

2013 CONTRACTOR'S CHOICE AWARD WINNERS



Each year, the Contractor's Choice Awards honor manufacturers for the products they put out on the jobsite. In 2013, 121 different products were recognized in 41 categories. The program works as follows: Manufacturers submit product updates and a ballot is delivered to ROADS & BRIDGES' contractor readership. The top vote-getters receive gold, silver and bronze awards.

Featured Gold-Medal Winners

26 Bridge Pavers/Finishers	32 Concrete Pavers	38 Compaction (Asphalt)
29 Motor Graders	34 Concrete Curb & Gutter	39 Software
30 Asphalt Milling Machines	36 Skid-Steer Loaders	

AERIAL WORK PLATFORMS

GOLD	JLG 1500SJ
SILVER	Skyjack SJ 45T
SILVER	Genie GS-4069 RT scissor lift

ASPHALT MILLING MACHINES

GOLD	Wirtgen W 210
SILVER	Roadtec RX-900
BRONZE	Cat PM200

ASPHALT PAVERS

GOLD	Cat AP1055E
SILVER	Roadtec RP-195
BRONZE	Terex CR662

ASPHALT PAVERS (SMALL)

GOLD	Cat AP555E
SILVER	VT LeeBoy 8500
BRONZE	Vögele Super 700

ASPHALT PLANTS

GOLD	Astec Six Pack
SILVER	Gencor Ultraplant 400
BRONZE	Asphalt Drum Mixers Milemaker Series

ASPHALT SCREEDS

GOLD	Cat AS3301C Extend-A-Mat
SILVER	Terex Stretch Screed 20
BRONZE	Carlson Easy Screed IV

BRIDGE PAVERS/ FINISHERS

GOLD	Terex Bid-Well 4800
SILVER	GOMACO C-450

COMPACTION (ASPHALT)

GOLD	Cat CB64
SILVER	Bomag BW 284 AD
BRONZE	Dynapac CC 624

COMPACTION (PLATE)

GOLD	Bomag Economizer
SILVER	Bobcat PCF64

COMPACTION (SOIL)

GOLD	Cat CS56
SILVER	Bomag BW 211 D-40
BRONZE	Hamm 3412

COMPRESSORS

GOLD	Atlas Copco XAS Series
SILVER	Doosan P185
BRONZE	EDCO PAC-8

CONCRETE BREAKERS

GOLD	Cat H90C
SILVER	Atlas Copco HB2200
BRONZE	Bobcat HB980

CONCRETE CURB & GUTTER

GOLD	GOMACO Commander III
SILVER	Power Curber 5700-C
BRONZE	VT LeeBoy LBC-24W

CONCRETE MIXER TRUCKS

GOLD	McNeilus Bridgmaster Mixer
SILVER	Terex FD4000

CONCRETE PAVERS

GOLD	GOMACO Commander III
SILVER	Guntert & Zimmerman S600
BRONZE	Wirtgen SP 25

CONCRETE SAWS

GOLD	Husqvarna FS 8400 D
SILVER	Multiquip SP706036/ Street PRO Road Saw
BRONZE	MK Diamond MK-4030

CRUSHING PLANTS

GOLD	Eagle Crusher Portable UltraMax 1400-45
SILVER	Terex Pegson 1165 HR
BRONZE	Metso Minerals Lokotrack

DOZERS

GOLD	Cat D6T Track-Type Tractor
SILVER	John Deere 700J
BRONZE	Komatsu D65-17

EXCAVATORS

GOLD	Cat 320D L
SILVER	Komatsu PC300
BRONZE	John Deere 200D LC

GENERATORS

GOLD	Multiquip MLTSDW7
SILVER	Atlas Copco QAS 20-600
BRONZE	Miller Electric Trailblazer 325

GPS/LASER-GUIDED EQUIPMENT

GOLD	Topcon 3-D GPS+ Machine Control
SILVER	Cat Grade Control
BRONZE	Trimble 3-D Grade and Compaction Control Systems

LOADER BACKHOES

GOLD	Cat 420E
SILVER	John Deere 310SJ TC
BRONZE	Case 580 Super N WT

MINI EXCAVATORS

GOLD	Cat 300.9D
SILVER	Bobcat E45
BRONZE	Case CX55B

MOTOR GRADERS

GOLD	Cat 12M2 AWD
SILVER	John Deere 872G/GP
BRONZE	Volvo G930B

PAVEMENT MARKING

GOLD	EZ-Liner Model 1300 Paint Striper
SILVER	Graco RoadLazer
BRONZE	Thermomark II Featherlite Double Drop

