

SITE PLAN APPROVAL/SPECIAL PERMIT PLANS
FOR A
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
ROUTES 117 AND 110
BOLTON, MASSACHUSETTS

RECORD OWNER:

MAP 006.A-0000-0004.0
DAVIS FARMS TRUST
P.O. BOX 305
BOLTON, MA 01740

RECORD APPLICANT:

SYNCARPHA SOLAR, LLC
645 MADISON AVENUE, 14TH FLOOR
NEW YORK, NY 10022

RENEWABLE ENERGY MASSACHUSETTS LLC
17 ARLINGTON STREET
CAMBRIDGE, MA 02140

LAND PLANNERS-CIVIL ENGINEERS:

BEALS ASSOCIATES, INC.
2 THIRTEENTH STREET
CHARLESTOWN, MA 02129

PV - SOLAR ELECTRICAL ENGINEERS:

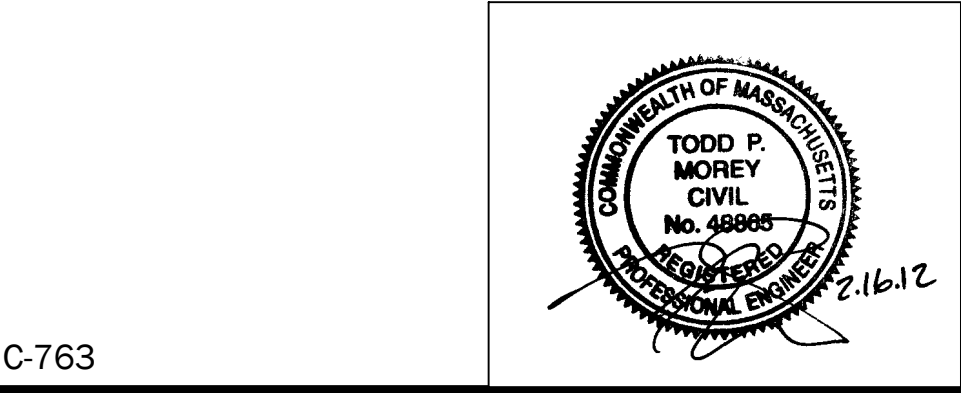
DSC
DEUTSCHE SOLAR CONSTRUCTION
OFFICE MONTEREY
43 SIERRA VISTA DRIVE
MONTEREY, CA 93940



LOCUS MAP
SCALE: 1" = 500'

INDEX

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C-763	
DATE: FEBRUARY 16, 2011	SCALE: N.T.S.
REVISIONS:	DATE:

GENERAL NOTES:

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2. THESE PLANS AND SPECIFICATIONS ARE INTENDED TO BE EXPLANATORY OF THE WORK TO BE COMPLETED AND OF EACH EACH OTHER. SHOULD ANY ONE OR MORE ERRORS OR DISCREPANCIES APPEAR, THEY SHALL BE SUBJECT TO CORRECTION AND INTERPRETATION BY THE DESIGN ENGINEER, THEREBY DEFINING AND FULFILLING THE INTENT OF THE PLANS.
3. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS. WORK THAT PROCEEDS WITHOUT NOTIFYING THE ENGINEER IS AT THE CONTRACTOR'S OWN RISK. COSTS OF ANY CHANGES REQUIRED BY THE ENGINEER OF SAID WORK SHALL BE SOLELY BORNE BY THE CONTRACTOR.
4. WHERE THE EXISTING UTILITIES ARE FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
5. ALL CONSTRUCTION SHALL CONFORM TO ALL CODES AND REGULATIONS HAVING JURISDICTION OVER THIS PROJECT, INCLUDING BUT NOT LIMITED TO THE COMMONWEALTH OF MASSACHUSETTS BUILDING CODE, ADA, ETC.
6. ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.
7. ALL WORK SHALL BE PERFORMED WITH THE HIGHEST STANDARDS OF THE INDUSTRY.
8. THE CONTRACTOR SHALL DISPOSE OF HAZARDOUS MATERIALS AND CONSTRUCTION BY-PRODUCTS IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL LAWS.
9. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE SITE CLEAR OF ACCUMULATED WASTE MATERIALS OR RUBBISH GENERATED BY THEIR ACTIVITIES. UPON COMPLETION OF WORK, ALL DEBRIS, SUPPLIES, AND EQUIPMENT SHALL BE REMOVED.
10. THE CONTRACTOR SHALL VISIT THE SITE AND DETERMINE ALL BASE BUILDING CONDITIONS PRIOR TO COMMENCING WORK.
11. PRIOR TO CONSTRUCTION, CONTRACTORS SHALL SUBMIT A JOB SCHEDULE TO BE DISCUSSED AND PERFORMED IN ACCORDANCE WITH TARGET DATES PROVIDED AND SUBJECT TO OWNER APPROVAL.
12. UNLESS OTHERWISE NOTED, WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
13. LATERAL DISTANCE TO ALL BUFFER ZONES AND CRITICAL AREAS TO BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.
14. THE CHARACTER OF NEW CONSTRUCTION ACTIVITIES, THE PROPOSED CONDITION SHALL MEET WITH THE EXISTING CONDITIONS UNLESS OTHERWISE NOTED.
15. AREAS OUTSIDE OF THE LIMIT OF WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
16. PROPOSED UTILITIES INSTALLED BY PRIVATE UTILITY COMPANIES, SUCH AS GAS, ELECTRIC AND TELEPHONE, SHALL BE SUBJECT TO ALTERATION AND ADJUSTMENT. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION COORDINATION WITH THE INSTALLERS.
17. UNLESS OTHERWISE NOTED, LOAM AND SEED ALL DISTURBED AREAS.
18. SEDIMENT DEPOSITED IN ANY DRAINAGE SYSTEM SHALL BE REMOVED BY THE CONTRACTOR UPON COMPLETION OF CONSTRUCTION ACTIVITIES.
19. EROSION AND SEDIMENTATION CONTROL DEVICES TO BE INSTALLED DOWNGRADIENT OF THE LIMIT OF WORK AND/OR AS SHOWN ON THE PLANS AS NECESSARY.
20. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION. EROSION CONTROL SHALL DENOTE THE LIMIT OF WORK UNLESS OTHERWISE NOTED.
21. ALL PROPOSED WORK AND MATERIALS LOCATED WITHIN THE PUBLIC RIGHT OF WAY SHALL CONFORM TO THE CITY/TOWN STANDARDS AND REGULATIONS. A STAKE OPENING PERMIT SHALL BE OBTAINED FOR ALL SUCH WORK AS NECESSARY.
22. ANY DISCREPANCIES IN EXISTING CONDITIONS WILL BE REPORTED BY THE CONTRACTOR TO THE DESIGN ENGINEER PRIOR TO ADDITIONAL CONSTRUCTION ACTIVITIES.
23. TOPOGRAPHY SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.

PLAN NOTES

1. PROPERTY LINE DATA COMPILED FROM MULTIPLE SOURCES INCLUDING, BUT NOT LIMITED TO WORCESTER COUNTY REGISTRY OF DEEDS, TOWN OF BOLTON ASSESSOR'S DATA AND PLANS OBTAINED FROM DAVID E. ROSS ASSOCIATES PREPARED FOR THE CURRENT OWNER. FOR ADDITIONAL INFORMATION, REFER TO PLAN OF LAND, APPROVAL NOT REQUIRED PLAN, PREPARED BY DAVID E. ROSS ASSOCIATES, SUBMITTED UNDER SEPARATE COVER.
2. TOPOGRAPHIC INFORMATION OBTAINED FROM STATE OF MASSACHUSETTS GIS DATA, GOOGLE EARTH DATA, DAVID E. ROSS ASSOCIATES SURVEY DATA AND OTHER SOURCES FROM THE WORCESTER COUNTY REGISTRY OF DEEDS AND IS NOT THE RESULT OF A COMPREHENSIVE ON THE GROUND TOPOGRAPHIC SURVEY.
3. BENCHMARK TO BE ESTABLISHED IN THE FIELD PRIOR TO CONSTRUCTION.
4. THE PROJECT SITE DOES NOT APPEAR TO BE WITHIN ANY REGULATED NATURAL RESOURCE AREAS OR THEIR BUFFERS BASED ON MASSACHUSETTS GIS DATA AND FIELD REVIEWS CONDUCTED DURING DECEMBER, 2011 BY BEALS ASSOCIATES, INC. STAFF.
5. THE PROJECT SITE IS NOT WITHIN NATURAL HERITAGE ESTIMATED OR POTENTIAL HABITAT AREAS BASED ON THE CURRENT NATURAL HERITAGE MAPPING.
6. THE PROPERTY IS NOT LOCATED WITHIN MAPPED FLOOD ZONES BASED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR WORCESTER COUNTY, MASSACHUSETTS, PANEL 459 OF 1075, MAP NUMBER 25027C0459E EFFECTIVE JULY 4, 2011.
7. UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE SHOWN IN AN APPROXIMATE WAY ONLY. UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. SOME DATA MAY BE CONFLICTING AND CAN ONLY BE VERIFIED BY EXCAVATION. BEFORE DESIGN AND CONSTRUCTION CALL "DIG SAFE" AT 1-800-332-4844.
8. ANY DISCREPANCIES IN EXISTING CONDITIONS SHALL BE REPORTED TO BY THE CONTRACTOR TO THE DESIGN ENGINEER PRIOR TO ADDITIONAL CONSTRUCTION ACTIVITIES.
9. UPON CONCLUSION OF THE OPERATION OF THE SOLAR ENERGY FACILITY ALL SURFACE AND SUBSURFACE UTILITIES AND IMPROVEMENTS SHALL BE REMOVED. SITE CONDITIONS SHALL BE RESTORED TO PREDEVELOPMENT CONDITIONS, INCLUDING RESTORATION OF THE LAND TO AGRICULTURAL CONDITIONS.

