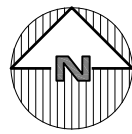


LOCATION MAP  
NOT TO SCALE



DRAWING INDEX:

SHEET NUMBER	DRAWING TITLE
T	TITLE SHEET
C-101	SITE PLAN
C-102	EXISTING CONDITIONS PLAN
C-103	EROSION AND SEDIMENT CONTROL PLAN
C-104	UTILITY PLAN
C-105	GRADING PLAN
C-106	SIGHT DISTANCE PLAN
C-107	TREE PLAN
C-108	FIRE ACCESS PLAN
C-109	ENVIRONMENTAL CONSTRAINTS MAP
C-110	OPEN SPACE AND RECREATION PLAN
C-111	LIGHTING PLAN
C-301	PROFILES
G-1	NOTES
G-2	E&SC NOTES
C-501	E&SC DETAILS
C-502	SITE DETAILS
C-503	WATERMAIN DETAILS
C-504	SANITARY SEWER DETAILS
C-505	DRAINAGE DETAILS
C-506	STORMWATER MANAGEMENT DETAILS
C-507	CRYSTAL STREAM DETAILS
C-508	CISTERN DETAILS
M-101	WETLAND BUFFER MITIGATION PLAN
M-102	BUFFER MITIGATION NOTES
L-101	LANDSCAPE PLAN
A-100	ZONING & CODE ANALYSIS
A-100A	SCHEMATIC BUILDING LAYOUT AND TABULATIONS
A-101	PROPOSED BUILDING #1 - BASEMENT FLOOR PLAN
A-102	PROPOSED BUILDING #1 - FIRST FLOOR PLAN
A-103	PROPOSED BUILDING #1 - SECOND FLOOR PLAN
A-104	PROPOSED BUILDING #1 - UPPER LEVEL FLOOR PLAN
A-105	PROPOSED BUILDING #1 - ROOF PLAN
A-106	PROPOSED BUILDING #1 - FRONT AND REAR ELEVATIONS
A-107	PROPOSED BUILDING #1 - LEFT AND RIGHT SIDE ELEVATIONS
A-201	PROPOSED BUILDING #2 - BASEMENT FLOOR PLAN
A-202	PROPOSED BUILDING #2 - FIRST FLOOR PLAN
A-203	PROPOSED BUILDING #2 - SECOND FLOOR PLAN
A-204	PROPOSED BUILDING #2 - UPPER LEVEL FLOOR PLAN
A-205	PROPOSED BUILDING #2 - ROOF PLAN
A-206	PROPOSED BUILDING #2 - FRONT AND REAR ELEVATIONS
A-207	PROPOSED BUILDING #2 - LEFT AND RIGHT SIDE ELEVATIONS

CONTRACT VENDEE:

AUDUBON MANOR, CO., LLC.  
500 EXECUTIVE BLVD #203  
OSSINING, NY 10562

CIVIL ENGINEER:

SITE DESIGN CONSULTANTS  
251-F UNDERHILL AVENUE  
YORKTOWN HEIGHTS, NY 10598  
P: 914 962 4488  
F: 914 962 7386  
jriina@sitedesignconsultants.com

SURVEYOR:

LINK LAND SURVEYORS  
21 CLARK PLACE, SUITE 1B  
MAHOPAC, NY 10541  
P: 845-628-5857  
F: 845-621-0013  
www.linklandsurveyors.com

ENVIRONMENTAL/ TRAFFIC CONSULTANT:

TIM MILLER ASSOCIATES INC.  
10 NORTH STREET  
COLD SPRING, NY 10516  
P: 845-265-4400

TRAFFIC CONSULTANT:

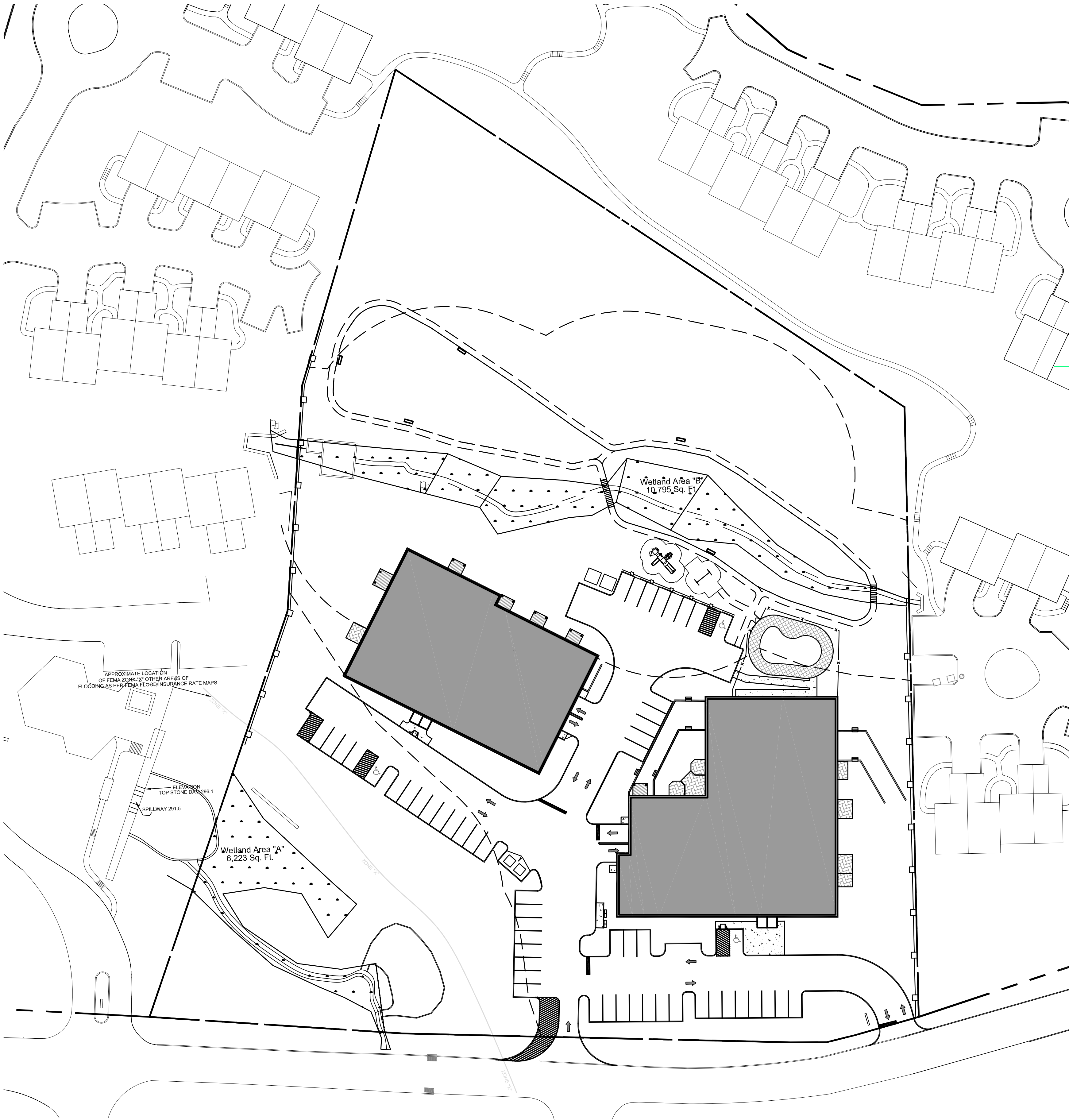
TIM MILLER ASSOCIATES INC.  
10 NORTH STREET  
COLD SPRING, NY 10516  
P: 845-265-4400

ARCHITECT:

ARQ.HT, LLC.  
100 EXECUTIVE BLVD #205  
OSSINING, NY 10562  
P: 914-944-3377

AUDUBON MANOR LLC.  
PARTH KNOLLS LLC.  
500 EXECUTIVE BLVD. #203  
OSSINING, NY, 10562  
87 HAWKES AVE.  
OSSINING, NY, 10562  
MF-4, MULTIFAMILY-INN  
MF-4, MULTIFAMILY-INN  
SECTION 80.20, BLOCK 1, LOT 15  
5.53 ACRES (240,734 SF)  
PUBLIC SEWERS  
PUBLIC WATER FACILITIES

# PARTH KNOLLS LLC.



ZONING SCHEDULE:

ZONING DISTRICT: MF-4, MULTI FAMILY RESIDENTIAL			
DIMENSIONAL REGULATIONS:	REQUIRED	PROVIDED	VARIANCE REQUIRED
MINIMUM SIZE OF LOT:			
MINIMUM LOT AREA:	40,000 SF.	240,734 SF.	NONE
MINIMUM LOT WIDTH:	150 FT.	522 FT.	NONE
MINIMUM LOT DEPTH:	150 FT.	414 FT.	NONE
MINIMUM YARD DIMENSIONS:			
PRINCIPAL BUILDING:			
FRONT YARD SETBACK:	50 FT.	77 FT.	NONE
REAR YARD SETBACK:	40 FT.	267 FT.	NONE
ONE SIDE YARD SETBACK:	50 FT.	50 FT.	NONE
COMBINED SIDE YARD SETBACK:	100 FT.	100 FT.	NONE
ACCESSORY BUILDINGS:			
FRONT YARD SETBACK:	10 FT.	53 FT.	NONE
REAR YARD SETBACK:	10 FT.	125 FT.	NONE
ONE SIDE YARD SETBACK:	10 FT.	429 FT.	NONE
COMBINED SIDE YARD SETBACK:	20 FT.	366 FT.	NONE
MAXIMUM % OF LOT TO BE OCCUPIED:			
LOT COVERAGE:	66% x 240,751 SF = 158,895 SF	71,456 SF	NONE
BUILDING COVERAGE:	20% x 240,751 SF = 48,151 SF	32,001 SF	NONE
MAXIMUM HEIGHT:			
PRINCIPAL BUILDING - FEET:	35 FEET	SEE ARCHITECTURAL PLANS	NONE
PRINCIPAL BUILDING - STORIES:	2 1/2		NONE

ZONING REGULATION NOTES:

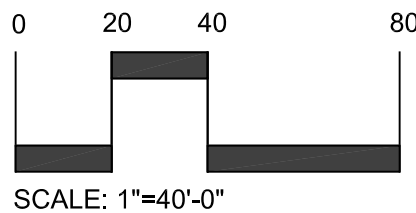
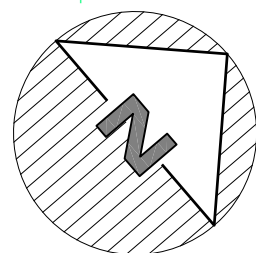
1. AT LEAST 1/3 OF THE NET SITE AREA SHALL BE DEVOTED TO PERMANENT OPEN SPACE AND/OR FOR SITES SUITABLE FOR RECREATION AS REQUIRED BY NOTE 2. UNDEVELOPED PERMANENT OPEN SPACE SHALL BE PROVIDED AND GUARANTEED AT THE RATE OF 1,500 SQUARE FEET PER BEDROOM.
2. THERE SHALL BE PROVIDED ON THE SAME LOT A SUITABLY EQUIPPED AND LANDSCAPED CHILDREN'S PLAY AREA WITH A MINIMUM OF 400 SQUARE FEET FOR EACH DWELLING UNIT.
3. BUILDING COVERAGE SHALL BE NO MORE THAN 20% OF LOT AREA. 20% x 240,751 SF = 48,151 SF

PARKING SCHEDULE

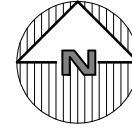
PARKING REQUIRED: Two (2) spaces per dwelling unit pursuant to Zoning Section 200-29, Dwelling, Multifamily  
53 apartments time (2) equals 106 spaces

Proposed Dwelling units.	Indoor Parking	Breakdown	Total Parking
Building No. 1	Standard Handicap Total	25 1 26	26
Building No. 2	Standard Handicap Total	30 1 31	31
Outdoor Parking	Breakdown		
	Standard Handicap Total	48 3 51	51
Total Parking Provided			108
Bank Parking for future use, if required [spaces #59,60,61 & 62]	Standard		4
Total Potential Parking Available			112

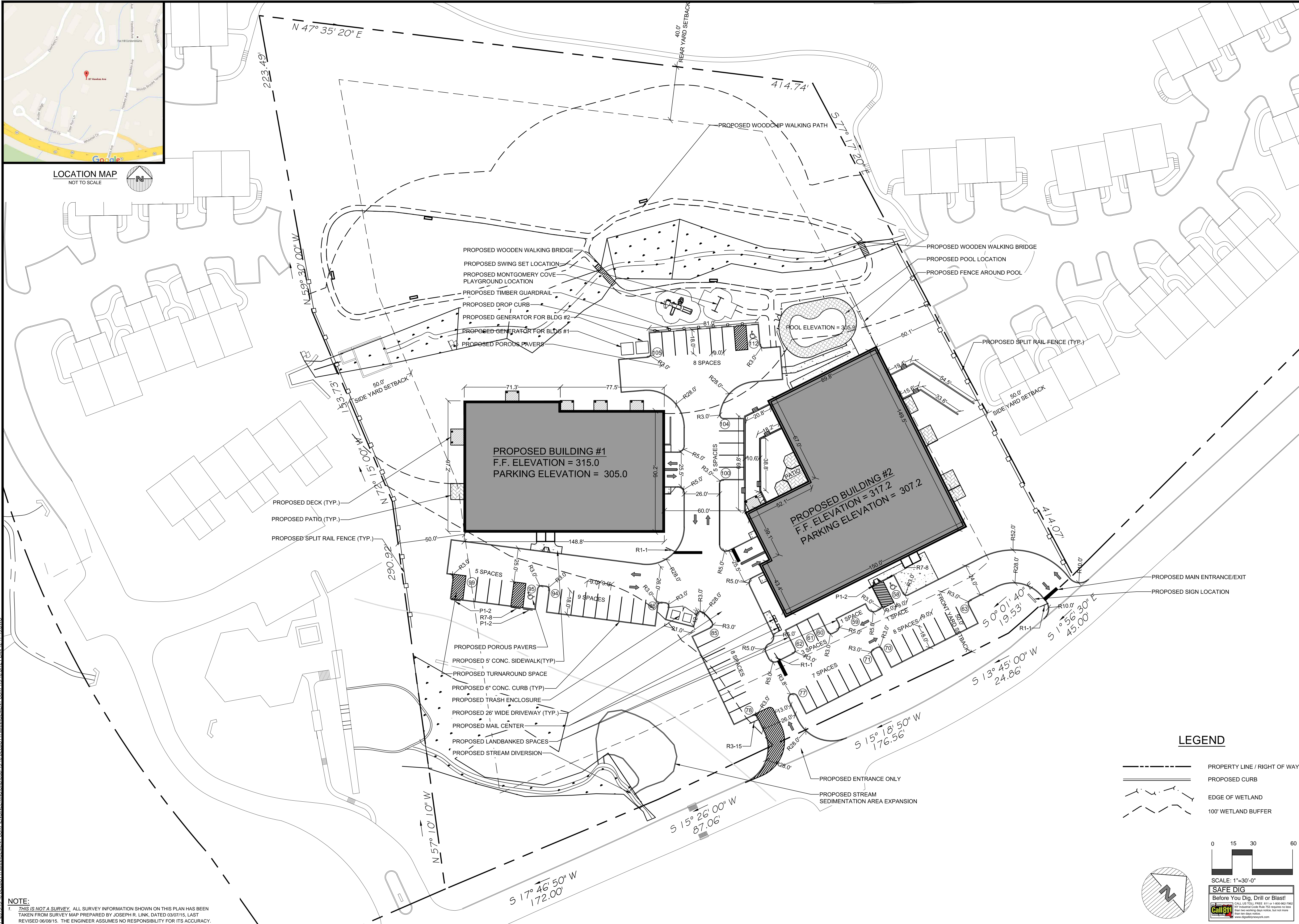
Article VI, Section 200.33 Section 200.34	Affordable Housing Required More than 5, but fewer than 10 acres Maximum permitted Density Bonus Calculation 1/2 of the units received must be BMR Density Bonus Number of Dwelling units Rounded Number of Dwelling units	(BMR) 10% of the number of Dwelling units 30% 41 Aptm (x) 30% 12.3 12	30% 41 12
Density Bonus			
	Total number of units with density Bonus		53
	1/2 of the Bonus Units received must be BMR		6
	BMR units will be broken down as follows:	1 2 bedroom unit 5 1 bedroom units	
General Description of Project			
Number of Multifamily Units			
Type	Non-BMR	BMR Units	Total Units
One (1) B/R	31	9	40
Two (2) B/R	10	3	13
Total Dwelling Units	41	12	53
			Bedrooms
			Unit Ratio
			75%
			25%
			100%
Section 200.28 Parking & loading			
2 for each dwelling unit plus 0.5 for each bedroom more than 2 bedrooms		Regular Apts BMR Apts	Total Parking
Dwelling Units	41	12	
Parking per Dwelling Unit	(x) 2	(x) 2	
Total Parking spaces required	82	24	106
Building Height Max			
Stories	2 1/2		
Feet	36'		
Design	Colonial		







**NOTE:**  
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**C-101**

PREPARED FOR  
**PARTH KNOLLS LLC.**

**87 HAWKES AVENUE**

Town of Ossining

Westchester County, NY

# SITE PLAN

1" = 30'

DRAWN BY:  
TK

DATE:  
9/25/15

No.	Date	Comments:
1	11/9/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments

15-18

PROJECT #

**Site Design Consultants**

Civil Engineers • Land Planners

251-F Underhill Avenue, Yorktown Heights, NY 10598

(914) 962-4488 • Fax: (914) 962-7386

www.sitedesignconsultants.com


Joseph C. Rima, P.E.

NYS Lic. No. 64431





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www.sitedesignconsultants.com

Engineer:  
Joseph C. Rinna, P.E.  
NYS Lic. No. 64431

Revisions:	
No.	Date
1	11/9/15
2	12/7/15
3	1/25/16

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EXISTING  
CONDITIONS

SITE PLAN  
PREPARED FOR

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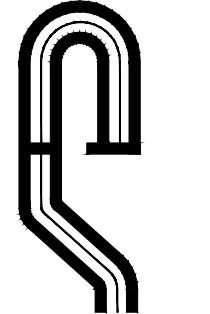
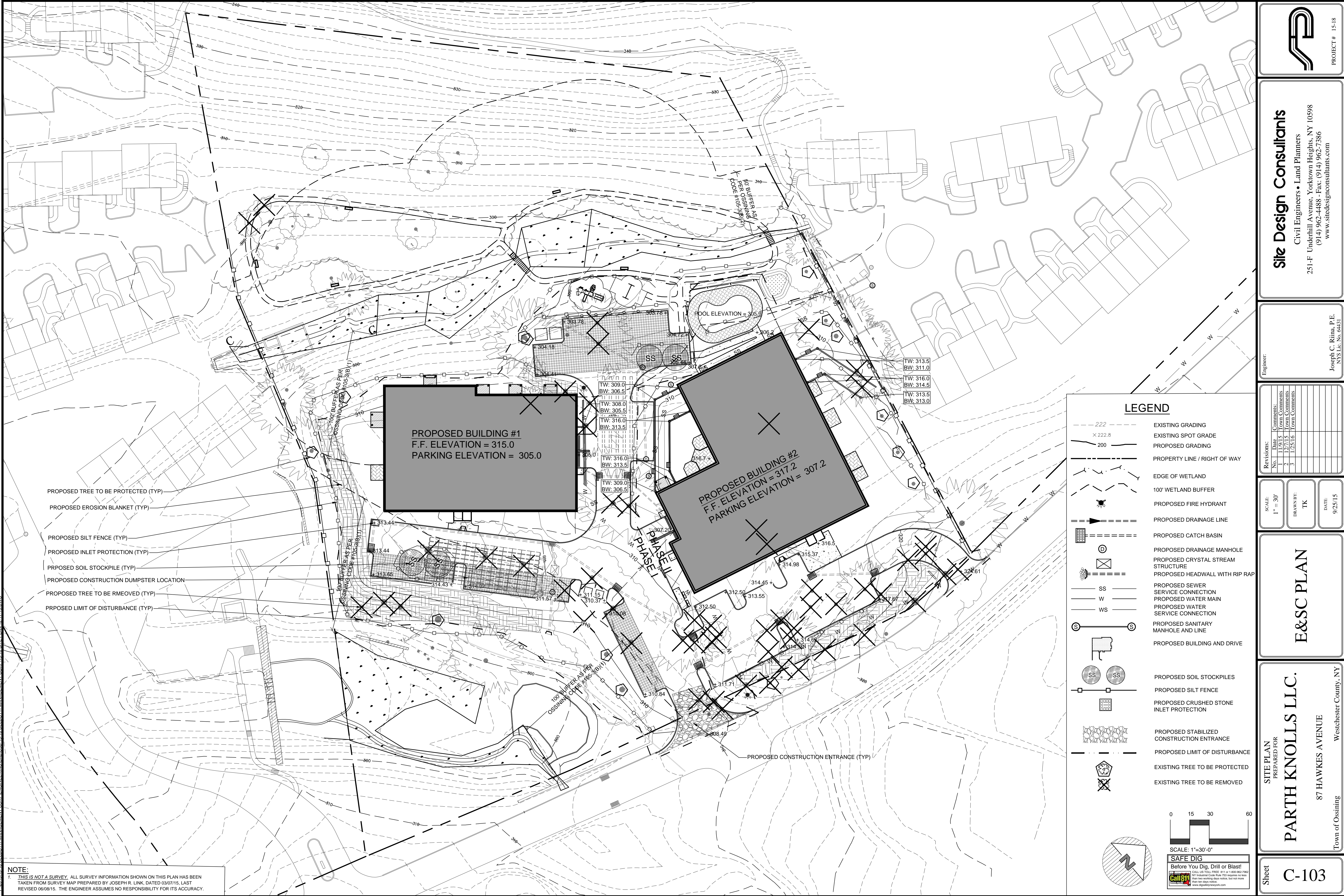
87 HAWKES AVENUE  
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Sheet

**C-102**

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Engineer:  
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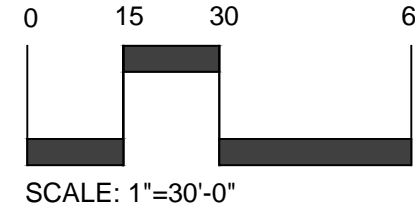
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E&SC PLAN

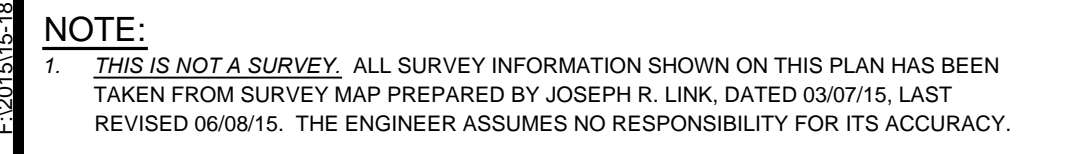
SITE PLAN  
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**PARTH KNOLLS LLC.**  
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Town of Ossining  
Westchester County, NY

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**C-103**



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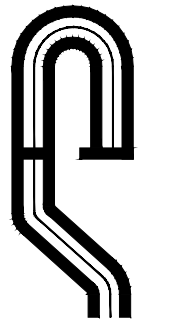
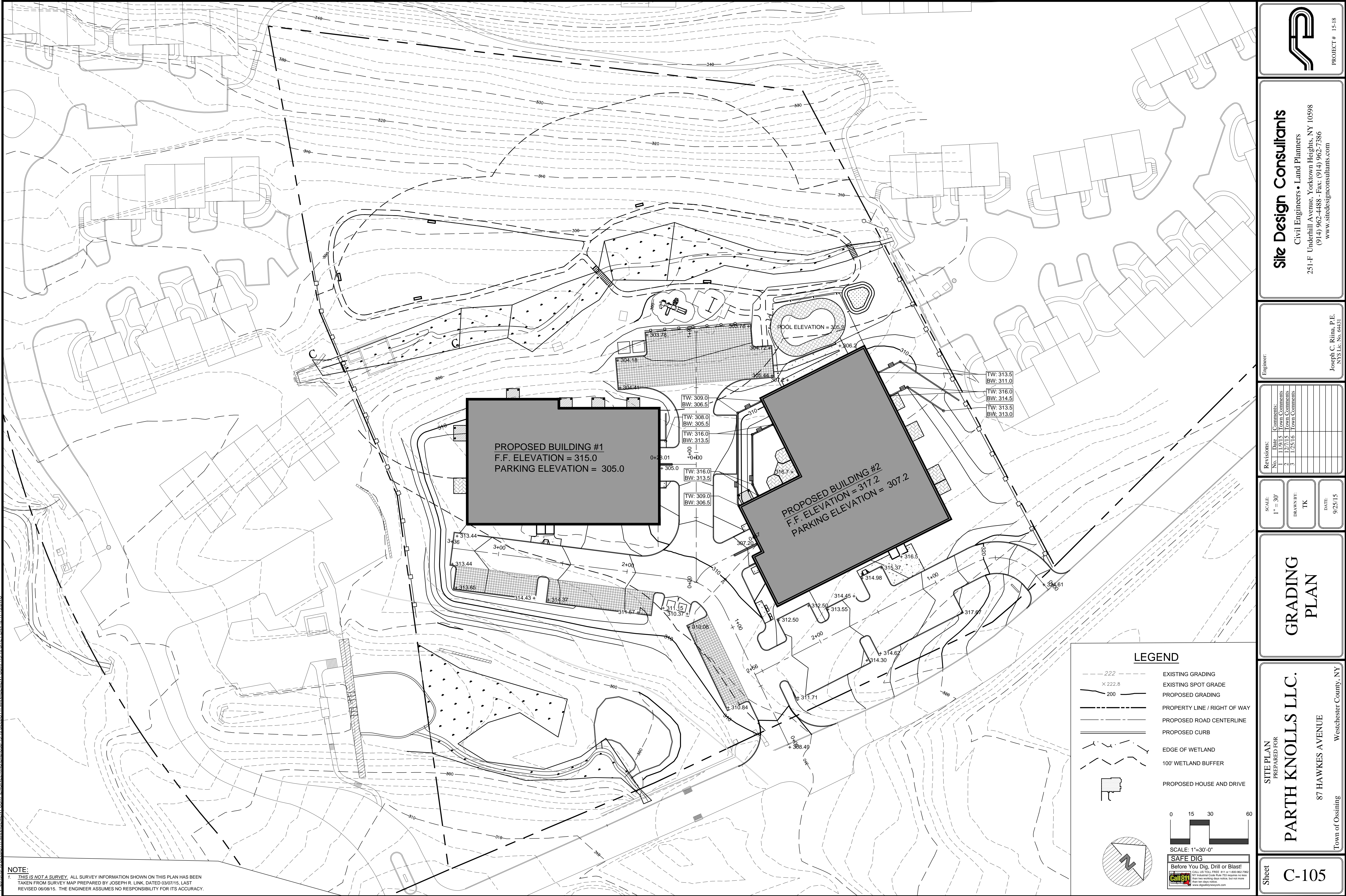




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GRADING  
PLAN

SITE PLAN  
PREPARED FOR

PARTH KNOLLS LLC.

