

Conveyor Support System

INSTALLATION & OPERATING INSTRUCTION MANUAL

Manufactured in the U.S.A. by







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INTRODUCTION

The purpose of this manual is to offer assistance in the assembly and installation of your new Silver Span® Conveyor Support System. It is not the intent to provide detailed instructions for every application of Silver Span® Conveyor Support Systems, as each application differs. It is the ultimate responsibility of the installer to ensure that the equipment is installed and used properly, providing a safe and sturdy work environment.

CHECK & INSPECT

Each order or shipment is double checked before leaving the factory. All parts, pieces and components are listed item by item on the packing list which accompanies every order. The number and description of each item package, container, skid, etc. is listed on the bill of lading. In signing the bill of lading, the carrier assumes full responsibility for the safe delivery of all goods to the destination in the same order as tendered by the shipper. In the event of damage or shortage, have the transportation company note the same on the freight bill. You should then file claim against the carrier for such loss and/or damage.

You will find a packing list attached to one of the items in the shipment. Check each item against the list. Check by description, specification, quantity, count, etc. Should there be any discrepancies, notify us immediately. If an order or shipment includes more than one Silver Span® Conveyor Support System, the parts for each system will be keyed or marked on the packing list for easy identification.

Smaller parts or items, such as bolts, washers, bushings and keys, are just as important to an installation as the larger ones. Make sure these are located and checked before disposing of any containers or packing. We cannot be responsible for loss of items that are listed and included on our packing list.

Should there be some delay between the time an order is received and its ensuing installation, store parts in a protected area so they may be easily located and identified. **Retain packing lists for this reason, as well as for future reference.**

SILVER SPAN® ASSEMBLY INSTRUCTIONS

The Silver Span® Conveyor Support System is manufactured in standard 20' sections. Other lengths, typically 5', 10' and 15', are available to make up overall lengths that are not in 20' increments. Silver Span® units that are NOT 20' in length should be installed as an end unit, not as the center section.

Silver Span® is shipped pre-assembled as base units (Figure A) without handrails installed. Field construction involves connecting the pre-assembled base units, mounting the conveyor, and adding the handrails.

In special circumstances, the Silver Span® is shipped unassembled and should be carefully constructed according to instruction sheets 1850220-001 through 1850220-008. (See Appendix for PDFs of these instruction sheets)

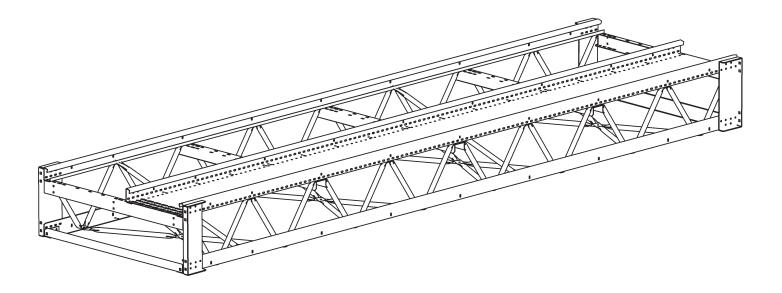


Figure A - Base Unit

Before construction, it is important to verify that the proper model of Silver Span® has been selected. Chart 1 indicates the maximum span depending on conveyor/product weight for differing models of Silver Span®. Do not exceed the limits indicated in Chart 1, unless specifically instructed to do so by a representative of Sweet Manufacturing Company.

