SITE DEVELOPMENT PLAN
SOLAR ENERGY FIELD
BOUTILIER ROAD
IN
LEICESTER, MASSACHUSETTS
JUNE 14, 2016

REVISIONS THROUGH SEPTEMBER 2, 2016

VICINITY MAP

SCALE: 1" = 1000'

CONTRACTOR

PRO-TECH ENERGY SOLTIONS, LLC
MICHAEL ALADICH
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY 08057
(856) 437-6220

APPLICANT:

ZPT ENERGY SOLUTIONS, LLC
BRENDAN GOVE, MANAGER
309 EAST COUNTY ROAD
RUTLAND, MASSACHUSETTS 01543
TEL: (774) 696-8729

OWNER

THE LAFLASH FAMILY REVOCABLE TRUST 2015
25 THOMPSON POND ROAD
SPENCER, MA 01562

CIVIL ENGINEER & LAND SURVEYOR:

HANNIGAN ENGINEERING, INC.
8 MONUMENT SQUARE
LEOMINSTER, MASSACHUSETTS 01453
TEL: (978) 534-1234

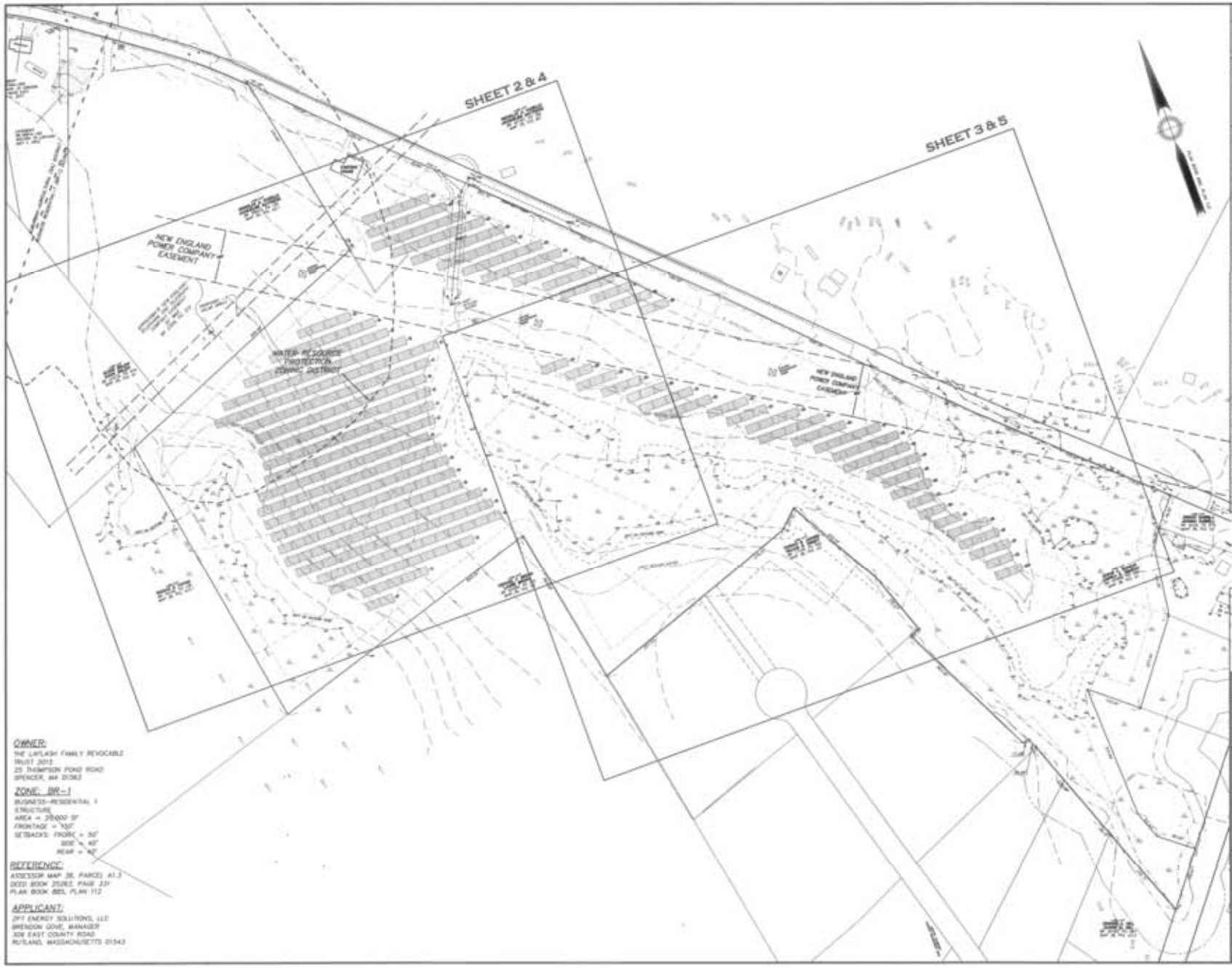
PLAN INDEX

SHEET	1	SHEET INDEX PLAN
SHEETS	2-3	EXISTING CONDITIONS
SHEETS	4-5	SITE DEVELOPMENT PLAN
SHEET	6	ELECTRICAL UTILTY PLAN
SHEETS	7-8	CONSTRUCTION DETAILS

PERMITTING SET

2015 - PRO-TECH ENERGY SOLUTIONS, LLC - C-12-22 (SEPTEMBER 2, 2016)
BOUTILIER ROAD - LEICESTER, MASSACHUSETTS 2F-20

2015 - PRO-TECH ENERGY SOLUTIONS, LLC - C-12-22 (SEPTEMBER 2, 2016)
BOUTILIER ROAD - LEICESTER, MASSACHUSETTS 2F-20



PROJECT INFORMATION

LAND INFORMATION

MAP/PARCEL: 38/A1.3
DEED BOOK/PAGE: 25283/231
PROPOSED FRONTAGE: 100.07 FT (SHAFFORD STREET)
PROPOSED AREA: 20.00 ACRES±

ZONING INFORMATION

ZONING DISTRICT: BUSINESS-RESIDENTIAL 1
DIMENSIONAL REQUIREMENTS:

MINIMUM AREA	20,000 SF
MINIMUM FRONTAGE	100 FEET
MINIMUM SETBACKS:	
FRONT YARD	50 FT
SIDE YARD	40 FT
REAR YARD	40 FT

GENERAL NOTES:

1. PROPERTY LINE INFORMATION BASED DEEDS AND PLANS OF RECORD. NO CONFIRMATION OF PROPERTY LINES SHOWN ON THIS PLAN IS INTENDED OR IMPLIED BY HANNIGAN ENGINEERING, INC. TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED BY CLIENT.
2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN PREVIOUSLY DELINEATED AND APPROVED BY THE LEICESTER CONSERVATION COMMISSION UNDER DEP FILE#171-0517. THOSE AREAS ARE DEPICTED ON THE PLANS.
3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR WARNED IN THE FIELD, AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENCY AS WELL AS DIG-SAFE PRIOR TO EXCAVATION. (SEE NOTE)
4. NOTIFICATION REQUIREMENTS SHOWN ON THIS PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS WHICH MAY EXIST UNDER LOCAL, STATE, OR FEDERAL JURISDICTION TO WHICH THE CONTRACTOR IS OBLIGATED.
5. RELOCATION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE TOWN OF LEICESTER AND THE MASS DOT SPECIFICATIONS OF HIGHWAYS AND BRIDGES.
7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
8. ANY DEVIATIONS AS DESIGN AS SHOWN SHALL REQUIRE A REVIEW AND APPROVAL OF THE DESIGN ENGINEER OR FIRM. CHANGES MADE IN THE FIELD MADE WITHOUT AUTHORIZATION SHALL BE SUBJECT TO REVIEW BY THE ENGINEER AND APPROPRIATE APPROVING AUTHORITY. EXPENSES INCURRED TO BRING THE UNAUTHORIZED CHANGES TO ACCEPTABLE CONFORMANCE SHALL BE BORNE BY THE COMPANY OR CONTRACTOR MAKING THE UNAUTHORIZED CHANGE.
9. ANY MATERIALS DISCOVERED ON-SITE WHICH ARE NOT SUITABLE FOR USE IN THE PROJECT AS SHOWN ON THIS PLAN SHALL BE REMOVED AND HAULED OFF-SITE TO AN APPROPRIATELY LICENSED FACILITY.
10. PLANS TO BE REVIEWED BY APPLICABLE UTILITY AGENCIES FOR COMPLIANCE WITH REGULATORY FINAL LOCATION IS SUBJECT TO CHANGE.
11. APPLICANT SHALL BE AWARE OF OBLIGATION TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, OTHERWISE KNOWN AS THE WETLANDS PROTECTION ACT AND THE ASSOCIATED REGULATIONS (310 CMR 10.00)
12. STOCKPILING OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED AT A SUITABLE LOCATION AND SURROUNDED BY A ROW OF STAKED HAY BALES FOR EROSION CONTROL.
13. AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY IN AREAS WITHIN BUILDINGS AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL FREE OF DELETERIOUS MATERIALS AND DEBRIS.
14. THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN, ZONE A, PER F.E.M.A. FIRM MAP No. 25027C0164E, JANUARY 4, 2011. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
15. ALL REINFORCED CONCRETE PIPE TO BE CLASS V UNLESS OTHERWISE NOTED.
16. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
17. ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE TOWN OF LEICESTER.

NO.	DATE	REVISIONS	BY
1	06/02/2016	PEER REVIEW COMMENTS	DMA
1	06/01/2016	PEER REVIEW COMMENTS	DMA

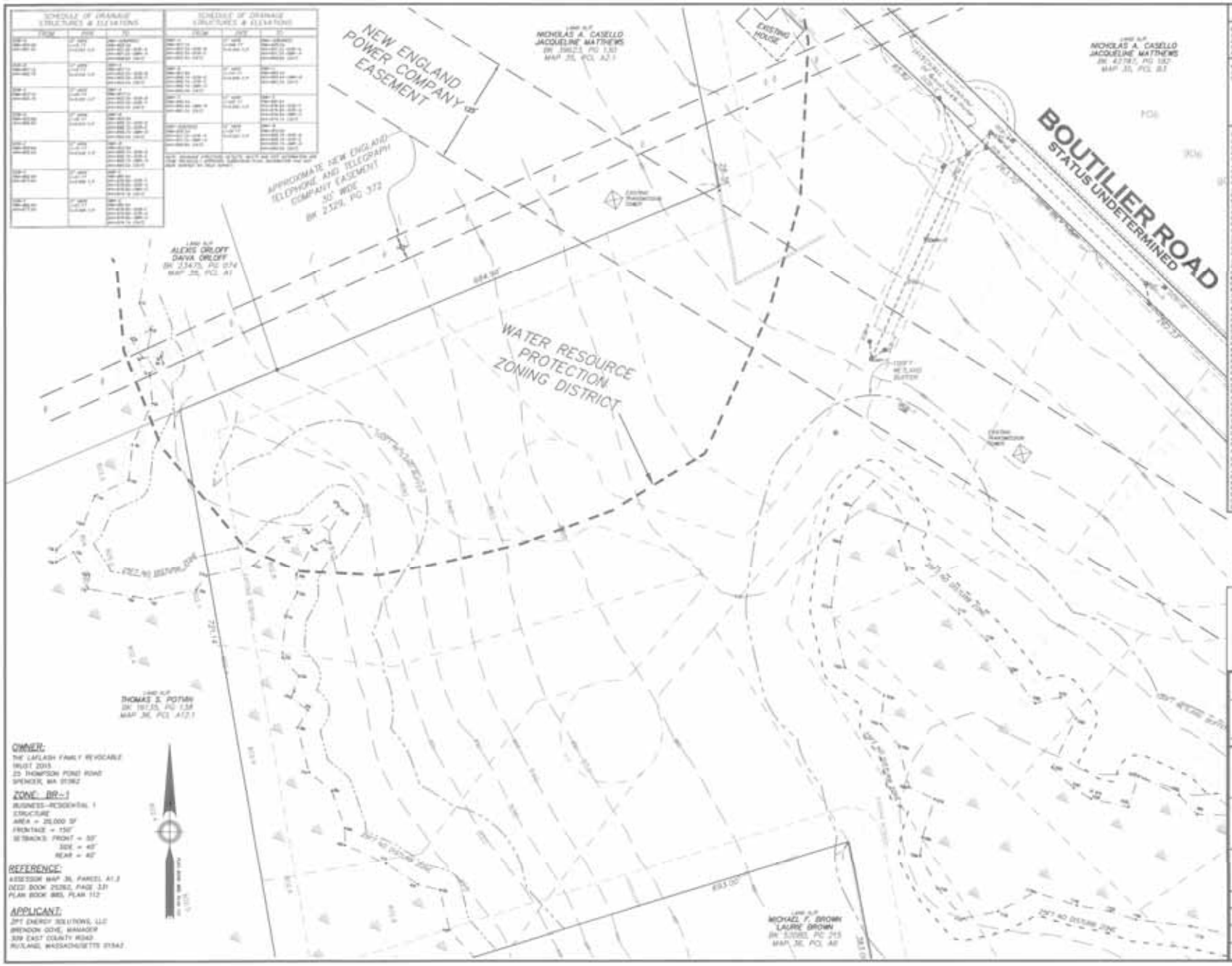
HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS

SHEET INDEX PLAN
IN
LEICESTER, MASSACHUSETTS

PREPARED FOR:
PRO-TECH ENERGY SOLUTIONS
MICHAEL ALADICH
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY 08057
TEL: (856) 437-6233

GRAPHIC SCALE: 1"=100'

CALC: DMA/MDH	DRWN: DMA/MDH	SCALE: 1"=100'
CHKD: MDH	APPD: MDH	DATE: JAN 14, 2016
SRV: JCT-PLB	FB: 1.2017004.2816	JOB NO: 2570
TAB: 1-0015	SHEET 1 OF 8	PLAN NO: C-13-23



PROJECT INFORMATION

LAND INFORMATION

MAP/PARCEL: 36/A1.3
DEED BOOK/PAGE: 25282/331
PROPOSED FRONTAGE: 150.07 FT (EXISTING STREET)
PROPOSED AREA: 20.00 ACRES±

ZONING INFORMATION

ZONING DISTRICT: BUSINESS-RESIDENTIAL 1
DIMENSIONAL REQUIREMENTS:

MINIMUM AREA	20,000 SF
MINIMUM FRONTAGE	150 FEET
MINIMUM SETBACKS:	
FRONT YARD:	50 FT
SIDE YARD:	40 FT
REAR YARD:	40 FT

GENERAL NOTES:

1. PROPERTY LINE INFORMATION BASED DEEDS AND PLANS OF RECORD. NO DETERMINATION OF PROPERTY LINES SHOWN ON THIS PLAN IS INTENDED OR IMPLIED BY HANNIGAN ENGINEERING, INC. TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED BY GLEPAT.
2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN PREVIOUSLY DELINEATED AND APPROVED BY THE LEICESTER CONSERVATION COMMISSION UNDER DEP FILE#311-0317. THESE AREAS ARE REFLECTED ON THE PLANS.
3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR MARKED IN THE FIELD, AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENCY AS WELL AS DIG-SAFE PRIOR TO EXCAVATION. (DIG NOTE)
4. NOTIFICATION REQUIREMENTS SHOWN ON THE PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS WHICH MAY EXIST UNDER LOCAL, STATE, OR FEDERAL JURISDICTION TO WHICH THE CONTRACTOR IS OBLIGATED.
5. RELOCATION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE TOWN OF LEICESTER AND THE MASS DOT SPECIFICATIONS OF HIGHWAYS AND BRIDGES.
7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
8. ANY DEVIATION IN DESIGN AS SHOWN SHALL REQUIRE A REVIEW AND APPROVAL OF THE DESIGN ENGINEER OR FIRM. CHANGES MADE IN THE FIELD MADE WITHOUT AUTHORIZATION SHALL BE SUBJECT TO REVIEW BY THE ENGINEER AND APPROPRIATE APPROVING AUTHORITY. EXPENSES INCURRED TO BRING THE UNAUTHORIZED CHANGES TO ACCEPTABLE CONFORMANCE SHALL BE BORNE BY THE COMPANY OR CONTRACTOR MAKING THE UNAUTHORIZED CHANGE.
9. ANY MATERIALS DISCOVERED ON-SITE WHICH ARE NOT SUITABLE FOR USE IN THE PROJECT AS SHOWN ON THIS PLAN SHALL BE REMOVED AND HAULED OFF-SITE TO AN APPROPRIATELY LICENSED FACILITY.
10. PLANS TO BE REVIEWED BY APPLICABLE UTILITY AGENCIES FOR COMPLIANCE WITH REGULATIONS. FINAL LOCATION IS SUBJECT TO CHANGE.
11. APPLICANT SHALL BE AWARE OF OBLIGATIONS TO COMPLY WITH CHAPTER 130, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, OTHERWISE KNOWN AS THE WETLANDS PROTECTION ACT, AND THE ASSOCIATED REGULATIONS (310 CMR 10.00).
12. STOCKPILING OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED IN A SUITABLE LOCATION AND SURROUNDED BY A ROW OF STAKED HAY BALES FOR EROSION CONTROL.
13. AREAS OF FILL TO BE COMPACTED TO A MINIMUM 95% DRY DENSITY IN AREAS WITHIN PAVEMENT AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL FREE OF DELETERIOUS MATERIALS AND DEBRIS.
14. THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN ZONE A, PER F.E.M.A. FIRM MAP No. 25027C0776E DATED JULY 4, 2011. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
15. ALL REINFORCED CONCRETE PIPE TO BE CLASS A UNLESS OTHERWISE NOTED.
16. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
17. ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE TOWN OF LEICESTER.

NO.	DATE	REVISIONS	BY
1	06/02/2016	PEER REVIEW COMMENTS	DMA
1	06/01/2016	PEER REVIEW COMMENTS	DMA

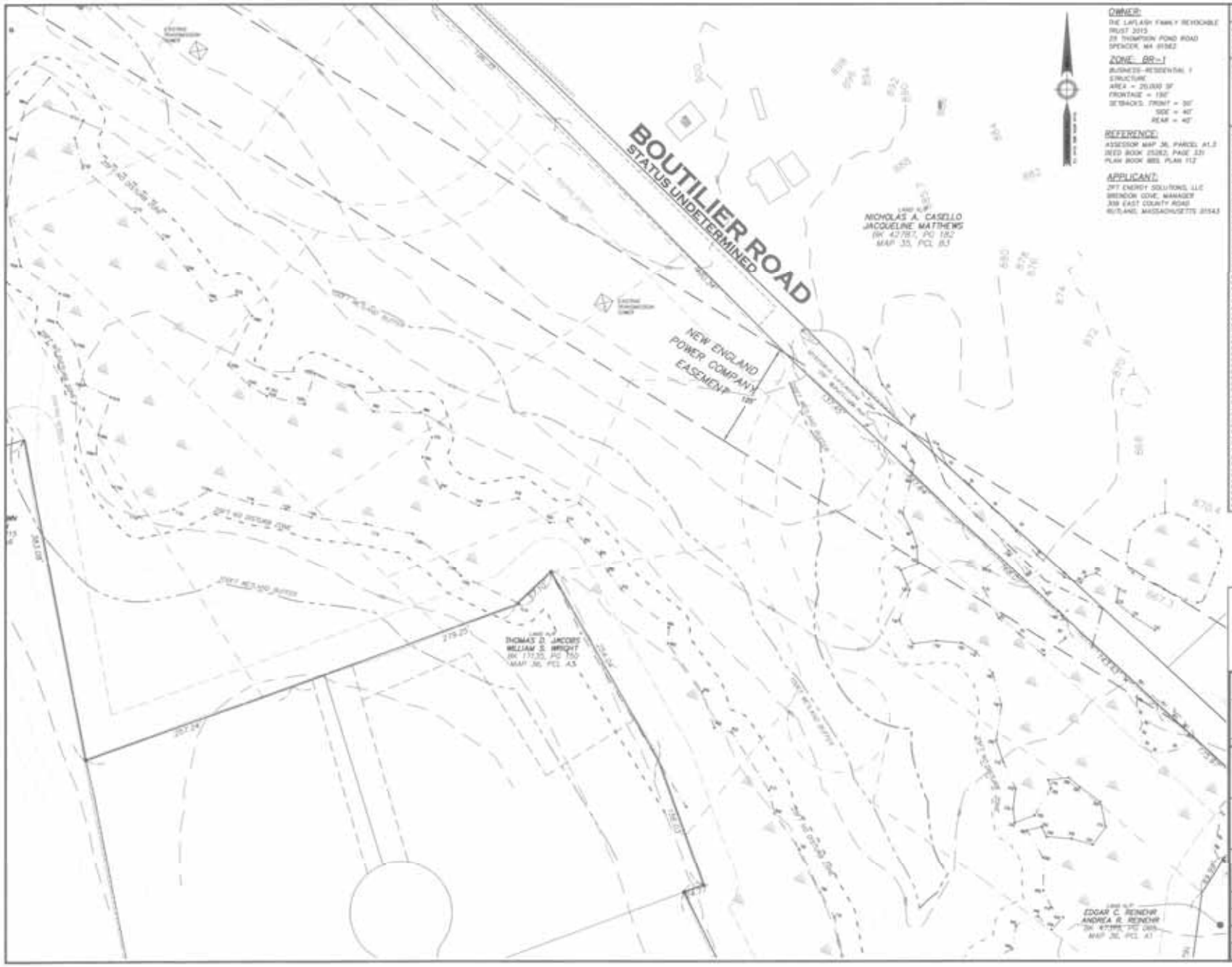
HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS

EXISTING CONDITION PLAN
IN
LEICESTER, MASSACHUSETTS

PREPARED FOR:
PRO-TECH ENERGY SOLUTIONS
MICHAEL ALADICH
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY 08057
TEL: (856) 451-6200

GRAPHIC SCALE: 1"=30'

CALC: DMA/MDH	DRWN: DMA/MDH	SCALE: 1"=30'
CHKD: MDH	APPD: MDH	DATE: JAN 14, 2016
SRV: JET-PJB	FB: L:2170042816	JOB NO: 2570
TAB: 2-EXCOND	SHEET 2 OF 8	PLAN NO: C-12-23



OWNER:
THE LAFLASH FAMILY REVOCABLE TRUST 2015
29 THOMPSON POND ROAD
SPENCER, MA 01562

ZONE: BR-1
BUSINESS-RESIDENTIAL 1
STRUCTURE
AREA = 25,000 SF
FRONTAGE = 150'
SETBACKS: FRONT = 30'
SIDE = 40'
REAR = 40'

