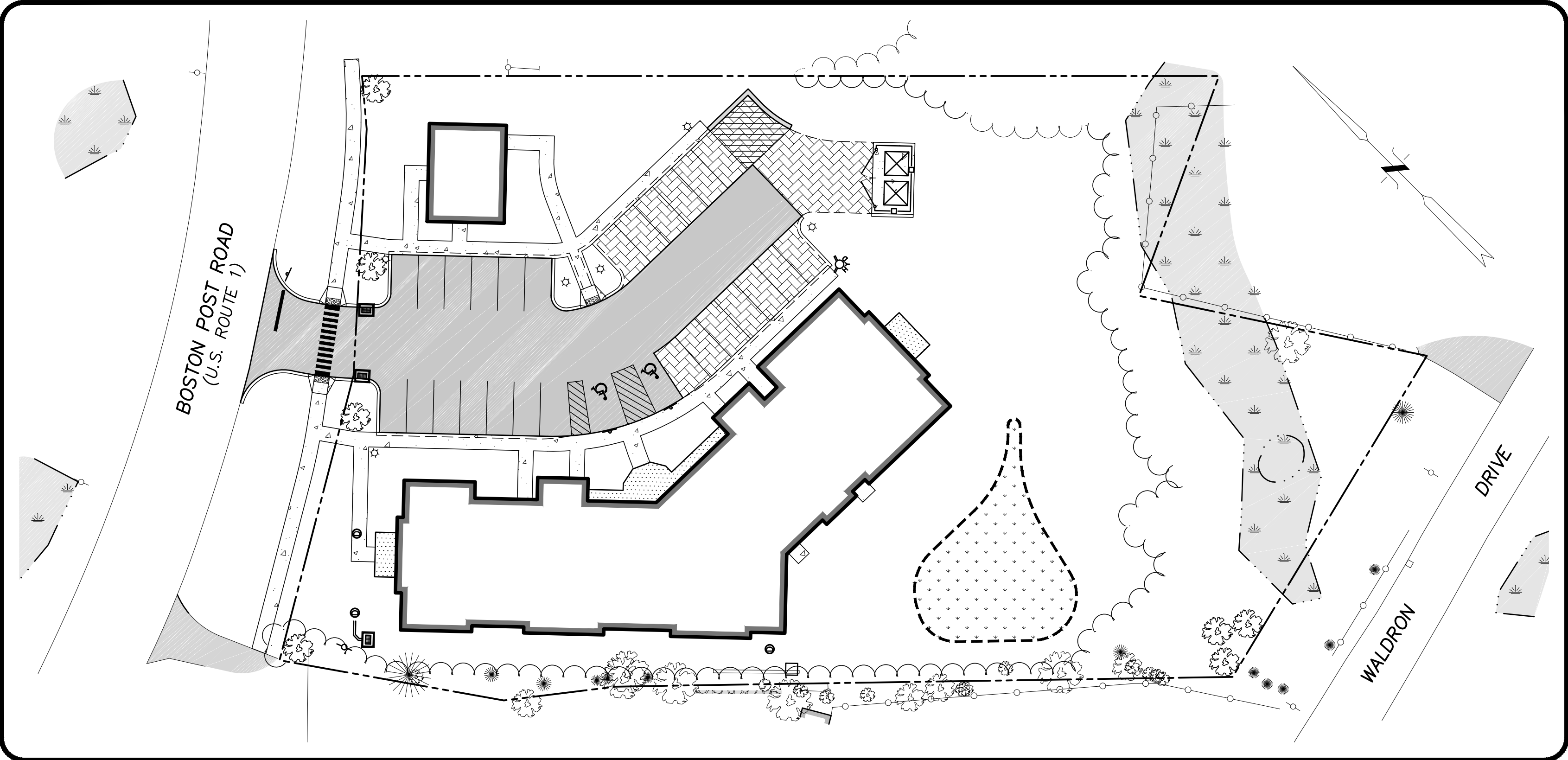


SETTLER'S PLACE - A PLANNED RESIDENTIAL DEVELOPMENT  
PREPARED FOR BOCCA-DES PROPERTIES, LLC  
1935 BOSTON POST ROAD -- MAP 180 LOT 114  
WESTBROOK, CONNECTICUT

LEGEND	
	EXISTING PROPERTY/STREET LINE
	BUILDING SETBACK LINE
	OPEN SPACE DELINEATION LINE
	FLOOD ZONE
	EXISTING OVERHEAD WIRES
	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING DRAINAGE LINE
	PROPOSED DRAINAGE LINE
	EXISTING BUILDING TO BE REMOVED
	PROPOSED BUILDING
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SILT FENCE
	PROPOSED GAS LINE
	PROPOSED UNDERGROUND ELECTRIC, TELEPHONE & CABLE SERVICES IN SCH. 40 PVC CONDUITS
	PROPOSED ROOF DRAIN
	INLAND WETLAND BOUNDARY
	100' INLAND WETLAND REVIEW AREA
	WETLANDS
	EDGE OF WATER
	TEST PIT LOCATION
	PERC TEST LOCATION
	STANDPIPE LOCATION
	WETLAND FLAG LOCATION
	EXISTING HYDRANT
	EXISTING WATER SHUTOFF
	UTILITY POLE/GUY ANCHOR
	CONCRETE MONUMENT
	IRON PIPE/PIN
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	GRADE TO DRAIN



DRAWING INDEX:

TITLE	DWG. NO.	SHEET NO.
OVERALL SITE PLAN	OSP-1	1 OF 10
COASTAL SITE PLAN FOR SPECIAL PERMIT	CSPSP-1	2 OF 10
GRADING, DRAINAGE, LANDSCAPING & UTILITY PLAN	GDLU-1	3 OF 10
SEPTIC SYSTEM DESIGN PLAN	SSDP-1	4 OF 10
SOIL TEST DATA & SEPTIC DESIGN CRITERIA	ST-1	5 OF 10
SEPTIC SYSTEM X-SECTION & CONSTRUCTION DETAILS	XSCD-1	6 OF 10
EROSION & SEDIMENT CONTROL PLAN	ESCP-1	7 OF 10
E&S DETAILS AND WATER MAIN DETAILS	ESD-1	8 OF 10
CONSTRUCTION DETAILS - 1	CD-1	9 OF 10
CONSTRUCTION DETAILS - 2	CD-2	10 OF 10

#	DATE	DESCRIPTION	BY
4	5/13/19	REVISIONS PER HEALTH DEPARTMENT COMMENTS, MISC.	RG
3	3/26/19	TREES ADDED ALONG WESTERN PROPERTY LINE PER ZC	RG
2	12/18/18	REVISIONS PER ENGINEERING REVIEW COMMENTS	SM
1	11/13/18	GENERAL MINOR REVISIONS	SM
#	DATE	DESCRIPTION	BY

PLANS NOT FOR  
CONSTRUCTION UNTIL  
THIS NOTE IS REMOVED

ORIGINAL PLAN SET DATED 8-29-18  
FOR REVIEW ONLY - NOT FOR CONSTRUCTION

LAND SURVEYOR

ANNINO SURVEY, LLC  
222 OLD BOSTON POST ROAD, SUITE 3  
OLD SAYBROOK, CONNECTICUT 06475

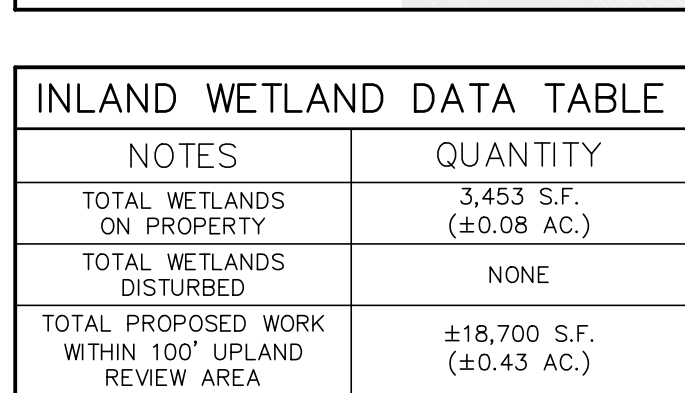
CIVIL ENGINEER



INDIGO LAND DESIGN, LLC  
JOE WREN, P.E.  
40 ELM STREET, 2ND FLOOR  
OLD SAYBROOK, CONNECTICUT 06475

PROPERTY OWNER/APPLICANT

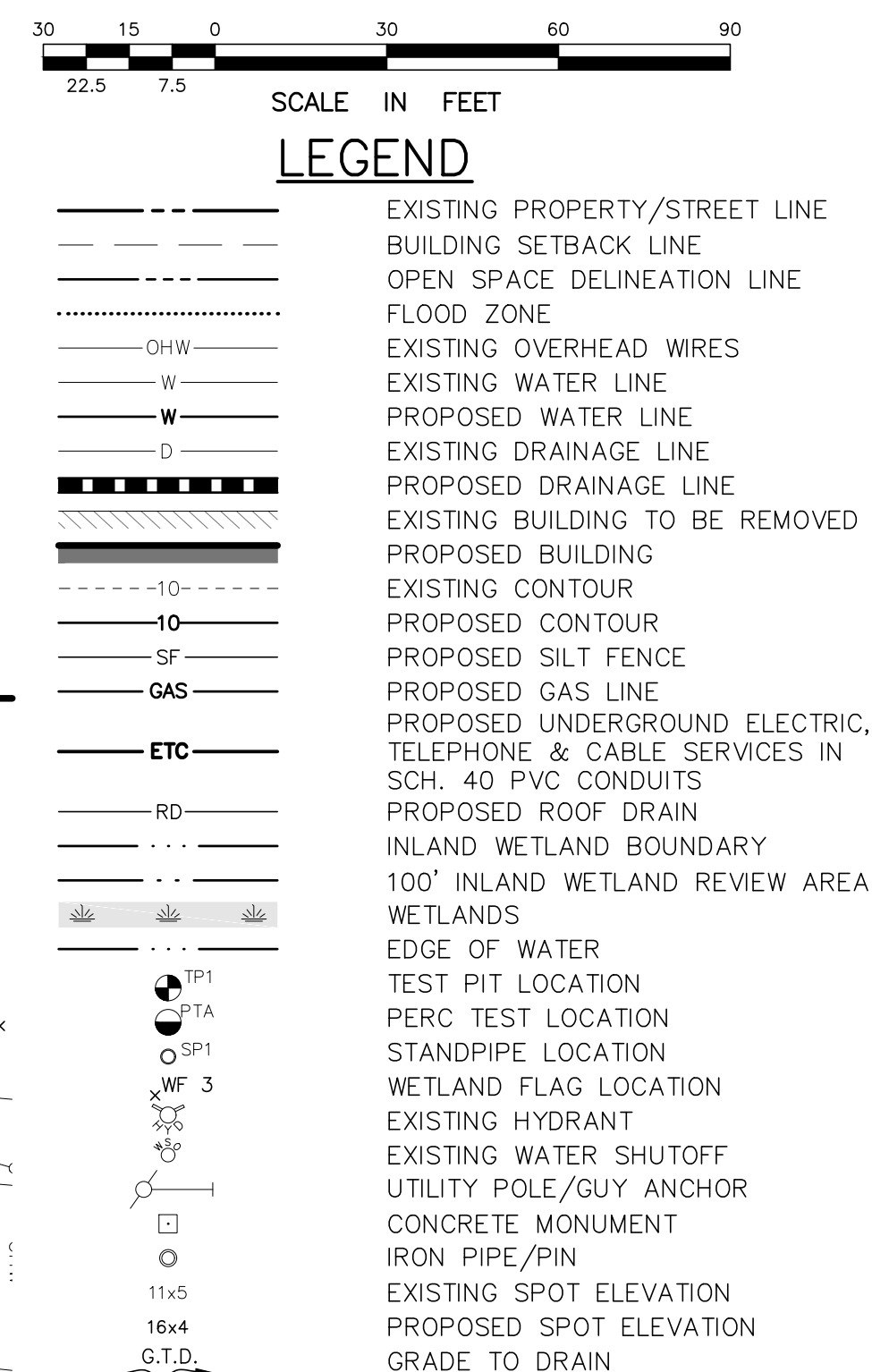
BOCCA-DES PROPERTIES, LLC  
95 MAIN STREET  
NORWALK, CONNECTICUT 06851



INLAND WETLAND DATA TABLE	
NOTES	QUANTITY
TOTAL WETLANDS ON PROPERTY	3,453 S.F. (±0.08 AC.)
TOTAL WETLANDS DISTURBED	NONE
TOTAL PROPOSED WORK WITHIN 100' UPLAND REVIEW AREA	±18,700 S.F. (±0.43 AC.)

1. THIS PLAN WAS COMPILED USING THE FOLLOWING REFERENCE MAPS:
  - A) A CLASS A-2 1-2 SURVEY MAP ENTITLED "PROPERTY/TOPOGRAPHIC SURVEY, LAND OF BOCCA-DEE PROPERTIES, LLC, 1935 BOSTON POST ROAD (U.S. ROUTE 1), WESTBROOK CONNECTICUT, SCALE: 1"=20", DATED: AUGUST 26, 2017 WITH REVISIONS THROUGH APRIL 3, 2018, PREPARED BY ANNINO SURVEY, LLC.
  - B) MAP ENTITLED "SITE PLAN, SETTLERS LANDING, MULTI-FAMILY HOUSING FACILITY, PREPARED FOR 1961 BOSTON POST ROAD, LLC & VISITA VOCATIONAL & LIFE SKILLS CENTER, INC. CHAPMAN BEACH ROAD, WESTBROOK, CT" AND MAP DEPICTING AS-BUILT CONDITIONS", MAP NO. 113 & MAP 180 LOT 174", SCALE: 1"=20", DATED: AUGUST 23, 2016 WITH REVISIONS THROUGH JUNE 22, 2017, PREPARED BY: DONNE-COLLINS ENGINEERING ASSOCIATES, LLC.
2. THE APPLICANT IS BOCCA-DEE PROPERTIES, LLC OF 95 MAIN STREET, NORWALK, CT 06851.
3. THE SUBJECT PARCEL IS IDENTIFIED AS LOT 114 ON TAX ASSESSOR'S MAP 180. THE DEED REFERENCE OF THE PROPERTY IS VOLUME 332 PAGE 565. THE AREA OF THE PARCEL IS 64,244.4 S.F. OR 1.47± ACRES.
4. THE SUBJECT PROPERTY IS LOCATED WITHIN THE 'NCD - NEIGHBORHOOD COMMERCIAL DISTRICT AND PARTIALLY WITHIN THE 'HQR - HIGH DENSITY RESIDENTIAL' DISTRICT. A 'PRO - PLANNED RESIDENTIAL DEVELOPMENT' OUTLINED WAS APPROVED ON THE PARCEL IN 2010. THE PARCEL LIES WITHIN THE COASTAL AREA MANAGEMENT ZONE, THE PARCEL LIES PARTIALLY WITHIN FEMA FLOOD ZONES X AND AE (EL 10) AND THE WESTBROOK FLOOD ORDINANCE ADDS ONE FOOT TO THE FEMA FLOOD ELEVATION TO 11'. THE PROPOSED BUILDINGS AND IMPROVEMENTS ARE LOCATED ENTIRELY WITHIN FLOOD ZONE 'X'.

5. THE APPLICANT IS PROPOSING TO CONSTRUCT A PLANNED RESIDENTIAL DEVELOPMENT WITH AN ACCESSORY OFFICE/STORAGE BUILDING, CONSTRUCT A PRIVATE ACCESS DRIVE AND ASSOCIATED PARKING, INSTALL A NEW CONNECTICUT PUBLIC HEALTH CODE-COMPLIANT SEPTIC SYSTEM WITHIN A 10' WIDE CONCRETE DRIVE, AND A 10' X 18' CONCRETE GALLERIES TO TREAT THE WATER QUALITY VOLUME, AND LANDSCAPING AND OTHER ASSOCIATED IMPROVEMENTS.
6. THE PURPOSE OF THIS PLAN IS FOR REVIEW BY THE WESTBROOK INLAND WETLANDS COMMISSION FOR PROPOSED WORK WITHIN THE 100' UPLAND REVIEW AREA, THE WESTBROOK ZONING COMMISSION FOR A SPECIAL PERMIT APPLICATION FOR A PROPOSED DEVELOPMENT WITHIN THE "PROTECTED" DISTRICT, AND THE WESTBROOK HEALTH DEPARTMENT FOR COMPLIANCE WITH THE CONNECTICUT PUBLIC HEALTH CODE. THIS PROJECT IS CLASSIFIED AS A SEPTIC SYSTEM REPAIR BY THE CONNECTICUT PUBLIC HEALTH CODE AND FALLS UNDER SECTION 19-113-B103 OF THE TECHNICAL STANDARDS.
7. THE PROPERTY IS SERVED BY PUBLIC WATER AND A SUBSURFACE SEWAGE DISPOSAL SYSTEM WITHIN NO KNOWN WELLS OR OTHER DESIGN CONFLICTS WITHIN 75 FEET OF THE PROPOSED SEPTIC SYSTEM.
8. INLAND WETLANDS AND WATERCOURSE LIMITS DELINEATED HEREON WERE DELINEATED BY JOSEPH R. THEROUX, SOIL SCIENTIST ON FEBRUARY 12, 2018 AND LOCATED IN THE FIELD BY ANNINO SURVEY, LLC ON FEBRUARY 16, 2018, APRIL 3, 2018 AND AUGUST 23, 2018.
9. THE ARCHITECTURAL DRAWINGS AND ADDITIONAL SHEETS IN THIS SET FOR ADDITIONAL PROPOSED BUILDING AND SITE INFORMATION.
10. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD-88 DATUM PER REFERENCE MAP 'A'.



DATE: AUGUST 29, 2018	
SCALE: 1"=30'	
DRAWN BY: SM	
CHECKED BY: JW	
DWG. NO.:	OCP-1
SHEET NO.:	1 of 10
JOB. NO.:	2017-384



## GENERAL NOTES:

- THIS PLAN WAS COMPILED USING THE FOLLOWING REFERENCE MAPS:
  - A CLASS A-2 T-2 SURVEY MAP ENTITLED "PROPERTY/TOPOGRAPHIC SURVEY, LAND OF BOCCA-DES PROPERTIES, LLC, 1935 BOSTON POST ROAD (U.S. ROUTE 1), WESTBROOK, CONNECTICUT" SCALE: 1"=20', DATED: AUGUST 26, 2017 WITH REVISIONS THROUGH APRIL 3, 2018, PREPARED BY ANNINO SURVEY, LLC.
  - MAP ENTITLED "SITE PLAN, SETTLERS LANDING, MULTI-FAMILY HOUSING FACILITY, PREPARED FOR 1961 BOSTON POST ROAD, LLC & VISTA VOCATIONAL & LIFE SKILLS CENTER, INC. CHAPMAN BEACH ROAD, WESTBROOK, CT" AND "MAP DEPICTING AS-BUILT CONDITIONS", MAP 180 LOT 113 & 114, MAP 180 LOT 174, SCALE: 1"=20', DATED: AUGUST 23, 2016 WITH REVISIONS THROUGH JUNE 22, 2017, PREPARED BY: DOANE-COLLINS, ENGINEERING ASSOCIATES, LLC.
- THE APPLICANT IS BOCCA-DES PROPERTIES, LLC OF 95 MAIN STREET, NORWALK, CT 06851.
- THE SUBJECT PARCEL IS IDENTIFIED AS LOT 114 ON TAX ASSESSOR'S MAP 180. THE DEED REFERENCE OF THE PROPERTY IS VOLUME 332 PAGE 565. THE AREA OF THE PARCEL IS 64,244± S.F. OR 1.474 ACRES.
- THE SUBJECT PROPERTY IS LOCATED WITHIN THE 'NCD - NEIGHBORHOOD COMMERCIAL DISTRICT' AND PARTIALLY WITHIN THE 'HDR - HIGH DENSITY RESIDENTIAL DISTRICT. A 'PRD - PLANNED RESIDENTIAL DEVELOPMENT' OVERLAY DISTRICT WAS APPROVED ON THE PARCEL IN 2014. THE PARCEL LIES WITHIN THE COASTAL AREA MANAGEMENT ZONE. THE PARCEL LIES PARTIALLY WITHIN FEMA FLOOD ZONES X AND AE (EL. 10) AND THE WESTBROOK FLOOD ORDINANCE ADDS ONE FOOT TO THE FEMA FLOOD ELEVATION TO 11. THE PROPOSED BUILDINGS AND IMPROVEMENTS ARE LOCATED ENTIRELY WITHIN FLOOD ZONE 'X'.
- THE APPLICANT IS PROPOSING TO CONSTRUCT A PLANNED RESIDENTIAL DEVELOPMENT WITH AN ACCESSORY OFFICE/STORAGE BUILDING, CONSTRUCT A PRIVATE ACCESS DRIVE AND ASSOCIATED PARKING, INSTALL A NEW CONNECTICUT PUBLIC HEALTH CODE-COMPLIANT SEPTIC SYSTEM, CONSTRUCT A WATER QUALITY BASIN AND INSTALL (15) 18" CONCRETE GALLERIES TO TREAT THE WATER QUALITY VOLUME, ADD LANDSCAPING AND OTHER ASSOCIATED IMPROVEMENTS.
- THE PURPOSE OF THIS PLAN IS FOR REVIEW BY THE WESTBROOK INLAND WETLANDS COMMISSION FOR PROPOSED WORK WITHIN THE 100' UPLAND REVIEW AREA, THE WESTBROOK ZONING COMMISSION FOR A SPECIAL PERMIT APPLICATION FOR A PROPOSED DEVELOPMENT WITHIN THE 'PRD' OVERLAY DISTRICT, AND THE WESTBROOK HEALTH DEPARTMENT FOR COMPLIANCE WITH THE CONNECTICUT PUBLIC HEALTH CODE. THIS PROJECT IS CLASSIFIED AS A SEPTIC SYSTEM REPAIR BY THE CONNECTICUT PUBLIC HEALTH CODE AND FALLS UNDER SECTION 19-13-B103 OF THE TECHNICAL STANDARDS.
- THE PROPERTY IS SERVED BY PUBLIC WATER AND A SUBSURFACE SEWAGE DISPOSAL SYSTEM. THERE ARE NO KNOWN WELLS OR OTHER DESIGN CONFLICTS WITHIN 75 FEET OF THE PROPOSED SEPTIC SYSTEM.
- INLAND WETLAND AND WATERCOURSE LIMITS DEPICTED HEREON WERE DELINEATED BY JOSEPH R. THEROUX, SOIL SCIENTIST ON FEBRUARY 12, 2018 AND LOCATED IN THE FIELD BY ANNINO SURVEY, LLC ON FEBRUARY 16, 2018, APRIL 3, 2018 AND AUGUST 23, 2018.
- REFER TO ARCHITECTURAL DRAWINGS AND ADDITIONAL SHEETS IN THIS SET FOR ADDITIONAL PROPOSED BUILDING AND SITE INFORMATION.
- ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD-88 DATUM PER REFERENCE MAP 'A'.

