

CHERRY VALLEY 1.0 MW PV ARRAY

146 HENSHAW STREET · LEICESTER · MASSACHUSETTS

PERMITTING DOCUMENTS

MARCH 2016

REVISED JUNE 2016

APPLICANT

ZPT ENERGY SOLUTIONS, LLC

309 EAST COUNTY ROAD
RUTLAND, MA 01543
774-696-8729

PREPARED BY



FUSS & O'NEILL

317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
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CN-001	GENERAL NOTES AND LEGEND
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CD-501 - CD-504	DETAILS

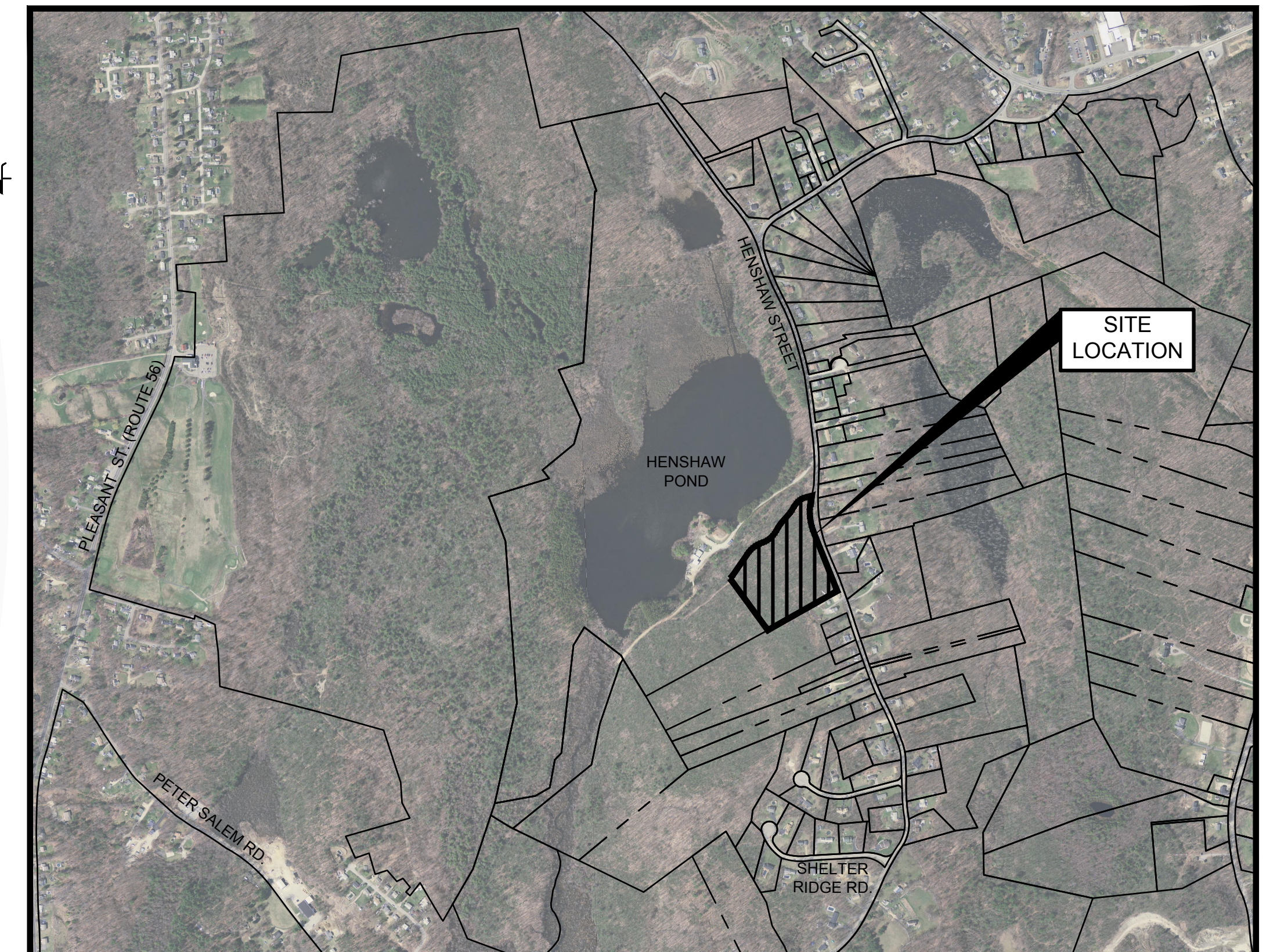
PROJECT TEAM

NATIONAL LAND SURVEYORS
42 HAMLET AVENUE
WOONSOCKET, RI 02895
401-769-7779

NATURAL RESOURCE SERVICES
180 TINKHAM LANE
HARRISVILLE, RI 02830
401-568-7390

PROPERTY OWNER

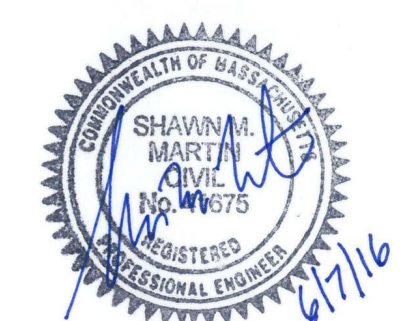
CHERRY VALLEY AND
ROCHDALE WATER DISTRICT
PO BOX 138
ROCHDALE, MA 01542
508-892-9616



LOCATION MAP

SCALE: 1" = 800'

**NOT FOR
CONSTRUCTION**



PROJ. No.: 20151249-A10
DATE: MARCH 2016

GI-001

File Path: J:\DWG\2016\20151249A10\Civil\Plan\20151249A10_EXC01.dwg Plotted: Thu, June 23, 2016 - 9:59 AM User: aglines
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No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
4.	6/7/2016	FINAL PLANS	AGG	SMM
3.	6/2/2016	RESPONSE TO COMMENTS	AGG	SMM
2.	5/12/2016	RESPONSE TO COMMENTS	AGG	SMM
1.	3/23/2016	ISSUED FOR PERMITTING	AGG	SMM

SEAL



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SCALE:

