



October 10, 2022

Attorney Melanie Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Petition #1469 -- LSE Indus LLC Petition for a Declaratory Ruling that No Certificate of Environmental Compatibility and Public Need is Required for the Construction, Operation and Maintenance of Solar Photovoltaic Facility in North Canaan, Connecticut

Dear Attorney Bachman:

In accordance with the Council’s decision dated January 28, 2022 (the “Approval”), petitioner LSE Indus LLC (“Lodestar”) submits the following in accordance with the Council’s Approval, condition #5. Please let me know if you have any questions.

Lodestar is re-submitting the revised plans for Council staff approval of minor changes in site layout, attached hereto as Exhibit 1, previously submitted on August 2, 2022. Please note that the changes include revisions to the detention basins and the addition of drip edge protection as requested by the Department of Energy and Environmental Protection’s (“DEEP”) stormwater division as part of Lodestar’s general stormwater permit process. As a result of the stormwater design revisions, the overall development area has incurred a reduction of .29 acres.

In addition, Lodestar is re-submitting the specifications for ZNShine, Item/Model Number: ZXM7-SHLDD144 Module Size: 540 as Exhibit 2, the modules Lodestar proposes to use for the Project. Also included in Exhibit 2 is a copy of the passing TCLP test results from the manufacturer, verifying that the panels comply with TCLP requirements. Based on the proposed panel model change, the total panel count for the Project will be reduced from the originally-proposed 5,902 panels to 4,966 panels.

Given these minor changes that result in less overall impact in the Site Plans and the passing TCLP testing of the proposed panels, Lodestar respectfully requests Council approval of these changes.

Please contact me directly if you have any questions.

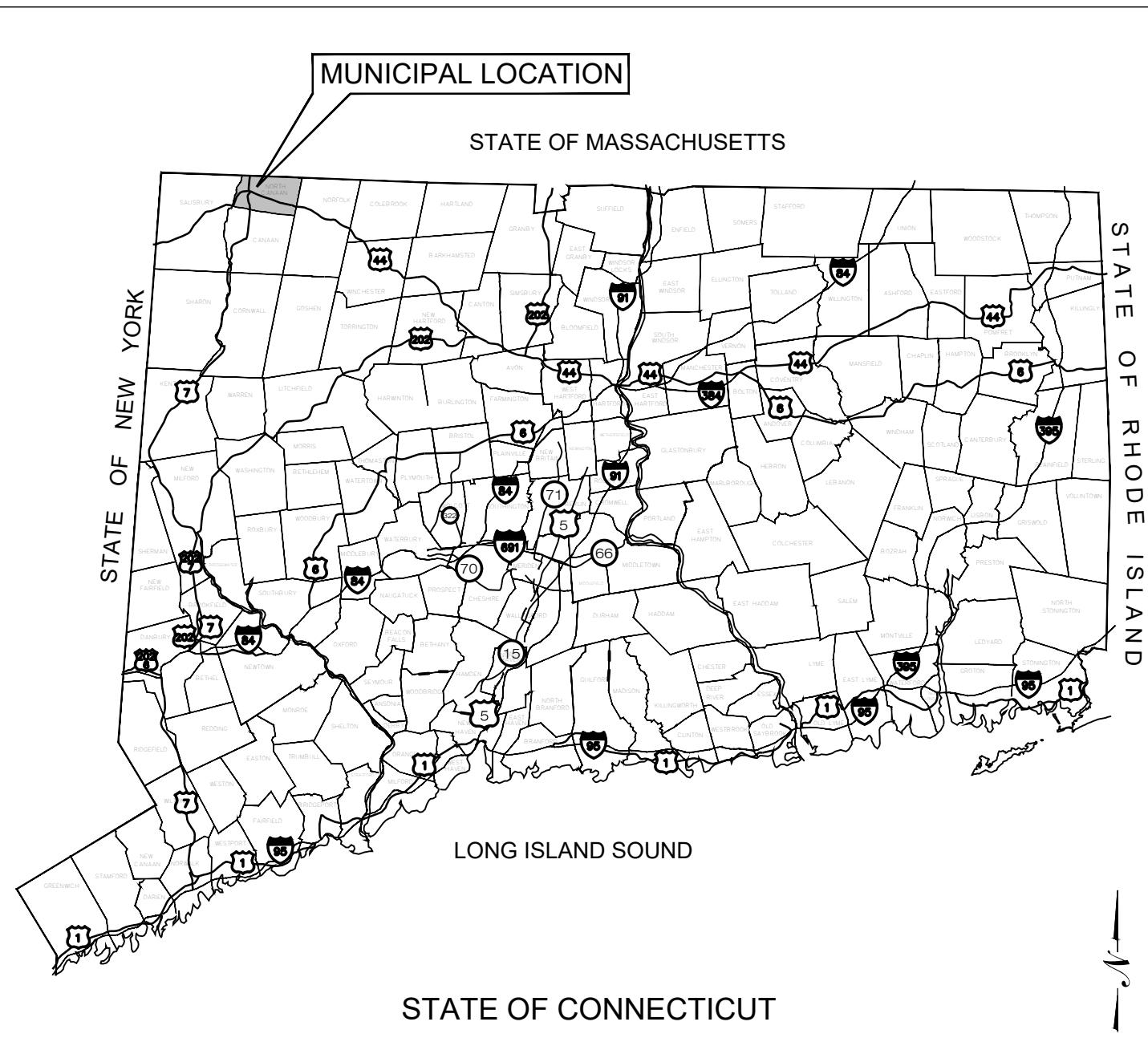
Sincerely,

Carrie Larson Ortolano

Carrie Larson Ortolano

Enclosures

EXHIBIT 1
Revised Site Plans



LSE INDUS LLC

"BUNCE 1 SOLAR FACILITY"

81 EAST MAIN ST
NORTH CANAAN, CT

LIST OF DRAWINGS

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SITE INFORMATION

SITE NAME: "BUNCE 1 SOLAR FACILITY"
 LOCATION: 81 EAST MAIN ST
NORTH CANAAN, CT

SITE TYPE/DESCRIPTION: ADD (4) GROUND MOUNTED SOLAR PANEL ARRAYS W/ ASSOCIATED EQUIPMENT, GRAVEL ACCESS ROAD, AND STORMWATER MANAGEMENT.

PROPERTY OWNER: JOHN BUNCE
81 EAST MAIN ST
NORTH CANAAN, CT

APPLICANT: LSE INDUS LLC
40 TOWER LANE, SUITE 201
AVON, CT 06001

ENGINEER CONTACT: KEVIN A. MCCAFFERY, P.E.
(860) 663-1697 x228

LATITUDE: 42°18'16" N
LONGITUDE: 73°18'46.48" W

MBLU: 16-50-0
ZONE: R-25

TOTAL SITE ACREAGE: 67.41± AC.
TOTAL DISTURBED AREA: 11.33± AC.

APPROX. VOLUME OF CUT: 3,419± CY
APPROX. VOLUME OF FILL: 2,845± CY
APPROX. NET VOLUME: 574± CY OF CUT

USGS TOPOGRAPHIC MAP



LSE INDUS LLC
40 TOWER LANE, SUITE 201
AVON, CT 06001


ALL-POINTS
TECHNOLOGY CORPORATION

567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860) 663-6971
WWW.ALLPOINTSTECH.COM FAX: (860) 663-0935

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DESIGN PROFESSIONAL OF RECORD

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COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311
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OWNER: JOHN BUNCE
ADDRESS: 81 EAST MAIN ST
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BUNCE 1 SOLAR FACILITY

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ADDRESS	NORTH CANAAN, CT
APT FILING NUMBER	CT606140
DRAWN BY	JT
DATE	10/19/21
CHECKED BY	KAM

SHEET TITLE:
TITLE SHEET & INDEX

SHEET NUMBER:
T-1



GENERAL NOTES

- ALL CONSTRUCTION SHALL COMPLY WITH PROJECT DEVELOPER STANDARDS, TOWN OF NORTH CANAAN STANDARDS, CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
- IF NO PROJECT CONSTRUCTION SPECIFICATION PACKAGE IS PROVIDED BY THE PROJECT DEVELOPER OR THEIR REPRESENTATIVE, THE CONTRACTOR SHALL COMPLY WITH THE MANUFACTURER, TOWN OF NORTH CANAAN, OR CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND BE IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
- THE PROJECT DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING AND STORMWATER PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL TOWN OF NORTH CANAAN CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- REFER TO PLANS, DETAILS AND REPORTS PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE PROJECT DEVELOPER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING/CONSTRUCTION. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE PROJECT DEVELOPERS CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS, AND SPECIFICATIONS TO THE PROJECT DEVELOPER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
- SHOULD ANY UNKNOWN OR INCORRECTLY LOCATED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE PROJECT DEVELOPER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
- DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE PROJECT DEVELOPER OR OTHERS DURING OCCUPIED HOURS, EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE PROJECT DEVELOPER AND THE LOCAL MUNICIPALITY. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
- THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL COMPLY WITH OSHA CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
- THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OF PERSONNEL OR TO SUPERVISE SAFETY AND DO NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
- THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE PROJECT DEVELOPER OR TOWN OF NORTH CANAAN.
- THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE PROJECT DEVELOPER AT THE END OF CONSTRUCTION.
- ALTERNATIVE METHODS AND PRODUCTS, OTHER THAN THOSE SPECIFIED, MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING/CONSTRUCTION PROCESS.
- INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
- NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS AND PERMITS ARE GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

SITE PLAN NOTES

- THE SURVEY WAS PROVIDED BY MARTIN SURVEYING ASSOCIATES, LLC. DATED APRIL 6, 2021.
- THERE ARE BORDERING VEGETATED WETLANDS (BVWS) LOCATED ON THE SITE AS INDICATED ON THE PLANS. BVW BOUNDARIES WERE FLAGGED AND LOCATED BY ALL-POINTS TECHNOLOGY CORPORATION, IN APRIL AND JULY 2021.
- THERE WILL BE MINIMAL GRADING ON SITE WITHIN THE ARRAY AREA IN THE AREAS OF THE MINOR CLEARING, TO ENSURE THAT PROPER DRAINAGE IS MAINTAINED. GRADING WILL BE PROPOSED FOR THE REQUIRED STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES.
- THE CONTRACTOR SHALL FOLLOW THE RECOMMENDED SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN OR SUBMIT AN ALTERNATE PLAN FOR APPROVAL BY THE ENGINEER AND/OR PERMITTING AGENCIES PRIOR TO THE START OF CONSTRUCTION. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
- PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATEROURCE OR BVWS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. IN ADDITION, THE CONTRACTOR SHALL ADHERE TO THE 'EROSION CONTROL PLAN' CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY GOVERNMENT AGENCIES WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.
- ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK, SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION AND PROJECT GEOTECHNICAL REPORT. THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT 95% PERCENT OF OPTIMUM MOISTURE CONTENT.
- ALL DISTURBANCE INCURRED TO PUBLIC, MUNICIPAL, COUNTY, STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF NORTH CANAAN AND STATE OF CONNECTICUT.
- IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL, AND NOTIFY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT.

