Sanitary sewer bypass pumping plan

[Enter Prince William County Plan Name]

[Enter Prince William County Plan Number]

Submittal [Select Date]

[PE seal and dated signature]

I certify that this Sanitary Sewer Bypass Pumping Plan meets all the requirements of the Service Authority’s Utility Standards Manual April 2021 Edition and I am the responsible party for all information in this submittal without exception.

PRINCE WILLIAM COUNTY SERVICE AUTHORITY RESPONSE TO THE SUBMITTED SANITARY

SEWER BYPASS PUMPING PLAN

No Exception taken.

Revise as noted. Do not resubmit. See notes above.

Revise as noted. Resubmit. See notes above.

Rejected. See notes above.

Checking of submittals is only for general conformance with the  
design concept of the Project. This bypass pumping plan is subject to PWCSA’s Utility Standards Manual and plan specifications. The Contactor is solely responsible to choose the means and methods for the needed application and operations that satisfies the PWCSA.

By: Date:

(Name)



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# Waivers

*Check One:*

No waivers are required from the Prince William County Service Authority (Service Authority) to execute this proposed sanitary sewer bypass pumping plan.

The following approved Service Authority waivers are required to execute this proposed sanitary sewer bypass pumping plan:

|  |  |
| --- | --- |
| [Insert copy of approved SA Wavier if applicable] |  |

# Checklist

*Only check the items addressed in this sanitary sewer bypass pumping plan:*

This bypass pumping plan has been submitted to the Service Authority 2 weeks prior before the desired start date of the bypass pumping operations.

All actions in the bypass pumping plan are written in the active tense of, “shall."

All sections in bypass pumping plan have been fully completed.

All permits have been acquired and permit requirements affecting bypass pumping operation have been reported in this bypass pumping plan.

A site visit has been made and all pertinent site information affecting the bypass pumping operation are disclosed in this bypass pumping plan.

Means and methods to protect the pumps and bypass pumping operations for all applicable hazards have been documented in the bypass pumping plan.

The existing sanitary sewer flow for the bypass pumping operation has been determined by an acceptable means permitted by the Service Authority’s Utility Standards Manual.

Service Authority accepted equipment (e.g. pumps) has been specified in the bypass pumping plan.

**The Professional Engineer is required to meet with the Service Authority’s Engineering staff prior to submitting the bypass pumping plan for any unmarked checklist item.**

# Overview & Objective

The proposed sanitary sewer bypass pumping plan shall be implemented by **[Enter Company Name]** after receiving Service Authority acceptance of this plan. Prior to commencing bypass pumping operations, **[Enter Company Name]** shall satisfy the Service Authority Field Inspector that all bypass pumping requirements are met and shall ensure that all the materials, equipment, and appropriate contingencies are on-site to fully execute the work.

* Provide brief overview of propose bypass pumping operation.
* Identify the size of the sanitary sewer line that is being bypassed.
* Report the objective the bypass pumping operation is to accomplish (e.g. cut-in manhole, sanitary sewer tie-in, etc.)
* Report what work will be executed by the Contractor during bypass pumping operations
* Discuss restrictions, limitations, and permitting requirements that affect the pumping plan.

# Date & Time

The proposed sanitary sewer bypass pumping operation is expected to commence on [date]. **[Enter Company Name]** shall provide 48 hour confirmation to the Service Authority Field Inspector prior to starting bypass pumping. **[Enter Company Name]** shall coordinate with the Service Authority Field Inspector to adjust the start date due to weather or other circumstances.

Once the bypass pumping operation commences, bypass pump operations shall continue for [Enter Number of Days] days and shall be active [Enter Number of Hours] hours during the day. The sanitary sewer bypass pumping operation is expected to end on [date]. **[Enter Company Name]** shall provide written notification to the Service Authority’s Field Inspector if bypass pumping operations are to be extend beyond the stated number of days in this plan and shall comply with additional requirements imposed by Service Authority for the time extension.

# Site and Surrounding Area

[Describe the general area for the proposed bypass pumping operation.]

