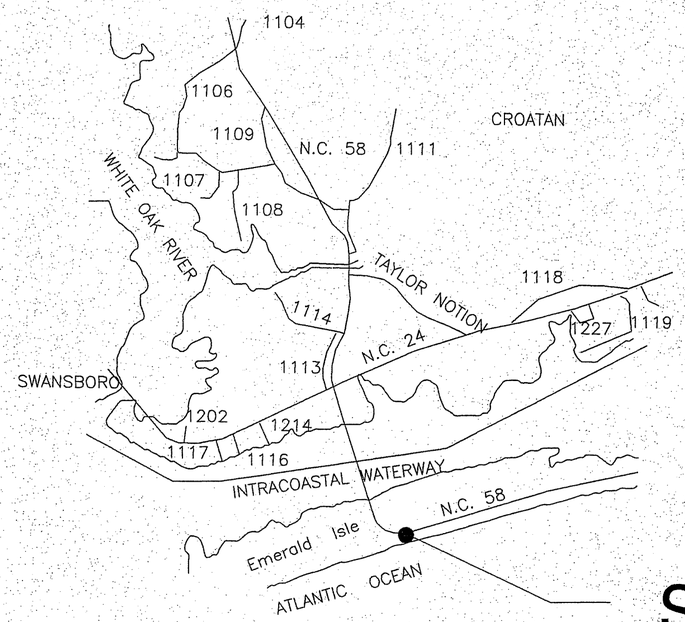
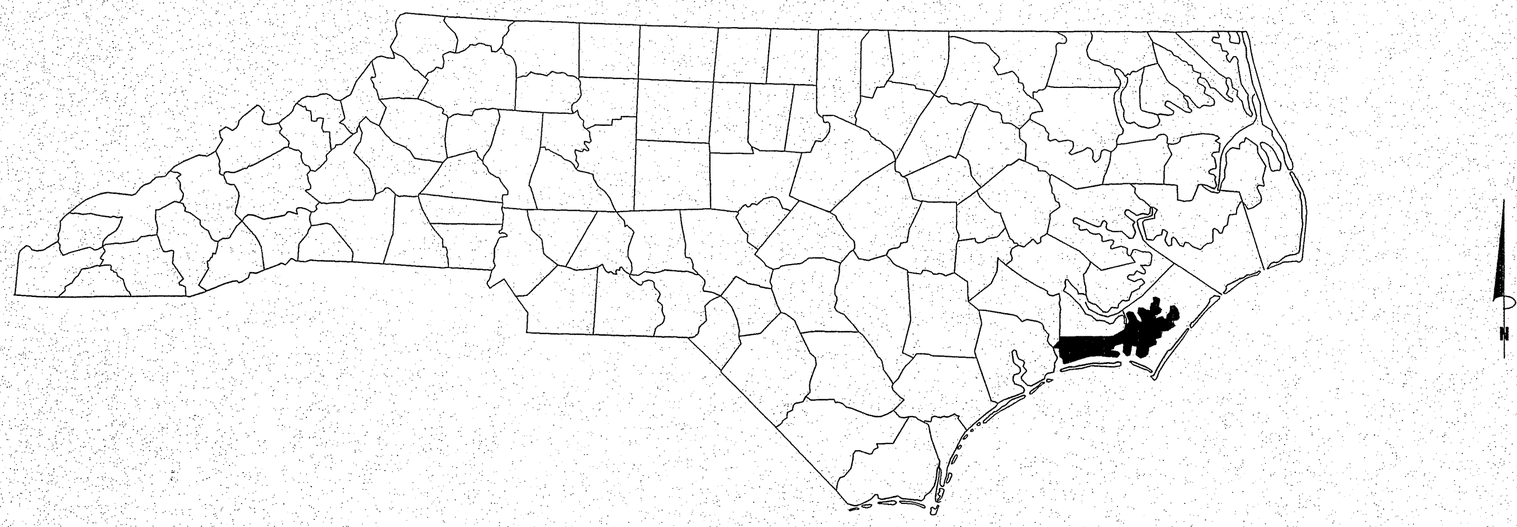
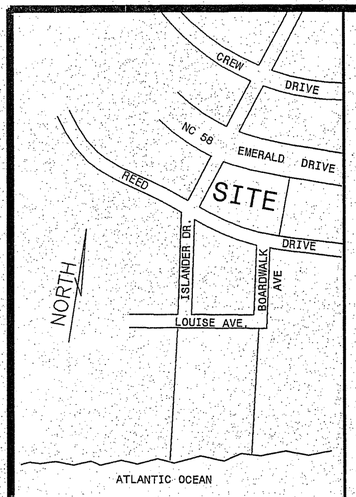
INDEX