UTILITY NOTES

- CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE TOWN OF NORTH CANAAN TO SECURE CONSTRUCTION PERMITS AND FOR PAYMENT OF FEES FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
- REFER TO DRAWINGS BY PROJECT DEVELOPER FOR THE ONSITE ELECTRICAL DRAWINGS AND INTERCONNECTION TO EXISTING ELECTRICAL GRID. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT. THESE DETAILS ARE NOT INCLUDED IN THESE PLANS.
- UTILITY LOCATIONS AND PENETRATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND SHALL BE VERIFIED WITH THE ELECTRICAL ENGINEER AND THE PROJECT DEVELOPER'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE PROP. SANITARY SEWERS AND WHERE PROP. STORM PIPING WILL CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE PROJECT DEVELOPER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
- UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.
- THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.
- THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.
- ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE TOWN OF NORTH CANAAN.
- ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
- RELOCATION OF UTILITY PROVIDER FACILITIES, SUCH AS POLES, SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.
- THE CONTRACTOR SHALL COMPACT PIPE BACKFILL IN 8" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABILE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.
- CONTRACTOR TO PROVIDE STEEL SLEEVES AND ANNULAR SPACE SAND FILL FOR UTILITY PIPE AND CONDUIT CONNECTIONS UNDER FOOTINGS.
- ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY PROVIDER REQUIREMENTS.
- A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM PIPING SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM PIPING AND SANITARY SEWER. A 6-INCH TO 18-INCH VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPING AND STORM PIPING SHALL REQUIRE CONCRETE ENCASEMENT OF THE SANITARY PIPING.
- THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, DRAINAGE STRUCTURE, SWALE OR LANDSCAPED AREAS DISTURBED DURING CONSTRUCTION, TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE PROJECT DEVELOPER AND TOWN OF NORTH CANAAN.
- INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY, AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE INCLUDING SERVICES. CONTACT "CALL BEFORE YOU DIG" AT 811 72 HOURS PRIOR TO CONSTRUCTION AND VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY AND STORM DRAINAGE LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROP. UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.
- THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY PROVIDERS FOR WORK TO BE PERFORMED BY UTILITY PROVIDERS. THE CONTRACTOR SHALL PAY ALL UTILITY FEES UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATION MANUAL AND GENERAL CONDITIONS, AND REPAIR PAVEMENTS AS NECESSARY.
- ELECTRIC DRAWINGS AND REQUIREMENTS ARE NOT INCLUDED AS PART OF THIS DRAWING SET AND SHOULD BE OBTAINED FROM THE PROJECT DEVELOPER.
- ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE PROJECT DEVELOPER, TOWN OF NORTH CANAAN, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.

GENERAL LEGEND

	EXISTING	PROPOSED
PROPERTY LINE	— - - - -	— - - - -
BUILDING SETBACK	— - - - -	— - - - -
SOLAR SETBACK	— - - - -	— - - - -
EASEMENT	— - - - -	— - - - -
TREE LINE	— - - - -	— - - - -
WETLAND	V V V	V V V
WETLAND BUFFER	— - - - -	— - - - -
VERNAL POOL	— - - - -	— - - - -
VERNAL POOL BUFFER	— - - - -	— - - - -
WATERCOURSE	— - - - -	— - - - -
WATERCOURSE BUFFER	— - - - -	— - - - -
MAJOR CONTOUR	— - - - -	— - - - -
MINOR CONTOUR	— - - - -	— - - - -
UNDERGROUND ELECTRIC	E E	E E
OVERHEAD ELECTRIC	OH OH	OH OH
GAS LINE	G G	G G
WATER LINE	W W	W W
BASIN	— - - - -	— - - - -
SWALE	— > — > —	— > — > —
FENCE	X X X X	X X X X
LIMIT OF DISTURBANCE	LOD	LOD
LIMIT OF CLEARING AND GRUBBING	LCG	LCG
FILTER SOCK	FS FS	FS FS
SILT FENCE	SF SF	SF SF
BAFFLE	— — — —	— — — —

LSE INDUS LLC
40 TOWER LANE, SUITE 201
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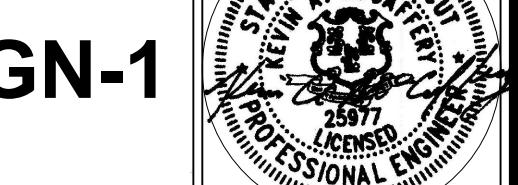
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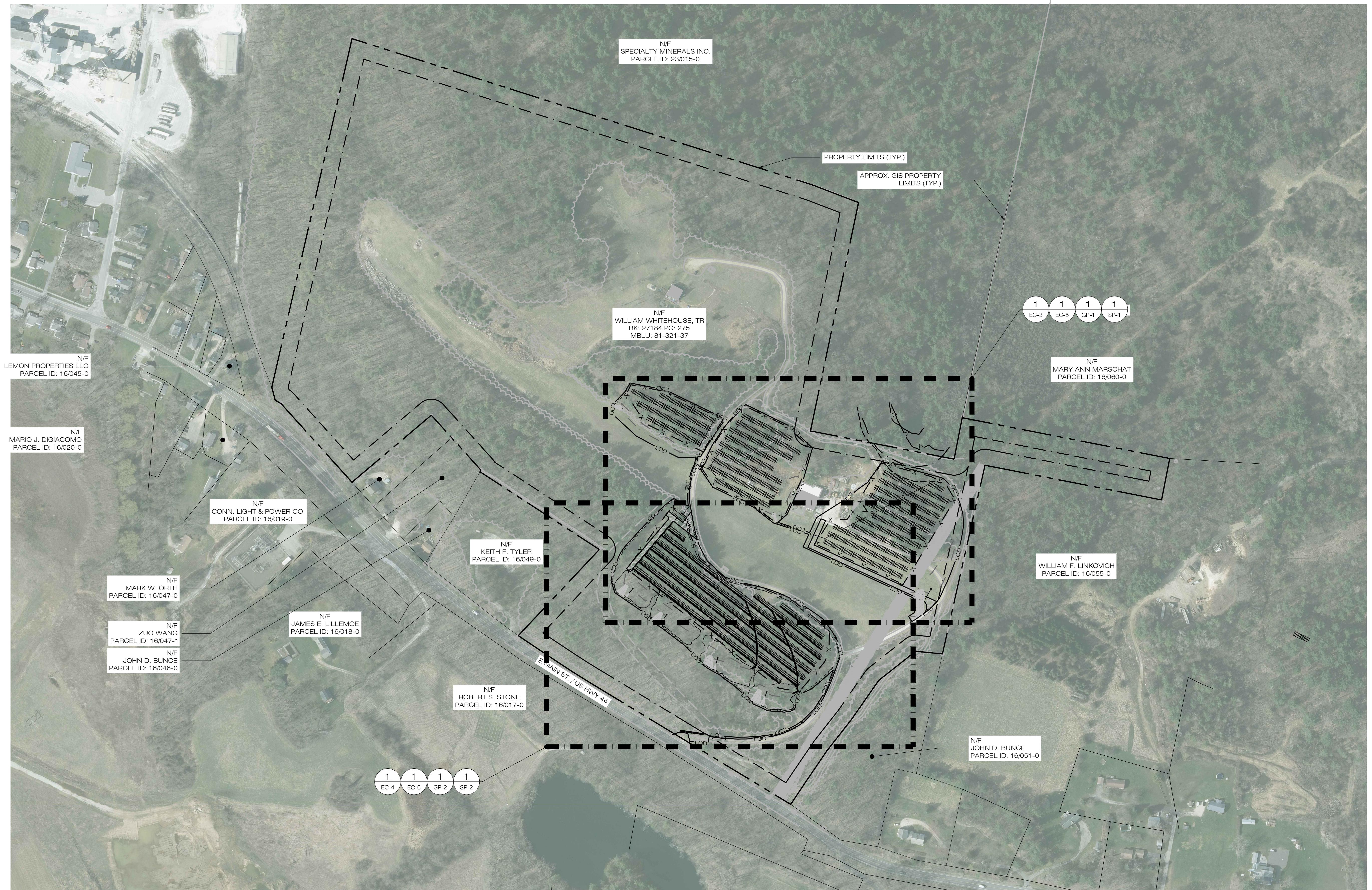
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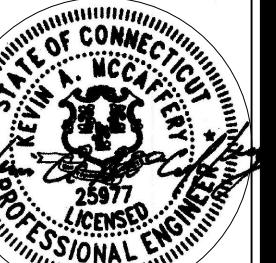
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sheet title:

OVERALL LOCUS MAP

sheet number:

