Memorandum
Department of Public Works

TO: Michael O. Geisel, P.E.
City Administrator

FROM: James A. Eckrich, P.E.
Public Works Dir. / City Engineer

DATE: October 15, 2018

RE: Stop Signs – Lydia Hill and Veterans Place

Construction of the Watermark development at Lydia Hill Drive and Veteran's Place Drive is nearing completion. Soon the developer will be reconfiguring and reconstructing the intersection of the Riparian Trail and Lydia Hill Drive. Once that occurs, a crosswalk will be constructed across Lydia Hill Drive, just west of Veterans Place Drive. The crosswalk will be utilized by pedestrians desirous of accessing the Riparian Trail, including those using the Central Park parking lot as a trailhead.

In accordance with City Policy, stop signs are not constructed on through streets (such as Lydia Hill Drive) unless the signs meet the warrants established in the Manual of Uniform Traffic Control Devices (MUTCD). It is the City Engineer's opinion that these warrants are met, specifically "the need to control vehicle / pedestrian conflicts near locations that generate high pedestrian volumes." The high pedestrian traffic volume in this area, generated by the Riparian Trail, the Aquatic Center, the Awakening, and the Amphitheater, warrants consideration of a four way stop sign.

Action Recommended

This matter should be forwarded to the Planning and Public Works Committee for its consideration of the installation of a four way stop condition at the intersection of Veterans Place Drive and Lydia Hill Drive. If recommended for approval by the Planning and Public Works Committee, the matter should then be forwarded to the full City Council for consideration of the attached ordinance.

Please forward to Planning & Public Works Committee for review and direction.

2018-10-15

BILL NO. _____ **ORDINANCE NO._____**

AN ORDINANCE AMENDING SCHEDULE VI OF THE MODEL TRAFFIC ORDINANCE OF THE CITY OF CHESTERFIELD BY ADDING AN ALL WAY STOP CONDITION AT THE INTERSECTION OF LYDIA HILL DRIVE AND VETERANS PLACE DRIVE.

WHEREAS, the intersection of the Riparian Trail and Lydia Hill Drive will soon be reconstructed in conjunction with the Watermark Development; and,

WHEREAS, the new design will include a crosswalk to accommodate Riparian Trail users desirous of accessing the trail from Central Park and,

WHEREAS, the City Engineer has reviewed the proposed plans and determined that the intersection meets the warrants for an all-way stop condition due to the generation of high traffic volumes; and,

WHEREAS, the Planning and Public Works Committee, having considered said request, recommended approval of the all-way stop condition to the full City Council.

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHESTERFIELD, ST. LOUIS COUNTY, MISSOURI, AS FOLLOWS:

Section 1. Schedule VI of the Model Traffic Ordinance of the City of Chesterfield is hereby amended by adding the following provision thereto:

Intersection	Traffic on Highway, Road, Street or Alley Listed Below Shall Stop
Lydia Hill Drive and Veteran's Place Drive	All-way Stop

Section 2. In all other respects, Schedule VI of the Model Traffic Ordinance of the City of Chesterfield remains in full force and effect.

Section 3. The Public Works Director is hereby authorized to install all signage necessary to establish the all-way stop condition, in accordance with the Manual of Uniform Traffic Control Devices. This ordinance shall be in full force and effect from and after its passage and approval.

Passed and approved this _____ day of _____, 2018.