[Describe the area where the sanitary sewer bypass pumps will be located within the site. (e.g. proximity to a stream that flood, in area where vehicles can crash into the pumps, proximity to houses, in the woods, shoulders of roads, parking lot, etc.)]

[Describe the area where the suction and discharge manholes reside (e.g. inside or outside the limits of disturbance, parking lots, roads, road shoulders, ditches, woods, HOA area, near sidewalks, embankments, etc.).]

[Describe or put into context potential impacts and risk the bypass pumping operation poses.

# Site Risks

*Response must be provided for each item:*

|  |  |  |
| --- | --- | --- |
| Yes: | No: |  |
|  |  | Bypass pumping operations can be affected by severe weather storms or flooding. |
|  |  | Bypass pumping operations require traffic control measures or resides in a vicinity where it can be affected by vehicle accidents (e.g. in an area outside of the right-of-way, but where vehicles can crash into the equipment). |
|  |  | Bypass pumping operations can be affected by snow removal operations. |
|  |  | Bypass pumping operations are in an area frequented by pedestrians. |

*[Describe site risk that could affect the bypass pumping operation.]*

|  |  |  |
| --- | --- | --- |
|  |  | Bypass pumping operations are in an area that can be easily vandalized. |
|  |  | Other applicable risks include: |

# Setup & Layout

1. Describe the routing of bypass pipe and report site factors that affect pipe routing.
2. Report how the pump locations, bypass piping, bypass pumping operations may affect the surrounding area or customers.
3. Describe how the pumps and bypass piping will be secured illegal access and tampering (e.g. fencing, etc.).

Appendix A shows the complete bypass system setup and layout from the suction manhole, [Enter PWCSA Manhole ID], to the discharge manhole, [Enter PWCSA Manhole ID], including the location of the bypass pumps.

# Site Impacts

*Response must be provided for each item:*

|  |  |  |
| --- | --- | --- |
| Yes: | No: |  |
|  |  | Bypass pumping operations occur within 1,000 feet of an environmentally sensitive area (wetlands, tributary, stream, RPA, conservation area, etc.) |
|  |  | Bypass pumping operations occur within 5 miles of a body water. |
|  |  | Bypass pumping operations occur outside the limits of disturbance defined by the approved plans. |
|  |  | Bypass pumping operations occur within sight or listening area of a residential development. |
|  |  | Bypass pumping operations affect property access (e.g. driveways, entrances) by private owners. |
|  |  | Bypass pumping operations impede vehicle traffic, affects lines of sights of drivers, affect emergency services, or school routes. |

*[Describe impacts the bypass pumping operation will have on the environment, external people or operations outside the limits of disturbance.]*

|  |  |  |
| --- | --- | --- |
|  |  | Bypass pumping operation affects drainage. |
|  |  | Bypass pumping operation affects existing sanitary sewer service to property owners. |
|  |  | Other: |

# Calculations of Flows to be Bypassed

The peak sanitary sewer flows incoming to suction manhole, [Enter PWCSA Manhole ID], from the existing [Enter Number]-inch sanitary sewer pipe with an upstream slope of [Enter Number]% was determined by:

*Check One:*

A flow monitoring plan accepted by the Service Authority. [See Appendix #]

Assuming the existing sanitary sewer pipe runs at full capacity, physically observing the flows running through the manhole and confirming no evidence of existing flow exceeding the channel in the manhole base. See calculations below.

|  |
| --- |
| **Manning’s Formula** |
| v= (1.49/n) R2/3 S1/2 |
|  |
| *Q* = 646,272 (1.49/*n) A R*2/3 *S*1/2 |
|  |
| Where: |
| v = velocity (feet per second) |
| *n* = roughness coefficient 0.013 |
| *R* = hydraulic radius |
| *S* = slope (feet per foot) |
| *A* = cross-sectional area (square feet) |
| *Q* = flow rate (gallons per day) |

[Insert engineering calculations for a full pipe and then convert to gallons per minute]

# Bypass Pumps

The original equipment manufacturer Choose an item. shall provide [Enter Total Number of Pumps], [Enter Pump Size]-inch [Enter Pump Model No.] Pumps with diesel engines equipped with fuel storage for a minimum of 48 hours of normal operations. Please see Appendix B for detailed equipment specifications. [Enter Number of Primary Pumps] primary pump(s) shall be used to pump the incoming peak flows out of the suction manhole. [Enter Number of Backup Pumps]additional pump(s) shall be provided for 100% backup for each primary pump.

