



Staff Report

Date: November 14, 2023
To: Advisory Design Review Group
From: Alex Lopez-Vega, Assistant Planner
Subject: 98 Shady Lane (DRP23-0019)

Recommendation

That the ADR Group discuss the proposed project at 98 Shady Lane and provide a formal recommendation to the Town Council regarding consistency with the Design Review criteria and standards of Ross Municipal Code (RMC) Section 18.41.100 (see **Attachment 1**).

Project Information

Property Owner: Alexander Hagan
Applicant: Joshua Thompson
Street Address: 98 Shady Lane
Parcel Number: 073-052-37
Zoning: R-1: B-10
General Plan: ML (Medium Low Density)
Flood Zone: AE (Floodway)

Project Data

	Code Standard	Existing	Proposed
Lot Area	10,000 SF	7,679 SF	No change
Floor Area (FAR)	20%	2,231 SF (29%)	No Change
Building Coverage	20%	2,231 SF (29%)	No Change

	Code Standard	Existing	Proposed
Front Setback	25'	23' 9"	No Change
North Side Setback	15'	House 9'	No Change (House) 15' 4" (Pool) 5' (Pool Equipment)
South Side Setback	15'	House 8"	No Change (House) 20' 8" (Pool)
Rear Setback	40'	House 35"	No Change (House) 9' 9" (Pool)
Impervious Surface Coverage	Minimize and/or mitigate for any increase.	1,500 SF	376 SF

Project Description

The applicant requests approval of Design Review and a Variance. The project involves construction of a new pool and spa in the rear yard of the existing single-family residence. The proposed size of the pool is 12'x 22' and the size of the spa is 6'x 8'. The project includes a pool equipment unit on the north side of the lot. A Variance is required to allow the pool/spa within the rear yard setback, and the pool equipment within the side yard setback.

Project plans are included as **Attachment 2** and Project Application is included as **Attachment 3**.

The proposed project is subject to the following permit approval:

- **Design Review is required pursuant to RMC Section 18.41.010** to allow for a project resulting in more than 50 cubic yards of grading or filling and site modifications that could affect the visual and/or physical character of the site and neighborhood, whether or not a building permit is required.
- **A Variance is required pursuant to RMC 18.48.010** to allow for the construction of a new pool/spa within the rear yard setback and the pool equipment within the side yard setback.

Background

The project site is a 7,679 square-foot (SF) narrow lot on the north side of Shady Lane. The lot has an existing 2,231 SF single-family residence. The existing single-family residence is nonconforming with respect to the minimum required side yard setbacks.



Discussion

The overall purpose of the Design Review is to guide new development, to preserve and enhance the special qualities of Ross and to sustain the beauty of the town's environment. Other purposes include: providing excellence of design consistent with the scale and quality of existing development; preserving and enhancing the historical "small town", low-density character and identity that is unique to the Town of Ross; promote and implement the design goals, policies and criteria of the Ross General Plan; upgrade the appearance, quality and condition of existing improvements in conjunction with new development or remodeling of a site; and preserve natural hydrology and drainage patterns and reduce stormwater runoff associated with development. The Design Review criteria and standards per section 18.41.100 are included as **Attachment 1**.

Public Comment

At the time of writing this report, no comments were received from the public regarding the project.

Attachments

1. Ross Municipal Code Section 18.41.100, Design Review Criteria and Standards
2. Project Plans
3. Project Application

ATTACHMENT 1

Chapter 18.41

DESIGN REVIEW

Sections:

18.41.010	Purpose.
18.41.020	Improvements subject to design review.
18.41.030	Chapter application.
18.41.040	Submittal requirements.
18.41.050	Review authority.
18.41.060	Town Council review.
18.41.070	Approval--Special conditions and findings.
18.41.080	Denial of incomplete or inactive applications.
18.41.090	Administrative review.
18.41.100	Design review criteria and standards.
18.41.110	Noncompliance.
18.41.120	Emergency situations.

18.41.010 Purpose. (a) The “small town” feel and the serene, quiet character of its neighborhoods are special qualities to the town. The existing scale and quality of architecture, the low density of development, the open and tree-covered hills, winding creeks and graciously landscaped streets and yards contribute to this ambience and to the beauty of a community in which the man-made and natural environment co-exist in harmony.

(b) This chapter is intended to guide new development to preserve and enhance these special qualities of Ross and to sustain the beauty of the town’s environment. Other specific purposes include the following:

(1) Provide excellence of design for all new development which harmonizes style, intensity and type of construction with the natural environment and respects the unique needs and features of each site and area. Promote high-quality design that enhances the community, is consistent with the scale and quality of existing development and is harmoniously integrated with the natural environment;

(2) Preserve and enhance the historical “small town,” low-density character and identity that is unique to the Town of Ross, and maintain the serene, quiet character of the town’s neighborhoods through maintaining historic design character and scale, preserving natural features, minimizing overbuilding of existing lots and retaining densities consistent with existing development in Ross and in the surrounding area;

(3) Preserve lands which are unique environmental resources including scenic resources (ridgelines, hillsides and trees), vegetation and wildlife habitat, creeks, threatened and endangered species habitat, open space and areas necessary to protect community health and

safety. Ensure that site design and intensity recognize site constraints and resources, preserve natural landforms and existing vegetation, and prevent excessive and unsightly hillside grading;

(4) Enhance important community entryways, local travel corridors and the area in which the project is located;

(5) Promote and implement the design goals, policies and criteria of the Ross general plan;

(6) Discourage the development of individual buildings which dominate the townscape or attract attention through color, mass or inappropriate architectural expression;

(7) Preserve buildings and areas with historic or aesthetic value and maintain the historic character and scale. Ensure that new construction respects and is compatible with historic character and architecture both within the site and neighborhood;

(8) Upgrade the appearance, quality and condition of existing improvements in conjunction with new development or remodeling of a site.

(9) Preserve natural hydrology and drainage patterns and reduce stormwater runoff associated with development to reduce flooding, streambank erosion, sediment in stormwater drainage systems and creeks, and minimize damage to public and private facilities. Ensure that existing site features that naturally aid in stormwater management are protected and enhanced. Recognize that every site is in a watershed and stormwater management is important on both small and large sites to improve stormwater quality and reduce overall runoff.

(c) This chapter establishes procedures and criteria for the review of buildings, structures and improvements necessary to meet this purpose. (Ord. 619 (part), 2010; Ord. 514 §1(part), 1993).

18.41.020 Improvements subject to design review.

(a) Design review is required for the following projects:

(1) All new buildings and for all exterior remodeling resulting in additions, extensions or enlargements to existing buildings exceeding two hundred square feet of new floor area, including enclosing existing open areas.

(2) All building relocations.

(3) Any increase to the existing roof height.

(4) All fences, gates or walls, or a combination of these, greater than forty-eight inches in height in any yard adjacent to the street or right-of-way.

(5) The construction of any retaining wall greater than forty-eight inches in height as measured from bottom of footing to top of wall or any terraced retaining walls totaling more than forty-eight inches in height.

(6) New retaining walls with a cumulative total of more than one hundred linear feet.

(7) Any sports court fences over 6 feet in height and for gate columns and other decorative fence elements that exceed the permitted fence height limits.

(8) Any project resulting in the removal or alteration of more than twenty-five percent of the exterior walls or wall coverings of a residence, as determined by the Planner.

(9) Any activity or project resulting in more than fifty cubic yards of grading or filling, whether or not a building permit is required.

(10) Any construction, improvements, grading/filling or other site work within twenty-five feet of a creek, waterway or drainageway, whether or not a building permit is required with the exception of creek projects in accordance with Section 18.41.020(b)(4) of this Code.

(11) Any project resulting in over 1,000 square feet of new impervious landscape surface, whether or not a building permit is required.

(12) Redevelopment, Rehabilitation, and/or renovation of existing landscaping over 2,500 square feet, including new hardscape, retaining walls, vegetation modifications, modification to topography, additional impervious surfaces, alterations of drainage patterns, and other site modifications that could affect the visual and/or physical character of the site and neighborhood, whether or not a building permit is required.

(b) Design Review is not required for the following:

(1) Repainting existing structures involving no exterior remodeling resulting in additions, extensions or alterations.

(2) Accessory Dwelling Units in Accordance with Chapter 18.42 of this Code.

(3) Attic improvement permitted under Chapter 18.46 unless the project involves exterior work within twenty-five feet of a creek, waterway or drainageway, or if the attic project is associated with a larger project that requires design review.

(4) Creek stabilization and/or stream bank repair and alteration permits subject to issuance of a building permit and local, state, and federal permitting approval.

(5) Improvement of an existing basement in accordance with Chapter 18.45 of this Code.

(6) Outdoor advertising for the Local Service Commercial (C-L) Zoning District in accordance with Section 18.41.090(d) of this Chapter. (Ord. 704 (part), 2020; Ord. 696 (part), 2019; Ord. 624 (part), 2011; Ord. 619 (part), 2010; Ord. 604 (part), 2008; Ord. 578 §7, 2003; Ord. 575 (part), 2003; Ord. 558 (part), 2001; Ord. 557 (part), 2001; Ord. 544 (part), 1999; Ord. 534 (part), 1996; Ord. 514 §1(part), 1993).

18.41.030 Chapter application. No work shall be started or authorized on any matter which is subject to design review on any lot located within the town until a design review application is approved, unless written approval for the work is first given by the town planner. (Ord. 514 §1(part), 1993).

18.41.040 Submittal requirements. Every design review application shall include drawings, plans, specifications and graphic or written material as required by the town planner or town council to clearly and accurately describe the proposed work, its effect on the environment and its relationship to existing improvements. The applicant shall pay a fee as set by the town council. All drawings and plans shall show both existing and proposed elevations and clearly identify all new construction and label all materials as new or existing. A structural engineer's report on the condition of the existing structure and its ability to meet building code requirements without additional modifications shall be prepared as required by the town planner or town council. An extensive termite, dry rot damage report shall be prepared, as required by the town planner or town council, which shall not only identify areas of damage but shall explore

to determine the full extent of the damage, both exposed and concealed. Complete photos and a videotape of the structure's exterior shall be provided as required by the town planner or town council. A project manager, hired by the town at the applicant's expense, shall monitor demolition/construction activity as deemed necessary by the town building official. The applicant shall submit a proposed erosion control and sediment control plan, stormwater control plan, and/or stormwater facilities operation and maintenance plan if required by chapter 12.28 of the town code. Standard submittal requirements will be prepared by the town planner. Additional material may be required by the town planner. (Ord. 657 (part), 2014; Ord. 604 (part), 2008: Ord. 534 (part), 1996: Ord. 514 §1(part), 1993).

18.41.050 Review authority. The town council will conduct the design review provided for by this chapter, except as otherwise provided in this chapter. (Ord. 641 (part), 2013; Ord. 514 §1(part), 1993).

18.41.060 Town Council review. Except as otherwise provided in this chapter, the town council will decide design review applications at a public meeting. The town council will review the application at its next available meeting following a determination by the town planner that the application is complete. The town clerk will mail written notice at least ten calendar days prior to the hearing to the applicant and to all owners of property within three hundred feet from the exterior boundaries of the project site. (Ord. 641 (part), 2013; Ord. 514 §1(part), 1993).

18.41.070 Approval--Special conditions and findings.

(a) The town council may approve, conditionally approve or deny an application for design review. The town council shall include conditions necessary to meet the purpose of this chapter and for substantial compliance with the criteria set forth in this chapter. The council may adopt by resolution standard conditions for all projects to meet.

(b) The town council shall make the following findings in approving any project:

(1) The project is consistent with the purpose of this chapter as outlined in Section 18.41.010.

(2) The project is in substantial compliance with the design criteria of Section 18.41.100.

(3) The project is consistent with the Ross general plan and zoning ordinance.

(c) The town council shall deny any project for which it cannot make the above findings required in this section. (Ord. 514 §1(part), 1993).

18.41.080 Denial of incomplete or inactive applications. Consistent with state law, the town planner may administratively deny without prejudice any application which remains incomplete or inactive for a period of greater than ninety days or is continued at the applicant's request for more than sixty days. (Ord. 514 §1(part), 1993).

18.41.090 Administrative review. The town planner may administratively approve, conditionally approve or deny the following without notice or a public hearing: (a) An amendment to town council approved plans that the town planner determines to be in substantial conformity with the approved plans or minor or incidental in nature and consistent

with the intent and criteria of this chapter and with zoning ordinance regulations. Such administrative review may include, but is not limited to, the addition of skylights, greenhouse windows and other minor changes from approved design review plans. (b) Design review of fences pursuant to the provisions of Section 18.41.070 and Section 18.41.080. (c) An application that involves alteration of more than twenty-five percent of the exterior walls, but less than twenty-five percent of the exterior wall coverings of a residence pursuant to the provisions of Section 18.41.070 and Section 18.41.080. (d) Outdoor advertising for the Local Service Commercial (C-L) Zoning District in consultation with the Town's Advisory Design Review Group. (Ord. 704 (part), 2020; Ord. 641 (part), 2013; Ord. 514 §1(part), 1993).).

18.41.100 Design review criteria and standards. Until such time the Town Council adopts Residential Design Guidelines, this section provides guidelines for development. Compliance is not mandatory but is strongly recommended. The Town Council may deny an application where there are substantial inconsistencies with one or more guidelines in a manner that is counter to any purpose of this ordinance.

(a) Preservation of Natural Areas and Existing Site Conditions.

(1) The existing landscape should be preserved in its natural state by keeping the removal of trees, vegetation, rocks and soil to a minimum. Development should minimize the amount of native vegetation clearing, grading, cutting and filling and maximize the retention and preservation of natural elevations, ridge lands and natural features, including lands too steep for development, geologically unstable areas, wooded canyons, areas containing significant native flora and fauna, rock outcroppings, view sites, watersheds and watercourses, considering zones of defensible space appropriate to prevent the spread of fire.

(2) Sites should be kept in harmony with the general appearance of neighboring landscape. All disturbed areas should be finished to a natural-appearing configuration and planted or seeded to prevent erosion.

(3) Lot coverage and building footprints should be minimized where feasible, and development clustered, to minimize site disturbance area and preserve large areas of undisturbed space. Environmentally sensitive areas, such as areas along streams, forested areas, and steep slopes shall be a priority for preservation and open space.

(b) Relationship Between Structure and Site.

There should be a balanced and harmonious relationship among structures on the site, between structures and the site itself, and between structures on the site and on neighboring properties. All new buildings or additions constructed on sloping land should be designed to relate to the natural land forms and step with the slope in order to minimize building mass, bulk and height and to integrate the structure with the site.

(c) Minimizing Bulk and Mass.

(1) New structures and additions should avoid monumental or excessively large size out of character with their setting or with other dwellings in the neighborhood. Buildings should be compatible with others in the neighborhood and not attract attention to themselves. When nonconforming floor area is proposed to be retained with site redevelopment, the Council may consider the volume and mass of the replacement floor area and limit the volume and mass where necessary to meet the intent of these standards.

