

RENÉE BYERS LANDSCAPE ARCHITECT

**COVER LETTER - PROJECT DESCRIPTION**

February 1, 2021

Ed Marron Jr. Building Inspector  
Chair Rasulu and members of the ARB  
Village Hall  
85 Main Street  
Irvington, NY 10583

**Re: ARB/Building Permit Submittal for 63 Field Terrace, Irvington, NY, Trencher Residence**

Dear Mr. Rasulo, members of the ARB and Mr. Marron:

With this letter you will find an application and supporting plans and documents on behalf of owners Barbara and Dan Trencher at the above-referenced property.

Earlier this year an approval and permit #2020-0047 was issued to the Trenchers to construct a covered exterior porch, kitchen extension, widened driveway and outdoor terrace, with architect Douglas McClure. With the building construction now nearing completion, our firm was retained to prepare a landscape design for the property, included are an expanded outdoor terrace near the house, an in-ground swimming pool and spa and associated garden walls and plantings. The improvements are intended to augment the green, park-like setting of the house.

Included for your review are a full set of drawings and site plans. Detail items of interest for the ARB for items such as exterior fencing, paving and wall details, are all included in the set, along with engineering support documents and photos of the existing and neighboring houses.

The existing 1939 red brick Colonial is situated on a relatively flat 1.18 AC corner parcel with well landscaped grounds, including an unusually generous main lawn in the rear of the home, where the proposed swimming pool is located. The project has received Planning Board approval and the necessary area variances from the ZBA.

Thank you for your consideration and I look forward to personally presenting the project details to you at the upcoming meeting ARB meeting on February 22nd.

Sincerely,



Renée Byers, RLA, ASLA  
NYS Lic. # 997

# APPLICATION FOR BUILDING PERMIT

The Village of Irvington | 85 Main St | Irvington NY 10533

Application Number:	158	Date:	01/27/2021
Job Location:	63 FIELD TERRACE AVE	Parcel ID:	2.170-76-20
Property Owner:	Barbara Trencher	Property Class:	1 FAMILY RES
Occupancy:	One/ Two Family	Zoning:	1F-40
Common Name:			

<b>Applicant</b>	<b>Contractor</b>
Renee Byers	
Renee Byers Landscape Architect	
33 East Elm St.Greenwich CT 06830	
2034890800	

## Description of Work

Type of Work:	Swimming pool	Applicant is:	Architect
Work Requested by:	The Owner	In association with:	
Cost of Work (Est.):	500000.00	Property Class:	1 FAMILY RES

## Description of Work

**Site improvements including the construction of a swimming pool, patios, fencing, walkways and site walls. Proposed plantings and the installation of a generator and propane tank are also part of the scope of work.**

**Please Note:** Completing the application does not constitute a permit to commence construction. To obtain your permit follow the instructions on the instruction page provided on page 3.



**AFFIDAVIT OF APPLICANT**

I **Renee Byers** being duly sworn, depose and says: That s/he does business as: **Renee Byers Landscape Architect** with offices at: **33 East Elm St. Greenwich CT 06830** and that s/he is:

- ☐ The owner of the property described herein.  
 The \_\_\_\_\_ of the New York Corporation \_\_\_\_\_ with offices at: \_\_\_\_\_  
 \_\_\_\_\_ duly authorized by resolution of the Board of Directors, and that  
 said corporation is duly authorized by the owner to make this application.
- ☐ A general partner of \_\_\_\_\_ with offices \_\_\_\_\_ and that said  
 Partnership is duly authorized by the Owner to make this application.
- ☐ The Lessee of the premises, duly authorized by the owner to make this application.
- ☒ The Architect of Engineer duly authorized by the owner to make this application.
- ☐ The contractor authorized by the owner to make this application.

That the information contained in this application and on the accompanying drawings is true to the best of his knowledge and belief. The undersigned hereby agrees to comply with all the requirements of the New York State Uniform Fire Prevention and Building Code, the Village of Irvington Building Code, Zoning Ordinance and all other laws pertaining to same, in the construction applied for, whether or not shown on plans or specify in this application.

Sworn to before me this 28 day of January of 2021

[Signature]  
 Notary Public / Commission of Deeds

VERA DEDAJ  
 No. 01DE6245708  
 Notary Public, State of New York  
 Qualified in Westchester County  
 My Commission Expires Aug. 01, 2023

[Signature]  
 Applicant's Signature

**OWNER'S AUTHORIZATION**

I **Barbara Trencher** as the owner of the subject premises and have authorized the contractor named above to perform the work under the subject application.

Owner phone number 917-664-1331 Owner email address btrencher@gmail.com

- ☐ Barbara Trencher I hereby acknowledge that it is my responsibility as the **property owner** to ensure that if the permit (if issued) receives a Final Certificate of Approval from the Building Department and further that if a Final Certificate of Approval is not obtained upon completion of the construction, a property violation may be placed on the property for which this permit is being requested.

Sworn to before me this 28 day of January of 2021

[Signature]  
 Notary Public / Commission of Deeds

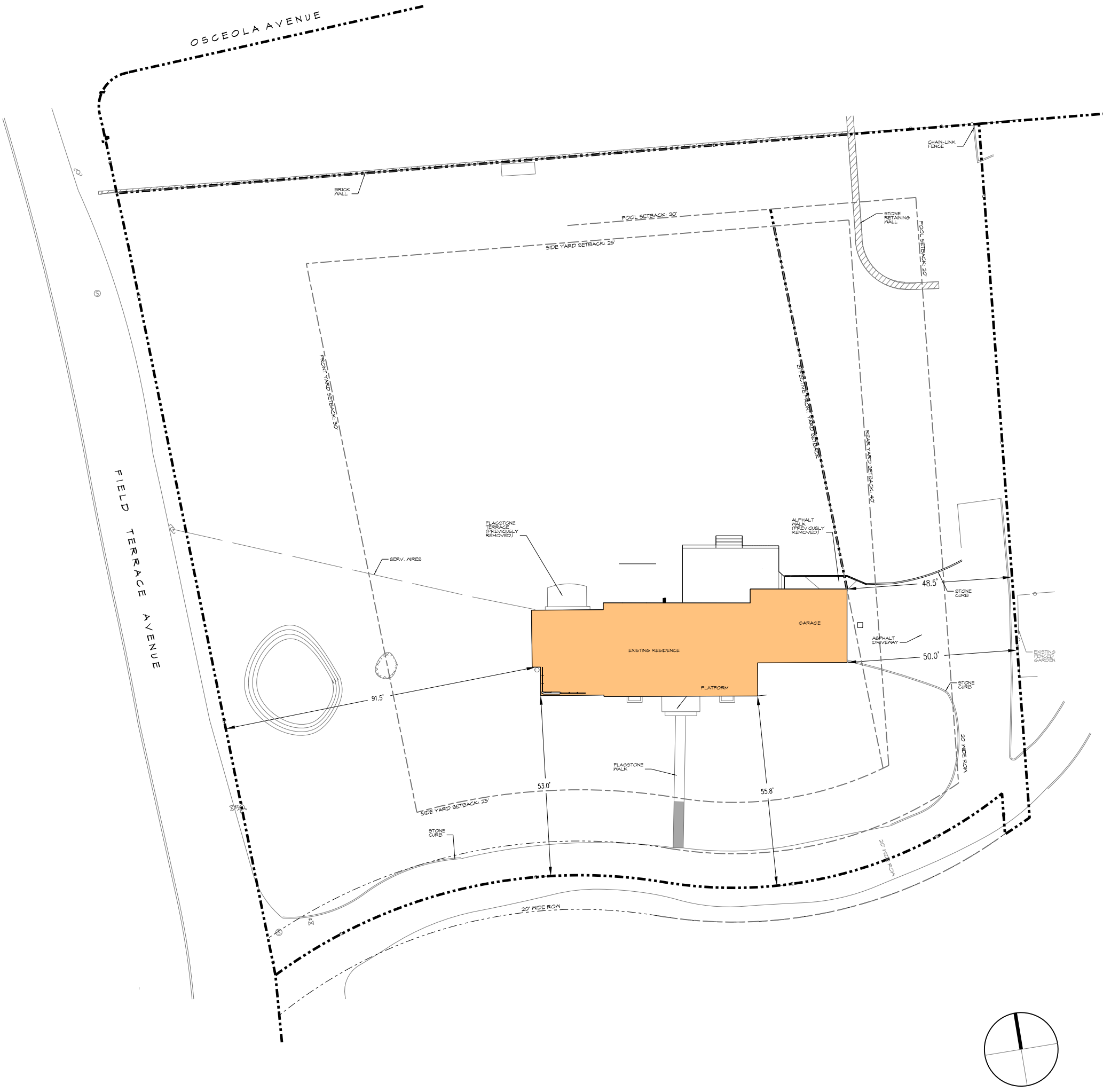
[Signature]  
 Applicant's Signature

KEFIRA R WILDERMAN  
 Notary Public, State of New York  
 No. 02WI6174466  
 Qualified in Westchester County  
 Commission Expires September 17, 2023









PRE-CONSTRUCTION SITE PLAN - LOT COVERAGE & SETBACKS  
SCALE: 1"=30'

ZONING ANALYSIS

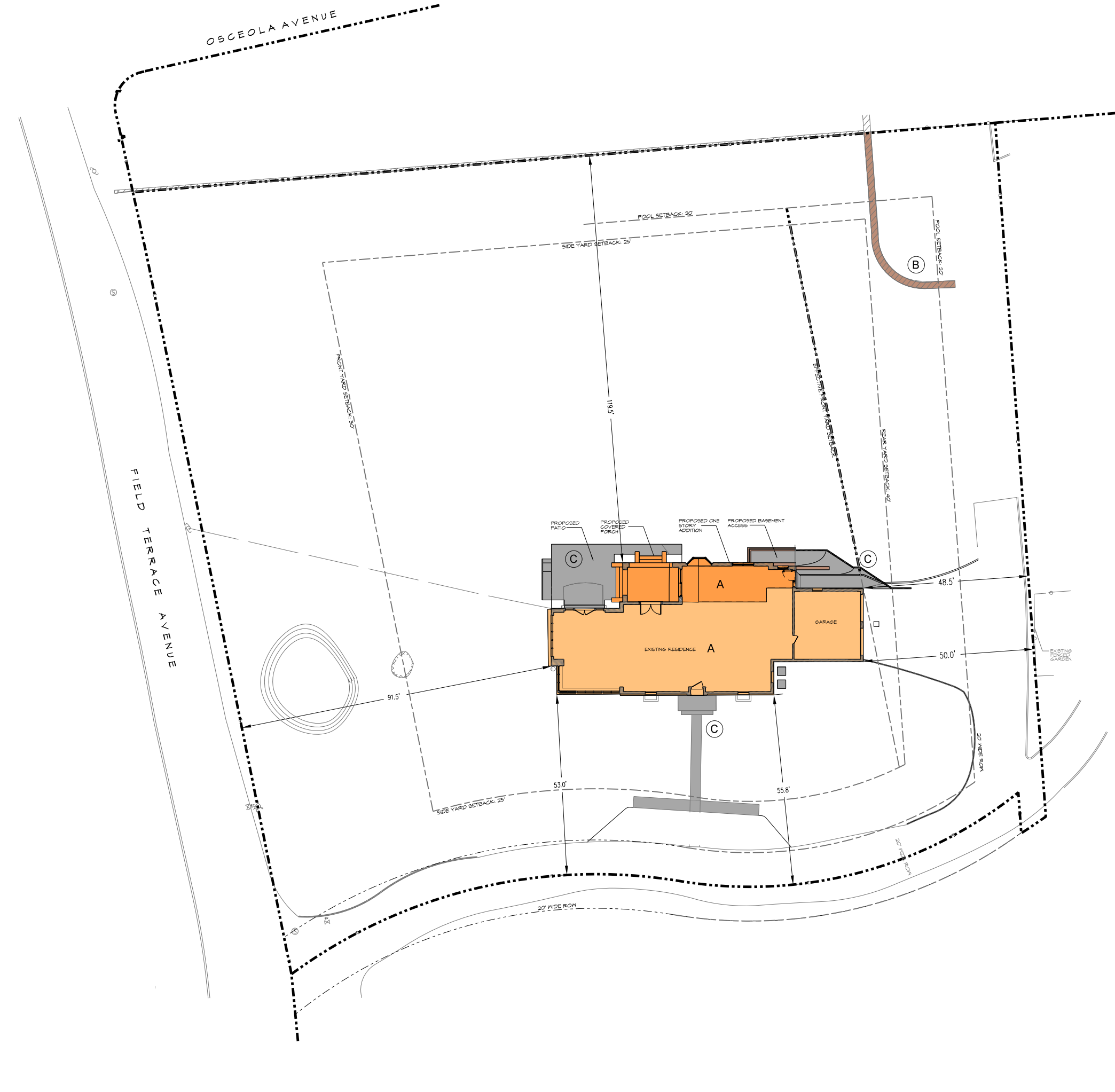
SECTION: 2.170 BLOCK: 233 LOT(S): 20  
REFERENCE ZONE: 1F - 40

LOT DATA	ALLOWED	PRE-CONST.
MIN. LOT AREA	40,000 sf	51,197
MIN. LOT WIDTH	150'	203'
MIN. LOT DEPTH	150'	226'
SETBACK REQUIREMENTS		
FRONT YARD	50'	91.5'
SIDE YARD (CORNER LOT)	25'	53'
SIDE YARD	25'	114'
REAR YARD	40'	48.5'
LOT COVERAGE REQUIREMENTS		
* LOT COVERAGE AREA FOR PRINCIPAL AND ACCESSORY BLDG.	5,248	3,194
LOT COVERAGE % FOR PRINCIPAL AND ACCESSORY BLDG.	10.3 %	6.25%
COVERAGE AVAILABLE = MAX ALLOWED MINUS EXISTING	N.A.	2,054

LOT COVERAGE AREAS: Parcel 20

COVERAGE COLOR KEY	PRE-CONST. (sf)
(A) PRINCIPAL BUILDING	2,259
ACCESSORY STRUCTURES:	
(B) WALLS	122
(C) STEPS, PATIOS, WALKWAYS OTHER PAVED AREAS	831
LOT COVERAGE (SUM: A-C)	3,194

\* MAXIMUM LOT COVERAGE FOR PRINCIPAL AND ACCESSORY BUILDING CALCULATIONS  
PARCEL AREA: 51,197 sf  
(40,000sf x .12) + (1,197SF X 4%)  
4800+ 447.88  
= 5,248 MAX



EXISTING CONDITIONS - LOT COVERAGE CALCULATIONS  
FOR APPROVED PERMIT # 2020-0047, NOW UNDER CONSTRUCTION  
SCALE: 1"=30'

ZONING ANALYSIS

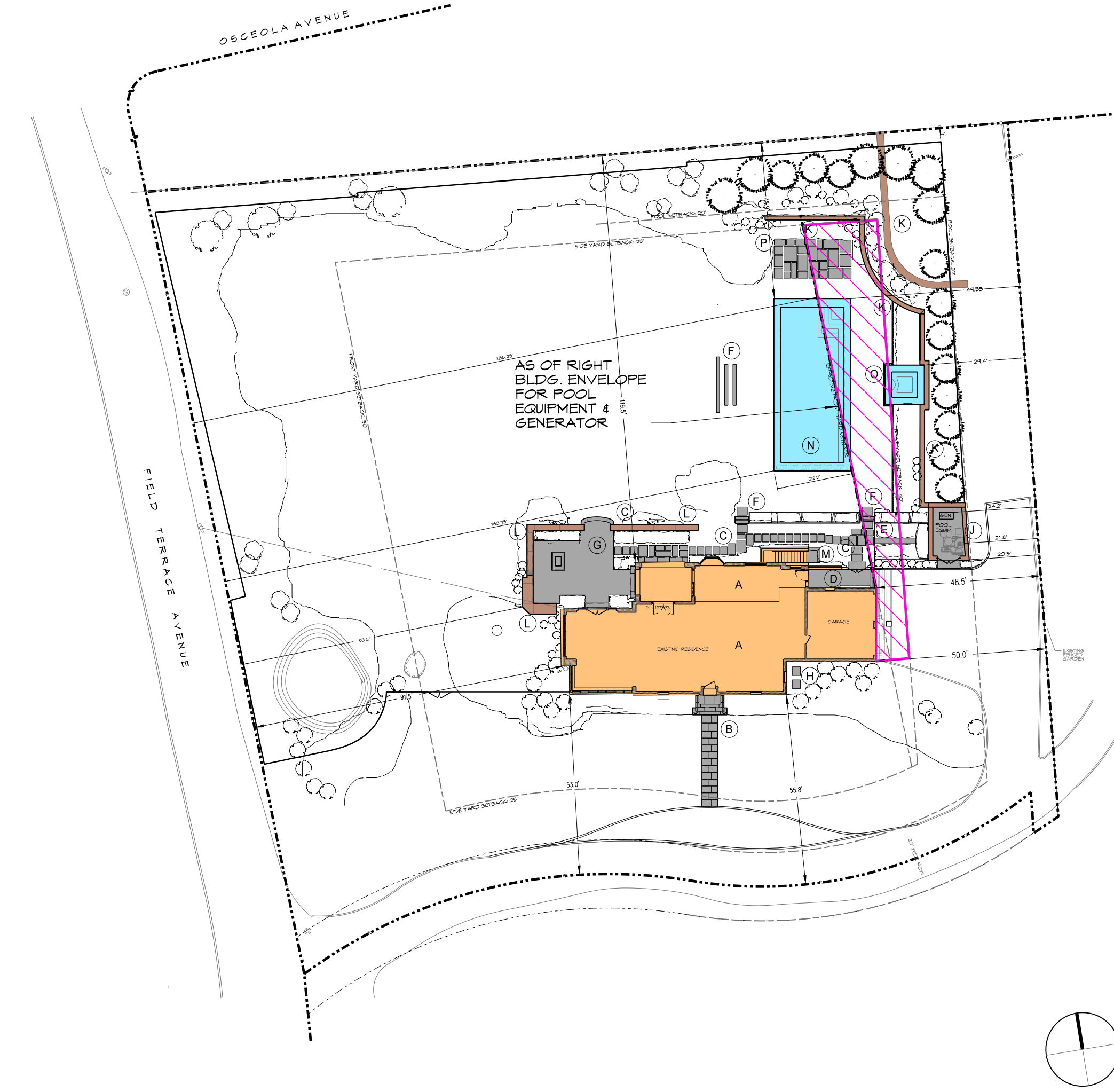
SECTION: 2.170 BLOCK: 233 LOT(S): 20  
REFERENCE ZONE: 1F - 40

LOT DATA	ALLOWED	EXISTING
MIN. LOT AREA	51,197	51,197
MIN. LOT WIDTH	150'	203'
MIN. LOT DEPTH	150'	226'
SETBACK REQUIREMENTS		
FRONT YARD	50'	91.5'
SIDE YARD (CORNER LOT)	25'	53'
SIDE YARD	25'	119.5'
REAR YARD	40'	48.5'
LOT COVERAGE REQUIREMENTS		
* LOT COVERAGE AREA FOR PRINCIPAL AND ACCESSORY BLDG.	5,248	3,916
LOT COVERAGE % FOR PRINCIPAL AND ACCESSORY BLDG.	10.3%	7.7%
COVERAGE AVAILABLE = ALLOWED MINUS EXISTING	2,054	1,332

LOT COVERAGE AREAS: Parcel 20

COVERAGE COLOR KEY	EXISTING (sf)
(A) PRINCIPAL BUILDING	2,982
ACCESSORY STRUCTURES:	
(B) WALLS	122
(C) STEPS, PATIOS, WALKWAYS OTHER PAVED AREAS	812
LOT COVERAGE (SUM: A-C)	3,916

\* MAXIMUM LOT COVERAGE FOR PRINCIPAL AND ACCESSORY BUILDING CALCULATIONS  
PARCEL AREA: 51,197 sf  
(40,000sf x .12) + (1,197SF X 4%)  
4800+ 447.88  
= 5,248 MAX



PROPOSED SITE PLAN - LOT COVERAGE CALCULATIONS  
INCL. LANDSCAPE ELEMENTS  
SCALE: 1"=30'

ZONING ANALYSIS

SECTION: 2.170 BLOCK: 233 LOT(S): 20  
REFERENCE ZONE: 1F - 40

LOT DATA	ALLOWED	EXISTING	PROPOSED
MIN. LOT AREA	51,197	51,197	NO CHANGE
MIN. LOT WIDTH	150'	203'	NO CHANGE
MIN. LOT DEPTH	150'	226'	NO CHANGE
SETBACK REQUIREMENTS			
FRONT YARD	50/186.25**	91.5'	**FOR POOL, 163.75'
SIDE (CORNER LOT)	25'	53'	NO CHANGE
SIDE YARD	25'	119.5'	NO CHANGE
REAR YARD	40'	48.5'	PROPOSED POOL EQUIP. 124' PROPOSED GENERATOR 24.2'
LOT COVERAGE REQUIREMENTS			
* LOT COVERAGE AREA FOR PRINCIPAL AND ACCESSORY BLDG.	5,248	3,916	6,194.6
LOT COVERAGE % FOR PRINCIPAL AND ACCESSORY BLDG.	10.3%	7.7%	12.1%
COVERAGE AVAILABLE = ALLOWED MINUS EXISTING	2,054	1,332	-946.6

LOT COVERAGE AREAS: Parcel 20

COVERAGE COLOR KEY	EXISTING (sf) W/ ARCHIT	PROPOSED (sf)
(A) PRINCIPAL BUILDING	2982	2844*
ACCESSORY STRUCTURES:		
(B) STONE STOOP, STEPS AND FRONT WALK		176.4
(C) STEPS, PATIOS AND OTHER PAVED AREAS	812	
(D) STEPPING STONES FROM MAIN TERRACE AND 2 STEPPING STONES BEYOND		242.39
(E) MUDROOM ENTRY		104.58
(F) PEBBLE PATH		20
(G) SMALL STEPS TO BACK LAWN STEPS AND STEPS TO COVERED PORCH		81.73
(H) REAR TERRACE		516
(I) MECHANICAL EQUIPMENT		10
(J) POOL EQUIPMENT		148.34
(K) CURVED EXISTING WALL	122	122
(L) NEW POOL LOW RETAINING WALL		163.07
(M) LEFT SIDE WALL INCL. KITCHEN (GARDEN WALL)		101
(N) RIGHT SIDE MAIN TERRACE (GARDEN WALL)		43
(O) AREAWAY STAIR, AND ADDITIONAL STEP		85.76
(P) POOL		1134
(Q) SPA		131.34
(R) POOL PATIO		212.79
LOT COVERAGE (SUM: A - P)	3,916	6,194.6

\* MAXIMUM LOT COVERAGE FOR PRINCIPAL AND ACCESSORY BUILDING CALCULATIONS  
PARCEL AREA: 51,197 sf  
(40,000sf x .12) + (1,197SF X 4%)  
4800+ 447.88  
= 5,248 MAX

+ COMPREHENSIVE SF OF STEPS, PATIOS AND OTHER PAVED AREAS AS CALCULATED WITHIN PERMIT # PB 2020-0047  
\* TOTAL PRINCIPAL BUILDING AREA OF ADDITIONS DIFFER DUE TO THE FACT THAT THE NEW STEPS LEADING FROM THE PORCH ADDITION WERE ORIGINALLY INCLUDED IN THE PRINCIPAL BUILDING CALCULATION.

