



**Special Called
City Council Meeting
March 23, 2021
5:00 p.m.**



Notice is Hereby Given of a Special Called Meeting of the City Council City of Spring Valley Village, Texas, 1025 Campbell Road, Spring Valley Village, Texas, in the Council Chambers, Tuesday, March 23, 2021, beginning at 5:00 p.m., For the Purpose of Considering and Acting upon the Following Items of Business:

In accordance with order of the Office of the Governor issued March 16, 2020, the City Council of Spring Valley Village will conduct the meeting scheduled at 5:00 p.m. on Tuesday, March 23, 2021 in the City Hall Council Chambers, located at 1025 Campbell Road, in part by telephone conference in order to advance the public health goal of limiting face-to-face meetings (also called “social distancing”) to slow the spread of the Coronavirus (COVID-19).

The meeting agenda and agenda packet are posted online at www.springvalleytx.com.

The video link to this meeting is <https://us02web.zoom.us/j/81290191465>

The public toll-free dial-in numbers to participate in the telephonic meeting are 1-346-248-7799 (Houston), 1-253-215-8782 (US), and 1-301-715-8592 (US); enter the Meeting ID: 812 9019 1465 and #.

The public will be permitted to offer public comments as provided by the agenda and as permitted by the presiding officer during the meeting.

An audio recording of the meeting will be made, and will be available to the public in accordance with the Open Meetings Act upon written request.

- 1. CALL THE ROLL AND ANNOUNCE A QUORUM IS PRESENT**
- 2. DISCUSSION AND POSSIBLE DIRECTION CONCERNING:** Review of Current Capital Improvement Program, Consideration of Re-Prioritization of and Possible Additional Capital Projects.
- 3. ADJOURNMENT**

Agenda items may not necessarily be considered in the order that they appear. With regard to any item, Council may take various actions, including but not limited to rescheduling an item in its entirety or for particular action at a future date or time.

I certify that a copy of the March 23, 2021 agenda of items to be considered by City Council was posted on or before the 18th day of March, 2021 at 12:00 p.m. pursuant to the Open Meetings Act,

Chapter 551 of the Texas Government Code.

Attest:


Roxanne Benitez, TRMC, CPM, CMCC
City Secretary

In compliance with the Americans with Disabilities Act, this facility is wheelchair accessible and accessible parking spaces are available. To better serve attendees, requests for accommodations or interpretive services should be made 48 hours prior to this meeting. Please contact the City Secretary's office at 713-465-8308, Fax 713-461-7969, or Email secretary@springvalleytx.com for further information.

**Spring Valley Village City Council
Agenda Item Data Sheet**

MEETING DATE: March 23, 2021

TOPIC:	DISCUSSION AND DIRECTION CONCERNING: Review of Current Capital Improvement Program, Consideration of Re-Prioritization of and Possible Additional Capital Projects.
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BACKGROUND:	On March 24, 2020, the City Council reviewed the projects and funding mechanisms on the City's 5-Year Capital Improvement Program that was approved October 23, 2018, as well as potential projects and funding, including the timing of the issuance of the next Certificate of Obligation bond. As a result of the discussion, it was the consensus of the City Council to:
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- (1) Keep the prioritization of current capital projects as approved On October 23, 2018, and move forward with design of Bond 2 projects if there are funds remaining after completion of Bond 1 projects;
- (2) Keep the SBISD Park Initiative on the approved capital project list and not expend effort on the project at this time;
- (3) Keep Bridge over Briar Branch Creek at Tamy Lane/Randy Drive on the approved capital projects list and investigate costs for removing the current vehicular bridge and replacing it with a pedestrian bridge; and
- (4) Add Renovation of Pech Road Footbridge and Phase III Park Improvements (Playground) to the capital projects list and investigate costs for both projects.

A copy of the Minutes of the March 24, 2020 Workshop Meeting, as well as a spreadsheet that reflects the breakdown of the approved CIP projects and funding from the Workshop Meeting, are provided with this agenda item.

NOTE: As this agenda data sheet was being prepared, I realized that the previously approved Capital Projects for the Utility Fund had been inadvertently left off the CIP that was approved on March 24, 2020. The Utility Fund CIP Projects Spreadsheet that was approved in 2019 and should have rolled forward on March 24, 2020, has been included with the 5-Year Capital Improvement Program.

As the Council considers the following projects for the CIP General Fund, please keep this funding information in mind:

Current CIP General Fund Cash Balance Net of FY 2021 Cash Projects	Approximately \$1.5 million
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Agenda Item Data Sheet**

CIP General Fund Cash Balance Net of FY 2021 as of September 30, 2021 (following transfer from General Fund Budget)	Approximately \$2.0 million
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**Reconsideration of Two Approved Projects in CIP for
General Fund**

- 1) **Renovation of Pech Road Footbridge** – On March 24, 2020, Council added the Renovation of Pech Road Footbridge to the CIP and requested that Staff investigate the costs associated with the project.

Approximately 15 years ago, the City of Spring Valley Village entered into an Interlocal Agreement with the City of Houston for the replacement of the footbridge. Under the Agreement, the City of Houston designed and built the bridge with financial participation from the City of Spring Valley Village in the amount of \$75,000.00.

Public Works Director Pat Riley contacted the City of Houston requesting information and participation from the City of Houston similar to the previous participation, and he was advised that the City of Houston will not be able to design or build the bridge as had been done in the past. **If the Council wishes to proceed with the Renovation of the Pech Road Footbridge, the City of Spring Valley Village will have to retain an engineer to design, develop a construction estimate, and perform construction administration for replacement of the footbridge at its own cost.** The City of Houston indicated that it may be willing to contribute financially for the construction cost to rebuild the bridge; however, the City has not received anything formal in this regard.