OP-1



EROSION CONTROL NOTES

EROSION AND SEDIMENT CONTROL PLAN NOTES

- THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF NORTH CANAAN, PERMITTEE, AND/OR SWPCC MONITOR. ALL PERIMETER SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.
- THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. SEE CONSTRUCTION SEQUENCE FOR ADDITIONAL INFORMATION. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN AS REQUIRED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR SWPCC MONITOR. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.
- A BOND OR LETTER OF CREDIT MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.
- THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANNER.
- THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.
- ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
- PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.
- CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXITING.
- ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNSHILL SIDE OF THE BARRIER.
- NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS. ALL SLOPES SHALL BE SEEDED AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.
- DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE CONFORMING TO THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES AND SECURED APPROPRIATELY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.
- MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
- SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.
- VEGETATIVE ESTABLISHMENT SHALL OCCUR ON ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION, IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.
- Maintain all permanent and temporary sediment control devices in effective condition throughout the construction period. Upon completion of work sweep concrete pads, clean the stormwater management systems and remove all temporary sediment controls once the site is fully stabilized and approval has been received from permittee or the municipality.
- THE SITE WAS DESIGNED TO COMPLY WITH FEDERAL, STATE, AND, IF APPLICABLE, LOCAL STANDARDS, PLUS CURRENT ACCEPTED PRACTICES FOR THE INDUSTRY. ADDITIONAL CONTROLS AND ACTIVITIES MAY BE DEEMED NECESSARY BY THE SWPCC MONITOR DURING CONSTRUCTION AS A RESULT OF UNFORESEEN CONDITIONS AND/OR MEANS AND METHODS. SUCH ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO, ADDITIONAL FOREBAYS, BASINS, OR UPSTREAM STRUCTURAL CONTROLS, THE USE OF FLOCCULANTS OR FLOCK LOGS TO DECREASE SEDIMENT DISCHARGE MANAGEMENT SUCH AS ADDITIONAL ARMORING AND FILTERING MEASURES (I.E. STRAW BALES, WATTLES, ETC.), AND HYDROSEEDING WITH RAPIDLY GERMINATING SEED.
- SEEDING MIXTURES SHALL BE ERNST SOLAR FARM SEED MIX (ERNMX-186) DURING CONSTRUCTION AND ERNST FUZZ & BUZZ MIX (ERNMX-147) FOR FINAL STABILIZATION (SEE SITE DETAILS SHEET DN-1), OR APPROVED EQUAL BY OWNER.

CONSTRUCTION OPERATION AND MAINTENANCE PLAN - BY CONTRACTOR

E&S MEASURE	INSPECTION SCHEDULE	MAINTENANCE REQUIRED
CONSTRUCTION ENTRANCE	DAILY	PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
COMPOST FILTER SOCK	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED.
SILT FENCE	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.
TOPSOIL/BORROW STOCKPILES	DAILY	REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH.

SEDIMENT & EROSION CONTROL NARRATIVE

- THE PROJECT INVOLVES THE CONSTRUCTION OF A GROUND MOUNTED SOLAR PANEL FACILITY WITH ASSOCIATED EQUIPMENT, INCLUDING THE CLEARING, GRUBBING AND GRADING OF APPROXIMATELY 11.33± ACRES OF EXISTING LOT.
- THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:
 - CLEARING, GRUBBING, AND GRADING OF EXISTING LOT.
 - CONSTRUCTION OF 4,966 GROUND MOUNTED SOLAR PANELS AND ASSOCIATED EQUIPMENT.
 - THE STABILIZATION OF DISTURBED AREAS WITH PERMANENT VEGETATIVE TREATMENTS.
- FOR THIS PROJECT, THERE ARE APPROXIMATELY 11.33± ACRE OF THE SITE BEING DISTURBED WITH NEGLIGIBLE INCREASE IN THE IMPERVIOUS AREA OF THE SITE, AS ALL ACCESS THOUGH THE SITE WILL BE GRAVEL. IMPERVIOUS AREAS ARE LIMITED TO THE CONCRETE PADS FOR ELECTRICAL EQUIPMENT.
- THE PROJECT SITE, AS MAPPED IN THE SOIL SURVEY OF STATE OF CONNECTICUT (NRCS, VERSION 20, JUN 9, 2020), CONTAINS TYPE 61B, 73C, 90B, AND 90D (HYDROLOGIC SOIL GROUP B), AND 49B (HYDROLOGIC SOIL GROUP C). A GEOTECHNICAL ENGINEERING REPORT HAS NOT BEEN COMPLETED.
- IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 3-4 MONTHS.
- REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.
- STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL AND THE TOWN OF NORTH CANAAN STANDARDS, TO THE EXTENT POSSIBLE AND PRACTICABLE FOR THIS PROJECT ON THIS SITE. EROSION AND SEDIMENTATION MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE CONNECTICUT EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION.
- DETAILS FOR THE TYPICAL STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON THE PLAN SHEETS OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.
- CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION:
 - STAGED CONSTRUCTION;
 - MINIMIZE THE DISTURBED AREAS TO THE EXTENT PRACTICABLE DURING CONSTRUCTION;
 - STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT MEASURES AS SOON AS POSSIBLE, BUT NO LATER THAN 7-DAYS FOLLOWING DISTURBANCE;
 - MINIMIZE IMPERVIOUS AREAS;
 - UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.
- THE FOLLOWING SEPARATE DOCUMENTS ARE TO BE CONSIDERED A PART OF THE EROSION AND SEDIMENTATION PLAN:
 - STORMWATER MANAGEMENT REPORT DATED OCTOBER 2021, REVISED FEBRUARY 2022.
 - SWPCC DATED OCTOBER 2021, REVISED FEBRUARY 2022.

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE, THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS. SHOULD THE CONTRACTOR ALTER THE CONSTRUCTION SEQUENCE OR ANY EROSION AND SEDIMENTATION CONTROL MEASURES THEY SHALL MODIFY THE STORMWATER POLLUTION CONTROL PLAN (SWPCC) AS REQUIRED BY THE GENERAL PERMIT. MAJOR CHANGES IN SEQUENCING AND/OR METHODS MAY REQUIRE REGULATORY APPROVAL PRIOR TO IMPLEMENTATION.

- THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING, PHYSICALLY FLAG THE LIMITS OF DISTURBANCE IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.
- CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNER'S REPRESENTATIVE(S), THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON, OR PERSONS, RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.
- NOTIFY CALL BEFORE YOU DIG AT 811, AS REQUIRED, PRIOR TO THE START OF CONSTRUCTION.

PHASE 1

- REMOVE EXISTING IMPEDIMENTS AS NECESSARY AND PROVIDE MINIMAL CLEARING AND GRUBBING TO INSTALL THE REQUIRED CONSTRUCTION ENTRANCE(S).
- CLEAR ONLY AS NEEDED TO INSTALL THE PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES AND, IF APPLICABLE, TREE PROTECTION. ALL WETLAND AREAS SHALL BE PROTECTED BEFORE MAJOR CONSTRUCTION BEGINS.
- INSTALL PERIMETER EROSION CONTROL.
- INSTALL PERMANENT GRASSED STORMWATER MANAGEMENT BASINS B-1B, B-1C, B-1D, B-1E, B-2, B-3, AND B-4. UPON COMPLETION OF THE INSTALLATION AND STABILIZATION OF THE BASINS, PHASE 2 WORK UP GRADIENT CAN PROCEED.

PHASE 2

- UPON COMPLETION OF THE INSTALLATION OF EACH OF THE PERMANENT GRASSED STORMWATER MANAGEMENT BASINS AND REQUIRED PERIMETER CONTROLS, THE AREAS UPSTREAM CAN HAVE THE REMAINING ARRAY AREA CLEARING AND GRUBBING COMPLETED AS REQUIRED. REMOVE CUT WOOD AND STOCKPILE FOR FUTURE USE OR REMOVE OFF-SITE. REMOVE AND DISPOSE OF DEMOLITION DEBRIS OFF-SITE IN ACCORDANCE WITH APPLICABLE LAWS.
- TEMPORARILY SEED DISTURBED AREAS NOT UNDER CONSTRUCTION FOR THIRTY (30) DAYS OR MORE.

FINAL GRADING & DRAINAGE PLAN (PHASE 3)

- INSTALL CONCRETE EQUIPMENT PADS.
- INSTALL ELECTRICAL CONDUITS.
- INSTALL RACKING POSTS FOR GROUND MOUNTED SOLAR PANELS.
- INSTALL GRAVEL DRIP EDGE PROTECTION.
- INSTALL REMAINDER OF RACKING AND GROUND MOUNTED SOLAR PANELS AND COMPLETE ELECTRICAL INSTALLATION.
- AFTER SUBSTANTIAL COMPLETION OF THE INSTALLATION OF THE SOLAR PANELS, COMPLETE REMAINING SITE WORK, INCLUDING ANY REQUIRED LANDSCAPE SCREENING, AND STABILIZE ALL DISTURBED AREAS.
- FINE GRADE, RAKE, SEED AND MULCH ALL REMAINING DISTURBED AREAS. FINAL STABILIZATION SEEDING SHALL BE ERNST FUZZ & BUZZ MIX OR APPROVED EQUAL.

- AFTER THE SITE IS DEEMED TO HAVE ACHIEVED FINAL STABILIZATION AND WITH THE APPROVAL OF THE PERMITTEE, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS AND CLEAN PERMANENT STORMWATER GRASS LINED BASINS. ANY AREAS DISTURBED DURING CLEAN UP SHALL BE PERMANENTLY SEEDED.
- THE SITE SHALL BE MONITORED ONCE A MONTH FOR TWO FULL GROWING SEASONS (APRIL - OCTOBER).
- ISSUE NOTICE OF TERMINATION UPON COMPLETION OF MONITORING REQUIRED PER CT DEEP CONSTRUCTION GP APPENDIX I.