## CONSTRUCTION NOTES:

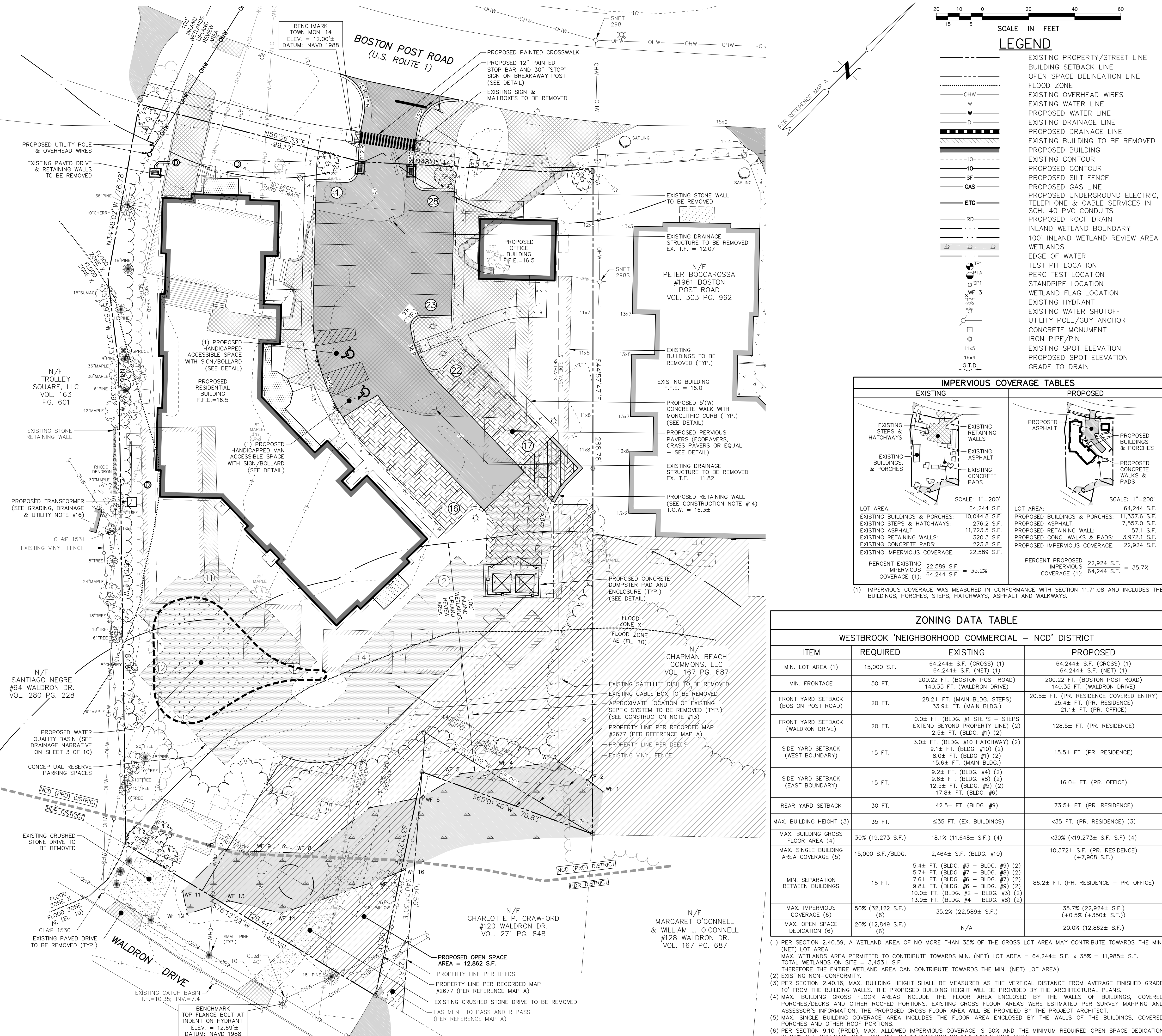
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND INFORMATION PROVIDED BY OTHERS. THEIR ACTUAL LOCATION MAY VARY FROM THOSE INDICATED AND ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 800-922-4455 TO MARK OUT ALL UNDERGROUND UTILITIES A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY. CONTRACTOR SHALL VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE TOWN OF WESTBROOK STANDARDS AND REGULATIONS.
- ALL UTILITIES SHALL BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE TOWN OF WESTBROOK AND THE CUSTODIAL UTILITY COMPANIES. ALL UTILITY TRENCHES SHALL BE NO LESS THAN 5 FEET FROM THE SEPTIC SYSTEM AND SHALL NOT BE BACKFILLED WITH FREE DRAINING MATERIAL. THE EXACT LOCATION OF THE EXISTING WATER MAIN IN WALDRON DRIVE IS UNKNOWN. THE LOCATION OF THE EXISTING WATER SERVICE LINES ARE UNKNOWN. THE CONTRACTOR SHALL LOCATE ALL WATER SERVICE LINES PRIOR TO INSTALLATION OF THE SEPTIC SYSTEM. ANY SEPTIC SYSTEM COMPONENT SHALL BE A MINIMUM OF 10 FEET FROM ANY WATER LINE IN CONFORMANCE WITH ALL STATE AND LOCAL REGULATIONS.
- ALL PROPERTY LINES SHALL BE VERIFIED IN THE FIELD. NO PRIVATE PROPERTY SHALL BE DISTURBED UNLESS PROPER RIGHTS ARE OBTAINED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN, REVIEW TO AND ADHERE TO ALL REQUIREMENTS AND ANY CONDITIONS OF APPROVAL OF THE TOWN OF WESTBROOK, THE CONNECTICUT DEPARTMENT OF PUBLIC HEALTH AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND CONFORMING TO ALL PERMITS, BONDING AND INSURANCE REQUIRED BY THE TOWN OF WESTBROOK, THE CONNECTICUT DEPARTMENT OF PUBLIC HEALTH AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION. A D.O.T. ENCROACHMENT PERMIT SHALL BE SECURED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN THE D.O.T. RIGHT-OF-WAY. ALL UTILITIES SHALL BE DISCONNECTED PRIOR TO COMMENCEMENT OF ANY DEMOLITION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ADJACENT PROPERTIES AND WETLANDS/WATERCOURSES FROM ANY EROSION AND/OR SEDIMENTATION. EROSION/SEDIMENTATION CONTROLS SHALL BE INSTALLED AS SHOWN HEREON AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. REFER TO THE EROSION & SEDIMENT CONTROL PLAN (SHEET 7 OF 10) AND THE E&S NARRATIVE & CONSTRUCTION DETAILS (SHEET 8 OF 10) FOR LOCATION OF ALL PROPOSED EROSION & SEDIMENTATION CONTROLS, NOTES & DETAILS.
- THE PROPOSED BUILDINGS WILL BE SLAB-ON-GRADE WITH FROST-PROTECTION WALLS AND WILL NOT HAVE FOOTING DRAINS. THERE ARE NO KNOWN DOWNGRADE SEPTIC SYSTEM COMPONENTS WITHIN 25 FEET FROM ANY UPGRADE GROUNDWATER DRAIN OR ANY UPGRADE SEPTIC SYSTEM COMPONENTS WITHIN 50 FEET FROM ANY DOWNGRADE GROUNDWATER DRAIN.
- ALL EXISTING DRAINAGE PATTERNS SHALL BE MAINTAINED. THE CONTRACTOR SHALL GRADE THE PROPERTY IN SUCH A MANNER TO MAINTAIN EXISTING LOCAL DRAINAGE PATTERNS AND TO PREVENT EXCESS RUNOFF AND/OR PONDING ON ADJACENT PROPERTIES, BOTH DURING AND AFTER CONSTRUCTION.
- ALL MATERIALS AND CONSTRUCTION METHODS FOR SITE WORK SHALL BE IN CONFORMANCE WITH THE CONNECTICUT D.O.T. "STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION" FORM 817, 2016 OR AS AMENDED.
- ALL PROPOSED PAVEMENT MARKINGS SHALL BE INSTALLED IN THE LOCATIONS SHOWN WITH DURABLE WHITE PAVEMENT MARKING PAINT AND IN ACCORDANCE WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
- THE PROJECT LAND SURVEYOR SHALL SET A BENCHMARK ON SITE PRIOR TO CONSTRUCTION AND SHALL STAKE OUT ALL PROPOSED IMPROVEMENTS & CLEARING LIMITS PRIOR TO CONSTRUCTION. THE LAND SURVEYOR SHALL OBTAIN THE FINAL ARCHITECTURAL BUILDING DRAWINGS TO VERIFY ALL DIMENSIONS PRIOR TO FIELD STAKEOUT.
- ALL DISTURBED AREAS SHALL BE LOAMED, SEEDED AND MULCHED AS NECESSARY OR OTHERWISE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER.
- ALL EXISTING SEPTIC SYSTEM COMPONENTS SHALL BE PUMPED DRY AS NECESSARY AND REMOVED AND/OR PROPERLY ABANDONED IN ACCORDANCE WITH THE CONNECTICUT PUBLIC HEALTH CODE AND ALL APPLICABLE LOCAL REGULATIONS.
- ALL PROPOSED RETAINING WALLS SHALL BE DESIGNED BY OTHERS AND SHALL CONFORM TO ALL BUILDING CODE REQUIREMENTS INCLUDING FALL PROTECTION AND HANDRAIL PROVISIONS.

PARKING REQUIREMENTS		
ITEM	REQUIRED	PROPOSED
MINIMUM REQUIRED PARKING SPACES	OFFICE (SECTION 10.06.15): 1 SPACE/250 S.F. G.F.A. (1 SPACE/250 S.F.)(1,000 S.F.) = 4 SPACES	28 PROPOSED PARKING SPACES (INCLUDING 2 HANDICAP SPACES) + 17 RESERVE SPACES
	STORAGE (SECTION 10.05.22): 1 SPACE/750 S.F. G.F.A. (1 SPACE/750 S.F.)(285 S.F.) = 1 SPACE	
	MULTIPLE FAMILY DWELLINGS (SECTION 10.06.14 & 9.10.03(g)): 2 SPACES/UNIT (2 SPACES/UNIT)(20 UNITS) = 40 SPACES	
	MINIMUM REQUIRED PARKING SPACES: 4 + 1 + 40 = 45 SPACES	

Final Approval by the Westbrook Zoning Commission

Chairman \_\_\_\_\_ Date \_\_\_\_\_

The statutory five-year period for completion of all physical improvements expires on \_\_\_\_\_, 20\_\_\_\_.



PLAN PREPARED BY:  
INDIGO LAND DESIGN, LLC  
JOSEPH WREN, P.E.  
440 EGG HOLLOW FLOOR  
OLD SAYBROOK, CT 06475  
PHONE: (860) 388-9343  
FAX: (860) 391-8854

THE EMBOSSED SEAL OF  
THE TOWN OF WESTBROOK  
AFFIXED HERE FOR THIS  
MAP TO BE VALID

REV	DATE	DESCRIPTION
1	5/13/19	REVISIONS PER HEALTH DEPARTMENT COMMENTS, MISC.
2	3/26/19	TREES ADDED ALONG WESTERN PROPERTY LINE PER ZC
3	12/18/18	REVISIONS PER ENGINEERING REVIEW COMMENTS
4	11/13/18	GENERAL MINOR REVISIONS
#		DATE

COASTAL SITE PLAN FOR SPECIAL PERMIT  
SETTLERS PLACE - A PLANNED RESIDENTIAL DEVELOPMENT  
PREPARED FOR BOCCA-DES PROPERTIES, LLC  
1935 BOSTON POST ROAD -- MAP 180 LOT 114  
WESTBROOK, CONNECTICUT

DATE: AUGUST 29, 2018  
SCALE: 1"=20'  
DRAWN BY: SM  
CHECKED BY: JW  
DWG. NO.: CSP-1  
SHEET NO.: 2 of 10  
JOB NO.: 2017-384

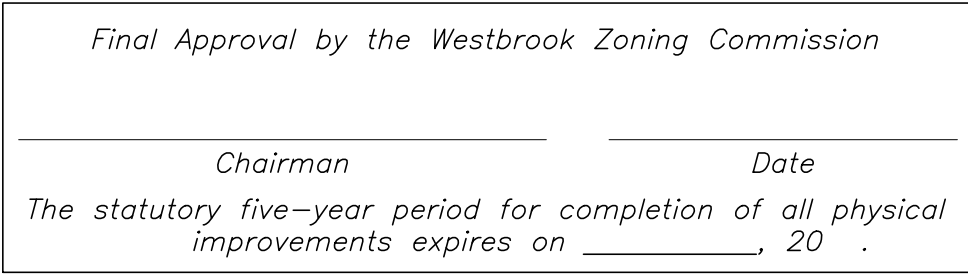


1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:

- GRADING, DRAINAGE & UTILITY NOTES:

1. THE APPLICANT IS PROPOSING TO CONSTRUCT A PLANNED RESIDENTIAL DEVELOPMENT

- DRAINAGE NARRATIVE:



- NOTE: EXACT PLANT LOCATIONS ARE SUBJECT TO CHANGE.

LANDSCAPING NOTES:

- | LANDSCAPING REQUIREMENTS     |  |  |   |
|------------------------------|--|--|---|
| ITEM                         | REQUIRED   | EXISTING   | PROPOSED                                  |
| MIN. NUMBER OF STREET TREES  | 1 TREE/50 FT. FRONTAGE<br>200 FT. (BPR)/50 FT. = 4 TREES<br>140 FT. (WALDRON DR.)/50 FT. = 3 TREES | 3 TREES (BPR) (1)<br>0 TREES (WALDRON DR.) (2)               | 4 TREES (BPR)<br>3 TREE (WALDRON DR.)     |
| STREET LINE LANDSCAPE BUFFER | MIN. WIDTH = 4 FT.   | 21.8 FT. (BPR)<br>0 FT. (WALDRON DR.) (3)                    | 10.7 FT. (BPR)<br>128.5 FT. (WALDRON DR.) |
| OTHER LINE LANDSCAPE BUFFER  | MIN. WIDTH = 5 FT.   | 3.0 FT. (W)<br>(BLDG #10 HATCH) (1)<br>9.2 FT. (W) (BLDG #2) | 5.1 FT. (E)<br>0 FT. (W) (1)              |
| BUILDING LANDSCAPE BUFFER    | MIN. WIDTH = 4 FT.   | 0 FT. (BLDG. #4) (1)   | 4 FT.                                     |

- 1) EXISTING NON-CONFORMITY.
- 2) EXISTING STREET LINE LANDSCAPE ISLAND IS ENTIRELY WITHIN THE R.O.W. AND DOES NOT COUNT TOWARD MINIMUM STREET TREE REQUIREMENTS
- 3) EXISTING BUILDING #11 STEPS AND DRIVEWAY EXTEND BEYOND THE FRONT PROPERTY LINE.



1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:

- OSP-1: OVERALL SITE PLAN
- CSPSP-1: COASTAL SITE PLAN FOR SPECIAL PERMIT
- GDUU-1: GEOTECH, DRAINAGE, LANDSCAPING & UTILITY PLAN
- ST-1: SOIL TEST DATA & SEPTIC DESIGN CRITERIA
- XSCD: SEPTIC SYSTEM X-SECTION & CONSTRUCTION DETAILS
- ESP-1: EROSION & SEDIMENT CONTROL PLAN
- ESD-1: E&S DETAILS AND WATER MAIN DETAILS
- CD-1: CONSTRUCTION DETAILS
- CD-2: CONSTRUCTION DETAILS
- ARCHITECTURAL DRAWINGS PREPARED BY PETER SPRINGSTEEL
- ALL REFERENCE MAPS

- THE APPLICANT IS PROPOSING TO CONSTRUCT A PLANNED RESIDENTIAL DEVELOPMENT WITH AN ACCESSORY OFFICE/STORAGE BUILDING, CONSTRUCT A PRIVATE ACCESS DRIVE AND ASSOCIATED DRIVEWAY, IMPROVE PUBLIC HEALTH AND SANITATION, AND IMPROVE WATER QUALITY. THE APPLICANT SHALL CONSTRUCT A WATER QUALITY BASIN AND INSTALL (15) 18" CONCRETE GALLERIES TO TREAT THE WATER QUALITY VOLUME, ADD LANDSCAPING AND OTHER ASSOCIATED IMPROVEMENTS.
- ALL PROPOSED UTILITIES SHALL BE INSTALLED UNDERGROUND.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND INFORMATION PROVIDED BY THE TOWN OF WESTBROOK. THE LOCATION MAY VARY FROM THOSE INDICATED AND ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 800-922-4455 TO MARK OUT ALL UNDERGROUND UTILITIES A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCING ANY CONSTRUCTION.
- IF THE CONTRACTOR SHALL ENCOUNTER ANY UNEXPECTED UTILITIES OR WATER MAINS UTILITIES PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE TOWN OF WESTBROOK STANDARDS AND REGULATIONS.
- ALL UTILITIES SHALL BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS AND STANDARDS OF THE TOWN OF WESTBROOK. THE CUSTODIAL UTILITY COMPANIES' ALL UTILITY TRENCHES SHALL BE NO LESS THAN 5 FEET FROM THE SEPTIC SYSTEM AND SHALL NOT BE BACKFILLED WITH FREE DRAINING MATERIAL. THE EXACT LOCATION OF THE EXISTING WATER MAINS AND SEWER LINES ARE UNKNOWN. THE LOCATION OF THE EXISTING WATER SERVICE LINES ARE UNKNOWN. THE CONTRACTOR SHALL LOCATE ALL WATER SERVICE LINES PRIOR TO INSTALLATION OF THE SEPTIC SYSTEM. ANY SEPTIC SYSTEM COMPONENT SHALL BE A MINIMUM OF 10 FEET FROM ANY WATER LINE IN CONFORMANCE WITH ALL STATE AND LOCAL REGULATIONS.
- ALL PROPERTY LINES SHALL BE VERIFIED IN THE FIELD. NO PRIVATE PROPERTY SHALL BE DISTURBED UNLESS PROPER RIGHTS ARE OBTAINED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN, REVIEW AND ADHERE TO ALL REQUIREMENTS AND ALL CONDITIONS OF PUBLIC HEALTH AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION, PUBLIC HEALTH AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND CONFORMING TO ALL PERMITS, BONDING AND INSURANCE REQUIRED BY THE TOWN OF WESTBROOK, THE CONNECTICUT DEPARTMENT OF PUBLIC HEALTH AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION. D.O.T. ENCROACHMENT PERMIT SHALL BE SECURED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN THE D.O.T. RIGHT-OF-WAY. ALL UTILITIES SHALL BE DISCONNECTED PRIOR TO COMMENCEMENT OF ANY DEMOLITION.
- NO PRIVATE PROPERTY SHALL BE DISTURBED UNLESS PROPER RIGHTS ARE OBTAINED PRIOR TO CONSTRUCTION.
- THERE ARE NO KNOWN WELLS OR OTHER DESIGN CONFLICTS WITHIN 75 FEET OF THE PROPOSED SEPTIC SYSTEM.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ADJACENT PROPERTIES AND WETLANDS/WATERSOURCES FROM ANY EROSION AND/OR SEDIMENTATION.
- NO EROSION, SEDIMENTATION OR OTHER DAMAGE SHALL BE INSTALLED OR ALLOWED TO BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. REFER TO THE EROSION & SEDIMENT CONTROL PLAN (SHEET 7 OF 10) AND THE E&S NARRATIVE AND CONSTRUCTION DETAILS (SHEET 8 OF 10) FOR MORE INFORMATION.
- THE PROPOSED BUILDINGS WILL BE SLAB-ON-GRADE WITH FROST-PROTECTION WALLS AND SHALL NOT HAVE TRENCHES. GEOMATRIX SHALL DISCUSS AND REVIEW SYSTEM OPERATION WITH OWNER INCLUDING ALTERNATING FLOWS TO LEACHING ROWS. IT IS STRONGLY RECOMMENDED, NOT REQUIRED BY THE PUBLIC HEALTH CODE, TO INSTALL A SOLIAR SYSTEM ON THE PROPOSED BUILDINGS TO FACILITATE POTENTIAL FUTURE SOIL AIR BLOWER CONNECTIONS. IF SOIL AIR SYSTEM IS NOT INSTALLED, GEOMATRIX WILL REQUIRE OWNER TO SIGN A DISCLAIMER AGREEMENT.
- ALL WATER SERVICES SERVING ALL RESIDENTIAL UNITS AND SEPARATE OFFICE BUILDING SHALL BE INDIVIDUALIZED. THE TOWN OF WESTBROOK WILL PROVIDE THE NECESSARY UTILITY INFORMATION.
- ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD-88 DATUM PER REFERENCE MAP A.

15# L.F. 6" SCH. 40 PVC ASTM D1785 BUILDING  
SEWER PIPE. MIN. SLOPE OF  $\frac{1}{8}$ " PER FT. AND 12"  
MIN. COVER TO BE PROVIDED.

(A) 24# L.F. 4" SCH. 40 PVC ASTM D1785 BUILDING  
SEWER PIPE. MIN. SLOPE OF  $\frac{1}{4}$ " PER FT. AND 12"  
MIN. COVER TO BE PROVIDED.

(B) 4,000-GALLON 1-COMPARTMENT H-20 CONCRETE  
SEPTIC TANK - SEE DETAIL.\*

(C) 2,000-GALLON 1-COMPARTMENT H-20 CONCRETE  
SEPTIC TANK - SEE DETAIL.\*

(D) 1,000-GALLON 2-COMPARTMENT H-20 CONCRETE  
SEPTIC TANK - SEE DETAIL.\*

(E) 4" SCH. 40 PVC ASTM D1785 SOLID PIPES TO  
CONDUIT TO D-BOXES AND LEACHING SYSTEM.

(F) H-20 CONCRETE DISTRIBUTION BOX (3'x3' CUSTOM  
UNITED CONCRETE "UTILITY VAULT") - SEE DETAIL.\*

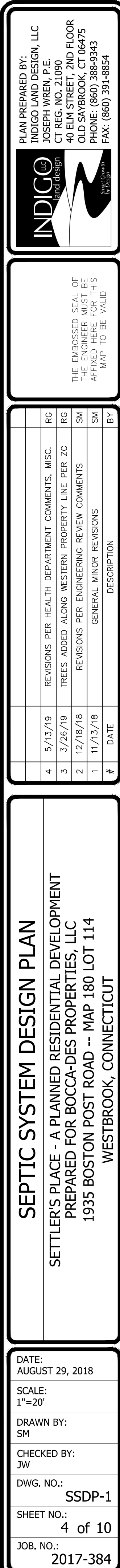
(G) 4" SCH. 40 PVC ASTM D1785 DISTRIBUTION TEE.\*

(H) 44.0 L.F. OF GEOMATRIX GS76236 LEACHING ROWS  
(WITH H-20 PROVISIONS) (4 ROWS TOTAL - 176  
L.F. TOTAL).

(I) 4" SCH. 40 PVC ASTM D1785 INSPECTION PORTS  
GEOMATRIX PART NO.: IPOST115.\*

\*THE 4,000-GAL. SEPTIC TANK SHALL HAVE A 6" KNOCKOUT TO ACCOMMODATE THE BUILDING SEWER PIPE. ALL TANKS AND DISTRIBUTION BOX SHALL HAVE H-20 RISERS TO FINISHED GRADE OF PAVEMENT AND PROVISIONS ADDED TO PREVENT UNAUTHORIZED ACCESS. INSPECTION PORTS SHALL HAVE H-20 RISERS AND VALVE COVERS TO FINISHED GRADE OF PAVEMENT. CONTRACTOR SHALL VERIFY ALL TANKS ARE WATERTIGHT PRIOR TO INSTALLATION.

REFER TO SEPTIC SYSTEM INVERT TABLE ON SHEET ST-1 (5 OF 10) FOR PROPOSED INVERT ELEVATIONS.





