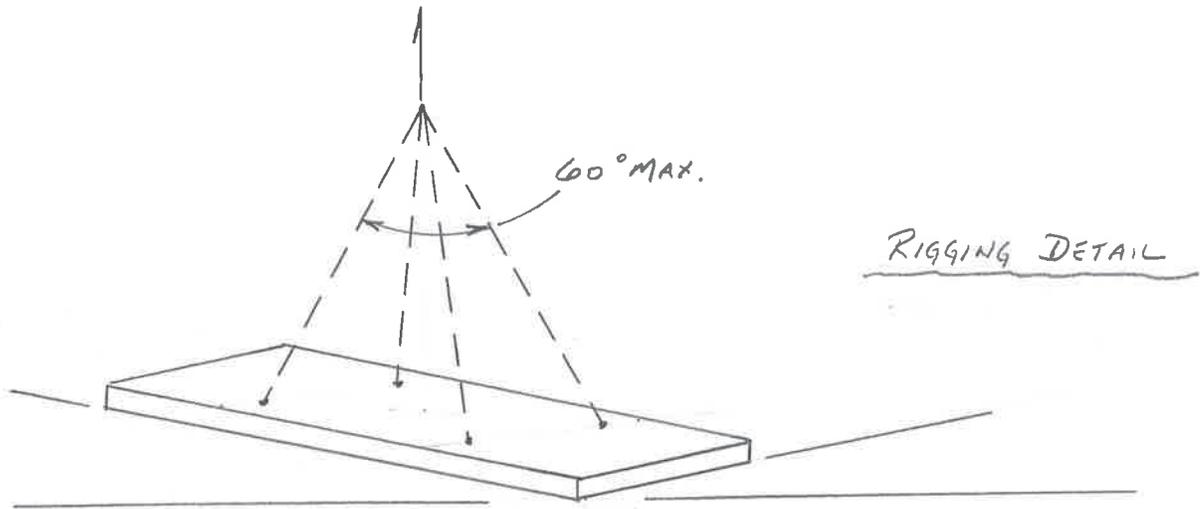
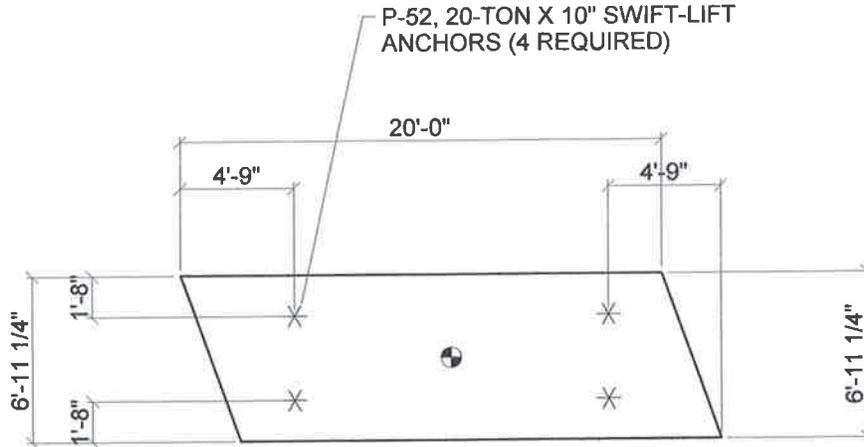
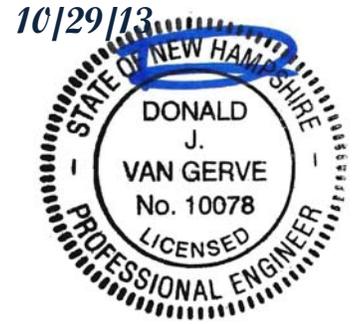


NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	15"	26.0 kips	22'-5 7/8"	6'-11 1/4"	4	APPROACH SLAB 1 - A, B, C & D

26,000 LBS. CONCRETE WEIGHT
+ 3,470 LBS. (20' X 6' 11-1/4" X 25PSF ADHESION)
=29,470 LBS. CONCRETE & ADHESION
x 1.16 (INCREASE FACTOR FOR 60 DEG. CABLE ANGLE)
=34,185 LBS TOTAL EFFECTIVE WEIGHT
/ 2 ANCHORS
=17,092 LBS PER ANCHOR



VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL

MINIMUM COMPRESSIVE STRENGTH REQ'D.= 3,500 PSI

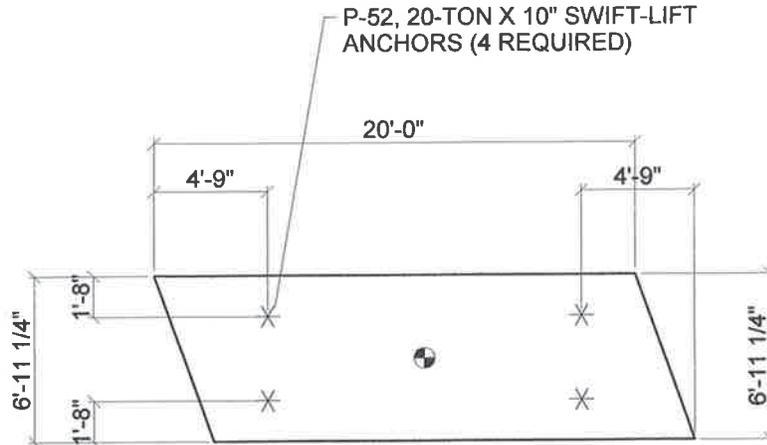
Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:
SUPERIOR LIFT TILT-UP SYSTEM		X 11'-3"	ΔX .0 >	CY= 6.4	SCALE:	RIGGING DETAILS
This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.		Y 3'-5 5/8"	2ΔX .0	GROSS AREA 138.8	1/8"	F22
PANEL VIEWED FROM:		INSIDE	CHECKED BY	NET AREA 138.8	JOB NO.	SHEET
			LAYOUT BY BP	DATE 10/30/13	13529	1 OF 20

