Response to Technical Review Comments

Volume 2 of 2
Revised Site Plans

Clear River Energy Center and Burrillville Interconnection Project

Burrillville, Rhode Island

PREPARED FOR:
Clear River Energy LLC
One South Wacker Drive
Suite 1800
Chicago, IL 60606

The Narraganset Electric Company d/b/a National Grid
280 Melrose Street
Providence, Rhode Island 02907

PREPARED BY:
ESS Group, Inc.
10 Hemingway Drive, 2nd Floor
East Providence, Rhode Island 02915

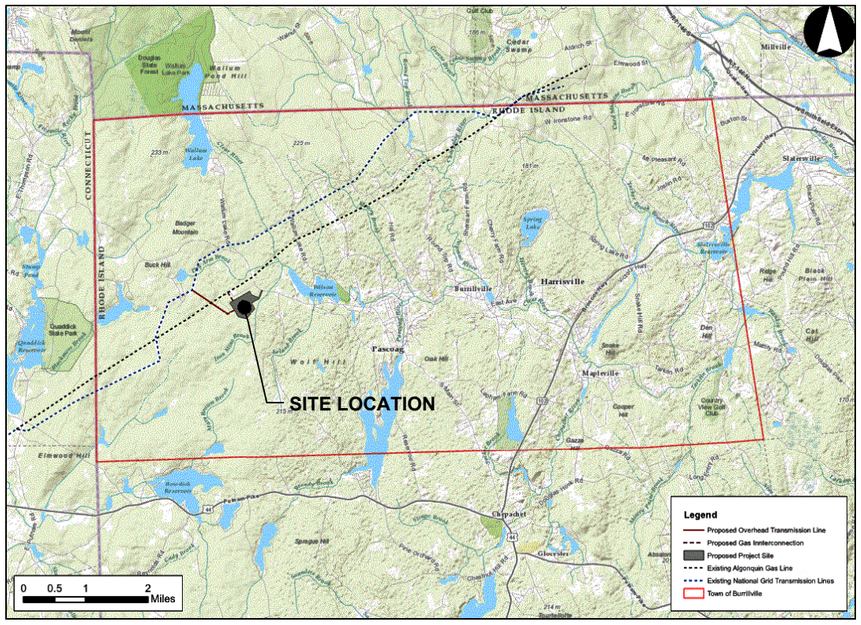
ESS Project No. I108-013

September 2017

Exhibit 1
Revised Site Plans

5405 DATA COURT
ANN ARBOR, MI
48108-8949

Stormwater Management



Clear River Energy LLC

Project No.
000000000238926

Burrillville, Rhode Island
March 2017

INDEX OF DRAWINGS

SITE PLANS

01C000	COVER
01C001	LEGEND
01C1000A	OVERALL SITE ARRANGEMENT
01C1000B	OVERALL SITE ARRANGEMENT
01C1000C	OVERALL SITE ARRANGEMENT
01C1000D	OVERALL SITE ARRANGEMENT
01C1000E	OVERALL SITE ARRANGEMENT
01C1000F	OVERALL SITE ARRANGEMENT
01C1000G	OVERALL SITE ARRANGEMENT
01C1000H	OVERALL SITE ARRANGEMENT
01C1000J	OVERALL SITE ARRANGEMENT
01C100	EXISTING CONDITIONS
01C101	EXISTING CONDITIONS
01C102	EXISTING CONDITIONS
01C103	EXISTING CONDITIONS
01C200	PROPOSED SITE LAYOUT PLAN
01C201	PROPOSED SITE LAYOUT PLAN
01C202	PROPOSED SITE LAYOUT PLAN
01C203	PROPOSED SITE LAYOUT PLAN
01C300	PROPOSED GRADING PLAN
01C301	PROPOSED GRADING PLAN
01C302	PROPOSED GRADING PLAN
01C303	PROPOSED GRADING PLAN
01C304	PROPOSED DRAINAGE & WATER QUALITY PLAN
01C305	PROPOSED DRAINAGE & WATER QUALITY PLAN
01C306	PROPOSED DRAINAGE & WATER QUALITY PLAN
01C307	PROPOSED DRAINAGE & WATER QUALITY PLAN
01C400	PROPOSED DRAINAGE PLAN
01C600	ROADWAY PLAN AND PROFILE
01C601	ROADWAY PLAN AND PROFILE
01C700	PROPOSED REFORESTATION PLAN
01C701	PROPOSED REFORESTATION PLAN
01C702	PROPOSED REFORESTATION PLAN
01C703	PROPOSED REFORESTATION PLAN
01C800	PROPOSED SITE DRAINAGE DETAILS
01C801	PROPOSED SITE DRAINAGE DETAILS
01C802	PROPOSED SITE DRAINAGE DETAILS
01C803	PROPOSED SITE DRAINAGE DETAILS
01C804	PROPOSED SITE DRAINAGE DETAILS
01C805	PROPOSED SITE DRAINAGE DETAILS

ALEXANDER DEWSON
No. 0011618
4/1/17
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

CIVIL MAPPING SYMBOLOGY

- OUTLET PROTECTION RIP-RAP PAD (FOR SIZE SEE DETAIL)
- (11R) HYDROCAD REFERENCE NODE FOR CALCS
- EXISTING SWAMP
- EXISTING FORESTED
- EXISTING SPECIAL AQUATIC SITE
- EXISTING AREA SUBJECT TO STORM FLOWAGE (ASSF)
- PROPOSED STORM STRUCTURE
- PROPOSED STORM PIPE
- D POINT OF DISCHARGE
- EXISTING LIGHT POLE
- EXISTING SIGN
- CONSTRUCTION STAGGING AREA
- #XX EXISTING POWER POLE WITH IDENTIFICATION NUMBER
- BH-13 BORING HOLE LOCATION
- SOIL MAP UNIT
- IP6 SILT FENCE INLET PROTECTION
- DIRECTION OF OVERLAND FLOW DURING & AFTER MASS GRADING
- X.XX DIRECTION OF OVERLAND FLOW W/ GRADE
- SB SEDIMENT BASIN
- CE TEMPORARY STONE CONSTRUCTION EXIT
- DB TEMPORARY DIVERSION DITCH/BERM
- POTABLE WATER WELL
- TP-5 TEST PIT LOCATION
- 1-50d WETLAND FLAG
- TIMBER MATTING

UTILITY/CIVIL LINE SYMBOLOGY

- SPECTRA PROPERTY LINE
- PROPERTY LINE SETBACK
- PROPERTY LINE
- 500 EXISTING CONTOUR ELEVATIONS
- 500 PROPOSED CONTOUR ELEVATIONS
- WETLAND EDGE
- EXISTING PERENNIAL STREAM
- EXISTING INTERMITMENT STREAM
- EXISTING STREAM BANK
- 50' PERIMETER WETLAND
- 100' RIVERBANK WETLAND
- 200' RIVERBANK WETLAND
- RIGHT OF WAY
- DRAINAGE AREAS
- TREELINE
- GAS PROPOSED GAS LINE
- LOD LIMITS OF DISTURBANCE (SILT FENCE INSTALLATION, SEE SHEET 01C904)
- SF PROPOSED SILT FENCE
- FLOOD PLAIN LINE

GENERAL NOTES:

1. THIS IS A STANDARD CIVIL SYMBOLOGY SHEET. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.

2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
3	3/27/2017	REVISION
2	2/17/2017	REVISION
1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

LEGEND

FILENAME 01C001.dwg
SCALE AS SHOWN
SHEET 01C001

EXISTING ROUTE OF TRANSMISSION LINES

DIRT TRAVELED WAY KNOWN AS WILSON TRAIL (SEE NOTE 2(B))

TRAIL

TRAIL

TRAIL

A.P. 135, LOT 2
AREA:
20,636,322 S.F.
(473.745 AC.)

"PARCEL 1"
AREA:
24,955,741 S.F.±
(572.905 AC.±)

MATCHLINE TO 238926-0GA-C1000B

N 58°00'30" E

MATCHLINE TO 238926-0GA-C1000D

NOTES:
1. WETLANDS DELINEATION PROVIDED BY ESS GROUP, INC., WALTHAM, MA. SURVEY CONDUCTED JULY 2015.
2. SURVEY PERFORMED BY WATERMAN ENGINEERING COMPANY, EAST PROVIDENCE, RI. SURVEY DRAWING: REVISED SUBDIVISION_12.06.16.DWG
3. SET-BACK FROM FUTURE CONSTRUCTION. ROW FOR SINGLE OR DOUBLE CIRCUIT.
4. SEE DRAWING C1002 FOR CONSTRUCTION LAYDOWN EXTENTS AND REQUIREMENTS.

LEGEND

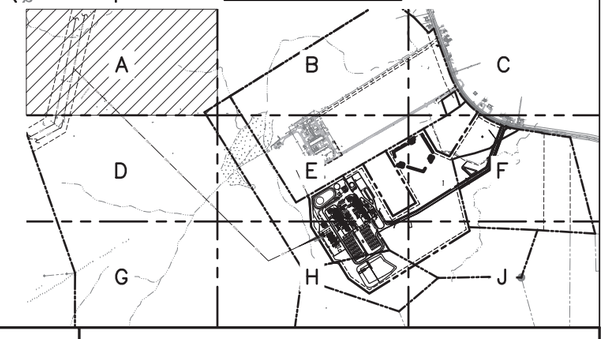
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- INDICATES SECURITY FENCE
- INDICATES A80 AQUIFER ZONE

NORTH

SITE ARRANGEMENT

SCALE 1" = 200'

DRAWING INDEX



HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
0	09/01/17	ISSUED FOR PERMIT	EDC	DWM	DWM	–

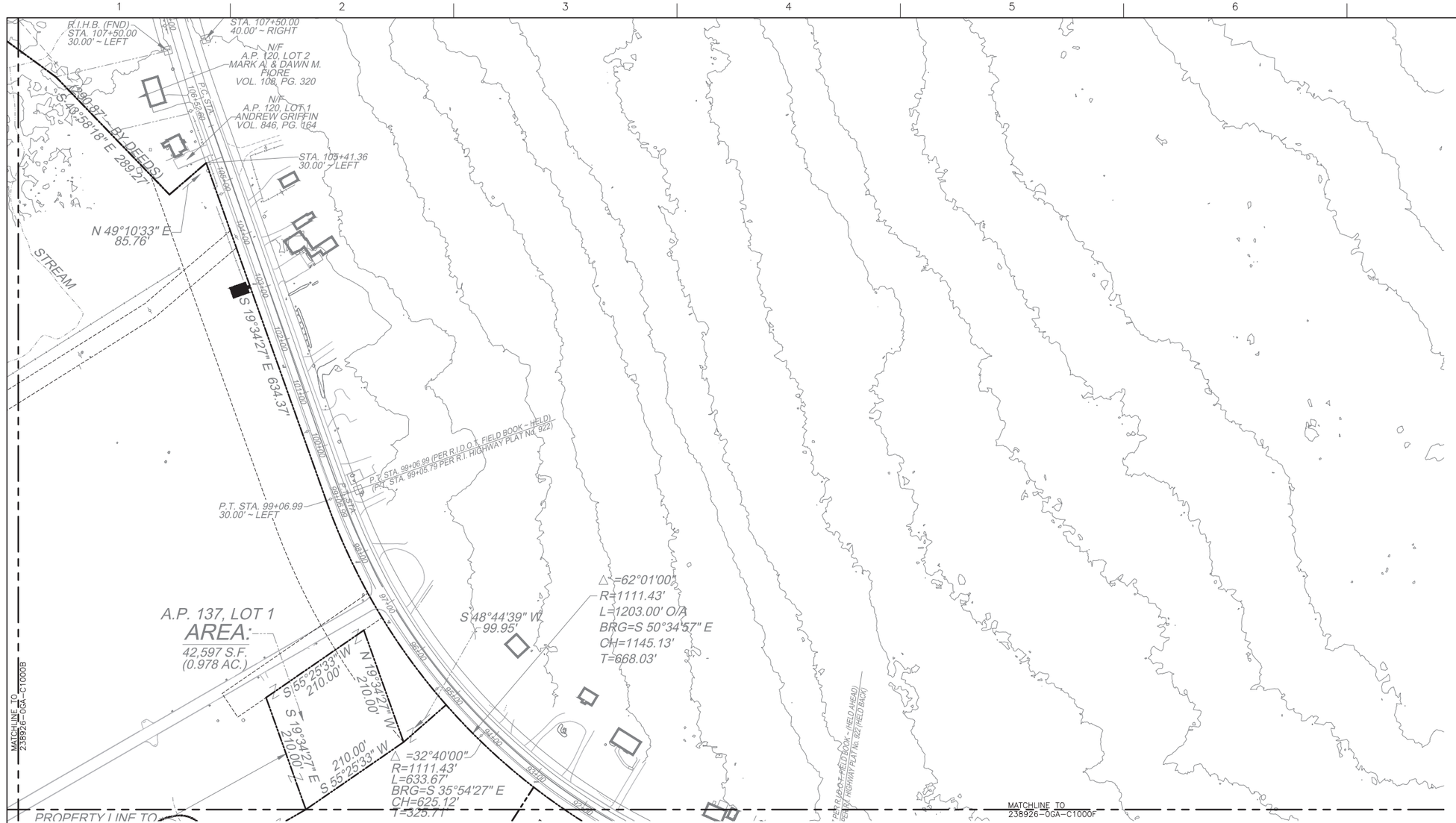
ALEXANDER DEUSON
No. 0011618
9/1/17
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER

SITE ARRANGEMENT

FILENAME	C1000-0GA-238926.dwg	SHEET
SCALE	AS NOTED	238926-0GA-C1000A

9/15/2017 12:00:01 PM, EDHURGH



NOTES:

1. WETLANDS DELINEATION PROVIDED BY ESS GROUP, INC., WALTHAM, MA. SURVEY CONDUCTED JULY 2015.
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LEGEND

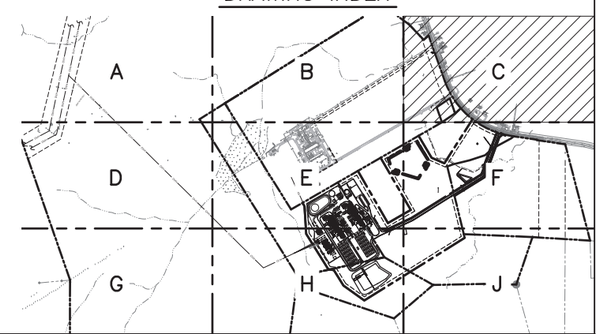
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NORTH

SITE ARRANGEMENT

SCALE 1" = 200'

DRAWING INDEX



ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
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HDR Engineering, Inc.

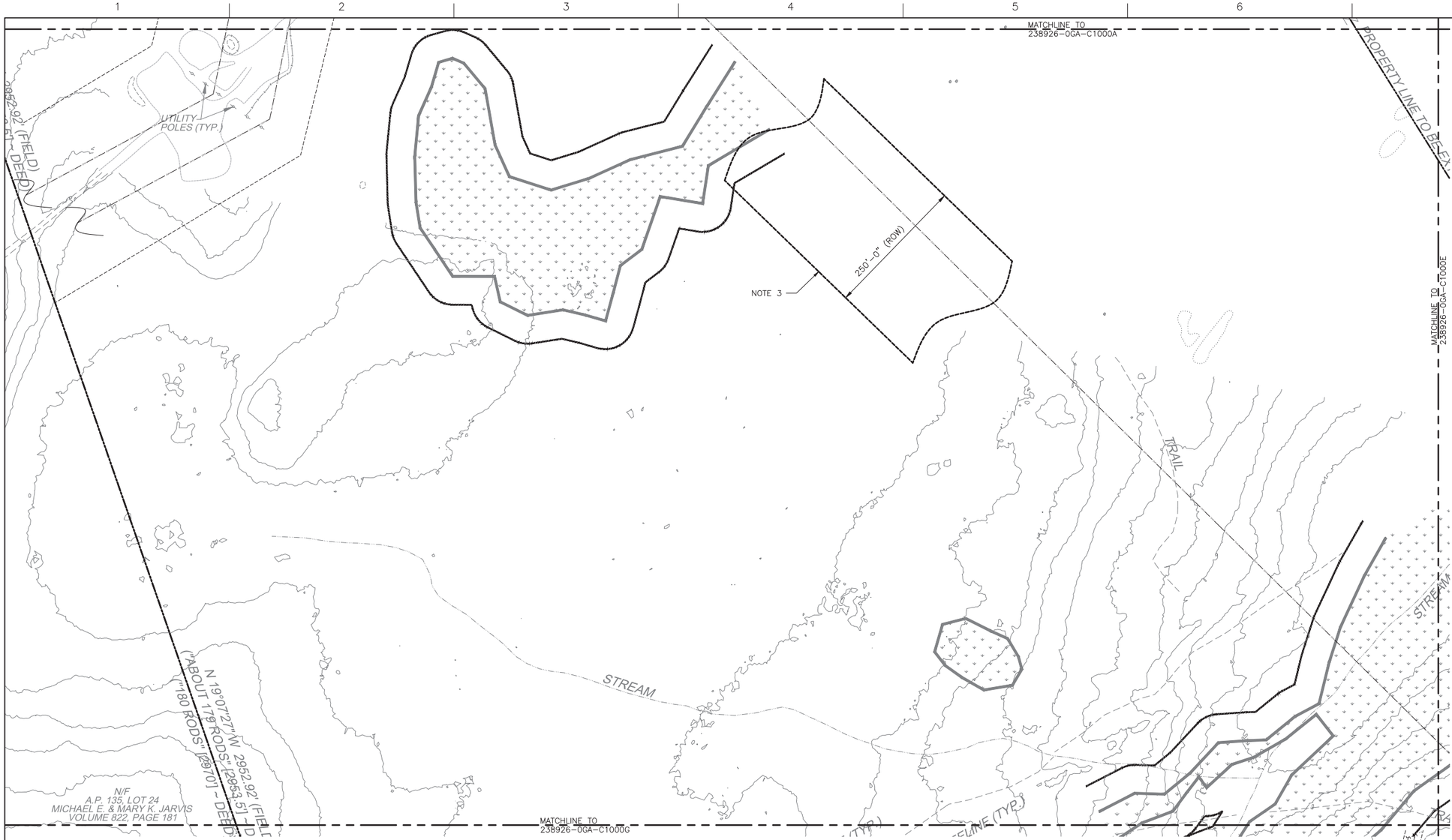
ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL
9/1/17

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER

SITE ARRANGEMENT

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SCALE	AS NOTED	238926-0GA-C1000C

9/15/2017 12:02:24 PM, EDHURGH



NOTES:

1. WETLANDS DELINEATION PROVIDED BY ESS GROUP, INC., WALTHAM, MA. SURVEY CONDUCTED JULY 2015.
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LEGEND

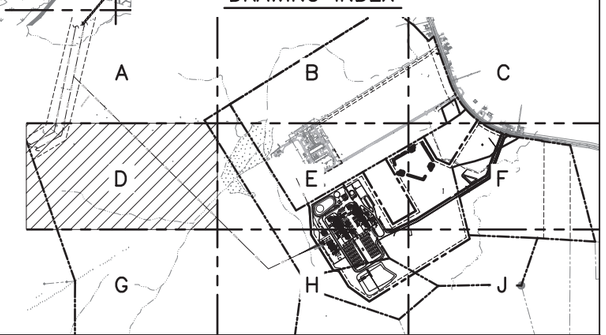
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SITE ARRANGEMENT

SCALE: 1" = 200'

NORTH

DRAWING INDEX



ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
0	09/01/17	ISSUED FOR PERMIT	EDC	DWM	DWM	–

HDR Engineering, Inc.

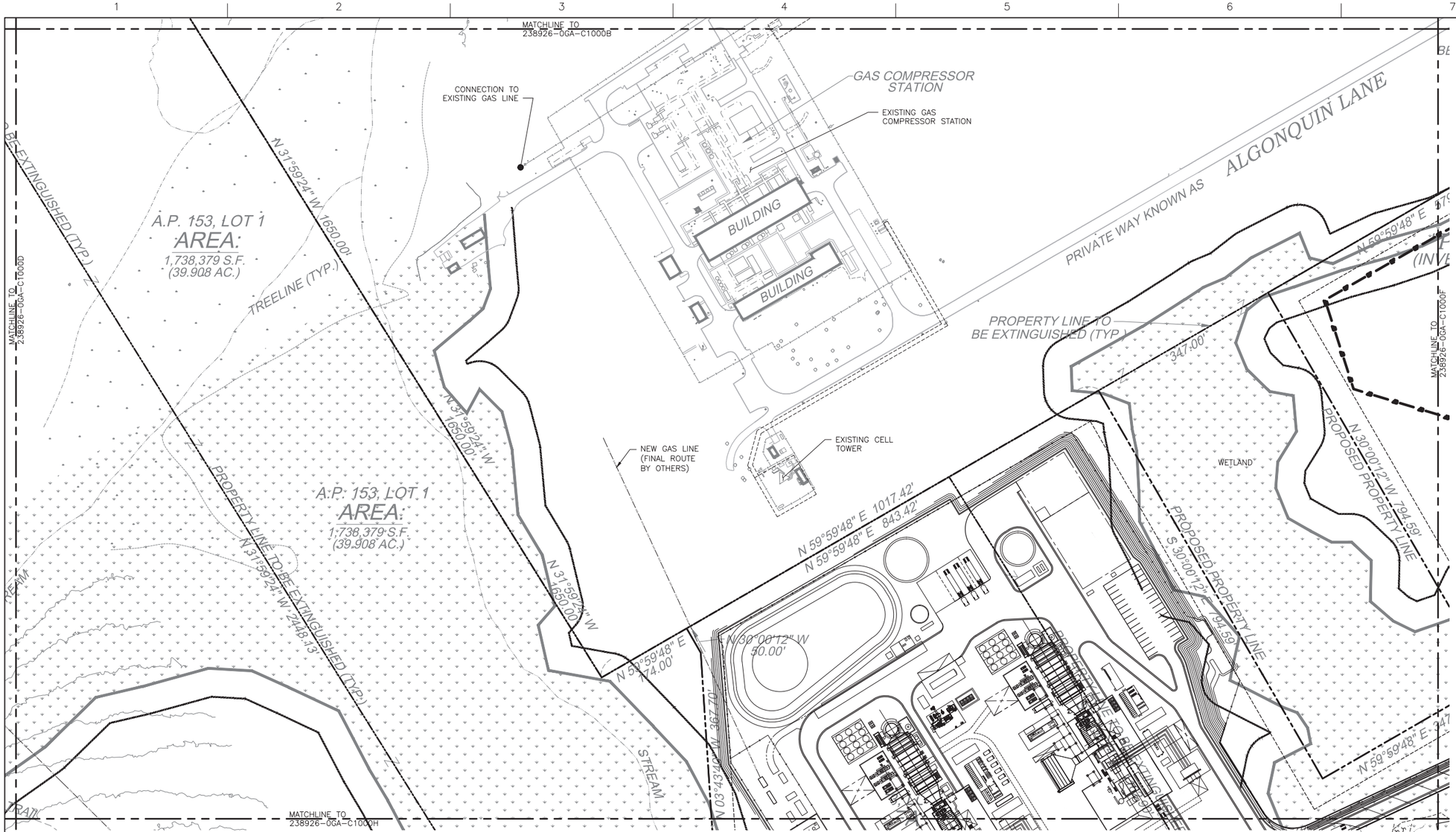
ALEXANDER DEUSON
No. 0011618
4/1/17
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER

SITE ARRANGEMENT

FILENAME	C1000-0GA-238926.dwg	SHEET
SCALE	AS NOTED	238926-0GA-C1000D

9/5/2017 2:03:46 PM, EDEUSON



NOTES:

1. WETLANDS DELINEATION PROVIDED BY ESS GROUP, INC., WALTHAM, MA. SURVEY CONDUCTED JULY 2015.
2. SURVEY PERFORMED BY WATERMAN ENGINEERING COMPANY, EAST PROVIDENCE, RI. SURVEY DRAWING: REVISED SUBDIVISION_12.06.16.DWG
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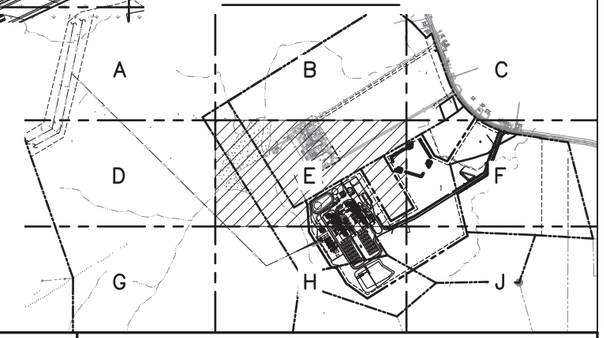
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NORTH

SITE ARRANGEMENT

SCALE 1" = 200'

DRAWING INDEX



HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION	DWN	CHK	APPV
0	09/01/17	ISSUED FOR PERMIT	EDC	DWM	DWM	–

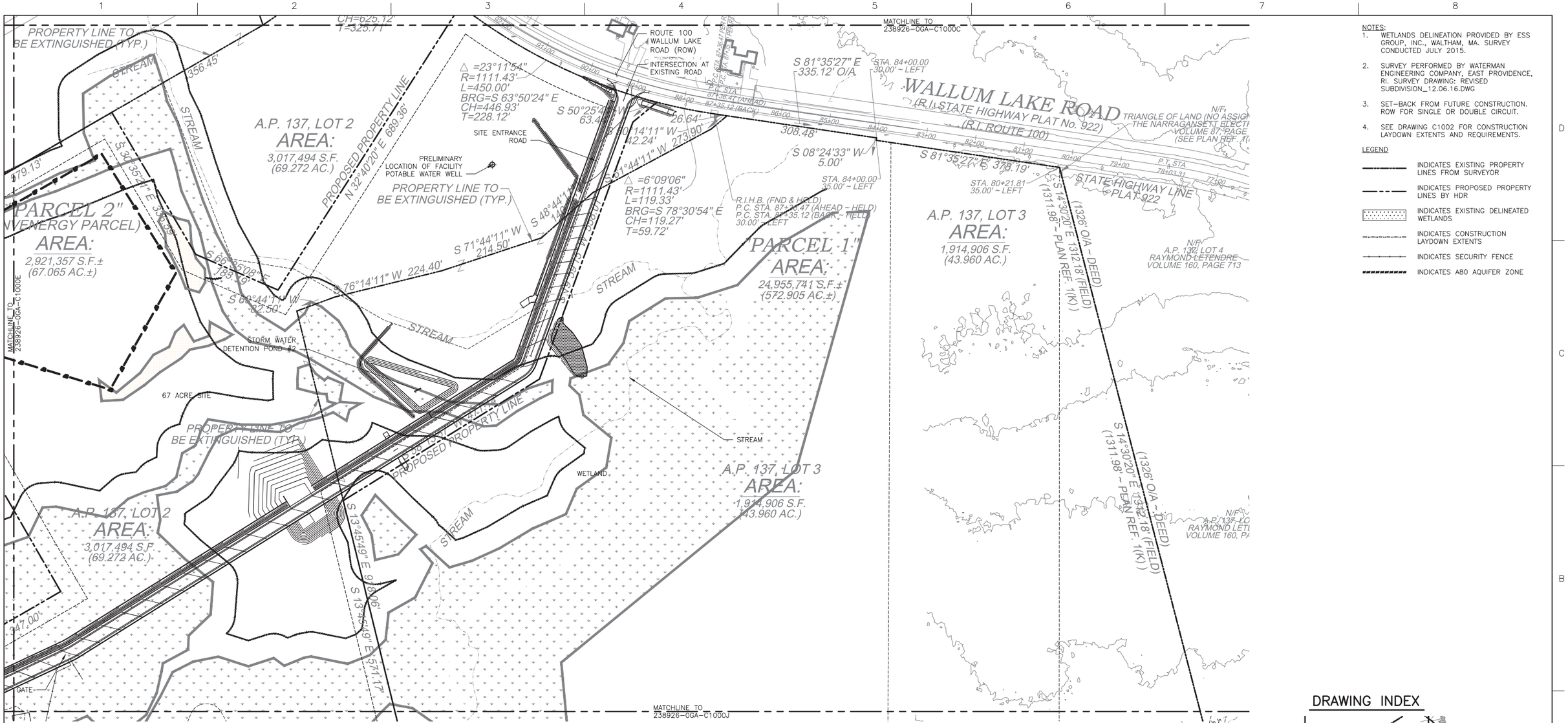
ALEXANDER DEUSON
No. 0011618
9/1/17
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER

SITE ARRANGEMENT

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SCALE	AS NOTED	238926-0GA-C1000E

9/15/2017 12:26:27 PM, EDAURGH



NOTES:
1. WETLANDS DELINEATION PROVIDED BY ESS GROUP, INC., WALTHAM, MA. SURVEY CONDUCTED JULY 2015.
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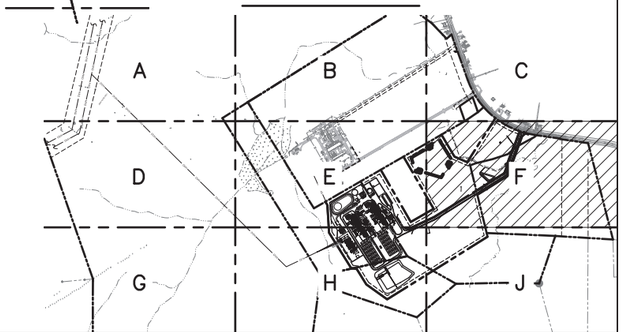
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SITE ARRANGEMENT

SCALE 1" = 200'

NORTH

DRAWING INDEX



HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION	EDC DWN	DWM ENGR	DWM CHK	– APPV
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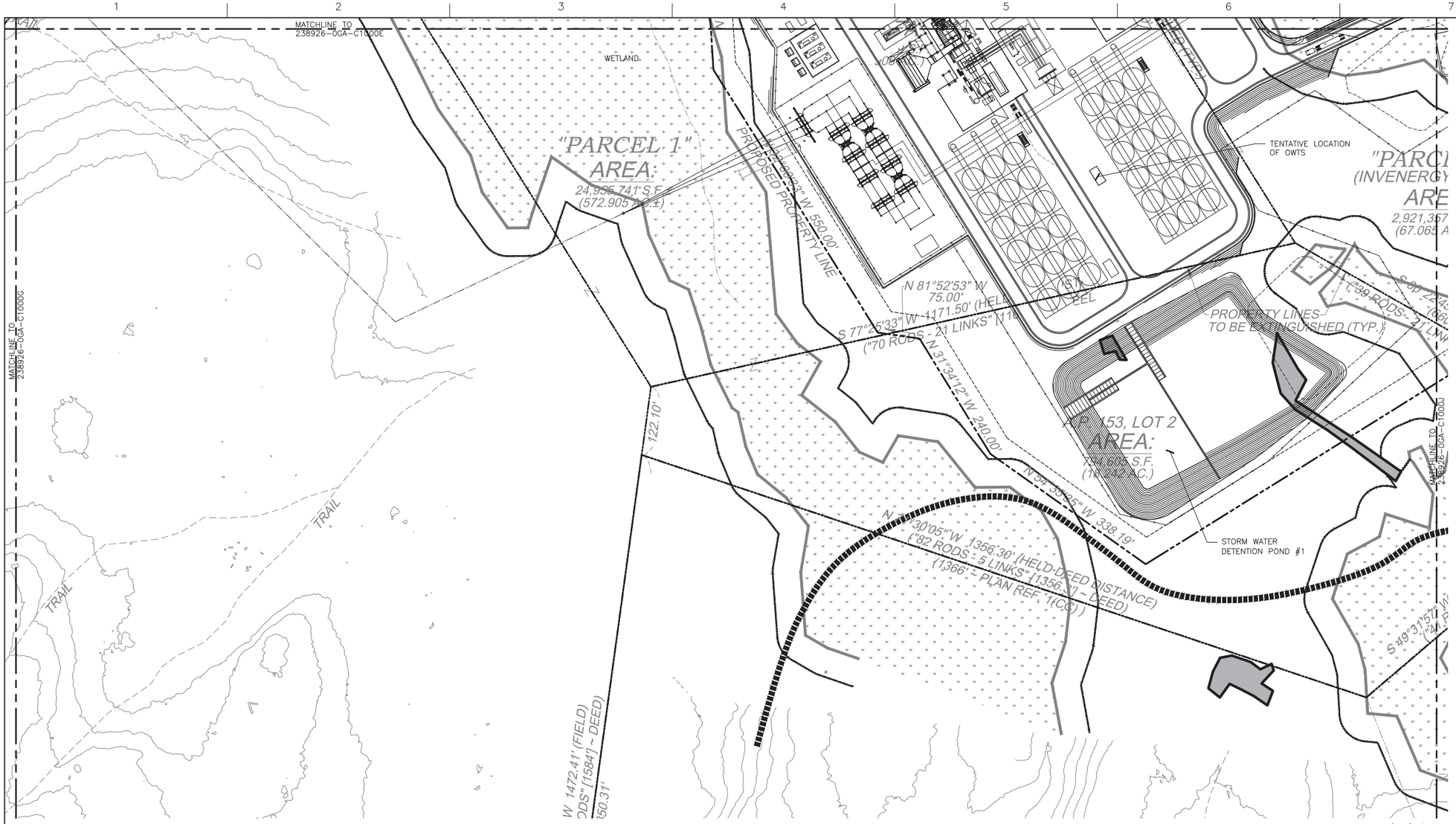
ALEXANDER DEUSON
No. 0011618
4/1/17
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER

SITE ARRANGEMENT

FILENAME	C1000-0GA-238926.dwg	SHEET
SCALE	AS NOTED	238926-0GA-C1000F

9/15/2017 12:07:46 PM, EDALRGH



NOTES:
1. WETLANDS DELINEATION PROVIDED BY ESS GROUP, INC., WALTHAM, MA. SURVEY CONDUCTED JULY 2015.
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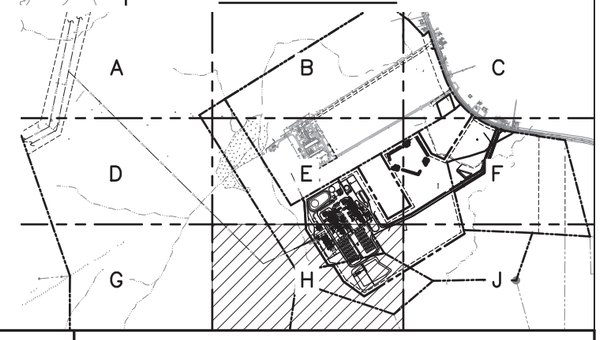
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NORTH

SITE ARRANGEMENT

SCALE 1" = 200'

DRAWING INDEX



HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
0	09/01/17	ISSUED FOR PERMIT	EDC	DWM	DWM	–

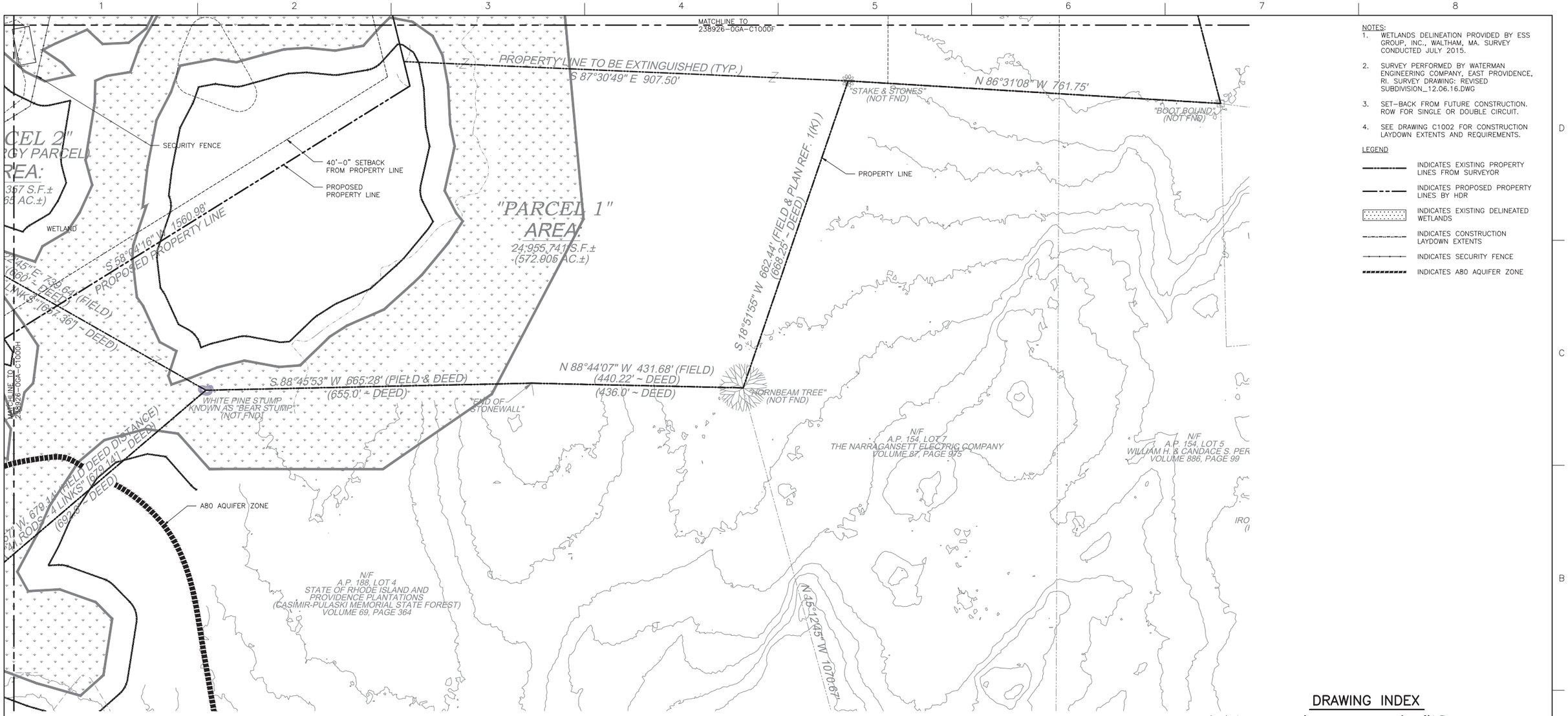
ALEXANDER DEUSON
No. 0011618
9/1/17
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER

SITE ARRANGEMENT

FILENAME	C1000-0GA-238926.dwg	SHEET
SCALE	AS NOTED	238926-0GA-C1000H

9/15/2017 12:09:42 PM, EDMURCH



NOTES:
1. WETLANDS DELINEATION PROVIDED BY ESS GROUP, INC., WALTHAM, MA. SURVEY CONDUCTED JULY 2015.
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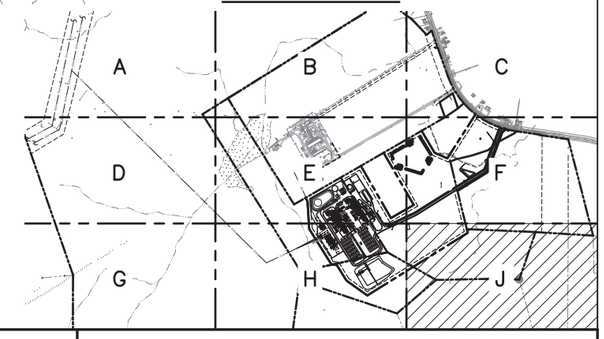
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NORTH

SITE ARRANGEMENT

SCALE 1" = 200'

DRAWING INDEX



HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION	EDC DWN	DWM ENGR	DWM CHK	– APPV
0	09/01/17	ISSUED FOR PERMIT				

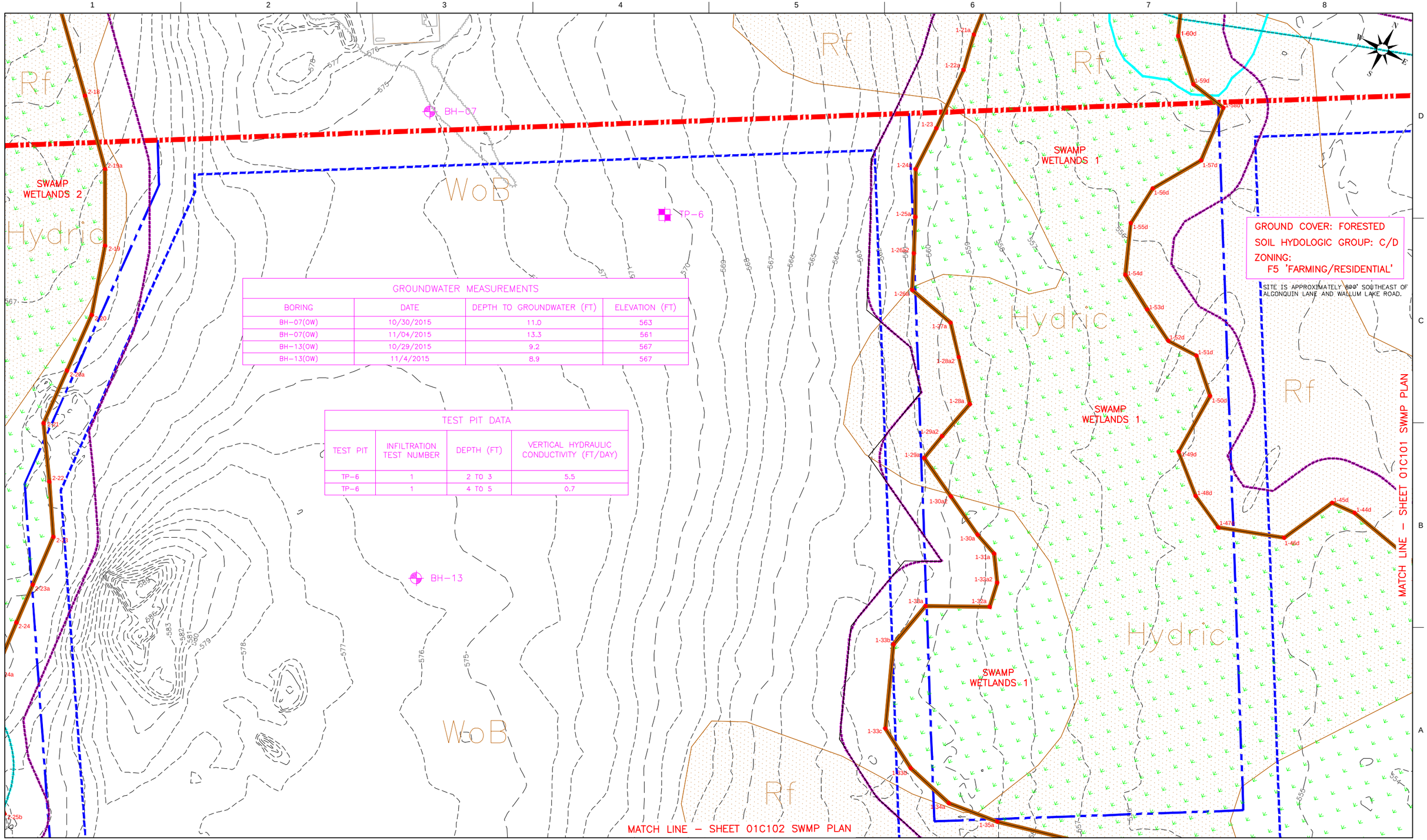
ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL
9/1/17

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER

SITE ARRANGEMENT

FILENAME	C1000-0GA-238926.dwg	SHEET
SCALE	AS NOTED	238926-0GA-C1000J

9/15/2017 12:10:51 PM, EDHURGH



GROUNDWATER MEASUREMENTS

BORING	DATE	DEPTH TO GROUNDWATER (FT)	ELEVATION (FT)
BH-07(OW)	10/30/2015	11.0	563
BH-07(OW)	11/04/2015	13.3	561
BH-13(OW)	10/29/2015	9.2	567
BH-13(OW)	11/4/2015	8.9	567

TEST PIT DATA

TEST PIT	INFILTRATION TEST NUMBER	DEPTH (FT)	VERTICAL HYDRAULIC CONDUCTIVITY (FT/DAY)
TP-6	1	2 TO 3	5.5
TP-6	1	4 TO 5	0.7

DRAWING INDEX

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2	2/17/2017	REVISION
1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL
4/1/17

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

EXISTING CONDITIONS

FILENAME 01C100.dwg
SCALE 1" = 100'

SHEET 01C100

TEST PIT DATA			
TEST PIT	INFILTRATION TEST NUMBER	DEPTH (FT)	VERTICAL HYDRAULIC CONDUCTIVITY (FT/DAY)
TP-3	3	4 TO 5	1.8

TEST PIT DATA (CONTINUED)				
TEST PIT	DEPTH TO SEEPAGE (IN)	DEPTH TO PONDED WATER (IN)	EST. SEASONAL HIGH WATER (IN)	TOTAL DEPTH OF TEST HOLE (IN)
TP-S1	29	NOT OBSERVED	20.0	114.0
TP-S2	38	88 (AFTER 30 MINS)	22.0	89.0

MATCH LINE – SHEET 01C100 SWMP PLAN

MATCH LINE – SHEET 01C103 SWMP PLAN

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CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

EXISTING CONDITIONS

FILENAME 01C101.dwg
SCALE 1" = 100'
SHEET 01C101

MATCH LINE – SHEET 01C100 SWMP PLAN

MATCH LINE – SHEET 01C103 SWMP PLAN

EXISTING TRAIL

EXISTING TRAIL

WoB

Hydric

Rf

ChB

SAS 1

SAS 2

SAS 3

SWAMP WETLANDS 1

SWAMP WETLANDS 2

SWAMP WETLANDS 1

SWAMP WETLANDS 1

TEST PIT DATA

TEST PIT	DEPTH TO SEEPAGE (IN)	DEPTH TO PONDED WATER (IN)	EST. SEASONAL HIGH WATER (IN)	TOTAL DEPTH OF TEST HOLE (IN)
TP-S3	NOT OBSERVED	NOT OBSERVED	22	43
TP-S4	NOT OBSERVED	NOT OBSERVED	21	48
TP-S5	31	43 (AFTER 10 MINS)	16	47
TP-S6	34	47 (AFTER 10 MINS)	20	48
TP-S7	NOT OBSERVED	NOT OBSERVED	18	48
TP-S8	45	49	20	49
TP-S9	37	46	18	47
TP-S10	39	43	16	47
TP-S11	52	53	17	53
TP-S12	46	46	12	46
TP-S13	NOT OBSERVED	NOT OBSERVED	19	47
TP-S14	24	52	12	58
TP-S15	NOT OBSERVED	NOT OBSERVED	19	45
TP-S16	30	44 (AFTER 10 MINS)	18	48
TP-S17	NOT OBSERVED	NOT OBSERVED	15	34
TP-S18	NOT OBSERVED	NOT OBSERVED	19	52
TP-S19	NOT OBSERVED	NOT OBSERVED	17	44
TP-S20	NOT OBSERVED	NOT OBSERVED	14	43
TP-S21	22	34 (AFTER 5 MINS)	8	36
TP-S22	25	45 (AFTER 15 MINS)	10	44
TP-S23	15	36	4	40
TP-S24	40	42	6	44

DRAWING INDEX

ISSUE	DATE	DESCRIPTION
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1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL

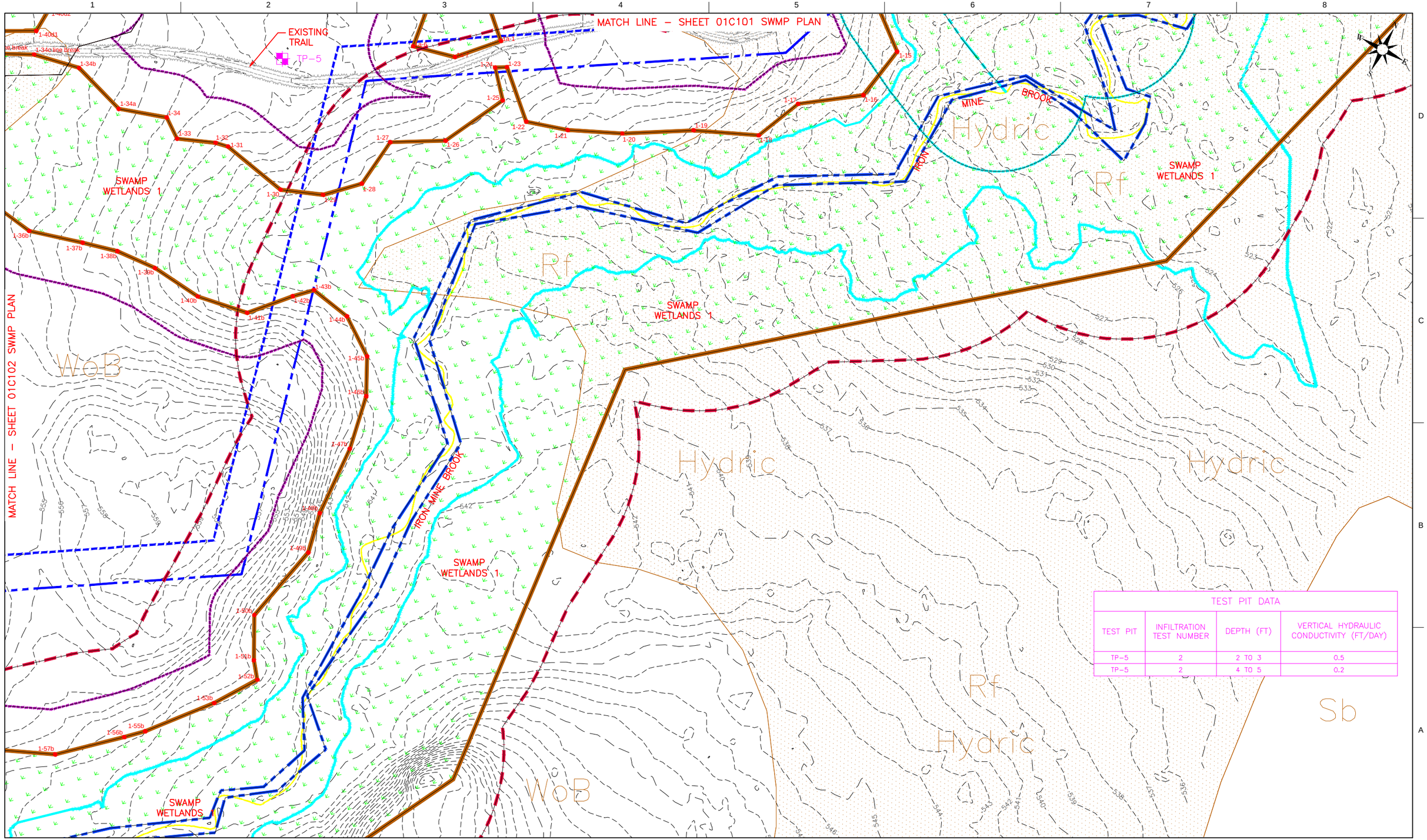
CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

EXISTING CONDITIONS

FILENAME 01C102.dwg

SCALE 1" = 100'

SHEET 01C102



TEST PIT DATA			
TEST PIT	INFILTRATION TEST NUMBER	DEPTH (FT)	VERTICAL HYDRAULIC CONDUCTIVITY (FT/DAY)
TP-5	2	2 TO 3	0.5
TP-5	2	4 TO 5	0.2

DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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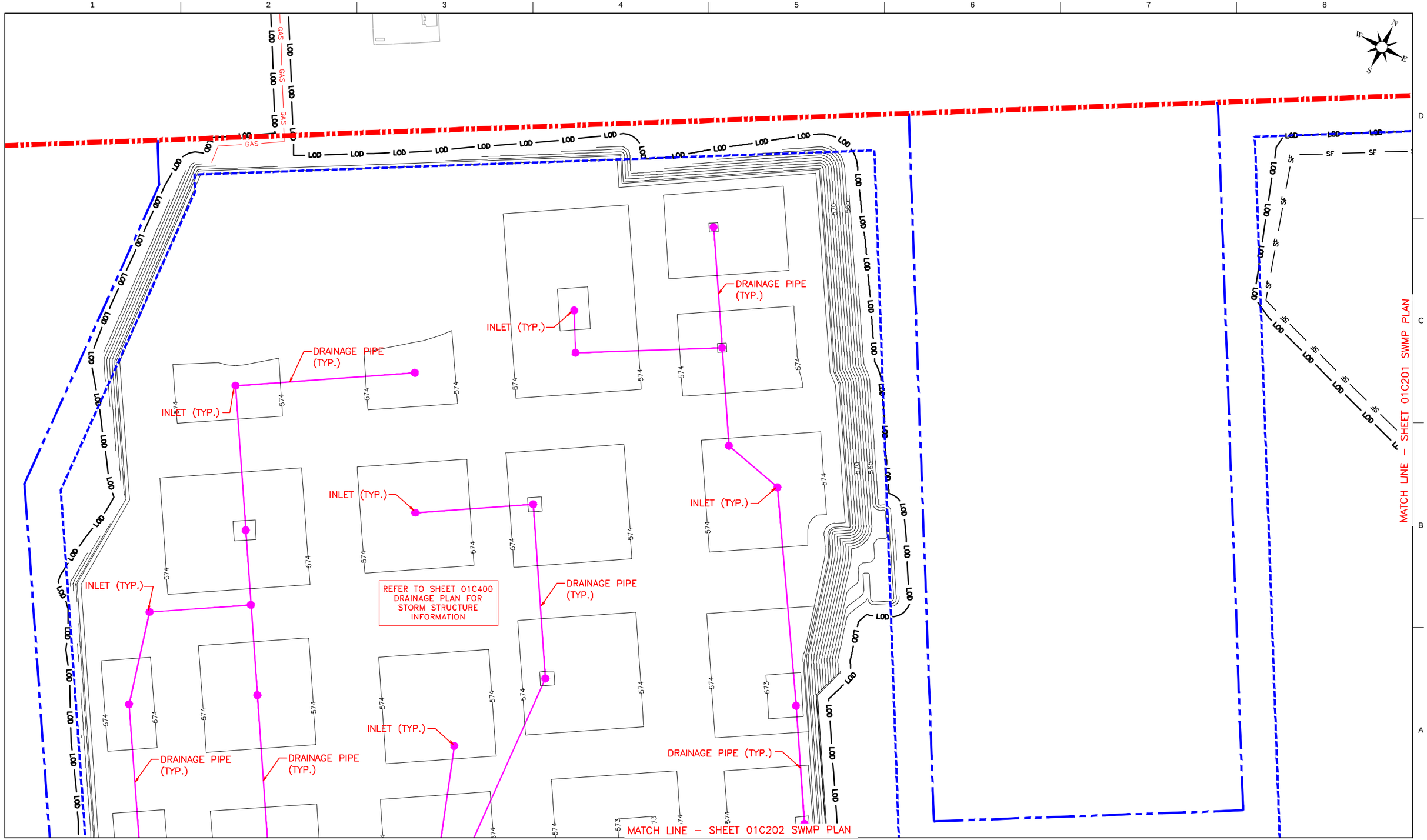
ALEXANDER DEUSON
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CIVIL

CLEAR RIVER ENERGY LLC
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WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

EXISTING CONDITIONS

FILENAME 01C103.dwg
SCALE 1" = 100'

SHEET
01C103



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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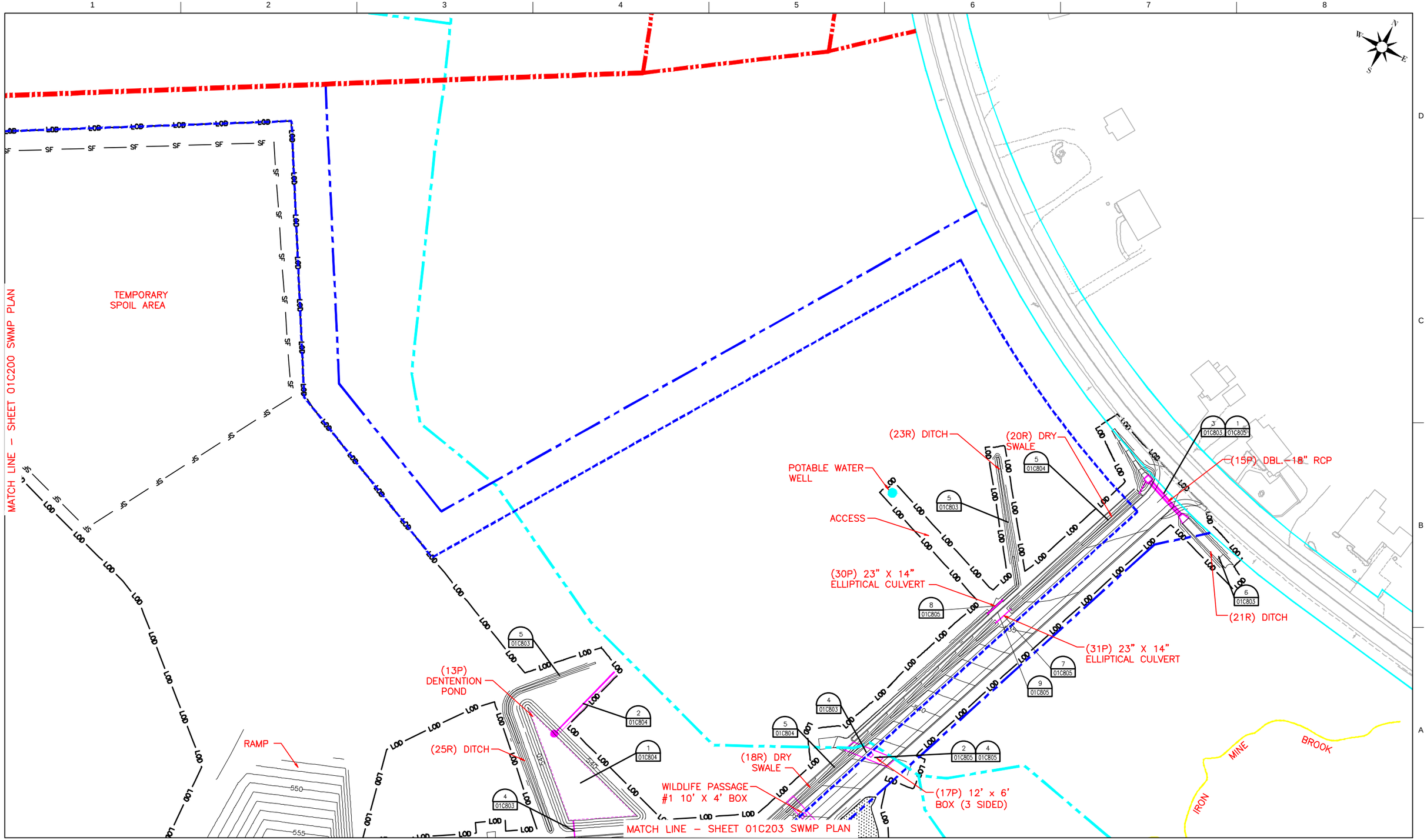
ALEXANDER DEUSON No. 0011618 REGISTERED PROFESSIONAL ENGINEER CIVIL 4/17

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CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED SITE LAYOUT PLAN

FILENAME 01C200.dwg
SCALE 1" = 100'

SHEET 01C200



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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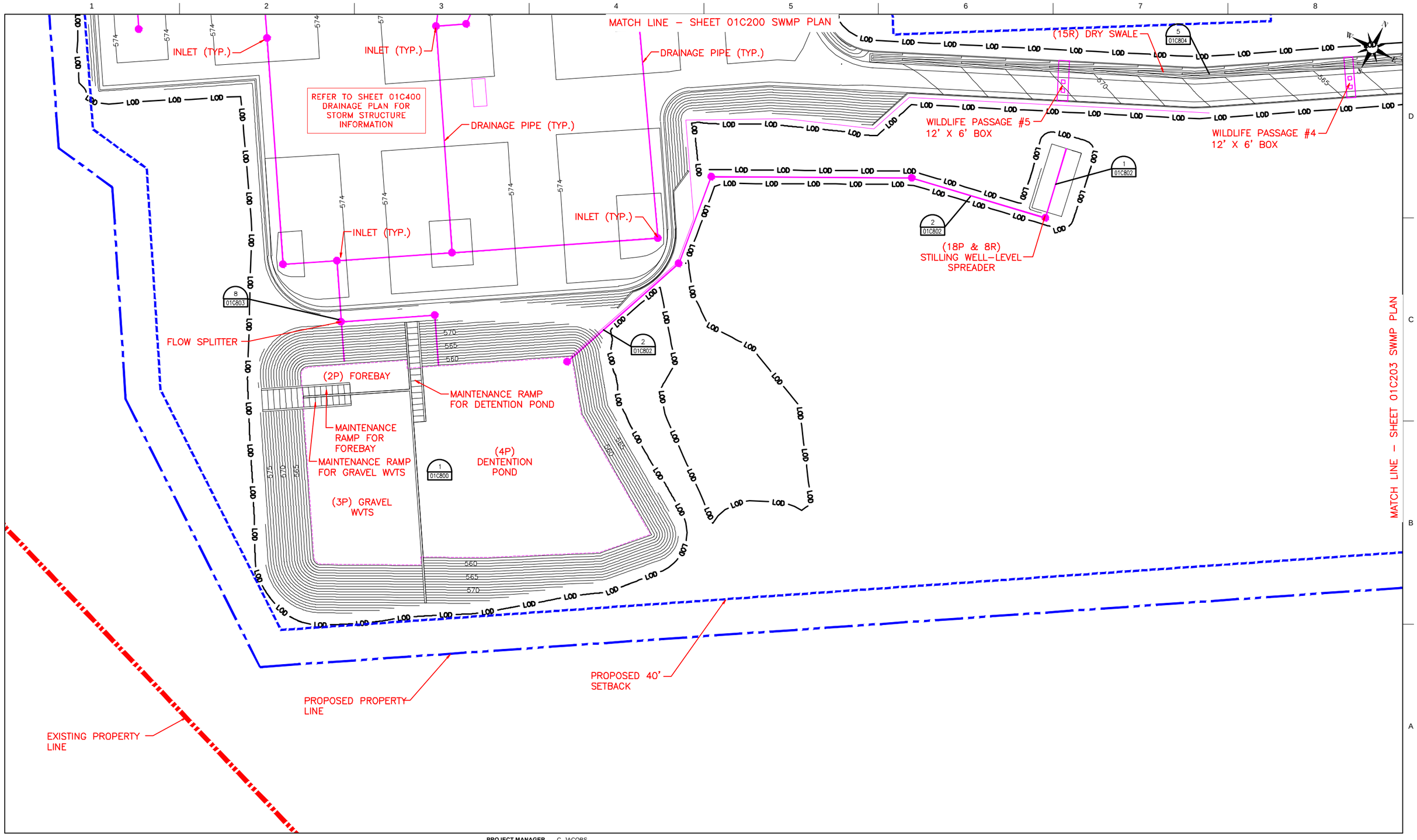
ALEXANDER DEUSON
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CIVIL

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CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED SITE LAYOUT PLAN

FILENAME 01C201.dwg
SCALE 1" = 100'

SHEET 01C201



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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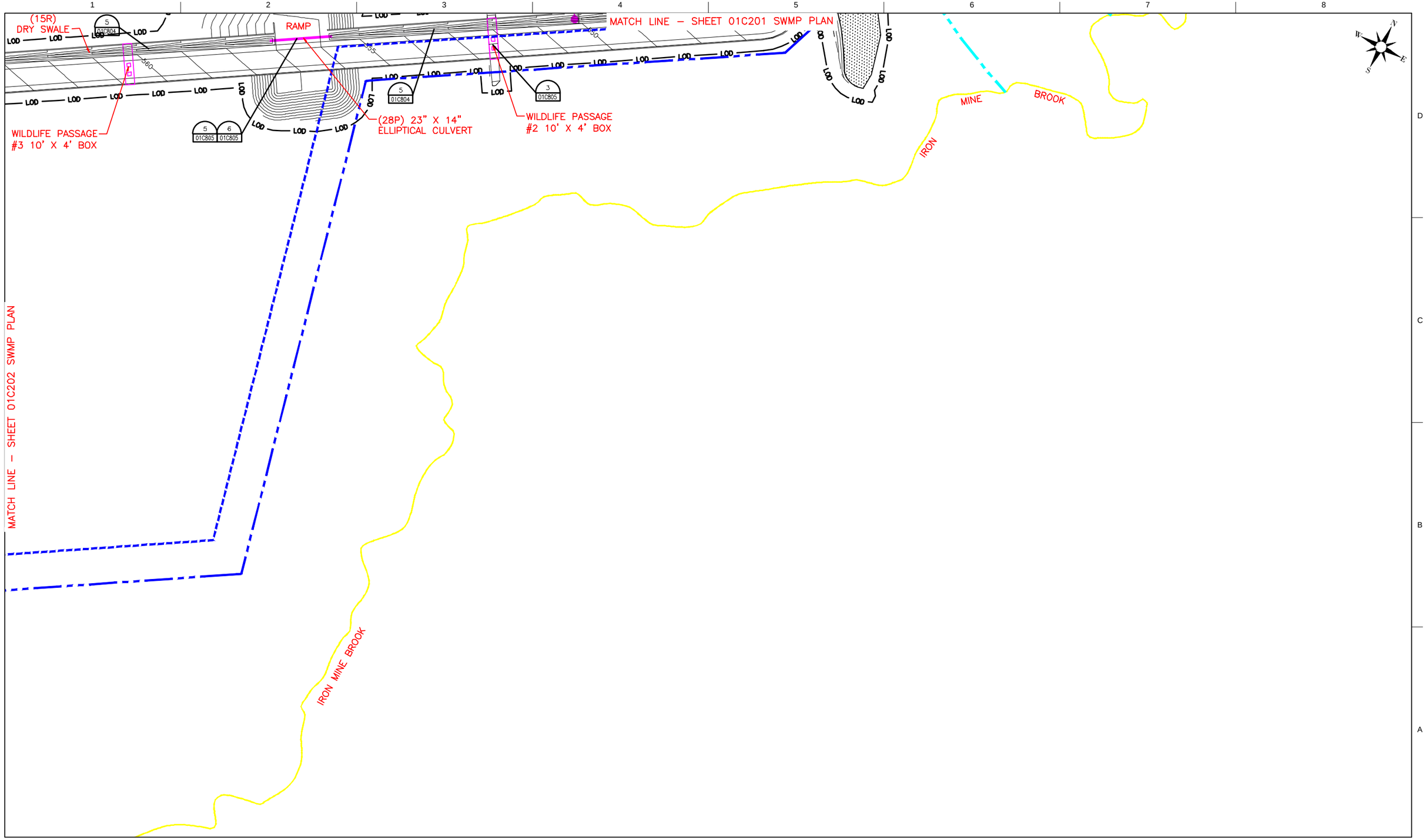
ALEXANDER DEUSON No. 0011618 REGISTERED PROFESSIONAL ENGINEER CIVIL

