

NOTES: 1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.  
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.  
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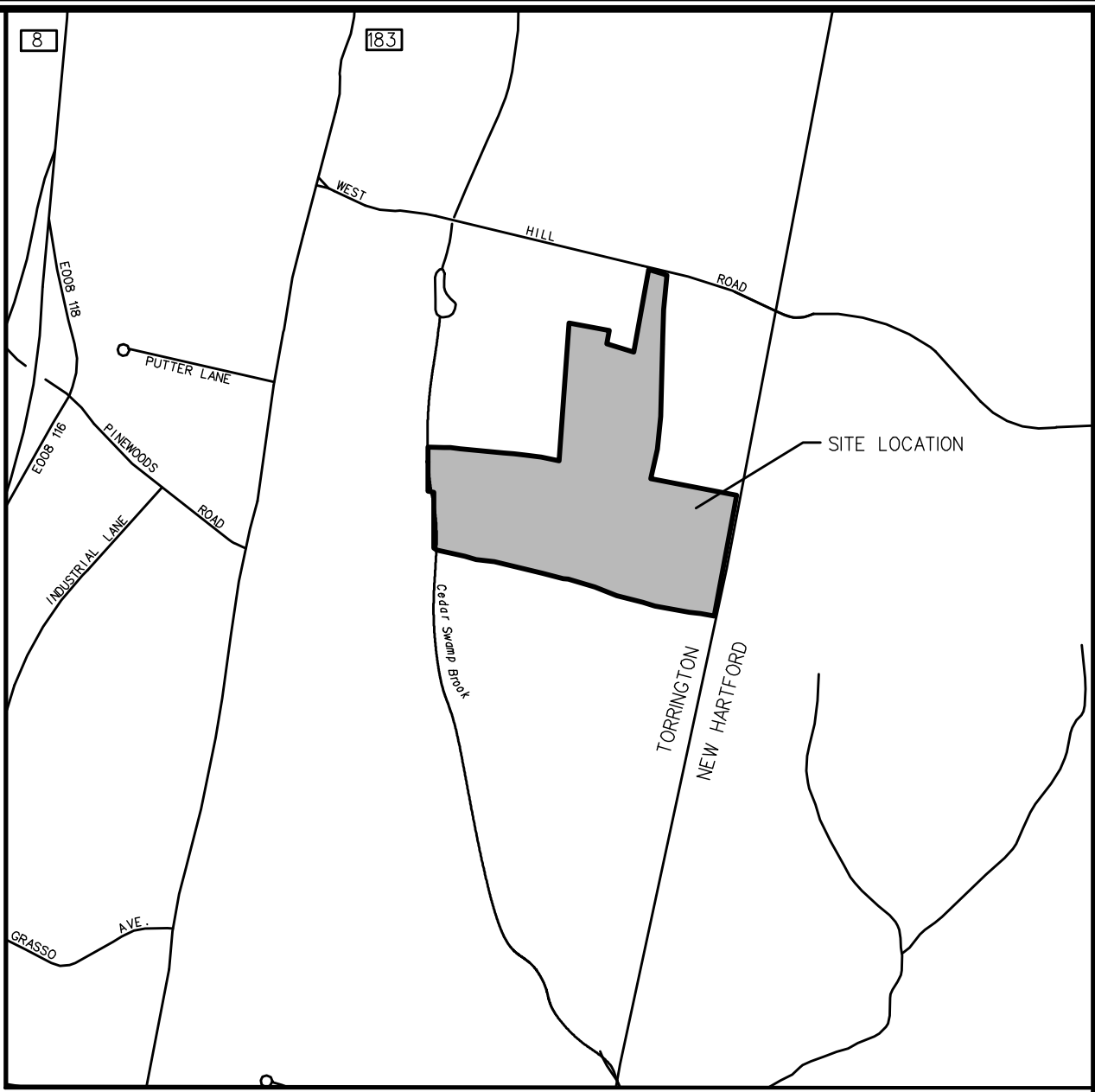
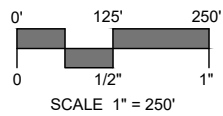
# WEST HILL ROAD SOLAR

## WEST HILL ROAD TORRINGTON, CONNECTICUT PERMIT DRAWINGS

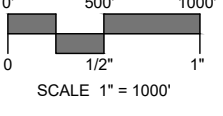
SLR#21617.00002  
JANUARY 07, 2025  
REVISED MAY 27, 2025



PROJECT SITE VICINITY MAP:



LOCATION MAP:



### PREPARED FOR:

LSE SERPENS LLC  
18 NORTH MAIN STREET, 2ND FLOOR  
WEST HARTFORD, CT 06107

### LIST OF DRAWINGS

NO.	NAME	TITLE
01	--	TITLE SHEET
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16	--	ELECTRICAL ONE LINE DIAGRAM (BO)

### PREPARED BY:



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STATE OF CONNECTICUT, DEPARTMENT OF CONSTRUCTION, DIVISION OF PLANNING AND DESIGN, 100 SOUTH MAIN STREET, SUITE 200, HARTFORD, CT 06103

SURVEY NOTES

1. THIS PLAN IS BASED ON THE PLAN AND SURVEY PROVIDED BY DAVID J. LITTLE, LS, AS PREPARED FOR THE GREYSTONE RESUBDIVISION PLAN, 2005, AND SUBSEQUENTLY UPDATED BY GNSS CONTROL SURVEY BY SLR CONSULTING JANUARY 2024.
2. HORIZONTAL DATUM IS NAD83. VERTICAL DATUM IS NAVD88. BOTH WERE DERIVED FROM GPS OBSERVATIONS TAKEN ON SITE.
3. PER FIRM MAP CITY OF TORRINGTON, CONNECTICUT PANEL NO. 095081 0014B EFFECTIVE DATE: MAY 19, 1972 BY FEDERAL EMERGENCY MANAGEMENT AGENCY, THE PROPERTY IS NOT LOCATED IN THE 100 YEAR FLOOD HAZARD ZONE (ZONE A).
4. THE LODESTAR PROPERTY AND ALL ABUTTING PROPERTIES ARE LOCATED IN THE R-WP ZONING DISTRICT.
5. LOCATIONS OF UTILITIES SHOWN HEREIN ARE THE RESULT OF SURFACE EVIDENCE AS LOCATED BY FIELD SURVEY AND ANECDOTAL KNOWLEDGE OF THE SITE. THIS PLAN DOES NOT DEPICT THE EXACT LOCATIONS OF ALL UTILITIES WHICH MAY EXIST AT THIS TIME WITHIN THE PREMISES SURVEYED.
6. WETLAND DELINEATION PERFORMED BY IAN COLE, REGISTERED SOIL SCIENTIST, IN JUNE 2023.

GENERAL NOTES

1. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD (V.I.F.) PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL PERFORM NECESSARY CONSTRUCTION NOTIFICATIONS, APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND SAFETY OF TRAFFIC ON THE PUBLIC AND PRIVATE WAYS AFFECTED BY THE CONSTRUCTION OF THE PROJECT.
4. ALL SLOPES, VEGETATION, PAVING, WALKS, AND IMPROVEMENTS OUTSIDE THE AREAS TO BE AFFECTED BY THE CONSTRUCTION OF THE PROJECT SHALL BE PROTECTED. DAMAGES RESULTING FROM CONSTRUCTION ACTIVITIES OUTSIDE THE PROJECT LIMITS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR IS RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH O.S.H.A. STANDARDS AND LOCAL REQUIREMENTS.
6. ALL STUMPS SHALL BE DISPOSED OF AT AN APPROVED OFFSITE LOCATION. THE BURYING OF STUMPS ON SITE SHALL NOT BE PERMITTED.
7. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "CALL BEFORE YOU DIG", 1-800-922-4455. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
8. SLR INTERNATIONAL CORPORATION ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
9. A DEEP STORMWATER GENERAL PERMIT IS REQUIRED PRIOR TO INITIATION OF CONSTRUCTION.
10. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.
11. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ANY UTILITIES INCLUDING IRRIGATION PIPES PRIOR TO THE START OF CONSTRUCTION.
12. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE CITY OF TORRINGTON REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 818 AND ADDENDUMS.
13. THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.
14. THE LIMIT OF WORK (LOW) AS SHOWN HEREIN IS APPROXIMATELY 19.0 ACRES AND INCLUDES TREE CLEARING LIMITS, GRADING, AND STORMWATER IMPROVEMENTS AS NECESSARY TO CONSTRUCT THE PROPOSED SOLAR FACILITY.
15. THESE PLANS HAVE BEEN PREPARED FOR REGULATORY APPROVAL ONLY. THEY ARE NOT INTENDED FOR USE DURING CONSTRUCTION.

CONSTRUCTION SEQUENCE AND SCHEDULE

CONSTRUCTION IS ANTICIPATED TO TAKE APPROXIMATELY 4 TO 6 MONTHS. THE GENERAL SEQUENCE OF CONSTRUCTION IS AS FOLLOWS:

1. STAKE OUT THE LIMIT OF WORK. NO DISTURBANCE IS TO TAKE PLACE BEYOND THE LIMITS OF WORK SHOWN ON THE DRAWINGS WITHOUT CONSENT OF THE ENGINEER.
2. INSTALL E&S CONTROLS FOR SITE CLEARING ACTIVITIES AS SHOWN ON THE DRAWINGS.
3. ALL SITE TREE CLEARING ACTIVITIES SHALL BE CONDUCTED BETWEEN THE PERIOD OF OCTOBER 31 THROUGH APRIL 15 DURING THE NORTHERN LONG EARED BAT HIBERNATION PERIOD. NO TREE CLEARING SHALL OCCUR OUTSIDE OF THE HIBERNATION PERIOD WINDOW.
4. CLEAR AND GRUB THE WOODED AREAS OF THE SITE WITHIN THE LIMITS SHOWN ON THE PLANS.
5. CONSTRUCT THE STORMWATER MANAGEMENT BASIN, OUTLET WEIR WALL, AND APPURTENANCES.
6. INSTALL PV SOLAR PANEL ARRAY RACKING, PANELS, ELECTRICAL COMPONENTS, CONDUIT, AND PERIMETER FENCING.
7. ANY DISTURBED SLOPES ARE TO BE ESTABLISHED TO FINISHED GRADE WITH PLACEMENT OF TOPSOIL AND SEED AS SOON AS PRACTICABLE. AREAS DISTURBED AND COMPACTED AS A RESULT OF PV ARRAY RACKING INSTALLATION SHALL BE AERATED BY APPROVED METHODS AND SEEDED. INSTALL EROSION CONTROL BLANKETS AS SHOWN ON THE DRAWINGS.
8. REMOVE E&S CONTROLS ONCE ALL DISTURBED AREAS HAVE COMPLETELY STABILIZED.

GRADING NOTES

THE RESHAPING OF THE GROUND SURFACE WITH EXCAVATION AND FILLING OR A COMBINATION OF, TO OBTAIN PLANNED GRADES, SHALL PROCEED IN ACCORDANCE WITH THE SEDIMENT AND EROSION MEASURES IN ADDITION THE FOLLOWING CRITERIA:

1. THE CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
2. THE PERMANENT EXPOSED FACES OF FILLS SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
3. THE CUT FACE OF ROCK EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO TWO VERTICAL (1:2).
4. PROVISIONS SHOULD BE INCLUDED TO CONVEY SURFACE WATER SAFELY TO STORM DRAINS TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
5. NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH INTO ADJACENT WETLANDS, WATERCOURSES, OR WATER BODIES.
6. PRIOR TO ANY RE-GRADING, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND OTHER SEDIMENTS FROM LEAVING THE SITE.
7. GRADING SHALL BE COMPLETED TO 95% COMPACTION PER THE SPECIFICATIONS.

SEDIMENT & EROSION CONTROL NOTES

1. CONTRACTOR TO STAKE OUT LIMIT OF DISTURBANCE. NO DISTURBANCE IS TO TAKE PLACE BEYOND THE LIMITS OF WORK SHOWN.
2. CONTRACTOR TO INSTALL SEDIMENT AND EROSION CONTROLS ALONG THE PERIMETER, AS SHOWN ON THE SEDIMENT CONTROL PLAN, AND STABILIZED CONSTRUCTION ENTRANCES.
3. CLEAR AND GRUB SITE AND STOCKPILE TOPSOIL AS NECESSARY. PLACE COMPOST FILTER TUBES AROUND STOCKPILES.
4. CONSTRUCT STORMWATER MANAGEMENT BASIN IMMEDIATELY AFTER THE SITE IS CLEARED AND GRUBBED.
5. SLOPES ARE TO BE ESTABLISHED AS SOON AS PRACTICAL BEFORE PV ARRAY INSTALLATION. STABILIZE ALL SLOPES IMMEDIATELY AFTER THEIR ESTABLISHMENT.
6. THE SEDIMENT CONTROL PLAN SHALL BE MODIFIED BY THE CONTRACTOR AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE AND THE MUNICIPALITY DESIGNATED REPRESENTATIVE AS NECESSITATED BY CHANGING SITE CONDITIONS.
7. ROUTINE SEDIMENT AND EROSION CONTROL INSPECTIONS SHALL CONTINUE UNTIL ALL DISTURBED AREAS HAVE STABILIZED PURSUANT TO THE CONNECTICUT STORMWATER GENERAL PERMIT.
8. ALL DEWATERING WASTE WATERS SHALL BE DISCHARGED IN A MANNER WHICH MINIMIZES THE DISCOLORATION OF THE RECEIVING WATERS.
9. THE SITE SHOULD BE KEPT CLEAN OF LOOSE DEBRIS, LITTER, AND BUILDING MATERIALS SUCH THAT NONE OF THE ABOVE ENTER WATERS OR WETLANDS.
10. A COPY OF ALL PLANS AND REVISIONS, AND THE SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON-SITE AT ALL TIMES DURING CONSTRUCTION.
11. SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTRUL - CONNECTICUT - 2024, CITY OF TORRINGTON REQUIREMENTS, AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.