VARIANCES REQUIRED:  
1. LOT COVERAGE (946.6 S.F. OR 18% OVER ALLOWABLE)  
2. POOL LOCATION (22.5' BEYOND FRONT YARD EFFECTIVE SETBACK; SETBACK DIMENSION FROM FRONT PROPERTY LINE IS 163.8')  
3. POOL EQUIPMENT LOCATION (21.8' FROM REAR YARD PL IN LIEU OF 40')  
4. GENERATOR LOCATION (24.2' FROM REAR YARD PL IN LIEU OF 40')



CONTEXT COVERAGE AND LOCATION MAPS

KEY:	LOT LOCATION	ADDRESS	PARCEL #	LAND AREA SF	COVERAGE ALLOWABLE SF	EXISTING SF	% ALLOWED	EXISTING % OF LOT COVERAGE
1F	55 FIELD TERRACE AVE.	2.170-76-19		133,294	8532	17195	6.4%	12.9%
2F	57 FIELD TERRACE AVE.	2.170-76-24		23,958	2874	4341	12.0%	18.0%
3F	59 FIELD TERRACE AVE.	2.170-76-43		43,996	4956	2156	11.3%	4.9%
4F	53 FIELD TERRACE AVE.	2.170-76-16		30,056	3606	4454	12.0%	15.0%
5F	54 FIELD TERRACE AVE.	2.170-76-26		39,640	4757	2815	12.0%	7.0%
6F	61 FIELD TERRACE AVE.	2.170-76-8		44,431	4977	6594	11.2%	14.9%
7FB	63 FIELD TERRACE AVE	2.170-76-20		51,197	5248	3916	10.3%	12.1%
7F	65 FIELD TERRACE AVE	2.170-76-42		101,930	7277	5067	7.0%	5.0%
8B	1 BELMONT DRIVE	2.170-76-41.1		76,666	6267	6834	8.2%	8.9%
9B	5 BELMONT DRIVE	2.170-76-2		135,907	8636	4859	6.4%	3.6%
10L	43 LANGDON AVE.	2.170-80-2		36,590	4391	3834	12.0%	10.5%
11W	14 WASHINGTON AVE.	2.170-80-1		70,567	6023	4669	8.5%	6.6%
12W	16 WASHINGTON AVE.	2.170-82-2		61,855	7082	4707	11.4%	7.6%
13W	19 WASHINGTON AVE.	2.170-80-3, SD		81,026	6441	6991	7.8%	8.6%
14W	23 WASHINGTON AVE.	2.170-80-5		41,382	4855	3835	11.7%	9.3%
15A	1 ARDSLEY AVE. E	2.170-80-6		39,640	5883	6172	8.8%	9.2%
16A	33 ARDSLEY AVE. E.	2.170-76-40		87,991	6720	6764	7.6%	7.7%
17O	30 OSCEOLA AVE.	2.170-76-39		66,647	5866	8138	8.8%	12.2%
18O	32 OSCEOLA AVE.	2.170-76-28		54,886	5395	4522	9.8%	8.2%
19O	49 OSCEOLA AVE.	2.170-76-10		18,731	2247	2191	12.0%	12.2%
20O	49B OSCEOLA AVE.	2.170-76-11		35,284	4234	6068	12.0%	17.2%

GRAY HIGHLIGHT INDICATES EXISTING COVERAGE THAT IS OVER THE ALLOWABLE

CONTEXT COVERAGE CHART

NOTE:  
COVERAGE NUMBERS COMPILED INDICATE STRUCTURES DOCUMENTED ON GREENBURGH CAI PROPERTY CARDS AND FROM AERIAL PHOTOGRAPHY.  
ADDITIONAL WALLS, PATIOS AND PATHWAYS MAY EXIST THAT HAVE NOT BEEN INCLUDED ON PROPERTY CARDS.

No.	Date	Revision / Issue
	02.01.2021	BUILDING PERMIT & ARB SUBMITTAL
	01.11.2021	ZBA SUBMITTAL
	12.23.2020	PLANNING BOARD SUBMISSION #2, VILLAGE OF IRVINGTON
	11.18.2020	PLANNING BOARD SUBMISSION VILLAGE OF IRVINGTON

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PROJECT:  
SITE IMPROVEMENTS FOR  
THE TRENCHER RESIDENCE  
63 FIELD TERRACE,  
IRVINGTON, NEW YORK

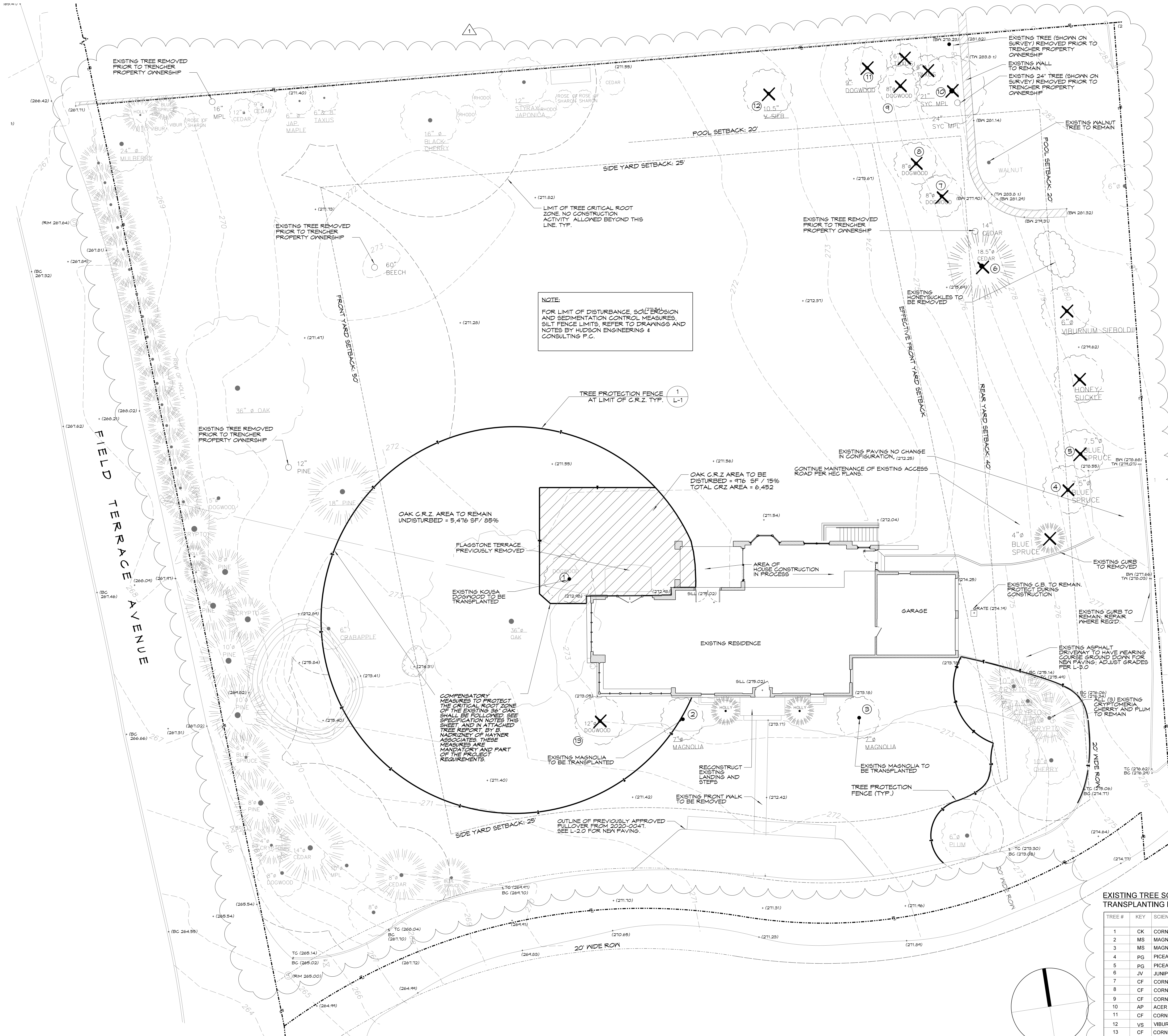
SHEET TITLE:

SITE DATA

SEAL & SIGNATURE:	DATE: 10.30.2020
REGISTERED ARCHITECT STATE OF NEW YORK	SCALE: AS NOTED
	DRAWN BY: CW, AS
	SHEET: L-0.0

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**KEY**

- 5" DOGWOOD
- 18" PINE
- 6" & 8" TAXUS
- 60" BEECH
- EXISTING DECIDUOUS TREE TO REMAIN
- EXISTING CONIFEROUS TREE TO REMAIN
- UNDERLINE INDICATES TREE DESCRIPTION UPDATED AND/OR LOCATED BY B. NADRIZNY, ARBORIST, 12/16/2020
- EXISTING TREE REMOVED PRIOR TO TRENCHER PROPERTY OWNERSHIP, SHOWN ON 2014 DOMATO SURVEY
- TREE TO BE REMOVED
- EXISTING SPOT GRADES
- EXISTING CONTOURS
- PROPERTY LINE
- TREE CONSTRUCTION FENCE
- TREE CRITICAL ROOT ZONE C.R.Z. PER VILLAGE OF IRVINGTON (1.5 X DBH" = R)
- EXISTING TREE OR SHrub MASS TO BE SAVED
- FENCE TO FACE OUT ON ALL SIDES
- LOCATE FENCE AT LIMIT OF CRZ (OR AS SHOWN ON PLAN) AND PER TREE PROTECTION NOTES
- POST
- SUBGRADE
- PLAN
- ELEVATION

**1 TREE PROTECTION FENCE**  
N.T.S.

TREE PROTECTION FENCE SHALL CONSIST OF 4" HIGH FLORESCENT ORANGE WOVEN POLYETHYLENE OR EQUAL, AND ATTACHED TO A 6" HIGH WOOD POST DRIVEN 2" BELOW GRADE AND SPACED AS REQUIRED TO REMAIN STABLE. NO ACTIVITY, INCLUDING PEDESTRIAN TRAFFIC AND STORAGE OF MATERIALS, SHALL OCCUR INSIDE THE FENCE OR AROUND ANY EXISTING PLANTS TO REMAIN.

**REMOVAL NOTES**

- PROTECT ALL EXISTING SURFACES TO REMAIN FROM DAMAGE FOR THE DURATION OF CONSTRUCTION.
- REMOVE OR TRANSPLANT EXISTING PLANTINGS AS REQUIRED FOR NEW WORK AS DIRECTED BY THE LANDSCAPE ARCHITECT.
- TREE PROTECTION FENCING TO BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.
- LOCATE TREE PROTECTION FENCE PER DETAIL 1/L1 AROUND ALL EXISTING TREE AND SHRUB GROUPS TO REMAIN, AS TAGGED BY THE LANDSCAPE ARCHITECT.
- EXCAVATION OF SOIL WITHIN THE CRITICAL ROOT ZONE MUST BE BY HAND SHOVEL AND AS OUTLINED IN ARBORIST REPORT DATED 12-18-20.
- EXISTING CONDITIONS INFORMATION BASED ON SURVEY PREPARED BY RICHARD J. DOMATO, LATEST UPDATE MAY 27, 2014.

**TREE PRESERVATION SPECIFICATIONS**

- A CONSTRUCTION FENCE SHOULD BE ERECTED AS INDICATED ON THE REMOVALS PLAN L1 AROUND ALL TREES TO REMAIN.
- NO ACTIVITY, INCLUDING PEDESTRIAN TRAFFIC AND STORAGE OF MATERIALS TO OCCUR INSIDE THE FENCING, EXCEPT AS NECESSARY TO REMOVAL ALL THE EXISTING PAVEMENT AND PERFORM THE TREE TRANSPLANTS.

REGARDING CONSTRUCTION IN THE VICINITY OF THE 36" OAK EAST OF THE HOUSE:

- EXCAVATION OF SOIL ALONG THE FENCE LINE MUST BE BY HAND SHOVEL OR PNEUMATIC AIR TOOL. ROOTS THAT ARE ENCOUNTERED, IN EXCESS OF ONE INCH IN DIAMETER SHOULD BE CLEANLY CUT WITH A SHARP SAW.
- IF ROOTS OVER 3" IN DIAMETER ARE ENCOUNTERED WITHIN THE FOOTPRINT OF THE PROPOSED TERRACE AND/OR WALLS, A CERTIFIED ARBORIST WILL INSPECT TO DETERMINE THE BEST COURSE OF ACTION, AND IF BRIDGING WITH A CONCRETE GRADE BEAM OR OTHER MEASURES ARE WARRANTED, SEE DETAIL 5/L1 FOR BRIDGING DETAIL.
- PRIOR TO EXCAVATION, THE AREAS SLATED FOR CONSTRUCTION BENEATH THE OAK SHALL BE AIR-SPADED AND INSPECTED BY A CERTIFIED ARBORIST.
- REMOVAL OF ANY PHYSICAL FEATURES TO BE COMPLETED WITH HAND TOOLS.
- THE VOIDS CREATED BY AIR SPADING SHOULD BE BACKFILLED WITH A BLEND OF TOPSOIL, SAND AND COMPOST.
- THE ENTIRE AREA BENEATH THE TREE SHOULD BE TREATED BY SOIL INJECTION PER LABEL DIRECTIONS WITH A SOIL BIO-STIMULANT AND MYCORRHIZAL SPORES. THIS SHOULD BE REPEATED ANNUALLY FOR THREE YEARS.

**EXISTING TREE SCHEDULE FOR REMOVAL & TRANSPLANTING IN PROJECT AREA (7" CAL. & OVER)**

TREE #	KEY	SCIENTIFIC NAME	COMMON NAME	CALIPER (IN.) FOR 2014 SURVEY IF PROVIDED	CALIPER (IN.) FOR 2020 SURVEY	CONDITION	STATUS* (R, T)
1	CK	CORNUS KOUSA	KOUSA DOGWOOD	NOT SHOWN	TWIN 6"	SPECIMEN	T
2	MS	MAGNOLIA SOULANGIANA	SAUCER MAGNOLIA	5"	7"	POOR	T
3	MS	MAGNOLIA SOULANGIANA	SAUCER MAGNOLIA	3"	7"	POOR	T
4	PG	PICEA GLAUC	BLUE SPRUCE	NOT SHOWN	7 1/2"	FAIR	R
5	PG	PICEA GLAUC	BLUE SPRUCE	NOT SHOWN	7 1/2"	FAIR	R
6	JV	JUNIPERUS VIRGINIANA	W. RED CEDAR	14"	18.5"	FAIR	R
7	CF	CORNUS FLORIDA	DOGWOOD	6"	8"	FAIR	R
8	CF	CORNUS FLORIDA	DOGWOOD	8"	8"	FAIR	R
9	CF	CORNUS FLORIDA	DOGWOOD	8"	8"	FAIR	R
10	AP	ACER PSEUDOPLATANUS	SYCAMORE MAPLE	24"	21"	POOR	R
11	CF	CORNUS FLORIDA	DOGWOOD	8"	9"	FAIR	R
12	VS	VIBURNUM SIEBOLDII (shrub)	SIEBOLD VIBURNUM	12"	10.5" @ 3' A.G.	POOR	R
13	CF	CORNUS FLORIDA	DOGWOOD	12"	12"	VERY POOR	R

TOTAL TREES OVER 8" CAL. TO BE REMOVED = 7 (SEE L-6 FOR REPLACEMENT TREES)  
+ 1 TREE FORM SHRUB TO BE REMOVED  
TOTAL TREES TO BE TRANSPLANTED = 3

No. Date Revision / Issue

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**PROJECT:** SITE IMPROVEMENTS FOR THE TRENCHER RESIDENCE 63 FIELD TERRACE, IRVINGTON, NEW YORK

**SHEET TITLE:** EXISTING CONDITIONS & REMOVALS PLAN

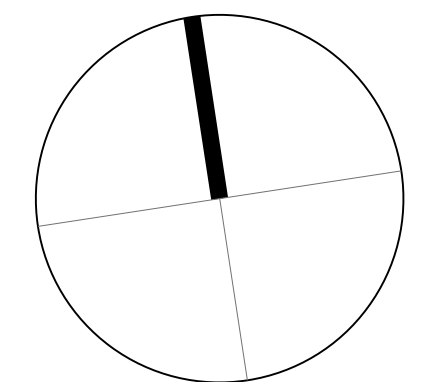
**SEAL & SIGNATURE:** [Signature]  
**DATE:** 07.14.20  
**SCALE:** 1"=10'-0"  
**DRAWN BY:** AS, CW  
**SHEET:** L-1.0


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SITE IMPROVEMENTS FOR  
THE TRENCHER RESIDENCE  
63 FIELD TERRACE,  
IRVINGTON, NEW YORK

**LAYOUT PLAN  
AREA ENLARGEMENTS**

SEAL & SIGNATURE:	DATE: 10.14.2020
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SCALE: AS NOTED