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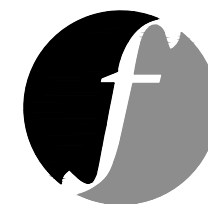
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GRAPHIC SCALE



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ZPT ENERGY SOLUTIONS, LLC

EXISTING CONDITIONS PLAN

CHERRY VALLEY 1.0 MW PV ARRAY

LEICESTER

MASSACHUSETTS

PROJ. No.: 20151249.A10

DATE: MARCH 2016

CS-101

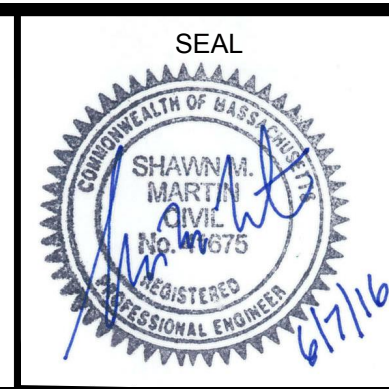


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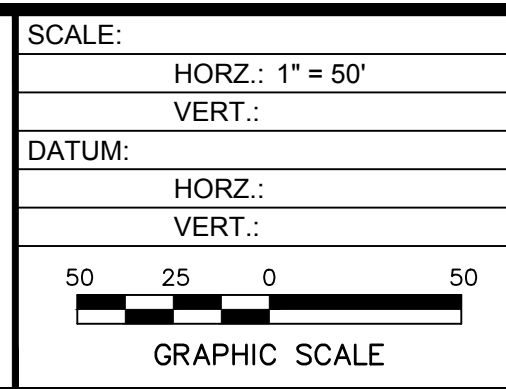
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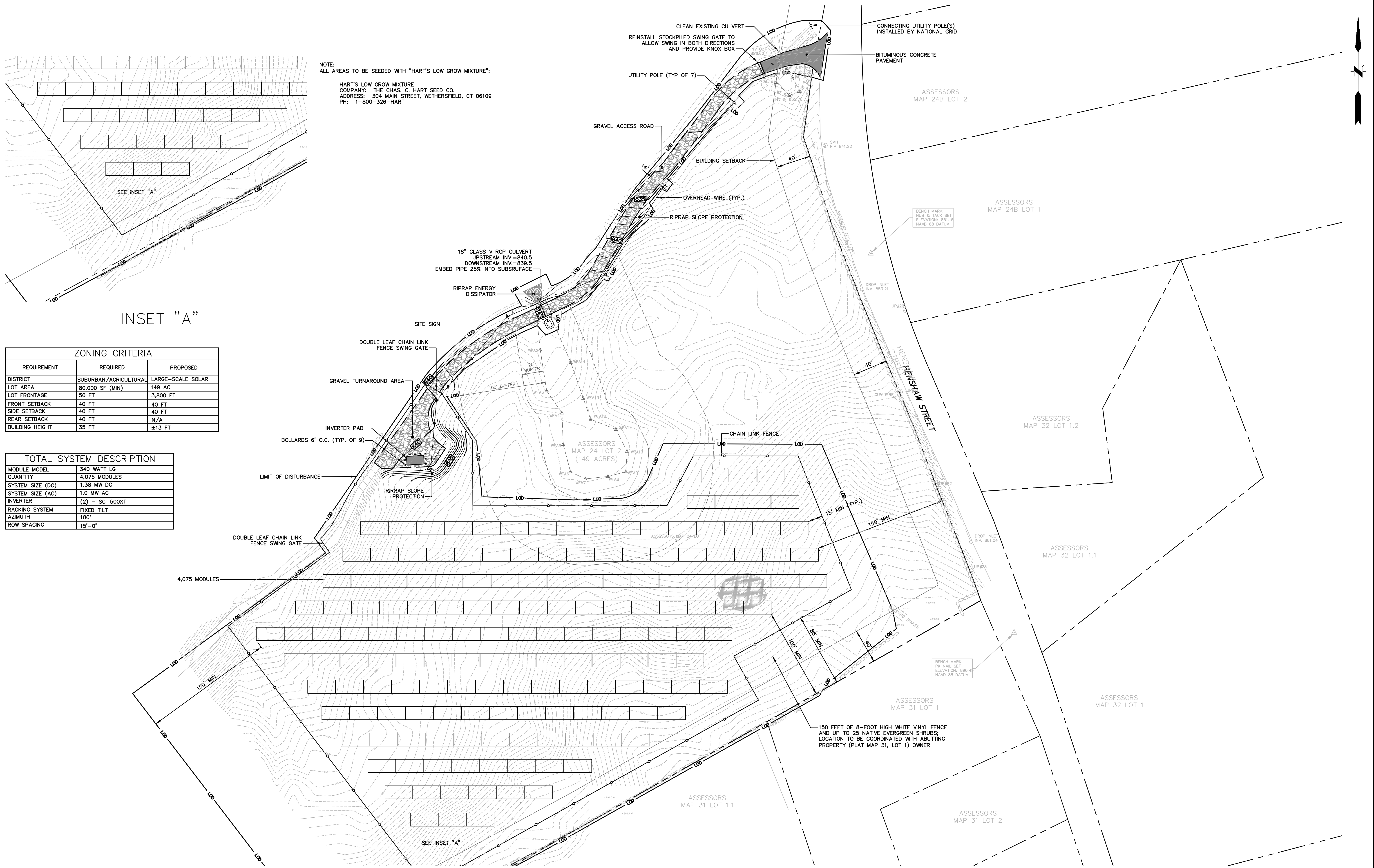
SITE PLAN

