

NATHANIEL J. HOLT, PE

dan@holtengineering.net

December 20, 2022

Town of North Castle
Planning Board
17 Bedford Road
Armonk, NY 10504

Attn: Christopher Carthy, Chairman

RE: Hugh Harris
9 Sterling Road North
Application for Site Plan and Wetland Permit Approval

Dear Chairman Carthy and Members of the Planning Board:

When we last appeared before your Board it was made very clear that he would need to provide you with a copy of the renewed Westchester County Department of Health Remediation Permit, before he could proceed any further with his application. A copy of that permit is attached herein.

As considerable time has passed since then, it might be helpful to give you a brief overview of what has caused part of this delay in returning before your Board.

- Initial Permit #: NOC 2020-03R expired in 2021
- September 9, 2022 applied for the renewal of Permit NOC 2020-03R
- After the application for renewal was filed, the Westchester County Department of Health released new Regulations regarding the design of On-Site Wastewater Treatment Systems. As a result all applications received after April 2022 had to be redesigned to comply with the new Regulations
- On October 17, 2022 the revised plans and related materials were re-submitted to the Health Department for approval and approved on October 28, 2022

Significant Changes to the Health Department's "Rules and Regulations" which had a positive impact on the design of the OWTS as it relates to the Harris application. Without going into a lot of detail, the new regulations actually reduced the area of the absorption fields which in-turn reduced the amount of run-of-bank fill and encroachment into the wetland buffer. (Upon close examination, you will note that the distance between the last absorption trench and the edge of the wetland has increased from approximately 30 feet to approximately 80 feet. Other factors include:

- A reduction in the daily flow rates, which resulted in a corresponding reduction in the required length of the absorption trenches
- This reduction in the total linear feet of fields also created an overall reduction in the absorption area of approximately 1,000 square feet
- The reduction in the total area of the fields also reduces the volume of run-of-bank fill and the corresponding slopes of the fill pad

Attached please find a copy of the renewed Construction Permit (#NOC-03R) which was issued on - October 28, 2022.

Finally, in their previous comments to the Planning Board, Kellard Sessions dated October 22, 2021 offered additional comments and/or requested clarification on several items. Responses to those comments are provided in the same order as provided.

1. *The applicant retained the services of Mary Jaehnig, specifically to address the Conservation Board's concerns that the proposed swimming pool within the buffer would be detrimental to the functionality of the wetlands. Ms. Jaehnig's findings are a matter of record (IE the wetlands are not a high quality/functioning wetland). It was this Office's understanding that Kellard Sessions would review the study and respond when the matter returned to your Board.*

Regardless, Mr. Harris has committed to an extensive wetland mitigation plan (which has expanded with the new Health Department Regulations). This plan includes recommendations offered by John Fava (the former Chairman of the Conservation Board), which included the removal of invasive vegetation and planting materials by hand (IE: no machines).

- *Much has been said regarding how the pool site was ultimately chosen. The fact of the matter is: the 60 year old septic system was in distress; a visual inspection and septage was found to be spilling onto the ground and every junction box clogged with effluent. The Health Department was contacted at which time it was agreed that a Remediation Permit was in order.*
 - *It is acknowledged that the Conservation Board issued a 4-3 vote against the issuing of a Wetland Permit for this application. Unfortunately, the Jaehnig report was not received by the Conservation Board before its decision to vote on the application. However, during the Planning Board meeting of October 10, 2021 Co-Chairman John Krupa indicated that the vote might have been different had the report been available at the time. Again, Ms. Jaehnig's analysis did not rate the quality/function of the wetland as "high".*
2. *It is also acknowledged that the proposed pool and septic is located entirely within the wetland setback, as is approximately 75% of the residence, and 33% of the driveway. The subject wetlands were there when the house and septic were built in the 1960's – the only thing that has changed is the regulations governing wetlands and site plan approval.*
 3. *Throughout the review process with the Conservation Board, the applicant continued to revise to the plans to address its concerns. The use of "Trex" was simply one of those attempts. The applicant will continue to adjust to concerns that the Planning Board may have.*
 4. *Initially, it was proposed to install a rain garden in this location to mitigate stormwater runoff which is actively flowing onto the property from Sterling Road North and into the wetland. As this did not gain any support, there is no longer any plans to construct a rain garden in that location. The detail has been removed from the Yost Plans.*
 5. *It is agreed that a wall will be required to facilitate the construction of the pool. Note that initially, the pool was set closer to ground level, however at the direction of the Conservation Board, the pool was "raised" which required the walls. As noted, the proposed wall height is now approximately four (4) feet high.*

6. *The Renewed Remediation Permit (#NOC 2022-15R) is attached as requested. Also attached is a copy of the Approved Plans.*
7. *The typographic error relative to the infiltration unit has been corrected.*
8. *See Expanded discussion regarding the stormwater mitigation system below.*
9. *The referenced retaining wall was constructed under a separate permit and plans designed by different consultants. In lieu of reconstructing the walls, the property owner has secured a Certification Letter from a NYS Licensed Engineer stating that the wall was constructed in accordance with specifications and that its height is within design standards.*

Also note that under a previously issued RPRC approval, Mr. Harris also removed approximately 8,000 square feet of paved driveway and replaced it with permeable pavers. Thereby reducing the volume of stormwater runoff. The manufacturer of the pavers has provided a letter indicating compliance with the company's standards
10. *The Limits of Disturbance has been added to the plans along with the requisite note stipulating that it is to be field staked prior to the start of work. For the purposes of this application, it is probable that the disturbance will occur in stages: **wetland mitigation/stabilization and pool/septic system construction.***
11. *See **Expanded Discussion** below*
12. *A note regarding the wood chip pile and its required mitigation/restoration is depicted on the Site Plans as well as the Yost Plans as requested.*

EXPANDED DISCUSSION

Under a previously issued RPRC approval and associated Building Permit the Harris's renovated their residence and other site improvements. At that time the Project Architect was Teo Siguenza, RA and the Site Plan/Landscape Architect was Blythe Yost, LA; Yost Designs. Apparently, in addition to the renovations to the residence and general landscaping, it was learned that the previously paved driveway was removed/expanded and approximately 8,000 square feet of precast permeable concrete pavers were installed. In correspondence provided by Mr. Harris, the pavers were installed according to specification and therefore would follow that the RCN value of the driveway was reduced. In discussions with the previous consultants, neither prepared/provided/detailed any stormwater mitigation measures.

However, Mr. Harris has advised me that he was "directed" to install a total of four Cultec Model 280 HD units (which are located on the north-westerly corner of the residence). Again, to this office's best information (previous consultants) neither of the plans associated with the original application reflected the location or design parameters of those units. The presumption would be the requirement was to offset any increase in roof area approved by the RPRC. Regardless this office was unable to confirm the design parameters; however, we would agree that based upon the changes to the residence the number of units was probably appropriate.

We appreciate the Town Engineer's reluctance to accept the concept of pumping stormwater or pool winterization discharge into a slightly elevated mitigation device – in fact under most situations we would agree. However, consider the following:

POOL (winterization, backwash, etc)

Based upon the current plan, the volume of water during the winterization process controls the size of the new mitigation system. Importantly all discharge associated with drawdown, backwash, drainage, rinse cycles, and similar functions are all handled by the pool pump motor (typically ½ Hp). The slight difference in elevation between the pumps and the existing Cultecs is minimal and therefore well within the range of any pool filter pump. It is also unlikely that a homeowner would not maintain the pool filtration equipment functioning at its optimum efficiency, so it would follow that the once-a-year winterization process and perhaps weekly back-flow cleaning of filter will occur without interference.

To address the additional volume of winterization discharge a fifth Cultec Unit is proposed.

DRIVEWAY

As noted above, the original driveway was approximately 8,000 square feet of asphalt and stone pavers. Under that approval, Mr. Harris removed the pavement and replaced it with permeable pavers. Although open to discussion, the typical RCN associated with impervious surfaces is 98, depending upon the manufacturer, permeable pavers are assigned an RCN as low as 75. However, for the purposes of this discussion an RCN of 88 was assumed.

RCN	98	Runoff Depth	6.2"	Volume	4,130 cf
RCN	88	Runoff Depth	5.1"	Volume	3,400 cf
Result					- 730 cf

POOL DECK (TREX) AND PATIO

Note that the area associated with the Trex Deck and Patio “creates” less than **50 cf** of runoff volume. Further, as the design point associated with all runoff from the property is in the northwesterly corner of the site, it is suggested that the intent of the stormwater mitigation requirements have not only been met, but exceeded.

Nathaniel J. Holt, PE
Holt Engineering & Consulting, PA

encl

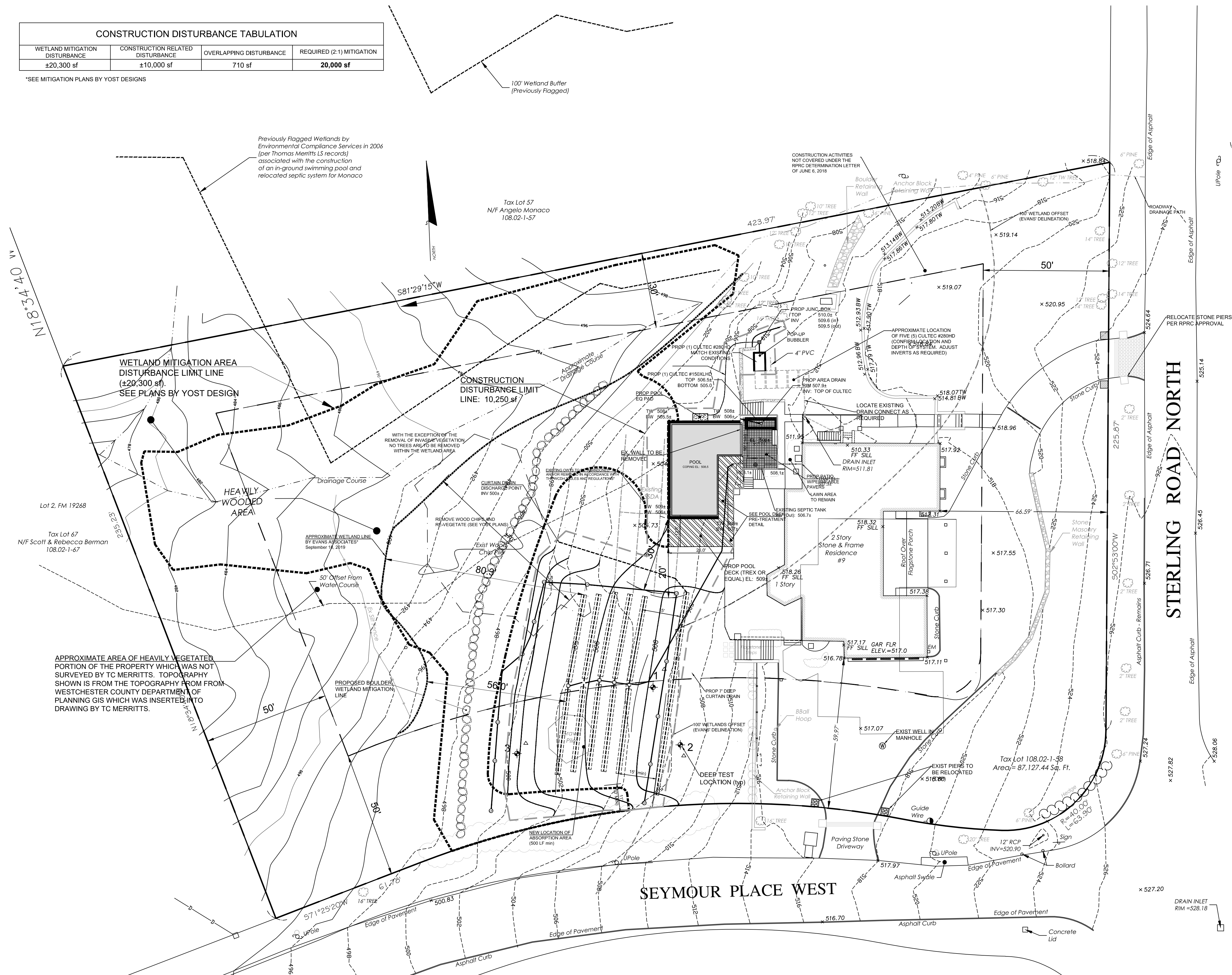
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GENERAL NOTES

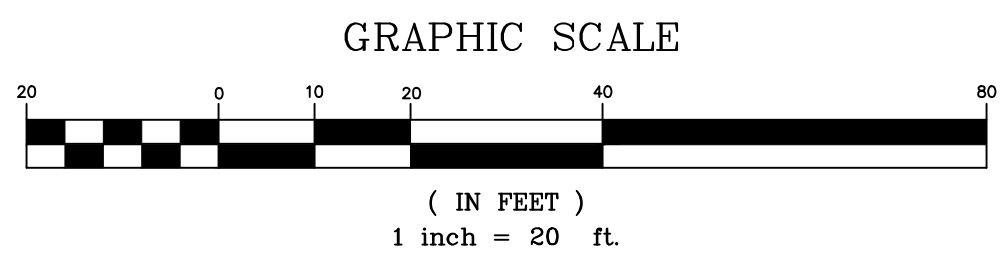
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2. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES, THE LIMITS OF DISTURBANCE SHALL BE FIELD STAKED FOR REVIEW AND APPROVAL BY THE OFFICE OF THE CONSULTING TOWN ENGINEER. AFTER WHICH TIME THE EROSION CONTROLS MAY BE INSTALLED. EROSION CONTROLS SHALL MUST BE PROPERLY INSTALLED, MAINTAINED AND INSPECTED AROUND THE WORK SITE UNTIL STABILIZED TO THE SATISFACTION OF THE TOWN ENGINEER.
3. CONSTRUCTION ENTRANCES MUST BE PROPERLY MAINTAINED SO THAT NO DEBRIS OR DIRT IS DEPOSITED ON THE STREET.
4. EXPOSED AREAS MUST BE STABILIZED AS SOON AS LAND ALTERATIONS ARE COMPLETED.
5. ANY UNDERGROUND PIPING OR STRUCTURES MUST BE INSPECTED PRIOR TO BACKFILLING.
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7. PRIOR TO THE START OF ANY EXCAVATION OPERATIONS THE CONTRACTOR SHALL CALL "DIG SAFELY NEW YORK" AT 1-800-962-7962 OR 811.9. WETLANDS ASSOCIATED WITH PARCEL 108.02-1-57 FROM TC MERRITTS RECORD SURVEY.
8. ADDITIONAL WETLAND INFORMATION BASED UPON A SITE WALK AND SKETCH PREPARED BY EVANS ASSOCIATES

CONSTRUCTION DISTURBANCE TABULATION			
WETLAND MITIGATION DISTURBANCE	CONSTRUCTION RELATED DISTURBANCE	OVERLAPPING DISTURBANCE	REQUIRED (2:1) MITIGATION
±20,300 sf	±10,000 sf	710 sf	20,000 sf

*SEE MITIGATION PLANS BY YOST DESIGNS



- LEGEND**
- 490 x EXISTING SPOT GRADE
 - PROPERTY LINE
 - TP 1 DEEP TEST PIT
 - * TREE TO BE REMOVED
 - 490 EXIST CONTOUR
 - PROP CONTOUR



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 DUPLICATION IS A VIOLATION OF
 APPLICABLE LAWS

SHEET: **2** of **4**

Date: _____

Project Number: HAR-4

Original Date: March 13, 2020

1. May 6, 2020
 2. Sept 6, 2020
 3. May 5, 2021
 4. Resubmission to Planning Bd
 5. July 9, 2022
 6. November 2, 2022

NATHANIEL J. HOLT, P.E.