DRAWN BY: AS, RB



SHEET: \_\_\_\_\_

100

STATE OF NEW YORK 023950 L-2.1

STATE OF NEW YORK

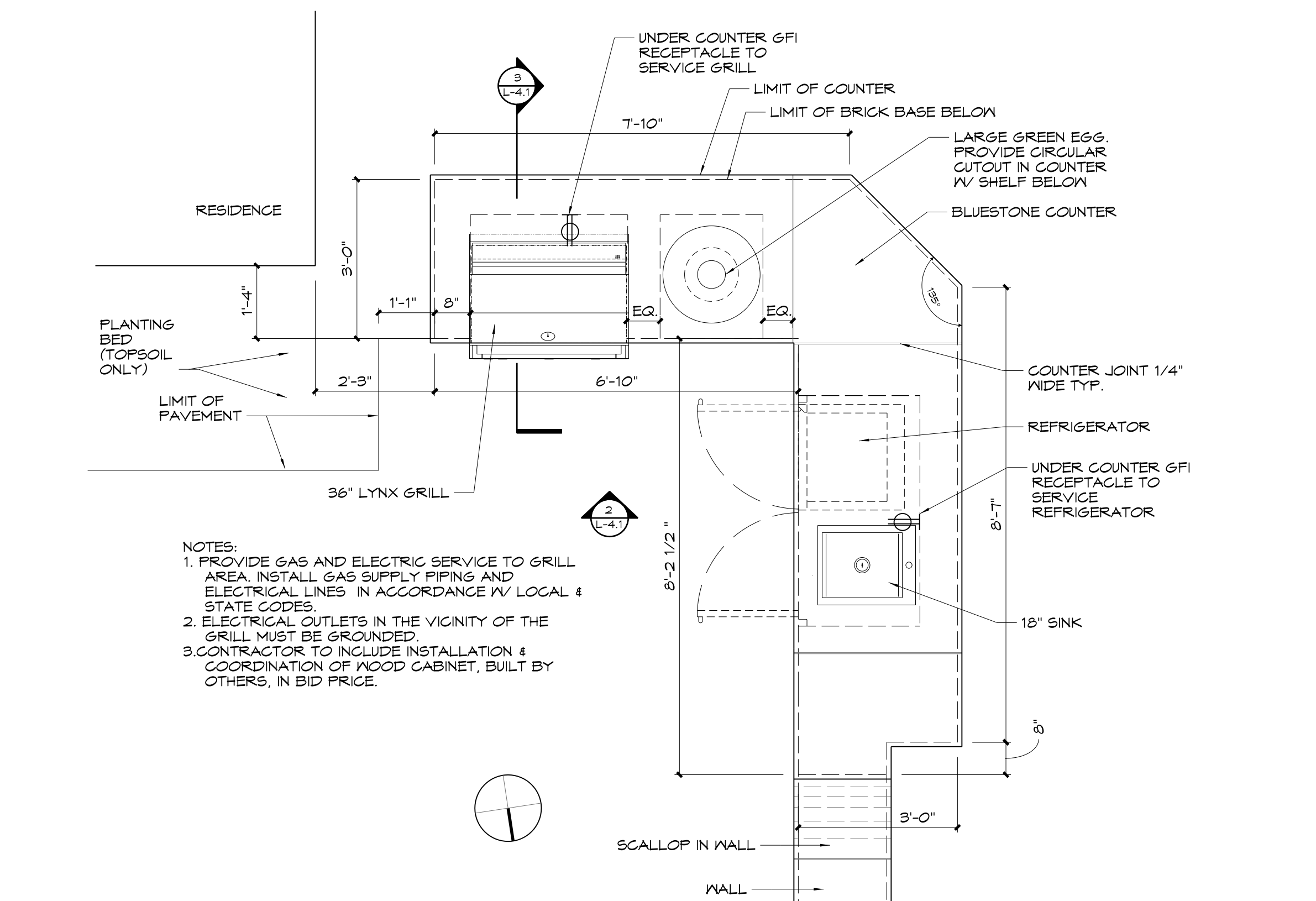




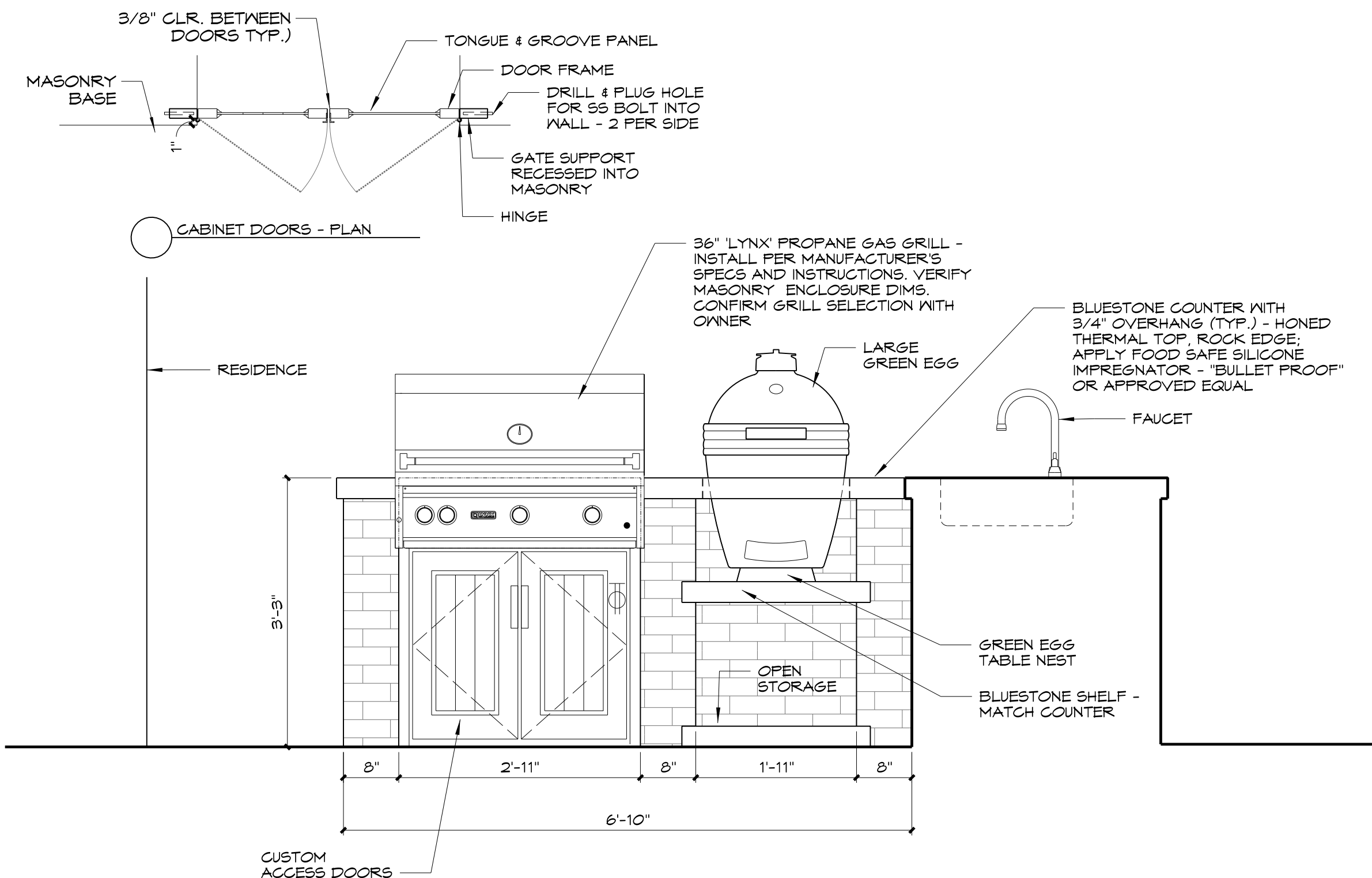




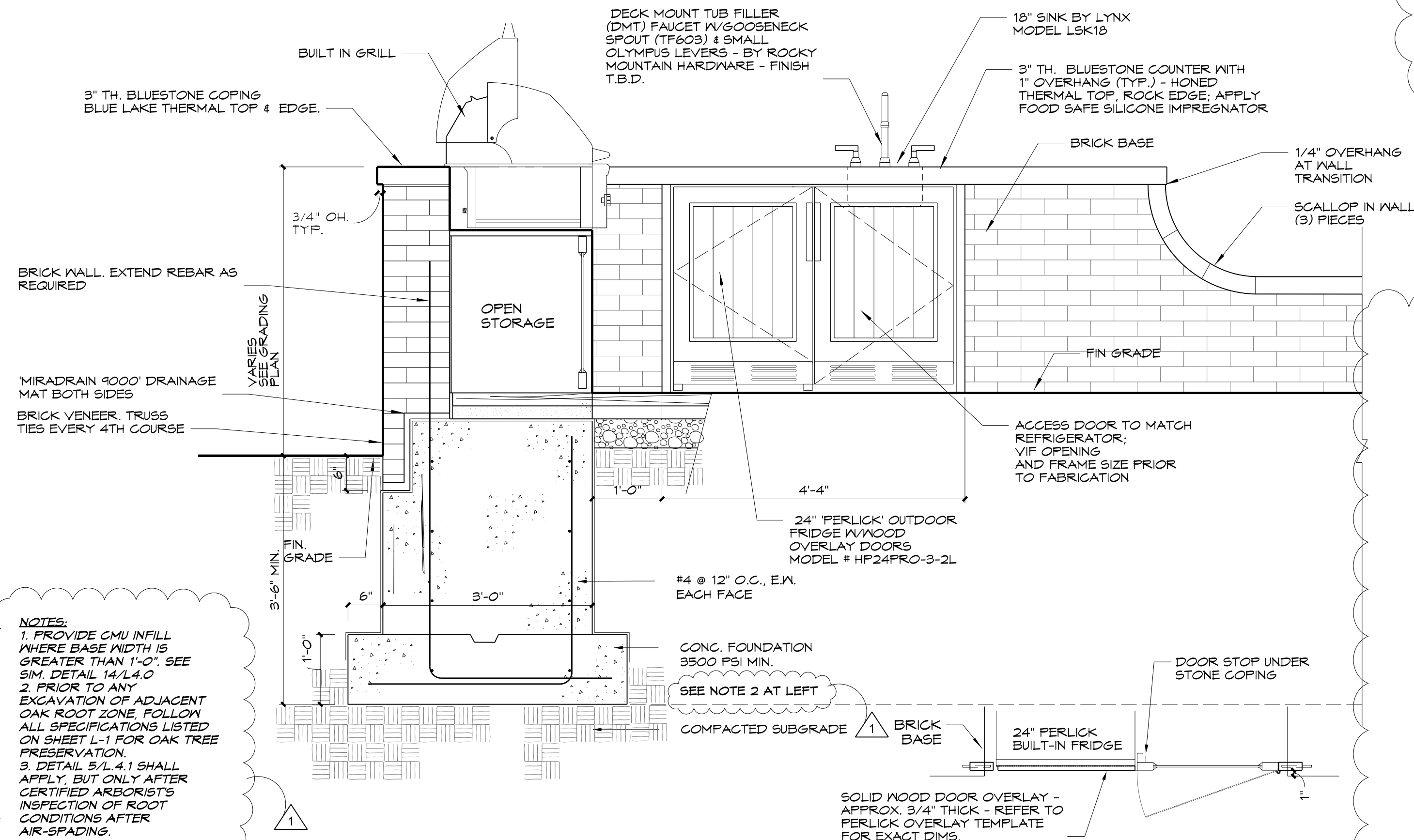




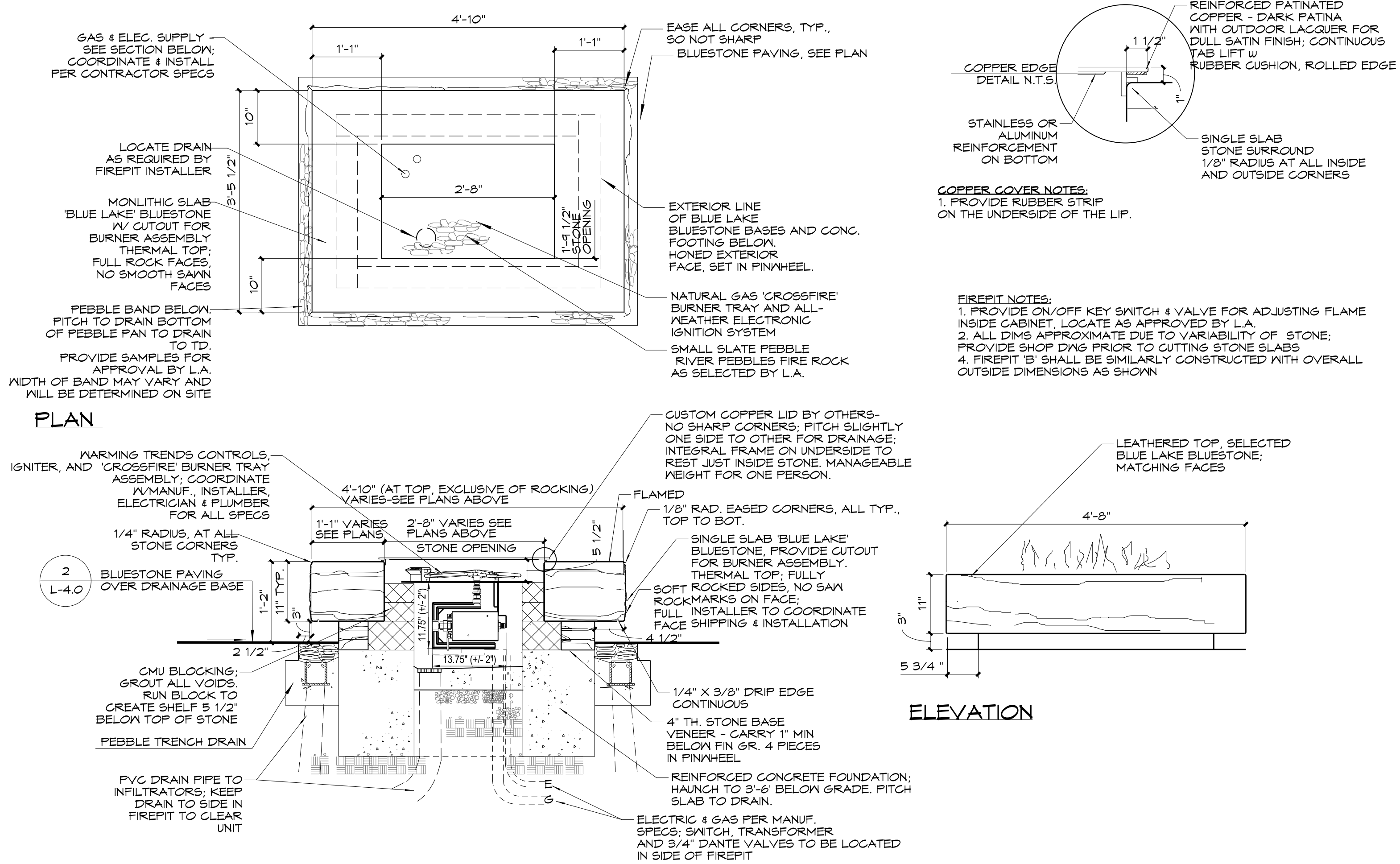
**1 OUTDOOR KITCHEN - PLAN**  
SCALE: 1/2"=1'-0"



**2 OUTDOOR KITCHEN - NORTH ELEVATION**  
SCALE: 3/4"=1'-0"

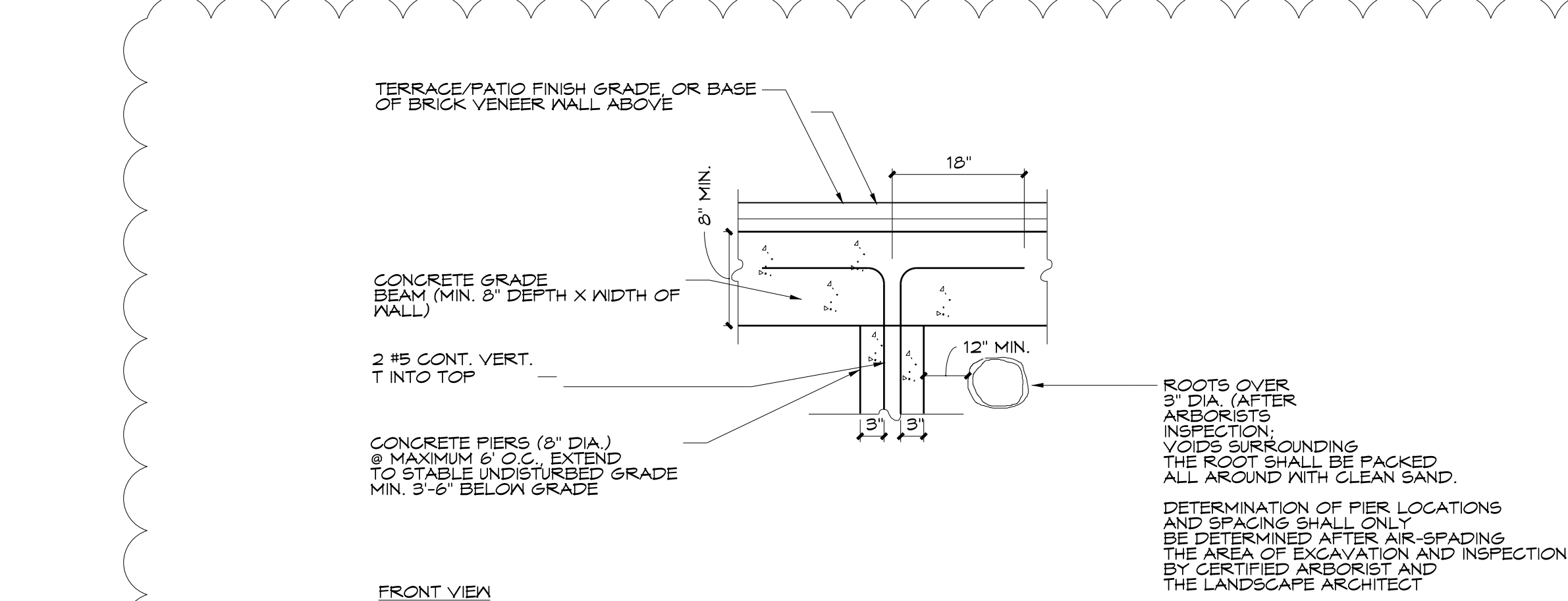


**3 OUTDOOR KITCHEN - EAST ELEVATION**  
SCALE: 3/4"=1'-0"



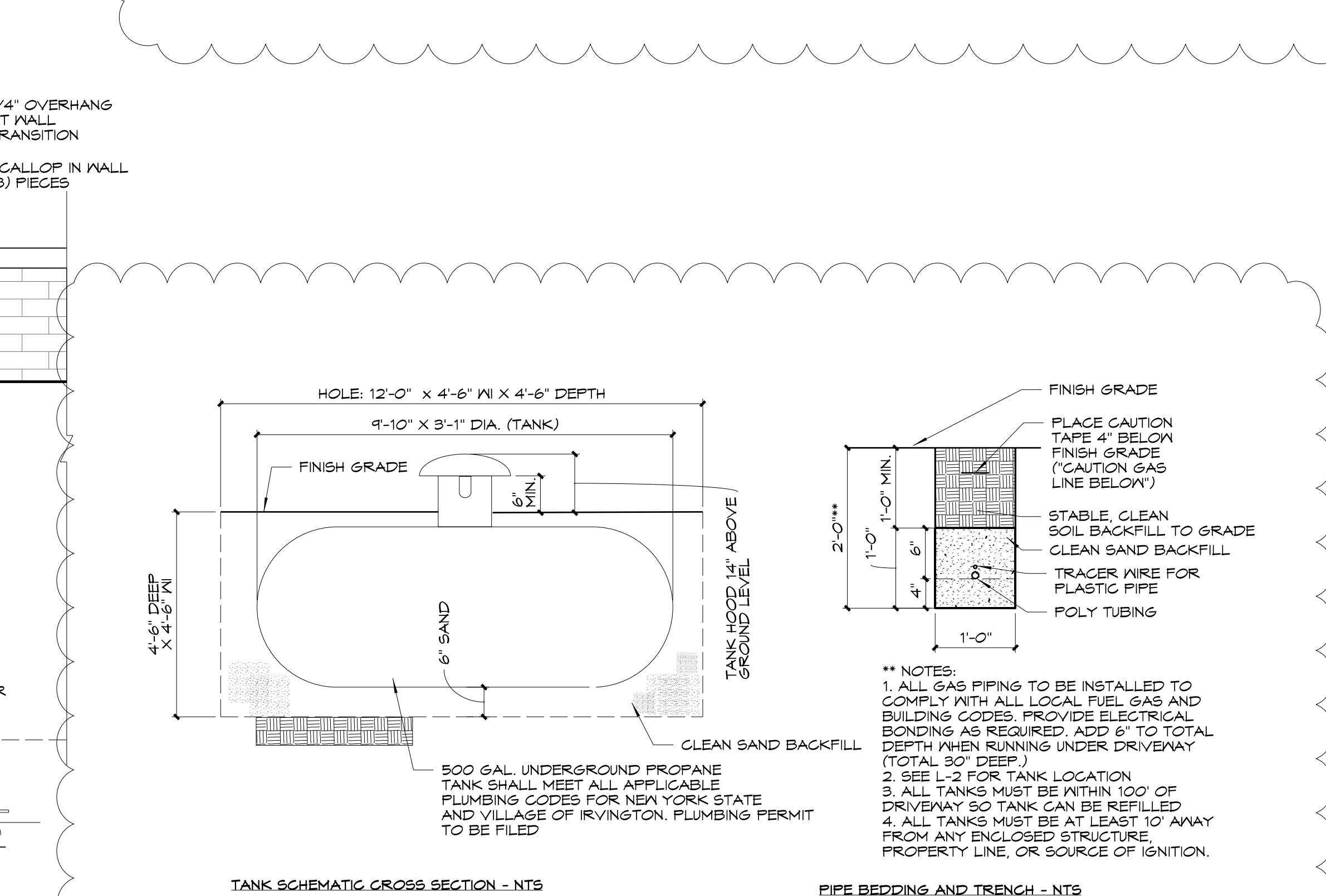
**SECTION**

**4 FIRE PIT**  
SCALE: 3/4"=1'-0"



**5 GRADE BEAM AT LARGE TREE ROOT AREAS**  
SCALE: 3/4"=1'-0"

**5 GRADE BEAM AT LARGE TREE ROOT AREAS**  
SCALE: 3/4"=1'-0"



**6 500 GALLON PROPANE TANK & PIPE TRENCH**  
SCALE: NTS

## MASONRY NOTES

1. ALL CONCRETE TO BE STONE WEIGHT CONCRETE WITH A 28-DAY COMPRESSIVE STRENGTH  $f'_c \geq 3,500$  P.S.I., AIR - ENTRAINED, 4" SLUMP MAX. TEST CYLINDERS REQUIRED.
2. ALL REINFORCING BARS TO BE DEFORMED STEEL GRADE 60,  $F_y = 60$  ksi.
3. ALL CONCRETE WORK SHALL BE EXECUTED PER ACI 318-99, INCLUDING CYLINDER TESTS AND CURING REQUIREMENTS.
4. ALL BLUESTONE SHALL BE 'BLUE LAKE' BLUESTONE. SEE DETAIL FOR FINISH AND, UNLESS OTHERWISE NOTED, BE IN A RANDOM RECTANGULAR PATTERN. MINIMUM PAVEMENT STONE DIMENSION SHALL BE 18" X 18". MORTAR JOINTS SHALL BE BETWEEN 1/4" AND 5/8". NOT 1/2". RECTANGULAR PATTERN SHALL BE LAID OUT FOR APPROVAL OF MOCK UP; NO JOINTS SHALL FORM A CROSS AND NO MORE THAN THREE PIECES IN ROW SHARING THE SAME JOINT LINE.
5. BLUESTONE COPINGS, PAVEMENT BANDS AND STAIR TREAD RETURNS; NO MITERED CORNER JOINTS OR BUTT JOINTS WILL BE ACCEPTED. ALL 90 DEGREE CORNERS SHALL BE 'L' SHAPE PIECES WITH RETURN LENGTHS AS SPECIFIED BY THE LAND ARCH. ON SITE FOR THE SELECTED LOCATION. ALL BANDS SHALL BE LAID WITH EQUAL, LONG BAND LENGTHS ALONG BORDERS.
6. ALL MASONRY FLATWORK AND WALL WORK, INCLUDING GROUT SHALL INCORPORATE ADMIXTURES TO REDUCE EFFLORESCENCE. THESE SHALL BE AS APPROVED IN ADVANCE AND USED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES; SIKAMIX, PAVESTAR, RHEOPEL, MAESAMIX ADMIXTURES ARE ACCEPTABLE FOR VARIOUS APPLICATIONS-REVIEW PRIOR TO SELECTION AND PURCHASE WITH LAND ARCH.
7. BRICK WALLS SHALL INCORPORATE RUNNING BOND PATTERN SIMILAR TO HOUSE FACADE AND SOLDIER COURSES FOR ALL BRICK RISERS AND COPINGS SHALL BE USED.
8. BACK FILL WALLS IN ONE FOOT LIFTS, ALTERNATING FRONT AND BACK SIDES OF WALL. COMPACT WITH A VIBRATORY PLATE TAMPER WHERE REQUIRED TO ACHIEVE NATURAL DENSITY. BACK FILL SHALL BE SAND OR RUN-OF-BANK WITH UNIT WEIGHT OF 100 LB./FT<sup>3</sup> MAX.
9. NOTIFY ARCHITECT AT TIME OF CONCRETE FOOTING INSTALLATION FOR INSPECTION AND CERTIFICATION TO THE DEPARTMENT OF BUILDINGS, VILLAGE OF IRVINGTON.
10. IF TREE ROOTS OVER 3" DIA. ARE ENCOUNTERED, NOTIFY LAND ARCH. TO REVIEW BRIDGING PROCEDURE. DO NOT CUT ROOTS.
11. PROVIDE 4" SLEEVES INTO LAND-LOCKED AREAS FOR UNDERGROUND DRAINAGE, IRRIGATION AND ELECTRICAL CONDUITS. LOCATIONS SHALL BE AS AGREED TO ON SITE WITH LANDSCAPE ARCHITECT AND SHALL BE MARKED WITH AN INCONSPICUOUS "X" MARK CHISELED INTO THE PAVING OR WALL STONE.
12. REVIEW IN-WALL LOCATIONS OF ALL BUILT-IN ITEMS WITH LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION - INCLUDING BUT NOT LIMITED TO: CATCH BASINS, TRENCH DRAINS, LIGHTS, EXTERIOR SPEAKERS, G.F.I.'S, AND DRIP IRRIGATION FOR CONTAINERS.

2	02.01.2021	BUILDING PERMIT & ARB SUBMITTAL
	01.11.2021	ZBA SUBMITTAL
1	12.23.2020	PLANNING BOARD SUBMISSION #2, VILLAGE OF IRVINGTON
	11.18.2020	PLANNING BOARD SUBMISSION VILLAGE OF IRVINGTON
No.	Date	Revision / Issue

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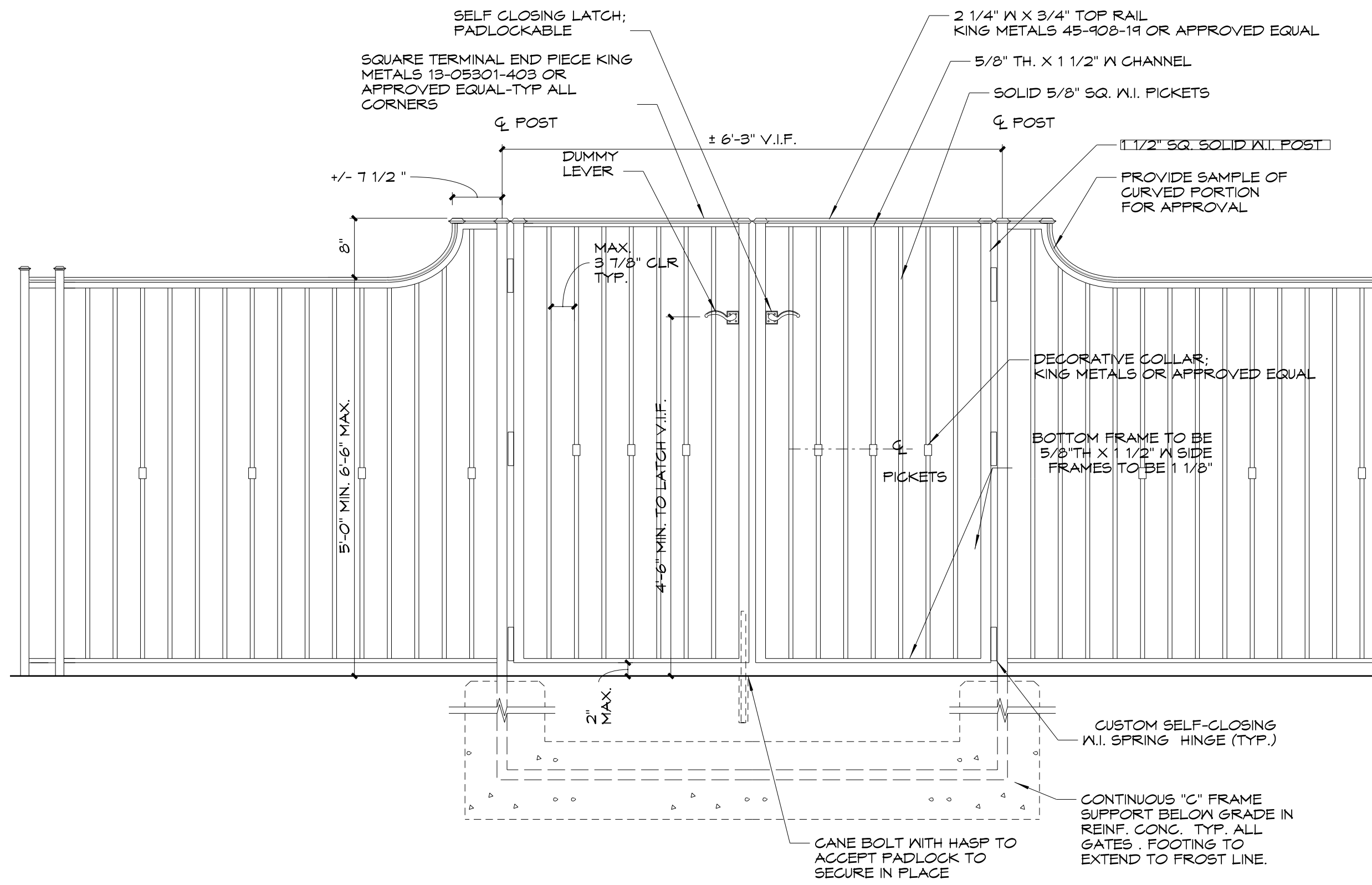
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**PROJECT:**  
SITE IMPROVEMENTS FOR  
**THE TRENCHER RESIDENCE**  
63 FIELD TERRACE,  
IRVINGTON, NEW YORK

**SHEET TITLE:**  
**SITE DETAILS**

**SEAL & SIGNATURE:**  
**REGISTERED ARCHITECT**  
**STATE OF NEW YORK**  
**023950**  
**DATE:** 1.15.2020  
**SCALE:** AS NOTED  
**DRAWN BY:** OV  
**SHEET:**  
**L-4.1**

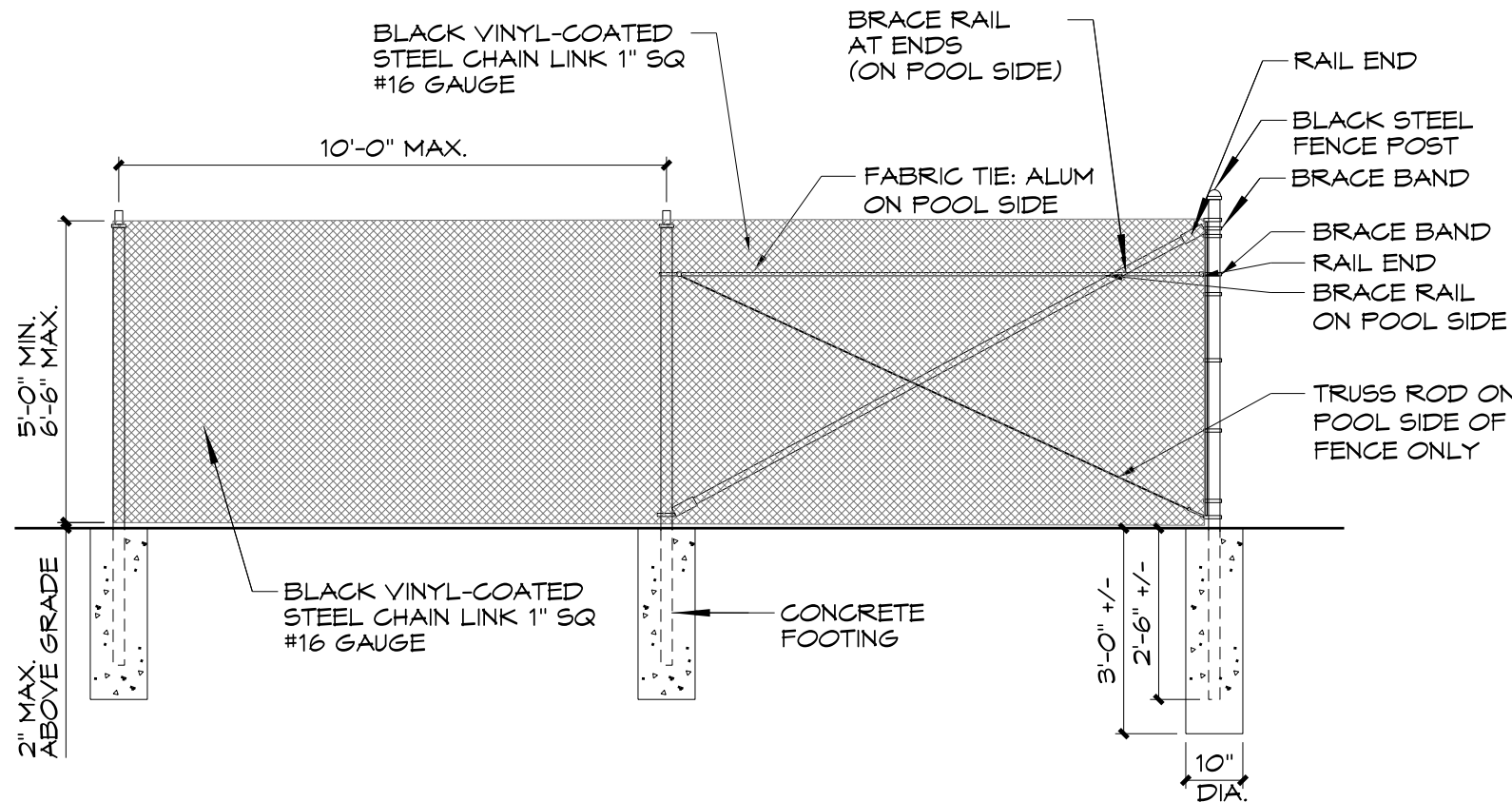




WROUGHT IRON GATE PRECEDENT IMAGE

## 1 WROUGHT IRON FENCE & GATE - POOL ENCLOSURE

SCALE: 3/4"=1'-0"