Staff requests direction from the Council as to whether and, if so, how it wishes to proceed with regard to the Renovation of the Pech Road Footbridge.

- 2) **Bridge Over Briar Branch Creek at Tamy Lane/Randy Drive** – On March 24, 2020, Council kept the Bridge Over Briar Branch Creek at Tamy Lane/Randy Drive on the approved CIP and requested that Staff investigate the costs associated for removing the current vehicular bridge and replacing it with a pedestrian bridge. During the August 25,

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2020 Workshop Meeting, the Council considered and discussed possible improvement options recommended by IDS Engineering. Additionally, the Council was briefed on cleanup work performed by the Public Works Team on August 17, 2020. After discussion, it was the consensus of the Council to keep the allocated funds of \$78,250.00 in the FY 2020-2021 Draft Budget but not to undertake any other improvements at this time. A copy of the Minutes of the August 25, 2020 Workshop Meeting are provided with this agenda item.

Staff requests direction from the Council as to whether it wishes to keep the funding in the FY 2021 Budget for the Bridge Over Briar Branch Creek at Tamy Lane/Randy Drive or allow the funding to be reallocated to a different Capital Project.

Possible Additional Projects for CIP for General Fund

- 1) **Wild Oak Circle Paving & Utility Improvements** - The City has received inquiries from residents on Wild Oak Circle as to why that street is not on the City's CIP. Wild Oak Circle is off of Fries Road and in the same area as Cavell (East of Fries), Heather Circle, and Echo Valley (East & West of Fries) – all of which have been included in the City's CIP as Project Group A under the Cash-Funded Paving and Utility Improvement Projects.

The City engaged Gessner Engineering to review the street with the help of Public Works Director Pat Riley, and the evaluation of the street revealed base failure causing ponding of water along the curb and systematic cracking and cement failure. Gessner Engineering has provided an Opinion of Probable Cost ("OPC") for both engineering design (\$74,000.00) and construction costs (\$521,517.78) of \$595,517.78.

Staff recommends that Wild Oak Circle be added to Project Group A under the Cash-Funded Paving and Utility Improvements Projects.

- 2) **Intersection Improvements for Westview Drive and Voss Road/Bracher Street** - On March 24, 2020, the City Council approved a proposal from IDS Engineers to utilize Traffic Engineers Inc. (TEI) to conduct a Safety and Mobility study to evaluate multiple traffic issue locations and the Bingle Road

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corridor within the City. One of the locations to be evaluated was the intersection of Westview Drive and Voss Road/Bracher Street ("Intersection"). TEI was able to observe the Intersection on January 13, 2021, and submitted its All-Way Stop Compliance Study to the City on February 10, 2021, a copy of which is provided with this agenda item.

As a reminder, while the Safety and Mobility Study was on-hold due to the Pandemic, the Public Works staff installed larger, 36" diamond grade stop signs, repainted striping at the intersection, installed red reflectors on the edges of the stop bars, and installed W3-1 stop ahead signs (alongside "stop ahead" markings) on all approaches.

In summary, TEI observed a total volume of vehicles of 7,320 over the 20-hour period, and the vehicles fell into 3 categories:

- Full stop - 56.8% (4,159)
- Rolling stop - 42.9% (3,140)
- No stop - 0.3% (21)

The hours with the highest number of rolling stops are 5:00 – 6:00 PM and 6:00 to 7:00 PM, and the hours with the highest proportion of rolling stops are 9:00 – 10:00 AM and 7:00 – 8:00 PM each with 55%.

In addition to education and enforcement through additional Police enforcement activity, TEI provided a few Intersection improvements for the City to consider:

- Installation of LED Enhanced Stop Signs for Westview Drive approaches only (east and west-bound lanes) - Material costs are estimated at \$7,000 for all four enhanced signs.
- Installation of Stop Bar Lights on Pavement - Material costs are estimated at \$13,000 for the materials and installations on each stop bar. As an add-on to enhanced stop signs, the additional cost would drop to \$10,000 (**\$17,000 for both the lights and signs**).

A traffic signal warrant analysis (TSWA) was performed at the intersection according to the *Texas Manual of Uniform Traffic Control Devices* due to low stop sign compliance. The intersection does not meet the TSWA warrant analysis based on the existing traffic volumes or crash history at the intersection. However, a traffic signal may still be installed if

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the City deems it necessary for the operation of the overall roadway network. A traffic signal would increase stopping compliance and pedestrian safety. Traffic signals cost approximately \$300,000 to design and build.

The CIP currently includes \$320,000 in funding for the Bingle Road Traffic Improvements, and the Safety and Mobility Study was undertaken for the Bingle Road Corridor as well as other traffic issue locations including this Intersection. If the Council wishes to proceed with any of the recommended improvements, this work could be funded out of that line item. Alternatively, the work could be funded out of the CIP Fund Balance.

Staff requests direction from the Council as to whether it wishes to proceed with any of the recommended intersection improvements, and, if so, which improvement(s) and how to fund the improvements.

Utility Fund Capital Projects

The previously approved CIP projects for the Utility Fund are the New Water Well and the Replacement of the Bolted Ground Storage Tank (Ground Storage Tank #2). The costs for these projects have been updated to reflect current costs, and funding is coming out of the Capital Reserve Fund.

As the Council considers the following projects for the CIP Utility Fund, please note that funding for these projects would come from the Capital Replacement Fund.

