

1000' RADIUS MAP

SCALE = 1' = 400'

AMENDED PRELIMINARY & FINAL SITE PLAN PROPOSED 7 TOWNHOUSES

LOTS 6.01, 6.02, 6.03 BLOCK 43
BOROUGH OF ALPINE
BERGEN COUNTY, NEW JERSEY

LIST OF PROPERTY OWNERS WITHIN 200'

BLOCK	LOT	QUAL	CLA	PROPERTY OWNER	PROPERTY LOCATION
40	6		2	KAO, JEH-LI PO BOX 561 ALPINE, NJ 07620	38 DUBOIS AVENUE
41	1		15C	BOROUGH OF ALPINE 100 CHURCH STREET ALPINE, NJ 07620	100 CHURCH STREET
41	3		2	PARK, JUNG K. & CAROLINE Y. PO BOX 1133 ALPINE, NJ 07620	30 SCHOOL HOUSE LANE
41	4		2	INCONTRO, RICHARD & CHRISTINE PO BOX 820 ALPINE NJ 07620	36 SCHOOL HOUSE LANE
41	5		2	SAIL, ROBERT F. & JEANINE E. PO BOX 24 ALPINE, NJ 07620	35 DUBOIS AVENUE
41	6		2	BON, SANGHO & JEENIN 31 DUBOIS AVE ALPINE, NJ 07620	31 DUBOIS AVENUE
42	1		2	NOBACK, RALPH P. PO BOX 139 ALPINE, NJ 07620	57 SCHOOL HOUSE LANE
42	1.01		1	NOBACK, RALPH T & NOBACK, PETER C PO BOX 139 ALPINE, NJ 07620	CLOSTER DOCK ROAD
43	3		4A	SHAW, HAROLD D III & MARY L ET ALS PO BOX 105 ALPINE, NJ 07620	966 CLOSTER DOCK ROAD
43	4		4A	KN CAFFEREY, ROBERT & JOHN PO BOX 471 ALPINE, NJ 07620	970 CLOSTER DOCK ROAD
43	5		2	MCCAFFEY, R. & MCCAFFEY, J. & R. PO BOX 411 ALPINE, NJ 07620	974 CLOSTER DOCK ROAD
43	7		1	GIANNUZZI, LEWIS D. & G.L. PO BOX 631 ALPINE, NJ 07620	990 CLOSTER DOCK ROAD
43	8		2	GIANNUZZI, LEWIS D. & G.L. PO BOX 631 ALPINE, NJ 07620	994 CLOSTER DOCK ROAD
44	4		2	MALOVANY, ROBERT & MAUREEN 965 CLOSTER DOCK RD ALPINE, NJ 07620	965 CLOSTER DOCK ROAD
44	5		2	CHAN, WEI LIK & PI-YU HSU 971 CLOSTER DOCK RD ALPINE, NJ 07620	971 CLOSTER DOCK ROAD
44	6		2	FABROCCINI, JOHN & CLAUDIA 2319 PROVIDENCE ST WOODLAND HILLS, CA 91364	13 MAIN STREET
44	7		2	KIN, JONG OK PO BOX 502 ALPINE, NJ 07620	17 MAIN STREET
47	1		2	GARABET, LEON 958 CLOSTER DOCK RD ALPINE, NJ 07620	987 CLOSTER DOCK ROAD
47	10		2	HSBC BANK USA NA 3476 STATEVIEW BLVD FORT WILK, SC 29715	979 CLOSTER DOCK ROAD

UTILITIES

Suez Water New Jersey, Inc
461 From Road, Suite 400
Paramus, NJ 07652

PSE&G
Manager Corporate Properties
80 Park Plaza, T6B
Newark, NJ 07102

Verizon
540 Broad Street
Newark, NJ 07101

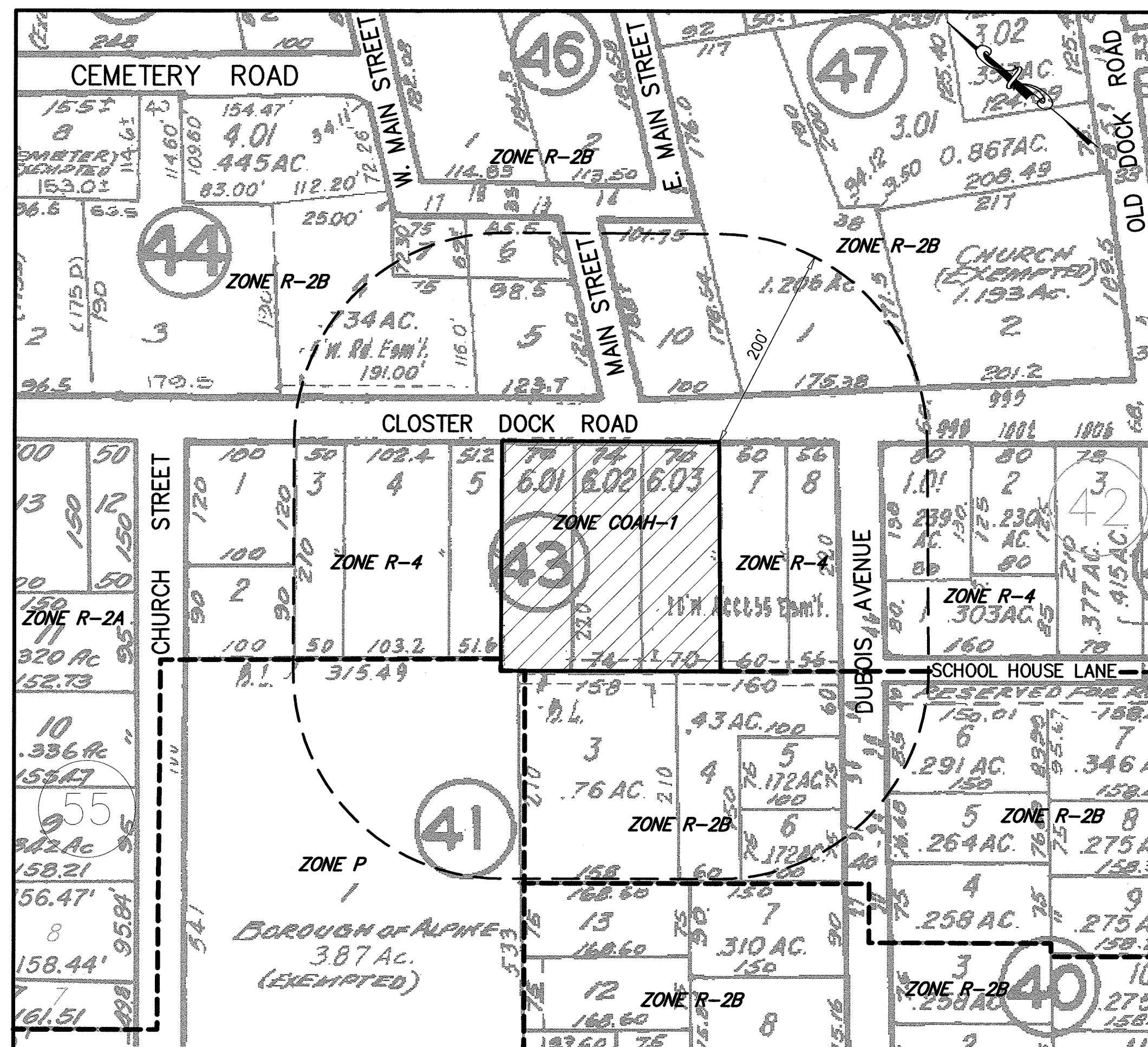
Rockland Electric Co.
390 West Route 59
Spring Valley, NY 10977

Cablevision
40 Potash Rd
Oakland, New Jersey 07436

County of Bergen
One Bergen County Plaza
Room 580

Bergen County Utilities Authority
PO Box 122

Little Ferry, NJ 07640



TAX MAP SHEET No. 4

KEY MAP

DRAWING SCHEDULE

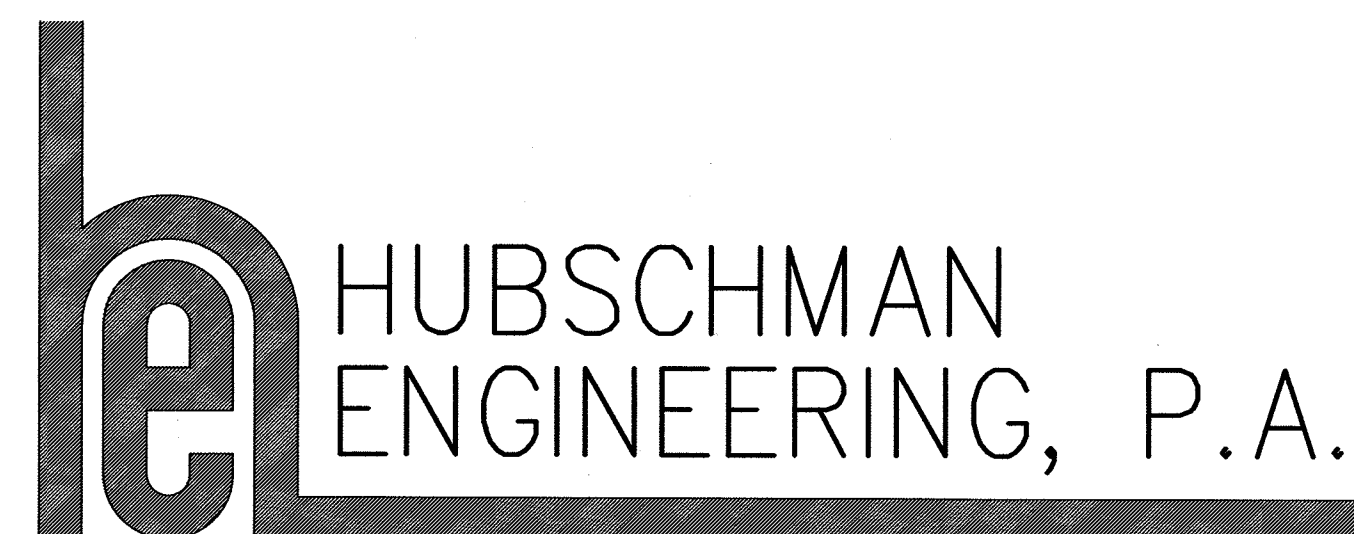
<u>DWG</u>	<u>TITLE</u>	<u>REVISION</u>
495-40	COVER SHEET	4-30-20
495-41	SITE PLAN	4-30-20
495-42	GRADING, DRAINAGE & UTILITY PLAN	4-30-20
495-43	DETAILS	4-30-20
495-44	DETAILS	4-30-20
495-45	STORMWATER SYSTEM DETAILS	4-30-20
495-46	LIGHTING PLAN	
495-47	SOIL EROSION & SEDIMENT CONTROL PLAN	4-30-20
495-48	EXISTING CONDITIONS PLAN; TREES TO BE REMOVED PLAN	4-30-20
495-49	PROFILE - CLOSTER DOCK ROAD	
495-50	STORM SEWER PROFILE; SANITARY SEWER PROFILE	10-7-19

SOIL MOVING CROSS SECTIONS

495-51	CROSS SECTIONS AND SOIL MOVING PROFILE	0+38W TO 1+02W	4-30-20
495-52	CROSS SECTIONS AND SOIL MOVING PROFILE	1+22E TO 1+74W	4-30-20
495-53	CROSS SECTIONS AND SOIL MOVING PROFILE	1+96E TO 3+32W	4-30-20

APPLICANT:

ALPINE THREE L.L.C.
P.O. BOX 835
ALPINE, NEW JERSEY



ENGINEERS – PLANNERS – SURVEYORS
263A SOUTH WASHINGTON AVENUE, BERGENFIELD, NJ 07621
201-384-5666

May 22, 2019

4.	ENGINEER'S COMMENTS DATED: 2-24-20 & 3-12-20	4-30-20	NM	M.JH
3.	MODIFIED CROSS SECTION LOCATIONS	12-18-19	B.W.	M.JH
2.	BCSDC LETTER DATED: 7-29-19	10-7-19	B.W.	M.JH
1.	FOR BCSDC SUBMITTAL	9-4-19	NM	M.JH
NO.	REVISIONS	DATE	BY	CHKD

COVER SHEET

LOTS 6.01, 6.02 & 6.03BLOCK 4

AMENDED PRELIMINARY & FINAL SITE PLAN PROPOSED 7 TOWNHOUSES

BOROUGH OF ALPINEBERGEN COUNTYNEW JERSEY

APPLICANT/OWNER: ALPINE THREE L.L.C.
P.O. BOX 435
ALPINE, N.J. 07620

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**HUBSCHMAN
ENGINEERING, P.A.**

ENGINEERS – PLANNERS – SURVEYORS
263A S. WASHINGTON AVE., BERGENFIELD, NJ 07621

DRAWN BY:	B.W.
CHKD BY:	MJH
SCALE:	1"=20'
DRAWING NO.	REV

495-40

1 of 1

4

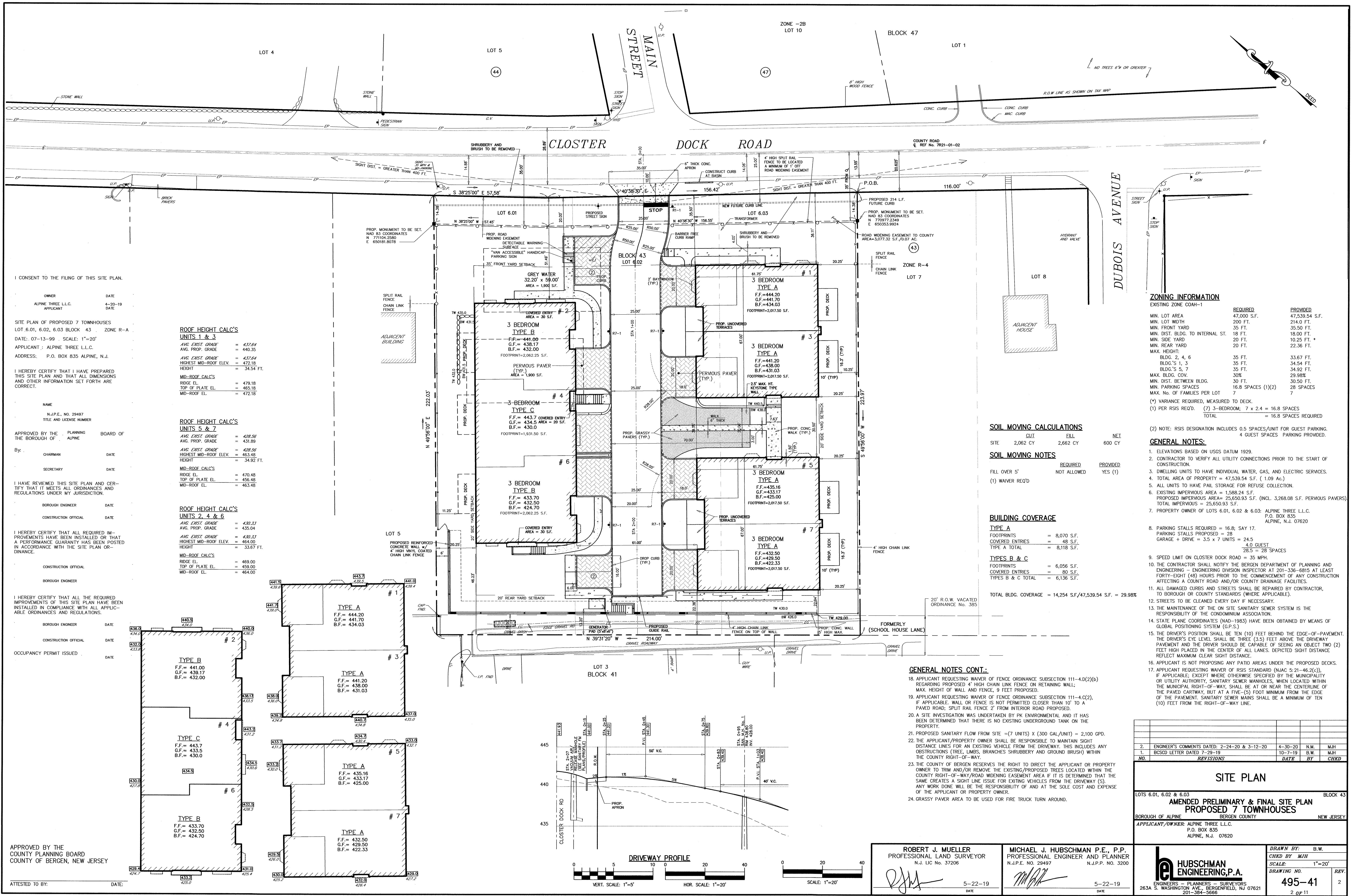
MICHAEL J. HUBSCHMAN P.E., P.P.
PROFESSIONAL ENGINEER AND PLANNER

M.B.K.

5-22-19

<i>DRAWN BY:</i>	B.W.
<i>CHKD BY</i>	MJH

DRAWING NO.		REV
495-40		4



I CONSENT TO THE FILING OF THIS SITE PLAN.

OWNER: ALPINE THREE L.L.C.
DATE: 4-20-19
APPLICANT: ALPINE THREE L.L.C.
DATE: 07-13-99
SCALE: 1"=20'
ADDRESS: P.O. BOX 835 ALPINE, N.J.

I HEREBY CERTIFY THAT I HAVE PREPARED THIS SITE PLAN AND THAT ALL DIMENSIONS AND OTHER INFORMATION SET FORTH ARE CORRECT.

NAME: N.J.P.E., No. 29497
TITLE AND LICENSE NUMBER: BOARD OF THE BOROUGH OF ALPINE

APPROVED BY: CHAIRMAN
DATE: SECRETARY
DATE:

I HAVE REVIEWED THIS SITE PLAN AND CERTIFY THAT IT MEETS ALL ORDINANCES AND REGULATIONS UNDER MY JURISDICTION.

BOROUGH ENGINEER
DATE: CONSTRUCTION OFFICIAL
DATE:

I HEREBY CERTIFY THAT ALL REQUIRED IMPROVEMENTS HAVE BEEN INSTALLED OR THAT A PERFORMANCE GUARANTEE HAS BEEN POSTED IN ACCORDANCE WITH THE SITE PLAN ORDINANCE.

CONSTRUCTION OFFICIAL
DATE: BOROUGH ENGINEER
DATE:

I HEREBY CERTIFY THAT ALL THE REQUIRED IMPROVEMENTS OF THIS SITE PLAN HAVE BEEN INSTALLED IN COMPLIANCE WITH ALL APPLICABLE ORDINANCES AND REGULATIONS.

BOROUGH ENGINEER
DATE: CONSTRUCTION OFFICIAL
DATE: OCCUPANCY PERMIT ISSUED
DATE:

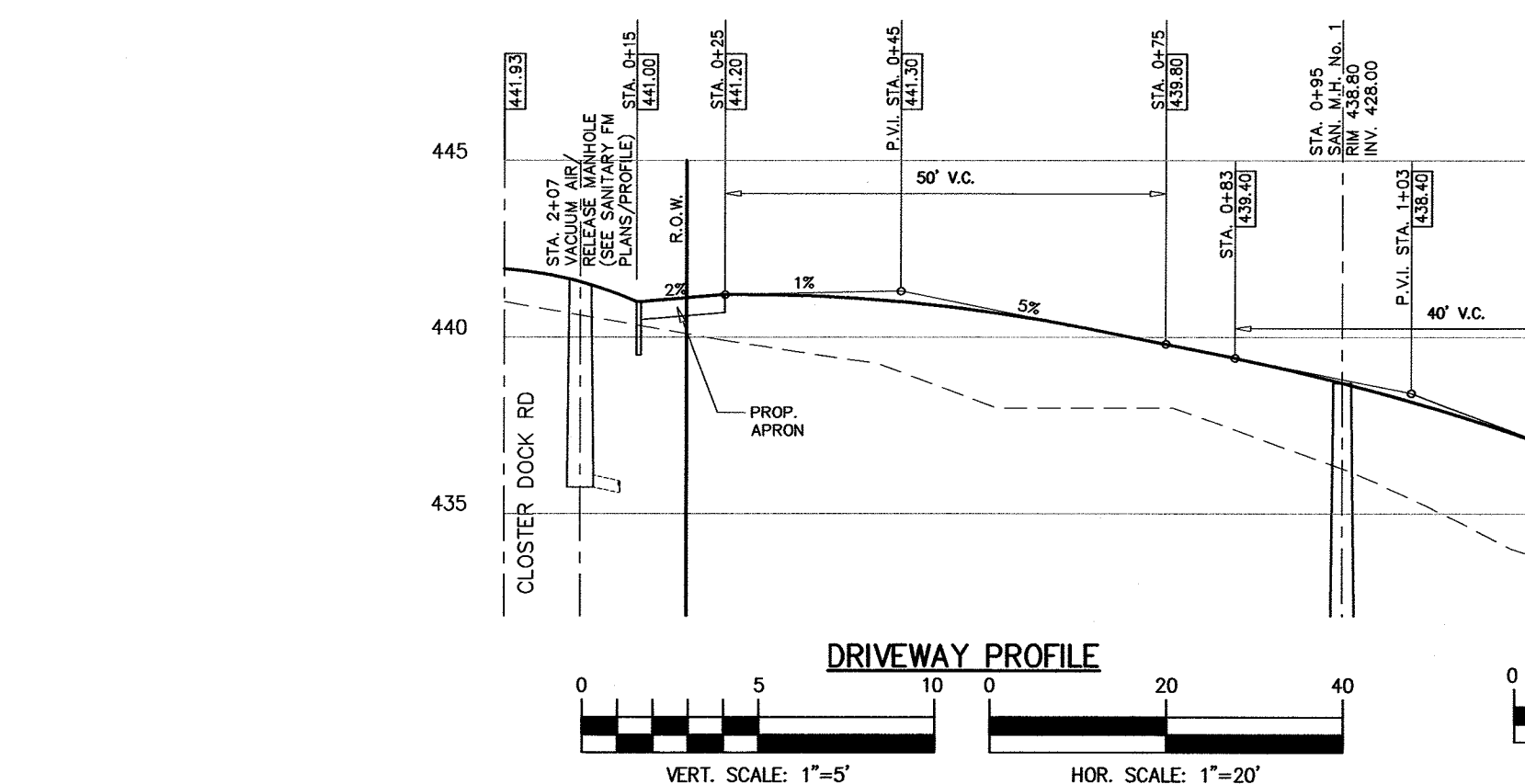
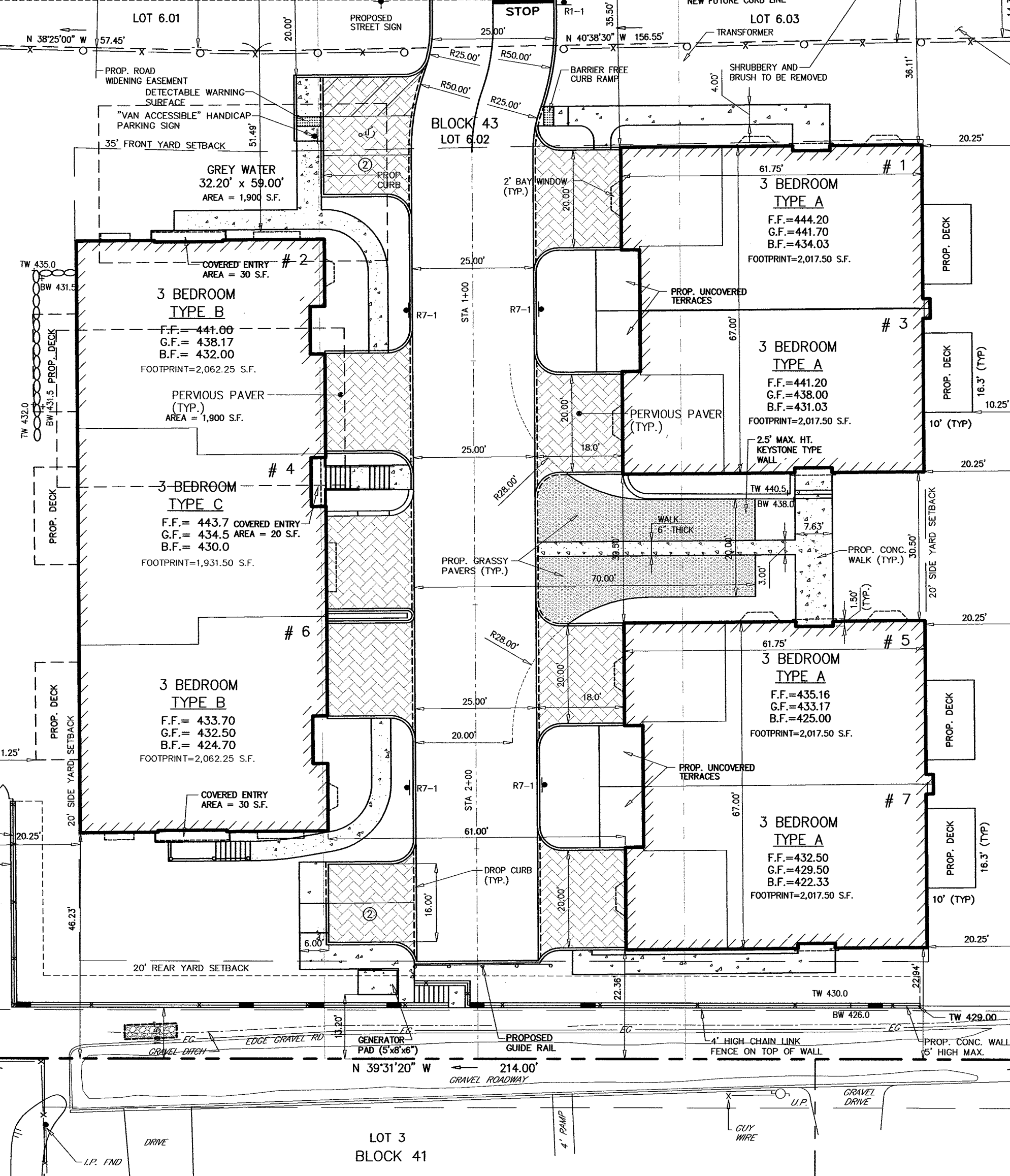
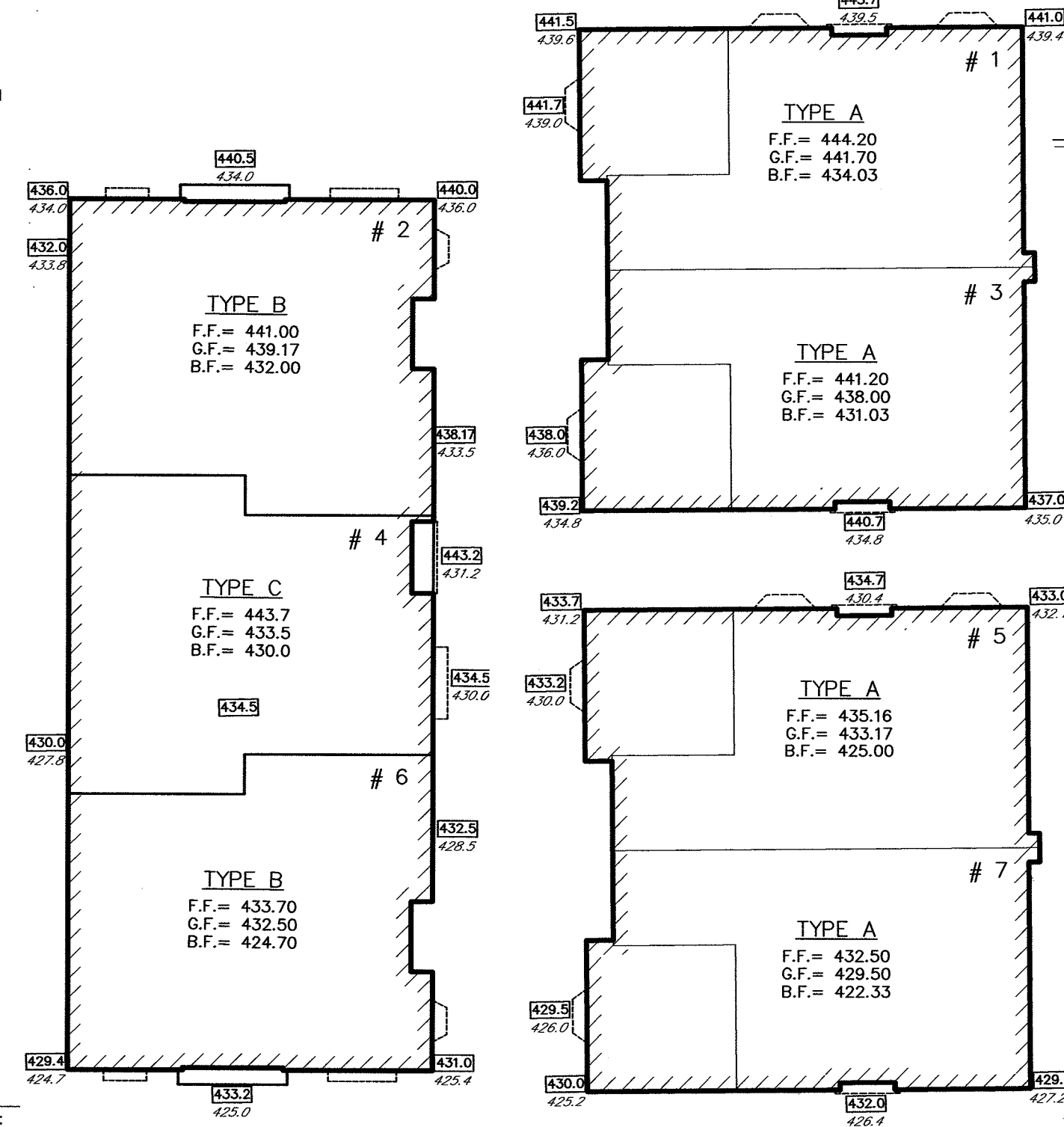
APPROVED BY THE COUNTY PLANNING BOARD
COUNTY OF BERGEN, NEW JERSEY

ATTTESTED TO BY: DATE:

ROOF HEIGHT CALC'S
UNITS 1 & 3
AVG. EXIST. GRADE = 437.64
AVG. PROP. GRADE = 440.35
AVG. EXIST. GRADE = 437.64
HIGHEST MID-ROOF ELEV. = 472.18
HEIGHT = 34.54 FT.
MID-ROOF CALC'S
RIDGE EL. = 479.18
TOP OF PLATE EL. = 465.18
MID-ROOF EL. = 472.18

ROOF HEIGHT CALC'S
UNITS 5 & 7
AVG. EXIST. GRADE = 438.22
AVG. PROP. GRADE = 431.29
AVG. EXIST. GRADE = 438.22
HIGHEST MID-ROOF ELEV. = 463.48
HEIGHT = 34.92 FT.
MID-ROOF CALC'S
RIDGE EL. = 470.48
TOP OF PLATE EL. = 458.48
MID-ROOF EL. = 463.48

ROOF HEIGHT CALC'S
UNITS 2, 4 & 6
AVG. EXIST. GRADE = 430.11
AVG. PROP. GRADE = 435.04
AVG. EXIST. GRADE = 430.11
HIGHEST MID-ROOF ELEV. = 464.00
HEIGHT = 33.67 FT.
MID-ROOF CALC'S
RIDGE EL. = 469.00
TOP OF PLATE EL. = 459.00
MID-ROOF EL. = 464.00



SOIL MOVING CALCULATIONS

	CUT	FILL	NET
SITE	2,062 CY	2,662 CY	600 CY
FILL OVER 5'		NOT ALLOWED	YES (1)
(1) WAIVER REQ'D			

BUILDING COVERAGE

TYPE A	
FOOTPRINTS	= 8,070 S.F.
COVERED TERRACES	= 48 S.F.
TYPE A TOTAL	= 8,118 S.F.
TYPE B & C	
FOOTPRINTS	= 6,056 S.F.
COVERED TERRACES	= 80 S.F.
TYPE B & C TOTAL	= 6,136 S.F.
TOTAL BLDG. COVERAGE	= 14,254 S.F./47,539.54 S.F. = 29.98%

GENERAL NOTES CONT.

