REVISED PRELIMINARY / FINAL LAND DEVELOPMENT PLAN

FOR

EPHRATA SOLAR ENERGY FARM

PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TROUT RUN ROAD & SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG

811

STATE of PENNSYLVANIA ONE CALL
DIAL 811 or 1-800-242-1776
WWW.PA1CALL.ORG

EPHRATA TOWNSHIP BOARD of SUPERVISORS PRELIMINARY PLAN APPROVAL CERTIFICATE

AT A MEETING HELD ON _____, 20___, THE EPHRATA TOWNSHIP BOARD OF SUPERVISORS GRANTED PRELIMINARY PLAN APPROVAL OF THIS PROJECT INCLUDING THE COMPLETE SET OF PLANS MARKED SHEET(S) _____ THROUGH _____, WHICH FORM A PART OF THE APPLICATION DATED _____, LAST REVISED _____, AND BEARING EPHRATA TOWNSHIP FILE No. _____. THIS PLAN MAY NOT BE RECORDED IN THE OFFICE OF THE LANCASTER COUNTY RECORDER OF DEEDS, NOR MAY ANY CONSTRUCTION BE INITIATED.

_____
DATE CHAIRMAN

_____
DATE VICE-CHAIRMAN

EPHRATA TOWNSHIP BOARD of SUPERVISORS FINAL PLAN APPROVAL CERTIFICATE

AT A MEETING HELD ON _____, 20___, THE EPHRATA TOWNSHIP BOARD OF SUPERVISORS APPROVED THIS PROJECT INCLUDING THE COMPLETE SET OF PLANS AND INFORMATION WHICH ARE FILED WITH THE SUPERVISORS IN FILE No. _____, BASED UPON IT CONFORMITY WITH THE STANDARDS OF THE EPHRATA TOWNSHIP SUBDIVISION AND LAND DEVELOPEMENT ORDINANCE.

_____
DATE CHAIRMAN

_____
DATE VICE-CHAIRMAN

EPHRATA TOWNSHIP PLANNING COMMISSION REVIEW CERTIFICATE

AT A MEETING HELD ON _____, 20___, THE EPHRATA TOWNSHIP PLANNING COMMISSION REVIEWED THIS PLAN AND A COPY OF THE REVIEW COMMENTS IS ON FILE IN THE TOWNSHIP OFFICE.

_____
DATE CHAIRMAN

_____
DATE SECRETARY

LANCASTER COUNTY PLANNING COMMISSION REVIEW CERTIFICATE

THE LANCASTER COUNTY PLANNING COMMISSION, AS REQUIRED BY THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, ACT 247 OF 1968, AS AMENDED, REVIEWED THIS PLAN ON _____, 20___, AND A COPY OF THE REVIEW IS ON FILE AT THE OFFICE OF THE LANCASTER COUNTY PLANNING COMMISSION IN LCPC FILE NO. _____. THIS CERTIFICATE DOES NOT INDICATE APPROVAL OR DISAPPROVAL OF THE PLAN BY THE LANCASTER COUNTY PLANNING COMMISSION, AND THE COMMISSION DOES NOT REPRESENT OR GUARANTEE THAT THIS PLAN COMPLIES WITH THE VARIOUS ORDINANCES, RULES, REGULATIONS OR LAWS OF THE LOCAL MUNICIPALITY, THE COMMONWEALTH OR THE FEDERAL GOVERNMENT.

_____
DATE CHAIRMAN

_____
DATE VICE-CHAIRMAN

RECORDER OF DEEDS CERTIFICATE

RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, IN AND FOR LANCASTER COUNTY, PENNSYLVANIA, IN SUBDIVISION PLAN BOOK _____, VOLUME _____, PAGE _____. WITNESS BY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____ A.D. 20___.

_____
DATE RECORDER

SHEET INDEX

COVER SHEET	CL
OVERALL SITE PLAN	OA
EXISTING CONDITION / DEMOLITION PLAN	ECD-A / ECD-B
SITE PLAN	SP-A / SP-B
GRADING, UTILITIES and EROSION CONTROL PLAN	GUE-A / GUE-B
EROSION & SEDIMENT CONTROL NOTES	NE
DETAIL SHEET	DT

UTILITY NOTES

1. NO WATER SERVICE IS REQUIRED FOR THE PROPOSED IMPROVEMENTS.
2. NO SANITARY SEWER SERVICE OR SEPTIC IS REQUIRED FOR THE PROPOSED IMPROVEMENTS.

OWNER / APPLICANT INFORMATION

OWNER / APPLICANT :

EPHRATA BOROUGH

124 SOUTH STATE STREET
EPHRATA, PA 17522
PHONE No. 717-738-9202

CERTIFICATE of OWNERSHIP, ACKNOWLEDGEMENT of PLAN and OFFER of DEDICATION

COMMONWEALTH OF PENNSYLVANIA, COUNTY OF LANCASTER

ON THIS, THE 10th DAY OF December, 20 15 BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED D Robert Thompson, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT HE IS THE Owner OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN THEREOF WAS MADE AT HIS DIRECTION, THAT HE ACKNOWLEDGES THE SAME TO BE HIS ACT AND PLAN, THAT HE DESIRES THE SAME TO BE RECORDED, AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED TO THE PUBLIC USE.

CORPORATE SEAL

12/10/2015 _____
DATE SIGNATURE

12-10-15 _____
DATE SIGNATURE of NOTARY PUBLIC

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Kathleen M. Holzinger, Notary Public
Ephrata Boro, Lancaster County
My Commission Expires Aug. 5, 2018
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

CERTIFICATION of ACCURACY

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE EPHRATA TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.
DECEMBER 11th , 2015 .

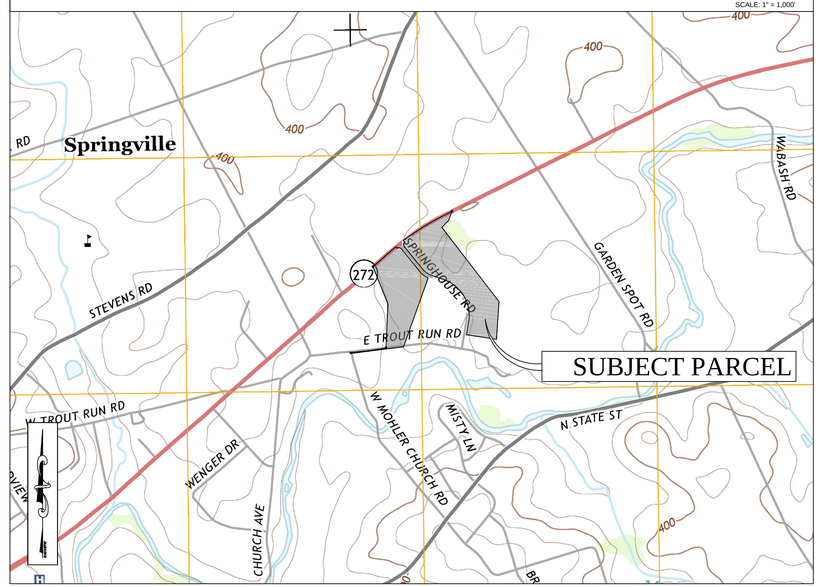
K. MATTHEW RUTT, PE - PA LIC. No. 073433
LANDCORE ENGINEERING CONSULTANTS, PC.
8614 MONTGOMERY AVENUE
WYNDMOOR, PENNSYLVANIA 19038

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
K. MATTHEW RUTT
ENGINEER
No. PE073433
PENNSYLVANIA

12 / 11 / 2015 _____
DATE SIGNATURE

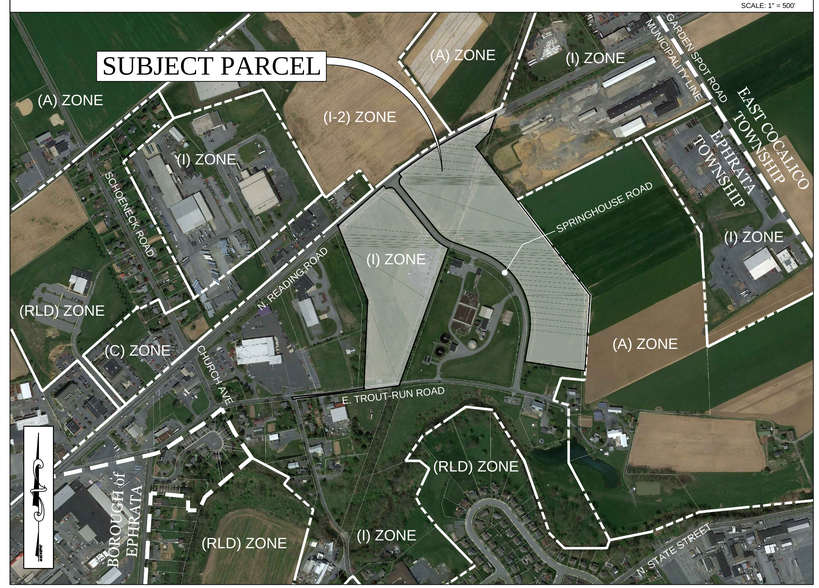
USGS MAP

SCALE: 1" = 1,000'



LOCATION MAP

SCALE: 1" = 500'



REV.	DATE	COMMENT	BY
01	01/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.

K. MATTHEW RUTT, P.E.
PENNSYLVANIA LICENSE NO. 073433
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

PROJECT No: 150066 | DRAWN BY: B. MASEKASAT | CHECKED BY: K. M. RUTT | CAD I.D. #: 01_CL_150066

LANDCORE
Engineering Consultants, P.C.
PRINCETON, NJ
TRIPORT CORPORATE CENTER
SUITE 220
PENNINGTON, NJ 08534
PHONE 609.730.0400
SAN ANTONIO, TX
ATT: JEFF FAN
1250 LAKE PLAZA DRIVE
SUITE 400
COLORADO SPRINGS, CO 80906
PHONE 719.473.2814
PITTSBURGH, PA
ATT: JEFF FAN
TECHNOLOGY CENTER
SUITE 3130
5000 BAUM BOULEVARD
PITTSBURGH, PA 15213
PHONE 412.253.4589
PHILADELPHIA, PA
ATT: JEFF FAN
1500 WALNUT STREET
SUITE 1900
PHILADELPHIA, PA 19102
PHONE 215.790.4500
WYNDMOOR, PA
ATT: JEFF FAN
8614 MONTGOMERY AVENUE
WYNDMOOR, PA 19038
PHONE 215.836.9251

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TROUT RUN ROAD & SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: COVER SHEET

SCALE: (H) AS NOTED (V) -
DATE: 2015 - 12 - 11
SHEET: CL
REV. No: 0

C:\USERS\MWOLFE\DROPBOX (LANDCORE)\PROJECTS\2015\150066 - GROSOLAR - EPHRATA PA\DRAWINGS\00-SITE PLANS\01_CL_150066-----XLAYOUT: COVER SHEET

SEED SPECIFICATIONS

ALL CULTIVATED AREAS OF THE SITE HAVE RECENTLY BEEN SEEDED WITH A RYE GRASS (FALL 2015). SUCH AREAS SHALL BE RE-SEEDED IN A NO-TILL MANNER WITH SEED MIX AS FOLLOWS:

"NO MOW" LAWN MIX WITH ANNUAL RYE NURSE CROP OR COMPARABLE SEED MIXTURE

SCIENTIFIC NAME	COMMON NAME	HEIGHT	LIGHT REQUIREMENTS
FESTUCA LONGIFOLIA	HARD FESCUE	6 - 24"	FULL SUN TO PARTIAL SHADE
FESTUCA OVINA	SHEEP FESCUE	6 - 24"	FULL SUN TO PARTIAL SHADE
FESTUCA RUBRA VAR. COMMUTATA	CHEWINGS FESCUE	6 - 24"	FULL SUN TO PARTIAL SHADE
FESTUCA RUBRA VAR. RUBRA	CREEPING RED FESCUE	6 - 24"	FULL SUN TO PARTIAL SHADE
FESTUCA RUBRA VAR. TRICHYOPLYLA	DAWSON RED FESCUE	6 - 24"	FULL SUN TO PARTIAL SHADE

PLANTING RESTRICTIONS

PLANT DURING ONE OF THE FOLLOWING PERIODS. COORDINATE PLANTING PERIODS WITH INITIAL MAINTENANCE PERIODS TO PROVIDE REQUIRED MAINTENANCE FROM DATE OF SUBSTANTIAL COMPLETION. FALL PLANTING IS OPTIMAL.

SPRING PLANTING: 15 MARCH - 15 MAY.
FALL PLANTING: 20 AUGUST - 15 OCTOBER.

TURF ESTABLISHMENT / MAINTENANCE PROCEDURE

- TO ASSURE A GOOD STAND OF NO-MOW TURF WITH MINIMAL COMPETITION FROM WEEDS & OTHER UNDESIRABLES, CONTRACTOR TO ELIMINATE ALL EXISTING PERENNIAL VEGETATION PRIOR TO SEEDING. THE CONTRACTOR WILL COORDINATE AN APPLICATION OF GLYPHOSATE HERBICIDE AT THE APPROPRIATE TIME OF THE GROWING SEASON TO MATCH THE SEEDING SCHEDULE. ADDITIONAL APPLICATIONS MAY BE NECESSARY AT A LATER DATE IN ORDER TO CONTROL PERSISTENT PERENNIAL WEEDS.
- CONTRACTOR TO MAINTAIN AND ESTABLISH TURF BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING AND PERFORMING OTHER OPERATIONS AS REQUIRED TO ESTABLISH HEALTHY, VIABLE TURF.
- YEAR ONE: MAINTAIN TURF TO A HEIGHT OF 6 INCHES.
- YEAR TWO AND BEYOND: INSPECT TURF ONE TO TWO TIMES ANNUALLY FOR INVASIVE SPECIES. ANY INVASIVE SPECIES SHOULD BE MAINTAINED TO A HEIGHT OF 4 INCHES AT TIME OF BLOOMING AND AGAIN IF THEY RE-BLOOM LATER IN SEASON.
- IN TIMES OF DROUGHT WHERE THE GROUNDCOVER BECOMES EXCESSIVELY DRY OR DORMANT, THE GROUNDCOVER MUST BE MOWED AND MAINTAINED TO A MAXIMUM HEIGHT OF 4" FOR FIRE PROTECTION PURPOSES.

