

Swimming Pool Projects

(Updated March 2023)



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Important Design Considerations

- **Pre-Development Meeting** A mandatory pre-development meeting is required for all new construction, reconstruction, and/or expansion/addition projects. The pre-development meeting is intended to expedite the review process and ease the construction process. Property owners and their builders, contractors and/or consultants shall attend this meeting. The meeting will provide an opportunity for discussion regarding the development process and requirements in the City of Bunker Hill Village including zoning, setbacks, coverage calculations, trees, drainage, and other ordinances that impact the planning and development of the property. A signature of acceptance of the pre-development packet and the meeting attendance will be required of the owner. No approvals will be provided at this meeting.

[Schedule a Pre-Development Meeting Here](#)

- **Pool Remodel** shall mean re-plastering and maintenance only of a swimming pool. A pool remodel project will not include any changes to the pool. Any changes to the pool (i.e., change of shape, depth, addition of benches, etc.) will require the pool to be permitted as a new construction pool. A PERMIT IS STILL REQUIRED FOR A POOL REMODEL PROJECT. Additional permits may be required if you plan to replace decking, modify electrical or plumbing. All remodel projects must include updating the pool safety aspects. Drains and under water lighting must meet code. A pool barrier which meets the International Residential Code must also be in place. Pool barrier requirements are discussed later in this package.
- **Plan Size** NO DOCUMENTS OR PLANS LARGER THAN 11" X 17" MAY BE SUBMITTED. Only **ONE** set of documents or plans is required. Scale is not required to be maintained but dimensions must be clearly labeled on the plans. No staples or torn pages.
- **Insurance** All contractors requiring permits shall file with the city, and maintain for the entire period during which work pursuant to such permit is being performed, commercial general liability insurance in an amount of not less than five hundred thousand dollars (\$500,000.00).
- **Working Hours** Construction and deliveries may be between the hours of 7:00 a.m. and 6:00 p.m. on weekdays that are not Recognized Holidays, and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays that are not Recognized Holidays, except in cases of extreme and urgent necessity in the interest of public safety with the approval of the Building Official. No construction shall be done on Sundays. Recognized Holidays shall include New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, Christmas Eve and Christmas Day.
- **No Overhead Service** All utility service lines for electricity, telephone, gas, cable television and any other such service for individual lots shall be underground unless federal or state law or regulations require otherwise.
- **Special Inspections** All pool piping must be inspected prior to gunite. The plumbing permit for the pool has this stipulation. In an effort to help pool contractors coordinate this requirement, all permits for plumbing, electrical and drainage must be purchased prior to beginning the pool project.

- **Site Plan** Each site plan must clearly depict the following, as applicable:
 - Basic survey;
 - Forms survey (after it becomes available);
 - Drainage and topographic survey;
 - Standard base elevation survey;
 - Easements and plat restrictions;
 - Buildings and other major structures;
 - Open areas, impervious areas, landscaping and areas for required trees and pervious areas;
 - Yards or "setbacks"; buildable area;
 - Fences;
 - Mechanical equipment;
 - Garage openings, pavement, parking areas, driveways, emergency access ways, fire zones, sidewalks, loading areas, curb cuts, waste storage areas and special screens;
 - Drainage facilities in accordance with ARTICLE V. - FLOOD DAMAGE PREVENTION of this Chapter;
 - Other features and facilities required to comply with applicable regulations;
 - Required Sanitary Sewer P-Trap within six (6) feet of pump equipment.

- **No Street Parking** For any address for which an active building or maintenance permit has been issued, all vehicles shall be required to be parked on the lot for which the permit has been issued. For private streets, parking may not be in the access easement. Vehicles parked temporarily for a period of 30 minutes or less are not required to meet this requirement. Blocking of a street so that less than 15 feet of width for access is not allowed under any circumstance.

- **Lot Coverage** Maximum Allowable Lot Coverage by Non-permeable Surfaces is 45.0%. This is for the total lot area. City Rights-of-way are not part of the lot and therefore not included in this number. The total allowable lot coverage including permeable surfaces is 55%. This includes water surfaces as well. If you are building on a private street, please include the portions of the street which are located on your lot.

- **Fences** Fences and walls are not allowed in front of the main structure. The maximum fence height is 8'-0" measured from outside the fence. A 3' 0" subdivision entrance fence is allowed on private property for lots which meet the ordinance requirements. Please see the IRC 2018 requirements for pool barriers for additional fence requirements.

- **Drainage** A drainage system design signed and sealed by a Texas Registered Civil P.E. is required for each new home, home reconstruction, or addition of 200 square feet or more. A plan review fee of \$1,000.00 is required to be submitted with the plan. Please see the **City of Bunker Hill Village Drainage Criteria Manual** and the **Drainage Detention Worksheet** for specific design requirements.