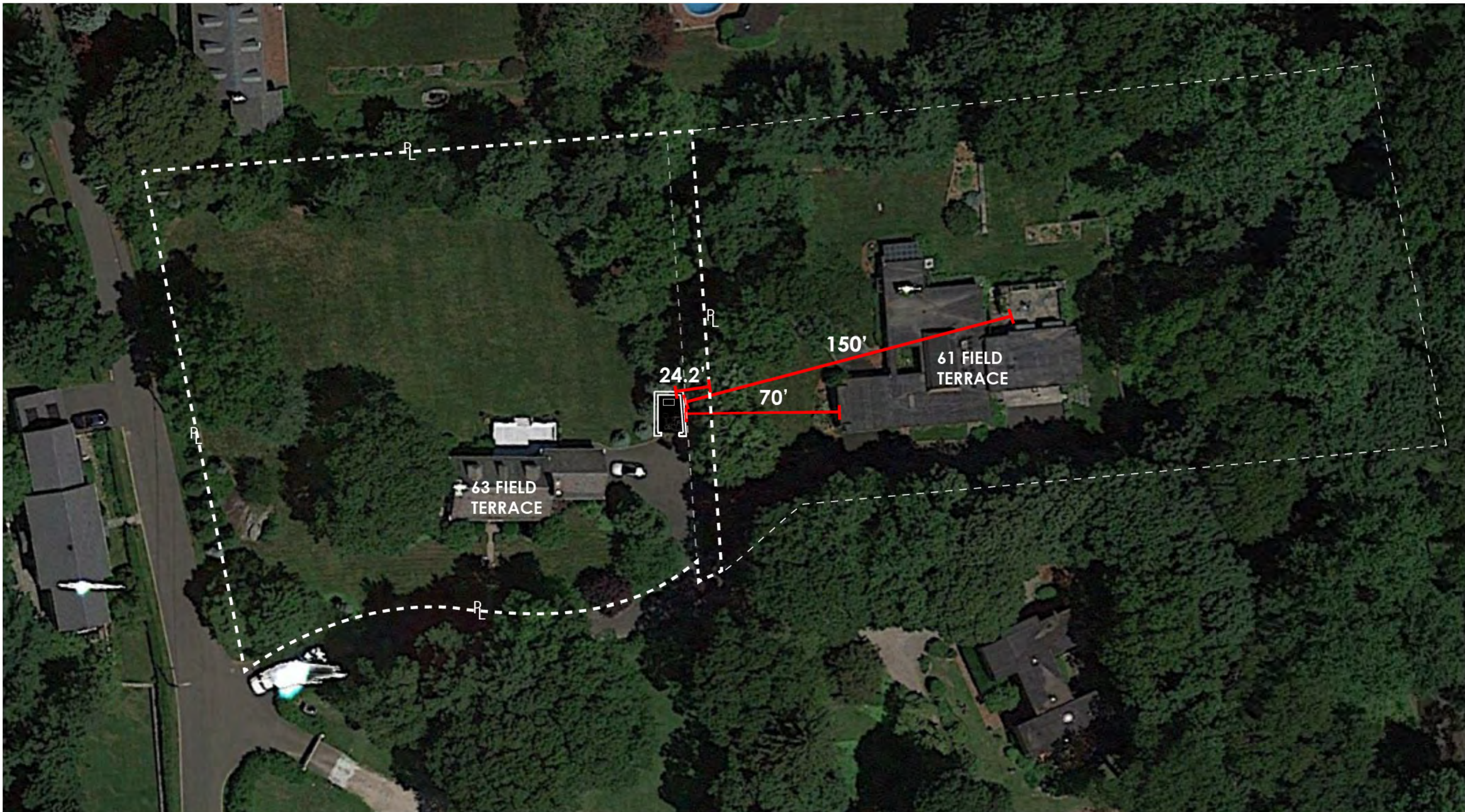


### CHAIN LINK FENCE AND GATE NOTES

1. THE PROPOSED FENCING AND GATES SHALL BE CONSTRUCTED AND INSTALLED TO COMPLY WITH SECTION AG105.1 THROUGH AG105.5 FOR POOL BARRIER REQUIREMENTS LOCATED IN APPENDIX G OF THE NEW YORK STATE RESIDENTIAL BUILDING CODE AND CHAPTER 3 SECTION 303.3 OF THE NEW YORK STATE PROPERTY MAINTENANCE CODE OF NEW YORK STATE, AND THE VILLAGE OF IRVINGTON CODES.
2. ALL ACCESS GATES MUST BE LOCKABLE WITH A KEY, COMBINATION, OR OTHER CHILD-PROOF LOCK WHEN THE SWIMMING POOL IS NOT IN USE OR SUPERVISED.
3. PEDESTRIAN ACCESS GATES MUST OPEN OUTWARD AWAY FROM THE POOL, AND BE SELF-CLOSING AND SELF-LATCHING.
4. THE BARRIER MUST BE AT LEAST 60" HEIGHT. THE SPACE BETWEEN THE BOTTOM OF THE BARRIER AND THE GROUND CANNOT EXCEED 2 INCHES. ANY OPENING IN THE BARRIER MUST BE NO LARGER THAN 2" IN ANY DIMENSION.
5. THE RELEASE MECHANISM OF THE SELF-LATCHING DEVICE SHALL BE LOCATED 60" OR MORE FROM THE BOTTOM OF THE GATE.
6. SEE ADDITIONAL POOL ENCLOSURE NOTES BELOW THIS SHEET.

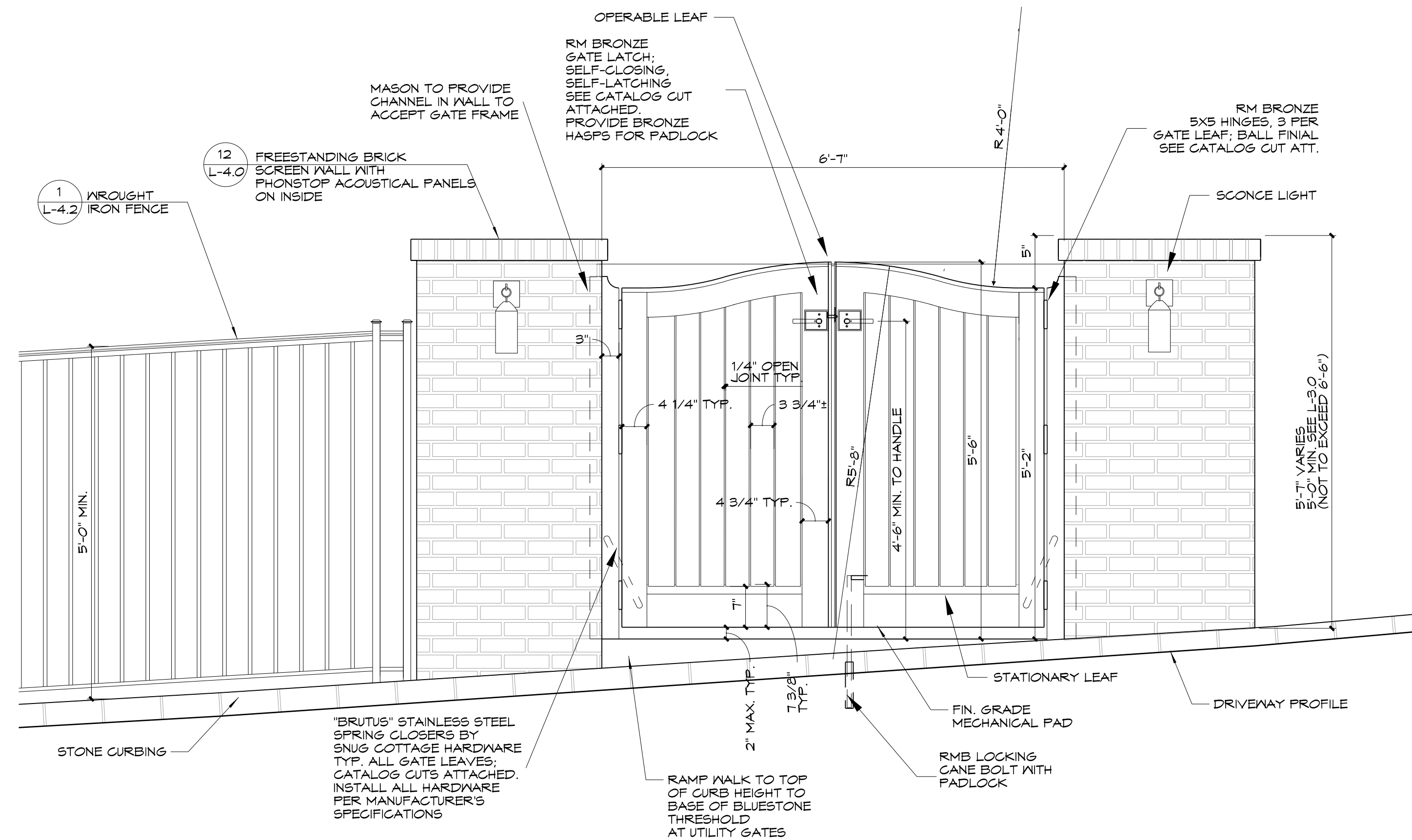
## 2 CHAIN LINK FENCE - POOL ENCLOSURE

SCALE: N.T.S.



## 4 NEIGHBOR PROXIMITY STUDY for POOL EQUIP AND GENERATOR

SCALE: NTS

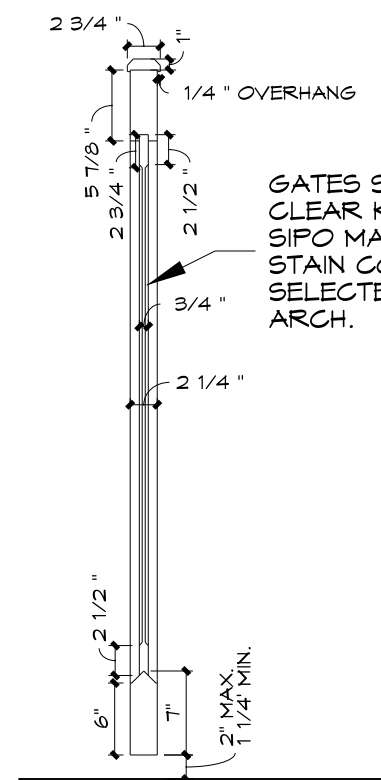


### ELEVATION

NOTE: PROVIDE SHOP DRAWINGS FOR APPROVAL FOR ALL GATES AND FENCES PRIOR TO FABRICATION.



### PLAN



### SECTION

## 3 WOODEN GATE AT POOL EQUIPMENT ENCLOSURE

SCALE: 3/4"=1'-0"



METAL GATE PRECEDENT IMAGE- SIMILAR

## 5 METAL FENCE

SCALE: NTS

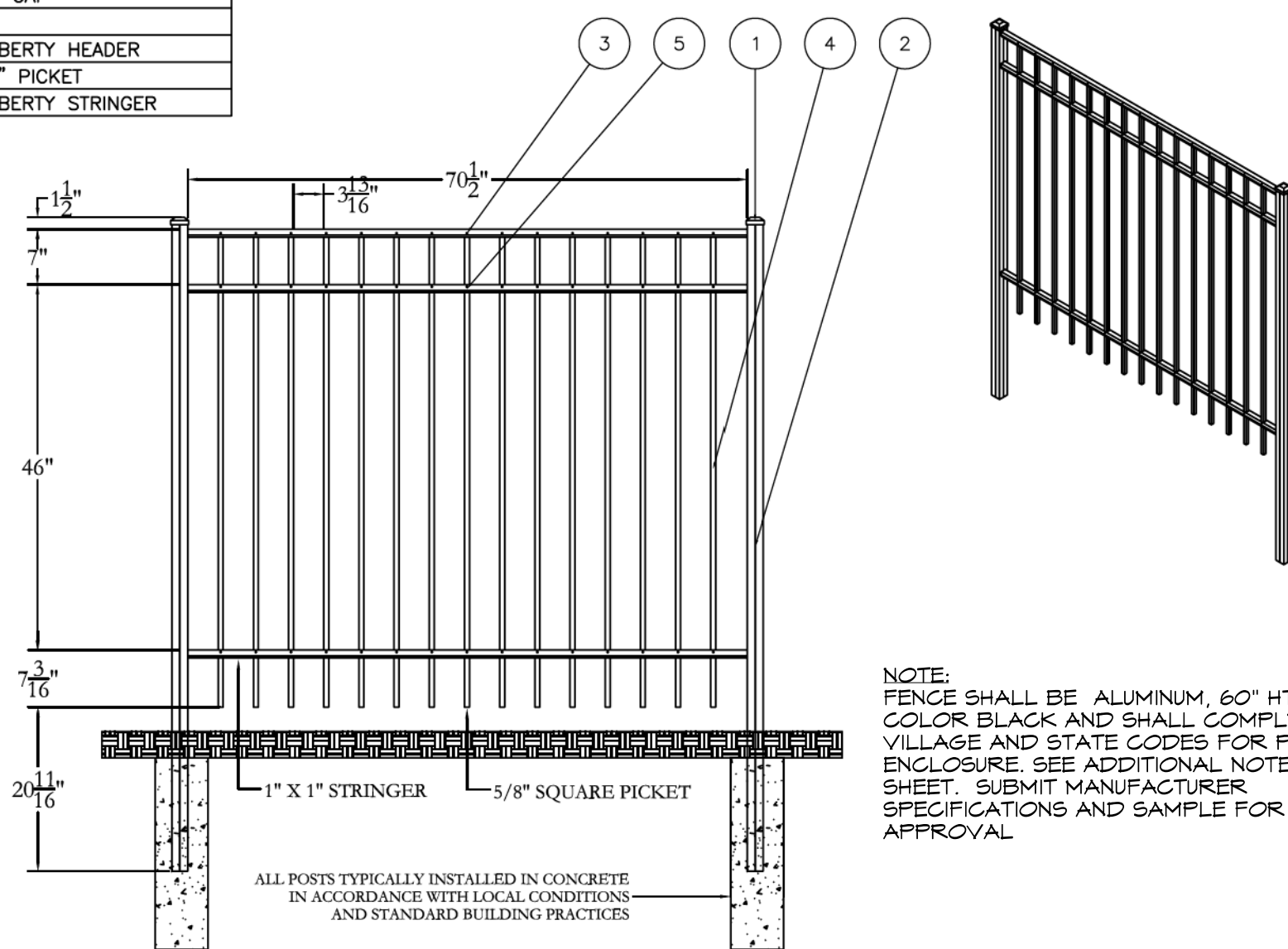
### FENCE, GATE, BARRIER NOTES:

1. THE PROPOSED FENCING AND GATES SHALL BE CONSTRUCTED AND INSTALLED TO COMPLY WITH SECTION AG105.1 THROUGH AG105.5 FOR POOL BARRIER REQUIREMENTS LOCATED IN APPENDIX G OF THE NEW YORK STATE RESIDENTIAL BUILDING CODE AND CHAPTER 3 SECTION 303.3 OF THE NEW YORK STATE PROPERTY MAINTENANCE CODE OF NEW YORK STATE, ALL COMPONENTS MUST COMPLY WITH CHAPTER 42: SWIMMING POOLS.
2. ALL ACCESS GATES MUST BE LOCKABLE WITH A KEY, COMBINATION, OR OTHER CHILD-PROOF LOCK WHEN THE SWIMMING POOL IS NOT IN USE OR SUPERVISED.
3. PEDESTRIAN ACCESS GATES MUST OPEN OUTWARD AWAY FROM THE POOL, AND BE SELF-CLOSING AND SELF-LATCHING.
4. THE BARRIER MUST BE AT LEAST 60" IN HEIGHT AND SHALL NOT EXCEED 6 1/2' HT. THE SPACE BETWEEN THE BOTTOM OF THE BARRIER AND THE GROUND CANNOT EXCEED 2 INCHES. ANY OPENING IN THE BARRIER MUST BE NO LARGER THAN 2" IN ANY DIMENSION.
5. THE RELEASE MECHANISM OF THE SELF-LATCHING DEVICE SHALL BE LOCATED 64" OR MORE FROM THE BOTTOM OF THE GATE.
6. AUTO-COVER MEETS ASTM F 1346: COMPLIANCE VERIFIED FOR BLDG. WALL AS SAFETY ENCLOSURE:  
NYS SWIMMING POOL CODE:  
A building wall can form part of the required barrier. However, where a wall of a dwelling serves as part of the barrier, at least one of the following requirements must be satisfied: the pool must be equipped with a powered safety cover in compliance with reference standard ASTM F1346, entitled Standard Performance Specification for safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs; or all doors with direct access to the pool through that wall must be equipped with an alarm which:


1. produces an audible warning when the door and its screen, if present, are opened,
2. sounds continuously for a minimum of 30 seconds immediately after the door is opened,
3. is capable of being heard throughout the house during normal household activities,
4. automatically resets under all conditions, and
5. is equipped with a manual means, such as a touchpad or switch, to deactivate the alarm temporarily for a single opening (such threshold of the door); or other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body and which afford a degree of protection not less than the protection afforded by the powered safety cover and door alarm described above, must be provided.

7. ALL WOOD GATE ASSEMBLIES REQUIRE SHOP DRAWINGS FOR APPROVAL.
8. ALL METAL FENCING AND GATES SHALL BE TREATED WITH TWO COATS RUST-INHIBITING PRIMER AND TWO COATS OF DARK BRONZE PATINA PAINT AS APPROVED BY ARCHITECT.
9. PROVIDE FULL HEIGHT MOCK-UP 24" MIN. WIDTH OF METAL GATE OR FENCE PANEL THAT INCLUDES ALL COMPONENTS FOR ARCHITECT'S APPROVAL. ARCHITECT MAY REQUEST MINOR DESIGN CHANGES TO RAILING DESIGN BASED ON MOCK-UP WHICH SHALL BE INCORPORATED INTO THE FINAL PRODUCT. ALL MOCK-UPS SHALL BE FINISHED WITH PATINA PAINT. CONSULT WITH LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
10. THE LOCATION OF THE FENCE, GATE AND POSTS SHALL BE STAKED OUT IN FIELD PRIOR TO FABRICATION AND MUST BE APPROVED BY THE LANDSCAPE ARCHITECT.

FENCE PARTS	
ITEM/QTY	NAME
1 2 2"	ALUMINUM POST CAP
2 2 2"	LIBERTY POST
3 1 7/2"	15 HOLE LIBERTY HEADER
4 15	LIBERTY 202 - 60" PICKET
5 2 7/2"	15 HOLE LIBERTY STRINGER



NOTE: FENCE SHALL BE ALUMINUM, 60" HT. MIN., COLOR BLACK AND SHALL COMPLY WITH VILLAGE AND STATE CODES FOR POOL ENCLOSURE. SEE ADDITIONAL NOTES THIS SHEET. SUBMIT MANUFACTURER SPECIFICATIONS AND SAMPLE FOR L.A. APPROVAL.

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	01.11.2021	ZBA SUBMITTAL
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	11.18.2020	PLANNING BOARD SUBMISSION VILLAGE OF IRVINGTON
No.	Date	Revision / Issue

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**THE TRENCHER RESIDENCE**  
63 FIELD TERRACE,  
IRVINGTON, NEW YORK

### SHEET TITLE:

### SITE DETAILS

SEAL & SIGNATURE: DATE: 1.15.2020

SCALE: AS NOTED

DRAWN BY: OV

CHECKED BY: SHEET:

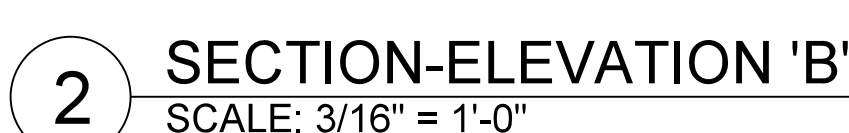
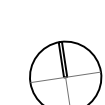
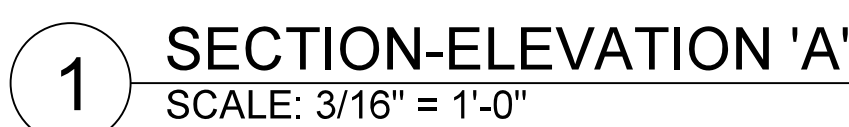
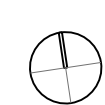
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SEAL & SIGNATURE:	DATE: 8.07.2020
	SCALE: AS NOTED
	DRAWN BY: JC, CW
	SHEET: L-6.0



ANY ALTERATIONS OR REVISIONS OF THESE PLANS, UNLESS DONE BY OR UNDER THE DIRECTION OF THE NYS LICENSED AND REGISTERED ENGINEER THAT PREPARED THEM, IS A VIOLATION OF THE NYS EDUCATION LAW.

63 FIELD TERRACE  
TOWN/VILLAGE OF IRVINGTON  
WESTCHESTER COUNTY - NEW YORK

PROPOSED POOL & ALTERATIONS

PROPOSED POOL & ALTERATIONS  
TOWN/VILLAGE OF IRVINGTON  
WESTCHESTER COUNTY - NEW YORK

STORMWATER MANAGEMENT PLAN

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CONSULTING, P.C.  
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Suite 201  
Elmsford, New York 10523  
Tel: 914-909-0420  
Fax: 914-909-2086

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DESIGNED BY: M.S.  
CHECKED BY: M.S.  
DATE: 11/18/20  
SHEET NO. 2

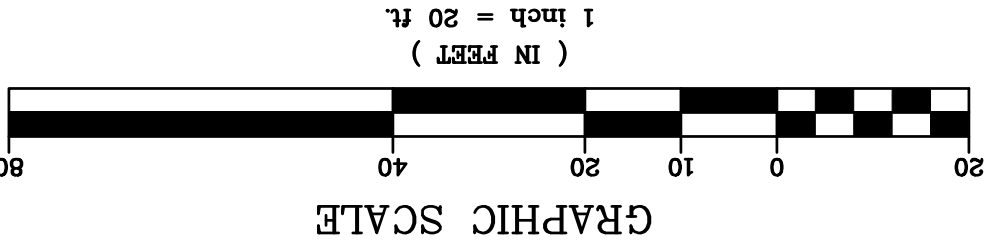
17/26/25  
12/7/25

PROJECT:

RENEE BYERS LANDSCAPE ARCHITECT  
2014  
EXISTING INFORMATION PROVIDED BY  
RICHARD J. DOMATO, DATED MAY 27,  
2014  
PROPOSED GRADING PROVIDED BY

STATE OF NEW YORK  
REGISTERED PROFESSIONAL ENGINEER  
No. 00657  
JAMES J. SPAIN

17/26/25  
12/7/25



PROPOSED GRADING PROVIDED BY  
RENEE BYERS LANDSCAPE ARCHITECT  
2014  
EXISTING INFORMATION PROVIDED BY  
RICHARD J. DOMATO, DATED MAY 27,  
2014  
PROPOSED GRADING PROVIDED BY

INFILTRATION TESTS WILL BE PERFORMED IN THE AREA OF PROPOSED STORMWATER MANAGEMENT PRACTICE OF ACCORDANCE WITH APPENDIX D OF THE NYSDC STORMWATER MANAGEMENT DESIGN MANUAL PRIOR TO THE START OF CONSTRUCTION. PERCOLATION TEST RESULTS AS WELL AS ANY NECESSARY PLAN REVISION WILL BE SUBMITTED TO THE VILLAGE ENGINEER.