LSE INDUS LLC
40 TOWER LANE, SUITE 201
AVON, CT 06001

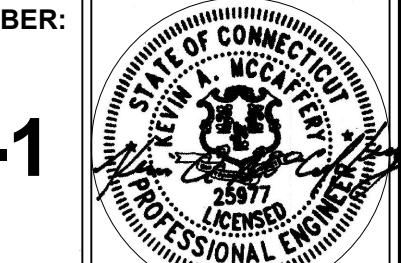

ALL-POINTS
TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860) 663-6979
WWW.ALLPOINTSTECH.COM FAX: (860) 663-9935

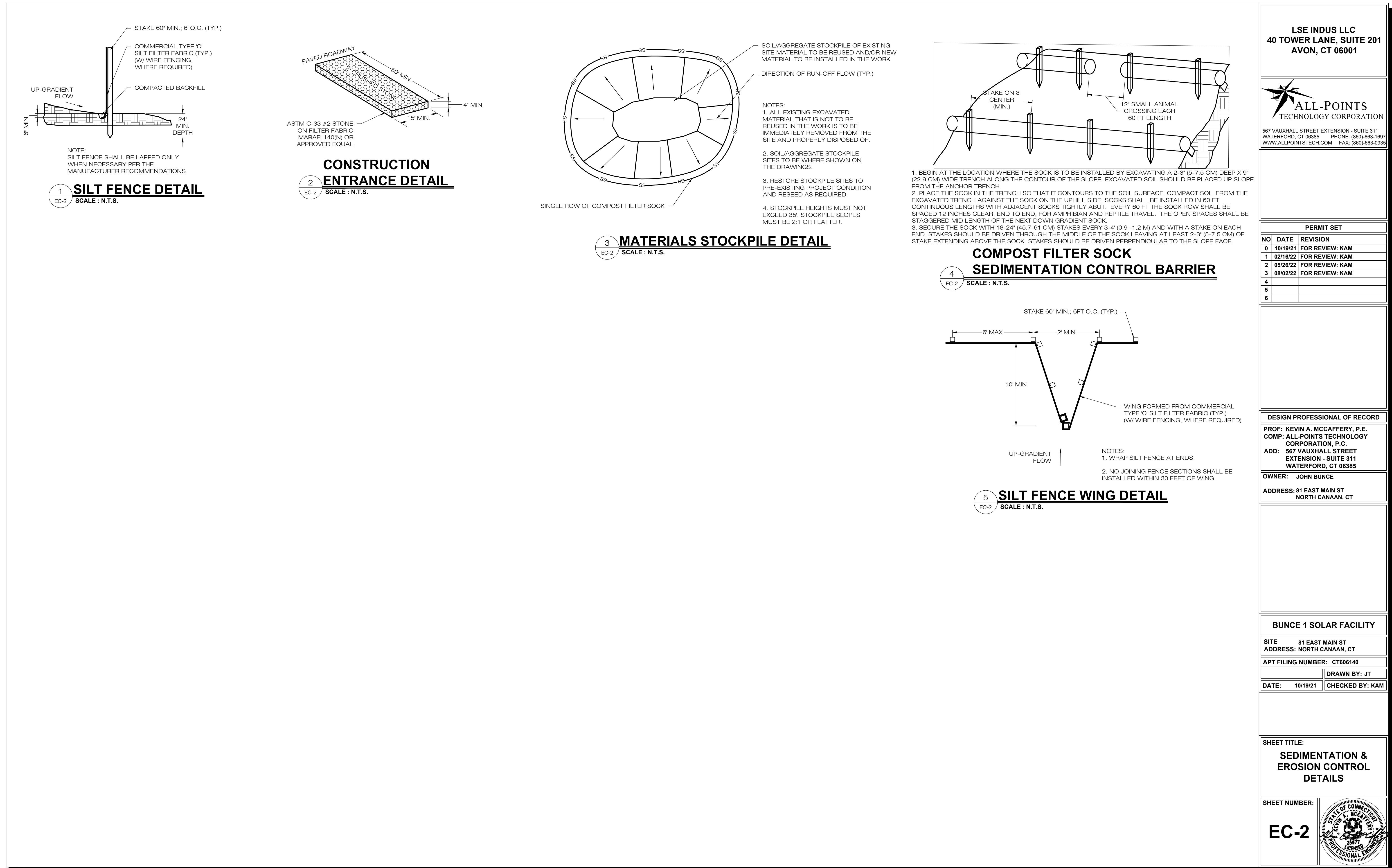
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1	02/16/22	FOR REVIEW: KAM
2	05/26/22	FOR REVIEW: KAM
3	08/02/22	FOR REVIEW: KAM
4		
5		
6		

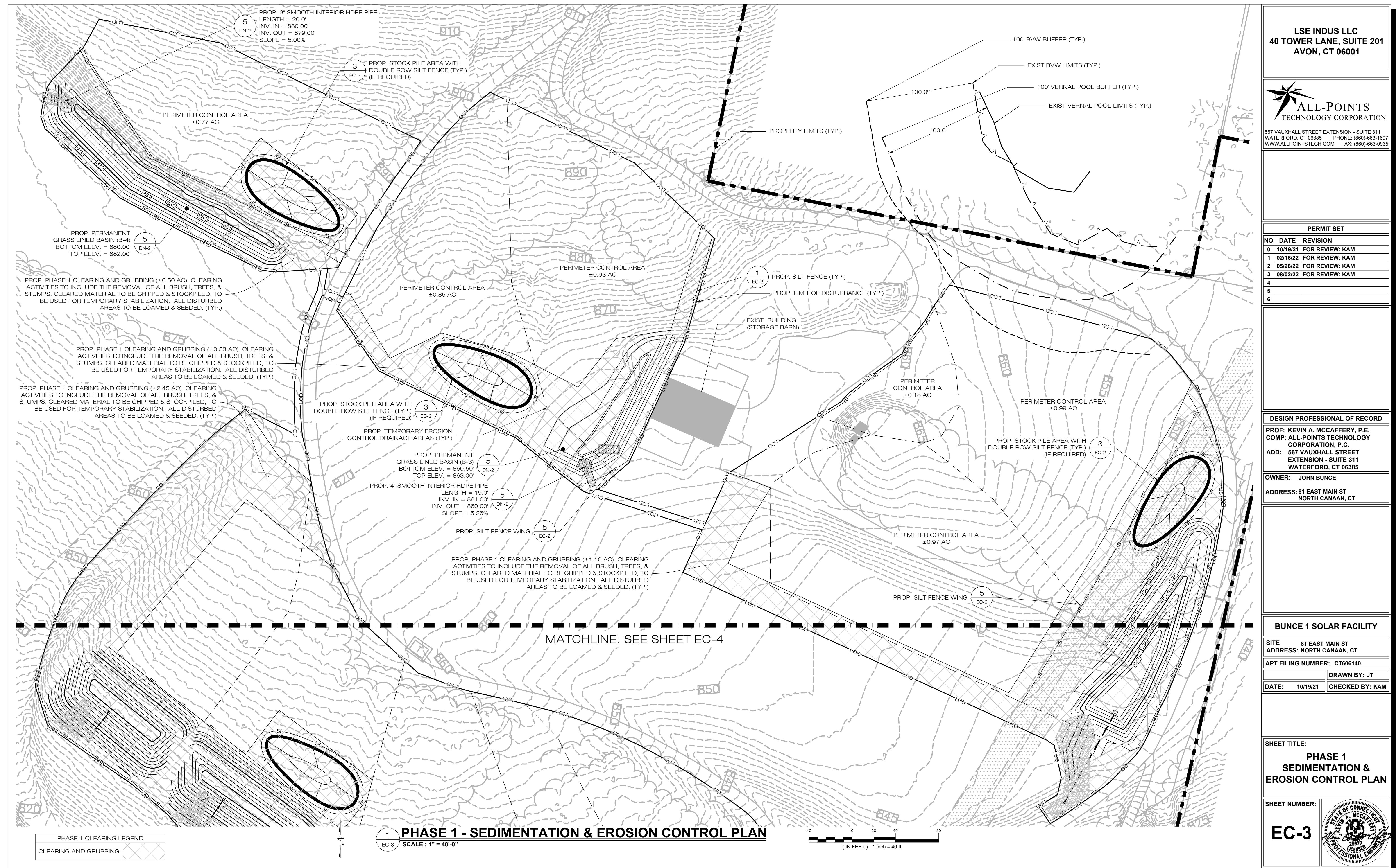
DESIGN PROFESSIONAL OF RECORD	
PROF: KEVIN A. MCCAFFERY, P.E.	
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.	
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311	
WATERFORD, CT 06385	
OWNER: JOHN BUNCE	
ADDRESS: 81 EAST MAIN ST	
NORTH CANAAN, CT	