- **SWPPP** A Storm Water Pollution Protection Plan is required for any project in the city on which the soil is disturbed during construction. Implementation may include silt fencing, inlet protection, maintaining at least 10 feet of vegetated area or any approved EPA method. Remember the goal of a SWPPP is to keep soil on your project and not allow it to flow into the storm water system or be tracked onto the street.

- Trees** A minimum of one tree for each 1,000 square feet of lot area, rounded up, is required to be present at the time of the building final. Larger trees which are part of the city's approved qualified tree list may count as more than one tree. Please see the complete information for tree preservation and the specific requirements for new construction. [View the Tree Information Packet here.](#)

Tree Classification and Size	Tree Count	Equivalent Tree Count
Qualified Tree 10-15 inch diameter	1 Trees	2
Protected Tree > 15 inch diameter	1 Trees	3

Building Codes

- 2018 Editions Of The International Building Code
- 2018 International Mechanical Code
- 2018 International Plumbing Code
- 2018 International Fuel Gas Code
- 2018 International Residential Code
- 2018 International Fire Code
- 2020 ICC Electrical Code
- 2020 Edition Of The National Electrical Code

AND the following modifications and additions:

- (1) 307.2.1 *Condensate Disposal*. Condensate from all cooling coils, evaporators and any condensate producing appliance shall be conveyed from the drain pan or appliance outlet to an approved place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley, walkway, patio or other area which could become unsafe with the presence of water. A water level detection device conforming to UL 508 shall be provided that will shut off the equipment served in the event that the condensate line becomes blocked.
- (2) Section 307.2.3 is hereby amended to read as follows:

307.2.3 *Auxiliary and Secondary Drain Systems*. In addition to the requirements of Section 307.2.1 where damage to any building components could occur as a result of overflow from the equipment primary condensate removal system, both of the following auxiliary protection methods shall be provided for each cooling coil or fuel-fired appliance that produces condensate:

1. An auxiliary drain pan with a separate drain shall be provided under the appliance on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1 ½ inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steel pans shall have a minimum thickness of not less than 0.0236 inch (0.6010 mm) (No. 24 gage). Nonmetallic pans shall have a minimum thickness of not less than 0.0625 inch (1.6 mm). Any appliance supports placed in the auxiliary drain pan must be of a noncombustible and non-deteriorating material.
2. A water-level detection device conforming to UL508 shall be provided that will shut off the equipment served prior to overflow of the pan.

The National Electrical Code, 2020 Edition, including all appendices, as published by the National Fire Protection Association, Inc., save and except the administrative provisions contained in Annex “H” thereof, and the 2018 International Code Council Electrical Code, as published by the International Code Council, authentic copies of which has been filed with the city secretary, are hereby adopted and made a part of this Code of Ordinances with the following amendments:

- (1) Minimum wire size for lighting and branch circuits is 12 gauge in areas of new construction. Number 14 gauge wire is not allowed for any purposes in areas of new construction.
 - (2) All wiring beyond the electrical service meter must be copper. No aluminum wiring allowed beyond the electric meter.
 - (3) All circuits, except those dedicated for specific appliances or required to be protected by GFCI, must be protected with combination breakers for arc and ground fault protection. A testing device shall be provided by the electrician at the final electrical inspection to test the arc and ground fault breakers at the receptacles.
 - (4) Hallways and stair landings of at least 3 feet (914 mm) or more in length as measured horizontally along the wall shall have at least one receptacle outlet. The hall length shall be considered the length measured along the centerline of the hall without passing through a doorway. Additional receptacles are required for each additional length of 12 feet (3658 mm).
 - (5) Receptacle requirements for kitchen islands – Any kitchen island with a work surface area, inclusive of sinks and appliances, of twelve (12) square feet or more must have a minimum of 4 individual receptacles generally distributed around the island.
 - (6) Standby and emergency generators shall be installed in accordance with the National Electrical Code, 2020 and the following restrictions:
 - a. All wiring shall meet all requirements outlined in this code.
 - b. Maximum sound level at anytime shall be 70db or less measured at the property line.
 - c. Generator shall be positioned so that no structure, roof or overhang is over any portion of the generator enclosure.
 - d. Minimum clearance between generator foundation and other structures shall be twenty-four (24) inches or greater as determined by manufacturers' specifications. At no time shall the clearance be less than twenty-four (24) inches.
 - e. No portion of the generator or wiring may be located in an easement or Right-of-Way.
 - f. Generator may not be located in any restricted area or required green space.
 - g. Generator may not be located within the required front yard of a lot.
 - h. Generator cannot be visible from a public or private street.
 - i. A load analysis, generator specifications and one-line electrical diagram must be posted with the permit on the project site.
- (3) 680.23 *Underwater Luminaires*. All underwater luminaires shall be low voltage L.E.D.
- (4) Wireless smoke detectors are acceptable without a signal communication wire if they meet all of the following:
- a. All detection devices must be of the same type and brand.
 - b. All detection devices must communicate interlocally.
 - c. All detection devices must sound simultaneously with an indication as to what area has triggered the alarm.