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	17 3/8"	30.1 kips	22'-5 7/8"	6'-11 1/4"	4	APPROACH SLAB 2 - E, F, G & H

30,100 LBS MAX. CONCRETE WEIGHT
+ 3,470 LBS (20' X 6' 11-1/4" X 25PSF ADHESION)
=33,570 LBS CONCRETE & ADHESION
x 1.16 (INCREASE FACTOR FOR 60 DEG. CABLE ANGLE)
=38,940 LBS TOTAL EFFECTIVE WEIGHT
/ 2 ANCHORS
=19,470 LBS PER ANCHOR

SLAB THICKNESS VARIES. MAXIMUM THICKNESS 17-3/8" (SLAB E)



10/29/13



VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL

MINIMUM COMPRESSIVE STRENGTH REQ'D.= 3,500 PSI

Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:			
SUPERIOR LIFT TILT-UP SYSTEM This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.	X	11'-3"	ΔX	.0 >	CY=	7.4	SCALE:	RIGGING DETAILS	
	Y	3'-5 5/8"	2ΔX	.0	GROSS AREA	138.8	1/8"	F22	
	PANEL VIEWED FROM:		CHECKED BY		NET AREA		JOB NO.	SHEET	
	INSIDE		BP		DATE		13529	2 of 20	

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

10/29/13



Summary - P-52 Swift Lift Anchor Safe Working Load Calculations

Precaster: Cold River Bridges
Project: Cavendish Bridge - Approach Slabs
Location: New Hampshire
Dealer: Harris Rebar (Harris Rebar.2013-0529.10.30.13)

Table with 3 columns: Parameter, Unit, Value. Rows include Recommended P-52 Swift Lift (SL) Anchor (20.00 tons), Recommended length of SL Anchor (10.000 in. long), SL Anchor set back from face of concrete (0.563 inches), SL Anchor embedment depth (Le) (10.366 inches), SL Anchor foot diameter (Dh) (3.858 inches), Concrete compressive strength (3,500 psi at initial lift), Concrete unit weight (150.00 lbs. per cubic foot), SL Anchor front edge distance (T1) (20.000 inches), SL Anchor back edge distance (T2) (21.625 inches), SL Anchor left edge distance (T3) (27.000 inches), SL Anchor right edge distance (T4) (78.000 inches), Concrete ultimate pull out capacity (79,914 lbs. per anchor), SL Anchor ultimate mechanical capacity (160,000 lbs. per anchor), Recommended factor of safety (4.00 to 1 (Ult. to SWL)), SL Anchor tension safe working load (19,975 lbs. per anchor).

By: Brad Phillips

Date: 10/30/2013

Operator : BP
Job no.: 13529
Panel no.: APPROACH SLAB 1
Date : 10/30/2013

Insert type: T-110
Safe working load = 25000 lbs.
Concrete compressive strength = 3500 psi.
Allowable bending strength = 354.9648 psi.
Steel grade = 60
Concrete unit Weight = 150 pcf.

Panel geometry

Feature number - 0 (Panel perimeter)
X(0) =02.4896 Y(0) = 00.00 NON RECTANGULAR FEATURE
X(1) =00.00 Y(1) = 06.9375
X(2) =20.00 Y(2) = 06.9375
X(3) =22.4896 Y(3) = 00.00

Weight and C. G.

Structural thickness = 15.00 in.
Overall thickness = 15.00 in.
Projected area = 139 sq. ft.
Effective area = 139 sq. ft.
X-bar = 11.24 ft.
Y-bar = 3.47 ft.
Z-bar = 7.50 inches
Bottom Concrete Cover for reinforcing = .75 in.
Top Concrete Cover for reinforcing = .75 in.
Weight = 26015.63 lbs.
Minimum number of inserts required by Weight = 2

Insert locations - decimal

ROW	Column 1	Column 2
1	04.72,01.71	17.77,01.71
2	04.72,05.23	17.77,05.23

Two row cable length = 20'-0"

Operator : BP
 Job no.: 13529
 Panel no.: APPROACH SLAB 1
 Date : 10/30/2013

VERTICAL ANALYSIS

Uniform loads

Segment Number	Length (Feet)	Load (PPF)
01	000.29	03750.00
02	000.29	03750.00
03	000.29	03750.00
04	000.29	03750.00
05	000.29	03750.00
06	000.26	03750.00
07	000.03	03750.00
08	000.29	03750.00
09	000.29	03750.00
10	000.29	03750.00
11	000.29	03750.00
12	000.29	03750.00
13	000.29	03750.00
14	000.29	03750.00
15	000.29	03750.00
16	000.29	03750.00
17	000.29	03750.00
18	000.29	03750.00
19	000.29	03750.00
20	000.03	03750.00
21	000.26	03750.00
22	000.29	03750.00
23	000.29	03750.00
24	000.29	03750.00
25	000.29	03750.00
26	000.29	03750.00

