STORMWATER POLLUTION CONTROL PLAN

Silver Sands State Park
Phase 1B Enhancements
Milford, Connecticut

Project No. BI-T-604

Prepared by:
Stantec Consulting Services, Inc.

Stantec

March 17, 2015

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1.0 Introduction

1.1 GENERAL PERMIT COVERAGE

This Stormwater Pollution Control Plan (SPCP) has been prepared for the construction activities and stabilization for the construction of the Phase 1B Enhancements to the Silver Sands State Park. The SPCP has been prepared in accordance with Connecticut's "General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities," October 1, 2013.

The project is covered by the General Permit because the discharge is comprised solely of stormwater and possibly dewatering wastewater from construction activities resulting in the disturbance of greater than one or more acres on the site. All other requirements for authorization listed in the General Permit are met by the project. A copy of the General Permit is included as Appendix A.

The General Permit is designed to operate in an administrative mode which minimizes paperwork for both the State and the applicant. A copy of the registration form is included in Appendix B. Subsequent conditions of coverage, including the following, are discussed in this document:

- maintain this SPCP on-site;
- periodic site inspections; and
- plan update, as needed.

This plan has been prepared in accordance with the drawings prepared by Stantec Consulting Services, Inc. The project drawings and details, which include all erosion and control measures, vegetative cover, and all pertinent construction sequencing and control measures, have been included as Appendix C.

The selected site contractor will manage the construction activities and will be responsible for oversight of the implementation of the erosion and sediment controls by the site contractor as shown on the project drawings, incorporated into this SPCP by reference, and to assure that all requirements of this SPCP are met.

1.2 RELATED DOCUMENTS

This plan has been prepared based on site planning and engineering completed by Stantec Consulting Services, Inc., New Haven, CT. Sheets G-1 – G-5 Grading, Drainage and Utilities Plan, EC-1 – EC-4 Site Preparation Plan (includes demolition and erosion control), EC-4 Site Preparation Details (Narrative and Erosion Control Details) of the project drawings, attached as Appendix C, include erosion and sedimentation (E&S) control measures, requirements, and details. Where there is a conflict between E&S features shown on the drawings and those

described in this plan, the more conservative (i.e. protective) will apply. The set of drawings referenced to develop this plan were issued February 13, 2015.

2.0 SITE DESCRIPTION

Three new buildings will be constructed at the Silver Sands State Park in Milford. The bath house complex will be constructed near the beach and consist of 3 buildings constructed on an elevated deck. This includes a concession building (750 SF), restrooms (2106 SF) and an office (600 SF). A new boardwalk will connect the existing beach boardwalk to the bath house and a new boardwalk across the tidal wetlands will connect the existing main boardwalk to the bath house.

The parking at the bath house will be reconfigured to accommodate the new building. There are 16 existing spaces and the number will increase to 20. The existing main paved parking lot (197 spaces) will be expanded to 251 spaces. The existing overflow gravel parking lot (500 spaces) will be reconfigured and built with reinforced grass with a total of 420 spaces. A new grassed parking lot will be constructed to the north of the main parking lot with a total of 146 spaces. Ten spaces will be provided at the maintenance building and 4 spaces will be provided at the ticket booths. A ticket booth complex will be constructed along the entry road. This building will be used to house attendants for collecting parking fees at the park.

A new maintenance building will be constructed at the north end of the park. This building (4710 SF) will include a garage (1660 SF), a workshop and storage area (1537 SF) and an office (1527 SF). Parking will be provided around the building for staff at this location.
In addition, the project will involve new utility connections.

The construction activities will disturb approximately 11.1 acres of the site. The construction will result in an increase in impervious coverage from 16% to 26%.

The project discharges through a series of bioswales and infiltration trenches which eventually discharge to the surrounding tidal wetlands. This network ultimately discharges to the Long Island Sound. The wetlands that will be impacted by the project are being permitted under separate permits with the CT DEEP and US Army Corps of Engineers.

The following table is the anticipated post-construction runoff coefficient for the project site impacted by construction.

Post-Construction			
Surfacing	**Area (A)**	**Runoff Coefficient (C)**	**Total (A x C)**
Parking/Building/Pavement	6.85	0.90	6.17
Vegetation/Lawn	19.3	0.30	5.79
Total A x C =			11.96
Site Area			26.15 ac.
Post-Construction Runoff Coefficient			0.46

3.0 Construction Sequencing

Prior to any other site construction at the site, temporary erosion and sedimentation controls will be installed (as described in section 4.0) and inspected for adequacy and effectiveness. The controls will be inspected and maintained throughout the construction period and three (3) months following final site stabilization.

The general sequence of construction activities is as follows:

1. Install perimeter and on-site erosion/siltation control measures per project plans.
2. Install anti-tracking pads.
3. Removal of all pavements, structures, foundations, etc.
4. Clearing and grubbing operations.
5. Strip and stockpile topsoil. Protect topsoil with internal erosion control measures.
6. Rough grading/earth removal. All cut or disturbed areas shall be graded to drain and stabilized with temporary vegetative cover as necessary. Temporary sediment basins shall be installed and maintained as site conditions dictate.
7. Installation of internal erosion controls.
8. Inspect and maintain erosion and sediment control measures at regular intervals, especially after storm events (see Section 5.0).
9. Perform building construction.
10. Install pavements and sidewalks.
11. Topsoil and final seeding of all disturbed areas within project site.
12. Installation of landscaping.
13. Remove perimeter erosion control measures and final cleanup.

4.0 CONTROLS

4.1 EROSION AND SEDIMENT CONTROLS

All proposed erosion and sediment controls will be installed on-site under the following conditions:

- All control measures including land grading and soil conservation will be implemented and/or constructed in accordance with the standards and specifications of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (2002 CT E&S Guidelines).
- All controls will be put into place prior to any other site construction.
- All controls will be maintained in an effective condition throughout the construction period.
- Additional control measures will be installed during the construction period if necessary, or required.

Details of the proposed controls are described in the following sub-sections:

4.1.1 Stabilization Controls

Preservation of Existing Vegetation

Preservation of existing trees will be enforced where applicable.

Slope Stabilzation (as required) – Contractor to use either of the specified methods

Bonded Fiber Matrix: Long strand wood fibers bonded by high strength non-toxic adhesive. The product shall be hydraulically applied to soil to form a continuous blanket. Upon drying the matrix will form a porous and erosion resistant mat that will not inhibit germination and plant growth. The matrix shall be capable of retaining its form despite wetting and shall be 100% biodegradable over time.

Erosion Control Blanket: shall be degradable but have a functional longevity of 2 years. It shall consist of wheat straw and mattress grade coconut fiber mechanically bound and covered on both sides with netting. Product shall conform to the requirements of Section M.13.09 – Erosion Control Mattting of ConnDOT Form 816.

Seed Mixture: shall be perennial rye-grass or selected from Figure TS-2 in the 2002 CT E&S Guidelines.

Temporary Vegetative Cover

Temporary cover will be provided under the following circumstances:

- When grading of the disturbed area will be suspended for a period of 30 or more consecutive days, but less than five months, the area will be stabilized with straw mulch within seven (7) days of the suspension of grading activities.
- For surfaces that are not to be reworked within five (5) months but will be reworked within one (1) year, use temporary seeding.
- Seed species, seeding rates, optimum seeding depth, and a seeding timeline will comply with Figure TS-2 of the 2002 CT E&S Guidelines.
- When hydroseeding, the seeding rate will be increased by 10%.
- Seeding will occur at all disturbed areas where construction activities have ceased or have been temporarily suspended for more than seven (7) days.

Any areas that may be disturbed in the winter months will be stabilized with non-vegetative means such as heavy mulching with a binder or jute matting which must be removed before seeding and then replaced.

4.1.2 Structural Controls

Sediment Filter Fence

Prior to the initiation of construction activities, sediment filter fence will be installed along the perimeter of the down-gradient portion of the construction areas.

Erosion Checks

Erosion checks comprised of staked haybales will be butted together around the perimeter of each existing stormwater catch basin. A stockpile of haybales will also be stored on-site for erosion control maintenance.

Staked haybales, butted together perpendicular to the potential flow will also be placed in this fashion for temporary drainage swales and the perimeter of temporary soil stockpile areas on-site.

Stone Construction Entrances (anti-tracking pads)

Stone construction entrances will be installed as shown on the plans. Pads will be constructed of modified riprap on 2-inch stone placed over geotextile matting to a depth of at least 6 inches in accordance to the detail on plans. Pad dimensions will be a minimum of 50 feet in length and 15 feet wide. The construction vehicles will only enter and exit the site from the construction entrances to eliminate or minimize the tracking of sediment onto neighboring streets.

Sediment filter fence with haybales, erosion checks, and construction entrances will be installed as shown on Erosion and Sedimentation Control and Detail Plans provided as Appendix C.

4.1.3 Maintenance

The following subsections have been prepared to address the minimum maintenance required for each specified erosion control measure. Several factors such as the construction methods, site soils, and rainfall intensity, duration, and frequency may necessitate the need for additional control measures. Therefore, it is important that each of the controls be inspected on a regular basis as described in Section 5.0 of this plan.

Temporary Vegetation

The inspector should determine if there has been soil channeling or rill erosion. If such failures are detected, rilled areas will be repaired and/or reseeded within 48 hours.

Sediment Filter Fence and Hay Bale Erosion Checks

Remove significant sediment deposits. The silt fence should be inspected for the following failures:

Fence/hay bale has been overtopped, undercut or bypassed by runoff water;

The barrier has been moved out of position or knocked over; or

Haybales have decomposed or been structurally damaged.

If the depth of the accumulated sediment is greater than or equal to six (6) inches, sediment or removal will be necessary.

Within 24 hours of recognized failure, the silt fence should be repaired or replaced. If repeated failures occur, additional control measures such as installing a second parallel fence or stone barriers should be considered.

Stone Construction Entrances

Entrances will be inspected on a regular basis and after there has been a high volume of traffic or storm event. When the stone surface becomes clogged with dirt or mud, additional stone will be placed. If excess mud, dirt, or rock is tracked off-site, the affected streets will be swept.

4.2 DEWATERING WASTEWATERS

Based upon review of data from geo-technical borings, dewatering may be necessary to install pavement areas or building areas. If any dewatering is required, all dewatering wastewaters will be pumped to a sedimentation/infiltration basin on-site prior to discharging into any existing storm water systems.

4.3 OTHER CONTROLS

4.3.1 Waste Disposal

During construction, waste materials will be managed as follows:

- All trash and construction debris will be collected and stored in secure enclosures in order to prevent unnecessary litter and exposure to stormwater.
- No construction waste materials will be buried on-site.
- Construction personnel will be instructed regarding the correct procedure for waste disposal.

Portable lavatory units will be provided for sanitary wastes during construction.

4.3.2 Dust Control

Dust control will be employed to prevent excessive dust from being transported off-site. Dust control will be accomplished through the following measures:

- Vegetation will be used for disturbed areas not subject to traffic.
- A sprinkling water truck will be used to wet on-site haul roads and other traffic routes.

4.3.3 Material Management

The following good housekeeping practices will be followed on-site during the construction project:

- The contractor will limit storage of materials on-site to that required for this project only.
- Materials will be stored as originally shipped (e.g. contained, palleted, etc.) and will be stored in a neat and orderly manner and, if necessary, under a roof or enclosure to prevent pollutants from exposure to stormwater.
- Original labels and material safety data sheets (MSDS) will be retained on-site for any construction related fluids or other materials with potential to be accidentally released or to otherwise contaminate site run-off.
- All chemical and petroleum product containers stored on the site (excluding those contained within vehicles and equipment) shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is greater, without overflow from the containment area.