Download and view permit forms here

POOL BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near drownings by restricting access to swimming pools, spas and hot tubs.

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure.

Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

2. Openings in the barrier shall not allow passage of a 4-inch diameter (102 mm) sphere.

3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1³/₄ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1³/₄ inches (44 mm) in width.

5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm).

Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1³/₄ inches (44 mm) in width.

6. Maximum mesh size for chain link fences shall be a 2 1/4-inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1³/₄ inches (44 mm).

7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1³/₄ inches (44 mm).

8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-

closing and have a self-latching device. Gates other than pedestrian

access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:

8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and

8.2. The gate and barrier shall have no opening larger than 1/2 inch (13 mm) within 18 inches (457 mm) of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:

9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or

9.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions.

The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or

9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps:

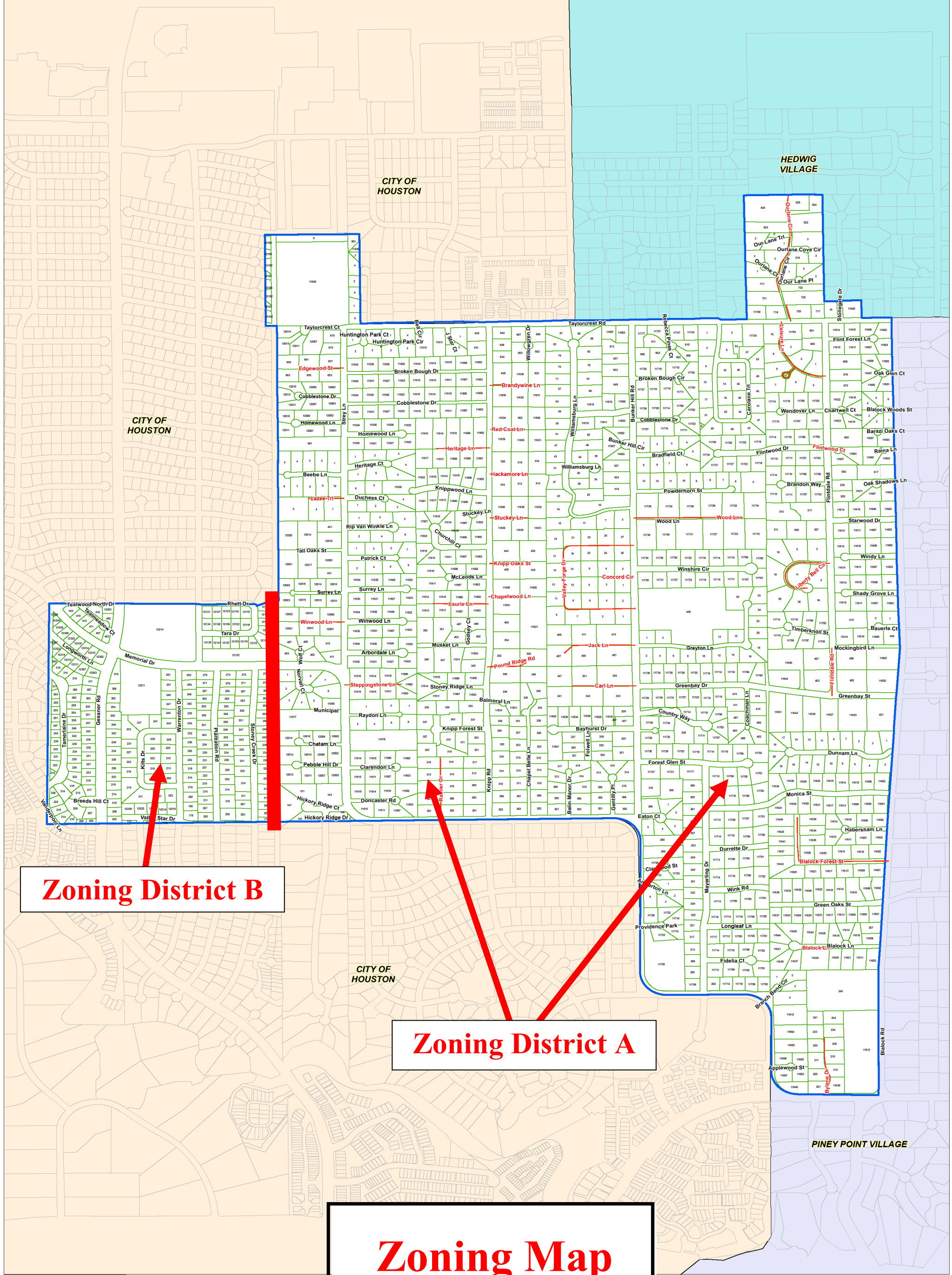
10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or

10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

AG105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Section AG105.2, Item 9.

AG105.4 Prohibited locations. Barriers shall be located to prohibit permanent structures, equipment or similar objects from being used to climb them.