Section Properties

N	D(N) (Ft.)	Area (In.^2)	Mom. of In. (In^4)	Neut. Axis (In.)	+Sec. Mod. (In.^3)	-Sec. Mod. (In.^3)	Eff. Thk. (In.)
01	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
02	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
03	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
04	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
05	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
06	000.26	03600.00	000067500	007.50	00009000	00009000	015.00
07	000.03	03600.00	000067500	007.50	00009000	00009000	015.00
08	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
09	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
10	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
11	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
12	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
13	000.29	03600.00	000067500	007.50	00009000	00009000	015.00

Operator : BP
 Job no.: 13529
 Panel no.: APPROACH SLAB 1
 Date : 10/30/2013

14	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
15	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
16	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
17	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
18	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
19	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
20	000.03	03600.00	000067500	007.50	00009000	00009000	015.00
21	000.26	03600.00	000067500	007.50	00009000	00009000	015.00
22	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
23	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
24	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
25	000.29	03600.00	000067500	007.50	00009000	00009000	015.00
26	000.29	03600.00	000067500	007.50	00009000	00009000	015.00

Additional reinforcing

Angle Deg.	Loc. Feet	Flexure Stress PSI	Bending Moment Ft-Lbs	Allow. Moment Ft-Lbs	Tens. Steel Sq. In.	Comp. Steel Sq. In.	Strongbacks	
							Sec. Mod. Wood In^3	Sec. Mod. Steel In^3

Insert loads

Maximum tension load = 6503.91 lbs per insert.
 Maximum shear load = .00 lbs per insert.
 Maximum ground reaction = .00 lbs
 Maximum positive stress (Bottom)= 0 psi @ 3.47 ft. and 0°
 Maximum negative stress (Top)= 7 psi @ 1.71 ft. and 0°

Strongback req'ments (Applicable only if printout shows add'l steel req'd.)

- Wood: 0 single 2X12's or equivalent.
- 0 single 4X12's or equivalent.
- Steel: 0 double C6X8.2 or equivalent.
- 0 double C8x11.5 or equivalent.

Operator : BP
 Job no.: 13529
 Panel no.: APPROACH SLAB 1
 Date : 10/30/2013

HORIZONTAL ANALYSIS

Uniform loads

Segment Number	Length (Feet)	Load (PPF)
01	00.31	00081.30
02	00.31	00243.90
03	00.31	00406.49
04	00.31	00569.09
05	00.31	00731.69
06	00.31	00894.29
07	00.31	01056.88
08	00.31	01219.48
09	02.23	01300.78
10	13.04	01300.78
11	02.23	01300.78
12	00.31	01219.48
13	00.31	01056.88
14	00.31	00894.29
15	00.31	00731.69
16	00.31	00569.09
17	00.31	00406.49
18	00.31	00243.90
19	00.31	00081.30

Section Properties

N	D(N) (Ft.)	Area (In.^2)	Mom. of In. (In.^4)	Neut. Axis (In.)	+Sec. Mod. (In.^3)	-Sec. Mod. (In.^3)	Eff. Thk. (In.)
01	000.31	00078.05	000001463	007.50	00000195	00000195	015.00
02	000.31	00234.14	000004390	007.50	00000585	00000585	015.00
03	000.31	00390.23	000007317	007.50	00000976	00000976	015.00
04	000.31	00546.33	000010244	007.50	00001366	00001366	015.00
05	000.31	00702.42	000013170	007.50	00001756	00001756	015.00
06	000.31	00858.51	000016097	007.50	00002146	00002146	015.00
07	000.31	01014.61	000019024	007.50	00002537	00002537	015.00
08	000.31	01170.70	000021951	007.50	00002927	00002927	015.00
09	002.23	01248.75	000023414	007.50	00003122	00003122	015.00
10	013.04	01248.75	000023414	007.50	00003122	00003122	015.00
11	002.23	01248.75	000023414	007.50	00003122	00003122	015.00
12	000.31	01170.70	000021951	007.50	00002927	00002927	015.00
13	000.31	01014.61	000019024	007.50	00002537	00002537	015.00
14	000.31	00858.51	000016097	007.50	00002146	00002146	015.00
15	000.31	00702.42	000013170	007.50	00001756	00001756	015.00
16	000.31	00546.33	000010244	007.50	00001366	00001366	015.00
17	000.31	00390.23	000007317	007.50	00000976	00000976	015.00
18	000.31	00234.14	000004390	007.50	00000585	00000585	015.00
19	000.31	00078.05	000001463	007.50	00000195	00000195	015.00

First point of zero shear = 00.00 ft.

Additional reinforcing

Operator : BP
Job no.: 13529
Panel no.: APPROACH SLAB 1
Date : 10/30/2013

Angle Deg.	Loc. Feet	Flexure Stress PSI	Bending Moment Ft-Lbs	Allow. Moment Ft-Lbs	Tens. Steel Sq. In.	Comp. Steel Sq. In.	Strongbacks	
							Sec. Mod. Wood In^3	Sec. Mod. Steel In^3

Maximum positive stress (Bottom)= 75 psi @ 11.14 ft. and 0°
Maximum negative stress (Top)= 31 psi @ 17.77 ft. and 0°

Balancing moment = 0.00 ft.-lbs./ft. over 0.00 ft.W-Shift 0.00
Strongback req'ments (Applicable only if printout shows add'l steel req'd.)
Wood: 0 single 2X12's or equivalent.
0 single 4X12's or equivalent.
Steel: 0 double C6X8.2 or equivalent.
0 double C8x11.5 or equivalent.

