



**TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS**

PROJECT NAME: PATTON RIDGE FINAL SUBDIVISION
PROJECT NO.: 2012-18
PROJECT LOCATION: SECTION 47, BLOCK 1, LOT 44
REVIEW DATE: 1 APRIL 2022
MEETING DATE: 7 APRIL 2022
PROJECT REPRESENTATIVE: KIRK ROTHER, P.E.

1. Security for all public improvements must be posted prior to signing of the plans. Security for water, sewer, roadway, stormwater management, soil erosion and sediment control, landscape trees are required. Cost estimates for these improvements should be submitted for review. After review Town Board approval for the security and inspection fees is required. Posting of all required fees will be required prior to signing of the maps.
2. Right-of-way dedication strips are proposed. Offers of dedication cession and other documents acceptable to the Town Attorney must be approved prior to stamping of the plans.
3. The applicant is requested to confirm the establishment of the drainage district to serve the project. Drainage district is required for operation and maintenance of the stormwater facilities and ownership of the stormwater management lot.
4. Town water and sewer notes latest revised 2015 must be added to the plan sheets. A copy of these notes are attached.
5. Many of the structures are located at the building envelope. A standard note requiring stake out of the structures, submission of a plot plan to the Building Department prior to the issuance of a Building Permit must be added to the plan sheets.
6. Final sign-off from the Highway Department regarding roadway locations should be required.
7. Snow storage easements should be added to the plan sheets per current Town requirements.
8. Street trees are to be located on the individual lots outside town right-of-way.
9. NYSDOT Utility Permits are required for proposed water connections within State Highway right-of-way.
10. Approval by the Town Board for road names for each of the cul-de-sacs is required.

NEW YORK OFFICE

33 Airport Center Drive, Suite 202, New Windsor, NY 12553
845-567-3100 | F: 845-567-3232 | mheny@mhepc.com

PENNSYLVANIA OFFICE

111 Wheatfield Drive, Suite 1, Milford, PA 18337
570-296-2765 | F: 570-296-2767 | mhepa@mhepc.com

11. The applicant's representative is requested to provide documentation that they have rights to connect to the existing 36 inch headwall on Tax Lot 54, Block 1, Lot 1. A drainage easement is indicated which may not incorporate the existing headwall. Information regarding who the existing drainage easement is in favor of any rights the project has to utilize the drainage easement should be documented.
12. Detail for modification of the headwall should be provided in the plans.
13. The Stormwater Pollution Prevention Plan has been updated to include individual rain gardens on the properties. Notes regarding the required construction of the rain gardens on each of the lots must be provided. Each of the lots must have operation and maintenance of the rain gardens incorporated into their deeds identifying the requirement of the rain gardens to remain on the site in a functional condition. Details of the rain gardens and required grading for each of the rain gardens on the site must be provided. Roof leaders should be depicted discharging to the rain gardens. Town coverage under the NYSDEC Stormwater Construction Permit is required prior to issuance of a Building Permit.
14. Recreation fees in compliance with the Town's schedule are required.
15. A note appears on Sheet 5 of 14 regarding off-site grading activities. Section 47, Block 1, Lot 43.2, status of owner's consent for off-site grading should be addressed.

Respectfully submitted,

MHE Engineering, D.P.C.



Patrick J. Hines
Principal

PJH/kbw

KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC

5 ST. STEPHEN'S LANE
Phone (845) 988-0620

WARWICK, NY 10990
Email krother@kirkrother.com

March 23, 2022

John Ewasutyn, Chairman
Town of Newburgh Planning Board
308 Gardnertown Road
Newburgh, NY 12550

**RE: Patton Ridge Subdivision
Patton Road and NYS Rt. 52
Town of Newburgh Tax ID 47-1-44
Our Project #05191.0
Newburgh Planning Board Task #2012-18**

Dear Chairman Ewasutyn:

In reference to the above, enclosed please find the following submitted to the Planning Board to initiate the process of final subdivision approval:

- 1 – Check in the amount of \$1700.00 for Escrow
- 2 – OCHD approved Water Main Extension Plans
- 2 – OCHD approved Water Main Technical Specifications
- 2 – OCHD Water Main Extension Approval Letter
- 2 – NYS DEC Dewater Main Extension Technical Specifications
- 2 – NYS DEC Sewer Extension Approval Letter
- 2 – Full Sets of OCHD approved Realty Subdivision Plans
- 2 – OCHD Realty Subdivision approval letter
- 9 – Abbreviated plan sets with detail sheets omitted

Kindly place this matter on the April 2022 Planning Board agenda for discussion. Should you have any questions, or require any additional materials, please contact our office.

Respectfully,



Kirk Rother, P.E.

cc: Client
Stan Schutzman, Esq.
Pat Hines, MHE w/enc.
Ken Wersted, PE via email
Dominic Cordisco, Esq., via email

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Region 3

100 Hillside Avenue, Suite 1W, White Plains, NY 10603

P: (914) 803-8157 | F: (914) 428-0323

www.dec.ny.gov

August 12, 2021

Mr. Gil Piaquadio
Supervisor, Town of Newburgh
1496 Route 300
Newburgh, NY 12550

Re: **Application for Sanitary Sewer Extension to serve Patton Ridge Subdivision,
Town of Newburgh, City of Newburgh SPDES #NY0026310 , Orange County**

Dear Mr. Piaquadio :

The New York State Department of Environmental Conservation (DEC) has received and reviewed a sewer extension application with supporting information indicating that downstream sewer capacity exists to allow the proposed connection. The proposed development consists of:

- 9 Sanitary Manholes, approximately 1,429 LF of 8" diameter SDR-35 PVC sewer pipe
- 7040 gpd Average Daily Flow

Pursuant to 6 NYCRR 750-2.10(f), DEC has determined that the PE Certification process is applicable to this project and will accept a certification by a NYS-licensed professional engineer (PE) that the design of the sewer extension conforms to design standards accepted by the DEC. This certification is in lieu of DEC review and approval of the engineering reports or plans and specifications. Consequently, the design and construction of this project may commence without specific prior DEC review and approval of the engineering reports or plans and specifications.

By initiating construction of this project, the permittee, owner and/or operator accepts and agrees to abide by and conform to the following conditions:

- (1) **THAT** the facilities shall be operated in compliance with State Pollutant Discharge Elimination System (SPDES) permit No. NY0026310 for the City of Newburgh.
- (2) **THAT** this approval letter and conditions, and the approved submissions be kept on file by the permittee, owner and/or operator.
- (3) **THAT** any and all construction undertaken shall be completely and wholly at the risk of the permittee. DEC does not assume any responsibility for reliance on the PE Certification. It is the applicant and the design engineer's responsibility to ensure that the system conforms to acceptable design standards and that it will function properly.
- (4) **THAT** this office is to be notified in writing at least one week prior to the date construction begins.
- (5) **THAT** upon completion of construction a Construction Certification must be provided to the DEC using NYSDEC form SPDES ENG-2 (attached). At this time, you must also submit to this office, in electronic PDF format, a final engineering report and as-built plans that are



Department of
Environmental
Conservation

both stamped and signed by a PE, and, if applicable, the results of the leakage and deflection tests of the completed work.

- (6) **THAT** failure to submit an adequate construction certification, which includes engineering documents demonstrating conformance to acceptable design standards, may disqualify this project from PE Certification eligibility. The DEC may withhold written acceptance of the Construction Certification until conformance is demonstrated.
- (7) **THAT** if there is non-conformance with acceptable design standards it is possible that the owner and/ or operator may be required to remove all or part of the constructed sewer extension.
- (8) **THAT** PE Certification will expire if form SPDES ENG-2 for construction completion is not submitted within five (5) years of the date of this letter or the project's eligibility date.
- (9) **THAT** you must receive written approval of the construction certification from the DEC before commencing use of, or discharge from, the new system.
- (10) **THAT** this approval in no way relieves the permittee or any of their employees from obtaining all other approvals or permits required by the DEC or any other municipal agency, before the project may proceed.

If you have any questions regarding this letter, please contact me at 914 803 8141 or meena.george@dec.ny.gov.

Sincerely,

Meena George

Meena George, PE.

Professional Engineer 2

ecc: K. Rother, P.E. Consulting Engineer, PLLC (krother@kirkrother.com)
City of Newburgh, City Engineer (JMorris@cityofnewburgh-ny.gov)

ATTACHMENT B

New York State Department of Environmental Conservation
**PROFESSIONAL ENGINEER'S CERTIFICATION OF WASTEWATER TREATMENT
PROJECT COMPLETION**
(Form SPDES ENG-2)

SPDES Permit Number NY- _____

SPDES Permittee Name: _____

Project Name: _____

Project Description: _____

I certify that the construction of the above referenced project was under my general supervision. The project was fully completed on _____ in accordance with the engineering reports, or plans and specifications, SPDES permit, and letter(s) of approval dated _____. I understand that certifying false, incorrect or inaccurate information is a violation of the laws of the State of New York, including Article 17 of the Environmental Conservation Law, 6 NYCRR 750-2.4(f), and Articles 17 and 210 of the Penal Law, and could subject me to criminal, civil, and/or administrative proceedings.

Engineering Firm Name: _____

Engineering Firm Address: _____

Certifying Engineer Name: _____

Date: _____

Certifying Engineer's Signature and Seal:

Attachments:



DEPARTMENT OF HEALTH

Dr. Irina Gelman, DPM, MPH, PhD
Commissioner of Health

124 Main Street
Goshen, New York 10924

Environmental Health

Phone: (845) 291-2331

Fax: (845) 291-4078

www.orangecountygov.com

Steven M. Neuhaus
County Executive

January 7, 2022

84 Realty, LLC
POB 467
Highland Mills NY 10930

Re:

**Approval of plans for:
Patton Ridge
Realty Subdivision
Town of Newburgh**

SBL: 47-1-44

CGN#10051

Dear Applicant:

Plans entitled Patton Ridge, prepared by Kirk Rother, P.E., and dated February 19, 2010, latest revision September 9, 2021, are approved.

Our Certificate of Approval is enclosed. The approved plans are being returned to the engineer for transmittal to you.

Very truly yours,

Steven Gagnon, M.P.H., P.E.
Principal Public Health Engineer

SG/ajc

cc: Engineer
O.C. Planning Dept.
File

Enc.

ORANGE COUNTY DEPARTMENT OF HEALTH
Division of Environmental Health
CERTIFICATE OF APPROVAL OF REALTY SUBDIVISION PLANS

TO: 84 Realty, LLC – POB 467 – Highland Mills NY 10930

The Orange County Department of Health certifies that a realty subdivision map entitled Patton Ridge, dated February 19, 2020, latest revision September 9, 2021, located in the Town of Newburgh showing plans for providing satisfactory and adequate water supply and sewage facilities for said subdivision have been filed with and approved by the Department on this date pursuant to Article II of the Public Health Law.

The following information was furnished in the application for approval of plans:

Total area: 9.4 acres Number of lots:16

Water supply: Newburgh Cons. W.D.

Sewage disposal: City of Newburgh WWTP

The owner intends to build on all lots.

Approval of the proposed water supply and sewage facilities is granted subject to the following conditions:

1. **THAT** the proposed facilities are installed in conformity with said plans.
2. **THAT** no lot or remaining lands shall be subdivided without plans for such resubdivision being filed with and approved by the Orange County Department of Health.
3. **THAT** the purchaser of a lot sold with water supply and/or sewage disposal facilities installed thereon will be furnished with a reproduction of the approved plans and an accurate as-built plan depicting all installed sanitary facilities.
4. **THAT** the sanitary facilities (water supply, any water treatment, and sewage disposal facilities) on these lots shall be inspected for compliance with the approved plans at the time of construction by a P.E., R.A. or exempt L.L.S. and that written certification to that effect shall be submitted to this Department and the Local Building Code Enforcement Officer within 30 days and prior to occupancy.
5. **THAT** plan approval is limited to 5 years. Time extensions for plan approval may be granted by the Orange County Department of Health based upon development facts and the realty subdivision regulations in effect at that time. A new plan submission may be required to obtain a time extension.
6. **THAT** the approved plans must be filed with the Orange County Clerk prior to offering lots for sale and within 90 days of the date of plan approval.
7. **THAT** all local and state agency rules and regulations be complied with.

8. **THAT** this approval/acceptance is granted only for the review conducted for compliance with regulations under the jurisdiction of the Orange County Department of Health. It does not supersede and/or provide any additional approval that may be required to be issued by other agencies, including but not limited to: local municipalities; Orange County Departments of Planning and Public Works; New York State Departments of Environmental Conservation; Health and Transportation; and/or U.S. Army Corps of Engineers.

January 7, 2022

Date


_____, P.E.
Steven Gagnon, M.P. H., P.E.
Principal Public Health Engineer *AB*



Steven M. Neuhaus
County Executive

DEPARTMENT OF HEALTH

Dr. Irina Gelman, DPM, MPH, PhDc
Commissioner of Health

124 Main Street
Goshen, New York 10924

Environmental Health

Phone: (845) 291-2331

Fax: (845) 291-4078

www.orangecountygov.com

April 28, 2021

Supervisor & Town Board
Town of Newburgh
1496 Route 300
Newburgh NY 12550

Re:

**Approval of plans & specs for:
Water Main Extension to serve
Patton Ridge Subdivision
CWS – ID#3503578
Town of Newburgh**

CGN#10050

Dear Supervisor & Town Board:

We have this day approved the plans and specifications submitted by Kirk Rother, P.E., dated November 1, 2013, last revised September 14, 2020 (plans only), January 2021 (specifications only), for the above mentioned project.

Application for this project was duly made by you and received in this office on October 9, 2020.

We are enclosing a Certificate of Approval. A copy of the approved plans is being retained in our files and the remaining sets are being returned to your engineer. The engineer, or other design professional, is now responsible for submitting scanned copies of the approved documents to the OCHD within 30 days. These documents should be submitted using the email address that has been provided for entry into our Sharefile system. Failure to submit these documents may delay our review and/or approval of subsequent projects.

Very truly yours,

Steven Gagnon, M.P.H., P.E.
Principal Public Health Engineer

SG/LSB/ajc
cc: Engineer
BPWSP: Albany
File

Enc.

Approval of Plans for Public Water Supply Improvement

This approval is issued under the provisions of 10 NYCRR, Part 5:

CGN# 10050

1. Applicant Town of Newburgh Patton Ridge Subdivision	2. Location of Works (C, V, T) Town of Newburgh	3. County Orange	4. Water District (Specific Area Served) Newburgh Cons. W.D. – CWS – ID#3503578
5. Type of Project			
<div style="display: flex; justify-content: space-between;"> <div style="width: 22%;"> <input type="checkbox"/> 1. Source </div> <div style="width: 22%;"> <input type="checkbox"/> 3. Pumping Units </div> <div style="width: 22%;"> <input type="checkbox"/> 5. Fluoridation </div> <div style="width: 22%;"> <input checked="" type="checkbox"/> 7. Distribution </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 22%;"> <input type="checkbox"/> 2. Transmission </div> <div style="width: 22%;"> <input type="checkbox"/> 4. Chlorination </div> <div style="width: 22%;"> <input type="checkbox"/> 6. Other Treatment </div> <div style="width: 22%;"> <input type="checkbox"/> 9. Other </div> </div>			
Remarks: Installation of approximately 1570 L.F. of 8" DIP water main to serve sixteen (16) four (4) bedroom single family residences proposed as the Patton Ridge Subdivision. Installation includes five (5) fire hydrants, valves and other associated appurtenances. Proposed water main to be connected to the existing 12" water main along N.Y.S. Route 52 (South Plank Road) with a 12" x 8" tapping sleeve and valve and to existing 8" DIP water main along Patton Road southwest of the project.			

By Initiating improvement of the approved supply, the applicant accepts and agrees to abide by and conform with the following:

- a. THAT the proposed works be constructed in complete conformity with the plans and specifications approved this day or approved amendments thereto.
- b. THAT this approval/acceptance is granted only for the review conducted for compliance with regulations under the jurisdiction of the Orange County Department of Health. It does not supersede and/or provide any additional approval that may be required to be issued by other agencies, including but not limited to local municipalities; Orange County Departments of Planning and Public Works; New York State Departments of Environmental Conservation; Health and Transportation; and/or U.S. Army Corps of Engineers.

(SEE ATTACHMENT)

ISSUED FOR THE STATE COMMISSIONER OF HEALTH

April 28, 2021

Date



Designated Representative

, P.E.

Steven Gagnon, M.P.H., P.E., Principal Public Health Engineer

Name and Title

O.C. Dept. of Env. Health
 124 Main St., Third Floor
 Goshen, NY 10924

General

6. Type of Ownership				
<input checked="" type="checkbox"/> Municipal	<input type="checkbox"/> Commercial	<input type="checkbox"/> Private – Institutional	<input type="checkbox"/> 19 Federal	<input type="checkbox"/> 40 International
<input type="checkbox"/> Industrial	<input type="checkbox"/> 9 Water Works Corp.	<input type="checkbox"/> 26 Board of Education	<input type="checkbox"/> 20 State	<input type="checkbox"/> 18 Indian Reservation
<input type="checkbox"/> 68 Private – Other	<input type="checkbox"/> 1 Authority	<input type="checkbox"/> 30 Interstate		
7. Estimated Total Cost	8. Population Served	9. Drainage Basin		
\$90,000.00	Sixteen (16) – four (4) bedroom Single Family Dwellings	Hudson River		
10. Federal Aid Involved?		11. WSA Project?		
<input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No		<input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No		

Source N/A

12. <input type="checkbox"/> Surface Name Class			13. Est. Source Development Cost
<input type="checkbox"/> Ground Name Class			
14. Safe Yield	15. Description		
GPD			

Treatment N/A

16. Type of Treatment			
<input type="checkbox"/> 1 Aeration	<input type="checkbox"/> 4 Sedimentation	<input type="checkbox"/> 7 Iron Removal	<input type="checkbox"/> 10 Softening
<input type="checkbox"/> 2 Microstrainers	<input type="checkbox"/> 5 Clarifiers	<input type="checkbox"/> 8 Chlorination	<input type="checkbox"/> 11 Corrosion Control
<input type="checkbox"/> 3 Mixing	<input type="checkbox"/> 6 Filtration	<input type="checkbox"/> 9 Fluoridation	<input type="checkbox"/> 12 Other
17. Name of Treatment Works	18. Max. Treatment Capacity	19. Grade of Plant Operator Req.	20. Est. Cost
	GPD		
21. Description			

Distribution

22. Type of Project		23. Type of Storage N/A		24. Est. Distribution Cost
<input type="checkbox"/> 1 Cross Connection	<input type="checkbox"/> 3 Transmission	Elevated Gals.	Underground Gals.	\$90,000.00
<input checked="" type="checkbox"/> 2 Interconnection	<input type="checkbox"/> 4 Fire Pump Cl ₂			
25. Anticipated			26. Designed for fire flow?	
System Demand:	Avg. 7,040 GPD	Max. GPD	<input checked="" type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No	
27. Description				
See item #5 on page 1 of form.				



Steven M. Neuhaus
County Executive

DEPARTMENT OF HEALTH

Dr. Irina Gelman, DPM, MPH, PhDc
Commissioner of Health

124 Main Street
Goshen, New York 10924

Environmental Health

Phone: (845) 291-2331

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www.orangecountygov.com

PATTON RIDGE SUBDIVISION
WATER MAIN EXTENSION APPROVAL
CWS – ID#3503578
TOWN OF NEWBURGH


CGN#10050

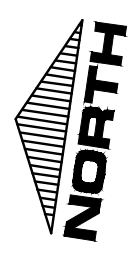
Additional conditions to approval:

- c. THAT this project has demonstrated an available flow of 2600 gpm while maintaining a minimum of 20 psi at all points in the distribution system. This value should be compared to the Needed Fire Flow (N.F.F.) for the proposed construction in accordance with the Insurance Services Office (ISO) guidelines, per the Recommended Standards for Water Works (N.Y.S. Sanitary Code Part 5, Appendix 5-A). The Needed Fire Flow for the proposed construction has not been evaluated by the Orange County Department of Health.

April 28, 2021

Date

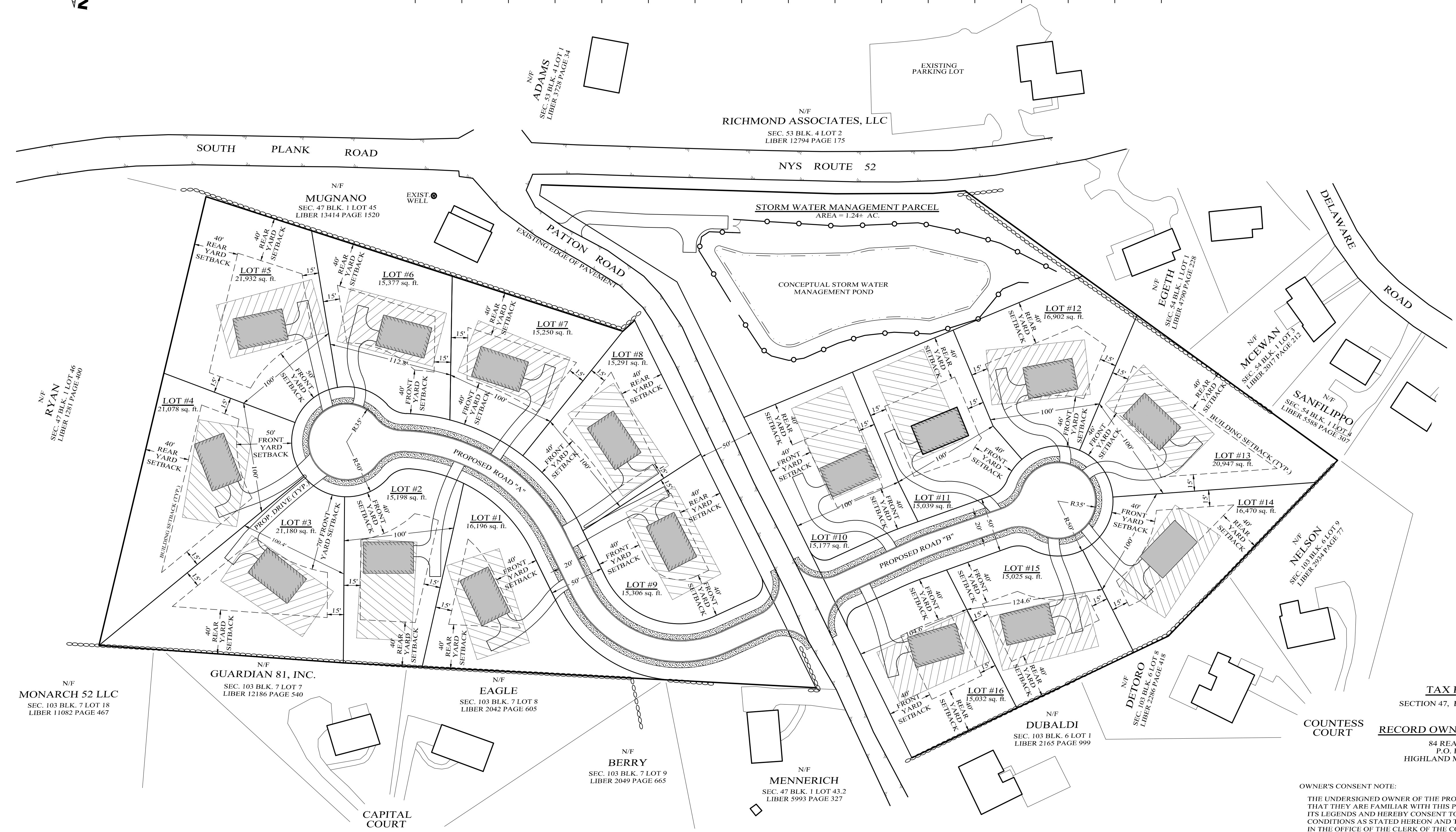

_____, M.P.H., P.E.
Steven Gagnon, M.P.H., P.E.
Principal Public Health Engineer *AB*



	MIN. REQUIRED	LOT #1	LOT #2	LOT #3	LOT #4	LOT #5	LOT #6	LOT #7	LOT #8	LOT #9	LOT #10	LOT #11	LOT #12	LOT #13	LOT #14	LOT #15	LOT #16
LOT AREA (S.F.)	15,000	16,196	15,283	21,095	21,078	21,932	15,377	15,250	15,291	15,306	15,177	15,039	16,902	20,947	16,470	15,205	15,032
LOT WIDTH (FT.)	100	154.8	100	100	100	100	100	100	100	100	100	100	100	100	100	124.6	104.6
LOT DEPTH (FT.)	125	143	180	170	141	180	127	127	136	127	148	151	140	132	126	137	144
FRONT YARD (FT.)	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
REAR YARD (FT.)	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
SIDE YARD (FT.)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
BOTH SIDE YARDS (FT.)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
LOT BUILDING COVERAGE (%)	15	7.7	8.2	6.0	6.0	5.7	8.2	8.3	8.2	8.3	8.3	8.4	7.5	6.0	7.7	8.3	8.4
LOT SURFACE COVERAGE (%)	30	14	15	11	10	10	14	15	15	15	16	18	15	12	13	15	15



LOCATION MAP
SCALE: 1" = 2,000'



GENERAL NOTES:

- TOWN OF NEWBURGH, TAX MAP DESIGNATION: SEC. 47, BLK. 1, LOT 44.
- TOTAL AREA OF PARCEL: APPROX. 9.4 ACRES.
- ENTIRE PARCEL IS LOCATED IN THE R-2 ZONING DISTRICT.
- TOTAL NUMBER OF PARCELS WITHIN THIS SUBDIVISION: 16
- TOTAL NUMBER OF RESIDENTIAL LOTS WITHIN THIS SUBDIVISION: 16
- TOTAL NUMBER OF PARCELS FOR STORMWATER MANAGEMENT WITHIN THIS SUBDIVISION: 1
- THE DESIGN AND LOCATION OF SANITARY FACILITIES (WATER AND SEWER) SHALL NOT BE CHANGED.
- PROPOSED SUBDIVISION TO BE SERVED BY THE TOWN OF NEWBURGH MUNICIPAL WATER AND SEWER SYSTEMS.
- ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
- ORANGE COUNTY DEPARTMENT OF HEALTH PLAN APPROVAL IS LIMITED TO 5 YEARS.
- TIME EXTENSIONS FOR PLAN APPROVAL MAY BE GRANTED BY THE ORANGE COUNTY DEPARTMENT OF HEALTH BASED UPON DEVELOPMENT FACTS AND THE REALTY SUBDIVISION REGULATIONS IN EFFECT AT THAT TIME. A NEW PLAN SUBMISSION MAY BE REQUIRED TO OBTAIN A TIME EXTENSION.
- THE APPROVED PLANS MUST BE FILED WITH THE ORANGE COUNTY CLERK'S OFFICE PRIOR TO OFFERING LOTS FOR SALE AND WITHIN 90 DAYS OF THE LAST APPROVAL OF THE FINAL PLANS.
- NO LOT IS TO BE FURTHER SUBDIVIDED WITHOUT ORANGE COUNTY DEPARTMENT OF HEALTH REVIEW AND APPROVAL.
- CONSISTENT WITH THE NYSDEC REQUIREMENTS FOR SPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FOR CONSTRUCTION ACTIVITY, PERMIT NO. GP-9-10-001, THE APPLICANT SHALL COMPLETE, SIGN AND SUBMIT (TO THE TOWN OF NEWBURGH BUILDING INSPECTOR) "MONTHLY SUMMARY OF SITE INSPECTION ACTIVITIES" AND "QUARTERLY SUMMARY OF SITE INSPECTION ACTIVITIES" REPORTS.
- TOPOGRAPHY SHOWN BASED ON ACTUAL FIELD DATA BY KIRK ROTHER, P.E. PLLC AND BASED ON ASSUMED DATUM.
- A SANITARY SEWER PERMIT IS REQUIRED FROM THE TOWN OF NEWBURGH SEWER DEPT.
- THERE ARE NO N.Y.S. D.E.C. OR FEDERAL A.C.O.E. FRESHWATER WETLANDS WITHIN THE PARCEL.
- EACH LOT WILL REQUIRE AN INDIVIDUAL PLOT PLAN AND FOUNDATION STAKE OUT IN THE FIELD, WHICH SHALL BE SUBMITTED AND APPROVED BY THE TOWN OF NEWBURGH BEFORE CONSTRUCTION.
- THE PURCHASER OF EACH LOT SHALL BE PROVIDED WITH A COPY OF THE APPROVED PLANS AND AN ACCURATE AS-BUILT DRAWING OF ANY EXISTING SANITARY FACILITIES.
- AN APPROPRIATE ENTRANCE PERMIT SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF WORK.
- THIS PROJECT DOES NOT LIE WITHIN A PUBLIC WATER SUPPLY WATERSHED.

