

URBAN

concepts



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As spring unfolds, we find ourselves inspired by the beauty and renewal that this season brings. It's a time of growth, innovation, and embracing new horizons, and we are thrilled to share with you the Spring edition of Urban Concepts.

In this edition, we are excited to share articles on AI in construction, Wagyu beef and the history of Ala Moana Park.

We hope you enjoy reading this edition as much as we enjoyed putting it together for you.

Mahalo,
Brett Hill Construction Inc



Artificial Intelligence and its Future in the Construction Industry

Artificial Intelligence, or AI, has become increasingly important in today's world and has the potential to revolutionize many industries, including healthcare, finance, education, and more. It has made tremendous inroads in virtually every industry because of its ability to mimic the reasoning and problem-solving skills we all possess, but at a much faster rate. The use of AI has already improved efficiency, reduced costs and increased accuracy in many fields. It has played a major role in the digitalization of society and has enabled us to collect, process, and analyze large amounts of data at a faster rate than ever before.

AI has made it easier to find and access the information we need in our work and personal lives. For example, the use of AI in smartphone technology has grown rapidly in recent years. Artificial intelligence, a field in data science, blends computer technology and a significant amount of data to enable problem-solving. You may have experienced AI in a voice search with Amazon's Alexa or Apple's Siri. Search engines also utilize AI to collect and retrieve relevant information based on user inquiries. Videos suggested to you by YouTube or Netflix are AI-driven results that recommend titles based on learning your preferences and viewing habits.



Examples of AI
Alexa / Siri
Google Maps
Roombas
Self driving cars
Autocorrect
Chatbots
Facial Recognition

AI in Construction

Artificial intelligence in the construction industry has emerged as a technology that is ready to transform our industry. As we enter this next phase of construction technology, it is important to understand what artificial intelligence is and how it offers new solutions to enhance the productivity and performance of the industry.

In a complex construction environment, AI offers advantages to those construction organizations that can harness data, generate intelligible insights, and make well-informed decisions. We are seeing that AI is beginning to establish a place in the construction industry after years of development.

Currently, AI's growth in the construction industry focuses on advances in computing power, algorithms that follow precise steps, the compilation and dissemination of large amounts of data the industry produces and innovations in the systems that gives construction companies huge advantages once they embrace this technology. That's why the time to understand and integrate AI into a construction company is now.





Artificial Intelligence in the Preconstruction Phase

Before a project starts, a variety of specialists from different disciplines and expertise must collaborate and plan on how the project will proceed. This is called the preconstruction phase, as it refers to the phases of construction that takes place before the actual construction work begins. Building owners, architects and engineers, trade contractors, general contractors, and building product manufacturers take part in preconstruction.

The preconstruction process in the construction industry helps to ensure that the project is completed on time, within budget, and to the client's satisfaction by identifying and addressing the sequence of contractors and events that will get the project completed.

Similar to the construction project itself, solid foundational work in preconstruction transitions over into a smooth-running project. Variations in preconstruction stages occur depending on variables such as the type of structure or project, project delivery methods, the scope of work involved, or if it is a public or private construction project.

There's a **pre-design** phase which includes the conceptual design, initial project planning, project development, and feasibility studies. The project team typically begins with the concept of the structure, performs a site analysis to identify potential obstacles, and develops a plan to address them. This phase also includes the development of a rough or working project scope and budget.

AI in the pre-design or initial project planning and development phase is helpful for feasibility studies to determine if a project is viable. Risks can be identified and analyzed with various data, including financial data, market data and data on the project's potential impact on the environment. Risk analysis can assist in deciding whether to proceed with the project. AI is a powerful tool at this stage because it offers thoroughness and accuracy without any bias.

The **design development** phase refers to the development of detailed design documents that direct the project. Documents included in this stage include architectural, structural, mechanical, electrical, and plumbing plans.

Design development is a critical phase in the project development process. It involves taking the conceptual design and turning it into a more detailed and buildable design, moving from general ideas to more specific ones. The design development phase is where many important decisions are made that will shape the final project, including cost, energy efficiency and functionality. AI can play a significant role in this phase by providing new tools and techniques to improve the efficiency and quality of the design development process.

The **construction documents** phase includes the development of final construction documents, including detailed construction plans, building product specifications, and contract documents. The finalization of the construction schedule is prepared, which outlines the sequence and expected duration of all activities required to complete the project.





