TOWN COUNCIL REGULAR WORK SESSION
Monday, September 8, 2025 @ 7:00PM
Town Hall Conference Room

View meeting online LIVE at https://www.frontroyalva.com/673/Town-Hall-Live

1. Roll Call

2. FREDA Update (No Coversheet) – *Lizi Lewis/Rick Novak*

3. NEW BUSINESS
   A. Construction Services to Restore Creek Bank at 8th Street Bridge– *Michelle Campbell*
   B. FY26 Budget Amendment for Electric Transformer Reimbursement – *BJ Wilson*
   C. Purchase of Replacement Refuse Truck – *BJ Wilson*
   D. Fiscal Year 2026-2027 Budget Calendar – *BJ Wilson*

4. UNFINISHED BUSINESS
   A. **ACTION ITEM** - An ordinance to amend sections of Front Royal Town Code Chapter 175 - Zoning by adding the definitions of auxiliary dwelling unit (ADU) and revising the definitions of accessory building/accessory structure, accessory use, garage, private, garage, public, lot, lot coverage, and principal permitted use contained in §175-3-Definitions; and, to amend §175-11 – Statement of Intent (R-1) to include ADU'S; to amend §175-12(A) – Uses Permitted by Right (R-1), §175- 18.2(A) – Use Regulations (R-1A), §175-20 – Uses by Right (R-2); §175-29(A) – Uses Permitted by Right (R-3), and §175-37.3(A) – Permitted Uses (PND); and, add §175-115 – Auxiliary Dwelling Unit (ADU) as performance standards for ADU'S.

   B. Request for Water and Sewer in the Rt. 522 Corridor for Industrial Use from Stafford One Investments, LLC (522 Properties LLC) at Winchester Road and Winners Court – *Joe Petty*

5. CLOSED MEETING

6. Adjourn

COUNCIL REGULAR WORK SESSION
AGENDA STATEMENT

Meeting Date: September 8, 2025 Item# 03A

Agenda Item: Construction Services to Restore Creek Bank at 8th Street Bridge

Summary: Request is being made of the Department of Public Works to procure services to restore the creek bank located just above the 8th Street Bridge. The bank of Happy Creek was damaged as a result of heavy rains and flooding a couple of months ago.

The method of procurement is cooperative contracting, utilizing the contract, No. 2248B, between the County School Board of Henrico County, Virgina and Muller, Inc., of Falls Church, Virginia. The department received a proposal from Muller, Inc. in the amount of $150,263.20.

Council is requested to award the procurement of services to Muller, Inc.

Budget/Funding: Staff would like to use contingency funds that were set aside for the 8th Street Bridge to fund this project. Contingency funds were set aside totaling $352,435.75. The remaining contingency funds will be $202,172.55 if Council were to approve to use contingency funds to restore the creek bank.

4500-R47926	Highway Maintenance Bridge Repairs	$150,263.20

Staff Recommendation: Staff recommends to approve as presented.

Town of Front Royal
Public Works

MEMORANDUM

TO: Michelle Campbell, Manager of Purchasing

CC: B.J. Wilson, Director of Finance / Assistant Town Manager

FROM: Robert B Boyer, Public Works Director

DATE: September 3, 2025

SUBJECT: Recommendation to Award Creek Bank Restoration to Muller, INC for Happy Creek

I would like to request that the Town Council approve using Muller, Inc to restore the creek bank damage that resulted from the heavy rains and flooding a couple months back along Happy Creek upstream of the 8th St bridge. We originally received a cost estimate from W&G Construction in the amount of $234,421.04 for this restoration work, by using the cooperative contract with Muller, Inc it brings the cost down to $150,263.20. This funding would come out of budget line item 4500-7926, and this cost would also cover permitting through the Department of Environmental Quality, US Army Corps of Engineers and the Virginia Marine Resource Commission needed to perform this creek bank restoration.

If you have any questions or need any further information, please contact me at 540-692-4789.

Thank You.

Muller

Turnkey Site Development
Dry Utility Design Build
Wet Utilities
Green Infrastructure
Bond Release
Stormwater Maintenance
Erosion & Sediment Control
Pipe Cleaning/Inspection/Repair

www.mullerec.com | 1910 Association Dr., Reston, VA 20191

Muller may be referred to hereon as "Contractor"

LUMP SUM PROPOSAL

JOB NAME: Town of Front Royal Creek Bank Restoration TO#5

CLIENT: Town of Front Royal
PRIMARY CONTACT: Steve Scheulen
EMAIL: sscheulen@frontroyalva.com
ESTIMATE #: E7526
LOCATION: Front Royal
PLANS DATED: N/A
PROPOSAL DATE: 8/6/2025
PREPARED BY: Jessica Ruiz
jruiz@mullerec.com

SCOPE OF WORK

- Civil construction services to restore aproximately 170 LF creek bank slope.
  - Furnish and install up to 230 TNS of Class 2 RipRap with filter fabric and 500 CYS of soil behind rip rap to tie into existing bank. Area accounts for up to 10 feet depth to top of slope, with all material being compacted in lifts. Stabilize any distured areas with EC-2 Matting and seed.

County of Henrico | Contract No. 2248B | Expires 2/13/2026 | Subject to Renewal Periods

NOTES AND CLARIFICATIONS

This is a lump sum (fixed fee) proposal. Total price is limited to the indicated scope of work. Any changes to this scope may result in a higher total price.
NPP = Non Pre-Priced Item (Added through Amendment) Not in Contract but Needed to Complete Scope of Work

In some situations where a specific line item is needed, but is not an available option, another similar item may have a quantity inputted. In which the unit price is +/- the same. For instance, if a tow behind concrete mixer is needed for a task order but is not an available item, another item such as a "generator" may be used, but is understood to represent what is actually needed. The same unit price listed will be billed.

- Assumes standard working hours between 7:00am and 5:00pm Monday through Friday.
- Assumes direct truck & equipment access in all work areas, and water level has stablized with no excessive rain events while work is being performed. Excludes pump around.
- Excludes survey.

DIVISION SCOPE OF WORK	ITEM NO.	DESCRIPTION	UNIT PRICE	QUANTITY	U/M	TOTAL PRICE
		BASE BID				
Heavy	18	Standard Track Excavator (under 30 foot reach)	$303.85	96	HR	$29,169.60
Heavy	10	Loader, Wheeled, 2 to 3 Cubic Yard Capacity	$200.85	96	HR	$19,281.60
Heavy	12	Single Axle Dump Truck	$108.15	120	HR	$12,978.00
Heavy	13	Tandem Axle Dump Truck (Minimum 12 ton Capacity)	$128.75	80	HR	$10,300.00
Labor	45	Laborer	$84.46	240	HR	$20,270.40
Labor	44	Field Supervisor	$98.88	60	HR	$5,932.80
Materials	30	Rip Rap Class II	$84.46	230	TN	$19,425.80
Materials	34	Silt Fence	$0.60	500	LF	$300.00
Materials	36	Geotextile Filter Fabric	$1.85	500	SY	$925.00
Materials	38	Degradable Soil Stabilization Fabric VDOT EC-2	$0.58	500	SY	$290.00
Materials	28	Select Fill Sand VDOT Type I, MIN CBR 20	$37.08	500	CY	$18,540.00
Materials	33	Permanent Seed (less than 0.5% weed content with lime, mulch, and fertilizer, as needed)	$0.40	500	SY	$200.00

		NPP (NON PRE-PRICED) ITEM				
NPP	1	Permitting per Exhibit A	$12,650.00	1	LS	$12,650.00
					LUMP SUM PROPOSAL TOTAL	**$150,263.20**

Number of Mobilizations Included **1**

		ADDITIONAL ALTERNATES				
					ADDITIONAL ALTERNATES TOTAL	

Click to View Full List of Contract Line Items

If link is not clickable please copy & paste the below URL into your browser to view

https://dfmdevelopmentoffice365mull.sharepoint.com/:b:/s/MullerInc/EfITiA2NBBZOslw5XZ9pgEYBQ90E0TImlgUbCCMqucfrrw?e=LwbscH

Muller, Inc:

Signature _____ Date: _____

Acceptance of Proposal - By signing below you are agreeing to the above prices and Muller, Inc. is authorized to perform the work as specified.

Customer/Client:

Authorized Signature _____ Date: _____

Billing Information

Billing Entity (If Applicable) _____

Billing Address

Street Address _____

City, State, Zip Code _____

Preferred Billing Method(s)

- ☐ E-mail to Project Manager
- ☐ E-mail to Accounts Payable
- ☐ Hard Copy by Mail

Project Manager Contact Information

Name: _____ Phone: ( ) _____ - _____ E-mail: _____

Accounts Payable Contact Information

Name: _____ Phone: ( ) _____ - _____ E-mail: _____

Purchase Order Number _____

Special Conditions of Invoice _____

EXHIBIT A

PROJECT UNDERSTANDING & ASSUMPTIONS

We have developed this Proposal/Agreement based on our understanding of the Project. In preparation of this Proposal the following have been assumed

1. Project Description: MULLER will support Muller by providing environmental permitting for the stream restoration.
2. MULLER will prepare and submit a joint permit application to the Virginia Marine Resources Commission (VMRC), who will determine which of several permitting options may be possible. The US Army Corps of Engineers (USACE) has two nationwide permits that may apply, one for stream restoration of aquatic habitat (NWP 27) or for bank stabilization (NWP 13). If the project meets conditions for a USACE NWP then a DEQ permit is not required. If the USACE determines that the project does not meet the conditions of the nationwide permits mentioned, then a VWP permit from DEQ may be required.
3. This Proposal is specific only to the project location listed above and the scope of work is limited to the scope specifically identified in the scope of work below.
4. MULLER does not guarantee any schedule dates or completion dates communicated to client or client's project team for any and all services provided due to numerous variables out of MULLER's hands.
5. Proposal excludes the following unless otherwise stated:
   a. Third party testing
   b. Third party review
   c. Guaranteed schedule/completion dates
   d. Project related liability
6. Pricing provided by MULLER for Lump Sum and Lum Sum Each Billing Type tasks assumes all MULLER's services are 100% completed within 2 years of Proposal date.

SCOPE OF WORK & FEE STRUCTURE

The proposal is limited to the scope of work listed within this agreement; any work outside of listed scope may result in additional fees. The scope of work we are proposing is limited to the below:

TASK	TYPE OF SERVICE
1	**Environmental Permitting** MULLER will provide environmental permitting support that might include identification of prevention measures/control of pollution and habitat disruption that may occur to the environment during construction.

BILLABLE EXPENSES

***** CLIENT'S WITH THEIR OWN FORM OF CONTRACTS/AGREEMENTS SHOULD INCLUDE THE RATES LISTED BELOW WITHIN THE CONTRACTS/AGREEMENTS. MULLER WILL NOT PAY BILLABLE EXPENSES ON BEHALF OF THE CLIENT UNLESS THIS IS INCLUDED. *****

a) **Project Related Vehicle Mileage Reimbursement..... $0.70/ mile**
(Standard Mileage Rate is based on current rates determined by the IRS and is subject to change without prior notification).

b) **All Other Out of Pocket Expenses Paid to Third Parties are Billable Expenses @ Cost + 15%**
Possible billable expenses may include plan copies, mailing, permit fees, bond extension fees, etc., on Scope of Work tasks. MULLER assumes no contractual responsibility (with client) for any services provided by a third party that are running through MULLER as billable expenses, such as work being completed by a designer.

ADDITIONAL WORK

Experience indicates that certain additional items of work may be required or necessary which MULLER cannot presently determine or estimate. For this reason, the fee for these items is not included in the SCOPE OF WORK/ FEE STRUCTURE above. Further, the performance of these items is not included in the Work unless the item is expressly described as the Work in the preceding SCOPE OF WORK section. These additional items of work ("Additional Work") are caused by many factors, usually at the discretion of the Client and/or his contractors and consultants. They may also be caused by reviewing agency or Client variance/deviation from present policies and standards of reviewing governmental agencies. "Additional Work" may sometimes be referred to as extras, change orders, or add-ons, but for purposes of this Agreement all such descriptions are intended to be encompassed within the term Additional Work.

For Client's reference, the following are some of the services that may be required as Additional Work to complete the Work but that are expressly excluded from the Scope of Services listed above. In view of their exclusion from this Proposal, MULLER is not and shall not be held responsible for their performance as Work within the Scope of Services:

1. Work revisions on any Scope of Services items that are required because of a change requested by Client after previous approval by it, the Project team or any approving agencies
2. Work revisions on any Scope of Services items that are required because of design revisions by the Project team
3. Work revisions on any Scope of Services items necessitated by a change in the approving agencies' codes, policies or guidelines during the progress of the work
4. Work revisions on any Scope of Services items necessitated by unforeseen circumstances that cause significant delay in the schedule
5. Procuring plats from the DOB office of the Surveyor.
6. Third party review services.
7. Securing, scanning and returning of permit drawings for hardcopy submissions. If required, this task will be negotiated separately.

COUNCIL REGULAR WORK SESSION
AGENDA STATEMENT

Meeting Date: September 8, 2025 Item# 03B

Agenda Item: FY26 Budget Amendment for Electric Transformer Reimbursement

Summary: Council is requested to approve a FY26 Budget Amendment in the amount of $18,540.00 to receive funds from a customer to reimburse the Department of Energy Service for the purchase of an electric transformer.

Budget/Funding: FY26 Budget Amendment

Revenue		
9401-3410209	Dept. Energy Services Reimbursement	$18,540.00
Expenditure		
9401-45407	Dept. Energy Services Repair & Maintenance Supplies	$18,540.00

Staff Recommendation: Staff recommends for Council to approve the budget amendment as presented.

Town of Front Royal
Department of Energy Services
P.O. Box 1560
Front Royal, Virginia 22630-1560
(540) 635-3027 Fax: (540) 631-3620
"Powering the community since 1894"

Memo

To:	BJ Wilson, Director of Finance
From:	Carey Saffelle, Director of Energy Service
Date:	August 20, 2025
Re:	18 E 6th St Service Upgrade Transformer Reimbursement

The Department of Energy Services purchased transformers at a total cost of $18,540.00 for a Three Phase Service Upgrade at 18 E 16th Street. This cost will be reimbursed in full by the customer.

Upon receipt of the customer's invoice payment, $18,540.00 should be transferred back into the Department of Energy Services Budget, Line Item 9401-45407 – Repair & Maintenance Supplies.

Thank you,

Carey Saffelle
Director of Energy Services
Town of Front Royal

COUNCIL REGULAR WORK SESSION
AGENDA STATEMENT

Meeting Date: September 8, 2025 Item# 03C

Agenda Item: Purchase of Replacement Refuse Truck

Summary: Council is requested to approve the purchase of a replacement refuse truck for the Department of Solid Waste Management, to replace a 2012 International 7600 Refuse Truck, vehicle #661.

The method of procurement is Cooperative Contracting.

Staff received a quote from Excel Truck Group – Fleet Team of Weyers Cave, VA, on August 13, 2025, in the amount of $266,241.00 for a complete International Freightliner M2106 Chassis with a 25-Yard Rear Loader, utilizing Sourcewell Cooperative Contract #032824-DAI.

Staff is requesting Council to approve the purchase for a total amount of $266,241.00, during the regular scheduled meeting on September 22, 2025.

Council had previously requested staff to review potential options for replacing the Town's current refuse truck with an auto-loading refuse truck. Staff obtained a quote in the amount of $390,000 for a 2025 Peterbilt with a 2025 Labrie Automizer. The cost of an auto-loading refuse truck would be approximately $123,760 more than the current type of refuse truck used by the Town.

Potential implementation of an autoloading refuse truck would require additional analysis. MSW Consultants provided the Town with a cost estimate of $25,000 to perform an analysis. MSW Consultants would use previously acquired information from the Town's solid waste rate study, obtain information from observing some of the Town's collection routes, and modeling potential changes to convert to an automated collection system.

Budget/Funding: Funds totaling $266,241.00 to purchase the refuse truck have been budgeted under the following line items:

4203-47005	Solid Wate Motor Vehicles	$154,111.00
4203-R47005	Solid Waste Motor Vehicles (Roll forward Funds)	$112,130.00

Staff Recommendation: Staff recommends to approve as presented.

MEMORANDUM

TO: BJ Wilson, Director of Financing

FROM: Donald B McPaters, Director of Fleet Maintenance DBM

SUBJECT: Purchase of 25-yard rea loader refuse truck.

DATE: August 15, 2025

We have a refuse truck in the budget for 2025-2026. Freightliner is on the Sourewell contract Daimler Contract #032824DAI. The chassis price and body will have a price of $266,241.00. through Excel Truck Group in Weyers Cave Virginia. The delivery time is around five months. I would recommend the purchase of the refuse truck. This truck is built just like the last six we have purchased prior as far as the body. The chassis have changed a little far as the Technology but are similar. Having the same truck and body built similarly makes our jobs easier for diagnosing problems with them and stocking wear parts.

EXCEL TRUCK GROUP®
3243 Lee Highway, Weyers Cave, VA 24486
Phone: (540) 234-0999 Toll Free: (888) 888-9407
www.ExcelTruckGroup.com

August 13, 2025

Town of Front Royal
102 E Main St
Front Royal, VA 22630
Member#

Daimler Contract # 032824DAI

Don McPaters,

Excel Truck Group appreciates the opportunity to quote Town of Front Royal one new 2026 Freightliner M2106 plus chassis set up for a 25' Loadmaster.

1. Freightliner M2106 chassis..... $136,621

(Pre discounted price chassis $186,127 with a 31.64% Sourcewell discount.... $127,236
Added Tariff, Surcharge, Delivery and Escalator.....$9385)

2. Equipment Works 25yd Rear Loader..... $129620

Total..... $266,241

Thanks again and please let me know if you have any questions.

