



CITY OF BUNKER HILL VILLAGE

THE PLANNING AND ZONING COMMISSION OF THE CITY OF BUNKER HILL VILLAGE, TEXAS, WILL MEET ON TUESDAY, FEBRUARY 27, 2024, AT 11:30 A.M. IN THE CITY HALL COUNCIL CHAMBERS AT 11977 MEMORIAL DRIVE FOR THE PURPOSE OF DISCUSSION AND POSSIBLE ACTION ON THE FOLLOWING:

NOTICE OF MEETING BY TELEPHONE AND VIDEO CONFERENCE:

In accordance with Texas Government Code, Sec. 551.127, on a regular, non-emergency basis, Board members may attend and participate in a meeting remotely by video conference. Should such attendance transpire, a quorum of the Planning and Zoning Commission will be physically present at the location noted above on this agenda.

This meeting agenda, and the agenda packet, are posted online at

www.bunkerhilltx.gov

The public will be able to observe and participate in the meeting as follows:

Join Zoom Meeting

<https://us06web.zoom.us/j/83880924614?pwd=i6DGldcduRNPMEer67RsSA4kimwmZi.1>

Meeting ID: 838 8092 4614

Passcode: 543026

Dial by your location

+1 346 248 7799 US (Houston)

The public will be permitted to offer public comments by video conference as provided by the agenda and as permitted by the presiding officer during the meeting. A recording of the meeting will be made and will be available to the public in accordance with the Open Meetings Act upon written request.

- I. **CALL TO ORDER**
- II. **PUBLIC COMMENTS**
- III. **CONSIDERATION AND POSSIBLE ACTION REGARDING APPROVAL OF THE JANUARY 23, 2024, MEETING MINUTES**
- IV. **CONSIDERATION AND POSSIBLE ACTION REGARDING A RECOMMENDATION TO THE CITY COUNCIL TO APPROVE A FINAL PLAT FOR 9 VALLEY FORGE**
- V. **REVIEW, DISCUSSION, AND DIRECTION ON AN APPLICATION FOR AN AMENDMENT TO THE SPECIFIC USE PERMIT FOR MEMORIAL DRIVE PRESBYTERIAN CHURCH LOCATED AT 11612 MEMORIAL DRIVE TO INSTALL REPLACEMENT SIGNAGE**
- VI. **REVIEW, DISCUSSION, AND DIRECTION ON AMENDING THE CITY’S ZONING ORDINANCE**

AN ORDINANCE OF THE CITY OF BUNKER HILL VILLAGE, TEXAS, AMENDING APPENDIX “A”, ZONING, OF ITS CODE OF ORDINANCES BY AMENDING SECTION 2.01, GENERAL, OF ARTICLE II, DEFINITIONS, TO AMEND THE DEFINITION OF PERMEABLE; BY AMENDING SECTION 5.04, AREA REGULATIONS, SIZE OF LOT, OF ARTICLE V, DISTRICT A REGULATIONS, AND SECTION 6.04, AREA REGULATIONS, SIZE OF LOT, OF ARTICLE VI, DISTRICT B REGULATIONS, OF APPENDIX A, ZONING, TO ADD THAT SYNTHETIC TURF SHALL BE CONSIDERED A PERMEABLE SURFACE AND SHALL BE PROHIBITED IN THE FRONT YARD; PROVIDING FOR SEVERABILITY; AND PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 PER DAY WITH EACH DAY CONSTITUTING A NEW VIOLATION

VII. ADJOURN

I, Gerardo Barrera, City Administrator, for the City of Bunker Hill Village, certify that the above notice of meeting was posted in a place convenient to the general public in compliance with Chapter 551, Texas Government Code, by Friday, February 23, 2024 by 12:00 p.m.

(SEAL)



Gerardo Barrera, City Administrator/ Acting City Secretary

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodation or interpretive services must be made 48 hours prior to public meetings. Please contact the office of the City Secretary at 713-467-9762 for further information.

**MINUTES OF A PUBLIC MEETING
OF THE CITY OF BUNKER HILL VILLAGE
PLANNING AND ZONING COMMISSION
TUESDAY, JANUARY 23, 2024, AT 11:30 A.M.**

I. CALL TO ORDER

Chair Bill Going called the Planning and Zoning Commission Meeting to order at 11:52 a.m. based on a quorum of members present:

Present

Bill Going, Chair
John Gillette, Vice-Chair
Jack Christiansen, Commissioner
Billy Murphy, Commissioner
Paul Reinbolt, Commissioner *via Zoom*

Also in Attendance

Gerardo Barrera, City Administrator
Elvin Hernandez, Director of Public Works
Loren Smith, City Attorney
Jennifer Namie, Assistant to the City Secretary
Keith Brown, City Council Liaison
Mallory Pack, Management Analyst

Absent

Catherine Wile, Commissioner
Monica Muschalik, Commissioner

II. PUBLIC COMMENTS

There were no public comments.

III. CONSIDERATION AND POSSIBLE ACTION REGARDING APPROVAL OF THE NOVEMBER 28, 2023, MEETING MINUTES

A motion was made by Vice-Chair Gillette and seconded by Commissioner Murphy to approve the November 28, 2023 meeting minutes.

The motion carried 5-0

IV. CONSIDERATION AND POSSIBLE ACTION ON AMENDING THE CITY'S SUBDIVISION ORDINANCE

AN ORDINANCE OF THE CITY OF BUNKER HILL VILLAGE, TEXAS AMENDING CHAPTER 14, SUBDIVISION, OF THE CITY'S CODE OF ORDINANCES BY AMENDING SECTION 14-1, DEFINITIONS, SECTION 14-2, GENERAL PROVISIONS, SECTION 14-3, SPECIAL PROVISIONS, SECTION 14-5, FINAL PLAT, SECTION 14-6, FEES, SECTION 14-11, APPROVAL OF FINAL PLAT; REMOVING SECTION 14-4, PRELIMINARY PLAT AND ACCOMPANYING DATA, TO REMOVE REFERENCES TO THE PRELIMINARY PLAT PROCESS; PROVIDING FOR A PENALTY IN AN AMOUNT OF \$2,000.00 FOR EACH VIOLATION HEREOF WITH EACH DAY CONSTITUTING A SEPARATE VIOLATION; AND PROVIDING FOR SEVERABILITY

There is no state law (or case law) that defines a “preliminary” plat. This is a creature of local municipality creation. In October 2014, Ordinance No. 14-446 amended Chapter 14 of the City's Code of Ordinances that included the amendment of adding the procedures of Preliminary Plat process.