592 ROUTE 22
 PAWLING, NEW YORK 12564
 (914) 760-1800

NATHANIEL J. HOLT, P.E.
 LICENSED PROFESSIONAL ENGINEER
 STATE OF NEW YORK

**SITE PLAN W/
 APPROVED SSDS**

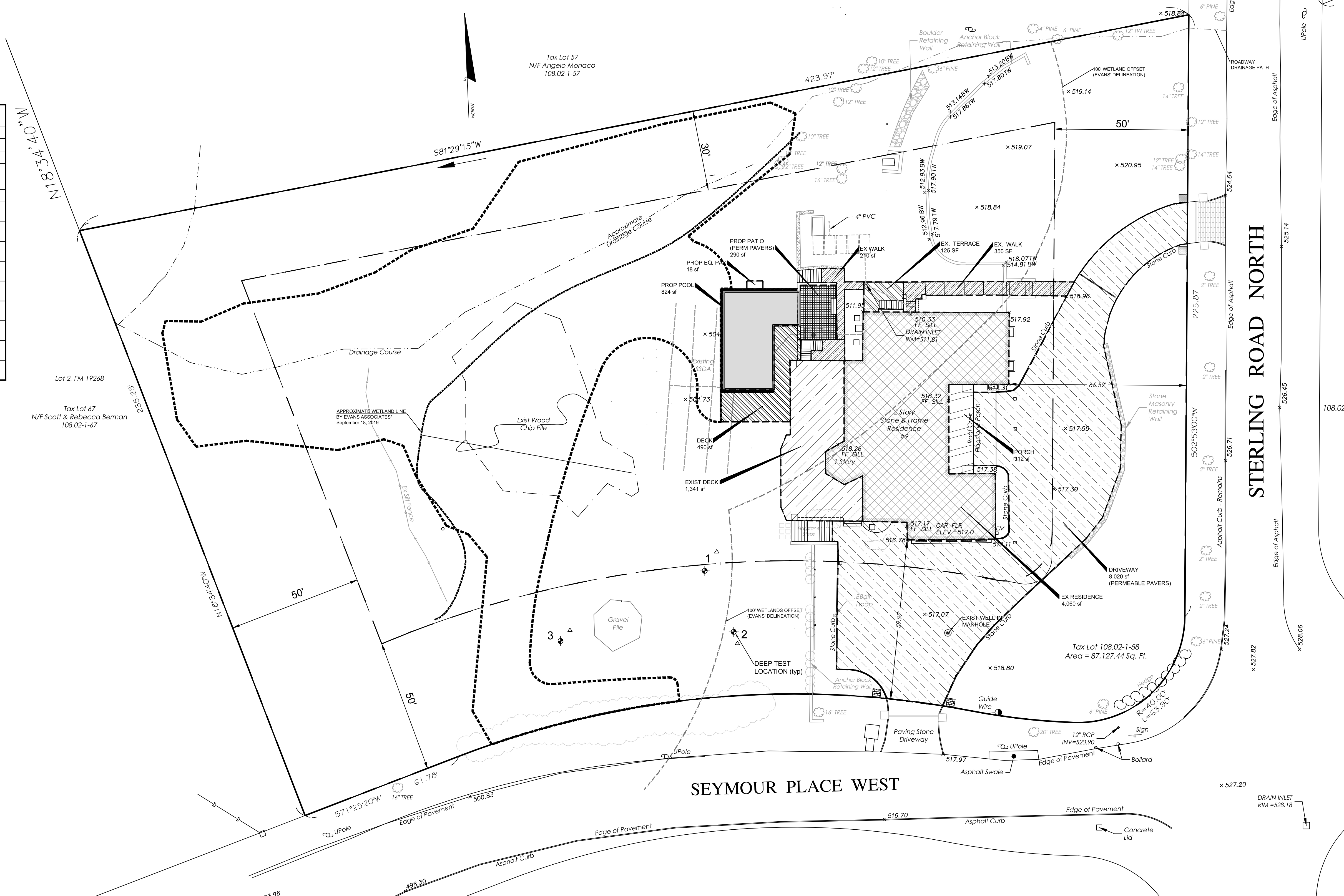
PROPOSED IN-GROUND POOL
 for
HARRIS

9 STERLING ROAD NORTH, ARMONK, NY

GROSS LAND COVERAGE CALCULATIONS WORKSHEET

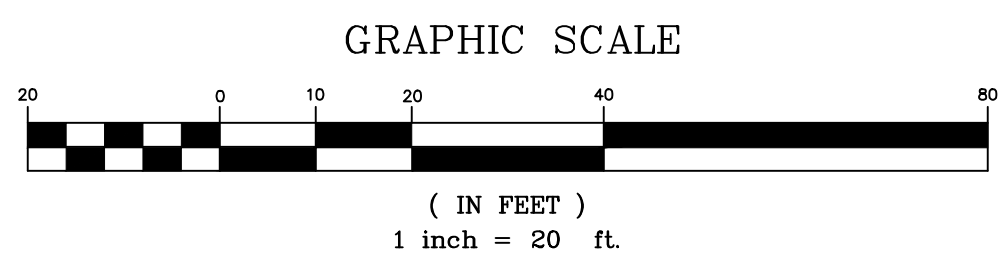
GROSS LOT COVERAGE	APPROVED	EXISTING	PROPOSED
1. TOTAL LOT AREA	87,120 sf		
2. MAXIMUM PERMITTED GROSS LAND COVERAGE	13,270 sf		
3. BONUS MAXIMUM GROSS LAND COVER Distance principal home is beyond minimum front yard setback 16.5 ft x 10 =	165 sf		
4. TOTAL MAXIMUM PERMITTED GROSS LAND COVERAGE	13,435 sf		
5. AMOUNT OF LOT AREA COVERED BY PRINCIPAL BUILDING 4,090 sf (EXISTING) + 0 sf (PROPOSED)	4,060 sf	4,060 sf	4,060 sf
6. AMOUNT OF LOT AREA COVERED BY ACCESSORY BLDGS 0 sf (EXISTING) + 0 sf (PROPOSED)	0 sf	0 sf	0 sf
7. AMOUNT OF LOT AREA COVERED BY DECKS 1,340 sf (EXISTING) + 490 SF (PROPOSED)	1,041 sf	1,340 sf	1,830 sf
8. AMOUNT OF LOT AREA COVERED BY PORCHES 300 sf (EXISTING) + 0 sf (PROPOSED)	312 sf	312 sf	312 sf
9. AMOUNT OF LOT AREA COVERED BY DRIVEWAY, PARKING AREAS AND WALKWAYS 8,545 sf (EXISTING) + 0 (PROPOSED)	7,113 sf	8,580 sf	8,580 sf
10. AMOUNT OF LOT AREA COVERED BY TERRACES/PATIOS 125 sf (EXISTING) + 290 SF (PROPOSED)	278 sf	125 sf	415 sf
11. AMOUNT OF LOT AREA COVERED BY TENNIS COURT, POOL & MECHANICAL EQUIP 0 sf (EXISTING) + 798 SF (PROPOSED)	0 sf	0 sf	784 sf
12. AMOUNT OF LOT AREA COVERED BY ALL OTHER STRUC. 0 sf (ORIGINAL) + 0 SF (PROPOSED)	0 sf	0 sf	0 sf
13. PROPOSED GROSS LAND COVERAGE: Total of Lines 5-12:	12,804 sf	14,417 sf ¹	15,981 sf ²

¹ VARIANCE OF 982 sf REQUIRED FOR EXISTING CONDITIONS
² VARIANCE OF 3,177 sf REQUIRED FOR EXISTING CONDITIONS



LEGEND

- 490 x EXISTING SPOT GRADE
- PROPERTY LINE
- TP 1 DEEP TEST PIT
- * TREE TO BE REMOVED
- 490 EXIST CONTOUR
- PROP CONTOUR



APPROVED BY THE TOWN OF NORTH CASTLE PLANNING BOARD
RESOLUTION DATED: _____

CHRISTOPHER CARTHY, CHAIRMAN
TOWN OF NORTH CASTLE PLANNING BOARD
DATE: _____

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO THE RESOLUTION:
DATE: _____