REFERENCE:
ASSESSOR MAP 36, PARCEL A1.2
DEED BOOK 25282, PAGE 331
PLAN BOOK 885, PLAN 112

APPLICANT:
DPT ENERGY SOLUTIONS, LLC
BRENDON COVE, MANAGER
339 EAST COUNTY ROAD
RUTLAND, MASSACHUSETTS 01543

PROJECT INFORMATION

LAND INFORMATION

MAP/PARCEL	36/A1.2
DEED BOOK/PAGE	25282/331
PROPOSED FRONTAGE	150.07 FT (STAFFORD STREET)
PROPOSED AREA	25.00 ACRES

ZONING INFORMATION

ZONING DISTRICT	BUSINESS-RESIDENTIAL 1
DIMENSIONAL REQUIREMENTS	
MINIMUM AREA	25,000 SF
MINIMUM FRONTAGE	150 FEET
MINIMUM SETBACKS	
FRONT YARD	30 FT
SIDE YARDS	40 FT
REAR YARD	40 FT

GENERAL NOTES:

1. PROPERTY LINE INFORMATION BASED DEEDS AND PLANS OF RECORD. NO DEMARCATION OF PROPERTY LINES SHOWN ON THIS PLAN IS INTENDED OR IMPLIED BY HANNIGAN ENGINEERING, INC. TOPOGRAPHIC INFORMATION WAS BEEN PROVIDED BY CLIENT.
2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN PREVIOUSLY DELINEATED AND APPROVED BY THE LEICESTER CONSERVATION COMMISSION UNDER DEP FILE#077-0917. THESE AREAS ARE DEPICTED ON THE PLANS.
3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR BASED IN THE FIELD, AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENCY AS WELL AS DIG-SAFE PRIOR TO EXCAVATION (SEE NOTE).
4. NOTIFICATION REQUIREMENTS SHOWN ON THIS PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS MADE BY ANY OTHER LOCAL, STATE, OR FEDERAL AGREEMENTS TO WHICH THE CONTRACTOR IS OBLIGATED.
5. RELOCATION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE TOWN OF LEICESTER AND THE MASS DOT SPECIFICATIONS OF HIGHWAYS AND BRIDGES.
7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
8. ANY DEVIATIONS IN DESIGN AS SHOWN SHALL REQUIRE A REVIEW AND APPROVAL OF THE DESIGN ENGINEER OR FIRM. CHANGES MADE IN THE FIELD MADE WITHOUT AUTHORIZATION SHALL BE SUBJECT TO REVIEW BY THE ENGINEER AND APPROPRIATE APPROVING AUTHORITY. EXPENSES INCURRED TO BRING THE UNAUTHORIZED CHANGES TO ACCEPTABLE CONFORMANCE SHALL BE BORNE BY THE COMPANY OR CONTRACTOR MAKING THE UNAUTHORIZED CHANGE.
9. ANY MATERIALS DISCOVERED ON-SITE WHICH ARE NOT SUITABLE FOR USE IN THE PROJECT AS SHOWN ON THIS PLAN SHALL BE REMOVED AND HAULED OFF-SITE TO AN APPROPRIATELY LICENSED FACILITY.
10. PLANS TO BE REVIEWED BY APPLICABLE UTILITY AGENCIES FOR COMPLIANCE WITH REGULATIONS. FINAL LOCATION IS SUBJECT TO CHANGE.
11. APPLICANT SHALL BE AWARE OF OBLIGATIONS TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, OTHERWISE KNOWN AS THE WETLANDS PROTECTION ACT AND THE ASSOCIATED REGULATIONS (310 CMR 10.00).
12. STOCKPILING OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED IN A SUITABLE LOCATION AND SURROUNDED BY A RING OF STAKED HAY BALES FOR EROSION CONTROL.
13. AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY IN AREAS WITHIN EASEMENTS AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL, FREE OF DELETERIOUS MATERIALS AND DEBRIS.
14. THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN ZONE A, PER F.E.M.A. FIRM MAP No. 25027C0194E, DATED JULY 4, 2011. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
15. ALL REINFORCED CONCRETE PIPE TO BE CLASS IV UNLESS OTHERWISE NOTED.
16. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
17. ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE TOWN OF LEICESTER.

NO	DATE	REVISIONS	BY
1	06/02/2016	PEER REVIEW COMMENTS	CMA
1	06/01/2016	PEER REVIEW COMMENTS	CMA

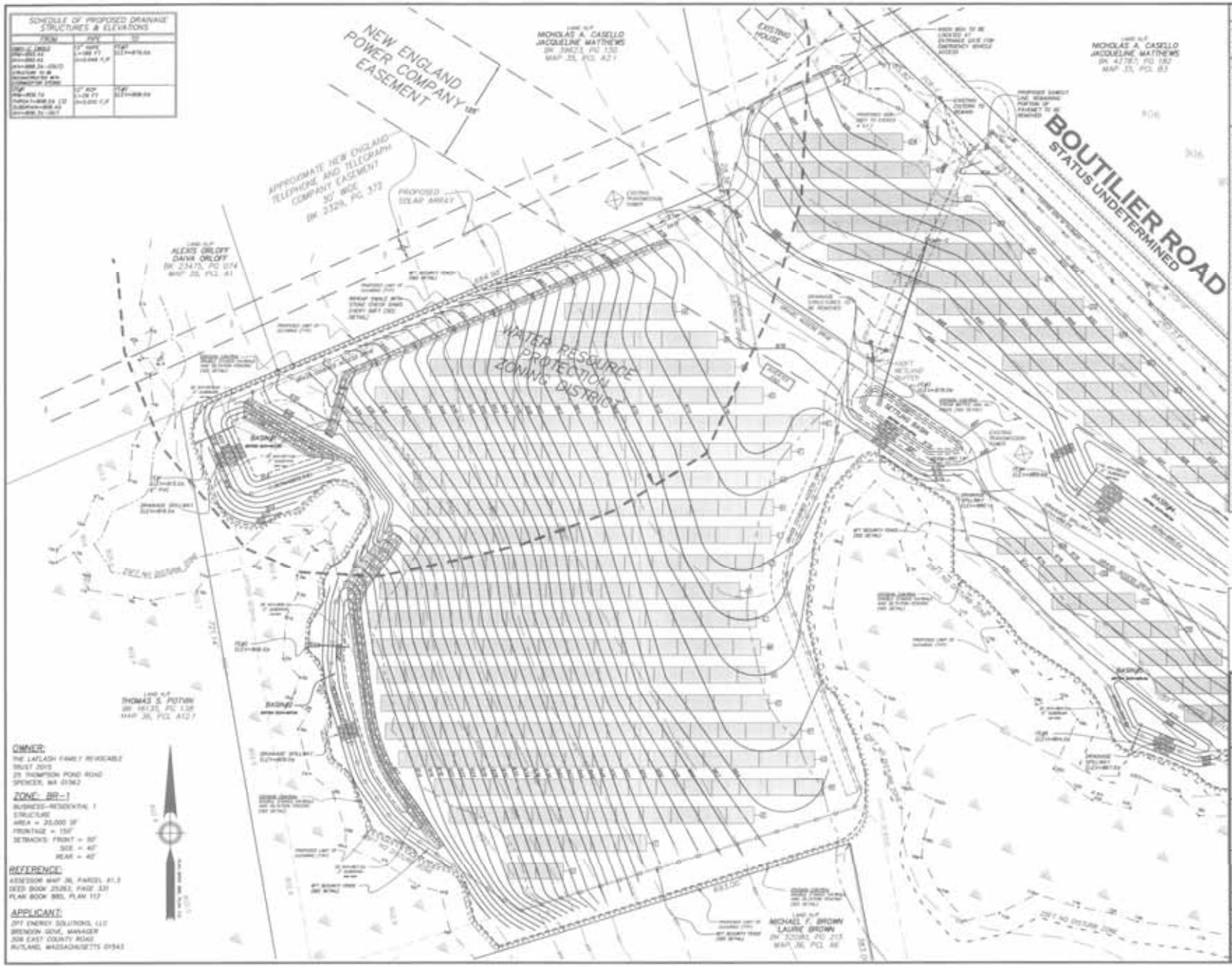
HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS

EXISTING CONDITIONS PLAN
IN
LEICESTER, MASSACHUSETTS

PREPARED FOR:
PRO-TECH ENERGY SOLUTIONS
MICHAEL KLADCH
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY 08057
TEL: (856) 437-6220

GRAPHIC SCALE: 1"=50'

CALC: CMA/MDH	DRWN: CMA/MDH	SCALE: 1"=50'
CHKD: MDH	APPD: MDH	DATE: JUN 14, 2016
SRV: BT-RJB	FB: E.2570042818	JOB NO: 2570
TAB: 3-EXCOND	SHEET 3 OF 8	PLAN NO: C-12-23



SCHEDULE OF PROPOSED DRAINAGE STRUCTURES & ELEVATIONS

FROM	PIPE	TO
[illegible]	12" HDPE [illegible]	[illegible]
[illegible]	12" RCP [illegible]	[illegible]

PROJECT INFORMATION

LAND INFORMATION

MAP/PARCEL:	36/41.3
DEED BOOK/PAGE:	25283/331
PROPOSED FRONTAGE:	150.67 FT (EXISTING STREET)
PROPOSED AREA:	28.00 ACRES

ZONING INFORMATION

ZONING DISTRICT: BUSINESS-RESIDENTIAL 1

DIMENSIONAL REQUIREMENTS

MINIMUM AREA:	20,000 SF
MINIMUM FRONTAGE:	150 FEET
MINIMUM SETBACKS:	
FRONT YARD:	50 FT
SIDE YARD:	40 FT
REAR YARD:	40 FT

GENERAL NOTES:

1. PROPERTY LINE INFORMATION BASED DEEDS AND PLANS OF RECORD. NO DETERMINATION OF PROPERTY LINES SHOWN ON THIS PLAN IS INTENDED OR IMPLIED BY HANNIGAN ENGINEERING, INC. TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED BY CLIENT.
2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN PREVIOUSLY DELINEATED AND APPROVED BY THE LEICESTER CONSERVATION COMMISSION UNDER DEP FILE#[illegible]. THESE AREAS ARE DEPICTED ON THE PLANS.
3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE EVIDENCE AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR WARRED IN THE FIELD AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENCY AS WELL AS DIG-SAFE PRIOR TO EXCAVATION (800-344-7233).
4. NOTIFICATION REQUIREMENTS SHOWN ON THIS PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS WHICH MAY EXIST UNDER LOCAL, STATE, OR FEDERAL JURISDICTION TO WHICH THE CONTRACTOR IS OBLIGATED.
5. RELOCATION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE TOWN OF LEICESTER AND THE MASS DOT SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
8. ANY DEVIATIONS IN DESIGN AS SHOWN SHALL REQUIRE A REVIEW AND APPROVAL OF THE DESIGN ENGINEER OR FIRM. CHANGES MADE IN THE FIELD MADE WITHOUT AUTHORIZATION SHALL BE SUBJECT TO REVIEW BY THE ENGINEER AND APPROPRIATE APPROVING AUTHORITY. CURRENT INCURRED WORK DONE ON UNAUTHORIZED CHANGES TO ACCEPTABLE CONFORMANCE SHALL BE DONE BY THE COMPANY OR CONTRACTOR MAKING THE UNAUTHORIZED CHANGE.
9. ANY MATERIALS DISCOVERED ON-SITE WHICH ARE NOT SUITABLE FOR USE IN THE PROJECT AS SHOWN ON THIS PLAN SHALL BE REMOVED AND HAULED OFF-SITE TO AN APPROPRIATELY LICENSED FACILITY.
10. PLANS TO BE REVIEWED BY APPLICABLE UTILITY AGENCIES FOR COMPLIANCE WITH REGULATIONS. FINAL LOCATION IS SUBJECT TO CHANGE.
11. APPLICANT SHOULD BE AWARE OF OBLIGATIONS TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, COMMONLY KNOWN AS THE WETLANDS PROTECTION ACT, AND THE ASSOCIATED REGULATIONS (310 CMR 10.00).
12. STOCKPILES OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED IN A SUITABLE LOCATION AND SURROUNDED BY A ROW OF STAKED HAY BALES FOR EROSION CONTROL.
13. AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY IN AREAS WITHIN EASEMENTS AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS AND TO BE CLEAN FILL FREE OF DELETERIOUS MATERIALS AND DEBRIS.
14. THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN ZONE A, PER F.E.M.A. FIRM MAP NO. [illegible]. HOWEVER, UNTIL ALL A CITY COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
15. ALL REINFORCED CONCRETE PIPE TO BE CLASS V UNLESS OTHERWISE NOTED.
16. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
17. ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE TOWN OF LEICESTER.