PAVEMENT-MARKING REMOVAL

GOLD	Stripe Hog SH8000
SILVER	NLB StarJet-Plus
SILVER	EDCO CPM8

RECYCLERS/ RECLAIMING MACHINES/ SOIL STABILIZERS

GOLD	Cat RM500
SILVER	Wirtgen WR 2500 S
BRONZE	Roadtec SX-5

ROAD PATCHING

GOLD	Crafco EZ Series II 1500 Melter Applicator
SILVER	DuraMaxx by Cimline
SILVER	Patch Management Pothole Killer PK 2000

SKID-STEER LOADERS

GOLD	Bobcat S650
SILVER	Cat 259B3
BRONZE	John Deere 318D

SOFTWARE (ACCOUNTING)

GOLD	Viewpoint Construction Accounting Software
SILVER	Computer Guidance Corp. eCMS Enterprise Resource Planning
BRONZE	Sage Master Builder

SOFTWARE (BIDDING)

GOLD	HCSS HeavyBid & Bidding
SILVER	Bid2Win Estimating & Bidding
BRONZE	Maxwell Systems ProContractorMX for Earthwork

SOFTWARE (FLEET MANAGEMENT)

GOLD	Cat ProductLink and VisionLink
SILVER	The Dispatcher from HCSS
BRONZE	Dexter + Chaney Spectrum Construction Software
BRONZE	John Deere JDLink Select

SOFTWARE (PROJECT MANAGEMENT)

GOLD	HeavyJob from HCSS
SILVER	Sage Timberline Office
SILVER	Viewpoint V6 Software's Project Management

SPECIALTY EXCAVATORS

GOLD	Cat 328D LCR
SILVER	Gradall XL 4100 IV
BRONZE	Liebherr R 954 C Litronic Demolition

STREET SWEEPERS

GOLD	Elgin Eagle
SILVER	TYMCO 600
BRONZE	Sweepster CS

TELEHANDLERS

GOLD	Cat TH514
SILVER	JLG SkyTrak 10054
BRONZE	Gehl RS10-55

TRUCKS (OFF-HIGHWAY)

GOLD	Cat 775G
SILVER	Volvo A40F FS
BRONZE	John Deere 250D

TRUCKS (ON-HIGHWAY)

GOLD	Peterbilt 335
SILVER	Mack Granite Medium Heavy Duty
BRONZE	Cat CT660

WHEEL LOADERS

GOLD	Cat 930H
SILVER	John Deere 744K
BRONZE	Volvo L90G

WORK-ZONE SAFETY (ATTENUATORS)

GOLD	Energy Absorption's SST Truck-Mounted Attenuator
SILVER	Trinity Highway Products MPS-350 Truck-Mounted Attenuator
BRONZE	Traffix Devices Scorpion Trailer Attenuator

WORK-ZONE SAFETY (LIGHTS)

GOLD	Genie TML-4000 Light Tower
SILVER	Multiquip GloBug Lighting Systems
SILVER	Terex AL 4L LED Light Tower

Change in scenery

Crews upgrade Creek Turnpike in Oklahoma

It's a scene that plays out in virtually every major metropolitan market in the U.S.

Growth and development along highways and roadways lead to increased traffic and congestion. Roads that were relatively free-flowing with a Level of Service (LOS) A or B rating (as defined by the Highway Capacity Manual published by the Transportation Research Board) just a decade or two ago are now facing the congestion and stop-and-go traffic of D-, E- and F-rated roads. Scarce state construction dollars and an under-funded federal road bill delay much-needed reconstruction and expansion of roads required to reduce congestion.

The Oklahoma Turnpike Authority (OTA) is taking a proactive approach to boost the capacity of the Creek Turnpike by 50% to ensure commuters using the highway to skirt Tulsa do not experience the congestion and gridlock associated with these lower-rated E and F roads.

"The existing four-lane highway," said Jack Damrill, Turnpike spokesman, "was designed to handle 60,000 vehicles per day, and current annual average daily traffic numbers are approaching 58,000 vehicles per day."

"Last fall, we had 27 bridge projects under construction at one time."

The OTA contracted with Sherwood Construction of Catoosa, Okla., to upgrade and expand an 8-mile stretch of the toll road. The nearly \$59 million project addresses congestion along nearly 25% of the Turnpike stemming from Memorial Drive to U. S. Highway 75 by expanding the roadway from two lanes to three lanes in both directions.

"This section of the Creek Turnpike sees the most amount of traffic, and expansion will bring the road LOS to a low B to high C rating," said Damrill.

The 504-day project required the widening of 10 bridges along this section of the Turnpike.

"It boiled down to 20 bridges if you consider that each bridge has an eastbound and westbound component," said Claude Ward, bridge superintendent for Sherwood Construction. For bridge-deck paving, Sherwood enlisted the help of three Terex Bid-Well 4800 pavers.