THE FOLLOWING MAINTENANCE PROGRAM WILL BE DEVELOPED TO MAINTAIN THE PROPER FUNCTION OF ALL DRAINAGE AND EROSION AND SEDIMENT CONTROL FACILITIES:

- MINIMIZE THE USE OF ROAD SALT FOR MAINTENANCE OF DRIVEWAY AREAS.
- DRAINAGE INLETS SHALL BE VACUUM SWEEP TWICE A YEAR, AT THE CONCLUSION OF THE SAND AND DE-ICING SEASON IN THE FALL AND AFTER THE SPRING.
- INFILTRATION SYSTEMS SHALL BE INSPECTED IMMEDIATELY AFTER CONSTRUCTION AS WELL AS EVERY SIX (6) MONTHS (SPRING AND FALL) FOR CLOGGING OF INLET AND OUTLET PIPING, DURING DRY WEATHER CONDITIONS, INLET AND OUTLET PIPING SHALL BE MANUALLY CLEANED AND CLEARED OF DEBRIS. ALL DEBRIS ACCUMULATED WITHIN THE INFILTRATION SYSTEM SHALL BE VACUUMED OUT OR REMOVED MANUALLY, TO PREVENT SEDIMENT FROM ACCUMULATING WITHIN SYSTEM. THE PRE-TREATMENT BASIN SHALL BE CLEANED AS RECOMMENDED ABOVE.
- THE PERMANENT MAINTENANCE PROGRAM WILL BE MANAGED BY THE FUTURE HOMEOWNERS UPON COMPLETION OF CONSTRUCTION AND ACCEPTANCE OF THE IMPROVEMENTS.

CUT-FILL ANALYSIS (NET)	
Pool Drawdown	840 Square Feet
Drawdown Depth	0.5 Feet
Total Storage Required	420 Cubic Feet
Total Storage Provided	1,313 Cubic Feet

STORMWATER MANAGEMENT FACILITIES MAINTENANCE PROGRAM

1. THE BUILDING INSPECTOR OR VILLAGE ENGINEER MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF DEEMED APPROPRIATE TO MITIGATE UNFORESEEN SILTATION AND EROSION OF DISTURBED SOILS.
2. "AS-BUILT" DRAWINGS OF THE SITE IMPROVEMENTS SHALL BE SUBMITTED TO THE VILLAGE ENGINEER FOR REVIEW PRIOR TO OBTAINING CERTIFICATE OF OCCUPANCY.
3. INFILTRATION SYSTEM ACCESS PORTS SHALL BE SHOWN ON THE "AS-BUILT".
4. THE INFILTRATION SYSTEM MUST NOT BE CONNECTED UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
5. NO EXISTING UTILITIES WILL BE DISTURBED BY STABILIZED WORKING AREAS.
6. ALL EXISTING TREES SHALL BE PROTECTED WITH A MINIMUM OF 6-INCHES OF MULCH OR WOOD CHIPS IN AREAS PRONE TO COMPACTION DUE TO CONSTRUCTION ACTIVITIES.
7. WHEN TREE ROOTS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL NEVER BE PULLED WITH MACHINERY, WHERE NECESSARY, CUT ROOTS CLEANLY AND BRIDGE WHEN POSSIBLE.
8. WORK WITHIN RIP LINE OF TREES SHALL BE COMPLETED BY HAND.
9. POOL COVER MUST BE CAPABLE OF SUPPORTING A MINIMUM DEAD WEIGHT OF 200 POUNDS WHEN FASTENED OR LOCKED IN PLACE OVER A SWIMMING POOL.
10. THE POOL COVER MUST FULLY COVER POOL WHEN NOT IN USE AND DURING THE PERIOD OF NOVEMBER 1 THROUGH MARCH 31.
11. EXPOSED ELECTRICAL WIRES SHALL NOT BE NEARER THAN 5 FEET TO THE EDGE OF THE SWIMMING POOL.
12. EXPOSED ELECTRICAL WIRES SHALL NOT BE LESS THAN 10 FEET ABOVE GROUND LEVEL AT EDGE OF SWIMMING POOL.
13. SIX-INCH POOL DRAINAGE SHALL BE DRAINAGE TO INFILTRATION SYSTEM. NO CHEMICALS SHALL BE ADDED TO THE POOL FOR A MINIMUM OF 10 DAYS PRIOR TO POOL DRAINAGE AND MUST OCCUR DURING A DRY PERIOD OR WHEN RAIN IS NOT FORECASTED.

CONSTRUCTION SEQUENCING:

THE FOLLOWING EROSION CONTROL SCHEDULE SHALL BE UTILIZED:

1. PLACE EROSION CONTROL MEASURES AROUND AREAS TO BE USED FOR EXCAVATION TO AVOID COMPACTION.
2. INSTALL A CONSTRUCTION ENTRANCE TO THE DEVELOPMENT AREA.
3. ESTABLISH CONSTRUCTION STAGING AREA.
4. INSTALL TREE PROTECTION REMOVAL FOR SILT FENCE INSTALLATION.
5. SELECTIVE VEGETATION REMOVAL FOR SILT FENCE INSTALLATION.
6. INSTALL SILT FENCE DOWN SLOPE OF ALL AREAS TO BE DISTURBED AS SHOWN ON THE PLAN.
7. SHIRT TOPSOIL AND STOCKPILE AT THE LOCATIONS SPECIFIED ON THE PLANS (GRADIENT OF EROSION CONTROL MEASURES). TEMPORARILY STABILIZE (TUSsock) STOCKPILES (HYDROSEED DURING MAY 1ST THROUGH OCTOBER 31ST THROUGH APRIL 30TH. INSTALL SILT FENCE AROUND TOE OF SLOPE.
8. DEMOLISH ANY EXISTING SITE FEATURES AND/OR STRUCTURES NOTED AS BEING GRASS ESTABLISHED.
9. ROUGH GRADE DISTURBED SITE.
10. EXCAVATE AND INSTALL INFILTRATION CHAMBERS PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
11. ROUGH GRADE PATIO.
12. CONSTRUCT POOL.
13. FINE GRADE AND SEED ALL DISTURBED AREAS. CLEAN PAVED AREAS AND DRAIN LINES. CLEAN INFILTRATION CHAMBERS. ENSURE GRASS STAND IS ACHIEVED.
14. INSTALL 4'-6" TOPSOIL, SEED THE DISTURBED AREAS AND ACHIEVED.
15. INSTALL LANDSCAPE PLANTINGS. SPREAD SALT HAY OVER SEEDED AREAS.
16. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES AFTER THE SITE IS STABILIZED WITH VEGETATION.

INSTALLATION & MAINTENANCE OF EROSION CONTROL:

CONSTRUCTION SCHEDULE

ROEY APPROXIMATE MUNICIPAL AGENCY HAVING JURISDICTION AT LEAST 5 DAYS PRIOR TO START.

MAINTENANCE TO BE PERFORMED DURING ALL PHASES OF CONSTRUCTION.

AFTER ANY RAIN CAUSING RUNOFF, CONTRACTORS TO INSPECT HAVESALS, ETC. AND REMOVE ANY EXCESSIVE SEDIMENT AND INSPECT STOCKPILES AND CORRECT ANY PROBLEMS WITH SEED ESTABLISHMENT.

MUNICIPAL AGENCY HAVING JURISDICTION TO THE APPROPRIATE JURISDICTION AT LEAST 2 DAYS PRIOR TO FINISH.

INSPECTION BY MUNICIPALITY - FINAL GRADING.

INSPECTION BY MUNICIPALITY - FINAL LANDSCAPING.

SPREAD TOPSOIL, SEED, AND GRASS ESTABLISHED.

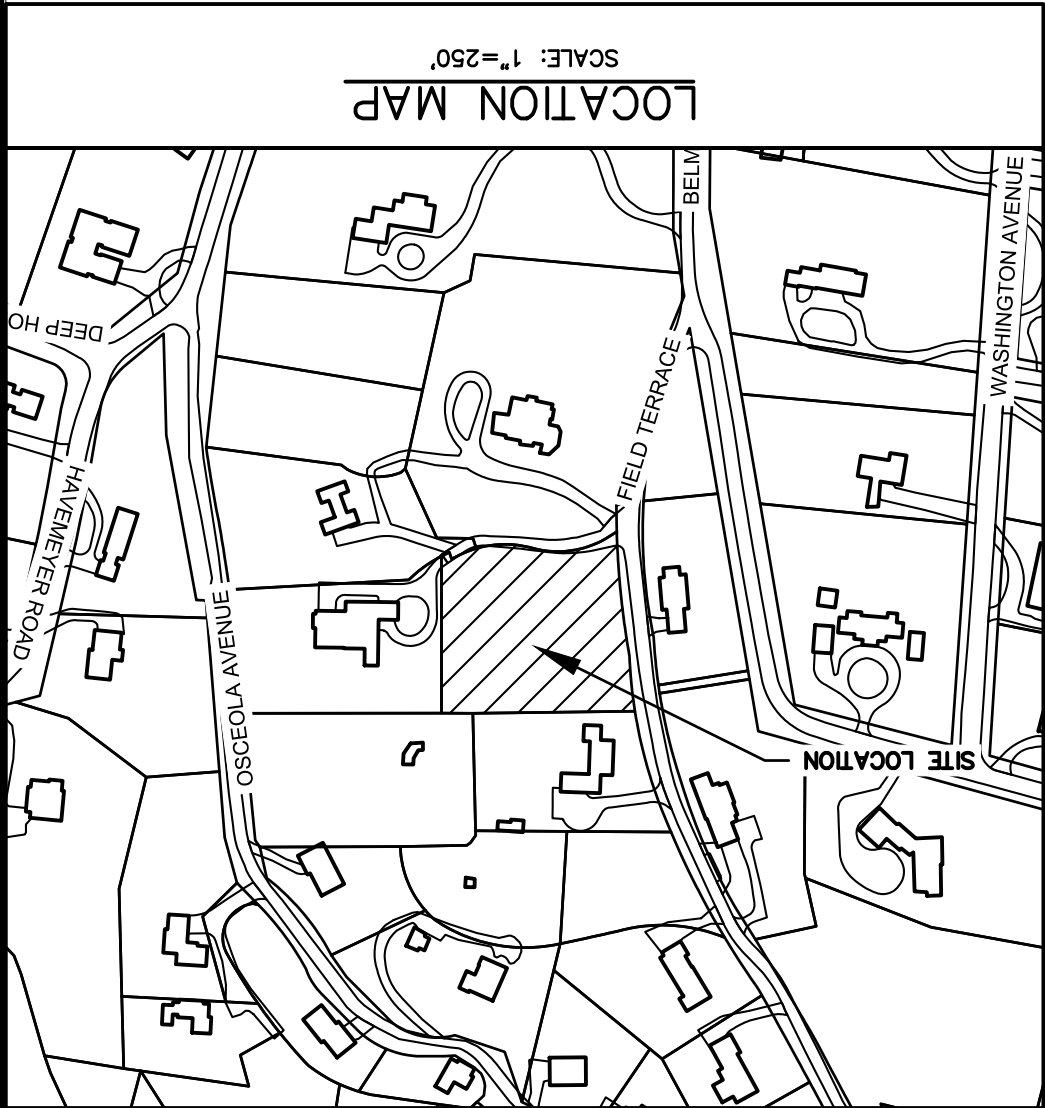
AGENCY HAVING JURISDICTION AT LEAST 2 DAYS PRIOR TO FINISH.

COMPLETION OF TOPSOILING. CALL FOR INSPECTION FROM THE APPROPRIATE MUNICIPAL AGENCY HAVING JURISDICTION AT LEAST 2 DAYS PRIOR TO FINISH.

INSPECTION BY MUNICIPALITY - FINAL INSPECTION.

INSPECTION BY MUNICIPALITY - FINAL INSPECTION.

INSPECTION BY MUNICIPALITY - FINAL INSPECTION.



GENERAL NOTES:

1. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE SUPERVISION OF THE

2. NO CHANGES SHALL BE MADE TO THESE PLANS EXCEPT AS PER NEW YORK

3. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE CODES, INCLUDING

4. ALL CONDITIONS, LOCATIONS AND DIMENSIONS SHALL BE FIELD VERIFIED AND THE

5. ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY DISCREPANCIES.

6. ALL CHANGES MADE TO THE PLANS SHALL BE APPROVED BY THE ENGINEER AND

7. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR THE ACTS AND

8. COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

9. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR THE ACTS AND

10. OF ALL LICENSES AND INSURANCE CERTIFICATES.

11. FINAL GRADING AROUND THE BUILDING AREA SHALL SLOPE AWAY FROM THE

12. STRUCTURE.

13. ALL WRITTEN DIMENSIONS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER ANY

14. DIMENSIONS.

15. DURING CONSTRUCTION, REMODELING AND DEMOLITION WORK, PROTECTION MUST BE

16. PROVIDED FOR FOOTINGS, FOUNDATIONS, PARTY WALLS, CHIMNEYS, SKYLIGHTS AND

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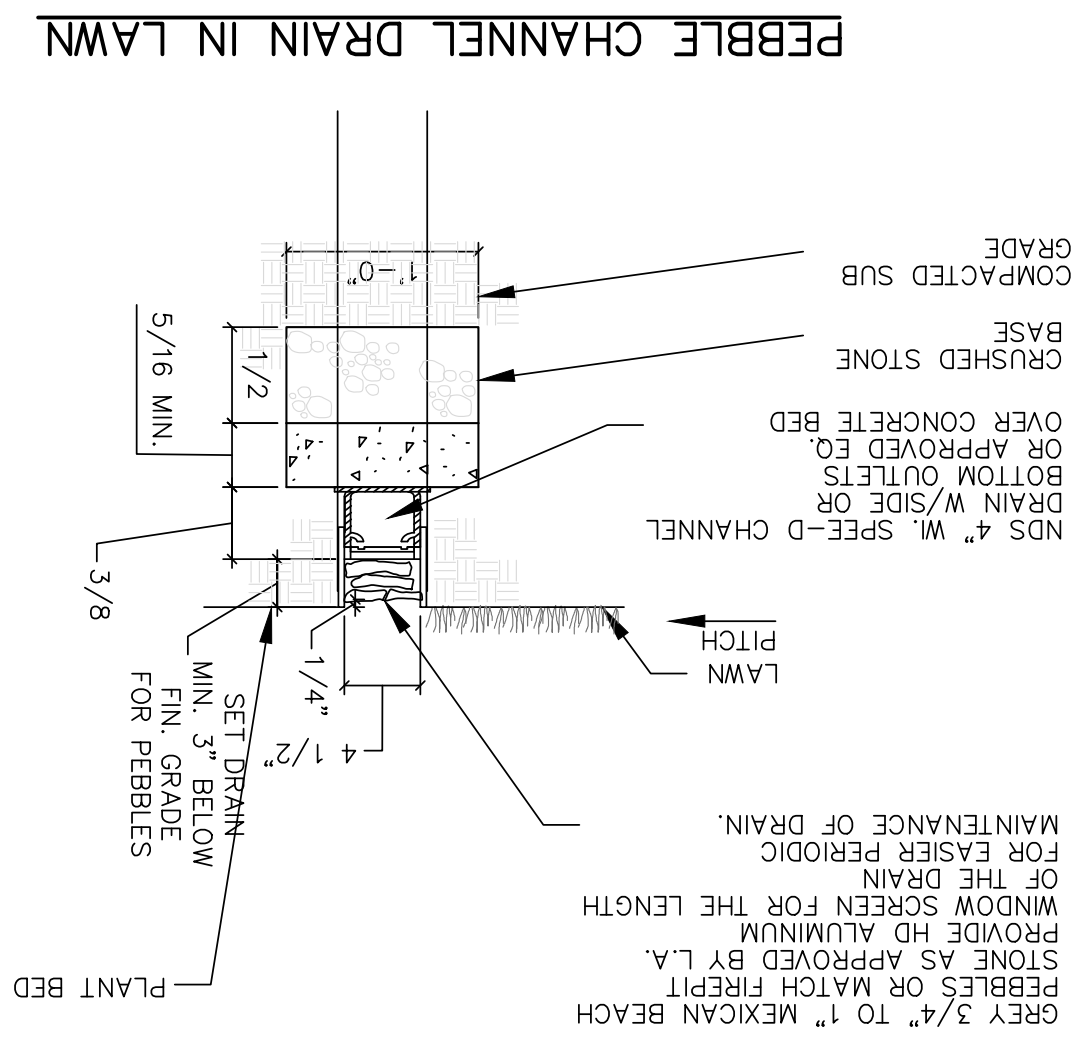
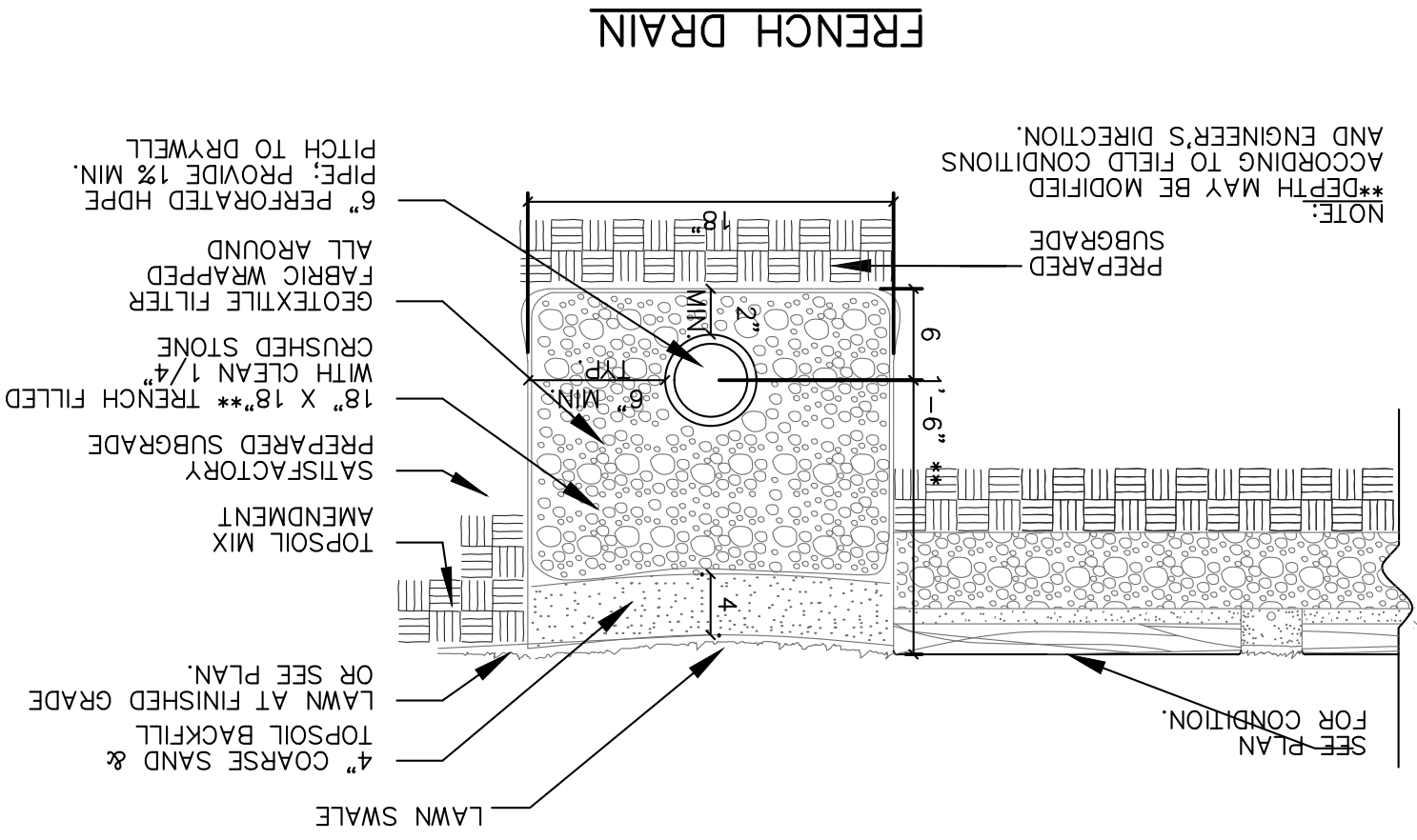
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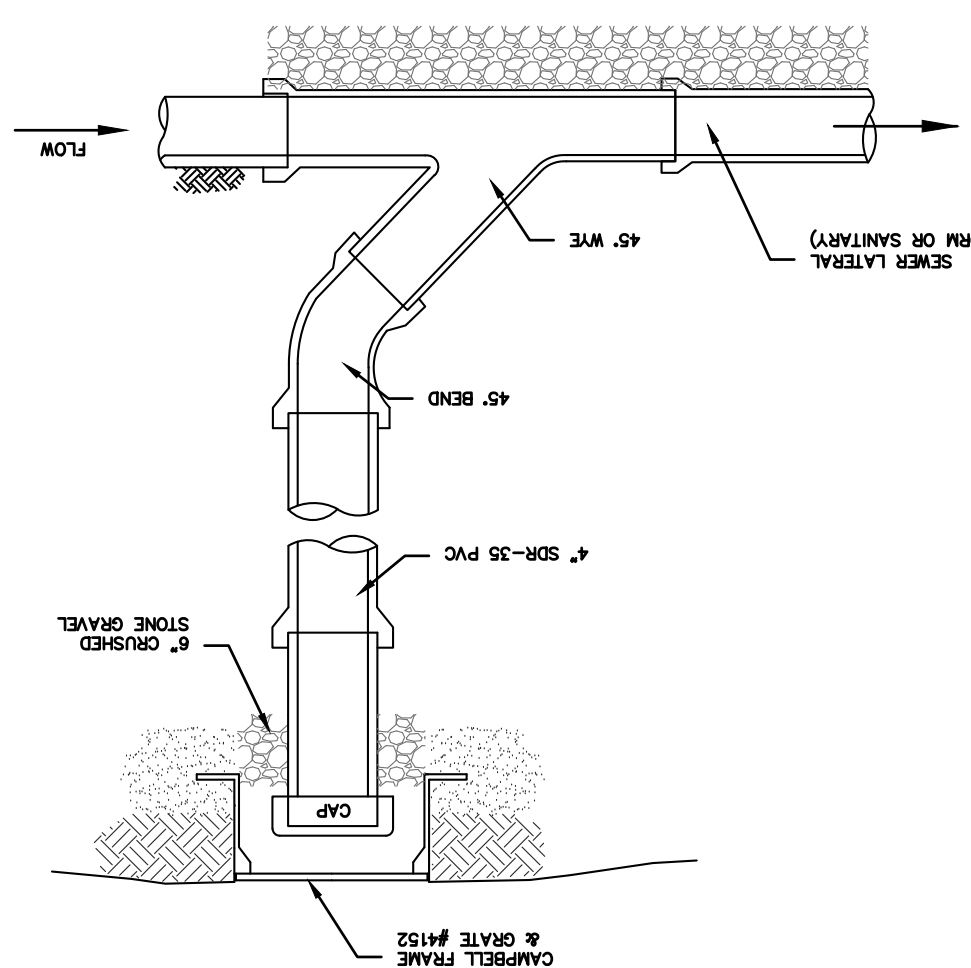


ANY ALTERATIONS OR REVISIONS OF THESE PLANS, UNLESS DONE BY OR UNDER THE DIRECTION OF THE NYS LICENSED AND REGISTERED ENGINEER THAT PREPARED THEM, IS A VIOLATION OF THE NYS EDUCATION LAW.