Regards,

Dan Smith
Sales Manager
Excel Truck Group

Prepared For :
Don McPaters
FRONT ROYAL TOWN OF
102 E MAIN ST
FRONT ROYAL, VA 22630
UNITED STATES
Phone :540-636-6889

Prepared by:
Dan Smith
EXCEL TRUCK GROUP
3243 LEE HIGHWAY
WEYERS CAVE, VA 244860096
Phone 540-234-0999

A proposal for
FRONT ROYAL TOWN OF

Prepared by
EXCEL TRUCK GROUP

Dan Smith

August 13, 2025

Freightliner M2 112 Plus



Components shown may not reflect all spec'd options and are not to scale

Prepared For :
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SPECIFICATION PROPOSAL

Data Code	Description	Weight Front	Weight Rear	Retail Price
Price Level				
PRL-29M	M2 PRL-29M (EFF:MY26 ORDERS)			STD
Data Version				
DRL-048	SPECPRO21 DATA RELEASE VER 048			N/C
Vehicle Configuration				
001-175	M2 112 PLUS CONVENTIONAL CHASSIS	8,244	6,026	$168,836.00
004-226	2026 MODEL YEAR SPECIFIED			STD
002-004	SET BACK AXLE - TRUCK			STD
019-004	STRAIGHT TRUCK PROVISION, NON-TOWING			STD
003-001	LH PRIMARY STEERING LOCATION			STD
General Service				
AA1-002	TRUCK CONFIGURATION			STD
AA6-002	DOMICILED, USA (EXCLUDING CALIFORNIA AND CARB OPT-IN STATES)			STD
99D-027	EPA CLEAN IDLE LABEL FOR INITIAL REGISTRATION IN EPA OR ACT STATES - (INCLUDES 6X4 INCH LABEL ON LOWER FORWARD OF DRIVER DOOR)			STD
AF2-998	NONE			N/C
A85-001	REFUSE SERVICE			N/C
A84-1GM	GOVERNMENT BUSINESS SEGMENT			N/C
AA4-003	DRY BULK COMMODITY			N/C
AA5-002	TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS			STD
AB1-008	MAXIMUM 8% EXPECTED GRADE			STD
AB5-001	SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE			STD
995-1AE	FREIGHTLINER LEVEL II WARRANTY			N/C

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	Data Code	Description	Weight Front	Weight Rear	Retail Price
	A66-99D	EXPECTED FRONT AXLE(S) LOAD 18000.0 lbs			
	A68-99D	EXPECTED REAR DRIVE AXLE(S) LOAD 44000.0 lbs			
	A63-99D	EXPECTED GROSS VEHICLE WEIGHT CAPACITY 62000.0 lbs			
Truck Service					
	AA3-061	REFUSE, SIDE LOAD OR REAR PACKER BODY - UNLOADS IN A LANDFILL			N/C
	AF3-119	HEIL ENVIRONMENTAL			N/C
	AF7-99D	EXPECTED BODY/PAYLOAD CG HEIGHT ABOVE FRAME "XX" INCHES 32.0 in			
Engine					
	101-3E3	CUM L9 370 HP @ 2100 RPM, 2100 GOV RPM, 1250 LB-FT @ 1200 RPM, REFUSE	-850	-70	($6,835.00)
Electronic Parameters					
	79A-075	75 MPH ROAD SPEED LIMIT			N/C
	79B-000	CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT			N/C
	79K-005	PTO MODE ENGINE RPM LIMIT - 900 RPM			N/C
	79U-011	PTO GOVERNOR RAMP RATE - 1000 RPM PER SECOND			N/C
N	79W-001	ONE REMOTE PTO SPEED			N/C
	79X-005	PTO SPEED 1 SETTING - 900 RPM			N/C
	80G-004	PTO MINIMUM RPM - 900			N/C
	80J-002	REGEN INHIBIT SPEED THRESHOLD - 5 MPH			N/C
	80S-018	PTO 1, WITH SWITCH, TEM SUPPLIED REQUEST AND INTERLOCKS, WITH PTO CONNECTIONS, NO FACTORY INTERLOCKS			N/C
	80T-018	PTO 2, WITH SWITCH, TEM SUPPLIED REQUEST AND INTERLOCKS, WITH PTO CONNECTIONS, NO INTERLOCKS			N/C
Engine Equipment					
	99C-024	EPA 2010/GHG 2024 CONFIGURATION			STD

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Data Code	Description	Weight Front	Weight Rear	Retail Price
13E-001	STANDARD OIL PAN			STD
105-001	ENGINE MOUNTED OIL CHECK AND FILL			STD
014-099	SIDE OF HOOD AIR INTAKE WITH FIREWALL MOUNTED DONALDSON AIR CLEANER			STD
124-1D7	DR 12V 160 AMP 28-SI QUADRAMOUNT PAD ALTERNATOR WITH REMOTE BATTERY VOLT SENSE			STD
292-236	(3) DTNA GENUINE, FLOODED STARTING, MIN 3000CCA, 555RC, THREADED STUD BATTERIES			STD
290-017	BATTERY BOX FRAME MOUNTED			STD
281-001	STANDARD BATTERY JUMPERS			STD
282-042	LH BATTERY BOX MOUNTED AS FAR AFT AS POSSIBLE, NO GREATER THAN 60 INCHES BACK OF CAB			$257.00
291-017	WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN			STD
289-001	NON-POLISHED BATTERY BOX COVER			STD
293-060	NON-ESSENTIAL POSITIVE LOAD DISCONNECT, LOCKING IN CAB CONTROL SWITCH MOUNTED OUTBOARD OF DRIVER SEAT	2		$195.00
295-029	POSITIVE AND NEGATIVE POSTS FOR JUMPSTART LOCATED ON FRAME NEXT TO STARTER	2		$88.00
306-015	PROGRESSIVE LOW VOLTAGE DISCONNECT AT 12 3 VOLTS FOR DESIGNATED CIRCUITS	2		STD
107-032	CUMMINS TURBOCHARGED 18.7 CFM AIR COMPRESSOR WITH INTERNAL SAFETY VALVE			N/C
108-002	STANDARD MECHANICAL AIR COMPRESSOR GOVERNOR			STD
131-013	AIR COMPRESSOR DISCHARGE LINE			STD
152-041	ELECTRONIC ENGINE INTEGRAL SHUTDOWN PROTECTION SYSTEM			STD
128-032	C-BRAKE BY JACOBS WITH LOW/OFF/HIGH BRAKING DASH SWITCH	80		$2,553.00
016-1C2	RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE	30	25	$823.00
28F-014	ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGENERATION AND VIRTUAL REGENERATION REQUEST SWITCH IN CLUSTER			STD

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Data Code	Description	Weight Front	Weight Rear	Retail Price
239-038	11 FOOT 06 INCH (138 INCH+0/-5.9 INCH) EXHAUST SYSTEM HEIGHT			N/C
237-1CR	RH CURVED VERTICAL TAILPIPE B-PILLAR MOUNTED ROUTED FROM STEP			N/C
23U-001	6 GALLON DIESEL EXHAUST FLUID TANK			STD
30N-003	100 PERCENT DIESEL EXHAUST FLUID FILL			STD
43X-002	LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION			STD
23Y-001	STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING			STD
43Y-001	STANDARD DIESEL EXHAUST FLUID TANK CAP			STD
242-011	ALUMINUM AFTERTREATMENT DEVICE/MUFFLER/TAILPIPE SHIELD(S)			N/C
273-058	AIR POWERED ON/OFF ENGINE FAN CLUTCH			($11.00)
276-001	AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON ENGINE MOUNTED			STD
110-003	CUMMINS SPIN ON FUEL FILTER			N/C
118-008	COMBINATION FULL FLOW/BYPASS OIL FILTER			N/C
120-998	NO COOLANT FILTER	-10		STD
266-017	1300 SQUARE INCH ALUMINUM RADIATOR	-20		N/C
103-039	ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT			STD
171-007	GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT			STD
172-001	CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES			STD
270-016	RADIATOR DRAIN VALVE			N/C
134-001	ALUMINUM FLYWHEEL HOUSING			STD
132-004	ELECTRIC GRID AIR INTAKE WARMER			N/C
155-058	DELCO 12V 38MT HD STARTER WITH INTEGRATED MAGNETIC SWITCH	-10		N/C

Transmission

Prepared For :
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Phone :540-636-6889

Prepared by:
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WEYERS CAVE, VA 244860096
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	Data Code	Description	Weight Front	Weight Rear	Retail Price
	342-562	ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION			STD

Transmission Equipment

	343-312	ALLISON VOCATIONAL PACKAGE 142 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODEL RDS			N/C
	84B-013	ALLISON VOCATIONAL RATING FOR REFUSE APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES			N/C
	84C-023	PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY			STD
	84D-023	SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY			STD
	84E-000	PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
	84F-000	SECONDARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
	84G-000	PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
	84H-000	SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
	84J-000	ENGINE BRAKE RANGE PRESELECT RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
	84K-000	ENGINE BRAKE RANGE ALTERNATE PRESELECT RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
	84N-004	FUEL SENSE 2.0 PLUS - DYNACTIVE: PERFORMANCE, NEUTRAL AT STOP: ACTIVE			$721.00
	84U-000	DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES			STD
N	85E-013	MAXIMUM ENGINE SPEED FOR PTO ENGAGEMENT 1100 RPM			N/C
	85F-028	MAXIMUM ENGINE SPEED FOR PTO OPERATION 1700 RPM			N/C
	353-076	QUICKFIT BODY LIGHTING CONNECTOR AT END OF FRAME, WITH BLUNTCUTS			$200.00
	34C-011	ELECTRONIC TRANSMISSION WIRING TO CUSTOMER INTERFACE CONNECTOR			$125.00

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Data Code	Description	Weight Front	Weight Rear	Retail Price
362-2JW	(2) CUSTOMER INSTALLED CHELSEA 871 SERIES PTO'S			N/C
363-011	PTO MOUNTING, LH AND RH SIDES OF MAIN TRANSMISSION			N/C
341-018	MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN			STD
345-003	PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED			$254.00
97G-004	TRANSMISSION PROGNOSTICS - ENABLED 2013			STD
370-015	WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK	15		N/C
346-003	TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK			STD
35T-001	SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)			STD
Front Axle and Equipment				
400-1BA	DETROIT DA-F-18.0-5 18,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE	210		$2,220.00
402-030	MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES	10		N/C
403-002	NON-ASBESTOS FRONT BRAKE LINING			STD
419-001	CAST IRON OUTBOARD FRONT BRAKE DRUMS			STD
409-006	FRONT OIL SEALS			STD
408-001	VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL			STD
416-022	STANDARD SPINDLE NUTS FOR ALL AXLES			STD
405-002	MERITOR AUTOMATIC FRONT SLACK ADJUSTERS			STD
536-055	TRW THP-60 POWER STEERING WITH RCH45 AUXILIARY GEAR	130		$1,531.00
539-003	POWER STEERING PUMP			STD
534-003	4 QUART POWER STEERING RESERVOIR	5		N/C
533-001	OIL/AIR POWER STEERING COOLER			N/C
40T-001	MINERAL SAE 80/90 FRONT AXLE LUBE			STD

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Front Suspension				
620-013	18,000# TAPERLEAF FRONT SUSPENSION	200		$1,428.00
619-005	MAINTENANCE FREE RUBBER BUSHINGS - FRONT SUSPENSION			STD
410-001	FRONT SHOCK ABSORBERS			STD
Rear Axle and Equipment				
420-103	MERITOR RT-46-160 46,000# R-SERIES TANDEM REAR AXLE		420	$4,096.00
421-489	4.89 REAR AXLE RATIO			N/C
424-001	IRON REAR AXLE CARRIER WITH STANDARD AXLE HOUSING			STD
386-074	MXL 176T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES	30	30	STD
388-073	MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES			STD
452-006	DRIVER CONTROLLED TRACTION DIFFERENTIAL - BOTH TANDEM REAR AXLES		30	$1,317.00
878-023	(1) INTERAXLE LOCK VALVE, (1) DRIVER CONTROLLED DIFFERENTIAL LOCK FORWARD-REAR AND REAR-REAR AXLE VALVE			N/C
87A-017	INDICATOR LIGHT FOR EACH INTERAXLE LOCKOUT SWITCH, DISENGAGE INTERAXLE LOCK WITH IGNITION OFF			N/C
87B-015	INDICATOR LIGHT FOR EACH DIFFERENTIAL LOCKOUT SWITCH, ENGAGE <5 MPH, DISENGAGE >25 MPH			N/C
423-033	MERITOR 16.5X7 Q+ CAST SPIDER HEAVY DUTY CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES		20	$294.00
433-002	NON-ASBESTOS REAR BRAKE LINING			STD
434-011	BRAKE CAMS AND CHAMBERS ON FORWARD SIDE OF DRIVE AXLE(S)			N/C
451-001	CAST IRON OUTBOARD REAR BRAKE DRUMS		-10	STD
440-006	REAR OIL SEALS			STD
426-101	WABCO TRISTOP D LONGSTROKE 2-DRIVE AXLE SPRING PARKING CHAMBERS			STD
428-003	HALDEX AUTOMATIC REAR SLACK ADJUSTERS			$92.00

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41T-002	CURRENT AVAILABLE SYNTHETIC 75W-90 REAR AXLE LUBE			STD
Rear Suspension				
622-298	TUFTRAC GEN2 46,000# REAR SPRING SUSPENSION		560	$3,532.00
621-108	9.5 INCH NOMINAL RIDE HEIGHT (460MM GLOBAL REFERENCE HEIGHT)			N/C
431-003	AXLE CLAMPING GROUP			N/C
624-025	55 INCH AXLE SPACING			N/C
623-006	FORE/AFT AND TRANSVERSE CONTROL RODS			N/C
439-001	REAR SHOCK ABSORBERS - ONE AXLE			N/C
Pusher / Tag Equipment				
429-998	NO PUSHER/TAG BRAKE DUST SHIELDS			STD
Brake System				
018-002	AIR BRAKE PACKAGE			STD
490-121	WABCO 4S/4M ABS WITH TRACTION CONTROL			STD
871-001	REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES			STD
904-001	FIBER BRAID PARKING BRAKE HOSE			STD
412-001	STANDARD BRAKE SYSTEM VALVES			STD
46D-002	STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM			STD
413-002	STD U.S. FRONT BRAKE VALVE			STD
432-003	RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE			STD
480-088	WABCO SYSTEM SAVER HP WITH INTEGRAL AIR GOVERNOR AND HEATER			STD
479-015	AIR DRYER FRAME MOUNTED			STD
460-001	STEEL AIR BRAKE RESERVOIRS			STD
477-001	PULL CABLE ON WET TANK, PETCOCK DRAIN VALVES ON ALL OTHER AIR TANKS			STD

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Trailer Connections				
481-998	NO TRAILER AIR HOSE			STD
476-998	NO AIR HOSE HANGER			STD
310-998	NO TRAILER ELECTRICAL CABLE			STD
Wheelbase & Frame				
545-572	5725MM (225 INCH) WHEELBASE			N/C
546-102	7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI	310	240	$1,300.00
547-001	1/4 INCH (6.35MM) C-CHANNEL INNER FRAME REINFORCEMENT	230	410	$1,000.00
552-043	1975MM (78 INCH) REAR FRAME OVERHANG			N/C
55W-007	FRAME OVERHANG RANGE: 71 INCH TO 80 INCH	-30	130	N/C
AC8-99D	CALC'D BACK OF CAB TO REAR SUSP C/L (CA) 159.84 in			
AE8-99D	CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) 156.84 in			
AE4-99D	CALC'D FRAME LENGTH - OVERALL 333.31 in			
FSS-0LH	CALCULATED FRAME SPACE LH SIDE 80.76 in			N/C
FSS-0RH	CALCULATED FRAME SPACE RH SIDE 105.54 in			N/C
AM6-99D	CALC'D SPACE AVAILABLE FOR DECKPLATE 0.0 in			
553-001	SQUARE END OF FRAME			STD
550-001	FRONT CLOSING CROSSMEMBER			STD
559-001	STANDARD WEIGHT ENGINE CROSSMEMBER			STD
561-001	STANDARD CROSSMEMBER BACK OF TRANSMISSION			STD
562-001	STANDARD MIDSHIP #1 CROSSMEMBER(S)			STD
572-001	STANDARD REARMOST CROSSMEMBER			STD
565-002	HEAVY DUTY SUSPENSION CROSSMEMBER		30	N/C

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Chassis Equipment				
556-1AP	THREE-PIECE 14 INCH PAINTED STEEL BUMPER WITH COLLAPSIBLE ENDS	-10		$10.00
558-070	REMOVABLE FRONT TOW/RECOVERY DEVICE,STORED ON CHASSIS FRAME	15		$155.00
574-001	BUMPER MOUNTING FOR SINGLE LICENSE PLATE			N/C
585-998	NO MUDFLAP BRACKETS			STD
590-998	NO REAR MUDFLAPS			STD
586-024	FENDER AND FRONT OF HOOD MOUNTED FRONT MUDFLAPS			STD
551-007	GRADE 8 THREADED HEX HEADED FRAME FASTENERS			STD
44Z-002	EXTERIOR HARNESSES WRAPPED IN ABRASION TAPE			STD
607-029	CLEAR FRAME RAIL FROM TRANSMISSION PTO OPENING TO 36 INCHES BACK OF CAB OUTBOARD/INSIDE/BELOW LH RAIL			$218.00
Fifth Wheel				
578-998	NO FIFTH WHEEL			STD
Fuel Tanks				
204-152	70 GALLON/264 LITER ALUMINUM FUEL TANK - LH	5		$90.00
218-006	25 INCH DIAMETER FUEL TANK(S)			STD
215-005	PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS			STD
212-007	FUEL TANK(S) FORWARD			STD
664-001	PLAIN STEP FINISH			STD
205-001	FUEL TANK CAP(S)			STD
122-1H3	DETROIT FUEL/WATER SEPARATOR WITH WATER IN FUEL SENSOR	10		N/C
216-020	EQUIFLO INBOARD FUEL SYSTEM			STD
202-016	HIGH TEMPERATURE REINFORCED NYLON FUEL LINE			STD
Tires				

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093-1XJ	BRIDGESTONE M870 315/80R22.5 20 PLY RADIAL FRONT TIRES	96		$1,648.00
094-2EA	BRIDGESTONE M799 11R22.5 16 PLY RADIAL REAR TIRES		88	$688.00
Hubs				
418-060	CONMET PRESET PLUS PREMIUM IRON FRONT HUBS			STD
450-060	CONMET PRESET PLUS PREMIUM IRON REAR HUBS			STD
Wheels				
502-579	MAXION WHEELS 10041 22.5X9.00 10-HUB PILOT 5.25 INSET 5-HAND STEEL DISC FRONT WHEELS	66		$190.00
505-753	MAXION WHEELS 91262 22.5X8.25 10-HUB PILOT 5-HAND STEEL DISC REAR WHEELS		40	($8.00)
496-011	FRONT WHEEL MOUNTING NUTS			STD
497-011	REAR WHEEL MOUNTING NUTS			STD
Cab Exterior				
829-072	112 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB			STD
650-008	AIR CAB MOUNTING			STD
754-017	BOLT-ON MOLDED FLEXIBLE FENDER EXTENSIONS	10		$100.00
678-001	LH AND RH GRAB HANDLES			STD
646-045	MOLD-IN COLOR GRILLE			STD
65X-011	MOLD-IN COLOR HOOD MOUNTED AIR INTAKE GRILLE			STD
644-004	FIBERGLASS HOOD			STD
652-001	FREIGHTLINER NAME PLATES			STD
690-017	HOOD LINER, ADDED FIREWALL AND FLOOR HEAT INSULATION	5		$158.00
727-1AF	SINGLE 14 INCH ROUND HADLEY AIR HORN UNDER LH DECK	4		$82.00
726-001	SINGLE ELECTRIC HORN			STD
575-001	REAR LICENSE PLATE MOUNT END OF FRAME			STD

