



SCHLAG HILLS

Design-Build Carport, Deck, Swim-Spa, Garden Walls, Hardscape & Landscape / Pittsburgh, PA / 2024
AFTERHOURS Design Collaborative

We were asked to conceive of and construct a carport, pool, and connecting deck for a suburban property in Pittsburgh's North Hills. The clients expressed an interest in brick masonry as a unifying motif. The resulting project demonstrates clever use of material, surface, mass, proportion and detail to create an addition to the home that is experientially rich and more than the sum of its parts.

Organizationally, the carport and pool set the anchor points from which the rest of the scheme is developed. The 16ft x 24ft carport sits adjacent to the existing garage to serve as additional parking for the owner's 1969 Mercedes 280SL. The new structure is detached and held off of the existing building to improve vehicle access while framing a new walking path to the deck and kitchen door. Accommodating the owner's love for sunlight, the pool is located in the sunniest part of the yard and includes an integrated bench facing south-west. The carport and pool are linked by a new wood deck which projects north from the existing kitchen to provide a gracious dining space before dog-legging out to the east to a secondary tanning deck adjacent to the new pool. Two on-grade patios are nestled in the relief spaces of the scheme, serving as additional space for intimate gatherings. The plan for the new exterior is a mirror of the home's interior spaces—garage, kitchen/dining, sunken living room, long hallway to private bed and bath—a logical scheme which reinforces the layers of intimacy and privacy for the property's owners.

Responding to the regional context of Pittsburgh and the client's interest in the material, low brick walls were utilized as a first-order tool for spatial delineation and organization, providing a unifying visual and tactile thread to both define the boundaries and transitions between the functional spaces and provide a sense of locality, orientation, and continuity within the scheme as a whole. New brick was matched to the existing home to allow the new construction to feel like an extension of the existing home, as if it was always there.

Formally, the project seeks to express the way in which it is built, an honest material language which makes clear the project's economy of means. Each part has a function, the assembly of which is legibly expressed. The material palette is constrained to what is essential, and each material system is manipulated intelligently and gracefully to yield functional and formal qualities which demonstrates the ethos of doing more with less. The brick walls, while primarily acting as a means of spatial delineation, take on varying dimension and form according to location and use—changing elevation, thickening in places, and varying bond pattern to provide seating, integrated planters, fire wood storage, grill smoke deflector, electric car charger mount, dynamic and static detail, mass/presence, threshold, framed vista, visual invitation, and visual terminus.

The carport steel frame, too, punches above its weight. Beginning with a simple 3-bay structural system, a series of tweaks and reductions were made to transform a very basic form into one that is complex, dynamic, and site-/use-specific, with very little added cost. The columns at the west end are removed to create a cantilever that opens up the approach to the carport, maintain a view to the yard, and provide a welcoming gesture while reducing the cost of excavation, foundation, and steel work there; the two front columns are shifted off of one another to conform more naturally to the triangular site, strengthen the stance of structure, and create an appearance of movement that helps blend the structure in with its natural surroundings; by detaching the structure and shifting it away from the existing garage, the new respects the old, does not add cost or complication associated with integrating and patching an attachment to the existing building, and effortlessly frames a bonus walkway to the deck and kitchen door; the cantilevered beam to the north is tapered, softening itself gracefully against the natural background beyond. In these ways, the form and detailing of the carport grew organically out of the environmental, functional, and spatial opportunities of the site and program to efficiently and appropriately achieve fitness with its surroundings.

Years
Design 2021-2022
Construction 2022-2024

Design
AFTERHOURS: Garrett Rauck, Brian Bollens

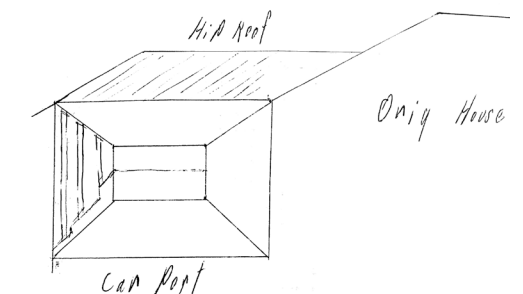
Design Consultants
Structural Engineer: House and Building Engineering
Horticultural Consultant: Mark Fiely, Ernst Seeds

Construction
AFTERHOURS: Garrett Rauck, Brian Bollens

Construction Contributors
Sr., Candace Ju, Ben Geithner, Forest Goebel

Sub-Contractors
Swim-Spa Installation: Superior Pools
Non-Carport Brick Masonry: Phillips Masonry Inc.
Excavation: Jeff Stalczyński