The Texas Legislature recently put in place requirements that all plats be approved within 30 days of submission or 30 days from approval by the Planning and Zoning Commission. To avoid any confusion between a Preliminary Plat and a Final Plat in conjunction with the timing requirements, it is recommended to remove the Preliminary Plat process from the Subdivision Ordinance.

The proposed amendment to Chapter 14 of the City's subdivision ordinance removes the Preliminary Plat process. This item was presented at the January 2024 Planning and Zoning Commission meeting with the commission voting unanimously 7-0 to recommend approval of amending the subdivision ordinance and removing the Preliminary Plat process of Chapter 14.

This item was placed on the agenda at the recommendation of the City Attorney.

A motion was made by Vice-Chair Gillette and seconded by Commissioner Christiansen to recommend approval of the ordinance to the City Council as written.

The motion carried 5-0

V. REVIEW, DISCUSSION, AND DIRECTION ON AMENDING THE CITY'S ZONING ORDINANCE

AN ORDINANCE OF THE CITY OF BUNKER HILL VILLAGE, TEXAS, AMENDING APPENDIX “A”, ZONING, OF ITS CODE OF ORDINANCES BY AMENDING SECTION 2.01, GENERAL, OF ARTICLE II, DEFINITIONS, TO AMEND THE DEFINITION OF PERMEABLE; BY AMENDING SECTION 5.04, AREA REGULATIONS, SIZE OF LOT, OF ARTICLE V, DISTRICT A REGULATIONS, AND SECTION 6.04, AREA REGULATIONS, SIZE OF LOT, OF ARTICLE VI, DISTRICT B REGULATIONS, OF APPENDIX A, ZONING, TO ADD THAT SYNTHETIC TURF SHALL BE CONSIDERED A PERMEABLE SURFACE AND SHALL BE PROHIBITED IN THE FRONT YARD; PROVIDING

FOR SEVERABILITY; AND PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 PER DAY WITH EACH DAY CONSTITUTING A NEW VIOLATION

At the June 2023 City Council meeting, staff presented a synthetic turf ordinance as recommended by the Planning and Zoning Commission. Council noted concerns with lot coverage limitations and the definition of permeability; the motion to adopt the ordinance failed 3-2. Council directed staff to bring the ordinance back to the Commission and Drainage Committee for additional review, discussion, and recommendations based on the following feedback:

- Define turf installation requirements
- If turf satisfies installation requirements and is fully permeable, turf should be considered landscaping and not counted towards 55% of lot coverage. However, if turf is impermeable, then turf should be included in the 45% lot coverage calculation.

At the August 2023 meeting, the Drainage Committee discussed the following:

- Turf is already defined as permeable if installed per City and manufacturer specifications (with a minimum infiltration rate of 10”in. p/hr). Any changes may need to update the definition in the Drainage Criteria Manual.

Based on the feedback from the August meeting, the Commission focused on three points of interest:

A. Definition

- Synthetic turf is defined as permeable in the Drainage Criteria Manual.
- Lot coverage restrictions (if applicable)
- Drainage calculation of turf versus natural grass

B. Optics

- Restricted in the front yard and side rear yard
- Cannot be visible from public or private street
- No color restrictions in backyard
- Not allowed in designated green space in rear yards. Turf placed in utility easements or over city utilities will not be replaced if removed during needed repair. Restoration will be the responsibility of the property owner.

C. Permeable

- Standard for installation is based on manufacturer specifications
- Restrict impermeable base material
- Ensure proper drainage

After discussions with the City’s Drainage Engineer, staff presented the following “tiered” approach at the October 2023 meeting:

Tier 1 – No additional requirements needed for an area covering 1,000 square feet (s.f.).

- The City currently allows up to 200 s.f. of impervious surface without any detention requirements. Using the 0.75 acre feet/ac detention rate, this calculates 150 cubic feet of “free” detention. Using this calculation for turf, the calculated volume that

would be provided on a standard 4” base (rock+gravel layers) x 40% void ratio, this calculates to approximately 133.33 cubic feet for an area of 1,000 s.f.

Tier 2 – Over 1,000 s.f up to 55% lot coverage

- Same requirement that currently exists.

Tier 3 – Over 1,000 s.f. and over 55% lot coverage

- This would require a design of a drainage system draining into an on-site detention system. For coverage over 55% lot coverage detention must be calculated at 0.75 ac-ft/ac. Volume will be included in the rock and gravel layers therefore the designer must provide specifications of volume calculations. If the volume under the base layer is insufficient, additional detention must be provided.

The Commission was not in favor of the tiered approach and recommended changing the 1,000 s.f. calculation to a percentage to more accurately account for variations in lot sizes. Additionally, the Commission recommended the manufacturer and city standard for installation remain a requirement.

On January 9, 2024, staff met with the Drainage Committee and presented information based on recent new developments within the City with proposed calculations that illustrated design coverage percentage and the percentage of the remaining that could be utilized for turf. This assumed 55% max lot coverage. The intent of the exercise was to show the amount of turf in square footage and also show the amount of cubic feet needed for additional detention. After discussion, the Drainage Committee recommended the following:

1. No changes to the current Drainage Criteria Manual
2. Maximum lot coverage to remain at 55% and maintain “no net new” water run-off

The Commission directed staff to invite the City’s drainage engineer to the February meeting to facilitate further discussion and insight on proposed installation methods, examine other cities’ ordinances and calculation of how turf differs from natural grass/landscaping.

No action was taken on this item.

VI. REVIEW, DISCUSSION, AND DIRECTION ON AMENDING THE CITY’S TREE ORDINANCE

The purpose of the City’s tree ordinance is to preserve and enhance the desirability of the city by requiring careful site planning; the protection of trees during construction to contribute to the long-term viability of existing trees; prohibiting indiscriminate cutting or clearing of trees; and encouraging the increase of the urban canopy.

In response to feedback received from the Planning and Zoning Commission, residents, and building developers, staff is currently in the preliminary phase of reviewing the City's tree ordinance to identify areas that may benefit from updates and eliminate any ambiguity in the language. Staff recommends addressing and clarifying any discrepancies to ensure that the code is clear, concise, and effective.

In discussions with the City Forester, staff has identified sections for review and potential updates under Chapter 4, Article VI of the Code of Ordinances (but not limited to):

- Sec. 4-183 - Minimum tree requirement
- Sec. 4-185 - Tree preservation, removal and replacement

Discussion included:

- Incorporate provisions imposing a penalty/ punitive actions (ex. include penalty if a tree was removed that was not approved in the tree survey/ include penalty for failure to follow tree survey as approved) to deter contractors from having to pay low fines for failure to comply with ordinance requirements.
- Require proof from a qualified Urban Forester to remove dead and/or diseased tree.
- Revise procedure for minimum tree count and tree placement (ex. Off-Site Tree Fund) to ensure best canopy coverage.
- Suspension or revocation of contractor to build in City

Staff will work with the City Forester to develop proposed revisions that reflect Commission discussion.

