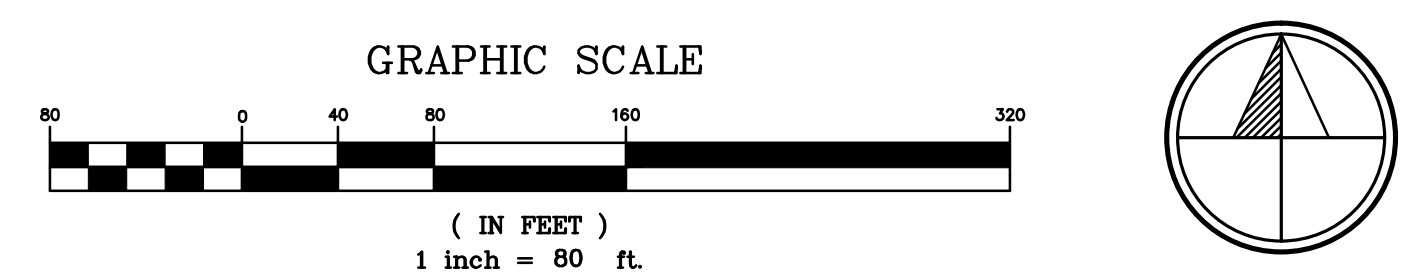


- DRAWING NOTES:**
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LEGEND

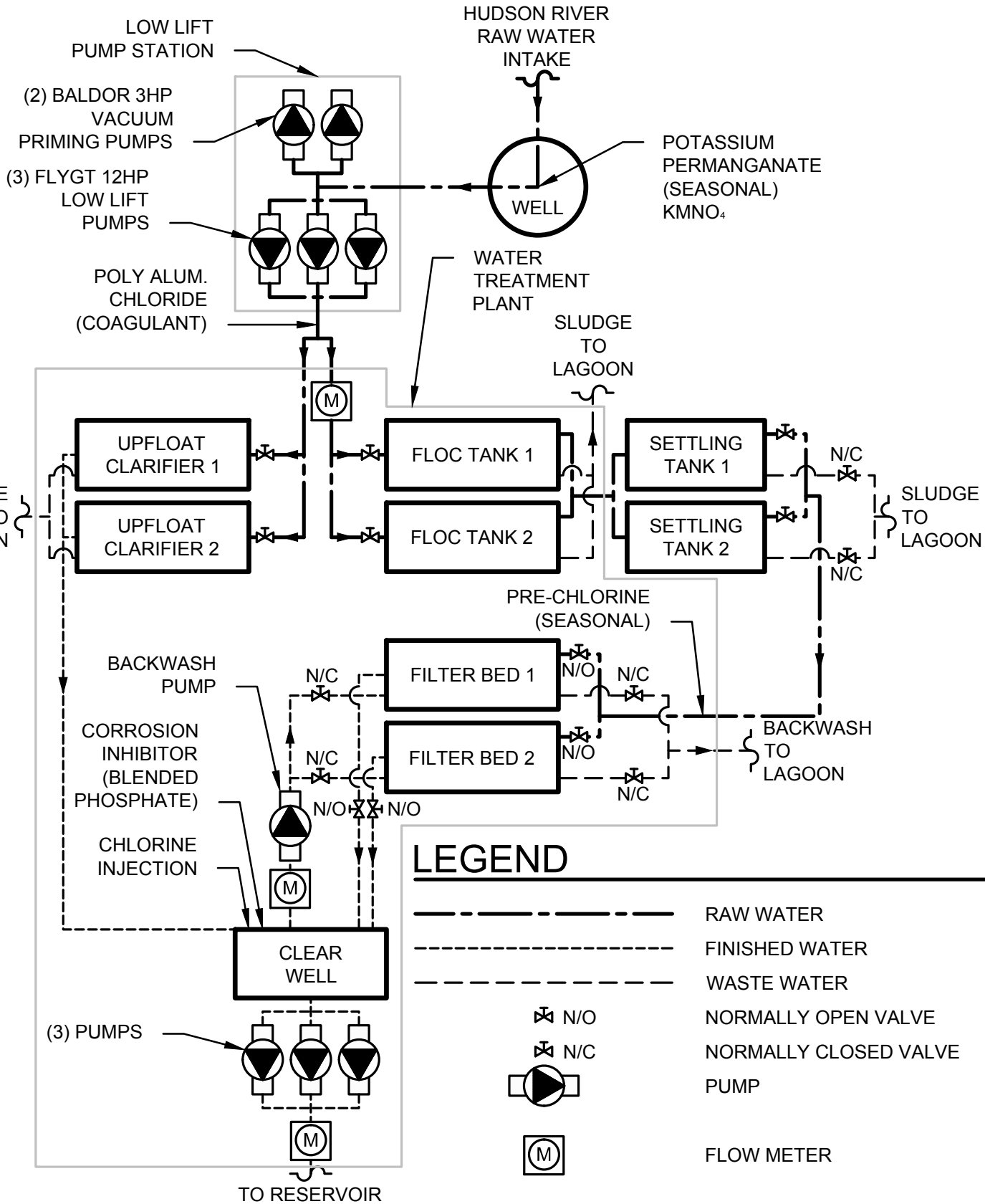
- EXISTING CONTOUR 2' INTERVAL
- EXISTING CONTOUR 10' INTERVAL
- + 1208.75 EXISTING SPOT ELEVATION
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- EXISTING/PROPOSED DRIVEWAY
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- 2100 INUNDATION ELEVATION (8.9')
- 2100 1% (100YR) ACF ELEVATION (14.1')