HEALTH DEPARTMENT APPROVAL

THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

PATTON RIDGE
TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
PROJECT TITLE

COVER PAGE
DRAWING TITLE
Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

TAX PARCEL
SECTION 47, BLOCK 1, LOT 44
RECORD OWNER / APPLICANT
84 REALTY, LLC
P.O. BOX 467
HIGHLAND MILLS, NY 10930

OWNER'S CONSENT NOTE:
THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATE THAT THEY ARE FAMILIAR WITH THIS PLAN, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENT TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON AND TO THE FILING OF THIS PLAN IN THE OFFICE OF THE CLERK OF THE COUNTY OF ORANGE, IF SO REQUIRED.

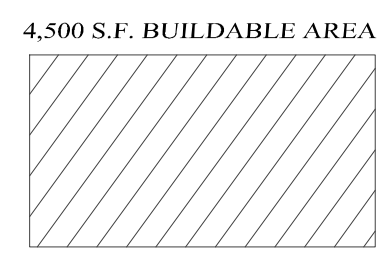
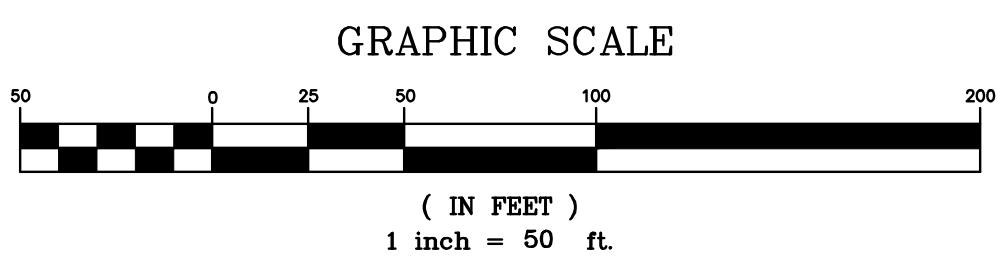
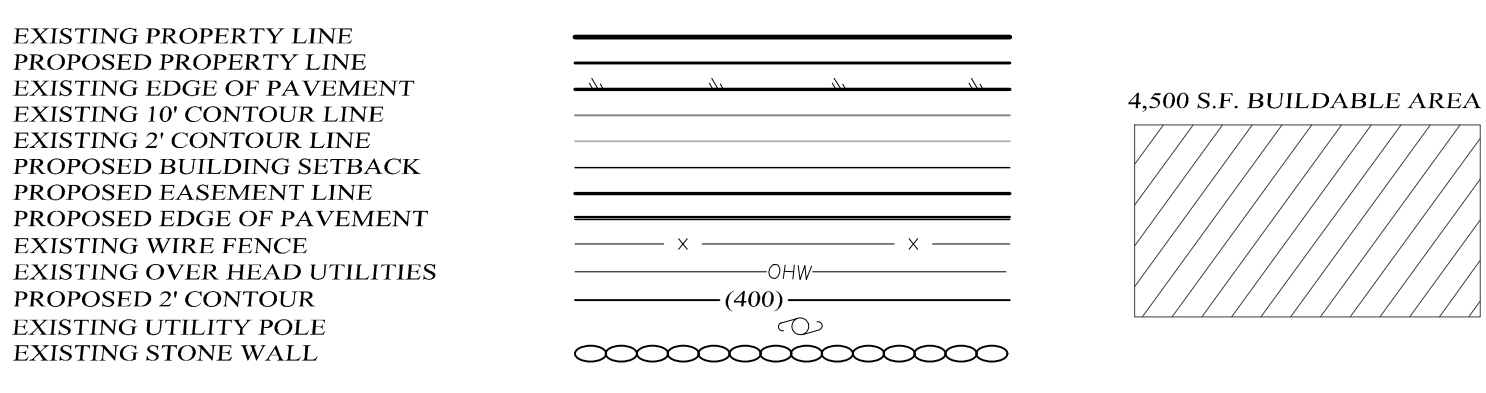
SIGNATURE

DATE	REVISIONS
09-09-21	REV. PER D.O.H. COMMENTS
01-21-21	REV. PER D.E.C. COMMENTS
11-19-20	REV. PER D.O.H. COMMENTS
11-01-13	REV. PER TOWN ENG. COMMENTS
10-31-13	REV. PER PUBLIC AND P.B. COMMENTS
09-27-13	REV. PER TOWN PLANNER & ENG. COMMENTS
08-01-13	REV. BUILDABLE AREA LOCATION
07-19-13	ADD GEN. NOTE 15
06-05-13	DETAILED DESIGN
10-04-12	ADD SLOPE SHADE AND 4500 AREAS
07-03-12	REV. ROAD ENTRANCE
02-19-10	INITIAL PREPARATION

SHEET INDEX

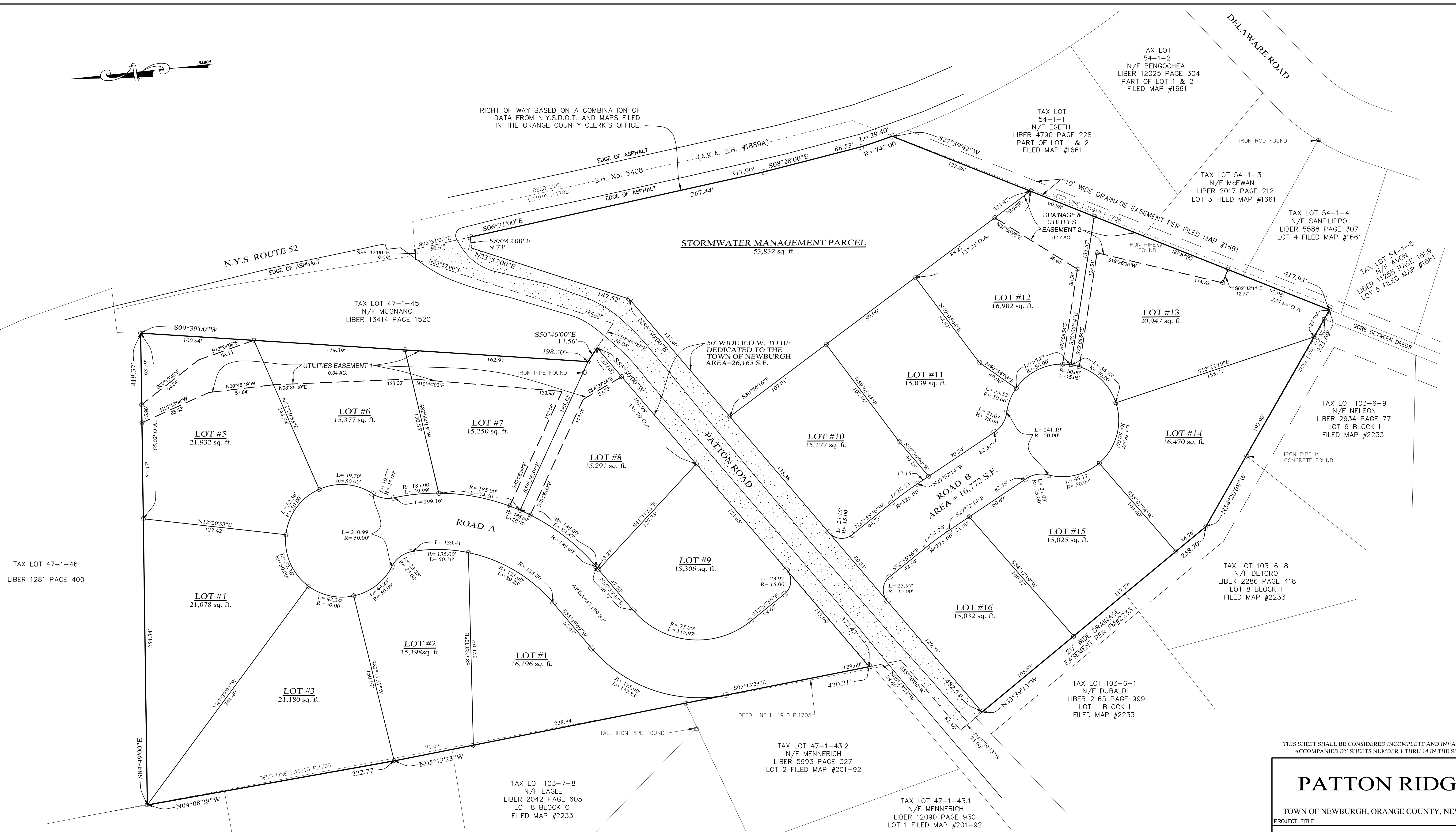
SHEET #1	- COVER PAGE
SHEET #2	- SUBDIVISION PLAT
SHEET #3	- EXISTING CONDITIONS PLAN
SHEET #4	- SITE PLAN
SHEET #5	- DRAINAGE & GRADING PLAN
SHEET #6	- UTILITIES PLAN
SHEET #7	- ROAD PROFILES
SHEET #8	- EROSION CONTROL PLAN
SHEET #9	- EROSION CONTROL DETAILS
SHEET #10	- SANITARY SEWER PROFILES
SHEET #11	- WATER MAIN PROFILES
SHEET #12	- SANITARY SEWER DETAILS
SHEET #13	- SITE DETAILS
SHEET #14	- STORMWATER MANAGEMENT PLAN

LEGEND





RIGHT OF WAY BASED ON A COMBINATION OF DATA FROM N.Y.S.D.O.T. AND MAPS FILED IN THE ORANGE COUNTY CLERK'S OFFICE.



TAX LOT 47-1-46
LIBER 1281 PAGE 400

TAX LOT 103-7-18
N/F MONARCH 52, LLC
LIBER 11082 PAGE 467

TAX LOT 103-7-7
N/F GUARDIAN 81, INC.
LIBER 12186 PAGE 540
LOT 8 BLOCK O
FILED MAP #2233

TAX LOT 103-7-8
N/F EAGLE
LIBER 2042 PAGE 605
LOT 8 BLOCK O
FILED MAP #2233

TAX LOT 103-7-9
N/F BERRY
LIBER 2049 PAGE 665
LOT 9 BLOCK O
FILED MAP #2233

TAX LOT 47-1-43.2
N/F MENNERICH
LIBER 5993 PAGE 327
LOT 2 FILED MAP #201-92

TAX LOT 47-1-43.1
N/F MENNERICH
LIBER 12090 PAGE 930
LOT 1 FILED MAP #201-92

TAX LOT 103-6-1
N/F DUBALDI
LIBER 2165 PAGE 999
LOT 1 BLOCK I
FILED MAP #2233

TAX LOT 103-6-8
N/F DETORO
LIBER 2286 PAGE 418
LOT 8 BLOCK I
FILED MAP #2233

TAX LOT 103-6-9
N/F NELSON
LIBER 2934 PAGE 77
LOT 9 BLOCK I
FILED MAP #2233

TAX LOT 54-1-5
N/F AVON
LIBER 11255 PAGE 1609
LOT 5 FILED MAP #1661

TAX LOT 54-1-4
N/F SANFILIPPO
LIBER 5588 PAGE 307
LOT 4 FILED MAP #1661

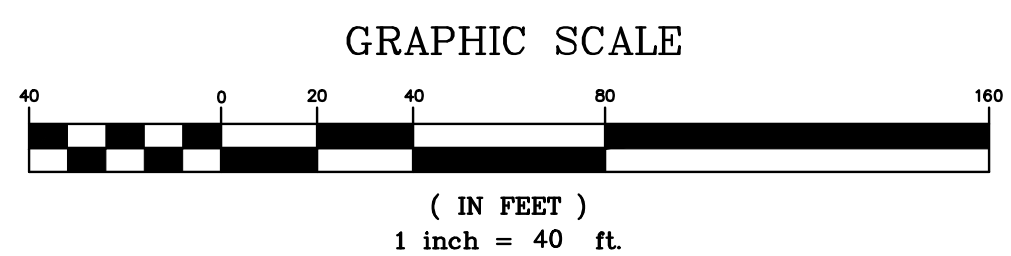
TAX LOT 54-1-3
N/F McEWAN
LIBER 2017 PAGE 212
LOT 3 FILED MAP #1661

TAX LOT 54-1-1
N/F EGETH
LIBER 4790 PAGE 228
PART OF LOT 1 & 2
FILED MAP #1661

TAX LOT 54-1-2
N/F BENGOCHEA
LIBER 12025 PAGE 304
PART OF LOT 1 & 2
FILED MAP #1661

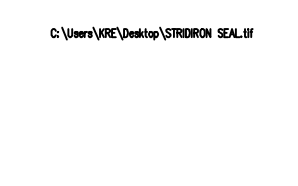
LEGEND

EXISTING PROPERTY LINE
PROPOSED PROPERTY LINE
EXISTING EASEMENT LINE
PROPOSED EASEMENT LINE



I HEREBY CERTIFY THAT:
THIS MAP OR PLAN IS BASED UPON THE FIELD NOTES OF THE SURVEY AND OTHER REFERENCES SHOWN.
ALL RECORDED EASEMENTS OR RIGHTS-OF-WAY AS SHOWN IN THE TITLE REPORT AND OTHER REFERENCES ARE SHOWN.
ALL OBSERVABLE EVIDENCE OF EASEMENTS ON THE GROUND ARE SHOWN.
ALL OBSERVABLE, ABOVE GROUND EVIDENCE OF BUILDINGS, STRUCTURES AND OTHER IMPROVEMENTS ARE SHOWN.
THE BOUNDARY SHOWN HEREON WAS PREPARED BY ME AND BASED ON FIELDWORK COMPLETED BY ME, DARREN STRIDIRON, ON MARCH 29, 2013.
UNAUTHORIZED ALTERATION TO A MAP BEARING A LICENSED PROFESSIONAL LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
THIS CERTIFICATION IS NOT AN EXPRESS OR IMPLIED WARRANTY OR GUARANTEE, IT IS PURELY A STATEMENT OF PROFESSIONAL OPINION BASED ON KNOWLEDGE, INFORMATION AND BELIEF, BASED ON EXISTING FIELD EVIDENCE AND DOCUMENTARY EVIDENCE AVAILABLE.
CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.
PLAN PREPARED PURSUANT TO SECTION 7208m OF THE NEW YORK STATE EDUCATION LAW.
SUBJECT TO THE FINDINGS OF AN UP-TO-DATE TITLE SEARCH.

Darren Stridiron
DARREN J. STRIDIRON, PROFESSIONAL LAND SURVEYOR
NEW YORK STATE LICENSE NO. 050487
HERITAGE LAND SURVEYING, P.C.
P.O. BOX 579 PLATTEKILL, NEW YORK 12568
TEL (845)566-1416, FAX (845)566-1416, e-mail: heritagelandsurvey@hotmail.com



THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

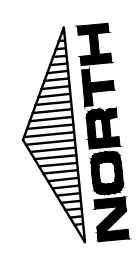
PATTON RIDGE
TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
PROJECT TITLE

SUBDIVISION PLAT
DRAWING TITLE

Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
12-01-20	REV. PER D.O.H. COMMENTS			
06-05-13	DETAILED DESIGN			
08-08-12	INITIAL PREPARATION			

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	2 OF 6	2 OF 14
CAD #	PROJECT #	SCALE	
05191 SFS	05191.0	AS NOTED	

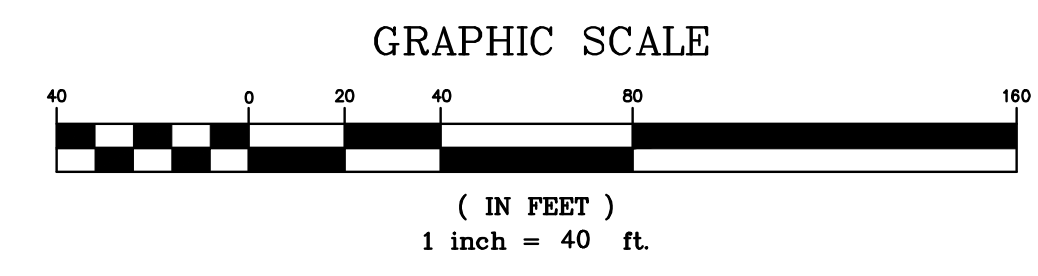


TAX LOT 47-1-44
LIBER 11910 PAGE 1705
PARCEL 1
AREA=198,585 S.F.
OR 4.56 ACRES±

TAX LOT 47-1-44
LIBER 11910 PAGE 1705
PARCEL 2
AREA=201,794 S.F.
OR 4.63 ACRES±

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING 10' CONTOUR LINE
- EXISTING 2' CONTOUR LINE
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT LINE
- PROPOSED EDGE OF PAVEMENT
- EXISTING WIRE FENCE
- EXISTING OVER HEAD UTILITIES
- PROPOSED 2' CONTOUR
- EXISTING UTILITY POLE
- EXISTING STONE WALL



THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

PATTON RIDGE

TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK

**EXISTING
CONDITIONS
MAP**

DRAWING TITLE

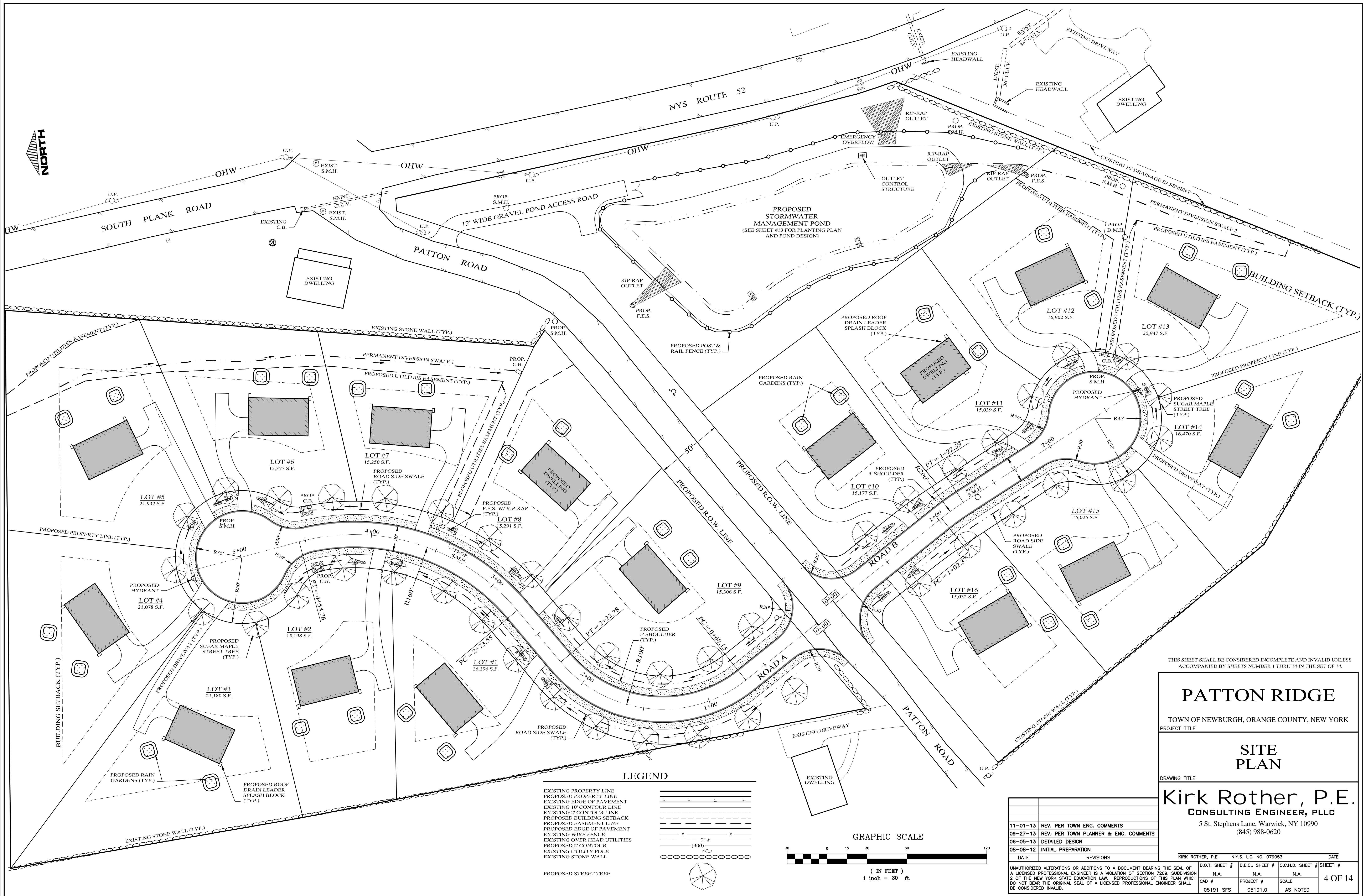
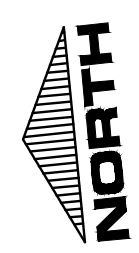
Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC

5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

12-01-20	REV. PER D.O.H. COMMENTS			
08-08-12	INITIAL PREPARATION			
DATE	REVISIONS			

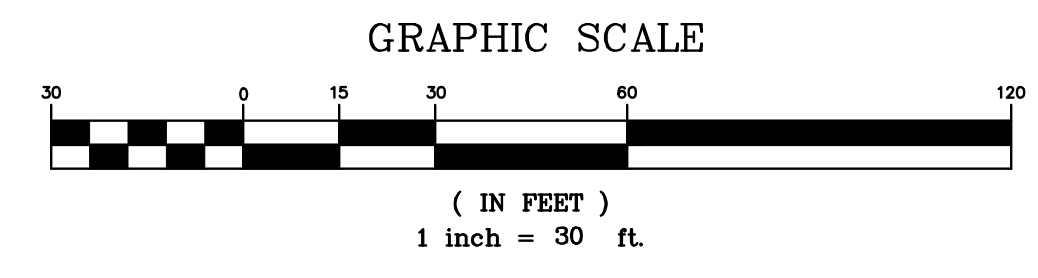
KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE		
D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #	
N.A.	N.A.	3 OF 6	3 OF 14	
CAD #	PROJECT #	SCALE		
05191 SFS	05191.0	AS NOTED		

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LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING 10' CONTOUR LINE
- EXISTING 2' CONTOUR LINE
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT LINE
- PROPOSED EDGE OF PAVEMENT
- EXISTING WIRE FENCE
- EXISTING OVER HEAD UTILITIES
- PROPOSED 2' CONTOUR
- EXISTING UTILITY POLE
- EXISTING STONE WALL
- PROPOSED STREET TREE



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PATTON RIDGE

TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK

PROJECT TITLE

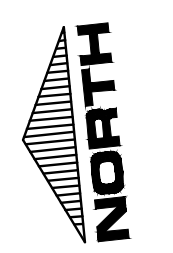
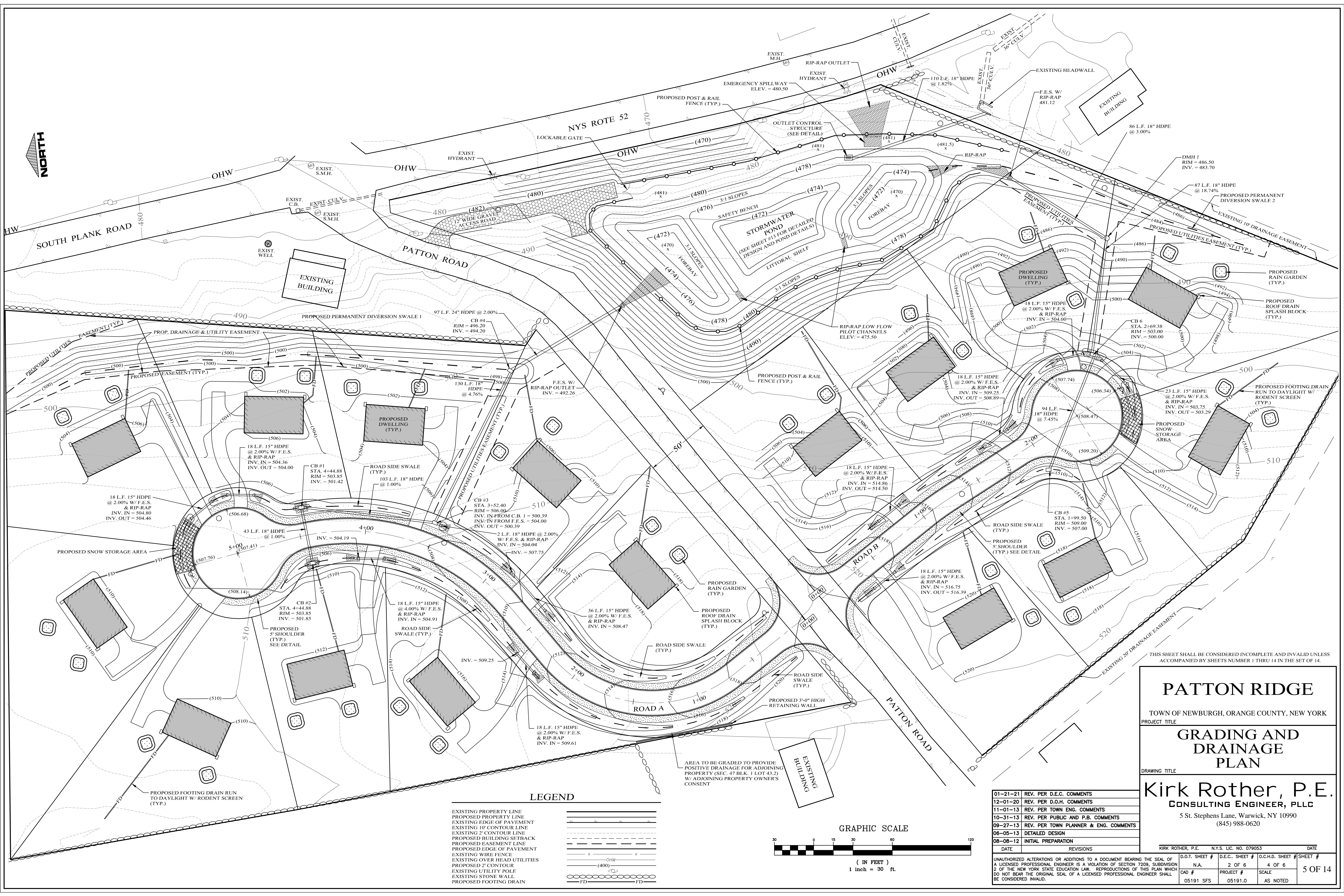
SITE PLAN

DRAWING TITLE

Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
11-01-13	REV. PER TOWN ENG. COMMENTS			
09-27-13	REV. PER TOWN PLANNER & ENG. COMMENTS			
06-05-13	DETAILED DESIGN			
08-08-12	INITIAL PREPARATION			

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	4 OF 14
CAD #	PROJECT #	SCALE	
05191 SFS	05191.0	AS NOTED	

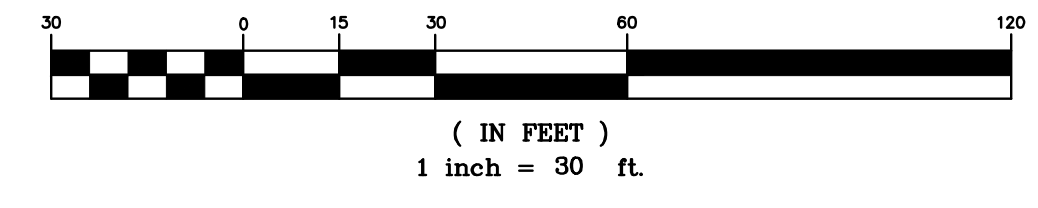


LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING 10' CONTOUR LINE
- EXISTING 2' CONTOUR LINE
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT LINE
- PROPOSED EDGE OF PAVEMENT
- EXISTING WIRE FENCE
- EXISTING OVER HEAD UTILITIES
- PROPOSED 2' CONTOUR
- EXISTING UTILITY POLE
- EXISTING STONE WALL
- PROPOSED FOOTING DRAIN