GENERAL NOTES

(AS APPLICABLE TO THIS PROJECT)

1. SPECIFIC RESOURCES, TECHNICAL REPORTS, DESIGN DOCUMENTS, ET. AL. RELATED TO THIS PROJECT INCLUDE (BUT MAY NOT BE LIMITED TO THE FOLLOWING):
   1.1. SURVEY
   1.2. GEOTECHNICAL REPORTS
2. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THESE DOCUMENTS AND FAMILIARIZING HIMSELF WITH THE SAME BOTH PRIOR TO AND DURING CONSTRUCTION.
3. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE SURVEYOR'S BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUNDBREAKING.
4. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.
5. THE OWNER / CONTRACTOR SHALL BE FAMILIAR WITH AND RESPONSIBLE FOR ANY / ALL CERTIFICATIONS, INSPECTIONS, ETC. REQUIRED BY ALL GOVERNING JURISDICTIONAL AGENCIES DURING AND AFTER CONSTRUCTION FOR SIGN-OFF AND CERTIFICATE OF OCCUPANCY ISSUANCE, INCLUDING BUT NOT LIMITED TO PROCUREMENT OF SERVICES, SCHEDULING OF FIELD OBSERVATIONS AND COORDINATION WITH REPRESENTATIVES OF THE APPROPRIATE PARTIES.
6. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
7. THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN THE CASE OF CONFLICT SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DISCREPANCY BETWEEN THE GEOTECHNICAL REPORT AND THE PLANS, ETC.
8. THE PROPERTY SURVEY SHALL BE CONSIDERED A PART OF THESE PLANS.
9. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO LANDCORE ENGINEERING CONSULTANTS, PC. AT THE TIME OF PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY LANDCORE ENGINEERING CONSULTANTS, PC. IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES.
10. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE RE-DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
11. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, COUNTY AND TOWN LOCAL LAWS AND APPLICABLE CODES.
12. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.
13. CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ADJACENT TO PAVEMENT, STRUCTURES, ETC. TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES AS NECESSARY TO ENSURE THE STRUCTURE STABILITY OF SIDEWALKS AND PAVEMENT TO REMAIN, AND TO PROVIDE A SAFE WORK AREA.
14. CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE ALL SIGNAL INTERCONNECT CABLE, CONDUITS AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION. REPAIR SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND NOTIFY CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
15. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS INDICATED IN SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND / OR GEOTECHNICAL REPORT.
16. ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS / MEANS FOR COMPLETION OF THE WORK DEPICTED ON THESE PLANS NOR ANY CONFLICTS / SCOPE REVISIONS WHICH RESULT FROM THE SAME. CONTRACTOR IS RESPONSIBLE FOR DETERMINING METHODS / MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND NOTIFICATION OF OWNER AND ENGINEER OF RECORD WHEN A CONFLICT IS IDENTIFIED.
17. ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY NOR HAS HE BEEN RETAINED FOR SUCH PURPOSES.
18. ALL CONTRACTORS MUST CARRY STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND APPROPRIATE LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (CGL). ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME LANDCORE ENGINEERING CONSULTANTS, PC. AND ITS SUBCONSULTANTS AS ADDITIONAL INSURED AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THE HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH LANDCORE ENGINEERING CONSULTANTS, P.C. WITH CERTIFICATIONS OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCING WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY THE LAW, INDEMNIFY AND HOLD HARMLESS LANDCORE ENGINEERING CONSULTANTS, PC. AND ITS SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS.
19. NEITHER THE PROFESSIONAL ACTIVITIES OF LANDCORE ENGINEERING CONSULTANTS, P.C. NOR THE PRESENCE OF LANDCORE ENGINEERING CONSULTANTS, P.C. OR ITS EMPLOYEES AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE, SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. LANDCORE ENGINEERING CONSULTANTS, P.C. AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOBSITE SAFETY. OWNER AND LANDCORE ENGINEERING CONSULTANTS, P.C. SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND SHALL BE MADE ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE.
20. LANDCORE ENGINEERING CONSULTANTS, P.C. SHALL REVIEW AND APPROVE OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION SHOWN, NOT CONSTRUCTION MEANS OR METHODS, COORDINATION OF THE WORK WITH OTHER TRADES, OR CONSTRUCTION SAFETY PRECAUTIONS, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. LANDCORE ENGINEERING'S REVIEW SHALL BE COMPLETED WITH REASONABLE PROMPTNESS (APPROX. 72-96 HOURS FOR INITIAL SUBMISSION; 48-72 HOURS FOR UPDATED SUBMISSIONS) WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE THAT LANDCORE ENGINEERING CONSULTANTS, P.C. HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. LANDCORE ENGINEERING CONSULTANTS, P.C. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT BROUGHT TO THE ATTENTION OF LANDCORE ENGINEERING CONSULTANTS, P.C. IN WRITING BY THE CONTRACTOR. LANDCORE ENGINEERING CONSULTANTS, P.C. SHALL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
21. IN AN EFFORT TO RESOLVE ANY CONFLICTS THAT ARISE DURING THE DESIGN AND CONSTRUCTION OF THE PROJECT OR FOLLOWING THE COMPLETION OF THE PROJECT, LANDCORE ENGINEERING CONSULTANTS, P.C. AND THE CONTRACTOR MUST AGREE THAT ALL DISPUTES BETWEEN THEM ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE PROJECT SHALL BE SUBMITTED TO NONBINDING MEDIATION UNLESS THE PARTIES MUTUALLY AGREE OTHERWISE.
22. THE CONTRACTOR MUST INCLUDE A MEDIATION PROVISION IN ALL AGREEMENTS WITH INDEPENDENT SUBCONTRACTORS AND CONSULTANTS RETAINED FOR THE PROJECT AND TO REQUIRE ALL INDEPENDENT CONTRACTORS AND CONSULTANTS ALSO TO INCLUDE A SIMILAR MEDIATION PROVISION IN ALL AGREEMENTS WITH THEIR SUBCONTRACTORS, SUBCONSULTANTS, SUPPLIERS AND FABRICATORS, THEREBY PROVIDING FOR MEDIATION AS THE PRIMARY METHOD FOR DISPUTE RESOLUTION BETWEEN THE PARTIES TO ALL THOSE AGREEMENTS.
23. IF THE CONTRACTOR DEVIATES FORM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING PRIOR WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE. ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.
24. NO SEWER OR WATER SERVICES ARE REQUIRED FOR THIS DEVELOPMENT.
25. THIS PLAN IS FOR APPROVAL PURPOSES ONLY; EXACT PANEL, ARRAY, INVERTER AND ELECTRICAL INTERCONNECT CONFIGURATION AND DIMENSIONS MAY CHANGE BASED ON ACTUAL EQUIPMENT AND MANUFACTURER SELECTION. HOWEVER, THE ULTIMATE PANEL / FENCING LOCATIONS MUST REMAIN WITHIN THE MAXIMUM EXTENTS AS SPECIFIED ON THE APPROVED SITE PLAN. CONTRACTOR TO USE FINAL CONSTRUCTION DRAWINGS FOR INSTALLATION PURPOSES.

BULK REQUIREMENTS

APPLICANT/ OWNER:
EPHRATA SOLAR ENERGY FARM
EPHRATA BOROUGH
124 SOUTH STATE STREET
EPHRATA, PENNSYLVANIA 17522
PHONE No. 717-738-9202

THIS SITE PLAN REFERENCES A BOUNDARY AND TOPOGRAPHICAL SURVEY BY:
BLUE MARSH ASSOCIATES, INC.
P.O. BOX 563, 2385 RABATHA DRIVE
WARRINGTON, PA 18976
DATED 11/11/15

PARCEL DATA:
ADDRESS:
18 EAST TROUT RUN ROAD & # 21 SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

PARCEL NOS. 270-22330 & 270-42620

ZONED : I (INDUSTRIAL)

EXISTING USE:
AGRICULTURAL

PROPOSED USE:
LARGE SOLAR ENERGY PRODUCTION FACILITY
(SPECIAL EXCEPTION USE)

BULK REQUIREMENTS:

	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	43,560 SF (1.000 Ac.)		
INCLUDING ROW AREA		1,438,684 SF (33.027 Ac.)	NO CHANGE
EXCLUDING ROW AREA		1,390,404 SF (31.919 Ac.)	NO CHANGE
MINIMUM LOT WIDTH	200.0'	273.63' (TROUT ROAD)	NO CHANGE
MAXIMUM LOT COVERAGE	60 %	0.55 % (7,600 SF)	NO CHANGE
MAXIMUM IMPERVIOUS COVERAGE	70 %	3.3 % (46,367 SF)	3.8 % (53,021 SF)
MINIMUM FRONT YARD	50.0'	123.26'	50'
MINIMUM SIDE YARD	25.0'	75.63'	25'
MINIMUM REAR YARD	50.0'	NOT APPLICABLE	NOT APPLICABLE
MAXIMUM BUILDING HEIGHT	40.0'	NOT APPLICABLE	NOT APPLICABLE
MAXIMUM FENCE HEIGHT (FOR LARGE SOLAR ENERGY PRODUCTION FACILITIES)	8.0'	6.0'	8.0'

ALL CALCULATIONS UTILIZE LOT AREA EXCLUDING ROW AND INCLUDE LEASE AREA

REQUESTED SALDO WAIVERS/DEFERRALS

WAIVERS:

SECTION 305.A AND 308.D TO PERMIT CONCURRENT PROCESSING OF PRELIMINARY AND FINAL LAND DEVELOPMENT PLAN APPLICATIONS.

DEFERRALS:

SECTION 602.A(7) - WIDENING OF TROUT RUN ROAD

SECTION 603.B - SIDEWALK INSTALLATION

SECTION 609.E(8) - STREET TREE INSTALLATION

LINETYPE LEGEND

PROPERTY LINE (PIQ)
LEASE LINE
PROPERTY LINE (ADJOINERS)
PROPERTY LINE (RIGHT OF WAY)
BUILDING SETBACK LINE
MAXIMUM EXTENT OF SOLAR PANELS
MAXIMUM EXTENT OF PERIMETER FENCING
MAXIMUM EXTENT OF PERIMETER FENCING (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)
FLOODPLAIN — FLOODPLAIN LINE (PER 2005 FEMA MAPPING)
EXISTING TREELINE

NOTE:
A PADEP SEWERAGE PLANNING MODULE IS NOT REQUIRED FOR THIS PROJECT SINCE IT WILL NOT GENERATE ANY WASTEWATER.

SCHEDULE OF INSPECTIONS

THE DEVELOPER SHALL PROVIDE AT LEAST TWENTY-FOUR (24) HOURS' NOTICE PRIOR TO THE START OF CONSTRUCTION OF ANY IMPROVEMENTS THAT ARE SUBJECT TO TOWNSHIP INSPECTION. ALL INSPECTIONS OF COMPLETED ITEMS SHALL BE REQUESTED, IN WRITING, AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF THE INSPECTION TIME AND DATE.

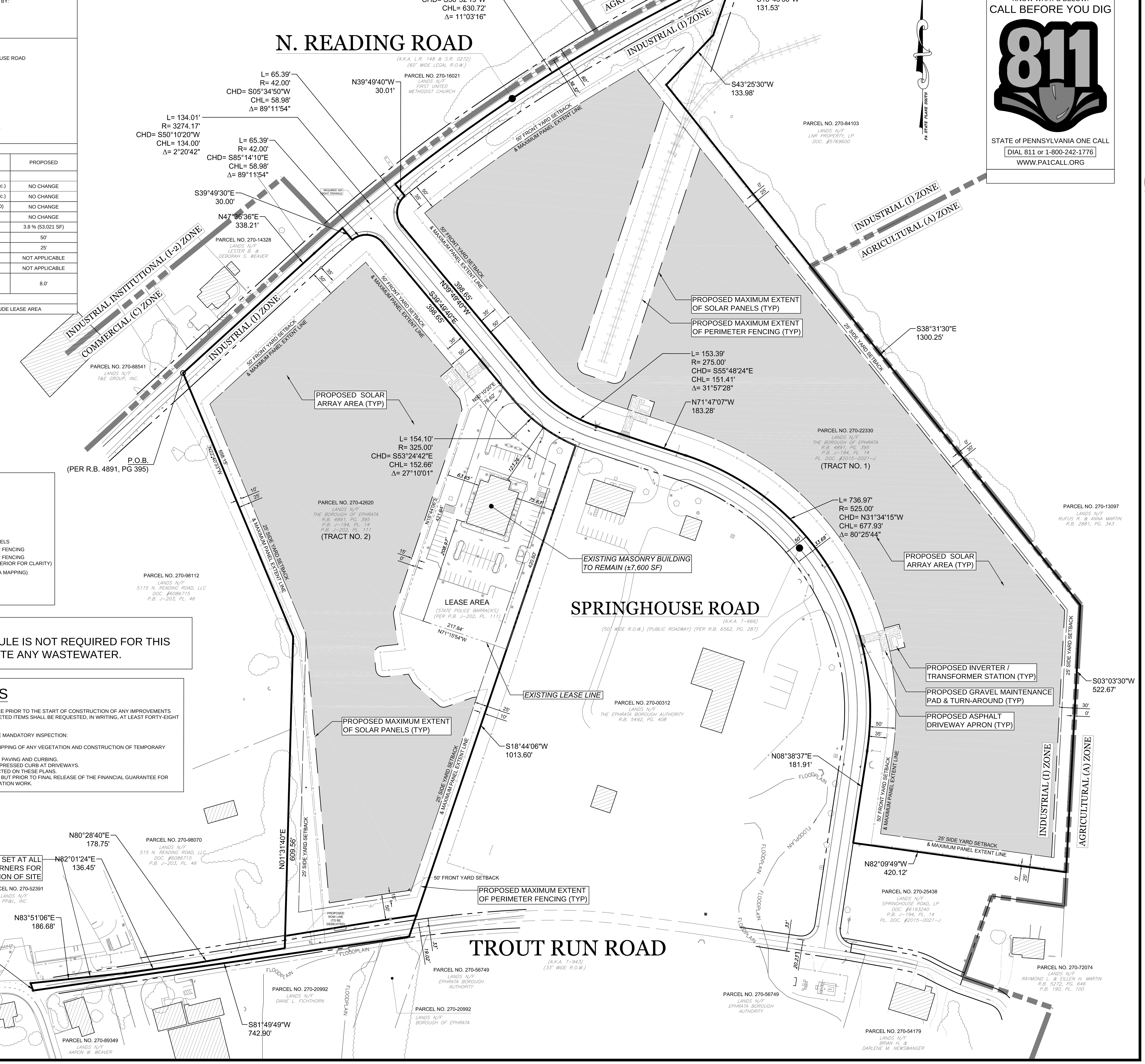
IT IS REQUIRED THAT THE FOLLOWING PHASES OF SITE CONSTRUCTION HAVE MANDATORY INSPECTION:

1. UPON COMPLETION OF PRELIMINARY SITE PREPARATION INCLUDING STRIPPING OF ANY VEGETATION AND CONSTRUCTION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES.
2. UPON COMPLETION PREPARATION OF DRIVEWAY APRON SUBGRADE FOR PAVING AND CURBING.
3. DURING THE PAVING OF THE DRIVEWAY APRONS AND PLACEMENT OF DEPRESSED CURB AT DRIVEWAYS.
4. UPON THE FINAL COMPLETION OF PERMANENT IMPROVEMENTS AS DEPICTED ON THESE PLANS.
5. AFTER REVIEW OF THE AS-BUILT DRAWINGS, REQUIRED BY SECTION 508, BUT PRIOR TO FINAL RELEASE OF THE FINANCIAL GUARANTEE FOR COMPLETION OF FINAL VEGETATIVE CONTROLS OR OTHER SITE RESTORATION WORK.

NOTE:
THIS PLAN RESERVES ADDITIONAL RIGHT-OF-WAY ALONG PORTIONS OF THE EXISTING ROAD FRONTAGE OF THE SUBJECT PROPERTY. THIS ADDITIONAL RIGHT-OF-WAY IS HEREBY RESERVED FOR POSSIBLE FUTURE USE BY EPHRATA TOWNSHIP FOR FUTURE ROADWAY AND RELATED IMPROVEMENTS.

GRAPHIC SCALE — 1 INCH = 100 FEET (100, 0, 50, 100, 200, 400)

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG
STATE of PENNSYLVANIA ONE CALL
DIAL 811 or 1-800-242-1776
WWW.PA1CALL.ORG



K. MATTHEW RUTT, P.E.
PENNSYLVANIA LICENSE NO. 073433
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

REV.	DATE	COMMENT	BY
01	01/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.

PROJECT No: 150066
DRAWN BY: B. NAGENGAST
CHECKED BY: K. M. RUTT
CAD I.D. #: 02_OA_150066

LANDCORE Engineering Consultants, P.C.
PHILADELPHIA, PA 8614 MONTGOMERY AVENUE WYNDMOOR, PA 19038 PHONE 215-836-2510
LANCASTER, PA 1853 WILLIAM PENN WAY P.O. BOX 10368 LANCASTER, PA 17605-0368 PHONE 717-672-0614
PITTSBURGH, PA 201 PENN CENTER BOULEVARD SUITE 400 PITTSBURGH, PA 15235 PHONE 412-253-6569
PRINCETON, NJ 100 OVERLOOK CENTER SUITE 200 PRINCETON, NJ 08540 PHONE 609-920-0268

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TROUT RUN ROAD & SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: OVERALL SITE PLAN

SCALE: (H) AS NOTED (V) .
DATE: 2015 - 12 - 11
SHEET: OA
REV. No: 0

C:\USERS\MWOLFE\DROPBOX (LANDCORE)\PROJECTS\2015\150066 - GROSOLAR - EPHRATA PA\DRAWINGS\00-SITE PLANS\02_OA_150066----->LAYOUT: OVERALL PLAN

REV. 01 | 01/27/2016 | REVISED PER LCCD AND TWONSHIP REVIEW LETTERS | T.P.R.

