



DRAINAGE STATEMENT

FOR

CHIT CHAT DINER
410 EAGLE ROCK AVENUE
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

SUBMITTED TO:

WEST ORANGE PLANNING BOARD

PREPARED BY:

PETRY ENGINEERING, LLC
155 PASSAIC AVENUE
FAIRFIELD, NEW JERSEY 07004
973-227-7004

J. Michael Petry

J. MICHAEL PETRY, PE
NJ PROFESSIONAL ENGINEER # 36662
JANUARY 24, 2025
REVISED: OCTOBER 27, 2025

PROJECT: #24-085

155 Passaic Avenue, Suite 350, Fairfield, New Jersey 07004
973-227-7004 963-227-7074 (fax)
www.petryengineering.com

EXISTING CONDITIONS

The property in question is located on Block 109, Lot 1.01 and Block 111, Lot 1.05 per the Township of West Orange Tax Map. The property is further identified as Chit Chat Diner and is located on the southerly side of Eagle Rock Avenue.

The property is comprised of two irregularly shaped lots and has an area of approximately 192,631 square feet (4.42 acres). The site generally slopes from east to west with stormwater runoff flowing from the rear south-westerly portion of the property to the front of the property towards Eagle Rock Avenue. The property is developed with a two-story stone building, paver walkway, outdoor seating and paved parking area. The existing impervious coverage of the subject site is approximately 50,932 square feet (1.17 acres).

Stormwater currently flows into a subsurface detention basin located at the rear parking area and into a subsurface detention basin located on the easterly parking area. Both systems ultimately flow into the county drainage system along Eagle Rock Avenue.

SOILS INVESTIGATION

Prior to the stormwater management design, a soils investigation was performed to determine the soil's permeability as well as to locate potential groundwater and bedrock. Three (3) test pits were performed in the desired parking expansion area, and the test results provided a soil permeability rate of 0.2 to 0.6 inch per hour. Additionally, bedrock was observed in all the test pits between 4'-0" and 5'-6" below the surface. With the bedrock established relatively close to the surface and the clay material above the rock, the existing surfaces act as impervious in the un-built condition.

PROPOSED DEVELOPMENT

The Applicant is proposing an expansion of the parking area for additional parking spaces to accommodate existing customers and to lessen the reliance on off-site employee parking.

The Applicant is proposing a net additional fifteen (15) physical parking spaces, of which four (4) will be EV-ready. With the EV credit applied, the total number of additional spaces proposed in relation to the zoning requirement is nineteen (19) spaces. Surrounding the proposed parking area will be block curb, a metal fence and a timber guide rail that matches the existing. The proposed parking area will include twelve (12) new plantings within the proposed islands and around the parking area to meet West Orange Tree Ordinance. It should be noted that the circulation for the proposed parking area will be one way with the appropriate signage provided. Additionally, the parking area will be illuminated with the proposed fixtures similar to those recently installed as shown on the plans.



The total amount of disturbance on these lots for all the proposed work is 19,200 square feet (0.441 acres). The proposed improvements consist of 8,313 square feet (0.191 acres) of impervious coverage of which 7,878 square feet (0.181 acres) of improvements are motor vehicle surface. Because of the increase in impervious coverage on site, two (2) type 'B' inlets will be constructed within the expanded parking area. These inlets will connect to two (2) manholes via 12" HDPE pipes which will tie into the existing type 'B' inlet on site.

