

**Attachment 10**  
(Sept. 29, 2020 DEQ Permit Application)

WQ0029867  
MOD #7

ORIGINAL Received 9/29/20  
Docket No. W-1800 Sub 92  
- This Final Received 11/19



Division of Water Resources

State of North Carolina  
Department of Environmental Quality  
Division of Water Resources

**15A NCAC 02T .0300 – FAST TRACK SEWER SYSTEM EXTENSION APPLICATION  
INSTRUCTIONS FOR FORM: FTA 04-16 & SUPPORTING DOCUMENTATION**

OFFICIAL COPY

Nov 29 2023

This application is for sewer extensions involving gravity sewers, pump stations and force mains, or any combination that has been certified by a professional engineer and the applicant that the project meets the requirements of 15A NCAC 02T and the Division's Minimum Design Criteria and that **plans, specifications and supporting documents have been prepared in accordance with, 15A NCAC 02T, 15A NCAC 02T .0300, Division policies and good engineering practices.**

While no upfront engineering design documents are required for submittal, in accordance with 15A NCAC 02T .0305(b), design documents must be prepared prior to submittal of a fast track permit application to the Division. This would include plans, design calculations, and project specifications referenced in 15A NCAC 02T .0305 and the applicable minimum design criteria. These documents shall be available upon request by the Division.

Projects that are deemed permitted (do not require a permit from the Division) are explained in 15A NCAC 02T.0303.

Projects not eligible for review via the fast track process (must be submitted for full technical review):

- Projects that require an environmental assessment in accordance with 15A NCAC 1C .0100;
- Projects that do not meet any part of the minimum design criteria (MDC) document;
- Projects that involve a variance from the requirements of 15A NCAC 2T;
- Pressure sewer systems utilizing septic tank-effluent pumps (STEPs) or simplex grinder pumps;
- STEP or simplex grinder pumps connecting to pressurized systems (e.g. force mains);
- Vacuum sewer systems.

**General** – When submitting an application, please use the following instructions as a checklist in order to ensure all required items are submitted. Adherence to these instructions and checking the provided boxes will help produce a quicker review time and reduce the amount of requested additional information. **Failure to submit all required items will necessitate additional processing and review time, and may result in return of the application.** Unless otherwise noted, the Applicant shall submit one original and one copy of the application and supporting documentation.

**A. One Original and One Copy of Application and Supporting Documents**

- ☒ Required unless otherwise noted

**B. Cover Letter (Required for All Application Packages):**

- ☒ List all items included in the application package, as well as a brief description of the requested permitting action.
- Be specific as to the system type, number of homes served, flow allocation required, etc.
- If necessary for clarity, include attachments to the application form.

**C. Application Fee (All New and Major Modification Application Packages):**

- ☒ Submit a check or money order in the amount of \$480.00 dated within 90 days of application submittal.
- Payable to North Carolina Department of Environmental Quality (NCDEQ)

**D. Fast Track (Form: FTA 04-16) Application (Required for All Application Packages):**

- ☒ Submit the completed and appropriately executed application.
- If necessary for clarity or due to space restrictions, attachments to the application may be made.
- ☐ If the Applicant Type in Item I.2 is a corporation or company, provide documentation it is registered for business with the North Carolina Secretary of State.
- ☐ If the Applicant Type in Item I.2 is a partnership or d/b/a, enclose a copy of the certificate filed with the Register of Deeds in the county of business.
- ☒ The Project Name in Item II.1 shall be consistent with the project name on the flow acceptance letters, agreements, etc.
- ☒ The Professional Engineer's Certification on Page 5 of the application shall be signed, sealed and dated by a North Carolina licensed Professional Engineer.
- ☒ The Applicant's Certification on Page 5 of the application shall be signed in accordance with 15A NCAC 02T .0106(b). Per 15A NCAC 02T .0106(c), an alternate person may be designated as the signing official if a delegation letter is provided from a person who meets the criteria in 15A NCAC 02T .0106(b).

**E. Flow Tracking/Acceptance Form (Form: FTSE 04-16) (If Applicable):**

- ☒ Submit the completed and executed FTSE form from the owners of the downstream sewers and treatment facility.
- Multiple forms may be required where the downstream sewer owner and wastewater treatment facility are different.
- The flow acceptance indicated in form FTSE must not expire prior to permit issuance and must be dated less than one year prior to the application date.
- Submittal of this application and form FTSE indicates that owner has adequate capacity and will not violate G.S. 143-215.67(a).
- Intergovernmental agreements or other contracts will not be accepted in lieu of a project-specific FTSE.

**F. Site Maps (All Application Packages):**

- ☒ Submit an 8.5-inch x 11-inch color copy of a USGS Topographic Map of sufficient scale to identify the entire project area and closest surface waters.
- Location of the project (gravity sewer, pump stations & force main)
- Downstream connection points and permit number (if known) for the receiving sewer
- ☒ Include a street level map (aerial) showing general project area so that Division staff can easily locate it in the field.

**G. Existing Permit (All Modification Packages):**

- ☒ Submit the most recently issued existing permit.
- ☒ Provide a list of any items within the permit the Applicant would like the Division to address during the permit modification (i.e., permit description, flow allocation, treatment facility, etc.).

**H. Power Reliability Plan (Required if portable reliability option utilized for Pump Station):**

- ☐ Per 15A NCAC 02T .0305(h)(1), submit documentation of power reliability for pumping stations.
- This alternative is only available for average daily flows less than 15,000 gallons per day
- It shall be demonstrated to the Division that the portable source is owned or contracted by the applicant and is compatible with the station. The Division will accept a letter signed by the applicant (see 15A NCAC 02T .0106(b)) or proposed contractor, stating that "the portable power generation unit or portable, independently-powered pumping units, associated appurtenances and personnel are available for distribution and operation of this pump station."
- If the portable power source or pump is dedicated to multiple pump stations, an evaluation of all the pump stations' storage capacities and the rotation schedule of the portable power source or pump, including travel timeframes, shall be provided in the case of a multiple station power outage. (Required at time of certification)

**I. Certificate of Public Convenience and Necessity (All Application Packages for Privately-Owned Public Utilities):**

- ☐ Per 15A NCAC 02T .0115(a)(1) provide the Certificate of Public Convenience and Necessity from the North Carolina Utilities Commission demonstrating the Applicant is authorized to hold the utility franchise for the area to be served by the sewer extension, or
- ☐ Provide a letter from the North Carolina Utilities Commission's Water and Sewer Division Public Staff stating an application for a franchise has been received and that the service area is contiguous to an existing franchised area or that franchise approval is expected.

**J. Operational Agreements (Applications from HOA/POA and Developers for lots to be sold):**

- ☐ Home/Property Owners' Associations
  - ☐ Per 15A NCAC 02T .0115(c), submit the properly executed Operational Agreement (FORM: HOA).
  - ☐ Per 15A NCAC 02T .0115(c), submit a copy of the Articles of Incorporation, Declarations and By-laws.
- ☐ Developers of lots to be sold
  - ☐ Per 15A NCAC 02T .0115(b), submit the properly executed Operational Agreement (FORM: DEV).

*For more information, visit the Division's collection systems [website](#)*

**THE COMPLETED APPLICATION PACKAGE INCLUDING ALL SUPPORTING INFORMATION AND MATERIALS, SHOULD BE SENT TO THE APPROPRIATE REGIONAL OFFICE:**

<b>REGIONAL OFFICE</b>	<b>ADDRESS</b>	<b>COUNTIES SERVED</b>
<b><u>Asheville Regional Office</u></b> <b><u>Water Quality Section</u></b>	2090 US Highway 70 Swannanoa, North Carolina 28778 (828) 296-4500 (828) 299-7043 Fax	Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Yancey
<b><u>Fayetteville Regional Office</u></b> <b><u>Water Quality Section</u></b>	225 Green Street Suite 714 Fayetteville, North Carolina 28301-5094 (910) 433-3300 (910) 486-0707 Fax	Anson, Bladen, Cumberland, Harnett, Hoke, Montgomery, Moore, Robeson, Richmond, Sampson, Scotland
<b><u>Mooreville Regional Office</u></b> <b><u>Water Quality Section</u></b>	610 E. Center Avenue Mooreville, North Carolina 28115 (704) 663-1699 (704) 663-6040 Fax	Alexander, Cabarrus, Catawba, Cleveland, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, Union
<b><u>Raleigh Regional Office</u></b> <b><u>Water Quality Section</u></b>	1628 Mail Service Center Raleigh, North Carolina 27699-1628 (919) 791-4200 (919) 788-7159 Fax	Chatham, Durham, Edgecombe, Franklin, Granville, Halifax, Johnston, Lee, Nash, Northampton, Orange, Person, Vance, Wake, Warren, Wilson
<b><u>Washington Regional Office</u></b> <b><u>Water Quality Section</u></b>	943 Washington Square Mall Washington, North Carolina 27889 (252) 946-6481 (252) 975-3716 Fax	Beaufort, Bertie, Camden, Chowan, Craven, Currituck, Dare, Gates, Greene, Hertford, Hyde, Jones, Lenoir, Martin, Pamlico, Pasquotank, Perquimans, Pitt, Tyrrell, Washington, Wayne
<b><u>Wilmington Regional Office</u></b> <b><u>Water Quality Section</u></b>	127 Cardinal Drive Extension Wilmington, North Carolina 28405 (910) 796-7215 (910) 350-2004 Fax	Brunswick, Carteret, Columbus, Duplin, New Hanover, Onslow, Pender
<b><u>Winston-Salem Regional Office</u></b> <b><u>Water Quality Section</u></b>	450 W. Hanes Mill Road Suite 300 Winston-Salem, North Carolina 27105 (336) 776-9800	Alamance, Alleghany, Ashe, Caswell, Davidson, Davie, Forsyth, Guilford, Rockingham, Randolph, Stokes, Surry, Watauga, Wilkes, Yadkin





Division of Water Resources

State of North Carolina  
Department of Environmental Quality  
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15A NCAC 02T .0300 – FAST TRACK SEWER SYSTEM EXTENSION APPLICATION  
FTA 04-16 & SUPPORTING DOCUMENTATION

Application Number: \_\_\_\_\_ (to be completed by DWR)

All items must be completed or the application will be returned

**I. APPLICANT INFORMATION:**

- Applicant's name: Old North State Water Company, LLC (company, municipality, HOA, utility, etc.)
- Applicant type: ☐ Individual ☐ Corporation ☐ General Partnership ☒ Privately-Owned Public Utility  
☐ Federal ☐ State/County ☐ Municipal ☐ Other
- Signature authority's name: John McDonald per 15A NCAC 02T .0106(b)  
Title: Owner
- Applicant's mailing address: 3212 6<sup>th</sup> Avenue South, Suite 200  
City: Birmingham State: AL Zip: 35222-\_\_\_\_
- Applicant's contact information:  
Phone number: (205) 326-3355 Email Address: \_\_\_\_\_

**II. PROJECT INFORMATION:**

- Project name: Briar Chapel - Lift Station "A" & Forcemain Improvements
- Application/Project status: ☐ Proposed (New Permit) ☒ Existing Permit/Project  
If a modification, provide the existing permit number: WQ0029867 and issued date: 5/3/10  
If new construction but part of a master plan, provide the existing permit number: WQ00\_\_\_\_\_
- County where project is located: Chatham
- Approximate Coordinates (Decimal Degrees): Latitude: 35.822307° Longitude: -79.104162°
- Parcel ID (if applicable): 0090383  
(or Parcel ID to closest downstream sewer)

**III. CONSULTANT INFORMATION:**

- Professional Engineer: Mark P. Ashness License Number: 18,894  
Firm: CE Group Inc.  
Mailing address: 301 Glenwood Avenue, Suite 220  
City: Raleigh State: NC Zip: 27603-\_\_\_\_  
Phone number: (919) 367-8790 Email Address: Mark@CEGroupInc.com

**IV. WASTEWATER TREATMENT FACILITY (WWTF) INFORMATION:**

- Facility Name: Briar Chapel WWTP Permit Number: WQ0028552  
Owner Name: Old North State Water Company, LLC

**V. RECEIVING DOWNSTREAM SEWER INFORMATION (if different than WWTF):**

- Permit Number(s): WQ 0039608 Downstream (Receiving) Sewer Size: 14" inch  
System Wide Collection System Permit Number(s) (if applicable): WQCS00372  
Owner Name(s): Old North State Water Company, LLC

**VI. GENERAL REQUIREMENTS**

1. If the Applicant is a Privately-Owned Public Utility, has a Certificate of Public Convenience and Necessity been attached?  
☒ Yes ☐ No ☐ N/A
2. If the Applicant is a Developer of lots to be sold, has a Developer's Operational Agreement (FORM: DEV) been attached?  
☐ Yes ☐ No ☐ N/A
3. If the Applicant is a Home/Property Owners' Association, has an Operational Agreement (FORM: HIOA) been attached?  
☐ Yes ☐ No ☐ N/A
4. Origin of wastewater: (check all that apply):
 

<input checked="" type="checkbox"/> Residential Owned	<input type="checkbox"/> Retail (stores, centers, malls)	<input type="checkbox"/> Car Wash
<input type="checkbox"/> Residential Leased	<input type="checkbox"/> Retail with food preparation/service	<input type="checkbox"/> Hotel and/or Motels
<input type="checkbox"/> School / preschool / day care	<input type="checkbox"/> Medical / dental / veterinary facilities	<input checked="" type="checkbox"/> Swimming Pool / Clubhouse
<input type="checkbox"/> Food and drink facilities	<input type="checkbox"/> Church	<input type="checkbox"/> Swimming Pool/Filter Backwash
<input type="checkbox"/> Businesses / offices / factories	<input type="checkbox"/> Nursing Home	<input type="checkbox"/> Other (Explain in Attachment)
5. Nature of wastewater : 100 % Domestic/Commercial \_\_\_\_\_ % Commercial  
0 % Industrial (See 15A NCAC 02T .0103(20))  
 \_\_\_\_\_ Is there a Pretreatment Program in effect? ☐ Yes ☐ No
6. Has a flow reduction been approved under 15A NCAC 02T .0114(f)? ☒ Yes ☐ No  
 ➤ **If yes, provide a copy of flow reduction approval letter**
7. Summarize wastewater generated by project:

Establishment Type (see 02T.0114(f))	Daily Design Flow <sup>a,b</sup>	No. of Units	Flow
No Change	gal/		GPD
	gal/		GPD
	gal/		GPD
	gal/		GPD
	gal/		GPD
	gal/		GPD
		<i>Total</i>	98500 GPD