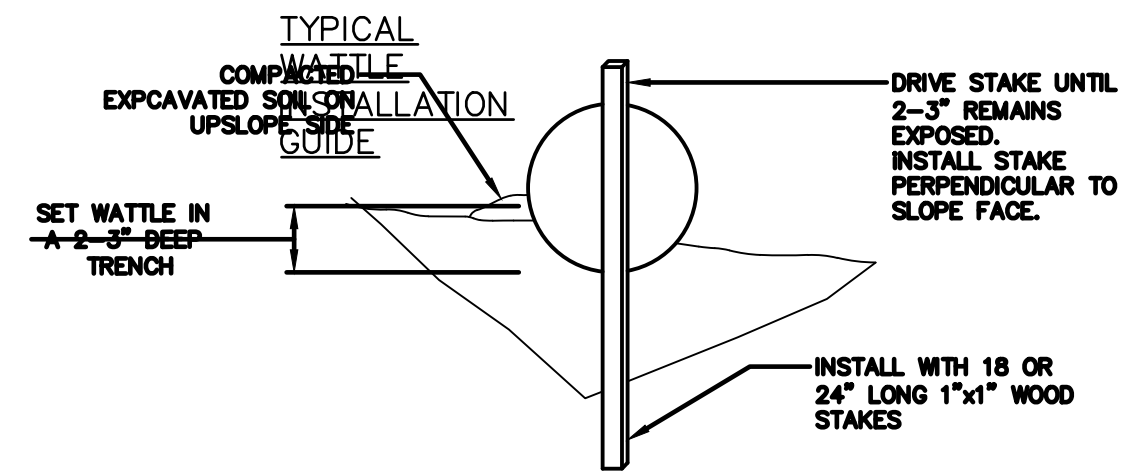
CHERRY VALLEY 1.0 MW PV ARRAY

LEICESTER MASSACHUSETTS

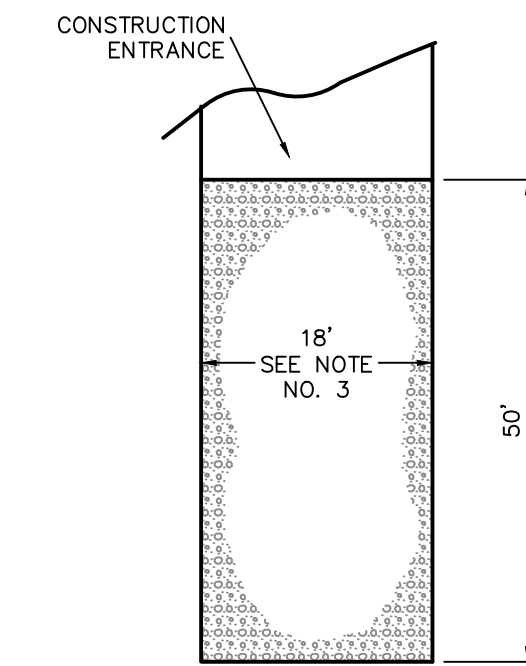
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DATE: MARCH 2016

CS-103





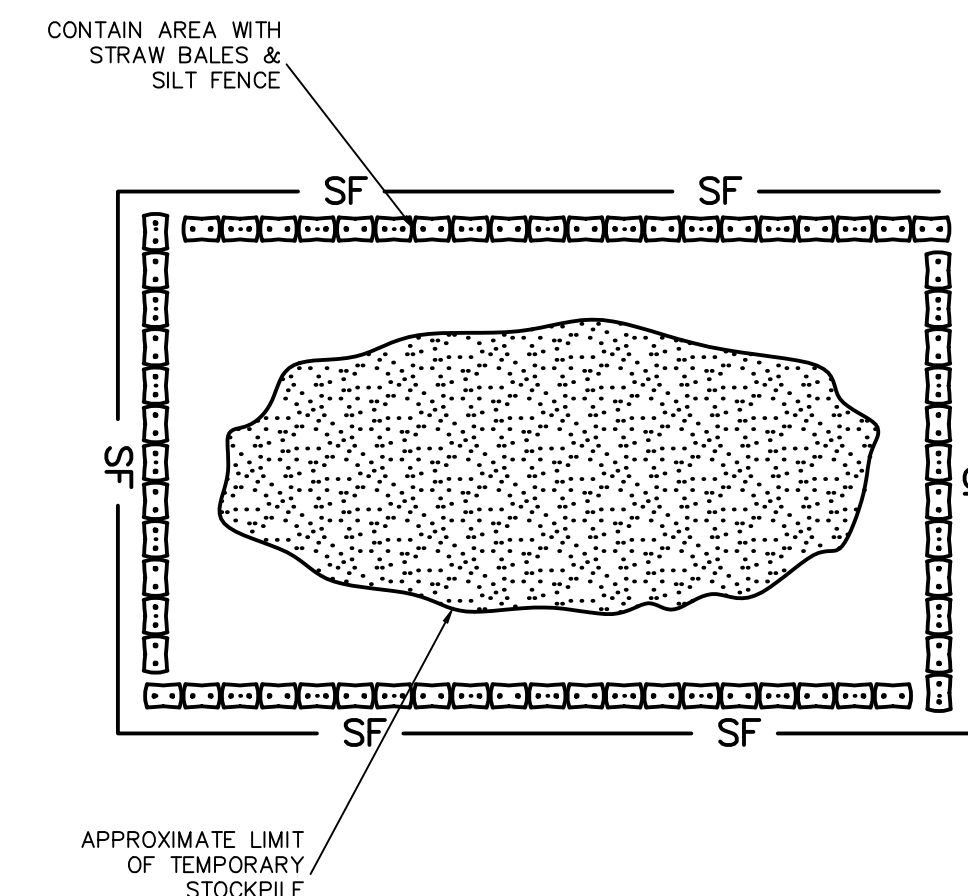
4. WATILES SHALL BE TYPE 12-100 WS1210 MANUFACTURED BY NORTH AMERICAN GREEN,
OR APPROVED EQUAL
SCALE: N.T.S.



