

TECHNICAL SPOTLIGHT

Lingua Franca

Willamette Valley winery builds a state-of-the-art, quake-resistant production facility

By L.M. Archer



When the 2014 South Napa earthquake subsided, wine consultant and master sommelier Larry Stone surveilled the wreckage of his Napa home and thought, “Wherever I work next, it’s gonna be earthquake-proof.”

Stone almost got his wish. His next move brought him to Oregon, where he and his family had purchased the Janzen farm in 2013 on Willamette Valley’s Eola-Amity Hills in partnership with attorney and publisher David Honig. Stone planted 66 acres of the 140-acre property to Pinot Noir and Chardonnay, with future plans for another 15 acres of vines and 35 acres of usable farm land.

Next, Stone enlisted Burgundy winemaker Dominique Lafon, with whom Stone had worked previously at Evening Land Vineyard, and Lafon protégé Thomas Savre to join him in the Oregon project christened Lingua Franca, or “honest tongue” in French.

After the winery was bonded in 2015, the partners scrambled to source grapes throughout Willamette Valley, renting space from Coelho Winery in Amity to produce their inaugural vintage of white and red wines. Yet throughout that first harvest, the team members understood they needed their own facility and set about constructing it.

Challenges and restrictions

Initially scheduled for completion by harvest 2016, the project faced a few unexpected obstacles (including earthquake and design issues) in addition to the tight schedule.

Lingua Franca engaged architectural firm Laurence Ferar and Associates of Portland, Ore., to blueprint the 24,000-square-foot facility. Winemaker Thomas Savre shared via email that the goal was to create a building “to make wines in a traditional way with innovative techniques.”

The project penciled out to an estimated cost of \$192 per square foot including all site work except landscaping for a final price tag of approximately \$5.2 million.

The building’s low-slung design hugs the hillside in homage to “undulating ribbons floating across the rolling landscape,” per the architect’s project description. Located on Hopewell Road, the southeastern-facing site is at 350 feet elevation, boasts favorable Nekia and Jory volcanic soils and rubs shoulders with Argyle’s Lone Star, Domaine Serene’s Jerusalem Hill and Evening Land’s Seven Springs vineyards.

Ironically, Stone thought he’d sidestepped California’s San Andreas Fault, only to discover that Lingua Franca straddles the Cascadia Subduction zone. In the end, the new structure meets the area’s robust building code and seismic requirements conceived to “resist” up to a 9.0-magnitude earthquake. This means that while the building may sustain some damage, it will not collapse.

Stone elaborates regarding the seismic accommodations: “The entire winery was designed around withstanding seismic event(s) around 9.0. All large tanks are secured. Catwalks are designed to stay together like the building, too.”

“The large space of the winery was proposed so that we wouldn’t need to stack barrels more than three high, but no further measures were possible considering how frequently we move the barrels and racks. Still, the rooms in which the barrels are kept are isolated from the rest of the winery and the working spaces where employees normally operate, unless they are working on the barrels.”

Other design considerations drove Lingua Franca to contract with structural engineers Ralph Turnbaugh and Geoff Gore of T.M. Rippey Consulting Engineers. Both long cantilevered eaves and clear span requirements, plus a peaked crush pad canopy

KEY POINTS

Lingua Franca is a 24,000-square-foot winery located in the Willamette Valley's Eola-Amity Hills AVA.

The facility was built to "resist" a 9.0-magnitude earthquake without collapse.

The winery produces premium Pinot Noir and Chardonnay, and it also offers custom-crush space for a few local, small-lot premium winemakers.

sans central column proved especially tricky, but the engineers resolved the problem with a custom field-welded steel beam.

Another set of constraints involved limiting the usable site area while maintaining 100-foot setbacks, preserving a grove of 100-year-old oaks, protecting a large riparian zone and retaining as much plantable vineyard acreage as possible. An exterior looped drive helps resolve this, providing ample maneuvering space for truck traffic while allowing for expansion to both the north and south, along with room for a potential case-goods facility to the west.

The compressed schedule proved equally daunting. A design contract was signed in mid-April 2015, and an excavation permit was issued five months later, just prior to fall rains. However, due to a booming construction economy, securing bids and commitments from subcontractors proved difficult.