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312-093	INTERGRAL LED HEADLIGHTS; NON-COMPLIANT WITH FMVSS 108 HEADLIGHT HEIGHT REQUIREMENT			$930.00
302-047	LED AERODYNAMIC MARKER LIGHTS			STD
311-001	DAYTIME RUNNING LIGHTS			STD
294-001	INTEGRAL STOP/TAIL/BACKUP LIGHTS			STD
300-015	STANDARD FRONT TURN SIGNAL LAMPS			STD
744-1BK	DUAL WEST COAST MOLDED-IN COLOR HEATED MIRRORS WITH LH AND RH REMOTE			STD
797-001	DOOR MOUNTED MIRRORS			STD
796-001	102 INCH EQUIPMENT WIDTH			STD
743-1AP	LH AND RH 8 INCH MOLDED-IN COLOR CONVEX MIRRORS M0UNTED UNDER PRIMARY MIRRORS			STD
729-001	STANDARD SIDE/REAR REFLECTORS			STD
677-054	RH AFTERTREATMENT SYSTEM CAB ACCESS WITH PLAIN DIAMOND PLATE COVER			($3.00)
768-043	63X14 INCH TINTED REAR WINDOW			STD
661-003	TINTED DOOR GLASS LH AND RH WITH TINTED NON-OPERATING WING WINDOWS			STD
654-011	RH AND LH ELECTRIC POWERED WINDOWS			STD
663-013	1-PIECE SOLAR GREEN GLASS WINDSHELD			STD
659-019	2 GALLON WINDSHIELD WASHER RESERVOIR WITHOUT FLUID LEVEL INDICATOR, FRAME MOUNTED			STD
647-001	WHITE WINTERFRONT	2		$35.00
Cab Interior				
055-018	ELITE TRIM PACKAGE			N/C
707-106	MIST CLOTH & CARBON VINYL INTERIOR "ELITE"			N/C
70K-019	CARBON WITH PREMIUM WOOD ACCENT (ELITE)			$116.00
706-013	MOLDED DOOR PANEL			STD

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708-013	MOLDED PLASTIC DOOR PANEL			STD
772-006	BLACK MATS WITH SINGLE INSULATION			STD
785-026	(1)DASH MOUNTED 12V POWER OUTLET, (1)DASH MOUNTED DUAL USB-C OUTLET			$32.00
691-001	FORWARD ROOF MOUNTED CONSOLE			STD
693-019	LH AND RH DOOR STORAGE POCKETS INTEGRATED INTO MOLDED DOOR PANELS			STD
738-021	DIGITAL ALARM CLOCK IN DRIVER DISPLAY			STD
742-007	(2) CUP HOLDERS LH AND RH DASH			STD
680-029	M2/SD DASH			STD
700-002	HEATER, DEFROSTER AND AIR CONDITIONER			STD
701-001	STANDARD HVAC DUCTING			STD
703-005	MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH			STD
170-015	STANDARD HEATER PLUMBING			STD
130-041	VALEO HEAVY DUTY A/C REFRIGERANT COMPRESSOR			STD
702-002	BINARY CONTROL, R-134A			STD
739-034	PREMIUM INSULATION			$187.00
285-013	SOLID-STATE CIRCUIT PROTECTION AND FUSES			STD
280-007	12V NEGATIVE GROUND ELECTRICAL SYSTEM			STD
324-1B3	STANDARD LED CAB LIGHTING			STD
787-004	REMOTE KEYLESS ENTRY AND 2 TRANSMITTERS	2		STD
657-001	DOOR LOCKS AND IGNITION SWITCH KEYED THE SAME			STD
78G-004	KEY QUANTITY OF 4			$18.00
655-028	LH AND RH ELECTRIC DOOR LOCKS WITH AUTO UNLOCK FEATURE WHEN DOOR IS SET FROM OPEN TO CLOSED POSITION			$23.00

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740-998	NO MATTRESS	-20	-15	STD
756-339	PREMIUM ISRINGHAUSEN HIGH BACK AIR SUSPENSION DRIVERS SEAT WITH 2 AIR LUMBAR, INTEGRATED CUSHION EXTENSION, TILT AND ADJUSTABLE SHOCK	70		$424.00
760-344	2 MAN TOOL BOX MID BACK NON SUSPENSION PASSENGER SEAT WITH HEADRESTS, SEATS INC	20		$344.00
759-007	DUAL DRIVER SEAT ARMRESTS, NO PASSENGER SEAT ARMRESTS	4		$67.00
711-004	LH AND RH INTEGRAL DOOR PANEL ARMRESTS			STD
758-1AK	BLACK VINYL DRIVER SEAT COVER			STD
761-1AK	BLACK VINYL PASSENGER SEAT COVER			STD
763-102	HIGH VISIBILITY ORANGE SEAT BELTS			$39.00
532-002	ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN			STD
540-070	4-SPOKE 18 INCH (450MM) LEATHER WRAPPED STEERING WHEEL WITH CHROME SWITCH BEZELS			$129.00
765-002	DRIVER AND PASSENGER INTERIOR SUN VISORS			STD

Instruments & Controls

106-002	ELECTRONIC ACCELERATOR CONTROL			STD
732-998	NO INSTRUMENT PANEL-DRIVER			STD
734-022	FULLY CONFIGURABLE CENTER INSTRUMENT PANELS			($59.00)
87L-001	ENGINE REMOTE INTERFACE WITH PARK BRAKE INTERLOCK			N/C
870-002	BRIGHT ARGENT FINISH GAUGE BEZELS			$1.00
486-001	LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM			STD
840-001	DUAL NEEDLE PRIMARY AND SECONDARY AIR PRESSURE GAUGE			STD
198-025	INTAKE MOUNTED AIR RESTRICTION INDICATOR WITHOUT GRADUATIONS			STD
149-015	ELECTRONIC CRUISE CONTROL WITH CONTROLS ON STEERING WHEEL SPOKES			STD

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156-007	KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY			STD
811-044	PREMIUM INSTRUMENT CLUSTER WITH 5.0 INCH TFT COLOR DISPLAY			STD
81B-003	DIGITAL PANEL LAMP DIMMER SWITCH IN DRIVER DISPLAY			STD
160-038	HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH			STD
844-001	2 INCH ELECTRIC FUEL GAUGE			STD
148-072	ENGINE REMOTE INTERFACE WITH ONE OR MORE SET SPEEDS			$134.00
48H-003	QUICKFIT POWERTRAIN INTERFACE CONNECTOR UNDER CAB WITH CAPS			$79.00
48C-003	QUICKFIT PROGRAMMABLE INTERFACE CONNECTOR(S) UNDER CAB WITH CAP			$6.00
163-014	ENGINE REMOTE INTERFACE CONNECTOR AT POWERTRAIN INTERFACE CONNECTOR			N/C
856-001	ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE			STD
864-001	2 INCH TRANSMISSION OIL TEMPERATURE GAUGE			$30.00
867-004	ELECTRONIC OUTSIDE TEMPERATURE SENSOR DISPLAY IN DRIVER MESSAGE CENTER			STD
830-017	ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY			STD
372-123	PTO CONTROLS FOR ENHANCED VEHICLE ELECTRIC/ELECTRONIC ARCHITECTURE			$60.00
736-998	NO OBSTACLE DETECTION SYSTEM			($4,324.00)
72J-998	NO DR ASSIST SYSTEM			($32.00)
73H-014	(1) BACKUP CAMERA-END OF FRAME MOUNTED WITH 15 FOOT EXTRA LONG CABLE COILED AT END OF FRAME			$420.00
49B-004	ELECTRONIC STABILITY CONTROL			STD
73B-998	NO LANE DEPARTURE WARNING SYSTEM			($1,080.00)
852-002	ELECTRIC ENGINE OIL PRESSURE GAUGE			STD
679-998	NO OVERHEAD INSTRUMENT PANEL			STD

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35M-010	1 QUICKFIT PROGRAMABLE MODULE (QPM/XMC)	10		$735.00
1U1-002	TOP OF DASH RAM MOUNT WITHOUT POWER OR GROUND, FOR CUSTOMER FURNISHED DEVICE			$32.00
746-143	7" B-PANEL INTERACTIVE TOUCHSCREEN DISPLAY RADIO W/ USB-C, APPLE CARPLAY, ANDROID AUTO, BLUETOOTH/AM/FM/SXM/WB, WITH MICROPHONE			STD
747-001	DASH MOUNTED RADIO			STD
750-002	(2) RADIO SPEAKERS IN CAB			STD
753-998	NO AM/FM RADIO ANTENNA			STD
749-998	NO CB RADIO MOUNTING PROVISION			STD
75W-002	SHARKFIN MULTI-BAND ANTENNA, RIGHT HAND BIAS ROOF MOUNTING LOCATION: AM/FM/WEATHERBAND, WIFI/BLUETOOTH, SDAR/SIRIUSXM, GNSS/GPS			STD
78C-003	INTEROPERABLE SDAR ANTENNA			STD
74D-006	STANDARD RADIO WIRING WITH STEERING WHEEL CONTROLS			STD
810-027	ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER			STD
817-001	STANDARD VEHICLE SPEED SENSOR			STD
812-001	ELECTRONIC 3000 RPM TACHOMETER			STD
813-1C8	DETROIT CONNECT PLATFORM HARDWARE			STD
8D1-313	3 YEARS DAIMLER CONNECTIVITY BASE PACKAGE ON (FEATURES VARY BY MODEL) POWERED BY DETROIT CONNECT ON CUMMINS ENGINES			N/C
6TS-008	(2) TMC RP1226 ACCESSORY CONNECTORS: (1) LOCATED BEHIND PASSENGER SIDE REMOVABLE DASH PANEL (1) CENTER OF OVERHEAD CONSOLE			$40.00
162-002	IGNITION SWITCH CONTROLLED ENGINE STOP			STD
329-136	THREE EXTRA HARDWIRED SWITCHES IN DASH, ROUTE TO END OF FRAME, BLUNTCUT			$190.00
4C1-026	HARDWIRE SWITCH #1, ON/OFF LATCHING, 10 AMPS BATTERY POWER			N/C
4C2-026	HARDWIRE SWITCH #2, ON/OFF LATCHING, 10 AMPS BATTERY POWER			N/C

Prepared For :
Don McPaters
FRONT ROYAL TOWN OF
102 E MAIN ST
FRONT ROYAL VA 22630
UNITED STATES
Phone 540-636-6889

Prepared by:
Dan Smith
EXCEL TRUCK GROUP
3243 LEE HIGHWAY
WEYERS CAVE VA 244860096
Phone :540-234-0999

Data Code	Description	Weight Front	Weight Rear	Retail Price
4C3-017	HARDWIRE SWITCH #3,ON/OFF LATCHING, 10 AMPS BATTERY POWER			N/C
264-030	(1) OVERHEAD MOUNTED LANYARD CONTROL FOR DRIVER AIR HORN			($23.00)
883-998	NO TRAILER HAND CONTROL BRAKE VALVE			STD
836-015	DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY			STD
660-008	SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY			STD
304-030	ROTARY HEADLAMP SWITCH, MARKER LIGHTS/HEADLIGHTS SWITCH WITH PULL OUT FOR OPTIONAL FOG/ROAD LAMPS			N/C
882-009	ONE VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR			STD
299-020	SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, HEADLAMP FLASH, WASH/WIPE/INTERMITTENT			STD
298-046	INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH 40 AMP (20 AMP PER SIDE) TRAILER LAMP CAPACITY			STD
87T-998	NO WRG/SW-OPTL #2,CHAS,AIR			STD
Design				
065-000	PAINT: ONE SOLID COLOR			STD
Color				
980-5F6	CAB COLOR A: L0006EY WHITE ELITE EY			STD
986-020	BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT			STD
962-974	POWDER GRAY (N0020EA) FRONT WHEELS/RIMS (PKGRY21, G, PG1)			$46.00
966-974	POWDER GRAY (N0020EA) REAR WHEELS/RIMS (PKGRY21, G, PG1)			$184.00
964-6Z7	BUMPER PAINT: FP24812 ARGENT SILVER DUPONT FLEX			STD
963-003	STANDARD E COAT/UNDERCOATING			STD
Certification / Compliance				
996-001	U.S. FMVSS CERTIFICATION, EXCEPT SALES CABS AND GLIDER KITS			STD

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Sales Programs

PMY-3G6	BUSINESS QUOTE SALES PROGRAM	N/C

TOTAL VEHICLE SUMMARY

Adjusted List Price

Adjusted List Price ** $ 186,127.00

Weight Summary

	Weight Front	Weight Rear	Total Weight
Factory Weight+	8869 lbs	7954 lbs	16823 lbs
Total Weight+	8869 lbs	7954 lbs	16823 lbs

ITEMS NOT INCLUDED IN ADJUSTED LIST PRICE

Other Factory Charges

PMV-024	GHG24 SURCHARGE - CUMMINS	$555.00
PCA-005	SOURCEWELL DEALER CHARGE	$800.00
RD1-313	3 YEARS DAIMLER CONNECTIVITY BASE PACKAGE ON (FEATURES VARY BY MODEL) POWERED BY DETROIT CONNECT ON CUMMINS ENGINES	N/C
RAG-020	CUMMINS TARIFF CHARGE - $205	$205.00
PAT-025	STEEL, ALUMINUM, AND CHINA TARIFF IMPACT FEE 108/114 SD AND M2 106/112	$1,500.00
R26-001	MY26 ESCALATOR	$3,750.00
P73-2FT	STANDARD DESTINATION CHARGE	$3,375.00

(+) Weights Shown are estimates only
If weight is critical, contact Customer Application Engineering.

(**) Prices shown do not include taxes, fees, etc... "Net Equipment Selling Price" is located on the Quotation Details Proposal Report.

(***) All cost increases for major components (Engines, Transmissions, Axles, Front and Rear Tires) and government mandated requirements, tariffs, and raw material surcharges will be passed through and added to factory invoices.

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QUOTATION

M2 112 PLUS CONVENTIONAL CHASSIS

SET BACK AXLE - TRUCK

CUM L9 370 HP @ 2100 RPM, 2100 GOV RPM, 1250 LB-FT @ 1200 RPM, REFUSE

ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION

MERITOR RT-46-160 46,000# R-SERIES TANDEM REAR AXLE

TUFTRAC GEN2 46,000# REAR SPRING SUSPENSION

DETROIT DA-F-18.0-5 18,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE

18,000# TAPERLEAF FRONT SUSPENSION

112 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB

5725MM (225 INCH) WHEELBASE

NO FIFTH WHEEL

7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI

1975MM (78 INCH) REAR FRAME OVERHANG

1/4 INCH (6.35MM) C-CHANNEL INNER FRAME REINFORCEMENT

			PER UNIT		TOTAL
VEHICLE PRICE	TOTAL # OF UNITS (1)	$	136,979	$	136,979
EXTENDED WARRANTY		$	0	$	0
DEALER INSTALLED OPTIONS		$	0	$	0
CUSTOMER PRICE BEFORE TAX		$	***136,979***	$	***136,979***
TAXES AND FEES					
FEDERAL EXCISE TAX (FET)		$	(358)	$	(358)
TAXES AND FEES		$	0	$	0
OTHER CHARGES		$	0	$	0
TRADE-IN					
TRADE-IN ALLOWANCE		$	0	$	0
BALANCE DUE	**(LOCAL CURRENCY)**	$	**136,621**	$	**136,621**

COMMENTS:
Projected delivery on ___ / ___ / ___ provided the order is received before ___ / ___ / ___.

APPROVAL:
Please indicate your acceptance of this quotation by signing below:

Customer: X_____ Date: ___ / ___ / ___.

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Daimler Truck Financial

Financing that works for you.

See your local dealer for a competitive quote from Daimler Truck Financial, or contact us at Information@dtfoffers.com.

Daimler Truck Financial offers a variety of finance, lease and insurance solutions to fit your business needs. For more information about our products and services, visit our website at www.daimler-truckfinancial.com

Equipment Works, Inc.
also dba Virginia Truck Body
703-339-4541
P.O. Box 708
Newington, VA 22122
Phone: 703-550-2685 FAX: 703-550-2596

ESTIMATE

Est Date: 04/03/25 01:18 pm

Excel Truck Group WC 3243 Lee Highway Weyers Cave Va 24486 ?: Work Phone: 540-234-0999	No Vehicle

Job01 Rear loader 25yd — Labor: 0.00 hrs@$155.00/hr=$0.00

1.00 2201007 Excel 25 Yd Rear Loader Short $83,900.00
1.00 9999999 Full Factory Mount New Chassis $1,060.00
1.00 9999999 Polyurethane Enamel Paint Customer Specified - Excel $6,100.00
1.00 9999999 Hot Shift PTO w/ Pump Installed Auto Trans $3,700.00
1.00 2211052 Sump Sludge Control Option SXL/PTO/Frame Tank $350.00
1.00 0120355 1/4" 100,000 P.S.I. Tailgate Sides $390.00
1.00 0100247 1/4" Gr 50 Body Floor 25 Yd $230.00
1.00 9999999 2 Year Body Warranty (1 Additional Year) $2,970.00
1.00 0120751 2-10 Enclosure Shroud $210.00
1.00 0120500 2-10 Yd Reeving Winch System $4,180.00
1.00 2211030 Container Bumper Bar $240.00
1.00 2211110 Body Side Mudguard for 315 Tires $230.00
1.00 0120775 Dual Work Lights Outside Hopper with Brush Guard $150.00
1.00 2211098 Excel S Remote Zerks Ejector $100.00
1.00 0120369 Frame Mounted Oil Tank 24" DIA. $720.00
1.00 0120240 Heavy Duty Packing Blades $420.00
1.00 0120036 Hopper Work Light Double $140.00
1.00 2211009 Install Dual Tipper w/Loadmaster Hydraulics $4,300.00
1.00 0120055 LED Strobe System (4) 4" Dia Body & T/G (Each front corner) $290.00
1.00 9999999 Material Cost Surcharge $5,200.00
2.00 9938002 Perkins D6220 $3,770.00
1.00 2211183 Triple Tailgate Side and Sweep Base Remote Zerks $300.00
1.00 0120409 Uni Latch Coupler $1,060.00
1.00 2201017 Water Cooler Mounted Under Body 5 Gal $430.00
1.00 2211215 T/G SIDE TUBE PROTECTORS DUAL CT $410.00 Technician: Add me 1 License #: Add me

25YD REARLOAD LO loadmaster 25yd — 1.0 @124620.0 =$ 124620.0124620.00

Status: Estimate Tech: Add me 1

m
Received By: _____

Payments to Equipment Works, Inc.