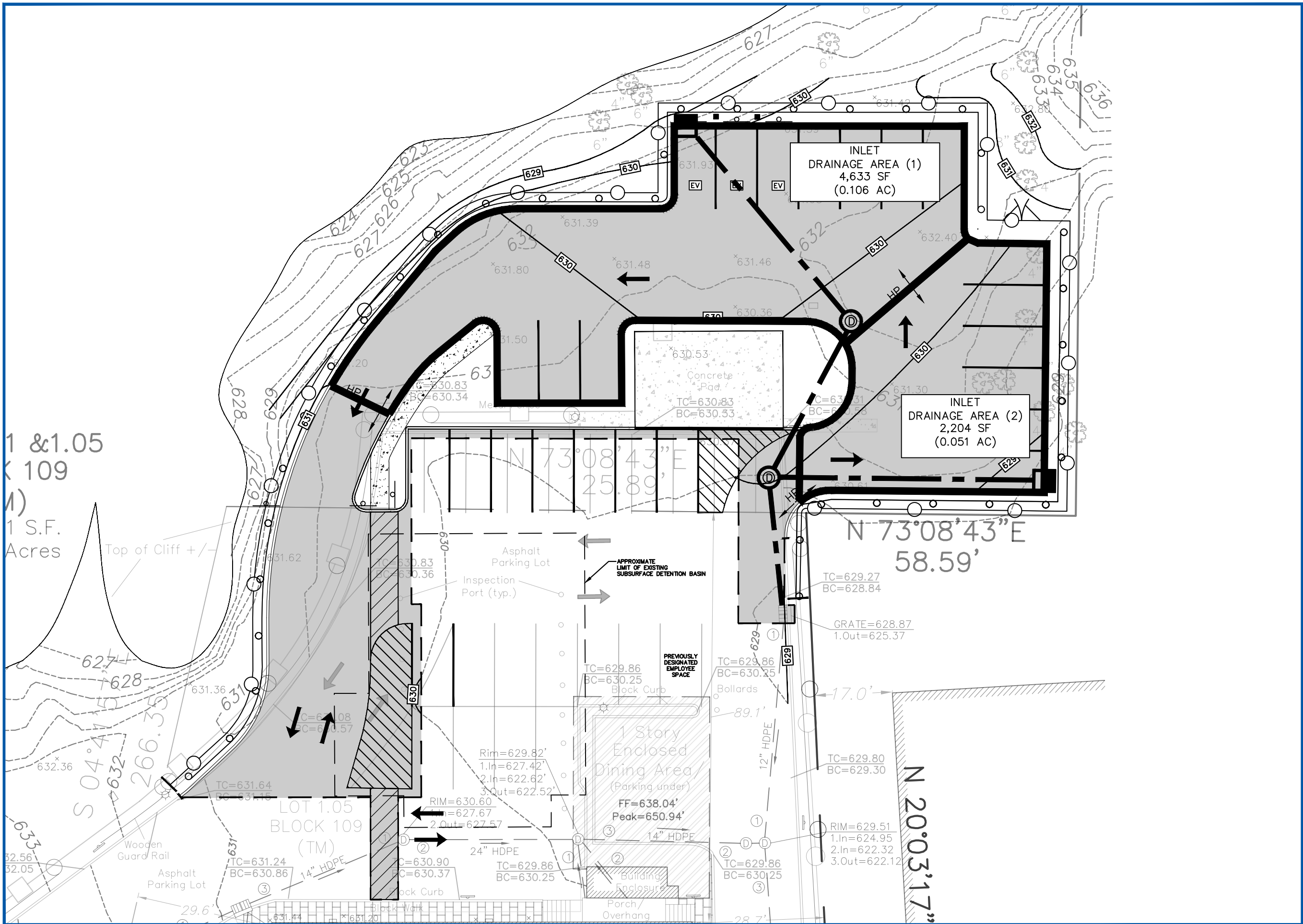
STORMWATER MANAGEMENT

Both the limit of disturbance (0.441 acres) and the new motor vehicle surface area (0.181 acres) are below the major development thresholds. No detention is provided since the shallow bedrock and clay material already represent an impervious condition. To account for the additional impervious coverage, the Applicant is proposing to install inlets and manholes to connect into the existing stormwater management system on site. This added pipe network will capture the stormwater runoff within the expanded parking area and direct it towards the existing storm sewer system located within the developed portion of the property.

CONCLUSION

To summarize, the improvements have been designed to provide additional parking stalls on the subject property. It is especially important to note that the proposed development will not have a negative impact on the neighboring properties as the stormwater runoff from the expansion will be captured by the proposed inlets and manholes and connect into the existing system in the parking lot. As such, there will be slight reduction in runoff that currently discharges to the steep slopes.





