REACH FOR 140-P AND 140PXL SNOOPERS

				(what Miles is using at the moment)			
		Parameter	140-P standard	140-P w/ 7 x 8'	140PXL	Comments	
			Platform	Platform	Platform		
		Operating surface	5% grade 8% super elevation	5% grade 8% super elevation	2% grade 2% super elevation		
		Number of rotation points	1	1	1		
		live load capacity	600 lbs	1,000 lbs	2,900 total*	*2,000 lbs payload, 900 personnel and tools	
		Platform size	24" wide x 13'-6" long	7' x 8'	4'X15' extending across		
			(27' long with bolt on extension)		the end of boom 3		
		Boom 1 reach	16' long	16' long	21' long		
		Boom 2 reach	Telescoping 16' to 28'	Telescoping 16' to 28'	Telescoping 21' to 29'		
		Boom 3 reach	n/a	n/a	telescoping 17' to 26'		
		Max underbridge reach obtainable	40'	21'	34'		
		1/22/2019				Aptus compare	

Specifications

Capacity of the PLATFORM SNOOPER®

Payload capacity 2,000 lbs.

Live Load capacity 900 lbs.

Total Capacity 2,900 lbs.

The Original SNOOPER® by PAXTON-MITCHELL COMPANY, L.L.C.

Specifications

CRANE SNOOPER® 140-PXL

SERIAL NO. 140001

CUSTOMER Aptus USA, LLC

Truck Make & Model Western Star 4900

Cab to Axle is 168" in.

Wheel Base is 258" in.

Front Axle Capacity is 20,000 lbs.

Rear Axle Capacity is 46,000 lbs.

Gross Vehicle Weight Rating (GVWR) 99,200 w/pusher & tag lbs.

Frame Section Modulus is 41.27 inches cubed

Resisting Bending Moment (RBM) 4,950,000

Frame Material is 120,000 PSI psi

SHIPPING WEIGHT - CARRIER AND CRANE: - Full Fueled

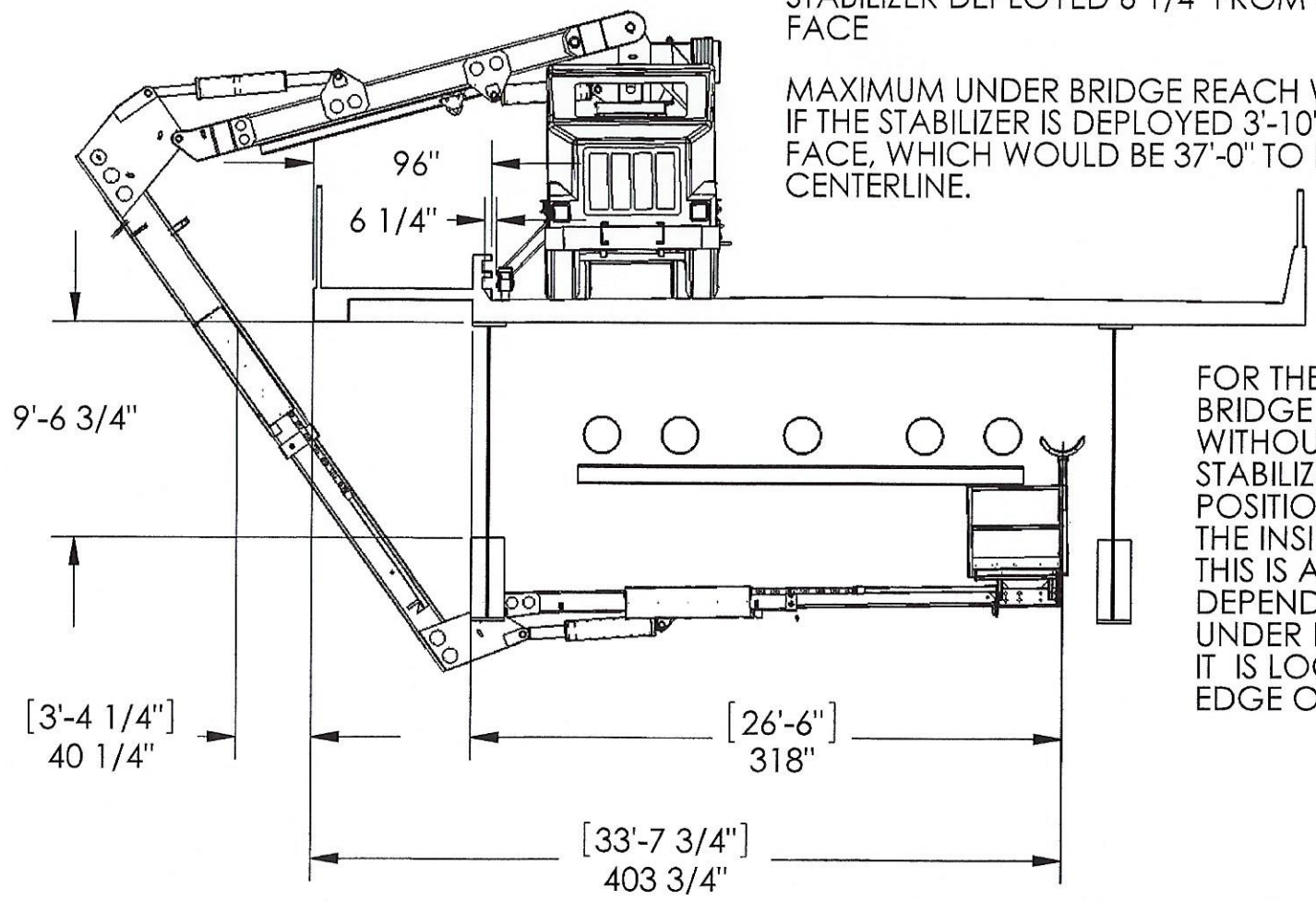
Front Axle	19,920	lbs.
Pusher Axle	7,940	lbs.
Rear Axle	33,440	lbs.
Tag Axle	5,620	lbs.
Total Weight	66,920	lbs.