Each pump shall be equipped with variable speed drive and shall be capable of indefinite dry-running. Each pump shall be supplied with a non-clog rated impeller and with an automatic start/stop float control system to act as a 100% stand-by system. The referenced pumps shall be automatically self-priming with [Enter Feet of Suction Lift] feet of suction lift and capable of indefinite dry-running.

Referenced pumps shall be equipped with lock out controls to prevent tampering and shall be housed in a critically silenced enclosure to reduce noise levels to less than 70 dBA at 30 feet. Selected pumps for this bypass pumping plan can pump [Enter Pumping Rate] GPM accounting total dynamic head in the bypass pumping operation. See Appendix B for pump curve information.

# Bypass Piping

shall provide suction hoses, discharge piping, valves, float controller and all necessary accessories required for a successful sanitary bypass pumping. See Appendix C for product specifications related to bypass piping and appurtenance. shall install [Enter Pipe Size]-inch HDPE suction dip tubes in the suction manhole from the pumps. The pumps will discharge individually through [Enter Pipe Size]inch piping connecting into a common wye and discharging through [Enter Number]feet of [Enter Pipe Size]-inch [Enter pipe material and/or type] pipe to the discharge manhole. Each pump will be isolated via a check valve at the wye location.

Choose an item. shall install bypass piping securely on the existing ground in the route shown in Appendix A. All bypass piping shall be fastened with [specify joint type] joints. All bypass piping shall be protected against unintentional movement by external forces (e.g. pumps cycling, water-hammer, equipment traffic, vehicles, etc.) or environmental changes (e.g. erosion). shall demonstrate that the bypass piping is watertight to the Service Authority Field Inspector prior to commencing bypass operations.

*Response must be provided for each item:*

|  |  |  |
| --- | --- | --- |
| Yes: | No: |  |
|  |  | Will the bypass piping be placed outside the limits of disturbance defined by the approved plans? |
|  |  | Will bypass piping cross or affect property access (e.g. driveways, entrances) by private owners? |
|  |  | Will bypass piping impede vehicle traffic, emergency services, or school routes (e.g. road closures, ramps, etc.)? |
|  |  | Will bypass piping affect drainage (e.g. impede or redirect storm water runoff, occupy culverts or storm pipes, etc.)? |
|  |  | Other: *[Describe impacts the bypass pumping piping will have that requires consideration and mitigation.]* |
|  |  |  |

# Bypass Pumping Operations

shall provide all necessary equipment and appurtenances to perform successful sanitary pump bypass pumping from the suction manhole to the discharge manhole. The pump controllers shall include the necessary start stop controls to automatically energize and maintain levels to safely bypass the sewer flow.

*Click on the embedded speared sheet and enter in required information:*



Suction piping shall be placed [#] feet above the bottom of the suction manhole. The flows shall rise [#] from the bottom of the manhole to an elevation [###’] which shall trigger operations of the primary pump(s). If flows continue to rise, an alarm shall trigger a notification of a primary pump failure at an elevation [###’] and shall trigger operation of the emergency backup pump(s). If flows continue to rise, an alarm shall trigger notification of a backup pump failure at elevation [###’]. The primary/emergency backup pump(s) shall operate until flows in the suction manhole return to an elevation [###’].

shall coordinate these levels with the Service Authority Field Inspector upon startup and adjusted as needed for successful bypass pumping operation.