Chart 1 - Typical Conveyor Loading

Silve Sacra Sacras	No Conveyor				Typica	Typical Conveyor Loading (Pounds per foot)	· Loading (Pounds pe	r foot)			
Silver Sparie Model	Man Walkway	40	20	06	110	130	150	190	210	240	270	300
				Unsub	Unsupported Distance of Span Between Supports	ance of Spa	าก Betweer	Supports				
18 inch Truss w/o Cable Truss	60 Ft.	60 Ft.	55 Ft.	50 Ft.	50 Ft.	45 Ft.	45 Ft.	40 Ft.	35 Ft.	33 Ft.	30 Ft.	XXX
With Minimum Lower Chord Angle	10 ga	10 ga	10 ga	10 ga	10 ga	10 ga	10 ga	.188"	.188"	.250"	.250"	XX
18 inch Truss w/ Single Cable Truss	80 Ft.	75 Ft.	70 Ft.	. 65 Ft	60 Ft.	55 Ft.	50 Ft.	45 Ft.	40 Ft.	38 Ft.	××	××
With Minimum Lower Chord Angle	10 ga	10 ga	10 ga	10 ga	10 ga	10 ga	.188"	.188"	.188"	.250"	X	XX
18 inch Truss w/ Double Cable Truss	100 Ft.	90 Ft.	85 Ft.	80 Ft.	75 Ft.	70 Ft.	65 Ft.	50 Ft.	50 Ft.	47 Ft.	42 Ft.	××
With Minimum Lower Chord Angle	.188"	.188"	.188"	.188"	.188"	.188"	.250"	.250"	.250"	.250"	.250"	XXX
30 inch Truss w/o Cable Truss	80 Ft.	75 Ft.	70 Ft.	65 Ft.	60 Ft.	55 Ft.	50 Ft.	45 Ft.	40 Ft.	38 Ft.	35 Ft.	30Ft.
With Minimum Lower Chord Angle	10 ga	10 ga	10 ga	10 ga	10 ga	10 ga	.188"	.188"	.250"	.250"	.375"	.375"
30 inch Truss w/ Single Cable Truss	100 Ft.	90 Ft.	85 Ft.	80 Ft.	75 Ft.	70 Ft.	65 Ft.	60 Ft.	50 Ft.	46 Ft.	××	××
With Minimum Lower Chord Angle	10 ga	10 ga	10 ga	10 ga	10 ga	10 ga	.188"	.188"	.188"	.250"	××	XX
30 inch Truss w/ Double Cable Truss	120 Ft.	100 Ft.	100 Ft.	90 Ft.	90 Ft.	80 Ft.	75 Ft.	70 Ft.	60 Ft.	56 Ft.	50 Ft.	46 Ft.
With Minimum Lower Chord Angle	10 ga	10 ga	10 ga	10 ga	10 ga	10 ga	.188"	.188"	.250"	.250"	.375"	.375"
	N/A	-	-	1017HFV	1417HFV	1817HFV	2017HFV			1826HFV	2426HFV	3026HFV
Corresponding Sweet Conveyors*		-	1017IFV	1017IFV	1817IFV	2017IFV						
		9"RB	12"RB	14"RB	16"RB							
		9"UT	12"UT	14"UT	16"UT	18"UT						

*	Sweet® Conveyors Handling Grain @ 48 DCE
HFV	Sweet® Flite-Veyor®Horizontal Flat Bottom Drag Conveyors
FV	Sweet® Flite-Veyor® Incline Flat Bottom Drag Conveyors
RB	Sweet® Flite-Veyor®Round Bottom Drag Conveyors
TO	CEMA Standard U-Trough Conveyors
XXX = JSH ISH ON	^^^

DO NOT USE = XXX

EXAMPLE:

A 100' drag conveyor weighing 5600 lbs. (unloaded) will carry 7200 lbs. of grain. [Grain weight can be approximated from GW = BPH/Conveyor Speed (FPM)]. The weight per foot loading is then (5600 + 7200)lbs./100 ft. = 128 lbs/ft. Using 130 lbs./ft., 18" deep Silver Span® (without cable trussing) is capable of spanning 45' while 30" deep Silver Span® (without cable trussing) is capable of spanning 55'. Note that additional structure is required at specific high loading areas, such as head, tail & inlets.

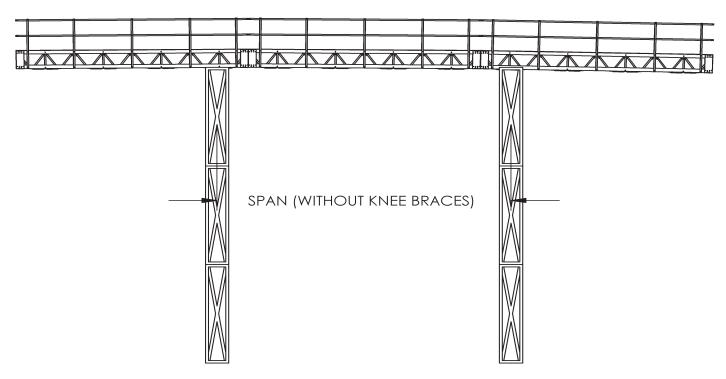
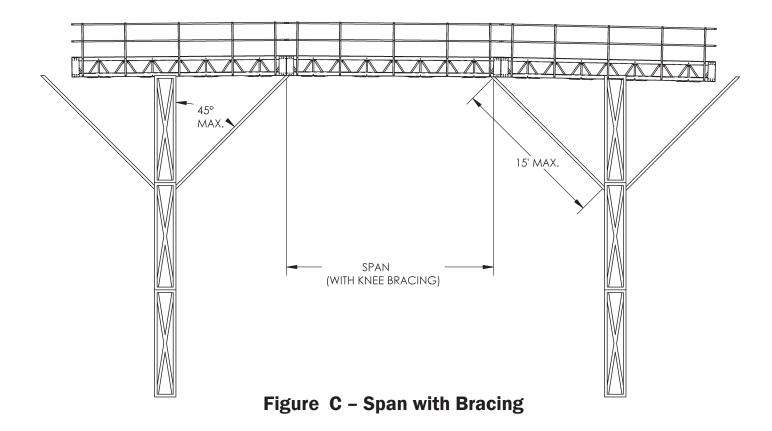


Figure B - Free Span, No Braces

KNEE BRACING

Slightly longer runs of Silver Span[®] may be achieved by knee bracing from the supporting structure back to the Silver Span[®]. (See Figure C).