EXISTING CONDITIONS LEGEND

BUILDING / STRUCTURE	
MAJOR CONTOUR	
MINOR CONTOUR	
TREELINE	
EDGE OF PAVEMENT	
PROPERTY LINE	
FLAGGED WETLAND LIMIT	
WETLAND FLAG	
WETLAND BUFFER	
ABUTTERS LINE	
BUILDING SETBACK LINE	
STONE WALL	
EASEMENT	
FENCE	
NOW OR FORMERLY	
IRON PIPE OR ROD FOUND	
UTILITY POLE	
CATCH BASIN	

SITE LAYOUT LEGEND

PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
SPOT ELEVATION	
GRAVEL SURFACE	
PROPOSED ELECTRICAL SERVICE (UNDERGROUND)	
PROPOSED ELECTRICAL SERVICE (OVERHEAD)	
PROPOSED WILDLIFE FENCE	
PROPOSED WILDLIFE FENCE WITH FABRIC SCREENING	
PHOTOVOLTAIC ARRAY	
PROPOSED UTILITY POLE	
PROPOSED TREE LINE	
POTENTIAL ARTIFICIAL ROOST LOCATION	
COMMON MILKWEED POLLINATOR PATCHES	

SEDIMENT & EROSION LEGEND

SEDIMENT FILTER FENCE	
COMPOST FILTER TUBE	
CONSTRUCTION ENTRANCE PAD	
SOIL STOCKPILE	
EROSION CONTROL BLANKET	
PROPOSED LIMIT OF WORK	

ZONING DATA

ZONING DISTRICT: R-WP (WATERSHED PROTECTION ZONE)	
	REQUIRED
MIN. LOT SIZE	65,000 SF
LOT WIDTH	200 FT
YARD SETBACKS	
FRONT	50 FT
SIDE	25 FT
REAR	100 FT
MAX HEIGHT	35 FT
MAX IMPERVIOUS SURFACE RATIO	0.3 FOR ANY USE
MAX BUILDING COVERAGE RATIO	0.1 FOR ANY USE
NET BUILDABLE AREA	30,000 SF RECTANGLE MIN LENGTH - 150 FT

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LEGEND & NOTES

LSE SERPENS LLC  
WEST HILL ROAD SOLAR  
WEST HILL ROAD  
TORRINGTON, CONNECTICUT

BY

DATE

DESCRIPTION

NOT FOR CONSTRUCTION

SMM

SMM

MRG

DESIGNED

DRAWN

CHECKED

AS NOTED

JANUARY 07, 2025

DATE

21617.00002

PROJECT NO.

02 OF 16

SHEET NO.

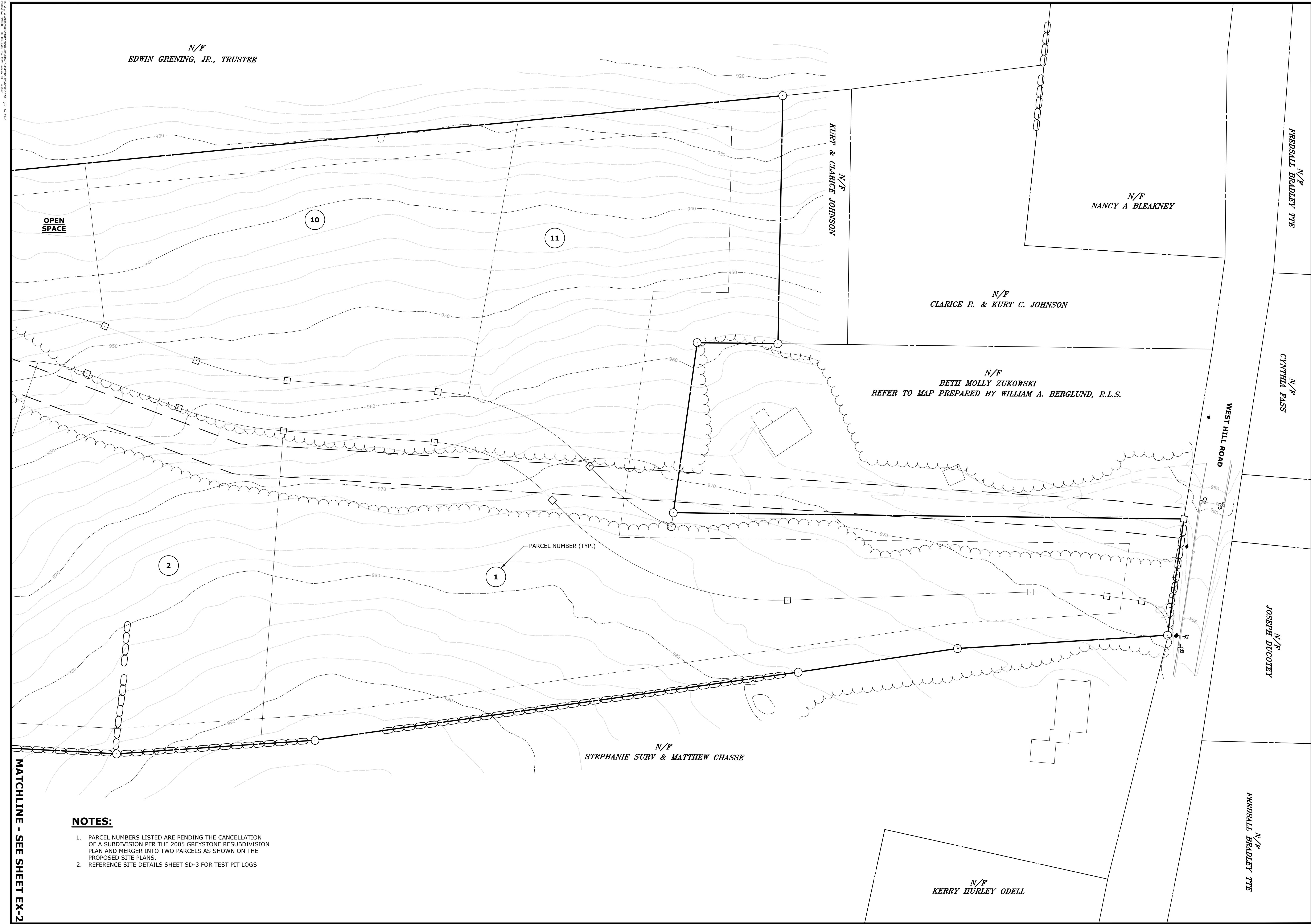
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SHEET NAME





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**NOTES:**

1. PARCEL NUMBERS LISTED ARE PENDING THE CANCELLATION OF A SUBDIVISION PER THE 2005 GREYSTONE RESUBDIVISION PLAN AND MERGER INTO TWO PARCELS AS SHOWN ON THE PROPOSED SITE PLANS.
2. REFERENCE SITE DETAILS SHEET SD-3 FOR TEST PIT LOGS

North Arrow pointing up. Graphic scale: 0 to 40 feet, 0 to 1 inch.

**SLR**  
SLR CONSULTING LLC  
99 REALTY DRIVE  
SUITE 200  
TORRINGTON, CT 06860  
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DESCRIPTION	DATE	BY

**EXISTING CONDITIONS**

LSE SERPENS LLC  
WEST HILL ROAD SOLAR  
WEST HILL ROAD  
TORRINGTON, CONNECTICUT

SMM	SMM	MRG
DESIGNED	DRAWN	CHECKED

SCALE: 1"=40'

DATE: JANUARY 07, 2025

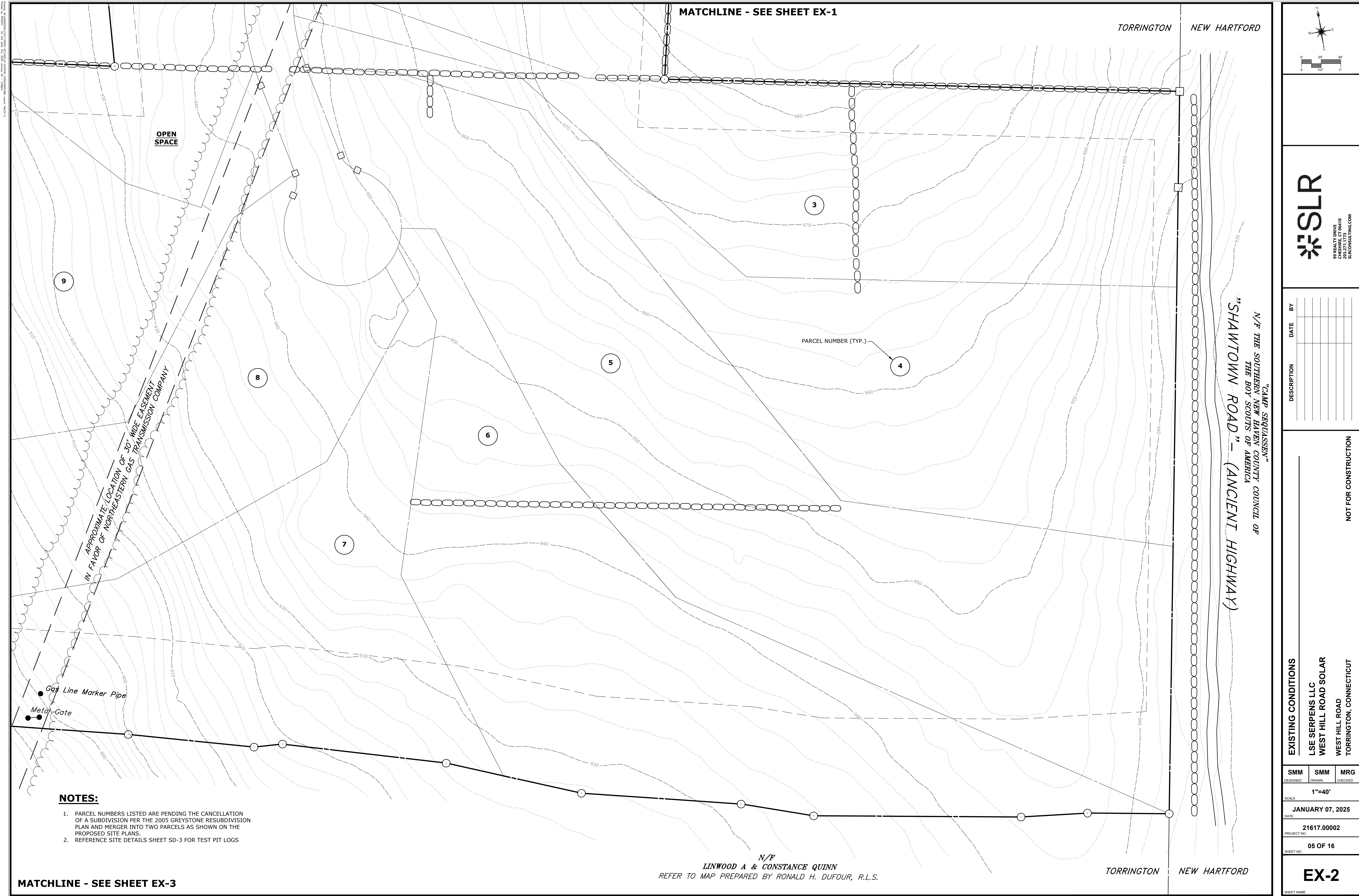
PROJECT NO.: 21617.00002

SHEET NO.: 04 OF 16

**EX-1**

SHEET NAME









COMMON MILKWEED PATCHES  
POLLINATOR PATCHES  
POTENTIAL ARTIFICIAL ROOST LOCATION

N/F  
EDWIN GRENING, JR., TRUSTEE

N/F  
KURT & CLARICE JOHNSON

N/F  
BETH MOLLY ZUKOWSKI  
REFER TO MAP PREPARED BY WILLIAM A. BERGLUND, R.L.S.