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135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
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PROPOSED SITE LAYOUT PLAN

FILENAME 01C202.dwg
SCALE 1" = 100'

SHEET 01C202



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

ALEXANDER DELUSO
No. 0011619
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PROFESSIONAL ENGINEER
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CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED SITE LAYOUT PLAN

FILENAME 01C203.dwg
SCALE 1" = 100'

SHEET
01C203

SWAMP WETLANDS 2

SWAMP WETLANDS 1

SWAMP WETLANDS 1

TEMPORARY SPOIL AREA

MATCH LINE – SHEET 01C302 SWMP PLAN

MATCH LINE – SHEET 01C301 SWMP PLAN

DRAWING INDEX

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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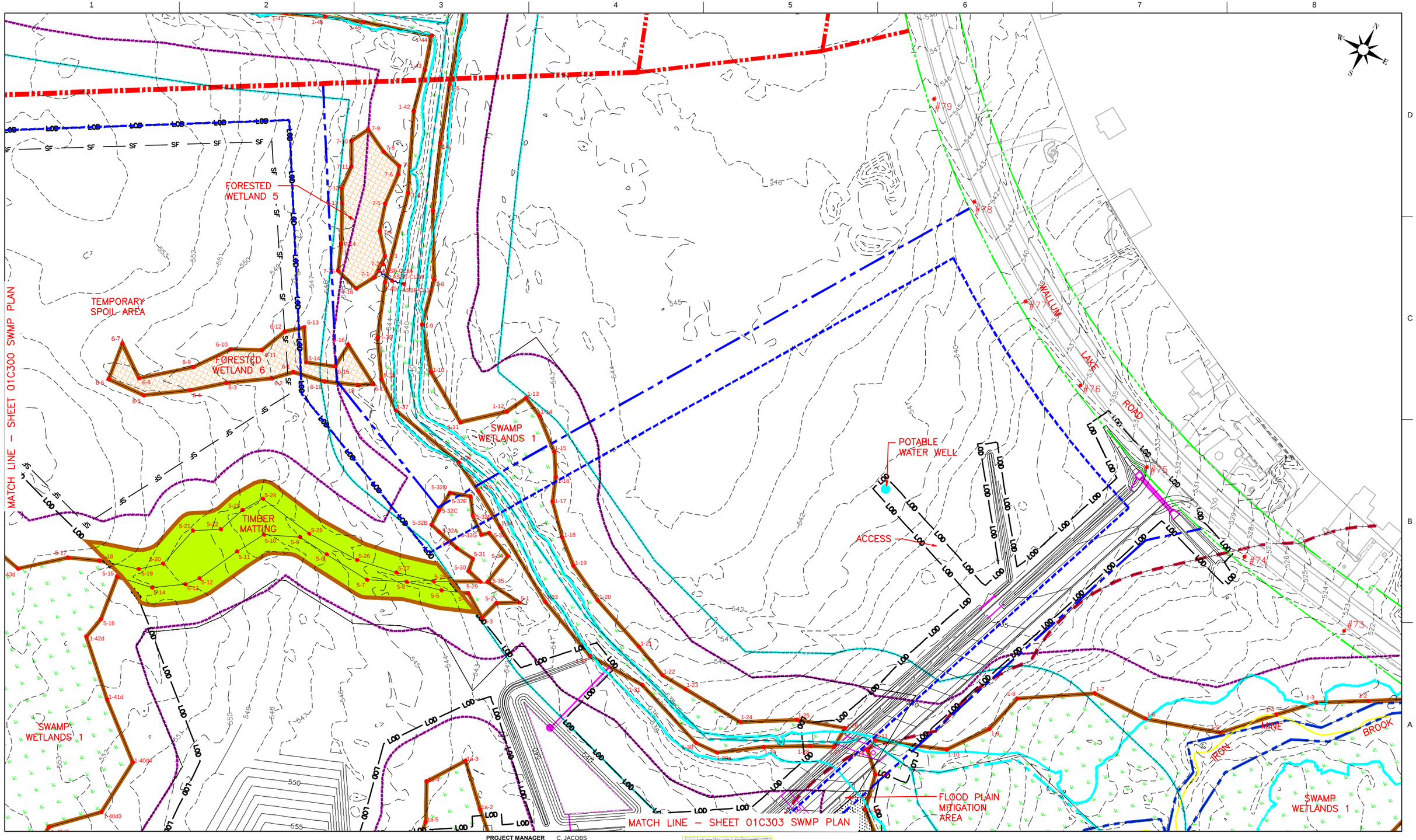
ALEXANDER DELSON
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CIVIL

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PROPOSED GRADING PLAN

FILENAME 01C300.dwg
SCALE 1" = 100'

SHEET 01C300



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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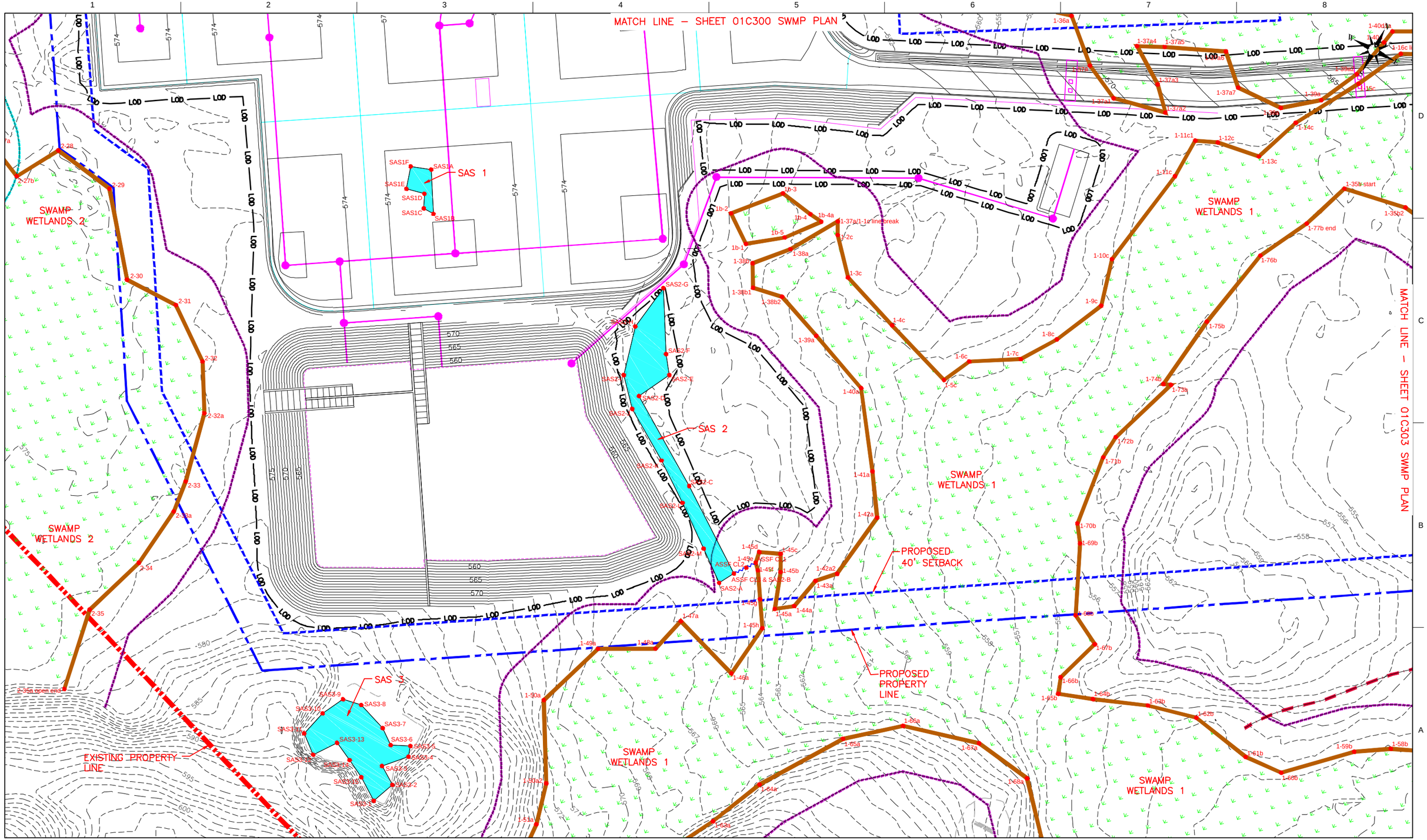
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PROPOSED GRADING PLAN

FILENAME 01C301.dwg
SCALE 1" = 100'
SHEET 01C301



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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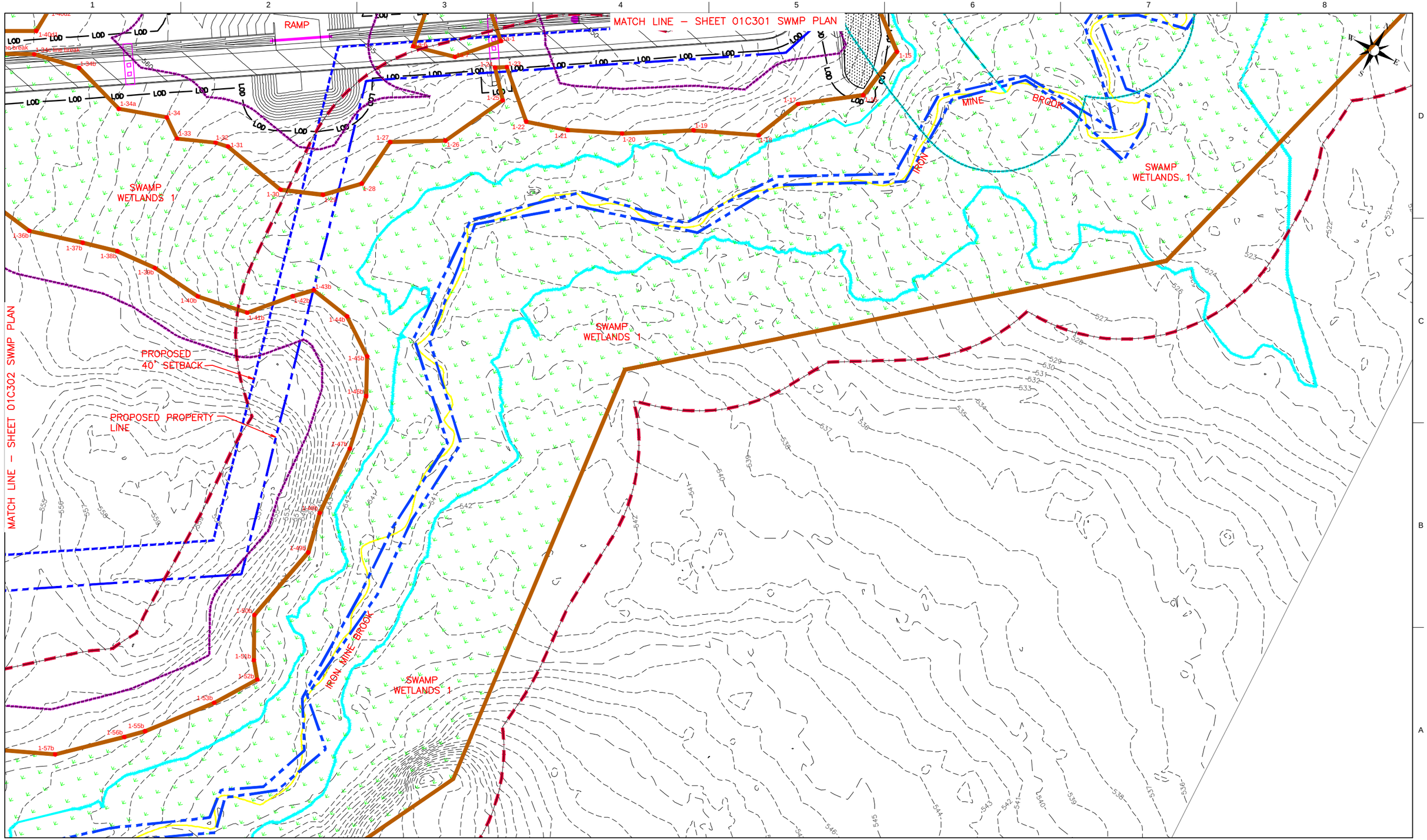
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PROPOSED GRADING PLAN

FILENAME 01C302.dwg
SCALE 1" = 100'
SHEET 01C302



DRAWING INDEX

HDR

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
3	3/27/2017	REVISION
2	2/17/2017	REVISION
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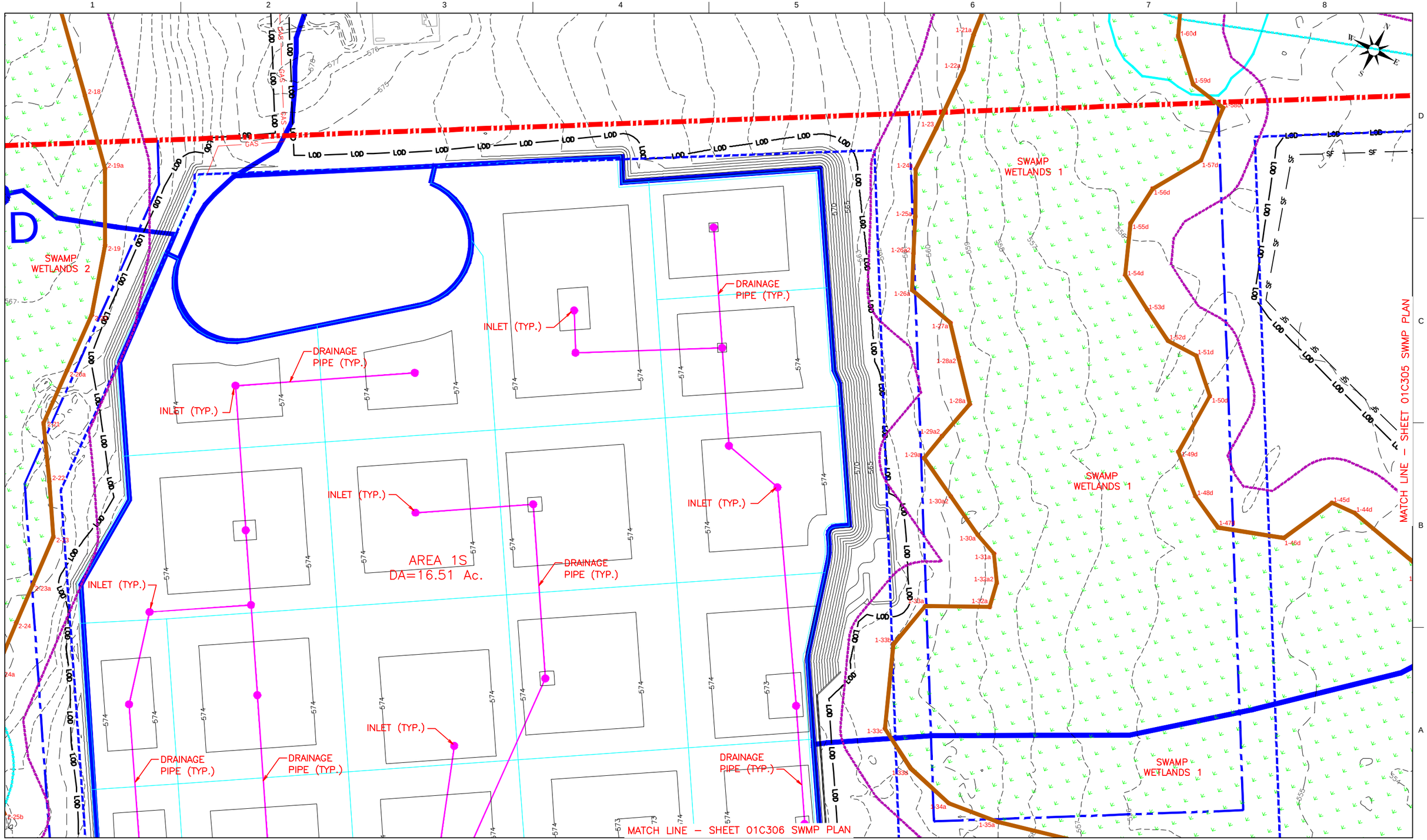
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PROPOSED GRADING PLAN

FILENAME 01C303.dwg
SCALE 1" = 100'

SHEET 01C303



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
3	3/27/2017	REVISION
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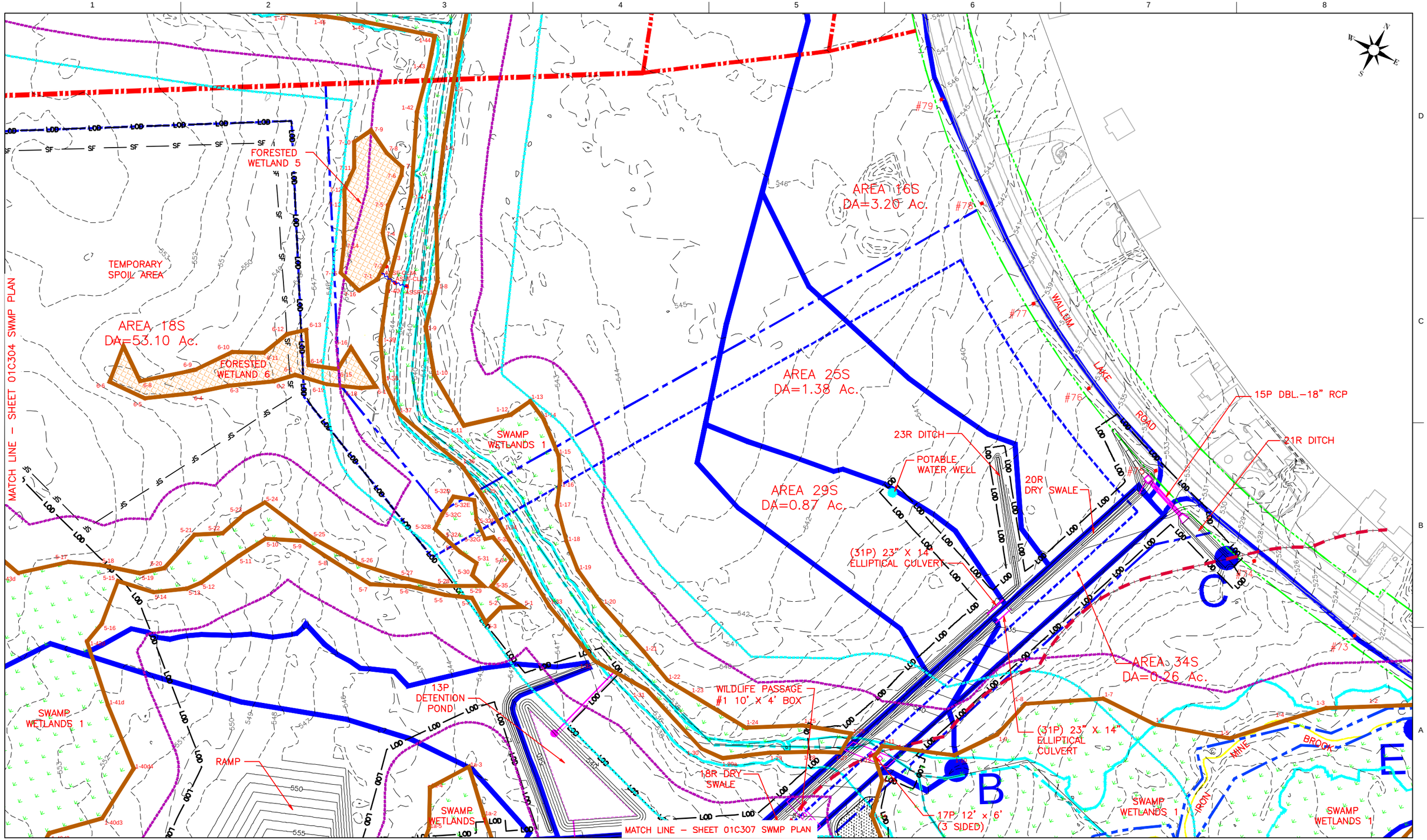
ALEXANDER DEUSON
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CIVIL

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153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED DRAINAGE AND WATER QUALITY PLAN

FILENAME 01C304.dwg
SCALE 1" = 100'

SHEET 01C304



DRAWING INDEX

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

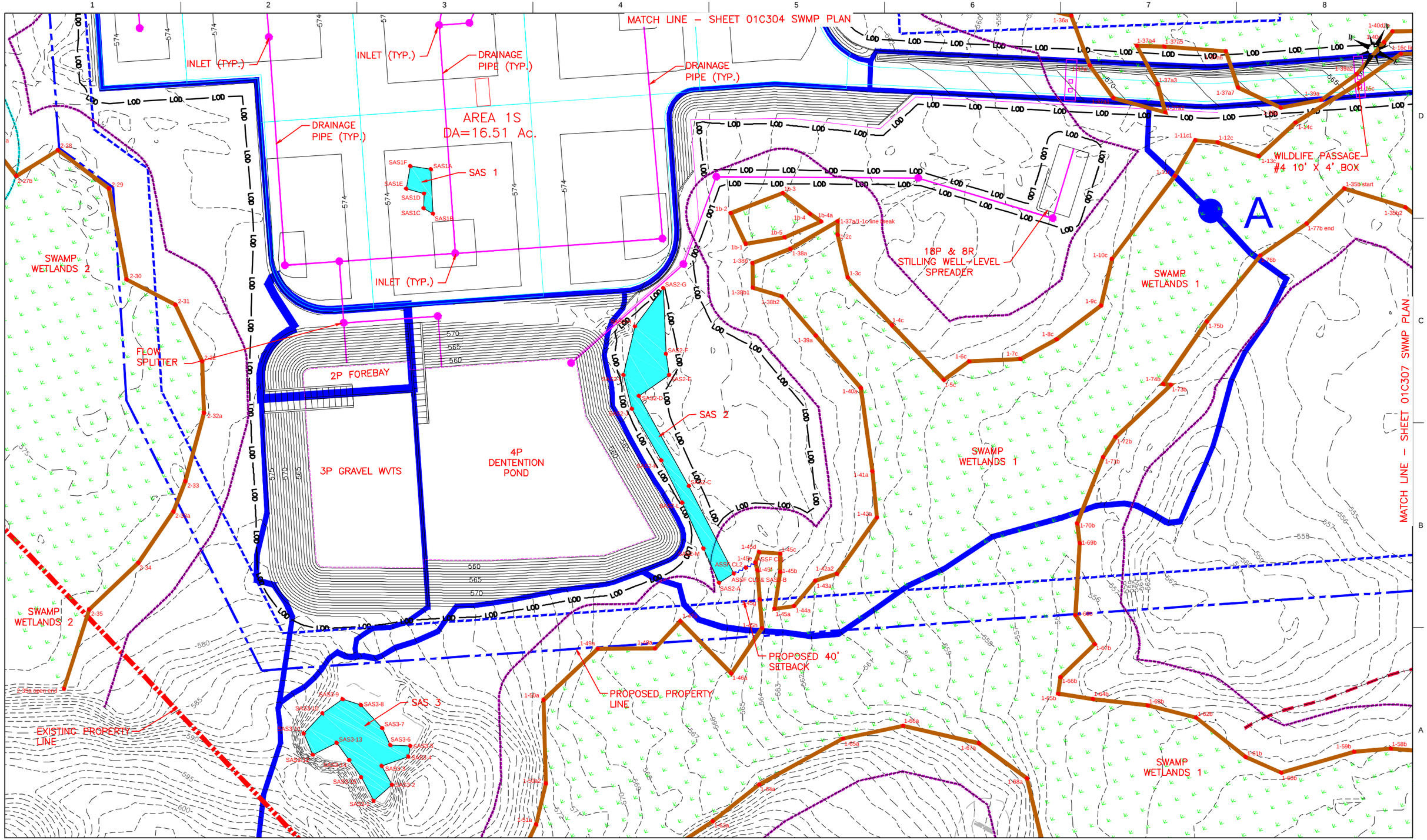
PROJECT NUMBER 10021318

ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL

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153-001, 153-002
TOWN OF BURRILLVILLE,
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PROPOSED DRAINAGE AND WATER QUALITY PLAN

FILENAME 01C305.dwg
SCALE 1" = 100'
SHEET 01C305



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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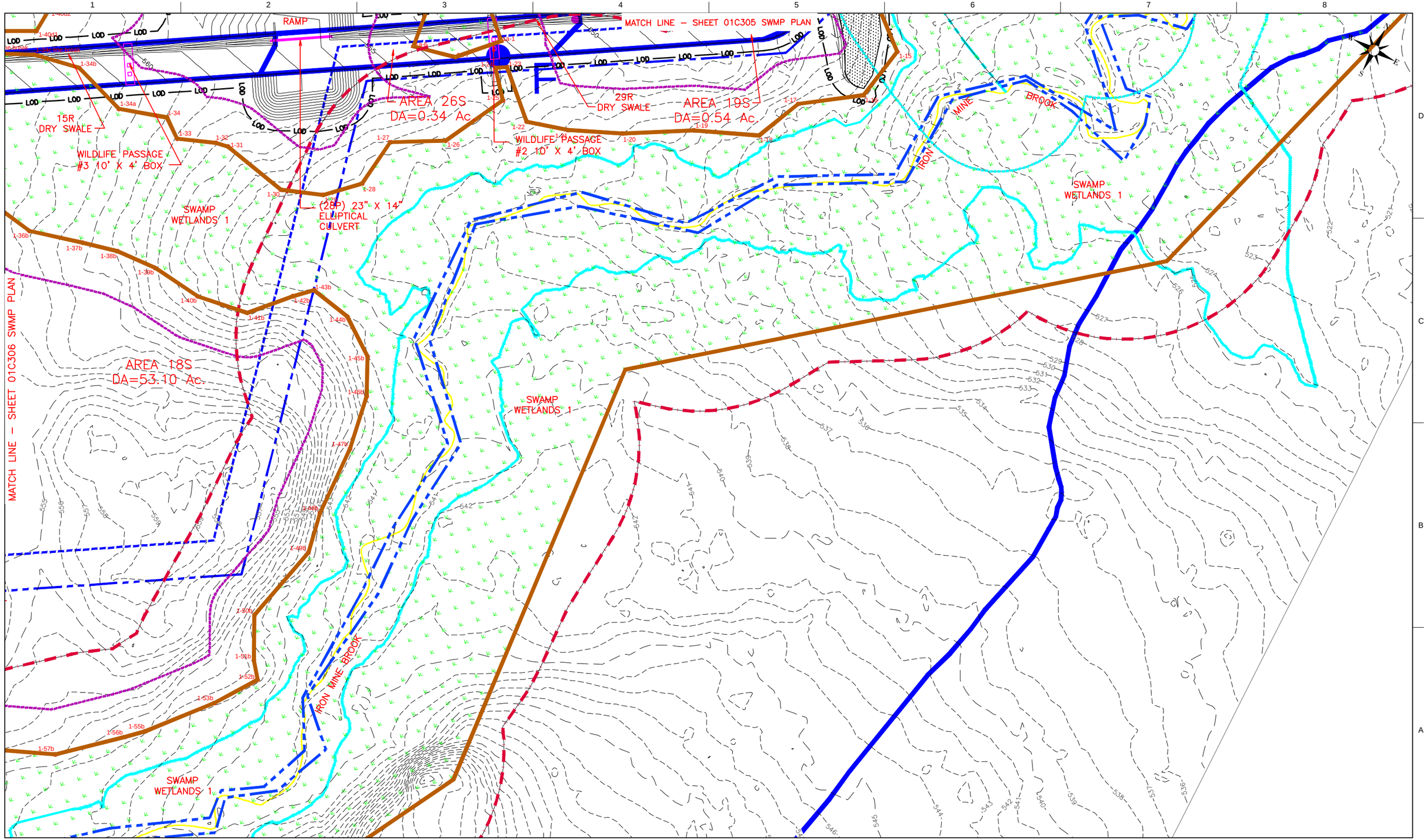
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TOWN OF BURRILLVILLE,
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PROPOSED DRAINAGE AND WATER QUALITY PLAN

FILENAME 01C306.dwg
SCALE 1" = 100'
SHEET 01C306



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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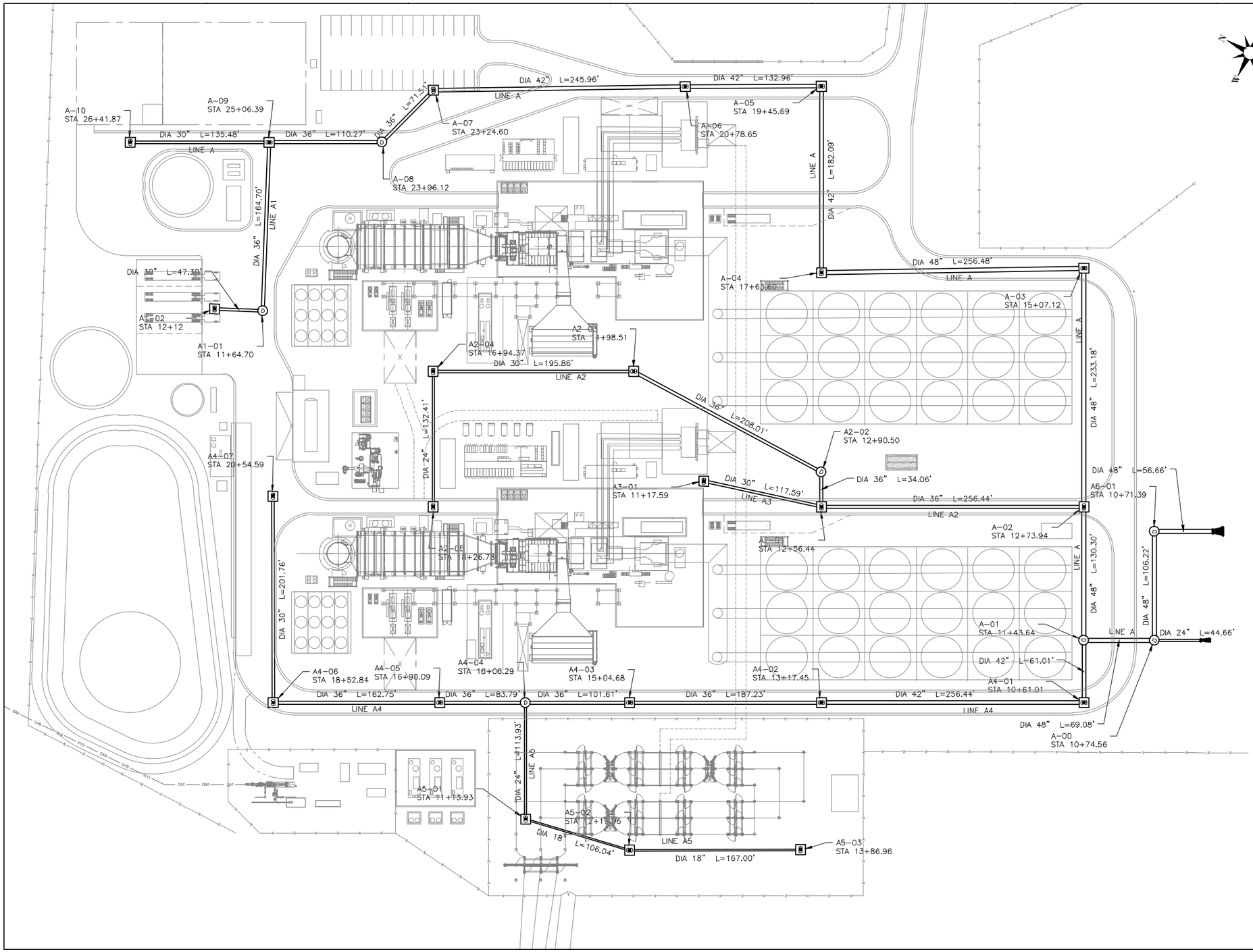
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PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED DRAINAGE AND WATER QUALITY PLAN

FILENAME 01C307.dwg
SCALE 1" = 100'

SHEET 01C307



STRUCTURE TABLE

NAME	TYPE	LAYOUT COORDINATES	LID	SUMP ELEVATION
A-00	FLOW SPLITTER	N:320779.39 E:259167.35	575.96	562.96
A-01	MANHOLE	N:320837.98 E:259130.75	573.78	563.12
A-02	DROP BOX INLET	N:320907.01 E:259241.27	572.62	563.43
A-03	DROP BOX INLET	N:321030.54 E:259439.04	572.38	564.02
A-04	DROP BOX INLET	N:321245.76 E:259299.53	572.69	564.66
A-05	DROP BOX INLET	N:321342.22 E:259453.97	572.94	565.11
A-06	DROP BOX INLET	N:321454.91 E:259383.40	572.57	565.43
A-07	DROP BOX INLET	N:321661.52 E:259249.96	573.02	566.05
A-08	MANHOLE	N:321677.22 E:259180.19	573.50	566.25
A-09	DROP BOX INLET	N:321770.75 E:259121.77	573.00	566.52
A-10	DROP BOX INLET	N:321885.65 E:259050.00	573.00	566.86
A1-01	MANHOLE	N:321688.60 E:258979.02	573.36	566.89
A1-02	DROP BOX INLET	N:321729.69 E:258955.59	572.77	567.01
A2-01	DROP BOX INLET	N:321124.51 E:259105.41	573.16	564.09
A2-02	MANHOLE	N:321142.55 E:259134.30	573.59	564.18
A2-03	DROP BOX INLET	N:321350.11 E:259120.61	572.95	564.70
A2-04	DROP BOX INLET	N:321516.23 E:259016.85	572.95	565.19
A2-05	DROP BOX INLET	N:321446.08 E:258904.55	573.17	565.52
A3-01	DROP BOX INLET	N:321235.22 E:259065.79	573.16	564.88
A4-01	DROP BOX INLET	N:320805.65 E:259079.00	572.62	563.27

STRUCTURE TABLE

NAME	TYPE	LAYOUT COORDINATES	LID	SUMP ELEVATION
A4-02	DROP BOX INLET	N:321023.15 E:258943.15	573.16	563.91
A4-03	DROP BOX INLET	N:321181.95 E:258843.96	573.16	564.38
A4-04	MANHOLE	N:321268.12 E:258790.13	574.34	564.63
A4-05	DROP BOX INLET	N:321339.19 E:258745.74	572.89	564.84
A4-06	DROP BOX INLET	N:321477.23 E:258659.52	573.50	565.29
A4-07	DROP BOX INLET	N:321584.23 E:258830.56	573.50	565.77
A5-01	DROP BOX INLET	N:321207.77 E:258693.50	574.34	564.91
A5-02	DROP BOX INLET	N:321105.53 E:258721.62	573.45	565.18
A5-03	DROP BOX INLET	N:320964.15 E:258810.50	573.26	565.60
A6-01	MANHOLE	N:320835.66 E:259257.44	574.84	562.43

STRUCTURE TABLE

NAME	TYPE	LAYOUT COORDINATES	LID	SUMP ELEVATION
B-01	MANHOLE	N:321256.01 E:259815.13	558.92	551.20
B-02	MANHOLE	N:321225.30 E:259660.67	561.99	553.00
B-03	MANHOLE	N:321120.14 E:259459.76	565.53	555.27
B-04	MANHOLE	N:321016.43 E:259473.41	566.17	556.32

DRAWING INDEX

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

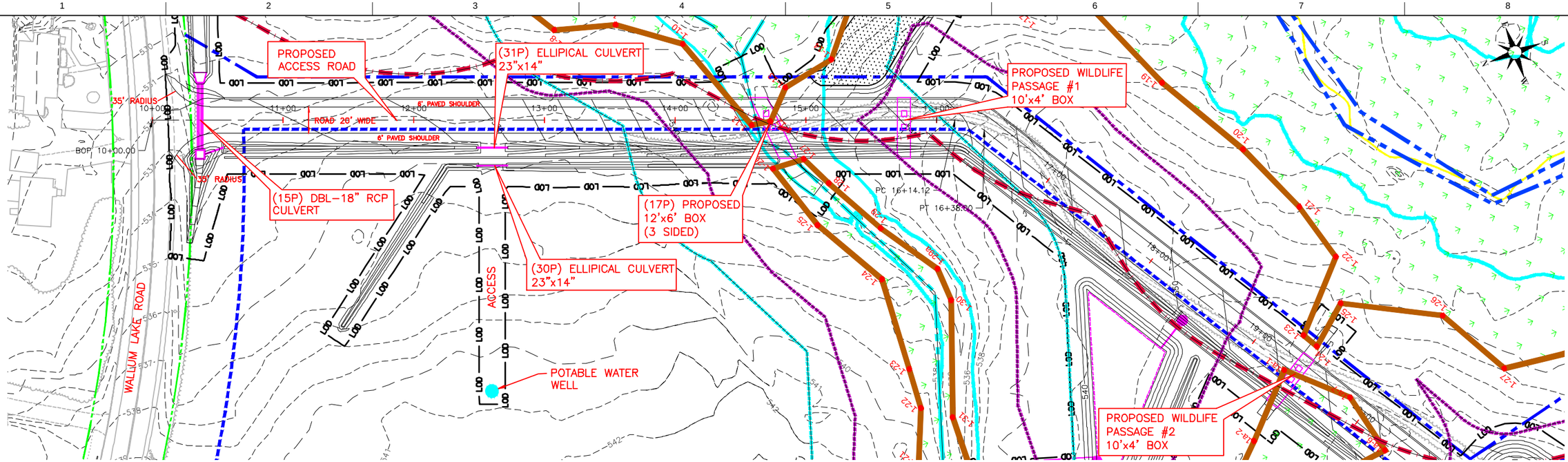
ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL
4/1/17

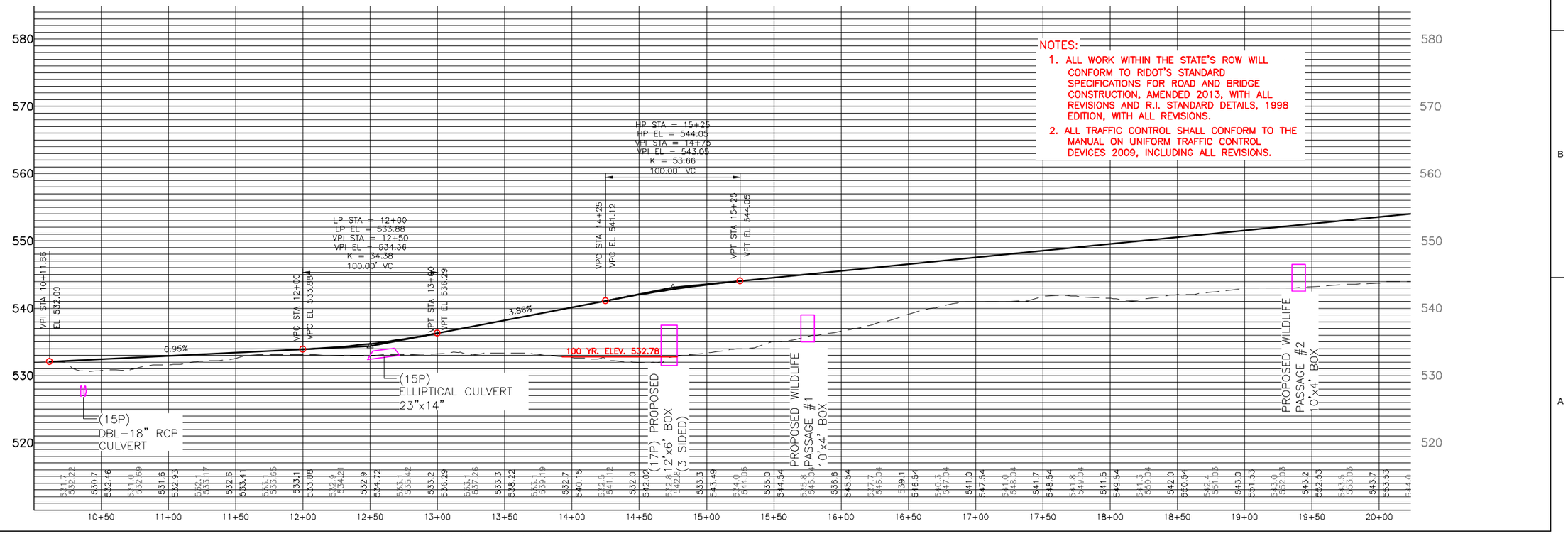
CLEAR RIVER ENERGY LLC
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153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED DRAINAGE PLAN

FILENAME 01C400.dwg
SCALE 1" = 100'

SHEET 01C400





NOTES:

1. ALL WORK WITHIN THE STATE'S ROW WILL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED 2013, WITH ALL REVISIONS AND R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.
2. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009, INCLUDING ALL REVISIONS.

DRAWING INDEX

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3	3/27/2017	REVISION
2	2/17/2017	REVISION
1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

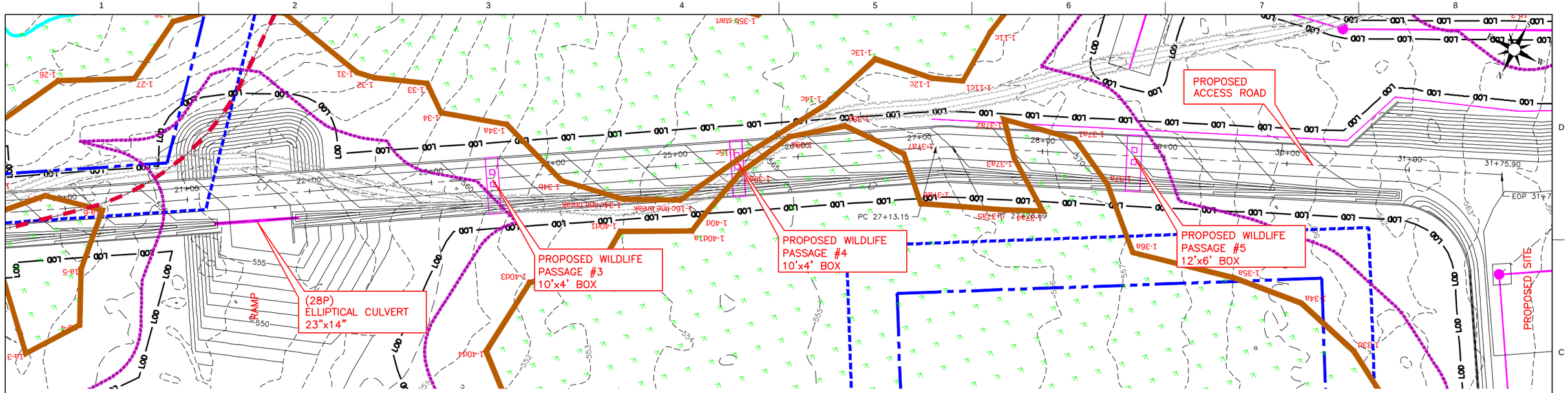
ALEXANDER DEUSON No. 0011618 REGISTERED PROFESSIONAL ENGINEER CIVIL

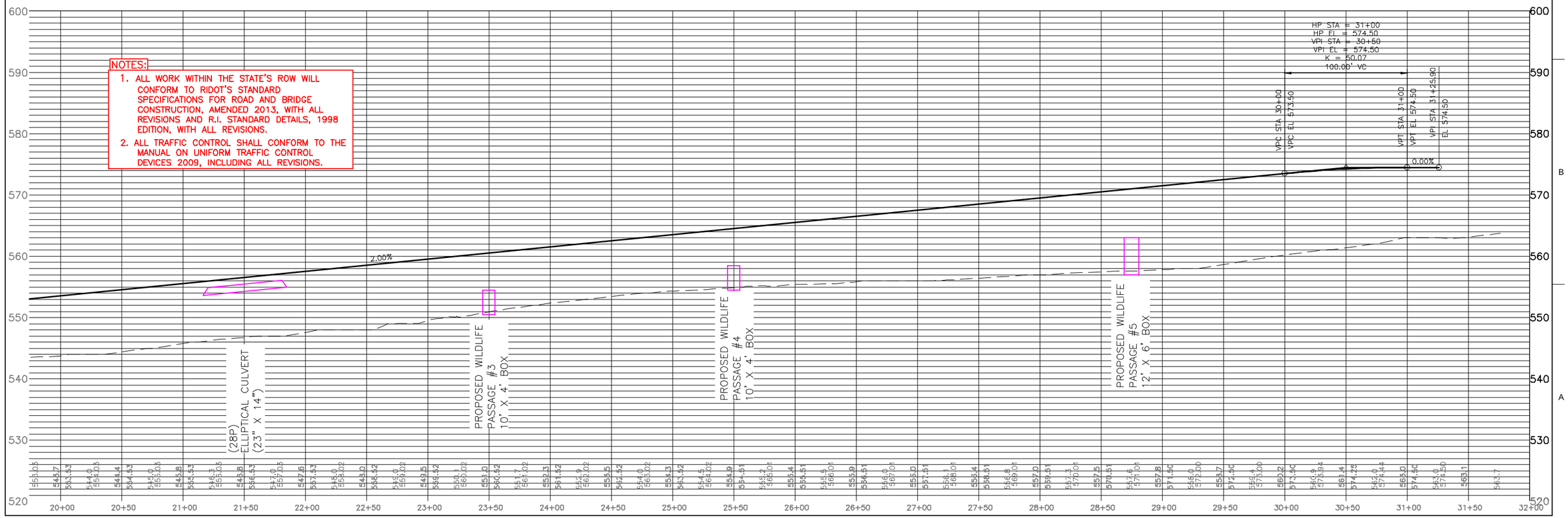
CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

ROADWAY PLAN & PROFILE

FILENAME 01C600.dwg
SCALE HOR. 1" = 80' VERT. 1" = 16'

SHEET 01C600





NOTES:

1. ALL WORK WITHIN THE STATE'S ROW WILL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED 2013, WITH ALL REVISIONS AND R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.
2. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009, INCLUDING ALL REVISIONS.

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PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

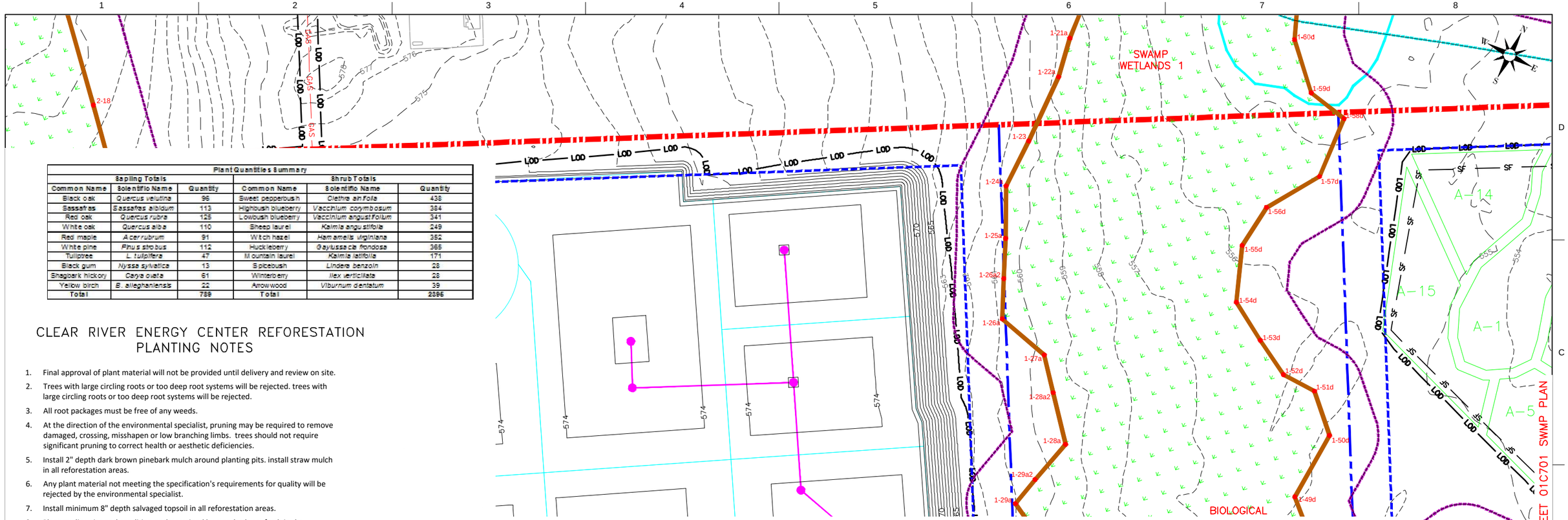
ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
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ROADWAY PLAN & PROFILE

FILENAME 01C601.dwg
SCALE HOR. 1" = 80' VERT. 1" = 16'

SHEET 01C601



Plant Quantities Summary					
Sapling Totals			Shrub Totals		
Common Name	Scientific Name	Quantity	Common Name	Scientific Name	Quantity
Black oak	*Quercus velutina*	96	Sweet pepperbush	*Clethra alnifolia*	438
Sassafras	*Sassafras albidum*	113	Highbush blueberry	*Vaccinium corymbosum*	384
Red oak	*Quercus rubra*	125	Lowbush blueberry	*Vaccinium angustifolium*	341
White oak	*Quercus alba*	110	Sheep laurel	*Kalmia angustifolia*	249
Red maple	*Acer rubrum*	91	Witch hazel	*Hamamelis virginiana*	352
White pine	*Pinus strobus*	112	Huckleberry	*Gaylussacia frondosa*	365
Tuliptree	*L. tulipifera*	47	Mountain laurel	*Kalmia latifolia*	171
Black gum	*Nyssa sylvatica*	13	Spicebush	*Lindera benzoin*	28
Shagbark hickory	*Carya ovata*	61	Winterberry	*Ilex verticillata*	28
Yellow birch	*B. alleghaniensis*	22	Arrowwood	*Viburnum dentatum*	39
Total		788	Total		2386

CLEAR RIVER ENERGY CENTER REFORESTATION PLANTING NOTES

1. Final approval of plant material will not be provided until delivery and review on site.
2. Trees with large circling roots or too deep root systems will be rejected. trees with large circling roots or too deep root systems will be rejected.
3. All root packages must be free of any weeds.
4. At the direction of the environmental specialist, pruning may be required to remove damaged, crossing, misshapen or low branching limbs. trees should not require significant pruning to correct health or aesthetic deficiencies.
5. Install 2" depth dark brown pinebark mulch around planting pits. install straw mulch in all reforestation areas.
6. Any plant material not meeting the specification's requirements for quality will be rejected by the environmental specialist.
7. Install minimum 8" depth salvaged topsoil in all reforestation areas.
8. Plant quality, size and condition as determined by standards set forth in the American Association of Nurserymen Standard ANSI 260.1-1973. Plant names shall conform to latest edition of "standardized plant names" as adopted by American Joint committee of Horticulture Nomenclature.
9. Reforestation plant sizes: sapling shall be a minimum of 5' high and "-3/4" cal. branching above 2.5'. shrubs shall be a minimum of 2.5'-3' high, full and bushy.
10. Planting time: planting of the reforestation work will occur from September 1-October 15th to ensure best establishment.
11. Tree shelters: Tubex tree guard shall be provided for all saplings to reduce rodent browsing. tree guards shall be removed after 2 years.
12. Maintenance: it shall be the contractor's responsibility to maintain the reforestation area for a period of one year after substantial completion. They will be responsible for watering during this time with an approved method.
13. Salvaged topsoil will be added as backfill in all planting pits.
14. Plantings will be supplemented with a conservation/wildlife seed mix or wetland seed mix. Seeding will occur after planting is complete to stabilize soil, reduce weed growth and provide and herbaceous forest floor.
15. Seeding: Uplands-Allens Conservation Mix, seeding rate 5 lb/1,000 sq ft. Wetlands-New England Wetland Seed Mix, seeding rate 0.5 lbs/1,000 sqft.
16. Native plantings are selected to thrive in the Clear River Energy site conditions. any additional fertilizer in the form of a slow release fertilizer shall be used only during the establishment period of the first three years, and then only as needed. Supplemental watering will only be used during the establishment period.
17. As deer can be an issue in rural areas, plants were selected to avoid those that are frequently severely damaged and focused on those that are rarely, seldom or occasionally damaged. Much of this depends on the severity of the winter months.

Reforestation Plant Quantity List											
Area Code	Polygon Area (sq ft)	Saplings 1	Quantity	Saplings 2	Quantity	Total Saplings	Shrubs 1	Quantity	Shrubs 2	Quantity	Total Shrubs
A-1	18,601	Black oak	26	Sassafras	26	53	Highbush blueberry	80	Mountain laurel	80	161
A-2	9,974	White oak	14	Shagbark hickory	14	28	Lowbush blueberry	43	Huckleberry	43	86
A-3	13,774	Red oak	20	White pine	20	39	Sweet pepperbush	60	Witch hazel	60	119
A-4	20,488	White pine	29	Shagbark hickory	29	58	Witch hazel	89	Lowbush blueberry	89	177
A-5	14,478	Red maple	21	Red oak	21	41	Huckleberry	63	Sweet pepperbush	63	125
A-6	11,899	Sassafras	17	White oak	17	34	Sheep laurel	51	Highbush blueberry	51	103
A-7	19,820	Black oak	28	White oak	28	56	Highbush blueberry	86	Huckleberry	86	171
A-8	12,039	White oak	17	Shagbark hickory	17	34	Lowbush blueberry	52	Witch hazel	52	104
A-9	8,469	Red oak	12	Tuliptree	12	24	Sweet pepperbush	37	Sheep laurel	37	73
A-10	6,982	White pine	10	Red oak	10	20	Witch hazel	30	Huckleberry	30	60
A-11	4,913	Red maple	7	White pine	7	14	Huckleberry	21	Sweet pepperbush	21	42
A-12	20,608	Sassafras	29	Black oak	29	59	Sheep laurel	89	Sweet pepperbush	89	178
A-13	24,516	Tuliptree	35	Red maple	35	70	Highbush blueberry	106	Lowbush blueberry	106	212
A-14	9,511	White oak	14	White pine	14	27	Mountain laurel	41	Witch hazel	41	82
A-15	11,441	Red oak	16	Sassafras	16	33	Sweet pepperbush	49	Mountain laurel	49	99
A-16	7,203	White pine	10	Red oak	10	21	Witch hazel	31	Sheep laurel	31	62
A-17	7,516	Red maple	11	Sassafras	11	21	Huckleberry	32	Lowbush blueberry	32	65
A-18	11,428	White pine	16	Red oak	16	33	Witch hazel	49	Huckleberry	49	99
A-19	6,432	Yellow birch	9	Red maple	9	18	Spicebush	28	Winterberry	28	56
A-20	9,122	Black gum	13	Yellow birch	13	26	Arrowwood	39	Sweet pepperbush	39	79
B-1	9,432	Sassafras	13	White oak	13	27	Sheep laurel	41	Huckleberry	41	82
B-2	8,067	Black oak	11	Red oak	11	23	Highbush blueberry	35	Sweet pepperbush	35	70
B-3	4,360	White oak	6	White pine	6	12	Lowbush blueberry	19	Sweet pepperbush	19	38
CFS	6,009	Red oak	9	Red maple	9	17	Sweet pepperbush	26	Highbush blueberry	26	52

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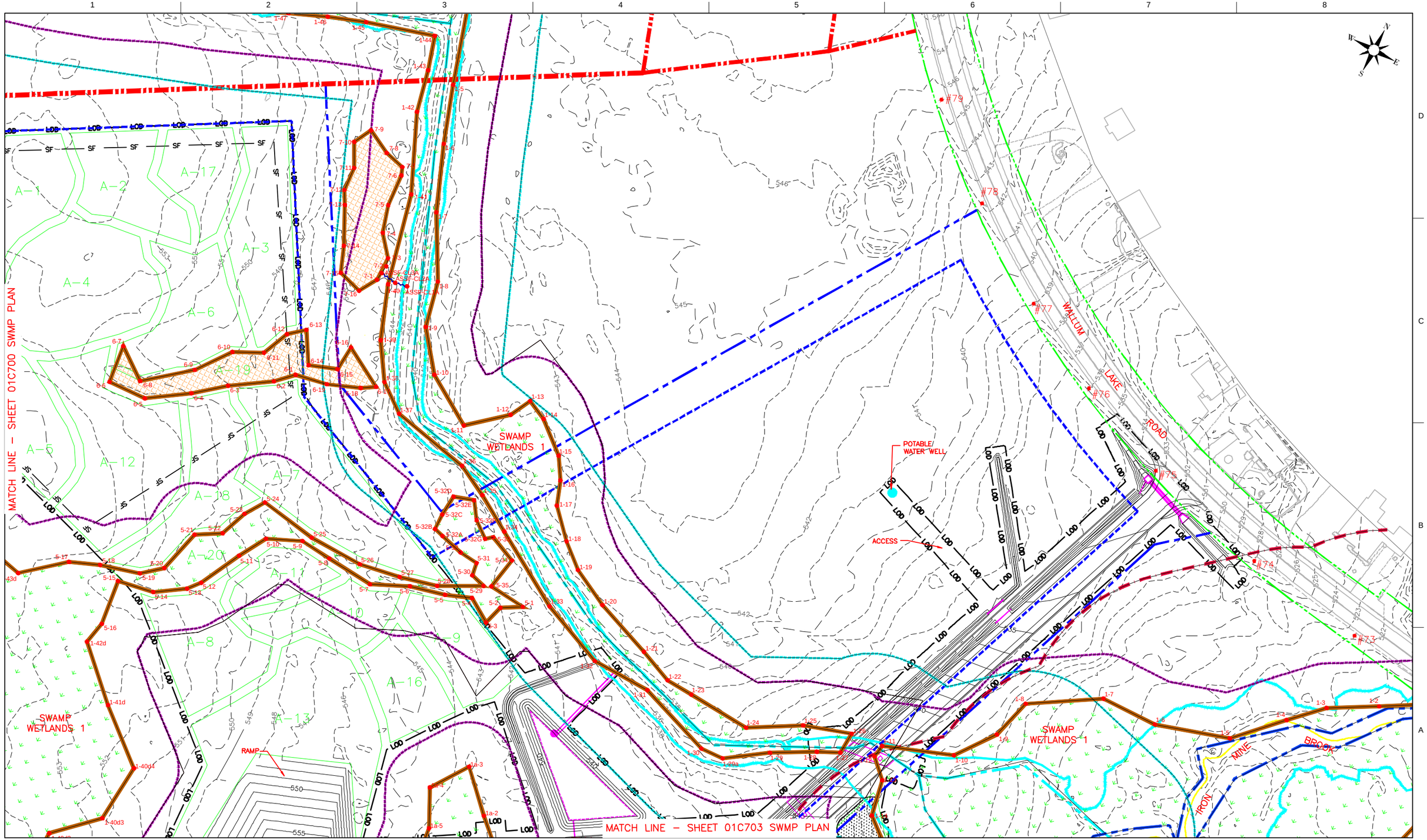
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ALEXANDER DEUSON No. 0011618 REGISTERED PROFESSIONAL ENGINEER CIVIL

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135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
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PROPOSED REFORESTATION PLAN

FILENAME 01C700.dwg
SCALE 1" = 100'
SHEET 01C700



DRAWING INDEX

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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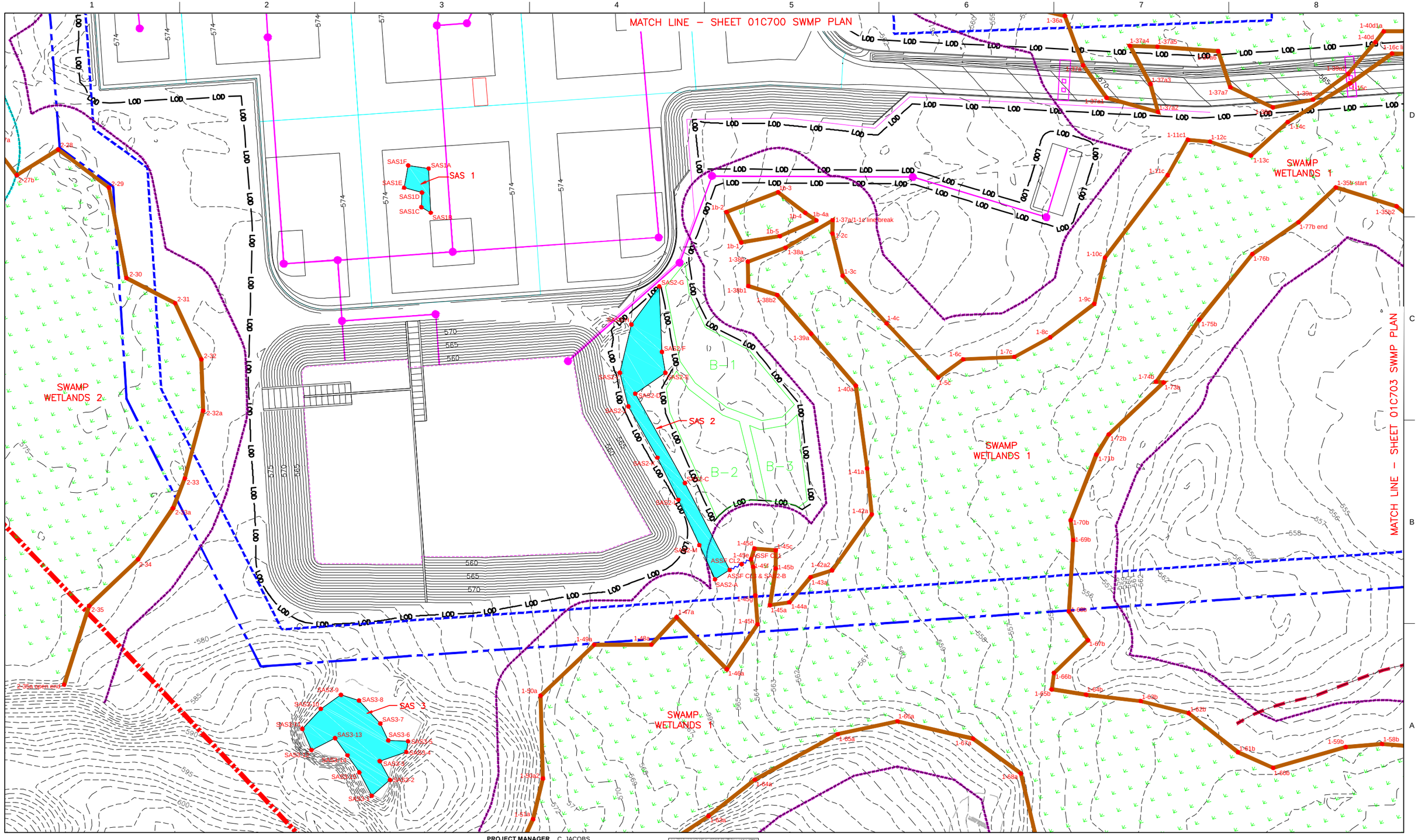
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PROPOSED REFORESTATION PLAN

FILENAME 01C701.dwg
SCALE 1" = 100'

SHEET 01C701



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PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED REFORESTATION PLAN

FILENAME 01C702.dwg
SCALE 1" = 100'
SHEET 01C702

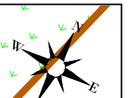
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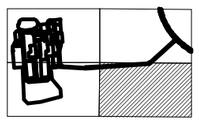
MATCH LINE — SHEET 01C702 SWMP PLAN