AREA TO BE GRADED TO PROVIDE POSITIVE DRAINAGE FOR ADJOINING PROPERTY (SEC. 47 BLK. 1 LOT 43.2) W/ ADJOINING PROPERTY OWNER'S CONSENT

GRAPHIC SCALE



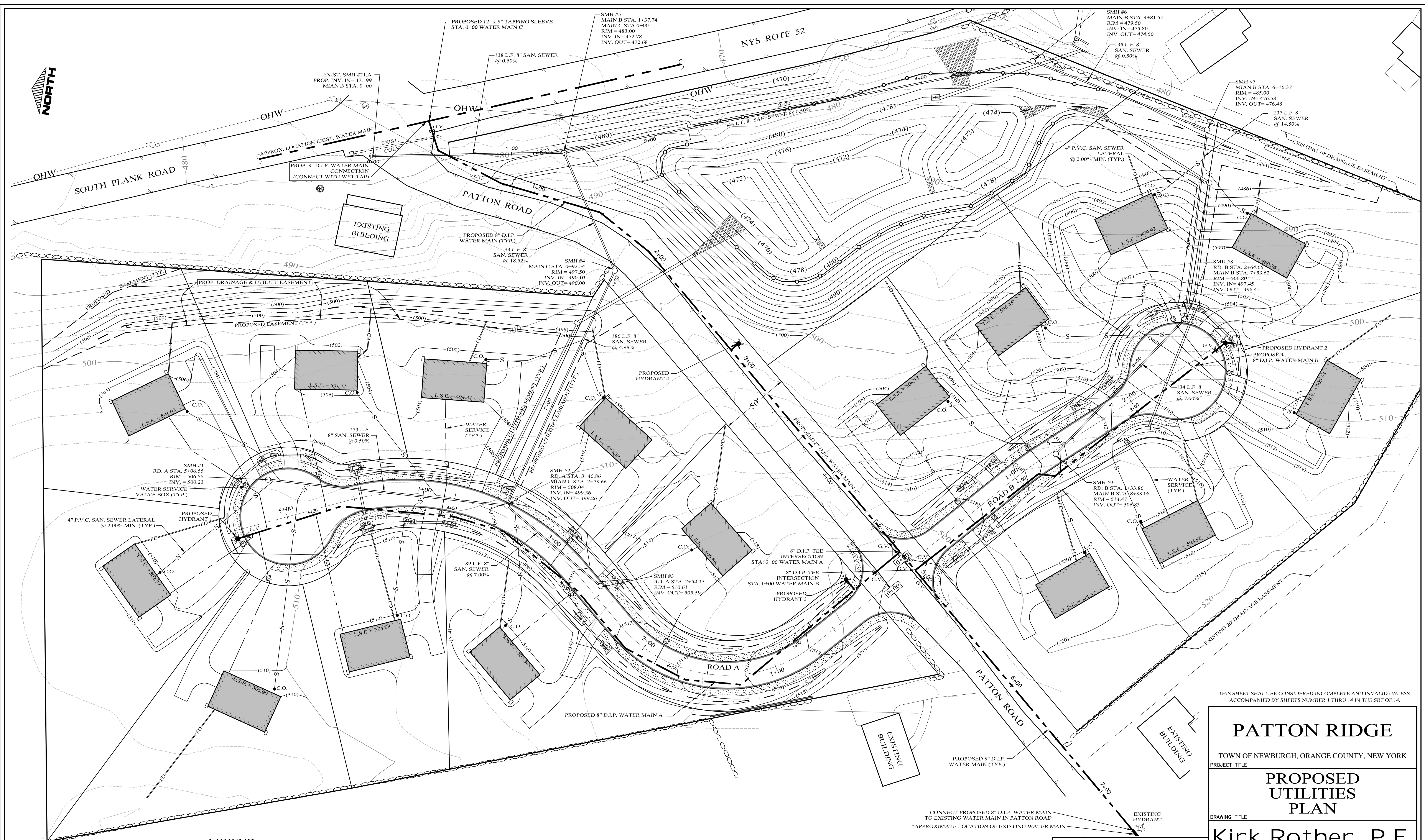
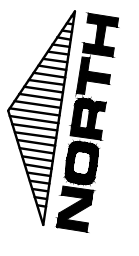
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PATTON RIDGE
TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
PROJECT TITLE
GRADING AND DRAINAGE PLAN
DRAWING TITLE

Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

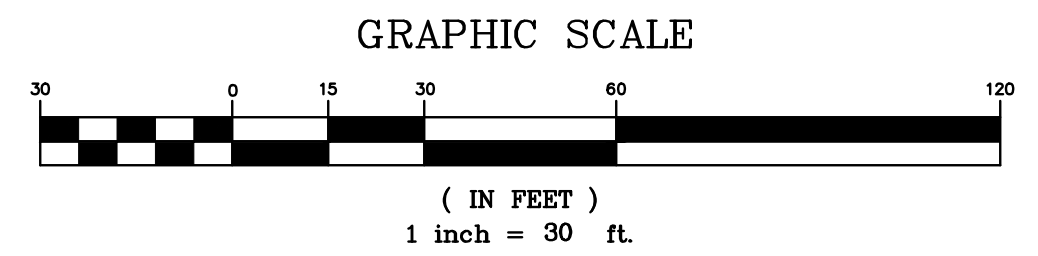
DATE	REVISIONS
01-21-21	REV. PER D.E.C. COMMENTS
12-01-20	REV. PER D.O.H. COMMENTS
11-01-13	REV. PER TOWN ENG. COMMENTS
10-31-13	REV. PER PUBLIC AND P.B. COMMENTS
09-27-13	REV. PER TOWN PLANNER & ENG. COMMENTS
06-05-13	DETAILED DESIGN
08-08-12	INITIAL PREPARATION

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079653	DATE
D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #	
N.A.	2 OF 6	4 OF 6		
CAD #	PROJECT #	SCALE		
05191 SFS	05191.0	AS NOTED		5 OF 14



LEGEND

EXISTING PROPERTY LINE	=====	PROPOSED WATER SERVICE CURB STOP	□
PROPOSED PROPERTY LINE	=====	PROPOSED WATER SERVICE LINE	—
EXISTING EDGE OF PAVEMENT	-----	PROPOSED SAN. SEWER MAIN	—
EXISTING 10' CONTOUR LINE	-----	PROPOSED SEWER SERVICE	—
EXISTING 2' CONTOUR LINE	-----	PROPOSED SEWER CLEAN OUT	—
PROPOSED BUILDING SETBACK	-----	PROPOSED SEWER MAN HOLE	○
PROPOSED EASEMENT LINE	-----	LEAST SEWERABLE ELEVATION	○
PROPOSED EDGE OF PAVEMENT	-----	PROPOSED WATER MAIN	—
EXISTING WIRE FENCE	x-----x	PROPOSED GATE VALVE	○
EXISTING OVER HEAD UTILITIES	x-----x	PROPOSED FIRE HYDRANT	○
PROPOSED 2' CONTOUR	(400)	PROPOSED CATCH BASIN	□
EXISTING UTILITY POLE	○	PROPOSED STORM DRAIN	—
EXISTING STONE WALL	-----		
PROPOSED FOOTING DRAIN	FD		



*EXISTING UTILITIES INFORMATION INCLUDING, AT A MINIMUM, THE SEWER MAINS, WATER MAINS AND DRAINAGE SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES COULD VOID THE UTILITY DESIGN AND SHALL BE REPORTED TO ENGINEER BEFORE CONSTRUCTION.

THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

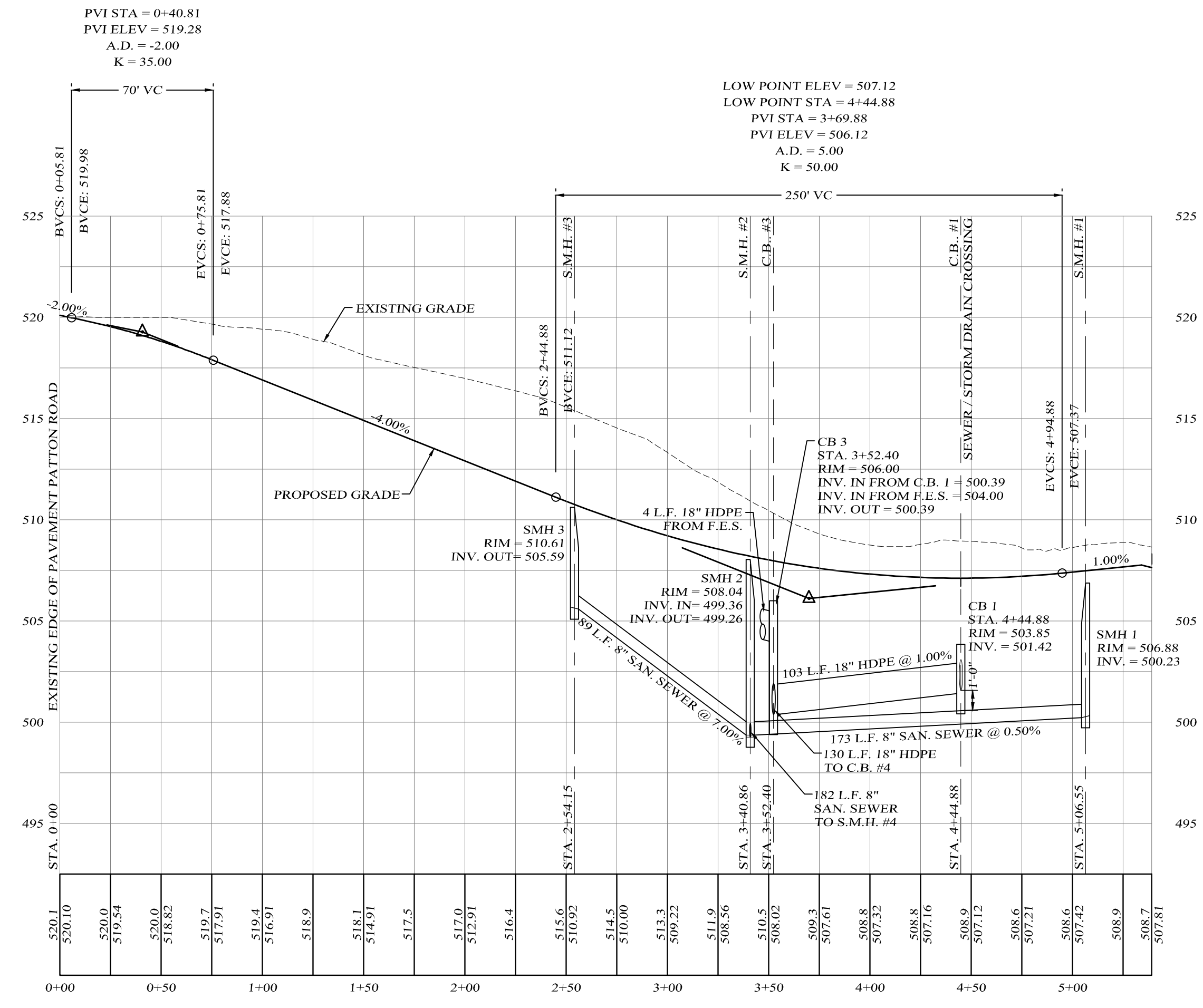
PATTON RIDGE
 TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
 PROJECT TITLE

PROPOSED UTILITIES PLAN
 DRAWING TITLE

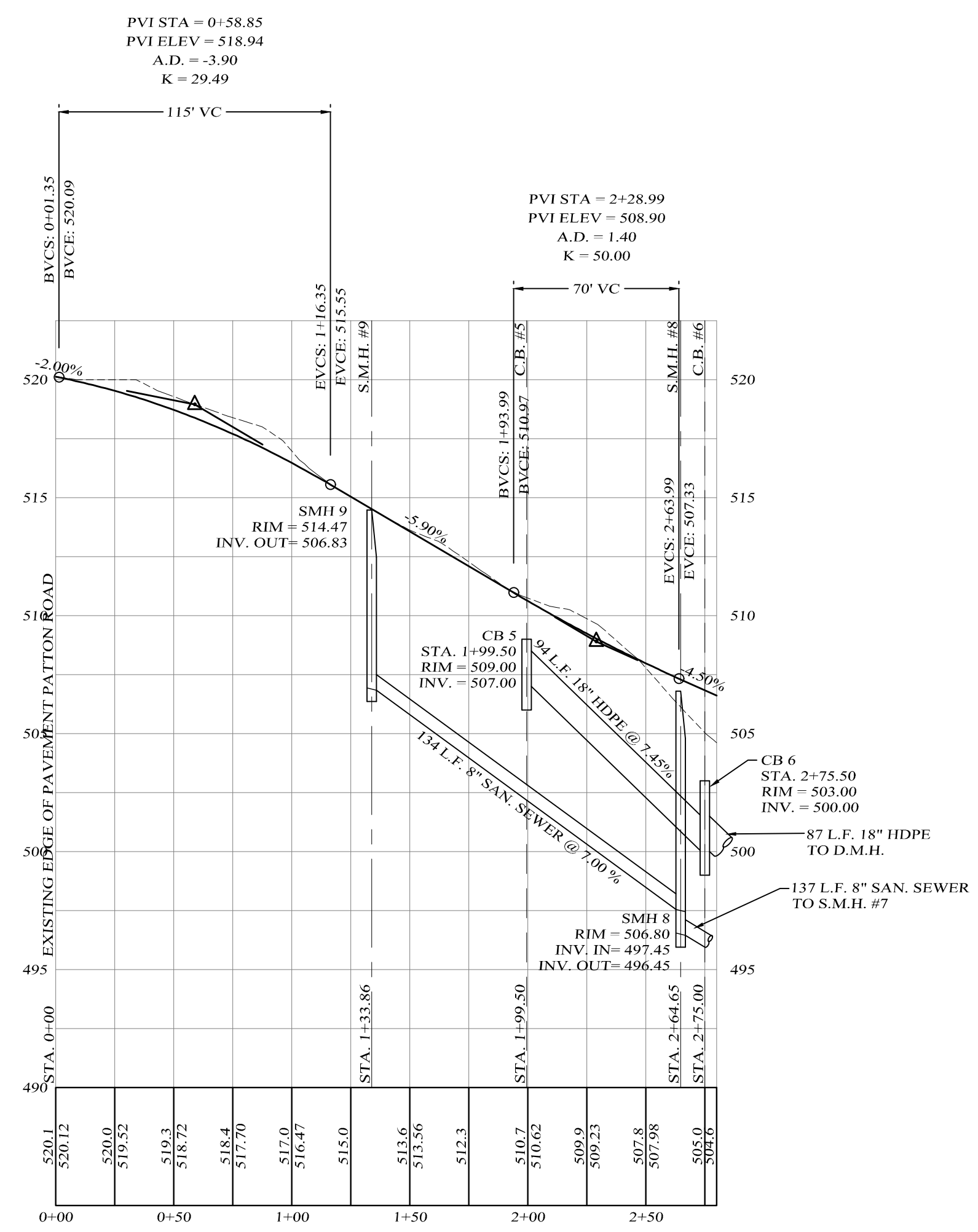
Kirk Rother, P.E.
 CONSULTING ENGINEER, PLLC
 5 St. Stephens Lane, Warwick, NY 10990
 (845) 988-0620

DATE	REVISIONS
01-21-21	REV. PER D.E.C. COMMENTS
12-01-20	REV. PER D.O.H. COMMENTS
11-01-13	REV. PER TOWN ENG. COMMENTS
06-05-13	DETAILED DESIGN
08-08-12	INITIAL PREPARATION

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	3 OF 6	5 OF 6	6 OF 14
CAD #	PROJECT #	SCALE	
05191 SFS	05191.0	AS NOTED	



ROAD "A" CENTERLINE PROFILE
 PROFILE SCALES:
 HOR: 1" = 50'
 VER: 1" = 5'



ROAD "B" CENTERLINE PROFILE
 PROFILE SCALES:
 HOR: 1" = 50'
 VER: 1" = 5'

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PATTON RIDGE
 TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
 PROJECT TITLE

PROPOSED ROAD PROFILES
 DRAWING TITLE

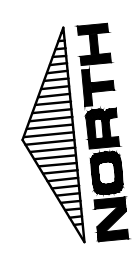
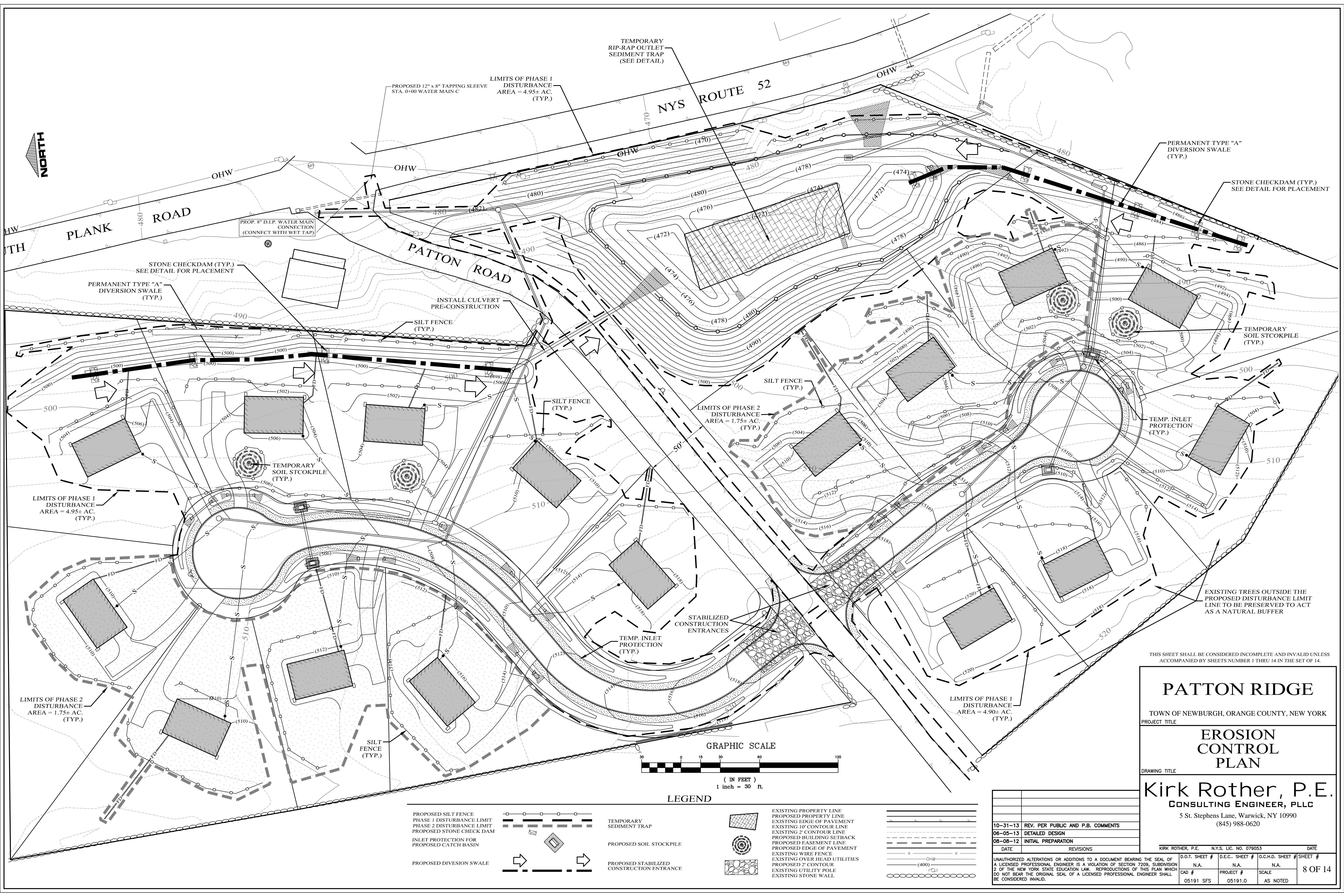
Kirk Rother, P.E.
 CONSULTING ENGINEER, PLLC
 5 St. Stephens Lane, Warwick, NY 10990
 (845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
06-05-13	DETAILED DESIGN			
08-08-12	INITIAL PREPARATION			

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	4 OF 6	N.A.	7 OF 14
CAD #	PROJECT #	SCALE	
05191 SFS	05191.0	AS NOTED	

DATE	REVISIONS

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TEMPORARY RIP-RAP OUTLET SEDIMENT TRAP (SEE DETAIL)

PROPOSED 12" x 8" TAPPING SLEEVE STA. 0+00 WATER MAIN C

LIMITS OF PHASE 1 DISTURBANCE AREA = 4.95± AC. (TYP.)

NYS ROUTE 52

PERMANENT TYPE "A" DIVERSION SWALE (TYP.)

STONE CHECKDAM (TYP.) SEE DETAIL FOR PLACEMENT

STONE CHECKDAM (TYP.) SEE DETAIL FOR PLACEMENT

PERMANENT TYPE "A" DIVERSION SWALE (TYP.)

INSTALL CULVERT PRE-CONSTRUCTION

SILT FENCE (TYP.)

SILT FENCE (TYP.)

LIMITS OF PHASE 2 DISTURBANCE AREA = 1.75± AC. (TYP.)

TEMP. INLET PROTECTION (TYP.)

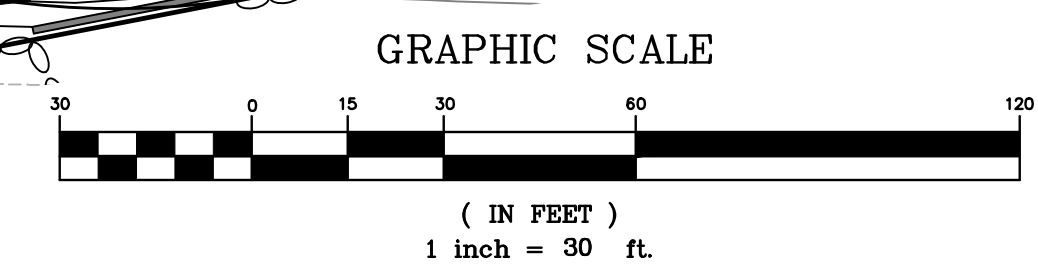
TEMPORARY SOIL STOCKPILE (TYP.)

LIMITS OF PHASE 1 DISTURBANCE AREA = 4.95± AC. (TYP.)

EXISTING TREES OUTSIDE THE PROPOSED DISTURBANCE LIMIT LINE TO BE PRESERVED TO ACT AS A NATURAL BUFFER

LIMITS OF PHASE 2 DISTURBANCE AREA = 1.75± AC. (TYP.)

LIMITS OF PHASE 1 DISTURBANCE AREA = 4.90± AC. (TYP.)



LEGEND

PROPOSED SILT FENCE		EXISTING PROPERTY LINE	
PHASE 1 DISTURBANCE LIMIT		PROPOSED PROPERTY LINE	
PHASE 2 DISTURBANCE LIMIT		EXISTING EDGE OF PAVEMENT	
PROPOSED STONE CHECK DAM		EXISTING 2' CONTOUR LINE	
INLET PROTECTION FOR PROPOSED CATCH BASIN		PROPOSED EASEMENT LINE	
		PROPOSED EDGE OF PAVEMENT	
		EXISTING WIRE FENCE	
		EXISTING OVER HEAD UTILITIES	
		PROPOSED 2' CONTOUR	
		EXISTING UTILITY POLE	
		EXISTING STONE WALL	
PROPOSED DIVERSION SWALE		TEMPORARY SEDIMENT TRAP	
		PROPOSED SOIL STOCKPILE	
		PROPOSED STABILIZED CONSTRUCTION ENTRANCE	

THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

PATTON RIDGE

TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK

PROJECT TITLE

EROSION CONTROL PLAN

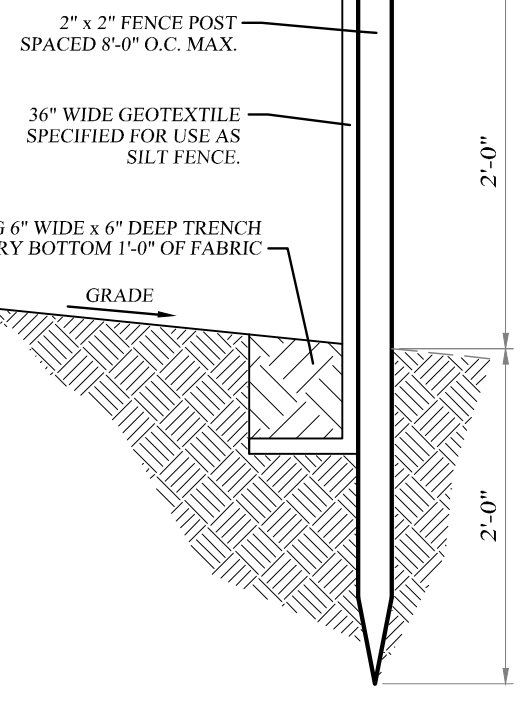
DRAWING TITLE

Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

DATE	REVISIONS	DATE
10-31-13	REV. PER PUBLIC AND P.B. COMMENTS	
06-05-13	DETAILED DESIGN	
08-08-12	INITIAL PREPARATION	

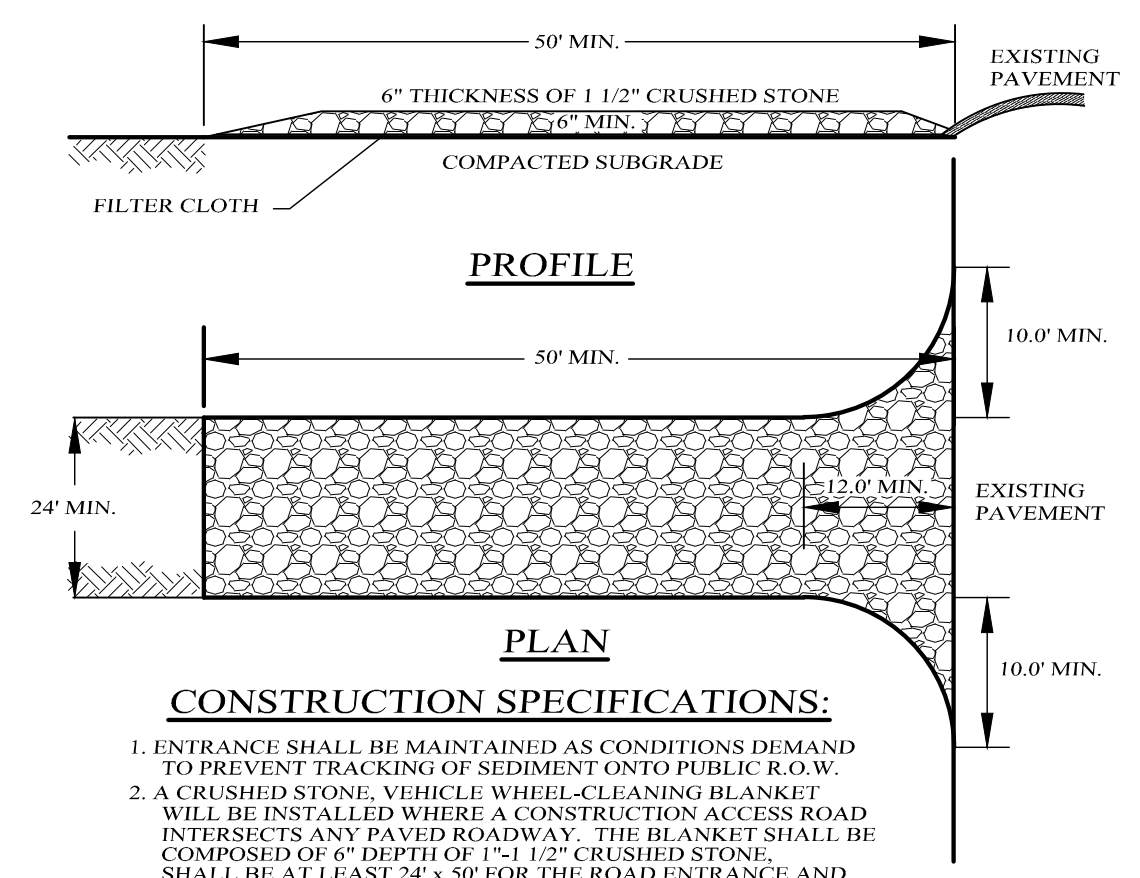
D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	8 OF 14

FENCE PROPERTIES	MINIMUM VALUE	STANDARD
GRAB TENSILE STRENGTH (LBS)	90	ASTM D1682
ELONGATION AT FAILURE (%)	50	ASTM D1682
MULEN BURST STRENGTH (PSI)	150	ASTM D3786
PUNCTURE STRENGTH (LBS)	40	ASTM D751 (MODIFIED)
SLURRY FLOW RATE (GAL/MIN/SF)	0.3	
EQUIVALENT OPENING SIZE	40-80	US STD SIEVE #20-40
ULTRAVIOLET RADIATION STABILITY (%)	90	ASTM G-26
SLOPE STEEPNESS		MAXIMUM FENCE SPACING (FT)
2:1		50
3:1		75
4:1		125
5:1		175
FLATTER THAN 5:1		200



- NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED 24" ON CENTER.
 3. ALL SILT FENCES SHALL RUN PARALLEL TO THE CONTOUR OF THE LAND.
 4. ALL SILT FENCING SHALL MEET THE MINIMUM REQUIREMENTS AS STATED UNLESS OTHERWISE NOTED AND APPROVED BY THE BUILDING INSPECTOR AND ENGINEER.
 5. MAINTENANCE SHALL BE PERFORMED AS NOTED AND MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE EVERY 24" AT TOP AND MID SECTION.