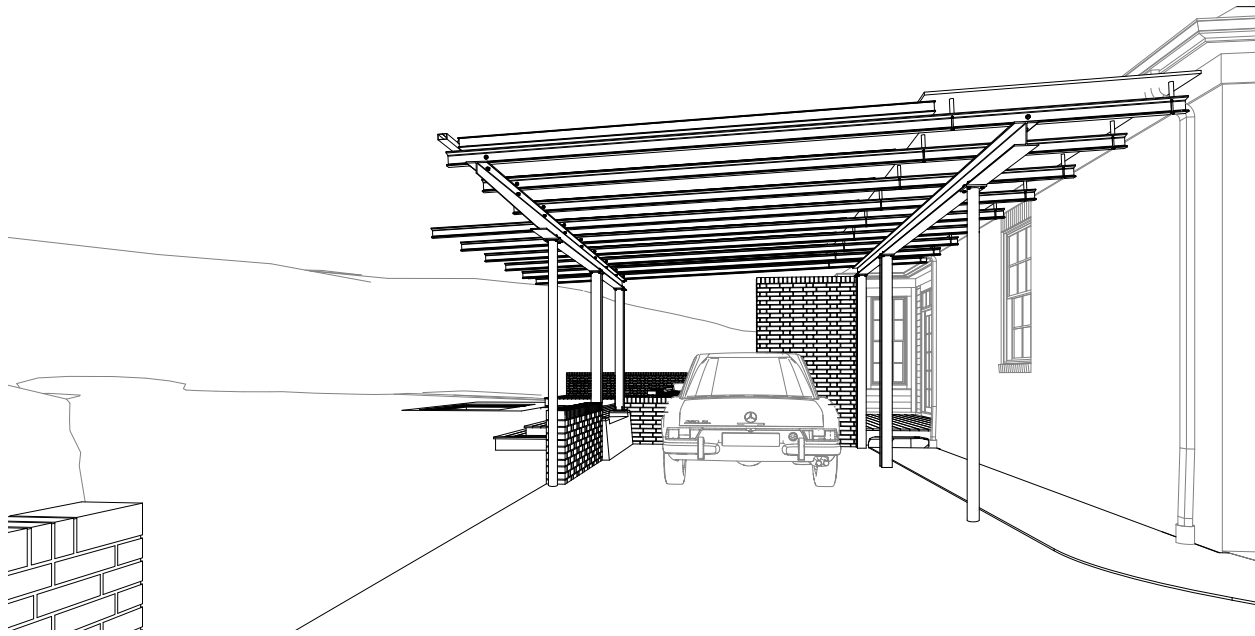
Fabricators
Structural Steel Fabrication: Woodward Inc.
Structural Steel Galvanizing: Young Galvanizing Inc.



Client's initial perspective sketch for carport.