REV. No.	ZONE	DATE	BY
VILLAGE OF RHINEBECK WATER SYSTEM VULNERABILITY ASSESSMENT VILLAGE OF RHINEBECK DUTCHESS COUNTY EXISTING CONDITIONS SITE PLAN			
<small>IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THESE PLANS, SPECIFICATIONS OR REPORTS IN ANY WAY, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER.</small>			
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SCALE AS SHOWN	CHECKED BY: APA	C&A JOB# 4568.05	DRAWING: FIG A-1
	APPROVED BY: APA		

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JENNIFER CRAWFORD 5/31/2017 3:02 PM



**RHINEBECK WATER SYSTEM
VULNERABILITY ANALYSIS**
VILLAGE OF RHINEBECK DUTCHESS COUNTY

CRAWFORD & ASSOCIATES
ENGINEERING, P.C.
4411 Route 9, Hudson New York 12534

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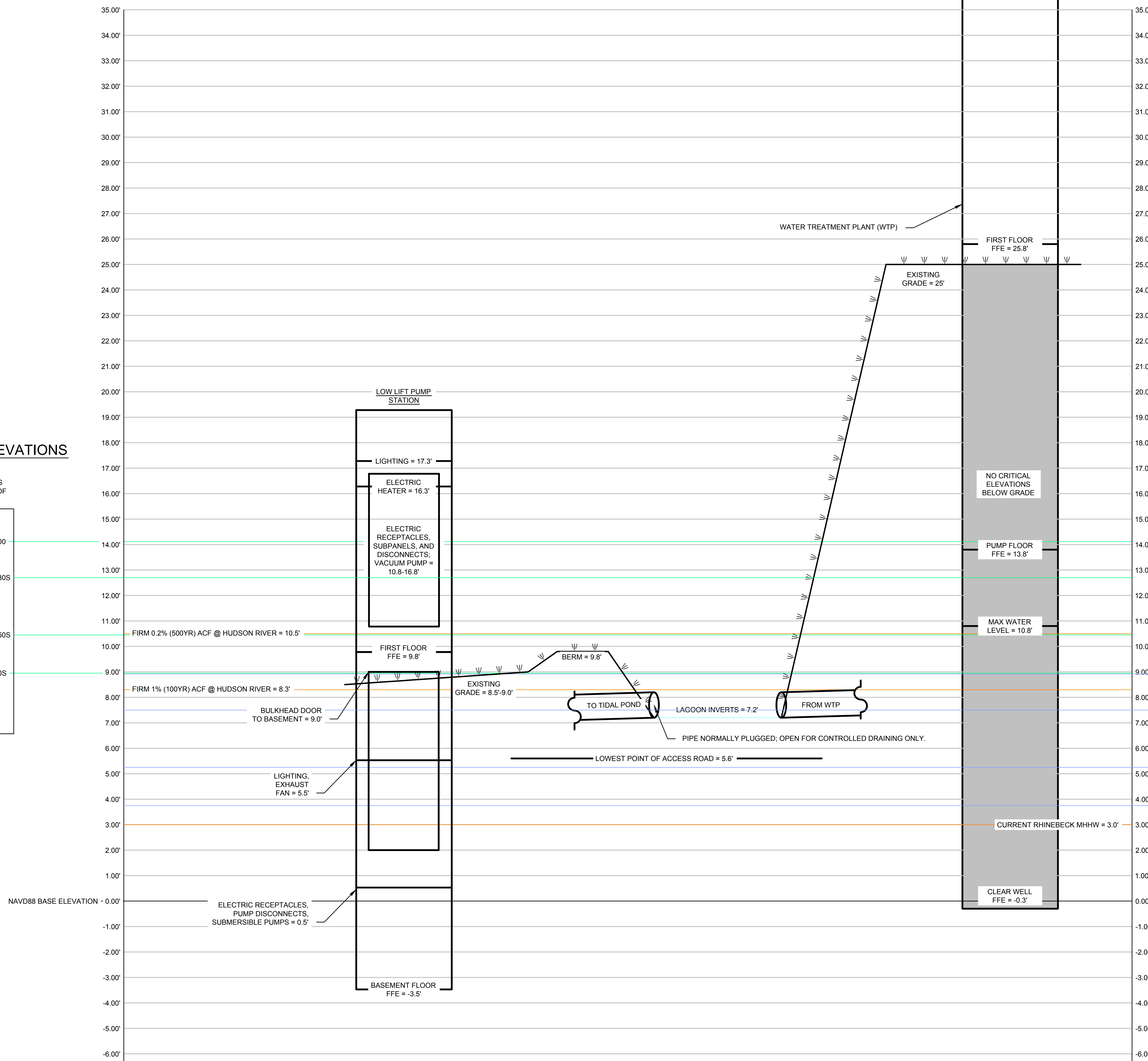
**WATER TREATMENT SYSTEM
SCHEMATIC**

