NS-110-JM-UA<br>IRONHAWK | NOSE PIECE,NUMBER 53 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 2 HOLES, ONE ON MOLD- BOARD SECTION, AND ONE ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED SEPTEMBER 2012 |                           | VALK 095-37-0016-JM-UA | \$49.00    | \$735.00              |
| 11993                      | AB36A7 IRONHAWK          | CARBIDE ADAPTOR BLADE, 3/4 IN. X 7 IN. X 36 IN., 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE  |                           | VALK CSP1T58N.75-7-3   | \$109.37   | \$2,187.40            |
| 11994                      | LE36 IRONHAWK            | BLADE, 7/8 IN. X 6 IN. X 36 IN. FOR 3 FT LAKE EFFECT BLADE.   |                           |                        | \$0.00     | \$0.00                |
| 11995                      | LE36CB IRONHAWK          | STRAP, (CLAMP BAR), 3 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |                        | \$0.00     | \$0.00                |
| 11996                      | AB48A7 IRONHAWK          | BLADE, CARBIDE ADAPTER, 3/4 IN. X 7 IN. X 48 IN., LAKE EFFECT PLOW BLADE.   |                           | VALK CSP1T58N.75-7-4   | \$145.80   | \$3,645.00            |
| 11997                      | PBA-LE12 IRONHAWK        | PLOW BLADE, 12 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE48 4 FT. LAKE EFFECT BLADE, 3 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT.  |                           |                        | \$0.00     | \$0.00                |
| 11998                      | LE48 IRONHAWK            | BLADE, 7/8 IN. X 6 IN. X 48 IN. LAKE EFFECT PLOW BLADE SYSTEM.  |                           |                        | \$0.00     | \$0.00                |
| 11999                      | LE48CB IRONHAWK          | STRAP, (CLAMP BAR), 4 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |                        | \$0.00     | \$0.00                |
| 12000                      | SG126112LL<br>IRONHAWK   | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN LEFT LAKE EFFECT.   |                           |                        | \$0.00     | \$0.00                |
| 12001                      | SG126112LR<br>IRONHAWK   | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN RIGHT FOR LAKE EFFECT.  |                           |                        | \$0.00     | \$0.00                |

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| Valk Manufacturing Company<br>New Kingtown, PA<br>874 |
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| Material | Primary Mfg Part Number | Description  | Lead Time (days or weeks) | Vendor Product Number | Unit Price | Estimated Total Price |
|----------|-------------------------|--|---------------------------|-----------------------|------------|-----------------------|
| 12002    | SG126112 IRONHAWK       | CENTER GUARD, ARTICULATING BLADE PROTECTOR FOR LAKE EFFECT PLOW SYSTEM.  |                           |                       | \$0.00     | \$0.00                |
| 13114    | PBA-LE11 IRONHAWK       | PLOW BLADE, 11 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 1 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE36 3 FT. LAKE EFFECT BLADE, 1 EA #LE36CB 3 FT. CLAMP BAR, 2 EA #AB48AX 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT                          |                           |                       | \$0.00     | \$0.00                |
| 13126    | PBA-LE9 IRONHAWK        | PLOW BLADE, 9 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE36 3 FT. LAKE EFFECT BLADE, 3 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT   |                           |                       | \$0.00     | \$0.00                |
| 13127    | PBA-LE10 IRONHAWK       | PLOW BLADE, 10 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE48 4 FT. LAKE EFFECT BLADE, 1 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT. |                           |                       | \$0.00     | \$0.00                |
| 13128    | PBA-LE14 IRONHAWK       | PLOW BLADE, 14 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 2 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE14 LAKE EFFECT BOLT KIT. |                           |                       | \$0.00     | \$0.00                |
| 13645    | FW580 IRONHAWK          | WASHER, 5/8 IN., STRUCTURAL FLAT, FOR LAKE EFFECT BLADE INSTALLATION.  |                           |                       | \$0.00     | \$0.00                |

TESTING/EVALUATION: After discussion of the blade system approval process, we have determined that there are two systems that require additional testing before they can be considered an “approved” system for contract award. We would like to take an approach similar to the way we tested the Lake Effect blades from Ironhawk before we adopt them as an acceptable standard. It is Maintenance’s intention to perform coordinated tests of both the Nordik and Kueper blade systems across the system. The intention is not to stock or assign material numbers for any of these products at this time.