Moreover, due to an unusually hot summer, harvest arrived especially early in 2016. Lingua Franca's winemaking style and youthful vineyards require earlier picking than those of other valley

wineries, further ratcheting up an already taut timeline.

"Everyone realized that the building would not be 100% complete for the 2016 harvest," Savre recalls. "As the summer progressed, many jobsite meetings were spent reviewing plans, schedules, and developing strategies to prioritize construction to allow occupancy of critical winemaking areas. Thanks to good communication between the owner, winemaking team, architects and contractors, enough of the building was completed to allow for a successful—if stressful—harvest."

Sustainability

Lingua Franca's commitment to sustainability resulted in features like the Thermomass wall system consisting of concrete tilt-up "sandwich panels," with a layer of rigid insulation between two layers of concrete. According to Savre, "This layering provides the benefit of perimeter insulation, a durable wall finish, as well as thermal mass to mediate diurnal temperature swings."

Other sustainability elements include energy-efficient LED lighting throughout the entire facility,



Oversized eaves offer protected storage for grape bins during harvest.

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OWNERS

Larry Stone and David Honig

WINEMAKER

Thomas Savre

CONSULTING WINEMAKER

Dominique Lafon

VINEYARD MANAGER

Valle Verde Vineyard Services

WINERY AVA

Eola-Amity Hills

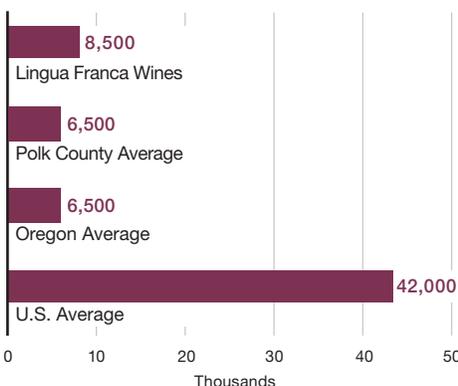
YEAR BONDED

2015

VINEYARD ACREAGE

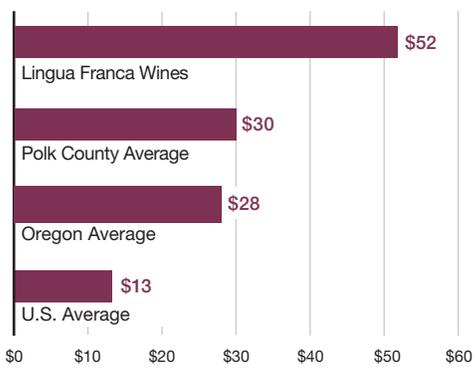
66 acres owned and 5 acres under long-term lease

WINERY CASE PRODUCTION



Source: Wines Vines Analytics

WINERY AVERAGE BOTTLE PRICE



Source: Wines Vines Analytics

The Technical Spotlight is a regular feature highlighting wineries in North America that have recently opened or undergone major renovations and improvements. *Wines & Vines* seeks to report how facility design and winemaking equipment is used to achieve a particular winemaking style while also exploring new trends and techniques being used in the industry. If you think your winery would be a good candidate for the feature, contact us at edit@winesandvines.com.

BUILDING THE WINERY

Architect	Laurence Ferar and Associates Inc. , ferar.net
Excavation	Jonas Co. , (503) 969-9548
General contractor	Andrew Scott Construction LLC , andrewscottconstruction.com
Interior design	Laurence Ferar and Associates Inc.
Metal fabrication	Solid Form Fabrication , solidformfabrication.com
Concrete	Marion Construction Co. , marionconst.com
HVAC	Frank Webster Heating and Air Conditioning LLC , websterheatingandac.com
Electrical	Nice Electric , niceelectricco.com
Winery refrigeration	G&D Chillers , gdchillers.com
Drains	Poly-Cast with cast iron grates, poly-cast.com
Walls	Thermomass Tilt-Up, Thermomass Building Insulation Systems , thermomass.com

PACKAGING

Bottles	Saverglass Inc. , saverglass.com ; Saxco , saxco.com
Corks	Diam Closures USA , diam-closures.com ; Cork Supply , corksupply.com
Label design	Gundolf Pfothenhauer , gpfothenhauer.com
Label printing	Paragon Label , paragonlabel.com
Capsules	Maverick Enterprises Inc. , maverickcaps.com ; Rivercap , rivercap.com