ZONING NOTES:

THE SUBJECT PROPERTY IS LOCATED IN A RESIDENTIAL ZONE WHICH IS ALSO SUBJECT TO MGL CHAPTER 40A, SECTION 3 RELATING TO THE SITING OF SOLAR ENERGY SYSTEMS. CONSISTENT WITH THAT MGL, SOLAR GENERATION FACILITIES ARE NOT A PROHIBITED USE IN BOLTON. AT THE TIME THESE PLANS ARE BEING PREPARED, IT IS NOTED THAT THE TOWN OF BOLTON HAS A SOLAR ZONING BY-LAW WHICH COULD BE AFFECTED BY A LARGE SCALE SOLAR ZONING BY-LAW WHICH WILL BE VOTED UPON BY THE TOWN ON MAY 7, 2012. THE PLANS AND PERMIT APPLICATIONS HAVE BEEN PREPARED IN ANTICIPATION THAT THE ZONING BY-LAW WILL BE SIMILAR IN CONTENT TO THE STATE OF MASSACHUSETTS EXAMPLE THAT HAS BEEN UNDER REVIEW BY THE TOWN OF BOLTON PLANNING BOARD.

EXISTING BOLTON SPACE AND BULK REQUIREMENTS:

MINIMUM LOT AREA:	1.5 ACRES
MINIMUM LOT FRONTAGE:	200 FEET
MINIMUM LOT WIDTH AT 100 FEET BACK FROM STREET LINE:	150 FEET

THE PROPOSED PROJECT WILL REQUIRE THE FOLLOWING PERMITS FROM THE TOWN OF BOLTON, MASSACHUSETTS:

SITE PLAN APPROVAL FROM BOARD OF SELECTMEN
SPECIAL PERMIT APPROVAL FROM PLANNING BOARD
BUILDING PERMIT FROM BUILDING INSPECTOR

LEGEND:EXISTING

_____ BLDG. SETBACK LINE
 _____ PROPERTY LINE
 _____ EASEMENT LINE
 _____ EDGE OF WATER/STREAM CL.
 350' _____ EXISTING MAJOR CONTOUR
 348' _____ EXISTING MINOR CONTOUR
 _____ EXISTING TRELISE
 _____ WETLAND LINE
 _____ 100' BUFFER LINE
 _____ GAS _____ EXISTING GAS LINE
 W _____ EXISTING WATER LINE
 _____ EXISTING OVERHEAD ELECTRIC
 _____ EXISTING ELEC./CABLE/TELE
 S _____ EXISTING SEWER LINE
 D _____ EXISTING DRAIN LINE
 _____ EXISTING FENCE
 _____ EXISTING GUARDRAIL
 [] EXISTING EROSION CONTROL
 [] EXISTING PAVEMENT
 [] EXISTING DRAIN MANHOLE
 [] EXISTING SEWER MANHOLE
 [] EXISTING ELECTRIC MANHOLE
 [] EXISTING UTILITY POLE
 [] EXISTING WATER SHUT OFF
 [] EXISTING GAS SHUT OFF
 [] EXISTING CATCH BASIN
 [] EXISTING FLARED END
 [] EXISTING STONEWALL
 [] EXISTING HYDRANT
 [] EXISTING STREET SIGN
 [] EXISTING STREETLIGHT
 _____ FLOOD PLAIN
 _____ ZONING LINE
 _____ PERC TEST
 _____ DEEP HOLE TEST PIT

LEGEND:PROPOSED

	PROPOSED PROPERTY LINE
	PROPOSED EASEMENT LINE
	PROPOSED TREELINE
	PROPOSED GAS LINE
	PROPOSED WATER LINE
	PROPOSED OVERHEAD ELECTRIC
	PROPOSED ELEC./CABLE/TELE
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	PROPOSED DRAIN LINE
	PROPOSED FENCE
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	PROPOSED CATCH
	PROPOSED PAVEMENT
	PROPOSED STONEWALL
	PROPOSED HYDRANT
	PROPOSED STREET SIGN
	PROPOSED STREETLIGHT

Construction Sequence - Solar Energy Facility
125 Still River Road
Bolton, MA

Construction of the proposed project will proceed as follows:

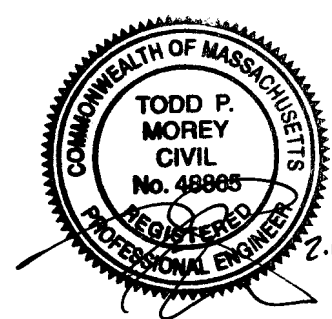
1. The limit of work line shown on the approved plans will be clearly marked with flags and stakes.
2. Install construction entrance and erosion control measures prior to operating heavy equipment on the site.
3. Any and all materials associated with the construction of the solar energy facility shall be stockpiled on the site.
4. Remove vegetation as necessary along the perimeter of the southerly and westerly boundaries of the construction area to allow maximum solar gain. Remove windbreak vegetation in the center of the site.
5. Scarcily existing fields and over-sow cover crop of low-growing vegetation (i.e. alfalfa, red clover, white clover, crown vetch, hairy vetch, buckwheat, and birdsfoot trefoil).
6. Install construction and maintenance drives as shown on plans.
7. Install 6 foot chain link fence (or equal) at limit of work.
8. Install supports for photovoltaic panels.
9. Install photovoltaic panels.
10. Construct electrical conduit connecting panel arrays.
11. Construct infra-structure for the collection of electricity generated by the photovoltaic panels (i.e. inverters and transfer station).
12. No pesticides, herbicides or fertilizers will be used during the construction or future operation and maintenance of the facility.
13. Upon abandonment or discontinued use of the Solar Energy Facility, all surface and subsurface utilities and improvements shall be removed. Site conditions shall be restored to predevelopment conditions, including agricultural conditions.



Syncarpha Solar, LLC
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14th Floor
New York, NY 10022
and
Renewable Energy
Massachusetts LLC
17 Arlington Street
Cambridge, MA 02140

BEALS · ASSOCIATES INC.

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PHONE: 617-242-1120 FAX: 617-242-1190



NO.	REVISION/ISSUE	DATE

GENERAL NOTES AND LEGEND

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PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

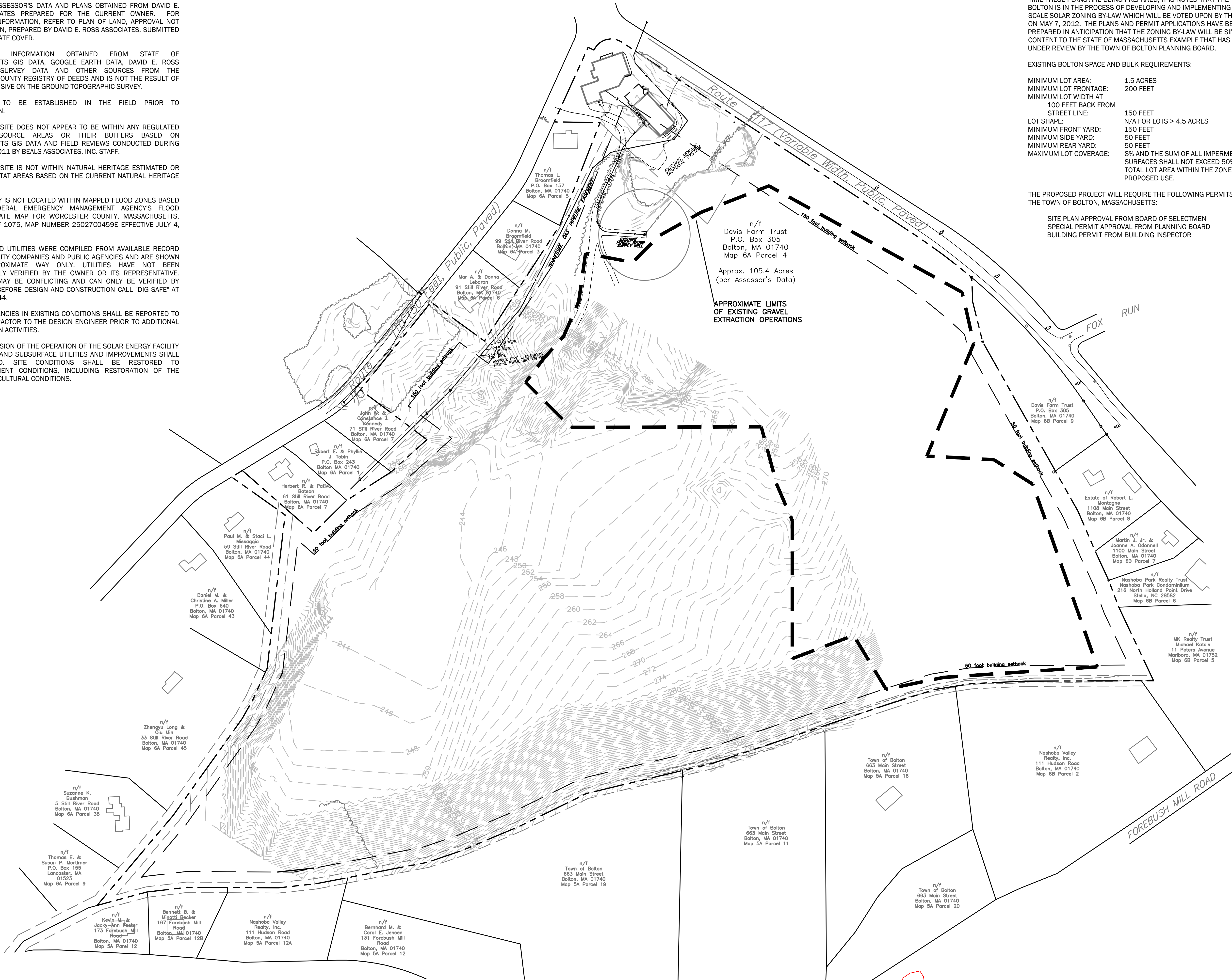
PROJECT C-763	DESIGN TPM	SHEET 2 OF 7
DATE February 16, 2012	CHECKED TPM	
SCALE AS NOTED	REVISED TPM	

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MINIMUM LOT FRONTAGE:	200 FEET
MINIMUM LOT WIDTH AT 100 FEET BACK FROM STREET LINE:	150 FEET
LOT SHAPE:	N/A FOR LOTS > 4.5 ACRES
MINIMUM FRONT YARD:	150 FEET
MINIMUM SIDE YARD:	50 FEET
MINIMUM REAR YARD:	50 FEET
MAXIMUM LOT COVERAGE:	3% AND THE SUM OF ALL IMPERMEABLE SURFACES SHALL NOT EXCEED 50% OF THE TOTAL LOT AREA WITHIN THE ZONE OF PROPOSED USE.