- APPLICANT REQUESTING WAIVER OF FENCE ORDINANCE SUBSECTION 111-4.0(2)(b) REGARDING PROPOSED 4' HIGH CHAIN LINK FENCE ON RETAINING WALL; MAX. HEIGHT OF WALL AND FENCE, 9 FEET PROPOSED.
- APPLICANT REQUESTING WAIVER OF FENCE ORDINANCE SUBSECTION 111-4.0(2), IF APPLICABLE, WALL OR FENCE IS NOT PERMITTED CLOSER THAN 10' TO A PAVED ROAD; SPLIT RAIL FENCE 2' FROM INTERIOR ROAD PROPOSED.
- A SITE INVESTIGATION WAS UNDERTAKEN BY PK ENVIRONMENTAL AND IT HAS BEEN DETERMINED THAT THERE IS NO EXISTING UNDERGROUND TANK ON THE PROPERTY.
- PROPOSED SANITARY FLOW FROM SITE = (7 UNITS) X (300 GAL/UNIT) = 2,100 GPD.
- THE APPLICANT/PROPERTY OWNER SHALL BE RESPONSIBLE TO MAINTAIN SIGHT DISTANCE LINES FOR AN EXISTING VEHICLE FROM THE DRIVEWAY. THIS INCLUDES ANY OBSTRUCTIONS (TREE, LIMBS, BRANCHES SHRUBBERY AND GROUND BRUSH) WITHIN THE COUNTY RIGHT-OF-WAY.
- THE COUNTY OF BERGEN RESERVES THE RIGHT TO DIRECT THE APPLICANT OR PROPERTY OWNER TO TRIM AND/OR REMOVE THE EXISTING/PROPOSED TREES LOCATED WITHIN THE COUNTY RIGHT-OF-WAY/ROAD WIDENING EASEMENT AREA IF IT IS DETERMINED THAT THE SAME CREATES A SIGHT LINE ISSUE FOR EXISTING VEHICLES FROM THE DRIVEWAY (S). ANY WORK DONE WILL BE THE RESPONSIBILITY OF AND AT THE SOLE COST AND EXPENSE OF THE APPLICANT OR PROPERTY OWNER.
- GRASSY PAVEMENT AREA TO BE USED FOR FIRE TRUCK TURN AROUND.

ZONING INFORMATION

EXISTING ZONE COAH-1	REQUIRED	PROVIDED
MIN. LOT AREA	47,000 S.F.	47,539.54 S.F.
MIN. LOT WIDTH	200 FT.	214.0 FT.
MIN. FRONT YARD	35 FT.	35.50 FT.
MIN. DIST. BLDG. TO INTERNAL ST.	18 FT.	18.00 FT.
MIN. SIDE YARD	20 FT.	10.25 FT. *
MIN. REAR YARD	20 FT.	22.36 FT.
MAX. HEIGHT:		
BLDG. 2, 4, 6	35 FT.	33.67 FT.
BLDG.'S 1, 3	35 FT.	34.54 FT.
BLDG.'S 5, 7	35 FT.	34.92 FT.
MAX. BLDG. COV.	30%	29.98%
MIN. DIST. BETWEEN BLDG.	30 FT.	30.50 FT.
MIN. PARKING SPACES	16.8 SPACES (1)(2)	28 SPACES
MAX. NO. OF FAMILIES PER LOT	7	7

(*) VARIANCE REQUIRED, MEASURED TO DECK.
(1) PER RSIS REQ'D. (2) 3-BEDROOM; 7 x 2.4 = 16.8 SPACES
TOTAL = 16.8 SPACES REQUIRED

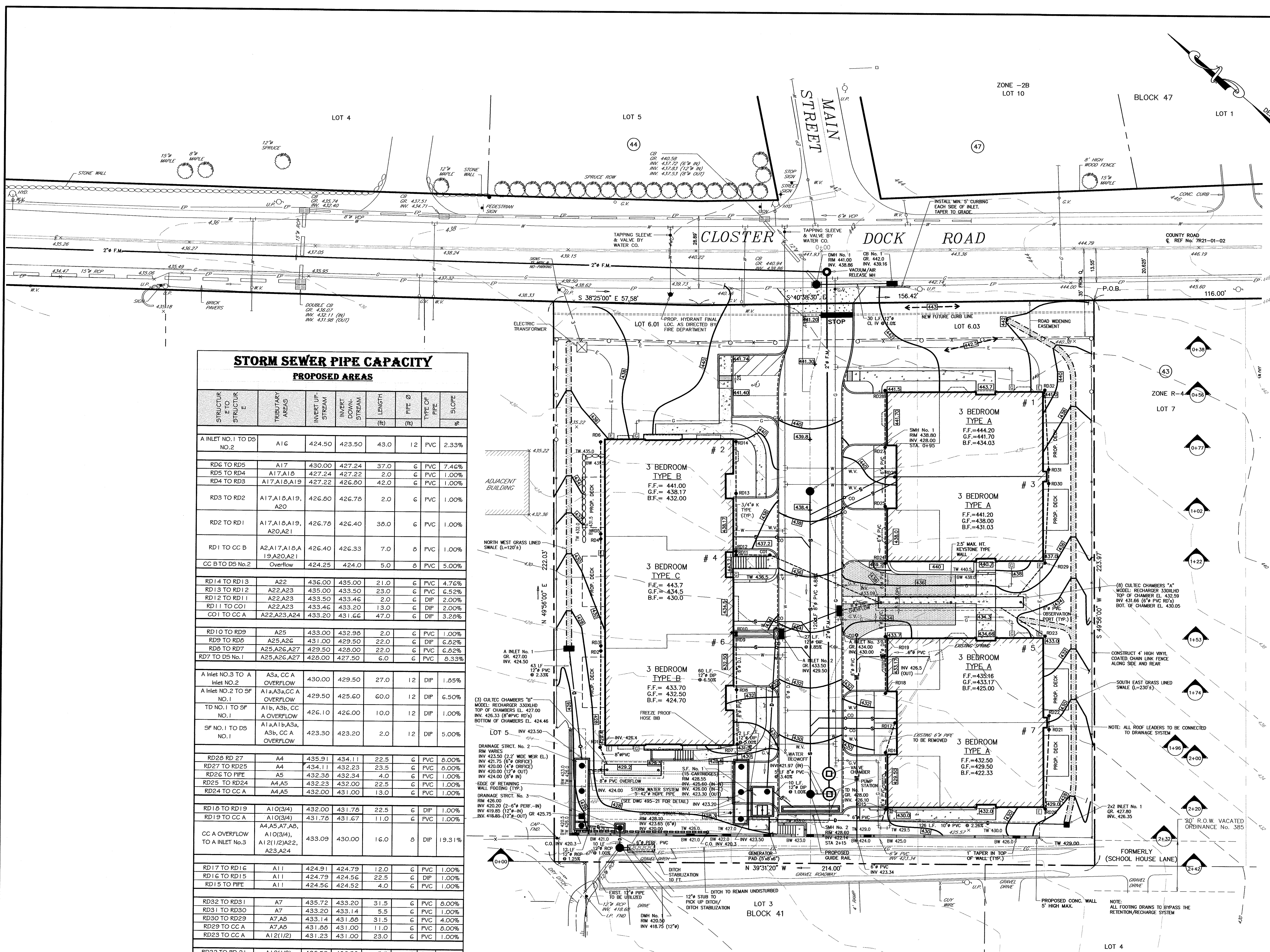
GENERAL NOTES:

- ELEVATIONS BASED ON USGS DATUM 1929.
- CONTRACTOR TO VERIFY ALL UTILITY CONNECTIONS PRIOR TO THE START OF CONSTRUCTION.
- DWELLING UNITS TO HAVE INDIVIDUAL WATER, GAS, AND ELECTRIC SERVICES.
- TOTAL AREA OF PROPERTY = 47,539.54 S.F. (1.09 AC.).
- ALL UNITS TO HAVE PAIL STORAGE FOR REFUSE COLLECTION.
- EXISTING IMPERVIOUS AREA = 1,588.24 S.F.
PROPOSED IMPERVIOUS AREA = 25,650.93 S.F. (INCL. 3,268.08 S.F. PERVIOUS PAVERS)
TOTAL IMPERVIOUS = 25,650.93 S.F.
- PROPERTY OWNER OF LOTS 6.01, 6.02 & 6.03: ALPINE THREE L.L.C., P.O. BOX 835, ALPINE, N.J. 07620
- PARKING STALLS REQUIRED = 16.8; SAY 17.
PARKING STALLS PROPOSED = 28
GARAGE + DRIVE = 3.5 x 7 UNITS = 24.5
4.0 GUEST
28.5 = 28 SPACES
- SPEED LIMIT ON CLOSTER DOCK ROAD = 35 MPH.
- THE CONTRACTOR SHALL NOTIFY THE BERGEN DEPARTMENT OF PLANNING AND ENGINEERING - ENGINEERING DIVISION INSPECTOR AT 201-336-0815 AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AFFECTING A COUNTY ROAD AND/OR COUNTY DRAINAGE FACILITIES.
- ALL DAMAGED CURBS AND STREETS SHALL BE REPAIRED BY CONTRACTOR, TO BOROUGH OR COUNTY STANDARDS (WHERE APPLICABLE).
- STREETS TO BE CLEANED EVERY DAY IF NECESSARY.
- THE MAINTENANCE OF THE ON SITE SANITARY SEWER SYSTEM IS THE RESPONSIBILITY OF THE CONDOMINIUM ASSOCIATION.
- STATE PLANE COORDINATES (NAD-1983) HAVE BEEN OBTAINED BY MEANS OF GLOBAL POSITIONING SYSTEM (GPS).
- THE DRIVER'S POSITION SHALL BE TEN (10) FEET BEHIND THE EDGE-OF-PAVEMENT. THE DRIVER'S EYE LEVEL SHALL BE THREE (3.5) FEET ABOVE THE DRIVEWAY PAVEMENT AND THE DRIVER SHOULD BE CAPABLE OF SEEING AN OBJECT TWO (2) FEET HIGH PLACED IN THE CENTER OF ALL LANES. DEPICTED SIGHT DISTANCE REFLECT MAXIMUM CLEAR SIGHT DISTANCE.
- APPLICANT IS NOT PROPOSING ANY PATIO AREAS UNDER THE PROPOSED DECKS.
- APPLICANT REQUESTING WAIVER OF RSIS STANDARD (NJAC 5:21-46.2(c)), IF APPLICABLE, EXCEPT WHERE OTHERWISE SPECIFIED BY THE MUNICIPALITY OR UTILITY AUTHORITY, SANITARY SEWER MANHOLES, WHEN LOCATED WITHIN THE MUNICIPAL RIGHT-OF-WAY, SHALL BE AT OR NEAR THE CENTERLINE OF THE PAVED DRIVEWAY, BUT AT A FIVE-(5) FOOT MINIMUM FROM THE EDGE OF THE PAVEMENT. SANITARY SEWER MAINS SHALL BE A MINIMUM OF TEN (10) FEET FROM THE RIGHT-OF-WAY LINE.

SITE PLAN

LOTS 6.01, 6.02 & 6.03
AMENDED PRELIMINARY & FINAL SITE PLAN
PROPOSED 7 TOWNHOUSES
BOROUGH OF ALPINE
APPLICANT/OWNER: ALPINE THREE L.L.C.
P.O. BOX 835
ALPINE, N.J. 07620

2. ENGINEER'S COMMENTS DATED: 2-24-20 & 3-12-20	4-30-20	N.M.	M.H.
1. BCSD LETTER DATED 7-29-19	10-7-19	B.W.	M.H.
NO.	REVISIONS	DATE	BY
HUBSCHMAN ENGINEERING, P.A.			
ENGINEERS - PLANNERS - SURVEYORS			
263A S. WASHINGTON AVE., BERGENFIELD, NJ 07621			
201-384-5666			
DRAWN BY: B.W.			
CHKD BY: M.H.			
SCALE: 1"=20'			
DRAWING NO. 495-41			
REV. 2			



STORM SEWER PIPE CAPACITY									
PROPOSED AREAS									
STRUCTURE TO STRUCTURE	TRIBUTARY AREAS	INVERT UP-STREAM	INVERT DOWN-STREAM	LENGTH (ft)	PIPE Ø (in)	TYPE OF PIPE	SLOPE		
A INLET NO.1 TO DS NO.2	A1G	424.50	423.50	43.0	12	PVC	2.33%		
RD6 TO RD5	A17	430.00	427.24	37.0	6	PVC	7.46%		
RD5 TO RD4	A17,A18	427.24	427.22	2.0	6	PVC	1.00%		
RD4 TO RD3	A17,A18,A19	427.22	426.80	42.0	6	PVC	1.00%		
RD3 TO RD2	A17,A18,A19,A20	426.80	426.78	2.0	6	PVC	1.00%		
RD2 TO RD1	A17,A18,A19,A20,A21	426.78	426.40	38.0	6	PVC	1.00%		
RD1 TO CC B	A2,A17,A18,A19,A20,A21	426.40	426.33	7.0	8	PVC	1.00%		
CC B TO DS NO.2	Overflow	424.25	424.0	5.0	8	PVC	5.00%		
RD14 TO RD13	A22	436.00	435.00	21.0	6	PVC	4.76%		
RD13 TO RD12	A22,A23	435.00	433.50	23.0	6	PVC	6.52%		
RD12 TO RD11	A22,A23	433.50	433.46	2.0	6	DIP	2.00%		
RD11 TO CC A	A22,A23	433.46	433.20	13.0	6	DIP	2.00%		
CC A TO CC A	A22,A23,A24	433.20	431.66	47.0	6	DIP	3.29%		
RD10 TO RD9	A25	433.00	432.98	2.0	6	PVC	1.00%		
RD9 TO RD8	A25,A26	431.00	429.50	22.0	6	DIP	6.82%		
RD8 TO RD7	A25,A26,A27	429.50	428.00	22.0	6	PVC	6.82%		
RD7 TO DS NO.1	A25,A26,A27	428.00	427.50	6.0	6	PVC	8.33%		
A Inlet NO.3 TO A Inlet NO.2	A3a, CC A OVERFLOW	430.00	429.50	27.0	12	DIP	1.85%		
A Inlet NO.2 TO SF NO.1	A1a,A3a,CC A OVERFLOW	429.50	425.60	60.0	12	DIP	6.50%		
TD NO.1 TO SF NO.1	A1b,A3b,CC A OVERFLOW	426.10	426.00	10.0	12	DIP	1.00%		
SF NO.1 TO DS NO.1	A1a,A1b,A3a,A3b,CC A OVERFLOW	423.30	423.20	2.0	12	DIP	5.00%		
RD28 TO RD27	A4	435.91	434.11	22.5	6	PVC	8.00%		
RD27 TO RD25	A4	434.11	432.23	23.5	6	PVC	8.00%		
RD26 TO PIPE	A5	432.36	432.34	4.0	6	PVC	1.00%		
RD25 TO RD24	A4,A5	432.23	432.00	22.5	6	PVC	1.00%		
RD24 TO CC A	A4,A5	432.00	431.00	13.0	6	PVC	1.00%		
RD18 TO RD19	A10(3/4)	432.00	431.78	22.5	6	DIP	1.00%		
RD19 TO CC A	A10(3/4)	431.78	431.67	11.0	6	PVC	1.00%		
CC A OVERFLOW TO A INLET NO.3	A4,A5,A7,A8,A10(3/4), A12(1/2),A22,A23,A24	433.09	430.00	16.0	8	DIP	19.31%		
RD17 TO RD16	A11	424.91	424.79	12.0	6	PVC	1.00%		
RD16 TO RD15	A11	424.79	424.56	22.5	6	DIP	1.00%		
RD15 TO PIPE	A11	424.56	424.52	4.0	6	PVC	1.00%		
RD32 TO RD31	A7	435.72	433.20	31.5	6	PVC	8.00%		
RD31 TO RD30	A7	433.20	433.14	5.5	6	PVC	1.00%		
RD30 TO RD29	A7,A8	433.14	431.88	31.5	6	PVC	4.00%		
RD29 TO CC A	A7,A8	431.88	431.00	11.0	6	PVC	8.00%		
RD23 TO CC A	A12(1/2)	431.23	431.00	23.0	6	PVC	1.00%		
RD22 TO RD21	A12(1/2)	426.59	426.53	5.5	6	PVC	1.00%		
RD21 TO RD20	A12(1/2),A13	426.53	426.21	31.5	6	PVC	1.00%		
RD20 TO PIPE	A12(1/2),A13	426.21	426.15	6.0	6	PVC	1.00%		
2X2 INLET NO.1 TO DS NO.1	A6,A9,A10(1/4), A11,A12(1/2), A13,A14	426.35	423.50	126.0	10	PVC	2.26%		
DS NO.2 TO DS NO.3	DEVELOPED DISCH.	420.00	419.85	12.0	12	RCP	1.25%		
DS NO.3 TO DMH NO.1	DEVELOPED DISCH.	418.85	418.75	10.0	12	RCP	1.00%		

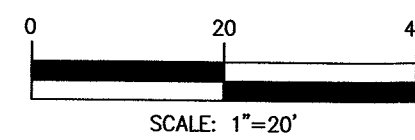
APPROVED BY THE COUNTY PLANNING BOARD COUNTY OF BERGEN, NEW JERSEY

ATTESTED TO BY: DATE:

- SPRING NOTES:**
- EXISTING SPRING TO BE RE-CONSTRUCTED.
 - FLOW TO BE DIRECTED TO EXISTING DITCH VIA 6" PVC PIPE. ROUTING TO BE FIELD VERIFIED.

- GENERAL NOTES:**
- THERE ARE NO FOOTING DRAINS OR GROUND WATER TO BE DRAINED INTO THE STORMWATER SYSTEM.
 - ALL DRIVEWAYS SHALL BE POROUS PAVEMENT.
 - ALL PROPOSED INLETS WITHIN THE COUNTY RIGHT-OF-WAY, LOCATED ALONG THE PROPERTY FRONTAGE, SHALL HAVE AN "N"-ECC CURB PIECE (CAMPBELL FOUNDRY PATTERN NO. 2618).
 - THE TOP ONE (1) FOOT OF ALL COUNTY MAINTAINED PRECAST INLETS AND MANHOLES ARE TO BE GIVEN A FACTORY COATING OF AN EPOXY SEALER ON BOTH THE INSIDE AND OUTSIDE FACE OF THE STRUCTURE. THE EPOXY SEALER SHALL BE EUCOPOXY LPI. MV MATERIAL SUPPLIED BY THE EUCO CHEMICAL COMPANY OR EQUAL AS PER NDOT 2007 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION 912.02.

- LEGEND**
- PROPOSED GRASS SWALE
 - SPRING PIPE



MICHAEL J. HUBSCHMAN P.E., P.P.
PROFESSIONAL ENGINEER AND PLANNER
N.J.P.E. NO. 29493
N.J.P.P. NO. 3200
5-22-19
DATE

4.	ENGINEER'S COMMENTS DATED: 2-24-20 & 3-12-20	4-30-20	NM	M.J.H.
3.	BCSD LETTER DATED 7-29-19	10-7-19	B.W.	M.J.H.
2.	BCSD COMMENTS ON 9-18-19	9-24-19	NM	M.J.H.
1.	FOR BCSD SUBMITTAL	9-4-19	NM	M.J.H.
NO.	REVISIONS	DATE	BY	CHKD

GRADING, DRAINAGE & UTILITY PLAN

LOTS 6.01, 6.02 & 6.03 BLOCK 43

AMENDED PRELIMINARY & FINAL SITE PLAN
PROPOSED 7 TOWNHOUSES

BOROUGH OF ALPINE BERGEN COUNTY NEW JERSEY

APPLICANT/OWNER: ALPINE THREE L.L.C.
P.O. BOX 835
ALPINE, N.J. 07620

HUBSCHMAN ENGINEERING P.A.

ENGINEERS - PLANNERS - SURVEYORS
263A S. WASHINGTON AVE., BERGENFIELD, NJ 07621
201-384-5666

DRAWN BY: B.W.

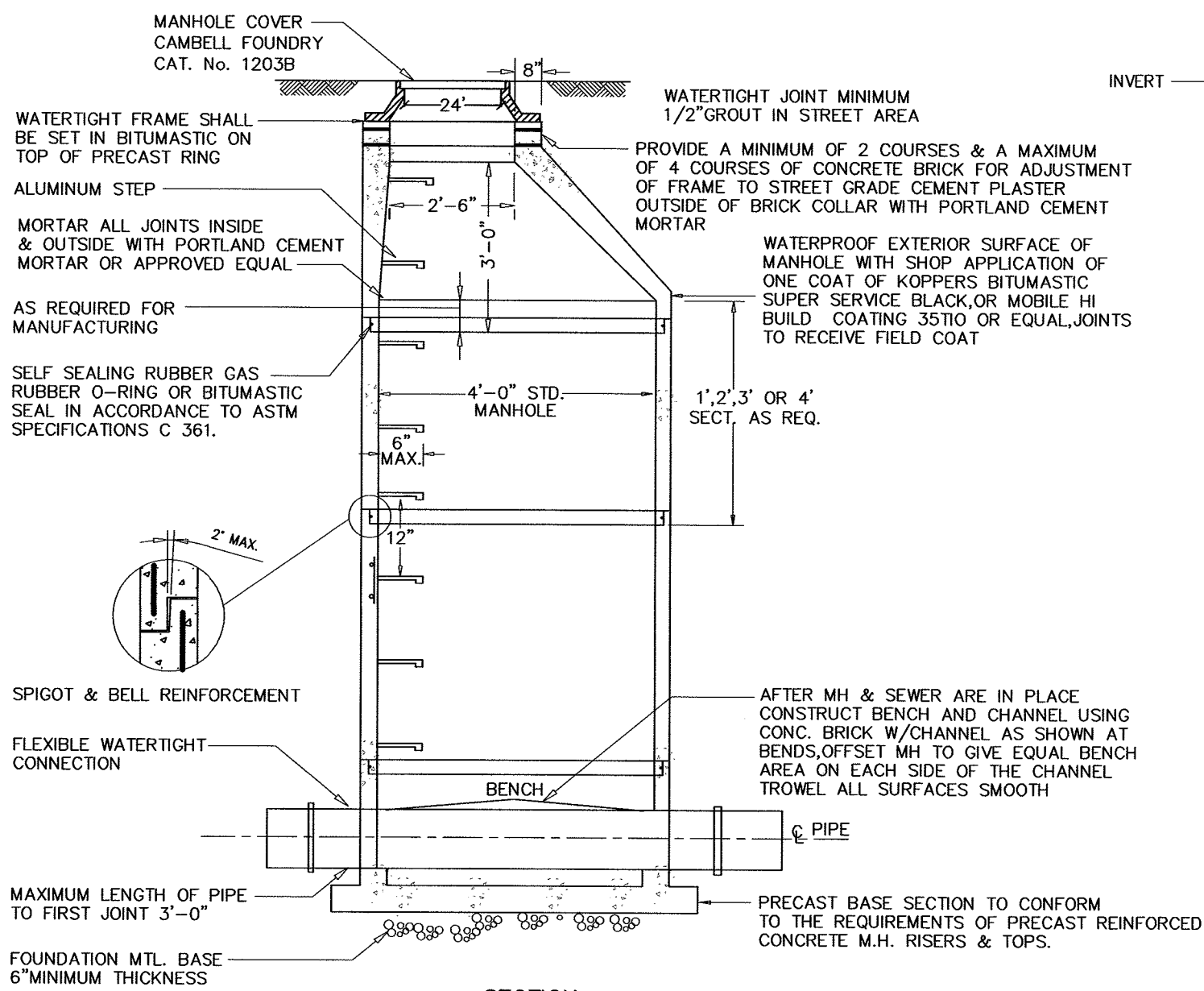
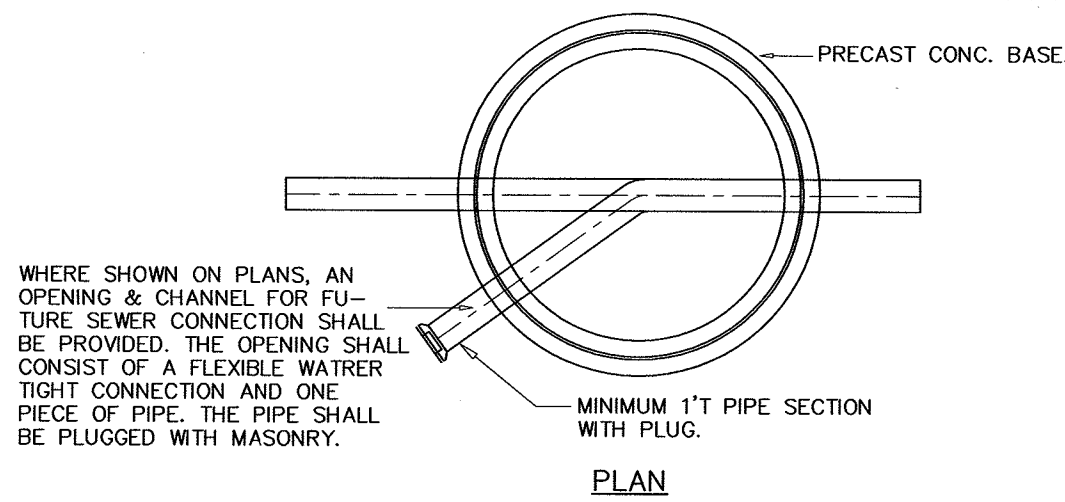
CHKD BY: M.J.H.