DEEP TEST PIT DATA

DATE: 1/20/15  
EXCAVATED BY: WATERVIEW LANDSCAPING  
WITNESSED BY: JOE WREN, P.E. (INDIGO)  
ROSS GLADSTONE (INDIGO)  
SEAMUS MORAN (INDIGO)  
SONIA MARINO, R.S., MPH  
(WESTBROOK HEALTH DEPT.)  
SHIRLEY MCKENS, EHT  
(WESTBROOK HEALTH DEPT.)  
RECORDED BY: BOB RUSSO, CPSS (CLA)

**TP #1** (ELEV. 13.5±)  
0-15" TOPSOIL  
15-36" YELLOW-BROWN SANDY LOAM  
36-42" YELLOW-BROWN SAND & GRAVEL  
42-46" BROWN FINE SANDY LOAM  
46-82" BRIGHT RUST COLORED SAND & GRAVEL (BOG IRON)  
46-82" GRAY SAND & GRAVEL  
MOTTLING @ 42" (ELEV. 10.0±)  
GROUNDWATER @ 78" (ELEV. 7.0±)  
ROOTS TO 42"  
NO LEDGE

**TP #2** (ELEV. 13.1±)  
0-9" TOPSOIL  
9-44" YELLOW-BROWN SANDY LOAM  
44-53" YELLOW-BROWN & GRAY SAND & GRAVEL  
53-85" GRAY MEDIUM SAND  
MOTTLING @ 44" (ELEV. 9.4±)  
GROUNDWATER @ 67" (ELEV. 7.5±)  
ROOTS TO 9"  
NO LEDGE

**TP #3** (ELEV. 10.8±)  
0-37" FILL - YELLOW-BROWN SANDY LOAM WITH PEBBLES & COBBLES  
37-42" VERY DARK GRAY, OLD TOPSOIL  
42-54" YELLOW-BROWN & GRAY SAND  
54-63" GRAY SAND & PEBBLES  
MOTTLING @ 37" (ELEV. 7.7±)  
GROUNDWATER @ 47" (ELEV. 6.9±)  
ROOTS TO 9"  
NO LEDGE

**TP #4** (ELEV. 13.5±)  
0-24" TOPSOIL - BROWN FINE SANDY LOAM  
24-32" YELLOW-BROWN SAND  
32-69" GRAY MEDIUM SAND  
MOTTLING @ 48" (ELEV. 9.5±)  
GROUNDWATER @ 56" (ELEV. 8.8±)  
ROOTS TO 24"  
NO LEDGE

DEEP TEST PIT DATA

DATE: 8/24/17  
WITNESSED BY: JOE WREN, P.E. (INDIGO)  
ROSS GLADSTONE (INDIGO)  
SONIA MARINO, R.S., MPH  
(WESTBROOK HEALTH DEPT.)  
SHIRLEY MCKENS, EHT  
(WESTBROOK HEALTH DEPT.)  
RECORDED BY: JOE THEROUX, CPSS

**TP #101** (ELEV. 13.2±)  
0-4" TOPSOIL - BROWN FINE SANDY LOAM  
4-9" YELLOW-BROWN FINE SANDY LOAM  
9-17" BROWN FINE SANDY LOAM  
17-42" BROWN FINE SANDY LOAM  
42-56" YELLOW-BROWN SAND  
56-96" YELLOW SAND  
MOTTLING @ 55" (ELEV. 8.6±)  
GROUNDWATER @ 83" (ELEV. 6.3±)  
ROOTS TO 42"  
NO LEDGE

**TP #102** (ELEV. 13.0±)  
0-2" BITUMINOUS ASPHALT  
2-7" GRAVEL FILL  
7-30" BROWN CLAY LOAM  
30-44" YELLOW-BROWN SAND  
44-96" YELLOW SAND  
MOTTLING @ 44" (ELEV. 9.3±)  
GROUNDWATER @ 70" (ELEV. 7.2±)  
NO ROOTS  
NO LEDGE

**TP #103** (ELEV. 15.1±)  
0-4" TOPSOIL  
4-43" BROWN FINE SANDY LOAM  
43-96" BROWN SAND & GRAVEL  
MOTTLING @ 44" (ELEV. 11.4±)  
NO GROUNDWATER TO ELEV. 7.1±  
ROOTS TO 50"  
NO LEDGE

DEEP TEST PIT DATA

DATE: 8/13/18  
WITNESSED BY: JOE WREN, P.E. (INDIGO)  
SONIA MARINO, R.S., MPH  
(WESTBROOK HEALTH DEPT.)  
JOE THEROUX, CPSS

**TP #201** (ELEV. 12.0±)  
0-12" TOPSOIL - FINE SANDY LOAM (10YR 3/3)  
12-42" FINE SANDY LOAM (10YR 4/4)  
42-80" SAND (25Y 5/2)  
MOTTLING @ 42" (ELEV. 8.5±)  
GROUNDWATER @ 65" (ELEV. 6.±)  
NO LEDGE

**TP #202** (ELEV. 12.2±)  
0-57" FILL (10YR 4/4)  
(PIT DUG IN OLD FILL AREA. MISC. GARBAG, TIRE & PLASTIC PIPE FOUND)

**TP #203** (ELEV. 12.9±)  
0-14" TOPSOIL - FINE SANDY LOAM (10YR 3/3)  
14-34" FINE SANDY LOAM (10YR 4/6)  
34-88" SAND (25Y 5/2)  
MOTTLING @ 45" (ELEV. 9.2±)  
GROUNDWATER @ 82" (ELEV. 6.1±)  
NO LEDGE

**TP #204** (ELEV. 13.0±)  
0-7" TOPSOIL - FINE SANDY LOAM (10YR 2/2)  
7-17" SANDY LOAM (75YR 4/6)  
17-85" SAND (25Y 6/4)  
MOTTLING @ 62" (ELEV. 7.8±)  
GROUNDWATER @ 80" (ELEV. 6.3±)  
NO LEDGE

**TP #205** (ELEV. 12.4±)  
+7-+4" FILL - TOPSOIL (10YR 4/2)  
+4-0" FILL - SAND (75YR 5/6)  
0-15" ORIGINAL TOPSOIL - FINE SANDY LOAM (10YR 4/3)  
15-37" FINE SANDY LOAM (75YR 4/6)  
37-83" SAND (25Y 5/3)  
MOTTLING @ 43" (ELEV. 8.8±)  
GROUNDWATER @ 72" (ELEV. 6.4±)  
NO LEDGE

**TP #206** (ELEV. 14.0±)  
+29-0" FILL - DISTURBED SOILS (10YR 4/4)  
0-80" GRAVELLY SAND (10YR 5/6)  
MOTTLING @ 42" (ELEV. 10.5±)  
NO GROUNDWATER TO ELEV. 7.3±  
NO LEDGE

**TP #207** (ELEV. 10.9±)  
+10-0" FILL (10YR 4/6)  
0-7" ORIGINAL TOPSOIL - FINE SANDY LOAM (10YR 3/1)  
7-25" FINE SANDY LOAM (10YR 4/6)  
25-78" SAND (25YR 5/2)  
(BURIED TANK/DRUM AND BURIED PLASTIC CONDUIT FOUND AT 21")  
MOTTLING @ 37" (ELEV. 7.8±)  
GROUNDWATER @ 56" (ELEV. 6.2±)  
NO LEDGE

**TP #208** (ELEV. 12.0±)  
0-13" TOPSOIL - FINE SANDY LOAM (10YR 4/3)  
13-29" FINE SANDY LOAM (10YR 4/6)  
29-90" SANDY LOAM (10YR 5/2)  
MOTTLING @ 43" (ELEV. 8.4±)  
GROUNDWATER @ 74" (ELEV. 5.8±)  
NO LEDGE

GENERAL NOTES (SEPTIC SYSTEM):

- THE APPLICANT IS PROPOSING TO CONSTRUCT A PLANNED RESIDENTIAL DEVELOPMENT WITH AN ACCESSORY OFFICE/STORAGE BUILDING. CONSTRUCT A PRIVATE ACCESS DRIVE AND ASSOCIATED PARKING, INSTALL A NEW CONNECTICUT PUBLIC HEALTH CODE-COMPLIANT SEPTIC SYSTEM, CONSTRUCT A WATER QUALITY BASIN AND INSTALL (15) 18" CONCRETE GALLERIES TO TREAT THE WATER QUALITY VOLUME, ADD LANDSCAPING AND OTHER ASSOCIATED IMPROVEMENTS.
- THE PROPERTY IS SERVED BY PUBLIC WATER AND A SUBSURFACE SEWAGE DISPOSAL SYSTEM. THERE ARE NO KNOWN WELLS OR OTHER DESIGN CONFLICTS WITHIN 75 FEET OF THE PROPOSED SEPTIC SYSTEM.
- THE USE OF A GARBAGE DISPOSAL IS NOT RECOMMENDED. IF A GARBAGE DISPOSAL OR A TUB OVER 100 GALLONS IS INSTALLED, THE PROPOSED SEPTIC TANK SIZE SHALL BE INCREASED IN CONFORMANCE WITH THE PUBLIC HEALTH CODE. ANY WATER SOFTENER SHALL NOT DISCHARGE TO THE SEPTIC SYSTEM.
- THE PROPOSED BUILDINGS WILL BE SLAB-ON-GRADE WITH FROST-PROTECTION WALLS AND WILL NOT HAVE FOOTING DRAINS. THERE ARE NO KNOWN DOWNGRADE SEPTIC SYSTEM COMPONENTS WITHIN 25 FEET FROM ANY UPGRADIENT GROUNDWATER DRAIN OR ANY UPGRADIENT SEPTIC SYSTEM COMPONENTS WITHIN 50 FEET FROM ANY DOWNGRADE GROUNDWATER DRAIN.
- ALL UTILITIES SHALL BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE TOWN OF WESTBROOK AND THE CUSTODIAL UTILITY COMPANIES. ALL UTILITY TRENCHES SHALL BE NO LESS THAN 5 FEET FROM THE SEPTIC SYSTEM AND SHALL NOT BE BACKFILLED WITH FREE DRAINING MATERIAL. THE EXACT LOCATION OF THE EXISTING WATER MAIN IN WALDRON DRIVE IS UNKNOWN. THE LOCATION OF THE EXISTING WATER SERVICE LINES ARE UNKNOWN. THE CONTRACTOR SHALL LOCATE ALL WATER SERVICE LINES PRIOR TO INSTALLATION OF THE SEPTIC SYSTEM. ANY SEPTIC SYSTEM COMPONENT SHALL BE A MINIMUM OF 10 FEET FROM ANY WATER LINE IN CONFORMANCE WITH ALL STATE AND LOCAL REGULATIONS.

GENERAL CONSTRUCTION NOTES (SEPTIC SYSTEM):

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT CONNECTICUT PUBLIC HEALTH CODE, AS AMENDED.
- THE PROJECT LAND SURVEYOR SHALL SET A BENCHMARK ON SITE PRIOR TO CONSTRUCTION AND SHALL STAKE OUT ALL THE PROPOSED SEPTIC SYSTEM PRIOR TO CONSTRUCTION.
- NO WORK SHALL COMMENCE IN THE SYSTEM AREA UNTIL A SEPTIC PERMIT HAS BEEN TAKEN OUT BY THE LICENSED INSTALLER.
- THE LICENSED INSTALLER SHALL PERFORM SITE PREPARATION AND SHOULD CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 TO VERIFY ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION.
- THE LICENSED INSTALLER SHALL BE ON SITE DURING SYSTEM CONSTRUCTION. THE SYSTEM SHALL BE INSTALLED IN CONFORMANCE TO THESE PLANS. ANY REQUESTED MODIFICATIONS SHALL BE DISCUSSED WITH THE ENGINEER PRIOR TO CONSTRUCTION. ALL MODIFICATIONS MUST BE APPROVED BY THE ENGINEER AND TOWN SANITARIAN PRIOR TO CONSTRUCTION.
- A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN BY THE LICENSED INSTALLER TO THE ENGINEER AND TOWN SANITARIAN BEFORE ANY STRIPPING IS DONE FOR THE SYSTEM. STRIP INSPECTIONS WILL BE PERFORMED BY THE ENGINEER AND SANITARIAN.
- THE LICENSED INSTALLER SHALL BE RESPONSIBLE FOR PREPARING THE LEACHING AREA IN A WORKMANLIKE MANNER. ALL NECESSARY STEPS SHALL BE TAKEN TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOILS FROM OVER COMPACTION AND SILTATION ONCE EXPOSED.
- THE INSTALLER SHALL NOTIFY THE ENGINEER AND SANITARIAN AT LEAST 24 HOURS IN ADVANCE OF BEING READY FOR A FINAL INSPECTION. THE ENGINEER AND SANITARIAN SHALL CONDUCT THE FINAL INSPECTION TOGETHER WITH THE LICENSED INSTALLER. NO DEVIATION FROM THE PLAN APPROVED BY THE SANITARIAN SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE SANITARIAN. THE SYSTEM SHALL NOT BE BACKFILLED WITHOUT THE APPROVAL OF THE SANITARIAN.
- THE LICENSED INSTALLER, A LICENSED ENGINEER OR A LICENSED SURVEYOR SHALL PREPARE A SEPTIC SYSTEM AS-BUILT DRAWING CERTIFYING THE SYSTEM IS CODE-COMPLIANT. THIS PLAN SHALL INCLUDE DISTANCES TO ALL ESSENTIAL POINTS INCLUDING FLOW LINES AT BUILDINGS, TANK MANHOLES, D-BOX, INSPECTION PORTS, LEACHING SYSTEM ENDS AND WATER LINES. THE AS-BUILT PLAN SHALL BE COMPLETED WITHIN 30 DAYS OF COMPLETION OF THE SYSTEM.
- THE LEACHING SYSTEM SHALL BE PROPERLY COVERED BY THE LICENSED SYSTEM INSTALLER WITHIN TWO (2) WORKING DAYS FOLLOWING THE LOCAL HEALTH DEPARTMENT'S FINAL INSPECTION AND APPROVAL.
- NO HEAVY EQUIPMENT SHALL BE DRIVEN OVER THE INSTALLED LEACHING SYSTEM AREA.
- THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IF HE WISHES TO CHANGE THE LOCATION OR ELEVATION OF ANY PROPOSED SEPTIC SYSTEM COMPONENT PRIOR TO CONSTRUCTION.
- THE LICENSED INSTALLER IS RESPONSIBLE TO INSTALL THE SUBSURFACE SEWAGE DISPOSAL SYSTEM IN ACCORDANCE WITH THE APPROVED PLAN.
- THE 4,000-GAL. SEPTIC TANK SHALL HAVE A 6" KNOCKOUT TO ACCOMMODATE THE BUILDING SEWER PIPE. SEPTIC TANKS AND DISTRIBUTION BOX SHALL HAVE H-20 RISERS TO FINISHED GRADE OF PAVEMENT AND PROVISIONS ADDED TO PREVENT UNAUTHORIZED ACCESS. INSPECTION PORTS SHALL HAVE H-20 RISERS AND VALVE COVERS TO FINISHED GRADE OF PAVEMENT. CONTRACTOR SHALL VERIFY ALL TANKS ARE WATERTIGHT PRIOR TO INSTALLATION.
- THE PROPOSED LEACHING SYSTEM, GEOMATRIX GST6236 (WITH H-20 PROVISIONS), SHALL BE INSTALLED IN CONFORMANCE WITH ALL MANUFACTURER'S SPECIFICATIONS. A GEOMATRIX SYSTEMS REPRESENTATIVE WILL DELIVER THE GEOMATRIX GST FORMS TO THE SITE AND WILL BE ON SITE DURING INSTALLATION OF THE SYSTEM TO ENSURE PROPER INSTALLATION. THE INSTALLER SHALL OBTAIN, REVIEW AND STRICTLY ADHERE TO THE ALL INSTALLATION INSTRUCTIONS AND MATERIAL SPECIFICATIONS. MORE INFORMATION CAN BE OBTAINED FROM THE MANUFACTURER, GEOMATRIX SYSTEMS, LLC - 114 MILL ROCK ROAD EAST, OLD SAYBROOK, CT - 860-610-0730 OR AT WWW.GEOMATRIXSYSTEMS.COM
- A TWO-PART CONCRETE SEPTIC TANK SHALL BE USED BUT MUST BE MADE 100% WATERTIGHT BY GASKETING AND MORTARING ALL JOINTS. IF A TWO-PART TANK IS USED, IT SHALL BE FILLED WITH WATER ABOVE THE JOINT AND INSPECTED BY THE ENGINEER AND/OR THE TOWN SANITARIAN WITHIN 24 HOURS. THE CONTRACTOR SHALL MONITOR THE WATER LEVEL IN THE TANK DURING THIS PERIOD AND SHALL PERMANENTLY REPAIR ANY LEAKS TO THE SATISFACTION OF THE ENGINEER AND THE TOWN SANITARIAN.
- THE LICENSED INSTALLER SHALL CONFIRM THAT NO LEDGE IS PRESENT WITHIN 48 INCHES BELOW THE BOTTOM OF THE PROPOSED LEACHING SYSTEM.
- THE CONTRACTOR SHALL GRADE THE AREA IN THE VICINITY OF THE LEACHING FIELD IN SUCH A MANNER THAT ALL SURFACE RUNOFF IS SUFFICIENTLY DIRECTED AWAY FROM THE LEACHING FIELD AREA AND NOT RESULT IN PONDING ON THE SUBJECT PROPERTY OR ANY ADJACENT PROPERTY OR ROADWAY.
- THE LICENSED INSTALLER SHALL INCLUDE ALL ADEQUATE PROVISIONS FOR FREEZE PROTECTION FOR ALL PIPING AND JUNCTIONS.
- LICENSED INSTALLER SHALL PROVIDE SEVE ANALYSES FOR SELECT FILL AND C-33 SAND PRIOR TO CONSTRUCTION. ENGINEER SHALL CONDUCT PERCOLATION TESTS IN THE SELECT FILL BED TO CONFIRM DESIGN PERCOLATION RATE.
- ALL EXISTING SEPTIC SYSTEM COMPONENTS SHALL BE PUMPED DRY AS NECESSARY AND REMOVED AND/OR PROPERLY ABANDONED IN ACCORDANCE WITH THE CONNECTICUT PUBLIC HEALTH CODE AND ALL APPLICABLE LOCAL REGULATIONS. ANY EXISTING SEPTIC SYSTEM COMPONENTS OR UNSUITABLE SOIL ENCOUNTERED WITHIN THE SYSTEM AREA SHALL BE REMOVED AND REPLACED WITH SELECT FILL.
- THE CONTRACTOR SHALL FULLY COORDINATE WITH GEOMATRIX SYSTEMS, LLC (GEOMATRIX) AND SHALL ABIDE BY ALL SPECIFICATIONS AND INSTRUCTIONS FOR INSTALLATION OF THE GEOMATRIX GST6236 LEACHING SYSTEM. GEOMATRIX SHALL DISCUSS AND REVIEW SYSTEM OPERATION WITH OWNER INCLUDING ALTERNATING FLOWS TO LEACHING ROWS. IT IS STRONGLY RECOMMENDED, ALTHOUGH NOT REQUIRED BY THE PUBLIC HEALTH CODE, TO INSTALL A SOLAIR SYSTEM ON THE PROPOSED LEACHING SYSTEM. AT A MINIMUM, SOIL AIR PIPING SHALL BE INSTALLED TO FACILITATE POTENTIAL FUTURE SOIL AIR BLOWER CONNECTIONS. IF SOIL AIR SYSTEM IS NOT INSTALLED, GEOMATRIX WILL REQUIRE OWNER TO SIGN A DISCLAIMER AGREEMENT.

DEEP TEST PIT DATA

DATE: 12/7/18  
WITNESSED BY: JOE WREN, P.E. (INDIGO)  
SEAMUS MORAN, P.E. (INDIGO)  
RECORDED BY: BOB RUSSO, CPSS

**TP #301** (ELEV. ±13.6)  
0-56" MIXED NATIVE MATERIAL & BROWN SAND FILL  
56-78" YELLOW-BROWN MEDIUM-COARSE SAND & GRAVEL  
NOTE: AT THE TIME OF TESTING, GROUNDWATER LEVELS WERE ABNORMALLY HIGH AND ESTIMATED TO BE AS HIGH OR HIGHER THAN MAX. GROUNDWATER DURING THE WET SEASON  
NO MOTTLING  
GROUNDWATER @ 70" (ELEV. 7.8)  
NO LEDGE

**TP #208** (ELEV. 12.0±)  
0-13" TOPSOIL - FINE SANDY LOAM (10YR 4/3)  
13-29" FINE SANDY LOAM (10YR 4/6)  
29-90" SANDY LOAM (10YR 5/2)  
MOTTLING @ 43" (ELEV. 8.4±)  
GROUNDWATER @ 74" (ELEV. 5.8±)  
NO LEDGE

PERCOLATION TEST DATA

DATE: 9/27/18

PERC A				
CONDUCTED BY: SEAMUS MORAN, P.E. (INDIGO)				
DEPTH: 30"±				
TIME (MIN.)	DEPTH (IN.)	DROP (IN.)	PERC RATE (MIN./IN.)	
0	16 5/8	---	---	---
5	17 3/4	1 1/8	4.4	
10	18 1/2	3/4	6.7	
15	19 1/8	5/8	8.0	
20	19 3/4	5/8	8.0	
25	20 1/4	1/2	10.0	
30	20 7/8	5/8	8.0	
35	21 3/8	1/2	10.0	
40	21 7/8	1/2	10.0	
45	22 3/8	1/2	10.0	
50	22 7/8	1/2	10.0	
55	23 1/4	3/8	13.3	
60	23 3/4	1/2	10.0	
PERC. RATE = 10.1-20.0 MINS./INCH				

PERCOLATION TEST DATA

DATE: 4/19/19

PERC B				
CONDUCTED BY: ROSS GLADSTONE, E.I.T. (INDIGO)				
DEPTH: 45"±				
TIME (MIN.)	DEPTH (IN.)	DROP (IN.)	PERC RATE (MIN./IN.)	
0	33	---	---	---
10	34 7/8	1 7/8	5.3	
20	36 1/4	1 3/8	7.3	
30	37 1/4	1	10.0	
40	38 1/4	1	10.0	
50	39 1/4	1	10.0	
60	40 1/8	7/8	11.4	
PERC. RATE = 10.1-20.0 MINS./INCH				

PERCOLATION TEST DATA

DATE: 4/19/19

PERC B				
CONDUCTED BY: ROSS GLADSTONE, E.I.T. (INDIGO)				
DEPTH: 41"±				
TIME (MIN.)	DEPTH (IN.)	DROP (IN.)	PERC RATE (MIN./IN.)	
0	28	---	---	---
10	31 1/4	3 1/4	3.1	
20	32 3/8	1 1/8	8.9	
30	33 1/4	7/8	11.4	
40	34 1/8	7/8	11.4	
50	34 3/4	5/8	16.0	
60	35 3/8	5/8	16.0	
PERC. RATE = 10.1-20.0 MINS./INCH				

SANITARY SYSTEM DESIGN CRITERIA

DESIGN PERC RATE	BUILDING TYPES	REQUIRED LEACHING AREA	LEACHING SYSTEM TYPE	EFF. LEACHING AREA	LEACHING AREA PROVIDED	REQ'D TANK CAPACITY	TANK CAPACITY PROVIDED
10.1 - 20.0 MINS./INCH	MULTI-FAMILY DWELLING & OFFICE/STORAGE (1)	4,607.1± S.F. (1)	176.0 L.F. (EIGHTY-EIGHT 2 FT. UNITS) OF GEOMATRIX GST6236 LEACHING SYSTEM WITH H-20 PROVISIONS	26.2 S.F./L.F.	4,611.2 S.F. (26.2 S.F./L.F. x 176.0 L.F.)	5,500-GAL. & 1,000-GAL. (2)	4,000-GAL. & 2,000-GAL. (BUILDING 1) AND 1,000-GAL. (BUILDING 2)

- THE PROPOSED LEACHING SYSTEM WILL SERVE TWO SEPARATE BUILDINGS:  
A) BUILDING 1: MULTI-FAMILY DWELLING WITH 20 1-BEDROOM UNITS  
MIN. REQUIRED E.L.A. = 675 S.F. (FIRST THREE BEDROOMS) + 225 S.F. (SEVENTEEN REMAINING BEDROOMS) = 4,500 S.F.  
B) BUILDING 2: OFFICE/STORAGE BUILDING WITH 1,285 S.F. G.F.A.  
DESIGN FLOW = 0.1 GPD/S.F. G.F.A. x 1,285 S.F. G.F.A. = 128.5 GPD  
MIN. REQUIRED E.L.A. = 128.5 GPD / 1.2 (APPLICATION RATE) = 107.1± S.F. E.L.A.  
**TOTAL REQUIRED EFFECTIVE LEACHING AREA = 4,500 S.F. (BUILDING 1) + 107.1± S.F. (BUILDING 2) = 4,607.1± S.F.**
- THE PROPOSED LEACHING SYSTEM WILL SERVE TWO SEPARATE BUILDINGS:  
A) BUILDING 1: MULTI-FAMILY DWELLING WITH 20 1-BEDROOM UNITS  
MIN. REQUIRED SEPTIC TANK CAPACITY = 1,250 GAL. (FIRST THREE BEDROOMS) + 250 GAL. (SEVENTEEN REMAINING BEDROOMS) = 5,500 GALLONS  
B) BUILDING 2: OFFICE/STORAGE BUILDING WITH 1,285 S.F. G.F.A.  
MIN. REQUIRED SEPTIC TANK CAPACITY = 1,000 GAL. OR THE 24-HOUR DESIGN FLOW (128.5 GPD), WHICHEVER IS GREATER = 1,000 GALLONS  
**TOTAL REQUIRED SEPTIC TANK CAPACITY = 5,500 GAL. (BUILDING 1) + 128.5 ± GAL. (BUILDING 2) = 5,628.5 GALLONS**

RECEIVING SOIL DEPTH > 60"  
-- M.L.S.S. NOT REQUIRED

\*RECEIVING SOIL WAS MEASURED FROM THE TOP OF THE PROPOSED LEACHING SYSTEM DOWN TO THE RESTRICTIVE LAYER  
-- MAX. 4-WEEK AVERAGE GROUNDWATER ELEVATION (SEE PROPOSED LEACHING SYSTEM PROFILE ON SHEET 6 OF 10).