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PREPARED FOR:

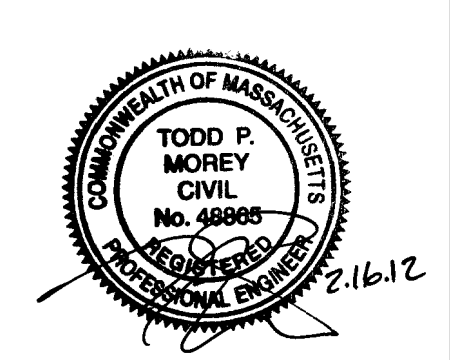
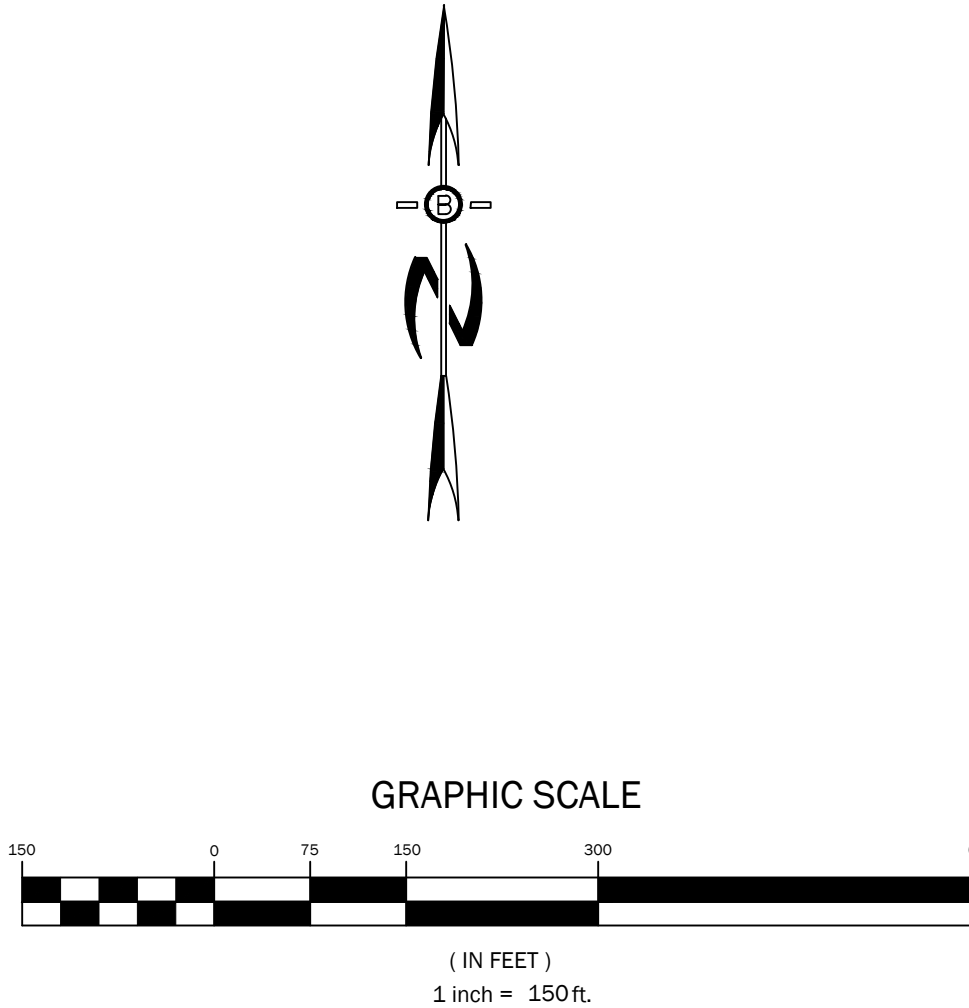
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EXISTING CONDITIONS PLAN

SITE PLAN APPROVAL/SPECIAL
PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

PROJECT C-763	DESIGN TPM	3 OF 7
DATE February 16, 2012	CHECKED TPM	
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ZONING NOTES:

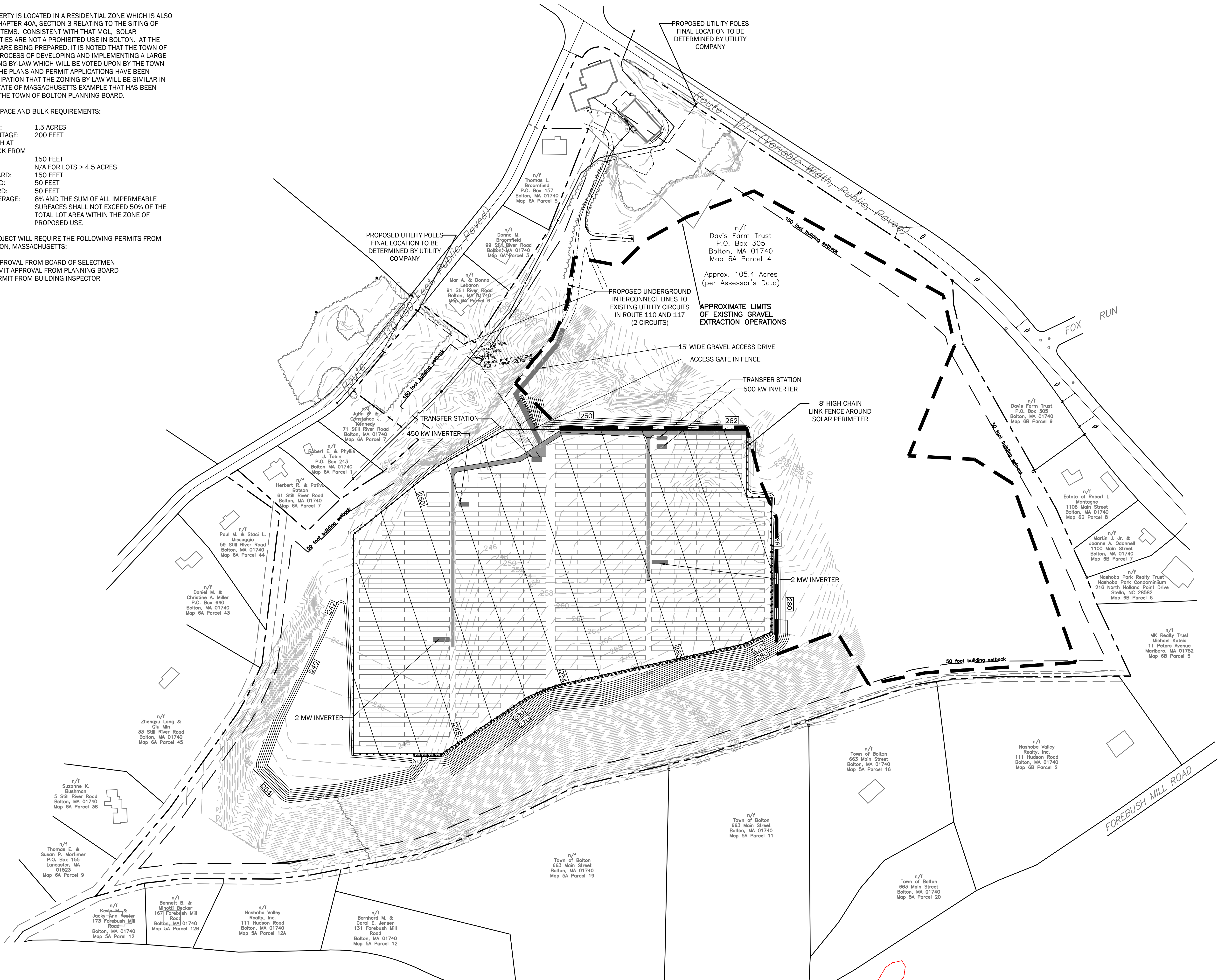
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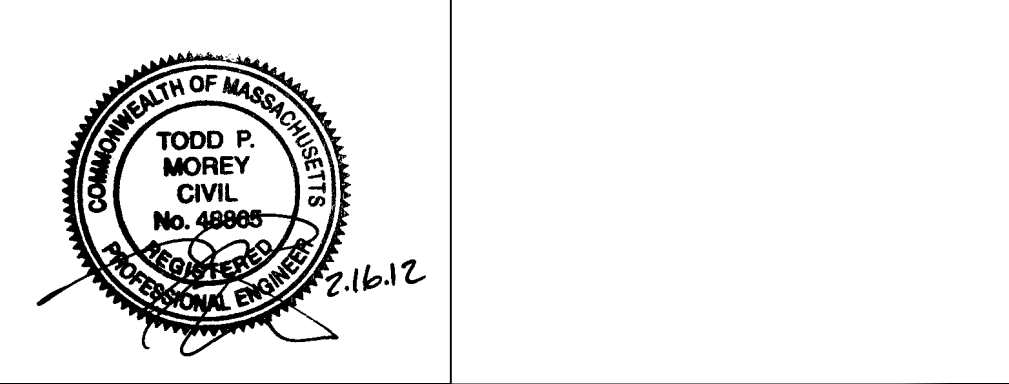
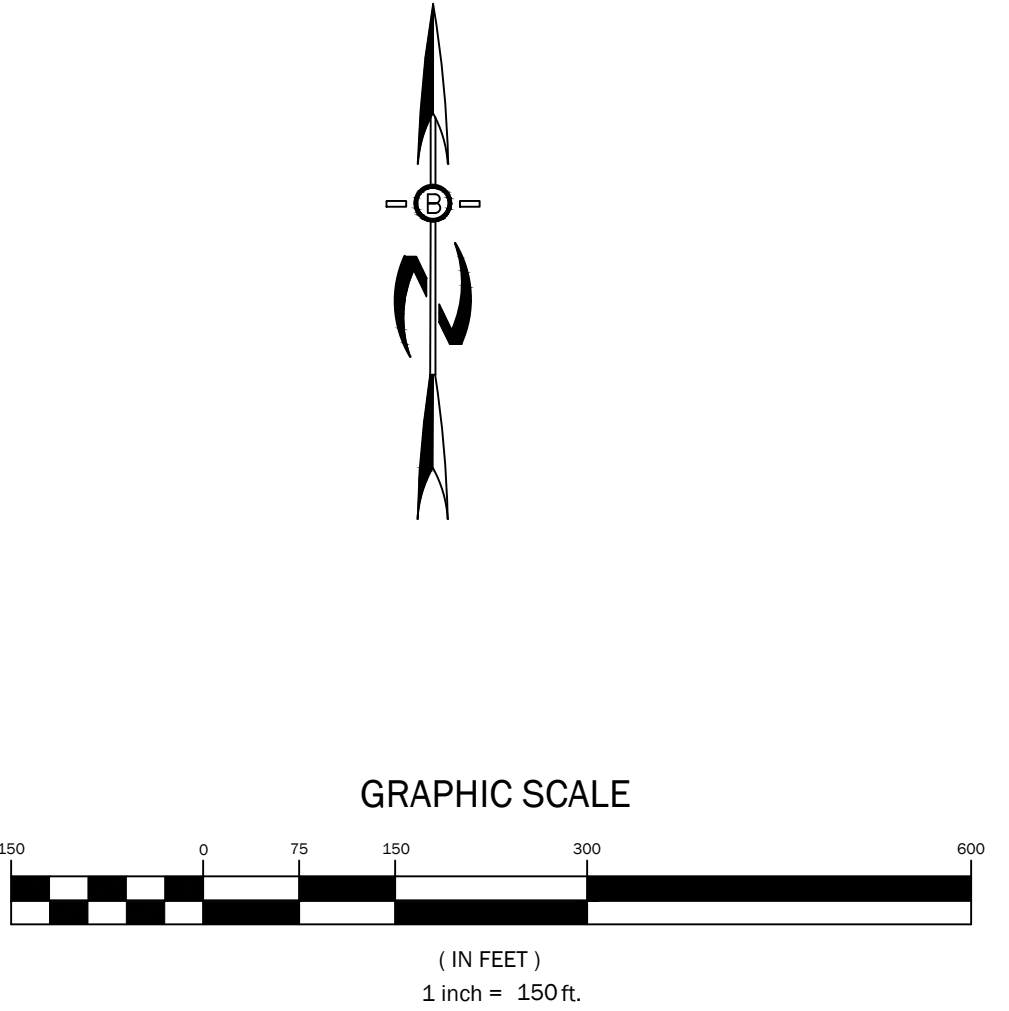