SWAMP WETLANDS 1

IRON MINE BROOK

LOD





DRAWING INDEX

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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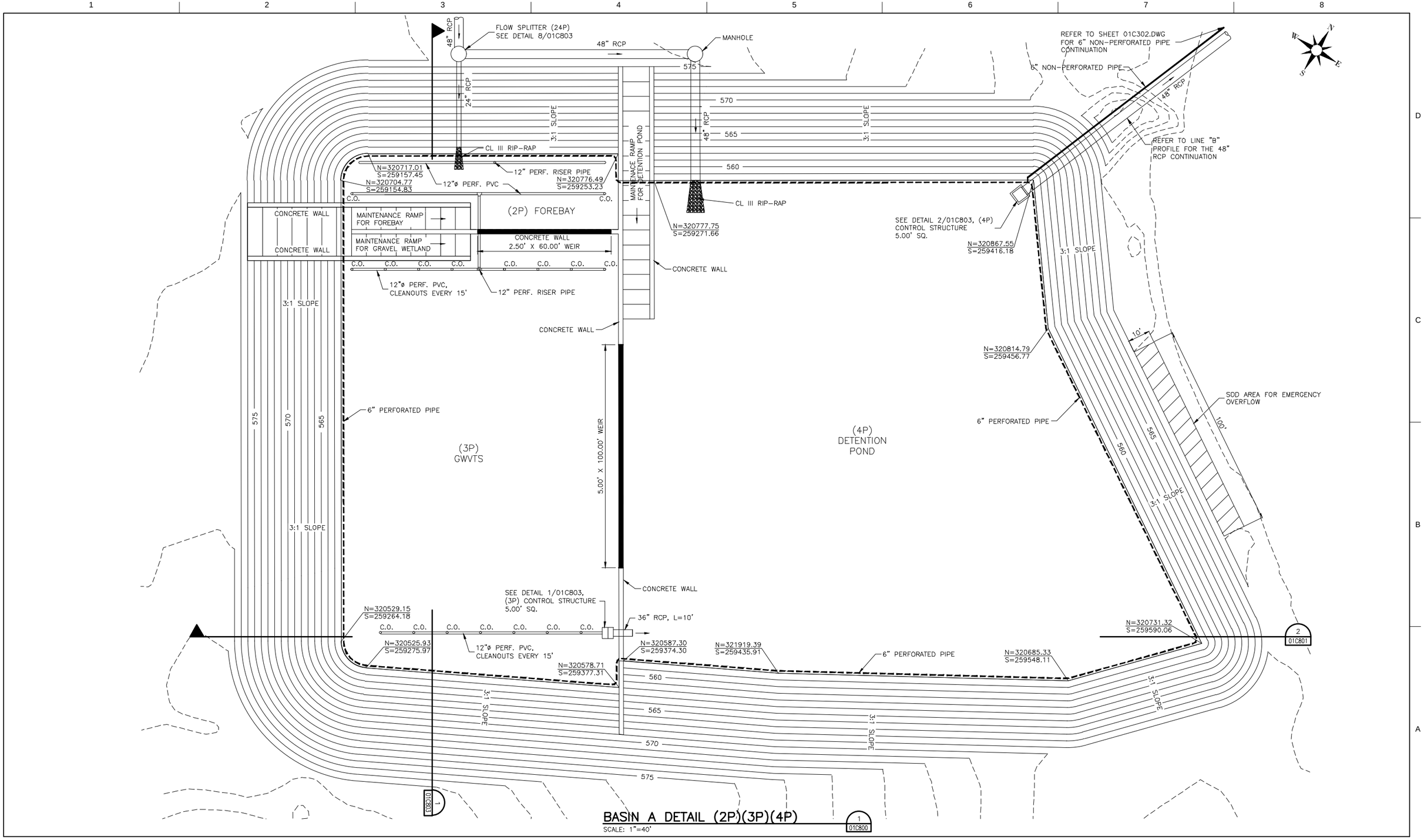
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PROPOSED REFORESTATION PLAN

FILENAME 01C703.dwg
SCALE 1" = 100'

SHEET 01C703



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PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

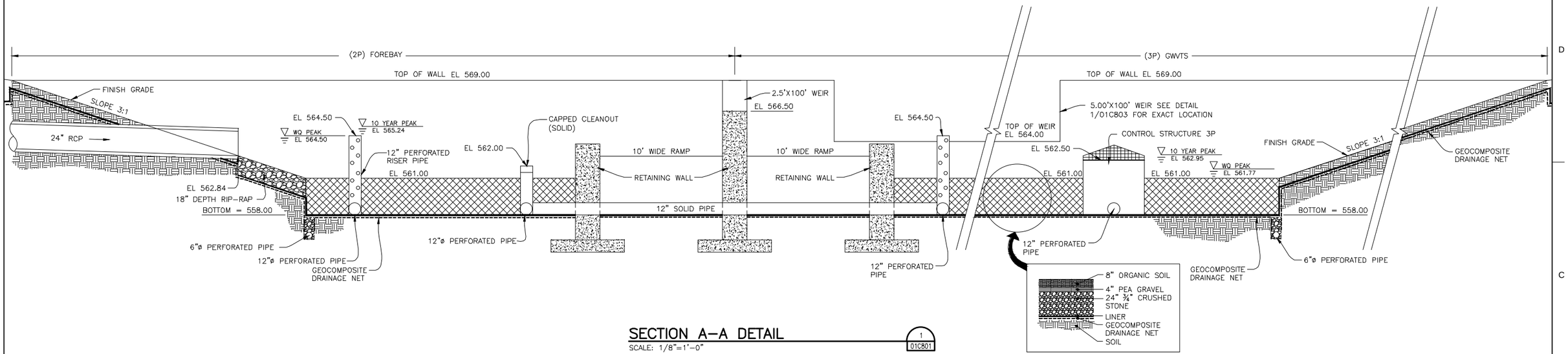
ALEXANDER DELISON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL

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TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED SITE DRAINAGE DETAILS

FILENAME 01C800.dwg
SCALE 1" = 40'

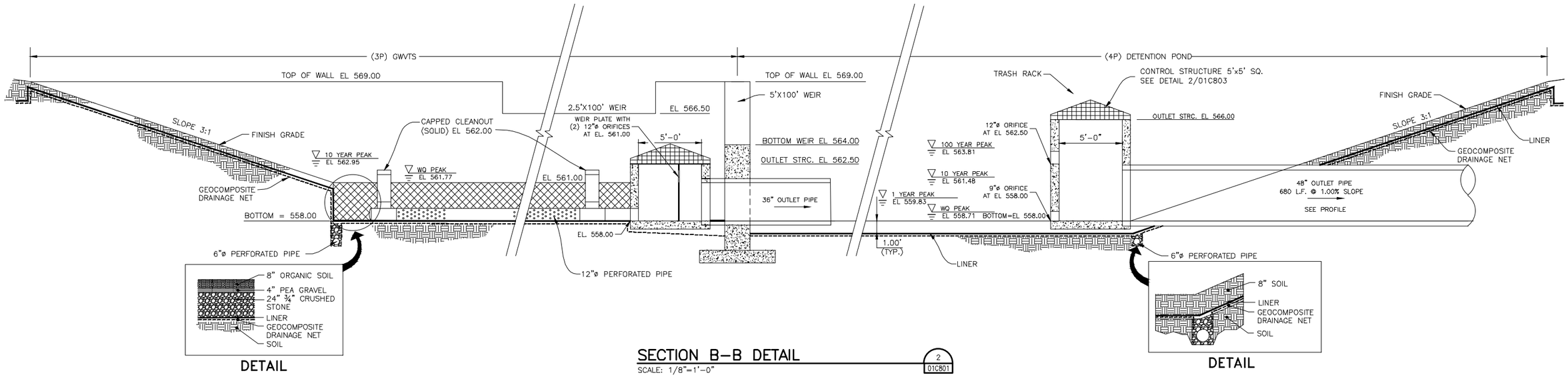
SHEET 01C800



SECTION A–A DETAIL

SCALE: 1/8"=1'-0"

1 / 01C801



SECTION B–B DETAIL

SCALE: 1/8"=1'-0"

2 / 01C801

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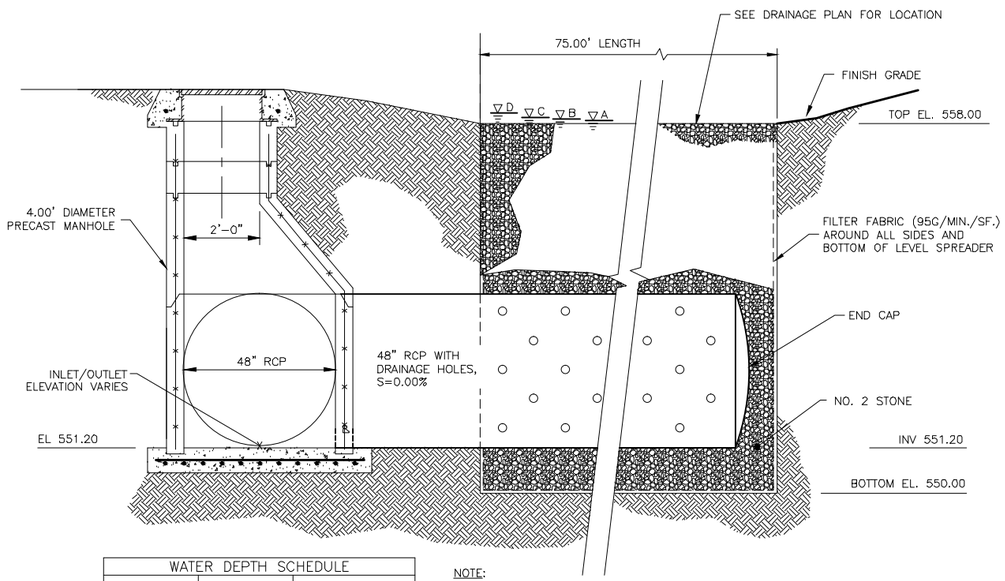
PROJECT MANAGER C. JACOBS

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PROPOSED SITE DRAINAGE DETAILS

FILENAME 01C801.dwg
SCALE AS NOTED
SHEET 01C801



WATER DEPTH SCHEDULE		
	STORM EVENT	ELEVATION
A	WQ PEAK	558.07
B	1 YR PEAK	558.15
C	10 YR PEAK	558.27
D	100 YR PEAK	558.12

NOTE:

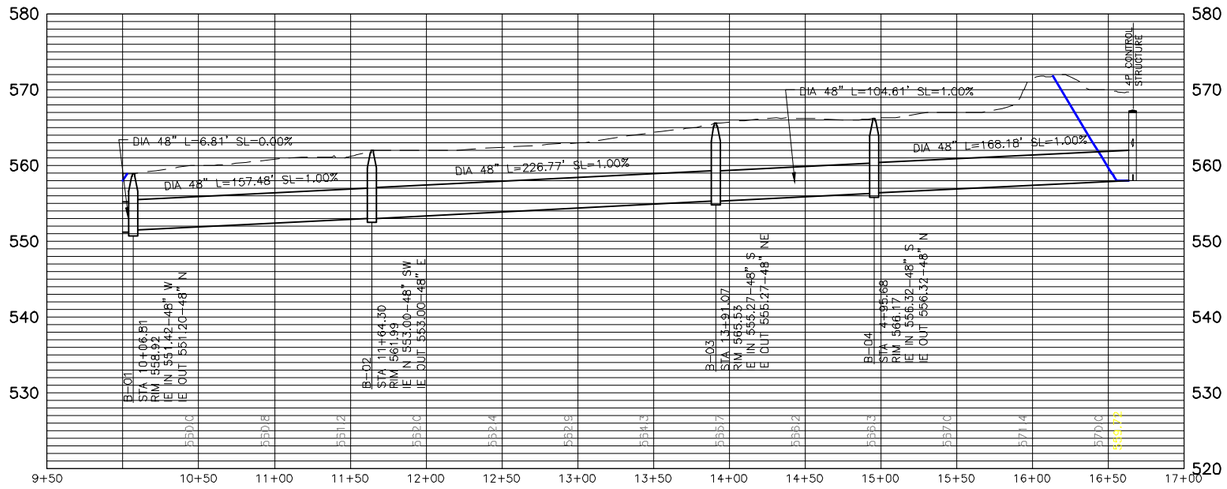
1) 48" I.D. PERFORATED UNDERDRAIN WITH FILTER SOCK. LAY PIPE WITH PERFORATIONS ON BOTTOM OF PIPE AND CAP END OF PIPE. LAY UNDERDRAIN AT 0.00% SLOPE FROM MANHOLE INVERT AND THRU BOTTOM OF LEVEL SPREADER.

2) WATER DEPTH MEASURED FROM TOP OF LEVEL SPREADER = EL 558.00.

STILLING WELL–LEVEL SPREADER DETAIL (18P)

1 / 01C802

SCALE: 1/4"=1'-0"



PROFILE OF LINE B

2 / 01C802

SCALE: HOR– 1"=100' VER– 1" = 20'

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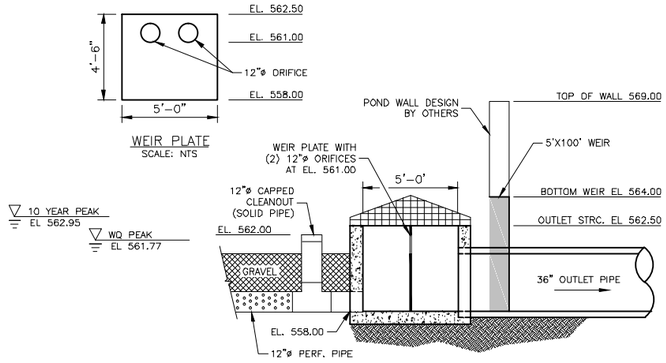
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PROPOSED SITE DRAINAGE DETAILS

FILENAME 01C802.dwg
SCALE AS NOTED

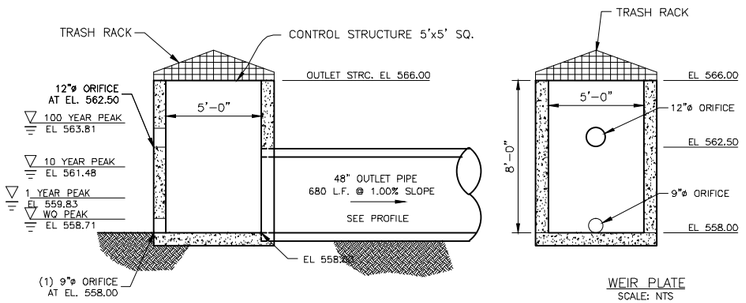
SHEET 01C802



CONTROL STRUCTURE DETAIL (3P)

SCALE: NTS

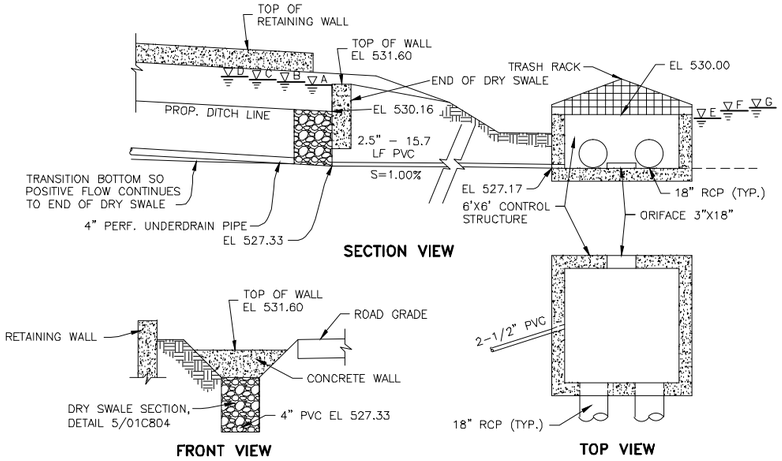
1 / 01C803



CONTROL STRUCTURE DETAIL (4P)

SCALE: NTS

2 / 01C803



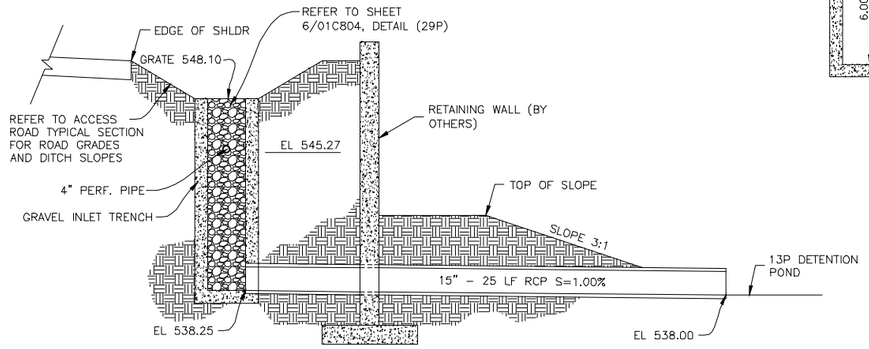
WATER DEPTH SCHEDULE (23P)		
	STORM EVENT	ELEVATION
A	WQ PEAK	530.99
B	1 YR PEAK	531.74
C	10 YR PEAK	531.86
D	100 YR PEAK	532.01

WATER DEPTH SCHEDULE (15P)		
	STORM EVENT	ELEVATION
E	1 YR PEAK	529.83
F	10 YR PEAK	530.16
G	100 YR PEAK	530.33

END OF SWALE (20R) DETAIL (23P)(15P)

SCALE: 1/8"=1'-0"

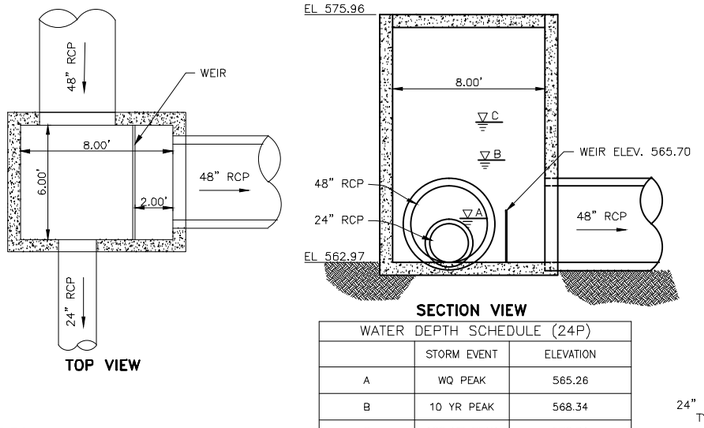
3 / 01C803



END OF SWALE DETAIL (29R)

SCALE: 1/8"=1'-0"

4 / 01C803

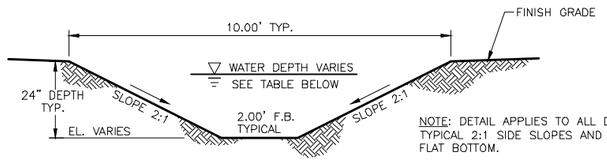


WATER DEPTH SCHEDULE (24P)		
	STORM EVENT	ELEVATION
A	WQ PEAK	565.26
B	10 YR PEAK	568.34
C	100 YR PEAK	570.34

FLOW SPLITTER (24P)

SCALE: 1/8"=1'-0"

8 / 01C803

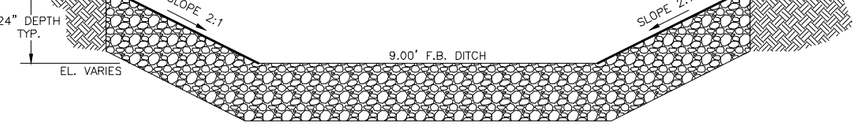


WATER DEPTH SCHEDULE		
STORM EVENT	MAX. WATER DEPTH (IN FEET)	
	RE-ROUTING DITCH (23R)	RE-ROUTING DITCH (30R)
1 YR PEAK	0.19	0.23
10 YR PEAK	0.37	0.43
100 YR PEAK	0.58	0.67

TYPICAL DITCH SECTION (23R)(30R)

SCALE: 1/4"=1'-0"

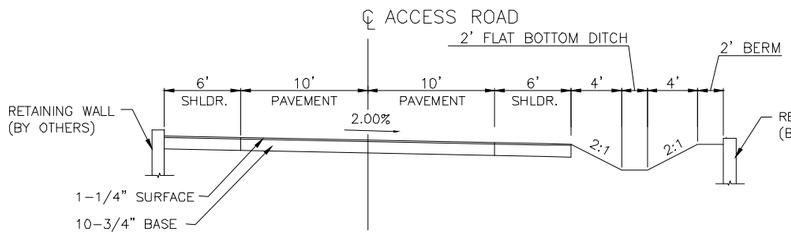
5 / 01C803



OUTLET CHANNEL FOR DBL 18" RCP (21R)

SCALE: 1/4"=1'-0"

6 / 01C803



ACCESS ROAD TYPICAL SECTION

SCALE: 1/8"=1-0'

7 / 01C803

ISSUE	DATE	DESCRIPTION
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1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

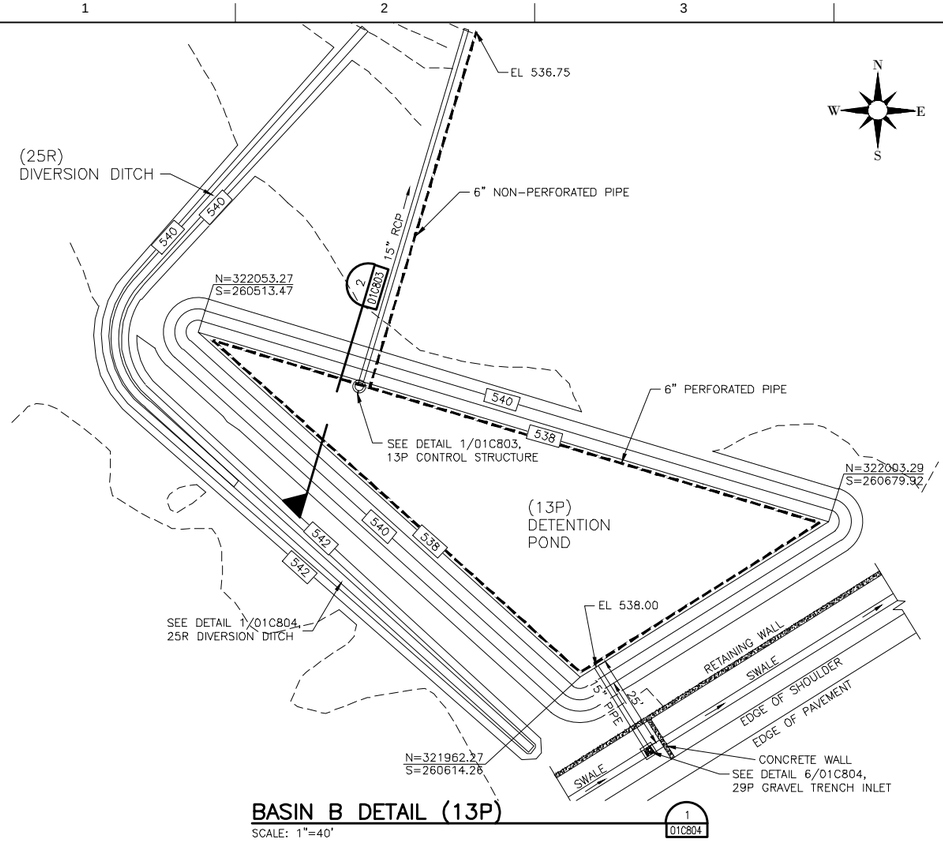
ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL
4/1/17

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED SITE DRAINAGE DETAILS

FILENAME 01C803.dwg
SCALE AS NOTED

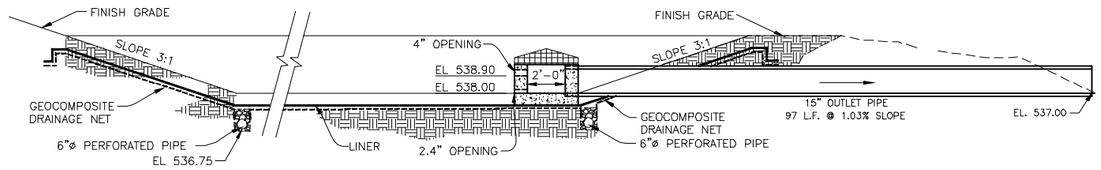
SHEET 01C803



BASIN B DETAIL (13P)

SCALE: 1"=40'

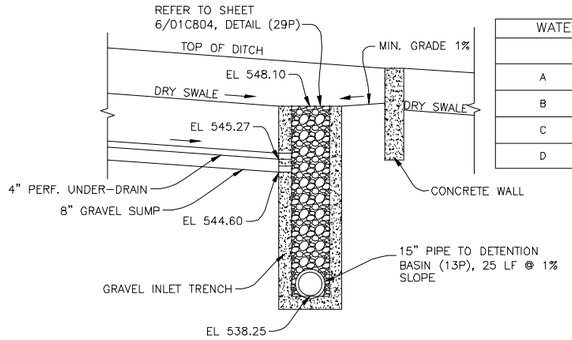
1 / 01C804



SECTION C-C DETAIL (13P)

SCALE: 1/8"=1'-0"

2 / 01C804

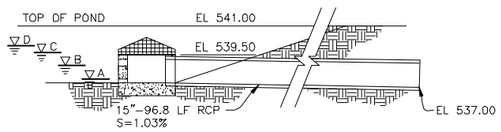


GRAVEL INLET TRENCH (29P)

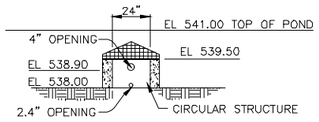
SCALE: 1/8"=1'-0" (SEE DETAIL 4/01C803)

6 / 01C804

WATER DEPTH SCHEDULE (29P)		
	STORM EVENT	ELEVATION
A	WQ PEAK	538.59
B	1 YR PEAK	539.00
C	10 YR PEAK	539.59
D	100 YR PEAK	541.84



SECTION VIEW



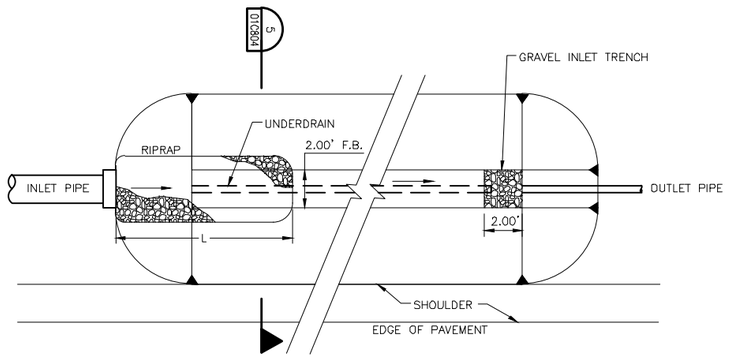
FRONT VIEW

WATER DEPTH SCHEDULE		
	STORM EVENT	ELEVATION
A	WQ PEAK	538.22
B	1 YR PEAK	538.86
C	10 YR PEAK	539.56
D	100 YR PEAK	539.94

CONTROL STRUCTURE DETAIL (13P)

SCALE: 1/8"=1'-0"

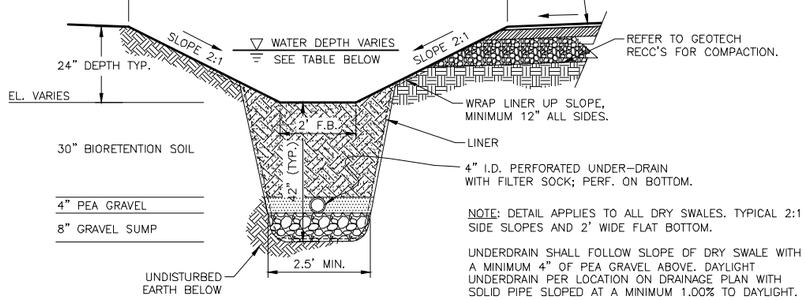
3 / 01C804



TYPICAL DRY SWALE DETAIL

SCALE: 1/8"=1'-0"

4 / 01C804



NOTE: DETAIL APPLIES TO ALL DRY SWALES. TYPICAL 2:1 SIDE SLOPES AND 2' WIDE FLAT BOTTOM.

UNDERDRAIN SHALL FOLLOW SLOPE OF DRY SWALE WITH A MINIMUM 4" OF PEA GRAVEL ABOVE. DAYLIGHT UNDERDRAIN PER LOCATION ON DRAINAGE PLAN WITH SOLID PIPE SLOPED AT A MINIMUM 1.00% TO DAYLIGHT.

WATER DEPTH SCHEDULE				
STORM EVENT	MAX. WATER DEPTH (IN FEET)			
	DRY SWALE – 1 (15R)	DRY SWALE – 2 (29R)	DRY SWALE – 3 (18R)	DRY SWALE – 4 (20R)
WATER QUALITY	0.11	0.13	0.04	0.14
1 YR PEAK	0.26	0.29	0.10	0.31
10 YR PEAK	0.40	0.45	0.16	0.47
100 YR PEAK	0.58	0.64	0.24	0.67

TYPICAL DRY SWALE SECTION (15R)(29R)(18R)(20R)

SCALE: 1/4"=1'-0"

5 / 01C804

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PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

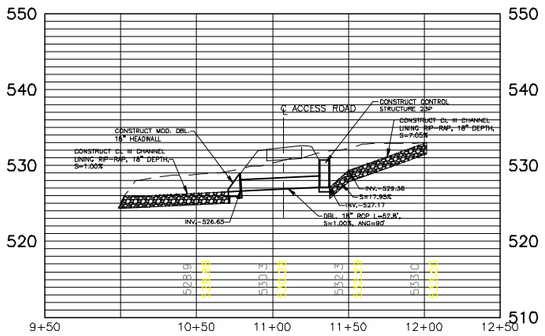
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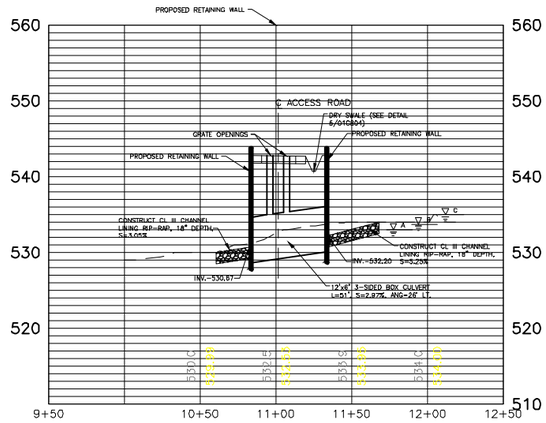
SHEET 01C804



CULVERT #1 SECTION (15P)

SCALE: HOR- 1"=100' VER- 1"=20'

1 / 01C805

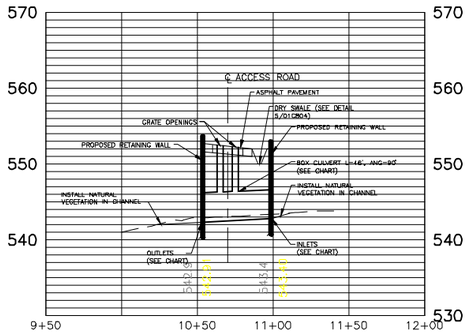


WATER DEPTH SCHEDULE		
	STORM EVENT	ELEVATION
A	1 YR PEAK	533.00
B	10 YR PEAK	533.76
C	100 YR PEAK	534.93

CULVERT #2 SECTION (17P)

SCALE: HOR- 1"=100' VER- 1"=20'

2 / 01C805

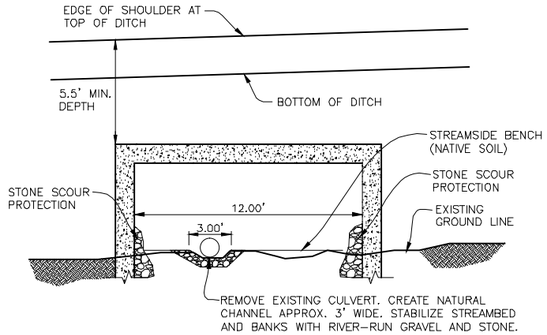


WILDLIFE PASSAGE			
NO.	SIZE	INVERT ELEV.	OUTLET ELEV.
1	10' x 4'	535.21	534.61
2	10' x 4'	542.39	541.93
3	10' x 4'	550.41	549.72
4	10' x 4'	554.60	553.79
5	12' x 6'	556.27	535.80

TYPICAL WILDLIFE PASSAGE SECTION

SCALE: HOR- 1"=100' VER- 1"=20'

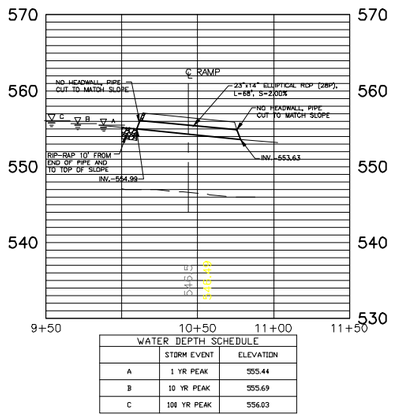
3 / 01C805



CULVERT #2 (17P) CONSTRUCTION DETAIL

SCALE: 1/8"=1'-0"

4 / 01C805

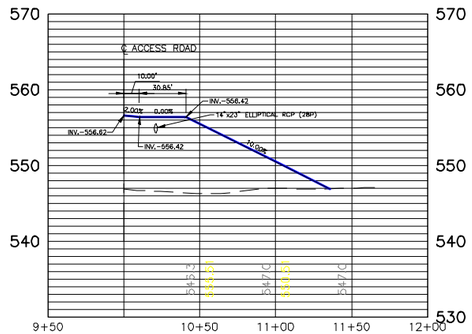


WATER DEPTH SCHEDULE		
	STORM EVENT	ELEVATION
A	1 YR PEAK	555.44
B	10 YR PEAK	555.69
C	100 YR PEAK	556.03

RAMP PIPE SECTION (28P)

SCALE: HOR- 1"=100' VER- 1'=20'

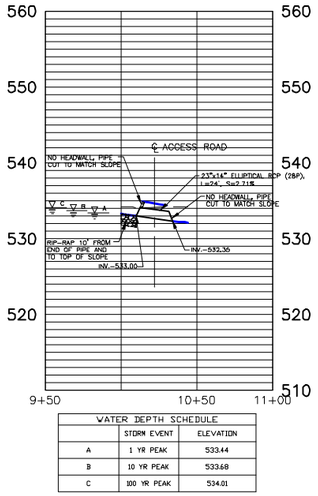
5 / 01C805



RAMP PIPE SECTION (28P)

SCALE: HOR- 1"=100' VER- 1"=20'

6 / 01C805

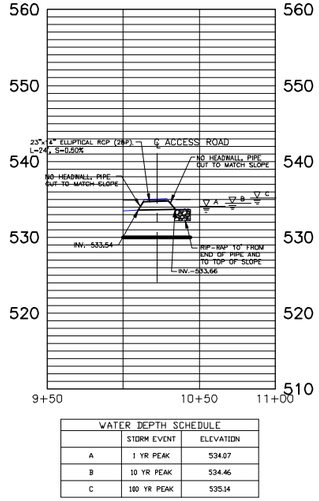


WATER DEPTH SCHEDULE		
	STORM EVENT	ELEVATION
A	1 YR PEAK	533.44
B	10 YR PEAK	533.68
C	100 YR PEAK	534.01

ACCESS ROAD PIPE SECTION (31P)

SCALE: HOR- 1"=100' VER- 1"=20'

7 / 01C805

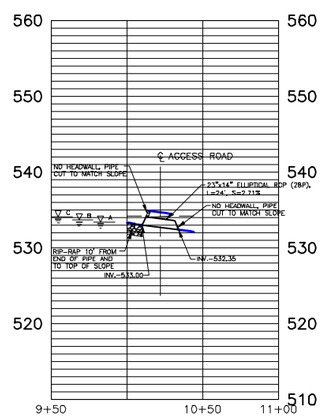


WATER DEPTH SCHEDULE		
	STORM EVENT	ELEVATION
A	1 YR PEAK	534.07
B	10 YR PEAK	534.46
C	100 YR PEAK	535.14

ACCESS ROAD PIPE SECTION (30P)

SCALE: HOR- 1"=100' VER- 1"=20'

8 / 01C805



ACCESS ROAD

SCALE: HOR- 1"=100' VER- 1"=20'

9 / 01C805

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PROJECT MANAGER C. JACOBS

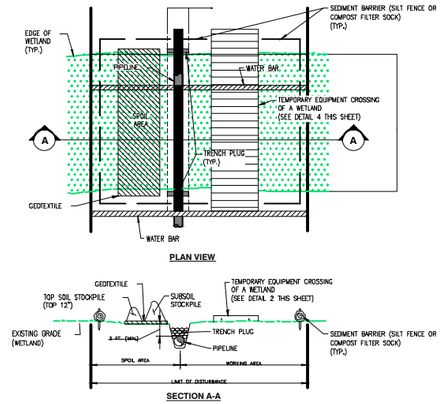
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ALEXANDER DEUSON
No. 0011618
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CIVIL

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PROPOSED SITE DRAINAGE DETAILS

FILENAME 01C805.dwg
SCALE AS NOTED
SHEET 01C805



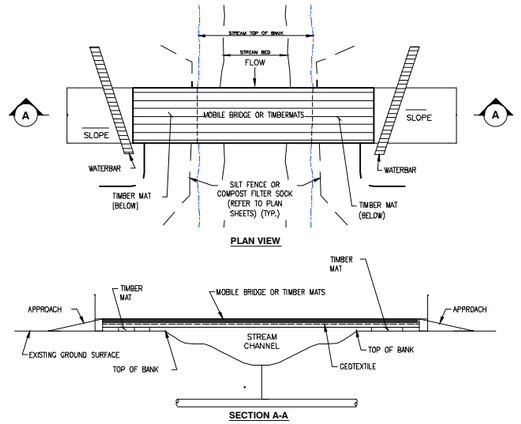
NOTES:

1. INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE LIMIT OF DISTURBANCE AND, AS NECESSARY, AROUND SOIL STOCKPILES.
2. PLACE A GEOTEXTILE UNDERLAYMENT IN AREAS WHERE WOOD MATS WILL BE PLACED FOR EQUIPMENT CROSSING, AND IN SPOIL AREAS.
3. INSTALL WOOD MATS AS NEEDED TO MINIMIZE DISTURBANCE/COMPACTION OF THE WETLAND.
4. INSTALL TRENCH PLUGS ON EACH END OF THE TRENCH TO PREVENT THE TRENCH FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
5. WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL. DURING BACKFILLING OF TRENCH, REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE PRE-CONSTRUCTION SOIL SEQUENCE. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (UNLESS THERE IS STANDING WATER OR THE SOIL IS TOO SATURATED TO SEGREGATE.)
6. UPON RESTORATION REMOVE GEOTEXTILE, WOOD MATS, AND RESTORE WETLAND TO EXISTING GRADE. WATERBARS WITHIN THE RIGHT-OF-WAY SHALL BE LEFT IN PLACE.

PIPELINE AND EQUIPMENT CROSSING OF WETLAND

1A 01C806

NOT TO SCALE



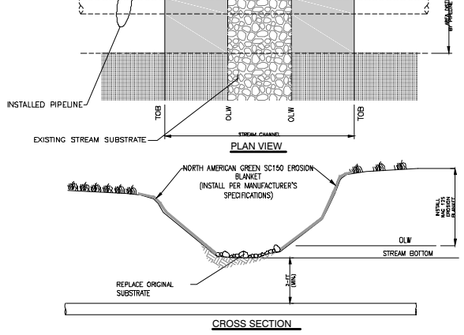
NOTES:

1. INSTALL WATERBARS AT APPROACHES TO STREAM CROSSING, AND COMPOST FILTER SOCK/SILT FENCE ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
2. MAINTAIN SURFACE OF TEMPORARY BRIDGE TO PREVENT SOIL DISCHARGES TO STREAM. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6-INCHES ABOVE ORIGINAL GRADE.
3. GEOTEXTILE SHALL BE ATTACHED TO THE UNDER SIDE OF THE MOBILE BRIDGE.

TEMPORARY EQUIPMENT CROSSING OF A STREAM – MOBILE BRIDGE

1B 01C806

NOT TO SCALE



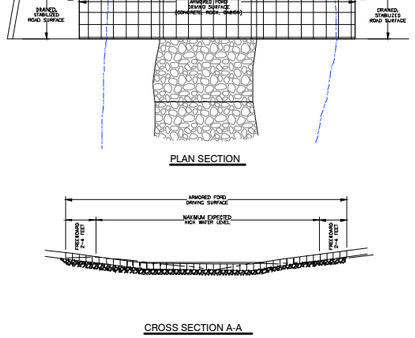
NOTES:

1. PRIOR TO WORKING IN STREAM CHANNEL, INSTALL ALL EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES SPECIFIED IN EROSION AND SEDIMENTATION PLAN AND DIVERT STREAM FLOW AROUND WORK AREA.
2. WHEN EXCAVATING PIPELINE TRENCH ACROSS STREAM, SEGREGATE AND SEPARATELY STOCKPILE STREAM SUBSTRATE.
3. AFTER INSTALLING PIPELINE IN TRENCH, REPLACE STOCKPILED SUBSTRATE ON SURFACE OF BOTTOM OF STREAM CHANNEL BELOW THE ORDINARY LOW WATER (OLW) LEVEL.
4. INSTALL NORTH AMERICAN GREEN S150 BLANKET ON STREAM BANKS FROM ORDINARY LOW WATER LEVEL TO TOP OF THE BANK, COVERING DISTURBED PORTIONS OF THE STREAM BANK. REFER TO E&S PLANS FOR STAPLE PATTERN.

STREAM CHANNEL RESTORATION

1C 01C806

NOT TO SCALE



NOTES:

1. PRIOR TO WORKING IN STREAM CHANNEL, INSTALL ALL EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES SPECIFIED IN EROSION AND SEDIMENTATION PLAN AND DIVERT STREAM FLOW AROUND WORK AREA.
2. AT THE END OF EVERY WORK DAY AND BEFORE RAINFALL EVENTS, 12IN SILT SOCK SHALL BE PLACED ACROSS ACCESS ROAD UNTIL THE SITE HAS BEEN SUFFICIENTLY STABILIZED.

STREAM – LOW WATER CROSSING

1D 01C806

NOT TO SCALE

TIMBER MATTING

1 01C806

NOT TO SCALE

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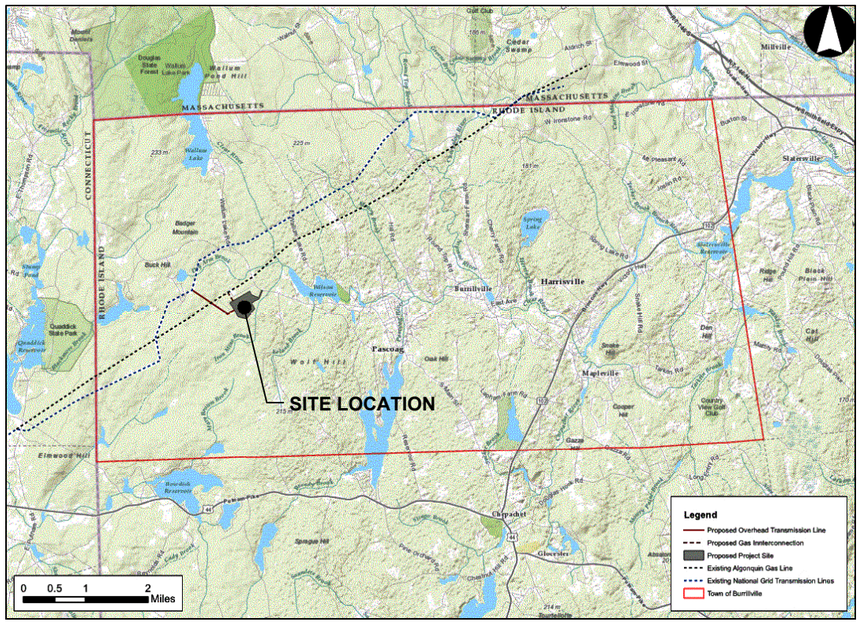
PROPOSED SITE DRAINAGE DETAILS

FILENAME	01C806.dwg
SCALE	NOT TO SCALE

SHEET 01C806

5405 DATA COURT
ANN ARBOR, MI
48108-8949

SESC



Clear River Energy LLC

Project No.
000000000238926

Burrillville, Rhode Island
March 2017

INDEX OF DRAWINGS

EROSION CONTROL

01C000	COVER
01C001	LEGEND
01C900	SESC NOTES
01C901	SESC EXISTING CONDITIONS AND SITE CONSTRAINTS MAP
01C902	SESC EXISTING CONDITIONS AND SITE CONSTRAINTS MAP
01C903	SESC EXISTING CONDITIONS AND SITE CONSTRAINTS MAP
01C904	SESC EXISTING CONDITIONS AND SITE CONSTRAINTS MAP
01C905	SESC PLAN PHASE I NOTES - SHEET 1 OF 5
01C906	SESC PLAN PHASE I SHEET 2 OF 5
01C907	SESC PLAN PHASE I SHEET 3 OF 5
01C908	SESC PLAN PHASE I SHEET 4 OF 5
01C909	SESC PLAN PHASE I SHEET 5 OF 5
01C910	SESC PLAN PHASE II SHEET 1 OF 4
01C911	SESC PLAN PHASE II SHEET 2 OF 4
01C912	SESC PLAN PHASE II SHEET 3 OF 4
01C913	SESC PLAN PHASE II SHEET 4 OF 4
01C914	SESC PLAN PHASE III SHEET 1 OF 4
01C915	SESC PLAN PHASE III SHEET 2 OF 4
01C916	SESC PLAN PHASE III SHEET 3 OF 4
01C917	SESC PLAN PHASE III SHEET 4 OF 4
01C918	SESC PLAN PHASE IV SHEET 1 OF 4
01C919	SESC PLAN PHASE IV SHEET 2 OF 4
01C920	SESC PLAN PHASE IV SHEET 3 OF 4
01C921	SESC PLAN PHASE IV SHEET 4 OF 4
01C922	SESC DETAILS
01C923	SESC DETAILS
01C924	SESC DETAILS
01C925	SESC DETAILS
01C926	SESC DETAILS

ALEXANDER DEUSON
No. 0011618
4/1/17
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

CIVIL MAPPING SYMBOLOGY

- OUTLET PROTECTION RIP-RAP PAD (FOR SIZE SEE DETAIL)
- (11R) HYDROCAD REFERENCE NODE FOR CALCS
- EXISTING SWAMP WETLAND
- EXISTING FORESTED WETLAND
- EXISTING SPECIAL AQUATIC SITE
- EXISTING AREA SUBJECT TO STORM FLOWAGE (ASSF)
- PROPOSED STORM STRUCTURE
- PROPOSED STORM PIPE
- D POINT OF DISCHARGE
- EXISTING LIGHT POLE
- EXISTING SIGN
- CONSTRUCTION STAGGING AREA
- #XX EXISTING POWER POLE WITH IDENTIFICATION NUMBER
- BH-13 BORING HOLE LOCATION
- SOIL MAP UNIT
- IP6 SILT FENCE INLET PROTECTION
- DIRECTION OF OVERLAND FLOW DURING & AFTER MASS GRADING
- X.XX DIRECTION OF OVERLAND FLOW W/ GRADE
- SB SEDIMENT BASIN
- CE TEMPORARY STONE CONSTRUCTION EXIT
- DB TEMPORARY DIVERSION DITCH/BERM
- POTABLE WATER WELL
- TP-5 TEST PIT LOCATION
- 1-50d WETLAND FLAG
- TIMBER MATTING

UTILITY/CIVIL LINE SYMBOLOGY

- SPECTRA PROPERTY LINE
- PROPERTY LINE SETBACK
- PROPERTY LINE
- 500 EXISTING CONTOUR ELEVATIONS
- 500 PROPOSED CONTOUR ELEVATIONS
- WETLAND EDGE
- EXISTING PERENNIAL STREAM
- EXISTING INTERMITMENT STREAM
- EXISTING STREAM BANK
- 50' PERIMETER WETLAND
- 100' RIVERBANK WETLAND
- 200' RIVERBANK WETLAND
- RIGHT OF WAY
- DRAINAGE AREAS
- TREELINE
- GAS PROPOSED GAS LINE
- LOD LIMITS OF DISTURBANCE (SILT FENCE INSTALLATION, SEE SHEET 01C904)
- SF PROPOSED SILT FENCE
- FLOOD PLAIN LINE

GENERAL NOTES:

1. THIS IS A STANDARD CIVIL SYMBOLOGY SHEET. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.

2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

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LEGEND

FILENAME 01C001.dwg
SCALE AS SHOWN
SHEET 01C001

MAINTENANCE

ALL MEASURES STATED ON THESE SOIL EROSION AND SEDIMENT CONTROL PLAN SHEETS, AND IN THE WRITTEN SOIL EROSION AND SEDIMENT CONTROL PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON A MINIMUM OF ONCE EVERY SEVEN (7) DAYS OR 24 HOURS AFTER A 0.25 INCH RAINFALL EVENT AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES.
7. TEMPORARY SEDIMENT BASINS SHALL HAVE SEDIMENT REMOVED SEMI-ANNUALLY (TWICE A YEAR) OR IF SEDIMENT REACHES THE TOP OF THE STONE RESTING PAD FOR THE FAIRCLOTH SKIMMERS.

WASTE DISPOSAL NOTES:

1. THE CONTRACTOR SHALL IDENTIFY AN AREA WITHIN THE CONSTRUCTION STAGING AREA FOR WASTE DISPOSAL AND DENOTE ON THE PLAN UPON ARRIVAL BY THE RESIDENT ENGINEER FOR THE PROJECT.

SEQUENCE OF CONSTRUCTION

PHASE I SHEETS 01C905 THRU 01C909

1. INSTALL TEMPORARY STONE CONSTRUCTION EXIT.
2. INSTALL ORANGE CONSTRUCTION SAFETY FENCING ALONG THE LIMITS OF DISTURBANCE TO DEFINE CONSTRUCTION ZONE AND PROTECT ADJACENT VEGETATION/WETLANDS.
3. INSTALL THE SILT FENCES AND CONCRETE WASHOUT PIT.
4. PREPARE TEMPORARY PARKING AND STORAGE AREA.

"HALT"
PERFORM INSPECTION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

5. CONSTRUCT TEMPORARY SEDIMENT/DETENTION BASIN "A", DIVERSION DITCHES, OUTLET STRUCTURES, OUTLET PROTECTIONS AND SEED BASIN.

PHASE II SHEETS 01C910 THRU 01C913

1. CLEAR AND GRUB THE SITE.
2. STRIP TOPSOIL AND STOCKPILE IN LOCATION SHOWN ON PLANS. INSTALL TEMPORARY SEEDING ON STOCKPILE AT END OF TOPSOIL STRIPPING ACTIVITIES.
3. CONSTRUCT SEDIMENT/DETENTION BASIN "B". OUTLET STRUCTURE AND OUTLET PROTECTION, SEED BASIN. CONSTRUCT DIVERSION DITCH/CONTAINMENT BERM. STORM RUNOFF WILL BE DIVERTED TO BASIN B AS THE SITE GRADING PROGRESSES TO FACILITATE THE EVENTUAL REMOVAL OF BASIN "A".
4. BEGIN GRADING THE SITE. TEMPORARY SEDIMENT BASIN "A" SIZE WILL BE REDUCED AS GRADING DIVERTS RUNOFF TO BASIN B THROUGH THE NEW DIVERSION DITCH. MOVE DITCH TO THE EAST AS NEEDED TO FACILITATE MASS GRADING. ONCE RUNOFF FROM AREAS THAT WERE ENTERING SEDIMENT BASIN A HAVE BEEN DIVERTED TO BASIN B, BASIN A CAN BE REMOVED TO FACILITATE FINAL MASS GRADING OF THE SITE.
5. BEGIN CONSTRUCTION OF RETAINING WALLS AND ENTRANCE ROAD CONSTRUCTION.

PHASE III SHEETS 01C914 THRU 01C917

1. INSTALL STORM DRAINAGE SYSTEM. INSTALL INLET PROTECTIONS AROUND ALL STORM SEWER STRUCTURES AS THEY ARE INSTALLED.
2. INSTALL UTILITIES AND BEGIN BUILDING PAD CONSTRUCTION.
3. PERFORM FINISH GRADING.
4. INSTALL PERMANENT SEEDING ON ALL PERIMETER AREAS.
5. INSTALL GRAVEL STABILIZATION TO ALL AREAS AS FINISH GRADING IS COMPLETED IN PREPARATION FOR PAVING.

PHASE IV SHEETS 01C918 THRU 01C921

1. PAVE SITE.
2. INSTALL INLET PROTECTION DEVICES IN PAVED AREAS. USE INLET FILTERS FOR ALL INLETS.
3. COMPLETE FINISH GRADING AND INSTALL PERMANENT SEEDING, SODDING AND PLANTING.
4. CONVERT BASIN "B" INTO FINAL WATER QUALITY/DETENTION BASIN.
5. COMPLETE SPILL CONTAINMENT AREA.
6. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED AND APPROVED BY CONSTRUCTION MANAGER AND GOVERNING AGENCIES).
7. REGRADE AND REPLANT CONSTRUCTION STAGING AREA PER REFORESTATION PLAN. SHEETS 01C700 THRU 01C703.

GENERAL EROSION NOTES

A. THE SOIL EROSION AND SEDIMENT CONTROL PLAN IS COMPRISED OF SHEETS 01C000 "COVER SHEET", 01C900 "SESC PLAN NOTES", 01C901 THRU 01C904 "EXISTING CONDITIONS AND SITE CONSTRAINTS MAP", 01C905 THRU 01C909 "PHASE I PLAN", 01C910 THRU 01C913 "PHASE II PLAN", 01C914 THRU 01C917 " PHASE III PLAN", 01C918 THRU 01C921 "PHASE IV PLAN", 01C922 THRU 01C925 "DETAILS", THE WRITTEN SOIL EROSION AND SEDIMENT CONTROL PLAN AND ASSOCIATED APPENDICES AND ATTACHMENTS, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (RIPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY SITE CONDITIONS ENCOUNTERED AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

E. SEE SITE MAP FOR DELINEATION OF ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT. ALL WORK SHALL REMAIN WITHIN THE LIMITS OF DISTURBED SHOWN ON THE PLANS. ANY WORK OUTSIDE THE LIMIT OF DISTURBANCE MUST BE APPROVED BY THE APPROPRIATE GOVERNING AGENCIES BEFORE ANY DISTURBANCE OUTSIDE THE LIMITS OF DISTURBANCE OCCURS.

G.) GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED ONSITE AND PROPERLY TREATED OR DISPOSED OF IN ACCORDANCE WITH THE APPROPRIATE GOVERNING REGULATIONS.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED IMMEDIATELY AND NO LATER THAN THE END OF THE NEXT WORK DAY. FOR AREAS WHERE IT IS KNOWN THAT A PORTION OF THE SITE WILL NOT HAVE ANY CONSTRUCTION ACTIVITIES FOR MORE THAN 14 DAYS, THESE AREAS SHALL HAVE BE TEMPORARILY SEEDED WITHIN 14 DAYS AS SOON AS THAT DETERMINATION IS KNOWN.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN FOR DETAILS.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

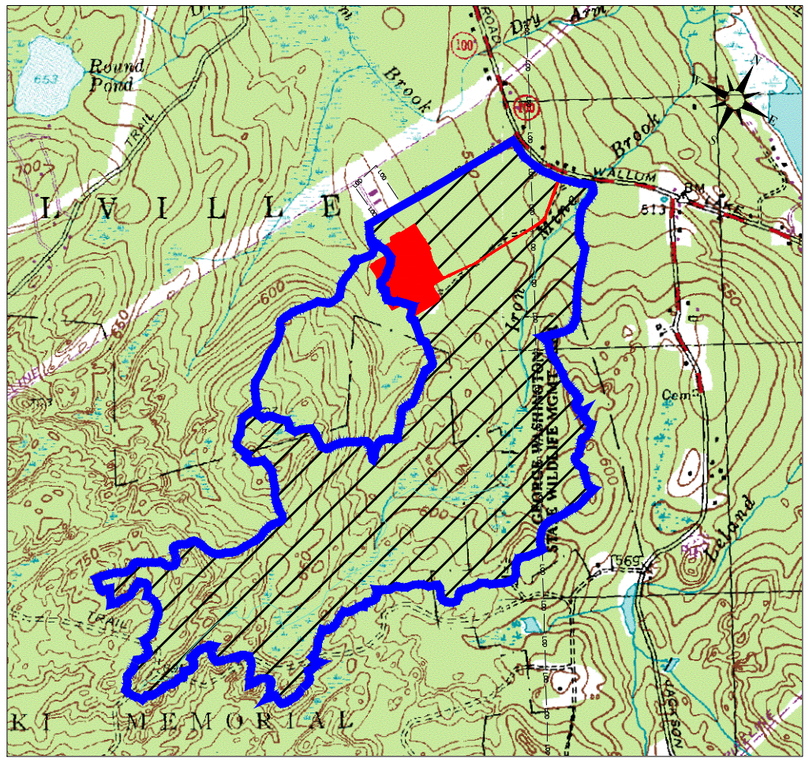
Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE TEMPORARY SEDIMENT BASIN, THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, DIVERSION DITCHES , ETC.) TO PREVENT EROSION.

U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.



SCALE: 1" = 2000'

SITE IS APPROXIMATELY 800' SOUTHEAST OF ALGONQUIN LANE AND OFF OF WALLUM LAKE ROAD.

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
INSTALL TEMP. CONSTRUCTION ENTRANCE																		
INSTALL CONSTRUCTION LIMIT OF DISTURBANCE FENCING																		
INSTALL SILT FENCES AND CONCRETE WASHOUT PIT																		
INSPECTION BY GOVERNING AGENCY (IF REQ'D)																		
CONSTRUCT CONSTRUCTION STAGING AREA																		
CONSTRUCT TEMP. SEDIMENT BASIN "A" AND OUTLET																		
STRIP & STOCKPILE TOPSOIL, BEGIN MASS GRADING																		
CONSTRUCT TEMP. SEDIMENT BASIN "B" AND OUTLET																		
REMOVE SEDIMENTATION POND "A"																		
BEGIN CONSTRUCTION OF RETAINING WALLS																		
BEGIN CONSTRUCTION OF ENTRANCE ROAD																		
INSTALL UTILITIES AND STORM SEWER SYSTEM																		
BEGIN BUILDING PAD CONSTRUCTION																		
INSTALL RETAINING WALLS																		
INSTALL RIP RAP ON OUTLETS AND INLET PROTECTION																		
PREPARE SITE FOR PAVING																		
FINISH GRADING OF SITE																		
LANDSCAPING/SEED/SOD/FINAL STABILIZATION																		
CONVERT BASIN "B" INTO WATER QUAL/DETENTION BASIN																		
COMPLETE SPILL CONTAINMENT AREA																		
REMOVE TEMP. EROSION AND SED. CONTROL DEVICES																		

ACREAGE SUMMARY in ACRES	
IMPERV. AREA	18.19 AC±
SEEDED AREA	17.96 AC±
TOTAL DISTURBED	36.15 AC±

TEMPORARY SEEDING
SEED: MIXTURE 70% RYEGRASS/ 30% WINTER WHEAT - 4 LBS/ 1000 S.F.

PERMANENT SEEDING
SEED: KY 31 FESCUE @ 6 LBS./ 1000 S.F.

CAUTION NOTICE TO CONTRACTOR
IF PROPERLY IMPLEMENTED, THIS PLAN WILL PROVIDE AN EFFECTIVE MEANS FOR CONTROLLING EROSION. HOWEVER, IT IS ACKNOWLEDGED THAT NO ONE PLAN CAN BE PREPARED THAT WILL DEPICT ALL POSSIBLE CONTROL MEASURES NECESSARY FOR VARIOUS STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL INCLUDE IN THE BASE BID ADEQUATE FUNDS TO PROVIDE ALL EROSION CONTROL MEASURES NECESSARY TO COMPLY WITH CODES FOR THE DURATION OF THE CONSTRUCTION PROJECT.

SPECIFICATION REQUIREMENTS
THE REQUIREMENTS SHOWN ON THIS PLAN ARE SUPPLEMENTED BY THE WRITTEN SOIL EROSION AND SEDIMENT CONTROL PLAN AND ANY SPECIFICATIONS CONTAINED WITHIN THE PROJECT SPECIFICATIONS. IN CASE OF CONFLICTS BETWEEN THE PLAN SHEETS, THE WRITTEN PLAN, PROJECT SPECIFICATIONS AND THE ACTUAL GENERAL PERMIT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.

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3	3/27/2017	REVISION
2	2/17/2017	REVISION
1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS
PROJECT NUMBER 10021318

ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

SESC NOTES

FILENAME 01C900.dwg
SCALE AS NOTED
SHEET 01C900

MATCH LINE – SEE SHEET 01C902 SESC PLAN INSERT

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

SWAMP WETLANDS 1

TOPSOIL STOCKPILE AREA INSTALL SILT FENCE AT TOE OF SLOPE, THIS FENCE DOES NOT SUPPLANT PERIMETER SILT FENCE ALONG PERIMETER LOD.