- a See 15A NCAC 02T .0114(b), (d), (e)(1) and (e)(2) for caveats to wastewater design flow rates (i.e., minimum flow per dwelling; proposed unknown non-residential development uses; public access facilities located near high public use areas; and residential property located south or east of the Atlantic Intracoastal Waterway to be used as vacation rentals as defined in G.S. 42A-4).
  - b Per 15A NCAC 02T .0114(e), design flow rates for establishments not identified [in table 15A NCAC 02T.0114] shall be determined using available flow data, water using fixtures, occupancy or operation patterns, and other measured data.
8. Wastewater generated by project: 0 GPD (per 15A NCAC 02T .0114)  
 ➤ Do not include future flows or previously permitted allocations  
 If permitted flow is zero, indicate why:  
☐ Pump Station or Gravity Sewer where flow will be permitted in subsequent permits that connect to this line  
☐ Flow has already been allocated in Permit Number: \_\_\_\_\_  
☒ Rehabilitation or replacement of existing sewer with no new flow expected  
☐ Other (Explain): \_\_\_\_\_

**VII. GRAVITY SEWER DESIGN CRITERIA (If Applicable) - 02T .0305 & MDC (Gravity Sewers):**

1. Summarize gravity sewer to be permitted:

Size (inches)	Length (feet)	Material
8	22,450	PVC

- Section II & III of the MDC for Permitting of Gravity Sewers contains information related to design criteria
- Section III contains information related to minimum slopes for gravity sewer(s)
- **Oversizing lines to meet minimum slope requirement is not allowed and a violation of the MDC**

**VIII. PUMP STATION DESIGN CRITERIA (If Applicable) - 02T .0305 & MDC (Pump Stations/Force Mains):****COMPLETE FOR EACH PUMP STATION INCLUDED IN THIS PROJECT**

1. Pump station number or name: Briar Chapel Lift Station "A"
2. Approximate Coordinates (Decimal Degrees): Latitude: 35.822929° Longitude: -79.103781°
3. Design flow of the pump station: 1.12 millions gallons per day (firm capacity)
4. Operational point(s) of the pump(s): 778 gallons per minute at 206 feet total dynamic head (TDH)
5. Summarize the force main to be permitted (for this Pump Station):

Size (inches)	Length (feet)	Material
12 (10" ID)	622	HDPE (DR 9)
10	20	DIP

6. Power reliability in accordance with
- 15A NCAC 02T .0305(h)(1)
- :

☒ Standby power source or pump with automatic activation and telemetry - 15A NCAC 02T .0305(h)(1)(B);

- Required for all pump stations with an average daily flow greater than or equal to 15,000 gallons per day
- Must be permanent to facility

Or if the pump station has an average daily flow less than 15,000 gallons per day:

☐ Portable power source with manual activation, quick-connection receptacle and telemetry - 15A NCAC 02T .0305(h)(1)(C)

or

☐ Portable pumping unit with plugged emergency pump connection and telemetry - 15A NCAC 02T .0305(h)(1)(C):

- It shall be demonstrated to the Division that the portable source is owned or contracted by the applicant (draft agreement) and is compatible with the station.
- If the portable power source or pump is dedicated to multiple pump stations, an evaluation of all the pump stations' storage capacities and the rotation schedule of the portable power source or pump, including travel timeframes, shall be provided in the case of a multiple station power outage.

**VII. GRAVITY SEWER DESIGN CRITERIA (If Applicable) - 02T .0305 & MDC (Gravity Sewers):**

1. Summarize gravity sewer to be permitted:

Size (inches)	Length (feet)	Material

- Section II & III of the MDC for Permitting of Gravity Sewers contains information related to design criteria
- Section III contains information related to minimum slopes for gravity sewer(s)
- **Oversizing lines to meet minimum slope requirement is not allowed and a violation of the MDC**

**VIII. PUMP STATION DESIGN CRITERIA (If Applicable) – 02T .0305 & MDC (Pump Stations/Force Mains):****COMPLETE FOR EACH PUMP STATION INCLUDED IN THIS PROJECT**

1. Pump station number or name: Briar Chapel Lift Station "B"
2. Approximate Coordinates (Decimal Degrees): Latitude: 35.8313° Longitude: -79.1083°
3. Design flow of the pump station: 0.55 millions gallons per day (firm capacity)
4. Operational point(s) of the pump(s): 386 gallons per minute at 65 feet total dynamic head (TDH)
5. Summarize the force main to be permitted (for this Pump Station):

Size (inches)	Length (feet)	Material
6	1800	PVC
4	850	PVC

6. Power reliability in accordance with 15A NCAC 02T .0305(h)(1):

- ☒ Standby power source or pump with automatic activation and telemetry - 15A NCAC 02T .0305(h)(1)(B);
- Required for all pump stations with an average daily flow greater than or equal to 15,000 gallons per day
  - Must be permanent to facility

Or if the pump station has an average daily flow less than 15,000 gallons per day:

- ☐ Portable power source with manual activation, quick-connection receptacle and telemetry - 15A NCAC 02T .0305(h)(1)(C)

or

- ☐ Portable pumping unit with plugged emergency pump connection and telemetry - 15A NCAC 02T .0305(h)(1)(C):

- It shall be demonstrated to the Division that the portable source is owned or contracted by the applicant (draft agreement) and is compatible with the station.
- If the portable power source or pump is dedicated to multiple pump stations, an evaluation of all the pump stations' storage capacities and the rotation schedule of the portable power source or pump, including travel timeframes, shall be provided in the case of a multiple station power outage.



**IX. SETBACKS & SEPARATIONS – (02B .0200 & 15A NCAC 02T .0305(f)):**

1. Does the project comply with all separations found in 15A NCAC 02T .0305(f) & (g) ☒ Yes ☐ No

➤ 15A NCAC 02T.0305(f) contains minimum separations that shall be provided for sewer systems:

Setback Parameter*	Separation Required
Storm sewers and other utilities not listed below (vertical)	24 inches
Water mains (vertical-water over sewer including in benched trenches)	18 inches
Water mains (horizontal)	10 feet
Reclaimed water lines (vertical - reclaimed over sewer)	18 inches
Reclaimed water lines (horizontal - reclaimed over sewer)	2 feet
**Any private or public water supply source, including any wells, WS-I waters of Class I or Class II impounded reservoirs used as a source of drinking water	100 feet
**Waters classified WS (except WS-I or WS-V), B, SA, ORW, HQW, or SB from normal high water (or tide elevation) and wetlands (see item IX.2)	50 feet
**Any other stream, lake, impoundment, or ground water lowering and surface drainage ditches	10 feet
Any building foundation	5 feet
Any basement	10 feet
Top slope of embankment or cuts of 2 feet or more vertical height	10 feet
Drainage systems and interceptor drains	5 feet
Any swimming pools	10 feet
Final earth grade (vertical)	36 inches

- 15A NCAC 02T.0305(g) contains alternatives where separations in 02T.0305(f) cannot be achieved.  
 ➤ \*\*Stream classifications can be identified using the Division's NC Surface Water Classifications webpage  
 ➤ If noncompliance with 02T.0305(f) or (g), see Section X of this application

2. Does the project comply with separation requirements for wetlands? (50 feet of separation) ☒ Yes ☐ No ☐ N/A

- See the Division's draft separation requirements for situations where separation cannot be met  
 ➤ No variance is required if the alternative design criteria specified in design and construction  
 ➤ As built documents should reference the location of areas effected

3. Does the project comply with setbacks found in the river basin rules per 15A NCAC 02B .0200? ☒ Yes ☐ No ☐ N/A

➤ This would include Trout Buffered Streams per 15A NCAC 2B.0202

4. Does the project require coverage/authorization under a 404 Nationwide or individual permits or 401 Water Quality Certifications? ☐ Yes ☒ No

➤ Information can be obtained from the 401 & Buffer Permitting Branch

5. Does project comply with 15A NCAC 02T.0105(c)(6) (additional permits/certifications)? ☒ Yes ☐ No

Per 15A NCAC 02T.0105(c)(6), directly related environmental permits or certification applications are being prepared, have been applied for, or have been obtained. Issuance of this permit is contingent on issuance of dependent permits (erosion and sedimentation control plans, stormwater management plans, etc.).

6. Does this project include any sewer collection lines that are deemed "high-priority?"

Per 15A NCAC 02T.0402, "high-priority sewer" means "any aerial sewer, sewer contacting surface waters, siphon, or sewer positioned parallel to streambanks that is subject to erosion that undermines or deteriorates the sewer.

☐ Yes ☒ No ☐ N/A

➤ If yes, include an attachment with details for each line, including type (aerial line, size, material, and location).

**High priority lines shall be inspected by the permittee or its representative at least once every six-months and inspections documented per 15A NCAC 02T.0403(a)(5) or the permittee's individual System-Wide Collection permit.**

**X. CERTIFICATIONS:**

1. Does the submitted system comply with 15A NCAC 02T, the Minimum Design Criteria for the Permitting of Pump Stations and Force Mains (latest version), and the Gravity Sewer Minimum Design Criteria (latest version) as applicable?

☒ Yes☐ No

If No, complete and submit the Variance/Alternative Design Request application (VADC 10-14) and supporting documents for review. Approval of the request is required prior to submittal of the Fast Track Application and supporting documents.

2. Professional Engineer's Certification:

I, Mark P. Schmass attest that this application for  
(Professional Engineer's name from Application Item III.1.)

has been reviewed by me and is accurate, complete and consistent with the information supplied in the plans, specifications, engineering calculations, and all other supporting documentation to the best of my knowledge. I further attest that to the best of my knowledge the proposed design has been prepared in accordance with the applicable regulations, Gravity Sewer Minimum Design Criteria for Gravity Sewers (latest version), and the Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains (latest version). Although other professionals may have developed certain portions of this submittal package, inclusion of these materials under my signature and seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design.

NOTE – In accordance with General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application package shall be guilty of a Class 2 misdemeanor, which may include a fine not to exceed \$10,000, as well as civil penalties up to \$25,000 per violation.

North Carolina Professional Engineer's seal, signature, and date:



3. Applicant's Certification per 15A NCAC 02T .0106(b):

I, John McDonald - Manager attest that this application for  
(Signature Authority's name & title from Application Item I.3.)

has been reviewed by me and is accurate and complete to the best of my knowledge. I understand that if all required parts of this application are not completed and that if all required supporting documentation and attachments are not included, this application package is subject to being returned as incomplete. I understand that any discharge of wastewater from this non-discharge system to surface waters or the land will result in an immediate enforcement action that may include civil penalties, injunctive relief, and/or criminal prosecution. I will make no claim against the Division of Water Resources should a condition of this permit be violated. I also understand that if all required parts of this application package are not completed and that if all required supporting information and attachments are not included, this application package will be returned to me as incomplete.

NOTE – In accordance with General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application package shall be guilty of a Class 2 misdemeanor, which may include a fine not to exceed \$10,000 as well as civil penalties up to \$25,000 per violation.

Signature: [Signature]Date: 11/16/20

State of North Carolina  
Department of Environmental Quality  
Division of Water Resources

Flow Tracking for Sewer Extension Applications  
(FTSE 10-18)

Entity Requesting Allocation: Old North State Water Company

Project Name for which flow is being requested: Briar Chapel - LS A & Forcemain

*More than one FTSE may be required for a single project if the owner of the WWTP is not responsible for all pump stations along the route of the proposed wastewater flow.*

I. Complete this section only if you are the owner of the wastewater treatment plant.

a. WWTP Facility Name: Briar Chapel WWTP

b. WWTP Facility Permit #: WQ0028552

	<i>All flows are in MGD</i>
c. WWTP facility's permitted flow	0.217 / .360 (Const/Permitted)
d. Estimated obligated flow not yet tributary to the WWTP	0.119
e. WWTP facility's actual avg. flow	0.205
f. Total flow for this specific request	0
g. Total actual and obligated flows to the facility	0.324
h. Percent of permitted flow used	149%/90%

II. Complete this section for each pump station you are responsible for along the route of this proposed wastewater flow.

List pump stations located between the project connection point and the WWTP:

Pump Station (Name or Number)	Pump Station Permit No.	Firm Capacity, * MGD	(A) Design Average Daily Flow** (Firm / pf), MGD	(B) Approx. Current Avg. Daily Flow, MGD	(C) Obligated, Not Yet Tributary Daily Flow, MGD	(D)=(B+C) Total Current Flow Plus Obligated Flow	(E)=(A-D) Available Capacity***
LS A	WQ0029687	1.12	0.448	0.12	0.01	0.121	0.327

\* The Firm Capacity (design flow) of any pump station is defined as the maximum pumped flow that can be achieved with the largest pump taken out of service.

\*\* Design Average Daily Flow is the firm capacity of the pump station divided by a peaking factor (pf) not less than 2.5, per Section 2.02(A)(4)(c) of the Minimum Design Criteria.

\*\*\* A Planning Assessment Addendum shall be attached for each pump station located between the project connection point and the WWTP where the Available Capacity is  $\leq 0$ .

