

# AGENDA ITEM

## Staff Report

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**TO:** Board of County Commissioners  
**FROM:** John Combs, Public Works Director  
**CC:** Ray Rears, County Manager  
**DATE:** May 17, 2022  
**ITEM:** Front end loader – Purchase or Lease Request  
**NEXT STEP:** Direction to staff

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ORDINANCE  
 MOTION  
 INFORMATION

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### I. REQUEST OR ISSUE:

Due to the high amount of hours used, and high cost of repair, staff is requesting purchase or lease of a new Front end loader. This is not a budgeted item for 2022. The options include:

#### PURCHASE OPTIONS:

John Deere 644-X \$297,628.82 (with trade in)

#### Pro's

1. Hybrid note uses the same 4- cylinder diesel as any other loader however the engine is driving a generator that powers the hydraulic transmission.
2. .03 per gallon per hour fuel saving.
3. Least expensive annual fuel cost

#### Con's

1. The most expensive option
2. \$ 19,462.82 Higher than Caterpillars 950-M
3. Delivery date – Q1 2023
4. No financing to purchase offered.

5. Lease only offered by John Deere.

John Deere 644-P \$273,695.07 (with trade in)

Pro's

1. The least expensive option
2. Tier 4 emission-controlled diesel engine.

Con's

1. Lower trade in offered \$46,500.00
2. No financing to purchase offered
3. Lease only offered by John Deere.
4. Delivery date – Q1 2023
5. Most expensive annual fuel cost by just \$1,227 est.

Caterpillar 950-M \$278,166 (with trade in)

Pro's

1. Highest trade in \$51,000.00
2. Tier 4 emission-controlled diesel engine.
3. More Safety options offered than John Deere.
4. Wagner Cat will have one available for delivery by early August 2022.
5. Both finance to own at 5.440% or lease purchase 5.440% from Caterpillar Corporate.
6. Larger bucket than John Deere.
7. Better fuel economy than the John Deere-P 3.1 gal-per hour.
8. Delivery date in August.

Con's

1. Not a hybrid.

LEASE OPTIONS:

<b>Lease costs</b>			5 Year Lease Annual payments						
Make	Model	Fuel Type	Quarterly payment	Annual cost	1 Annual Payment	5 Annual Pmt	Plus Residual	Total capital cost	
John Deere	644-X	Hybrid	\$ 10,665	\$ 42,658	\$ 41,679	\$ 208,395	\$ 154,753	\$ 363,148	
John Deere*	644-P	Diesel	\$ 9,807	\$ 39,228	\$ 38,327	\$ 191,637	\$ 142,373	\$ 334,010	
Caterpillar	950M	Diesel	\$ 16,003	\$ 64,014	\$ 64,014	\$ 320,070	\$ -	\$ 320,070	

Note: John Deere Rep did NOT quote lease costs for the 644-P  
 These are estimated at 92% of the cost of the 644-X  
 John Deere quotes are "turn in" lease. We would not own the equipment at the end of the lease  
 The residual is \$154,752

The terms and interest rates associated with the lease option will be presented during the meeting.

**II. RECOMMENDED ACTION / NEXT STEP:**

Staff is recommending to purchase or lease a new Front end loader and not spend additional public funds on repairing the existing 644-J-2 Front end loader.

**III. FISCAL IMPACTS:**

If a lease option is approved, the cost of those payments could be offset by reducing material costs (culverts) and no amendment to the budget would be required. Alternatively, the Board originally allocated \$19,934 to hire two temporary fulltime seasonal workers using ARPA funds to support the Public Works Department. Those positions have not been filled. Some ARPA funds could be used to offset a portion of the lease or purchase costs.

If the Board authorizes a purchase, staff would return with more specific suggestions as to where the estimated \$273,695.07 to \$297,628.82 would be reallocated from the 2022 approved budget. That direction would be reflected with a future budget amendment presented to the Board near the end of the year.

Alternatively, the lease option could be started this year and the full buyout purchase price could be budgeted in 2023, so no budget amendment would need to be made for 2022.

**V. LEGAL ISSUES:**

None.

**VI. CONFLICTS OR ENVIRONMENTAL ISSUES:**

None.

**VII. SUMMARY AND ALTERNATIVES:**

The equipment could be leased, purchased or the existing equipment could be repaired.