1 & 1.05
K 109
(M)
1 S.F.
Acres

PETRY
ENGINEERING, LLC
DIVISION OF CONSUMER AFFAIRS LICENSE NUMBER 24C2815500
155 PASADENA AVENUE • FAIRFIELD • NEW JERSEY • 07004
TEL: 908.231.7074
PETRYENGINEERING.COM

REV	DESCRIPTION	DATE

CHECKED BY: SPD
DRAFTED BY: LCD

PETRY
ENGINEERING, LLC

PREPARED FOR
CHIT CHAT DINER
410 EAGLE ROCK AVENUE
LOT 1.01, BLOCK 109
LOT 1.05, BLOCK 111
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

TITLE:
**INLET DRAINAGE
AREA MAP**

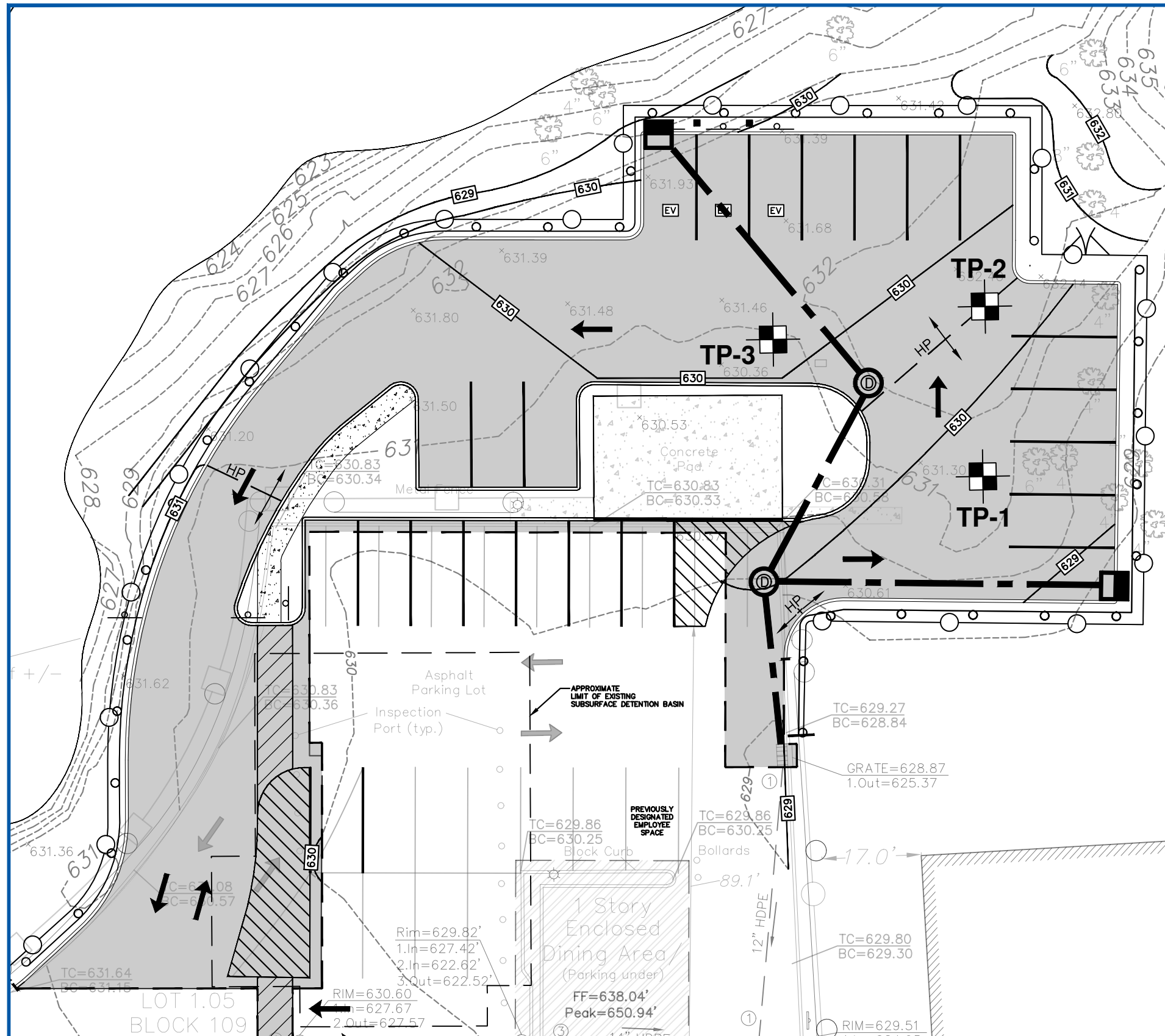
PROJECT #:
24-085

SHEET:
FIG-1

STORM SEWER COMPUTATIONS
RATIONAL METHOD - (Q=CIA)
25 YR. STORM

Date: 01-24-25, Revised:
By: LCD

PIPE SEGMENT															
FROM	TO	A-Incremental	C-Runoff Coef.	AxC-Incremental	AxC Cumulative	Tc (MIN.)	I-Rainfall Int. (in./hr)	Qp-Peak Runoff (cfs)	Pipe/Box Length (FT.)	Slope (%)	Pipe/Box Size (IN.)	Capacity (FULL) (cfs)	Velocity (Design) (fps)	Pipe Travel Time(min)	
Inlet #1-3	MH #1-2	0.11	0.99	0.10	0.10	6.0	5.60	0.59	50	1%	12" HDPE	3.87	4.93	0.17	GOOD
MH #1-2	MH #1-1	0	0.99	0.00	0.10	6.0	5.60	0.59	34	1%	12" HDPE	3.87	4.93	0.11	GOOD
Inlet #1-4	MH #1-1	0.051	0.99	0.05	0.16	6.0	5.60	0.87	55	1%	12" HDPE	3.87	4.93	0.19	GOOD
MH #1-1	EX. INLET	0	0.99	0.00	0.16	6.0	5.60	0.87	25	1%	12" HDPE	3.87	4.93	0.08	GOOD



SOIL TESTING RESULTS

SOIL TESTING WAS PERFORMED ON JANUARY 8, 2025 BY JOHNSON SOILS COMPANY.

TEST PIT #1 (TP-1) – ELEVATION: 631±

0'-0" – 0'-4" TOPSOIL / GRASS
0'-4" – 4'-0" BROWN CLAYEY SOIL

NO GROUNDWATER OBSERVED
BEDROCK OBSERVED AT 4'-0"
SAMPLE COLLECTED AT 4'-0"

THE SOIL PERMEABILITY RATING IS K-1 (0.2 TO 0.6 IN/HR).

TEST PIT #2 (TP-2) – ELEVATION: 632±