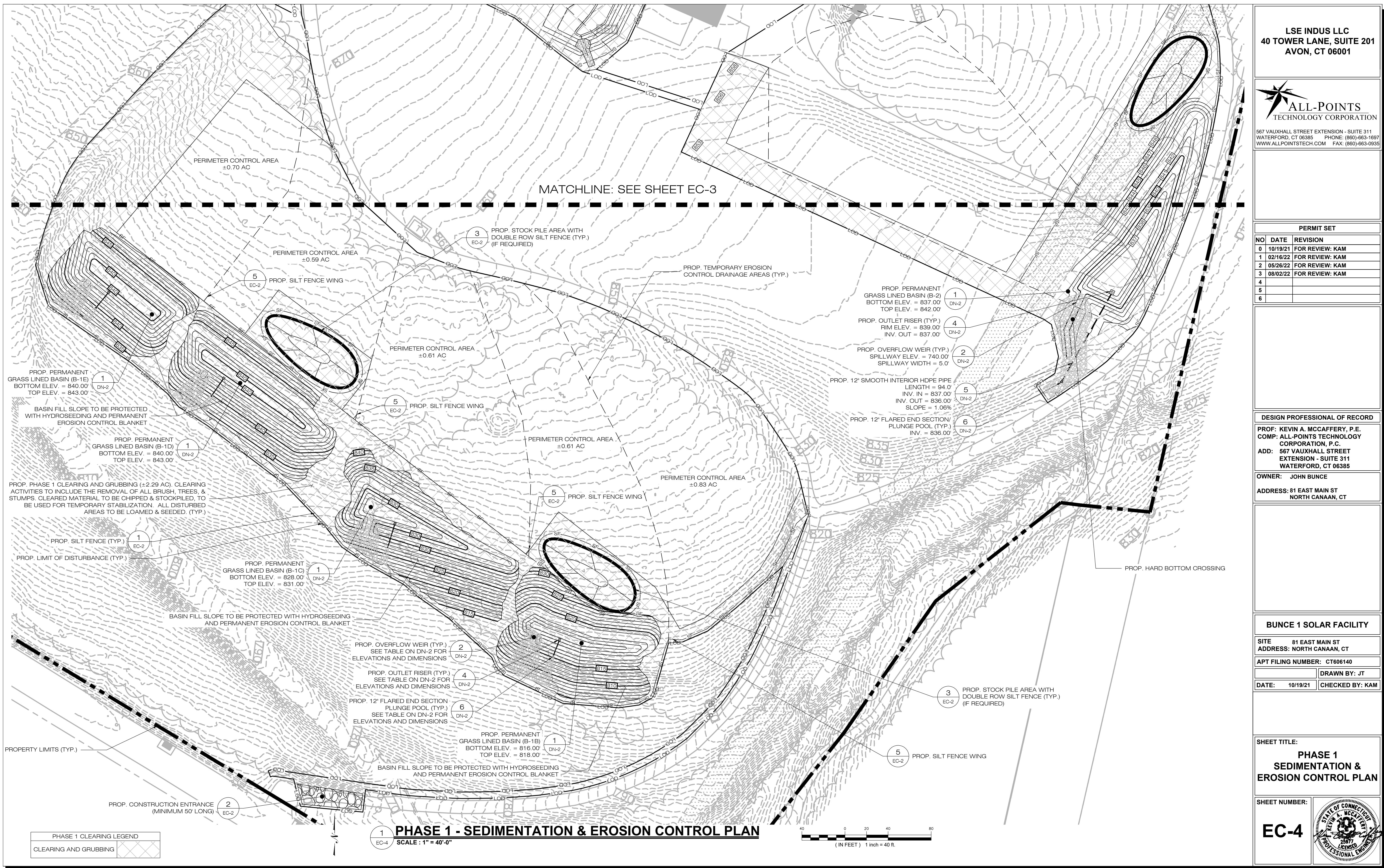
BUNCE 1 SOLAR FACILITY	
SITE	81 EAST MAIN ST
ADDRESS:	NORTH CANAAN, CT
APT FILING NUMBER:	CT606140
DRAWN BY:	JT
DATE:	10/19/21
CHECKED BY:	KAM