SCALE: 1"=20'

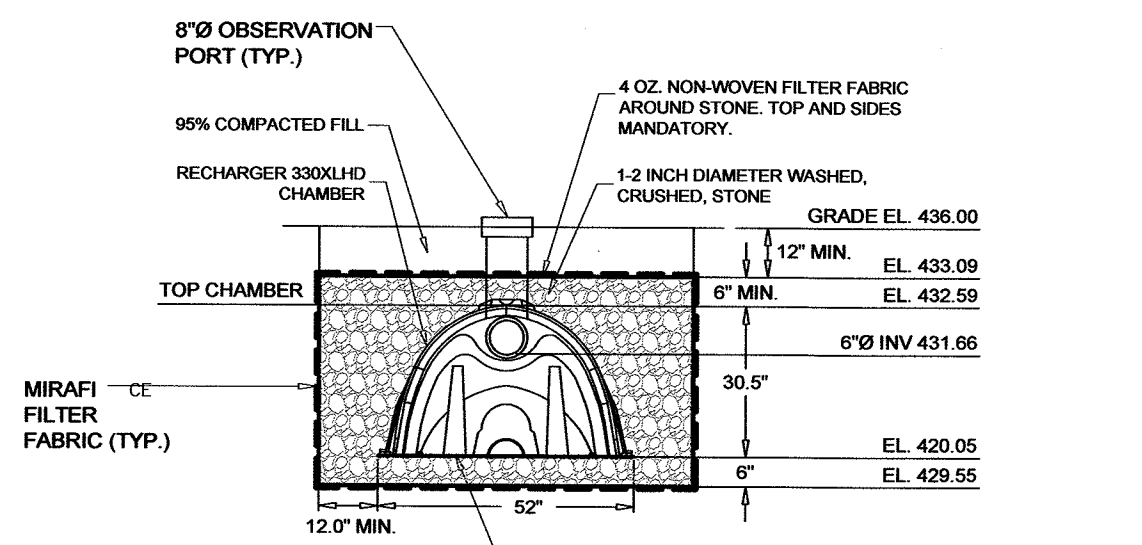
DRAWING NO. 495-42

REV. 5

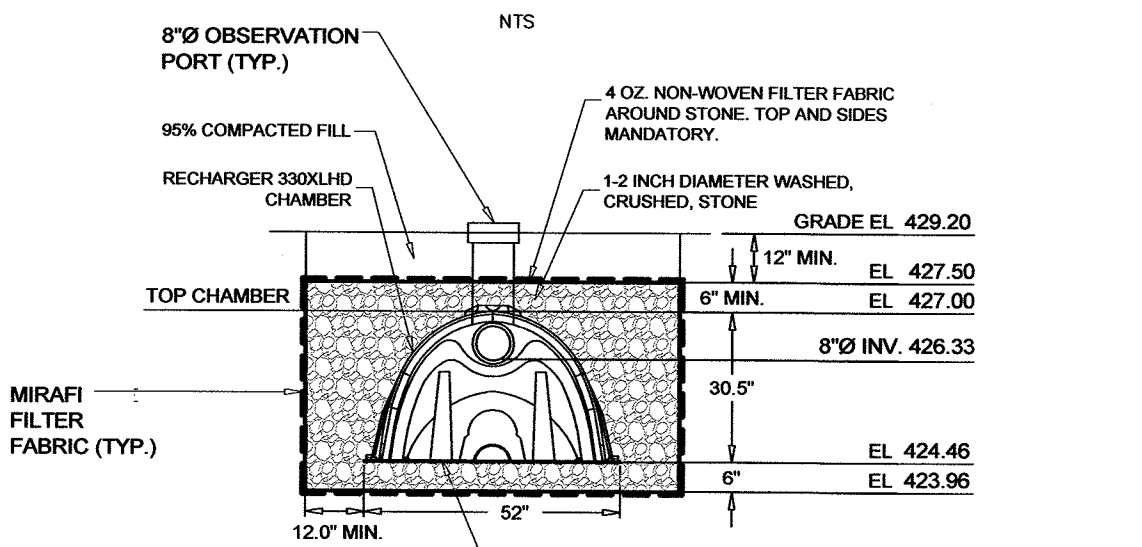
3 of 11



SECTION
SANITARY MANHOLE DETAIL
NTS



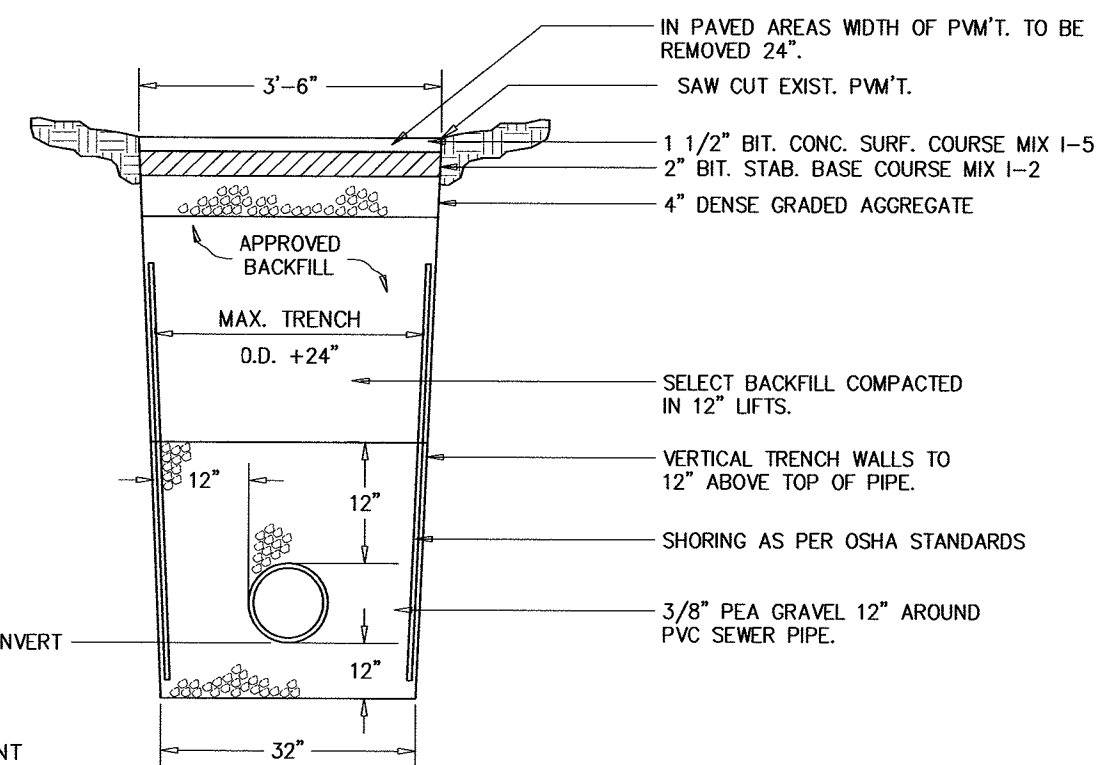
SECTION CULTEC CHAMBER BMP A
NTS



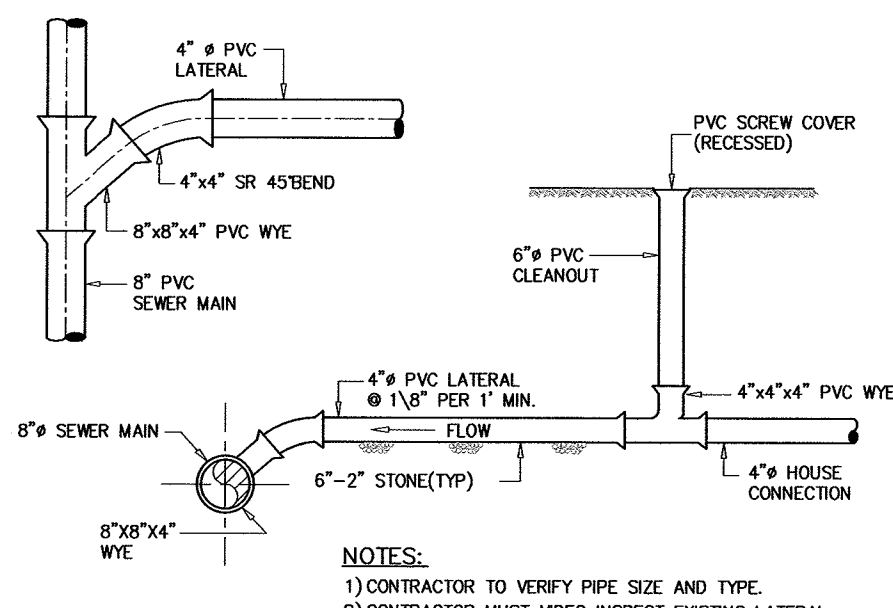
SECTION CULTEC CHAMBER BMP B
NTS

MAINTENANCE NOTES FOR STORMWATER SYSTEM

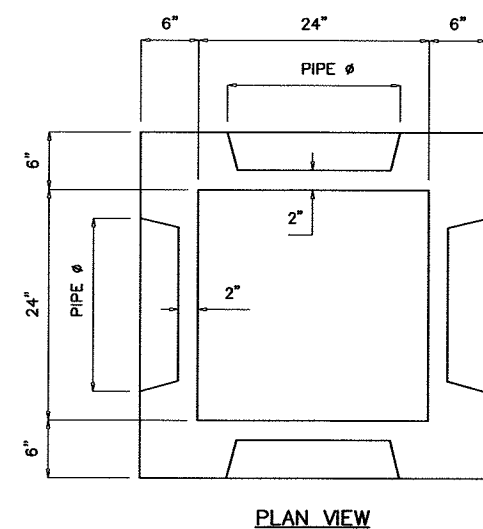
1. IT IS THE RESPONSIBILITY OF THE HOMEOWNER ASSOC. TO MAINTAIN THE DRAINAGE SYSTEM TO INSURE ITS PROPER OPERATION.
2. THE INLETS SHOULD BE CLEANED REGULARLY AFTER EACH MAJOR STORM EVENT. THE CHAMBERS SHOULD BE INSPECTED AT A MINIMUM OF ONCE PER YEAR.
3. THE BOROUGH ENGINEER'S OFFICE SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION OF THE CHAMBER IN ORDER TO PROVIDE AN OBSERVER DURING EXCAVATION.
4. SEE DETAILED MAINTENANCE PLAN FOR APPROVED MAINTENANCE INFORMATION.



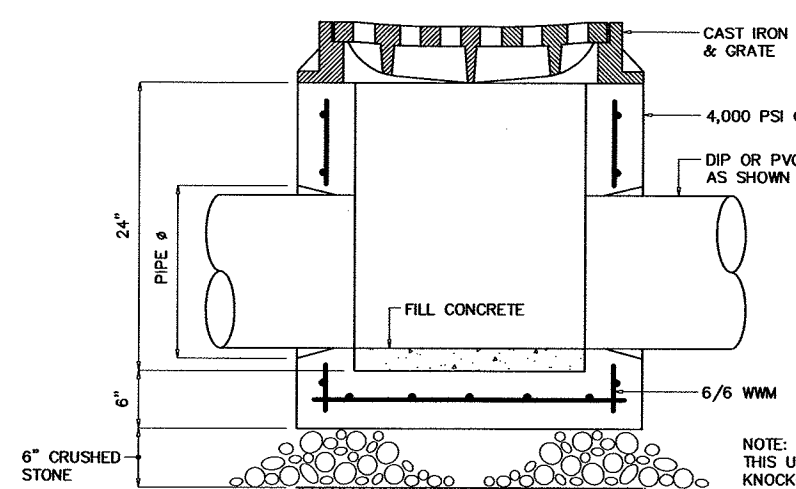
TRENCH DETAIL
NTS



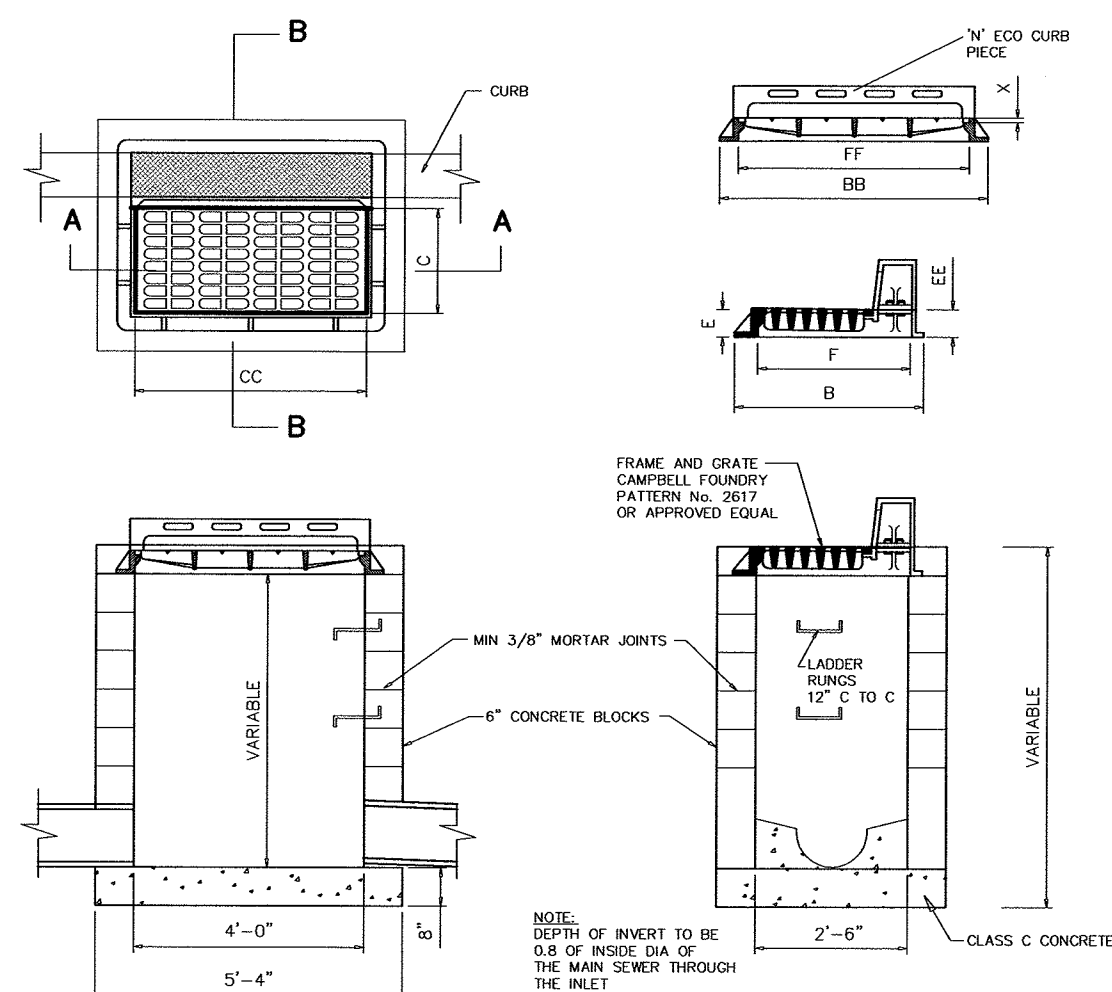
SEWER LATERAL AND CLEANOUT DETAIL
NTS



PLAN VIEW



SECTION
24\"/>

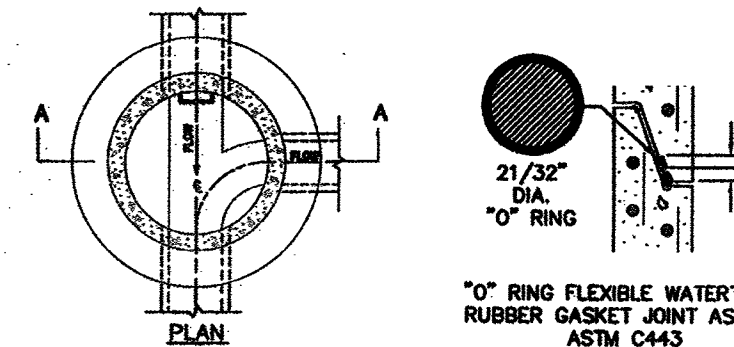


PATTERN NUMBER	DIMENSIONS IN INCHES									
	B	BB	C	CC	E	F	FF	X		
2617	36	54	21 3/4	47 3/4	5 1/2	4	30	48	1 1/4	

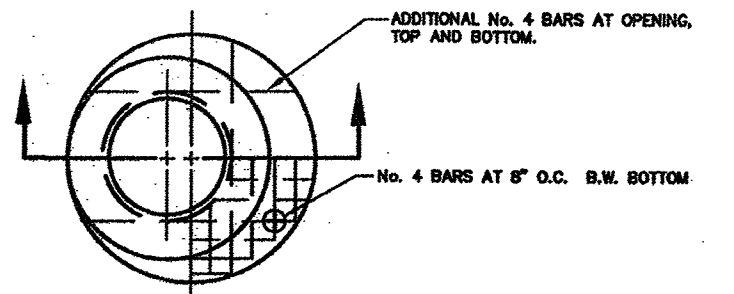
TYPE \"/>

NOTES:

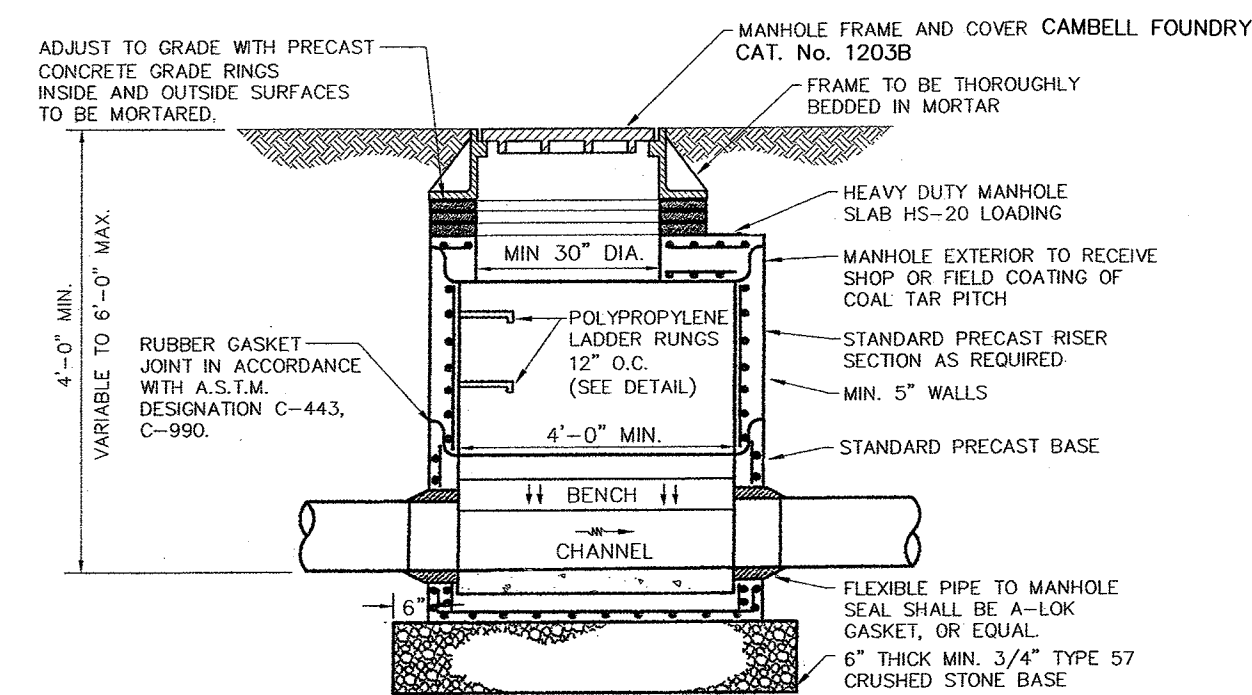
1. THIS MANHOLE MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2\"/>