N/F  
STEPHANIE SURV & MATTHEW CHASSE

N/F  
KERRY HURLEY ODELL

N/F  
CYNTHIA PASS

N/F  
JOSEPH DUCOTTEY

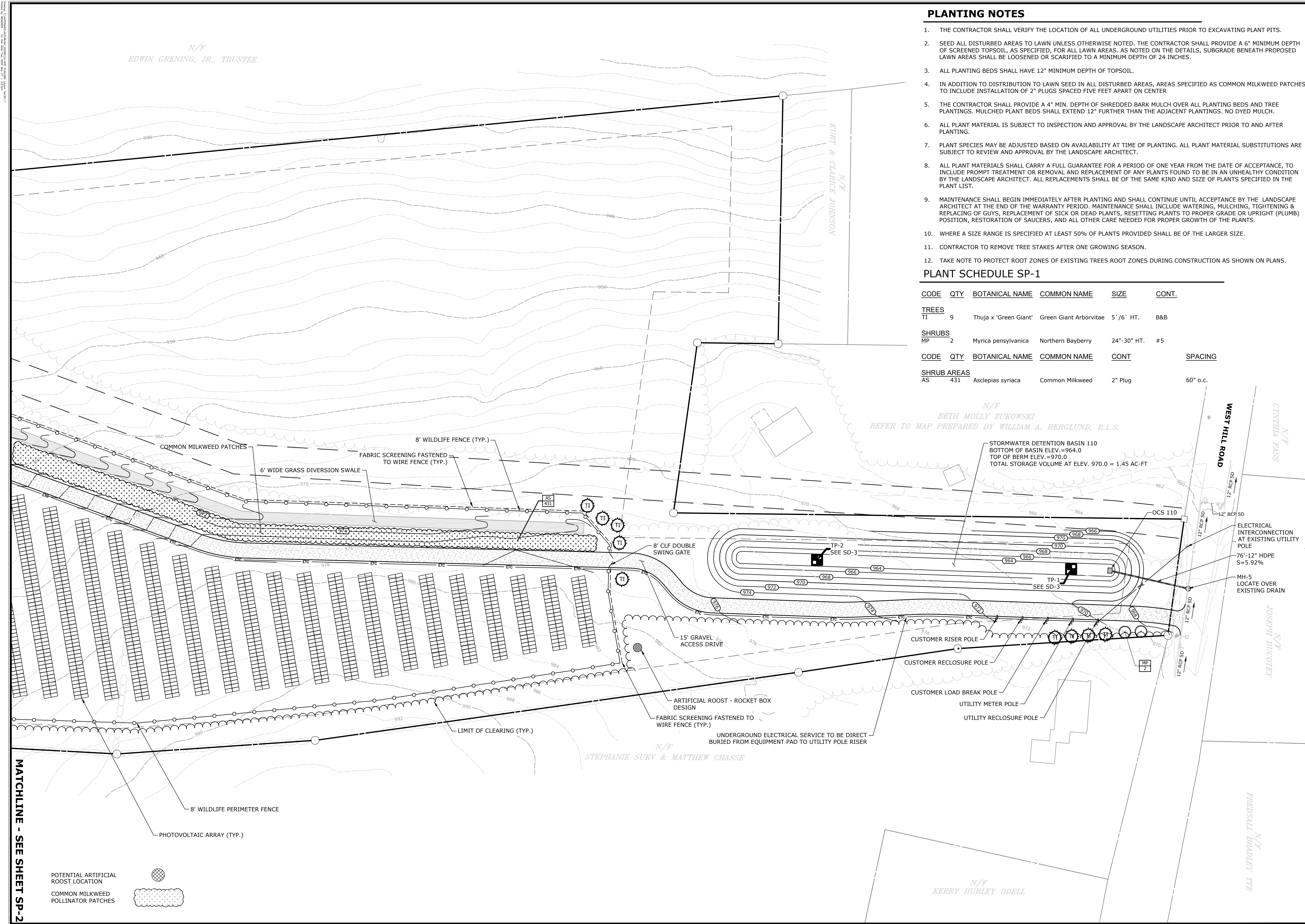
N/F  
FREDSAUL BRADLEY TTE

### PLANTING NOTES

- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING PLANT PITS.
- SEED ALL DISTURBED AREAS TO LAWN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE A 6" MINIMUM DEPTH OF SCREENED TOPSOIL, AS SPECIFIED, FOR ALL LAWN AREAS. AS NOTED ON THE DETAILS, SUBGRADE BENEATH PROPOSED LAWN AREAS SHALL BE LOOSENEED OR SCARIFIED TO A MINIMUM DEPTH OF 24 INCHES.
- ALL PLANTING BEDS SHALL HAVE 12" MINIMUM DEPTH OF TOPSOIL.
- IN ADDITION TO DISTRIBUTION TO LAWN SEED IN ALL DISTURBED AREAS, AREAS SPECIFIED AS COMMON MILKWEED PATCHES TO INCLUDE INSTALLATION OF 2" PLUGS SPACED FIVE FEET APART ON CENTER
- THE CONTRACTOR SHALL PROVIDE A 4" MIN. DEPTH OF SHREDDED BARK MULCH OVER ALL PLANTING BEDS AND TREE PLANTINGS. MULCHED PLANT BEDS SHALL EXTEND 12" FURTHER THAN THE ADJACENT PLANTINGS. NO DYED MULCH.
- ALL PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO AND AFTER PLANTING.
- PLANT SPECIES MAY BE ADJUSTED BASED ON AVAILABILITY AT TIME OF PLANTING. ALL PLANT MATERIAL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS SHALL CARRY A FULL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, TO INCLUDE PROMPT TREATMENT OR REMOVAL AND REPLACEMENT OF ANY PLANTS FOUND TO BE IN AN UNHEALTHY CONDITION BY THE LANDSCAPE ARCHITECT. ALL REPLACEMENTS SHALL BE OF THE SAME KIND AND SIZE OF PLANTS SPECIFIED IN THE PLANT LIST.
- MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL ACCEPTANCE BY THE LANDSCAPE ARCHITECT AT THE END OF THE WARRANTY PERIOD. MAINTENANCE SHALL INCLUDE WATERING, MULCHING, TIGHTENING & REPLACING OF GUYS, REPLACEMENT OF SICK OR DEAD PLANTS, RESETTING PLANTS TO PROPER GRADE OR UPRIGHT (PLUMB) POSITION, RESTORATION OF SAUCERS, AND ALL OTHER CARE NEEDED FOR PROPER GROWTH OF THE PLANTS.
- WHERE A SIZE RANGE IS SPECIFIED AT LEAST 50% OF PLANTS PROVIDED SHALL BE OF THE LARGER SIZE.
- CONTRACTOR TO REMOVE TREE STAKES AFTER ONE GROWING SEASON.
- TAKE NOTE TO PROTECT ROOT ZONES OF EXISTING TREES ROOT ZONES DURING CONSTRUCTION AS SHOWN ON PLANS.

### PLANT SCHEDULE SP-1

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.
<b>TREES</b>					
TI	9	Thuja x 'Green Giant'	Green Giant Arborvitae	5' / 6' HT.	B&B
<b>SHRUBS</b>					
MP	2	Myrica pensylvanica	Northern Bayberry	24"-30" HT.	#5
<b>SHRUB AREAS</b>					
AS	431	Asclepias syriaca	Common Milkweed	2" Plug	60" o.c.



DESCRIPTION	DATE	BY
BASIN 110 GRADING	5/27/2025	MRG

SITE PLAN

LSE SERPENS LLC  
WEST HILL ROAD SOLAR  
WEST HILL ROAD  
TORRINGTON, CONNECTICUT

SMM	SMM	MRG
DESIGNED	DRAWN	CHECKED
1"=40'		
JANUARY 07, 2025		
DATE		
21617.00002		
PROJECT NO.		
07 OF 16		
SHEET NO.		