AREA OF STEEP SLOPES

3.66%

0.86%

4.55%

4.00%

1.70%

20.00%

MATCH LINE – SHEET 01C903 SESC PLAN

MATCH LINE – SHEET 01C902 SESC PLAN

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

SWAMP WETLANDS 1

SWAMP WETLANDS 1

PROPOSED PROPERTY BOUNDARY

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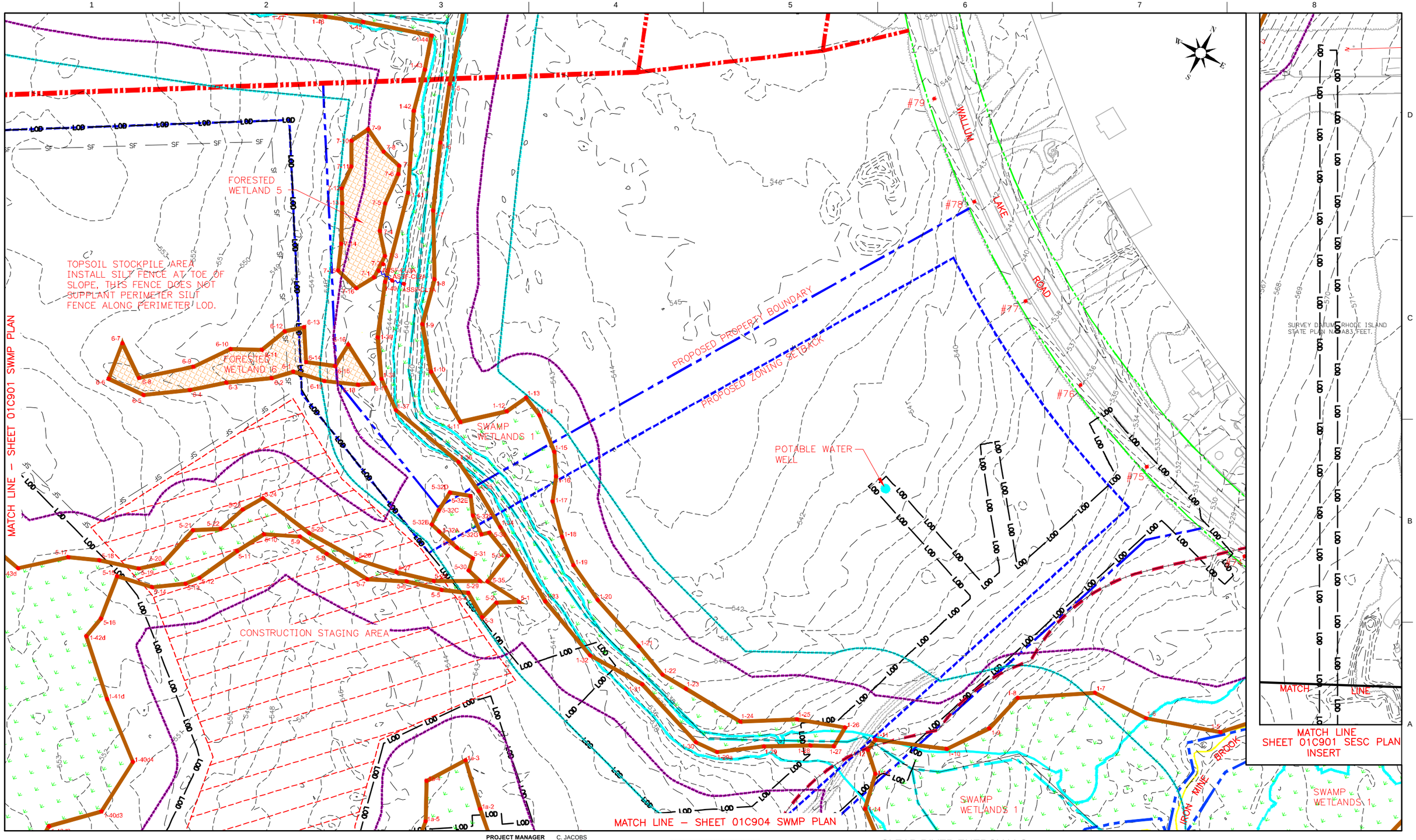
ALEXANDER DEUSON
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SESC EXISTING CONDITIONS AND SITE CONSTRAINTS MAP

FILENAME 01C901.dwg
SCALE 1" = 100'

SHEET 01C901



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ALEXANDER DEUSON No. 0011618 REGISTERED PROFESSIONAL ENGINEER CIVIL

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153-001, 153-002
TOWN OF BURRILLVILLE,
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SESC EXISTING CONDITIONS AND SITE CONSTRAINTS MAP

FILENAME 01C902.dwg
SCALE 1" = 100'
SHEET 01C902

MATCH LINE – SHEET 01C901 SESC PLAN

MATCH LINE – SHEET 01C904 SESC PLAN

SWAMP WETLANDS 2

SWAMP WETLANDS 1

SAS 1

SAS 2

SAS 3

1.70%

4.00%

2.86%

3.85%

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

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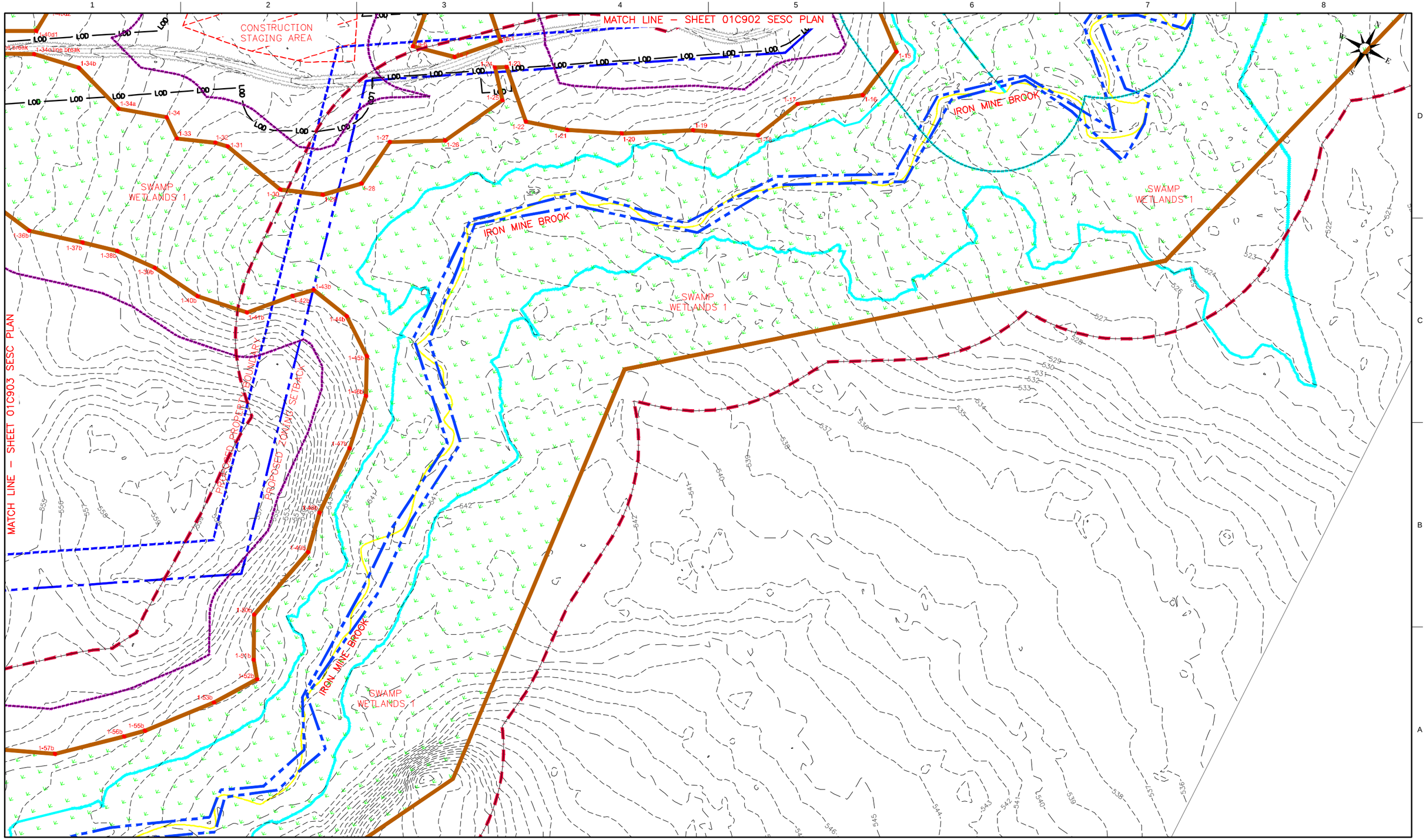
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FILENAME	01C903.dwg
SCALE	1" = 100'
SHEET	01C903



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SESC EXISTING CONDITIONS AND SITE CONSTRAINTS MAP

FILENAME	01C904.dwg
SCALE	1" = 100'
SHEET	01C904

REFER TO 01C900 SESC PLAN FOR NOTES

NOTE: REFERENCES IN ( ) ARE NODE LABELS IN CALCULATIONS

TEMP. DIVER. DITCH DB #1 (11R)
@ 0.5% SLOPE MAX.
DA=5.1 AC.
Q_{10}=18.6 CFS
V_{10}=3.8 FPS
NORMAL DEPTH=1.15 FT
TRAPEZOID CHANNEL
BOTTOM WIDTH=2 FT.
SIDESLOPES 2:1
TOTAL BERM DEPTH 2 FT
Q_{CAP}=61.8 CFS

TEMP. DIVER. DITCH DB #2 (13R)
@ 0.7% SLOPE MAX.
DA=5.4 AC.
Q_{10}=20.0 CFS
V_{10}=4.3 FPS
NORMAL DEPTH=1.11 FT
TRAPEZOID CHANNEL
BOTTOM WIDTH=2 FT.
SIDESLOPES 2:1
TOTAL BERM DEPTH 2 FT
Q_{CAP}=71.2 CFS

POND ENTRY DITCH DB #3 (14R)
@ 21.9% SLOPE MAX.
DA=10.5 AC.
Q_{10}=38.6 CFS
V_{10}=10.4 FPS
NORMAL DEPTH=0.63 FT
TRAPEZOID CHANNEL
BOTTOM WIDTH=4 FT.
SIDESLOPES 3:1
TOTAL BERM DEPTH 2 FT
Q_{CAP}=392.7 CFS

LINE POND ENTRY DITCH WITH NON-WOVEN FILTER FABRIC, 6 INCHES OF #2 STONE WITH RIP-RAP ON TOP CONSISTING OF STONE WITH AN AVERAGE DIAMETER OF 20 INCHES FROM TOP OF BASIN ENBANKMENT TO BOTTOM

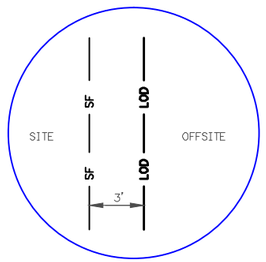
TSB "A" (8P) POND DATA

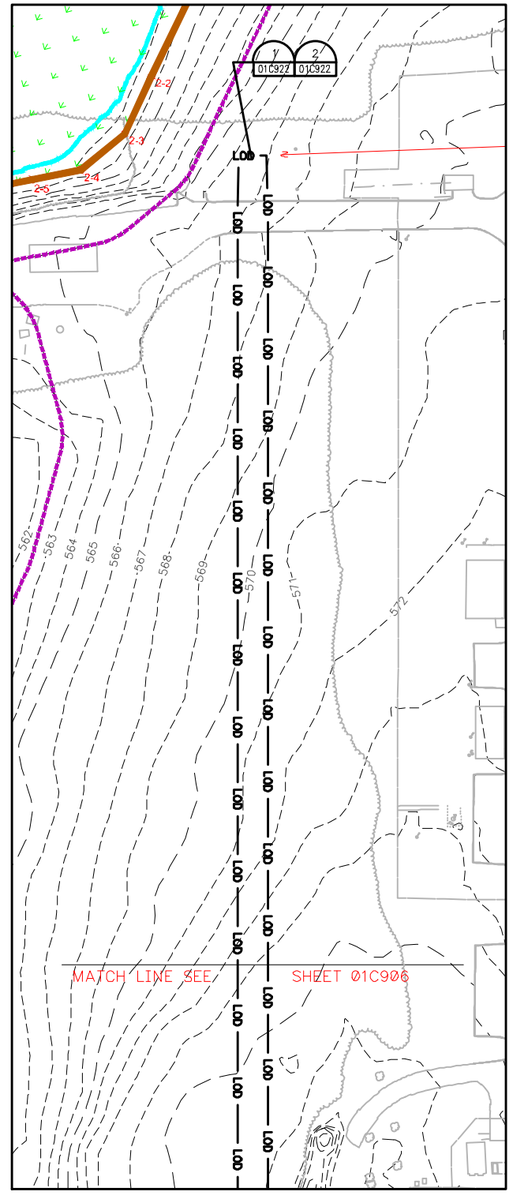
TOP=569.00
BOTTOM=563.00
SIDE SLOPES=3:1
PRIMARY INLET ELEV (4-4" Dia Holes) =565.5'
EMERGENCY OVERFLOW 18" RISER ELEV = 566.5'
Q_{IN} (10 YR. STORM)= 50.4 CFS
Q_{OUT} (10 YR. STORM)= 0.85 CFS
VELOCITY (10 YR. STORM)=2.3 FPS
SED. VOLUME REQ'D, 1 YEAR STORAGE = 6,098 CF
SED. VOLUME PROV. (TO ELEV. 563.20')=14,480 CF
WATER SURFACE ELEV. (10 YR. STORM)=565.17'

ACREAGE SUMMARY in ACRES	
TOTAL DISTURBED	3.2 AC±

PERIMETER SILT FENCE INSTALLATION NOTES;

1. INSTALL TEMPORARY SILT FENCES ALONG AND INSIDE OF LIMITS OF DISTURBANCE FENCING.
2. PERIMETER SILT FENCING IS NOT ACTUALLY SHOWN ON DRAWINGS DUE TO PROXIMITY TO LOD FENCING FOR CLARITY. TYPICALLY FENCING SHOULD BE INSTALLED 3 FEET INSIDE LOD FENCING FOR MAINTENANCE ACCESS. HOWEVER, THERE ARE AREAS WHERE THE SILT FENCE WILL HAVE TO BE DIRECTLY ADJACENT TO LOD FENCING FOR CONSTRUCTION PURPOSES. LOCATION OF SILT FENCE WILL BE AT CONTRACTORS DISCRETION.
3. ADDITIONAL SILT FENCE INSTALLATIONS (OTHER THAN PERIMETER) WILL BE NOTED ON PLANS.







SURVEY DATUM: RHODE ISLAND STATE PLAN NAD83 FEET.

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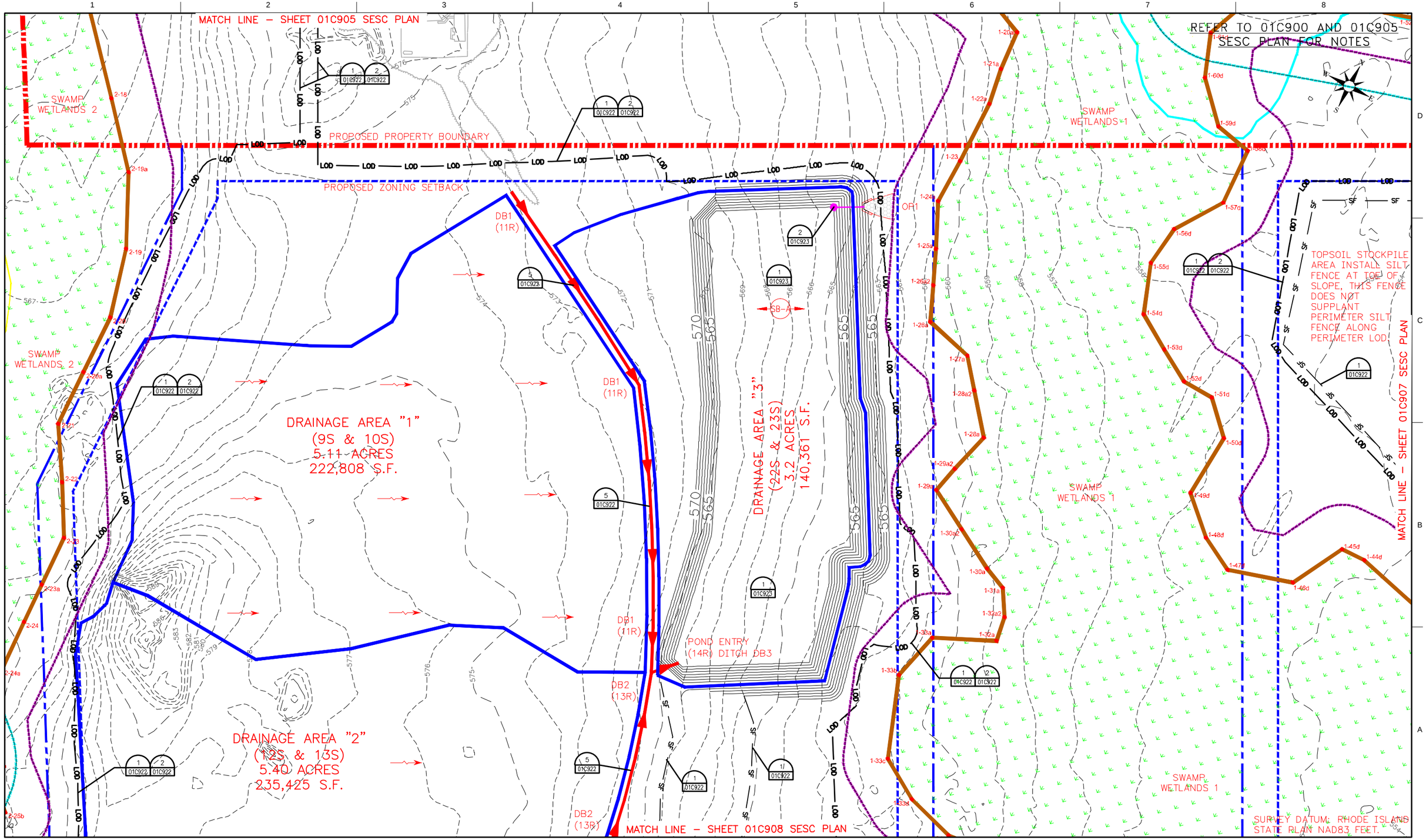
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SESC PLAN PHASE I
SHEET 1 OF 5

FILENAME 01C905.dwg
SCALE 1" = 100'
SHEET 01C905



DRAWING INDEX

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
3	3/27/2017	REVISION
2	2/17/2017	REVISION
1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

ALEXANDER DELUSON No. 0011618 REGISTERED PROFESSIONAL ENGINEER CIVIL 4/1/17

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

SESC PLAN PHASE I
SHEET 2 OF 5

FILENAME 01C906.dwg
SCALE 1" = 100'
SHEET 01C906

REFER TO 01C900 AND 01C905
SESC PLAN FOR NOTES

MATCH LINE – SHEET 01C906 SWMP PLAN

MATCH LINE – SHEET 01C909 SESC PLAN

FORESTED WETLAND 5

FORESTED WETLAND 6

SWAMP WETLANDS 1

TOPSOIL STOCKPILE AREA
INSTALL SILT FENCE AT TOE OF SLOPE, THIS FENCE DOES NOT SUPPLANT PERIMETER SILT FENCE ALONG PERIMETER LOD.

TIMBER MATTING

CONSTRUCTION STAGING AREA

HAZARDOUS MATERIALS STORAGE AREA

FUELING AREA

CONCRETE WASHOUT LOCATION

POTABLE WATER WELL

CONSTRUCTION ACCESS ROAD

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

WALLUM LAKE ROAD

SURVEY DATUM: RHODE ISLAND STATE PLAN NAD83 FEET

DRAWING INDEX

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153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

SESC PLAN PHASE I
SHEET 3 OF 5

FILENAME 01C907.dwg
SCALE 1" = 100'

SHEET
01C907

MATCH LINE – SHEET 01C906 SESC PLAN

DRAINAGE AREA "2"
(12S & 13S)
5.40 ACRES
235,425 S.F.

PROPOSED PROPERTY BOUNDARY

CONSTRUCTION ACCESS ROAD

REFER TO 01C900 AND 01C905
SESC PLAN FOR NOTES

SWAMP WETLANDS 2

SWAMP WETLANDS 1

SAS 1

SAS 2

SAS 3

DB2 (13R)

PROPOSED ZONING SETBACK

MATCH LINE – SHEET 01C909 SESC PLAN

SURVEY DATUM: RHODE ISLAND STATE PLAN NAD83 FEET.

DRAWING INDEX

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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PROVIDENCE COUNTY, RHODE ISLAND

SESC PLAN PHASE I
SHEET 4 OF 5

FILENAME 01C908.dwg
SCALE 1" = 100'

SHEET 01C908

MATCH LINE – SHEET 01C907 SESC PLAN

MATCH LINE – SHEET 01C908 SESC PLAN

REFER TO 01C900 AND 01C905
SESC PLAN FOR NOTES

CONSTRUCTION STAGING AREA

EXISTING ACCESS ROAD

PROPOSED PROPERTY BOUNDARY

SWAMP WETLANDS 1

MINE BROOK

IRON MINE BROOK

LOD

SURVEY DATUM: RHODE ISLAND
STATE PLAN NADA83 FEET.

DRAWING INDEX

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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SESC PLAN PHASE I
SHEET 5 OF 5

FILENAME 01C909.dwg
SCALE 1" = 100'

SHEET
01C909

MATCH LINE – SHEET 01C905 SESC PLAN

REFER TO 01C900 SESC PLAN FOR NOTES

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

SWAMP WETLANDS 2

SWAMP WETLANDS 1

DRAINAGE AREA "4" (11S) 8.14 ACRES 354,521 S.F.

DRAINAGE AREA "5" (21S) 8.85 ACRES 385,556 S.F.

DB4 (9R)

DB4 (26R)

TOPSOIL STOCKPILE AREA INSTALL SILT FENCE AT TOE OF SLOPE, THIS FENCE DOES NOT SUPPLANT PERIMETER SILT FENCE ALONG PERIMETER LOD.

MATCH LINE – SHEET 01C911 SESC PLAN

MATCH LINE – SHEET 01C912 SESC PLAN

DRAWING INDEX

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PROVIDENCE COUNTY, RHODE ISLAND

SESC PLAN PHASE II
SHEET 1 OF 4

FILENAME 01C910.dwg
SCALE 1" = 100'

SHEET 01C910

REFER TO 01C900 SESC PLAN FOR NOTES

MATCH LINE – SHEET 01C910 SESC PLAN

MATCH LINE – SHEET 01C913 SESC PLAN

FORESTED WETLAND 5

FORESTED WETLAND 6

SWAMP WETLANDS 1

TOPSOIL STOCKPILE AREA
INSTALL SILT FENCE AT TOE OF SLOPE, THIS FENCE DOES NOT SUPPLANT PERIMETER SILT FENCE ALONG PERIMETER LOD.

TIMBER MATTING

CONSTRUCTION STAGING AREA

HAZARDOUS MATERIALS STORAGE AREA

FUELING AREA

CONCRETE WASHOUT LOCATION

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

POTABLE WATER WELL

WALLUM LAKE ROAD

IRON MINE BROOK

#80 #79 #78 #77 #76 #75 #74 #73

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PROJECT NUMBER	10021318

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SESC PLAN PHASE II
SHEET 2 OF 4

FILENAME 01C911.dwg
SCALE 1" = 100'

SHEET 01C911

MATCH LINE – SHEET 01C910 SESC PLAN

DRAINAGE AREA "5"
(21S)
8.85 ACRES
385,556 S.F.

DRAINAGE AREA "6"
(24S)
7.23 ACRES
134,999 S.F.

DB4 (26R)

DB5 (10R)

DB6 (12R)

SB-B

SWAMP WETLANDS 2

SWAMP WETLANDS 1

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

REFER TO 01C900 SESC PLAN FOR NOTES

MATCH LINE – SHEET 01C913 SESC PLAN

NOTE: REFERENCES IN ( ) ARE NODE LABELS IN CALCULATIONS

TSB "B" POND DATA

568.00
558.00
SIDE SLOPES=3:1
PRIMARY INLET 12" DIA OPENING ELEV. = 562.5'
EMERGENCY OVERFLOW 72" RISER ELEV. = 567.0'
(1Ø YR. STORM)= 88.1 CFS
(1Ø YR. STORM)=Ø.85 CFS
VELOCITY (1Ø YR. STORM)= N/A DUE TO OUTLET DESIGN
SED. VOLUME REQ'D, 1 YEAR STORAGE = 13,Ø68 CF
SED. VOLUME PROV. (TO ELEV.558.2) = 14,43Ø CF
WATER SURFACE ELEV. (1Ø YR. STORM)= 562.1

TEMP. DIVERSION DITCH DB4 (26R) @ Ø.5%
DA=17.Ø AC.
QIØ=62.2 CFS
VIØ=6.8 FPS
NORMAL DEPTH= Ø.91 FT
TRAPEZOID CHANNEL
BOTTOM WIDTH= 5 FT.
SIDESLOPES 3:1
TOTAL BERM DEPTH 2 FT
QCAP=299.4 CFS

TEMP. DIVERSION DITCH DB5 (10R) @ 1%
DA=17.Ø AC.
QIØ=62.3 CFS
VIØ=6.Ø FPS
NORMAL DEPTH= 1.21 FT
TRAPEZOID CHANNEL
BOTTOM WIDTH= 5 FT.
SIDESLOPES 3:1
TOTAL BERM DEPTH 2 FT
QCAP=172.1 CFS

POND ENTRY DITCH DB6 (12R)
DA=17.Ø AC.
QIØ=62.2 CFS
VIØ=6.8 FPS
NORMAL DEPTH= Ø.91 FT
TRAPEZOID CHANNEL
BOTTOM WIDTH= 5 FT.
SIDESLOPES 3:1
TOTAL BERM DEPTH 2 FT
QCAP=299.4 CFS

LINE POND ENTRY DITCH WITH NON-WOVEN FILTER FABRIC, 6 INCHES OF #2 STONE WITH RIP-RAP ON TOP CONSISTING OF STONE WITH AN AVERAGE DIAMETER OF 2Ø INCHES FROM TOP OF BASIN ENBANKMENT TO BOTTOM

ACREAGE SUMMARY in ACRES

TOTAL DISTURBED	36.15 AC±

SURVEY DATUM: RHODE ISLAND STATE PLAN NADA83 FEET.

DRAWING INDEX

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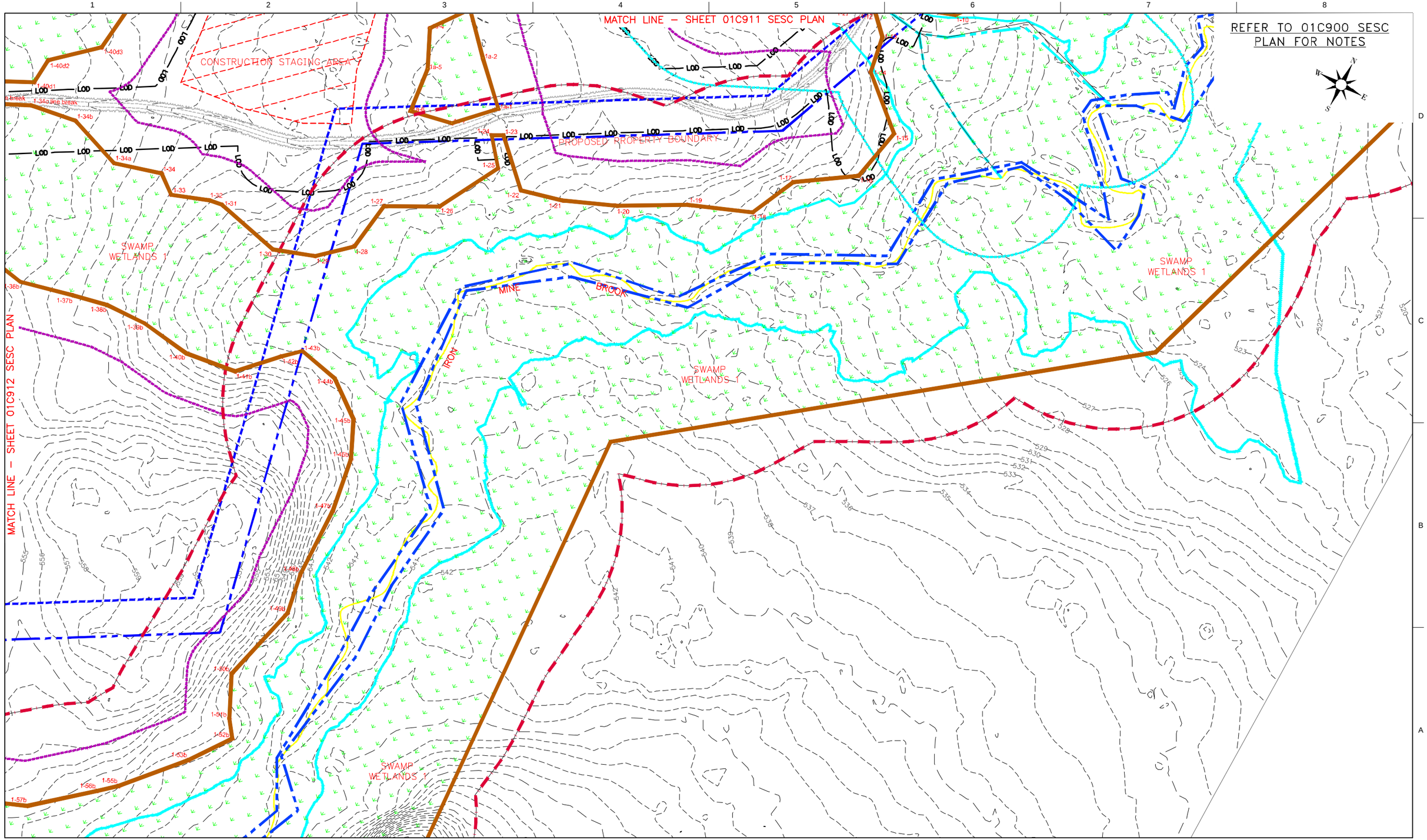
ALEXANDER DEUSON
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153-001, 153-002
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SESC PLAN PHASE II
SHEET 3 OF 4

FILENAME 01C912.dwg
SCALE 1" = 100'

SHEET 01C912



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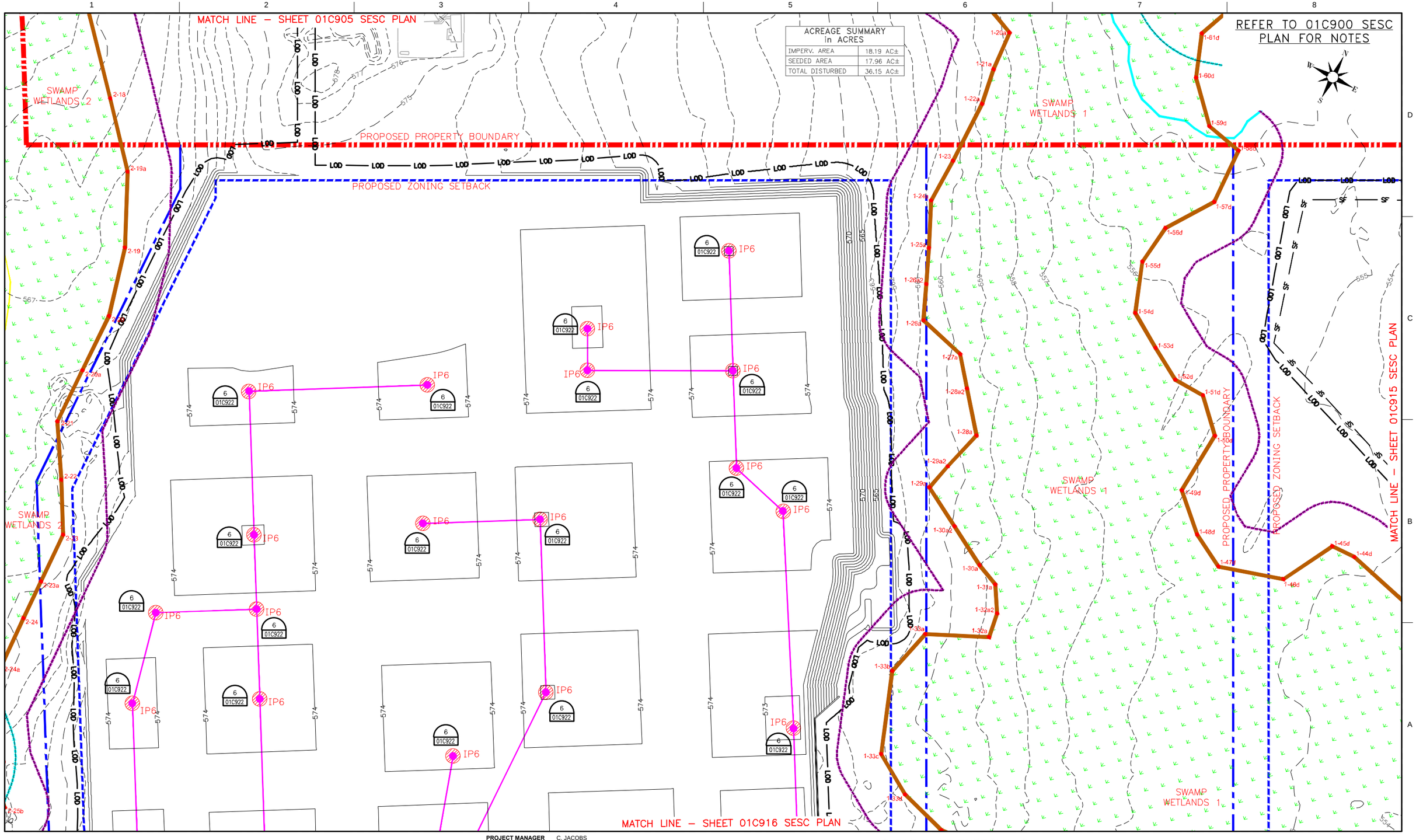
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153-001, 153-002
TOWN OF BURRILLVILLE,
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SESC PLAN PHASE II
SHEET 4 OF 4

FILENAME 01C913.dwg
SCALE 1" = 100'

SHEET
01C913



DRAWING INDEX

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY
		RI DEM OF JUNE 19, 2017
3	3/27/2017	REVISION
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PROJECT NUMBER 10021318

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135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

SESC PLAN PHASE III
SHEET 1 OF 4

FILENAME 01C914.dwg
SCALE 1" = 100'

SHEET 01C914

REFER TO 01C900 SESC PLAN FOR NOTES

MATCH LINE – SHEET 01C914 SESC PLAN

MATCH LINE – SHEET 01C917 SESC PLAN

FORESTED WETLAND 5

FORESTED WETLAND 6

SWAMP WETLANDS 1

TOPSOIL STOCKPILE AREA
INSTALL SILT FENCE AT TOE OF SLOPE, THIS FENCE DOES NOT SUPPLANT PERIMETER SILT FENCE ALONG PERIMETER LOD.

TIMBER MATTING

CONSTRUCTION STAGING AREA

HAZARDOUS MATERIALS STORAGE AREA

FUELING AREA

CONCRETE WASHOUT LOCATION

STORM WATER DETENTION

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

POTABLE WATER WELL

#80 #79 #78 #77 #76 #75 #74 #73

WALLUM LAKE ROAD

IRON MINE BROOK

LOD SF

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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153-001, 153-002
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SESC PLAN PHASE III
SHEET 2 OF 4

FILENAME 01C915.dwg
SCALE 1" = 100'

SHEET 01C915

MATCH LINE – SHEET 01C914 SESC PLAN

REFER TO 01C900 SESC PLAN FOR NOTES

MATCH LINE – SHEET 01C917 SESC PLAN

SWAMP WETLANDS 1

SWAMP WETLANDS 2

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
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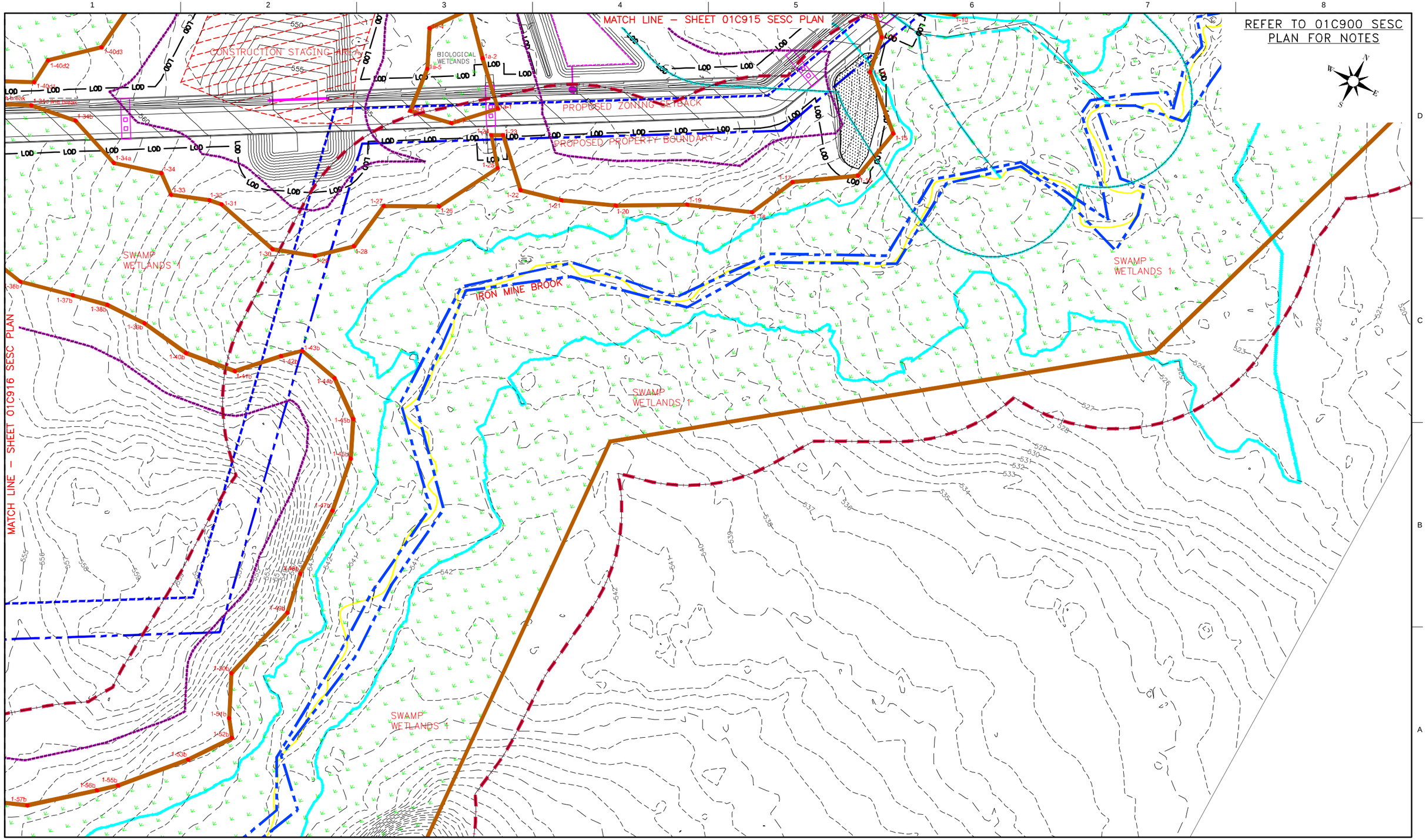
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4/1/17

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153-001, 153-002
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SESC PLAN PHASE III
SHEET 3 OF 4

FILENAME 01C916.dwg
SCALE 1" = 100'

SHEET
01C916



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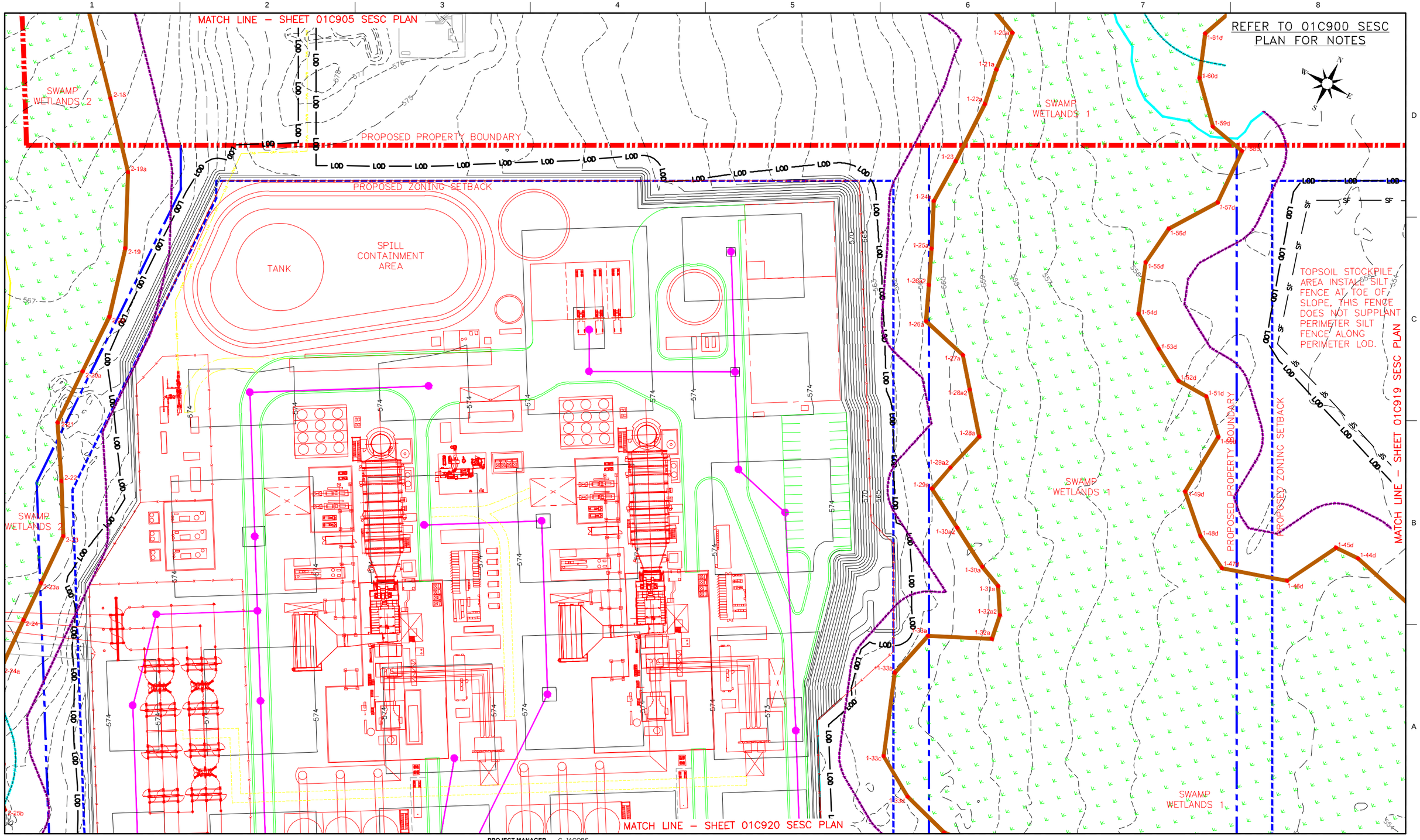
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SESC PLAN PHASE III
SHEET 4 OF 4

FILENAME	01C917.dwg
SCALE	1" = 100'
SHEET	01C917



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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY
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SESC PLAN PHASE IV
SHEET 1 OF 4

FILENAME	01C918.dwg
SCALE	1" = 100'
SHEET	01C918

REFER TO 01C900 SESC PLAN FOR NOTES

MATCH LINE – SHEET 01C918 SESC PLAN

MATCH LINE – SHEET 01C921 SESC PLAN

FORESTED WETLAND 5

FORESTED WETLAND 6

SWAMP WETLANDS 1

REGRADE AND REPLANT PER REFORESTATION PLAN, SHEETS 01C700 THRU 01C703

PROPOSED PROPERTY BOUNDARY

PROPOSED ZONING SETBACK

POTABLE WATER WELL

WALLUM LAKE ROAD

IRON MINE BROOK

#80 #79 #78 #77 #76 #75 #74 #73

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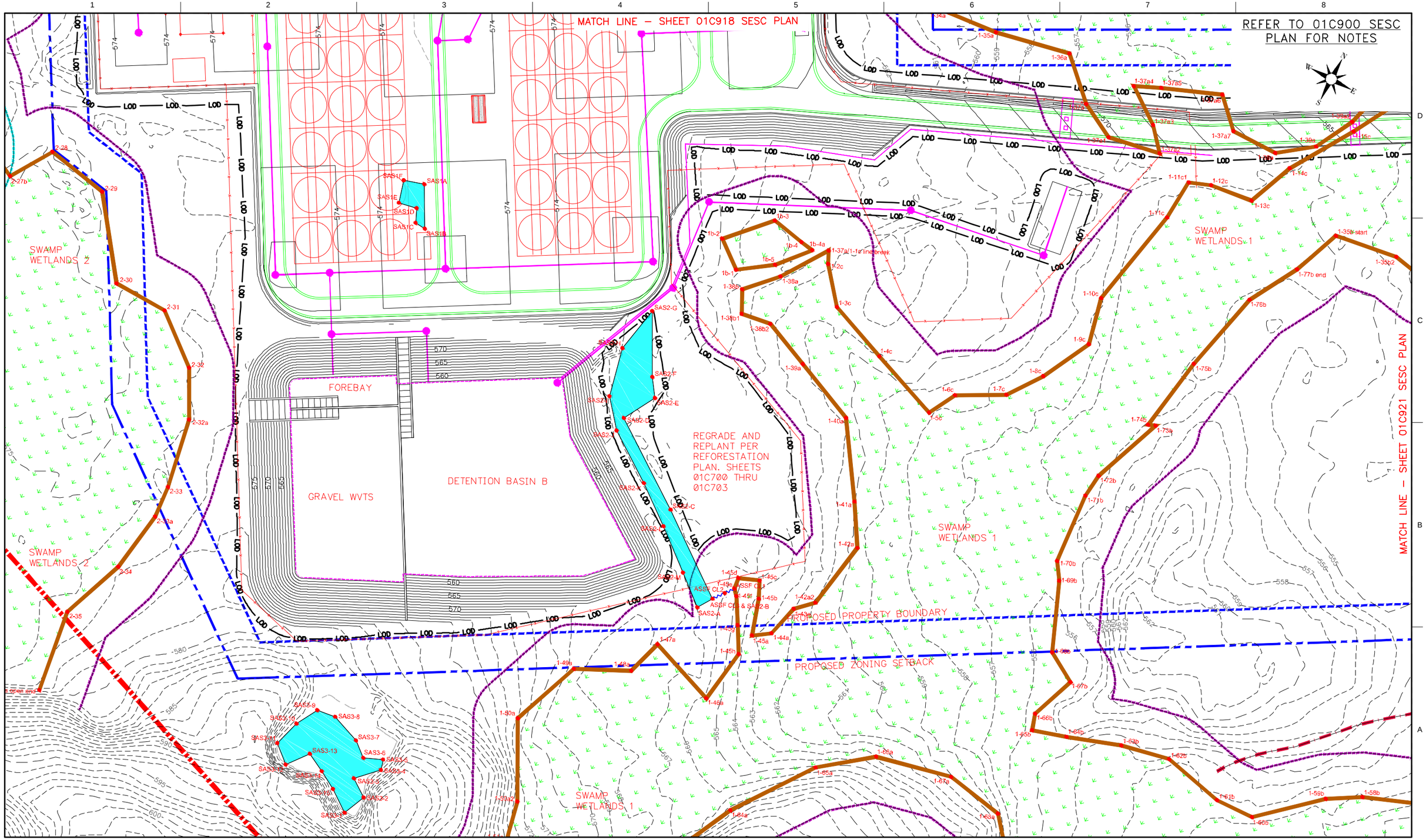
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SESC PLAN PHASE IV
SHEET 2 OF 4

FILENAME 01C919.dwg
SCALE 1" = 100'

SHEET 01C919



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SESC PLAN PHASE IV
SHEET 3 OF 4

FILENAME	01C920.dwg
SCALE	1" = 100'

SHEET 01C920

REFER TO 01C900 SESC PLAN FOR NOTES

CONSTRUCTION STAGING AREA

PROPOSED ZONING SETBACK

PROPOSED PROPERTY BOUNDARY

REGRADE AND REPLANT PER REFORESTATION PLAN. SHEETS 01C700 THRU 01C703

SWAMP WETLANDS 1

MINE BROOK

IRON

SWAMP WETLANDS

SWAMP WETLANDS 1

SWAMP WETLANDS 1

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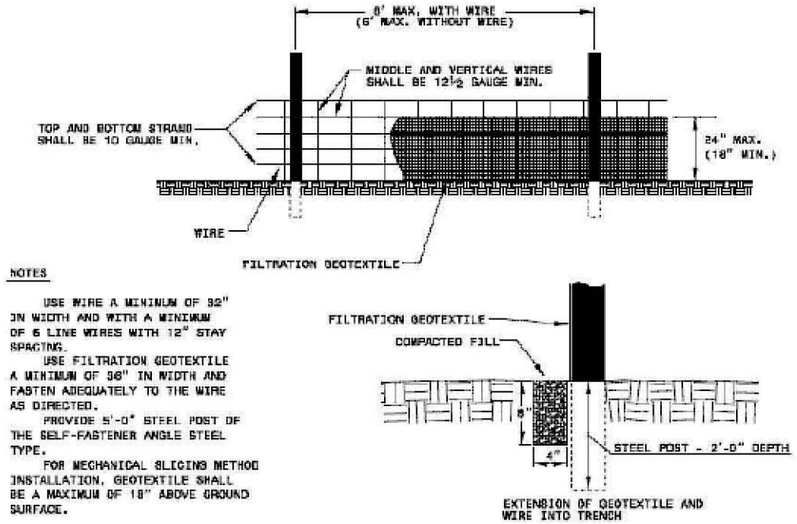
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SESC PLAN PHASE IV
SHEET 4 OF 4

FILENAME 01C921.dwg
SCALE 1" = 100'

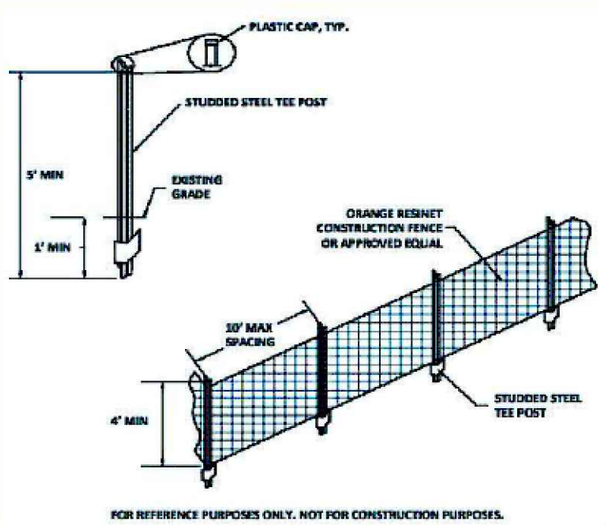
SHEET 01C921



SILT FENCE DETAIL

SCALE: NTS

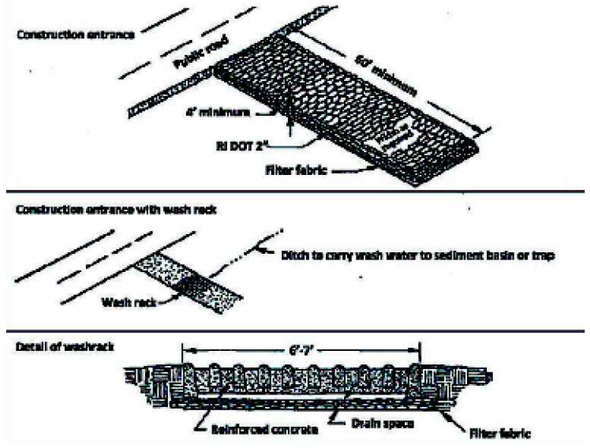
1 01C922



CONSTRUCTION FENCE DETAIL

SCALE: NTS

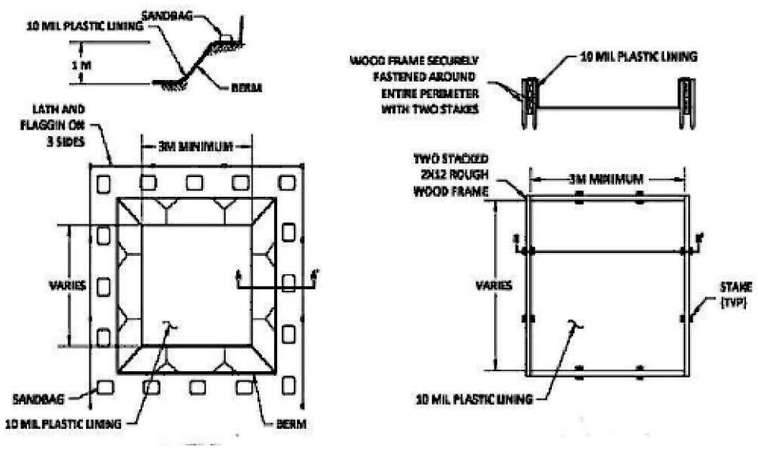
2 01C922



CONSTRUCTION ENTRANCE

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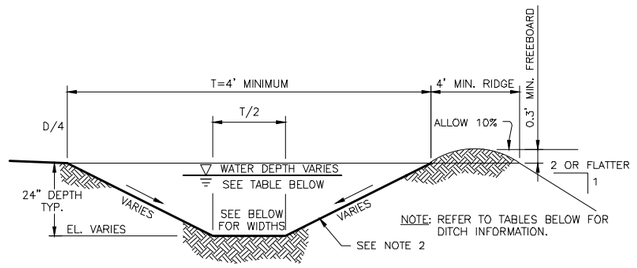
3 01C922



CONCRETE WASHOUT DETAIL

SCALE: NTS

4 01C922



NOTES:
1. MINIMUM DESIGN CAPACITY SHALL CONVEY A 10 YR.-24 HR. PEAK FLOW WITHOUT EROSION.
2. INSTALL EROSION CONTROL BLANKETS OR TURF REINFORCEMENT MATS AS NEEDED FOR EROSION RESISTANCE.

DIVERSION DITCH INFORMATION

DITCH NO.	BOTTOM WIDTH (FT.)	SIDE SLOPES	HEIGHT (FT.)	DITCH SLOPE	LINING	WATER DEPTH 10 YR. STORM	WATER DEPTH 100 YR. STORM
DB1	2	2 TO 1	2	0.5%	NONE	1.15'	1.53'
DB2	2	2 TO 1	2	0.7%	NONE	1.11'	1.48'
DB3	4	3 TO 1	2	21.9%	RIP-RAP	0.63'	0.87'
DB4	5	3 TO 1	2	0.5%	NONE	1.44'	1.95'
DB5	5	3 TO 1	2	1.0%	NONE	1.21'	1.65'
DB6	5	3 TO 1	2	10.0%	RIP-RAP	0.91'	1.25'

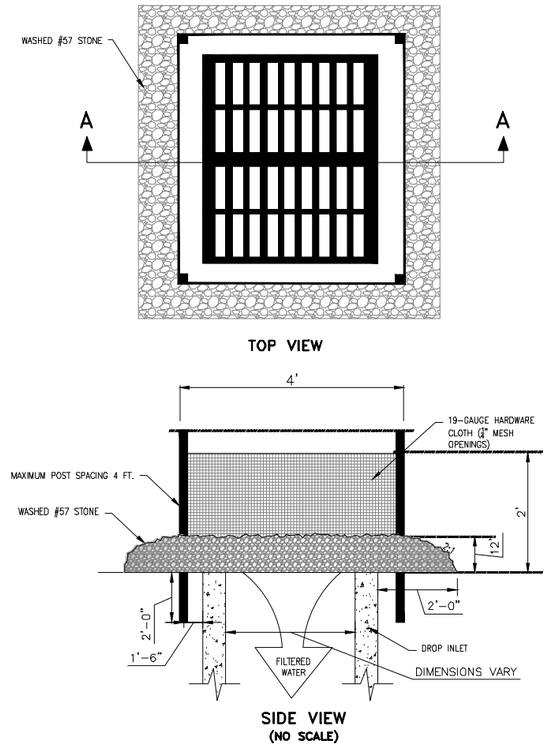
DIVERSION DITCH DETAIL

SCALE: NTS

5 01C922

GENERAL NOTES:

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. LAND SLOPE IMMEDIATELY SURROUNDING THIS DEVICE SHOULD NOT EXCEED 1 PERCENT.
3. SUPPORT STAKES FOR FABRIC SHALL BE A MINIMUM OF 3 FEET LONG, SPACED A MAXIMUM OF 4 FEET APART. THEY SHOULD BE DRIVEN CLOSE TO THE INLET SO ANY OVERFLOW DROPS INTO THE INLET AND NOT ON UNPROTECTED SOIL.
4. SURROUND THE POSTS WITH REINFORCED FILTER FABRIC. SECURE THE FABRIC TO THE POSTS AT THE TOP, MIDDLE, AND BOTTOM.
5. PLACE CLEAN GRAVEL, #57 STONE ON A 2:1 SLOPE WITH A HEIGHT OF 12 INCHES AROUND THE FABRIC, AND SMOOTH TO AN EVEN GRADE.
6. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.



FABRIC DROP INLET PROTECTION

SCALE: NTS

6 01C922

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY
		RI DEM OF JUNE 19, 2017
3	3/27/2017	REVISION
2	2/17/2017	REVISION
1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

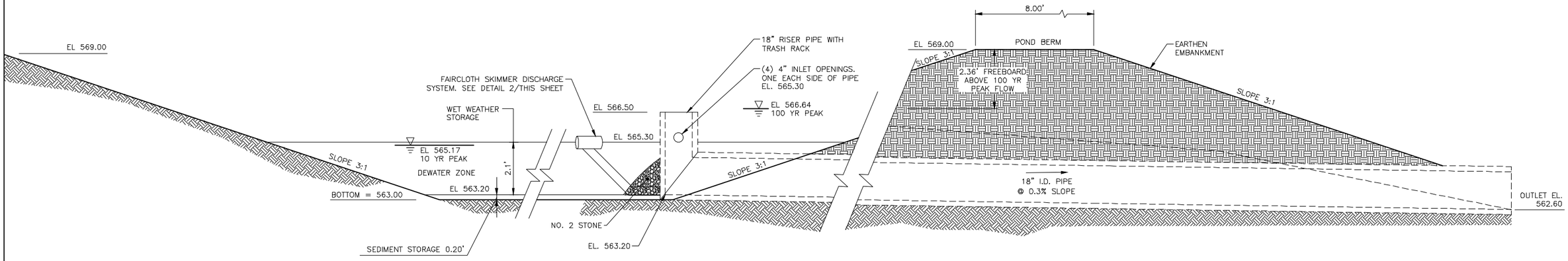
ALEXANDER DEUSON
No. 0011618
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

SESC DETAILS

FILENAME 01C922.dwg
SCALE NTS

SHEET 01C922



BASIN A DETAIL

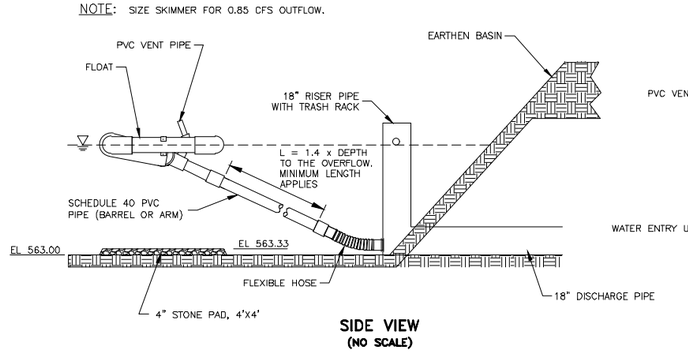
SCALE: 1/4"=1'-0"

1
01C923

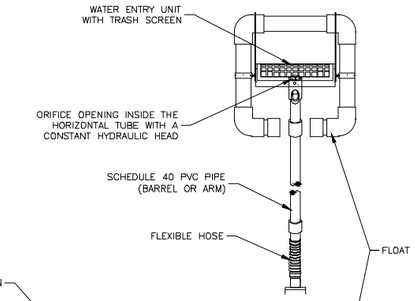
GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.

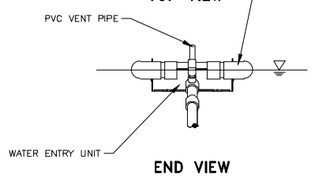
NOTE: SIZE SKIMMER FOR 0.85 CFS OUTFLOW.



SIDE VIEW
(NO SCALE)



TOP VIEW



END VIEW

FAIRCLOTH® SKIMMER DISCHARGE SYSTEM WITH EMBANKMENT – BASIN A

SCALE: NTS

2
01C923

ISSUE	DATE	DESCRIPTION
4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY RI DEM OF JUNE 19, 2017
3	3/27/2017	REVISION
2	2/17/2017	REVISION
1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

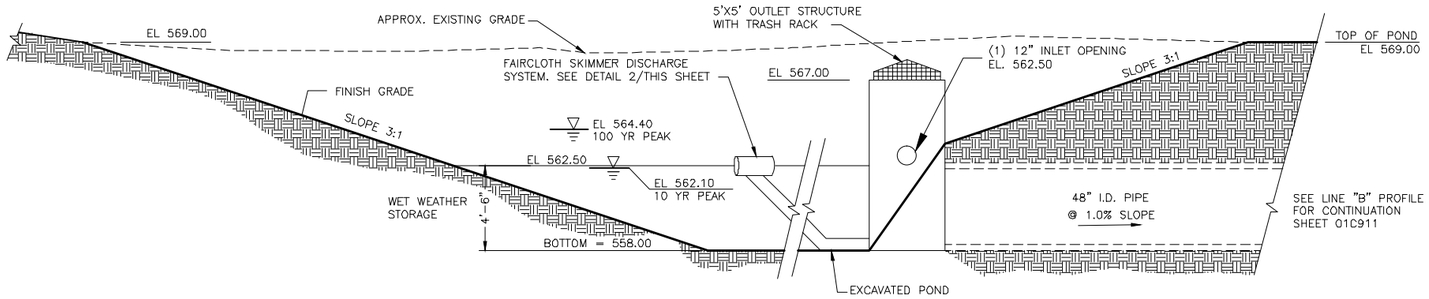
ALEXANDER DEUSON
No. 0011618
4/1/17
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

SESC DETAILS

FILENAME 01C923.dwg
SCALE AS SHOWN

SHEET
01C923



BASIN B DETAIL

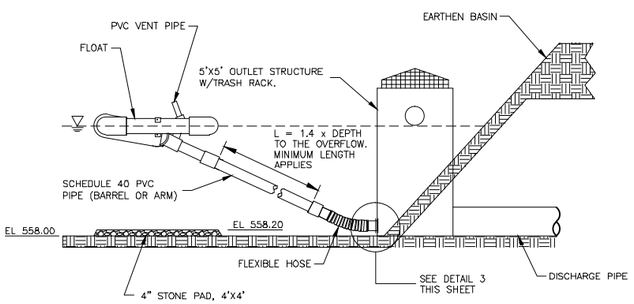
SCALE: 1/8"=1'-0"

1 / 01C924

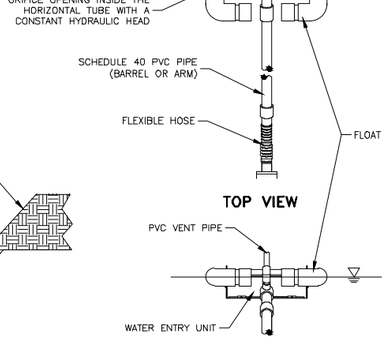
GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.

NOTE: SIZE SKIMMER FOR 0.85 CFS OUTFLOW.



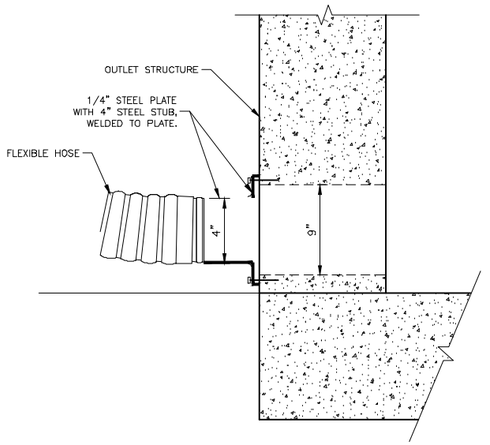
SIDE VIEW
(NO SCALE)



FAIRCLOTH® SKIMMER DISCHARGE SYSTEM WITH EMBANKMENT – BASIN B

SCALE: NTS

2 / 01C924



SKIMMER CONNECTION DETAIL

SCALE: NTS

3 / 01C924

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4	7/19/2017	REVISED PER TECHNICAL REVIEW COMMENTS BY
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1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

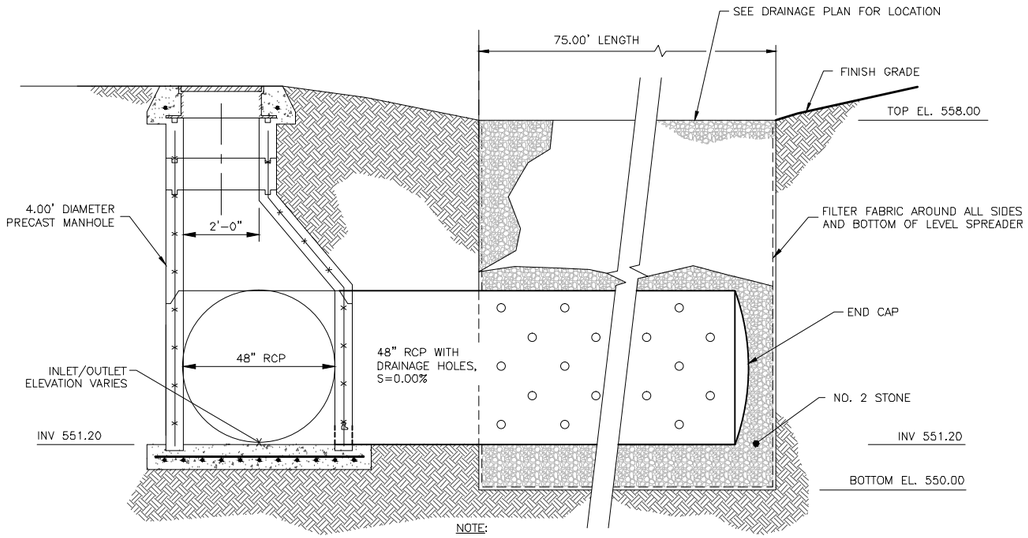
PROJECT NUMBER 10021318

ALEXANDER DEUSON No. 0011618 REGISTERED PROFESSIONAL ENGINEER CIVIL 4/1/17

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

SESC DETAILS

FILENAME 01C924.dwg
SCALE AS SHOWN
SHEET 01C924



NOTE:

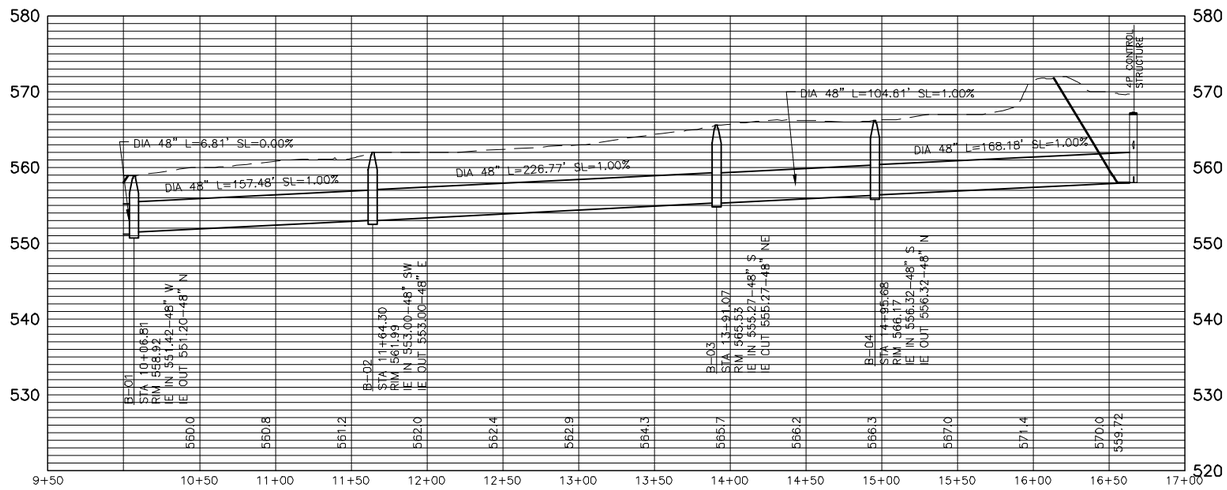
1) 48" I.D. PERFORATED UNDERDRAIN WITH FILTER SOCK. LAY PIPE WITH PERFORATIONS ON BOTTOM OF PIPE AND CAP END OF PIPE. LAY UNDERDRAIN AT 0.00% SLOPE FROM MANHOLE INVERT AND THRU BOTTOM OF LEVEL SPREADER.

2) WATER DEPTH MEASURED FROM TOP OF LEVEL SPREADER = EL 558.00.

STILLING WELL–LEVEL SPREADER DETAIL (18P)

SCALE: 1/4"=1'-0"

1 / 01C925



PROFILE OF LINE B

SCALE: HOR– 1"=100' VER– 1" = 20'

2 / 01C925

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PROJECT MANAGER C. JACOBS

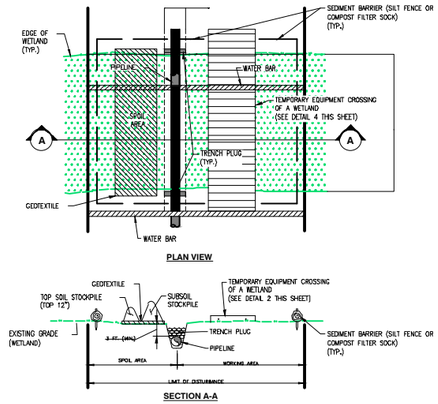
PROJECT NUMBER 10021318

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

SESC DETAILS

FILENAME 01C925.dwg
SCALE AS SHOWN

SHEET 01C925



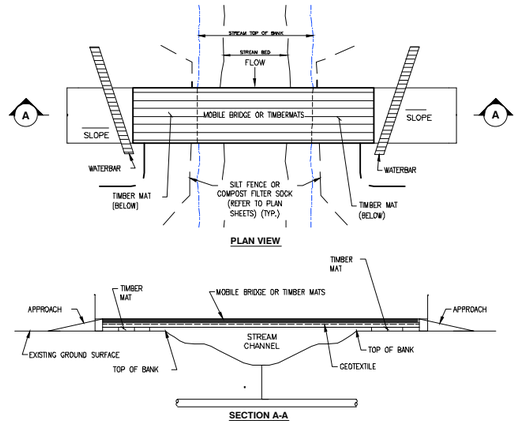
NOTES:

1. INSTALL COMPOST FILTER SOCK ACROSS THE RIGHT-OF-WAY IMMEDIATELY UP-SLOPE OF THE WETLAND BOUNDARY, AT THE EDGE OF THE LIMIT OF DISTURBANCE AND, AS NECESSARY, AROUND SOIL STOCKPILES.
2. PLACE A GEOTEXTILE UNDERLAYMENT IN AREAS WHERE WOOD MATS WILL BE PLACED FOR EQUIPMENT CROSSING, AND IN SPOIL AREAS.
3. INSTALL WOOD MATS AS NEEDED TO MINIMIZE DISTURBANCE/COMPACTION OF THE WETLAND.
4. INSTALL TRENCH PLUGS ON EACH END OF THE TRENCH TO PREVENT THE TRENCH FROM DRAINING WETLAND OR CHANGING HYDROLOGY.
5. WHEN EXCAVATING TRENCH IN WETLAND, EXCAVATE WETLAND TOPSOIL (TOP 12 INCHES) AND STOCKPILE SEPARATELY FROM SUBSOIL. DURING BACKFILLING OF TRENCH, REPLACE TOPSOIL IN TOP OF TRENCH TO RESTORE PRE-CONSTRUCTION SOIL SEQUENCE. STOCKPILE SOIL ONTO GEOTEXTILE IN THE SPOIL AREA NEXT TO THE TRENCH. (UNLESS THERE IS STANDING WATER OR THE SOIL IS TOO SATURATED TO SEGREGATE.)
6. UPON RESTORATION REMOVE GEOTEXTILE, WOOD MATS, AND RESTORE WETLAND TO EXISTING GRADE. WATERBARS WITHIN THE RIGHT-OF-WAY SHALL BE LEFT IN PLACE.