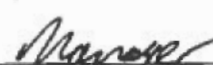
Downstream Facility Name (Sewer): 14" FM

Downstream Permit Number:

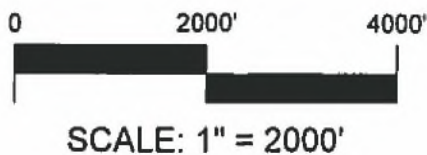
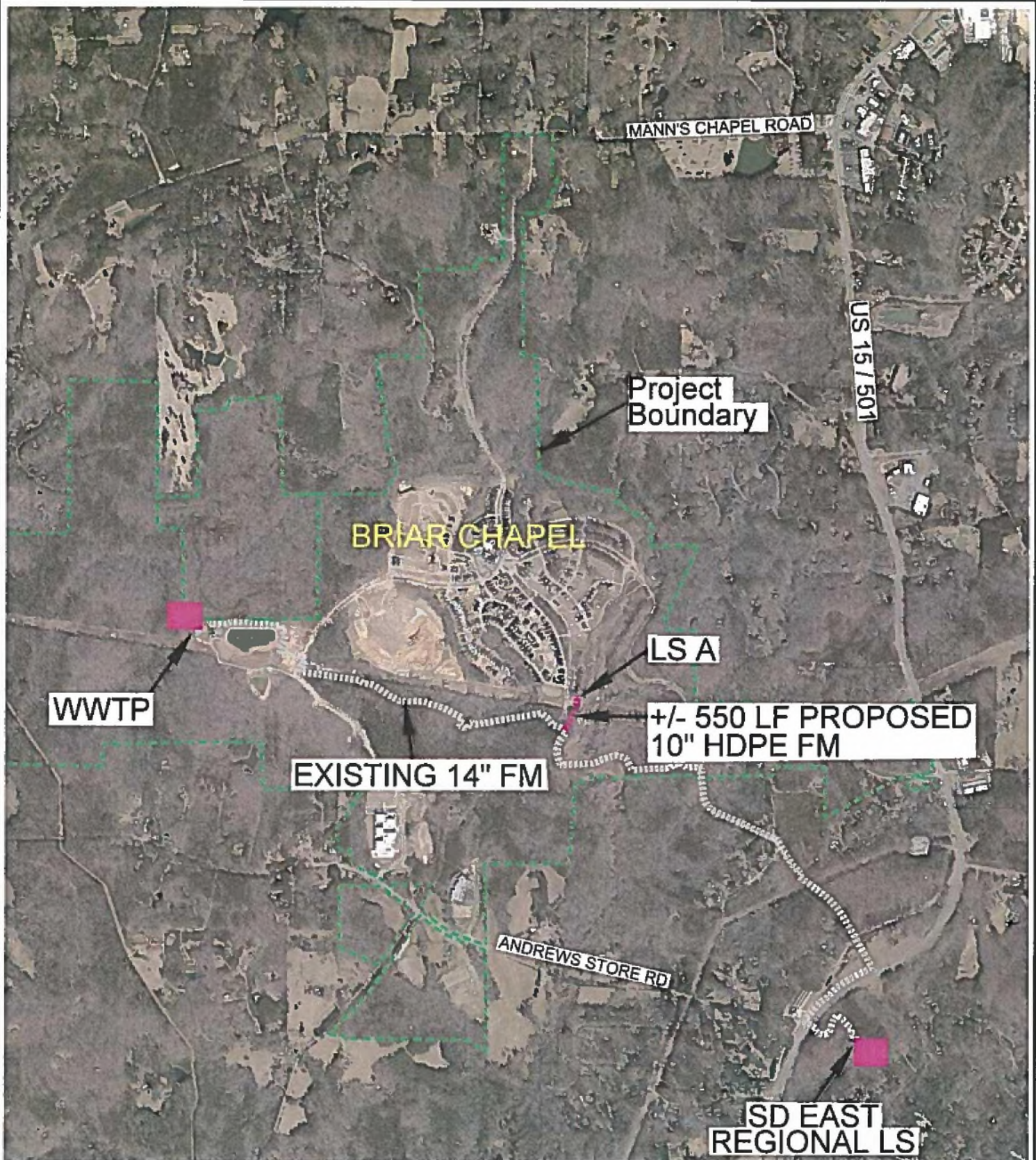
WQ0039608

## III. Certification Statement:

I John McDonald certify to the best of my knowledge that the addition of the volume of wastewater to be permitted in this project has been evaluated along the route to the receiving wastewater treatment facility and that the flow from this project is not anticipated to cause any capacity related sanitary sewer overflows or overburden any downstream pump station en route to the receiving treatment plant under normal circumstances, given the implementation of the planned improvements identified in the planning assessment where applicable. This analysis has been performed in accordance with local established policies and procedures using the best available data. This certification applies to those items listed above in Sections I and II plus all attached planning assessment addendums for which I am the responsible party. Signature of this form certifies that the receiving collection system or treatment works has adequate capacity to transport and treat the proposed new wastewater.

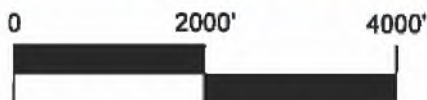
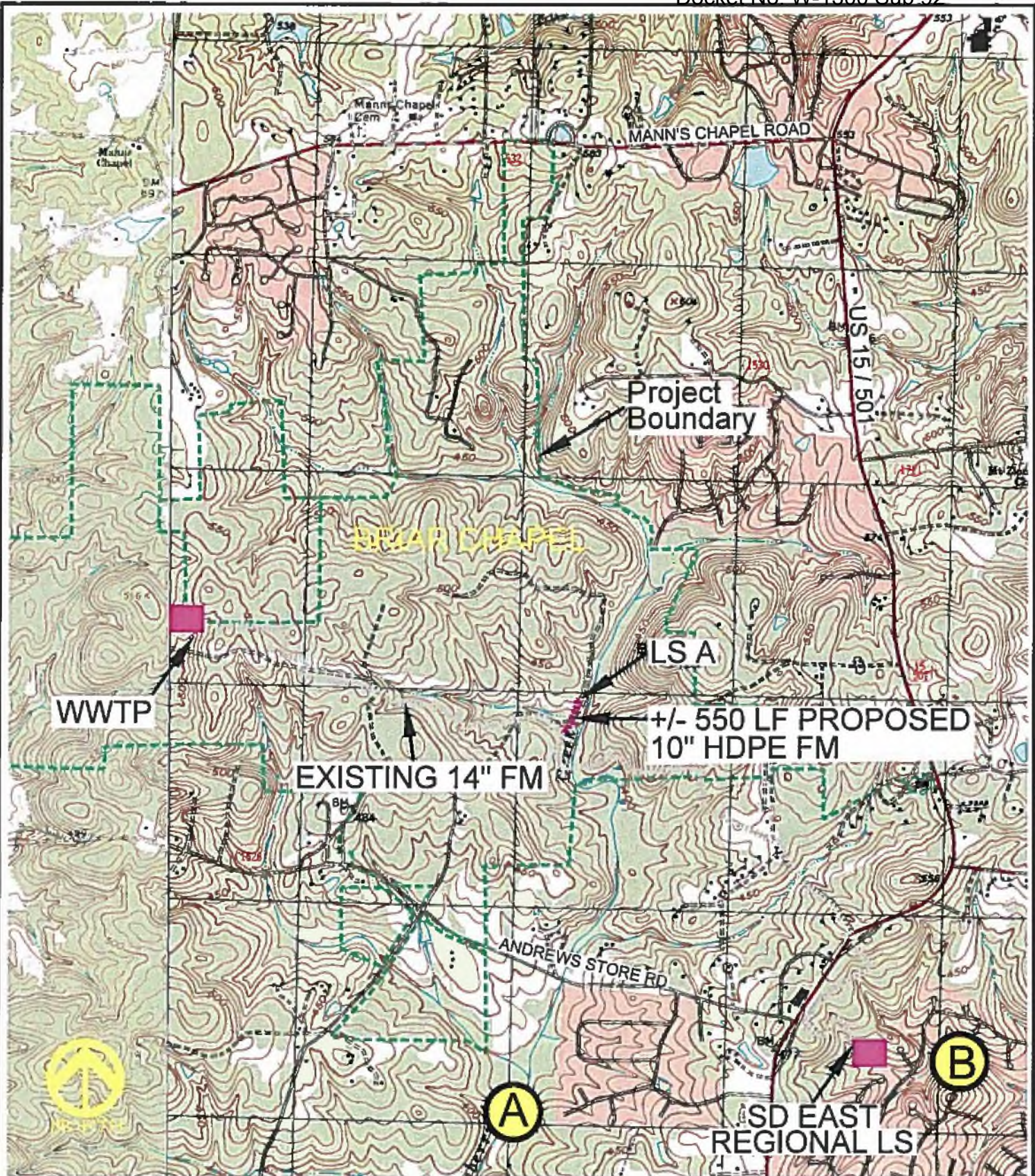
  
\_\_\_\_\_  
Signing Official Signature11/19/20  
\_\_\_\_\_  
Date  
\_\_\_\_\_  
Title of Signing Official





Briar Chapel  
Lift Station "A" &  
Forcemain Improvements  
**USGS MAP**  
September 24, 2020





SCALE: 1" = 2000'

Briar Chapel  
Lift Station "A" &  
Forcemain Improvements

**USGS MAP**

September 24, 2020

FARRINGTON, NC

1993

NDMA 6153 I SE-SERIES V842





**CE GROUP**

301 GLENWOOD AVENUE, SUITE 220

RALEIGH, NC 27603

Phone: (919) 367-8790

E-Mail: [mitch@cegroupinc.com](mailto:mitch@cegroupinc.com)

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Nov 29 2023

TO: NCDENR - DWQ
Raleigh Regional Office
Raleigh, NC 27609
Hand Delivery
ATTENTION: <b>Permitting</b>

<b>Transmittal</b>
DATE: 9/29/2020
PROJECT NO: 605-06
Briar Chapel – Lift Station A Improvements
WQ 0039608
Chatham County, NC

Quantity	Item	Description
2	Original / Copy	NCDENR DWQ Fast-Track Application (FTA 04-16)
2	Original / Copy	NCDENR DWQ Flow Tracking (FTSE 10-18)
1	Original	Project Narrative
1	Original	Aerial 8 ½ x 11
1	Original	USGS 8 ½ x 11
1	Copy	Watershed Classification Form
1	Check	Permit Review Fee \$480.00 – Check #11086
1	Copy	Construction Drawings (Dated 9/28/2020)
1	Copy	Existing Permit – WQ0039608
		NC Dept of Environmental Quality
		SEP 29 2020
		Raleigh Regional Office

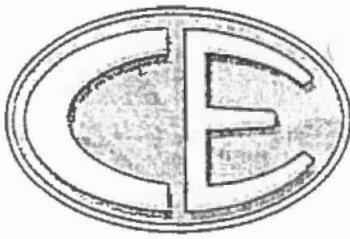
REMARKS Please let us know if you require any additional information.

CC:

Signed

CE Group, Inc.

Joseph M. Craig, PE

**CE GROUP**

301 GLENWOOD AVENUE, SUITE 220  
RALEIGH, NC 27603  
Phone: (919) 367-8790  
E-Mail: mark@cegroupinc.com

**Memorandum**

To: NCDEQ  
From: Mark P Ashness PE, CE Group  
Date: September 25, 2020  
Re: Briar Chapel LS A Modification WQ 0029867

1. LS Design Narrative and Modeling Discussion
2. Site Map Aerial and USGS
3. FTA 04-16
4. FTSE 10-18
5. Sealed LS A Original Plan

**Briar Chapel LS A Lift Station Design Narrative & Modeling Discussion**

LS A is currently rated at 676 GPM (approved plan included). Recently a 14" DIP FM has been permitted to convey flow from the SD East LS directly to the WWTP. This FM is proximate to LS A. LS A currently discharges into an 8" PVC FM. In response to recent multiple line breaks in the 8" PVC FM, we are rerouting the discharge to the new 14" FM. Modeling is included to reflect multiple operating conditions. The rated condition reflects a contributing flow of 1300 GPM from SD East LS (+/- 1100 GPM) and a future Ph 14 LS (+/- 200 GPM).

The new LS A rated flow increases to +/- 778 GPM (utilizing a 14" Impeller). Without contributing flow, LS A will discharge +/- 1167 GPM. Both of these scenarios exceed 2 FPS in the 12" HDPE and 14" DIP FM. The current 100 HP pumps and controls at LS A can accommodate a future increase in impeller size if necessary.

Given that a significant static head condition between LS A and the WWTP, a 6" surge pressure valve and vault will also be installed.

An Alternate Improvement (replace backup generator) a Natural Gas Dri-Prime System will also be considered. The Dri-prime system provides a complete backup not reliant on the existing LS controls.

All calculations are consistent with the MDC for Permitting of Pump Stations and FM 03/08

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SEP 29 2021





Title: SD East Regional LS

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P-13

Hydromatic S4T Pump Curve

NOTE FOR USE WITH ANTAR RAIL SYSTEM ONLY

CLIPPER  
14" IMP





CURRENT  
PUMPING  
TOGETHER  
778 GPM

### COMPARISON TO MODEL

Project: Briar Chapel Shared Date: SEPT 23, 2020  
 Description: Current Rated  
 VALIDATION OF MODEL  
 Pump Station Design:

A Target Pumping Rate 778 GPM 175 GPM Qddr

#### B Piping

Force Main	14 D.P.	10 HDPE
Total Force Main Length	7,100 ft.	650
Friction Coefficient	C= 125	C= 140
Target Pumping Rate	2,078 gpm	778 gpm
Velocity	4.53 fps	3.13
Headloss in FM per 1,000 ft	5.02 ft	3.41
Headloss	35.67 ft	2.21
Total Projected FM Headloss	37.88 ft.	

#### C Dimensions and Elevations

##### 1 Wet Well

Inside Dimensions	10.00 ft Diameter	13.50 ft depth
Pump Station Rim Elevation	417.50 ft MSL	
Invert of Influent Line	409.10 ft MSL	
High Level Alarm	411.50 ft MSL	
Lag Pump On	410.50 ft MSL	
Lead Pump On	410.20 ft MSL	
Pump Off	409.25 ft MSL	
Bottom Wet Well	404.00 ft MSL	
Detention Volume	1,145 gal	
Force Main High Point	570.00 ft MSL	
Force Main Discharge Elevation	570.00 ft MSL	

##### 2 Cycle Time

Pump On Time = Detention Volume / (Pumping Rate - Q)	1.90 min
Pump Off Time = Detention Volume / Q	6.54 min
Pumping Cycle = Pump On + Pump Off	8.44 min
Cycles per Hour	7.11 cycles

#### D System Works

##### 1 Static Head

Force Main Max. Elev	570.00 ft
Pump Off	409.25 ft
Total Static Lift	161.75 ft

##### 2 Station Losses

	8" DIP	778 GPM	4.97 FPS
a Velocity		K	
b Station Losses			
Entrance	1 ea	0.50	0.50
Plug Valve	1 ea	1.00	1.00
Check Valve	1 ea	2.20	2.20
90 degree bends	4 ea	0.25	1.00
Tee (Branch Flow)	1 ea	0.75	0.75
Exit	1 ea	1.00	1.00
		Total Equivalent K	6.45
Fitting Loss	2.47 ft.		

##### c Piping

Force Main	8 DIP
Total Force Main Length	50 ft
Friction Coefficient	C= 125
Target Pumping Rate	778 gpm
Velocity	4.97 fps
Headloss in FM per 1,000 ft	12.45 ft
Headloss	0.62 ft.
Total Station Loss	3.10 ft.