MAKING THE WINE

Stainless steel tanks	JVNW Inc. , jvnw.com
Concrete tanks	Sonoma Cast Stone , concretewinetanks.com
Yeast/ML bacteria	Ambient
Barrels	Pinot Noir: Tonnellerie Taransaud , taransaud.com ; Tonnellerie de Mercurey USA Inc. , tonellerie-de-mercurey.com ; Tonnellerie Chassin Père et Fils , chassin-bourgogne.fr ; Kádár Hungary , kadarhungary.com Chardonnay: Tonnellerie Damy , tonellerie-damy.com ; Tonnellerie de Mercurey USA Inc. , tonellerie-de-mercurey.com
Barrel washing	MOOG Cleaning Systems AG , moog.ch
Hoses, clamps and other fittings	Crush2Cellar , crush2cellar.com
Press	Europress , euromachinesusa.com

WINERY SERVICES

Laboratory services	Core Enology , enologylab.com ; ETS , etslabs.com
Case goods storage	Northwest Distribution & Storage Inc. , nwdist.com
Compliance	Compli , compli.com
Web sales/ POS software	Square , squareup.com
DtC/wine shipments	VinoShipper , vinoshipper.com
Financing/bank	Northwest Farm Credit Services , northwestfcs.com

CO₂ exhaust fans linked to skylights that also double for night cooling, barrel rooms cut into the ground to maximize the earth-sheltering effect, minimal south- and west-facing windows to reduce heat gain, a canopied crush pad with curtain for late-afternoon sun shading, and a roof storm runoff-collection system that feeds the fire-suppression pond.

Production flexibility

Savre works in close communication with Burgundy-based consulting winemaker Dominique Lafon throughout the vintage, touching base almost daily via Skype.

In order to maintain cool temperatures and pristine fruit conditions prior to sorting, crews pick as early as possible in the morning, filling half-ton bins with Chardonnay and slightly less-than-quarter-ton slotted bins with Pinot Noir.

“We pick fruit based upon overall maturity while taking into account the best balance between phenolic, aromatic and technologic ripeness (pH, TA and percent alcohol) factors, and process the fruit on the same day,” Savre said.

The grape-receiving and crush area faces the vineyard to maximize shading provided on that side of the building during the day. A team of eight workers, plus Stone and Savre, sort all the grapes by hand on a vibrating conveyor table. The triage area takes advantage of the location’s existing slope, so the sorting table rests at a comfortable height, and a natural 4-foot drop directs clusters to the destemmer on the crush pad below.

Either bins or conveyers transport the fruit to fermentation vessels after destemming. A ramp along one side provides easy forklift connection between the two levels. The lab doubles as a “command post,” offering a view of the crush pad and fermentation room while allowing for passive supervision.



Lingua Franca added 11 concrete fermentors from Sonoma Cast Stone in a truncated conical shape.

Fermentation and *élevage*

Lingua Franca deploys 10 fixed stainless steel fermentors with aisle space for 30-plus 2-, 4- and 5-ton movable fermentors. All of the fermentors, both fixed and portable, exploit overhead fall-protection tracks. This summer, Lingua Franca added 11 concrete fermentors fashioned by Sonoma Cast Stone in 3.5-ton truncated conical shape, replete with wall and floor jackets.

Destined for red wine production, these concrete fermentors’ truncated conical format allows for better fermentation control, more

homogenous fermentation and better extraction, Savre maintains. He also presses into service jacketed stainless steel tanks by JVNW in 2-, 4-, 5- and 7-ton format for Pinot Noir fermentation, as the jackets permit both heating and cooling temperature control.

“We use ambient yeast to initiate fermentation,” says Savre, “which typically takes about two to four days for reds and three to five days for whites, depending on the source of the fruit.”

Fermentation and barrel room layouts allow for bifurcation of red and white processes. The red wine fermentation and barrel room sits at

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An extension of the winery's glycol general system can be connected to the center of the wine-production area during the busy harvest season.

the south end of the facility; the white wine fermentation and barrel room occupies the north end, with more white tanks stationed on the south end of the white room and inside along the north wall of the main room.

Outside, the winery's canopied east side offers weather protection to the mobile bottling line as well as to trucks dropping off goods or picking up wine pallets (especially useful in rainy weather). The bottling truck access also accommodates all required utility hookups and a capped sleeve through the wall for the wine line.