(2) To avoid monotony or an impression of bulk, large expanses of any one material on a single plane should be avoided, and large single plane retaining walls should be avoided. Vertical and horizontal elements should be used to add architectural variety and to break up building plans. The development of dwellings or dwelling groups should not create excessive mass, bulk or repetition of design features.

(d) Materials and Colors.

(1) Buildings should use materials and colors that minimize visual impacts, blend with the existing landforms and vegetative cover, are compatible with structures in the neighborhood and do not attract attention to the structures. Colors and materials should be compatible with those in the surrounding area. High-quality building materials should be used.

(2) Natural materials such as wood and stone are preferred, and manufactured materials such as concrete, stucco or metal should be used in moderation to avoid visual conflicts with the natural setting of the structure.

(3) Soft and muted colors in the earthtone and woodtone range are preferred and generally should predominate.

(e) Drives, Parking and Circulation.

(1) Good access, circulation and off-street parking should be provided consistent with the natural features of the site. Walkways, driveways, curb cuts and off-street parking should allow smooth traffic flow and provide for safe ingress and egress to a site.

(2) Access ways and parking areas should be in scale with the design of buildings and structures on the site. They should be sited to minimize physical impacts on adjacent properties related to noise, light and emissions and be visually compatible with development on the site and on neighboring properties. Off-street parking should be screened from view. The area devoted to driveways, parking pads and parking facilities should be minimized through careful site planning.

(3) Incorporate natural drainage ways and vegetated channels, rather than the standard concrete curb and gutter configuration to decrease flow velocity and allow for stormwater infiltration, percolation and absorption.

(f) Exterior Lighting.

Exterior lighting should not create glare, hazard or annoyance to adjacent property owners or passersby. Lighting should be shielded and directed downward, with the location of lights coordinated with the approved landscape plan. Lamps should be low wattage and should be incandescent.

(g) Fences and Screening.

Fences and walls should be designed and located to be architecturally compatible with the design of the building. They should be aesthetically attractive and not create a “walled-in” feeling or a harsh, solid expanse when viewed from adjacent vantage points. Front yard fences and walls should be set back sufficient distance from the property line to allow for installation of a landscape buffer to soften the visual appearance. Transparent front yard fences and gates over four feet tall may be permitted if the design and landscaping is compatible and consistent with the design, height and character of fences and landscaping in the neighborhood. Front yard vehicular gates should be transparent to let light and lines of sight through the gate. Solid walls and fences over four feet in height are generally discouraged on property lines adjacent to a right-of-way but may be permitted for properties adjacent to Poplar Avenue and Sir Francis Drake

Boulevard based on the quality of the design, materials, and landscaping proposed. Driveway gates should be automatic to encourage use of onsite parking. Pedestrian gates are encouraged for safety, egress, and to encourage multi-modal transportation and pedestrian-friendly neighborhood character.

(h) Views.

Views of the hills and ridgelines from public streets and parks should be preserved where possible through appropriate siting of improvements and through selection of an appropriate building design including height, architectural style, roof pitch and number of stories.

(i) Natural Environment.

(1) The high-quality and fragile natural environment should be preserved and maintained through protecting scenic resources (ridgelines, hillsides, trees and tree groves), vegetation and wildlife habitat, creeks, drainageways threatened and endangered species habitat, open space and areas necessary to protect community health and safety.

(2) Development in upland areas shall maintain a setback from creeks or drainageways. The setback shall be maximized to protect the natural resource value of riparian areas and to protect residents from geologic and other hazards.

(3) Development in low-lying areas shall maintain a setback from creeks or drainageways consistent with the existing development pattern and intensity in the area and on the site, the riparian value along the site, geologic stability, and the development alternatives available on the site. The setback should be maximized to protect the natural resource value of the riparian area and to protect residents from geologic and flood hazards.

(4) The filling and development of land areas within the one-hundred-year flood plain is discouraged. Modification of natural channels of creeks is discouraged. Any modification shall retain and protect creekside vegetation in its natural state as much as possible. Reseeding or replanting with native plants of the habitat and removal of broom and other aggressive exotic plants should occur as soon as possible if vegetation removal or soil disturbance occurs.

(5) Safe and adequate drainage capacity should be provided for all watercourses.

(j) Landscaping.

(1) Attractive, fire-resistant, native species are preferred. Landscaping should be integrated into the architectural scheme to accent and enhance the appearance of the development. Trees on the site, along public or private streets and within twenty feet of common property lines, should be protected and preserved in site planning. Replacement trees should be provided for trees removed or affected by development. Native trees should be replaced with the same or similar species. Landscaping should include planting of additional street trees as necessary.

(2) Landscaping should include appropriate plantings to soften or screen the appearance of structures as seen from off-site locations and to screen architectural and mechanical elements such as foundations, retaining walls, condensers and transformers.

(3) Landscape plans should include appropriate plantings to repair, reseed and/or replant disturbed areas to prevent erosion.

(4) Landscape plans should create and maintain defensible spaces around buildings and structures as appropriate to prevent the spread of wildfire.

(5) Wherever possible, residential development should be designed to preserve, protect and restore native site vegetation and habitat. In addition, where possible and appropriate, invasive vegetation should be removed.

(k) Health and Safety.

Project design should minimize the potential for loss of life, injury or damage to property due to natural and other hazards. New construction must, at a minimum, adhere to the fire safety standards in the Building and Fire Code and use measures such as fire-preventive site design, landscaping and building materials, and fire-suppression techniques and resources. Development on hillside areas should adhere to the wildland urban interface building standards in Chapter 7A of the California Building Code. New development in areas of geologic hazard must not be endangered by nor contribute to hazardous conditions on the site or on adjoining properties.

(l) Visual Focus.

(1) Where visibility exists from roadways and public vantage points, the primary residence should be the most prominent structure on a site. Accessory structures, including but not limited to garages, pool cabanas, accessory dwellings, parking pads, pools and tennis courts, should be sited to minimize their observed presence on the site, taking into consideration runoff impacts from driveways and impervious surfaces. Front yards and street side yards on corner lots should remain free of structures unless they can be sited where they will not visually detract from the public view of the residence.

(2) Accessory structures should generally be single-story units unless a clearly superior design results from a multilevel structure. Accessory structures should generally be small in floor area. The number of accessory structures should be minimized to avoid a feeling of overbuilding a site. Both the number and size of accessory structures may be regulated in order to minimize the overbuilding of existing lots and attain compliance with these criteria.

(m) Privacy.

Building placement and window size and placement should be selected with consideration given to protecting the privacy of surrounding properties. Decks, balconies and other outdoor areas should be sited to minimize noise to protect the privacy and quietude of surrounding properties. Landscaping should be provided to protect privacy between properties. Where nonconformities are proposed to be retained, the proposed structures and landscaping should not impair the primary views or privacy of adjacent properties to a greater extent than the impairment created by the existing nonconforming structures.

(n) Consideration of Existing Nonconforming Situations.

Proposed work should be evaluated in relationship to existing nonconforming situations, and where determined to be feasible and reasonable, consideration should be given to eliminating nonconforming situations.

(o) Relationship of Project to Entire Site.

(1) Development review should be a broad, overall site review, rather than with a narrow focus oriented only at the portion of the project specifically triggering design review. All information on site development submitted in support of an application constitutes the approved design review project and, once approved, may not be changed by current or future property owners without town approval.

(2) Proposed work should be viewed in relationship to existing on-site conditions. Pre-existing site conditions should be brought into further compliance with the purpose and design criteria of this chapter as a condition of project approval whenever reasonable and feasible.

(p) Relationship to Development Standards in Zoning District.

The town council may impose more restrictive development standards than the standards contained in the zoning district in which the project is located in order to meet these criteria. Where two or more contiguous parcels are merged into one legal parcel, the Town Council may consider the total floor area of the existing conforming and legal nonconforming structures and may reduce the permitted floor area to meet the purposes of these standards.

(q) Project Reducing Housing Stock.

Projects reducing the number of housing units in the town, whether involving the demolition of a single unit with no replacement unit or the demolition of multiple units with fewer replacement units, are discouraged; nonetheless, such projects may be approved if the council makes findings that the project is consistent with the neighborhood and town character and that the project is consistent with the Ross general plan.

(r) Maximum Floor Area.

Regardless of a residentially zoned parcel's lot area, a guideline maximum of ten thousand square feet of total floor area is recommended. Development above guideline floor area levels may be permitted if the town council finds that such development intensity is appropriate and consistent with this section, the Ross municipal Code and the Ross general plan. Factors which would support such a finding include, but are not limited to: excellence of design, site planning which minimizes environmental impacts and compatibility with the character of the surrounding area.

(s) Setbacks.

All development shall maintain a setback from creeks, waterways and drainageways. The setback shall be maximized to protect the natural resource value of riparian areas and to protect residents from geologic and other hazards. A minimum fifty-foot setback from the top of bank is recommended for all new buildings. At least twenty-five feet from the top of bank should be provided for all improvements, when feasible. The area along the top of bank of a creek or waterway should be maintained in a natural state or restored to a natural condition, when feasible.

(t) Low Impact Development for Stormwater Management.

Development plans should strive to replicate natural, predevelopment hydrology. To the maximum extent possible, the post-development stormwater runoff rates from the site should be no greater than pre-project rates. Development should include plans to manage stormwater runoff to maintain the natural drainage patterns and infiltrate runoff to the maximum extent practical given the site's soil characteristics, slope, and other relevant factors. An applicant may be required to provide a full justification and demonstrate why the use of Low Impact Development (LID) design approaches is not possible before proposing to use conventional structural stormwater management measures which channel stormwater away from the development site.

(1) Maximize Permeability and Reduce Impervious Surfaces. Use permeable materials for driveways, parking areas, patios and paths. Reduce building footprints by using

more than one floor level. Pre-existing impervious surfaces should be reduced. The width and length of streets, turnaround areas, and driveways should be limited as much as possible, while conforming with traffic and safety concerns and requirements. Common driveways are encouraged. Projects should include appropriate subsurface conditions and plan for future maintenance to maintain the infiltration performance.

(2) Disperse Runoff On Site. Use drainage as a design element and design the landscaping to function as part of the stormwater management system. Discharge runoff from downspouts to landscaped areas. Include vegetative and landscaping controls, such as vegetated depressions, bioretention areas, or rain gardens, to decrease the velocity of runoff and allow for stormwater infiltration on-site. Avoid connecting impervious areas directly to the storm drain system.

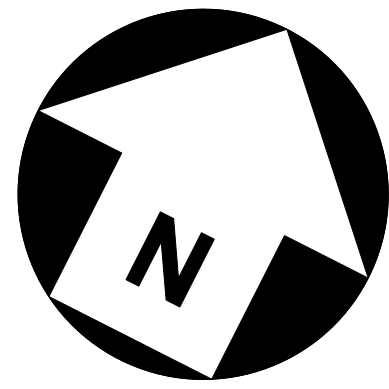
(3) Include Small-Scale Stormwater Controls and Storage Facilities. As appropriate based on the scale of the development, projects should incorporate small-scale controls to store stormwater runoff for reuse or slow release, including vegetated swales, rooftop gardens or “green roofs”, catch-basins retro-fitted with below-grade storage culverts, rain barrels, cisterns and dry wells. Such facilities may be necessary to meet minimum stormwater peak flow management standards, such as the no net increase standard. Facilities should be designed to minimize mosquito production. (Ord. 696 (part), 2019; Ord. 653 (part), 2014; Ord. 641 (part), 2013; Ord. 619 (part), 2010; Ord. 611 (part), 2008; Ord. 575 (part), 2003; Ord. 555, 2000; Ord. 543-1 (part), 1998; Ord. 514 §1 (part), 1993).

18.41.110 Noncompliance. Failure to comply in any respect with the conditions or approved plans constitutes grounds for the town to immediately stop work related to the noncompliance until the matter is resolved. Such violation will be subject to the enforcement penalties procedures of Chapter 18.64 of this code. (Ord. 514 §1(part), 1993).

18.41.120 Emergency situations. If a condition exists which requires immediate action to protect public health, safety and welfare, the town building official may, after consultation with the town planner, grant emergency approval to temporarily correct or ameliorate such condition without submitting the matter to the Town Council for design review approval or posting written notice. Permanent corrective measures shall require design review approval in accordance with the provisions of this chapter. The building official and town planner may impose conditions on an emergency permit as necessary to ensure compliance with this chapter. (Ord. 514 §1(part), 1993).

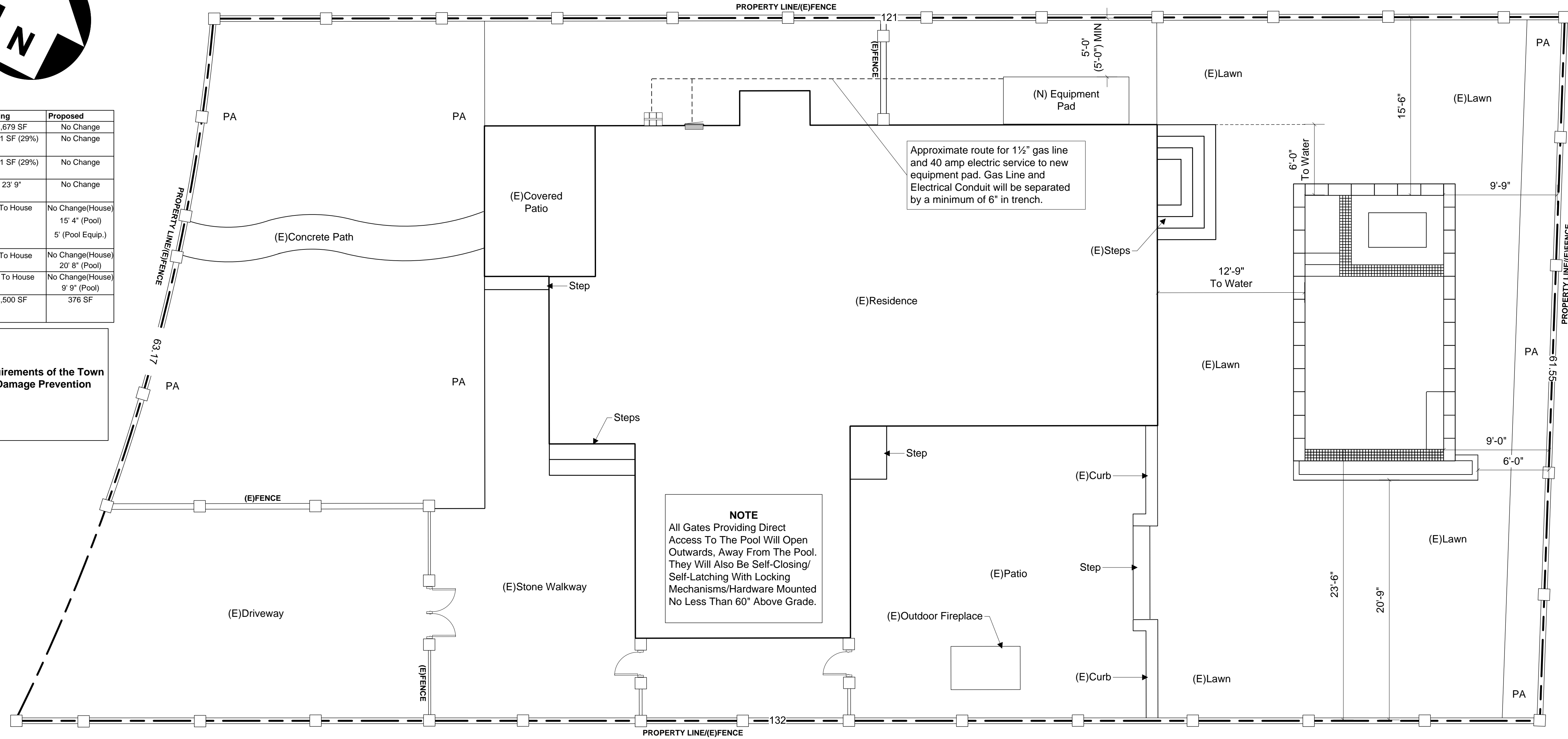
ATTACHMENT 2

Site Plan



	Code Standard	Existing	Proposed
Lot Area	10,000 SF	7,679 SF	No Change
Floor Area (FAR)	20%	2,231 SF (29%)	No Change
Building Coverage	20%	2,231 SF (29%)	No Change
Front Setback	25'	23' 9"	No Change
North Side Setback	15'	9' To House 15' 4" (Pool) 5' (Pool Equip.)	No Change(House) No Change(Pool) No Change(Pool Equip.)
South Side Setback	15'	8' To House	No Change(House)
Rear Setback	40'	35' To House	No Change(House)
Impervious Surface Coverage	Minimize and/or mitigate for any increase	1,500 SF	376 SF

All work to comply with the requirements of the Town of Ross Section 15.36 Flood Damage Prevention Code.