Close quarters

The Creek Turnpike originally opened to traffic in 1992 with extensions eastward and westward developed over the next decade. Development along the toll road over the past 20 years has increased the Turnpike's traffic, lowered its LOS rating and made it in need of expansion. Fortunately, the roadway was built with expansion in mind.

"Before widening the bridges, there was approximately 40 ft in between each eastbound and westbound bridge," said Ward.

The plans called for the bridges to be widened to the inside, closing the gap in between each bridge. According to Ward, each bridge width increased by 20 ft. After expansion, the space in between the eastbound and westbound bridge lanes shrank to just 2 in. A parapet wall on either side of the eastbound and westbound lanes separates the widened bridges.

Concurrent with the bridge work, different crews from Sherwood handled the earthwork and grading for the road-lane expansion in between each bridge. Still, other Sherwood crews used slipform pavers to pave the concrete road leading up to the bridges.

"Sherwood has people for every stage of construction," commented Ward.

Sherwood was founded in the latter days of the Depression, in 1934, as a heavy grading company. Today it is best known for its dirt-work projects. However, more recently the company has expanded its focus to include concrete work



throughout a market that expands from Texas and Arkansas to Oklahoma and Kansas. It has built a solid reputation for bridge construction and paving as well.

"Last fall, we had 27 bridge projects under construction at one time," said Ward.

The close quarters and bridge-construction plans on the Creek Turnpike would prove to be a test for Sherwood. The company would have to rely on its crew members' expertise and flexible paving equipment to turn even the toughest challenge into the seemingly mundane.

The high side

The roughly 2 miles of bridgework threw a number of paving challenges at Sherwood, including superelevated sections and skewed decks. Curves on the roads adjacent to the start of the bridges led to superelevations that put the eastbound traffic bridges higher than the westbound and vice versa, depending on



the direction of the curve.

“Think about it as two banked race-tracks going around the same curve but with cars going in the opposite direction,” explained Larry Eben, district manager for Terex Bid-Well. “One side is going to be higher than the other.”

These superelevations resulted in a bridge deck being as much as 2 ft higher than the adjacent lane of the opposite-direction bridge where the two bridges came in close contact. Crews had to make sure the three 4800 pavers on the project could be properly adjusted to handle finish paving of the bridge deck where the bridge lanes were joined.

Making this all the more difficult, the paver frame had to clear rebar installed for the barrier walls that would separate the lanes of traffic.

“A 42-in.-high parapet wall separates the eastbound and westbound traffic on the bridges,” said David Murdock, director of engineering for the OTA.

For the bridges traversing the Arkansas River, Coal Creek and Vinsel Creek, constructed with superelevations, Sherwood’s paving crew poured the high-side bridge deck first. For the 2,400-ft-long Arkansas River Bridge, this meant paving the westbound lane expansion first.

Work crews paved 600-ft deck sections one at a time and left one week in between each pour for concrete curing, which resulted in a two-month completion time.

“We could not pour the high side and low side simultaneously, so we would have to pour a section and wait for it to fully cure, so we could get equipment onto the new deck to pave the next section,” said Ward.

Each 4800 paver was set to a 20 ft width for bridge paving. The paver offers a maximum standard width of 120 ft and offers standard minimum and maximum paving widths of 12 ft and 116 ft, respectively. The paver can be constructed to reach widths beyond 120 ft.

Bridge Pavers/Finishers

Terex Bid-Well

4800

“We can extend our 4800 pavers to 130 ft wide without adding truss segments,” explained Ward. Truss-extension inserts, available in a variety of widths ranging from 2 to 18 ft long, allow the paver to meet virtually any paving width.

According to Ward, approximately half of the bridges also were built at varying degrees of skew angle. Crews could have equipped the 4800 paver with a skew bar kit and set it to pave with the skew angle.

“The skew bar kit allows the paving carriage to be offset, so it hits the same crown points from the machine’s front to rear,” said Eben.

However, Ward preferred to keep the three pavers square, since crews were often moving each paver from bridge to

bridge. Cool weather allowed crews to pour the concrete ahead of the paver in order to take deflection out of the deck beams without the fear of the concrete setting up too early.

Adaptable paver

Paving the lower, opposite-direction bridge decks in the superelevations is where the flexibility of the paver really helped to save Sherwood time and money. In order to achieve proper grade and a smooth riding surface, crews set the paver's legs on the existing lane of the lower deck, while the opposite legs traveled along a rail set on the recently expanded higher deck.

The paver's frame had to straddle and clear the steel for the parapet walls that separated the eastbound from the westbound lanes.

"Everything we needed to adapt the paver to this job was already built into the machine," said Ward.