Commissioner Reinbolt left the meeting at 1:00 p.m.

No action was taken on this item.

VII. ADJOURN

A motion was made by Commissioner Murphy and seconded by Vice-Chair Gillette to adjourn the meeting at 1:14 p.m.

The motion carried 4-0

Approved and accepted on February 27, 2024.

William Going, Chair

ATTEST:

Gerardo Barrera, City Administrator/ Acting City Secretary



AGENDA REQUEST
City of Bunker Hill Village
Planning and Zoning Commission

Agenda Date: February 27, 2024
Agenda Item: IV
Subject: Final Plat
Exhibits: Location Map
Final Plat
Presenter(s): Gerardo Barrera, City Administrator

Executive Summary

At the February 2024 City Council meeting, Council voted to approve Ordinance No. 24-621, formally amending Chapter 14 of the Code of Ordinances to remove the Preliminary Plat process.

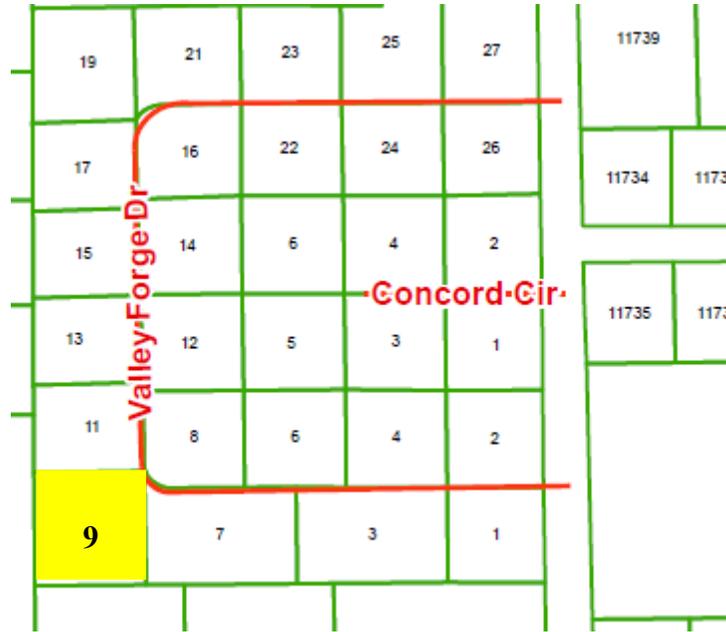
During the plan review of a new home at 9 Valley Forge, it was found that no final plat was ever recorded with Harris County. The property owner's representatives have submitted the plat (attached) for the Planning and Zoning Commission and ultimately, the City Council's approval. The property does not qualify for a short term final plat as the property is on a private street and not within an existing public street circulation.

Staff and the City's consultant have reviewed the plat and find that it meets all requirements of the City's Code of Ordinance.

Recommended Action

Staff recommends the Planning and Zoning Commission recommend approval of the final plat to the City Council.

Location Map
9 Valley Forge





AGENDA REQUEST
City of Bunker Hill Village
Planning and Zoning Commission

Agenda Date:	February 27, 2024
Agenda Item:	V
Subject:	Specific Use Permit (SUP) for Memorial Drive Presbyterian Church (MDPC)
Exhibits:	Presentation
Presenter(s):	Gerardo Barrera, City Administrator

Executive Summary

Memorial Drive Presbyterian Church (MDPC), located at 11612 Memorial Drive, operates under a specific use permit (SUP). The SUP outlines a detailed site plan and specific conditions on MDPC property.

At the April 2023 Planning and Zoning Commission Meeting, MDPC presented an application for an amendment to the SUP for Commission review, discussion, and direction for the following:

1. Replacement of existing signs (3 total)
2. New pickleball courts (2 total) with covered structure and site amenities

The Commission discussed the items and recommended separating the two requests. In discussions with the Commission and staff, MDPC representatives expressed that the pickleball courts were the highest priority and would pursue replacing the signage at a later time.

At the November 2023 meeting, the Commission held a public hearing on the proposed pickleball courts and voted 6-1 to recommend approval to the City Council of amending the SUP for MDPC to install new pickleball courts with a covered structure and site amenities as presented. At the February 2024 City Council meeting, Council voted 3-1 to approve the amendment.

MDPC is now revisiting the signage request. MDPC is requesting to replace existing signs in three (3) locations along Memorial Dr. and Blalock Rd. The proposed signs are electronic.

The City has granted SUPs in the past for electronic signs at Frostwood Elementary School, Bunker Hill Elementary School, and Memorial Drive Lutheran Church. The SUPs incorporate conditions related to color and hours of operation that the sign can be illuminated.

The City's Code for institutional signage includes the following:

§ 7.11. - Signs.

It shall be unlawful for any person to erect, construct, install, or maintain any sign within the city except one specifically permitted by this section. No sign, except one authorized or required by governmental authority, shall be placed or allowed to project in, along, or over a public street, sidewalk, easement, or other public property. Only the following type signs, of the size and dimensions specified, shall be permitted in the city:

D. Institutional signs. Institutions located within the city shall be allowed to erect one (1) permanent freestanding ground sign within each yard of the lot or parcel of land on which such institution is situated which fronts or is adjacent to a street. No such sign shall exceed fifty (50) square feet in total area, including the supporting structure, and the sign face, or "message area," shall not exceed twenty (20) square feet. No such sign shall exceed five (5) feet in height above the immediately adjacent natural grade, or be placed within one (1) foot of a roadway right-of-way. Such signs shall not impede traffic visibility or constitute a traffic hazard. In addition to the foregoing, such signs shall comply with, and be subject to, the following:

1. All institutional signs shall be subject to approval by the city council, upon recommendation of the Planning and Zoning Commission. The institution requesting approval shall submit to the commission a drawing of the proposed sign, together with a description and other information sufficient to determine whether the sign is in compliance with this section. The commission shall, as soon as practicable following submission of the request for approval of a proposed sign, advise the applicant whether it recommends approval or disapproval and, if disapproval is recommended, the reasons therefor. The applicant may revise the proposal and resubmit it for review by the commission. After review, the commission shall deliver its written recommendation to city council.
2. Institutional signs may be illuminated if by means which do not include neon, strobe, blinking, moving, or other similar attention-arresting lighting devices. Any such sign shall be constructed of materials substantially similar to the existing design, construction and appearance of the institution to which such sign pertains. The structural portion of the sign, same being that portion other than the sign face or "message area," shall be constructed of stone, brick or wood. The message portion of any such sign, including lettering or logos, shall be of subdued natural earth colors, such as white, black, gray, brown or dark green.