**Bid Tabulation - PA Turnpike Commission**

**Bid 166000-2019-B  
9/4/2019**

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|--|
| Chemung Supply Corp.<br>Elmira, NY<br>39 |
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| Material                   | Primary Mfg Part Number | Description   | Lead Time (days or weeks) | Vendor Product Number | Unit Price | Estimated Total Price |
|----------------------------|-------------------------|---|---------------------------|-----------------------|------------|-----------------------|
| <b>LOT 2: Blade System</b> |                         |   |                           |                       |            |                       |
| 10878                      | CF40585 JOMA            | BOLT, CARRIAGE, 5/8 IN.-11 X 4 IN., GRADE 8, FOR BLADE SYSTEM   |                           |                       |            | \$0.00                |
| 10879                      | PB30475 JOMA            | BOLT, PLOW, 5/8 IN.-11 X 2 1/2 IN., GRADE 8, FOR CARBIDE ADAPTOR BLADE PLOW BLADE SYSTEM  |                           |                       |            | \$0.00                |
| 11503                      | NS-111-JM-UA IRONHAWK   | NOSE PIECE,NUMBER 38 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 3 HOLES, ONE ON MOLD- BOARD SECTION, AND TWO ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED JULY 2012      |                           |                       |            | \$0.00                |
| 11504                      | NS-110-JM-UA IRONHAWK   | NOSE PIECE,NUMBER 53 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 2 HOLES, ONE ON MOLD- BOARD SECTION, AND ONE ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED SEPTEMBER 2012 |                           |                       |            | \$0.00                |
| 11993                      | AB36A7 IRONHAWK         | CARBIDE ADAPTOR BLADE, 3/4 IN. X 7 IN. X 36 IN., 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE  |                           |                       |            | \$0.00                |
| 11994                      | LE36 IRONHAWK           | BLADE, 7/8 IN. X 6 IN. X 36 IN. FOR 3 FT LAKE EFFECT BLADE.   |                           |                       |            | \$0.00                |
| 11995                      | LE36CB IRONHAWK         | STRAP, (CLAMP BAR), 3 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |                       |            | \$0.00                |
| 11996                      | AB48A7 IRONHAWK         | BLADE, CARBIDE ADAPTER, 3/4 IN. X 7 IN. X 48 IN., LAKE EFFECT PLOW BLADE.   |                           |                       |            | \$0.00                |
| 11997                      | PBA-LE12 IRONHAWK       | PLOW BLADE, 12 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE48 4 FT. LAKE EFFECT BLADE, 3 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT.  |                           |                       |            | \$0.00                |
| 11998                      | LE48 IRONHAWK           | BLADE, 7/8 IN. X 6 IN. X 48 IN. LAKE EFFECT PLOW BLADE SYSTEM.  |                           |                       |            | \$0.00                |
| 11999                      | LE48CB IRONHAWK         | STRAP, (CLAMP BAR), 4 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |                       |            | \$0.00                |
| 12000                      | SG126112LL IRONHAWK     | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN LEFT LAKE EFFECT.   |                           |                       |            | \$0.00                |
| 12001                      | SG126112LR IRONHAWK     | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN RIGHT FOR LAKE EFFECT.  |                           |                       |            | \$0.00                |