Depending on the degree of

superelevation, the lane of the high-side bridge deck ranged from 6 in. to as much as 2 ft higher than the bridge deck that was being paved.

"Leg height on the 4800 can be adjusted up to 48 in. with the screw-adjustment mechanism designed for this type of application," said Eben.

Ward added, "We can hydraulically raise and lower the legs from the operator's platform," which made it easy for the operator to adjust leg positioning as the paver transitioned out of the superelevation. Should Sherwood's crews ever need additional leg adjustment beyond the 48 in., they can reposition the leg at the leg plate, where it clamps to the frame, for an additional 16 in. of adjustment.

With legs in position and the frame clearing the steel of the divider walls, crews had one final adjustment to make prior to paving: the height of the paving carriage. The 4800's paving carriage consists of dual adjustable strike-off augers

with double flighting to efficiently meter the concrete and two, 5-ft-long paving rollers. In between, the patented Terex Bid-Well Rota-Vibe system reconsolidates the top 2.5 in. of concrete. Adjustable finish pans are available with either burlap drag or astro-grass to finish the concrete with the desired texture.

The requirement of elevating the frame to clear the wall meant the paving carriage had to be lowered from its standard operating position.

With the adjustments made for the paver and carriage height, crews poured the class AA, 4,000-psi concrete in front of the 4800 paver, 300 cu yd at a time. In part due to the paver's quick adaptation to the challenging paving conditions along the Creek Turnpike, Sherwood will be able to complete the bridge work ahead of schedule, according to Ward. This will allow commuters on this section of the Creek Turnpike to, once again, drive with the relatively congestion-free experience of a LOS B to C roadway. **R&B**



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Haul roads lead from Rome

Ga. contractor fights rough weather, terrain to build new bypass



Motor Graders
Caterpillar
12M2

Floyd County in northwest Georgia features a little bit of everything the state has to offer: rocky hills, murky swamps and green forests.

While scenic, this variation can make life difficult for construction crews, as Atlanta-based contractor C.W. Matthews is finding out during its portion of the West Rome Bypass project.

C.W. Matthews' leg of the larger bypass—which will ultimately connect U.S. 27 and S.R. 20—covers 4.5 miles through that fluctuating terrain. Building a new road and 10 bridges through this area means moving 2.3 million cu yd of material, some of which has to be hauled from the site. Since the bypass

C.W. Matthews' leg of the larger bypass covers 4.5 miles through fluctuating terrain.

itself is brand new and not a rebuild, this meant building brand new haul roads as well.

And if the terrain itself wasn't enough of a problem, the winter of 2012 was a particularly wet one for Georgia. It's not an uncommon phenomenon, but the previous few winters had been relatively dry, so the C.W. Matthews crew was in for a bit of a shock.

"With the large amount of material we're moving—using up to eight off-road trucks at a time—those haul roads are a priority; keeping them clean, keeping the grass off of them and keeping them graded so the trucks can move efficiently," Kevin Eubanks, roadway division manager for C.W. Matthews, told *ROADS & BRIDGES*.

To help keep those haul roads clean and smooth, C.W. Matthews employed a pair of Caterpillar motor graders: the 12H, and the brand-new 12M2. Once it stopped raining, they would let the road

dry for a day or so and then send in the motor grader. "Within a day, they'd have the roads back in shape and they could get back to hauling," he said.

The 12 Series had been the go-to for motor graders throughout Eubanks' tenure and beyond; he saw no reason to change now, pointing to their ability to tackle any job, big or small. The 12M2 revitalizes the series by introducing dual-joystick controls, putting everything immediately in the operator's reach. Eubanks noted that this alone was enough to win over his crew.

"They seemed a little apprehensive at first, especially some of the older guys that have been around a long time. But once they've been on them for a day or two, they love them," he said. "They're not having to take their hands off the wheel to 'play the pianos' all across the column; they can keep their hands on the joystick." They also liked the improved visibility from the cab. **R&B**

Working at home

San Francisco contractor versatile with milling

The versatile W 210 from Wirtgen America Inc. is as much at home doing urban milling in congested San Francisco, as it is doing utility cuts for suburban gas-line repairs, a San Francisco Bay-area contractor has found.

Last December, ABSL Construction, Hayward, Calif., was using two of its W 210s to undertake maintenance milling in the streets of San Francisco and utility cuts south of the city as natural-gas pipelines are upgraded in the area.

"In San Francisco we are using the W 210 to do a 2-in. grind full-width [6 ft 7 in.]," said ABSL's Quinto Allende. "And near Stanford University we are removing 9 in. of asphalt cold mix, basically digging out a 9-ft-wide trench for utility repair."