NO.	DATE	REVISIONS	BY
1	06/02/2016	PEER REVIEW COMMENTS	DMA
1	06/03/2016	PEER REVIEW COMMENTS	DMA

WILLIAM H. HANNIGAN JR. PLS

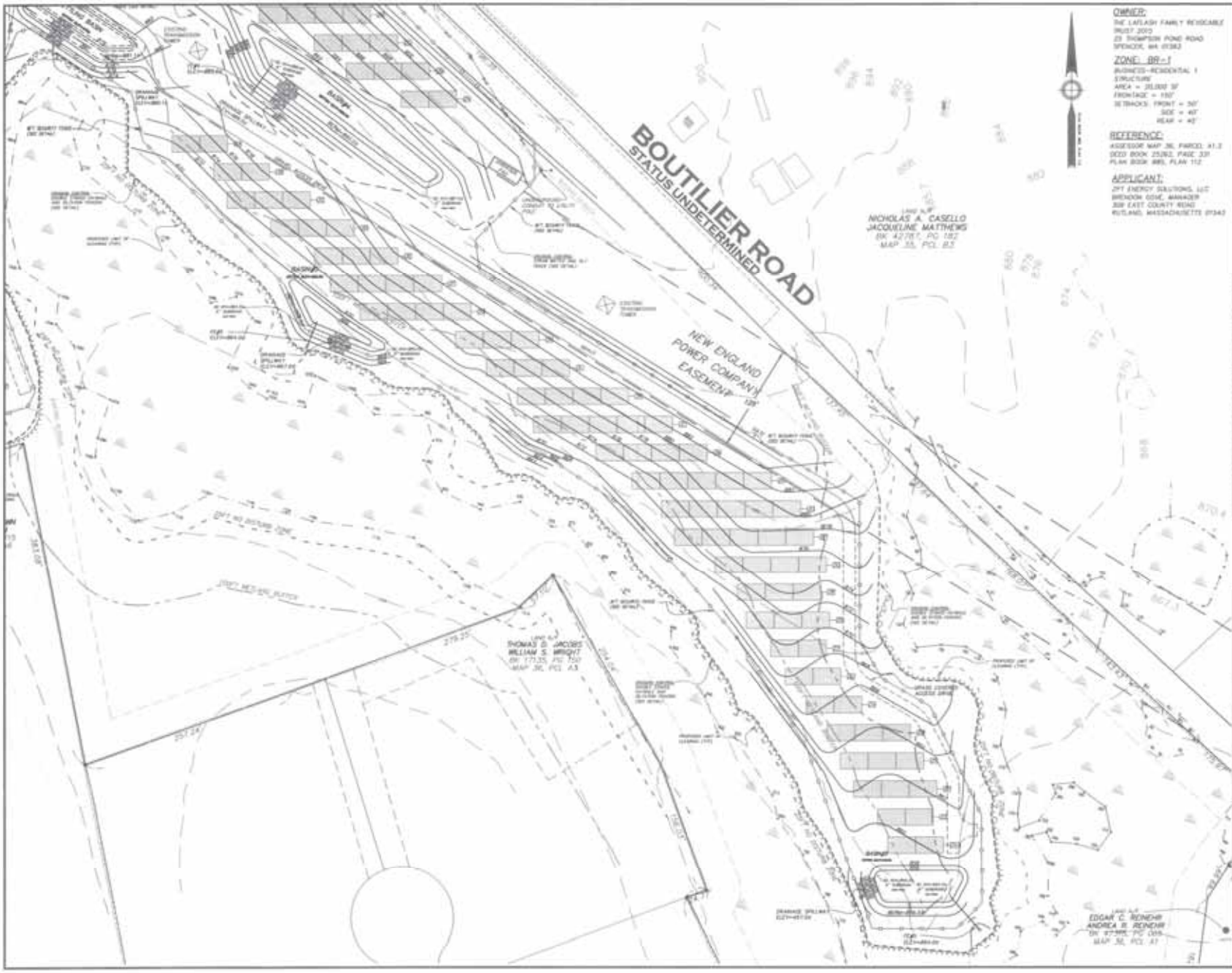
HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS

SITE DEVELOPMENT PLAN
IN
LEICESTER, MASSACHUSETTS

PREPARED FOR:
PRO-TECH ENERGY SOLUTIONS
MICHAEL ALADICH
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY 08057
TEL: (856) 437-6230

GRAPHIC SCALE: 1"=50'

CALC: DMA/WDH	DRWN: DMA/WDH	SCALE: 1"=50'
CHKD: WDH	APPD: WDH	DATE: JUN 14, 2016
SRV: JEF-PJB	FB: [illegible]	JOB NO: 2570
TAB: 4-SITE	SHEET 4 OF 8	PLAN NO: C-13-32



OWNER:
THE LAFLASH FAMILY REVOCABLE TRUST 2010
23 THOMPSON POND ROAD
SPENCER, MA 01562

ZONE: BR-1
BUSINESS-RESIDENTIAL 1
STRUCTURE
AREA = 20,000 SF
FRONTAGE = 150'
SETBACKS: FRONT = 50'
SIDE = 40'
REAR = 40'

REFERENCE:
ASSESSOR MAP 36, PARCEL A1.2
DEED BOOK 25282, PAGE 331
PLAN BOOK 885, PLAN 112

APPLICANT:
ZPT ENERGY SOLUTIONS, LLC
BRENDON GOVE, MANAGER
308 EAST COUNTY ROAD
RUTLAND, MASSACHUSETTS 01543

PROJECT INFORMATION

LAND INFORMATION

MAP/PARCEL	36/A1.2
DEED BOOK/PAGE	25282/331
PROPOSED STREETADD	1 NEAR IT STATIONS STREET
PROPOSED AREA	20.00 ACRES

ZONING INFORMATION

ZONING DISTRICT	BUSINESS-RESIDENTIAL 1
DIMENSIONAL REQUIREMENTS	
MINIMUM AREA	20,000 SF
MINIMUM FRONTAGE	150' FEET
MINIMUM SETBACKS	
FRONT YARD	50 FT
SIDE YARD	40 FT
REAR YARD	40 FT

GENERAL NOTES:

1. PROPERTY LINE INFORMATION BASED DEEDS AND PLANS OF RECORD. NO CERTIFICATION OF PROPERTY LINES SHOWN ON THIS PLAN IS INTENDED OR IMPLIED BY HANNIGAN ENGINEERING, INC. TOPOGRAPHIC INFORMATION WAS BEEN PROVIDED BY SUBMIT.
2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN PRELIMINARILY DELINEATED AND APPROVED BY THE LEICESTER CONSERVATION COMMISSION UNDER ANY FINALIZATION. THESE AREAS ARE DEPICTED ON THE PLANS.
3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR MARKED IN THE FIELD, AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENTS AS WELL AS DIG-SAFE PRIOR TO EXCAVATION (DIG SAFE).
4. NOTIFICATION REQUIREMENTS SHOWN ON THIS PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS WHICH MAY EXIST UNDER LOCAL, STATE, OR FEDERAL JURISDICTION TO WHICH THE CONTRACTOR IS OBLIGATED.
5. REGULATION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE TOWN OF LEICESTER AND THE MASS DOT DIVISION OF HIGHWAYS AND BRIDGES.
7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
8. ANY DEVIATIONS IN DESIGN AS SHOWN SHALL REQUIRE A REVIEW AND APPROVAL OF THE DESIGN ENGINEER OR FIRM. CHANGES MADE IN THE FIELD WHICH WITHOUT AUTHORIZATION SHALL BE SUBJECT TO REVIEW BY THE ENGINEER AND APPROPRIATE APPROVAL AUTHORITY. EXPENSES INCURRED TO REVISE THE UNAUTHORIZED CHANGES TO ADDITIONALLY COMPENSATE SHALL BE BORNE BY THE COMPANY OR CONTRACTOR MAKING THE UNAUTHORIZED CHANGE.
9. ANY MATERIALS UNCOVERED ON-SITE WHICH ARE NOT SUITABLE FOR USE IN THE PROJECT AS SHOWN ON THIS PLAN SHALL BE REMOVED AND HAULED OFF-SITE TO AN APPROPRIATELY LICENSED FACILITY.
10. PLANS TO BE REVIEWED BY APPLICABLE UTILITY AGENCIES FOR COMPLIANCE WITH REGULATIONS. FINAL LOCATION IS SUBJECT TO CHANGE.
11. APPLICANT SHOULD BE AWARE OF OBLIGATIONS TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, COMMONLY KNOWN AS THE WETLANDS PROTECTION ACT, AND THE ASSOCIATED REGULATIONS (310 CMR 10.00).
12. STOCKPILING OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED ON A SUITABLE LOCATION AND SURROUNDED BY A ROW OF STAKED HAY BALES FOR EROSION CONTROL.
13. AREAS OF FILL TO BE COMPACTED TO A MINIMUM 95% DRY DENSITY IN AREAS WITHIN RESIDENCE AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL, FREE OF DELETERIOUS MATERIALS AND DEBRIS.
14. THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN, ZONE A, PER F.I.R.M. PANEL MAP NO. 25027C0176E, DATED JULY 4, 2011. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
15. ALL REINFORCED CONCRETE PIPE TO BE CLASS III UNLESS OTHERWISE NOTED.
16. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
17. ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE TOWN OF LEICESTER.