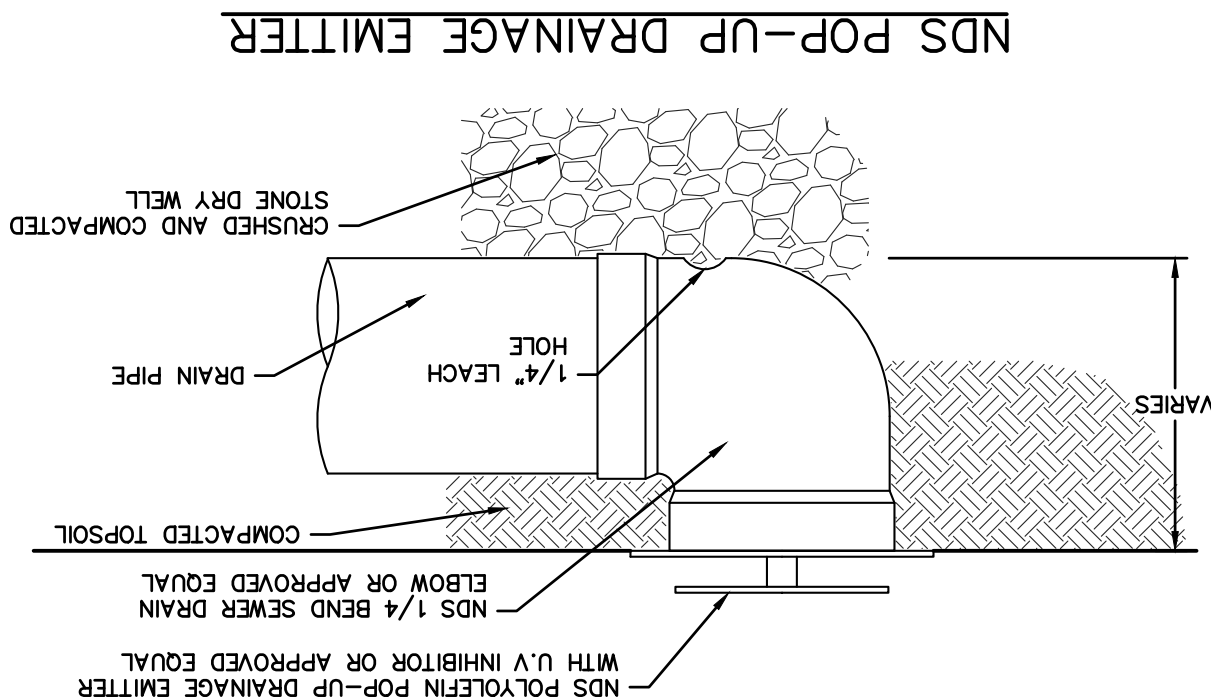
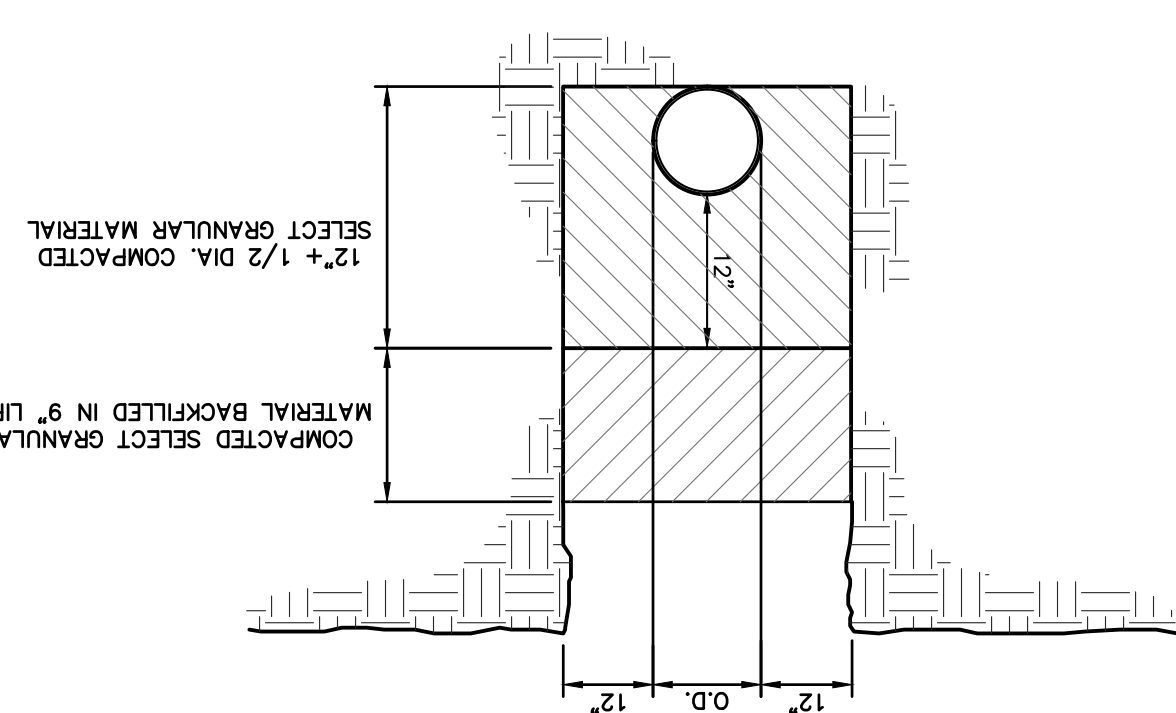


**SEWER CLEANOUT DETAIL (GRAVITY)**

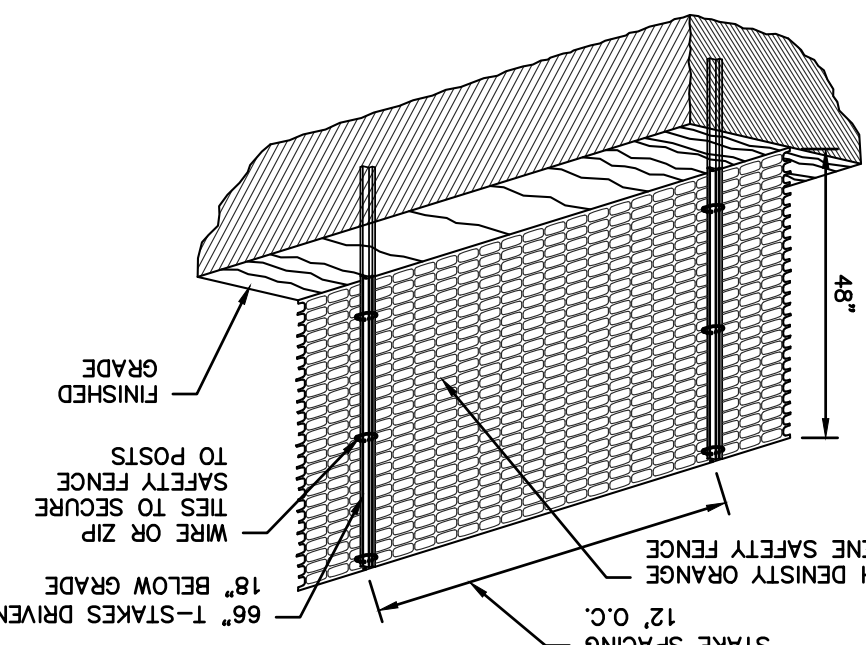
- NOTES (SANITARY SEWER SERVICES):
1. ALL SANITARY SEWER SERVICES TO BE 4" SCH. 40 @ 1.0% MINIMUM.
  2. IN ACCORDANCE WITH THE NYS RESIDENTIAL BUILDING CODE, THE FOLLOWING REQUIREMENTS APPLY:
  - A. CLEANOUTS SHALL BE INSTALLED NOT MORE THAN 100 FEET APART IN HORIZONTAL DRAINAGE LINES (3005.2.2).
  - B. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION OF THE DRAINAGE.
  - C. CLEANOUTS SHALL BE INSTALLED SO THAT THE CLEANOUT OPENS TO ALLOW CLEANING IN SITU. CLEANOUTS SHALL BE INSTALLED AT AN ANGLE OF 45 DEGREES.
  - D. THE DIRECTION OF THE FLOW OF THE DRAINAGE LINE (3005.2.2).
  - E. NOTES (STORM SEWER):
  1. REFER TO PLANS FOR SPECIFIC PIPE SIZING AND SLOPE SPECIFICATIONS, HOWEVER, IN GENERAL, ALL STORM SEWER SERVICES TO BE 6" SCH. 40 @ 1.0% MINIMUM.
  2. CLEANOUTS SHALL BE PLACED BEFORE SIGNIFICANT PIPE BEND LOCATIONS (I.E. JUNCTIONS, 90-DEGREE BENDS, ETC.) UNLESS A ROOF LEADER DOWNSPOUT CONNECTION IS PROPOSED.



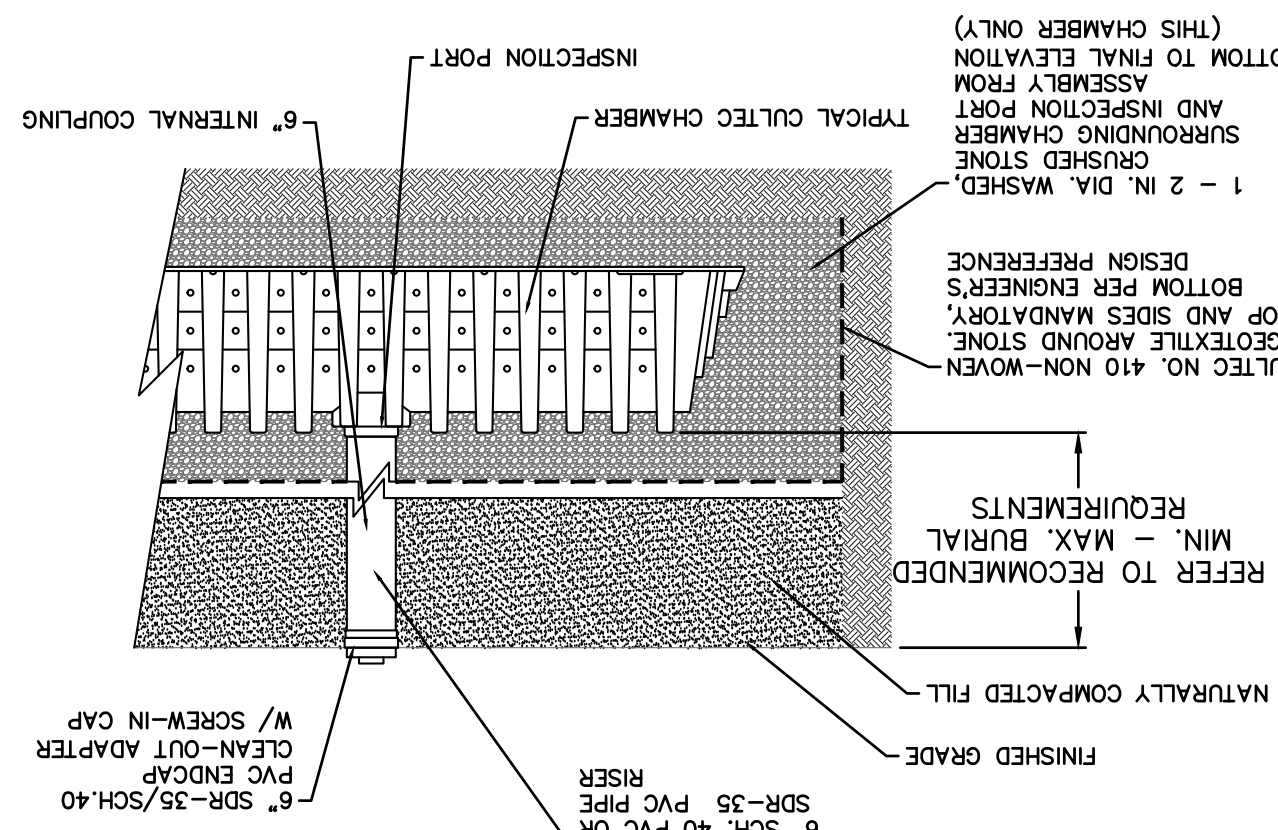
**TRENCH BEDDING**



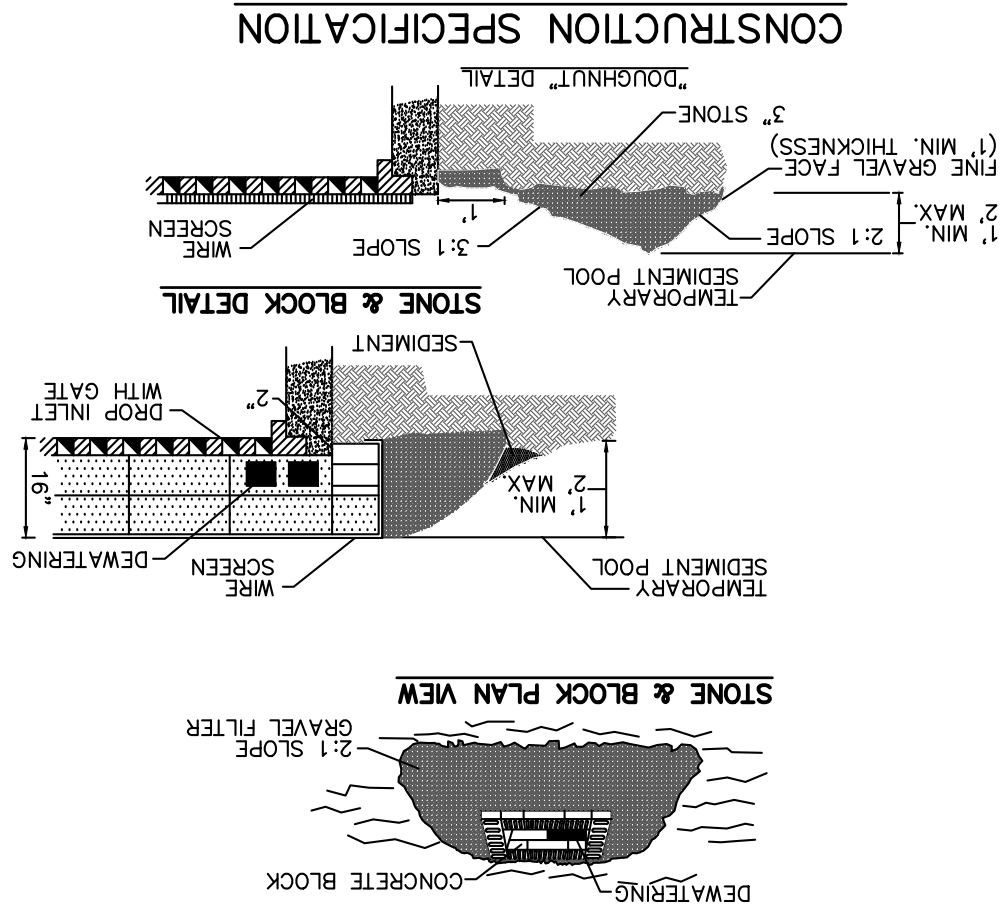
**CONSTRUCTION FENCE**



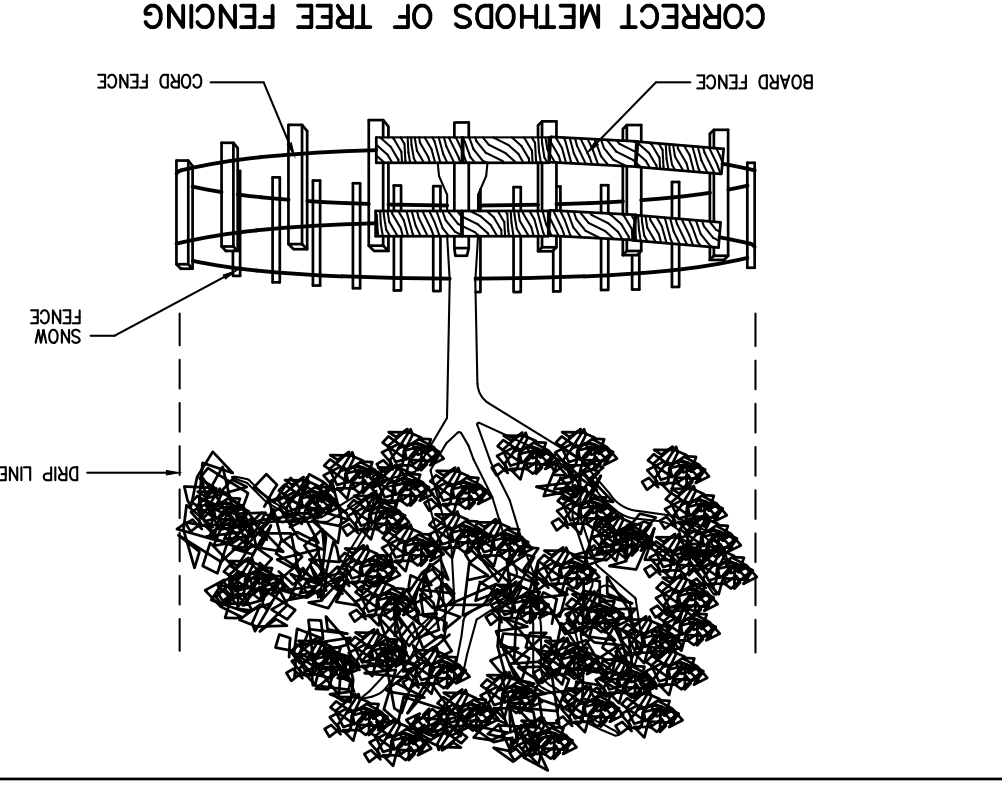
**CULTEC ACCESS PORT**



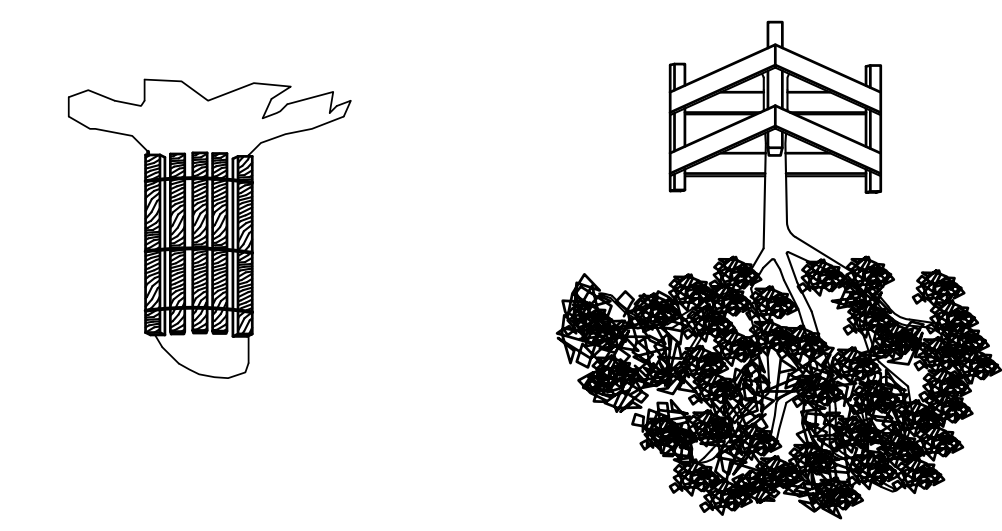
**STONE & BLOCK DROP INLET PROTECTION**



**FENCING AND ARMORING**



**TRIANGULAR BOARD FENCE**

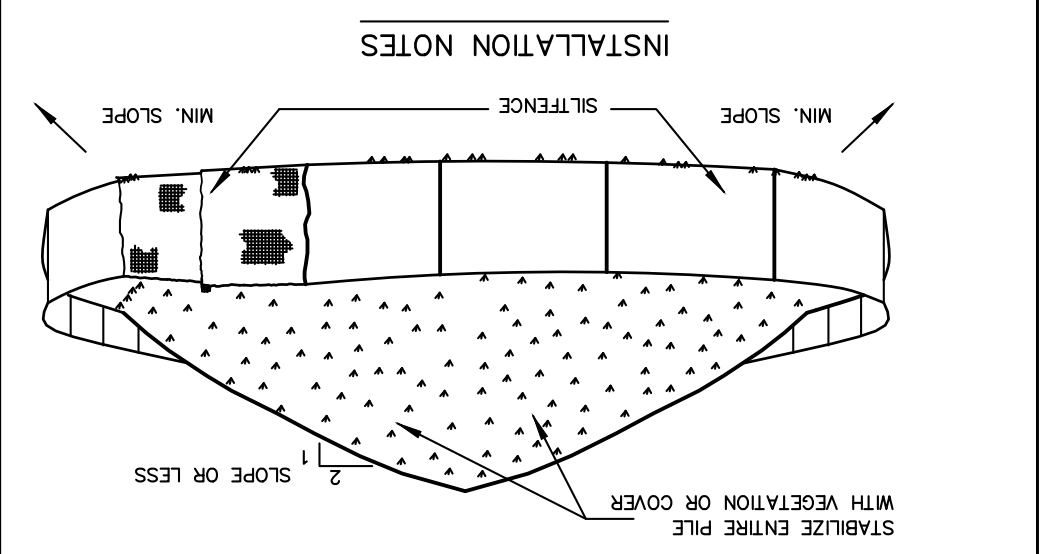


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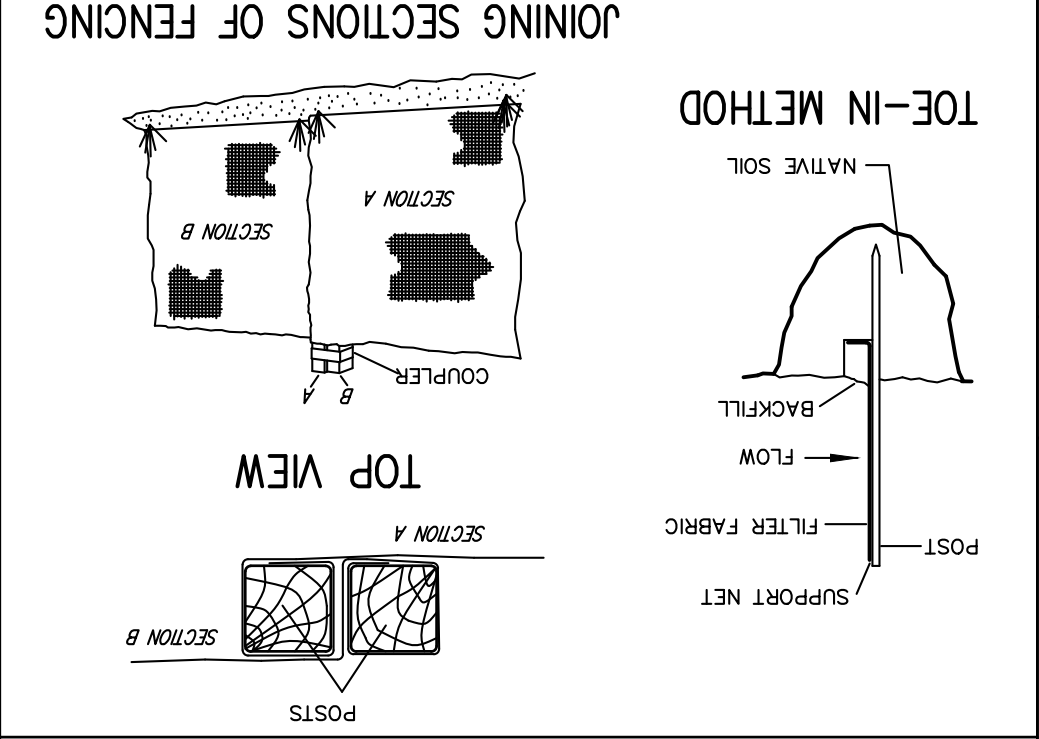
PROJECT: PROPOSED POOL & ALTERATIONS  
63 FIELD TERRACE  
TOWN/VILLAGE OF IRVINGTON  
WESTCHESTER COUNTY - NEW YORK

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SHEET: 2  
DESIGNED BY: M.S.  
CHECKED BY: M.S.  
N.Y.S. E-2000  
STATE OF NEW YORK  
REGISTERED PROFESSIONAL ENGINEER  
No. 00651

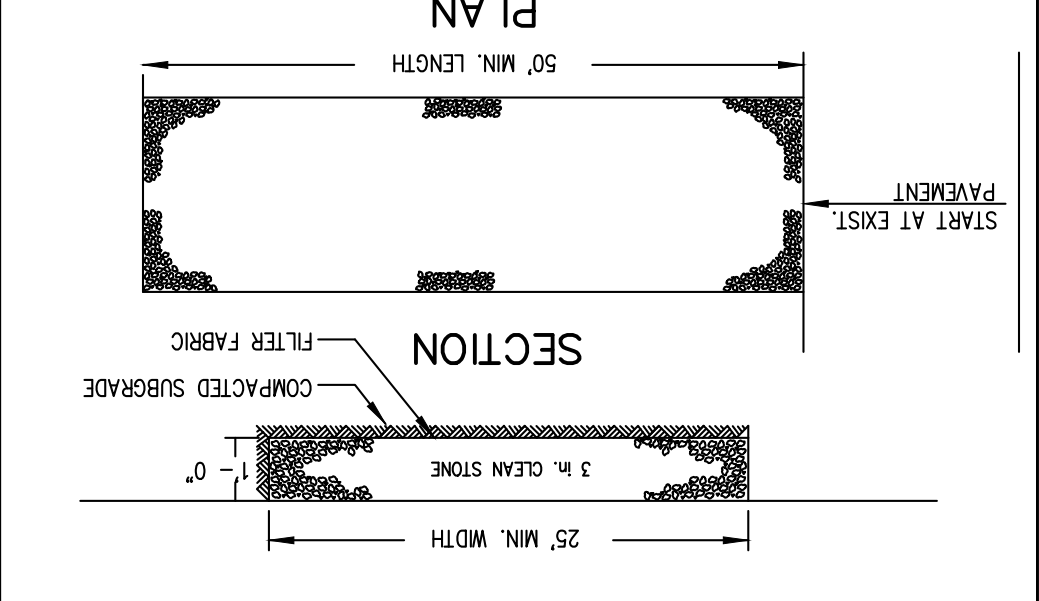
**SOIL STOCKPILING**



**SILT FENCE**



**STABILIZED CONSTRUCTION ENTRANCE**



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2	REVISION	1/29/20

PROJECT: PROPOSED POOL & ALTERATIONS  
63 FIELD TERRACE  
TOWN/VILLAGE OF IRVINGTON  
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REGISTERED PROFESSIONAL ENGINEER  
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# **STORMWATER MANAGEMENT PLAN & DRAINAGE ANALYSIS**

**63 Field Terrace  
Village of Irvington - New York**

**November 18, 2020  
Revised: January 29, 2021**



**Hudson Engineering & Consulting, P.C.**

*45 Knollwood Road - Suite 201*

*Elmsford, NY 10523*

*(914) 909-0420*



# **STORMWATER MANAGEMENT PLAN & DRAINAGE ANALYSIS**

## **63 Field Terrace**

### **Village of Irvington - New York**

#### ***INTRODUCTION***

This Stormwater Management Plan presents the proposed Best Management Practices (BMPs) to control erosion and sedimentation and manage stormwater during and upon construction of pool & alterations at 63 Field Terrace in the Village of Irvington, Westchester County, New York.