DATE 5/31/17	DRAWN BY: JSC	H: \WORK\4568.05\Dwg\456805 SITE.dwg	
SCALE N.T.S.	DESIGNED BY: JSC	C&A JOB# 4568.05	DRAWING: FIG A-2
	CHECKED BY: APA		
	APPROVED BY: APA		

100YR FLOOD ELEVATIONS

HIGH DEC PROJECTIONS (PART 490 AS OF JUNE 2016)

71" RISE BY 2100
54" RISE BY 2080S
27" RISE BY 2050S
9" RISE BY 2020S



WTP SCHEMATIC PROFILE

VERTICAL SCALE: 1" = 2'; HORIZONTAL SCALE = N.T.S.

DRAWING NOTES:

- SITE FEATURES HAVE BEEN DIGITALLY TRACED BASED ON 1FT RESOLUTION ORTHOGRAPHIC IMAGERY TAKEN IN 2013 AND ACCESSED VIA USGS EARTH EXPLORER.
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INUNDATION ELEVATIONS

HIGH DEC PROJECTIONS (PART 490 AS OF JUNE 2016)

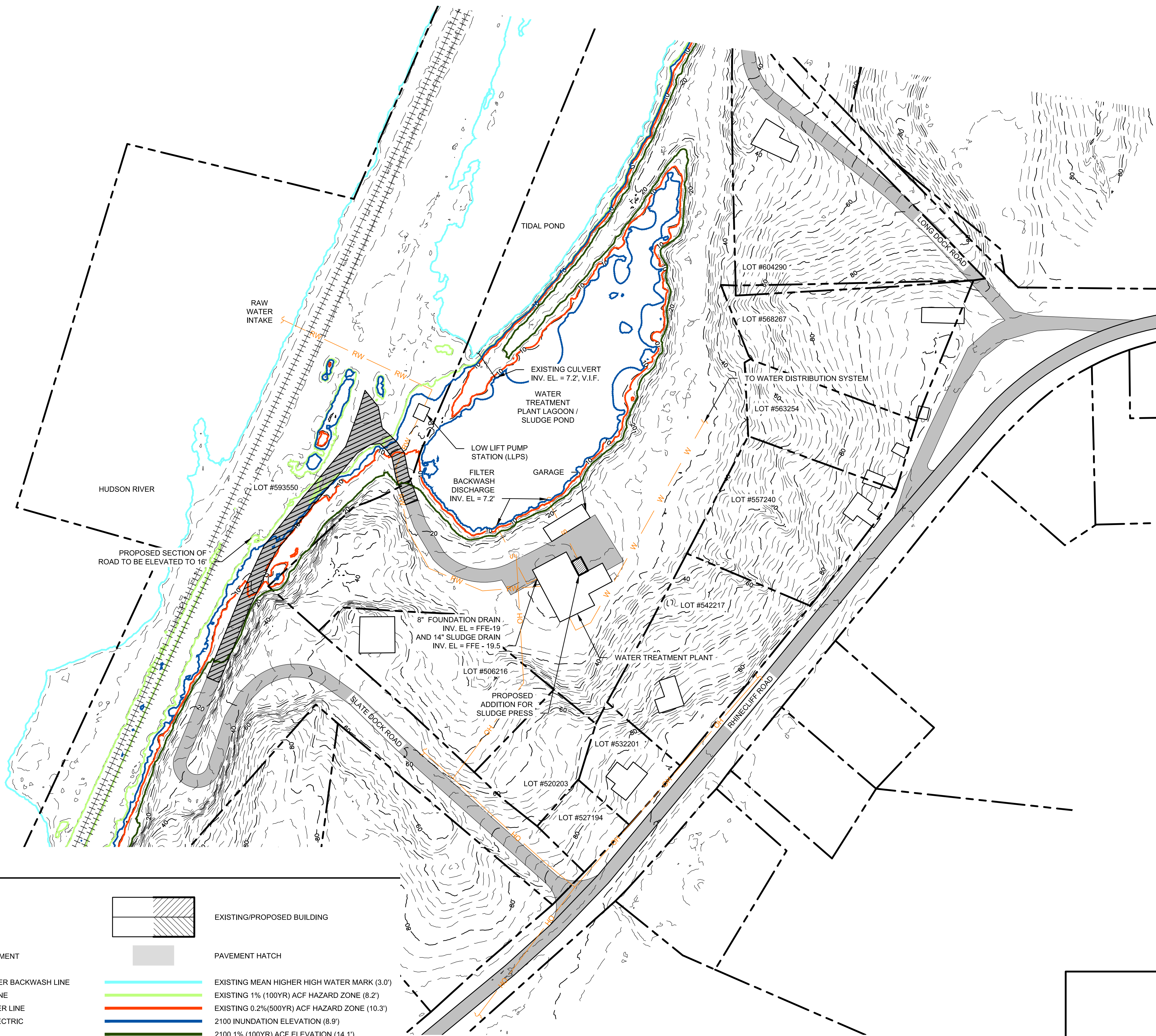
71" RISE BY 2100
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REV. No.	ZONE	DATE	BY
VILLAGE OF RHINEBECK WATER SYSTEM VULNERABILITY ASSESSMENT <small>VILLAGE OF RHINEBECK DUTCHESS COUNTY</small>			
WTP SCHEMATIC PROFILE			



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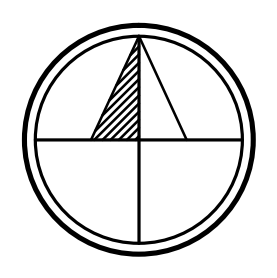
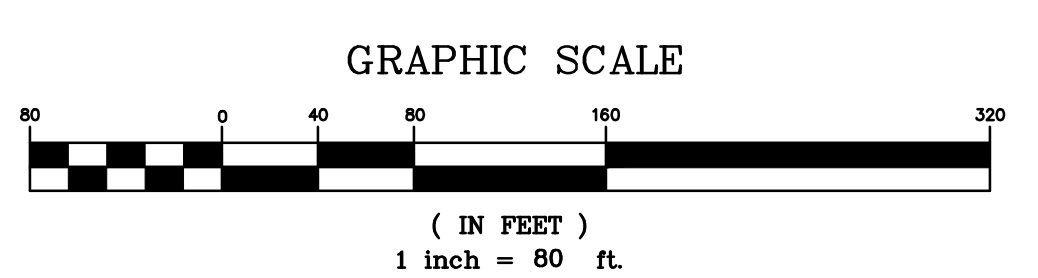
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	APPROVED BY: APA	DRAWING: FIG A-3