PIPELINE AND EQUIPMENT CROSSING OF WETLAND

NOT TO SCALE

1A 01C806



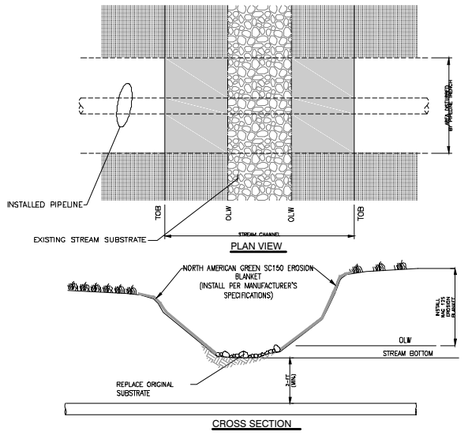
NOTES:

1. INSTALL WATERBARS AT APPROACHES TO STREAM CROSSING, AND COMPOST FILTER SOCK/SILT FENCE ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATERBARS.
2. MAINTAIN SURFACE OF TEMPORARY BRIDGE TO PREVENT SOIL DISCHARGES TO STREAM. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6-INCHES ABOVE ORIGINAL GRADE.
3. GEOTEXTILE SHALL BE ATTACHED TO THE UNDER SIDE OF THE MOBILE BRIDGE.

TEMPORARY EQUIPMENT CROSSING OF A STREAM – MOBILE BRIDGE

NOT TO SCALE

1B 01C806



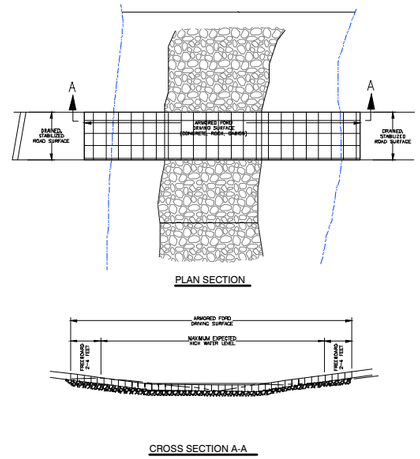
NOTES:

1. PRIOR TO WORKING IN STREAM CHANNEL, INSTALL ALL EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES SPECIFIED IN EROSION AND SEDIMENTATION PLAN AND DIVERT STREAM FLOW AROUND WORK AREA.
2. WHEN EXCAVATING PIPELINE TRENCH ACROSS STREAM, SEGREGATE AND SEPARATELY STOCKPILE STREAM SUBSTRATE.
3. AFTER INSTALLING PIPELINE IN TRENCH, REPLACE STOCKPILED SUBSTRATE ON SURFACE OF BOTTOM OF STREAM CHANNEL BELOW THE ORDINARY LOW WATER (OLW) LEVEL.
4. INSTALL NORTH AMERICAN GREEN S150 BLANKET ON STREAM BANKS FROM ORDINARY LOW WATER LEVEL TO TOP OF THE BANK, COVERING DISTURBED PORTIONS OF THE STREAM BANK. REFER TO E&S PLANS FOR STAPLE PATTERN.

STREAM CHANNEL RESTORATION

NOT TO SCALE

1C 01C806



NOTES:

1. PRIOR TO WORKING IN STREAM CHANNEL, INSTALL ALL EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES SPECIFIED IN EROSION AND SEDIMENTATION PLAN AND DIVERT STREAM FLOW AROUND WORK AREA.
2. AT THE END OF EVERY WORK DAY AND BEFORE RAINFALL EVENTS, 12IN SILT SOCK SHALL BE PLACED ACROSS ACCESS ROAD UNTIL THE SITE HAS BEEN SUFFICIENTLY STABILIZED.

STREAM – LOW WATER CROSSING

NOT TO SCALE

1D 01C806

TIMBER MATTING

NOT TO SCALE

1 01C926

ISSUE	DATE	DESCRIPTION
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1	8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 10021318

ALEXANDER DEUSON No. 0011618 REGISTERED PROFESSIONAL ENGINEER CIVIL

CLEAR RIVER ENERGY LLC
CLEAR RIVER ENERGY CENTER
WALLUM LAKE ROAD LOT NO.
135-002, 137-002, 137-003, 137-021,
153-001, 153-002
TOWN OF BURRILLVILLE,
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED SITE SWPP DETAILS

FILENAME 01C926.dwg
SCALE NOT TO SCALE

SHEET 01C926

The Narragansett Electric Company d/b/a National Grid
Clear River Energy, LLC

Burrillville Interconnection Project
Burrillville, Rhode Island

RIDEM Application No. 17-0079

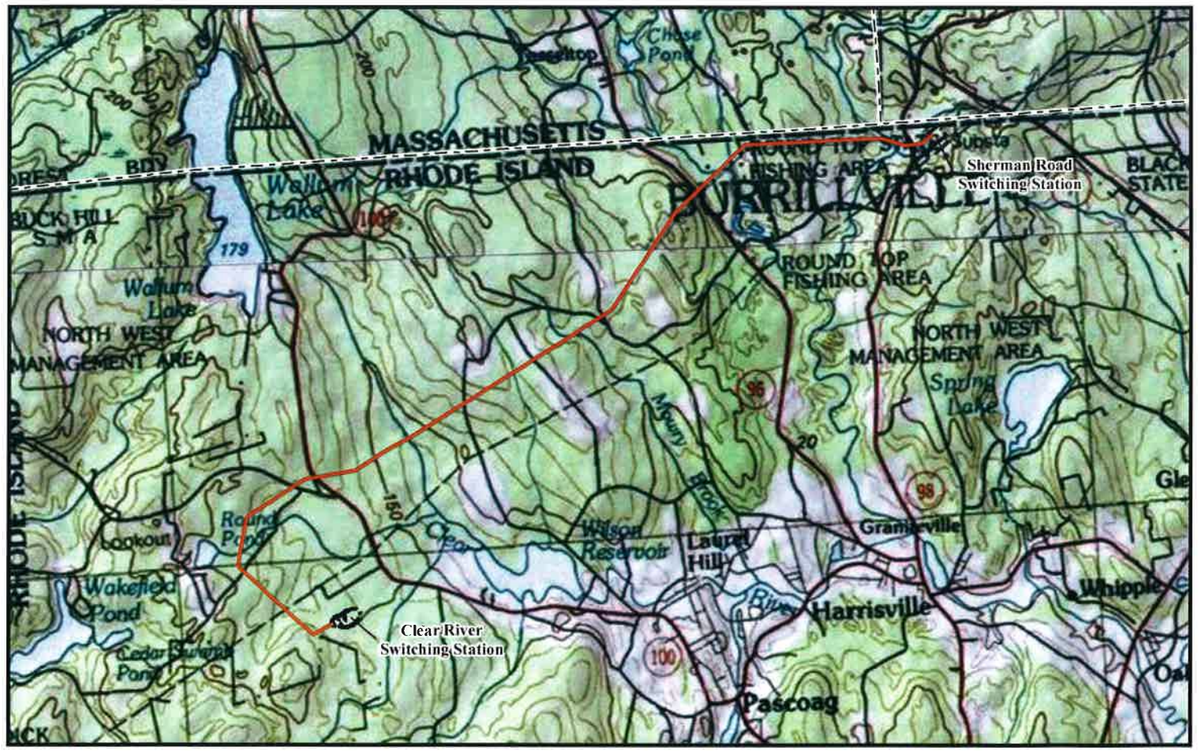
PAMELA S. KELLEY
RHODE ISLAND
No. 8879
9/15/17
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

JOSEPH M. DROUIN
No. 9008
REGISTERED PROFESSIONAL ENGINEER CIVIL
09/15/17

POWER Engineers, Inc
100 John L. Dietsch Square
North Attleboro, MA 02763

Owner/Applicant:
The Narragansett Electric Company d/b/a National Grid
280 Melrose Street
Providence, RI 02907

Clear River Energy, LLC
One South Wacker Drive, Suite 1800
Chicago, IL 60606



1 " = 1 mile

This document has been reviewed for Critical Energy Infrastructure Information (CEII). [February 2017]

POWER ENGINEERS

Plans

Issued for Permitting Not for Construction
Date Issued: March 30, 2017
Latest Issue: September 15, 2017

Index

No.	Drawing Title	Latest Issue
1	Title Sheet and Notes	09/15/2017
2	Erosion and Sediment Control Notes	08/28/2017
3 to 5	Cross Sections	03/30/2017
6	Key Sheet	08/30/2017
7 to 33	Burrillville Interconnection Plan	03/30/2017
34 to 63	Engineering Plan Set	03/27/2017

Plan Set

Notes

1. Planimetric Base Mapping - Planimetric base mapping was developed by James W. Sewall Company from April 15, 2007, 1:1200 scale color aerial photography. Scanned aerial photography was utilized to perform aerotriangulation and develop exterior orientation parameters, which were then used in subsequent photogrammetric compilation and orthorectification processes.

2. Contour Data - Contour data was acquired from RIGIS (Rhode Island Geographic Information System), 1:5000 scale two-foot contour line data dated 9/2013. Nominal point spacing (NPS) <= 1m, Vertical RMSE 15cm, Fundamental vertical accuracy 29.4cm @ 95% confidence level (open terrain).

3. Aerial Mapping - Aerial mapping utilized 1:6000 scale color imagery acquired from Google Earth 5/11/2016 and 8/23/2016.

4. Wetland Delineation on TNEC ROW performed by AECOM between May 2007 and November 2007, and updated in 2011 for the Interstate Reliability Project. RIDEM Permit to Alter Freshwater Wetlands, Application No. 12-0117 and RIPDES No. RIR 100950, issued October 9, 2013, revised April 14, 2014. Updates to the wetland delineation and additional field surveys performed by POWER Engineers on 8/2/2016, 8/5/2016, 8/30/2016, 9/1/2016, and 3/9/2017.

5. Wetland Delineation for CREC and CREC ROW performed by ESS Group between fall of 2014 and spring of 2015. RIDEM biologist verified wetland edges via RIDEM Application No. 15-0239 (January 28, 2016).

6. Wetland flags were located in the field with a Trimble GeoXT or Geo XH GPS receivers. Field data was postprocessed, differentially corrected, and back-checked on a series of 1:2000 scale aerial photo base maps.

7. Existing pole structure numbers and right-of-way boundary location is based on the following transmission line sheets (T-sheets) provided by Narragansett Electric Company: H300078-5 Rev 5 issued 6/10/16, T-4499 Rev. 9 issued 6/10/16, T-4498 Rev. 7 issued 6/10/16, T-4497 Rev. 8 issued 6/10/16, T-4496 Rev. 7 issued 6/10/16, T-4495 Rev. 7 issued 6/10/16, T-4604 Rev. 6 issued 6/10/16, T-5603 Rev. 6 issued 6/10/16, T-4602 Rev. 5 issued 6/10/16.

8. Limits of ROW shown are approximate.

9. Rhode Island PE Seal 9008 is applicable only to the proposed transmission structure locations shown.

10. Proposed transmission structure locations are approximate.

11. Rhode Island PE Seal 8879 is applicable only to the proposed ESC measures.

NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. D/B/A NATIONAL GRID & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS TITLE SHEET AND NOTES BURRILLVILLE, RHODE ISLAND	
DATE: 9/15/2017	DRAWN: TDH	142704	REV 1 Updated Erosion and Sediment Control Details	SHEET 01 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DD\GIS\Apps\RIDEM_Submission\RIDEM_1_Title_Page.mxd

Erosion and Sediment Control General Notes:

1. Areas outside the limit of work disturbed by the contractor's operations shall be restored by the contractor to their original condition at the contractor's expense, to the satisfaction of the National Grid Environmental Engineer.

2. Contractor shall be solely responsible for site security and job safety. All construction activity shall be in accordance with OSHA regulations and local and state requirements.

3. All materials are to be disposed of per applicable laws and regulations.

4. Dewatering activities shall occur outside of wetlands and watercourses with approved dewatering controls such as filter bags, filter socks, weir tanks or dewatering basins. Where this is not possible, dewatering effluent shall be transported offsite.

5. All work shall conform to and be in compliance with the individual permit issued by the U.S. Army Corp of Engineers for this project.

6. RIDEM file number signage and a copy of the completed RIPDES NOI as submitted to the RIDEM shall be conspicuously posted in agreed upon locations in each municipality prior to commencing work. Signage locations shall be determined in coordination with the National Grid Environmental Scientist.

7. All wetland and waterways shall be flagged prior to commencing work activities at the site.

8. Maintain undisturbed vegetated buffers between work areas and wetlands/waterways wherever possible.

9. Limit removal of, and damage to, existing vegetation wherever possible.

10. Avoid unnecessary disturbance of site soils wherever possible.

11. Upon completion of construction in a given location (structure, work area, etc.), disturbed or exposed soils shall be immediately stabilized with mulch, blankets or similar temporary erosion and sediment control practice adequate for providing temporary stabilization while vegetation becomes established.

12. Where temporary erosion control, or permanent seed mixes are placed, appropriate temporary measures shall be taken to prevent soil erosion while seed is germinating.

13. Mulch shall not be used as a temporary erosion control practice in drainageways. Mulch placement on steep slopes (>3:1) shall be limited to hydraulic mulch or rolled erosion control products (e.g., erosion control blankets, etc.).

14. Seeding shall occur only during specified planting seasons unless otherwise directed by the National Grid Environmental Scientist.

15. Seed mixes shall be approved by the National Grid Environmental Scientist prior to placement. Seed mixes shall be appropriate for the site conditions (e.g. wetland, upland, etc.).

16. Low growing, woody plant species and root systems shall be retained in locations where work pads and access roads are not proposed. Care shall be taken to protect such plants and their root systems from damage and compaction.

17. Perimeter sediment control locations shown on the plans contained herein are approximations, and may change depending on field conditions at the time of construction or as directed by the National Grid Environmental Scientist. Perimeter sediment controls shall not be installed directly in wetlands without prior written approval from the National Grid Environmental Scientist.

18. Where resources areas occur immediately adjacent to and down gradient from the work, sediment perimeter controls (e.g. straw wattles, compost filter socks, excelsior sediment logs, straw bales, reinforced silt fence, etc.) shall be placed between the resource area and the work zone prior to the commencement of work. Perimeter controls shall be installed as close to the area of disturbance as possible. Perimeter control selection should occur in coordination with the National Grid Environmental Scientist.

19. Perimeter sediment controls shall be placed along the down slope edge of unpaved access roads as indicated on the plans wherever wetlands resource areas are closer than 50' to the edge of road and/or adjacent to slopes exceeding a grade of 3:1, or as directed by the National Grid Environmental Scientist.

20. If required, alternatives to silt fence and/or straw bales (e.g., compost socks, wattles, excelsior sediment logs, etc.) are preferred within wetlands adjacent to the edge of the construction pad. Care should be taken to avoid disturbing wetland soils outside of limits of the construction pad and/or area while installing perimeter controls (refer to general note 17).

21. Mud box/drill cutting box locations, dewatering areas, concrete washout areas, and temporary soil stockpile areas shown on the plan indicate only that such devices and practices may be required and do not approximate locations. Final locations for such devices and practices will be determined during construction as field condition require and allow. Dewatering may be required in additional locations depending on field conditions during construction.

22. Where water bars are installed on improved access roads, they should be installed such that runoff is directed to a level spreader, stabilized outlet, or other feature designed to prevent concentrated flows from eroding adjacent locations. Wherever possible, runoff should be directed away from wetlands, waterways, and waterbodies.

23. Install inlet protection if catch basins present.

24. When swamp mats are used in locations where excavations/mud boxes are required for structure installation, the swamp mat surface shall be adequately protected to prevent siltation through the swamp mats to wetlands below.

25. Where necessary, or as directed by the National Grid Environmental Scientist, stone transition ramps shall be installed in association with swamp mats.

26. All erosion and sediment controls, devices, and practices shall be properly maintained, replaced, supplemented, or modified as necessary throughout the life of the project in order to minimize soil erosion and to prevent sediment from being deposited in any wetlands.

27. The Contractor shall prepare and follow an approved Snow Management Plan and a Wet Soil Management Plan.

28. Soil stockpiles shall be contained within approved construction work pads or designated stockpiling areas.

29. Where possible, soil stockpiles shall not exceed 5 feet high in height. Soil stockpiles shall be covered with matting, tarp, or other similar material and weights at the end of each construction day if necessary. Install perimeter controls around all stockpiles in close proximity to wetlands and buffers.

30. No vehicle or equipment refueling shall occur within 100 feet of a wetland, waterbody, or waterway.

31. Stone, soil, or other fill materials shall not be placed in any wetlands, waterbodies, or waterways.

32. Where work will occur in wetlands, or where waterway crossing are proposed, swamp mats, or swamp mat bridges shall be installed respectively prior to commencing construction.

33. Upon permanent stabilization of all disturbed soils, temporary erosion and/or sediment controls and swamp mats shall be removed from, and disposed of properly, off-site.

34. Unless otherwise directed, all erosion and sediment controls shall be installed in accordance with, and work shall conform to National Grid's Environmental Guidance-303.

35. Any potentially impacted soils or water encountered during construction activities shall be managed in accordance with applicable local, state and federal regulations.

36. TNEC and/or its Contractors will install soil erosion and sediment controls approved under latest Rhode Island Soil Erosion and Sedimentation Control Handbook (RISESCH) and current version of National Grid's Environmental Guidance Document (EG-303), Access, Maintenance and Construction Best Management Practices. Construction-phase best management practices (BMPs) may include straw bales or wattles (not hay), in addition to other BMPs, such as silt fence, filter socks, etc. approved under the RISESCH and National Grid's EG-303.

Erosion and Sediment Control Maintenance During Construction:

1. All Erosion and sediment control measures shall be inspected for stability and proper function after every runoff producing storm event, or at least weekly. All necessary repairs shall be made immediately.

2. Trapped sediment shall be removed from behind perimeter control devices before the deposits reach 50 percent (1/2) of the above-ground height of the device, unless otherwise noted, or according to manufacturer's specifications.

3. Sediment shall be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50 percent (50%).

4. In disturbed areas where adequate seed stock is not present, or where topsoil has been displaced, soils shall be prepared in a manner suitable for supporting plant growth prior to placing seed, mulch, and or other erosion control practices appropriate for the site.

PAMELA S. KELLEY
No. 8879
9/14/17
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

Invenergy

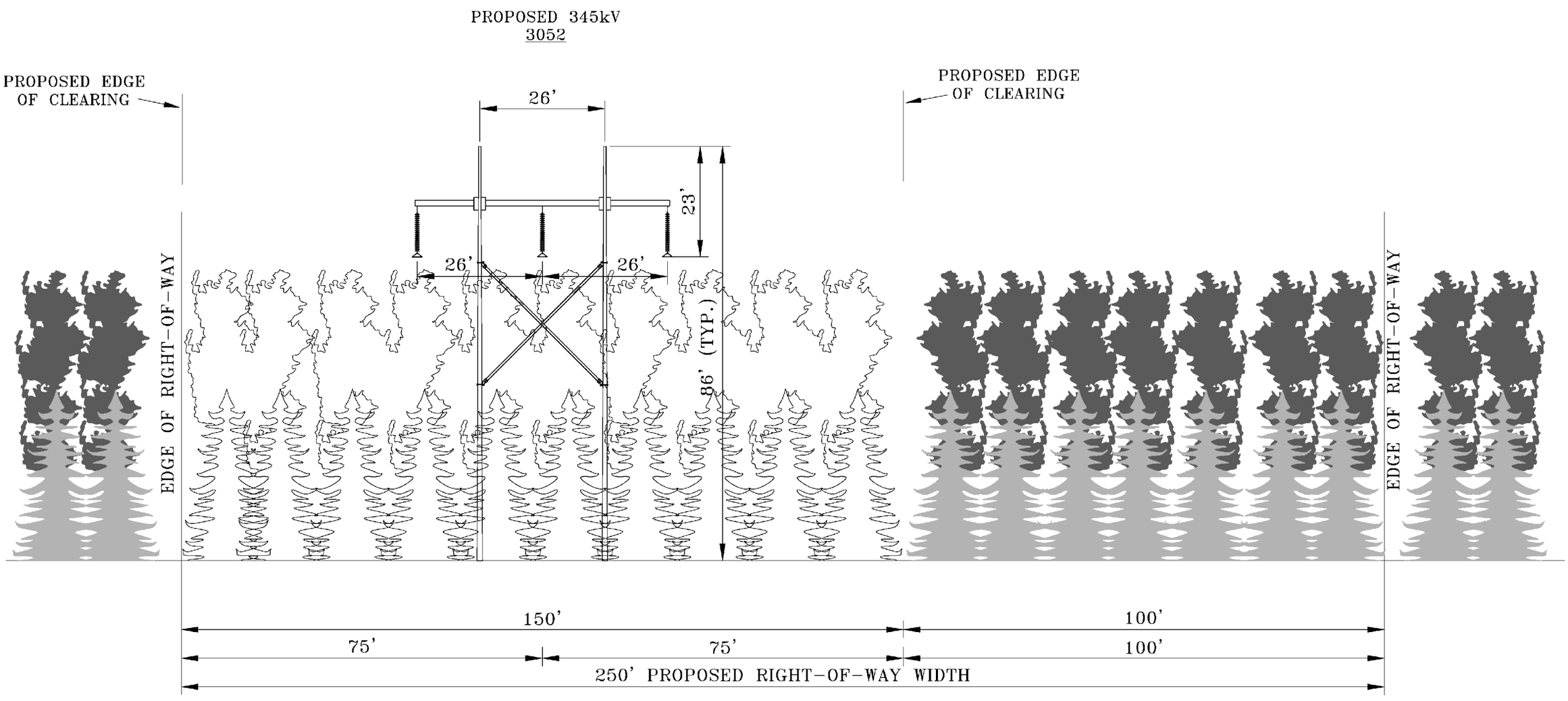
nationalgrid

POWER ENGINEERS

NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS EROSION AND SEDIMENT CONTROL GENERAL NOTES BURRILLVILLE, RHODE ISLAND	
DATE: 8/28/2017	DRAWN: TDH	142704	FIGURE T-1	SHEET 02 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DD\GIS\Apps\RIDEM_Submission\RIDEM_2_Erosion_Controls_Page.mxd



View Facing Southeast Toward CREC

Segment 1 CREC ROW
Approximately 0.8 Mile

Notes:
-Proposed structure types and heights shown are typical. Final structure will vary.
-Existing ROW limits and proposed limits of clearing shown are approximate.

NOT FOR CONSTRUCTION

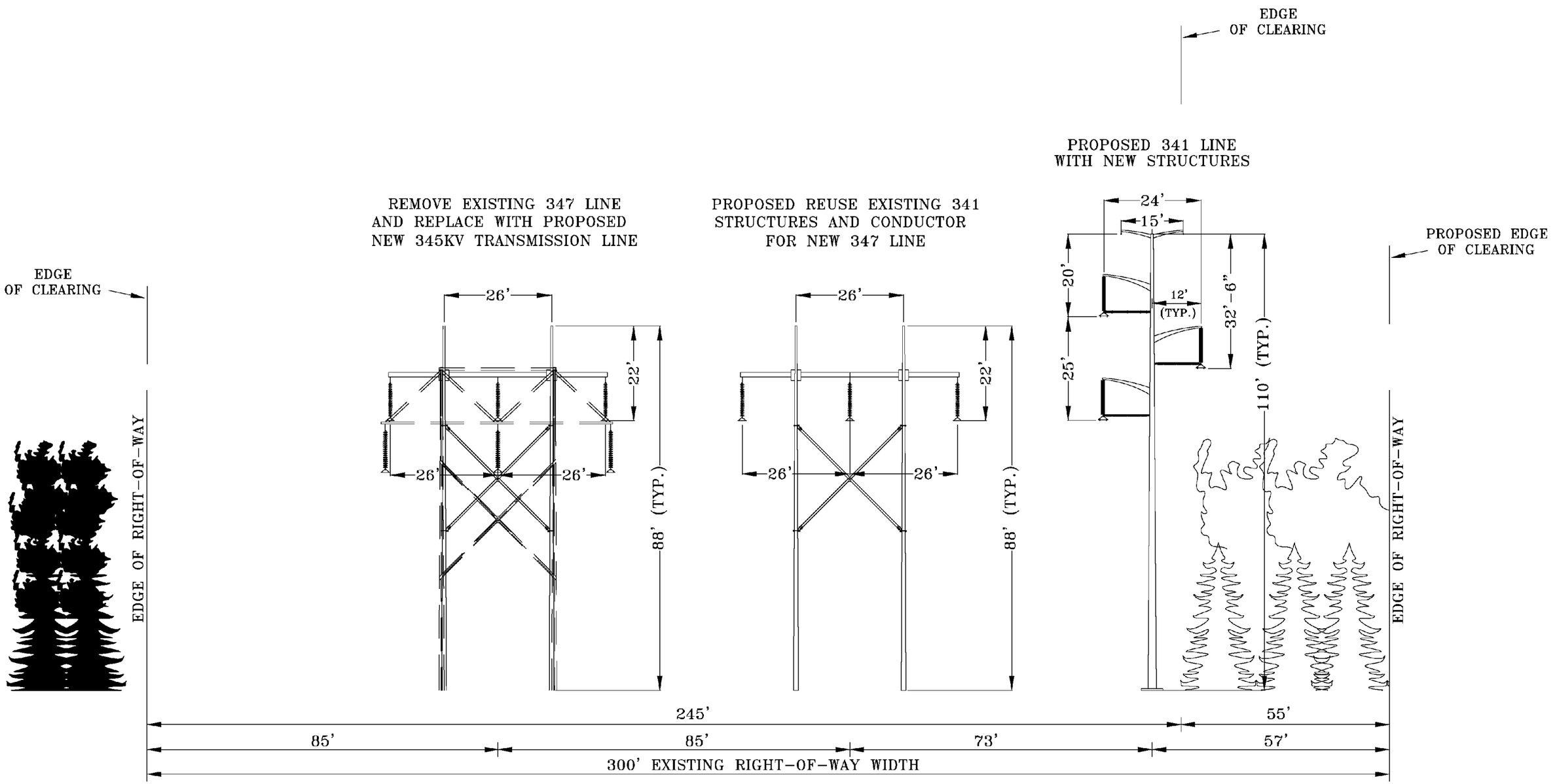
Invenergy

nationalgrid

POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS TYPICAL RIGHT OF WAY CROSS SECTION BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-2	SHEET 03 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DD\GIS\Apps\RIDEM_Submission\RIDEM_3_Greenfield_Cross_Section.mxd



View Facing Southwest

Segment 2 TNEC ROW to 0.19 Mile
West of the Clear River
Approximately 1.6 Miles

Notes:
-Proposed structure types and heights shown are typical. Final structure will vary.
-Existing ROW limits and proposed limits of clearing shown are approximate.

NOT FOR CONSTRUCTION

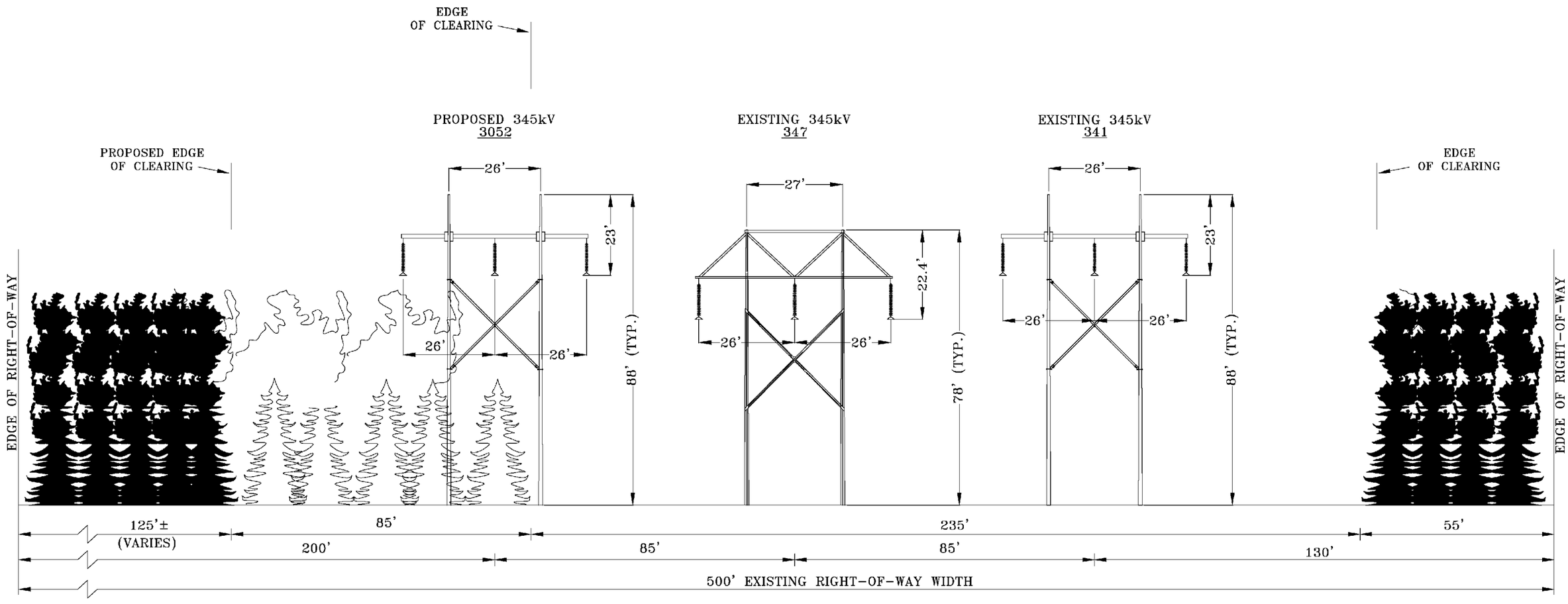
Invenergy

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS TYPICAL RIGHT OF WAY CROSS SECTION BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-2	SHEET 04 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DD\GIS\Apps\RIDEM_Submission\RIDEM_4_Replace_Existing_Line.mxd



View Facing Southwest

Segment 3 0.19 Mile West of the Clear River to
Sherman Road Switching Station
Approximately 4.4 Miles

Notes:
-Proposed structure types and heights shown are typical. Final structure will vary.
-Existing ROW limits and proposed limits of clearing shown are approximate.

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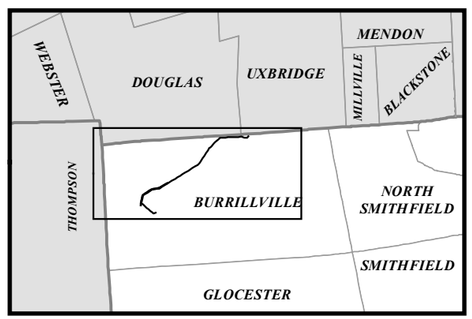
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS TYPICAL RIGHT OF WAY CROSS SECTION BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-2	SHEET 05 OF 63

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DOUGLAS
UXBRIDGE
MASSACHUSETTS
RHODE ISLAND
CONNECTICUT
BURRILLVILLE
Harrisville
Oakland
Wallum Lake
Badger Mountain
Wilson Reservoir
White Mill Park
Spring Lake
Hill Rd
East Wallum Lake Rd
Wallum Lake Rd
Buck Hill Rd
Stone Barn Rd
Town Farm Rd
Round Top Rd
Collins Taft Rd
Sherman Farm Rd
Brook Rd
W Ironstone Rd
Douglas Pike
N Shore Dr
Spring Lake Rd
Chapel St
East Ave
Whipple Ave
Central St
Eagle Peak Rd
Church St
Pascoag Main St
Smith Rd
Whipple Rd
North Rd
Hill Rd
Donahue Rd
Mowry Brook
Dry Arm Brook
Iron Mine Brook
Nipmic River
Clear River
Pascoag River
Cherry Farm Rd
Black Hut Rd
Herring Brook
Joslin Rd
Ironmine Rd
Mowry St
Clear River Dr
Broncos Hwy
Buck Hill Rd
Croff Farm Brook
Waterfield Rd
Cruff Rd
W Shore Ln
Lee Cir
Stagehead Dr
Manley Dr
Union Ave
Centennial St
Sayles Ave
Round Top Rd
West Rd
S Shore Rd
New Rd
E Thompson Rd
Brook
767 ft
738 ft
596 ft
600 ft
400 ft
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Map Location



Legend

- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Town Boundary

N
W E
S

1 " = 3,000 '

0 1,000 2,000 3,000 4,000 5,000 6,000 Feet

Invenergy

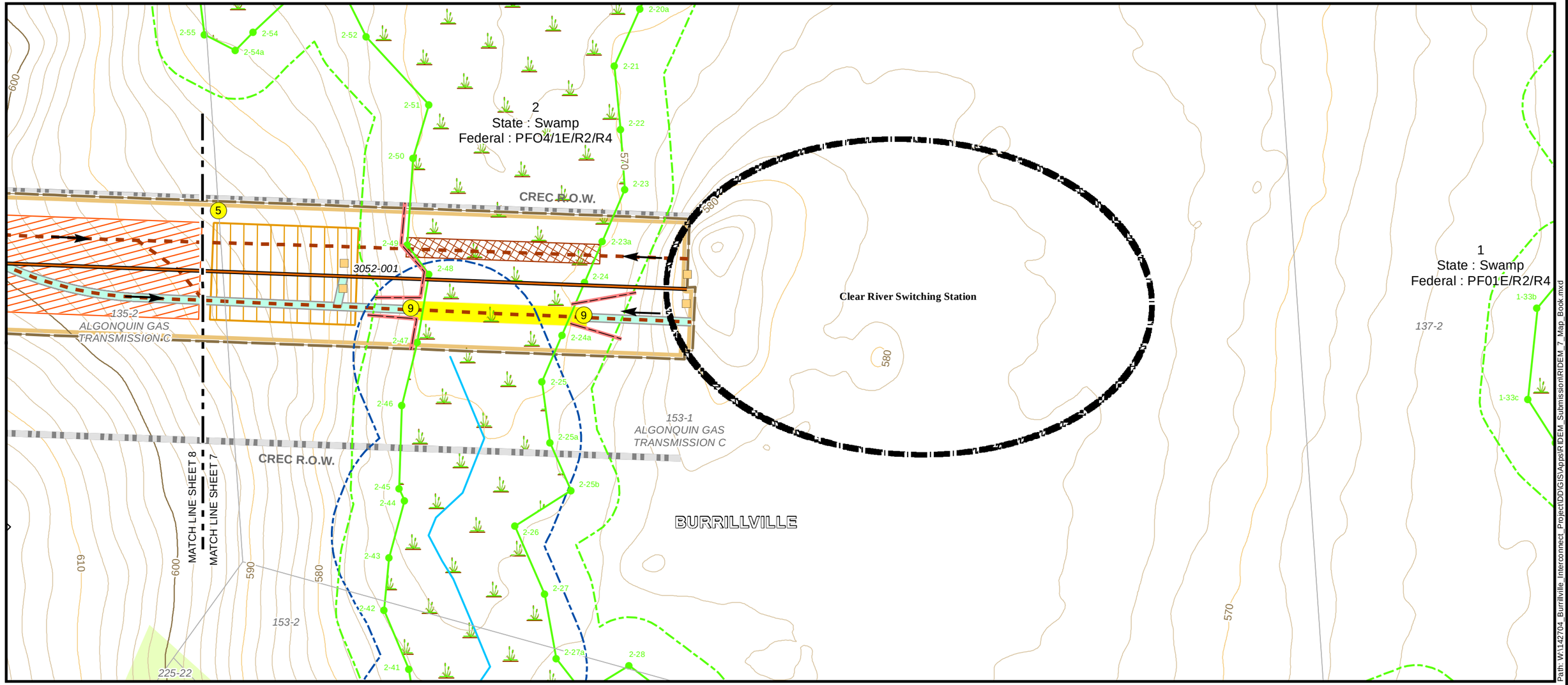
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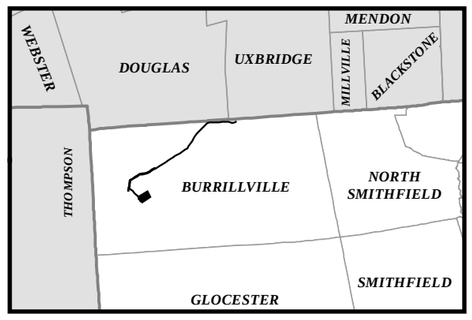
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS KEY SHEET BURRILLVILLE, RHODE ISLAND	
DATE: 8/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 06 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Aprs\RIDEM_SubmissionRIDEM_6_Map_Book_Index.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

0 100 200 Feet

1. Stabilized construction ingress/egress
2. Mud box / drill cutting box (see Erosion & Sediment Control General Notes)
3. Laydown or landing area
4. Stockpiling / staging area (see Erosion & Sediment Control General Notes)
5. Dewatering area (see Erosion & Sediment Control General Notes)
6. Concrete washout basin / testing area (see Erosion & Sediment Control General Notes)
7. If access road grading required on steep terrain (exceeding 3:1 slope), water bars should be installed during road bed preparation
8. Stream and ASSF crossings will be accomplished using one of the stream crossing techniques shown on the swamp mat details (mat bridge detail). Access road crossings and construction work pads will be elevated in such a manner to span the stream or ASSF and not obstruct the flow of water.
9. Perimeter soil erosion & sediment controls (see Erosion & Sediment Control General Notes)

Notes:
- Limits of ROW shown are approximate.
- Rhode Island PE Seal 9008 is applicable only to the proposed transmission structure locations shown.
- Proposed transmission structure locations are approximate.

NOT FOR CONSTRUCTION

Invenergy

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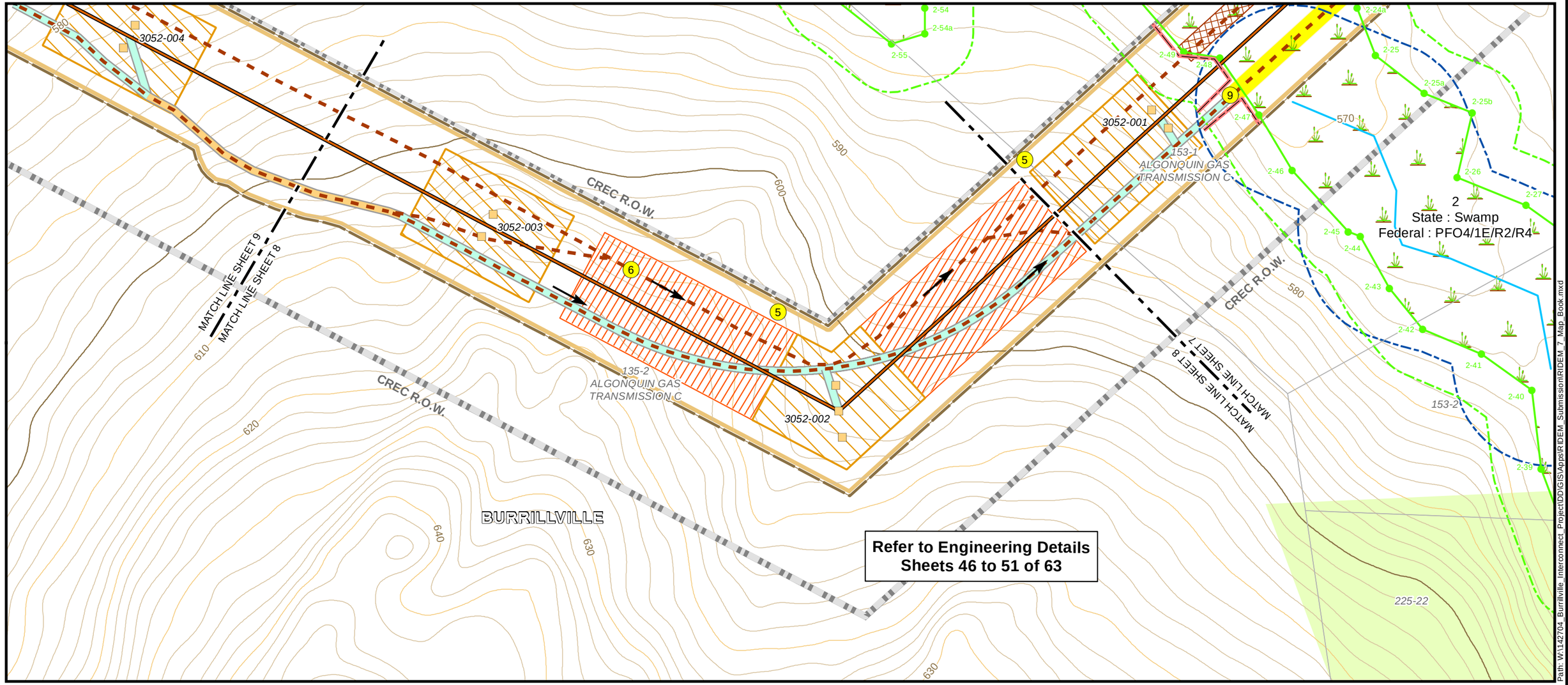
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BURRILLVILLE INTERCONNECTION PROJECT
THE NARRAGANSETT ELECTRIC CO.
& CLEAR RIVER ENERGY, LLC

RIDEM AND USACE PERMIT DRAWINGS
BURRILLVILLE, RHODE ISLAND

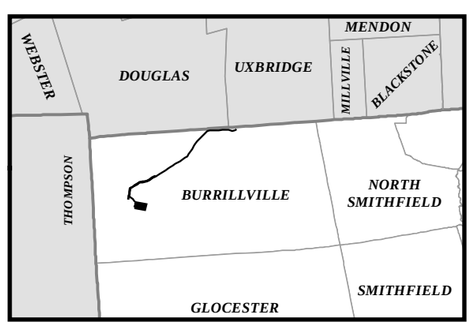
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 07 OF 63

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Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
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- Floodway
- Parcel Boundary
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- Stone Grouping
- Stone Wall
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Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
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- Perimeter Sediment Control
- Limit of Tree Clearing
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- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

0 100 200 Feet

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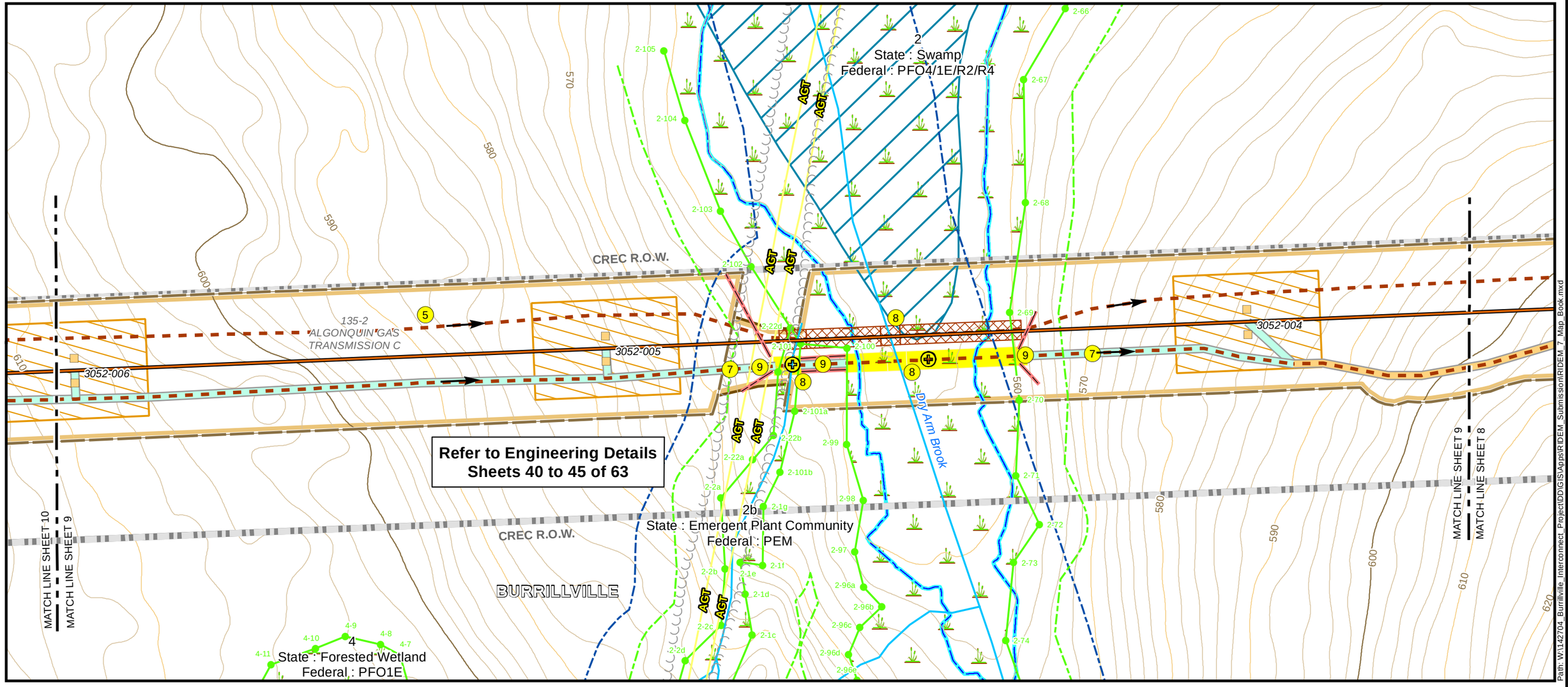
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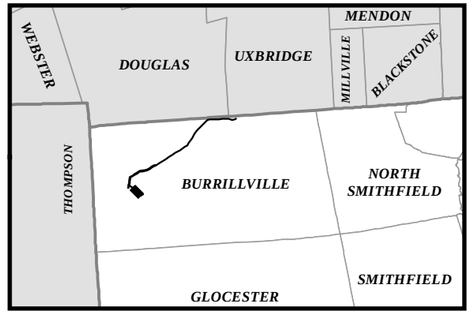
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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 08 OF 63



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
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- Existing Power Facility
- Existing Road
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- Existing Culvert or Stream Ford
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- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr)
- Floodway
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- Building
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- Stone Feature
- Stone Grouping
- Stone Wall
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- Index Contour (10' Interval)
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- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
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- Work Pad /
- Limit of Disturbance

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9. Perimeter soil erosion & sediment controls (see Erosion & Sediment Control General Notes)

Notes:
- Limits of ROW shown are approximate.
- Rhode Island PE Seal 9008 is applicable only to the proposed transmission structure locations shown.
- Proposed transmission structure locations are approximate.

NOT FOR CONSTRUCTION

Invenergy

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 09 OF 63

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BURRILLVILLE

CREC R.O.W.

135-2
ALGONQUIN GAS
TRANSMISSION C

3052-008

3052-007

3052-006

630 650 640 650 660 620 610

MATCH LINE SHEET 10

MATCH LINE SHEET 11

MATCH LINE SHEET 10

MATCH LINE SHEET 9

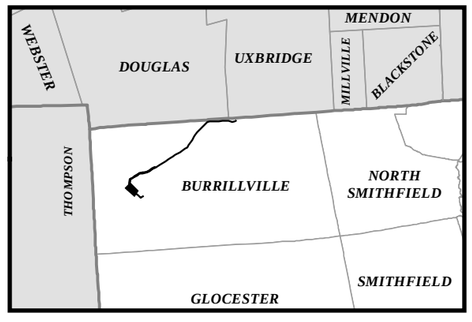
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3
State : Swamp
Federal : PFO1E

Refer to Engineering Details Sheets 34 to 39 of 63

Path: W:\142704_Burrillville_Interconnect_Project\DDGIS\Apps\RIDEM_Submission\RIDEM_7_Map_Book.mxd

Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
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- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr)
- Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
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Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
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- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

0 100 200 Feet

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3. Laydown or landing area
4. Stockpiling / staging area (see Erosion & Sediment Control General Notes)
5. Dewatering area (see Erosion & Sediment Control General Notes)
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9. Perimeter soil erosion & sediment controls (see Erosion & Sediment Control General Notes)

Notes:
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- Rhode Island PE Seal 9008 is applicable only to the proposed transmission structure locations shown.
- Proposed transmission structure locations are approximate.

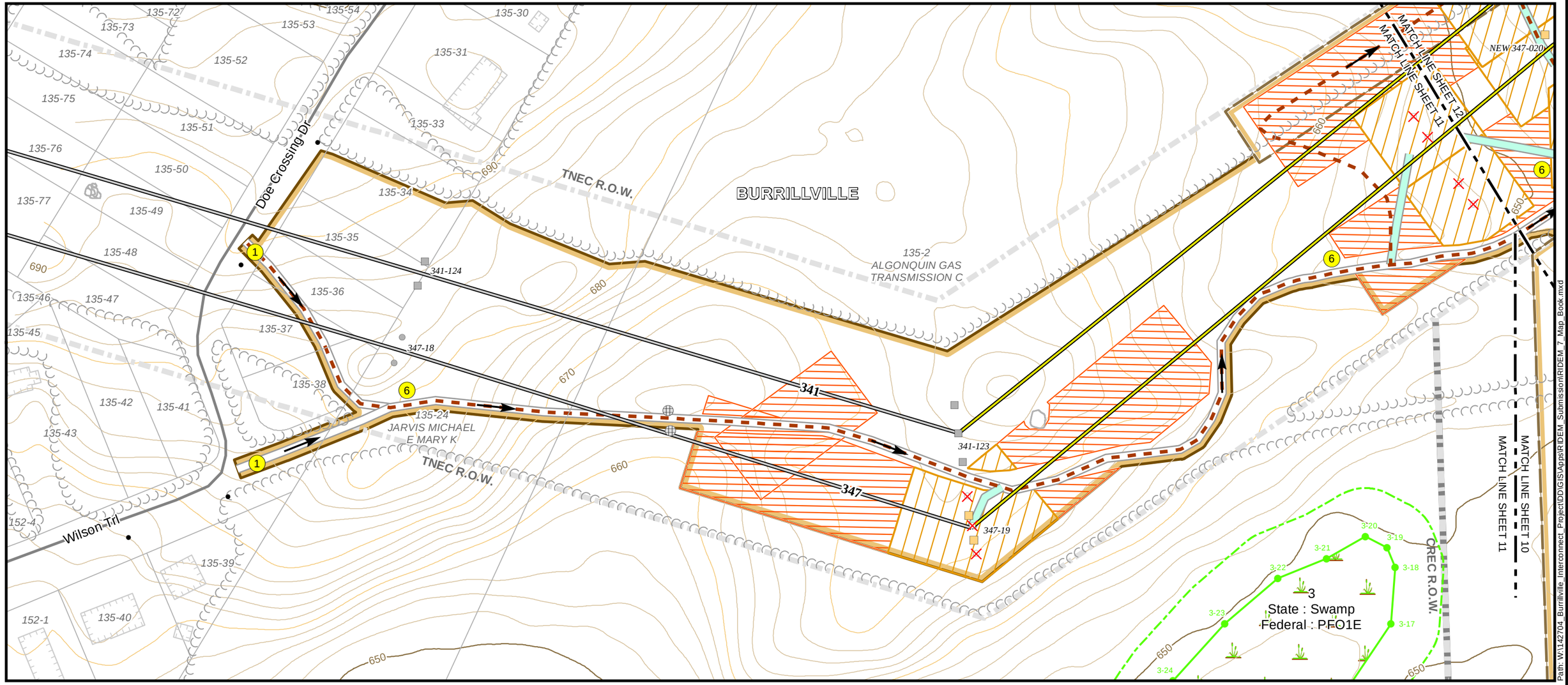
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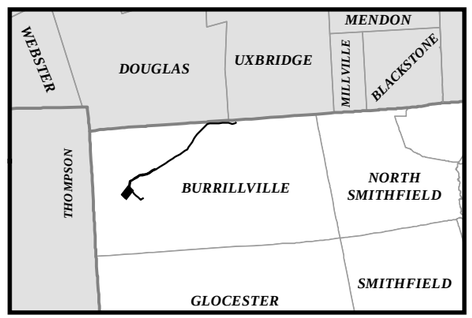
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 10 OF 63



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

0 100 200 Feet

1. Stabilized construction ingress/egress
2. Mud box / drill cutting box (see Erosion & Sediment Control General Notes)
3. Laydown or landing area
4. Stockpiling / staging area (see Erosion & Sediment Control General Notes)
5. Dewatering area (see Erosion & Sediment Control General Notes)
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Notes:
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NOT FOR CONSTRUCTION

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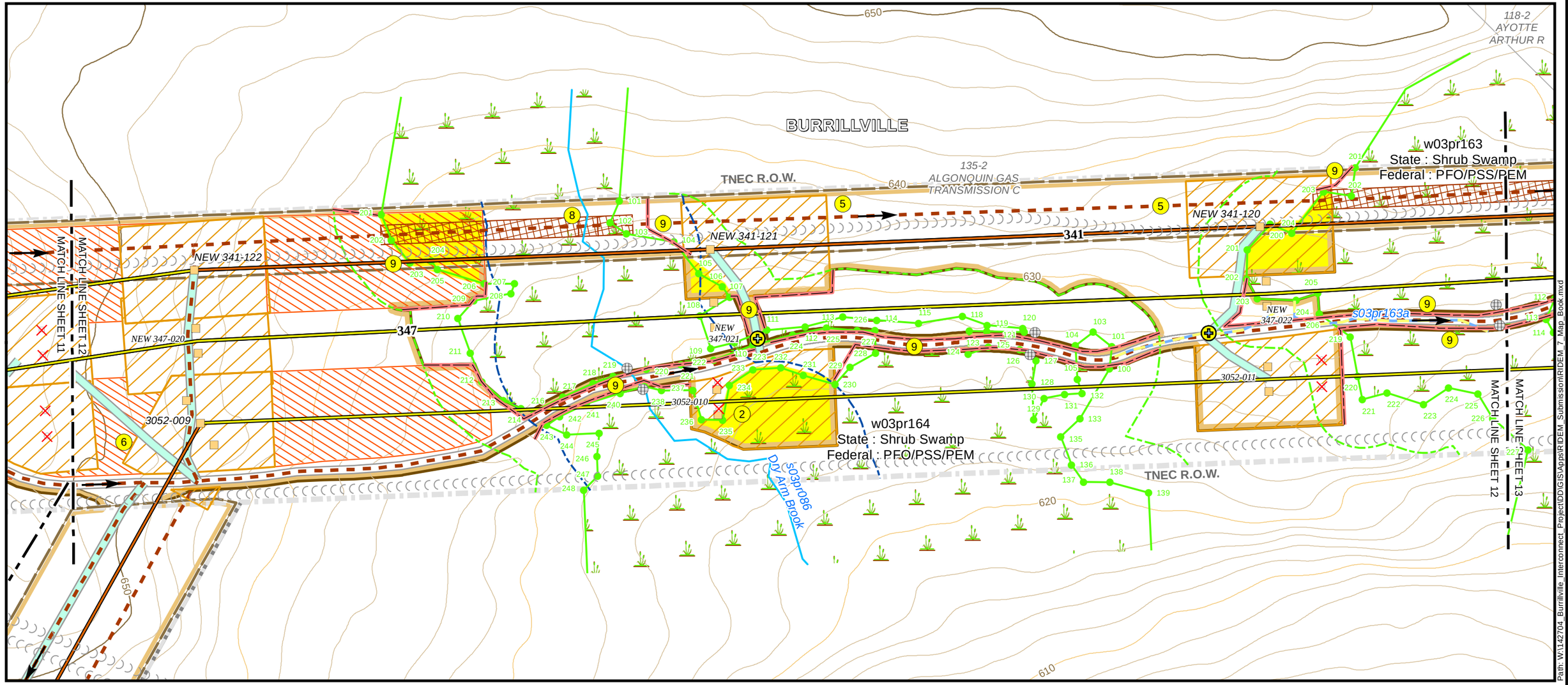
nationalgrid

POWER ENGINEERS

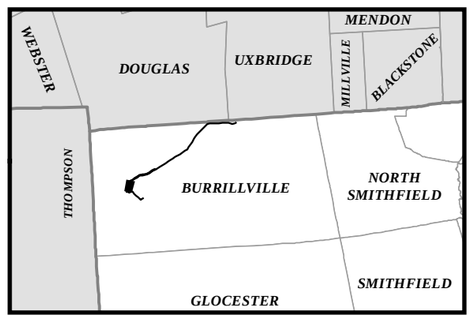
BURRILLVILLE INTERCONNECTION PROJECT
THE NARRAGANSETT ELECTRIC CO.
& CLEAR RIVER ENERGY, LLC

RIDEM AND USACE PERMIT DRAWINGS
BURRILLVILLE, RHODE ISLAND

DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 11 OF 63



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

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0 100 200 Feet

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NOT FOR CONSTRUCTION

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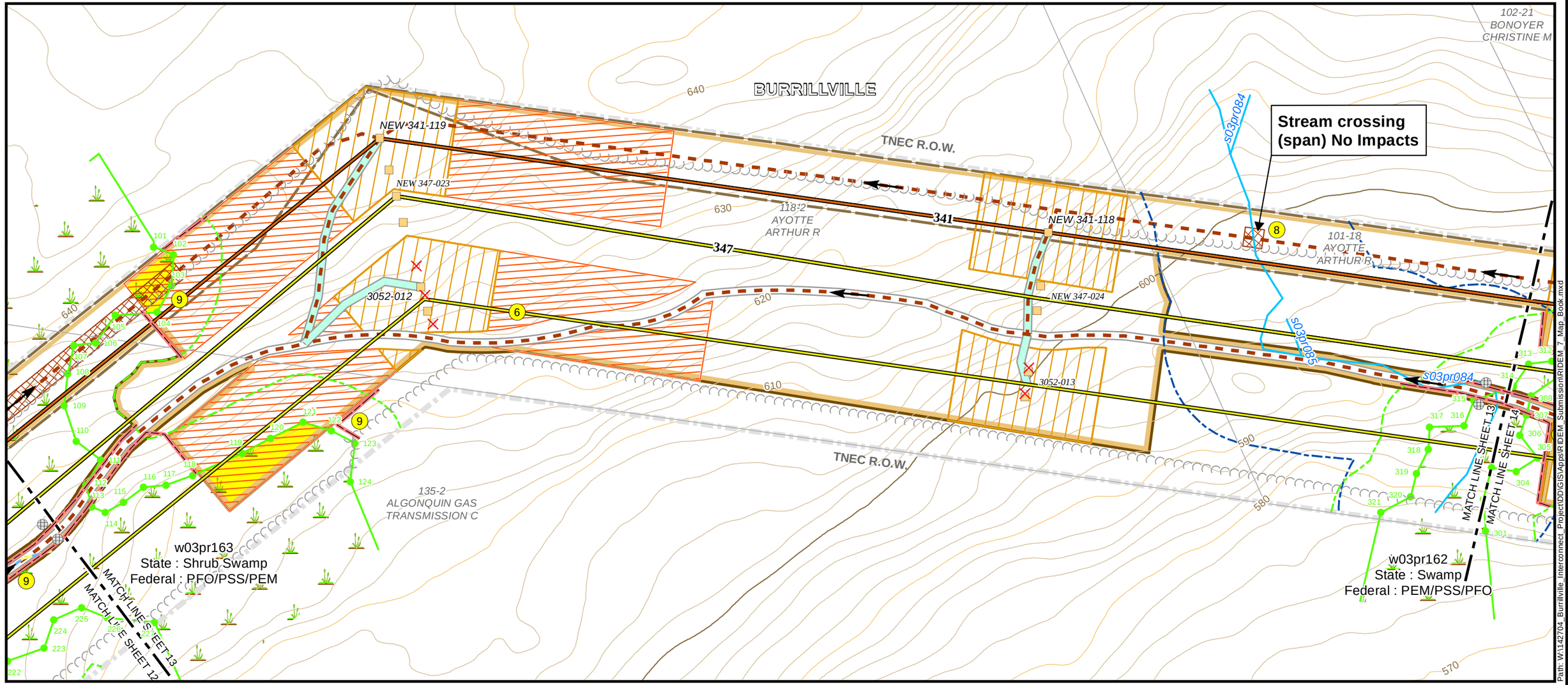
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT
THE NARRAGANSETT ELECTRIC CO.
& CLEAR RIVER ENERGY, LLC

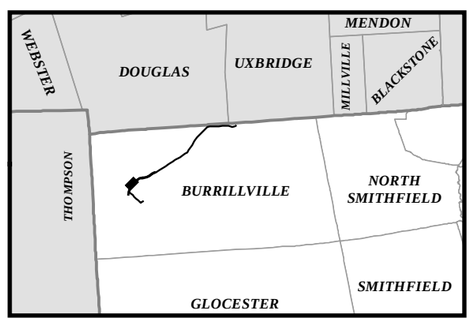
RIDEM AND USACE PERMIT DRAWINGS
BURRILLVILLE, RHODE ISLAND

DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 12 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\SVApps\RIDEM_Submission\RIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
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- Area Subject to Storm Flowage (ASSF)
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- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
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- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

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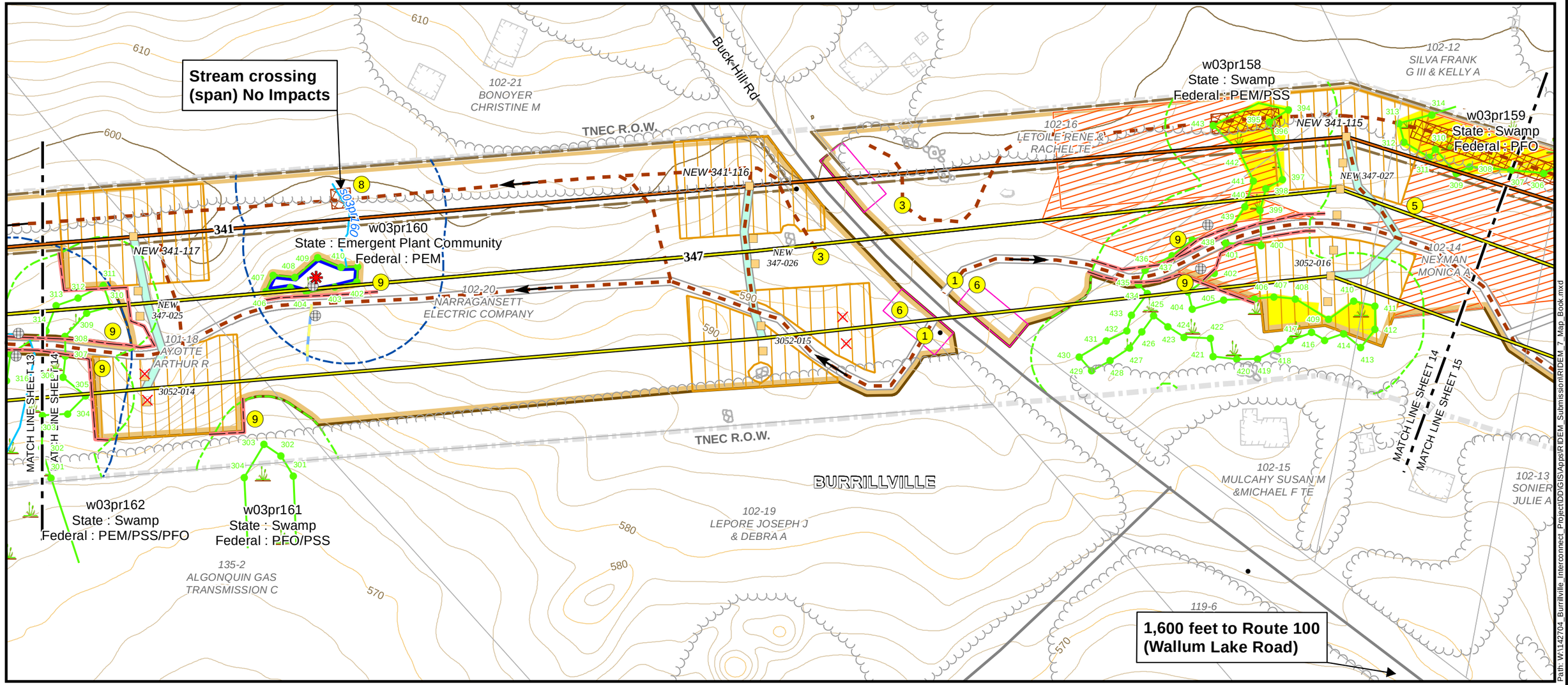
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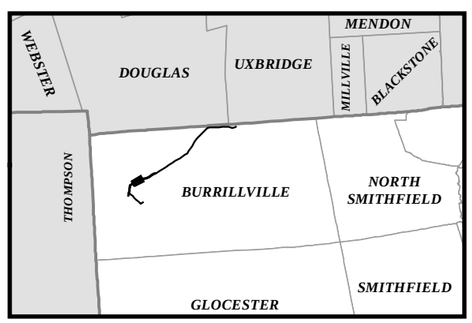
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 13 OF 63

Path: W:\142704_Burrillville_Interconnect_Proj\DDG\SAppsR\DEM_Submission\RIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
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- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
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- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
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- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

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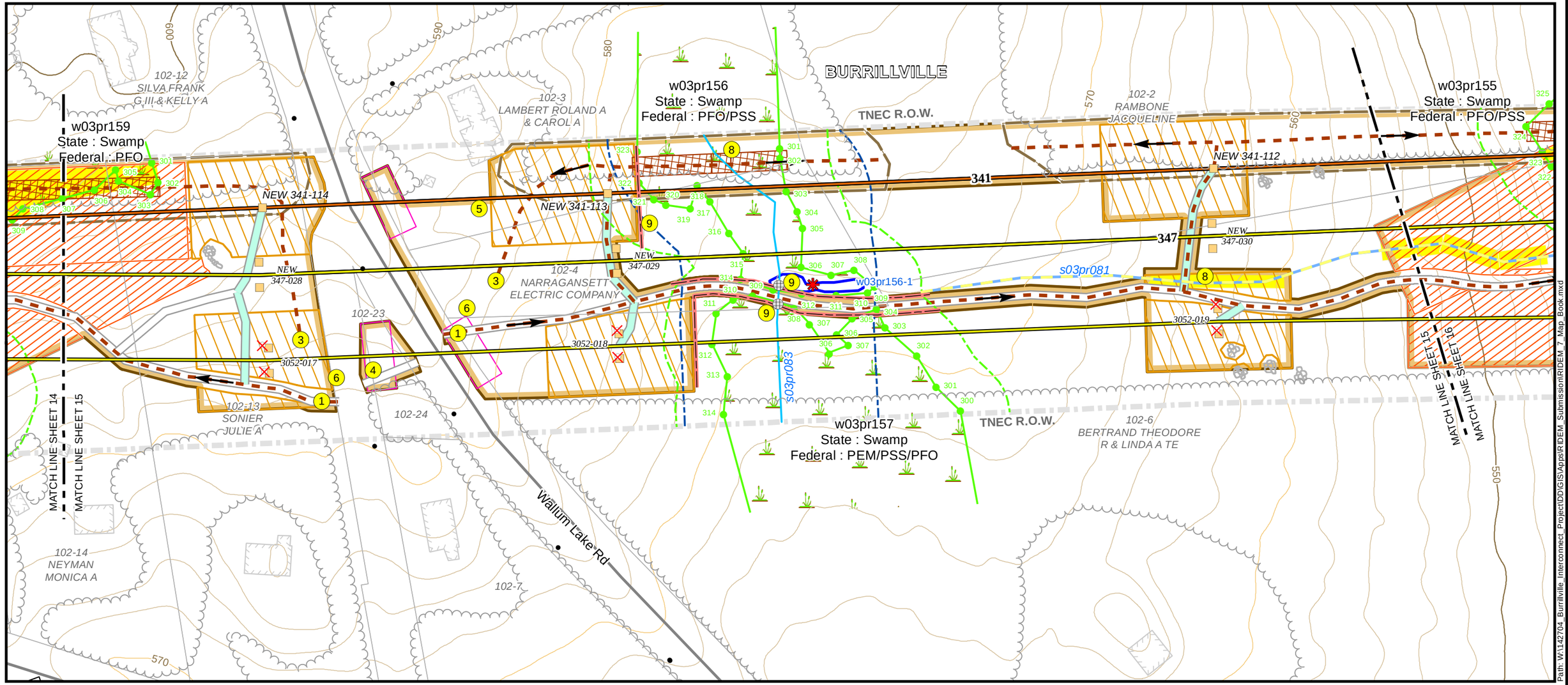
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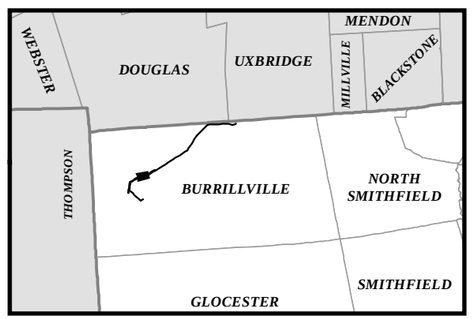
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 14 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Apps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
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- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

N W E S

1 " = 100 '

0 100 200 Feet

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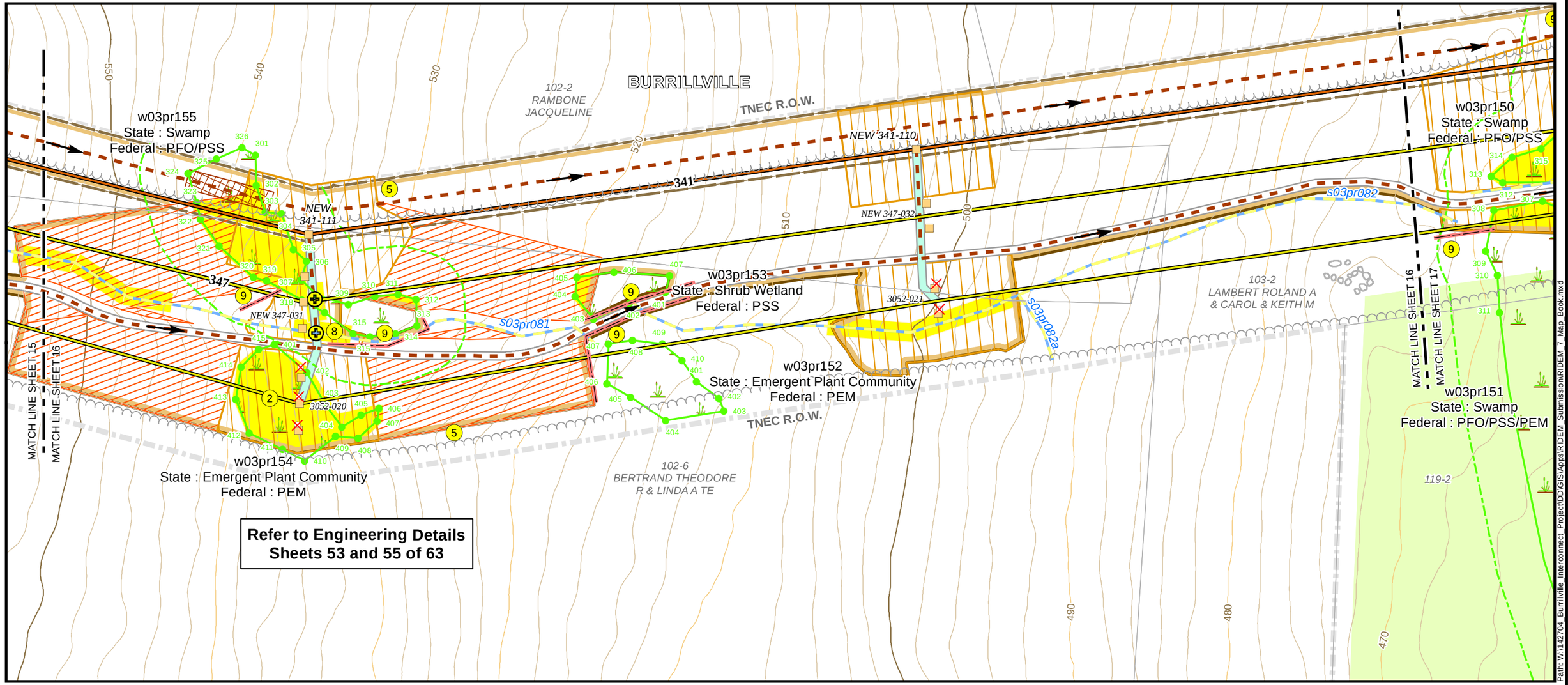
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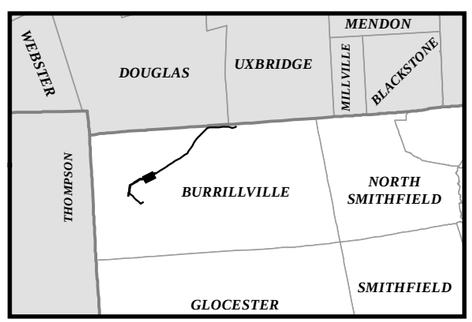
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 15 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Apps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
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- Area Subject to Storm Flowage (ASSF)
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Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
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NOT FOR CONSTRUCTION

Invenergy

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 16 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Apps\RIDEM_Submission\RIDEM_7_Map_Book.mxd

w03pr150
State : Swamp
Federal : PFO/PSS

w03pr151
State : Swamp
Federal : PFO/PSS/PEM

w03pr149
State : Swamp
Federal : PFO/PSS/PEM

w03pr148
State : Swamp
Federal : PFO/PSS/PEM

w03pr148-1

NEW 341-109

NEW 347-033

341

341-108

347

347-34

3052-022

3052-023

s03pr082

s03pr080

s03pr079

Clear River

TNEC R.O.W.