ABSL is a long-time user of Wirtgen cold mills. The firm currently has a wide array of more than 20 cold mills, and the contractor has benefited from the technological improvements the W 210 has over its predecessor, the W 2100.

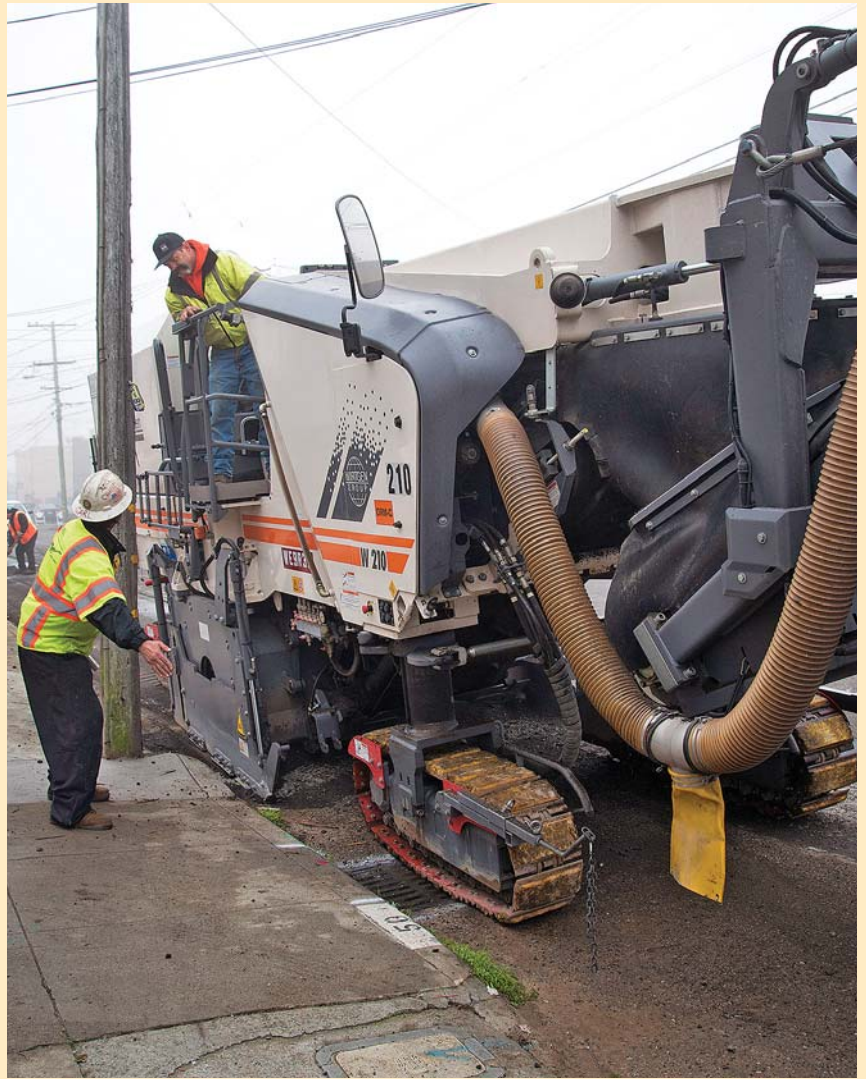
ABSL's W 210s have a unique fuel-saving drive concept utilizing two diesel engines, generating a total of 671 hp with both engines engaged. Its CE operating weight is 62,126 lb.

"Near Stanford

University we are removing 9 in. of asphalt cold mix, digging out a 9-ft-wide trench for utility repair."

"The W 210 has two engines, so it has a lot more power," Allende said. "It won't overheat and can work hour after hour with no problems."

In late 2012 the W 210 was updated by the Tier IV-interim-compliant W 210i, with very similar specifications. Their Parallel-to-Surface (PTS) technology automatically keeps the cutter housing level as the W 210 or W 210i move into a cut, accelerating production.



"Once you finish a cut, you turn off automatic, pushing one button, and the machine just lifts up out of the cut all by itself," Allende said. "It's one less thing for the operator to think about."

Asphalt and concrete milling is one of the most abrasive environments for any machine, but the new Vacuum Cutting System (VCS) option will remove dust, fines and smoke from the cutter chamber and extract it out the conveyor, keeping the machine cleaner and prolonging component life.

"The VCS works well," Allende said. "There are jobs where they really want

Asphalt Milling Machines

Wirtgen
W 210

to minimize dust, such as when we work at San Francisco International Airport. They want to keep dust down for visibility but don't want us to use a lot of water, as they want to pave the cut back on the same shift. The vac system picks up a lot of that fine material and is an ideal system to use on a job like that." **R&B**

Unique situations

Utah CORE project filled with challenges

Provo River Constructors had eight GOMACO pavers at work on the I-15 Corridor Expansion Project (I-15 CORE) in the state of Utah.