Cost Summary

Labor	0.00
Parts	0.00
Non Taxable	124620.00
Freight	5000.00

-------->---->---->---Continued on the next page--->---->----->------>

Equipment Works, Inc.
also dba Virginia Truck Body
703-339-4541
P.O. Box 708
Newington, VA 22122
Phone: 703-550-2685 FAX: 703-550-2596

ESTIMATE Est Date: 04/03/25 01:18 pm

Payments to Equipment Works, Inc.

Cost Summary

Tax	0.00
Total	$129620.00
Payments	0.00
Bal Due	129620.00

Status: Estimate

Payments:

Thank you for choosing Equipment Works, Inc.

4/10/25 John A. Smith
Excel Truck Group
Sales Mgr.

VIN - WS1254 due begin of Ju

AUTOMATED WASTE COLLECTION – HOW TO MAKE SURE IT MAKES SENSE FOR YOUR COMMUNITY

Marc J. Rogoff, Ph.D.
SCS Engineers
Tampa, Florida

Richard E. Lilyquist, P.E.
Public Works Department
City of Lakeland
Lakeland, Florida

Donald Ross
Kessler Consulting, Inc
Tampa, Florida

Jeffrey L. Wood
Solid Waste Division
City of Lakeland
Lakeland, Florida

ABSTRACT

The decision to implement solid waste collection automation is a complex one and involves a number of factors that should be considered, including engineering, risk management, technology assessment, costs, and public acceptance. This paper analyzes these key issues and provides a case study of how waste collection automation was considered by the City of Lakeland, Florida.

HOW DID AUTOMATED COLLECTION GET STARTED?

The evolution of solid waste collection vehicles has been historically driven by an overwhelming desire by solid waste professionals to collect more waste for less money, as well as lessening the physical demands on sanitation workers. Evolving from horse drawn carriages and human powered carts to motor operated vehicles, collection equipment has been modernized, but it was not until the 1960s in the United States, however, that solid waste collection took a monumental leap in technology to improve overall efficiency.

During this era, public works departments in communities in mostly western states, which were experiencing rapid customer growth in suburbia in the post-World War II period, were exploring the concept of improving their labor productivity with their oftentimes limited resources. It is important to point out that these cities and agencies were less constrained by formal labor agreements, which were more typical of their larger sister, communities in the east and Midwest. Consequently, they began to explore ways of moving in the direction of improved vehicle automation as a substitute for labor to lift, tip, and empty garbage containers that were placed curbside.

Automated side-load trucks were first implemented in the City of Phoenix in the 1970s with the aim of ending the back-breaking nature of residential solid waste collection, and to minimize worker injuries. Since then thousands of public agencies and private haulers have moved from the once traditional read-load method of waste collection to one that also provides the customer with a variety of choices in standardized, rollout carts. These automated programs have enabled communities throughout the country to significantly reduce worker compensation claims and minimize insurance expenses, while at the same time offer opportunities to workers who are not selected for their work assignment based solely on physical skills.

MODERN APPLICATION OF AUTOMATION

In an automated collection system, residents are provided a standardized container into which they place their waste. Residents must place their cart at the curb on collection day. During collection, the driver positions the collection vehicle beside the cart. Using controls inside the cab of the vehicle, the driver maneuvers a side-mounted arm to pick up the container and dump its contents into the vehicle. The driver then uses the arm to return the container to its original location. Automated collection allows for the driver to service the entire route; the need for additional manual labor is eliminated. The savings in personnel and worker's compensation costs, as well as the increase in crew productivity for automated collection, are well documented throughout the solid waste industry.

Currently, the Waste Equipment Technology Association (WASTEC) estimates that there are roughly about 120,000 solid waste vehicles on the road in the United States and about 15% of all new waste collection vehicles purchased in 2003 (the most recent statistics available) were automated. This trend is rapidly increasing as many agencies and private haulers shift to

automation in an attempt to minimize increasing insurance costs and more effectively control their cost of labor, while at the same time provide increased customer service levels and opportunities for an aging work force.

ADVANTAGES AND DISADVANTAGES OF AUTOMATION

Some of the general advantages of automated collection often touted by its proponents include the following:

For Residents

- Convenient and easy method for residents to dispose of trash.
- Wheeled containers are easier, more maneuverable, and safer for residents because there is no carrying or lifting of heavy trash cans.
- The capacity of most cans provided in these programs is equal to three or four regular trash cans.
- The containers keep rodents and pets out of trash given the tight lids.
- Helps to eliminate "over service," as carts have a finite capacity as compared to manual bag programs.
- Containers are provided by and maintained by the community or hauler.
- Cleaner, healthier neighborhoods with no litter on streets after pickup.

For the Municipality

- Improved collection efficiency and reduced costs
- Reduced employee injuries.
- Lower turnover rate and increased productivity due to less time missed by injured employees.
- Reduced Worker's Compensation claims and insurance premiums.
- Reduced rodent problems.
- Cleaner, healthier neighborhoods with no litter on streets after pickup.
- Volume based containerized system helps limit overages.

IMPROVING SAFETY AND REDUCING WORK INJURIES

Solid waste collection workers are highly exposed to health and environmental safety risks due to exposure to heavy workloads, volatile compounds, potentially hazardous or even infectious materials. Typical rear-load operations require manually lifting materials into the collection vehicles. Statistics from such programs suggest that collection crews lift on average, over six tons (13,000 lbs.) per worker per day. In general, this heavy, repetitive, manual lifting combined with an aging workforce tends to generate an increasing number of injured staff.

A fully automated collection program enhances worker safety and comfort, minimizes manual lifting and exposure to possible hazards in the waste such as sharp objects. Fully automated collection eliminates heavy lifting, walking between setouts and frequent steps on and off the truck. The mechanical arms on modern, fully automated trucks are typically operated by the driver using a joystick control. Rather than slogging through rain and high temperature environments, operators of automated refuse collection systems spend their shifts in climate controlled comfort. The reduced physical requirement increases the diversity and longevity of the workforce that is able to collect waste. Automated collection has proven to significantly reduce collection worker injuries resulting in reduced workers compensation costs, decreasing disability claims, decreasing the number and cost of light duty assignments, and reducing salary fringe benefit costs in the future.

Automated collection programs are designed for right-side only collection routing. Similar to mail carrier routes, vehicles are forced to collect along the curb line making right hand only turns during its collection route. This right-hand only routing scheme enhances safety, reduces the number of unprotected left hand intersection turns, and eliminates the unsafe practices of zigzagging and double-sided collection commonly seen in rear end load collection systems.

ENABLING VARIABLE RATE STRUCTURES

Under the traditional manual collection system, customers in most communities are typically allocated a basic service level of two cans for garbage collected twice weekly. Those homeowners that are ardent recyclers and who reduce waste and regularly set out less than two full cans of garbage oftentimes do not see any savings as they pay the same as those residents that use two full cans.

Most communities have found that implementation of automated collection provides an opportunity to supply their customers with varied container sizes and thereby moving closer to a true utility-like user pay for garbage disposal system (pay-as-you-throw or "PAYT") where residents pay only for the service they need. Tailoring the size of the cart to the amount of garbage produced

and charging a higher cost for larger garbage cart sizes encourages residents to recycle and reduce the amount of waste disposed.

ENVIRONMENTAL AND AESTHETIC BENEFITS

The use of standardized containers for automated collection has proven to result in a number of clear environmental benefits. The rolling carts are more resistant to animals, thus reducing unsightly blowing litter and strewn garbage, and replaces unsightly set-outs with a single uniform container over an entire community. The carts are designed with closed lids which help to reduce odors and keep water out, reducing leakage from trucks and water weight at landfills. Automated yard trash collection programs also eliminate the need for residents to use plastic bags which end up in the landfill and reduce the quality and usability of mulch products while providing residents with a convenient wheeled cart to collect debris while landscaping.

Enhanced Level of Service

Automated solid waste collection is considered a higher level of service (versus manual collection) for residents. For most residents, wheeled carts are easier to move and set out than cans and bags that must be lifted. The wheeled containers are extremely durable, often lasting ten years or more, and are convenient to use as residents no longer need to buy replacement garbage cans or plastic yard trimmings bags. In most cases, carts are owned and maintained by the jurisdiction or servicing hauler.

DISADVANTAGES OF AUTOMATED COLLECTION PROGRAMS

The primary disadvantage of automated collection is the initial costs of purchasing specialized vehicles and providing carts to homeowners. On average, the capital cost of an automated side-load vehicle is 20 percent more than that of a manual rear load vehicle. Additionally, the useful life of an automated vehicle is often less than a rear load vehicle. Cart costs generally average between $35 and $50 each depending on container size. Additional general disadvantages include the following:

- Automated vehicles require more maintenance than traditional rear end load vehicles and require specialized training of technicians.
- Homeowners must be educated on where to place bins and what kinds of trash can be collected. Bulky items that do not fit in the cart usually require a separate collection. Overloaded containers, or waste left on the ground can impact the productivity of collection. Ordinances prohibiting waste left on the ground should be developed, while additional containers or additional bag fees can help cover or discourage the practice.
- Some cities have chosen to automate yard waste collection as part of a transition to automation; however the size and volume of yard waste makes it less conducive to cart programs, and typically requires separate collection with different vehicle types (claw-type trucks or rear end load units). In order to effectively automate yard waste collection, yard waste size limits must be enforced, and alternate methods developed to collect larger, bulk debris items. Some jurisdictions have instituted a volume-based fee for yard waste that exceeds a predefined limit, making the system conducive to automation.
- Automated collection does not work in densely populated areas with on-street parking on collection days. However, on-street parking does not prevent a cart based approach to collection. A hybrid system can be employed in these cases where carts are collected in a semi-automated fashion and many cart system benefits can still be enjoyed.

CASE STUDY TO ANALYZE IMPLEMENTATION FEASIBILITY

Last year, the City of Lakeland, Florida studied the feasibility of converting to an automated collection program for single-family, residential customers. Residential garbage collection for some 43,000 accounts is currently performed twice weekly with two separate routes structures (Monday/Thursday and Tuesday/Friday). Utilizing rear-end load compaction vehicles, 15 trucks are deployed on the Monday/Thursday routes, and 14 trucks are deployed on the Tuesday/Friday routes. Three-man crews are utilized on each of these routes including one driver and two loader collectors. Data indicated that setouts on the lead or first day of collection average about 80 percent, while the average setout rates on the trail or second day of collection is 58 percent.

INSURANCE CLAIMS

With manual collection, worker's compensation claims had escalated over the past five years (Table 1) with the most significant claims dealing with knee/ankle/wrist and back injuries.

TABLE 1
WORKER'S COMPENSATION CLAIMS FOR SOLID WASTE OPERATIONS 2005- 2009

Type of Injury	Number of Claims	Total Compensation ($)
Back/Neck	388	139,124
Eyes	60	4,474
Fall or Thrown from Vehicle	90	21,695
Groin	33	27,136
Hopper	8	614
Insect Bite	51	5,042
Knee/Ankle/Leg	1,316	828,673
Laceration or Stab	67	8,825
Miscellaneous	126	22,756
Shoulder	323	120,951
Toes/Foot	29	2,523
Wrist/Elbow/Arm	148	23,544
Total	**2,639**	**1,205,356**

CITY OF LAKELAND, FLORIDA

A Pro-Forma Model was constructed to help estimate the projected costs to the City to implement an automated, solid waste collection program. The Model estimated the financial impact of implementing an automated collection program that included once weekly collection of 95-gallon containers and once weekly collection of yard waste using the existing rear-end load system. The model did not include costs associated with the collection of curbside recyclables, as revenues are separate from garbage and yard waste collection.

Model Assumptions

The following assumptions were utilized to construct the Lakeland Model. Although the reader's mileage may vary, each of these items is important to consider when considering a conversion to automation:

- 43,000 residential customers.
- 90 homes per hour rate of production. Although higher production rates can be achieved with automation (up to 120 homes per hour), the City should not expect to reach higher levels until system is fully implemented, staff is fully trained, and education and outreach programs have demonstrated effective results.
- Four-day work week (garbage).
- Four-day work week (yard waste).
- Yard waste production estimates based on the City's current actual experience.
- Labor cost assumptions based on the median of salary ranges as provided by City, escalated 3% for 2010 CPI.
- Benefit costs calculated at 35% of total salaries.
- Fuel usage was based on per unit FY 2009 budget estimates. Fuel costs based on Energy Information Administration (EIA) average for low sulfur diesel for previous 2 years.
- Three-person yard waste routes (1-driver, 2-crew).
- Model does not consider revenues from sale of surplus equipment (can be factored into new purchases – City estimates a 40 percent residual value).
- Vehicle spare (backup) ratios calculated at 15%.
- Manpower backup ratio calculated based on City provided time off (vacation & sick time) benefits.
- Automated containers are depreciated for 10 years (coinciding with factory backed warranty of 10 years).
- Spare ratios for carts calculated at 5 % for spares and replacements.
- Self-insurance cost reduction estimated at 30% of current City experience. Rear load collection

exposure is projected to remain at 20% to account for continued manual yard waste collection.

Projected Results

The team was asked to conduct a financial analysis of the residential solid waste and yard waste system. To conduct this analysis, administrative costs (approximately $3.2 million), those that are considered part of the entire department, needed to be allocated to the residential services portion of the system in order to recognize a true cost of operations. The residential administrative allocations ($1,582,231) include the current costs experienced by the City and were allocated by a variety of methods including number of trucks, staffing, and percent of revenue, depending on the cost category. A minimum of 30 percent savings in the self-insurance fund was estimated to occur in the first year of automation. Similar systems have recognized greater than 50 percent in some cases. Figure 1 illustrates that with the assumptions in place, the City can reduce overall operating expenses by converting to automated collection. The monthly per household cost can potentially be reduced by $1,220,862, an estimated $2.06 per month from the current FY 2009 cost of $15.82. However, it is up to the City's elected officials to determine if the savings should be used to stabilize utility rates in future years, or if the savings can be immediately passed through to residents. The project also illustrated that the current cost to operate is currently higher than monthly residential fees charged ($15.75), and that the residential system is being subsidized by the City's commercial collection system.

FIGURE 1
ESTIMATED FINANCIAL RESULTS
CITY OF LAKELAND, FLORIDA

Factors	Current Program	Automated Program
Staffing	64	35
Vehicles	26	24 - 22
Collection Frequency	2 X Week	1 X Week
Cost ($/Month/Home)	$15.82[1]	$14.32 - $13.45[2]
Potential System Savings		$774,326 - $1,220,862

*Cost to operate is currently higher than monthly residential fee ($15.75). Residential rates are currently subsidized by commercial collection system.
**Projected rates (first year to full implementation)

Following meetings with City staff, the first model was further adjusted to account for no reduction in administrative costs using a current residential system allocation amount provided by the Division of $1,749,784. Applying this allocation method, the City can conservatively reduce the monthly per household cost by an estimated $1.73 per month. The majority of these savings can be seen in the personnel expense category, as the FTE headcount is reduced by approximately 20. This change to automated collection is projected to result in a cumulative first year savings for the Division as a whole of $774,326 in 2009 dollars. These total savings will not be fully recognized until the entire system has been converted to full automation.

Implementation Issues

Phase In Approach:

Implementing an automated collection program should preferably be in a series of steps. Implementation should be done in a phased in approach; adding subdivisions and areas of the City to the program over time. In most cases, implementation begins with a pilot program where a small consolidated sector of the city is converted to the new system. This sector size is based roughly on the collection capacity of one vehicle (900 – 1200 households), and is typically an active community with a high level of residents involved in the local community. Homeowner association meetings, mailings, and promotional activities are conducted three to six months in advance in order to brief the residents on the program, and feedback is solicited from the residents during the process in order to help anticipate future questions. Once the pilot community is active with the new system for at least three months, planning can begin on a full scale phased in implementation. The benefits to a phased in approach include:

- Acclimating residents to the program organically and not concurrently - Except for the first city area to be converted, other residents will be exposed to ongoing education and outreach programs about the new system and will have an understanding of the program when their neighborhood is ready for conversion. Also, a phased-in approach will allow the City to adjust program education based on initial feedback from the pilot program residents.

- Provides an opportunity for better capital management - A phased in approach to citywide conversion allows for the phased in purchase of new collection vehicles, rather than purchasing all at the same time. As vehicles age, the cost to repair increases, and at some future point, all vehicles again have to be replaced. In a phased approach, new vehicles can be purchased a few at a time each year, maintaining an average age of fleet of three to

four years, while at the same time maintaining a predictable level of variable maintenance expenses.

- Today there is a choice in automated collection vehicles and a phased-in approach allows the City the opportunity to test and experiment with different units on a smaller scale, rather than an initial commitment to one style, make, or model. The industry is working to develop options to address the higher operating costs of automation while still maintaining the gains in efficiencies. These new technologies should be examined through pilot scenarios to maximize the cost savings benefit on automation.

- A significant portion of program capital and the system's most noticeable feature are the containers. Carts can be purchased or leased from container manufacturers who can also provide the maintenance services required. Each supplier offers a different level of specifications that should be considered, including subsequent repair and maintenance.

  Although most cart suppliers offer a ten year warranty on manufacturer defects, all cart systems require a level of service to deliver, remove, and regularly repair carts that become damaged during day to day operations. In many cases, containers can be procured with and without a service maintenance program. If the cart company is not conducting the service, City staff will be required to maintain the cart system, and once fully implemented will require full time staffing. When procuring containers, the city should consider requests for pricing that include both cart purchases and a separate price for cart maintenance services in order to properly evaluate the cost associated with this service. Additionally, today's economic climate has resulted in very low interest rates that the City could leverage when making new equipment and container purchases.

- Conversions should begin in newly planned subdivisions. Newly planned subdivisions are designed with adequate turning radii and street width, and sufficient amounts of off street parking, which are conducive to automated collection systems. Conversions in these newer neighborhoods can occur quickly such that:

  - Adding contiguous subdivisions (of acceptable route size) to the first area maintains route density, enhances production, and assists with planning new equipment purchases.

  - Equipment is purchased in stages as new areas are developed.

  - Education programs are introduced 3 to 6 months in advance of equipment delivery, and can be accelerated as a greater percentage of the City is converted.

  - Older neighborhoods are added to the program last.

Manpower:

As staffing and personnel costs represent the largest portion of savings in an automated conversion, there are a number of issues that should be addressed by the City during the planning phase. In Lakeland's case, an automated conversion implementation plan was estimated to reduce the Division staffing levels for residential waste collection from 58 to 32 positions, 23 of which are solid waste collectors.

In our experiences with similar municipal programs, automation provides significant opportunities for current solid waste employees to cross-train and advance in the Division. Further, automation preserves the City's aging workforce by reducing physical labor requirements for waste collection.

Nonetheless, these new collection vehicles will have enhanced technology requiring specialized training for technicians in the Fleet Management Division. Although this can present a challenge, it also can provide opportunities for current Fleet Division employees to cross-train and advance in the division with advanced technical certifications.