REV. | DATE | COMMENT | BY

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER K. MATTHEW RUTT No. PE073433

K. MATTHEW RUTT, P.E.

PENNSYLVANIA LICENSE NO. 073433
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

PROJECT No: 150066
DRAWN BY: B. NAGENGAST
CHECKED BY: K. M. RUTT
CAD I.D. #: 03-04_ECD_150066

LANDCORE
Engineering Consultants, P.C.

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PRINCETON, NJ
100 OVERLOOK CENTER
SUITE 200
PRINCETON, NJ 08540
PHONE 609-920-0268

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TROUT RUN ROAD & SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: EXISTING CONDITIONS / DEMOLITION PLAN

SCALE: (H) AS NOTED (V) .
DATE: 2015 - 12 - 11
SHEET: ECD-A
REV. No: 0

C:\USERS\MWOLFE\DROPBOX (LANDCORE)\PROJECTS\2015\150066 - GROSOLAR - EPHRATA PA\DRAWINGS\00-SITE PLANS\03-04_ECD_150066------>LAYOUT: EXIST COND DEMO A

MATCH LINE B

MATCH LINE A

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING LEASE LINE

PROPOSED SOLAR ARRAY AREA (TYP)

LEASE AREA
(STATE POLICE BARRACKS)
(PER P.B. J-202, PG. 111)

TRANSFORMER ON CONC. PAD

MASONRY BUILDING (25.4'± HT)

TRASH ENCLOSURE

ASPHALT PAVEMENT

CONC. CURB

CHAIN LINK FENCE

APPROXIMATE LOCATION OF STORM WATER EASEMENT (PER R.B. 6082, PG. 602) (PER P.B. J-202, PL. 111)

25' SIDE YARD SETBACK

TREE CANOPY (30.5'± HT)

BENT REBAR FOUND

TREE CANOPY (36.0'± HT)

TREE CANOPY (27.0'± HT)

20' WIDE PERMANENT RIGHT-OF-WAY FOR EPHRATA SANITARY SEWER (PER P.B. J-202, PL. 111) (PER R.B. E-58, PG. 24)

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING EASEMENT LINE

TREE CANOPY (18.0'± HT)

TREE CANOPY (9.5'± HT)

TREE CANOPY (48.0'± HT)

REBAR FOUND (0.2' SE)

PROPOSED 8' HIGH FENCE (TYP.)

PARCEL NO. 270-42620
LANDS N/F
THE BOROUGH OF EPHRATA
R.B. 4891, PG. 395
P.B. J-194, PL. 14
P.B. J-202, PL. 111
(TRACT NO. 2)

ALL GROUND SURFACE AREAS WITHIN PROPOSED FENCE SHALL BE SEEDED PER THE SPECIFICATIONS INCLUDED IN THIS PLAN SET (TYP.)

25' SIDE YARD SETBACK & MAXIMUM PANEL LIMIT LINE

PROPOSED MAXIMUM SOLAR PANEL EXTENT LINE (TYP.)

PROPOSED SOLAR ARRAY AREA (TYP)

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING EASEMENT LINE

50' FRONT YARD SETBACK & MAXIMUM PANEL LIMIT LINE

APPROXIMATE LOCATION OF STORM WATER EASEMENT (PER P.B. J-202, PL. 111)

PROPOSED ROW LINE (TO BE DEDICATED)

LEGAL R.O.W. LINE (PER P.B. J-202, PL. 111)

PROPOSED (2) 8' WIDE ACCESS GATES EQUIPPED w/ KNOX BOX & GATE MOUNTED 'VOLTAGE WARNING' SIGNS

PROPOSED CONCRETE MONUMENT TO BE SET (TYP.)

PARCEL NO. 270-00312
LANDS N/F
THE EPHRATA BOROUGH AUTHORITY
R.B. 5492, PG. 408

PARCEL NO. 270-56749
LANDS N/F
EPHRATA BOROUGH AUTHORITY

PARCEL NO. 270-20992
LANDS N/F
BOROUGH OF EPHRATA

PARCEL NO. 270-20992
LANDS N/F
DIANE L. FICHTHORN

ASPHALT ROADWAY

PAINTED DOUBLE YELLOW LINE

E.O.P.

FLOODPLAIN

APPROX. LOC. OF FLOODPLAIN LINE

ZONE "AE"

WOODED AREA

TREE CANOPY (54.0'± HT)

PROPOSED DEPRESSED CONCRETE CURB

PROPOSED SAWCUT LINE w/ FULL DEPTH PAVEMENT REPAIR TO MATCH EXISTING ROADWAY PAVEMENT SECTION

20' WIDE RIGHT-OF-WAY FOR PP&L COMPANY (PER R.B. 6209, PG. 483)

ASPHALT ROADWAY

PAINTED DOUBLE YELLOW LINE

CONC. CURB

UP #44378 5.31915 4018X15 w/GUY WIRE

REBAR w/CAP FOUND (0.2' NW)

MASONRY BUILDING (13.9'± HT)

ASPHALT PAVEMENT

APPROX. LOC. OF MASONRY BUILDING

14.0'± HT

REQUIRED 164' SAFE STOPPING SIGHT DISTANCE

APPROXIMATE LOCATION OF STORM WATER EASEMENT (PER R.B. 6082, PG. 602) (PER P.B. J-202, PL. 111)

PARCEL NO. 270-00312
LANDS N/F
THE EPHRATA BOROUGH AUTHORITY
R.B. 5492, PG. 408

CHAIN LINK FENCE

REQUIRED 168' SAFE STOPPING SIGHT DISTANCE

UP #44389 5.31899 4018X14 w/GUY WIRE

12.4'± HT

APPROX. LOC. OF MASONRY BUILDING

WALL

TREE (26.0'± HT)

UP #5.31881 4018X13 w/GUY WIRE

REQUIRED 156' SAFE STOPPING SIGHT DISTANCE

10.5'± HT

11.5'± HT

UP #44390 5.31862 4018X12 w/GUY WIRE

UP w/CONDUITS

20.5'± HT

21.5'± HT

APPROX. LOC. OF MASONRY BUILDING

21.5'± HT

ZONE "X" (OTHER FLOOD AREA)

ZONE "AE"

FLOODPLAIN

APPROX. LOC. OF FLOODPLAIN LINE

SPRINGHOUSE ROAD
(S.R. 1060)
(66' WIDE R.O.W.) (PUBLIC ROADWAY) (PER P.B. 6562, PG. 287)

TREE (23.0'± HT)

TREE (30.0'± HT)

17.05'± HT

17.1'± HT

UP #44384 5.31843 4018X11

REBAR FOUND (0.1' SW)

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING PROPERTY LINE

PARCEL NO. 270-25438
LANDS N/F
SPRINGHOUSE ROAD, LP.
DOC. #6193240
P.B. J-194, PL. 14
PL. DOC. #2015-0021-J

TREE (30.5'± HT)

UP #44380 5.31827 4108X10 w/GUY WIRE

REBAR FOUND (0.1' SW)

UP #44379 5.31825 4018X9 w/GUY WIRE

REBAR FOUND

TROUT RUN ROAD
(A.K.A. T-943)
(33' WIDE R.O.W.)

E.O.P.

PAINTED DOUBLE YELLOW LINE

GRAVEL DRIVE

CHAIN LINK FENCE

SHED

PARCEL NO. 270-56749
LANDS N/F
EPHRATA BOROUGH AUTHORITY

ZONE "AE"

FLOODPLAIN

APPROX. LOC. OF FLOODPLAIN LINE

GRAVEL ROADWAY

MASONRY BUILDING

PARCEL NO. 270-72074
LANDS N/F
RAYMOND L. & EILLEN H. MARTIN
R.B. 5272, PG. 646
P.B. 190, PL. 100

REBAR FOUND

WALLS

WOODED AREA

REBAR FOUND (0.1' SE)

PARCEL NO. 270-13097
LANDS N/F
RAYMOND L. & EILLEN H. MARTIN
R.B. 2881, PG. 343

WOODED AREA

TREE CANOPY (45.0'± HT)

EXISTING VEGETATION / TREES TO BE CLEARED TO EXISTING PROPERTY LINE AS / IF NEEDED

TREE CANOPY (72.5'± HT)

CULTIVATED FIELD

25' SIDE YARD SETBACK

20' WIDE PERMANENT UTILITY EASEMENT & 10' WIDE CONSTRUCTION R.O.W. (TO EPHRATA AREA JOINT AUTHORITY) (PER R.B. 5900, PG. 140) (PER DOC #5638077)

PROPOSED SOLAR ARRAY AREA (TYP)

PROPOSED 8' HIGH FENCE (TYP)

DRAINAGE EASEMENT (PER P.B. 2015-0021-J)

20' WIDE RIGHT-OF-WAY FOR PP&L COMPANY (PER R.B. 6209, PG. 483)

PROPOSED MAXIMUM SOLAR PANEL EXTENT LINE (TYP.)
PANEL EXTENT TO FOLLOW EXISTING EASEMENT LINE

PROPOSED (2) 8' WIDE ACCESS GATES EQUIPPED w/ KNOX BOX & GATE MOUNTED 'VOLTAGE WARNING' SIGNS

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING PROPERTY LINE

WOOD POST

BENT REBAR FOUND

PROPOSED ASPHALT DRIVEWAY APRON

PROPOSED DEPRESSED CONCRETE CURB

PROPOSED SAWCUT LINE w/ FULL DEPTH PAVEMENT REPAIR TO MATCH EXISTING ROADWAY PAVEMENT SECTION

PROPOSED INVERTER / TRANSFORMER ON CONCRETE PADS

PROPOSED 15' GRAVEL MAINTENANCE PAD w/ 23'x15' TURN-AROUND AREA

PROPOSED ASPHALT DRIVEWAY APRON

PARCEL NO. 270-22330
LANDS N/F
THE BOROUGH OF EPHRATA
R.B. 4891, PG. 395
P.B. J-194, PL. 14
PL. DOC. #2015-0021-J
(TRACT NO. 1)

ALL GROUND SURFACE AREAS WITHIN PROPOSED FENCE SHALL BE SEEDED PER THE SPECIFICATIONS INCLUDED IN THIS PLAN SET (TYP.)

PROPOSED CONCRETE MONUMENT TO BE SET (TYP.)

50' FRONT YARD SETBACK & MAXIMUM PANEL LIMIT LINE

DRAINAGE EASEMENT (PER P.B. 2015-0021-J)

PROPOSED SOLAR ARRAY AREA (TYP)

PROPOSED 8' HIGH FENCE (TYP)

PROPOSED MAXIMUM SOLAR PANEL EXTENT LINE (TYP.)
PANEL EXTENT TO FOLLOW EXISTING EASEMENT LINE

25' SIDE YARD SETBACK & MAXIMUM PANEL LIMIT LINE

CULTIVATED FIELD

REBAR FOUND

REBAR FOUND

REBAR FOUND (0.1' SE)

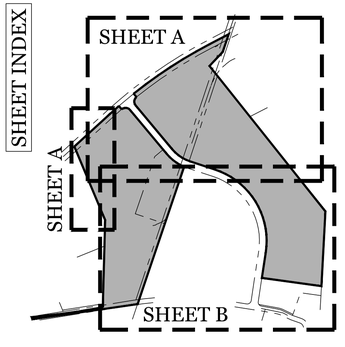
INDUSTRIAL (I) ZONE

AGRICULTURAL (A) ZONE

LINETYPE LEGEND

- PROPERTY LINE (PIQ)
- LEASE LINE
- PROPERTY LINE (ADJOINERS)
- PROPERTY LINE (RIGHT OF WAY)
- BUILDING SETBACK LINE
- MAXIMUM EXTENT OF SOLAR PANELS
- MAXIMUM EXTENT OF PERIMETER FENCING
- MAXIMUM EXTENT OF PERIMETER FENCING (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)
- FLOODPLAIN — FLOODPLAIN LINE (PER 2005 FEMA MAPPING)
- EXISTING TREELINE
- ZONE LINE

SHEET INDEX



REFER TO SHEET OA FOR UNIMPROVED PORTION OF SITE

REFER TO SHEET SP-A FOR SSSD CALCULATIONS

EASEMENT LEGEND

- RAILWAY ACCESS EASEMENT
- EXISTING SIGHT TRIANGLE EASEMENT
- EXISITING LIMIT OF SLOPE EASEMENT
- EXISTING CONSTRUCTION EASEMENT
- EXISTING DRAINAGE / STORMWATER EASEMENT
- EXISTING SANITARY EASEMENT
- EXISTING UTILITY EASEMENT

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG

811

STATE of PENNSYLVANIA ONE CALL
DIAL 811 or 1-800-242-1776
WWW.PA1CALL.ORG

PA STATE PLANE SOUTH

GRAPHIC SCALE
50 0 25 50 100 200
1 INCH = 50 FEET

REV.	DATE	COMMENT	BY
01	10/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
K. MATTHEW RUTT
ENGINEER
No. PE073433
SIGNS YLVANIA

K. MATTHEW RUTT, P.E.
PENNSYLVANIA LICENSE NO. 073433
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

PROJECT No: 150066
DRAWN BY: B. MGEKAST
CHECKED BY: K. M. RUTT
CAD I.D. #: 05-06_SP_150066

LANDCORE
Engineering Consultants, P.C.
CORPORATE OFFICE
1383 ARCH STREET, 2ND FLOOR
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FAX 215.563.1919
LANCASTER OFFICE
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LANCASTER, PA 17605-0368
PHONE 717.872.0674
PITTSBURGH OFFICE
2171 PENNSYLVANIA AVENUE
WINDSOR PA 18008
PHONE 724.933.5263
CHARLESTON, WV
1550 CHARLESTON CENTER
TOWER ONE, CHARLESTON
SUITE 270
CHARLESTON, WV 25301
PHONE 304.205.5688
CULLEOKA, TN
4 PARK PLAZA BOULEVARD
SUITE 400
NASHVILLE, TN 37204
PHONE 615.354.0389

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
1 PROPERTY LOCATED ON SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: SITE PLAN

SCALE: (H) AS NOTED (V) -

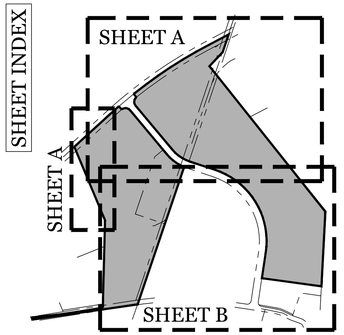
DATE: 2015 - 12 - 11

SHEET: SP-B

REV. No: 0

C:\USERS\MWOLF\DROPBOX (LANDCORE)\PROJECTS\2015\150066 - GROSOLAR - EPHRATA PA\DRAWINGS\05-SITE PLANS\05-06_SP_150066-----SA.RTOT - 06 - SITE PLAN

SHEET INDEX



LINETYPE LEGEND

- PROPERTY LINE (PIQ)
- LEASE LINE
- PROPERTY LINE (ADJOINERS)
- PROPERTY LINE (RIGHT OF WAY)
- BUILDING SETBACK LINE
- MAXIMUM EXTENT OF SOLAR PANELS
- MAXIMUM EXTENT OF PERIMETER FENCING
- MAXIMUM EXTENT OF PERIMETER FENCING (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)
- FLOODPLAIN — FLOODPLAIN LINE (PER 2005 FEMA MAPPING)
- EXISTING TREELINE
- ZONE LINE

EASEMENT LEGEND

- RAILWAY ACCESS EASEMENT
- EXISTING SIGHT TRIANGLE EASEMENT
- EXISITING LIMIT OF SLOPE EASEMENT
- EXISTING CONSTRUCTION EASEMENT
- EXISTING DRAINAGE / STORMWATER EASEMENT
- EXISTING SANITARY EASEMENT
- EXISTING UTILITY EASEMENT

