DocuSign Envelope ID: 805E3DA0-6960-4039-B0B9-DE46BEB50FCA D-754-85A TRUCK INSPECTION ROADSIDE SITE Place bolt close enough to pulley so cable will not PULLEY WINCH FOR 5' X 3' SIGN Notes: ump off pulley or prevent $\frac{1}{4}$ " dia. bolt with washer pulley from turning. and lock washer and nut Use minimum 0.100 inch thickness sign backing material. with spacer to prevent Weld ¼" plate to shape shown freewheeling of pulley. Punch holes round for \(^3/8\)" bolt. so cable drops into pulley slot Pulling Winch: Build winch for lifting and pulling operations with self locking mechanism. Use winch and cable attachment in compliance with SAE Standard J1853 and mount using three 3/8" diameter bolts, washers and lock washers. Use laminated, high carbon steel gears. Copper braze drive gears and arc weld gears. Rigid weld reel for added strength. Assure reel is free wheeling when ratchet is disengaged. Match gear ratio for easy cranking. Use zinc plated finish. Use %" thick steel plate Heavy duty steel with molded grips for handle and embossed reinforced steel base. Provide permanently lubricated bearings for drive shafts. Include cable clamp. Provide large hub for pulling winch for use with cable operation. %" dia. bolt with Use 3/8" thick steel plate conforming to AASHTO M270 Grade 36 and galvanized in conformance with ASTM A153 for washer,lock pulling winch and pulley attachment hardware. Provide pulleys of approximately 3" diameter plus a \(^3\epsilon\) diameter cable ride. Cable Guide washer, and nuts. Use spacers between the hub and the attachment brackets so pulleys ride in the center of brackets without moving back and forth. Fabricate bolts, nuts, and washers of steel meeting ASTM A307 and galvanized in conformance with ASTM A153. 2½"x2½" %" thick steel plate 12 gauge Use double galvanized 7 strand steel wire cable not less than \(^3\)/8" diameter meeting ASTM A475. perforated stringer Use 4" wide x 2" deep x ½" thick stainless steel hinges with 4-¾6" Dia [#10-24] x 5/8" long slotted countersunk flat head stainless steel stove bolts/machine screws with stainless steel locking nuts to attach to flat sheet panels. Place centerline $\frac{3}{8}$ " thick steel plate of hinge pin with offset letters so sign will hang down vertically. %" dia. bolt with washer, lock Hinge Detail washer, and nuts. Place bolt close enough %" thick steel plate Connection Detai to pulley so cable will not jump off pulley or 13/4" prevent pulley from turning. Detail A $rac{1}{4}$ " dia. bolt and washer, 1.5' and lock washer, and nut 2" with spacer to prevent Hinge Detail Side View Front View freewheeling of pulley. Detail B 1.5' 2" A \(^3\)\" dia. I bolt with washer, lock washer, and two nuts. **→** 2⁷/₈" Detail B Side View Front View Detail C Vertical Clearance (See plans.) Post Length (See plans) 1%"x1%" %" dia. bolt Horizontal Stringer Post Length (See plans.) 12 gauge with washer perforated lock washer 5½" stringer Attachment bracket and nut. Attachment bracket Punch round hole Pulling winch through angle to Vertical Stringer 41/4" Detail C fit stringer and post holes. Pulling winch Connection Detail Front View Side View Detail A NORTH DAKOTA DEPARTMENT OF TRANSPORTATION 9-27-13 REVISIONS DATE CHANGE PROFESSIONAL PE-4683 Anchors (see plans) Anchors Anchors (see plans) (see plans) Sign Closed Sign Opening Sign Open

Side View

Opening and Closing Mechanism

10/01/24