DATE: 7/26/19

DRG. NO.
A-70000-UB-1

MAXIMUM UNDER BRIDGE REACH WITH STABILIZER DEPLOYED 6 1/4" FROM CURB FACE

MAXIMUM UNDER BRIDGE REACH WOULD BE IF THE STABILIZER IS DEPLOYED 3'-10" FROM CURB FACE, WHICH WOULD BE 37'-0" TO PIPE CENTERLINE.



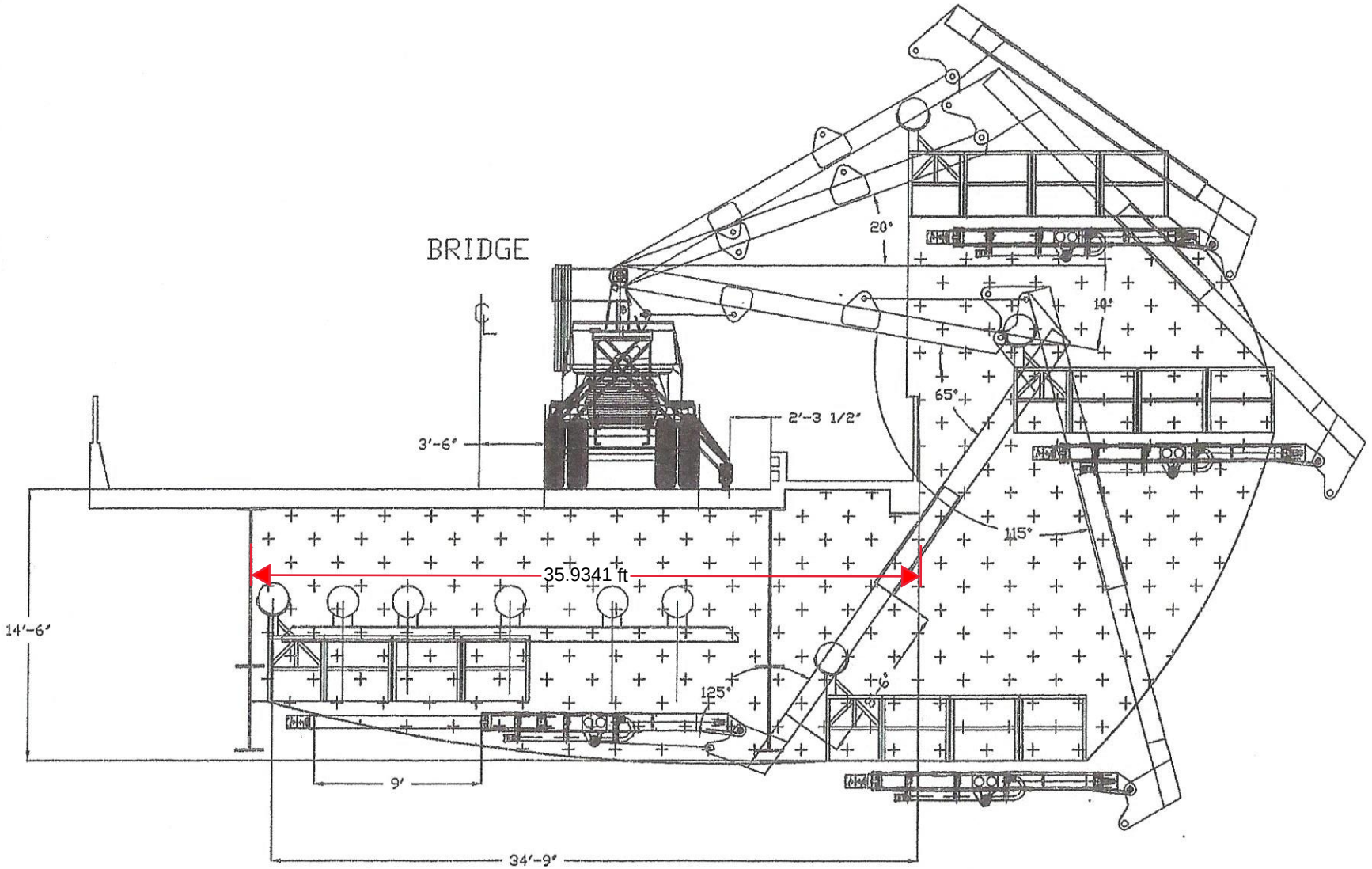
FOR THE MAXIMUM UNDER BRIDGE REACH OF 37'-0" WITHOUT A SIDE WALK, THE STABILIZER WOULD HAVE TO BE POSITIONED 11'-10" FROM THE INSIDE FACE OF THE CURB. THIS IS ALSO GOING TO BE DEPENDENT UPON HOW DEEP THE UNDER BRIDGE BEAM IS AND WHERE IT IS LOCATED FROM THE OUTSIDE EDGE OF THE BRIDGE.

PAXTON-MITCHELL CO.

OMAHA, NE, U.S.A

PMF-230 REV "A" 3/17/03	DR.	BRF	MACHINE
	CK.		UNIT GENERAL ARRANGEMENT
	DATE	2/23/04	
	SCALE	1:96	PART MAXIMUM UNDER BRIDGE REACH
TOLERANCE UNLESS OTHERWISE SPECIFIED	WHOLE NUMBERS & FRACTIONS +/- 1/16 DECIMALS +/- .010		SHEET 1 OF 1 / DRG. NO. A-70000-UB-1 / REV. A