**Bid Tabulation - PA Turnpike Commission**

**Bid 166000-2019-B  
9/4/2019**

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| Chemung Supply Corp.<br>Elmira, NY<br>39 |
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| Material | Primary Mfg Part Number | Description  | Lead Time (days or weeks) | Vendor Product Number | Unit Price | Estimated Total Price |
|----------|-------------------------|--|---------------------------|-----------------------|------------|-----------------------|
| 12002    | SG126112 IRONHAWK       | CENTER GUARD, ARTICULATING BLADE PROTECTOR FOR LAKE EFFECT PLOW SYSTEM.  |                           |                       |            | \$0.00                |
| 13114    | PBA-LE11 IRONHAWK       | PLOW BLADE, 11 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 1 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE36 3 FT. LAKE EFFECT BLADE, 1 EA #LE36CB 3 FT. CLAMP BAR, 2 EA #AB48AX 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT                          |                           |                       |            | \$0.00                |
| 13126    | PBA-LE9 IRONHAWK        | PLOW BLADE, 9 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE36 3 FT. LAKE EFFECT BLADE, 3 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT   |                           |                       |            | \$0.00                |
| 13127    | PBA-LE10 IRONHAWK       | PLOW BLADE, 10 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE48 4 FT. LAKE EFFECT BLADE, 1 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT. |                           |                       |            | \$0.00                |
| 13128    | PBA-LE14 IRONHAWK       | PLOW BLADE, 14 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 2 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE14 LAKE EFFECT BOLT KIT. |                           |                       |            | \$0.00                |
| 13645    | FW580 IRONHAWK          | WASHER, 5/8 IN., STRUCTURAL FLAT, FOR LAKE EFFECT BLADE INSTALLATION.  |                           |                       |            | \$0.00                |

TESTING/EVALUATION: After discussion of the blade system approval process, we have determined that there are two systems that require additional testing before they can be considered an “approved” system for contract award. We would like to take an approach similar to the way we tested the Lake Effect blades from Ironhawk before we adopt them as an acceptable standard. It is Maintenance’s intention to perform coordinated tests of both the Nordik and Kueper blade systems across the system. The intention is not to stock or assign material numbers for any of these products at this time.

**Bid Tabulation - PA Turnpike Commission**

**Bid 166000-2019-B  
9/4/2019**

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|---|
| Nordik Blades<br>Asbestos, Quebec<br>6492 |
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| Material                   | Primary Mfg Part Number | Description   | Lead Time (days or weeks) | Vendor Product Number                          | Unit Price | Estimated Total Price |
|----------------------------|-------------------------|---|---------------------------|--|------------|-----------------------|
| <b>LOT 2: Blade System</b> |                         |   |                           |  |            |                       |
| 10878                      | CF40585 JOMA            | BOLT, CARRIAGE, 5/8 IN.-11 X 4 IN., GRADE 8, FOR BLADE SYSTEM   |                           |  | \$0.00     | \$0.00                |
| 10879                      | PB30475 JOMA            | BOLT, PLOW, 5/8 IN.-11 X 2 1/2 IN., GRADE 8, FOR CARBIDE ADAPTOR BLADE PLOW BLADE SYSTEM  |                           |  | \$0.00     | \$0.00                |
| 11503                      | NS-111-JM-UA IRONHAWK   | NOSE PIECE,NUMBER 38 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 3 HOLES, ONE ON MOLD- BOARD SECTION, AND TWO ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED JULY 2012      |                           |  | \$0.00     | \$0.00                |
| 11504                      | NS-110-JM-UA IRONHAWK   | NOSE PIECE,NUMBER 53 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 2 HOLES, ONE ON MOLD- BOARD SECTION, AND ONE ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED SEPTEMBER 2012 |                           |  | \$0.00     | \$0.00                |
| 11993                      | AB36A7 IRONHAWK         | CARBIDE ADAPTOR BLADE, 3/4 IN. X 7 IN. X 36 IN., 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE  |                           |  | \$0.00     | \$0.00                |
| 11994                      | LE36 IRONHAWK           | BLADE, 7/8 IN. X 6 IN. X 36 IN. FOR 3 FT LAKE EFFECT BLADE.   |                           | N-NORDIK MOVE (NORDIK MOVE 3X12" REPL SECTION) | \$403.00   | \$28,210.00           |
| 11995                      | LE36CB IRONHAWK         | STRAP, (CLAMP BAR), 3 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |  | \$0.00     | \$0.00                |
| 11996                      | AB48A7 IRONHAWK         | BLADE, CARBIDE ADAPTER, 3/4 IN. X 7 IN. X 48 IN., LAKE EFFECT PLOW BLADE.   |                           |  | \$0.00     | \$0.00                |
| 11997                      | PBA-LE12 IRONHAWK       | PLOW BLADE, 12 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE48 4 FT. LAKE EFFECT BLADE, 3 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT.  |                           | N-NORDIK 1200-CARBIDE                          | \$2,497.00 | \$49,940.00           |
| 11998                      | LE48 IRONHAWK           | BLADE, 7/8 IN. X 6 IN. X 48 IN. LAKE EFFECT PLOW BLADE SYSTEM.  |                           | N-NORDIK MOVE (NORDIK MOVE 4X12" REPL SECTION) | \$537.00   | \$80,550.00           |
| 11999                      | LE48CB IRONHAWK         | STRAP, (CLAMP BAR), 4 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |  | \$0.00     | \$0.00                |
| 12000                      | SG126112LL IRONHAWK     | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN LEFT LAKE EFFECT.   |                           |  | \$0.00     | \$0.00                |
| 12001                      | SG126112LR IRONHAWK     | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN RIGHT FOR LAKE EFFECT.  |                           |  | \$0.00     | \$0.00                |