This Plan consists of this narrative and a plan set entitled: “Proposed Additions & Alterations, 63 Field Terrace, Village of Irvington, Westchester County - New York”, all as prepared by Hudson Engineering and Consulting, P.C., Elmsford, New York, last revised January 29, 2021. The design is in accordance with the Village of Irvington requirements. The approximate area of the limits of disturbance is 0.65-acres. Since the project disturbance is less than one acre the New York State Department of Environmental Conservation [NYSDEC] stormwater regulations are not applicable.

#### ***METHODOLOGY***

The stormwater analysis was developed utilizing the Soil Conservation Service (SCS) TR-20, 24-hour Type III storm events (HydroCad®) to assist with the design of the mitigating practices. The “Curve Number” (CN) value determination is based on soil type, vegetation and land use. The design is in accordance with the Village of Irvington’s stormwater regulations. The CN and  $T_c$  data are input into the computer model. The project site was modeled for the 100-year Type III – 24-hour storm event.

#### ***PRE-DESIGN INVESTIGATIVE ANALYSIS***

A design by Hudson Engineering & Consulting, P.C., last revised January 08, 2020, was previously approved by the Village of Irvington Engineering Department. The previously approved stormwater management practice was designed to convey the stormwater runoff from the previously proposed construction consisting of 1,742-square feet via a comprehensive drainage system to six (6) Cultec® Recharger 280HD units. Currently, the Cultec system is receiving stormwater runoff from a tributary area consisting of approximately 1,050-square feet in the form of the dwelling addition, covered porch, and a portion of the existing dwelling. The previously proposed patio has not been constructed to date.

#### ***PRE-DEVELOPED CONDITION***

In the pre-developed condition, the site is characterized as sloping from the east to west. The soil classification based upon Westchester County Soils Mapping is Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky. The site vegetation can be characterized as lawn and landscaping.

The site is located along the east side of Field Terrace. Runoff from the existing addition flows through the gutters and downspouts into the previously installed Cultec system and the downspouts daylight onto the lawn in the front of the property before exiting the property onto Field Terrace.

### **POST-DEVELOPED CONDITION**

The project site was modeled as one watershed, *Watershed 1*, which contains a tributary area of approximately 6,149-square feet. 4,559-square feet is impervious in the form of the proposed walks, rear terrace, equipment pads, walls, pool, spa, pool terrace, existing addition, covered porch, and a portion of the existing dwelling. 1,590-square feet is pervious in the form of lawn and landscaping. The weighted Curve Number for this area is 88 and the  $T_c$  is a direct entry of 1 minute. The stormwater runoff from this tributary area is conveyed via a comprehensive drainage system to twenty (20) Cultec® 280HD Rechargers, set in one foot of gravel at the sides and invert. The system is designed to fully accept (no release) the entire stormwater runoff volume for the 100-year storm event from the watershed and ex-filtrate the runoff into the surrounding soil sub-strata.

The existing drainage conditions will not be negatively impacted by the proposed development.

### **CONSTRUCTION SEQUENCING**

The following erosion control schedule shall be utilized:

1. Place orange construction fencing around areas to be used for ex-filtration to avoid compaction.
2. Install a construction entrance to the development area.
3. Establish construction staging area.
4. Install tree protection on trees as noted on plans.
5. Selective vegetation removal for silt fence installation.
6. Install silt fence down slope of all areas to be disturbed as shown on the plan.
7. Strip topsoil and stockpile at the locations specified on the plans (up gradient of erosion control measures). Temporarily stabilize topsoil stockpiles (hydroseed during May 1<sup>st</sup> through October 31<sup>st</sup> planting



season or by covering with a tarpaulin(s) November 1<sup>st</sup> through April 30<sup>th</sup>. Install silt fence around toe of slope.

8. Demolish any existing site features and/or structures noted as being removed on the construction documents, and dispose of off-site.
9. Rough grade disturbed site.
10. Excavate and install infiltration chambers per manufacturer's recommendations and requirements.
11. Rough grade patio.
12. Construct building additions.
13. Fine grade and seed all disturbed areas. Clean paved areas and drain lines. Clean infiltration chambers. Ensure grass stand is achieved.
14. Install 4"-6" topsoil, fine grade, seed the disturbed areas and install landscape plantings. Spread salt hay over seeded areas.
15. Install and connect all roof drain leaders to previously installed infiltration chambers.
16. Remove all temporary soil erosion and sediment control measures after the site is stabilized with vegetation.

\* Soil erosion and sediment control maintenance must occur weekly and prior to and after every ½" or greater rainfall event.

### ***EROSION AND SEDIMENT CONTROL COMPONENTS***

The primary aim of the soil and sediment control measures is to reduce soil erosion from areas stripped of vegetation during and after construction and to prevent silt from reaching the off-site drainage structures and downstream properties. The Sediment and Erosion Control Components are an integral component of the construction sequencing and will be implemented to control sedimentation and re-establish vegetation.

Planned erosion and sedimentation control practices during construction include the installation, inspection and maintenance of the inlet protection, soil stockpile areas, diversion swales, and silt fencing. General land grading practices, including land stabilization and construction sequencing are also integrated into the Sediment and Erosion Control Plan. Dust control is not expected to be a problem due to the relatively limited area of exposure, the undisturbed perimeter of trees around the project area and the relatively short time of exposure. Should excessive dust be generated, it will be controlled by sprinkling.

All proposed soil erosion and sediment control practices have been designed in accordance with the following publications:

- New York State standards and Specifications for Urban Erosion and Sediment Control, August 2005
- New York State General Permit for Stormwater Discharges, GP-0-10-002 (General permit).
- “Reducing the Impacts of Stormwater Runoff from New Development”, as published by the New York State Department of Environmental Conservation (NYSDEC), second edition, April, 1993.

The proposed soil erosion and sediment control devices include the planned erosion control practices outlined below. Maintenance procedures for each erosion control practice have also been outlined below.

- **SILT FENCE**

Silt fence (geo-textile filter cloth) shall be placed in locations depicted on the approved plans. The purpose of the silt fence is to reduce the velocity of sediment laden stormwater from small drainage areas and to intercept the transported sediment load. In general, silt fence shall be used at the toe of slopes or intermediately within slopes where obvious channel concentration of stormwater is not present.

Maintenance

Silt fencing shall be inspected at a minimum of once per week and prior to and within 24 hours following a rain event  $\frac{1}{2}$ " or greater. Inspections shall include ensuring that the fence material is tightly secured to the woven wire and the wire is secured to the wood posts. In addition, overlapping filter fabric shall be secured and the fabric shall be maintained a minimum of six (6) inches below grade. In the event that any “bulges” develop in the fence, that section of fence shall be replaced within 24 hours with new fence section. Any sediment build-up against the fence shall be removed within 24 hours and deposited on-site a minimum of 100 feet outside of any wetland or watercourse.

The installation of silt fencing will be maintained or replaced until the fencing is no longer necessary. Once the site is stabilized, all silt fences shall be removed. The immediate area occupied by the silt fence will be shaped to an acceptable grade and stabilized.

- **INLET PROTECTION**

After catch basins and surface inlets have been installed, these drain inlets will receive stormwater from the roadways, driveways, and surrounding overland watersheds. In order to protect the receiving waters from sedimentation, the

contractor shall install stone and block inlet protection as shown on the plans. Once installed, ¾ inch stone aggregate shall be installed around the perimeter of all catch basins and surface inlets as illustrated on the approved plans. This barrier will allow stormwater to be filtered prior to reaching the basin inlet grate.

The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow. Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area. The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet (“doughnut”). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet.

A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure.

The barrier should be inspected after each rain event and repairs made within 24 hours. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all materials and any unstable soil and dispose of properly. Bring the disturbed area to proper grade, smooth, compact and stabilized in a manner appropriate to the site.

### Maintenance

**Stone Aggregate:** The stone aggregate shall be inspected weekly prior to and within 24 hours following a rain event ½” or greater. Care shall be taken to ensure that all stone aggregate is properly located and secure and do not become displaced. The stone aggregate shall be inspected for accumulated sediments and any accumulated sediment shall be removed from the device and deposited not less than 100 feet from wetland or watercourse.

- **TREE PROTECTION**

All significant trees to be preserved located within the limits of disturbance and on the perimeter of the disturbance limits shall be protected from harm by erecting a 3' high (minimum) snow fence completely surrounding the tree. Snow fence should extend to the drip-line of the tree to be preserved. Trees designated to be protected shall be identified during the staking of the limits of disturbance for each construction phase.

Maintenance

The snow fence shall be inspected daily to ensure that the perimeter of the fence remains at the drip-line of the tree to be preserved. Any damaged portions of the fence shall be repaired or replaced within 24 hours. Care shall also be taken to ensure that no construction equipment is driven or parked within the drip-line of the tree to be preserved.

- **SOIL/SHOT ROCK STOCKPILING**

All soil and shot rock stripped from the construction area during grubbing and mass grading shall be stockpiled in locations shown on the plans, but in no case shall they be placed within 100' of a wetland or watercourse. The stockpiled soils shall be re-used during finish-grading to provide a suitable growing medium for plant establishment. Soil stockpiles shall be protected from erosion by vegetating the stockpile with rapidly –germinating grass seed (during the May 1<sup>st</sup> – October 30<sup>th</sup>) planting season or covering the stockpile with tarpaulin the remainder of the year. Install silt fence around toe of slope.

Maintenance

Sediment controls (silt fence) surrounding the stockpiles shall be inspected according to the recommended maintenance outline above. *All stockpiles shall be inspected for signs of erosion or problems with seed establishment weekly or tarpaulin and prior to and within 24 hours following a rain event ½" or greater.*

- **GENERAL LAND GRADING**

The intent of the Erosion & Sediment Control Plan is to control disturbed areas such that soils are protected from erosion by temporary methods and, ultimately, by permanent vegetation. Where practicable, all cut and fill slopes shall be kept to a maximum slope of 2:1. In the event that a slope must exceed a 2:1 slope, it will be stabilized with stone riprap. On fill slopes, all material will be placed in layers not to exceed 12 inches in depth and adequately compacted. Diversion swales shall be constructed on the top of all fill embankments to divert any overland flows away from the fill slopes.

- **SURFACE STABILIZATION**

All disturbed areas will be protected from erosion with the use of vegetative measures (i.e., grass seed mix, sod) hydromulch netting or hay. When activities temporarily cease during construction, soil stockpiles and exposed soil should be stabilized by seed, mulch or other appropriate measures within 7 days after construction activity has ceased, or 24 hours prior to a rain event  $\frac{1}{2}$ " or greater.

All seeded areas will be re-seeded areas as necessary and mulched according to the site plan to maintain a vigorous, dense vegetative cover,

Erosion control barriers (silt fencing) shall be placed around exposed areas during construction. Where exposed areas are immediately uphill from a wetland or watercourse, the erosion control barrier will consist of double rows of silt fencing. Any areas stripped of vegetation during construction will be vegetated and/or mulch, but in no case more than 14 days to prevent erosion of the exposed soils. And topsoil removed during construction will be temporarily stockpiled for future use in grading and landscaping.

As mentioned above, temporary vegetation will be established to protect exposed soil areas during construction. If growing conditions are not suitable for the temporary vegetation, mulch will be used to the satisfaction of the Town Engineer. Materials that may be used for mulching include straw, hay, salt hay, wood fiber, synthetic soil stabilizers, mulch netting, sod or hydromulch. In site areas where significant erosion potential exists (steep slopes) and where specifically directed by the Town's representative, Curlex Excelsior erosion control blankets (manufactured by American Excelsior, or approved equal) shall be installed. A permanent vegetative cover will be established upon completion of construction of those areas that have been brought to finish-grade and to remain undisturbed.

- **Temporary Stabilization(May 1<sup>st</sup> through October 31<sup>st</sup> planting season)**

The following seeding application should be used depending on the time of year.

- Spring/summer or early fall, seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (Approximately 0.7 lb/1000 sq. ft. or use 1 lb/1000 sq. ft.).
- Late fall or early winter, seed Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs/1000 sq. ft.).

- **Permanent Stabilization(May 1<sup>st</sup> through October 31st planting season)**

1. Provide minimum of four (4) inches topsoil for all new lawn areas. Top dress all existing disturbed lawn areas with two (2) inches of topsoil.
2. Grass seed shall be evenly sown by mechanical seeder at a rate of 3.0-4.0 pounds per 1,000 square feet.
3. Fine rake, roll and water to a depth of one inch all seeded areas.
4. Apply air-dried hay or straw mulch to provide 90% coverage of surface (approximately 90 lbs. per 1,000 SF). Use small grain straw where mulch is maintained for more than three months
5. Contractor shall provide, at his own expense, protection against trespassing and other damage to lawn areas.
6. Lawn seed mix shall include:
  - a. General Recreation areas and lawns:
    - 65% Kentucky Bluegrass blend
    - 20% Perennial Rye
    - 15% Fine fescue

Sod may be used as an alternate to seeding in select areas.

Slow release fertilizers will be applied by hand to horticultural plantings as part of regular horticultural maintenance program and shall be limited to a single spring application.

### ***CONSTRUCTION PRACTICES TO MINIMIZE STORMWATER CONTAMINATION***

Adequate measures shall be taken to minimize contaminant particles arising from the discharge of solid materials, including building materials, grading operations, and the reclamation and placement of pavement, during project construction, including but not limited to:

- Building materials, garbage, and debris shall be cleaned up daily and deposited into dumpsters, which will be periodically removed from the site and appropriately disposed of.
- Dump trucks hauling material from the construction site will be covered with a tarpaulin.
- The paved street adjacent to the site entrance will be swept daily to remove excess mud, dirt, or rock tracked from the site.



- Petroleum products will be stored in tightly sealed containers that are clearly labeled.
- All vehicles on site will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.
- All spills will be cleaned up immediately upon discovery. Spills large enough to reach the storm system will be reported to the NationalResponseCenter at 1-800-424-8802.
- Materials and equipment necessary for spill cleanup will be kept in the temporary material storage trailer onsite. Equipment will include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, and sand, saw dust, and plastic and metal trash containers.
- All paint containers and curing compounds will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm system, but will be properly disposed according to the manufacturer's instructions.
- Sanitary waste will be collected from portable units a minimum of two times a week to avoid overfilling.
- Any asphalt substances used on-site will be applied according to the manufacturer's recommendation.
- Fertilizers will be stored in a covered shed and partially used bags will be transferred to a sealable bin to avoid spills and will be applied only in the minimum amounts recommended by the manufacturer and worked into the soil to limit exposure to stormwater.
- No disturbed area shall be left un-stabilized for longer than 14 days during the growing season.
- When erosion is likely to be a problem, grubbing operations shall be scheduled and performed such that grading operations and permanent erosion control features can follow within 24 hours thereafter.
- As work progresses, patch seeding shall be done as required on areas previously treated to maintain or establish protective cover.
- Drainage pipes and swales/ditches shall generally be constructed in a sequence from outlet to inlet in order to stabilize outlet areas and ditches before water is directed to the new installation or any portion thereof, unless conditions unique to the location warrant an alternative method.

## **STORMWATER MANAGEMENT FACILITIES MAINTENANCE PROGRAM**

The following maintenance plan has been developed to maintain the proper function of all drainage and erosion and sediment control facilities:

- Minimize the use of road salt for maintenance of driveway areas.
- Drainage inlets shall be vacuum swept twice a year, at the conclusion of the landscape season in the fall and at the conclusion of the sand and de-icing season in the spring.
- All infiltration systems shall be inspected immediately after construction as well as every six (6) months (spring and fall) for clogging of inlet and outlet piping. During dry weather conditions, inlet and outlet piping shall be manually cleaned and cleared of debris. All debris accumulated within the infiltration system shall be vacuumed out or removed manually. To prevent sediment from accumulating within system, the pre-treatment basin shall be cleaned as recommended above.

The permanent maintenance program will be managed by the future homeowners upon completion of construction and acceptance of the improvements.

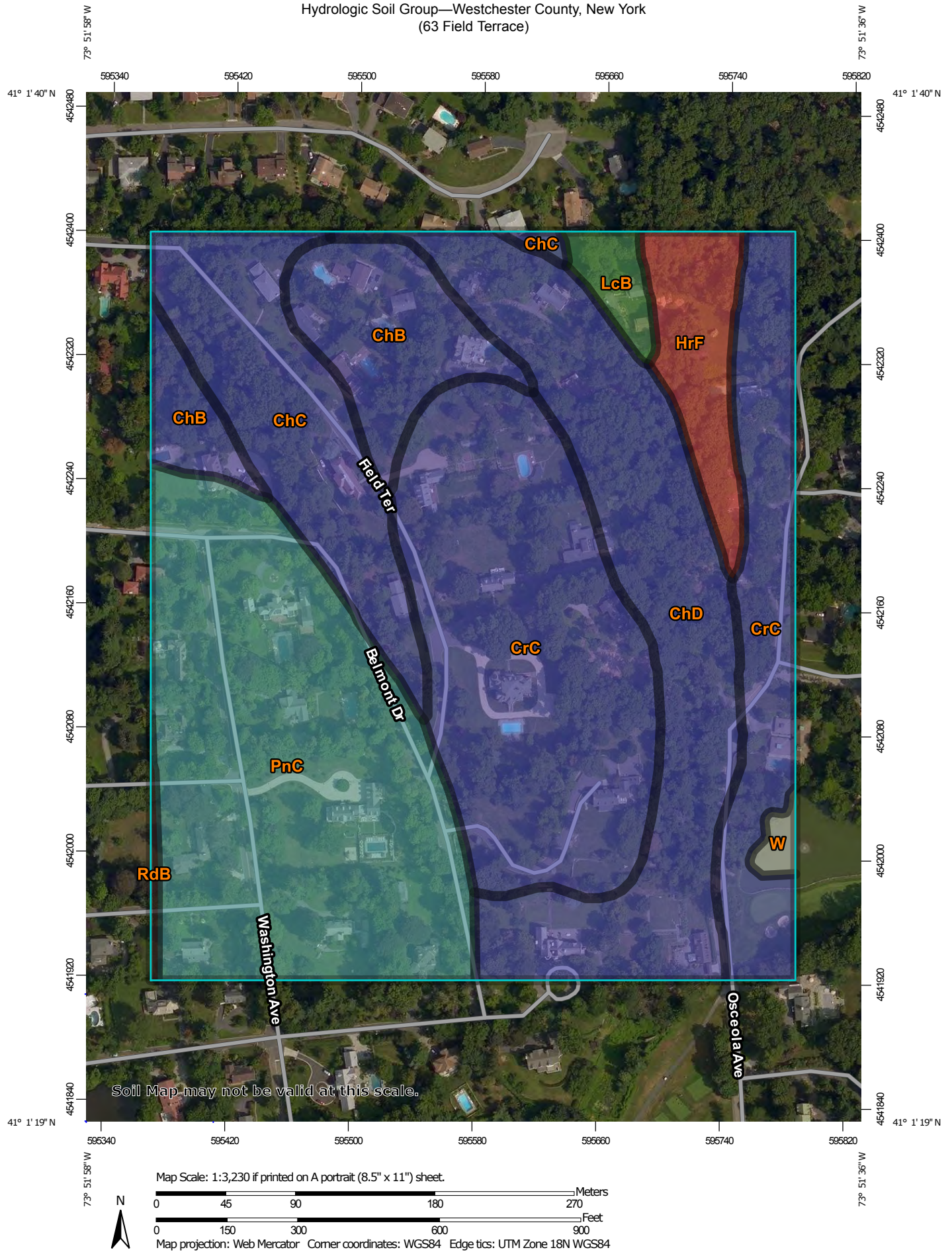
## **CONCLUSION**

The stormwater management plan proposed meets all the requirements set forth by the Village of Irvington. Design modification requirements that may occur during the approval process will be performed and submitted for review to the Village of Irvington.

# Soils Report




# Hydrologic Soil Group—Westchester County, New York (63 Field Terrace)



## MAP LEGEND

### Area of Interest (AOI)









 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons





 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Lines


 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Points






 A  
 A/D  
 B  
 B/D

 C  
 C/D  
 D  
 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York  
 Survey Area Data: Version 13, Oct 8, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 21, 2014—Aug 27, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	B	4.0	8.1%
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	B	5.2	10.5%
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	B	9.5	18.9%
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	B	14.9	29.9%
HrF	Hollis-Rock outcrop complex, 35 to 60 percent slopes	D	2.2	4.4%
LcB	Leicester loam, 3 to 8 percent slopes, stony	A/D	0.7	1.4%
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	C	13.0	26.0%
RdB	Ridgebury loam, 3 to 8 percent slopes	B/D	0.1	0.3%
W	Water		0.2	0.5%
<b>Totals for Area of Interest</b>			<b>49.9</b>	<b>100.0%</b>



## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

*Aggregation Method:* Dominant Condition



Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

*Component Percent Cutoff: None Specified*

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

*Tie-break Rule: Higher*

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.



# Extreme Precipitation Table



# Extreme Precipitation Tables

## Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New York
Location	
Longitude	73.863 degrees West
Latitude	41.025 degrees North
Elevation	0 feet
Date/Time	Mon, 30 Apr 2018 16:21:27 -0400

## Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.33	0.51	0.63	0.82	1.03	1.29	1yr	0.89	1.23	1.48	1.84	2.27	2.81	3.20	1yr	2.49	3.08	3.57	4.29	4.93	1yr
2yr	0.40	0.62	0.77	1.01	1.27	1.59	2yr	1.10	1.49	1.83	2.26	2.78	3.42	3.85	2yr	3.03	3.70	4.26	5.06	5.73	2yr
5yr	0.47	0.73	0.92	1.23	1.57	1.99	5yr	1.36	1.84	2.29	2.84	3.49	4.28	4.87	5yr	3.79	4.69	5.44	6.33	7.09	5yr
10yr	0.53	0.83	1.05	1.42	1.85	2.35	10yr	1.59	2.16	2.72	3.38	4.15	5.07	5.82	10yr	4.49	5.60	6.54	7.51	8.33	10yr
25yr	0.61	0.98	1.24	1.72	2.29	2.94	25yr	1.97	2.68	3.42	4.26	5.23	6.35	7.38	25yr	5.62	7.10	8.36	9.41	10.31	25yr
50yr	0.70	1.12	1.43	2.01	2.70	3.49	50yr	2.33	3.16	4.07	5.07	6.21	7.53	8.83	50yr	6.66	8.49	10.06	11.16	12.13	50yr
100yr	0.79	1.28	1.65	2.33	3.18	4.15	100yr	2.75	3.72	4.85	6.04	7.39	8.94	10.57	100yr	7.91	10.17	12.12	13.24	14.26	100yr
200yr	0.90	1.46	1.90	2.72	3.76	4.93	200yr	3.24	4.39	5.77	7.19	8.79	10.61	12.67	200yr	9.39	12.18	14.61	15.72	16.78	200yr
500yr	1.07	1.77	2.30	3.34	4.68	6.19	500yr	4.04	5.47	7.26	9.06	11.07	13.34	16.09	500yr	11.80	15.47	18.71	19.73	20.83	500yr

## Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.45	0.55	0.74	0.92	1.15	1yr	0.79	1.12	1.32	1.57	2.17	2.44	2.69	1yr	2.16	2.59	3.29	3.95	4.35	1yr
2yr	0.38	0.59	0.73	0.99	1.21	1.46	2yr	1.05	1.43	1.68	2.17	2.70	3.32	3.73	2yr	2.94	3.59	4.12	4.88	5.56	2yr
5yr	0.42	0.64	0.79	1.09	1.39	1.70	5yr	1.20	1.67	1.96	2.51	3.16	3.98	4.52	5yr	3.52	4.35	5.01	5.84	6.54	5yr
10yr	0.45	0.68	0.85	1.18	1.53	1.89	10yr	1.32	1.85	2.19	2.75	3.56	4.56	5.22	10yr	4.04	5.02	5.77	6.61	7.26	10yr
25yr	0.48	0.73	0.91	1.30	1.71	2.16	25yr	1.48	2.12	2.54	3.08	4.17	5.50	6.30	25yr	4.87	6.06	6.92	7.86	8.28	25yr
50yr	0.51	0.77	0.96	1.38	1.85	2.39	50yr	1.60	2.33	2.84	3.33	4.70	6.33	7.26	50yr	5.60	6.98	7.91	8.95	9.07	50yr
100yr	0.53	0.80	1.01	1.46	2.00	2.62	100yr	1.72	2.56	3.17	3.58	5.26	7.31	8.37	100yr	6.47	8.05	9.08	10.19	9.88	100yr
200yr	0.55	0.82	1.04	1.51	2.11	2.85	200yr	1.82	2.79	3.55	3.81	5.93	8.47	9.66	200yr	7.49	9.29	10.39	11.59	10.69	200yr
500yr	0.57	0.85	1.09	1.59	2.26	3.19	500yr	1.95	3.12	4.12	4.08	6.96	10.29	11.60	500yr	9.10	11.15	12.40	13.73	11.78	500yr

## Upper Confidence Limits

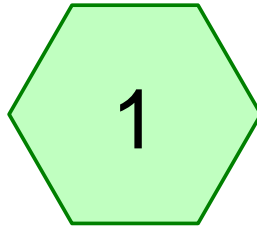
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.37	0.58	0.71	0.95	1.17	1.38	1yr	1.01	1.35	1.61	2.12	2.50	3.02	3.49	1yr	2.68	3.35	3.87	4.62	5.24	1yr
2yr	0.42	0.65	0.80	1.08	1.33	1.60	2yr	1.15	1.57	1.82	2.37	2.90	3.55	3.99	2yr	3.14	3.84	4.45	5.24	6.04	2yr
5yr	0.52	0.81	1.00	1.37	1.75	2.04	5yr	1.51	2.00	2.36	3.06	3.81	4.60	5.26	5yr	4.07	5.05	5.85	6.81	7.61	5yr
10yr	0.63	0.97	1.20	1.68	2.17	2.48	10yr	1.88	2.43	2.88	3.73	4.67	5.60	6.50	10yr	4.96	6.25	7.25	8.40	9.31	10yr
25yr	0.82	1.25	1.55	2.21	2.91	3.23	25yr	2.51	3.16	3.76	4.94	6.14	7.25	8.60	25yr	6.41	8.27	9.63	11.04	12.06	25yr
50yr	1.00	1.52	1.89	2.72	3.66	3.97	50yr	3.16	3.88	4.61	6.11	7.53	8.81	10.64	50yr	7.80	10.23	11.96	13.56	14.69	50yr
100yr	1.23	1.86	2.33	3.37	4.62	4.87	100yr	3.98	4.76	5.66	7.60	9.27	10.72	13.18	100yr	9.49	12.68	14.89	16.67	17.93	100yr
200yr	1.52	2.29	2.90	4.19	5.85	5.98	200yr	5.05	5.85	6.95	9.49	11.40	13.03	16.32	200yr	11.54	15.69	18.55	20.50	21.90	200yr
500yr	2.04	3.03	3.90	5.67	8.06	7.89	500yr	6.96	7.71	9.13	12.79	15.01	16.86	21.67	500yr	14.92	20.84	24.83	26.96	28.59	500yr



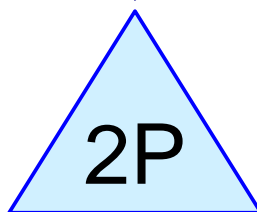
# Post-Development Analysis of the 100-Year Storm Event



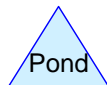
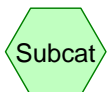




Watershed 1



20 Cultec 280HD  
Rechargers



**Routing Diagram for Proposed Condition 2020-11-17**  
Prepared by Hudson Engineering & Consulting, P.C., Printed 11/18/2020  
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**Proposed Condition 2020-11-17***Type III 24-hr 100-Year Rainfall=8.94"*

Prepared by Hudson Engineering &amp; Consulting, P.C.