- DRAWING NOTES:**
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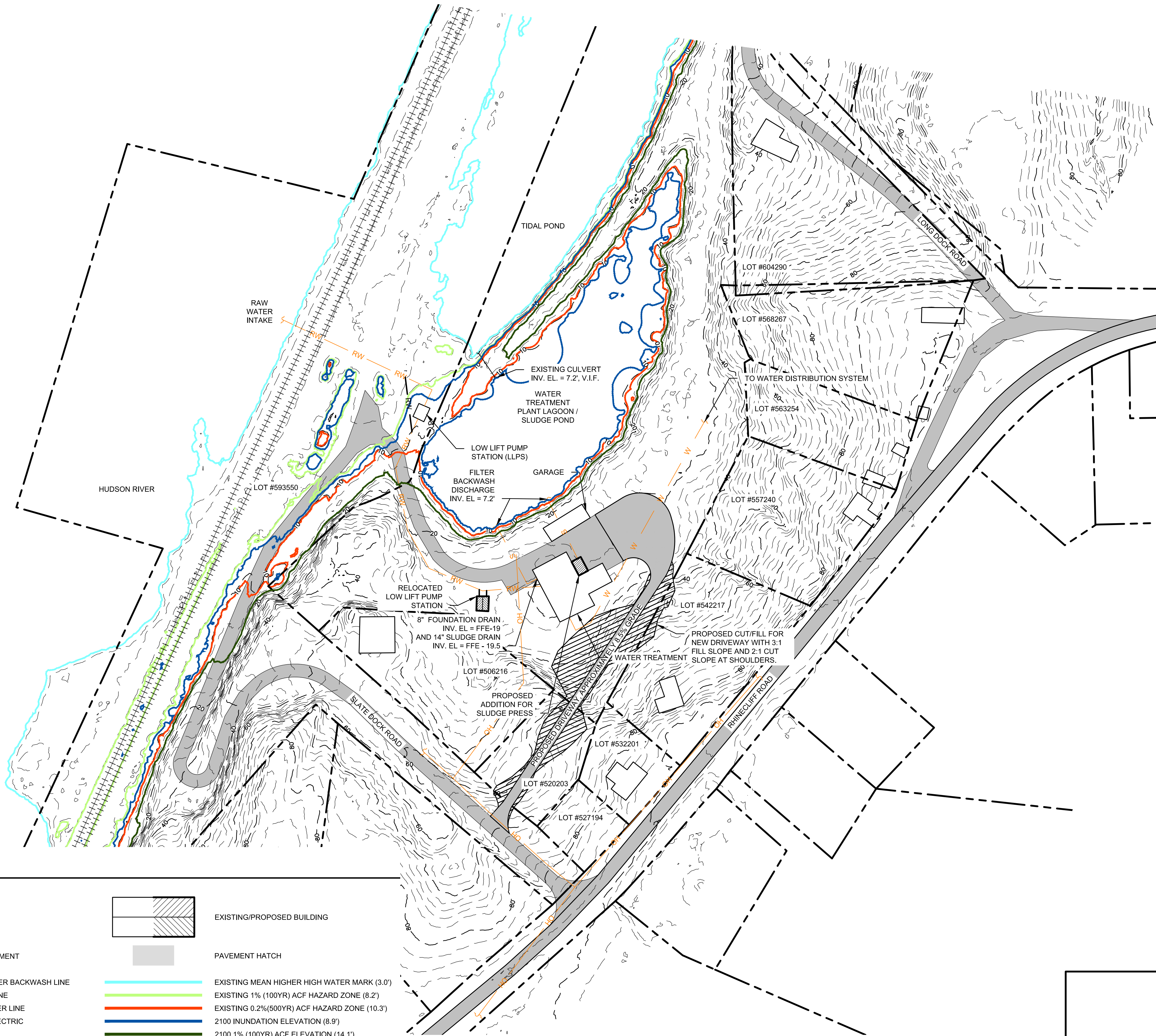
LEGEND

- EXISTING CONTOUR 2' INTERVAL
- EXISTING CONTOUR 10' INTERVAL
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- PROPERTY LINE
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- 2100 1% (100YR) ACF ELEVATION (14.1')
- ▨ PROPOSED ROAD TO BE ELEVATED HATCH