JOSEPH M. CERMELE, PE
KELLARD SESSIONS, CONSULTING
CONSULTING TOWN ENGINEERS

SHEET: **3** of **4**

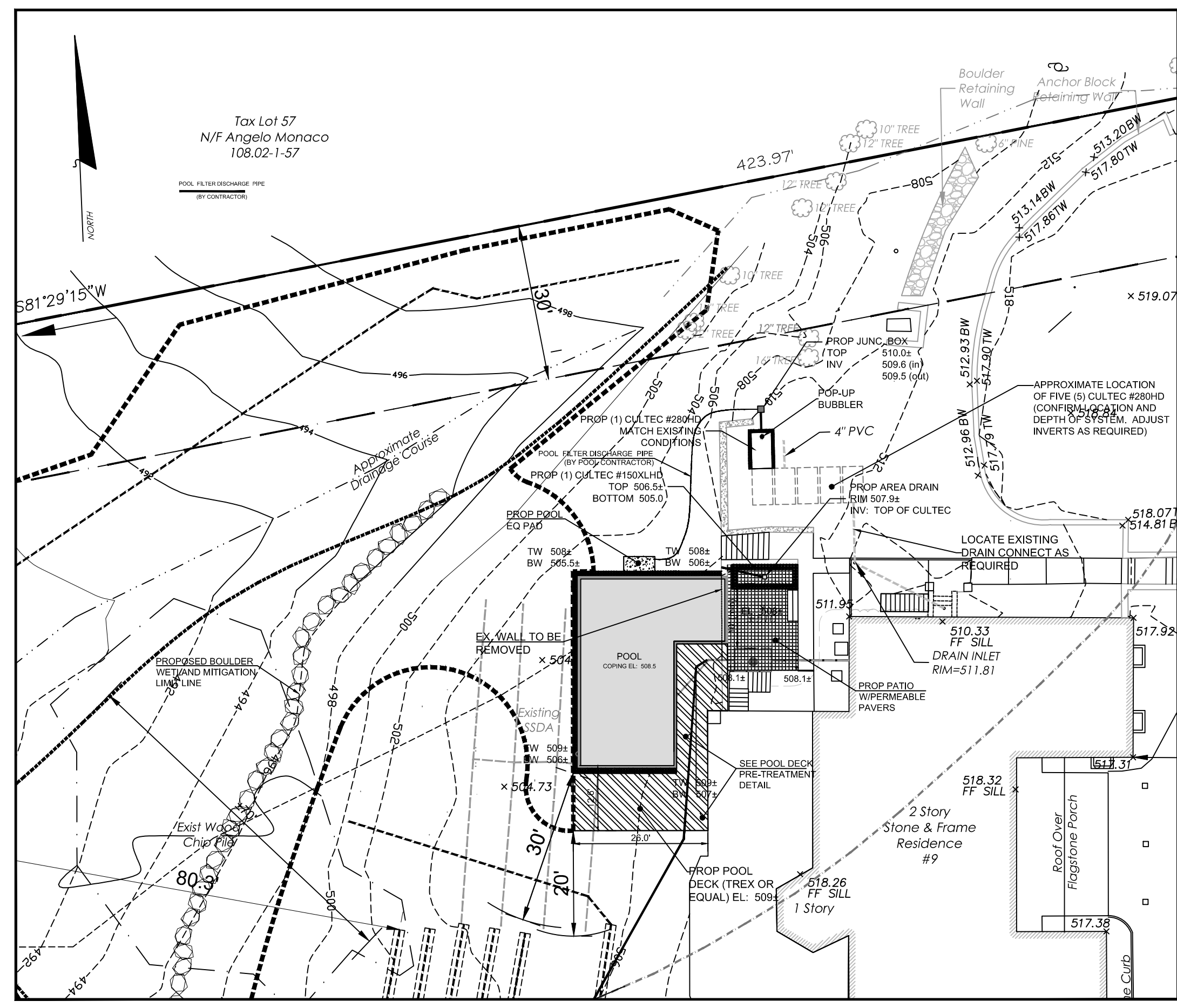
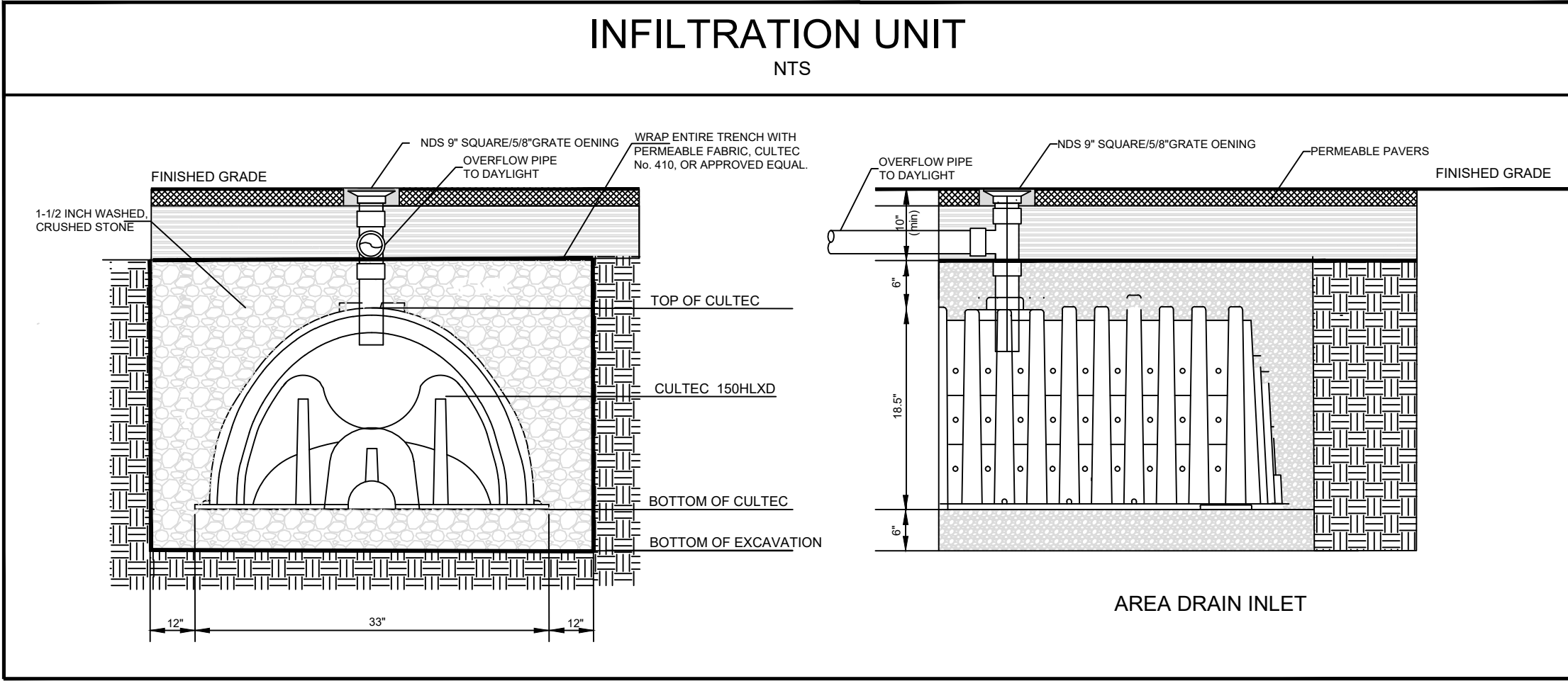
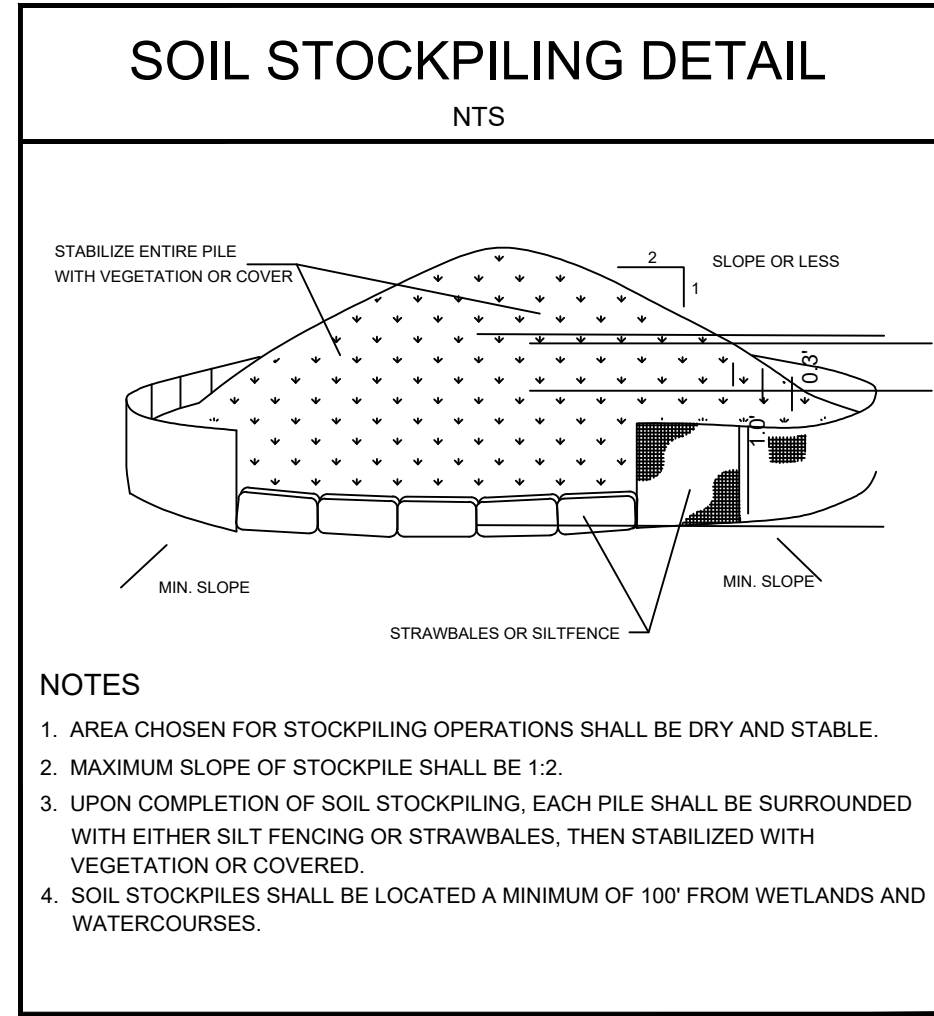
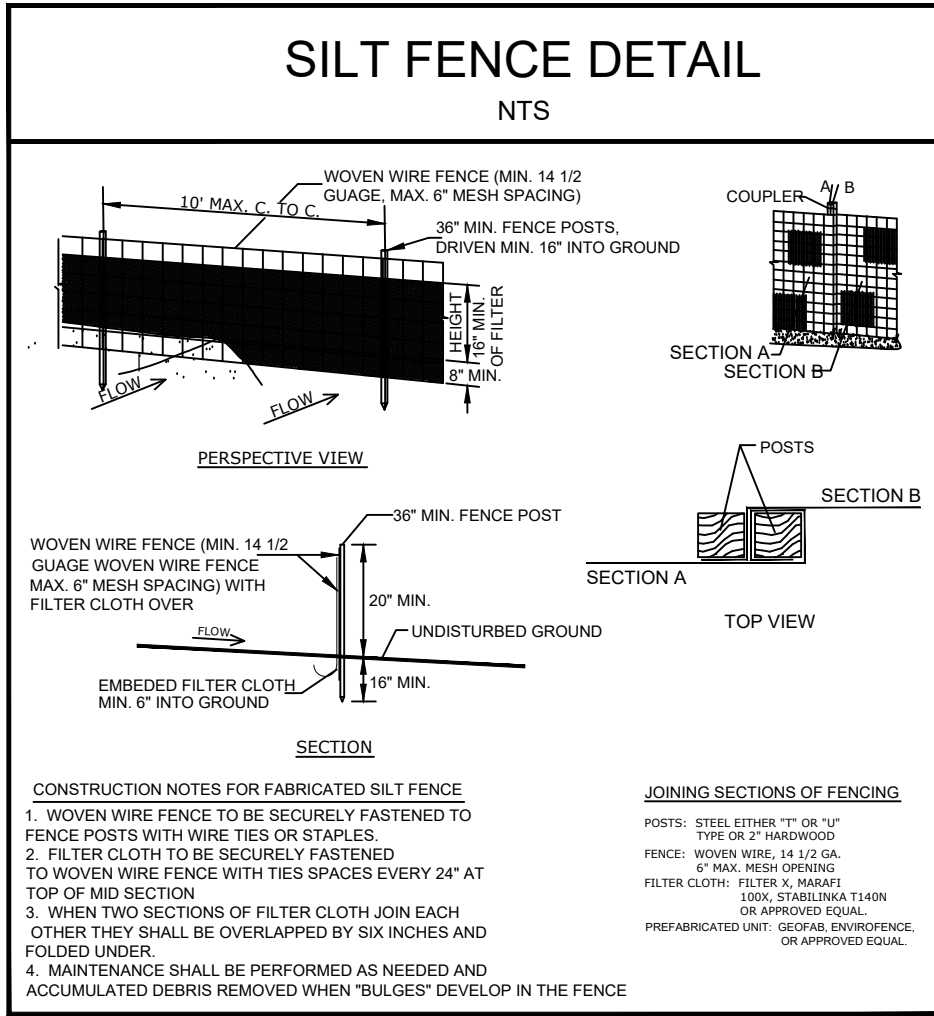
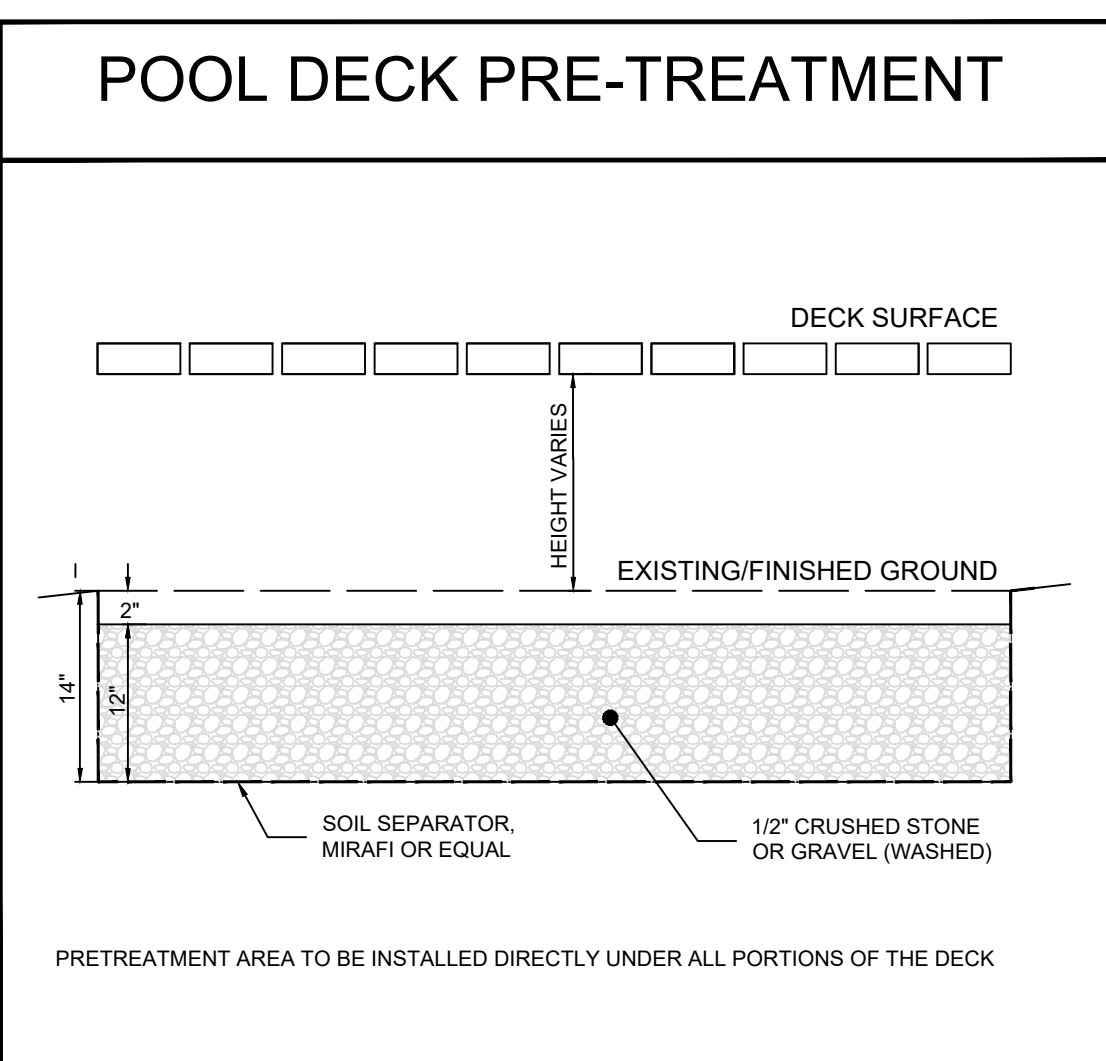
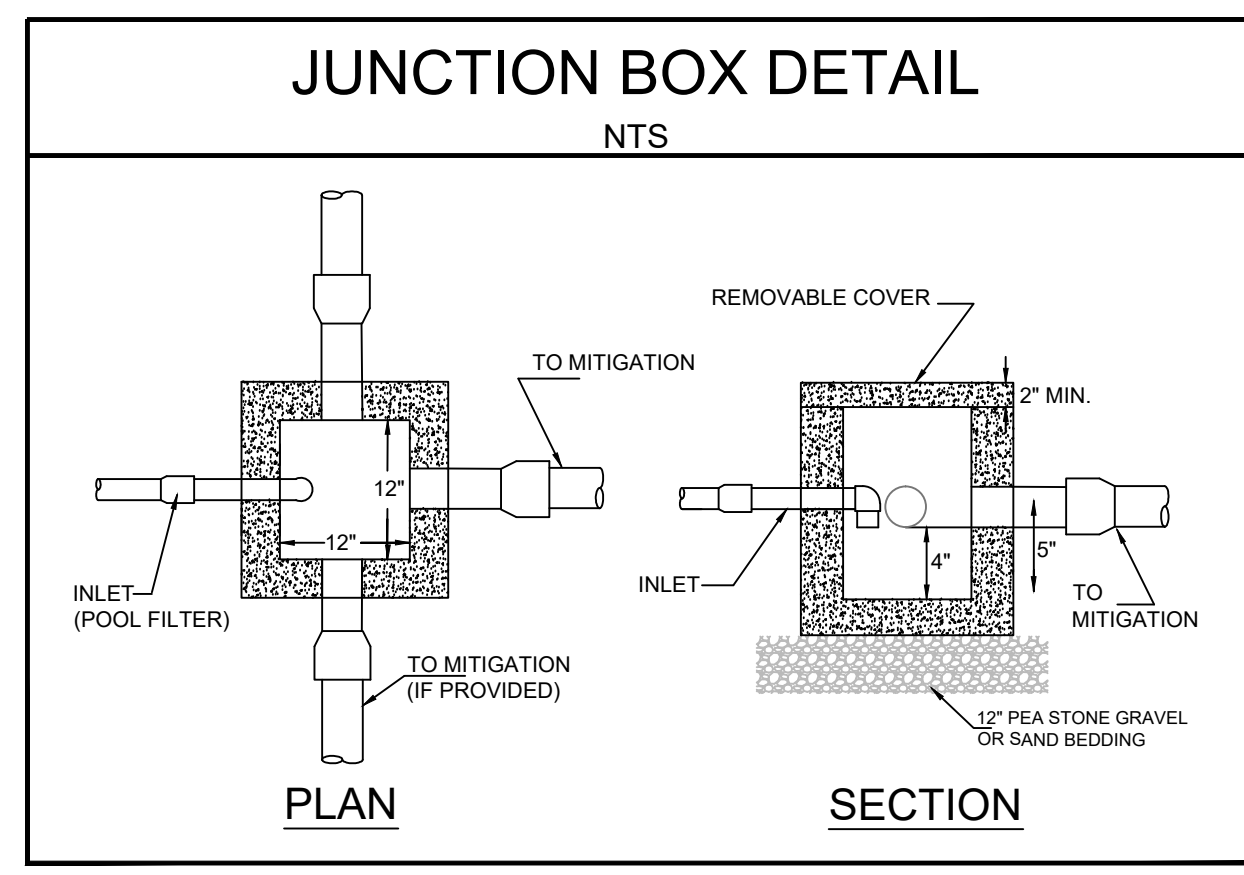
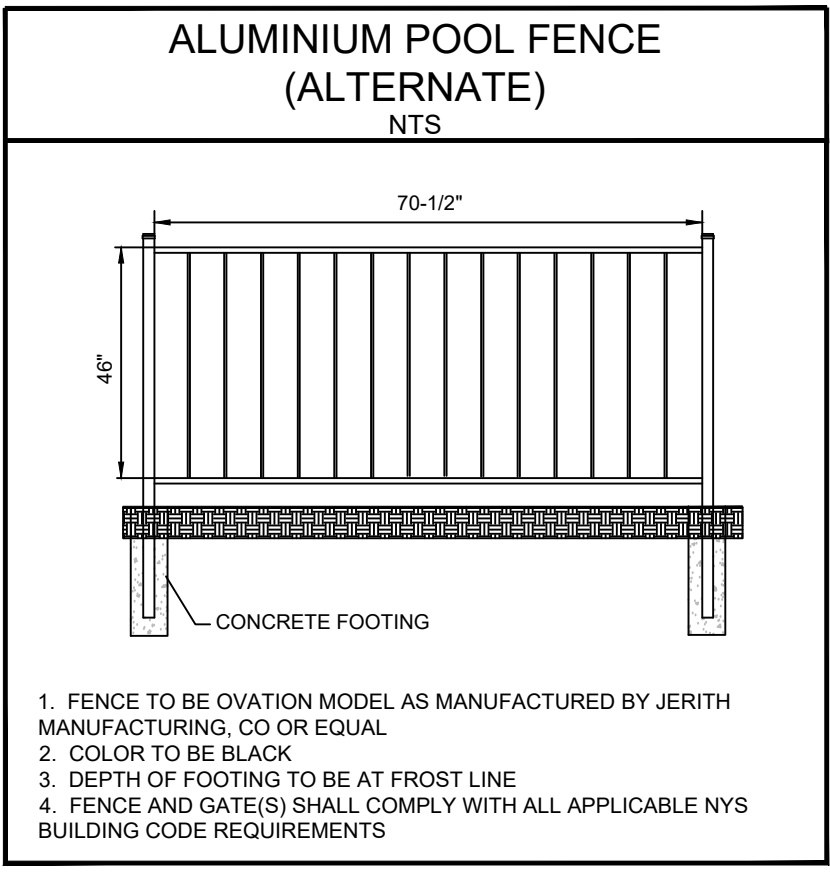
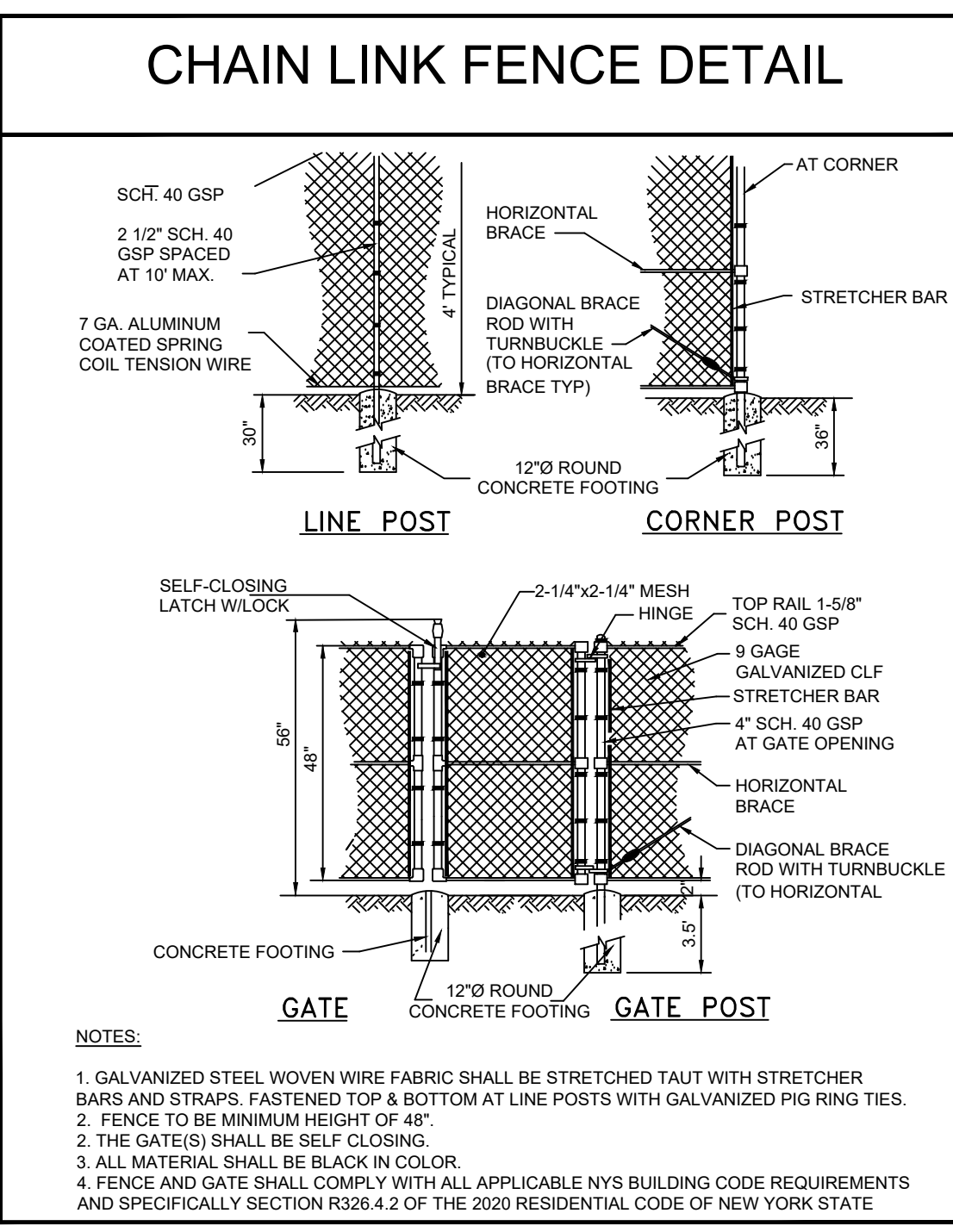
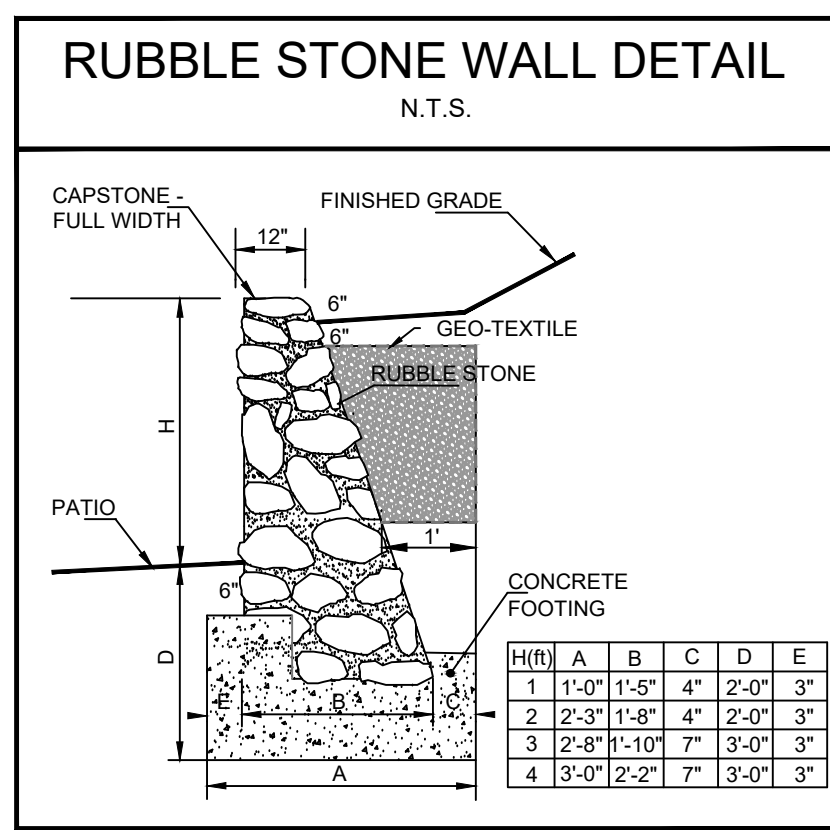
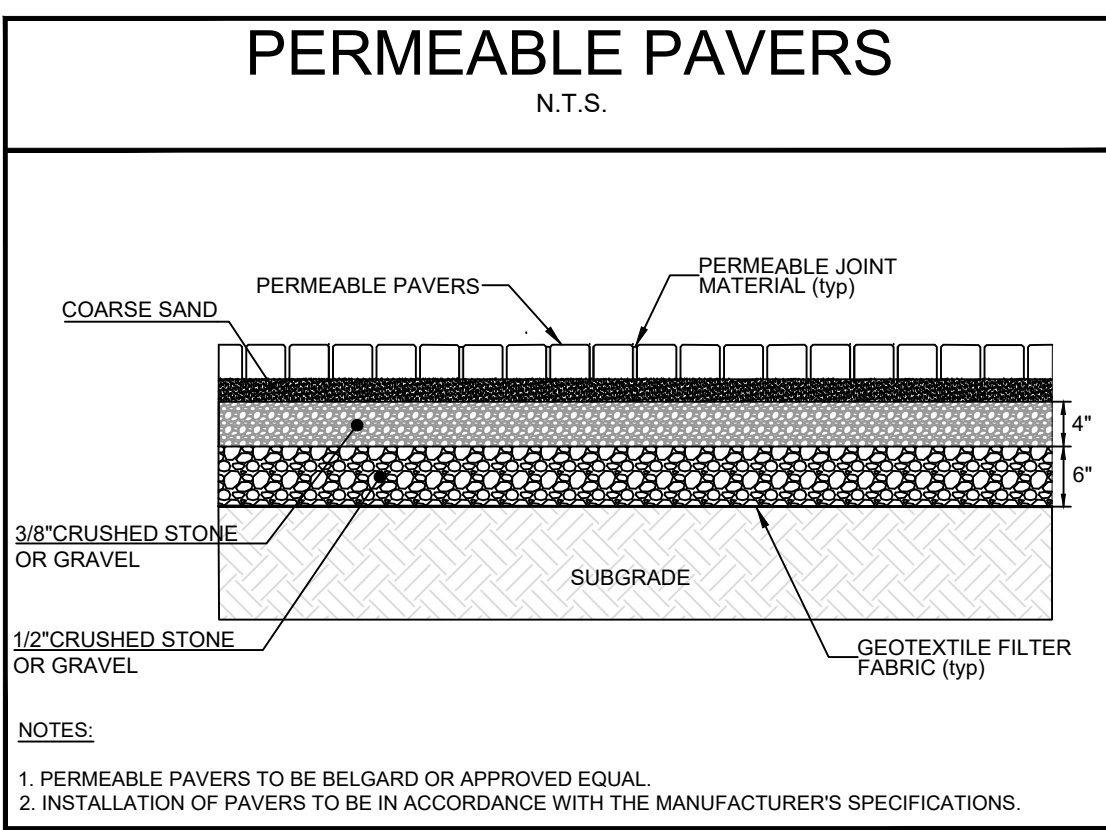
November 2, 2022
November 16, 2022
July 9, 2022
Resubmission to Planning Bd
Resubmission to Planning Bd
May 5, 2021
Resubmission to Planning Bd
May 29, 2020
2. Specific Added
1. May 6, 2020
Original Date: March 13, 2020
Project Number: HAR-4