AG105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AG107, shall be exempt from the provisions of this appendix.



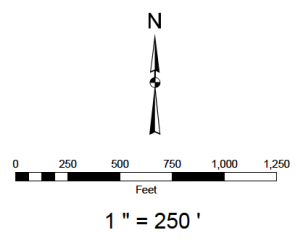
Zoning District B

Zoning District A

Zoning Map

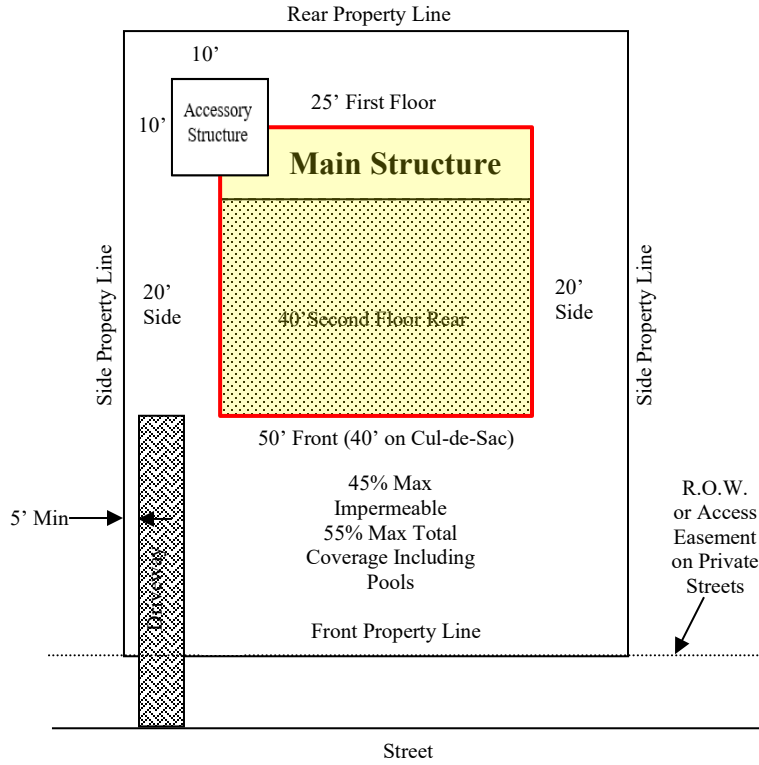

**CITY OF
BUNKER HILL VILLAGE**

- Legend**
- PRIVATE STREETS
 - PUBLIC STREETS
 - CITY LIMITS
 - Parcel (HCAD)