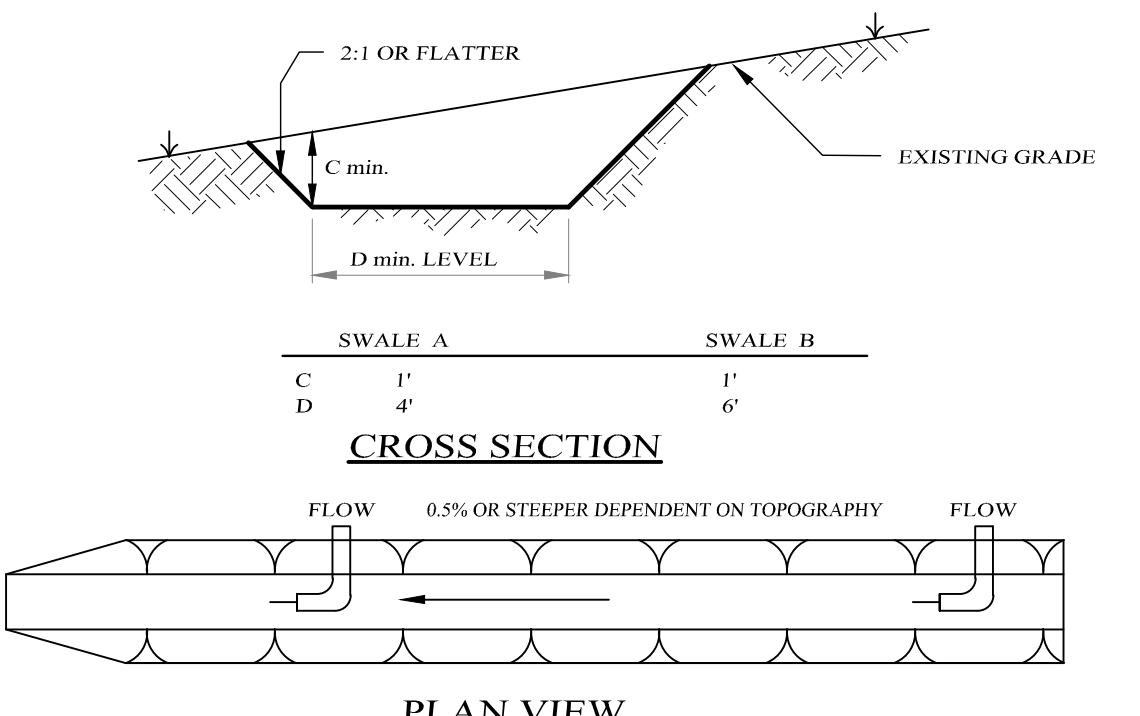
FILTER FABRIC SILT FENCE DETAIL
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. ENTRANCE SHALL BE MAINTAINED AS CONDITIONS DEMAND TO PREVENT TRACKING OF SEDIMENT ONTO PUBLIC R.O.W.
2. A CRUSHED STONE, VEHICLE WHEEL-CLEANING BLANKET WILL BE INSTALLED WHERE A CONSTRUCTION ACCESS ROAD INTERSECTS ANY PAVED ROADWAY. THE BLANKET SHALL BE COMPOSED OF 6" DEPTH OF 1-1/2" CRUSHED STONE. SHALL BE AT LEAST 24" x 50' FOR THE ROAD ENTRANCE AND 12" x 25' FOR DRIVEWAYS, AND SHALL BE PLACED ON COMPACTED SUB-GRADE.
3. A FILTER CLOTH WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE IF PIPING IS IMPRACTICAL. A MOUNTABLE BERM WITH 3:1 SLOPES WILL BE PERMITTED.
5. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH IMPERE NORMAL FLOW.
6. ALL FILLS ARE TO BE MECHANICALLY COMPACTED.
7. ALL EARTH REMOVED AND NOT NEEDED SHALL BE PLACED AS NOT TO INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. REFER TO CHART FOR STABILIZATION OF FLOW CHANNEL.
9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

TEMPORARY DIVERSION SWALE DETAIL
NOT TO SCALE

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC OR LESS)	B (5 AC-10 AC)
1.	0.5-1.0	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2.	1.1-5.0	SEED AND STRAW MULCH	SEED USING JUTE OR EXCISLOR
3.	5.1-8.0	SEED WITH JUTE OR EXCISLOR	LINED RIP-RAP 4-8"
4.	8.1-20	EXCISLOR AND RECYCLED CONCRETE EQUIVALENT ENGINEERED DESIGN	LINED 4-8" RIP-RAP

PERMANENT SEEDING MIXTURES

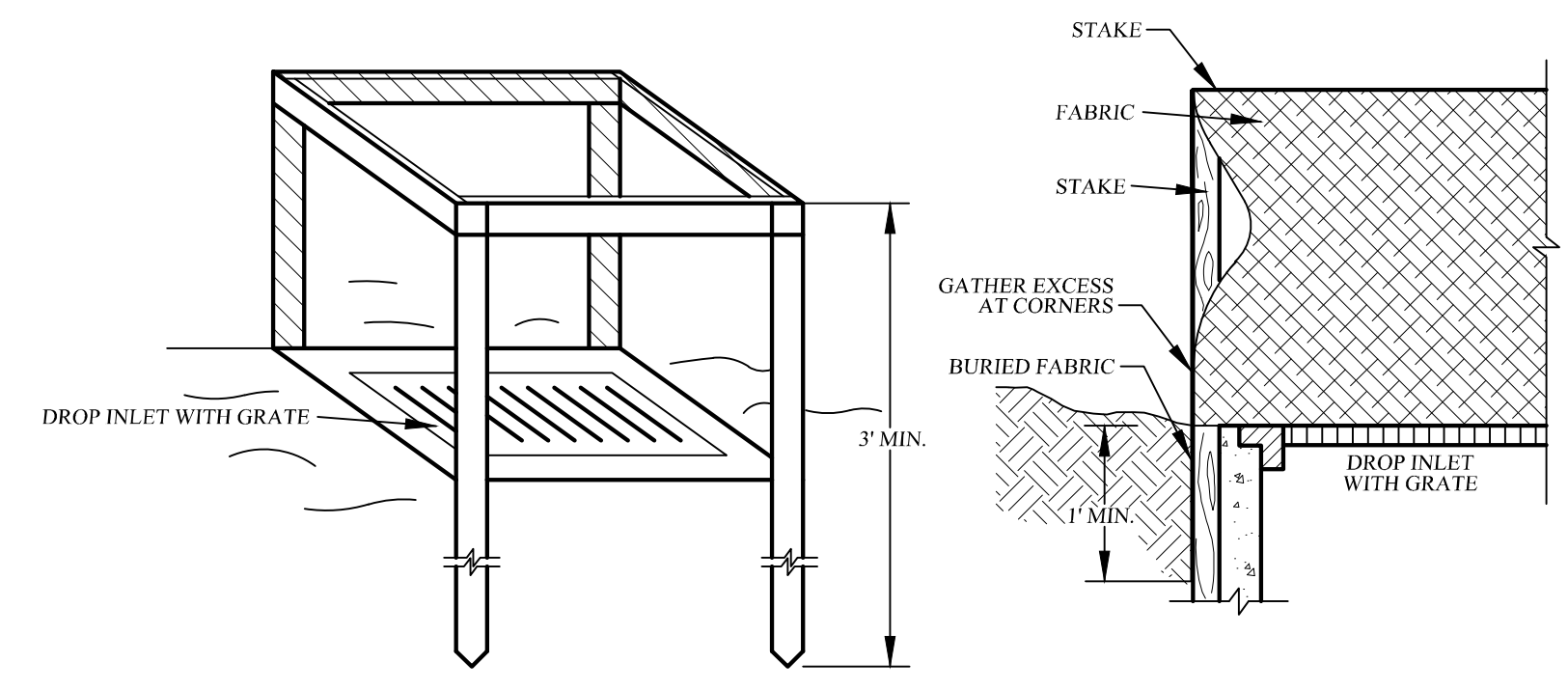
SPECIES	APPLICATION RATE	SPECIES	APPLICATION RATE
EMPIRE BIRDSFOOT TREFOIL	8 LBS/ACRE	80% SHADE TOLERANT KENTUCKY BLUEGRASS BLEND	8 LBS/ACRE
TALL FESCUE	20 LBS/ACRE	20% PERENNIAL RYEGRASS	5 LBS/ACRE
	5 LBS/ACRE		
GENERAL RECREATION AREAS AND LAWNS		SHADY WET SITES (SOMEWHAT POOR TO POORLY DRAINED SOILS)	
SPECIES	APPLICATION RATE	SPECIES	APPLICATION RATE
SUNNY SITES (WELL, MODERATELY WELL AND SOMEWHAT POORLY DRAINED SOILS)		70% ROUGH BLUEGRASS	80% SHADE TOLERANT KENTUCKY BLUEGRASS BLEND
65% KENTUCKY BLUEGRASS BLEND	85-114 LBS/ACRE		
20% PERENNIAL RYEGRASS	26-35 LBS/ACRE		
15% FINE FESCUE	19-26 LBS/ACRE		
SUNNY DROUGHTY SITES (SOMEWHAT TO EXCESSIVELY DRAINED SOILS)		SHADY DRY SITES (WELL TO SOMEWHAT POORLY DRAINED SOILS)	
65% FINE FESCUE	114-142 LBS/ACRE	80% SHADE TOLERANT KENTUCKY BLUEGRASS BLEND	8 LBS/ACRE
15% PERENNIAL RYEGRASS	26-33 LBS/ACRE		
20% KENTUCKY BLUEGRASS BLEND	35-44 LBS/ACRE		

- SITE PREPARATION**
1. INSTALL NEEDED WATER AND EROSION CONTROL MEASURES AND BRING AREA TO BE SEED TO DESIRED GRADES USING A MINIMUM OF 4" OF TOPSOIL.
 2. PREPARE SEED BED BY LOOSENING SOIL TO A DEPTH OF 4-6 INCHES.
 3. LIME TO A pH OF 6.5.
 4. FERTILIZE PER SOIL TESTS, OR, IF FERTILIZER IS TO BE APPLIED BEFORE SOIL TESTS, APPLY 850 POUNDS OF 5-10-10 OR EQUIVALENT PER ACRE (20 LBS./1000 SQ. FT.).
 5. INCORPORATE LIME AND FERTILIZER IN TOP 2-4 INCHES OF SOIL.
 6. SMOOTHLY REMOVE ALL STONES OVER 1" IN DIAMETER, STICKS AND FOREIGN MATTER. FIRM SEED BED.
 7. APPLY SEED PER PERMANENT SEEDING SCHEDULE.

SLOPE STABILIZATION, SEEDING METHOD & MULCHING

SLOPES OF 4:1 OR GREATER (HORIZONTAL-VERTICAL) SLOPES SHALL BE HYDROSEEDING WITH THE MIXTURES AND RATES INDICATED IN THE PERMANENT SEEDING MIXTURE SCHEDULE. STRAW OR HAY MULCH SHALL BE APPLIED AT A RATE OF 2 TONS/ACRE. STRAW OR HAY MULCH SHALL BE ANCHORED WITH BOD-M68860 NETTING AS MANUFACTURED BY RELANKA INTERNATIONAL OR APPROVED EQUIVALENT. NETTING TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.

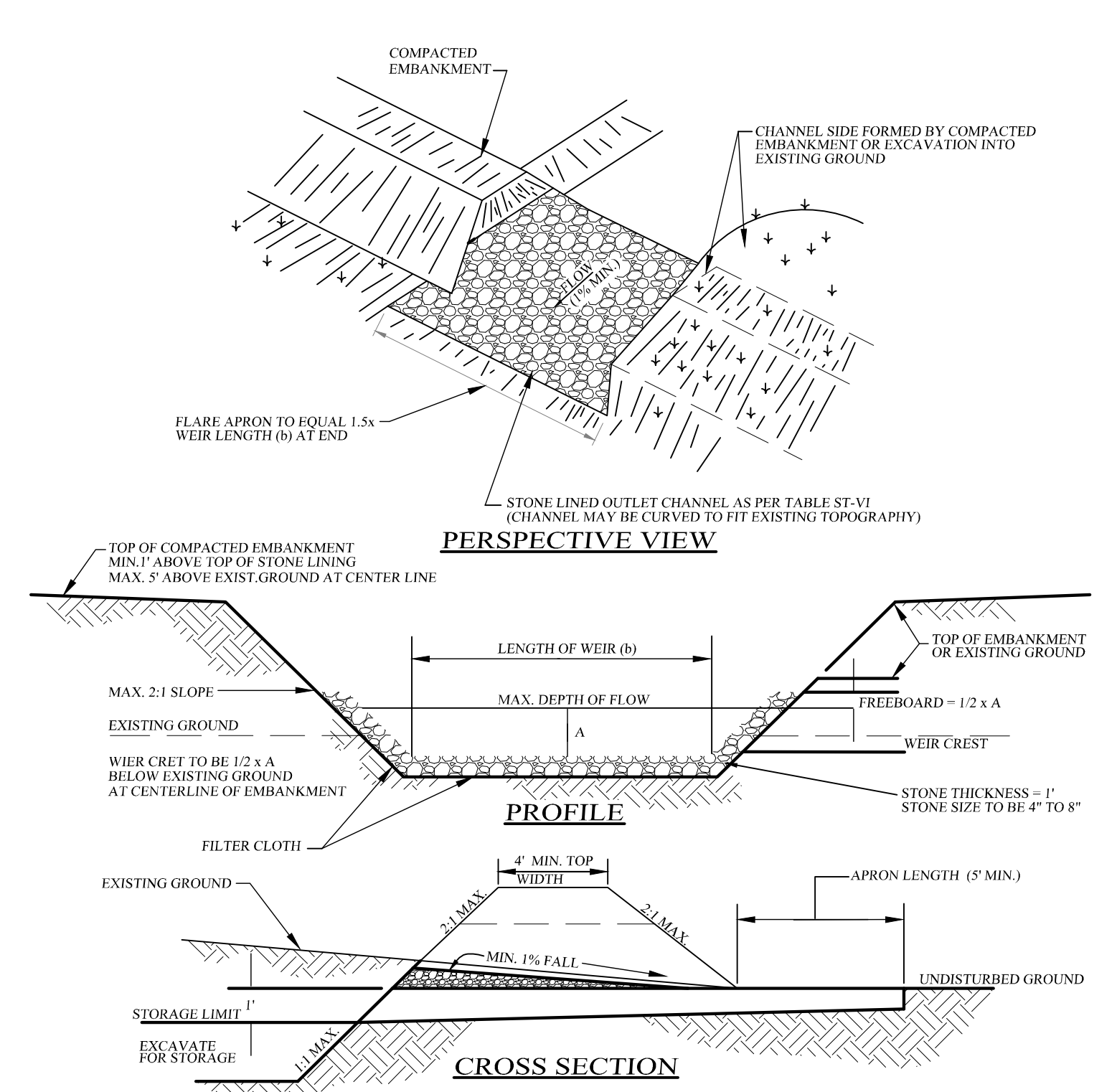
GENTLE SLOPES AND FLAT AREAS
AREAS SHALL BE SEEDING BY HYDROSEEDING OR BROADCASTING WITH THE MIXTURES AND RATES INDICATED ON THE PERMANENT SEEDING MIXTURE SCHEDULE. HYDROSEEDING AREAS SHALL BE MULCHED WITH A WOOD FIBER MULCH APPLIED AT A RATE OF 900 LBS/ACRE. BROADCAST AREAS SHALL MULCHED WITH HAY OR STRAW AT A RATE OF 2 TONS/ACRE. AREAS SEEDING BY BROADCASTING SHALL BE LIGHTLY RAKED AND PACKED PRIOR TO PLACING MULCH.



CONSTRUCTION SPECIFICATIONS:

1. FILTER FABRIC SHALL HAVE AN FOS OF 4085. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT, METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM OF 18" DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVERFLOW STABILITY.

FILTER FABRIC DROP INLET PROTECTION
NOT TO SCALE



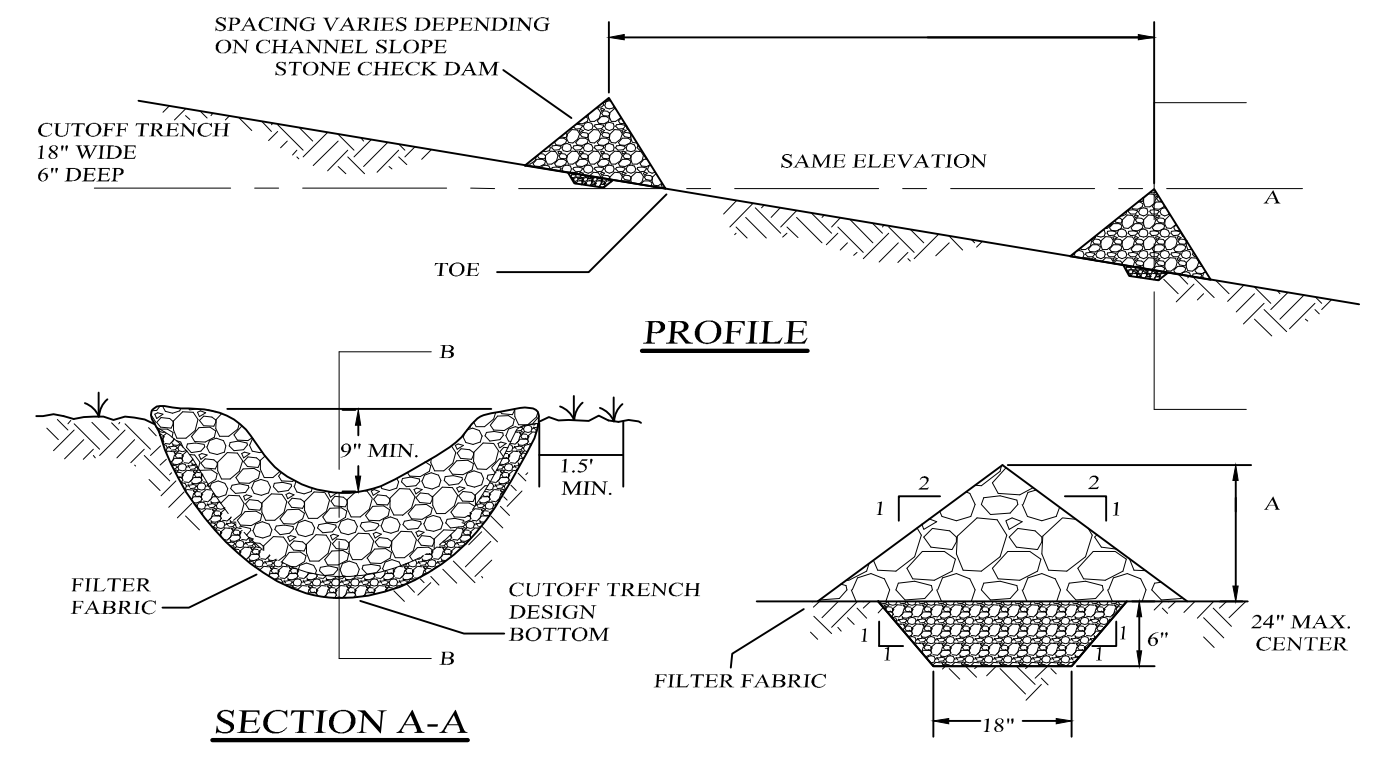
RIPRAP OUTLET SEDIMENT TRAP
NOT TO SCALE
MAX. DRAINAGE AREA = 15 ACRES

SEDIMENT TRAP CRITERIA

TRAP TYPE	RIP RAP OUTLET SEDIMENT TRAP
DRAINAGE AREA	7 AC
STORAGE REQUIRED	25,200 C.F.
VOLUME PROVIDED	27,000 C.F.
DIMENSIONS AT "AVE." WATER HT.	120' x 45'
DEPTH BELOW BASE OF WEIR (AVG.)	4'
CHANNEL DEPTH	1.5'
WEIR LENGTH	6'
EMBANKMENT HEIGHT	5'

CONSTRUCTION SPECIFICATIONS:

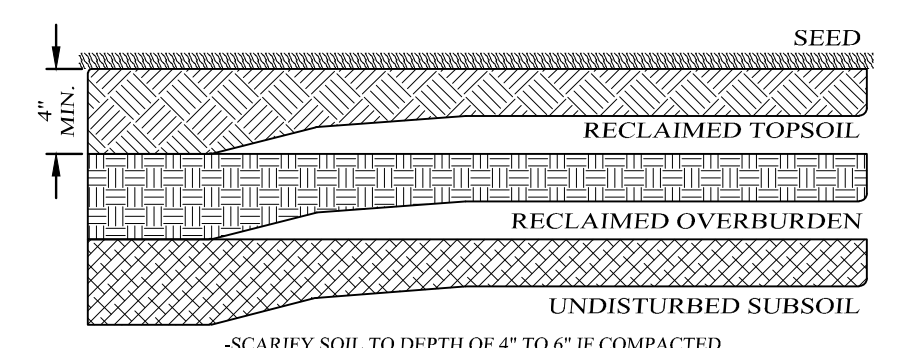
1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE FIVE (5) FEET, MEASURED AT CENTERLINE OF EMBANKMENT.
3. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER, CUT SLOPES 1:1 OR FLATTER.
4. ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED HEIGHT OF EMBANKMENT.
5. STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME AVAILABLE BEHIND THE OUTLET CHANNEL UP TO AN ELEVATION OF ONE (1) FOOT BELOW THE WEIR CREST.
6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTIONS OF FABRIC MUST OVERLAP AT LEAST ONE (1) FOOT WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
7. STONE USED IN THE OUTLET CHANNEL SHALL BE FOUR (4) TO EIGHT (8) INCHES RIP-RAP. TO PROVIDE A FILTERING EFFECT, A LAYER OF FILTER CLOTH SHALL BE EMBEDDED ONE (1) FOOT WITH SECTION NEAREST ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
8. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 12" THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
9. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND SHALL BE REPAIRED AS NEEDED.
10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
11. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
12. DRAINAGE AREA FOR THIS PRACTICE IS LIMITED TO 15 ACRES.



CONSTRUCTION SPECIFICATIONS:

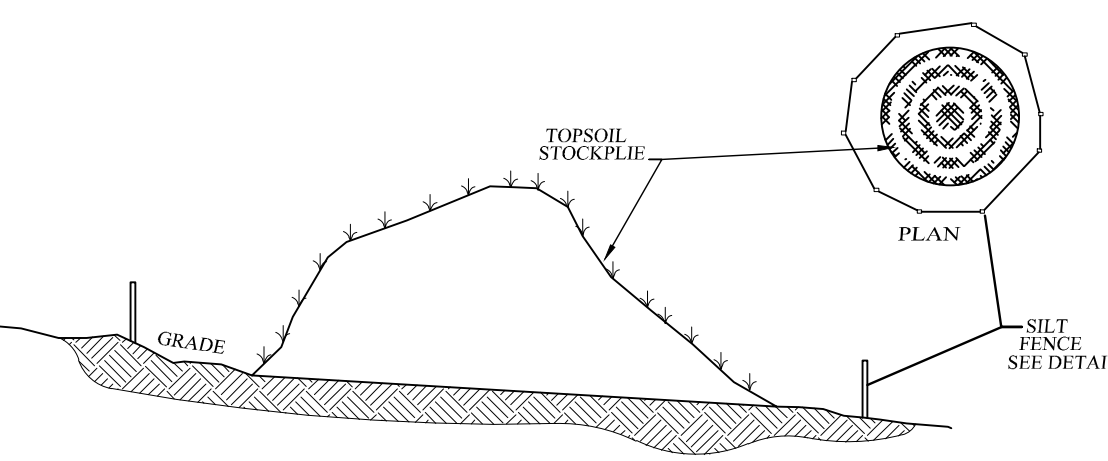
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATION OF THE CREST OF THE DOWN STREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 15 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
6. MAXIMUM DRAINAGE AREA IS 2 ACRES ABOVE THE CHECK DAM.

CHECK DAM DETAILS
NOT TO SCALE



RECLAMATION DETAIL
NOT TO SCALE

- SCARIFY SOIL TO DEPTH OF 4" TO 6" IF COMPACTED.
- REMOVE LARGE STONES, STUMPS, ROOTS & DEBRIS.
- LIME AS REQUIRED TO ACHIEVE A pH OF 6.0.
- FERTILIZE AT 600/ACRE OF 5-10-10 FERTILIZER, IF NEEDED.
- ROUGHEN TOP 4" OF SOIL, SEED AND MULCH.



- NOTES:
1. TOPSOIL STOCKPILE TO BE SEED AS PER THE TEMPORARY SEEDING SPECIFICATIONS.
 2. SILT FENCE TO BE INSTALLED DOWN GRADIENT OF STOCKPILE.

TOPSOIL STOCKPILE DETAIL
NOT TO SCALE

ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS NOTES:

1. NO SITE PREPARATION OR CONSTRUCTION, INCLUDING UTILITY CONNECTIONS, SHALL COMMENCE UNTIL A VALID HIGHWAY WORK PERMIT HAS BEEN SECURED FROM THE ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS UNDER SECTION 136 OF THE HIGHWAY LAW.
2. THE VEGETATIVE DRIP EDGE, AT MATURITY, SHALL NOT PROJECT INTO THE COUNTY R.O.W.
3. NO SIGNS SHALL BE PLACED WITHIN, OR PROJECT INTO, THE COUNTY R.O.W.

THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

PATTON RIDGE
TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
PROJECT TITLE

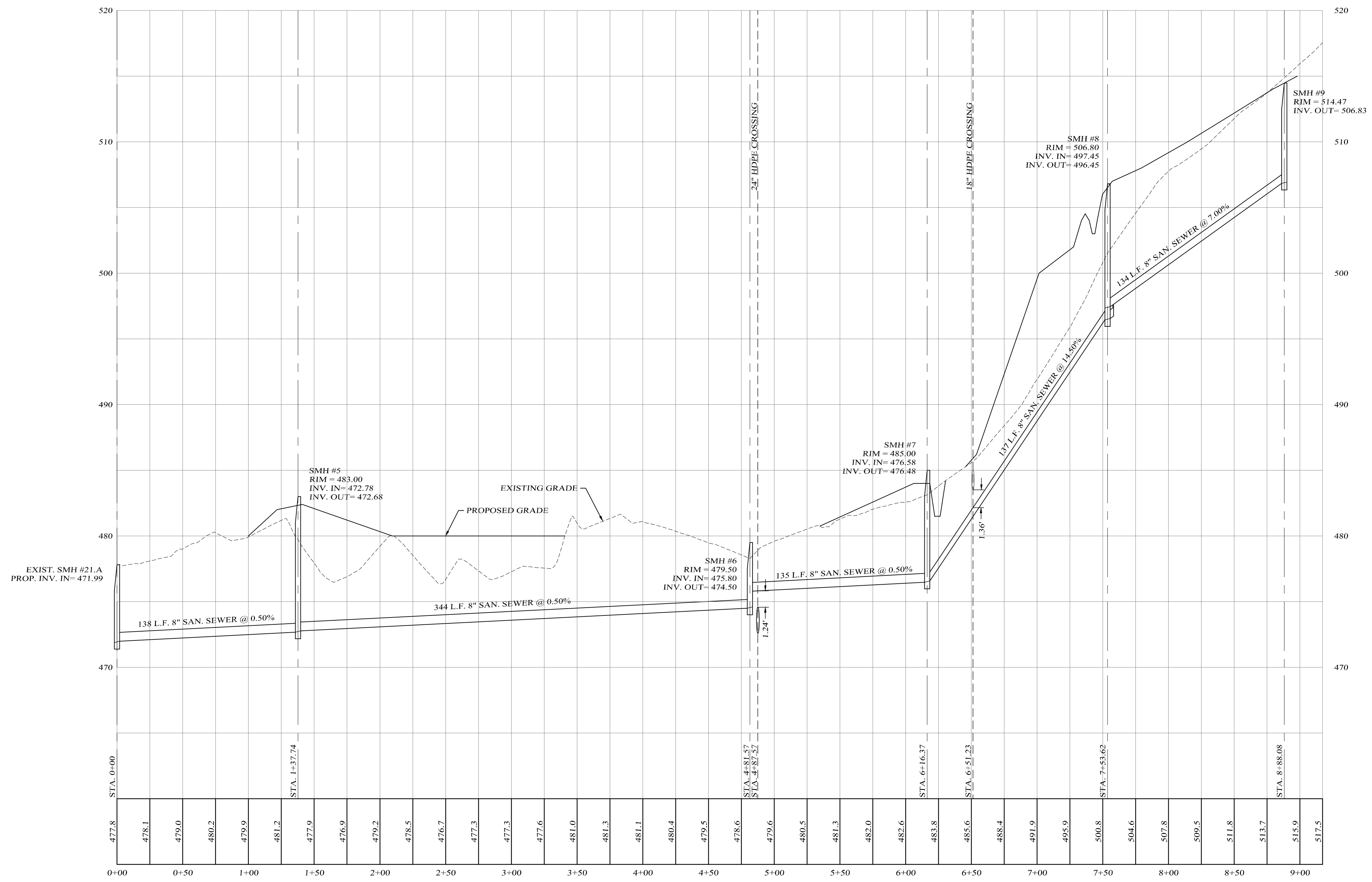
EROSION CONTROL DETAILS
DRAWING TITLE

Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
06-05-13	DETAILED DESIGN			
08-08-12	INITIAL PREPARATION			

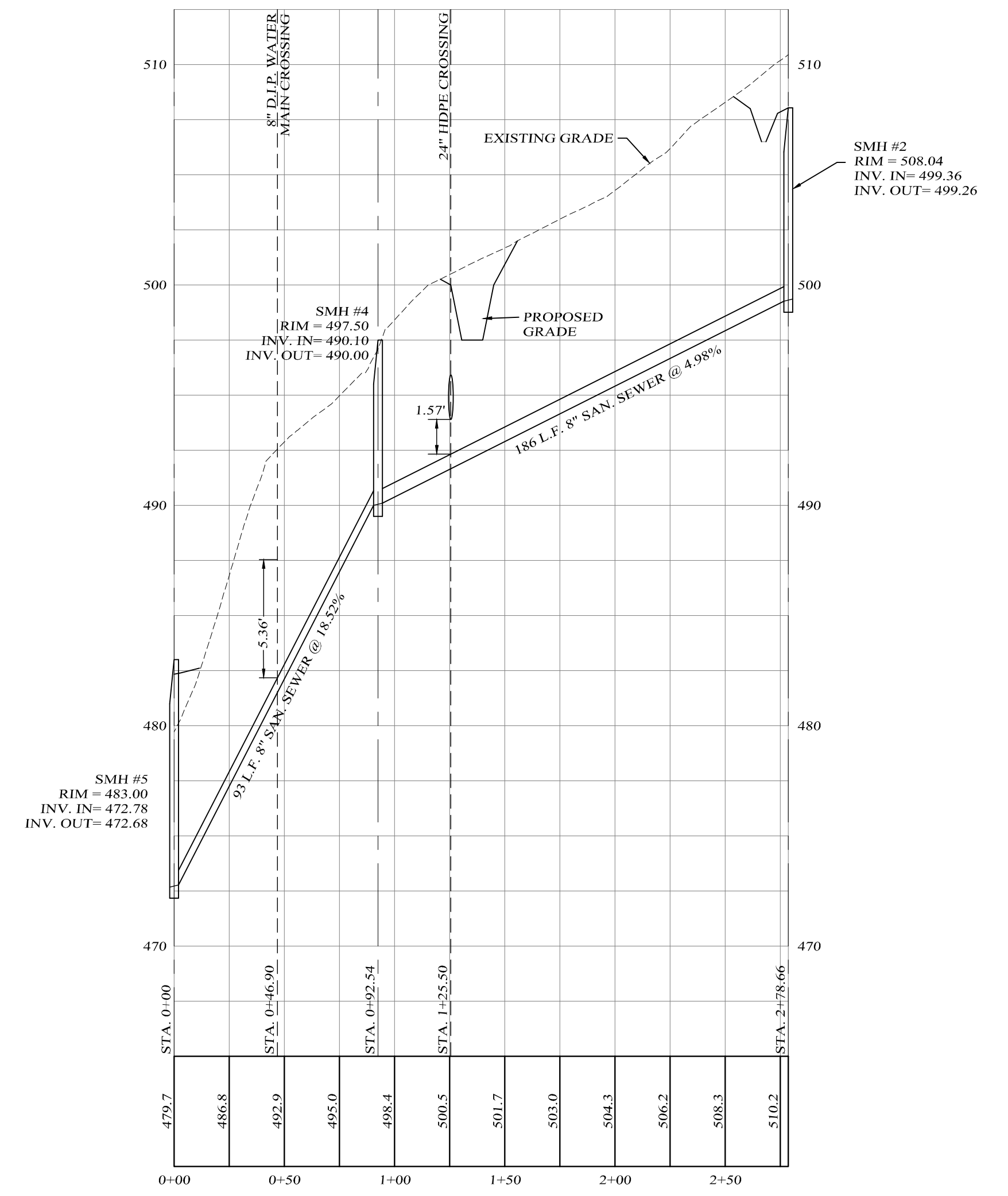
D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	9 OF 14
05191 SFS	05191.0	AS NOTED	

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. REPRODUCTIONS OF THIS PLAN WHICH DO NOT BEAR THE ORIGINAL SEAL OF A LICENSED PROFESSIONAL ENGINEER SHALL BE CONSIDERED INVALID.



SANITARY SEWER MAIN "B" PROFILE

PROFILE SCALES:
HOR: 1" = 50'
VER: 1" = 5'



SANITARY SEWER MAIN "C" PROFILE

PROFILE SCALES:
HOR: 1" = 50'
VER: 1" = 5'

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PATTON RIDGE
TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
PROJECT TITLE

SANITARY SEWER PROFILES
DRAWING TITLE

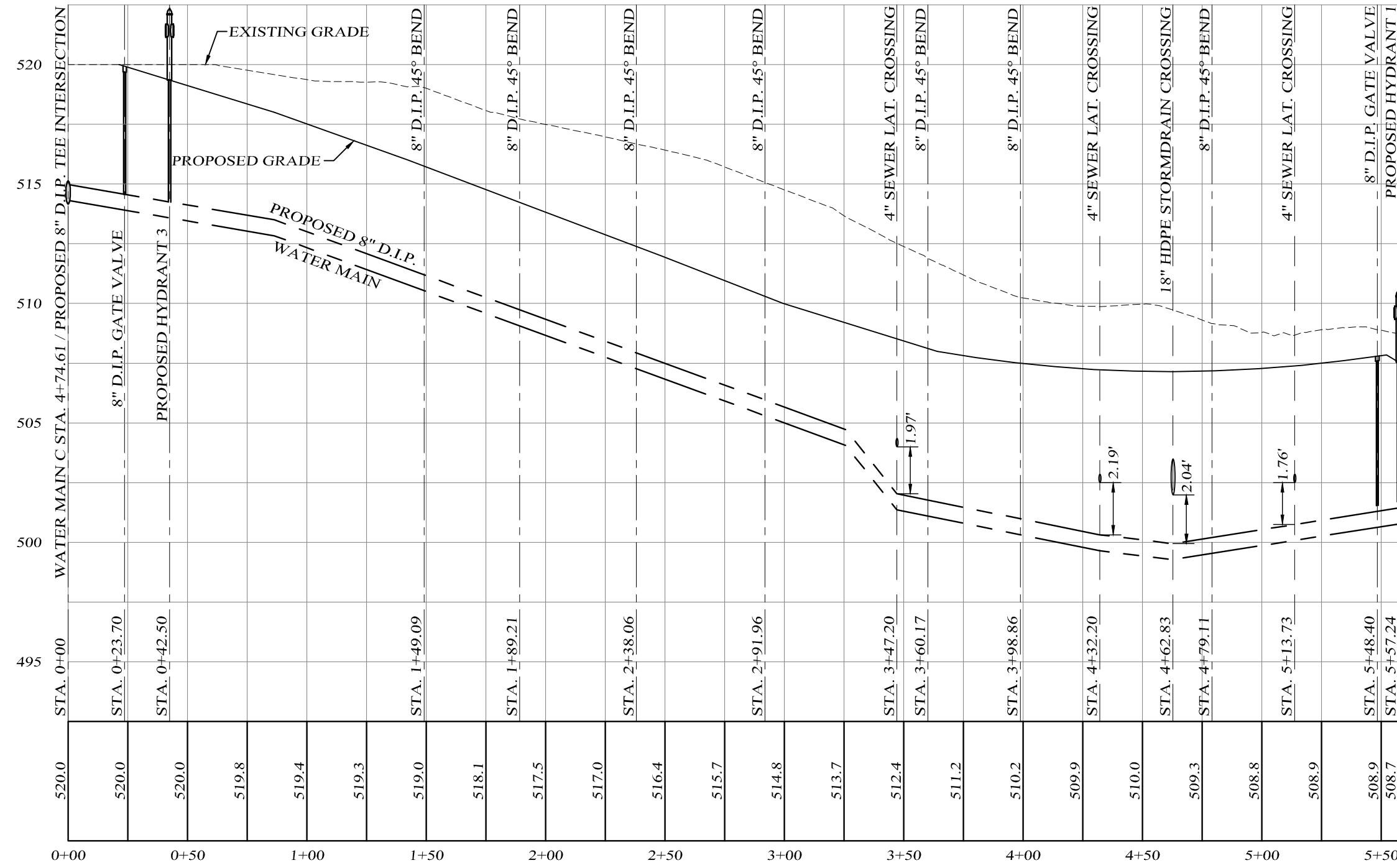
Kirk Rother, P.E.
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5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

DATE	REVISIONS
06-05-13	DETAILED DESIGN
08-08-12	INITIAL PREPARATION

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	5 OF 6	N.A.	10 OF 15
PROJECT #	SCALE		
05191.0	AS NOTED		

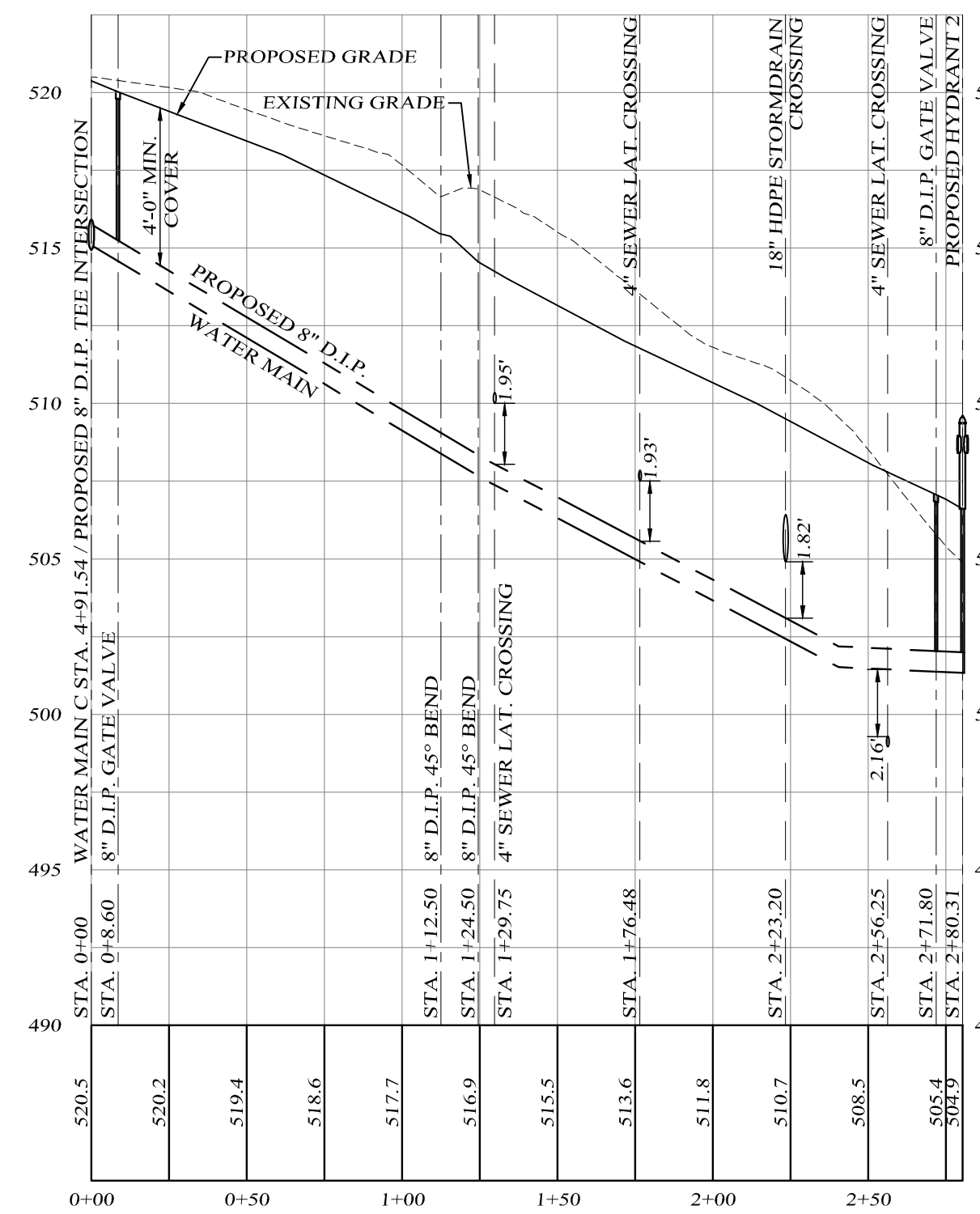
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KIRK ROTHER, P.E. N.Y.S. LIC. NO. 079053 DATE



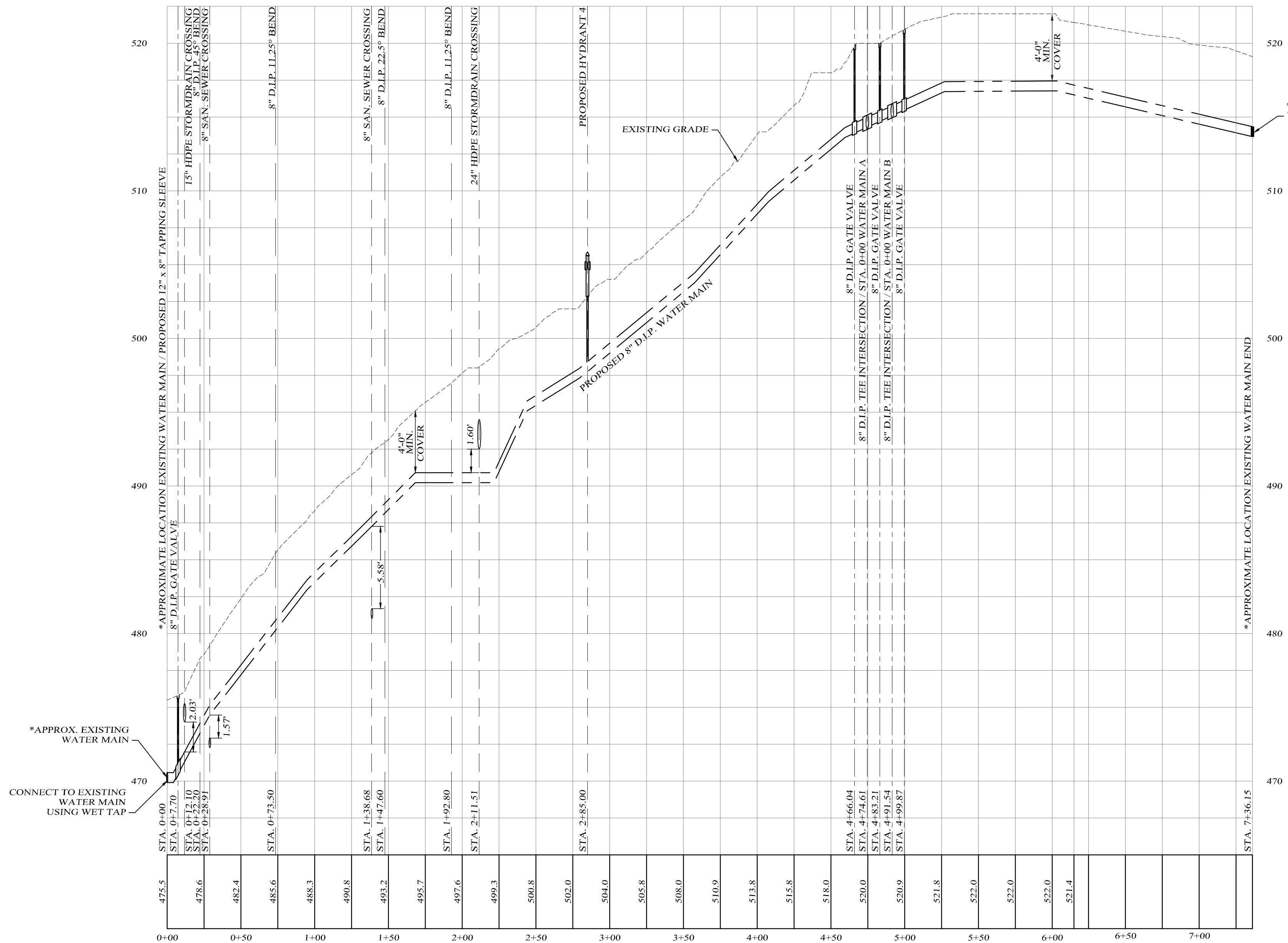
WATER MAIN "A" PROFILE

PROFILE SCALES:
HOR: 1" = 50'
VER: 1" = 5'



WATER MAIN "B" PROFILE

PROFILE SCALES:
HOR: 1" = 50'
VER: 1" = 5'



WATER MAIN "C" PROFILE

PROFILE SCALES:
HOR: 1" = 50'
VER: 1" = 5'

WATER SYSTEM NOTES

- Construction of potable water utilities and connection to the Town of Newburgh water system requires a permit from the Town of Newburgh Water Department. All requirements shall conform to the requirements of the New York State Department of Health and the Town of Newburgh.
- All water service lines four (4) inches and larger in diameter shall be cast iron, class 52, ductile iron pipe conforming to ANSIAWWA C151/A21.51-91 or later revision for ductile iron pipe joints shall be either push-on or mechanical joint as required.
- Thrust restraint of the pipe shall be through the use of joint restraint. Thrust blocks are not acceptable. Joint restraints shall be through the use of mechanical joint pipe with retainer glands. All fittings and valves shall also be installed with retainer glands for joint restraint. Retainer glands shall be EBBA iron megabag series 1100 or approved equal. The use of a manufactured restrained joint pipe is acceptable with prior approval of the Water Department.
- All fittings shall be cast iron or ductile iron, mechanical joint, class 250 and conform to ANSIAWWA C110/A21.10-87 or later revision for ductile and gray iron fittings or ANSIAWWA C153/A21.53-94 for later revision for ductile iron compact fittings.
- All valves shall be resilient wedge, mechanical joint gate valves conforming to ANSIAWWA C509 or later revision such as Mueller A-2360-23 or approved equal. All gate valves shall open left (counter-clockwise).
- Tapping sleeve shall be mechanical joint such as Mueller H-613 or equal. Tapping valve shall be resilient wedge gate valves conforming to ANSIAWWA C509 such as Mueller Model T-2360-19 or approved equal. All tapping sleeves and valves shall be tested to 150 PSI minimum testing of the tapping sleeve and valve must be witnessed and accepted by the Town of Newburgh Water Department prior to cutting into the pipe.
- All water service lines two (2) inches in diameter and smaller shall be Type K copper tubing. Corporation stops shall be Mueller H-15020 for 1/2 and 1 inch, Mueller H-15000 or B-25000 for 1 1/2 and 2 inch sizes. Curb valves shall be Mueller H-15012 for 1/2 and 1 inch and Mueller B-25004 for 1 1/2 and 2 inch sizes. Curb boxes shall be Mueller H-10012 for 1/2 and 1 inch and Mueller H-10010 for 1 1/2 and 2 inch sizes.
- All pipe installation shall be subject to inspection by the Town of Newburgh Water Department. The contractor shall be responsible for coordinating all inspections as required with the Town of Newburgh Water Department.
- The water main shall be tested, disinfected and flushed in accordance with the Town of Newburgh requirements. All testing, disinfection and flushing shall be coordinated with the Town of Newburgh Water Department. Prior to putting the water main in service, satisfactory sanitary results from a certified lab must be submitted to the Town of Newburgh Water Department. The test samples must be collected by a representative of the testing laboratory and witnessed by the Water Department.
- Thrust restraint shall be provided by the rods and retainer glands. The length of restrained pipe shall be determined based upon working pressures, soil conditions and depth of bury according to DHPA standards.
- Pressure and leakage tests are required and shall be done in accordance with AWWA C-600 standards.
- Disinfection of all new work shall be done in accordance with AWWA C-651 - year of latest revision standards.
- All water mains shall be 8", Class 52, ductile iron pipe unless otherwise noted.

THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

PATTON RIDGE

TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK

WATER MAIN PROFILES

DRAWING TITLE

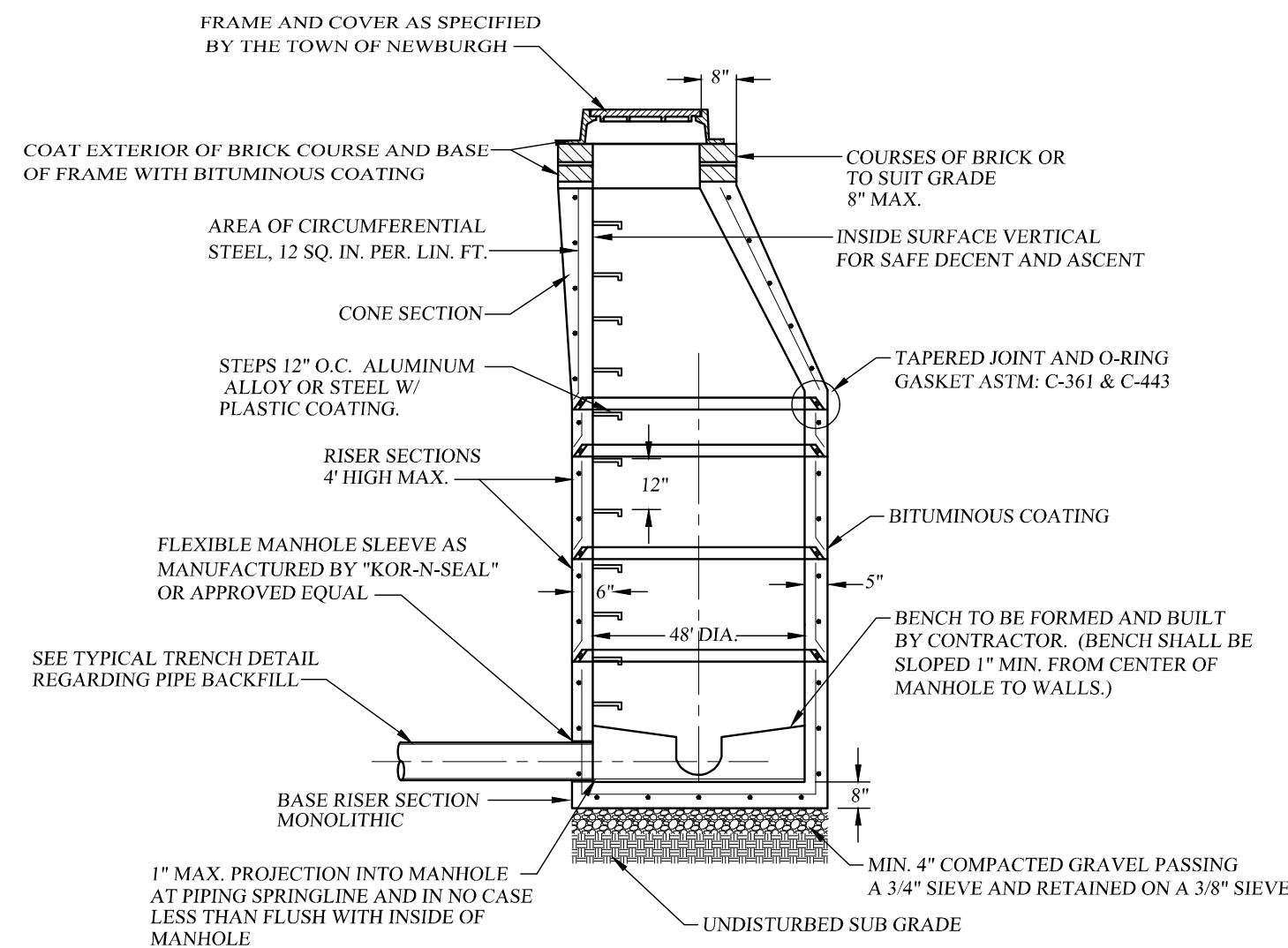
Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC

5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
11-01-13	REV. PER TOWN ENG. COMMENTS			
09-27-13	REV. PER TOWN PLANNER & ENG. COMMENTS			
06-05-13	DETAILED DESIGN			
08-08-12	INITIAL PREPARATION			

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	11 OF 14
CAD #	PROJECT #	SCALE	
05191 SFS	05191.0	AS NOTED	

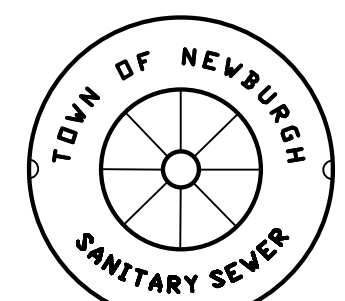
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PRECAST REINFORCED CONCRETE MANHOLE
NOT TO SCALE

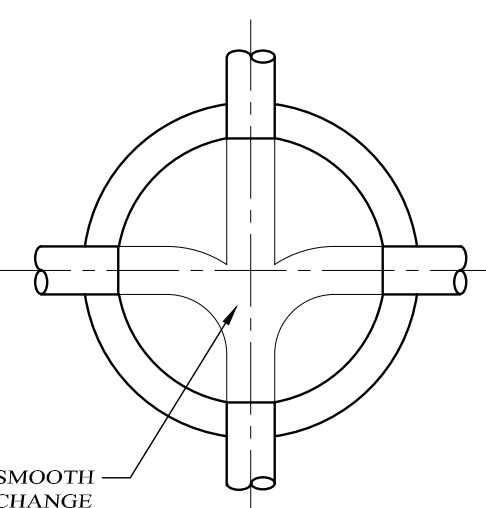
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- MANHOLE TO MEET CURRENT REQUIREMENTS OF ASTM: C-478
- JOINTS: LOCK TYPE WITH ROUND RUBBER GASKETS. THE WEIGHT OF EACH SECTION MUST MAKE AN INFILTRATION PROOF JOINT BY FORCING THE GASKET TIGHT.
- ALL MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE TOWN OF NEWBURGH
- MANHOLE TO BE SUITABLE FOR H-20 LOADING.
- MANHOLE EXTERIOR MUST BE 100% BITUMINOUS COATING.
- ALL MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS, CONSTRUCTION MATERIALS, DATED 2002 (NEW YORK STATE STANDARD SPECIFICATIONS) WITH ALL ADDENDUMS. ALL FACILITIES MUST BE NEW YORK STATE DEPARTMENT OF TRANSPORTATION APPROVED.