Deploying the new automated program in a phased-in approach will allow the City to plan for staff reductions through attrition: In this way, retiring employees, or those lost through normal attrition, are replaced with temporary staffing until which time the conversion to automation reduces staffing permanently. Although this sounds daunting, normal turnover in solid waste hauling operations can range between 10 and 20 percent annually.

COUNCIL REGULAR WORK SESSION
AGENDA STATEMENT

Meeting Date: September 8, 2025 Item# 03D

Agenda Item: Fiscal Year 2026-2027 Budget Calendar

Summary: Staff would like direction from Council regarding the FY2026-2027 Budget Calendar. The Code of Virginia requires that adoption of the annual appropriation ordinance (aka budget) be at least 7 days after the public hearing for the appropriation ordinance and the public hearing for the appropriation ordinance may not be held during the same meeting as the public hearing for a tax rate increase. Below are the corresponding sections of the Code of Virginia:

§ 58.1-3321. Effect on rate when assessment results in tax increase; public hearings; referendum.

B. The governing body of a county, city, or town may, after conducting a public hearing, which shall not be held at the same time as the annual budget hearing, increase the rate above the reduced rate required in subsection A if any such increase is deemed to be necessary by such governing body.

§ 15.2-2506. Publication and notice; public hearing; adjournment; moneys not to be paid out until appropriated.

Notice of one or more public hearings shall be given in accordance with § 15.2-1427. Such notice shall, at a minimum, include a summary of the total revenues and expenditures for each appropriated fund and the current and proposed real estate and personal property tax levies. Any locality not having a newspaper of general circulation may in lieu of the foregoing notice provide for notice by written or printed handbills, posted at such places as it may direct. The hearing shall be held at least seven days prior to the approval of the budget as prescribed in § 15.2-2503.

The Town anticipates receiving health insurance rates mid to late February 2026, which play a large role in building the annual budget. Staff anticipates being able to provide Council with the FY26-27 Proposed Budget at the first work session in March 2026. Some key factors that should be to be taken into account are:

1. Real estate tax rates may increase to accurately reflect an equalization due to the problems encountered with assessed values for the current year; therefore, public hearings for the tax rates will likely need to be separate.
2. Annual appropriation ordinance may need to have a separate public hearing.
3. Approval of annual appropriation ordinance must be at least 7 days after public hearing for appropriation ordinance
4. Council will need adequate time to review annual appropriation ordinance
5. Appropriation ordinance is contingent on potential tax rate and utility rate changes; usually the Town tries to communicate any changes to taxpayers/customers in advance.
6. June is usually a busy month for the Town's Department of Finance with closing out the fiscal year, working with auditors, and collecting tax payments. Additionally, in June 2026 the Town anticipates preparing to implement new software for July 2026.
7. Council may hold Public Hearings and/or Approve Ordinances on dates outside of regularly scheduled meetings. Council may need to consider holding a special meeting for the tax rate/appropriation ordinance public hearing, which could be hosted at the Government Center.
8. The Town may encounter similar scheduling concerns in future years.
9. Memorial Day is on Monday, May 25th, Council's regularly scheduled meeting is on Tuesday, May 26th. The following work session is scheduled for Monday, June 1st. There are only 6 days between May 26th to June 1st; therefore, if a Public Hearing was held on May 26th, Town Council would not be able to approve the appropriation ordinance during the normally scheduled June 1st work session.

Budget/Funding: N/A

Staff Recommendation: Staff recommends Option D and holding a public hearing on May 11, 2026 for the annual appropriation ordinance along with a work session at the Warren County Government Center.

OPTION A

Fiscal Year 2026-2027 Budget Calendar

Sept 15, 2025	Finance Department distributes FY27 Budget forms to Departments (FY25 Figures provided will not be final/audited figures)
Oct 17, 2025	FY27 Departmental spending requests & Budgetary Planning documents due back to Finance
Nov 10-14, 2025	Town Manager preliminary review spending with Departments
Dec 15, 2026	Mid-year FY26 Budget transfers due from departments
Jan 5, 2026	Review of major items that may be included in FY27 Proposed Budget
March 2, 2026	Town Manager's Recommended Budget provided to Town Council, Work Session review of FY27 Proposed Budget (Council directs staff to advertise for annual appropriation ordinance)
March 3, 2026	Advertisement submitted for Annual Appropriation Ordinance
March 9, 2026	Additional Budget Work Session (As needed)
March 25, 2026	Public Hearing for Annual Appropriation Ordinance (Council does not approve appropriations during this meeting)
April 6, 2026	Work Session to discuss advertisement to be submitted for annual tax rate for Real and Personal Property
April 7, 2026	Advertisement submitted Tax Ordinance
April 13, 2026	Additional Budget Work Session (As needed)
April 27, 2026	Public Hearing for tax rates Ordinance and Utility Rate Ordinances. Request Council to approve tax rates, utility rate ordinances, and appropriation ordinance.

Pros of Option A

-Public hearings and Council approvals are all during regularly scheduled Council meetings.

Cons of Option A

-Council receives the proposed budget and is immediately advertising for public hearing

-If Council raises/lowers tax rate compared to proposed budget, the Town may need to readvertise the appropriation ordinance.

-All rate increases would be approved during the same meeting, which could be a heavy load.

OPTION B

Fiscal Year 2026-2027 Budget Calendar

Sept 15, 2025	Finance Department distributes FY27 Budget forms to Departments (FY25 Figures provided will not be final/audited figures)
Oct 17, 2025	FY27 Departmental spending requests & Budgetary Planning documents due back to Finance
Nov 10-14, 2025	Town Manager preliminary review spending with Departments
Dec 15, 2026	Mid-year FY26 Budget transfers due from departments
Jan 5, 2026	Review of major items that may be included in FY27 Proposed Budget
March 2, 2026	Town Manager's Recommended Budget provided to Town Council, Work Session review of FY27 Proposed Budget (Council directs staff to advertise for annual appropriation ordinance)
March 9, 2026	Additional Budget Work Session (As needed)
April 6, 2026	Work Session to discuss advertisement to be submitted for annual tax rate for Real and Personal Property
April 7, 2026	Advertisement submitted Tax Ordinance
April 13, 2026	Additional Budget Work Session (As needed)
April 27, 2026	Public Hearing for tax rates Ordinance. Request Council to approve tax rates.
May 4, 2026	Work session to discuss advertisement of annual appropriation ordinance
May 5, 2026	Annual appropriation ordinance advertised

May 26, 2026	Public Hearing FY 26-27 Appropriations Ordinance & Utility Rate Ordinances
June 23, 2026	Town Council approves appropriation ordinance & utility rate ordinance

Pros of Option B

-Public hearings and Council approvals are all during regularly scheduled Council meetings.

-Ample time between Council receiving the budget and approving the appropriation ordinance.

Cons of Option B

-Appropriation ordinance is being approved one week before the end of the fiscal year, so no margin for errors and appropriation ordinance will need to be approved otherwise the Town will be without an appropriation ordinance before the new fiscal year begins.

-New utility rates will be in effect July 1, 2026 making communication to the public minimal.

-Finance Department will have seven days for processing of new budget, new utility rates, and preparing for the fiscal year end; in addition to collecting remaining tax payments, normal close out procedures, and new software implementation. This would be a significant demand from the Department of Finance.

OPTION C

Fiscal Year 2026-2027 Budget Calendar

Sept 15, 2025	Finance Department distributes FY27 Budget forms to Departments (FY25 Figures provided will not be final/audited figures)
Oct 17, 2025	FY27 Departmental spending requests & Budgetary Planning documents due back to Finance
Nov 10-14, 2025	Town Manager preliminary review spending with Departments
Dec 15, 2026	Mid-year FY26 Budget transfers due from departments
Jan 5, 2026	Review of major items that may be included in FY27 Proposed Budget
March 2, 2026	Town Manager's Recommended Budget provided to Town Council, Work Session review of FY27 Proposed Budget
March 9, 2026	Additional Budget Work Session (As needed)
April 6, 2026	Work Session to discuss advertisement to be submitted for annual tax rate for Real and Personal Property
April 7, 2026	Advertisement submitted Tax Ordinance
April 13, 2026	Additional Budget Work Session (As needed)
April 27, 2026	Public Hearing for tax rates Ordinance. Request Council to approve tax rates.
May 4, 2026	Work session to discuss advertisement of annual appropriation ordinance
May 5, 2026	Annual appropriation ordinance advertised
May 26, 2026	Public Hearing FY 26-27 Appropriations Ordinance & Utility Rate Ordinances

June 9, 2026 Work Session - Town Council approves appropriation ordinance & utility rate ordinance

Pros of Option C

-Ample time between Council receiving the budget and approving the appropriation ordinance.

Cons of Option C

-Appropriation ordinance is being approved 3 week before the end of the fiscal year, so little margin for errors.

-New utility rates will be in effect July 1, 2026 making communication to the public minimal.

-Finance Department will have three weeks for processing of new budget, new utility rates, and preparing for the fiscal year end; in addition to collecting remaining tax payments, normal close out procedures, and new software implementation. This would be a little rough for the Department of Finance.

OPTION D

Fiscal Year 2026-2027 Budget Calendar

Sept 15, 2025	Finance Department distributes FY27 Budget forms to Departments (FY25 Figures provided will not be final/audited figures)
Oct 17, 2025	FY27 Departmental spending requests & Budgetary Planning documents due back to Finance
Nov 10-14, 2025	Town Manager preliminary review spending with Departments
Dec 15, 2026	Mid-year FY26 Budget transfers due from departments
Jan 5, 2026	Review of major items that may be included in FY27 Proposed Budget
March 2, 2026	Town Manager's Recommended Budget provided to Town Council, Work Session review of FY27 Proposed Budget
March 9, 2026	Additional Budget Work Session (As needed)
April 6, 2026	Work Session to discuss advertisement to be submitted for annual tax rate for Real and Personal Property & Appropriation Ordinance. (Note: Public Hearings will be held on separate days)
April 7, 2026	Advertisement submitted Tax Ordinance & Annual Appropriation Ordinance
April 13, 2026	Additional Budget Work Session (As needed)
April 27, 2026	Public Hearing for tax rates Ordinance. Request Council to approve tax rates.
May 11, 2026	Work session & Public Hearing for appropriation ordinance
May 26, 2026	Request Council approval of FY 26-27 Appropriations Ordinance & Utility Rate Ordinances

Pros of Option D

-Three months between Council receiving the budget and approving the appropriation ordinance.

-Will allow 30 days notice to public for potential utility rate increases

-Allows a buffer in case additional time is required for appropriation approval

-Allows Department of Finance adequate time to prepare for end of fiscal year, new budget, new utility rates, implementation of new software, & collection of taxes.

-Council can approve appropriation ordinance during a regular meeting.

Cons of Option D

-Public Hearing will be held during a work session.

REGULAR WORK SESSION
ACTION AGENDA STATEMENT

Meeting Date: September 8, 2025 Item# 04A

Agenda Item: An ordinance to amend sections of Front Royal Town Code Chapter 175 - Zoning by adding the definitions of auxiliary dwelling unit (ADU) and revising the definitions of accessory building/accessory structure, accessory use, garage, private, garage, public, lot, lot coverage, and principal permitted use contained in §175-3-Definitions; and, to amend §175-11 – Statement of Intent (R-1) to include ADU'S; to amend §175-12(A) – Uses Permitted by Right (R-1), §175- 18.2(A) – Use Regulations (R-1A), §175-20 – Uses by Right (R-2); §175-29(A) – Uses Permitted by Right (R-3), and §175-37.3(A) – Permitted Uses (PND); and, add §175-115 – Auxiliary Dwelling Unit (ADU) as performance standards for ADU'S.

Summary: Council is requested to discuss this item further and determine whether it should go back to the Planning Commission for further review. Below is the summary from the September 2, 2025 Work Session.

The ADU ordinance permits one Auxiliary dwelling unit per lot in all zoning districts with residential housing, subject to the following:

- The Auxiliary dwelling unit must be located on the same lot as a single-family dwelling (existing or proposed)
- The property must be owner occupied
- The internal ADU cannot exceed 33% of the floor area of the main single-family dwelling or 500 square feet, whichever is greater
- Detached ADUs cannot exceed 1000 square feet or 80% of the gross floor area of the principal dwelling, whichever is less.
- The Auxiliary dwelling unit must follow the underlying zoning district requirements for setbacks, lot coverage, appearance, height, etc.
- Detached ADUs shall not exceed the maximum lot square foot coverage allowed in the zoning district the ADU is located

Budget/Funding: N/A

Meetings: Work Session held September 2, 2025

Proposed Motion: I move that Town Council refer the item back to the Planning Commission to make potential changes in accordance with VA Code § § 15.2-2291.

Moved _____ ***Seconded*** _____

Wood _____ ***Veitenthal*** _____ ***Sealock*** _____ ***Rappaport*** _____ ***Ingram*** _____ ***DeDomenico-Payne*** _____

AN ORDINANCE TO AMEND CHAPTER 175 OF THE FRONT ROYAL TOWN CODE BY ADDING THE DEFINTIONS OF AUXILIARY DWELLING UNIT (ADU) AND REVISING THE DEFINITIONS OF ACCESSORY BUILDING/ACCESSORY STRUCTURE, ACCESSORY USE, GARAGE, PRIVATE, GARAGE, PUBLIC, LOT, LOT COVERAGE, AND PRINCIPAL PERMITTED USE CONTAINED IN §175-3; AMEND §175-11, THE STATEMENT OF INTENT (R-1) TO INCLUDE ADU'S; AMEND §175-12(A), §175-18.2(A), §175-20, §175-29(A), AND §175-37.3(A) TO ADD ADU'S AS A BY-RIGHT USE; AND ADD SECTION §175-115 AS PERFORMANCE STANDARDS FOR ADU'S."

175-3 - DEFINITIONS

ACCESSORY BUILDING/ACCESSORY STRUCTURE - A building or structure that is subordinate to, and located on the same lot as the principal permitted use of the property, of which, the accessory building or accessory structure is used for purposes that are clearly incidental to that of the principal permitted use of the property, and which is not attached by any part of a common wall or roof to the main building, or buildings, if any. No residential occupancy is permitted. An accessory building shall not exceed the height of the main building(s) located on the property; shall not be located within a required yard area that abuts a public road; and shall not be permitted where no main building exists on the property, except in the following: (i) temporary buildings or structures permitted under this chapter, (ii) accessory buildings without utilities that are used for storage purposes and do not exceed 256 square feet, and (iii) buildings, such as barns and silos, used for agricultural purposes.

ACCESSORY USE - A use of a building, lot or portion there of which is customarily incidental and subordinate to the principal permitted use of the main building or lot. ~~Accessory uses shall include the use of accessory buildings as a separate accessory dwelling unit, provided that the lot is at least 12,000 square feet in size~~, The accessory building ~~complies with~~ shall comply with the minimum setback and yard area requirements that are required for main buildings within the applicable zoning district~~. no more than one accessory dwelling is located on the property, and the accessory dwelling unit does not utilize more than 500 square feet.~~ Urban agriculture is considered an accessory use when the requirements of Section 175-110.5 are complied with.

Auxiliary Dwelling Unit (ADU) also known as in-law units, backyard cottage, or granny flat - A secondary, self-contained residential unit located on the same lot as a primary single-family dwelling. It includes independent living facilities such as a kitchen, bathroom, sleeping area, and separate entrance.

GARAGE, PRIVATE - ~~An accessory building~~ A vehicle storage structure used for the storage of vehicles by the occupants of a lot on which such building is located.

GARAGE, PUBLIC - ~~An accessory building~~ A vehicle storage structure, portion of a principal building or principal buildings used only for the storage of four (4) or more vehicles by others than only those occupants of a lot on which such building is located.

DRAFT

LOT - A parcel of land occupied or to be occupied by a building and its auxiliary or accessory buildings or by a use and accessory uses, together with such open spaces as are required under the provisions of this chapter, having at least the minimum area required by this chapter for a lot in the zone in which such lot is situated and having its principal frontage on a public or private street approved by the Town.

LOT COVERAGE - The maximum percent of the lot which may be occupied by buildings or structures, including auxiliary or accessory buildings or structures.

PRINCIPAL PERMITTED USE – A specific use, or uses, of a lot that are permitted on a particular lot, based on the regulations of the underlying zoning district, and the main use, or uses, of the property, as distinguished from an auxiliary or accessory use.

STATEMENT OF INTENT (R-1) (175-11)

The R-1 District is composed of quiet, low-density residential areas, plus undeveloped areas where similar residential construction appears likely to occur. The standards set forth for this district are designed to stabilize and protect the essential character of the areas so delineated, to promote and encourage a suitable environment for family life where children may or may not be present, to provide areas for suitable expansion of the Town as facilities are provided and to prohibit all commercial activities. Development is, therefore, limited to relatively low concentration, and permitted uses are limited to single-unit dwellings, plus selected additional uses, such as schools, parks, churches, Auxiliary Dwelling Units (ADUs) and certain public facilities that serve the residents of the district. Mobile homes or rooming houses are prohibited.

USES PERMITTED BY RIGHT(R-1) (175-12)

A. Subject to the standards and requirements set forth in this Chapter, except as prohibited or restricted by separate restrictions of record that may pertain to property within the R-1 District, the following uses of land and buildings are permitted by-right in the R-1 District:

<u>RESIDENTIAL:</u>
Single-family dwellings, detached.
Auxiliary Dwelling Units (ADUs).

<u>COMMERCIAL:</u>

<u>INDUSTRIAL:</u>

DRAFT

ORGANIZATIONAL:
Churches.
Public libraries.
Schools.

USE REGULATIONS (R-1A) (175-18.2)

A. Subject to the standards and requirements set forth in this Chapter, except as prohibited or restricted by separate restrictions of record that may pertain to property within the R-1A District, the following uses of land and buildings are permitted by-right in the R-1A District:

RESIDENTIAL:
Single-family dwellings, detached.
Auxiliary Dwelling Units (ADUs).

USES PERMITTED BY RIGHT (R-2) (175-20)

Subject to the standards and requirements set forth in this Chapter, except as prohibited or restricted by separate restrictions of record that may pertain to property within the R-2 District, the following uses of land and buildings are permitted by-right in the R-2 District:

RESIDENTIAL:
Duplexes.
Single-family dwellings, detached.
Two-family dwellings.
Auxiliary Dwelling Units (ADUs).

USES PERMITTED BY RIGHT (R-3) (175-29)

A. Subject to the standards and requirements set forth in this Chapter, except as prohibited or restricted by separate restrictions of record that may pertain to property within the R-3 District, the following uses of land and buildings are permitted by-right in the R-3 District:

RESIDENTIAL:
Duplexes.
Single-family dwellings, detached.
Townhouses developed on sites of twenty thousand (20,000) square feet up to one (1) acre as set forth in section 175-112.
Two-family dwellings.
Auxiliary Dwelling Units (ADUs).