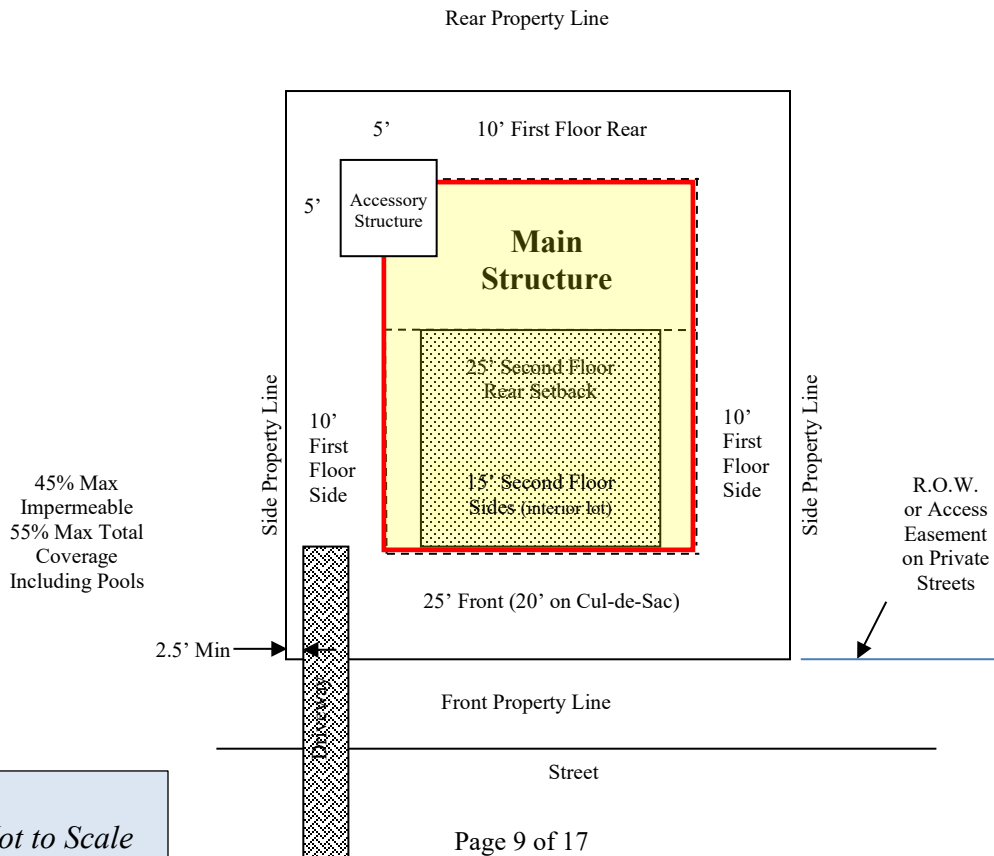




District A



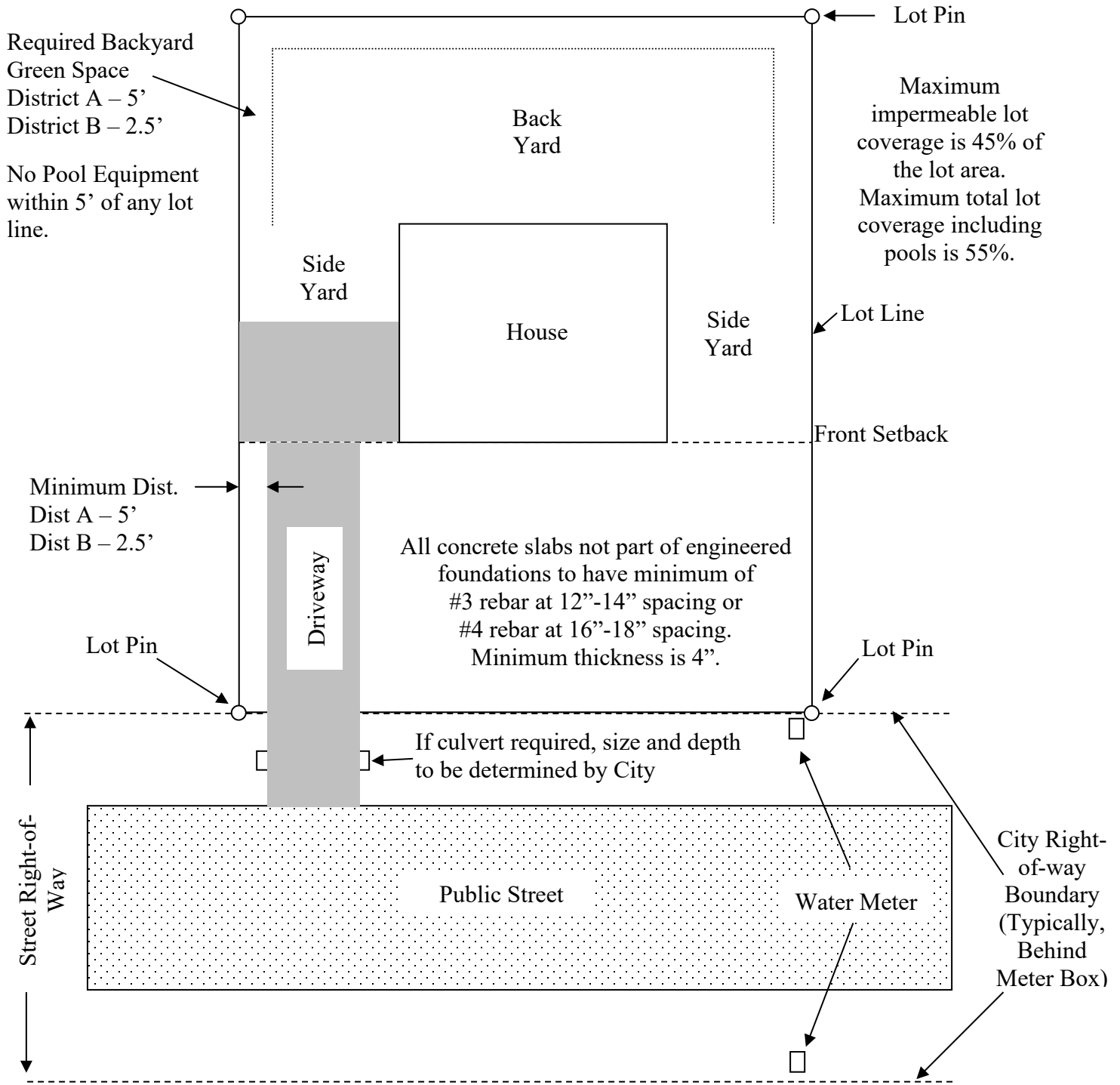
District B



NOTE:
Exhibits Not to Scale



Driveway, Sidewalk, Pool Decking and Patio Requirements



Permeable pavers must be manufactured and designated as a permeable material. Installation must comply with manufacturer's recommendations for permeable installations. Final inspection of a permeable system will include a test to confirm that all water is transferred to the soil below the paver system.

NOTE:
Exhibits Not to Scale



PERMEABLE PAVER SYSTEMS



Permeable pavers and other permeable surfaces are allowed as hardscapes but still count towards the maximum total lot coverage.