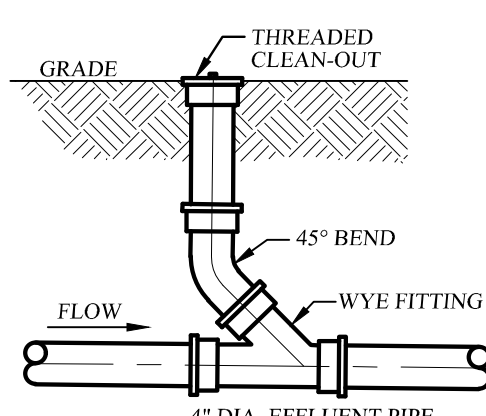
SANITARY MANHOLE LID DETAIL
NOT TO SCALE

(NOT FOR REVIEW OR APPROVAL BY ORANGE COUNTY HEALTH DEPT.)

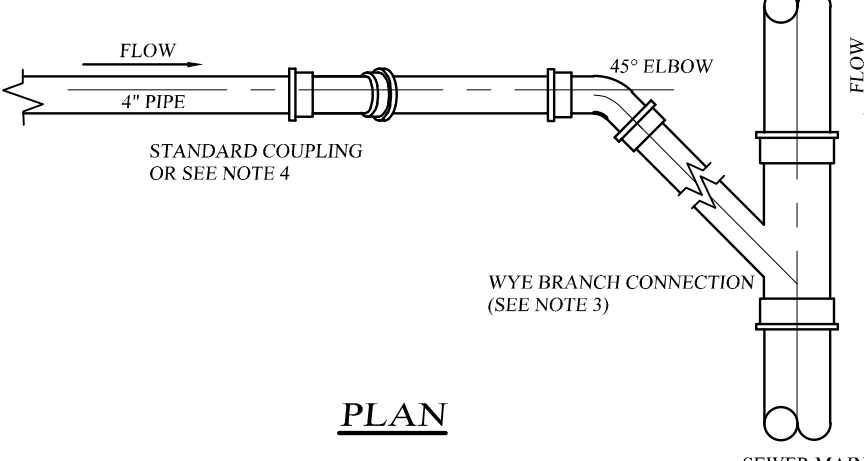


MANHOLE BASE PLAN
NOT TO SCALE

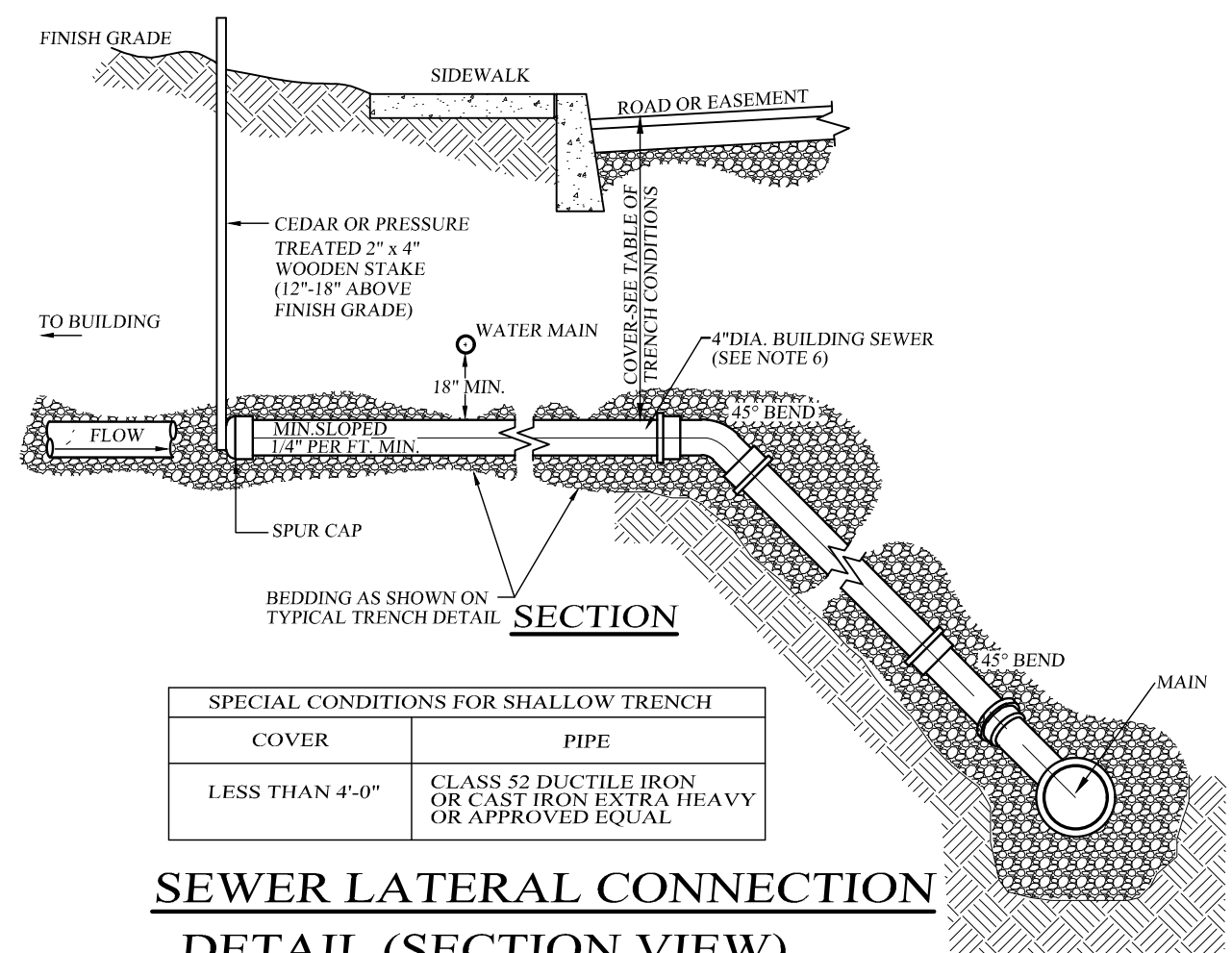
(NOT FOR REVIEW OR APPROVAL BY ORANGE COUNTY HEALTH DEPT.)



- SEWER CLEAN-OUT DETAIL**
NOT TO SCALE
- (NOT FOR REVIEW OR APPROVAL BY ORANGE COUNTY HEALTH DEPT.)
- NOTES:
1. THE MAXIMUM DISTANCE BETWEEN POINTS OF POSSIBLE CLEAN-OUT SHALL BE 75 FEET.
 2. BENDS SHALL BE AVOIDED IF POSSIBLE. HOWEVER, IF BENDS ARE REQUIRED, A CLEAN-OUT SHALL BE INSTALLED AT EACH SUCH BEND.



- SEWER LATERAL CONNECTION DETAIL (PLAN VIEW)**
NOT TO SCALE
- (NOT FOR REVIEW OR APPROVAL BY ORANGE COUNTY HEALTH DEPT.)
- NOTES:
1. ALL APPROVED BUILDING SEWER PIPE CONNECTIONS SHALL BE CONSTRUCTED FROM THE SAME MATERIAL.
 2. MINIMUM HORIZONTAL SEPARATION BETWEEN SPUR CAP AND SIDEWALK SHALL BE 2'-0\"/>



SPECIAL CONDITIONS FOR SHALLOW TRENCH

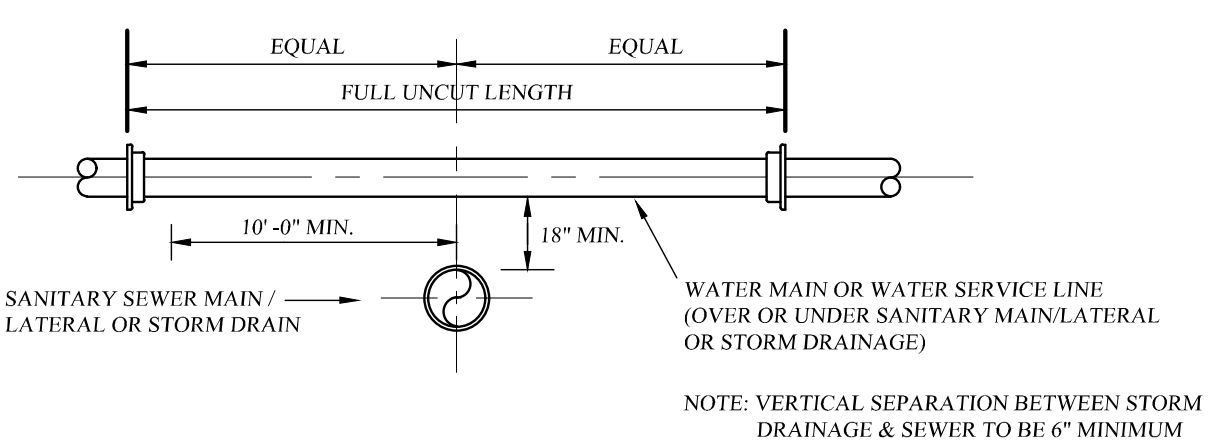
COVER	PIPE
LESS THAN 4'-0"	CLASS 52 DUCTILE IRON OR CAST IRON EXTRA HEAVY OR APPROVED EQUAL

SEWER LATERAL CONNECTION DETAIL (SECTION VIEW)
NOT TO SCALE

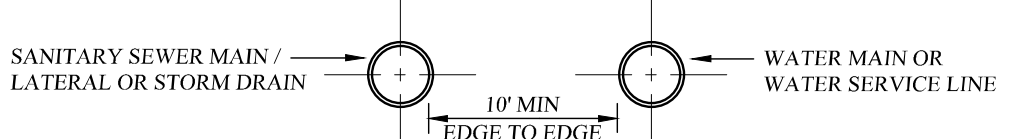
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SEWER LATERAL CONNECTION DETAIL NOTES
(NOT FOR REVIEW OR APPROVAL BY ORANGE COUNTY HEALTH DEPT.)

- SANITARY SEWER SPECIFICATIONS (FOR BUILDING SEWERS AND SEWER MAIN LINE)
- 1) REQUIRED MAIN LINE SEWER (OR APPROVED EQUAL):
 - A) PVC - SDR 35 SOLID WALL PIPE
 - D) PIPE (8"-15" DIAMETER): STAMPED ASTM D3034
 - PIPE (18" OR GREATER DIAMETER): STAMPED ASTM F769
 - F) FITTINGS: STAMPED ASTM 3034 OR F679
 - III) JOINTS: BELL & SPIGOT WITH ELASTOMERIC GASKET ASTM D3034 OR SOLVENT WELD ASTM D2664
- 2) BUILDING LATERAL SEWER (OR APPROVED EQUAL):
 - A) PVC - SDR 35 SOLID WALL PIPE
 - D) PIPE STAMPED ASTM D3034 AND SDR 35
 - F) FITTINGS: STAMPED SDR 35 AND ASTM 3034
 - III) JOINTS: BELL & SPIGOT WITH ELASTOMERIC GASKET ASTM D3034 OR SOLVENT WELD ASTM D2664



VERTICAL SEPARATION DETAIL
NOT TO SCALE



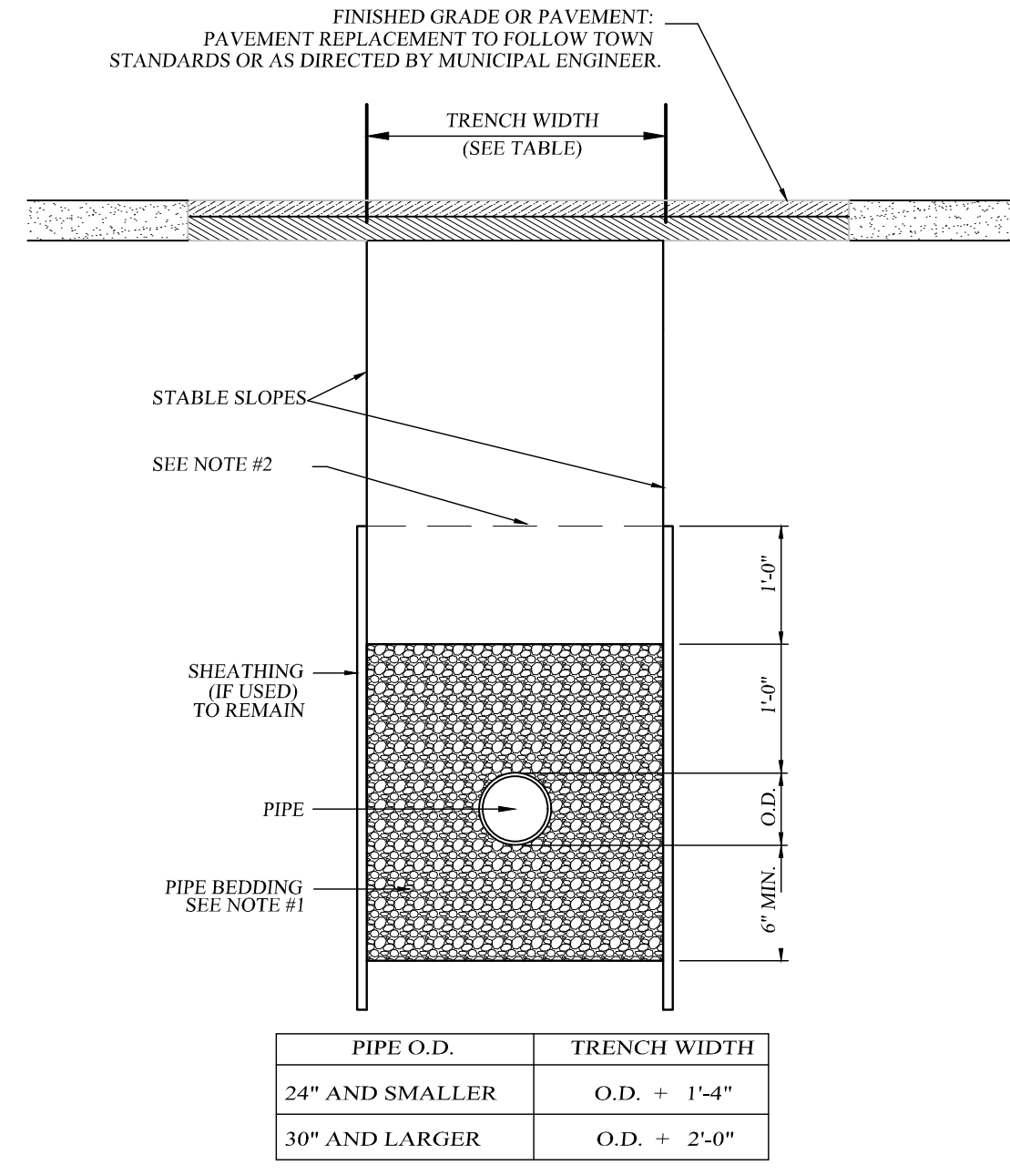
HORIZONTAL SEPARATION DETAIL
NOT TO SCALE

NOTE: THE SEPARATION REQUIREMENT SHALL CONFORM TO CURRENT ORANGE COUNTY DEPARTMENT OF HEALTH STATUTES, CODES, RULES, REGULATIONS AND LAWS AS THEY APPLY. ANY DEVIATION FROM THE ABOVE SEPARATION REQUIREMENTS SHALL REQUIRE WRITTEN APPROVAL FROM THE ORANGE COUNTY DEPARTMENT OF HEALTH.

WATER/SEWER SEPARATION REQUIREMENTS
NOT TO SCALE

GENERAL NOTES:

1. WATER MAIN LOCATION MUST BE VERIFIED IN FIELD (V.I.F.) BEFORE ANY CONSTRUCTION WORK BEGINS. A PERMIT FROM THE TOWN OF NEWBURGH WATER DEPARTMENT IS REQUIRED FOR CONNECTION.
2. A PERMIT FOR SEWER CONNECTION SHALL BE OBTAINED FROM THE TOWN OF NEWBURGH PRIOR TO CONSTRUCTION.
3. A HIGHWAY WORK PERMIT SHALL BE OBTAINED FROM THE TOWN OF NEWBURGH PUBLIC WORKS PRIOR TO CONSTRUCTION.
4. "THE MORE STRICT OF ANY REQUIREMENT, CODE, RULE, REGULATION AND LAW ESTABLISHED BY THE TOWN OF NEWBURGH OR OTHER GOVERNMENTAL AGENCY, INCLUDING BUT NOT LIMITED TO THE ORANGE COUNTY DEPARTMENT OF HEALTH, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, U.S. CORPS OF ENGINEERS, U.S. ENVIRONMENTAL PROTECTION AGENCY, UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND NEW YORK STATE DEPARTMENT OF LABOR FOR SANITARY SEWER SIZE, SLOPE, ALIGNMENT, MATERIALS OF CONSTRUCTION AND APPURTENANCES AND METHODS FOR EXCAVATING, PIPE PLACEMENT, JOINTING, TESTING AND TRENCH BACKFILLING SHALL BE COMPILED WITH DURING ALL PHASES OF CONSTRUCTION."
5. "ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS THAT ARE APPROVED BY THE TOWN OF NEWBURGH. ANY DEVIATION FROM THE APPROVED PLANS AND/OR SPECIFICATIONS SHALL REQUIRE REVIEW AND APPROVAL BY THE TOWN OF NEWBURGH. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE PROJECT ENGINEER AND THE TOWN OF NEWBURGH OF ANY PLANNED DEVIATION(S) FROM THE APPROVED PLAN AND/OR SPECIFICATIONS."



PIPE O.D.	TRENCH WIDTH
24" AND SMALLER	O.D. + 1'-4"
30" AND LARGER	O.D. + 2'-0"

TYPICAL TRENCH DETAIL (SANITARY SEWER)
NOT TO SCALE

(NOT FOR REVIEW OR APPROVAL BY ORANGE COUNTY HEALTH DEPT.)

- Notes:
- 1) PIPE BEDDING SHALL BE A CLASS I ASTM D2321 EMBEDMENT MATERIAL THAT SHALL BE EITHER CRUSHED STONE OR WASHED GRAVEL PASSING A 3/4" SIEVE AND RETAINED ON A 3/8" SIEVE. THE EMBEDMENT MATERIAL SHALL BE HAND TAMPED AND COMPACTED TO 90% OF THE MAXIMUM DENSITY OF THE EMBEDMENT MATERIAL AS DETERMINED BY STANDARD PROTECTOR TEST.
 - 2) BACKFILL FROM 12 IN. TO 24 IN. ABOVE THE PIPE EMBEDMENT MATERIAL SHALL BE FINE EARTH FREE FROM CINDERS AND SHALL BE MECHANICALLY COMPACTED. REMAINING BACKFILL SHALL BE FREE FROM LARGE CLOUDS, NATURAL DEBRIS, ROCKS, AND CINDERS.
 - 3) PLACE EMBEDMENT MATERIAL BY HAND AND HAND COMPACT UNDER AND AROUND SIDES OF PIPE. PLACE EMBEDMENT MATERIAL IN 6" LAYERS ABOVE TOP OF PIPE AND HAND COMPACT TO A POINT 12 INCH MAXIMUM ABOVE THE TOP OF PIPE.
 - 4) THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPETENT PERSON DURING ALL PHASES OF CONSTRUCTION WHOSE DUTY SHALL BE TO INSURE THAT ALL PHASES OF CONSTRUCTION ARE IN FULL COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL STATUTES, CODES, RULES, REGULATIONS AND LAWS INCLUDING, BUT NOT LIMITED TO, UNITED STATES DEPARTMENT OF LABOR FOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND N.Y.S. DEPARTMENT OF LABOR FOR SECTION 1910.146 PERMIT REQUIRED CONFINED SPACE ENTRY, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION SECTION 1926.650 EXCAVATION GENERAL PROTECTION REQUIREMENTS AND OSHA SECTION 1926.651 TRENCHING AND SHORING STATE OF NEW YORK UNIFORM FIRE PREVENTION AND BUILDING CODES AND NATIONAL FIRE PROTECTION ASSOCIATION CODES.
 - 5) ALL APPROVED MAIN LINE SEWER PIPE SHALL BE THE SAME MATERIAL FROM MAN-HOLE TO MAN-HOLE.
 - 6) FILL SECTION AREA MUST BE GRADED WITH THE PLACEMENT OF SUITABLE SOIL MATERIAL AS DETERMINED BY THE PROJECT SITE ENGINEER, IN 12" (MAX) LAYERS COMPACTED TO 95% OF THE MAXIMUM DENSITY OF THE SOIL AS DETERMINED BY THE STANDARD PROTECTOR TEST (ASHTO DESIGNATION T-99) TO 2'-0" (MIN.) ABOVE TOP OF PIPE AT A MINIMUM WIDTH OF O.D. + 4'-0" BEFORE TRENCH EXCAVATING.
 - 7) WHERE ROCK IS ENCOUNTERED IN TRENCH BOTTOM, UNDERCUT MUST BE MADE BETWEEN 12" MIN. TO 24" MAX.
 - 8) WHERE UNSUITABLE MATERIAL IS ENCOUNTERED IN TRENCH BOTTOM, UNDERCUT TO SUITABLE MATERIAL (AS APPROVED BY TOWN ENGINEER).

NOTE
CONTACT UNDERGROUND FACILITIES PROTECTION ORGANIZATION 3 DAYS PRIOR TO CONSTRUCTION @ "DIG SAFELY N.Y. 800-962-7962".

DATE	REVISIONS
09-09-21	REV. PER D.O.H. COMMENTS
06-05-13	INITIAL PREPARATION

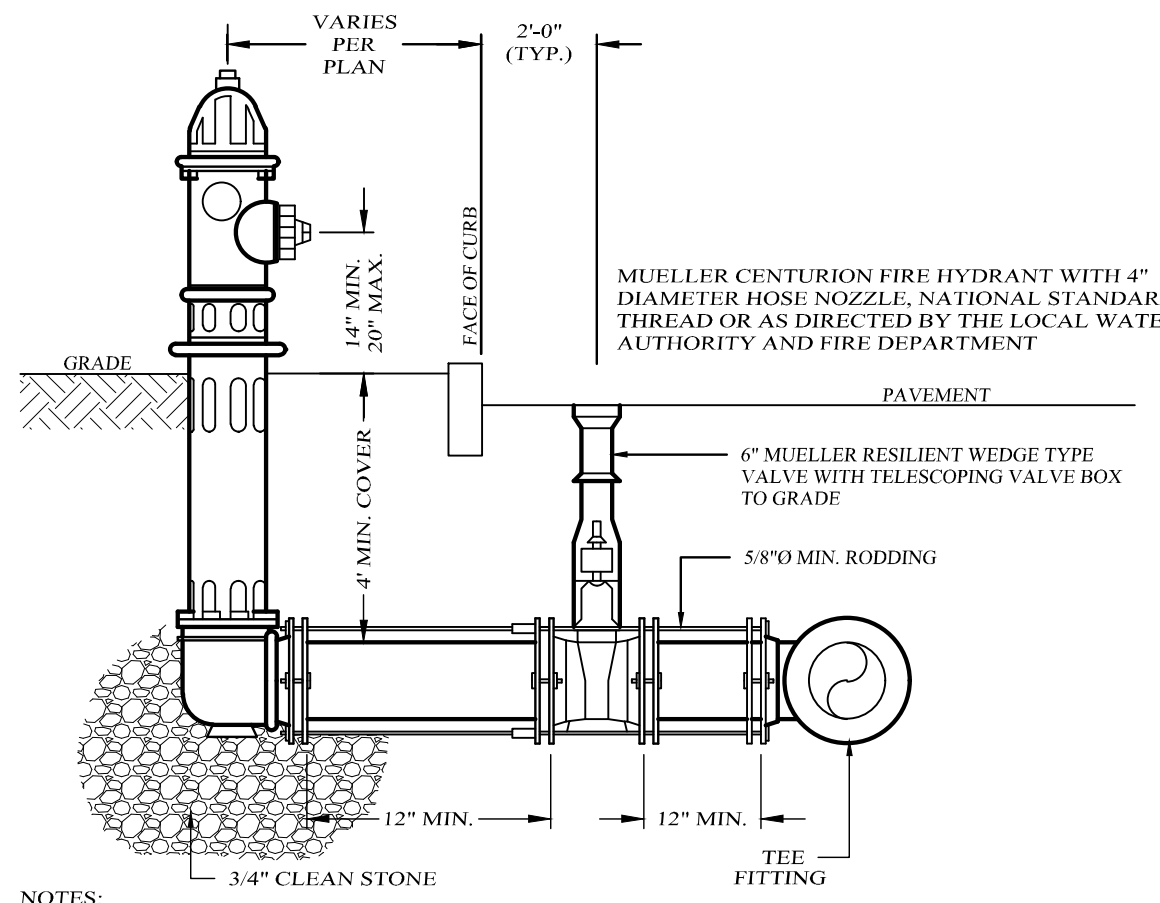
THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

PATTON RIDGE
TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
PROJECT TITLE

SEWER DETAILS
DRAWING TITLE

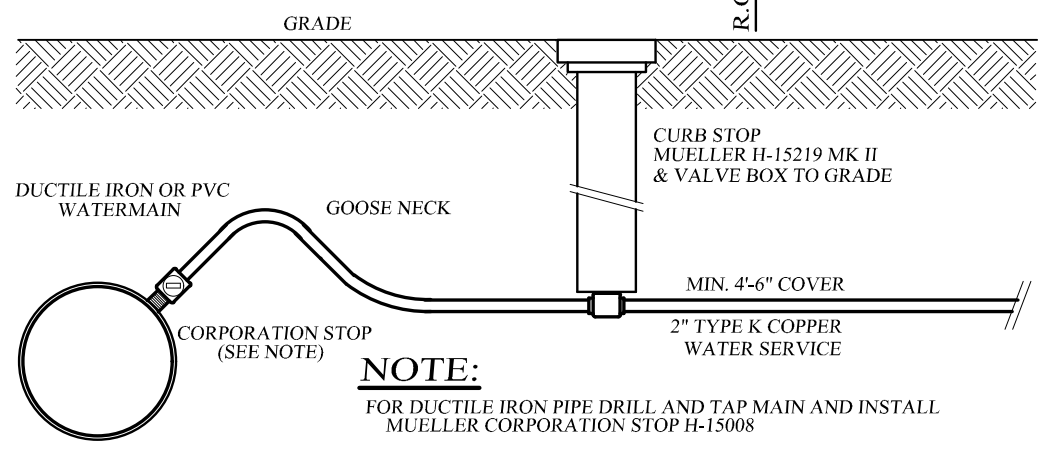
Kirk Rother, P.E.
CONSULTING ENGINEER, PLLC
5 Saint Stephens Lane, Warwick, NY 10990
(845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #	
N.A.	6 OF 6	6 OF 6		12 OF 14
CAD #	PROJECT #	SCALE		
05191 SFS	05191.0	AS SHOWN		



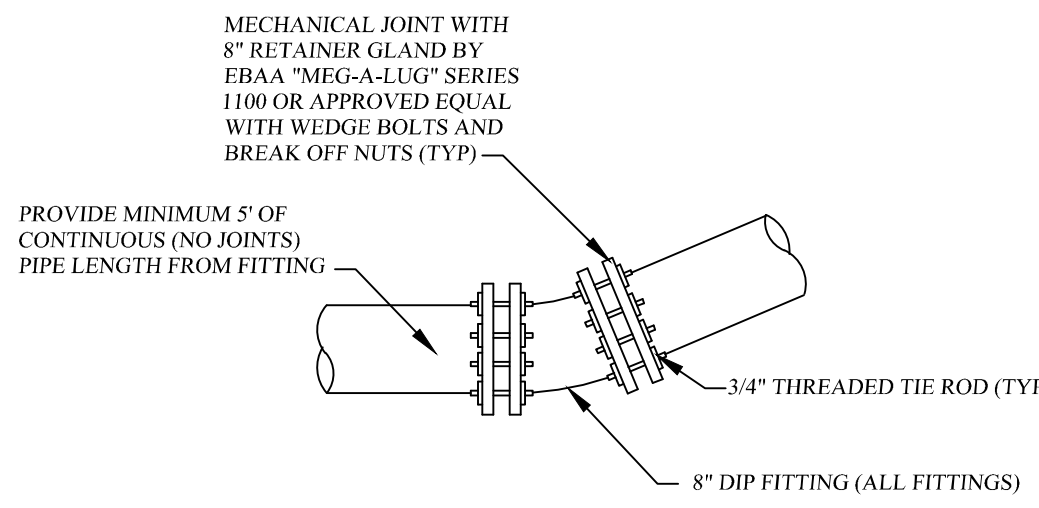
NOTES:
 1. INSTALL 1/2 CUBIC YARD 3/4" CLEAN STONE AROUND THE HYDRANT BASE FOR HYDRANT DRAIN.
 2. ALL CONNECTIONS TO BE MECHANICAL JOINT TYPE RESTRAINED BY 5/8" Ø RODDING OR AS SPECIFIED BY LOCAL AUTHORITY.
 WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE LATEST REVISION OF ALL APPLICABLE STANDARDS RELATING TO THE CONSTRUCTION OF WATER WORKS FOR POTABLE CONSUMPTION INCLUDING AWWA, ANSI, ASTM, NSF AND MANUFACTURER, AMONG OTHERS.