## Front End Wheel Loader Options

Make	Model	Purchase Cost	Value (Old 6441Z)	Net Purchase lowest price	Premium over
John Deere	644-X	\$ 346,878.82	\$ 49,250.00	\$ 297,628.82	\$ 23,933.75
John Deere	644-P	\$ 320,195.07	\$ 46,500.00	\$ 273,695.07	-
Caterpillar	950M	\$ 329,166.00	\$ 51,000.00	\$ 278,166.00	\$ 4,470.93

92%

## Estimated Cost of fuel for Wheel Loader Options

Make	Model	Fuel Type	Est Gallons of Fuel per hour	Avg Hours per year	Annual Gallons of fuel Used	Cost per Gallon of Diesel (2021 Average)		
						Cost per Gallon of Diesel (2021 Average)	Total Fuel Cost per Year	Fuel Cost Expense Difference
John Deere	644-X	Diesel/Hybrid	2.9	650	1885	2.45	\$ 4,618.25	\$ -
John Deere	644-P	Diesel	3.3	650	2145	2.45	\$ 5,255.25	\$ 637.00
Caterpillar	950M	Diesel	3.1	650	2015	2.45	\$ 4,936.75	\$ 318.50

Make	Model	Fuel Type	Est Gallons of Fuel per hour	Avg Hours per year	Annual Gallons of fuel Used	Cost per Gallon of Diesel (Current 4/28/22)		
						Cost per Gallon of Diesel (Current 4/28/22)	Total Fuel Cost per Year	Fuel Cost Expense Difference
John Deere	644-X	Diesel/Hybrid	2.9	650	1885	4.72	\$ 8,897.20	\$ -
John Deere	644-P	Diesel	3.3	650	2145	4.72	\$ 10,124.40	\$ 1,227.20
Caterpillar	950M	Diesel	3.1	650	2015	4.72	\$ 9,510.80	\$ 613.60

## Lease costs

Make	Model	Fuel Type	5 Year Lease Annual payments			Total capital cost
			Quarterly payment	Annual cost	1 Annual Payment	
John Deere	644-X	Diesel/Hybrid	\$ 10,665	\$ 42,658	\$ 41,679	\$ 208,395
John Deere*	644-P	Diesel	\$ 9,807	\$ 39,228	\$ 38,327	\$ 191,637
Caterpillar	950M	Diesel	\$ 16,003	\$ 64,014	\$ 64,014	\$ 320,070

Note: John Deere Rep did NOT quote lease costs for the 644-P. These are estimated at 92% of the cost of the 644-X. John Deere quotes are "turn in" lease. We would not own the equipment at the end of the lease. The residual is \$154,752.

## Expected Delivery Dates

Make	Model	Fuel Type	Expected Delivery Date
John Deere	644-X	Diesel/Hybrid	Late 2022 or early 2023
John Deere*	644-P	Diesel	Late 2022 or early 2023
Caterpillar	950M	Diesel	August 2022

# Front End Loader Quotes, 2022

In 2020 Public Works ordered a new CAT Model 950-M Loader for \$258,000 and refused delivery due to COVID. We rebuilt the engine that was failing in 2005, John DEERE 644-J Loader, this repair was \$30,000. Now our 2006 John DEERE 644-J-2 front end loader with 9,825 hours is failing. I am proposing the purchase of a new front end loader instead of putting that much money into that old of a machine. Here are the quotes from both John DEERE and CAT on replacing our front end loader. In 2021 the 644-J-2 loader consumed 1,173.88 gallons of fuel. With John DEERE's estimated cost savings of 4/10th of gallon per hour on the 644-X Hybrid would save the county 160 gallons average per year.

Model	Engine Type	Purchase Cost	Fuel Cost Savings	Trade in Value	Total Cost	Warrenty
JD-644-X	Tier 4 Hybrid	\$ 346,878.82	.4/h	\$ 49,250.00	\$ 297,928.82	6 Yrs / 6,000 Hours
JD-644-P	Tier 4	\$ 320,195.07	0/h	\$ 46,500.00	\$ 273,655.07	6 Yrs / 6,000 Hours
CAT 950-M	Tier 4	\$ 329,166.00	0/h	\$ 51,000.00	\$ 278,166.00	1 Yrs / Unlimited Hours