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

PROPOSED
IN-GROUND POOL
COVERAGE PLAN

for
HARRIS

9 STERLING ROAD NORTH, ARMONK, NY



STORMWATER ANALYSIS

REQUIRED: CAPTURE 25 YR STORM EVENT (6") OVER INCREASE IN IMPERVIOUS AREA

EXISTING CONDITIONS

PROPERTY AREA: 87,120 SF
 STUDY AREA: 1,735 SF
 SOIL TYPE: WdB - WOODBRIDGE
 PERVIOUS AREAS (HSG = C/D)
 LAWN-POOR (RCN 78) 1,730 sf = 0.04 ac

PROPOSED CONDITIONS

DECK (Trex: 40% Perv) 505 sf = 0.0115 ac
 POOL (NOT INCLUDED IN RUNOFF) 950 sf = 0.0218 ac
 PATIO (PAVERS: 40% VOIDS) 275 sf = 0.0063 ac
 TOTAL 1,730 sf = 0.04 ac

RUNOFF CURVE NUMBER

DECK 0.012 ac x 75 = 0.90
 PATIO 0.006 ac x 85 = 0.51
 0.018 1.41 = 7, SAY 78.3

RUNOFF VOLUME

THE INCREASE IN RUNOFF VOLUME DUE TO THE INCREASE IN IMPERVIOUS AREA IS:
 (3.93" - 3.9") / 12 x 1,730 sf = 43.25 cf

WINTERIZATION DRAWDOWN

POOL VOLUME: 765 sf x 0.5ft = 382.5 cf

POOL DRAWDOWN VOLUME CONTROLS

THERE ARE 5 CULTEC MODEL #280 HD INSTALLED UNDER THE PREVIOUS SITE PLAN APPROVED BY THE RPC. TO ADDRESS THE POOL WINTERIZATION, AN ADDITIONAL CULTEC 280 HD IS PROPOSED.

PROPOSED MITIGATION

ONE CULTEC UNIT (MODEL 150XLHD) HAS THE CAPACITY OF 50.2 cf/ft. THEREFORE: USE 1 MODEL 150 XLHD

NOTED ABOVE, THE TREX DECK AND POOL PATIO WILL RESULT IN AN INCREASE IN IMPERVIOUS AREA THAT REQUIRES MITIGATION. HOWEVER, TOPOGRAPHICALLY, IT IS NOT POSSIBLE TO PROVIDE GRAVITY FLOW FROM THE PATIO AREA TO THE INFILTRATION SYSTEM.

ALTERNATIVE CONSIDERATION

APPARENTLY, SOME FORM OF MITIGATION WAS PROVIDED FOR THE RECENTLY COMPLETED RENOVATIONS TO THE RESIDENCE. AS REPORTED BY THE APPLICANT/OWNER, APPROXIMATELY 8,000 SF OF THE EXISTING ASPHALTIC DRIVEWAY WAS REMOVED AND REPLACED BY PERMEABLE PAVERS.

FOR THE PURPOSE OF THIS ANALYSIS A CONSERVATIVE RCN VALUE OF 88 HAS BEEN ASSIGNED TO THE PERMEABLE PAVERS VARIES. THE RESULTING REDUCTION IN RUNOFF ASSOCIATED WITH THE 25 YEAR STORM EVENT IS ILLUSTRATED BELOW:

ASPHALT (CN 98): 6.2" (4133 CF OF RUNOFF DURING THE 25 YEAR EVENT)
 PERMEABLE PAVER (88): 5.1" (3,400 CF OF RUNOFF DURING THE 25 YEAR EVENT)

RUNOFF VOLUME REDUCTION: 733 CF

BY COMPARISON: THE PROPOSED POOL AND PATIO AREAS "CREATE" 141 CF OF ADDITIONAL RUNOFF. THEREFORE BY REPLACING THE EXISTING PAVED DRIVEWAY PROVIDED 5 TIMES THE REQUIRED AMOUNT OF MITIGATION

APPROVED BY THE TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION DATED: _____

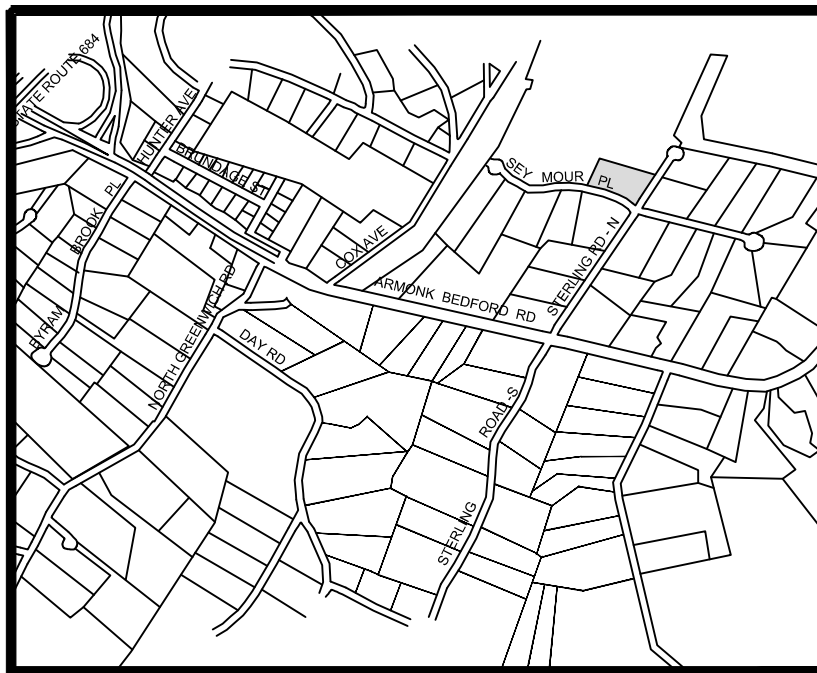
CHRISTOPHER CARTHY, CHAIRMAN
 TOWN OF NORTH CASTLE PLANNING BOARD

DATE: _____

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO THE RESOLUTION:

DATE: _____

JOSEPH M. CERMELE, PE
 KELLARD SESSIONS, CONSULTING
 CONSULTING TOWN ENGINEERS



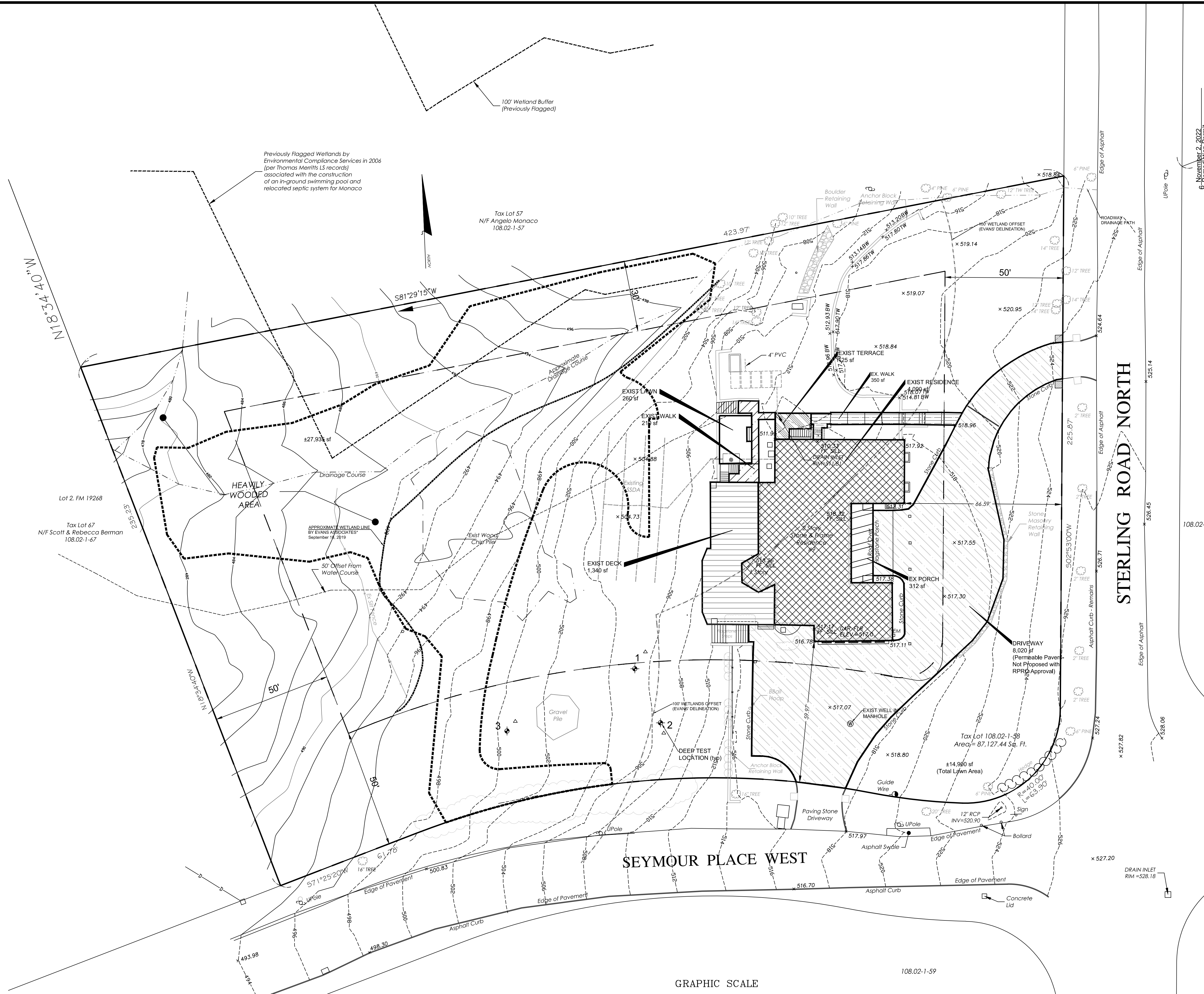
VICINITY MAP
1" = 2,000'

PROPERTY DATA

1. PROPERTY OWNER: HUGH HARRIS
9 STERLING ROAD N
ARMONK, NEW YORK 10504
2. TAX MAP DESIGNATION: 108.02-1-58
3. ZONING DISTRICT R-2A SINGLE FAMILY RESIDENTIAL 2 ACRE

GENERAL NOTES

1. SITE TOPOGRAPHY FROM A SURVEY PREPARED BY STEPHEN HOPPE, LS DATED FEBRUARY 28, 2018. SURVEY UPDATED BY TC MERRITTS ENTITLED "TOPOGRAPHIC SURVEY PREPARED FOR HUGH AND VIOLETTA HARRIS" DATED AUGUST 20, 2019.
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10. ADDITIONAL WETLAND INFORMATION BASED UPON A SKETCH PREPARED BY EVANS ASSOCIATES.
11. PRIOR TO THE START OF CONSTRUCTION, THE LIMIT OF DISTURBANCE LINE SHALL BE FIELD STAKED AND REVIEWED/APPROVED BY THE TOWN CONSULTING ENGINEERS.



Previously Flagged Wetlands by Environmental Compliance Services in 2006 (per Thomas Merritts LS records) associated with the construction of an in-ground swimming pool and relocated septic system for Monaco

Tax Lot 57
N/F Angelo Monaco
108.02-1-57

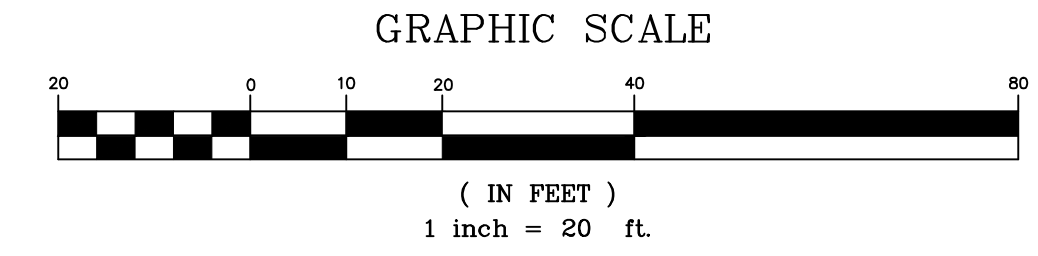
Lot 2, FM 19268
Tax Lot 67
N/F Scott & Rebecca Berman
108.02-1-67

Tax Lot 108.02-1-58
Area = 87,127.44 Sq. Ft.
±14,960 sf
(Total Lawn Area)

SEYMOUR PLACE WEST

STERLING ROAD NORTH

- 490 x EXISTING SPOT GRADE
- PROPERTY LINE
- TP 1 DEEP TEST PIT
- * TREE TO BE REMOVED
- 490 — EXIST CONTOUR
- PROP CONTOUR



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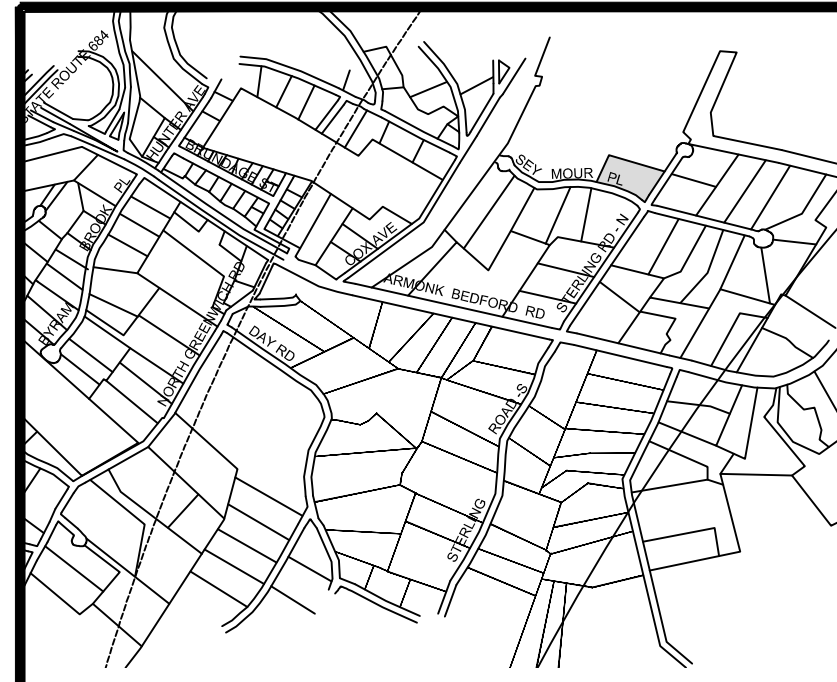
SHEET: **1** of **4**

6 November 2, 2022
6 November 2, 2022
5 July 9, 2022
4 Resubmission to Planning Bd
3 Resubmission to Planning Bd
3 May 5, 2021
2 May 5, 2021
2 Sept 16, 2020
1 May 6, 2020
Original Date: March 13, 2020
Project Number: HAR-4

NATHANIEL J. HOLT, P.E.
592 ROUTE 22
PAWLING, NEW YORK 12564
(914) 760-1800

EXISTING CONDITIONS
PLAN

PROPOSED IN-GROUND POOL
for
HARRIS
9 STERLING ROAD NORTH, ARMONK, NY



VICINITY MAP
1" = 2,000'

PROPERTY OWNER: HUGH HARRIS
9 STERLING ROAD NORTH
ARMONK, NEW YORK 10904

SITE LOCATION: 9 STERLING ROAD NORTH, ARMONK, NEW YORK
TAX MAP DESIGNATION: SECTION 2, BLOCK 1-4, LOT 2
STATE ID SECTION 108.02, BLOCK 1, LOT 58

WESTCHESTER COUNTY DEPARTMENT OF HEALTH NOTES

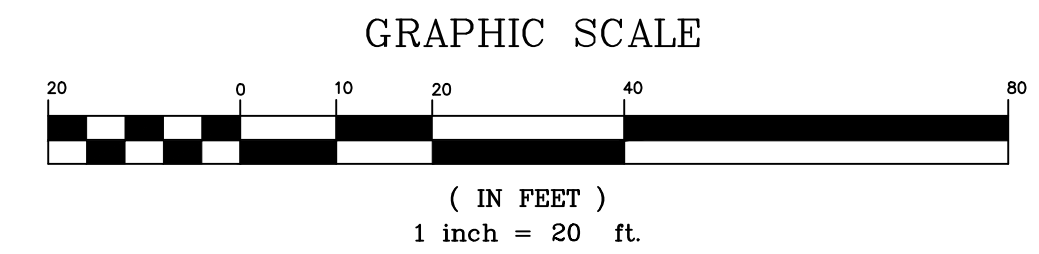
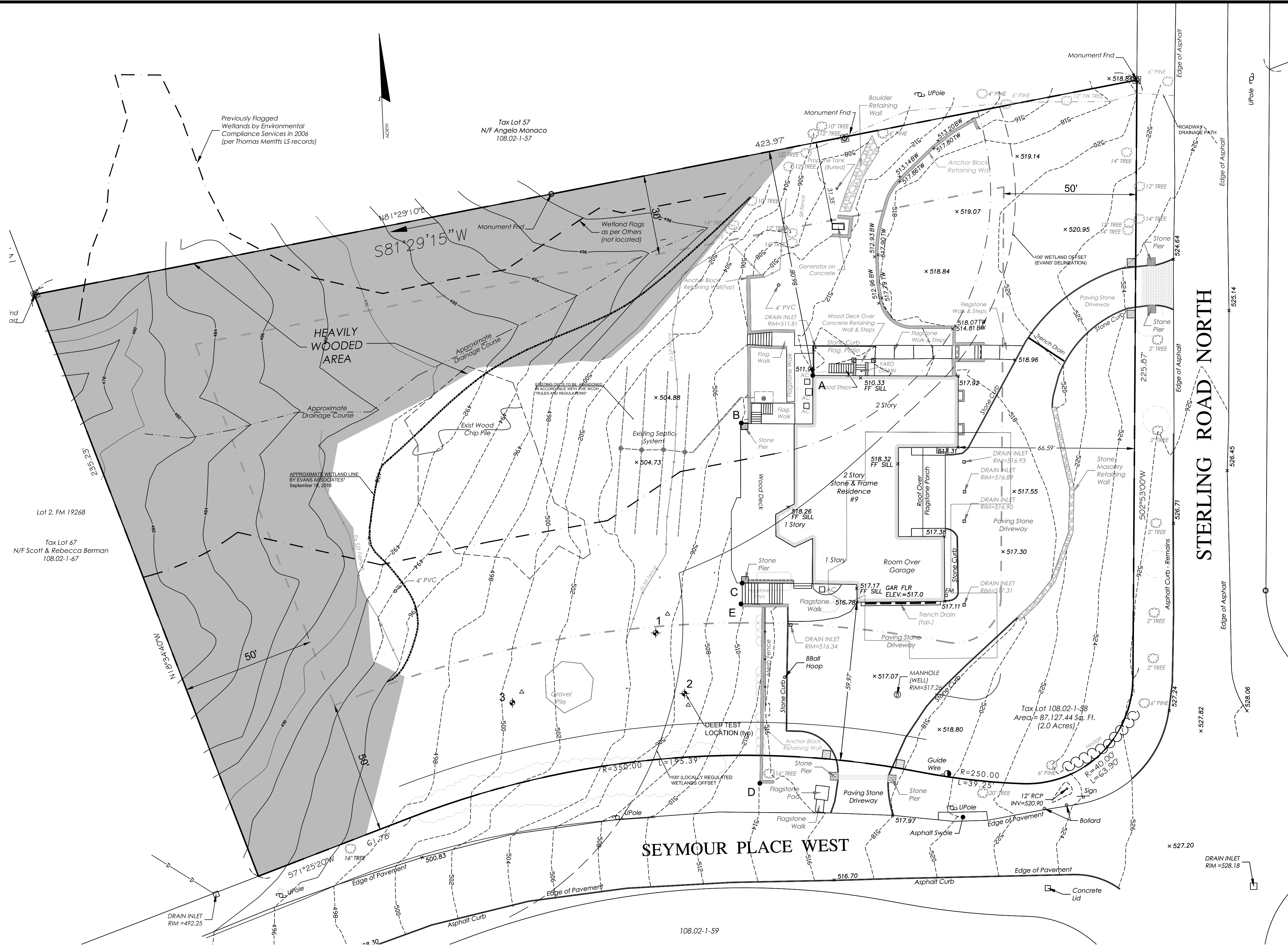
- CONSTRUCTION OF THE SUBSURFACE SEWAGE DISPOSAL SYSTEM (OWTS) SHALL BE IN ACCORDANCE WITH THESE PLANS. ADDITIONS AND/OR MODIFICATION TO THE SYSTEM SHALL BE IN ACCORDANCE WITH THE NYSDCC TOWNSHIP ADAPTATION 7-2-A. ALL MODIFICATIONS AND/OR ADDITIONS SHALL BE ENDORSED BY THE ENGINEER AND THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH PRIOR TO CONSTRUCTION OF THE SYSTEM.
- ELEVATIONS OF THE SUBSURFACE SEWAGE DISPOSAL SYSTEM HAVE BEEN ESTABLISHED BASED UPON THE SEWER INVERT OF THE BUILDING LINE AND GROUND ELEVATIONS WITHIN THE ABSORPTION AREA. SHOULD THE SEWER INVERT BE CHANGED, ADJUSTMENTS OF THE ELEVATIONS TO THE REMAINING PORTION OF THE SYSTEM MAY BE REQUIRED. ALL CHANGES SHALL BE ENDORSED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL ISOLATE AND PROTECT THE SEWAGE DISPOSAL AND EXPANSION AREAS AGAINST DAMAGE. NO TRUCKS, HEAVY EQUIPMENT, BUILDING MATERIALS OR EARTH SHALL BE PERMITTED ON OR IN THE SEWAGE DISPOSAL AREA PRIOR DURING OR AFTER CONSTRUCTION.
- DESIGN OF THE OWTS IS BASED UPON A SOIL PERCOLATION RATE OF 11 - 15 MINUTES PER INCH AND A 4 BEDROOM SINGLE FAMILY RESIDENCE.
MINIMUM SEPTIC TANK SIZE: 4 BEDROOMS x 110 GALS/DAY/BEOMS = 440 GPD x 1.5 = 660 GPD IN ACCORDANCE WITH TABLE 3, LATEST EDITION OF WESTCHESTER COUNTY "RULES AND REGULATIONS" THE MINIMUM TANK SIZE IS 1,250 GALLONS
MINIMUM ABSORPTION TRENCH LENGTH = 440 GAL x 0.65 GALS/DAY/FT x 1/5 FT/FT = 339 LF, SAY 340 LF
- AS PROPOSED, THE SUBSURFACE SEWAGE DISPOSAL SYSTEM SHALL CONSIST OF THE FOLLOWING:
340 LF OF ABSORPTION TRENCH
1,250 GALLON PRECAST CONCRETE SEPTIC TANK
ADDITIONAL REQUIREMENTS:
3 FEET RUN OF BANK FILL
7 FOOT DEEP CURTAIN DRAIN
- SHOULD FILL BE REQUIRED WITHIN THE SUBSURFACE SEWAGE DISPOSAL AND 100% RESERVE AREAS, ALL FILL PLACED SHALL BE "RUN-OF-BANK" FILL CONFORMING TO THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH DEPARTMENT REGULATIONS. BANK RUN FILL SHALL BE PLACED TO THE DEPTHS SPECIFIED ON THE DRAWINGS. PRIOR TO PLACING THE FILL THE ENGINEER SHALL INSPECT AND APPROVE THE MATERIAL.
- THE CONTRACTOR SHALL CONSTRUCT A CURTAIN DRAIN AND SWALES AS SPECIFIED ON THE PLANS, IN ORDER TO DIVERT GROUND AND SURFACE WATER AROUND THE ABSORPTION AREA. ALL ROOF AND FOUNDATION SURFACE WATER SHALL BE DISCHARGED BELOW THE DISPOSAL AREA.
- THE CONTRACTOR SHALL REMOVE TOPSOIL WITHIN THE LIMITS OF THE ABSORPTION AREA AND STOCKPILE IT FOR LATER USE. UPON COMPLETION OF CONSTRUCTION OF THE SYSTEM, TOPSOIL SHALL BE REDISTRIBUTED OVER THE AREA TO A MINIMUM DEPTH OF 4 INCHES.
- THE CONTRACTOR SHALL REMOVE ALL TREES WITHIN TEN FEET OF THE OWTS.
- THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF CONSTRUCTION. IN ADDITION THE CONTRACTOR SHALL EMPLOY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE WESTCHESTER COUNTY'S BEST MANAGEMENT PRACTICE MANUAL FOR CONSTRUCTION RELATED ACTIVITIES IN AN EFFORT TO REDUCE EROSION AND PREVENT SEDIMENTATION OF DOWNSTREAM WATERCOURSES.
- THERE ARE NO WELLS WITHIN 200' OF THE OWTS UNLESS OTHERWISE NOTED ON THESE PLANS.
- THERE ARE NO OWTS WITHIN 200' OF THE WELL UNLESS OTHERWISE SHOWN ON THE PLANS.
- THE PROPOSED OWTS AREA SHALL BE PROTECTED AND ISOLATED AGAINST DAMAGE AND EROSION, STORAGE OF EARTH OR MATERIALS, DISPLACEMENT, COMPACTION OR OTHERWISE ADVERSE PHYSICAL CHANGE IN THE CHARACTERISTICS OF THE SOIL OR IN THE DRAINAGE OF THE AREA.
- THE DESIGN PROFESSIONAL SHALL SUPERVISE THE CONSTRUCTION OF THE OWTS AND MAKE ON OPEN WORKS INSPECTION.
- WITHIN 24 HOURS OF THE COMPLETION OF THE OWTS, THE DESIGN PROFESSIONAL MUST NOTIFY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH THAT THE OWTS IS READY FOR INSPECTION BY SUBMITTING A COMPLETED WORKS REQUEST FOR AN OPEN WORKS INSPECTION ON THE APPROPRIATE FORM TO THE WCDH.
- NO BACKFILLING OF THE OWTS SHALL OCCUR UNTIL AFTER IT HAS BEEN INSPECTED AND ACCEPTED BY THE WCDH.
- AFTER BACKFILLING OF THE OWTS, THE AREA SHALL BE COVERED WITH A MINIMUM OF 4 INCHES OF CLEAN TOPSOIL, SEEDED AND MULCHED.
- THE INSPECTION OF THE OWTS SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR THE DESIGN AND CONSTRUCTION OF RESIDENTIAL SUBSURFACE SEWAGE TREATMENT SYSTEMS AND DRILLED WELLS IN WESTCHESTER COUNTY.
- ALL PIPES CONNECTING THE TANK AND BOXES SHALL BE CUT FLUSH WITH THE INSIDE WALL OF THE STRUCTURE.
- THE OWTS SHALL BE INSTALLED BY A WESTCHESTER COUNTY LICENSED SEPTIC CONTRACTOR.
- PRIOR TO ANY EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED, CALL 1-800-962-7962.
- THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH APPROVAL SHALL EXPIRE ONE YEAR FROM THE DATE ON THE APPROVAL STAMP AND IS REQUIRED TO BE RENEWED ON OR BEFORE THE EXPIRATION DATE. THE APPROVAL IS REVOCABLE FOR CAUSE OR MAY BE AMENDED OR MODIFIED WHEN CONSIDERED NECESSARY BY THE DEPARTMENT.
- THE SITE IS SERVICED BY AN EXISTING DOMESTIC WELL.
- TOTAL SITE DISTURBANCE IS APPROXIMATELY ---SF.