SUP & Amendment Process

The purpose of the SUP process and regulations is to allow the proper integration of uses which may be suitable in specific locations within the City. Any future requests by the applicant must meet the existing SUP or an amendment is required.

As stated in the Code of Ordinances, before any specific use is permitted in the applicable zoning district, a report from the Planning and Zoning Commission must be directed to the City Council accompanied by the Commission's recommendation for approval or denial. The report shall include, but need not be limited to, the following:

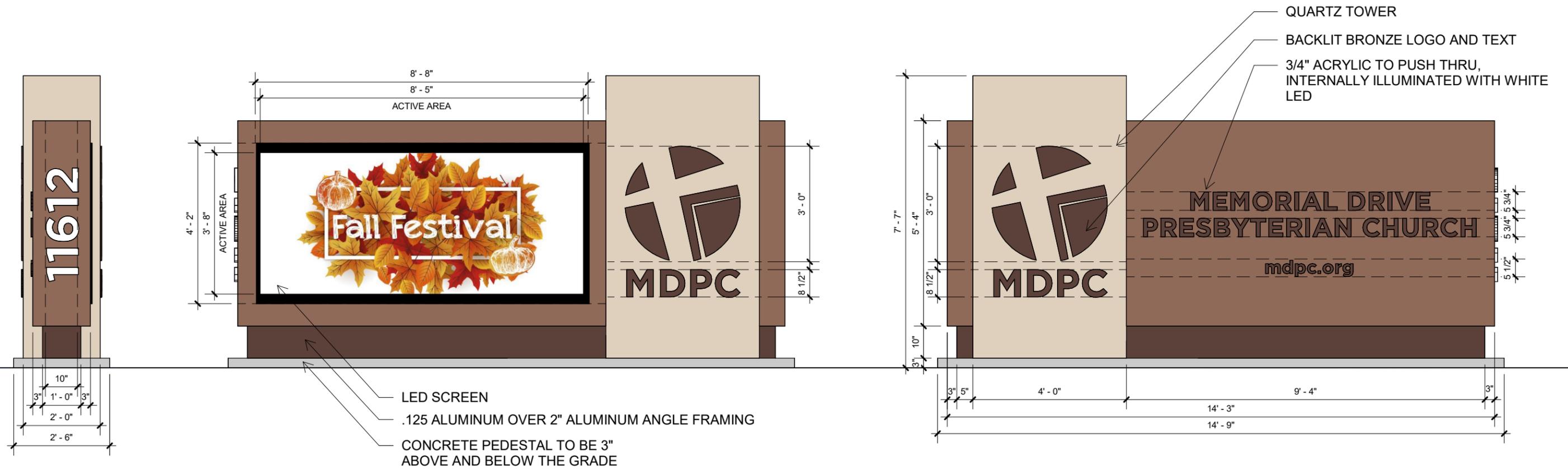
- A. *Ingress and egress*: Ingress and egress to the property and proposed structures thereon, with particular reference to automobile and pedestrian safety and convenience, traffic flow and control, and access in the event of fire or other catastrophe.
- B. *Off-street parking*: Off-street parking and loading areas where required, with particular attention to the items set forth in subsection A of this section, and the economic, noise, glare, and other effects of the specific use on adjoining properties and other properties generally in the district and city.
- C. *Service area*: Refuse and service areas, with particular reference to the items set forth in subsections A and B of this section.
- D. *Utilities*: Utilities include water and wastewater with reference to location, availability, and compatibility.
- E. *Drainage*: Drainage plans proposed to meet requirements of the city's drainage ordinance and criteria manual.
- F. *Screening and buffering*: Screening and buffering, either or both, with reference to type, dimensions, and character.
- G. *Signs and lighting*: Sign location and size, proposed exterior lighting with reference to glare and traffic safety and compatibility and harmony with adjacent property and other properties generally in the district and city.
- H. *Trees, yards and open spaces*: Landscaping and required yards, open spaces, and building setback lines.
- I. *Compatibility*: General compatibility with adjacent properties and other properties in the district and city.
- J. *Conformity*: The conformity of the proposed use with the requirements and intent of this ordinance and the comprehensive plan of the city.

The SUP process examines individual sites on a case-by-case basis to determine if the proposal would negatively impact adjacent properties and the City as a whole.

The SUP process provides for conditions to be included to ensure specific concerns are addressed for the various factors.