0'-0" – 0'-4" TOPSOIL / GRASS
0'-4" – 5'-6" DARK BROWN CLAYEY SOIL

NO GROUNDWATER OBSERVED
BEDROCK OBSERVED AT 5'-6"
SAMPLE COLLECTED AT 5'-6"

THE SOIL PERMEABILITY RATING IS K-1 (0.2 TO 0.6 IN/HR).

TEST PIT #3 (TP-3) – ELEVATION: 631±

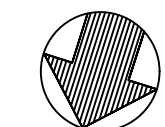
0'-0" – 0'-4" TOPSOIL / GRASS
0'-4" – 4'-0" DARK BROWN CLAYEY SOIL

NO GROUNDWATER OBSERVED
BEDROCK OBSERVED AT 4'-0"
SAMPLE COLLECTED AT 4'-0"

THE SOIL PERMEABILITY RATING IS K-1 (0.2 TO 0.6 IN/HR).



REV	DESCRIPTION	DATE



1 INCH = 20 FT.

CHECKED BY: SPD

DRAFTED BY: LCD



PREPARED FOR
CHIT CHAT DINER
410 EAGLE ROCK AVENUE
LOT 1.01, BLOCK 109
LOT 1.05, BLOCK 111
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

TITLE:
TEST PIT LOCATIONS
AND SOIL
PERMEABILITY MAP

PROJECT #:

24-085

SHEET:

FIG-2



66 Glen Avenue
Glen Rock, NJ 07452
Telephone: 201-301-1045
Fax: 201-857-8002
Email: info@johnsonsoils.com

January 13, 2025

PETRY ENGINEERING, LLC
155 Passaic Avenue, Suite 350
Fairfield, NJ 07004

Re: 410 Eagle Rock Ave.
West Orange, NJ
JSC Job #25-026

Dear Sir:

Following are the test results for the sample received on January 8, 2025. The hydrometer analysis was done accordingly to ASTM-D-422 as per N.J.A.C. 7:9A-6.3 (a).

Sample	% Sand	% Silt	% Clay	Fine And Very Fine Sand (% of Total Sand Sample)	% Coarse Fragments	Permeability Rating
TP-1	54	32	14	52	34	K-1**
TP-2	50	34	16	58	50	K-1**
TP-3	55	31	14	55	48	K-1**

SOIL PERMEABILITY RATING IS FROM THE SOIL PERMEABILITY/TEXTURAL TRIANGLE. Based on the average textural analysis, the soil permeability rating for

TP-1 is K-1** (0.2-0.6 in/hr.)