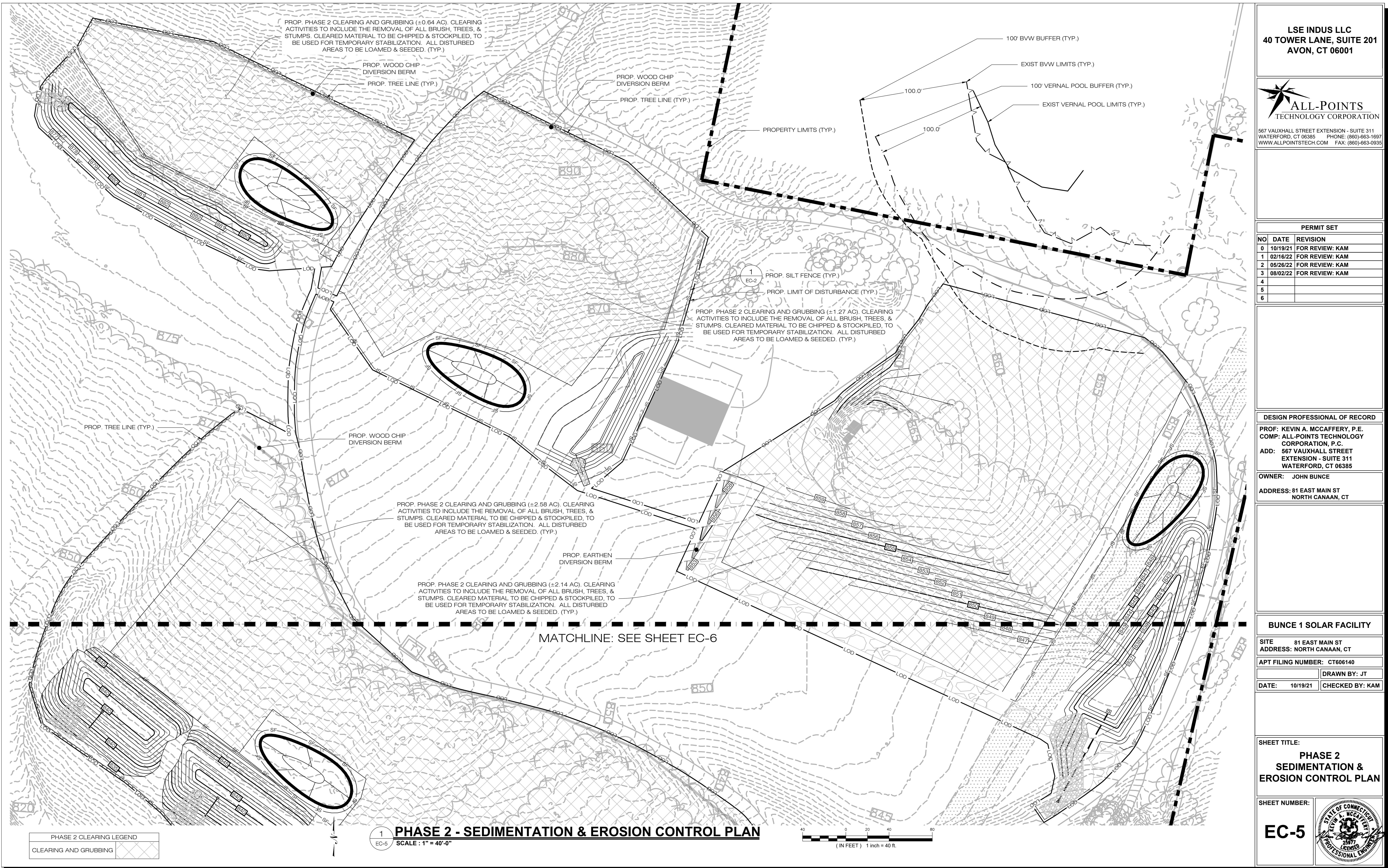
SHEET TITLE:	
SEDIMENTATION & EROSION CONTROL NOTES	
SHEET NUMBER:	EC-1

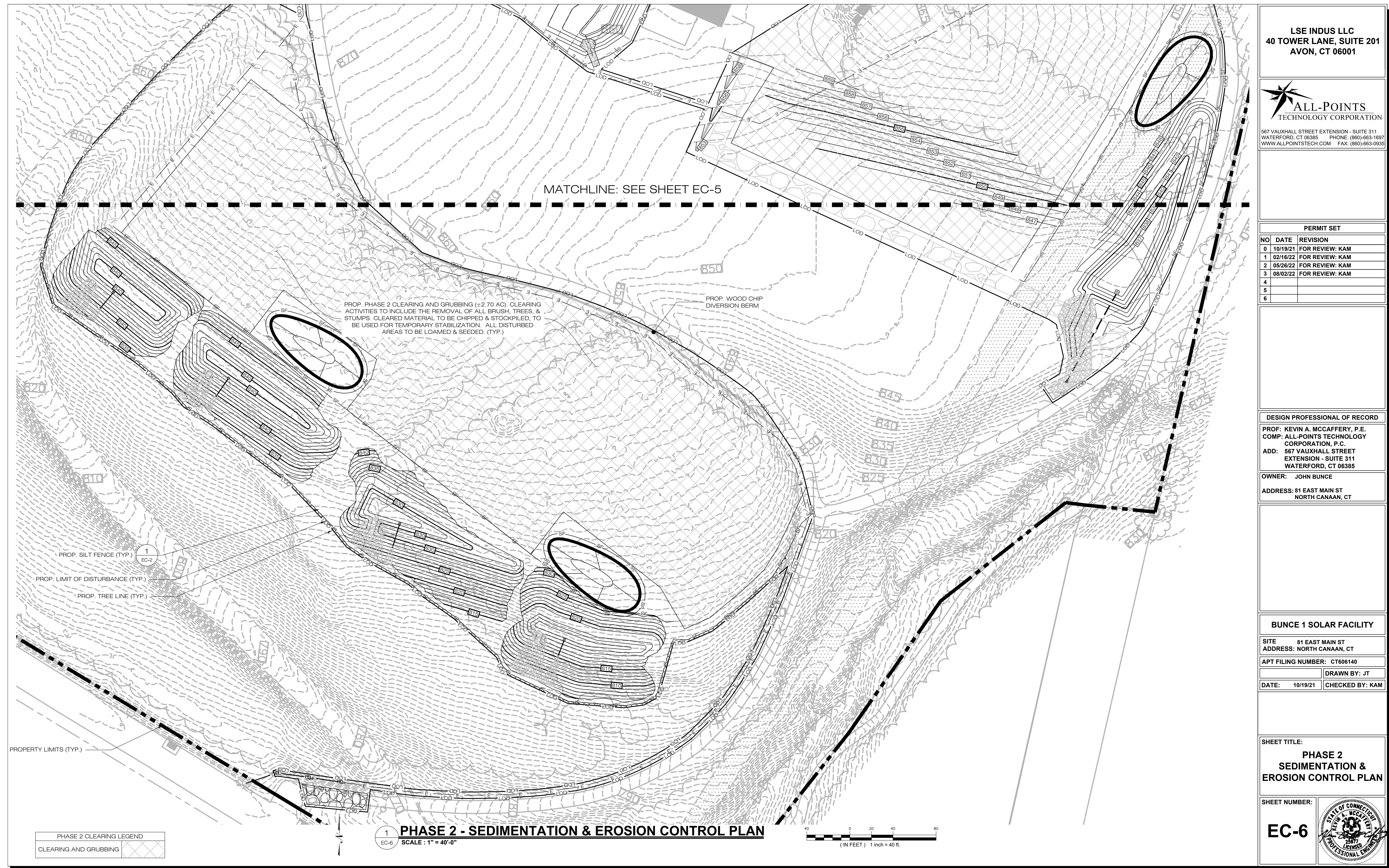


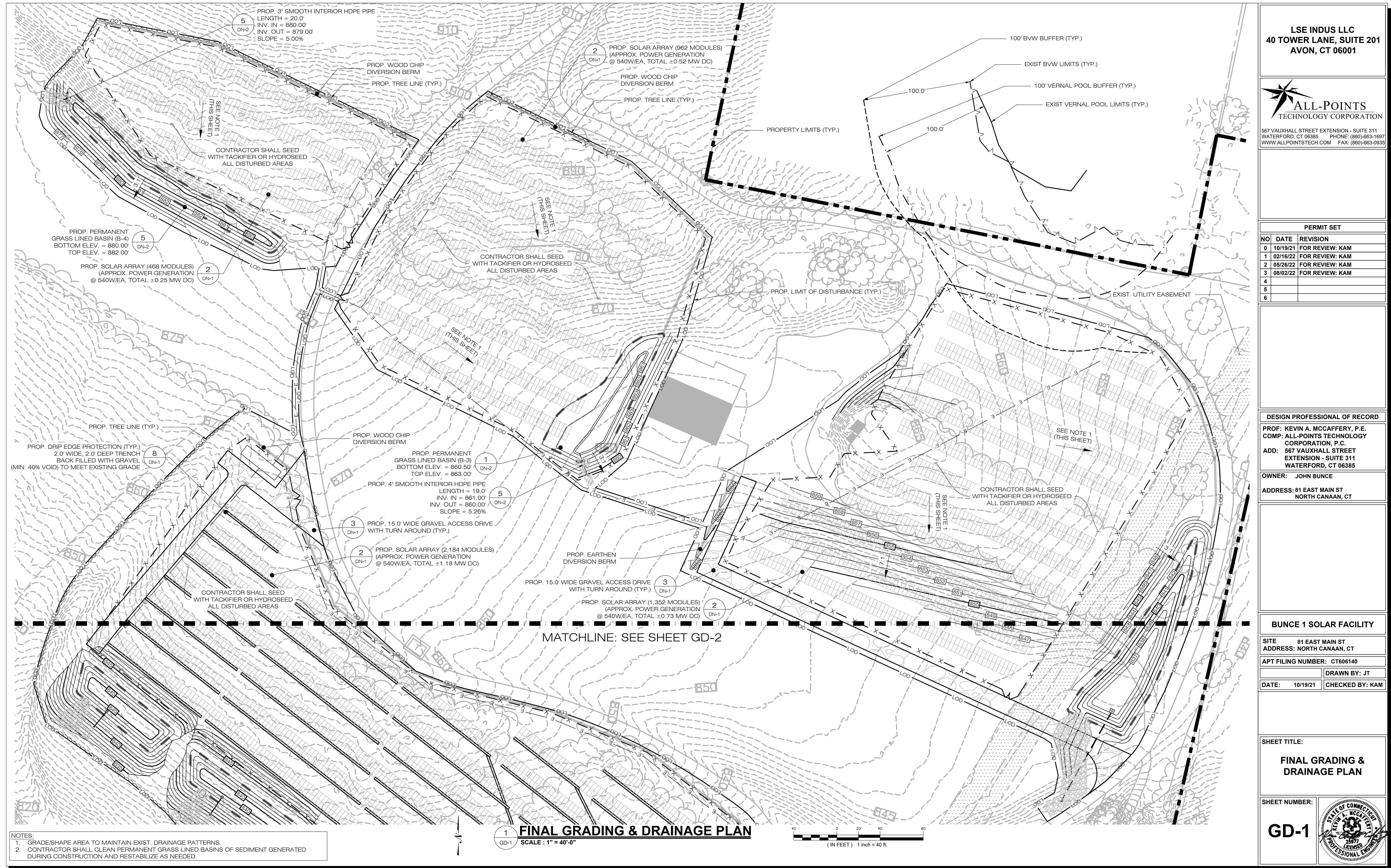


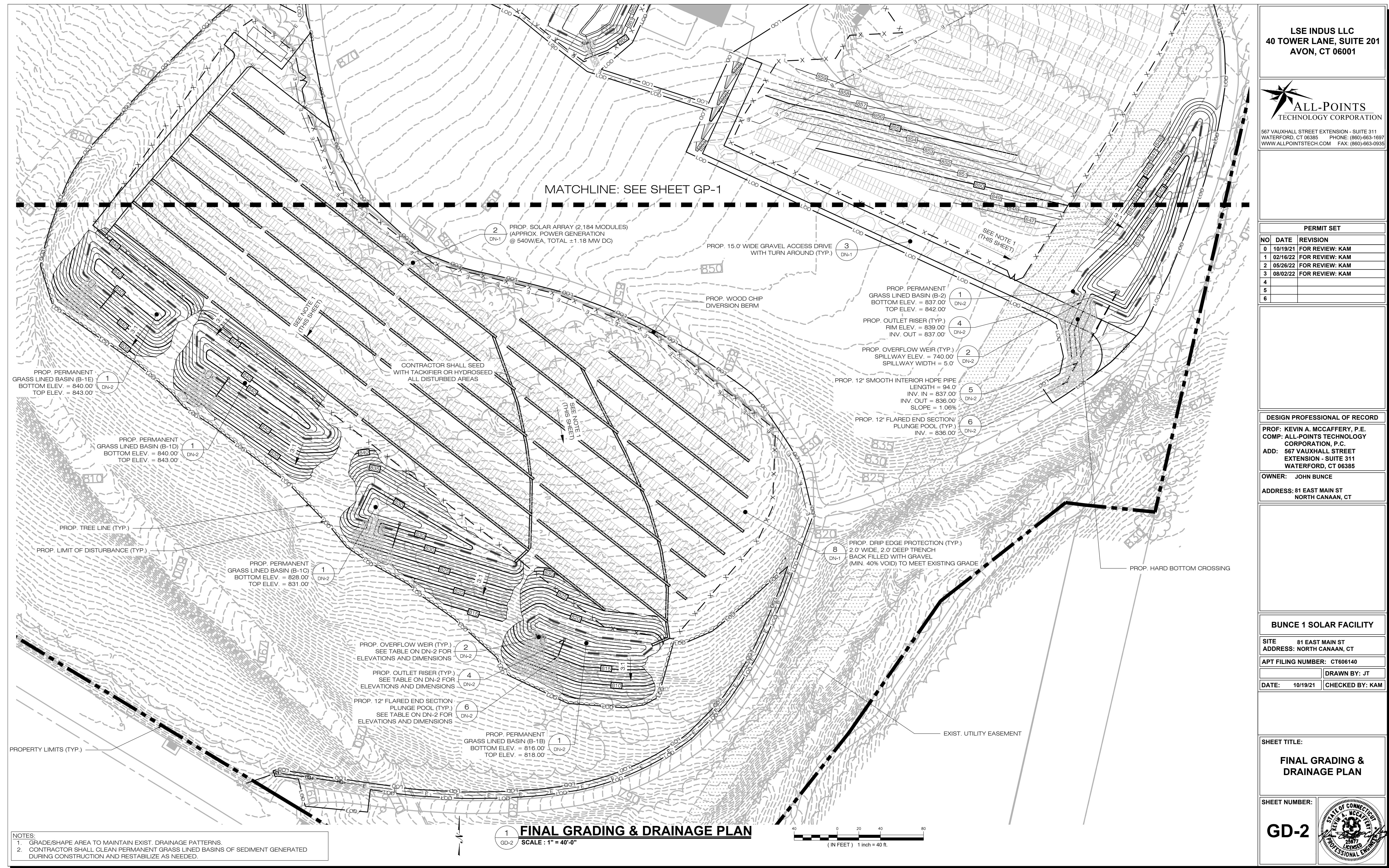


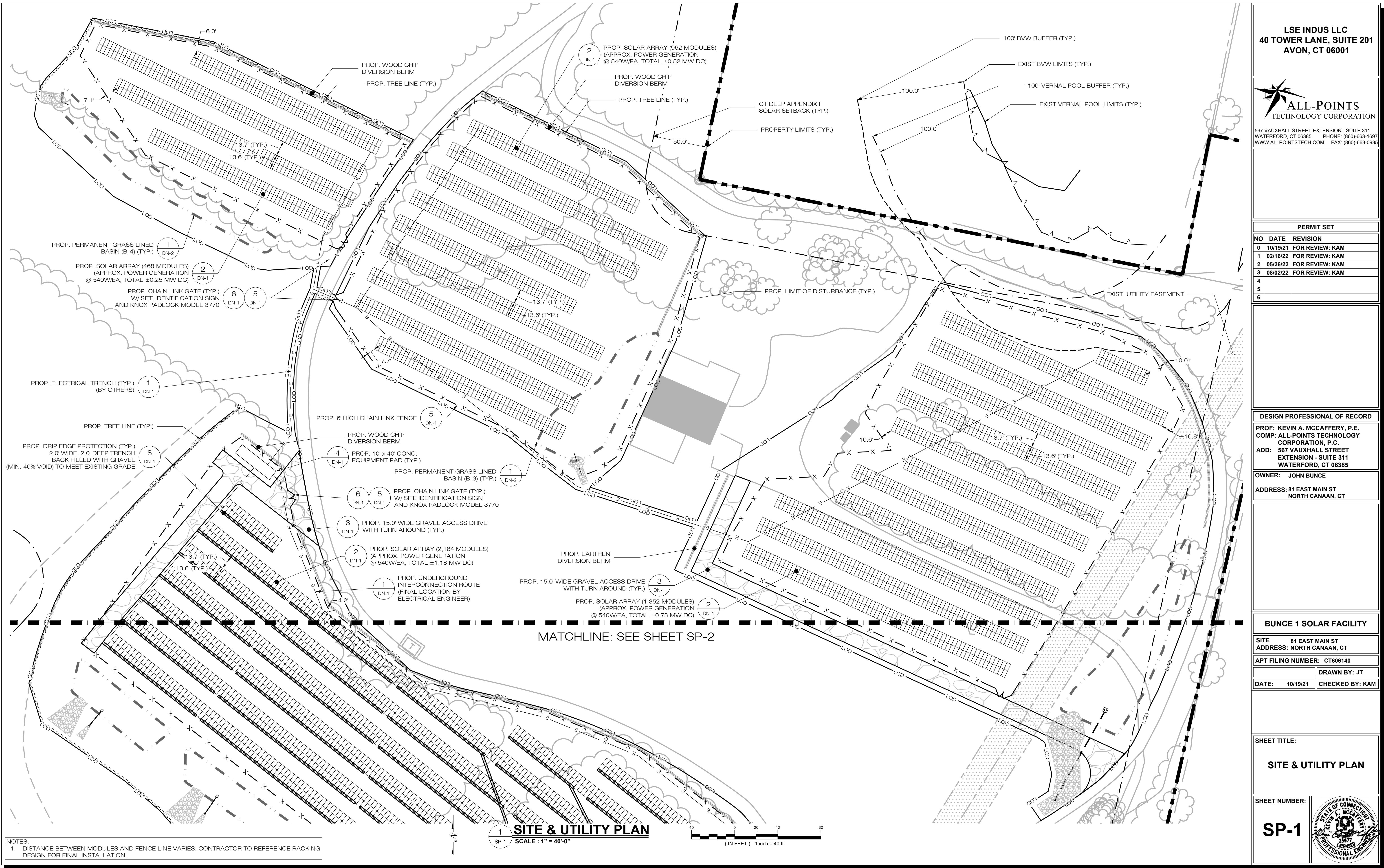


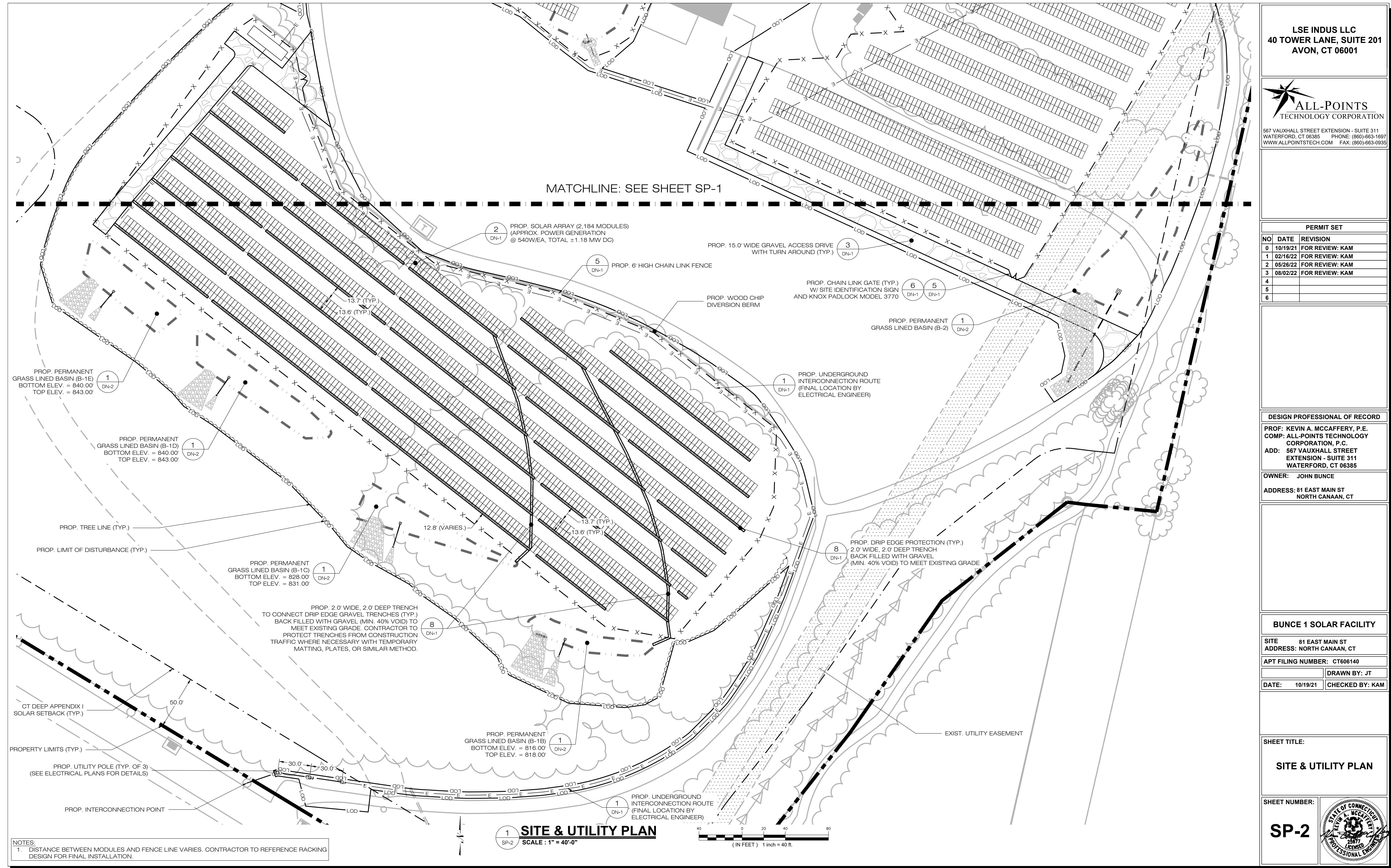


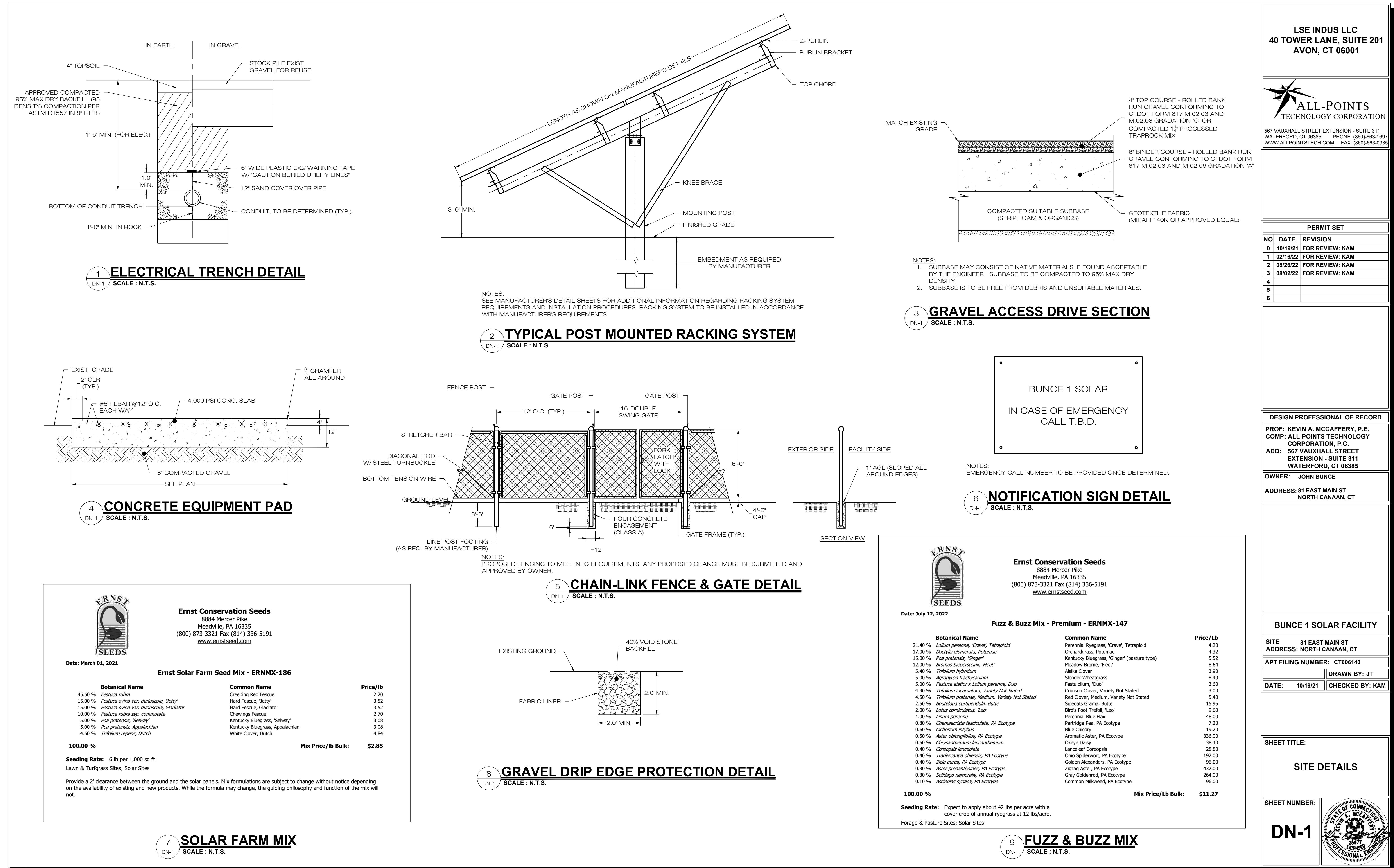












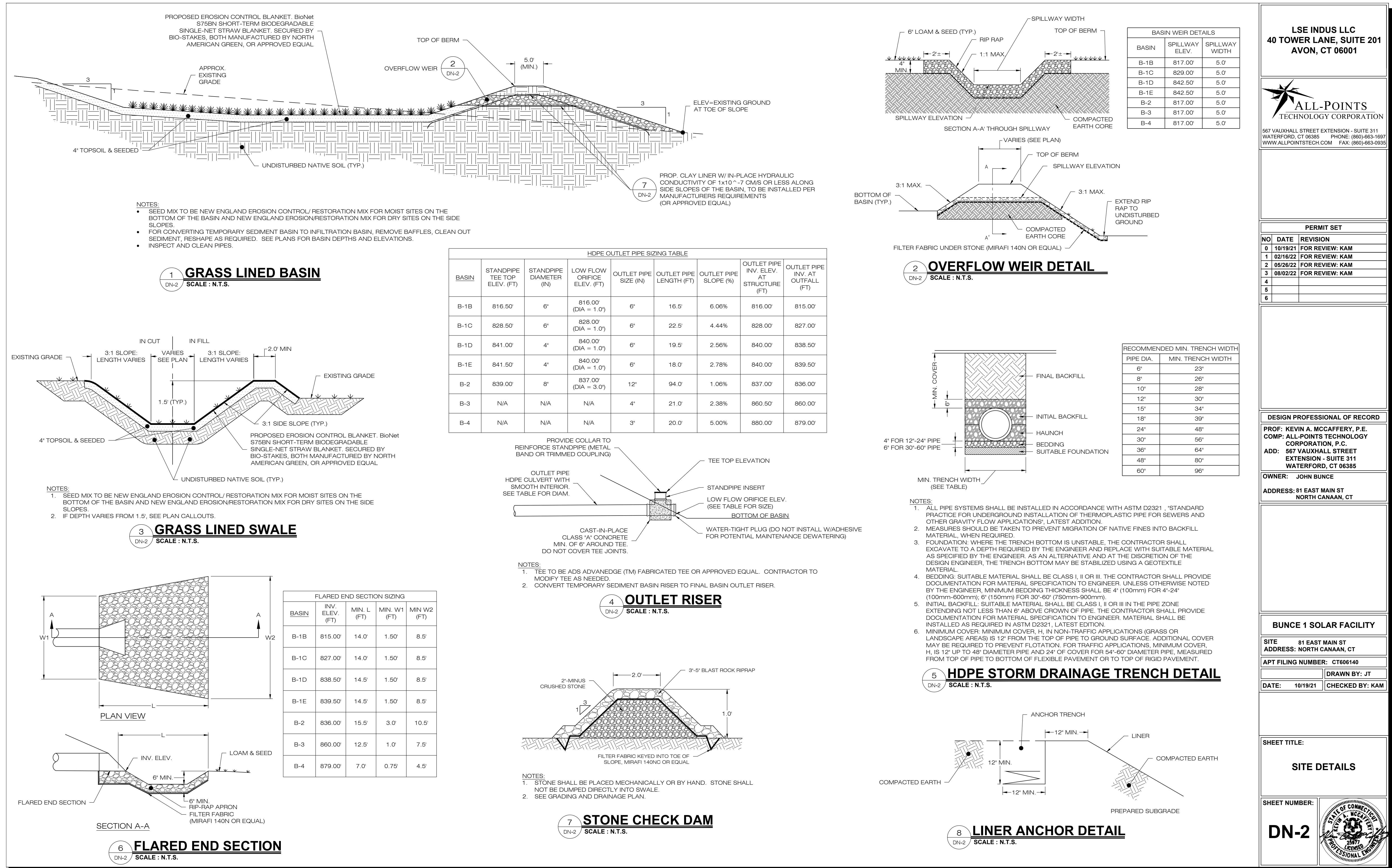


EXHIBIT 2
Module Specifications and TCLP testing results



Znshinesolar 10BB HALF-CELL Bifacial Light-Weight Double Glass Monocrystalline PERC PV Module

525W | 530W | 535W | 540W | 545W | 550W



Excellent cells efficiency

MBB technology decreases the distance between busbar and finger grid line which is benefit to power increase.



Better Weak Illumination Response

More power output in weak light condition, such as haze, cloudy, and early morning.



Anti PID

Ensured PID resistance through the quality control of cell manufacturing process and raw materials.



Adapt To Harsh Outdoor Environment

Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.



TIER 1

Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing.



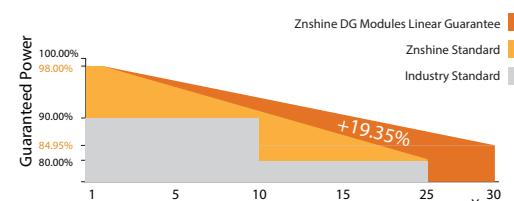
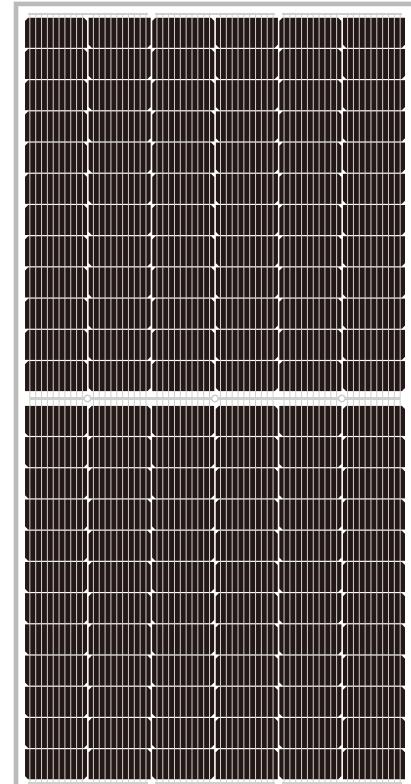
Excellent Quality Management System

Warranted reliability and stringent quality assurances well beyond certified requirements.



Bifacial Technology

Up to 25% additional power gain from back side depending on albedo.



12 years product guarantee
30 years output guarantee



0.45% annual degradation
over 30 years



IEC61215/IEC61730/IEC61701/IEC62716/UL61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO45001: Occupational Health and Safety Management System