Sheet 1	Cover Sheet
Sheet 2	Site Plan
Sheet 3	Utility Plan
Sheet 4	Stormwater Plan
Sheet 5	Grading Plan and Lighting Plan

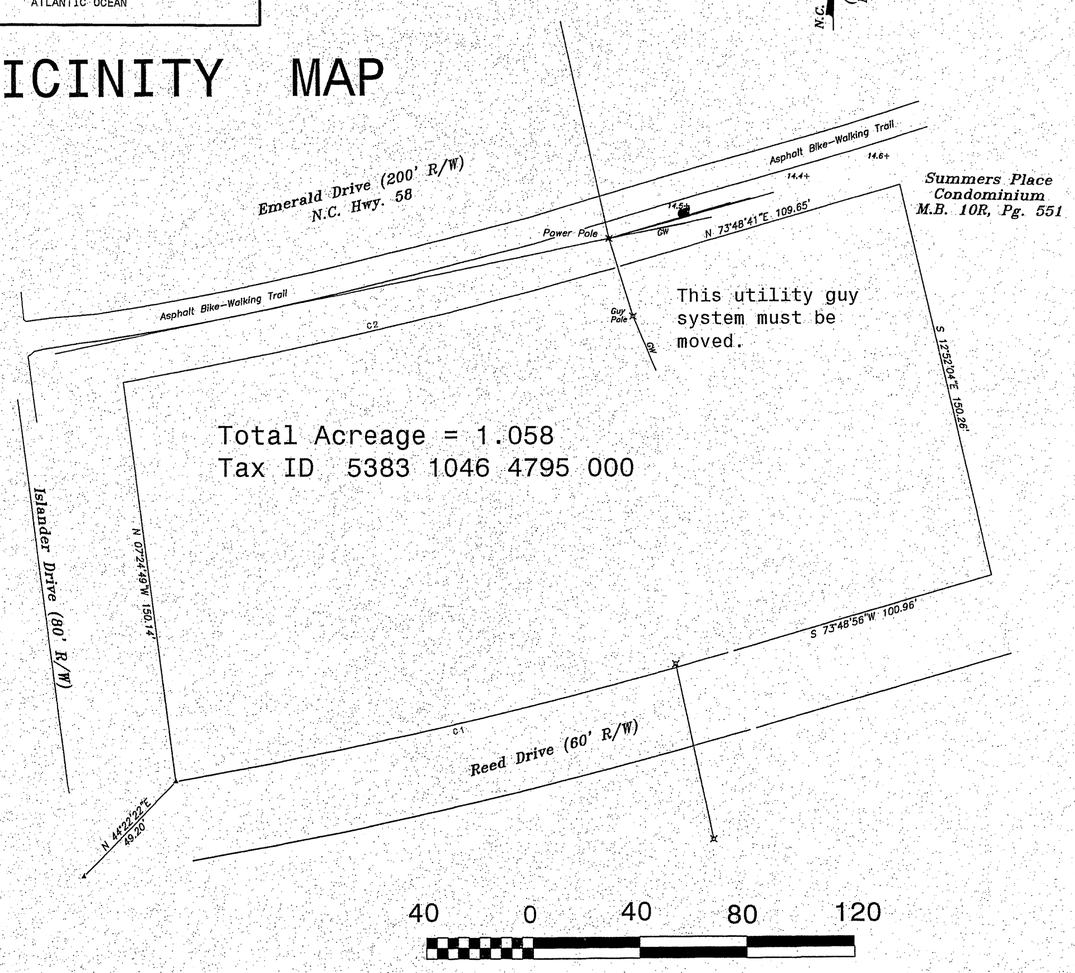


SITE

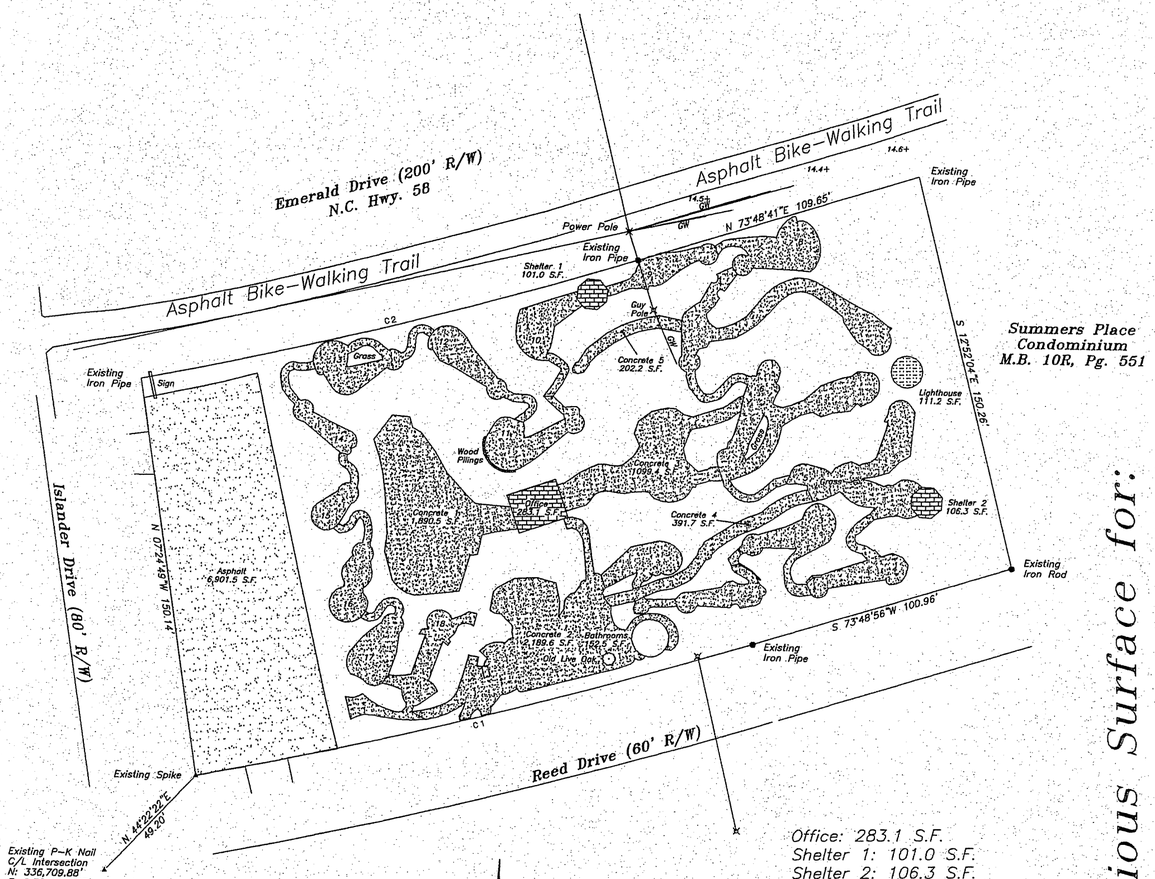




VICINITY MAP

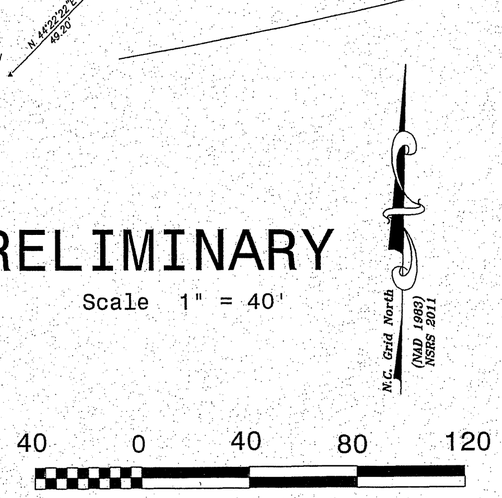


Total Acreage = 1.058
Tax ID 5383 1046 4795 000



PRELIMINARY

Scale 1" = 40'



Survey of Existing Impervious Surface for:

Office: 283.1 S.F.
Shelter 1: 101.0 S.F.
Shelter 2: 106.3 S.F.
Lighthouse: 111.2 S.F.
Asphalt: 6,901.5 S.F.
Bathrooms: 152.5 S.F.

Concrete 1: 1,890.5 S.F.
Concrete 2: 2,189.6 S.F.
Concrete 3: 1,099.4 S.F.
Concrete 4: 391.7 S.F.
Concrete 5: 202.2 S.F.

Hole 1: 311.8 S.F.
Hole 2: 340.8 S.F.
Hole 3: 442.3 S.F.
Hole 4: 376.7 S.F.
Hole 5: 833.9 S.F.
Hole 6: 984.5 S.F.
Hole 7: 915.1 S.F.
Hole 8: 477.3 S.F.
Hole 9: 297.5 S.F.
Hole 10: 390.9 S.F.
Hole 11: 468.6 S,F.
Hole 12: 378.8 S.F.
Hole 13: 444.5 S.F.
Hole 14: 257.9 S.F.
Hole 15: 214.8 S.F.
Hole 16: 370.5 S.F.
Hole 17: 400.8 S.F.
Hole 18: 509.7 S.F.

Total Impervious: 21,845.4 S.F.

