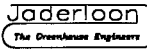


2IN1127

ROLLUP CURTAIN INSTRUCTIONS

DRAWING.....	PAGE NO.
STRUCTURE PREPARATION.....	1
STRUCTURE RETAINER PREPARATION.....	2
STRUCTURE RETAINER PREPARATION.....	3
STRUCTURE RETAINER PREPARATION.....	4
DRIVE ADAPTOR ASSEMBLY.....	5
STRUCTURE RETAINER PREPARATION.....	6
CURTAIN INSTALLATION.....	7
ENDSEAL FRAME INSTALLATION.....	8

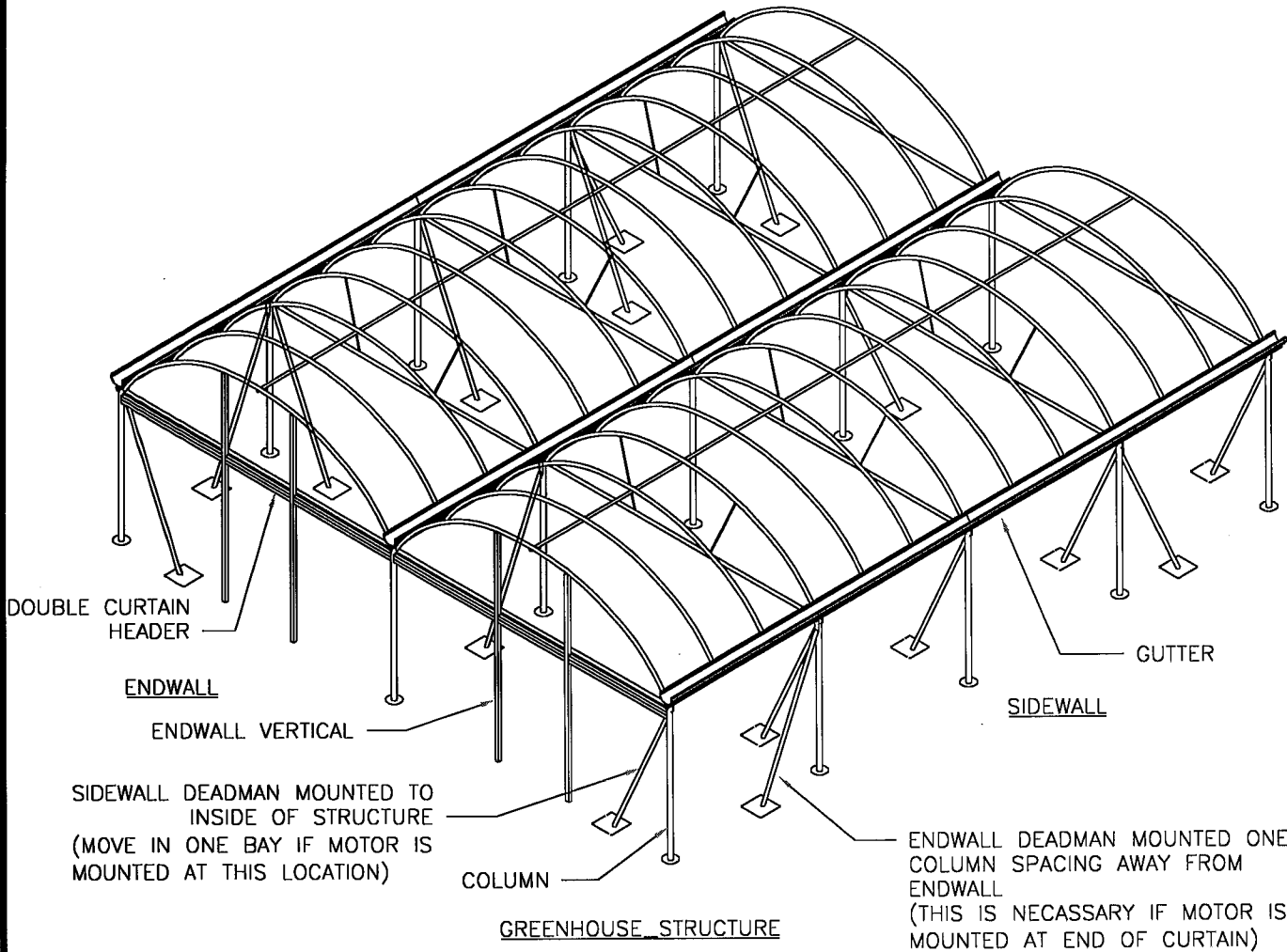
DRAWING.....	PAGE NO.
ENDSEAL COVER INSTALLATION.....	9
ENDSEAL COVER INSTALLATION.....	10
COUNTER WEIGHT INSTALLATION.....	11
CURTAIN ELECTRICAL INSTALLATION.....	12
115V. MOTOR ELECTRICAL SCHEMATIC.....	13
230V. MOTOR ELECTRICAL SCHEMATIC.....	14
LIMIT SWITCH ADJUSTMENT.....	15

DRAWING NAME		
ROLL-UP CURTAIN TABLE OF CONTENTS		
MAJOR ASSEMBLY		
MINOR ASSEMBLY		
SCALE	USERS SCALE	DATE
N/A	N/A	7-19-00
DRAWN BY	APPROVED BY	DRAWING NO.
D MCDONALD		2IN1127TOC

REVISIONS

NOTE:

SYM	DESCRIPTION	DATE	BY



STRUCTURE PREPARATION

SIDEWALL

Rollup curtains may be mounted on external deadmen if necessary but function best mounted on a vertical wall. Deadmen can be mounted internally to create a vertical wall. If deadmen are mounted internally and the motor is to be mounted at the end of the curtain, the endwall deadmen must be moved in one column spacing to provide clearance for motor travel. If motor is mounted at midpoint of curtain rather than the end, endwall deadmen can be mounted to the endwall columns.

ENDWALL

Endwall framework must be in place before curtain can be installed. Two verticals and a double horizontal is all the endwall framework required. There must be a double row of framework along top of curtain. This will allow the attachment of the curtain as well as the gable cover material. Corner deadmen must be moved in one bay if motor is installed at end of curtain. If motor is installed at midpoint of curtain deadmen may be installed at corners.

DRAWING NAME STRUCTURE PREPARATION

Jaderloon Co., Inc
161 Greenpines Rd, Irma, FL 32942

DRAWING SCALE 3/16" = 1'	PLOT SCALE 1:96	DATE 10-27-00
DRAWN BY NOLES		DRAWING NUMBER 00102701

REVISIONS

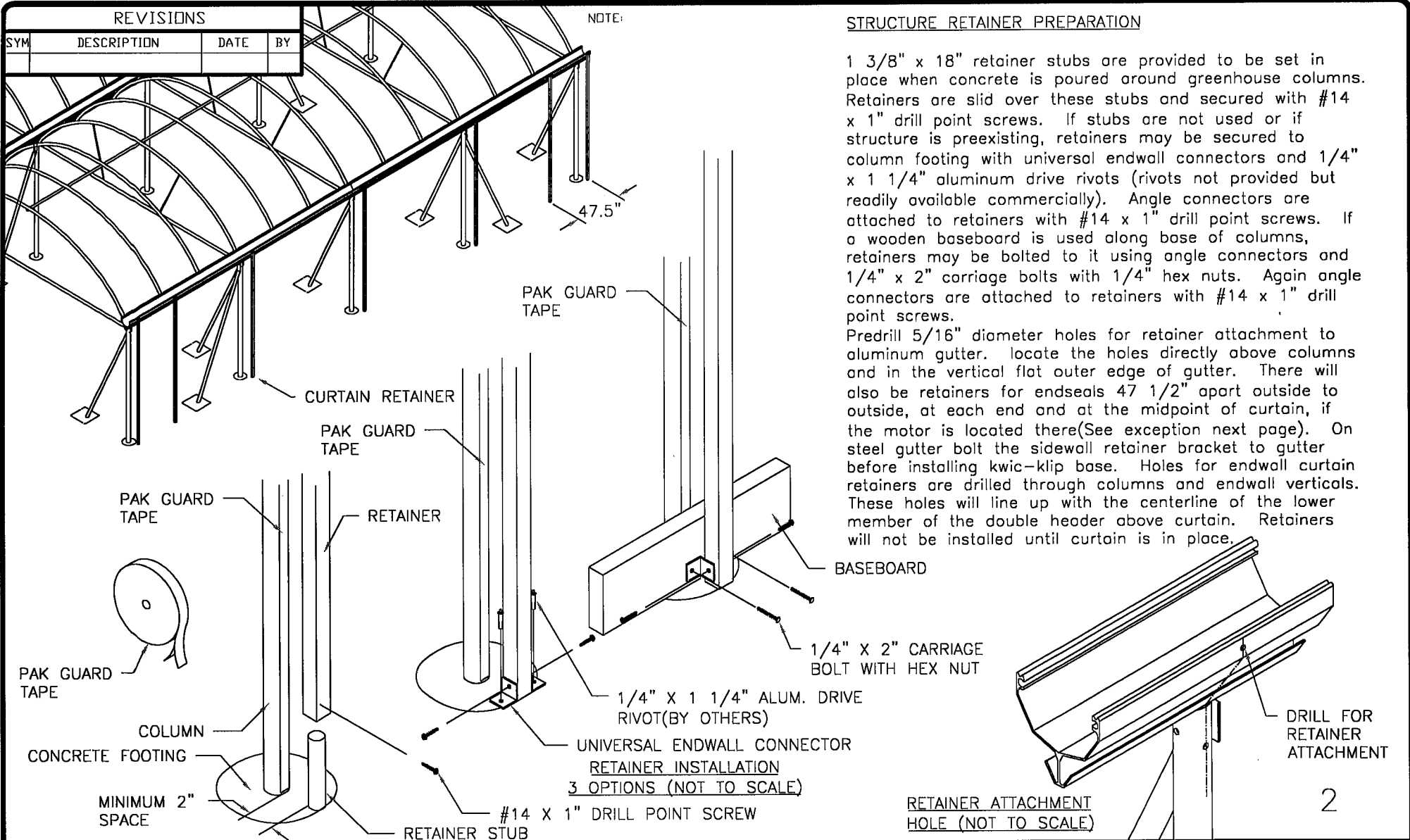
SYM	DESCRIPTION	DATE	BY

NOTE:

STRUCTURE RETAINER PREPARATION

1 3/8" x 18" retainer stubs are provided to be set in place when concrete is poured around greenhouse columns. Retainers are slid over these stubs and secured with #14 x 1" drill point screws. If stubs are not used or if structure is preexisting, retainers may be secured to column footing with universal endwall connectors and 1/4" x 1 1/4" aluminum drive rivots (rivots not provided but readily available commercially). Angle connectors are attached to retainers with #14 x 1" drill point screws. If a wooden baseboard is used along base of columns, retainers may be bolted to it using angle connectors and 1/4" x 2" carriage bolts with 1/4" hex nuts. Again angle connectors are attached to retainers with #14 x 1" drill point screws.