NOTE
All Gates Providing Direct Access To The Pool Will Open Outwards, Away From The Pool. They Will Also Be Self-Closing/ Self-Latching With Locking Mechanisms/Hardware Mounted No Less Than 60" Above Grade.

NOTE

THE NEW SWIMMING POOL WILL BE EQUIPPED WITH AT LEAST 2 OF THE 7 DROWNING PREVENTION SAFETY FEATURES PER CBC SEC. 3109.4.4.2 AND STATE OF CALIFORNIA BUILDING STANDARDS INFORMATION BULLETIN 17-08 EFFECTIVE JANUARY 1, 2018.

- 1) THE NEW SWIMMING POOL WILL BE EQUIPPED WITH AN AUTOMATIC SAFETY COVER THAT IS MANUALLY CONTROLLED FROM A KEY SWITCH.
- 2) EXIT ALARMS ON THE PRIVATE SINGLE-FAMILY HOME'S DOORS THAT PROVIDE DIRECT ACCESS TO THE SWIMMING POOL OR SPA. THE EXIT ALARM MAY CAUSE EITHER AN ALARM NOISE OR A VERBAL WARNING, SUCH AS A REPEATING NOTIFICATION THAT "THE DOOR TO THE POOL IS OPEN."

Applicable Codes

2022 California Building Code (CBC), 2022 California Residential Code (CRC), 2022 California Electrical Code (CEC), 2022 California Mechanical Code (CMC), 2022 California Plumbing Code (CPC), 2022 California Energy Code (CEC), 2022 California Fire Code (CFC), 2022 California Green Code (CGC), International Swimming Pool, Spa Code, 2018 Edition.

Type Of Construction

New Pool/Spa

Scope of Work

- 1) Set forms and excavate for a new in-ground pool that is 12'x22' with an interior 6'x8' spa and automatic safety cover.
- 2) Tie steel reinforcement per engineered plan. See sheet SP1.
- 3) Install plumbing as follows: Pool - 2 1/2" main drain suction line, 2 1/2" skimmer suction line, 2" return line, 1 1/2" air line. Spa - 3" jet pump suction line, 2 1/2" main drain suction line, 2 1/2" jet return line, 2" return line, 2" air line.
- 4) Apply gunite material to form new pool, spa and cover vault shell.
- 5) Install a precast coping stone on top of pool bond beam.
- 6) Install a standard waterline tile.
- 7) Install equipment as follows: Pentair EasyTouch 8 Controller, Pentair Variable Speed Pump, Pentair Whisperflo Jet Pump, Pentair 520 Cartridge Filter, Pentair 400 Mastertemp Heater, (2) Pentair White LED IntelliBrite Pool Lights, (1) Pentair White LED IntelliBrite Spa Light.
- 8) Pressure wash gunite structure, clean up construction debris and prep for plaster.
- 9) Apply a standard Tahoe Blue plaster on pool and spa interior.
- 10) Start up system and balance chemicals.
- 11) Install automatic safety cover.

Mechanical, Plumbing Requirements

- 1) An atmospheric or pressure backflow prevention device will be placed on the water supply to the pool.
- 2) Anti-siphon devices will be placed on all hose bibs within the pool area
- 3) A minimum of 36 inches is required between filter and heater for future installation of solar

Electrical Requirements

- 1) All metal within 5 feet horizontally and 12 feet vertically of water will be bonded.
- 2) All receptacles providing power to pool equipment will be GFCI protected.
- 3) An equipotential bonding of a minimum 8AWG will be installed.
- 4) A minimum of 9 sq.in. of conductive material will be in constant contact with the pool water and bonded to the pool equipment grounding system.

NOTE

(N) Outdoor Weather Proof Convenience Plug, GFCI Protected Electrical Receptacle Will Be Installed No Closer Than 6' And No Further Than 20' From Pool. Location TBD During Project.

NOTE

A New 1" Conduit With A #8 Conductor For A 40 AMP Service Will Be Run From The Existing Main Panel To The New Equipment Pad.

NOTE

A New 1 1/2" Gas Line Will Be Run For Approximately 30' From The Existing Gas Meter To The New Equipment Pad Where It Will Be Connected To The New Pool/Spa Heater.

NOTE

Approximately 46 Cubic Yards Of Dirt Will Be Removed In The Excavation Of The Pool. Approximately 5 Yards Of Rock Will Be Used For A 6" Gravel Bed In The Pool, If Required By The Engineer. All Spoils From Excavation Will Be Off-Hauled, Dumping/Recycling Site TBD At Start Of Job.

Professional Consultants And Designers

- 1) **Engineer (RPE 73459)** - Gerry Lenehan, Lenehan Engineering 1024 Iron Point Road Suite 100-1486, Folsom, CA 95630
- 2) **Draftsman/Designer** - Josh Thompson, Herb's Pool Service 3413 Petaluma Blvd N. Petaluma, CA 94952 (415) 726-0001
- 3) **Pool Project Manager** - Tim Lindelli, Herb's Pool Service 3413 Petaluma Blvd N. Petaluma, CA 94952 (415) 726-3119

Owner: Alexander Hagan
Parcel# 073-052-37
Mailing Address: 98 Shady Lane
PO BOX 1750 Ross, CA 94957
Jurisdiction: Ross
Zoning: R-1 B-10
Use Type: Residential Single Family
Units: 1 @ 2,231 Sq. Ft.
Lot Square Footage: 7,679

By		Issue/Revision		Date		Symbol	
License Class	C-53	Contractor License	791298	<i>Josh Thompson</i>			
3413 Petaluma Blvd N. Petaluma, CA 94952 (415)726-0001, (415) 479-4040							
New Pool for 98 Shady Lane Hagan Residence 98 Shady Lane Ross, CA 94957							
SHEET TITLE	Date	APN #	Drawn	Scale			
Site Plan	11/8/2023	073-052-37	JT	3/16" = 1'			
SHEET:	P-1						
1 of 5 SHEETS							

Sheet Index

- P-1 Site Plan
- P-2 New Pool/Spa Plan
- P-3 Pool Flow Rates
- P-4 Equipment Sheet
- P-5 General Notes
- SP1 Engineering

2 1/2 inches				
Volume Flow (gal/min)	Volume Flow (gal/hr)	Velocity (ft/sec)	Friction Head (ft/100 ft)	Friction Loss (psi/100 ft)
5	300	0.3	0.04	0.02
7	420	0.5	0.05	0.02
10	600	0.7	0.1	0.04
15	900	1.0	0.2	0.08
20	1200	1.4	0.3	0.1
25	1500	1.7	0.5	0.2
30	1800	2.1	0.7	0.3
35	2100	2.4	0.9	0.4
40	2400	2.7	1.2	0.5
45	2700	3.1	1.4	0.6
50	3000	3.4	1.8	0.8
60	3600	4.1	2.5	1.1
70	4200	4.8	3.3	1.4
75	4500	5.1	3.7	1.6
80	4800	5.5	4.2	1.8
90	5400	6.2	5.2	2.3
100	6000	6.8	6.3	2.7
125	7500	8.6	9.6	4.2
150	9000	10.3	13.4	5.8

2 inches				
Volume Flow (gal/min)	Volume Flow (gal/hr)	Velocity (ft/sec)	Friction Head (ft/100 ft)	Friction Loss (psi/100 ft)
5	300	0.5	0.07	0.03
7	420	0.7	0.1	0.05
10	600	1.0	0.2	0.09
15	900	1.5	0.5	0.2
20	1200	2.0	0.8	0.3
25	1500	2.4	1.2	0.5
30	1800	2.9	1.6	0.7
35	2100	3.4	2.2	0.9
40	2400	3.9	2.8	1.2
45	2700	4.4	3.4	1.5
50	3000	4.9	4.2	1.8
60	3600	5.9	5.8	2.5
70	4200	6.8	7.8	3.4
75	4500	7.3	8.8	3.8
80	4800	7.8	9.9	4.3
90	5400	8.8	12.4	5.4
100	6000	9.8	15.0	6.5

Pool 22' LONG x 12' WIDE AND 3'6" x 5'6" DEEP


LENGTH X WIDTH X AVERAGE DEPTH X 7.48 = GALLONS

(L) 22' x (W) 12' = 264 x (A.D.) 4.5 = 1,188 x 7.48 = 8,886 GALLONS

8 HOURS = 480 MINUTES

8,886 GALLONS / 480 MINUTES = 19 GALLONS PER MINUTE

- 19 GALLONS PER MINUTE THROUGH A 2 1/2" SCH40 PVC SUCTION LINE WILL TRAVEL AT 1.4 FEET PER SECOND WITH A MAXIMUM 100' OF HEAD. BOTH THE MAIN DRAIN AND SKIMMER SUCTION LINES ARE 2 1/2" SCH40 PVC
- 19 GALLONS PER MINUTE THROUGH A 2" PVC PIPE WILL TRAVEL AT 2.0 FEET PER SECOND WITH A MAX 100' HEAD. THE POOL RETURN LINE WILL BE 2" SCH 40 PVC.



10" ROUND STAR SUMPLESS SUCTION OUTLET COVER, UNIVERSAL ADAPTER KIT AND MUD FRAME


VGB Series

The AquaStar line of suction outlet covers, compliant with the Virginia Graeme-Baker Pool and Spa Safety Act (ANSI/APSP 16-2 011 and NSF/ANSI 50-2009a)

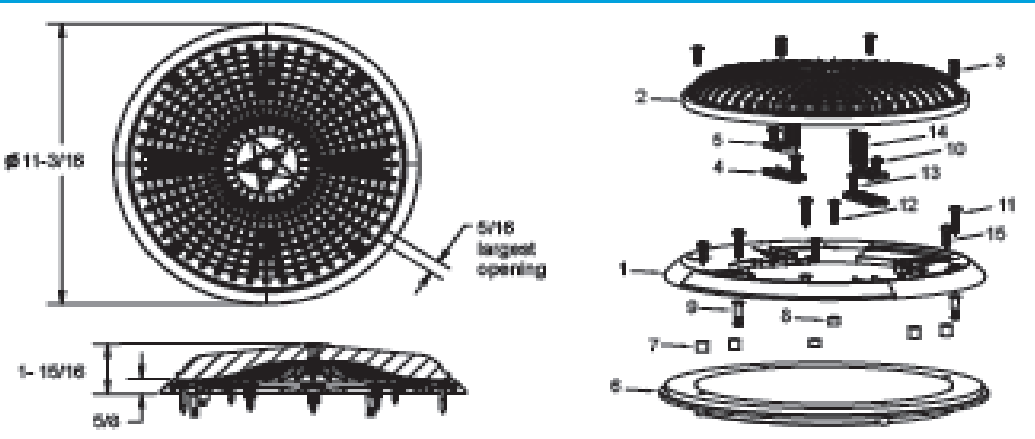
FEATURES
 For single or multiple drain use (see installation instructions)
 Single - sumpless.
 Floor/Wall: 170 GPM at 1.7 fps
 Floor/Wall: 147.3 GPM at 1.5 fps
 Floor/Wall: 98.2 GPM at 1.0 fps
 31.5 square inch opening
 For retrofit or new construction!
 Available with mud frame for new construction or with universal adapter frame to retrofit all existing frames/sumps up to 10" round.
 Trademarked VGB compliance button easily identifies VGB 2008 compliance from pool/spa deck.
 Manufactured from superior UV resistant engineered polymer.
 Can be used with Strux Anchor Kit (S/N) SKA for odd-sized or non-structured frames/sump.
 All components (cover, adapter plate, frame, screws) meet or exceed ANSI/APSP 16-2011 and NSF/ANSI 50-2009a national standards and ASTM G154 UV testing exposure.
 #316 stainless steel screws.
 Replace every five years from the date of installation.
 6 per case.

U.S. patent D621009

No sump required!
 Retrofits over all sumps/frames up to 10" using included plastic concrete anchors



Part # A10RCFR0xx



Also available as a Contractor's 2-Pack without Retro Kit, with Mud Frame # A10RCFR20xx

VGB 2008 Compliant

STANDARD COLORS

- A10RCFR101 - White
- A10RCFR102 - Black
- A10RCFR103 - Light Gray
- A10RCFR104 - Blue
- A10RCFR105 - Dark Gray
- A10RCFR108 - Tan

1. 10" universal adapter frame
 2. 10" round suction outlet drain
 3. 10-32 x 5/8" lg flat head Phillips, 316 ss, qty 4
 4. Adjustable slide, long, qty 2
 5. Adjustable slide, short, qty 2
 6. 10" super low profile round frame
 7. 3/8" bushing, qty 6
 8. 1/4" bushing, qty 2

9. 1/4" concrete anchor, qty 3
 10. 10-32 x 5/16" lg pan head Phillips, 316 ss, qty 2
 11. #10 x 1" lg pan head Phillips, 316 ss, qty 3
 12. 8-32 x 3/4" lg pan head Phillips, 316 ss, qty 2
 13. 10-24 x 7/8" lg pan head Phillips, 316 ss, qty 2
 14. #8 x 1" lg pan head Phillips, 316 ss, qty 2
 15. #10 x 3/4" pan head Phillips, 316 ss, qty 2

Not all screws and hardware used for all installations

P 877-768-2717 F 877-276-POOL Outside the US: P +1-805-620-5060 F +1-949-336-1940
 info@aquastarpoolproducts.com www.aquastarpoolproducts.com

★ ★ PROUDLY MADE
 ★ ★ IN THE USA

Issue/Revision

Date

Symbol

By

License Class
C-53
Contractors License
791298

Josh Thompson

Herb's Pool Service Inc.