87 HAWKES AVENUE

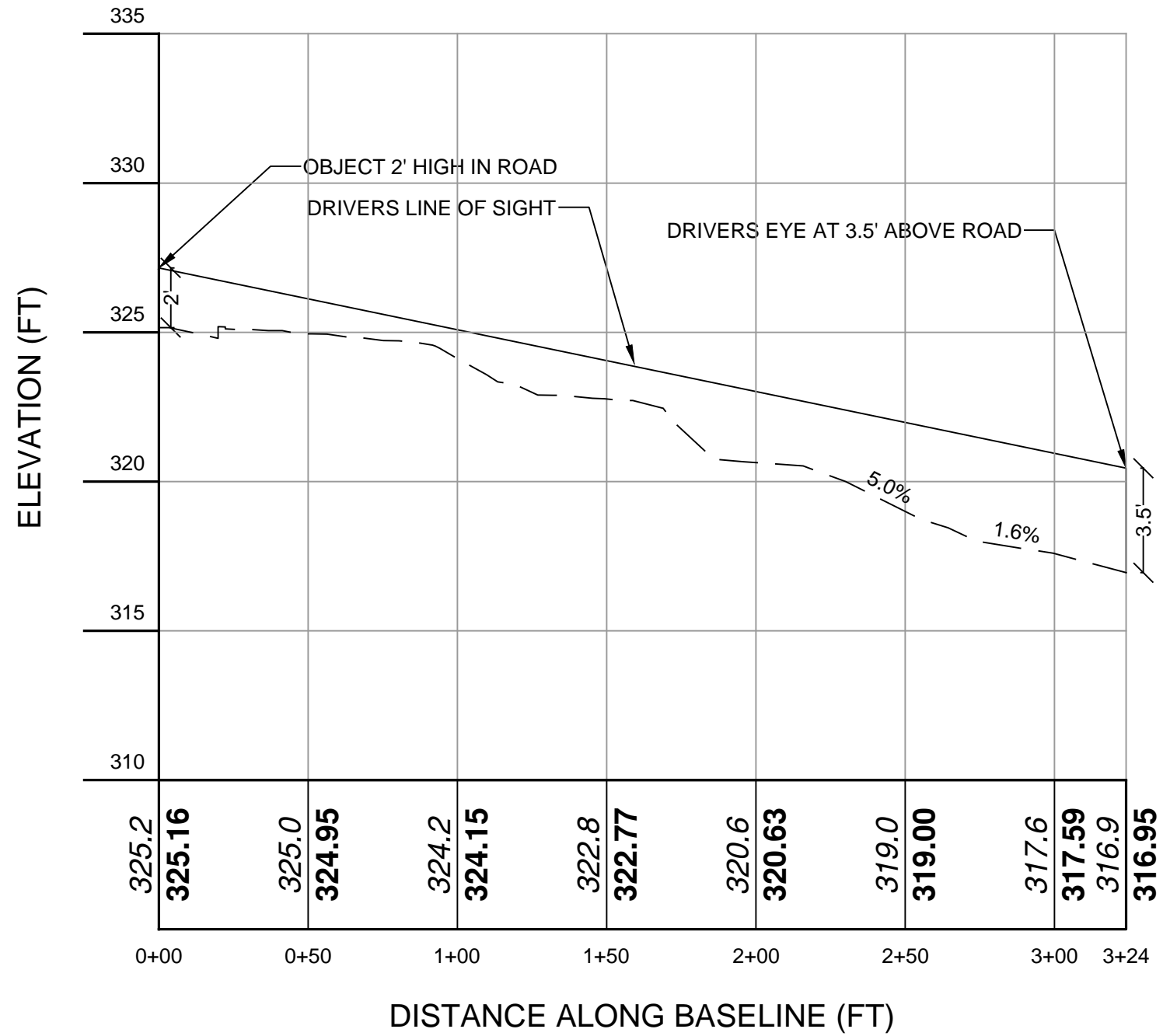
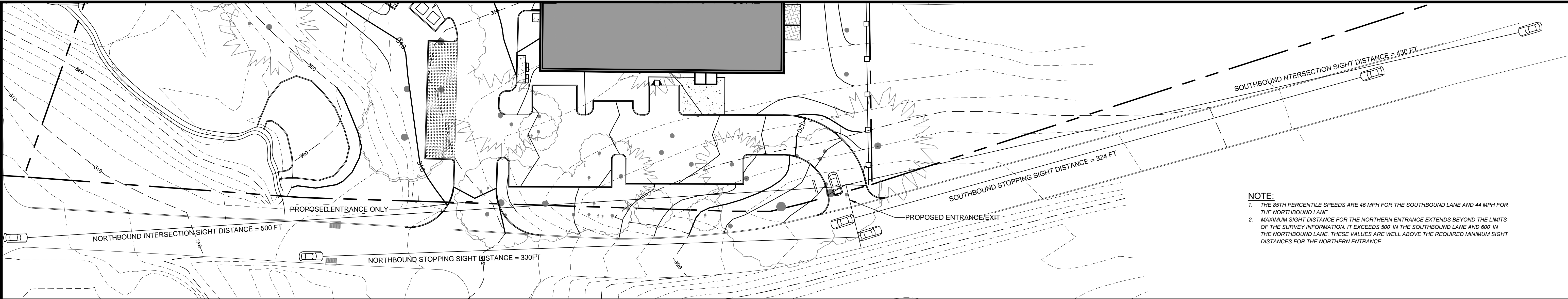
Westchester County, NY

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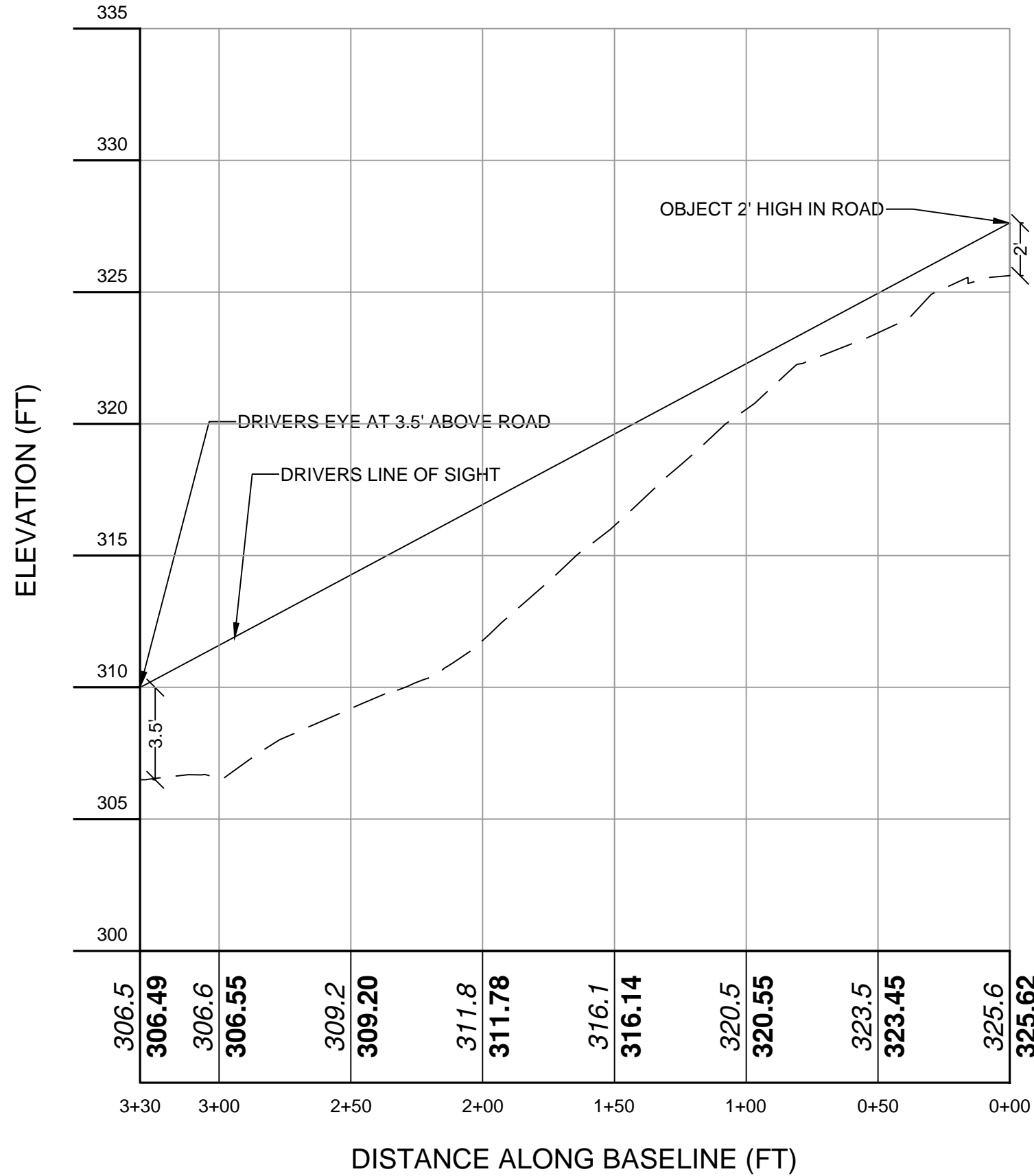
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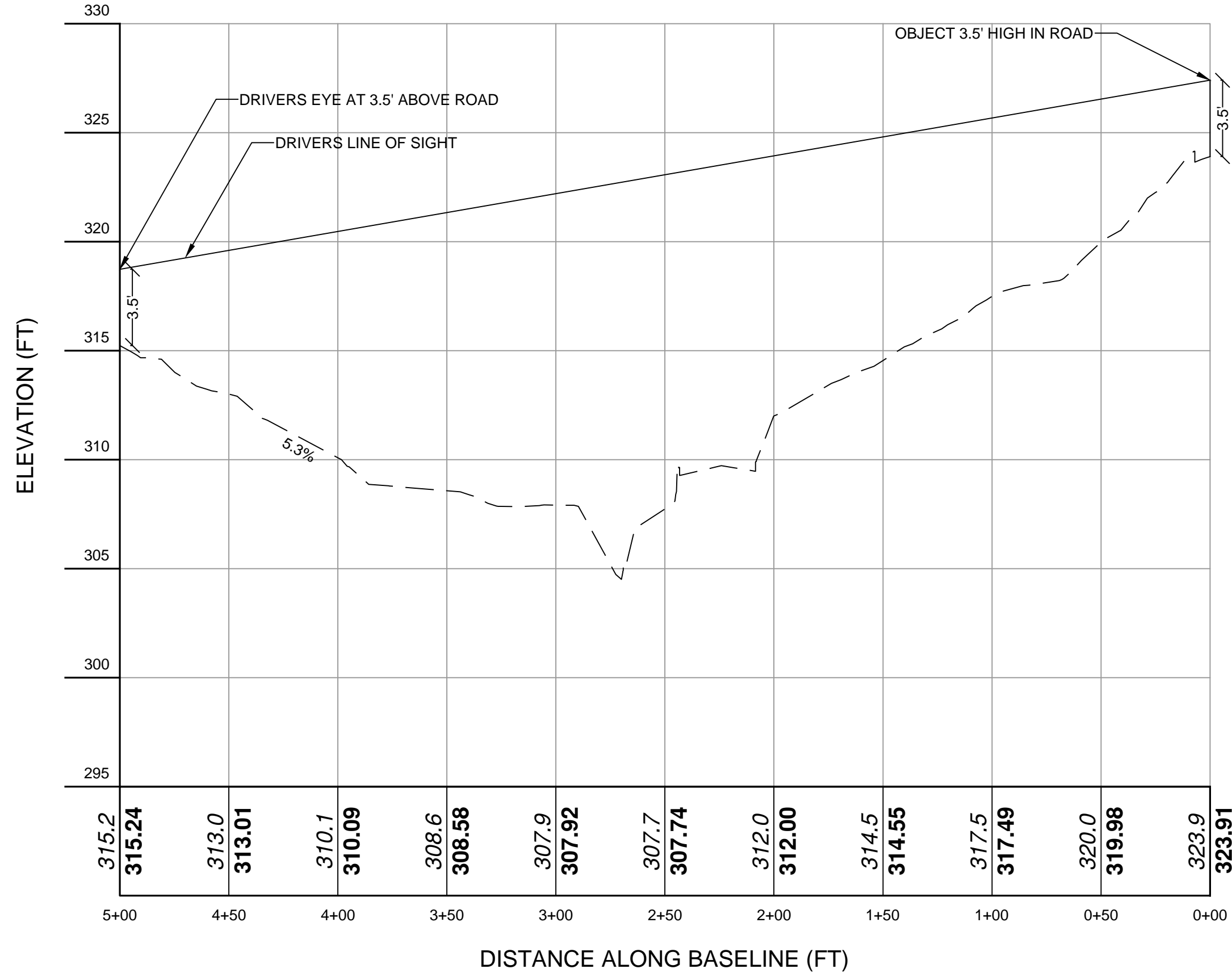




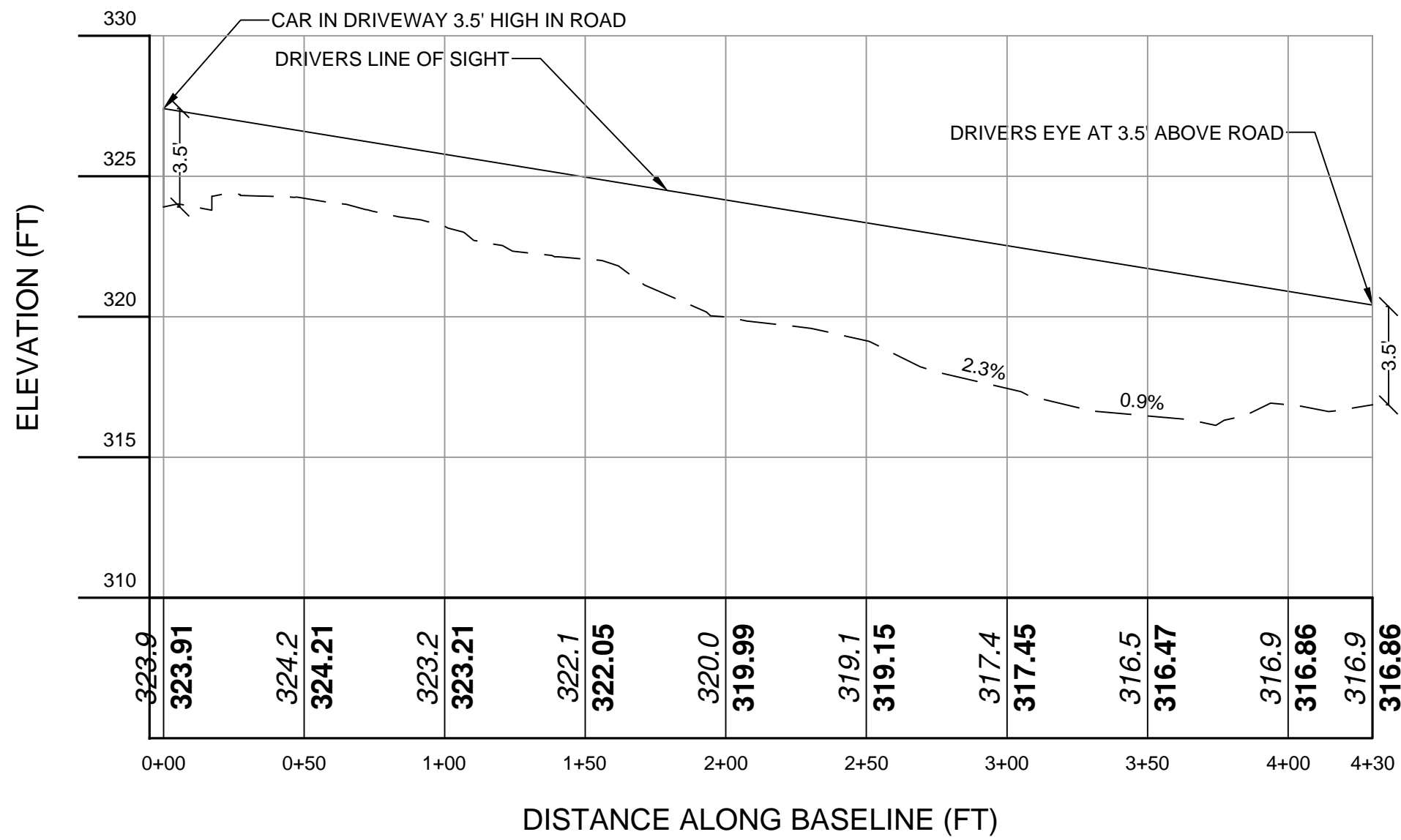
North Entrance Southbound Stopping Sight Distance  
PROFILE SCALE:  
HORIZ: 1"=50'  
VERT: 1"=5'



North Entrance Northbound Stopping Sight Distance  
PROFILE SCALE:  
HORIZ: 1"=50'  
VERT: 1"=5'



North Entrance Northbound Intersection Sight Distance  
PROFILE SCALE:  
HORIZ: 1"=50'  
VERT: 1"=5'



Northern Entrance Northbound Intersection Sight Distance  
PROFILE SCALE:  
HORIZ: 1"=50'  
VERT: 1"=5'

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**LEGEND**

- 222 --- EXISTING GRADING
- x 222.8 EXISTING SPOT GRADE
- 200 PROPOSED GRADING
- --- PROPERTY LINE / RIGHT OF WAY
- --- PROPOSED ROAD CENTERLINE
- --- PROPOSED CURB
- - - - - EDGE OF WETLAND
- - - - - 100' WETLAND BUFFER
- [House Icon] PROPOSED HOUSE AND DRIVE

0 15 30 60  
SCALE: 1"=30'-0"

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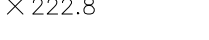




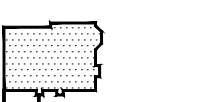


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**SIGHT DISTANCE PLAN**

SITE PLAN PREPARED FOR  
**PARTH KNOLLS LLC.**  
87 HAWKES AVENUE  
Town of Ossining  
Westchester County, NY

Sheet  
**C-106**



	EXISTING GRADING
	EXISTING SPOT GRADE
	PROPOSED GRADING
	PROPERTY LINE / RIGHT OF WAY
	EDGE OF WETLAND
	100' WETLAND BUFFER
	PROPOSED BUILDING AND DRIVE
	EXISTING TREE TO BE PROTECTED
	EXISTING TREE TO BE REMOVED

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E:\2015\15-18 BELDOTT MANAGEMENT CORP\15-18 SITE PLAN\24-15.DWG

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**LEGEND**

--- PROPERTY LINE / RIGHT OF WAY  
--- PROPOSED CURB  
--- EDGE OF WETLAND  
--- 100' WETLAND BUFFER

0 15 30 60  
SCALE: 1"=30'-0"

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PROJECT # 15-18

Engineer:  
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No.	Comments
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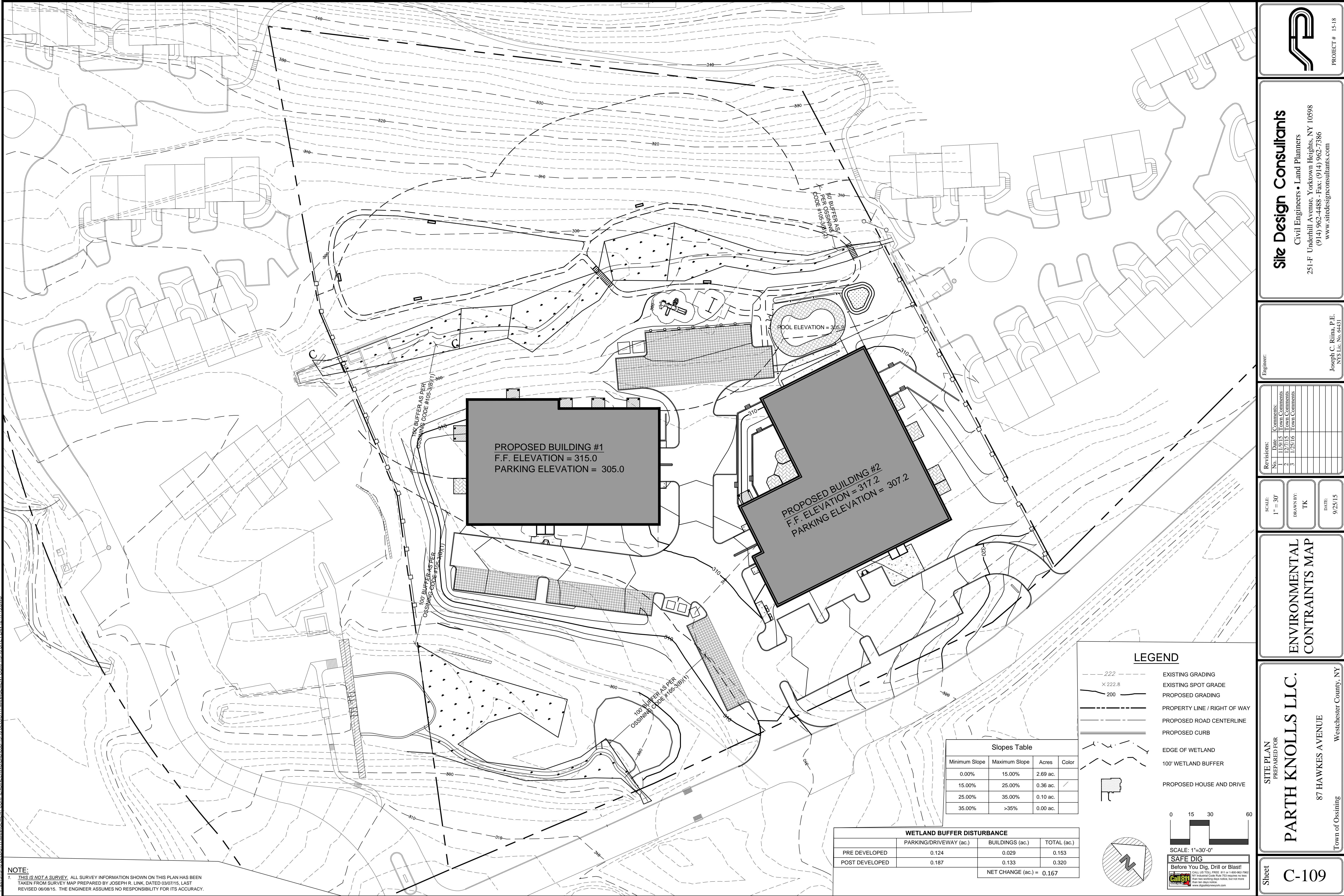
**FIRE ACCESS PLAN**

**PARTH KNOLLS LLC.**  
87 HAWKES AVENUE  
Town of Ossining  
Westchester County, NY

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**C-108**

\\sdc\projects\15-18 BELDOTT MANAGEMENT CORP\15-18 SITE PLAN\24-15.DWG





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SCALE:  
1" = 30'

DRAWN BY:  
TK

DATE:  
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## ENVIRONMENTAL CONSTRAINTS MAP

SITE PLAN  
PREPARED FOR

PARTH KNOLLS LLC.

87 HAWKES AVENUE

Town of Ossining Westchester County, NY

Sheet

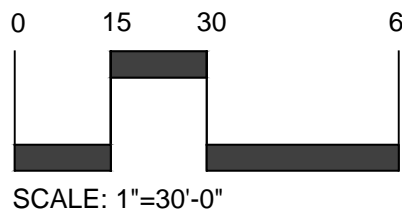
C-109

### LEGEND

- 222 --- EXISTING GRADING
- X 222.8 EXISTING SPOT GRADE
- 200 --- PROPOSED GRADING
- PROPERTY LINE / RIGHT OF WAY
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER
- PROPOSED HOUSE AND DRIVE

Slopes Table			
Minimum Slope	Maximum Slope	Acres	Color
0.00%	15.00%	2.69 ac.	
15.00%	25.00%	0.36 ac.	
25.00%	35.00%	0.10 ac.	
35.00%	>35%	0.00 ac.	

WETLAND BUFFER DISTURBANCE		
	PARKING/DRIVEWAY (ac.)	BUILDINGS (ac.)
PRE DEVELOPED	0.124	0.029
POST DEVELOPED	0.187	0.133
NET CHANGE (ac.) =		0.167



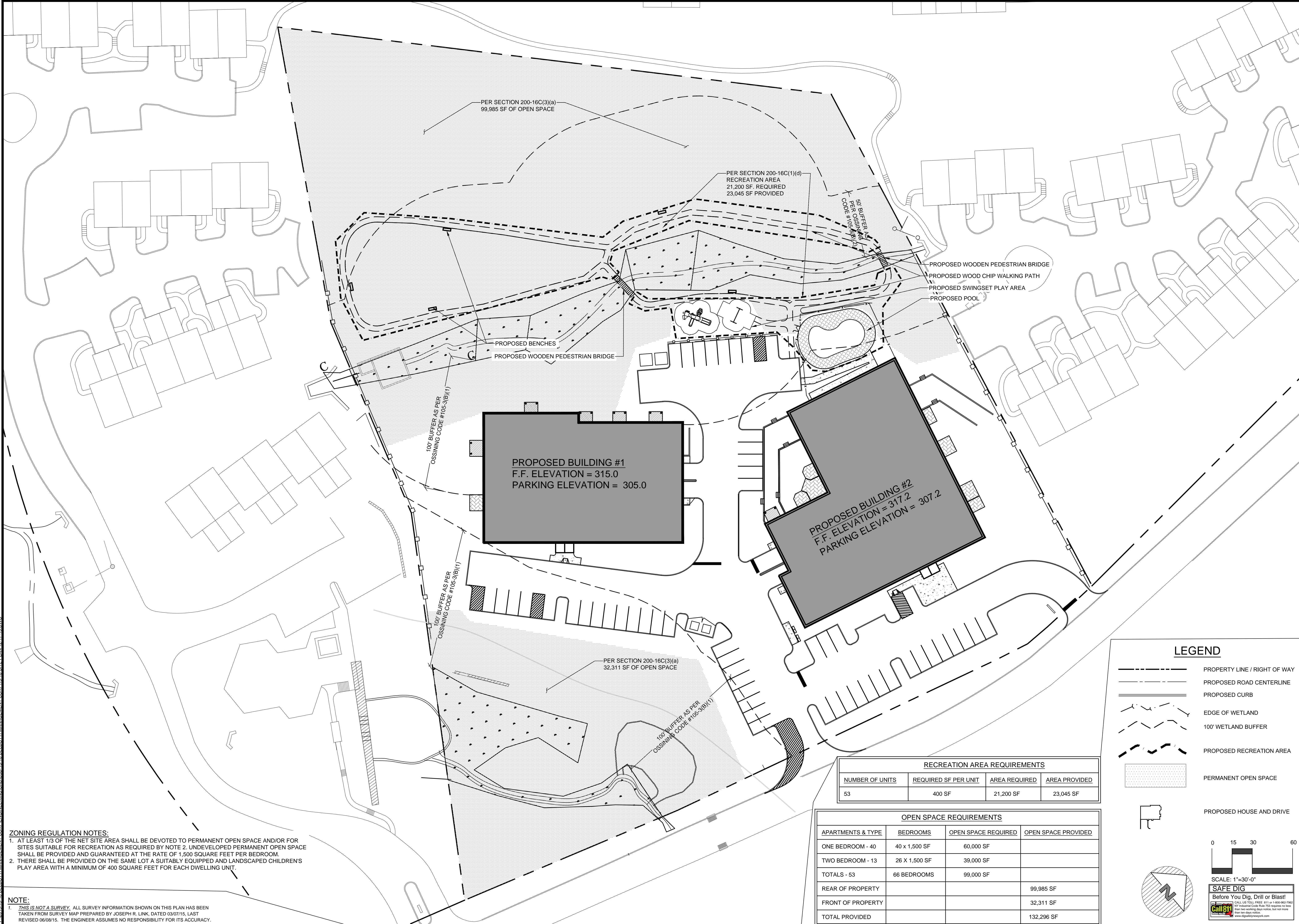
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than ten days notice.  
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F:\2015\15-BELDOTTI MANAGEMENT CORP\15-18 BELDOTTI MANAGEMENT CORP\15-18 SITE PLAN 12-17-15.DWG

**ZONING REGULATION NOTES:**  
1. AT LEAST 1/3 OF THE NET SITE AREA SHALL BE DEVOTED TO PERMANENT OPEN SPACE AND/OR FOR SITES SUITABLE FOR RECREATION AS REQUIRED BY NOTE 2. UNDEVELOPED PERMANENT OPEN SPACE SHALL BE PROVIDED AND GUARANTEED AT THE RATE OF 1,500 SQUARE FEET PER BEDROOM.  
2. THERE SHALL BE PROVIDED ON THE SAME LOT A SUITABLY EQUIPPED AND LANDSCAPED CHILDREN'S PLAY AREA WITH A MINIMUM OF 400 SQUARE FEET FOR EACH DWELLING UNIT.

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RECREATION AREA REQUIREMENTS			
NUMBER OF UNITS	REQUIRED SF PER UNIT	AREA REQUIRED	AREA PROVIDED
53	400 SF	21,200 SF	23,045 SF

OPEN SPACE REQUIREMENTS			
APARTMENTS & TYPE	BEDROOMS	OPEN SPACE REQUIRED	OPEN SPACE PROVIDED
ONE BEDROOM - 40	40 x 1,500 SF	60,000 SF	
TWO BEDROOM - 13	26 x 1,500 SF	39,000 SF	
TOTALS - 53	66 BEDROOMS	99,000 SF	
REAR OF PROPERTY			99,985 SF
FRONT OF PROPERTY			32,311 SF
TOTAL PROVIDED			132,296 SF

**LEGEND**

- PROPERTY LINE / RIGHT OF WAY
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER
- PROPOSED RECREATION AREA
- PERMANENT OPEN SPACE
- PROPOSED HOUSE AND DRIVE

0 15 30 60  
SCALE: 1"=30'-0"

**SAFE DIG**  
Before You Dig, Drill or Blast!  
Call 811 to find out where underground utilities are located. Digging without this information can be dangerous and costly. Call 811 to find out where underground utilities are located. Digging without this information can be dangerous and costly. Call 811 to find out where underground utilities are located. Digging without this information can be dangerous and costly.

**Site Design Consultants**  
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NYS Lic. No. 64431

Revisions:  
No. Date Comments  
1 11/9/15 Town Comments  
2 12/7/15 Town Comments  
3 1/25/16 Town Comments

SCALE:  
1" = 30'

DRAWN BY:  
TK

DATE:  
9/25/15

**OPEN SPACE  
AND  
RECREATION  
PLAN**

SITE PLAN  
PREPARED FOR  
**PARTH KNOLLS LLC.**  
87 HAWKES AVENUE  
Town of Ossining  
Westchester County, NY

Sheet  
**C-110**

PROJECT # 15-18  
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**Notes:**

1. These calculations are based on the listed fixtures only. Substitution of these fixtures will void all calculations.
2. Acuity Brands Lighting reserves the right to withdraw these copyrighted plans from the public record if substitutions occur.
3. **ALL SUBSTITUTIONS REQUIRE NEW CALCULATIONS BASED ON THE FIXTURES SUPPLIED.**
4. Luminaire near Pool area for security lighting only. Illumination will not meet NYS Sanitary Code for night swimming.

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Drive Lanes and Parking	+	1.9 fc	9.0 fc	0.1 fc	90.0:1	19.0:1
Pool Security Lighting	+	0.7 fc	4.6 fc	0.1 fc	46.0:1	7.0:1
Site Trespass	+	0.0 fc	0.5 fc	0.0 fc	N/A	N/A

Engineer:

SCALE:  
1" = 30'

DRAWN BY:  
TK

DATE:  
9/25/15

PARTH KNOLLS LLC.