Anticipated TDH 203 FT TDH

Good to go in Model ✓

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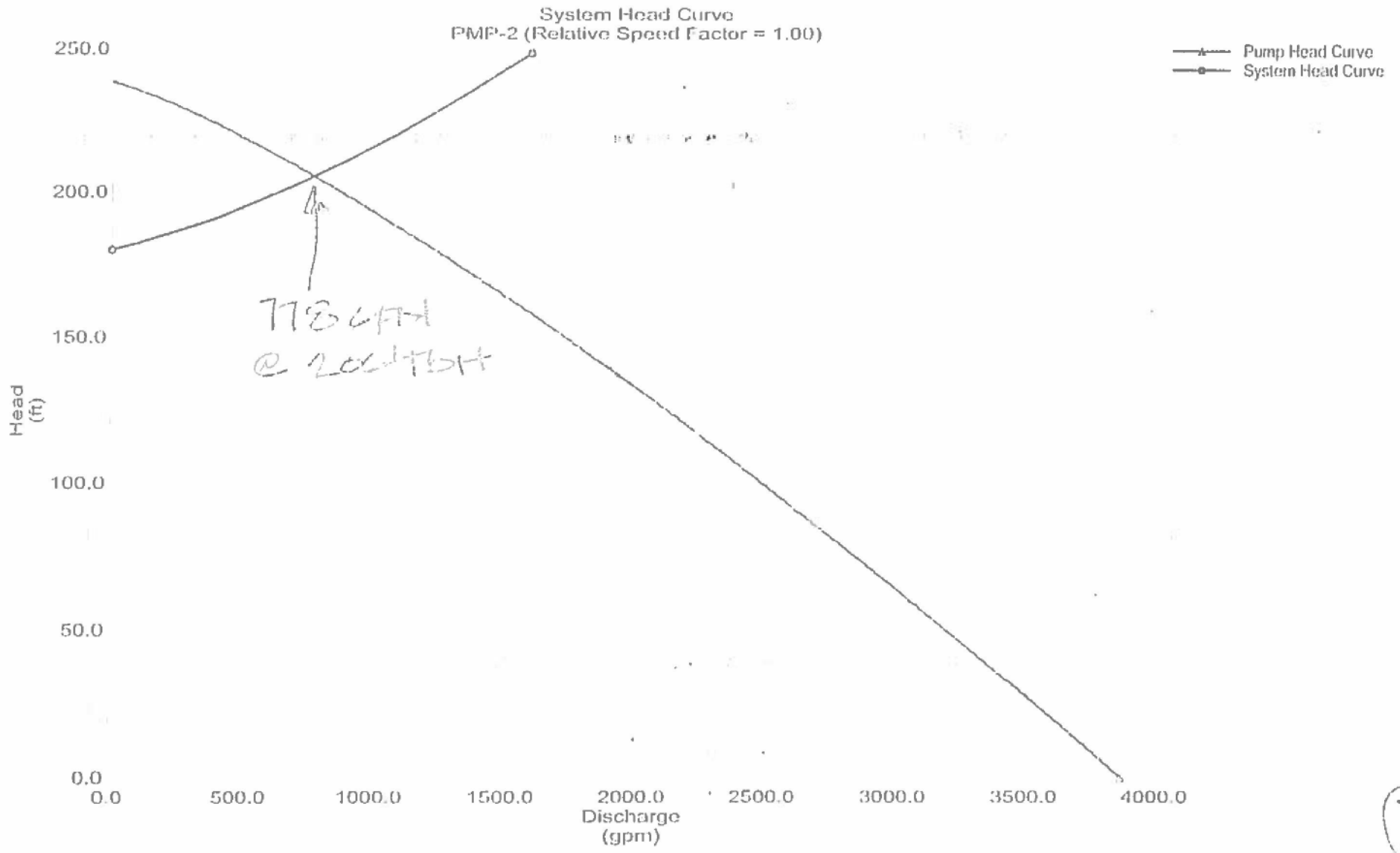
CE Group

Watertown, CT 06795 USA +1-203-755-1666



# Graph

LSA  
SYSTEM  
CURVE  
PUMP



(Y)

P-10	1,250.00	14.0	Ductile Iro	125.0	false	2.50	Open	2,077.71	583.17	576.21	6.96	5.57	4.33
P-11	1,100.00	14.0	Ductile Iro	125.0	false	2.50	Open	2,077.71	576.21	570.00	6.21	5.65	4.33
P-12	165.00	10.0	PVC	140.0	false	2.50	Open	777.71	406.00	405.05	0.95	5.75	3.18
P-13	574.00	14.0	Ductile Iro	125.0	false	2.50	Open	1,300.00	609.78	608.29	1.49	2.59	2.71
P-14	3,800.00	14.0	Ductile Iro	125.0	false	2.50	Open	2,077.71	608.29	588.63	19.66	5.17	4.33
P-15	605.00	10.0	PVC	140.0	false	2.50	Open	777.71	610.72	608.29	2.43	4.02	3.18

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510.00	Zone	Demand	0.00	Fixed	J-5	0.00	588.63	34.02
535.00	Zone	Demand	0.00	Fixed	J-6	0.00	583.17	20.84
560.00	Zone	Demand	0.00	Fixed	J-7	0.00	576.21	7.01
415.00	Zone	Demand	0.00	Fixed	J-8	0.00	608.29	83.63

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LSA (B)  
CURRENT  
PUMPING  
SLOPE  
1167 GPM

COMPARISON TO MODEL

Project: Briar Chapel  
Current Rated  
Description:  
VALIDATION OF MODEL  
Pump Station Design:

Alone

Date: SEPT 23 2020

A. Target Pumping Rate 1,167 GPM 175 GPM "QdM"

B. Piping

Force Main	14 DIP	10 HDPE
Total Force Main Length	7,100 ft	650
Friction Coefficient	C= 125	C= 140
Target Pumping Rate	1,167 gpm	1,167 gpm
Velocity	2.43 fps	4.77
Headloss in FM per 1,000 ft.	1.73 ft	7.21
Headloss	12.27 ft	4.69
Total Projected FM Headloss	16.95 ft.	

C. Dimensions and Elevations

1. Wet Well

Inside Dimensions	10.00 ft Diameter	13.50 ft depth
Pump Station Rim Elevation	417.50 ft. MSL	
Invert of Influent Line	409.10 ft. MSL	
High Level Alarm	411.50 ft. MSL	
Lag Pump On	410.80 ft. MSL	
Lead Pump On	410.20 ft. MSL	
Pump Off	408.25 ft. MSL	
Bottom Wet Well	404.00 ft. MSL	
Detention Volume	1,145 gal	
Force Main High Point	570.00 ft. MSL	
Force Main Discharge Elevation	570.00 ft. MSL	

2. Cycle Time

Pump On Time = Detention Volume (Pumping Rate - Q)	1.15 min
Pump Off Time = Detention Volume / Q	6.54 min
Pumping Cycle = Pump On + Pump Off	7.70 min
Cycles per Hour	7.80 cycles

D. System Works

1. Static Head

Force Main Max. Elev.	570.00 ft.
Pump Off	408.25 ft.
Total Static Lift	161.75 ft.

2. Station Losses

a. Velocity	8" DIP	1,167 GPM	7.45 FPS
b. Station Losses		K	
Entrance	1 ea	0.50	0.50
Plug Valve	1 ea	1.00	1.00
Check Valve	1 ea	2.20	2.20
90 degree bends	4 ea	0.25	1.00
Tee (Branch Flow)	1 ea	0.75	0.75
Exit	1 ea	1.00	1.00
		Total Equivalent K	6.45
Fitting Loss	5.56 ft.		

c. Piping

Force Main	8" DIP
Total Force Main Length	50 ft
Friction Coefficient	C= 125
Target Pumping Rate	1,167 gpm
Velocity	7.45 fps
Headloss in FM per 1,000 ft	26.37 ft
Headloss	1.32 ft.
Total Station Loss	6.88 ft.

Anticipated TDH 186 FT TDH

184' TDH RI 1-2-2020 ✓



Title: SD East Regional LS  
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P-10	1,250.00	14.0	Ductile Iro	125.0	false	2.50	Open	1,167.21	574.48	572.11	2.37	1.90	2.43
P-11	1,100.00	14.0	Ductile Iro	125.0	false	2.50	Open	1,167.21	572.11	570.00	2.11	1.92	2.43
P-12	165.00	10.0	PVC	140.0	false	2.50	Open	1,167.21	406.00	403.94	2.06	12.50	4.77
P-13	574.00	14.0	Ductile Iro	125.0	false	2.50	Open	0.00	583.08	583.08	0.00	0.00	0.00
P-14	3,800.00	14.0	Ductile Iro	125.0	false	2.50	Open	1,167.21	583.08	576.34	6.74	1.77	2.43
P-15	605.00	10.0	PVC	140.0	false	2.50	Open	1,167.21	588.29	583.08	5.21	8.61	4.77

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510.00	Zone	Demand	0.00	Fixed	J-5	0.00	576.34	28.70
535.00	Zone	Demand	0.00	Fixed	J-6	0.00	574.48	17.08
560.00	Zone	Demand	0.00	Fixed	J-7	0.00	572.11	5.24
415.00	Zone	Demand	0.00	Fixed	J-8	0.00	583.08	72.72

Title: SD East Regional LS

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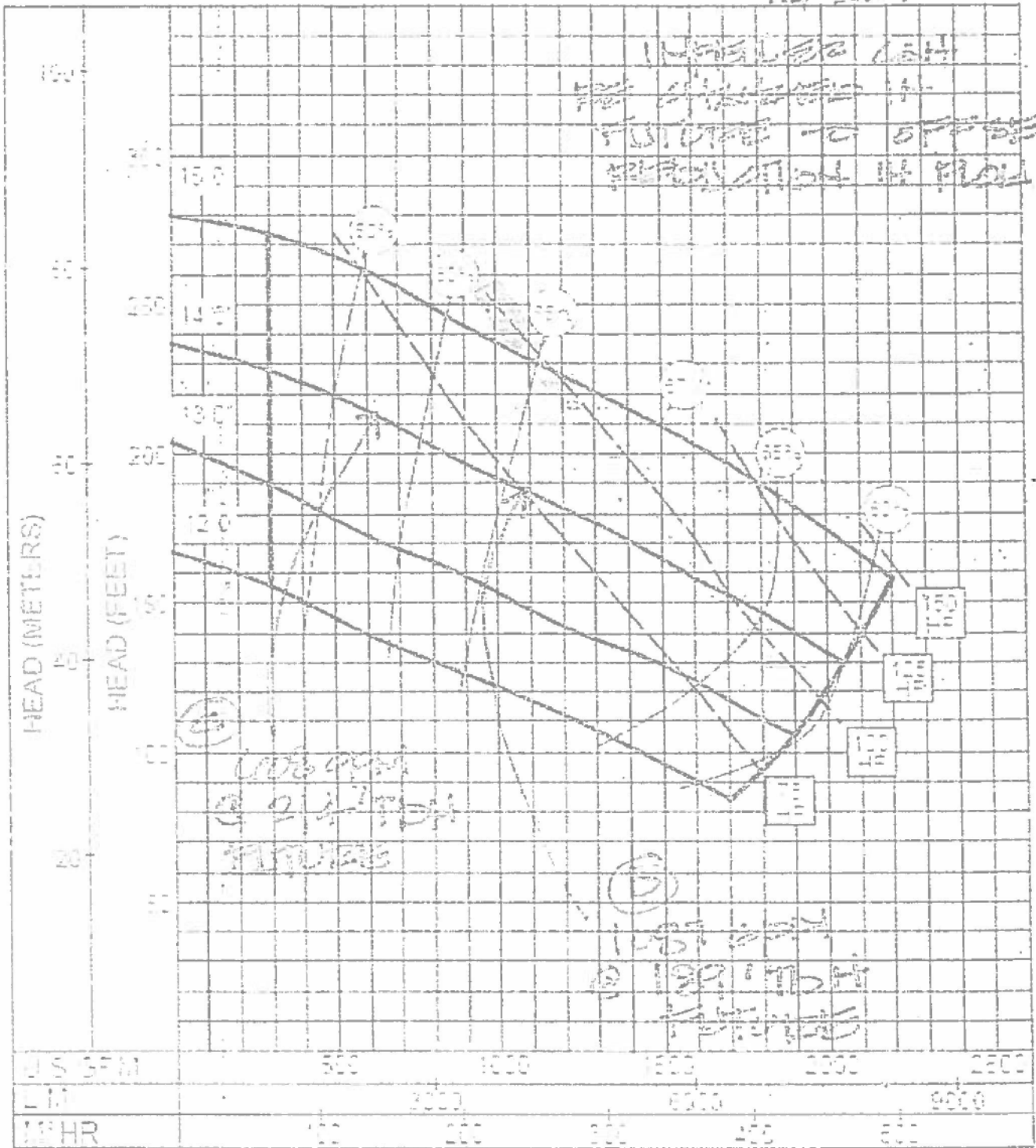
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FUTURE



# Hydromatic S4T Pump Curve

NOTE: FOR USE WITH AMTAA P4.3 SYSTEM ONLY



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P-10	1,250.00	14.0	Ductile Iro	100.0	false	2.50	Open	1,902.62	586.26	577.65	8.61	6.89	3.97
P-11	1,100.00	14.0	Ductile Iro	100.0	false	2.50	Open	1,902.62	577.65	570.00	7.65	6.96	3.97
P-12	165.00	10.0	PVC	120.0	false	2.50	Open	602.62	406.00	405.30	0.70	4.22	2.46
P-13	574.00	14.0	Ductile Iro	100.0	false	2.50	Open	1,300.00	619.98	617.88	2.10	3.66	2.71
P-14	3,800.00	14.0	Ductile Iro	100.0	false	2.50	Open	1,902.62	617.88	592.95	24.93	6.56	3.97
P-15	605.00	10.0	PVC	120.0	false	2.50	Open	602.62	619.81	617.88	1.93	3.19	2.46

510.00	Zone	Demand	0.00	Fixed	J-5	0.00	592.93	33.89
535.00	Zone	Demand	0.00	Fixed	J-6	0.00	586.26	22.18
560.00	Zone	Demand	0.00	Fixed	J-7	0.00	577.65	7.64
415.00	Zone	Demand	0.00	Fixed	J-8	0.00	617.88	87.78



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P-10	1,250.00	14.0	Ductile Iro	100.0	false	2.50	Open	1,087.45	575.74	572.70	3.04	2.43	2.27
P-11	1,100.00	14.0	Ductile Iro	100.0	false	2.50	Open	1,087.45	572.70	570.00	2.70	2.45	2.27
P-12	165.00	10.0	PVC	120.0	false	2.50	Open	1,087.45	406.00	403.86	2.14	12.99	4.44
P-13	574.00	14.0	Ductile Iro	100.0	false	2.50	Open	-0.00	586.92	586.92	0.00	0.00	0.00
P-14	3,800.00	14.0	Ductile Iro	100.0	false	2.50	Open	1,087.45	586.92	578.09	8.83	2.32	2.27
P-15	605.00	10.0	PVC	120.0	false	2.50	Open	1,087.45	592.74	586.92	5.81	9.61	4.44