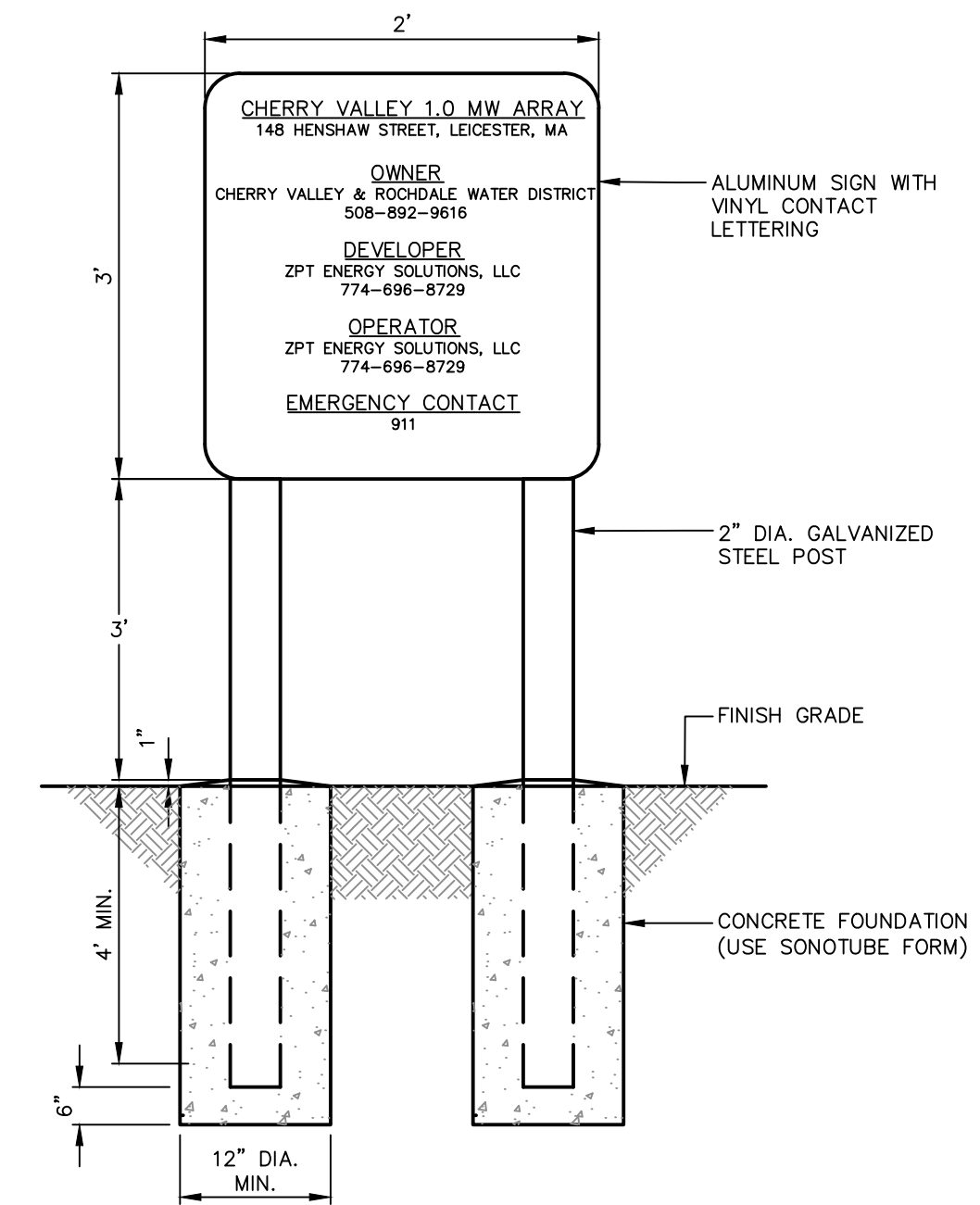
- 1.) MAINTAIN ANTI-TRACKING APRON IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
- 2.) ADJACENT ROADWAY SHALL BE SWEEPED DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO PAVEMENT.
- 3.) WIDTH OF APRON SHALL NOT BE LESS THAN WIDTH OF INGRESS OR EGRESS.

PLAN

2 CONSTRUCTION ENTRANCE
SCALE: N.T.S.



3 TEMPORARY SOIL STOCKPILE
SCALE: N.T.S.



4 SITE SIGN
SCALE: N.T.S.

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SEAL



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SCALE:

HORZ.: AS NOTED

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GRAPHIC SCALE



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ZPT ENERGY SOLUTIONS, LLC

DETAILS

CHERRY VALLEY 1.0 MW PV ARRAY

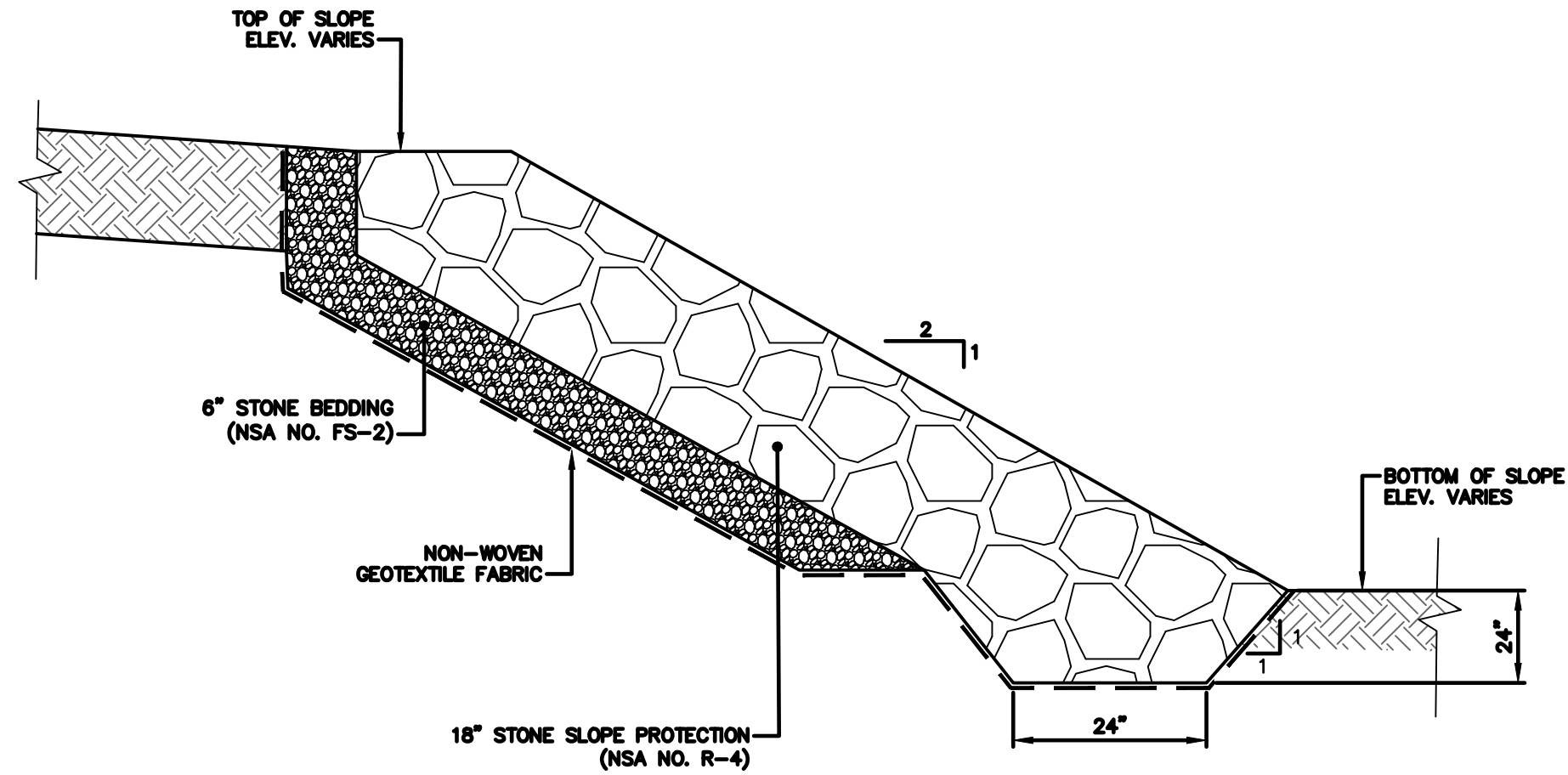
LEICESTER

MASSACHUSETTS

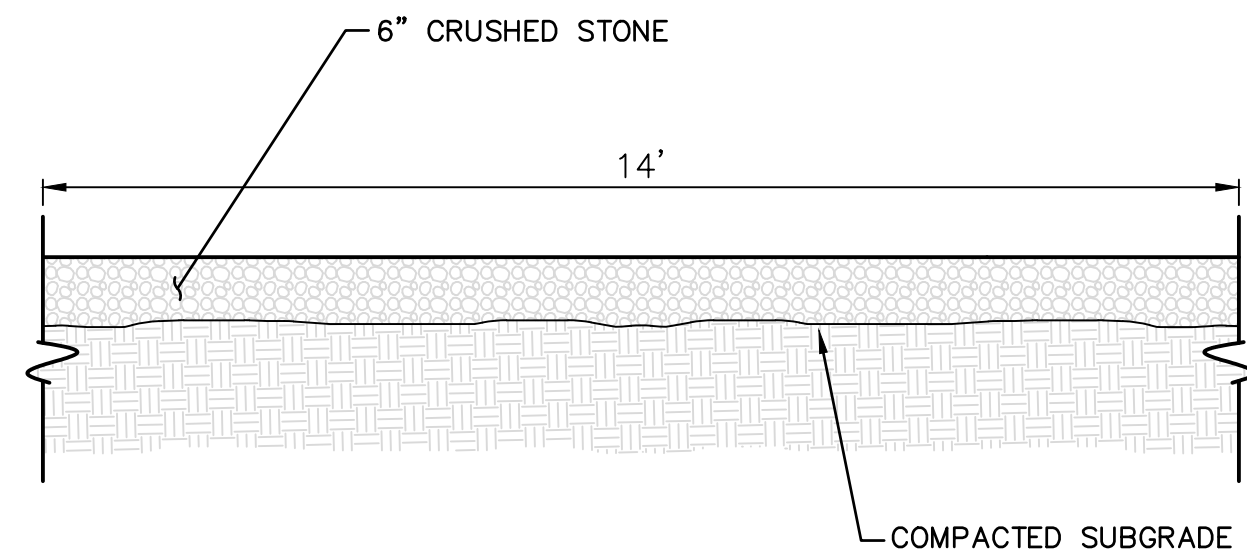
PROJ. No.: 20151249.A10
DATE: MARCH 2016

CD-501

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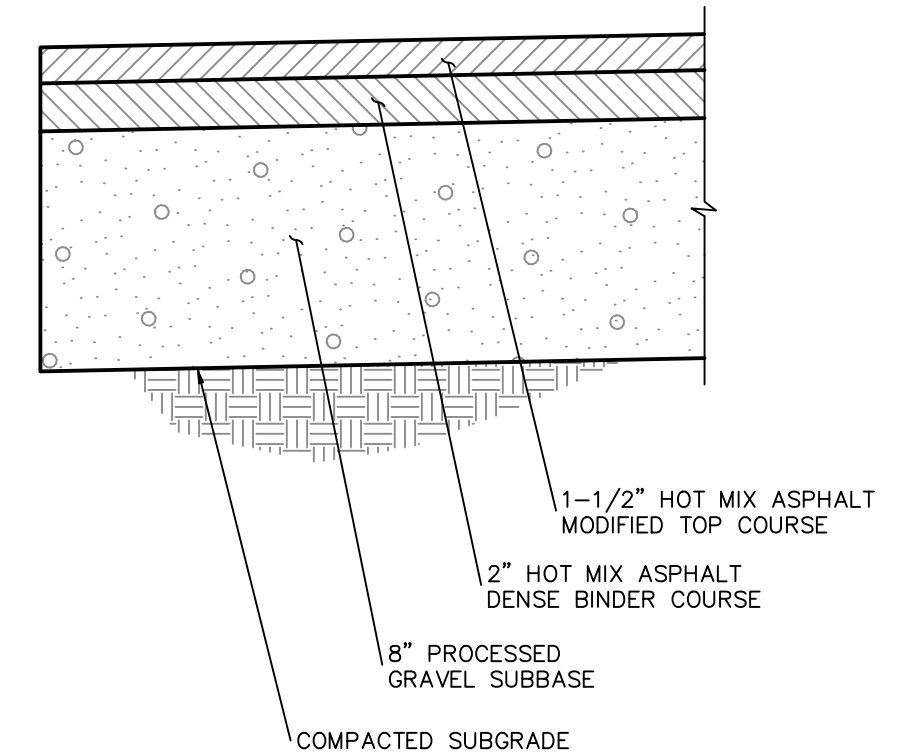