4.3.4 Washout Areas

Washout areas for vehicles, containers, applicators and equipment for concrete, paint or other materials shall be within a designated area on-site. The area shall be clearly marked and flagged for washout activities only. The designated washout area shall be as follows:

- Outside of any buffers and at least 50 feet from any stream, wetland or other sensitive resource, or
- In an entirely self-contained washout system
- There shall be no surface discharge of washout waters from this area.
- Hardened concrete shall be removed as outlined in the "Waste Disposal" section of the general permit. Hardened concrete is to be removed once it has reached a depth of ½ the container pit, or as necessary to prevent overflows.
- Washout areas shall be checked at least once a week for structural integrity and holding capacity and any damage or leaking shall be repaired prior to future use.
- Dumping of liquid wastes in the storm sewers is prohibited.

4.4 POST-CONSTRUCTION STORMWATER MANAGEMENT

As required by the CTDEEP Stormwater Quality Manual the first one inch of precipitation over the site's impervious areas must be retained on-site to recharge the water table (Water Quality Volume). The water quality volume proposed to be infiltrated at the site is 47,306 cubic feet (required volume is 27,007 cubic feet). This volume will be retained on-site by the use of an bioswales, infiltration trenches and wet meadows.

In addition to the water quality volume requirements, the corresponding Water Quality Flow must be treated onsite to remove sediment and other contaminants prior to being released off-site. Gravel infiltration trenches, wet meadows and biowales are proposed at the site which will filter the runoff prior to leaving the site. The unit has been sized to treat the required water quality flow and has been designed to remove 80% of the total suspended solids (tss), along with miscellaneous debris that may be present in the runoff.

Additional stormwater information and calculations is included in Appendix G.

5.0 INSPECTION

5.1 RESPONSIBLE PARTY

The selected site contractor has been assigned to oversee the implementation of the erosion and sediment control measures by the site contractor.

The site contractor shall conduct inspections and will ensure that no litter, building materials, etc., are discharged to the waters of the State and that storage areas are maintained properly. Potential or actual sources of erosion and sedimentation or other water pollution will be identified and remedied.

5.2 INSPECTION FREQUENCY

The site shall have an initial inspection (by a qualified S.E.C. professional or a professional engineer) within the first 30 days following commencement of construction at the site to confirm compliance with the General Permit. A report and certification shall be compiled in accordance with the General Permit.

The permittee shall maintain a rain gauge on site to measure rainfall amounts. The site will then be routinely inspected by the permittee's inspector in accordance with the following criteria:

- At least once every seven (7) calendar days.
- Within 24 hours of the end of a storm that is 0.5 inches or greater of precipitation.
- At least once (1) per month for three (3) months after stabilization of temporarily seeded areas.
- Once the project is complete, post-stabilization inspections are required for an additional three (3) months.

5.3 PLAN REVISION

This plan will be revised as required if any of the following circumstances occur:

- Site Plan Changes;
- Erosion & Sediment Control Plan changes; or
- Failure of Plan objectives

Based on the results of the inspection, the description of potential sources and pollution prevention measures in the Plan will be revised as appropriate. Needed changes to the site will

occur within 24 hours and implementation to changes in the plan within 72 hours following the inspection.

5.4 REPORTS

Reports summarizing the scope of the inspection will be completed and maintained as part of this plan for at least 3 years after project termination. The primary components of each report are listed below and a site-specific inspection log is included in Appendix D:

- The date of the inspection;
- Major observations relating to the SPCP;
- Actions to be taken;
- Signature of the permittee or his authorized agent.

6.0 MONITORING

6.1 MONITORING REQUIREMENTS

The primary requirements for monitoring turbidity are summarized in the table below:

Area of Soil Disturbance	Monitoring Required	Monitoring Frequency	Sample Method
Sites which disturb 1 acre or more, but less than 5 acres	Only IF a registration is required	Monthly IF a Registration is required	Procedure consistent with 40 CFR Part 136
Sites which disturb 5 acres or more	Yes	Monthly	Procedure consistent with 40 CFR Part 136

Monitoring shall be conducted in accordance with the table, whenever a discharge of stormwater is present during construction activities. Monitoring shall be continued until final stabilization is achieved for the site stormwater outfall. If there is no stormwater discharge during a particular month, no sampling and monitoring is required. Samples shall be taken at least three separate times during a storm event. All sampling points are shown on C1.1 Grading, Drainage and Utilities Plan and will be marked in the field with a flag, stake or other visible marker.

6.2 REPORTS

Within thirty (30) days following the end of each month, stormwater sampling results on the Stormwater Montitoring Report (SMR) (See appendix D) shall be submitted in accordance with the NetDMR provisions as outlined in the general permit. If NetDMR is not to be used, the report shall be submitted to the following address:

Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division (Attn: DMR Processing)
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

7.0 Contractors

The General Permit requires that each contractor and subcontractor who will perform site actions be identified and be required to sign the certification statement included in Appendix E. All certifications will be appended to this document in Appendix E. The contractors for the site who conduct activities that may affect stormwater quality are as follows:

General Contractor

Sub-Contractors

8.0 RETENTION OF RECORDS

A copy of this Stormwater Pollution Control Plan will be maintained by the CM and the General Site Contractor at the construction site until Notice of Termination. The CM will retain copies of the SPCP, its revisions, its inspection reports, and any other relevant data for a period of three years from the date that construction at the site is completed.

All inspection reports generated during construction and any SPCP revisions will also be maintained on-site during this period.

Reports summarizing the inspection will be generated and maintained as part of this plan. Inspection Report Forms should be kept on-file for at least three (3) years from the date of final stabilization.

The Plan will be updated as necessary to reflect significant design and construction sequence changes or in response to ineffective erosion & sedimentation controls. See Section 5.3.

9.0 TERMINATION REQUIREMENTS

Notice of Termination

At the completion of the construction project, a Notice of Termination will be filed with the Commissioner. The project will be considered complete (3) months after the site has been fully stabilized.

Termination Form

A Notice of Termination form is included as Appendix F. The form must be completed in full and signed by the permittee.

Where to File a Termination Form

The termination form will be sent to the following address:

Permit Coordinator
Bureau of Water Management
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

10.0 Other Requirements

Regulations of Connecticut State Agencies

The complete set of DEEP discharge permit regulations, as contained in RCSA 22a-430-3 & -4, is in effect under this general permit.

Duty to Correct and Report Violations

Upon becoming aware of a violation of a condition of the General Permit, the permittee will complete the following course of action within five (5) days:

- Determine the cause of the violation;
- Correct and mitigate the results of the violation;
- Prevent further violations;
- Report corrective actions to the Commissioner in accordance with the certification requirements of Section 6(h).

Duty to Provide Information

The permittee will provide the Commissioner with pertinent information within five (5) days of such requests in accordance with the certification requirements of Section 6(h).

Correction of Inaccuracies

The permittee will correct inaccuracies or relevant missing information in writing to the Commissioner within fifteen (15) days of notification in accordance with the certification requirements of Section 6(h).

APPENDIX A

GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

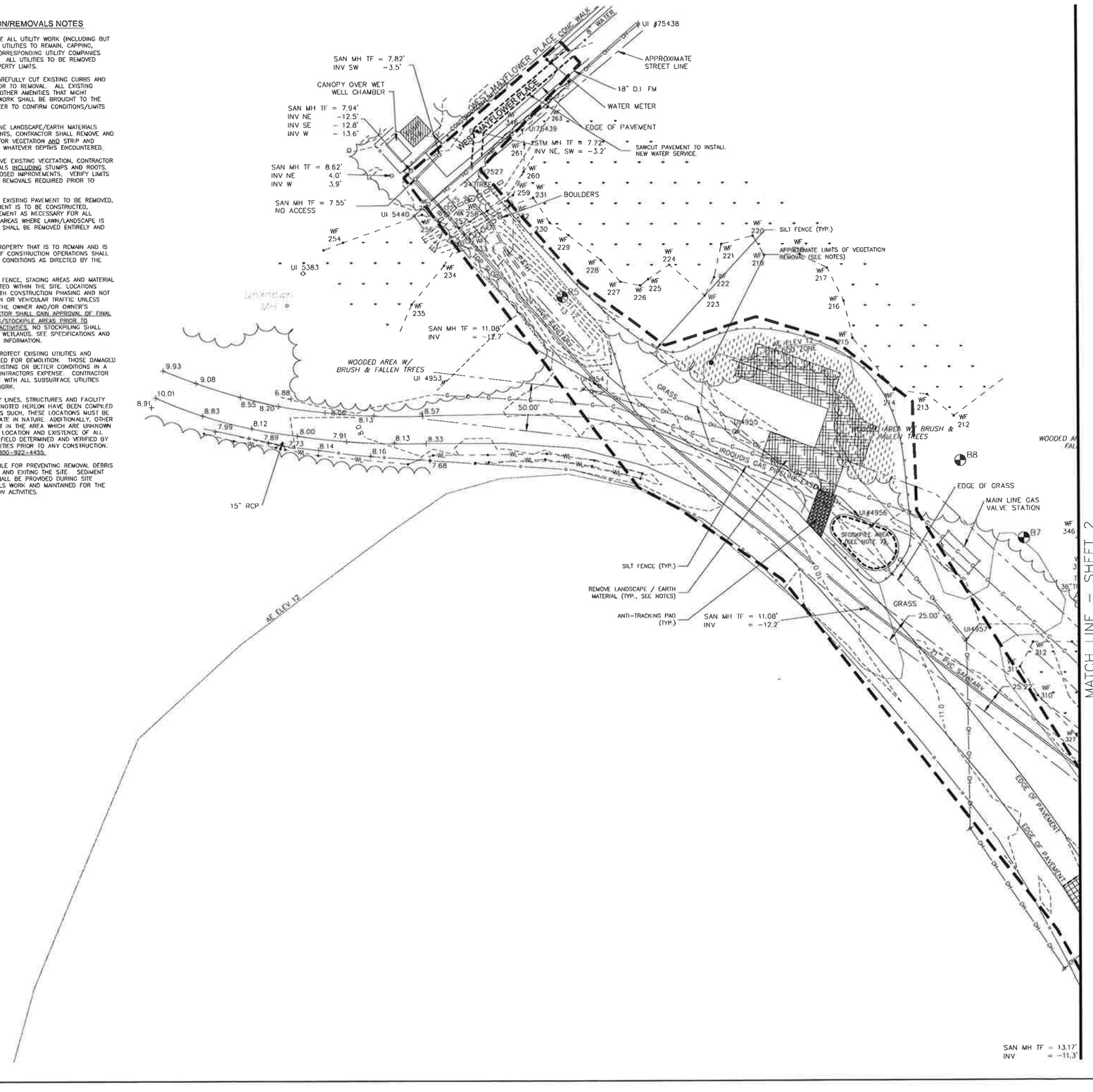
APPENDIX C

PROJECT DRAWINGS

EC-1 - EC-4	Site Preparation Plans
EC-5	Site Preparation Details
G-1 - G-5	Grading, Drainage and Utility Plans