Operator : BP
Job no.: 13529
Panel no.: APPROACH SLAB 2 - E, F, G & H
Date : 10/30/2013

Insert type: Other
Safe working load = 25000 lbs.
Concrete compressive strength = 3500 psi.
Allowable bending strength = 354.9648 psi.
Steel grade = 60
Concrete unit Weight = 150 pcf.

Panel geometry

Feature number - 0 (Panel perimeter)
X(0) =02.4896 Y(0) = 00.00 NON RECTANGULAR FEATURE
X(1) =00.00 Y(1) = 06.9375
X(2) =20.00 Y(2) = 06.9375
X(3) =22.4896 Y(3) = 00.00

Weight and C. G.

Structural thickness = 17.375 in.
Overall thickness = 17.375 in.
Projected area = 139 sq. ft.
Effective area = 139 sq. ft.
X-bar = 11.24 ft.
Y-bar = 3.47 ft.
Z-bar = 8.6875 inches
Bottom Concrete Cover for reinforcing = .75 in.
Top Concrete Cover for reinforcing = .75 in.
Weight = 30134.77 lbs.
Minimum number of inserts required by Weight = 2

Insert locations - decimal

ROW	Column 1	Column 2
1	04.72,01.71	17.77,01.71
2	04.72,05.23	17.77,05.23

Two row cable length = 20'-0"

Operator : BP
 Job no.: 13529
 Panel no.: APPROACH SLAB 2 - E, F, G & H
 Date : 10/30/2013

VERTICAL ANALYSIS

Uniform loads

Segment Number	Length (Feet)	Load (PPF)
01	000.29	04343.75
02	000.29	04343.75
03	000.29	04343.75
04	000.29	04343.75
05	000.29	04343.75
06	000.26	04343.75
07	000.03	04343.75
08	000.29	04343.75
09	000.29	04343.75
10	000.29	04343.75
11	000.29	04343.75
12	000.29	04343.75
13	000.29	04343.75
14	000.29	04343.75
15	000.29	04343.75
16	000.29	04343.75
17	000.29	04343.75
18	000.29	04343.75
19	000.29	04343.75
20	000.03	04343.75
21	000.26	04343.75
22	000.29	04343.75
23	000.29	04343.75
24	000.29	04343.75
25	000.29	04343.75
26	000.29	04343.75

Section Properties

N	D(N) (Ft.)	Area (In.^2)	Mom. of In. (In^4)	Neut. Axis (In.)	+Sec. Mod. (In.^3)	-Sec. Mod. (In.^3)	Eff. Thk. (In.)
01	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
02	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
03	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
04	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
05	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
06	000.26	04170.00	000104907	008.69	00012076	00012076	017.38
07	000.03	04170.00	000104907	008.69	00012076	00012076	017.38
08	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
09	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
10	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
11	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
12	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
13	000.29	04170.00	000104907	008.69	00012076	00012076	017.38

Operator : BP
 Job no.: 13529
 Panel no.: APPROACH SLAB 2 - E, F, G & H
 Date : 10/30/2013

14	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
15	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
16	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
17	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
18	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
19	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
20	000.03	04170.00	000104907	008.69	00012076	00012076	017.38
21	000.26	04170.00	000104907	008.69	00012076	00012076	017.38
22	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
23	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
24	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
25	000.29	04170.00	000104907	008.69	00012076	00012076	017.38
26	000.29	04170.00	000104907	008.69	00012076	00012076	017.38

Additional reinforcing

Angle	Loc.	Flexure	Bending	Allow.	Tens.	Comp.	Strongbacks	
							Sec. Mod.	Sec. Mod.
Deg.	Feet	Stress	Moment	Moment	Steel	Steel	Wood	Steel
		PSI	Ft-Lbs	Ft-Lbs	Sq. In.	Sq. In.	In^3	In^3

Insert loads

Maximum tension load = 7533.69 lbs per insert.
 Maximum shear load = .00 lbs per insert.
 Maximum ground reaction = .00 lbs
 Maximum positive stress (Bottom)= 0 psi @ 3.47 ft. and 0°
 Maximum negative stress (Top)= 6 psi @ 1.71 ft. and 0°

Strongback req'ments (Applicable only if printout shows add'l steel req'd.)

- Wood: 0 single 2X12's or equivalent.
- 0 single 4X12's or equivalent.
- Steel: 0 double C6X8.2 or equivalent.
- 0 double C8x11.5 or equivalent.