# Selling Equipment

**Quote Id:** 26133025

**Customer:** GILPIN COUNTY ROAD & BRIDGE DEPT

## JOHN DEERE 644 X WHEEL LOADER

**Hours:**
**Stock Number:**

Code	Description	Qty
6060DW	644 X WHEEL LOADER	1

### Standard Options - Per Unit

170K	JLink™	1
0924	John Deere PowerTech Engine	1
1010	Standard Wheel Loader	1
1140	Hybrid Electric Drive Transmission System	1
1217	140 amp Alternator	1
1310	Flat Black Curved Stack	1
1430	Engine Air Intake System with Centrifugal Precleaner	1
1520	Automatic Reversing Hydraulic Fan	1
1610	Standard Fuel Filter with Water Separator and Standard Fuel Fill	1
1910	Premium Cab	1
1940	7 inch Monitor	1
1970	Hydrau Hydraulic Fluid	1
2010	Standard Z-BAR	1
2120	Steering Wheel Only	1
2240	Premium Seat, Heated and Ventilated with Heavy Duty Air Suspension	1
2360	Joystick Controls	1
2510	Ride Control	1
2605	English Decals and Manuals	1
2715	15 Amp Converter	1
2870	No Payload Scale with Cycle Counter	1
3049	High Traction - Front & Rear Hydraulically Locking Differential Axles	1
3120	Manual Axle Differential Lock	1
4935	No Brand Preferred, 23.5R25 L3 Single Star Radial On 3pc. Rims	1
5320	Less Tire Pressure Monitoring System	1
5530	Standard Front Fenders	1
5610	Left Side Steps Only	1
5840	No Fork Frame	1
5940	No Tines	1
7140	Premium LED Work and Drive Lights	1

# Selling Equipment

**Quote Id:** 26404283

**Customer:** GILPIN COUNTY ROAD & BRIDGE DEPT

## 2022 JOHN DEERE 644 P WHEEL LOADER

**Hours:** 0  
**Stock Number:** 77977

Code	Description	Qty
6050DW	JOHN DEERE 644 P-TIER 4WD LOADER	1
<b>Standard Options - Per Unit</b>		
170K	JDLINK	1
0924	JD POWERTECH ENGINE	1
1010	STANDARD WHEEL LOADER	1
1120	5 SP TRANSMISSION W/ LOCK UP	1
1217	140 AMP ALTERNATOR	1
1310	FLAT BLACK CURVED STACK	1
1430	AIR INTAKE WITH PRECLEANER	1
1520	AUTOMATIC REVERSING HYD FAN	1
1610	FUEL TANK W STD FILTER	1
1910	PREMIUM CAB	1
1940	7 INCH DISPLAY MONITOR	1
1970	HYDRAU HYDRAULIC FLUID	1
2010	STANDARD Z-BAR	1
2120	STEERING WHEEL ONLY	1
2240	PREMIUM SEAT	1
2360	JOYSTICK CONTROLS	1
2402	TWO FUNCTION HYDRAULICS	1
2515	RIDE CONTROL	1
2605	ENGLISH DECALS & MANUALS	1
2715	15 AMP CONVERTER	1
2870	NO PAYLOAD SCALE W/ COUNTER	1
3049	AXLE,W/ HYD FRONT & REAR	1
3120	MANUAL DIFFERENTIAL LOCK	1
4935	23.5R25 L3 NBP RADIAL 3PC	1
5320	LESS TPMS SYSTEM	1
5530	STANDARD FRONT FENDERS	1
5610	LEFT SIDE STEPS ONLY	1
5840	NO FORK FRAME	1
5940	NO TINES	1
7140	PREMIUM LED LIGHT PACKAGE	1
8220	REAR HITCH & COUNTERWEIGHT	1
8240	REAR CAMERA ONLY	1
8275	LED STROBE BEACON W/ BRACKET	1



Quote 241130-01

April 7, 2022

**GILPIN COUNTY ROAD & BRIDGE**  
255 BRAECHER PARK RD  
BLACK HAWK, Colorado 80422 8803

Attention: John Combs

We would like to thank you for your interest in our company and our products, and are pleased to quote the following for your consideration.

Caterpillar Model: **One New 950M Wheel Loader**

We appreciate the opportunity to extend this quote. This quote is subject to availability and is valid for 30 days, after which time we reserve the right to re-quote. If there are any questions, please do not hesitate to contact me.

Regards,

Andy Kratt  
Sales Representative  
Wagner Equipment Co.