SITE PREPARATION/REMOVALS NOTES

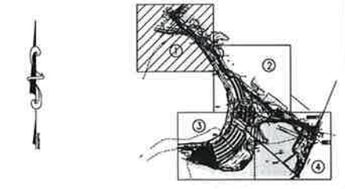
1. CONTRACTOR TO COORDINATE ALL UTILITY WORK (INCLUDING BUT NOT LIMITED TO REMOVALS, UTILITIES TO REMAIN, CAPPING, ABANDONING, ETC.) WITH CORRESPONDING UTILITY COMPANIES PRIOR TO START OF WORK. ALL UTILITIES TO BE REMOVED SHALL BE CAPPED AT PROPERTY LIMITS.
2. THE CONTRACTOR SHALL CAREFULLY CUT EXISTING CURBS AND PAVEMENTS TO REMAIN PRIOR TO REMOVAL. ALL EXISTING CURBING, PAVEMENTS AND OTHER AMENITIES THAT MIGHT INTERFERE WITH THE NEW WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER TO CONFIRM CONDITIONS/LIMITS OF REMOVAL.
3. WHERE INDICATED TO REMOVE LANDSCAPE/EARTH MATERIALS FOR PROPOSED IMPROVEMENTS, CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL SOD AND/OR VEGETATION AND STRIP AND STOCKPILE ALL TOPSOIL TO WHATEVER DEPTHS ENCOUNTERED.
4. WHERE INDICATED TO REMOVE EXISTING VEGETATION, CONTRACTOR SHALL REMOVE ALL MATERIALS INCLUDING STUMPS AND ROOTS, WITHIN THE AREA OF PROPOSED IMPROVEMENTS. VERIFY LIMITS OF NECESSARY VEGETATION REMOVALS REQUIRED PRIOR TO BEGINNING WORK.
5. ALL BASE MATERIAL UNDER EXISTING PAVEMENT TO BE REMOVED, EXCEPT WHERE NEW PAVEMENT IS TO BE CONSTRUCTED, CONTRACTOR SHALL SUPPLEMENT AS NECESSARY FOR ALL PROPOSED PAVEMENT. IN AREAS WHERE LAWN/LANDSCAPE IS PROPOSED, BASE MATERIAL SHALL BE REMOVED ENTIRELY AND REPLACED WITH TOPSOIL.
6. ALL PUBLIC OR PRIVATE PROPERTY THAT IS TO REMAIN AND IS DISTURBED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ORIGINAL CONDITIONS AS DIRECTED BY THE ENGINEER.
7. CHAIN LINK CONSTRUCTION FENCE, STAGING AREAS AND MATERIAL STOCKPILES SHALL BE LIMITED WITHIN THE SITE. LOCATIONS SHALL BE COORDINATED WITH CONSTRUCTION PHASING AND NOT INTERFERE WITH PEDESTRIAN OR VEHICULAR TRAFFIC UNLESS OTHERWISE APPROVED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL GAIN APPROVAL OF FINAL LOCATION FOR ALL STAGING/STOCKPILE AREAS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. NO STOCKPILING SHALL OCCUR WITHIN DESIGNATED WETLANDS. SEE SPECIFICATIONS AND SHEET CP-1 FOR PHASING INFORMATION.
8. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND STRUCTURES NOT SCHEDULED FOR DEMOLITION. THOSE DAMAGED SHALL BE REPAIRED TO EXISTING OR BETTER CONDITIONS IN A TIMELY MANNER AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL SUBSURFACE UTILITIES PRIOR TO THE START OF WORK.
9. ANY UNDERGROUND UTILITY LINES, STRUCTURES AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED FROM RECORD MAPPING AS SUCH, THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST IN THE AREA WHICH ARE UNKNOWN TO THE SIGNER. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
10. CONTRACTOR IS RESPONSIBLE FOR PREVENTING REMOVAL DEBRIS FROM ENTERING WETLANDS AND EXITING THE SITE. SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED DURING SITE PREPARATION AND REMOVALS WORK AND MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES.



LEGEND

- CONSTRUCTION LIMIT LINE
- ANTI-TRACKING PAD
- SILT FENCE
- INLET PROTECTION
- TREE PROTECTION
- ITEM TO BE REMOVED
- ITEM TO BE REMOVED
- SAWCUT PAVEMENT
- ITEM TO BE REMOVED AND SALVAGED FOR REUSE
- BITUMINOUS PAVEMENT TO BE REMOVED
- CONCRETE PAVEMENT TO BE REMOVED
- GRAVEL MATERIAL TO BE REMOVED
- LANDSCAPE / EARTH MATERIAL TO BE REMOVED FOR PROPOSED PAVING (SEE NOTES)
- VEGETATION TO BE REMOVED (SEE NOTES)
- ENHANCED GRASS

STATE OF CONNECTICUT
PHILIP J. KATZ
No. 15301
LICENSED
PROFESSIONAL ENGINEER

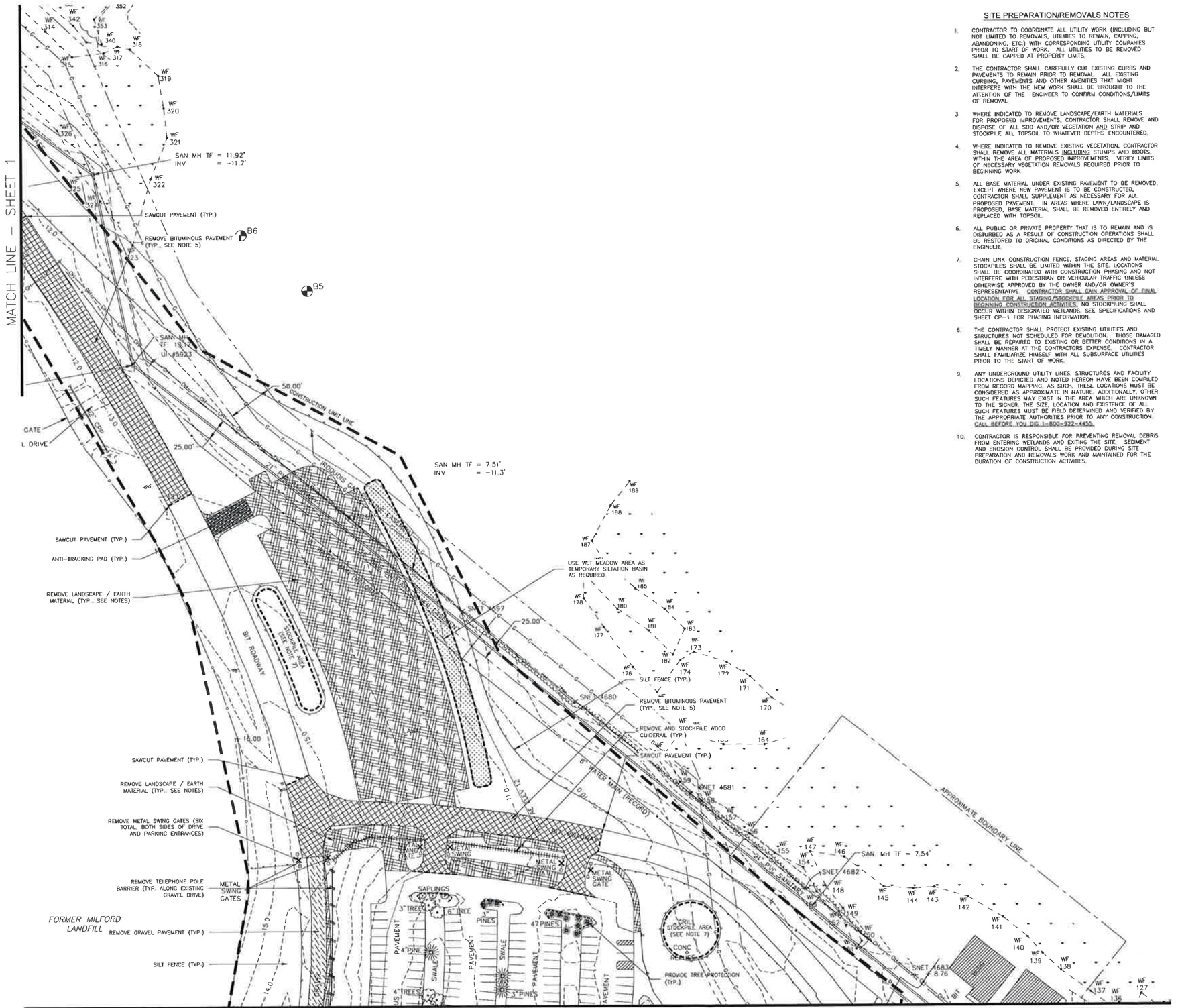


KEY MAP (NOT TO SCALE)

GRAPHIC SCALE

CONNECTICUT STATE PARKS 100

drawing title: SITE PREPARATION PLAN 1 OF 5	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES	
REVISIONS mark / date / description 1 SCHEMATIC DESIGN 2 DD SUBMISSION 3 50% CD SUBMISSION 4 100% CD SUBMISSION 5 FINAL PLANS	drawing prepared by: STANTEC CONSULTING SERVICES INC. 55 CHURCH STREET, SUITE 801 NEW HAVEN, CT 06510 (203) 495-1845	date: 07/2016 scale: drawn by: approved by:
	project: SILVER SANDS STATE PARK PHASE 1B ENHANCEMENTS Milford, CT	
	CAD no. 122310370 / project no. BI-1-604	drawing no. EC-1



SITE PREPARATION/REMOVALS NOTES

1. CONTRACTOR TO COORDINATE ALL UTILITY WORK (INCLUDING BUT NOT LIMITED TO REMOVALS, UTILITIES TO REMAIN, CAPPING, ABANDONING, ETC.) WITH CORRESPONDING UTILITY COMPANIES PRIOR TO START OF WORK. ALL UTILITIES TO BE REMOVED SHALL BE CAPPED AT PROPERTY LIMITS.
2. THE CONTRACTOR SHALL CAREFULLY CUT EXISTING CURBS AND PAVEMENTS TO REMAIN PRIOR TO REMOVAL. ALL EXISTING CURBING, PAVEMENTS AND OTHER AMENITIES THAT MIGHT INTERFERE WITH THE NEW WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER TO CONFIRM CONDITIONS/LIMITS OF REMOVAL.
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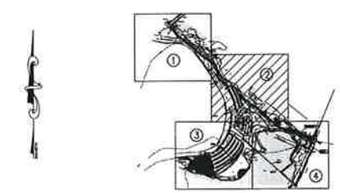
4. WHERE INDICATED TO REMOVE EXISTING VEGETATION, CONTRACTOR SHALL REMOVE ALL MATERIALS INCLUDING STUMPS AND ROOTS, WITHIN THE AREA OF PROPOSED IMPROVEMENTS. VERIFY LIMITS OF NECESSARY VEGETATION REMOVALS REQUIRED PRIOR TO BEGINNING WORK.
5. ALL BASE MATERIAL UNDER EXISTING PAVEMENT TO BE REMOVED, EXCEPT WHERE NEW PAVEMENT IS TO BE CONSTRUCTED, CONTRACTOR SHALL SUPPLEMENT AS NECESSARY FOR ALL PROPOSED PAVEMENT. IN AREAS WHERE LAWN/LANDSCAPE IS PROPOSED, BASE MATERIAL SHALL BE REMOVED ENTIRELY AND REPLACED WITH TOPSOIL.
6. ALL PUBLIC OR PRIVATE PROPERTY THAT IS TO REMAIN AND IS DISTURBED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ORIGINAL CONDITIONS AS DIRECTED BY THE ENGINEER.
7. CHAIN LINK CONSTRUCTION FENCE, STAGING AREAS AND MATERIAL STOCKPILES SHALL BE LIMITED WITHIN THE SITE. LOCATIONS SHALL BE COORDINATED WITH CONSTRUCTION PHASING AND NOT INTERFERE WITH PEDESTRIAN OR VEHICULAR TRAFFIC UNLESS OTHERWISE APPROVED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL GAIN APPROVAL OF FINAL LOCATION FOR ALL STAGING/STOCKPILE AREAS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. NO STOCKPILING SHALL OCCUR WITHIN DESIGNATED WETLANDS. SEE SPECIFICATIONS AND SHEET CP-1 FOR PHASING INFORMATION.
8. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND STRUCTURES NOT SCHEDULED FOR DEMOLITION. THOSE DAMAGED SHALL BE REPAIRED TO EXISTING OR BETTER CONDITIONS IN A TIMELY MANNER AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL SUBSURFACE UTILITIES PRIOR TO THE START OF WORK.
9. ANY UNDERGROUND UTILITY LINES, STRUCTURES AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED FROM RECORD MAPPING. AS SUCH, THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST IN THE AREA WHICH ARE UNKNOWN TO THE SIGNER. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
10. CONTRACTOR IS RESPONSIBLE FOR PREVENTING REMOVAL DEBRIS FROM ENTERING WETLANDS AND EXITING THE SITE. SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED DURING SITE PREPARATION AND REMOVALS WORK AND MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES.