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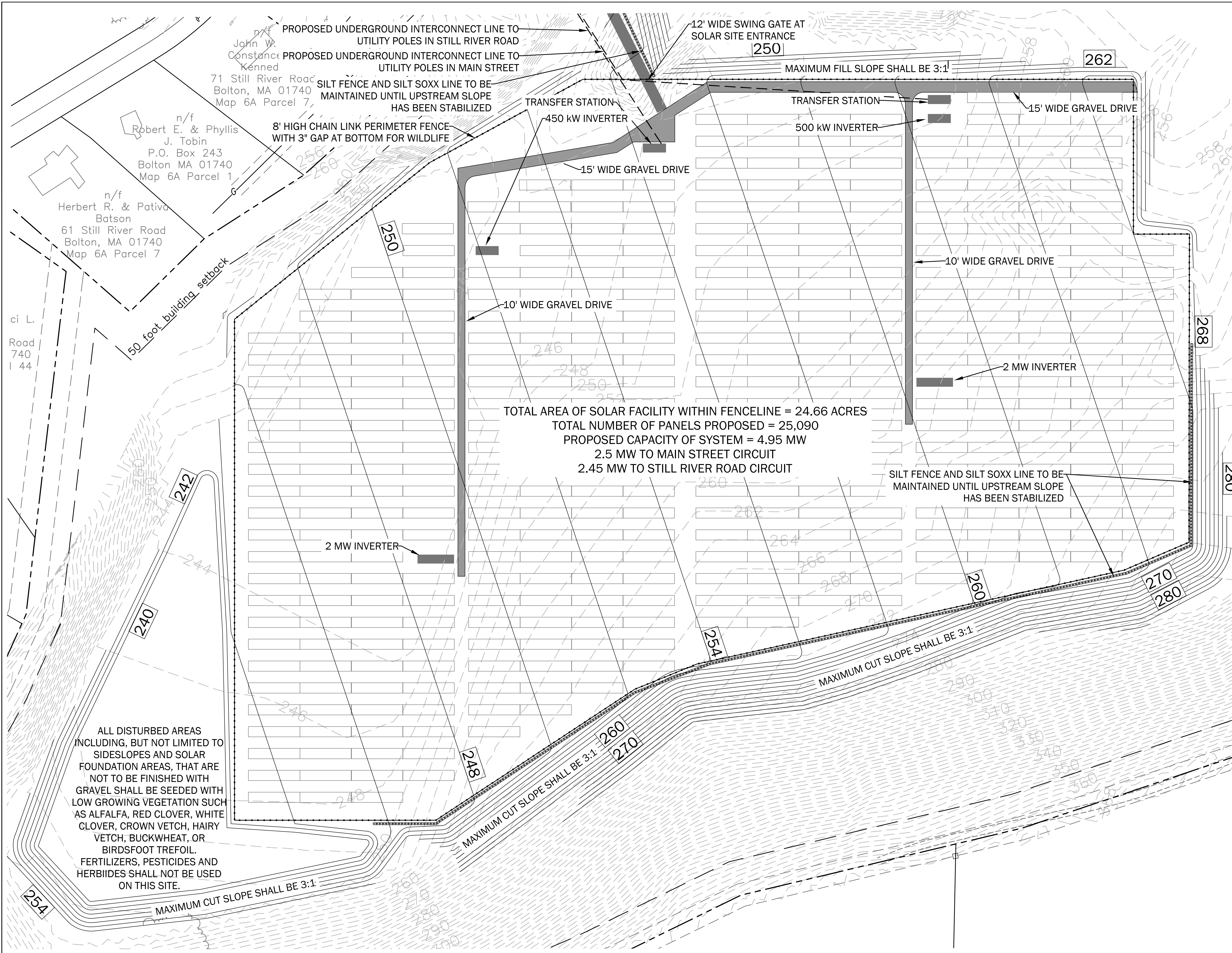


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OVERALL SITE PLAN
SITE PLAN APPROVAL/SPECIAL PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

PROJECT C-763	DESIGN TPM	SHEET 4 OF 7
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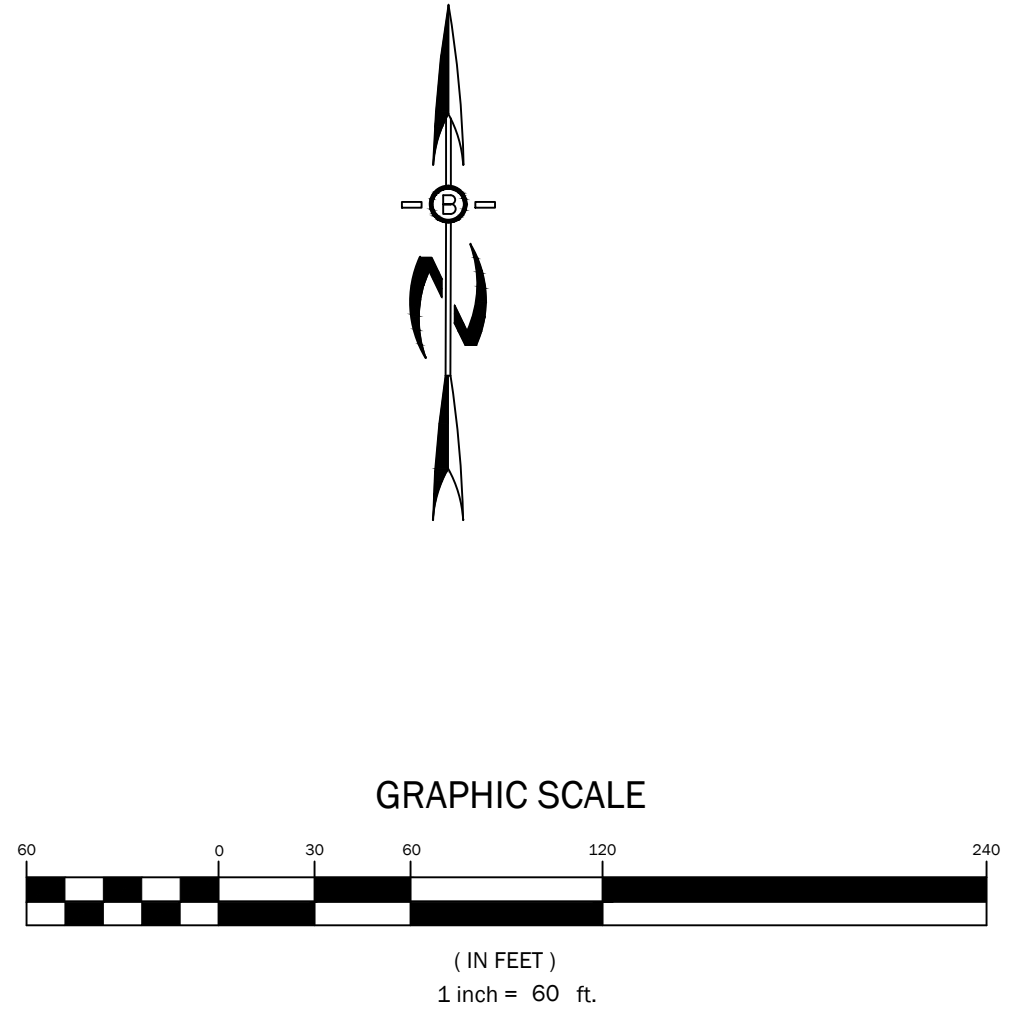