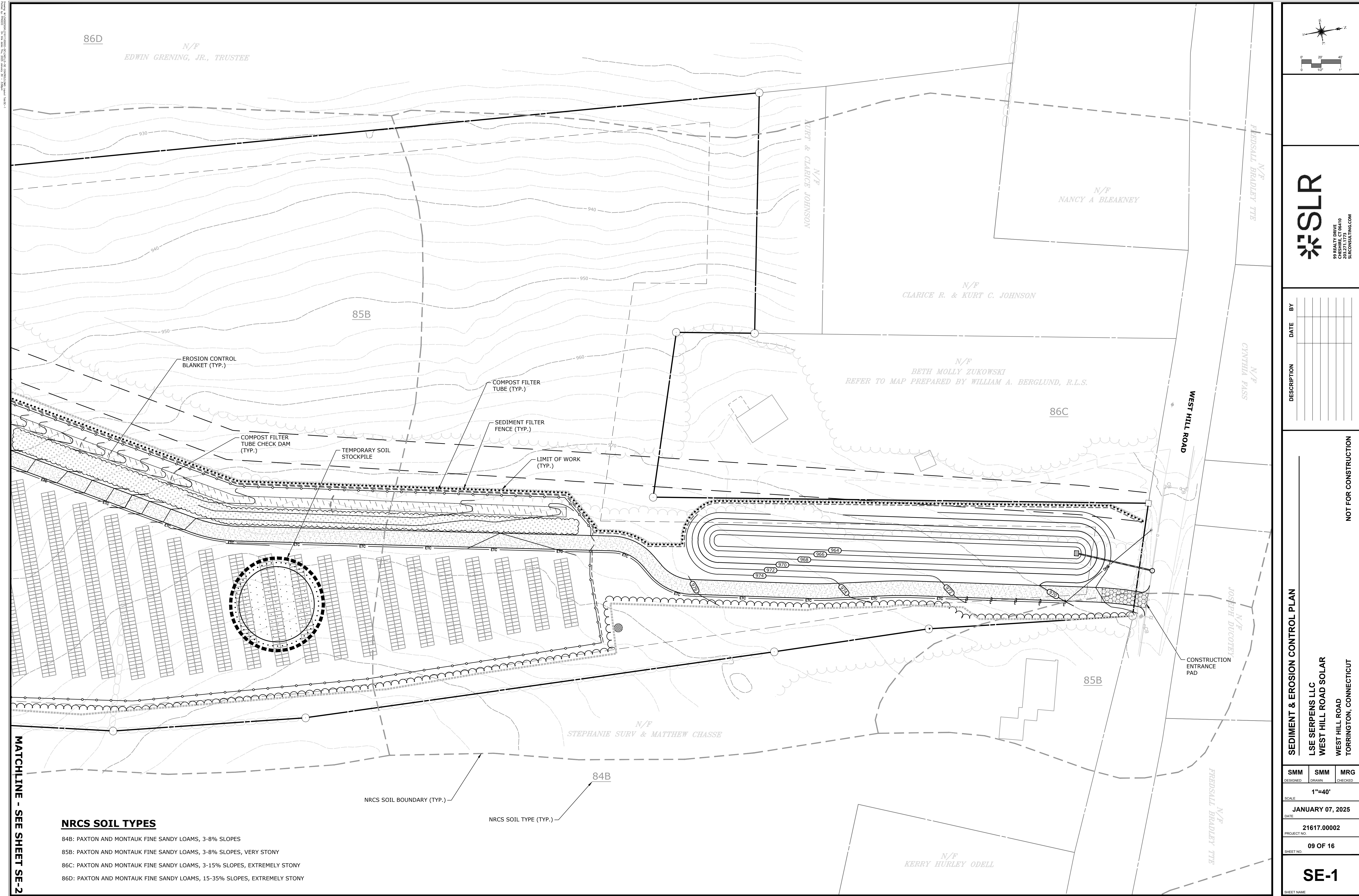
SP-1

SHEET NAME

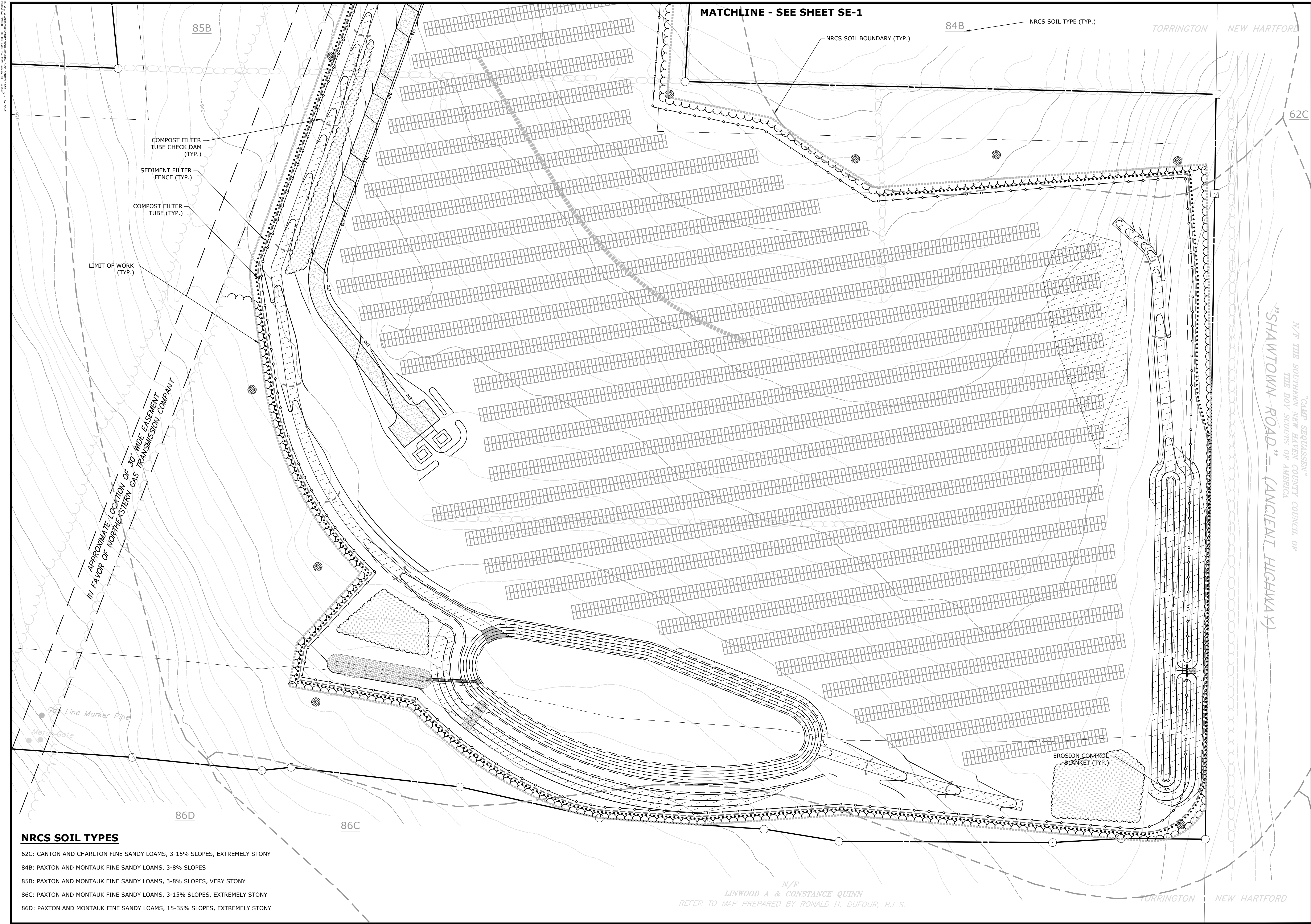












DESCRIPTION	DATE	BY

SEDIMENT & EROSION CONTROL PLAN

LSE SERPENS LLC  
WEST HILL ROAD SOLAR  
WEST HILL ROAD  
TORRINGTON, CONNECTICUT

NOT FOR CONSTRUCTION

SMM	SMM	MRG
DESIGNED	DRAWN	CHECKED

SCALE: 1"=40'

DATE: JANUARY 07, 2025

PROJECT NO.: 21617.00002

SHEET NO.: 10 OF 16

SE-2

SHEET NAME









NOT TO SCALE



NOT TO SCALE

- NOTES:
1. POSTS AND BRACE RAIL MATERIAL SHALL BE PRESSURE-TREATED SOUTHERN YELLOW PINE.
  2. FENCE MATERIAL: SOLIDLOCK FIXED KNOT GAME FENCE. 96" HIGH, 12.5 GAUGE WIRE AND CLASS 3 GALVANIZED. LARGER OPENINGS SHALL BE LOCATED AT THE BASE. FABRIC TO BE FASTENED TO POSTS WITH STAPLES PER THE SPECIFICATIONS
  3. ADDITIONAL BRACING MAY BE REQUIRED ON LONGER FENCE RUNS.
  4. FABRIC SCREENING SHALL BE INSTALLED ON FENCE RUNS AS SHOWN ON THE PLANS.
  5. MAINTAIN 6" MINIMUM CLEARANCE OFF EXISTING GROUND LEVEL TO FACILITATE WILDLIFE MOBILITY



NOT TO SCALE



1. PROVIDE SAWCUTS AS SHOWN ON THE PLANS.

NOT TO SCALE



1. PROVIDE PREFORMED EXPANSION JOINT AT ALL CONSTRUCTION JOINT, AND OTHER LOCATIONS WHERE CONCRETE ABUTTS EXISTING CONCRETE.

NOT TO SCALE



NOT TO SCALE



1. EXPANSION JOINTS EVERY 20LF MAXIMUM OR EVERY 144SF UNLESS OTHERWISE INDICATED ON PLANS (SEE JOINT DETAILS)
2. SCORE JOINTS 5' ON CENTER UNLESS OTHERWISE INDICATED ON PLANS.

NOT TO SCALE



NOT TO SCALE

- NOT TO SCALE (SEE NOTE 2)

**99 REALTY DRIVE  
CHESHIRE, CT 06410  
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**NOT FOR CONSTRUCTION**

LSE SERPENS LLC  
WEST HILL ROAD SOLAR  
WEST HILL ROAD  
TORRINGTON, CONNECTICUT

<b>SMM</b>	<b>SMM</b>	<b>MRC</b>
DESIGNED	DRAWN	CHECKED

**AS NOTED**

**JANUARY 07, 2025**  
DATE

12 OF 16

SD-1

SHEET NAME



CONSTRUCTION OF DETENTION BASIN OUTLET CONTROL STRUCTURES

FORMATION OF EMBANKMENTS FOR STORMWATER BASINS

1. MATERIALS

ALL FILL MATERIALS SHALL BE OBTAINED FROM REQUIRED EXCAVATIONS OR DESIGNATED BORROW AREAS. FILL MATERIAL SHALL CONTAIN NO FROZEN MATERIAL, SOD, BRUSH, ROOTS, OR OTHER ORGANIC MATERIAL. EARTH EMBANKMENTS SHALL CONTAIN NO STONES OR ROCK PARTICLES OVER THREE INCHES IN DIAMETER.

THE MATERIAL USED IN THE CENTER PORTION OF THE EMBANKMENT SHALL BE THE MOST IMPERVIOUS MATERIAL OBTAINED FROM THE BORROW AREAS IF REQUIRED, THE MORE PERVIOUS MATERIALS SHALL BE USED IN THE OUTER PORTION OF THE EMBANKMENT AS SHOWN ON THE PLANS.

A. IMPERVIOUS FILL MATERIALS

IMPERVIOUS FILL SHALL BE A GLACIAL TILL, AND TO BE PROVIDED FROM AN OFFSITE SOURCE IN THE QUANTITIES REQUIRED FOR COMPLETION. FILL TO BE APPROVED BY THE ENGINEER. GLACIAL TILL SHALL CONSIST OF HARD AND DURABLE PARTICLES OR FRAGMENTS AND SHALL BE FREE FROM ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIALS. GLACIAL TILL SHALL GENERALLY CONFORM TO THE FOLLOWING GRADATION LIMITS:

U.S. STANDARD	PERCENTAGE PASSING
SIEVE SIZE	BY WEIGHT
3 INCH	100
NO. 4	60-95
NO. 10	50-95
NO. 40	30-75
NO. 100	20-65
NO. 200	10-40

2. EMBANKMENT FOUNDATION PREPARATION

AREAS WHERE EMBANKMENTS ARE TO BE FORMED SHALL BE CLEARED AND GRUBBED OF ALL TOPSOIL AND OTHER ORGANIC MATERIALS TO A DEPTH OF AT LEAST 24 INCHES. UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS, FOUNDATION AREAS SHALL BE SCARIFIED TO A DEPTH OF THREE INCHES PRIOR TO PLACEMENT OF FILL MATERIAL.

3. PLACEMENT

NO FILL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION AND EXCAVATIONS IN THE FOUNDATION HAVE BEEN COMPLETED. NO FILL SHALL BE PLACED ON A FROZEN SURFACE NOR SHALL FROZEN MATERIAL BE INCORPORATED.

A. EMBANKMENT

MATERIAL SHALL BE PLACED IN HORIZONTAL LAYERS. THE THICKNESS OF LAYERS SHALL BE SIX INCHES. DURING CONSTRUCTION, THE SURFACE OF THE FILL SHALL HAVE A CROWN OR CROSS-SLOPE OF NOT LESS THAN TWO PERCENT. EACH LAYER OR LIFT SHALL EXTEND OVER THE ENTIRE AREA OF THE FILL.

THE FILL SHALL BE FREE FROM LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFERING SUBSTANTIALLY IN TEXTURE OR GRADATION FROM THE SURROUNDING MATERIAL. THE MORE PERVIOUS MATERIAL SHALL BE PLACED IN THE OUTSIDE PORTION OF THE EMBANKMENT OR AS INDICATED ON THE DRAWINGS. THE FINISHED FILL SHALL BE SHAPED AND GRADED TO THE LINES AND GRADE SHOWN ON THE DRAWINGS.

B. BACKFILL AT THE PIPE OUTLET

BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED THREE INCHES IN THICKNESS AND SHALL BE BROUGHT UP UNIFORMLY AROUND THE OUTLET PIPE AND FLARED END SECTION

4. MOISTURE CONTROL

THE MOISTURE CONTENT OF MATERIALS IN THE EMBANKMENT SHALL BE CONTROLLED TO MEET THE REQUIREMENTS OF SECTION 5, "COMPACTION OF EMBANKMENT." WHEN NECESSARY, MOISTURE SHALL BE ADDED BY USE OF APPROVED SPRINKLING EQUIPMENT. WATER SHALL BE ADDED UNIFORMLY AND EACH LAYER SHALL BE THOROUGHLY DISKED OR HARROWED TO PROVIDE ROPER MIXING. ANY LAYER FOUND TOO WET FOR PROPER COMPACTION SHALL BE ALLOWED TO DRY BEFORE ROLLING. PLACING OR ROLLING OF MATERIAL ON EARTH FILLS WILL NOT BE PERMITTED DURING OR IMMEDIATELY AFTER RAINFALLS WHICH INCREASE THE MOISTURE CONTENT BEYOND THE LIMIT OF SATISFACTORY COMPACTION. THE EARTH FILL SHALL BE BROUGHT UP UNIFORMLY AND ITS TOP SHALL BE KEPT GRADED AND SLOPED SO THAT A MINIMUM OF RAINWATER WILL BE RETAINED THEREON. COMPACTED EARTH FILL DAMAGED BY WASHING SHALL BE ACCEPTABLY REPLACED BY THE CONTRACTOR.

5. COMPACTION

A. EMBANKMENT

EMBANKMENT MATERIAL SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY AT NEAR OPTIMUM MOISTURE CONTENT AND BY THE COMPACTION EQUIPMENT SPECIFIED HEREIN. THE COMPACTION EQUIPMENT SHALL TRAVERSE THE ENTIRE SURFACE OF EACH LAYER OF FILL MATERIAL.

APPROVED TAMPING ROLLERS SHALL BE USED FOR COMPACTING ALL PARTS OF THE EMBANKMENTS WHICH THEY CAN EFFECTIVELY REACH. THE CONTRACTOR SHALL DEMONSTRATE THE EFFECTIVENESS OF THE ROLLER BY ACTUAL SOIL COMPACTION RESULTS OF THE SOIL TO BE USED IN THE EMBANKMENT WITH LABORATORY WORK PERFORMED BY AN APPROVED SOIL TESTING LABORATORY.