Predrill 5/16" diameter holes for retainer attachment to aluminum gutter. locate the holes directly above columns and in the vertical flat outer edge of gutter. There will also be retainers for endseals 47 1/2" apart outside to outside, at each end and at the midpoint of curtain, if the motor is located there(See exception next page). On steel gutter bolt the sidewall retainer bracket to gutter before installing kwic-klip base. Holes for endwall curtain retainers are drilled through columns and endwall verticals. These holes will line up with the centerline of the lower member of the double header above curtain. Retainers will not be installed until curtain is in place.



2

DRAWING NAME STRUCTURE RETAINER PREPARATION

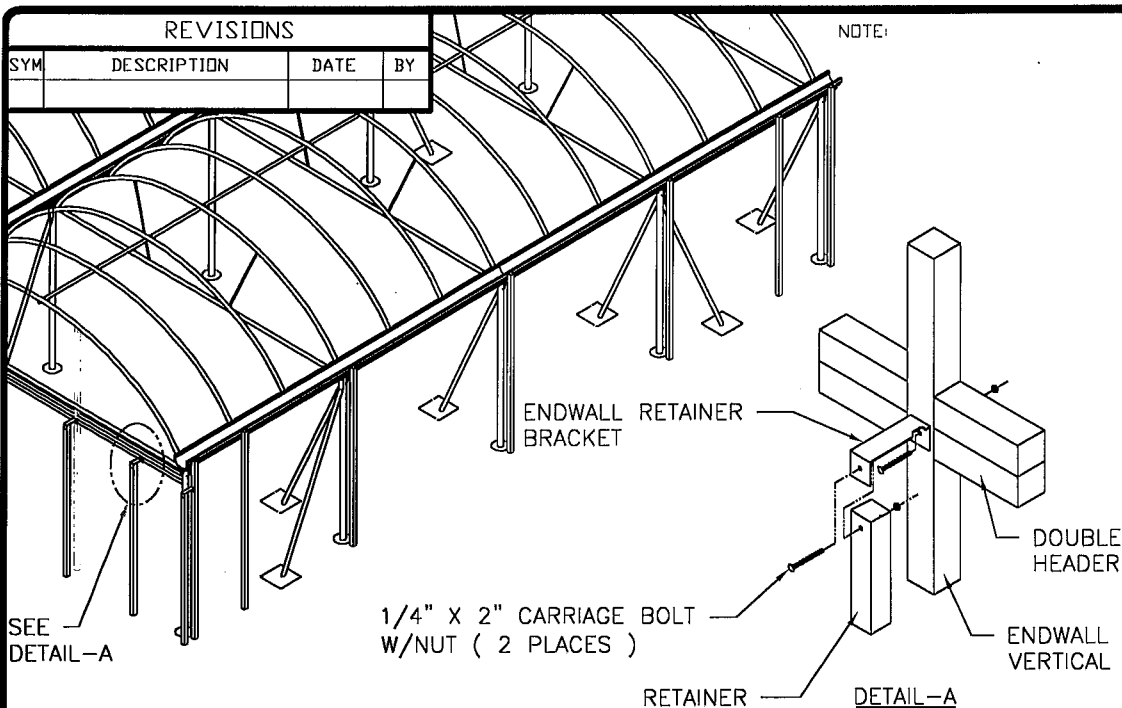
Jaderloon Co., Inc
161 Greenhines Rd, Irmo, SC 29212

DRAWING SCALE 3/16" = 1'	PLOT SCALE 1:96	DATE 10-27-00
DRAWN BY NOLES		DRAWING NUMBER 00102702

REVISIONS

SYM	DESCRIPTION	DATE	BY

NOTE:



SEE
DETAIL-A

1/4" X 2" CARRIAGE BOLT
W/NUT (2 PLACES)

1/4 X 2" CARRIAGE
BOLT W/NUT(3 PLS)

DETAIL-A

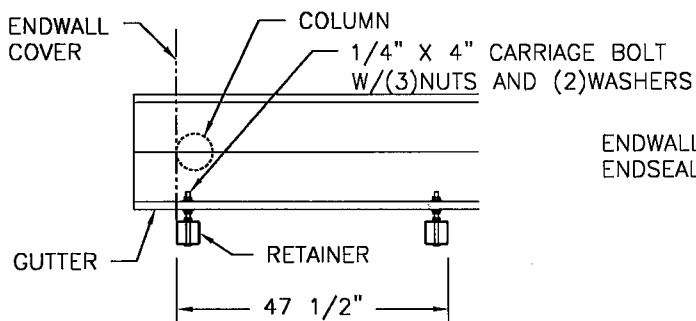
RETAINER LOCATIONS

SIDEWALL CURTAINS

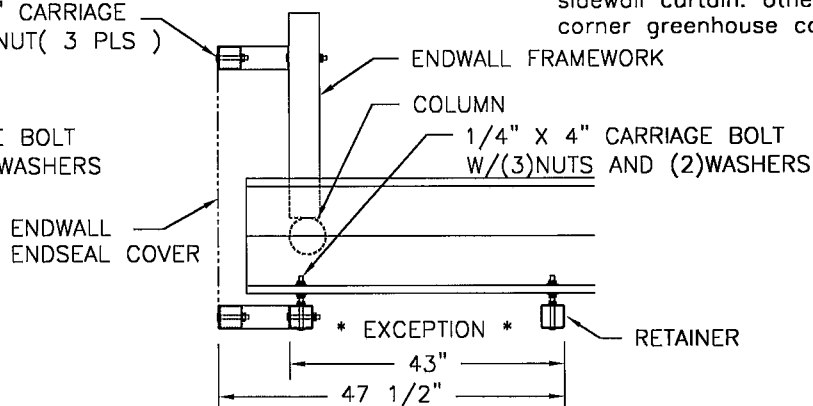
Retainers are generally located in front of each sidewall column. The only exceptions are those for curtain endseals. The retainers at the ends of curtains must be positioned to line up with endwall cover material. This will allow a square corner that will be trimmed with aluminum angle. Once the corner retainer location is established, set another retainer 47 1/2" from it. This 47 1/2" dimension must be outside to outside of the two retainers. If there is a rollup curtain on the endwall, the 47 1/2" dimension will change to 43" on the endseals only. If the motor is to be mounted at midpoint of curtain, an additional seal will be installed at that location. Install this seal adjacent to or in front of a column. The two retainers for the midseal will also be 47 1/2" apart outside to outside.

ENDWALL CURTAINS

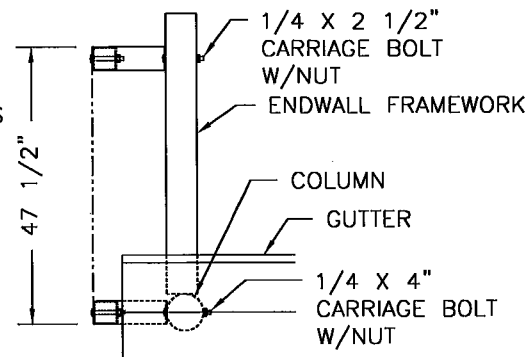
Endwall retainers are located at columns and endwall verticals with the exception of the end and midseal retainers. If there is a rollup curtain on the sidewall, the corner retainer will attach to the corner retainer of the sidewall curtain. otherwise the corner retainer will attach to corner greenhouse column.



ENDSEAL RETAINERS SIDEWALL CURTAIN



ENDSEAL RETAINERS SIDEWALL AND ENDWALL CURTAINS



ENDSEAL RETAINERS ENDWALL CURTAIN

3

DRAWING NAME STRUCTURE RETAINER PREPARATION

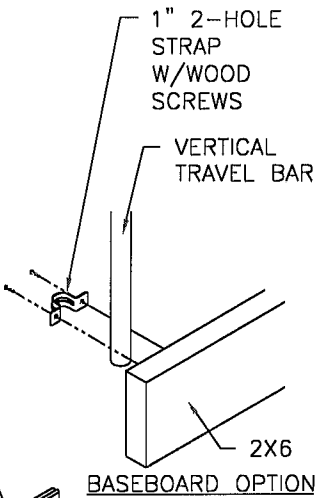
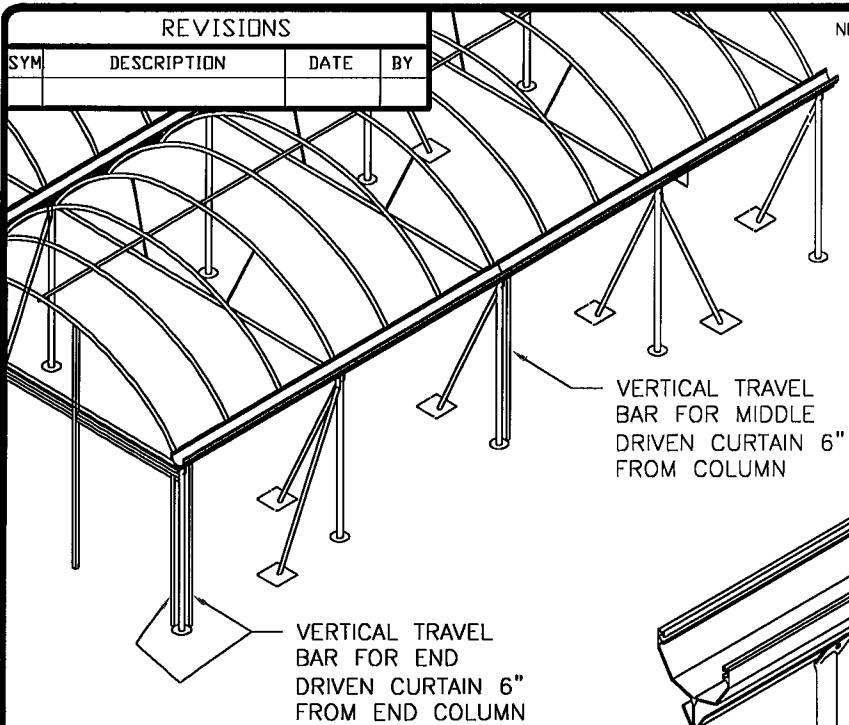
Juderloon Co., Inc
161 Greenpines Rd., Irmo, SC 29212