Operator : BP
 Job no.: 13529
 Panel no.: APPROACH SLAB 2 - E, F, G & H
 Date : 10/30/2013

HORIZONTAL ANALYSIS

Uniform loads

Segment Number	Length (Feet)	Load (PPF)
01	00.31	00094.17
02	00.31	00282.51
03	00.31	00470.86
04	00.31	00659.20
05	00.31	00847.54
06	00.31	01035.88
07	00.31	01224.22
08	00.31	01412.57
09	02.23	01506.74
10	13.04	01506.74
11	02.23	01506.74
12	00.31	01412.57
13	00.31	01224.22
14	00.31	01035.88
15	00.31	00847.54
16	00.31	00659.20
17	00.31	00470.86
18	00.31	00282.51
19	00.31	00094.17

Section Properties

N	D(N) (Ft.)	Area (In.^2)	Mom. of In. (In.^4)	Neut. Axis (In.)	+Sec. Mod. (In.^3)	-Sec. Mod. (In.^3)	Eff. Thk. (In.)
01	000.31	00090.40	000002274	008.69	00000262	00000262	017.38
02	000.31	00271.21	000006823	008.69	00000785	00000785	017.38
03	000.31	00452.02	000011372	008.69	00001309	00001309	017.38
04	000.31	00632.83	000015920	008.69	00001833	00001833	017.38
05	000.31	00813.64	000020469	008.69	00002356	00002356	017.38
06	000.31	00994.45	000025018	008.69	00002880	00002880	017.38
07	000.31	01175.25	000029567	008.69	00003403	00003403	017.38
08	000.31	01356.06	000034115	008.69	00003927	00003927	017.38
09	002.23	01446.47	000036390	008.69	00004189	00004189	017.38
10	013.04	01446.47	000036390	008.69	00004189	00004189	017.38
11	002.23	01446.47	000036390	008.69	00004189	00004189	017.38
12	000.31	01356.06	000034115	008.69	00003927	00003927	017.38
13	000.31	01175.25	000029567	008.69	00003403	00003403	017.38
14	000.31	00994.45	000025018	008.69	00002880	00002880	017.38
15	000.31	00813.64	000020469	008.69	00002356	00002356	017.38
16	000.31	00632.83	000015920	008.69	00001833	00001833	017.38
17	000.31	00452.02	000011372	008.69	00001309	00001309	017.38
18	000.31	00271.21	000006823	008.69	00000785	00000785	017.38
19	000.31	00090.40	000002274	008.69	00000262	00000262	017.38

First point of zero shear = 00.00 ft.

Additional reinforcing

Operator : BP
Job no.: 13529
Panel no.: APPROACH SLAB 2 - E, F, G & H
Date : 10/30/2013

Angle Deg.	Loc. Feet	Flexure Stress PSI	Bending Moment Ft-Lbs	Allow. Moment Ft-Lbs	Tens. Steel Sq. In.	Comp. Steel Sq. In.	Strongbacks	
							Sec. Mod. Wood In^3	Sec. Mod. Steel In^3

Maximum positive stress (Bottom)= 65 psi @ 11.14 ft. and 0°
Maximum negative stress (Top)= 26 psi @ 17.77 ft. and 0°

Balancing moment = 0.00 ft.-lbs./ft. over 0.00 ft.W-Shift 0.00
Strongback req'ments (Applicable only if printout shows add'l steel req'd.)
Wood: 0 single 2X12's or equivalent.
0 single 4X12's or equivalent.
Steel: 0 double C6X8.2 or equivalent.
0 double C8x11.5 or equivalent.

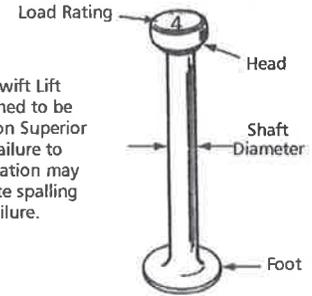
P52 Swift Lift® Anchor

The P52 Swift Lift Anchor is hot forged from carbon steel. The formed head provides spherical seating that the Lifting Eye engages, while a disc-shaped foot is embedded in the concrete.

Due to its being a forged part, the Swift Lift Anchor does not depend on welds or thread engagement to develop its safe working load. Forging provides maximum safety with its advantageous material structure. This allows the anchor to easily meet the OSHA requirement of a 4 to 1 factor of safety.

In addition to the carbon steel anchors, Type 304 or 316 Stainless Steel Swift Lift Anchors are available on special order. Use stainless steel anchors when maximum protection against corrosion is required.

For safety, refer to the P52 Swift Lift Anchor Selection Chart to determine the actual safe working load of an individual anchor. The MAXIMUM safe working load is clearly visible on the head of the anchor for easy recognition of the appropriate hardware and accessories for-use with each Swift Lift Anchor.



Caution: The Swift Lift Anchor is designed to be used with Dayton Superior components. Failure to use this combination may result in concrete spalling or premature failure.

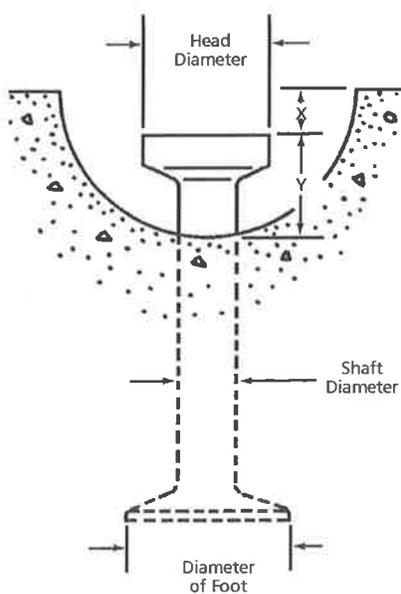
To Order:

Specify: (1) quantity, (2) name, (3) system size, (4) length

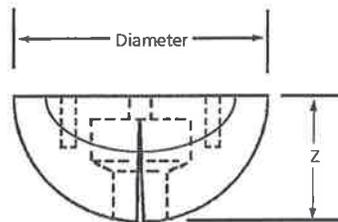
Example:

200, P52 Swift Lift Anchors, 4 ton, 9-1/2" long

P52 Swift Lift Anchor and Recess Plug Dimensions



P52 Swift Lift Anchor



Swift Lift Round Recess Plug

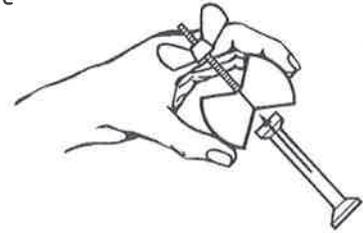
Swift Lift Round Recess Plug Dimensions		
Swift Lift Anchor	Diameter of Recess Plug	Dimension Z
1	2-7/16"	1-3/16"
2	3-5/16"	1-7/16"
4	4"	1-13/16"
8	5"	2-5/16"
20 Tons	6-3/8"	3-1/8"

Note: The diameter of the narrow recess plug is the same as the diameter of the round recess plug.

P52 Swift Lift Anchor Dimensions					
Swift Lift Anchor	Dimension X	Dimension Y	Shaft Diameter	Foot Diameter	Head Diameter
1	5/16"	7/8"	3/8"	1"	11/16"
2	7/16"	1-1/16"	9/16"	1-3/8"	1-1/32"
4	9/16"	1-5/16"	3/4"	1-7/8"	1-11/32"
8	9/16"	1-5/8"	1-3/32"	2-5/8"	1-7/8"
20 Tons	9/16"	2-5/8"	1-1/2"	3-3/4"	2-3/4"

How to Install P56 and P56PL Recess Plugs on P52 Anchors

Grasp the recess plug firmly across the top diameter of the plug. Application of pressure by the thumb and fingers on the outer edge of the plug will cause the plug to open up to allow insertion of the anchor.

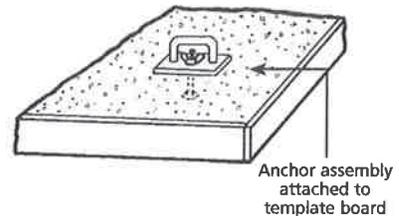


“Wet Setting” P52 Swift Lift Face Lift Anchors

When a Swift Lift anchor is to be positioned in the top surface of a flat precast section, wet setting the anchor is best done immediately after the concrete has been placed.

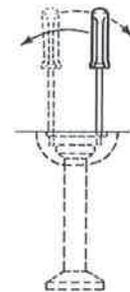
The anchor/recess plug assembly is attached to a small template board and pressed into the fresh concrete until the template board lies flush on the surface of the concrete.

Light vibration of the fresh concrete will assure proper embedment and anchorage.



Recess Plug Removal

Swift Lift recess plugs provide two holes in the top surface that are used in the removal process. Insert two screw drivers or steel rods into the holes and simply lever the two across the plug for easy removal.



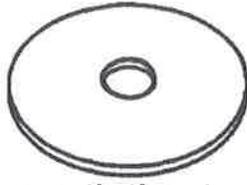
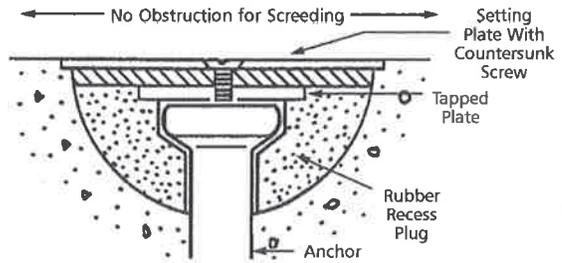
Selecting the Proper Swift Lift Anchor

Determination of the required rated load and length of a P52 Swift Lift Anchor is based on the actual maximum load that is transferred to the anchor. In most cases, a flat slab can be handled with the anchors properly located in the face of the flat slab. The anchors should normally be the maximum length that can be accommodated in the slab's structural thickness, allowing at least 1/2" clearance between the anchor and the casting bed. Dimension tables and safe working load charts, contained herein, will aid in the selection of the proper anchor. Keep in mind that the safe working load of an anchor is a function of several factors:

1. The effective concrete thickness
2. Actual edge distance
3. Concrete compressive strength at time of lift
4. Anchor length
5. In some applications, the use of a shear bar

P61 Swift Lift® Setting Plate, P62 Countersunk Screw

The Dayton Superior P61 Swift Lift Setting Plate and P62 Countersunk Screw combination provide an easy method of placing a Swift Lift Anchor into the surface of a flat panel without obstructing the screeding process. The P61 setting plate is available in two sizes, a 4" unit for use with 4-ton anchors and a 5" unit for use with 8-ton anchors. The P62 screw is available in two sizes to match the setting plates. The 4-ton setup uses a 3/4" long, 5/16" – 18 NC thread screw and the 8-ton setup uses a 3/4" long, 7/16" – 14 NC thread screw.



P61 Swift Lift Setting Plate



P62 Swift Lift Countersunk Screw

To Order:

Specify: (1) quantity, (2) name, (3) anchor size.

Example:

200, P61 Swift Lift Setting Plates and 200, P62 Countersunk Screws for 4-ton anchors.

P63 Swift Lift® Stud, P64 Swift Lift Wing Nut

The Dayton Superior P63 Swift Lift Stud and P64 Wing Nut combination is used to set P56 Narrow Recess Plugs. Available in two sizes, 5/16" – 18 NC threads for use with the 1-ton anchor and 7/16" – 14 NC threads for use with 2, 4, 8 and 20-ton P56 anchors.