Any system which requires compacting or results in the subsoil becoming compacted will not be approved. Gravel and other aggregates spread on the ground surface will result in soil compaction over time and therefore do not qualify as permeable materials.

Pavers must be engineered as a permeable product and installed as to allow all of the underlying soil to absorb water at the same rate as surrounding native soil. Flagstone and other large coverage materials do not meet this requirement.

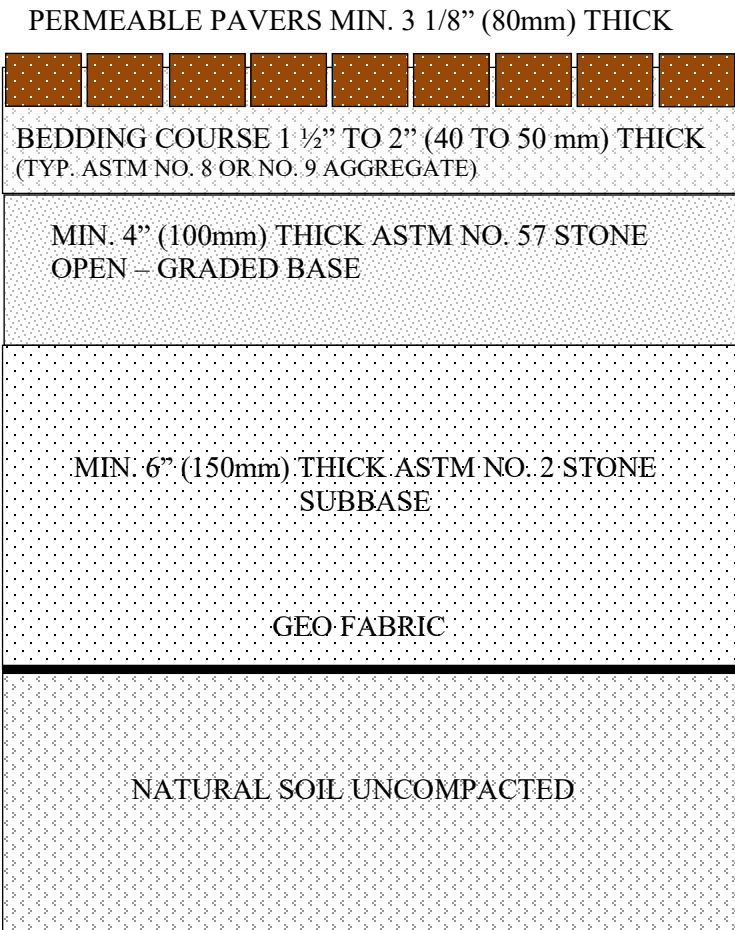
Permeable pavement areas must meet the same setbacks and location restrictions as non-permeable surfaces.

Please see driveway design standards for required roadway connection requirements.

Permeable concrete may be used in the same configuration as a paver, but similar bedding, base and sub-base materials will be required to allow adequate soil absorption.

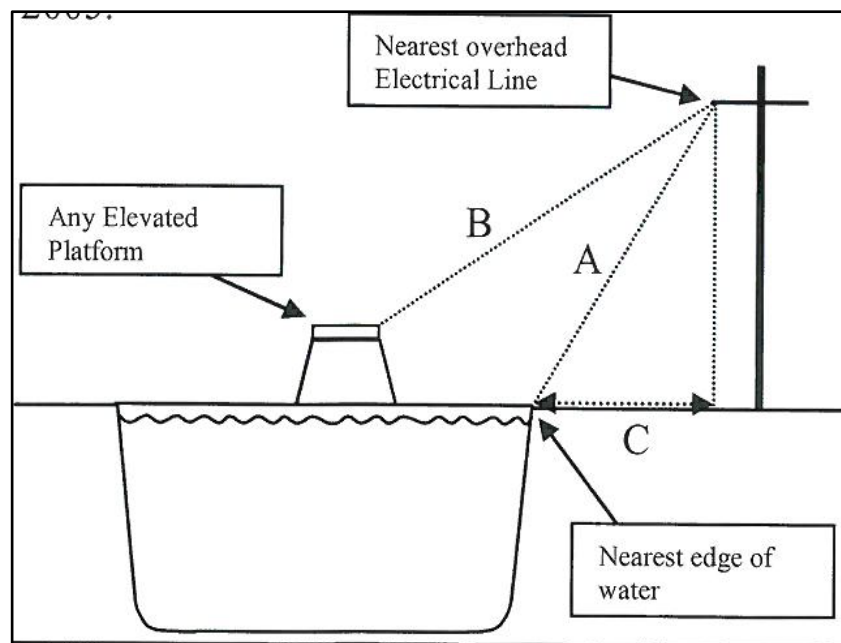
Sand materials are not allowed in any stage of a permeable system.