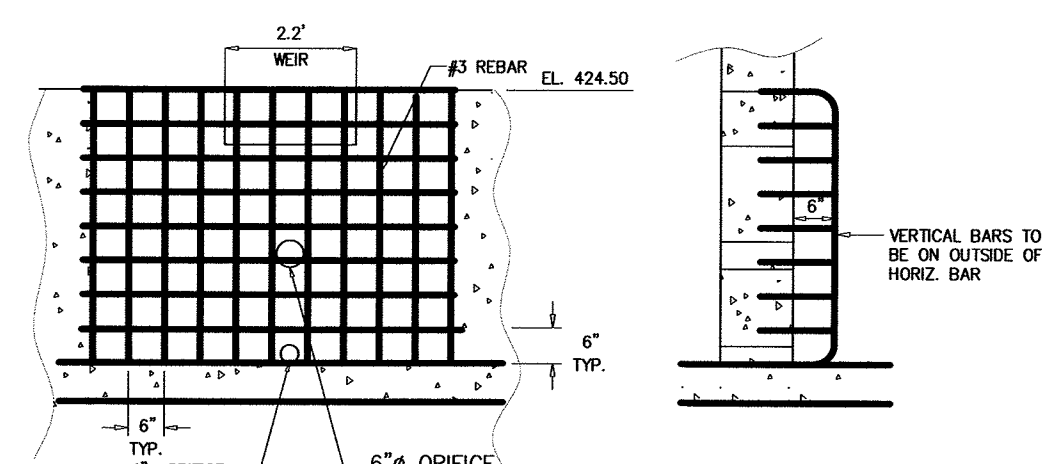
PLAN



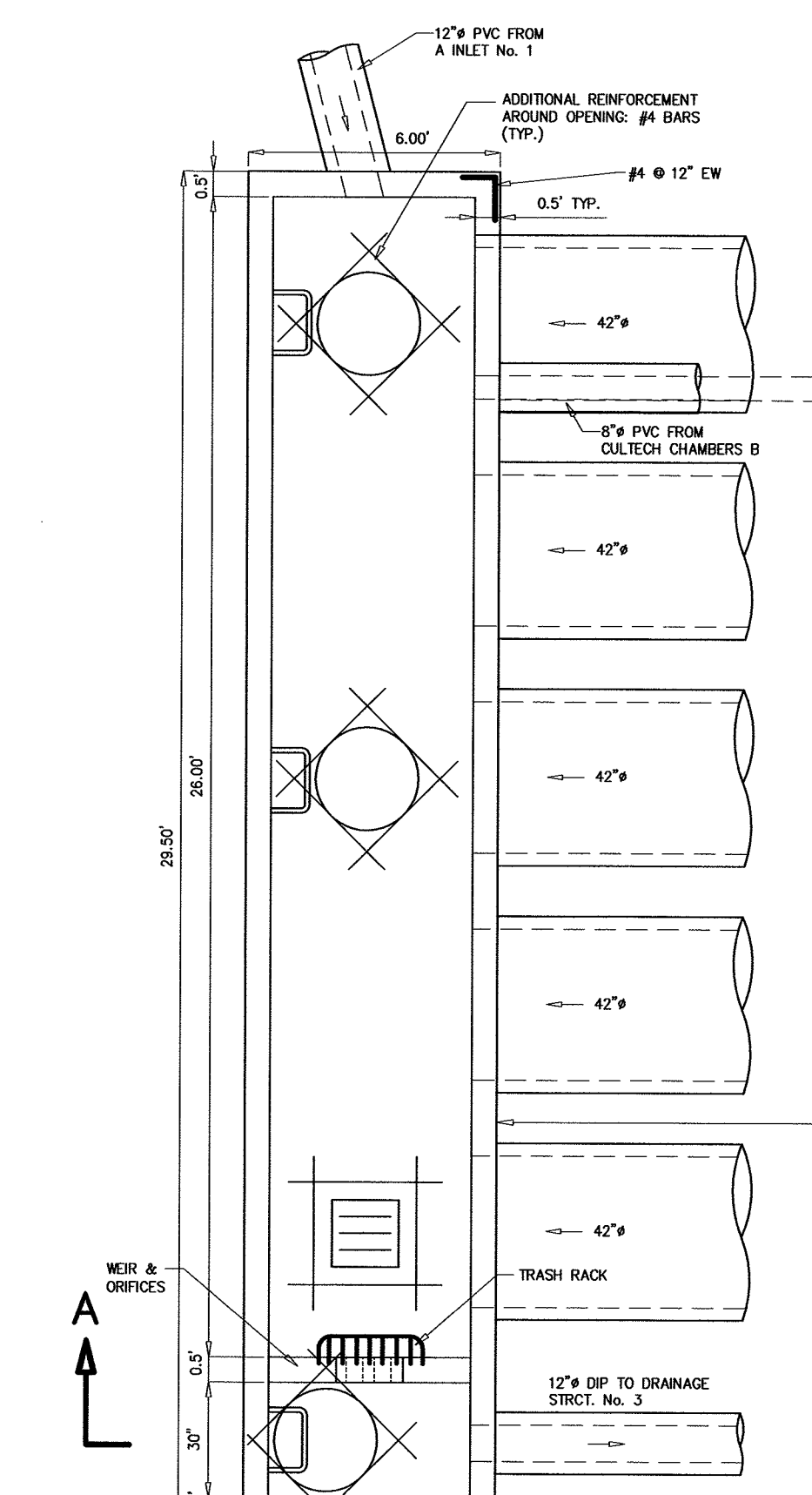
SECTION



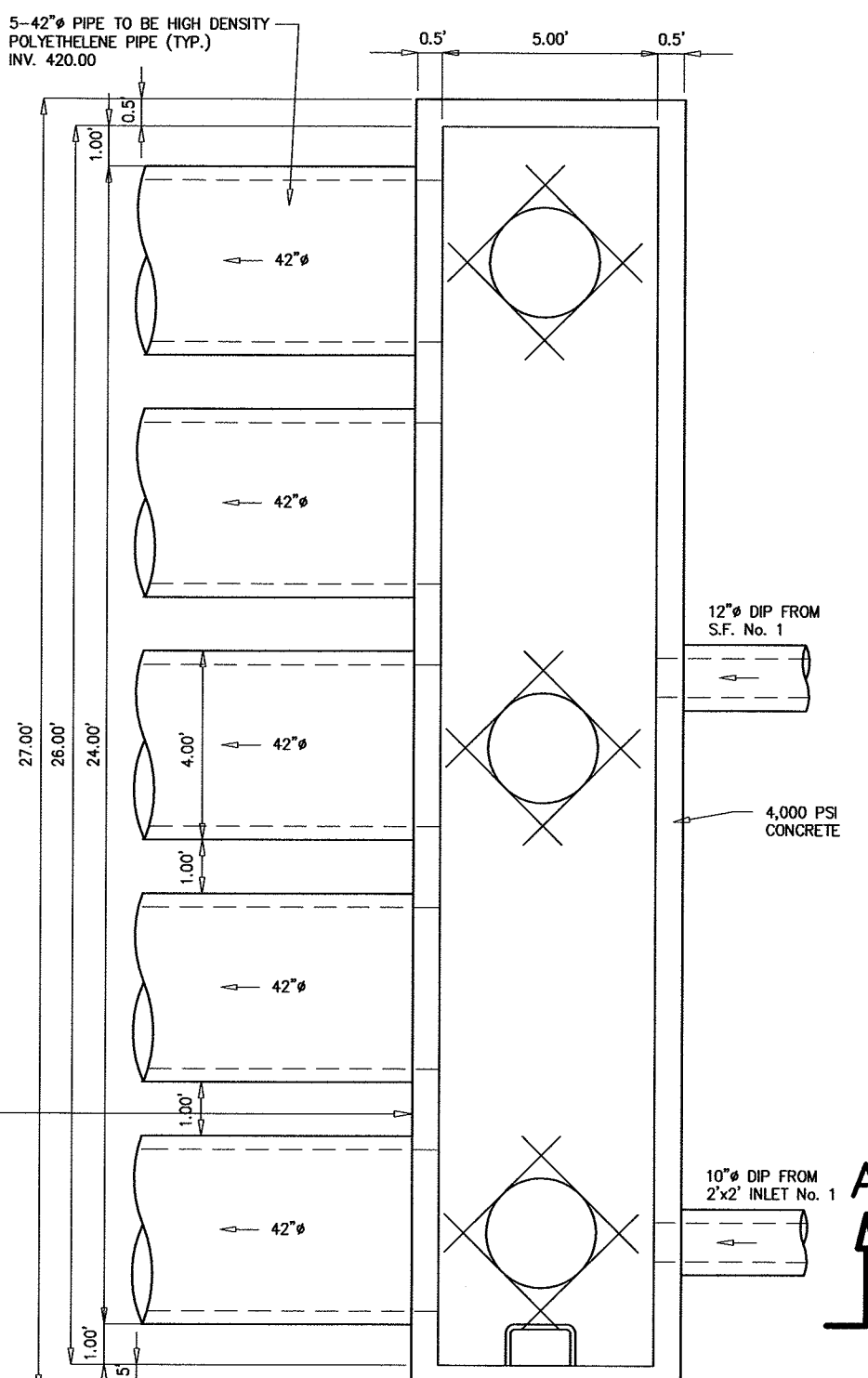
SHALLOW DRAINAGE MANHOLE DETAIL
NTS



TRASH RACK DETAIL

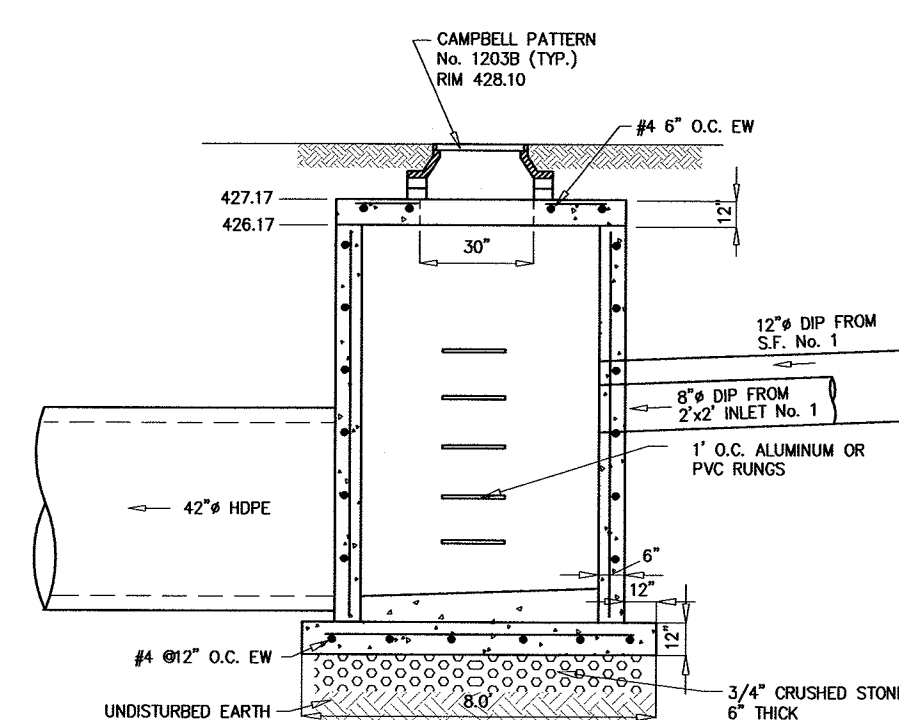


STRUCTURE No. 2



STRUCTURE No. 1

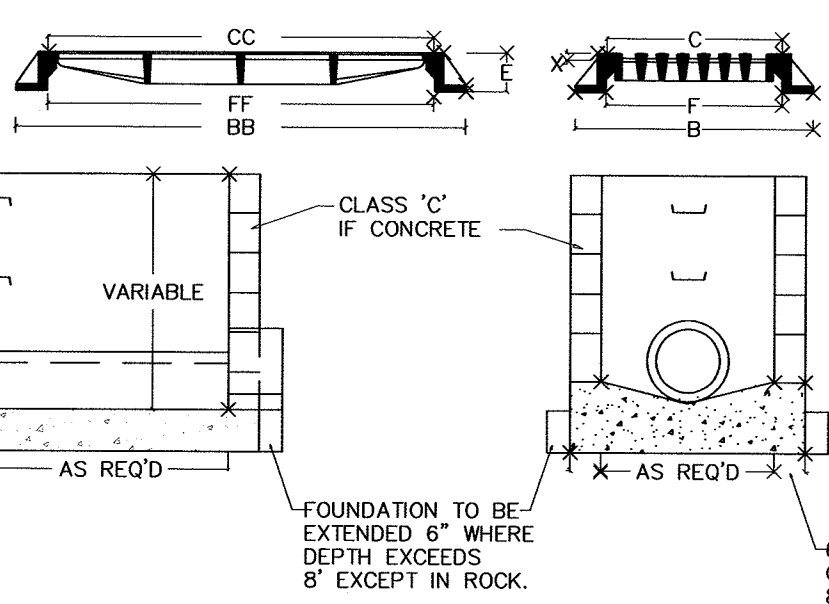
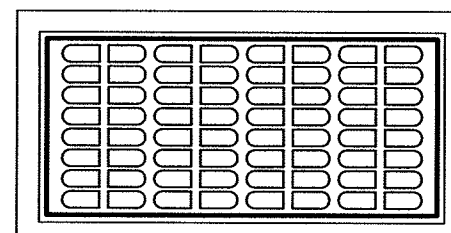
SECTION A-A
DETENTION SYSTEM DETAIL
(SEE ADDITIONAL DETAIL SHEET 495-45
NTS)



VALVE BOX DETAIL
NTS

VALVE BOX NOTES:

- 1) VALVE BOX DETAIL PER CAMBELL FOUNDRY COMPANY, PATTERN No. 4425 OR APPROVED EQUAL.



TYPE \"/>

PATTERN NUMBER	DIMENSIONS IN INCHES									
	B	BB	C	CC	E	F	FF	X		
3407	32	54	25 3/4	47 3/4	5	26	48	1 1/4		

USE CAMBELL PATTERN 3407 EXCEPT AS NOTED.

MICHAEL J. HUBSCHMAN P.E., P.P.
PROFESSIONAL ENGINEER AND PLANNER
N.J.P.E. No. 29497 N.J.P.P. No. 3200

5-22-19
DATE

1.	ENGINEER'S COMMENTS DATED: 2-24-20 & 3-12-20	4-30-20	NM	M.H.
NO.	REVISIONS	DATE	BY	CHKD

DETAILS

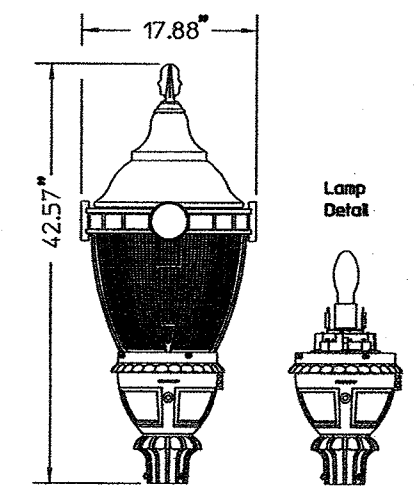
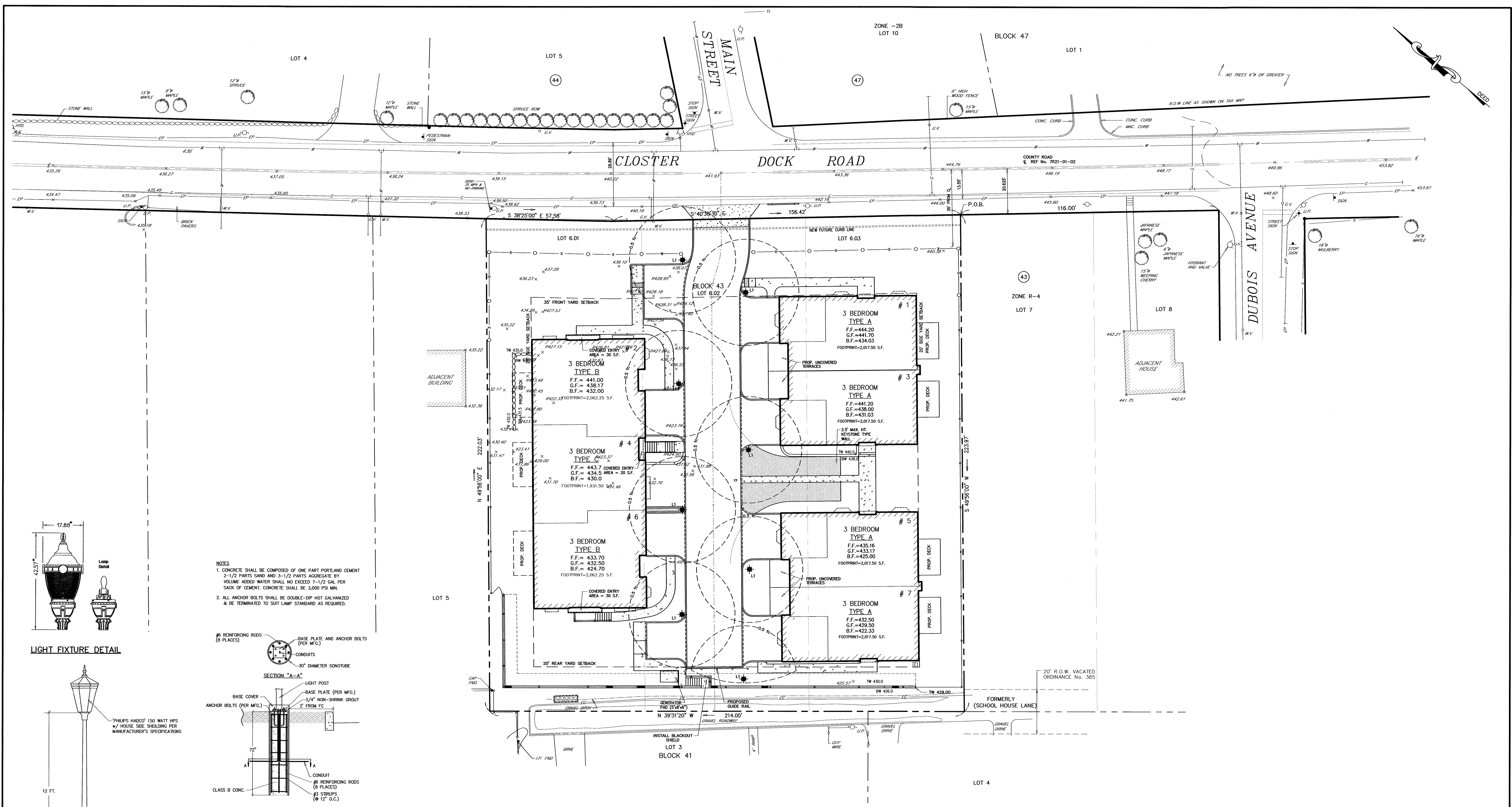
LOTS 6.01, 6.02 & 6.03 BLOCK 43
AMENDED PRELIMINARY & FINAL SITE PLAN
PROPOSED 7 TOWNHOUSES
BOROUGH OF ALPINE BERGEN COUNTY NEW JERSEY
APPLICANT/OWNER: ALPINE THREE L.L.C.
P.O. BOX 835
ALPINE, N.J. 07620

HUBSCHMAN ENGINEERING P.A.
ENGINEERS PLANNERS - SURVEYORS
263A S. WASHINGTON AVE. BERGENFIELD, NJ 07621
201-384-5666

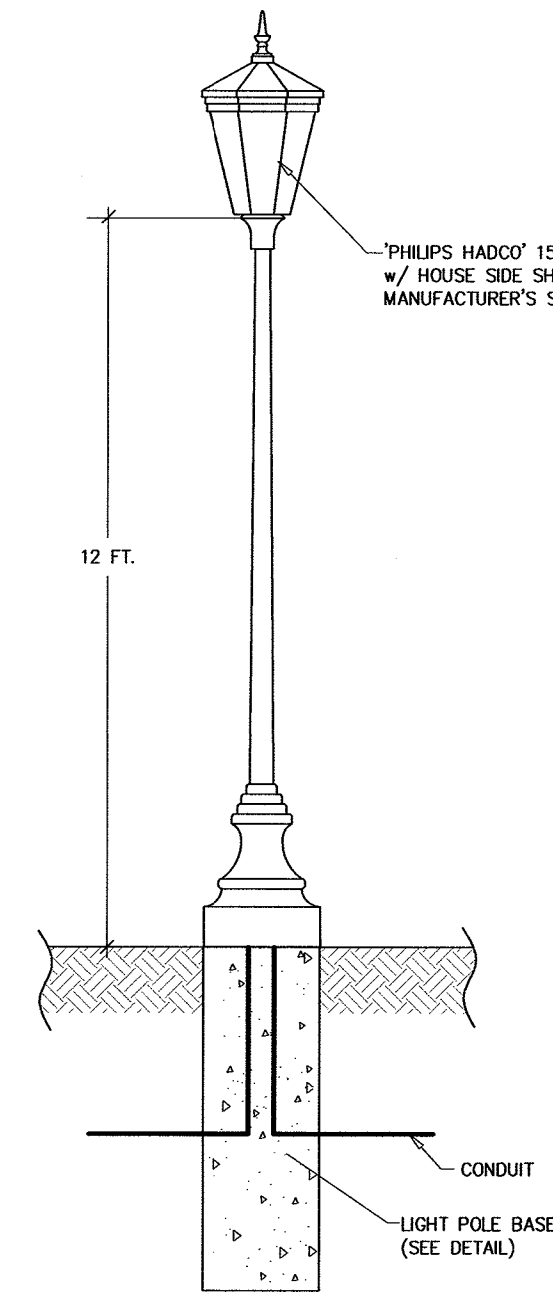
DRAWN BY: B.W.
CHKD BY: M.H.
SCALE: AS SHOWN
DRAWING NO. 495-43
REV. 1

APPROVED BY THE
COUNTY PLANNING BOARD
COUNTY OF BERGEN, NEW JERSEY

ATTESTED TO BY: DATE:

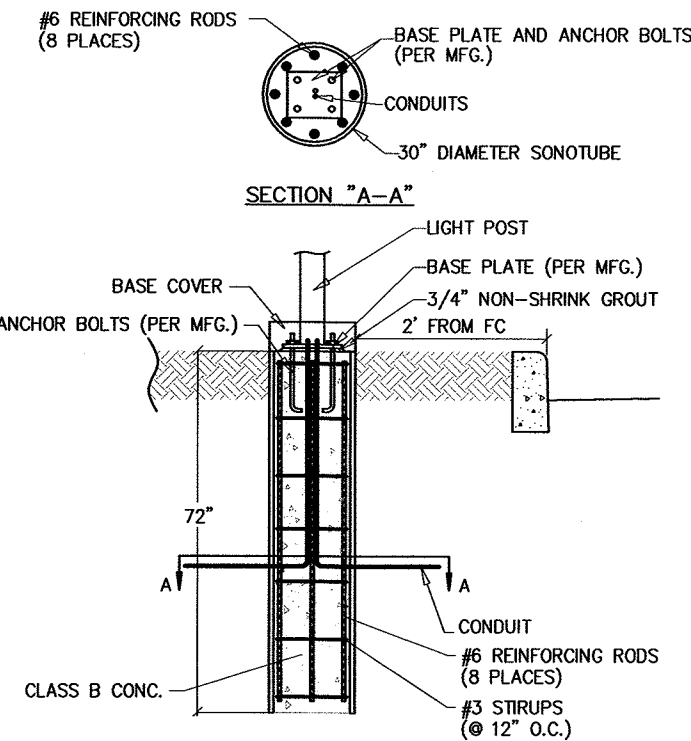


LIGHT FIXTURE DETAIL



LIGHT POLE DETAIL
(FOR ON SITE LIGHTS)

- NOTES
- CONCRETE SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT 2-1/2 PARTS SAND AND 5-1/2 PARTS AGGREGATE BY VOLUME. ADDED WATER SHALL NOT EXCEED 7-1/2 GAL PER SACK OF CEMENT. CONCRETE SHALL BE 3,000 PSI MIN.
 - ALL ANCHOR BOLTS SHALL BE DOUBLE-DIP HOT GALVANIZED & BE TERMINATED TO SUIT LAMP STANDARD AS REQUIRED.



LIGHT POLE BASE

Luminaire Schedule				
Symbol	Qty	Arrangement	Lumens	LLF
☼ A	8	SINGLE	9500	0.80
Philips HADCO 150W HPS Type 5 Luminaire Mounted on 12' Pole, Cat. No. RS2-1554WS				

NO.				REVISIONS				DATE				BY				CHKD			
LIGHTING PLAN																			
LOTS 6.01, 6.02 & 6.03 AMENDED PRELIMINARY & FINAL SITE PLAN PROPOSED 7 TOWNHOUSES																			
BOROUGH OF ALPINE BERGEN COUNTY NEW JERSEY APPLICANT/OWNER: ALPINE THREE L.L.C. P.O. BOX 835 ALPINE, N.J. 07620																			
MICHAEL J. HUBSCHMAN P.E., P.P. PROFESSIONAL ENGINEER AND PLANNER N.J.P.E. NO. 29497 N.J.P.P. NO. 3200												DRAWN BY: B.W. CHKD BY: MJH SCALE: AS SHOWN DRAWING NO. 495-46 REV. 7 OF 11							
HUBSCHMAN ENGINEERING, P.A. ENGINEERS - PLANNERS - SURVEYORS 263A S. WASHINGTON AVE., BERGENFIELD, NJ 07621 201-384-5666																			

BERGEN COUNTY SOIL CONSERVATION DISTRICT
SOIL EROSION AND SEDIMENT CONTROL NOTES

- All soil erosion and sediment control practices will be installed in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey (NJ Standards), and will be installed in proper sequence and maintained until permanent stabilization is established.
- Any disturbed area that will be left exposed for more than thirty (30) days and not subject to construction traffic shall immediately receive a temporary seeding and mulching. If the season prohibits temporary seeding, the disturbed area will be mulched with unrotted straw at a rate of 2 tons per acre anchored by approved methods (i.e. peg and twine, mulch netting, or liquid mulch binder).
- Immediately following initial disturbance or rough grading, all critical areas subject to erosion will receive a temporary seeding in combination with straw mulch or a suitable equivalent, at a rate of 2 tons per acre, according to the NJ Standards.
- Stabilization Specifications:**
 - Temporary Seeding and Mulching:**

Ground Limestone – Applied uniformly according to soil test recommendations.
Fertilizer – Apply 11 lbs./1,000 sf of 10-20-10 or equivalent with 50% water insoluble nitrogen (unless a soil test indicates otherwise) worked into the soil a minimum of 4".
Seed – perennial ryegrass 100 lbs./acre (2.3 lbs./1,000 sf) or other approved seeds, plant between March 1 and May 15 or between August 15 and October 1.
Mulch – Unrotted straw or hay at a rate of 70 to 90 lbs./1,000 sf applied to achieve 95% soil surface coverage. Mulch shall be anchored by approved methods (i.e. peg and twine, mulch netting, or liquid mulch binder).
 - Permanent Seeding and Mulching:**

Topsoil – A uniform application to an average depth of 5", minimum of 4" firmed in place is required.
Ground Limestone – Applied uniformly according to soil test recommendations.
Fertilizer – Apply 11 lbs./1,000 sf of 10-20-10 or equivalent with 50% water insoluble nitrogen (unless a soil test indicates otherwise) worked into the soil a minimum of 4".
Seed – Turf type tall fescue (blend of 3 cultivars) 350 lbs./acre (8 lbs./1,000 sf) or other approved seeds, plant between March 1 and October 1 (summer seeding require irrigation).
Mulch – Unrotted straw or hay at a rate of 70 to 90 lbs./1,000 sf applied to achieve 95% soil surface coverage. Mulch shall be anchored by approved methods (i.e. peg and twine, mulch netting, or liquid mulch binder).
- The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
- Soil erosion and sediment control measures will be inspected and maintained on a regular basis, including after every storm event.
- Stockpiles are not to be located within 50' of a floodplain, slope, roadway or drainage facility. The base of all stockpiles shall be contained by a hay bale sediment barrier or silt fence.
- A crushed stone, vehicle-cleaning blanket will be installed wherever a construction access road intersects any paved roadway. Said blanket will be composed of 1" – 2 1/2" crushed stone, 6" thick, will be at least 30' x 100' and should be underlain with a suitable synthetic sediment filter fabric and maintained.
- Maximum side slopes of all exposed surfaces shall not exceed 3:1 unless otherwise approved by the District.
- Driveways must be stabilized with 1" – 2 1/2" crushed stone or subbase prior to individual lot construction.
- All soil washed, dropped, spilled or tracked outside the limit of disturbance or onto public right-of-ways, will be removed immediately. Paved roadways must be kept clean at all times.
- Catch basin inlets will be protected with an inlet filter designed in accordance with Section 28 -1 of the NJ Standards.
- Storm drainage outlets will be stabilized, as required, before the discharge points become operational.
- Dewatering operations must discharge directly into a sediment control bay or other approved filter in accordance with Section 14-1 of the NJ Standards.
- Dust shall be controlled via the application of water, calcium chloride or other approved method in accordance with Section 16-1 of the NJ Standards.
- Trees to remain after construction are to be protected with a suitable fence installed at the drip line or beyond in accordance with Section 9-1 of the NJ Standards.
- The project owner shall be responsible for any erosion or sedimentation that may occur below stormwater outfalls or off-site as a result of construction of the project.
- Any revision to the certified Soil Erosion and Sediment Control Plan must be submitted to the District for review and approval prior to implementation in the field.
- A copy of the certified Soil Erosion and Sediment Control Plan must be available at the project site throughout construction.
- The Bergen County Soil Conservation District must be notified, in writing, at least 48 hours prior to any land disturbance. Bergen County SO3, 700 Kinderkamack Road, Suite 106, Oradell, NJ 07646. Tel: 201-261-4407; Fax 201-261-7515.
- The Bergen County Soil Conservation District may request additional measures to minimize on or off-site erosion problems during construction.
- The owner must obtain a District issued report of compliance prior to the issuance of any certificate of occupancy. The District requires at least one week's notice to facilitate the scheduling of all report of compliance inspections. All site work must be completed, including temporary/permanent stabilization of all exposed areas, prior to the issuance of a report of compliance by the District.

SOIL DE-COMPACTION AND TESTING REQUIREMENTS

- Subgrade soils prior to the application of topsoil (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.
- Areas of the site which are subject to compaction testing and/or mitigation are graphically denoted on the certified soil erosion control plan.
- Compaction testing locations are denoted on the plan. A copy of the plan or portion of the plan shall be used to mark locations of tests, and attached to the compaction mitigation verification form, available from the local soil conservation district. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.
- In the event that testing indicates compaction in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the option to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

Compaction Testing Methods

- Probing Wire Test (see detail)
- Hand-held Penetrometer Test (see detail)
- Tube Bulk Density Test (licensed professional engineer required)
- Nuclear Density Test (licensed professional engineer required)

Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to district approval.

Soil compaction testing is not required if/when subsoil compaction remediation (scarification/tillage (6" minimum depth) or similar) is proposed as part of the sequence of construction.

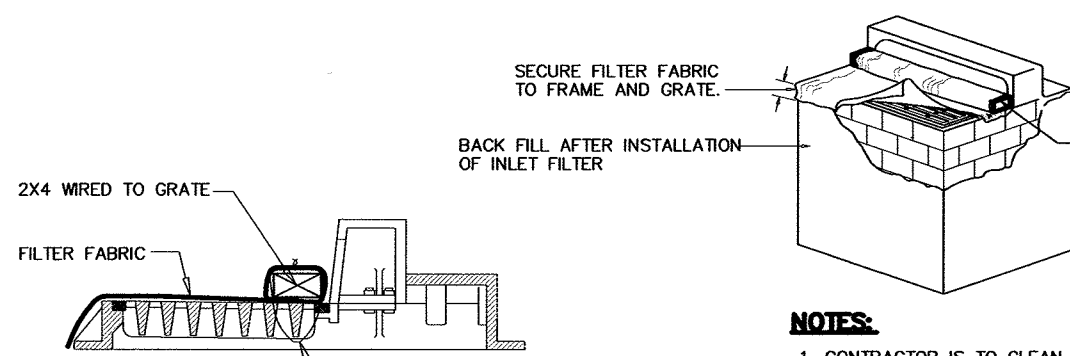
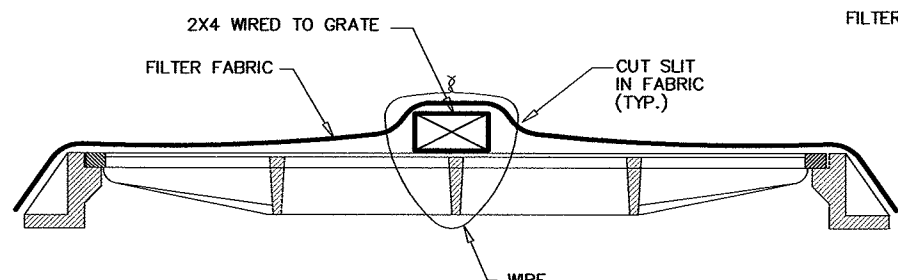
Procedures For Soil Compaction Mitigation

Procedures shall be used to mitigate excessive soil compaction prior to placement of topsoil and establishment of permanent vegetative cover.

Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer may be substituted subject to district approval.