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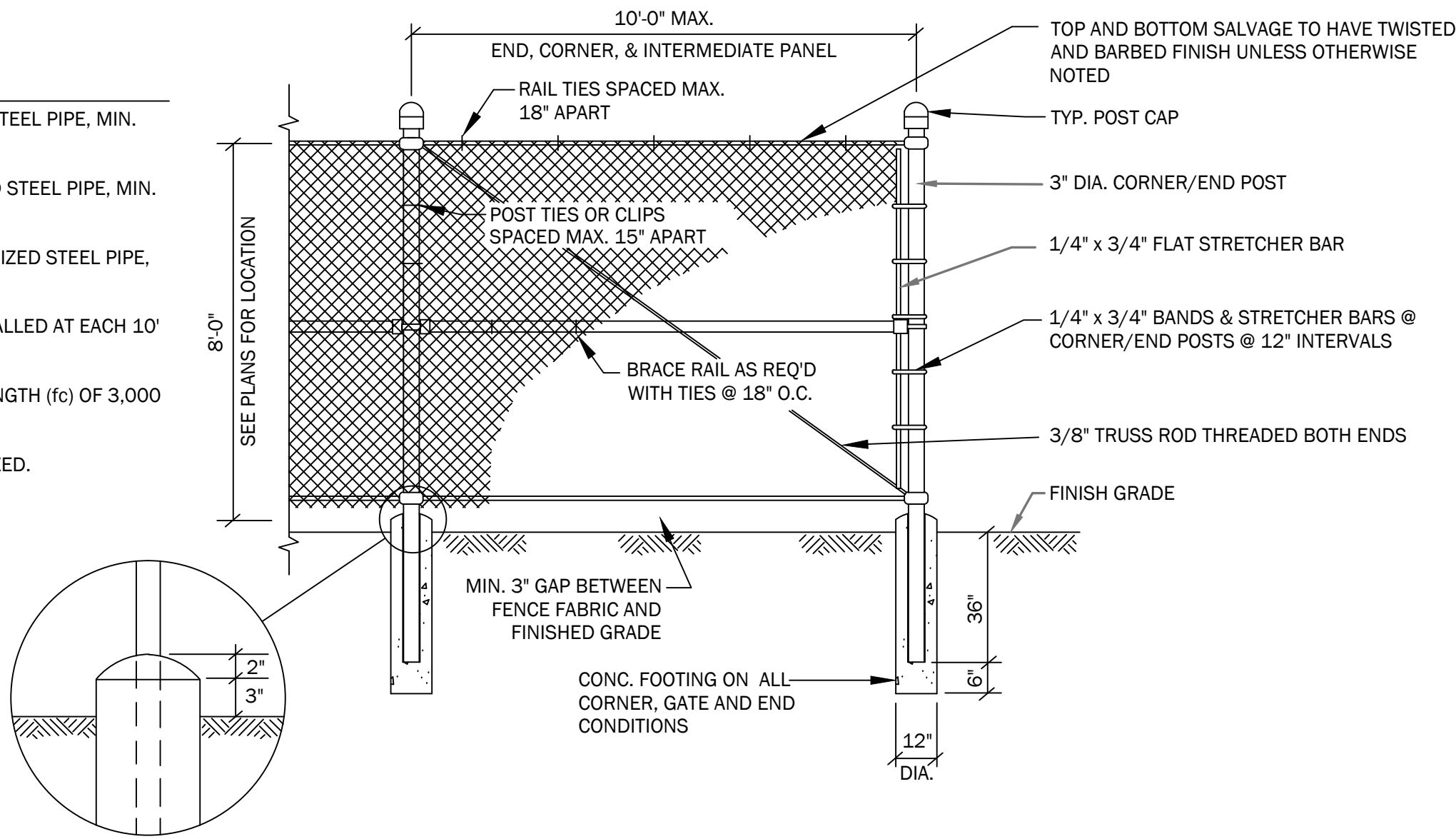
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60 SCALE SITE PLAN

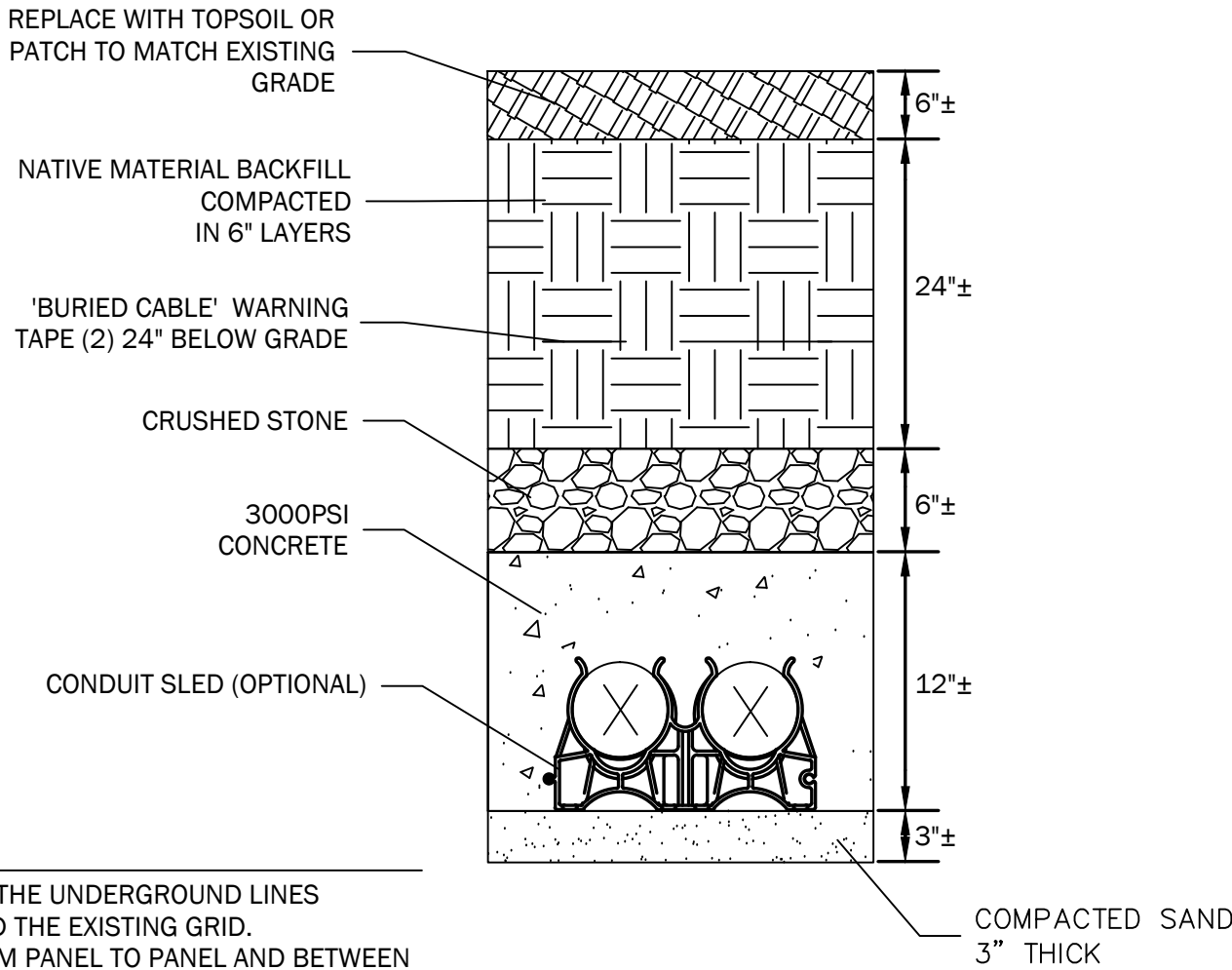
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- NOTES:
- CORNER OR END POST: NOMINAL 3" O.D. GALVANIZED STEEL PIPE, MIN. 5.79 lbs./LF.
 - INTERMEDIATE POST: NOMINAL 2-3/8" O.D. GALVANIZED STEEL PIPE, MIN. 3.65 lbs./LF.
 - BRACES (TOP & BOTTOM): NOMINAL 1-5/8" O.D. GALVANIZED STEEL PIPE, MIN. 2.27 lbs./LF.
 - BRACE RAIL AND DIAGONAL BRACE ROD SHALL BE INSTALLED AT EACH 10' CORNER SECTION OF ENCLOSURE.
 - CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH (fc) OF 3,000 psi WITH 6% AIR ENTRAINMENT.
 - ALL FENCE MATERIALS SHALL BE HOT-DIPPED GALVANIZED.