B. BACKFILL AT OUTLET CONDUIT

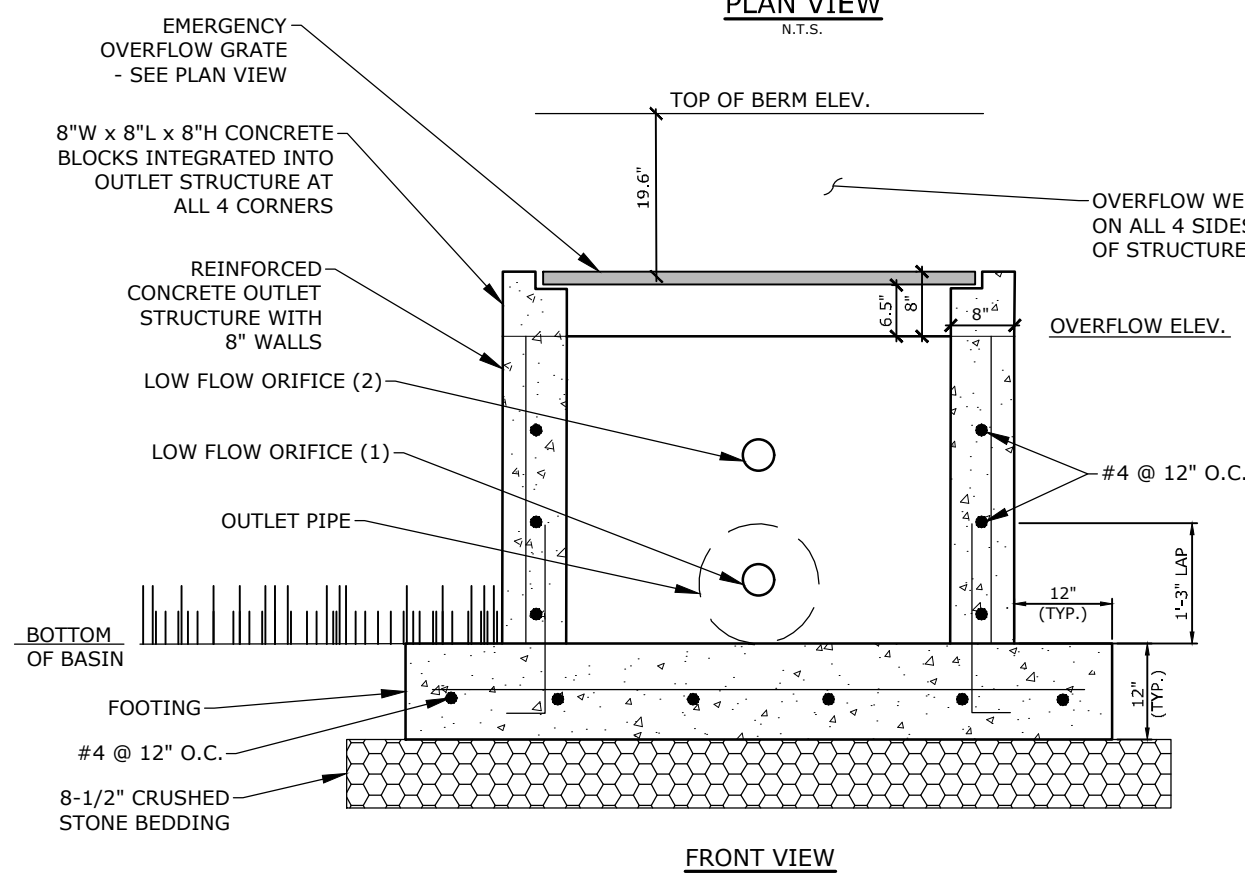
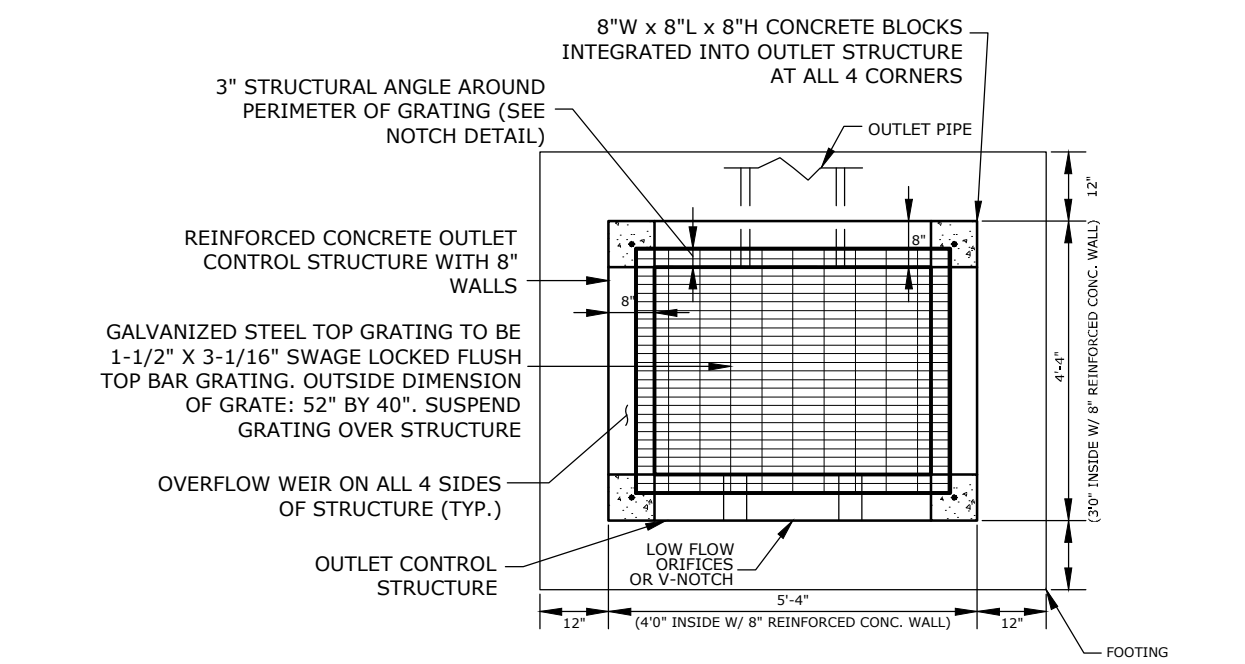
BACKFILL SHALL BE COMPACTED BY HAND TAMPING WITH MECHANICAL TAMPERS. HEAVY EQUIPMENT SHALL NOT BE OPERATED WITHIN TWO FEET OF ANY STRUCTURE. EQUIPMENT SHALL NOT BE ALLOWED TO OPERATE OVER THE OUTLET CONDUITS UNTIL THERE IS 24 INCHES OF FILL OVER THE PIPE CONDUITS.

6. FINISHING EMBANKMENTS

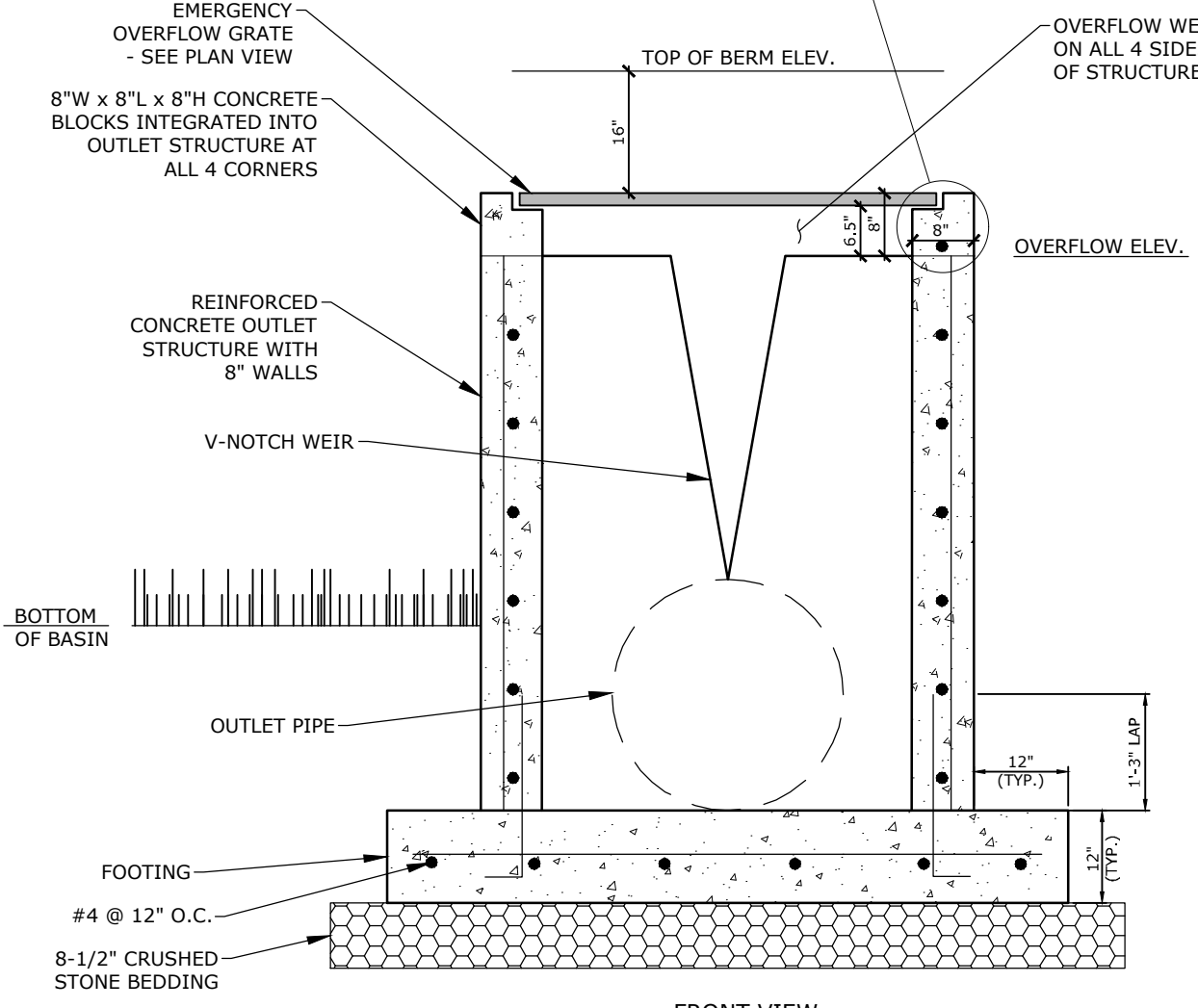
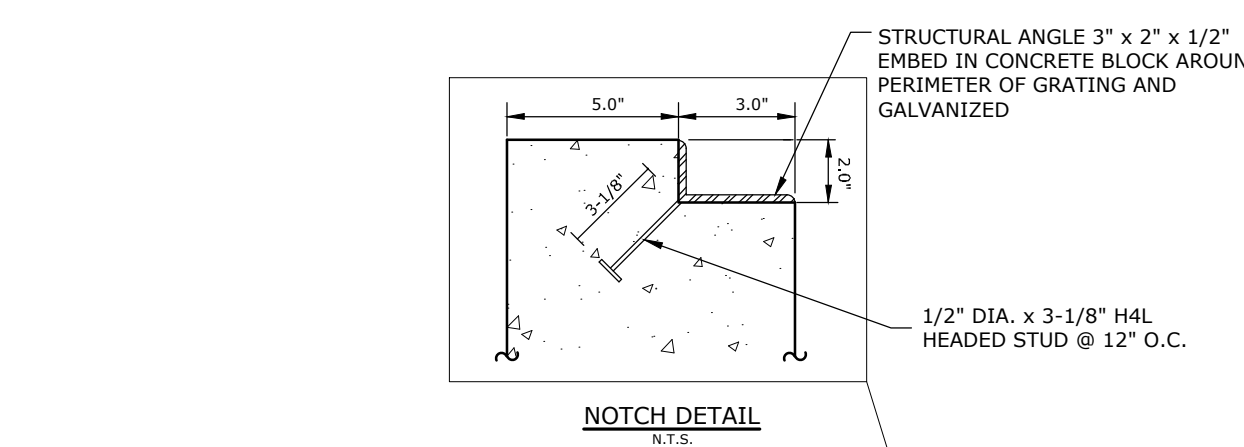
THE EMBANKMENTS SHALL BE CONSTRUCTED TO THE ELEVATIONS, LINES, GRADES AND CROSS-SECTIONS AS SHOWN ON THE DRAWINGS. THE EMBANKMENTS SHALL BE MAINTAINED IN A MANNER SATISFACTORY TO THE ENGINEER AND SURFACES SHALL BE COMPACT AND ACCURATELY GRADED BEFORE TOPSOIL IS PLACED ON THEM. THE CONTRACTOR SHALL CHECK THE EMBANKMENT SLOPES WITH STRING LINES TO INSURE THAT THEY CONFORM TO THE SLOPES GIVEN ON THE PLANS AND ARE UNIFORM FOR THE ENTIRE LENGTH OF THE SLOPE.