The span between knee brace supports must not exceed the span length shown in Chart 1. The knee brace should not exceed 15' in length and should be at a maximum of 45° to the vertical support structure.



EXTENDED LENGTH SYSTEMS

Cable Truss • See Page 6, Diagram A

Longer runs of Silver Span[®] may be achieved by using cable trusses as shown in Diagram A (page 6). A single cable truss system will allow longer spans than non-cable trussed units. Double cable trussed units can span longer than single trussed units. (See Chart 1)

A single cable truss kit consists of:

Galvanized Angle Truss with Hardware

End Plates

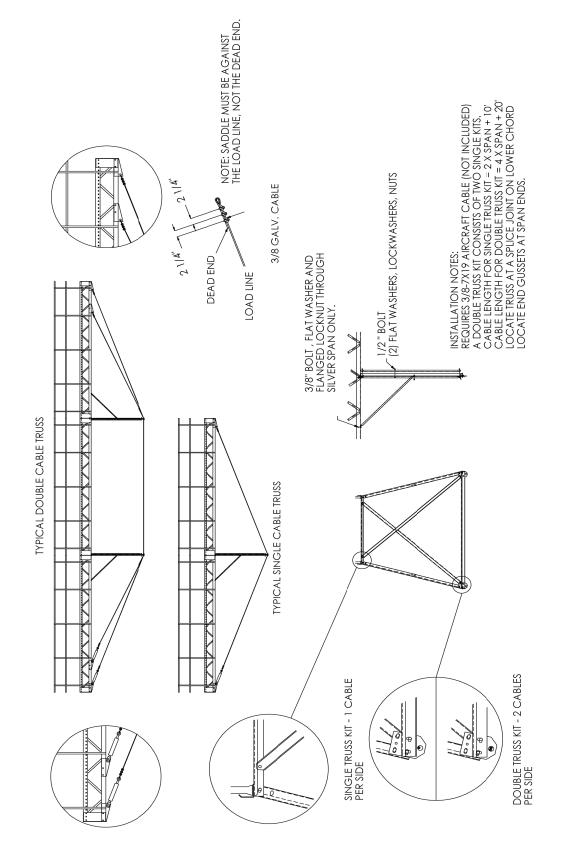
Cable Clamps

Turnbuckles

Two galvanized aircraft cables, each 5' longer than the trussed span, must be ordered separately to complete the kit.

A double truss system consists of two single truss kits. Four cables must be ordered separately to complete the kit. See Diagram A for cable truss assembly instructions.

DIAGRAM A – CABLE TRUSS INSTALLATION



INTERMEDIATE SUPPORTS

On many longer runs of Silver Span[®], intermediate supports may be necessary. Sweet Manufacturing has a full line of two- and three-legged support columns as well as four-legged support towers (both guyed and free standing).

Care must be taken to support the Silver Span® at proper load-bearing points. These locations are:

- 1) a splice
- 2) between joints by utilizing optional load-bearing angle (p/n 0855540)

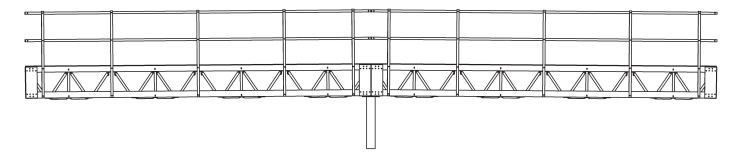


Figure D - Intermediate Support at a Splice Joint

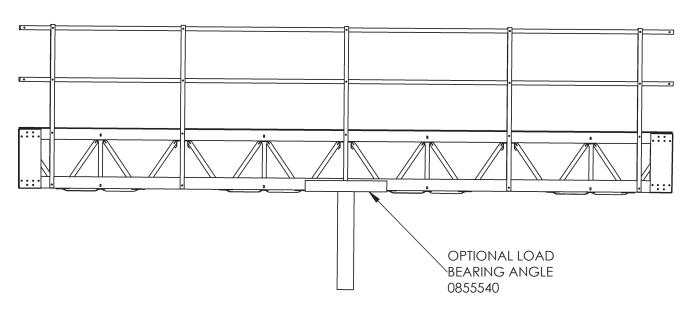


Figure E - Intermediate Support Between Splice Joints

FIELD ASSEMBLY

1) Position up to 80' of pre-assembled base sections (trussed 20' sections) end to end on a flat, level surface. Block up the connecting sections to support the Silver Span® with the approximate camber of 1" per 10' of span. For example, if you were assembling 80' of Silver Span®, the center of the 80' span would be 8" higher than the ends.