TP-2 is K-1** (0.2-0.6 in/hr.)

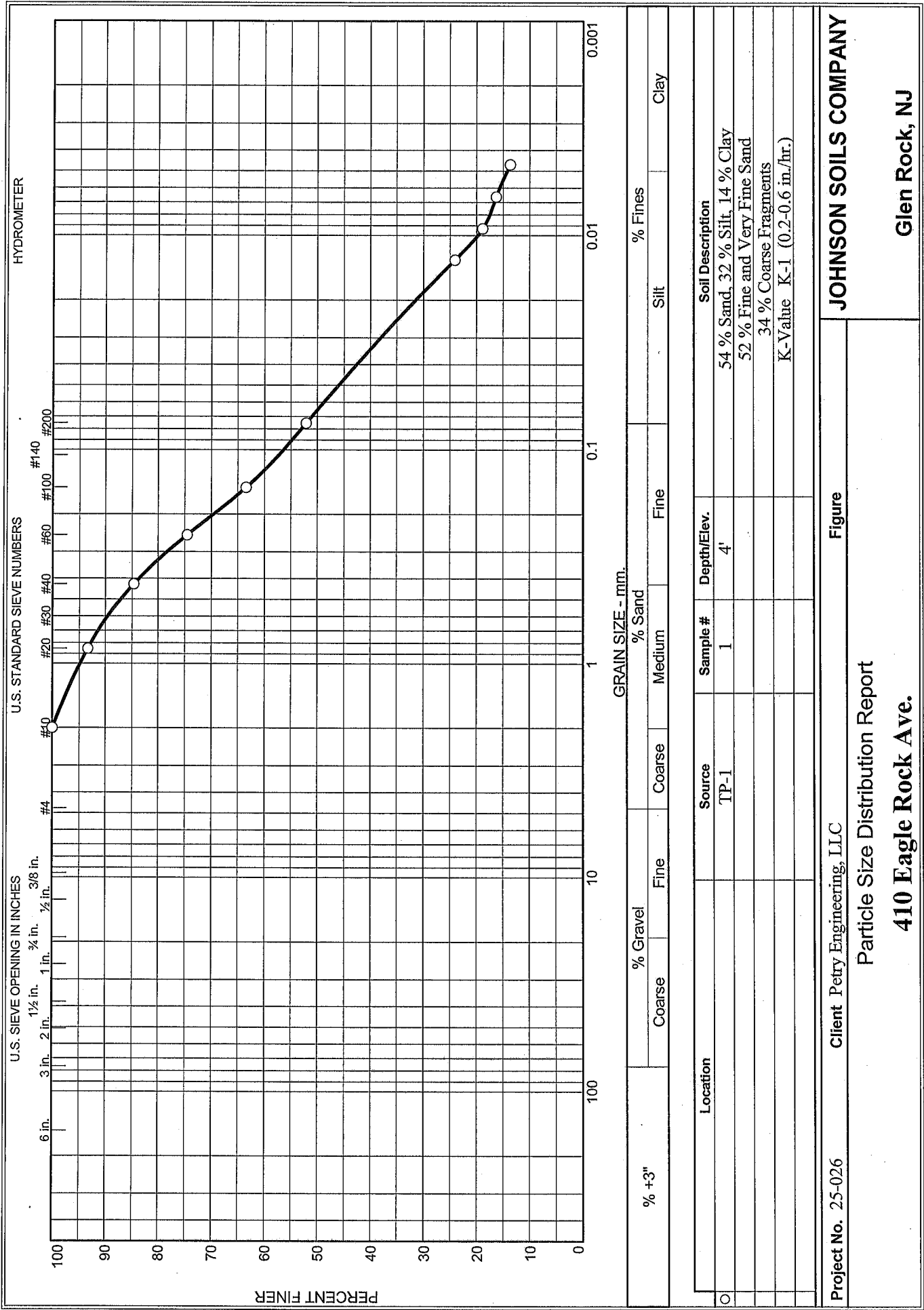
TP-3 is K-1** (0.2-0.6 in/hr.)