Once all setup is complete and approvals have been given to begin, shall install a manhole plug in the receiving invert of the suction manhole and initiate bypass pumping operations. All inflatable manhole plugs shall be equipped with an external gauge to monitor the pressure and an independent means to re-inflate the plug for any loss pressure. shall adjust the flow rate of bypass pumping to ensure successful operations. shall monitor and flush the suction manhole as needed to prevent the collection and buildup of solids caused by the cycling of bypass pumping to maintain free flowing effluent.

shall execute all work necessary to achieve the objective of the bypass pumping operation. All work shall successfully pass all required testing and inspection before bypass pumping operations cease and are decommissioned.

Upon completing the bypass pumping operations, shall remove all plugs, equipment, pumps, bypass piping, and materials from the sanitary sewer system. All bypass piping shall be flushed clean via use of a tanker truck. Cross-connection to a portable water system to flush bypass piping shall not be made. The interior area of both the suction and discharge manhole shall be washed down if directed by the Service Authority Field Inspector. shall fully restore or adjust all manholes in accordance with the approved plans. The area around the manholes shall be restored and stabilized to permit normal access and use by the Service Authority.

# Monitoring

The Service Authority reserves the right to require 24-hour onsite personnel for monitoring of the bypass pump operations, at no cost to the Service Authority, at the onset or during bypass pumping operations, for any reason. On-site personnel for monitoring shall be assumed for the bypass pumping of trunk sewers greater than 12-inch, in environmentally sensitive areas, near bodies of water, or operations deemed high risk.

proposes continuously monitored bypass pumping operations via:

*Check One:*

|  |  |  |  |
| --- | --- | --- | --- |
|  | A person shall be physically present on site while bypass pumping equipment is in operation. | | |
|  |  |  |  |
|  | Yes: | No: |  |
|  |  |  | Monitoring person shall be trained and qualified to start, stop, refuel, operate, trouble shoot, and maintain the bypass pumping equipment. |
|  |  |  | Monitoring person has access to on-site supplies and emergency contact telephone numbers to acquire additional resources to resolve a problem before a sanitary sewer overflow. |

|  |  |  |  |
| --- | --- | --- | --- |
|  | An automatic dialer alarm system. | | |
|  |  |  |  |
|  | Yes: | No: |  |
|  |  |  | Each primary pump and backup pump are equipped with its own auto dialer system. Auto dialers are not shared between pumps. |
|  |  |  | The suction manhole has enough holding volume to permit the emergency contacts to arrive on site and initiate corrective action before a sanitary sewer overflow |
|  |  |  | A minimum of three emergency contacts shall be programmed in the auto dialer. |
|  |  |  | The first emergency contact shall have a response time to arrive at the site no greater than 0.5 hour. |
|  |  |  | The backup emergency contacts shall have a response time to arrive at the site no greater than 1.0 hour. |
|  |  |  | Each emergency contact shall be trained and qualified to start, stop, refuel, operate, trouble shoot, and maintain the bypass pumping equipment. |

# Sanitary Sewer System evaluation

## Suction Manhole Evaluation

|  |  |  |
| --- | --- | --- |
| Suction Manhole ID: |  |  |

*Response must be provided for each item:*

|  |  |  |
| --- | --- | --- |
| Yes: | No: |  |
|  |  | The suction piping can be routed through the manhole lid without modifying the manhole structure (e.g. removing the cone section). *Note: If the cone section must be removed. This needs to be discussed in the bypass pumping plan and will affect required protections.* |
|  |  | Suction manhole diameter is large enough to accommodate suction piping and float controls. *Note: Bypassing of large trunk sewers are limited by the allowable area inside the manhole to install multiple suction pipes and float controls.* |
|  |  | Suction manhole is a pre-cast concrete structure. *Note: The Contractor should avoid disturbing or modifying an existing brick manhole. Operations in a brick manhole requires special care and must be addressed in the bypass pumping plan.* |
|  |  | Suction manhole is in good condition. *Note: Manholes in poor condition may need to be rehabilitated before used as suction manhole to ensure the manhole is watertight and to avoid materials and debris from entering the sewer system. Contractor must take special care not to damage the lining inside a manhole, if applicable.* |
|  |  | The depth of the suction manhole is compatible with the selected pump. *Note: There needs to be enough depth in the manhole to permit the suction piping to be off-set from the bottom of the manhole. The manhole depth must not be greater than the pump’s ability for suction lift.* |
|  |  | The holding volume in the suction manhole is compatible with the selected pump and controls. *Note: Shallow manholes must hold enough volume to allow both primary and backup floats to trigger, allow time for the pumps to self-prime, and recovery time for pumps to lower the flow in the manhole.* |
|  |  | The suction manhole is not in a flood area, drainage area, or subject to inflow. *Note: External flow into the sanitary sewer system can exceed capacity and result in a sanitary sewage overflow. The bypass pumping plan shall discuss mitigation to protection open manholes from external flow.* |