103-2
LAMBERT ROLAND A
& CAROL & KEITH M

104-1
JALBERT
MARY M TRUST

119-2

103-1
BURRILLVILLE
LAND TRUST

MATCH LINE SHEET 16

MATCH LINE SHEET 17

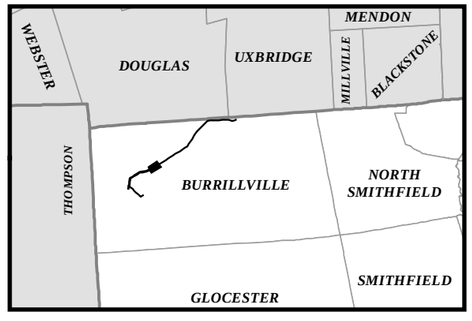
MATCH LINE SHEET 17

MATCH LINE SHEET 18

Refer to Engineering Details
Sheet 54 of 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Apps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd

Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
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- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr)
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Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
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- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '
0 100 200 Feet

1. Stabilized construction ingress/egress
2. Mud box / drill cutting box (see Erosion & Sediment Control General Notes)
3. Laydown or landing area
4. Stockpiling / staging area (see Erosion & Sediment Control General Notes)
5. Dewatering area (see Erosion & Sediment Control General Notes)
6. Concrete washout basin / testing area (see Erosion & Sediment Control General Notes)
7. If access road grading required on steep terrain (exceeding 3:1 slope), water bars should be installed during road bed preparation
8. Stream and ASSF crossings will be accomplished using one of the stream crossing techniques shown on the swamp mat details (mat bridge detail). Access road crossings and construction work pads will be elevated in such a manner to span the stream or ASSF and not obstruct the flow of water.
9. Perimeter soil erosion & sediment controls (see Erosion & Sediment Control General Notes)

Notes:
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- Proposed transmission structure locations are approximate.

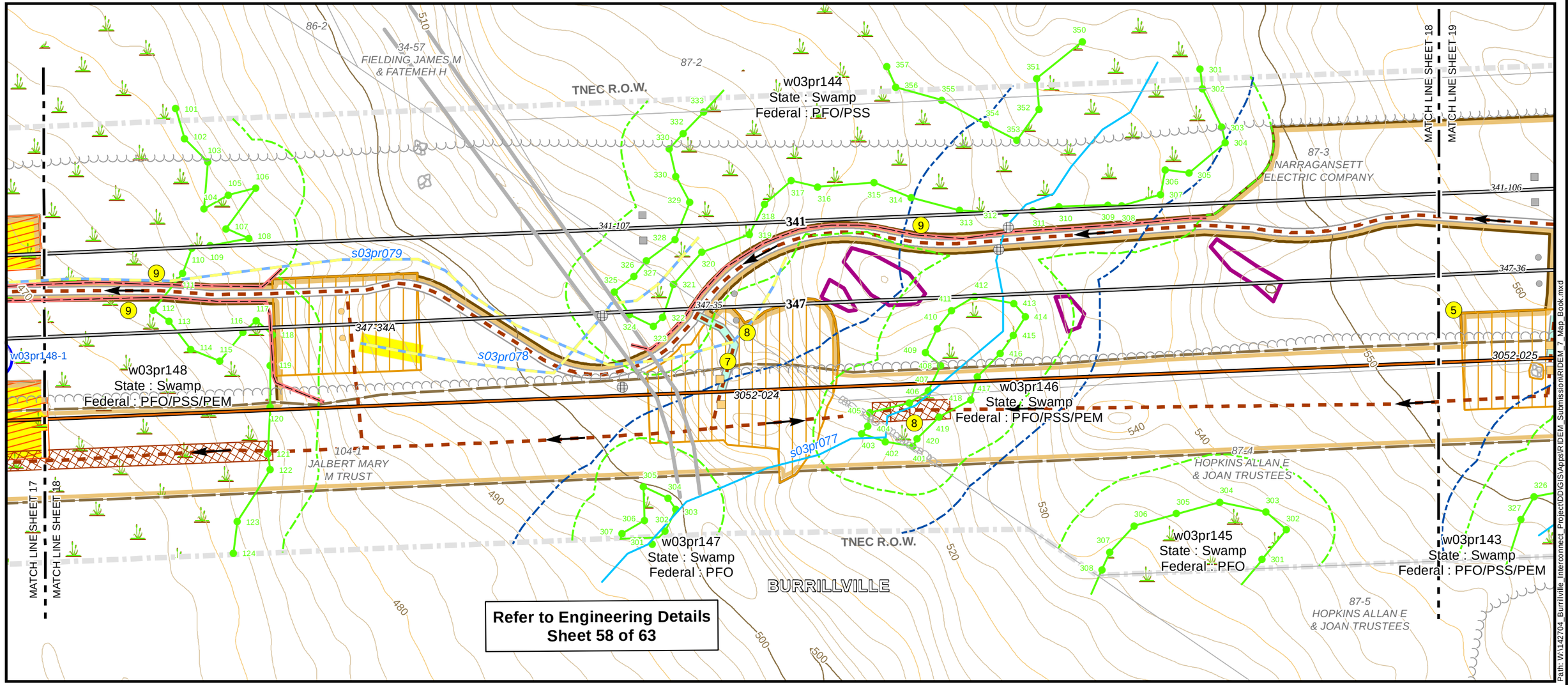
NOT FOR CONSTRUCTION

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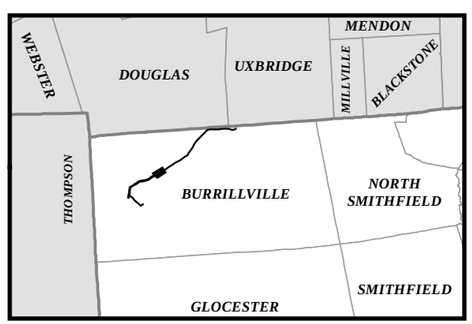
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 17 OF 63



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

0 100 200 Feet

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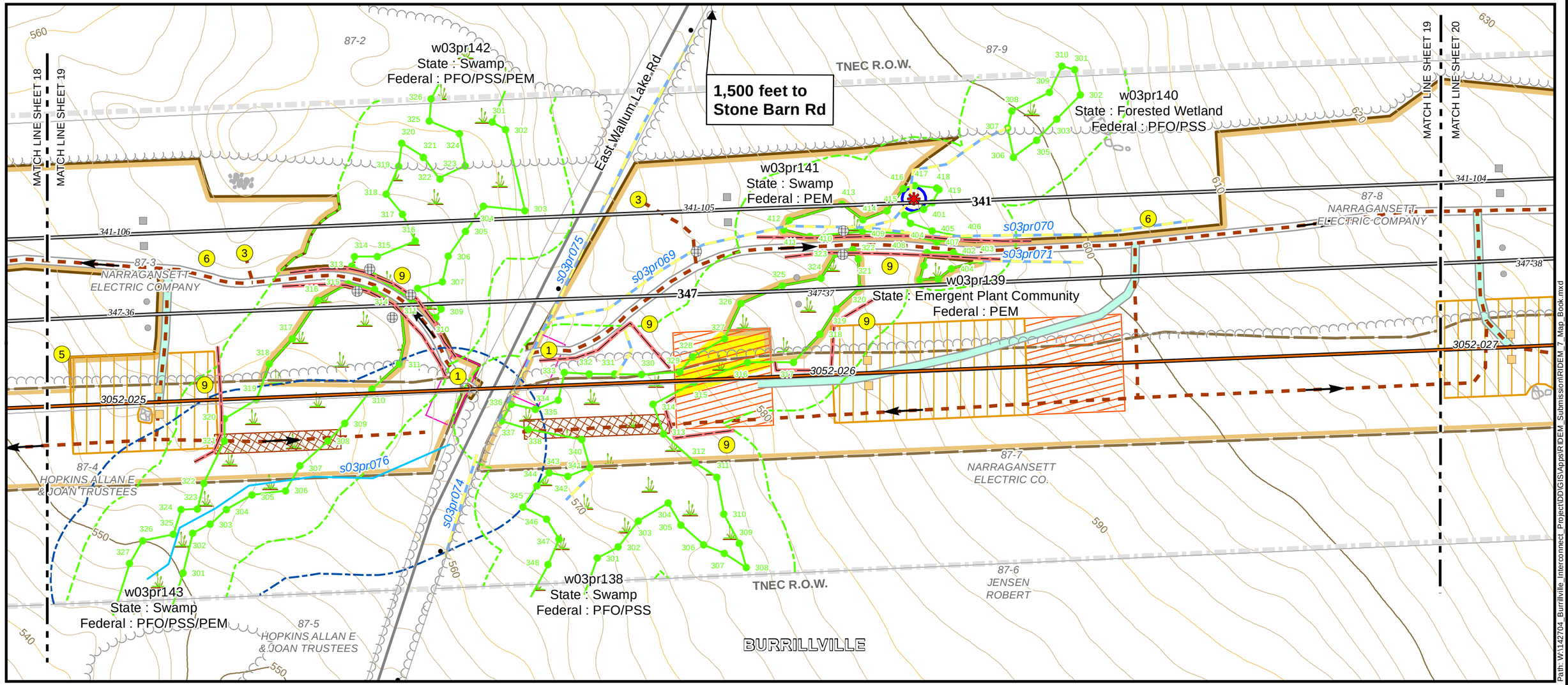
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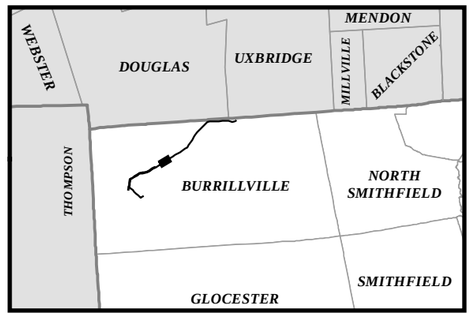
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 18 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\SApps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
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- Vernal Pool Location
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- Parcel Boundary
- Building
- Edge of Wooded
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- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

0 100 200 Feet

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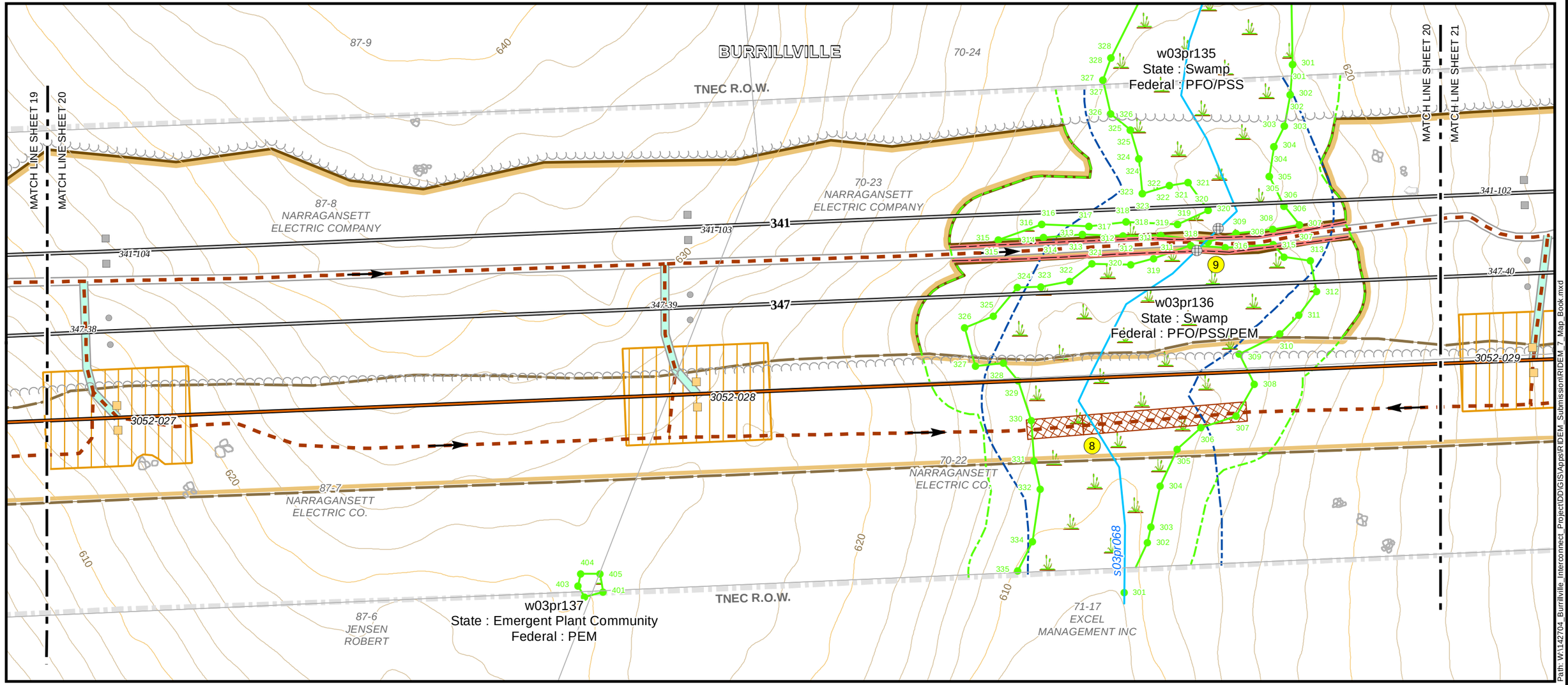
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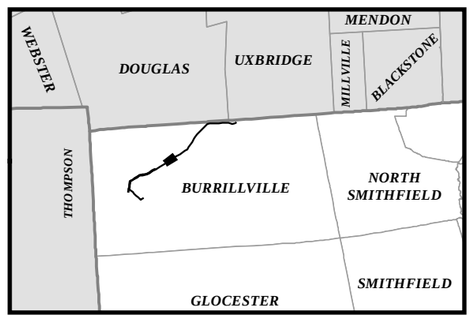
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 19 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Apps\RIDEM_Submission\RIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

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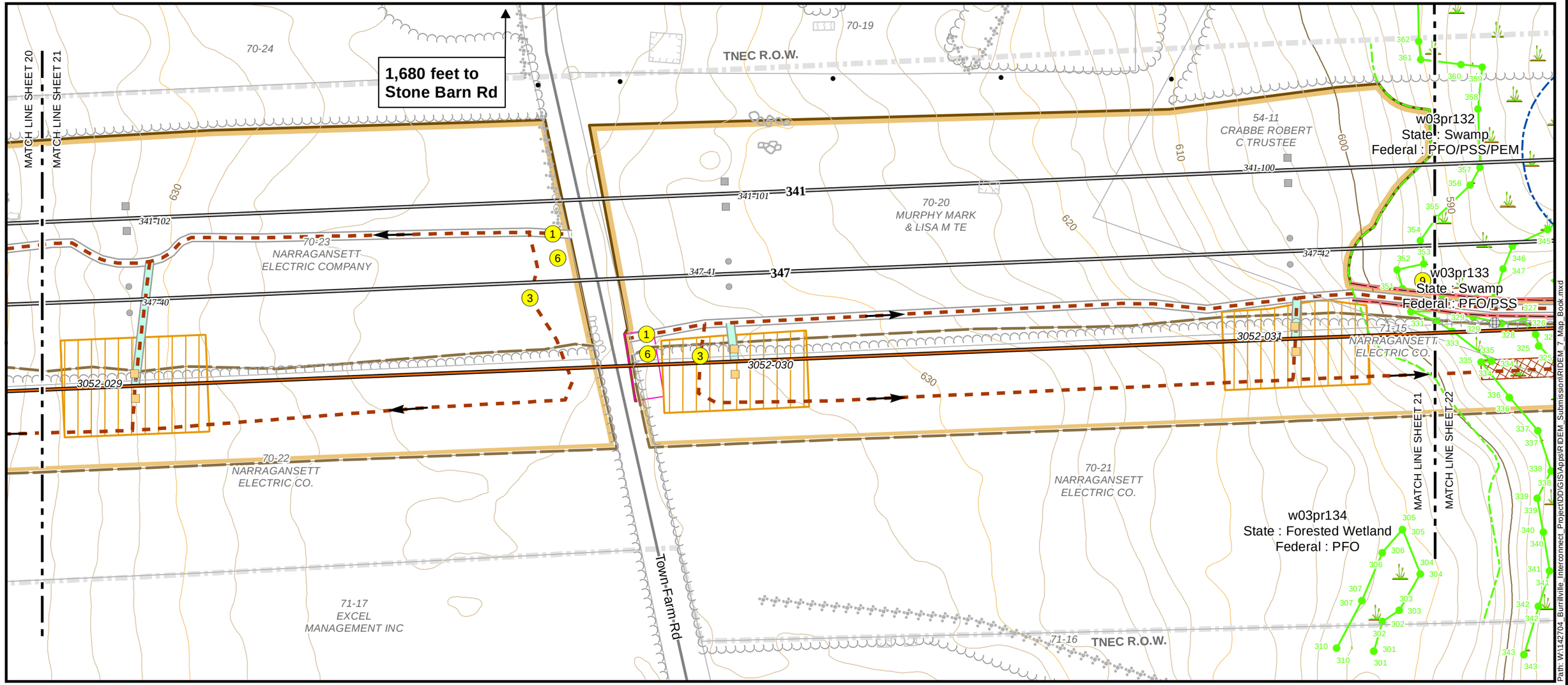
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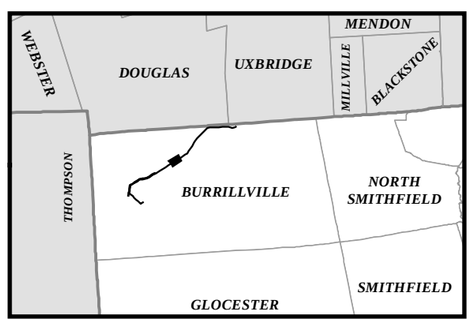
BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 20 OF 63

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Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
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- Field Delineated Wetland
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- Vernal Pool Location
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- Stone Grouping
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- Major Index Contour (50' Interval)
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- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
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- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

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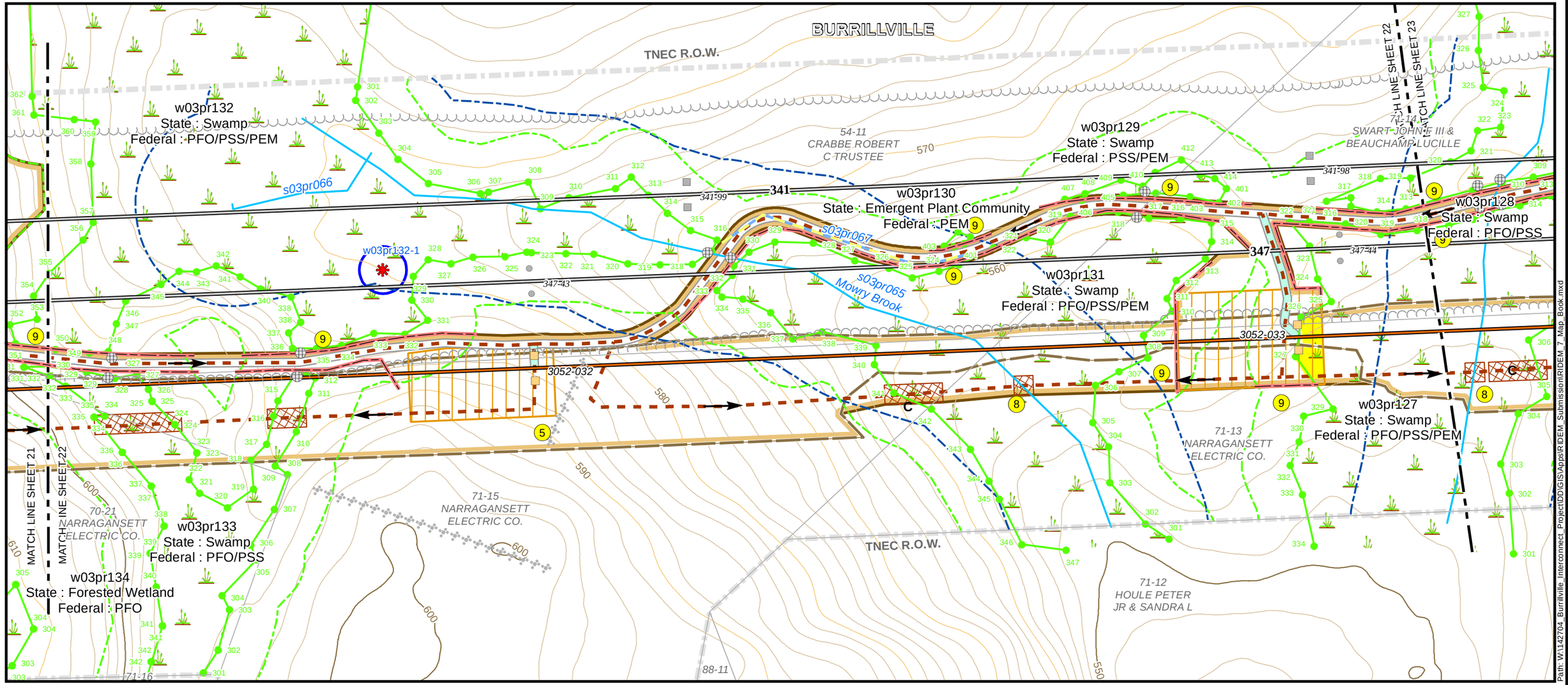
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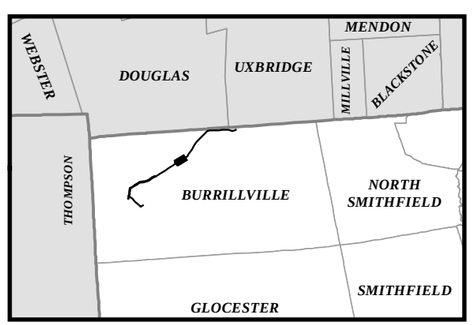
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 21 OF 63



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
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- Wetland Flag
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- Vernal Pool
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- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
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- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
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- Protected Habitat
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Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C — Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

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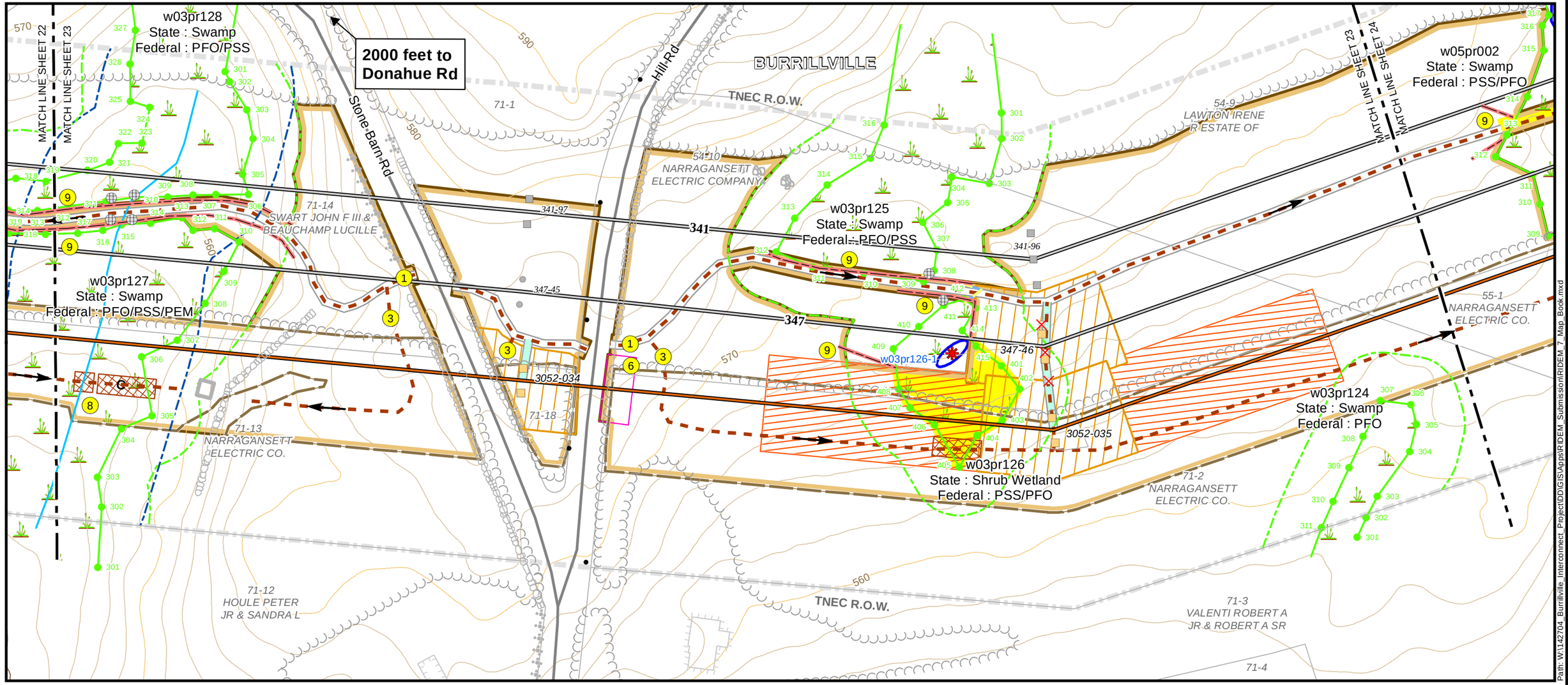
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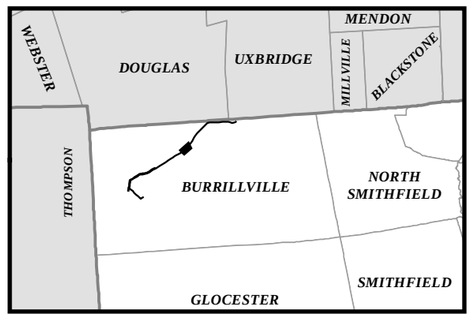
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 22 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Apps\RIDEM_Submission\RIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
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- Watercourse
- Area Subject to Storm Flowage (ASSF)
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Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
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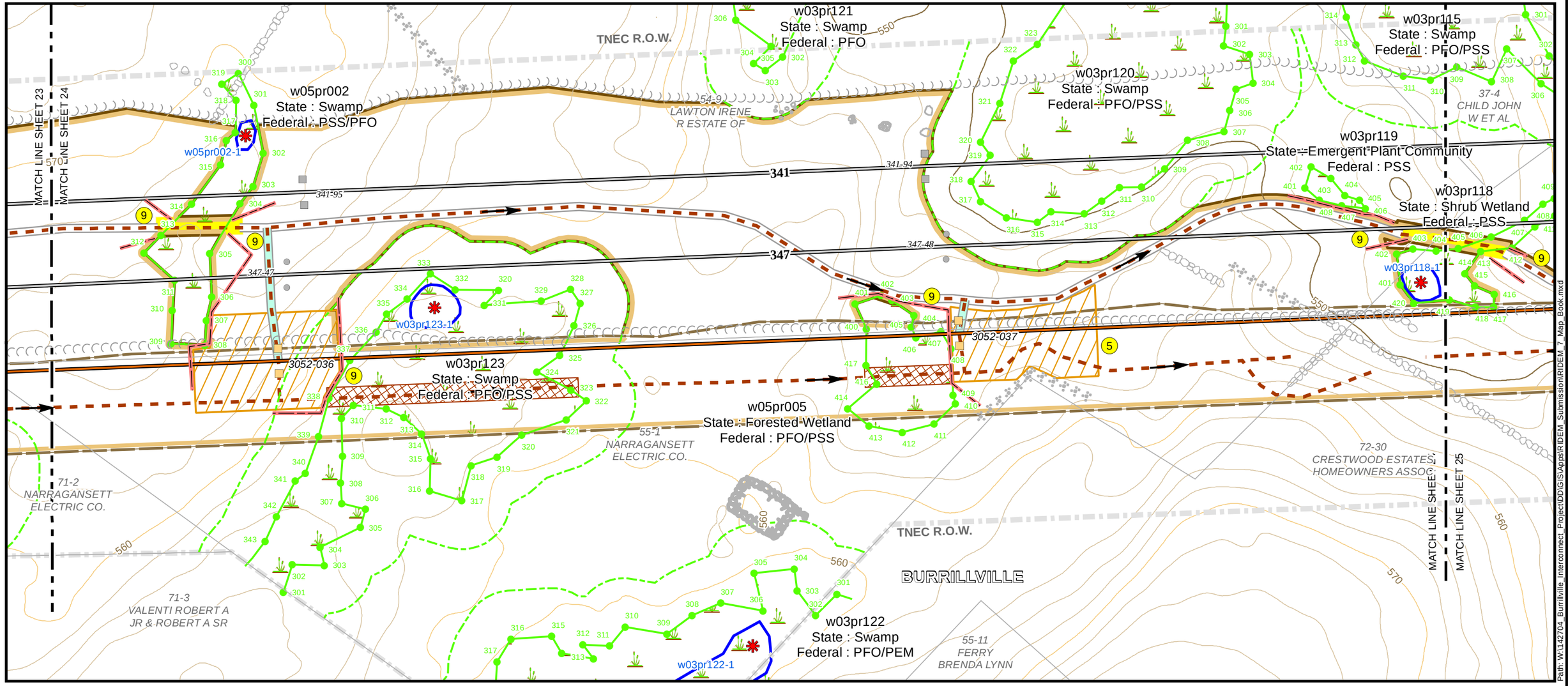
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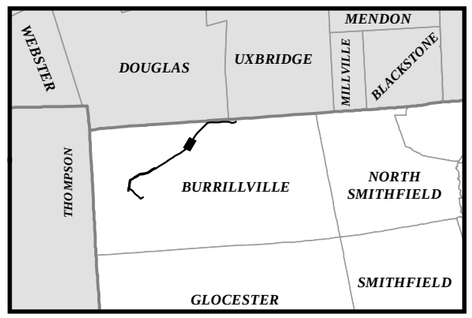
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 23 OF 63

Path: W:\142704_Burrillville_Interconnect_ProjectDD\GIS\Apps\RIDEM_Submission\RIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
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Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
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- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

0 100 200 Feet

1. Stabilized construction ingress/egress
2. Mud box / drill cutting box (see Erosion & Sediment Control General Notes)
3. Laydown or landing area
4. Stockpiling / staging area (see Erosion & Sediment Control General Notes)
5. Dewatering area (see Erosion & Sediment Control General Notes)
6. Concrete washout basin / testing area (see Erosion & Sediment Control General Notes)
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9. Perimeter soil erosion & sediment controls (see Erosion & Sediment Control General Notes)

Notes:
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NOT FOR CONSTRUCTION

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 24 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Apps\RIDEM_Submission\RIDEM_7_Map_Book.mxd

w03pr115
State : Swamp
Federal : PFO/PSS

w12pr200
State : Swamp
Federal : PFO

w03pr114-1

w03pr114
State : Swamp
Federal : PFO/PSS/PEM

w03pr118
State : Shrub Wetland
Federal : PSS

w03pr118-1

w03pr117
State : Emergent Plant Community
Federal : PEM

w03pr116
State : Swamp
Federal : PFO

37-4
CHILD JOHN
W ET AL

72-30
CRESTWOOD ESTATES
HOMEOWNERS ASSOC

21-5
ALLES
DEBRA

21-14
NARRAGANSETT
ELECTRIC CO.

38-2
ALLES STEWART
F & DEBRA L

TNEC R.O.W.

TNEC R.O.W.

BURRILLVILLE

341

341-92

341-93

347

347-49

347-50

3052-038

3052-039

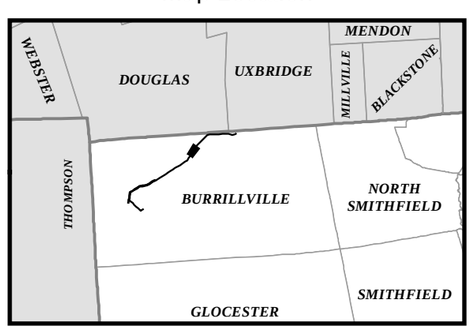
MATCH LINE SHEET 24

MATCH LINE SHEET 25

MATCH LINE SHEET 25

MATCH LINE SHEET 26

Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '
0 100 200 Feet

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT
THE NARRAGANSETT ELECTRIC CO.
& CLEAR RIVER ENERGY, LLC

RIDEM AND USACE PERMIT DRAWINGS
BURRILLVILLE, RHODE ISLAND

DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 25 OF 63

Path: W:\142704_Burrillville_Interconnect_P...\Interconnect_Project\DDG\SApps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd

TNEC R.O.W.

MATCH LINE SHEET 25

MATCH LINE SHEET 26

MATCH LINE SHEET 27

21-5 ALLES DEBRA

21-10 TASCHEREAU STEVEN R & LISA G

21-13 HUSSAIN GHAUDRY

21-14 NARRAGANSETT ELECTRIC CO.

38-2 ALLES STEWART F & DEBRA L

BURRILLVILLE

341-90

341-89

341-91

347-52

347-53

347-51

3052-040

3052-041

3052-042

341

347

w03pr113
State : Emergent Plant Community
Federal : PEM

Two-Tiered Pad

550

560

570

580

590

540

530

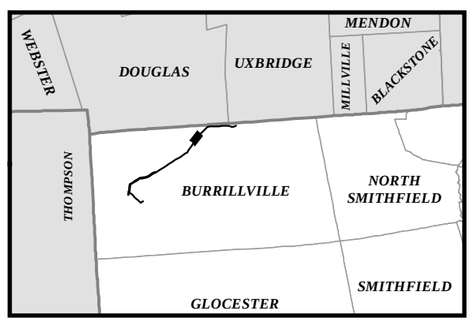
520

510

500

Path: W:\142704_Burrillville_Interconnect_Project\DDG\SApps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd

Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

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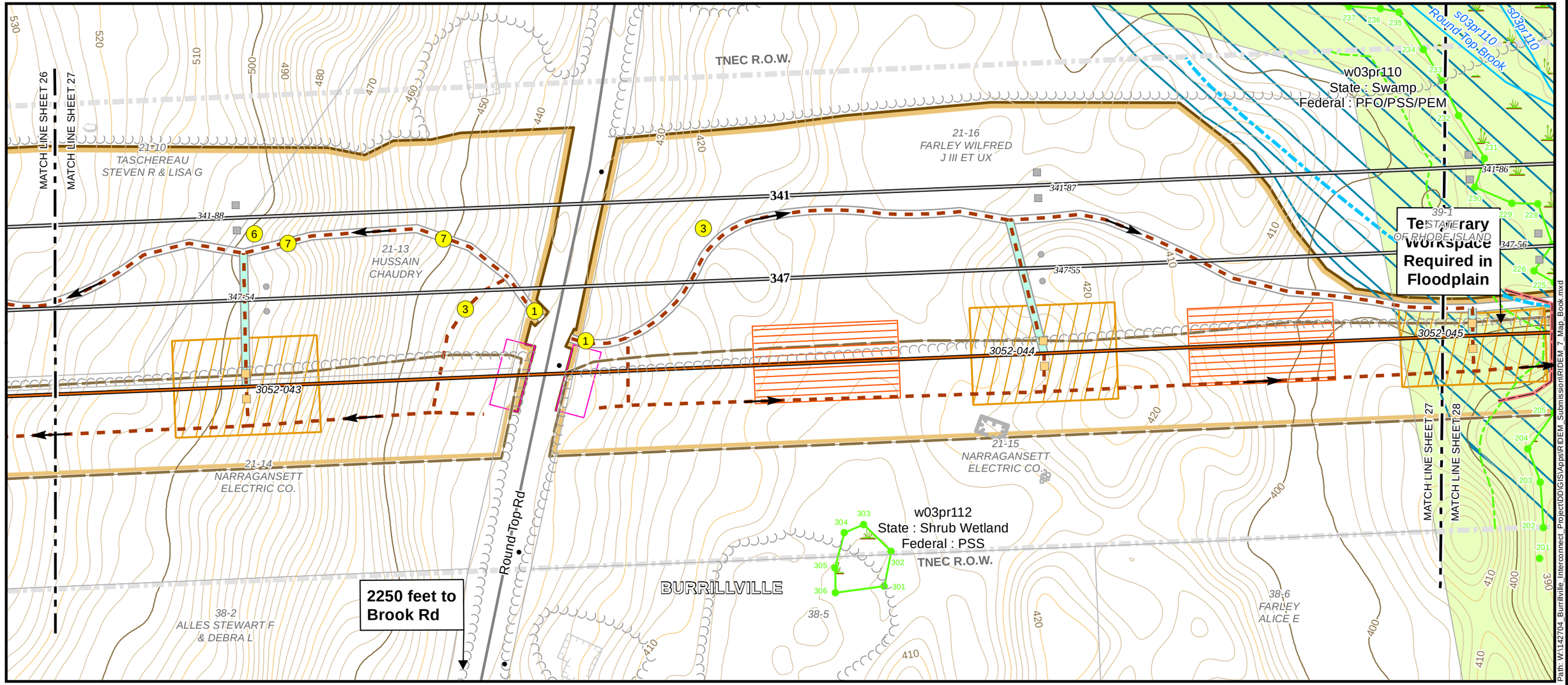
NOT FOR CONSTRUCTION

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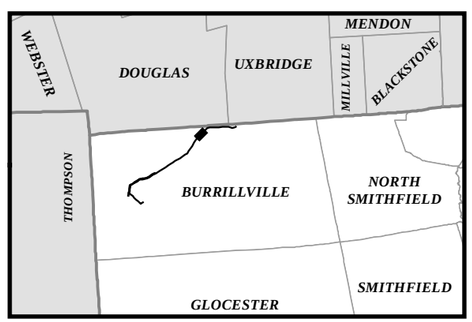
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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 26 OF 63



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
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- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
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- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

1 " = 100 '

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NOT FOR CONSTRUCTION

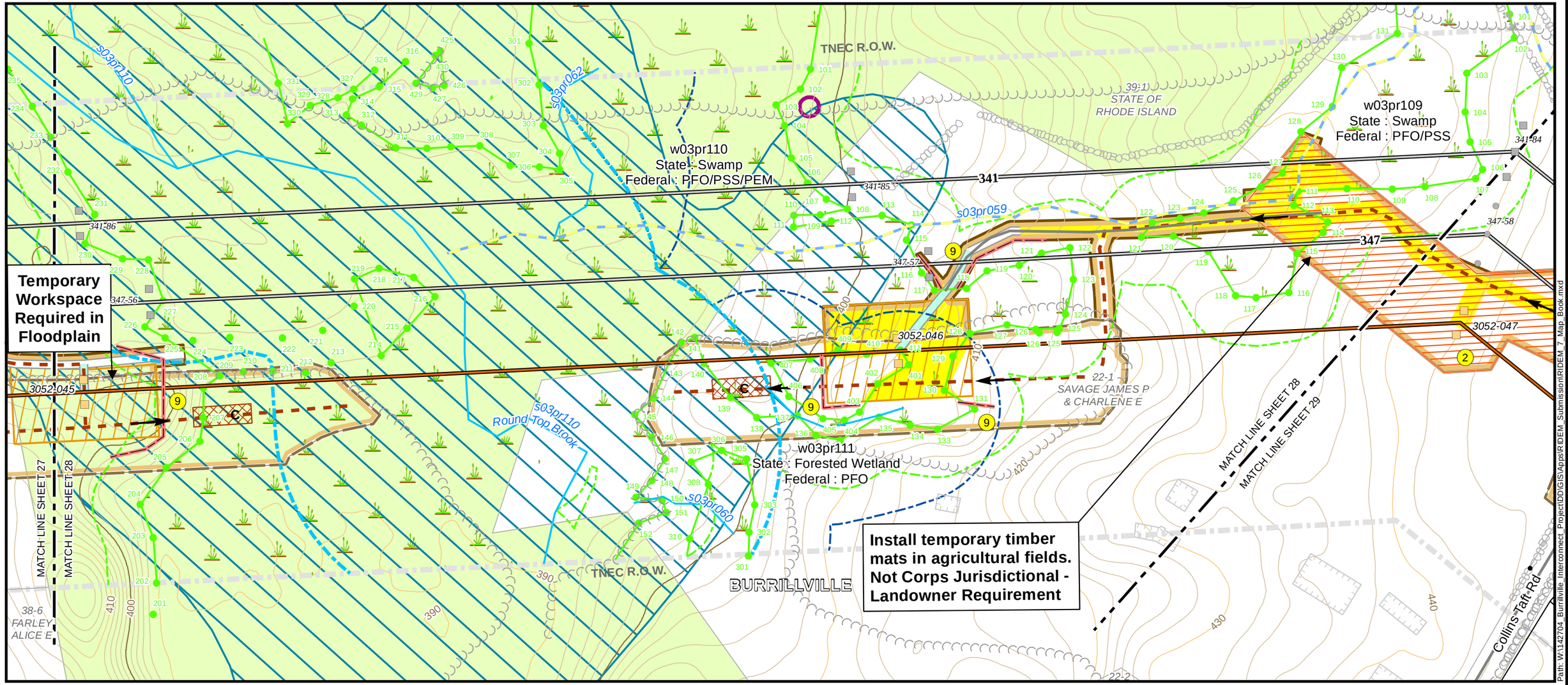
Invenergy

nationalgrid

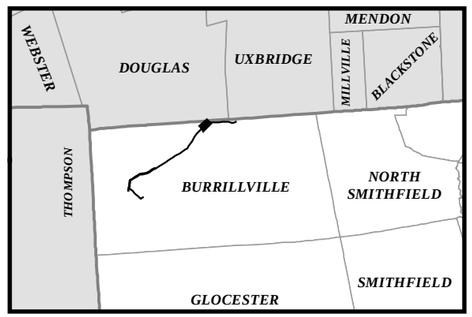
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 27 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\SApps\RIDEM_Submission\RIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
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- Vernal Pool Location
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- Proposed or Reused Steel Pole
- Steel Pole to be Removed
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- Proposed 345 kV Transmission Line
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- Improve Existing Road
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- Perimeter Sediment Control
- Limit of Tree Clearing
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- Work Pad /
- Limit of Disturbance

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT
THE NARRAGANSETT ELECTRIC CO.
& CLEAR RIVER ENERGY, LLC

RIDEM AND USACE PERMIT DRAWINGS
BURRILLVILLE, RHODE ISLAND

DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 28 OF 63

w03pr108
State : Forested Wetland
Federal : PFO/PSS

w03pr109
State : Swamp
Federal : PFO/PSS

w03pr106
State : Swamp
Federal : PFO/PSS

w03pr106-1

s03pr055
s03pr056
s03pr058
s03pr059

TNEC R.O.W.

MATCH LINE SHEET 28
MATCH LINE SHEET 29
MATCH LINE SHEET 30

22-1 SAVAGE JAMES P & CHARLENE E
22-4 FRENETTE KEVIN M & TAMMY A
22-5 NARRAGANSETT ELECTRIC CO.
22-6 SHUGRUE ROBERT C & RENAY M
22-7 CHRISTENSEN DAVID W & MARGARET WILSON

3052-047
3052-048
3052-049

Collins-Taft-Rd

BURRILLVILLE

3500 feet to Brook Rd

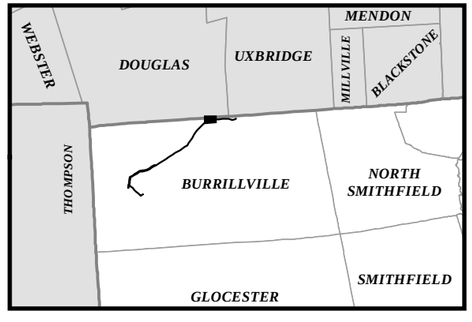
Install temporary timber mats in agricultural fields. Not Corps Jurisdictional - Landowner Requirement

Avoid Stone Foundation

Use existing breaches in stone wall for tree clearing access.

Path: W:\142704_Burrillville_Interconnect_P...\Interconnect_Project\DDG\GIS\Apps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd

Map Location



Existing Conditions

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- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
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- Existing Road
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- Vernal Pool
- Vernal Pool Location
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- Parcel Boundary
- Building
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Proposed

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- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
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- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
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- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

N W E S

1 " = 100 '

0 100 200 Feet

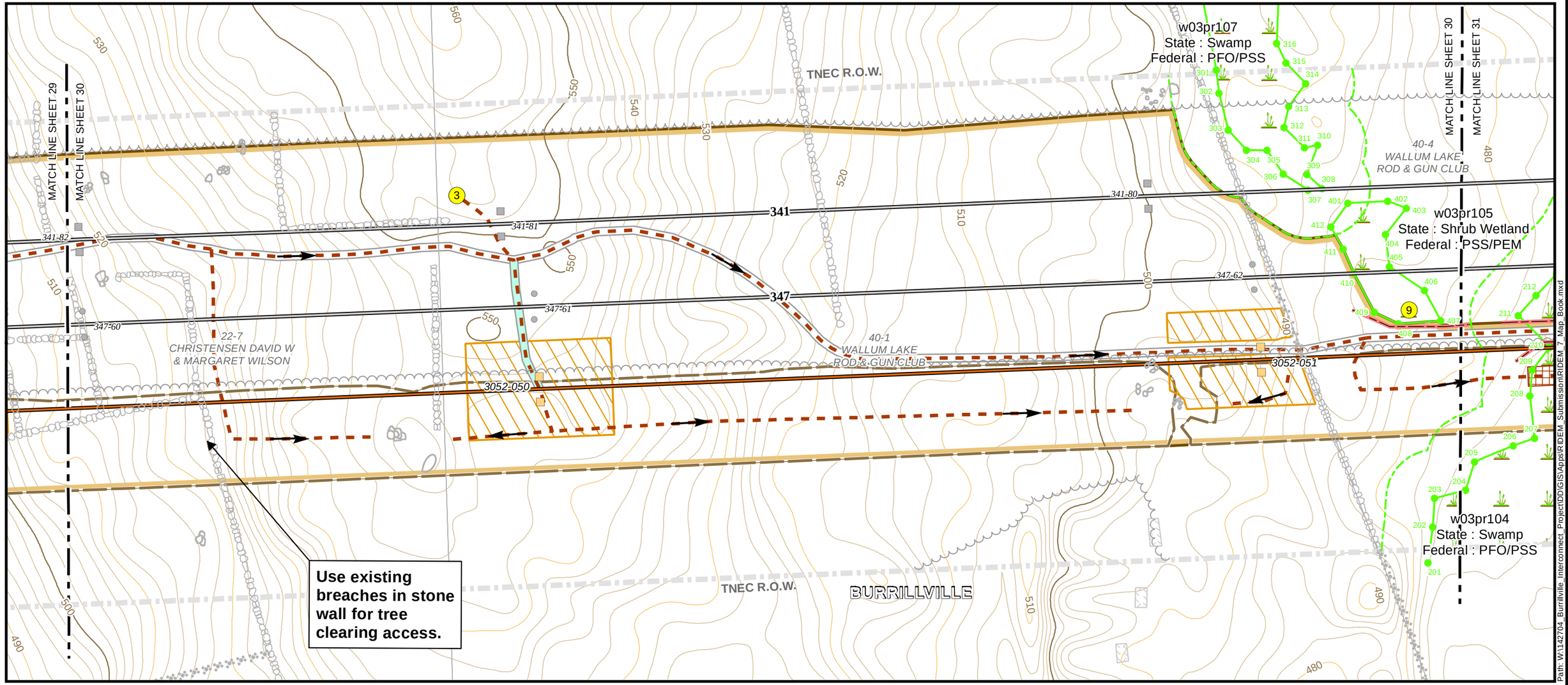
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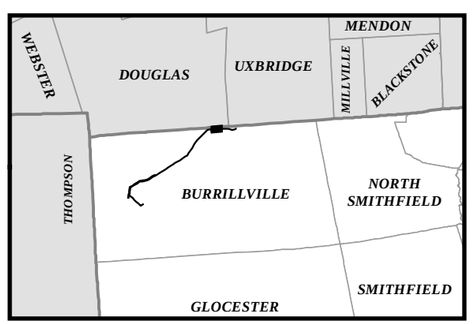
NOT FOR CONSTRUCTION

Invenergy
nationalgrid
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 29 OF 63



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
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- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
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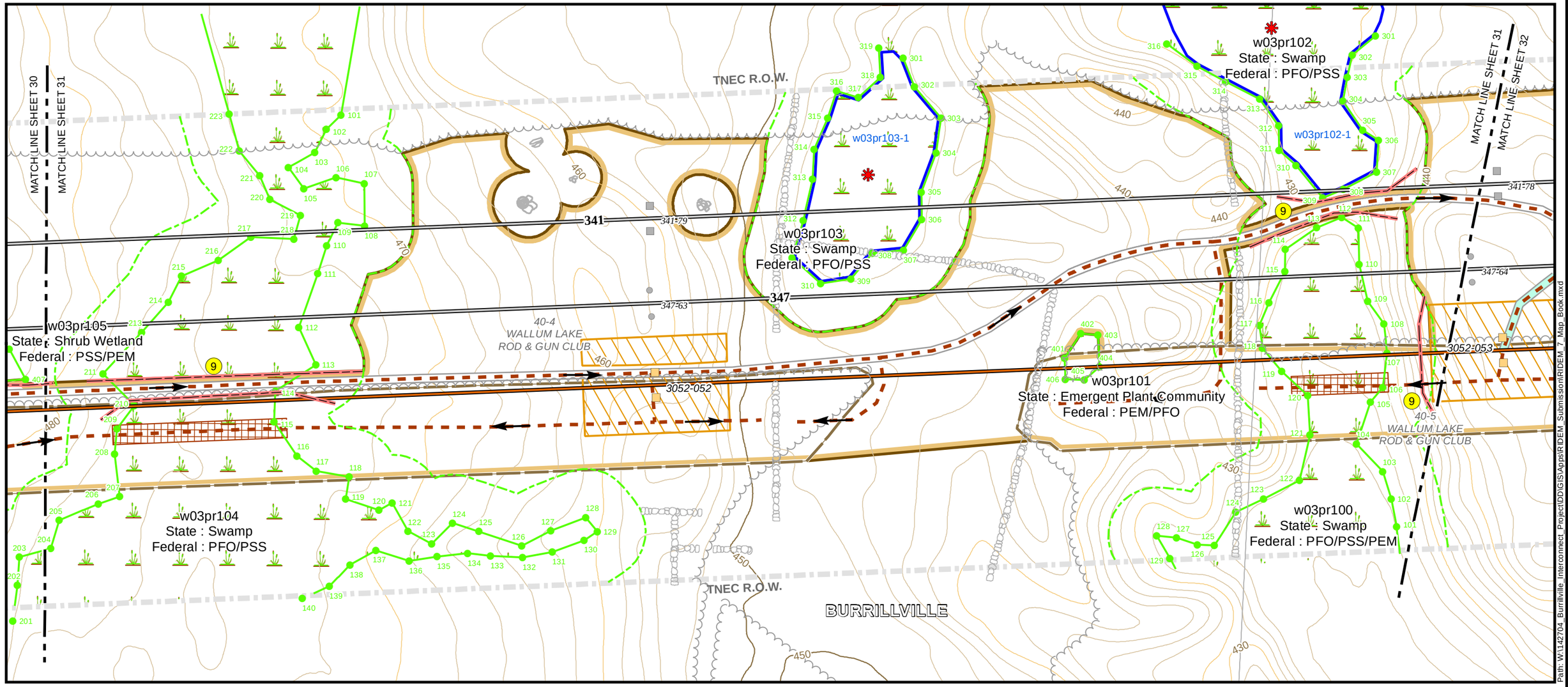
Invenergy

nationalgrid

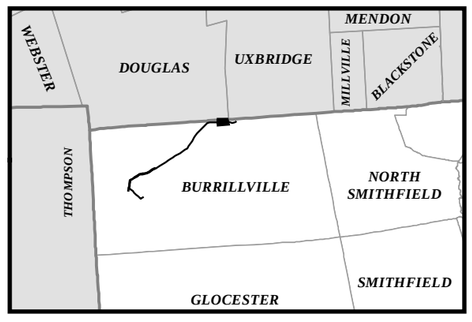
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 30 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DD\GIS\Apps\RIDEM_Submission\RIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
- AT&T Fiber Optic Line
- Existing Power Facility
- Existing Road
- Existing Right of Way
- Existing Culvert or Stream Ford
- Watercourse
- Area Subject to Storm Flowage (ASSF)
- 100' Riverbank Buffer
- 200' Riverbank Buffer
- Wetland Flag
- Field Delineated Wetland
- 50' Perimeter Wetland
- Vernal Pool
- Vernal Pool Location
- Surveyed Floodplain
- FEMA Flood Hazard (DFIRM 100yr) Floodway
- Parcel Boundary
- Building
- Edge of Wooded
- Stone Feature
- Stone Grouping
- Stone Wall
- Major Index Contour (50' Interval)
- Index Contour (10' Interval)
- Contour (2' Interval)
- Protected Habitat
- Conservation Land

Proposed

- Proposed or Reused Steel Pole
- Steel Pole to be Removed
- Proposed Wood Pole
- Wood Pole to be Removed
- Proposed 345 kV Transmission Line
- Replaced 345 kV Transmission Line
- Proposed Clear River Switching Station
- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
- Use Existing Access
- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
- C Tree Clearing Cluster Mat
- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

N
W E
S

1 " = 100 '

0 100 200 Feet

1. Stabilized construction ingress/egress
2. Mud box / drill cutting box (see Erosion & Sediment Control General Notes)
3. Laydown or landing area
4. Stockpiling / staging area (see Erosion & Sediment Control General Notes)
5. Dewatering area (see Erosion & Sediment Control General Notes)
6. Concrete washout basin / testing area (see Erosion & Sediment Control General Notes)
7. If access road grading required on steep terrain (exceeding 3:1 slope), water bars should be installed during road bed preparation
8. Stream and ASSF crossings will be accomplished using one of the stream crossing techniques shown on the swamp mat details (mat bridge detail). Access road crossings and construction work pads will be elevated in such a manner to span the stream or ASSF and not obstruct the flow of water.
9. Perimeter soil erosion & sediment controls (see Erosion & Sediment Control General Notes)

Notes:
- Limits of ROW shown are approximate.
- Rhode Island PE Seal 9008 is applicable only to the proposed transmission structure locations shown.
- Proposed transmission structure locations are approximate.