OWNER

Mr. and Mrs. Larry Spell
PO Box 4118
Emerald Isle, N.C. 28594

ARCHITECT

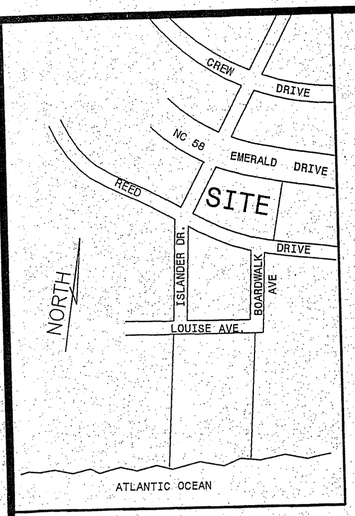
Tom Murphy, AIA
Olive Architecture
436 N. Harrington Street
Raleigh, N.C. 27603

ENGINEER

John McLean, P.E.
400 Taylor Notion Road
Cape Carteret, N.C. 28584

SURVEYOR

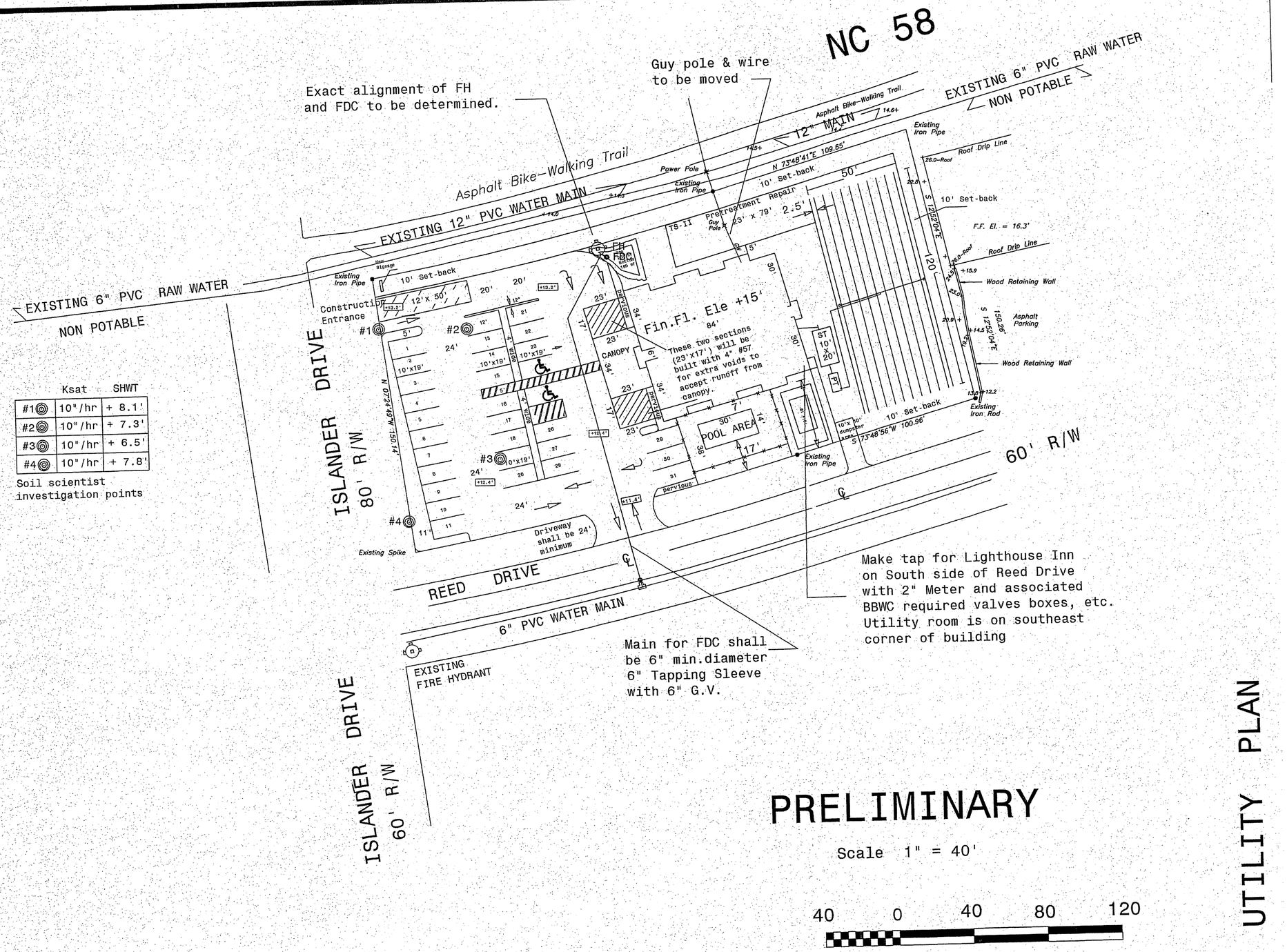
Alan Bell, PLS
Bell & Phillips Surveying, PLLC
604 E Cedar Point Boulevard
Cedar Point, N.C. 28584