**Bid Tabulation - PA Turnpike Commission**

**Bid 166000-2019-B  
9/4/2019**

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| Nordik Blades<br>Asbestos, Quebec<br>6492 |
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| Material | Primary Mfg Part Number | Description  | Lead Time (days or weeks) | Vendor Product Number | Unit Price | Estimated Total Price |
|----------|-------------------------|--|---------------------------|-----------------------|------------|-----------------------|
| 12002    | SG126112 IRONHAWK       | CENTER GUARD, ARTICULATING BLADE PROTECTOR FOR LAKE EFFECT PLOW SYSTEM.  |                           |                       | \$0.00     | \$0.00                |
| 13114    | PBA-LE11 IRONHAWK       | PLOW BLADE, 11 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 1 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE36 3 FT. LAKE EFFECT BLADE, 1 EA #LE36CB 3 FT. CLAMP BAR, 2 EA #AB48AX 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT                          |                           | N-NORDIK 1100 CARBIDE | \$2,298.00 | \$11,490.00           |
| 13126    | PBA-LE9 IRONHAWK        | PLOW BLADE, 9 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE36 3 FT. LAKE EFFECT BLADE, 3 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT   |                           | N-NORDIK 900 CARBIDE  | \$1,889.00 | \$9,445.00            |
| 13127    | PBA-LE10 IRONHAWK       | PLOW BLADE, 10 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE48 4 FT. LAKE EFFECT BLADE, 1 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT. |                           | N-NORDIK 1000 CARBIDE | \$2,099.00 | \$10,495.00           |
| 13128    | PBA-LE14 IRONHAWK       | PLOW BLADE, 14 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 2 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE14 LAKE EFFECT BOLT KIT. |                           | N-NORDIK 1400 CARBIDE | \$2,945.00 | \$2,945.00            |
| 13645    | FW580 IRONHAWK          | WASHER, 5/8 IN., STRUCTURAL FLAT, FOR LAKE EFFECT BLADE INSTALLATION.  |                           |                       | \$0.00     | \$0.00                |

TESTING/EVALUATION: After discussion of the blade system approval process, we have determined that there are two systems that require additional testing before they can be considered an “approved” system for contract award. We would like to take an approach similar to the way we tested the Lake Effect blades from Ironhawk before we adopt them as an acceptable standard. It is Maintenance’s intention to perform coordinated tests of both the Nordik and Kueper blade systems across the system. The intention is not to stock or assign material numbers for any of these products at this time.