NOT FOR CONSTRUCTION

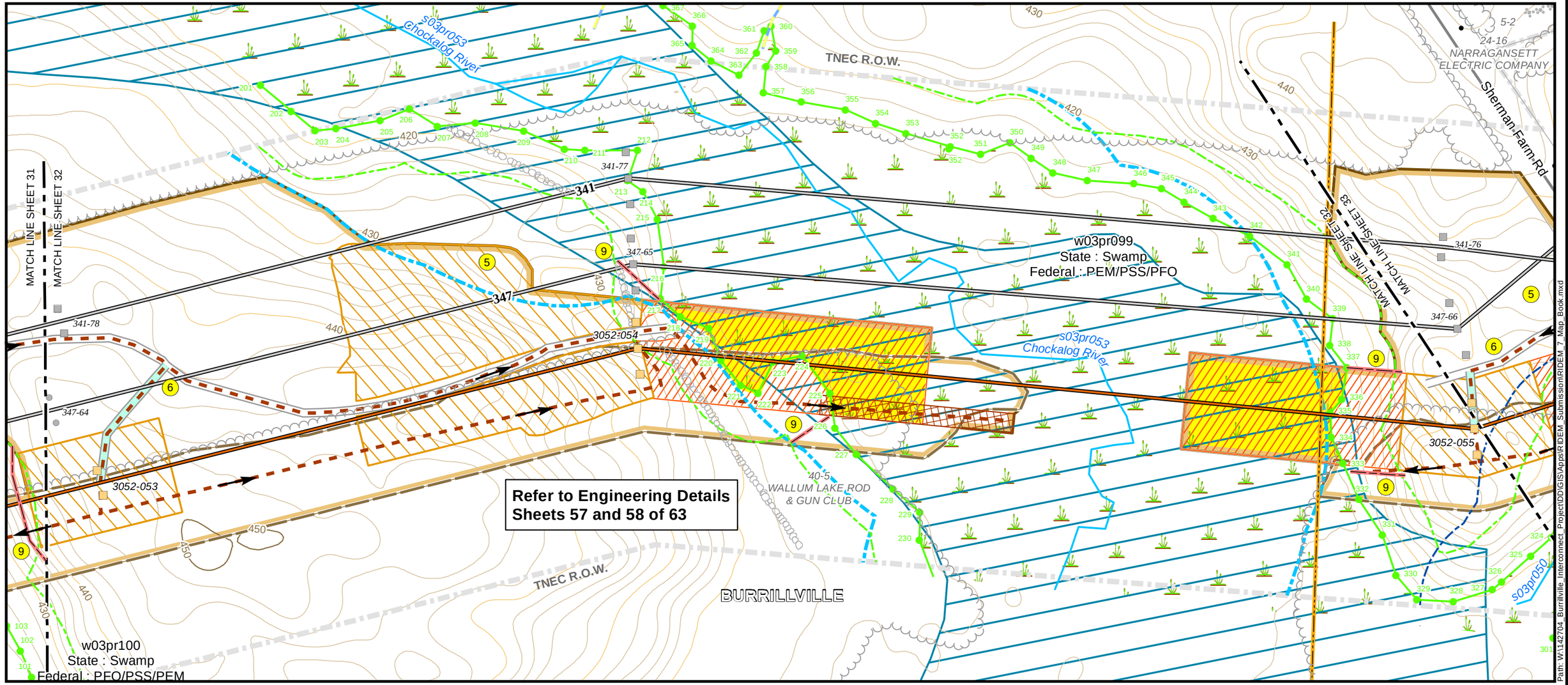
Invenergy

nationalgrid

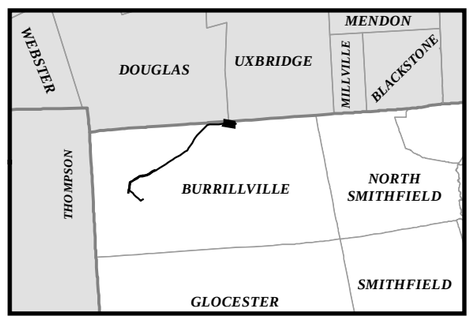
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 31 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDGIS\Apps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd



Map Location



Existing Conditions

- Existing Steel Pole
- Existing Wood Pole
- Wood Distribution Pole
- Existing Transmission Line
- Natural Gas Pipeline
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- Existing Power Facility
- Existing Road
- Existing Right of Way
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- Vernal Pool Location
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- Stone Grouping
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- Proposed Wood Pole
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- Proposed Culvert or Stream Ford
- Proposed New Right-of-Way
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- Improve Existing Road
- Construct New Access
- Tree Clearing Access
- Perimeter Sediment Control
- Limit of Tree Clearing
- Swamp Mat (Construction)
- Road Crossing Guard
- Swamp Mat (Tree Clearing)
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- Wire Pulling Station
- Work Pad /
- Limit of Disturbance

N W E S

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0 100 200 Feet

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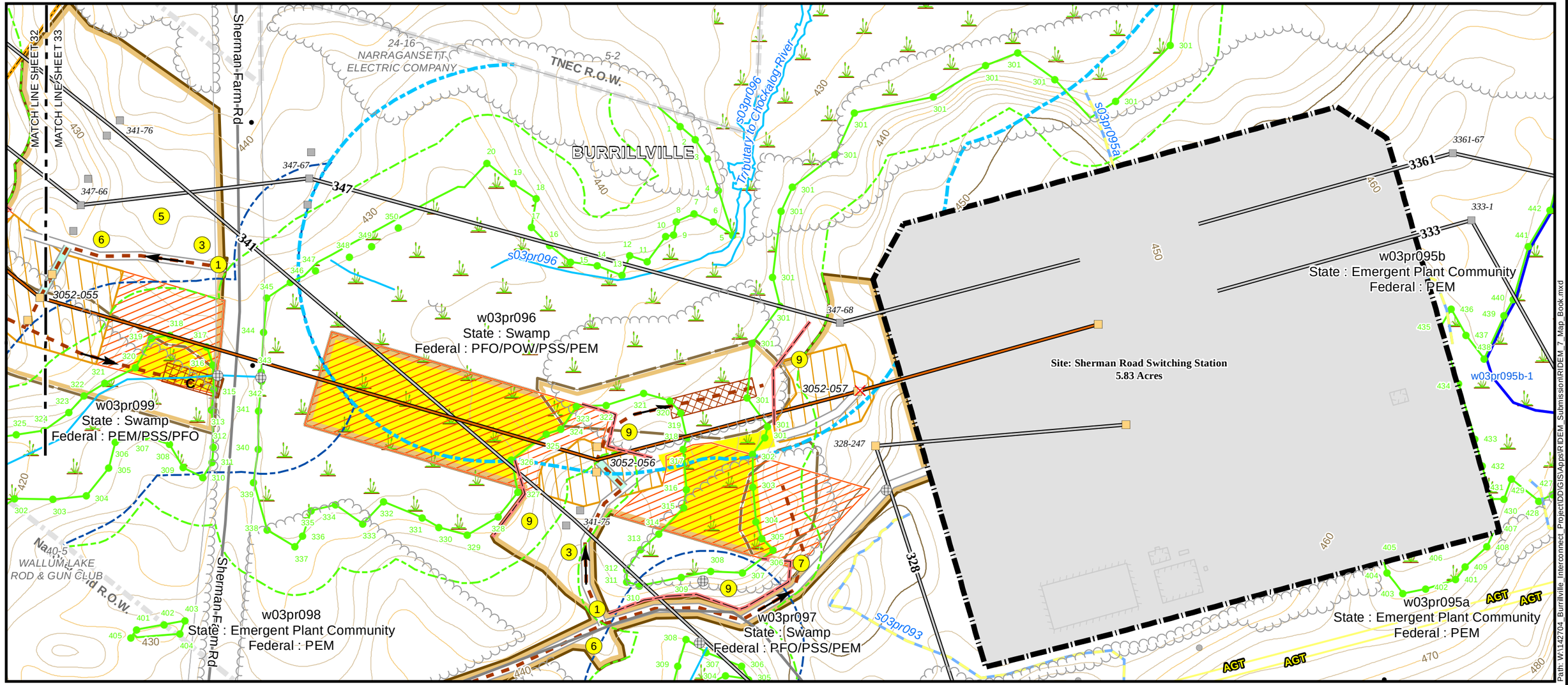
Invenergy

nationalgrid

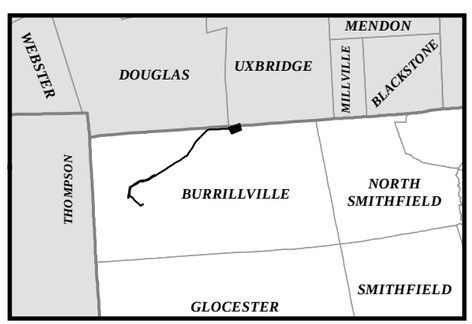
POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 32 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\SIA\ppsR\DEM_SubmissionR\DEM_7_Map_Book.mxd



Map Location



Invenergy

nationalgrid

POWER ENGINEERS

Existing Conditions

- Existing Steel Pole
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0 100 200 Feet

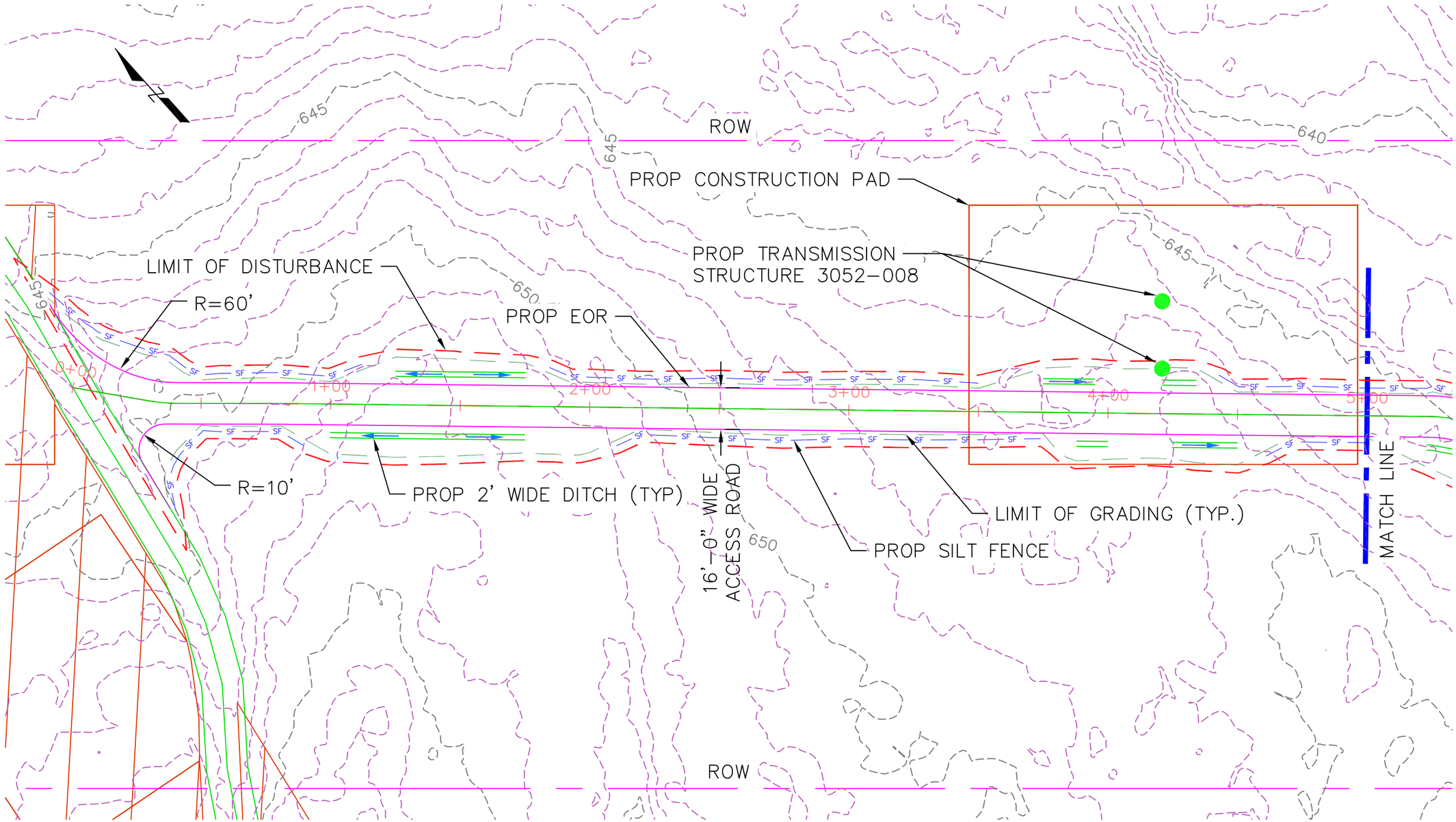
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS BURRILLVILLE, RHODE ISLAND	
DATE: 3/30/2017	DRAWN: TDH	142704	FIGURE T-3	SHEET 33 OF 63

Path: W:\142704_Burrillville_Interconnect_Project\DDG\GIS\Apps\RIDEM_SubmissionRIDEM_7_Map_Book.mxd



ROAD PLAN STATION 0+00 TO 5+00
SCALE: 1"=40'

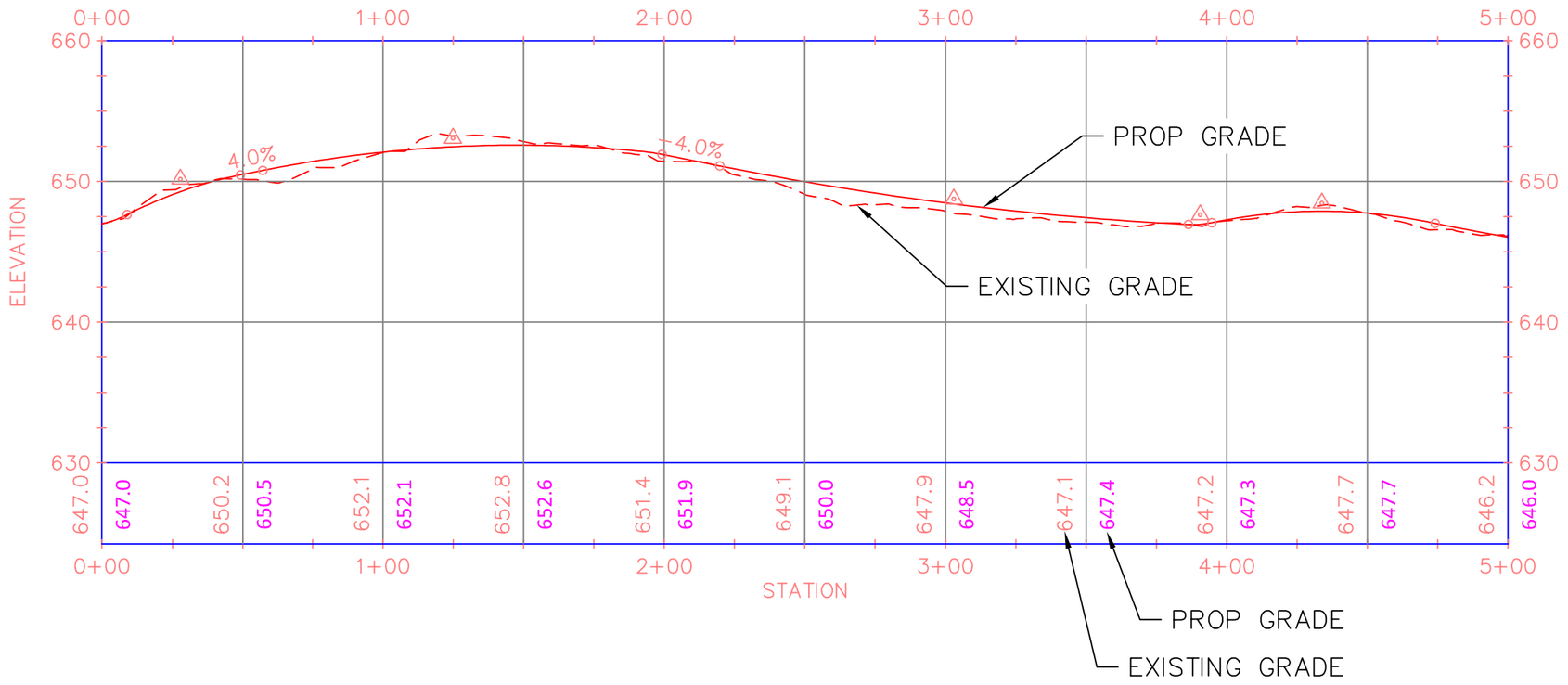
0 40 80 FEET

NOTE: THE LIMITS OF GRADING SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. EXISTING GRADES ARE BASED OFF LIDAR SURVEY. LIMITS OF ROW SHOWN ARE APPROXIMATE. RHODE ISLAND PE SEAL 9008 IS APPLICABLE ONLY TO THE PROPOSED TRANSMISSION STRUCTURE LOCATIONS SHOWN. PROPOSED TRANSMISSION STRUCTURE LOCATIONS ARE APPROXIMATE.

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 34 OF 63



ROAD PROFILE STATION 0+00 TO 5+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

HOR. SCALE IN FEET
0 50 100 FEET

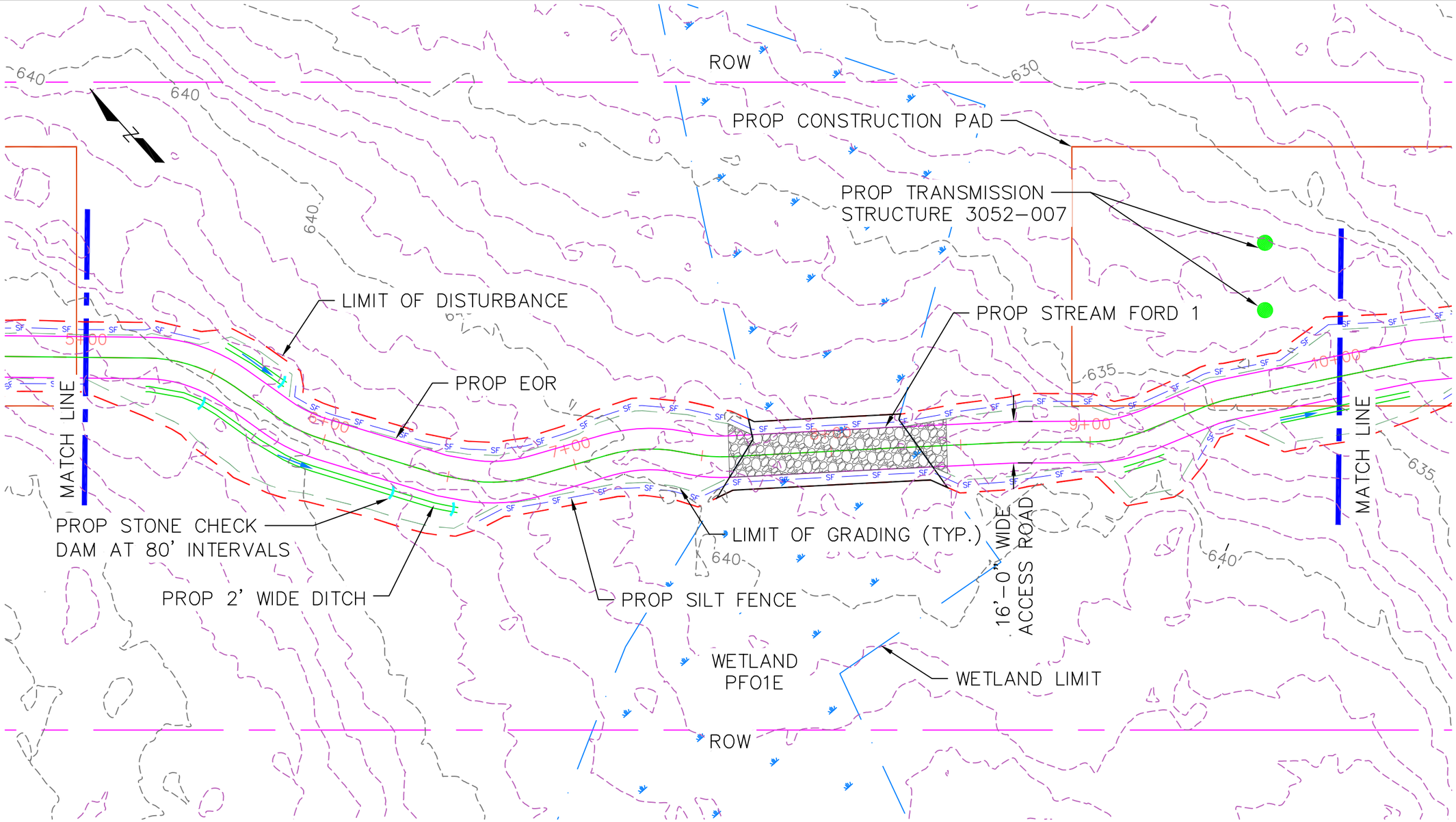
VER. SCALE IN FEET
0 10 20 FEET

Invenergy

nationalgrid

POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 35 OF 63



ROAD PLAN STATION 5+00 TO 10+00
SCALE: 1"=40'

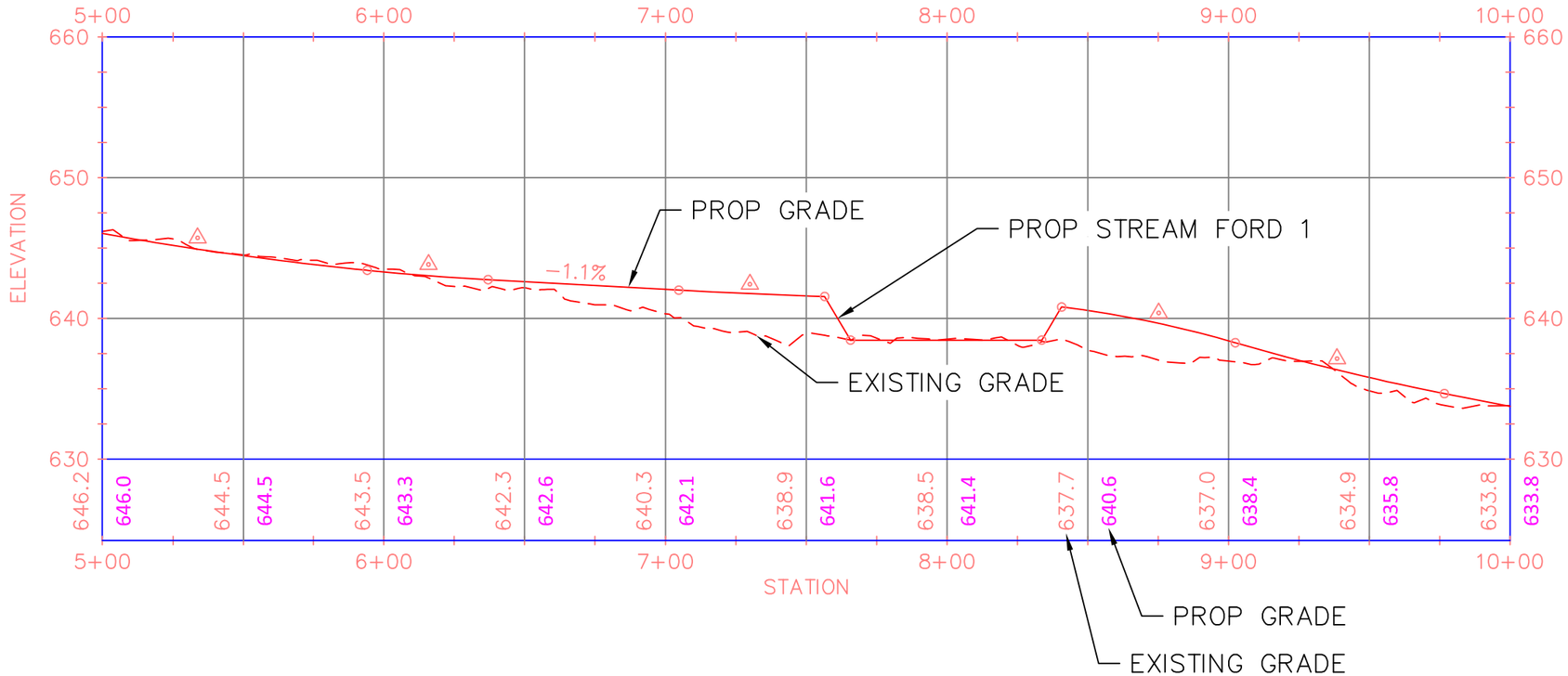
0 40 80 FEET

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DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 36 OF 63



ROAD PROFILE STATION 5+00 TO 10+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

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Invenergy

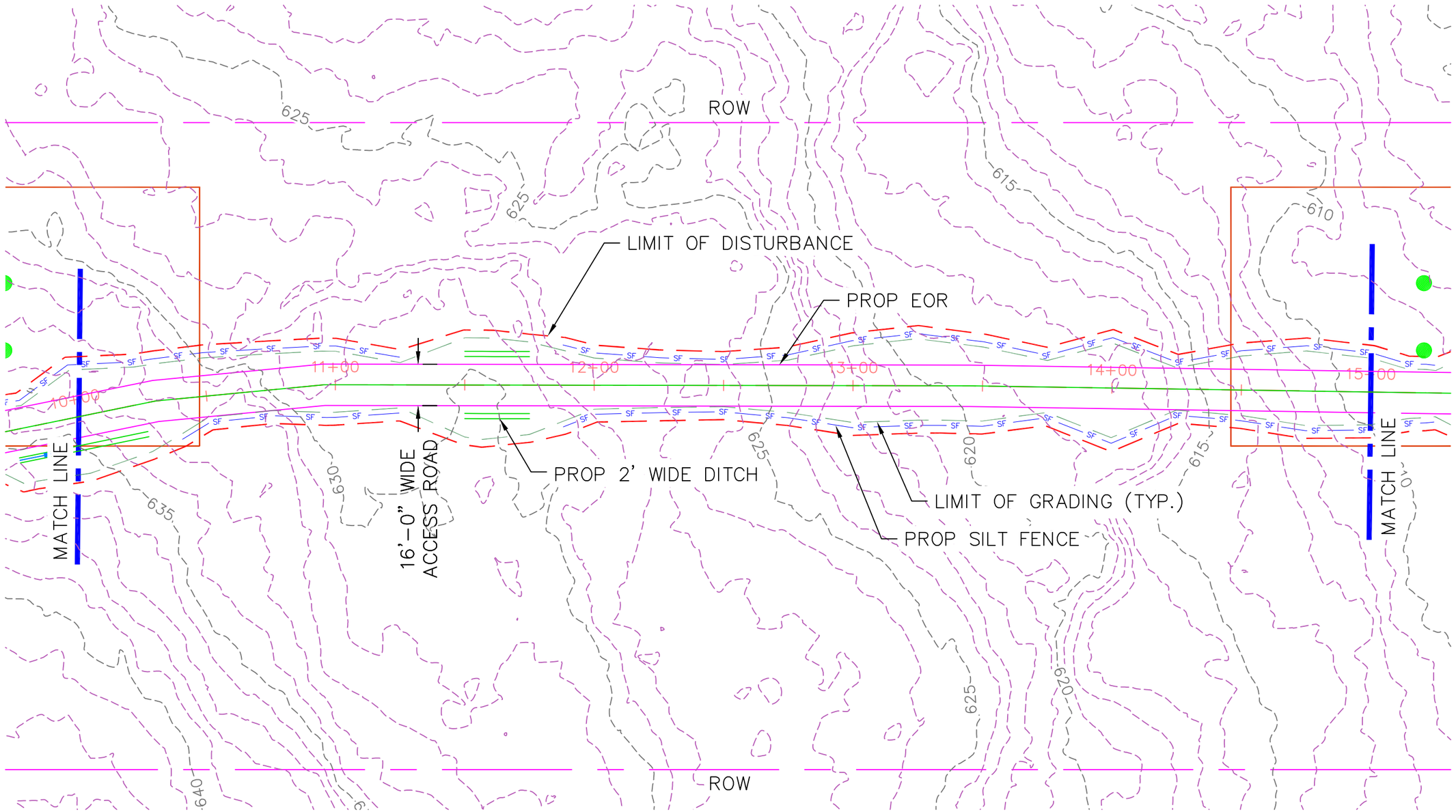
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POWER ENGINEERS

HOR. SCALE IN FEET
0 50 100 FEET

VER. SCALE IN FEET
0 10 20 FEET

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 37 OF 63



ROAD PLAN STATION 10+00 TO 15+00
SCALE: 1"=40'

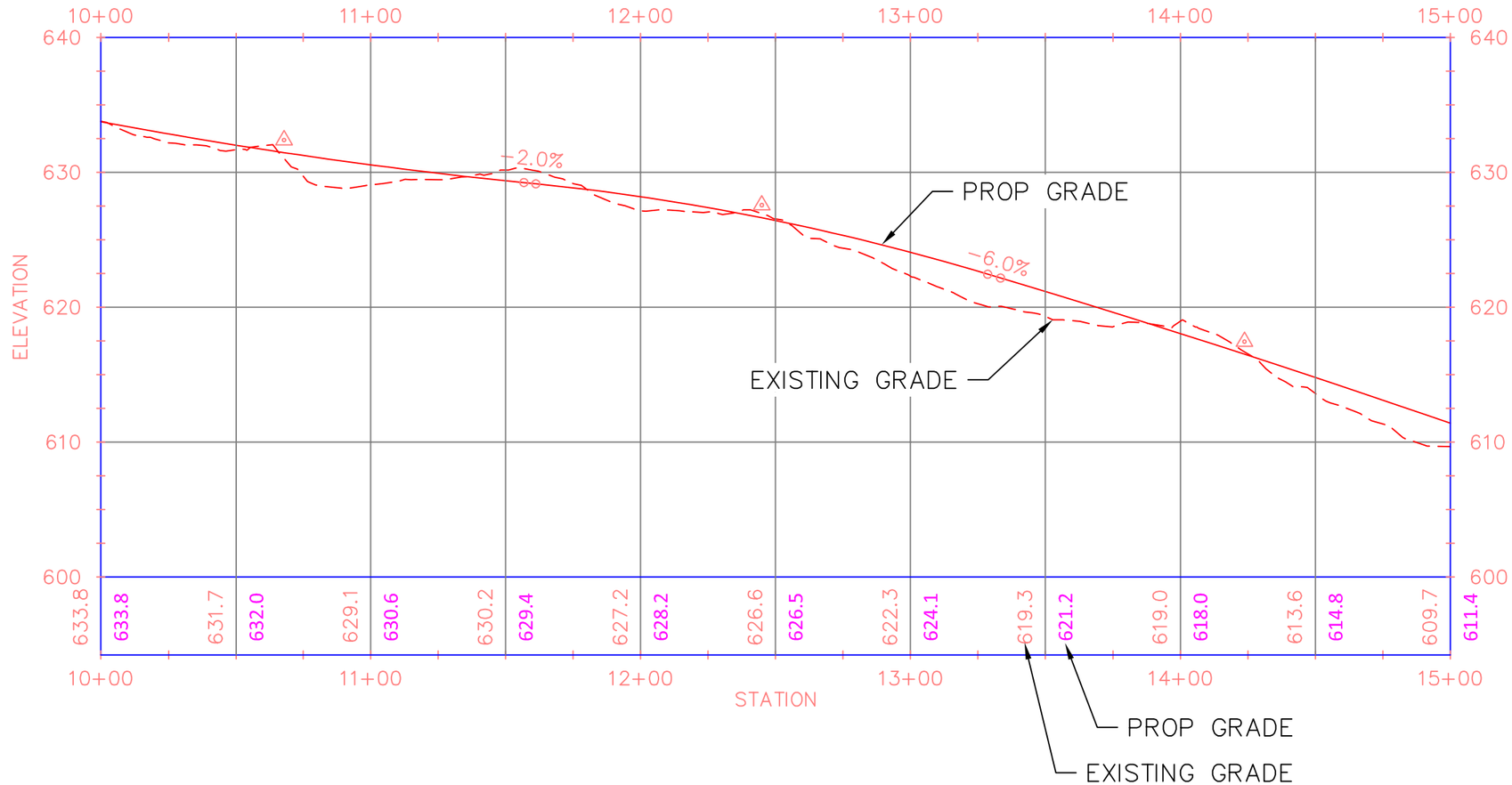
0 40 80 FEET

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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 38 OF 63



ROAD PROFILE STATION 10+00 TO 15+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

Invenergy

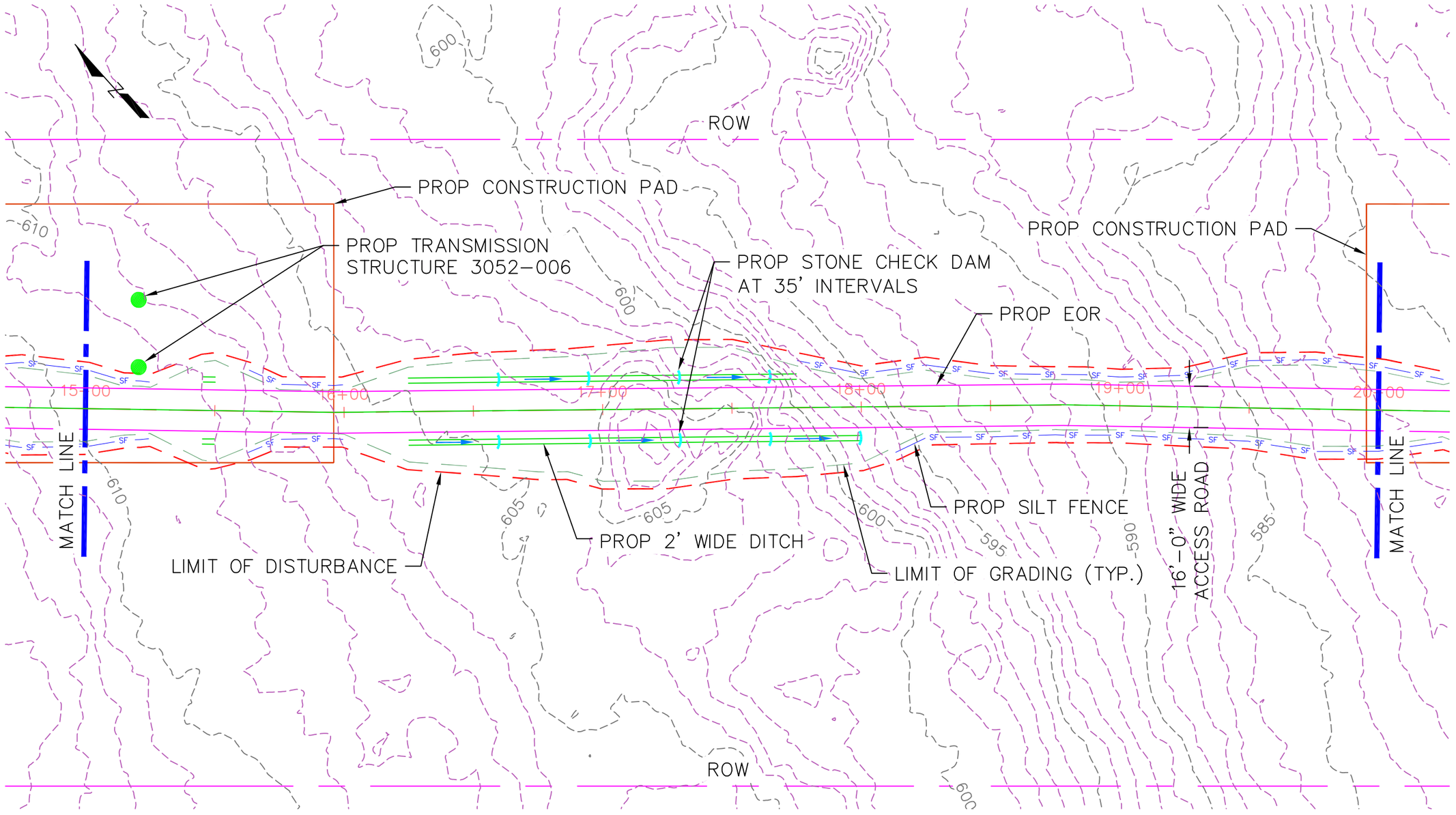
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POWER ENGINEERS

HOR. SCALE IN FEET
0 50 100 FEET

VER. SCALE IN FEET
0 10 20 FEET

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 39 OF 63



ROAD PLAN STATION 15+00 TO 20+00
SCALE: 1"=40'

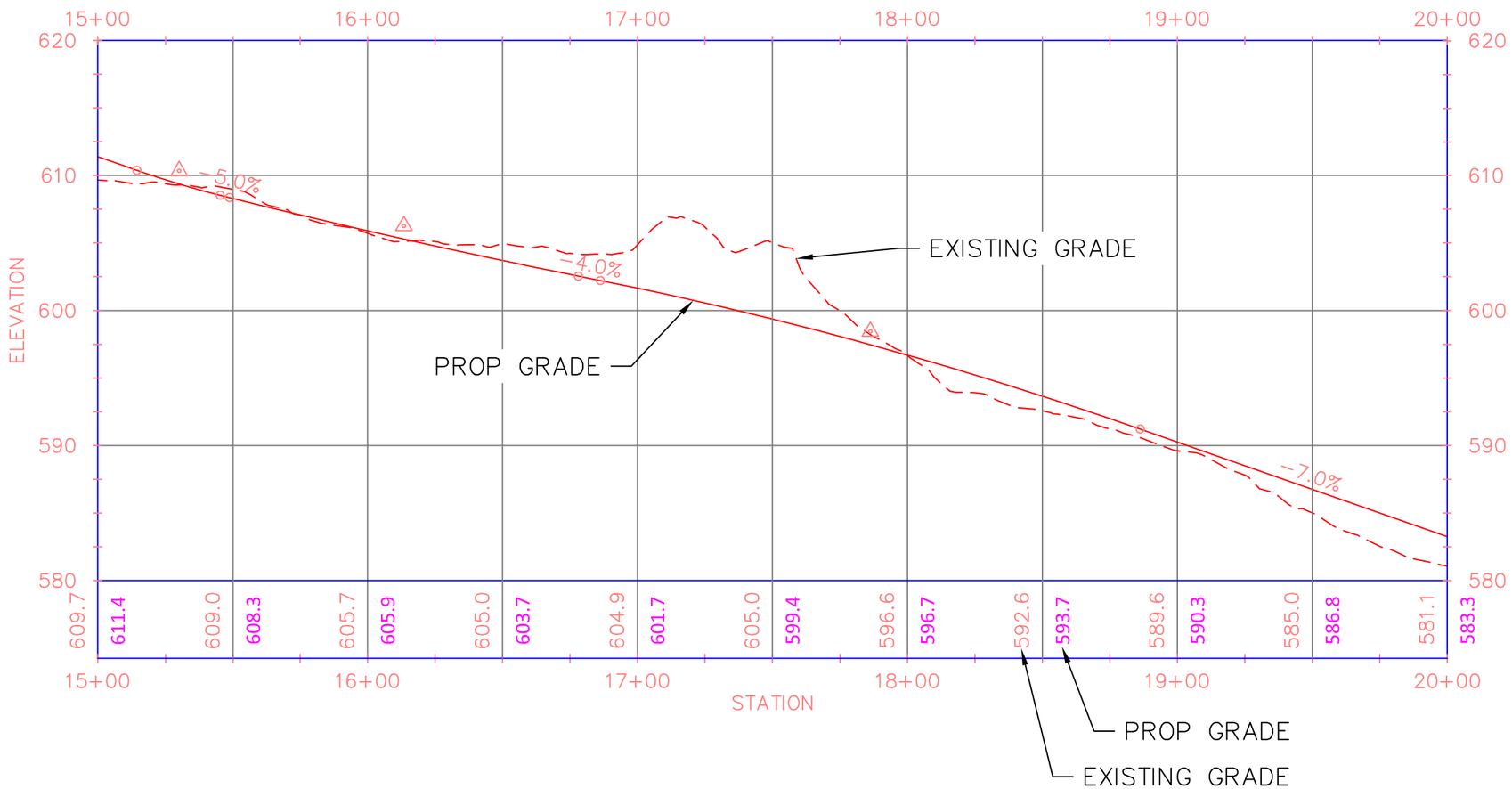
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DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 40 OF 63



ROAD PROFILE STATION 15+00 TO 20+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

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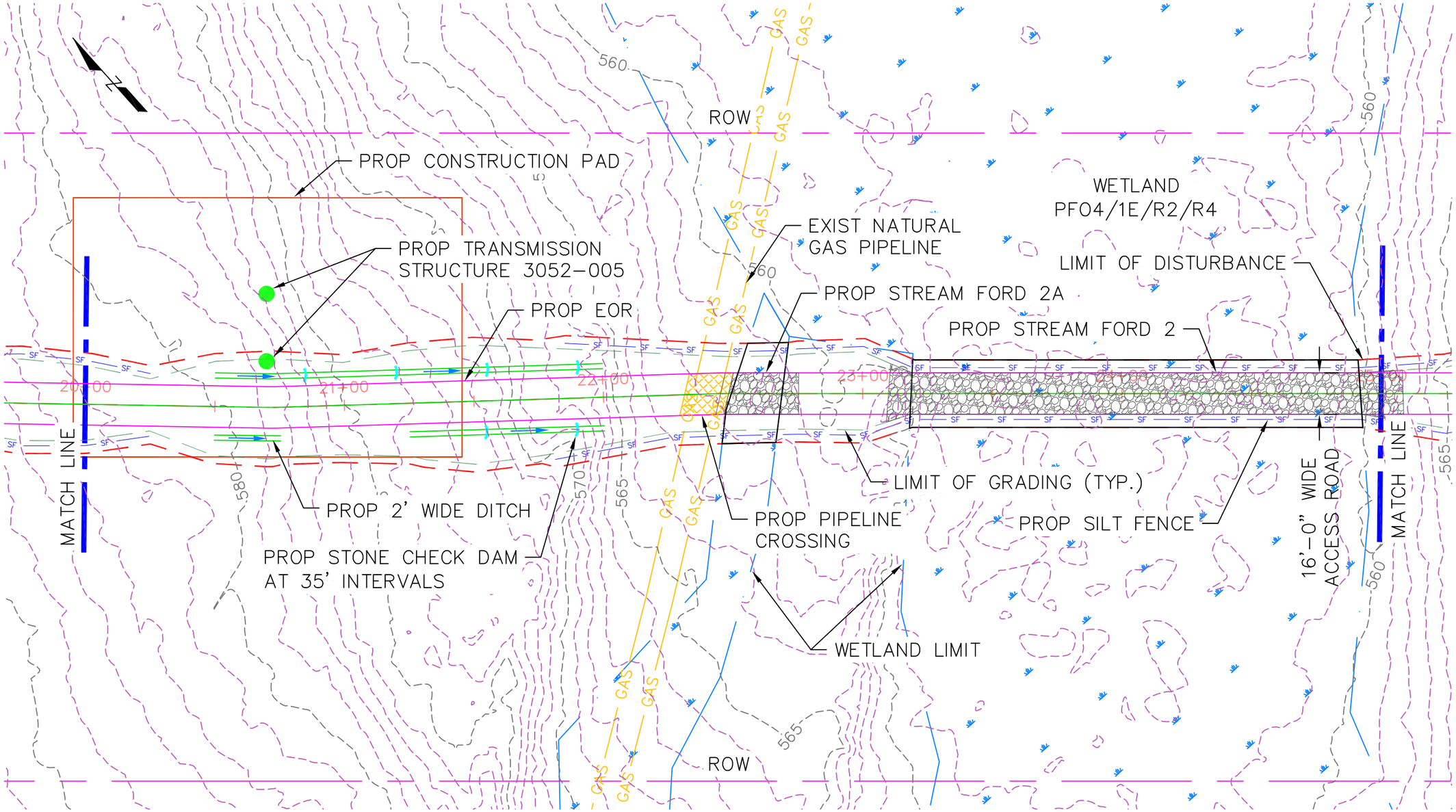
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POWER ENGINEERS

HOR. SCALE IN FEET
0 50 100 FEET

VER. SCALE IN FEET
0 10 20 FEET

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DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 41 OF 63



ROAD PLAN STATION 20+00 TO 25+00
SCALE: 1"=40'

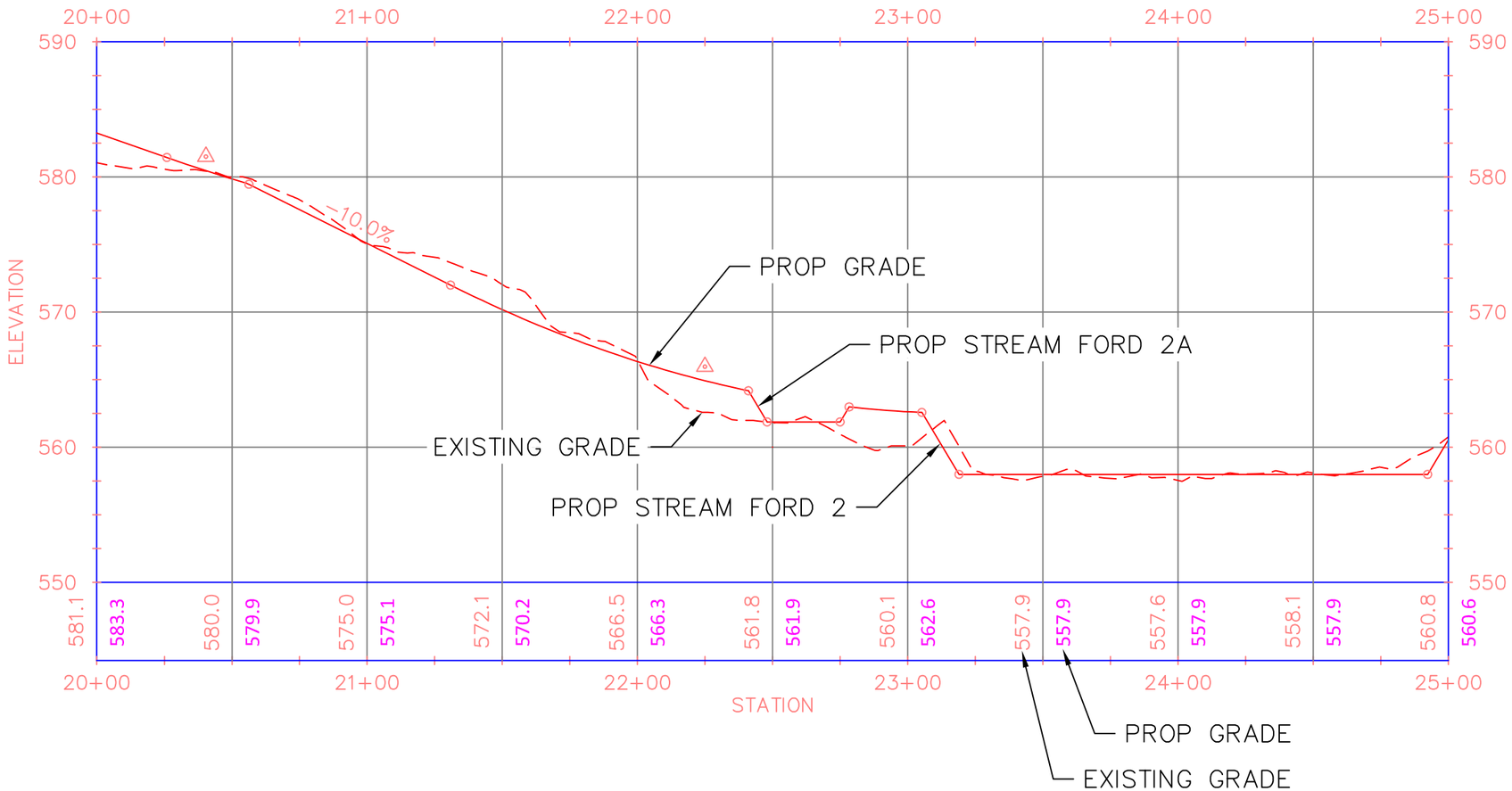
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DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 42 OF 63



ROAD PROFILE STATION 20+00 TO 25+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

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Invenergy

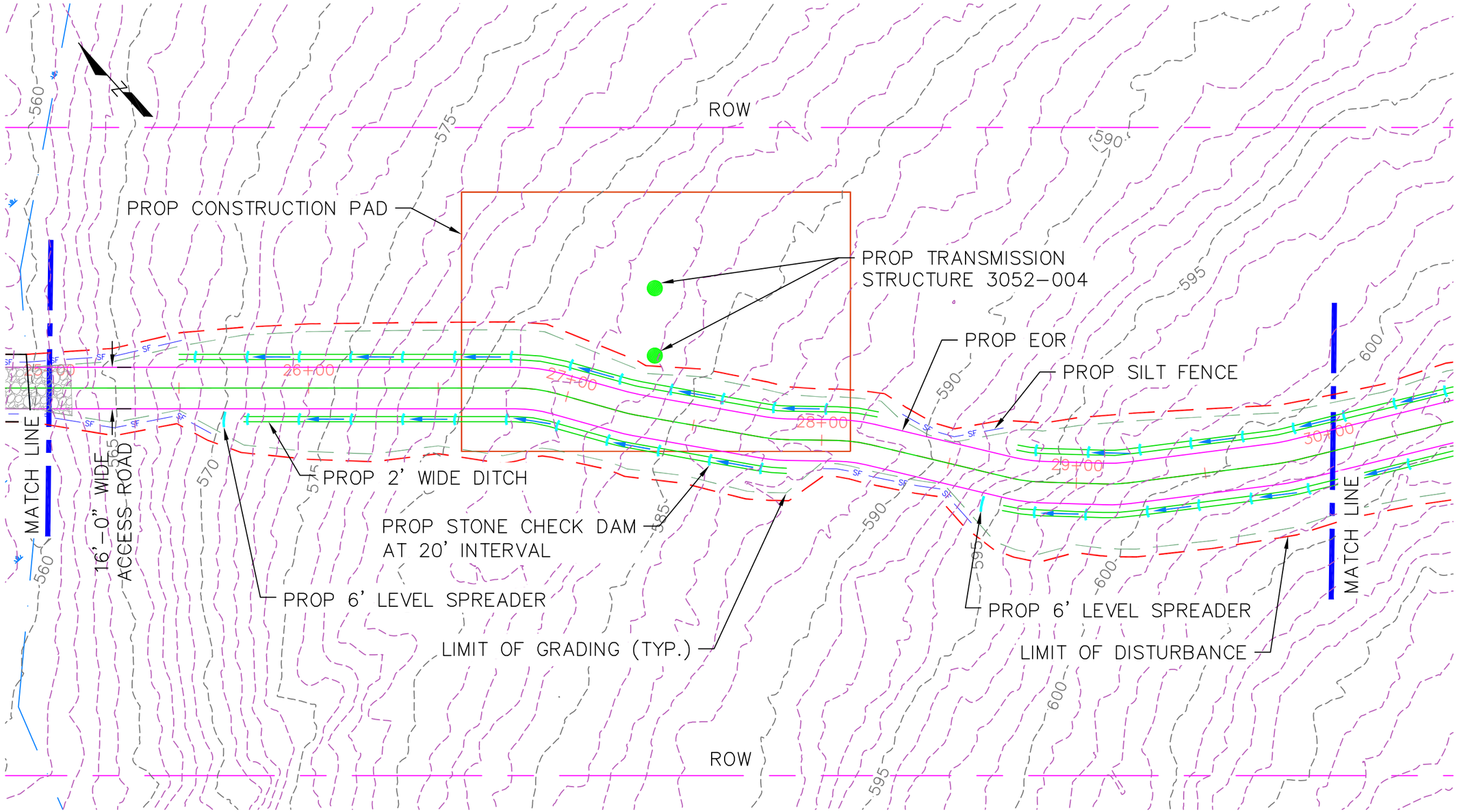
nationalgrid

POWER ENGINEERS

HOR. SCALE IN FEET
0 50 100 FEET

VER. SCALE IN FEET
0 10 20 FEET

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 43 OF 63



ROAD PLAN STATION 25+00 TO 30+00
SCALE: 1"=40'

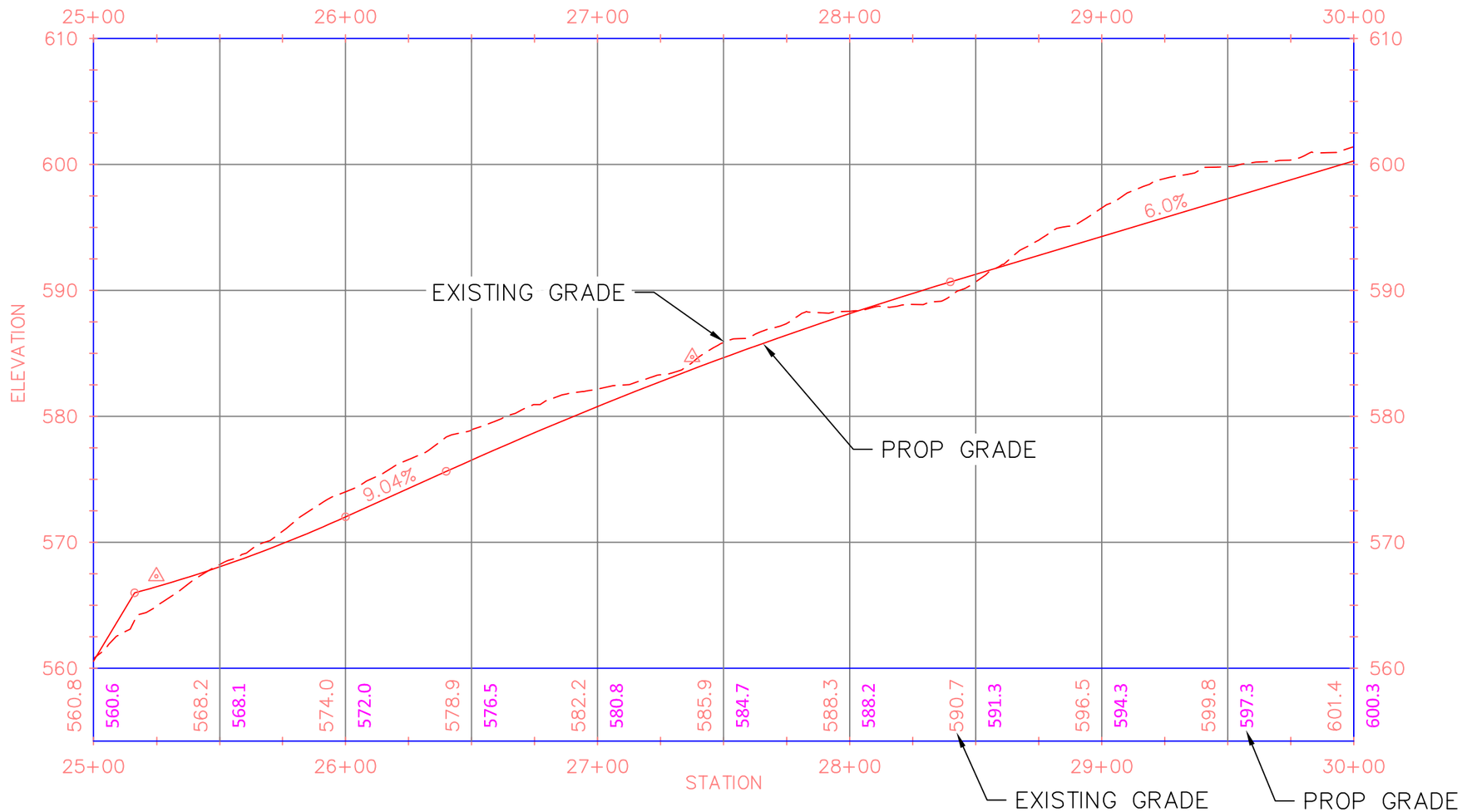
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DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 44 OF 63



ROAD PROFILE STATION 25+00 TO 30+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

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NOT FOR CONSTRUCTION

HOR. SCALE IN FEET
0 50 100 FEET

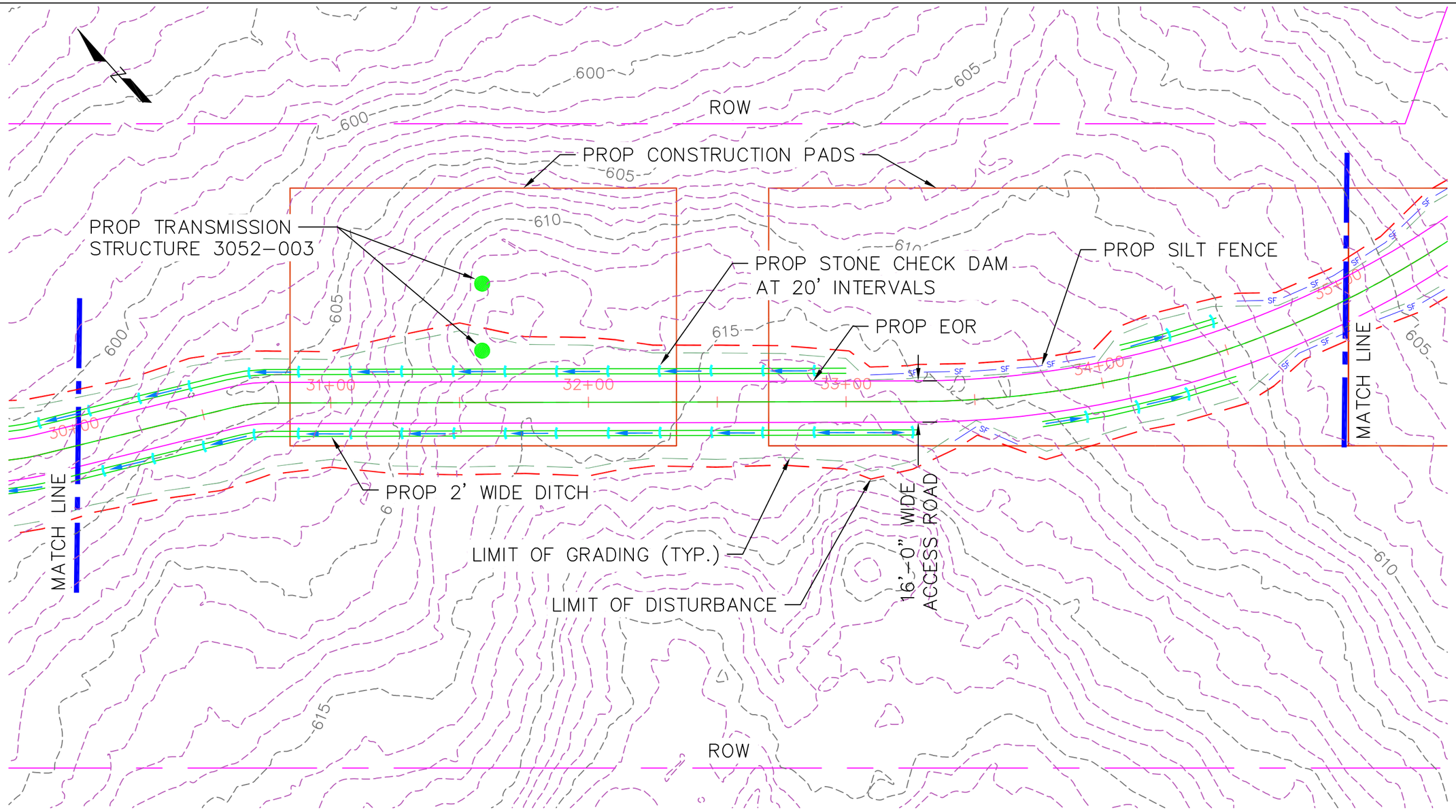
VER. SCALE IN FEET
0 10 20 FEET

Invenergy

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 45 OF 63



ROAD PLAN STATION 30+00 TO 35+00
SCALE: 1"=40'

0 40 80 FEET

NOTE: THE LIMITS OF GRADING SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. EXISTING GRADES ARE BASED OFF LIDAR SURVEY. LIMITS OF ROW SHOWN ARE APPROXIMATE. RHODE ISLAND PE SEAL 9008 IS APPLICABLE ONLY TO THE PROPOSED TRANSMISSION STRUCTURE LOCATIONS SHOWN. PROPOSED TRANSMISSION STRUCTURE LOCATIONS ARE APPROXIMATE.

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

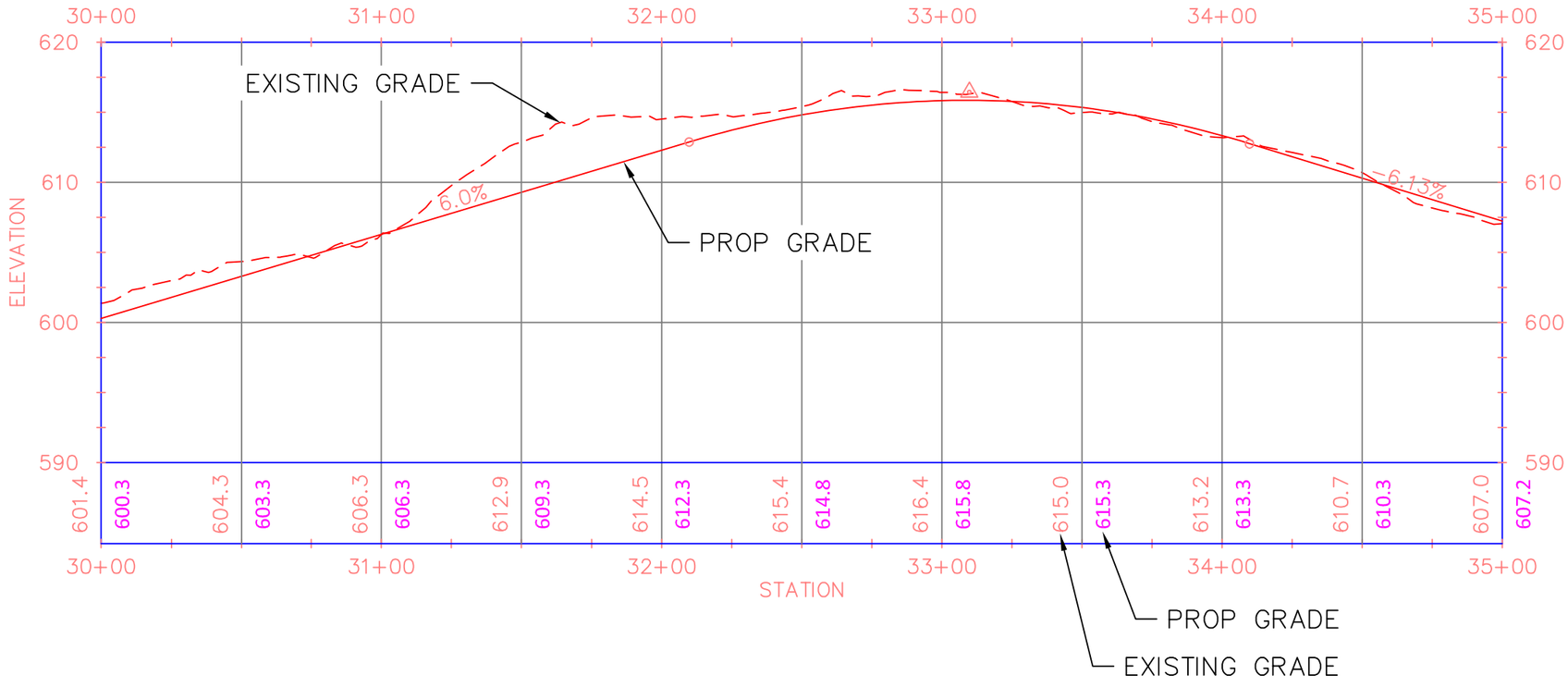
NOT FOR CONSTRUCTION

Invenergy

nationalgrid

POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 46 OF 63



ROAD PROFILE STATION 30+00 TO 35+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

HOR. SCALE IN FEET
0 50 100 FEET

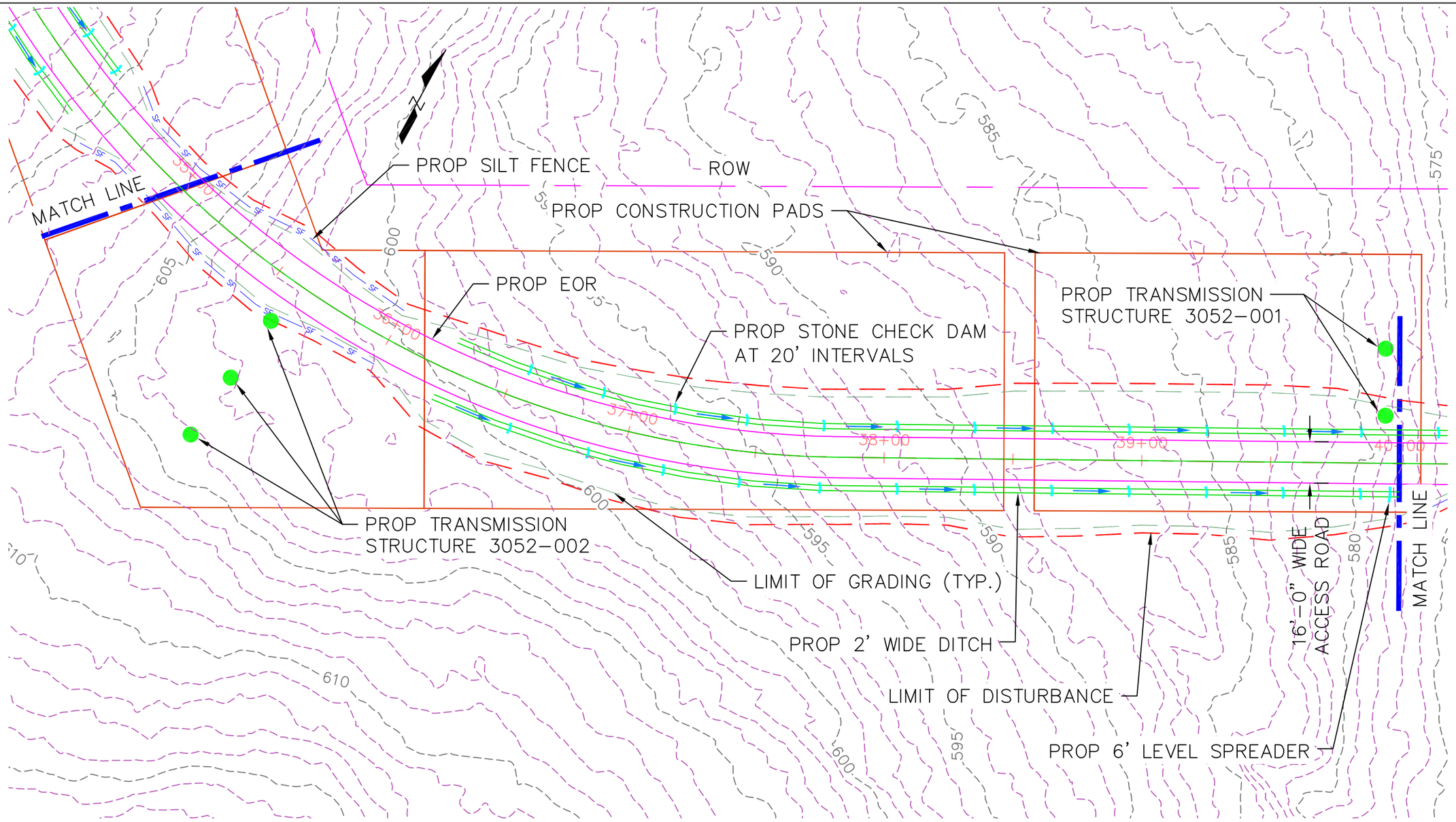
VER. SCALE IN FEET
0 10 20 FEET

Invenergy

nationalgrid

POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 47 OF 63



ROAD PLAN STATION 35+00 TO 40+00
SCALE: 1"=40'

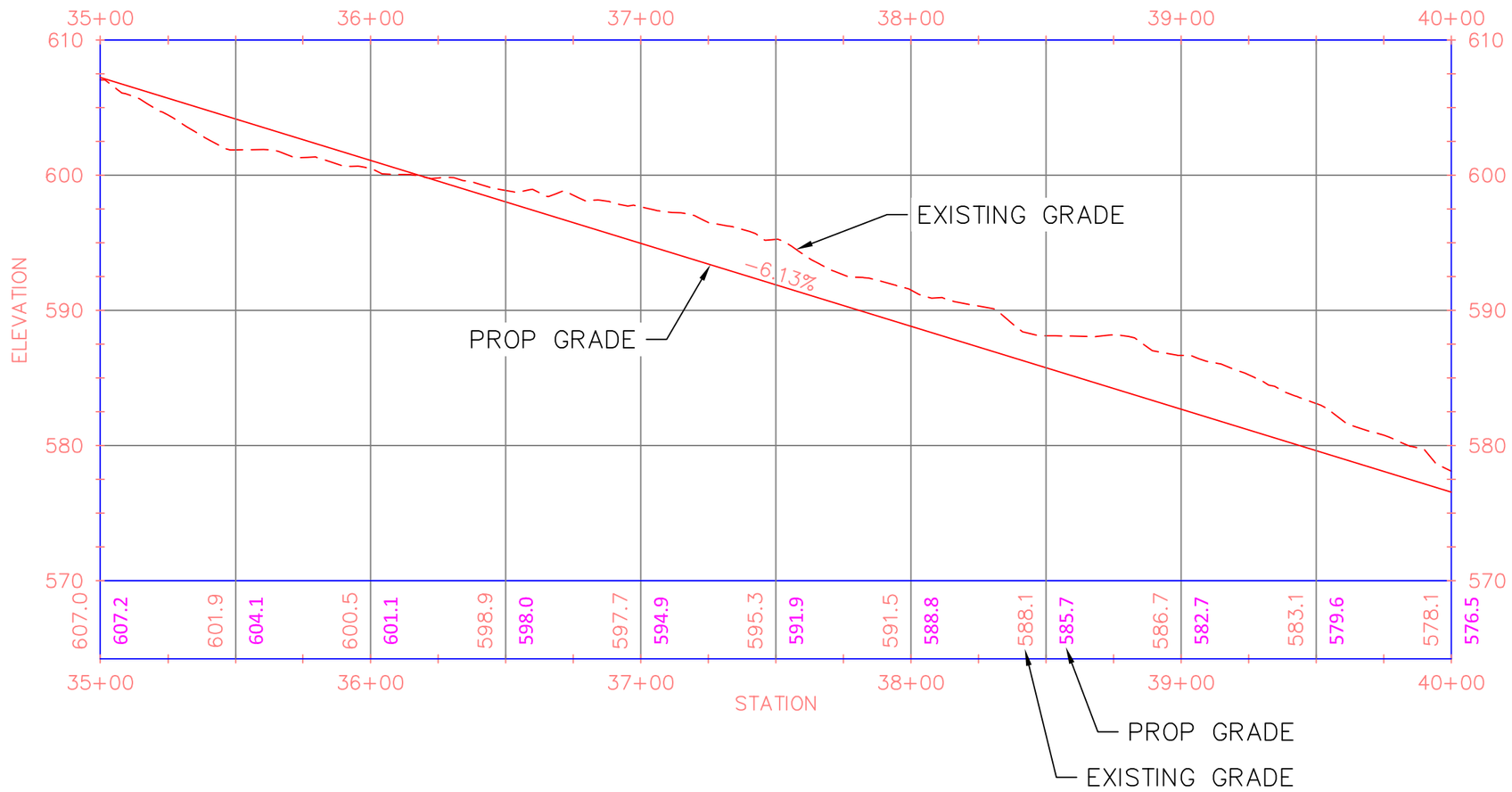
0 40 80 FEET

NOTE: THE LIMITS OF GRADING SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. EXISTING GRADES ARE BASED OFF LIDAR SURVEY. LIMITS OF ROW SHOWN ARE APPROXIMATE. RHODE ISLAND PE SEAL 9008 IS APPLICABLE ONLY TO THE PROPOSED TRANSMISSION STRUCTURE LOCATIONS SHOWN. PROPOSED TRANSMISSION STRUCTURE LOCATIONS ARE APPROXIMATE.