AI-based tools can be used to automate the process of extracting, analyzing and processing data from construction documents. For example, natural language processing (NLP) can be used to analyze project requirements and create a detailed project scope document based on two-dimensional construction plans like PDF files. NLP has been around for many years and is the component of AI that understands and interprets human language, both written and spoken. This can save time and resources compared to the tedium of traditional methods, such as manual data entry or spreadsheet calculations.

The **bidding and negotiation** phase includes distributing the plans to trade contractors and manufacturers for bidding. The project team will review the bids, negotiate with contractors and select winning bids. For general contractors and trade contractors, this is the essential phase that includes producing and delivering detailed takeoffs and estimates to submit a competitive bid.

General contractors, trade contractors and building supply manufacturers assess the project scope, identify opportunities to pursue, analyze bidding strategies and decide which projects clear the hurdle for success. General and trade contractors can use AI to streamline processes, automate repetitive tasks like takeoffs and improve the speed at which decisions like vetting profitable projects are made.

The **permitting and approvals** phase includes the submission of the construction documents to the appropriate governmental agencies, where appropriate, for review and approval. Artificial intelligence is used in this phase to reduce the time to validate building code compliance and to manage the building permit process, thereby reducing the wait time to receive approved building permits.

The **finalize preconstruction** phase includes finalizing contracts, mobilization of the contractors and the start of construction activities. Effective preconstruction planning and strategic decision-making are key components of profitability for trades, general contractors, and building product manufacturers.

The finalization of the construction schedule is prepared, which outlines the sequence and expected duration of all activities required to complete the project.

Artificial Intelligence in the Construction Phase

The preconstruction stages can become more complex due to the nature of the project, the inherent need for effective communication and collaboration among teams and local and national Regulatory Agencies. Time and budget issues are consistently make-or-break drivers of a profitable construction project. Technology like AI offers an opportunity to improve performance throughout the preconstruction lifecycle.





AI is a technology continuing to emerge in other areas of construction, enabling improvements in performance and safety. Some examples include:

- **Predictive maintenance:** AI can be used to analyze data from building systems, such as HVAC and electrical systems to develop a preventative maintenance schedule for appliances and equipment.
- **Site safety:** AI-powered cameras and sensors (even some worn by workers) can monitor construction sites for potential safety hazards and alert workers and manager to potential dangers.
- **Robotics:** The efficiency of AI and machine learning have found their way into robotic bricklaying, welding, and even building entire structures with 3D printing.
- **Project management:** AI can optimize the allocation of labor and materials, making the scheduling of construction tasks more efficient and cost-effective.
- **Quality control:** AI-powered cameras and sensors can monitor the quality of construction work, identify defects, and alert workers and managers to issues that need to be addressed.
- **Building performance:** AI could be used to analyze data from building systems to optimize energy efficiency, indoor air quality and other performance metrics. Simulating building efficiency with AI allows the identification of potential energy-depriving areas for better design and construction.



Bright Future for AI in Construction

The present and future of AI in the construction industry are promising as more AI-based tools and techniques become integrated into projects and as technology further develops, AI is expected to play an even more integral part of the construction process, helping to improve efficiency, reduce costs and enhance construction performance outcomes.

The one concern of many in the workforce is will jobs and careers be eliminated or replaced by AI. While there is no clear vision on how far we can take the development of AI, it's quite certain jobs and careers will be altered or even eliminated. On the positive side, new types of jobs and careers will develop as AI will not entirely eliminate the need for the human resource. Because for all AI has done to enhance our lives, it hasn't yet found a way to completely replace the complex human element required for judgement and decision-making, interpersonal communication, human expression and body language, social and emotional intelligence, creativity and innovation and physical dexterity and mobility.



HISTORY OF ALA MOANA PARK

Ala Moana Park, also known as Ala Moana Beach Park, is recognized as one of the state's oldest and busiest parks, frequented by hundreds to thousands of visitors daily. What many don't know about this entirely man-made park is that it was actually not intended to be a park but was instead meant for boats.