3413 Petaluma Blvd N., Petaluma, CA
94952 (415)726-0001, (415) 479-4040

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APN # 073-052-37
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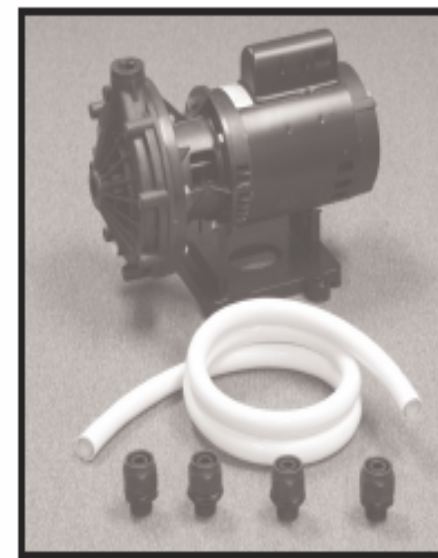
SHEET TITLE
Pool Flow Rates

P-3

3 of 6 SHEETS



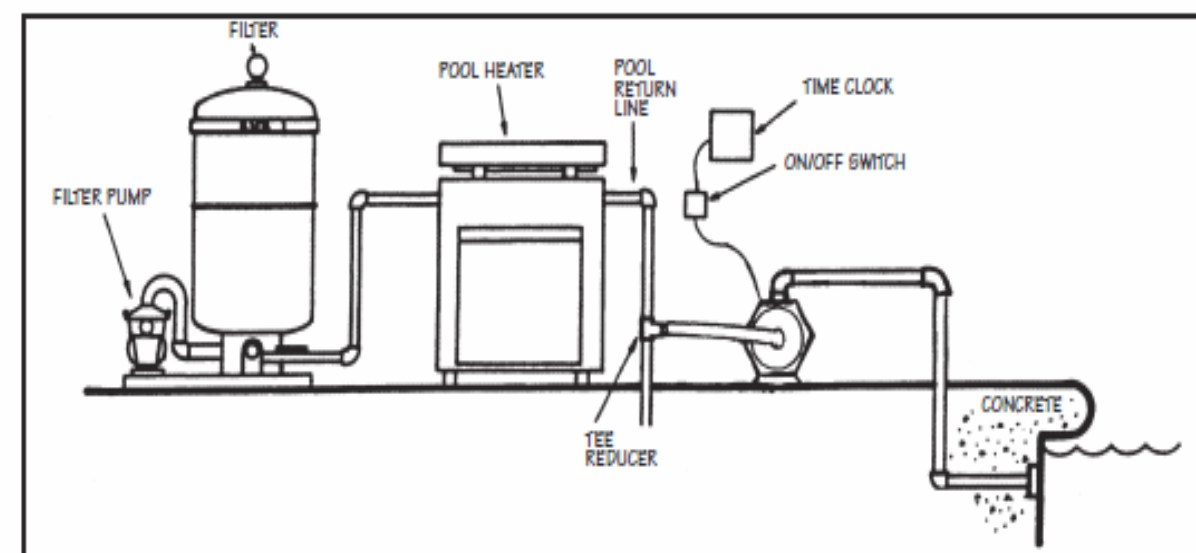
UNIVERSAL BOOSTER PUMP INSTALLATION AND PARTS LIST



IMPORTANT
A solid copper bonding conductor not smaller than No. 8 AWG (8.4 mm²) should be connected from the accessible wire connector on the motor to all metal parts of the swimming pool, spa, or hot tub structure and to all electrical equipment, metal conduit and metal piping within 5 ft. (1.5m) of the inside walls of a swimming pool, spa or hot tub when the motor is installed within 5 feet of the inside walls of the swimming pool, spa or hot tub.

IMPORTANT SAFETY INSTRUCTIONS. READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY. SAVE THESE INSTRUCTIONS.

Figure 1: Typical Installation



EASYTOUCH[®] Control Systems



POOL/SPA CONTROL SYSTEMS

The EasyTouch[®] Control System family offers a new level of control for homeowner's looking for an affordable, easy to use pool/spa control system. EasyTouch allows full control of all pool/spa features including advanced features such as colored lighting and IntelliChlor[®] Salt Chlorine Generator support. Every EasyTouch system includes an easy to use control panel that is built into the outdoor enclosure. This control panel allows for full system setup, programmability, and everyday operation. In addition, there are several other available remote interface choices. The EasyTouch systems come in a variety of configurations: Pool only or Spa only, Pool/Spa with shared equipment, and also integrated with Pentair IntelliChlor Salt Chlorine Generator.

FEATURES

- UltraTemp[®] Heat Pump integration
- Support for 2 VS or 2 VF Pumps
- Supports 8 Feature circuits
- MagicStream[®] Laminar support
- IntelliChem[®] controller support
- Now works with ScreenLogic2[®] Interface software to allow control from an Apple[®] iPad[®], iPhone[®], iPod touch[®] mobile digital device or Android[™] device, PC or Mac[®] computer
- IntelliBrite[®] 5g Pool and Spa Light support
- All functions controlled with easy, one-button access from the self-contained load center or optional controllers. No need to memorize operating sequences, open and close valves, or reset time clocks and thermostats.
- Built-in diagnostics include automatic verification of the display, microprocessor, switches, indicators, relay outputs, valve outputs, sensor inputs, and communication ports as well as a diagnostic screen that reports failures for troubleshooting and repair purposes.
- Include 150 amp breaker base with space for 10 1-in breakers
- UL and cUL approved
- Dimensions: 26 in. H x 17 in. W x 5-1/4 in. D

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INTELLIFLO[®] Variable Speed Pump



WANT TO KNOW WHY INTELLIFLO VARIABLE SPEED PUMPS OUTSELL ALL OTHER VARIABLE SPEED POOL PUMPS COMBINED?

When Pentair[®] first introduced IntelliFlo variable speed technology, it set off a marketplace revolution with its energy efficiency, near-silent operation and long service life.

The IntelliFlo Variable Speed Pump further refines the field-proven advancements that have led IntelliFlo pumps to outsell all other variable speed brands combined. Check out these advantages and you'll quickly see why:

FEATURES

- ENERGY STAR[®] Certified: meets strict energy efficiency criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.
- Energy savings up to 90% versus traditional pumps**
- 8 programmable speed settings and built-in timer to ensure the pump runs at optimum speed and duration
- Ultra-efficient permanent magnet motor design reduces noise and vibration for greater efficiency and longer pump life
- Dramatically quieter operation - as low as 45 decibels - about 4 times quieter than most traditional-style pumps.**
- Totally enclosed fan-cooled (TEFC) design and low average operating speed makes IntelliFlo the quietest pump on earth
- Fully compatible with IntelliTouch[®], EasyTouch[®], SunTouch[®] Pool Control Systems and other brands of digital pool/spa controls for managing pump, heating, lighting, spa jets and water features.
- Built-in diagnostics protect the pump for longer service life

*Savings based on variable speed pump compared to a single-speed pump running 12 hours per day at an average of \$0.16 per kWh in a 20,000 gallon pool. Actual savings may vary based on local utility rates, pool size, pump run time, pump horsepower, pump rpm, plumbing size and length, pump model, service factor and other hydraulic factors.

** Compared to noise level of typical 1.5 hp single-speed pump.

CERTIFICATIONS



WHISPERFLO[®] High Performance Pump



ENERGY EFFICIENT SWIMMING POOL PUMP

Robust thermoplastic with the Cam & Ramp[™] "see thru" lid design. Self-priming, high flow with patented Funnel-Flo diffusers. 2 in. suction and discharge ports. Motor features threaded shaft and durable commercial duty 56 frame motor with NEMA square flange.

FEATURES

- 2-speed WhisperFlo pump models are now ENERGY STAR[®] Certified: meets strict energy efficiency criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.
- Oversized strainer basket and volute - industry standard in pool pumps
- Standard and Energy-efficient Square Flange Motors available
- Lower HP's deliver higher performance than industry standard
- Compatible with all cleaning systems, various filters and jet action spas
- Heavy-duty/durable construction is designed for long life
- Designed for residential and commercial applications
- New motor increases life, energy, efficiency, ease of installation and better cooling for long service life

CERTIFICATIONS



CLEAN & CLEAR[®] PLUS Cartridge Filters



FIBERGLASS REINFORCED POLYPROPYLENE TANK

Clean & Clear[®] Plus Cartridge Filters have a corrosion resistant injection molded filter tank featuring superior strength and reliability. The cartridge assembly uses four easy to clean, non-woven, polyester cartridges. Each filter is supplied with a bulkhead union set for easy installation.

FEATURES

- NSF listed
- Superior strength
- Large filter area for increased dirt capacity
- 1-1/2 in., 100% drain clean-out port
- Continuous High Flow[™] internal air relief*
- Base and plumbing kits now available
- Injection molded tank
- Balanced hydraulic flow
- Tension Control[™] clamp
- 100% factory tested
- Black bulkhead unions
- High Flow manual air relief valve

Note: Actual system flow will depend on plumbing size and other system components.

Note: Pentair Pool Products does not recommend flow rates above 150 GPM. *Integrated Continuous High Flow internal air relief is operational only when there is unobstructed flow in the circulating system.

Operating Limits - maximum continual operating pressure of 50 PSI. Pool/Spa (bather) applications, maximum operating water temperature (internal filter) 104 degrees F (40 degrees C)

MASTERTEMP[®]



HIGH PERFORMANCE ECO-FRIENDLY HEATERS

MasterTemp[®] offers all the efficiency, convenience and reliability features you want in a pool heater, plus a lot more. As easy to use as your home heating system, plus, user-friendly indicator lights make system operation and monitoring a snap. The compact design and super quiet operation won't intrude on your poolside leisure time. Heavy-duty (HD) unit with cupro-nickel exchanger stands up to the harshest of applications, like low pH, high flow or heavy use.

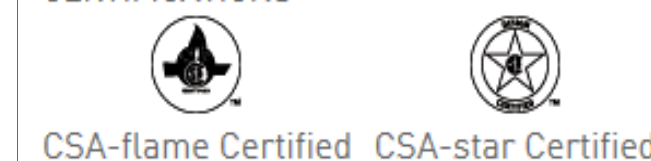
FEATURES

- Heats up fast so no long waits before enjoying your pool or spa
- Best-in-class energy efficiency*
- Manual gas shut-off when service is required
- Eco-friendly MasterTemp[®] is certified for low NOx emission and outperforms industry standards
- Rotating digital display allows for easy viewing
- Tough, rustproof exterior handles the heat and weathers the elements

Note: The MasterTemp Heater is certified for Low NOx emissions.

* Standard Copper Heat Exchanger 84% Efficient. Heavy-duty (HD) Cupro-Nickel Heat Exchanger 82% Efficient.

CERTIFICATIONS



INTELLIBRITE[®] 5G White LED Pool Lights



NOW POOL OWNERS CAN ENJOY THE MOST ENERGY-EFFICIENT WHITE LED LIGHTS AVAILABLE

IntelliBrite[®] 5g White LED pool lights provide the most energy-efficient lighting ever. They use 89% less electricity than incandescent and halogen pool lights.

FEATURES

- The most energy efficient white LED pool light on the market
- Energy efficient utilizing up to 89% less energy than comparable incandescent lights
- Superior lens geometry and exclusive reflector design combine to create a wider beam and more uniform light distribution
- Pool lens can be rotated to 180 degrees to provide wide beam pattern (standard) or narrow beam pattern
- Compatible with Pentair stainless steel and plastic niches
- Available in 120V and 12V versions
- Available in 300W, 400W and 500W incandescent equivalencies

Note: All 120 volt pool and spa lights must be connected to a branch circuit Notice: Underwriters Laboratories has listed with Pentair Water Pool and Spa Inc. lights for use with Pentair Water Pool and Spa, Pentair Pool Products, American Products, Purex, or PacFab niches ONLY. To ensure proper grounding/bonding connections install only Pentair Water Pool and Spa lights in Pentair Water Pool and Spa, Pentair Pool Products, American Products, Purex, or PacFab niches only

SHEET TITLE	Equipment Sheet	
	Date	11/8/2023
SHEET #	APN #	073-052-37
	Drawn	JT
SHEET	Scale	None
	4 of 6 SHEETS	
License Class	C-53	Contractors License
	791298	
Issue/Revision		Date
Herb's Pool Service Inc.		3413 Petaluma Blvd N. Petaluma, CA 94952 (415)726-0001, (415) 479-4040
New Pool for 98 Shady Lane Hagan Residence 98 Shady Lane Ross, CA 94957		

POOL COVER COMPLIANCE 1-800-447-2838

COVER-POOLS IS COMMITTED TO PRODUCING THE SAFEST AND HIGHEST QUALITY POOL AND SPA COVERS IN THE WORLD. WE ARE YOUR PARTNERS IN PROVIDING A RELIABLE ADDITIONAL LAYER OF SAFETY FOR YOU POOL.

UNDERWRITERS LABORATORIES INC. LISTING
 THCOVER-POOLS UNDERWRITERS LABORATORIES LISTING NUMBER IS 181T-FILE #E52841
 WBAH COVERS FOR SWIMMING POOLS AND SPAS
 POWER SAFETY COVERS, MODEL SAVE-T3® 3, CLASSIFIED IN ACCORDANCE WITH ASTM F1346-91
 WDDJ SWIMMING POOL AND SPA COVER OPERATORS ELECTRIC
 POOL COVER OPERATOR, MODEL "SAFE-T"

ASTM (AMERICAN SOCIETY FOR TESTING MATERIALS)
 DESIGNATION: F 1346-91 (PSC, MSC, OC)
 COVER-POOLS PRODUCTS SAVE-T COVER AND STEP-SAVERS® HAVE BEEN MANUFACTURED AND ARE IN FULL COMPLIANCE WITH ASTM F 1346-91 STANDARD
 PREFORMANCE SPECIFICATION FOR SAFETY COVERS AND LABELING REQUIREMENTS FOR ALL COVERS FOR SWIMMING POOLS, SPAS, AND HOT TUBS.

FCC ID" P8G-50306 SAVE-T COVER WIRELESS 50305
 NOTE: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS B DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMUL INTERFERENCE IN A RESIDENTIAL INSTALLATION. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS, MAY CAUSE HARMFULL INTERFERENCE TO RADIO COMMUNICATIONS. HOWEVER, THERE IS NO GUARENTEE THAT INTERFERENCE WILLNOT OCCUR IN A PARTICULAR INSTALLATION. IF THIS EQUIPMENT DOES CAUSE HARMFUL INTERFERENCE TO RADIO OR TELEVISION RECEPTION, WHICH CAN BE DETERMINED BY TURNING THE EQUIPMENT OFF AND ON, THE USER IS ENCOURAGED TO TRY TO CORRECT THE INTERFERENCE BY ONE OR MORE OF THE FOLLOWING MEASURES:

- REORIENT OR RELOCATE THE RECEIVING ANTENNA.
- INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND RECEIVER.
- CONNECT THE EQUIPMENT INTO AN OUTLET ON A CIRCUIT DIFFERENT FROM THAT TO WHICH THE RECEIVE IS CONNECTED.
- CONSULT THE DEALER OR AN EXPERIENCED RADIO/TV TECHNICIAN FOR HELP.