FIRE HYDRANT DETAIL
 NOT TO SCALE



WATER SERVICE CONNECTION DETAIL (NON SPRINKLERED BUILDINGS)
 NOT TO SCALE

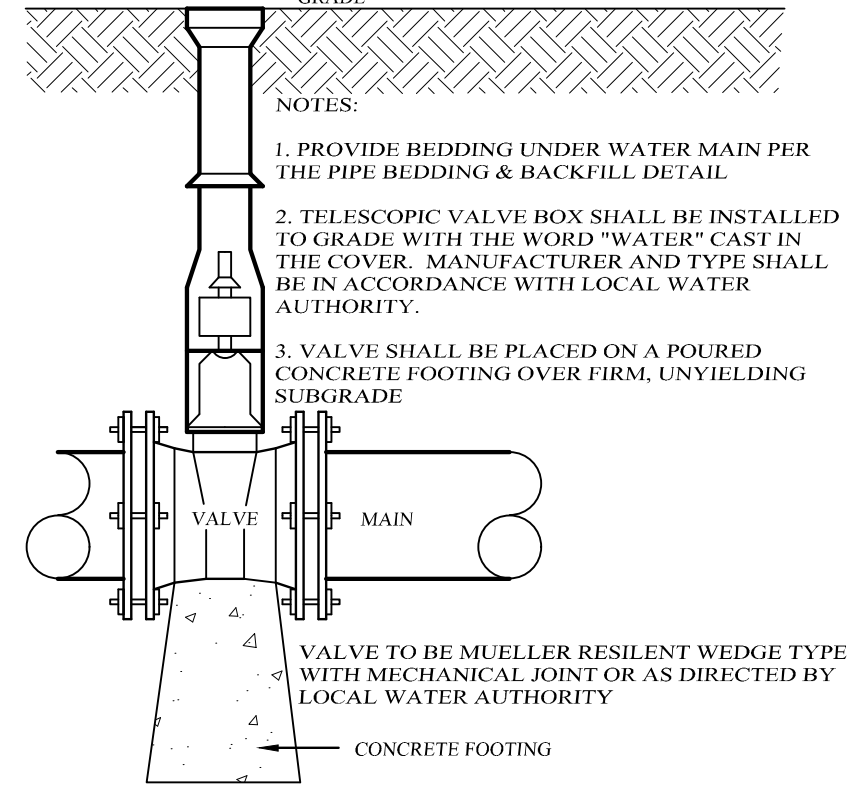
NOTE:
 FOR DUCTILE IRON PIPE DRILL AND TAP MAIN AND INSTALL MUELLER CORPORATION STOP H-1508
 FOR PVC PIPE DRILL MAIN & INSTALL MUELLER H-104 SERIES SERVICE CLAMP WITH MUELLER CORPORATION STOP H-1903
 ALL NEW SERVICE LINES SERVING NON-SPRINKLERED BUILDINGS MAY BE COPPER PIPE AND FITTINGS, BUT MUST HAVE A MAXIMUM DIA. OF 1.25". SHOULD DESIGN REQUIREMENTS FOR SUCH BUILDINGS SHOW THE NEED FOR A 2" DIA. OR LARGER SERVICE LINE, THE DESIGN MUST CONFORM TO THAT OF A SPRINKLERED BUILDING (5" MIN. DIA. WITH DUCTILE IRON).



PIPE RESTRAINT DETAIL
 NOT TO SCALE

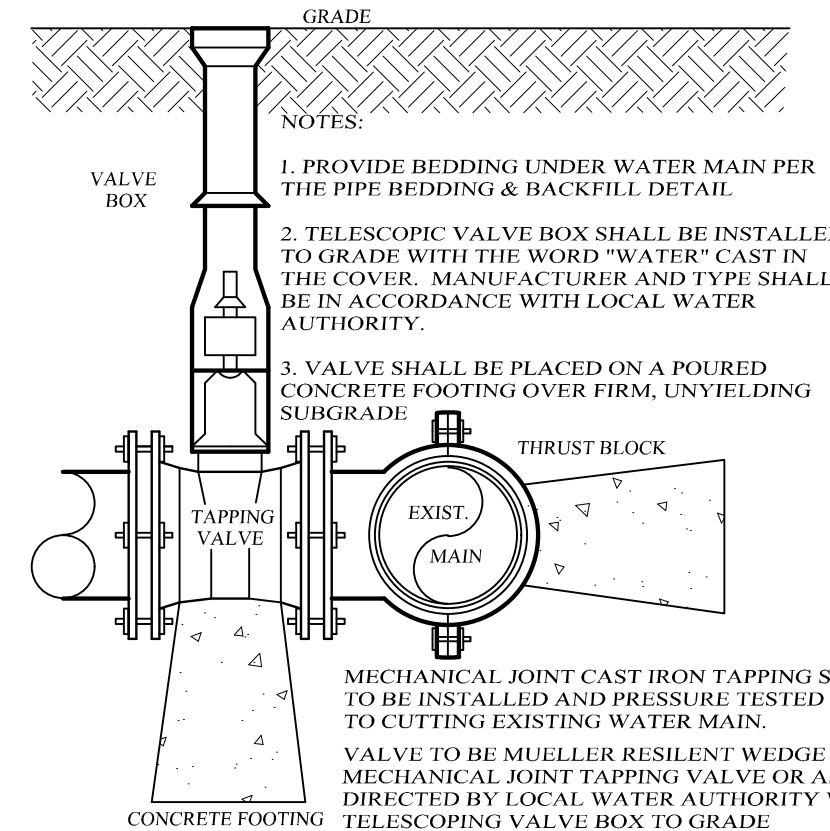
TEE RESTRAIN ALL JOINTS WITHIN 17' FEET OF FITTING
 90° RESTRAIN ALL JOINTS WITHIN 8' FEET OF FITTING
 45° RESTRAIN ALL JOINTS WITHIN 4' FEET OF FITTING
 22.5° RESTRAIN ALL JOINTS WITHIN 2' FEET OF FITTING
 11.5° RESTRAIN ALL JOINTS WITHIN 2' FEET OF FITTING
 * THE "T" FITTING SHALL HAVE A MINIMUM LENGTH OF 10' OF PIPE WITHOUT JOINTS OR FITTINGS SHALL BE PROVIDED IN EACH DIRECTION OF THE THROUGH RUN AS MEASURED FROM THE BRANCH.

NOTE: VALVE ABOVE FOR 6" D.I.P. TEST PRESSURE OF 150 PSI, SM SOIL CLASSIFICATION AND FACTOR OF SAFETY OF 2:1



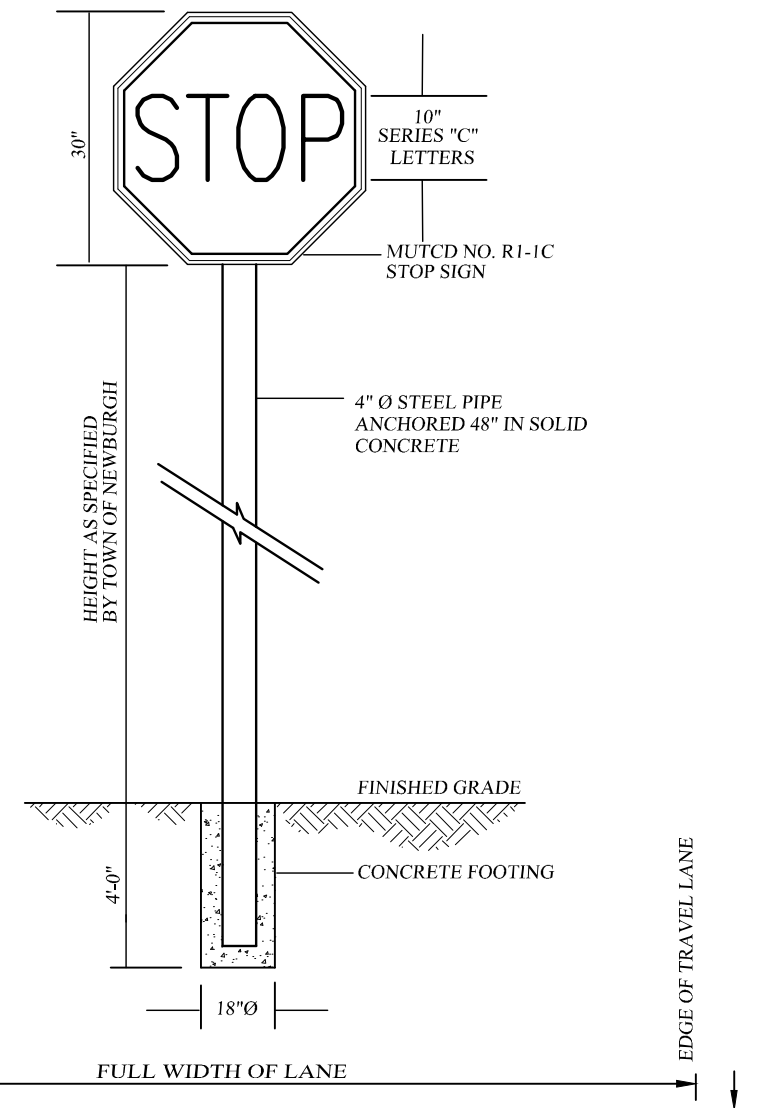
IN-LINE WATER VALVE DETAIL
 NOT TO SCALE

WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE LATEST REVISION OF ALL APPLICABLE STANDARDS RELATING TO THE CONSTRUCTION OF WATER WORKS FOR POTABLE CONSUMPTION INCLUDING AWWA, ANSI, ASTM, NSF AND MANUFACTURER, AMONG OTHERS.



WATER MAIN TAPPING VALVE DETAIL
 NOT TO SCALE

MECHANICAL JOINT CAST IRON TAPPING SLEEVE TO BE INSTALLED AND PRESSURE TESTED PRIOR TO CUTTING EXISTING WATER MAIN. VALVE TO BE MUELLER RESILIENT WEDGE TYPE MECHANICAL JOINT TAPPING VALVE OR AS DIRECTED BY LOCAL WATER AUTHORITY WITH TELESCOPING VALVE BOX TO GRADE.

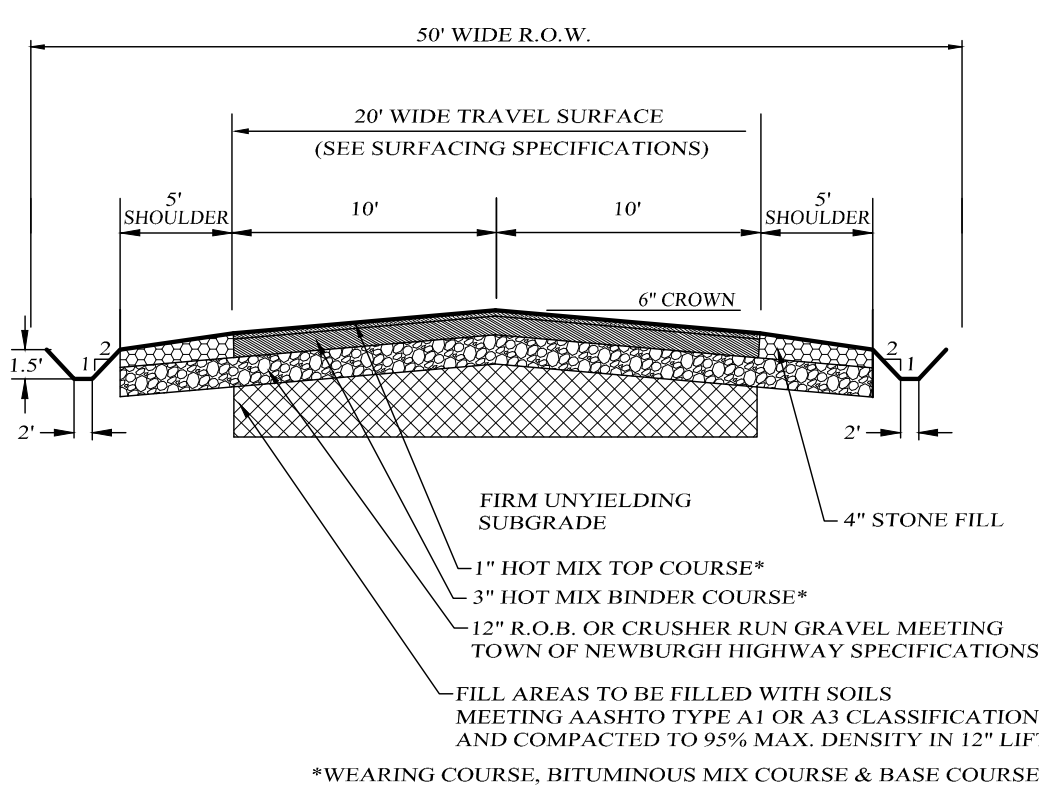


STOP BAR AND SIGN DETAIL
 NOT TO SCALE

NOTES:
 1. INSTALLATION AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN SECTION 640 OF NYS DOT STANDARDS AND SPECIFICATIONS, LATEST REVISION.
 2. PAVEMENT SURFACE TO BE CLEANED AND PREPARED PRIOR TO PLACEMENT OF PAVEMENT MARKINGS IN ACCORDANCE WITH SECTION 635 OF NYS DOT STANDARDS AND SPECIFICATIONS.
 3. REFER TO APPROVED PLANS FOR ACTUAL LOCATION OF STOP LINE, SIZE AND LOCATION TO CONFORM TO MUTCD STANDARDS.
 4. REFLECTORIZED PAVEMENT MARKINGS TO BE WHITE EPOXY WITH WET NIGHT VISIBILITY SPHERES, NYS DOT ITEM #1865.
 5. ALL PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE NYS MANUAL OF TRAFFIC CONTROL DEVICES 200.

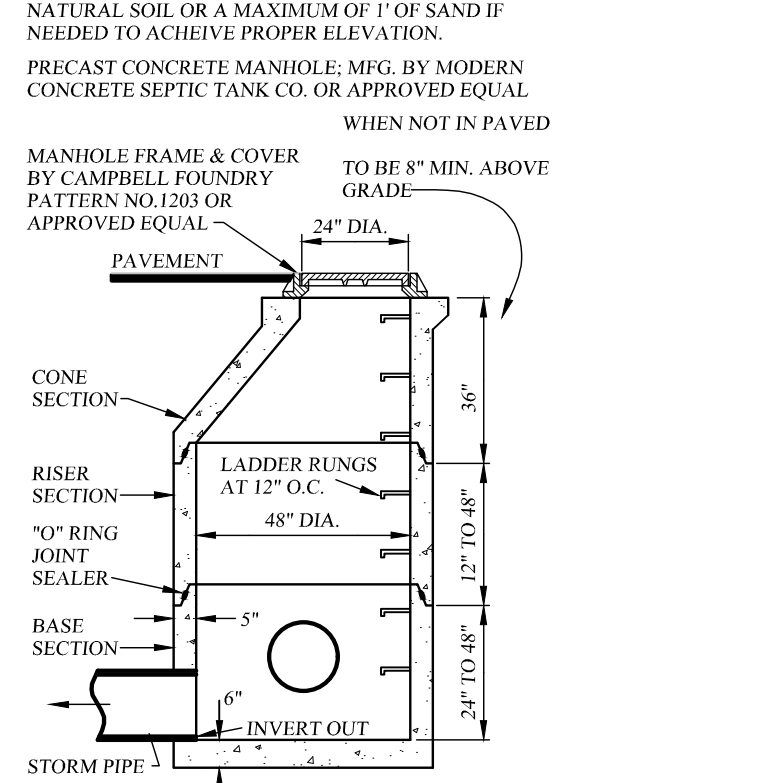
GENERAL NOTES:

1. WATER MAIN LOCATION MUST BE VERIFIED IN FIELD (V.L.F.) BEFORE ANY CONSTRUCTION WORK BEGINS.
2. CONSTRUCTION OF POTABLE WATER UTILITIES AND CONNECTION TO THE TOWN OF NEWBURGH WATER SYSTEM REQUIRES A PERMIT FROM THE TOWN OF NEWBURGH WATER DEPARTMENT. ALL REQUIREMENTS SHALL CONFORM TO THE REQUIREMENTS OF THE OCOOH AND THE TOWN OF NEWBURGH.
3. ALL WATER SERVICE LINES FOUR (4) INCHES AND LARGER IN DIAMETER SHALL BE CEMENT CLASS 52 DUCTILE IRON PIPE CONFORMING TO ANSI/AWWA C151/A21.51-91 OR LATEST REVISION FOR DUCTILE IRON PIPE. JOINTS SHALL BE EITHER PUSH-ON OR MECHANICAL JOINT AS REQUIRED.
4. THRUST RESTRAINT OF THE PIPE SHALL BE THROUGH THE USE OF JOINT RESTRAINT. THRUST BLOCKS ARE NOT ACCEPTABLE. JOINT RESTRAINT SHALL BE THROUGH THE USE OF MECHANICAL JOINT PIPE WITH RETAINER GLANDS. ALL FITTINGS AND VALVES SHALL ALSO BE INSTALLED WITH RETAINER GLANDS FOR JOINT RESTRAINT. RETAINER GLANDS SHALL BE EBBA IRON MEGALUG SERIES 1100 OR APPROVED EQUAL. THE USE OF A MANUFACTURED RESTRAINED JOINT PIPE IS ACCEPTABLE WITH PRIOR APPROVAL OF THE WATER DEPARTMENT.
5. ALL FITTINGS SHALL BE CAST IRON OR DUCTILE IRON, MECHANICAL JOINT, CLASS 250 AND CONFORM TO ANSI / AWWA C110 / A21.10-87 OR LATEST REVISION FOR DUCTILE AND GRAY IRON FITTINGS OR ANSI / AWWA C153 / A21.53-94 OR LATEST REVISION FOR DUCTILE IRON COMPACT FITTINGS.
6. ALL VALVES SHALL BE DOUBLE-DISC, MECHANICAL JOINT GATE VALVES CONFORMING TO ANSI / AWWA C500-93 OR LATEST REVISION SUCH AS MUELLER A-2300-23 OR APPROVED EQUAL.
7. TAPPING SLEEVE SHALL BE MECHANICAL JOINT SUCH AS MUELLER H-615 OR EQUAL. TAPPING VALVE SHALL BE DOUBLE-DISC, MECHANICAL JOINT BY FLANGED END SUCH AS MUELLER H-667 OR EQUAL. ALL TAPPING SLEEVES AND VALVES SHALL BE TESTED TO 150 PSI MINIMUM. TESTING OF THE TAPPING SLEEVE AND VALVE MUST BE WITNESSED AND ACCEPTED BY THE TOWN OF NEWBURGH WATER DEPARTMENT PRIOR TO CUTTING INTO THE PIPE.
8. ALL WATER SERVICE LINES TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING. CORPORATION STOPS SHALL BE MUELLER H-1520 FOR 3/4 AND 1 INCH, MUELLER H-1900 OR B-2500 FOR 1 1/2 AND 2 INCH SIZES. CURB VALVES SHALL BE MUELLER H-1501 FOR 3/4 AND 1 INCH AND MUELLER B-2504 FOR 1 1/2 AND 2 INCH SIZES. CURB BOXES SHALL BE MUELLER H-1012 FOR 3/4 AND 1 INCH AND MUELLER H-10310 FOR 1 1/2 AND 2 INCH SIZES.
9. ALL PIPE INSTALLATION SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF NEWBURGH WATER DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS AS REQUIRED WITH THE TOWN OF NEWBURGH WATER DEPARTMENT.
10. THE WATER MAIN SHALL BE TESTED, DISINFECTED AND FLUSHED IN ACCORDANCE WITH AWWA STANDARDS AS WELL AS THE TOWN OF NEWBURGH REQUIREMENTS. ALL TESTING, DISINFECTION AND FLUSHING SHALL BE COORDINATED WITH THE TOWN OF NEWBURGH WATER DEPARTMENT. PRIOR TO PUTTING THE WATER MAIN IN SERVICE SATISFACTORY SANITARY RESUL TS FROM A CERTIFIED LAB MUST BE SUBMITTED TO THE TOWN OF NEWBURGH WATER DEPARTMENT. THE TEST SAMPLES MUST BE COLLECTED BY A REPRESENTATIVE OF THE TESTING LABORATORY AND WITNESSED BY THE TOWN OF NEWBURGH WATER DEPARTMENT.
11. "THE MORE STRICT OF ANY REQUIREMENT, CODE, RULE, REGULATION AND LAW ESTABLISHED BY THE TOWN OF NEWBURGH OR OTHER GOVERNMENTAL AGENCY, INCLUDING BUT NOT LIMITED TO THE ORANGE COUNTY DEPARTMENT OF HEALTH, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, U.S. CORPS OF ENGINEERS, U.S. ENVIRONMENTAL PROTECTION AGENCY, UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND NEW YORK STATE DEPARTMENT OF LABOR FOR SANITARY SEWER SIZE, SLOPE, ALIGNMENT, MATERIALS OF CONSTRUCTION AND APPURTENANCES AND METHODS FOR EXCAVATING, PIPE PLACEMENT, JOINTING, TESTING AND TRENCH BACKFILLING SHALL BE COMPILED WITH DURING ALL PHASES OF CONSTRUCTION."



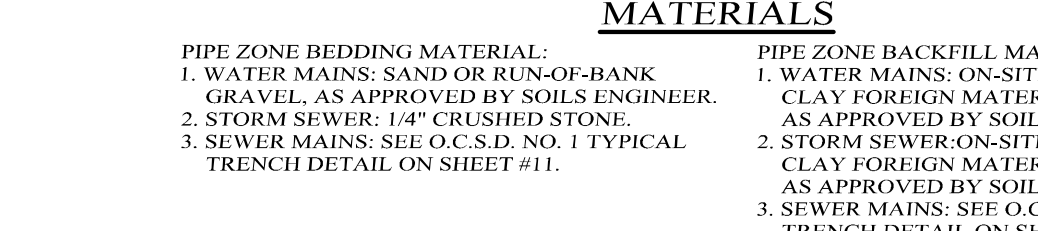
TYPICAL MINOR RESIDENTIAL ROAD CROSS SECTION (NO CURB)
 NOT TO SCALE

* WEARING COURSE, BITUMINOUS MIX COURSE & BASE COURSE PER TOWN OF NEWBURGH CHAPTER 161 STREET SPECIFICATIONS



STORM SEWER MANHOLE DETAIL
 NOT TO SCALE

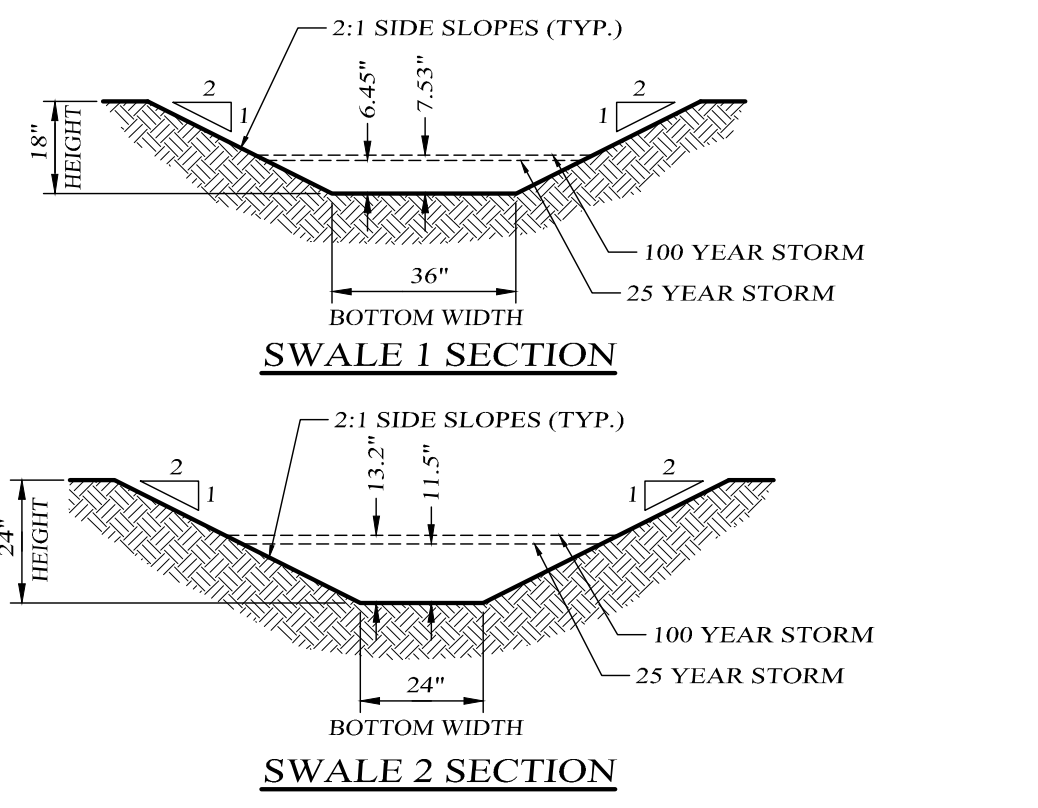
ALL INSIDE CONCRETE SURFACES SHALL BE SEALED WITH TWO COATINGS OF A BITUMINOUS COATING TO MINIMIZE CORROSION.