A-STOWED	NO.	PART NO.	QTY	DESCRIPTION	MATERIAL	WT



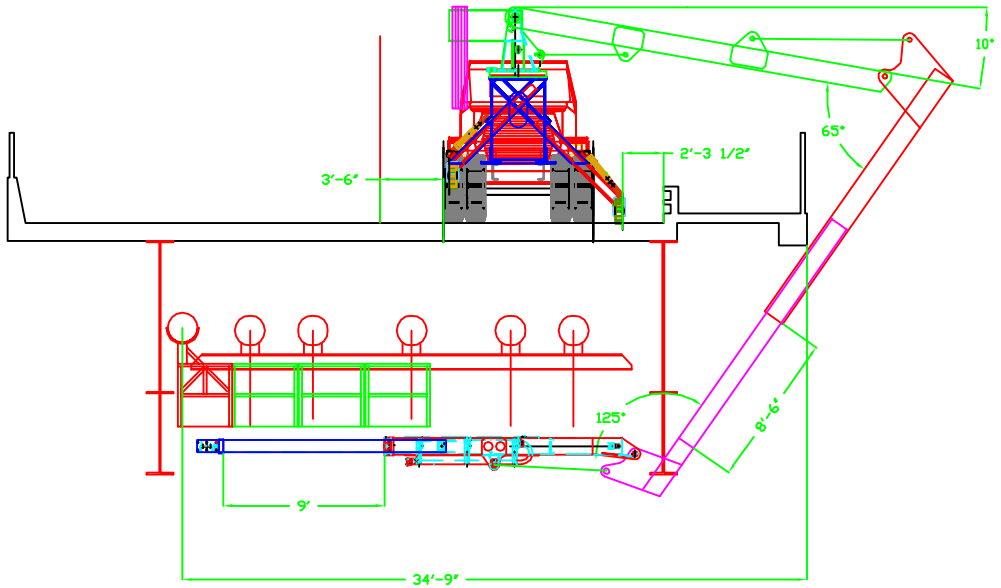
PAXTON-MITCHELL CO.

OMAHA,NEBR.,U.S.A

DR. BRF	MACHINE KING ELECTRIC
CK.	UNIT UNDER BRIDGE
DATE 12/2/03	PART GENERAL ARRANGEMENT
SCALE 1/8"=1'-0"	SHEET 1 OF 1
TOLERANCE UNLESS OTHERWISE SPECIFIED: FRACTIONS +/- 1/64, DECIMALS +/- .010	DRG. NO. A-STOWED

DESCRIPTION	REV	DATE

MAX UNDER-1	NO.	PART NO.	QTY	DESCRIPTION	MATERIAL	WT



PAXTON-MITCHELL CO.

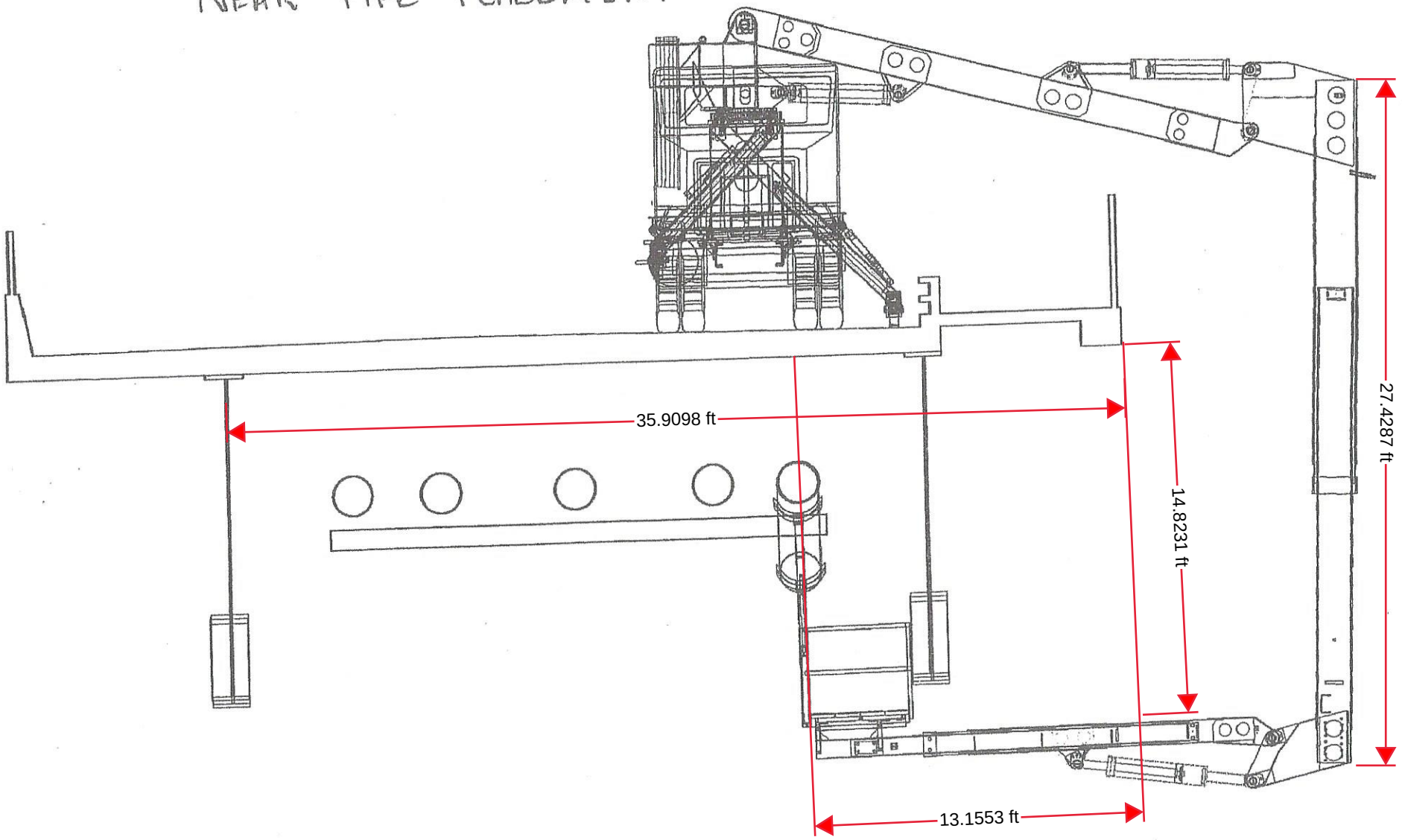
OMAHA,NEBR.,U.S.A

DR. BRF	MACHINE KING ELECTRIC
CK.	UNIT GENERAL ARRANGEMENT
DATE 12-2-03	PART MAXIMUM UNDER REACH
SCALE 1/8"=1'-0"	SHEET 1 OF 1
TOLERANCE UNLESS OTHERWISE SPECIFIED: FRACTIONS +/- 1/64, DECIMALS +/- .010	DRG. NO. MAX UNDER-1