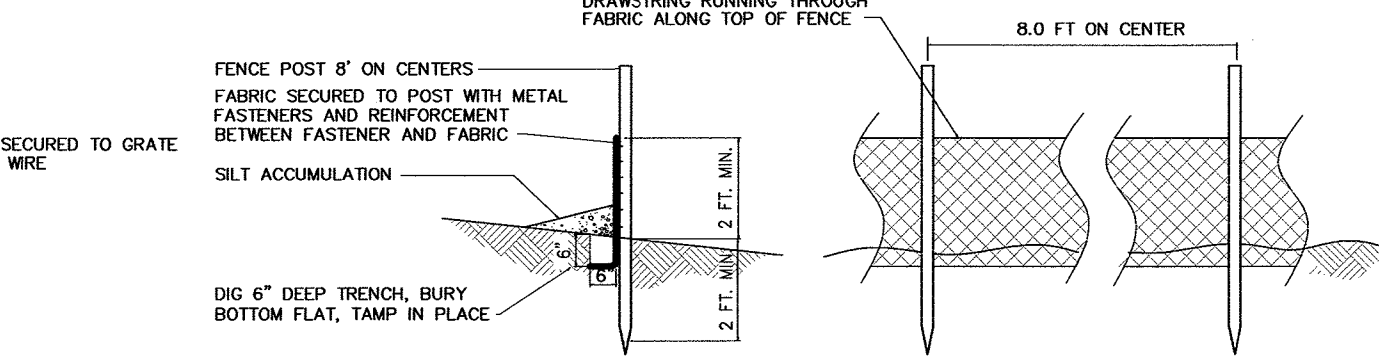
SEQUENCE OF CONSTRUCTION

- INSTALL 25'X50' TRACKING BED AT CONSTRUCTION ENTRANCE
- INSTALL SILT FENCE ALONG PROPERTY SUBJECT TO SOIL EROSION ACCORDING TO PLAN
- INSTALL INLET FILTER PROTECTION WHERE APPLICABLE.
- DEMOLISH EXISTING DWELLING.
- REMOVE TOPSOIL AND STOCKPILE.
- PROVIDE ROUGH GRADING FOR SITE.
- CONDUCT SOIL COMPACTION TESTING AND REMEDIATE SUBSOIL (SCARIFICATION/TILLAGE TO A MINIMUM DEPTH OF 6") AS NECESSARY.
- EXCAVATE FOR NEW BUILDING, DRIVEWAY, AND UTILITIES.
- CONSTRUCT NEW BUILDING, PROVIDE PAVEMENT BASE COURSE ON DRIVEWAY.
- PROVIDE FINAL GRADING, TOPSOIL REPLACEMENT, AND LANDSCAPING. (UNIFORMLY APPLY TOPSOIL TO AN AVERAGE DEPTH OF 5", MINIMUM OF 4" FIRMED IN PLACE.)
- PROVIDE FINAL PAVING.
- REMOVE SOIL EROSION CONTROL DEVICES AS DIRECTED BY LOCAL SERVICE.

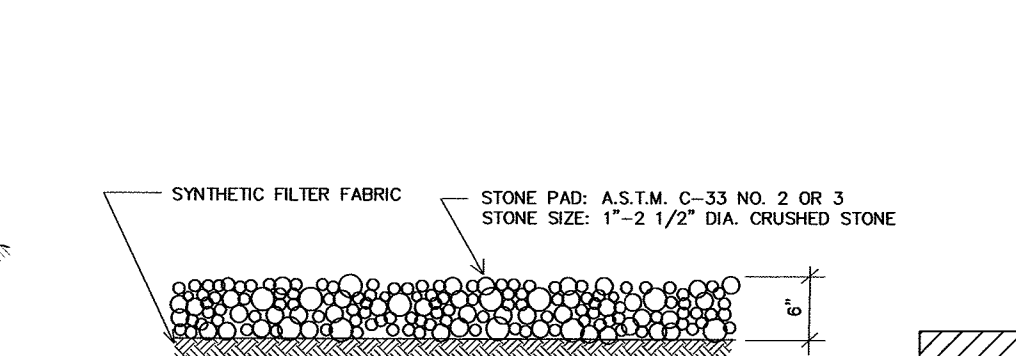


STORM SEWER INLET PROTECTION
NTS
SHOWN

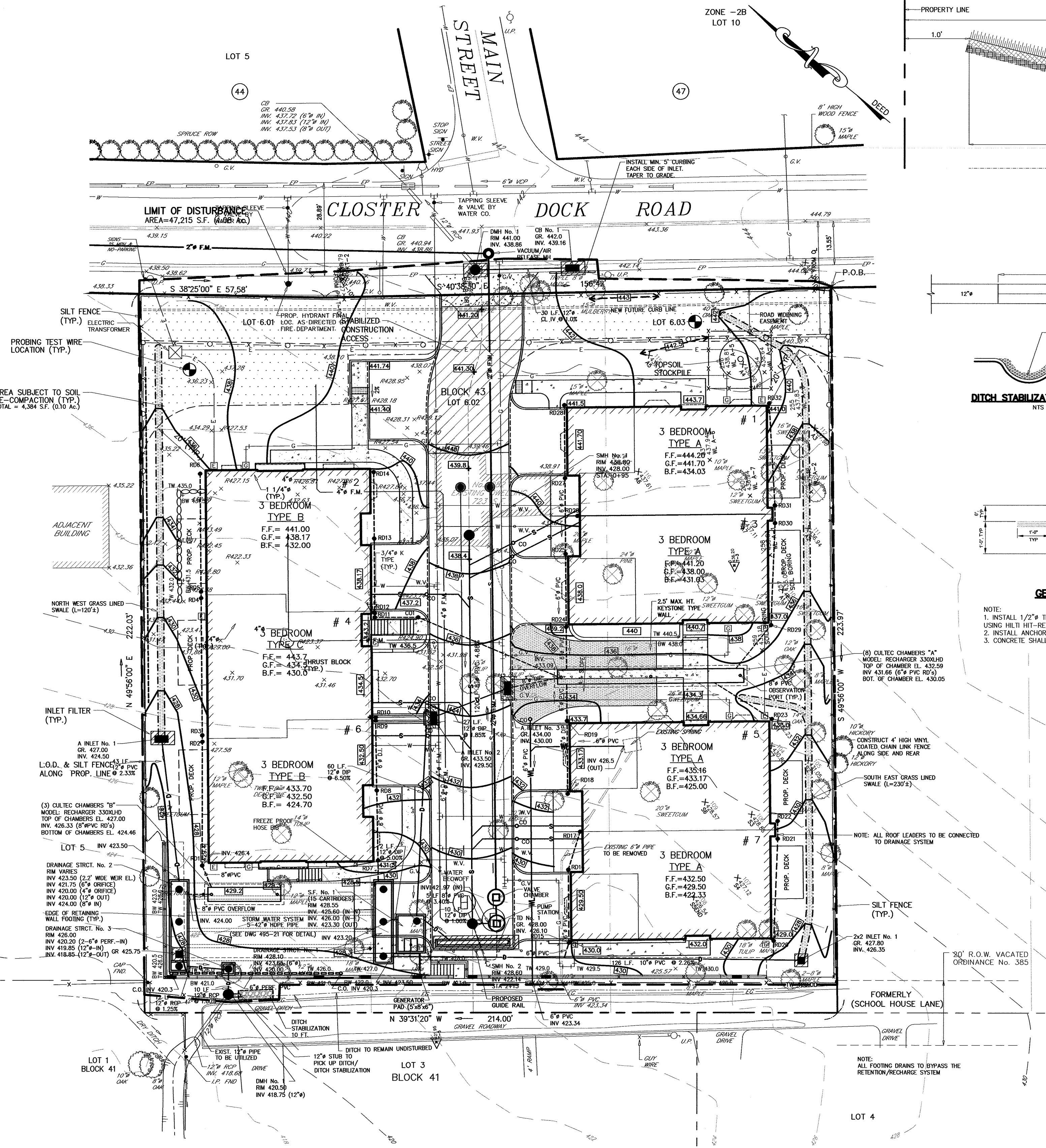
- NOTES:
- CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
 - CONTRACTOR TO REMOVE FABRIC PRIOR TO PAVING.
 - FILTER WILL COMPLETELY PASS FLOWS GREATER THAN 1 YEAR 24 HR STORM.



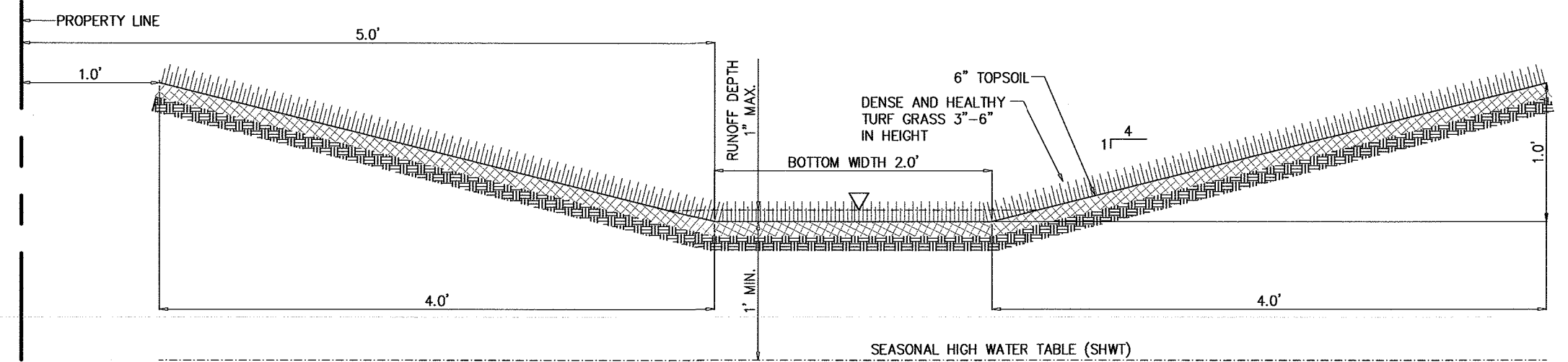
SILT FENCE CONSTRUCTION AND INSTALLATION DETAIL
NTS
SHOWN



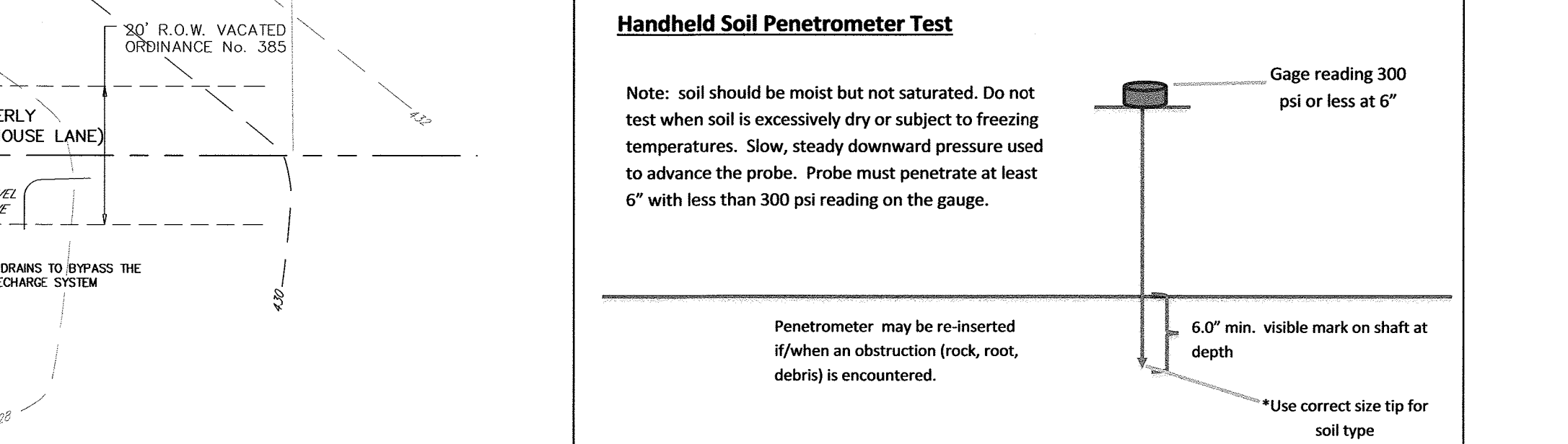
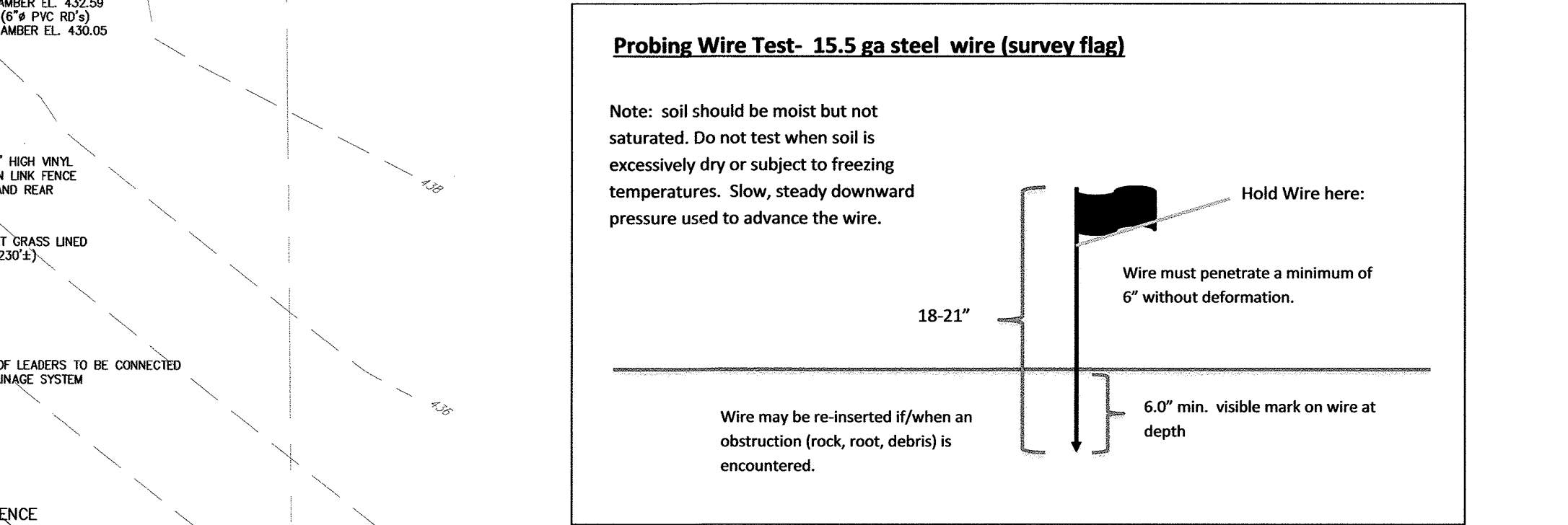
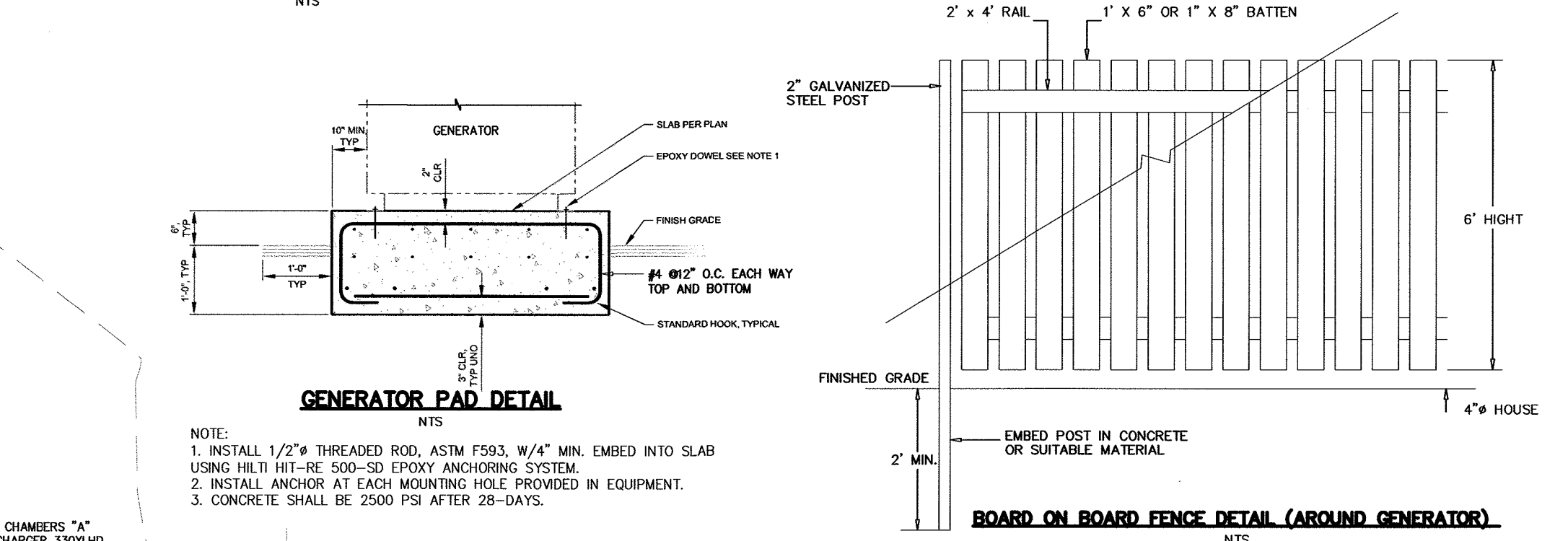
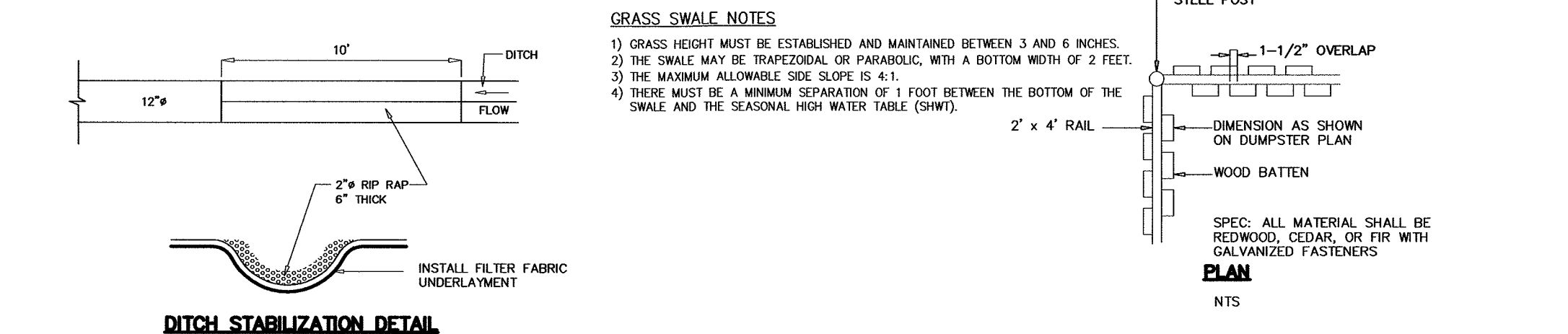
STABILIZED CONSTRUCTION ACCESS
NTS
SHOWN



- LEGEND
- AREA SUBJECT TO SOIL DE-COMPACTION
 - PROBING WIRE TEST LOCATION
NOTE: 2 TESTS PER ACRE MINIMUM
2 TESTS PER PROJECT WHEN AREA < 1 AC.



GRASS LINED SWALE DETAIL
SCALE: 1"=1'



NO.	REVISIONS	DATE	BY	CHKD
4.	ENGINEER'S COMMENTS DATED: 2-24-20 & 3-12-20	4-30-20	NM	M.J.H.
3.	BCSD LETTER DATED 7-29-19	10-7-19	B.W.	M.J.H.
2.	BCSD COMMENTS ON 9-18-19	9-24-19	NM	M.J.H.
1.	FOR BCSD SUBMITTAL	9-4-19	NM	M.J.H.

SOIL EROSION & SEDIMENT CONTROL PLAN

LOTS 6.01, 6.02 & 6.03 BLOCK 43

**AMENDED PRELIMINARY & FINAL SITE PLAN
PROPOSED 7 TOWNHOUSES**

BOROUGH OF ALPINE BERGEN COUNTY NEW JERSEY

APPLICANT/OWNER: ALPINE THREE LLC
P.O. BOX 835
ALPINE, N.J. 07620

MICHAEL J. HUBSCHMAN P.E., P.P.
PROFESSIONAL ENGINEER AND PLANNER
N.J.P.E. NO. 2949 N.J.P.P. NO. 3200

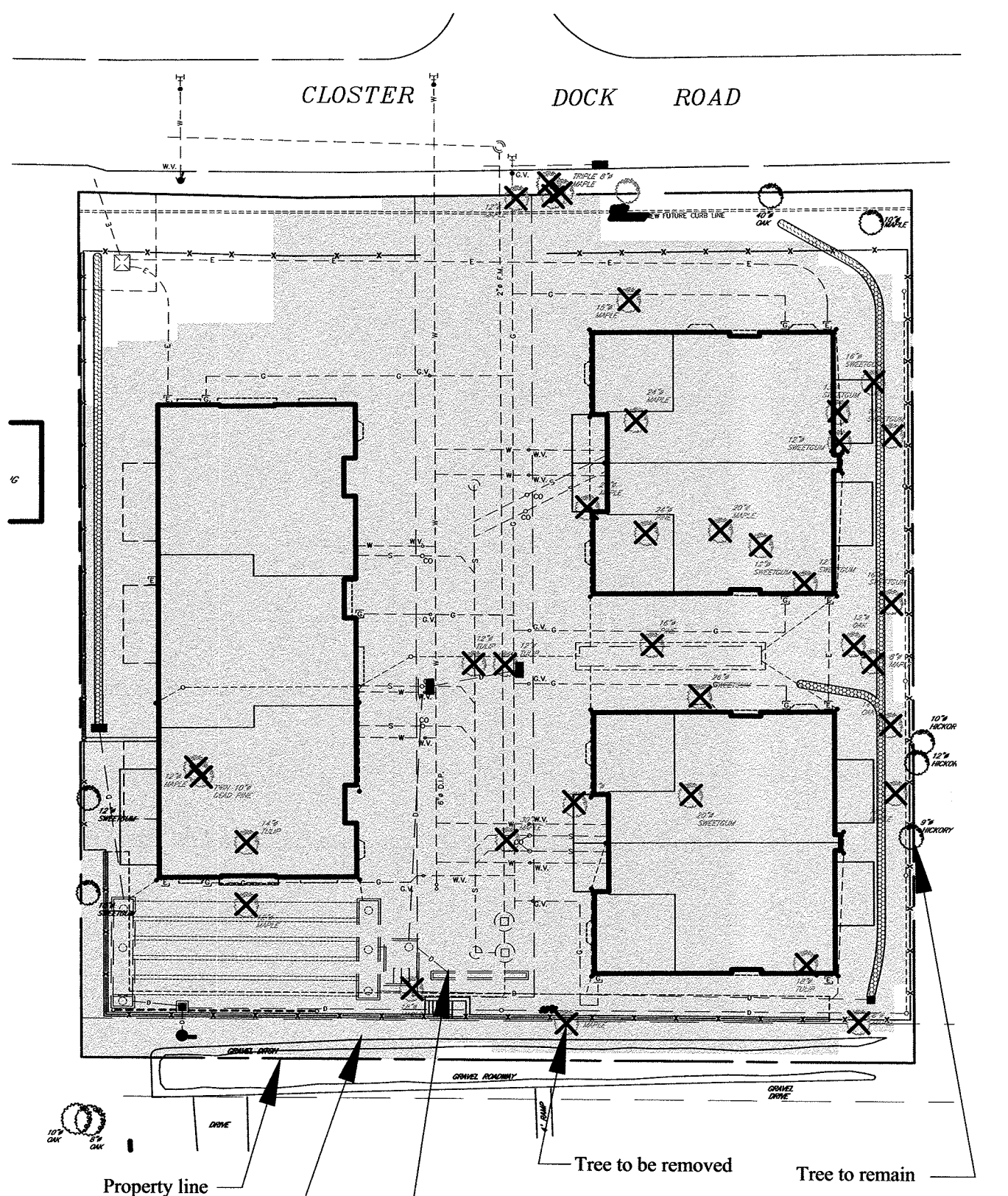
DRAWN BY: B.W.
CHKD BY: M.J.H.
SCALE: AS SHOWN
DRAWING NO. 495-47
REY. 4

263A S. WASHINGTON AVE., BERGENFIELD, NJ 07621
201-384-5666

5-22-19
DATE

TREE REMOVAL CALCULATIONS				
CALIPER OF TREE REMOVED (INCHES)	NUMBER OF TREES TO BE REMOVED	NUMBER OF TREES REQUIRED FOR REPLACEMENT	REQUIRED REPLACEMENT RATIO	TOTAL NUMBER OF TREES TO BE REPLACED
6 TO NO MORE THAN 12 *	23	0	2	0
12 TO NO MORE THAN 18	13	0	3	0
18 TO NO MORE THAN 30	8	0	4	0
30 OR GREATER	0	0	5	0
TOTAL *	44	0	N/A	0

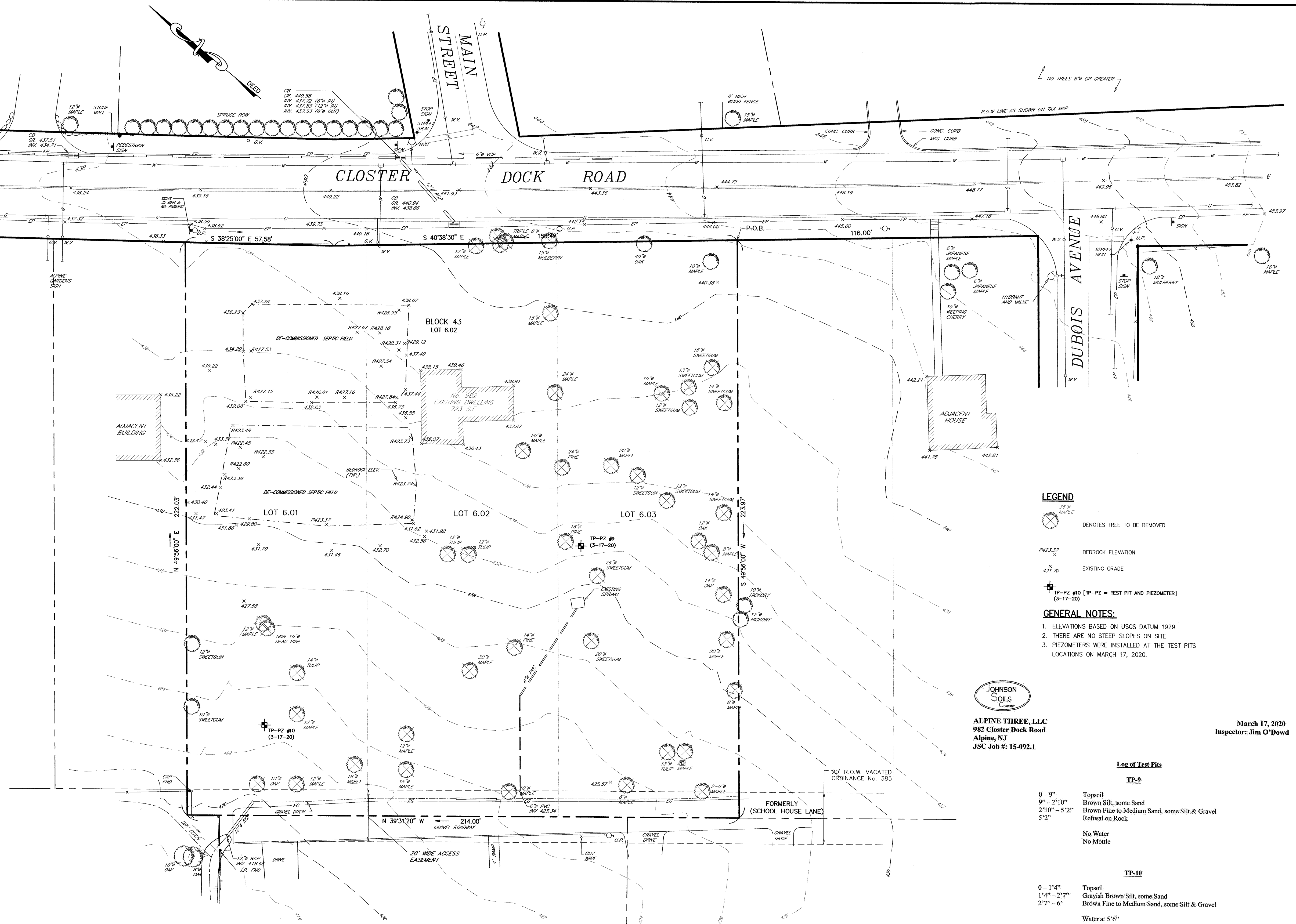
*INCLUDES ONE DEAD TREE



PROPOSED TOWNHOUSES
 LOTS 6.01, 6.02, 6.03
 BLOCK 43
 CLOSTER DOCK ROAD
 ALPINE, NJ

TREE REMOVAL STUDY 12/12/2019
 PREPARED BY B. MEUMANN, LLA

NOTE:
 TREES WITHIN SHADED ZONE ARE EXEMPT FROM REPLACEMENT.