SANITARY SYSTEM PIPE INVERT TABLE

STRUCTURE	BUILDING TO SEPTIC TANK (A1)	BUILDING TO SEPTIC TANK (A2)	SEPTIC TANK (B1)	SEPTIC TANK (B2)	SEPTIC TANK (B3)	DIST. BOX	LEACHING ROW
INV. IN (FT.)	---	---	14.00± (6" PVC)	13.75± (4" PVC)	13.75± (4" PVC)	13.35± (4" PVC)	12.80± (4" PVC)
INV. OUT (FT.)	14.50± (6" PVC)	14.50± (4" PVC)	13.75± (4" PVC)	13.50± (4" PVC)	13.50± (4" PVC)	13.25± (4" PVC) (3)	---

- FOR ALL PIPE, A MIN. OF 12" OF COVER IS RECOMMENDED.
- BOTTOM OF LEACHING SYSTEM SHALL BE SET LEVEL AND AT AN ELEVATION OF 9.80'.
- OUTLET PIPING SHALL BE LEVEL FOR THE FIRST 10' OUT OF THE D-BOX TO ENSURE EQUAL DISTRIBUTION.

SANITARY SYSTEM PIPE SLOPES TABLE

PIPE	INV. OUT OF BUILDING (FT.)	INV. INTO SEPTIC TANK (FT.)	LENGTH (FT.)	MIN. SLOPE REQUIRED	SLOPE PROVIDED
A1	14.50±	14.00	15±	1.04% (6" PVC)	0.5'/15' = 3.33%
A2	14.50±	13.75	24±	2.08% (4" PVC)	0.75'/24' = 3.13%

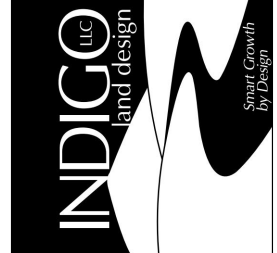
DATE	GROUNDWATER ELEVATION (FEET)		
	SP1	SP2	SP3
3/14/19	7.25	7.40	7.40
3/21/19	7.1 (DRY)	7.3 (DRY)	7.5 (DRY)
3/28/19	7.1 (DRY)	7.3 (DRY)	7.5 (DRY)
4/3/19	6.78	6.92	7.04
4/10/19	6.81	6.95	7.10
4/17/19	7.11	7.30	7.46
4/24/19	7.45	7.69	7.87
5/1/19	7.28	7.51	7.61
5/8/19	7.19	7.37	7.53
5/15/19	7.23	7.43	7.59
MAX. 4-WEEK AVERAGE	7.25	7.46	7.61
MAX. AVERAGE GROUNDWATER	(7.25 + 7.46 + 7.61) / 3 = 7.44±		

- GROUNDWATER WAS MONITORED WEEKLY DURING THE 2019 WET SEASON BETWEEN 3/14/19 AND 5/15/19. DURING THE SECOND AND THIRD WEEK OF MONITORING (READINGS 3/21/19 AND 3/28/19), THE STANDPIPES WERE OBSERVED TO BE DRY TO THE NOTED ELEVATIONS. THEREFORE, ON 4/1/19, THE STANDPIPES WERE RESET TO BE DEEPER INTO THE GROUND. THE MAXIMUM 4-WEEK AVERAGE WAS FROM 4/17/19 THROUGH 5/15/19 AS INDICATED, WHICH CORRESPONDS WITH THE LOCAL USGS GROUNDWATER DATA.
- THE GROUNDWATER GRADIENT IS ESSENTIALLY ZERO AND RADIAL BASED ON THE OBSERVED GROUNDWATER LEVELS. THE MAXIMUM HYDRAULIC GRADIENTS WERE OBSERVED ON 4/24/19 AS SHOWN:  
HYDRAULIC GRADIENT (SP1-SP2) = 0.24'± /143' = 0.17%  
HYDRAULIC GRADIENT (SP2-SP3) = 0.18'± /116' = 0.16%  
HYDRAULIC GRADIENT (SP1-SP3) = 0.42'± /246' = 0.17%
- THE GROUND ELEVATION IS 6.8± AT THE WETLAND NORTH OF ROUTE 1 AND THE GROUND ELEVATION IS 6.9± AT THE WETLAND SOUTH OF WALDRON DRIVE.

SOIL TEST DATA & SEPTIC DESIGN CRITERIA  
SETTLER'S PLACE - A PLANNED RESIDENTIAL DEVELOPMENT  
PREPARED FOR BOCCA-DES PROPERTIES, LLC  
1935 BOSTON POST ROAD -- MAP 180 LOT 114  
WESTBROOK, CONNECTICUT

DATE: AUGUST 29, 2018  
SCALE: AS NOTED  
DRAWN BY: SM  
CHECKED BY: JW  
DWG. NO.: ST-1  
SHEET NO.: 5 of 10  
JOB. NO.: 2017-384

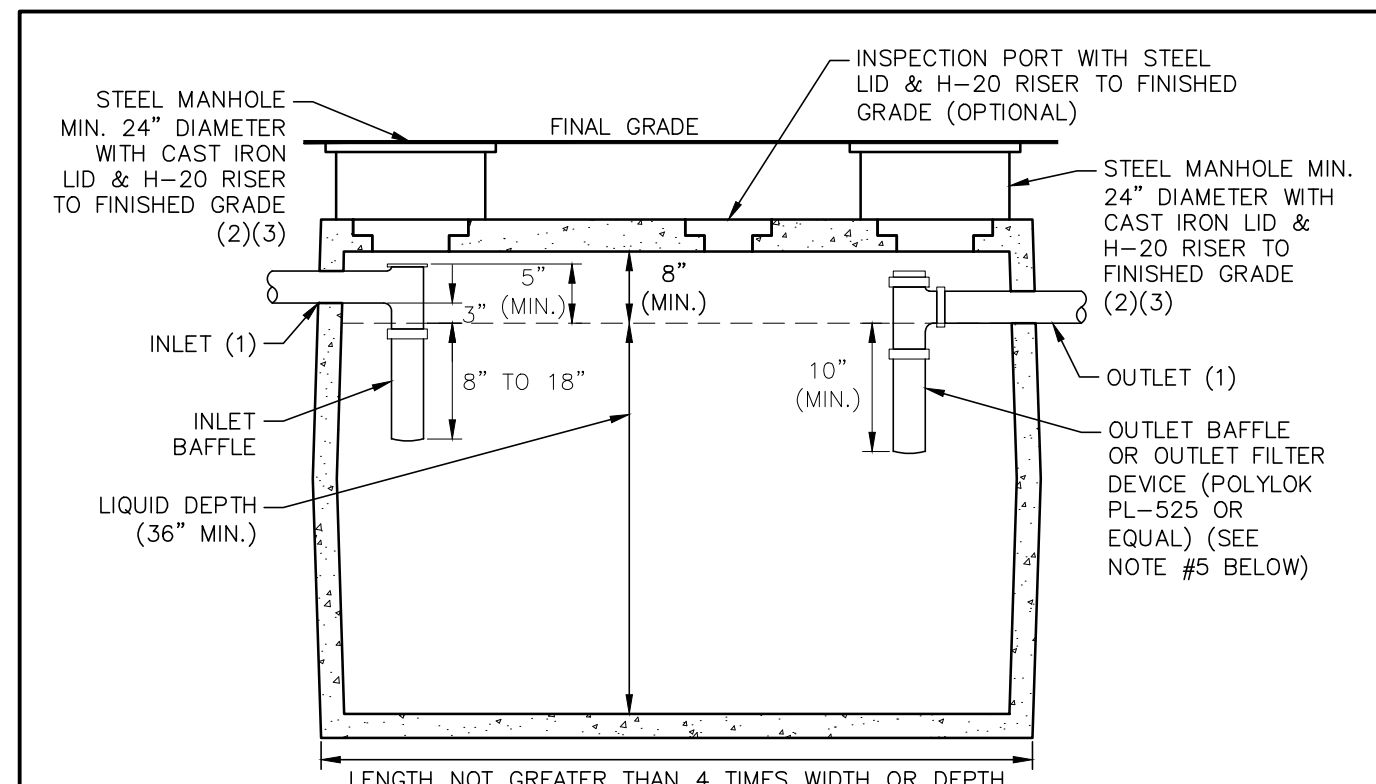
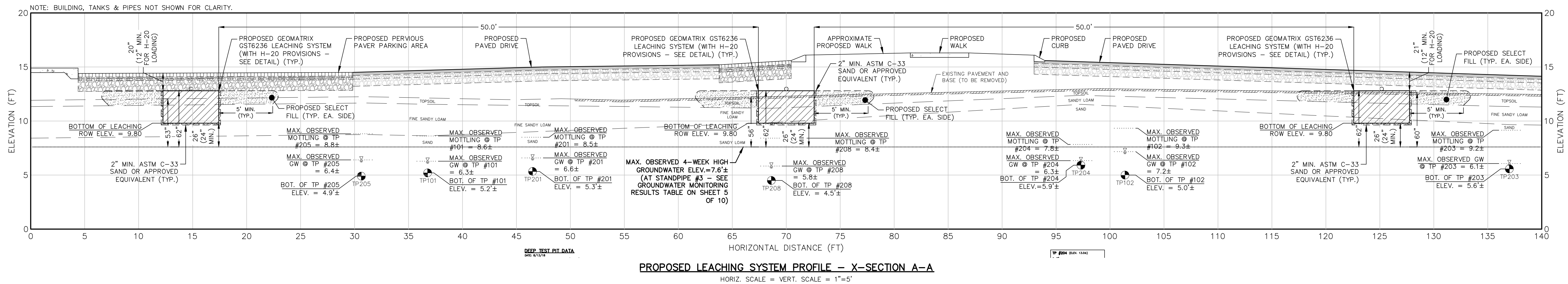
PLANT PREPARED BY:  
INDIGO LAND DESIGN, LLC  
JOSEPH WREN, P.E.  
440 BOSTON POST ROAD  
OLD SAYBROOK, CT 06475  
PHONE: (860) 388-9343  
FAX: (860) 391-9854



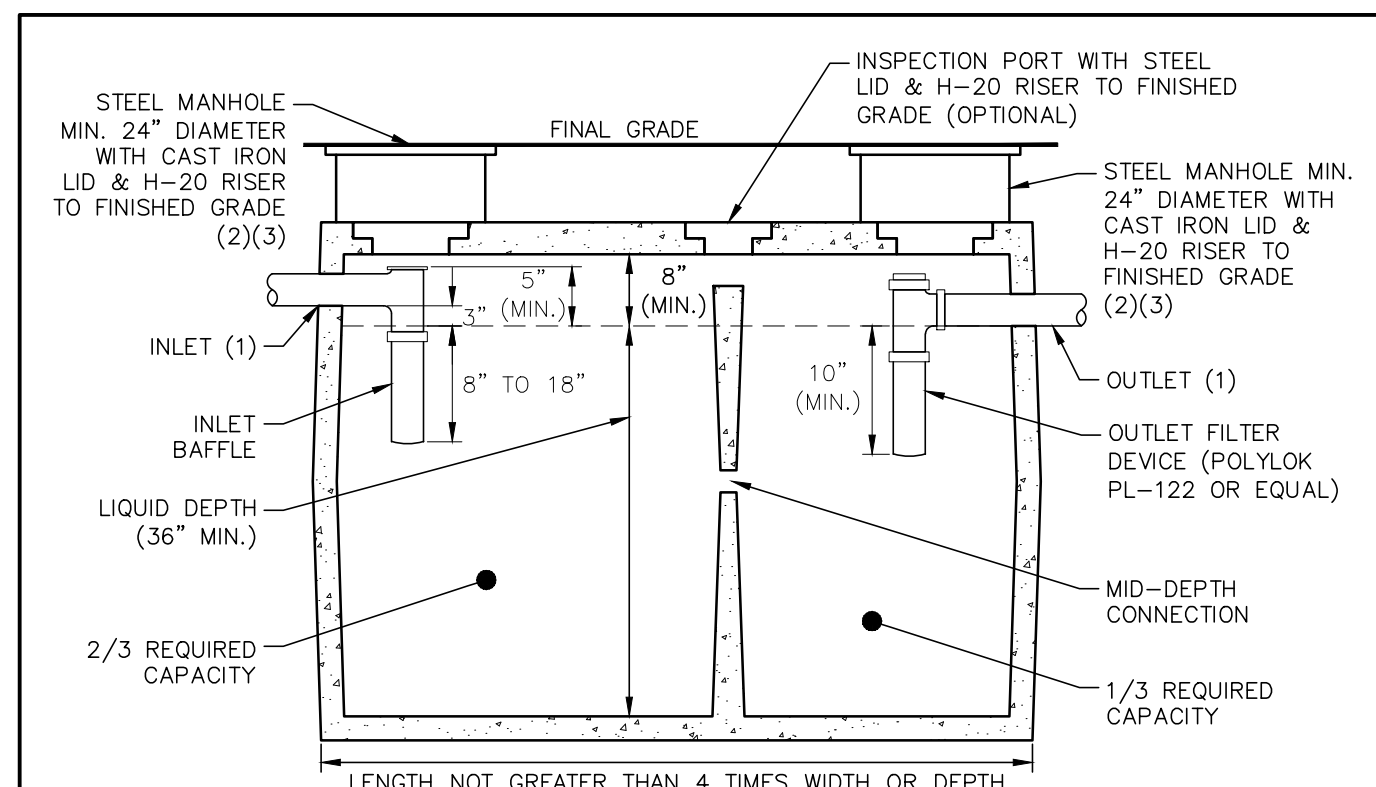
THE EMBOSSED SEAL OF  
THE REGISTERED PROFESSIONAL ENGINEER  
AFFIXED HERE FOR THIS  
MAP TO BE VALID

		RC	RC	BY
		REVISIONS PER HEALTH DEPARTMENT COMMENTS, MISC.		
4	5/13/19	TREES ADDED ALONG WESTERN PROPERTY LINE PER ZC		
3	3/26/19	REVISIONS PER ENGINEERING REVIEW COMMENTS	SM	
2	12/18/18	REVISIONS PER ENGINEERING REVIEW COMMENTS	SM	
1	11/13/18	GENERAL MINOR REVISIONS	SM	
#		DATE		





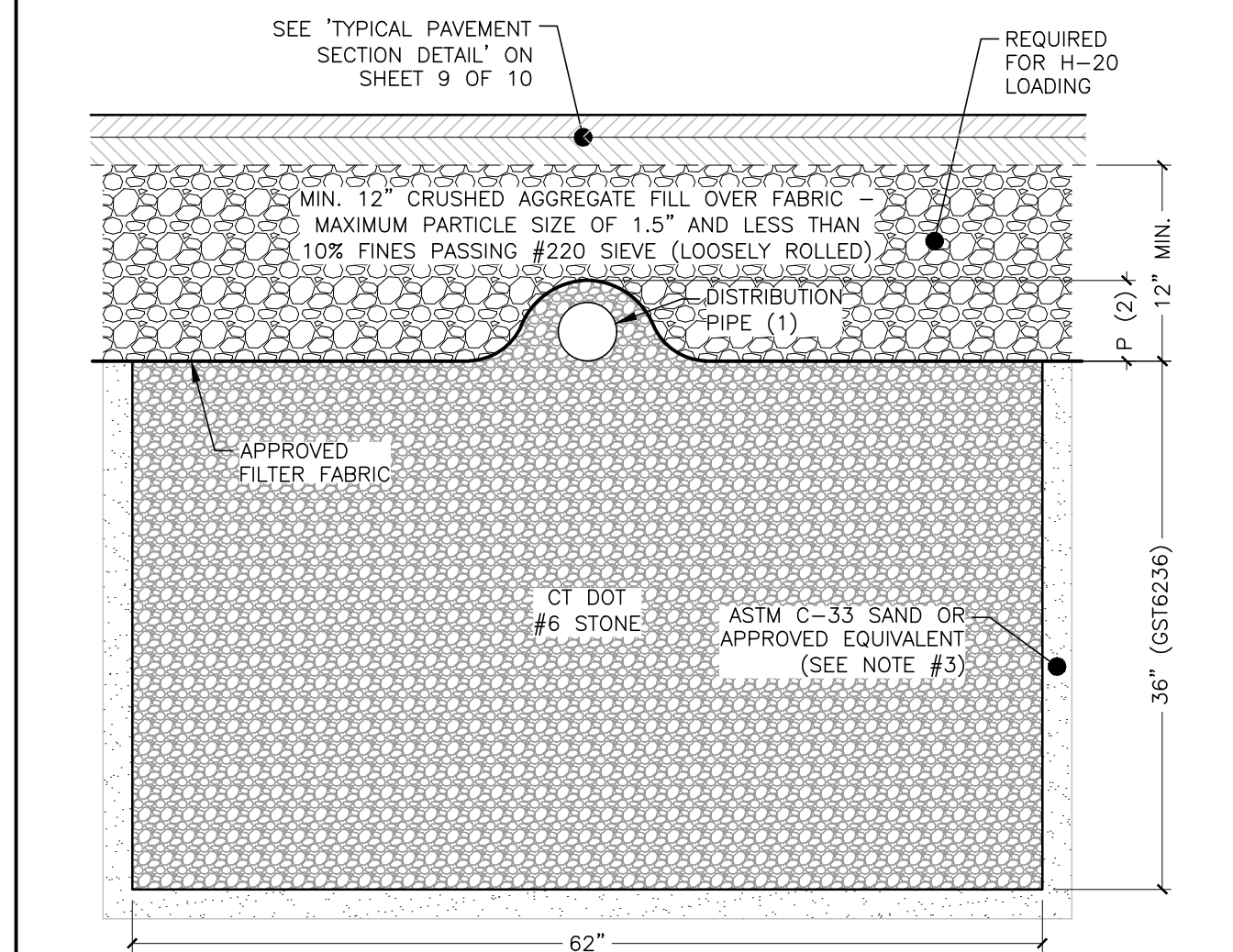
- NOTES:
1. INLET AND OUTLET PIPING SHALL BE AS LEVEL AS POSSIBLE AND SHALL NOT EXCEED 1/4" PER FOOT. THE 4,000 GALLON SEPTIC TANK SHALL HAVE A 6" KNOCKOUT TO ACCOMMODATE THE BUILDING SEWER PIPE.
  2. PAVEMENT AROUND MANHOLE LIDS SHALL BE GRADED AWAY FROM MANHOLES.
  3. ALL TANKS REQUIRING RISERS SHALL MAINTAIN THE ORIGINAL COVERS ON THE TANKS, HAVE RISER COVERS THAT WEIGH AT LEAST 59 LBS AND/OR INSTALL A SAFETY DEVICE BELOW THE RISER TO PREVENT INDIVIDUALS FROM FALLING INTO A TANK. ALL BELOW GRADE TANK OR RISER COVER HANDLES SHALL CONTAIN OR BE FITTED WITH A MATERIAL THAT CAN BE LOCATED WITH A METAL DETECTOR.
  4. THE 1-COMPARTMENT SEPTIC TANKS SHALL BE USED WHEN THE SEPTIC TANKS ARE IN SERIES, OTHERWISE, USE 2-COMPARTMENT SEPTIC TANKS (SEE SEPTIC SYSTEM DESIGN PLAN - SHEET 4 OF 10).
  5. FOR THE 4,000 GALLON 1-COMPARTMENT SEPTIC TANK THERE SHALL BE AN OUTLET BAFFLE (NO OUTLET FILTER DEVICE). FOR THE 2,000 GALLON 1-COMPARTMENT SEPTIC TANK THERE SHALL BE AN OUTLET FILTER DEVICE.



- NOTES:
1. INLET AND OUTLET PIPING SHALL BE AS LEVEL AS POSSIBLE AND SHALL NOT EXCEED 1/4" PER FOOT.
  2. PAVEMENT AROUND MANHOLE LIDS SHALL BE GRADED AWAY FROM MANHOLES.
  3. ALL TANKS REQUIRING RISERS SHALL MAINTAIN THE ORIGINAL COVERS ON THE TANKS, HAVE RISER COVERS THAT WEIGH AT LEAST 59 LBS AND/OR INSTALL A SAFETY DEVICE BELOW THE RISER TO PREVENT INDIVIDUALS FROM FALLING INTO A TANK. ALL BELOW GRADE TANK OR RISER COVER HANDLES SHALL CONTAIN OR BE FITTED WITH A MATERIAL THAT CAN BE LOCATED WITH A METAL DETECTOR.

CRUSHED AGGREGATE FILL GRADATION

SIZE	PERCENT PASSING
1 1/2 IN.	100
3/4 IN.	50-100
#4	25-50
#40	10-20
#100	5-15
#200	LESS THAN 10



- NOTES:
1. 3" (MIN.) SCH. 40 ASTM D-1785 PVC PIPE FOR GRAVITY APPLICATIONS.  
0.75" (MIN. I.D.) SCH. 40 ASTM D-1785 PVC PIPE FOR PRESSURE APPLICATIONS.
  2. P = 2" TO 5.5"
  3. 2" MINIMUM ASTM C-33 SAND OR APPROVED EQUIVALENT ON PERIMETER, BOTTOM AND SIDES OF SYSTEM.
  4. PAVEMENT BASE AND SUBBASE (12" MIN. THICKNESS + PAVEMENT) MAY BE ADEQUATE FOR H-20 LOADING. CONFIRM WITH GEOMATRIX SYSTEMS, LLC.

GEOMATRIX GST6236 (WITH H-20 PROVISIONS)  
LEACHING SYSTEM - X-SECTION B-B

NOT TO SCALE

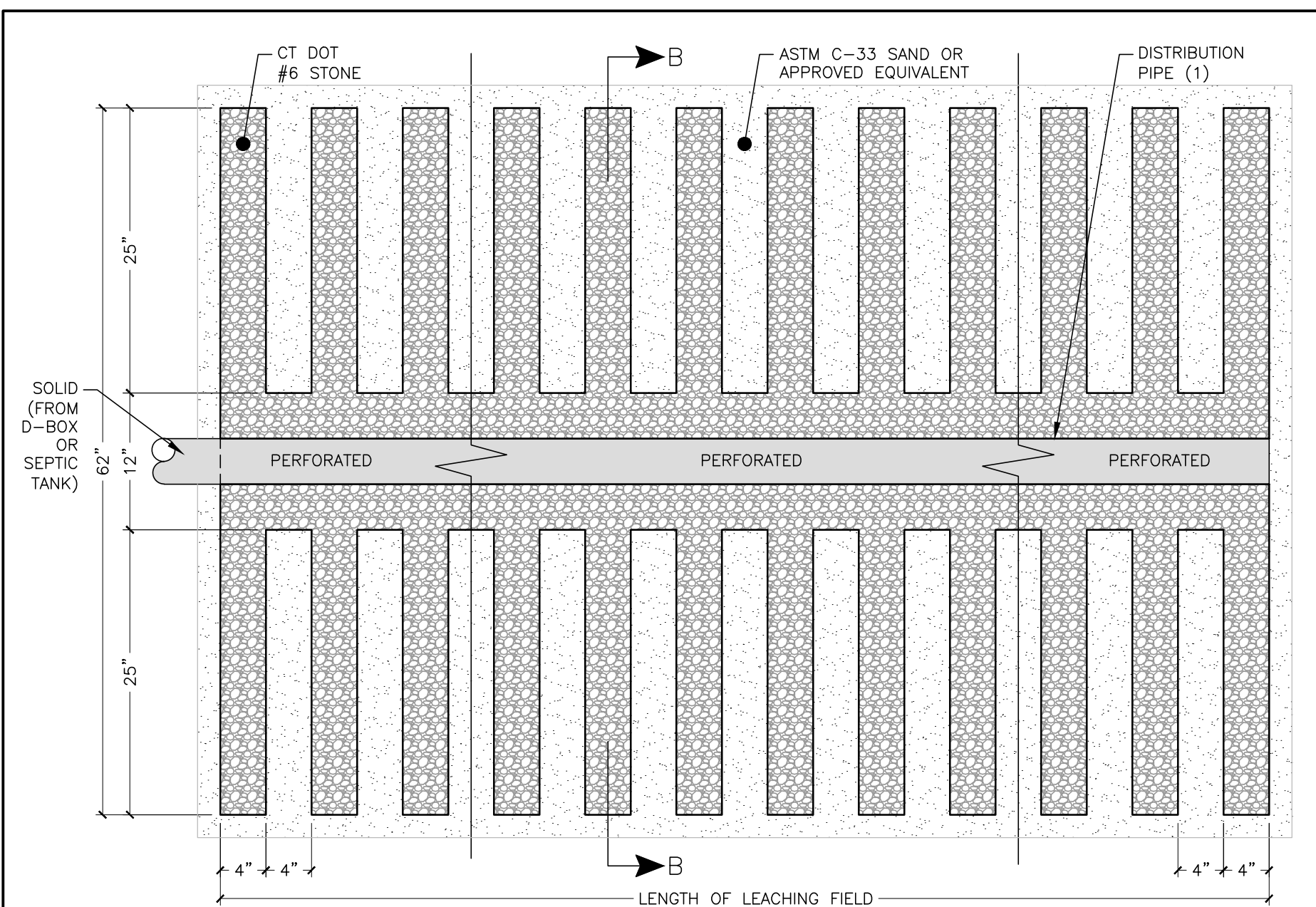
FILL AND GRADING NOTES (SEPTIC SYSTEM):

1. REMOVE ALL TOPSOIL AND/OR FILL WITHIN THE SYSTEM AREA AND SCARIFY THE SURFACE IN THE PROPOSED LEACHING SYSTEM AREA PRIOR TO PLACING ANY SELECT FILL MATERIAL. AVOID COMPACTING THE SCARIFIED AREA. FILL SHALL NOT BE PLACED OVER SNOW OR FROZEN GROUND. DISCONTINUE FILL PLACEMENT DURING HEAVY RAINFALL AND A MINIMUM OF 24 HOURS THEREAFTER. THE SELECT FILL MATERIAL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 90% DENSITY.
2. SELECT FILL MATERIAL SHALL CONSIST OF CLEAN SAND AND GRAVEL, FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. THE SELECT FILL MATERIAL SHALL MEET THE REQUIREMENTS OF THE PUBLIC HEALTH CODE PROVIDED IN THE TABLE ON THIS SHEET.
3. THE LICENSED INSTALLER SHALL BE RESPONSIBLE FOR PREPARING THE LEACHING AREA UTILIZING THE SELECT FILL MATERIAL.
4. ALL NECESSARY STEPS SHALL BE TAKEN TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOILS FROM OVER COMPACTION AND SILTATION ONCE EXPOSED.
5. THE CONTRACTOR SHALL PROVIDE GRADATION SPECIFICATIONS OF THE SELECT FILL MATERIAL TO BE USED FOR THE PROPOSED SEPTIC SYSTEM TO THE DESIGN ENGINEER AND TOWN SANITARIAN PRIOR TO ORDERING AND INSTALLATION.