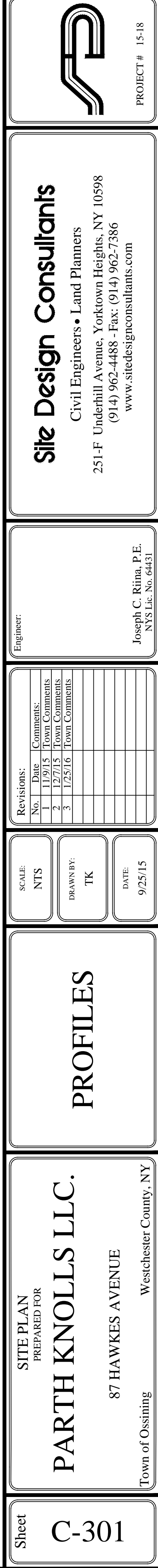
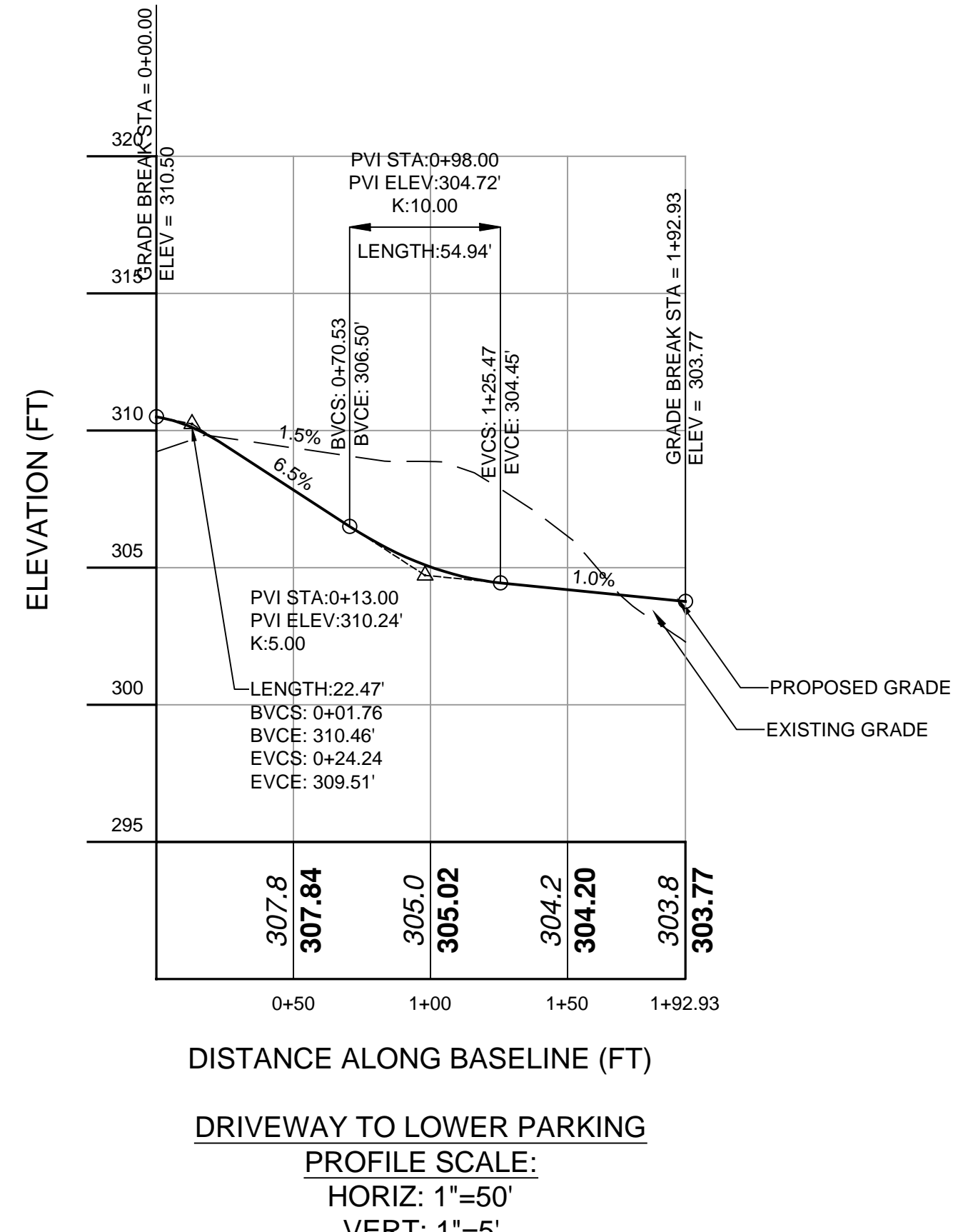
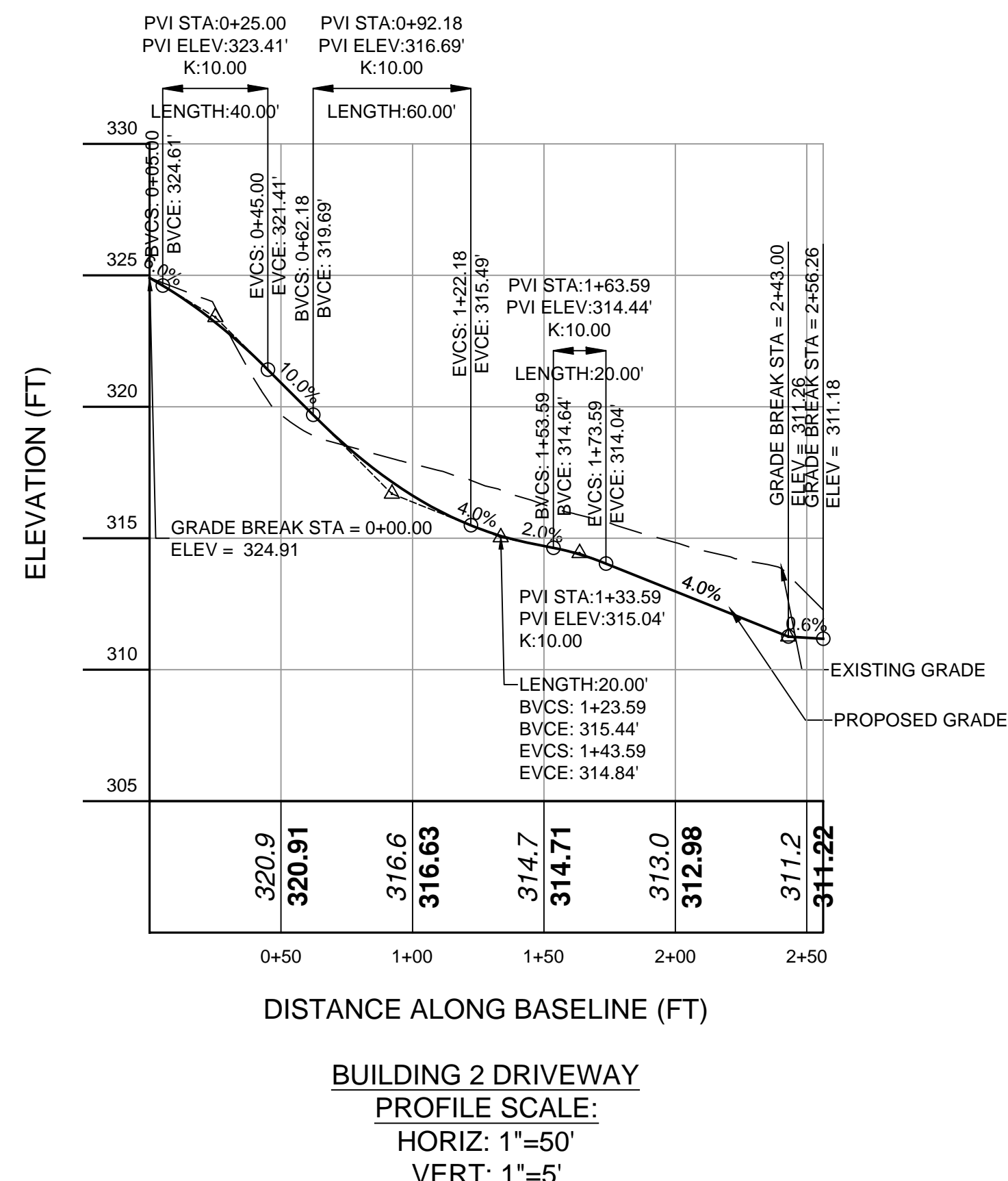
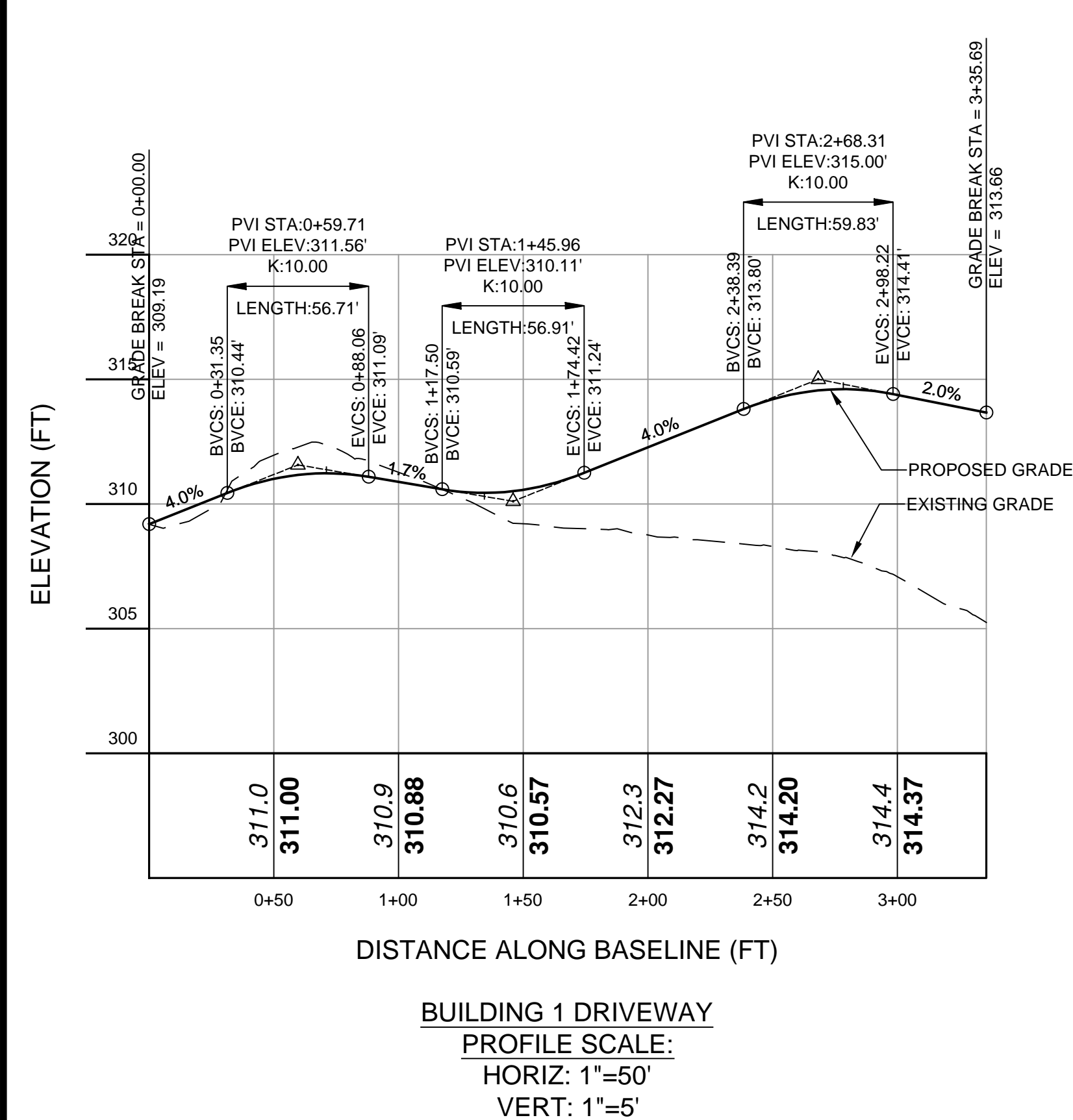
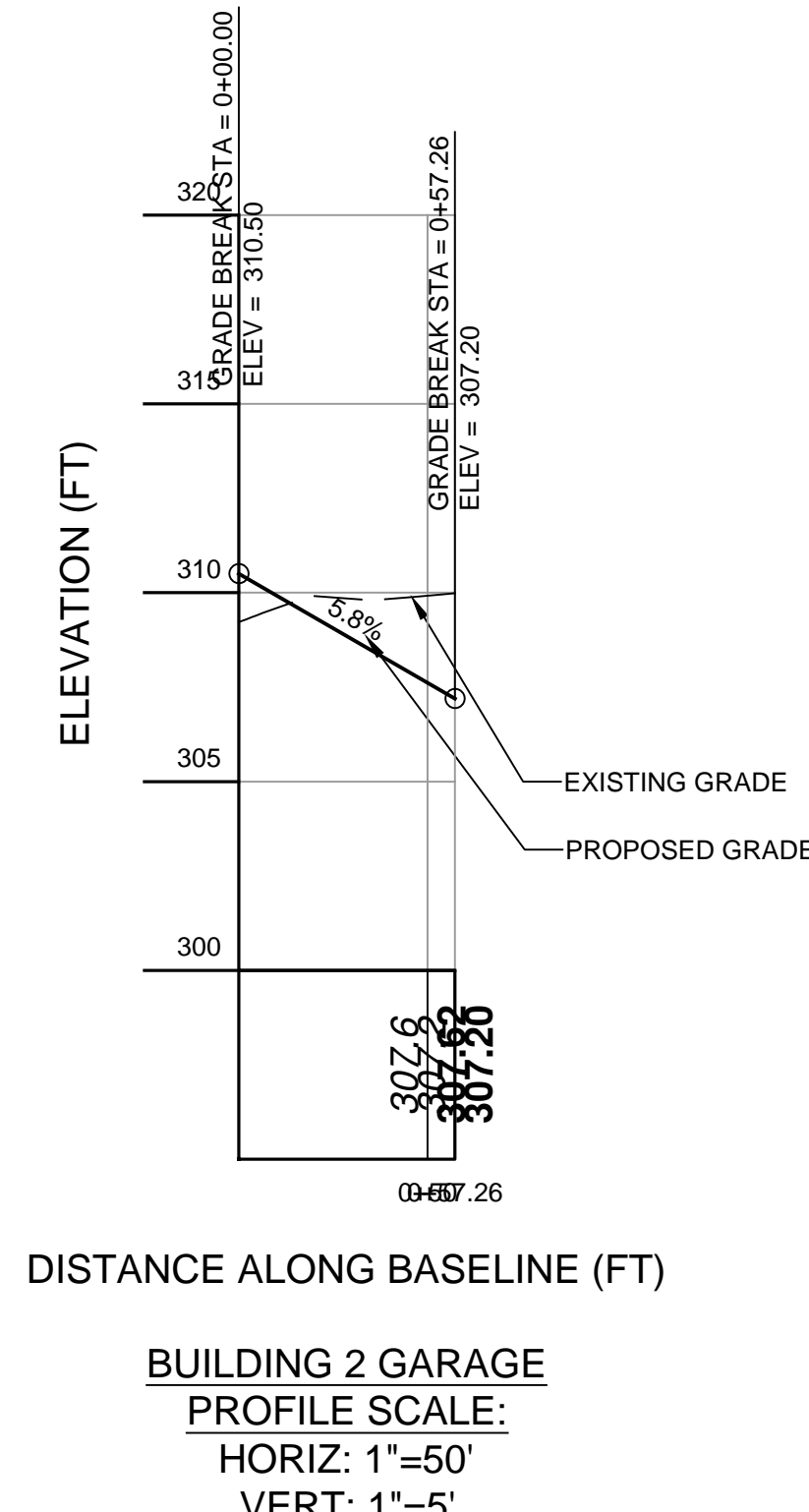
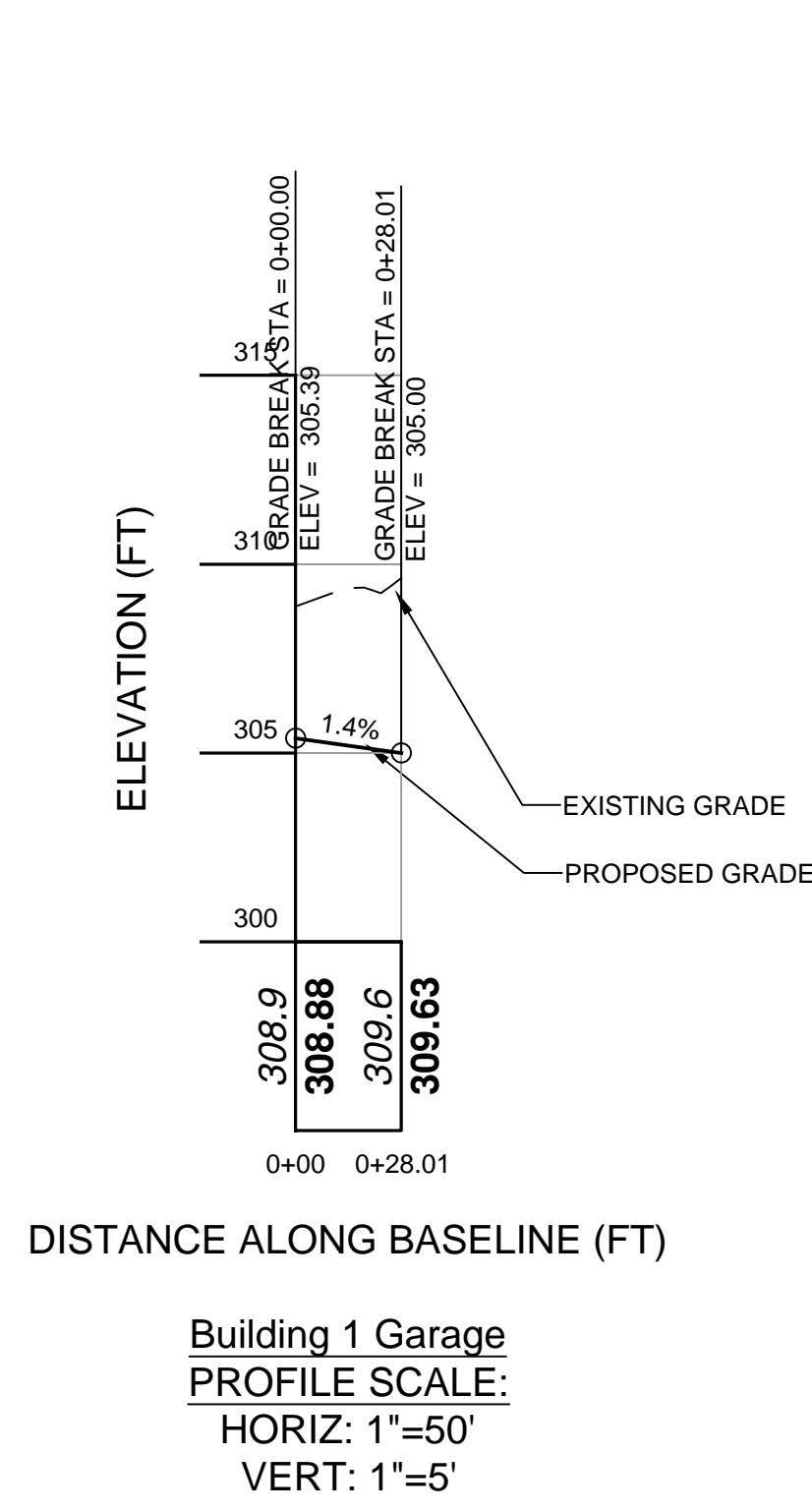
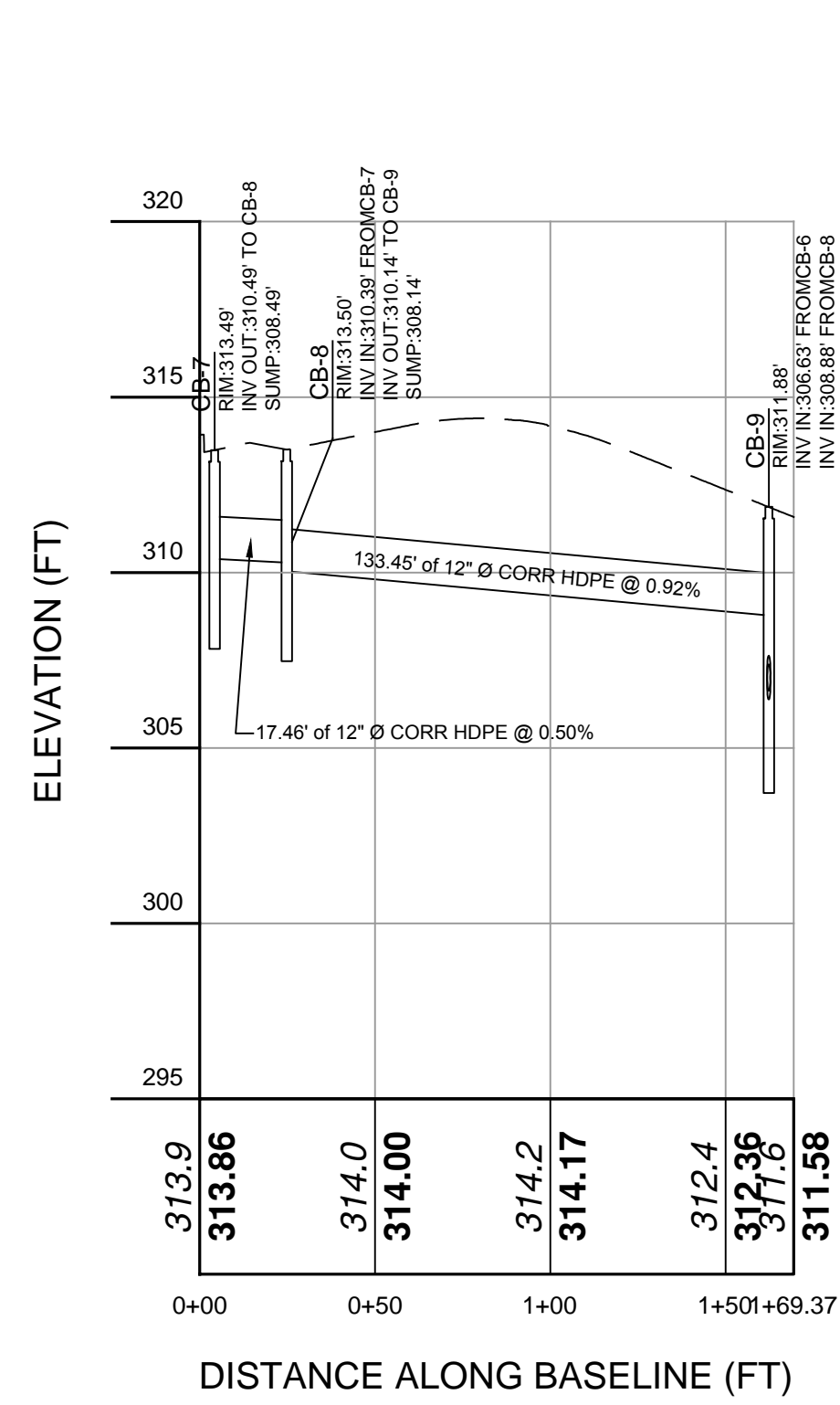
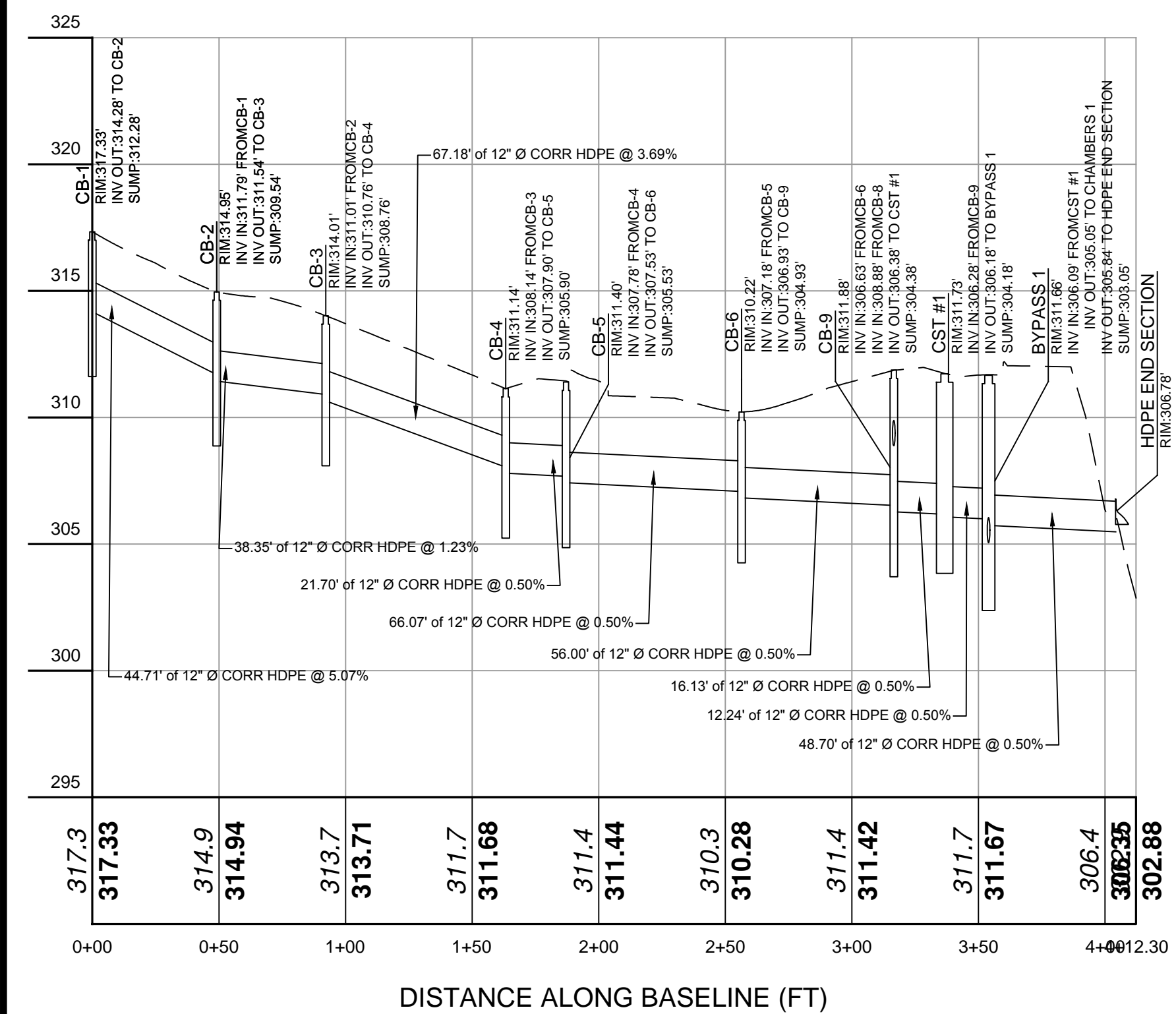
87 HAWKES AVENUE

Town of Ossining  
Westchester County, NY

PROJECT # 15-18

**NOTE:**  
1. THIS IS NOT A SURVEY. ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY JOSEPH R. LINK, DATED 03/07/15, LAST REVISED 06/08/15. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.







E:\2014\14-18 BELDOTT MANAGEMENT CORP\ENGINEERING\CD\14-18 BELDOTT MANAGEMENT CORP\14-18 DETAILS.DWG

GENERAL NOTES:

1. THE ENGINEER WHOSE SEAL APPEARS HEREON HAS NOT BEEN RETAINED FOR SUPERVISION OF CONSTRUCTION. SUBSEQUENTLY, HE IS NOT RESPONSIBLE FOR CONSTRUCTION AND THEREFORE ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION PRACTICES, PROCEDURES, AND RESULTS THEREFROM.
2. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE OR HELD ACCOUNTABLE FOR THE INTEGRITY OF ANY STRUCTURES CONSTRUCTED OR UNDER CONSTRUCTION PRIOR TO THE APPROVAL OF THE PLANS.
3. THE TOWN ENGINEER'S OFFICE AND WATER DISTRICT OFFICE IS TO BE NOTIFIED 24 HOURS BEFORE COMMENCING SITE CONSTRUCTION OR WATER MAIN CONNECTION.
4. ALL WORK IS TO BE IN ACCORDANCE WITH THE TOWN CODE OF PRACTICE AND SPECIFICATIONS.
5. ALL CONDITIONS, LOCATIONS, AND DIMENSIONS SHALL BE FIELD VERIFIED AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY DISCREPANCIES.
6. ALL CHANGES MADE TO THE PLANS SHALL BE APPROVED BY THE ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS. ANY SUCH CHANGES SHALL BE FILED AS AMENDMENTS TO THE ORIGINAL BUILDING PERMIT.
7. ALL WRITTEN DIMENSIONS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER ANY SCALED DIMENSIONS.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL IN A "CODE 53" PRIOR TO CONSTRUCTION FOR UNDERGROUND UTILITY LOCATIONS. 9. SUBSTRUCTURES AND THEIR ENCROACHMENTS BELOW GRADE, IF ANY, ARE NOT SHOWN.
9. ANY PROPOSED ELECTRIC AND/OR TELEPHONE SERVICE LINES ARE TO BE PLACED UNDERGROUND.
10. THE DESIGN ENGINEER DISCLAIMS ANY LIABILITY FOR DAMAGE OR LOSS INCURRED DURING OR AFTER CONSTRUCTION.
11. ALL CONDITIONS, LOCATIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND THE OWNER/ENGINEER NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO THE START OF WORK. THE OWNER/ENGINEER WILL EVALUATE THE SITUATION AND MODIFY THE PLAN AS NECESSARY.