VICINITY MAP

	Ksat	SHWT
#1	10"/hr	+ 8.1'
#2	10"/hr	+ 7.3'
#3	10"/hr	+ 6.5'
#4	10"/hr	+ 7.8'

Soil scientist investigation points



PRELIMINARY

Scale 1" = 40'

40 0 40 80 120

UTILITY PLAN

WATER SUPPLIER

Seola Hill, Executive Director
Bogue Banks Water Corp.
P.O.Box 4009
Emerald Isle, N.C. 28594
252-354-3307

ELECTRIC SUPPLIER

Jake Joplin, CEO
Carteret Craven EMC
1300 NC 24
Newport, N.C. 28570
252-247-3107

WASTEWATER PLAN

Daniel Allen, RS
Environmental Health Div.
Carteret County Health Dept.
3820-A Bridges Street
Morehead City, N.C. 28557
252-728-8499

PLANT OPERATOR

Dan Fortin
Fortin Contract Services
1141 Cedar Point Blvd.
Cedar Point, N.C. 28584
252-393-8720

Check List

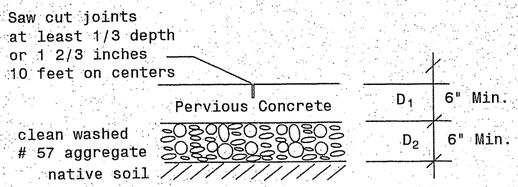
1. Description and Size : pervious pavement, 17,000 sq. ft.
2. Contaminated Soils : N/A
3. Side Slopes: In all cases, no steeper than 3:1
4. Erosion Protection : See sod explaination for sides slopes
5. Excess Flows : Only the area of rainfall on the portico requires extra depth of storage in # 57 base. There is presently an offsite flow of 6,900 SF from an existing parking lot on to Reed Drive. There will be minor off site flow after this plan is implemented.
6. Dewatering : N/A
7. Cleanup after Construction : Stormwater Control Measures during construction shall be properly cleanedout before site is completed.
8. Maintenance Access : a.Min Width = 10'
   b.Sideslopes = 3:1
   c.Extend to R/Ws
9. Easements for access to infiltration basins shall be recorded in Reg. of Deeds or on a recorded map.
10. Single Family Lots : N/A
11. Operations and Maintenance Agreement :
12. Pervious Concrete will be in accordance with ACI 522.
13. Pervious Concrete flows routinely exceed 600 - 1200"/hr. according to National Ready Mix Concrete Association Engineer, Kenneth M. Justice, PE, LEED AP

	Ksat	SHWT
#1	10"/hr	+ 8.1'
#2	10"/hr	+ 7.3'
#3	10"/hr	+ 7.3'
#4	10"/hr	+ 7.8'

Pervious Pavement Notes:

All concrete pavement shall meet minimum requirements of ACI 5521.
There shall be 6" Pervious Pavement and 6" of clean washed # 57 aggregate below, all graded properly.
The contractor and the concrete plant shall be certified to deliver and install the pervious concrete.