7. CONTROL OF WATER

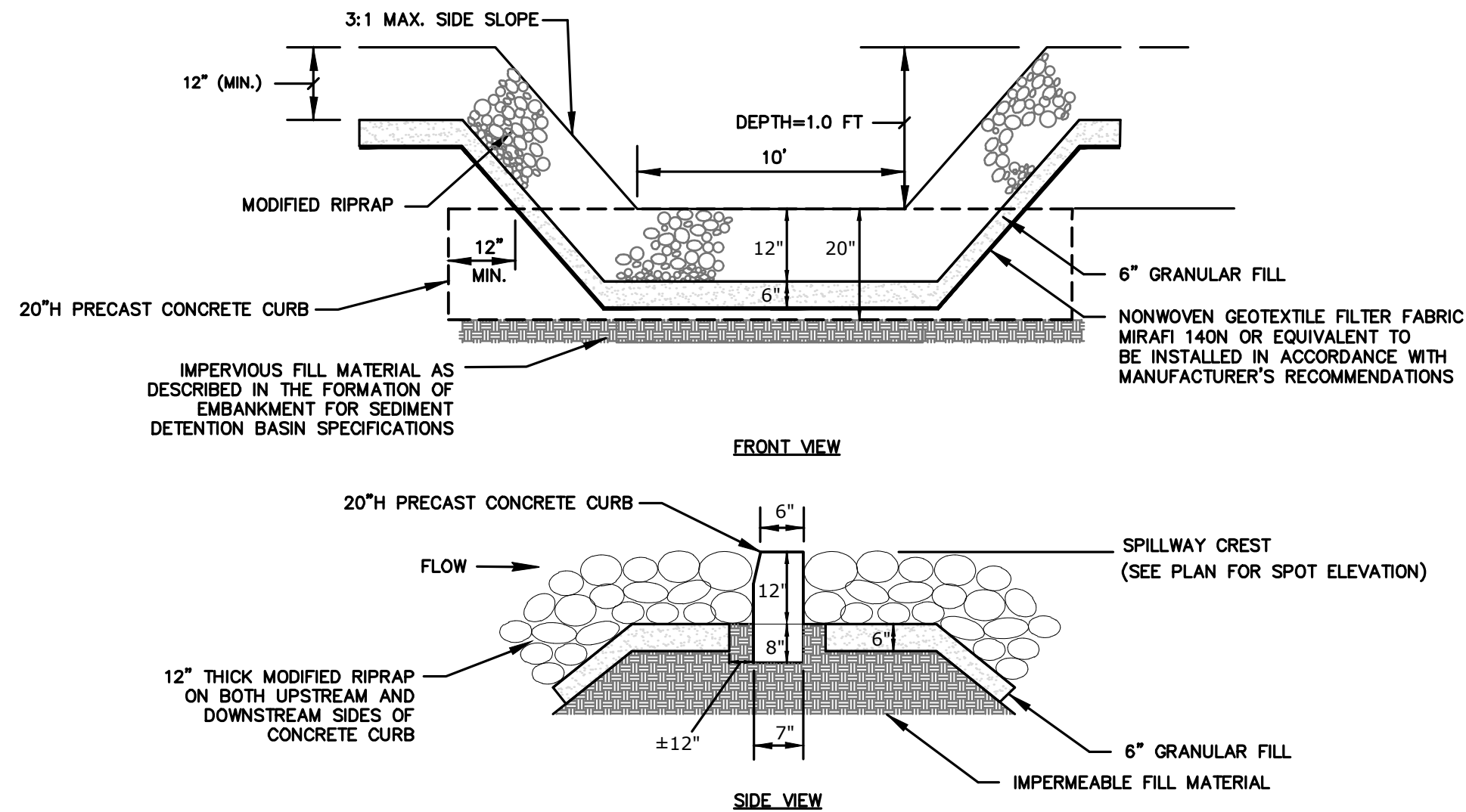
THE PROJECT SITE IS SUBJECT TO HIGH WATER TABLE. THE CONTRACTOR SHALL USE TEMPORARY PIPES OR PUMPS TO ASSURE PLACEMENT OF SELECT FILL IN DRY CONDITIONS.



	DET 110
TOP OF BERM ELEVATION	970.0
OVERFLOW ELEVATION	967.7
100-YEAR WATER SURFACE ELEV.	968.5
LOW FLOW ORIFICE DIAMETER (1)	4"
LOW FLOW ORIFICE INVERT (1)	965.0
LOW FLOW ORIFICE DIAMETER (2)	4"
LOW FLOW ORIFICE INVERT (2)	966.3
OUTLET PIPE DIAMETER	15"
OUTLET PIPE INVERT	964.5
BASIN BOTTOM ELEVATION	964.5

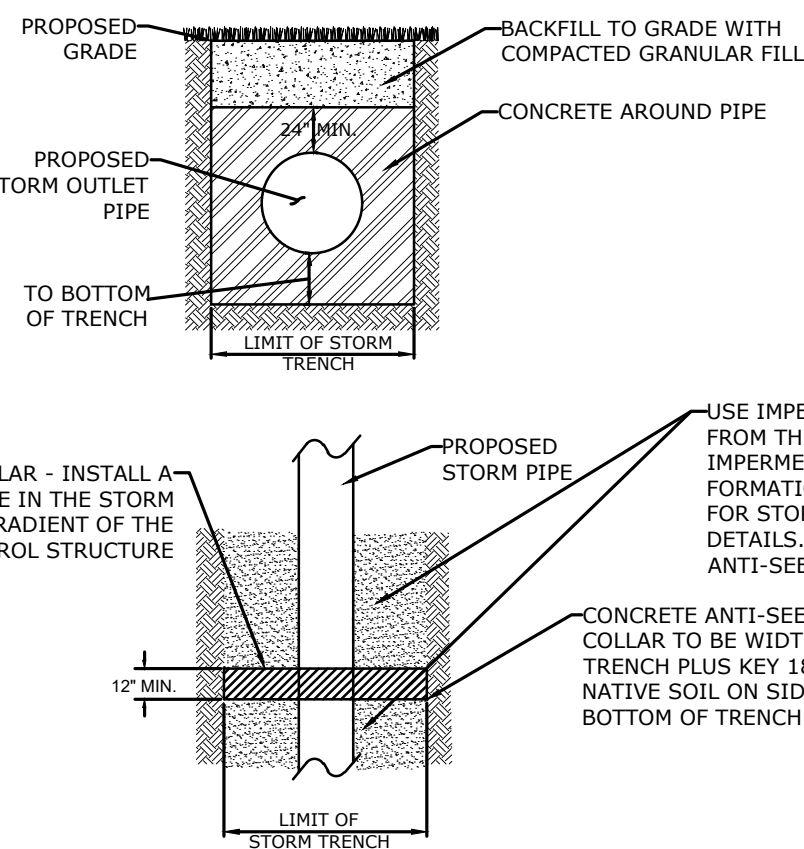


	DET 120
TOP OF BERM ELEVATION	936.5
OVERFLOW ELEVATION	934.5
100-YEAR WATER SURFACE ELEV.	935.2
V-NOTCH WEIR ANGLE	20 DEG.
V-NOTCH WEIR INVERT	931.0
OUTLET PIPE DIAMETER	30"
OUTLET PIPE INVERT	928.5
BASIN BOTTOM ELEVATION	930.5



EMERGENCY RIPRAP SPILLWAY

NOT TO SCALE

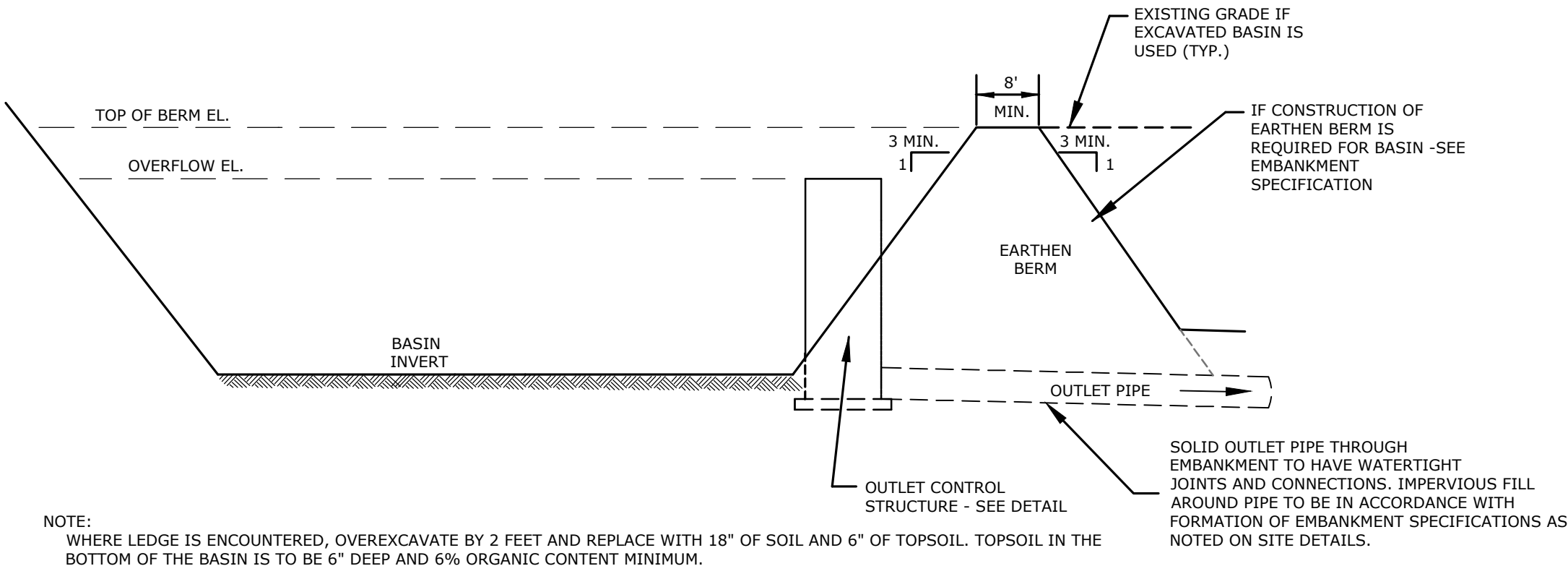


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NOT TO SCALE

DETENTION BASIN OUTLET CONTROL STRUCTURES

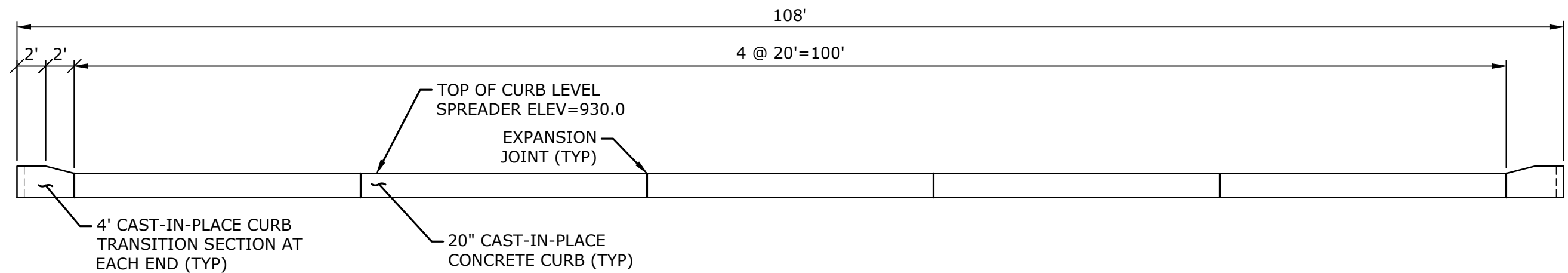
SCALE: 1"=2'



NOTE: WHERE LEDGE IS ENCOUNTERED, OVEREXCAVATE BY 2 FEET AND REPLACE WITH 18" OF SOIL AND 6" OF TOPSOIL. TOPSOIL IN THE BOTTOM OF THE BASIN IS TO BE 6" DEEP AND 6% ORGANIC CONTENT MINIMUM.

TYPICAL DETENTION BASIN

NOT TO SCALE

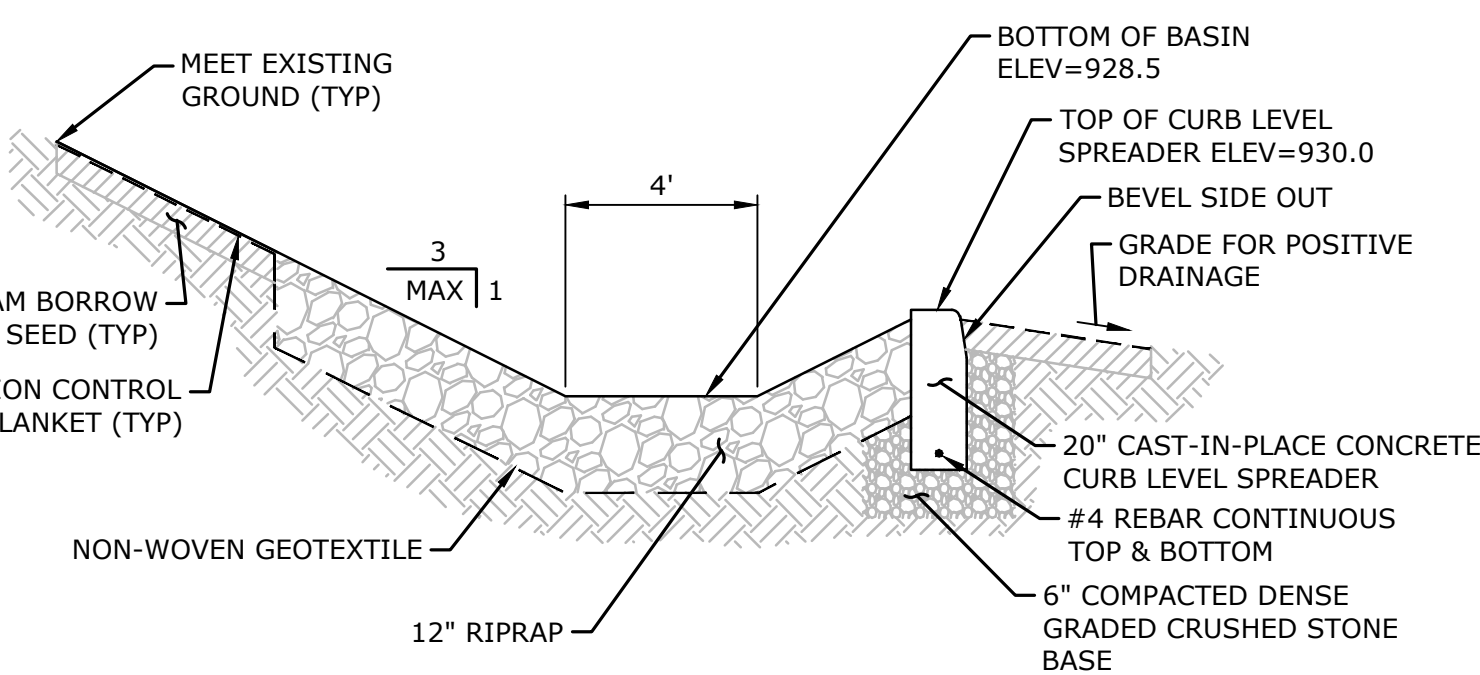


NOTES:

- USE 1/2" PREFORMED EXPANSION JOINT FILLER SPACED NO MORE THAN 25' O.C. OR AS SHOWN.
- JOINTS BETWEEN CURB SECTIONS NOT TO EXCEED 1/2".
- CONCRETE CURB SHALL MEET M.08.02-4 OF CTDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- 2-#4 REBAR CONTINUOUS ALONG LENGTH OF CURB.
- UPON COMPLETION OF LEVEL SPREADER, TOP OF CURB ELEVATION SHALL BE VERIFIED THAT IT IS ABSOLUTELY LEVEL FOR THE ENTIRE LENGTH OF THE CURB AND DEVIATES NO MORE THAN 1/4". FINAL AS-BUILT ELEVATIONS SHALL BE PROVIDED WITH THE RECORD DRAWINGS.