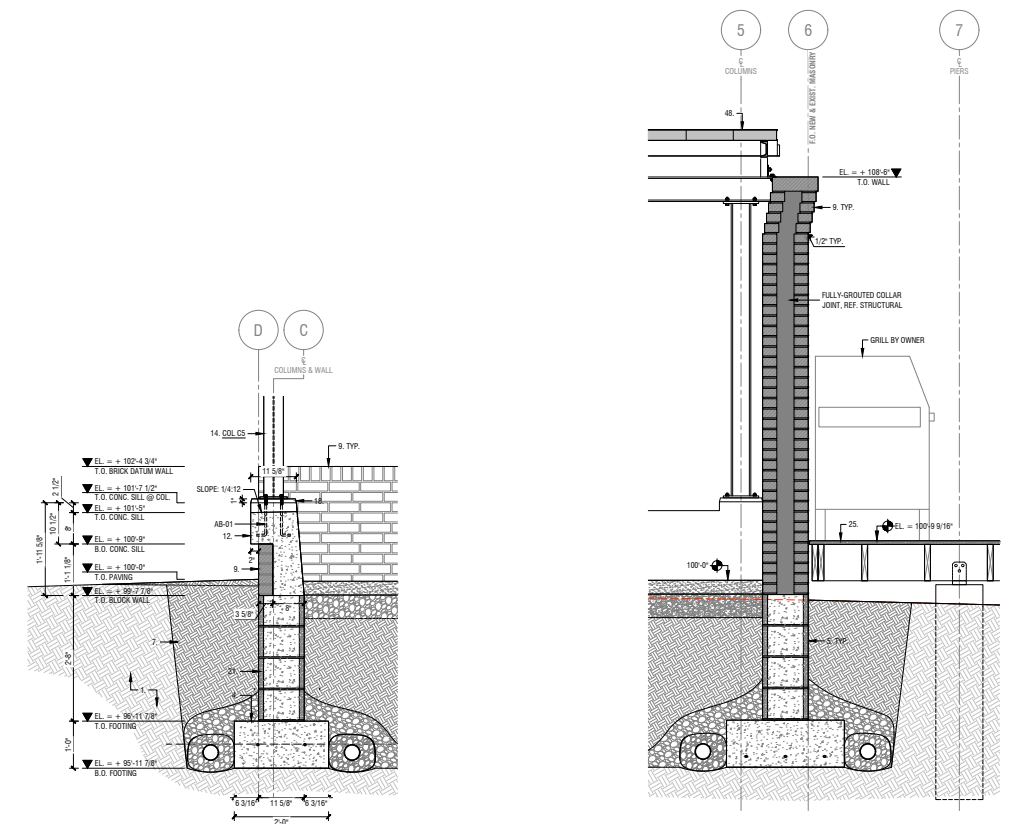
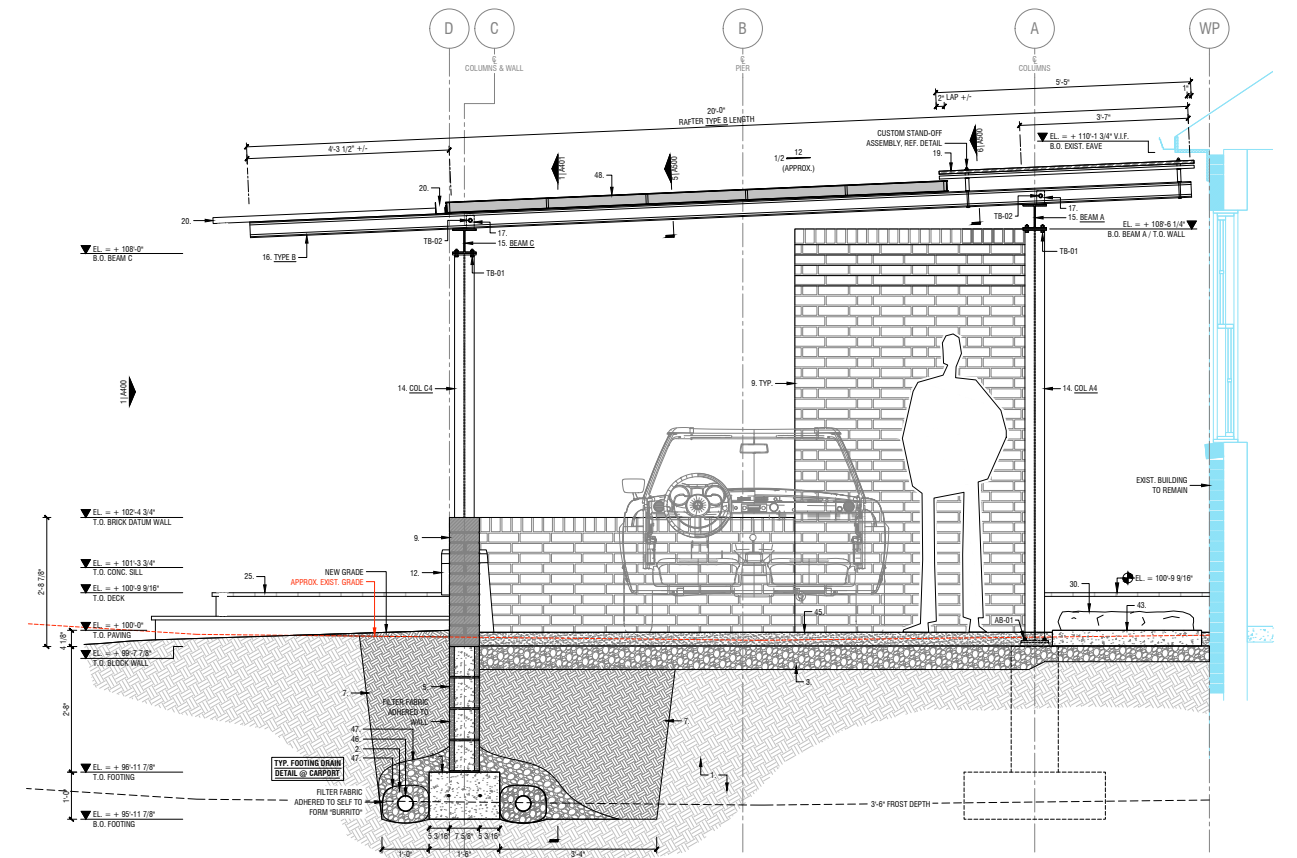
In an effort to reduce resource consumption while bringing richness to the project, regional, reclaimed, surplus, and waste materials were utilized where possible, including reclaimed Kalwall roof panels, waste brick aggregate, surplus and waste Pennsylvania Bluestone, Western-PA-sourced White Oak, found PA stones, and waste deck lumber. Additionally, the carport steel frame is entirely designed for deconstruction. Bolted connections are used throughout the structural frame and all roofing and gutter connections. At the end of its useful life, the structure could be disassembled by a small team in less than a day and all frame, roofing, and gutter materials reused—continuing their life cycles and reducing the need for greater raw material consumption.