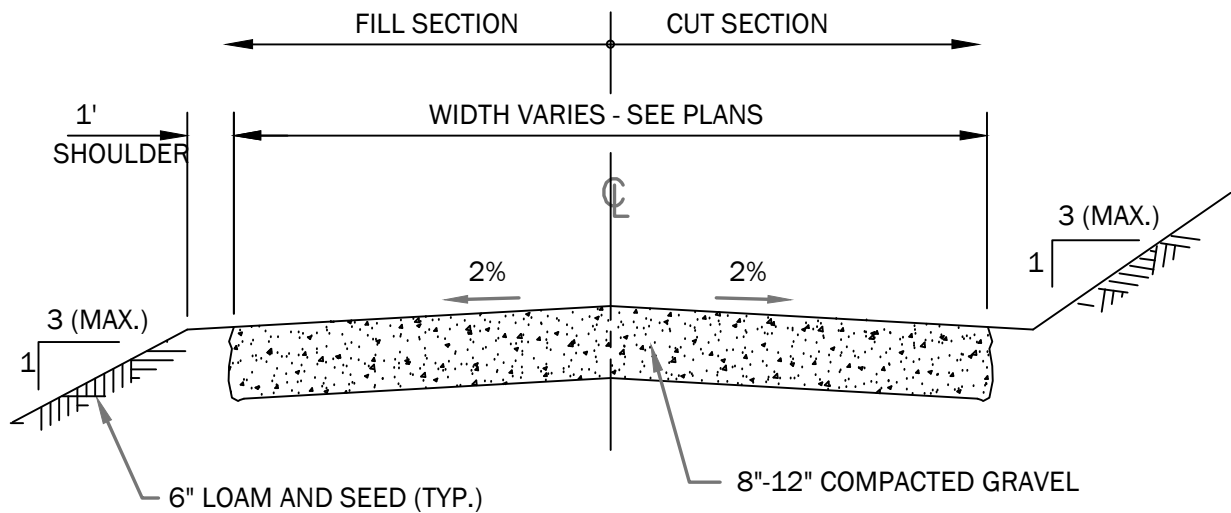


TYPICAL CHAIN LINK FENCE
NOT TO SCALE

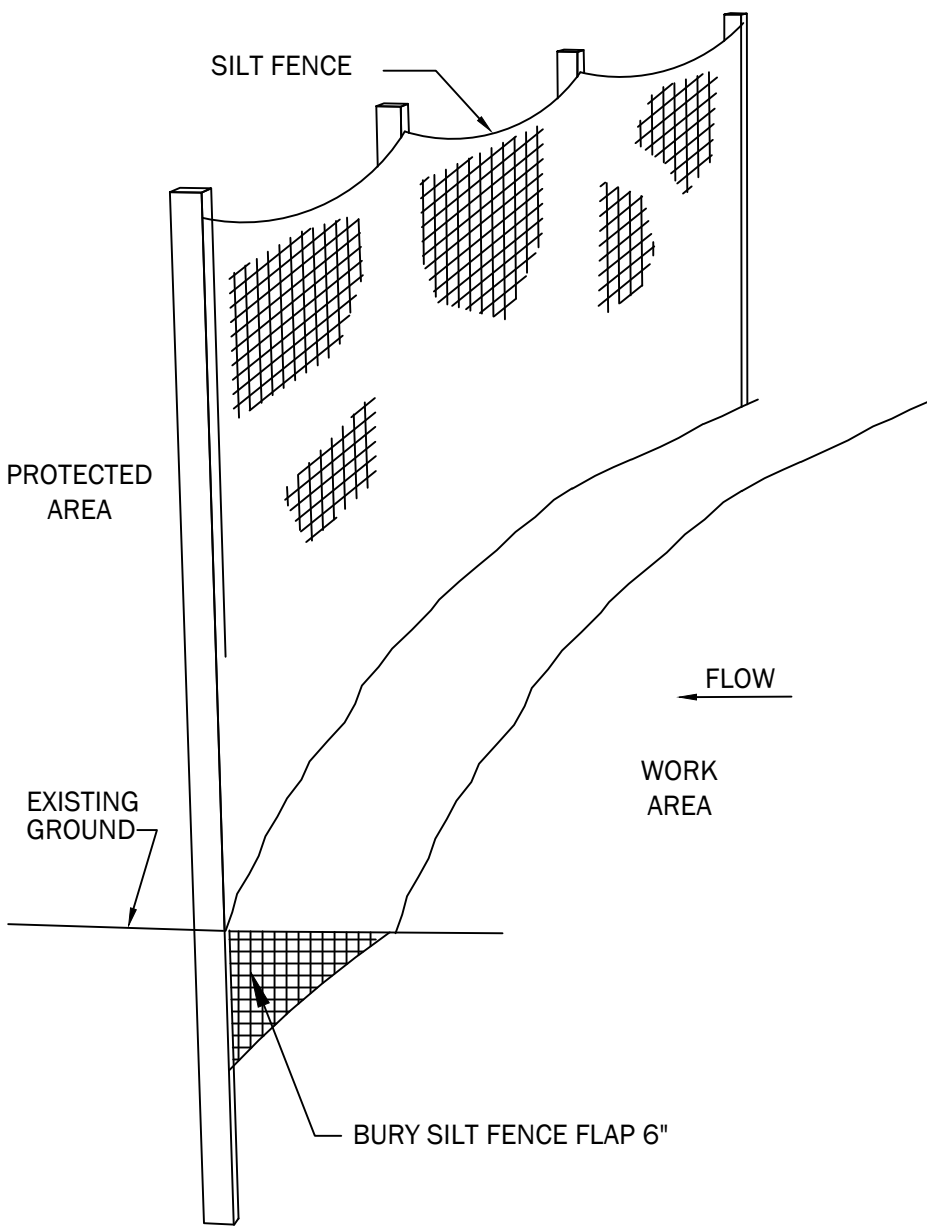


- NOTES:
- THIS DETAIL SHALL BE USED ONLY FOR THE UNDERGROUND LINES BETWEEN THE TRANSFER STATIONS AND THE EXISTING GRID.
 - UNDERGROUND ELECTRICAL LINES FROM PANEL TO PANEL AND BETWEEN OTHER APPURTENANCES MAY BE INSTALLED IN CONDUIT THAT IS DIRECT BURIED WITHOUT CONCRETE.
 - IN ALL CIRCUMSTANCES, ALL UNDERGROUND ELECTRICAL CONDUIT SHALL FEATURE "BURIED ABEL" WARNING TAPE 24" BELOW GRADE.

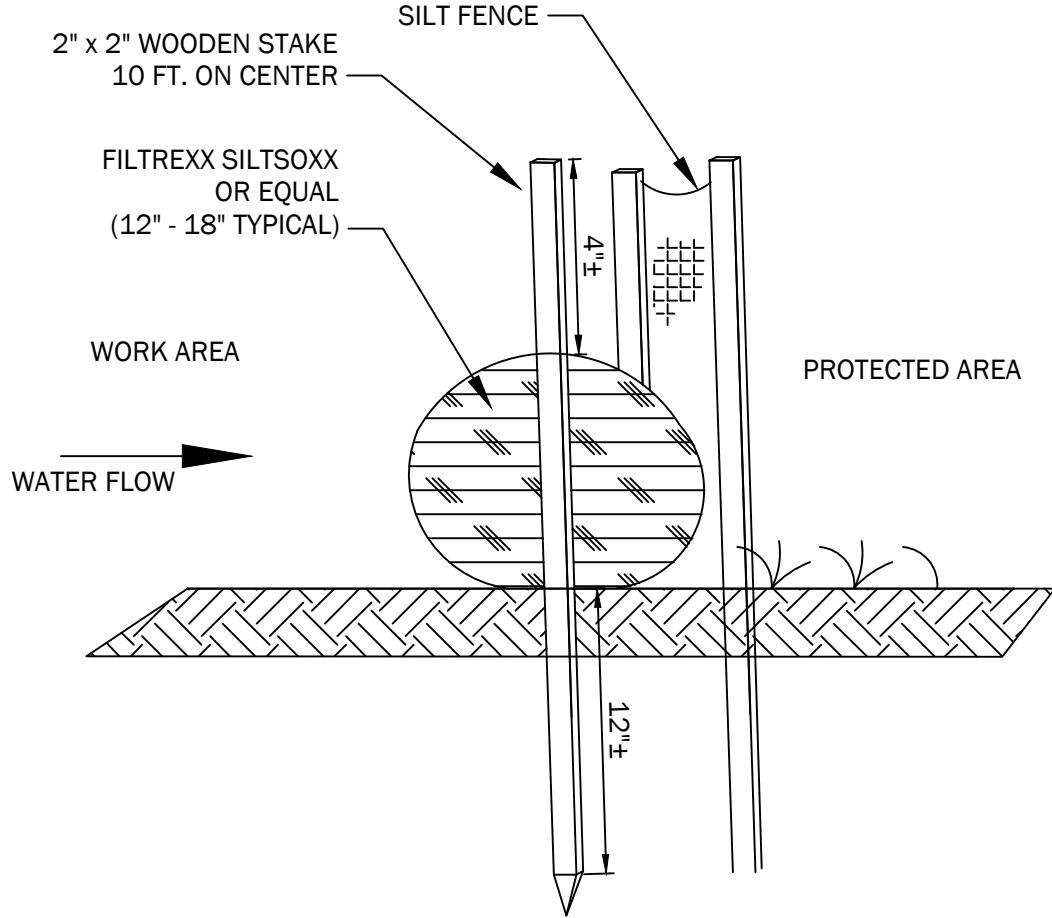
INTERCONNECT LINE
ELECTRICAL CONDUIT DUCTBANK
NOT TO SCALE



GRAVEL MAINTENANCE DRIVE
TYPICAL CROSS SECTION
NOT TO SCALE



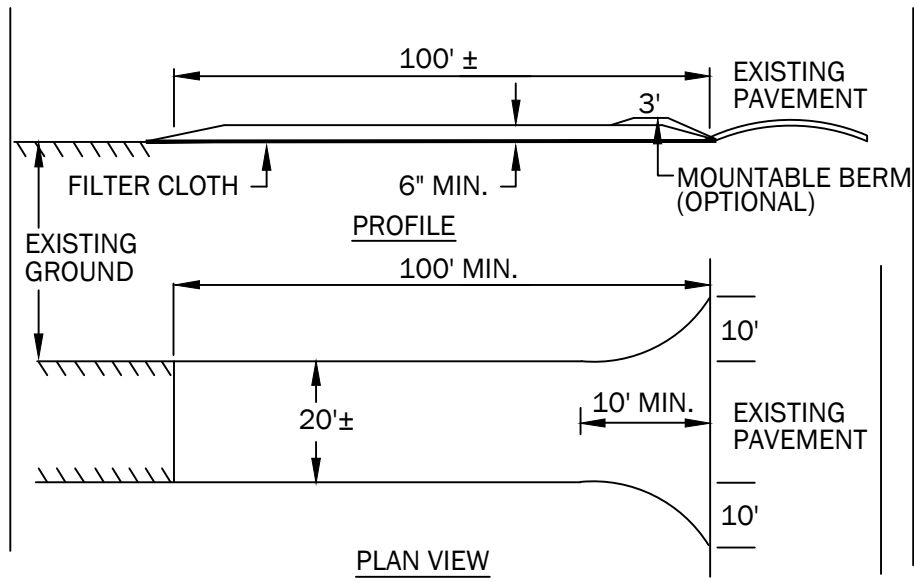
SILT FENCE INSTALLATION
NOT TO SCALE



- NOTES:
- ALL MATERIALS TO MEET INSTALLER SPECIFICATIONS.
 - COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
 - LARGER SILT SOXX OR EQUAL TO BE PROVIDED FOR STEEP SLOPES AND HEAVY FLOW AREAS.
 - SILTsoxx OR EQUAL TO BE COMPOSTED AND DISPERSED AS PER CONSERVATION COMMISSION DIRECTION.