LEGEND

- CONSTRUCTION LIMIT LINE
- ANTI-TRACKING PAD
- SILT FENCE
- INLET PROTECTION
- TREE PROTECTION
- ITEM TO BE REMOVED
- ITEM TO BE REMOVED
- SAWCUT PAVEMENT
- ITEM TO BE REMOVED AND SLAVAGED FOR REUSE
- BITUMINOUS PAVEMENT TO BE REMOVED
- CONCRETE PAVEMENT TO BE REMOVED
- GRAVEL MATERIAL TO BE REMOVED
- LANDSCAPE / EARTH MATERIAL TO BE REMOVED FOR PROPOSED PAVING (SEE NOTES)
- VEGETATION TO BE REMOVED (SEE NOTES)
- EMBANKMENT GRADE

STATE OF CONNECTICUT
PHILIP J. KATZ
No. 15307
LICENSED
PROFESSIONAL ENGINEER



KEY MAP (NOT TO SCALE)

GRAPHIC SCALE

CONNECTICUT STATE PARKS 100

drawing title	SITE PREPARATION PLAN 2 OF 5
REVISIONS	

mark	date	description
1	03/13/15	SCHEMATIC DESIGN
2	04/17/14	DD SUBMISSION
3	06/24/14	100% CD SUBMISSION
4	11/26/14	100% CD SUBMISSION
5	02/13/15	FINAL PLANS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

drawing prepared by: STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 405-1045

project: SILVER SANDS STATE PARK
PHASE 1B ENHANCEMENTS
Milford, CT

CAD no. 192510370 | project no. BI-T-804

date: 02/13/15
scale:
drawn by:
approved by:
drawing no. EC-2

MATCH LINE – SHEET 2

SITE PREPARATION/REMOVALS NOTES

1. CONTRACTOR TO COORDINATE ALL UTILITY WORK (INCLUDING BUT NOT LIMITED TO REMOVALS, UTILITIES TO REMAIN, CAPPING, ABANDONING, ETC.) WITH CORRESPONDING UTILITY COMPANIES PRIOR TO START OF WORK. ALL UTILITIES TO BE REMOVED SHALL BE CAPPED AT PROPERTY LIMITS.
2. THE CONTRACTOR SHALL CAREFULLY CUT EXISTING CURBS AND PAVEMENTS TO REMAIN PRIOR TO REMOVAL. ALL EXISTING CURBING, PAVEMENTS AND OTHER AMENITIES THAT MIGHT INTERFERE WITH THE NEW WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER TO CONFIRM CONDITIONS/LIMITS OF REMOVAL.
3. WHERE INDICATED TO REMOVE LANDSCAPE/EARTH MATERIALS FOR PROPOSED IMPROVEMENTS, CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL SOD AND/OR VEGETATION AND STRIP AND STOCKPILE ALL TOPSOIL TO WHATEVER DEPTHS ENCOUNTERED.
4. WHERE INDICATED TO REMOVE EXISTING VEGETATION, CONTRACTOR SHALL REMOVE ALL MATERIALS INCLUDING STUMPS AND ROOTS, WITHIN THE AREA OF PROPOSED IMPROVEMENTS. VERIFY LIMITS OF NECESSARY VEGETATION REMOVALS REQUIRED PRIOR TO BEGINNING WORK.
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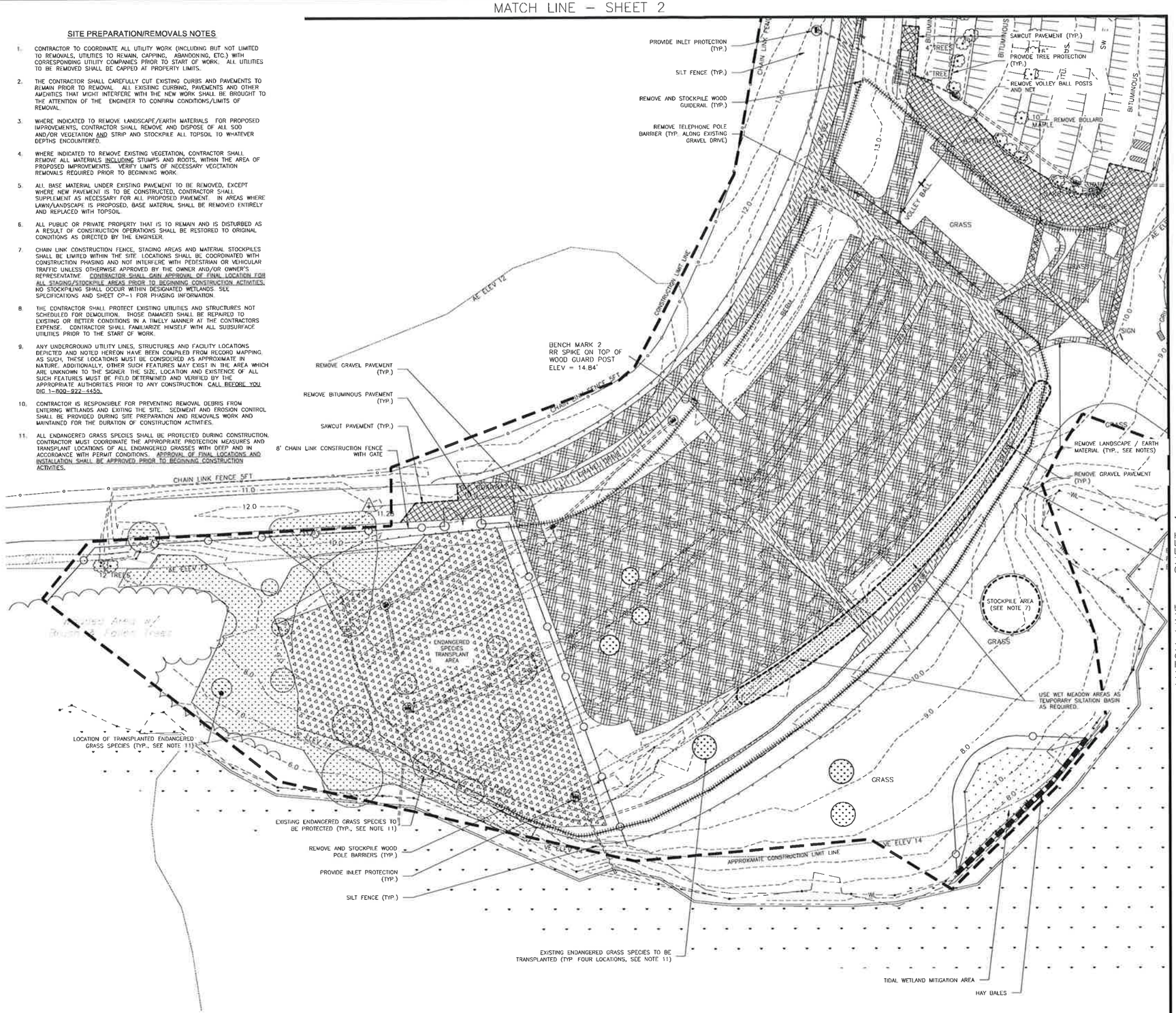
11. ALL ENDANGERED GRASS SPECIES SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR MUST COORDINATE THE APPROPRIATE PROTECTION MEASURES AND TRANSPLANT LOCATIONS OF ALL ENDANGERED GRASSES WITH DEEP AND IN ACCORDANCE WITH PERMIT CONDITIONS. APPROVAL OF FINAL LOCATIONS AND INSTALLATION SHALL BE APPROVED PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.



MATCH LINE – SHEET 4

LEGEND

- CONSTRUCTION LIMIT LINE
- ANTI-TRACKING PAD
- SILT FENCE
- INLET PROTECTION
- TREE PROTECTION
- ITEM TO BE REMOVED
- ITEM TO BE REMOVED
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- ITEM TO BE REMOVED AND SALVAGED FOR REUSE
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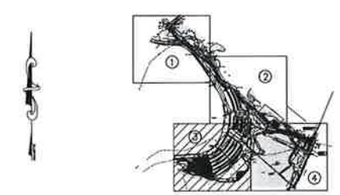
- GRAVEL MATERIAL TO BE REMOVED
- LANDSCAPE / EARTH MATERIAL TO BE REMOVED FOR PROPOSED PAVING (SEE NOTES)
- VEGETATION TO BE REMOVED (SEE NOTES)
- ENDANGERED GRASS
- ENDANGERED SPECIES TRANSPLANT AREA

STATE OF CONNECTICUT
PHILIP A. KYTE
No. 15307
LICENSED
PROFESSIONAL ENGINEER



KEY MAP (NOT TO SCALE)

GRAPHIC SCALE

CONNECTICUT STATE PARKS 100

drawing title: SITE PREPARATION PLAN 3 OF 5

REVISIONS		
mark	date	description
1	10/18/18	SCHEMATIC DESIGN
2	12/21/18	DD SUBMISSION
3	04/19/19	50% CD SUBMISSION
4	07/26/19	90% CD SUBMISSION
5	09/30/19	FINAL PLANS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

drawing prepared by: STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 495-1845

project: SILVER SANDS STATE PARK
PHASE 1B ENHANCEMENTS
Milford, CT

date: 09/13/19
scale:
drawn by:
approved by:
drawing no: EC-3

CAD no: 162313079
project no: BI-T-804

MATCH LINE – SHEET 2

MATCH LINE – SHEET 3

CITY OF MILFORD CONTROL POINT BM 88-24
MASONRY NAIL IN CONCRETE WALK TO THE LEFT OF HOUSE #840 EAST BROADWAY N 635,626.371 E 914,018.377, NAVD 88 ELEV = 6.34'.

CITY OF MILFORD CONTROL POINT BM 88-25
DISK SET IN CONCRETE IN 21" DIAMETER PVC PIPE
N 633,802.623 E 913249.752, NAVD 88 ELEV = 17.03'

BENCH MARK 5
RR SPIKE IN 12" TREE
ELEV = 7.45'

BENCH MARK 2'
SPIKE IN 12" TREE
ELEV = 9.02'

RECORD N 22°51'14"E, 1979'
SURVEY N 22°51'14"E, 1979'

LEGEND

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11. ALL ITEMS TO BE REMOVED AND STOCKPILED FOR REUSE SHALL PROTECTED UNTIL INSTALLATION. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY IF SALVAGED MATERIALS ARE DAMAGED OR UNABLE TO BE REINSTALLED. UTILITIES SHALL BE CAPPED AND/OR RELOCATED AS NECESSARY.

STATE OF CONNECTICUT
PHILIP J. KAZ
No. 15807
LICENSED
PROFESSIONAL ENGINEER

KEY MAP (NOT TO SCALE)

GRAPHIC SCALE

drawing title	
SITE PREPARATION PLAN 4 OF 5	

REVISIONS

mark	date	description
1	10.07.13	SCHEMATIC DESIGN
2	06.27.14	DD SUBMISSION
3	09.24.14	100% CD SUBMISSION
4	07.30.15	100% CD SUBMISSION
5	02.03.15	FINAL PLANS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

drawing prepared by: STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 495-1645

date: 02/13/15
project: SILVER SANDS STATE PARK PHASE 1B ENHANCEMENTS
Milford, CT
CAD no: 162310370
project no: BI-T-804
drawn by:
approved by:
drawing no: EC-4

PROJECT DESCRIPTION:

THE PROJECT CONSISTS OF THE CONSTRUCTION OF SILVER SANDS STATE PARK IN MILFORD, CONNECTICUT.