CONTRACTOR RESPONSIBILITIES:

1. ALL WORK ON THE PROJECT SHALL BE PERFORMED IN A WORKMAN LIKE MANNER AND SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE INDUSTRY. THE OWNER WILL BE THE SOLE JUDGE OF THE ACCEPTABILITY OF THE WORK. MATERIALS AND WORK DEEMED UNACCEPTABLE WILL BE REMOVED AND REDONE AT THE SOLE COST AND RESPONSIBILITY OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT HIS WORK AND WILL BE HELD RESPONSIBLE FOR CONSEQUENTIAL DAMAGES DUE TO HIS ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR THE ACTS AND OMISSIONS OF HIS EMPLOYEES AND THEIR AGENTS AND EMPLOYEES, AND ANY OTHER PERSONS PERFORMING ANY THE WORK UNDER A SEPARATE CONTRACT WITH THE CONTRACTOR.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY SHORE EXISTING UTILITIES IF REQUIRED BY CONSTRUCTION.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE THE BUILDING INSPECTOR IN ADVANCE OF HIS WORK OR AS THE INSPECTOR DEEMS APPROPRIATE.
5. ALL CONDITIONS, LOCATIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND THE OWNER/ENGINEER NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO THE START OF WORK. THE OWNER/ENGINEER WILL EVALUATE THE SITUATION AND MODIFY THE PLAN AS NECESSARY.
6. ALL CHANGES MADE TO THIS PLAN SHALL BE APPROVED BY THE ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS. ANY UNAUTHORIZED ALTERATION OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.
7. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING HIS BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THIS WORK UNDER THIS CONTRACT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR THE ACTS AND OMISSIONS OF HIS EMPLOYEES, SUBCONTRACTORS, AND THEIR AGENTS AND EMPLOYEES, AND ANY OTHER PERSONS PERFORMING ANY OF THE WORK UNDER A CONTRACT WITH THE CONTRACTOR.
9. THE CONTRACTOR SHALL VERIFY ALL SUBSTRUCTURES ENCOUNTERED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SECURE & PAY FOR A BUILDERS RISK POLICY TO COVER THE PERIOD OF CONSTRUCTION. THE ENGINEER & OWNER SHALL BE NAMED AS ADDITIONAL INSURED. ALL CONTRACTORS EMPLOYED AT THE SITE SHALL BE COVERED BY WORKMAN'S COMPENSATION.

GENERAL CONSTRUCTION NOTES:

1. BENCH MARKS USING U.S.G.S. DATUM SHALL BE OF SUCH ELEVATION THAT THE GROUND WILL SLOPE AWAY FROM IT IN ALL DIRECTIONS.
2. CONSTRUCTION ACTIVITY SHALL BE LIMITED FROM 8:00 A.M. TO 6 P.M., AND NO CONSTRUCTION ACTIVITY SHALL OCCUR ON SUNDAYS OR LEGAL NEW YORK STATE HOLIDAYS. WHERE BLASTING IS NECESSARY, IT SHALL OCCUR FROM MONDAY THROUGH FRIDAY BETWEEN THE HOURS OF 8:00 A.M. AND 6:00 P.M. NO BLASTING SHALL OCCUR ON HOLIDAYS, SATURDAY OR SUNDAY. ALL BLASTING SHALL ALSO BE COMPLETED IN ACCORDANCE WITH THE TOWN OF OSSINING AND NEW YORK STATE BLASTING ORDINANCES.
3. ANY SOIL THAT IS UNSUITABLE FOR DEVELOPMENT OF BUILDINGS OR ROADWAYS SHALL BE REMOVED FROM THE AREA AND SHALL BE DISPOSED OF WITHIN THE SITE IN NEW EMBANKMENTS WHERE STRUCTURAL LOADING, I.E. A BUILDING OR ROADWAY, WILL NOT TAKE PLACE. WHEN CONSTRUCTION IS PROPOSED TO OCCUR IN SPECIFIC AREAS WHERE SOILS ARE OF QUESTIONABLE SUITABILITY, THE APPLICANT SHALL PROVIDE SOILS ENGINEERING REPORTS AS REQUIRED BY THE PLANNING BOARD ENGINEER, PRIOR TO THE CONSTRUCTION OF ROADWAYS AND, AS REQUIRED BY THE BUILDING INSPECTOR, PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
4. NO TOPSOIL SHALL BE REMOVED FROM THE SITE.
5. ROCK CUT STABILITY IS TO BE FIELD VERIFIED BY GEOTECHNICAL ENGINEER AND SHALL BE MOIDIFIED IF REQUIRED.
6. NO CRUSHING/PROCESSING IS PERMITTED ON THE SITE WITHOUT PRIOR APPROVAL BY THE TOWN OF OSSINING PLANNING BOARD.

GENERAL STORM DRAINAGE & UTILITY NOTES

1. ALL UTILITIES, INCLUDING ELECTRIC LINES, TELEPHONE, WATER, SANITARY SEWER LINES, AND STORM SEWER LINES SHALL BE LOCATED UNDERGROUND AND SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF OSSINING AND THE UTILITY COMPANIES HAVING JURISDICTION.
2. LOCATION OF GAS AND WATER VALVES, ELECTRIC AND TELEPHONE POLES ARE TO BE DETERMINED BY PROPER AUTHORITIES AND APPROVED, AS TO LOCATION, BY THE TOWN ENGINEER.
3. EACH BUILDING CONSTRUCTED HEREON SHALL BE OF SUCH AN ELEVATION THAT THE GROUND WILL SLOPE AWAY FROM IT IN ALL DIRECTIONS. IN THE EVENT THAT THIS IS NOT FEASIBLE, THE CONTRACTOR SHALL INSTALL TYPICAL YARD DRAINS AS REQUIRED AND CONNECT THEM TO THE STORM DRAINAGE SYSTEM OR AS DIRECTED BY THE PROJECT ENGINEER.
4. ROOF LEADERS AND FOOTING DRAINS SHALL EMPTY INTO THE STORM DRAINAGE SYSTEM OR DISCHARGE DIRECTLY TO STORMWATER MANAGEMENT SYSTEMS IF GRADES PERMIT, AND CONNECTION TO THE STORM SYSTEM IS NOT FEASIBLE. FOOTING DRAINS ONLY MAY DISCHARGE TO DAYLIGHT AT THE REAR OF BUILDINGS. FOOTING DRAINS SHALL EXTEND A MINIMUM OF 30 FT. FROM THE REAR FACE OF THE BUILDING WHEN POSSIBLE. UNDER NO CIRCUMSTANCES SHALL THE DISCHARGE OF GROUND WATER OR STORM WATER, EITHER BY GRAVITY OR BY PUMPING, BE DISCHARGED TO ANY SANITARY SEWER SYSTEM.
5. ANY REVISIONS AND/OR ADDITIONS TO THE ROAD STORM DRAINAGE SYSTEMS CURRENTLY SHOWN ON THE PLANS WHICH ARE DEEMED NECESSARY DURING CONSTRUCTION MUST BE MADE BY THE CONTRACTOR AS REQUIRED BY THE TOWN AND SHALL BE SHOWN ON THE AS-BUILT DRAWINGS.
6. STORM DRAIN PIPING TO BE HIGH DENSITY POLYETHYLENE AS SHOWN ON THE CONSTRUCTION DRAWINGS. MINIMUM COVER TO BE 2" UNLESS OTHERWISE NOTED.
7. INTERCEPTOR DRAINS ARE TO BE INSTALLED WHERE REQUIRED BY THE TOWN OR PROJECT ENGINEER DURING ROAD CONSTRUCTION.
8. ALL EXISTING UNDERGROUND DRAINS ENCOUNTERED DURING CONSTRUCTION OF PROPOSED ROADS ARE TO BE CONNECTED TO PROPOSED DRAINAGE IMPROVEMENTS. CONNECTIONS TO BE APPROVED BY THE TOWN ENGINEER.
9. PRIOR TO FINAL APPROVAL AND OPERATION OF DRAINAGE SYSTEM, CONTRACTOR SHALL CLEAR ALL ACCUMULATED SEDIMENT AND/OR DEBRIS FROM DRAINAGE STRUCTURES, MANHOLES, CULVERTS, OUTLETS AND DRAIN INLETS. ENGINEER SHALL BE NOTIFIED FOR FINAL INSPECTION.
10. ALL STRUCTURES SHALL BE SET ONE INCH BELOW PAVEMENT.
11. STREET OPENING PERMIT FROM THE TOWN OF OSSINING D.P.W. MAY BE REQUIRED FOR INSTALLATIONS IN PUBLIC ROADS.

WALL NOTES:

1. EXCAVATION IN GENERAL SHALL CONFORM TO THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS.
2. THE ENGINEER SHALL BE NOTIFIED OF UNSUITABLE SUB-GRADE SOILS PRIOR TO PLACEMENT OF WALL.
3. WALLS TO BE CONSTRUCTED ON VIRGIN IN-SITU SOIL SHALL HAVE A MINIMUM ALLOWABLE BEARING CAPACITY OF 2 TSF. ALL OTHER CONDITIONS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER.
4. TO INSURE A PROPER BEARING SURFACE, THE WALL SHALL BE CONSTRUCTED ON NATURAL IN-SITU SOIL. THE CONTRACTOR SHALL STRIP ALL TOP SOIL. THE AREA SHALL THEN BE COMPACTED USING SUITABLE COMPACTION EQUIPMENT. A MINIMUM OF 3 PASSES SHALL BE MADE.
5. WALLS SHALL NOT BE CONSTRUCTED ON WET OR FROZEN GROUND.
6. SOILS USED AS BACKFILL SHALL CONSIST OF CLEAN DRY SOIL. THE MATERIAL SHALL BE GRANULAR AND FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL. IN GENERAL THE SOIL SHALL BE NON-PLASTIC WITH A PLASTICITY INDEX LESS THAN 5 AND SHALL CONFORM TO THE AASHTO SOIL CLASSIFICATION SYSTEM FOR AN "A-1-A" SOIL. HOWEVER THE MAXIMUM SIZE SHALL BE 6". IN GENERAL ALL FILL SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS USE. WET MATERIAL OR UNSUITABLE MATERIAL SHOULD NOT BE USED.
7. BACKFILL SHALL BE PLACED AND COMPACTED IN A MAXIMUM 12" LIFTS.
8. ALL BOULDER RETAINING WALLS SHALL HAVE A GEOTEXTILE FABRIC BACKING FOR THE FULL HIEGHT OF THE WALL AS MANUFACTURED BY MIRAFI OR APPROVED EQUAL.
9. IF GROUNDWATER IS ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO DETERMINE IF THE ADDITION OF AN UNDERDRAIN MAY BE REQUIRED.
10. THE CONTRACTOR SHALL NOT USE LARGE OR HEAVY CONSTRUCTION EQUIPMENT WITHIN 5' OF THE RETAINING WALLS OR NEW FOUNDATION WALLS. HAND OPERATED COMPACTING EQUIPMENT SHALL BE USED WITHIN 5' OF THE WALL FACE.
11. ALTERNATE WALL DESIGNS MUST BE SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER THE MINIMUM FACTORS OF SAFETY FOR SLIDING AND OVERTURNING SHALL BE 2.0.
12. ALTERNATE WALL DESIGNS MUST BE SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER THE MINIMUM FACTORS OF SAFETY FOR SLIDING AND OVERTURNING SHALL BE 2.0.

WATERMAIN NOTES

I. DISTRIBUTION SYSTEM - WATERMAIN

A. GENERAL

THE CONTRACTOR SHALL PERFORM THE NECESSARY EXCAVATION, BACKFILLING, CLEARING, GRUBBING, SHEETING, SHORING, DO ALL SHAPING OF TRENCHES, PUMPING AND BAILING, LAYING AND JOINING OF ALL PIPES, PROTECT AND SUPPORT EXISTING STRUCTURES AND REPAIR THEM, IF DAMAGED, AND ALL ELSE NECESSARY TO COMPLETE THE WORK.

THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, LABOR, AND TOOLS NECESSARY TO COMPLETE THE WORK IN A SAFE, NEAT, AND WORKMANLIKE MANNER.

B. SITE AND ACCESS CLEARING (WITHIN EASEMENTS)

THE CONTRACTOR SHALL CONFINE ALL CLEARING OPERATIONS TO WITHIN THE IMMEDIATE AREAS THAT ARE ESSENTIAL FOR CONSTRUCTION OF THE WORK.

C. STOCKPILING OF SUITABLE BACKFILL MATERIAL

THE CONTRACTOR SHALL BE PREPARED WHEN EXCAVATING THE TRENCH TO SEPARATE SUITABLE BACKFILL MATERIAL FROM UNSUITABLE MATERIAL FOR USE AS BACKFILL ADJACENT TO THE PIPE.

D. PROTECTION OF EXISTING STRUCTURES AND UTILITIES

SPECIAL PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT OVERHEAD POWER LINES, WATERMAINS, GAS MAINS, ELECTRIC AND TELEPHONE CONDUITS, STORM AND SANITARY SEWERS, CULVERTS, BUILDINGS AND OTHER EXISTING STRUCTURES IN AND NEAR THE EXCAVATION. IN ALL CASES, WHETHER UNDERGROUND STRUCTURES HAVE OR HAVE NOT BEEN DELINEATED, THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE ACCEPTS NO RESPONSIBILITY FOR THEIR LOCATION. "UNDERGROUND UTILITIES" LOCATES EXISTING UNDERGROUND UTILITIES FREE OF CHARGE. THE PHONE NUMBER IS 1-800-245-2828.

GUTTERS, SEWERS, DRAINS AND DITCHES SHALL BE KEPT OPEN AT ALL TIMES FOR SURFACE DRAINAGE. NO DAMMING OR PONDING OF WATER IN GUTTERS OR OTHER WATERWAYS WILL BE PERMITTED EXCEPT WHERE STREAM CROSSINGS ARE NECESSARY AND THEN ONLY TO AN EXTENT WHICH THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE SHALL CONSIDER NECESSARY. THE CONTRACTOR SHALL NOT DIRECT ANY FLOW OF WATER ACROSS OR OVER PAVEMENTS EXCEPT THROUGH APPROVED PIPES OR PROPERLY CONSTRUCTED TROUGHS OF SUCH SIZES AND LENGTHS AS MAY BE REQUIRED, AND PLACE THE SAME AS DIRECTED. THE GRADING IN THE VICINITY OF TRENCHES SHALL BE CONTROLLED SO THAT THE GROUND SURFACE IS PROPERLY PITCHED TO PREVENT WATER RUNNING IN THE TRENCHING. THE CONTRACTOR SHALL NOT COMMENCE OPERATIONS INVOLVING ANY PUBLIC UTILITY BEFORE HAVING GIVEN WRITTEN NOTICE TO THE COMPANY OR OWNER, OR ITS AGENTS, AND SHALL COOPERATE WITH THE COMPANY'S OR OWNER'S FORCES IN PROTECTING AND PREVENTING DAMAGE TO THE PROPERTY.

THE CONTRACTOR WILL, AT HIS OWN EXPENSE, BE RESPONSIBLE FOR DIRECT OR INDIRECT DAMAGE THAT MAY BE DONE TO ANY UTILITY OR STRUCTURE IN THE PROSECUTION OF HIS WORK. THE LIABILITY OF THE CONTRACTOR IS ABSOLUTE AND IS NOT DEPENDENT UPON ANY QUESTIONS OF NEGLIGENCE ON HIS PART OR ON THE PART OF HIS AGENT, OR EMPLOYEES, AND THE NEGLECT OF THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE TO DIRECT THE CONTRACTOR TO TAKE ANY PARTICULAR PRECAUTION OR TO REFRAIN FROM DOING SUCH DAMAGE.

SHOULD THE POSITION OF ANY PIPE, CONDUIT, POLE OR OTHER STRUCTURES, ABOVE OR BELOW THE GROUND, BE SUCH AS TO REQUIRE ITS REMOVAL, REALIGNMENT, OR CHANGE DUE TO WORK TO BE DONE, REALIGNMENT OR CHANGE WILL BE DONE BY OR UNDER SUPERVISION OF THE OWNER OF THE OBSTRUCTIONS. THE CONTRACTOR SHALL UNCOVER AND SUSTAIN THE STRUCTURES, AFTER SUCH REALIGNMENT OR CHANGE.

THE CONTACTOR SHALL NOT INTERFERE WITH ANY PERSONS, OR WITH THE OWNER IN PROTECTING, REMOVING, CHANGING OR REPLACING THEIR PIPES, CONDUITS, POLES OR OTHER STRUCTURES; BUT HE SHALL SUFFER SAID PERSONS OR THE OWNER TO TAKE ALL SUCH MEASURES AS THEY MAY DEEM NECESSARY OR ADVISABLE FOR THE PURPOSE AFORESAID, AND THE CONTRACTOR SHALL THEREBY BE IN NO WAY RELIEVED OF ANY OF HIS RESPONSIBILITIES.

THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE OWNER OF THE RESPECTIVE UTILITY PRIOR TO RELOCATION OR INTERRUPTION OF SERVICE. ALL WORK NECESSARY FOR THE RELOCATION SHALL BE PERFORMED BY THE CONTRACTOR, OR BY THE OWNER AT THE OWNER'S OPTION, AND TO THE SATISFACTION OF THE OWNER. WHERE SERVICE IS INTERRUPTED, THE CONTRACTOR SHALL COOPERATE IN RESTORING SERVICE PROMPTLY. ALL CHARGES FOR DAMAGES DONE TO UTILITIES SHALL BE PAID BY THE CONTRACTOR.

E. CONSTRUCTION OF ROAD RIGHT-OF-WAY

CONSTRUCTION IN THE ROAD RIGHT-OF-WAY SHALL AT ALL TIMES BE PERFORMED WITH MINIMUM DISTURBANCE TO TRAFFIC WITH SUFFICIENT BARRICADES AND DIRECTION. DETOURS CAN BE INSTITUTED WITH APPROVAL OF THE TOWN ENGINEER, WATER SUPERINTENDENT OR AUTHORIZED REPRESENTATIVE OR STATE, COUNTY, OR LOCAL AUTHORITIES. PAVEMENT SHALL BE CUT PRIOR TO REMOVAL. HOLES AND SETTLEMENTS IN THE TRENCHES SHALL BE IMMEDIATELY FILLED TO THE ORIGINAL GRADE ELEVATION WITH THE SPECIFIED MATERIALS.

F. EXCAVATION AND PREPARATION OF TRENCH

THE CONTRACTOR SHALL PROCEED WITH CAUTION IN THE EXCAVATION AND PREPARATION OF THE TRENCH SO THAT THE EXACT LOCATION OF UNDERGROUND STRUCTURES, BOTH KNOWN AND UNKNOWN, MAY BE DETERMINED. THE TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND DEPTH REQUIRED. MINIMUM DEPTH OF COVER FROM SURFACE OF GROUND TO TOP OF PIPE BARREL SHALL BE FOUR FEET (4'). NO TRENCH SHALL BE EXCAVATED MORE THAN FIVE HUNDRED LINEAL FEET (500 LF) IN ADVANCE OF PIPE LAYING, UNLESS AUTHORIZED BY THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE. THE TRENCH SHALL BE SO BRACED AND DRAINED THAT THE WORKMEN MAY WORK THEREIN SAFELY AND EFFICIENTLY. IT IS ESSENTIAL THAT THE DISCHARGE OF THE TRENCH DEWATERING PUMPS BE CONDUCTED TO NATURAL DRAINAGE CHANNELS OR DRAINS, AS IN ACCORDANCE WITH OSHA REQUIREMENTS.

THE WIDTH OF THE TRENCH SHALL BE OF ADEQUATE SIZE TO PERMIT THE PIPE TO BE LAID AND JOINED PROPERLY, BUT SHALL NOT EXCEED THE SUM OF TWENTY-FOUR INCHES(24") PLUS THE PIPE OUTSIDE DIAMETER, AND THE BACKFILL TO BE PLACED AND COMPACTED AS SPECIFIED.

LEDGE ROCK, BOULDERS AND LARGE STONES SHALL BE REMOVED TO PROVIDE A CLEARANCE OF AT LEAST SIX INCHES (6") BELOW AND ON EACH SIDE OF ALL PIPES AND FITTINGS.

THE TRENCH SHALL BE EXCAVATED TO THE DEPTH REQUIRED SO AS TO PROVIDE A UNIFORM AND CONTINUOUS BEARING AND SUPPORT FOR THE PIPE ON SOLID AND UNDISTURBED GROUND AT EVERY POINT. WHERE THE BOTTOM OF THE TRENCH AT A SUBGRADE IS FOUND TO BE UNSTABLE, OR TO INCLUDE ASHES, CINDERS, ALL TYPES OF REFUSE, VEGETABLE OR OTHER ORGANIC MATERIAL OR LARGE PICES OF FRAGMENTS OR INORGANIC MATERIAL WHICH IN THE JUDGEMENT OF THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE SHOULD BE REMOVED, THE CONTRACTOR SHALL EXCAVATE AND REMOVE SUCH UNSUITABLE MATERIAL TO THE WIDTH AND DEPTH ORDERED BY THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE.

ANY PART OF THE BOTTOM OF THE TRENCH EXCAVATED BELOW THE SPECIFIED GRADE SHALL BE CORRECTED WITH APPROVED BEDDING MATERIAL, SUCH AS THOROUGHLY COMPACTED CRUSHED STONE, GRAVEL, OR CONCRETE AS DIRECTED BY THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE. THE FINISHED SUBGRADE SHALL BE PREPARED ACCURATELY BY MEANS OF HAND TOOLS.

GENERAL WATER MAIN NOTES:

1. ALL PROPOSED WATERMAIN MATERIALS, CONSTRUCTION AND INSTALLATION SHALL CONFORM TO ALL APPLICABLE RULES AND REGULATIONS OF THE TOWN OF OSSINING WATER DEPARTMENT AND THE WESTCHESTER COUNTY HEALTH DEPARTMENT STANDARDS AND SPECIFICATIONS.
2. THE RECORDS OF THE TOWN OF OSSINING INDICATE THAT THERE IS ADEQUATE WATER PRESSURE AND CAPACITY AS REQUIRED TO SERVE THIS PROJECT.
3. ALL BACKFLOW PREVENTION DEVICES ASSOCIATED WITH THE FIRE AND DOMESTIC SERVICES FOR EACH OF THE PROPOSED OFFICE SPACES IN THE TYPE "B" UNITS SHALL BE LOCATED INTERNAL TO THE BUILDING AND SHALL REQUIRE SEPARATE APPROVAL BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH.
4. ALL FIRE AND DOMESTIC SERVICE CONNECTIONS FROM THE PROPOSED WATER MAIN SHALL BE INSTALLED WITH WET TAPS AFTER THE CONTRACTOR HAS INSTALLED THE MAIN AND IT HAS BEEN APPROVED BY THE TOWN OF OSSINING WATER DEPARTMENT AND THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH.
5. THE CONTRACTOR IS ADVISED THAT BEFORE HE CONNECTS TO THE EXISTING WATER SYSTEM, HE MUST ADVISE AND COORDINATE HIS OPERATIONS WITH THE TOWN OF OSSINING WATER DEPARTMENT'S SUPERINTENDENT. MEANS AND METHODS USED TO CONNECT TO THE EXISTING SERVICE SHALL BE APPROVED BY THE TOWN AND SHALL INCLUDE BUT NOT BE LIMITED TO WET TAPS OR OTHERWISE.
6. THE CONTRACTOR IS TO MAINTAIN CONSTANT FLOW AND PRESSURE IN ALL WATER MAINS AT ALL TIMES. IF THE NEED SHOULD ARISE THAT WATER SERVICE IS TO BE INTERRUPTED FOR A SHORT PERIOD, IT MUST BE COORDINATED WITH AND APPROVED BY THE ENGINEER AND THE TOWN OF OSSINING SUPERINTENDENT OF WATER.
7. WATER MAINS CROSSING HOUSE SEWERS, STORM SEWERS OR SANITARY SEWERS SHALL BE LAID TO PROVIDE A VERTICAL SEPARATION OF A MINIMUM OF 18" BETWEEN THE BOTTOM OF WATER MAIN AND TOP OF SEWER.
8. WATER MAINS PASSING UNDER HOUSE SEWERS, IN ADDITION, SHALL BE PROTECTED BY PROVIDING A VERTICAL SEPARATION OF 18" MINIMUM FROM THE BOTTOM OF THE SEWER TO THE TOP OF THE WATER MAIN AND ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF THE JOINTS AND THE SEWER SETTling AND BREAKING THE WATER MAIN. IN ADDITION THE LENGTH OF WATER PIPE IS TO BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER. NO WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER OR SEWER MANHOLE.
9. THE COVER OVER THE TOP OF THE WATER MAIN SHALL BE A MINIMUM OF 4 FEET TO A MAXIMUM OF 5.5 FT.
10. WATER MAINS SHALL BE CLASS 54 DUCTILE IRON PIPES (DIP) TYTON JOINT TYPE AND FITTINGS SHALL BE FACTORY CEMENT LINED CLASS 54. ALL FITTINGS SHALL HAVE MECHANICAL JOINTS AND SHALL BE PRESSURE RATED AT 250 PSI. ALL NECESSARY JOINT MATERIALS SHALL BE FURNISHED. WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH AWWA STANDARDS, LATEST REVISION.
11. ALL GATE VALVES SHALL BE MUELLER RESILIENT WEDGE (TURN LEFT OPEN) TYPE AND SHALL MEET AWWA STANDARDS, LATEST REVISION.
12. ALL SERVICE CONNECTIONS AND SMALL DIAMETER EXTENSIONS SHALL CONFORM TO AWWA C-151.
13. RETAINER GLANDS AND CONCRETE THRUST BLOCKS OR RODS SHALL BE USED AT ALL LOCATIONS WHERE RESTRAINTS EXIST.
14. INSTALLATION AND TESTING OF THE WATER MAIN SHALL BE INSPECTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH. THE CONTRACTOR SHALL PROVIDE THE HEALTH DEPARTMENT A MINIMUM 48 HOURS NOTICE PRIOR TO ANY PRESSURE/LEAKAGE TESTS AND/OR DISINFECTION AND BACTERIOLOGICAL TESTS PERFORMED ON THE PROPOSED WATER MAIN. THE RESULTS OF THE ABOVE TESTS MUST BE ACCEPTED BY THE WCHD PRIOR TO USE OF THE MAIN.
15. ASBUILT DRAWINGS SHALL SHOW DIMENSIONS BETWEEN ALL VALVE TURNING NUTS AND FINISH GRADE.
16. INSTALLATION, DISINFECTION AND TESTING TO BE WITNESSED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER OR TOWN OF OSSINING ENGINEER.
17. ALL HYDRANTS AND VALVES SHALL BE AS MANUFACTURED BY THE MUELLER COMPANY.
18. THE FINAL LOCATIONS OF FIRE HYDRANTS AND SIAMESE CONNECTIONS SHALL BE DETERMINED BY AND COORDINATED WITH THE TOWN OF OSSINING FIRE DEPARTMENT.
19. IF, DURING CONSTRUCTION, IT IS FOUND THAT THE REQUIRED SEPARATION OF WATER MAINS, SANITARY SEWERS, STORM SEWERS, AND BUILDING SEWERS CANNOT BE MET, THE DEVELOPER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONTACT THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH. APPROVAL BY THE WCHD IS REQUIRED PRIOR TO ANY FIELD CHANGES THAT WILL AFFECT MINIMUM WATER/SEWER SEPARATION DISTANCES.
20. ALL TYPES OF INSTALLED PIPE SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C-600.
21. ALL NEW, CLEANED OR REPAIRED WATER MAINS SHALL BE DISINFECTED AND BACTERIOLOGICAL TESTING PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C-651-05 (EXCEPT FOR SECTION 4.4.2 WHICH IS NOT APPROVABLE), THE SPECIFICATIONS INCLUDE DETAILED PROCEDURES FOR THE ADEQUATE FLUSHING, DISINFECTION, AND MICRO- BIOLOGICAL TESTING OF ALL WATER MAINS.
22. ROAD OPENINGS SHALL BE DONE IN ACCORDANCE WITH CONDITIONS OF PERMIT, AND COORDINATED WITH THE TOWN OF OSSINING.



PROJECT # 15-18

Site Design Consultants

Civil Engineers • Land Planners  
251-F Underhill Avenue, Yorktown Heights, NY 10598  
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www.sitedesignconsultants.com

Engineer:

Joseph C. Rina, P.E.  
NYS Lic. No. 64431

Revisions:		No.	Date	Comments
Town Comments	1	11/9/15		
	2	12/7/15		
	3	1/25/16		
Town Comments				

SCALE: ###/###/###	DRAWN BY: TK	DATE: 9/25/15
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NOTES

SITE PLAN  
PREPARED FOR  
**PARTH KNOLLS LLC.**

87 HAWKES AVENUE  
Town of Ossining  
Westchester County, NY

Sheet  
**G-1**



Construction Sequence

Recommended Sequence of Construction

Use of erosion and sediment control structures and practices are important for maintaining site stability under runoff and during daily construction activities. The Construction Sequence should be staged with erosion and sediment controls, as follows, with all controls in place and implemented prior to respective infrastructure construction. As construction proceeds, the controls should be monitored, maintained and replaced as needed. Additional controls may be required as needed to address unforeseen situations.

Refer to The Construction Drawings for all plans and details which relate to the Construction Sequence. This Sequence should be followed in conjunction with all Plans, Notes, and the Stormwater Pollution Prevention Plan. Prior to the commencement of work, the Owner and General Contractor shall read and understand the Sequence for Construction. The Sequence shall be discussed at the time of the Pre-construction Meeting.

During construction of the project, the Contractor is responsible to coordinate all required inspections with various agencies and the Project Engineer.

Construction Sequence

General Sequence: The general sequence applies to the start of all Phases of the project. The requirements in such shall be applied as appropriate in that phase and shall be assumed in place prior to the start of the work outlined in the sequence for each Phase.