- LEGEND**
- ⊗ DENOTES TREE TO BE REMOVED
 - ⊗ BEDROCK ELEVATION
 - ⊗ EXISTING GRADE
 - ⊗ TP-PZ #10 [TP-PZ = TEST PIT AND PIEZOMETER] (3-17-20)
- GENERAL NOTES:**
- ELEVATIONS BASED ON USGS DATUM 1929.
 - THERE ARE NO STEEP SLOPES ON SITE.
 - PIEZOMETERS WERE INSTALLED AT THE TEST PITS LOCATIONS ON MARCH 17, 2020.

JOHNSON
 SOILS
 CONSULTANTS
 ALPINE THREE, LLC
 982 Closter Dock Road
 Alpine, NJ
 JSC Job #: 15-092.1

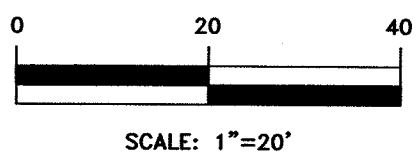
March 17, 2020
 Inspector: Jim O'Dowd

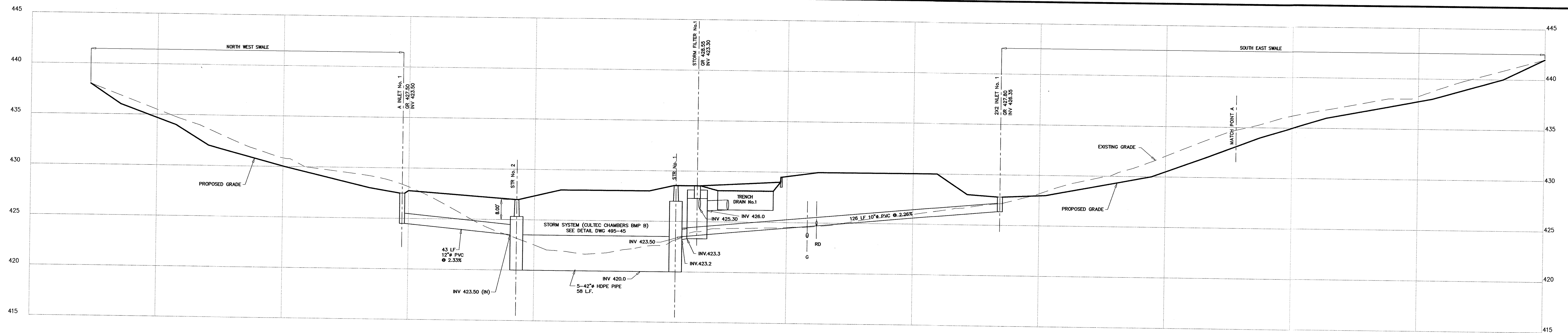
- Log of Test Pits**
- TP-9**
- 0' - 9" Topsoil
 - 9" - 2'10" Brown Silt, some Sand
 - 2'10" - 5'2" Brown Fine to Medium Sand, some Silt & Gravel
 - 5'2" Refusal on Rock
- TP-10**
- 0' - 1'4" Topsoil
 - 1'4" - 2'7" Grayish Brown Silt, some Sand
 - 2'7" - 6' Brown Fine to Medium Sand, some Silt & Gravel
 - Water at 5'6"
 - No Mottle

2.	ENGINEER'S COMMENTS DATED: 2-24-20 & 3-12-20	4-30-20	NM	M.J.H.
1.	UPDATED EXIST. CONDITIONS ALONG CLOSTER DOCK ROAD	10-7-19	B.W.	M.J.H.
NO.	REVISIONS	DATE	BY	CHKD
EXISTING CONDITIONS PLAN; TREES TO BE REMOVED PLAN				
LOTS 6.01, 6.02 & 6.03 BLOCK 43				
AMENDED PRELIMINARY & FINAL SITE PLAN PROPOSED 7 TOWNHOUSES				
BOROUGH OF ALPINE BERGEN COUNTY NEW JERSEY				
APPLICANT/OWNER: ALPINE THREE L.L.C. P.O. BOX 835 ALPINE, N.J. 07620				
DRAWN BY: B.W.		CHKD BY: M.J.H.		
SCALE: AS SHOWN		DRAWING NO. 495-48		
ENGINEERS: PLANNERS - SURVEYORS 263A S. WASHINGTON AVE., BERGENFIELD, NJ 07621 201-384-5666		REV. 2		

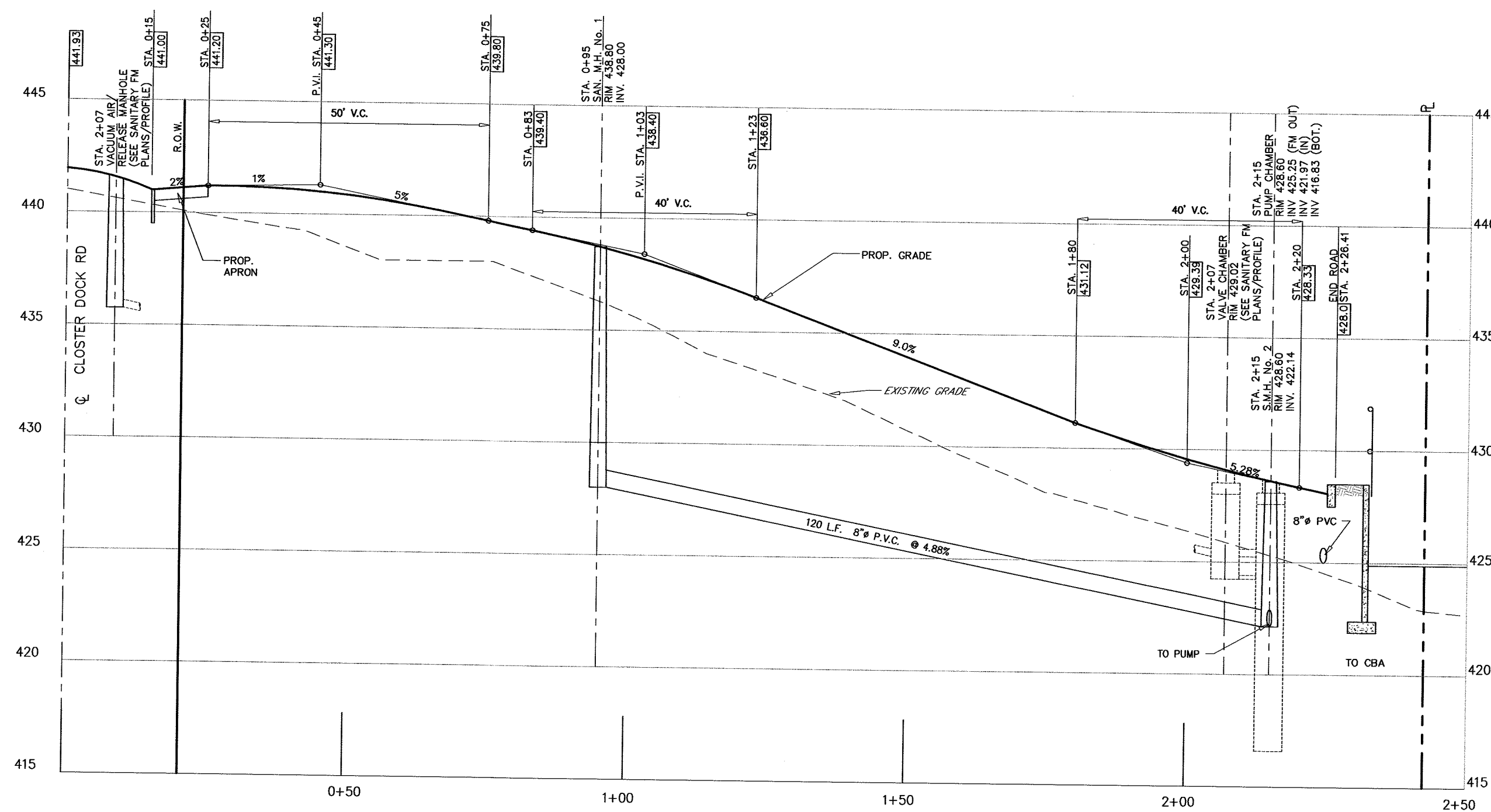
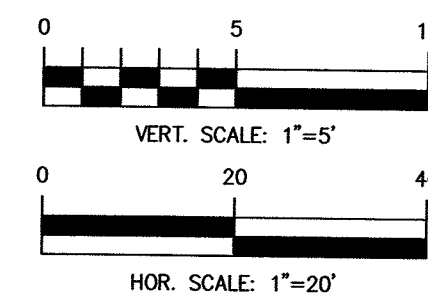
ROBERT J. MUELLER
 PROFESSIONAL LAND SURVEYOR
 N.J. LIC. NO. 37206
 5-22-19

MICHAEL J. HUBSCHMAN P.E., P.P.
 PROFESSIONAL ENGINEER AND PLANNER
 N.J.P.E. NO. 29497
 N.J.P.P. NO. 3200
 5-22-19

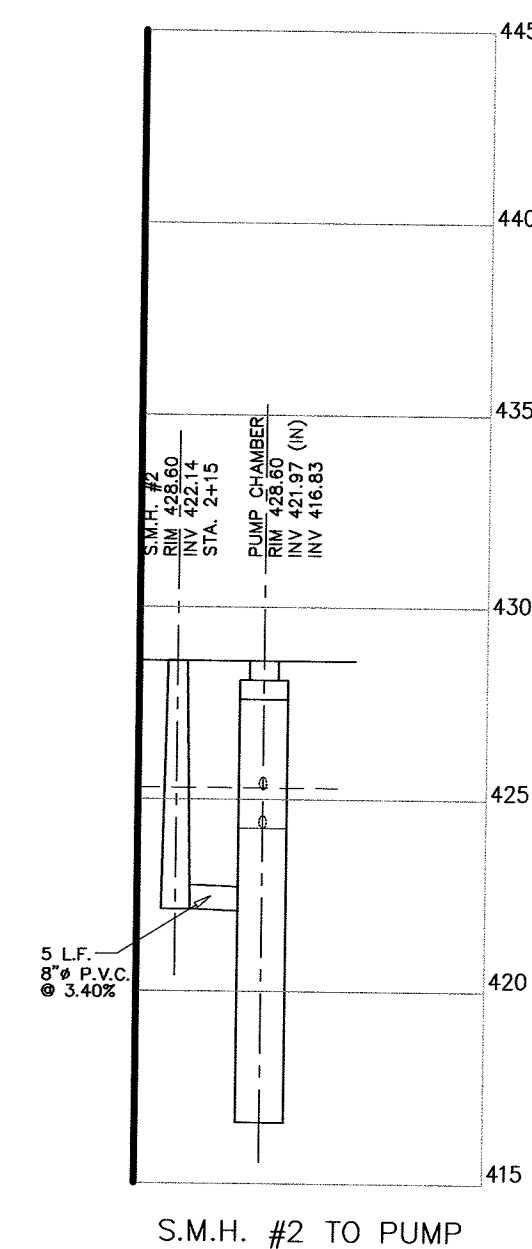
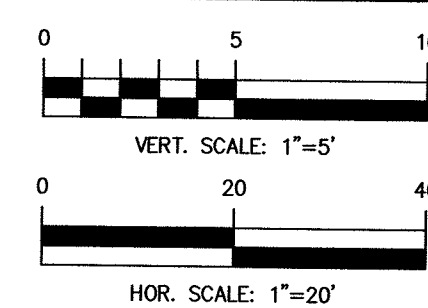




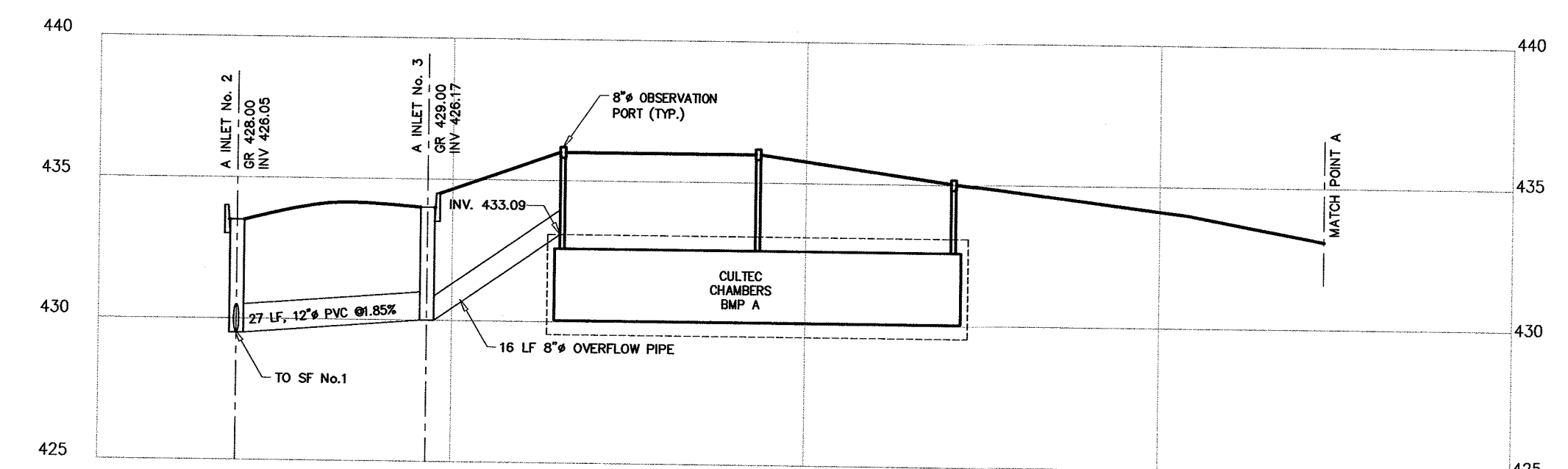
PROFILE- A INLET TO STR No.2, 2X2 INLET No.1 TO STR No.1



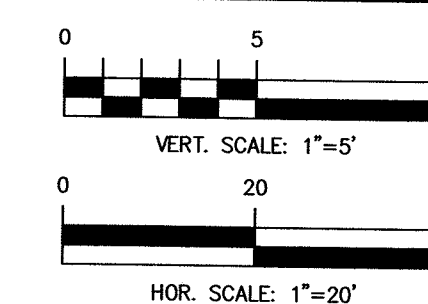
FINAL SANITARY PROFILE



S.M.H. #2 TO PUMP



PROFILE- CULTEC CHAMBERS BMP A TO A INLET No.3 AND 2



FINAL SANITARY PLAN

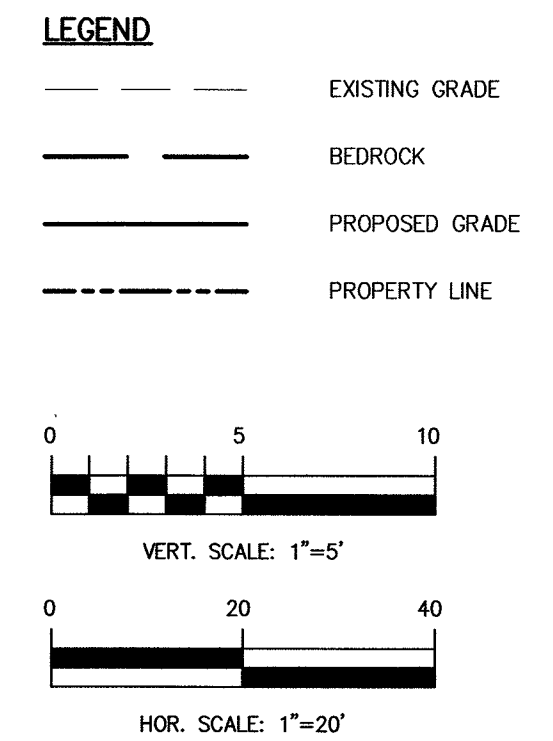
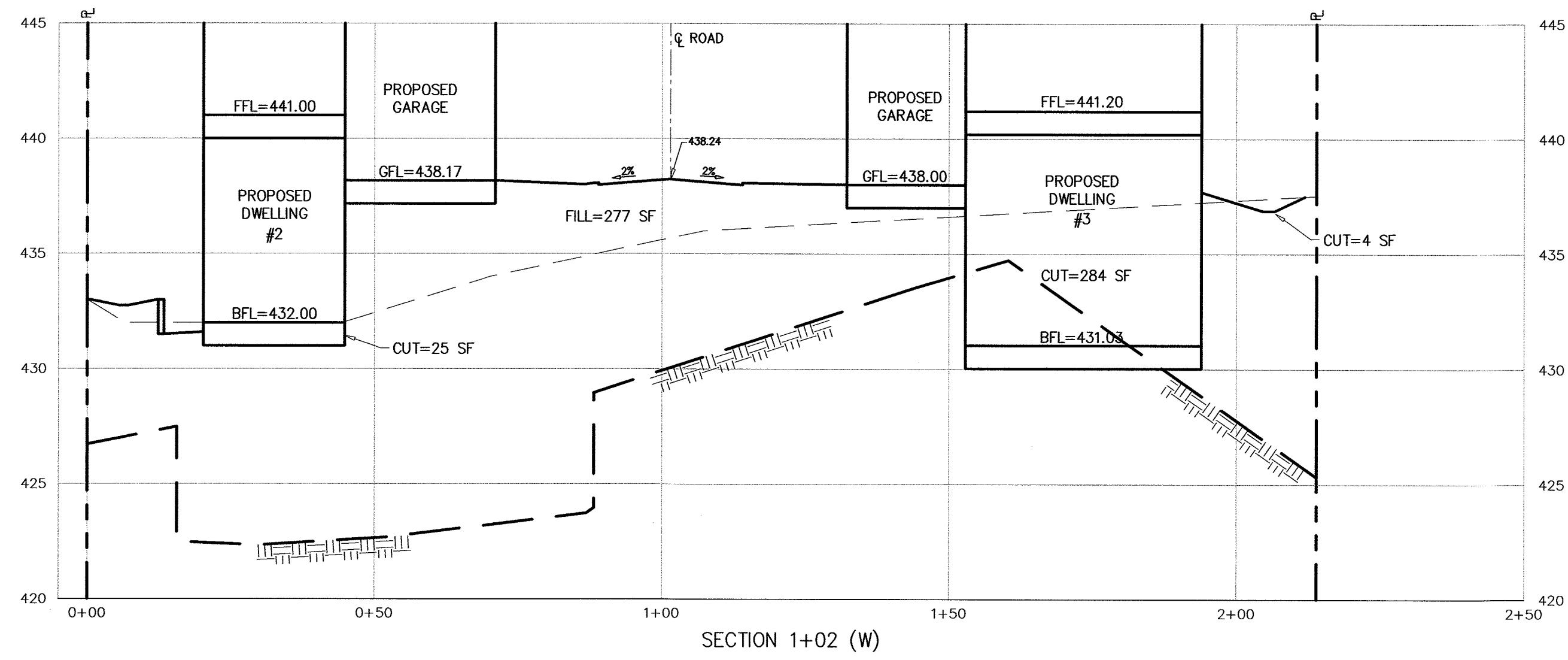
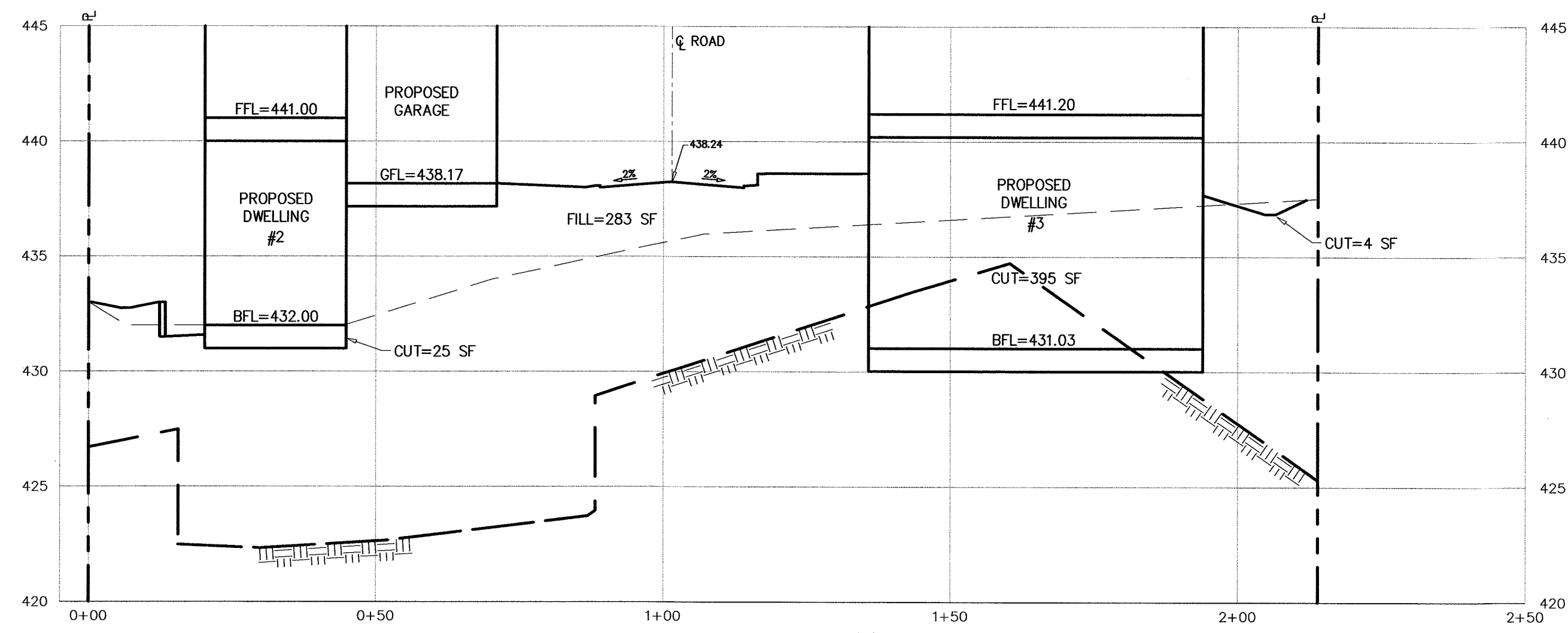
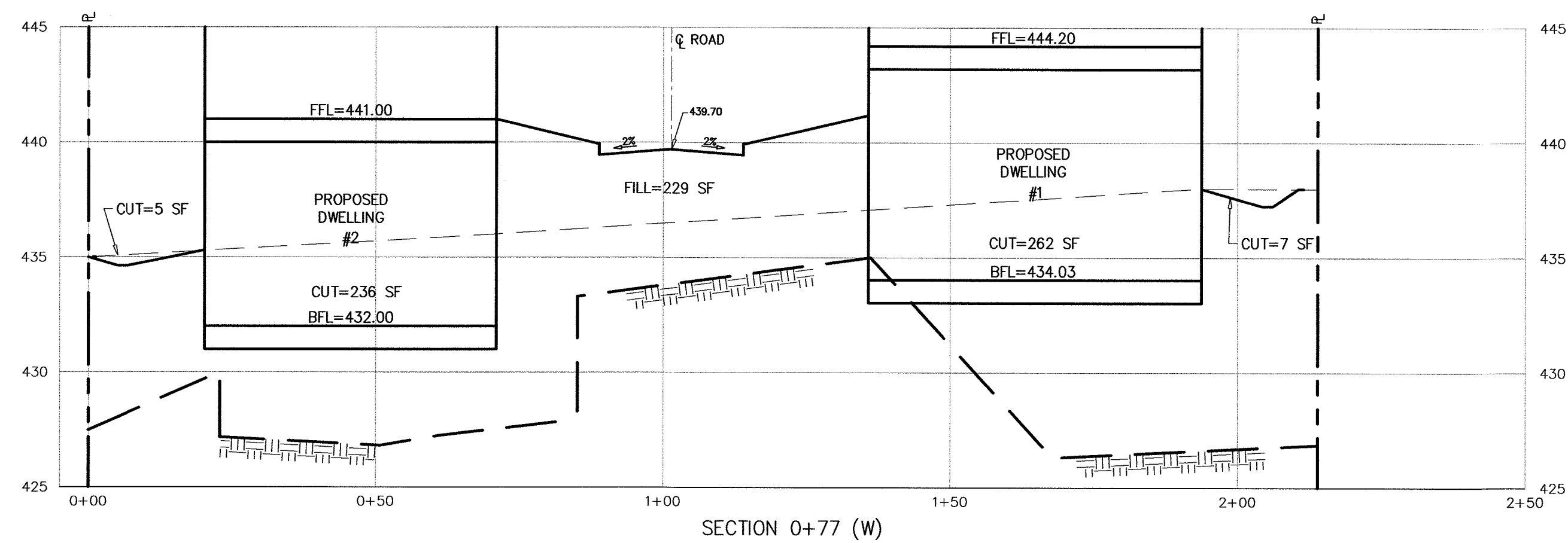
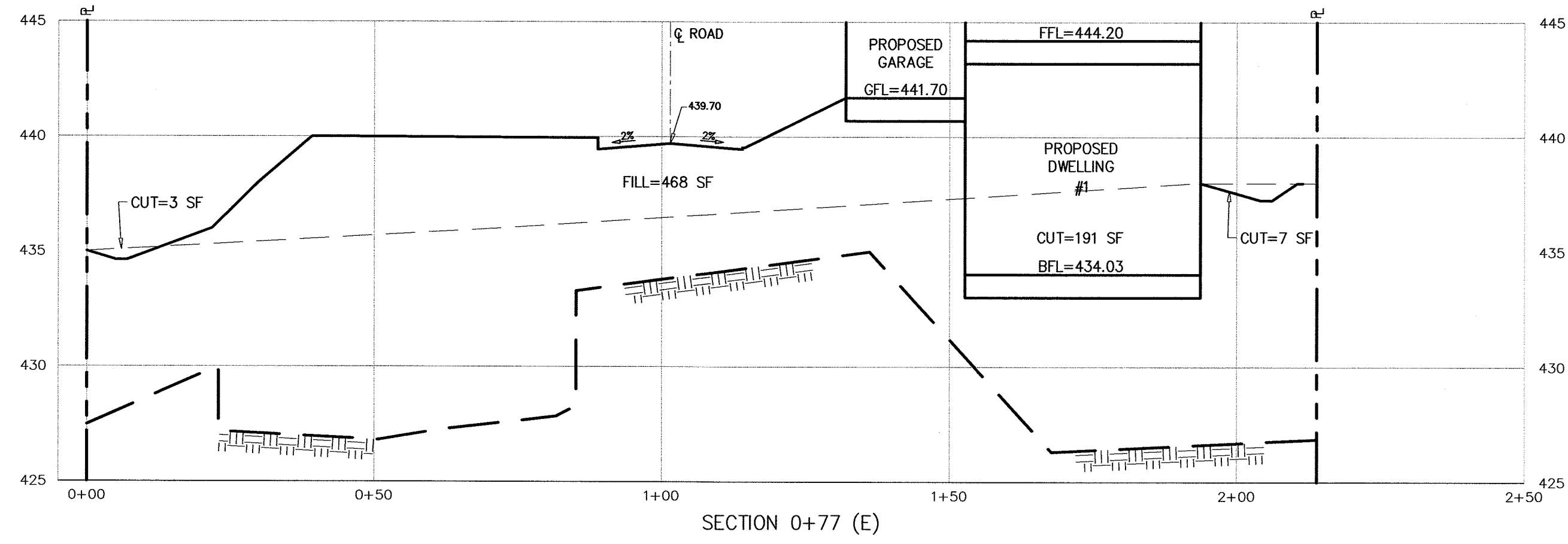
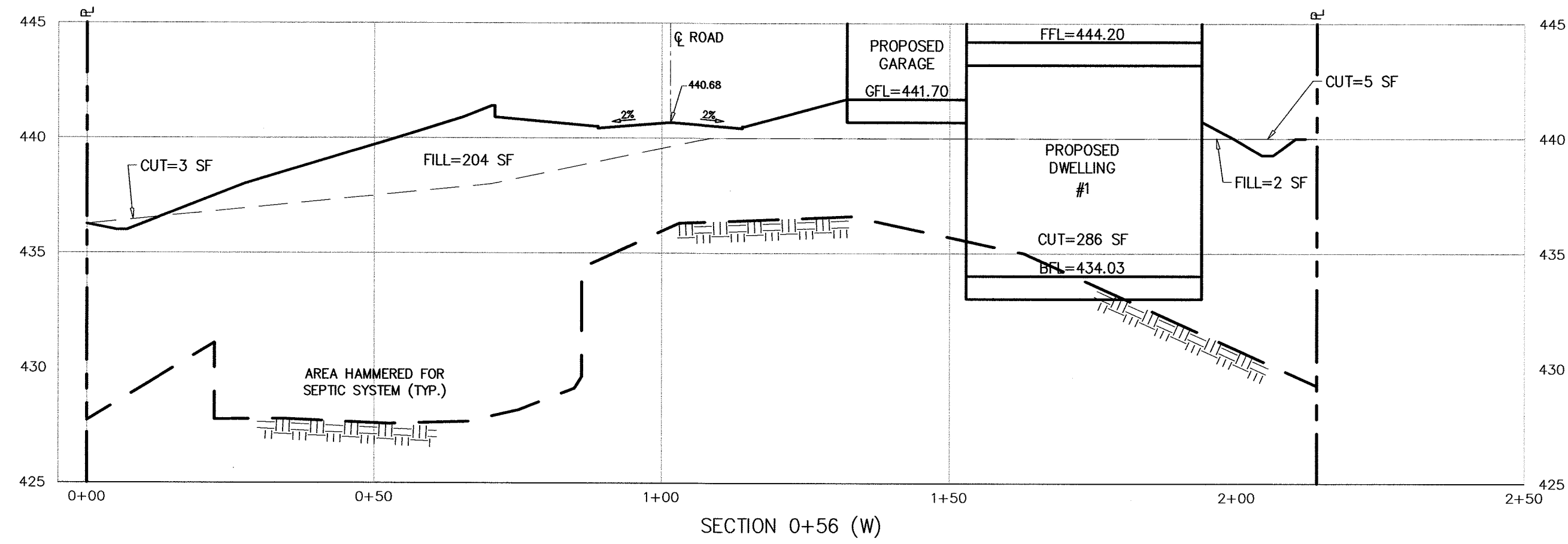
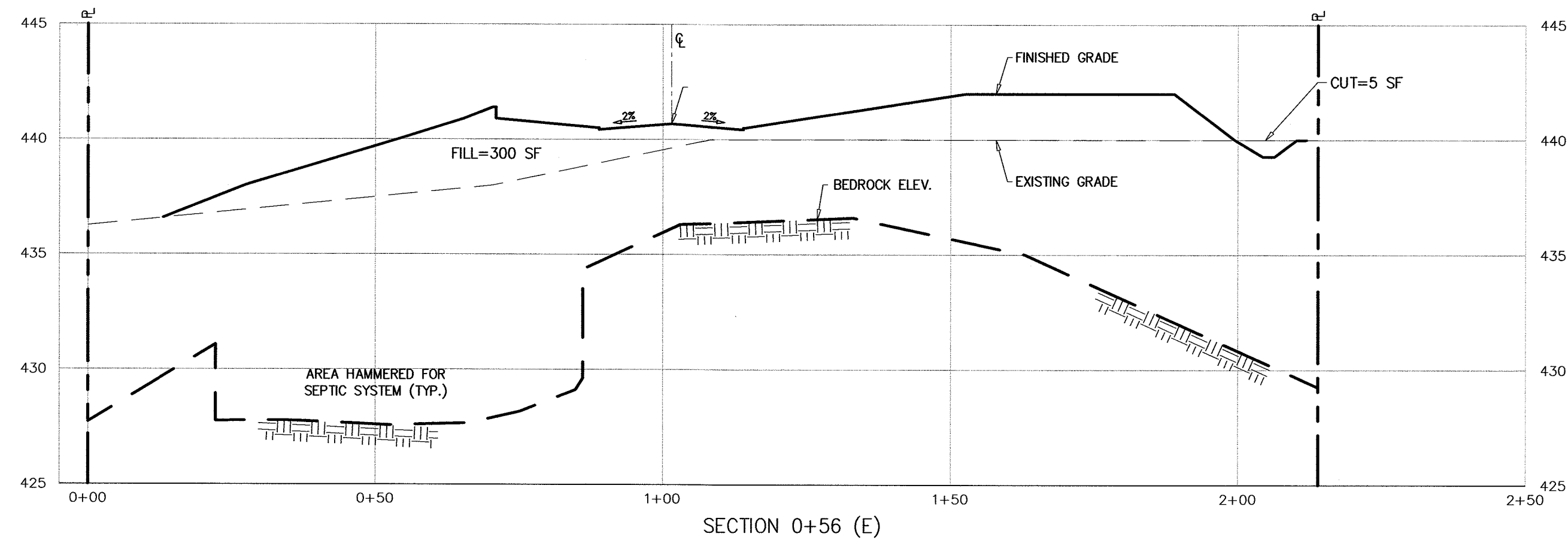
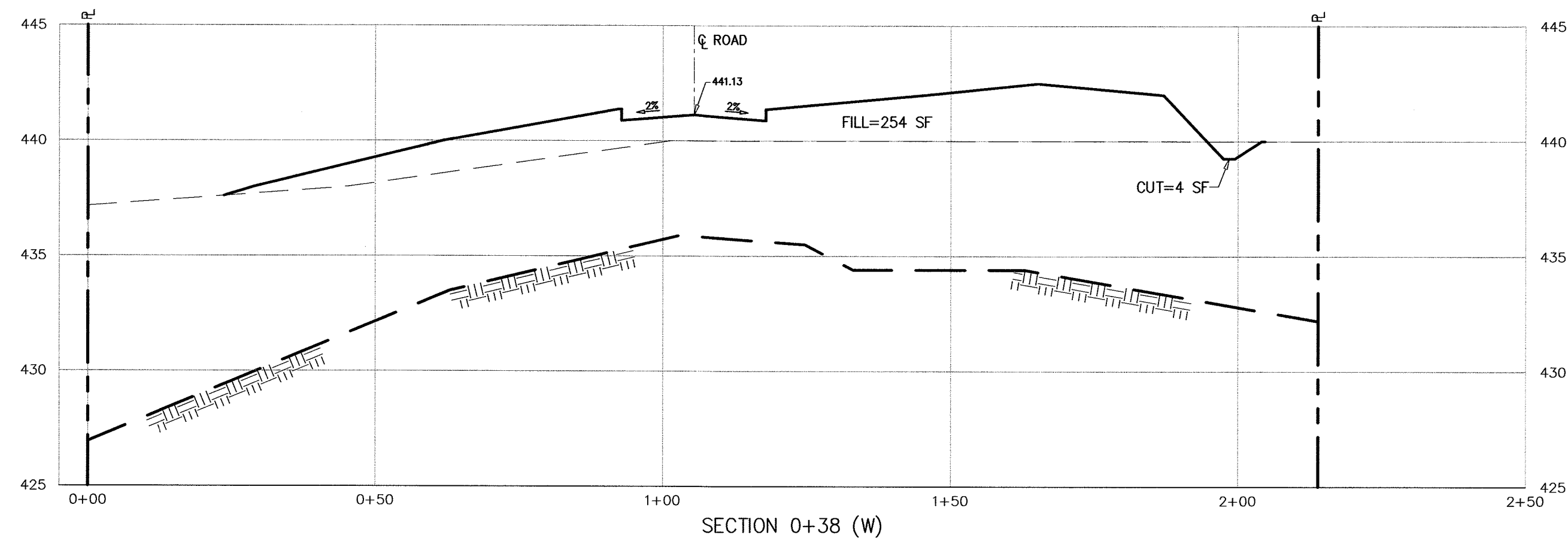
N.J.A.C. 7-14A-23