THE INTENT OF THE SEDIMENT AND EROSION CONTROL PLAN IS TO COLLECT SETTLEMENT IN RUNOFF DURING CUTTING AND FILLING OPERATIONS BEFORE CONSTRUCTION AREAS ARE STABILIZED. SEDIMENT AND EROSION CONTROL MEASURES AS DESCRIBED HEREIN SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER OR STATE INSPECTOR. EXISTING DRAINAGE CHANNELS AND STORM DRAINAGE STRUCTURES WILL BE MAINTAINED AND PROTECTED DURING CONSTRUCTION UNTIL NEW DRAINAGE APPURTENANCES, WHERE PROPOSED, ARE OPERATIONAL.

CONSTRUCTION SEQUENCE: THE GENERAL SEQUENCE OF CONSTRUCTION SHALL PROCEED AS FOLLOWS:

- INSTALLATION OF PERIMETER EROSION/SILTATION CONTROL MEASURES, ANTI-TRACKING PAD, AND FENCE OFF AREAS LIMITED TO HEAVY EQUIPMENT
- REMOVAL OF ALL PAVEMENT, STRUCTURES AND UTILITIES TO BE REMOVED
- CLEARING AND GRUBBING: VEGETATION AND STUMPS ARE TO BE DISPOSED OF IN A LEGAL AND ENVIRONMENTALLY SAFE MANOR.
- TOPSOIL REMOVAL AND STOCKPILING: STOCK PILE MATERIAL TO BE PLACED IN DESIGNATED AREAS DETERMINED AS PROJECT PROCEEDS. ALL STOCKPILES TO BE STABILIZED UPON COMPLETION OF DUMPING SEQUENCE AT EACH LOCATION.
- ESTABLISH ROUGH SUBGRADES FOR ROADWAYS, PARKING AND BUILDING PLATFORMS
- SITE STORMWATER RUNOFF FROM DISTURBED AREAS TO BE DIRECTED VIA TEMPORARY SWALES OR DIVERSION DIKES TO SEDIMENT BASINS AS NECESSARY. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR AS CONSTRUCTION DICTATES
- DISCHARGES FROM DEWATERING OF EXCAVATION SHALL NOT BE DIVERTED DIRECTLY INTO ANY EXISTING STORM DRAINS WITHOUT PRETREATMENT VIA SEDIMENT BASIN OR TEMPORARY SEDIMENT CONTROL POOL.
- MAINTAIN ANTI-TRACKING PAD AND INSPECT EROSION CONTROL MEASURES.
- STABILIZE ALL CUT OR DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH.
- REMOVAL OF EXISTING DRAINAGE SYSTEM
- EXCAVATION AND INSTALLATION OF DRAINAGE SYSTEM AND UTILITY CONDUITS
- INSTALLATION OF INTERNAL EROSION CONTROLS AS AREAS ONSITE ARE STABILIZED AND CONSTRUCTION PROGRESSES
- INSTALL REMAINING UTILITIES
- PERFORM BUILDING CONSTRUCTION
- CONSTRUCT ROADWAYS AND PARKING AREAS
- TOPSOIL AND FINAL SEEDING OF ALL DISTURBED AREAS AND OTHER AREAS WITHIN SITE AS DIRECTED BY OWNER'S REPRESENTATIVE
- INSTALLATION OF LIGHTING AND LANDSCAPING
- INSPECT AND CLEAN DRAINAGE SYSTEM
- REMOVAL OF PERIMETER EROSION CONTROL MEASURES
- FINAL CLEAN-UP

SEDIMENTATION AND EROSION CONTROL NOTES:

1. SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY PRIOR TO THE START OF GRADING AND MAINTAINED UNTIL ALL GROUND SURFACES ARE STABILIZED I.E. WITH TURF, PAVEMENT, ETC., AND SHALL CONSIST OF SILT FENCING, HAY BALES, TEMPORARY SEDIMENTATION BASINS AND SWALES, MULCH AND TEMPORARY SEEDING

2. THE OWNER HAS THE AUTHORITY TO CONTROL THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION OPERATIONS AND TO DIRECT THE CONTRACTOR TO IMMEDIATELY PROVIDE PERMANENT OR TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS, WATERCOURSES, LAKES, PONDS, OR OTHER AREAS OF WATER IMPOUNDMENT BY CONSTRUCTION OPERATIONS. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO PREVENT EROSION ON THE SITE AND/OR ONTO ABUTTING PROPERTY.

3. THE ENGINEER HAS THE AUTHORITY TO DIRECT THE CONTRACTOR TO DIVERT SURFACE WATER RUN-OFF AWAY FROM EXPOSED RAW EARTH SURFACES THROUGH THE USE OF TEMPORARY BERMS, DIKES, DIVERSION CHANNELS AND/OR OTHER DIVERSION TECHNIQUES APPROVED BY THE CITY'S REPRESENTATIVE AND THE ENGINEER.

4. THE EROSION CONTROL FEATURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR AND SHALL BE CHECKED DAILY AND AFTER EACH SEVERE RAIN STORM FOR DAMAGE, UNTIL SUCH FEATURES ARE, IN THE OPINION OF THE ENGINEER, NO LONGER NEEDED. ALL SEDIMENTATION TRAPS AND SEDIMENTATION BASINS SHALL HAVE THE ACCUMULATED SEDIMENT AND/OR CLEAN WATER REMOVED BEFORE IT SIGNIFICANTLY REDUCES THEIR STORAGE VOLUME OR FUNCTION, PRIOR TO THE NEXT RAIN STORM FORECAST FOR THE REGION.

5. THE CONTRACTOR SHALL, AT ALL TIMES, HAVE ON HAND THE NECESSARY MATERIALS AND EQUIPMENT TO PROVIDE FOR EARLY SLOPE STABILIZATION AND CORRECTIVE MEASURES TO DAMAGED SLOPES. THE CONTRACTOR SHALL RESPOND TO MAINTENANCE OR ADDITIONAL MEASURES ORDERED BY THE ENGINEER WITHIN 24 HOURS.

6. THE CONTRACTOR SHALL OPERATE ALL EQUIPMENT AND PERFORM ALL CONSTRUCTION OPERATIONS SO AS TO MINIMIZE POLLUTION TO ADJACENT WATER COURSES OR WETLANDS AREAS. THE CONTRACTOR SHALL CEASE ANY OF HIS OPERATIONS WHICH WILL INCREASE POLLUTION DURING RAIN STORMS.

7. ALL SLOPES OF STOCKPILE MATERIAL AND OTHER DISTURBED AREAS SHALL BE STABILIZED AND PROTECTED BY SURROUNDING WITH SILT FENCING OR HAY BALES, OR OTHERWISE PROTECTED AS APPROVED BY THE ENGINEER. ALL DAMAGED AREAS SHALL BE REPAIRED AS SOON AS POSSIBLE. THE ENGINEER SHALL LIMIT THE SURFACE AREA OF EACH MATERIAL EXPOSED IF THE CONTRACTOR FAILS TO SUFFICIENTLY PROTECT THE SLOPES TO PREVENT POLLUTION.

8. MULCHES: SHALL BE HAY, STRAW, WOOD CELLULOSE, WOOD CHIPS, STONE, NETTING, BURLAP OR OTHER SUITABLE MULCH MATERIAL AS APPROVED BY THE ENGINEER. MULCHES SHALL BE REASONABLY CLEAN AND FREE OF NOXIOUS WEEDS AND DELETERIOUS MATERIALS. ASPHALT SPRAYS WILL NOT BE ALLOWED. THE CONTRACTOR SHALL PREVENT STRAW, WOOD CHIPS, ETC., FROM ENTERING ANY CATCH BASINS, RESERVOIRS OR WATERCOURSES.

9. HAY BALES: SHALL BE PLACED AROUND ALL EXISTING DRAINAGE INLETS OR AS DIRECTED BY THE ENGINEER. THEY SHALL BE HELD IN PLACE BY TWO WOODEN STAKES IN EACH BALE. BALES SHALL BE MAINTAINED OR REPLACED AS ORDERED BY THE ENGINEER UNTIL THEY ARE NO LONGER NECESSARY FOR THE PURPOSE INTENDED OR ARE ORDERED REMOVED BY THE ENGINEER. HAY BALES SHALL BE MADE OF HAY WITH 40 POUNDS MINIMUM WEIGHT AND 120 POUNDS MAXIMUM WEIGHT. WOOD STAKES SHALL BE A MINIMUM OF 1 INCH BY 1 INCH NOMINAL SIZE BY A MINIMUM OF 3 FEET LONG.

10. SILT FENCE: SHALL CONSIST OF 3-FOOT WIDE GEOSYNTHETIC FABRIC WITH PREFABRICATED WOOD POSTS AS MANUFACTURED BY "MIRAFI" OR EQUAL. THE BOTTOM SIX INCHES OF FABRIC SHALL BE BURIED BY EITHER TRENCHING OR BY LAYING THE SIX INCH SECTION HORIZONTALLY ON THE GROUND AND BURYING BY RAKING THE TOPSOIL UP TO THE CONTROL FENCE.

- MINIMUM LENGTH OF SILT FENCE IS 15 L.F.
- MAXIMUM POST SPACING IS 10 L.F.
- JOINTS IN FILTER FABRIC SHALL BE ONLY AT SUPPORT POSTS WITH MINIMUM 6" OVERLAP, SECURELY SEALED
- SILT FENCE SHALL NOT BE USED IN A WATER COURSE
- FABRIC SUSCEPTIBLE TO SUNLIGHT DAMAGE SHALL NOT BE USED IN ANY INSTALLATIONS WHERE EXPOSURE TO LIGHT WILL EXCEED 30 DAYS, UNLESS SPECIFICALLY AUTHORIZED IN WRITING BY THE ENGINEER.

11. TEMPORARY SWALES AND SEDIMENTATION BASINS MAY BE CONSTRUCTED OF RIP-RAP, MULCH, HAY BALES OR JUTE MESH. PORTLAND CONCRETE OR BITUMINOUS CONCRETE WILL NOT BE ALLOWED.

12. TEMPORARY GRASS SEED SHALL BE PERENNIAL RYE-GRASS (LOLIUM PERENNE) OR AN APPROVED VARIETY THEREOF, SUCH AS MANHATTAN, HAVING A MINIMUM PURITY OF 98 PERCENT AND A MINIMUM GERMINATION OF 90 PERCENT. THE SEEDING MAY BE ALTERED BY THE ENGINEER IF REQUESTED BY THE CONTRACTOR TO SUIT SPECIAL AREAS OR CONDITIONS.

13. AT THE COMPLETION OF THE PROJECT, AND AFTER ALL DISTURBED AREAS ARE STABILIZED, THE CONTRACTOR SHALL COMPLETELY REMOVE ALL SEDIMENTATION AND EROSION CONTROL MEASURES. SILT FENCING SHALL BE CUT FLUSH WITH THE GROUND AND ANY ACCUMULATED SEDIMENTATION SHALL BE THINLY SPREAD UPON EXISTING GROUND COVER. ALL MULCH, HAY BALES AND RIP-RAP SHALL BE REMOVED FROM THE SITE, UNLESS SPECIFICALLY ORDERED BY THE ENGINEER TO REMAIN IN PLACE.