- Prior to the beginning of any site work the major features of the construction must be field staked by a licensed surveyor. These include the building, limits of disturbance, utility lines, and Stormwater practices.
- Prior to the start of the project, an on-site pre-construction meeting will be held. This will be attended by the Project Owner, the Operator responsible for complying with the approved construction drawings including the Erosion and Sediment Control (E&SC) Plan and Details, the Design Engineer, the Engineer responsible for E&SC monitoring during construction, Town representatives from the Engineering Department and Code Enforcement.
- Cut and clear trees within the phase limits as necessary for the areas to be disturbed. Install tree protective measure at marked locations on E&SC Plan.
- Install all temporary erosion control measures as shown on the Erosion and Sediment Control Plan for the project's immediate disturbance areas. This shall include, but not limited to silt fence, stabilized construction entrances, diversion swales, sediment traps, construction fence, etc. This sequence must be followed to insure proper implementation of the Erosion and Sediment Control Plan (E&SC) and Stormwater Pollution Prevention Plan (SWPPP).
- Timbered trees and woodchips shall be temporarily stored in the stockpile and/or staging area if necessary before being removed off-site. Woodchips may be used for mulch to stabilize disturbed areas. Woodchip mulch shall be applied at a minimum rate of 500 lbs. per 1000 SF (2" thick minimum).
- Remove existing vegetative cover, cut and clear trees, grub, remove stumps and other surface features in the limit of construction only. Any disturbance that results from tree clearing and grubbing shall be immediately stabilized with woodchips mulch, hydro-mulch, or straw and seed. Timbered trees, wood chips, and stumps shall be removed off-site unless otherwise directed. As stated woodchips may be stockpiled for use as stabilized ground cover. Demolish and/or remove existing features, i.e.: fence, concrete slab, asphalt etc., and dispose of or stockpile as required by the Owner. All construction debris shall be properly disposed of in accordance with all Federal, State, and Local requirements.

Standard Sequence Notes for Phases I & II

- Begin rough grading the building pads for the Buildings. Begin moving the fill towards the location designated for each phase. Cut and fill of a certain phase shall meet the next phase boundary at a maximum slope of 2V:1H. For previous phases where grading is complete match to finish grade elevations. All compaction requirements shall be met within the fill sections. (This work shall include the commencement of the retaining walls around the proposed building construction.) Upon completion of the grading, temporary seed or hydro-mulch the embankment and install erosion control blankets as shown on the Plans along the northern perimeter of the fill section. During building and site construction, maintain and re-establish as required, erosion control and stabilization measures as required by the Site Plan and Details. Areas which are to remain undisturbed for more than seven (7) days shall be stabilized with temporary seeding or mulch.
- A licensed surveyor must define the building locations.
- Install or check condition of all temporary Erosion Control Measures as shown on the Erosion and Sediment Control Plan.
- Begin preparation of the building site and excavation of the building foundation as well as construction of all retaining walls. Areas in which final grade is achieved shall be immediately stabilized with permanent vegetative cover. Permanent slopes of 3:1 or greater shall receive erosion blankets.
- Begin construction of the foundation. Upon completion and after proper curing time is achieved, backfill the foundation and bring site to rough grade. Areas which are to remain undisturbed for more than seven (7) days shall be stabilized with temporary seeding or mulch.

The following phases are the general order for construction of the project and may be modified after approved by the supervising Engineer. The phasing is meant to minimize the amount of open disturbance. Under no circumstances shall multiple phases amounting to five (5) acres or greater be disturbed during the same period of time. In the event greater disturbance is necessary outside of the Phase limits shown on the Erosion and Sediment Control Plan, the Contractor shall coordinate with the Engineer of Record, and Municipality for an on-site meeting to discuss the alternative approach to the construction.

Phase I: Construction of Building 1 - The intent of this Phase is to complete the construction of Building 1, the driveways for the parking area in front of the building, the parking garage, the parking area in the rear of the building, and the landscape and hardscape included in the Phase limits shown on the Erosion and Sediment Control Plan. Additionally, any proposed drainage measures shown within the phase limits shall be put in place, but not connected until the final stabilization of Phase 2.

- The Surveyor shall stake-out the proposed driveway centerlines, limits of cut and fill and the location of the temporary sediment traps.
- Implement the General Sequence Notes 1 through 6 where applicable prior to continuing this Phase.
- Once the tree removal operation is complete strip the topsoil within the Phase I boundary and place excavated topsoil within the identified stockpile locations. Any soils so deemed by the Design or Monitoring Engineer shall be stockpiled for future use as landscaped area topsoil. Contractor shall take every precaution feasible to reduce the amount of disturbed/exposed soils during construction.
- Construct and install temporary sediment traps along the proposed access drive and rear parking area. Install the temporary filtered outlet pipe. Any disturbed area that will not be further disturbed within seven (7) days shall be immediately stabilized with woodchips, hydro-mulch, or straw and seed.
- Prior to starting the work install all erosion and sediment controls including the installation of the stabilized construction entrance and sediment trap.
- Begin the removal of the existing driveway. Material shall be properly disposed of.
- Begin rough grading of driveways within phase limits and adjacent areas. Slops in excess of 3H:1V shall not be left exposed and must be stabilized.
- Begin excavation of the building foundation for the Building and adjacent areas.

Refer to Notes 7 through 12 under the General Sequence.

- Cut material shall first be moved to the fill locations required to complete the access drive and staging area and bring the area up to final grades. Excess material to be used toward infilling in Phase II shall be stockpiled. Blasted rock that is not suitable to remain on site shall be hauled away and properly disposed of. An area has been provided for the stockpiling of removed soil and rock which is to be removed from the site as well as a cuing area for trucks awaiting loading.
- Proceed with the construction of Building 1. This includes the building structure itself, retaining walls, and rough grades. At any point during this begin installation of the utilities including the water and sewer connections, drainage and power utilities.
- Stake-out the location of utilities and utility structures within this Phase. Temporarily relocate the staging area at the western end of the site. Begin installation of subsurface infiltration and detention chambers within Phase I limits.
- When the subsurface units are installed, the upstream drainage structure shall be blocked so as to not allow sediment laden water from reaching the subsurface chambers.
- Backfill as installation is complete and stabilize the area. If trenches are to be left open, place excavated material on the up-slope sides of the trench and protect and stabilize if it is to remain open for an extended period of seven (7) days or more.
- Upon completion of the subsurface chambers, begin installation of proposed bypass and outlet structures. Install storm sewer piping, catch basins and manholes, working downstream to upstream. During the installation of catch basins, install inlet protection and water bar as per E&SC Plan to assure that sediment laden water will not enter the storm system. Once the final grade above the system is achieved, put into place the final topsoil cover, seed mix, and erosion control blanket, or hydro-mulch. Refer to the Landscape Plan for the seed mix requirements.
- Once the infiltrator system has been installed, grade and install the base course for the driveways and parking areas. Re-establish the staging area for the construction site trailer and parking.

Note: No stormwater is permitted to enter the infiltration system from the upstream conveyance system and shall be blocked until the completion and stabilization of all Phases tributary to the basin. An area shall be considered to have achieved final stabilization when it has a minimum uniform 80% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.

- Complete construction of the building and remaining retaining walls within Phase limits.
- Stake out and install curbing as per Plan. Once curbing is completed around catch basins, re-install inlet protection within catch basins. As curbing is complete, backfill with topsoil. Areas that are filled with topsoil are to be raked, seeded, and hay mulched.
- Upon completion of the majority of the infrastructure in that phase, install pavement binder course to the thickness and elevation as per the Construction Plans.
- As each Phase is at the completion stage install final asphalt surface.
- Install hardscape such as patios, walks steps etc., and final vegetation including sod and landscaping. Refer to Landscape Plans for location and identification of ground cover and plantings. Clear site of debris and all unwanted materials. Disposal shall be in accordance with all Federal, State, and Local requirements.
- During the Final Phase of building construction, finish grade, topsoil, rake, and seed all areas as required. Where required or recommended, hydro-mulch or install erosion control blankets.
- Upon completion of this Phase, the Contractor shall be required to stabilize disturbed soils in the event the disturbed area will remain not worked for greater than seven (7) days, at the direction of the Engineer of Record or permitting entity Inspector, and when significant precipitation is in the immediate forecast. All disturbed areas shall be temporarily stabilized with hydro-mulch or where appropriate woodchips. It is recommended that any grading that is at the finish stage will receive no further disturbance and that permanent stabilization such as topsoil, seed, mulching or blankets as per the Plan be installed. The next Phase cannot commence until these steps have been completed.

Phase II: Construction of Building 2 - The intent of this Phase is to complete the construction of Building 2, the main access driveway and parking for the building, the pool and recreation area located behind the building and the landscape and hardscape included in the Phase limits shown on the Erosion and Sediment Control Plan. Additionally, the any proposed drainage measures shown within the phase limits shall be put in place, but not connected until the final stabilization of Phase II.

- The Surveyor shall stake-out the proposed building, drive and parking access, pool and recreation area, limits of cut and fill, and the location of the temporary sediment traps.
- Strip topsoil within the Phase II boundary and place excavated topsoil within the identified stockpile locations. Any soils so deemed by the Design or Monitoring Engineer shall be stockpiled for future use as landscaped area topsoil. Contractor shall take every precaution feasible to reduce the amount of disturbed/exposed soils during construction.
- Begin excavation for the building foundation for the building and adjacent areas. Refer to Notes 7 through 12 under the General Sequence.
- Begin rough grading main access driveway and parking area for building 2. Connections to building 1 driveway shall be made at subgrade elevations.
- Cut material shall first be moved to the fill locations required to complete and bring the areas up to final grades. Excess material to be removed from the site.
- Stake-out the location of utilities and utility structures within this Phase. Install storm sewer piping, catch basins and manholes, working downstream to upstream. During the installation of catch basins, install inlet protection and water bar as per E&SC Plan to assure that sediment-laden water will not enter the storm system. Make connections to other phase utilities as necessary.
- Complete construction of the building and remaining retaining walls within Phase limits. Utilities must be installed and completed before the construction of the retaining walls.
- Stake out and install curbing as per Plan. Once curbing is completed around catch basins, re-install inlet protection within catch basins. As curbing is complete, backfill with topsoil. Areas that are filled with topsoil are to be raked, seeded, and hay mulched.
- Upon completion of the majority of the infrastructure in that phase, install pavement binder course to the thickness and elevation as per the Construction Plans.
- As the Phase is at the completion stage install final asphalt surface.
- Install hardscape such as patios, walks steps etc., and final vegetation including sod and landscaping. Refer to Landscape Plans for location and identification of ground cover and plantings. Clear site of debris and all unwanted materials. Disposal shall be in accordance with all Federal, State, and Local requirements.
- During the Final Phase of building construction, once final grade is achieved, place final topsoil cover, begin placement of seed mix and erosion control blanket, or hydro-mulch. Refer to the Landscape Plan for the seed mix requirements.

Final Site Stabilization and Completion of New Construction:

- Upon completion of all Phases, the site shall be inspected by the Supervising Engineer and Town Inspector to determine completion of all work and permanent stabilization of the site.
- Any areas deemed incomplete or not properly stabilized shall be done so to the satisfaction to the Supervising Engineer and Town Inspector.
- Once the site is deemed adequately stable the temporary erosion and sediment control measures can be removed including the sediment traps. The area where the sediment trap was located shall be filled, top soiled, seeded and mulched in accordance with the specifications within this plan. At that time if deemed appropriate drainage structures upstream from the subsurface stormwater management systems shall be cleaned of sediment and debris. They can then be unblocked to allow for flow of collected surface runoff.

Contact information during and after construction:

Anthony Beldotti  
APB Management  
500 Executive Blvd. #203  
Ossining, NY 10562  
914-762-7898

GENERAL EROSION CONTROL NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED. ROAD SURFACE FLOWS FROM THE SITE SHOULD BE DISSIPATED WITH TRACKING PAD OR APPROPRIATE MEASURES DURING ADJACENT ROAD SHOULDER REGRADING. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL DEVICES THROUGHOUT THE COURSE OF CONSTRUCTION.
- CATCH BASIN INLET PROTECTION MUST BE INSTALLED AND OPERATING AT ALL TIMES UNTIL TRIBUTARY AREAS HAVE BEEN STABILIZED. WHEN POSSIBLE FLOWS SHOULD BE STABILIZED BEFORE REACHING INLET PROTECTION STRUCTURE. TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED ON A REGULAR BASIS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
- THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURING STANDARDS SHALL BE AS SPECIFIED IN THESE PLANS, AS ORDERED BY THE ENGINEER, AND IN ACCORDANCE WITH THE LATEST EDITION OF THE "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" (NYSSESC).
- ALL TOPSOIL SHALL BE PLACED IN A STABILIZED STOCKPILE FOR REUSE ON THE SITE. ALL STOCKPILE MATERIAL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE TEMPORARILY SEEDED AND MULCHED WITHIN 7 DAYS. REFER TO SOIL STOCKPILE DETAILS.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 7 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL IMMEDIATELY RECEIVE TEMPORARY SEEDING. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL NOT BE LIMED AND FERTILIZED PRIOR TO TEMPORARY SEEDING.
- ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.
- THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.
- SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT EDITION OF NYSSESC.
- ALL REGRADED AREAS MUST BE STABILIZED APPROPRIATELY PRIOR TO ANY ROCK BLASTING, CUTTING, AND/OR FILLING OF SOILS. SPECIAL CARE SHOULD BE TAKEN DURING CONSTRUCTION TO INSURE STABILITY DURING MAINTENANCE AND INTEGRITY OF CONTROL STRUCTURES.
- ANY SLOPES GRADED AT 3:1 OR GREATER SHALL BE STABILIZED WITH EROSION BLANKETS TO BE STAKED INTO PLACE IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS. EROSION BLANKETS MAY ALSO BE REQUIRED AT THE DISCRETION OF TOWN OFFICIALS OR PROJECT ENGINEER. WHEN STABILIZED BLANKET IS UTILIZED FOR CHANNEL STABILIZATION, PLACE ALL OF THE VOLUME OF SEED MIX PRIOR TO LAYING NET, OR AS RECOMMENDED BY THE MANUFACTURER.
- TO PREVENT HEAVY CONSTRUCTION EQUIPMENT AND TRUCKS FROM TRACKING SOIL OFF-SITE, CONSTRUCT A PERVIOUS CRUSHED STONE PAD. LOCATE AND CONSTRUCT PADS AS DETAILED IN THESE PLANS.
- CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST BY SPRINKLING EXPOSED SOIL AREAS PERIODICALLY WITH WATER AS REQUIRED. CONTRACTOR TO SUPPLY ALL EQUIPMENT AND WATER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION INSPECTIONS AS PER NYSDEC GP-0-15-002 AND TOWN OF OSSINING CODE.

MAINTENANCE OF TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURES:

N.Y.S.D.E.C. GP-0-15-002 EXPOSURE RESTRICTIONS - STATES THAT ANY EXPOSED EARTHWORK SHALL BE STABILIZED IN ACCORDANCE WITH THE GUIDELINES OF THIS PLAN.

- TREES AND VEGETATION SHALL BE PROTECTED AT ALL TIMES AS SHOWN ON THE DETAIL DRAWING AND AS DIRECTED BY THE ENGINEER.
- CARE SHOULD BE TAKEN SO AS NOT TO CHANNEL CONCENTRATED RUNOFF THROUGH THE AREAS OF CONSTRUCTION ACTIVITY ON THE SITE.
- FILL AND SITE DISTURBANCES SHOULD NOT BE CREATED WHICH CAUSES WATER TO POND OFF SITE OR ON ADJACENT PROPERTIES.
- RUNOFF FROM LAND DISTURBANCES SHALL NOT BE DISCHARGED OR HAVE THE POTENTIAL TO DISCHARGE OFF SITE WITHOUT FIRST BEING INTERCEPTED BY A CONTROL STRUCTURE, SUCH AS A SEDIMENT TRAP OR SILT FENCE. SEDIMENT SHALL BE REMOVED BEFORE EXCEEDING 50% OF THE RETENTION STRUCTURE'S CAPACITY.
- FOR FINISHED GRADING, ADEQUATE GRADE SHALL BE PROVIDED SO THAT WATER WILL NOT POND ON LAWNS FOR MORE THAN 24 HOURS AFTER RAINFALL, EXCEPT IN SWALE FLOW AREAS WHICH MAY DRAIN FOR AS LONG AS 48 HOURS AFTER RAINFALL.
- ALL SWALES AND OTHER AREAS OF CONCENTRATED FLOW SHALL BE PROPERLY STABILIZED WITH TEMPORARY CONTROL MEASURES TO PREVENT EROSION AND SEDIMENT TRAVEL. SURFACE FLOWS OVER CUT AND FILL AREAS SHALL BE STABILIZED AT ALL TIMES.
- ALL SITES SHALL BE STABILIZED WITH EROSION CONTROL MATERIALS WITHIN 7 DAYS OF FINAL GRADING.
- TEMPORARY SEDIMENT TRAPPING DEVICES SHALL BE REMOVED FROM THE SITE WITHIN 30 DAYS OF FINAL STABILIZATION.

MAINTENANCE SCHEDULE:

	DAILY	WEEKLY	MONTHLY	AFTER RAINFALL	NECESSARY TO MAINTAIN FUNCTION	AFTER APPROVAL OF INSPECTOR
SILT FENCE	----	-----	INSP.	INSP.	CLEAN/ REPLACE	REMOVE
WHEEL CLEANER	CLEAN	-----	-----	-----	REPLACE	REMOVE
INLET PROTECTION	----	INSP.	INSP.	CLEAN	REPLACE	REMOVE

MAINTENANCE OF PERMANENT CONTROL STRUCTURES DURING CONSTRUCTION:

The stormwater management system and outlet structure shall be inspected on a regular basis and after every rainfall event. Sediment build up shall be removed from the inlet protection regularly to insure detention capacity and proper drainage. Outlet structure shall be free of obstructions. All piping and drain inlets shall be free of obstruction. Any sediment build up shall be removed.

MAINTENANCE OF CONTROLS AFTER CONSTRUCTION:

Controls (including respective outlet structures) should be inspected periodically for the first few months after construction and on an annual basis thereafter. They should also be inspected after major storm events.

DEBRIS AND LITTER REMOVAL:

Twice a year, inspect outlet structure and drain inlets for accumulated debris. Also, remove any accumulations during each mowing operation.

STRUCTURAL REPAIR/REPLACEMENT:

Outlet structure must be inspected twice a year for evidence of structural damage and repaired immediately.

EROSION CONTROL:

Unstable areas tributary to the basin shall immediately be stabilized with vegetation or other appropriate erosion control measures.

SEDIMENT REMOVAL:

Sediment should be removed after it has reached a maximum depth of five inches above the stormwater management system floor.

TOPSOIL:

Existing topsoil will be removed and stored in piles sufficiently as to avoid mixing with other excavation. Stockpiles shall be surrounded by erosion control as outlined on these plans. The furnishing of new topsoil shall be of a better or equal to the following criteria (SS713.01 NYSDOT):

- The pH of the material shall be 5.5 to 7.6.
- The organic content shall not be less than 2% or more than 70%.

Gradation:	SIEVE SIZE	% PASSING BY WGT.
	2 INCH	100
	1 INCH	85 TO 100
	1/4 INCH	65 TO 100
	NO. 200 MESH	20 TO 80

PERMANENT VEGETATIVE COVER:

- Site preparation:
  - Install erosion control measures.
  - Scarify compacted soil areas.
  - Lime as required to ph 6.5.
  - Fertilize with 10-6-4 4 lbs/1,000 S.F.
  - Incorporate amendments into soil with disc harrow.
- Seed mixtures for use on swales and cut and fill areas.

MIXTURE		LBS./ACRE
ALT. A	KENTUCKY BLUE GRASS	20
	CREeping RED FESCUE	28
	RYE GRASS OR REDTOP	5
ALT. B	CREeping RED FESCUE	20
	REDTOP	2
	TALL FESCUE/SMOOTH BLOOMGRASS	20

- SEEDING
  - Prepare seed bed by raking to remove stones, twigs, roots and other foreign material.
  - Apply soil amendments and integrate into soil.
  - Apply seed uniformly by cyclone seeder culti-packer or hydro-seeder at rate indicated.
  - Stabilize seeded areas in drainage swales.
  - Irrigate to fully saturate soil layer, but not to dislodge planting soil.
  - Seed between April 1st and May 15th or August 15th and October 15th.
  - Seeding may occur May 15th and August 15th if adequate irrigation is provided.

TEMPORARY VEGETATIVE COVER:

SITE PREPARATION:

- Install erosion control measures.
- Scarify areas of compacted soil.
- Fertilize with 10-10-10 at 400/acre.
- Lime as required to ph 6.5.

SEED SPECIES:

MIXTURE	LBS./ACRE
Rapidly germinating annual ryegrass (or approved equal)	20
Perennial ryegrass	20
Cereal oats	36

SEEDING:

Same as permanent vegetative cover

OWNER / OPERATOR CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Further, I hereby certify that the SWPPP meets all Federal, State, and local erosion and sediment control requirements. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law."

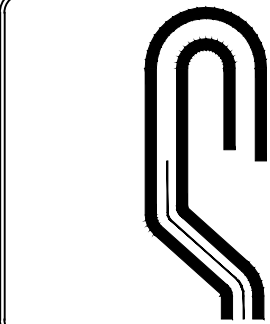
Name (please print): \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Signature: \_\_\_\_\_

CONTRACTOR CERTIFICATION STATEMENT

Certification Statement - All contractors and subcontractors as identified in a SWPPP, by the Owner or Operator, in accordance with Part III.A.5 of the SPDES General Permit for Stormwater Runoff from Construction Activity, GP-0-15-002, dated January 12, 2015, Page 10 of 40, shall sign a copy of the following Certification Statement before undertaking any construction activity at the Site identified in the SWPPP:

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the Qualified Inspector during a site inspection. I also understand that the Owner or Operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") General Permit for Stormwater Discharge from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

Individual Contractor: \_\_\_\_\_  
Name and Title (please print): \_\_\_\_\_  
Signature of Contractor: \_\_\_\_\_  
Company / Contracting Firm: \_\_\_\_\_  
Name of Company: \_\_\_\_\_  
Address of Company: \_\_\_\_\_  
Telephone Number / Cell Number: \_\_\_\_\_  
Site Information: \_\_\_\_\_  
Address of Site: \_\_\_\_\_  
Today's Date: \_\_\_\_\_



Site Design Consultants

Civil Engineers • Land Planners

251-F Underhill Avenue, Yorktown Heights, NY 10598  
(914) 962-4488 - Fax: (914) 962-7386  
www.sitedesignconsultants.com

Engineer:

Joseph C. Rina, P.E.  
NYS Lic. No. 64431

Revisions:	No.	Date	Comments:
	1	11/9/15	Town Comments
	2	12/7/15	Town Comments
	3	1/25/16	Town Comments

SCALE:  
N.T.S.

DRAWN BY:  
TK

DATE:  
9/25/15

E&SC NOTES

SITE PLAN  
PREPARED FOR

PARTH KNOLLS LLC.

87 HAWKES AVENUE

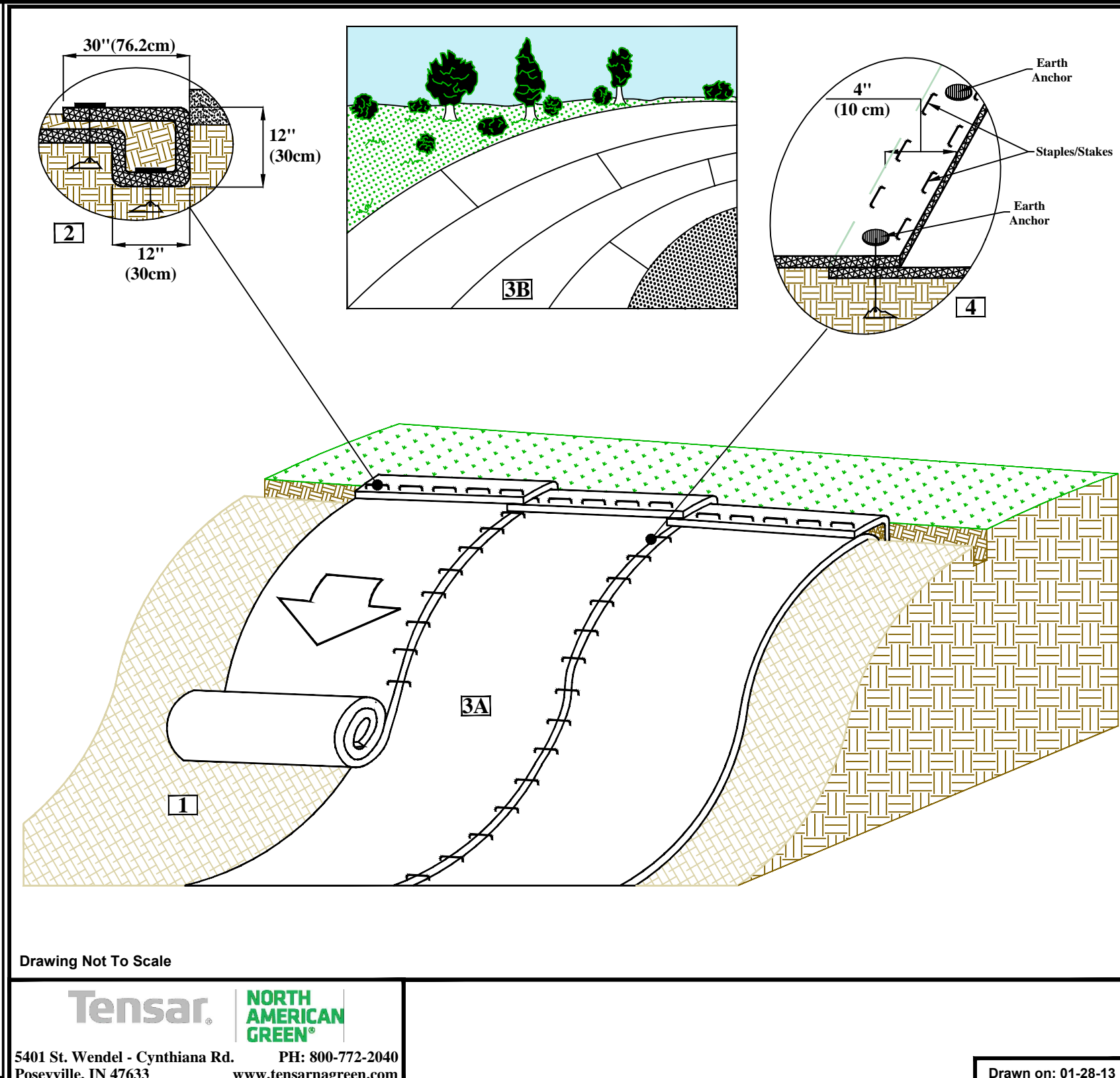
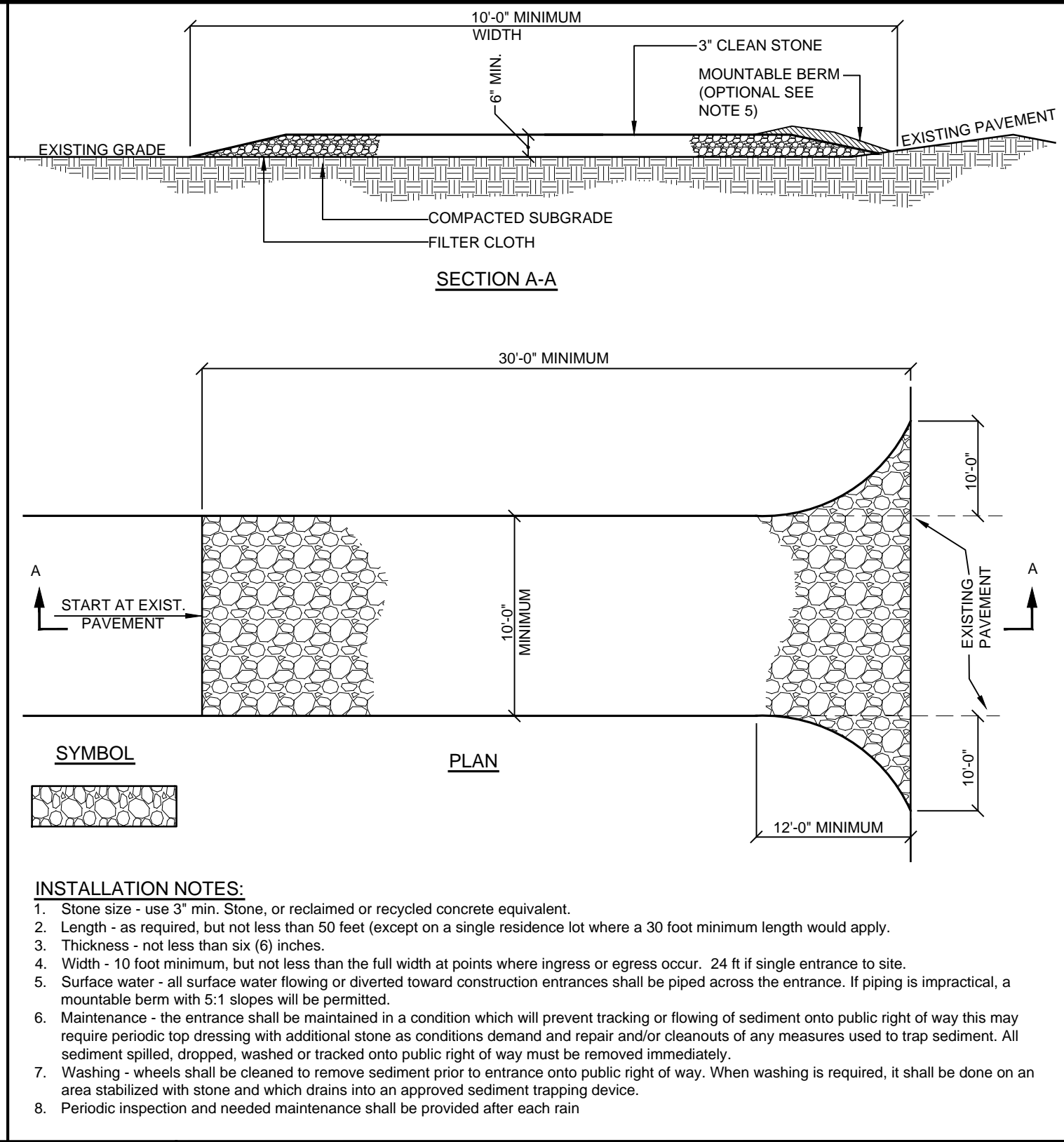
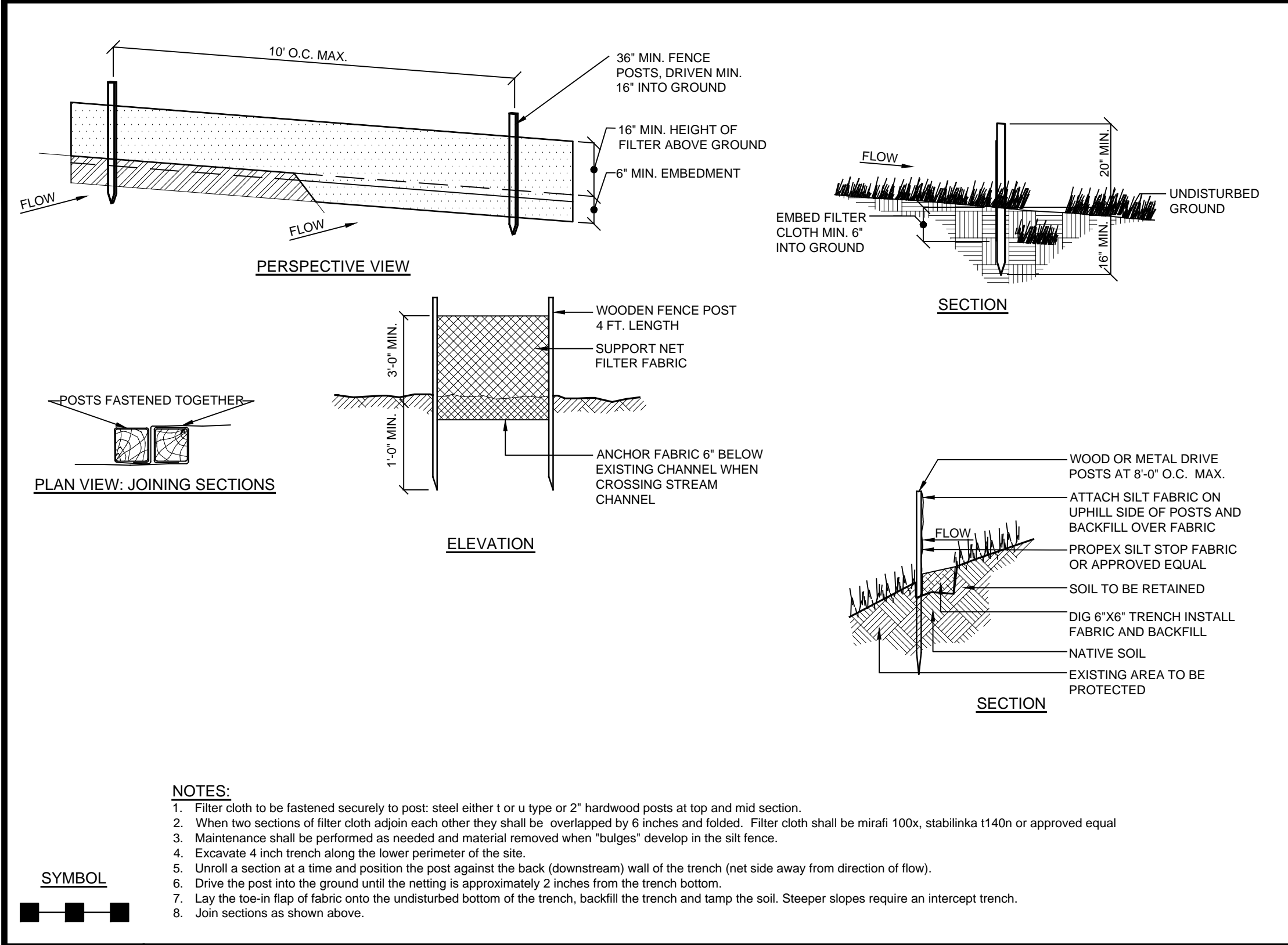
Westchester County, NY