Savre notes that incorporating glycol lines into the central array of movable fermentors proved a particular challenge, so they collaborated with the contractor to develop a removable manifold that threads into the floor, ingeniously supplied from overhead drops.



Architecture firm Laurence Ferar and Associates of Portland, Ore., designed separate barrel cellars for red and white wines.



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Savre explains, “The glycol lines are mounted in a loop all around the building, which is classical and normal. But in order to have the glycol system get to the middle of the winery, where we have our 4-, 5-, 2-ton fermentors, instead of having several portable units we were able to build an extension of the glycol system that can feed the center of the main room. Then we can have the drops that are mounted with tri-clamps removed when it is not harvest. In order to feed the tanks, we worked with the contractor to design a stainless steel piece that has a quick-connect to feed each tank in the middle.”

To avoid the possibility of contamination, they located the drops outboard of the fermentors and move the manifolds and supply drops after harvest to unobstruct the floor and ceiling.

Chardonnay is pressed whole cluster, without destemming, with light *débourbage* (settling), and the use of ambient yeast. Fermentation begins briefly in tank, and is then moved into barrels with lees until racking before the next harvest. White fermentation usually take about a month, depending upon the fruit source.

Pinot Noir is fermented in some years with a varying percentage of whole-cluster in tanks. Once underway, fermentation for red wines lasts between 13 and 15 days. During fermentation of the Pinot Noir, Savre uses mostly pumpover to break the cap, inducing a gentle extraction from the skins and promoting oxygenation of the must necessary for yeast development at the beginning of fermentation.

Full malolactic fermentation occurs naturally, in barrel, for both Pinot Noir and Chardonnay after primary fermentation is completed.

While the primary fermentation is still active but slowing down, Savre attempts one or two punchdowns in order to free any remaining sugar trapped in any still-intact berries. Savre admits, “I did purchase a hand punchdown device for the second harvest but discovered that the traditional (foot) method is superior.” He finds the traditional method allows better feeling of pockets and temperature variations within

the cap. Typical *pigéage* (treading) attire includes bare feet, bare legs and a harness system attached to a metal track running above the concrete tanks, which allows workers to stir the must safely without slipping. The process may lengthen the fermentation time and increase the temperature.

Post-fermentation, Savre presses using light pressure, depending upon the vintage, then combines free run and press wine together in the tanks, where the juice stays for a few weeks to settle. Afterward, the Pinot Noir and Chardonnay age in 228-liter oak



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Positioning a sorting table on the receiving level allows fruit to drop 4 feet into a destemmer, from which it is transferred to fermentation vessels.

barrels for a year or so. Oaking protocols include 20% new oak, with 95% of the barrels sourced from French coopers and the remainder from a cooper in Hungary.

Storage and custom-crush capabilities

The completed winery allows wine production of 10,000 to 15,000 cases, with extra capacity

for outside clients. “The goal is to have enough space to have all (wine from) our estate vineyard made in this facility,” Savre maintains, adding, “The winery was not built for custom-crush activity *per se*, but the efficiency of the construction has allowed us to make room for a small number of friends looking for a high-quality facility to make their own wine.”

A large mezzanine over the office area allows for light storage loads such as cork, capsules and cartons, while the building’s intentionally oversized eaves provide tuck-away storage for grape bins, a bonus during Oregon’s inclement weather.

Savre looks forward to completing the 2017 harvest in the new facility, noting, “I think this year will be a great example of how we will be able to use it at its full potential.”

Ultimately, Lingua Franca’s sleek, state-of-the-art winery blends the spirit of Willamette Valley ingenuity with the soul of Burgundy’s winemaking traditions to create a flexible, safe, efficient production site with room to grow for the future. 

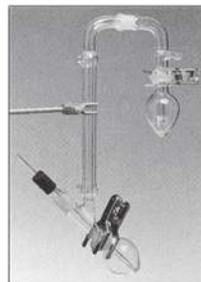
L.M. Archer is a freelance writer, wine journalist, and Burgundy specialist. Her works appear in numerous publications, including Oregon Wine Press, Palate Press, France Today, and wine-searcher.com; she’s also founder | editor of the artisan wine-centric site binNotes | redThread.

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