GENERAL NOTES:

1. TOTAL SITE AREA = 68 AC., TOTAL DISTURBED AREA = 13.0 AC., TOTAL AREA TO BE VEGETATIVELY STABILIZED = 7.0 AC.

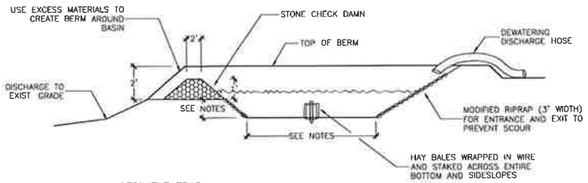
2. THE ANTICIPATED START OF CONSTRUCTION FOR THE PROJECT IS: MAY 2015.
3. THE FOLLOWING PERMITS ARE ANTICIPATED FOR THE PROJECT: US ARMY CORPS CATEGORY 2, CT DEEP STRUCTURES AND DREDGING, CT DEEP INLAND WETLANDS

4. CONTRACTOR SHALL ENSURE THAT ALL SEDIMENT AND EROSION CONTROL MEASURES AT THE SITE ARE MAINTAINED AND IN WORKING ORDER AT ALL TIMES BUT ESPECIALLY PRIOR TO A MAJOR STORM. A MAJOR STORM IS DEFINED AS A STORM PREDICTED BY THE NATIONAL OFFICE OF ATMOSPHERIC ADMINISTRATION (NOAA) WEATHER SERVICE WITH WARNINGS OF FLOODING, SEVERE THUNDERSTORMS OR SIMILARLY SEVERE WEATHER CONDITIONS OR EFFECTS.

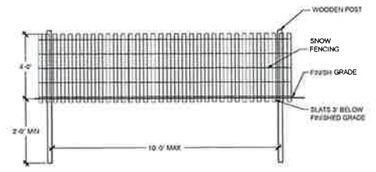
5. ALL SEDIMENT AND EROSION CONTROL MEASURES TO BE USED AT THE SITE SHALL BE IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

6. PERSON RESPONSIBLE FOR MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION SHALL BE: TBD.

NOTE:
1. CLEANOUT OF ACCUMULATED SEDIMENT SHALL BE ACCOMPLISHED WHEN ONE-HALF OF THE ORIGINAL HEIGHT OF THE SEDIMENTATION CONTROL SYSTEM, AS INSTALLED, BECOMES FILLED WITH SEDIMENT.
2. SEDIMENT TRAP TO BE USED AS CONDITIONS WARRANT OR AT THE DIRECTION OF THE ENGINEER.
3. DEWATERING FROM COFFERDAM INSTALLATION OR EXCAVATION SHALL PASS THROUGH A TEMPORARY SEDIMENT TRAP OR SEDIMENTATION ROLLOFF CONTAINER. SEDIMENT LADEN WATER SHALL NOT BE DISCHARGED DIRECTLY TO THE BROOK OR STORM SYSTEM.
4. DIMENSIONS/LOCATION AND REQUIREMENTS SHOWN ARE MINIMUMS AND SHALL BE MODIFIED AS SITE CONDITIONS DICTATE OR AS DIRECTED BY ENGINEER.
5. SIZING SHALL BE PER CT SEDIMENT AND EROSION CONTROL GUIDELINES. STORAGE SHALL BE 134 CY PER ACRE OF DISTURBED CONTRIBUTING AREA.

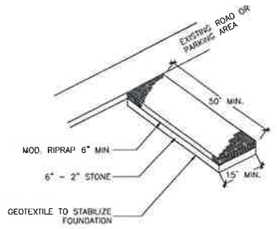


TEMPORARY SEDIMENT TRAP
SCALE: N.T.S.

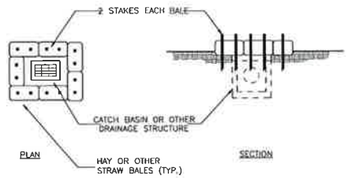


NOTES
1. SEE SPECIFICATIONS FOR COMPLETE DIMENSIONS AND MATERIALS REQUIRED.

DUNE GUARD FENCE
SCALE: N.T.S

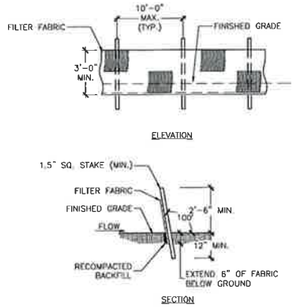


ANTI-TRACKING PAD DETAIL
SCALE: NTS

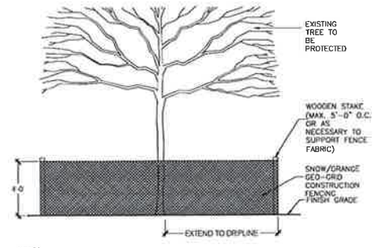


NOTE:
ALL EXISTING OR PROPOSED CATCH BASINS IN AREAS DISTURBED BY CONSTRUCTION SHALL BE PROTECTED BY SEDIMENTATION CONTROLS.

HAY BALE DETAIL- CATCH BASIN IN A DEPRESSION - TYPE 'C'
SCALE: NTS



SILT FENCE DETAIL
SCALE: NTS



NOTES:
1. NO STOCKPILING OF MATERIALS OR EQUIPMENT IS PERMITTED WITHIN TREE PROTECTION FENCE.
2. EXTENT OF TREE PROTECTION FENCE SHALL BE TO DRIPLINE OF TREE WHERE POSSIBLE. FENCE MAY BE LOCATED A MIN. OF 6'-0" FROM TRUNK OF TREE WHERE APPROVED BY LANDSCAPE ARCHITECT.

TREE PROTECTION FENCE
SCALE: NTS

STATE OF CONNECTICUT
PHILIP J. KATZ
No. 15307
LICENSED
PROFESSIONAL ENGINEER

CONNECTICUT STATE PARKS 100

drawing title: SITE PREPARATION DETAILS - 5 OF 5

REVISIONS

mark	date	description
1	10.01.14	SCHEMATIC DESIGN
2	04.17.15	DD SUBMISSION
3	06.24.15	50% CD SUBMISSION
4	09.30.15	100% CD SUBMISSION
5	02.03.16	FINAL PLANS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

drawing prepared by: STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 865-1845

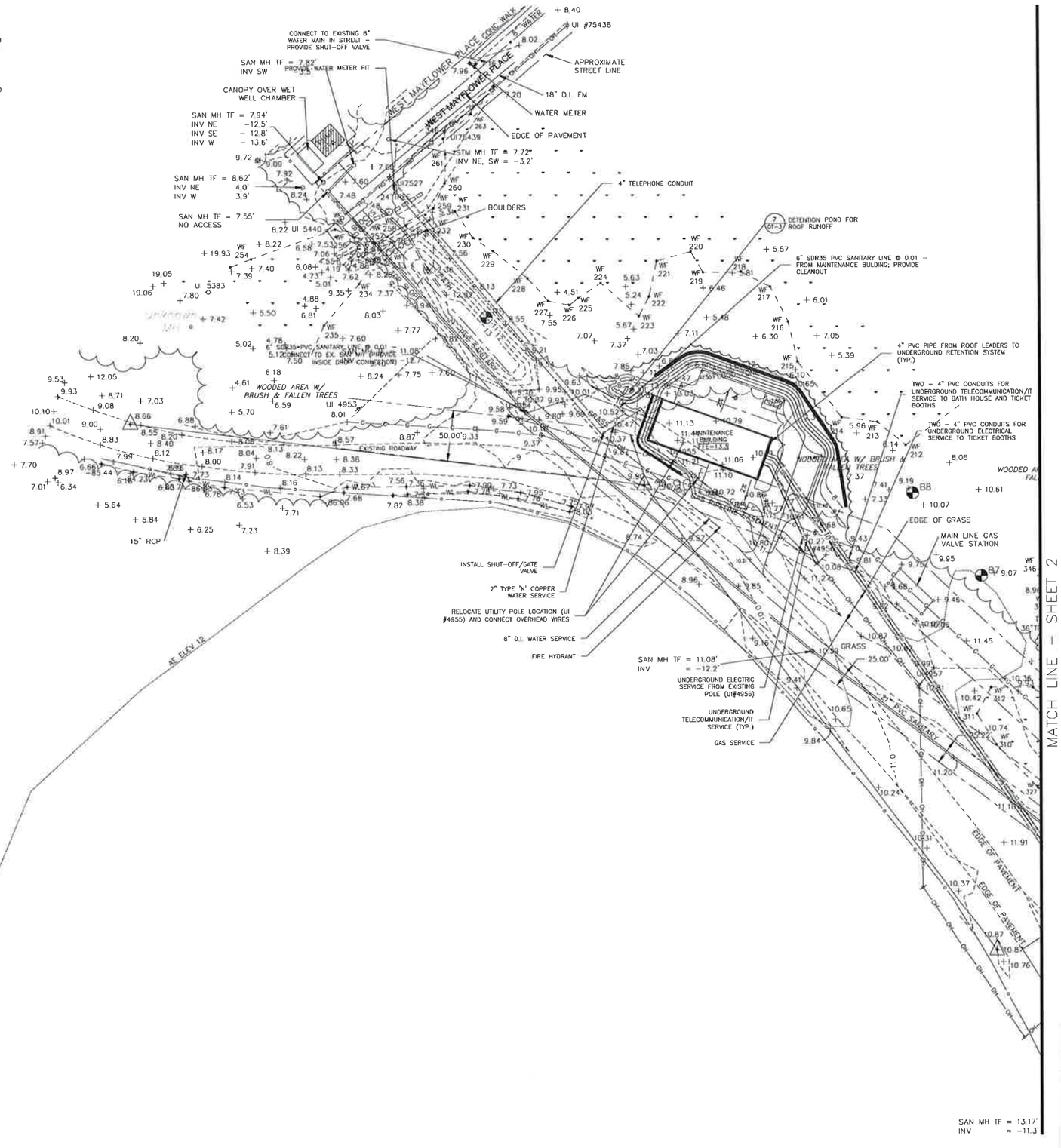
project: SILVER SANDS STATE PARK
PHASE 1B ENHANCEMENTS
Milford, CT

date: 02/3/16
scale:
drawn by:
approved by:
drawing no: EC-5

CAD no: 192310379
project no: BI-T-604

GRADING, DRAINAGE AND UTILITIES NOTES

1. CONTRACTOR TO COORDINATE ALL PROPOSED UTILITY WORK WITH CORRESPONDING UTILITY COMPANIES PRIOR TO START OF WORK.
2. SEE DETAIL SHEETS FOR TYPICAL DRAINAGE AND UTILITY INSTALLATION DETAILS AND ADDITIONAL INFORMATION.
3. ALL ACCESSIBLE ROUTES AND PAVED WALKS SHALL BE CONSTRUCTED WITH A RUNNING SLOPE NOT TO EXCEED 5% AND A CROSS SLOPE OF 2% MAX.
4. ALL NEW WORK, PAVEMENTS AND CURBS SHALL BLEND SMOOTHLY INTO EXISTING CONDITIONS AND PROPOSED IMPROVEMENTS WITH NO TRIPPING HAZARDS.