DRAWING SCALE 3/16" = 1'	PLOT SCALE 1:96	DATE 10-27-00
DRAWN BY NOLES		DRAWING NUMBER 00011601

REVISIONS

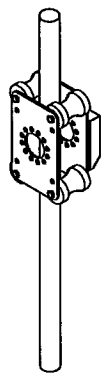
SYM	DESCRIPTION	DATE	BY

NOTE:

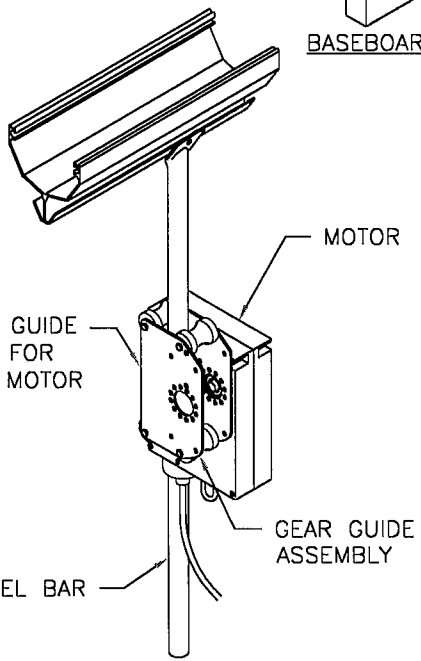


MOTOR INSTALLATION

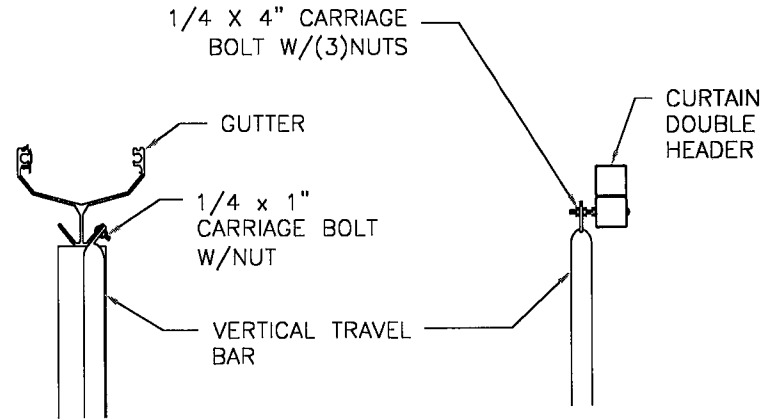
The motor will be installed at either end or near the midpoint of the curtain. This is not an option during installation, the curtain materials are provided for one or the other not both. Check your drive adapter it will be setup for either single or double output, single output for the ends or double output for the midpoint of curtain. Install single or double drive adapter through motor and either motorized or manual gear guide. On single drive adapters coupling must face toward curtain. Slide this assembly onto vertical travel bar. Install 1 3/8" x 180" vertical travel bar at motor location. Cut vertical travel bar to fit with bottom end buried 12" in ground or anchored to concrete as per retainers. Bend top to match angle of aluminum gutter, drill 5/16" diameter hole in drip angle of gutter and bolt in place with 1/4" x 1" carriage bolt and 1/4" hex nut. For steel gutter drill through to outside of gutter and bolt travel bar in place. Caulk bolt head in gutter to prevent leaking. On endwall curtains drill 5/16" hole through framework above curtain. Attach with 1/4" x 4" carriage bolt and (3)1/4" hex nuts. Use (2)hex nuts to space travel bar away from framework as needed to align motor.



FOLLOW GEAR GUIDE INSTRUCTIONS FOR ASSEMBLY TO MOTOR



MOTOR INSTALLATION



SIDEWALL TRAVEL BAR INSTALLATION

ENDWALL TRAVEL BAR INSTALLATION

DRAWING NAME STRUCTURE RETAINER PREPARATION

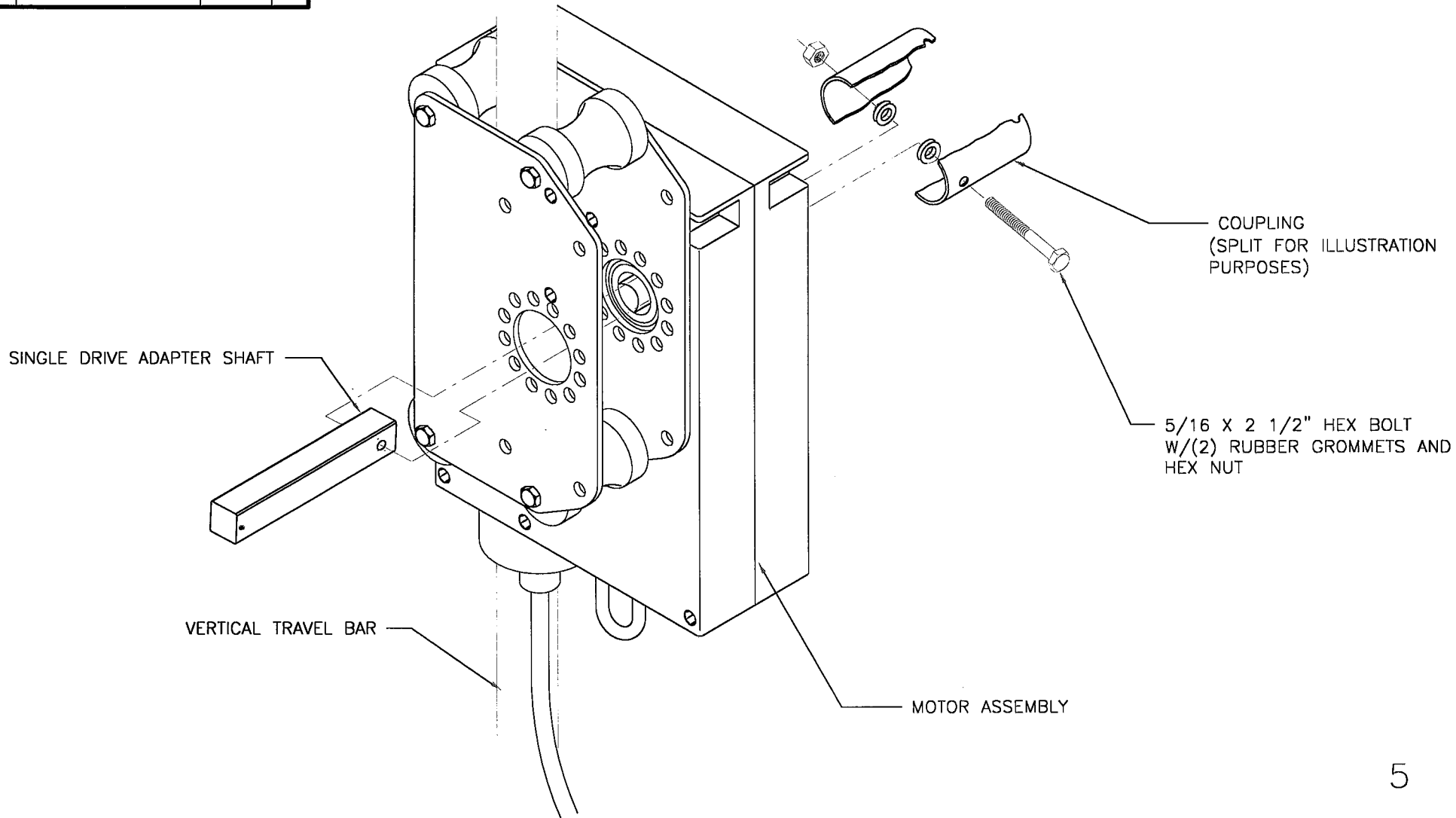
Jadertoon Co., Inc
161 Greenpines Rd, Irma, FL 32942

DRAWING SCALE 3/16" = 1'	PLOT SCALE 1:96	DATE 10-27-00
DRAWN BY NOLES		DRAWING NUMBER 00102705

REVISIONS

SYM	DESCRIPTION	DATE	BY

NOTE: 1. DOUBLE DRIVE ADAPTERS HAVE (2) COUPLINGS (1) ON EACH SIDE OF MOTOR
 2. ASSEMBLY IS THE SAME FOR MANUAL GEARBOX DRIVE ADAPTERS