Four of those pavers were four-track Commander IIIs, each slipforming its own unique application. One of the four Commander IIIs was equipped with the GOMACO V2 mold.

The Commander III with V2 mold was at work paving a variety of applications at different widths. Some of the changes were made on the go on ramp transitions, while others were hydraulic-width changes before the pours began. It paved 8- to 14-ft-wide shoulders and also variable-width ramps making on-the-go width changes from 10 to 13 ft. They also left the V2 mold mounted under the paver and attached a 13-ft sidemounted, zero-clearance mold to the Commander III.

“Right out of the gate, we were hitting good numbers and getting good rides.”

“It has been quite the asset to this whole project,” Gaylen Gough, Provo River Constructor’s paving superintendent for the GOMACO Commander III with V2 mold, said. “It sure helps out being able to make that slide on the go and being able to change the dimensions of your pour as you need. The Commander III has a little bit of everything to add to the more difficult areas, all the way up to slipping a typical lane.”

The V2 mold includes a spreader plow to control the head of concrete in front of the mold. The plow has both horizontal and vertical movement and can be operated manually or set on automatic for maximum concrete control.

“I like the plow on the [concrete paver] and it has really filled a spot here



for us,” Gough said. “We’re doing a lot of paving with a 2% or more slope. The plow helps us keep the material where it needs to be. The Commander III is very capable of doing just about anything that needs to be done, and we’re proving that on this project.”

No stringline was set on the project. Instead, all of the pavers were controlled with Leica 3-D guidance systems.

“Right out of the gate, we were hitting good numbers and getting good rides with this stringless system,” Gough said.

Concrete Pavers
GOMACO
Commander III

“It also eliminates all of the headaches about truck access, tripping over the line, finishers having to worry about the line with their handles, and access is not as big of an issue by going stringless. I’ve been really impressed, and now I can’t imagine working without it.” **R&B**

Strong at Whiskey

Curb-and-gutter work goes seamlessly

Work is progressing at the new Fred Couples-designed Whiskey Jack golf course and subdivision in Sparwood, British Columbia, Canada.

Bears paw Contracting Inc., from Elkford, was busy hand-pouring foundations and driveways when one of the project developers approached Leonard Gostick, president of Bears paw, and asked him if he knew of anyone who could slipform the 3.4 miles of curb and gutter and monolithic sidewalk and curb and gutter on the project.

"I jokingly told him I had done it before as a laborer and he dared me to go and buy a machine and he'd give us the contract," Gostick said. "So, we did."

The rollover-style curb and gutter at Whiskey Jack has a 19.7-in.-wide base and the curb is 9.25 in. tall.

The company turned to established slipform contractors, their local equipment distributor and the Internet for advice to help them find the right machine for their needs. Bears paw's choice was the GOMACO three-track Commander III. It has the size and versatility to handle multiple slipform applications, but yet isn't too big to operate in tight working conditions.

The rollover-style curb and gutter at Whiskey Jack has a 19.7-in.-wide base and the curb is 9.25 in. tall. The monolithic sidewalk with curb-and-gutter features the same style of curb, with a 5-ft-wide and 5-in.-thick sidewalk.

The Commander III is used to pretrim the rocky base material for both applications. Then, when concrete is ordered, it simultaneously trims and pours. Production is dependent on concrete delivery, and in Sparwood and



the surrounding area, the mines have priority for concrete orders. It's a frustration for Bears paw.

"Every time we try to book in a large pour, the mines will call right in the middle of it and there goes our concrete supply," Gostick explained.

Bears paw started slipforming on the project last fall, but winter caught them before they could complete all of the work. This spring, they are finishing the last of it and then will start on another 4

Concrete Curb and Gutter
GOMACO
Commander III

miles of both applications for phase two of the development project. They also are looking to expand into the concrete-safety-barrier market with their Commander III as the slipforming portion of their business grows. **R&B**



Moving camp ground

Paving company has fleet of needed tool

As general superintendent for Norris Asphalt Paving Co., based in Ottumwa, Iowa, manager Phil See is responsible for making equipment decisions on the paving playing field that have game-changing implications.

Three years ago—just before the start of the 2010 paving season—after Norris Asphalt Paving had taken possession of six new Bobcat S650 skid-steer loaders, it was obvious that See was looking forward to the paving season ahead.

When See goes on an equipment-recruiting trip, there are several attributes he looks for in a potential new addition to his fleet. Among them are arm extension and vertical reach—features that

“I can remember years back we didn’t have loaders; we did it the old-fashioned way—by hand.”

have become more important as truck bed-height measurements have increased.