Possible Additional Projects for CIP for Utility Fund

- 1) **Repair of Pech Road Lift Station** – This lift station was originally built in the 1980s and rebuilt in 2006. It is time repair piping in the wet well, access hatches, and add ultrasonic level indicators and floats.
 - Estimated Cost is \$45,000 – There is currently \$11,183 specifically allocated for this lift station in the Sewer Department Reserve in the Capital Replacement Fund. Additionally, there is enough funding in the Sewer Department Reserve to fund the balance of these repairs.

Staff recommends that Repair of Pech Road Lift Station be added to the CIP for the Utility Fund in FY 2022.

- 2) **Refurbishing of Home Depot Lift Station** – This lift station was built in 2003, and there have been minimal repairs to it since it was originally built. It is time to replace everything in

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	the wet well, including the pumps, and all piping in the dry well. Estimated Cost is \$165,000 – There is currently \$13,195 specifically allocated for this lift station in the Sewer Department Reserve in the Capital Replacement Fund. While there is not enough funding in the Sewer Department Reserve to fund the balance of these repairs, City staff will be working to identify funding options over the next year for this project. <u>Staff recommends that Refurbishing of the Home Depot Lift Station be added to the CIP for the Utility Fund in FY 2023.</u> 3) Future Water Plant Upgrades – There are a number of future water plant upgrades that the City will need to plan for over the next 5 years: Replacing the 5 booster pumps, electrical panels, check valves, addition of variable frequency drives to reduce electric consumption, and a SCADA system upgrade. City staff does not currently have estimates for the upgrades but will be obtaining those estimates and determining timing for the different activities over the next year. There is currently \$842,787 in the Water Department Reserve in the Capital Replacement Fund, and much of this amount is allocated for these upgrades. <u>Staff recommends that Future Water Plant Upgrades be added to the CIP for the Utility Fund in FY 2024 and 2025.</u>
RECOMMENDATION:	Staff requests direction from the Council concerning any changes to the approved CIP as outlined above.
ATTACHMENTS:	- Capital Improvement Plan Approved March 24, 2020 (Revised August 25, 2020) - Copy of Minutes of March 24, 2020 Council Workshop - Copy of Minutes of August 25, 2020 Council Workshop - All-Way Stop Compliance Study – Intersection of Westview Drive and Voss Road/Bracher Street Prepared by Traffic Engineers, Inc. - Copy of Reserve Fund Analysis for the Utility Fund Sewer Department Reserve Contained in the FY 2021 Budget
FUNDING ISSUES:	☒ Not applicable – no dollars are being spent or received. ☐ Full amount already budgeted in Acct/Project# _____ ☐ Not budgeted, if approved, the following will be included in the next Budget Amendment: ☐ \$_____ from Acct/Project# _____ will be transferred to Acct/Project# _____ ☐ _____ from unassigned fund balance will be used and added to Acct/Project# _____ ☐ \$_____ will be added to Revenue Acct# ____ - ____ and

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\$ _____ added to Expenditure Acct/Project# _____

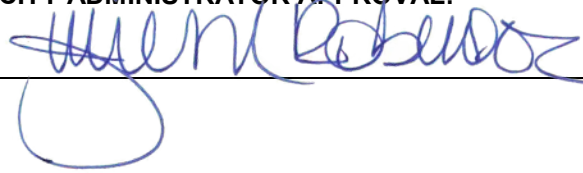
FINANCE VERIFICATION OF FUNDING:



SUBMITTING STAFF MEMBER:

Julie M. Robinson, City Administrator

CITY ADMINISTRATOR APPROVAL:



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**CITY OF SPRING VALLEY VILLAGE
CAPITAL IMPROVEMENT PLAN
GENERAL FUND CIP LIST**
APPROVED MARCH 24, 2020 (REVISED AUGUST 25, 2020)

Item No.	Projects by Type	Start 2020 - 2021	Year 1 2021 - 2022	Year 2 2022 - 2023	Year 3 2023 - 2024	Year 4 2024 - 2025	Year 5 2025 - 2026	Greater than 5 Years	Total
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PAVEMENT & UTILITY IMPROVEMENTS

BOND 1	1	Loeser	386,113	386,113					772,226
		Traweek	400,000	599,350					999,350
		Lone Star	331,537	531,538					863,075
		West Tex	376,932	576,963					953,895
	2	Green Valley &Winningham, West of Voss	700,000	543,514					1,243,514
		Bond 1 Total							4,832,060

BOND 2	4	Winningham, East of Voss	272,550	272,550					545,100
		Cedarspur E. of Voss	272,550	272,550					545,100
		Burkhart, East of Voss	227,125	227,125					454,250
	5	Cedarspur (W. of Bingle)		227,125					227,125
		Burkhart (East of Bingle)		700,000	685,463				1,385,463
	6	Brighton Place Streets • Cedarspur St • Pech Rd between Cedarspur St. & Winningham Ln. • Burkhart Cir. • Burkhart Ct. • Winningham Ln. East of Bingle Rd.		500,000	3,240,000	1,660,000			5,400,000
Bond 2 Total									8,557,038
Cumulative Bond Totals			\$ 2,966,807	\$ 4,836,828	\$ 3,925,463	\$ 1,660,000		\$ -	\$ 13,389,098