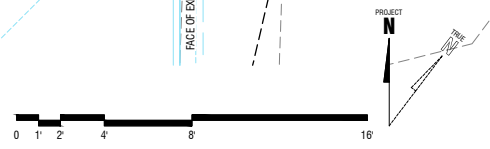
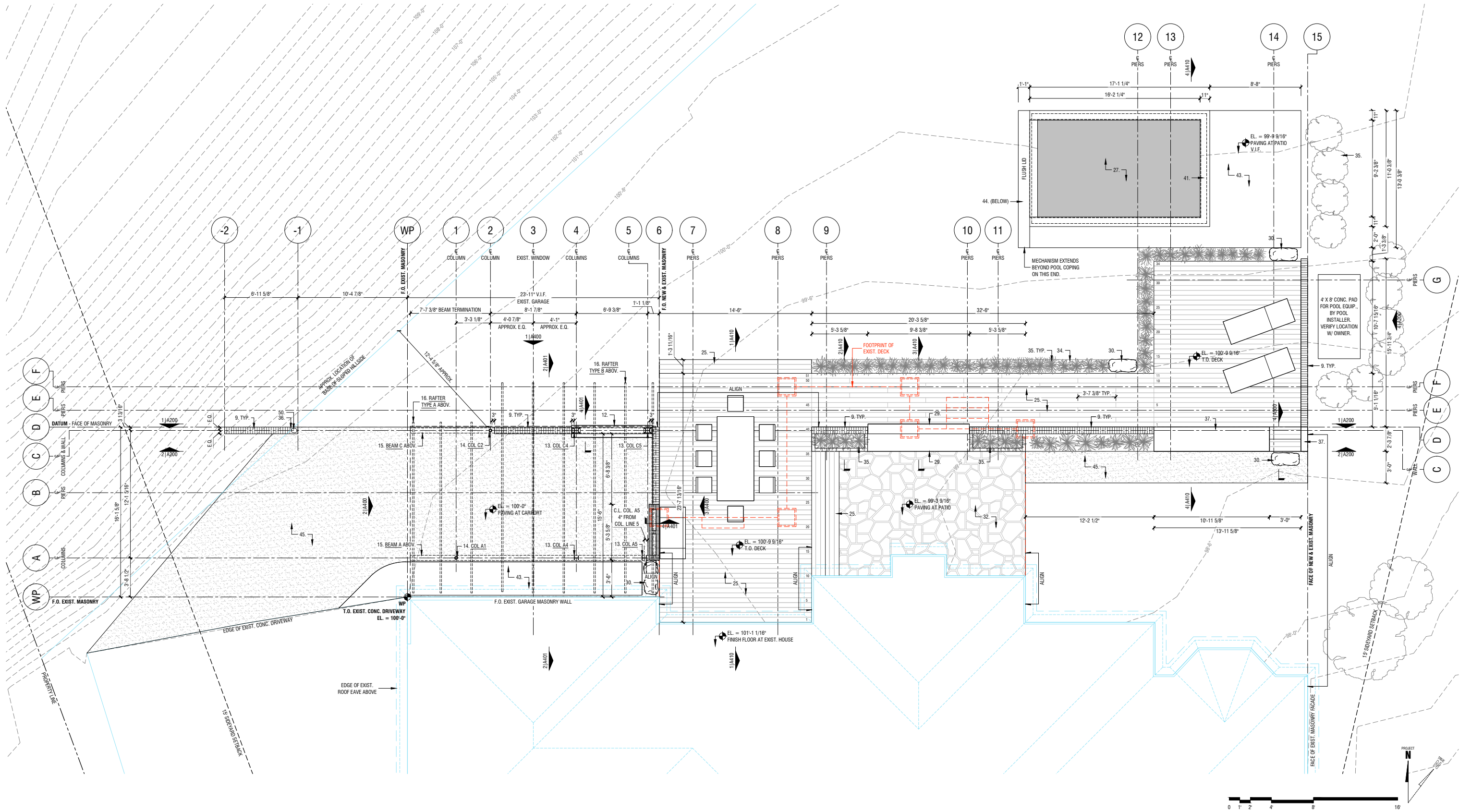


(Top) View from driveway looking north; (Bottom) Perspective drawing from Construction Documents, view from new gravel drive looking northeast; (Opposite) View from new gravel drive looking northeast toward new covered carport walkway.