**Bid Tabulation - PA Turnpike Commission**

Bid 166000-2019-B  
9/4/2019

Northern Supply  
Bloomfield, NY

| Material                   | Primary Mfg Part Number | Description   | Lead Time (days or weeks) | Vendor Product Number                  | Unit Price | Estimated Total Price |
|----------------------------|-------------------------|---|---------------------------|--|------------|-----------------------|
| <b>LOT 2: Blade System</b> |                         |   |                           |  |            |                       |
| 10878                      | CF40585 JOMA            | BOLT, CARRIAGE, 5/8 IN.-11 X 4 IN., GRADE 8, FOR BLADE SYSTEM   |                           |  | \$0.00     | \$0.00                |
| 10879                      | PB30475 JOMA            | BOLT, PLOW, 5/8 IN.-11 X 2 1/2 IN., GRADE 8, FOR CARBIDE ADAPTOR BLADE PLOW BLADE SYSTEM  |                           |  | \$0.00     | \$0.00                |
| 11503                      | NS-111-JM-UA IRONHAWK   | NOSE PIECE,NUMBER 38 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 3 HOLES, ONE ON MOLD- BOARD SECTION, AND TWO ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED JULY 2012      |                           |  | \$0.00     | \$0.00                |
| 11504                      | NS-110-JM-UA IRONHAWK   | NOSE PIECE,NUMBER 53 MODIFIED FOR JOMA BLADES, 1020 GRADE CARBON STEEL,MOLDBOARD SECTION IS 3/4 IN. THICK, PLOW SIDE IS 1 IN. THICK, 2 HOLES, ONE ON MOLD- BOARD SECTION, AND ONE ON PLOW SIDE SECTION, PUNCHINGS SHALL BE 11/16 INCH SQUARE HOLES, WITH THE HOLES COUNT- ERSUNK 80 TO 82 DEGREES, .120 INCH MINIMUM DEPTH TO .180 INCH MAXIMUM DEPTH TO RECEIVE A 5/8 IN. DIAMETER PLOW BOLT, SUPPLIED 2 UNASSEMBLED PIECES, ZIP TIED TOGETHER, AS PER ATTACHED DRAWING DATED SEPTEMBER 2012 |                           |  | \$0.00     | \$0.00                |
| 11993                      | AB36A7 IRONHAWK         | CARBIDE ADAPTOR BLADE, 3/4 IN. X 7 IN. X 36 IN., 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE  |                           |  | \$0.00     | \$0.00                |
| 11994                      | LE36 IRONHAWK           | BLADE, 7/8 IN. X 6 IN. X 36 IN. FOR 3 FT LAKE EFFECT BLADE.   |                           | Kueper Tuca Sx Wave PN: 34855836XB     | \$612.00   | \$42,840.00           |
| 11995                      | LE36CB IRONHAWK         | STRAP, (CLAMP BAR), 3 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |  | \$0.00     | \$0.00                |
| 11996                      | AB48A7 IRONHAWK         | BLADE, CARBIDE ADAPTER, 3/4 IN. X 7 IN. X 48 IN., LAKE EFFECT PLOW BLADE.   |                           |  | \$0.00     | \$0.00                |
| 11997                      | PBA-LE12 IRONHAWK       | PLOW BLADE, 12 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE48 4 FT. LAKE EFFECT BLADE, 3 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT.  |                           | Kueper Tuca Sx Wave Qty:3-4ft Sections | \$2,448.00 | \$48,960.00           |
| 11998                      | LE48 IRONHAWK           | BLADE, 7/8 IN. X 6 IN. X 48 IN. LAKE EFFECT PLOW BLADE SYSTEM.  |                           | Kueper Tuca Sx Wave PN:34855936XB      | \$816.00   | \$122,400.00          |
| 11999                      | LE48CB IRONHAWK         | STRAP, (CLAMP BAR), 4 FT., FOR LAKE EFFECT PLOW BLADE.  |                           |  | \$0.00     | \$0.00                |
| 12000                      | SG126112LL IRONHAWK     | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN LEFT LAKE EFFECT.   |                           | Kueper 300000002                       | \$209.00   | \$6,270.00            |
| 12001                      | SG126112LR IRONHAWK     | HEAVY DUTY CURB GUARD (BLADE PROTECTOR), 6 IN RIGHT FOR LAKE EFFECT.  |                           | Kueper 300000003                       | \$209.00   | \$8,360.00            |