**OTHER STANDARD EQUIPMENT** -Engine idle management system and auto -idle shutdown  
-Filters: fuel, engine air, engine oil, -hydraulic oil, transmission -Hitch, drawbar -Kickout, lift & tilt,  
automatic -(adjustable) -

## **MACHINE SPECIFICATIONS**

950M WHEEL LOADER  
LANE 2 ORDER  
REGIONAL PKG, AM-N  
LINKAGE, STANDARD LIFT  
COUNTERWEIGHT, 1460 KG  
AIR INLET PRECLEANER, TURBINE  
AXLES, AUTO/AUTO, ED  
HYDRAULICS, 3V RC STD/LOG  
HYDRAULIC OIL, STANDARD  
STARTING, COLD (120V)  
LIGHTS, HALOGEN, PREMIUM  
WINDOWS, STANDARD  
STEERING SYST, STD, WHL  
LEVERS 3V, STEERING WHEEL  
SEAT BELT, 3"  
AUTO DIFF, STEERING WHEEL  
FILTRATION, STANDARD  
CAB TRIM, DELUXE (HMU)  
RADIO, ENTERTAINMENT READY  
PREMIUM CORP RADIO (12V)  
PRODUCT LINK, CELLULAR PLE641  
COOLING CORES, 9 FPI  
FAN, STANDARD  
ANTIFREEZE, -34C (-29F)  
TIRES, 23.5R25 MX XHA2 \* L3  
FENDERS, BASIC +  
HOOD, NON-METALLIC  
SOUND SUPPRESSION, STANDARD  
LUBRICATION, MANUAL, STD  
SERIALIZED TECHNICAL MEDIA KIT

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<b>TOTAL</b>	<b>\$312,846.00</b>
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**Options:**

7.00 CYD Light Material Rylind Wedge Lock style, bucket, 126" wide, add	\$15,720.00
7.00 CYD Light Material, Rylind Wedge Lock style, bucket. 132" wide, add	\$16,320.00
Total with 126" wide bucket	\$328,566.00
Total with 132" wide bucket	\$329,166.00
Trade of Deere 644J, Serial # JX604026	(\$51,000.00)
Balance to Finance 126" bucket	\$277,566.00
Balance to Finance 132 bucket	\$278,166.00
Guaranteed Buy back after 6 years, 7,500 hours	\$133,000.00

**WARRANTY & COVERAGE**

Standard Warranty:	12 Months Unlimited Hours, Parts and Labor (Travel Time included for the first 6 months)
Extended Coverage:	950-72 MO/7500 HR POWERTRAIN + HYDRAULICS

**F.O.B/TERMS:**

Gilpin County Shop

Gilpin 132

Compound Period: Monthly

Nominal Annual Rate: 5.440 %

## CASH FLOW DATA

Event	Date	Amount	Number	Period	End Date
1 Lease	04/07/2022	278,566.00	1		
2 Lease Payment	05/07/2022	4,543.35	72	Monthly	04/07/2028
3 Lease Payment	05/07/2028	1.00	1		

## AMORTIZATION SCHEDULE - Normal Amortization

	Date	Lease Payment	Interest	Principal	Balance
Lease	04/07/2022				278,566.00
1	05/07/2022	4,543.35	1,262.83	3,280.52	275,285.48
2	06/07/2022	4,543.35	1,247.96	3,295.39	271,990.09
3	07/07/2022	4,543.35	1,233.02	3,310.33	268,679.76
4	08/07/2022	4,543.35	1,218.01	3,325.34	265,354.42
5	09/07/2022	4,543.35	1,202.94	3,340.41	262,014.01
6	10/07/2022	4,543.35	1,187.80	3,355.55	258,658.46
7	11/07/2022	4,543.35	1,172.59	3,370.76	255,287.70
8	12/07/2022	4,543.35	1,157.30	3,386.05	251,901.65
2022 Totals		36,346.80	9,682.45	26,664.35	
9	01/07/2023	4,543.35	1,141.95	3,401.40	248,500.25