NO.	DATE	REVISIONS	BY
1	06/02/2016	PEER REVIEW COMMENTS	DMA
1	06/01/2016	PEER REVIEW COMMENTS	DMA

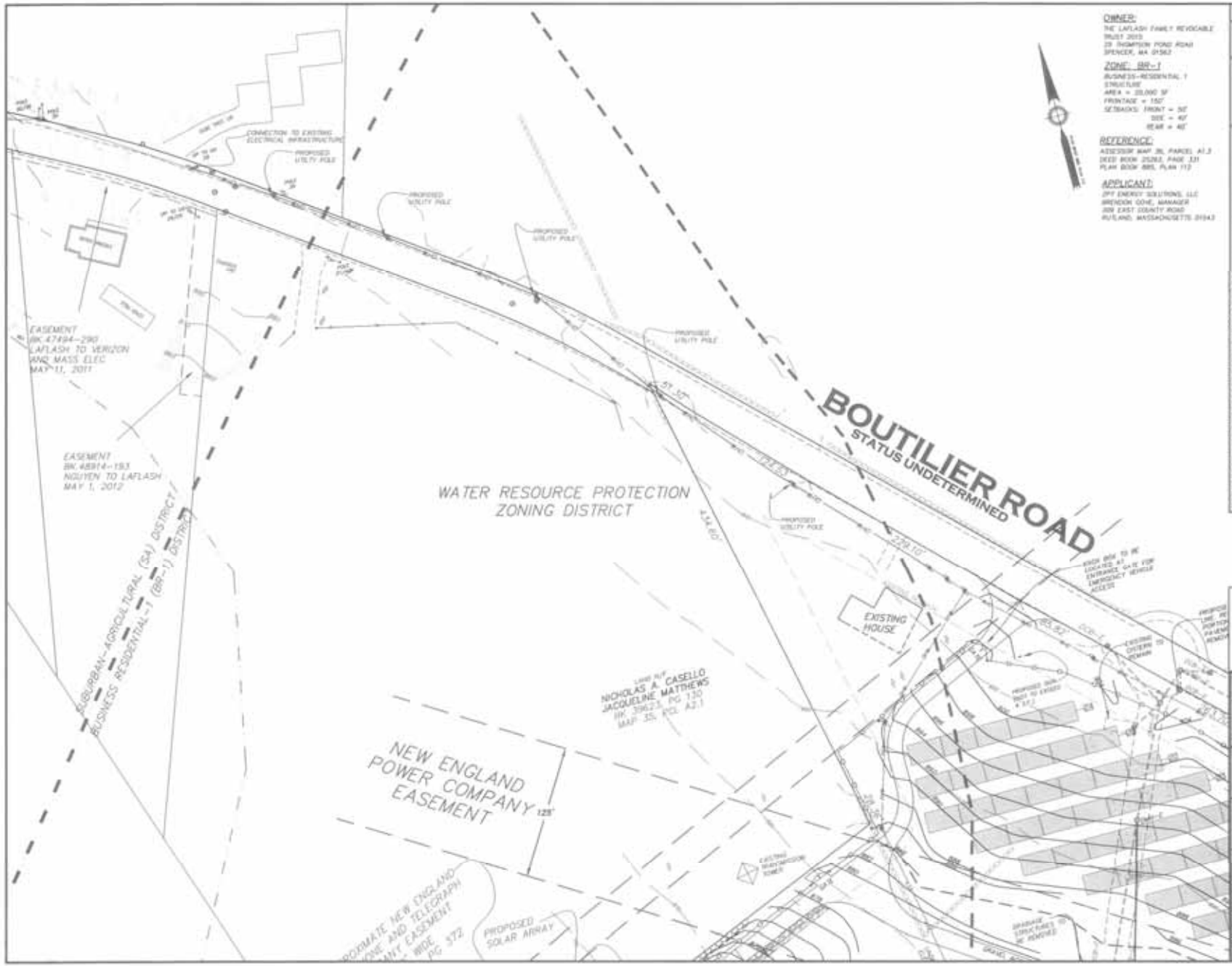
HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS

SITE DEVELOPMENT PLAN
IN
LEICESTER, MASSACHUSETTS

PREPARED FOR:
PRO-TECH ENERGY SOLUTIONS
MICHAEL ALADICH
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY
TEL: (856) 437-6220

GRAPHIC SCALE: 1"=50'

CALC: DMA/MDH	DRWN: DMA/MDH	SCALE: 1"=50'
CHKD: MDH	APPD: MDH	DATE: JUN 14, 2016
SRV: JET-P.JB	FB: L.2570042816	JOB NO: 2570
TAB: S-S/S	SHEET 5 OF 8	PLAN NO: C-12-22



OWNER:
THE LAFLASH FAMILY REVOCABLE TRUST 2013
23 THOMPSON POND ROAD
SPENCER, MA 01562

ZONE: BR-1
BUSINESS-RESIDENTIAL 1
STRUCTURE
AREA = 20,000 SF
FRONTAGE = 150'
SETBACKS: FRONT = 50'
SIDE = 40'
REAR = 40'

REFERENCE:
ASSESSOR MAP 35, PARCEL A2.3
DEED BOOK 25283, PAGE 331
PLAN BOOK 885, PLAN 113

APPLICANT:
ZFF ENERGY SOLUTIONS, LLC
BRENDON CONE, MANAGER
309 EAST COUNTY ROAD
RUTLAND, MASSACHUSETTS 01543

PROJECT INFORMATION

LAND INFORMATION
MAP/PARCEL: 35/A2.3
DEED BOOK/PAGE: 25283/331
PROPOSED FRONTAGE: 150.27 FT (STATIONS STREET)
PROPOSED AREA: 20.00 ACRES

ZONING INFORMATION
ZONING DISTRICT: BUSINESS-RESIDENTIAL 1
DIMENSIONAL REQUIREMENTS:

MINIMUM AREA	20,000 SF
MINIMUM FRONTAGE	150 FEET
MINIMUM SETBACKS	
FRONT YARD	50 FT
SIDE YARD	40 FT
REAR YARD	40 FT

GENERAL NOTES:

1. PROPERTY LINE INFORMATION BASED DEEDS AND PLANS OF RECORD. NO DEMARCATION OF PROPERTY LINES SHOWN ON THIS PLAN IS INTENDED OR IMPLIED BY HANNIGAN ENGINEERING, INC. TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED BY CLIENT.
2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN PREVIOUSLY DELINEATED AND APPROVED BY THE LEICESTER CONSERVATION COMMISSION UNDER DEP FILE#077-0517. NOISE AREAS ARE DEPICTED ON THE PLANS.
3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR, MARKED IN THE FIELD, AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENCY AS WELL AS 811-DIGSAFE PRIOR TO EXCAVATION. (SEE NOTE)
4. INTERSECTION REQUIREMENTS SHOWN ON THIS PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS WHICH MAY EXIST UNDER LOCAL, STATE, OR FEDERAL JURISDICTION TO WHICH THE CONTRACTOR IS OBLIGATED.
5. REVISION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE TOWN OF LEICESTER AND THE MASS DOT SPECIFICATIONS OF HIGHWAYS AND BRIDGES.
7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
8. ANY DEVIATIONS IN DESIGN AS SHOWN SHALL REQUIRE A REVIEW AND APPROVAL OF THE DESIGN ENGINEER OR FIRM. CHANGES MADE IN THE FIELD WHICH WITHOUT AUTHORIZATION SHALL BE SUBJECT TO REVIEW BY THE ENGINEER AND APPROPRIATE APPROVING AUTHORITY. EXPENSES INCURRED TO BRING THE UNAUTHORIZED CHANGES TO ACCEPTABLE CONFORMANCE SHALL BE BORNE BY THE COMPANY OR CONTRACTOR MAKING THE UNAUTHORIZED CHANGE.
9. ANY MATERIALS DISCOVERED ON-SITE WHICH ARE NOT SUITABLE FOR USE IN THE PROJECT AS SHOWN ON THIS PLAN SHALL BE REMOVED AND HAULED OFF-SITE TO AN APPROPRIATELY LICENSED FACILITY.
10. PLANS TO BE REVIEWED BY APPLICABLE UTILITY AGENCIES FOR COMPLIANCE WITH REGULATORY. FINAL LOCATION IS SUBJECT TO CHANGE.
11. APPLICANT SHOULD BE AWARE OF OBLIGATIONS TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, STORMWATER HANDBOOK AS THE WETLANDS PROTECTION ACT, AND THE ASSOCIATED REGULATIONS (310 CMR 10.00).
12. STOCKPILING OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED IN A SUITABLE LOCATION AND SURROUNDED BY A ROW OF STAKED HAY BALES FOR EROSION CONTROL.
13. AREAS OF FILL TO BE COMPACTED TO A MINIMUM 95% DRY DENSITY IN AREAS WITHIN ROADWAYS AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL, FREE OF DELETERIOUS MATERIALS AND DEBRIS.
14. THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN. ZONE X, PER F.E.M.A. FIRM MAP No. 25027C0164E, DATED JULY 4, 2011. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
15. ALL REINFORCED CONCRETE PIPE TO BE CLASS III UNLESS OTHERWISE NOTED.
16. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
17. ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE TOWN OF LEICESTER.

NO.	DATE	REVISIONS	BY
2	06/02/2016	PEER REVIEW COMMENTS	CMA
1	05/31/2016	PEER REVIEW COMMENTS	CMA

WILLIAM D. HANNIGAN
No. 34413
P.E.

HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS
8 MONUMENT SQUARE
LEXINGTON, MASSACHUSETTS 02420
(781) 534-1334 FAX
WWW.HANNIGANENGINEERING.COM

ELECTRICAL CONNECTION PLAN IN LEICESTER, MASSACHUSETTS

PREPARED FOR:
PRO-TECH ENERGY SOLUTIONS
MICHAEL ALADDIN
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY 08057
TEL: (866) 437-6230

GRAPHIC SCALE: 1"=40'

CALC: CMA/WDH	DRWN: CMA/WDH	SCALE: 1"=40'
CHKD: WDH	APPD: WDH	DATE: JUN 14, 2016
SRV: JEF-PJB	FB: L-25/10042016	JOB NO: 2570
TAB: 8-ELEC	SHEET 8 OF 8	PLAN NO: C-12-22

EROSION & SEDIMENTATION CONTROL PLAN

GENERAL:

1. THE PURPOSE OF THIS PLAN IS TO PRESENT A PRESUMPTIVE METHOD OF CONSTRUCTION TO MINIMIZE THE IMPACT OF THE CONSTRUCTION ACTIVITIES UPON WETLAND AND OTHER SENSITIVE AREAS. THE DATA CONTAINED ON THIS PLAN IS INTENDED TO SUPPLEMENT THE DEVELOPER OR CONTRACTOR'S EXPERTISE AND IS NOT MEANT TO PROVIDE CLINICAL DECISIONS REQUIRED BY A VARIETY OF FIELD CONDITIONS INCLUDING WEATHER AND THE TYPE OF EQUIPMENT AVAILABLE TO THE CONTRACTOR.

2. THE CONTRACTOR IS TO BE AWARE OF THE REQUIREMENTS AND PROVISIONS TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, OTHERWISE KNOWN AS THE WETLANDS PROTECTION ACT, AND ITS ASSOCIATED REGULATIONS (310 CMR 10.00). CERTAIN PERMITS IN THE FORM OF AN ORDER OF CONDITIONS, OR OTHER FORMAT, MAY BE REQUIRED FOR THE CONSTRUCTION AS DEPICTED ON THIS PLAN. THESE PERMITS SHALL BE REVIEWED AND ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL ALSO MAINTAIN COPIES OF ALL PERMITS ON SITE AT ALL TIMES.

3. IF CHANGES IN THE PROJECT ARE REQUIRED DUE TO FIELD CONDITIONS THE DEVELOPER/CONTRACTOR SHALL PROMPTLY NOTIFY THE CONSULTANT FOR REVIEW OF THESE CONDITIONS. UPON REVIEW AND PRIOR TO THE IMPLEMENTATION OF ANY CHANGE, THE CONTRACTOR AND THE ENGINEER SHALL MEET WITH THE APPROPRIATE LOCAL AND/OR STATE OFFICIAL OR ITS AGENT, TO DETERMINE IF THE CHANGE REQUIRES MODIFICATION TO EXISTING APPROVED PERMITS.

4. ALTERATION AND/OR DESTRUCTION OF WETLAND AREAS WITHOUT PRIOR CONSENT OF THE CONSERVATION COMMISSION IS PROHIBITED. SOLITARY FLOWERS, SLOPE DESTRUCTIONS, OR MAINTENANCE ALTERATION SHALL BE CONSIDERED AS ACTIVITIES NOT PERMITTED BY THE ORDER AND SHALL BE REPORTED TO THE CONSERVATION COMMISSION ALONG WITH THE PROPOSED MITIGATION MEASURES.

5. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE EROSION AND SEDIMENT CONTROL BARRIER SHALL BE INSTALLED AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE EROSION CONTROL BARRIER UNTIL ALL WORK IS COMPLETE, AND ALL AREAS HAVE BEEN STABILIZED. THE REMOVAL OF BARRIER CONTROL DEVICES SHALL BE ONLY UPON THE APPROVAL OF THE CONSERVATION COMMISSION.

6. EROSION AND SEDIMENTATION CONTROL DEVICES, SUCH AS CHECK DAMS, SEDIMENT BASINS, ETC. ARE TO BE INSTALLED AS SHOWN ON THE SITE DEVELOPMENT PLANS AND ADHERED TO DETAILS AS APPROPRIATE.

7. CONSTRUCTION OPERATIONS SHALL NOT CAUSE NOTICEABLE SEDIMENTATION PLUMES TO OCCUR ON OR SURROUNDING THE PROJECT. SHOULD SEDIMENT EXCEED BEYOND THE EROSION CONTROL BARRIERS, THE CONTRACTOR SHALL STOP WORK AND INSTALL ADDITIONAL MITIGATION MEASURES TO PREVENT FURTHER SEDIMENTATION.

8. ANY MATERIAL SUBJECT TO EROSION SHALL BE STOCKPILED OVERNIGHT WITHIN 100 FEET OF ANY WETLAND AREAS WITHOUT PROPER EROSION AND SEDIMENTATION DEVICES IN PLACE.

9. EQUIPMENT SHALL NOT BE PARKED WITHIN WETLAND OR BUFFER AREAS EXCEPT DURING ACTUAL OPERATIONS REQUIRING SUCH EQUIPMENT.

10. ACCUMULATED SEDIMENT ALONG EROSION CONTROL BARRIERS SHALL BE PERIODICALLY REMOVED AND DISPOSED OF BY THE CONTRACTOR AS REQUIRED BY THE CONSERVATION COMMISSION OR AS DIRECTED BY THE OWNER.

EROSION CONTROL METHODS:

1. IT IS OF GREAT IMPORTANCE THAT CONCENTRATION OF RUNOFF BE AVOIDED IN ORDER TO PREVENT THE TRANSPORT OF SEDIMENT.

2. THE PRIMARY EROSION CONTROL METHODS TO BE UTILIZED IS TO LIMIT THE AREA OF DISTURBANCE DURING CONSTRUCTION ACTIVITIES. THIS IS ACCOMPLISHED BY INSTANT STABILIZATION OF DISTURBED AREAS UPON COMPLETION OF SEQUENCES OF CONSTRUCTION.

3. EROSION AND SEDIMENT CONTROL DEVICES SUCH AS HAY BALES, SILT FENCES, DIVERSION BERMS, ETC. SHALL BE UTILIZED FOR THE PROTECTION OF THE AREAS BEYOND THE LIMIT OF CONSTRUCTION.

DEMARCATION OF SENSITIVE AREAS:

1. IT IS RECOMMENDED THAT BARRIERS BE PLACED ON THE SITE TO CONTROL THE LIMITS OF THE DISTURBANCE. AS AN EXAMPLE, HAY BALE BARRIERS PROVIDE SUCH DEMARCATION AND OTHER METHODS SUCH AS LOG BARRIERS, ROPE WITH FLAGGING ETC. MAY BE UTILIZED.

2. CARE SHOULD BE TAKEN IN THE OPERATION OF EQUIPMENT SUCH THAT ONLY THE MINIMUM AREA NEEDED TO BE ALTERED IS DISTURBED.

ACCESS:

1. ACCESS TO THE SITE SHALL BE MADE IN THE AREA OF A PERMANENT DRIVEWAY OR DESIGNED UNLESS DOING SO WOULD RESULT IN A TRAFFIC HAZARD.

2. ON AREA OF CRUSHED STONE SHALL BE PLACED AT THE DRIVEWAY ENTRANCE TO ENSURE THAT MUD IS NOT TRACKED ONTO THE EXISTING PUBLIC STREET. CONSTRUCTION VEHICLES SHOULD BE MAINTAINED TO PREVENT TRACKED DUST ON ROAD. IT SHOULD BE PROMPTLY REMOVED.

3. LANDFILL VEHICLES SHALL BE PARKED IN A DESIGNATED AREA AS TO MINIMIZE DISTURBED SURFACES AND TO ENSURE THAT DUST AND MUD CREATED AND WHICH COULD CARRY WATER TO A WETLAND OR OTHER SENSITIVE AREA.

4. SUITABLE MEASURES SHALL BE TAKEN TO ENSURE THAT LARGE DELIVERY TRUCKS DEPARTING THE SITE DO NOT CHANGE TO AREAS OF EXISTING VEGETATION OR CAUSE DISTURBANCE TO STABILIZED AREAS.

ORDERLY CONSTRUCTION PROCEDURES:

1. THE CONTRACTOR SHALL PERFORM SITE CONSTRUCTION IN A MANNER WHICH WILL ENSURE THE STABILIZATION OF AREAS IN PROXIMITY OF OR TRIBUTARY TO WETLAND AREAS AS SOON AS POSSIBLE.

2. EROSION CONTROL DEVICES SUCH AS HAY BALE BARRIERS, SILT FENCES AND MULCH SHALL BE BROUGHT TO THE SITE AND STOCKPILED PRIOR TO ACTUAL CONSTRUCTION.

3. THE CONTRACTOR SHALL PROVIDE AREAS FOR THE TEMPORARY STORAGE OF CONSTRUCTION DEBRIS. CONSTRUCTION DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE FOR AN EXTENDED PERIOD OF TIME.

CLEARING:

1. LAND CLEARING SHALL BE PERFORMED IN PHASES CONSISTENT WITH ACTUAL CONSTRUCTION REQUIREMENTS. FINAL LAND CLEARING SHALL BE LIMITED TO RETAIN TO GRADE SLOPES.

2. TREES SHALL BE CUT FOR ENTIRE SITE LEAVING STUMPS IN PLACE TO MAINTAIN SOIL STABILIZATION.

3. STUMPS SHALL BE PULLED AND STOCKPILED FOR GRINDING.

4. BRUSH AND BRANCHES SHALL BE CHIPPED AND UTILIZED FOR WORK BELOW OF PRACTICAL.

5. WOODLOT LOCATED IN THE CLEARING OPERATION SHOULD NOT INVADE WETLANDS OR FLOWING BROOKS OR STREAMS WITHOUT PRIOR APPROVAL FROM THE LOCAL CONSERVATION COMMISSION OR AGENT.

ROUGH GRADING:

1. THE ROUGH GRADING OF THE SITE SHALL FOLLOW THE FILL AND EXCAVATION SEQUENCES AS DESCRIBED ON THE CONSTRUCTION PHASING PLANS. SLOPES SHALL BE MAINTAINED AWAY FROM WETLANDS AND SENSITIVE AREAS AS MUCH AS PRACTICAL.

2. DURING THIS PHASE THE EROSION POTENTIAL IS HIGH. SUFFICIENT EROSION CONTROL BARRIERS SHOULD BE KEPT IN PROXIMITY TO THE WORK AREAS TO ALLOW QUICK ACTION SHOULD EROSION OCCUR ON SITE AND TO ENSURE THAT NO SEDIMENT REACHES WETLANDS OR OTHER SENSITIVE AREAS.

3. IN AREAS OF CUT AND/OR FILL WHERE SLOPES COULD DIVERT WATER TOWARD WETLAND AREAS, DIVERSION BERMS AND/OR SMALLS SHOULD BE CONSIDERED AND IMPLEMENTED TO DIVERT WATER AWAY FROM THESE AREAS.

4. DEEP SIDE SLOPES IN EXCAVATION OR FILL SHOULD BE AVOIDED.

5. DISTURBED AREAS SHALL BE STABILIZED BY LOAMING AND SEEDING OR MAINTAINED IMMEDIATELY AFTER THE FINISH GRADE HAS BEEN MET. FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED WITH HAY WITH A TACKIFIER, IF NECESSARY. SLOPED AREAS MAY REQUIRE ADDITIONAL CONCRETE SUCH AS EROSION CONTROL BLOCKS OR MATTRESS.

6. A GROUND COVER SUFFICIENT TO RETAIN SOILS IN A STABILIZED CONDITION MUST BE PROVIDED WITHIN 14 WORKING DAYS, SEASON PERMITTING, ON ANY PORTION OF THE PROJECT UPON WHICH FURTHER ACTIVE CONSTRUCTION IS NOT BEING UNDERTAKEN.

DRAINAGE:

1. IF DRAINAGE PIPES OR CULVERTS ARE TO BE INSTALLED, THEY SHALL BE CONSTRUCTED FROM DOWNSTREAM UP AND CONSTRUCTION SHALL INCLUDE THE PLACEMENT OF OUTFALL RIPRAP AND OTHER MITIGATION MEASURES SHOWN ON THE PLANS.

2. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, HAY BALES OR OTHER SUITABLE METHODS TO DAMPEN SEDIMENT SHALL BE PLACED DOWNSTREAM.

3. THE TOE OF EMBANKMENTS SHALL BE STABILIZED IMMEDIATELY, MULCHED AND SEEDED DOWN BY SUITABLE MEANS.

CREATION OF DETENTION BASIN:

1. THE DETENTION BASIN HAS BEEN PLACED AS A DEPARTURE FROM TO EMPHASIZE THE IMPORTANCE OF EROSION CONTROL DURING ITS CONSTRUCTION.

2. THE PRIMARY EROSION CONTROL METHOD FOR BASIN CONSTRUCTION AS WELL AS FOR THE SITE IS THE RAPID STABILIZATION OF ALL SURFACES. SECONDARY IN IMPORTANCE IS THE CONCENTRATION OF RUNOFF BE AVOIDED IN ORDER TO PREVENT THE TRANSPORT OF SEDIMENT.

3. DURING CONSTRUCTION, THE FILL AND EXCAVATION SEQUENCES SHOWN ON THE CONSTRUCTION PHASING PLANS, ALONG WITH THE DETAILS PROVIDED IN THIS PLAN SET SHALL BE UTILIZED. THESE SEQUENCES REQUIRE THAT SLOPED AREAS LEFT FOR ANY PERIOD OF TIME NOT SLOPED TOWARDS THE WETLAND OR SENSITIVE AREA, BUT RAKED BACK INTO THE FILL MATERIAL.

4. THE BASIN BERM IS TO BE CONSTRUCTED BY EQUIPMENT MOVING ON STABLE MATERIAL UNLESS HAY BALES SHALL BE PLACED AT THE TOE OF SLOPE UNTIL SURFACES ARE STABILIZED.

5. NO EXCAVATION WITHIN THE BASIN SHALL COMMENCE UNTIL THE BERM IS IN PLACE.

6. CARE SHOULD BE TAKEN TO ENSURE THAT SPOILING MATERIAL REMOVED FROM THE BASIN AREA IS RESERVED FOR FINISH GRADING AND THE STABILIZATION OF DISTURBED AREAS.

7. IF DEWATERING IS NECESSARY, PUMPING TO A SETTLING BASIN SHALL BE PERMITTED. A SETTLING BASIN IS CONSTRUCTED, MAINTAINED AND OPERATED EFFECTIVELY.

8. AT NO TIME SHALL RUNOFF CARRYING SEDIMENT BE ALLOWED TO FLOW ON THE WETLANDS OR SENSITIVE AREAS.

9. THE WORK AREA SHALL REMAIN FREE OF LITTER AND DEBRIS AT ALL TIMES AND MONITORED ON A DAILY BASIS TO ENSURE COMPLIANCE.

10. ALL MATERIALS STOCKPILED SHALL BE LOCATED AROUND OR DOWNHILL FROM TO ENSURE THAT MATERIALS CONTAINED WITHIN AREA NOT CARRIED INTO THE WETLANDS.