The Ala Moana area was originally a swampy marshland that had fishponds, ducks, birds, taro patches, and many fisherman living in the area. After annexation, the site became part of the lands of the Hawaiian Kingdom that were transferred by the Republic of Hawaii to the United States Government. In 1912, 50 acres of the swampy land was purchased for \$25,000 by Walter Dillingham, the son of the founder of Hawaiian Dredging, because a place was needed to dump the dirt and coral from dredging projects. Then in the late 1920s, Hawaiian Dredging, the only dredging company in Hawaii at the time, was awarded the contract to dredge a channel through a coral reef along the Ala Moana beachfront, connecting the Ala Wai Boat Harbor and Kewalo Basin with the purpose of enabling boats to travel between them. However, after Ala Moana became a popular spot for swimmers, the channel was closed to boat traffic. The dredged coral was then used as fill to form Ala Moana Beach Park, with the excess used to fill the marshlands further inland to create solid ground that would later become Ala Moana Boulevard, the Ala Moana Center, 1350 Ala Moana and part of where the Hawaiki Tower was built.



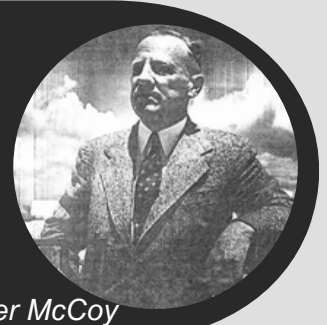
On October 25, 1927,

The Federal Government deeded the area to the Territory of Hawaii, and about three months later, it was transferred to the City and County of Honolulu on the condition that the property be used fully as a public park. Shortly after the title was transferred to the city in early 1928, Hawaiian Dredging was granted the dredging contract and completed the work by October 1930.

Picture: Early construction of the park.

Between 1931 and 1941,

Charles Lester McCoy was the first chair of the Honolulu Park Board. He was an Illinois man who retired at the age of 42 from the wholesale grocery business and moved to Honolulu with his wife. An affluent man with an interest in servicing the community, he only took a salary of one dollar per year.



Picture: Charles Lester McCoy

July 1931

Shortly after McCoy became Park Board chair, the Honolulu Park Board approved the designs of landscape architects, Catherine Jones Richards and Robert Oliver Thompson. They became known as of the most inventive landscape architects in the 1930s, incorporating large specimen trees, open spaces, and the use of indigenous plants in their work.

In 1933,

Harry Sims Bent was hired by Charles McCoy as the Park Architect. Bent was originally sent to Honolulu by the New York firm of Bertram Goodhue and Associates to supervise the construction of the Honolulu Academy of Arts, and it was his work that gave many of the 1930s Hawaii parks their architectural uniqueness. His designs were influenced by Art Deco and Moderne design styles and included elements such as angular zigzags, curvilinear shapes, repetitive patterns, smooth concrete surfaces, open pergolas, and flat roof lines.



Picture: Harry Sims Bent

Federal Assistance provided by the Federal Relief Administration and the Civil Works Administration was also initiated in 1933, allowing the construction of the park to continue during the Great Depression Years. Although the labor force in the park reached around 800-900 workers daily, many of them were unskilled. Additionally, with material limitations, the “boulder concrete” method adapted by Bent and McCoy was the only way construction was possible during the Depression. This method was used for the construction of the concrete walls and features, where a thin gruel of concrete was poured into the wooden forms packed firmly with boulders of coral and lava rock. The park board also gathered the rock debris from its own properties, saving up to an estimated one-third of the cost of regular concrete construction.

In 1947,

The name of the park was renamed from Moana Park or “Ocean Park” to Ala Moana Park, translating to “Ocean Street”, due to its popular usage.



In 1955,

Sand was brought in from the west coast of Oahu to construct a beach area in Ala Moana Park as part of the Kewalo Basin State Park Project.



Picture: Ala Moana Beach Park (old, left/ present, right)



In the early 1960s,

A 30-acre peninsula, now known as Magic Island, was added to Ala Moana Beach Park as a landfill project. Originally planned to accommodate a new resort, the project fell through, resulting in the area becoming a public park. Although most locals still refer to it as Magic Island, the name was officially changed to Aina Moana Park in 1972, translating to “land from the sea”.

Picture: Magic Island

Ala Moana Park ~ Key Historic Features

Bridle Path Bridge

The Bridle Path Bridge was completed in 1934, marking Bent's first design in the Park. It was intended as an equestrian bridge to arch over the park's drainage canal. The original drawing was titled "Bridle Path Bridges", suggesting that there were multiple structures initially planned.