If applicable, discuss how the manhole structure will be temporarily modified to accommodate the bypass pumping operation. Report if the cone section will need to be removed and why. Report if additional manhole sections will have to be added to raise the top of the manhole. Report distance the top of them manhole is to be set relative to grade around the manhole. Report if erosion control or other measures are to be installed to keep erosion and inflow out the manhole.

The shall secure the top of the suction manhole with a plywood covering customized to permit the suction piping to pass through. The top of the manhole shall be secured to prevent trash, debris and inflow from entering the sewer system. shall set [type] fencing around the suction manhole and install all necessary precautions to prevent accidental entry.

## Discharge Manhole Evaluation

|  |  |  |
| --- | --- | --- |
| Discharge Manhole ID: |  |  |

*Response must be provided for each item:*

|  |  |  |
| --- | --- | --- |
| Yes: | No: |  |
|  |  | The discharge piping can be routed through the manhole lid without modifying the manhole structure (e.g. removing the cone section). *Note: If the cone section must be removed this needs to be discussed in the bypass pumping plan and will affect required protections.* |
|  |  | Discharge manhole diameter is large enough to accommodate discharge piping. *Note: Bypassing of large trunk sewers may be impacted by the allowable area of the manhole to receive discharge piping.* |
|  |  | Discharge manhole is in good condition. *Note: Manholes in poor condition may need to be rehabilitated before use. Contractor must take special care not to damage the lining inside a manhole, if applicable.* |
|  |  | The discharge manhole is not in a flood area, drainage area, or subject to inflow. *Note: External flow into the sanitary sewer system can exceed capacity and result in a sanitary sewage overflow. The bypass pumping plan shall discuss mitigation to protection open manholes from external flow.* |

If applicable, discuss how the manhole structure will be temporarily modified to accommodate the bypass pumping operation. Report if the cone section will need to be removed and why. Report if additional manhole sections will have to be added to raise the top of the manhole. Report distance the top of them manhole is to be set relative to grade around the manhole. Report if erosion control or other measures are to be installed to keep erosion and inflow out the manhole.

The shall secure the top of the discharge manhole with a plywood covering customized to permit the discharge piping to pass through. The top of the manhole shall be secured to prevent trash, debris and inflow from entering the sewer system. shall set [type] fencing around the discharge manhole and install all necessary precautions to prevent accidental entry.

## Lateral Evaluations

The existence of laterals was verified by one of the following means:

*Response must be provided for each item:*

|  |  |  |
| --- | --- | --- |
| Yes: | No: |  |
|  |  | A check for laterals was made by CCTV inspection. |
|  |  | A check for laterals was made by physical observation (excavation or test pit). |
|  |  | A check for laterals was made by a record check. |
|  |  | A check for laterals was made by dye testing. |
|  |  | Other: *[Report the other means by which a check for laterals was performed.]* |