- ADDITIONAL NOTES**
- THE PROPERTY IS NOT LOCATED WITHIN A NYCDP DESIGNATED WATERSHED. (BYRAN RIVER/LONG ISLAND SOUND).
 - THERE ARE NO NYSDCC WETLANDS OR WATERCOURSES WITHIN 200 FEET OF THE PROPOSED OWTS UNLESS OTHERWISE NOTED ON THE PLANS.
 - THE START DATE IS DEPENDENT UPON THE TOWN OF NORTH CASTLE'S ISSUANCE OF AN "ADMINISTRATIVE WETLAND PERMIT" (LOCALLY REGULATED WETLAND).
 - THE EXISTING OWTS SHALL BE ABANDONED IN ACCORDANCE WITH THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH'S "RULES AND REGULATIONS".
 - A SEARCH OF THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH FILES FAILED TO LOCATE ANY INFORMATION ON THE EXISTING OWTS. HOWEVER, NORTH CASTLE BUILDING DEPARTMENT FILES INDICATED THAT THE 4 BEDROOM RESIDENCE WAS CONSTRUCTED IN THE EARLY 1990'S. THE LOCATION OF THE EXISTING ABSORPTION AREA WAS DETERMINED BY FIELD EXPLORATION.

LEGEND

- EXISTING SPOT GRADE
- PROPERTY LINE
- DEEP TEST PIT
- TREE TO BE REMOVED
- EXIST CONTOUR
- PROP CONTOUR

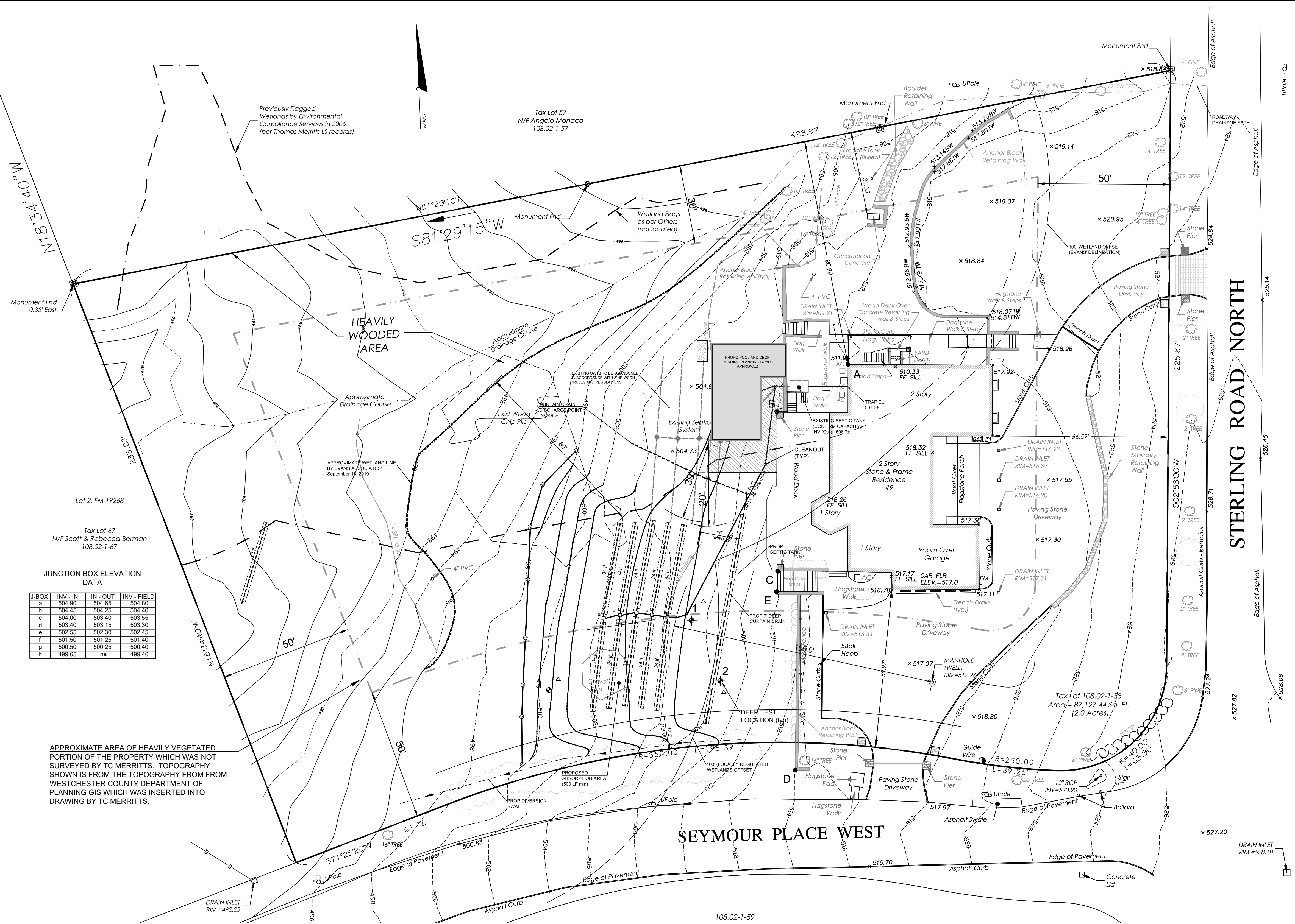
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DUPLICATION IS A VIOLATION OF
APPLICABLE LAWS



<p>SHEET: 1 of 3</p>
<p>5 4 3 2 1 Original Date: March 13, 2020 Project Number: HAR-4</p>
<p>NATHANIEL J. HOLT, P.E. 592 ROUTE 22 PAWLING, NEW YORK 12564 (914) 760-1800</p>
<p>EXISTING CONDITIONS PLAN</p>
<p>OWTS REMEDIATION PLAN for HUGH HARRIS 9 STERLING ROAD NORTH, ARMONK, NY</p>

GENERAL NOTES

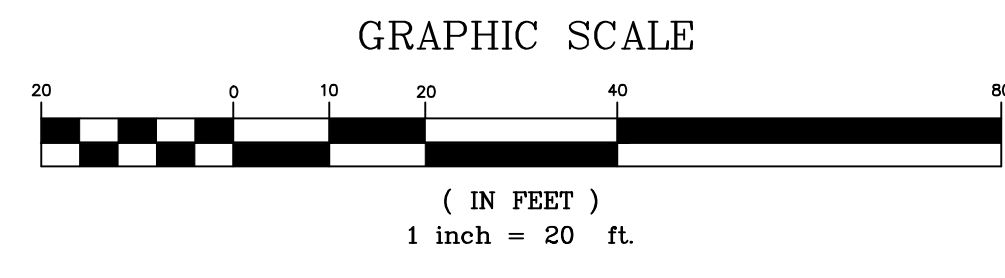
1. SITE TOPOGRAPHY FROM A SURVEY PREPARED BY STEPHEN HOPPE, LS DATED FEBRUARY 28, 2018. SURVEY UPDATED BY TC MERRITTS ENTITLED "TOPOGRAPHIC SURVEY PREPARED FOR HIGH AND VIOLETTA HARRIS" DATED AUGUST 20, 2019.
2. EROSION CONTROLS MUST BE PROPERLY INSTALLED, MAINTAINED AND INSPECTED AROUND THE WORK SITE.
4. CONSTRUCTION ENTRANCES MUST BE PROPERLY MAINTAINED SO THAT NO DEBRIS OR DIRT IS DEPOSITED ON THE STREET.
5. EXPOSED AREAS MUST BE STABILIZED AS SOON AS LAND ALTERATIONS ARE COMPLETED.
6. ANY UNDERGROUND PIPING OR STRUCTURES MUST BE INSPECTED PRIOR TO BACKFILLING.
7. 24 HOUR NOTICE IS REQUIRED FOR ANY INSPECTION.
8. PRIOR TO THE START OF ANY EXCAVATION OPERATIONS THE CONTRACTOR SHALL CALL "DIG SAFELY NEW YORK" AT 1-800-962-7962 OR 811.9. WETLANDS ASSOCIATED WITH PARCEL 108.02-1-57 FROM TC MERRITTS RECORD SURVEY.
10. ADDITIONAL WETLAND INFORMATION BASED UPON A SKETCH PREPARED BY EVANS ASSOCIATES



JUNCTION BOX ELEVATION DATA

J-BOX	INV. - IN	IN - OUT	INV. - FIELD
a	504.90	504.65	504.80
b	504.45	504.25	504.40
c	504.00	503.40	503.55
d	503.40	503.15	503.30
e	502.55	502.30	502.45
f	501.50	501.25	501.40
g	500.50	500.25	500.40
h	499.65	na	499.40

APPROXIMATE AREA OF HEAVILY VEGETATED PORTION OF THE PROPERTY WHICH WAS NOT SURVEYED BY TC MERRITTS. TOPOGRAPHY SHOWN IS FROM THE TOPOGRAPHY FROM FROM WESTCHESTER COUNTY DEPARTMENT OF PLANNING GIS WHICH WAS INSERTED INTO DRAWING BY TC MERRITTS.



- LEGEND
- 490 x EXISTING SPOT GRADE
 - PROPERTY LINE
 - TP 1 DEEP TEST PIT
 - * TREE TO BE REMOVED
 - 490 EXIST CONTOUR
 - PROP CONTOUR