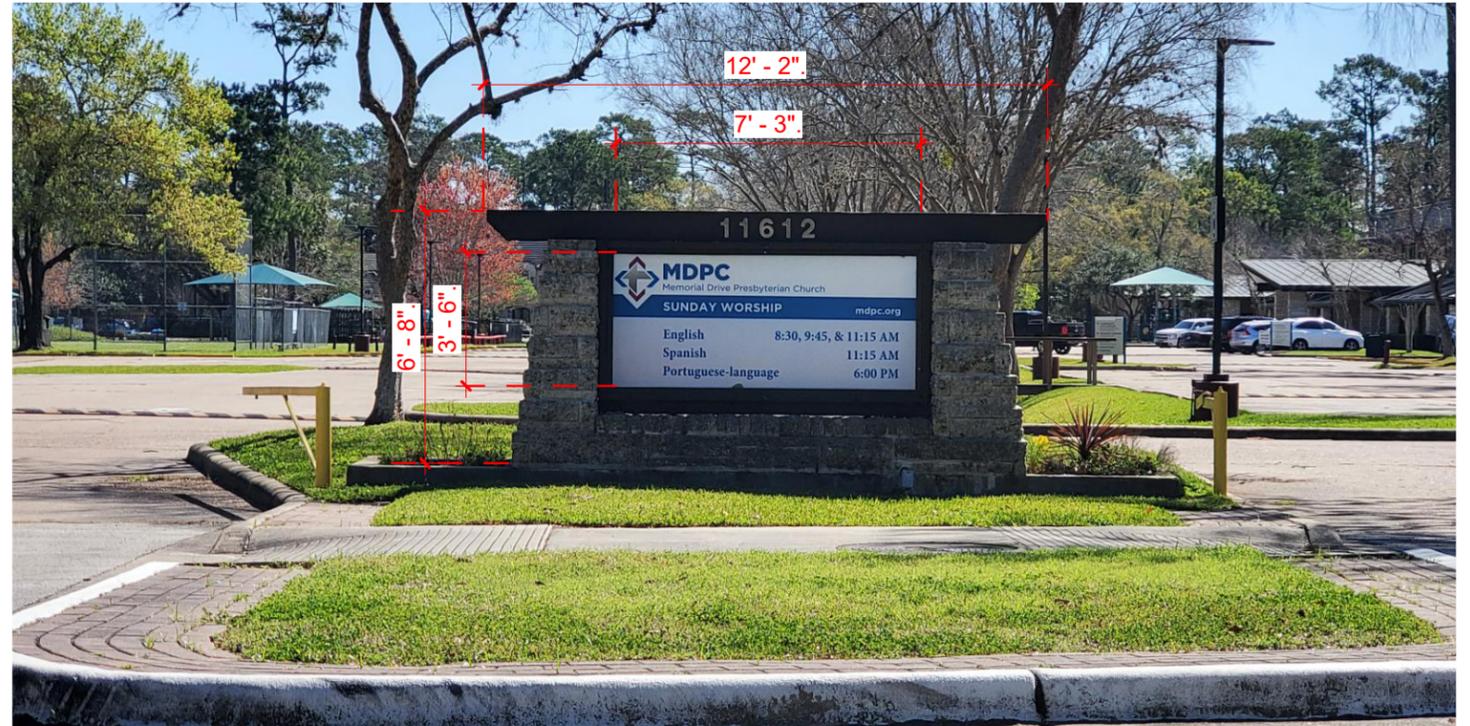
Recommended Action

Staff recommends that the Planning and Zoning Commission provide direction and feedback.

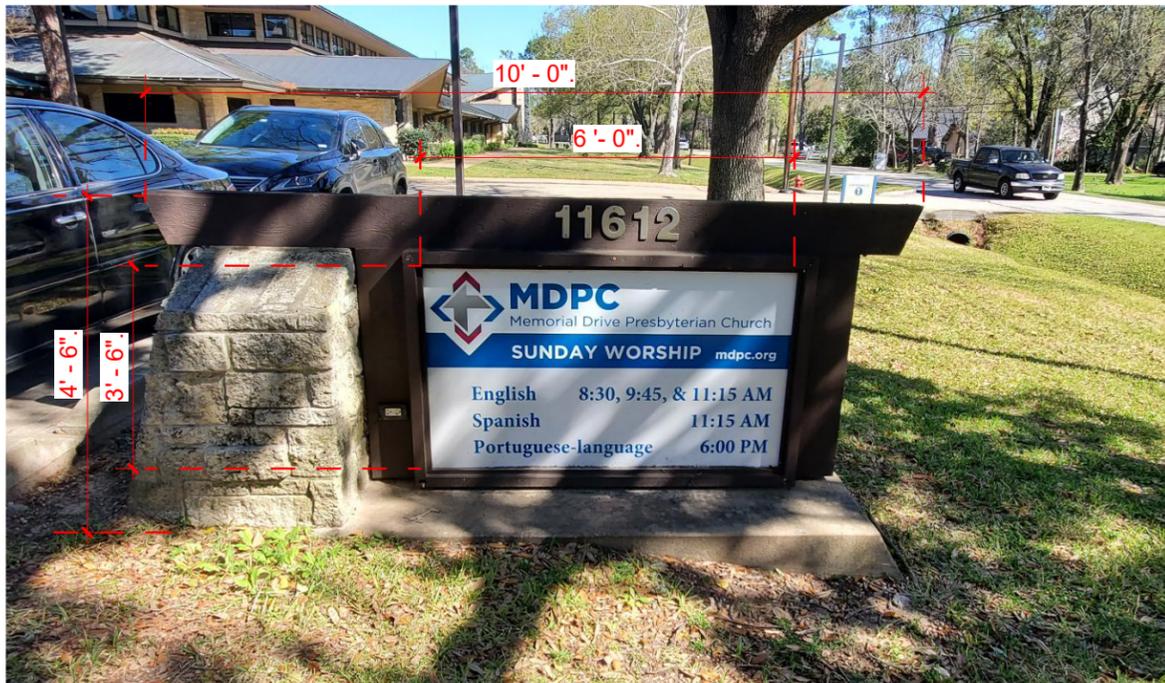




SIGN A - 13'-4" X 4'-5"



SIGN B - 12'-2" X 6'-8"

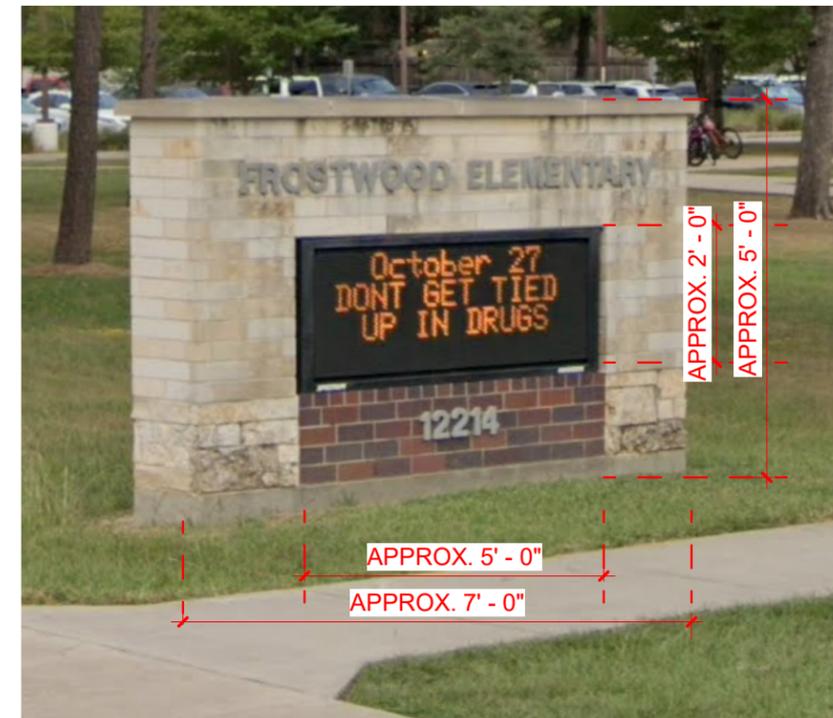


SIGN C - 10'-0" X 4'-6"





SECOND BAPTIST CHURCH - MONUMENT SIGN



FROSTWOOD ELEMENTARY SCHOOL - MONUMENT SIGN



MEMORIAL DRIVE LUTHERAN CHURCH - MONUMENT SIGN

§ 7.11. - Signs.