SEWERS CONVEYING SANITARY FLOW, COMBINED SANITARY AND STORMWATER FLOW, OR INDUSTRIAL FLOW SHALL BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, OR SUCH OTHER SEPARATION AS APPROVED BY THE DEPARTMENT.

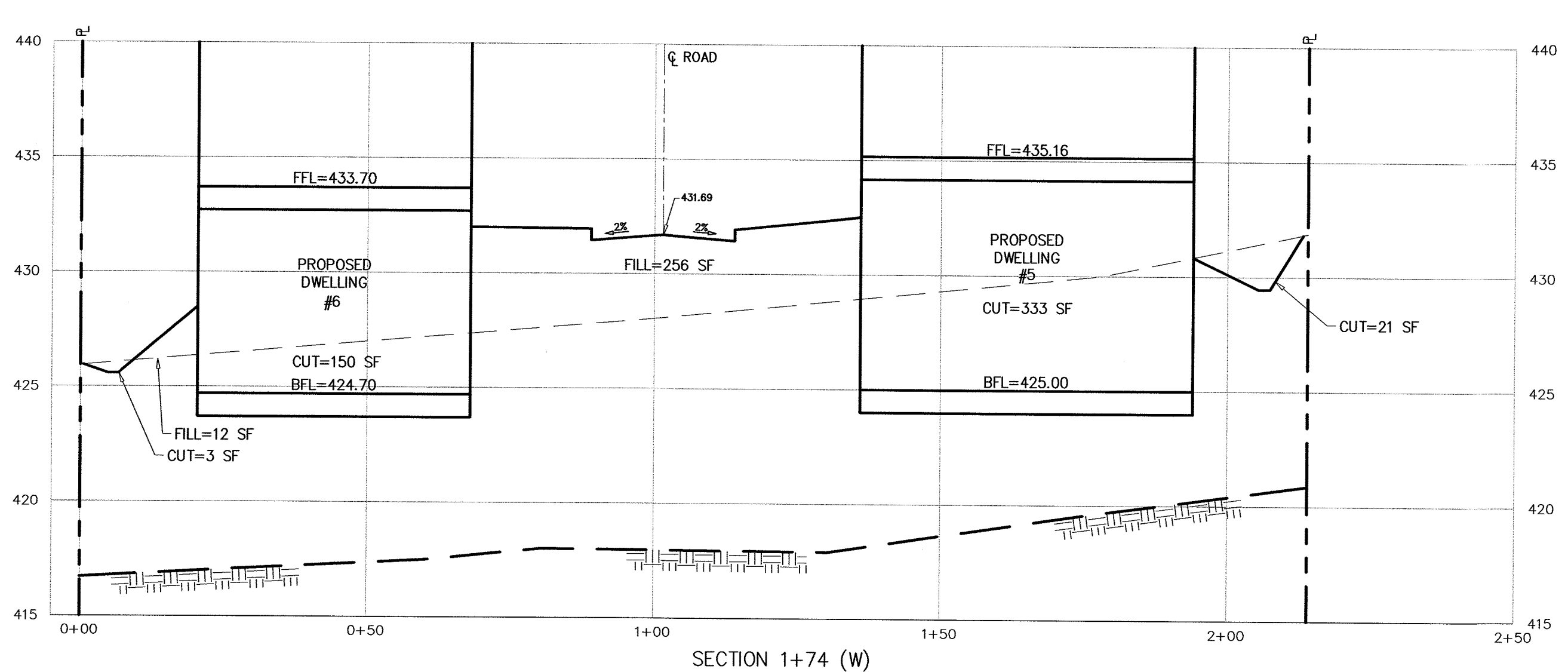
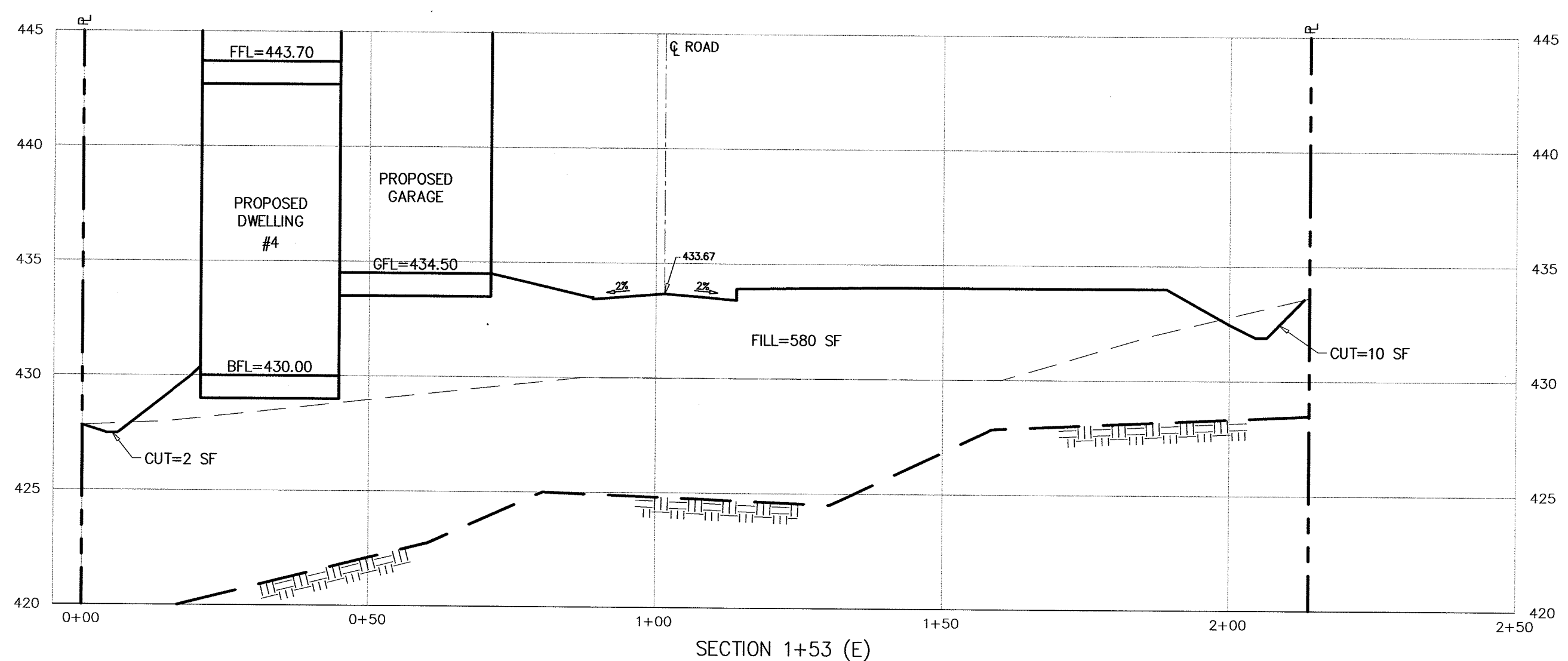
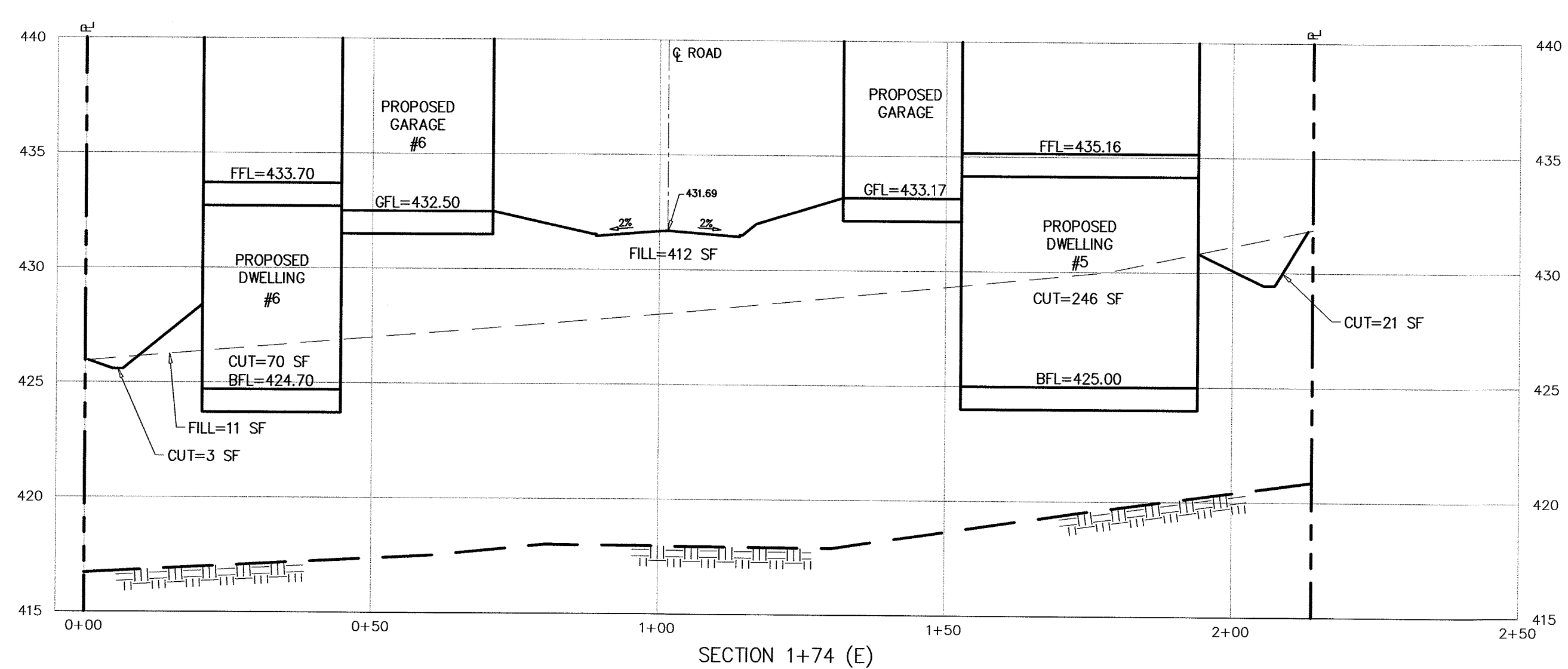
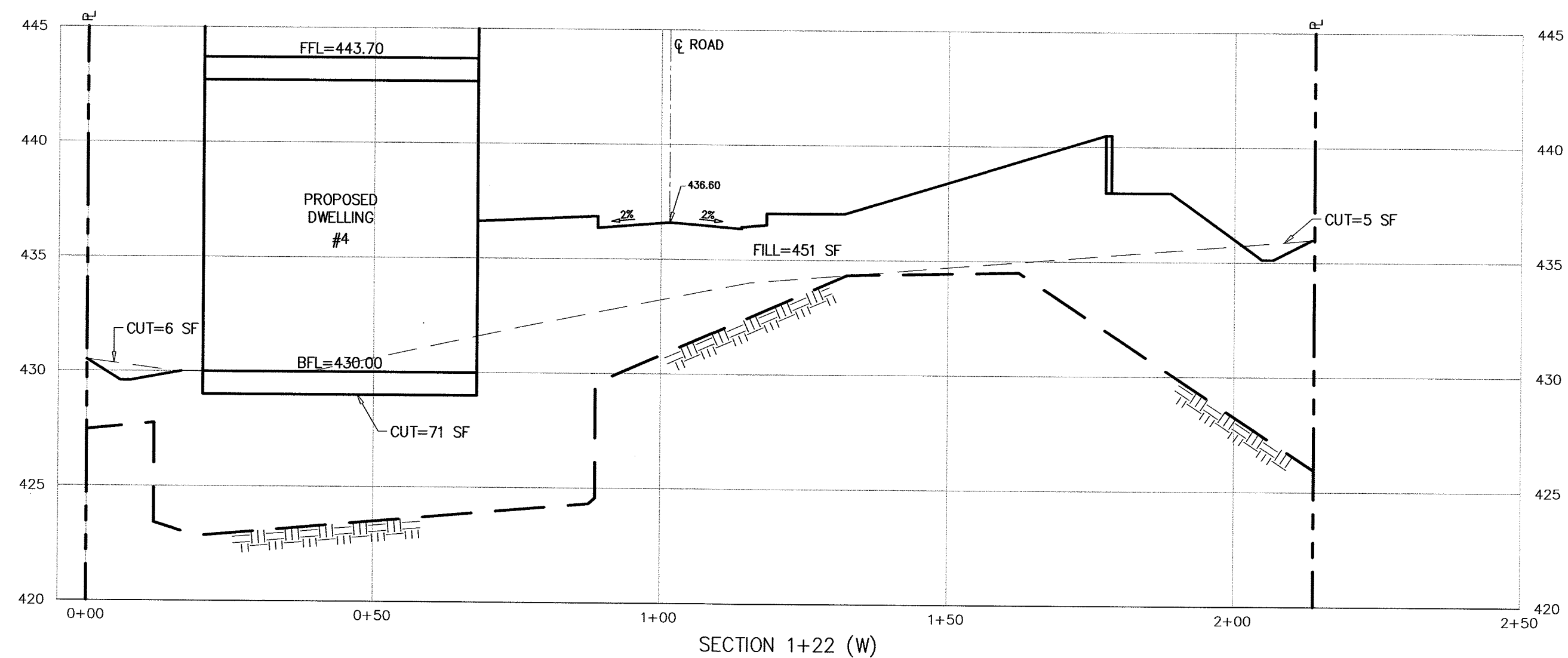
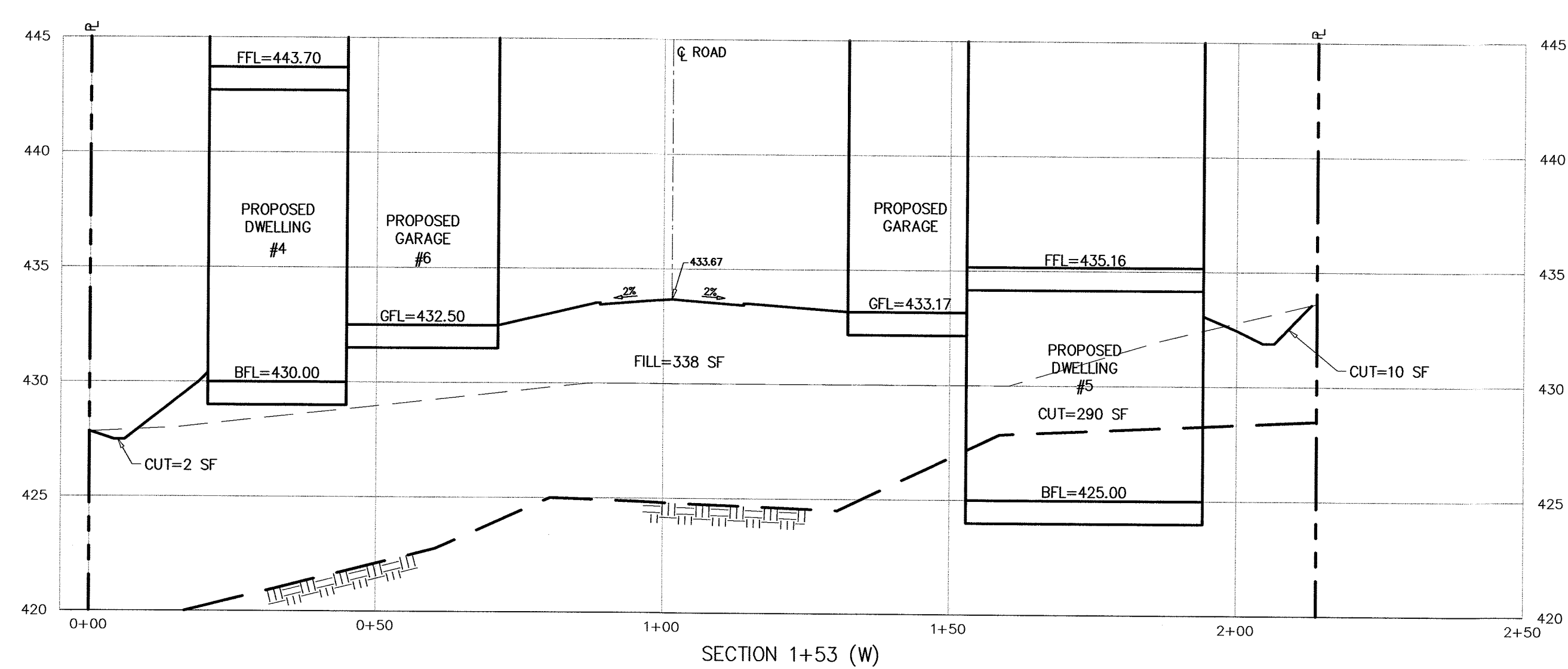
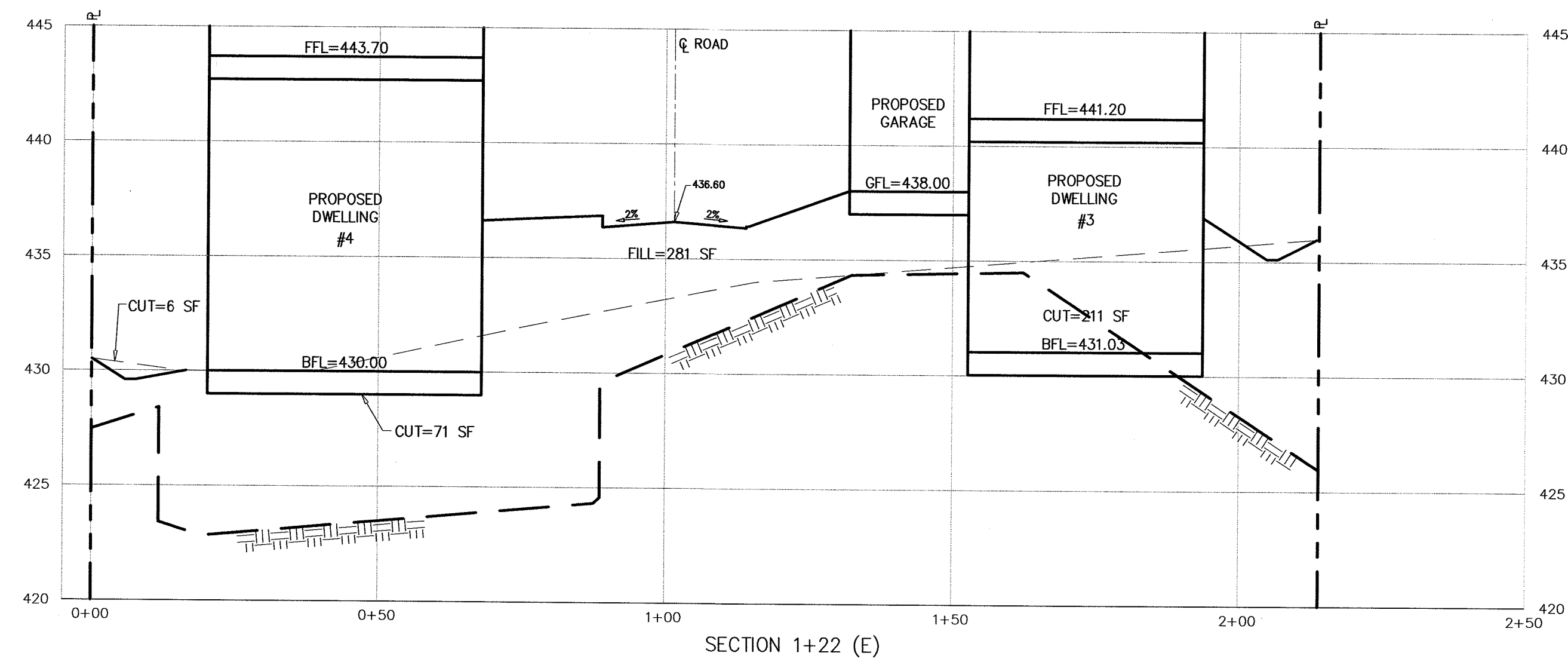
WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER SHALL BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER SHALL BE PROVIDED. THE DEPARTMENT MAY ALSO REQUIRE ADDITIONAL STRUCTURAL SUPPORT FOR STORM SEWERS CROSSING OVER SEWER LINES.