P63 Swift Lift Stud

Note: The P63 Stud and P64 Wing Nut are not interchangeable with the P56PL Recess Plug accessories.



P64 Swift Lift Wing Nut

To Order:

Specify: (1) quantity, (2) name, (3) size.

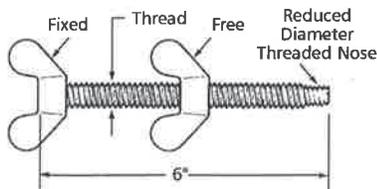
Example:

200, P63 Swift Lift Studs and 200 P64 Swift Lift Wing Nuts, 7/16" dia.

P63PL Swift Lift® Plus Holding Stud, P64PL Swift Lift Plus Wing Nut

The Dayton Superior P63PL Swift Lift Plus Holding Stud is a 3/8" diameter, coil threaded stud with a fixed wing nut and a free-running wing nut used with the P66PL threaded plate to quickly attach the P56PL recess plug to the formwork. The holding stud is inserted through the form and threaded into the threaded plate. Complete the anchor installation by screwing the free-running wing nut tightly against the form.

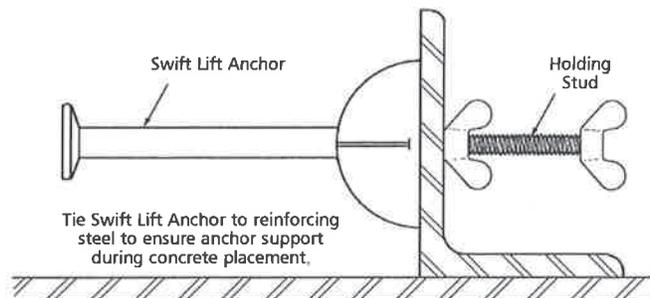
The P64PL Wing Nut has 3/8" diameter coil thread and is available as a replacement nut for the P63PL Holding Stud.



P63PL Swift Lift Plus Holding Stud



P64PL Swift Lift Plus Wing Nut



To Order:

Specify: (1) quantity, (2) name.

Example:

200, P63PL Swift Lift Plus Holding Studs.

Swift Lift® System

The Swift Lift System is a quick connect-disconnect system that allows precast concrete elements to be handled repeatedly, with speed, safety and economy. It is a non-welded system and void of threaded connections. The quality, reusable Swift Lift Lifting Eye's heavy duty construction will provide years of good service.

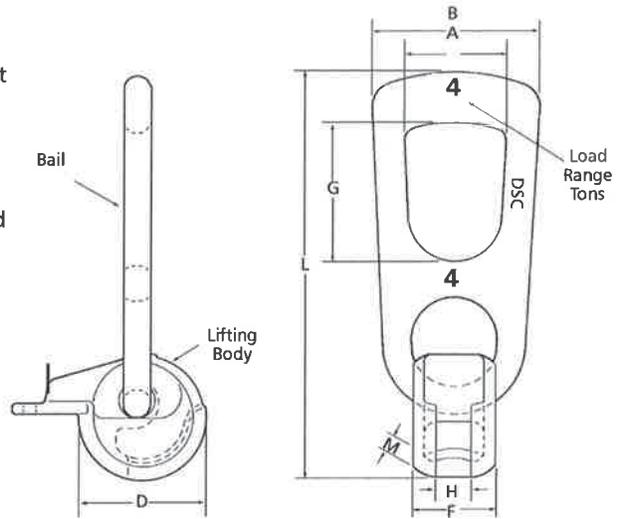
The Swift Lift System is available with safe load ratings of 1, 2, 4, 8 and 20 tons. Each component is clearly marked with its maximum safe working load. The System is extremely versatile and can be utilized for vertical and diagonal pulls. It can be used to lift concrete elements from a horizontal to a vertical position without the aid of a tilting table.

P50 Swift Lift® Universal Lifting Eye

The Swift Lift Universal Lifting Eye (P50) consists of a flat-sided, spherical lifting body and a high strength bail. The lifting body has a T-shaped slot that permits rapid attachment and release of the head on Swift Lift Anchors.

The design of the P50 Universal Lifting Eye permits the bail to freely rotate 180°, while the complete lifting eye may rotate through a 360° arc. This design feature allows precast concrete elements to be turned, tilted and/or rotated under load.

Dayton Superior does not recommend the use of this lifting eye for edge lifting of thin precast concrete panels.



P50 Swift Lift Universal Lifting Eye Dimensions						
Rated Load Tons	A	B	D	F	G	L
1	1.87"	2.95"	2.20"	1.26"	2.80"	7.40"
2	2.34"	3.58"	2.68"	1.61"	3.41"	9.06"
4	2.76"	4.65"	3.46"	2.22"	3.46"	11.14"
8	3.47"	6.30"	4.41"	2.83"	4.52"	15.79"
20	4.18"	7.09"	6.00"	4.29"	5.31"	20.00"

The rated load provides a factor of safety of approximately 5 to 1 (ultimate to rated load).

P50 Inspection and Maintenance

The P50 Universal Lifting Eye may be subjected to wear, misuse, overloading and other factors that can affect the lifting eye's rated load. Therefore, it is imperative that the lifting eye be user-inspected at least once a month to determine its general condition and degree of wear.