SELECT FILL GRADATION TABLE

SIEVE SIZE	PERCENT PASSING	
	WET SIEVE	DRY SIEVE
#4	100	100
#10	70-100	70-100
#40	10-50*	10-75
#100	0-20	0-5
#200	0-5	0-2.5

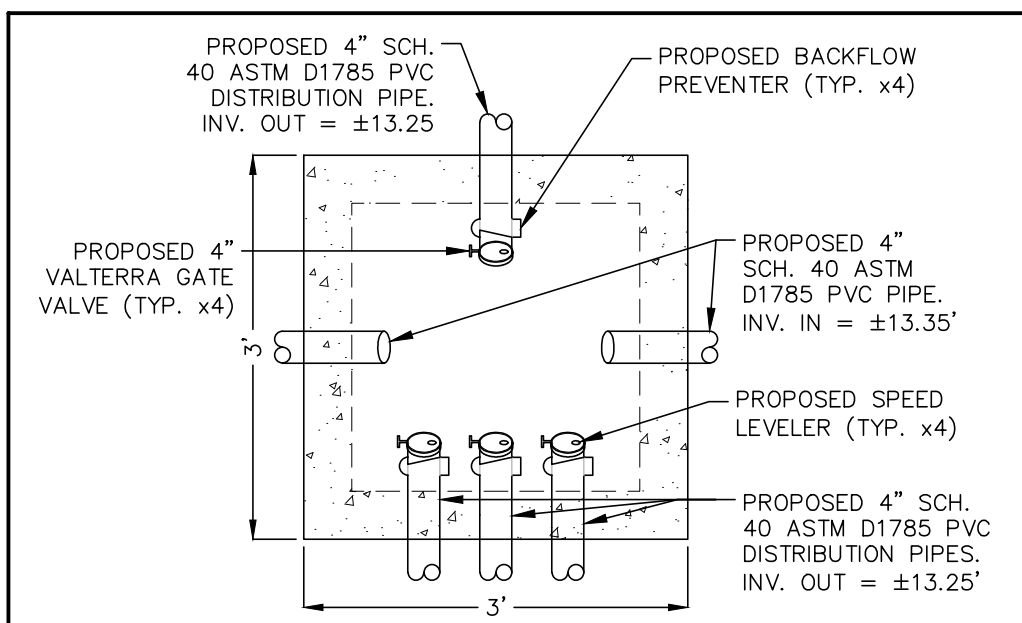
- \* PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.
- \*\* A SIEVE ANALYSIS FOR THE SELECT FILL MATERIAL SHALL BE PROVIDED TO THE DESIGN ENGINEER. ONLY THE DESIGN ENGINEER MAY APPROVE SELECT FILL MATERIAL NOT IN COMPLIANCE WITH THE GRADATION TABLE IF THE MATERIAL PASSING THE #200 SIEVE DOES NOT EXCEED 6% BASED ON WET SIEVE.



- NOTES:
1. 3" (MIN.) SCH. 40 ASTM D-1785 PVC PIPE FOR GRAVITY APPLICATIONS.  
0.75" (MIN. I.D.) SCH. 40 ASTM D-1785 PVC PIPE FOR PRESSURE APPLICATIONS.
  2. 2" MINIMUM ASTM C-33 SAND OR APPROVED EQUIVALENT ON PERIMETER, BOTTOM AND SIDES OF SYSTEM.
  3. DISTRIBUTION PIPES SHALL EXTEND TO THE ENDS OF ROWS AND SHALL BE PROPERLY CAPPED.

GEOMATRIX GST6236 (WITH H-20 PROVISIONS) LEACHING SYSTEM - PLAN VIEW

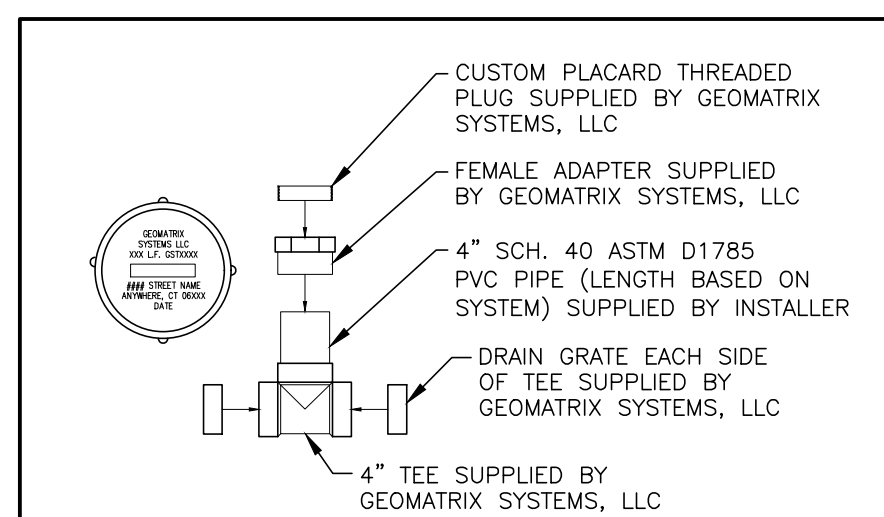
NOT TO SCALE



- NOTE:
1. DISTRIBUTION BOX SHALL HAVE A WATER-TIGHT ALUMINUM H-20 RATED ACCESS HATCH AT FINISHED GRADE OF PAVEMENT AND PROVISIONS ADDED TO PREVENT UNAUTHORIZED ACCESS.

H-20 D-BOX DETAIL (CUSTOM  
UNITED CONCRETE 3'x3' UTILITY VAULT)

NOT TO SCALE

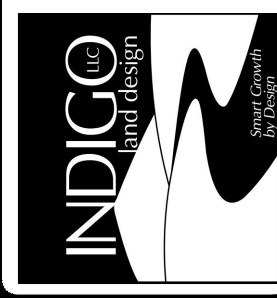


- NOTE:
1. INSPECTION PORT ASSEMBLY SHALL BE H-20 LOAD RATED

GEOMATRIX GST LEACHING SYSTEM  
INSPECTION PORT DETAIL

NOT TO SCALE

PLAN PREPARED BY:  
INDIGO LAND DESIGN, LLC  
JOSEPH WREN, P.E.  
44 REG. NO. 21290 FLOOR  
400 STATE ST. SUITE 200  
OLD SAYBROOK, CT 06475  
PHONE: (860) 388-9343  
FAX: (860) 391-8854



THE EMBOSSED SEAL OF  
THE PROFESSIONAL ENGINEER  
AFFIXED HERE FOR THIS  
MAP TO BE VALID

REV	DATE	DESCRIPTION
4	5/13/19	REVISIONS PER HEALTH DEPARTMENT COMMENTS, MISC.
3	3/26/19	TREES ADDED ALONG WESTERN PROPERTY LINE PER ZC
2	12/18/18	REVISIONS PER ENGINEERING REVIEW COMMENTS
1	11/13/18	GENERAL MINOR REVISIONS
#		

SEPTIC SYSTEM X-SECTION & CONSTRUCTION DETAILS  
SETTLER'S PLACE - A PLANNED RESIDENTIAL DEVELOPMENT  
PREPARED FOR BOCCA-DES PROPERTIES, LLC  
1935 BOSTON POST ROAD -- MAP 180 LOT 114  
WESTBROOK, CONNECTICUT

DATE:  
AUGUST 29, 2018  
SCALE:  
AS NOTED  
DRAWN BY:  
SM  
CHECKED BY:  
JW  
DWG. NO.:  
XSCD-1  
SHEET NO.:  
6 of 10  
JOB. NO.:  
2017-384

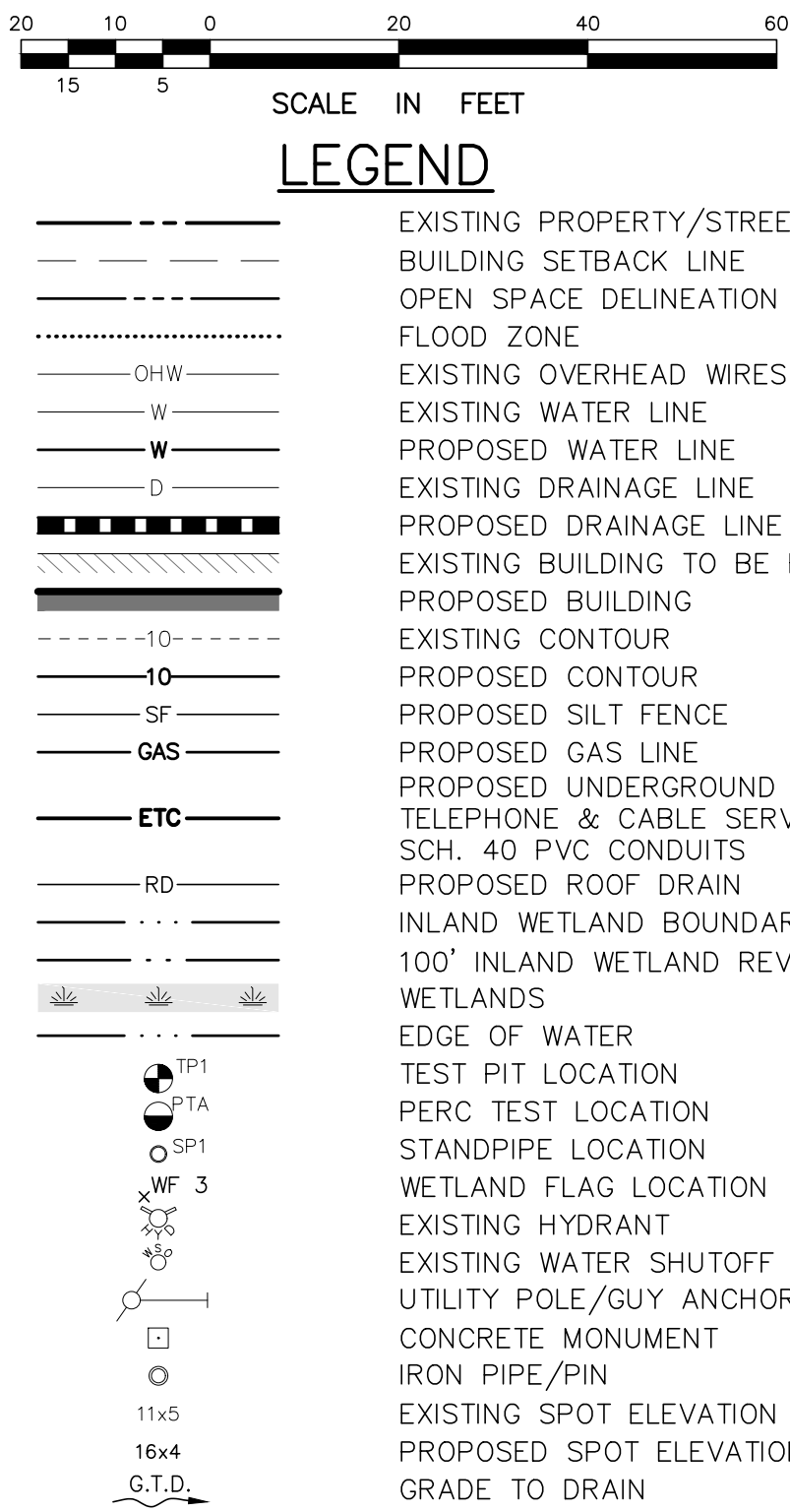
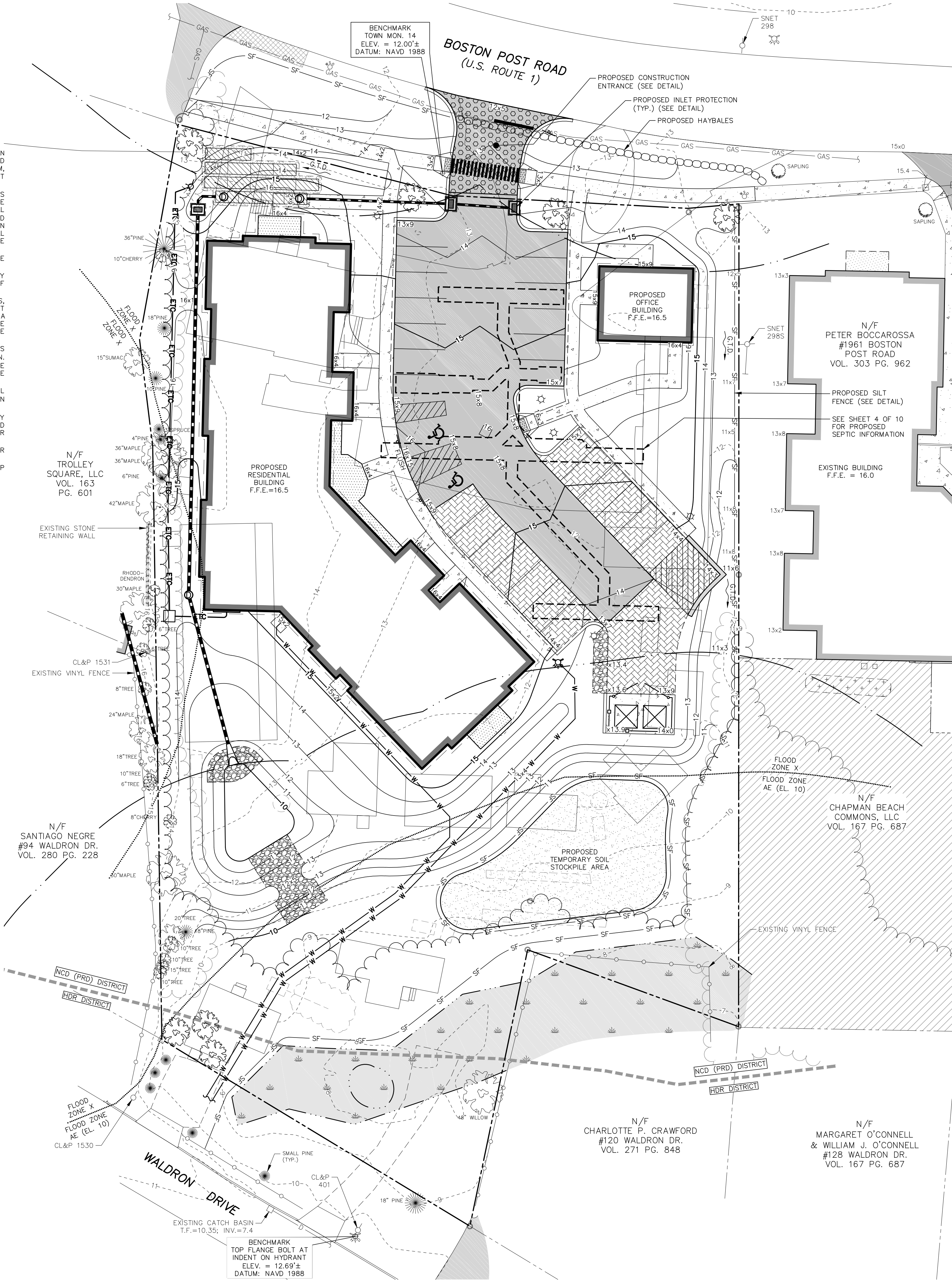


GENERAL NOTES:

- REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
  - CSP-1: OVERALL SITE PLAN
  - CSPSP-1: COASTAL SITE PLAN FOR SPECIAL PERMIT
  - GDUL-1: GRADING, DRAINAGE, LANDSCAPING & UTILITY PLAN
  - SSDP-1: SEPTIC SYSTEM DESIGN PLAN
  - ST-1: SOIL TEST DATA & SEPTIC DESIGN CRITERIA
  - XSOD-1: SEPTIC SYSTEM X-SECTION & CONSTRUCTION DETAILS
  - ESD-1: E&S DETAILS AND WATER MAIN DETAILS
  - CD-1: CONSTRUCTION DETAILS
  - CD-2: CONSTRUCTION DETAILS
  - ARCHITECTURAL DRAWINGS PREPARED BY PETER SPRINGSTEEL
  - ALL REFERENCE MAPS

EROSION & SEDIMENT CONTROL NOTES:

- THE APPLICANT IS PROPOSING TO CONSTRUCT A PLANNED RESIDENTIAL DEVELOPMENT WITH AN ACCESSORY OFFICE/STORAGE BUILDING, CONSTRUCT A PRIVATE ACCESS DRIVE AND ASSOCIATED PARKING, INSTALL A NEW CONNECTICUT PUBLIC HEALTH CODE-COMPLIANT SEPTIC SYSTEM, CONSTRUCT A WATER QUALITY BASIN AND INSTALL (15) 18" CONCRETE GALLERIES TO TREAT THE WATER QUALITY VOLUME, ADD LANDSCAPING AND OTHER ASSOCIATED IMPROVEMENTS.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND INFORMATION PROVIDED BY OTHERS. THEIR ACTUAL LOCATION MAY VARY FROM THOSE INDICATED AND ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 800-922-4455 TO MARK OUT ALL UNDERGROUND UTILITIES A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY. CONTRACTOR SHALL VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE TOWN OF WESTBROOK STANDARDS AND REGULATIONS.
- ALL PROPERTY LINES SHALL BE VERIFIED IN THE FIELD. NO PRIVATE PROPERTY SHALL BE DISTURBED UNLESS PROPER RIGHTS ARE OBTAINED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN, REVIEW AND ADHERE TO ALL REQUIREMENTS AND ANY CONDITIONS OF APPROVAL OF THE TOWN OF WESTBROOK, THE CONNECTICUT DEPARTMENT OF PUBLIC HEALTH AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND CONFORMING TO ALL PERMITS, BONDING AND INSURANCE REQUIRED BY THE TOWN OF WESTBROOK, THE CONNECTICUT DEPARTMENT OF PUBLIC HEALTH AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION. A D.O.T. ENCROACHMENT PERMIT SHALL BE SECURED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN THE D.O.T. RIGHT-OF-WAY. ALL UTILITIES SHALL BE DISCONNECTED PRIOR TO COMMENCEMENT OF ANY DEMOLITION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ADJACENT PROPERTIES AND WETLANDS/WATERCOURSES FROM ANY EROSION AND/OR SEDIMENTATION. EROSION/SEDIMENTATION CONTROLS SHALL BE INSTALLED AS SHOWN HEREON AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. REFER TO THE E&S NARRATIVE AND CONSTRUCTION DETAILS ON SHEET 8 OF 10 FOR MOR INFORMATION.
- THE SITE SHALL BE GRADED USING STANDARD CONSTRUCTION PRACTICES. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL SLOPES EQUAL TO OR STEEPER THAN 3(H):1(V) IN STRICT CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.
- AFTER ROUGH GRADING AND SHAPING, THE AREA OF THE BASIN SHALL BE MARKED OFF BY APPROPRIATE FENCING TO PREVENT THE MOVEMENT OF CONSTRUCTION VEHICLES OVER AND THE POSSIBLE OVER COMPACTION OF THE UNDERLYING NATURAL SOILS. BASIN SHALL NEVER BE USED FOR SEDIMENT CONTROL DURING AN ACTIVE CONSTRUCTION PERIOD.
- ALL DISTURBED AREAS SHALL BE LOAMED, SEEDED AND MULCHED AS NECESSARY OR OTHERWISE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER.
- ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD-88 DATUM PER REFERENCE MAP A.



Final Approval by the Westbrook Zoning Commission

Chairman \_\_\_\_\_ Date \_\_\_\_\_

The statutory five-year period for completion of all physical improvements expires on \_\_\_\_\_, 20\_\_\_\_.