DRAWING NAME DRIVE ADAPTER ASSEMBLY

Jadertoon Co., Inc
 161 Greenfines Rd, Irmo, SC 29212

DRAWING SCALE 1/2	PLOT SCALE 1:2	DATE 1-22-01
DRAWN BY NDLES		DRAWING NUMBER 00012201

REVISIONS

SYM	DESCRIPTION	DATE	BY

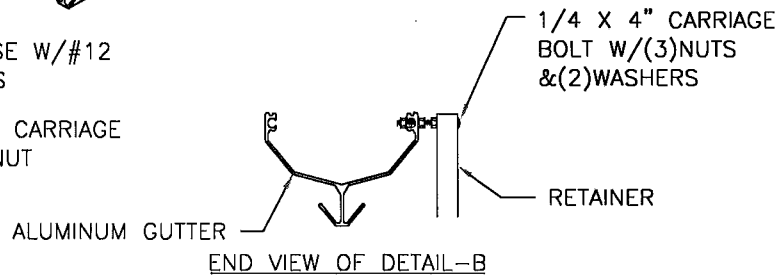
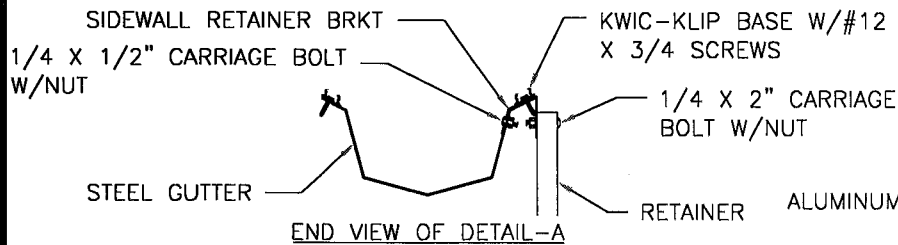
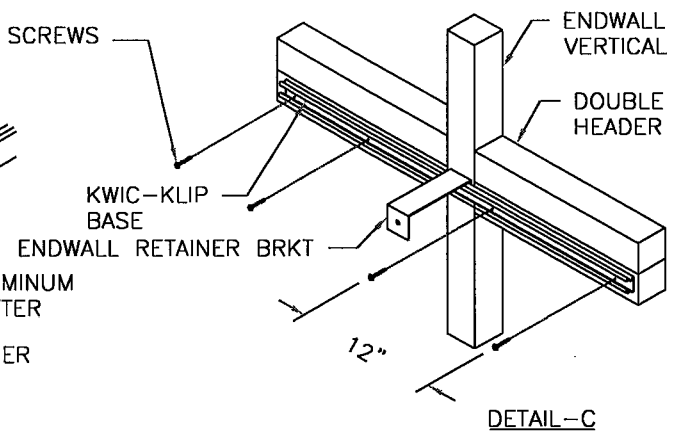
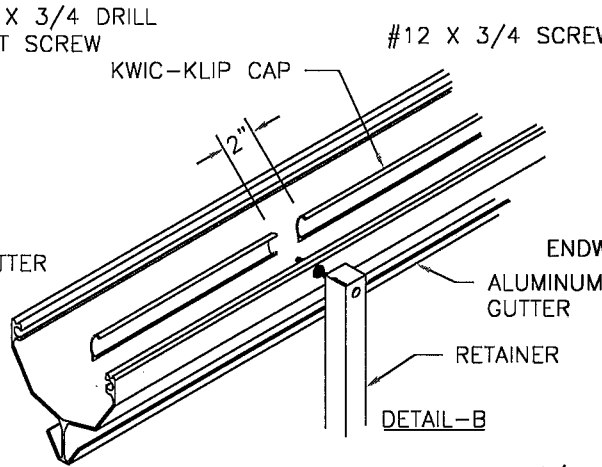
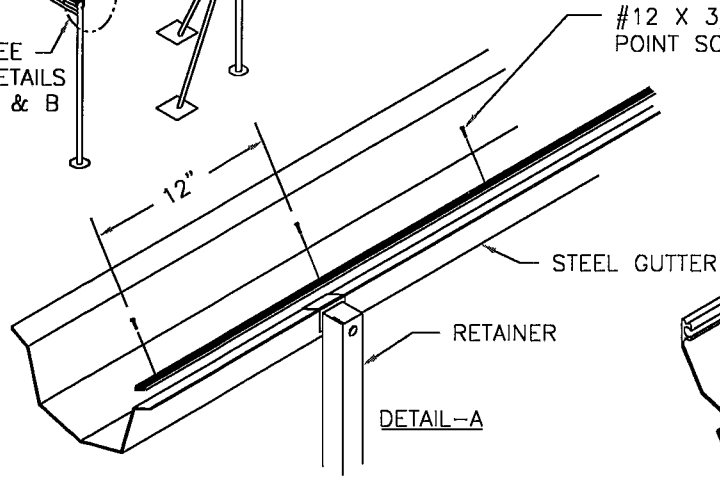
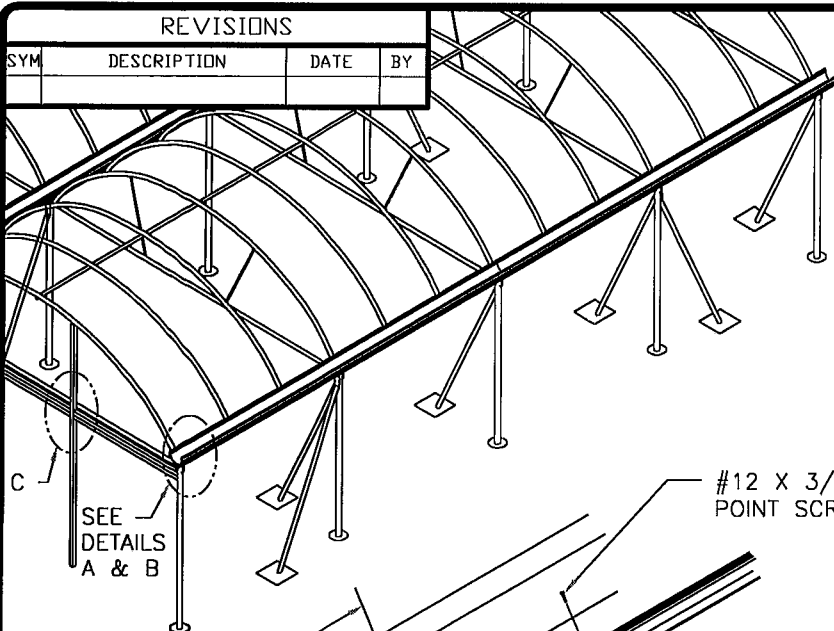
KWIC-KLIP INSTALLATION

SIDEWALL

If structure has steel gutter, screw kwic-clip base along edge of gutter using #12 x 3/4" drill point screws spaced 1 foot apart. Tab on kwic-clip base must face into gutter. Sidewall retainer brackets must be attached to steel gutter before kwic-clip base is installed. On aluminum gutter only, precut kwic-clip cap so that for a 9 foot column spacing you have an 8 foot piece and a 10 inch piece for each column spacing. This will allow you to leave a 2 inch gap where retainers bolt through gutter. For 12 foot column spacings cut kwic-clip cap so that you have an 8 foot piece and a 3 foot 10 inch piece per column spacing.

ENDWALL

Screw kwic-clip base to lower member of curtain double header. Tab on kwic-clip base must face up. Endwall retainer brackets must be in place before installing kwic-clip base.

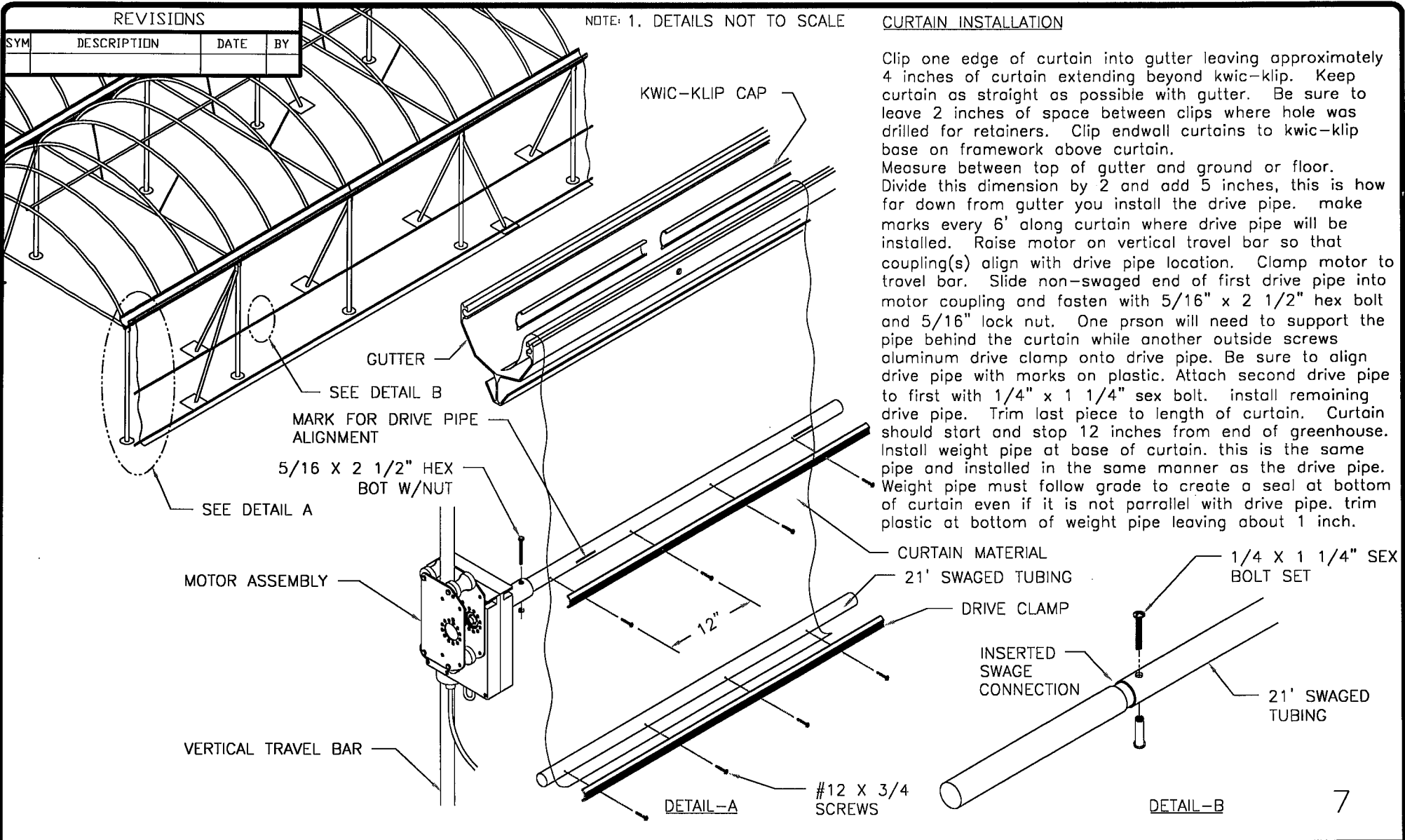


REVISIONS

SYM	DESCRIPTION	DATE	BY

NOTE: 1. DETAILS NOT TO SCALE

CURTAIN INSTALLATION



Clip one edge of curtain into gutter leaving approximately 4 inches of curtain extending beyond kwic-clip. Keep curtain as straight as possible with gutter. Be sure to leave 2 inches of space between clips where hole was drilled for retainers. Clip endwall curtains to kwic-clip base on framework above curtain.