Town Of Ossining

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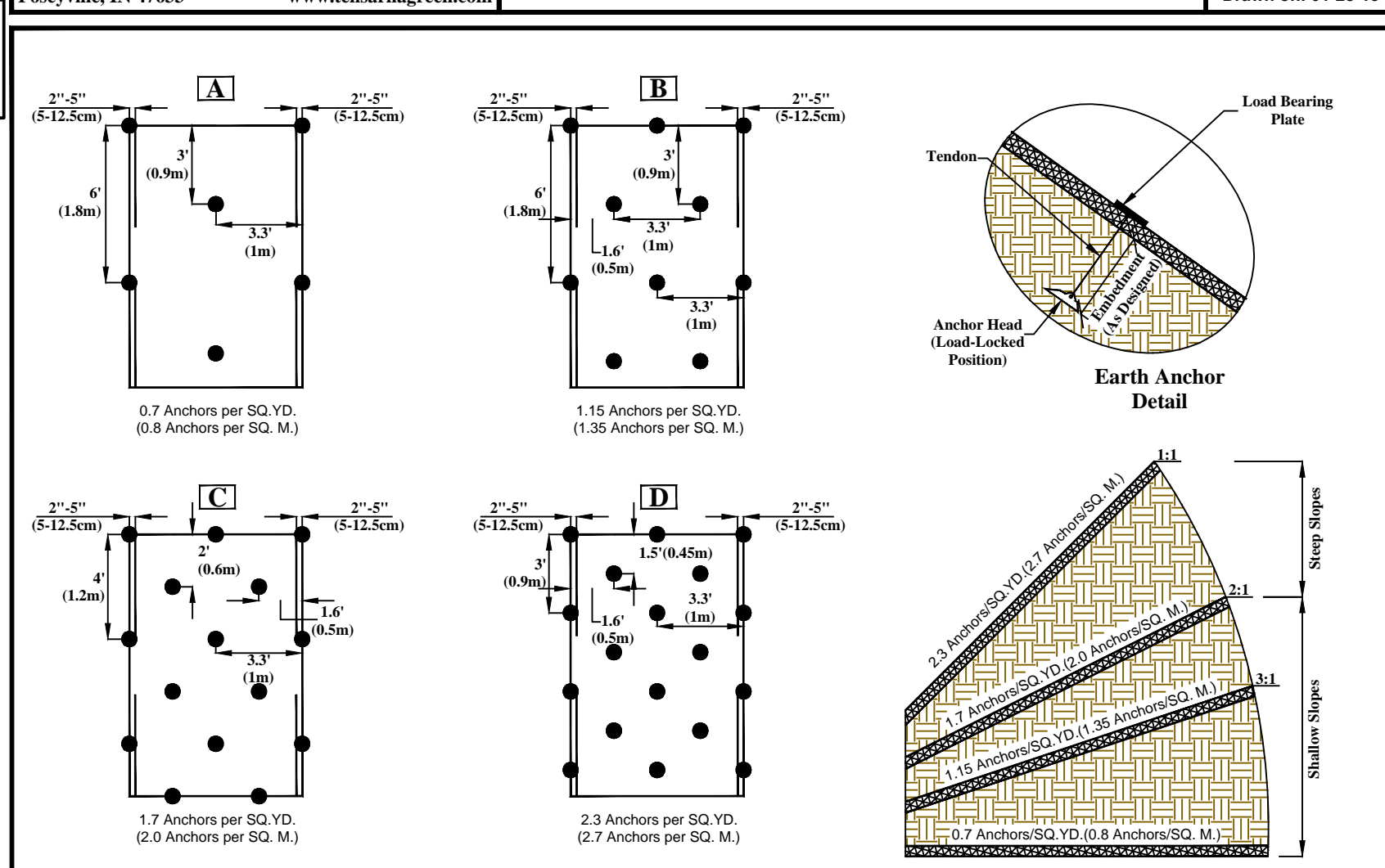
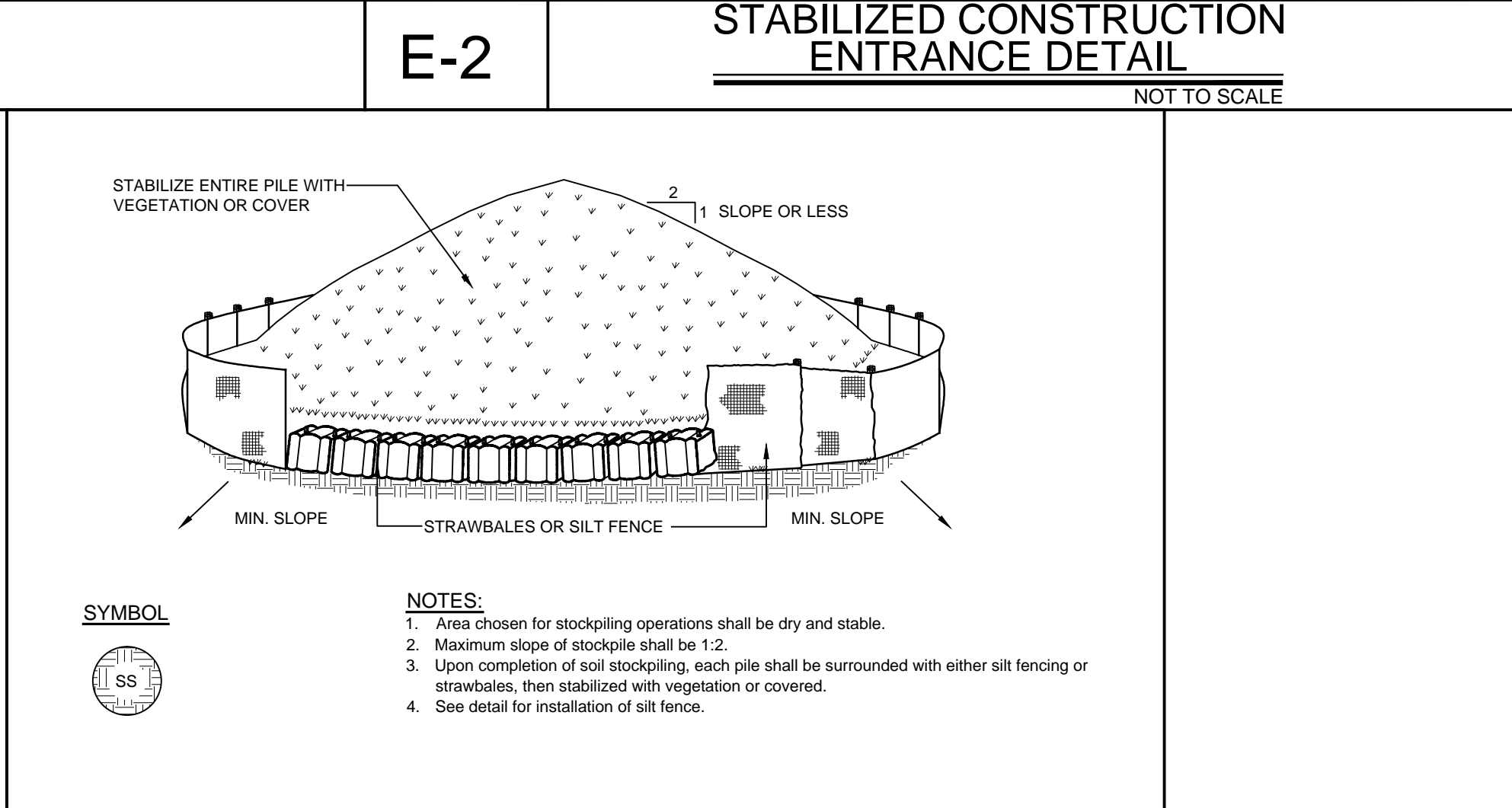
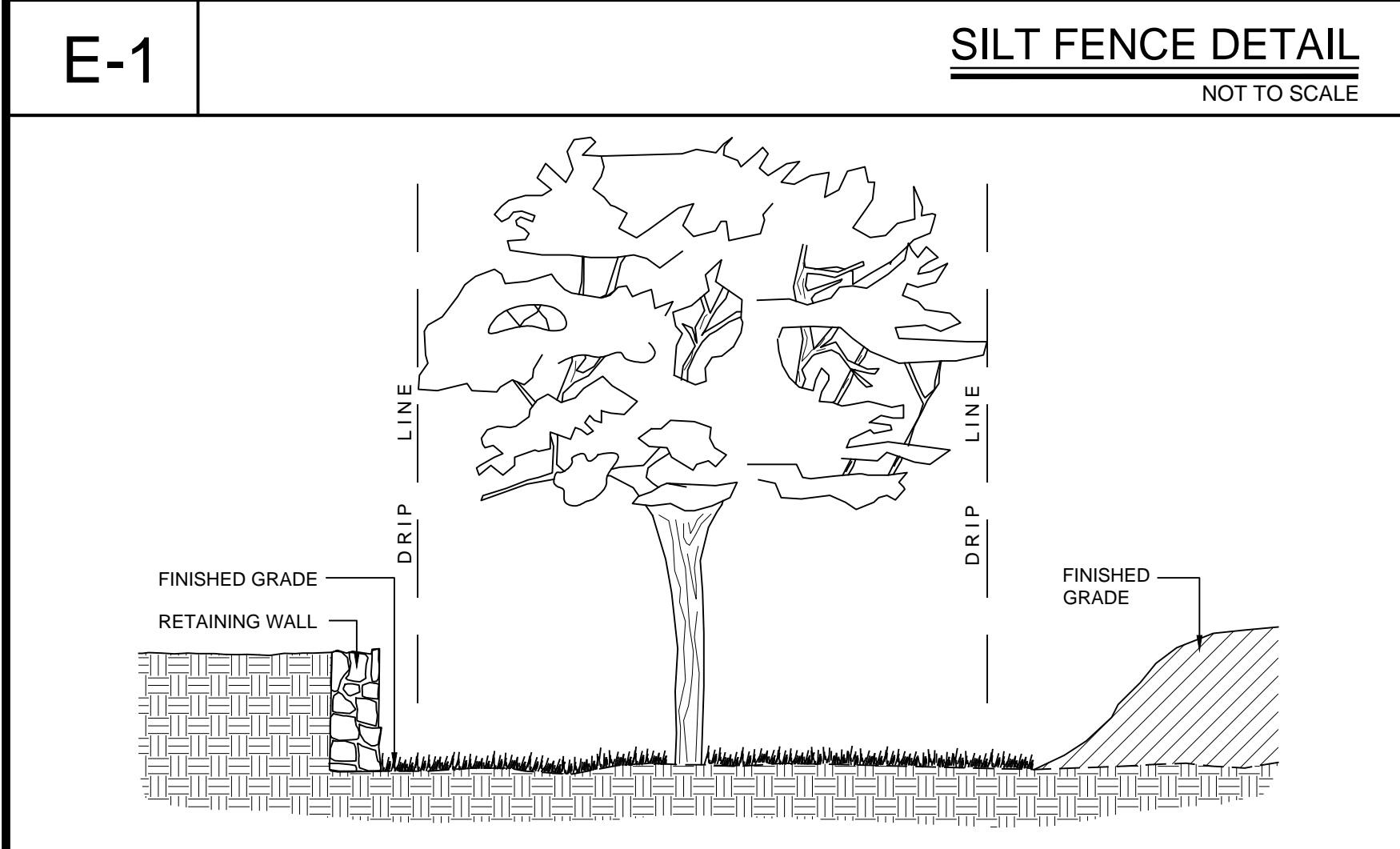
**SLOPE INSTALLATION EARTH ANCHOR (EA) DETAIL**

1. Prepare soil before installing high-performance turf reinforcement mats (HP-TRMs), including any necessary application of lime, fertilizer, and seed.

2. Begin at the top of the slope by anchoring the HP-TRMs in a 12" (30 cm) deep x 12" (30cm) wide trench with approximately 30" (76.2 cm) of HP-TRMs extended beyond the up-slope portion of the trench. Anchor the HP-TRMs with an alternating row of staples and anchors approximately 30" (76.2 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Fold remaining 30" (76.2 cm) portion of HP-TRMs back over compacted soil. Secure HP-TRMs over compacted soil with an alternating row of staples/stakes spaced approximately 18" (45 cm) apart across the width of the HP-TRMs.

3. Roll the HP-TRMs (A) down or (B) horizontally across the slope. HP-TRMs will unroll with appropriate side against the soil surface. All HP-TRMs must be securely fastened to soil surface by placing staples/anchors in appropriate locations as shown in the staple pattern guide.

4. The edges of parallel HP-TRMs must be stapled between earth anchors with approximately 4" (10 cm) overlap depending on the HP-TRM type. For curved sections, adjust the overlap edges of parallel HP-TRMs accordingly with a minimum of 4" (10 cm) overlap to accommodate transitional segments.



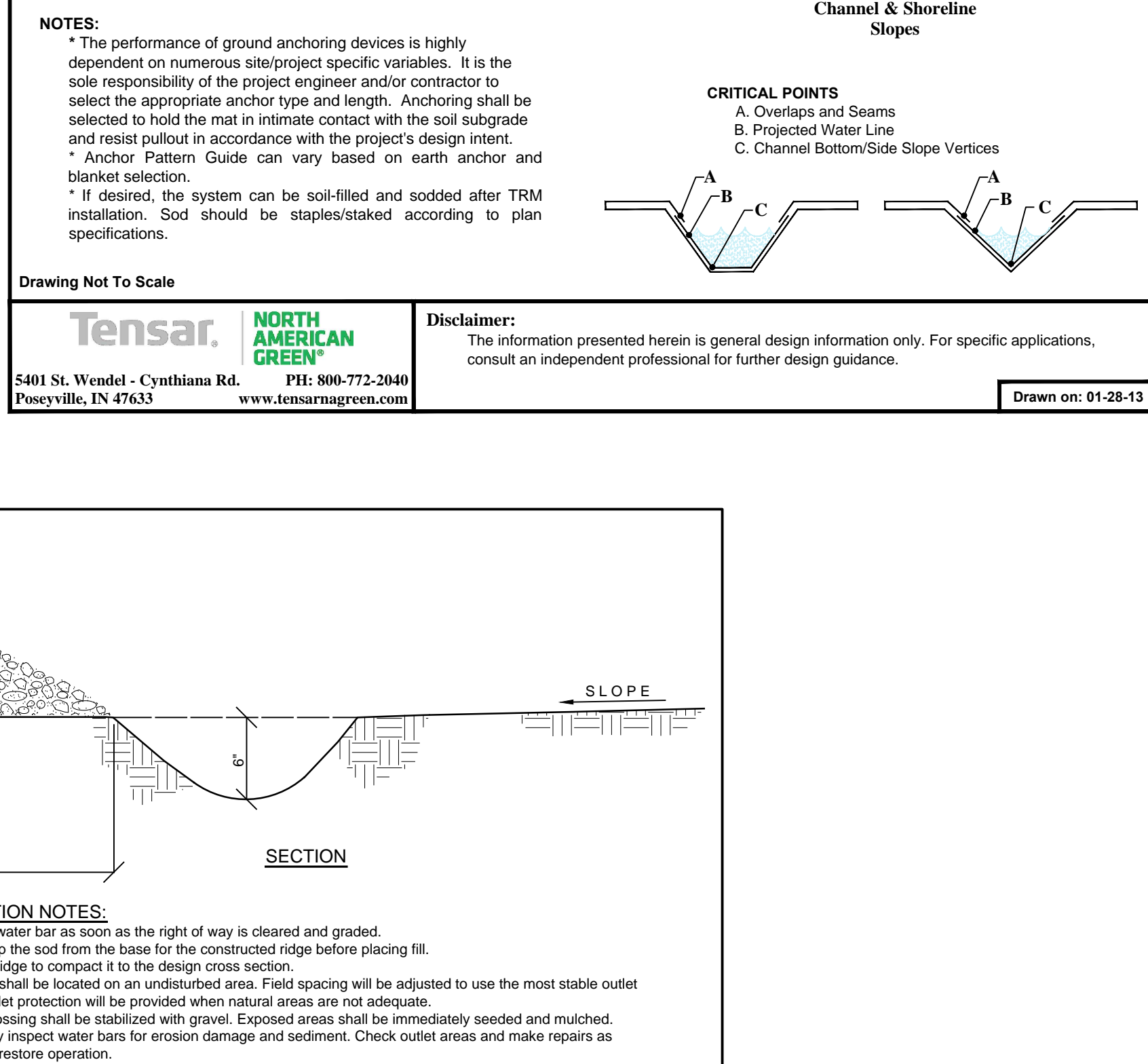
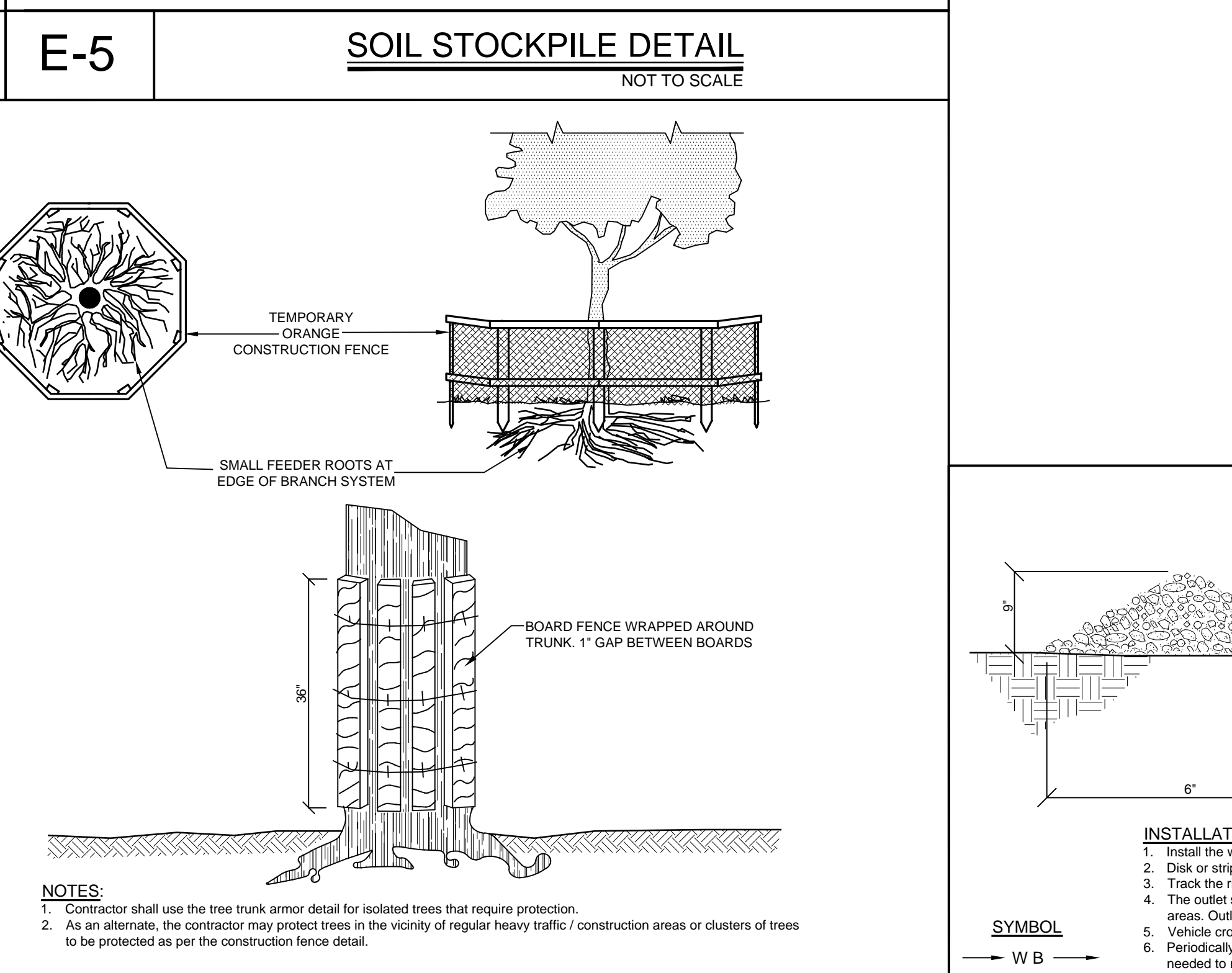
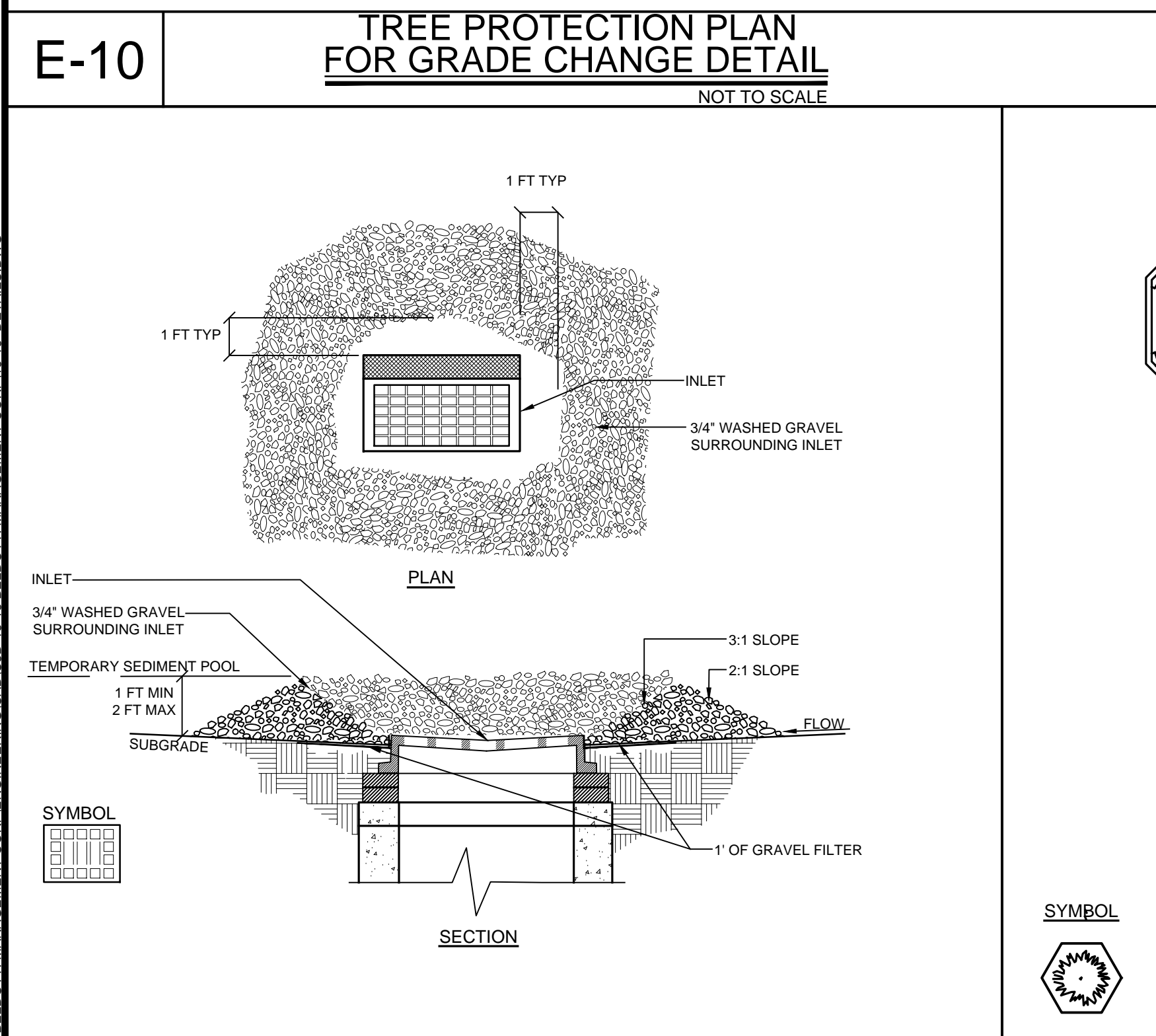
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**E-3 INLET PROTECTION DETAIL**