DRAFT

PERMITTED USES (PND) (175-37.3)

A. All planned neighborhood developments shall permit the following residential and Auxiliary uses:

1. Detached single-family dwellings;
2. Two-family dwellings;
3. Multi-family dwellings;
4. Townhouses with a maximum of eight units per structure;
5. Auxiliary Dwelling Units (ADUs)
6. Accessory buildings or uses as defined in Town Code section 175-3;
7. Recreation or park facilities;
8. Retirement living facilities (handicapped accessible)
9. Municipal buildings or uses;
10. Public utilities: poles, lines, booster and relay stations, distribution transformers, pipes, meters and other facilities necessary for the provision and maintenance of public utilities, including water and sewerage systems. Such utilities shall be buried or otherwise screened in accordance with design standards of the development;
11. Home Occupations as set forth in section 175-108;
12. Public libraries;
13. Schools;
14. Churches;
15. Special childcare services;
16. Open space and conservation areas; and
17. Such other uses as determined similar to one or more enumerated uses by the Zoning Administrator.

175-115 – Auxiliary Dwelling Unit (ADU)

The ADU ordinance permits one Auxiliary dwelling unit in the selected zoning districts of R1, R1A, R2, R3 and PND with residential housing, subject to the following:

A. The Auxiliary dwelling unit must be located on the same lot as a single-family detached dwelling (existing or proposed) and only one (1) ADU is permitted per residential lot.

B. The property must be owner occupied.

C. The internal ADU shall not extend beyond the existing foot print of the primary structure.

~~1. *Floor area* means the sum of the horizontal areas of enclosed building space on all floors of all buildings on a lot measured from the exterior face of exterior walls and including intervening partitions, halls, lobbies, stairways and elevator shafts. The following shall be excluded from calculation of floor area:~~

DRAFT

~~a. Open exterior balconies and other unenclosed spaces.~~

~~b. Uncovered terraces, patios, porches, or steps.~~

~~c. Garages, carports or other areas, enclosed or unenclosed, used for the parking or circulation of motor vehicles.~~

~~d. Areas for housing major mechanical equipment which serves the building as a whole or major portion thereof, but not including utility areas within individual dwelling units.~~

~~e. Areas for common special purpose use by occupants of the premises, including laundries, recreation areas, sitting areas and libraries in buildings devoted to dwelling use, and storage areas, and areas devoted exclusively to management and/or maintenance of the premises in buildings devoted to any use, but not including incidental commercial activities in any case.~~

D. Detached ADUs shall be a minimum of 600 square feet but cannot exceed 1000 square feet or 80% of the gross floor area of the principal dwelling, whichever is less.

E. The Auxiliary dwelling unit must follow the underlying zoning district requirements (setbacks, lot coverage, appearance, height, etc.). Detached ADUs shall not exceed the maximum lot square foot coverage allowed in the zoning district the ADU is located.

F. Access to an ADU shall be provided in accordance with requirements of the Department of Fire and Emergency Services.

175-~~114~~ 117—175-122 - (RESERVED)

DRAFT

PLANNING COMMISSION REGULAR MEETING
AGENDA STATEMENT

Meeting Date: August 20, 2025

Public Hearing Item 3: 2500319 – For the public necessity, convenience, general welfare, or good zoning practice, Zoning Text Amendments to Town Code §175-3 - Definitions, to define the use of an "Auxiliary Dwelling Unit", to amend the Residential Districts in which it would be permitted by-right, and to establish §175-115 "Auxiliary Dwelling Unit" performance standards within the Supplementary Provisions of Town Code.

Recommendation of Approval ✓
Recommendation of Denial _____
Postponed _____

For the public necessity, convenience, general welfare, or good zoning practice, Commissioner Brooks moved, seconded by Commissioner Fedoryka that the Planning Commission forward a recommendation of approval to the Town Council to approve a text amendment to add the definition of auxiliary dwelling unit (ADU) and revise the definitions of accessory building/accessory structure, accessory use, garage private, garage public, lot, lot coverage, and principal permitted use contained in §175-3; amend §175-11, the statement of intent (R-1) to include ADU'S; amend §175-12, §175-18.2, §175-20, §175-29, and §175-37.3 to add ADU'S as a by-right use; and add section §175-115 as performance standards for ADU'S.

Moved Brooks *Seconded* Fedoryka

Marshner yes *Marrazzo* Absent *Neel* Absent *Brooks* yes *Fedoryka* yes

CERTIFIED by the Planning Commission

Connie Marshner
Chairman Marshner

Town of Front Royal, Virginia

Planning Commission Regular Meeting Agenda

☐ Consent Action ☐ Administrative Action ☑ Public Hearing ☐ Discussion

Agenda Item: Zoning Text Amendment # 2500319

MEETING DATE: August 20, 2025

SUMMARY: For the public necessity, convenience, general welfare, or good zoning practice, Zoning Text Amendments to Town Code §175-3 - Definitions, to define the use of an "Auxiliary Dwelling Unit", to amend the Residential Districts in which it would be permitted by-right, and to establish §175-115 "Auxiliary Dwelling Unit" performance standards within the Supplementary Provisions of Town Code.

STAFF RECOMMENDATION: Staff recommends approval.

DRAFT MOTION: "For the public necessity, convenience, general welfare, or good zoning practice, I move that the Planning Commission forward a recommendation of approval to the Town Council to approve a text amendment to add the definition of auxiliary dwelling unit (ADU) and revise the definitions of accessory building/accessory structure, accessory use, garage private, garage public, lot, lot coverage, and principal permitted use contained in §175-3; amend §175-11, the statement of intent (R-1) to include ADU'S; amend §175-12(A), §175-18.2(A), §175-20, §175-29(A), and §175-37.3(A) to add ADU'S as a by-right use; and add section §175-115 as performance standards for ADU'S."

"I move that the Planning Commission keep the public hearing open to _____. "

"I move that the Planning Commission forward a recommendation of denial to the Town Council for Zoning Text Amendment #2500319."

NOTE: This is only a draft motion. Alternative motions are also welcome.

PLANNING COMMISSION ACTION:

Moved _____ Seconded _____

Marshner _____ Marrazzo _____ Neel _____ Brooks _____ Fedoryka _____

☐ Approved ☐ Approved w/ Conditions ☐ Denied ☐ Other

Staff Report : Zoning Text Amendment 200319	
Background Information	Staff recommends approval to the Town Council
Code Sections Amended	An ordinance to add the definition of auxiliary dwelling unit (ADU) and revise the definitions of accessory building/accessory structure, accessory use, garage private, garage public, lot, lot coverage, and principal permitted use contained in §175-3; amend §175-11, the statement of intent (R-1) to include ADU'S; amend §175-12(A), §175-18.2(A), §175-20, §175-29(A), and §175-37.3(A) to add ADU'S as a by-right use; and add section §175-115 as performance standards for ADU'S."

Auxiliary Dwelling Units (ADU

What is an ADU

- Accessory Dwelling Units (ADUs) – also known as in-law units, backyard cottages, among other names
  - ADUs are small independent structures built on the same lot as a single-residence or a prescribed percentage of square footage within the prima residential structure (single family residence)
  - ADUs occupy a different category than "Accessory Use" which is intende utility purposes (storage, sheds, etc.)
- ADUs are permitted by state law with localities setting guideline
    - There has been some state legislation intended to mandate ADUs in R1 but to none of this legislation has been implemented
      - The main objections in the legislature seems to concern having the state vice local where ADUs can be located and not if they are desirable
- ADUs are common in other Virginia towns and counties
  - ADUs allowed in Richmond, Virginia Beach, Falls Church, Rockingham Co and more

Why Front Royal Should Support ADU

- ADUs expand affordable housing options
  - ADUs are maintained by homeowners and not taxpayers
  - ADUs help meet demand for smaller, more affordable homes ideal for se young workers, and small families
  - Provides lower-costs without the need for taxpayer-funded housing proj
- Support Local Families & Aging in Place
  - Allows individuals to remain in their own homes or with family instead o moving into full-time institutional care
  - Often less expensive than nursing homes or assisted living facilities
  - Reduces the financial burden on families and public health systems (e.g. Medicaid)
- Encourages autonomy and dignity for participants
  - Offers flexible space for multigenerational living, caregivers, or returning college kids

Why Front Royal Should Support ADUs (co

- Smart Growth, Not Sprawl
  - Adds gentle density without changing neighborhood character
- Encourages infill housing and uses existing infrastructure efficien
  - Boost Local Economy & Tax Base
  - Potential generation of new property tax revenue from increased prope value
  - Brings more people into the local economy supporting shops, schools, a services
- Enhances Property Rights
  - Gives homeowners more choice in how they use their property
  - Helps residents stay in their homes by generating rental income

What Proposed ADU Ordnance Provid

- The ADU ordinance permits one Auxiliary dwelling unit per l all zoning districts with residential housing, subject to the following:
  - The Auxiliary dwelling unit must be located on the same lot as a si family dwelling (existing or proposed)
  - The property must be owner occupied
  - The internal ADU cannot exceed 33% of the floor area of the main family dwelling or 500 square feet, whichever is greater
  - Detached ADUs cannot exceed 1000 square feet or 80% of the gro floor area of the principal dwelling, whichever is less
  - The Auxiliary dwelling unit must follow the underlying zoning distr requirements (setbacks, lot coverage, appearance, height, etc.).
    - Detached ADUs shall not exceed the maximum lot square foot coverage all the zoning district the ADU is located

Example ADU in R1

- External ADU in an R-1 district consisting of a 2000 sq ft primary on a ¼ acre lot consisting of 10890 sq ft
  - Code dictates 30% max structure coverage or 3267 sq ft
  - Proposal will allow an ADU size of 80% of exiting structure maximum foo or 1000 sq ft, whichever is less
  - 80% of 2000 sq ft equates to a 1600 sq ft size of potential external ADU a therefore limited to the max size of ADUs of 1000 sq ft by regulation
  - This allow1267 sq feet on the lot for ADU construction, egress and set-ba
    - Set backs and easements can further restrict ADU size, placement or project via
- The internal ADU cannot exceed 33% of the floor area of the mai single-family dwelling or 500 square feet, whichever is greater
  - In this 2000 sq ft home example, 660 sq ft is the limit (2000 x .33 = 660)

R2 and R3 Coverage areas

- R2 and R3 allow for greater lot coverage but with same protections of max lot coverage and constrained by setbacks easements
  - R-2 – Max 45% building Coverage.
  - R-3 – Max 40% building Coverage with exceptions

COUNCIL REGULAR WORK SESSION
AGENDA STATEMENT

Meeting Date: September 8, 2025 **Item# 04B**

Agenda Item: Request for Water and Sewer in the Rt. 522 Corridor for Industrial Use from Stafford One Investments, LLC (522 Properties LLC) at Winchester Road and Winners Court

Summary: The Town has received a joint request from Warren County and Stafford One Investments LLC (522 Properties LLC) for water and sewer service within the Route 522/340 North Corridor. The property consists of approximately 28.3 acres identified as Tax Map 12-6F, 4-44B, 4-43A, 4-45Bp and located on the west side of Winchester Road at its intersection with Winners Court. The intention is to construct a 220,000 square foot industrial warehouse building for a warehouse and distribution center.

According to the application for an out-of-town utility connection, the applicant estimates the facility will require 4,500 gallons of water per day.

Town Council held work sessions on May 5 & 12, 2025, regarding the request and on the 12th the Applicant was in attendance to answer Council questions. On May 27 the Council held their regular meeting, when the agenda item came up, the motion listed below did not receive a second; therefore, the item was not considered at the meeting.

> *I move that Council, based upon a finding of sufficient excess capacity, approve a joint request from Warren County and Stafford One Investments LLC (522 Properties LLC, Owner) for water and sewer service, not to exceed 4,500 gallons per day, within the Route 522/340 North Corridor on property identified as Tax Map 12-6F, 4-44B, 4-43A, 4-45Bp and located on the west side of Winchester Road at its intersection with Winners Court for use as an industrial warehouse and distribution center, conditioned upon conveyance to the Town of any necessary easements and the execution of an out-of-Town excess capacity utility agreement and direct the Town Manager and Town Attorney to execute the necessary agreement with the Owner in compliance with all Town Code requirements, with rates and charges at one hundred percent (100%) more than the in-town rates and charges.*

On July 18, 2025, CHA presented an updated excess volume determination for 2025. After receiving feedback, the numbers have been revised to accommodate any and all possible future development which was sent to the Town on August 2, 2025.

Budget/Funding: N/A

Staff Recommendation: Council is to consider an out-of-town utility connection for industrial use.

APPLICATION FOR OUT-OF-TOWN UTILITY CONNECTION

Town of Front Royal
Public Works
800 Crosby Rd – PO Box 1560
Front Royal VA 22630
(540) 635-7819 (O) • (540) 635-8973 (F)
www.frontroyalva.com

Application Date: 3/24/2025; Rev. - 4/17/2025

Owner(s) / Applicant(s) Full Name: Stafford One Investments, LLC

Mailing Address: 13580 Groupe Drive, Suite 200

City/State/Zip: Woodbridge, VA 22192

Daytime Phone: 703-737-3633; 703-528-4700 Email: eswisshelm@thelandlawyers.com; ncumings@thelandlawyers.com

Property Address/Lot #: 986 John Marshall Highway

IF RESIDENTIAL:

Type of Unit: ☐ Single Family ☐ Townhouse ☐ Duplex/Multi Family

IF COMMERCIAL or INDUSTRIAL:

Type of Business: Industrial

Number of Employees: unknown Hours of Operation: unknown

Estimated Usage: 4,500 gallons per day

ALL APPLICANTS:

Number of Toilets: N/A Urinals: N/A Sinks: N/A Tubs/Showers: N/A

Size of Meter (Must match water service size): 2"

Fire Suppression Required: (Yes) / No Meter size 10"

THIS SECTION TO BE COMPLETED BY WARREN COUNTY PLANNING DEPARTMENT

Application Approved by Board of Supervisors: _____ Date: _____

Application Approved by Building Department: _____ Date: _____

Application Approved by Planning Staff: _____ Date: _____

Director of Planning Signature: _____ Date: _____

TOWN APPROVAL PROCESS

- ✓ **Approval of Connection by Town Council if applicable (Four Weeks)**
- ✓ **Review of Site Plans if applicable (Three Weeks per submittal)**
- ✓ **If Commercial–Completion of PILOT Agreement, if applicable-through Town Attorney's Office (Two Weeks)**
- ✓ **Payment of Applicable Fees through Finance Department (One Week)**
- ✓ **Developer provides and installs all equipment (pipes, valves, meters, etc.)**

THIS SECTION TO BE COMPLETED BY PUBLIC WORKS

Water & Sewer Availability: _____

Utility Extension Required: _____

Utility Plans Reviewed & Approved: _____

PILOT Agreement Completed: _____

Confirmation from Director of Finance that Taxes have been paid in full: ___ Date: _____

Signature: _____

FEES:

Water Connection Fee _____

Water Additional Fee _____

Fire Suppression Fee _____

Sub Total (Water) _____

Sewer Connection Fee _____

Sewer Additional Fee _____

Sub Total (Sewer) _____

TOTAL _____

Public Works Director Signature: _____ Date: _____

134-71.1 PURCHASE OF WATER AND SEWER TAPS

- A water and sewer connection can be purchased from the Town of Front Royal only for a specific, designated building site or lot.
- Once an application to purchase a water and sewer connection has been received, the connection shall not be transferrable to another site.
- If the water and sewer connection is not installed within twelve (12) months from the date of purchase because the purchaser is not ready for actual installation, the purchase shall be voided and the purchase price alone shall be refunded without interest.
- Water and sewer connection fees shall be paid upon application. However, when a single developer in a single application requests the purchase of six (6) or more water and sewer taps for six (6) or more building units, the connection fee for each tap may be paid upon actual installation of each respective tap. **(Ord. No. 2-86 Added Entire Section 2-10-86-Effective Upon Passage)**

GENERAL INFORMATION

1. A site plan or plat depicting the utility connection locations to the Town water and sewer mains must be included with this application. Warren County may release building permit upon Town approval of site plans.
2. All owner information must be completed and Warren County approvals received prior to processing by the Town.
3. The tax map number can be found on your Zoning or Building permit. If you do not know this number, it can be obtained from the County Planning Department (540-636-3354).
4. Connection fee information can be obtained from the Town website www.frontroyalva.com or by contacting Public Works (540) 635-7819.
5. For tenant occupied structures, separate water meters must be provided for each unit.
6. Information about the Town's PILOT program and Out-of-Town Water & Sewage Service Agreement can be obtained from the Town website www.frontroyalva.com or by contacting the Town Attorney at (540) 635-8007. Warren County may release Occupancy Permit upon completion of PILOT Agreement.
7. Out-of-Town residential & industrial fees & rates are 200% in-Town rates.

Water Element	Raw Water Intake & PS	Water Treatment Plant	Guard Hill PS	Future Manassas Ave PS	Jamestown PS	4H PS	WTP Zone Distribution System
Zone Served	All	All	Route 522 Corridor		Jamestown	4H	WTP Zone
Existing Daily Flow (MGD)	2.11	2.02	0.53		0.33	0.07	1.10
Committed to Dominion Power, but Unused (MGD)	0.52	0.52	0.52		-	-	-
Sum of Existing and Committed Flow (MGD)	2.64	2.54	1.05		0.33	0.07	1.10
Permitted Capacity (MGD)*	3.49	4.00	-	-	-	-	-
Design Capacity (MGD) **	8.00	5.94	1.63	1.63	0.41	0.09	2.20
*Available Infrastructure's Capacity after Existing & Committed Flows (MGD)****	*5.36*	*3.40*	*2.21*		*0.09*	*0.02*	*1.10*
Projected Total Development Estimated Flow (MGD)	1.92	1.92	1.18		0.48	0	0.25
Limiting Facility/Permit***	Raw Water Permit	Raw Water Permit	Raw Water Permit		Jamestown PS	4H PS	Raw Water Permit
Available Daily Excess Capacity after Development (MGD)	**-1.06**	**-0.46**	**-1.06**		**-0.40**	**0.02**	**-1.06**
Notes	4.8 MGD of capacity in infrastructure. Updated permit may required new screens. once permit updated	2.8 MGD of capacity in infrastructure. Permit can be obtained with little expense	1.97 MGD of distribution system capacity available once Manassas Ave PS and Raw & Plant permiting completed.		2026 Upgrade planned	2026 Upgrade planned	1.02 MGD of distribution system capacity available once Raw & Plant permiting completed.