Measure between top of gutter and ground or floor. Divide this dimension by 2 and add 5 inches, this is how far down from gutter you install the drive pipe. make marks every 6' along curtain where drive pipe will be installed. Raise motor on vertical travel bar so that coupling(s) align with drive pipe location. Clamp motor to travel bar. Slide non-swaged end of first drive pipe into motor coupling and fasten with 5/16" x 2 1/2" hex bolt and 5/16" lock nut. One prson will need to support the pipe behind the curtain while another outside screws aluminum drive clamp onto drive pipe. Be sure to align drive pipe with marks on plastic. Attach second drive pipe to first with 1/4" x 1 1/4" sex bolt. install remaining drive pipe. Trim last piece to length of curtain. Curtain should start and stop 12 inches from end of greenhouse. Install weight pipe at base of curtain. this is the same pipe and installed in the same manner as the drive pipe. Weight pipe must follow grade to create a seal at bottom of curtain even if it is not parralel with drive pipe. trim plastic at bottom of weight pipe leaving about 1 inch.

DRAWING NAME	CURTAIN INSTALLATION
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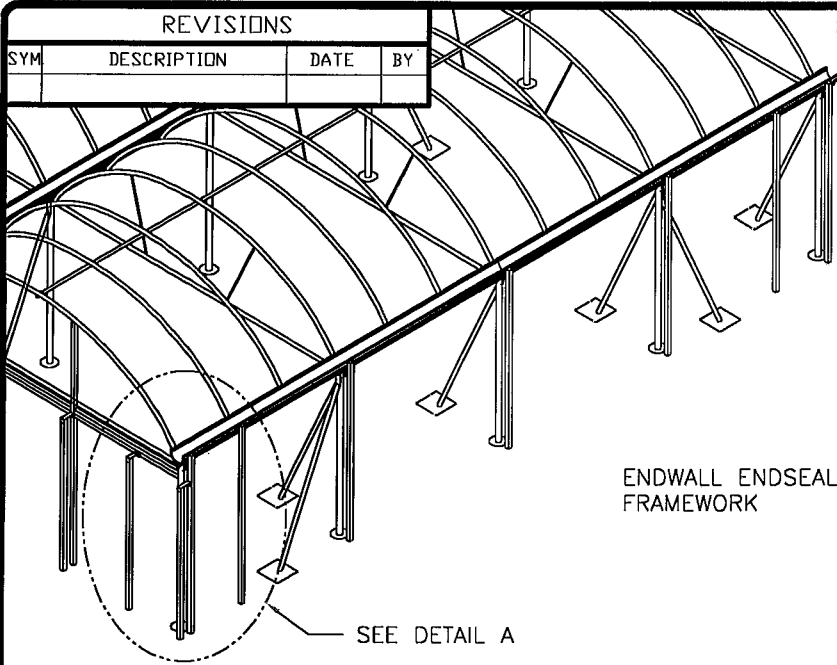
Jaderloon Co., Inc
161 Greenpines Rd, Irma, FL 29212

DRAWING SCALE	3/16" = 1'	PLLOT SCALE	1:96	DATE	11-29-00
DRAWN BY	NDLES	DRAWING NUMBER	00012001		

REVISIONS

SYM	DESCRIPTION	DATE	BY

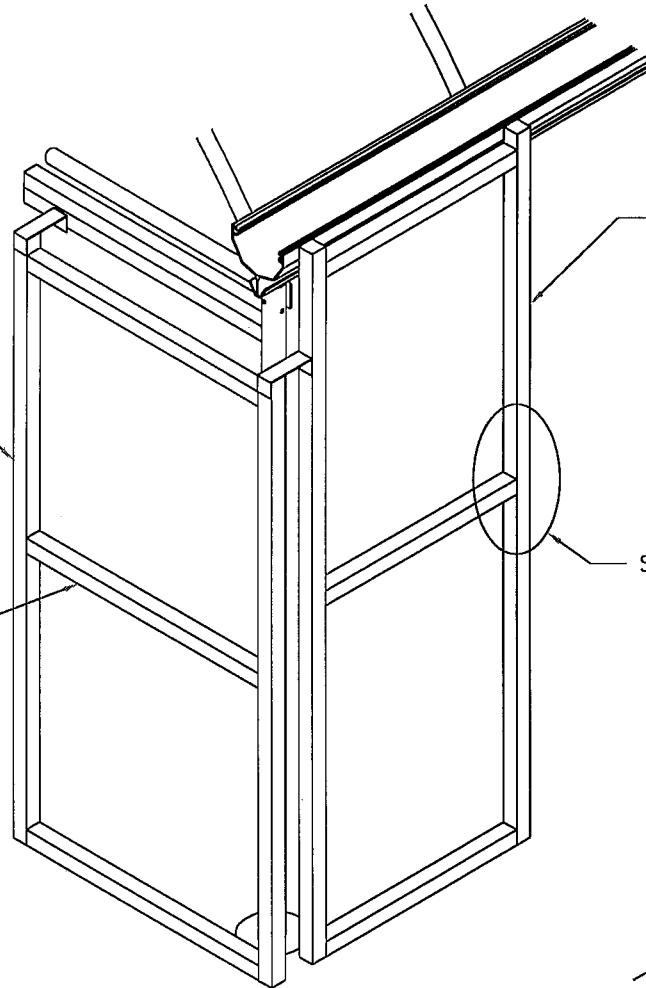
NOTE:



ENDWALL ENDSEAL FRAMEWORK

SEE DETAIL A

HORIZONTAL FRAMEWORK



SIDEWALL ENDSEAL FRAMEWORK

SEE DETAIL B

ENDSEAL FRAMEWORK

Install all retainers as shown in previous drawings. Space sidewall endseal retainers away from gutter at least 3/4" with extra nuts as shown. This is required on endseal retainers but may not be necessary elsewhere if there is adequate clearance for curtain travel. Install horizontal framework in endseal for the support of cover material. use universal angle connectors and #14 x 3/4" drill point screws to install horizontal framework. position horizontal members at the top, bottom and middle of endseal. On sidewalls where the 47 1/2" dimension is reduced to 43", the horizontal members will require site cutting to fit.

#14 X 3/4" DRILL POINT SCREWS

UNIVERSAL ANGLE CONNECTOR

DETAIL-A

DETAIL-B

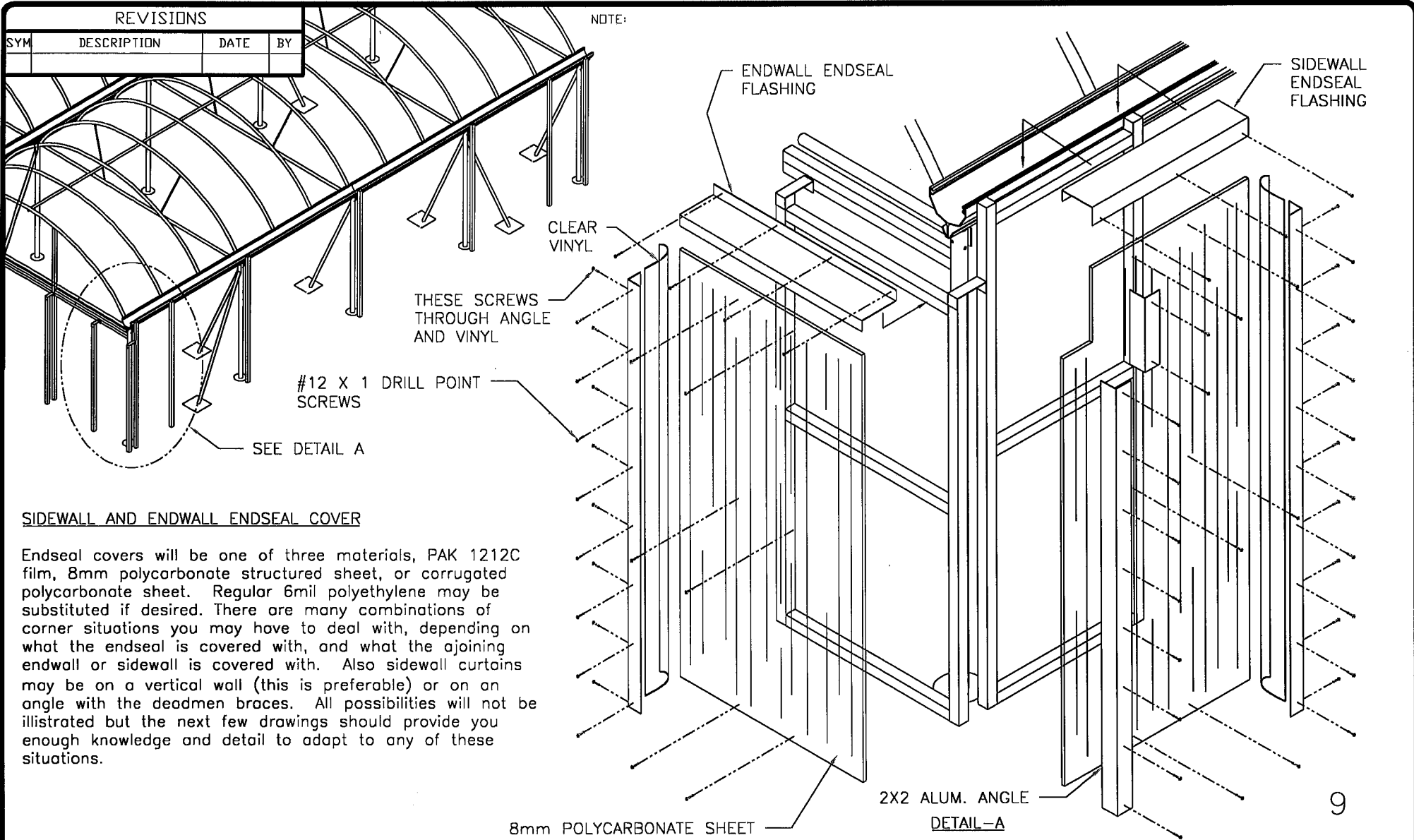
8

DRAWING NAME: ENDSEAL FRAME INSTALLATION

Jadrolon Co., Inc
161 Greenpines Rd, Jmo, FL 32912

DRAWING SCALE 3/16" = 1'	PLOT SCALE 1:96	DATE 1-20-01
DRAWN BY NOLES		DRAWING NUMBER 00012301

REVISIONS			
SYM	DESCRIPTION	DATE	BY



SIDEWALL AND ENDWALL ENDSEAL COVER

Endseal covers will be one of three materials, PAK 1212C film, 8mm polycarbonate structured sheet, or corrugated polycarbonate sheet. Regular 6mil polyethylene may be substituted if desired. There are many combinations of corner situations you may have to deal with, depending on what the endseal is covered with, and what the adjoining endwall or sidewall is covered with. Also sidewall curtains may be on a vertical wall (this is preferable) or on an angle with the deadmen braces. All possibilities will not be illustrated but the next few drawings should provide you enough knowledge and detail to adapt to any of these situations.