FILTREX SITLsoxx
TYPICAL INSTALLATION
NOT TO SCALE

- NOTES:
- STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
 - THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
 - THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
 - THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
 - GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT.
 - ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.



STABILIZED CONSTRUCTION
ENTRANCE DETAIL
NOT TO SCALE

PREPARED FOR:

Syncarpha Solar, LLC
645 Madison Avenue
14th Floor
New York, NY 10022
and
Renewable Energy
Massachusetts LLC
17 Arlington Street
Cambridge, MA 02140

BEALS ASSOCIATES Inc.

2 THIRTEENTH STREET CHARLESTOWN, MA 02129
PHONE: 617-242-1120 FAX: 617-242-1190



NO.	REVISION/ISSUE	DATE
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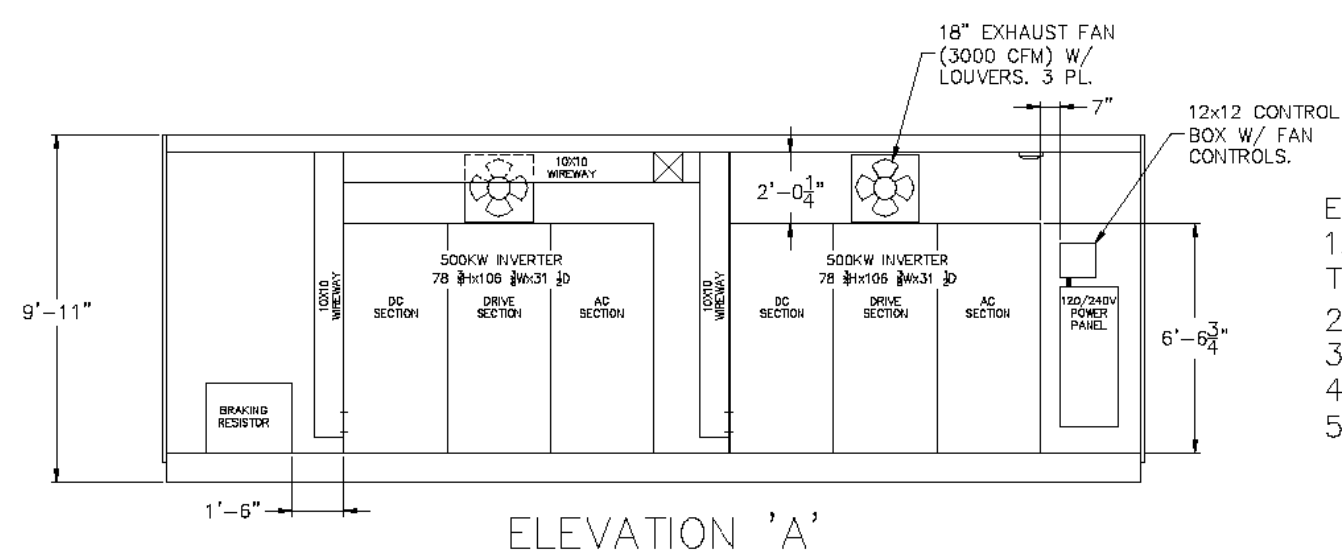
DETAIL SHEET 1

SITE PLAN APPROVAL/SPECIAL
PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

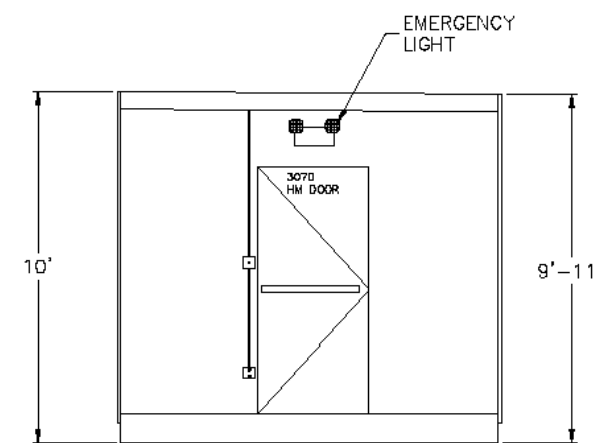
PROJECT C-763	DESIGN TPM	SHEET 6 OF 7
DATE February 16, 2012	CHECKED TPM	
SCALE AS NOTED	REVISED TPM	

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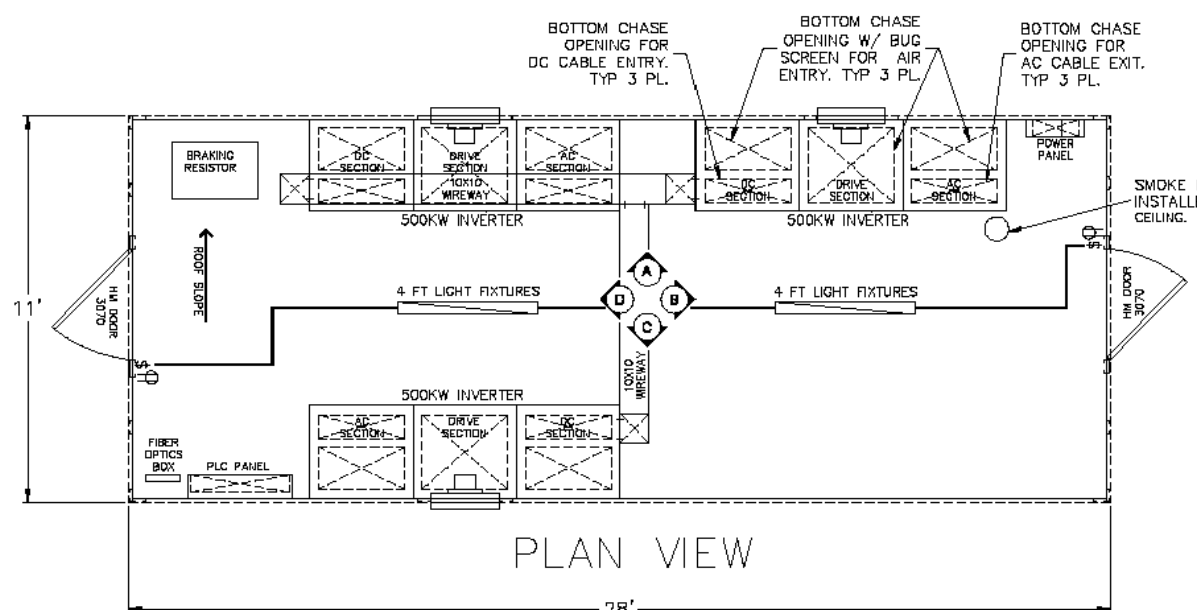


- Enclosure Options:
1. Stucco Embossed Aluminum Siding – Pueblo Tan
 2. Painted 3/4" Fire Resistant Plywood Floors
 3. Purchased Metal Doors.
 4. Membrane Roof – White
 5. Insulated Walls & Ceiling (R4.2) .

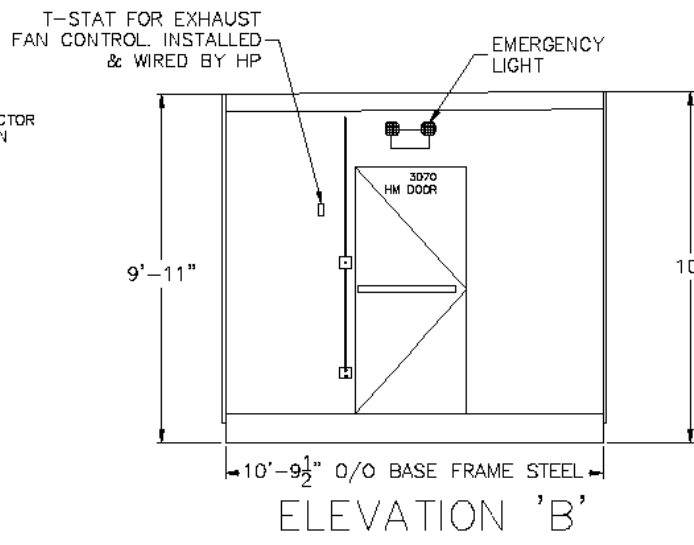


ELEVATION 'D'

APPROX WGT: 27,000 LBS.