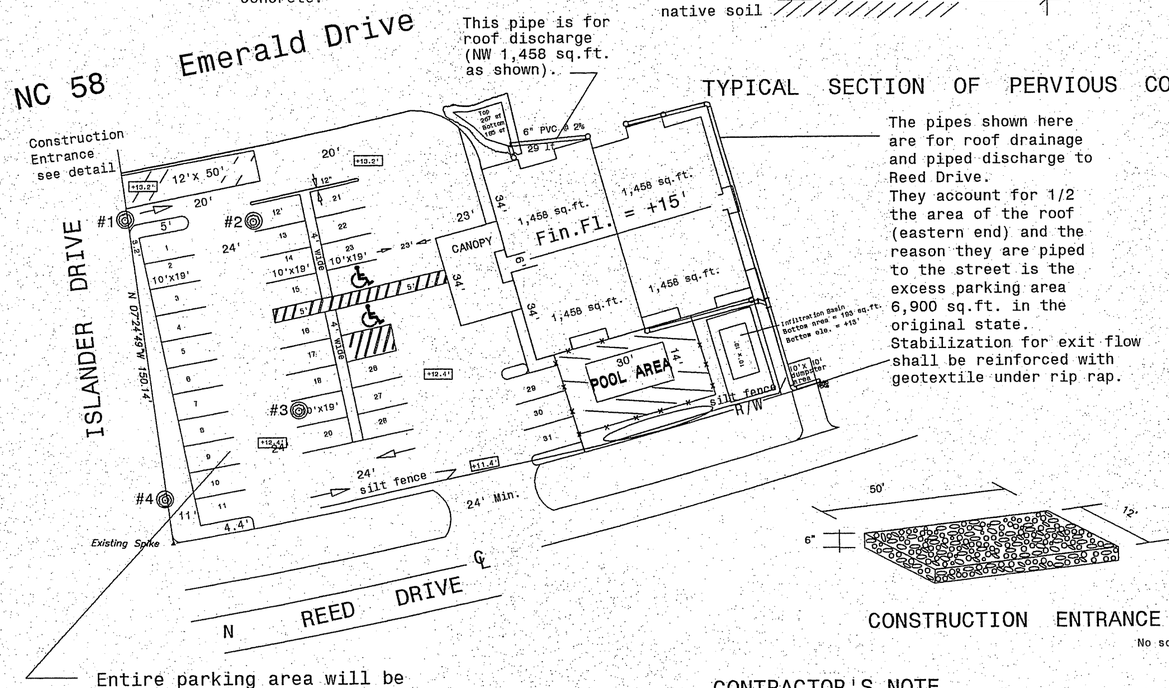
PERVIOUS PAVEMENT



VOIDS CALCULATIONS

6" x .2 = 1.2"/hr (pervious conc.)
6" x .4 = 2.4"/hr
Total = 3.6"/hr

Assumptions
Use .2 voids for Conc.
Use .4 voids for #57



TYPICAL SECTION OF PERVIOUS CONCRETE

NOT TO SCALE

The pipes shown here are for roof drainage and piped discharge to Reed Drive.
They account for 1/2 the area of the roof (eastern end) and the reason they are piped to the street is the excess parking area 6,900 sq.ft. in the original state.
Stabilization for exit flow shall be reinforced with geotextile under rip rap.

CONSTRUCTION ENTRANCE DETAIL

No scale

Entire parking area will be constructed of pervious concrete.

The area UNDER the canopy shall be solid (non pervious) concrete.

SAMPLE CALCULATIONS (BY COMPUTER)

Entire parking lot =	18,227.97 sq. ft.
deduct canopy area =	824.60 sq. ft.
deduct 4' wide planted	202.94 sq. ft.
deduct North "tee"	200.00 sq. ft.
Total =	17,000.41 sq. ft.

CONTRACTOR'S NOTE

1. All overburden shall be removed from site and disposed of in an approved location.
2. Silt fence shall be erected to prevent off-site contamination.
3. No burning is permitted on site.
4. Install Construction Entrance as detailed
5. All areas shall be graded as shown to provide for site preparation.
7. Septic System shall be installed in accordance with approved DEH plans.
8. Infiltration sites will be constructed as noted with sideslopes sodded so only areas in bottom may infiltrate into native sandy soil.
9. Site is above 1 acre, but this project will disturb less than an acre.

O & M for Pervious Concrete

ACTIVITY	SCHEDULE
Avoid sealing by using tar type materials, or any other repaving impervious materials.	N/A
Visually inspect to : ensure surface is clean of bebris and clean of all sediments,	Monthly
Maintain upland and adjacent grassy areas. Seed upland bare areas. Keep pervious pavement surface free of sediment by blowing, sweeping or vacuuming. Water flow carrying debris toward pervious pavement should be diverted.	As Needed
Inspect for damage/spalling	Annually
Owner hereby grants ingress, egress and regress permission to observe, monitor, maintain and repair the SCM.	

I, _____ owner, do hereby certify that all stormwater improvements will be properly constructed in accordance with this plan.

I, _____ owner and I, _____, P.E. do hereby certify the proposed improvements have been properly constructed in accordance with this plan.

Office: 283.1 S.F.
Shelter 1: 101.0 S.F.
Shelter 2: 106.3 S.F.
Lighthouse: 111.2 S.F.
Asphalt: 6,901.5 S.F.
Bathrooms: 152.5 S.F.

Concrete 1: 1,890.5 S.F.
Concrete 2: 2,189.6 S.F.
Concrete 3: 1,099.4 S.F.
Concrete 4: 391.7 S.F.
Concrete 5: 202.2 S.F.