The drawing shown represents minimum design specifications. Please see your specific manufacturer for additional requirements.



Pool Location

- No part of the swimming pool structure may be located in an easement.
- Nearest water edge is defined as any part of the pool in which water is or can be present and visible. This may include waterfalls, slides, beaches or overflows.
- The minimum distance from the nearest overhead power line (insulated or un-insulated) to the nearest water edge is 22.5 feet direct (or angular) measurement. This is shown as measurement "A" in the drawing below.
- The minimum distance from the nearest overhead power line (insulated or un-insulated) to the nearest elevated platform is 14.5 feet direct (or angular) measurement. This is shown as measurement "B" in the drawing below.
- The minimum horizontal distance from the nearest overhead power line (insulated or un-insulated) to the nearest water edge is 10.0 horizontal feet. This is shown as measurement "C" in the drawing below.
- A swimming pool must comply with all yard and setback requirements of the main building unless such swimming pool is located in the rear one-third (1/3) of the lot, in which event the following shall apply:
 - If located in the rear one-third (1/3) of **an interior lot**, a swimming pool must be set back at least ten (10) feet from the rear lot line and at least ten (10) feet from each side lot line.
 - If located in the rear one-third (1/3) of **a corner lot**, a swimming pool must be set back at least ten (10) feet from the rear lot line, at least ten (10) feet from the interior side lot line (the side lot line farthest removed from the side street), and at least twenty (20) feet or a distance at least equal to the required depth of that yard of the contiguous lot which abuts such side street, whichever is greater, from the exterior side lot line (the side lot line which abuts the side street). All of the foregoing measurements shall be taken from the nearest water's edge of such swimming pool.



New Swimming Pool Required Documentation

One set of the following items, no pages larger than 11" X 17", no staples please

- This list with items checked if provided.
- Pre-Development Meeting Signature Page - You will receive this at the Pre-Development Meeting
- Check for \$1,000.00 for Drainage Review

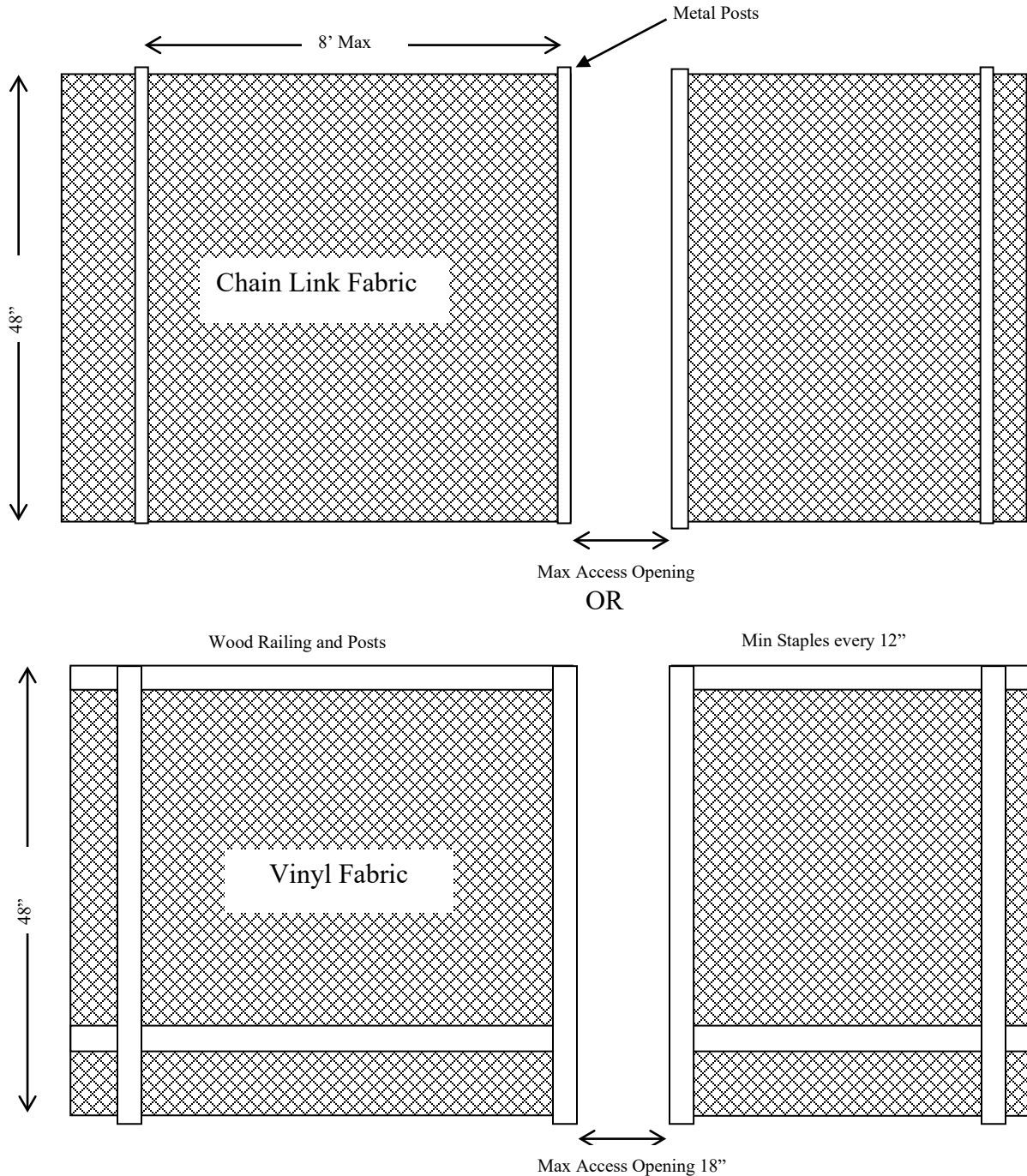
These forms are available as a fill in Excel Spreadsheet. You are strongly encouraged to use the Spreadsheet some results will be calculated for you.