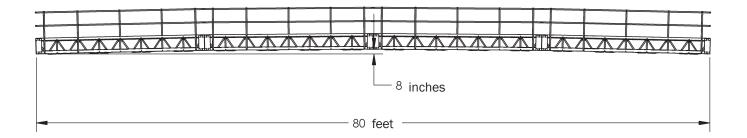


Figure F - Assembly with Camber

- 2) Attach the Silver Span® sections together using the supplied hardware. The splice hardware package for each section of Silver Span® consists of :
- 10 5/8"-11 x 1 1/2" grade 5 carriage bolts
- 10 5/8" flat washers
- 10 5/8" split ring lock washers
- 10 5/8"-11 grade 5 hex nuts
- 6 3/8"-16 x 1" grade 5 carriage bolts
- 6 3/8"-16 flanged hex nuts

Note that grade 5 hardware is identified by the following marks:

Figure G - Grade 5 Bolt

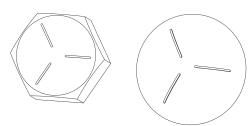
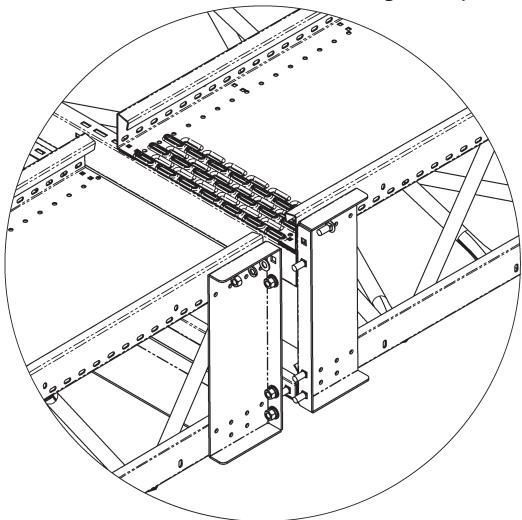


Figure H - Splice Joint Hardware



Use the 5/8" hardware to join splice plates and the bottom angle. The 3/8" hardware is used to join the upper angles (not shown). Torque 5/8" hardware to 60 ft. lbs. and 3/8" hardware to 25 ft. lbs.

CONVEYOR ATTACHMENT

The conveyor should be attached to the Silver Span® Support at least every 10'. The conveyor should be bolted to the cross-channels using support feet, which are available from the factory.

If intermediate conveyor discharges interfere with the diagonal or cross bracing of the Silver Span®, these braces can be relocated to the nearest available position in the field.

- 1) Install posts to the sides of the Silver Span® base assemblies using the 3/8"-16 x 2¼ grade 5 hex bolts supplied. The spacing of the posts must correspond with the holes punched in the handrails. On a typical 20' section, holes are located at 1.5", 12", 60",120",180",228" and 238.5". The posts bolt to the lower rail and to the upper rail on the conveyor side and the walkway on the other side. Use a flat washer under the head of each bolt and under each lock nut.
- 2) Attach the handrails to the posts using 3/8"-16 x 3" grade 5 hex bolts, washers and lock nuts. Do not overtighten.
- 3) Attach handrail splices (Figure I) to one end of the handrail and the guard rail. Install plastic post caps on all exposed post ends.

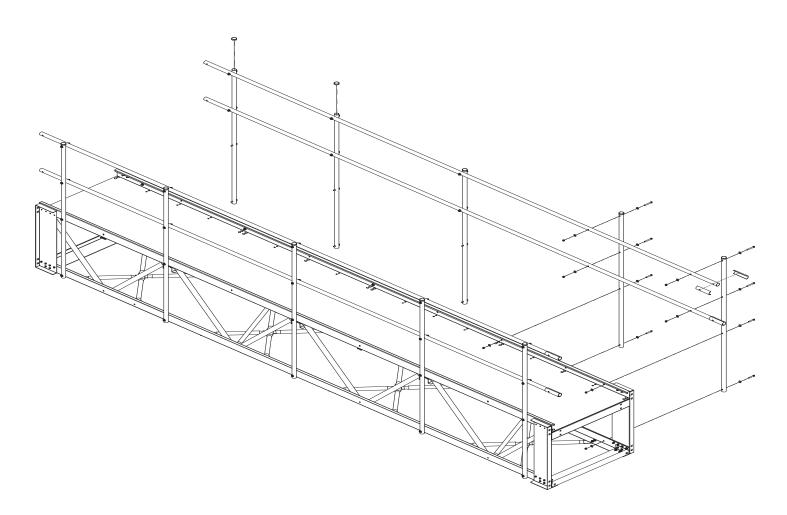


Figure I - Handrail & Guardrail Splices

LIFTING SILVER SPAN® ASSEMBLIES

Figure J shows a typical method of lifting Silver Span® Support Systems. This can be accomplished with the conveyor attached to the Silver Span®, if desired. It is NOT recommended to lift more than 80' of Silver Span® at a time.