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Title: SD East Regional L.S  
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576.00	Zone	Demand	0.00	Fixed	J-5	0.00	576.00	29.49
535.00	Zone	Demand	0.00	Fixed	J-6	0.00	575.74	17.62
560.00	Zone	Demand	0.00	Fixed	J-7	0.00	572.70	5.49
415.00	Zone	Demand	0.00	Fixed	J-8	0.00	586.92	74.38

HDPE  
into  
SURGE  
RELIEF



# HDPE Water/Sewer DIPS

PRESSURE-RATED HDPE PIPE



DELIVERING GOOD WATER TO YOU



ANSI/AWWA C906, ASTM F714, ASTM D3035  
ASTM D3350 Cell Class 445574C/E, PPI (TR-4) PE 4710  
ANSI/NSF 61/14

## MARKETS



Potable



Reclaim



Sewer

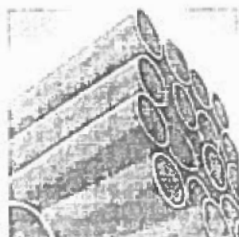


Drainage

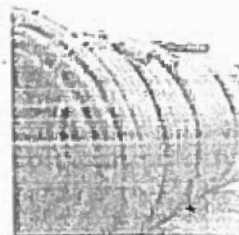


Rehabilitation

## DESCRIPTION



Standard HDPE

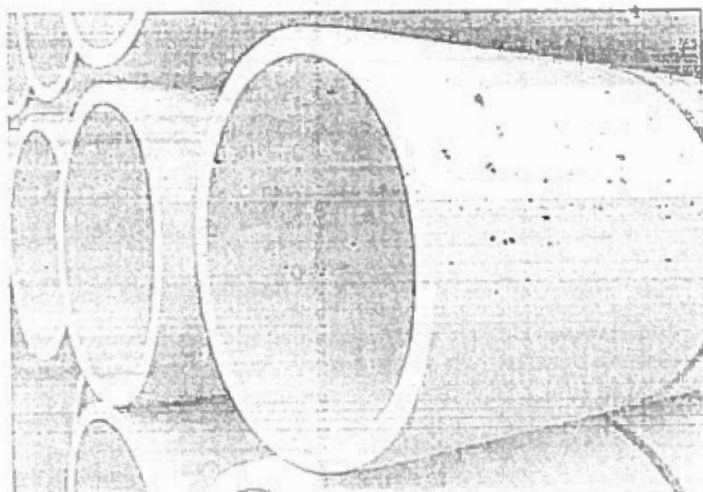


Coiled HDPE

DIPS	PIPE SIZES	ADDITIONAL OPTIONS:
Nominal Laying Length: 40-50 feet (Laying length tolerances are in accordance with AWWA and ASTM standards)	4", 6", 8", 10", 12", 14", 15", 18", 20", 24", 30", 36", 42", 48"	Perforated*: 4", 6", 8" Coll*: 4", 6"
PIPE COLORS:	BLACK W/ COLOR STRIPES	ADDITIONAL COLOR OPTIONS:
<input checked="" type="checkbox"/> Black	<input checked="" type="checkbox"/> Blue <input checked="" type="checkbox"/> Green <input checked="" type="checkbox"/> Purple <input checked="" type="checkbox"/> Gray*	

### AWWA C906

DR 7	335 psi
DR 9	250 psi
DR 11	200 psi
DR 13.5	160 psi
DR 17	125 psi
DR 19	112 psi
DR 21	100 psi
DR 26	80 psi
DR 32.5	63 psi



## BENEFITS



### INSTALLATION

Light weight with long laying length, great for easy transportation and installation.

Pipe applicable for open-trench and slip-lining installation.



### FEATURES

Extremely durable, corrosive, gouging and abrasion resistant.

Features 100 years design life per Florida DOT.

Great flexibility and highly suitable for earthquake-prone areas.

Highest PE pressure rating, resistance to slow crack growth and rapid crack propagation.

# HDPE Water/Sewer DIPS

PRESSURE-RATED HDPE PIPE



## SUBMITTAL AND DATA SHEET

DELIVERING GOOD WATER TO YOU

### HDPE DUCTILE IRON OUTSIDE DIAMETER PRESSURE PIPE

PIPE SIZE (IN)	AVG. O.D. (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)
4	4.610	0.685	3.346	3.87	0.533	3.570	3.13	0.435	3.876	2.62
6	6.610	0.996	4.868	7.99	0.767	5.274	6.46	0.627	5.571	5.41
8	8.610	1.293	6.309	13.75	1.006	6.917	11.12	0.823	7.305	9.32
10	10.610	1.588	7.738	20.88	1.233	8.335	15.72	1.009	8.981	14.01
12	12.610	1.886	9.202	29.25	1.467	10.090	23.65	1.200	10.656	19.82
14	14.610	2.185	10.665	39.29	1.700	11.696	31.77	1.391	12.351	26.63
16	16.610	2.486	12.130	50.82	1.933	13.302	41.08	1.582	14.046	34.44
18	18.610	2.789	13.594	63.82	2.167	14.906	51.61	1.773	15.741	43.25
20	20.610	3.086	15.058	78.31	2.400	16.512	63.32	1.964	17.436	53.07
24	24.610	N/A	N/A	N/A	2.867	19.722	90.35	2.345	20.929	75.69
30	30.610	N/A	N/A	N/A	N/A	N/A	N/A	2.909	25.833	118.46
36	36.610	N/A	N/A	N/A	N/A	N/A	N/A	3.482	30.918	166.84

Product Standard: ANSI/AWWA C906

ASTM F714, ASTM D3035

Pipe Compound: PPI TR-4 PE 4710

ASTM D3350 Cell Class 445574 C/E

Certification: ANSI/NSF 61, ANSI/NSF 14\*

Additional Option: Paricrated (4" - 6")

Nominal Laying Length: 40/50 feet

(Laying length tolerances are in accordance with AWWA and ASTM standards)

Coil option available upon request for size 6" and below.

Installation: JM Eagle™ HDPE Water/Sewer Installation Guide

Manning Coefficient (n) = 0.009

Hazen-Williams Coefficient (c) = 150

\*Supply may vary based on plant location. Please call regarding availability

PIPE SIZE (IN)	AVG. O.D. (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)
4	4.610	0.355	4.045	2.18	0.292	4.202	1.75	0.253	4.204	1.53
6	6.610	0.511	5.517	4.50	0.406	6.030	3.84	0.360	6.130	3.27
8	8.610	0.670	7.630	7.74	0.532	7.922	6.25	0.478	8.041	5.63
10	10.610	0.822	9.375	11.64	0.653	9.761	9.41	0.584	9.862	8.47
12	12.610	0.978	11.127	16.47	0.776	11.555	13.30	0.695	11.727	11.99
14	14.610	1.133	12.599	22.12	0.900	13.362	17.88	0.805	13.593	16.10
16	16.610	1.289	14.567	28.61	1.024	15.209	23.13	0.916	15.458	20.84
18	18.610	1.444	16.433	35.92	1.147	17.068	29.04	1.026	17.325	26.15
20	20.610	1.600	18.208	44.09	1.271	18.905	35.84	1.137	19.190	32.10
24	24.610	1.911	21.743	62.90	1.518	22.582	53.84	1.358	22.921	45.80
30	30.610	2.370	26.978	95.76	1.892	28.123	78.13	1.684	28.430	70.45
36	36.610	2.837	32.286	138.62	2.253	33.624	112.02	2.016	34.025	100.94
42	42.610	N/A	N/A	N/A	2.618	38.950	151.24	2.342	39.535	136.34
48	48.610	N/A	N/A	N/A	2.988	44.465	197.05	2.674	45.131	177.57

PIPE SIZE (IN)	AVG. O.D. (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)	MIN. WALL THICKNESS (IN)	AVG. WALL THICKNESS (IN)	MAX. WALL THICKNESS (IN)
4	4.610	0.229	4.315	1.44	0.185	4.408	1.15	0.146	4.456	0.95
6	6.610	0.329	6.203	2.98	0.265	6.338	2.43	0.212	6.451	1.96
8	8.610	0.431	8.136	5.13	0.348	8.312	4.13	0.278	8.461	3.37
10	10.610	0.529	9.979	7.72	0.427	10.195	6.23	0.342	10.375	5.08
12	12.610	0.629	11.887	10.91	0.506	12.123	8.91	0.406	12.339	7.18
14	14.610	0.729	13.755	14.66	0.588	14.053	11.95	0.471	14.301	9.65
16	16.610	0.829	15.643	18.96	0.669	15.982	15.46	0.535	15.429	12.49
18	18.610	0.929	17.531	23.31	0.750	17.910	19.55	0.600	18.228	15.67
20	20.610	1.029	19.419	29.22	0.831	19.835	23.64	0.665	20.130	19.24
24	24.610	1.229	23.195	41.68	0.992	23.697	33.99	0.794	24.117	27.44
30	30.610	1.524	28.769	64.11	1.231	29.390	52.31	0.985	29.912	42.23
36	36.610	1.824	34.433	91.84	1.473	35.177	74.92	1.178	35.873	60.43
42	42.610	2.119	40.008	123.96	1.712	40.871	101.17	1.369	41.480	81.59
48	48.610	2.419	45.672	161.55	1.954	46.658	131.83	1.563	47.436	106.34



T: (Wall Thickness)

I.D.: (Inside Diameter)

O.D.: (Outside Diameter)

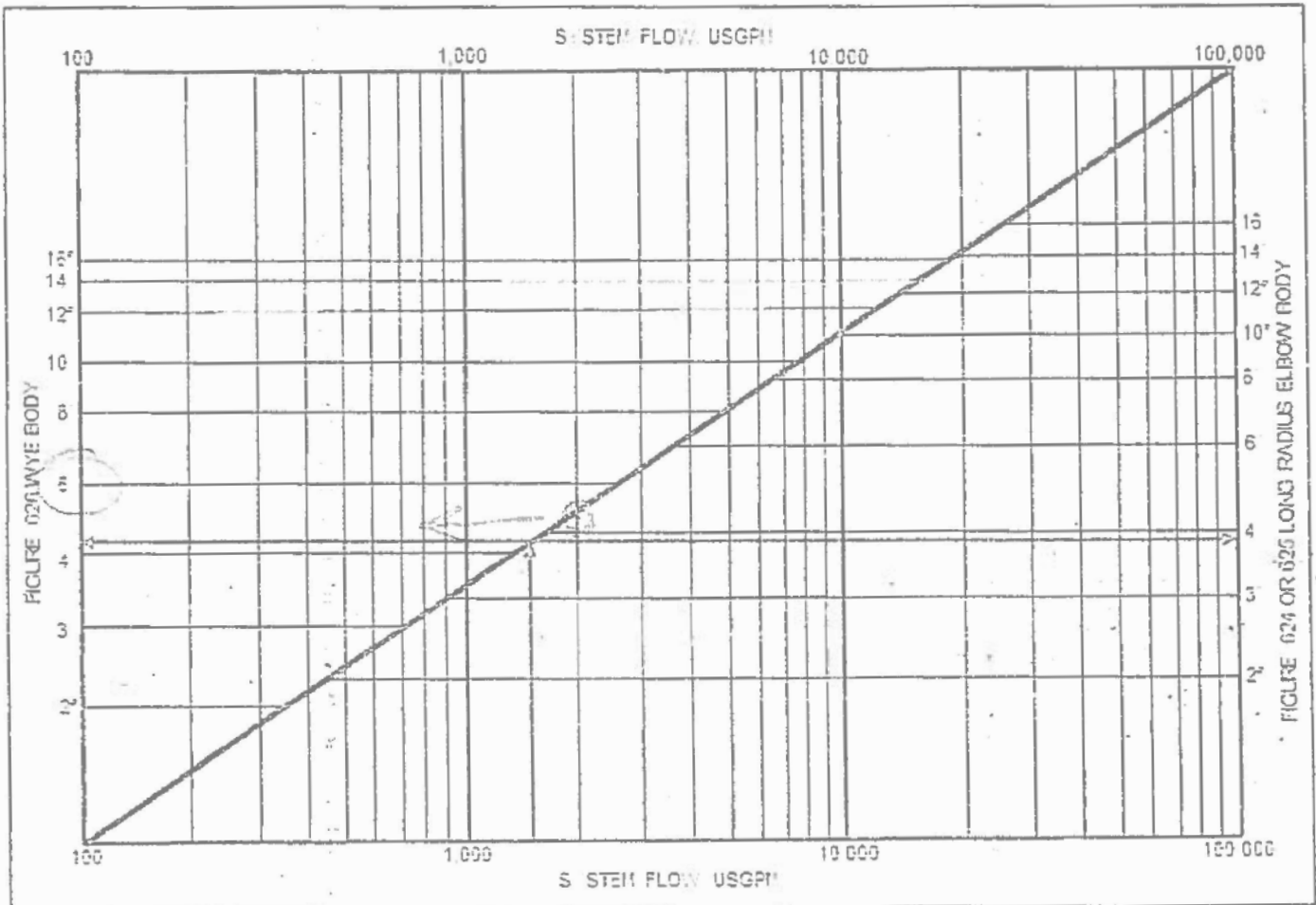


NSF





# Figures 624-D, 625-D, 626-D Sewage/Wastewater Surge Relief Valve Sizing Guideline Chart



Read up or down to diagonal line and to right for 2" to 8" Figure 625-D and 10" to 16" Figure 624-D LONG RADIUS ELBOW BODY relief valves and to right for Figure 626 WYE BODY relief valves. Select next larger size valve. For example,  $Q_{max} = 1,500$  USGPM, select 4" Figure 625-D or 6" Figure 626-D.

Above is for guidance only. Line velocity, system pressure and other factors can affect surge relief valve sizing. Consult GA Industries for computer aided surge relief valve sizing.

SIZE	2"	3"	4"	6"	8"	10"	12"	14"	16"
Flow Area Through Valve Square Inches	3.1	7.1	12.6	23.3	50.3	78.5	113.1	153.9	201.1

A multiple of smaller surge relief valves with a combined flow area equal or greater than a single large valve may be substituted for the single large valve (e.g., 3 - 10" versus 1 - 16").

# Figures 624-D, 625-D, 626-D Sewage/Wastewater Surge Relief Valves



## Description

GA Industries Figures 624-D, 625-D and 626-D direct acting, spring loaded surge relief valves protect sewage and wastewater systems from excessively high pressure due to a sudden stoppage of pumping or valve closure.

The valves are closed as long as the pressure at its inlet is below the spring setting but open as quickly as needed to discharge fluid out of the system at the rate necessary to prevent an excessive rise in pressure. The valve closes slowly and seals tightly when pressure decreases below the pilot setting.