LEGEND

- EXISTING STREET LINE
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- STORM DRAINAGE PIPE
- SANITARY PIPE
- CATCH BASIN
- MANHOLE
- WATER SERVICE
- GAS SERVICE
- ELECTRIC SERVICE
- TELECOMMUNICATION SERVICE
- RELOCATED UTILITY POLE

STATE OF CONNECTICUT
PHILIP J. KATZ
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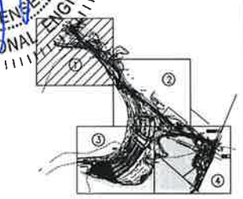
PROFESSIONAL ENGINEER



KEY MAP (NOT TO SCALE)

GRAPHIC SCALE

1 IN FEET
1 inch = 40 ft.

CONNECTICUT STATE PARKS 100

drawing title: GRADING, DRAINAGE AND UTILITY PLAN - 1 OF 5

REVISIONS

mark	date	description
1	11/17/14	SCHEMATIC DESIGN
2	12/17/14	DD SUBMISSION
3	06/24/14	50% CD SUBMISSION
4	01/30/14	100% CD SUBMISSION
5	12/13/15	FINAL PLANS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

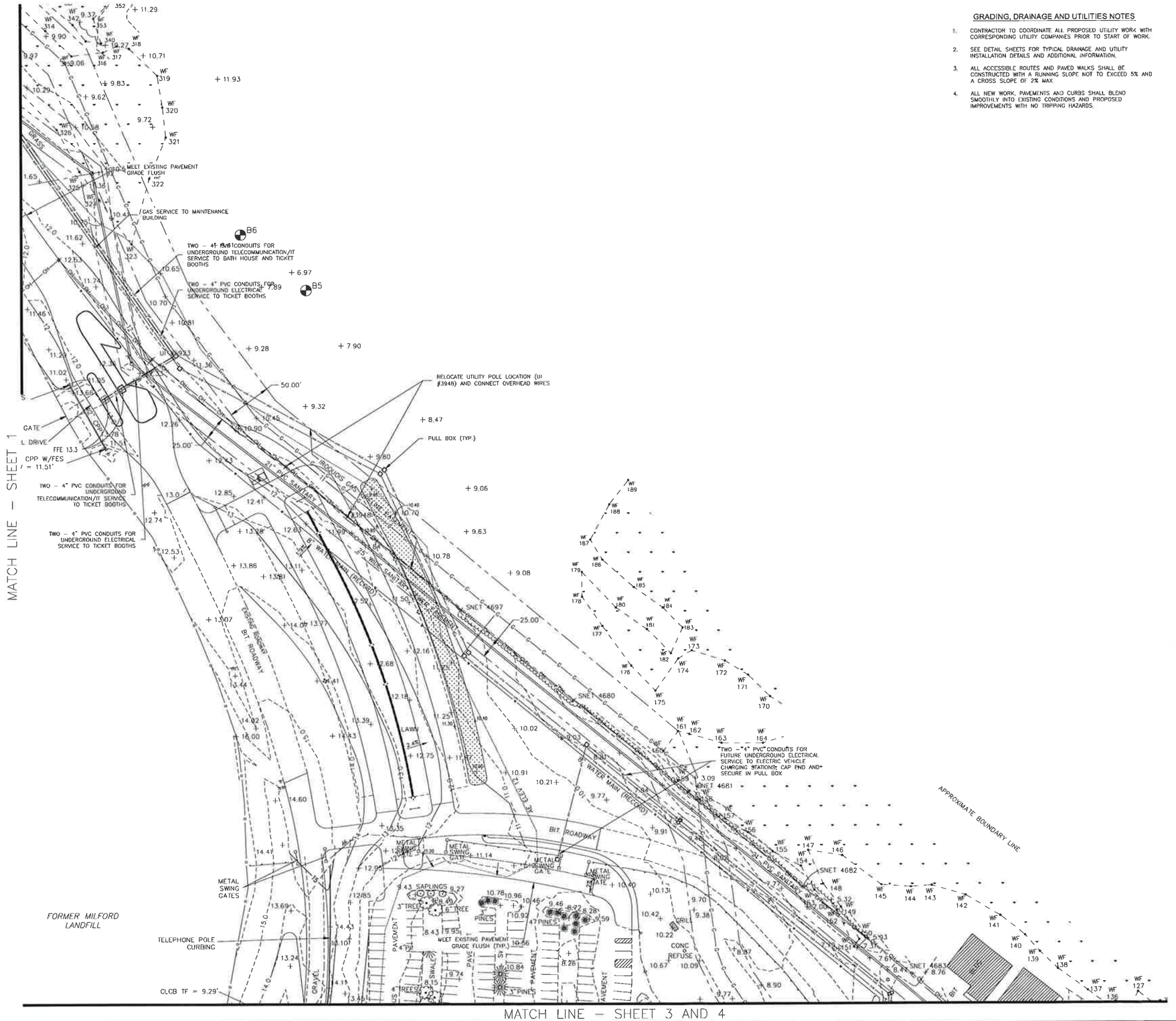
drawing prepared by: STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 495-1645

date: 02/13/15
scale:

project: SILVER SANDS STATE PARK PHASE 1B ENHANCEMENTS
Milford, CT

drawn by:
approved by:
drawing no: G-1

CAD no: 192310379
project no: BI-T-604



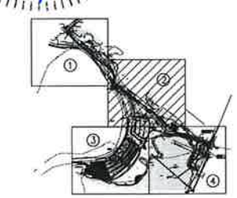
GRADING, DRAINAGE AND UTILITIES NOTES

1. CONTRACTOR TO COORDINATE ALL PROPOSED UTILITY WORK WITH CORRESPONDING UTILITY COMPANIES PRIOR TO START OF WORK.
2. SEE DETAIL SHEETS FOR TYPICAL DRAINAGE AND UTILITY INSTALLATION DETAILS AND ADDITIONAL INFORMATION.
3. ALL ACCESSIBLE ROUTES AND PAVED WALKS SHALL BE CONSTRUCTED WITH A RUNNING SLOPE NOT TO EXCEED 5% AND A CROSS SLOPE OF 2% MAX.
4. ALL NEW WORK, PAVEMENTS AND CURBS SHALL BLEND SMOOTHLY INTO EXISTING CONDITIONS AND PROPOSED IMPROVEMENTS WITH NO TRIPPING HAZARDS.

LEGEND

- EXISTING STREET LINE
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- STORM DRAINAGE PIPE
- SANITARY PIPE
- CATCH BASIN
- MANHOLE
- WATER SERVICE
- GAS SERVICE
- ELECTRIC SERVICE
- TELECOMMUNICATION SERVICE
- RELOCATED UTILITY POLE

STATE OF CONNECTICUT
PHILIP J. KATZ
No. 15307
LICENSED
PROFESSIONAL ENGINEER



KEY MAP (NOT TO SCALE)

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

CONNECTICUT STATE PARKS 100

drawing title: GRADING, DRAINAGE AND UTILITY PLAN – 2 OF 5

REVISIONS

mark	date	description
1	11/17/13	SCHEMATIC DESIGN
2	12/17/14	DD SUBMISSION
3	06/24/14	50% CD SUBMISSION
4	07/30/14	100% CD SUBMISSION
5	02/13/15	FINAL PLANS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

drawing prepared by: STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 495-1645

project: SILVER SANDS STATE PARK PHASE 1B ENHANCEMENTS
Milford, CT

CAD no. 192310379
project no. BI-T-604

date: 02/13/15
scale:
drawn by:
approved by:
drawing no. G-2

MATCH LINE – SHEET 2

GRADING, DRAINAGE AND UTILITIES NOTES

1. CONTRACTOR TO COORDINATE ALL PROPOSED UTILITY WORK WITH CORRESPONDING UTILITY COMPANIES PRIOR TO START OF WORK.
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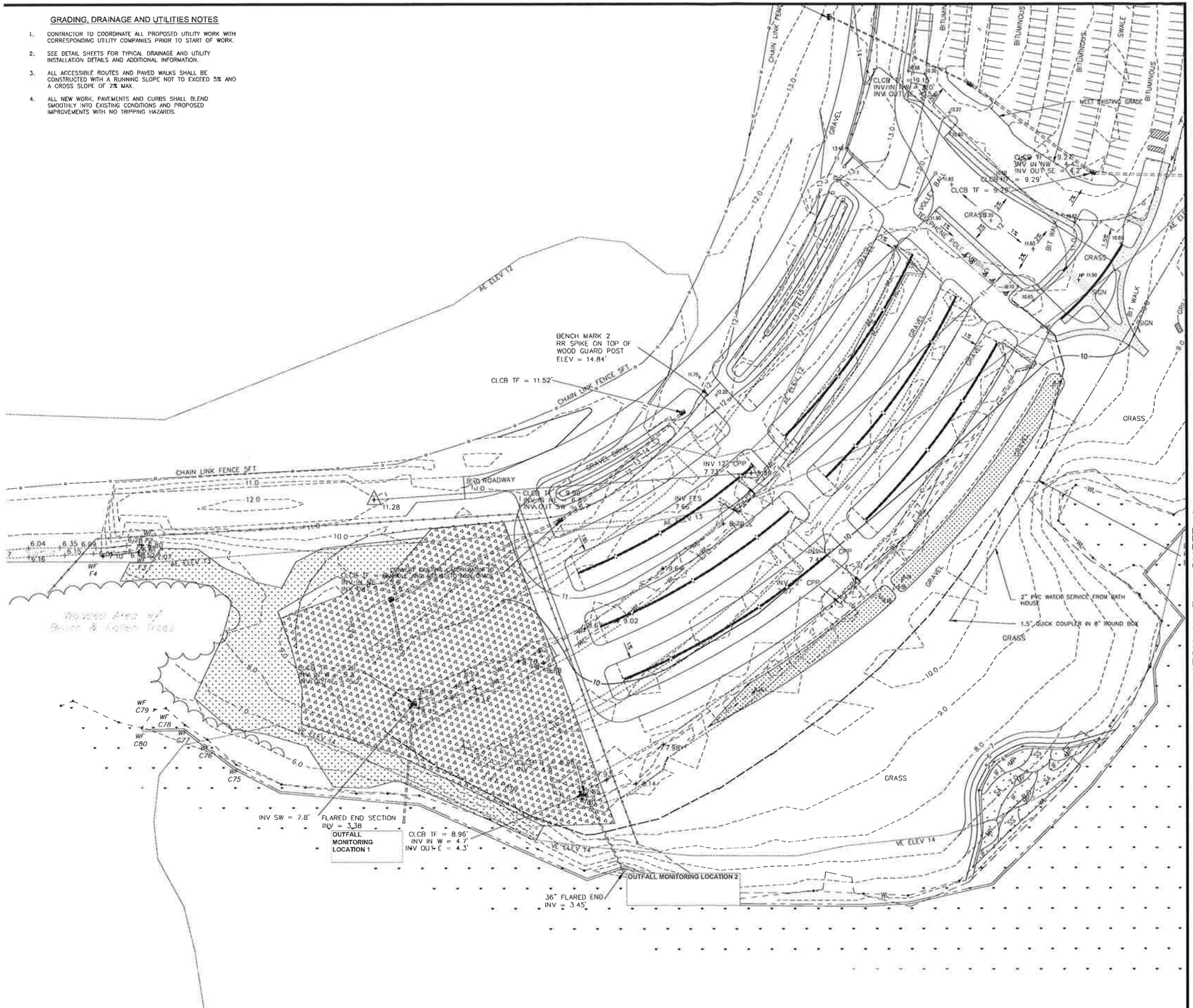
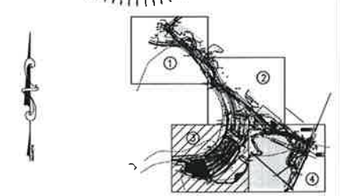


MATCH LINE – SHEET 4

LEGEND

- EXISTING STREET LINE
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- STORM DRAINAGE PIPE
- SANITARY PIPE
- CATCH BASIN
- MANHOLE
- WATER SERVICE
- GAS SERVICE
- ELECTRIC SERVICE
- TELECOMMUNICATION SERVICE
- RELOCATED UTILITY POLE

STATE OF CONNECTICUT
PHILIP J. KATZ
NO. 15307
LICENSED
PROFESSIONAL ENGINEER



KEY MAP (NOT TO SCALE)

GRAPHIC SCALE

drawing title	
GRADING, DRAINAGE AND UTILITY PLAN – 3 OF 5	

REVISIONS

mark	date	description
1	11/12/13	SCHEMATIC DESIGN
2	02/17/14	DD SUBMISSION
3	06/24/14	50% CD SUBMISSION
4	12/31/14	100% CD SUBMISSION
5	05/13/15	FINAL PLANS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

drawing prepared by:
STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 401-1845