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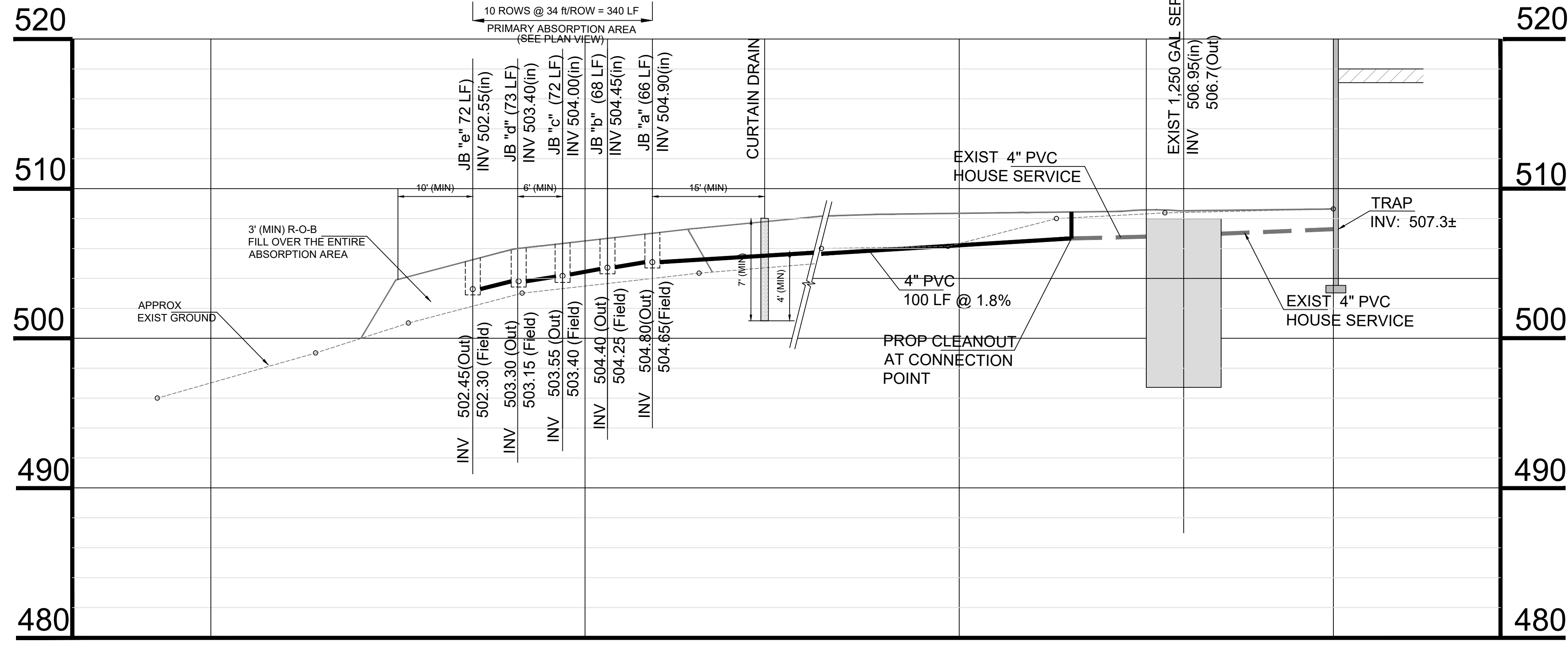
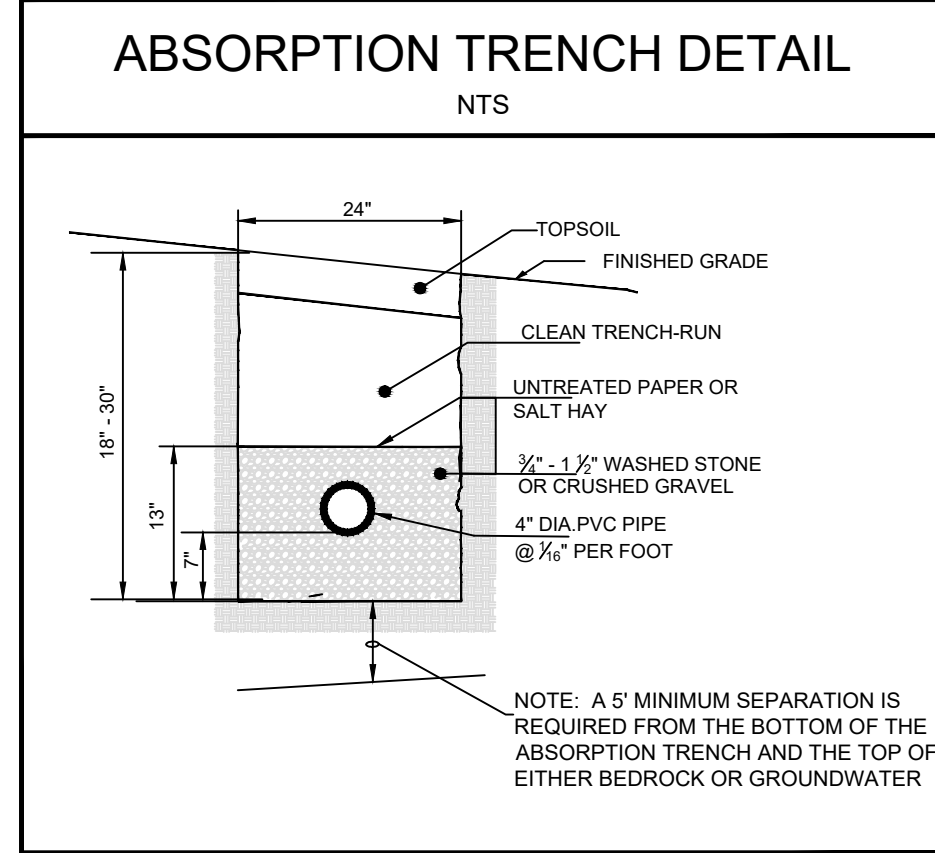
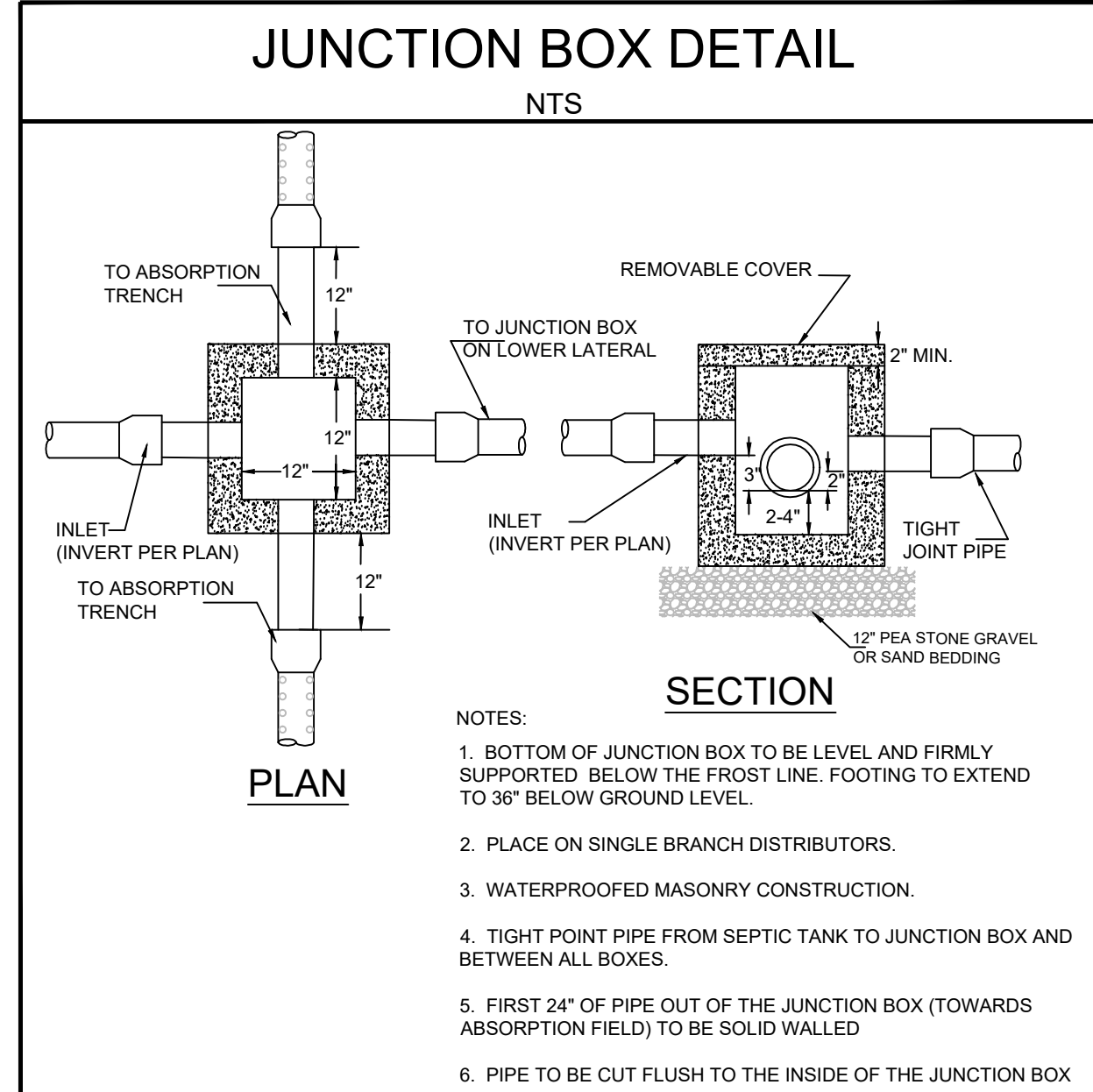
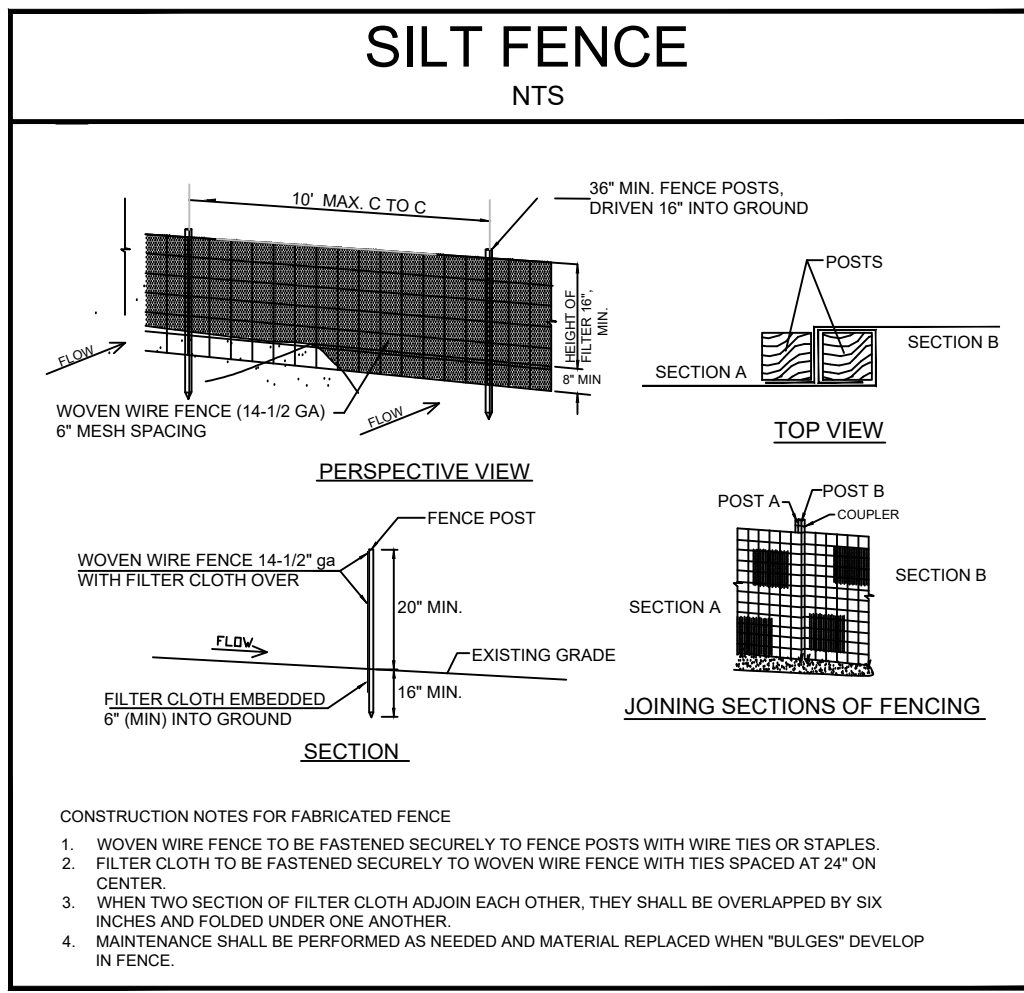
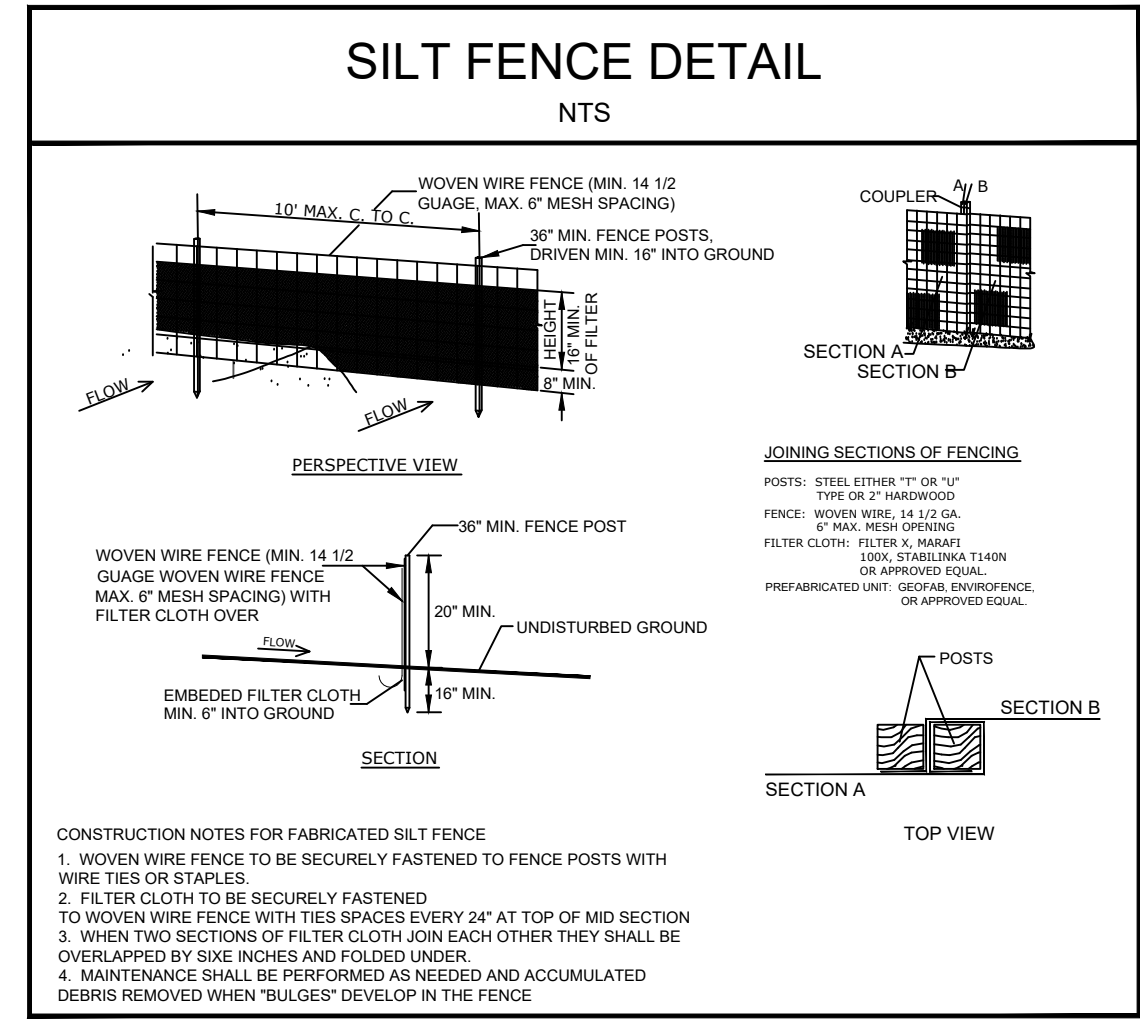
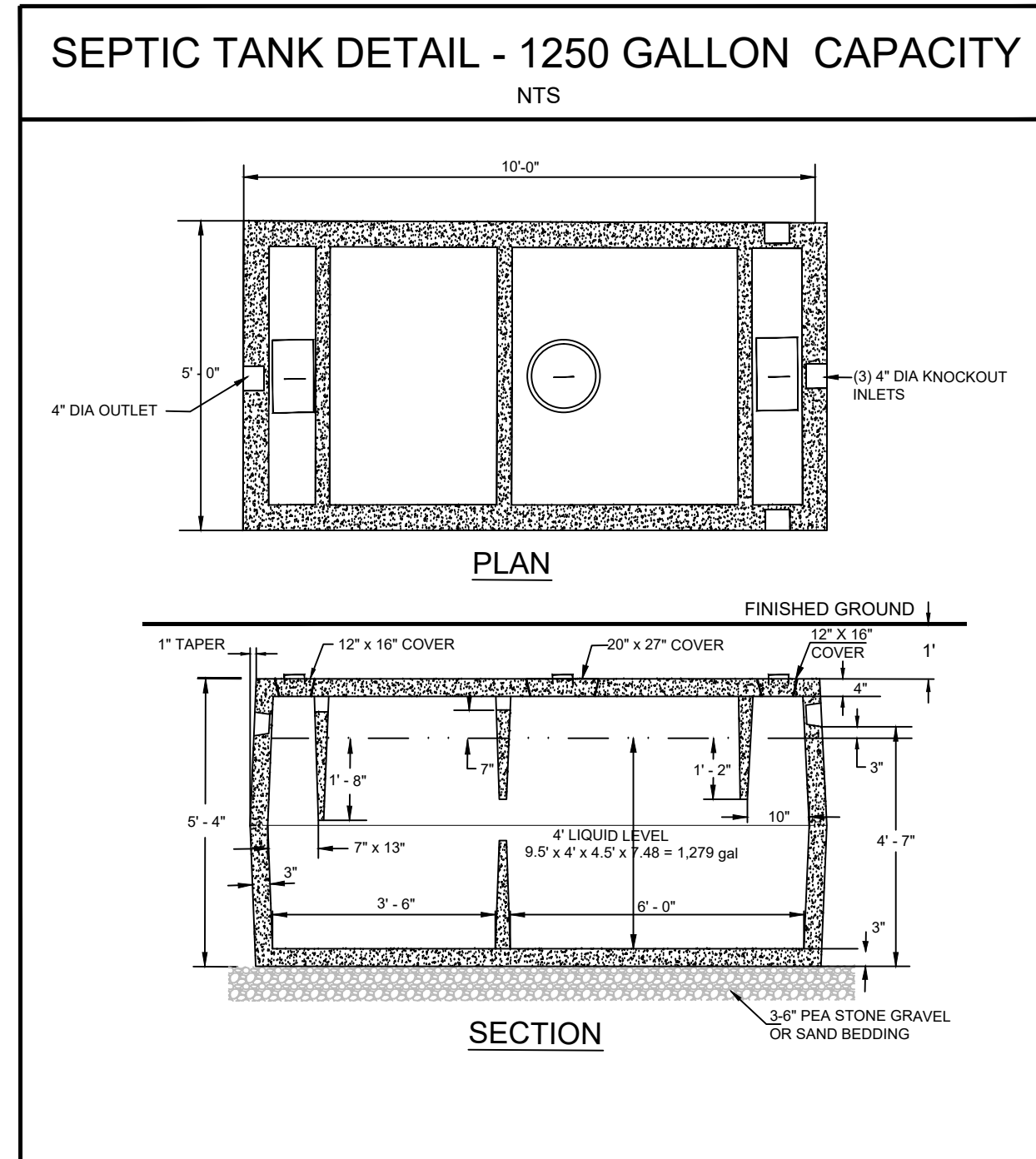
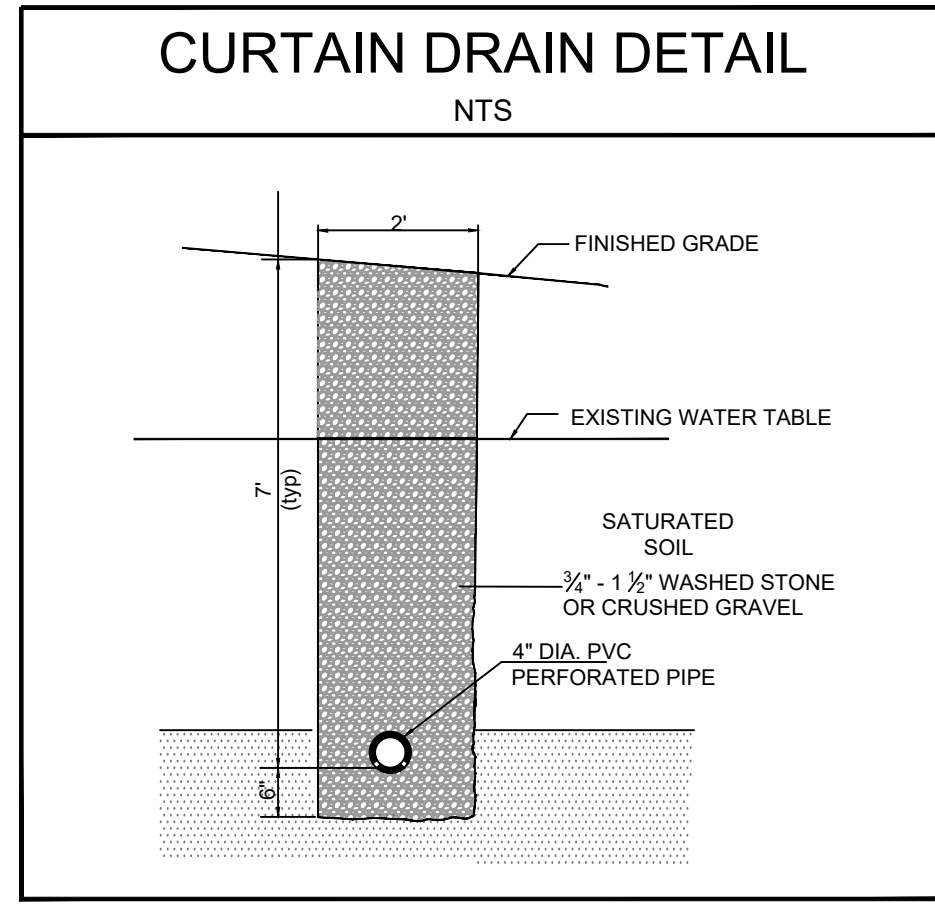
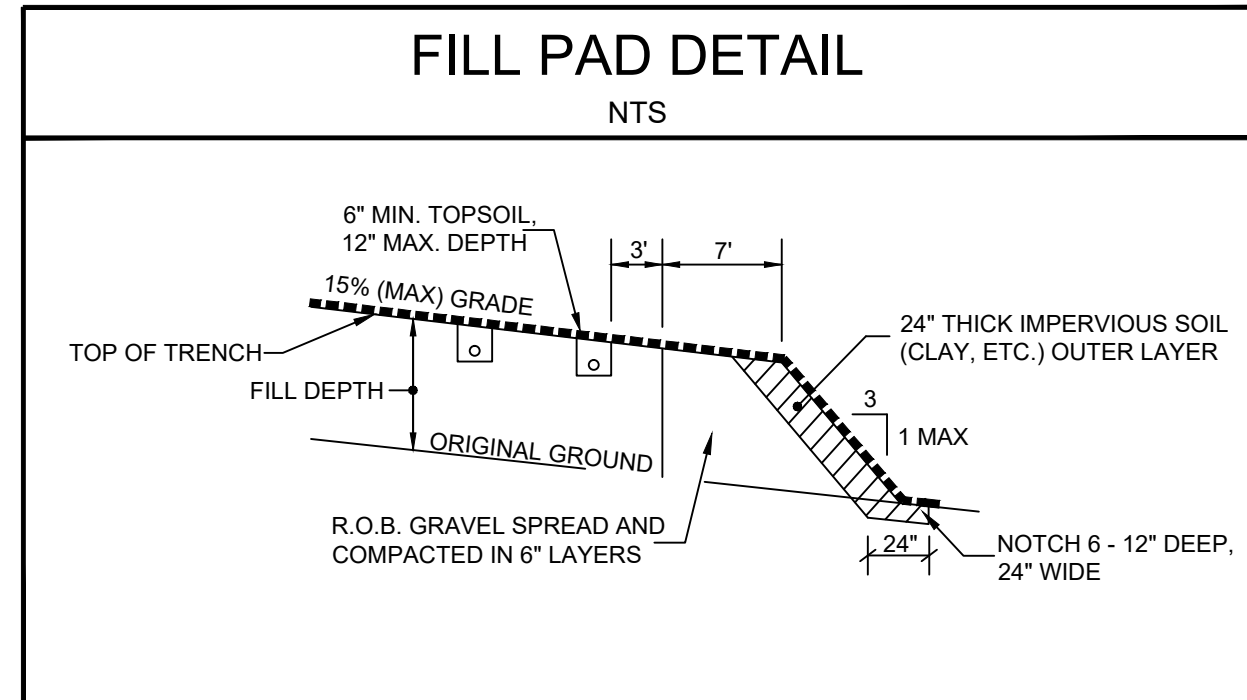
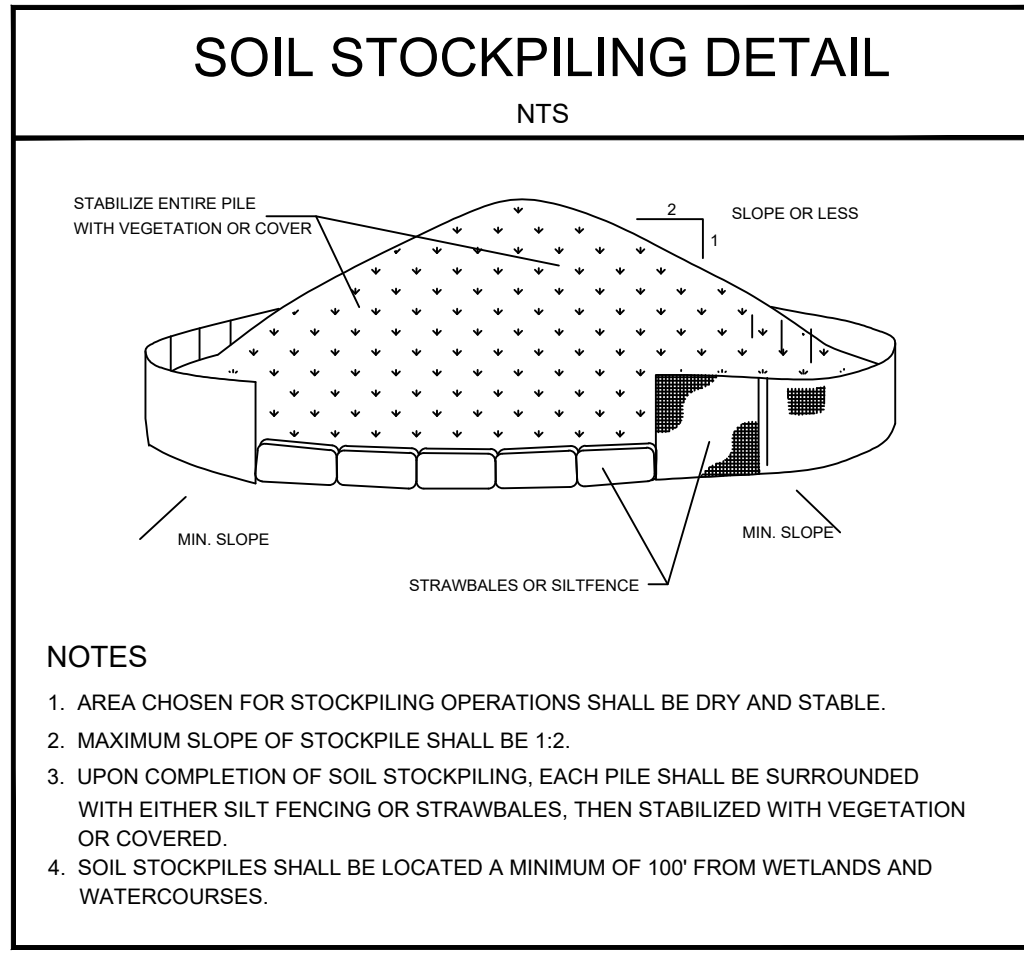
SHEET: **2** of **3**