NOTE: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS 1, CLASS 2, AND CLASS 3 RADIO EQUIPMENT AND SYSTEM UNDER TITLE: ETS EN 300 683: 97 AND ETS EN 300 200-1(RE5) (EMC) (SRD) OPERATING ON FREQUENCIES BETWEEN 9kHz AND 25GHz. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE IN A RESIDENTIAL INSTALLATION. THIS EQUIPMENT GENERATES, USERS, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. HOWEVER, THERE IS NO GUARANTEE THA INTERFERENCE WILL NOT OCCUR IN A PARTICULAR INSTALLATION. IF THIS EQUIPMENT DOES CAUSE HARM INTERFERENECE TO RADIO OR TELEVISION RECEPTION, WHICH CAN BE DETERMINED BY TURNING THE EQUIPMENT OFF AND ON, THE USER IS ENCOURAGED TO TRY TO CORRECT THE INTERFERENCE BY ONE OR MORE OF THE FOLLOWING MEASURES:

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- INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND RECEIVER.
- CONNECT THE EQUIPMENT INTO AN OUTLET ON A CIRCUIT DIFFERENT FROM THAT TO WHICH THE RECEIVER IS CONNECTED.

EQUIPOTENTIAL BONDING

CALIFORNIA ELECTRICAL CODE (CEC) 2022

THE FOLLOWING ARE EXCERPTS FROM THE 2022 CEC PERTAINING TO THE ELECTRICAL COMPONENTS WITHIN AND AROUND WATER ENVIROMENTS.

680.26 EQUIPOTENTIAL BONDING

(A) PERFORMANCE. THE EQUIPOTENTIAL BONDING REQUIRED BY THIS SECTION SHALL BE INSTALLED TO REDUCE VOLTAGE GRADIENTS IN THE POOL AREA.
(B) BONDED PARTS. THE PARTS SPECIFIED IN 680.26(B)(1) THROUGH (B)(7) SHALL BE BONDED TOGETHER USING SOLID COPPER CONDUCTORS, INSULATED COVERED, OR BARE, NOT SMALLER THAN 8 AWG OR WITH RIGID METAL CONDUIT OF BRASS OR OTHER IDENTIFIED CORROSION-RESISTANT METAL. CONNECTIONS TO BONDED PARTS SHALL BE MADE IN ACCORDANCE WITH 250.8. AN 8AWG OR LARGER SOLID COPPER BONDING CONDUCTOR PROVIDED TO REDUCE VOLTAGE GRADIENTS IN THE POOL AREA SHALL NOT BE REQUIRED TO BE EXTENDED OR ATTACHED TO REMOTE PANELBOARDS, SERVICE EQUIPMENT, OR ELECTRODES.

(1) CONDUCTIVE POOL SHELLS. BONDING TO CONDUCTIVE POOL SHELLS SHALL BE PROVIDED AS SPECIFIED IN 680.26(B)(1)(a) OR (B)(1)(b). POURED CONCRETE, PNEUMATICALLY APPLIED OR SPRAYED CONCRETE AND CONCRETE BLOCK WITH PAINTED OR PLASTERED COATINGS SHALL ALL BE CONSIDERED CONDUCTIVE MATERIALS DUE TO WATER PERMEABILITY AND POROSITY. VINYL LINERS AND FIBERGLASS COMPOSITE SHELLS SHALL BE CONSIDERED TO BE NONCONDUCTIVE MATERIALS.

(a) STRUCTURAL REINFORCING STEEL. UNENCAPSULATED STRUCTURE REINFORCING STEEL SHALL BE BONDED TOGETHER BY STEEL TIE WIRES OR THE EQUIVALENT. WHERE STRUCTURAL REINFORCING STEEL IS ENCAPSULATED IN A NONCONDUCTIVE COMPOUND, A COPPER CONDUCTOR GRID SHALL BE INSTALLED IN ACCORDANCE WITH 680.26(B)(1)(b).

(b) COPPER CONDUCTOR GRID. A COPPER CONDUCTOR GRID SHALL BE PROVIDED AND SHALL COMPLY WITH (b)(1) THROUGH (b)(4).

1. BE CONSTRUCTED OF MINIMUM 8AWG BARE SOLID COPPER CONDUCTORS BONDED TO EACH OTHER AT ALL POINTS OF CROSSING. THE BONDING SHALL BE IN ACCORDANCE WITH 250.8 OR OTHER APPROVED MEANS.
2. CONFORM TO THE CONTOUR OF THE POOL.
3. BE ARRANGED IN A 300-MM (12-IN) BY 300-MM (12IN) NETWORK OF CONDUCTORS IN A UNIFORMLY SPACED PERPENDICULAR GRID PATTERN WITH TOLERANCE OF 100MM (4IN)

4. BE SECURED WITHIN OR UNDER THE POOL NO MORE THAN 150 MM (6 IN) FROM THE OUTER CONTOUR OF THE POOL SHELL.

(a) PERIMETER SURFACES. THE PERIMETER SURFACE SHALL EXTEND FOR 1 M (3FT) HORIZONTALLY BEYOND THE INSIDE WALLS OF THE POOL AND SHALL INCLUDE UNPAVED SURFACES, AS WELL AS POURED CONCRETE SURFACES AND OTHER TYPES OF PAVING. PERIMETER SURFACES LESS THAN 1 M (3 FT) SEPARATED BY A PERMANENT WALL OR BUILDING 1.5 MM(5FT) IN HEIGHT OR MORE SHALL REQUIRE EQUIPOTENTIAL BONDING ON THE POOL SIDE OF THE PERMANENT WALL OR BUILDING. BONDING TO PERIMETER SURFACES SHALL BE PROVIDED AS SPECIFIED IN 680.26(B)(2)(a) OR (2)(b) AND SHALL BE ATTACHED TO THE POOL REINFORCING SHEEL OR COPPER CONDUCTOR GRID AT A MINIMUM OF FOUR (4) POINTS UNIFORMLY SPACED AROUND THE PERIMETER OF THE POOL. FOR NONCONDUCTIVE POOL SHELLS, BONDING AT FOUR POINTS SHALL NOT BE REQUIRED.

(b) STRUCTURAL REINFORCING STEEL. STRUCTURAL REINFORCING STEEL SHALL BE BINDED IN ACCORDANCE WITH 680.26(B)(1)(a).

(b) ALTERNATE MEANS. WHERE STRUCTURAL REINFORCEING STEEL IS NOT AVAILABLE OR IS ENCAPSULATED IN A NONCONDUCTIVE COMPOUND, A COPPER CONDUCTOR(S) SHALL BE UTILIZED WHERE THE FOLLOWING REQUIREMENTS ARE MET:

1. AT LEAST ONE MINIMUM 8AWG BARE SOLID COPPER CONDUCTOR SHALL BE PROVIDED.
2. THE CONDUCTORS SHALL FOLLOW THE CONTOUR OF THE PERIMETER SURFACE.
3. ONLY LISTED SPLICES SHALL BE PERMITTED.
4. THE REQUIRED CONDUCTOR SHALL BE 450 MM TO 600 MM (18IN TO 24IN) FROM THE INSIDE WALLS OF THE POOL.
5. THE REQUIRED CONDUCTOR SHALL BE SECURED WITHIN OR UNDER THE PERIMETER SURFACE 100 MM TO 150 MM (4IN TO 6IN) BELOW THE SUBGRADE

GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA ADMINISTRATIVE CODE, THE UNIFORM BUILDING CODE, AND ALL STATE AND LOCAL CODES.
2. ALL GATES TO OPEN OUTWARD AND BE EQUIPPED WITH SELF CLOSING SPRINGS AND A SELF LATCHING LATCH TO BE MOUNTED A MINIMUM OF 60".
3. INSTALLATION OF ONE (1) GFCI CONVIENCE RECEPTICAL ON A GENERAL PURPOSE BRANCH CIRCUIT LOCATED A MINIMUM OF 6' AND MAXIMUM OF 20' FROM WATER EDGE WILL BE INSTALLED.
4. RECEPTACLES THAT PROVIDE POWER FOR WATER-PUMP MOTORS OR FOR OTHER LOADS DIRECTLY RELATED TO THE CIRCULATION AND SANITATION SYSTEM SHALL BE LOCATED AT LEAST 6 FEET FROM THE INSIDE WALLS OF THE POOL. THESE RECEPTACLES SHALL HAVE GFCI PROTECTION AND BE OF THE GROUNDING TYPE.

**2022 BUILDING ENERGY EFFICIENCY STANDARDS
 EFFICIENCY STANDARD EXCERPT FROM THE CALIF. CODE OF REGULATIONS- TITLE 24, PART 6**

SUBCHAPTER 2- ALL OCCUPANCIES- MANDATORY REQUIREMENTS FOR THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF SYSTEMS, EQUIPMENT AND BUILDING COMPONENTS SECTION 110.4- MANDATORY REQUIREMENTS FOR POOL AND SPA SYSTEMS AND EQUIPMENT

(a) CERTIFICATION BY MANUFACTURERS. ANY POOL OR SPA HEATING SYSTEM OR EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE SYSTEM OR EQUIPMENT HAS ALL OF THE FOLLOWING:

1. **EFFICIENCY.** A THERMAL EFFICIENCY THAT COMPLIES WITH THE APPLIANCE EFFICIENCY REGULATIONS; AND
2. **ON-OFF SWITCH.** A READILY ACCESSIBLE ON-OFF SWITCH, MOUNTED ON THE OUTSIDE OF THE HEATER THAT ALLOWS SHUTTING OFF THE HEATER WITHOUT ADJUSTING THE THERMOSTAT SETTING; AND
3. **INSTRUCTIONS.** A PERMANENT, EASILY READABLE AND WEATHERPROOF PLATE OR CARD THAT GIVES INSTRUCTION FOR THE ENERGY EFFICIENT OPERATION OF THE POOL OR SPA HEATER AND FOR THE PROPER CARE OF THE POOL OR SPA WATER WHEN A COVER IS USED; AND
4. **ELECTIC RESISTANCE HEATING.** NO ELECTRIC RESISTANCE HEATING; AND

EXCEPTION 1 TO SECTION 110.4(a)4: LISTED PACKAGE UNITS WITH FULLY INSULATED ENCLOSURES, AND WITH TIGHT-FITTING COVERS THAT ARE INSULATED TO AT LEAST R-6.
EXCEPTION 2 TO SECTION 110.4(a)4: POOLS OR SPAS DERIVING AT LEAST 60 PERCENT OF THE ANNUAL HEATING ENERGY FROM SITE SOLAR ENERGY OR RECOVERED ENERGY.

(b)INSTALLATION. ANY POOL OR SPA SYSTEM OR EQUIPMENT SHALL BE INSTALLED WITH ALL OF THE FOLLOWING:

1. **PIPING.** AT LEAST 36 INCHES OF PIPE SHALL BE INSTALLED BETWEEN THE FILTER AND THE HEATER OR DEDICATED SUCTION AND RETURN LINES, OR BUILT-IN OR BUILT UP CONNECTIONS SHALL BE INSTALLED TO ALLOW FOR THE FUTURE ADDITION OF SOLAR HEATING EQUIPMENT; AND
2. **COVERS.** A COVER FOR OUTDOOR POOLS OR OUTDOOR SPAS THAT HAVE A HEAT PUMP OR GAS HEATER.
3. **DIRECTIONAL INLET AND TIME SWITCHES FOR POOLS.** IF THE SYSTEM OR EQUIPMENT IS FOR A POOL:
 - i. THE POOL SHALL HAVE DIRECTIONAL INLETS THAT ADEQUATELY MIX THE POOL WATER; AND
 - ii. A TIME SWITCH OR SIMILAR CONTROL MECHANISM SHALL BE INSTALLED AS PART OF THE POOL WATER CIRCULATION CONTROL SYSTEM THAT WILL ALLOW ALL PUMPS TO BE SET OR PROGRAMMED TO RUN ONLY DURING THE OFF-PEAK ELECTRIC DEMAND PERIOD AND FOR THE MINIMUM TIME NECESSARY TO MAINTAIN THE WATER IN THE CONDITION REQUIRED BY APPLICABLE PUBLIC HEALTH STANDARDS.

SECTION 110.5- NATURAL GAS POOL/SPA HEATERS (PILOT LIGHT PROHIBITED)

ANY NATURAL GAS SYSTEM OR EQUIPMENT LISTED BELOW MAY BE INSTALLED INLY IF IT DOES NOT HAVE A CONTINUOUSLY BURNING PILOT LIGHT.

- (a) FAN-TYPE CENTRAL FURNACES.
- (b) HOUSEHOLD COOKING APPLIANCES.

Exception to 110.5(B): HOUSEHOLD COOKING APPLIANCES WITHOUT AN ELECTRICAL SUPPLY VOLTAGE CONNECTION AND IN WHICH EACH PILOT CONSUMES LESS THAN 150 BTU/HR.

- (c) POOL HEATERS.
- (d) SPA HEATERS.

SUBCHAPTER 7-LOW RISE RESIDENTIALBUILDINGS- MANDATORY FEATURES AND DEVICES

SECTION 150.0- MANDATIRY FEATURES AND DEVICES

LOW-RISE RESIDENTIAL BUILDINGS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF SECTIONS 150(a) THROUGH 150.0(r)

(p) POOL SYSTEM AND EQUIPMENT INSTALLATION. ANY RESIDENTIAL POOL SYSTEM OR EQUIPMENT INSTALLED SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF SECTION 110.4, AS WELL AS THE REQUIREMENTS LISTED IN THIS SECTION.

