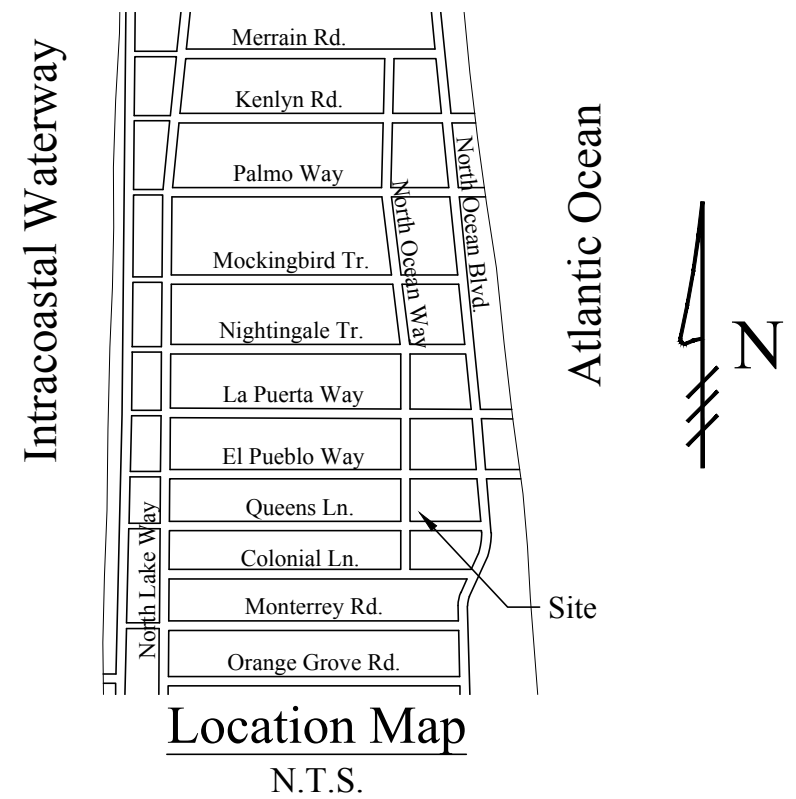
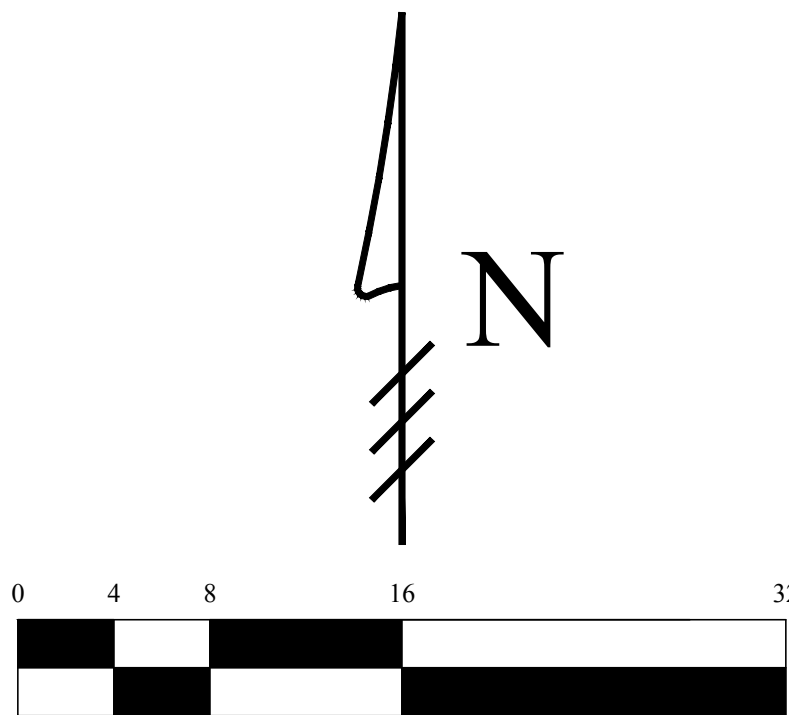