DESCRIPTION	REV	DATE

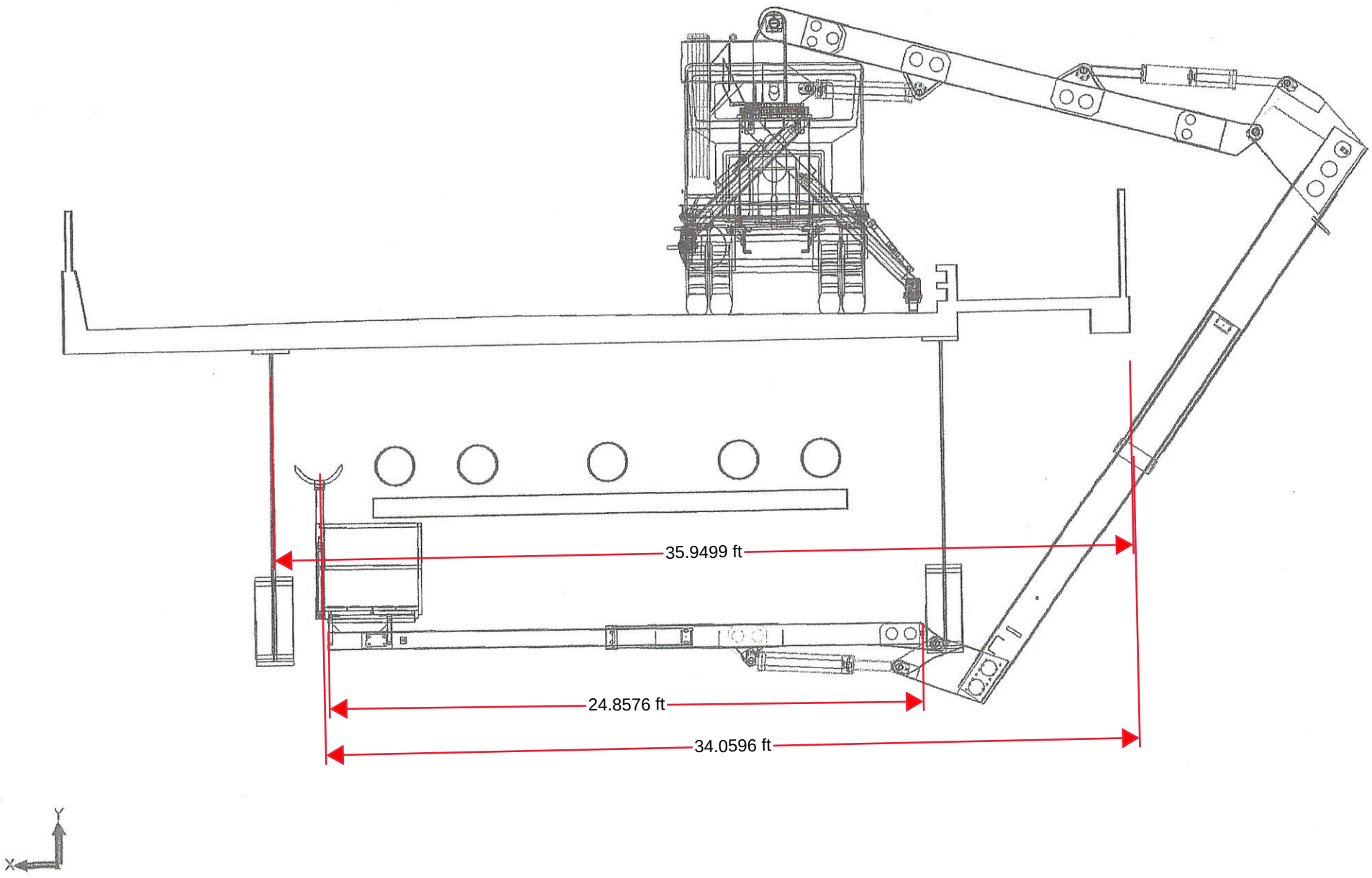
This scenario shows the second boom not fully deployed, but getting a 14'-10" reach from the bottom of the deck to the bottom of the platform.