Hole 1: 311.8 S.F.
Hole 2: 340.8 S.F.
Hole 3: 442.3 S.F.
Hole 4: 376.7 S.F.
Hole 5: 833.9 S.F.
Hole 6: 984.5 S.F.
Hole 7: 915.1 S.F.
Hole 8: 477.3 S.F.
Hole 9: 297.5 S.F.
Hole 10: 390.9 S.F.
Hole 11: 468.6 S.F.
Hole 12: 378.8 S.F.
Hole 13: 444.5 S.F.
Hole 14: 257.9 S.F.
Hole 15: 214.8 S.F.
Hole 16: 370.5 S.F.
Hole 17: 400.8 S.F.
Hole 18: 509.7 S.F.

Total Impervious: 21,845.4 S.F.

These totals are impervious as determined by Alan Bell, PLS in original condition. It includes, buildings, putt putt surfaces, parking lot, etc.

STORMWATER PLAN

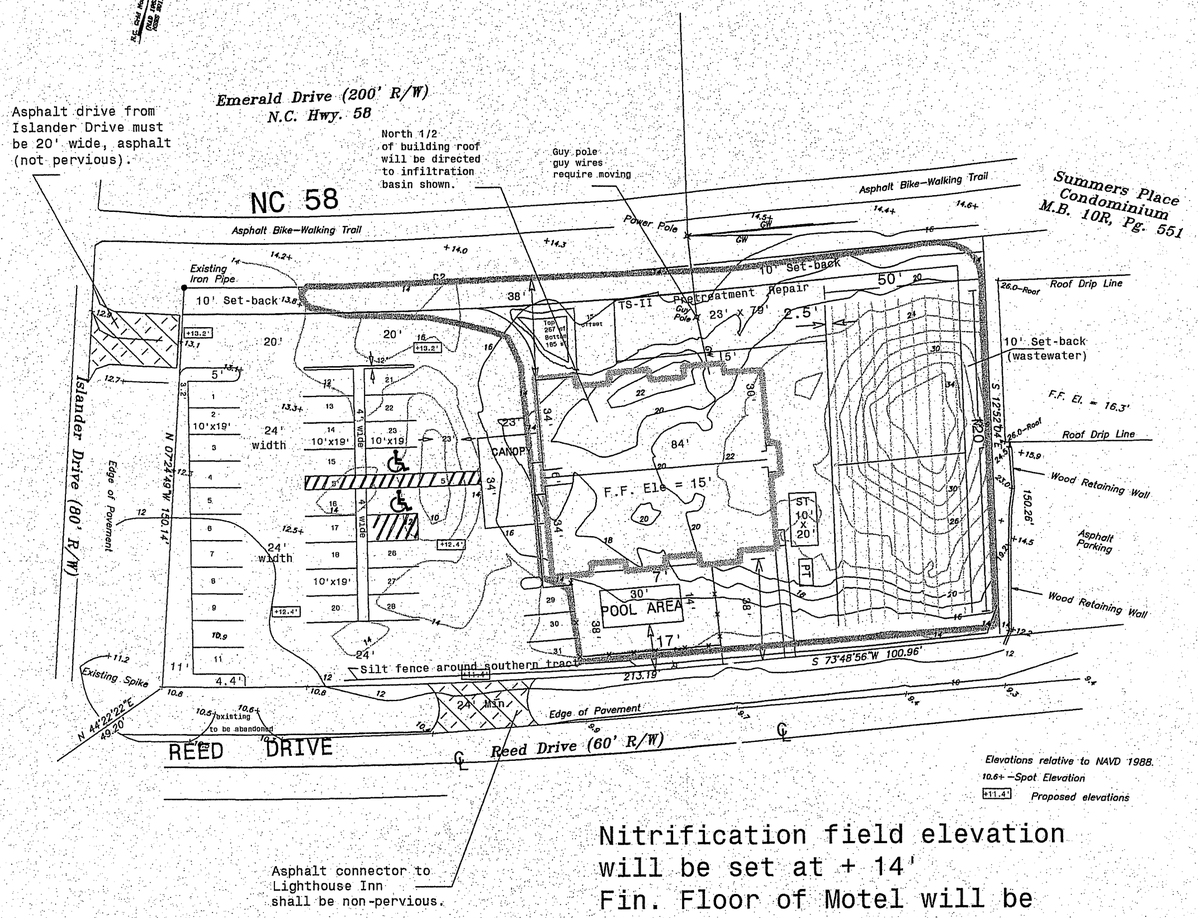
PRELIMINARY

Scale 1" = 40'

40 0 40 80 120

REVISIONS

Curve	Radius	Length	Chord	Chord Bear.
C1	1921.02'	213.30'	213.19'	S 76°59'48" W
C2	1771.02'	190.34'	190.25'	N 76°53'40" E



Asphalt connector to Lighthouse Inn shall be non-pervious.