OTHER PAVEMENT & UTILITY IMPROVEMENTS

CASH FUND	A	Cavell (E. of Fries)						454,250	454,250
		Heather Cir						250,000	250,000
		Echo Valley (E & W of Fries)						908,500	908,500
	B	Spring Oaks Circle						408,825	408,825
	C	Croes (E & W of Fries)						1,430,888	1,430,888
	D	Campbell Rd. Detention at Briar Branch						800,000	800,000
			\$ -	\$ -	\$ -	\$ -		\$ 4,252,463	\$ 4,252,463
	PUBLIC FACILITIES								
	A	Fire Station Renovation	60,938						60,938
	B	Renovation of Public Works Building	250,000						250,000
			\$ 310,938	\$ -	\$ -	\$ -		\$ -	\$ 310,938
COMMUNITY IMPROVEMENTS									

Item No.	Projects by Type	Start	Year 1	Year 2	Year 3	Year 4	Year 5	Greater than 5 Years	Total
		2020 - 2021	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026		
A	Katy Freeway Noise Reduction	46,800							46,800
B	Bingle Road Traffic Improvements	320,000						380,000	700,000
C	SBISD Park Initiative	-							-
D	Repair/Replacement of Bridge Over Briar Branch Creek at Tamy Lane and Randy Drive	78,250							78,250
E	Renovation of Pech Road Footbridge								-
F	Phase III Park Improvements (Playground)								-
Total General Fund Improvements		\$ 445,050	\$ -	\$ -	\$ -			\$ 380,000	\$ 825,050
									\$ 18,777,549

CITY OF SPRING VALLEY VILLAGE
CAPITAL IMPROVEMENT PLAN
UTILITY FUND CIP LIST
APPROVED OCTOBER 23, 2018 (REVISED JULY 8, 2019)

Item No.	Projects by Type	Start 2020 - 2021	Year 1 2021 - 2022	Year 2 2022 - 2023	Year 3 2023 - 2024	Year 4 2024 - 2025	Year 5 2025 - 2026	Greater Than 5 Years	Total
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UTILITY INFRASTRUCTURE IMPROVEMENTS

A	New Production Water Well	\$ 1,493,136							\$ 1,493,136
B	Replace Bolted Water Storage (GST#2)	\$ 265,000	\$ 362,860						\$ 627,860
	Total Utility Fund Improvements	\$ 1,758,136	\$ 362,860	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,120,996

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**MINUTES OF THE SPECIAL CALLED CITY COUNCIL MEETING
CITY OF SPRING VALLEY VILLAGE, TEXAS
TUESDAY, MARCH 24, 2020 AT 5:00 P.M.
IN THE COUNCIL CHAMBERS OF CITY HALL
1025 CAMPBELL ROAD, HOUSTON, TEXAS**

1. CALL THE ROLL AND ANNOUNCE A QUORUM IS PRESENT

With a quorum of the Council Members present, the Regular Meeting of the Spring Valley Village City Council was called to order by Mayor Ramsey at 5:03 p.m.

Members Present:

Mayor Tom Ramsey

Mayor Pro-Tem Allen Carpenter

Council Member David Dominy

Council Member Tom Donaho (via teleconference)

Council Member Joy McCormack

Council Member Marcus Vajdos

Members Absent:

None

2. DISCUSSION AND DIRECTION CONCERNING: Current Capital Improvement Program, Consideration of Re-Prioritization of and Possible Additional Capital Projects, and Preparation for 2021 Certificate of Obligation Bond Issue.

City Administrator Julie Robinson asked for direction from the City Council concerning currently approved capital projects and if re-prioritization was necessary. Ms. Robinson also requested feedback regarding potential projects that were not on the capital projects list. The City Council discussed various capital projects within the approved capital projects list as well as potential projects and funding, including the timing of the issuance of the next Certificate of Obligation bond. The Council requested that the City's financial advisor provide a briefing on the status of the municipal bond market during the April 28, 2020 Council meeting. It was the consensus of the City Council to:

- (1) Keep the prioritization of current capital projects as approved On October 23, 2018, and move forward with design of Bond 2 projects if there are funds remaining after completion of Bond 1 projects;
- (2) Keep the SBISD Park Initiative on the approved capital project list and not expend effort on the project at this time;
- (3) Keep Bridge over Briar Branch Creek at Tamy Lane/Randy Drive on the approved capital projects list and investigate costs for removing the current vehicular bridge and replacing it with a pedestrian bridge;
- (4) Add Renovation of Pech Road Footbridge and Phase III Park Improvements (Playground) to the capital projects list and investigate costs for both projects.

3. ADJOURNMENT

The Special Called meeting adjourned at 5:49 p.m.

Signed: _____

Tom S. Ramsey
Mayor

Attest: _____

Roxanne Benitez
Roxanne Benitez, TRMC, CPM, CMCC
City Secretary

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**MINUTES OF THE SPECIAL CALLED CITY COUNCIL MEETING
CITY OF SPRING VALLEY VILLAGE, TEXAS
TUESDAY, AUGUST 25, 2020 AT 5:00 P.M.
IN THE COUNCIL CHAMBERS OF CITY HALL
1025 CAMPBELL ROAD, HOUSTON, TEXAS**

1. CALL THE ROLL AND ANNOUNCE A QUORUM IS PRESENT

With a quorum of the Council Members present, the Special Called Meeting of the Spring Valley Village City Council was called to order by Mayor Vajdos at 5:02 p.m.

Members Present:

Mayor Marcus Vajdos

Mayor Pro-Tem Allen Carpenter

Council Member Bo Bothe

Council Member David Dominy (arrived by video conference at 5:03 p.m.)

Council Member Tom Donaho (arrived by video conference at 5:05 p.m.)

Council Member Joy McCormack

Members Absent:

None.