Roosevelt Portal Dedication

Also seen in various other park designs by Bent, the Roosevelt Portals consist of a combination of curved and angular shapes, scalloped walls, and wedge indentations. This structure was also completed in 1934 and it was dedicated by President Roosevelt, who referred to Ala Moana Park as "The People's Park".

Sports Pavilion

Officially completed along with the Banyan Courtyard in 1937, the pavilion was designed to be a community recreation center for games and activities. Robert Lee Eskridge painted two wall-sized murals inside, rendering the Hawaiian makahiki or sports festival.

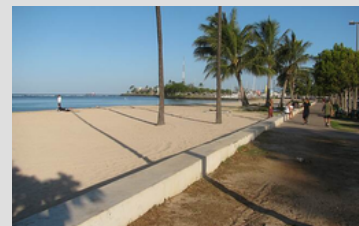
Banyan Courtyard

Differing from Bent's other park designs, the banyan court was based on a "Pacific" inspiration, straying from his usual Art Deco/ Moderne influenced styles. Its design was inspired by a postcard of an old Balinese garden with stone tree boxes next to shaded reflection pools. He also explained in a 1947 article that the idea was adopted due to its persona and simplicity, plus the fact that it seemed to offer a method of construction that would fit with their labor-material ratio at the time. Marble sculptures of stylized Hawaiian Figures are portrayed on the walls by Marguerite Blasingame.



Promenade and Central Terrace

The process of utilizing boulder concrete has resulted in strong and functional construction, as shown by the Central Terrace's two pergolas. The unfinished rough concrete walls, exposing natural rock, characterize this area. The boulder construction serves as a testament to the point in time when the park was built, representing a creative response to immediate practical needs. Along with the use of local materials and easy building methods, park administrators were able to maximize limited resources, resulting in architecture characterized by minimalist design, embodying the aesthetic of challenging times.



Lawn Bowling

Built in 1939 with the help of federal funds, the lawn bowling green was Harry Sim Bent's last design for Ala Moana Park and remains the only lawn bowling green in Honolulu. The private Honolulu Lawn Bowls Club has been responsible for maintaining the green since 1981.

McCoy Pavilion

Designed by Charles J. W. Chamberlain and completed in 1975, the McCoy Pavilion was the most prominent change made to the original design of the Banyan Court and Sports Pavilion. The pavilion was added to the Diamond Head side of the courtyard, which involved removing some structures that had been there since the thirties. It is named after Charles Lester McCoy, the first Chairman of the Honolulu Park Board. When McCoy's widow, Hazel Corning McCoy, passed away in 1968, she left the city with the largest gift ever given, of \$1.2 million, to fund the construction of the pavilion in the park as a memorial to her late husband.



Ala Moana Beach Park has become and will always be a monumental gathering spot for locals and visitors alike. Hosting millions of people every year, it features popular annual events such as the Lantern Floating Ceremony and the Independence Day fireworks, as well as community events like beach volleyball and lawn bowling games.

WAGYU BEEF: THE ULTIMATE STEAK

Living in Hawaii, many of us know of family members or friends who travel to Japan and are passionate foodies. Therefore, any discussion about trips to Japan generally centers around food. One inevitable topic of discussion is Wagyu steaks and the memorable experience of trying them for the first time.



What is Wagyu beef?

Wagyu beef, as most of us know, is a highly exclusive, high-end meat from cows bred and raised in Japan using specific feed and cultivation regimens. The literal translation of Wagyu is “Japanese cow,” which covers over 200 brands in regions throughout Japan, each using their own strict methods and standards in raising their cattle. For those of us who enjoy a good steak, having an A5 Wagyu steak is more than just a meal; it’s memorable experience that can only be described as epic.

The taste and texture of Wagyu beef are so unlike most steaks we purchase from our local grocery stores. The buttery taste and soft texture are often described as “melts in your mouth.” Even though Wagyu beef costs a lot more than other types of meats, the experience is always worth the price.

While Wagyu beef has no specific section of the cow carcass that gives it its name, the more sought-after sections are the ribeye and rib cap. These are the sections you would normally refer to as ribeye steaks and prime rib.

Where did Wagyu beef originate?