1 RIPRAP SLOPE PROTECTION
SCALE: N.T.S.

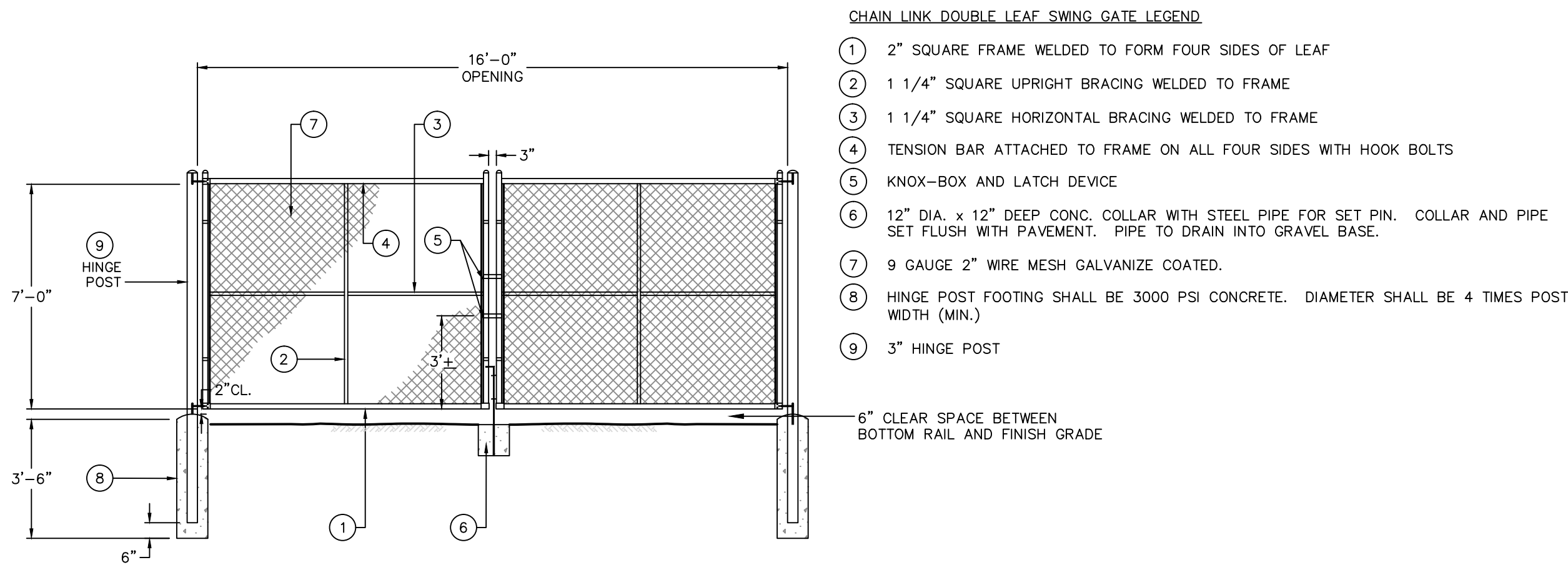


- NOTES
1. MAINTAIN FINISH GRADE AND CROSS SLOPE OF EXISTING DIRT ROAD.
 2. CRUSHED STONE SHALL BE IN ACCORDANCE WITH SECTION M2.01.0 AND CONFORM TO M2.01.5 GRADATION OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.

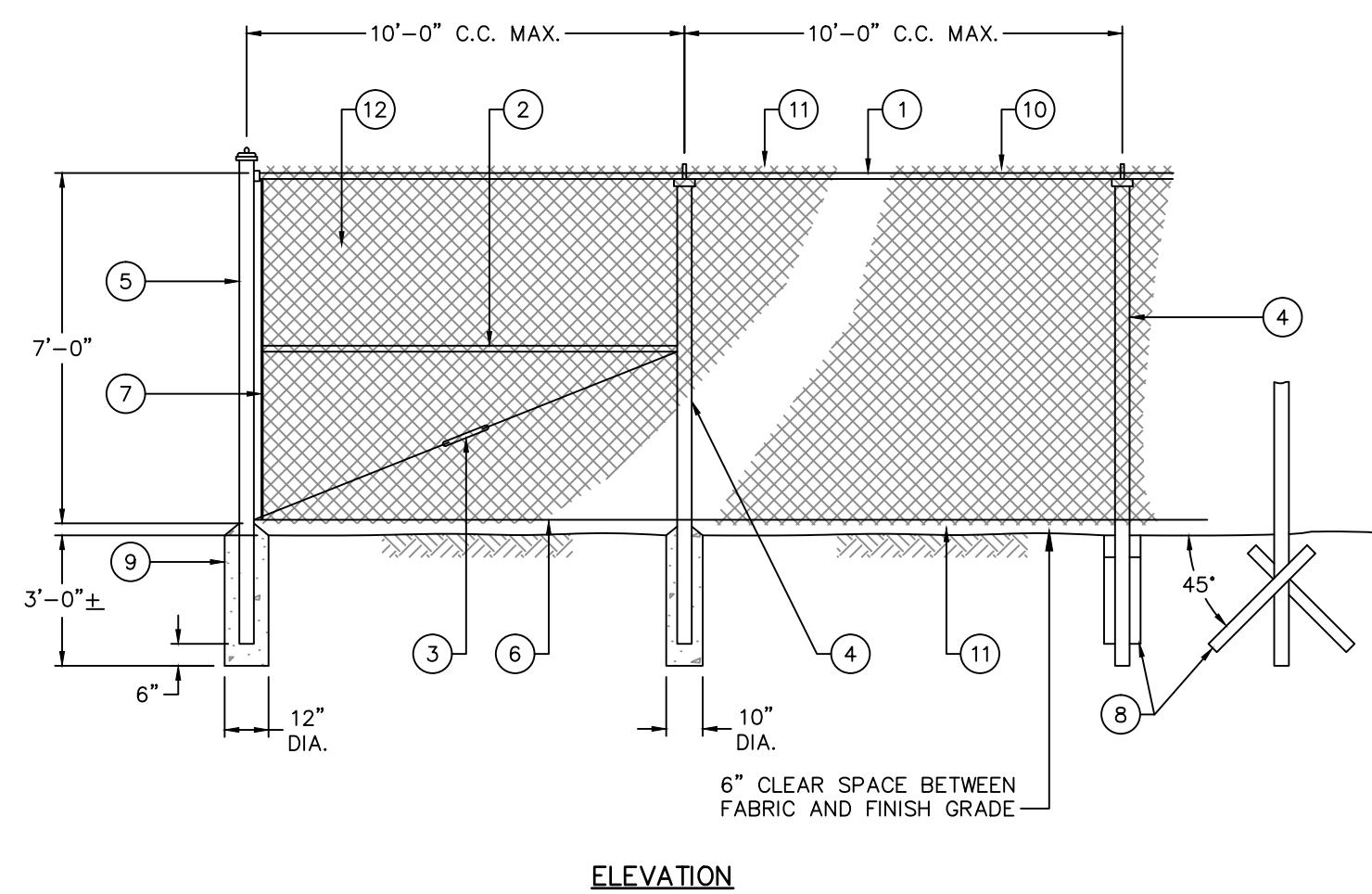
2 GRAVEL ACCESS ROAD
SCALE: N.T.S.