PLANT PREPARED BY:  
INDIGO LAND DESIGN, LLC  
JOSEPH WREN, P.E.  
REGISTERED PROFESSIONAL ENGINEER  
445 STATE ST., 2ND FLOOR  
OLD SAYBROOK, CT 06475  
PHONE: (860) 388-9343  
FAX: (860) 391-8854

THE EMBOSSED SEAL OF  
THE ENGINEERING REGISTRY OF  
CONNECTICUT  
AFFIXED HERE FOR THIS  
MAP TO BE VALID

	RC	RC	RC	SM	BY
REVISIONS PER HEALTH DEPARTMENT COMMENTS, MISC.					
TREES ADDED ALONG WESTERN PROPERTY LINE PER ZC	4	5/13/19			
REVISIONS PER ENGINEERING REVIEW COMMENTS	3	3/26/19			
GENERAL MINOR REVISIONS	2	12/18/18			
	1	11/13/18			
#		DATE			

**EROSION & SEDIMENT CONTROL PLAN**  
SETTLER'S PLACE - A PLANNED RESIDENTIAL DEVELOPMENT  
PREPARED FOR BOCCA-DES PROPERTIES, LLC  
1935 BOSTON POST ROAD -- MAP 180 LOT 114  
WESTBROOK, CONNECTICUT

DATE:  
AUGUST 29, 2018

SCALE:  
1"=20'

DRAWN BY:  
SM

CHECKED BY:  
JW

DWG. NO.:  
ESCP-1

SHEET NO.:  
7 of 10

JOB. NO.:  
2017-384

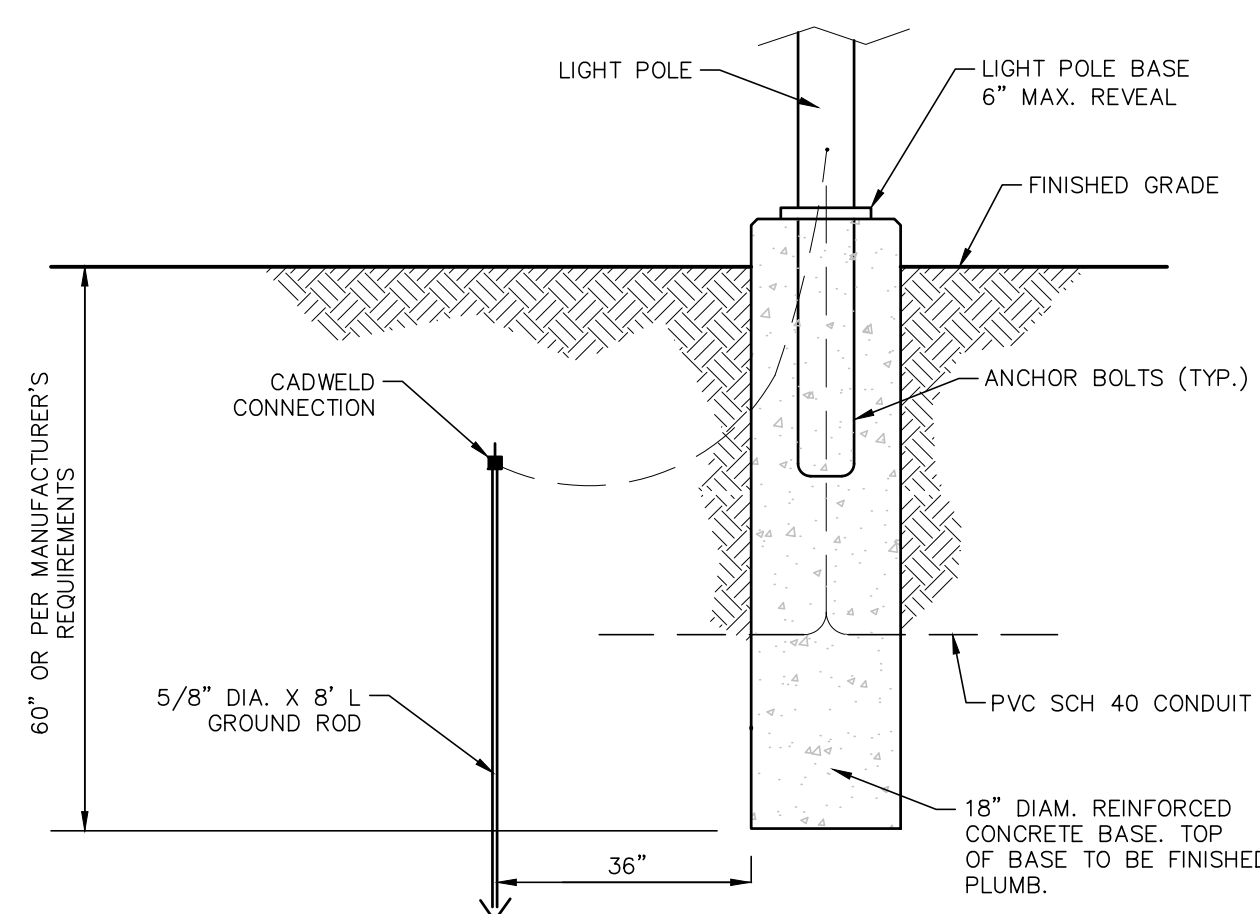




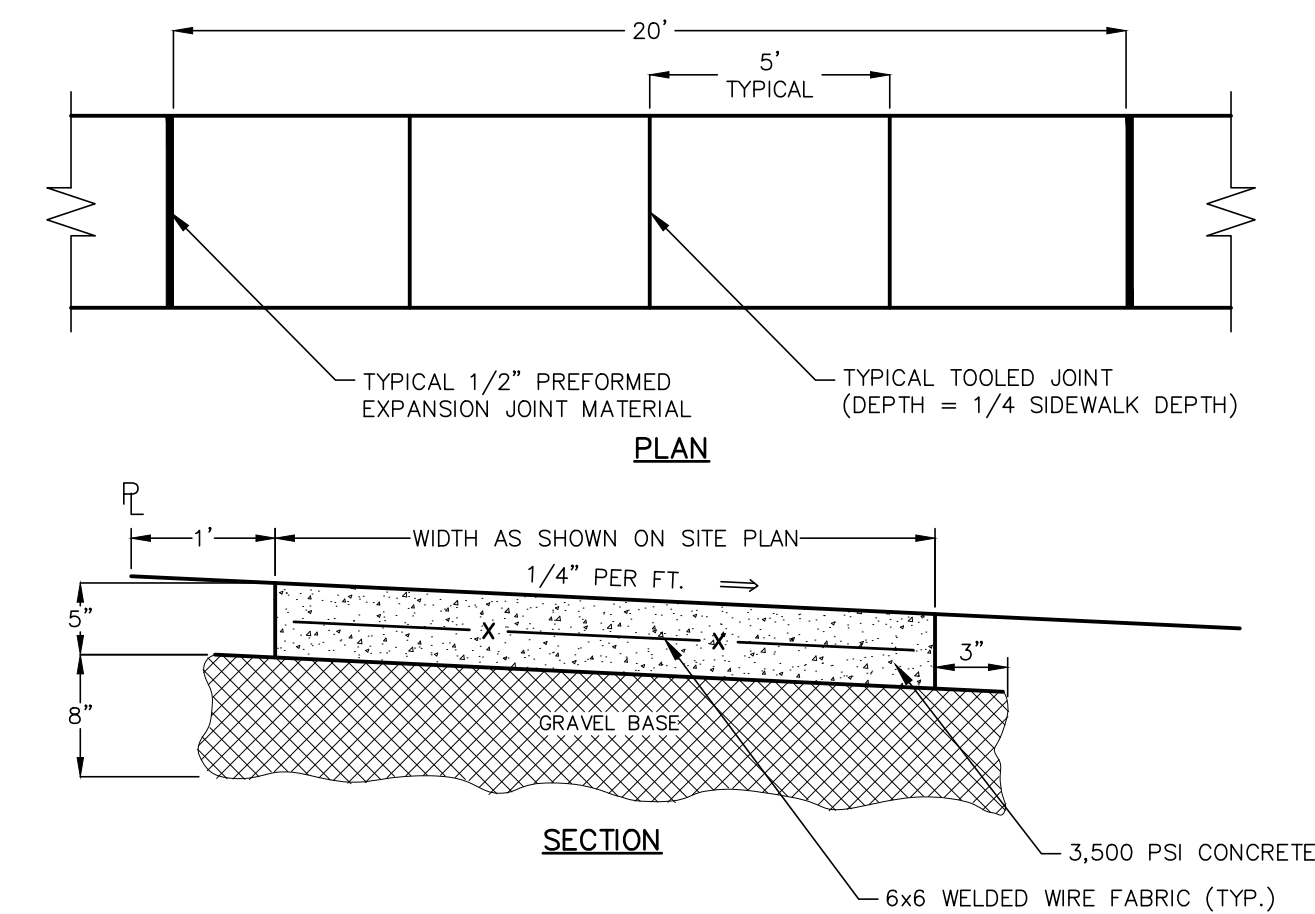


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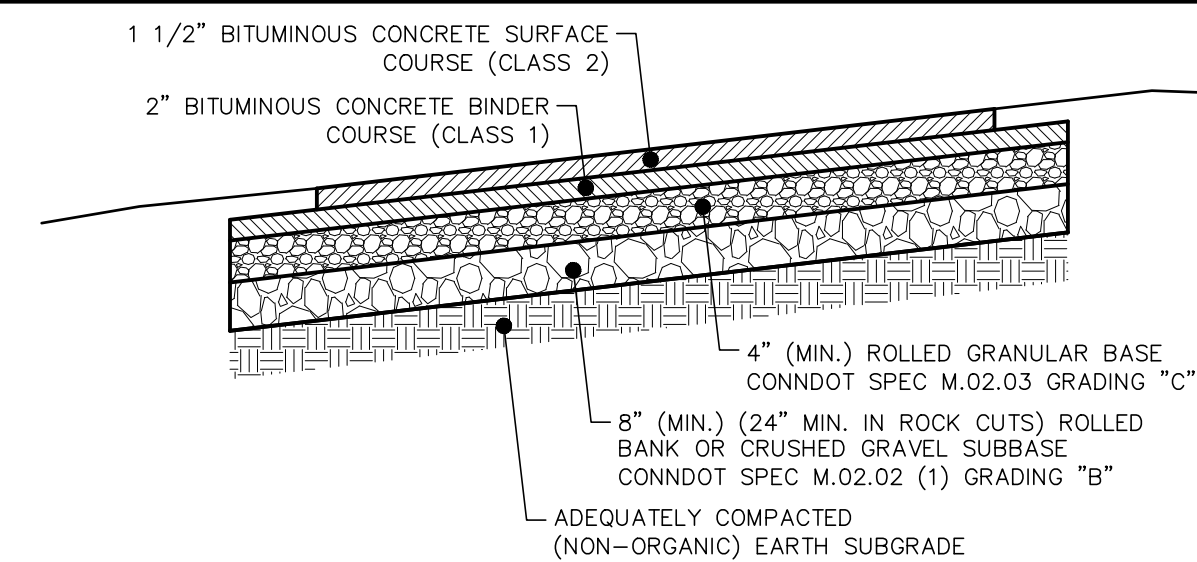
1. EMBLEM AND LETTERING TO BE WHITE ON A BLUE BACKGROUND.
2. SIGN TO BE EMBOSSED GALVANIZED STEEL WITH BAKED ENAMEL FINISH.
3. INSTALL SIGNS IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REQUIREMENTS (2001 MUTCD STANDARDS OR AS AMENDED).
4. SHOP DRAWINGS REQUIRED.
5. SEE HANDICAPPED PARKING STALL DETAIL FOR LOCATION OF SIGN.



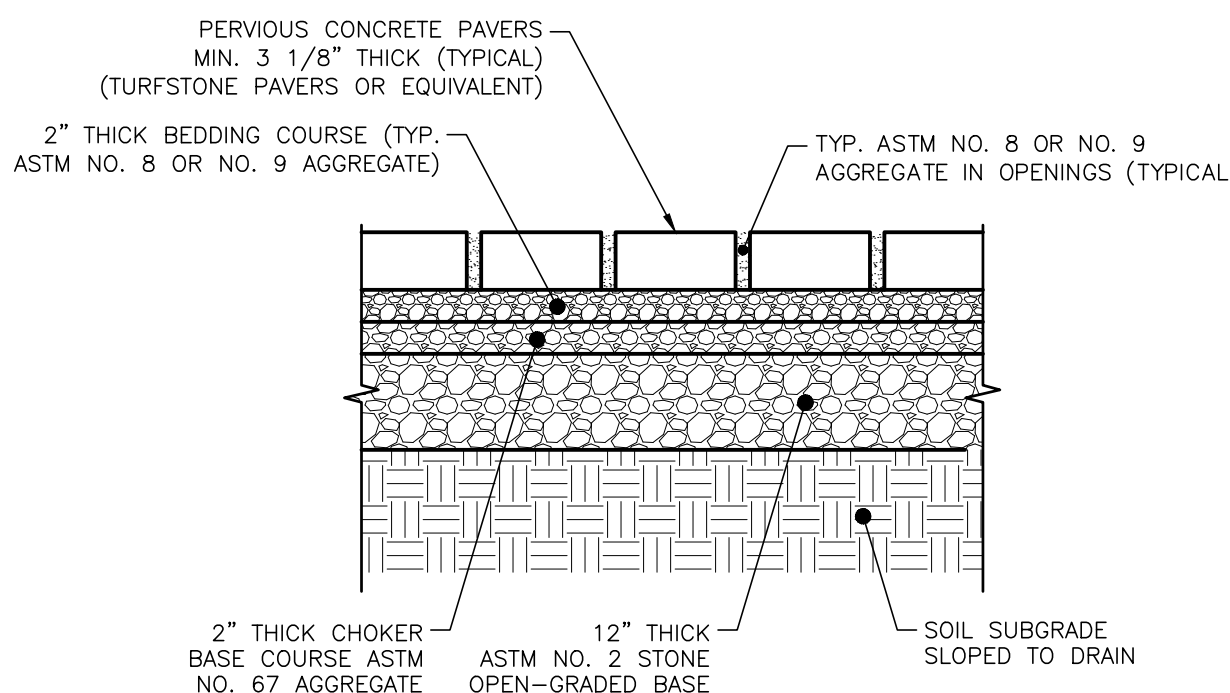
**LIGHT POLE CONCRETE BASE DETAIL**  
NOT TO SCALE



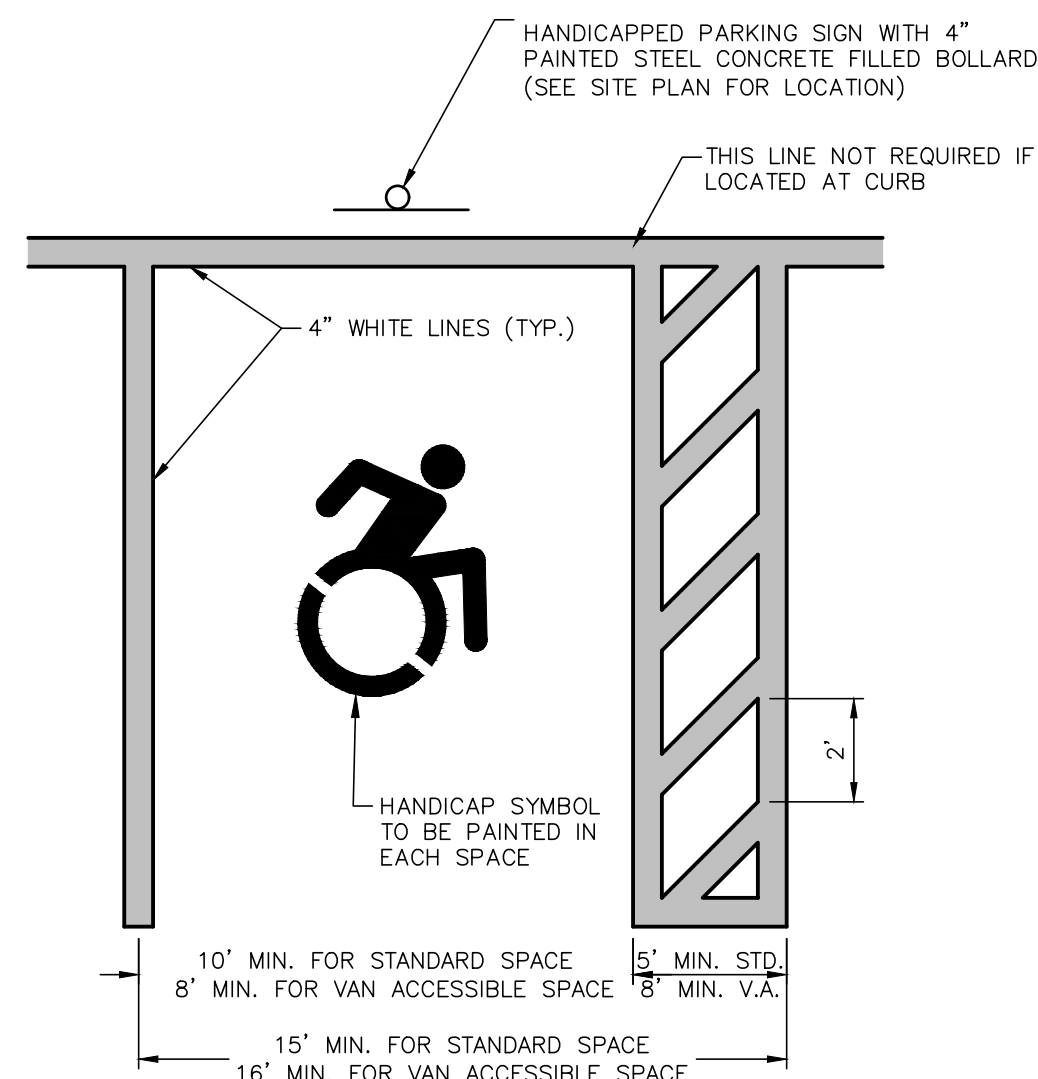
**CONCRETE SIDEWALK**  
NOT TO SCALE



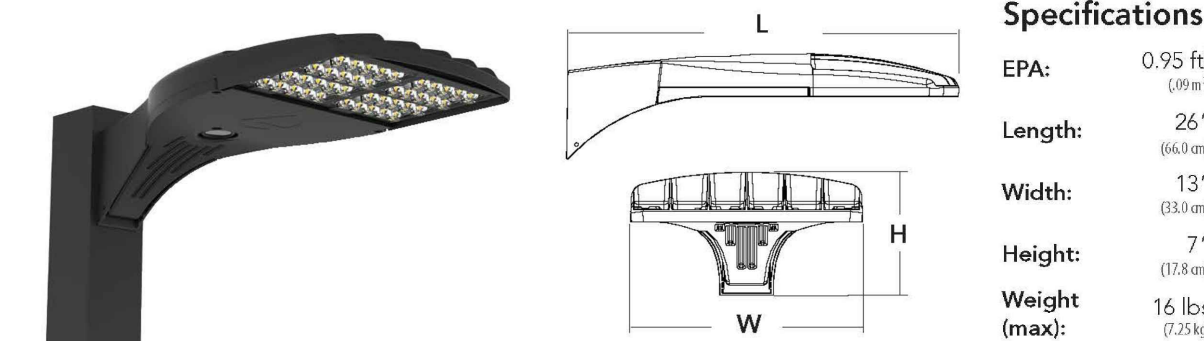
**TYPICAL PAVEMENT SECTION DETAIL**  
NOT TO SCALE



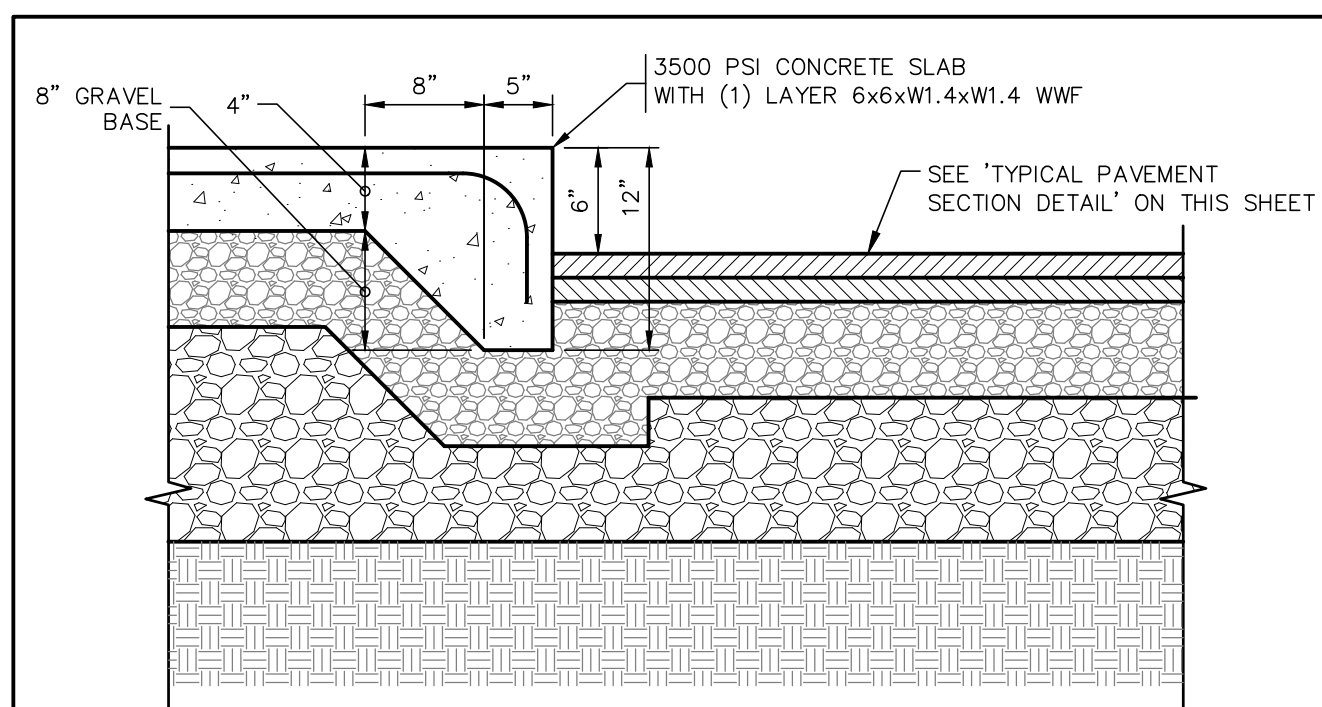
PERVIOUS INTERLOCKING CONCRETE PAVER DETAIL  
NOT TO SCALE



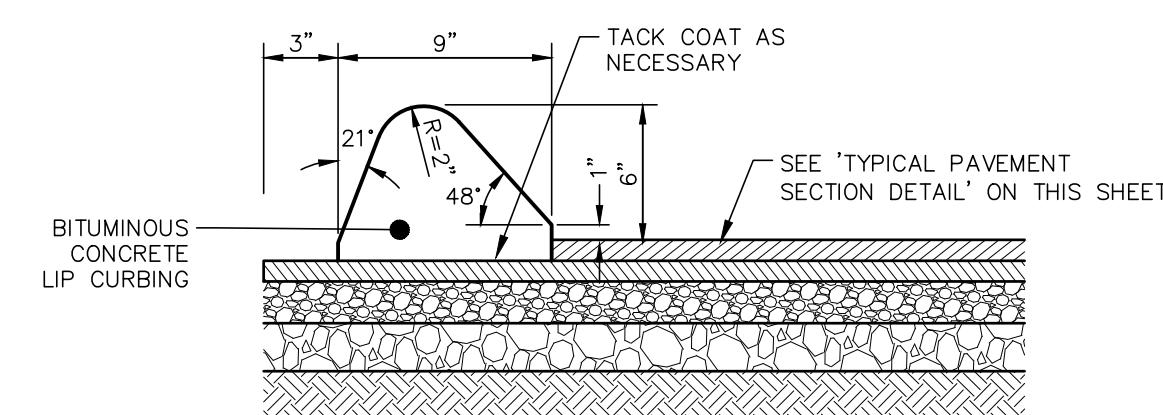
HANDICAPPED PARKING STALL DETAIL  
NOT TO SCALE



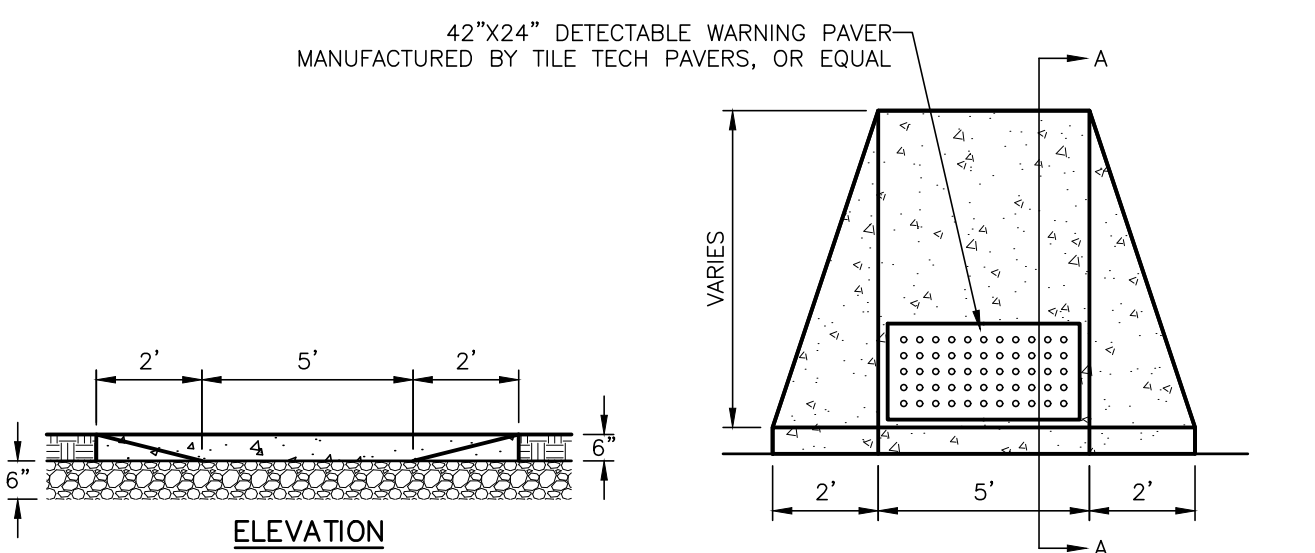
**LIGHTING DETAIL**  
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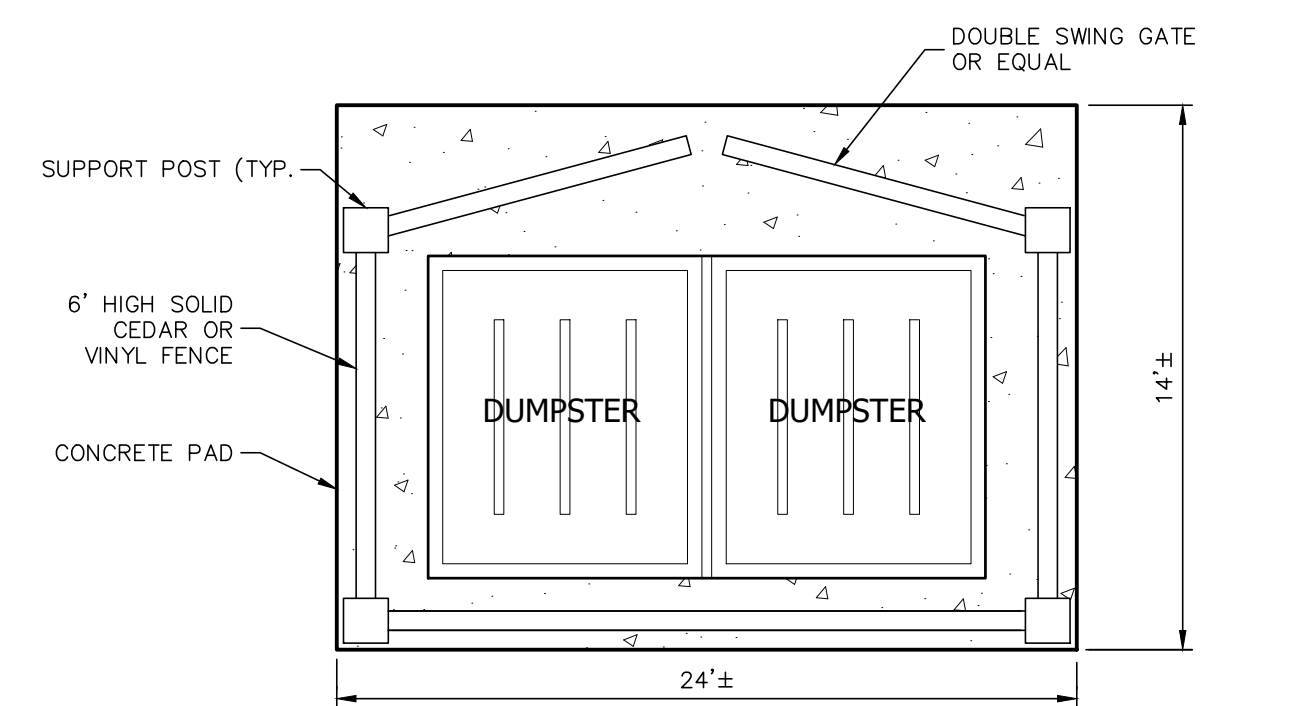
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NOT TO SCALE