Near Pipe Placement

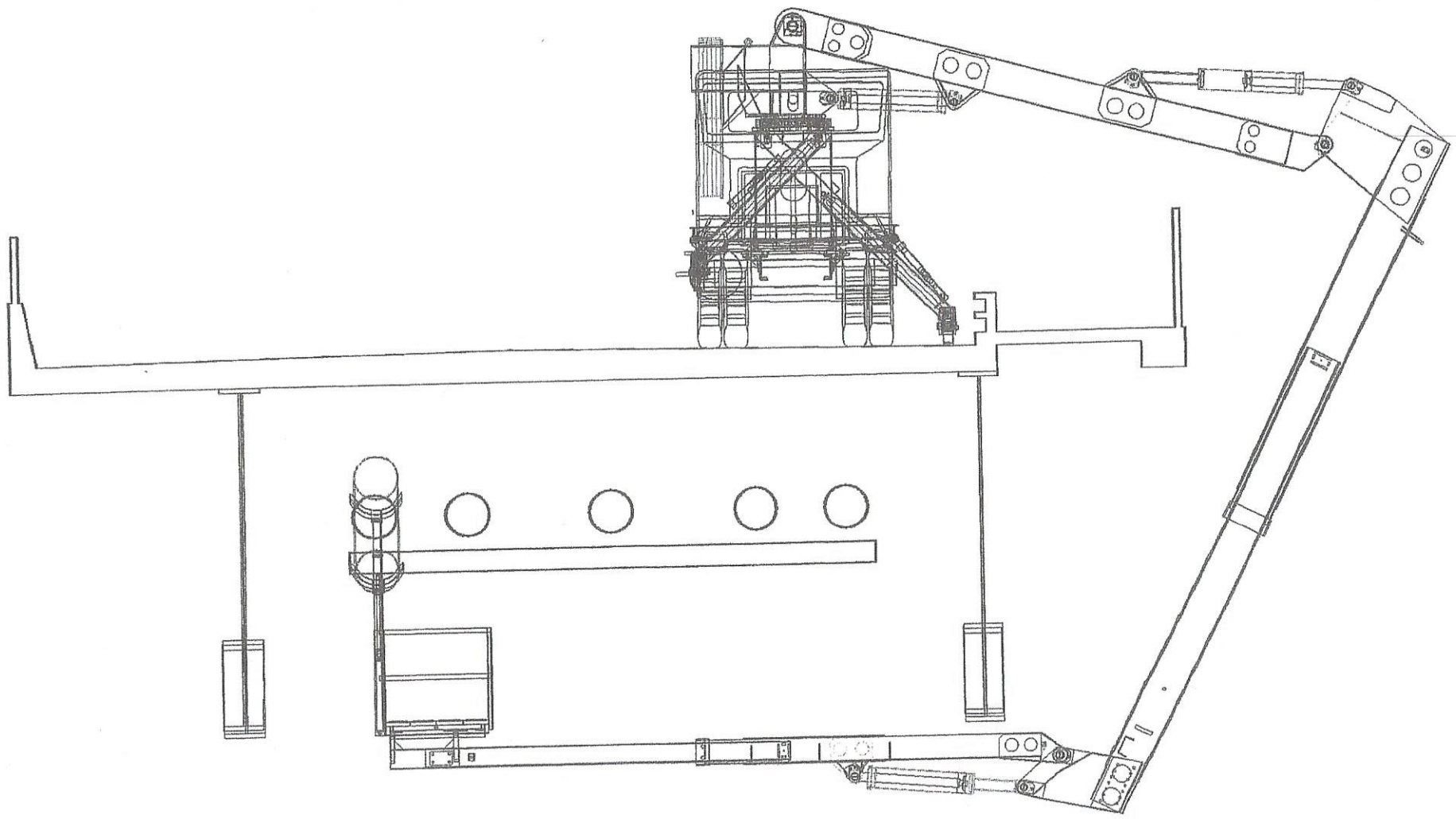


Max Reach

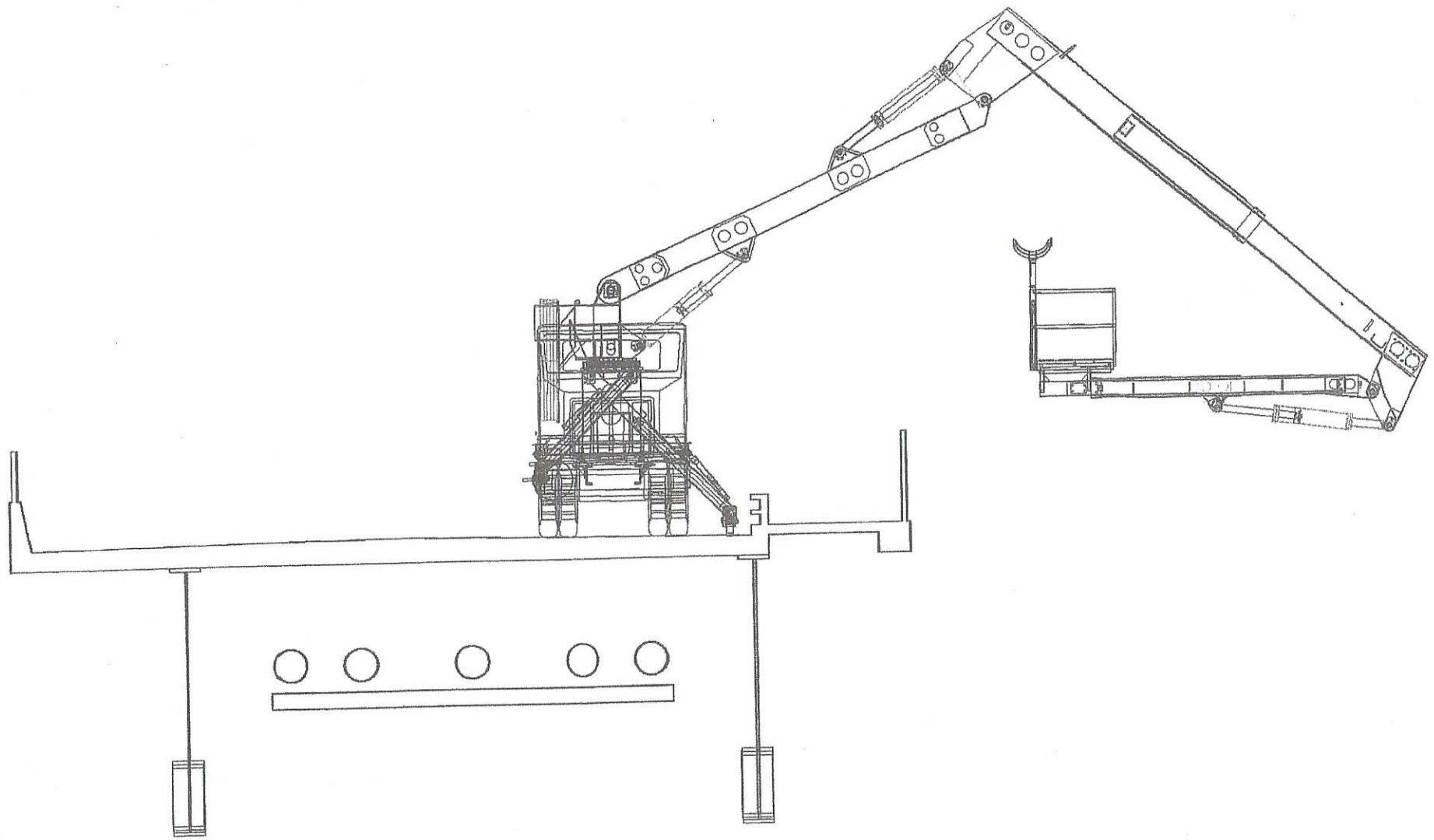
This scenario shows the third boom not fully deployed, but getting a 34' reach from the edge of the deck to the center of the payload.