FRONT ELEVATION - CURB LEVEL SPREADER

SCALE: 1"=8'



TYPICAL SECTION - RIPRAP OUTLET BASIN

SCALE: 1"=2'



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203.271.1773  
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DESCRIPTION	DATE	BY

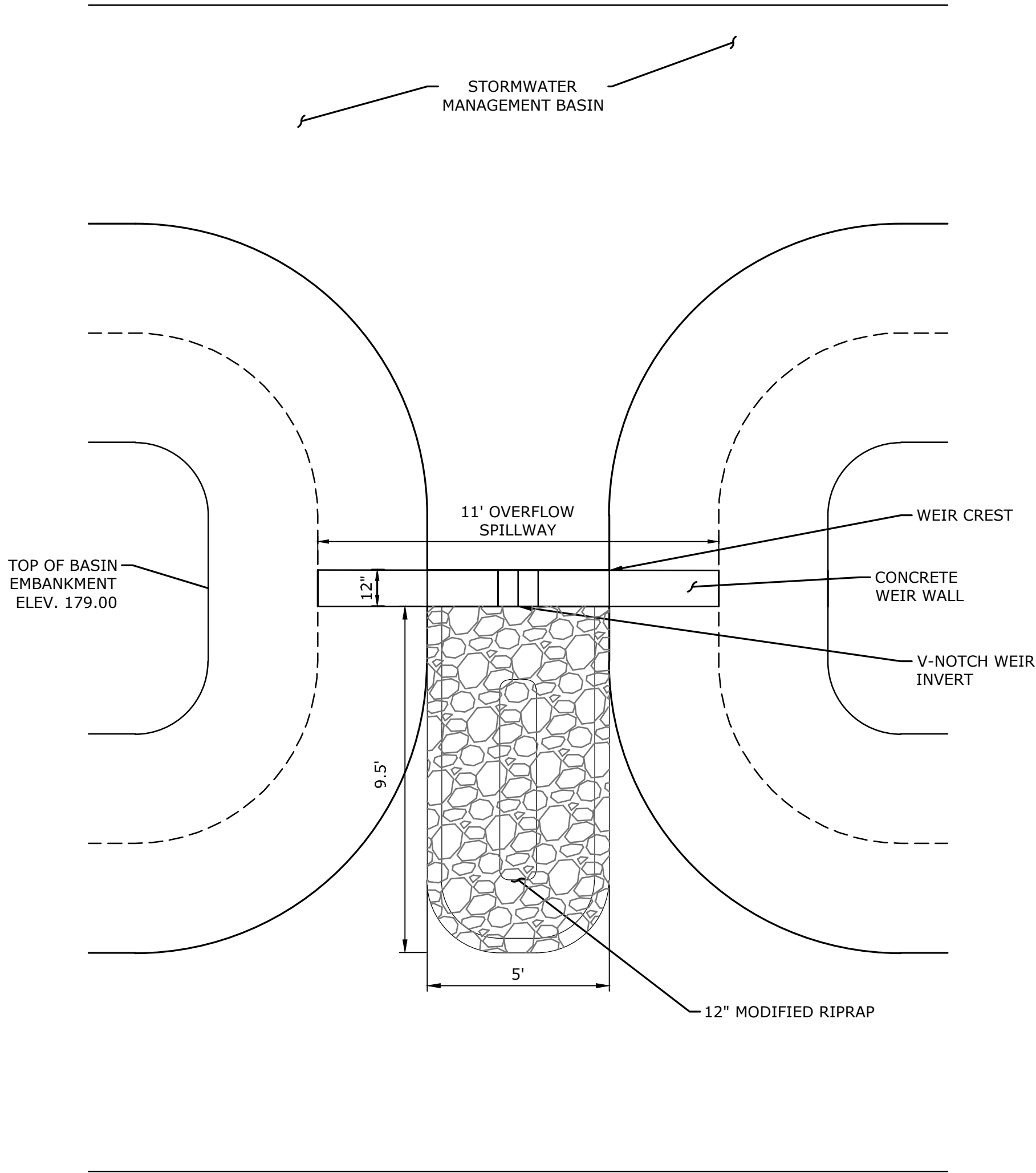
NOT FOR CONSTRUCTION

SITE DETAILS

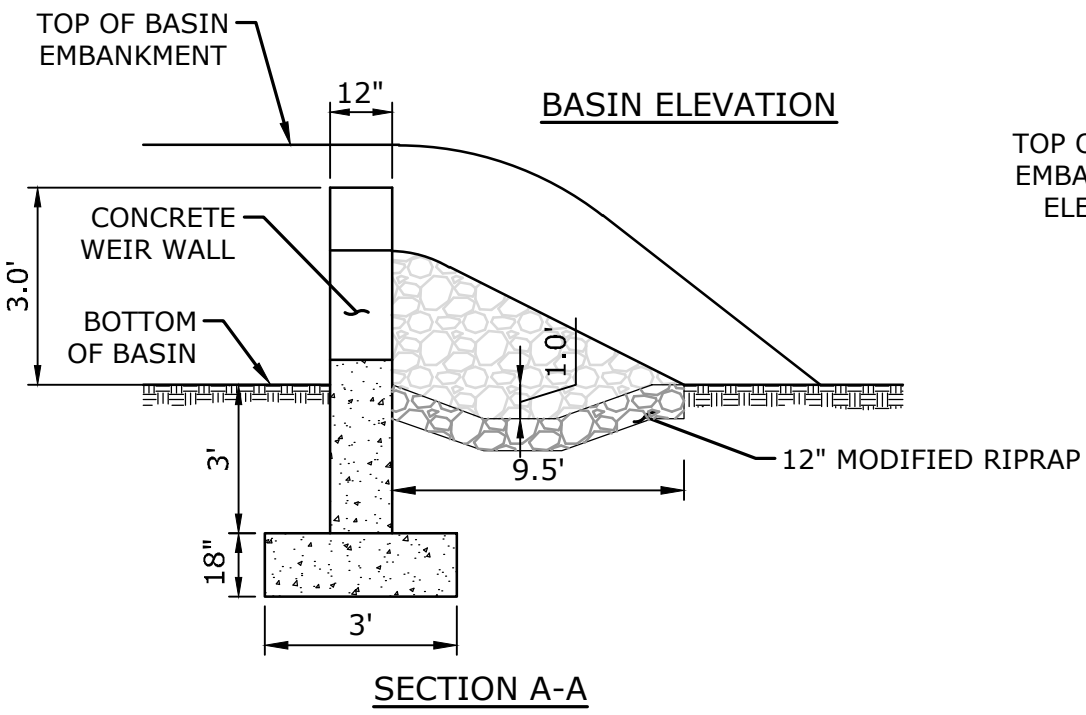
LSE SERPENS LLC  
WEST HILL ROAD SOLAR  
WEST HILL ROAD  
TORRINGTON, CONNECTICUT

SMM	SMM	MRG
DESIGNED	DRAWN	CHECKED
AS NOTED		
JANUARY 07, 2025		
DATE		
21617.00002		
PROJECT NO.		
13 OF 16		
SHEET NO.		
SD-2		
SHEET NAME		

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NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM SLR CONSULTING, INC.

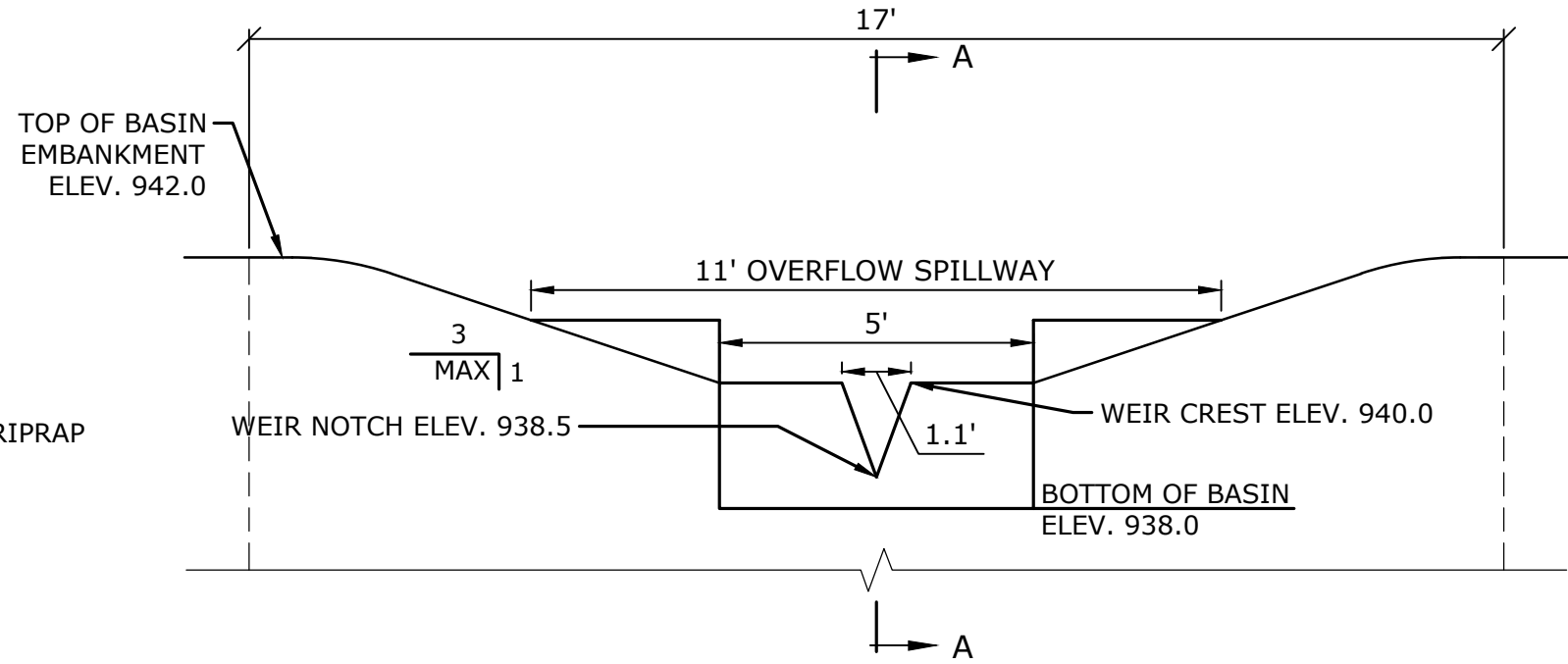


PLAN VIEW



BASIN ELEVATION

SECTION A-A



OUTLET WEIR WALL - DET 200

SCALE: 1"=3'