10	02/07/2023	4,543.35	1,126.53	3,416.82	245,083.43
11	03/07/2023	4,543.35	1,111.04	3,432.31	241,651.12
12	04/07/2023	4,543.35	1,095.49	3,447.86	238,203.26
13	05/07/2023	4,543.35	1,079.85	3,463.50	234,739.76
14	06/07/2023	4,543.35	1,064.15	3,479.20	231,260.56
15	07/07/2023	4,543.35	1,048.38	3,494.97	227,765.59
16	08/07/2023	4,543.35	1,032.54	3,510.81	224,254.78
17	09/07/2023	4,543.35	1,016.62	3,526.73	220,728.05
18	10/07/2023	4,543.35	1,000.63	3,542.72	217,185.33
19	11/07/2023	4,543.35	984.57	3,558.78	213,626.55
20	12/07/2023	4,543.35	968.44	3,574.91	210,051.64
2023 Totals		54,520.20	12,670.19	41,850.01	
21	01/07/2024	4,543.35	952.23	3,591.12	206,460.52
22	02/07/2024	4,543.35	935.95	3,607.40	202,853.12
23	03/07/2024	4,543.35	919.60	3,623.75	199,229.37
24	04/07/2024	4,543.35	903.17	3,640.18	195,589.19
25	05/07/2024	4,543.35	886.67	3,656.68	191,932.51
26	06/07/2024	4,543.35	870.09	3,673.26	188,259.25
27	07/07/2024	4,543.35	853.44	3,689.91	184,569.34
28	08/07/2024	4,543.35	836.71	3,706.64	180,862.70
29	09/07/2024	4,543.35	819.91	3,723.44	177,139.26
30	10/07/2024	4,543.35	803.03	3,740.32	173,398.94
31	11/07/2024	4,543.35	786.08	3,757.27	169,641.67
32	12/07/2024	4,543.35	769.04	3,774.31	165,867.36
2024 Totals		54,520.20	10,335.92	44,184.28	
33	01/07/2025	4,543.35	751.93	3,791.42	162,075.94
34	02/07/2025	4,543.35	734.74	3,808.61	158,267.33
35	03/07/2025	4,543.35	717.48	3,825.87	154,441.46

36	04/07/2025	4,543.35	700.13	3,843.22	150,598.24
37	05/07/2025	4,543.35	682.71	3,860.64	146,737.60
38	06/07/2025	4,543.35	665.21	3,878.14	142,859.46
39	07/07/2025	4,543.35	647.63	3,895.72	138,963.74
40	08/07/2025	4,543.35	629.97	3,913.38	135,050.36
41	09/07/2025	4,543.35	612.23	3,931.12	131,119.24
42	10/07/2025	4,543.35	594.41	3,948.94	127,170.30
43	11/07/2025	4,543.35	576.51	3,966.84	123,203.46
44	12/07/2025	4,543.35	558.52	3,984.83	119,218.63
2025 Totals		54,520.20	7,871.47	46,648.73	
45	01/07/2026	4,543.35	540.46	4,002.89	115,215.74
46	02/07/2026	4,543.35	522.31	4,021.04	111,194.70
47	03/07/2026	4,543.35	504.08	4,039.27	107,155.43
48	04/07/2026	4,543.35	485.77	4,057.58	103,097.85
49	05/07/2026	4,543.35	467.38	4,075.97	99,021.88
50	06/07/2026	4,543.35	448.90	4,094.45	94,927.43
51	07/07/2026	4,543.35	430.34	4,113.01	90,814.42
52	08/07/2026	4,543.35	411.69	4,131.66	86,682.76
53	09/07/2026	4,543.35	392.96	4,150.39	82,532.37
54	10/07/2026	4,543.35	374.15	4,169.20	78,363.17
55	11/07/2026	4,543.35	355.25	4,188.10	74,175.07
56	12/07/2026	4,543.35	336.26	4,207.09	69,967.98
2026 Totals		54,520.20	5,269.55	49,250.65	
57	01/07/2027	4,543.35	317.19	4,226.16	65,741.82
58	02/07/2027	4,543.35	298.03	4,245.32	61,496.50
59	03/07/2027	4,543.35	278.78	4,264.57	57,231.93
60	04/07/2027	4,543.35	259.45	4,283.90	52,948.03
61	05/07/2027	4,543.35	240.03	4,303.32	48,644.71

62	06/07/2027	4,543.35	220.52	4,322.83	44,321.88
63	07/07/2027	4,543.35	200.93	4,342.42	39,979.46
64	08/07/2027	4,543.35	181.24	4,362.11	35,617.35
65	09/07/2027	4,543.35	161.47	4,381.88	31,235.47
66	10/07/2027	4,543.35	141.60	4,401.75	26,833.72
67	11/07/2027	4,543.35	121.65	4,421.70	22,412.02
68	12/07/2027	4,543.35	101.60	4,441.75	17,970.27
2027 Totals		54,520.20	2,522.49	51,997.71	
69	01/07/2028	4,543.35	81.47	4,461.88	13,508.39
70	02/07/2028	4,543.35	61.24	4,482.11	9,026.28
71	03/07/2028	4,543.35	40.92	4,502.43	4,523.85
72	04/07/2028	4,543.35	20.51	4,522.84	1.01
73	05/07/2028	1.00	0.01-	1.01	0.00
2028 Totals		18,174.40	204.13	17,970.27	
Grand Totals		327,122.20	48,556.20	278,566.00	

Last interest amount decreased by 0.01 due to rounding.