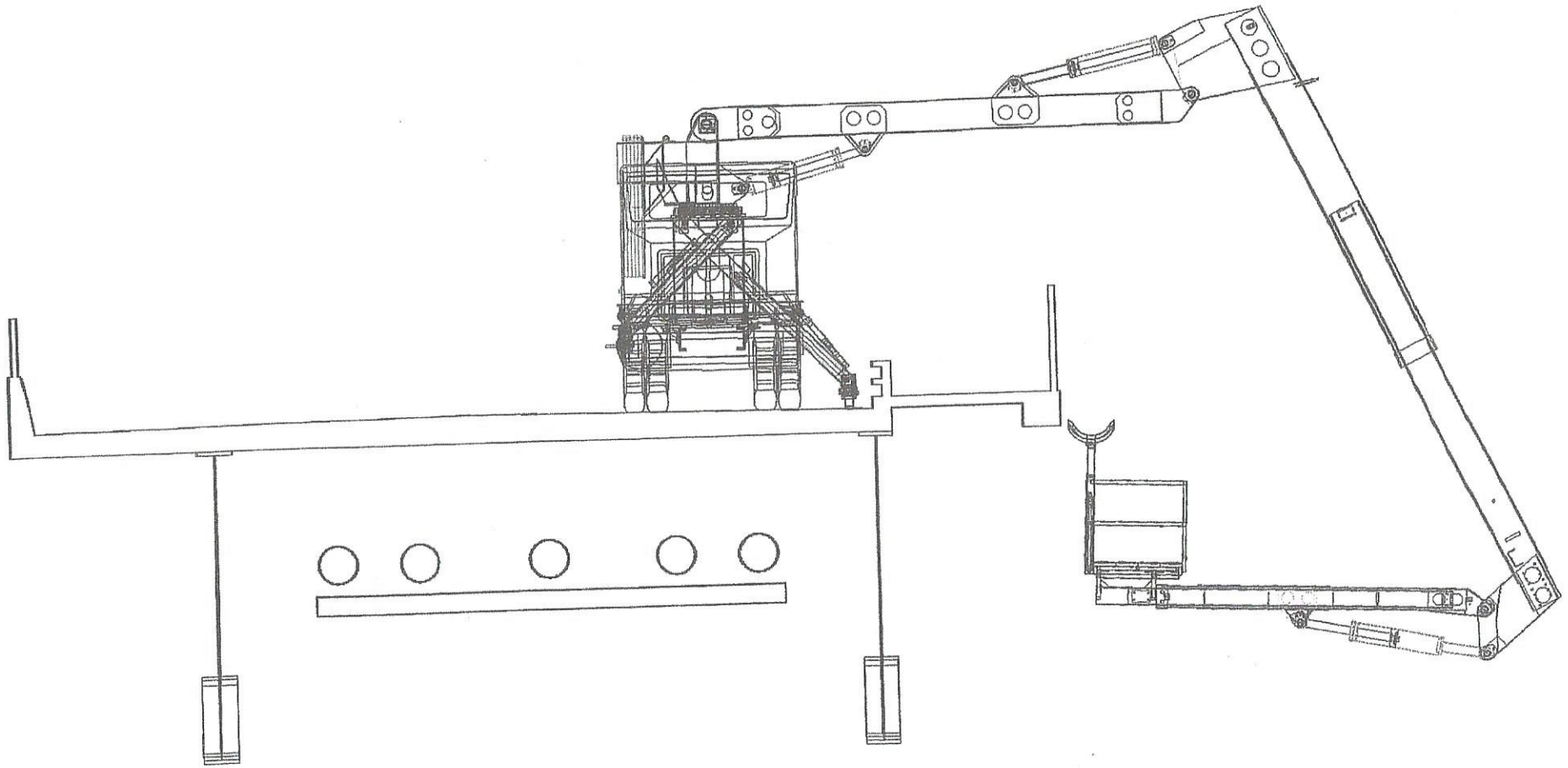
FAR PIPE PLACEMENT



Platform Deployment



PIPE LOADING POSITION



• DANGER •

THIS MACHINE IS NOT INSULATED

ELECTROCUTION HAZARD

Maintain safe clearances from electrical lines and apparatus. You must allow for boom sway, rock or sag and electrical line swaying.

This lifting device does not provide protection from contact with or proximity to an electrically charged conductor.

You must maintain a clearance of at least 10 feet between any part of the crane, loadline or load and electrical line or apparatus carrying up to 50,000 volts. One foot additional clearance is required for every additional 30,000 volts or less.

DEATH OR SERIOUS INJURY WILL RESULT
FROM CONTACT OR INADEQUATE CLEARANCE.

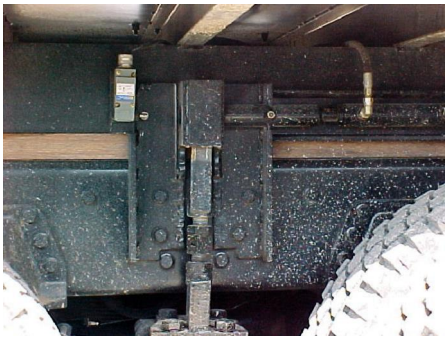
This SNOOPER® is counterweighted to operate on side slopes and grades as specified on the caution decal and in your operators manual. When moving unit with booms deployed over bridge railing keep truck in lowest gear and DO NOT exceed two (2) MPH.

Only personnel who are trained and qualified should operate this machine. Also be sure the SNOOPER® has been inspected and is in safe operating condition.