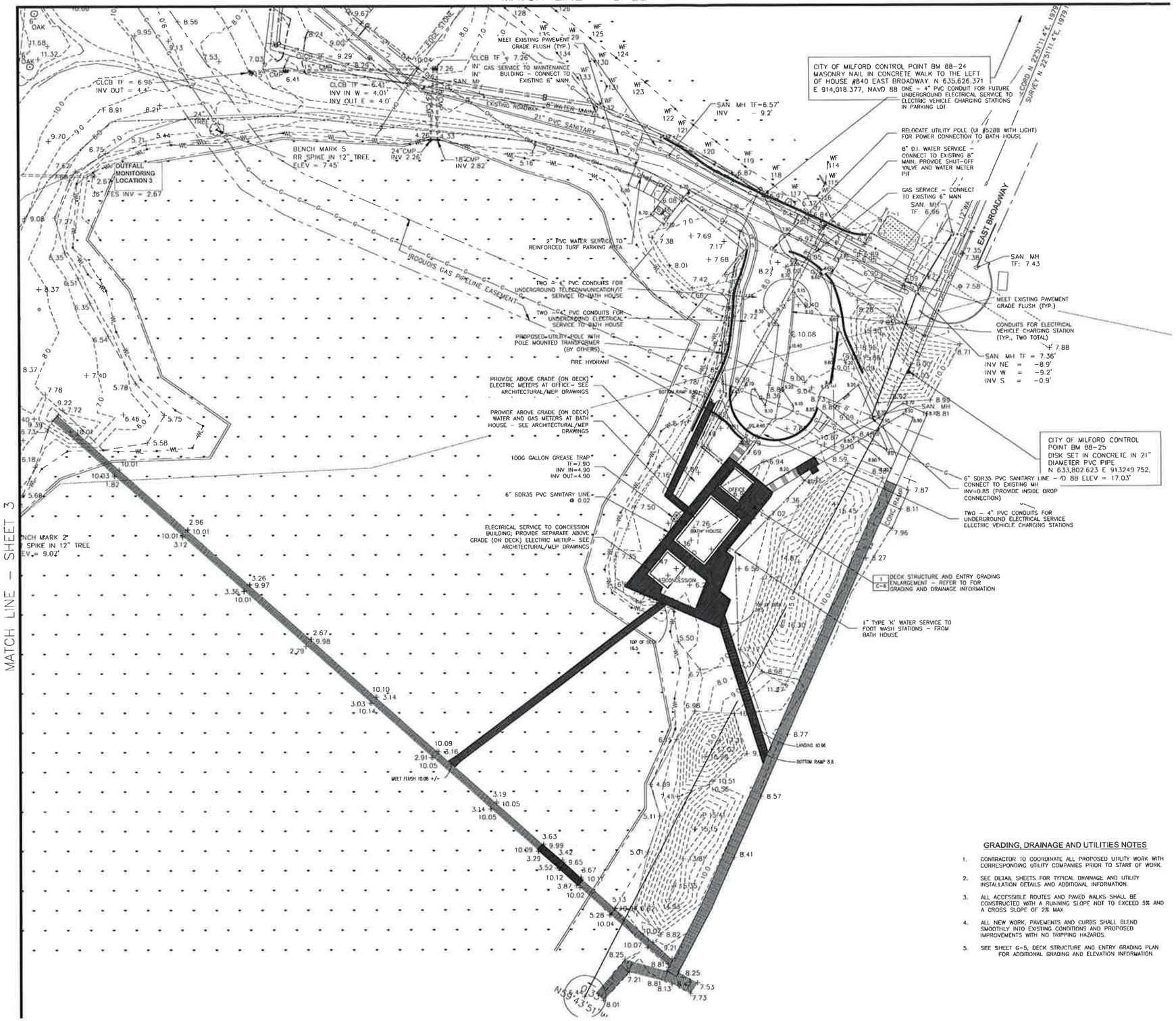
project:
SILVER SANDS STATE PARK
PHASE 1B ENHANCEMENTS
Milford, CT

date	drawn by	approved by	drawing no
02/13/15			G-3

CAD no. 162310379 | project no. DI-T-684

MATCH LINE – SHEET 2

MATCH LINE – SHEET 3



LEGEND

- EXISTING STREET LINE
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- STORM DRAINAGE PIPE
- SANITARY PIPE
- CATCH BASIN
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- WATER SERVICE
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- ELECTRIC SERVICE
- TELECOMMUNICATION SERVICE
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GRADING, DRAINAGE AND UTILITIES NOTES

1. CONTRACTOR TO COORDINATE ALL PROPOSED UTILITY WORK WITH CORRESPONDING UTILITY COMPANIES PRIOR TO START OF WORK.
2. SEE DETAIL SHEETS FOR TYPICAL DRAINAGE AND UTILITY INSTALLATION DETAILS AND ADDITIONAL INFORMATION.
3. ALL ACCESSIBLE ROUTES AND PAVED WALKS SHALL BE CONSTRUCTED WITH A RUNNING SLOPE NOT TO EXCEED 5% AND A CROSS SLOPE OF 2% MAX.
4. ALL NEW WORK, PAVEMENTS AND CURBS SHALL BLEND SMOOTHLY INTO EXISTING CONDITIONS AND PROPOSED IMPROVEMENTS WITH NO TRIPPING HAZARDS.
5. SEE SHEET G-5, DECK STRUCTURE AND ENTRY GRADING PLAN FOR ADDITIONAL GRADING AND ELEVATION INFORMATION.

STATE OF CONNECTICUT
PHILIP J. KAUFMAN
No. 18391
LICENSED PROFESSIONAL ENGINEER

KEY MAP (NOT TO SCALE)

GRAPHIC SCALE

CONNECTICUT STATE PARKS 100

drawing title: GRADING, DRAINAGE AND UTILITY PLAN – 4 OF 5

REVISIONS

mark	date	description
1	11.13.13	SCHEMATIC DESIGN
2	12.17.14	DD SUBMISSION
3	06.04.15	50% CD SUBMISSION
4	09.30.15	100% CD SUBMISSION
5	12.23.15	FINAL PLANS

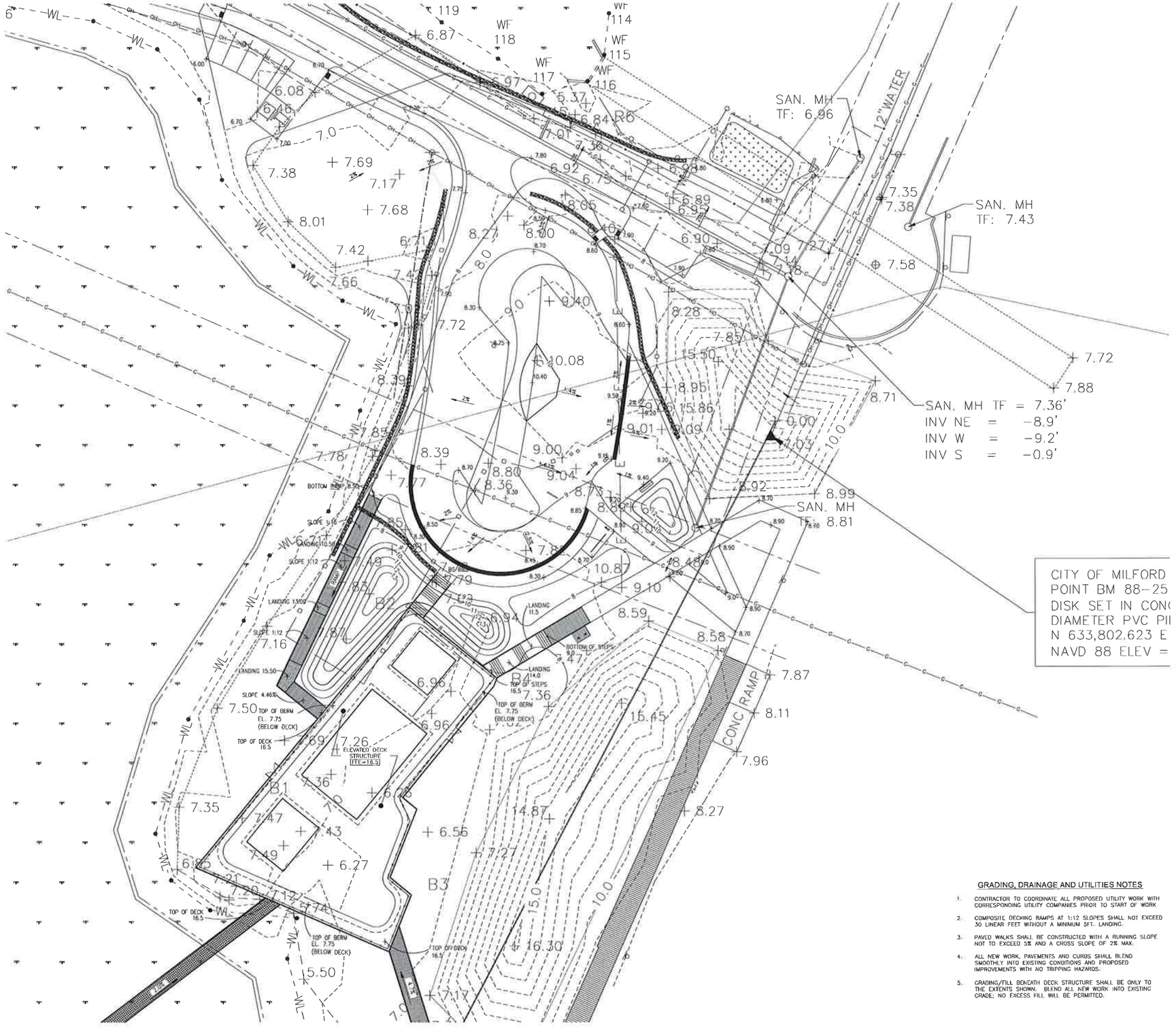
STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

drawing prepared by: STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 495-1645

project: SILVER SANDS STATE PARK
PHASE 1B ENHANCEMENTS
Milford, CT

CAD no. 1925310379 | project no. BI-T-604

date: 12/23/15
scale:
drawn by:
approved by:
drawing no. G-4



LEGEND

- EXISTING STREET LINE
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- STORM DRAINAGE PIPE
- SANITARY PIPE
- CATCH BASIN
- MANHOLE
- WATER SERVICE
- GAS SERVICE
- ELECTRIC SERVICE
- TELECOMMUNICATION SERVICE
- RELOCATED UTILITY POLE

GRADING, DRAINAGE AND UTILITIES NOTES

1. CONTRACTOR TO COORDINATE ALL PROPOSED UTILITY WORK WITH CORRESPONDING UTILITY COMPANIES PRIOR TO START OF WORK
2. COMPOSITE DECKING RAMPS AT 1:12 SLOPES SHALL NOT EXCEED 30 LINEAR FEET WITHOUT A MINIMUM 5FT. LANDING.
3. PAVED WALKS SHALL BE CONSTRUCTED WITH A RUNNING SLOPE NOT TO EXCEED 5% AND A CROSS SLOPE OF 2% MAX.
4. ALL NEW WORK, PAVEMENTS AND CURBS SHALL BLEND SMOOTHLY INTO EXISTING CONDITIONS AND PROPOSED IMPROVEMENTS WITH NO TRIPPING HAZARDS.
5. GRADING/FILL BENEATH DECK STRUCTURE SHALL BE ONLY TO THE EXTENTS SHOWN. BLEND ALL NEW WORK INTO EXISTING GRADE; NO EXCESS FILL WILL BE PERMITTED.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft

CONNECTICUT STATE PARKS 100

drawing title: DECK STRUCTURE AND ENTRY - 5 OF 5

REVISIONS

mark	date	description
1	[illegible]	SCHEMATIC DESIGN
2	[illegible]	DD SUBMISSION
3	[illegible]	50% CD SUBMISSION
4	[illegible]	100% CD SUBMISSION
5	[illegible]	FINAL PLANS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

drawing prepared by: STANTEC CONSULTING SERVICES INC.
55 CHURCH STREET, SUITE 601
NEW HAVEN, CT 06510 (203) 495-1645

project: SILVER SANDS STATE PARK PHASE 1B ENHANCEMENTS
Milford CT

CAD no: 192310379
project no: BI-T-004

date: 03/13/15
scale:
drawn by:
approved by:
drawing no: G-5