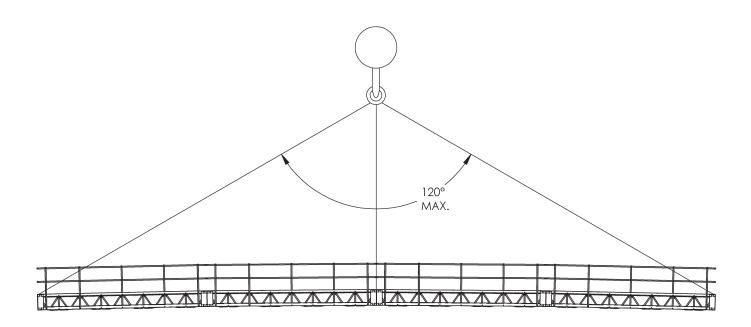
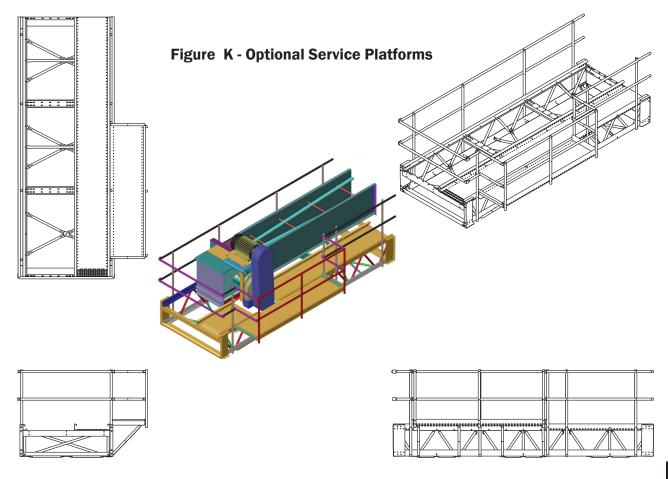