Existing flow data taken from May 2024 to April 2025, except for 4H pump station which had a major leak from Jan 2024-Aug 2024

**Raw Water Intake & PS Annual average permitted capacity is 3.49 MGD, Max day cannot exceed 5.94 MGD, max month is 4.27 MGD*

*** Pump station capacity is based on 16 hours of operation per day . WTP & Raw Water PS based on 24 hr/day operation*

Water Element	Raw Water Intake & PS	Water Treatment Plant	Guard Hill PS	Future Manassas Ave PS	Jamestown PS	4H PS	WTP Zone Distribution System
Zone Served	All	All	Route 522 Corridor		Jamestown	4H	WTP Zone
*Available Infrastructure's Capacity after Existing & Committed Flows (MGD)****	*5.36*	*3.40*	*2.21*		*0.09*	*0.02*	*1.10*
Projected Approved Development Estimated Flow (MGD)	0.007	0.007	0.007		0	0	0
Available Capacity after Approved Development (MGD)	**5.36**	**3.39**	**2.21**		**0.09**	**0.02**	**1.10**
Projected Planned Development Estimated Flow (MGD)	0.63	0.63	0.29		0.26	0	0.08
Available Capacity after Planned Development (MGD)	**4.72**	**2.76**	**1.92**		**-0.17**	**0.02**	**1.02**
Projected Future Development Estimated Flow (MGD)	1.27	1.27	0.89		0.22	0	0.17
Available Capacity after Future Development (MGD)	**3.45**	**1.48**	**1.03**		**-0.40**	**0.02**	**0.85**

Sanitary Sewer System Excess Capacity: Sep 2025 Update

Wastewater Element	WWTP	Riverton PS	Crooked Run PS	Kelly Industrial Park PS	Stevens PS	Happy Creek #1 PS	Happy Creek #2 PS	IT Federal PS
2022 Average Daily Flow (MGD)	4.82	1.03	0.36	0.003	0.01	0.07	0.02	0.0002
2023 Average Daily Flow (MGD)	4.12	0.89	0.37	0.003	0.01	0.05	0.01	0.0007
2024 Average Daily Flow (MGD)	4.46	0.87	0.31	0.003	0.01	0.07	0.03	0.0010
2025 Average Daily Flow (MGD)	3.79	0.77	0.28	0.003	0.01	0.04	0.01	0.0010
2022 Peak Day Flow (MGD)	11.60	3.60	0.85	0.041	0.07	0.63	0.18	0.0060
2023 Peak Day Flow (MGD)	9.74	1.70	0.67	0.019	0.07	0.36	0.13	0.0160
2024 Peak Day Flow (MGD)	10.80	3.51	1.86	0.039	0.30	0.98	0.62	0.0200
2025 Peak Day Flow (MGD)	6.06	1.00	0.44	0.004	0.03	0.11	0.08	0.0020
Projected Total Development Estimated Flow (MGD)	1.92	0.97	0.94	0	0.005	0.32	0.09	0.15
Design Capacity (MGD)	*5.30*	*2.74*	*1.73*	*0.28*	*1.44*	*0.32*	*0.32*	*0.19*
Available Daily Excess Capacity (MGD)	**-**	**0.99**	**0.51**	**0.28**	**1.43**	**-**	**0.23**	**0.04**
Peak Day Excess Capacity (MGD)	-	0.76	0.35	0.28	1.41	-	0.15	0.03

Notes: 2023 information does not include December, 2024 information does not include November & December, 2025 information ranges from May 1 2024 to April 30 2025

Sanitary Sewer System Excess Capacity: Sep 2025 Update

Wastewater Element	WWTP	Riverton PS	Crooked Run PS	Kelly Industrial Park PS	Stevens PS	Happy Creek #1 PS	Happy Creek #2 PS	IT Federal PS
2025 Average Daily Flow (MGD)	3.79	0.77	0.28	0.003	0.01	0.04	0.01	0.001
Design Capacity (MGD)	*5.30*	*2.74*	*1.73*	*0.28*	*1.44*	*0.32*	*0.32*	*0.19*
Projected Approved Development Estimated Flow (MGD)	0.007	0.007	0.007	0	0.005	0	0	0
Available Daily Capacity after Approved Development (MGD)	**1.50**	**1.96**	**1.44**	**0.28**	**1.43**	**0.28**	**0.32**	**0.19**
Projected Planned Development Estimated Flow (MGD)	0.63	0.08	0.04	0	0	0.10	0	0
Available Daily Capacity after Planned Development (MGD)	**0.87**	**1.88**	**1.40**	**0.28**	**1.43**	**0.19**	**0.32**	**0.19**
Projected Future Development Estimated Flow (MGD)	1.27	0.89	0.89	0	0	0.22	0.09	0.15
Available Daily Capacity after Future Development (MGD)	**-0.41**	**0.99**	**0.51**	**0.28**	**1.43**	**-0.03**	**0.23**	**0.04**

`	WWTP	Riverton PS	Crooked Run PS	Kelly Industrial Park PS	Stevens PS	Happy Creek #1 PS	Happy Creek #2 PS	IT Federal PS
2025 Peak Day Flow (MGD)	6.06	1.00	0.44	0.004	0.03	0.11	0.08	0.002
Design Capacity (MGD)	*5.30*	*2.74*	*1.73*	*0.28*	*1.44*	*0.32*	*0.32*	*0.19*
Projected Approved Development Estimated Flow (MGD)	0.007	0.007	0.007	0	0.005	0	0	0
Available Peak Day Capacity after Approved Development (MGD)	**-0.77**	**1.72**	**1.28**	**0.28**	**1.41**	**0.21**	**0.24**	**0.19**
Projected Planned Development Estimated Flow (MGD)	0.63	0.08	0.04	0	0	0.10	0	0
Available Peak Day Capacity after Planned Development (MGD)	**-1.40**	**1.64**	**1.24**	**0.28**	**1.41**	**0.12**	**0.24**	**0.19**
Projected Future Development Estimated Flow (MGD)	1.27	0.89	0.89	0	0	0.22	0.09	0.15
Available Peak Day Capacity after Future Development (MGD)	**-2.68**	**0.76**	**0.35**	**0.28**	**1.41**	**-0.10**	**0.15**	**0.03**

Map ID	Development	Teir	Planned Residences	Projected Flow (MGD)	Water Pressure Zone	Wastewater Sewershed
1	Swan Estates	Planned	450	0.135	Eastern	WWTP
2	FRLP (149 AC. Parcel)	Planned	320	0.096	Eastern	Happy Creek #1
3	FRLP (Annexation Area)	Planned	818	0.245	Route 522 Corridor	WWTP
4	Squirrel Hill	Planned	36	0.011	WTP	Riverton PS
5	Townhomes by Holloway on Strasburg Road	Planned	24	0.007	WTP	Riverton PS
6	Forest Hill Drive	Planned	16	0.005	WTP	Riverton PS
7	Southside of Strasburg Across from AS Rhodes	Planned	50	0.015	WTP	Riverton PS
8	Royal Lane Apartments	Planned	36	0.011	WTP	WWTP
9	Apartments behind Rural King	Planned	90	0.027	WTP	WWTP
10	Elsia Drive	Planned	30	0.009	WTP	WWTP
11	Marshall Glen (1321 Happy Creek Rd)	Planned	97	0.029	Eastern	WWTP
12	Marlow & Silek	Planned		0.004	Route 522 Corridor	Crooked Run PS
13	Caroline Drive	Planned		0.014	Route 522 Corridor	Crooked Run PS
14	Rushmark	Approved		0.001	Route 522 Corridor	Crooked Run PS
15	Toray Drive Property	Approved		0.002	Route 522 Corridor	Crooked Run PS
16	Equus Development (53 AC. Baugh Drive)	Approved		0.004	Route 522 Corridor	Stevens PS
17	Plien-Smith TDS (23 AC. Baugh Drive)	Approved		0.001	Route 522 Corridor	Stevens PS
18	Crooked Run Assemblage	Planned		0.004	Route 522 Corridor	Crooked Run PS
19	Green Pearl Hospitality	Planned		0.021	Route 522 Corridor	Crooked Run PS
20	Crooked Run Assemblage	Planned		0.001	Route 522 Corridor	Crooked Run PS
21	Avtex Property (Plant Side)	Future		0.153	WTP	IT Federal PS
22	Happy Creek Technology Park	Future		0.131	Eastern	Happy Creek #1
23	Andricks Flea Market	Future		0.005	WTP	WWTP
24	Lim On Group LLC	Future		0.007	WTP	WWTP
25	Front Royal Industrial Park LLC (16 lots)	Future		0.070	Eastern	Happy Creek #2
26	Jackson Furniture (5 Lots)	Future		0.022	Eastern	Happy Creek #2
27	0 N. Shenandoah Ave. (Selah)	Future		0.001	WTP	WWTP
28	Crooked Run West	Future		0.169	Route 522 Corridor	Crooked Run PS
29	Slate Run Farm	Future		0.385	Route 522 Corridor	Crooked Run PS
30	Wayne Bunch (Jett Farm Road Frontage)	Future		0.075	Route 522 Corridor	Crooked Run PS
31	Turker Investments	Future		0.009	Route 522 Corridor	Crooked Run PS
32	Khatib Land Company	Future		0.010	Route 522 Corridor	Crooked Run PS
33	Shen Valley LLC	Future		0.004	Route 522 Corridor	Crooked Run PS
34	Shen Valley LLC	Future		0.006	Route 522 Corridor	Crooked Run PS
35	Lispen LLC (2 Lots)	Future		0.012	Route 522 Corridor	Crooked Run PS
36	Sulphur Springs Farm LLC	Future		0.109	Route 522 Corridor	Crooked Run PS
37	Sulphur Springs Farm LLC	Future		0.063	Route 522 Corridor	Crooked Run PS
38	Ahmad Khatib	Future		0.044	Route 522 Corridor	Crooked Run PS





Front Royal – Excess Volume Determi

Council Update – July 14, 2025

Town Code

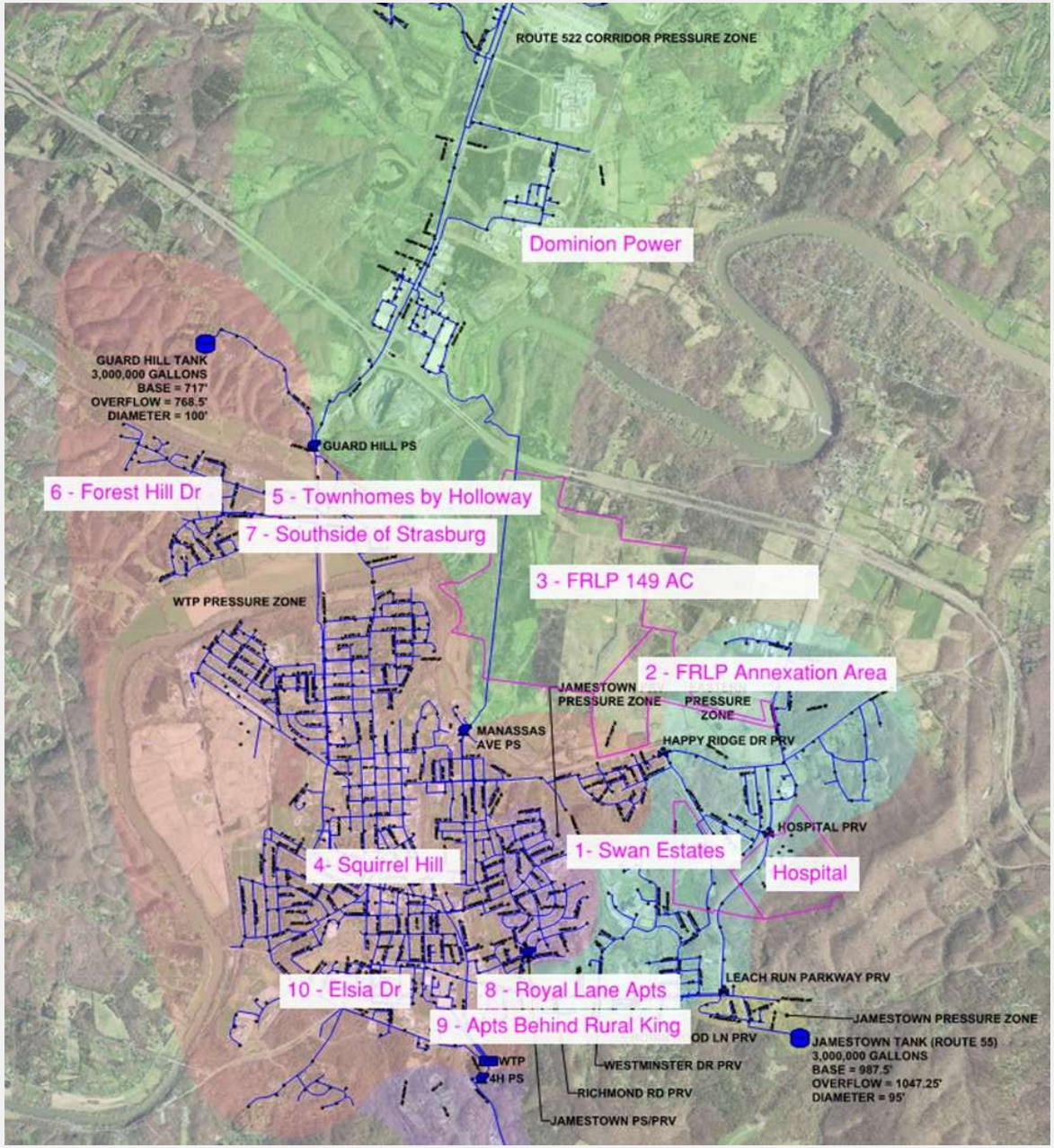
Section 134.1.C

The Town Municipal Code (Code), section 134.1. C, states that the Town will annually
the "anticipated excess volume" of water and sewer that is available for residential, co
or industrial use. The Code establishes excess volume as the "current and projecte
required by the Town subtracted from the current permitted plant capacities." The
requires all utility extensions to include detailed information demonstrating no impact
users and that all construction will meet established Town standards.

This report seeks to fulfill the Code requirement for determining anticipated excess volu
the water and sewer systems. This report takes the approach that "excess volume
capacity available for future development. Thus, the "excess volume" is assumed to
average treatment, conveyance and/or distribution capacity available to support new,
development.

Proposed Development

Map ID	Development	Planned Residences	Projected Flow (MGD)	Water Pressure Zone
1	Swan Estates	450	0.14	Eastern
2	FRLP (149 AC. Parcel)	320	0.10	Eastern
3	FRLP (Annexation Area)	818	0.25	Route 522 Corridor
4	Squirrel Hill	36	0.01	WTP
5	Townhomes by Holloway on Strasburg Road	24	0.01	WTP
6	Forest Hill Drive	16	0.00	WTP
7	Southside of Strasburg Across from AS Rhodes	50	0.02	WTP
8	Royal Lane Apartments	36	0.01	WTP
9	Apartments behind Rural King	90	0.03	WTP
10	Elsia Drive	30	0.01	WTP


ROUTE 522 CORRIDOR PRESSURE ZONE
Dominion Power
GUARD HILL TANK
3,000,000 GALLONS
BASE = 717'
OVERFLOW = 768.5'
DIAMETER = 100'
GUARD HILL PS
6 - Forest Hill Dr
5 - Townhomes by Holloway
7 - Southside of Strasburg
3 - FRLP 149 AC
WTP PRESSURE ZONE
2 - FRLP Annexation Area
JAMESTOWN
PRESSURE ZONE
PRESSURE
ZONE
MANASSAS
AVE PS
HAPPY RIDGE DR PRV
HOSPITAL PRV
1- Swan Estates
Hospital
4- Squirrel Hill
10 - Elsia Dr
8 - Royal Lane Apts
LEACH RUN PARKWAY PRV
9 - Apts Behind Rural King
JAMESTOWN PRESSURE ZONE
OD LN PRV
JAMESTOWN TANK (ROUTE 55)
3,000,000 GALLONS
BASE = 987.5'
OVERFLOW = 1047.25'
DIAMETER = 95'
WTP
4H PS
WESTMINSTER DR PRV
RICHMOND RD PRV
JAMESTOWN PS/PRV

Water System Excess Volume 2025

Available Capacity

Water Element	Raw Water Intake & PS	Water Treatment Plant	Guard Hill PS	Future Manassas Ave PS	Jamestown PS	4H PS
Zone Served	All	All	Route 522 Corridor		Jamestown	4H
Existing Daily Flow (MGD)	2.11	2.02	0.53		0.33	0.07
Committed to Dominion Power, but Unused (MGD)	0.52	0.52	0.52		-	-
Sum of Existing and Committed Flow (MGD)	2.64	2.54	1.05		0.33	0.07
Permitted Capacity (MGD)*	3.49	4.00	-	-	-	-
Design Capacity (MGD) **	8.00	5.94	1.63	1.63	0.41	0.09
*Available Infrastructure's Capacity after Existing & Committed Flows (MGD)****	*5.36*	*3.40*	*2.21*		*0.09*	*0.02*
Projected Future Development Estimated Flow (MGD)	0.56	0.56	0.25		0.23	0.00
Limiting Facility/Permit***	Raw Water Permit	Raw Water Permit	Raw Water Permit		Jamestown PS	4H PS
Available Daily Excess Capacity after Development (MGD)	**0.29**	**0.90**	**0.29**		**-0.14**	**0.02**
Notes	4.8 MGD of capacity in infrastructure. Updated permit may required new screens. once permit updated	2.8 MGD of capacity in infrastructure. Permit can be obtained with little expense	1.97 MGD of distribution system capacity available once Manassas Ave PS and Raw & Plant permiting completed.		2026 Upgrade planned	2026 Upgrade planned

Existing flow data taken from May 2024 to April 2025, except for 4H pump station which had a major leak from Jan 2024-Aug 2024

**Raw Water Intake & PS Annual average permitted capacity is 3.49 MGD, Max day cannot exceed 5.94 MGD, max month is 4.27 MGD*