SAFE STOPPING DISTANCE CALCULATIONS

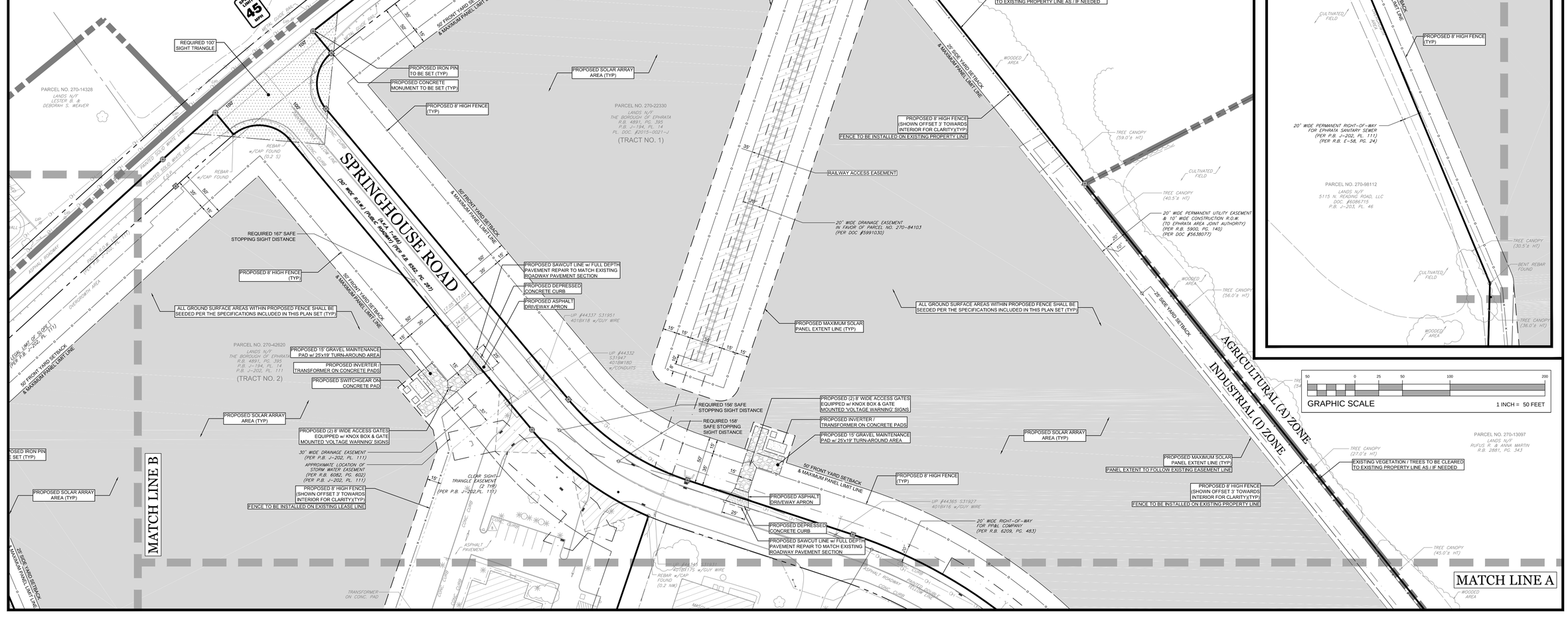
ALL CALCULATIONS BASED ON THE FOLLOWING FORMULA (SALDO § 602.E(8):

SSSD = 1.47*V*t + (V^2 / [30*(f +/- g)])

SSSD - MINIMUM SAFE STOPPING DISTANCE (LF)
V - VELOCITY OF VEHICLE, 25 MPH FOR ALL
t - PERCEPTION TIME OF DRIVER, 2.5 SEC FOR ALL
f - WET FRICTION OF PAVEMENT, 0.30 FOR ALL
G - PERCENT GRADE OF ROADWAY DIVIDED BY 100

	G	SSSD
SB DIRECTION, APPROACHING FIRST DRIVEWAY	-0.022	SSSD = 1.47*25*2.5 + (25^2 / [30*(0.30 - 0.022)]) = 167 LF
NB DIRECTION, APPROACHING FIRST DRIVEWAY	0.024	SSSD = 1.47*25*2.5 + (25^2 / [30*(0.30 + 0.024)]) = 156 LF
SB DIRECTION, APPROACHING SECOND DRIVEWAY	0.013	SSSD = 1.47*25*2.5 + (25^2 / [30*(0.30 + 0.013)]) = 158 LF
NB DIRECTION, APPROACHING SECOND DRIVEWAY	-0.012	SSSD = 1.47*25*2.5 + (25^2 / [30*(0.30 - 0.012)]) = 164 LF
SB DIRECTION, APPROACHING THIRD DRIVEWAY	-0.026	SSSD = 1.47*25*2.5 + (25^2 / [30*(0.30 - 0.026)]) = 168 LF
NB DIRECTION, APPROACHING THIRD DRIVEWAY	0.025	SSSD = 1.47*25*2.5 + (25^2 / [30*(0.30 + 0.025)]) = 156 LF

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG
811
STATE of PENNSYLVANIA ONE CALL
DIAL 811 or 1-800-242-1776
WWW.PA1CALL.ORG



LANDCORE
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PHONE: 215-997-1149
FAX: 215-997-9512
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REV.	DATE	COMMENT	BY
01	01/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
K. MATTHEW RUTT
ENGINEER
NO. PE073413
PENNSYLVANIA

K. MATTHEW RUTT, P.E.
PENNSYLVANIA LICENSE NO. 073413
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

PROJECT No:	150066
DRAWN BY:	B. MASEKASIT
CHECKED BY:	K. M. RUTT
CAD I.D. #	05-06_SP_150066

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TAX PARCEL NO. 270-16021 SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: SITE PLAN

SCALE: (H) AS NOTED
(V) -
DATE: 2015 - 12 - 11
SHEET: SP-A
REV. No: 0

C:\USERS\MWOLFE\APPDATA\LOCAL\TEMP\AXPUBLISH_{LANDCORE}\PROJECTS\2015\150066 - GROSOLAR - EPHRATA PA\DRAWINGS\05 - SITE PLANS\05 - 06_SP_150066 - - -

MATCH LINE B

MATCH LINE A

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING LEASE LINE

PROPOSED SOLAR ARRAY AREA (TYP)

LEASE AREA
(STATE POLICE BARRACKS)
(PER P.B. J-202, PG. 111)

TRANSFORMER ON CONC. PAD

MASONRY BUILDING (25.4'± HT)

TRASH ENCLOSURE

ASPHALT PAVEMENT

CONC. CURB

CHAIN LINK FENCE

APPROXIMATE LOCATION OF STORM WATER EASEMENT (PER R.B. 6082, PG. 602) (PER P.B. J-202, PL. 111)

25' SIDE YARD SETBACK

TREE CANOPY (30.5'± HT)

BENT REBAR FOUND

TREE CANOPY (36.0'± HT)

TREE CANOPY (27.0'± HT)

20' WIDE PERMANENT RIGHT-OF-WAY FOR EPHRATA SANITARY SEWER (PER P.B. J-202, PL. 111) (PER R.B. E-58, PG. 24)

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING EASEMENT LINE

TREE CANOPY (18.0'± HT)

TREE CANOPY (9.5'± HT)

TREE CANOPY (48.0'± HT)

REBAR FOUND (0.2' SE)

PROPOSED 8' HIGH FENCE (TYP.)

PARCEL NO. 270-42620
LANDS N/F
THE BOROUGH OF EPHRATA
R.B. 4891, PG. 395
P.B. J-194, PL. 14
P.B. J-202, PL. 111
(TRACT NO. 2)

ALL GROUND SURFACE AREAS WITHIN PROPOSED FENCE SHALL BE SEEDED PER THE SPECIFICATIONS INCLUDED IN THIS PLAN SET (TYP.)

25' SIDE YARD SETBACK & MAXIMUM PANEL LIMIT LINE

PROPOSED MAXIMUM SOLAR PANEL EXTENT LINE (TYP.)

PROPOSED SOLAR ARRAY AREA (TYP)

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING EASEMENT LINE

50' FRONT YARD SETBACK & MAXIMUM PANEL LIMIT LINE

APPROXIMATE LOCATION OF STORM WATER EASEMENT (PER P.B. J-202, PL. 111)

PROPOSED ROW LINE (TO BE DEDICATED)

LEGAL R.O.W. LINE (PER P.B. J-202, PL. 111)

PROPOSED (2) 8' WIDE ACCESS GATES EQUIPPED w/ KNOX BOX & GATE MOUNTED 'VOLTAGE WARNING' SIGNS

PROPOSED CONCRETE MONUMENT TO BE SET (TYP.)

PARCEL NO. 270-00312
LANDS N/F
THE EPHRATA BOROUGH AUTHORITY
R.B. 5492, PG. 408

PARCEL NO. 270-56749
LANDS N/F
EPHRATA BOROUGH AUTHORITY

PARCEL NO. 270-20992
LANDS N/F
BOROUGH OF EPHRATA

PARCEL NO. 270-20992
LANDS N/F
DIANE L. FICHTHORN

ASPHALT ROADWAY

PAINTED DOUBLE YELLOW LINE

E.O.P.

FLOODPLAIN

APPROX. LOC. OF FLOODPLAIN LINE

ZONE "AE"

WOODED AREA

TREE CANOPY (54.0'± HT)

PROPOSED DEPRESSED CONCRETE CURB

PROPOSED SAWCUT LINE w/ FULL DEPTH PAVEMENT REPAIR TO MATCH EXISTING ROADWAY PAVEMENT SECTION

20' WIDE RIGHT-OF-WAY FOR PP&L COMPANY (PER R.B. 6209, PG. 483)

ASPHALT ROADWAY

PAINTED DOUBLE YELLOW LINE

CONC. CURB

UP #44378 5.31915 4018X15 w/GUY WIRE

REBAR w/CAP FOUND (0.2' NW)

MASONRY BUILDING (13.9'± HT)

ASPHALT PAVEMENT

APPROX. LOC. OF MASONRY BUILDING

14.0'± HT

REQUIRED 164' SAFE STOPPING SIGHT DISTANCE

APPROXIMATE LOCATION OF STORM WATER EASEMENT (PER R.B. 6082, PG. 602) (PER P.B. J-202, PL. 111)

PARCEL NO. 270-00312
LANDS N/F
THE EPHRATA BOROUGH AUTHORITY
R.B. 5492, PG. 408

CHAIN LINK FENCE

REQUIRED 168' SAFE STOPPING SIGHT DISTANCE

UP #44389 5.31899 4018X14 w/GUY WIRE

12.4'± HT

APPROX. LOC. OF MASONRY BUILDING

WALL

TREE (26.0'± HT)

UP #5.31881 4018X13 w/GUY WIRE

REQUIRED 156' SAFE STOPPING SIGHT DISTANCE

10.5'± HT

11.5'± HT

UP #44390 5.31862 4018X12 w/GUY WIRE

UP w/CONDUITS

20.5'± HT

21.5'± HT

APPROX. LOC. OF MASONRY BUILDING

21.5'± HT

ZONE "X" (OTHER FLOOD AREA)

ZONE "AE"

FLOODPLAIN

APPROX. LOC. OF FLOODPLAIN LINE

SPRINGHOUSE ROAD
(S.R. 1060)
(66' WIDE R.O.W.) (PUBLIC ROADWAY) (PER P.B. 6562, PG. 287)

TREE (23.0'± HT)

TREE (30.0'± HT)

17.05'± HT

17.1'± HT

UP #44384 5.31843 4018X11

REBAR FOUND (0.1' SW)

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING PROPERTY LINE

PARCEL NO. 270-25438
LANDS N/F
SPRINGHOUSE ROAD, LP.
DOC. #6193240
P.B. J-194, PL. 14
PL. DOC. #2015-0021-J

TREE (30.5'± HT)

UP #44380 5.31827 4108X10 w/GUY WIRE

REBAR FOUND (0.1' SW)

UP #44379 5.31825 4018X9 w/GUY WIRE

REBAR FOUND

TROUT RUN ROAD
(A.K.A. T-943)
(33' WIDE R.O.W.)

E.O.P.

PAINTED DOUBLE YELLOW LINE

GRAVEL DRIVE

CHAIN LINK FENCE

SHED

PARCEL NO. 270-56749
LANDS N/F
EPHRATA BOROUGH AUTHORITY

ZONE "AE"

FLOODPLAIN

APPROX. LOC. OF FLOODPLAIN LINE

GRAVEL ROADWAY

MASONRY BUILDING

PARCEL NO. 270-72074
LANDS N/F
RAYMOND L. & EILLEN H. MARTIN
R.B. 5272, PG. 646
P.B. 190, PL. 100

REBAR FOUND

WALLS

WOODED AREA

REBAR FOUND (0.1' SE)

PARCEL NO. 270-13097
LANDS N/F
RAYMOND L. & EILLEN H. MARTIN
R.B. 2881, PG. 343

WOODED AREA

TREE CANOPY (45.0'± HT)

EXISTING VEGETATION / TREES TO BE CLEARED TO EXISTING PROPERTY LINE AS / IF NEEDED

TREE CANOPY (72.5'± HT)

CULTIVATED FIELD

25' SIDE YARD SETBACK

20' WIDE PERMANENT UTILITY EASEMENT & 10' WIDE CONSTRUCTION R.O.W. (TO EPHRATA AREA JOINT AUTHORITY) (PER R.B. 5900, PG. 140) (PER DOC #5638077)

PROPOSED SOLAR ARRAY AREA (TYP)

PROPOSED 8' HIGH FENCE (TYP)

DRAINAGE EASEMENT (PER P.B. 2015-0021-J)

20' WIDE RIGHT-OF-WAY FOR PP&L COMPANY (PER R.B. 6209, PG. 483)

PROPOSED MAXIMUM SOLAR PANEL EXTENT LINE (TYP.)
PANEL EXTENT TO FOLLOW EXISTING EASEMENT LINE

PROPOSED (2) 8' WIDE ACCESS GATES EQUIPPED w/ KNOX BOX & GATE MOUNTED 'VOLTAGE WARNING' SIGNS

PROPOSED 8' HIGH FENCE (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)(TYP.)
FENCE TO BE INSTALLED ON EXISTING PROPERTY LINE

WOOD POST

BENT REBAR FOUND

PROPOSED ASPHALT DRIVEWAY APRON

PROPOSED DEPRESSED CONCRETE CURB

PROPOSED SAWCUT LINE w/ FULL DEPTH PAVEMENT REPAIR TO MATCH EXISTING ROADWAY PAVEMENT SECTION

PROPOSED INVERTER / TRANSFORMER ON CONCRETE PADS

PROPOSED 15' GRAVEL MAINTENANCE PAD w/ 23'x15' TURN-AROUND AREA

PROPOSED ASPHALT DRIVEWAY APRON

PARCEL NO. 270-22330
LANDS N/F
THE BOROUGH OF EPHRATA
R.B. 4891, PG. 395
P.B. J-194, PL. 14
PL. DOC. #2015-0021-J
(TRACT NO. 1)

ALL GROUND SURFACE AREAS WITHIN PROPOSED FENCE SHALL BE SEEDED PER THE SPECIFICATIONS INCLUDED IN THIS PLAN SET (TYP.)

PROPOSED CONCRETE MONUMENT TO BE SET (TYP.)