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1. All institutional signs shall be subject to approval by the city council, upon recommendation of the Planning and Zoning Commission. The institution requesting approval shall submit to the commission a drawing of the proposed sign, together with a description and other information sufficient to determine whether the sign is in compliance with this section. The commission shall, as soon as practicable following submission of the request for approval of a proposed sign, advise the applicant whether it recommends approval or disapproval and, if disapproval is recommended, the reasons therefor. The applicant may revise the proposal and resubmit it for review by the commission. After review, the commission shall deliver its written recommendation to city council.

2. Institutional signs may be illuminated if by means which **do not include neon, strobe, blinking, moving, or other similar attention-arresting lighting devices**. Any such sign shall be constructed of materials **substantially similar to the existing design, construction and appearance of the institution to which such sign pertains**. The structural portion of the sign, same being that portion other than the sign face or "message area," shall be constructed of **stone, brick or wood**. The message portion of any such sign, including lettering or logos, shall be of subdued natural earth colors, such as white, black, gray, brown or dark green.

Proposed Sign Total Area is 92 sqft.

Proposed LED Sign is 31.5 sqft.

Proposed Sign Height is 7' - 7".

Proposed Signs do not have any strobe lighting. Proposed LED sign is dimmable and programmable.

Proposed Sign Materials match the existing campus and all lettering is in earth tones.



GALAXY® GT6x 10 MM PRODUCT SPECIFICATIONS

The Galaxy® GT6x offers high-value Galaxy features combined with high-resolution 10 mm surface mount LED technology to provide high-quality images.

10 MM TECHNICAL SPECIFICATIONS

Character Height:

2.8" (7 pixel font)

Line Spacing:

10.16 mm (0.4")

Pixel Configuration:

3-in-1 SMD

Maximum Brightness:

8,000 nits

Full Color Capability:

281 trillion colors

Viewing Angle:

160 degrees horizontal x 70 degrees vertical

Min Viewing Distance:

21' (10 mm)

PRODUCT FEATURES

- All sealed components
- Quick connects
- Mounting clips
- High-contrast louvers
- Redundant module signal
- Large sections for fast installation
- Front ventilation on displays less than eight feet tall
- No spreader beam required for displays greater than eight feet tall
- Single-step module removal
- Shallow cabinet depth
- Narrow cabinet borders

MODEL NUMBER GUIDE

GT6x	- 72	x 108	- 10	- RGB	- SF
Series	Lines High	Columns Wide	Line Spacing	LED Color	Single Face or Two View



GT6x SERIES SPECIFICATIONS

Estimated LED Lifetime:

100,000+ hours

Contrast Enhancement:

Non-reflective black louvers and module face grooves disperse light

Message Capability:

Text, graphics, logos, basic animation, video clips, multiple font styles, and sizes

Control Software:

Venus® Control Suite

Power:

120, 120/240 VAC Single Phase

Display Dimming:

64 levels (Automatic, scheduled or manual control)

Communication Options:

Ethernet Fiber Optic, Ethernet Bridge Radio, Remote Cellular, Ethernet CAT5

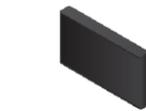
Operating Temperature:

-40°F to 120°F with 99% RH non-condensing

Compliance Information:

UL Listed, FCC compliance

DISPLAY CONFIGURATIONS



Single-face (SF)
Available in all sizes



Two-view (2V)
Available in all sizes

GALAXY® GT6x 10 MM PRODUCT SPECIFICATIONS

Lines x Columns	Sections/Ventilated	Cabinet Dimensions Feet-Inches H x W x D	Cabinet Dimensions Meters H x W x D	Cabinet Square Feet (Square Meters)	Active Area Square Feet (Square Meters)	Cabinet Weight Pounds (kilograms)	Lines/Characters per line	Character Height	Maximum Watts RGB
36x144	Sing/Ft	1'9" x 5'1" x 7"	0.53 x 1.54 x 0.18	8.6 (0.8)	5.8 (0.6)	65 (30)	4/28	2" - 14"	495
36x180	Sing/Ft	1'9" x 6'3" x 7"	0.53 x 1.91 x 0.18	10.7 (1.0)	7.2 (0.8)	80 (37)	4/36	2" - 14"	610
36x216	Sing/Ft	1'9" x 7'6" x 7"	0.53 x 2.28 x 0.18	12.7 (1.2)	8.7 (0.9)	95 (44)	4/43	2" - 14"	720
36x252	Sing/Ft	1'9" x 8'8" x 7"	0.53 x 2.64 x 0.18	14.8 (1.4)	10.1 (1.0)	110 (50)	4/50	2" - 14"	835
36x288	Sing/Ft	1'9" x 9'11" x 7"	0.53 x 3.01 x 0.18	16.8 (1.6)	11.6 (1.2)	125 (57)	4/57	2" - 14"	945
36x324	Sing/Ft	1'9" x 11'1" x 7"	0.53 x 3.37 x 0.18	18.8 (1.8)	13.0 (1.3)	140 (64)	4/64	2" - 14"	1060
36x360	Sing/Ft	1'9" x 12'3" x 7"	0.53 x 3.74 x 0.18	20.9 (1.9)	14.4 (1.5)	155 (71)	4/72	2" - 14"	1170
36x396	Sing/Ft	1'9" x 13'6" x 7"	0.53 x 4.1 x 0.18	22.9 (2.1)	15.9 (1.6)	170 (78)	4/79	2" - 14"	1285
36x432	Sing/Ft	1'9" x 14'8" x 7"	0.53 x 4.47 x 0.18	25.0 (2.3)	17.3 (1.8)	185 (84)	4/86	2" - 14"	1395
36x468	Sing/Ft	1'9" x 15'11" x 7"	0.53 x 4.84 x 0.18	27.0 (2.5)	18.8 (1.9)	200 (91)	4/93	2" - 14"	1510
36x504	Sing/Ft	1'9" x 17'1" x 7"	0.53 x 5.2 x 0.18	29.0 (2.7)	20.2 (2.1)	215 (98)	4/100	2" - 14"	1620
36x540	Sing/Ft	1'9" x 18'3" x 7"	0.53 x 5.57 x 0.18	31.1 (2.9)	21.6 (2.2)	230 (105)	4/108	2" - 14"	1735
36x576	Sing/Ft	1'9" x 19'6" x 7"	0.53 x 5.93 x 0.18	33.1 (3.1)	23.1 (2.4)	245 (112)	4/115	2" - 14"	1850
36x612	Sing/Ft	1'9" x 20'8" x 7"	0.53 x 6.3 x 0.18	35.2 (3.3)	24.5 (2.5)	260 (118)	4/122	2" - 14"	1960
36x648	Sing/Ft	1'9" x 21'11" x 7"	0.53 x 6.66 x 0.18	37.2 (3.5)	26.0 (2.6)	275 (125)	4/129	2" - 14"	2075
36x684	Sing/Ft	1'9" x 23'1" x 7"	0.53 x 7.03 x 0.18	39.2 (3.7)	27.4 (2.8)	290 (132)	4/136	2" - 14"	2185
36x720	Sing/Ft	1'9" x 24'3" x 7"	0.53 x 7.4 x 0.18	41.3 (3.8)	28.8 (3.0)	305 (139)	4/144	2" - 14"	2300
72x108	Sing/Ft	2'11" x 3'11" x 7"	0.89 x 1.18 x 0.18	11.2 (1.1)	8.7 (0.9)	90 (44)	9/21	2" - 28"	630
72x144	Sing/Ft	2'11" x 5'1" x 7"	0.89 x 1.54 x 0.18	14.6 (1.4)	11.6 (1.2)	125 (57)	9/28	2" - 28"	825
72x180	Sing/Ft	2'11" x 6'3" x 7"	0.89 x 1.91 x 0.18	18.1 (1.7)	14.4 (1.5)	155 (71)	9/36	2" - 28"	1020
72x216	Sing/Ft	2'11" x 7'6" x 7"	0.89 x 2.28 x 0.18	21.6 (2.0)	17.3 (1.8)	185 (84)	9/43	2" - 28"	1215
72x252	Sing/Ft	2'11" x 8'8" x 7"	0.89 x 2.64 x 0.18	25.1 (2.3)	20.2 (2.1)	215 (98)	9/50	2" - 28"	1410
72x288	Sing/Ft	2'11" x 9'11" x 7"	0.89 x 3.01 x 0.18	28.6 (2.7)	23.1 (2.4)	245 (112)	9/57	2" - 28"	1610
72x324	Sing/Ft	2'11" x 11'1" x 7"	0.89 x 3.37 x 0.18	32.0 (3.0)	26.0 (2.6)	275 (125)	9/64	2" - 28"	1805
72x360	Sing/Ft	2'11" x 12'3" x 7"	0.89 x 3.74 x 0.18	35.5 (3.3)	28.8 (3.0)	305 (139)	9/72	2" - 28"	2000
72x396	Sing/Ft	2'11" x 13'6" x 7"	0.89 x 4.1 x 0.18	39.0 (3.6)	31.7 (3.3)	335 (152)	9/79	2" - 28"	2195
72x432	Sing/Ft	2'11" x 14'8" x 7"	0.89 x 4.47 x 0.18	42.5 (4.0)	34.6 (3.5)	365 (166)	9/86	2" - 28"	2390
72x468	Sing/Ft	2'11" x 15'11" x 7"	0.89 x 4.84 x 0.18	46.0 (4.3)	37.5 (3.8)	395 (180)	9/93	2" - 28"	2585
72x504	Sing/Ft	2'11" x 17'1" x 7"	0.89 x 5.2 x 0.18	49.4 (4.6)	40.4 (4.2)	425 (193)	9/100	2" - 28"	2780
72x540	Sing/Ft	2'11" x 18'3" x 7"	0.89 x 5.57 x 0.18	52.9 (5.0)	43.2 (4.4)	455 (207)	9/108	2" - 28"	2975
72x576	Sing/Ft	2'11" x 19'6" x 7"	0.89 x 5.93 x 0.18	56.4 (5.3)	46.1 (4.7)	485 (220)	9/115	2" - 28"	3170
72x612	Sing/Ft	2'11" x 20'8" x 7"	0.89 x 6.3 x 0.18	59.9 (5.6)	49.0 (5.0)	515 (234)	9/122	2" - 28"	3365
72x648	Sing/Ft	2'11" x 21'11" x 7"	0.89 x 6.66 x 0.18	63.4 (5.9)	51.9 (5.3)	545 (248)	9/129	2" - 28"	3560
72x684	Sing/Ft	2'11" x 23'1" x 7"	0.89 x 7.03 x 0.18	66.8 (6.3)	54.8 (5.6)	575 (261)	9/136	2" - 28"	3755
72x720	Sing/Ft	2'11" x 24'3" x 7"	0.89 x 7.4 x 0.18	70.3 (6.6)	57.6 (5.9)	605 (275)	9/144	2" - 28"	3950
108x72	Sing/Ft	4'2" x 2'8" x 7"	1.25 x 0.81 x 0.18	10.9 (1.0)	8.7 (0.9)	95 (44)	13/14	2" - 43"	630
108x108	Sing/Ft	4'2" x 3'11" x 7"	1.25 x 1.18 x 0.18	15.8 (1.5)	13.0 (1.2)	140 (64)	13/21	2" - 43"	970
108x144	Sing/Ft	4'2" x 5'1" x 7"	1.25 x 1.54 x 0.18	20.7 (1.9)	17.3 (1.7)	185 (84)	13/28	2" - 43"	1275
108x180	Sing/Ft	4'2" x 6'3" x 7"	1.25 x 1.91 x 0.18	25.6 (2.4)	21.6 (2.1)	230 (105)	13/36	2" - 43"	1585
108x216	Sing/Ft	4'2" x 7'6" x 7"	1.25 x 2.28 x 0.18	30.5 (2.9)	26.0 (2.4)	275 (125)	13/43	2" - 43"	1895
108x252	Sing/Ft	4'2" x 8'8" x 7"	1.25 x 2.64 x 0.18	35.5 (3.3)	30.3 (2.9)	320 (146)	13/50	2" - 43"	2200
108x288	Sing/Ft	4'2" x 9'11" x 7"	1.25 x 3.01 x 0.18	40.4 (3.8)	34.6 (3.3)	365 (166)	13/57	2" - 43"	2510
108x324	Sing/Ft	4'2" x 11'1" x 7"	1.25 x 3.37 x 0.18	45.3 (4.2)	38.9 (3.6)	410 (186)	13/64	2" - 43"	2815
108x360	Sing/Ft	4'2" x 12'3" x 7"	1.25 x 3.74 x 0.18	50.2 (4.7)	43.2 (4.1)	455 (207)	13/72	2" - 43"	3125
108x396	Sing/Ft	4'2" x 13'6" x 7"	1.25 x 4.1 x 0.18	55.1 (5.1)	47.6 (4.5)	500 (227)	13/79	2" - 43"	3430
108x432	Sing/Ft	4'2" x 14'8" x 7"	1.25 x 4.47 x 0.18	60.1 (5.6)	51.9 (4.8)	545 (248)	13/86	2" - 43"	3740
108x468	Sing/Ft	4'2" x 15'11" x 7"	1.25 x 4.84 x 0.18	65.0 (6.1)	56.2 (5.3)	590 (268)	13/93	2" - 43"	4050
108x504	Sing/Ft	4'2" x 17'1" x 7"	1.25 x 5.2 x 0.18	69.9 (6.5)	60.5 (5.7)	635 (289)	13/100	2" - 43"	4355
108x540	Sing/Ft	4'2" x 18'3" x 7"	1.25 x 5.57 x 0.18	74.8 (7.0)	64.8 (6.1)	680 (309)	13/108	2" - 43"	4665
108x576	Sing/Ft	4'2" x 19'6" x 7"	1.25 x 5.93 x 0.18	79.7 (7.4)	69.2 (6.5)	725 (329)	13/115	2" - 43"	4970
108x612	Sing/Ft	4'2" x 20'8" x 7"	1.25 x 6.3 x 0.18	84.7 (7.9)	73.5 (6.9)	770 (350)	13/122	2" - 43"	5280
108x648	Sing/Ft	4'2" x 21'11" x 7"	1.25 x 6.66 x 0.18	89.6 (8.3)	77.8 (7.3)	815 (370)	13/129	2" - 43"	5585
108x684	Sing/Ft	4'2" x 23'1" x 7"	1.25 x 7.03 x 0.18	94.5 (8.8)	82.1 (7.7)	860 (391)	13/136	2" - 43"	5895
108x720	Sing/Ft	4'2" x 24'3" x 7"	1.25 x 7.4 x 0.18	99.4 (9.3)	86.4 (8.1)	905 (411)	13/144	2" - 43"	6200
144 x 72	Sing/Ft	5'4" x 2'8" x 7"	1.62 x 0.81 x 0.18	14.1 (1.3)	11.6 (1.2)	125 (57)	18/14	2" - 57"	825
144x108	Sing/Ft	5'4" x 3'11" x 7"	1.62 x 1.18 x 0.18	20.4 (1.9)	17.3 (1.7)	185 (84)	18/21	2" - 57"	1215
144x144	Sing/Ft	5'4" x 5'1" x 7"	1.62 x 1.54 x 0.18	26.8 (2.5)	23.1 (2.3)	245 (112)	18/28	2" - 57"	1610