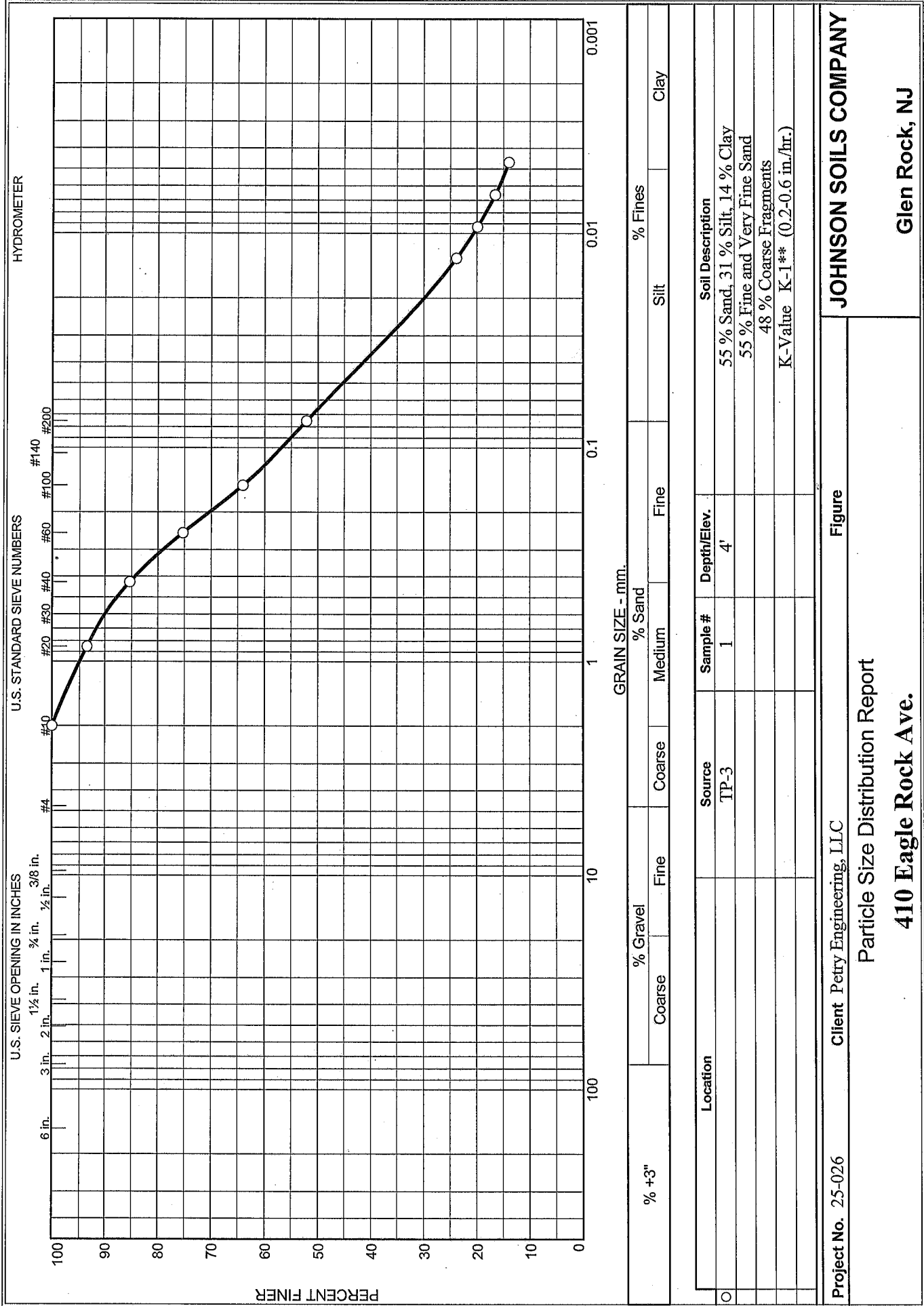
** Please note the permeability rating has been adjusted to the next slowest class due to the high percentage of fine and very fine SAND as per Chapter 9A Standards for Individual Subsurface Sewage Disposal Systems 7:9A-6.3 (h)2.

Very truly yours,
JOHNSON SOILS COMPANY

Lisa V. Mahle-Greco, P.E.
Engineering Manager
NJ Lic. No. 43197

CA





Tested By: DD

Checked By: LVMG