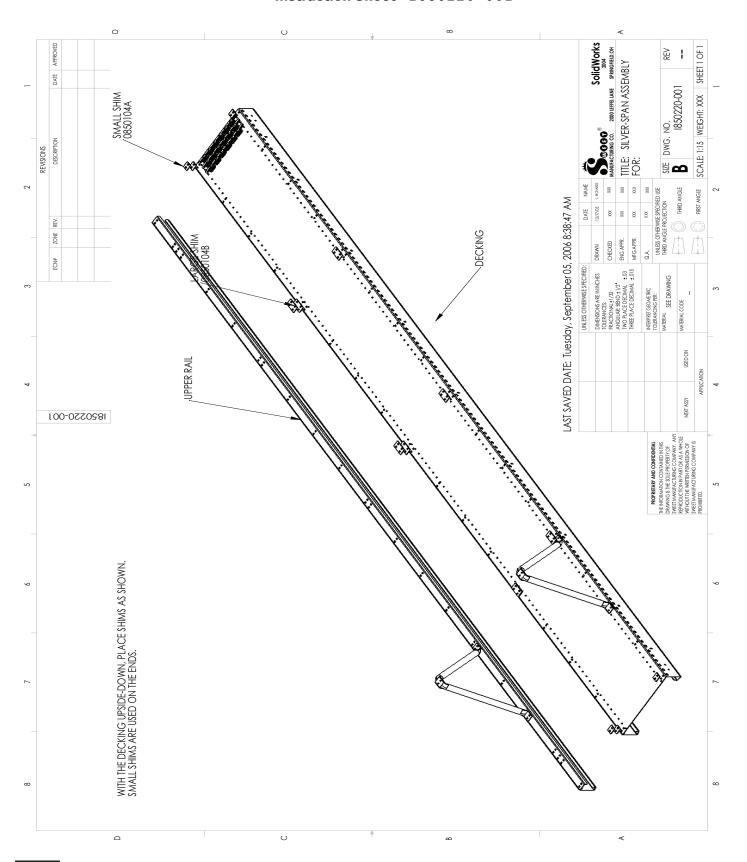
Figure J - Lifting Silver Span®

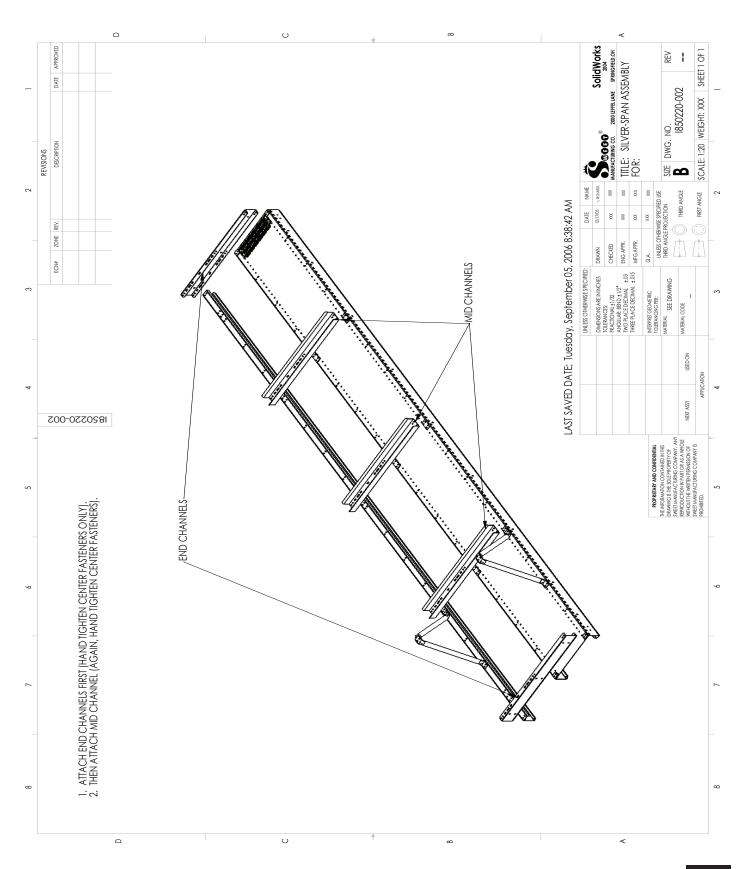
OPTIONAL SERVICE PLATFORMS

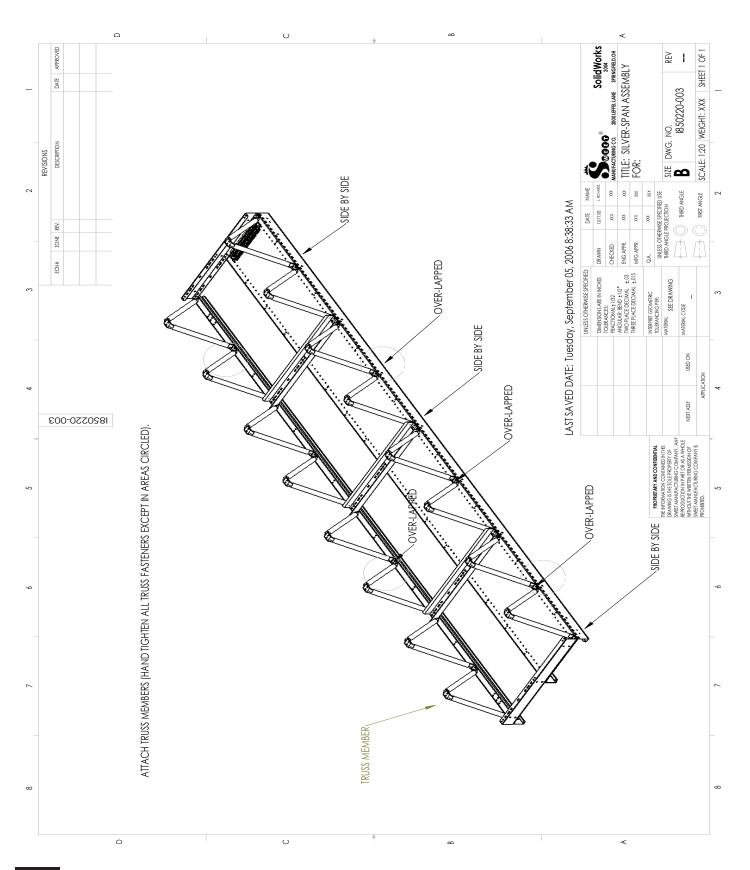
An optional service platform is available for Silver Span® to give additional working room around obstructions such as the drive, the tail or an intermediate discharge. The service platform is 90" long and can provide an additional 24", 30" or 36" of walkway room around obstructions that protrude over the walkway. It can be field located and installed along the length of the Silver Span® walkway. Installation steps are:

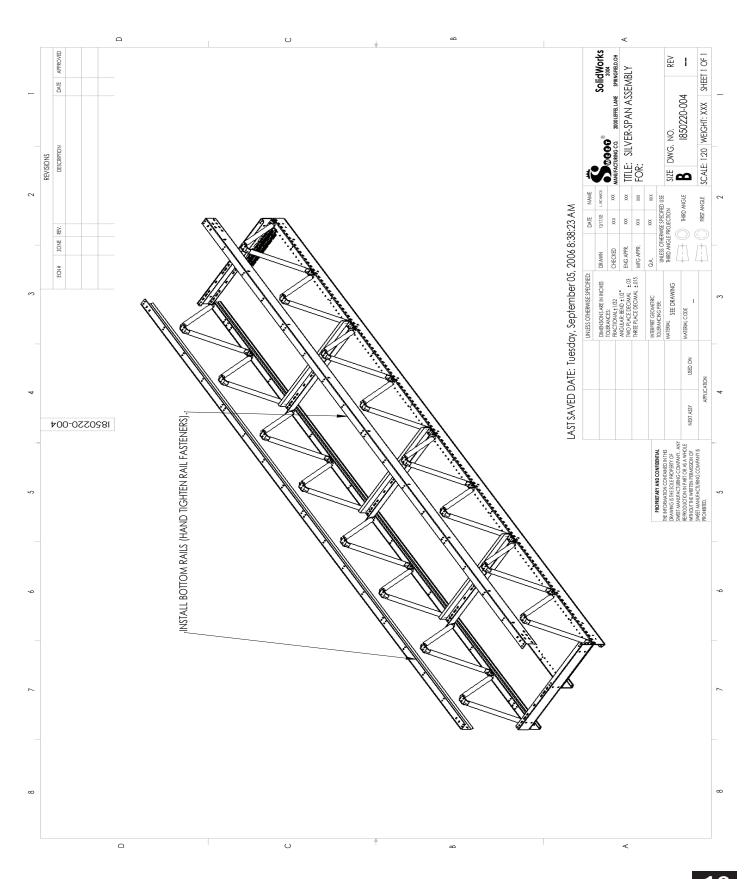
- Locate the service platform walkway. Remove Silver Span® handrail posts that may be interfering with the walkway.
- Attach the walkway to the Silver Span[®] walkway. Attach bolts every 12". Note that the service platform tread surface is flush with the top of the Silver Span[®] toe board, making a 4" step. Attach a post to the Silver Span[®] at each end of the service platform.
- Attach the four (4) knee braces. These should be located with one at each end of the service platform and the other two spaced equally for support. Note that these must be attached with 4 bolts each, and some drilling will be required.
- Attach handrails and posts around the service platform.
- Cut out the Silver Span® handrail sections to allow access to the service platform.