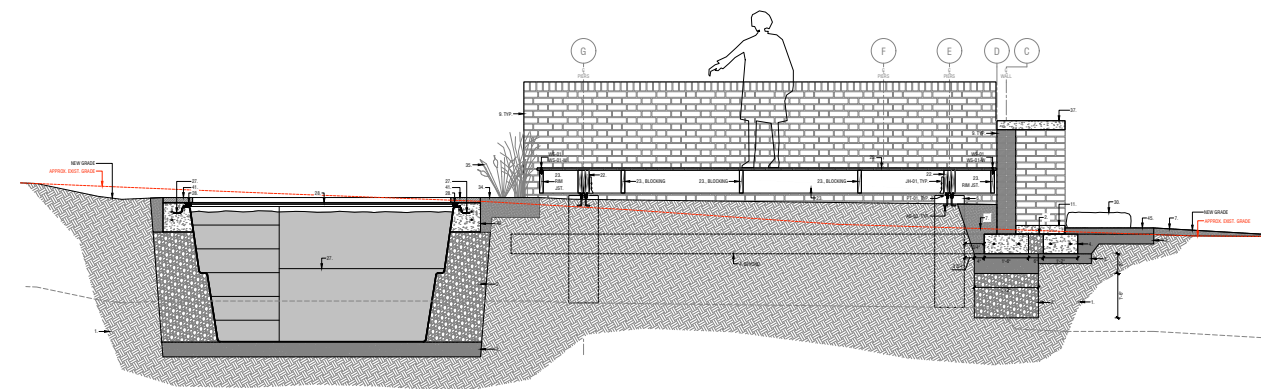
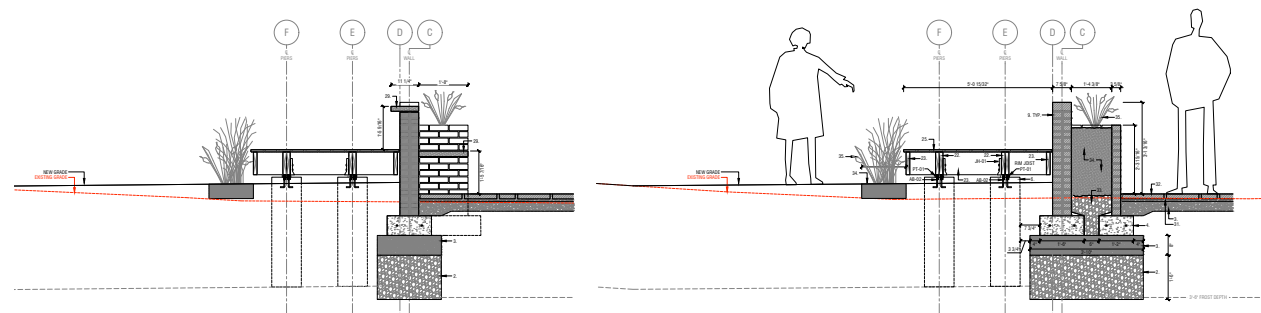
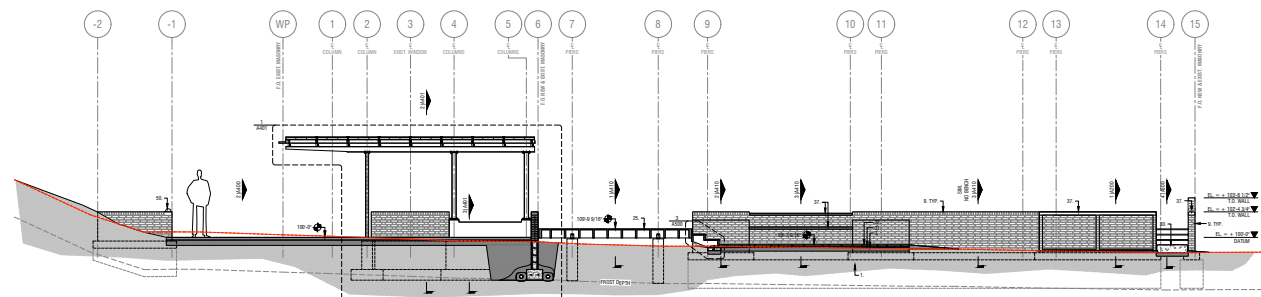
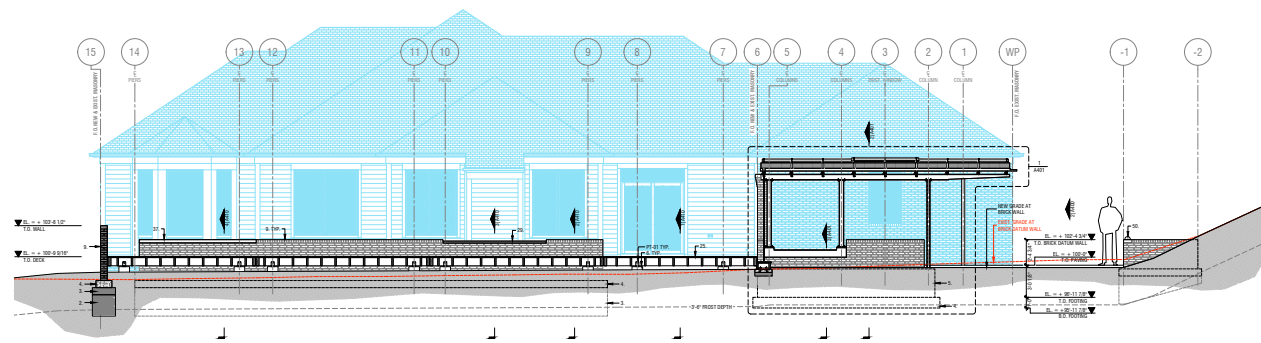