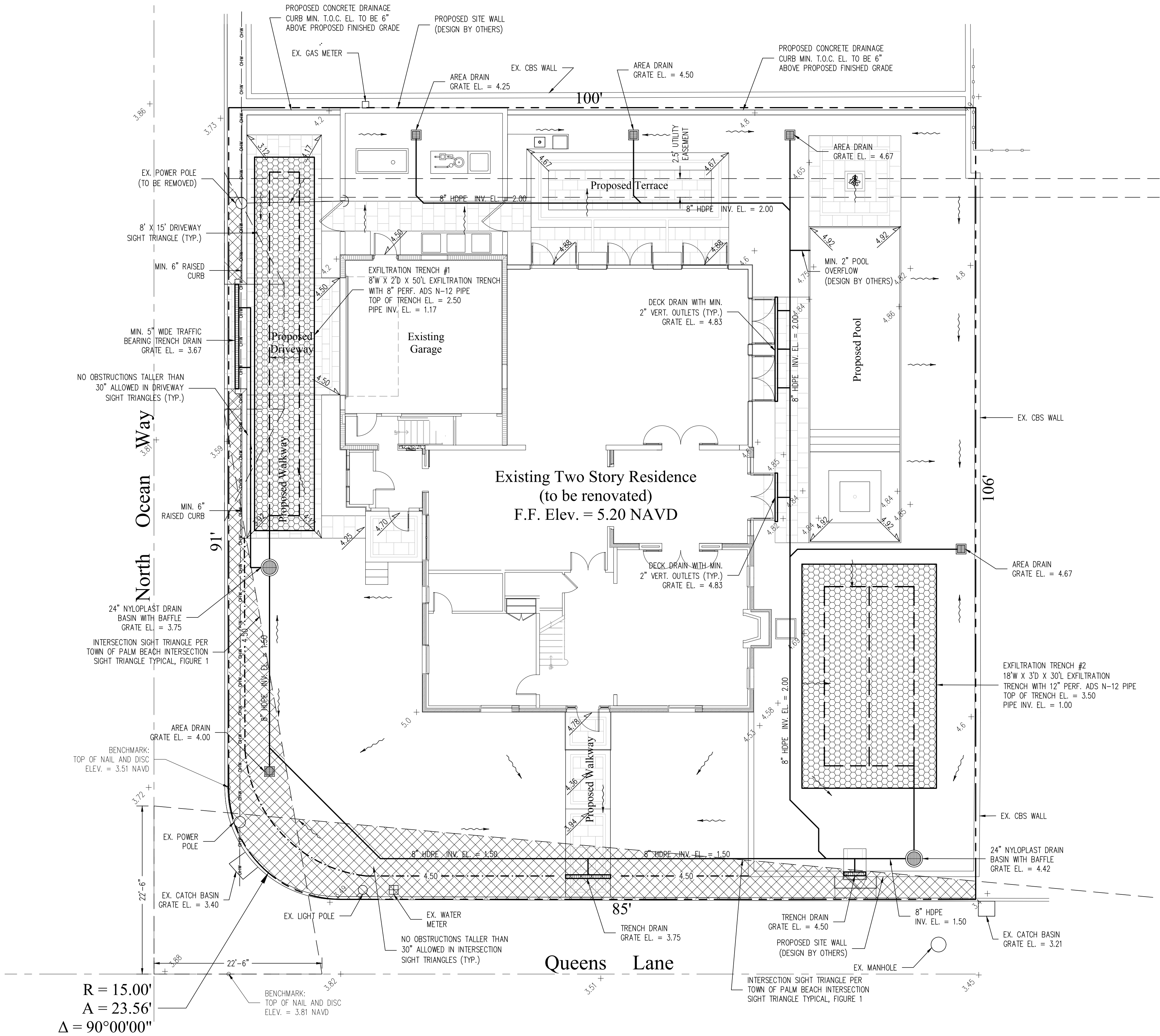


Legend

- EXISTING ELEVATION PER WALLACE SURVEYING CORP. (NAVD-88)
- PROPOSED ELEVATION (NAVD-88)
- PROPOSED ELEVATION CONTOUR (NAVD-88)
- FLOW DIRECTION
- EXFILTRATION TRENCH
- AREA DRAIN
- 24" NYLOPLAST DRAIN BASIN WITH BAFFLE



Scale: 1/8" = 1'-0"



STORMWATER RETENTION CALCULATIONS

A. SITE INFORMATION

Total Property Area = 10,552 sq.ft.

Drainage Area Impervious Surface = 6,805 sq.ft.

Drainage Area Pervious Surface = 4,747 sq.ft.

B. ESTIMATED STORMWATER RETENTION VOLUME

The retention volume is estimated using the Rational Method (Q=CIA)

where:

C = 1.0 (impervious surface)

C = 0.2 (pervious surface)

i = 2 in/hr

Impervious Surface Runoff Volume:
1.0 x 2 in/hr x 6,805 sq.ft. x 1 ft./12 in. = 968 cu.ft.

Pervious Runoff Volume:
0.2 x 2 in/hr x 4,747 sq.ft. x 1 ft./12 in. = 159 cu.ft.

Total Volume to be Retained = 1,127 cu.ft.

C. PROPOSED EXFILTRATION TRENCH SIZING

Exfiltration Trench #1

L = Total Length of Trench Provided = 50 ft
W = Trench Width = 8 ft
K = Hydraulic Conductivity = 0.00005 cfs/sq.ft./ft. of head
H2 = Depth to Water Table = 2.17 ft
DU = Un-Saturated Trench Depth = 1.00 ft
DS = Saturated Trench Depth = 1.00 ft

V = Volume Treated = 429 cu.ft.

Exfiltration Trench #2

L = Total Length of Trench Provided = 30 ft
W = Trench Width = 18 ft
K = Hydraulic Conductivity = 0.00005 cfs/sq.ft./ft. of head
H2 = Depth to Water Table = 2.17 ft
DU = Un-Saturated Trench Depth = 2.00 ft
DS = Saturated Trench Depth = 1.00 ft

V = Volume Treated = 806 cu.ft.

Total Volume Retained in Exfiltration Trenches = 1,235 cu.ft.

Notes:

- Exfiltration trenches and storm piping to be protected from roots with a root barrier.
- Roof drain downspouts are to be connected to the proposed drainage system. Contractor to provide engineer with downspout locations prior to installation of drainage system.
- Exfiltration trench design uses an assumed value of hydraulic conductivity. Client may obtain a site specific test for hydraulic conductivity prior to exfiltration trench installation.
- Contractor shall mill and overlay all roadway cuts a minimum of 50 ft. on either side of the excavation the entire width of each affected lane.
- Contractor is responsible for installing and maintaining erosion control measures during construction.
- Video inspection of storm drainage system required prior to installation of sod.

This item has been electronically signed and sealed by Chad M. Gruber on the date adjacent to the seal using a SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.

Plan Background from Hardscape Plan by
Environmental Design Group Received 9/1/22

HSB-22-015

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