Founded in 1988, ZNShine solar is a world's leading high-tech PV module manufacturer. With the state-of-the-art production lines, the company boasts module capacity of 6GW. Bloomberg has listed ZNShine as a global Tier 1 PV module maker. Today Znshine has distributed its sales to more than 60 countries around the globe.

www.znshinesolar.com

TÜV Rheinland (Shanghai) Co., Ltd.

ZNshine Solar Module TCLP Report

Commissioned Test

Client: ZNSHINE PV-TECH Co., Ltd.

Report No.: CN227VOX 001

September 2022

TÜV Rheinland (Shanghai) Co., Ltd.

B1-13F No. 177, Lane 777 West Guangzhong Road
Jing'an District, Shanghai, P.R.China

www.tuv.com/solar

Please contact: Allen Qian

Phone: +86 21 6081 4897

Email: Allen.Qian@tuy.com

Rev No.	Rev. Date	Content/Changes	Prepared/revised	Checked/released
1	30 September 2022	Formal Report	Allen Qian	Shangshang Ju

X Alter Liam

Inspector

X Sherry Sherry Jr.

Reviewer

Disclaimer

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Client:	ZNSHINE PV-TECH Co., Ltd.
Quotation No.:	245782345
Order No.:	244446750
Order Date:	31.08.2022

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List of Abbreviations

ND: Not detected

µg/L: Microgram per liter

mg/L: Milligrams per liter

TCLP: Toxicity Characteristic Leaching Procedure

TUV: TÜV Rheinland (Shanghai) Co., Ltd.

J-Box: Junction-Box

1. Executive Summary

General Information	
Client	ZNSHINE PV-TECH Co., Ltd.
Project Name	ZNshine Solar Module TCLP
Product Specification	ZNshine Solar Photovoltaic Module: ZXM7-SHLDD144-XXX/M, ZXM6-NHLDD144-XXX/M