DRAWING NAME	ENDSEAL COVER INSTALLATION
--------------	----------------------------

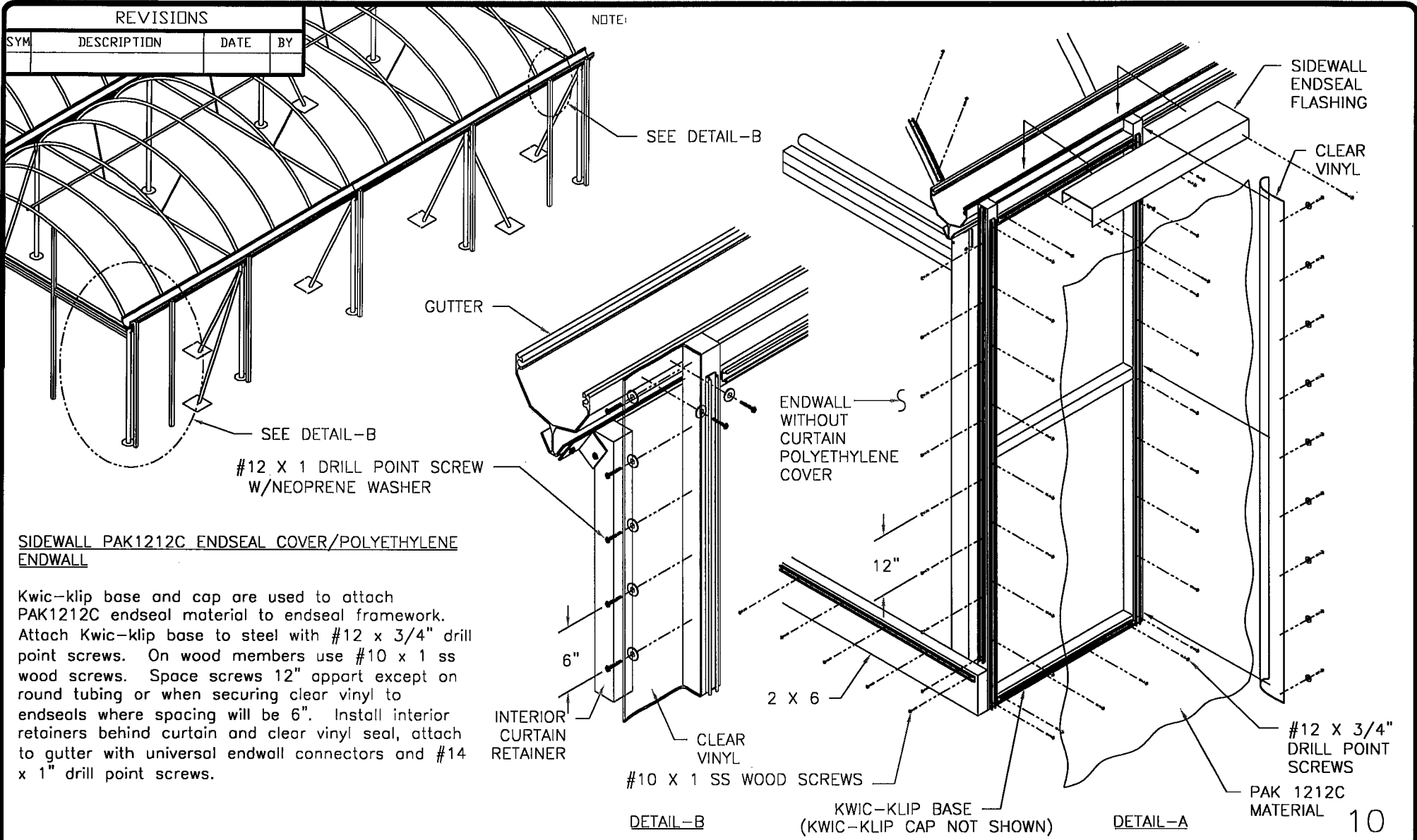
Jaderloon Co., Inc
 161 Greenpines Rd, Irmo, SC 29212

DRAWING SCALE	3/16" = 1'	PLOT SCALE	1:96	DATE	1-20-01
DRAWN BY	NDLES	DRAWING NUMBER	00012002		

REVISIONS

SYM	DESCRIPTION	DATE	BY

NOTE:



SIDEWALL PAK1212C ENDSEAL COVER/POLYETHYLENE ENDWALL

Kwic-klip base and cap are used to attach PAK1212C endseal material to endseal framework. Attach Kwic-klip base to steel with #12 x 3/4" drill point screws. On wood members use #10 x 1 ss wood screws. Space screws 12" apart except on round tubing or when securing clear vinyl to endseals where spacing will be 6". Install interior retainers behind curtain and clear vinyl seal, attach to gutter with universal endwall connectors and #14 x 1" drill point screws.

DRAWING NAME: ENDSEAL COVER INSTALLATION II

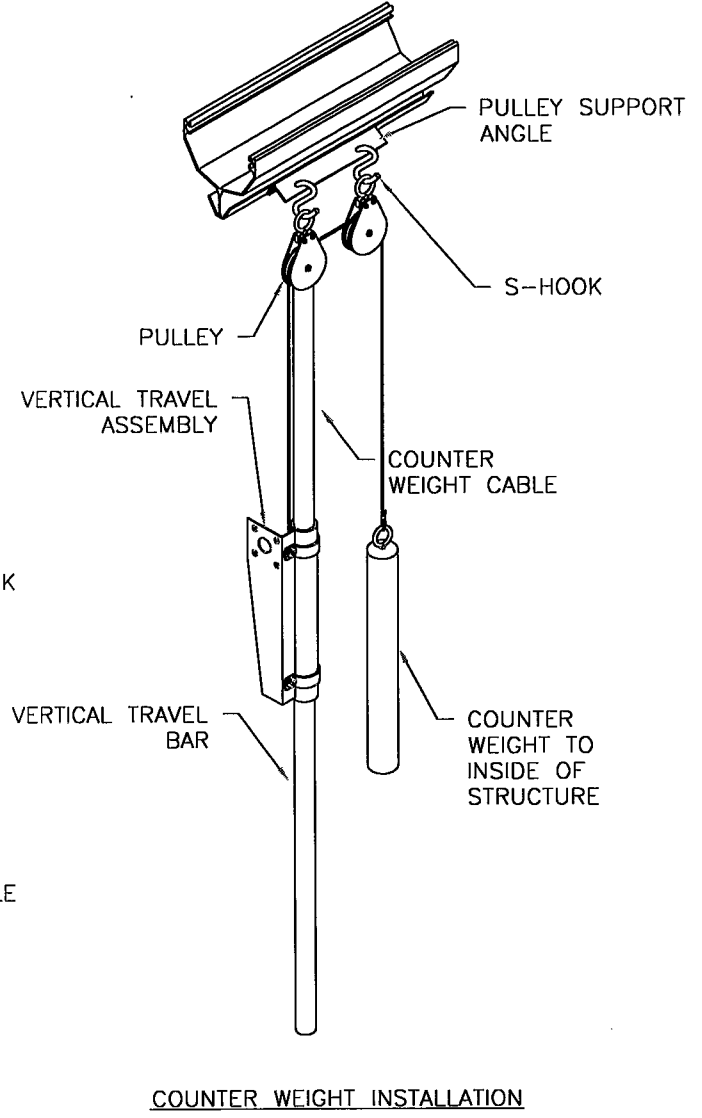
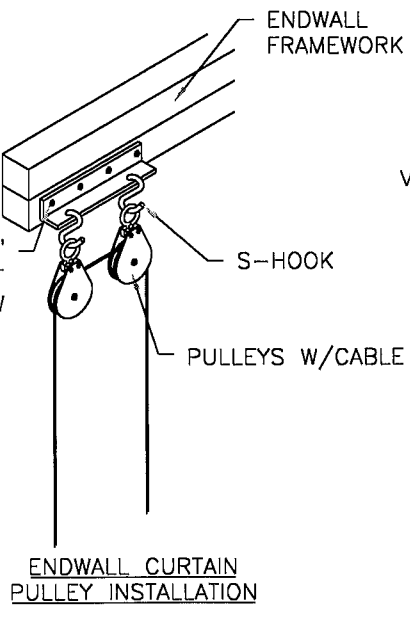
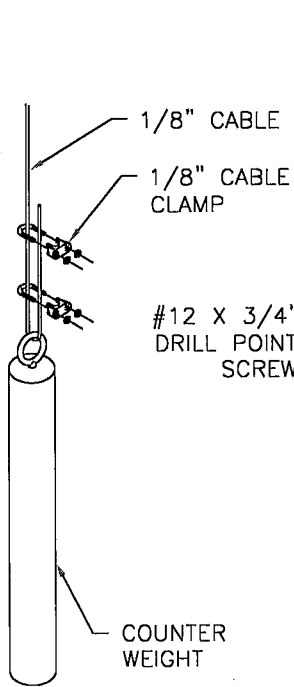
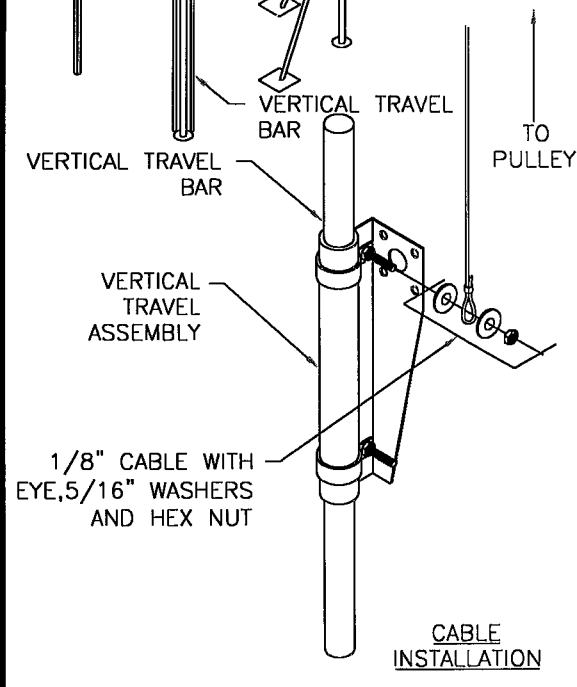
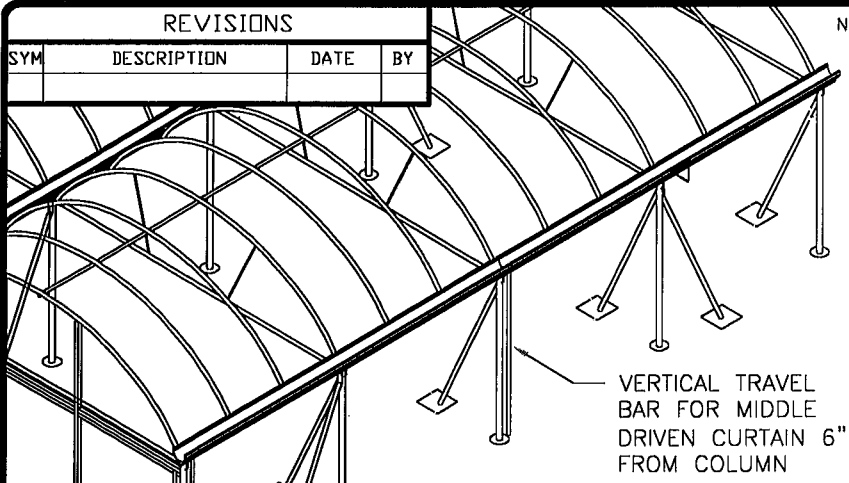
Jadertoon Co., Inc
161 Greenhines Rd, Jmcs, NC 29212