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AGENDA REQUEST
City of Bunker Hill Village
Planning and Zoning Commission

Agenda Date: February 27, 2024
Agenda Item: VI
Subject: Artificial Turf
Exhibits: N/A
Presenter(s): Gerardo Barrera, City Administrator

Executive Summary

At the June 2023 City Council meeting, staff presented a synthetic turf ordinance as recommended by the Planning and Zoning Commission. Council noted concerns with lot coverage limitations and the definition of permeability; the motion to adopt the ordinance failed 3-2. Council directed staff to bring the ordinance back to the Commission and Drainage Committee for additional review, discussion, and recommendations based on the following feedback:

- Define turf installation requirements
- If turf satisfies installation requirements and is fully permeable, turf should be considered landscaping and not counted towards 55% of lot coverage. However, if turf is impermeable, then turf should be included in the 45% lot coverage calculation.

At the August 2023 meeting, the Drainage Committee discussed the following:

- Turf is already defined as permeable if installed per City and manufacturer specifications (with a minimum infiltration rate of 10”in. p/hr). Any changes may need to update the definition in the Drainage Criteria Manual.

Based on the feedback from the August meeting, the Commission focused on three points of interest:

1. Definition
 - Synthetic turf is defined as permeable in the Drainage Criteria Manual.
 - Lot coverage restrictions (if applicable)
 - Drainage calculation of turf versus natural grass
2. Optics
 - Restricted in the front yard and side rear yard
 - Cannot be visible from public or private street
 - No color restrictions in back yard

- Not allowed in designated green space in rear yards. Turf placed in utility easements or over city utilities will not be replaced if removed during needed repair. Restoration will be the responsibility of the property owner.

3. Permeable

- Standard for installation is based on manufacturer specifications
- Restrict impermeable base material
- Ensure proper drainage

After discussions with the City’s Drainage Engineer, staff presented the following “tiered” approach at the October 2023 meeting:

Tier 1 – No additional requirements needed for an area covering 1,000 square feet (s.f.).

- The City currently allows up to 200 s.f. of impervious surface without any detention requirements. Using the 0.75 acre feet/ac detention rate, this calculates 150 cubic feet of “free” detention. Using this calculation for turf, the calculated volume that would be provided on a standard 4” base (rock+gravel layers) x 40% void ratio, this calculates to approximately 133.33 cubic feet for an area of 1,000 s.f.

Tier 2 – Over 1,000 s.f up to 55% lot coverage

- Same requirement that currently exists.

Tier 3 – Over 1,000 s.f. and over 55% lot coverage

- This would require a design of a drainage system draining into an on-site detention system. For coverage over 55% lot coverage detention must be calculated at 0.75 ac-ft/ac. Volume will be included in the rock and gravel layers therefore the designer must provide specifications of volume calculations. If the volume under the base layer is insufficient, additional detention must be provided.

The Commission was not in favor of the tiered approach and recommended changing the 1,000 s.f. calculation to a percentage to more accurately account for variations in lot sizes. Additionally, the Commission recommended the manufacturer and city standard for installation remain a requirement.

On January 9, 2024, staff met with the Drainage Committee and presented information based on recent new developments within the City with proposed calculations that illustrated design coverage percentage and the percentage of the remaining that could be utilized for turf. This assumed 55% max lot coverage. The intent of the exercise was to show the amount of turf in square footage and also show the amount of cubic feet needed for additional detention. After discussion, the Drainage Committee recommended the following:

1. No changes to the current Drainage Criteria Manual
2. Maximum lot coverage to remain at 55% and maintain “no net new” water run-off

At the January 2024 meeting, the Commission instructed staff to work with the City’s Drainage Engineer to review the following at the February meeting:

- Turf Installation Methods
- Examine how other entities regulate installation
- Calculation between natural grass and turf

The City's Drainage Engineer will make a presentation to the Commission and be available to answer any questions. The goal is to provide this information to formulate a solution for the regulation of turf installation.

Recommended Action

Staff is requesting additional feedback and direction.