NOT TO SCALE

**E-4 TREE TRUNK ARMOR / TREE PROTECTION DETAIL**

NOT TO SCALE

**E-6 WATER BAR DETAIL**

NOT TO SCALE

PROJECT # 15-18

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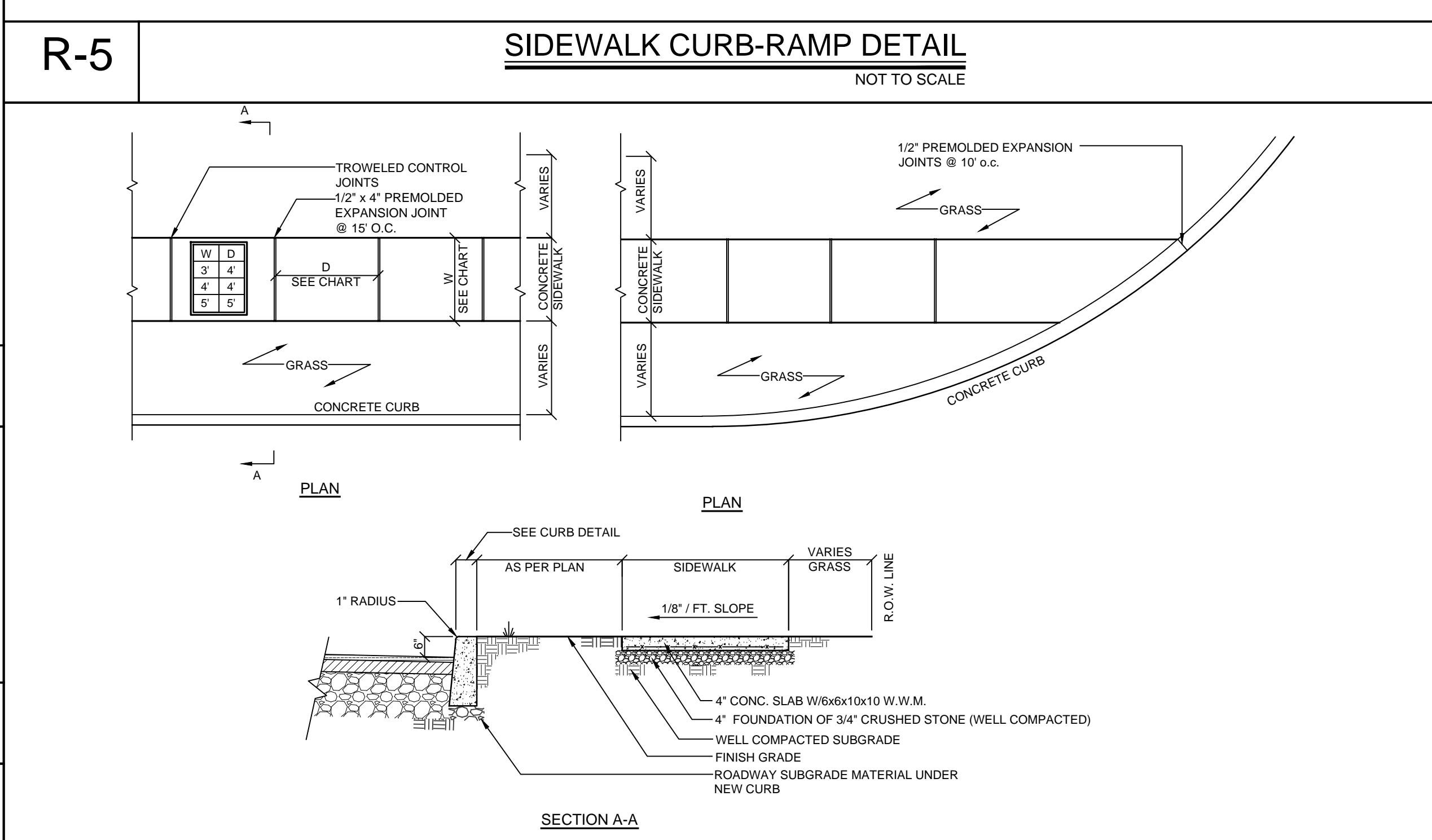
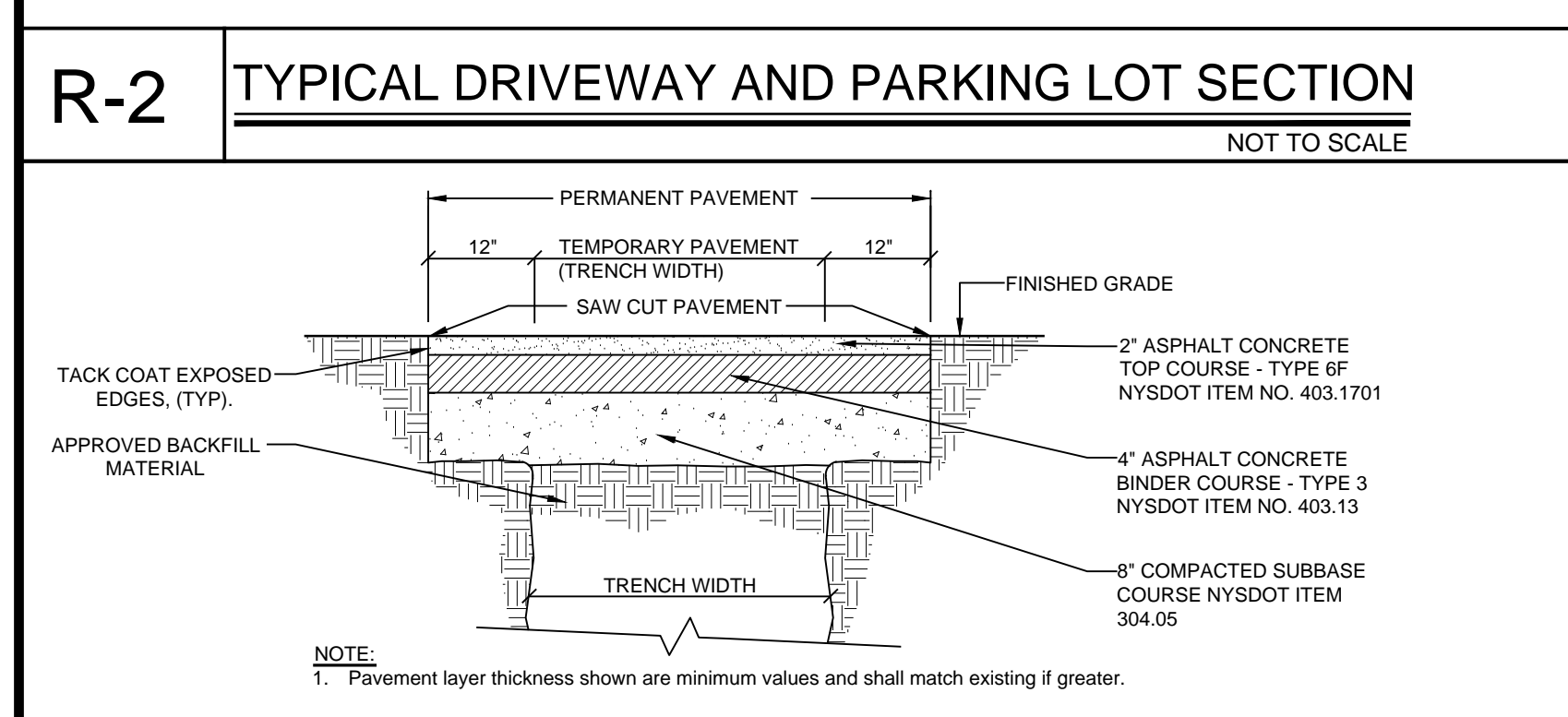
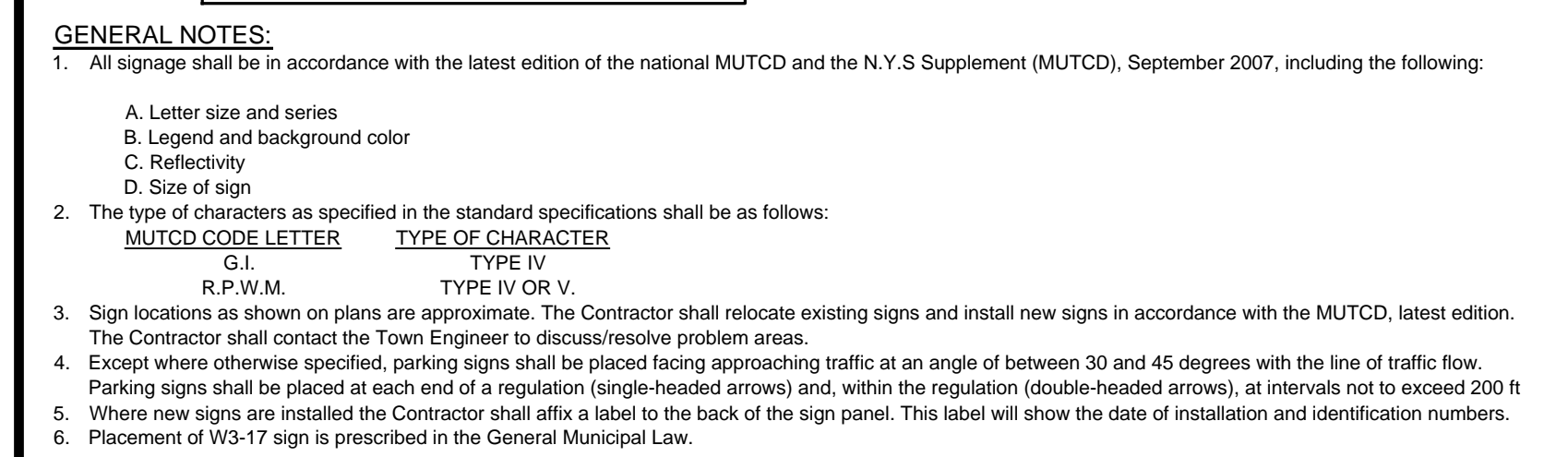
Town of Ossining

Westchester County, NY

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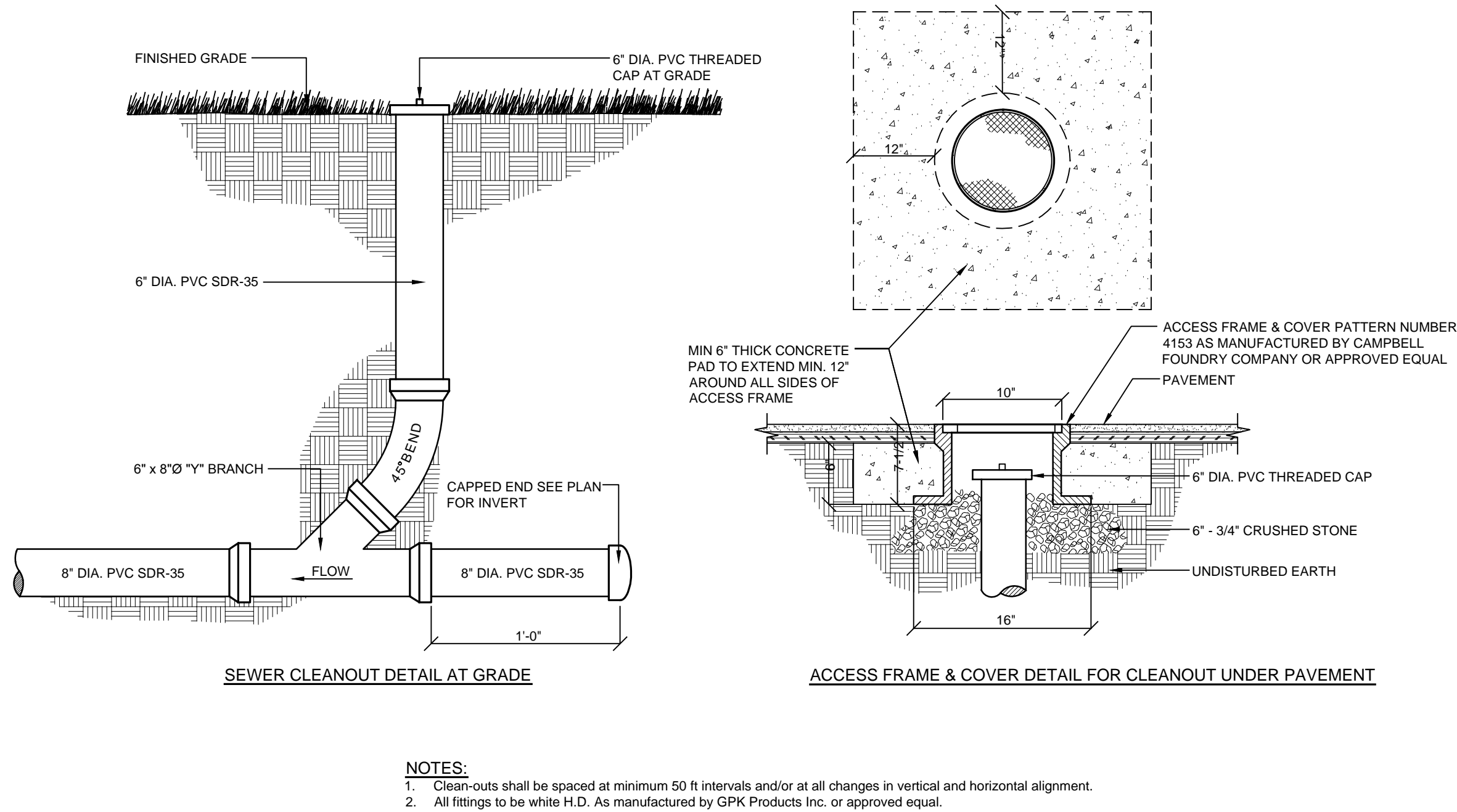
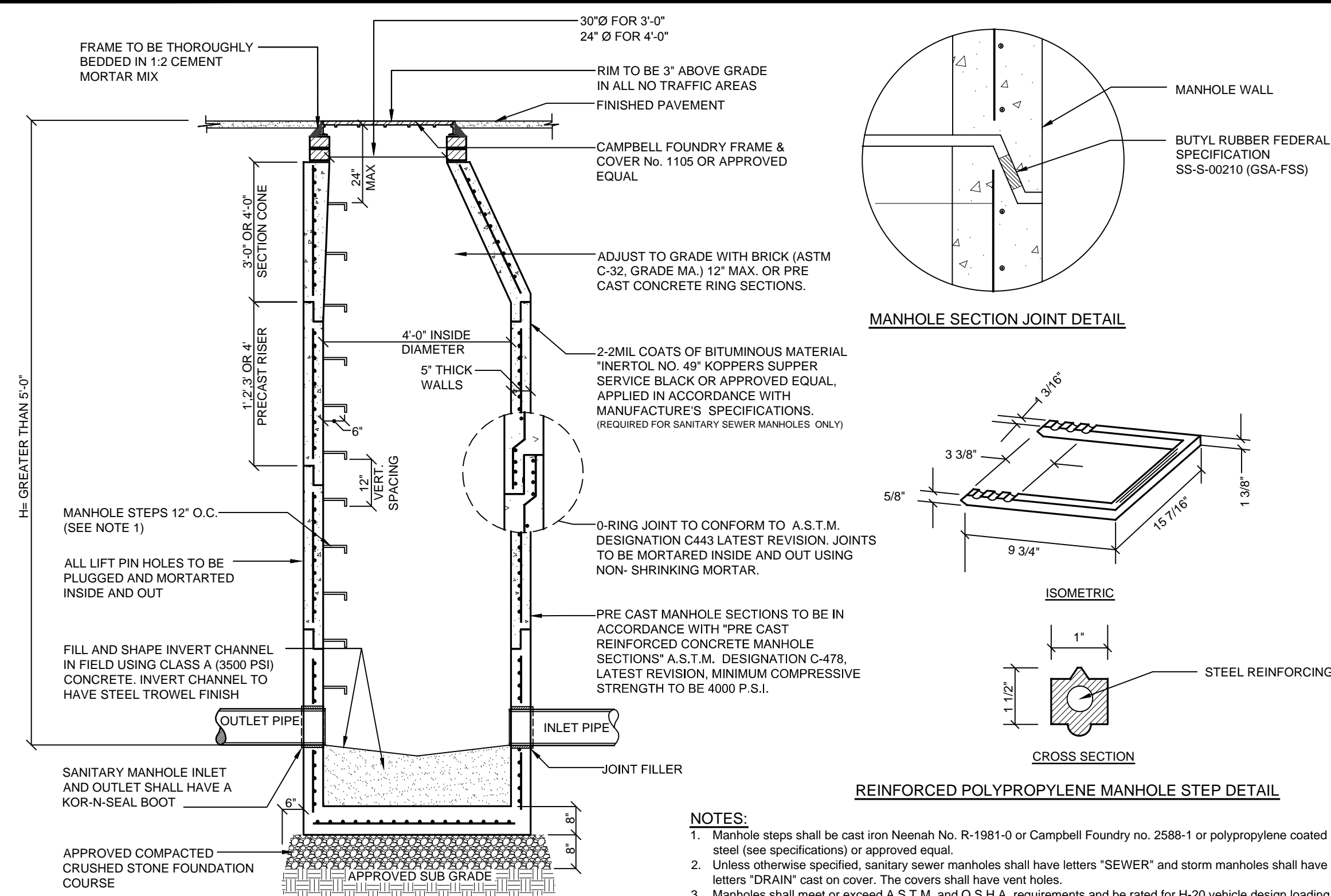












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# SANITARY SEWER DETAILS

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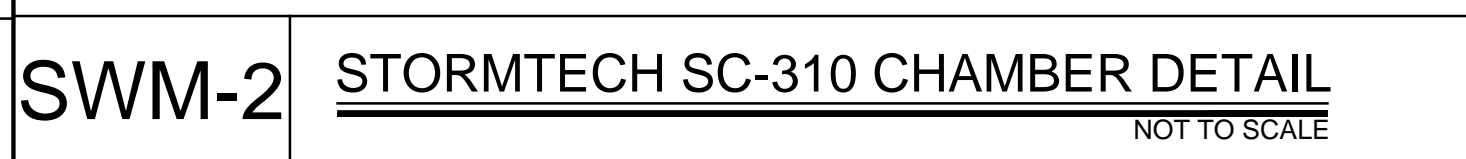
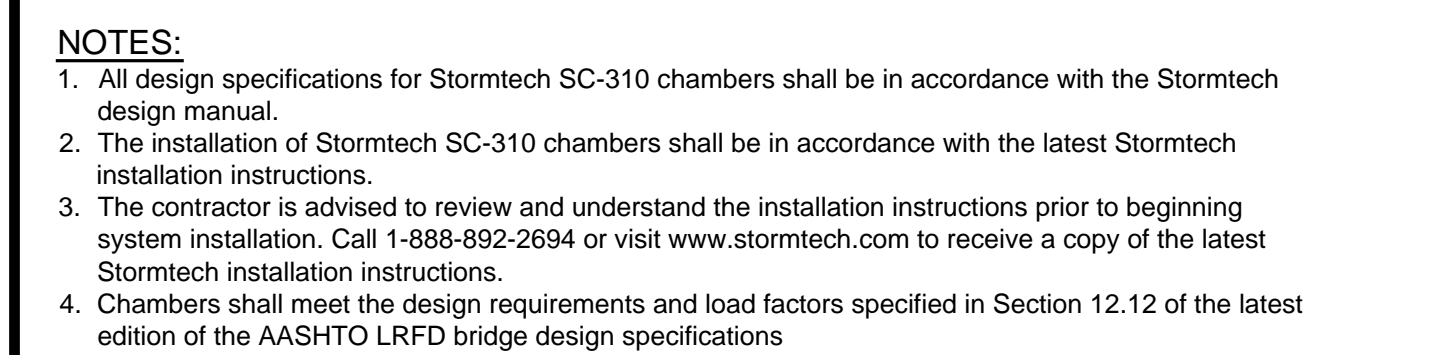
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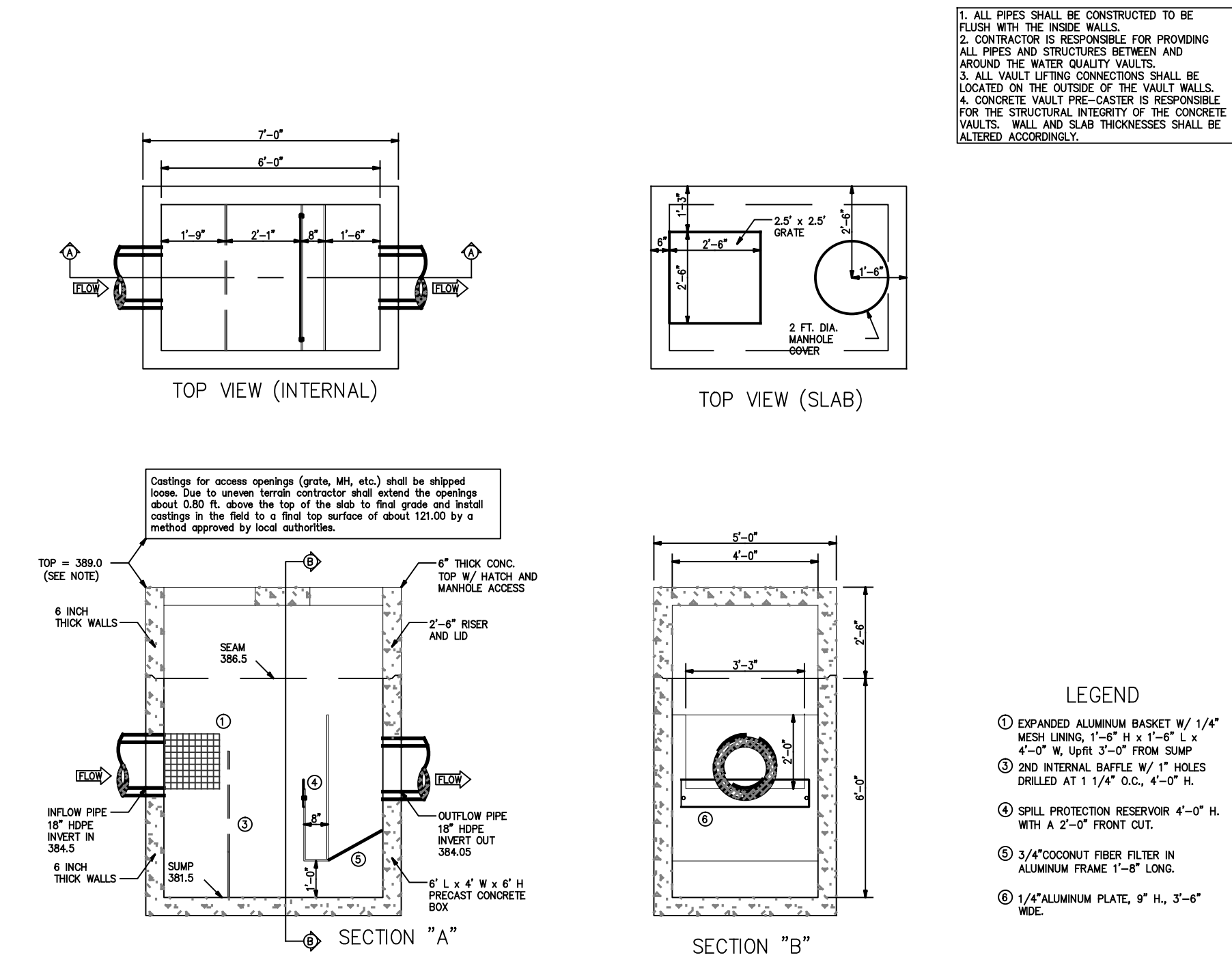












CRYSTALSTREAM "CRYSTALCLEAN" WATER QUALITY VAULT MODEL "646"

JURISDICTION: Ossining, NY

Projected by U.S. Patent No.s: 6,797,161; 6,836,163; 6,839,461; 6,951,607; 6,984,782; 7,011,743; 7,037,436



CrystalStream Technologies  
BEST MANAGEMENT PRACTICE (BMP) AND THE PROTECTIVE USE OF THE UNIT  
UPON DATA PROVIDED BY THE ENGINEER, LAND PLANNER, AND RELEVANT AGENCIES.

AS PER THE FOLLOWING:

3.1 INSPECTION OVERVIEW

3.2 INSPECTION PROCEDURES

AS PER THE FOLLOWING:

3.2.1 THE UNIT SHOULD BE VISUALLY INSPECTED FROM THE SURFACE TO DETERMINE THE INTEGRITY OF ACCESS POINTS. LOOK FOR BROKEN HINGES OR BROKEN OR MISSING HANDLES. A QUALIFIED WELDER SHOULD REPAIR ANY BROKEN HINGES IMMEDIATELY. INSPECT BOLTS ON LID ANGLE IRON AND LOOK FOR LOOSE RED HEADS ON ANGLE IRON. REPLACE RED HEADS AS NEEDED. RE-PAINT THE LID, WITH A RUST RESISTANT PAINT AS NECESSARY.

3.2.2 THE ACCESS SHOULD BE OPENED AND SECURED PROPERLY.

3.2.3 A VISUAL INSPECTION SHOULD BE MADE OF THE TRASH BASKET AT THE FRONT OF THE UNIT TO DETERMINE CAPACITY AND TYPE OF MATERIAL TRAPPED.

3.2.4 A VISUAL INSPECTION SHOULD BE MADE OF THE WATER SURFACE IN THE FRONT OF THE UNIT TO DETERMINE OIL SHEEN OR BLANKET.

3.2.5 A VISUAL INSPECTION SHOULD BE MADE OF THE OIL AND HYDROCARBON RESERVOIR TO DETERMINE AMOUNT OF OIL/WATER TRAPPED AND THE HISTORICAL HIGH-WATER LEVEL IN THE UNIT.

3.2.6 A VISUAL INSPECTION OF THE WATER SURFACE IN THE REAR OF THE UNIT SHOULD BE MADE AND ANY POLLUTANTS NOTED.

3.2.7 INSPECT THE ALUMINUM MESH IN THE TRASH BASKET. REPLACE AS NEEDED.

3.2.8 INSPECT THE BASKET FRAME FOR CRACKS OR DAMAGE. REPAIR AS NEEDED.

A VISUAL INSPECTION SHOULD BE MADE OF THE PIPE CONNECTIONS TO THE UNIT AND ANY MATERIAL DECAY OR IMPROPER INSTALLATION NOTED. PIPES SHOULD BE CUT FLUSH WITH THE INTERIOR WALL OF THE UNIT AND PROPERLY MUDDED IN. IF UPON INSPECTION IT IS NOTED THAT THE PIPES ARE NOT CUT FLUSH, OR ARE NOT MUDDED IN, CONTACT THE CONTRACTOR AND REQUIRE THAT HE CORRECT THIS IMMEDIATELY.

3.2.9 INSPECT BAFFLES TO ENSURE THAT THEY ARE PROPERLY SEATED INTO THE BRACKETS. ALSO NOTE IF THERE IS ANY DAMAGE TO BAFFLES (BOWING). RESEAT BAFFLES IF NECESSARY.

3.2.10 INSPECT OIL RESERVOIR FOR CRACKS OR DAMAGE. CHECK THE WELDS AROUND THE OIL RESERVOIR FOR WEAR OR DAMAGE AND NOTE ANY REPAIR WORK NECESSARY. A QUALIFIED WELDER MUST PERFORM ALL REPAIR WORK TO THE WELDS ON THE OIL RESERVOIR DURING THE ROUTINE CLEANING.

3.2.11 INSPECT THE RISER FOR CRACKS IN THE CONCRETE WALLS. REPAIR AS REQUIRED DURING THE ROUTINE CLEANING.

3.2.12 A SILT GAUGE SHOULD BE USED TO DETERMINE SEDIMENT DEPTH AS SHOWN IN APPENDIX 1. CHECK THE SILT/SEDIMENT LEVEL BEHIND THE TRASH BASKET AND IN FRONT OF THE OIL RESERVOIR

3.2.13 THE ACCESS FOR CLEANING SHOULD BE EVALUATED AND DOCUMENTED. THE TRUCK CLEANING THESE UNITS REQUIRES A STABLE ROADWAY CAPABLE OF WITHSTANDING 15,000 POUNDS.

3.2.14 ANY CHANGES IN THE AREA TRIBUTARY THAT ARE EVIDENT SHOULD BE NOTED.

3.2.15 REPLACE THE ACCESS POINT COVERS CAREFULLY.

3.2.16 NOTE THE CONDITION OF THE AREA SURROUNDING THE UNIT ON THE INSPECTION REPORT. (EXAMPLE: GRASS, DIRT, ROCKS, SINK HOLES) REPORT ANY HAZARDOUS CONDITIONS TO THE APPROPRIATE SUPERVISOR.

3.2.17 AN INSPECTION REPORT SHOULD BE COMPLETED, WITH A COPY STAYING ON SITE AND A COPY BEING SENT TO THE LOCAL JURISDICTION.

THE INSPECTION PROCEDURES FOR THE TRAFFIC UNITS ARE SIMILAR TO THOSE FOR THE NON- TRAFFIC UNITS WITH THE EXCEPTION OF THE SEDIMENT DEPTH EVALUATIONS AS SHOWN IN APPENDIX 1 AND AN INSPECTION OF THE GRATE AND FRAME AND RING AND COVER. ALSO PROPER PRECAUTIONS SHOULD BE TAKEN IN TRAFFIC SITUATIONS AS SPECIFIED IN THE SAFETY SECTION OF THIS MANUAL.

NOTE: WHEN THERE HAS BEEN AN OBVIOUS GASOLINE SPILL OR OTHER FLAMMABLE/HAZARDOUS MATERIAL IN THE UNIT, IMMEDIATE NOTIFICATION SHOULD BE GIVEN TO THE OWNER AND JURISDICTIONAL AUTHORITIES. THIS MANUAL IS FOR ROUTINE CLEANING OF STORM WATER DEBRIS AND ANY UNUSUAL OCCURRENCES SHOULD BE LEFT TO PROPERLY TRAINED AND EQUIPPED INDIVIDUALS.