DRAWING SCALE 3/16' = 1'	PLOT SCALE 1:96	DATE 1-20-01
DRAWN BY NOLES		DRAWING NUMBER 00012501

REVISIONS

SYM	DESCRIPTION	DATE	BY

NOTE:

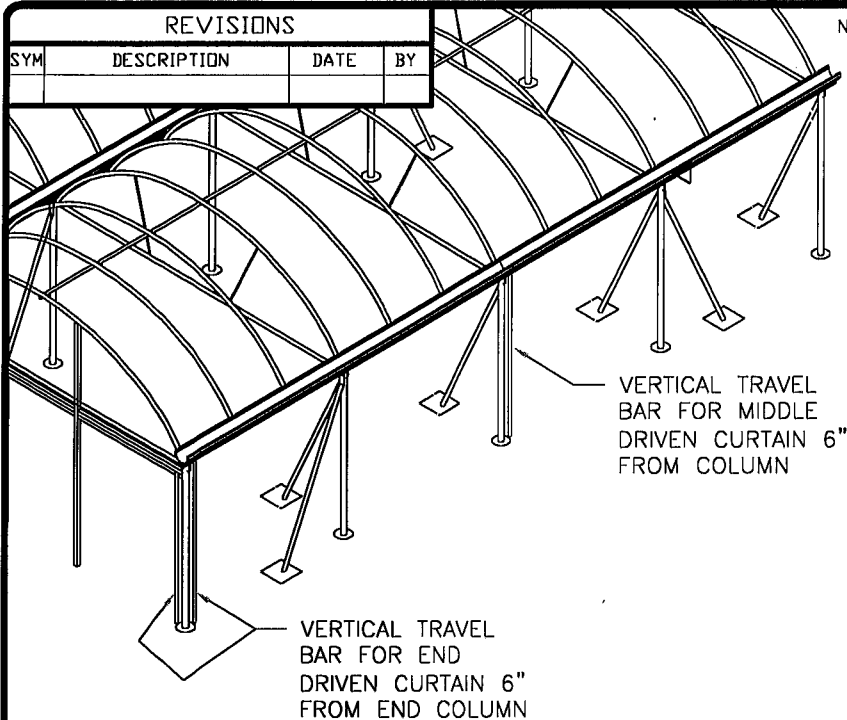


DRAWING NAME: COUNTER WEIGHT INSTALLATION

Jaderloon Co., Inc
161 Greenhines Rd., Armo, MO 29212

DRAWING SCALE 3/16" = 1'	PLOT SCALE 1:96	DATE 10-30-00
DRAWN BY NOLES		DRAWING NUMBER 01021501

REVISIONS			
SYM	DESCRIPTION	DATE	BY



NOTE:

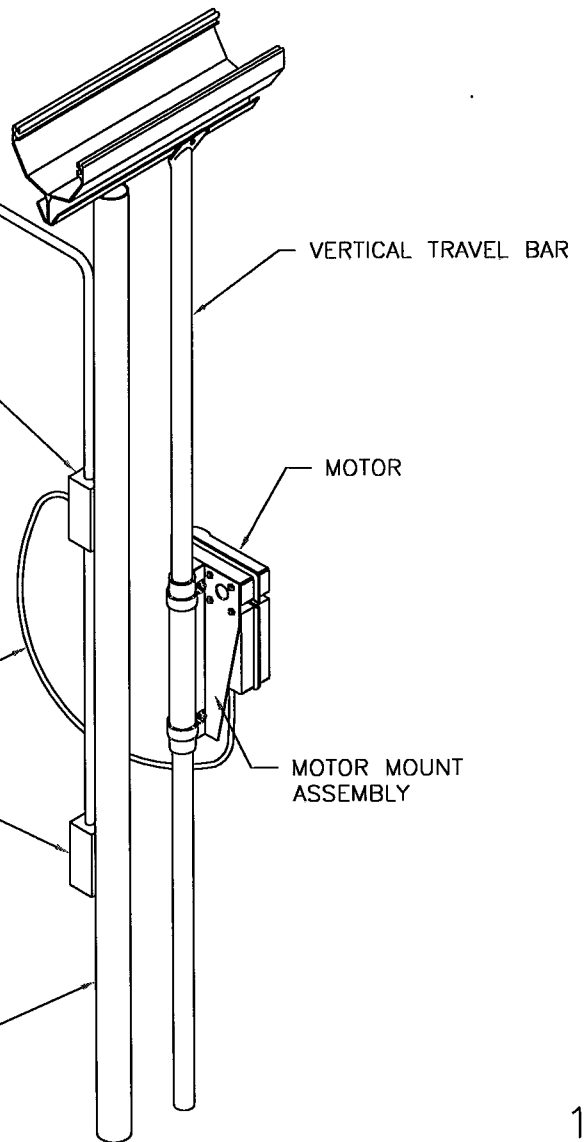
TO POWER SUPPLY

JUNCTION BOX WITH CORD GRIP IN FACE PLATE (INSTALL BETWEEN UPPER AND LOWER MOTOR TRAVEL LIMITS)

MOTOR POWER CORD

VENT CONTROL UNIT (INSTALL WITHIN OPERATORS REACH)

GREENHOUSE COLUMN



MOTOR ELECTRICAL INSTALLATION

DRAWING NAME CURTAIN ELECTRICAL INSTALLATION

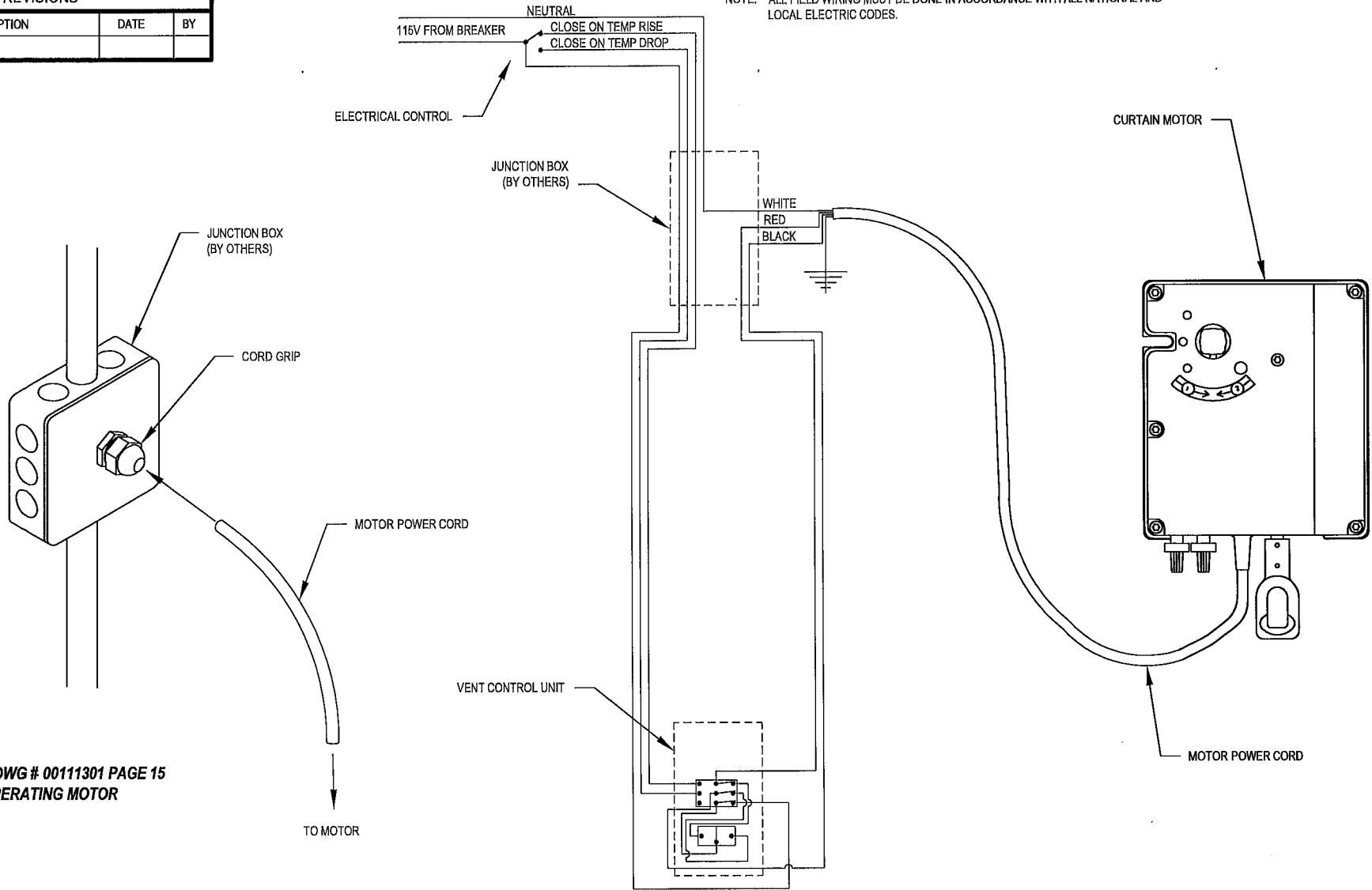
Jadenloon Co., Inc
161 Greenpines Rd., Irmo, SC 29212