3 BITUMINOUS CONCRETE PAVEMENT
SCALE: N.T.S.



4 DOUBLE LEAF CHAIN LINK SWING GATE
SCALE: N.T.S.



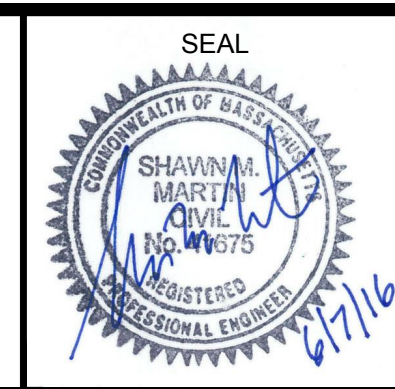
5 CHAIN LINK FENCE
SCALE: N.T.S.

- NOTES
1. FOOTING DESIGN TO BE CHECKED BY AN ENGINEER FOR WIND LOADS IF SLATS ARE USED OR IF POOR SOIL CONDITIONS EXIST.
 2. STRAIGHT RUNS BETWEEN BRACED POSTS SHALL NOT EXCEED 500 FT.
 3. FENCE DETAILS ARE INTENDED AS A GUIDE ONLY. ALL FENCE MATERIALS AND CONSTRUCTION METHODS SHALL BE APPROVED BY THE ENGINEER AND FENCE MANUFACTURER.

- CHAIN LINK FENCE LEGEND
- | | |
|----|---|
| 1 | 1 5/8" O.D. TOP RAIL ATTACH FABRIC WITH 9 GAUGE WIRE CLIP EVERY 24" |
| 2 | 1 5/8" O.D. BRACE FOR RAIL FENCES OVER 6 FEET HIGH AND ALL FENCES WITHOUT TOP RAIL |
| 3 | 5/16" TRUSS ROD AND TURNBUCKLE |
| 4 | INTERMEDIATE POST |
| 5 | END OR CORNER POST |
| 6 | 6 GAUGE BOTTOM TENSION WIRE ATTACH TO FABRIC WITH HOG RING AT 24" C.C. |
| 7 | TENSION ROD ATTACHED TO END OR CORNER POST |
| 8 | 2 30" MIN. LENGTH DRIVE ANCHORS DRIVEN THROUGH FITTINGS AT 90° TO FENCE LINE INTO EARTH AT 45° (TO BE USED IN PLACE OF CONCRETE FOOTING. SEE FOOTING DESIGN NOTE NO. 1) |
| 9 | CONCRETE FOOTING 36" DEEP WITH 12" DIA. AT END POST AND 10" DIA. AT INTERMEDIATE POST. HOLE CORE IN UNDISTURBED OR COMPACTED SOIL. (SEE NOTE NO. 1) |
| 10 | 6 GAUGE TENSION WIRE WHEN TOP RAIL IS NOT USED. |
| 11 | FABRIC SELVAGE: UNDER 6 FEET SHALL BE KNUCKLED TOP AND BOTTOM, 6 FEET AND OVER SHALL BE KNUCKLED BOTTOM AND TWISTED ON THE TOP RECREATIONAL FENCING, REGARDLESS OF HEIGHT, SHALL BE KNUCKLED TOP AND BOTTOM |
| 12 | 9 GAUGE 2" WIRE MESH GALVANIZE COATED. |