50' FRONT YARD SETBACK & MAXIMUM PANEL LIMIT LINE

DRAINAGE EASEMENT (PER P.B. 2015-0021-J)

PROPOSED SOLAR ARRAY AREA (TYP)

PROPOSED 8' HIGH FENCE (TYP)

PROPOSED MAXIMUM SOLAR PANEL EXTENT LINE (TYP.)
PANEL EXTENT TO FOLLOW EXISTING EASEMENT LINE

25' SIDE YARD SETBACK & MAXIMUM PANEL LIMIT LINE

CULTIVATED FIELD

REBAR FOUND

REBAR FOUND

REBAR FOUND (0.1' SE)

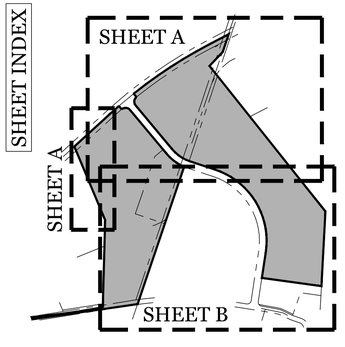
INDUSTRIAL (I) ZONE

AGRICULTURAL (A) ZONE

LINETYPE LEGEND

- PROPERTY LINE (PIQ)
- LEASE LINE
- PROPERTY LINE (ADJOINERS)
- PROPERTY LINE (RIGHT OF WAY)
- BUILDING SETBACK LINE
- MAXIMUM EXTENT OF SOLAR PANELS
- MAXIMUM EXTENT OF PERIMETER FENCING
- MAXIMUM EXTENT OF PERIMETER FENCING (SHOWN OFFSET 3' TOWARDS INTERIOR FOR CLARITY)
- FLOODPLAIN — FLOODPLAIN LINE (PER 2005 FEMA MAPPING)
- EXISTING TREELINE
- ZONE LINE

SHEET INDEX



REFER TO SHEET OA FOR UNIMPROVED PORTION OF SITE

REFER TO SHEET SP-A FOR SSSD CALCULATIONS

EASEMENT LEGEND

- RAILWAY ACCESS EASEMENT
- EXISTING SIGHT TRIANGLE EASEMENT
- EXISITING LIMIT OF SLOPE EASEMENT
- EXISTING CONSTRUCTION EASEMENT
- EXISTING DRAINAGE / STORMWATER EASEMENT
- EXISTING SANITARY EASEMENT
- EXISTING UTILITY EASEMENT

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG

811

STATE of PENNSYLVANIA ONE CALL
DIAL 811 or 1-800-242-1776
WWW.PA1CALL.ORG

PA STATE PLANE SOUTH

GRAPHIC SCALE
50 0 25 50 100 200
1 INCH = 50 FEET

REV.	DATE	COMMENT	BY
01	10/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
K. MATTHEW RUTT
ENGINEER
No. PE073433
SIGNS YLVANIA

K. MATTHEW RUTT, P.E.
PENNSYLVANIA LICENSE NO. 073433
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

PROJECT No: 150066
DRAWN BY: B. MGEKAST
CHECKED BY: K. M. RUTT
CAD I.D. #: 05-06_SP_150066

LANDCORE
Engineering Consultants, P.C.
CORPORATE OFFICE
1383 ARCH STREET, 2ND FLOOR
PHILADELPHIA, PA 19107
PHONE 215.563.1900
FAX 215.563.1919
LANCASTER OFFICE
P.O. BOX 10368
LANCASTER, PA 17605-0368
PHONE 717.872.0674
PITTSBURGH OFFICE
2171 PENNSYLVANIA AVENUE
WINDSOR PA 18008
PHONE 724.933.5263
CHARLESTON, WV
1550 CHARLESTON CENTER
TOWER ONE, CHARLESTON
SUITE 270
CHARLESTON, WV 25301
PHONE 304.205.5688
CULLEOKA, TN
4 PARK PLAZA BOULEVARD
SUITE 400
NASHVILLE, TN 37204
PHONE 615.354.0389

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
1 PROPERTY LOCATED ON SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: SITE PLAN

SCALE: (H) AS NOTED (V) -

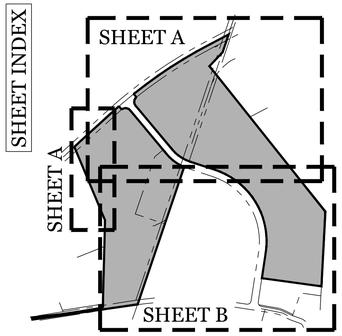
DATE: 2015 - 12 - 11

SHEET: SP-B

REV. No: 0

C:\USERS\MWOLF\DROPBOX (LANDCORE)\PROJECTS\2015\150066 - GROSOLAR - EPHRATA PA\DRAWINGS\05-SITE PLANS\05-06_SP_150066-----SA.RTOT - 06 - SITE PLAN

SHEET INDEX



SEQUENCE OF CONSTRUCTION

NOTE: NO DEMOLITION OR EARTH DISTURBANCE IS ALLOWED UNTIL AFTER THE LCCD E&S ADEQUACY LETTER HAS BEEN ISSUED AND THE PRE-CONSTRUCTION MEETING HELD AT EPHRATA TOWNSHIP MUNICIPAL HALL (OR ON SITE).

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

PRE-CONSTRUCTION STABILIZATION REQUIREMENTS:
THE EXISTING CULTIVATED FIELD AREAS ON THE SITE WHICH ARE INTENDED TO BE CONVERTED TO MEADOW GRASS SHALL BE SEEDED WITH GRASS MIXTURE (OR A NURSE-CROP GRASS MIXTURE) IN A NO-TILL MANNER AFTER THE CURRENT CORN CROP IS HARVESTED/REMOVED. THE GRASS MIXTURE SEEDED IN SUCH AREAS SHALL ESTABLISH STABILIZATION PRIOR TO THE INITIATION OF CONSTRUCTION ACTIVITIES ON THIS SITE. SUCH DETERMINATION OF STABILIZATION SHALL BE MADE BY THE COUNTY CONSERVATION DISTRICT PRIOR TO (OR AT THE TIME OF) THE PRE-CONSTRUCTION MEETING.

A PRE-CONSTRUCTION MEETING IS REQUIRED TO OCCUR NO LESS THAN 7-DAYS PRIOR TO ANY EARTH DISTURBANCE UNLESS NOTIFIED OTHERWISE BY THE COUNTY CONSERVATION DISTRICT. APPLICANT, OPERATORS, ALL APPROPRIATE MUNICIPAL OFFICIALS, REPRESENTATIVES FROM THE COUNTY CONSERVATION DISTRICT AND LICENSED PROFESSIONALS OR DESIGNEES RESPONSIBLE FOR THE EARTH DISTURBANCE ACTIVITY, INCLUDING IMPLEMENTATION OF E&S PLANS, SHALL ATTEND A PRE-CONSTRUCTION MEETING.

1. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCE.
2. INSTALL SEDIMENT BARRIERS. NO DISTURBANCE PERMITTED BEYOND THE BARRIERS.
3. PERFORM INITIAL CLEARING AND GRUBBING.
4. INSTALL FENCING, SOLAR ARRAY, INTERNAL ACCESS DRIVES, UTILITIES AND INVERTER PADS.
5. INSTALL ASPHALT APRON AT DRIVEWAY.
6. PERFORM PERMANENT STABILIZATION/SEEDING MEASURES PER PLAN SPECIFICATIONS.
7. UPON SITE STABILIZATION (UNIFORM COVERAGE OR DENSITY OF 70% ACROSS ALL DISTURBED AREAS) AND AUTHORIZATION FROM THE COUNTY CONSERVATION DISTRICT, REMOVE ALL REMAINING EROSION AND SEDIMENT POLLUTION CONTROL BMP'S (SEDIMENT BARRIER, ETC.). ANY AREA DISTURBED DURING THE REMOVAL OF THE EROSION AND SEDIMENT POLLUTION CONTROL BMP'S MUST BE STABILIZED IMMEDIATELY. UPON COMPLETION OF ALL OTHER SITE CONSTRUCTION ACTIVITIES, INSTALL FINAL WEARING COURSE. DEMOBILIZE.
8. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY BMP'S AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OPERATORS SHALL CONTACT THE COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION.

EROSION & SEDIMENT CONTROL LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE
- SOX — 24" COMPOST FILTER SOCK
- LOD — LIMIT OF DISTURBANCE
- SOILS BOUNDARY
- STOCKPILE

NOTE:

STORMWATER DISCHARGES FROM EARTH DISTURBANCE ACTIVITY INVOLVING EQUAL TO OR GREATER THAN ONE ACRE MUST BE AUTHORIZED WITH AN NPDES PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. AN NPDES PERMIT WAS NOT OBTAINED FOR THIS SITE. THEREFORE, EARTH DISTURBANCE AT THIS SITE IS NOT PERMITTED OUTSIDE OF THE LIMITS OF DISTURBANCE AS ILLUSTRATED ON THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN (E&S PLAN). IF EARTH DISTURBANCE AT THE SITE EXCEEDS ONE ACRE, AN NPDES PERMIT WILL NEED TO BE OBTAINED. [25 PA CODE 102.5(A)]

REFER TO SHEET GUE-B FOR BARRIER SUMMARY TABLE

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG
811
STATE of PENNSYLVANIA ONE CALL
DIAL 811 or 1-800-242-1776
WWW.PA1CALL.ORG

SOILS

HaB : HAGERSTOWN SILT LOAM, 3 - 8 % SL. HYD. GROUP B

HbC : HAGERSTOWN SILTY CLAY, 8 - 15 % SL. HYD. GROUP B

DATUM:
- ELEVATIONS ARE BASED UPON (NAVD 88) DATUM ESTABLISHED ONSITE UTILIZING GLOBAL POSITIONING SYSTEM DATA COLLECTION.

GRADING & UTILITY LEGEND

EXISTING ITEMS	PROPOSED ITEMS	
377.34		SPOT GRADE
		STORM STRUCTURE
		HYDRANT
		VALVE
G		U/G GAS LINE
OH		OVER HEAD WIRES
S		SANITARY SEWER MAIN
		STORM SEWER MAIN
T		U/G TELEPHONE CONDUIT
XXX	XXX	CONTOUR
FLOODPLAIN		FLOODPLAIN LIMITS

N. READING ROAD (A.K.A. L.R. 148 & S.R. 0272) (80' WIDE LEGAL R.O.W.)

SPRINGHOUSE ROAD (50' WIDE R.O.W.) (PUBLIC ROADWAY) (A.K.A. T-389) (PER P.B. 6052, PG. 397)

SPEED LIMIT 45 MPH

HaB "B" SOILS

HbC "B" SOILS

Uc SOILS

MATCH LINE B

MATCH LINE A

PARCEL NO. 270-16021 — LANDS N/F FIRST UNITED METHODIST CHURCH

PARCEL NO. 270-14328 — LANDS N/F LESTER B. & DEBORAH S. WEAVER

PARCEL NO. 270-42820 — LANDS N/F THE BOROUGH OF EPHRATA P.B. 4891, PG. 395 P.B. J-194, PG. 14 P.B. J-202, PL. 111 (TRACT NO. 2)

PARCEL NO. 270-22330 — LANDS N/F THE BOROUGH OF EPHRATA P.B. 4891, PG. 395 P.B. J-194, PG. 14 PL. DOC. #2015-0021-J (TRACT NO. 1)

PARCEL NO. 270-84103 — LANDS N/F LNR PROPERTY, LP DOC. #5769600

PARCEL NO. 270-98112 — LANDS N/F 5115 N. READING ROAD, LLC DOC. #60867115 P.B. J-203, PG. 46

PARCEL NO. 270-13097 — LANDS N/F RUFUS R. & ANNA MARTIN P.B. 2851, PG. 343

REQUIRED 10' SIGHT TRIANGLE

CLEAR SIGHT TRIANGLE EASEMENT (2 TYP) (PER P.B. J-202,PL. 111)

30' WIDE DRAINAGE EASEMENT (PER P.B. J-202, PL. 111)

APPROXIMATE LOCATION OF STORM WATER EASEMENT (PER P.B. 6052, PG. 402) (PER P.B. J-202, PL. 111)

20' WIDE DRAINAGE EASEMENT IN FAVOR OF PARCEL NO. 270-84103 (PER DOC. #5991030)

20' WIDE PERMANENT UTILITY EASEMENT & 10' WIDE CONSTRUCTION R.O.W. (TO EPHRATA AREA JOINT AUTHORITY) (PER R.B. 5900, PG. 140) (PER DOC. #3638077)

20' WIDE RIGHT-OF-WAY FOR PP&L COMPANY (PER R.B. 6209, PG. 483)

20' WIDE PERMANENT RIGHT-OF-WAY FOR EPHRATA SANITARY SEWER (PER P.B. J-202, PL. 111) (PER R.B. E-58, PG. 24)

LEGAL LIMIT OF SLOPE (PER P.B. J-202, PL. 111)

TEMPORARY ROADWAY EASEMENT (PER DOC. #5936609)

PA STATE PLANE GRID N

GRAPHIC SCALE 1 INCH = 50 FEET

NO.	DATE	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	BY
01	01/27/2016	COMMENT	T.P.R.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL K. MATTHEW RUTT ENGINEER No. PE073413 COMMONWEALTH OF PENNSYLVANIA

K. MATTHEW RUTT, P.E.

PENNSYLVANIA LICENSE NO. 073413
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

PROJECT No: 150066 | DRAWN BY: B. MASEMORE | CHECKED BY: K. M. RUTT | CAD I.D. #: 07-08_GUE_150066

LANDCORE Engineering Consultants, P.C.
PRINCETON, NJ — 100 OVERLOOK CENTER, SUITE 200, PRINCETON, NJ 08540, PHONE: 609.750.0208
PITTSBURGH, PA — 1000 CRANBERRY WOODS DRIVE, SUITE 270, CRANBERRY TWP., PA 16066, PHONE: 412.553.4089
SAN JUAN, PR — 1519 PONCE DE LEON AVENUE, SUITE 201, SAN JUAN, PR 00909, PHONE: 787.672.2874
WYNDMOOR, PA — 19038 SPRINGFIELD AVENUE, WYNDMOOR, PA 19038, PHONE: 215.233.5053

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TAX PARCEL NO. 270-16021, SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: GRADING, UTILITIES and EROSION CONTROL PLAN

SCALE: (H) AS NOTED (V) -
DATE: 2015 - 12 - 11
SHEET: GUE-A
REV. No: 0

C:\USERS\MWOLFE\DROPBOX (LANDCORE)\PROJECTS\2015\150066 - GROZOLAR - EPHRATA PA\DRAWINGS\05 - SITE PLANS\07-08_GUE_150066-----JULY\07_GRAD, UTIL, ERO, PLAN _A

MATCH LINE B

MATCH LINE A

HbC
"B" SOILS

HaB
"B" SOILS

HaB
"B" SOILS

HaB
"B" SOILS

HaB
"B" SOILS

LEASE AREA
(STATE POLICE BARRACKS)
(PER P.B. J-202, PL. 111)

PARCEL NO. 270-00312
LANDS N/F
THE EPHRATA BOROUGH AUTHORITY
R.B. 5492, PG. 408

PARCEL NO. 270-42620
LANDS N/F
THE BOROUGH OF EPHRATA
R.B. 4691, PG. 195
P.B. J-194, PL. 14
P.B. J-202, PL. 111
(TRACT NO. 2)

PARCEL NO. 270-22330
LANDS N/F
THE BOROUGH OF EPHRATA
R.B. 4691, PG. 195
P.B. J-194, PL. 14
PL. DOC. #2015-0021-J
(TRACT NO. 1)

PARCEL NO. 270-25438
LANDS N/F
SPRINGHOUSE ROAD, LP
DOC. #6191340
P.B. J-194, PL. 14
PL. DOC. #2015-0021-J

PARCEL NO. 270-56749
LANDS N/F
EPHRATA BOROUGH AUTHORITY

PARCEL NO. 270-20992
LANDS N/F
DIANE L. FICHTHORN

PARCEL NO. 270-20992
LANDS N/F
THE EPHRATA BOROUGH AUTHORITY

PARCEL NO. 270-19097
LANDS N/F
RUFUS, R. & ANNA MARTIN
R.B. 2881, PG. 343

PARCEL NO. 270-72074
LANDS N/F
RAYMOND L. &
ELLEN H. MARTIN
R.B. 5272, PG. 646
P.B. 190, PL. 100

SPRINGHOUSE ROAD
(50' WIDE R.O.W.) (PUBLIC ROADWAY PER R.B. 6662, PG. 287)
(A.K.A. T-946)

TROUT RUN ROAD
(A.K.A. T-943)
(33' WIDE R.O.W.)