Operation

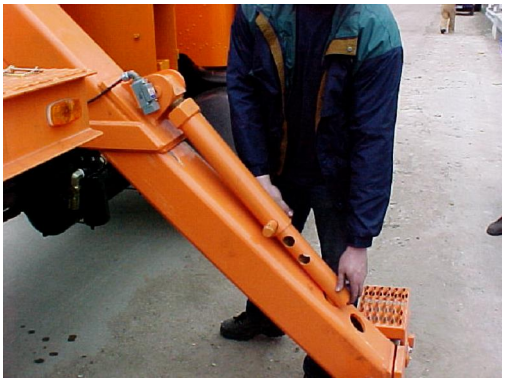
1. *To place the SNOOPER® in operation, position the truck on the bridge approximately 2-1/2 feet from the bridge edge. Be sure to set up adequate signal equipment to warn traffic that one lane of the bridge is blocked. Set the brakes, engage the P.T.O. (or start auxiliary power unit), and turn on the crane power switch in the cab.*

2. *Engage the hydraulically operated spring lockouts if equipped, using the lever located on the pedestal. There is a spring lockout located on each side of the truck at the rear suspension. A hydraulic cylinder shifts a pin horizontally through a hole in a vertical member attached to the suspension. Vertical adjustment can be made to align the hole with the pin. Visually check to make sure the pins are in place before continuing operation.*

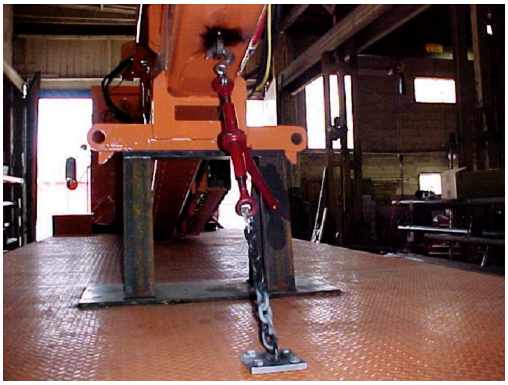


3. *Remove the safety chain from the hydraulically operated stabilizer and extend it down to grade.*

4. *The stabilizer is equipped with a manual safety leg. This leg provides additional safety support for the stabilizer. Pivot the safety leg so the pin welded in the lower tube is engaged in the hole at the lower end of the stabilizer. The upper tube of the safety leg is threaded so it can be adjusted to the proper length to line up the holes for the pin. Install the pin. Be sure to install the lock pin and lock it in place.*



5. *At the rear of the bed is the tie down which holds the booms in place for transporting. Remove the tie down at this time.*

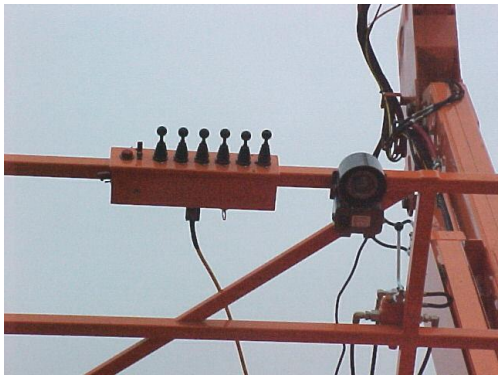


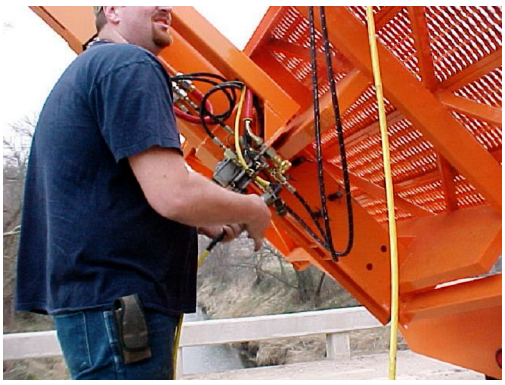
6. *Using the boom #1 "UP" control raise boom #1 up to maximum. This lifts the boom package out of the stowing saddle and allows the second boom to unfold. Tilt boom #2 out to its full outward position and telescope boom #2 out maximum.*

7. *Unfasten the stowing straps and brackets on the platform and rotate it so that the platform handrails are facing the back of the Snooper. Unpin the pipe cradles, and place them in the handrail tubes on the top of the platform. Pin off the cradles once they are in position.*

8. *Tilt boom #3 down and telescope out to attach platform.*

9. *After attaching the platform, install the remote control station and intercom, connect the QD's to the pipe lift cylinder and open the shutoff valve at the aframe.*





10. *Tilt the platform up to horizontal. Operators may now enter platform and attach safety lanyards.*

11. *Rotate turret #1 toward side of truck with stabilizer deployed. Always work directly over the stabilizer and as close to the bridge as possible.*

12. *With boom #1 horizontal lift pipe to deploy to the platform pipe cradles.*

13. *Do not operate unit with boom #1 above horizontal and pipe on platform as unit will become unstable.*

14. *Always keep the platform as level as possible when deploying pipe.*

15. *Move platform assembly into desired position under bridge and telescope pipe cradle to position pipe.*

16. *To stow, reverse the previous procedure.*

The unit is now ready for transporting

1. General Provisions:

   It is the intent and purpose of this specification to describe a truck mounted self-contained hydraulic crane to use for bridge inspection and maintenance.

   The equipment shall comply, in all respects, with OSHA standards (aerial lifts) 1926.556 and 1910.67 (vehicle mounted elevating and rotating platforms) as well as standards referenced therein and ANSI A.92.8 statutes as applicable.

   Pre-delivery criteria must include testing on a combination of 2% grade and 2% super elevation with 1-1/2 times the rated load in all configurations.

   Service and parts must be available within 48 hours in the limits of the continental United States

2. Coverage:

   Under bridge coverage area, without moving the truck, is to be a minimum of 1,150 square feet. Driving the truck forward or reverse, with booms extended in working position, shall provide additional overlapping areas of coverage. Minimum horizontal extension from outer edge of bridge deck, under and across, shall be 34’0”.

3. Main Frame:

   The main frame or pedestal and turret shall be constructed of high strength steel and equipped with a counterweight. The counterweight is not to exceed the width of the truck when the crane is in stowed or operating positions. The main turret shall rotate about the centerline of the vehicle 360 degrees, thus allowing operation from either sides of truck.