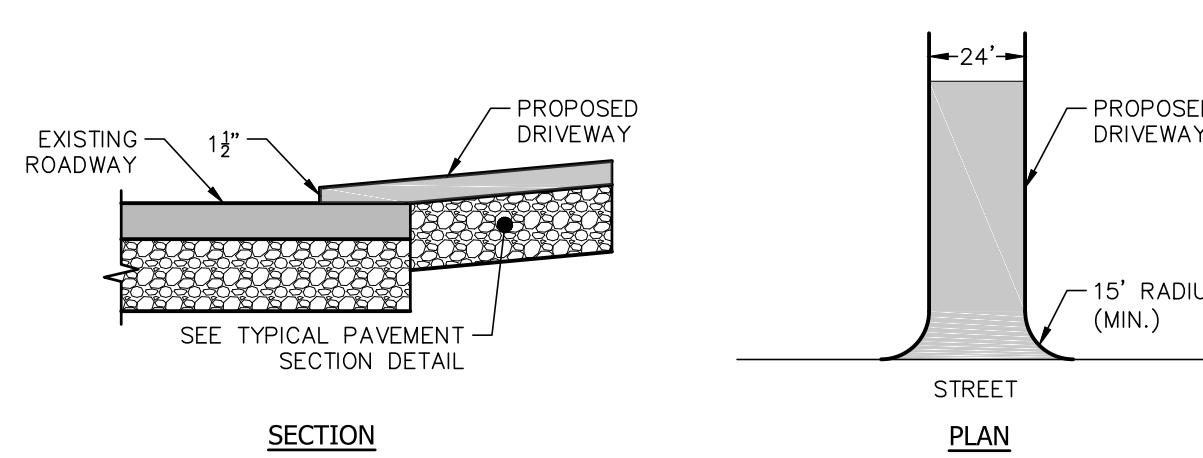
**BITUMINOUS CONCRETE CURB DETAIL**  
NOT TO SCALE



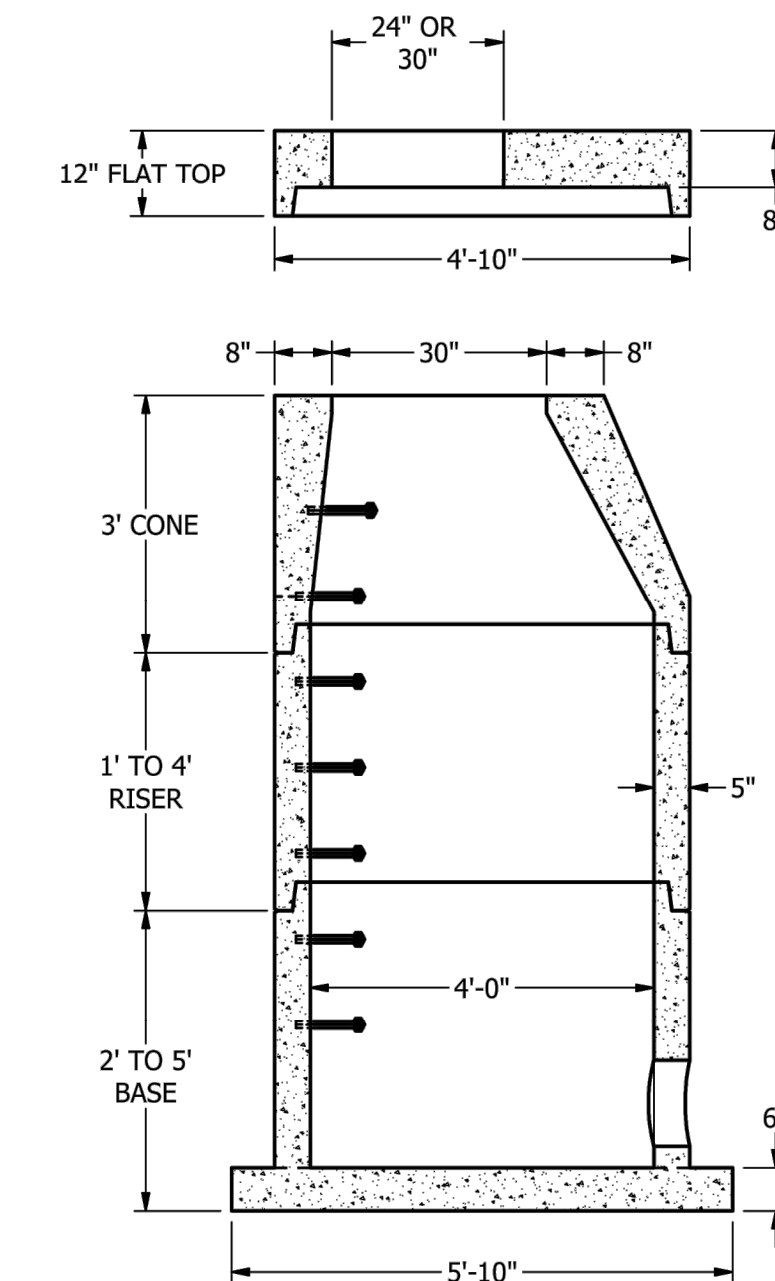
**CONCRETE SIDEWALK RAMP DETAIL**  
NOT TO SCALE



DUMPSTER ENCLOSURE DETAIL  
NOT TO SCALE



**DRIVEWAY ENTRANCE DETAIL**  
NOT TO SCALE



**TYPICAL DRAINAGE MANHOLE DETAIL**  
NOT TO SCALE

DESIGN NOTES:

1. CONCRETE COMPRESSIVE STRENGTH - 5000 PSI AT 28 DAYS
2. REINFORCEMENT STEEL CONFORMS TO THE LATEST A615 AND A185 SPEC.
3. H-20 DESIGN LOADING PER AASHTO HS-20-44
4. MANHOLE DESIGN CONFORMS TO LATEST ASTM C478 SPEC.
5. BUTYL RUBBER JOINT SEALANT CONFORMS TO LATEST ASTM C990 SPEC.
6. STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC STEP CONFORMS TO LATEST ASTM 478 SPEC.
7. EXTERIOR COATING WHEN SPECIFIED

1-800-582-4638

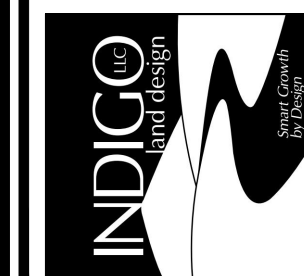


[www.jolleyprecast.com](http://www.jolleyprecast.com)

**JOLLEY PRECAST INC.**

48 Inch Dia. Manhole With  
Extended Base

PLAN PREPARED BY:  
INDIGO LAND DESIGN, LLC  
JOSEPH WREN, P.E.  
CT REG. NO. 21090  
40 ELM STREET, 2ND FLOOR  
OLD SAYBROOK, CT 06475  
PHONE: (860) 388-9343  
FAX: (860) 391-8854



THE EMBOSSED SEAL OF  
THE ENGINEER MUST BE  
AFFIXED HERE FOR THIS  
MAP TO BE VALID

4	5/13/19	REVIEWS PER HEALTH DEPARTMENT COMMENTS, MISC.	RG
3	3/26/19	TREES ADDED ALONG WESTERN PROPERTY LINE PER ZC	RG
2	12/18/18	REVISIONS PER ENGINEERING REVIEW COMMENTS	SM
1	11/13/18	GENERAL MINOR REVISIONS	SM
	DATE	DESCRIPTION	BY

**CONSTRUCTION DETAILS**

DATE:  
AUGUST 29, 2018

SCALE:  
AS NOTEDDRAWN BY:  
SM

CHECKED BY  
JW

DWG. NO.

CD-1

SHEET NO.:

9 of 10

---

JOB. NO.:

2017-384



1. AFTER ROUGH GRADING AND SHAPING, THE AREA OF THE BASIN SHALL BE MARKED OFF BY APPROPRIATE FENCING TO PREVENT THE MOVEMENT OF CONSTRUCTION VEHICLES OVER AND THE POSSIBLE OVER COMPACTION OF THE UNDERLYING NATURAL SOILS.
2. BASIN SHALL NEVER BE USED FOR SEDIMENT CONTROL DURING AN ACTIVE CONSTRUCTION PERIOD.
3. DURING CONSTRUCTION, SEDIMENT SHALL BE PREVENTED FROM ENTERING THE AREA OF THE BASIN. THE CONTRACTOR SHALL ENSURE THAT THE AREAS DRAINING TO THE BASIN ARE STABILIZED IN A TIMELY MANNER AND MAINTAINED OVER THE ENTIRE AREA DRAINING TO THE BASIN.
4. THE DESIGN ENGINEER SHALL MONITOR THE CONSTRUCTION OF THE WATER QUALITY BASIN. WILL PERFORM ALL FOLLOW UP INSPECTIONS, ASSESSMENTS AND REPORTS AND REMEDIATION WORK (IF NECESSARY) AND SHALL PROVIDE CERTIFICATION THAT THE SYSTEM WAS INSTALLED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS.
5. ALL DISTURBED AREAS SHALL BE FINE GRADED WITH 6" TOPSOIL, RAKED, SEEDED AND MULCHED IN A TIMELY MANNER. THE ENTIRE BASIN SHALL BE HEAVILY SEEDED WITH "RETENTION BASIN MIX" BY ERNST CONSERVATION SEEDS, AND SIDE SLOPES AND BERMS OF STORMWATER BASIN TO BE HEAVILY SEEDED WITH STANDARD SEED MIX AND MULCHED PER SITE PLANS. ERNST "RETENTION BASIN FLOW MIX" SHALL BE INSTALLED PER SUPPLIER SPECIFICATIONS AND MULCHED ACCORDINGLY. SEEDING SHALL BE QUICKLY ESTABLISHED AND MAINTAINED TO PREVENT ANY SLT AND EROSION. ONCE THE BOTTOM OF THE BASIN IS FINE GRADED, IF NECESSARY, THE CONTRACTOR SHALL INSTALL IMPROPER STONE CHECK DAMS TO PREVENT EROSION FROM ENTERING THE BASIN AREA DURING CONSTRUCTION. MINIMUM VEGETATIVE COVERAGE OF 90% SHALL BE MAINTAINED.
6. THE SEED BED SHALL BE WATERED AS NEEDED IN ORDER FOR THE SOIL TO REMAIN MOIST UNTIL THE PLANTINGS ARE 4" TO 6" IN HEIGHT

1. VEGETATION ALONG THE BASIN FLOOR AND SIDE SLOPES SHALL BE MOVED TO 4" TO 6" HEIGHT AS NEEDED. GRASS CLIPPINGS, LEAVES AND ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED AT LEAST TWICE PER YEAR. MOWING SHOULD NOT BE PERFORMED WHEN DROUGHT IS SOFT TO AVOID CREATION OF RUTS AND COMPACTION. AAR. MOWED VEGETATION SHALL BE REMOVED.
2. NO PESTICIDES OR NON-ORGANIC FERTILIZERS SHALL BE USED WITHIN THE WATER QUALITY BASIN.
3. IF THERE IS AN ACCUMULATION OF ORGANIC DEBRIS OR SEDIMENT ON THE FLOOR OF THE BASIN OR IF PONDED WATER IS OBSERVED, THE OBSERVED MATERIAL SHALL BE HOW AWAY FROM THE BASIN FLOOR, 6" SHALL BE REMOVED, AND THE EXPOSED SOIL SURFACE DIRTOTILLED TO A DEPTH OF 12". SEDIMENTATION SHOULD BE REMOVED WHEN IT IS VISIBLY DRY AND READILY SEPARATES FROM THE BASIN FLOOR TO MINIMIZE SMEARING. AFTER THIS WORK HAS BEEN DONE, THE BOTTOM OF THE BASIN SHALL BE RESTORED TO ITS ORIGINAL CONDITION.
4. ROUTINE INSPECTIONS OF THE BASIN, SIDE SLOPES, STONE SPILLWAY AND BERM SHALL BE MADE AFTER ANY SIGNIFICANT RAINFALL EVENT AND AT LEAST TWICE PER YEAR. INSPECTIONS SHALL INCLUDE CHECKING FOR ACCUMULATED SEDIMENT, ACCUMULATED DEBRIS AND LOSS OF THE BASIN VEGETATION. ANY ACCUMULATED SEDIMENTS, DEBRIS OR MOWED VEGETATION SHALL BE REMOVED.