DRAWING SCALE 3/16" = 1'	PLOT SCALE 1:96	DATE 10-27-00
DRAWN BY NOLES		DRAWING NUMBER 01110201

REVISIONS

SYM.	DESCRIPTION	DATE	BY
A			

NOTE: ALL FIELD WIRING MUST BE DONE IN ACCORDANCE WITH ALL NATIONAL AND LOCAL ELECTRIC CODES.



REFER TO DWG # 00111301 PAGE 15
BEFORE OPERATING MOTOR

DRAWING NAME
115V MOTOR ELECTRICAL SCHEMATIC

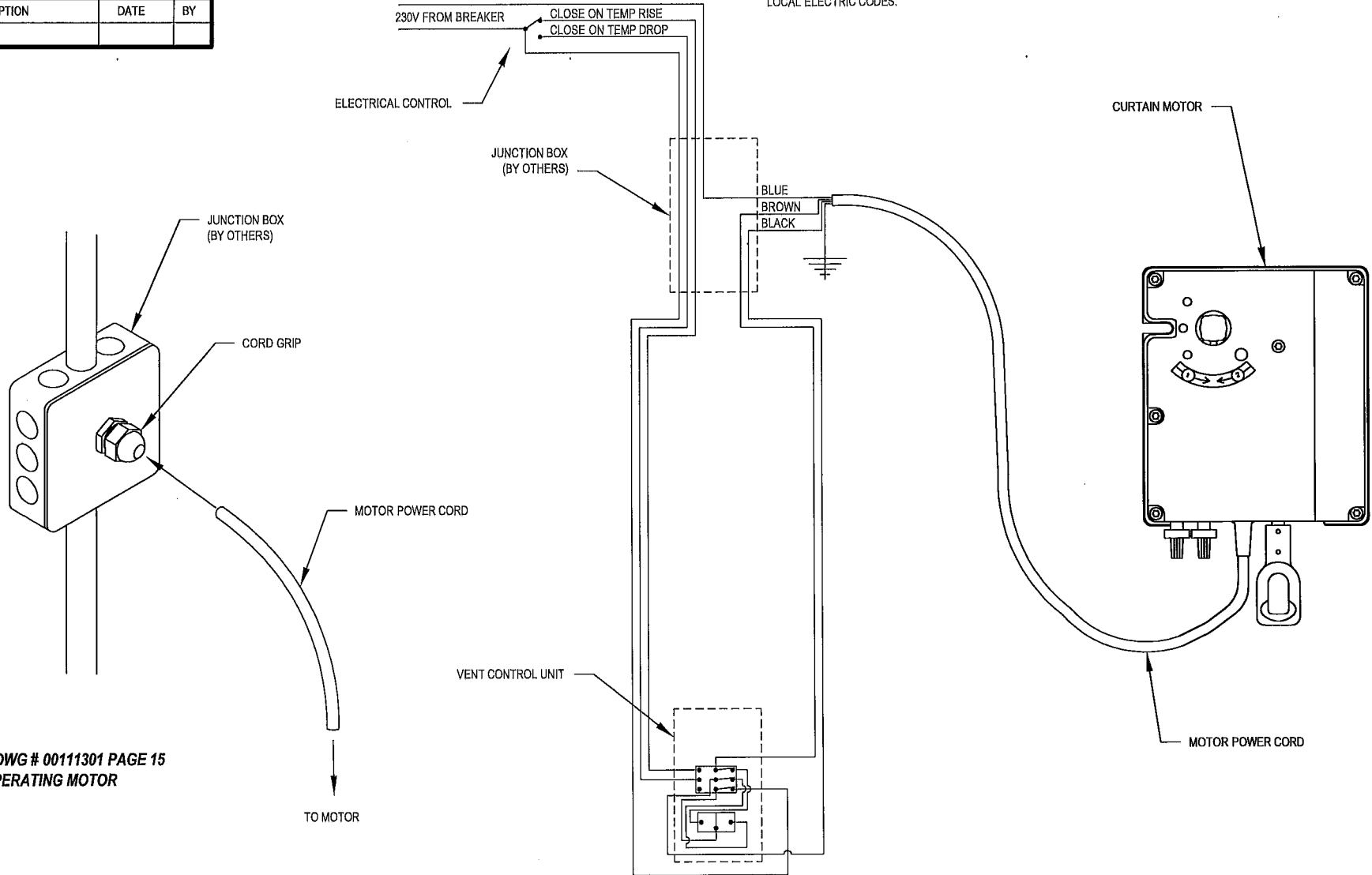
Jadorloon Co., Inc
161 Greenfines Rd., Fmcs, PA 29212

DRAWING SCALE 1/3	PLOT SCALE 1:3	DATE 11-5-01
DRAWN BY NOLES		DRAWING NUMBER 01110501

REVISIONS

SYM.	DESCRIPTION	DATE	BY
A			

NOTE: ALL FIELD WIRING MUST BE DONE IN ACCORDANCE WITH ALL NATIONAL AND LOCAL ELECTRIC CODES.



DRAWING NAME
230V MOTOR ELECTRICAL SCHEMATIC

Jadrolon Co., Inc
161 Greenfines Rd, Irma, FL 32912

DRAWING SCALE 1/3	PLOT SCALE 1:3	DATE 11-6-01
DRAWN BY NOLES		DRAWING NUMBER 01110601

REVISIONS

SYM.	DESCRIPTION	DATE	BY
A	x	x	x

WIRING AND ADJUSTMENT

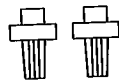
BEFORE WIRING MOTOR, LOCATE LIMIT SWITCH ADJUSTMENT KNOBS AND TURN BOTH IN THE NEGATIVE DIRECTION. THIS DECREASES THE NUMBER OF REVOLUTIONS THE MOTOR WILL TURN IN EITHER DIRECTION. TURN BOTH KNOBS UNTIL THEY CLICK. THE MOTOR IS NOW SET AT ZERO REVOLUTIONS IN BOTH DIRECTIONS.

WIRE MOTOR AND MOTOR CONTROL UNIT AS SHOWN IN DRAWING NUMBER 01110501 FOR 115V MOTORS OR DRAWING NUMBER 01110601 FOR 230V MOTORS. THESE MOTORS ARE NOT WARRANTIED WITHOUT THE MOTOR CONTROL UNIT OR AT LEAST THE AMP BREAKER WIRED INTO THE CIRCUIT. THE AMP BREAKER PROTECTS THE MOTOR AGAINST OVERLOAD SHOULD THE LIMIT SWITCHES FAIL OR GET OUT OF ADJUSTMENT.

WITH MOTOR WIRED AND CURTAIN CLOSED, FLIP AMP BREAKER TO ON POSITION. FLIP AUTO/MANUAL SWITCH TO MANUAL POSITION. FLIP AND HOLD OPEN/CLOSE SWITCH IN OPEN POSITION. TURN THE APPROPRIATE LIMIT SWITCH ADJUSTMENT KNOB (THIS SHOULD BE KNOB NO. 1) UNTIL THE CURTAIN OPENS TO THE DESIRED POSITION. SEVERAL REVOLUTIONS OF THE KNOB MAY BE REQUIRED BEFORE THE MOTOR BEGINS TO ROTATE.

NOW FLIP AND HOLD THE OPEN/CLOSE SWITCH IN THE CLOSE POSITION AND ADJUST THE OTHER KNOB UNTIL CURTAIN IS CLOSED. CARE MUST BE TAKEN NOT TO TRY AND CLOSE THE CURTAIN TO TIGHTLY. THIS MAY RESULT IN THE MOTOR CONTINUING TO PUSH EVEN AFTER THE CURTAIN IS CLOSED. EVEN WITH AMP BREAKER IN CIRCUIT THIS CAN DAMAGE THE MOTOR OVER AN EXTENDED PERIOD OF TIME.

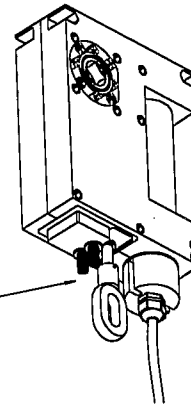
FLIP AUTO/MANUAL SWITCH TO AUTO POSITION AND CURTAIN IS READY TO OPERATE BY THERMOSTAT.



ADJUSTMENT KNOBS

PUSH KNOB IN AND TURN TO ADJUST LIMIT SWITCHES.

ADJUSTMENT KNOB LETTERS CORRESPOND WITH MOTOR DIRECTION LABELS ON SIDE OF MOTOR.



CAUTION:
BE SURE TO READ THIS PAGE
BEFORE OPERATING MOTOR