4. Stabilizers:

   To increase safety and stability, plus decreasing vehicle curb weight, the main frame shall be supported with two (2) “A” type stabilizer assemblies, located on each side of the frame. Both shall be independently hydraulically operated and each shall roll with truck movement on two- (2) 16” diameter 4” wide steel wheels with polyurethane tires. They are to be electrically interlocked so that the crane will not operate unless the stabilizer on the side the crane is being deployed is properly engaged. Only one stabilizer will be required during positioning and under bridge use. The total operating width of the unit with one stabilizer extended is approximately 10'0”.

5. Spring Lockouts:

   Both rear and front hydraulic spring lockouts or lock blocks will be provided to stabilize and reduce “spring” action of truck during crane operation. These are to electrically interlocked to prevent crane operation if not engaged.

6. First Boom:

   The first section shall be non-telescoping with a nominal 21' horizontal reach. It shall rotate hydraulically at least 360 degrees at the main turret, allowing operation from both sides of the truck. Tilt above horizontal shall be 50 degrees, -below- 14.5 degrees - which will allow placement of booms over fences a minimum of ten feet (10'), in height. A guide rail shall be welded to the bottom side of boom #1 and run the length of the boom between the first tilt cylinder pin off and the outboard boom #1 nosepiece. The guide rail shall accommodate a rail trolley and chain hoist of sufficient size to lift material from the bridge deck, and lower it on to the pipe cradles on the work platform.

7. Second Boom:

   The second boom section shall hydraulically telescope from 21' to 29' extending downward enabling the platform boom to be positioned horizontally under girders 25' below a bridge deck. It shall articulate from 15 degrees stowed to 115 degrees maximum when open.

8. Third Boom:

   The third boom section shall telescope a nominal 17' to 26' pin to pin. It shall hydraulically articulate from a stowed position 125 degrees.

9. Attachable Work Platform:

   The unit shall be equipped with an attachable specialized work platform designed for handling pipe up to 20 feet long weighing 2,000 pounds. Total platform capacity is to be 2,900 pounds.

   The platform shall be 4 feet long by 15 feet wide equipped 42” high handrails and (2) handling cradles. The platform shall be constructed of steel, and shall be attached to the telescoping end of boom #3. The maximum under bridge reach, with platform attached, shall be no less than 34 feet as measured from the edge of the bridge. Two pipe cradles shall be incorporated on either outside corner of the work platform. One cradle shall be fixed, the other shall be hydraulically telescoping up to 50 inches to allow workers to lift the pipe into place under the bridge.

10. Safety Systems:

    Unit to be equipped with an electric interlock which will not allow normal operation of SNOOPER unless stabilizer is in operating position and lockouts are engaged.

11. Remote Controls:

Dead man type, one set located at main frame and one set located at the workstation. Engine start-stop shall be provided to shut down or start operation in emergency. One control lever is to be provided for each function. It shall be possible to operate one or more functions at the same time, controlling the unit at various speeds from creep to full.

Central station at main frame shall override workstation in case of emergency.

12. Communication System:

A three-station, 12 volt intercommunication circuit providing the following: Both listen and transmit from truck cab and main control station at main frame to underbridge work station. Press switch to transmit. Continuous open system at work station allowing workers under bridge to talk or listen without operating any switches.

13. Hydraulics:

Hydraulic system shall be sufficient to properly operate the unit with greatest safety. All valves, pumps, filters, hoses, fittings, and P.T.O. shall be furnished. All hydraulics to meet J.I.C. standards.

RESERVOIR - 30 gallon surge baffled.

FILTERs - 10 micron, return line type.
20 micron pressure line filter

PUMP - Minimum 15 gallon at 1,800 R.P.M., piston pressure compensated type with 100 mesh suction line strainer.

SYSTEM PRESSURE - Adjustable, preset at 2,350 and protected by relief valve.

CONTROL VALVES - Valves shall be of a type that allow precise metering from creep to full speed from a remote controller. Valves shall be pressure compensated to provide constant speed regardless of load pressure changes. They shall also allow the operation of two or more controls in any combination. Valves shall have a lever for manual override operation in the event of electrical failure.

HYDRAULIC LINES - Seamless steel tubing and extra heavy piping, forged or machined steel fittings.

Heavy duty pressure line hoses 2,500 P. S. I. minimum working pressure.

CYLINDERS - All cylinders shall be double acting and have automatic safety check valves directly mounted to the cylinders. Cylinder walls to be honed, cylinder rods to be ground and polished, chrome plated alloy steel.

BACK-UP HYDRAULIC PUMP – The unit shall be equipped with an emergency back-up hydraulic pump system. The pump shall be driven by a diesel engine which gets its fuel supply from the trucks fuel tanks. This system is to be used in the event of truck engine, P.T.O., or truck mounted pump failures and shall have the capability to stow the unit from any operating position.

MINIMUM TRUCK REQUIREMENTS

BASIC TRUCK REQUIREMENTS

Conventional Cab (No cab over)
Cab to trunion - 189" typical
Wheel base per truck manufacturer to meet C.T. requirement
(Example: Int. F2574 - 189" C.T. 258" W.B.)
GVW - 77,200 lbs.
Front axle - 20,000 lbs.
Front suspension – To match axle capacity (less front shock absorbers)
Front tires & wheels – To match axle capacity
Pusher axle – steerable 13,200 lbs.
Pusher position – approx.. 54” ahead of front tandem axle
Pusher tire and wheels – To match axle capacity
Rear tandem axle - 44,000 lbs.
Rear suspension – Hendrickson RT2/RTE2 series only, to match capacity
Rear tires & wheels – To match axle capacity
Tag axle - 15,000 lbs. – to be supplied by Paxton-Mitchell Co.
Frame section modulus 43" cubed per rail ideal
Axle to end of frame approximately 166"
Step fuel tank
No aluminum walking beams

Truck ECM configured with wiring for remote stop, remote start, and remote 2-speed (set at 1000 rpm).

Note: Clear frame desired beginning 31” from back of cab to pusher axle if possible.

Platform body to suit truck frame, to be supplied by the crane manufacturer, and mounted after installation of crane.

Trucks supplied with Cummins Mechanical Engines must have MVS governor installed prior to receipt at the factory for crane installation.

"Stowed" or Transport Pos. Specifications

8'-1" Width

13'-1" Height

40'-1-1/2" Length

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