2. PRESENTATION, DISCUSSION, AND DIRECTION CONCERNING: Draft Budget for Fiscal Year 2020-2021.

City Administrator Julie Robinson presented the Fiscal Year 2020-2021 Draft Budget and advised that each budget line item had been reviewed and evaluated by City Treasurer Michelle Yi, Assistant to the City Administrator Matthew Hitt, and her. Ms. Robinson also advised that the Draft Budget had been developed using a property tax rate of \$0.4250 per \$100 – which is identical to the current year’s property tax rate.

There was discussion concerning the Draft Budget, the historical appraised values and property tax rates, the future impact of COVID-19 on the City’s commercial properties, and items in the Draft Budget on which the Council had questions. Following the discussion, it was the consensus of the Council that the proposed tax rate of \$.4250 and the Draft Budget as presented were acceptable and that no further changes to the Draft Budget were needed. Ms. Robinson advised that only one public hearing regarding the proposed tax rate is now required as opposed to two public hearings that were required in the past and that the public hearing would be held during the same City Council meeting when the FY 2021 tax rate would be adopted, which would be on September 22, 2020.

3. CONSIDERATION AND POSSIBLE ACTION CONCERNING: Options for Improvements to Tamy Lane Bridge.

Director of Public Works Pat Riley presented the following improvement options which were recommended by IDS Engineering for the Tamy Lane bridge:

- Remove existing railing and install new railing that is something other than guard rail fencing
- Install bollards at bridge approaches
- Power wash the bridge deck and sides
- Install pavers and/or concrete to bridge approach

City Administrator Julie Robinson advised that funds have been included in the Capital Projects Fund in the FY 2020-2021 Draft Budget for the recommended improvements and that additional funding is available in the Capital Projects Fund if needed. Mr. Riley advised the Council that, during the week of August 17, 2020, the Public Works crew performed some cleanup work of the bridge. Council Member Dominy advised that the recent improvements performed by the Public Works crew made the bridge more functional and believed that no further improvements were need at this time.

After a brief discussion, it was the consensus of the Council to keep the allocated funds in the FY 2020-2021 Draft Budget but not to undertake any other improvements at this time.

4. DISCUSSION AND DIRECTION CONCERNING: Replacement of Ground Storage Tank #2.

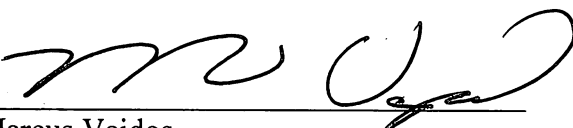
City Administrator Julie Robinson advised that, during the October 15, 2019 meeting, the City Council approved the use of \$466,996.00 of the Unassigned General Fund, Fund Balance from FY 2018 for the engineering design and construction to replace Ground Storage Tank #2 ("GST2"). These funds were transferred to the Capital Replacement Fund. During the discussion about setting aside these funds, City Staff was asked to investigate the possibility of replacing GST#2 with an elevated storage tank.

Due to a lack of required acreage and the cost differential for an elevated storage tank, Ms. Robinson advised that it was not feasible for the City to proceed with replacing GST2 with an elevated storage tank. Therefore, the Staff recommendation was that Council approve the replacement of the existing bolted ground storage tank with a metal welded, ground storage tank in the current location instead of an elevated storage tank. Following a brief discussion, it was the consensus of the Council to replace the existing ground storage tank with another ground storage tank as recommended by Staff. Ms. Robinson indicated that Mr. Riley would request an updated engineering proposal and opinion of probable cost to ensure current pricing and bring the information back to Council in October for consideration of the project.

After a brief discussion, the Council directed Staff to pursue replacement options for Ground Storage Tank #2.

5. ADJOURNMENT

Council Member Carpenter made a motion to adjourn the meeting at 5:56 p.m., and Council Member Bothe seconded the motion. Motion carried 5-0.

Signed: 

Marcus Vajdos
Mayor

Attest: 

Roxanne Benitez, TRMC, CPM, CMCC
City Secretary

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Suite 325
Houston, TX 77002

Texas Registration Number F-003158

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Fax (281) 809-0807
www.trafficengineers.com

February 10th, 2021

Mr. Pat Riley
Public Works Director
City of Spring Valley Village
Office: 713-465-8308
Direct: 832-910-8575
Email: PRiley@SpringValleyTX.com

RE: All-Way Stop Compliance Study – Intersection of Westview Drive at Voss Road/Bracher Street

Dear Mr. Riley,

This report examines the reported issues with drivers running the stop signs at the intersection of Westview Drive at Voss Road/Bracher Street. The study was commissioned in response to multiple citizens and City council members' complaints of motorists running the all-way stop signs at the intersection. As the intersection is heavily used by pedestrians and motorists alike, safety is a high priority for the City.

This letter report includes findings from the field observation and recommendations of infrastructure improvements & enforcement strategies.

The intersection has one (1) left-turn/through lane and one (1) right-turn lane on the eastbound/westbound Westview Drive approaches and one lane on the northbound Voss Road/southbound Bracher Street approaches.

Previous efforts to improve stop sign compliance include larger, 36" diamond grade stop signs, repainted striping at the intersection, red reflectors on the edges of the stop bars, and installation of W3-1 stop ahead signs (alongside stop ahead markings) on all approaches. These improvements were present on the date of data collection at the intersection. Photos of the previous improvements are included on the next page.



Existing Stop Compliance Rate

TEI observed the intersection for a total of 20 hours on January 13th, 2021. We recorded the compliance rate with the stop signs posted on all four approaches. The weather during the recording was sunny with moderate temperatures and no precipitation. Vehicles passing through the intersection were determined to be in one of three categories: full stop, rolling stop, no stop. The videos were recorded from the three following camera positions (see Figures 1 to 3), fully capturing all stop locations in the intersection without any sight obstruction. For example, video angle 1 was oriented as shown below with Voss/Bracher running north/south and Westview running east/west.