11. ANY MATERIALS BLOWN OR CARRIED BY WATER AWAY FROM THE CONSTRUCTION SITE OR INTO THE WETLAND AREAS SHALL BE PROMPTLY REMOVED AS REQUIRED BY THE LOCAL CONSERVATION COMMISSION.

12. A SEDIMENTATION FILTER FABRIC SHALL BE PLACED OVER THE BASIN OVERFLOW DURING CONSTRUCTION TO PREVENT SEDIMENT FROM ENTERING AND CLOGGING THE DRAIN. THE FABRIC SHALL BE REMOVED FOR BASIN PREPARATION FOR FINAL STABILIZATION.

DRILLING AND STORPING:

1. TOP SOIL SHALL BE RETAINED AND STOCKPILED FOR LANDSCAPING PURPOSES.

2. DRILLING AND STORPING OF SLOPES LEADING TO WETLAND AREAS SHALL NOT BE UNDERTAKEN DURING PERIODS OF HEAVY RAINFALL.

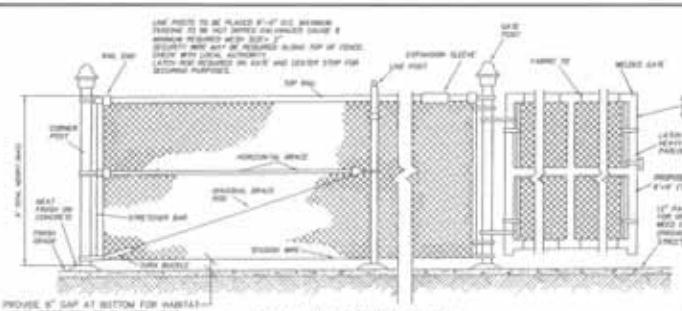
3. TOP SOIL STOCKPILE LOCATIONS ARE DEPICTED ON THE SITE DEVELOPMENT PLAN, THE EROSION CONTROL PLAN, AND/OR THE CONSTRUCTION PHASING PLAN AND SHALL BE ADHERED TO.

4. AREA NORMALLY IN THE VICINITY OF WETLANDS, TOP SOIL SATURATED WITH WATER SHALL BE REMOVED, AND CONTAINED PRIOR TO BEING USED.

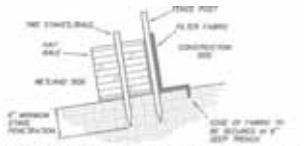
5. AREAS LEADING TO WETLANDS SHALL HAVE HAY BALE BARRIERS INSTALLED ALONGS THEM IN AREA PRIMARILY DOWN THE HILL AT INTERVALS SUFFICIENT TO ADEQUATE RUNOFF CHANGING SCENARIO.

6. DURING PERIODS OF HEAVY RAINFALL, OR IF THE PROJECT IS TO BE LEFT FOR A PERIOD OF TIME, CONSERVATION SHOULD BE GIVEN TO SUPPLEMENT HAY BALE BARRIERS WITH OTHER CRUSHED STONE OR WINDROW BARRIERS. CONSERVATION MAY ALSO BE GIVEN TO UNDERTAKE RUNOFF INTO TEMPORARY SEDIMENTATION CONTROL AREAS.

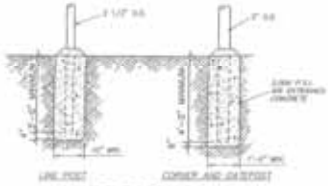
7. WHENever PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED.



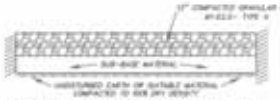
CHAIN LINK FENCE DETAIL
NO SCALE



HAYBALES WITH SILT FENCE DETAIL
NO SCALE

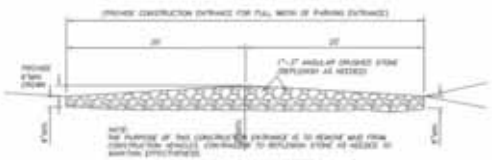


FENCE POST DETAIL
NO SCALE

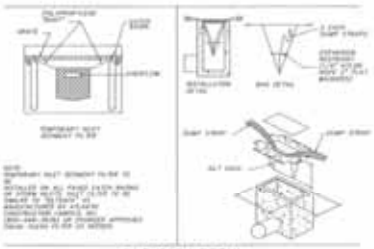


GRAVEL ACCESS LANE SECTION
(FOR ACCESS TO PANELS AND DETENTION BASIN)
NO SCALE – 14FT WIDE

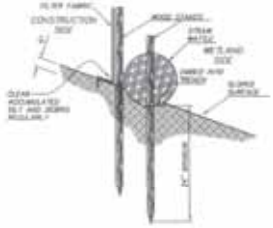
TYPICAL ACCESS LANE SECTION
(FOR ACCESS TO PANELS)
NO SCALE – 14FT WIDE



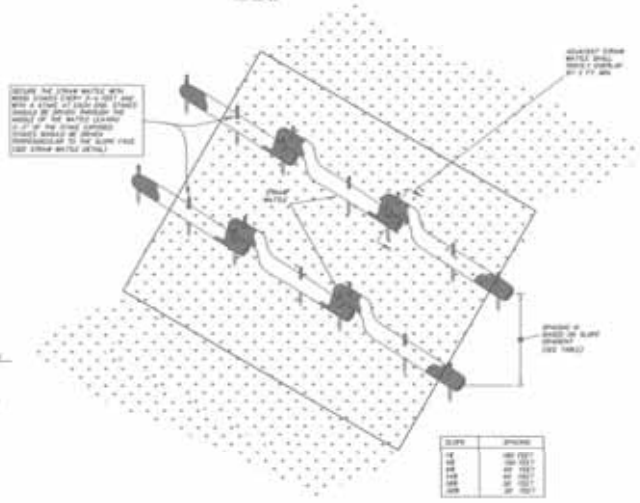
CONSTRUCTION ENTRANCE
NO SCALE



SILT SACK DETAIL
NO SCALE



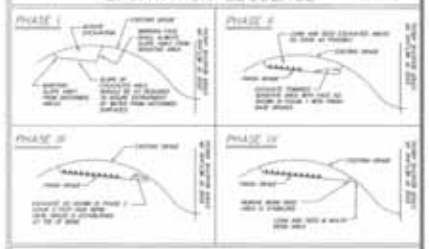
STRAW WATTLE DETAIL
NO SCALE



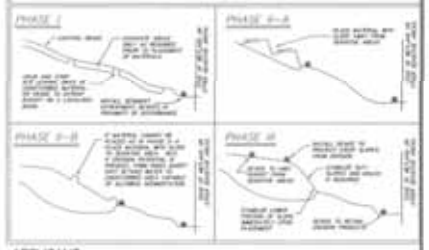
SLOPE	SPACING
1:1	100 (30')
1:2	100 (30')
1:3	100 (30')
1:4	100 (30')
1:5	100 (30')
1:6	100 (30')
1:7	100 (30')
1:8	100 (30')

EROSION CONTROL SLOPE DETAIL

EXCAVATION SEQUENCE
NO SCALE



FILL SEQUENCE
NO SCALE



APPLICANT:
ZPT ENERGY SOLUTIONS, LLC
BRENDON DOVE, MANAGER
208 EAST COUNTY ROAD
AUTLAND, MASSACHUSETTS 01543

OWNER:
THE LAFLASH FAMILY REVOCABLE TRUST 2015
25 THOMPSON POND ROAD
SPENCER, MA 01562

REFERENCE:
ASSESSOR MAP 36, PARCEL 41.3
DEED BOOK 25263, PAGE 231
PLAN BOOK 885, PLAN 112

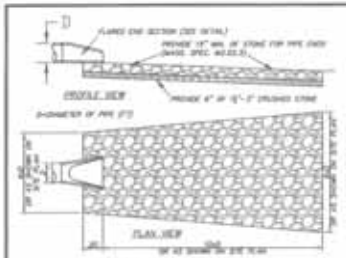
NO.	DATE	REVISIONS	BY
1	06/02/2016	PEER REVIEW COMMENTS	DMA
1	06/01/2016	PEER REVIEW COMMENTS	DMA

HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS

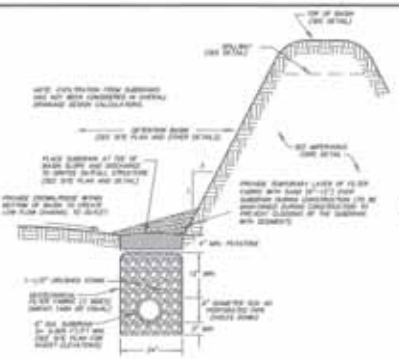
CONSTRUCTION DETAILS
in
LEICESTER, MASSACHUSETTS

PREPARED FOR:
PRO-TECH ENERGY SOLUTIONS
MICHAEL ALASCH
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY 08057
TEL: (856) 431-4220

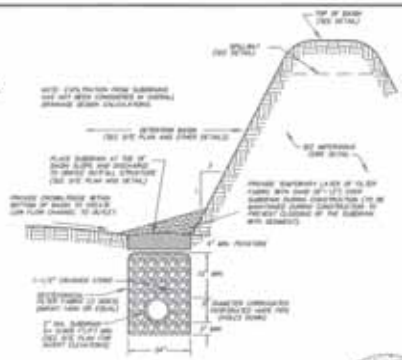
CALC: DMA/MDH	DRWN: DMA/MDH	SCALE: NONE
CHKD: MDH	APPD: MDH	DATE: JAN 14, 2016
SRV:	FB:	JOB NO: 2570
TAB: 1-8 DETAIL	SHEET 7 OF 8	PLAN NO: C-10-20



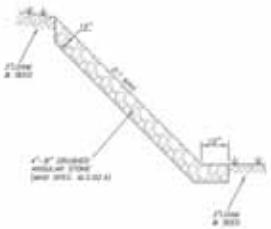
RIP RAP APRON DETAIL
NO SCALE



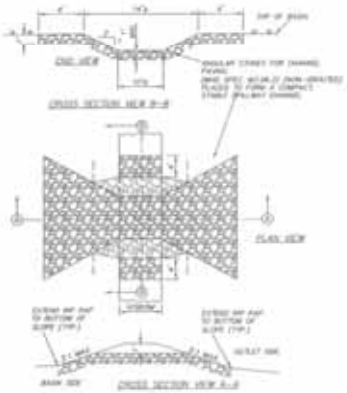
DETENTION BASIN 6"-SUBDRAIN DETAIL
NO SCALE



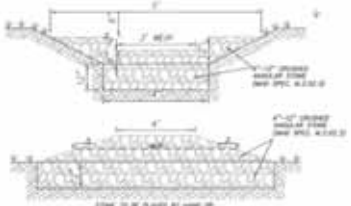
DETENTION BASIN 3"-SUBDRAIN DETAIL
NO SCALE



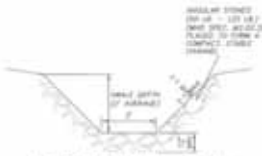
2:1 RIP RAP SLOPE DETAIL
NO SCALE



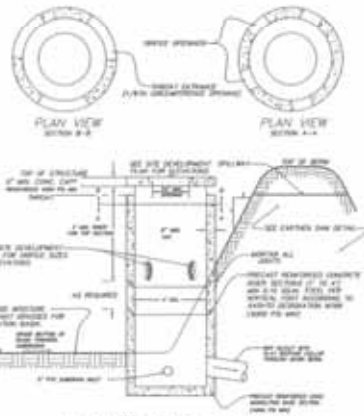
EMERGENCY SPILLWAY DETAIL
NO SCALE



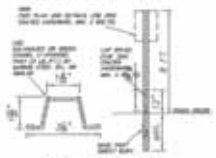
ROCK CHECK DAM
NO SCALE



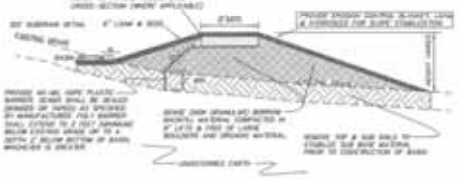
RIP-RAP SWALE DETAIL
NO SCALE



D-BASIN OUTLET STRUCTURE
NO SCALE



SIGN POST DETAIL
NO SCALE



DETENTION BASIN BERM
(REQUIRED FOR DETENTION BASIN CONSTRUCTION)
NO SCALE

DANGER
NO TRESPASSING

PERIMETER SIGNAGE
NO SCALE
12" x 8"
SIGNS TO BE PLACED ALONG PERIMETER AT 50 FT INTERVALS

"FACILITY NAME"
OWNER CONTACT INFORMATION
(###) ### - ####
OPERATOR CONTACT INFORMATION
(###) ### - ####
EMERGENCY CONTACT INFORMATION
(###) ### - ####

TYPICAL PROJECT SIGN
NO SCALE
24" x 24"
SIGNS TO BE PLACED AT ENTRANCE OF PROJECT SITE

PROCEDURE FOR INSTALLATION OF EROSION CONTROL BLANKETS

1) PREPARE SURFACE WITH FINAL GRADING AND LOAM PLACEMENT. RAKE AND SMOOTH FINAL SURFACE. APPLY APPLICABLE SEED MIX.