The valve's streamlined, flow efficient, non-clogging long radius elbow or wye body provides dependable surge protection even when handling solids-laden fluids such as raw sewage.

## Product Features

- Heavy duty, flow efficient long radius elbow or wye body
- Tough 316 stainless steel replaceable body seat
- Durable resilient disc seat for tight shutoff
- Compression spring(s) enclosed in chambers, safer than exposed tension springs
- Self-contained hydraulic closing speed control

## Standard Materials

- Body & Cover Cast Iron, ASTM A126 Class B
- Body Seat Type 316 Stainless Steel
- Disc Ductile Iron, ASTM A536 Gr 65-45-12
- Disc Seat Thiokol Composition or UHMWPE
- Shaft Stainless Steel
- External Fasteners Steel, A307, Zinc Plated
- Spring(s) Alloy Spring Steel, Painted

## Corrosion Protection

- Standard Internal and External Carboline 891 NSF-61 Certified Epoxy, min 6 mil DFT
- Option P2 316 Stainless Steel External Fasteners

## Options

- Option HP High Pressure Spring (See Chart)
- Option 1S With Honeywell HDLS NEMA 1, 3, 4, 4X, 6, 6P, 12 & 13 SPDT Limit Switch

## Ordering Data

- Figure Number (624-D, 625-D, 626-D)
- Size
- Installation Orientation
- Options and/or Accessories
- Relief Pressure Setting

Data Sheet SSRV.01B

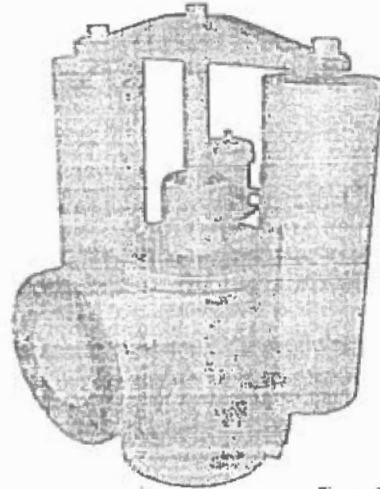


Figure 625-D Shown

Figure Number and Size Range			
Figure Number	625-D	624-D	626-D
Body Type	Long Radius Elbow	Long Radius Elbow	Wye
Flange Connection	ANSI B16.1 Class 125	ANSI B16.1 Class 125	ANSI B16.1 Class 125
Size Range	2" to 8"	10" to 16"	2" to 16"

Maximum Relief Set Pressure, PSI						
Size	2" - 6"	8"	10"	12"	14"	16"
Standard Maximum	175	140	125	90	65	50
Optional High Pressure Maximum	-	175	175	160	100	90

Relief valve typically set at 10% above highest normal pressure at valve inlet



Data Sheet SSRV.01B

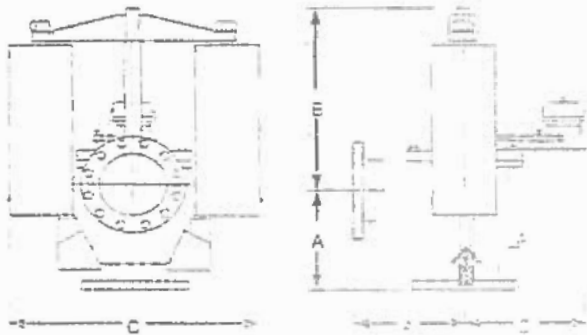


Figure 625 Long Radius Elbow Body

SIZE	A	B	C	D	WEIGHT
2"	7 1/2	16 1/2	14	8	250
3"	7 1/2	16 1/2	14	8	250
4"	9	23	23	10	375
6"	11 1/2	24 1/2	25	9	435
8"	14	25	25	10	500

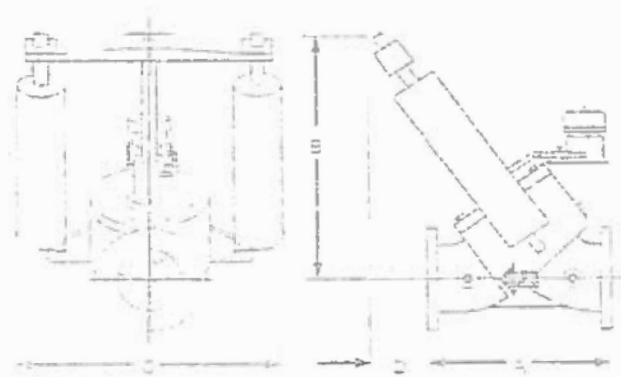


Figure 626 Wye Body

SIZE	A	B	C	D	WEIGHT
2"	12	17 1/2	13 1/2	4 1/2	250
3"	12	17 1/2	13 1/2	4 1/2	250
4"	13	23	16	6 1/2	375
6"	18	26 1/2	26 1/2	5 1/2	405
8"	24 1/2	35 1/2	32 1/2	2	500

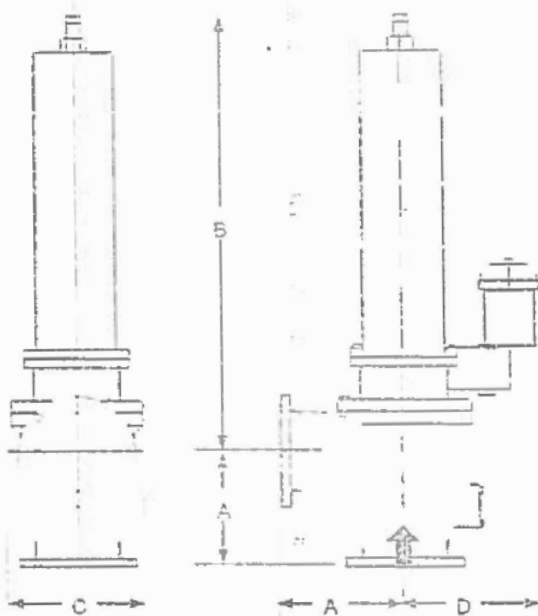


Figure 624 Long Radius Elbow Body

SIZE	A	B	C	D	WEIGHT
10"	18 1/2	75	18	11	635
12"	19	76	19 1/2	13	1,170
14"	21 1/2	87	23 1/2	13	1,900
16"	24	87	25 1/2	16	2,500

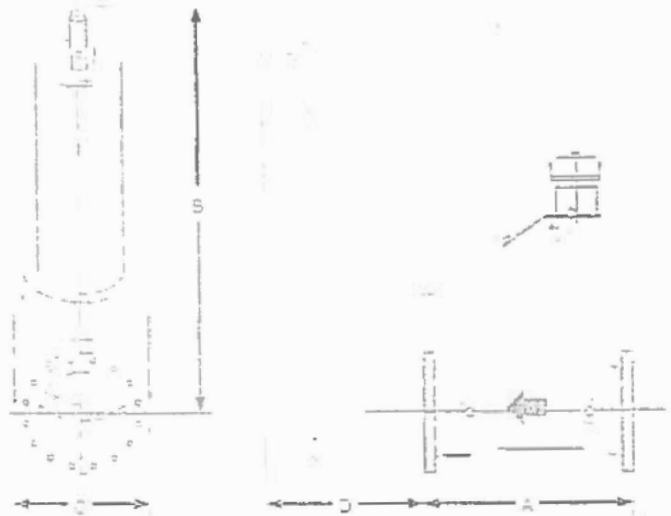


Figure 626 Wye Body

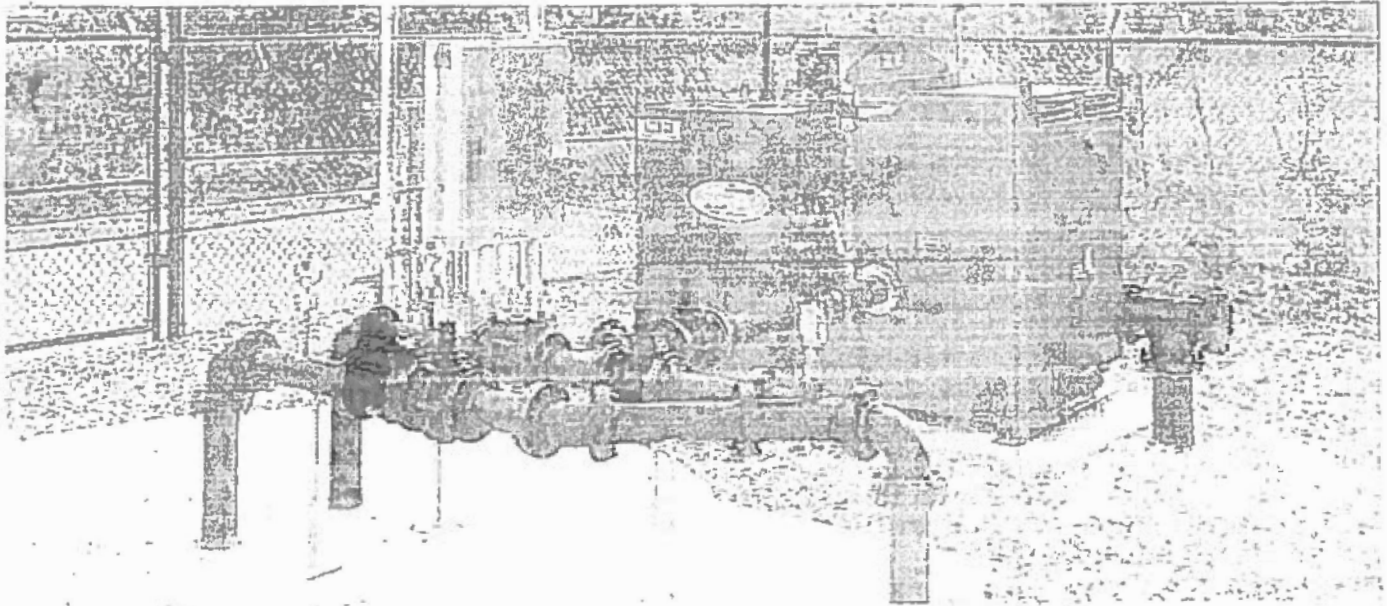
SIZE	A	B	C	D	WEIGHT
10"	26	56 1/2	18	20 1/2	685
12"	31	64 1/2	19 1/2	22 1/2	1,170
14"	33	72 1/2	23 1/2	27 1/2	1,900
16"	36	69 1/2	25 1/2	20 1/2	2,500

- All dimensions in inches, weights in pounds, are approximate and represent standard construction. Request certified drawings if dimensions are critical.
- Figure 624 and 625 shown in standard "VH" (vertical up inlet, horizontal outlet) installation orientation. Other orientations are available, consult factory.



# EMERGENCY BACKUP LIFT STATION STANDBY SYSTEM

Enviroprime System®



Thompson Pump's diesel-driven backup pumps are quickly replacing generator backup systems as the ideal contingency plan. The Thompson Backup System's permanently installed standby units continue pumping despite power loss or primary pump failures, and act as the primary pumping system during maintenance or repairs. Our exclusive and eco-friendly Enviroprime System® pumps are available in size 2" to 18" and can easily handle flows up to 11,000 gallons-per-minute (GPM) and solids up to 4" in diameter. The Thompson Enviroprime System®, unlike other automatic priming systems, actively prevents blow-by or pumpage from discharging on the ground, keeping the environment clean and safe. The Thompson Backup System is also available with Oil-less Vacuum Technology.

## BACKUP PUMP OPTIONS

- Available as diesel-driven, natural gas powered, and other alternative fuels
- Automatic start and stop systems using floats or transducers
- Automatic throttle control for diesel engine
- Remote monitoring and notification systems integration
- Sound attenuated enclosures
- Double wall fuel tanks
- Battery chargers
- Cold weather aids
- SCADA Interface

## ADVANTAGES

- Fully automatic and independent system
- Less expensive than comparable diesel generator and ATS
- Less complicated – no need for complicated transfer switches
- Increased flexibility – can size diesel backup pump to handle potential infiltration and inflow
- Versatile – can use diesel backup pump to supplement lift station pumps if needed
- User friendly – can provide notification that backup pump is running – can even measure depth of water in wet well and adjust engine speed accordingly
- Power outage issues, our pump is fully independent
- Compact design, high capacity pumps
- Stand alone capabilities – pump operates on its own power that takes the place of a generator
- A smarter contingency plan



Experience Innovation

## Model: 8" Vacuum-Assisted Solids Handling Pump

Name: 8JSVE

With its heavy-duty cast-iron construction and fast priming capabilities, the Thompson 8JSVE solids handling end suction centrifugal pump leads the industry in construction, industrial and municipal applications. The Thompson 8JSVE is designed for moderate flows up to 3,200 gpm and heads up to 273 feet making it perfect for sewage bypass pumping or general construction dewatering.