_____ _____

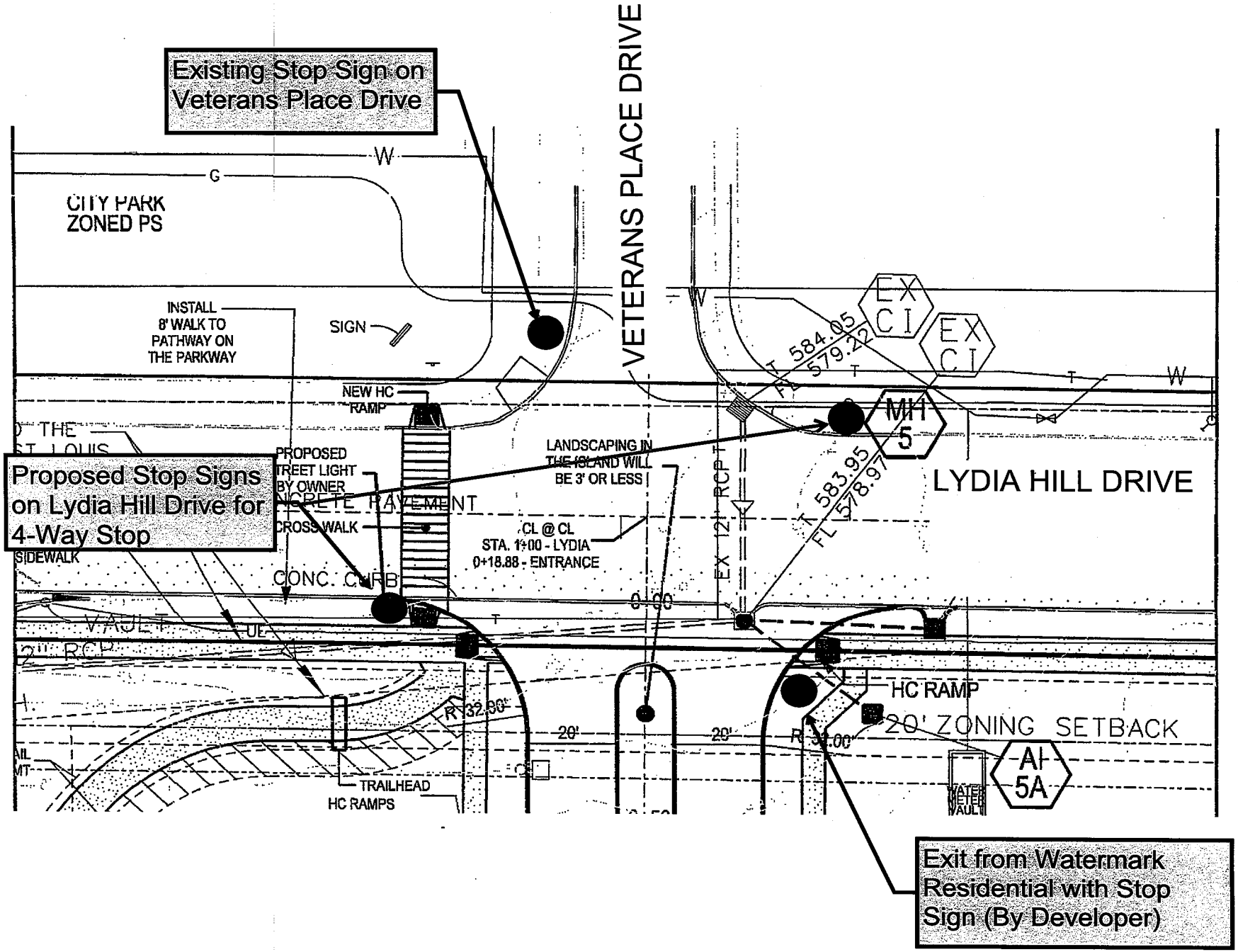
PRESIDING OFFICER Bob Nation, MAYOR

ATTEST:

_____

Vickie Hass, CITY CLERK

FIRST READING HELD:


Existing Stop Sign on Veterans Place Drive
VETERANS PLACE DRIVE
CITY PARK
ZONED PS
INSTALL 8' WALK TO PATHWAY ON THE PARKWAY
SIGN
NEW HC RAMP
PROPOSED STREET LIGHT BY OWNER
Proposed Stop Signs on Lydia Hill Drive for 4-Way Stop
LANDSCAPING IN THE ISLAND WILL BE 3' OR LESS
CROSS WALK
CL @ CL
STA. 1+00 - LYDIA
0+18.88 - ENTRANCE
CONC. CURB
SIDEWALK
EX 12" RCP
MH 5
LYDIA HILL DRIVE
HC RAMP
20' ZONING SETBACK
TRAILHEAD
HC RAMPS
Exit from Watermark Residential with Stop Sign (By Developer)

Section 2B.06 STOP Sign Applications

Guidance:

01 *At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs (see Sections 2B.08 and 2B.09).*

02 *The use of STOP signs on the minor-street approaches should be considered if engineering judgment indicates that a stop is always required because of one or more of the following conditions:*

A. *The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per day;*
B. *A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway; and/or*
C. *Crash records indicate that three or more crashes that are susceptible to correction by the installation of a STOP sign have been reported within a 12-month period, or that five or more such crashes have been reported within a 2-year period. Such crashes include right-angle collisions involving road users on the minor-street approach failing to yield the right-of-way to traffic on the through street or highway.*

Support:

03 The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.

Section 2B.07 Multi-Way Stop Applications

Support:

01 Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

02 The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.

Guidance:

03 *The decision to install multi-way stop control should be based on an engineering study.*

04 *The following criteria should be considered in the engineering study for a multi-way STOP sign installation:*

A. *Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
B. *Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*
C. *Minimum volumes:*
    1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
    2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
    3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
D. *Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

Option:

05 Other criteria that may be considered in an engineering study include:

A. The need to control left-turn conflicts;
B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.