Printed 11/18/2020

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1: Watershed 1**

Runoff Area=6,149 sf 74.14% Impervious Runoff Depth=7.49"

Tc=1.0 min CN=88 Runoff=1.39 cfs 0.088 af

**Pond 2P: 20 Cultec 280HD Rechargers**

Peak Elev=3.18' Storage=1,378 cf Inflow=1.39 cfs 0.088 af

Outflow=0.11 cfs 0.088 af

**Total Runoff Area = 0.141 ac Runoff Volume = 0.088 af Average Runoff Depth = 7.49"**  
**25.86% Pervious = 0.037 ac 74.14% Impervious = 0.105 ac**

**Proposed Condition 2020-11-17**

Type III 24-hr 100-Year Rainfall=8.94"

Prepared by Hudson Engineering &amp; Consulting, P.C.

Printed 11/18/2020

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**Summary for Subcatchment 1: Watershed 1**

Runoff = 1.39 cfs @ 12.01 hrs, Volume= 0.088 af, Depth= 7.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-Year Rainfall=8.94"

	Area (sf)	CN	Description
*	1,050	98	Existing Addition & Covered Porch
*	503	98	Portion of Existing Dwelling
*	367	98	Proposed Walks
*	516	98	Proposed Rear Terrace
*	158	98	Proposed Equipment Pads
*	487	98	Proposed Walls
*	1,134	98	Proposed Pool
*	131	98	Proposed Spa
*	213	98	Proposed Pool Terrace
	1,590	61	>75% Grass cover, Good, HSG B
	6,149	88	Weighted Average
	1,590		25.86% Pervious Area
	4,559		74.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0					Direct Entry, Direct Entry

**Summary for Pond 2P: 20 Cultec 280HD Rechargers**

Inflow Area = 0.141 ac, 74.14% Impervious, Inflow Depth = 7.49" for 100-Year event  
 Inflow = 1.39 cfs @ 12.01 hrs, Volume= 0.088 af  
 Outflow = 0.11 cfs @ 11.33 hrs, Volume= 0.088 af, Atten= 92%, Lag= 0.0 min  
 Discarded = 0.11 cfs @ 11.33 hrs, Volume= 0.088 af

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs  
 Peak Elev= 3.18' @ 12.86 hrs Surf.Area= 776 sf Storage= 1,378 cf

Plug-Flow detention time= 93.0 min calculated for 0.088 af (100% of inflow)  
 Center-of-Mass det. time= 93.0 min ( 867.1 - 774.0 )

Volume	Invert	Avail.Storage	Storage Description
#1A	0.00'	474 cf	<b>45.67'W x 17.00'L x 3.21'H Field A</b> 2,491 cf Overall - 911 cf Embedded = 1,580 cf x 30.0% Voids
#2A	1.00'	911 cf	<b>Cultec R-280HD</b> x 20 Inside #1 Effective Size= 46.9"W x 26.0"H => 6.07 sf x 7.00'L = 42.5 cf Overall Size= 47.0"W x 26.5"H x 8.00'L with 1.00' Overlap Row Length Adjustment= +1.00' x 6.07 sf x 10 rows
		1,385 cf	Total Available Storage

Storage Group A created with Chamber Wizard

**Proposed Condition 2020-11-17***Type III 24-hr 100-Year Rainfall=8.94"*

Prepared by Hudson Engineering &amp; Consulting, P.C.

Printed 11/18/2020

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Page 4

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Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	<b>6.000 in/hr Exfiltration over Surface area</b>

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**Discarded OutFlow** Max=0.11 cfs @ 11.33 hrs HW=0.03' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.11 cfs)



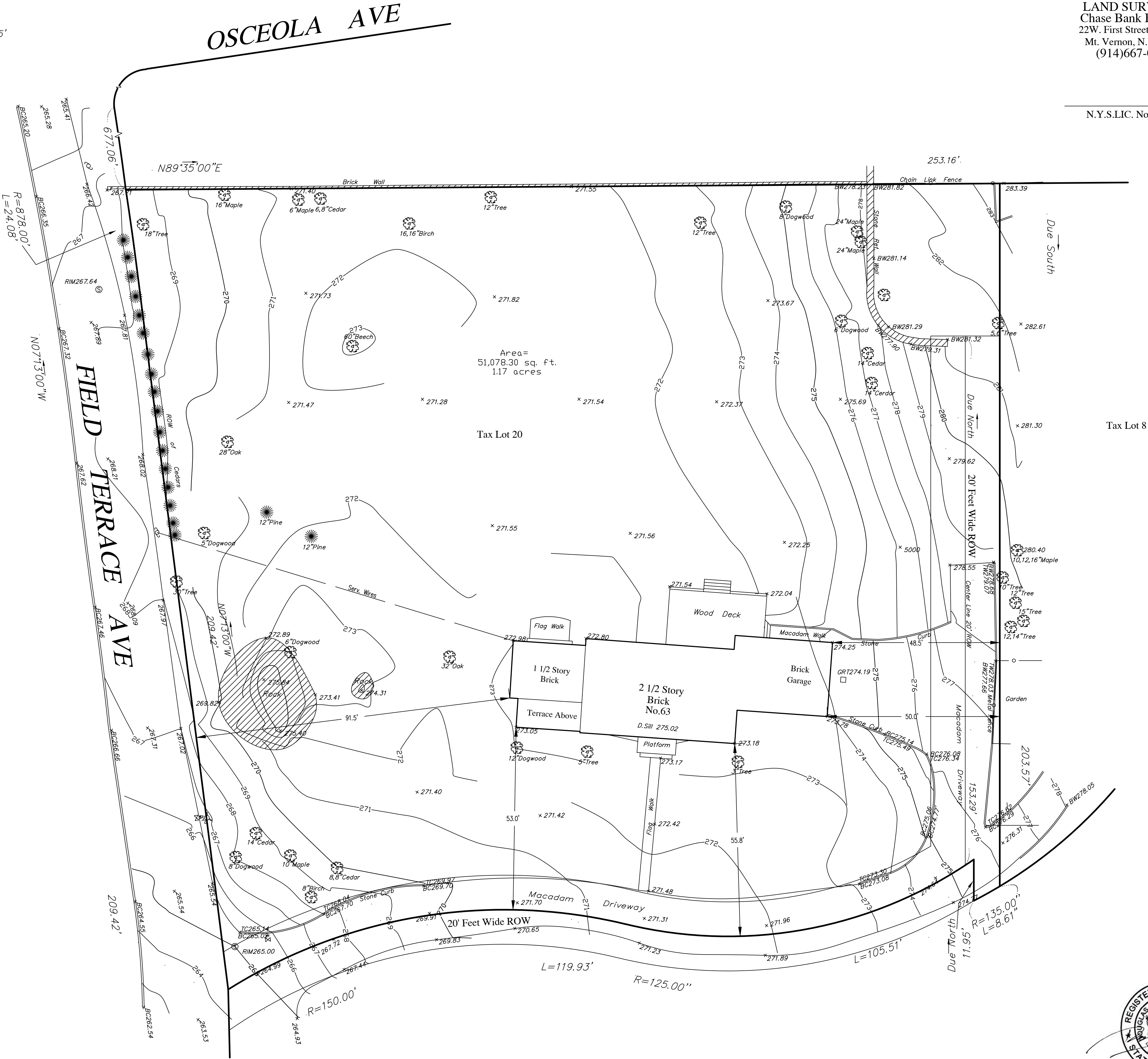
Topographic Survey of Tax Lot 20, Block 76, Sec. 2.170 as shown on  
The Official Tax Maps of The Village of Irvington,  
Town of Greenburgh,  
Westchester County, New York.

Date: May 27, 2014

Scale : 1"=15'

**RICHARD J. DOMATO**  
LAND SURVEYOR  
Chase Bank Building  
22W. First Street-Room 401  
Mt. Vernon, N.Y. 10550  
(914)667-0565

N.Y.S.LIC. No.049418



In accordance with the minimum  
standards for Title Surveys of  
The N.Y.S. Land Title Assn.  
"SURVEYED AS IN POSSESSION"







SHARED DRIVEWAY ENTRANCE

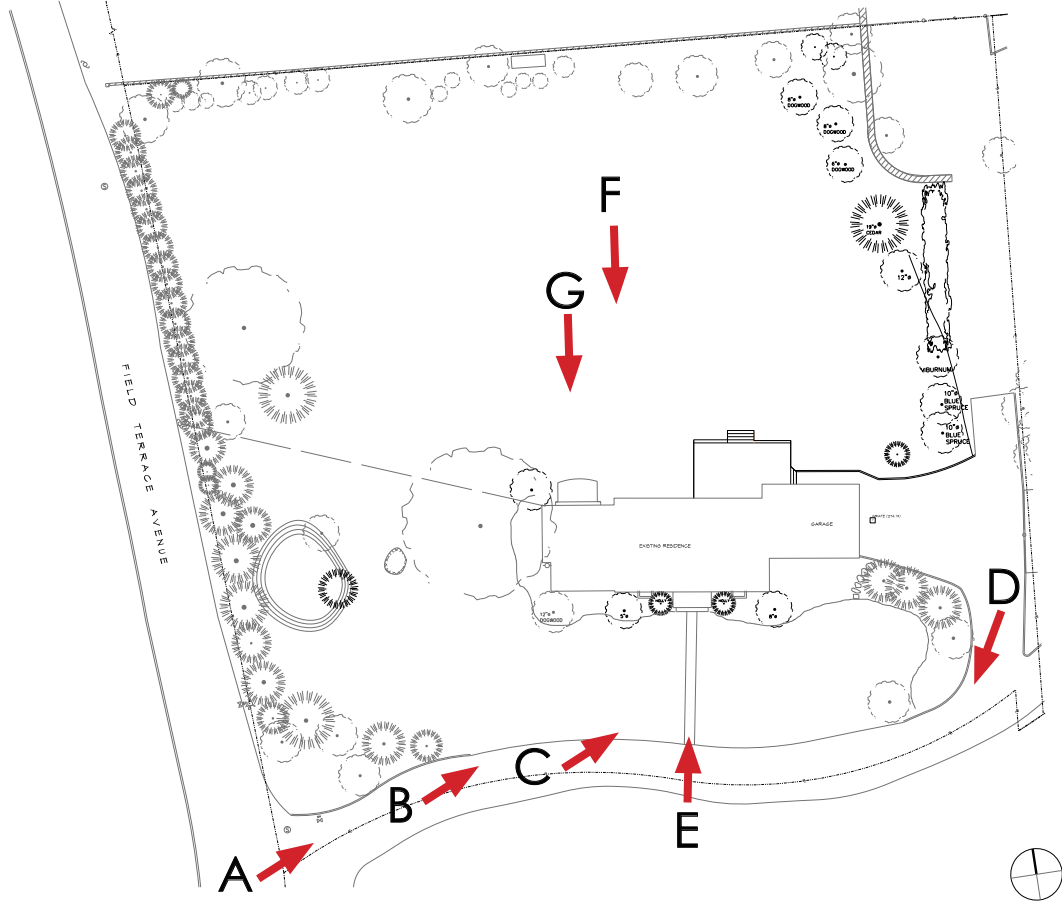
A



B



C



EXISTING CONDITIONS PLAN

N.T.S



DRIVEWAY - LOOKING BACK AT FIELD TERRACE

D



FRONT OF HOUSE

E



PROPOSED POOL LOCATION

F



REAR OF HOUSE DURING CONSTRUCTION PB PERMIT # 2020-0047

G





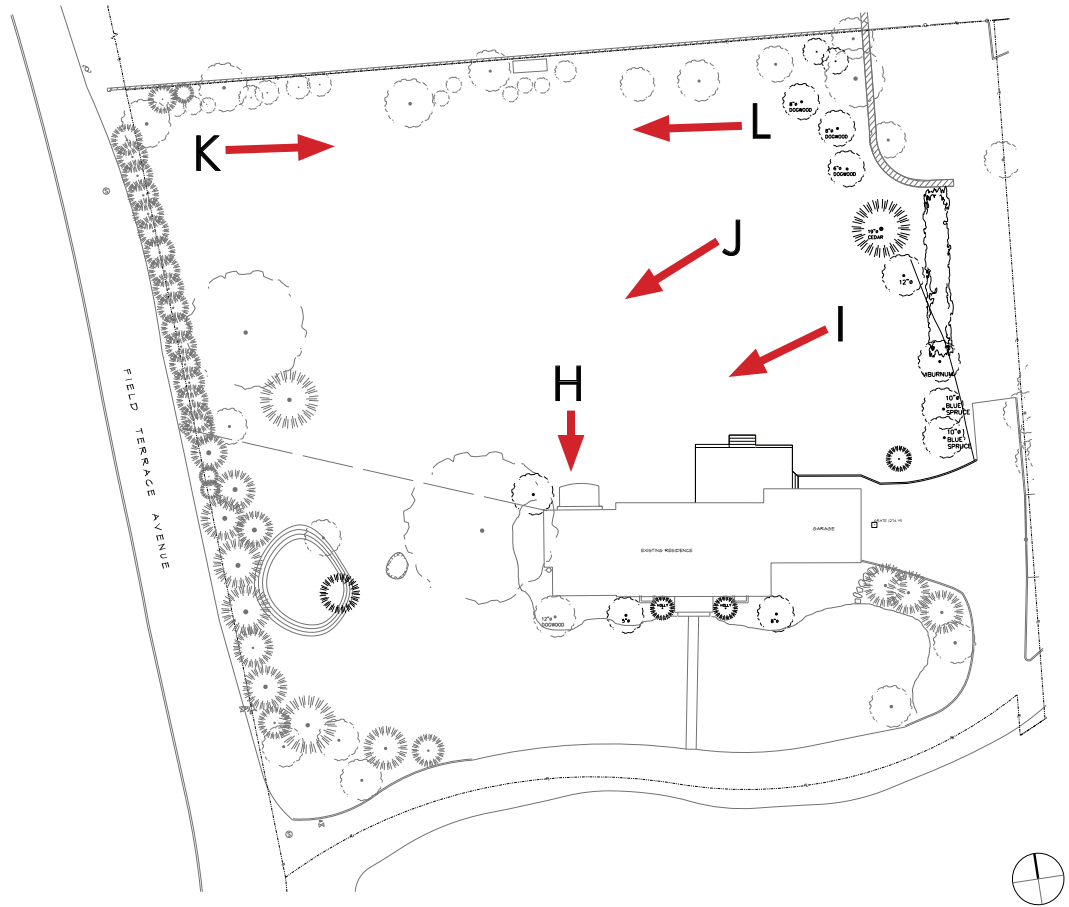
PROPOSED LOCATION OF DINING TERRACE



H

I

J



EXISTING CONDITIONS PLAN  
N.T.S



PROPOSED POOL LOCATION



L





1 49 Field Terrace, Irvington NY



2 51 Field Terrace, Irvington NY



3 53 Field Terrace, Irvington NY (Allowable coverage = 12% Current Coverage = 15%)



4 54 Field Terrace, Irvington NY



AERIAL  
N.T.S







5 57 Field Terrace, Irvington NY (Allowable coverage = 11.9% Current Coverage = 18%)



AERIAL  
N.T.S



6 59 Field Terrace, Irvington NY



7 55 Field Terrace, Irvington NY



8 61 Field Terrace, Irvington NY (Allowable Coverage = 11.2% Current Coverage = 14.9%)



61 Field Terrace Aerial

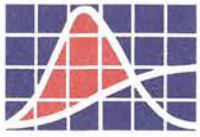


10 65 Field Terrace, Irvington NY



9 30 Osceola Ave, Irvington NY (Allowable Coverage = 8.8% Current Coverage = 12.2%)





## MEMORANDUM

**To** : Cesare Manfredi, Planning Board Chair  
Village of Irvington

**From** : George E. Pommer, P.E.  
Vice President

**Dated** : January 4, 2021

**Subject** : Site Plan Review  
Irvington Planning Board No. 2020-30  
Owner/Applicant –Barbara & Daniel Trencher  
63 Field Terrace

**Drawings Reviewed** : “Rendered Master Plan”, Revised 12/23/20, Sheet M-1.0.  
“Site Data”, Revised 12/23/20, Sheet L-0.0.  
“Existing Conditions & Removal Plan”, Revised 12/23/20, Sheet L-1.0.  
“Layout Plan”, Revised 12/23/20, Sheet L-2.0.  
“Layout Plan Area Enlargements”, Revised 12/23/20, Sheet L-2.1.  
“Grading Plan”, Revised 12/23/20, Sheet L-3.0.  
“Site Details”, Revised 12/23/20, Sheet L-4.0.  
“Site Details”, Revised 12/23/20, Sheet L-4.1.  
“Site Details”, Revised 12/23/20, Sheet L-4.2.  
“Landscape & Lighting Plan”, Revised 12/23/20, Sheet L-5.0.  
“Section-Elevations”, Revised 12/23/20, Sheet L-6.0.  
“Stormwater Management Plan”, Revised 12/18/20, Sheet C-1.  
“Details”, Revised 12/18/20, Sheet C-2.  
“Topographic Survey”, Dated 5/27/14.

**Documents Reviewed** : Letter from Renee Byers, Dated 12/21/20.  
Stormwater Management Plan & Drainage Analysis, Dated 12/18/20.  
Exhibit I, Product Information.  
Exhibit II, Letter from Joe Fattore, Dated 12/21/20.  
Exhibit III, Letter from Brian Nadriczny, Arborist, Dated 12/19/20.  
Exhibit IV, Application Page 2 of 6.

**Future Submissions must include the following:**

- **Three (3) complete set of plans, signed and sealed by the licensed professional.**
- **One (1) flash drive with a scanned copy of the submitted documents and the complete set of plans, signed and sealed by the licensed professional.**

E N V I R O N M E N T A L     A N D     C I V I L     E N G I N E E R I N G  
S T U D I E S     •     R E P O R T S     •     D E S I G N

- A letter addressing comments from the Planning Board and their consultants, identifying each comment, how it has been addressed, and where it is provided.
  - Any revised sheets or documents must have a revision date.
- 

The referenced plans have been reviewed for compliance with the Village Code and our previous memorandum dated November 30, 2020. The applicant proposes the construction of a pool on 1.18 acres in the 1F-40 Zoning District. The improvements also include patios, retaining walls, walks, and a stormwater management system. The site is located within 500 yards of a border of Irvington (Dobbs Ferry).

Pursuant to our review, the following items should be addressed by the applicant.

1. Coverage is exceeded by 18.0 percent over the allowable and 58.2 percent greater than the existing, therefore a variance is required. The allowable, existing, and proposed coverage values are 5,248 sf, 3,916 sf, and 6,194 sf, respectively. The applicant is aware of this.
2. The pool is located closer to the street than the rear of the building, therefore a variance is required. The applicant is aware of this.
3. The pool equipment is located in the rear yard setback and a variance is required. The applicant is aware of this.
4. As previously mentioned, the proposed wall footing drain discharge locations should be shown. The wall drains should not connect to the stormwater infiltration system. Details 12 and 13 on Sheet 2-4.0 indicates a "4" PVC to drywell" at the base of the retaining wall.
5. It appears additional overland flow east of the pool is tributary to the proposed stormwater system and should be included in the hydrologic analysis.
6. It appears 8" drainage pipe is connected into 6" perforated underdrain. This should be revised.
7. Required soil testing should be noted on the plans. Test results shall be submitted to the Village for review.
8. As previously mentioned, it should be clarified how French drains positioned perpendicular to the slope, such as adjacent to the pool patio, capture stormwater runoff.
9. It appears the proposed pop-up emitter could be located closer to the infiltration system, thereby reducing the area of disturbance.

**Irvington Planning Board**  
**Site Plan Review**  
**IPB No. 2020-30**  
**January 4, 2021**  
**Page 3**

10. The proposed propane tank shown on the grading plan should be shown on all site drawings and a detail should be provided.
11. Any comments made by the Planning Board at the meeting should be responded to in next submission, if applicable.

A written response and revised plans responding to the above comments should be submitted by the applicant for review. Any changes made that do not pertain to our comments should be identified separately in the written response. Additional comments may be generated based on the revised plans.

  
\_\_\_\_\_  
GEP:DH:ay

Enclosure

P:\Village of Irvington\Planning Board\2020\2020-30 - Trencher -63 Field Terrace\2020-30 Site Plan Review 2021-01-06 IPBM.docx



HUDSON  
ENGINEERING  
&  
CONSULTING, P.C.

January 29, 2021

George E. Pommer, P.E.  
Vice President  
James J. Hahn Engineering, P.C.  
Village of Dobbs Ferry

Re: Site Plan Review  
Irvington Planning Board No. 2020-30  
Owner/Applicant – Barbara & Daniel Trencher  
63 Field Terrace

Dear Mr. Pommer:

We have received your comment letter dated January 4, 2021, and offer the following responses:

1. Coverage variance has been received from the ZBA.
2. Pool area variance has been received from the ZBA.
3. Variance has been received from the ZBA.
4. The proposed wall will use weep holes to facilitate drainage. Revisions to the wall details have been made on sheet L-4.0.
5. Grading to the east of the proposed pool terrace wall has been revised to provide a grass drainage swale. Overland flow east of the terrace wall will flow into the existing driveway catch basin and northwest of the pool terrace. Overland flow east of the terrace will not be tributary to the proposed Cultec system.
6. The 8" drainage pipe has been reduced to 6".
7. A note has been added to sheet C-1 regarding required soil testing.
8. The grade is sloped away from the pool in all directions. All proposed French drains will be parallel to the grade.
9. The NDS pop-up emitter has been moved closer to the proposed stormwater system to reduce the area of disturbance.
10. The proposed propane tank has been reflected on sheet C-1. A detail has been provided on Sheet L 4.1.



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January 29, 2021  
Page 2 of 2

11. Any necessary plan revisions will be submitted to the Village Engineer upon issuance of any further comments. There were no follow up comments made by the Planning Board that need to be added to the drawings.

If you should have any additional questions or comments, please do not hesitate to contact our office at (914) 909-0420, or via email at [mfrugis@hudsonec.com](mailto:mfrugis@hudsonec.com).

Sincerely,

Michael Frugis, EIT  
Hudson Engineering & Consulting, P.C.