“As the years went by, it seemed like newer dump trucks got bigger; especially the sides got higher,” See said. “The Bobcat M-Series S650 skid-steer loaders have the reach to get up over the truck box; plus they have the power. But more importantly, they accomplish this without wavering. The S650 can raise and empty a full, heavy load easily at those heights and remain in firm, stable contact with the ground. That gives our operators confidence they are running equipment that is safe. Aside from everything else—production included—safety is what’s most important.”

With a vertical lift height (hinge to pin) of 8 ft, the S650 provides greater forward reach at full lift height than other comparable skid-steer loaders. And See also appreciates the powerful hydraulics, top digging and pushing power, and increased fuel capacity of his S650 skid-steer loader team players.

Skid-Steer Loaders

Bobcat
S650

Currently, See has set up a remote paving camp—complete with a dedicated team of paving veterans and an arsenal of resurfacing reinforcements including a Bobcat S650 skid-steer loader—on a closed road overlay job in northern Iowa, one of many sites his crew will visit during this long paving season.

As See explained, in addition to the S650 skid-steer loader being an all-around, all-purpose handy machine, it’s also a labor saver.

“I wouldn’t dispatch a crew to a jobsite without a skid-steer loader,” he said. “I can remember years back we didn’t have loaders; we did it the old fashioned way—by hand. When we first got one, it seemed like a luxury. It isn’t so much a luxury anymore, but a necessary tool. And skid-steer loaders are so adaptable. You never know for sure what any crew may be doing from day to day, so versatility is important; something that is even more impactful with all the attachments available.” **R&B**



Shaking the frost off

Early spring start no problem for Utah job

A tight timeframe was among the many challenges recently at Salt Lake City International Airport.

Granite Construction crews recently milled and resurfaced portions of the airport. Specifically, the project called for profile milling and resurfacing of the middle runway and all the taxiways. Crews removed 4 in. of asphalt during milling and replaced it in two 2-in. lifts. During the job, 80,000 tons were placed.

Specified tolerances were 2/100 of a foot, and the crews consistently hit or exceeded that goal.

It's the job of Kyle Smith, project manager at Granite, to make sure the more

"We paved on some pretty cold days. We had to get started."

demanding specification targets were achieved—and the penalties avoided.

The targets, of course, include meeting deadlines. That meant Granite crews had to be productive, despite the cold spring.

"We paved on some pretty cold days," said Smith. "We had to get started."

Starting early meant a better chance of finishing the job on schedule. But the cold weather could have put other specifications, particularly density and smoothness tolerances, in jeopardy.

It didn't, in part because of Granite's compaction efforts. The company used an echelon-paving process, which meant six asphalt compactors were used—three behind each echelon paver. Five of the six rollers used were Cat CB64s.

The CB64 features a five-amplitude vibratory system and provides the necessary punch on projects that require a heavy hitter. The Versa Vibe Vibratory system creates a "2-in-1" roller, for thick

Compaction (Asphalt)