Wagyu has its genetic origins dating back 35,000 years in Japan. Originally, in Japanese civilization, the cows were primarily used as work cattle and were selected for their physical endurance. The intramuscular fat, which is the marbling in the beef, is a good source of energy for these working cattle.



In 1868, at the start of the Meiji era in Japan, significant political, religious and social changes occurred. It was a time that brought about modernization and the Westernization of the country. One of those changes was the popularization of beef consumption, which had not been common before the Meiji era. During this time, crossbreeding work cattle with cows from Europe and Korea became popular. By the turn of the century, this process developed four breeds that produced superior meat quality, which we now refer to as Wagyu beef – Japanese Black (Kuroge), the most popular; Japanese Brown (Akage); Japanese Shorthorn (Nihon Tankaku); and Japanese Polled (Mukaku).

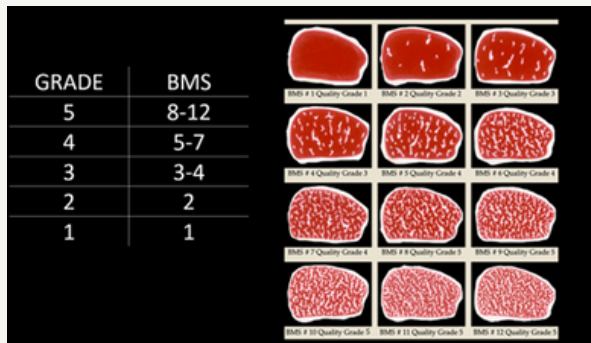
How does the Wagyu beef ratings work?

Wagyu beef is graded on a scale from 1 to 5, with 5 being the highest grade. This grading criteria is based on several factors: the level of marbling (intramuscular fat), color, firmness, and the texture of the meat.

To delve deeper into the grading system, the beef marbling score or BMS has a 1 to 12 rating with 12 being the highest grade. Within the 1 to 5 scale, the marbling grade can be categorized as follows:

- Grade 5: Marbling grade of 8–12
- Grade 4: Marbling grade of 5–7
- Grade 3: Marbling grade of 3–4
- Grade 2: Marbling grade of 2
- Grade 1: Marbling grade of 1

Additionally, there's the beef color standard or BCS for grading the color of the meat, where a narrower rating means a higher quality color. Finally, the beef fat standard or BFS, grades the fat content in each steak, with a narrower range being given to a higher grade.



Wagyu grading also comes with an A, B, or C rating for meat yield. The yield measurement is taken between the sixth and seventh ribs of the cow. This measurement is used to mathematically estimate the yield percentage of meat to the total weight of each cow's carcass.



For example:

- Grade A: 72% and above
- Grade B: 69% to 71%
- Grade C: anything under 69%



This alphanumeric grading system means that A5 is the top-level grade of Wagyu. Referring to this grading scale can be very helpful when shopping for high-quality Wagyu steaks.

Wagyu beef is kept on a strict grading system to maintain the integrity, transparency, and authenticity of this exquisite beef. Wagyu at any rating makes a great steak dinner, but if your goal is to pull out all the stops and price is not an issue, you should definitely consider the higher-rated cuts.

Is there a difference between Wagyu beef and Kobe beef?

As mentioned earlier, the literal translation of Wagyu is 'Japanese cow,' indicating that Wagyu beef comes from cattle raised in Japan. The four breeds mentioned earlier are the premium breeds that produce Wagyu beef in Japan.

Within the classification of Wagyu is Kobe beef. In order to be authentic Kobe beef, the cattle must be born, fed, and raised under specific guidelines, and they must also be slaughtered and processed in the Tajima-Gyu area within Japan's Hyogo prefecture. Any beef that does not meet these criteria cannot be labeled as Kobe beef. This strict classification is why Kobe beef is so hard to come by and costs significantly more than other premium cuts of steak.

How does Wagyu beef compare to other types of steaks?

Most of us will never turn down a good grilled steak, and it shouldn't matter if it's Wagyu beef or not. Any good cuts of meat, whether it's ribeye, sirloin, or prime rib, should satisfy our meat cravings. What sets premium Wagyu beef apart from other good cuts of meat is its higher fat content, marbling, texture, and the strict quality control required to raise the cattle.



vs.