The cameras were small and attached to utility poles and their presence was generally not noticeable to the motorists. The video records revealed their typical driving habits.

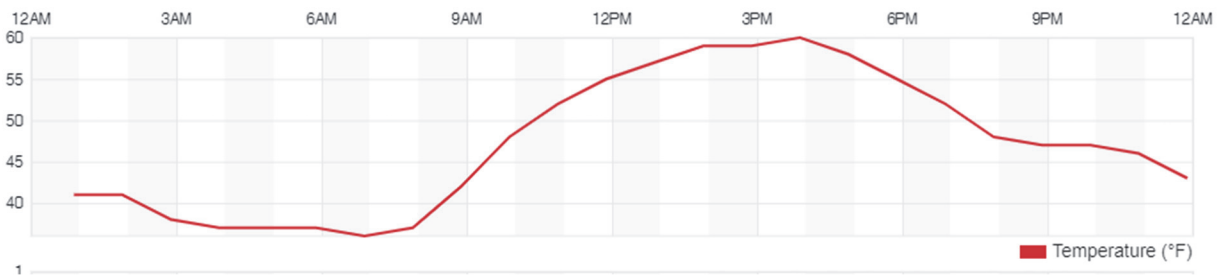


Figure 1: Temperature Data



Figure 2: Video Angle 1



Figure 3: Video Angle 2



Figure 4: Video Angle 3

Vehicles were deemed to have fully stopped if they paused with little to no movement near the stop location. Vehicles were deemed to have rolling stopped if they never fully stopped near the stop bar location. Vehicles that did not slow down significantly near the stop bar location were deemed to have not stopped.

The results of observations are recorded in the table below.

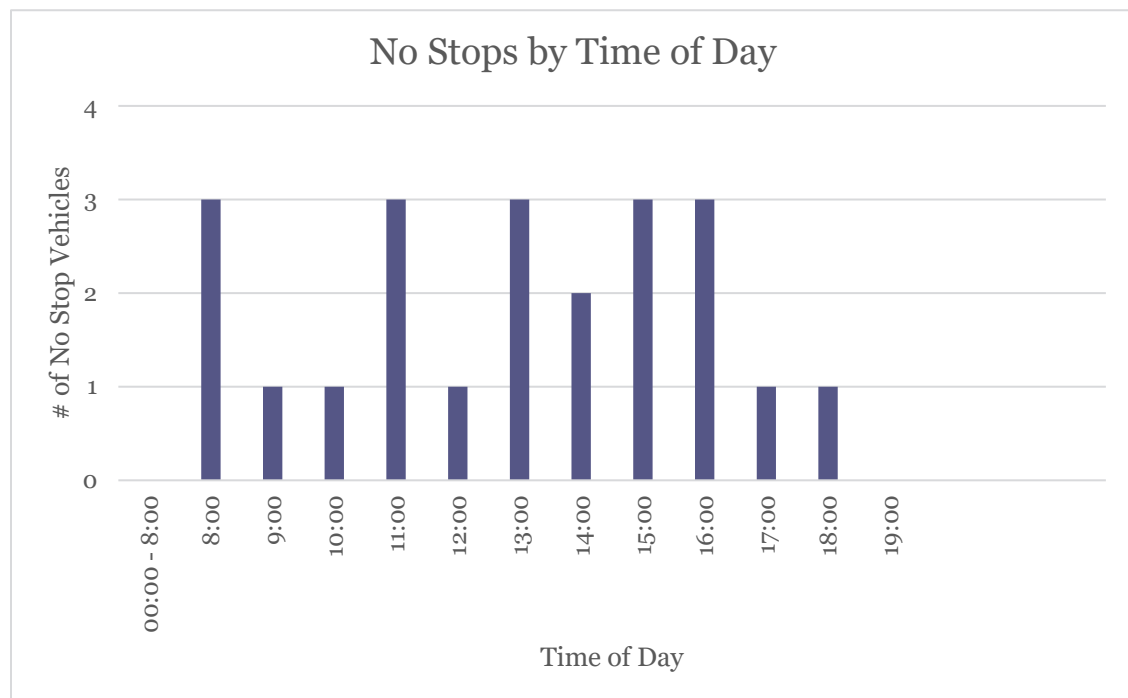
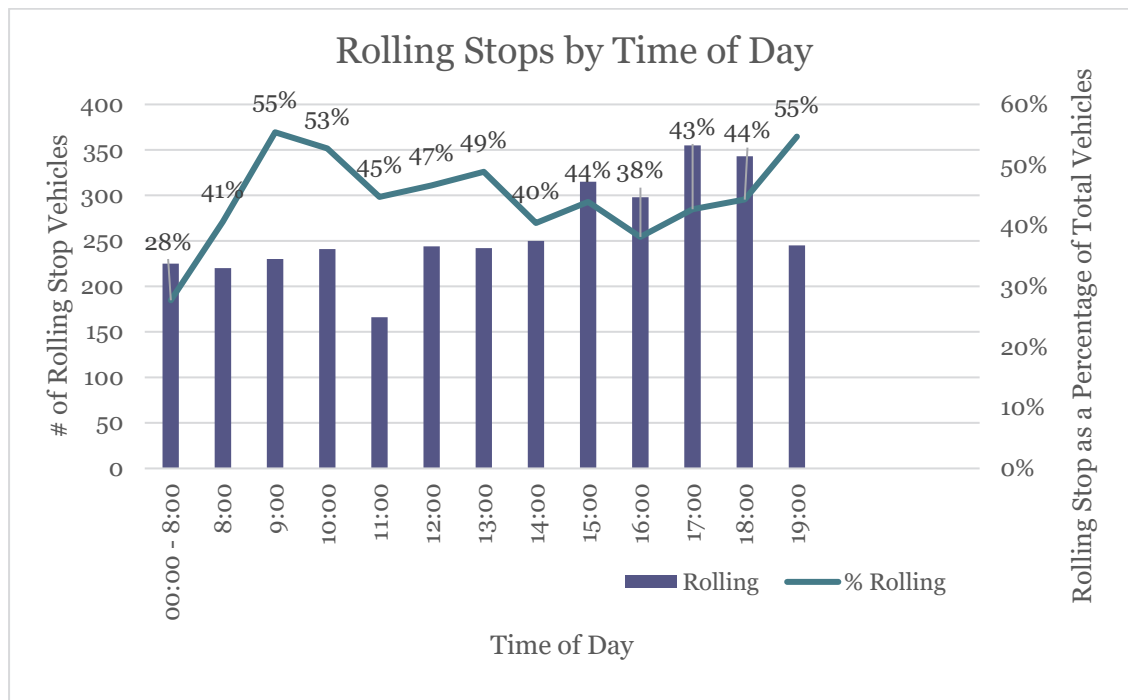
FULL STOP	ROLLING STOP	NO STOP
4,159	3,140	21
56.8%	42.9%	0.3%