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 48 OF 63



ROAD PROFILE STATION 35+00 TO 40+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

Invenergy

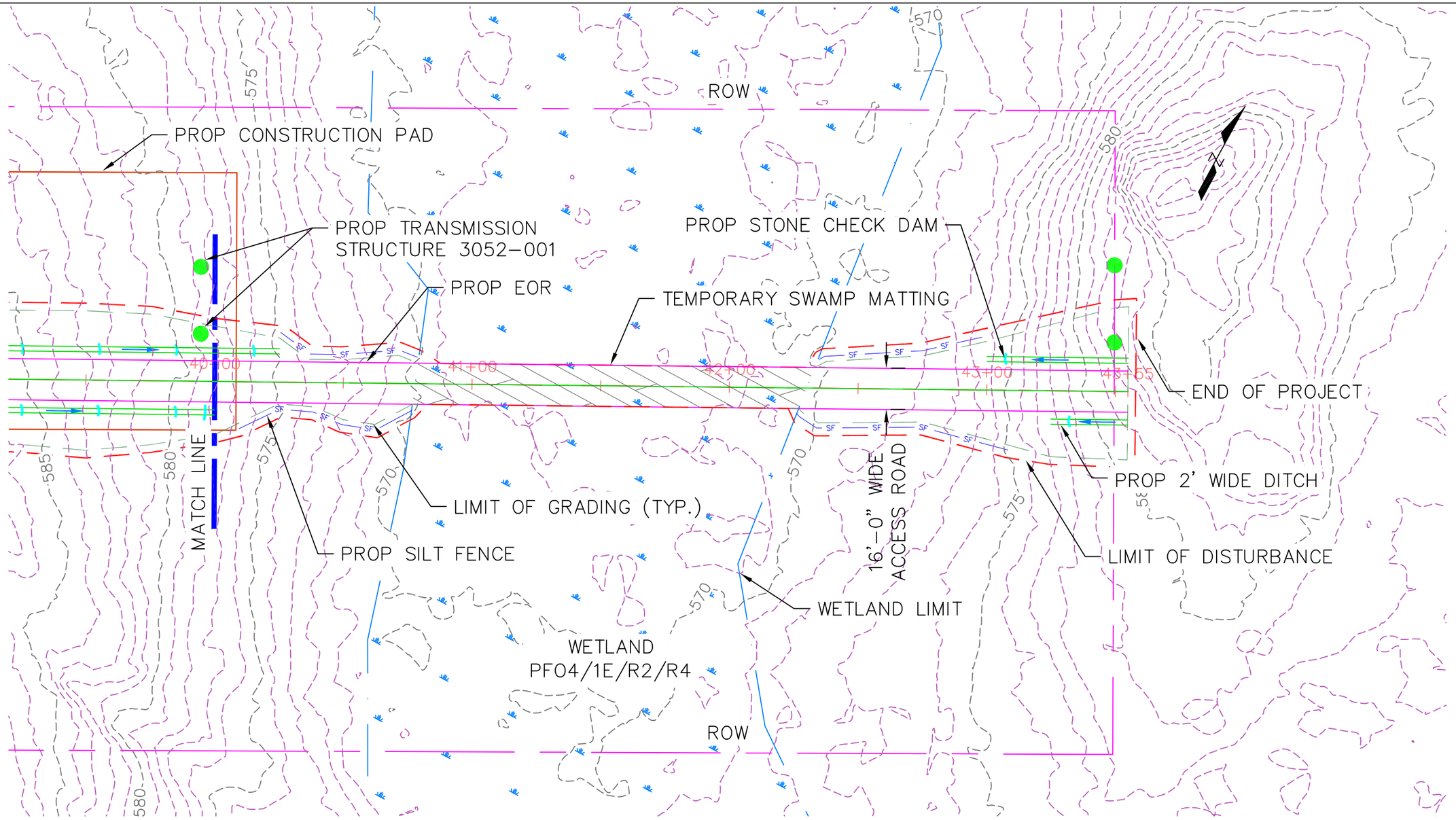
nationalgrid

POWER ENGINEERS

HOR. SCALE IN FEET
0 50 100 FEET

VER. SCALE IN FEET
0 10 20 FEET

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 49 OF 63



ROAD PLAN STATION 40+00 TO 43+55
SCALE: 1"=40'

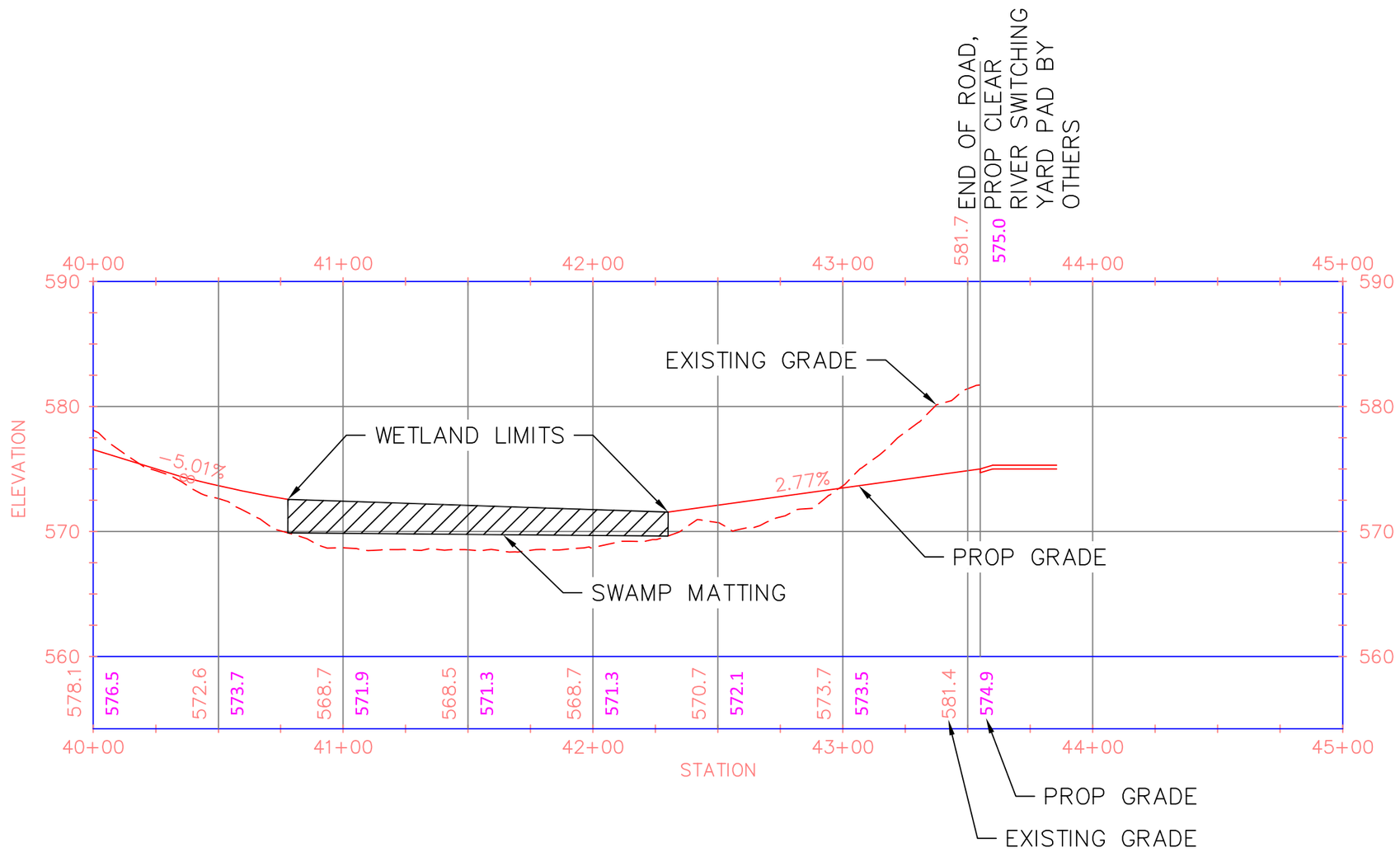
0 40 80 FEET

NOTE: THE LIMITS OF GRADING SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. EXISTING GRADES ARE BASED OFF LIDAR SURVEY. LIMITS OF ROW SHOWN ARE APPROXIMATE. RHODE ISLAND PE SEAL 9008 IS APPLICABLE ONLY TO THE PROPOSED TRANSMISSION STRUCTURE LOCATIONS SHOWN. PROPOSED TRANSMISSION STRUCTURE LOCATIONS ARE APPROXIMATE.

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NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 50 OF 63



ROAD PROFILE STATION 40+00 TO 45+00
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

Invenergy

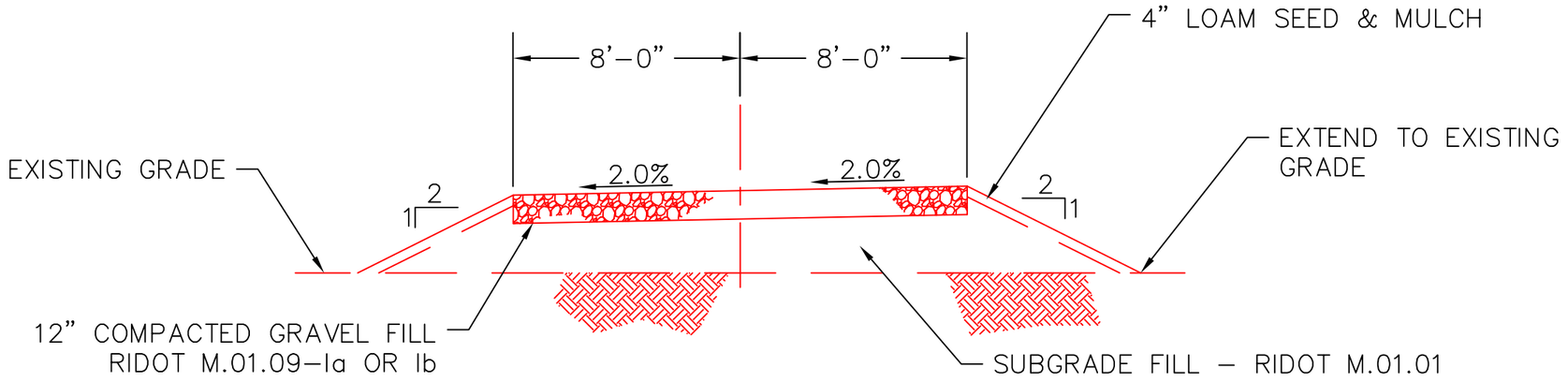
nationalgrid

POWER ENGINEERS

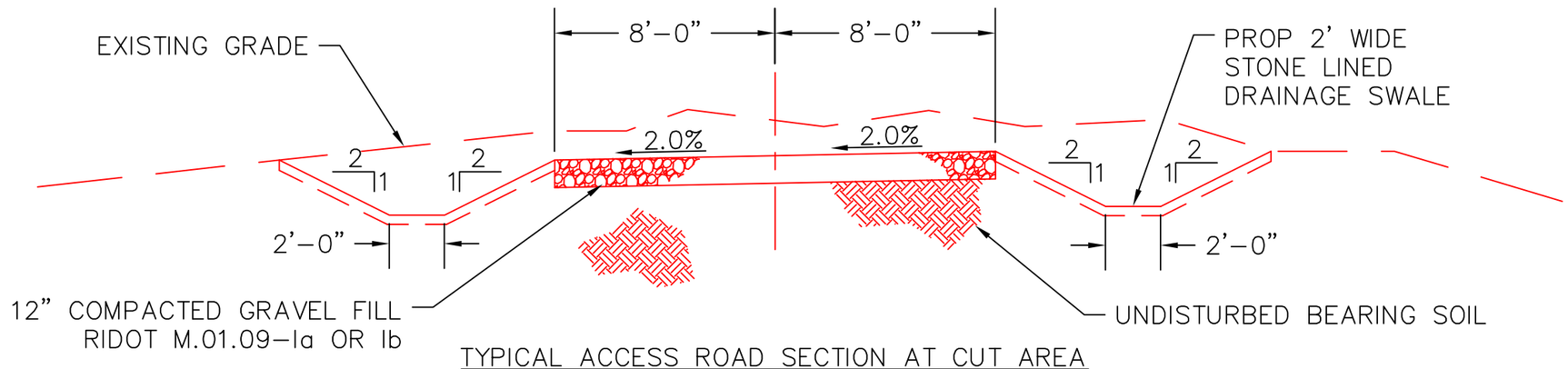
HOR. SCALE IN FEET
0 50 100 FEET

VER. SCALE IN FEET
0 10 20 FEET

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PROPOSED ACCESS ROAD BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 51 OF 63



TYPICAL ACCESS ROAD AND SPUR SECTION AT FILL AREA



TYPICAL ACCESS ROAD SECTION AT CUT AREA

TYPICAL ACCESS ROAD SECTIONS
SCALE: 1"=5'

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

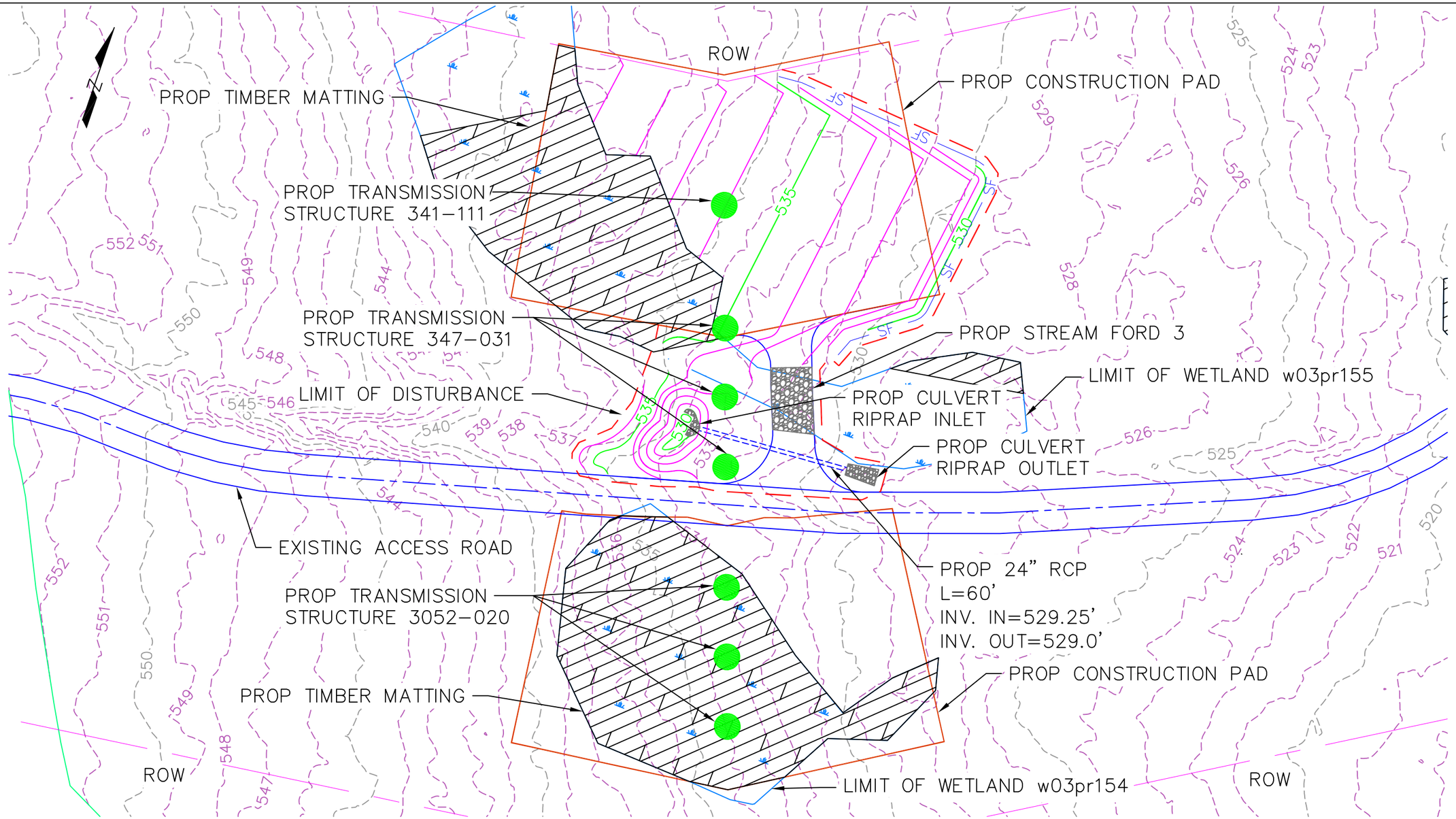
Invenergy

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POWER ENGINEERS

0 5 10 FEET

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS ACCESS ROAD CROSS SECTIONS BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 52 OF 63



PROPOSED GRADING PLAN
AROUND STRUCTURE 347–031
SCALE: 1"=40'

0 40 80 FEET

NOTE: THE LIMITS OF GRADING SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. EXISTING GRADES ARE BASED OFF LIDAR SURVEY. LIMITS OF ROW SHOWN ARE APPROXIMATE. RHODE ISLAND PE SEAL 9008 IS APPLICABLE ONLY TO THE PROPOSED TRANSMISSION STRUCTURE LOCATIONS SHOWN. PROPOSED TRANSMISSION STRUCTURE LOCATIONS ARE APPROXIMATE.

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

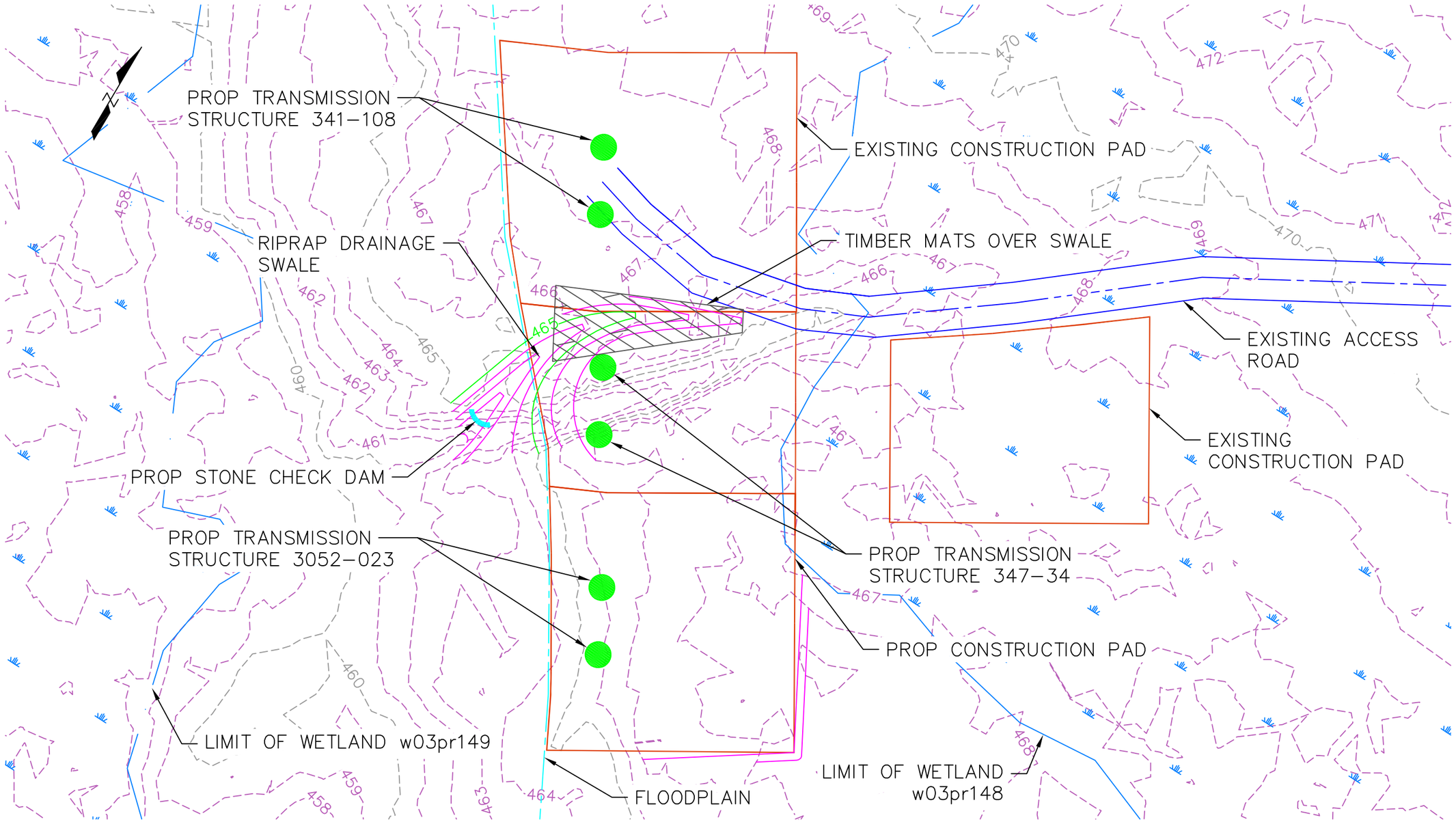
NOT FOR CONSTRUCTION

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS CONSTRUCTION PAD GRADING BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 53 OF 63



PROPOSED GRADING PLAN
AROUND STRUCTURE 347–034
SCALE: 1"=40'

0 40 80 FEET

NOTE: THE LIMITS OF GRADING SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. EXISTING GRADES ARE BASED OFF LIDAR SURVEY. LIMITS OF ROW SHOWN ARE APPROXIMATE. RHODE ISLAND PE SEAL 9008 IS APPLICABLE ONLY TO THE PROPOSED TRANSMISSION STRUCTURE LOCATIONS SHOWN. PROPOSED TRANSMISSION STRUCTURE LOCATIONS ARE APPROXIMATE.

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

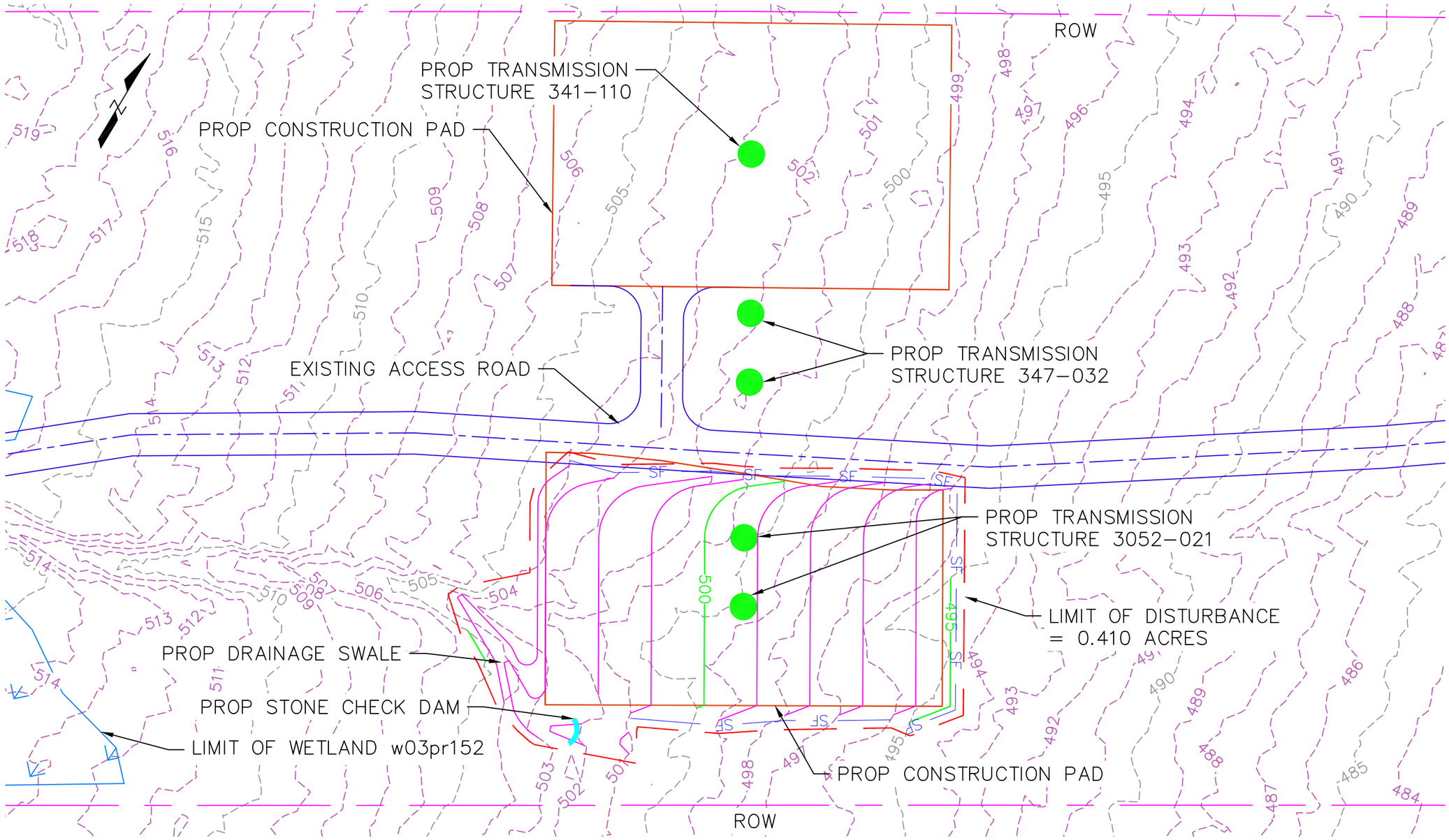
NOT FOR CONSTRUCTION

Invenergy

nationalgrid

POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS CONSTRUCTION PAD GRADING BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 54 OF 63



PROPOSED GRADING PLAN
AROUND STRUCTURE 3052-021
SCALE: 1"=40'

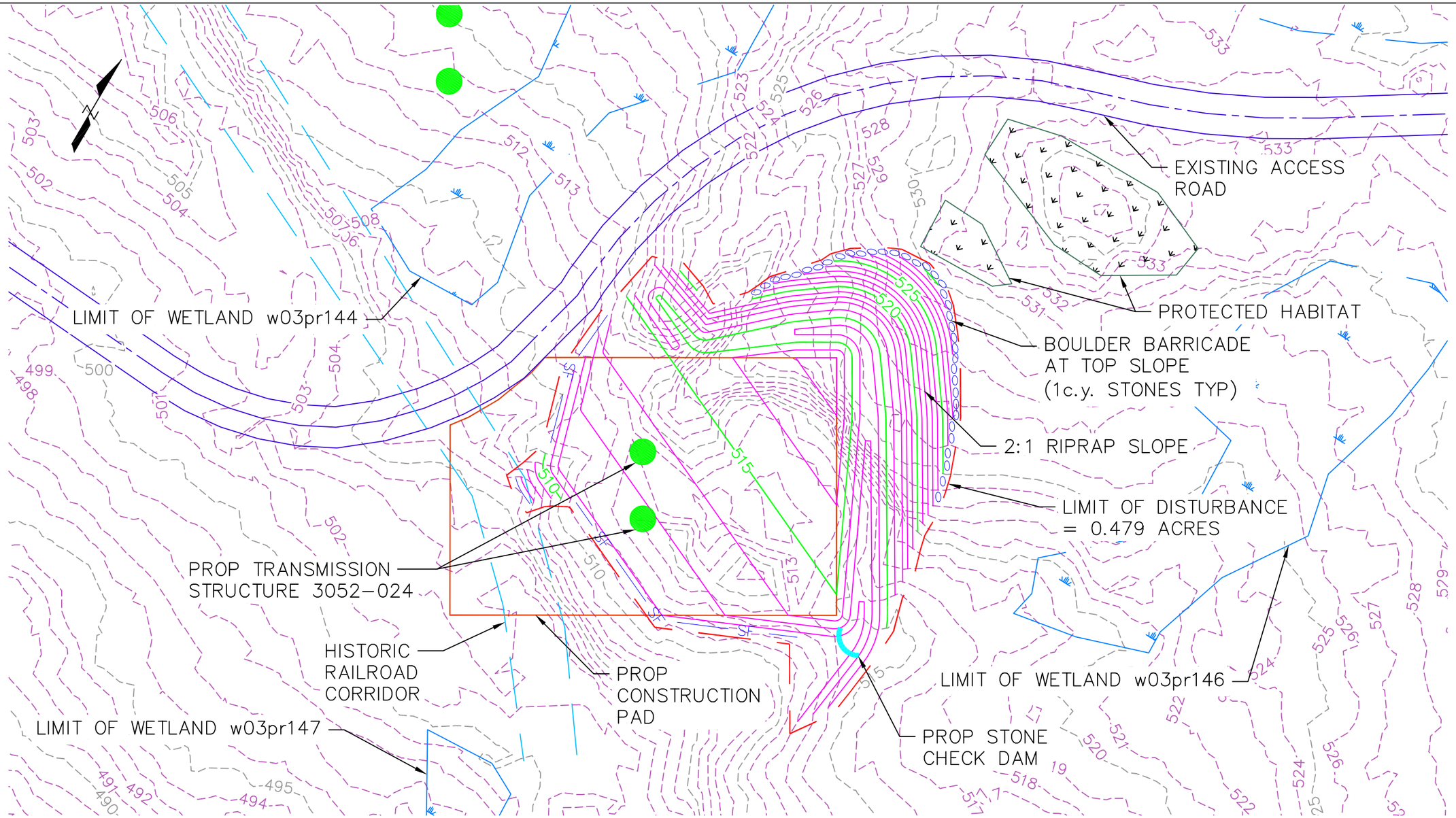
0 40 80 FEET

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NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS CONSTRUCTION PAD GRADING BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 55 OF 63



PROPOSED GRADING PLAN
AROUND STRUCTURE 3052-024
SCALE: 1"=40'

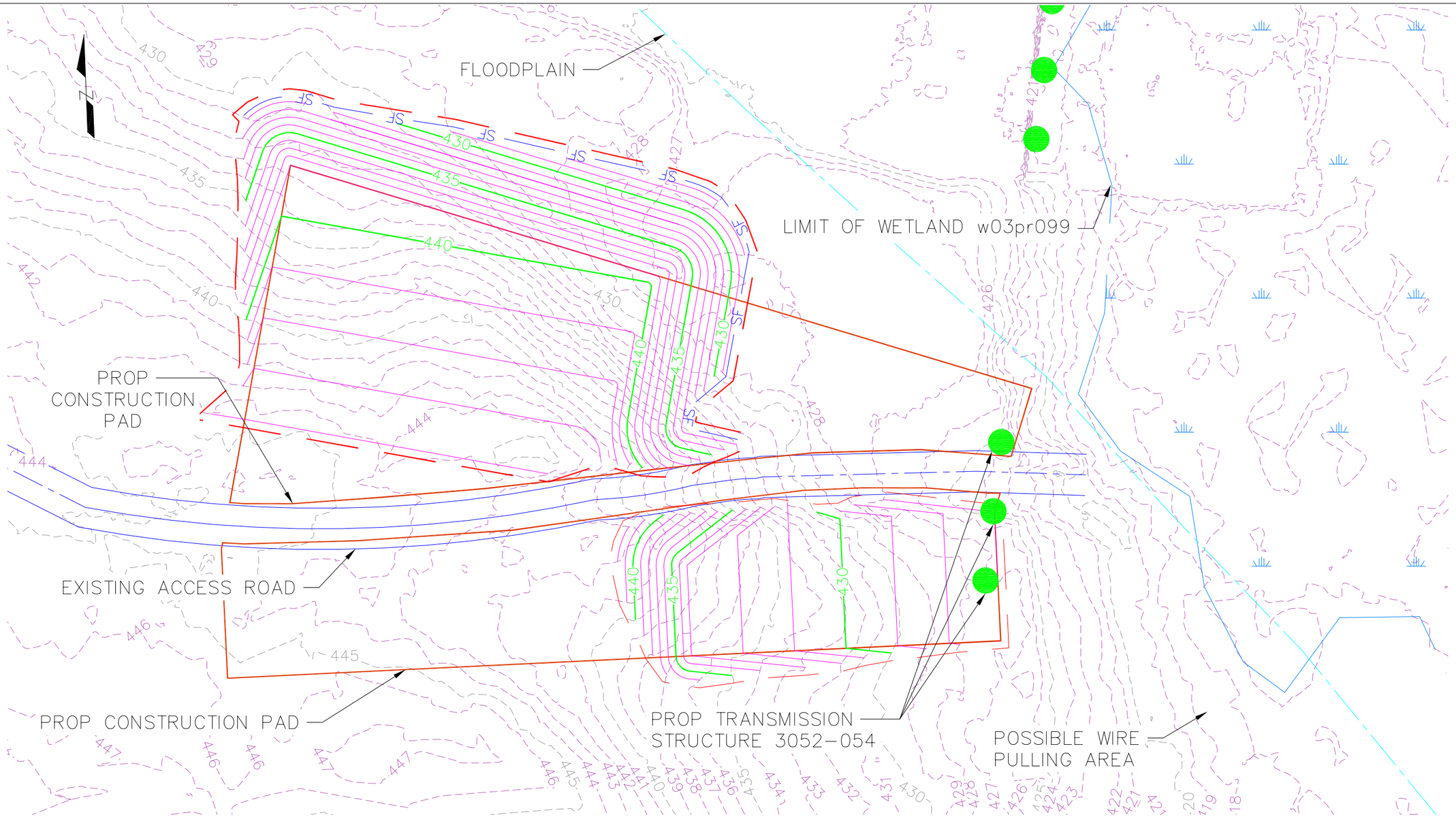
0 40 80 FEET

NOTE: THE LIMITS OF GRADING SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. EXISTING GRADES ARE BASED OFF LIDAR SURVEY. LIMITS OF ROW SHOWN ARE APPROXIMATE. RHODE ISLAND PE SEAL 9008 IS APPLICABLE ONLY TO THE PROPOSED TRANSMISSION STRUCTURE LOCATIONS SHOWN. PROPOSED TRANSMISSION STRUCTURE LOCATIONS ARE APPROXIMATE.

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NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS CONSTRUCTION PAD GRADING BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 56 OF 63



PROPOSED GRADING PLAN
AROUND STRUCTURE 3052-054
SCALE: 1"=40'

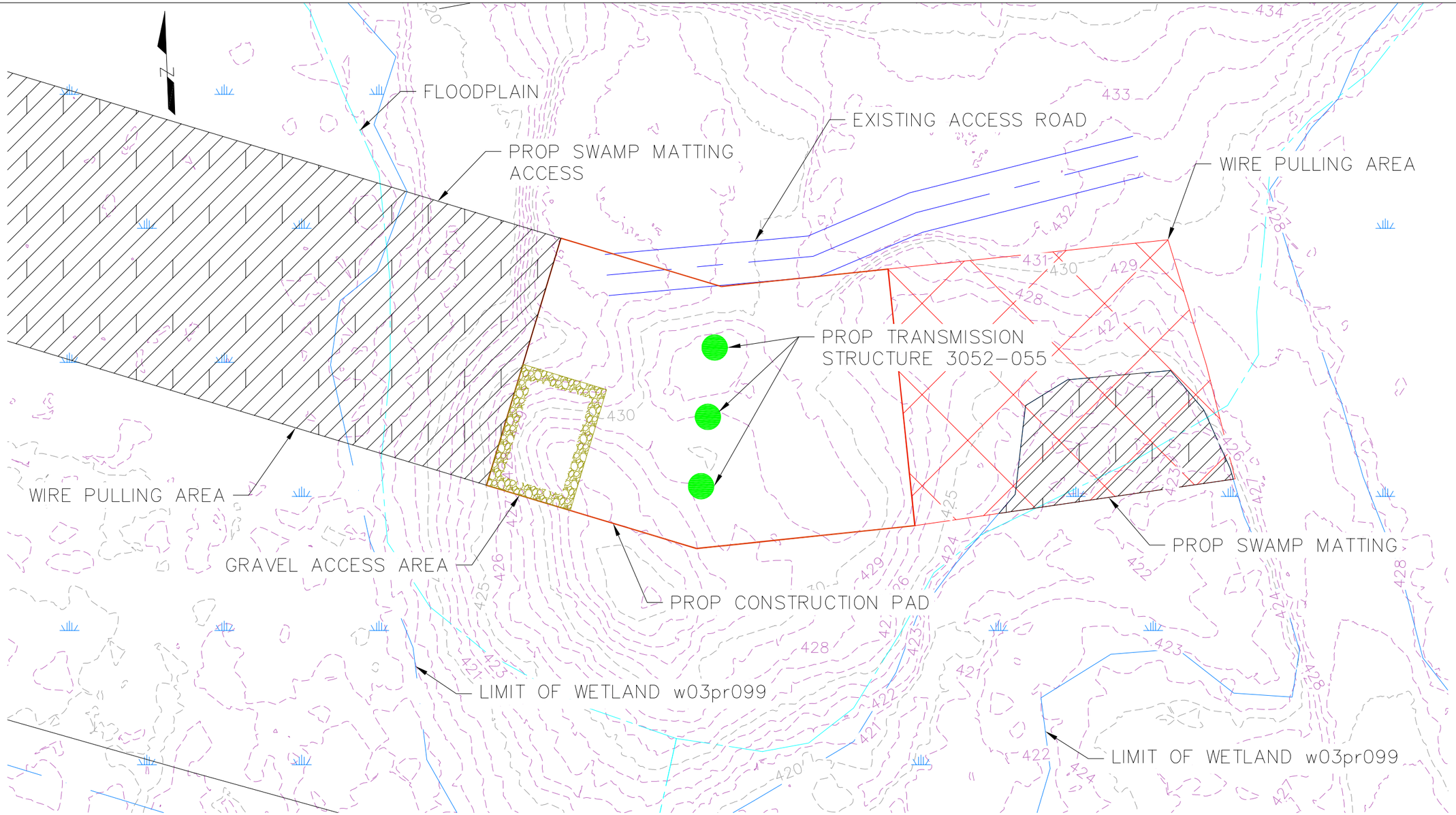
0 40 80 FEET

NOTE: THE LIMITS OF GRADING SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. EXISTING GRADES ARE BASED OFF LIDAR SURVEY. LIMITS OF ROW SHOWN ARE APPROXIMATE. RHODE ISLAND PE SEAL 9008 IS APPLICABLE ONLY TO THE PROPOSED TRANSMISSION STRUCTURE LOCATIONS SHOWN. PROPOSED TRANSMISSION STRUCTURE LOCATIONS ARE APPROXIMATE.

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NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS CONSTRUCTION PAD GRADING BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 57 OF 63



PROPOSED GRADING PLAN
AROUND STRUCTURE 3052-055
SCALE: 1"=40'

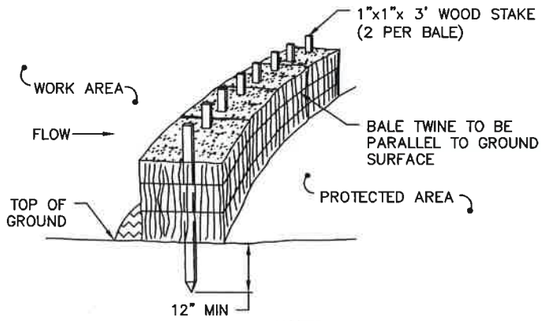
0 40 80 FEET

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RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

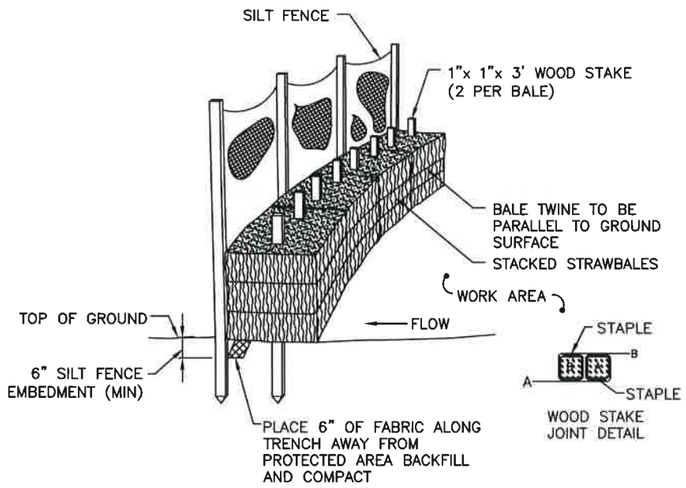
NOT FOR CONSTRUCTION

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS CONSTRUCTION PAD GRADING BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 58 OF 63

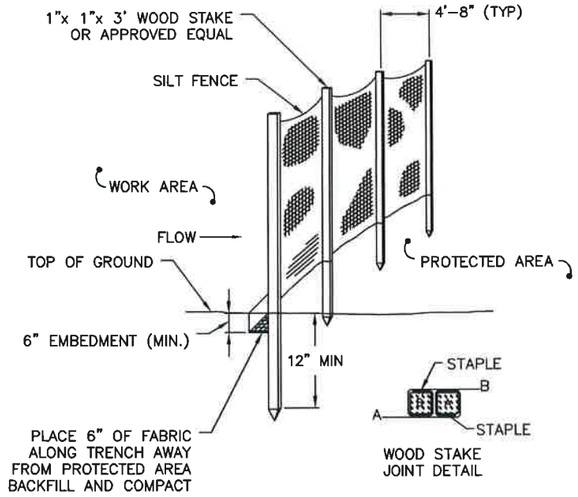


NOTES:
STRAW BALES SHALL ALWAYS BE USED INSTEAD OF HAY BALES.

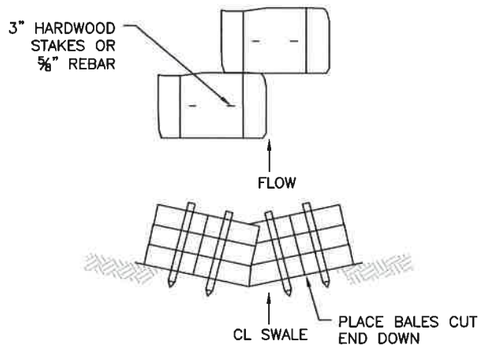
STRAWBALE BARRIER NON-EMBEDDED
N.T.S.



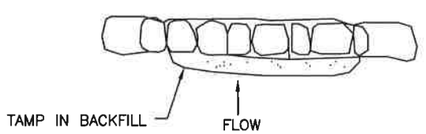
STACKED STRAWBALES AND SILT FENCE
N.T.S.

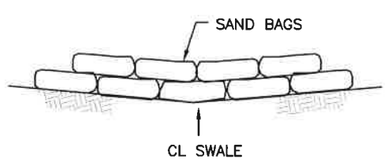


SILT FENCE BARRIER
N.T.S.

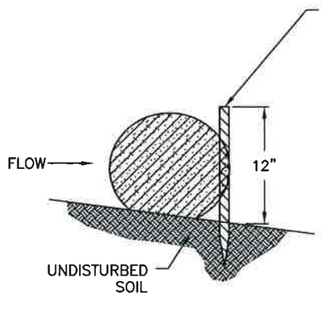


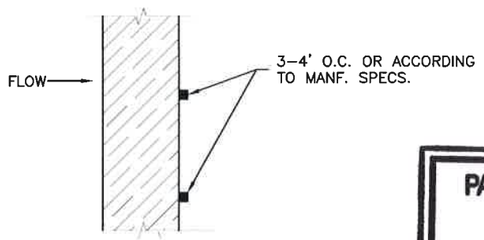
STRAWBALE CHECK DAM
N.T.S.



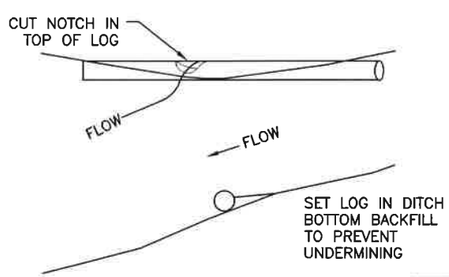


SANDBAG CHECK DAM
N.T.S.

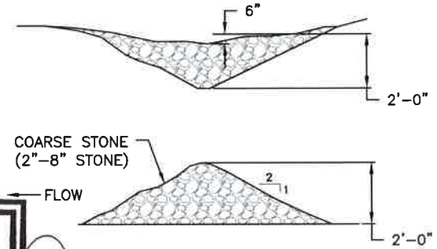




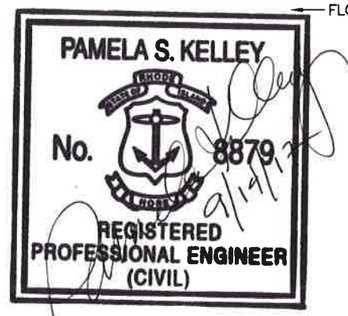
STRAW WATTLE (BIOROLL BARRIER)
N.T.S.



LOG CHECK DAM
N.T.S.



STONE CHECK DAM
N.T.S.



RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

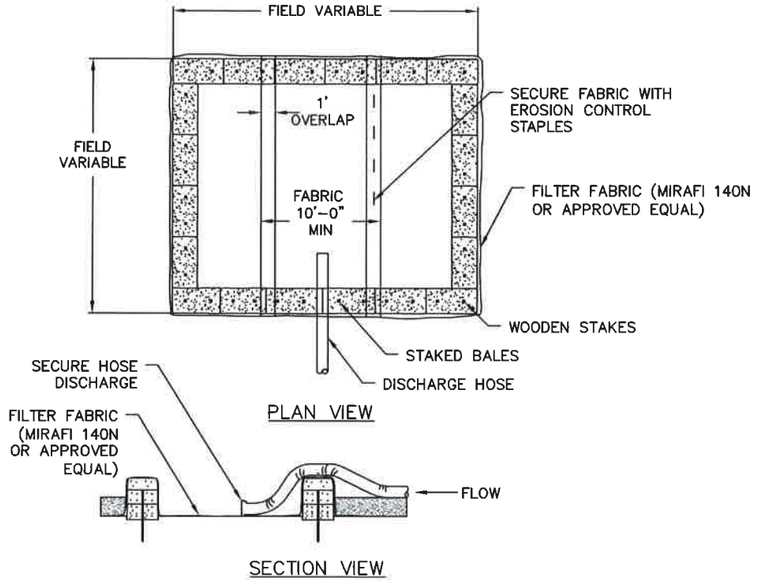
NOT FOR CONSTRUCTION

Invenergy

nationalgrid

POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS EROSION CONTROL DETAILS BURRILLVILLE, RHODE ISLAND	
DATE: 8/28/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 59 OF 63



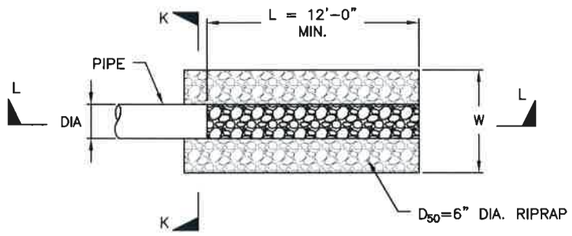
PLAN VIEW

SECTION VIEW

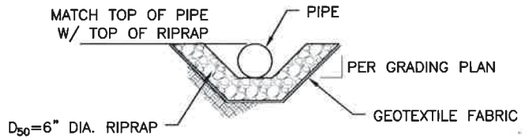
NOTES
1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS.
2. THE BASIN TO BE SIZED TO PREVENT DISCHARGE WATER FROM OVERTOPPING BASIN.
3. KEEP AS FAR FROM WETLANDS AS PRACTICAL.
4. CLEAN, REMOVE AND REPLACE AGGREGATE SURFACING AS SOON AS DEWATERING IS COMPLETE.

DEWATERING STRAWBALE BASIN
N.T.S.

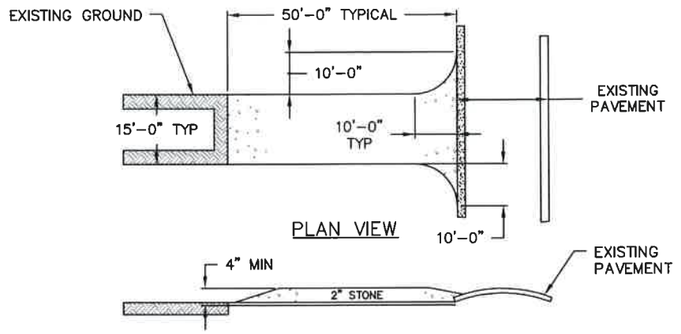
OUTLET PIPE DIA.	L(FT)	W(FT)
24"	35	20
30"	40	25



PLAN



SECTION K–K

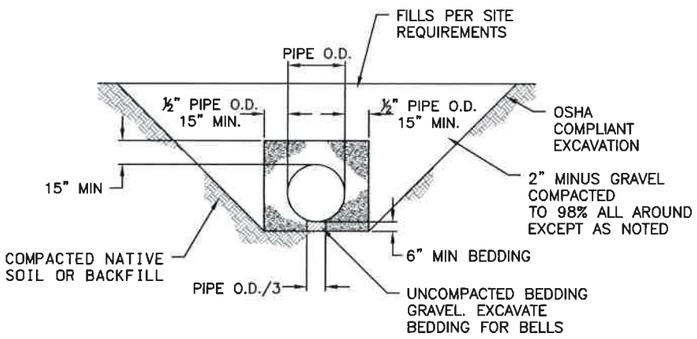


PLAN VIEW

SECTION VIEW

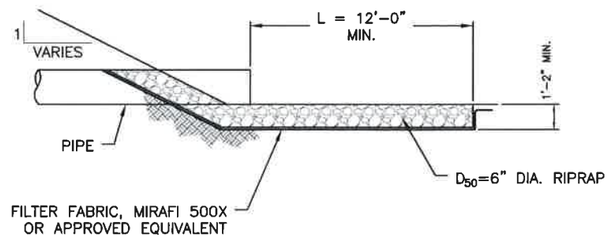
CONSTRUCTION SPECIFICATIONS:
1. STONE SIZE – USE 2" STONE (MINIMUM) TO 6" STONE (MAXIMUM),
2. LENGTH – GREATER THAN OR EQUAL TO 50 FEET.
3. THICKNESS – 4".
4. WIDTH – FIFTEEN (15) FEET TYP., BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHALL BE PERMITTED.
6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ANY PUBLIC RIGHT–OF–WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO ANY PUBLIC RIGHT–OF–WAYS MUST BE REMOVED IMMEDIATELY.
7. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED. DEPENDING UPON SITE CONDITIONS, THIS ENTRANCE MAY OR MAY NOT BE PERMANENT.

STABILIZED CONSTRUCTION EXIT
N.T.S.



TYPICAL CULVERT SECTION
N.T.S.

CULVERT TABLE			
POLE #	DIA.	INV. IN	LENGTH
347–021	30"	624.75'	FIELD
347–022	30"	623.75'	FIELD
347–034	24"	529.25'	60'



SECTION L–L
CULVERT INLET/OUTLET PROTECTION DETAIL
N.T.S.

PAMELA S. KELLEY
STATE OF RHODE ISLAND
No. 8879
HOPE
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

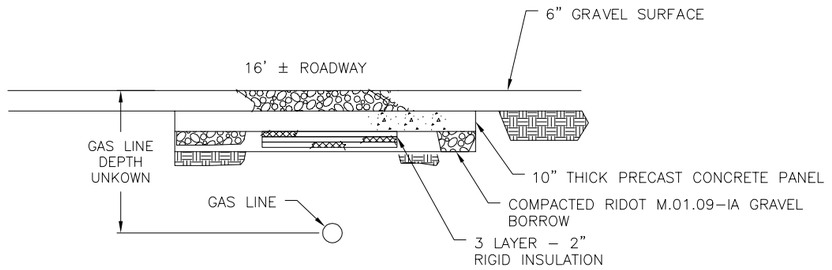
NOT FOR CONSTRUCTION

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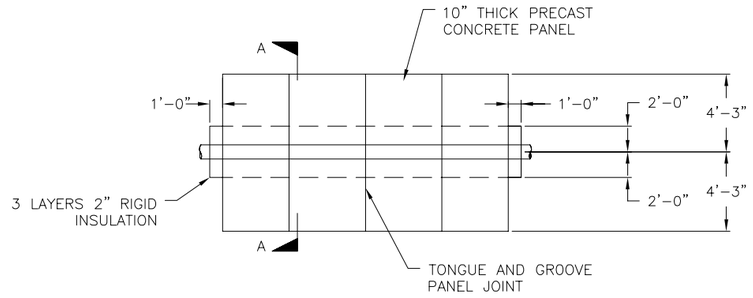
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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS EROSION CONTROL DETAILS BURRILLVILLE, RHODE ISLAND	
DATE: 8/28/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 60 OF 63



SECTION A-A



PIPELINE CROSSING PLAN

N.T.S.

NOTES:
CONTRACTOR TO VERIFY FINAL PIPELINE CROSSING DETAILS WITH PIPELINE OWNER BEFORE CONSTRUCTION.

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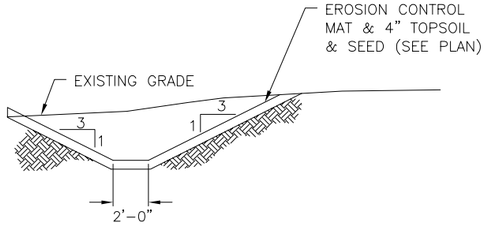
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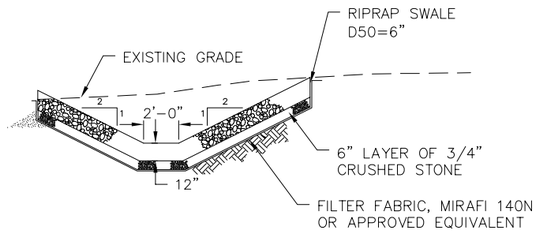
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POWER ENGINEERS

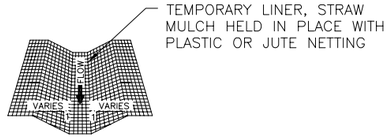
BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS PIPELINE CROSSING DETAILS BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 61 OF 63



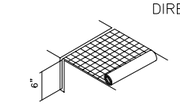
TYPICAL VEGETATED SWALE SECTION
N.T.S.



TYPICAL RIPRAP SWALE SECTION
N.T.S.



ROLL OUT STRIPS OF
NETTING PARALLEL TO THE
DIRECTION OF FLOW



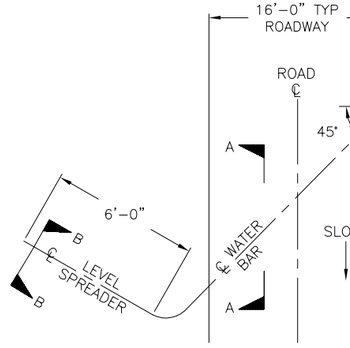
ANCHOR NETTING IN A 6"
TRENCH

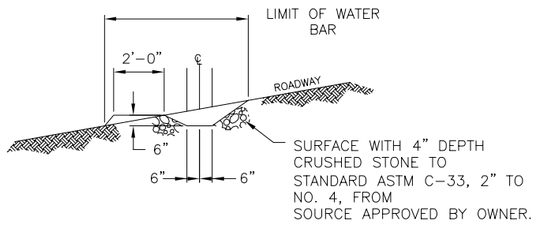


JOIN STRIPS BY ANCHORING
AND OVERLAPPING

1. EXCAVATE THE CHANNEL AND SHAPE IT TO AN EVEN CROSS-SECTION AS SHOWN. WHEN STAKING INDICATE A 0.2' OVERCUT AROUND THE CHANNEL PERIMETER FOR SILTING AND BULKING.
2. GRADE SOIL AWAY FROM CHANNEL SO THAT SURFACE WATER MAY ENTER FREELY.
3. APPLY LIME, FERTILIZER AND SEED TO THE CHANNEL AND ADJOINING AREAS IN ACCORDANCE WITH THE EROSION CONTROL PLAN.
4. SPREAD HAY OR STRAW MULCH AT THE RATE OF 100 LB/1000 SF.
5. HOLD MULCH IN PLACE IMMEDIATELY AFTER SPREADING WITH A PLASTIC NETTING INSTALLED AS SHOWN.
6. START LAYING THE NET FROM THE TOP OF THE UPSTREAM AND OF THE CHANNEL AND UNROLL IT DOWN GRADE. DO NOT STRETCH THE NETTING.
7. BURY THE UP SLOPE END AND STAPLE THE NET EVERY 12" ACROSS THE TOP END, EVERY 3 FT AROUND THE EDGES AND ACROSS THE NET SO THAT THE STRAW IS HELD CLOSELY AGAINST THE SOIL. HOWEVER, DO NOT STRETCH THE NETTING WHEN STAPLING.
8. NETTING STRIPS SHALL BE JOINED TOGETHER ALONG THE SIDES WITH A 3" OVERLAP AND STAPLED TOGETHER.
9. TO JOIN ENDS OF STRIPS, INSERT A NEW ROLL OF NET IN A TRENCH AS WITH THE UP SLOPE END AND OVERLAP IT 18" WITH THE PREVIOUSLY LAID UPPER ROLL. TURN UNDER 6" OF THE 18" OVERLAP AND STAPLE EVERY 12" ACROSS THE END.

EROSION CONTROL MAT DETAIL
NTS





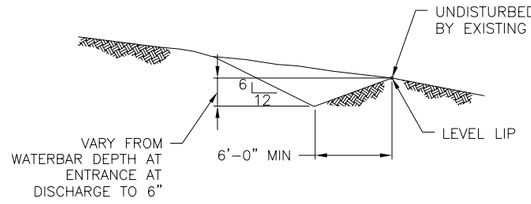
NOTES:

1. SLOPES OF WATER BAR TO BE MAINTAINED AT 1 ON 4
2. CLEAN 3 FT BEYOND LIMITS OF EXCAVATION FOR LEVEL SPREADER.

ROAD SLOPE PERCENT	WATER BAR SPACING – FT
5	150
10	100
15 AND OVER	50

WATER BAR AND LEVEL SPREADER PLAN
N.T.S.

SECTION "A–A"
(THROUGH WATER BAR)
N.T.S.



SECTION "B–B"
(THROUGH LEVEL SPREADER)
N.T.S.

NOTES:

1. ALL LEVEL SPREADERS SHALL HAVE A LENGTH OF 6 FEET.
2. ALL DISTURBED SOIL TO BE STABILIZED, MULCHED AND SEEDED SUBJECT TO APPROVAL OF THE CORPORATION.
3. LEVEL LIP TO BE MAINTAINED AT CONSTANT ELEVATION OVER FULL LENGTH OF SPREADER.

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

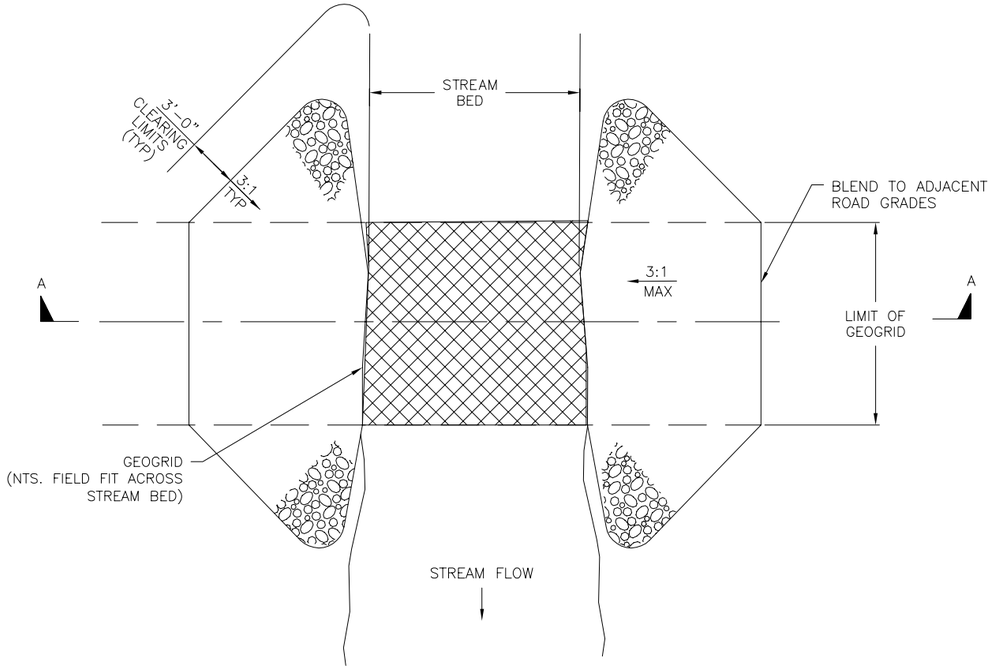
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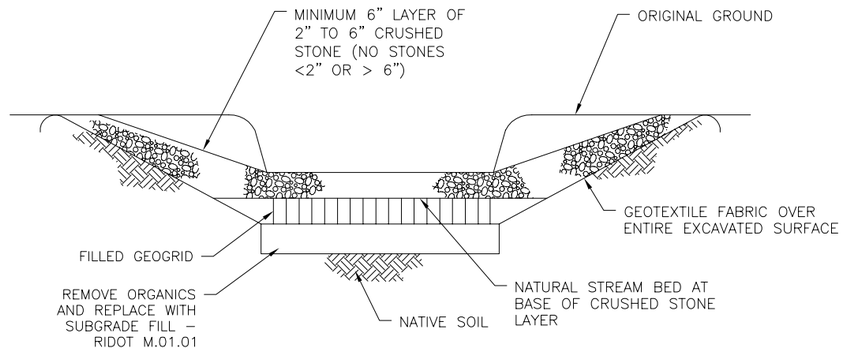
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BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS GRADING DETAILS BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 62 OF 63



PLAN



SECTION A–A

STREAM FORD
N.T.S.

NOTES:

1. USE PRESTO GEOSYSTEMS GEOWEB (OR APPROVED EQUAL) FOR GEOGRID AND CONNECT EACH SECTION TOGETHER.
2. ANCHOR GEOGRID IN PLACE WITH STAKES
3. FILL GEOGRID WITH AASHTO #5 CRUSHED STONE (OR APPROVED SIMILAR) TO STABILIZE EACH CELL.
4. LIMIT FILL DROP HEIGHT TO 3 FEET.
5. OVERFILL CELLS AT LEAST 2 INCHES BEFORE COMPACTING.

RHODE ISLAND PE SEAL 8879 IS APPLICABLE ONLY TO THE PROPOSED SITEWORK AND ESC MEASURES.

NOT FOR CONSTRUCTION

Invenergy

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POWER ENGINEERS

BURRILLVILLE INTERCONNECTION PROJECT THE NARRAGANSETT ELECTRIC CO. & CLEAR RIVER ENERGY, LLC			RIDEM AND USACE PERMIT DRAWINGS STREAM FORD DETAILS BURRILLVILLE, RHODE ISLAND	
DATE: 3/22/2017	DRAWN: RST	142704	FIGURE T-4	SHEET 63 OF 63