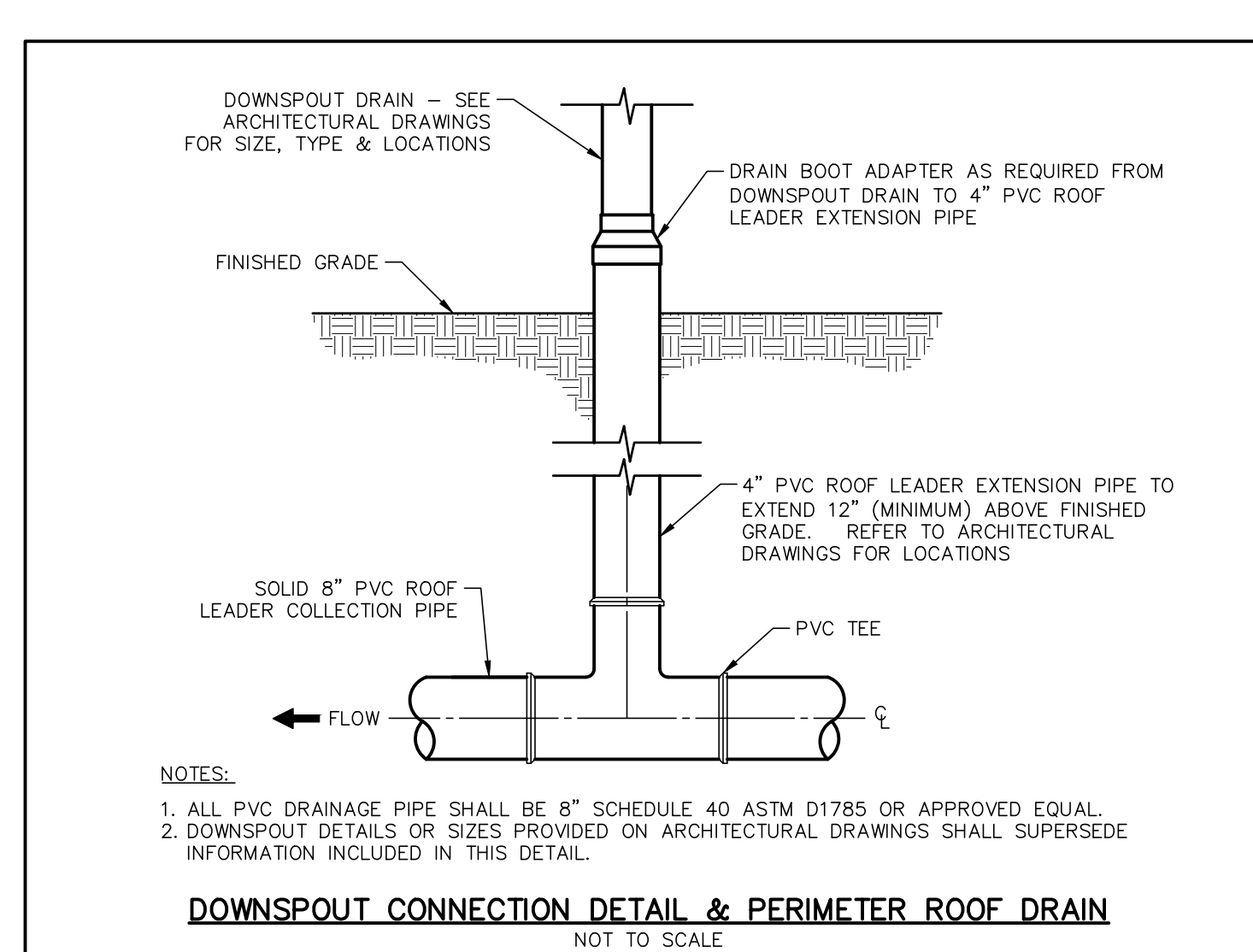
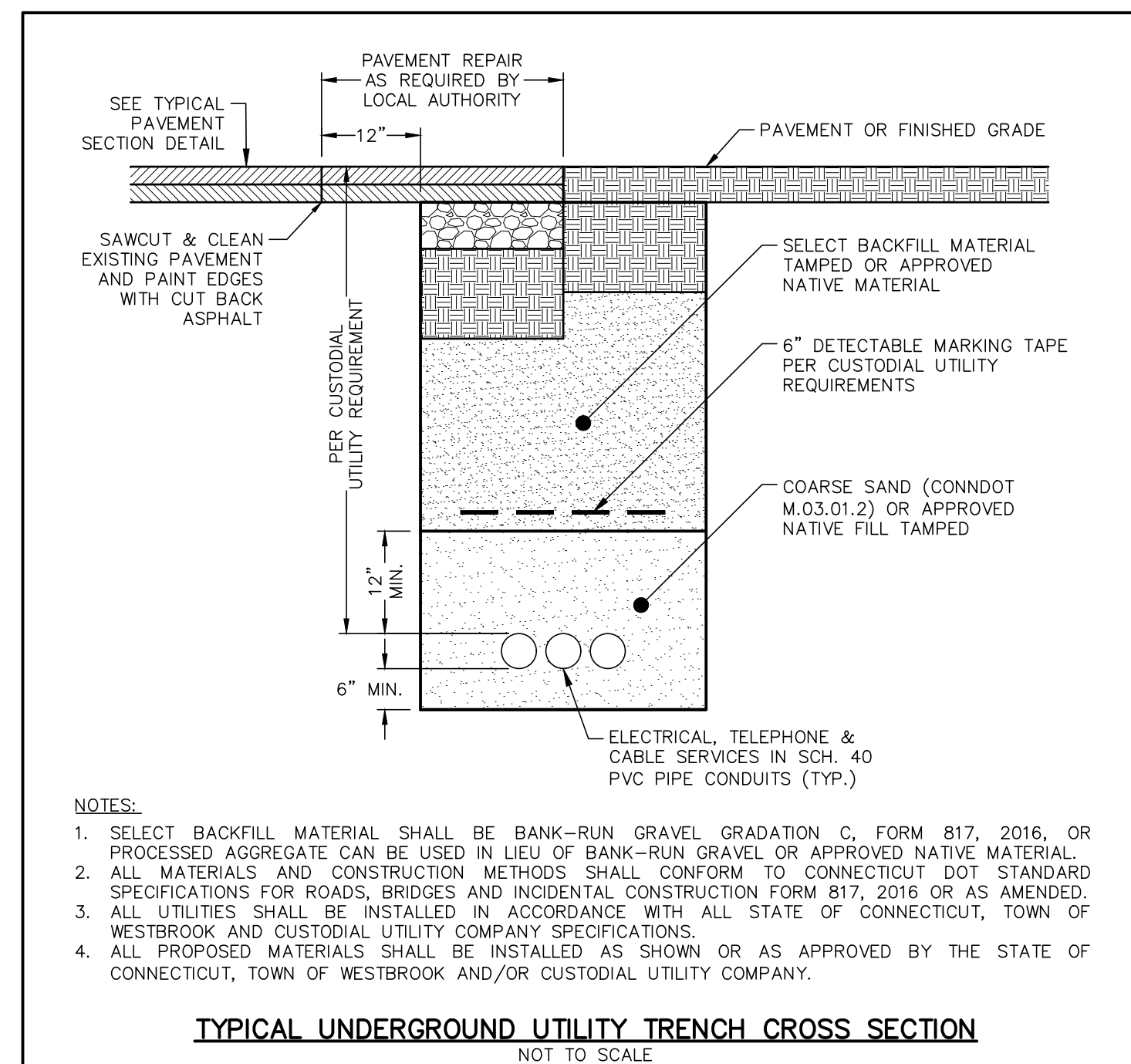
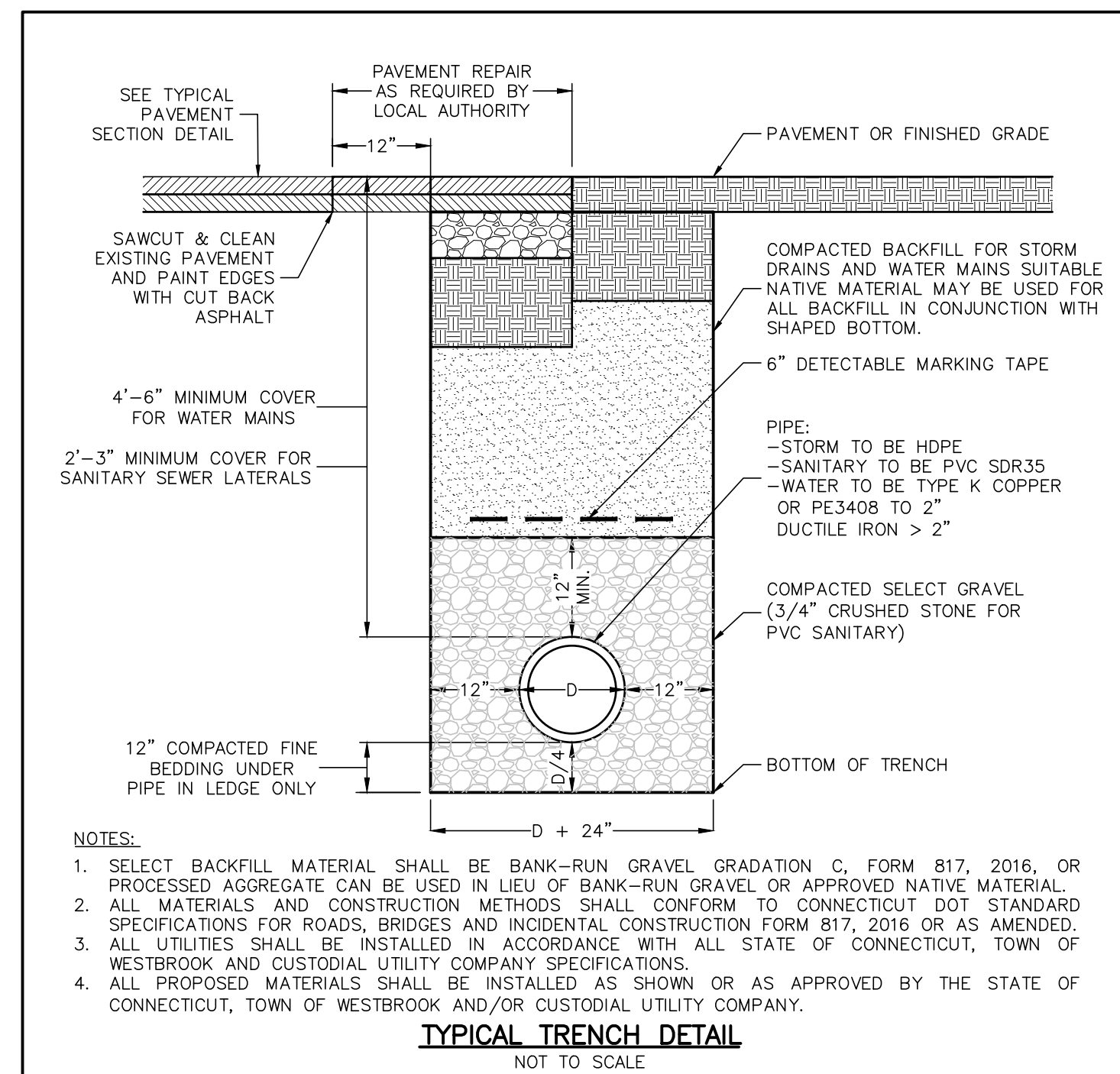
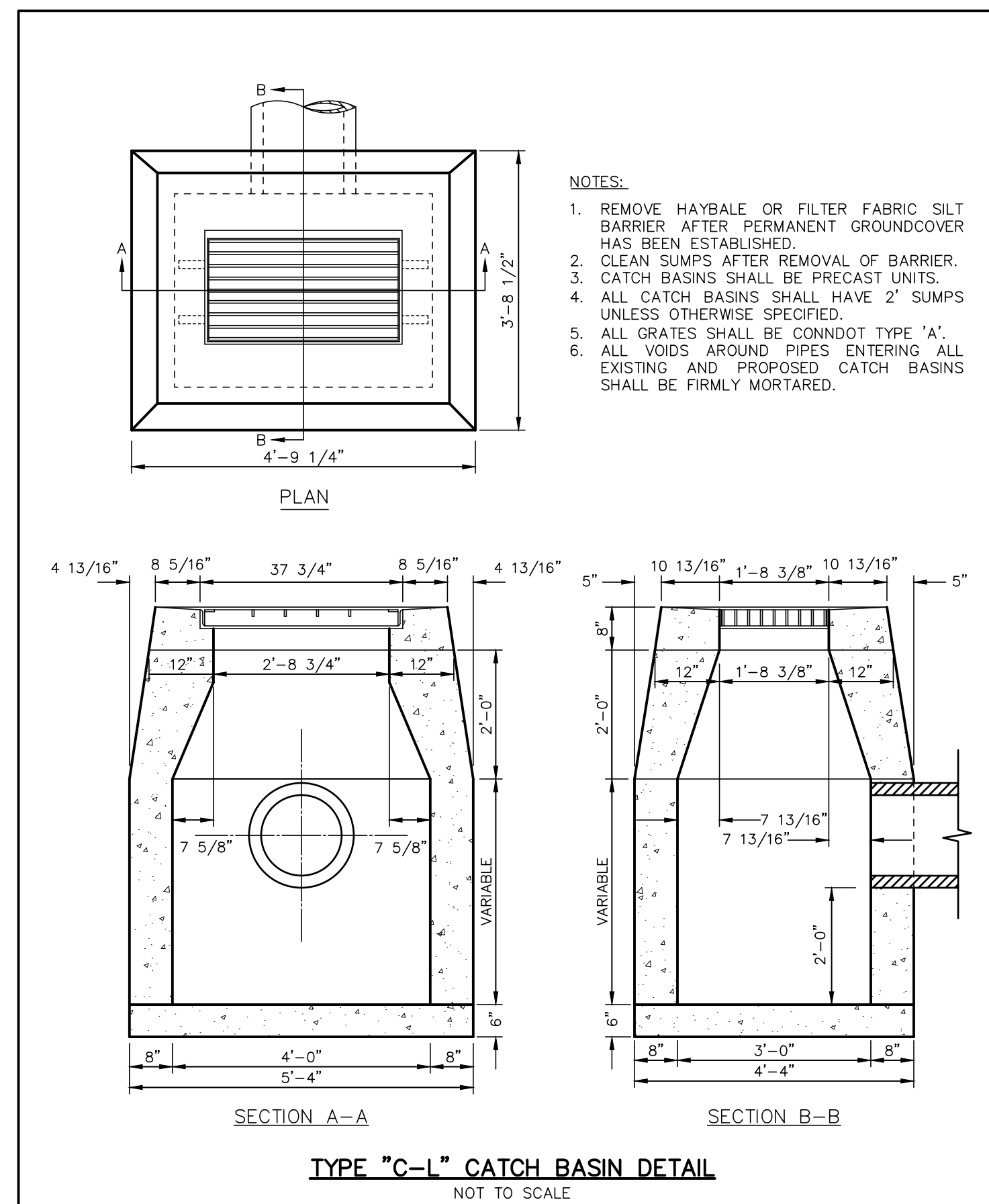
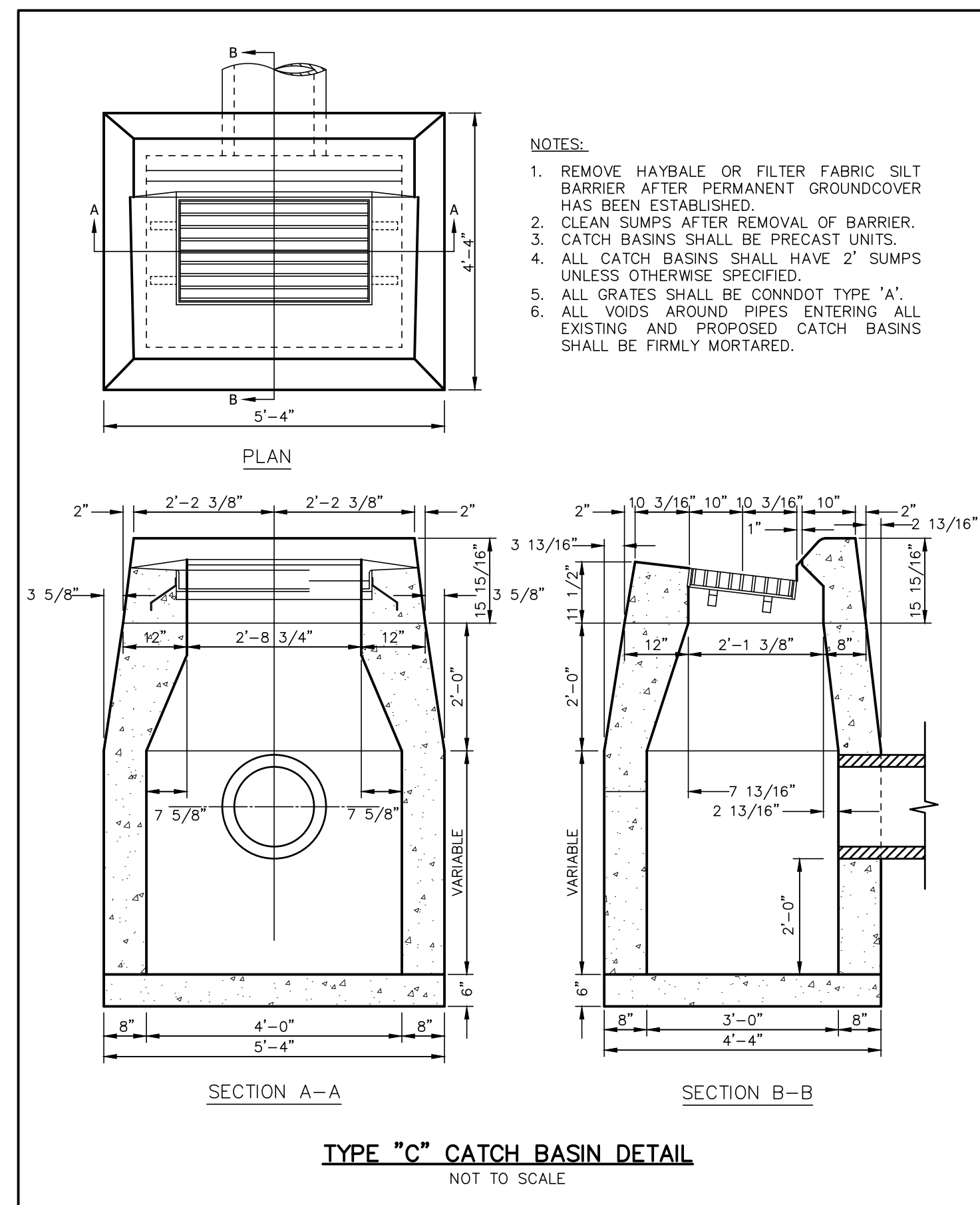
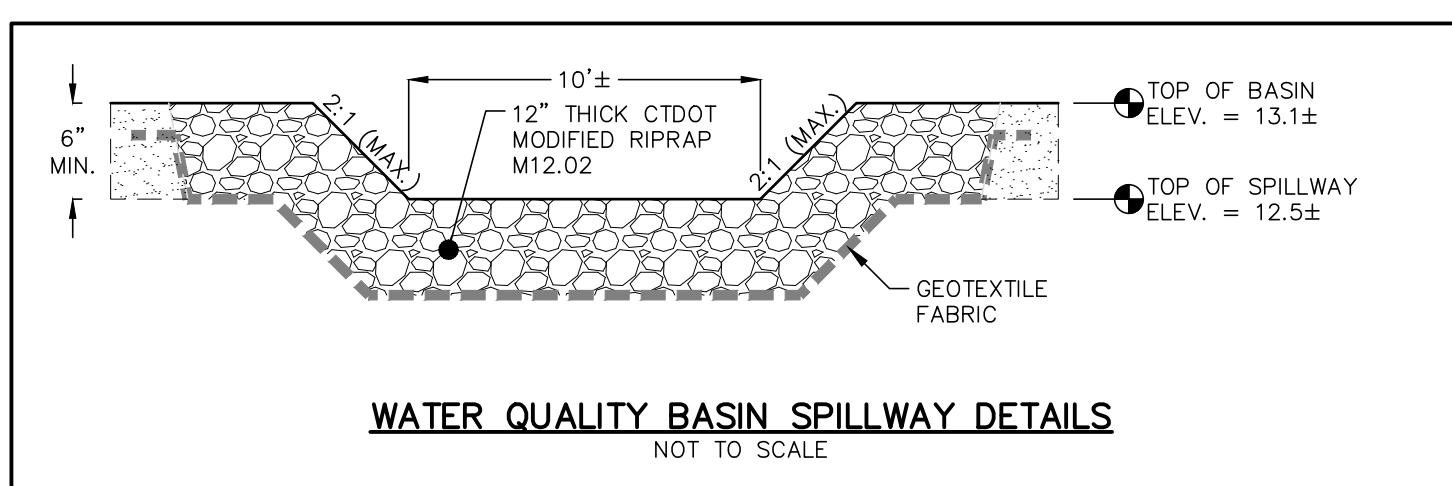
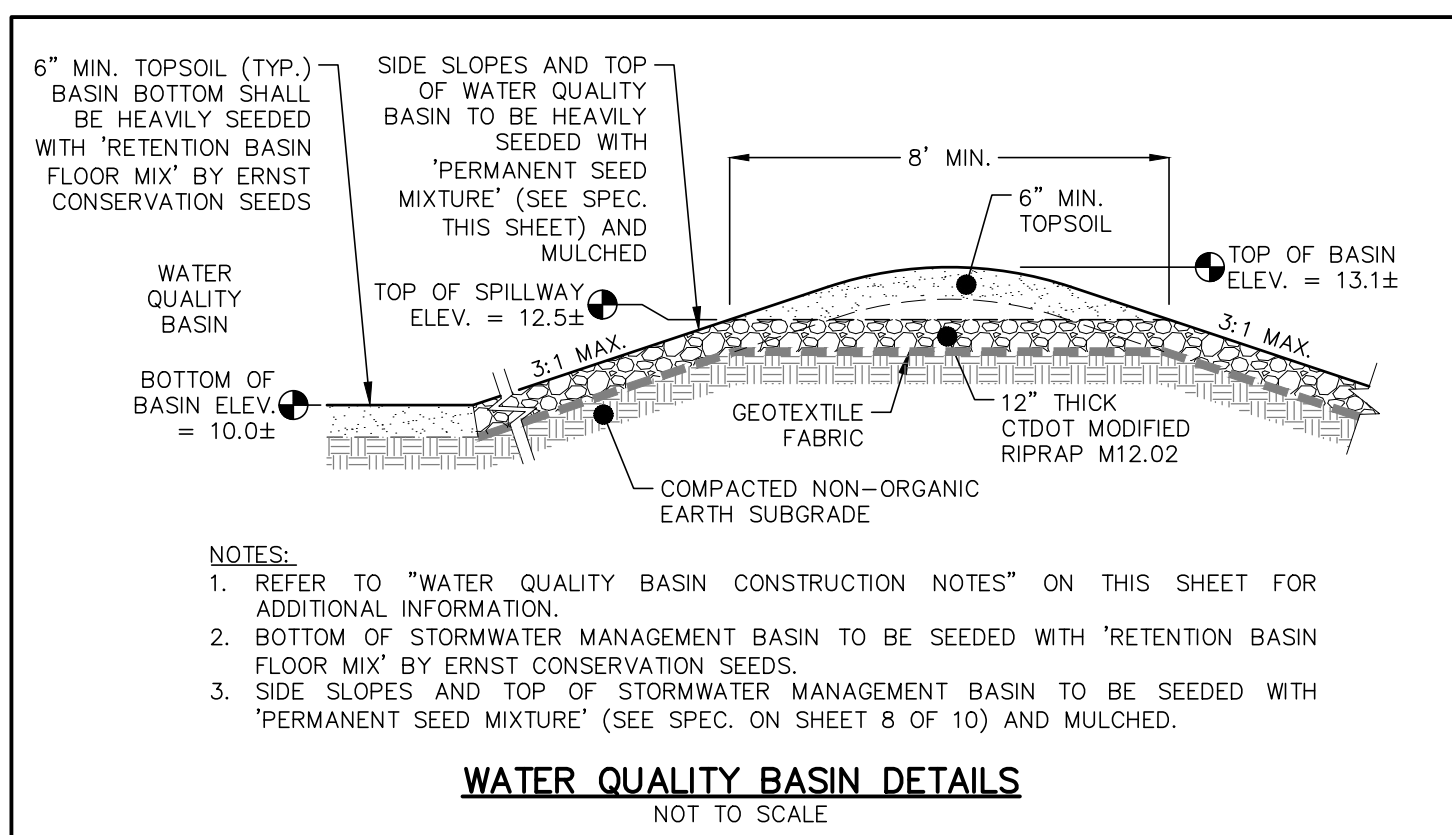
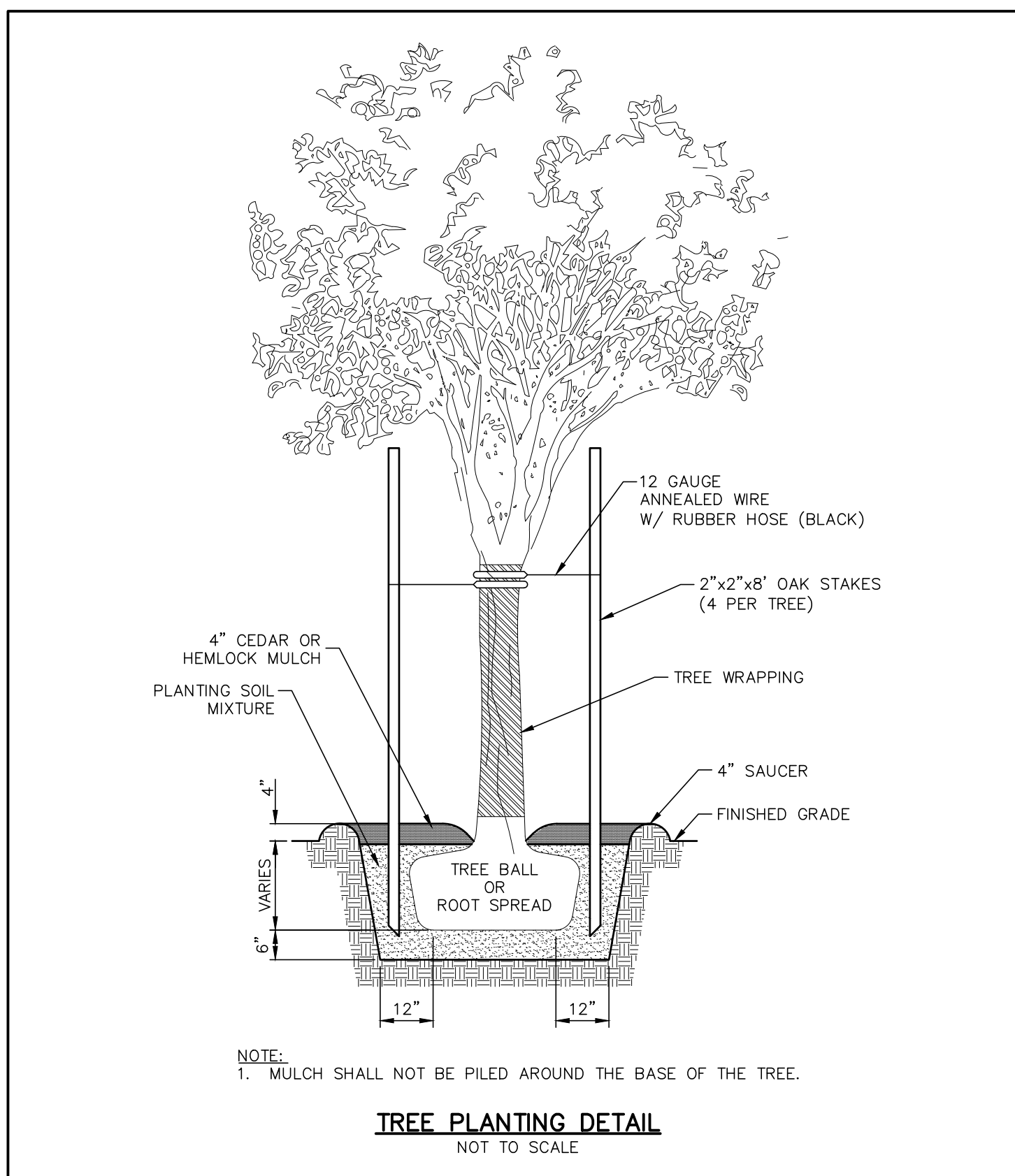
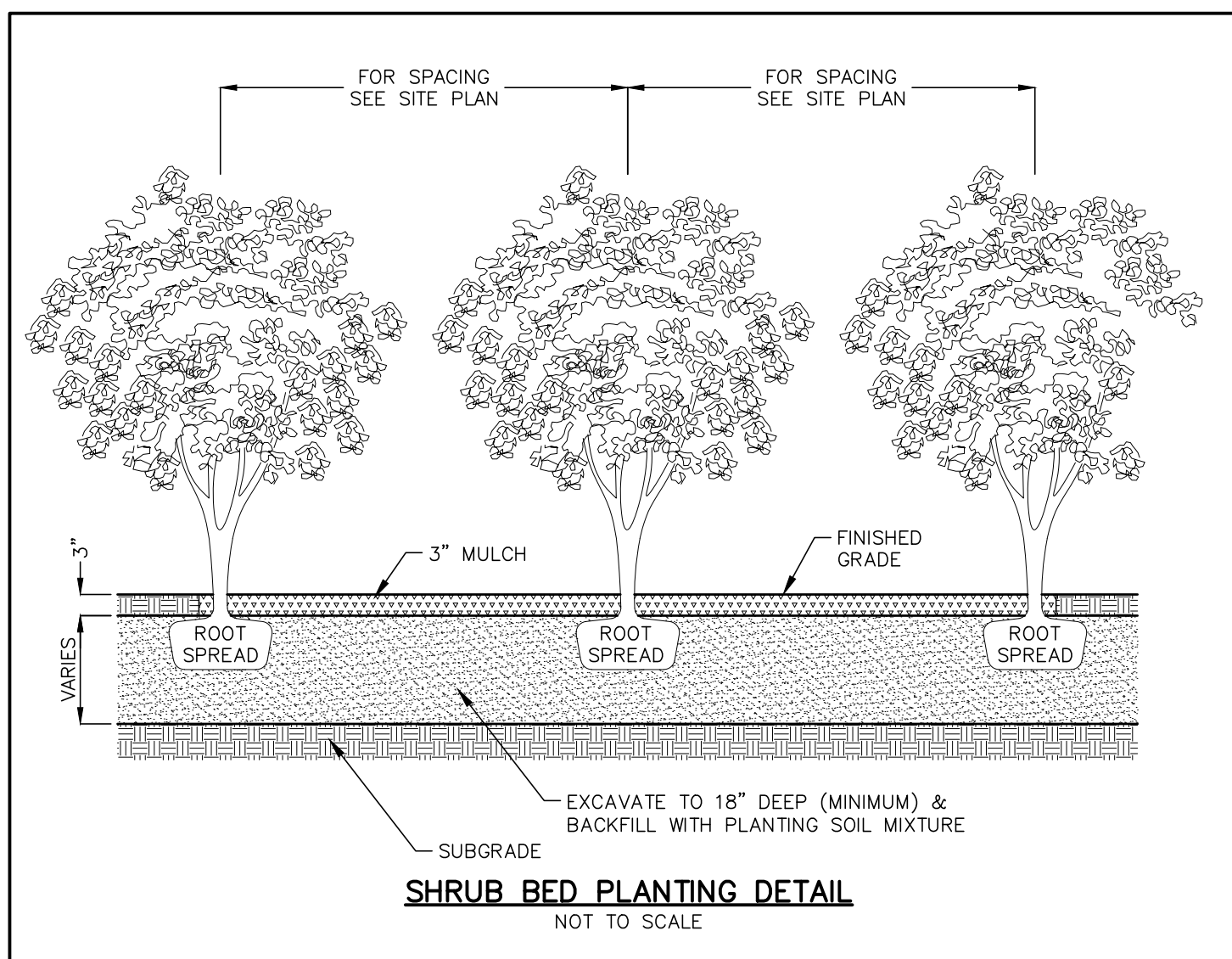
RETENTION BASIN FLOW MIX - SEED MIXTURE SPECIFICATION

25% REDTOP PANICGRASS, PA ECOTYPE (PANICUM RIGIDULUM (P. STIPITATUM), PA ECOTYPE)  
16% VIRGINIA WILDRYE, PA ECOTYPE (ELYSIUM VIRGINICUM, PA ECOTYPE)  
16% ALKALAGRASS, 'FULTS' (PUCCINELLIA DISTANS, 'FULTS')  
15% FOWL BLUEGRASS (POA PALUSTRIS)  
10% CREEPING BENTGRASS (AGROSTIS STOLONIFERA)  
10% TICKLERGRASS (ROUGH BENTGRASS), PA ECOTYPE (AGROSTIS SCABRA, PA ECOTYPE)  
5% SOFT RUSH (JUNCUS EFFUSUS)  
5% COMMON BENTGRASS, PA ECOTYPE (AGROSTIS PERENNANS, PA ECOTYPE)  
1% PATH RUSH, PA ECOTYPE (JUNCUS TENUIS, PA ECOTYPE)

1. STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 176-81 GRADE 60 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A 176-81 CARBON STEEL. THE MAX. ALLOWED NOMINAL WEIGHT OF 91LBS. OR GREATER PER LINEAR YARD. STEEL FOR DELINEATOR POSTS SHALL BE ASTM A36 STEEL.
2. AFTER FABRICATION, ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A 123.
3. ALL SIGN POSTS SHALL HAVE "BREAKAWAY" FEATURES THAT MEET AASHTO REQUIREMENTS CONTAINED IN STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS-1985. THE "BREAKAWAY" FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGNS SHOWN IN THE PLANS AT 60 MPH WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



NOT TO SCALE



**INDIGO**  
land design

**PLAN PREPARED BY:**  
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*Specialty General  
Contractors*

THE EMBOSSED SEAL OF  
THE ENGINEER MUST BE  
AFFIXED HERE FOR THIS  
MAP TO BE VALID

RG						
RG						
SM						
SM						
BY						

## CONSTRUCTION DETAILS

SETTLER'S PLACE - A PLANNED RESIDENTIAL DEVELOPMENT  
PREPARED FOR BOCCA-DES PROPERTIES, LLC  
1935 BOSTON POST ROAD -- MAP 180 LOT 114  
WESTBROOK, CONNECTICUT

DATE: AUGUST 29, 2018
SCALE: AS NOTED
DRAWN BY: SM
CHECKED BY: JW
DWG. NO.: CD-2
SHEET NO.: 10 of 10
JOB. NO.: 2017-384