REV. No.	ZONE	DATE	BY
VILLAGE OF RHINEBECK WATER SYSTEM VULNERABILITY ASSESSMENT VILLAGE OF RHINEBECK DUTCHESS COUNTY ADAPTATION OPTIONS: ELEVATE ACCESS ROAD			
<small>IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THESE PLANS, SPECIFICATIONS OR REPORTS IN ANY WAY, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER.</small>			
DATE 5/31/17	DRAWN BY: JSC	FILE: H:\WORK\4568.05\DWG\4568.05 SITE.dwg	
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	APPROVED BY: APA		

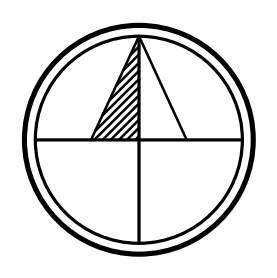
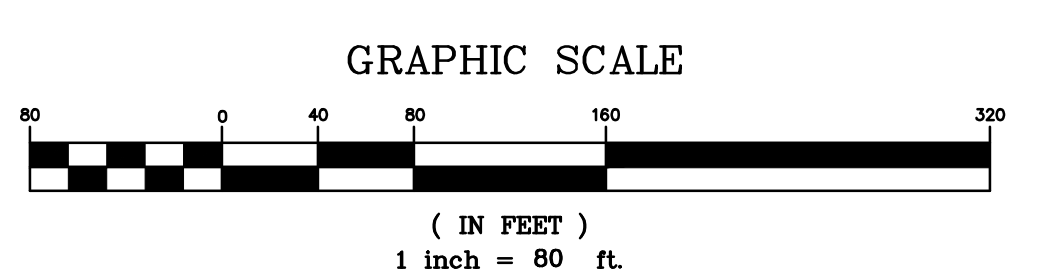
5/25/2017 3:03 PM
JANUARY CRAWFORD



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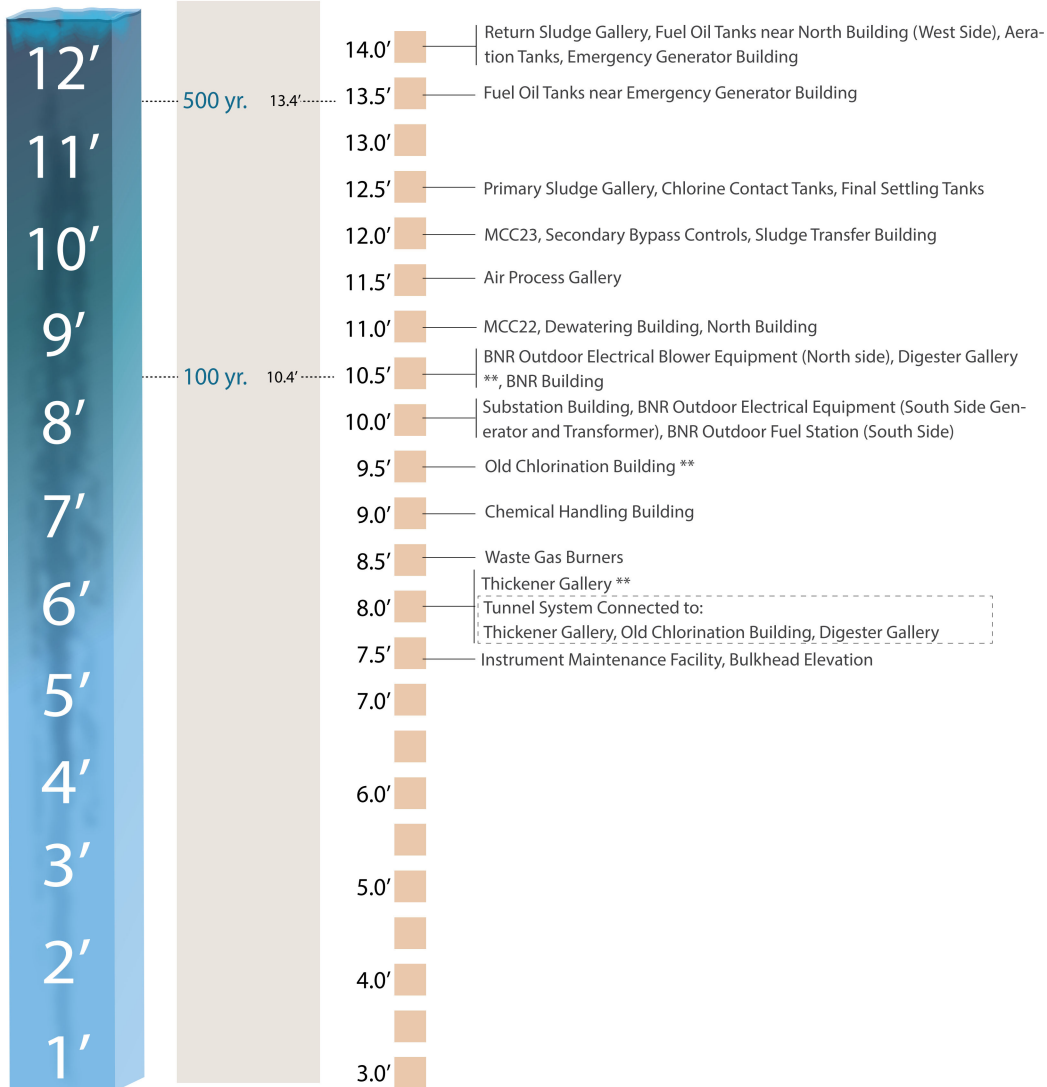
REV. No.	ZONE	DATE	BY
VILLAGE OF RHINEBECK WATER SYSTEM VULNERABILITY ASSESSMENT VILLAGE OF RHINEBECK DUTCHESS COUNTY ADAPTATION OPTIONS: RELOCATE LLPS AND ACCESS ROAD			
 CRAWFORD & ASSOCIATES ENGINEERING, P.C. 4411 Route 9, Hudson New York 12534			
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SCALE	CHECKED BY:	APA	
AS SHOWN	APPROVED BY:	APA	
	C&A JOB#	4568.05	
	DRAWING:	FIG A-5	