1. PUMP SIZING AND FLOW RATE.

- A. ALL PUMPS AND PUMP MOTORS INSTALLED SHALL BE LISTED IN THE COMMISSION'S DIRECTORY OF CERTIFIED EQUIPMENT AND SHALL COMPLY WITH THE APPLIANCE EFFICIENCY REGULATIONS.
 - B. ALL PUMP FLOW RATES SHALL BE CALCULATED USING THE FOLLOWING SYSTEM EQUATION: $H = C \times F^2$ WHERE H IS THE TOTAL SYSTEM HEAD IN FEET OF WATER, F IS THE FLOW RATE IN GALLONS PER MINUTE (GPM), C IS THE COEFFICIENT BASED ON THE VOLUME OF THE POOL: 0.0167 FOR POOLS LESS THAN OR EQUAL TO 17,000 GALLONS & 0.0082 FOR POOLS GREATER THAT 17,000 GALLONS, AND ;
 - C. FILTRATION PUMPS SHALL BE SIZED, OR IF PROGRAMMABLE, SHALL BE PROGRAMMED, SO THAT THE FILTRATION FLOW RATE IS NOT GREATER THAN THE RATE NEEDED TO TURN OVER THE POOL WATER VOLUME IN 6 HOURS OR 36GPM, WHICHEVER IS GREATER; AND
 - D. PUMP MOTORS USED FOR FILTRATION WITH A CAPACITY OF 1 HP OR MORE SHALL BE MULTI-SPEED; AND
 - E. EACH AUXILIARY POOL LOAD SHALL BE SERVED BY EITHER SEPARATE PUMPS OR THE SYSTEM SHALL BE SERVICED BY A MULTI-SPEED PUMP; AND
- EXCEPTION TO SECTION (p)1E:** PUMPS IF LESS THAN 1 HP MAY BE A SINGLE SPEED.
- F. MULTI-SPEED PUMPS SHALL HAVE CONTROLS WHICH DEFAULT TO THE FILTRATION FLOW RATE WHEN NO AUXILIARY POOL LOADS ARE OPERATING; AND
 - G. FOR MULTI-SPEED PUMPS, THE CONTROLS SHALL DEFAULT TO THE FILTRATION FLOW RATE SETTING WITHIN 24 HOURS AND SHALL HAVE AN OVERRIDE CAPABILITY FOR SERVICING.

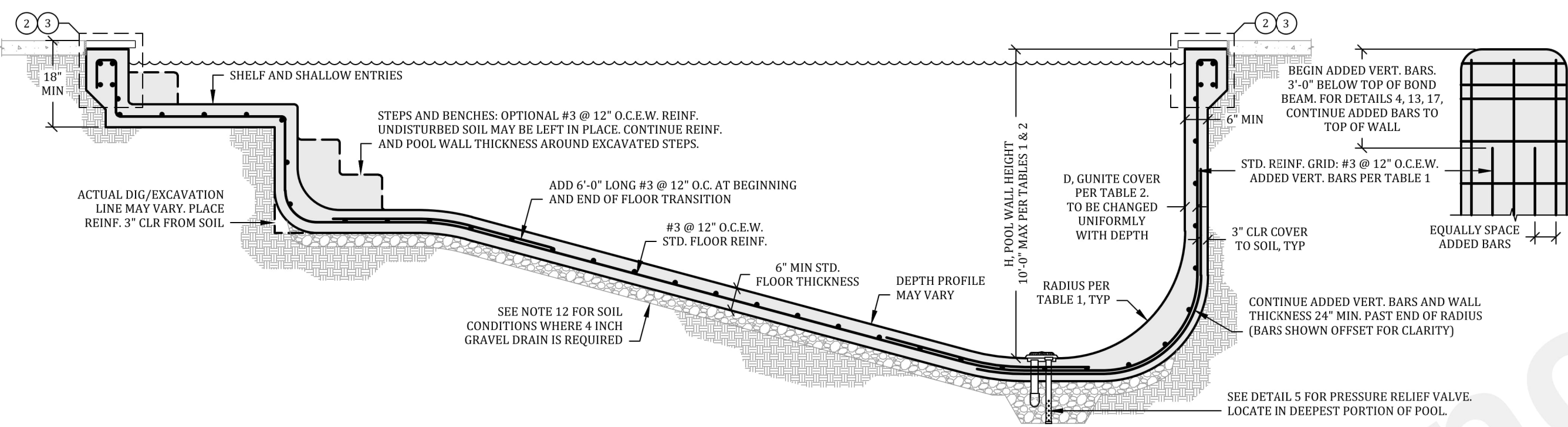
2. SYSTEM PIPING.

- A. A LENGTH OF STRAIGHT PIPE THAT IS GREATER THAN OR EQUAL TO AT LEAST 4 PIPE DIAMETERS SHALL BE INSTALLED BEFORE THE PUMP; AND
- B. POOL PIPING SHALL BE SIZED SO THAT THE VELOCITY OF THE WATER AT MAXIMIM FLOW FOR AUXILIARY POOL LOADS DOES NOT EXCEED 8 FEET PER SECOND IN THE RETURN LINE AND 6 FEET PER SECOND IN THE SUCTION LINE; AND
- C. ALL ELBOWS SHALL BE SWEEP ELBOWS OR ELBOW-TYPE THAT HAVE A PRESSURE DROP OF LESS THAN THE PRESSURE DROP OF STRAIGHT PIPE WITH A LENGTH OF 30 PIPE DIAMETERS.

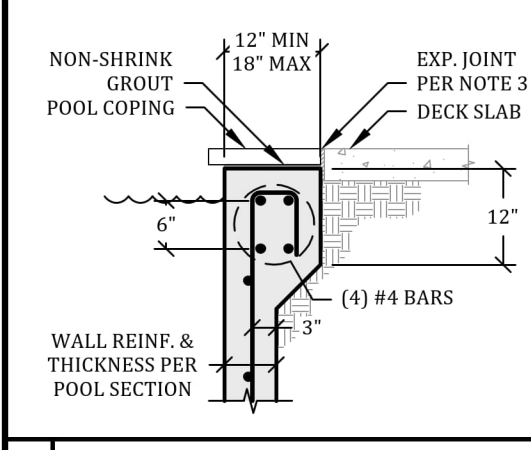
3. FILTERS. FILTERS SHALL BE AT LEAST THE SIZE SPECIFIED IN NSF/ANSI 50 FOR PUBLIC POOL INTENDED APPLICATIONS.

4. VALVES. MINIMUM DIAMETER OF BACK WASH VALVES SHALL BE 2 INCHES OR THE DIAMETER OF THE RETURN PIPE, WHICHEVER IS GREATER.

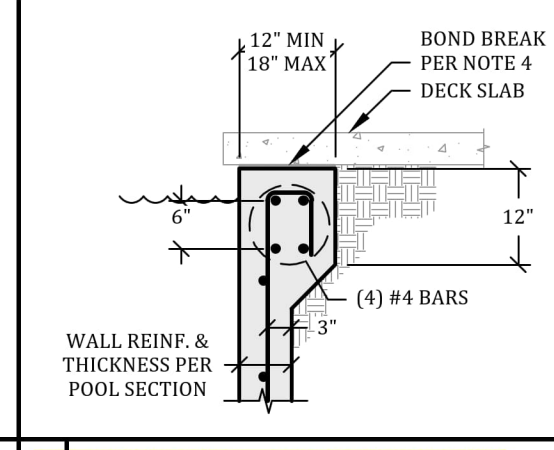
SHEET:	P-5	5 of 6 SHEETS	General Notes	APN #	073-052-37
				Date	11/8/2023
SHEET TITLE	General Notes	None	Drawn	JT	Scale
			3413 Petaluma Blvd N, Petaluma, CA 94952 (415)726-0001, (415) 479-4040		
License Class C-53 Contractors License 791298 			By Issue/Revision Date Symbol		