**Bid Tabulation - PA Turnpike Commission**

**Bid 166000-2019-B  
9/4/2019**

**Northern Supply  
Bloomfield, NY**

| Material | Primary Mfg Part Number | Description  | Lead Time (days or weeks) | Vendor Product Number   | Unit Price | Estimated Total Price |
|----------|-------------------------|--|---------------------------|---|------------|-----------------------|
| 12002    | SG126112 IRONHAWK       | CENTER GUARD, ARTICULATING BLADE PROTECTOR FOR LAKE EFFECT PLOW SYSTEM.  |                           |   | \$0.00     | \$0.00                |
| 13114    | PBA-LE11 IRONHAWK       | PLOW BLADE, 11 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 1 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE36 3 FT. LAKE EFFECT BLADE, 1 EA #LE36CB 3 FT. CLAMP BAR, 2 EA #AB48AX 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT                          |                           | Kueper Tuca Sx Wave<br>QTY: 1-3Ft Section QTY:<br>2-4Ft Sections  | \$2,244.00 | \$11,220.00           |
| 13126    | PBA-LE9 IRONHAWK        | PLOW BLADE, 9 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 3 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 3 EA #LE36 3 FT. LAKE EFFECT BLADE, 3 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT   |                           | Kueper Tuca Sx Wave<br>QTY: 3-3Ft Sections                        | \$1,836.00 | \$9,180.00            |
| 13127    | PBA-LE10 IRONHAWK       | PLOW BLADE, 10 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 1 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 1 EA #LE48 4 FT. LAKE EFFECT BLADE, 1 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE12 LAKE EFFECT BOLT KIT. |                           | Kueper Tuca Sx Wave<br>QTY: 2-3Ft Sections<br>QTY: 1-4Ft Section  | \$2,040.00 | \$10,200.00           |
| 13128    | PBA-LE14 IRONHAWK       | PLOW BLADE, 14 FT. INITIAL SET UP KIT FOR LAKE EFFECT PLOW BLADE SYSTEM, KIT CONTAINS: 2 EA #AB36A7 3 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE36 3 FT. LAKE EFFECT BLADE, 2 EA #LE36CB 3 FT. LAKE EFFECT CLAMP BAR, 2 EA #LE48A7 4 FT. ADAPTOR BLADE FOR LAKE EFFECT BLADE, 2 EA #LE48 4 FT. LAKE EFFECT BLADE, 2 EA #LE48CB 4 FT. LAKE EFFECT CLAMP BAR, 1 EA #SG126112LL BLADE PROTECTOR LEFT, 1 EA #SG126112LR BLADE PROTECTOR RIGHT, 1 EA #KIT-LE14 LAKE EFFECT BOLT KIT. |                           | Kueper Tuca Sx Wave<br>QTY: 2-3Ft Sections<br>QTY: 2-4Ft Sections | \$2,856.00 | \$2,856.00            |
| 13645    | FW580 IRONHAWK          | WASHER, 5/8 IN., STRUCTURAL FLAT, FOR LAKE EFFECT BLADE INSTALLATION.  |                           |   | \$0.00     | \$0.00                |

TESTING/EVALUATION: After discussion of the blade system approval process, we have determined that there are two systems that require additional testing before they can be considered an “approved” system for contract award. We would like to take an approach similar to the way we tested the Lake Effect blades from Ironhawk before we adopt them as an acceptable standard. It is Maintenance’s intention to perform coordinated tests of both the Nordik and Kueper blade systems across the system. The intention is not to stock or assign material numbers for any of these products at this time.