### TEST PIT OBSERVATION LOGS

SLR-TP-1 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-9" TOPSOIL 9"-24" YELLOW FINE SANDY LOAM W/ SILT 24"-72" YELLOW/BROWN FINE SANDY LOAM W/ SILT (COMPACT) ROOTS: 36" NO GROUNDWATER NO MOTTLING NO LEDGE PERMEABILITY SAMPLES AT 60"	SLR-TP-8 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-8" TOPSOIL 8"-31" YELLOW/BROWN FINE SANDY LOAM 31"-63" YELLOW/BROWN FINE SANDY LOAM W/ SOME ROCK (COMPACT) ROOTS: 27" NO GROUNDWATER MOTTLING: 38" NO LEDGE
SLR-TP-2 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-10" TOPSOIL 10"-20" YELLOW/BROWN FINE SANDY LOAM/SILT 20"-32" TAN BROWN FINE SANDY LOAM/SILT 32"-132" BROWN FINE SANDY LOAM/SILT ROOTS: 30" NO GROUNDWATER NO MOTTLING NO LEDGE	SLR-TP-9 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-6" TOPSOIL 6'-35" YELLOW/BROWN FINE SANDY LOAM W/SILT 35"-40" LIGHT BROWN SANDY LOAM (COMPACT) 40"-65" BROWN FINE SANDY LOAM ROOTS: 24" NO GROUNDWATER MOTTLING: 43" NO LEDGE PERMEABILITY SAMPLES AT 48"
SLR-TP-3 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-5" TOPSOIL 5'-13" BROWN FINE LOAM/SILT 13"-43" YELLOW/BROWN FINE SANDY LOAM (COMPACT) ROOTS: 24" NO GROUNDWATER NO MOTTLING LEDGE: 60"	SLR-TP-10 OBSERVED BY: SEAN MCALLEN 10/11/24 0'-7" TOPSOIL 7"-34" LIGHT BROWN FINE SANDY LOAM 34"-110" YELLOW/BROWN FINE SANDY LOAM, SOME GRAVEL (COMPACT) ROOTS: 32" NO GROUNDWATER NO MOTTLING LEDGE: 110"
SLR-TP-4 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-6" TOPSOIL 6'-31" YELLOW/BROWN FINE SANDY LOAM W/ SILT 31"-43" YELLOW/GREY FINE SANDY LOAM (COMPACT) 43"-79" YELLOW/BROWN FINE SANDY LOAM ROOTS: 30" NO GROUNDWATER NO MOTTLING NO LEDGE PERMEABILITY SAMPLES AT 60"	SLR-TP-11 OBSERVED BY: SEAN MCALLEN 10/11/24 0'-6" TOPSOIL 6'-28" LIGHT BROWN FINE SANDY LOAM 28"-56" YELLOW/BROWN FINE SANDY LOAM, SOME GRAVEL (COMPACT) 56"-120" BROWN/GREY FINE SANDY LOAM ROOTS: 28" NO GROUNDWATER NO MOTTLING NO LEDGE
SLR-TP-5 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-5" TOPSOIL 5'-14" BROWN FINE SILTY SANDY LOAM 14"-30" YELLOW/BROWN FINE SANDY LOAM ROOTS: 13" NO GROUNDWATER NO MOTTLING LEDGE: 30"	SLR-TP-12 OBSERVED BY: SEAN MCALLEN 10/11/24 0'-8" TOPSOIL 8'-21" LIGHT BROWN FINE SANDY LOAM W/ SILT 21"-36" YELLOW/BROWN FINE SANDY LOAM W/ SILT 36"-86" YELLOW/BROWN FINE SANDY LOAM SOME GRAVEL (COMPACT) ROOTS: 36" NO GROUNDWATER NOR MOTTLING NO LEDGE PERMEABILITY SAMPLE AT 60"
SLR-TP-6 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-6" TOPSOIL 6'-44" YELLOW/BROWN FINE SANDY LOAM W/ SILT 44"-60" BROWN FINE SANDY LOAM ROOTS: 19" NO GROUNDWATER MOTTLING: 44" LEDGE: 60" PERMEABILITY SAMPLE AT 36"	SLR-TP-13 OBSERVED BY: SEAN MCALLEN 10/11/24 0'-6" TOPSOIL 6'-31" LIGHT BROWN FINE SANDY LOAM 31"-68" YELLOW/BROWN FINE SANDY LOAM, SOME GRAVEL (COMPACT) ROOTS: 20" NO GROUNDWATER MOTTLING: 36" NO LEDGE PERMEABILITY SAMPLE AT 36"
SLR-TP-7 OBSERVED BY: SEAN MCALLEN 9/27/24 0'-8" TOPSOIL 8"-30" YELLOW/BROWN FINE SANDY LOAM W/ SILT 30"-84" YELLOW/BROWN SANDY LOAM W/SILT AND SOME ROCK ROOTS: 24" NO GROUNDWATER MOTTLING: 38" NO LEDGE	

SLR

99 REALTY DRIVE  
SUITE 200  
TORRINGTON, CT 06860  
203.271.1773  
SLRCONSULTING.COM

DESCRIPTION

DATE

BY

SITE DETAILS

LSE SERPENS LLC  
WEST HILL ROAD SOLAR  
WEST HILL ROAD  
TORRINGTON, CONNECTICUT

NOT FOR CONSTRUCTION

SMM	SMM	MRG
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DATE

JANUARY 07, 2025

PROJECT NO.

21617.00002

SHEET NO.

14 OF 16

SD-3

SHEET NAME



Two bat houses can be mounted back to back on a pole; this can create a more stable temperature for the bats.

### Recommended tools

1/2 sheet (4' x 4') 1/2" AC, BC or T1-11 (outdoor grade) plywood  
1/2 sheet (4' x 4') 3/8" AC or BC (outdoor grade) plywood  
Two pieces 1" x 6" (3/4" x 5 1/2" finished) x 8' pine or cedar  
One lb. coated deck or exterior-grade screws, 1 5/8"  
20 – 25 coated deck or exterior-grade screws, 1 1/4"  
20 – 25 exterior-grade screws, 1"  
One quart water-based primer, exterior grade (see Fig. 3)  
Two quarts flat water-based paint or stain, exterior grade  
One tube paintable latex caulk  
Black asphalt shingles or galvanized metal (optional)  
12 – 20 roofing nails, 7/8"

Table saw or circular saw  
Variable-speed reversing drill  
Screwdriver bit for drill  
Tape measure or yardstick  
Caulking gun  
1 1/2" hole saw or spade bit  
Paintbrushes  
Hammer (optional)  
Tin snips (optional)  
Bar clamp (optional)  
Sander (optional)

1. Measure, mark, and cut out all wood according to the sawing diagrams in **Figures 1 & 2** (below).
2. Roughen interior and landing surfaces by cutting horizontal grooves with sharp object and saw. Space grooves  $1/4'' - 1/2''$  apart, cutting  $1/2''$  to  $1/16''$  deep.
  - a. We no longer recommend the use of mesh type material. Over time, the material degrades and can trap bats or damage their wings.
3. Apply two coats of dark (any color), water-based stain to interior surfaces. Do not use paint, as it will fill grooves.
4. Attach sidepieces to baulk, caulking first. Use  $15/8''$  screws. Make sure top angles match.
5. Attach  $5''$  and  $10''$  spacers to inside corners per drawings (**Figure 1**). Use  $1''$  screws. Roost chamber spacing will be  $3/4''$  (front to back). Do not block side vents.
6. Place first roosting partition on spacers even with bottom edge of roof. Place  $20''$  spacers on partitioned screw to first spacers (through partition, using  $1/58''$  screws).
7. Repeat step 6 for remaining spacers and partitions (three times).
8. Attach front to side: top piece first (caulk screws).
  - a. Be sure top angles match (sand if necessary).
  - b. Leave  $1/2''$  vent space between top and bottom front pieces.
  - c. A bar clamp may be useful if sides have flared out during construction.
9. Attach roof supports to the top inside of front and back pieces with  $1''$  screws. Do NOT let screws protrude into roosting chamber.
10. Caulk around all top surfaces, sanding first if necessary, to ensure good fit with roof.
11. Attach roof to sides and roof supports with  $1/4''$  screws.

- **For larger colonies:** These nursery-house dimensions were chosen to permit construction of two bat houses per half sheet of plywood. Increasing house width to 24" or more or adding partitions benefits bats and attracts larger colonies. Additional spacers are required to prevent warping of roost partitions for houses more than 24" wide.
- **Taller houses:** Taller bat houses provide improved temperature gradients and may be especially useful in climates where daily temperatures fluctuate widely. Bat houses 3' or taller should have the horizontal vent slats placed at the top of the roosting chambers.
- **Dual mounting houses:** Two bat houses can be placed back-to-back mounted on poles. This can save on mounting costs and creates a more stable internal temperature.
  - Before assembly, a horizontal 3/4" slot should be cut in the back of each house about 10" from the bottom edge of the back piece to permit movement of bats between houses.
  - Two pieces of wood, 1" x 4" x 10 3/4", screwed horizontally to each side, will join the two boxes.
  - Leave a 3/4" space between the two houses, and roughen the wood surfaces.
  - One 2" x 4" x 40" vertical piece, attached to each side, over the horizontal pieces, blocks light but allows bats and air to enter.
  - Use a 2" x 6" vertical piece if securing houses with U-bolts to metal poles.
  - A galvanized metal roof that covers both houses protects them and helps prevent overheating.
  - Eaves should extend about 3" in front in southern areas and about 1 1/2" in the north.
- **Colder climates:** Ventilation may not be necessary in cold climates. In that case, the front of the bat house should be a single, 23" long piece
  - Far-northern bat houses may also benefit from a partial bottom to help retain heat. Slope the sides and bottom at an angle of 45° or greater to reduce guano build-up. Leave a 3/4" entry gap at the front and be sure the bottom does not interfere with access to the roost crevices. A hinged bottom is required to permit annual cleaning.
- **Removable partitions:** Make partitions removable by attaching small cleats with thumbcrews to the bottom of the sidepieces for support. Spacer strips are unnecessary if grooves for partitions are cut in the sidepieces with a router or dado saw blade.

- Mounted bat houses on wooden posts, steel poles, pivot poles, or on the sides of buildings, but do not mount them on trees.
  - Example: well pipe; galvanized pipe can be too thin
- Mount in an area that gets 6-8 hours of direct sunlight (facing East or South).
- To the extent possible, locate houses 20 to 30 feet from tree branches or other obstacles and 12 to 20 feet above ground (or above the tallest vegetation beneath the bat house).
- The best locations are along streams, rivers, lakes or forests because

8. Attach spacer boards to pole screw using a **four** (up) and **two** (down) 1/2" screws per board. Bottom spacer boards are 9" up from the bottom of the pole screw.
9. Attach alternate spacer boards to the pole screw using **four** (up) and **two** (down) 1/2" screws per board.
10. Assemble four outer shell boards into a hollow, square box in the center of the pole.
11. Slide pole screw into inner shell until top edges are flush. But passage holes will be towards the top. Mark the location of spacer boards on the pole screw. Then slide the pole screw through the spacer boards to ensure no screws protrude into nesting chambers. Pre-drill holes into top to avoid splintering pole screw.
12. Attach spacer boards (4 per side) to inner shell as a screw, using two 1/2" screws per board. Bottom spacer boards are 10" up from the bottom of the pole screw. The top spacer boards are 4" from the top of the pole screw and left and right sides, 4" apart.
13. Assemble four outer-shell boards into a hollow, square box in the top. Next slot are on opposing sides and oriented towards the bottom.
14. Slide finished outer shell over inner shell, so that 6" of inner shell protrudes from the top of the outer shell.
15. Secure outer shell to inner shell as in step 7 (pre-drill holes first). Ensure that no screws protrude into the nesting chambers.
16. Caulking and Sealing. Seal the outer shell to the inner shell with a bead of caulking. Carefully drive screws into top edges of the pole to prevent screws from entering nesting chambers.
17. Center the outer shell over the inner roof with 1/2" screws, caulking first.
18. Paint or stain exterior three times (use primer first for metal).
19. Cover the roof with 1/2" galvalume or galvanized metal.
20. Slide completed rooster box over pole. One inch up from the bottom edge of pole screw, drill a 1/2" hole at the way through the pole screw. Then drill a 1/2" hole at the top of the pole screw, 2 inches from the bottom, through pole screw and hole. Secure box with pole with two 4"x6" bolts, washers and nuts. Orient vent to the wind.

**to the rocket box**

1. For extra mounting height, insert a 4½" bolt and nut about halfway up through pole sleeve after completing step 5.
2. For extra heat-holding capacity, create a compartment in upper half of pole sleeve with a 2½"-square piece of leftover plywood. Fill upper half of sleeve with sand, gravel or dirt, and seal with another piece of plywood flush with top.
3. In warmer climates, a larger outer roof with more overhang can be used for additional shading.

Inner roof  
10" x 10"

Outer roof  
12" x 12"

Extra material

32 spacer blocks  
4" x 1½"

*Rocket Box  
Sawing  
Diagram*

Figure 1 shows a detail of the connection between the column and the beam. The column has a width of 16 inches. The beam has a depth of 24 inches. The connection is shown with reinforcement bars (rebar) extending from the column into the beam. A dimension line indicates a distance of 6 1/4 inches from the centerline of the column to the centerline of the beam.

**Outer shell**  
2 boards @  
1" x 10" x 6" 18"

36" 2x 2x

Diagram showing a hole in a plate with dimensions  $6 \times \frac{1}{8}$  inch.

[illegible]

Two of each piece required

## POCKET BOX DESIGN

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FIGURE 1  
*Four-chamber  
Nursery House  
Assembly Diagrams*

FIGURE 2  
*Four-chamber  
Nursery House  
Sawing Diagram.*

Figure 3. Bat house external paint color guide based on average summer temperatures in the United States

## SITE DETAILS

**OLSE SERPENS LLC**  
**WEST HILL ROAD SOLAR**  
**WEST HILL ROAD**  
**TORRINGTON, CONNECTICUT**

<b>SMM</b>	<b>SMM</b>	<b>MRC</b>
DESIGNED	DRAWN	CHECKED

AS NOTED

SCALE

**JANUARY 07, 2025**  
DATE

21617.00002  
PROJECT NO.

15 OF 16

SD-4

SHEET NAME