*** Pump station capacity is based on 16 hours of operation per day . WTP & Raw Water PS based on 24 hr/day operation*

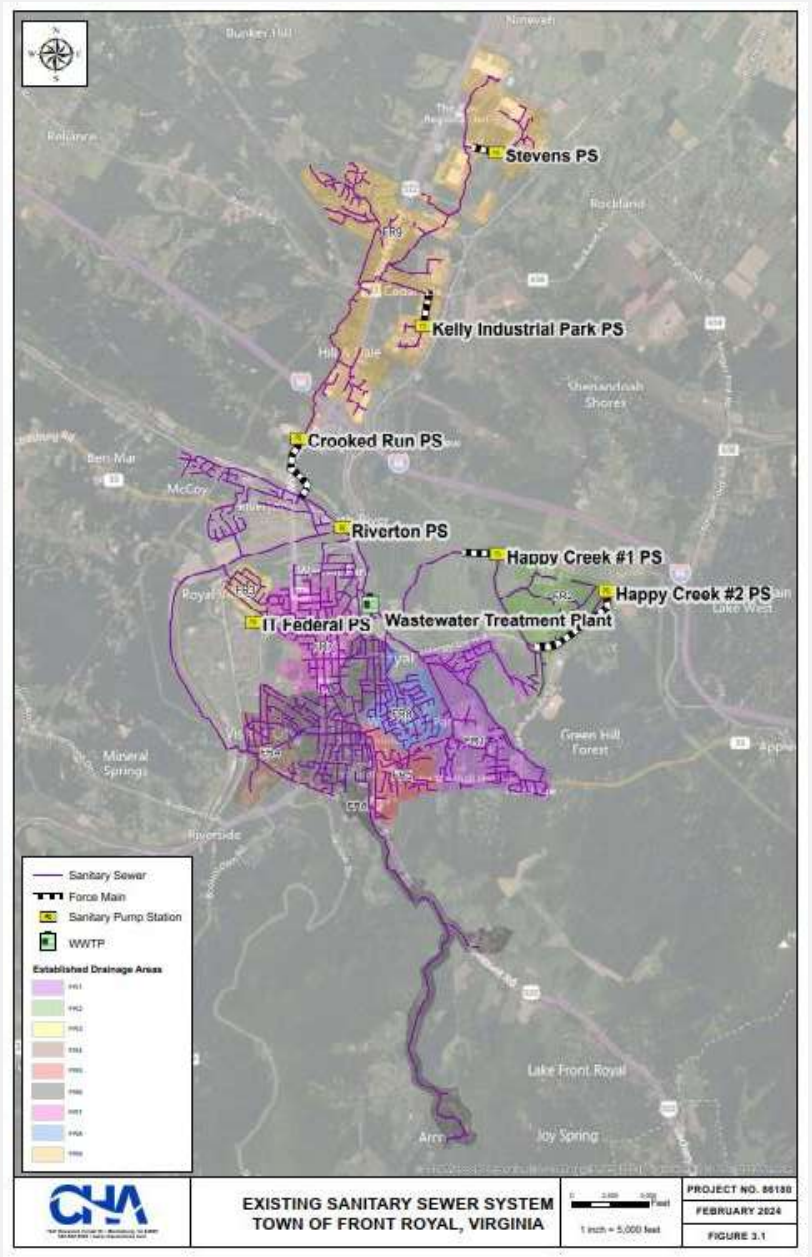
Sewer System Excess Volume 2025

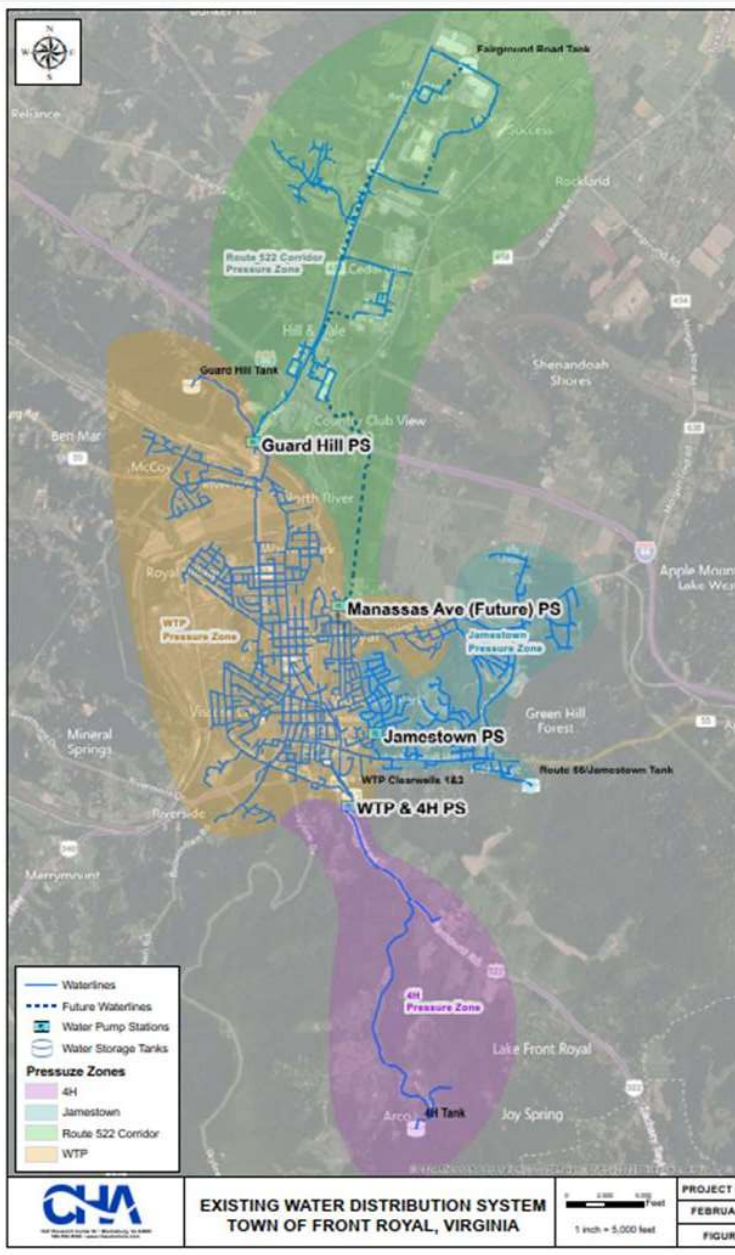
Available Capacity

Wastewater Element	WWTP	Riverton PS	Crooked Run PS	Kelly Industrial Park PS	Stevens PS	Happy Creek #1 PS	Happy Creek #2 PS
2022 Average Daily Flow (MGD)	4.82	1.03	0.36	0.003	0.01	0.07	0.02
2023 Average Daily Flow (MGD)	4.12	0.89	0.37	0.003	0.01	0.05	0.01
2024 Average Daily Flow (MGD)	4.46	0.87	0.31	0.003	0.01	0.07	0.03
2025 Average Daily Flow (MGD)	3.79	0.77	0.28	0.003	0.01	0.04	0.01
2022 Peak Day Flow (MGD)	11.6	3.60	0.85	0.041	0.07	0.63	0.18
2023 Peak Day Flow (MGD)	9.74	1.7	0.67	0.019	0.07	0.36	0.13
2024 Peak Day Flow (MGD)	10.8	3.51	1.86	0.039	0.30	0.98	0.62
2025 Peak Day Flow (MGD)	6.06	1.0	0.44	0.004	0.03	0.11	0.08
Projected Future Development Estimated Flow (MGD)	0.561	0.0378	0	0	0.00	0.10	0
Design Capacity (MGD)	*5.30*	*2.74*	*1.73*	*0.28*	*1.44*	*0.32*	*0.32*
Available Daily Excess Capacity (MGD)	**0.95**	**1.93**	**1.45**	**0.28**	**1.43**	**0.19**	**0.32**
Peak Day Excess Capacity (MGD)*	-	1.64	1.29	0.28	1.41	-	0.24

Notes: 2023 information does not include December, 2024 information does not include November & December, 2025 information ranges from May 1 2024 to April 30 2025

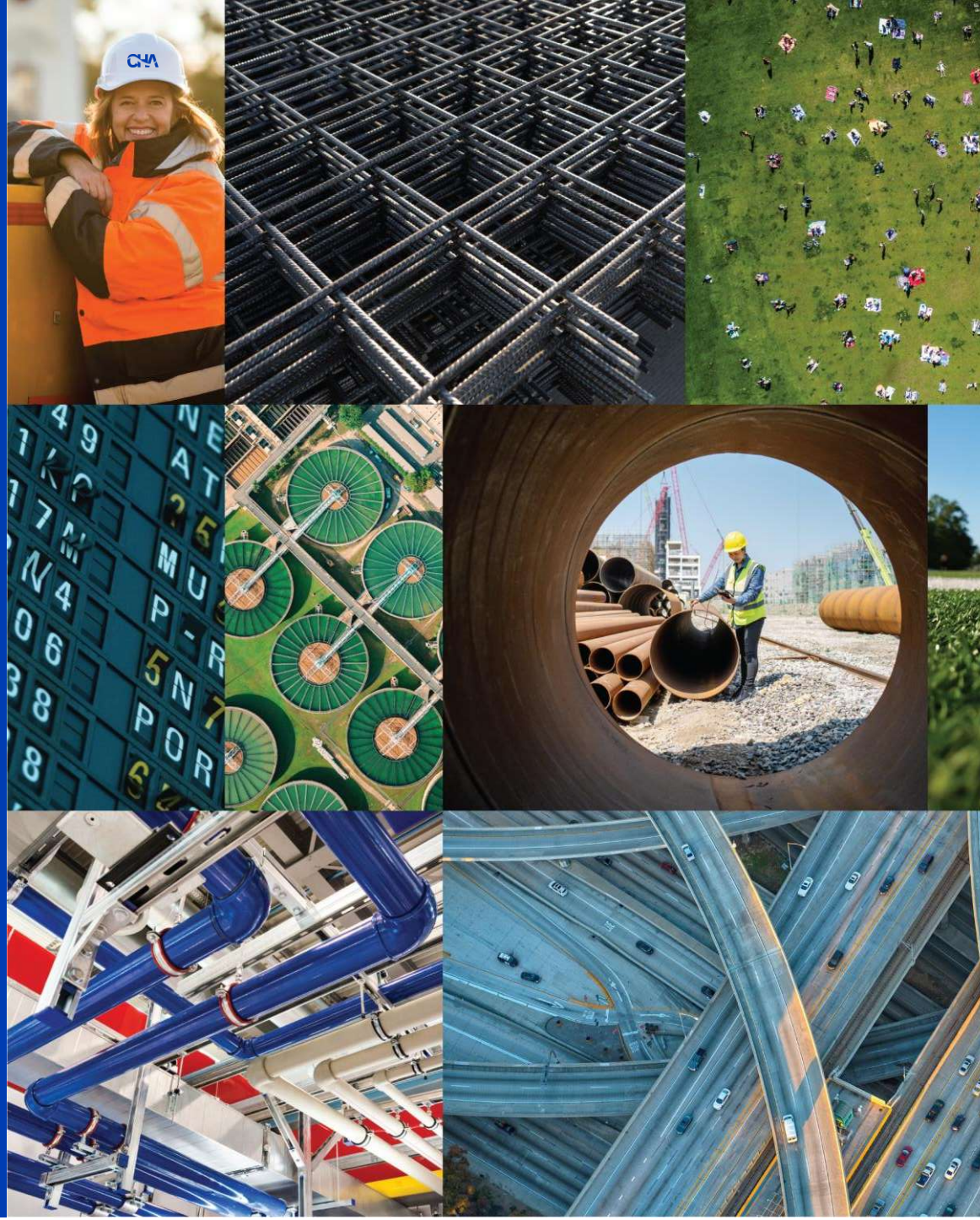
**Assumes a 2.5 peaking factor on developed flow.*


Stevens PS
Kelly Industrial Park PS
Crooked Run PS
Riverton PS
Happy Creek #1 PS
Happy Creek #2 PS
II Federal PS
Wastewater Treatment Plant
Sanitary Sewer
Force Main
Sanitary Pump Station
WWTP
Established Drainage Areas
EXISTING SANITARY SEWER SYSTEM
TOWN OF FRONT ROYAL, VIRGINIA
PROJECT NO. 86180
FEBRUARY 2024
FIGURE 3.1


Fairground Road Tank
Guard Hill Tank
Guard Hill PS
Manassas Ave (Future) PS
Jamestown PS
WTP & 4H PS
Route 66/Jamestown Tank
4H Tank
Waterlines
Future Waterlines
Water Pump Stations
Water Storage Tanks
Pressuze Zones
4H
Jamestown
Route 522 Corridor
WTP
EXISTING WATER DISTRIBUTION SYSTEM
TOWN OF FRONT ROYAL, VIRGINIA

Questions?

Contact:
Stevie Steele
Ssteele@chasolutions.com



Water System Volume
November 2024
Available Capacity

Water Element	Raw Water Intake & PS	Water Treatment Plant	Guard Hill PS	Future Manassas Ave PS	Jamestown PS	4H PS
Zone Served	All	All	Route 522 Corridor		Jamestown	4H
Existing Daily Flow (MGD)	2.10	2.10	0.55		0.31	0.01
Dominion Power Committed but Unused Capacity (MGD)	0.52	0.52	0.52		-	-
Permitted Capacity (MGD)	3.49*	4.00	-	-	-	-
Design Capacity (MGD) **	8.00	5.94	1.63	1.63	0.41	0.09
Available Capacity (MGD)	5.38	3.32	0.56	1.63	0.10	0.08
Limiting Facility/Permit	Raw Water PS DEQ Permit	Raw Water PS DEQ Permit	Raw Water PS WTP Zone		Jamestown PS	4H PS
Excess Capacity (MGD) ***	0.87	0.87	0.87		0.17	0.08

**Max day cannot exceed 5.94 MGD, max month is 4.27 MGD*

*** Pump station capacity is based on 16 hours of operation per day . WTP & Raw Water PS based on 24 hr/day operation*

**** Available Daily Excess Capacity was calculated as permitted capacity minus average daily flow & commitment to Dominion*

Sewer System Volume
November 2024
Available Capacity

Wastewater Element	WWTP	Riverton PS	Crooked Run PS	Kelly Industrial Park PS	Stevens PS	Happy Creek #1 PS
2022 Average Daily Flow (MGD)	4.82	1.03	0.36	0.003	0.01	0.07
2023 Average Daily Flow (MGD)	4.12	0.89	0.37	0.003	0.01	0.05
2024 Average Daily Flow (MGD)	4.46	0.87	0.31	0.003	0.01	0.07
2022 Peak Day Flow (MGD)	11.6	3.60	0.85	0.041	0.07	0.63
2023 Peak Day Flow (MGD)	9.74	1.7	0.67	0.019	0.07	0.36
2024 Peak Day Flow (MGD)	10.8	3.51	1.86	0.039	0.30	0.98
Design Capacity (MGD)	*5.3*	*2.74*	*1.73*	*0.281*	*1.44*	*0.32*
Average Daily Excess Capacity (MGD)	**0.84**	**1.87**	**1.42**	**0.28**	**1.43**	**0.25**
Peak Day Excess Capacity (MGD)	-	-	-	0.24	1.14	-

Notes: 2023 information does not include December, 2024 information does not include November & December

Water System Volume
March 2024
Available Capacity

Table 2.1 Water System Excess Capacity

Water Element	Raw Water Intake & PS	Water Treatment Plant	Guard Hill PS	Future Manassas Ave PS	Jamestown PS	4H PS	WTP Pressur Zone Distributi System
Pressure Zone Served	All	All	Route 522 Corridor		Jamestown	4H	WTP
Average Day Demand (MGD)	2.10	2.10	0.42	-	0.24	0.01	1.10
Dominion Power Unused Capacity (MGD)	0.52	0.52	0.52	-	-	-	-
Permitted Capacity (MGD)	3.49*	4.00	-	-	-	-	
Design Capacity (MGD) **	8.00	5.94	1.63	1.63	0.41	0.09	2.20
Available Capacity (MGD)	5.38	3.32	0.71	1.63	0.17	0.08	1.10
Limiting Facility/Permit	Raw Water PS DEQ Permit	Raw Water PS DEQ Permit	Raw Water PS WTP Pressure Zone		Jamestown PS	4H PS	Raw Water DEQ Perm
Excess Capacity (MGD) * **	**0.87**	**0.87**	**0.87**		**0.17**	**0.08**	**0.87**

**Max day cannot exceed 5.94 MGD, max month is 4.27 MGD*
*** Distribution pump station capacity is based on 16 hours/day operation. WTP & Raw Water PS based on 24 hours/day operation.*
**** Available Excess Capacity was calculated as the lowest available permitted capacity minus demand and unused capacity. The DEQ withdrawal permit limits most portions of the water system.*

Sewer System Volume
March 2024
Available Capacity

Table 3.2 Sanitary Sewer System Excess Capacity

Wastewater Element	WWTP	Riverton PS	Crooked Run PS	Kelly Industrial Park PS	Stevens PS	Happy Creek #1 PS	Ha Cre
2022 Average Day Flow (MGD)	**4.82**	**1.03**	**0.36**	**0.003**	**0.01**	**0.07**	**0.**
2022 Peak Day Flow (MGD)	**11.6**	**3.60**	**0.85**	**0.041**	**0.07**	**0.63**	**0.**
2023 Average Day Flow (MGD)	4.12	0.89	0.37	0.003	0.01	0.05	0.
2023 Peak Day Flow (MGD)	9.74	1.7	0.67	0.019	0.07	0.36	0.
Design Capacity (MGD)	**5.3**	**2.74**	**1.73**	**0.281**	**1.44**	**0.32**	**0.**
Average Daily Excess Capacity* (MGD)	0.48	-	0.88	0.240	1.37	-	0.
Limiting Facility	-	Riverton PS	Riverton PS	Riverton PS	Riverton PS	Happy Creek #1 PS	Ha Cre
Downstream Excess Capacity* (MGD)**	**0.48**	**-**	**-**	**-**	**-**	**-**	

* Calculated as design capacity minus 2022 Peak Day for all pump stations, for the WWTP 2022 the Average Day was used

** Excess capacity is only available if supported by downstream facilities. This numbers reflects the lowest available capacity d

CLOSED MEETING
AGENDA STATEMENT

Meeting Date: September 8, 2025 Item# 05

MOTION ON TO GO INTO CLOSED MEETING

[to be approved by affirmative recorded vote, with motion set forth in detail in the minutes. Council may take action in open session following closed meeting].

I move that Town Council convene a closed meeting, pursuant to Sections 2.2-3711 and 2.2-3712 of the Code of Virginia, for the following purpose:

!) pursuant to Section 2.2-3711(A)(8) of the Code of Virginia, for consultation with legal counsel employed or retained by a public body regarding specific legal matters requiring the provision of legal advice by such counsel, more specifically, the 2011 McKay Springs MOU between the Town of Front Royal and the County of Warren, Virginia.

Motion to Certify Closed Meeting at its Conclusion

[At the conclusion of the Closed Meeting, immediately re-convene in open meeting and take a roll call vote on the following:]

I move that Council certify that to the best of each member's knowledge, as recognized by each Council member's affirmative vote, that only such public business matters lawfully exempted from Open Meeting requirements under the Virginia Freedom of Information Act as were identified in the motion by which the Closed Meeting was convened were heard, discussed or considered in the Closed Meeting by Council, and that the vote of each individual member of Council be taken by roll call and recorded and included in the minutes of the meeting of Town Council.

Moved _____ ***Seconded*** _____

Wood _____ ***Veitenthal*** _____ ***Sealock*** _____ ***Rappaport*** _____ ***Ingram*** _____ ***DeDomenico-Payne*** _____