*Response must be provided for each item:*

|  |  |  |
| --- | --- | --- |
| Yes: | No: |  |
|  |  | Are there any sanitary sewer service laterals connected to the portion of existing sanitary sewer line to be bypassed? |
|  |  | Are there any incoming lateral invert in the suction manhole? *Note: Flow must build up inside the manhole to reach the suction piping. The backed up flow in the manhole cannot block or surcharge the lateral invert. Laterals must always have free unobstructed discharge to the sanitary sewer system.* |
|  |  | Are there any lateral connections on the upstream sanitary sewer pipe to the suction manhole at the elevation effluent will rise in the suction manhole? *Note: Flow must build up inside the manhole to reach the suction piping. As the flow rises in the suction manhole, flow will back up in the upstream sanitary sewer pipe. The backed up flow in the upstream pipe cannot block or surcharge a lateral connection to the pipe. Laterals must always have free unobstructed discharge to the sanitary sewer system.* |
|  |  | Are there any lateral connections on the discharge manhole? *Note: An inrush of pumped flow must not block or surcharge a sanitary lateral invert. Laterals must always have free unobstructed discharge to the sanitary sewer system.* |
|  |  | Existing sanitary sewer service laterals will be affected by the bypass pumping operation. |

# Contingency & Emergency Planning

## Containment

*Check One That Applies:*

|  |  |  |
| --- | --- | --- |
| Containment shall be set at the suction manhole. The tops of all manholes upstream of the suction manhole have been verified to exist at a higher elevation than the top of the suction manhole. | | |
| Above ground  containment area  Upstream manhole top elevation above suction manhole  Pump | FAILED PUMP SCENARIO  Pump  Sanitary sewer overflow in the  containment area |
|  |  |
| Containment shall be set at the suction manhole and relief manhole. The tops of manholes upstream of the suction manhole have been verified to exist at a lower elevation than the top of the suction manhole. | | |
| Upstream manhole top elevation below suction manhole  Above ground  containment area  Pump | FAILED PUMP SCENARIO  Sanitary sewer overflow relief manhole  Sanitary sewer overflow in the  containment area  Pump |

In the case of a failed sanitary sewer bypass pumping, a sanitary sewer overflow shall be managed at manhole(s) [refence PWCSA manhole ID(s)]. shall setup a containment area around the referenced manholes. shall install a physical barrier separating the environment in the containment area from the potential sewer overflow. The barrier shall consist of [Engineer is to specify. If plastic, fully specify the required product – thickness (mils), density, lamination, seamless, etc.]

Containment shall be made via:

*Check One:*

|  |  |
| --- | --- |
|  | Grading a collection area (e.g., ditch, holding pond, etc.) for effluent to collect. |
|  | Grading a berm wall [number] feet high and [number] in diameter. |
|  | Stacking larger manhole [number] feet high and [number] in diameter. |
|  | Other: [Describe here if checked] |

## Spill Kit

[Company Name] shall provide and maintain a spill kit on-site. The spill kit shall be restocked as necessary to ensure adequate and continuous supply of the following:

* Personal Protective Equipment (e.g. gloves, eye protection, suits) appropriate to handle materials contaminated with sewage.
* Plastic bags to collect and dispose of used personal protective equipment.
* Lime to neutralize spillage.
* Oil absorbent booms: four each, five feet long.
* Oil absorbent pads or bulk material, adequate for coverage of 200 square feet of surface area.
* Oil absorbent material, such as kitty litter or sawdust for material spills on hard surfaces.

## Emergency Contigency Plan

In the event of a sewage spill occurring in connection with the work being performed by [Company Name], the [Company Name] shall immediately:

Notify the Service Authority Emergency Dispatch at (703) 335-7982 and the Service Authority’s Inspections Manager and comply with the currently adopted version of all Federal, State, and Local regulations to include required notifications. All costs associated with a sewage spill are the responsibility of the [Company Name] and at no cost to the Service Authority.

Clean up all spilled solid material, disinfect the affected area, and repair any damage to property in conformance with all applicable regulatory agency requirements.

Provide an oral report to the VADEQ within 24-hours from the time [Company Name] becomes aware of the sewage spill, at the telephone number listed below, and a submit a written report to VADEQ, with a copy to the Service Authority Inspections Manager, within five (5) days of discovery at the following address:

Department of Environmental Quality

Northern Virginia Regional Office

13901 Crown Court

Woodbridge, VA 22193

(703) 583-3800 (voice) or (703) 583-3821 (fax)

For reports to VADEQ outside normal working hours, [Company Name] shall leave a message to fulfill the immediate notification requirement. If a sewage spill is considered to be an emergency, based on volume, spill location, or public health concerns, or the sewage spill takes place after normal business hours, on a weekend, or on a holiday, the [Company Name] shall call the Virginia Department of Emergency Services at its 24-hour telephone service at 1 (800) 468-8892.