PENNSYLVANIA TURNPIKE
(PA STATE PLANE SOUTH)

20' WIDE RIGHT-OF-WAY
FOR PP&L COMPANY
(PER R.B. 6209, PG. 483)

20' WIDE PERMANENT UTILITY EASEMENT
& 10' WIDE CONSTRUCTION R.O.W.
(TO EPHRATA AREA JOINT AUTHORITY)
(PER R.B. 5960, PG. 140)
(PER DOC #5638077)

DRAINAGE EASEMENT
(PER P.B. 2015-0021-J)

20' WIDE PERMANENT RIGHT-OF-WAY
FOR EPHRATA SANITARY SEWER
(PER P.B. J-202, PL. 111)
(PER R.B. C-58, PG. 24)

APPROXIMATE LOCATION OF
STORM WATER EASEMENT
(PER R.B. 6082, PG. 602)
(PER P.B. J-202, PL. 111)

APPROXIMATE LOCATION OF
STORM WATER EASEMENT
(PER R.B. 6082, PG. 602)
(PER P.B. J-202, PL. 111)

APPROX. LOCATION OF
U.G. ELECTRIC LINE

APPROX. LOCATION OF MH
(NOT FIELD VERIFIED)

APPROX. LOC. OF
MASONRY BUILDING

APPROX. LOC. OF
FLOODPLAIN LINE

ZONE 'AE'

ZONE 'X'
(OTHER FLOOD AREA)

PROPOSED
ROW LINE
(TO BE
DEDICATED)

PROPOSED INTERCONNECT WITH OFF-SITE TRANSMISSION LINES TO OCCUR IN THIS SOUTHWEST PORTION OF THE PROJECT (SEE PLANS BY OTHERS FOR DETAILS OF CONNECTION AND ROUTE OF OFF-SITE TRANSMISSION LINES)

LIMIT OF DISTURBANCE (LOD)
(0.30 ACRES - TOTAL)

REFER TO SHEET OA FOR
UNIMPROVED PORTION OF SITE

SHEET INDEX

SHEET A

SHEET B

Barrier No.	Type	Location
S-1	Compost Filter Socks - 12" dia.	Along western property line
S-2	Compost Filter Socks - 18" dia.	Along western property line
S-3	Compost Filter Socks - 18" dia.	Along western property line
S-4	Compost Filter Socks - 18" dia.	Along western property line
S-5	Compost Filter Socks - 24" dia.	Along western property line
S-6	Compost Filter Socks - 24" dia.	Along western property line
S-7	Compost Filter Socks - 24" dia.	Along Reading Rd
S-8	Compost Filter Socks - 24" dia.	Along Reading Rd
S-9	Compost Filter Socks - 24" dia.	Along Reading Rd
S-10	Compost Filter Socks - 24" dia.	Along Reading Rd
S-11	Compost Filter Socks - 18" dia.	Along Reading Rd
S-12	Compost Filter Socks - 18" dia.	Along Reading Rd
S-13	Compost Filter Socks - 18" dia.	Along Reading Rd
S-14	Compost Filter Socks - 12" dia.	Along Reading Rd
S-15	Compost Filter Socks - 12" dia.	Along Reading Rd
S-16	Compost Filter Socks - 12" dia.	Along Reading Rd
S-17	Compost Filter Socks - 12" dia.	Along Reading Rd
S-18	Compost Filter Socks - 12" dia.	Along Reading Rd
S-19	Compost Filter Socks - 12" dia.	Along Reading Rd
S-20	Compost Filter Socks - 12" dia.	Along Springhouse Rd
S-21	Compost Filter Socks - 12" dia.	Along Springhouse Rd
S-22	Compost Filter Socks - 12" dia.	Along Springhouse Rd
S-23	Compost Filter Socks - 12" dia.	Along Springhouse Rd
S-24	Compost Filter Socks - 18" dia.	Along Springhouse Rd
S-25	Compost Filter Socks - 24" dia.	Along Springhouse Rd
S-26	Compost Filter Socks - 12" dia.	Along Springhouse Rd
S-27	Compost Filter Socks - 32" dia.	Along Springhouse Rd
S-28	Compost Filter Socks - 32" dia.	Along Springhouse Rd
S-29	Compost Filter Socks - 32" dia.	Along Springhouse Rd
S-30	Compost Filter Socks - 32" dia.	Along Springhouse Rd
S-31	Compost Filter Socks - 32" dia.	Along Springhouse Rd
S-32	Compost Filter Socks - 32" dia.	Along Springhouse Rd
S-33	Compost Filter Socks - 32" dia.	Along Springhouse Rd
S-34	Compost Filter Socks - 32" dia.	Along Springhouse Rd
S-35	Compost Filter Socks - 18" dia.	Along Springhouse Rd
S-36	Compost Filter Socks - 18" dia.	Along Springhouse Rd
S-37	Compost Filter Socks - 18" dia.	Along Springhouse Rd

GRAPHIC SCALE 1 INCH = 50 FEET

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG
811
STATE of PENNSYLVANIA ONE CALL
DIAL 811 or 1-800-242-1776
WWW.PA1CALL.ORG

REV.	DATE	COMMENT	BY
01	01/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.

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REGISTERED PROFESSIONAL
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NOT FOR CONSTRUCTION

PROJECT No: 150066
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CAD I.D. #: 07-08_GUE_150066

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PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TROUT RUN ROAD & SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: GRADING, UTILITIES and EROSION CONTROL PLAN

SCALE: (H) AS NOTED (V) -
DATE: 2015 - 12 - 11
SHEET: GUE-B
REV. No: 0

C:\USERS\KMRUTT\DROPBOX (LANDCORE)\PROJECTS\2015\150066 - EPHRATA, PA\DRAWINGS\00-SITE PLANS\07-08_GUE_150066 - - - - - - - - - - XLAYOUT: GRAD UTIL ENG PLAN_B

EROSION / SEDIMENT CONTROL PLAN STANDARD NOTES

STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.

THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS.

ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.

EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.

AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.

AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.
DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% (PERCENT) VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OF THE RISER(S), WHEREUPON THE COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS SEALED (WATERTIGHT).

AT STREAM CROSSING, A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.

UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.

SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.

ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.

SOILS LIMITATION CHART

MAP SYMBOL & SOIL NAME	CUTBANKS CAVE	CORROSIVE TO CONCRETE /STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE / SHWT	HYDRIC / HYDRIC INCLUSIONS	LOW STRENGTH / LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
HaB - HAGERSTOWN SILT LOAM, 3 to 8 %																
HaB	X	S		X		X	X	X	X	X	X	X	X	X		
HbC- HAGERSTOWN SILTY CLAY, 8 to 15 %																
HbC	X	S		X		X	X	X	X	X	X	X	X	X		

LIMITATIONS	RESOLUTIONS
CUTBANKS CAVE	NO IMPACTS - NO MAJOR EARTH MOVEMENT IS PROPOSED.
CORROSIVE TO STEEL	ADDITIONAL SOILS TESTING TO EVALUATE THE CORROSIVE PROPERTIES OF THE SOILS WILL BE COMPLETED PRIOR TO CONSTRUCTION AND MATERIAL ADJUSTMENTS WILL BE MADE ACCORDINGLY.
EASILY ERODIBLE	NO IMPACTS - NO MAJOR EARTH MOVEMENT IS PROPOSED.
DEPTH TO SATURATED ZONE / SHWT	NO IMPACTS - NO BMPS PROPOSED.
HYDRIC / HYDRIC INCLUSIONS	ALL IMPROVEMENTS WILL OCCUR IN AREAS ABOVE THE 100-YEAR FLOODPLAIN. PLANT SPECIES HAVE BEEN SELECTED TO ACCOUNT FOR HYDRIC SOIL CONDITIONS.
LOW STRENGTH / LANDSLIDE PRONE	NO IMPACTS - NO MAJOR EARTH MOVEMENT IS PROPOSED.
SLOW PERCOLATION	NO IMPACTS - NO BMPS PROPOSED.
PIPING	NO IMPACTS - NO BMPS PROPOSED.
POOR SOURCE OF TOPSOIL	NO IMPACTS - NO MAJOR EARTH MOVEMENT IS PROPOSED.
FROST ACTION	NO IMPACTS - NO MAJOR EARTH MOVEMENT IS PROPOSED.
SHRINK SWELL	CONSTRUCTION TIMING WILL BE COORDINATED TO AVOID EARTH MOVEMENT OPERATIONS AND MAJOR TRENCHING WORK DURING THE RAINY SEASON TO MINIMIZE GROUNDWATER IMPACTS. ALSO, SUMP PUMPS EQUIPPED WITH FILTERING BAGS WILL BE UTILTIZED DURING CONSTRUCTION.
POTENTIAL SINKHOLES	NO IMPACTS - NO INFILTRATION BMPS PROPOSED. RUNOFF WILL CONTINUE TO SHEET FLOW.

CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE NOTES

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE CONTRACTOR.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM .

SOIL EROSION AND SEDIMENT POLLUTION BMP MAINTENANCE PROGRAM

UNTIL THE SITE IS STABILIZED, ALL TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT POLLUTION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. RECORDS OF EACH INSPECTION, NOTES OF DEFICIENCIES, AND THE CORRECTIVE ACTIONS TAKEN MUST BE KEPT AT THE PROJECT SITE FOR REVIEW BY THE ENGINEER OF RECORD, APPLICABLE COUNTY CONSERVATION DISTRICT AND/OR PADEP (AS APPLICABLE).

1. CONTRACTOR IS RESPONSIBLE TO CONSTRUCT AND MAINTAIN ALL REQUIRED EROSION AND SEDIMENT POLLUTION CONTROL BMPS THROUGHOUT THE CONSTRUCTION PROCESS. THE CONTRACTOR IS ALSO RESPONSIBLE TO INSPECT AND EVALUATE THE EFFECTIVENESS OF THE EROSION AND SEDIMENT POLLUTION CONTROL BMPS AND IMPLEMENT ANY ADDITIONAL BMPS REQUIRED TO CONTROL UNFORESEEN PROBLEMS ON THE SITE.
2. OWNER/DEVELOPER IS RESPONSIBLE TO ENSURE THAT THE CONTRACTOR CONDUCTS HIS OPERATIONS AND MAINTENANCE ACCORDING TO THE APPROVED EROSION AND SEDIMENT POLLUTION CONTROL PLAN.
3. OWNER AND/OR CONTRACTOR SHALL ASSIGN ONE INDIVIDUAL TO BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT POLLUTION CONTROL BMPS THROUGHOUT THE CONSTRUCTION PROCESS.
4. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF EROSION AND SEDIMENT POLLUTION CONTROL BMPS. ADDITIONAL BMPS SHALL BE INSTALLED WHERE NECESSARY OR WHERE DIRECTED BY EITHER THE TOWNSHIP OR THE COUNTY CONSERVATION DISTRICT AS CONSTRUCTION PROGRESSES.
5. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
6. THE PERMITTEE AND CO-PERMITTEE MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND AFTER EACH MEASURABLE PRECIPITATION EVENT BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT THE EROSION AND SEDIMENT CONTROL (E&S) BMPS ARE OPERATIONAL AND EFFECTIVE IN PREVENTING POLLUTION TO THE WATERS OF THE COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT, AND INCLUDE:

   1) A SUMMARY OF THE SITE CONDITIONS, E&S BMPS, AND COMPLIANCE; AND
   2) THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION.

7. AFTER EACH RUNOFF EVENT, ALL TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL BMPS SHALL BE INSPECTED, CLEANED AND REPAIRED AS NECESSARY.
8. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY.
9. IF THE INSTALLED EROSION AND SEDIMENT POLLUTION CONTROL BMPS FAIL TO PERFORM AS INTENDED, REPLACEMENT BMPS OR MODIFICATIONS OF THE INSTALLED BMPS WILL BE REQUIRED.
10. SHOULD ANY EROSION AND SEDIMENT POLLUTION CONTROL BMPS CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE (OR PRIOR TO STABILIZING THE PERMANENT SURFACES), ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED TO ELIMINATE SUCH PROBLEMS.
11. CONTRACTOR SHALL SEPARATE WATER ORIGINATING OUTSIDE OF THE PROJECT BOUNDARY FROM WATER THAT ORIGINATING WITHIN THE PROJECT BOUNDARY.
12. CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENTS AS REQUIRED AND AT A MINIMUM PRIOR TO THE SEDIMENT REACHING ONE-HALF OF THE ABOVE GROUND HEIGHT OF THE SILT FENCE TO KEEP THE SILT FENCE FUNCTIONAL. REPAIR ALL UNDERCUTTING OR EROSION OF THE TOE ANCHOR IMMEDIATELY WITH COMPACTED BACKFILL MATERIALS.
13. ANY SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY.
14. ROCK CONSTRUCTION ENTRANCE(S) THICKNESS MUST BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSION BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL MUST BE MAINTAINED ON THE PROJECT SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS MUST BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WITH WATER IS NOT PERMITTED UNLESS A VACUUM TRUCK IS UTILIZED FOR THIS PROCESS.
15. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, WATERS OF THE COMMONWEALTH, FLOODPLAINS OR DRAINAGE SWALES AND MUST BE IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AN EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR ALL OFF-SITE BORROW AND WASTE AREAS. THIS PLAN MUST BE SUBMITTED TO THE ENGINEER OF RECORD, APPLICABLE COUNTY CONSERVATION DISTRICT, AND PADEP (AS REQUIRED) FOR REVIEW AND APPROVAL.
17. CONTRACTOR SHALL STABILIZE ALL OFF-SITE BORROW AND WASTE AREAS BY SEEDING AND MULCHING AS SPECIFIED IN THE APPROVED EROSION AND SEDIMENT POLLUTION CONTROL PLAN.
18. IF SIGNS OF BMPS FAILURE ARE NOTED, AN ENGINEER OR OTHER QUALIFIED PROFESSIONAL SHOULD BE CONTACTED.
19. MAINTENANCE OF THE PERMANENT STORMWATER CONTROL BMPS SHALL BE THE RESPONSIBILITY OF OWNER.

RECYCLING AND DISPOSAL OF CONSTRUCTION WASTES

1. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO: EXCESS SOIL MATERIALS, BUILDING MATERIALS AND WASTES, CONCRETE WASH WATER, SANITARY WASTES, ANY WASTES THAT COULD ADVERSELY IMPACT WATER QUALITY. CONSTRUCTION WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (PADEP) SOLID WASTE MANAGEMENT REGULATIONS. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP OR DISCHARGE ANY CONSTRUCTION MATERIALS OR WASTES AT THE PROJECT SITE.
2. CONCRETE WASH WATER SHALL BE CONTROLLED TO PROJECT AREAS THAT WILL RECEIVE CONCRETE PAVING AS PART OF THE PROJECT'S PROPOSED CONDITIONS. CONCRETE WASH WATER SHALL BE CONTROLLED AT ALL TIMES AND SHALL NOT BE PERMITTED TO ENTER INTO THE STORMWATER RUNOFF FROM THE PROJECT SITE.
3. IN THE EVENT OF A SINK FORMATION, UNDER THE SUPERVISION OF A PROFESSIONAL GEOLOGIST OR A LICENSED GEOTECHNICAL ENGINEER, MATERIAL DEEMED UNSUITABLE FOR BACKFILL MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (PADEP) SOLID WASTE MANAGEMENT REGULATIONS.

TEMPORARY STABILIZATION NOTES:

(REFER TO SEED SPECIFICATIONS ON NOTES SHEET OF THESE PLANS FOR PROJECT SPECIFIC SEEDING REQUIREMENTS)

SURFACE STABILIZATION CRITERIA:
ALL DENUDED SOIL SURFACES, INCLUDING SOIL STOCKPILES, ARE SUBJECT TO EROSION AND SHALL BE STABILIZED EITHER TEMPORARILY OR PERMANENTLY. DURING NON-GERMINATION PERIODS, MULCH MUST BE APPLIED AT RECOMMENDED RATES. CRUSHED STONE ON PAVEMENT SUB-GRADES IS CONSIDERED ADEQUATE STABILIZATION. ALL DISTURBED ZONES AND VEGETATED REGIONS SHALL BE STABILIZED, PREFERABLY WITH A PERMANENT TREATMENT AS FOLLOWS:

A. TEMPORARY COVER ON DISTURBED AREAS:
DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A TEMPORARY COVER. PREPARATION OF THE SURFACE, FERTILIZATION AND SEEDING WITH EITHER ANNUAL OR WINTER RYE GRASS SHALL BE DONE IN COMPLIANCE WITH THE PENN STATE GUIDELINES UNDER "EROSION CONTROL & CONSERVATION PLANTING ON NON-CROPLAND".
a. GROUND LIMESTONE SHALL BE APPLIED AT A RATE OF 1.0 TON/ACRE OR 46 LBS/1,000 S.F.
b. FERTILIZER SHALL BE APPLIED AT 50-50-50 LBS/ACRE. (BOTH FERTILIZER AND LIMESTONE SHALL BE WORKED INTO THE SOIL TO A DEPTH OF FOUR (4) INCHES PRIOR TO SEEDING.)
c. ANNUAL RYEGRASS SHALL BE APPLIED AT A RATE OF 48 LBS/ACRE OR 1.1 LB/1,000 S.F.
d. WINTER RYEGRASS SHALL BE APPLIED AT A RATE OF 168 LBS/ACRE OR 3.9 LBS/1,000 S.F.
e. AFTER SEEDING, MULCH WITH HAY OR STRAW AT 3.0 TONS/ACRE OR 138 LBS/ 1,000 S.F. (MULCHING IS MOST APPLICABLE TO THOSE AREAS SUBJECT TO PERIODIC DISTURBANCE AND REWORKING.)
f. GENERAL INFORMATION:
i. AREAS THAT FAIL TO GERMINATE MUST BE RE-SEEDED.
ii. WHERE DISTURBED AREAS ARE DIFFICULT TO STABILIZE, NETTING SHOULD BE USED TO HOLD SEED AND MULCH IN PLACE. THIS IS ESPECIALLY IMPORTANT AROUND WATERCOURSES, WITHIN SWALES AND AREAS OF CONCENTRATED FLOWS, AND ON (STEEP) SLOPES.