MICHAEL J. HUBSCHMAN P.E., P.P.
PROFESSIONAL ENGINEER AND PLANNER
N.J.P.E. NO. 29497 N.J.P.P. NO. 3200
2-22-19
DATE

NO.	REVISIONS	DATE	BY	CHKD
1.	BCSCD LETTER DATED 7-29-19	10-7-19	B.W.	M.J.H.
STORM WATER PROFILE; SANITARY SEWER PROFILE				
LOTS 6.01, 6.02 & 6.03 BLOCK 43				
AMENDED PRELIMINARY & FINAL SITE PLAN PROPOSED 7 TOWNHOUSES				
BOROUGH OF ALPINE BERGEN COUNTY NEW JERSEY				
APPLICANT/OWNER: ALPINE THREE L.L.C. P.O. BOX 835 ALPINE, N.J. 07620				
DRAWN BY: B.W.		11 of 11		
CHKD BY: M.J.H.		495-50		
SCALE: AS SHOWN		1		
DRAWING NO.		11 of 11		
ENGINEERS - PLANNERS - SURVEYORS		263A S. WASHINGTON AVE. BERGENFIELD, NJ 07621		
201-384-5666		© COPYRIGHT 2020 HUBSCHMAN ENGINEERING, P.A.		

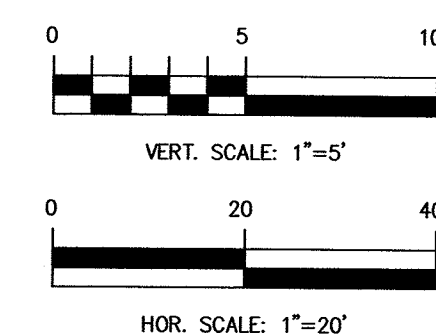


REVISIONS				Y.R.	M.H.
NO.	DATE	BY	CHKD		
1	4-30-20				
CROSS SECTIONS AND SOIL MOVING PLAN					
0+38 W TO 1+02 W					
AMENDED PRELIMINARY & FINAL SITE PLAN					
PROPOSED 7 TOWNHOUSES					
Borough of Alpine, Bergen County, New Jersey					
APPLICANT/OWNER: ALPINE THREE L.L.C.					
P.O. BOX 835					
ALPINE, N.J. 07620					
MICHAEL J. HUBSCHMAN P.E., P.P.				DRAWN BY: Y.R.	
PROFESSIONAL ENGINEER AND PLANNER				CHKD BY: M.H.	
N.J.P.E. NO. 29497				SCALE: 1"=20'	
N.J.P.P. NO. 3200				DRAWING NO.	
5-22-19				495-51	
DATE				REV.	
				1	



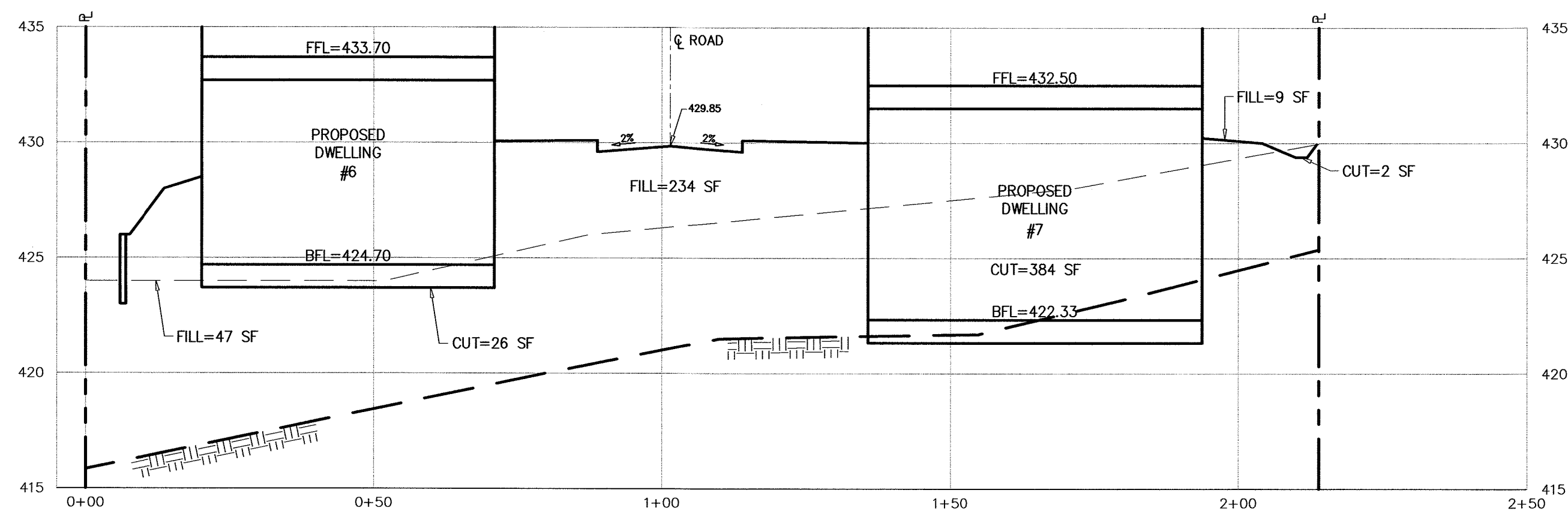
LEGEND

— EXISTING GRADE
 — BEDROCK
 — PROPOSED GRADE
 - - - PROPERTY LINE

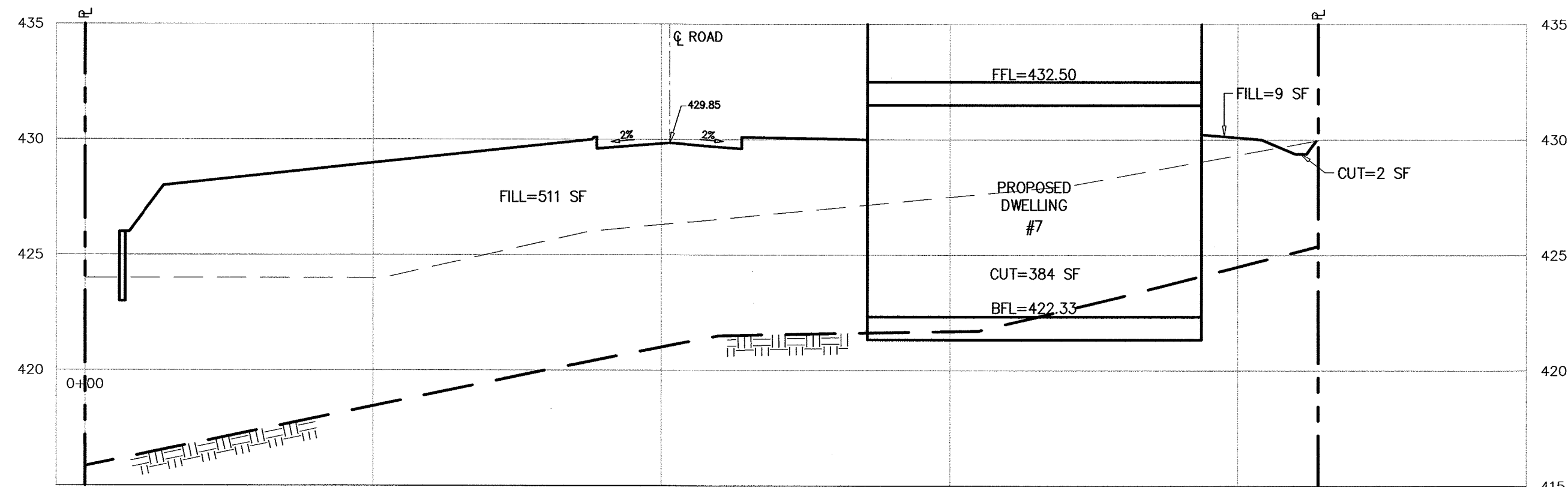


MICHAEL J. HUBSCHMAN P.E., P.P.
 PROFESSIONAL ENGINEER AND PLANNER
 N.J.P.E. NO. 29497
 N.J.P.P. NO. 3200

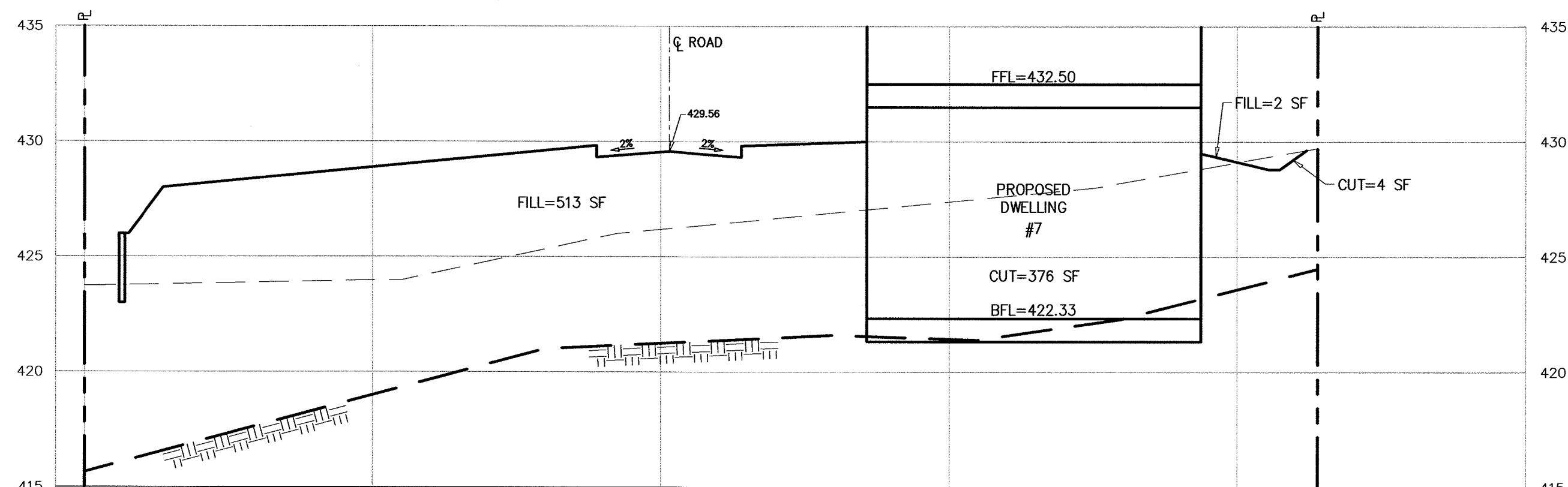
NO.	REVISIONS	DATE	BY	CHKD
1	ADDED ROCK ELEVATION, RENUMBERED CROSS SECTIONS	4-30-20	Y.R.	M.J.H.
CROSS SECTIONS AND SOIL MOVING PLAN 1+22 E TO 1+74 W				
LOTS 6.01, 6.02 & 6.03 BLOCK 43				
AMENDED PRELIMINARY & FINAL SITE PLAN PROPOSED 7 TOWNHOUSES				
BOROUGH OF ALPINE BERGEN COUNTY NEW JERSEY				
APPLICANT/OWNER: ALPINE THREE L.L.C. P.O. BOX 835 ALPINE, N.J. 07620				
DRAWN BY: Y.R. CHKD BY: M.J.H. SCALE: 1"=20' DRAWING NO. 495-52 REV. 1				
HUBSCHMAN ENGINEERING, P.A. ENGINEERS - PLANNERS - SURVEYORS 263A S. WASHINGTON AVE., BERGENFIELD, NJ 07621 201-384-5666				



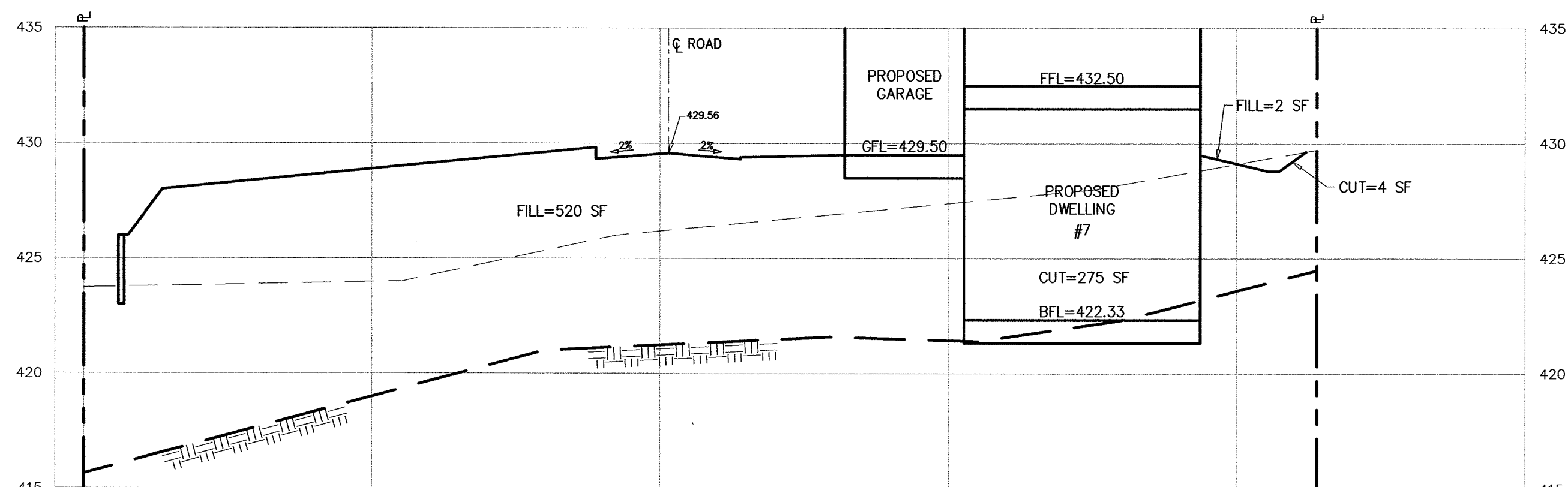
SECTION 1+96 (E)



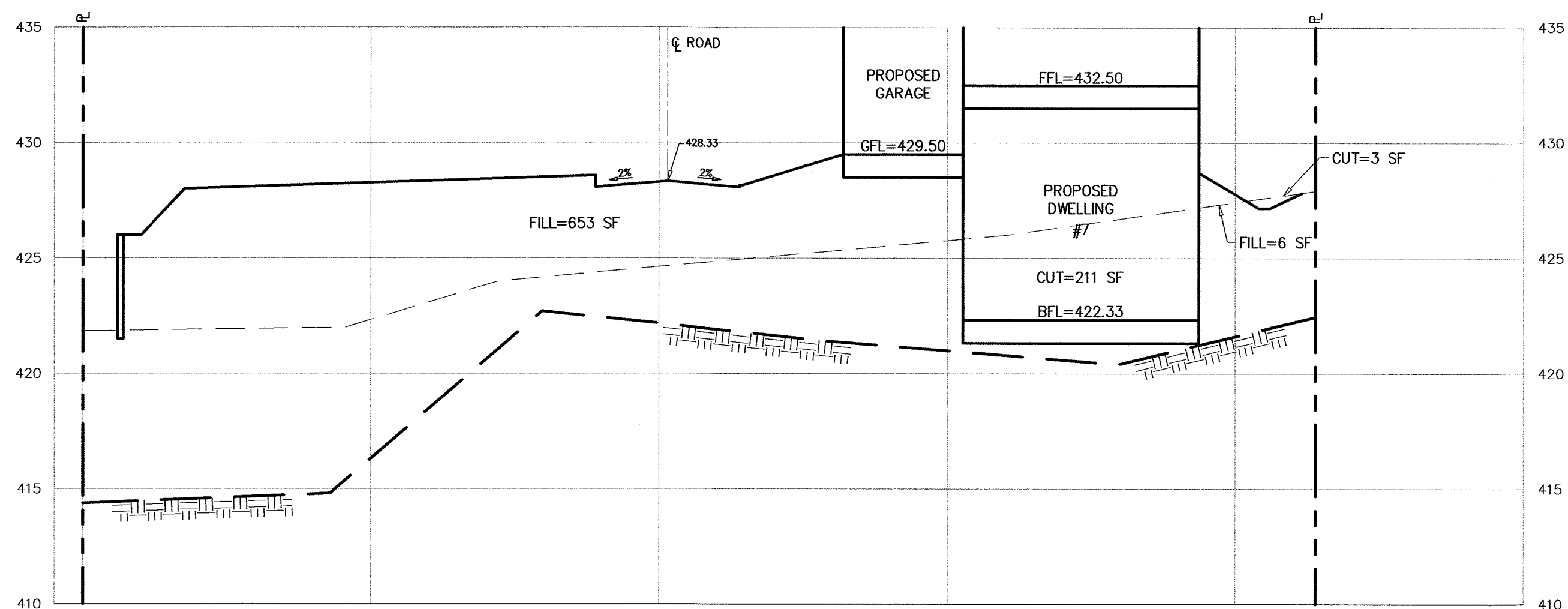
SECTION 1+96 (W)



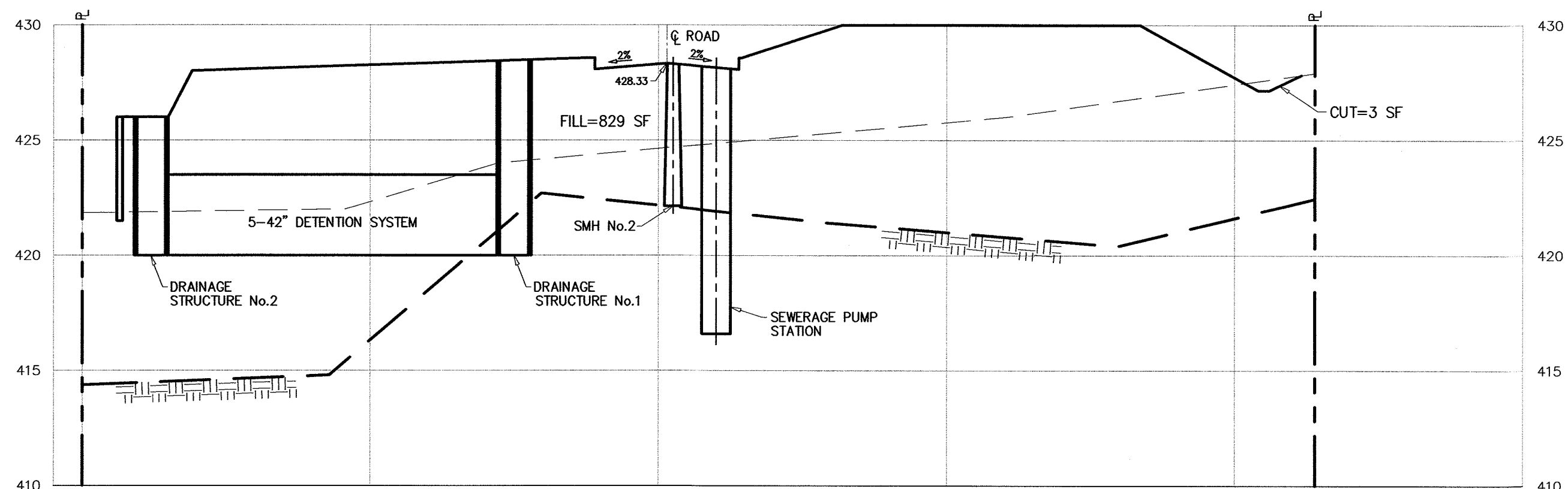
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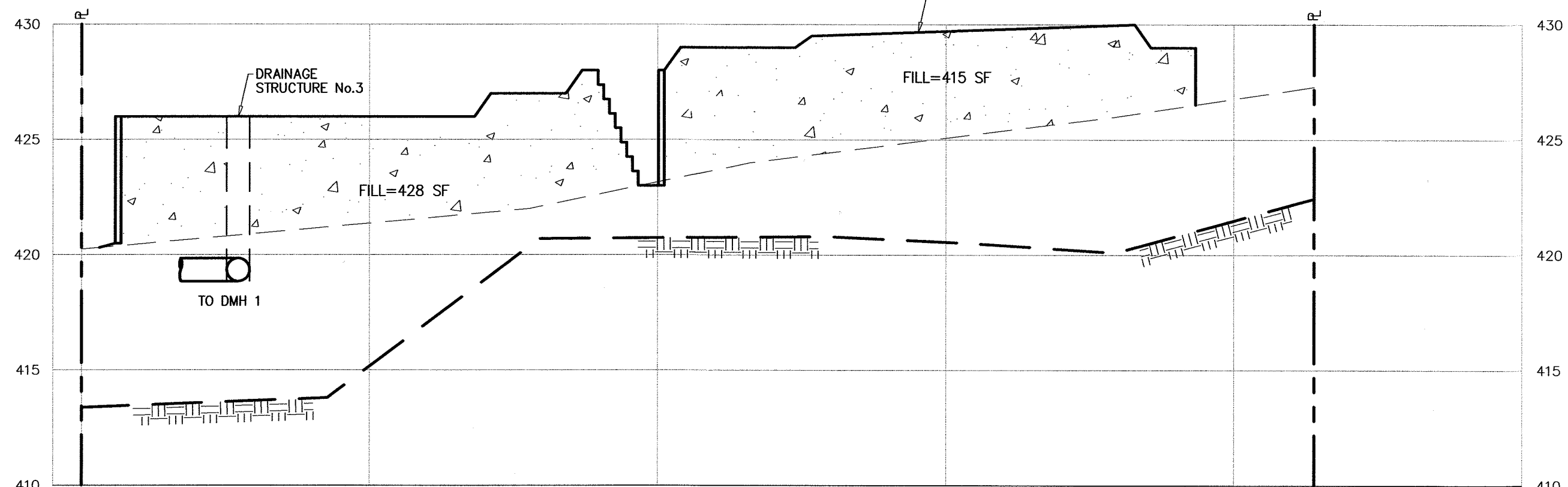
SECTION 2+00 (W)



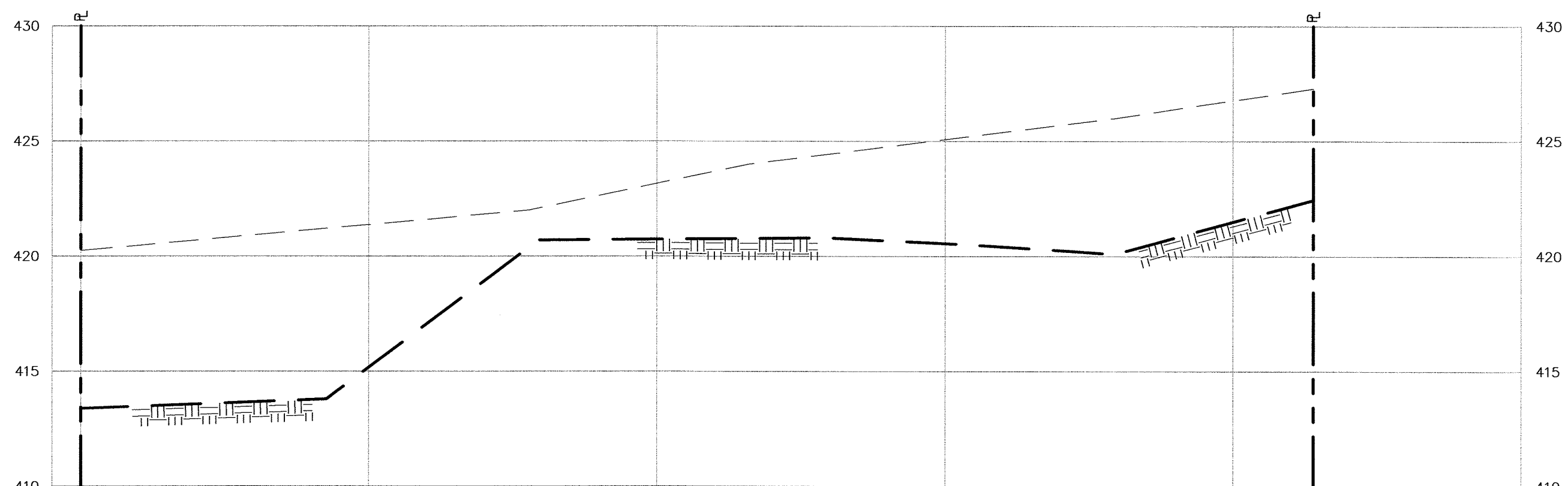
SECTION 2+20 (E)



SECTION 2+20 (W)



SECTION 2+32 (E)



SECTION 2+32 (W)

CUT	Cut (SF)	Average (SF)	Distance (FT)	Volume (CY)
0+38 W	4	4.50	18	81.00
0+56 E	5			
0+56 W	294	247.50	21	5,197.50
0+77 E	201			
0+77 W	510	469.50	25	11,737.50
1+02 E	429			
1+02 W	318	303.00	20	6,060.00
1+22 E	288			
1+22 W	62	47.00	31	1,457.00
1+53 E	12			
1+53 W	302	321.00	21	6,741.00
1+74 E	340			
1+74 W	507	459.50	22	10,109.00
1+96 E	412			
1+96 W	386	383.00	4	1,532.00
2+00 E	380			
2+00 W	279	246.50	20	4,930.00
2+20 E	214			
2+20 W	3	1.50	12	18.00
2+32 E	0			
2+32 W	0	0.00	10	0.00
2+42 E	0			
Total				47,863.00 ≈ 1,773 CY

FILL	Fill (SF)	Average (SF)	Distance (FT)	Volume (CY)
0+38 W	254	277.00	18	4,996.00
0+56 E	300			
0+56 W	206	337.00	21	7,077.00
0+77 E	468			
0+77 W	229	256.00	25	6,400.00
1+02 E	283			
1+02 W	277	279.00	20	5,580.00
1+22 E	281			
1+22 W	451	315.50	31	9,780.50
1+53 E	180			
1+53 W	338	380.50	21	7,990.50
1+74 E	423			
1+74 W	268	279.00	22	6,138.00
1+96 E	290			
1+96 W	520	517.50	4	2,070.00
2+00 E	515			
2+00 W	522	590.50	20	11,810.00
2+20 E	659			
2+20 W	829	836.00	12	10,032.00
2+32 E	843			
2+32 W	0	0.00	10	0.00
2+42 E	0			
Total				71,864.00 ≈ 2,662 CY

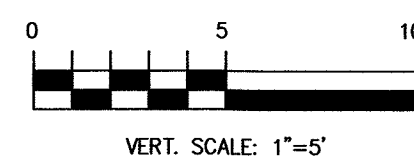
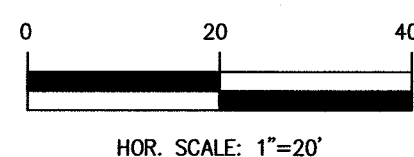
CUT	
Detention System	
Pipes	5 - 42" pipes = 48" O.D.
End Section	58 Ft. x 5 ft. (2 x 4'24") = 3,644 CF
End Section	2 x 6 Ft. x 8 Ft. x 26 Ft. = 2,496 CF
Cut Volume	6,140 CF
	227 CY

CUT	
Culvert Chambers	
7 Chambers	
Bed Area	340.66 SF
Bed Depth	4.92 FT
Bed Volume	1,676 CF
Cut Volume	62 CY

Total Cut (CY)	2,062
Total Fill (CY)	2,662
Quantity of Soil to Be Imported To Site (CY)	600

LEGEND

- EXISTING GRADE
- BEDROCK
- PROPOSED GRADE
- PROPERTY LINE



MICHAEL J. HUBSCHMAN P.E., P.P.
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N.J.P.E. NO. 28497 N.J.P.P. NO. 3200

5-22-19

CROSS SECTIONS AND SOIL MOVING PLAN			
1+96 E TO 2+32 W			
AMENDED PRELIMINARY & FINAL SITE PLAN			
PROPOSED 7 TOWNHOUSES			
Borough of Alpine, Bergen County, New Jersey			
APPLICANT/OWNER: ALPINE THREE L.L.C.			
P.O. BOX 835			
ALPINE, N.J. 07620			

DRAWN BY: Y.R.		CHKD BY: MJH	
SCALE: 1"=20'		DRAWING NO. 495-53	
3 OF 3		REV. 1	