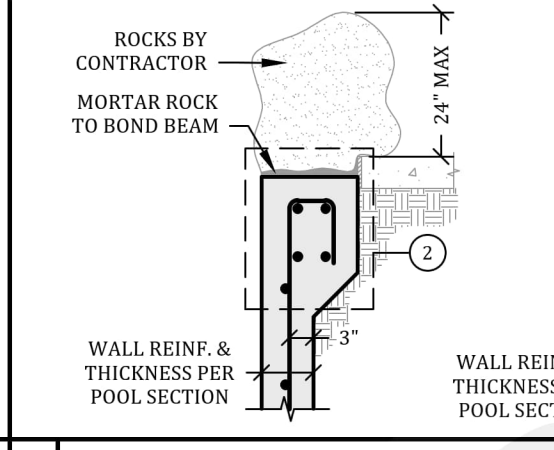
1 TYPICAL POOL SECTION



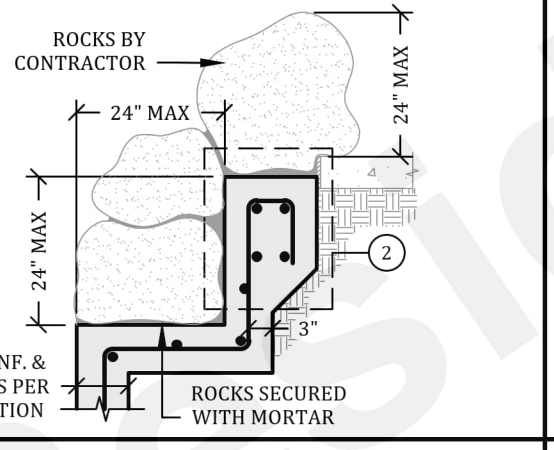
2 BOND BEAM - COPING



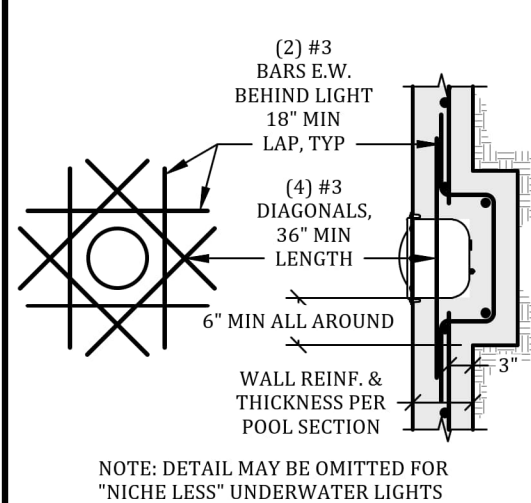
3 BOND BEAM - CANTILEVER DECK



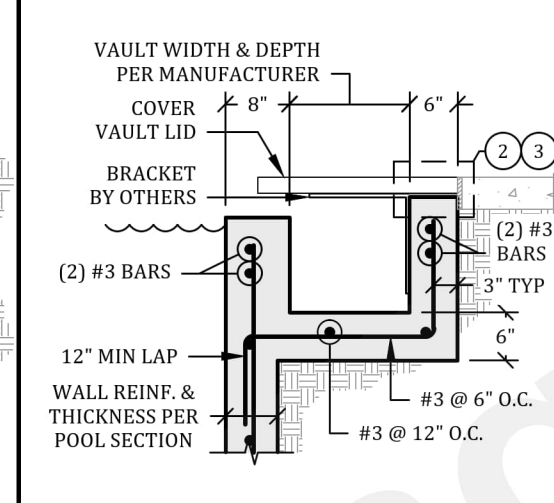
4 ROCK ON BOND BEAM



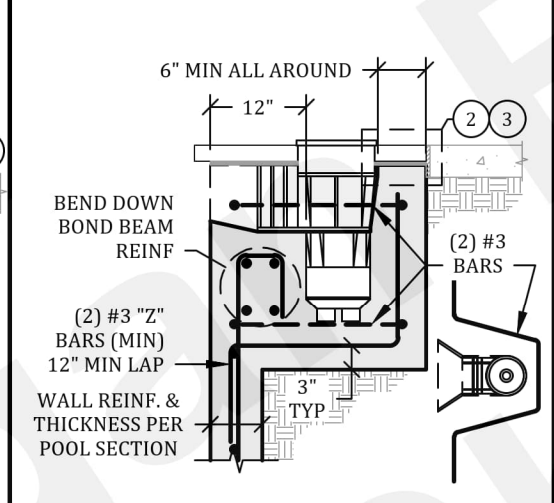
5 PRESSURE RELIEF VALVE



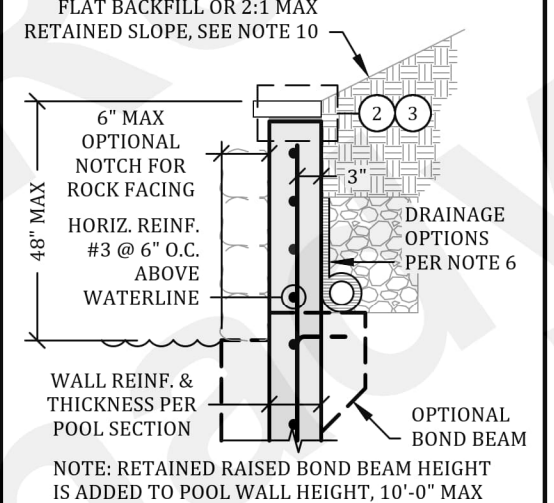
6 LIGHT NICHE



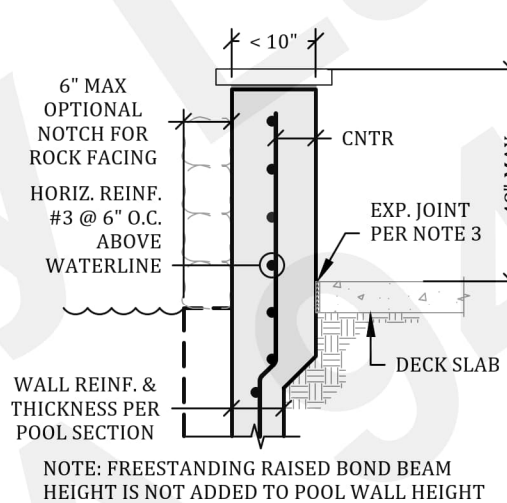
7 COVER VAULT



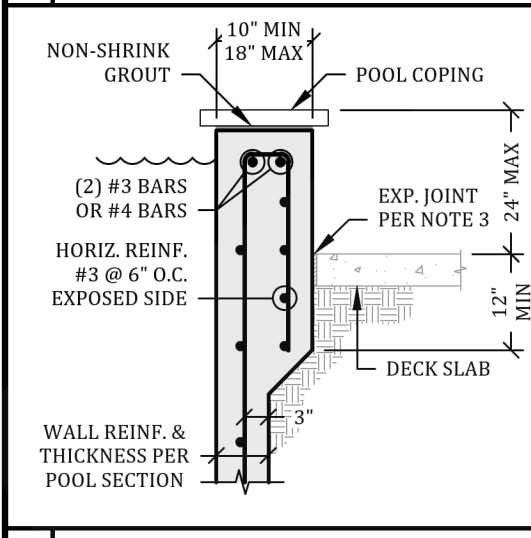
8 SKIMMER



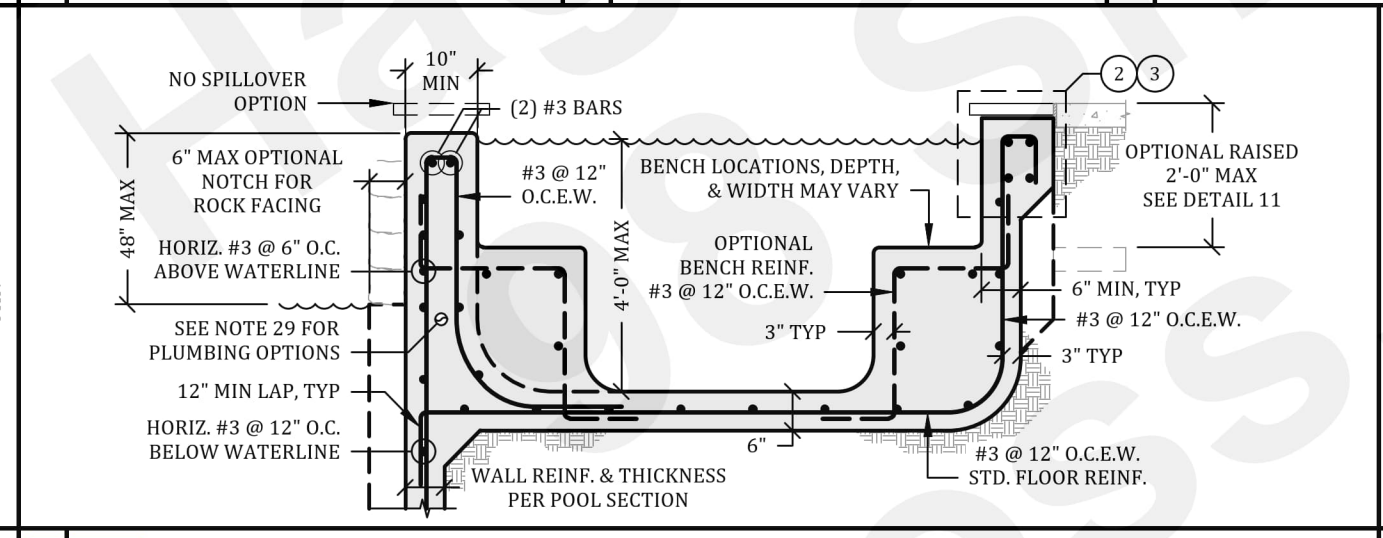
9 RETAINED RAISED BOND BEAM



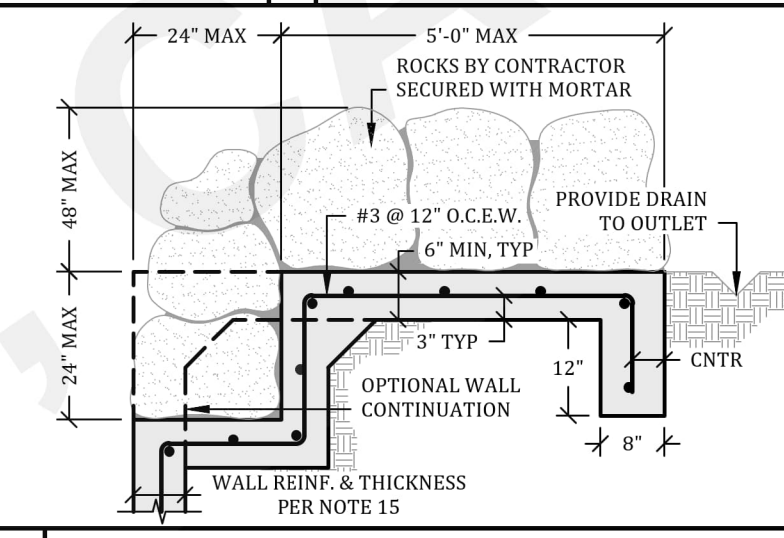
10 FREESTANDING RAISED BOND BEAM



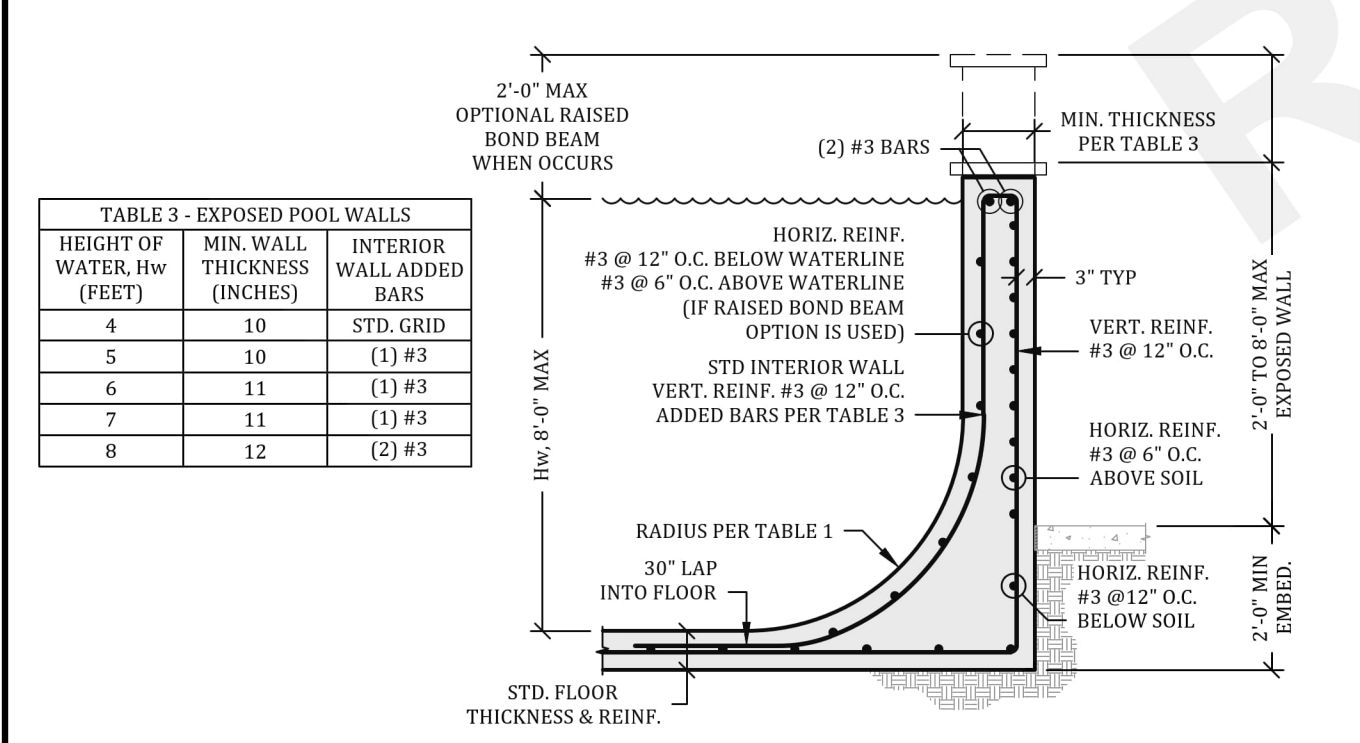
11 EXPOSED RAISED BOND BEAM



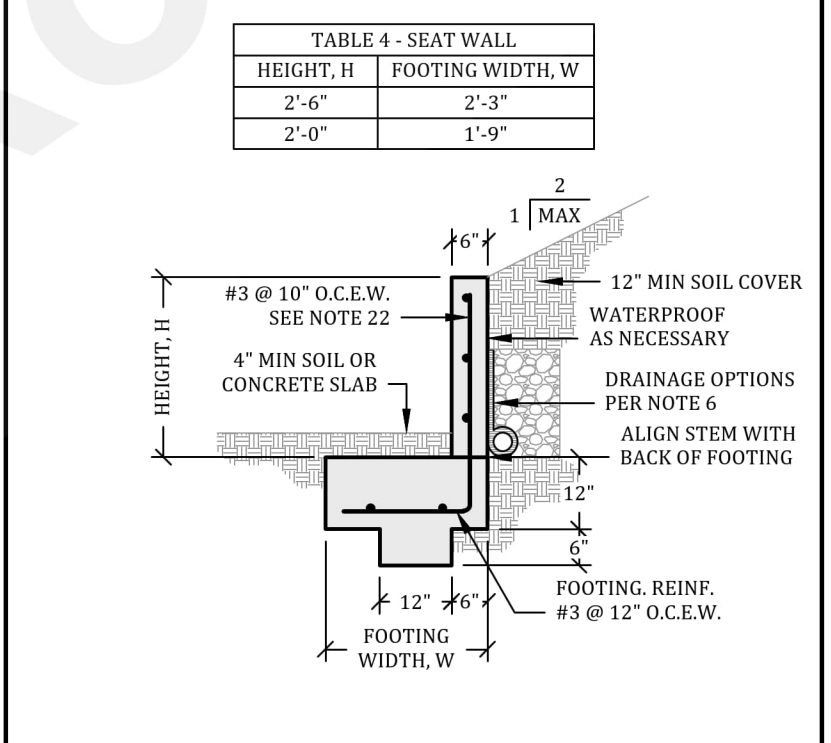
12 SPA



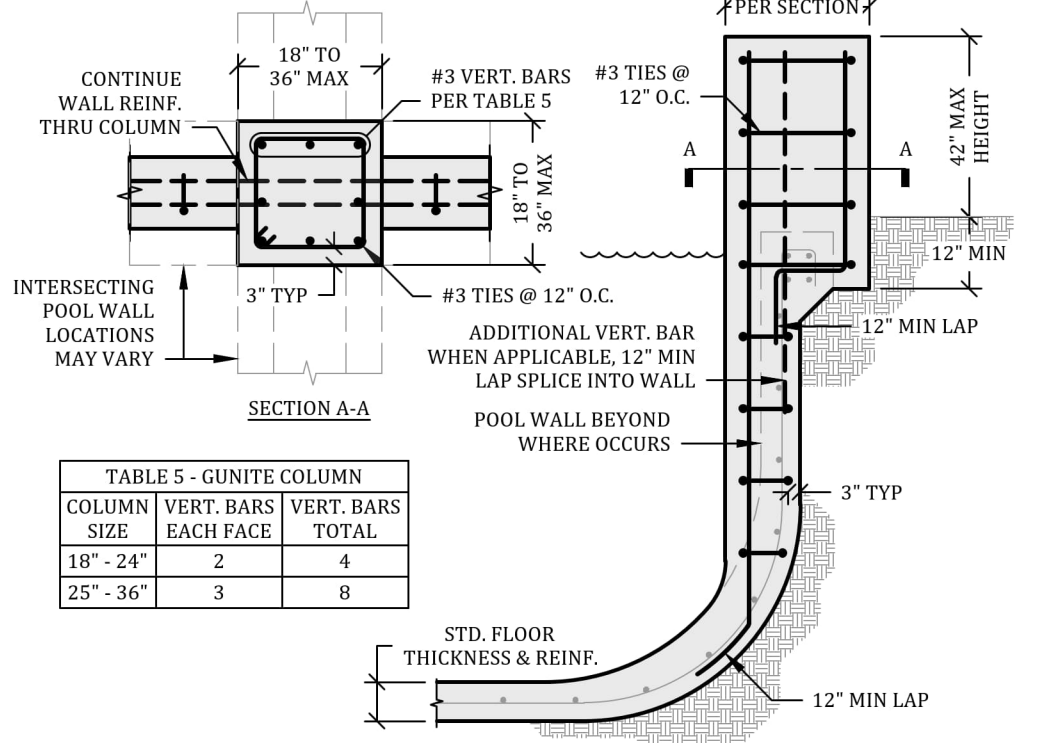
13 ROCK WATER FEATURE



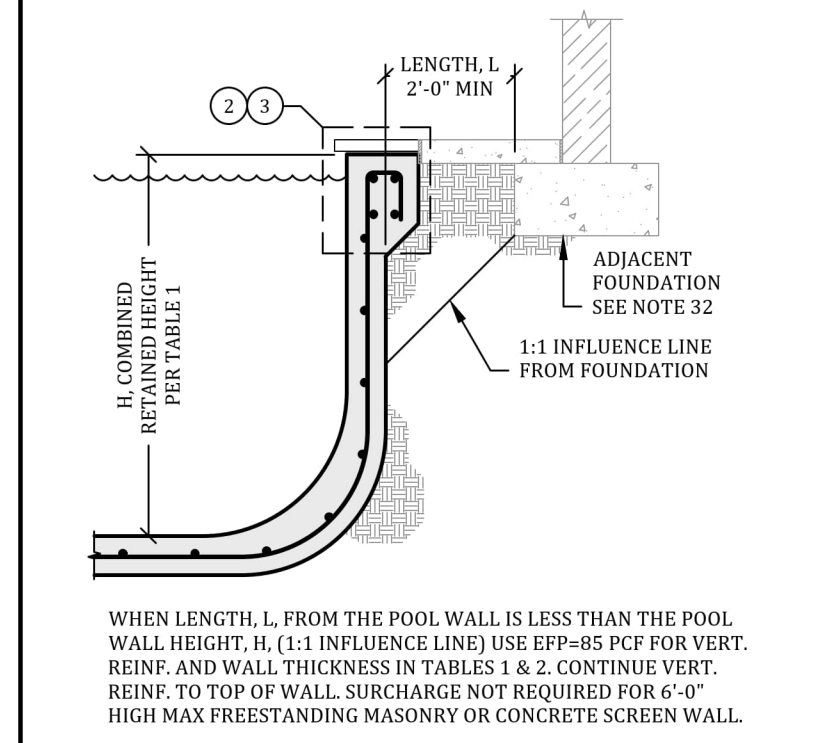
14 EXPOSED POOL WALL



15 SEAT WALL



16 GUNITE COLUMN



17 ADJACENT FOOTING

GENERAL

1. THE SITE CONDITIONS HAVE NOT BEEN INSPECTED BY LENEHAN ENGINEERING. IF SITE CONDITIONS VARY FROM THAT PROVIDED IN THIS PLAN, LENEHAN ENGINEERING SHOULD BE CONTACTED.
2. THIS STANDARD PLAN HAS BEEN DEVELOPED BASED ON THE 2022 CBC, ASCE 7, AND ACI 318. SEISMIC DESIGN CATEGORY D, RISK CATEGORY 1, SOIL SITE CLASS D
3. COPING: EXPANSION JOINT OF MASTIC OR OTHER SEPARATOR SHOULD BE PLACED BETWEEN CONCRETE DECKS AND COPING AND SHOULD EXTEND THE FULL DEPTH OF THE DECK.
4. CANTILEVER DECKS: PLACE A BOND BREAK AT THE TOP OF THE POOL WALL AND BELOW THE CANTILEVER DECK SUCH AS 30# ROOF FELT, HEAVY BROWN PAPER OR OTHER EQUIVALENT.
5. ALL ELECTRICAL IS TO BE ELECTRICALLY GROUNDING IN ACCORDANCE WITH THE 2022 CALIFORNIA ELECTRICAL CODE.
6. WALL DRAINAGE MAY CONSIST OF A 12-INCH GRAVEL DRAIN WRAPPED IN A FILTER FABRIC OR A DRAINAGE COMPOSITE. DRAIN BOTH OPTIONS TO A 3" Ø PERFORATED PIPE AT A MIN 1% SLOPE, DISCHARGE TO EXISTING DRAINAGE SYSTEM.
7. CONTRACTOR OR OWNER SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.
8. INTERIOR SURFACE OF POOL SHALL BE COATED WITH A WATER-TIGHT SURFACE.