Nitrification field elevation will be set at + 14'
Fin. Floor of Motel will be set at +15'

PT Pump Tank

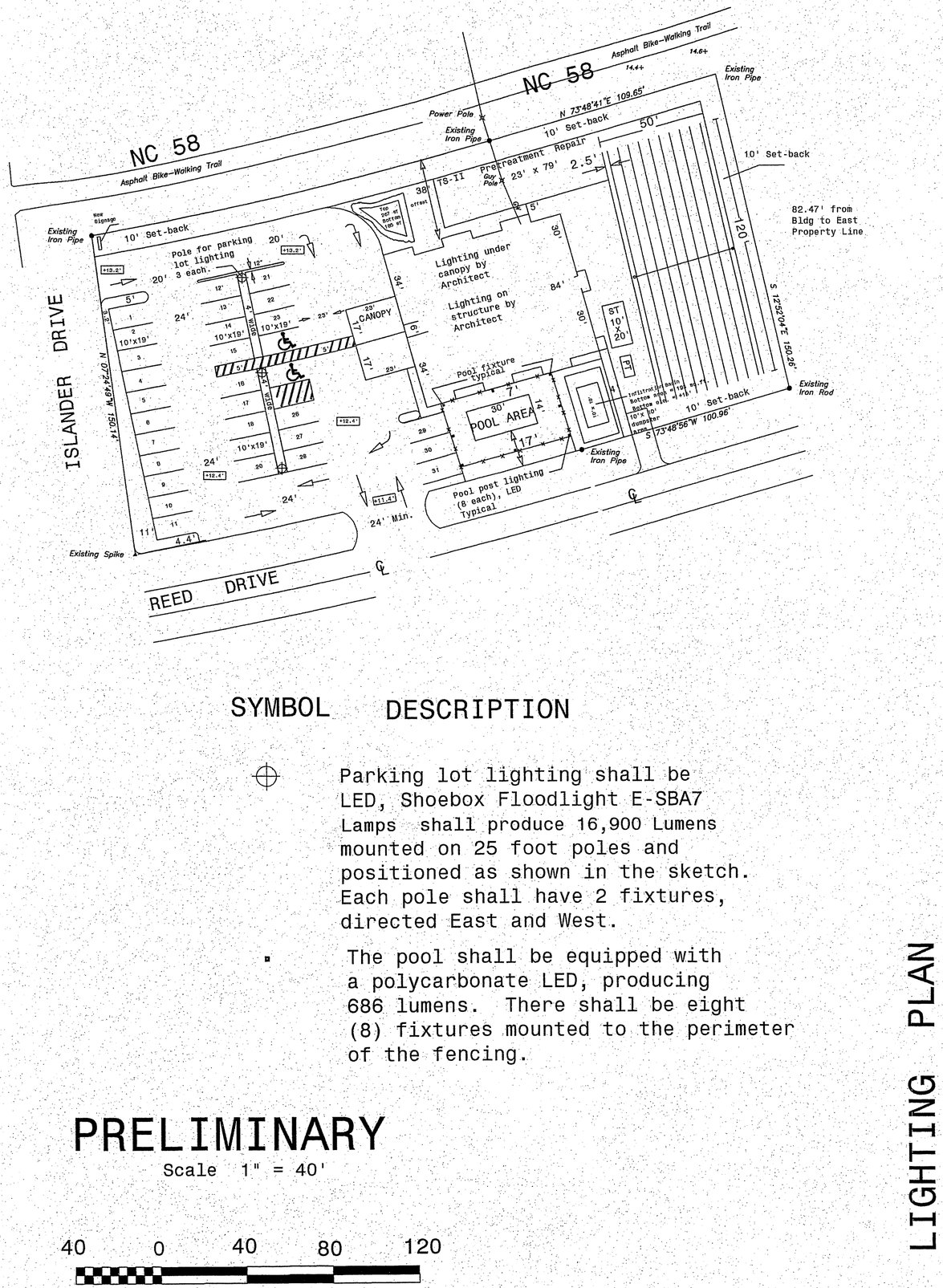
ST 10' x 20' Septic Tank

PRELIMINARY

Scale 1" = 40'

40 0 40 80 120

GRADING PLAN



SYMBOL	DESCRIPTION
⊕	Parking lot lighting shall be LED, Shoebox Floodlight E-SBA7 Lamps shall produce 16,900 Lumens mounted on 25 foot poles and positioned as shown in the sketch. Each pole shall have 2 fixtures, directed East and West.
▪	The pool shall be equipped with a polycarbonate LED, producing 686 lumens. There shall be eight (8) fixtures mounted to the perimeter of the fencing.

PRELIMINARY

Scale 1" = 40'

40 0 40 80 120

LIGHTING PLAN