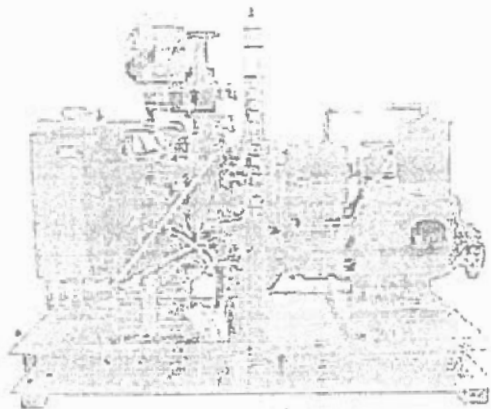


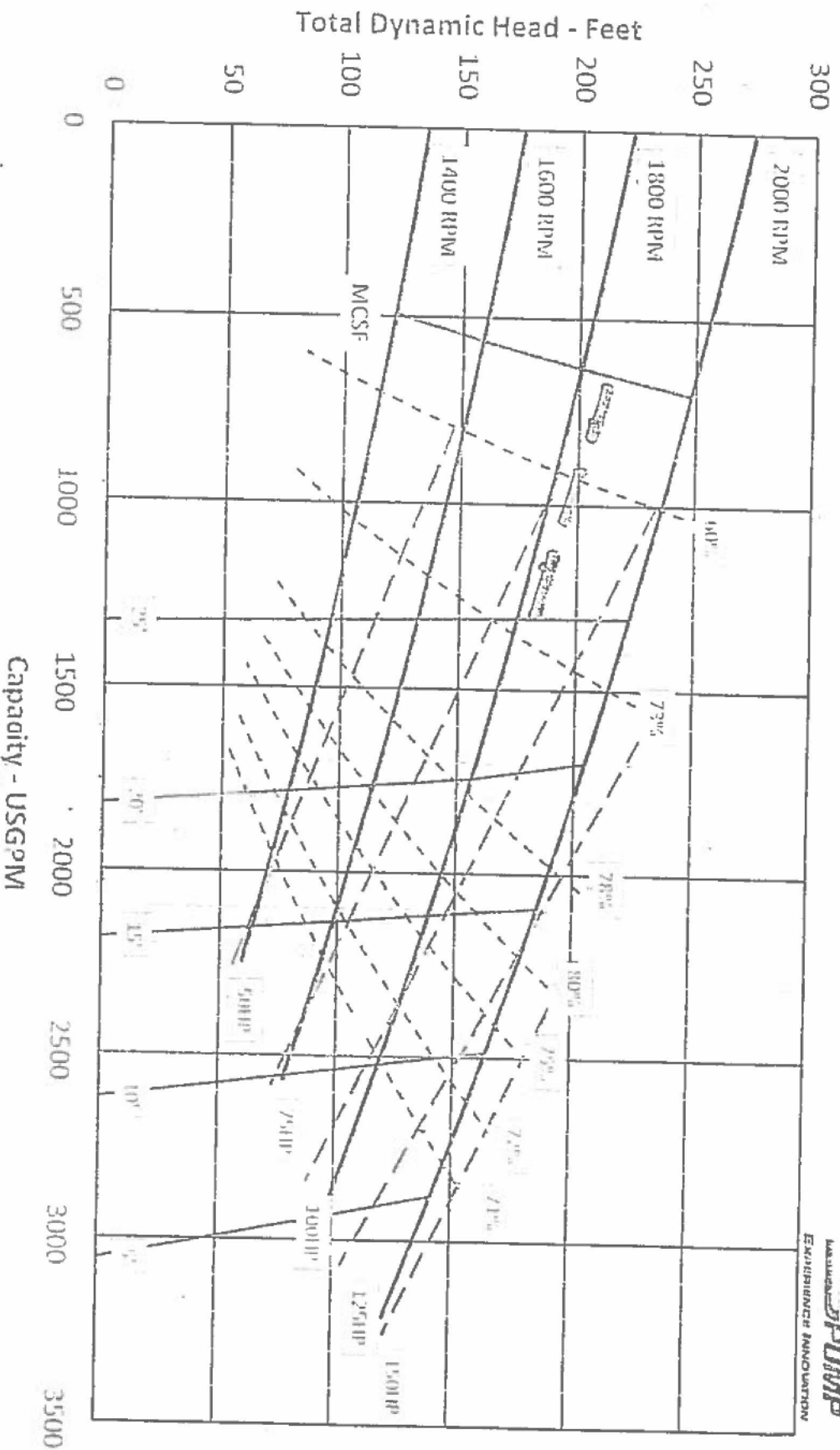
Photo shown may not be exact model.  
Consult factory for other options.

Pump End Materials	
Pump Casing	Heavy-duty class 30 ductile-iron.
Impeller	Dynamically balanced, non-clogging, enclosed, 65-45-12 ductile iron with rear-equalizing vanes to reduce axial loading and prolong seal and bearing life, diameter 14".
Mechanical Seal	Dry-running, grease or oil lubricated with tungsten carbide rotating and silicon carbide stationary seal faces. Single inside mounted, non-pusher type with self-adjusting elastomeric bellows. Other components are 304 stainless steel and Viton.
Head	Rugged, back pull out design, heavy-duty class 30 cast iron with tapered bore design.
Bearings	Heavy-duty grease lubricated to carry both axial and radial loads.
Bearing Frame	Heavy-duty class 30 cast iron.
Shaft	SAE 1144 steel shaft with 416 renewable stainless steel shaft sleeve.

Technical Specifications			
Suction Size	8 in (20.32 cm)	Approximate Dry Weight	5,475 lbs (2,483.42 kg)
Discharge Size	6 in (20.32 cm)	Best Efficiency	80%
Maximum Solids Handling	3 in (7.62 cm)	Maximum Operating Speed	2,000 rpm
Maximum Operating Temperature	200° F (93.33° C)	Maximum Operating Pressure	118.18 psi (814.83 kPa)



**Model: 6x6s1**  
Impeller Diameter: 14"



Test Conditions: Specific Gravity: 1.0 Temperature: 80°F Viscosity: 31.5 SSU Altitude: Sea Level  
Tests conducted according to Hydraulic Institute ANSI/HI 14.6 Standard.

Rev. 12/19







**Robinson, Jason**

**From:** Mark Ashness <mark@CEGROUPINC.COM>  
**Sent:** Monday, November 23, 2020 12:01 PM  
**To:** Robinson, Jason; 'JMcDonald@integrawater.com'; Mitch Craig  
**Cc:** Cashion, Ted; Vinson, Scott; Fertenbaugh, Christyn L; Deck, Erin M; Goss, Stephanie  
**Subject:** [External] RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request  
**Attachments:** 2020-11-16 Buffer Impact Map.pdf

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Jason: the attached exhibit reflects the buffer impacts submitted to Chatham County which is delegated to review.

We looked at several routes with County staff and this location utilizes an existing roadway crossing with installation in existing fill section over the existing culverts. See below for specific response.

Let me know if you need any further information.

thx

**Mark Ashness**

P.E, LEED AP



**CE GROUP**

301 Glenwood Avenue, Suite 220  
 Raleigh, NC 27603  
 Phone: (919) 367-8790  
 Cell: (919) 606-7704

**From:** Robinson, Jason <jason.t.robinson@ncdenr.gov>  
**Sent:** Friday, November 20, 2020 11:32 AM  
**To:** Mark Ashness <mark@CEGROUPINC.COM>; 'JMcDonald@integrawater.com' <JMcDonald@integrawater.com>; Mitch Craig <mitch@CEGROUPINC.COM>  
**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>; Deck, Erin M <erin.deck@ncdenr.gov>; Goss, Stephanie <stephanie.goss@ncdenr.gov>  
**Subject:** RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Mark,

We have questions about your statement: *"We are now using the existing road fill to cross the buffer."*

I don't deal with buffers/401 issues too often, so I ran it by some co-workers that work more frequently in that arena.

Here's the questions they had:

1. Can you describe this a little more?

- a. Will the sewerline run parallel to a permitted road within the road easement? The line will run parallel with the road (in the road shoulder) and above some existing culverts
- b. Does it alter/increase impacts that were previously permitted? Regardless of the existing impacts within the buffer (existing roadway and utilities); Chatham County requires us to show these as new impacts even within a previously altered area.
- c. Will the streambed be impacted? No

Thanks,

Jason

-----  
 Jason T. Robinson, P.E.  
 Raleigh Regional Office  
 Water Quality Regional Operations  
 NC Division of Water Resources, DEQ  
 919-791-4200

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**From:** Mark Ashness [mailto:mark@CEGROUPOINC.COM]

**Sent:** Thursday, November 19, 2020 4:05 PM

**To:** Robinson, Jason <jason.t.robinson@ncdenr.gov>; 'JMcDonald@integrawater.com' <JMcDonald@integrawater.com>;

Mitch Craig <mitch@CEGROUPOINC.COM>

**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>; Deck, Erin M <erin.deck@ncdenr.gov>

**Subject:** [External] Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

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Jason: Please find attached with the corrections noted. The length of 12" HDPE has changed based upon the FM route agreed upon with Chatham County. We are now using the existing road fill to cross the buffer. The 12" HDPE has the same inside diameter as the 10" DIP.

I am also attaching the FTSE with the permitted volume you provided below. We believe the permitted (not constructed) is substantially higher and have reflected that on the form (in addition)

I apologize for the multi-iterations of applications sent. I hope this information is satisfactory to obtain approval.

thx

**Mark Ashness**

P.E., LEED AP

**CE GROUP**

301 Glenwood Avenue, Suite 220

Raleigh, NC 27603

Phone: (919) 367-8790

Cell: (919) 606-7704

**From:** Robinson, Jason <jason.t.robinson@ncdenr.gov>**Sent:** Tuesday, November 17, 2020 12:29 PM**To:** Mark Ashness <mark@CEGROUPINC.COM>; 'JMcDonald@integrawater.com' <JMcDonald@integrawater.com>;

Mitch Craig &lt;mitch@CEGROUPINC.COM&gt;

**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L

&lt;christyn.fertenbaugh@ncdenr.gov&gt;; Deck, Erin M &lt;erin.deck@ncdenr.gov&gt;

**Subject:** RE: [External] RE: RE: RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Mark,

A couple Sections still weren't addressed on the revised application you sent yesterday (11/16). See Items #2 & #3 in my November 3<sup>rd</sup> email below. I also referenced these Items in my November 5<sup>th</sup> email.

-----  
 Jason T. Robinson, P.E.  
 Raleigh Regional Office  
 Water Quality Regional Operations  
 NC Division of Water Resources, DEQ  
 919-791-4200

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**From:** Mark Ashness [mailto:mark@CEGROUPINC.COM]

**Sent:** Monday, November 16, 2020 4:08 PM

**To:** Robinson, Jason <jason.t.robinson@ncdenr.gov>; 'JMcDonald@integrawater.com' <JMcDonald@integrawater.com>; Mitch Craig <mitch@CEGROUPINC.COM>

**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>

**Subject:** [External] RE: RE: RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

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Jason: Attached id the updated FTA for LS A. this matches the adjustments in flow and piping discussed below.

I will be forwarding the FTSE shortly.

thx

**Mark Ashness**

P.E, LEED AP



**CE GROUP**

301 Glenwood Avenue, Suite 220  
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Phone: (919) 367-8790  
Cell: (919) 606-7704

**From:** Mark Ashness

**Sent:** Thursday, November 5, 2020 1:59 PM

**To:** Robinson, Jason <jason.t.robinson@ncdenr.gov>; JMcDonald@integrawater.com; Mitch Craig <mitch@CEGROUPINC.COM>

**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>

**Subject:** RE: RE: RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Jason: I will update everything and send to you 1<sup>st</sup>. If everything checks, I will sign and forward to John to execute.

thx

**Mark Ashness**

P.E, LEED AP



**CE GROUP**

301 Glenwood Avenue, Suite 220

Raleigh, NC 27603  
 Phone: (919) 367-8790  
 Cell: (919) 606-7704

From: Robinson, Jason <jason.t.robinson@ncdenr.gov>

Sent: Thursday, November 5, 2020 1:30 PM

To: Mark Ashness <mark@CEGROUPINC.COM>; JMcDonald@integrawater.com; Mitch Craig <mitch@CEGROUPINC.COM>

Cc: Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>

Subject: RE: RE: RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Thanks Mark, I see the second "Page 3" now.

So just to make sure, here's what we plan to include in the modified (new) permit. Please confirm:

- A. 22,450 LF of 8" Gravity (existing)
- B. 850 LF of 4" FM (This was reduced from 3,600 that is in the current permit.)
- C. 1,800 LF of 6" FM (existing)
- D. 65 LF of 10" FM (This will be new construction. It was not in the current permit but was included on the most recently submitted application)
- E. 545 LF of 12" (This will be new construction. It was not in the current permit but was included on the most recently submitted application)
- F. LS-A: 778 GPM (Increased from 683 GPM)
- G. LS-B: 386 GPM (This is actually a slight increase from the 371 GPM that is in the current permit)
- H. Total Flow of 98,500 GPD (existing, in the current permit)
- I. 7,000 LF of 8" FM will be removed in the modified permit

A few other issues with the FTA that I described in my last email on 11/3 were not addressed (Items numbered 2 and 3 in my email). Those revisions need to be made. Once all the revisions are made, the application should be re-signed/dated by the applicant and re-certified/dated by the engineer, since so many changes have been made to what was originally submitted.

As far as the value used in Item 1.C for "Permitted Limit" on the Flow Tracking Form (FTSE), we checked with our permitting unit about how the 80/90 Rule would be applied to this plant, and were told that the limiting amount of permitted/certified spray fields should be used, or the 0.217 MGD. But at this point, I don't think that's a big deal on the FTSE. But we do need an updated FTSE form with the correct obligated flow to the WWTP completed in Item 1.d. (and Item 1.f "Flow for this Request" can remain 0, since it's existing flow and already tributary to the plant).

Let us know if you have any questions.

-----  
 Jason T. Robinson, P.E.  
 Raleigh Regional Office  
 Water Quality Regional Operations  
 NC Division of Water Resources, DEQ  
 919-791-4200

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**From:** Mark Ashness [mailto:mark@CEGROUPINC.COM]

**Sent:** Tuesday, November 3, 2020 3:48 PM

**To:** Robinson, Jason <jason.t.robinson@ncdenr.gov>; JMcDonald@integrawater.com; Mitch Craig <mitch@CEGROUPINC.COM>

**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>

**Subject:** [External] RE: RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

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Jason: My apologies the pdf attached yesterday was the wrong pdf; An additional page 3 was included with the application prepared yesterday. There were (2) LS pages (1) for LS A and (1) for LS B.

LS A info and FM on page 6 of the pdf application

LS B info and FM on page 7 of the pdf application

The FM to remain in the permit is noted on page 7 of the pdf

The gravity sewer to remain is noted on page 6 of the pdf

The new FM lines are on page 6 of the pdf

I am going to address the other items you have noted and send back later today.

The service area to this LS A is mature with exception of one area and the average daily flow from LS A is 0.12 MGD (see attached pdf)

I will get the paper flow rates for the area in Paper Flow to LS A and include.

thx

**Mark Ashness**

P.E, LEED AP



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Cell: (919) 606-7704



**From:** Robinson, Jason <jason.t.robinson@ncdenr.gov>  
**Sent:** Tuesday, November 3, 2020 1:30 PM  
**To:** Mark Ashness <mark@CEGROUPLNC.COM>; JMcDonald@integrawater.com; Mitch Craig <mitch@CEGROUPLNC.COM>  
**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>  
**Subject:** RE:RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Hi Mark,

There are still multiple issues with the application (FTA) you submitted yesterday.

1. As I've explained in my emails on 10/14 and 10/16, the lines (and PSs) that are included in the existing permit (WQ0029867, issued May 2010, attached) that will remain in operation should be included in the mod application you submit. The reason for this is because the modified permit we issue will rescind and completely replace the original permit, so it has to include everything that was in the original permit that will stay in operation. Lines that were in the original permit that will be abandoned should not be included in the application you submit. And of course, new lines that will be installed should be included in the application.

For example, you state in your email below that the 1,800 LF of 6" FM that is included in the original permit will remain in operation. Therefore, that 6" FM that should be included in the mod application that you submit. Same with the other lines listed in my email below that you say will remain in operation. Only the lines that are being abandoned should not be included in the app you submit. This is how mods are done. (When you certify the modified permit, you can make a note that you're not certifying the lines that have already been certified and in operation).