DATE PLOTTED: 5/31/2017 3:03 PM
 USER: JSC

Storm Surge Guidance: 26th Ward WWTP

If a storm surge advisory is announced as part of a weather report, locate the forecasted surge level below. Protective measures should be taken for all locations at or below that level. If a small craft advisory is also issued, waves may splash shoreline assets more than 3 ft above the surge level. Adjust protection accordingly.

Storm Surge Advisory* Floodplain and elevations Elevations and areas to be protected
Brooklyn Sewer Datum



*Storm surge added to Mean Higher High Water at Sandy Hook as of 2012, which is 1.77 ft Brooklyn Sewer Datum. Sea level is expected to rise up to 30 inches by 2050. This storm surge advisory is for current conditions.
**One of the multiple flood pathways into the tunnel system. To protect tunnels, ensure all pathways are protected.

This storm surge placard provides a quick reference for operators to prepare their plant in advance of a surge event. The guidance enables an operator to rapidly locate at-risk locations based on storm surge warnings. Once at-risk areas are identified, plant staff may proactively protect locations at or below the forecasted surge levels.

Village of Rhinebeck Water Treatment Facilities: Flood Risk Matrix

Updated May 31, 2017

H:\WORK\4568.05\Excel\4568.05 Elevation Matrix.xlsx

2017 Flood Elevations (ft)

Inundation (MHHW) 3.0
 1% (100yr) Annual Chance Flood 8.3

Legend

Y The equipment is vulnerable to flooding or projected to be inundated
 N The equipment is not vulnerable to flooding or projected to be inundated

		Elevation at which Item is Vulnerable to Flooding (ft)					
		8.5	9.8	5.6	7.2	9.8	25.0
Year	Sea Level Rise (in)	Low Lift Pump Station (Finished Grade)	Low Lift Pump Station (1st Floor)	Access Road (Lowest Point)	Lagoon Culvert (Inv. EI)	Lagoon Berm (Finished Grade)	Water Treatment Plant (Finished Grade)
Potential to be Impacted by a 1% (100yr) Annual Chance Flood							
2017	0	N	N	Y	Y	N	N
2020s	9	Y	N	Y	Y	N	N
2050s	27	Y	Y	Y	Y	Y	N
2080s	54	Y	Y	Y	Y	Y	N
2100	71	Y	Y	Y	Y	Y	N
Potential for Regular Inundation by High Tide							
2017	0	N	N	N	N	N	N
2020s	9	N	N	N	N	N	N
2050s	27	N	N	N	N	N	N
2080s	54	N	N	Y	Y	N	N
2100	71	Y	N	Y	Y	N	N