The total volume through the intersection during the observed period was 7,320 vehicles. Vehicles came to a full stop at the stop signs posted at the intersection at a rate of 56.8%. Vehicles slowed but did not come to a full stop at the stop signs posted at the intersection at a rate of 42.9%. Vehicles fully ran the stop signs posted at the intersection at a rate of 0.3%.

Most rolling stops occur when vehicles are approaching a stop sign and are in a rush to get to the stop sign before the other vehicles from the other approaches reach the stop sign. No stop vehicles frequently occur in the eastbound and westbound right-turn-only lanes at the intersection. These vehicles are exiting a major thoroughfare and have fewer conflicting turning movements. Right-turning vehicles are more confident in running a stop sign if no other cars are turning out of the intersection. Besides, the no-stop and rolling stop vehicles coming out of the minor thoroughfare streets are more likely to run the stop sign when the intersection is otherwise empty.

As shown in the graph below, we observed the following:

- The hours with the highest number of rolling stops are 5:00 – 6:00 PM and 6:00 to 7:00 PM. The first hour had a total of 355 rolling stops and 1 no stop while the second hour had 343 rolling stops and 1 no stop.
- The hours with the highest proportion of rolling stops are 9:00 – 10:00 AM and 7:00 – 8:00 PM each with 55%.



Mitigation Strategies

Several strategies are available to reduce the number of vehicles that enter all-way stop-controlled intersections without coming to a full stop.

Police Enforcement (Education & Enforcement)

Setting up police patrols during critical hours can increase awareness, help non-compliant drivers correct the driving habit, and effectively increase compliance.

We recommend police officers patrol during 5 – 6 PM when the highest number of rolling stops were identified. If there is additional capacity, Police Department may also consider patrol during 6 to 7 PM - the second most frequent rolling stop hours. Other time periods Police Department may consider include 9-10 AM and 7-8 PM.

LED Enhanced Signs (Engineering)

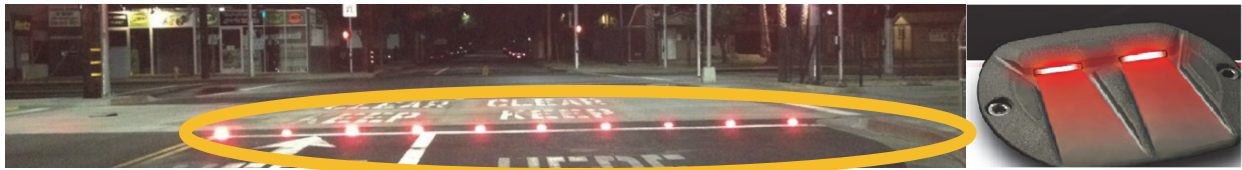
Some motorists likely fail to stop at the intersection due to not seeing or anticipating the stop sign in time. LED enhanced stop signs to use LEDs on the edge of the sign to increase the visibility of the signage at the intersection. While most of the published research on the effectiveness of the signs is focused on rural intersection crash reduction, research conducted by the *Texas Transportation Institute* has concluded that LED enhanced signs offer “increased conspicuity” to motorists, increasing compliance (“Modern Traffic Control Devices to Improve Safety at Rural Intersections”, Fitzpatrick, Chrysler, Sunkari, et. al.). Higher visibility signs can help indicate that the intersection is of higher importance, possibly increasing compliance.



Light pollution caused by the signs may be an issue due to the houses south of the intersection. We recommend these signs be installed for Westview Drive approaches only. Material costs are estimated at \$7,000 for all four enhanced signs.

Stop Bar Lights

An add-on/alternative to enhanced stop signs is an enhanced stop bar. Adding in-pavement stop bar lights reinforces where motorists should stop and increases intersection conspicuity. Stop bar lights also create light pollution but are less likely to be a nuisance to surrounding property owners due to being installed on the pavement. Material costs are estimated at \$13,000 for the materials and installations on each stop bar. As an add-on to enhanced stop signs, the additional cost would drop to \$10,000 (\$17,000 for both the lights and signs).