- Contractor Information Form
- Building Permit Application
- Tree Inventory and Removal Form (even if no trees to be removed)
- Detention Volume and Coverage Worksheet
- Electrical Load Calculation-Must provide amps of incoming service, amps of existing load and proposed amps for new pool.
- Site Plan as detailed in this package
- Tree Survey showing all trees and proposed planting location, size and species of any trees to be planted.
- Drainage plan signed and sealed by a Civil Engineer
- Property Survey - 11" X 17"
- Pool Steel Plan
- Pool Piping Plan- Must show a sanitary sewer P-trap within 6 feet of the pump equipment even if a cartridge filtration system is used.
- Please provide a gas size calculation and indicate if a gas meter upgrade or an additional gas meter is required
- Pool Barrier Plan- If you plan to use the property fencing, please show which neighboring lots have pools



Types of Allowable Tree Protection Fencing

Tree protection shall consist of fencing, at least forty-eight (48) inches in height, which shall be placed at the drip line of the canopy of each tree to be preserved. Fencing shall be of either metal hurricane variety with steel posts no greater than eight (8) feet apart, or a wooden rail fence with vinyl construction fencing attached, with staples every twelve (12) inches. An opening shall be left in each fence enclosure of not more than eighteen (18) inches to allow access for maintenance of grass and vegetation. No such tree protection area shall be used to store materials or equipment.





General Contractor Responsibilities

The general contractor **SHALL PROVIDE A SINGLE PROTECTED AREA FOR ALL PERMITS AND INSPECTION RECORDS** issued for that site.

SANITARY WASTE: All sanitary waste shall be collected in an enclosed portable waste collection unit (portable toilets) approved by the City of Bunker Hill Village. All portable toilets shall be screened from view from any adjacent private property or any public or private roadway with privacy fencing or other decorative screening materials, of a height of not less than the height of the portable toilet. Each portable toilet shall be served at least one (1) time per week.

All trees to be left on the site **MUST HAVE TREE PROTECTION IN PLACE BEFORE ANY CONSTRUCTION INCLUDING DEMOLITION TAKES PLACE.**

ALL STREETS AND PUBLIC DRAINAGE AREAS MUST BE PROTECTED FROM SITE RUNOFF WITH A SILT FENCE. Any tracking of mud or debris **MUST BE CLEANED DAILY.**

ON-SITE PARKING FOR WORKERS: All vehicles belonging to construction workers shall be parked on the job site unless special approval by the building official is received. The builder shall provide an all-weather temporary drive to minimize tracking dirt, mud, etc., onto the adjacent street or streets.

HOURS OF WORK NOTICES MUST BE POSTED. The City of Bunker Hill will provide these notices in English and Spanish. The general contractor is to place them in a protective sleeve or have them laminated and post both at the site.

ALL TRASH, DEBRIS, AND LITTER MUST BE PICKED UP DAILY.

Violation of any of the above **CAN RESULT IN STOP WORK ORDERS OR A FINE OF \$2,000 OR BOTH.**

A “Site Inspection” is required prior to any construction activities to confirm that all of the above are in place. No construction inspections will be scheduled until an approved site inspection have been performed. Items to be inspected as part of a site inspection:

- Permit posting station in place with permits on site
- Tree protection as required
- Storm water protection in place (silt fencing)
- Designated construction parking location
- Work hours posted
- Fencing around sanitary facilities
- Dumpster in place



**City of Bunker Hill Village
WORKING HOURS:**

Monday – Friday

7:00 a.m. to 6:00 p.m.

Saturday

8:00 a.m. to 5:00 p.m.

Sunday & Holidays

No Work Allowed



LAS HORAS DE TRABAJO

LUNES – VIERNES

7:00 a.m. hasta las 6:00 p.m.

SABADO

8:00 a.m. hasta las 5:00 p.m.

DOMINGO

DIA DE DESCANSO

No Se Permite Trabajar