Caterpillar
CB64

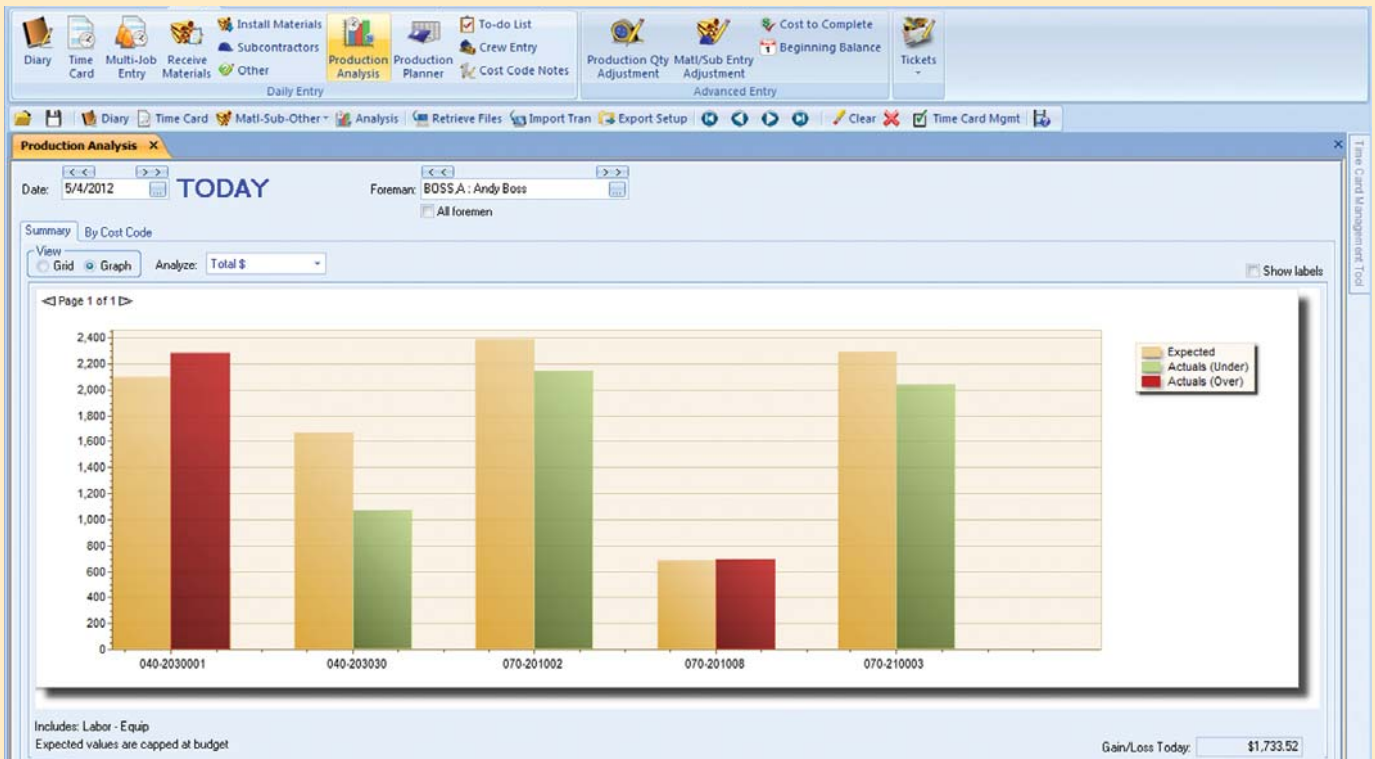
or thin lifts, and offers four amplitudes and two frequencies. The dual amplitude/dual frequency feature automatically matches amplitude and frequency, while the 50-50 weight distribution ensures consistent compaction coverage.

Granite crews took advantage of the multiple amplitude settings. "We set the amplitude at 3 for most of the project," Smith said. "When conditions were tough we would set it at 4 to help with any issues we had."

The amplitudes were adjusted based on results generated from test strips. "We adjusted the control settings and varied the rolling patterns," Smith said.

The compaction efforts paid off.

"The rollers were able to hit hard enough to deliver the compaction efforts we needed, even in those colder conditions," Smith said. "We never had incentive/disincentive problems with the rollers." **R&B**



The difference of a day

Builder sees daily update on operations

Sundt Construction, headquartered in Tempe, Ariz., is one of the nation's oldest and largest construction companies.

For 120-plus years, the company has built many landmark projects including the town of Los Alamos, N.M., where the first atomic bomb was built, and relocated the London Bridge to Lake Havasu, Ariz. Today, the company works across the U.S. in markets including civil, transportation, mining, industrial, power, water treatment and commercial building.

Sundt is consistently recognized as a top contractor with a commitment to staying on the cutting edge of new technologies. For example, Sundt's Civil Group uses HeavyBid estimating software

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from HCSS to work efficiently and maintain profits. Annually, Sundt bids billions of dollars of work throughout the lower 48 states, Hawaii and Guam.

"HeavyBid is flexible, allowing us to bid both lump-sum and unit-price projects for over 50 different owners per year," said Mike James, a preconstruction manager for heavy/civil at Sundt. "HeavyBid has given us the flexibility to utilize a centralized Arizona estimating staff that can seamlessly deal with labor rates that fluctuate over \$40/hour between regions. In addition to labor costs, a dynamic equipment library that can be adjusted for widely fluctuating operating rates (i.e., fuel, maintenance) is instrumental to our success."

In 2012, Sundt began piloting HeavyJob, the job-management software from HCSS, to manage its new construction projects. The company liked it so much it is now rolling out HeavyJob across many of its market segments and testing the new iPad mobile applications in its

subsidiary, Foley Masonry and Tile.

"The best thing about [the software] is knowing where we stand every day on our projects," said Scott Miller, a project engineer at Sundt. "In the past, we wouldn't have current cost information until we had the accounting reports, but this was sometimes too late to make necessary changes. Now we have instant feedback, so we can make changes and stay profitable."

James added, "The knowledge captured by HeavyJob improves our cost estimates and ultimately increases our competitiveness in numerous markets."

"We've enjoyed working with HCSS on the HeavyJob implementation. Our companies have similar cultures where both are employee-owned and are working to stay on the cutting edge of technology so we can provide high levels of service to our customers," said Miller. "It's been a great partnership, and we appreciate how committed HCSS is to our success." **R&B**

Software

HCSS

HeavyBid, HeavyJob