- a. Same with flow. The original permit included 98,500 GPD. Therefore, this mod application should include that flow in Item VI.7
  - b. Again, the existing WQ0029867 is attached)
2. Item VI.1 is marked "N/A" for whether Old North State is a Privately-Owned Public Utility. This should be marked "Yes", and the Certificate of Public Convenience and Necessity should be included with the application.
3. Item IX.3 is marked "N/A" for meeting setback for river basin rules. This project is in the Jordan Watershed, and is therefore Subject to the Jordan Lake Buffer Rules. So either "yes" or "no" should be checked.
4. You stated that page 3 was attached to the email, but I think there was some confusion. You included page 3 of your plans. I was saying you need to attach a second Page 3 of the APPLICATION to include the info for the second pump station. If nothing is changing for the second pump station, the information should be the same as it was in the original permit.
5. The most recent app you submitted was not signed by the applicant or sealed/certified by you. It may save some time for you to make the changes described in Items 1-4 above and let us look at it and make sure it's complete/accurate before you get the applicant to sign it again.
6. There seems to be some issues on the Flow Tracking/Acceptance Form (FTSE):
  - a. Item 1.C states that the plants permitted flow is 0.25. However, it's our recollection/understanding that the facility currently has the capability to spray only 0.217 MGD (and there's ongoing discussions to get this increased to 0.25) If that's the case, then 0.217 MGD should be used in 1.C., since that's the limiting factor. The WWTP is permitted at .75 MGD. There are permitted spray areas in excess of .36 MGD. DEQ recognizes built spray systems at 0.217 MGD. My understanding is that the permitted volumes are what should be counted against the paper flow. I have attached the Spray DMR showing all permitted areas.



- b. Item I.d states that there is "0" obligated flow to the BC WWTP. However, there are multiple sewer permits that include flow that have been issued for Briar Chapel that we have not received certifications for (or only received partial certifications). Those projects should not be in operation, and therefore are "obligated" (Paper) flow. We will update this information for you.

Let me know if you have any questions.

Thanks,

Jason

-----  
 Jason T. Robinson, P.E.  
 Raleigh Regional Office  
 Water Quality Regional Operations  
 NC Division of Water Resources, DEQ  
 919-791-4200

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**From:** Mark Ashness [<mailto:mark@CEGROUPOINC.COM>]

**Sent:** Monday, November 2, 2020 3:37 PM

**To:** Robinson, Jason <[jason.t.robinson@ncdenr.gov](mailto:jason.t.robinson@ncdenr.gov)>; JMcDonald@integrawater.com; Mitch Craig <[mitch@CEGROUPOINC.COM](mailto:mitch@CEGROUPOINC.COM)>

**Cc:** Cashion, Ted <[ted.cashion@ncdenr.gov](mailto:ted.cashion@ncdenr.gov)>; Vinson, Scott <[scott.vinson@ncdenr.gov](mailto:scott.vinson@ncdenr.gov)>; Fertenbaugh, Christyn L <[christyn.fertenbaugh@ncdenr.gov](mailto:christyn.fertenbaugh@ncdenr.gov)>

**Subject:** RE: [External] RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

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Jason: sorry I missed this email.

Please see specific responses below along with the revised application including the additional Page 3 for existing LS B (still remaining)

thx

**Mark Ashness**  
 P.E, LEED AP



301 Glenwood Avenue, Suite 220  
Raleigh, NC 27603  
Phone: (919) 367-8790  
Cell: (919) 606-7704

**From:** Robinson, Jason <jason.t.robinson@ncdenr.gov>  
**Sent:** Friday, October 16, 2020 2:27 PM  
**To:** Mark Ashness <mark@CEGROUPINC.COM>; JMcDonald@integrawater.com; Mitch Craig <mitch@CEGROUPINC.COM>  
**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>  
**Subject:** RE: [External] RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Mark,

I apologize, I'm just seeing that the PDF of permit WQ0029867 that I sent you yesterday is missing some pages (I inadvertently just scanned the front pages and not the backs).

Your certified application is still not completed correctly. Section VIII still shows a 1,137 gpm pump station. It also shows 10" and 12" FM, which wasn't in the original WQ0029867, and isn't being added to the project as part of this modification (we are adding it). It's our understanding you're adding 14" line, but there is no 14" line shown in the application. The 14" line is already permitted in another permit so we are not adding in this permit. We will certify the 14" line from the other project when we certify these improvements.

When a permit is modified, it rescinds the earlier issued permit. So the modified permit (and the application) should contain everything that was in the original permit that will remain in operation, add any new lines and PSs that will be installed, and should NOT contain any lines/PSs that were in the original permit that will be taken out of operation/abandoned.

The current WQ0029867, which you're seeking to modify, contains the following:

- 3,600 LF of 4" FM, reduced to 850 LF when old FM from Woods Charter School was redirected into gravity sewer installed closer to school
- 22,450 LF of 8" gravity, remaining
- 1,800 LF of 6" FM, remaining
- 7,000 LF of 8" FM yes we are eliminating this run pf FM
- 371 GPM PS LS B remaining
- 683 GPM PS modified and rerated to 778 GPM

It sounds like only the 8" FM is being abandoned (yes) and a portion of 4" FM that was eliminated when gravity sewer was installed closer to Woods Charter School, so the 8" FM should NOT be included in the new application. But I assume all the other lines will remain in operation, so they should be included in the new application. And the two pump stations should also be in the new application, with the new Operational point for the one. (you'll need to submit two Page 3s to describe each PS). It should also contain the amount of 14" that is being added. We are not adding 14" FM in this permit.

I am attaching the LS B plan sheet to show the rated condition.

OFFICIAL COPY

Nov 29 2023

We also have some questions about the FTSE form, but want to get the issues with the FTA form resolved first.

I have updated the FTSE to match the LS A rated condition.

-Jason

-----  
 Jason T. Robinson, P.E.  
 Raleigh Regional Office  
 Water Quality Regional Operations  
 NC Division of Water Resources, DEQ  
 919-791-4200

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**From:** Mark Ashness [mailto:mark@CEGROUPINC.COM]

**Sent:** Friday, October 16, 2020 11:29 AM

**To:** Robinson, Jason <jason.t.robinson@ncdenr.gov>; JMcDonald@integrawater.com; Mitch Craig <mitch@CEGROUPINC.COM>

**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>

**Subject:** [External] RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

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## Citrix Attachments

Expires April 14, 2021

Briar Chapel_LS A Mod FM-Abandonment-...x36.pdf	3.3 MB
FTA rev Form - Signed.pdf	1.4 MB
FTSE Form revised - Signed.pdf	510 KB

[Download Attachments](#)

Mark Ashness uses Citrix Files to share documents securely.

Jason: I apologize for the miscommunication on our part. Please find attached the corrected applications along with an exhibit showing the 8" FM abandonment.

The revised application reflects the abandonment of +/- 6960 LF of 8" FM from permit WQ0029867, addition of new FM to the recently permitted 14" FM, and the re-rating of LS A from 638 GPM to 778 GPM.

Our new FM discharges into the 14" FM permitted in WQ0039608

No other change to the permit.

thx

**Mark Ashness**

P.E, LEED AP



301 Glenwood Avenue, Suite 220  
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**From:** Robinson, Jason <jason.t.robinson@ncdenr.gov>

**Sent:** Thursday, October 15, 2020 5:03 PM

**To:** Mark Ashness <mark@CEGROUPINC.COM>; JMcDonald@integrawater.com; Mitch Craig <mitch@CEGROUPINC.COM>

**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>

**Subject:** RE: RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Mark,

Section II.2 of the application (FTA) we received on 9/20/20 said it was to modify WQ0039608, which only contains the SD East Pump Station. The application we received also lists a 1,137 gpm PS in Section VIII.4. So it sounds like both of those Sections in the app we received were completed incorrectly.

I've attached the most recent version of WQ0029867 issued on May 3, 2010.

-----  
Jason T. Robinson, P.E.  
Raleigh Regional Office  
Water Quality Regional Operations  
NC Division of Water Resources, DEQ  
919-791-4200



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**From:** Mark Ashness [<mailto:mark@CEGROUPINC.COM>]

**Sent:** Wednesday, October 14, 2020 6:24 PM

**To:** Robinson, Jason <[jason.t.robinson@ncdenr.gov](mailto:jason.t.robinson@ncdenr.gov)>; JMcDonald@integrawater.com; Mitch Craig <[mitch@CEGROUPINC.COM](mailto:mitch@CEGROUPINC.COM)>

**Cc:** Cashion, Ted <[ted.cashion@ncdenr.gov](mailto:ted.cashion@ncdenr.gov)>; Vinson, Scott <[scott.vinson@ncdenr.gov](mailto:scott.vinson@ncdenr.gov)>; Fertenbaugh, Christyn L <[christyn.fertenbaugh@ncdenr.gov](mailto:christyn.fertenbaugh@ncdenr.gov)>

**Subject:** RE: [External] RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

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Jason: We will be rerating LS A from 683 GPM to 778 GPM (with the upgrade)

The other flow mentioned is LS B at 371 GPM. We are not modifying that LS.

SD East is a different LS and we are not seeking to modify that permit either.

thx

**Mark Ashness**

P.E, LEED AP



**CE GROUP**

301 Glenwood Avenue, Suite 220

Raleigh, NC 27603

Phone: (919) 367-8790

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**From:** Robinson, Jason <[jason.t.robinson@ncdenr.gov](mailto:jason.t.robinson@ncdenr.gov)>

**Sent:** Wednesday, October 14, 2020 5:58 PM

**To:** Mark Ashness <[mark@CEGROUPINC.COM](mailto:mark@CEGROUPINC.COM)>; JMcDonald@integrawater.com; Mitch Craig <[mitch@CEGROUPINC.COM](mailto:mitch@CEGROUPINC.COM)>

**Cc:** Cashion, Ted <[ted.cashion@ncdenr.gov](mailto:ted.cashion@ncdenr.gov)>; Vinson, Scott <[scott.vinson@ncdenr.gov](mailto:scott.vinson@ncdenr.gov)>; Fertenbaugh, Christyn L <[christyn.fertenbaugh@ncdenr.gov](mailto:christyn.fertenbaugh@ncdenr.gov)>

**Subject:** RE: [External] RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Thanks Mark,

I'll need to scan a copy of the most recent WQ0029867 and sent it to you (it's been modified multiple times). I should be able to do that either tomorrow or Friday.

But just to confirm, SD East Lift Station is different than LS A? And if that's the case, it sounds like LS A will be upgraded to 1,137 GPM? (because the 2 pump stations listed in WQ0029867 are 371 and 683 gpm).

-----  
**Jason T. Robinson, P.E.**  
 Raleigh Regional Office  
 Water Quality Regional Operations  
 NC Division of Water Resources, DEQ  
 919-791-4200

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**From:** Mark Ashness [mailto:mark@CEGROUPOINC.COM]

**Sent:** Wednesday, October 14, 2020 5:18 PM

**To:** Robinson, Jason <jason.t.robinson@ncdenr.gov>; JMcDonald@integrawater.com; Mitch Craig <mitch@CEGROUPOINC.COM>

**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>

**Subject:** [External] RE: Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

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Jason: Thanks for your comments. The permit we are seeking to modify is the original LS A permit which was referenced in our application. The correct permit is WQ 0029867. I do believe this permit includes LS B, FM and gravity sewer.

Given that there is another LS (LS B), FM, and gravity sewer in this original permit; let me provide a summary of what will be removed from the original permit and what will be added. If you can share the original permit that would be helpful so I can make sure our quantities are correct.

I will include an exhibit; we can then revise the application accordingly.

thx

**Mark Ashness**  
 P.E, LEED AP



## CE GROUP

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**From:** Robinson, Jason <jason.t.robinson@ncdenr.gov>  
**Sent:** Wednesday, October 14, 2020 11:26 AM  
**To:** Mark Ashness <mark@CEGROUPINC.COM>; JMcDonald@integrawater.com  
**Cc:** Cashion, Ted <ted.cashion@ncdenr.gov>; Vinson, Scott <scott.vinson@ncdenr.gov>; Fertenbaugh, Christyn L <christyn.fertenbaugh@ncdenr.gov>  
**Subject:** Briar Chapel - Lift Station "A" & Forcemain Improvements - Info Request

Mark & John,

We received the referenced sewer extension application on 9/29. The application states that it is to modify permit "WQ0039608-Briar Chapel SD East Lift Station". We are trying to sort through it. It should reference LS A

When a permit is modified, it rescinds the earlier issued permit. So the modified permit (and application) should contain everything that was in the original permit that will remain in operation, add any new lines and PSs that will be installed, and should NOT contain any lines/PSs that were in the original permit that will be taken out of operation/abandoned. Therefore, it appears that the application may not have been accurately completed.

Permit "WQ0039608-Briar Chapel SD East Lift Station" was issued in May 2018. Below is a list of the lines/PS that is included in the existing WQ0039608, with follow-up questions. Please provide a written response to the below questions:

- The current permit project name of WQ0039608 is "Briar Chapel SD East Lift Station". The new application states the project name is "Briar Chapel Lift Station "A" & FM Improvements".
  - Do you intend to change the project name of permit WQ0039608? No the permit we are modifying is LS A
- The current permit contains 47 LF of 8" Gravity
  - Will that remain in operation? If so, it should have been included in the new application.
- The current permit contains 13,830 LF of 12" FM
  - The new application proposes 545 LF of 12" FM. Is that replacing the existing 13,830? Or is the 545 LF in addition to the 13,830?
- The current permit contains 16,400 LF of 14" FM
  - The new application proposes 6,670 LF of 14" FM. Is this 6,670 replacing the 16,400? Or is it in addition to that?
- The current permit contains an 1,100 GPM Pump Station, the "SD East Pump Station"
  - The new application proposes a 1,137 GPM Pump Station, Is this the existing SD East Pump Station that is in the current WQ0039608?
  - Is the SD Pump Station and the LS A the same pump station?
- Also, the narrative and plans show the abandonment of the existing 8" Forcemain.

- There was no 8" FM in WQ0039608. Is this the forcemain described in Permit WQ0029867 (7,000 LF)? If so, then that permit will also need to be modified to remove the 8" FM that is being abandoned.

We'll likely have additional questions, but we need written responses to the above questions to get a better idea of what's going on before we can proceed with the review.

Thanks,  
Jason

-----  
Jason T. Robinson, P.E.  
Raleigh Regional Office  
Water Quality Regional Operations  
NC Division of Water Resources, DEQ  
919-791-4200

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