ELEVATION 'C'

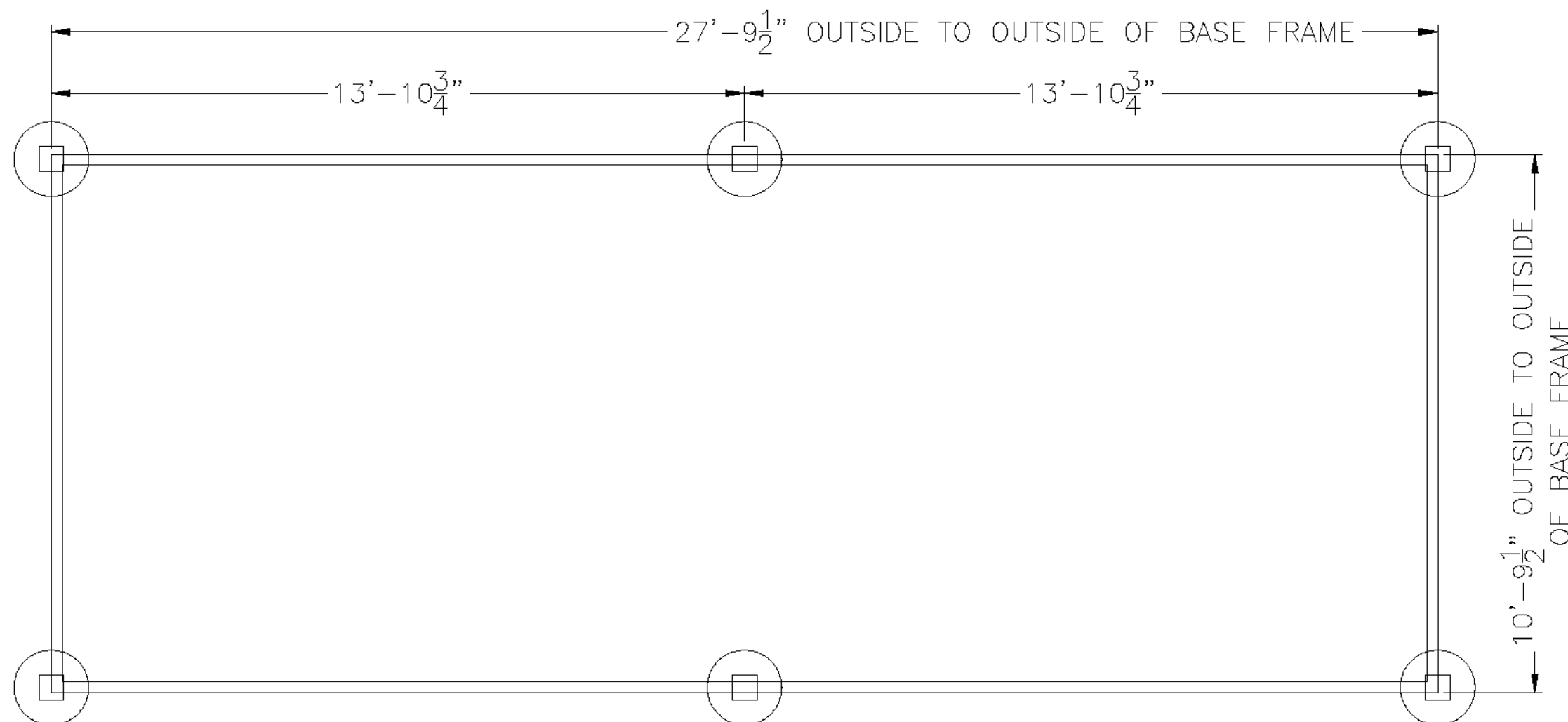


SOLAR INVERTER

REVISION RECORD				SIEMENS PV ANYWHERE, USA	
REV	DATE	BY	DESCRIPTION	DATE	BY
1	01/01/2010	IC	RELEASED FOR PROP	01/01/2010	IC
2					
3					
4					
5					

SOLAR INVERTER

FOR ILLUSTRATIVE PURPOSES ONLY
NOT FOR CONSTRUCTION



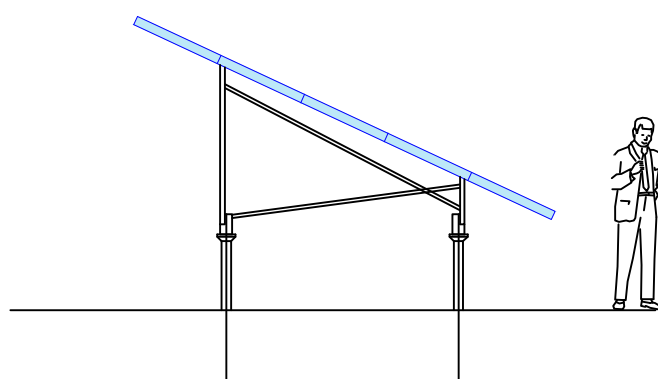
SUPPORT PIER LAYOUT

FOR ILLUSTRATIVE PURPOSES ONLY
NOT FOR CONSTRUCTION

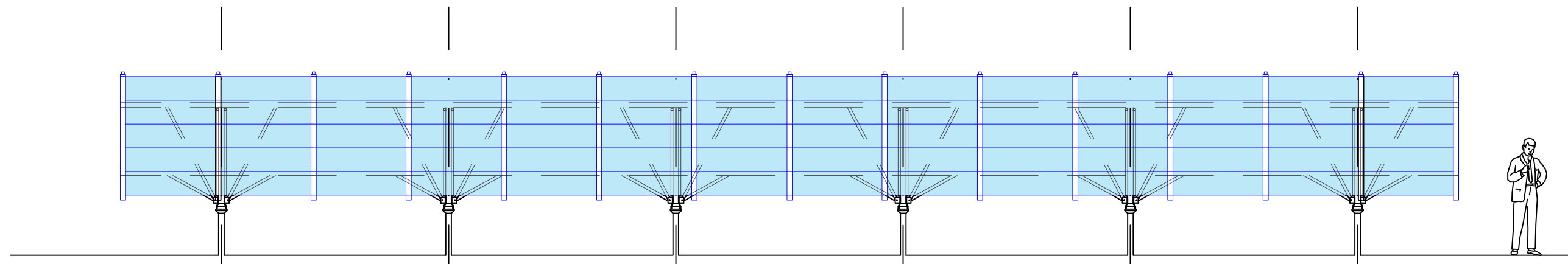
SUPPORT PIER SPACING

REVISION RECORD				SIEMENS PV ANYWHERE, USA	
REV	DATE	BY	DESCRIPTION	DATE	BY
1	01/01/2010	IC	RELEASED FOR PROP	01/01/2010	IC
2					
3					
4					
5					

SOLAR INVERTER



LEFT SIDE VIEW



FRONT VIEW

CS6P

230/235/240/245/250P

On-grid Module

CS6P is a robust solar module with 60 solar cells. These modules can be used for on-grid solar applications. Our meticulous design and production techniques ensure a high-yield, long-term performance for every module produced. Our rigorous quality control and in-house testing facilities guarantee Canadian Solar's modules meet the highest quality standards possible.

Key Features

- Top ranked PVUSA (PTC) rating in California for higher energy production
- Industry first comprehensive warranty insurance by AM Best rated leading insurance companies in the world
- Industry leading plus only power tolerance: 0 ~ +5W
- Strong framed module, passing mechanical load test of 5400Pa to withstand heavier snow load
- The 1st manufacturer in the PV industry certified for ISO TS16949 (The automotive quality management system) in module production since 2003
- ISO17025 qualified manufacturer owned testing lab, fully complying to IEC, TUV, UL testing standards
- Backed By Our New 10/25 Linear Power Warranty Plus our added 25 year insurance coverage

Applications

- On-grid residential roof-tops
- On-grid commercial/industrial roof-tops
- Solar power stations
- Other on-grid applications

Quality Certificates

- IEC 61215, IEC 61730, UL1703, CECListed, CE and MCS
- ISO9001: 2008 Standards for quality management systems
- ISO TS16949: 2009 The automotive quality management system

Environmental Certificates

- ISO14001: 2004 Standards for Environmental management systems
- QC080000 HSPM The Certification for Hazardous Substances Regulations

Electrical Data

STC	CS6P-230P	CS6P-235P	CS6P-240P	CS6P-245P	CS6P-250P
Module Maximum Power (Pmax)	230W	235W	240W	245W	250W
Optimum Operating Voltage (Vmp)	29.8V	29.8V	29.8V	30.1V	30.1V
Optimum Operating Current (Imp)	7.76A	7.89A	8.06A	8.15A	8.30A
Open Circuit Voltage (Voc)	38.8V	38.8V	37.9V	37.7V	37.2V
Short Circuit Current (IsC)	8.34A	8.48A	8.59A	8.74A	8.87A
Module Efficiency	14.30%	14.81%	14.92%	15.23%	15.54%
Operating Temperature	-40°C ~ +85°C				
Maximum System Voltage	1000V (IEC), 600V (UL)				
Maximum Series Fuse Rating	15A				
Application Classification	Class A				
Power Tolerance	0 ~ +5W				

Temperature Characteristics

	Pmax	Vmp	IsC
Temperature Coefficient	-0.43%/°C	-0.34%/°C	0.26%/°C
Normal Operating Cell Temperature	40±2°C		

Performance at Low Irradiance

Industry leading performance at low irradiation environment, +0.5% module efficiency from an irradiance of 100W/m² to 200W/m² (AM 1.5, 25°C)

Engineering Drawings

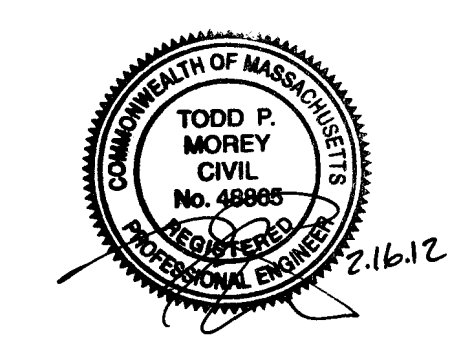
SYSTEM DETAILS			
SECTION	450kWp	500kWp	2 Sections of 2000kWp each Totals Below
# OF FRAMES	36 p	38 p	312 p
# OF MODULS	2,340 p	2,470 p	20,280 p
# MODULS/FRAME	60 p	60 p	60 p
# MODULS/STRING	13 p	13 p	13 p
POWER MODUL	235Wp	235Wp	235Wp
POWER DC	549.9 kWp	580.45 kWp	4766 kWp
POWER AC	450 kWp	500 kWp	4,000 kWp
AZIMUTH	180°	180°	180°
PITCH	27°	27°	27°
MOUNT	Fixed	Fixed	Fixed
INVERTERS	2 x 100kW PVP 1 x 250kW PVP	1 x 500kW Stat.	1 x 2.00 MW Stat.

PREPARED FOR:

Syncarpha Solar, LLC
645 Madison Avenue
14th Floor
New York, NY 10022
and
Renewable Energy
Massachusetts LLC
17 Arlington Street
Cambridge, MA 02140

BEALS ASSOCIATES INC.

2 THIRTEENTH STREET CHARLESTOWN, MA 02129
PHONE: 617-242-1120 FAX: 617-242-1190



DETAIL SHEET 2

SITE PLAN APPROVAL/SPECIAL
PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

PROJECT C-763	DESIGN TPM	SHEET
DATE February 16, 2012	CHECKED TPM	7 OF 7
SCALE AS NOTED	REVISED TPM	

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