Detail of sample	<p>1. A section of the laminate, including the glass superstrate and substrate (top and bottom), the encapsulant, the cell and the interconnect wires (aka ribbons)</p> <p>2. A section of the aluminum frame with the adhesive used to adhere the frame to the laminate</p> <p>3. A complete junction box assembly, including the adhesive used to adhere the assembly to the substrate, the junction box, diodes, cables, connectors and potting compound.</p>
Test Details	
Scope of work	TCLP
Test Period	22.09.2022 - 28.09.2022
Laboratory	TÜV Building III, No.177, Lane 777, West Guangzhong Road Jingan District, Shanghai, China
Reference Standards	For Arsenic, Mercury, Selenium: HJ/T 300-2007; HJ694-2014
	For Barium, Cadmium, Chromium, Lead, Silver: HJ/T 300-2007; HJ776-2015
Result	<p>1. Arsenic was found in Laminate, Frame, J-box.</p> <p>2. Barium was found in frame.</p> <p>3. Mercury was found in J-box.</p> <p>4. Other elements were not found.</p> <p>Note: Refer to table 1 for data Detail in next page.</p>

2. Results

Table 1:

Metal	Results			Threshold	Unit
	Laminate	Frame	J-box		
Arsenic	1.0	1.4	1.0	0.3	µg/L
Barium	ND	0.03	ND	0.01	mg/L
Cadmium	ND	ND	ND	0.05	mg/L
Chromium	ND	ND	ND	0.03	mg/L
Lead	ND	ND	ND	0.1	mg/L
Mercury	ND	ND	0.08	0.04	µg/L
Selenium	ND	ND	ND	0.4	µg/L
Silver	ND	ND	ND	0.03	mg/L
Remark: ND: Not detected.					
Reference Standards: For Arsenic, Mercury, Selenium: HJ/T 300-2007; HJ694-2014					
Reference Standards: For Barium, Cadmium, Chromium, Lead, Silver: HJ/T 300-2007; HJ776-2015					

3. Equipment List

Table 2:

Equipment name	Equipment Type	Equipment number
Atomic fluorescence photometer	AFS8510	F-004-01
Inductively coupled plasma emission spectrometer	Icap6000	Icap6000

End of the report