NATHANIEL J. HOLT, P.E.
 592 ROUTE 22
 PAWLING, NEW YORK 12564
 (914) 760-1800

**OWTS
 CONSTRUCTION PLAN**

OWTS REMEDIATION PLAN
 for
HUGH HARRIS
 9 STERLING ROAD NORTH, ARMONK, NY

Project Number: HAR-4
 Original Date: March 13, 2020
 Date: _____



SEPTIC SYSTEM PROFILE

SCALES HORZ: 1" = 10'
VERT: 1" = 5'

FORMERLY NOC 2020-03R

REMEDATION APPROVAL APPLICATION

(WCDOH OFFICE USE ONLY)

WCDH File # NOV 2022 15R Municipality: NO CASTLE Fee Amount: 90

Watershed Basin: BYRAM RIVER If NYC Watershed: Joint Review Delegated Review

Property Information:

Property Name: HUGH HARRIS

Property Address: 9 STERLING RD - N Zip Code: 10504

TMD: Section: 180108.02 Block: 1 Lot: 58 Lot Area: 2.0 Acres

Owner Last Name: HARRIS Owner First Name: HUGH Phone #: 914843-2675

St. #: 9 St. Address: STERLING RD - N State: NY Zip Code: 10504

Owner E-mail Address: HUGH@WATERMARK.NY.COM

Property Use: Single Family Multiple Family Industrial Commercial Other (describe) _____

Existing On-site Wastewater Treatment System Information:

Is property located in a Sewer District: Y N Name: _____ is there a public sewer available: Y N

Is there a site plan or OWTS plan available? Y N WCDH File # (if available): NOV 2020-03R

of Bedrooms: 4 # of Bathrooms: 3 Total Habitable Space: 4000 Sq. Ft.

Proposed On-site Wastewater Treatment System Information:

Design Soil Percolation Rate: 11-15 min. /in. Slope of OWTS Area: 12 %

Components:	Existing	New		
Septic Tank:	<u>1250</u>	<u>1250</u>	Gal.	
Pump Chamber:	<u>NA</u>	<u>NA</u>	Gal.	
Dose: _____ gallons				
Overflow Tank:	<u>NA</u>	<u>NA</u>	Gal	
Absorption Trench(es):	<u>200</u>	<u>500</u>	LF	<u>2</u> Ft. Width
Gravelless Trench(es):	<u>NA</u>	<u>NA</u>	LF	
Absorption Pit(s): # of pits _____	<u>NA</u>	<u>NA</u>	Ft Dia.	Sq. Ft.
Galleys:	<u>NA</u>	<u>NA</u>	LF	Sq. Ft.
Flow Diffusers:	<u>NA</u>	<u>NA</u>	LF	Sq. Ft.
75A Alternative: _____	<u>NA</u>	<u>NA</u>		
ETU/ATU: Make and Model	<u>NA</u>			
Junction/Distribution Box(es):	<u>3</u>	<u>8</u>	Number	<u>8</u> Size <u>12"x12"</u>
Curtain Drain:	<u>NO</u>	<u>YES</u>	Ft Depth	<u>7</u> Ft. Width
ROB Sand/Gravel Fill:	<u>NO</u>	<u>YES</u>	Ft. Depth	<u>3</u> Sq. Ft Area <u>5500</u>
Other: <u>DIVERSION SWALE</u>	<u>NO</u>	<u>YES</u>		

Will any portion of the existing OWTS remain? Y N If Y Total LF _____ Total SF _____

Describe remaining components: _____

Septic System Contractor (SSC): LICENSED CONTRACTOR ONLY License # _____

Existing Water Supply Information:

Private Water Supply Public Water Supply: Source Name: _____

Other Requirements/Conditions _____

I represent that I am wholly and completely responsible for the design and location of the remediation work; 1] that the remediation work above described will be constructed as shown on the approved plan or approved amendments thereto and with the rules and regulations of the Westchester County Department of Health; 2] that on completion thereof, a "Certificate of Construction Compliance" satisfactory to the Commissioner of Health will be submitted to the Department along with a completed Guaranty of Remediation Work form;

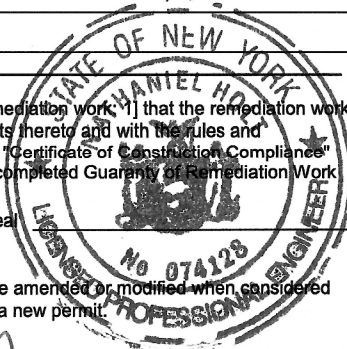
Date: 10/5/22 Signed: _____ P.E./R.A Seal _____

APPROVED FOR REMEDIATION

This approval expires one (1) year from the date issued, and is revocable for cause or may be amended or modified when considered necessary by the Commissioner of Health, Any change or alteration of construction requires a new permit.

Date: 10/28/2022 Approved By: _____

Commissioner of Health, Westchester County Department of Health



FOR DEC. 2022 FAVOR PT