B. STANDARD FOR STABILIZATION WITH MULCH:
a. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO THE SLOPE.
b. STRAW AND HAY MULCH SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT WIND BLOWING.
c. GRADE AS NEEDED AND FEASIBLE. SEE STANDARD FOR LAND GRADING.
d. PROTECTIVE MATERIALS TO BE USED:
i. NON-ROTTED SMALL-GRAIN STRAW OR HAY AT 3.0 TONS/ACRE, SPREAD UNIFORMLY AT 140 LBS/1,000 S.F. AND ANCHORED WITH LIQUID MULCH BINDER; OR BY A HYDRO-SEEDER OR HYDRO-MULCHER. (USE IS LIMITED TO FLATTER SLOPES DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.)
ii. LIQUID MULCH BINDERS: APPLY IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. IF EMULSIFIED ASPHALT (CONTAINING NO SOLVENTS OR OTHER DILUTING AGENTS TOXIC TO PLANT OR ANIMAL LIFE), APPLY AT A RATE OF 31 GAL/1,000 S.Y.

C. STANDARD FOR LAND GRADING:
a. DEFINITION: RESHAPING THE GROUND SURFACE BY GRADING TO PLANNED GRADES WHICH ARE DETERMINED BY TOPOGRAPHIC SURVEY AND LAYOUT.
b. PROVISIONS SHALL BE MADE TO SAFELY CONVEY SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
c. ADJOINING PROPERTY(IES) SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS.
d. TIMBER, LOGS, BRUSH, RUBBISH, ROCKS, STUMPS AND VEGETATIVE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OF FILL AREAS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH APPROVED DISPOSAL METHODS.
e. FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN AMOUNTS THAT WILL BE DETRIMENTAL TO CONSTRUCTING STABLE FILLS.
f. ALL FILLS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESS SATURATION. (REFER TO GEOTECHNICAL REQUIREMENTS OF THE PROJECT SITE FOR SPECIFIC STANDARD FOR FILL PLACEMENT AND COMPACTION.)
g. ALL DISTURBED AREAS SHALL BE LEFT WITH A CLEAN AND FINISHED APPEARANCE AND SHALL BE PROTECTED FROM EROSION USING APPROVED EROSION AND SEDIMENT POLLUTION CONTROL BMPS.

UTILITY LINE TRENCH EXCAVATION NOTES

1. LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
2. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
3. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
4. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
5. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND / OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
6. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.
7. SOILS EXCAVATED FROM EXISTING SURFACE LAYER SHOULD BE STOCKPILED SEPARATELY AND RETURNED AS FINAL SURFACE LAYER FOLLOWING TRENCH BACKFILLING.

PERMANENT STABILIZATION NOTES:

(REFER TO SEED SPECIFICATIONS ON OVERALL SITE PLAN SHHET OF THESE PLANS FOR PROJECT SPECIFIC SEEDING REQUIREMENTS)

A. STANDARD FOR SEEDING AND SOIL TREATMENT FOR PERMANENT VEGETATIVE COVER:
a. SITE PREPARATION:
1. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, ANCHORING AND MAINTENANCE.
2. ii. SUBSOIL SHOULD BE TESTED BY A REPUTABLE LABORATORY FOR THE LIME REQUIREMENT; AND LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL PH TO 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR (4) INCHES.
3. iii. IMMEDIATELY PRIOR TO TOPSOIL DISTRIBUTION, THE SURFACE SHOULD BE SCARIFIED TO PROVIDE A GOOD BOND WITH THE TOPSOIL.

b. APPLYING TOPSOIL:
AREAS WHICH ARE TO BE TOP-SOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES (6 TO 12 INCHES ON COMPACTED SOILS) PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING, I.E. YARDS.
1. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE.
2. UNIFORM APPLICATION TO A DEPTH OF FIVE (5) INCHES (UNSETTLED) IS RECOMMENDED. SOILS WITH A PH OF 4.0 OR LESS, OR CONTAINING IRON SULFIDE, SHALL BE COVERED WITH A MINIMUM DEPTH OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 6.0 OR MORE.

c. SEED BED PREPARATION:
1. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO THE SLOPE.
2. APPLY 10-20-20 OR EQUIVALENT RATED FERTILIZER AT A RATE OF 500 LBS./ACRE OR 11 LBS./1,000 S.F.
3. APPLY 300 LBS. OF 38-0-0 PER ACRE OR EQUIVALENT OF SLOW RELEASE NITROGEN.
4. APPLY PULVERIZED DOLOMITIC LIMESTONE AT A RATE OF 4.0 TON/ACRE OR 184 LBS./1,000 S.F.
5. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR (4) INCHES. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM FINE SEEDBED IS PREPARED.
6. REMOVE FROM THE SURFACE ALL STONES TWO (2) INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.
7. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED AND FIRMED AS ABOVE.

d. GENERAL SEEDING RATES :
(UNLESS SPECIFIED OTHERWISE ELSEWHERE ON LAND DEVELOPMENT PLANS)

PERENNIAL RYEGRASS	1/2 LB./1,000 S.F.
KENTUCKY BLUEGRASS	1.0 LB./1,000 S.F.
RED FESCUE	1-1/2 LBS./1,000 S.F.
SPREADING FESCUE	1-1/2 LBS./1,000 S.F.
FERTILIZER (20-10-10)	14 LBS./1,000 S.F.
HAY OR STRAW MULCH	138 LBS./1,000 S.F. (OR 3 TONS/ACRE)

e. ERNST 5311 CONSERVATION MIX (ERNMX-114) SEEDING RATES:
(UNLESS SPECIFIED OTHERWISE ELSEWHERE ON LAND DEVELOPMENT PLANS)
FESTUCA RUBRA, PENNALAWN
POA PRATENSIS, ALENE
POA PRATENSIS, CACHE
LOLIUM MULITIFLORUM
LOLIUM PERENNE
PENNLAWN CREEPING RED FESCUE
ALENE KENTUCKY BLUEGRASS
CACHE KENTUCKY BLUEGRASS
ANNUAL RYEGRASS

TURF TYPE PERENNIAL RYEGRASS	4 LB./1,000 S.F.
FERTILIZER (20-10-10)	14 LBS./1,000 S.F.
HAY OR STRAW MULCH	138 LBS./1,000 S.F. (OR 3 TONS/ACRE)

f. IRRIGATION - (WHERE FEASIBLE):
i. WATER A MINIMUM OF 1/4" TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED, ESPECIALLY WHEN SEEDING IS PERFORMED IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

B. STANDARD FOR PERMANENT STABILIZATION WITH SOD:
a. METHODS AND MATERIALS:
1. CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD. SPECIFY "CERTIFIED SOD", OR OTHER HIGH-QUALITY CULTIVATED SOD.
2. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.
3. SOD SHOULD BE OF UNIFORM THICKNESS, APPROXIMATELY 5/8 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING (EXCLUDES TOP GROWTH).
4. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 10% OF THE STRIP. BROKEN PADS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.
5. FOR DROUGHT/DRY SITES, A SOD OF KENTUCKY 31 TALL FESCUE AND BLUEGRASS IS PREFERRED OVER A STRAIGHT BLUEGRASS SOD.
6. ONLY MOIST, FRESH, UN-HEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS, OTHERWISE IT SHALL BE REJECTED.

b. SITE PREPARATION:
1. SEE STANDARD FOR LAND GRADING.

c. SOIL PREPARATION:
1. SEE SPECIFICATION FOR SEEDING AND SOIL TREATMENT FOR PERMANENT VEGETATIVE COVER.

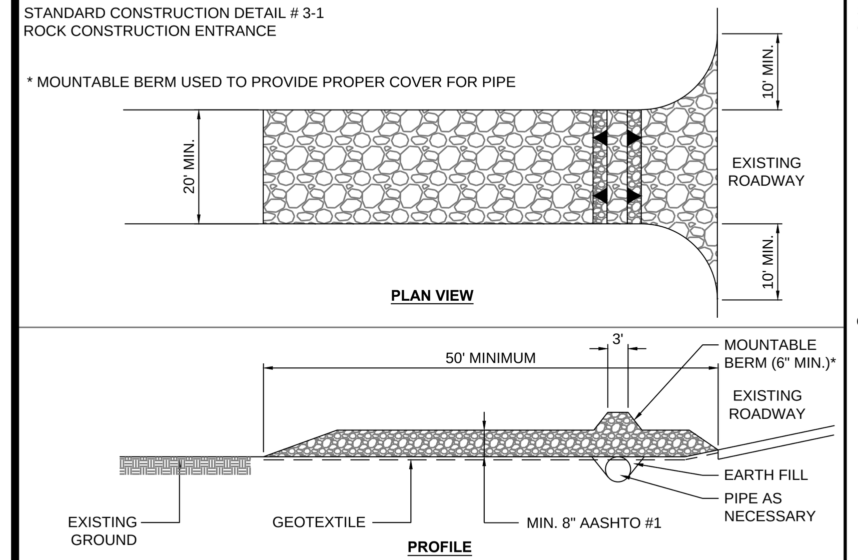
d. SOD PLACEMENT:
1. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO APPLYING THE SOD.
2. PLACE SOD STRIPS WITH SNUG EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES WILL RESULT IN EROSION AND SEDIMENT POLLUTION.
3. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO ENSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE DRYING OF THE ROOTS.
4. ON SLOPES GREATER THAN 3:1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 3/4 INCH WIDE).
5. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER-CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL WORK.
6. PENETRATE THE SOIL LAYER BENEATH THE SOD TO A DEPTH OF 4 INCHES. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO (2) WEEKS.

e. TOPDRESSING:
1. IF SLOW RELEASE NITROGEN (300 LBS. OF 38-0-0 PER ACRE OR EQUIVALENT) IS USED IN ADDITION TO SUGGESTED FERTILIZER, THEN A FOLLOW-UP OF TOPDRESSING IS NOT MANDATORY.
2. SPRING INSTALLATION OF SOD WILL REQUIRE AN APPLICATION OF FERTILIZER SUCH AS 10-20-10 OR EQUIVALENT AT 400 LBS./ACRE OR 10 LBS./1,000 S.F. BETWEEN MARCH 15 AND MAY 1.
3. FALL INSTALLATION OF SOD WILL REQUIRE THE ABOVE BETWEEN SEPTEMBER 1 AND OCTOBER 15.

ADDITIONAL STABILIZATION NOTES:

1. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
2. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
3. AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES STEEPER THAN 3:1, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF WATERS OF THE COMMONWEALTH.

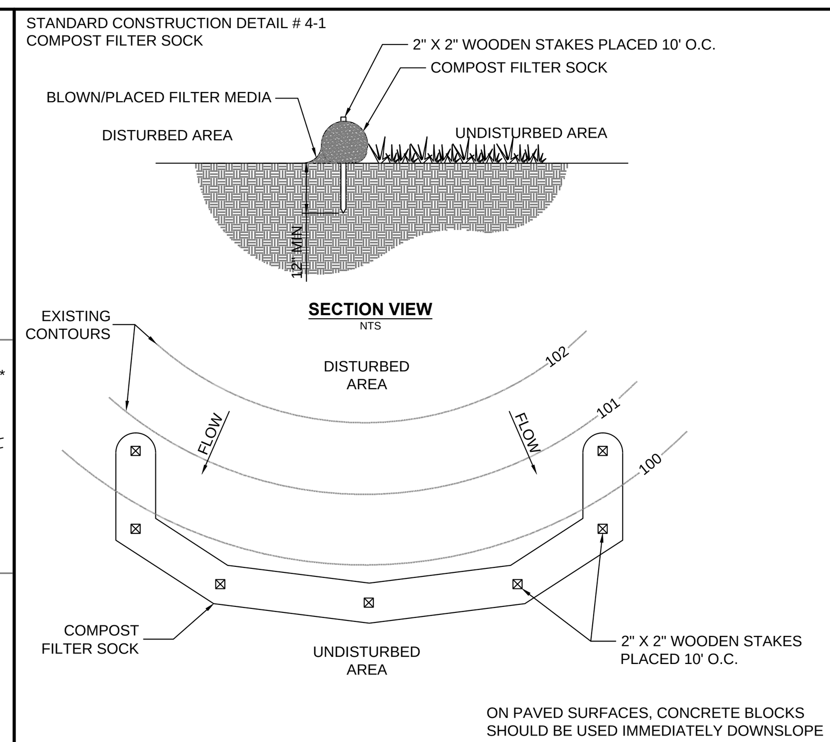
STANDARD CONSTRUCTION DETAIL # 3-1
ROCK CONSTRUCTION ENTRANCE



- REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
- RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
- MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
- MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

01 ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE

STANDARD CONSTRUCTION DETAIL # 4-1
COMPOST FILTER SOCK



ON PAVED SURFACES, CONCRETE BLOCKS SHOULD BE USED IMMEDIATELY DOWNSLOPE OF SOCKS (AT SAME INTERVALS AS STAKES)

02 COMPOST FILTER SOCK
NOT TO SCALE

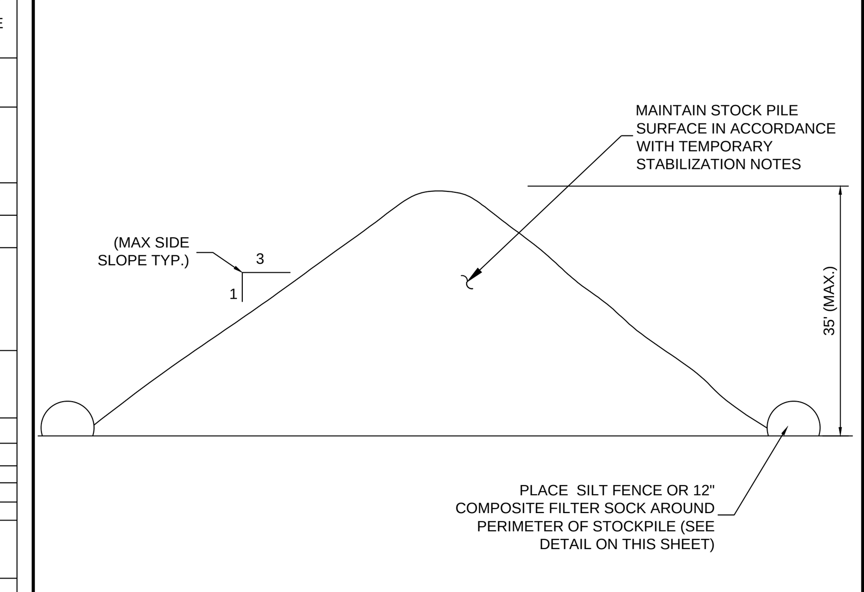
NOTES:
- SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.
- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
- SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
- COMPOST SHOULD BE A WELL DECOMPOSED, WEED-FREE ORGANIC MATTER DERIVED FROM AGRICULTURE, FOOD, STUMP GRINDINGS, AND YARD OR WOOD/BARK ORGANIC MATTER SOURCES. THE COMPOST SHOULD BE AEROBICALLY COMPOSTED. THE COMPOST SHOULD POSSESS NO OBJECTIONABLE ODORS AND SHOULD BE REASONABLY FREE (<1% BY DRY WEIGHT) OF MAN-MADE FOREIGN MATTER. THE COMPOST PRODUCT SHOULD NOT RESEMBLE THE RAW MATERIAL FROM WHICH IT WAS DERIVED. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS ARE NOT ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
- THE PHYSICAL PARAMETERS OF THE COMPOST SHOULD COMPLY WITH THE STANDARDS IN TABLE 4.2. THE STANDARDS CONTAINED IN THE PENNDOT PUBLICATION 408 ARE AN ACCEPTABLE ALTERNATIVE.