#### 4.1 CLEANING OVERVIEW

THE CLEANING OF THE UNIT IS THE ESSENTIAL ELEMENT TO THE OPERATIONAL SUCCESS OF THE CRYSTALSTREAM DEVICE. THE POLLUTANT REMOVAL CAPACITY OF THE DEVICE WILL EVENTUALLY CAUSE THE EQUIPMENT TO FAIL WITHOUT PROPER MAINTENANCE AND ADDITIONALLY NOT ACHIEVE THE GOALS OF THE INSTALLATION. THE CLEANING CYCLE IS DEPENDANT ON A NUMBER OF FACTORS INCLUDING POLLUTANT LOAD, RAINFALL, TIME OF YEAR, BASIN CHANGES, UPSTREAM MITIGATION TACTICS AND INSTALLATION. BASED ON THE VARIETY OF FACTORS, A CLEANING SCHEDULE CAN BE CONSISTENT OR VARY WIDELY ON THE SAME DEVICE. THIS HIGHLIGHTS THE IMPORTANCE OF THE INSPECTION PROCESS IN THE OVERALL MAINTENANCE AND INTEGRITY OF THE UNIT. THE CLEANING IS GENERALLY DONE WITH A TWO-PERSON CREW AND A VACUUM PUMP SYSTEM. THE DURATION OF THE MAINTENANCE WILL DEPEND ON A NUMBER OF FACTORS BUT CAN TYPICALLY BE DONE IN ABOUT 2.5 HOURS WITH PROPERLY TRAINED INDIVIDUALS.

#### 4.2 OPTION 1: CLEANING PROCEDURES - SURFACE CLEANING

IF THE CLEANING OF THE UNIT IS TO BE PREFORMED FROM THE SURFACE, THE OPERATOR SHOULD EXPECT A LONGER CLEANING TIME AND THE POTENTIAL FOR ADDITIONAL DISPOSAL CHARGES. THE FRONT CHAMBER OF THE UNIT WILL CONTAIN THE TRASH AND DEBRIS IN THE TRASH BASKET, ANY FLOATING HYDROCARBONS THAT HAVE NOT BEEN SKIMMED INTO THE OIL/HYDROCARBON RESERVOIR AND ACCUMULATED SEDIMENT ON THE BOTTOM OF THE UNIT.

CLEANING PROCEDURES ARE AS PER THE FOLLOWING:

- 4.2.1 THE UNIT SHOULD BE VISUALLY INSPECTED FROM THE SURFACE TO DETERMINE THE INTEGRITY OF THE TREAD PLATE LID, ALUMINUM HATCH OR OTHER ACCESS.
- 4.2.2 A VISUAL INSPECTION OF THE UNIT SHOULD BE DONE TO EVALUATE STRUCTURAL INTEGRITY AND DETERMINE IF ANY IMPACTED MATERIAL IS PRESENT IN THE DEVICE. IF THERE HAS BEEN A HAZARDOUS SPILL SEE SECTION 4.6

NOTE: WHEN THERE HAS BEEN AN OBVIOUS GASOLINE SPILL OR OTHER FLAMMABLE/HAZARDOUS MATERIAL IN THE UNIT, IMMEDIATE NOTIFICATION SHOULD BE GIVEN TO THE OWNER AND JURISDICTIONAL AUTHORITIES. THIS MANUAL IS FOR ROUTINE CLEANING OF STORM WATER DEBRIS AND ANY UNUSUAL OCCURRENCES SHOULD BE LEFT TO PROPERLY TRAINED AND EQUIPPED INDIVIDUALS.

- 4.2.3 THE TRASH BASKET SHOULD BE CLEANED BY EITHER USING A TRASH NETTING SYSTEM OR VACUUM TRUCK. IF CLEANING USING A NETTING SYSTEM, THIS MATERIAL CAN BE DISPOSED OF IN TRASH BAGS IN THE NORMAL MANNER.
- 4.2.4 THE SURFACE OIL/HYDROCARBON SEPARATION ZONE IN THE FRONT CHAMBER SHOULD BE REMOVED EITHER WITH SORBANTS OR WITH A VACUUM TRUCK.
- 4.2.5 THE STORMWATER CONTAINED IN THE AREA BETWEEN THE SURFACE WATER AND THE SEDIMENT ACCUMULATION CAN BE DECANTED TO MINIMIZE THE AMOUNT OF DISPOSAL REQUIRED. ANY DOWNSTREAM DISCHARGE NEEDS TO BE AFTER THE SURFACE CLEANING AND ONLY DOWN TO THE LEVEL OF THE BOTTOM OF THE OIL/HYDROCARBON RESERVOIR OR THE TOP OF THE SEDIMENT ACCUMULATION. ANY POLLUTANTS DISCHARGED DOWNSTREAM ARE THE RESPONSIBILITY OF THE CLEANING OPERATOR.
- 4.2.6 THE OIL/HYDROCARBON RESERVOIR NEEDS TO BE EVACUATED BY THE VACUUM EQUIPMENT.
- 4.2.7 THE SEDIMENT ACCUMULATED IN THE FRONT AND REAR CHAMBER CAN BE REMOVED BY THE VACUUM EQUIPMENT.
- 4.2.8 THE UNIT SHOULD BE PRESSURE WASHED DOWN TO REMOVE ANY POLLUTION ATTACHED TO THE BAFFLES, WALLS OR HYDROCARBON RESERVOIR.
- 4.2.9 ALL PARTS SHOULD BE INSPECTED FOR WEAR AND TEAR AND DOCUMENTED.

- 4.2.10 A MAINTENANCE REPORT (APPENDIX 3) SHOULD BE COMPLETED, WITH A COPY STAYING ON SITE AND A COPY BEING SENT TO THE LOCAL JURISDICTION.
- 4.3 OPTION 2: CLEANING PROCEDURES - CONFINED SPACE ENTRY

THE CLEANING PROCEDURES ARE SIMILAR FOR CONFINED SPACE ENTRIES EXCEPT THAT THE OSHA GUIDELINE APPLY AND NEED TO BE FOLLOWED. THE CONFINED SPACE ENTRY ALLOWS THE CREW TO DO A BETTER JOB OF CLEANING THE UNIT AND ALLOWS FOR THE TIME NEEDED AND DISPOSAL COST TO BE REDUCED.

CAUTION! ANY INSPECTION DONE IN A TRAFFIC AREA MUST MEET THE DOT GUIDELINES FOR ROADWAY WORK AND ADDITIONAL SAFETY PROCEDURE WILL BE NECESSARY.

CAUTION! ALL OSHA CONFINED SPACE REQUIREMENTS SHOULD BE MET WHILE CLEANING THIS UNIT. AS PER THE FOLLOWING:

- 4.3.1 THE UNIT SHOULD BE VISUALLY INSPECTED FROM THE SURFACE TO DETERMINE THE INTEGRITY OF THE TREAD PLATE LID.
- 4.3.2 A VISUAL INSPECTION OF THE UNIT SHOULD BE DONE TO EVALUATE STRUCTURAL INTEGRITY AND DETERMINE IF ANY IMPACTED MATERIAL IS PRESENT IN THE DEVICE. IF THERE HAS BEEN A HAZARDOUS SPILL SEE SECTION 4.6
- NOTE: WHEN THERE HAS BEEN AN OBVIOUS GASOLINE SPILL OR OTHER FLAMMABLE/HAZARDOUS MATERIAL IN THE UNIT, IMMEDIATE NOTIFICATION SHOULD BE GIVEN TO THE OWNER AND JURISDICTIONAL AUTHORITIES. THIS MANUAL IS FOR ROUTINE CLEANING OF STORM WATER DEBRIS AND ANY UNUSUAL OCCURRENCES SHOULD BE LEFT TO PROPERLY TRAINED AND EQUIPPED INDIVIDUALS.

- 4.3.3 A LADDER SHOULD BE INSERTED ON THE FRONT SIDE OF THE UNIT BETWEEN THE BAFFLES AND A SORBANT BLANKET LAID ON THE SURFACE OF THE WATER TO COLLECT ANY FREE OIL FLOATING ON THE SURFACE.
- 4.3.4 IN MOST UNITS, THE TRASH BASKET AND BAFFLES CAN BE REMOVED TO ALLOW EASIER ACCESS TO THE BOTTOM OF THE UNIT.
- 4.3.5 INSPECT THE ALUMINUM MESH IN THE TRASH BASKET. REPLACE AS NEEDED.
- 4.3.6 THE TRASH BASKET SHOULD BE CLEANED AND DIRECTLY DISPOSED OF IN GARBAGE BAGS.
- 4.3.7 THE STORMWATER CONTAINED IN THE AREA BETWEEN THE SURFACE WATER AND THE SEDIMENT ACCUMULATION CAN BE DECANTED TO MINIMIZE THE AMOUNT OF DISPOSAL REQUIRED. ANY DOWNSTREAM DISCHARGE NEEDS TO BE AFTER THE SURFACE CLEANING AND ONLY DOWN TO THE LEVEL OF THE BOTTOM OF THE OIL/HYDROCARBON RESERVOIR OR THE TOP OF THE SEDIMENT ACCUMULATION. ANY POLLUTANTS DISCHARGED DOWNSTREAM ARE THE RESPONSIBILITY OF THE CLEANING OPERATOR.
- 4.3.8 THE UNIT SHOULD BE PRESSURE WASHED DOWN TO REMOVE ANY POLLUTION ATTACHED TO THE BAFFLES, WALLS OR HYDROCARBON RESERVOIR.
- 4.3.9 THE LADDER CAN BE USED TO GET ON TO THE UNIT FLOOR AND REMOVE THE REST OF THE WATER AND SEDIMENT FROM THE BOTTOM OF THE UNIT.
- 4.3.10 THE WALLS SHOULD BE WIPED DOWN IN THE FRONT WITH A SORBANT BLANKET
- 4.3.11 THE FRESH COCONUT FIBER MESH SHOULD BE REPLACED IN THE FRAME AND THE FRAME ASSEMBLY RETURNED TO THE UNIT.
- 4.3.12 ALL PARTS SHOULD BE INSPECTED FOR WEAR AND TEAR AND DOCUMENTED.
- 4.3.13 REMOVE ALL EQUIPMENT FROM THE UNIT. REPLACE THE MANHOLE COVER AND THE GRATE IN THE CONCRETE LID.
- 4.3.14 A MAINTENANCE REPORT (APPENDIX 3) SHOULD BE COMPLETED, WITH A COPY STAYING ON SITE AND A COPY BEING SENT TO THE LOCAL JURISDICTION.

#### CLEANING EQUIPMENT

THE EQUIPMENT NEEDED TO CLEAN THE CRYSTALSTREAM UNIT IS:

- VACUUM TRUCK 750 GALLON
- PRESSURE WASHER
- SUBMERSIBLE PUMP
- GENERATOR
- SORBANT PADS (MYCELT<sup>TM</sup>)
- 16-25 FT. LADDER
- GLOVES
- COCONUT FIBER MESH (ROLANKA INDUSTRIES)
- TRASH BAGS
- CRYSTALSTREAM LID HOOKS
- SEDIMENT/SILT GAUGE
- RUBBER BOOTS
- TESTING EQUIPMENT TO MEET OSHA CONFINED SPACE ENTRY REQUIREMENTS
- CONES
- BARRICADES
- CAUTION TAPE
- HARDHAT
- WATERPROOF SILICON CAULK
- ALUMINUM MESH (FOR TRASH BASKET)
- FLAT SHOVEL
- 20' ELECTRICAL CORD
- 5 GALLON BUCKET W/ROPE
- FIRST AID KIT CONTAINING EYE WASH
- TRIPOD SAFETY HARNESS RECOVERY APPARATUS

CALL CRYSTALSTREAM AT 1-800-748-6945 IF YOU NEED SUPPLIES OR PARTS.

#### DOCUMENTATION AND DISPOSAL

THE CLEANING OF THE UNIT SHOULD BE DOCUMENTED AND THE CONTENTS OF THE UNIT ESTIMATED AND RECORDED IN A LOG FOR INSPECTIONS. THIS DOCUMENTATION SHOULD MEET FEDERAL, STATE AND LOCAL GUIDELINES.

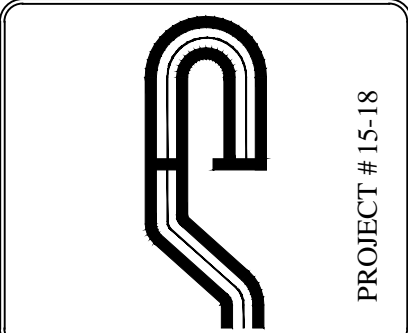
THE DISPOSAL OF THE TRASH, DEBRIS, WATER AND SEDIMENT SHOULD BE DONE AT AN APPROVED FACILITY AND THE PROPER PERMITS SHOULD BE OBTAINED TO TRANSPORT THE MATERIAL. SEDIMENT AND WATER SHOULD BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS. SEDIMENT SHOULD BE REMOVED TO A LANDFILL AND LIQUIDS TO A DECANTING FACILITY.

#### HAZARDOUS WASTE PROCEDURE

THE PRESENCE OF ANY HAZARDOUS MATERIAL INSIDE THE UNIT SHOULD PROMPT AN IMMEDIATE CALL TO THE JURISDICTION AND AN APPROPRIATE HAZARDOUS RESPONSE TEAM. THIS MATERIAL IS NOT PART OF THE STANDARD CLEANING OF THE DEVICE AND SHOULD BE TREATED WITH THE PROPER CARE AFFORDED SUCH SPILLS AS PER FEDERAL, STATE AND LOCAL GUIDELINES.

#### 5.1 MAINTENANCE OVERVIEW

ALL OF THE COMPONENTS IN THE UNIT SHOULD BE INSPECTED AT EVERY CLEANING TO DETERMINE WEAR OR DAMAGE. IF ANY COMPONENTS ARE DAMAGED, PLEASE CONTACT CRYSTALSTREAM TECHNOLOGIES FOR AN EVALUATION OF THE DAMAGE AND A MAINTENANCE ESTIMATE.



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CRYSTAL  
STREAM  
DETAILS

SITE PLAN  
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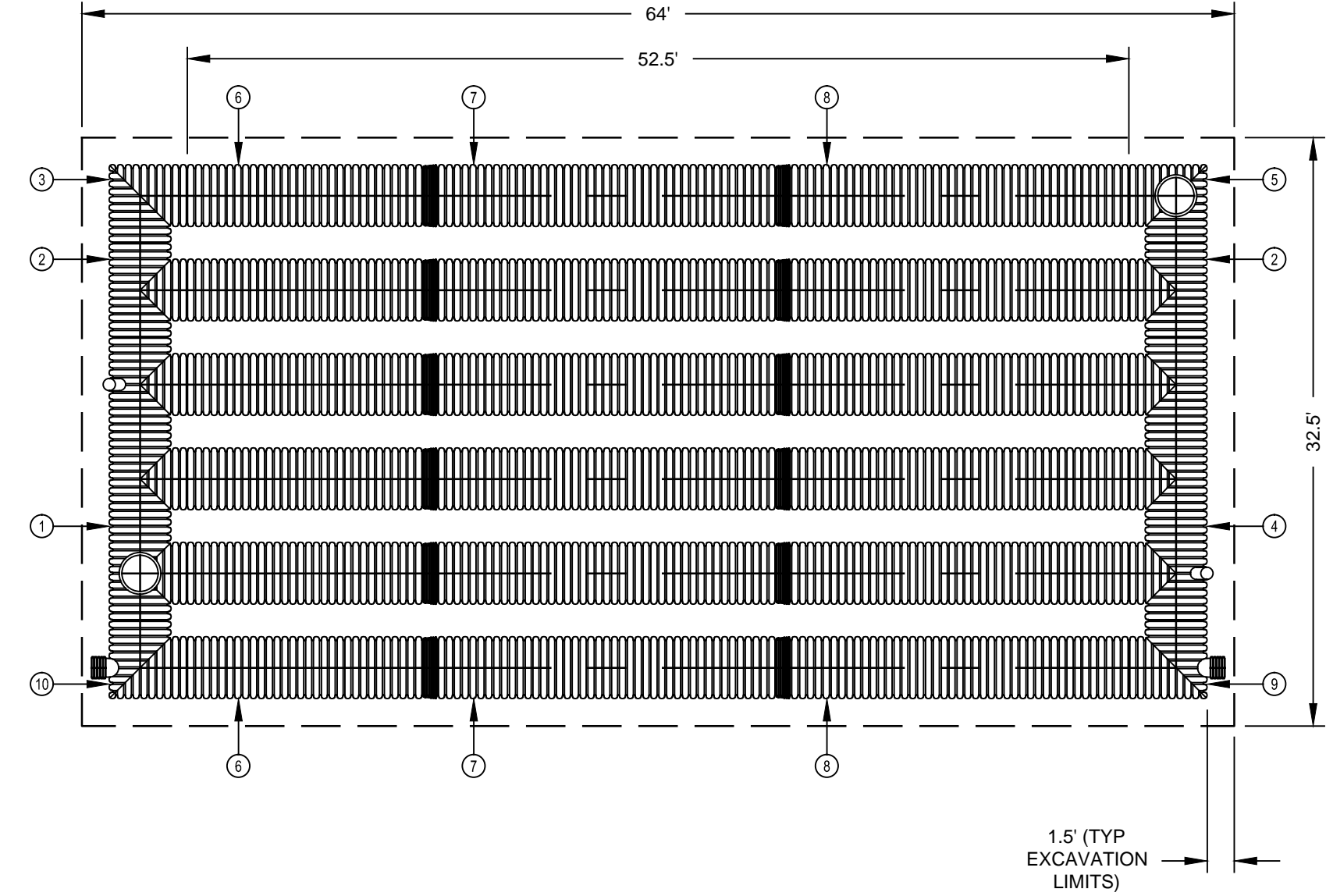
87 HAWKES AVENUE

Westchester County, NY

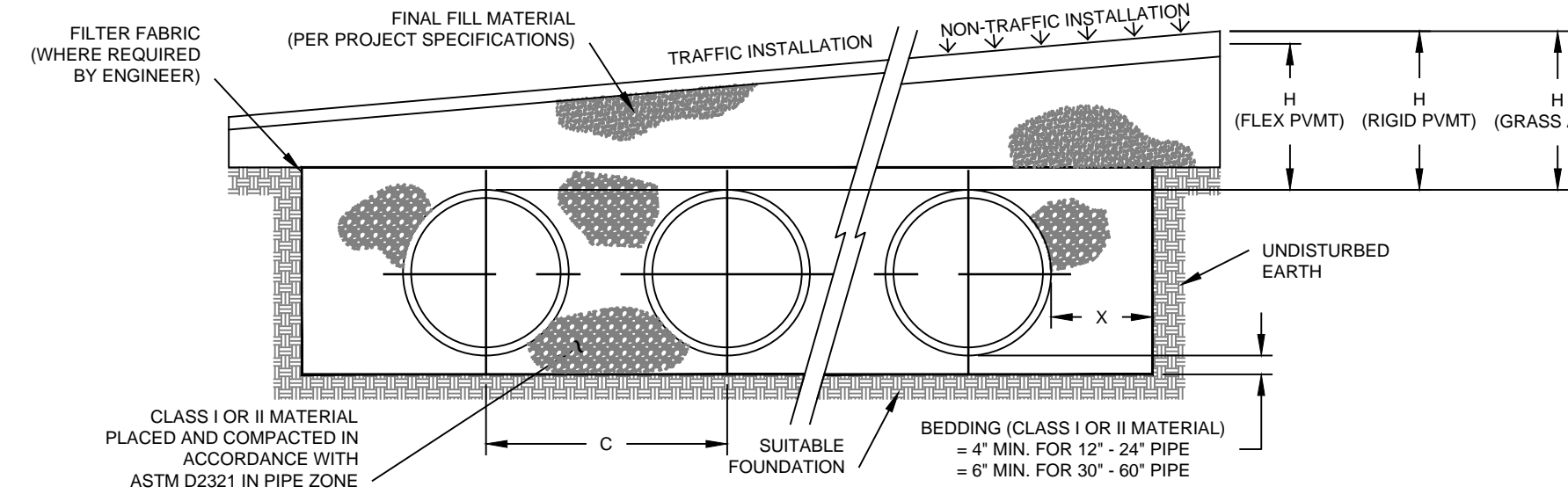
Sheet

C-507





BILL OF MATERIALS				
ITEM	QTY	PART #	DESCRIPTION	NOTE
1	1	3653ANC_1	36" TRIPLE MANIFOLD TEE W/24" RISER, W/8" CLEANOUT	See Detail
2	1	3651AN	36" SINGLE MANIFOLD TEE	See Detail
3	1	3658AN	36" X 90 DEGREE MANIFOLD BEND	See Detail
4	1	3653ANC_2	36" TRIPLE MANIFOLD TEE W/8" CLEANOUT	See Detail
5	1	3658ANC_1	36" X 90 DEGREE MANIFOLD BEND W/24" RISER	See Detail
6	1	3654	36" PIPE STICK : SOIL TIGHT (FIELD CUT)	See Detail
7	6	3650020IB	36" PIPE STICK : SOIL TIGHT	See Detail
8	1	3654	36" PIPE STICK : SOIL TIGHT (FIELD CUT)	See Detail
9	1	3658ANC_2	36" X 90 DEGREE MANIFOLD BEND W/12" STUB	See Detail
10	1	3658ANC_3	36" X 90 DEGREE MANIFOLD BEND W/12" STUB	See Detail
11	1	3654	36" PIPE STICK : SOIL TIGHT	See Detail



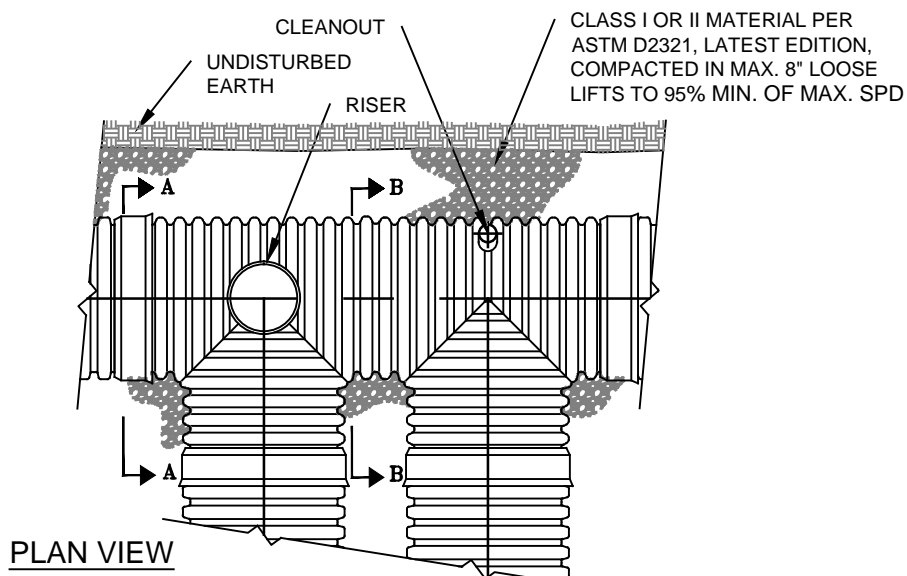
NOMINAL DIAMETER	NOMINAL O.D.	TYPICAL SPACING "C"	TYPICAL SIDE WALL "X"	MIN. H (NON-TRAFFIC)	MIN. H (TRAFFIC)	MAX. H*
36" (900 MM)	42" (1067 MM)	63" (1600 MM)	18" (457 MM)	12" (292 MM)	12" (292 MM)	8" (2.4 M)

\* MAXIMUM FILL HEIGHTS OVER MANIFOLD FITTINGS. CONTACT MANUFACTURER'S REPRESENTATIVE FOR INSTALLATION CONSIDERATIONS WHEN COVER EXCEEDS 8-FT.  
\* 60" SYSTEMS REQUIRE CLASS I BACKFILL AROUND ALL FITTINGS.

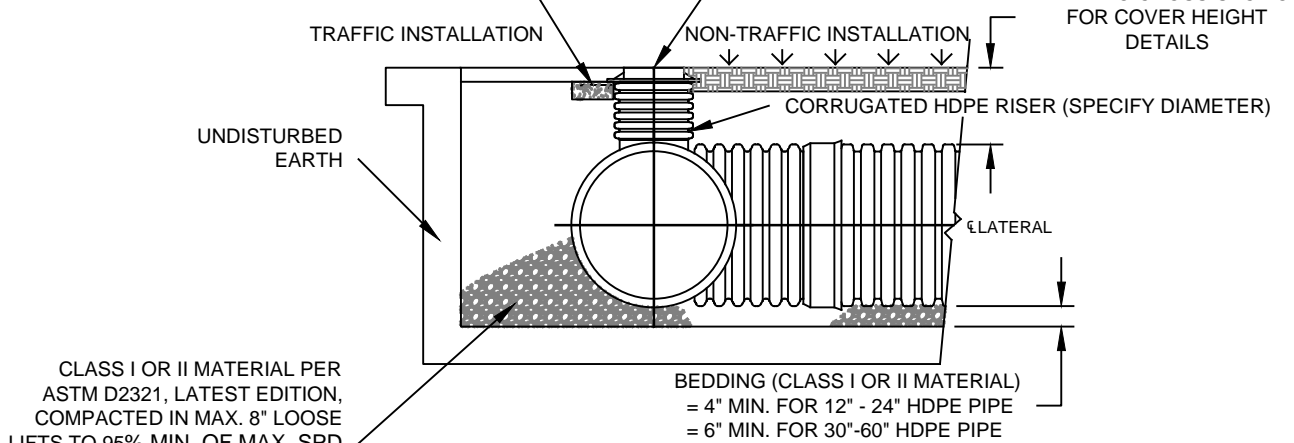
#### NOTES:

- ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D3231 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
- ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D3231, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
- MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D3231.
- FILTER FABRIC:** A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
- FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm), 6" (150mm) FOR 30"-60" (750mm-900mm).
- INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D3231, LATEST EDITION.
- COVER:** MINIMUM COVER OVER ALL RETENTION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42"-60" DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. MAXIMUM FILL HEIGHT LIMITED TO 8-FT OVER FITTINGS FOR STANDARD INSTALLATIONS. CONTACT A SALES REPRESENTATIVE WHEN MAXIMUM FILL HEIGHTS EXCEED 8-FT FOR INSTALLATION CONSIDERATIONS.

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\* LOAD BEARING CONCRETE COLLAR AS SPECIFIED BY DESIGN ENGINEER (WHERE REQUIRED)



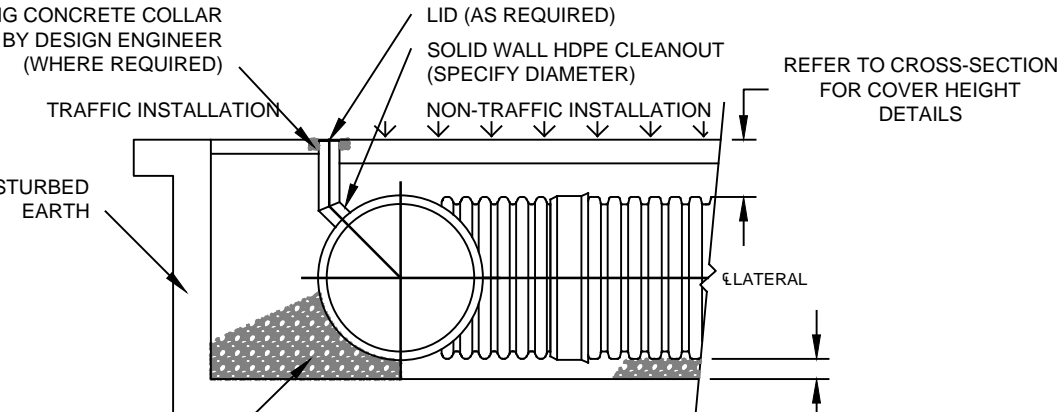
CLASS I OR II MATERIAL PER ASTM D3231, LATEST EDITION, COMPACTED IN MAX. 8" LOOSE LIFTS TO 95% MIN. OF MAX. SPD

SECTION A-A

\* LOAD BEARING CONCRETE COLLAR SHALL BE CONSTRUCTED IN TRAFFIC AREAS SUCH THAT THE LIVE LOAD IS TRANSMITTED TO THE SURROUNDING SOIL AND NOT DIRECTLY TO THE RISER.

SECTION B-B

CLASS I OR II MATERIAL PER ASTM D3231, LATEST EDITION, COMPACTED IN MAX. 8" LOOSE LIFTS TO 95% MIN. OF MAX. SPD



LID (AS REQUIRED)  
SOLID WALL HDPE CLEANOUT (SPECIFY DIAMETER)  
REFER TO CROSS-SECTION FOR COVER HEIGHT DETAILS

TRAFFIC INSTALLATION  
NON-TRAFFIC INSTALLATION  
UNDISTURBED EARTH  
BEDDING (CLASS I OR II MATERIAL) = 4" MIN. FOR 12" - 24" HDPE PIPE = 6" MIN. FOR 30" - 60" HDPE PIPE

CLASS I OR II MATERIAL PER ASTM D3231, LATEST EDITION, COMPACTED IN MAX. 8" LOOSE LIFTS TO 95% MIN. OF MAX. SPD

SECTION A-A

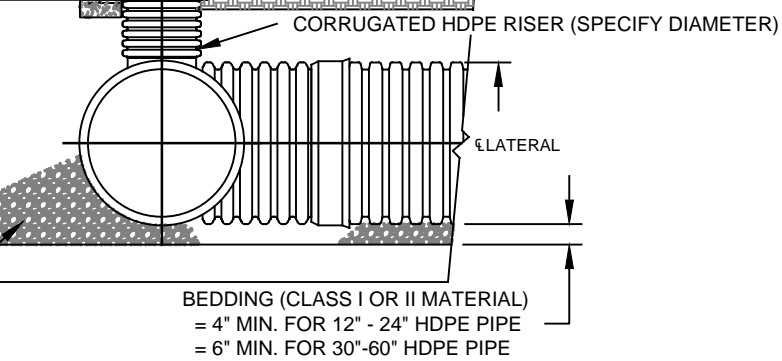
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