(Top) Transverse section through carport; (Bottom Left) Section through carport concrete knee wall; (Bottom Right) Section through 8ft-tall reinforced masonry grill backsplash; (Opposite) Masonry grill backsplash with Flemish bond and corbelled head.

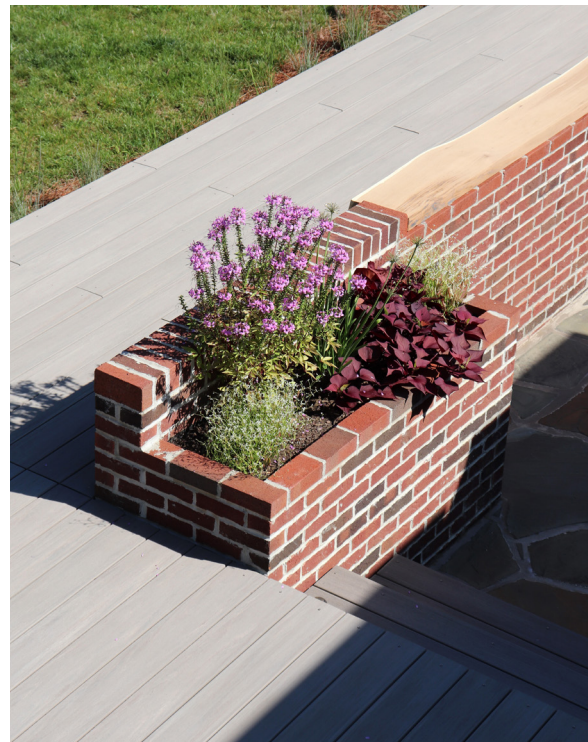
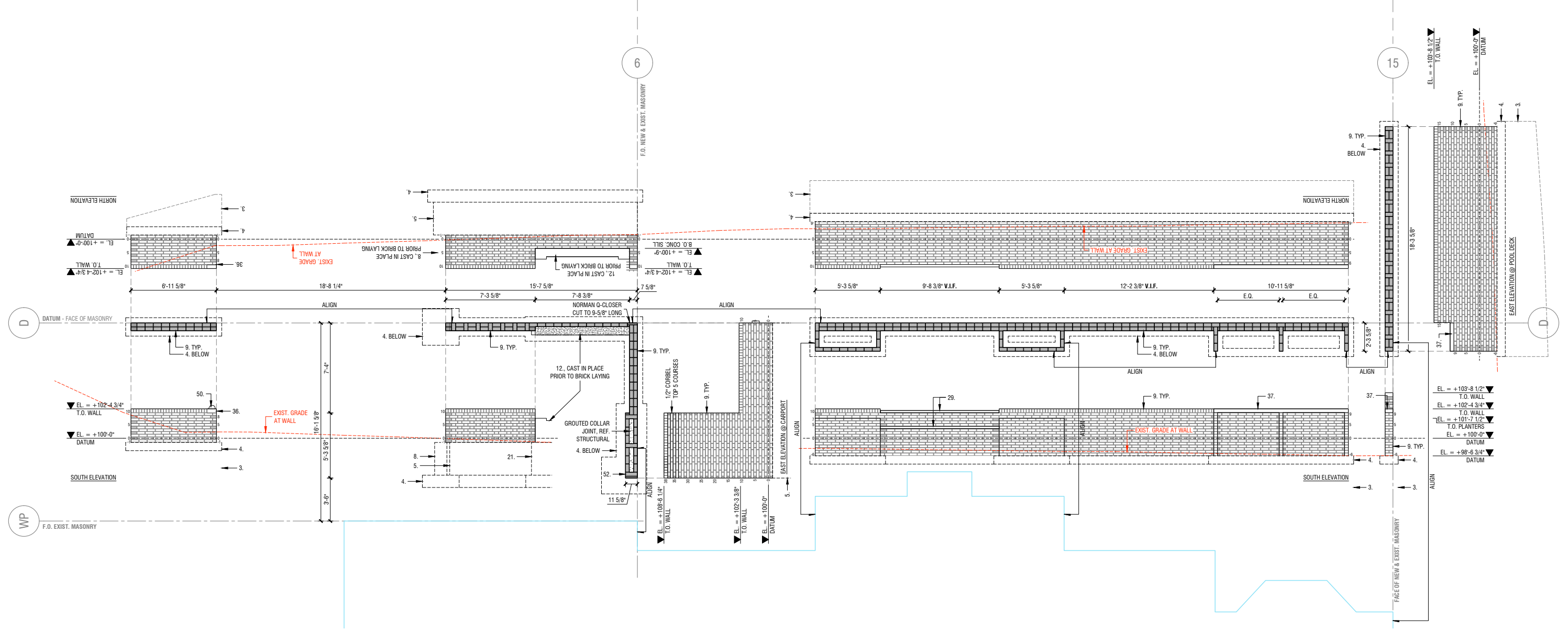