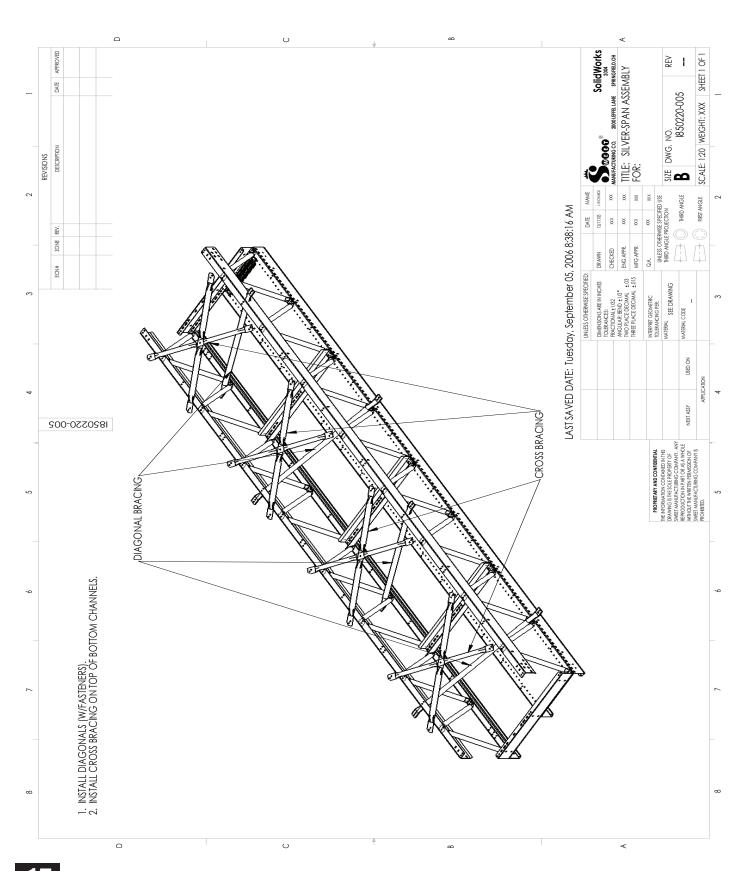


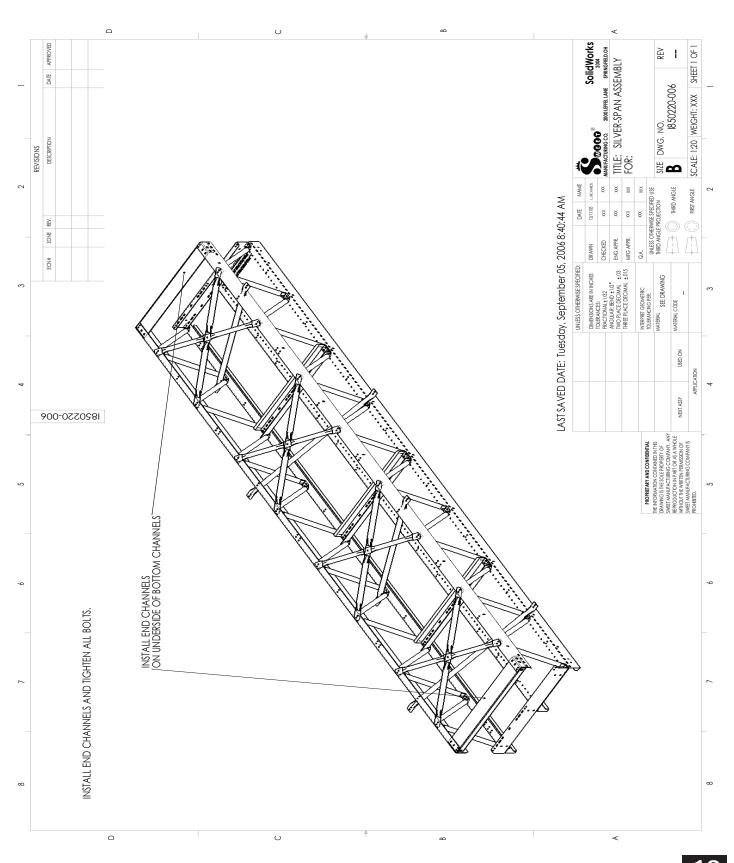


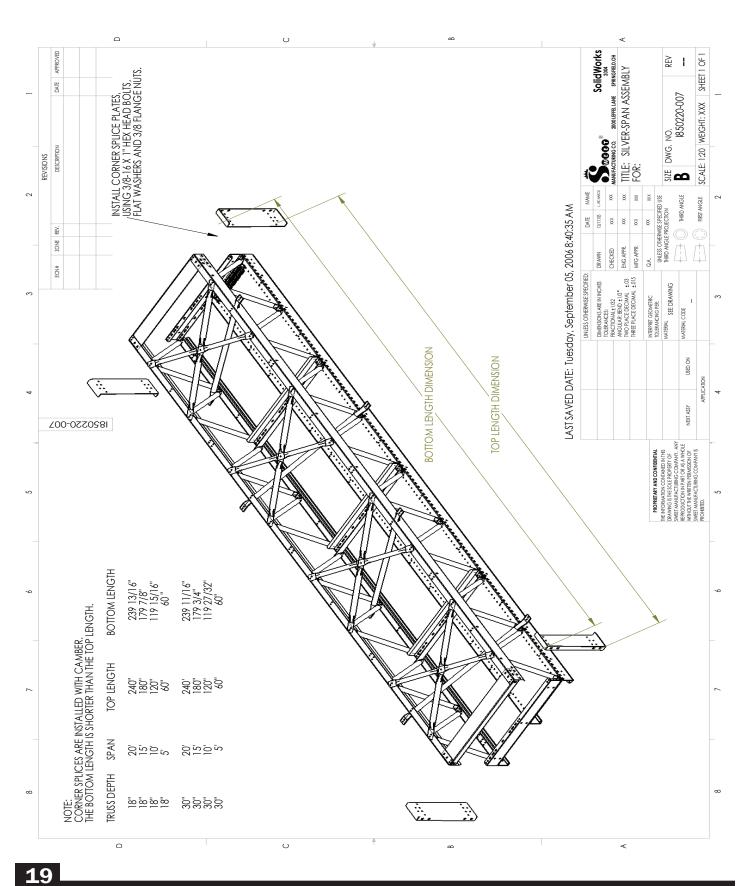


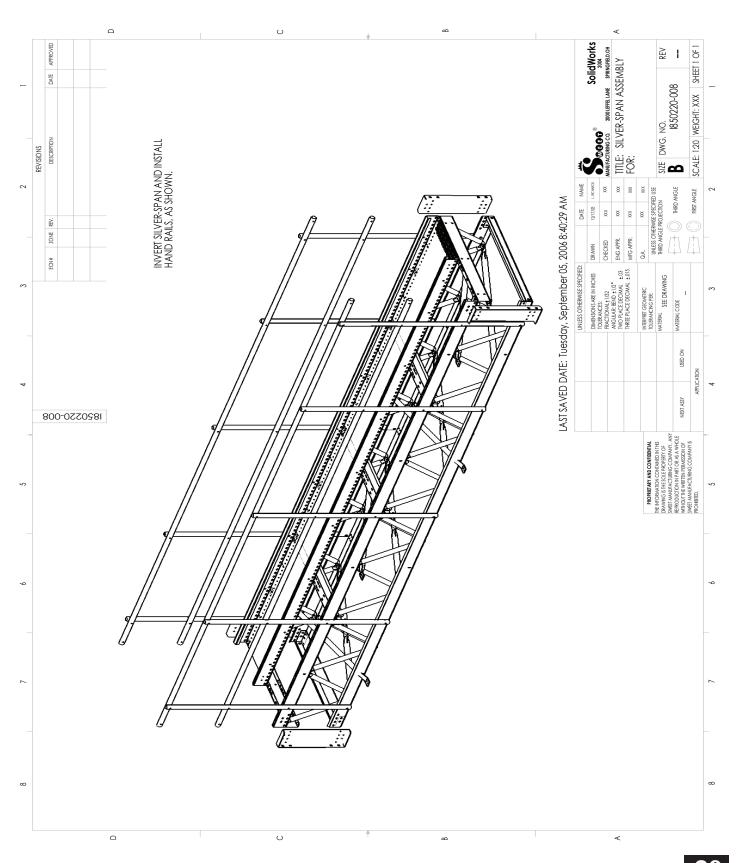














Our Mission

To provide innovative quality solutions that create an extraordinary customer experience.