2) START AT THE TOP OF SLOPE BY ANCHORING BLANKETS IN A 6" DEEP x 6" WIDE ANCHOR TRENCH. PLACE BLANKETS, STAPLE (8" STAPLES), SHOVEL AND COMPACT WITH TAMPER (OVERLAP OF 12").

3) ROLL BLANKETS DOWN THE SLOPE. STAPLE THE OPEN BLANKET EDGE USING ONE ROW OF STAPLES AT 2' INTERVALS. THE INTERIOR OF THE BLANKET SHOULD BE STAPLED USING A 2' WIDE x 2' HIGH STAPLE PATTERN. BE SURE TO LAY BLANKETS LOOSELY ON THE GROUND ALLOWING A GOOD CONTACT BETWEEN SOIL AND BLANKETS.

4) USE NO 6" OVERLAP BETWEEN BLANKET SPLICES. USE A SINGLE ROW OF STAPLES TO ANCHOR BLANKETS TOGETHER.

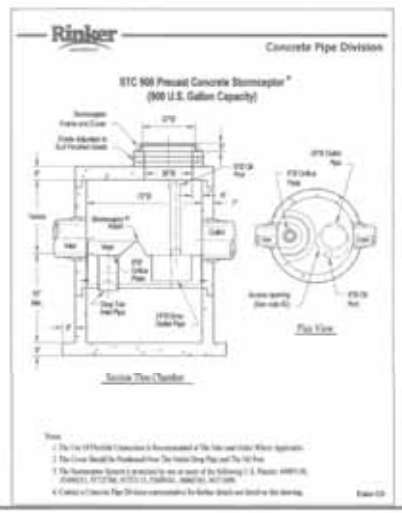
5) PROVIDE 6"x 6" ANCHOR TRENCH AT TOP OF SLOPE.

6) EROSION CONTROL BLANKET TYPE SHALL BE PROPERLY SELECTED FOR SITE CONDITIONS AND MAXIMUM ALLOWABLE SLOPE.

7) METAL METALLIC ANCHORS SHALL BE PROMPTLY REMOVED ONCE THE VEGETATIVE COVER HAS BEEN ESTABLISHED.

8) GRASS SEED VARIETY SHALL BE PROPERLY CHOSEN FOR SPECIFIC SITE CONDITIONS (SHADE OR SUN, ETC.)

EROSION CONTROL BANKET PLACEMENT
NO SCALE



STORMWATER OPERATION AND MAINTENANCE PLAN

THE FOLLOWING SHALL BE CONSIDERED THE OPERATION & MAINTENANCE PLAN (OMP) FOR THE STORMWATER COLLECTION FACILITY FOR THIS DEVELOPMENT. THIS OMP HAS BEEN PREPARED IN ACCORDANCE WITH THE STORMWATER MANAGEMENT POLICY AS ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

I. SYSTEM OWNERSHIP

THE SYSTEM SHALL INCLUDE THE DRAINAGE INFRASTRUCTURE AND ALL OF ITS COMPONENTS AS SHOWN ON THE SITE DEVELOPMENT PLANS, INCLUDING THE DETENTION FACILITIES AND ALL AREAS OF THE DRAINAGE SYSTEM, AND STRUCTURES OF THE SYSTEM SHALL INCLUDE THE DRAINAGE SWALES AND THE OUTFALL & CONTROL STRUCTURES. THE SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DETAILS AND THE APPROVED PLANS.

UPON THE COMPLETION OF CONSTRUCTION THE DRAINAGE SYSTEM DESCRIBED ABOVE AND AS DEPICTED ON THE SITE PLANS SHALL BECOME PROPERTY OF THE LAND OWNER WITH SPECIFIC EASEMENT RIGHTS TO THE OPERATOR OF THE SOLAR SYSTEM TO MAINTAIN THE DRAINAGE SYSTEM AS DEPICTED ON THE APPROVED PLANS. THE EASEMENT RIGHTS SHALL BE PROPERLY RECORDED IN LAND RECORDS FOR THE PROJECT.

II. RESPONSIBLE PARTIES

THE OPERATOR OF THE SOLAR SYSTEM SHALL BE CONSIDERED THE RESPONSIBLE PARTY FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM. THE SYSTEM SHALL INCLUDE THE DRAINAGE INFRASTRUCTURE AND ALL OF ITS COMPONENTS AS SHOWN ON THE APPROVED PLANS. THE SYSTEM SHALL ALSO INCLUDE THE DETENTION FACILITIES AND THE OUTFALL AREAS OF THE DRAINAGE SYSTEM.

III. INSPECTION & MAINTENANCE SCHEDULE

THE FOLLOWING MAINTENANCE SCHEDULE SHALL BE FOLLOWED IN ORDER TO MAINTAIN THE EFFECTIVENESS OF THE STORMWATER MANAGEMENT SYSTEM.

STRUCTURE TYPE	INSPECTION	MAINTENANCE	TASK
RIP-RAP APRON	TWICE A YEAR	EVERY 10 YEARS	REMOVE DEBRIS & ADD STONE
SUBDRAIN (DETENTION BASIN)	TWICE A YEAR MONTHLY (MAY-OCT)	EVERY 5 YEARS MONTHLY (MAY-OCT)	REPLACE FILTERS MOW GRASS AREAS & REMOVE DEBRIS
OUTFALL STRUCTURES SPILLWAYS	TWICE A YEAR	EVERY 10 YEARS	REMOVE DEBRIS & ADD STONE
DETENTION	ANNUALLY IN THE SPRING	WHENEVER THE DEPTH OF DEPOSITS IS GREATER THAN 1/2 OF THE TOTAL STORAGE CAPACITY (1-6" OF SEDIMENT)	REMOVE SEDIMENT FROM SUMPS
LITTER BARRIER	SEASONALLY	SEASONALLY OR WHENEVER THE DEPTH OF DEPOSITS IS GREATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE INVERT OF THE LOWEST PIPE	REMOVE SEDIMENT FROM SUMPS

NOTE: THE DETENTION BASINS ON THIS PROJECT MAY GROW VEGETATION IN THE BOTTOM WHICH MAY INCLUDE SPECIES THAT ARE THE WETLAND PROTECTION ACT. THESE PLANTS SHALL NOT BE CONSTRUED AS HAVING PROTECTION UNDER THE ACT AND SHALL BE CONSIDERED OPPORTUNISTIC GROWTH PLANTS. ADDITIONALLY, THIS AREA SHALL NOT BE CONSIDERED A CONSTRUCTED WETLAND.

SEEDING OPERATION AND MAINTENANCE PLAN

I. RESPONSIBLE PARTIES

THE OPERATOR OF THE SOLAR SYSTEM SHALL BE CONSIDERED THE RESPONSIBLE PARTY FOR THE OPERATION AND MAINTENANCE OF THE GRASS & VEGETATION. THE VEGETATION SHALL INCLUDE ALL OF ITS AREAS AS SHOWN ON THE APPROVED PLANS. THE SYSTEM SHALL ALSO INCLUDE THE GRASSED AREAS AROUND THE PANELS AND DRAINAGE STRUCTURES.

II. INSPECTION & MAINTENANCE SCHEDULE

THE FOLLOWING MAINTENANCE SCHEDULE SHALL BE FOLLOWED IN ORDER TO MAINTAIN THE VEGETATED AREAS

ACTIVITY	MAINTENANCE	TASK
GRASS CUTTING	MONTHLY	GRASS HEIGHT TO BE ALLOWED TO GROW TO A HEIGHT OF NO MORE THAN 10 INCHES AND BE CUT TO A HEIGHT OF 4 TO 5 INCHES

III. APPROPRIATE SEED MIX AND APPLICATION RATES

THE FOLLOWING SEED SCHEDULE SHALL BE FOLLOWED IN ORDER TO PROPERLY MAINTAIN VEGETATED AREAS

SEED TYPE (NATIVE SEED REQUIRED)	APPLICATION RATE	% OF MIX
MEDIUM SEED MIX	2 TO 10 POUNDS PER ACRE	30%
WHITE CLOVER SEED MIX	2 TO 5 POUNDS PER ACRE	10%
CONTROLLED MULCHING	80 TO 100 POUNDS PER ACRE	40%

IV. CHEMICALS & FERTILIZERS

THERE WILL BE NO CHEMICALS OR FERTILIZERS USED ON THIS PROJECT.

APPLICANT:
DPT ENERGY SOLUTIONS, LLC
BRENDON COVE, MANAGER
309 EAST COUNTY ROAD
RUTLAND, MASSACHUSETTS 01543

OWNER:
THE LAFLASH FAMILY REVOCABLE TRUST 2015
25 THOMPSON POND ROAD
SPENCER, MA 01562

REFERENCE:
ASSESSOR MAP 38, PARCEL 41.3
DEED BOOK 20262, PAGE 231
PLAN BOOK 880, PLAN 112

NO.	DATE	REVISIONS	BY
1	06/02/2016	PEER REVIEW COMMENTS	CMA
1	06/01/2016	PEER REVIEW COMMENTS	CMA

WILLIAM D. HANNIGAN
CIVIL
No. 34434

HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS
8 WAYMOUTH SQUARE
LEICESTER, MASSACHUSETTS 01523
(508) 892-9400 (FAX)
(508) 892-9401 (FAX)
www.hanniganengineering.com

CONSTRUCTION DETAILS
IN
LEICESTER, MASSACHUSETTS

PREPARED FOR:
PRO-TECH ENERGY SOLUTIONS
MICHAEL KLADCH
215 EXECUTIVE DRIVE
MOORESTOWN, NEW JERSEY 08057
TEL: (856) 437-6220

CALC: CMA/WDH	DRWN: CMA/WDH	SCALE: NA
CHKD: WDH	APPD: WDH	DATE: JUN. 14, 2016
SRV:	FB:	JOB NO: 2570
TAB: 7-8 DETAIL	SHEET 8 OF 8	PLAN NO: C-12-22