TABLE 4.2
COMPOST STANDARDS

ORGANIC MATERIAL CONTENT	80% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAXIMUM

TABLE 4.1
COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEAR
TWO-PLY SYSTEM					
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET CONTINUOUSLY WOUND FUSION-WELDED JUNCTURES 3/4" X 3/4" MAX. APERTURE SIZE				
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH) 3/16" MAX. APERTURE SIZE				
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.					



03 TEMPORARY STOCKPILE
NOT TO SCALE

REV.	DATE	COMMENT	BY
01	01/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.
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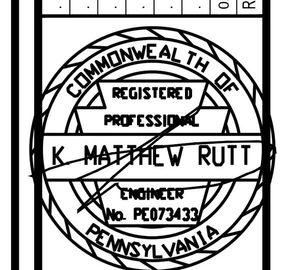

K. MATTHEW RUTT, P.E.
PENNSYLVANIA LICENSE NO. 073433
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

PROJECT No:	150066
DRAWN BY:	B. NAGENGAST
CHECKED BY:	K. M. RUTT
CAD I.D. #:	09-NE_150066

LANDCORE
Engineering Consultants, P.C.
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PITTSBURGH, PA 15235
PHONE 412-253-6569
PRINCETON, NJ
100 OVERLOOK CENTER
SUITE 200
PRINCETON, NJ 08540
PHONE 609-920-0268

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TROUT RUN ROAD & SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

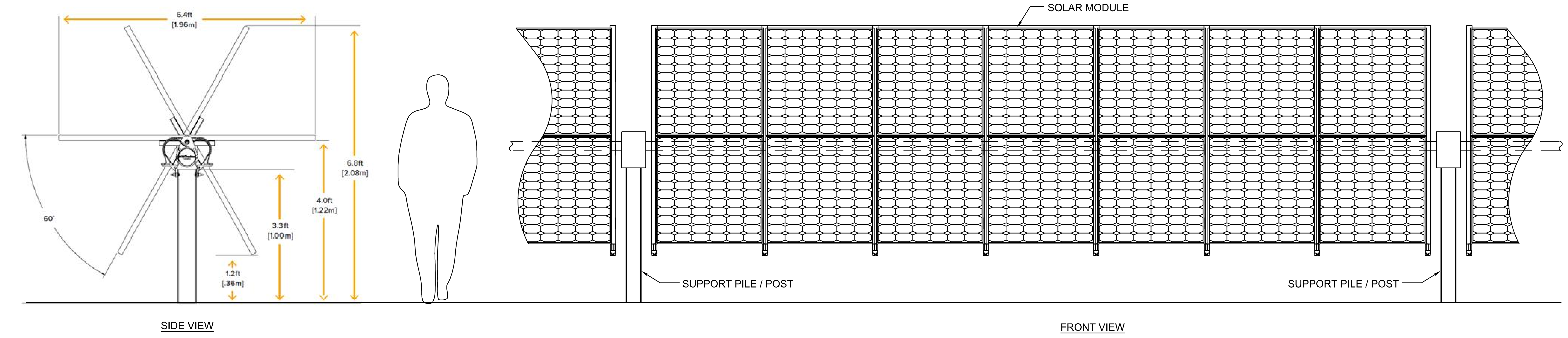
TITLE: EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SCALE: (H) AS NOTED
(V) .

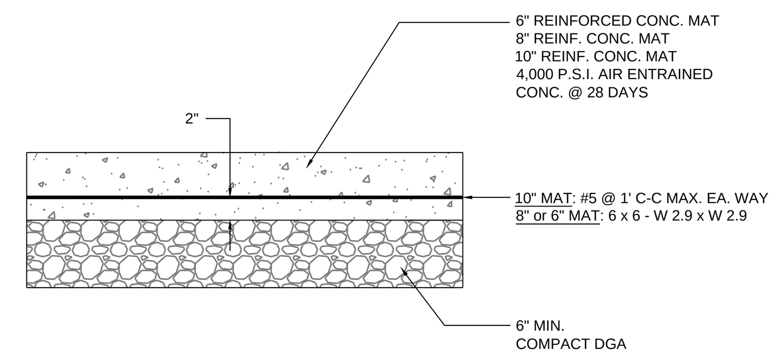
DATE: 2015 - 12 - 11

SHEET : NE
REV. No: 0

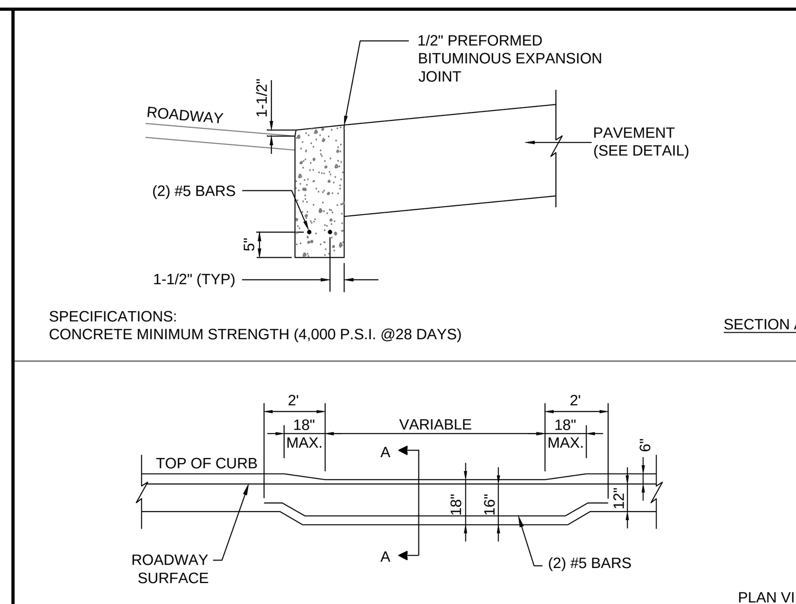
C:\USERS\MWOLFE\DROPBOX (LANDCORE)\PROJECTS\2015\150066 - GROSOLAR - EPHRATA PA\DRAWINGS\00-SITE PLANS\09-NE_150066----->LAYOUT: ERO NOTES



01 SOLAR PANEL ARRAY / MODULE (FOR ILLUSTRATIVE PURPOSES ONLY)
NOT TO SCALE



02 REINFORCED CONCRETE MAT
NOT TO SCALE

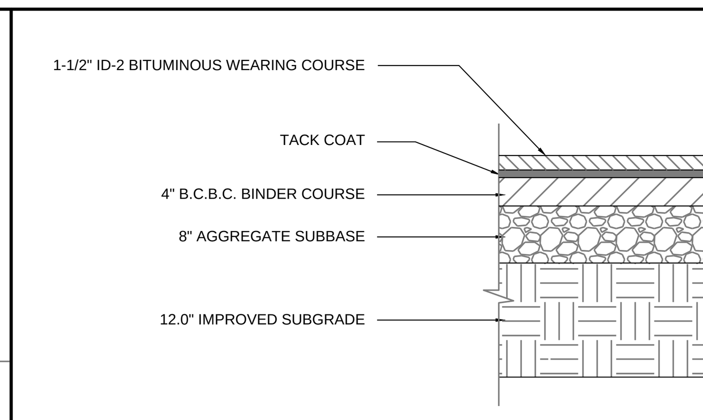


SPECIFICATIONS:
CONCRETE MINIMUM STRENGTH (4,000 P.S.I. @28 DAYS)

NOTES:

1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO POURING.
2. TRANSVERSE JOINTS 3/4" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED 1/4" FROM THE FRONT FACE AND TOP OF THE CURB.

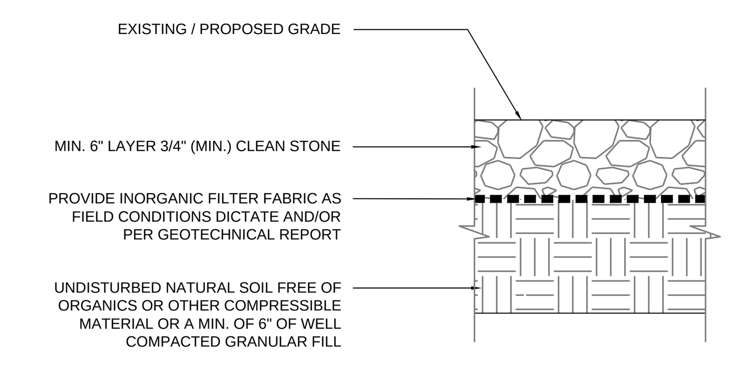
03 CONCRETE DEPRESSED CURB
NOT TO SCALE



NOTE:

1. CBR VALUES SHALL BE OBTAINED BY GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF PAVING.
2. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL PAVEMENT DESIGN SPECIFICATIONS AND MATERIAL REQUIREMENTS.
3. AGGREGATE SUB-BASE SHALL BE AGGREGATE CONFORMING TO THE GRADATIONS OF TYPE 2A AGGREGATE. ON-SITE MATERIAL MAY BE USED IF DEEMED ADEQUATE.

04 ASPHALT PAVEMENT
NOT TO SCALE



05 GRAVEL DRIVE
NOT TO SCALE

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG
811
STATE of PENNSYLVANIA ONE CALL
DIAL 811 or 1-800-242-1776
WWW.PA1CALL.ORG

DEMOLITION NOTES
(AS APPLICABLE TO THIS PROJECT)

1. LANDCORE ENGINEERING CONSULTANTS, P.C. IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION.
2. ALL DEMOLITION ACTIVITIES ARE TO PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AS WELL AS ALL FEDERAL, STATE AND LOCAL REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS SHALL BE IDENTIFIED BY THE CONTRACTOR TO LANDCORE ENGINEERING CONSULTANTS, P.C. IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF SITE ACTIVITY.
3. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE TO / FOR THE FOLLOWING:
   - 3.1. ENSURING COPIES OF ALL PERMITS AND APPROVALS MUST BE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW
   - 3.2. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
   - 3.3. ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY SEWER , STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL UNDERGROUND UTILITIES.
   - 3.4. PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED DURING THE DEMOLITION ACTIVITIES.
   - 3.5. FAMILIARIZING THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
   - 3.6. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING 'OFF-PEAK' HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT OF THE AFFECTED PARTIES.
   - 3.7. A COMPLETE INSPECTION CONTAINMENTS BY A LICENSED ENVIRONMENTAL TESTING AGENCY, OF ALL BUILDINGS AND / OR STRUCTURES TO BE REMOVED. SAME SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. ALL ENVIRONMENTAL WORK INCLUDING HAZARDOUS MATERIAL, SOILS, ASBESTOS OR OTHER REFERENCED OR IMPLIED HEREIN IS THE SOLE RESPONSIBILITY OF THE OWNER'S ENVIRONMENTAL CONSULTANT.
4. THE FIRM OR ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
5. THE CONTRACTOR SHALL PROVIDE ALL THE 'MEANS AND METHODS' NECESSARY TO PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF EXISTING STRUCTURES OR ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF THE SITE. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF THEIR ACTIVITIES. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION.
6. IN THE ABSENCE OF SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE IN ACCORDANCE WITH DIRECTION BY THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
7. EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AN EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
8. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE 'MANUAL ON UNIFORM TRAFFIC CONTROL' AS WELL AS FEDERAL, STATE AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHTS OF WAY.
9. CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.
10. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROPERTY LINE WITHOUT WRITTEN PERMISSION OF THE OWNER AND / OR APPROPRIATE GOVERNMENT AGENCY.
11. USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE AND / OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR 'PRE-DEMOLITION' CONDITION.
12. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
13. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS / CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH FEDERAL, STATE, LOCAL AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
14. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, COUNTY AND TOWN LAWS AND APPLICABLE CODES.
15. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR SHALL BE REQUIRED TO CALL THE BOARD OF PUBLIC UTILITIES 'ONE CALL' DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT IN ADVANCE OF ANY EXCAVATION.
16. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING SITE IMPROVEMENTS AND UTILITIES. ALL DISCREPANCIES SHALL BE IDENTIFIED TO THE ENGINEER IN WRITING.
17. ALL EXISTING UTILITIES SHALL BE REMOVED BY CONTRACTOR IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS.
18. ALL DEMOLITION DEBRIS TO BE REMOVED BY CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

DRAINAGE and UTILITY NOTES
(AS APPLICABLE TO THIS PROJECT)

1. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ALL UTILITIES AND SERVICES INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO COST TO THE OWNER.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
4. DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/ RELOCATED DURING SITE ACTIVITY.
5. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
6. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED IN COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER OR OWNER'S REPRESENTATIVE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT.
7. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION SHALL BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND SHALL BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
8. THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
9. PAVEMENT SHALL BE SAW CUT IN STRAIGHT LINES TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS SHALL BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.
10. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS SHALL BE ADJUSTED, IF REQUIRED TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.
11. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MINIMUM SLOPE AGAINST ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE SO AT THE CONTRACTOR'S OWN RISK.
12. IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS.
13. CONTRACTOR SHALL BE REQUIRED TO SECURE ALL NECESSARY PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR SHALL SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING WORK.

REV.	DATE	COMMENT	BY
01	01/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.
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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — K. MATTHEW RUTT — ENGINEER — No. PE073433

K. MATTHEW RUTT, P.E.
PENNSYLVANIA LICENSE NO. 073433
NEW JERSEY LICENSE NO. 42952

NOT FOR CONSTRUCTION

PROJECT No:	150066
DRAWN BY:	B. NAGENGAST
CHECKED BY:	K. M. RUTT
CAD I.D. #:	10_DT_150066

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PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TROUT RUN ROAD & SPRINGHOUSE ROAD
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: DETAIL SHEET

SCALE: (H) AS NOTED
(V) .

DATE: 2015 - 12 - 11

SHEET: DT
REV. No: 0

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REV. | DATE | COMMENT | BY
01 | 01/27/2016 | REVISED PER LCCD AND TWONSHIP REVIEW LETTERS | T.P.R.

COMMONWEALTH OF PENNSYLVANIA
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K. MATTHEW RUTT
ENGINEER
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K. MATTHEW RUTT, P.E.

PENNSYLVANIA LICENSE NO. 073413
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NOT FOR CONSTRUCTION

PROJECT No: 150066
DRAWN BY: B. NAGENKAST
CHECKED BY: K. M. RUTT
CAD I.D. #: C01_EDAM_150066

PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TAX PARCEL #'S 360-64-1-PRCL-0000 & 360-64-1-PRCL-0000
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: PRE-DEVELOPMENT DRAINAGE MAP

SCALE: (H) AS NOTED
(V) -

DATE: 2015 - 12 - 11

SHEET: EDAM

REV. No: 0

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REV.	DATE	COMMENT	BY
01	01/27/2016	REVISED PER LCCD AND TWONSHIP REVIEW LETTERS	T.P.R.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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No. PE073413
K. MATTHEW RUTT, P.E.
PENNSYLVANIA LICENSE NO. 073413
NEW JERSEY LICENSE NO. 42952
NOT FOR CONSTRUCTION

PROJECT No:	150066
DRAWN BY:	B. MAGENGAST
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CAD I.D. #	C02_PDAM_150066

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PROJECT: EPHRATA SOLAR ENERGY FARM
PROPOSED LARGE SOLAR ENERGY PRODUCTION FACILITY
TAX PARCEL #'S 360-A-274 & 360-A-274-1
EPHRATA TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

TITLE: POST-DEVELOPMENT DRAINAGE MAP

SCALE: (H)	AS NOTED
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DATE:	2015 - 12 - 11
SHEET :	PDAM
REV. No:	0

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