PIPE BEDDING AND BACKFILL DETAIL (WITHIN ROAD R.O.W.)
 NOT TO SCALE

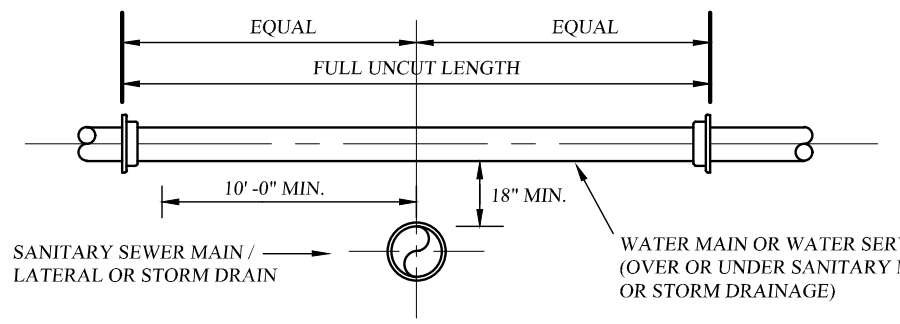
PIPE ZONE BEDDING MATERIAL:
 1. WATER MAINS: SAND OR RUN-OF-BANK GRAVEL, AS APPROVED BY SOILS ENGINEER.
 2. STORM SEWER: 1/4" CRUSHED STONE.
 3. SEWER MAINS: SEE O.C.S.D. NO. 1 TYPICAL TRENCH DETAIL ON SHEET #11.

PIPE ZONE BACKFILL MATERIAL:
 1. WATER MAINS: ON-SITE MATERIAL FREE OF STONE, CLAY FOREIGN MATERIAL OR FROZEN EARTH AS APPROVED BY SOILS ENGINEER.
 2. STORM SEWER: ON-SITE MATERIAL FREE OF STONE, CLAY FOREIGN MATERIAL OR FROZEN EARTH AS APPROVED BY SOILS ENGINEER.
 3. SEWER MAINS: SEE O.C.S.D. NO. 1 TYPICAL TRENCH DETAIL ON SHEET #11.

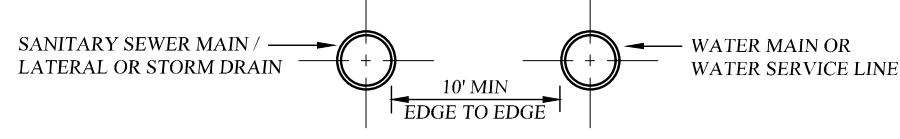


PERMANENT DIVERSION SWALE DETAILS
 NOT TO SCALE

THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.



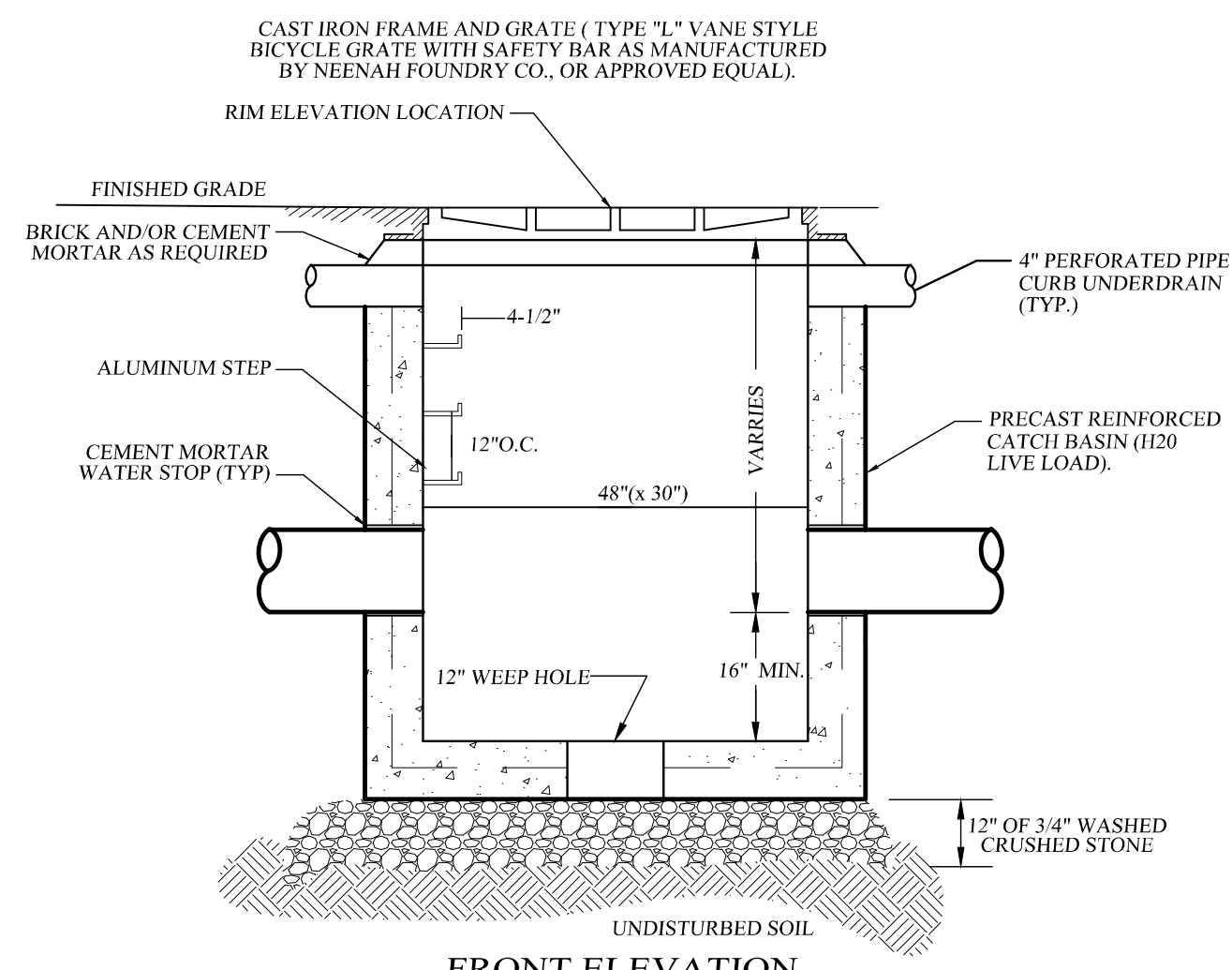
VERTICAL SEPARATION DETAIL
 NOT TO SCALE



HORIZONTAL SEPARATION DETAIL
 NOT TO SCALE

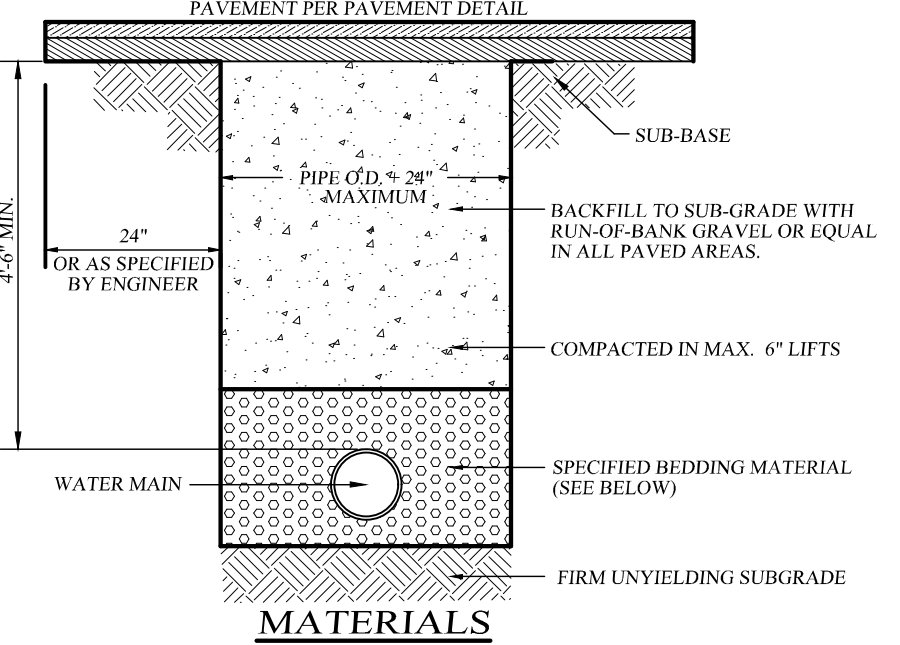
NOTE: THE SEPARATION REQUIREMENT SHALL CONFORM TO CURRENT ORANGE COUNTY DEPARTMENT OF HEALTH STATUTES, CODES, RULES, REGULATIONS AND LAWS AS THEY APPLY. ANY DEVIATION FROM THE ABOVE SEPARATION REQUIREMENTS SHALL REQUIRE WRITTEN APPROVAL FROM THE ORANGE COUNTY DEPARTMENT OF HEALTH.

WATER/SEWER SEPARATION REQUIREMENTS
 NOT TO SCALE



PRECAST CONCRETE CURB INLET DETAIL
 NOT TO SCALE

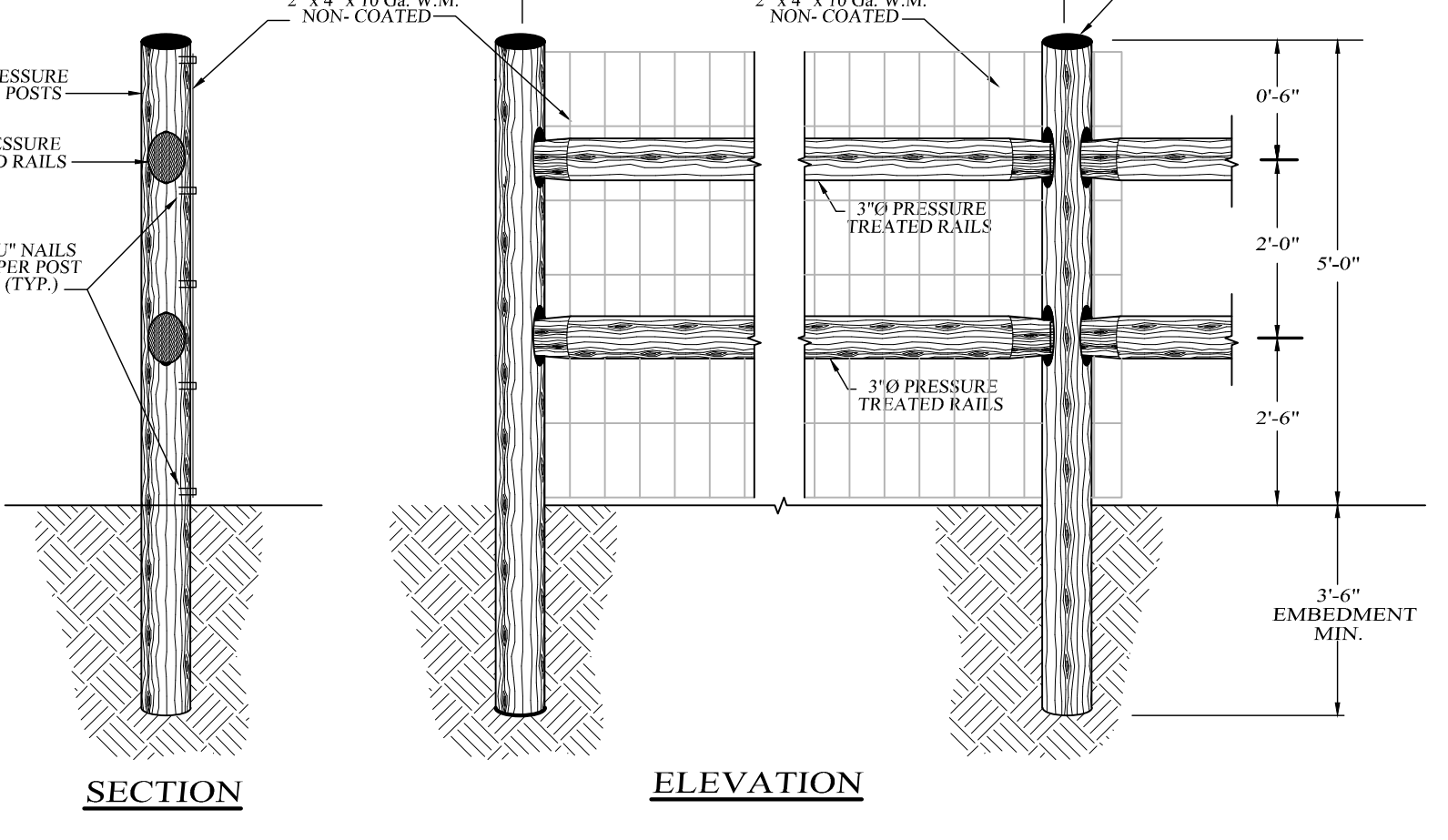
NOTES:
 1. BACKFILL AROUND CATCH BASIN TO BE COMPACTED IN MAX. 8" LIFTS.
 2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF CATCH BASIN AND ADEQUATELY MORTARED.
 3. PRECAST CONCRETE TO BE 4000 PSI @ 28 DAYS



PIPE BEDDING AND BACKFILL DETAIL (OUTSIDE RIGHT OF WAY)
 NOT TO SCALE

PIPE ZONE BEDDING MATERIAL:
 1. WATER MAINS: SAND OR RUN-OF-BANK GRAVEL, AS APPROVED BY SOILS ENGINEER.
 2. STORM SEWER: 1/4" CRUSHED STONE.
 3. SEWER MAINS: SEE O.C.S.D. NO. 1 TYPICAL TRENCH DETAIL ON SHEET #11.

PIPE ZONE BACKFILL MATERIAL:
 1. WATER MAINS: ON-SITE MATERIAL FREE OF STONE, CLAY FOREIGN MATERIAL OR FROZEN EARTH AS APPROVED BY SOILS ENGINEER.



POST AND RAIL FENCE W/ GATE DETAIL
 NOT TO SCALE

NOTE:
 1. ALL CORNER POSTS SHALL BE 6" DIA.
 2. FENCE MATERIALS TO BE NON-COATED RUSTIC.

PATTON RIDGE
 TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
 PROJECT TITLE

SITE DETAILS

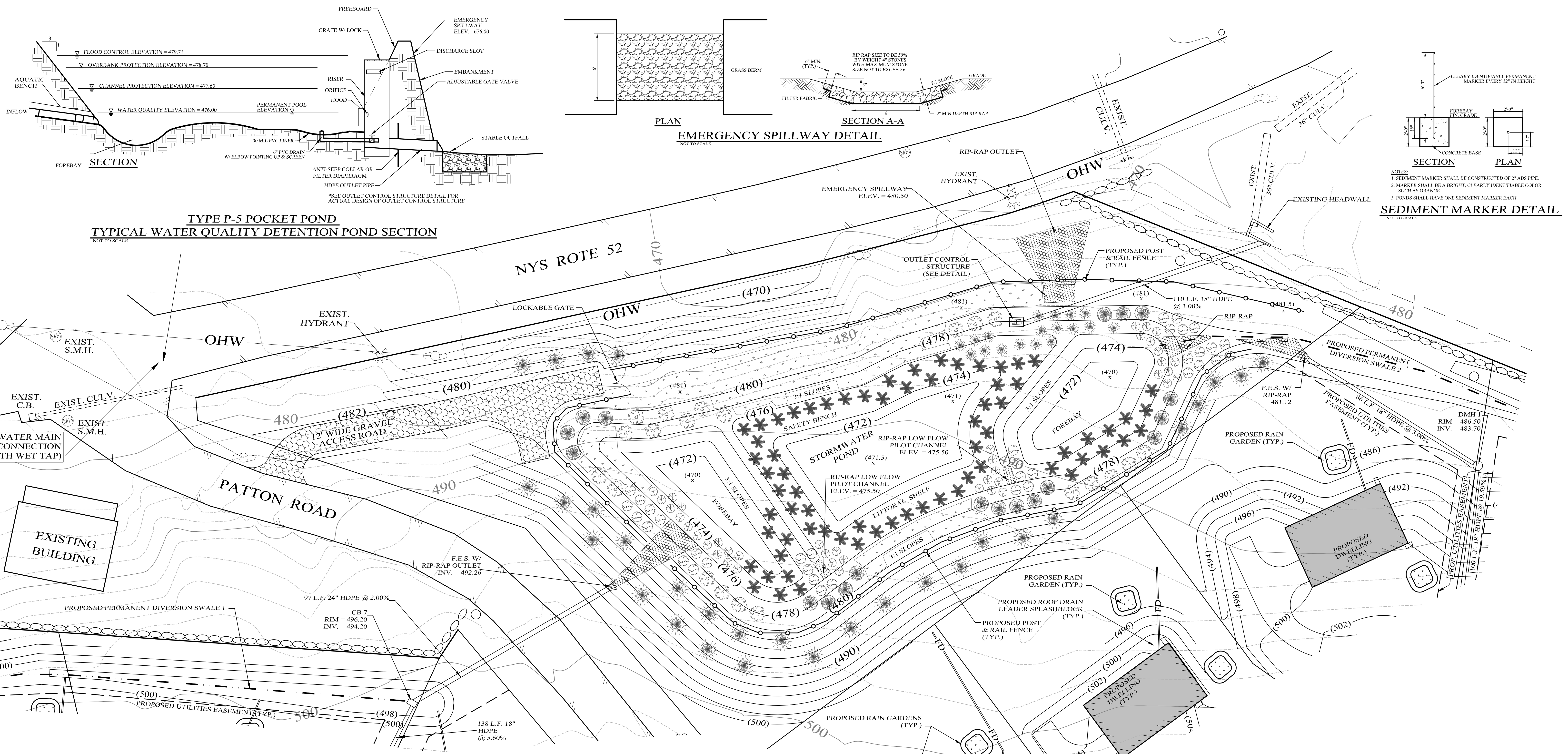
DRAWING TITLE

Kirk Rother, P.E.
 CONSULTING ENGINEER, PLLC
 5 Saint Stephens Lane, Warwick, NY 10990
 (845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
11-01-13	REV. PER TOWN ENG. COMMENTS			
09-27-13	REV. PER TOWN PLANNER & ENG. COMMENTS			
06-05-13	INITIAL PREPARATION			

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	13 OF 14

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. REPRODUCTIONS OF THIS PLAN WHICH DO NOT BEAR THE ORIGINAL SEAL OF A LICENSED PROFESSIONAL ENGINEER SHALL BE CONSIDERED INVALID.



TYPE P-5 POCKET POND
TYPICAL WATER QUALITY DETENTION POND SECTION
 NOT TO SCALE

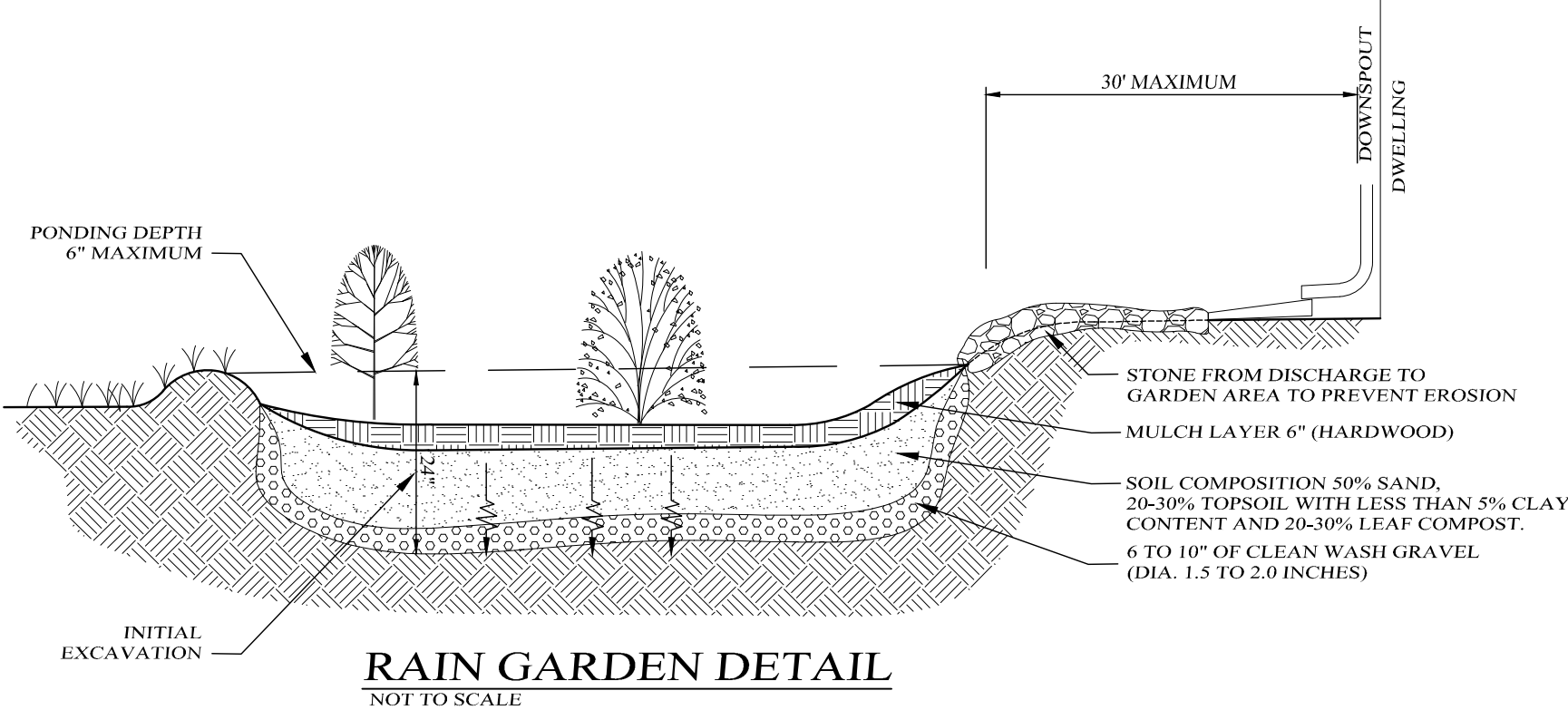
EMERGENCY SPILLWAY DETAIL
 NOT TO SCALE

SEDIMENT MARKER DETAIL
 NOT TO SCALE

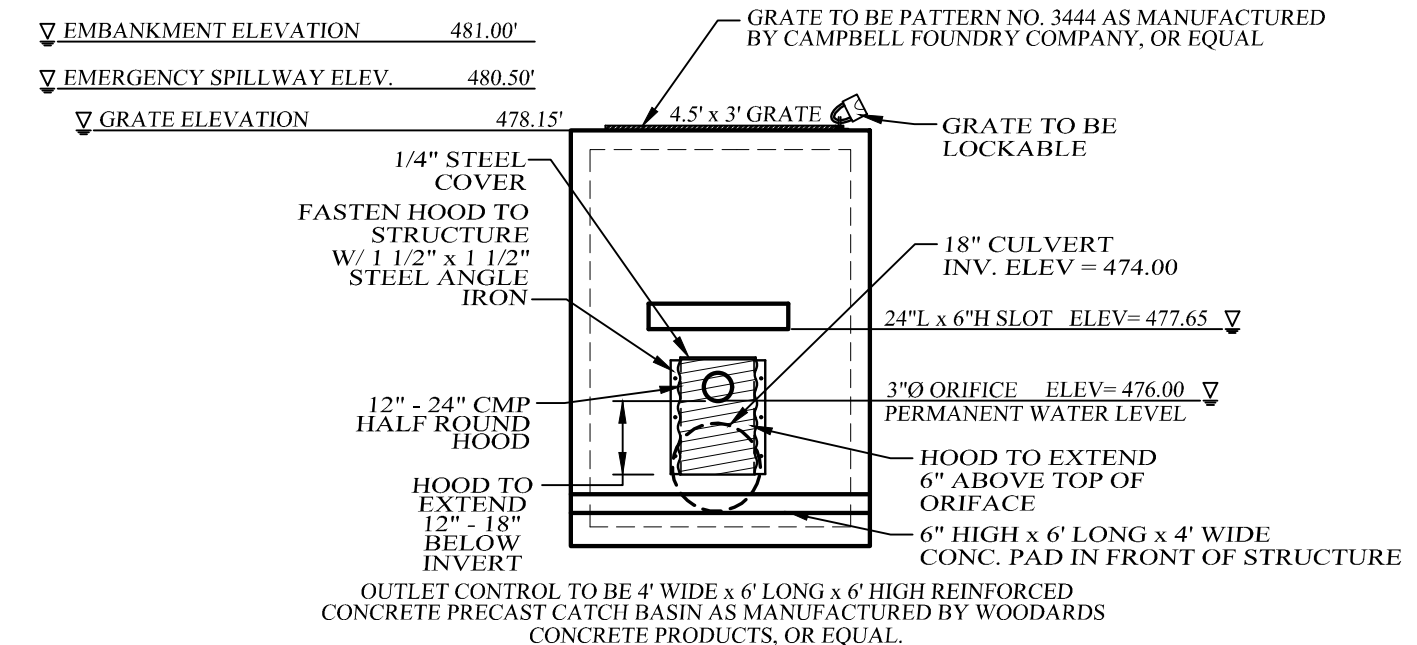
POND PLANT SCHEDULE

SYMBOL	PLANT NAME	SCIENTIFIC NAME	POND PLANTING ZONE	SIZE	SPACING
	NORWAY SPRUCE	PICEA ABIES	4	B & B	10' O.C.
	SILKY DOGWOOD	CORNUS AMOMIUM	3 & 4	2 GAL.	3' O.C.
	SEDGES	CAREX SPP	3	1 GAL.	2 1/2' O.C.
	CATTAIL	TYPHA SP	2 & 3	PLUG	2' O.C.
	HARDSTEM BULRUSH	SCRIPUS ACUTUS	2	PLUG	2' O.C.
	SOFTSTEM BULRUSH	SCRIPUS VALIDUS	2	PLUG	2' O.C.
	SMARTWEED	POLYGONUM SPP	2	PLUG	2' O.C.
	SEEDED AREA	NEW ENGLAND EROSION CONTROL RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES	3 & 4	35 lbs / ACRE	3 & 4

NOTES:
 1. WOODY VEGETATION MAY NOT BE PLANTED OR ALLOWED TO GROW WITHIN 15 FEET OF THE TOE OF EMBANKMENT AND 25 FEET FROM THE PRINCIPAL SPILLWAY STRUCTURE.



NOTES:
 1. RELATIVELY FLAT SLOPES ARE REQUIRED TO ACCOMMODATE RUNOFF FILTERING THROUGH THE SYSTEM, WHEN MODERATE SLOPES ARE PRESENT THE USE OF A BERM OR WALL MAY BE REQUIRED.
 2. RUNOFF MUST ENTER AT THE SURFACE.
 3. USE PLANTS AND SHRUBS WHICH ARE NATIVE TO THE SURROUNDING COMMUNITY THE FOLLOWING IS A LIST OF PLANTS AND SHRUBS WHICH CAN BE USED TO STABILIZE THE PONDING AREA BUT ARE NOT LIMITED TO:
 - SHRUBS: WITCH HAZEL, WINTERBERRY, ARROWWOOD, BROOK-SIDE ALDER, RED-OSIER DOGWOOD, SWEET PEPPERCORNER, SPOTTED JOE-PYE WEED, SWITCH GRASS, GREAT BLUE LOBELIA, WILD BERGAMOT, RED MILKWEED.
 4. WEEDING AND WATERING ARE ESSENTIAL FOR THE FIRST YEAR TO ESTABLISH HARDY GROWTH. REPLACE PLANTS AS REQUIRED.
 5. LENGTH TO WIDTH RATIO OF 2:1, WITH THE LONG AXIS PERPENDICULAR TO THE SLOPE OF THE FLOW PATH.



OUTLET CONTROL STRUCTURE DETAIL
 NOT TO SCALE

THIS SHEET SHALL BE CONSIDERED INCOMPLETE AND INVALID UNLESS ACCOMPANIED BY SHEETS NUMBER 1 THRU 14 IN THE SET OF 14.

PATTON RIDGE
 TOWN OF NEWBURGH, ORANGE COUNTY, NEW YORK
 PROJECT TITLE

STORMWATER MANAGEMENT PLAN
 DRAWING TITLE

Kirk Rother, P.E.
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 5 St. Stephens Lane, Warwick, NY 10990
 (845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
11-01-13	REV. PER TOWN ENG. COMMENTS			
06-05-13	INITIAL PREPARATION			

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	14 OF 14