SOILS

9. EFP = 65 PCF IS TO BE USED AS THE DEFAULT SOIL PRESSURE AND INCLUDES MODERATELY EXPANSIVE SOIL.
10. EFP = 85 PCF IS TO BE USED WITH RETAINED SLOPES BETWEEN 2H:1V AND 4H:1V. EFP=85 PCF IS TO BE USED FOR HIGHLY EXPANSIVE SOILS.
11. POOL SHOULD BE FOUNDED ON FIRM NATIVE SOILS OR ENGINEERED FILL COMPACTED TO 90% MINIMUM RELATIVE COMPACTION WITH A MINIMUM BEARING CAPACITY OF 1,500 PSF. THIS PLAN IS NOT SUITABLE WHERE DIFFERENTIAL SETTLEMENT OR MOVEMENT MAY OCCUR.
12. A HYDROSTATIC RELIEF VALVE IS REQUIRED TO PREVENT BELOW POOL UPLIFT PRESSURES. IF SEEPAGE IS OBSERVED IN AN OPEN EXCAVATION A 4 INCH GRAVEL DRAIN LAYER IS REQUIRED BELOW THE POOL FLOOR.
13. KEEP ALL EXPANSIVE SOILS IN A MOIST CONDITION PRIOR TO THE PLACEMENT OF GUNITE.
14. DECK DETAILS SHOW MINIMUM CONSTRUCTION AND DO NOT DEMONSTRATE A SYSTEM THAT WILL RESIST HEAVING DUE TO SOIL EXPANSION.
15. ROCK WATER FEATURES ARE A MAXIMUM OF 4 FEET HIGH. ADD 1/2 THE WATER FEATURE HEIGHT TO THE DEPTH OF THE POOL. (I.E. AN 8 FOOT DEEP POOL WITH A 4 FOOT WATER FEATURE WILL USE THE 10 FOOT WALL STEEL SCHEDULE AND THICKNESS)
16. POOL WALLS TO MAINTAIN 24" MINIMUM EMBEDMENT (EXCEPTION: SHALLOW ENTRY FEATURES 18" MINIMUM EMBEDMENT). POOL WALLS TO MAINTAIN 10 FEET OF HORIZONTAL DISTANCE TO SLOPE FACE. ADDITIONAL DETAILS ARE REQUIRED IF THESE CONDITIONS ARE NOT MET.

REINFORCEMENT

17. REINFORCEMENT SHOULD BE PLACED IN ACCORDANCE WITH CBC 1908 AND ACI 318 CH. 25 AND BE ASTM A615 GRADE 40 OR BETTER FOR #3 AND #4 BARS. SPLICES ARE TO BE LAPPED A MINIMUM OF 40 BAR DIAMETERS. CONTACT SPLICING MAY BE USED PROVIDED SPLICED BARS ARE IN THE SAME PLANE AND PARALLEL TO THE DIRECTION OF THE GUNITE SHOOTING.
18. ALL BENDS SHALL HAVE A MINIMUM RADIUS OF 6 BAR DIAMETERS PER ACI 318.
19. (1) #4 BAR MAY BE REPLACED WITH (2) #3 BARS PROVIDED A 2.5-INCH MINIMUM CLEARANCE IS MAINTAINED.
20. AREAS WHERE SOIL SUPPORT HAS BEEN TEMPORARILY REMOVED, I.E. RAMP EXCAVATIONS, SHOULD HAVE #3 BARS AT 6 INCHES ON CENTER, VERTICAL AND HORIZONTAL.
21. 3-INCH MINIMUM CLEARANCE IS REQUIRED BETWEEN REINFORCEMENT AND SOIL AND A 2-INCH CLEARANCE BETWEEN REINFORCEMENT AND WATER OR EXPOSED TO AIR.
22. ADJACENT RETAINING WALLS AND RAISED BOND BEAM SHALL HAVE DISCONTINUOUS REINFORCEMENT AND A BOND BREAK BETWEEN EACH ELEMENT.

SHOTCRETE

23. CEMENT SHALL CONFORM TO CBC SECTION 1903.1, ACI 318 CH. 19, ASTM C 150.
24. GUNITE IS A COMMON TERM THAT REFERS TO THE SHOTCRETE DRY MIX PROCESS AND IS ACCEPTABLE TO USE WITH THIS PLAN.
25. SHOTCRETE SHALL BE PLACED AGAINST UNDISTURBED NATIVE SOIL OR COMPACTED ENGINEERED FILL.
26. SHOTCRETE CEMENT TO AGGREGATE PROPORTIONS SHOULD NOT BE LESS THAN 1 TO 5 AND SHOULD CONFORM TO CBC 1908 AND ACI 506R.
27. MINIMUM SHOTCRETE COMPRESSIVE STRENGTH: 2,500 PSI AT 28 DAYS.
28. MINIMUM WALL THICKNESS IS 6 INCHES.
29. PLUMBING SHALL BE KEPT A MINIMUM OF 1 INCH FROM REINFORCEMENT.
30. KEEP SHOTCRETE DAMP CONTINUOUSLY FOR 14 DAYS.

SLOPES/ADJACENT FOOTING

31. POOLS ON SLOPE CREST OR BEHIND A RETAINING WALL SHALL BE CAPABLE OF SUPPORTING WATER IN THE POOL WITHOUT SOIL SUPPORT AND SHALL COMPLY WITH 2022 CBC SECTION 1908.7.3. USE EFP=85 PCF FOR REINFORCEMENT AND WALL THICKNESS IN THE FOLLOWING CONDITIONS:
 - A. POOL WALLS WITHIN 7 FEET OF A DESCENDING SLOPE.
 - B. BEHIND RETAINING WALL: POOL WALLS CLOSER THAN 7 FEET + THE HEIGHT OF THE RETAINING WALL.
32. EXISTING FOOTINGS OR FOUNDATIONS THAT WILL BE AFFECTED BY ANY EXCAVATION SHALL BE PROTECTED AGAINST DETRIMENTAL LATERAL OR VERTICAL MOVEMENT PER CBC 1808.3.2. 1,500 PSF MAX BEARING PRESSURE FROM ADJACENT FOOTING.

PROJECT SPECIFIC REQUIREMENTS

TABLE 1 - ADDED VERTICAL BARS TO STANDARD GRID

WALL HEIGHT (FEET)	RADIUS (FEET)	EFP = 65 PCF ADDED BARS (EVERY 12 INCHES)	EFP = 85 PCF ADDED BARS (EVERY 12 INCHES)
4	1	STD. GRID	STD. GRID
5	2	(1) #3	(1) #3
6	3	(1) #3	(2) #3
7	4	(1) #3	(2) #3
8	5	(1) #3	(2) #3
9	5	(2) #3	(2) #4
10	5	(2) #4	(3) #4

TABLE 2 - WALL THICKNESS

WALL HEIGHT (FEET)	EFP = 65 PCF D, GUNITE COVER (INCHES)	EFP = 85 PCF D, GUNITE COVER (INCHES)
4	4	4
5	4	4
6	6	5
7	8	8
8	10	10
9	11	10
10	12	11

- TABLE NOTES:**
1. EFP REFERS TO EQUIVALENT FLUID PRESSURE. EFP = 65 PCF SHOULD BE USED FOR DEFAULT SOIL PRESSURE.
 2. TOTAL WALL THICKNESS IS D, GUNITE COVER (TABLE 2) PLUS 3 INCHES CLEAR COVER TO SOIL.

ATTACHMENT 3



Town of Ross

Planning Department

Post Office Box 320, Ross, CA 94957

Telephone (415) 453-1453, Ext. 121 Fax (415) 453-1950

www.townofross.org

PLANNING APPLICATION FORM

Type of Application (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> Advisory Design Review | <input type="checkbox"/> Minor Exception |
| <input type="checkbox"/> Appeals | <input type="checkbox"/> Non-conformity Permit |
| <input type="checkbox"/> Basement and Attics Exception | <input type="checkbox"/> Accessory Dwelling Unit |
| <input type="checkbox"/> Certificate of Compliance | <input type="checkbox"/> Tentative Map |
| <input type="checkbox"/> Demolition Permit | <input type="checkbox"/> Tentative Map Amendment |
| <input checked="" type="checkbox"/> Design Review | <input type="checkbox"/> Time Extension |
| <input type="checkbox"/> Design Review- Amendment | <input type="checkbox"/> Use Permit |
| <input type="checkbox"/> Final or Parcel Map | <input checked="" type="checkbox"/> Variance |
| <input type="checkbox"/> General Plan Amendment | <input type="checkbox"/> Zoning Ordinance |
| <input type="checkbox"/> Hillside Lot Permit | <input type="checkbox"/> Amendment Other: |
| <input type="checkbox"/> Lot Line Adjustment | <input type="checkbox"/> Other: |

To Be Completed by Applicant:

Assessor's Parcel No(s): 073-052-37

Project Address: 98 Shady Lane

Property Owner: Alexander Hagan

Owner Mailing Address (PO Box in Ross): 1750

City/State/Zip: Ross, CA 94957 Owner's Phone: (415) 827-4994

Owner's Email: alexhagan@mac.com

Applicant: Joshua Thompson

Applicant Mailing Address: 3769 Redwood Highway

City/State/Zip: San Rafael, CA 94903 Applicant's Phone: (415) 479-4040

Applicant's Email: _____

Primary point of Contact Email: Owner Buyer Agent Architect

To Be Completed by Town Staff:

Date Received: _____	Planning 5300 _____
Application No.: _____	Tree Permit 5305 _____
Zoning: _____	Fee Program Administration 5315-05 _____
	Record Management 5316-05 _____
	Record Retention 5112-05 _____
	Technology Surcharge 5313-05 _____
Date paid: _____	TOTAL FEES: _____

Make checks payable to Town of Ross. Fees may not be refunded if the application is withdrawn.

SUBDIVISION INFORMATION ONLY

Number of Lots: _____

LOT LINE ADJUSTMENT ONLY

Describe the Proposed Lot Line Adjustment:

Existing Parcel Size(s) Parcel 1: Parcel 2:

Adjusted Parcel Size(s) Parcel 1: Parcel 2:

PARCEL ONE	PARCEL 2
Owners Signature: _____	Owner's Signature: _____
Date: _____	Date: _____
Owner's Name (Please Print): _____	Owner's Name (Please Print): _____
Assessor's Parcel Number: _____	Assessor's Parcel Number: _____

* If there are more than two affected property owners, please attach separate letters of authorization.

REZONING OR TEXT AMENDMENT ONLY

The applicant wishes to amend Section _____ of the Ross Municipal Code Title 18.

The applicant wishes to Rezone parcel _____ from the _____ Zoning District to _____.

GENERAL OR SPECIFIC PLAN AMENDMENT ONLY

Please describe the proposed amendment:

CERTIFICATION AND SIGNATURES

I, the property owner, do hereby authorize the applicant designated herein to act as my representative during the review process by City staff and agencies.

Owner's Signature: MP Hagan Date: 1/9/23

I, the applicant, do hereby declare under penalty of perjury that the facts and information contained in this application, including any supplemental forms and materials, are true and accurate to the best of my knowledge

Owner's Signature: [Signature] Date: 1/9/23

SIGNATURE:

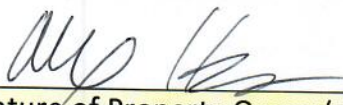
I hereby authorize employees, agents, and/or consultants of the Town of Ross to enter upon the subject property upon reasonable notice, as necessary, to inspect the premises and process this application.

I hereby authorize Town staff to reproduce plans and exhibits as necessary for the processing of this application. I understand that this may include circulating copies of the reduced plans for public inspection. Multiple signatures are required when plans are prepared by multiple professionals.

I further certify that I understand the processing procedures, fees, and application submittal requirements.

I hereby certify that I have read this application form and that to the best of my knowledge, the information in this application form and all the exhibits are complete and accurate. I understand that any misstatement or omission of the requested information or of any information subsequently requested shall be grounds for rejecting the application, deeming the application incomplete, denying the application, suspending or revoking a permit issued on the basis of these or subsequent representations, or for the seeking of such other and further relief as may seem proper to the Town of Ross. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this application was signed at

_____ Ross _____, California on 1/9/23 _____

 _____

Signature of Property Owner(s) and Applicant(s) Signature of Plan Preparer

Notice of Ordinance/Plan Modifications

- Pursuant to Government Code Section 65945(a), please indicate, by checking this box, if you would like to receive a notice from the Town of any proposal to adopt or amend the General Plan, a specific plan, zoning ordinance, or an ordinance affecting building permits or grading permits, if the Town determines that the proposal is reasonably related to your request for a development permit.

Alternate Format Information

The Town of Ross provides written materials in an alternate format as an accommodation to individuals with disabilities that adversely affect their ability to utilize standard print materials. To request written materials in an alternate format please contact us at (415) 453-1453, extension 105.

Consultant Information

The following information is required for all project consultants.

Landscape Architect

Firm N/A

Project Landscape Architect

Mailing Address _____

City _____ State _____ ZIP _____

Phone _____ Fax _____

Email _____

Town of Ross Business License No. _____ Expiration Date _____

Civil/ Geotechnical Engineer

Firm N/A

Project Engineer _____

Mailing Address _____

City _____ State _____ ZIP _____

Phone _____ Fax _____

Email _____

Town of Ross Business License No. _____ Expiration Date _____

Arborist

Firm N/A

Project Arborist _____

Mailing Address _____

City _____ State _____ ZIP _____

Phone _____ Fax _____

Email _____

Town of Ross Business License No. _____ Expiration Date _____

Other

Consultant Herb's Pool Service

Mailing Address 3769 Redwood Highway

City San Rafael State CA ZIP 94903

Phone (415) 479-4040 Fax N/A

Email josh@herbspoolservice.com

Town of Ross Business License No. _____ Expiration Date _____

Other

Consultant Lenehan Engineering

Mailing Address 1024 Iron Point Road, Suite 100-1486

City Folsom State CA ZIP 95630

Phone (916) 287-1445 Fax N/A

Email gerry@lenehaneng.com

Town of Ross Business License No. _____ Expiration Date _____

Mandatory Findings for Variance Applications

In order for a variance to be granted, the following mandatory findings must be made:

Special Circumstances

That because of special circumstances applicable to the property, including size, shape, topography, location, and surroundings, the strict application of the Zoning Ordinance deprives the property of privileges enjoyed by other properties in the vicinity and under identical zoning classification. **Describe the special circumstances that prevent conformance to pertinent zoning regulations.**

The special circumstance that prevents conformance
to pertinent zoning regulations is the 40' rear yard setback.
The rear of the house to the rear property line is 34'.

Substantial Property Rights

That the variance is necessary for the preservation and enjoyment of substantial property rights. **Describe why the project is needed to enjoy substantial property rights.**

A swimming pool will give the property owner a great space to entertain friends and family.
A home swimming pool is one of the safest ways to learn to swim and play water games.
Regular swimming can enhance coordination, flexibility, endurance, and strength.
Swimming pools can bring people together and create memories that last a lifetime.

Public Welfare

That the granting of a variance will not be detrimental to the public welfare or injurious to other property in the neighborhood in which said property is situated. **Describe why the variance will not be harmful to or incompatible with other nearby properties.**

The variance will not be harmful or incompatible with nearby properties. Safety measures will be installed as required to prevent any unauthorized entry into the pool. Gates providing direct access will open outward away from the pool. They will also be self-closing and self-latching with hardware mounted no less than 60" above grade. A safety cover will be installed on the pool and door alarms on the residence.