Traffic Signal

A traffic signal warrant analysis (TSWA) was performed at the study intersection according to the *Texas Manual of Uniform Traffic Control Devices* due to low stop sign compliance. A traffic signal is warranted and may be installed if one or more of the following warrants is satisfied:

Warrant 1: Eight-Hour Vehicular Volume – Not Warranted

The eight highest hourly volumes must each meet a certain threshold for the traffic volumes on both major street and one of the minor street approaches. If at least eight hours meet the threshold, the warrant is satisfied. Warrant 1 is not satisfied by the volumes measured at the intersection.

Warrant 2: Four-Hour Vehicular Volume – Not Warranted

The four highest hourly volumes must each meet a certain threshold for the traffic volumes on both major street and one of the minor street approaches. If at least four hours meet the threshold, the warrant is satisfied. Warrant 2 is not satisfied by the volumes measured at the intersection.

Warrant 3: Peak Hour – Not Warranted

The highest hourly volume must meet a certain threshold for the traffic volumes on both major street and one of the minor street approaches. If the highest hourly volume meets the threshold, the warrant is satisfied. Warrant 3 is not satisfied by the volumes measured at the intersection.

Warrant 4: Pedestrian Volume – Not Warranted

The four highest hourly pedestrian volumes must each meet a certain threshold for the traffic crossing the major street or the highest hourly pedestrian volume must meet a higher threshold. If the volumes meet the required thresholds, the warrant is satisfied. Warrant 4 is not satisfied by the pedestrian volumes measured at the intersection.

Warrant 5: School Crossing – Not Applicable

Warrant 6: Coordinated Signal System – Not Applicable

Warrant 7: Crash Experience – Not Warranted

The number of crashes at the intersection that would be prevented had a signal been at the intersection must reach a certain threshold for the warrant to be satisfied. Warrant 7 is not satisfied by the number of crashes at the intersection.

Warrant 8: Roadway Network – Not Warranted

Warrant 9: Intersection Near a Grade Crossing – Not Applicable

None of the warrants were satisfied based on the existing traffic volumes or crash history at the intersection. However, a traffic signal may still be installed if the City deems it necessary for the operation of the overall roadway network. A traffic signal would increase stopping compliance and pedestrian safety. Traffic signals cost approximately \$300,000 to design and build.

Conclusions

The recommended mitigation strategies can be utilized independently or in conjunction with each other to increase the all-way full stop compliance rate. The provided cost information is based on a limited number of quotes and for magnitude information only. Strategies should be chosen based on cost and reviewed periodically for effectiveness.

Should you have any questions on this matter, please do not hesitate to contact me at sammychen@trafficengineers.com or (281) 606-0288.

Sincerely,



Sammy Chen, Ph.D., PE, PTOE
Principal
Traffic Engineers, Inc.

DIVIDER PAGE

**City of Spring Valley Village
Reserve Fund Analysis
2021 Budget**

	Balance at 9/30/19	Projected at 9/30/20	FY2021 Proposed Budget		Projected at 9/30/21
			Transfers In	Use of Funds	
Utility Fund					
Sewer Department Reserve	\$ 93,792	\$ 99,224	\$ 5,432	\$ -	\$ 104,655 *

	Estimated Useful Life	Estimated Remaining Life	Estimated Replacement Cost	Reserved from Prior Years	FY 2021 Budget Transfer	Total Reserve Balance	Budget Estimated Use of Funds	Projected Reserve Balance
Sewer Lift Stations								
<i>1010 Voss Road (1998)</i>								
Pump 1 Model 3085	20	0	\$ 15,000	\$ 15,500	\$ 750	\$ 16,250	\$ -	\$ 16,250
Pump 2 Model 3085	20	0	15,000	15,500	750	16,250	-	16,250
<i>1226-1/2 Pech Road (rebuilt 2006)</i>								
Pump 1 Model 3126	20	6	15,000	10,419	763	11,183	-	11,183
Pump 2 Model 3126	20	6	15,000	10,419	763	11,183	-	11,183
<i>1040 Bingle Road (1979)</i>								
Pump 1 Model 3085	20	0	15,000	7,800	600	8,400		8,400
Pump 2 Model 3085	20	0	15,000	15,000		15,000	-	15,000
<i>8300 Katy Fwy (2003)</i>								
Pump 1 Phase 1	20	4	15,000	12,292	903	13,195	-	13,195
	20	4	15,000	12,292	903	13,195	-	13,195
				<u>\$ 99,224</u>	<u>\$ 5,432</u>	<u>\$ 104,655</u>	<u>\$ -</u>	<u>\$ 104,655</u>

<u>Lift Stations:</u>	<u>Description</u>	<u>Capacity</u>	<u>Type</u>	<u>Depth</u>	<u>Year Built</u>	<u>Cost</u>	<u>Comments</u>
1000 Campbell Road Storm Water Pump Station - West Tex	Stormwater	768 GPM	Duplex	20'	2006	\$ 155,347.31	Bid price
8300 Katy Fwy Behind Home Depot	Sanitary	350 GPM	Duplex	23'	2003	\$ 182,000.00	Estimated
1010 Voss Road Voss at Cavell (Dad's Club)	Sanitary	140 GPM	Duplex	12'	1997	\$ 85,000.00	Bid price
1226-1/2 Pech Road Pech Road (south of Cedarbrake)	Sanitary	500 GPM	Duplex		1980's	\$ 210,000.00	Estimated Re-hab in 2005
1040 Bingle Road Woodsborough (Bingle at WMP)	Sanitary	200	Duplex		1980's	\$ 115,000.00	Estimated