Cattle that produce Wagyu beef are also raised in the United States and Australia because at one time Japan allowed the export of a few of their cattle to both countries. These cattle are raised under similar guidelines as their Japanese counterparts, although the food the cattle are fed may differ. However, Japan has since enacted an export ban in 1997 by declaring Wagyu cattle a national treasure, thus protecting the status and keeping authentic Japanese Wagyu beef exclusive to Japan.

Wagyu beef also comes with some good health and nutritional value. The high fat content, if consumed in moderation, contain healthy fats essential to our diet. Additionally, due to the strict guidelines required to raise these cattle, they are never treated with antibiotics or growth hormones and are free of contaminants.

Where can I find Wagyu in Hawaii?

Due to its high demand, limited supply, and cost of shipping/ air freight, finding good and fresh Wagyu beef from Japan is a challenge here in Hawaii. While certain grocers and premium meat wholesalers like Whole Foods Market, Nijiya Market, and Hawaii Premium Meats do carry Wagyu beef, it is not always in stock. Sometimes they may require pre-ordering, and you must be very specific about the grade when ordering.

What is the best way to prepare Wagyu steak?

After spending a premium to purchase your A5 Wagyu steak, the last thing you'd want is to ruin it during the preparation process.



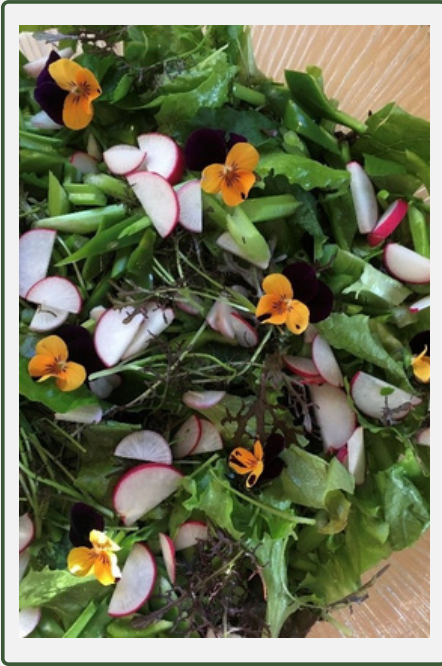
In talking to experts in this area, there are a few ways to prepare your steak, but the most common is to set the steak out until it's at room temperature and lightly season it with salt and pepper.

Preheat your skillet to medium-high heat, and depending on your wellness preference and the thickness of your steak, cook it anywhere from a minute to two minutes on each side or until the surface turns brown. We've been told that Wagyu steaks are best enjoyed at medium-rare to medium, which means the meat is pink on the inside.

We hope this has been an informative guide to Wagyu beef. While it's a dish many of us could not afford to enjoy on a weekly basis, but if you have an opportunity to try an A5 Wagyu steak, it is highly recommended that you treat yourself and indulge in a memorable experience.

Produce Showcase:

MUSTARD FRILLS



WHAT IS IT?

Native to the Himalayan region of India, mustard frills are similar to arugula. The texture is crunchy yet tender, with a distinct mustard flavor and mild, sweet, and spicy pepper-like finish. They are quick-growing, and the young leaves are best harvested in around 3 weeks; however, the longer they are left, the more enhanced the bitter taste becomes. As you continue to pick off the leaves, they will keep producing more for you to enjoy throughout the season.

HOW TO SELECT & STORE:

Grown on Oahu and the neighbor islands, mustard frills can be found at most grocery stores and local farmers' markets. You should discard any yellow leaves when prepping mustard frills for consumption. They should not be frozen, as they are sensitive to freezing temperatures.

NUTRITIONAL VALUE

Contains compounds which have cancer preventing benefits, including antioxidants, anti-inflammatory and natural detoxifying properties. A source of calcium, magnesium, folic acid, and vitamin K.

HOW TO PREPARE & SERVE

Best consumed raw, but more mature leaves can also be lightly sautéed or braised. Most commonly used in salads, mustard frills mix very well with other salad greens. They are also sometimes used in stews, soups and pho. Due to their perforated leaves, they can hold a vinaigrette dressing nicely, pairing well with creamy soft cheeses, nutty oils, light vinegars and citrus fruits, as well as common salad veggies such as cucumbers, tomatoes, avocados, and mushrooms.



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