The written report shall contain the following:

* Description of discharge and location
* Whether discharge reached state waters; if so, name of affected waterbody
* Cause of discharge
* Date of discharge
* Duration of discharge
* Volume of discharge
* Whether the discharge is continuing; if so, how long it is expected to continue
* Expected total volume of discharge
* Steps planned or taken to reduce, eliminate, and prevent reoccurrence of current or future discharges

## Emergency contact List

See Bypass Pumping Operations section for the anticipated response time to react to problem. [Company Name] shall personnel on-site during the hours of #:## AM to #:## PM [days of the week] to immediately respond to an alarm and resolve an issue. During off hours, the following individuals are responsible to respond to a bypass pumping alarm condition, resolve any bypass pumping issue, and execute the Emergency Contingency Plan, if applicable.

|  |  |  |  |
| --- | --- | --- | --- |
| **Emergency Contact List** | | | |
| Contact Name | Phone No. | Relationship to Project | Response to Project (after normal business hours |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Maintenance & Continuity of Service

[Company Name] shall be responsible to perform all necessary maintenance to maintain bypass pumping equipment during operation. [Company Name] shall keep a daily maintenance log and present it for inspection by Service Authority Field Inspector.

* [Company Name] is responsible to provide a fueling plan for the bypass pump operation prior to start-up. The fuel plan shall ensure that fuel can be delivered for all conditions during bypass pumping operation.
* On site-fuel storage shall be provided when weather emergencies are forecast, and delivery of fuel is made more difficult.
* [Company Name] shall arrange for fuel and fueling operations to be made free of water or other containments.
* [Company Name] shall take all necessary precautions to prevent fuel from freezing or gelling in the revisor, fuel lines, or filters.
* As part of the maintenance log, [Company Name] shall document fuel checks and fill ups for the bypass pumping equipment.
* [Company Name]’s maintenance log shall document daily checks of the bypass pumping equipment. Daily maintenance checks shall be performed in accordance with the manufacturer’s recommendations. The maintenance log shall include documenting the conditions of fluid levels and filters.
* [Company Name]’s maintenance log shall document daily checks of the battery’s operational status. Batteries that show a low charge ore require boosting, shall be immediately replaced with a new battery.
* [Company Name] shall immediately remove from the site and replace any piece of bypass pumping equipment that has an observed or repeated operational problem.

# Statement of Responsibility and Assumption of Liability

[Name] ([cell phone number]) is responsible for safely bypassing sewage flows as detailed in this bypass pumping plan without causing or contributing to any spills, discharges, leaks, or deposits of sewage in or to the environment, including the land, surface water, or groundwater (collectively, “Sewage Spills”).

I, [name], understand and am in agreement that if the company I represent cannot  
complete the work as outlined and scheduled in the approved plans and this bypass pumping plan, the Service Authority has the right to come in and complete the work and pass all cost incurred on to my company as a result of this action. The Service Authority shall back-charge the [Company Name] for any fines, penalties, or other costs or damages incurred by the Service Authority as a result of a sewage spill occurring in connection with the work being performed by the [Company Name].

Authorized Agent of [Company Name]:

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title: [Type title of person signing]

Date: [Type the date of signature]

.

Exhibit A shows the complete sanitary sewer bypass pumping setup and layout. Bypass pumping operations shall initiate from suction manhole [refence PWCSA manhole ID] run to the discharge manhole [refence PWCSA manhole].

Appendix A shows the complete bypass system setup and layout from the suction manhole, [refence PWCSA manhole ID], to the discharge manhole, [refence PWCSA manhole ID], including the location of the bypass pumps.

Please see Appendix B for detailed equipment specifications.

See Appendix C for detailed bypass piping specifications.