During the user's monthly inspection, the lifting eye should be checked for evidence of heat application. If evidence of heat application is found, the unit must be scrapped. Check for a bent or twisted bail and discard all units found to have these flaws. Also, check to make certain that the bail rotates freely in all directions.

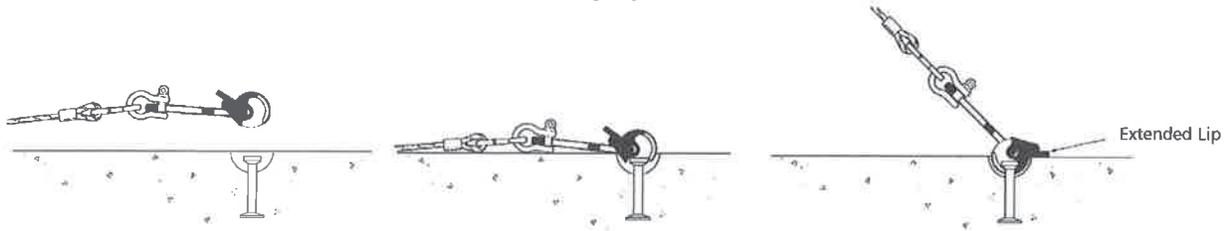
At least once every three months, dimensions "H" and "M" on each unit should be checked. The upper limits are shown in the chart. If either of these limits is exceeded, the P50 Universal Lifting Eye must be removed from service and destroyed.

The proper method for scrapping a lifting eye is to cut through the bail with a cutting torch to render the unit useless as a lifting device.

No repairs or welding to the P50 Swift Lift Universal Lifting Eye are permitted.

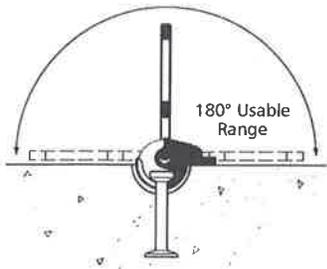
Limiting Dimensions on P-50 Swift Lift Universal Lifting Eye		
Rated Load (Tons)	H Maximum Width	M Minimum Thickness
1	0.512"	0.217"
2	0.709"	0.236"
4	0.984"	0.315"
8	1.260"	0.472"
20	1.811"	0.709"

How to Use the P50 Swift Lift Universal Lifting Eye

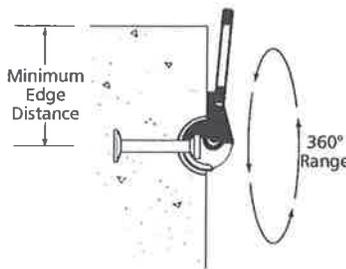


1. To install the P50 lifting eye, hold the unit upside down with the T-shaped slot directly over the head of the Swift Lift anchor.
2. Lower the lifting eye down onto the anchor until the Tslot engages the head of the anchor.
3. Rotate the lifting eye until the extended lip of the body touches the horizontal surface of the concrete.

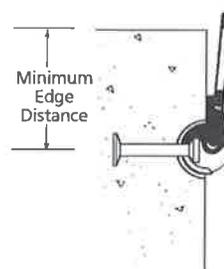
Note: Prior to lifting a precast element, apply an initial cable tension to make sure that the bail and body of the lifting eye are aligned in the direction of the cable pull.



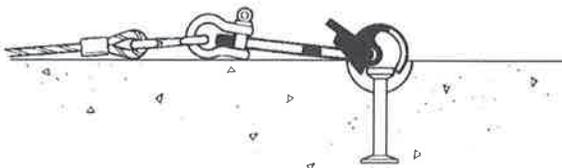
The bail of the P50 lifting eye can move through a 180° usable range.



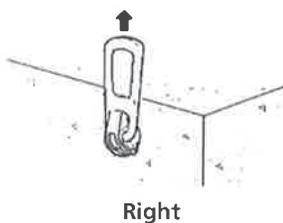
The main body of the lifting eye has a 360° rotational range.



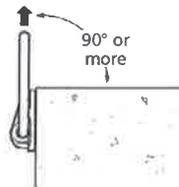
The P50 lifting is used with the T-shaped slot facing toward the direction of the applied load.



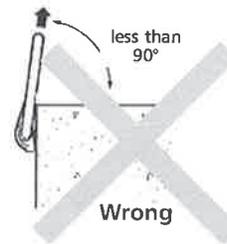
To disengage the lifting eye, the crane hook is lowered and the body removed by rotating the extended lip upward.



Right



Right



Wrong

Dos and Don'ts of the P50 Swift Lift Universal Lifting Eye

Prior to lifting a precast element, apply an initial cable tension to make certain that the bail and body of the lifting eye are aligned in the direction of the cable pull.

When applying the initial cable tension on edge lift applications, make sure that the cables are at a 90° angle (or larger) to the surface of the precast element.

Warning: Do not allow the crane lines to form an angle less than 90° during an edge lift application. This condition can bend the lifting eye bail and could lead to a premature failure.

Warning: The crane line and bail of the lifting hardware must be turned in the direction of the cable forces before the lifting operation begins. The crane line must not be allowed to apply a sideward force on the bail. This condition is dangerous and could lead to premature failure of the hardware or insert.

Warning: Do not modify, weld or alter in any way the Swift Lift Universal Lifting Eye.