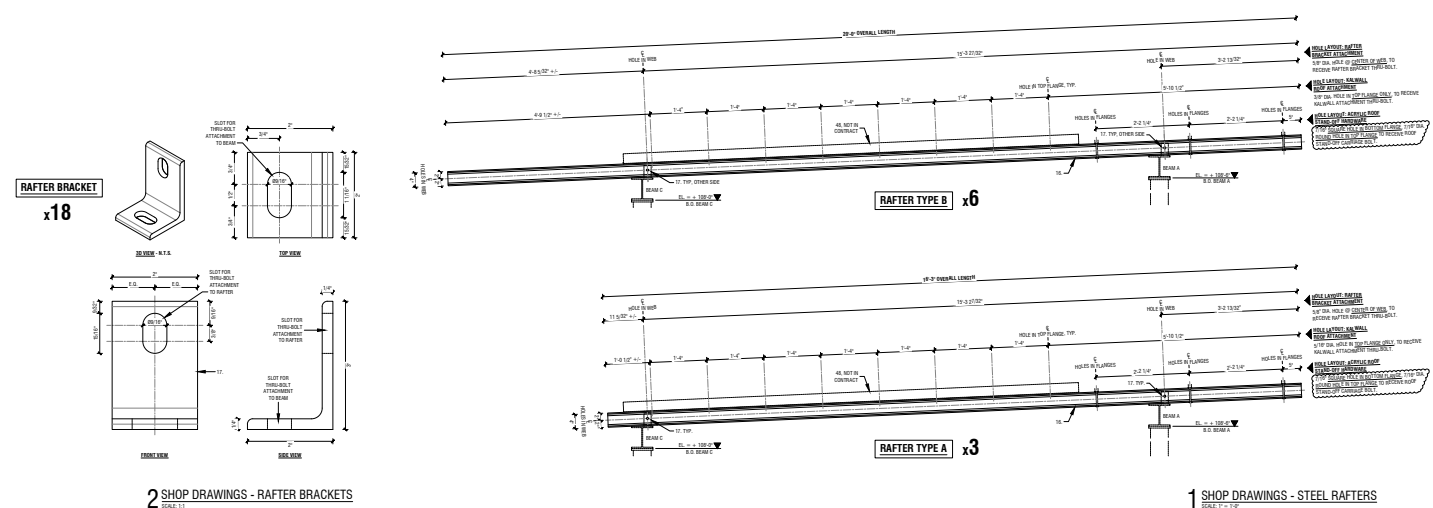
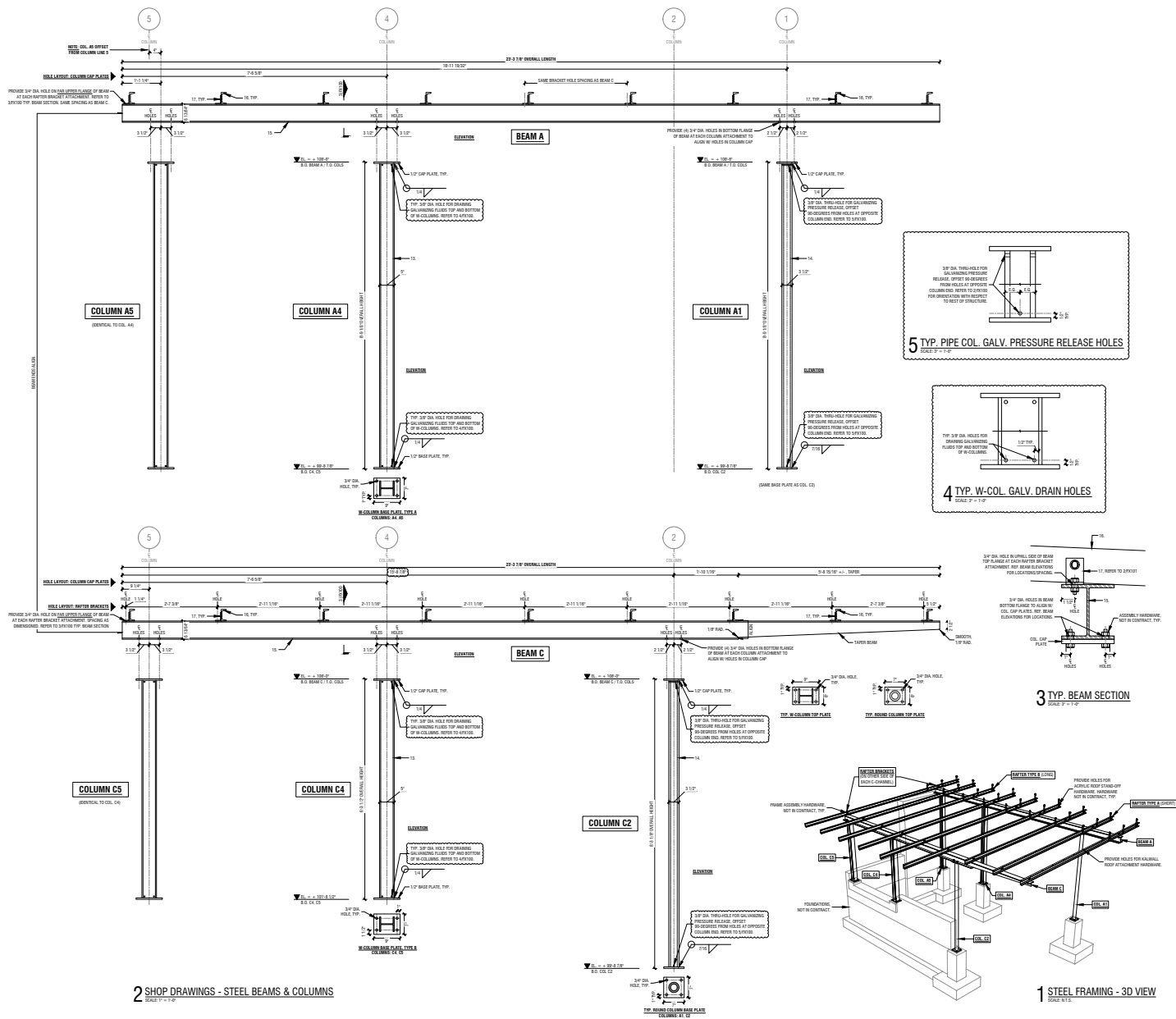


(Above) Longitudinal sections and enlarged sections through deck and pool, from Construction Documents.





(Top) Construction Documents excerpt developed to coordinate brick coursing in plan and elevation. (Bottom) The masonry walls take on varying dimension and form according to location and use.



(Above) Steel shop drawings developed to facilitate precise fabrication by steel fabricator for entirely bolted assembly on site.