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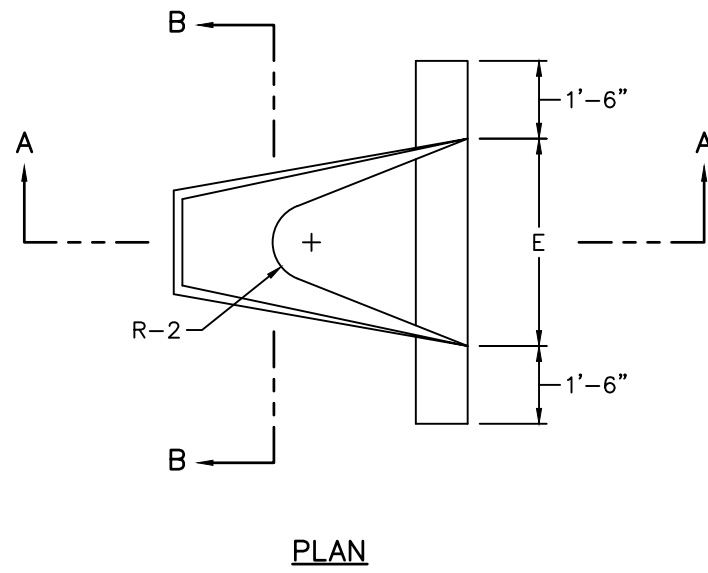
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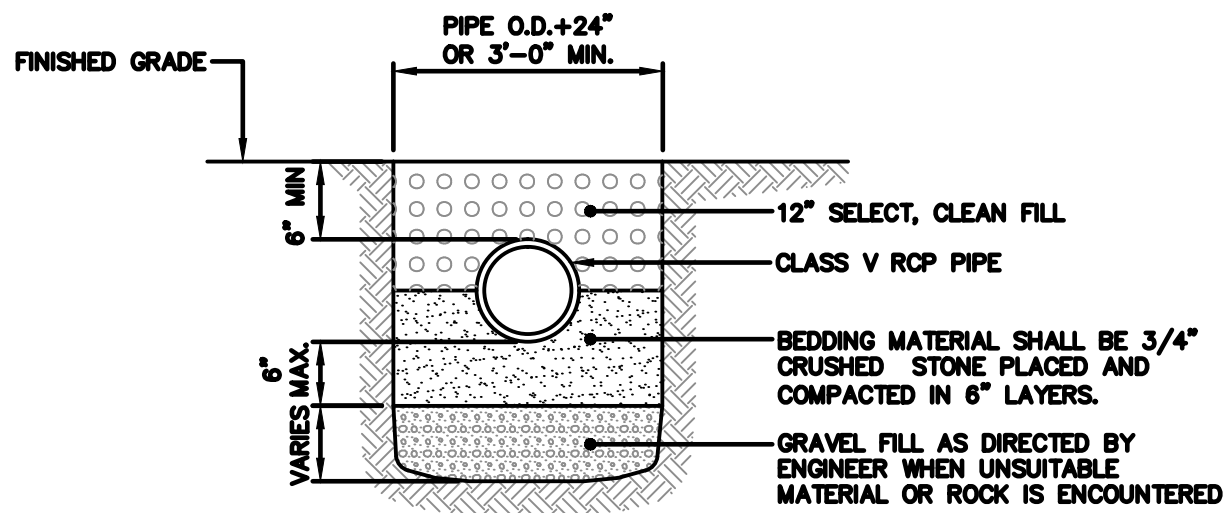
ZPT ENERGY SOLUTIONS, LLC
DETAILS
CHERRY VALLEY 1.0 MW PV ARRAY
LEICESTER MASSACHUSETTS

PROJ. No.: 20151249.A10
DATE: MARCH 2016
CD-502

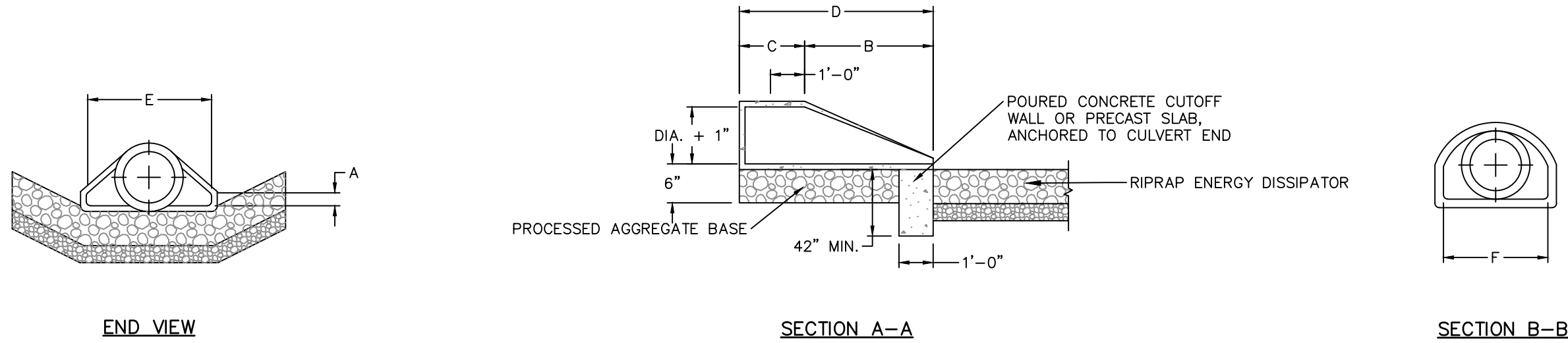
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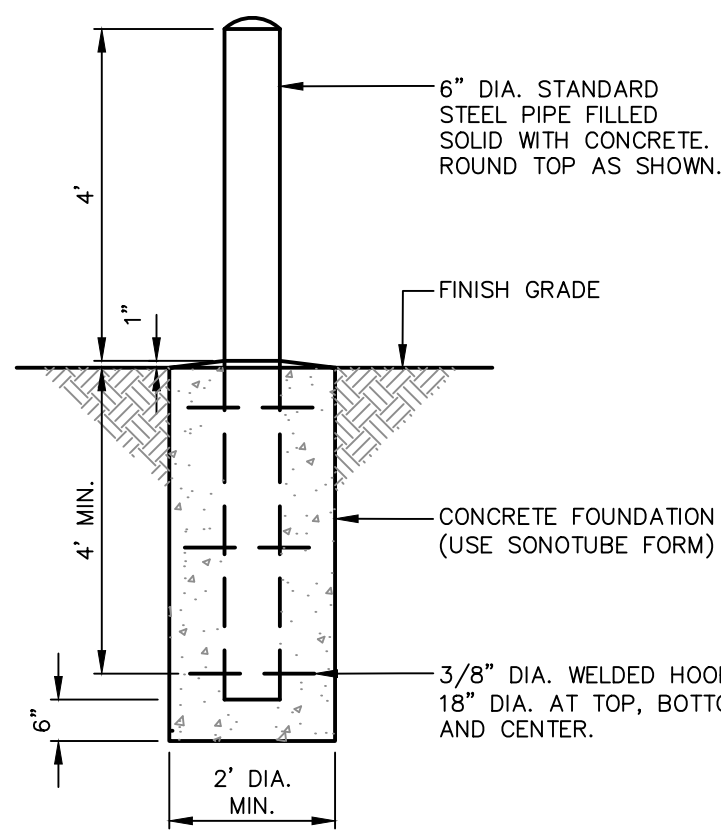
DIMENSIONS						
DIA.	A	B	C	D	E	F
15"	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0 5/16"



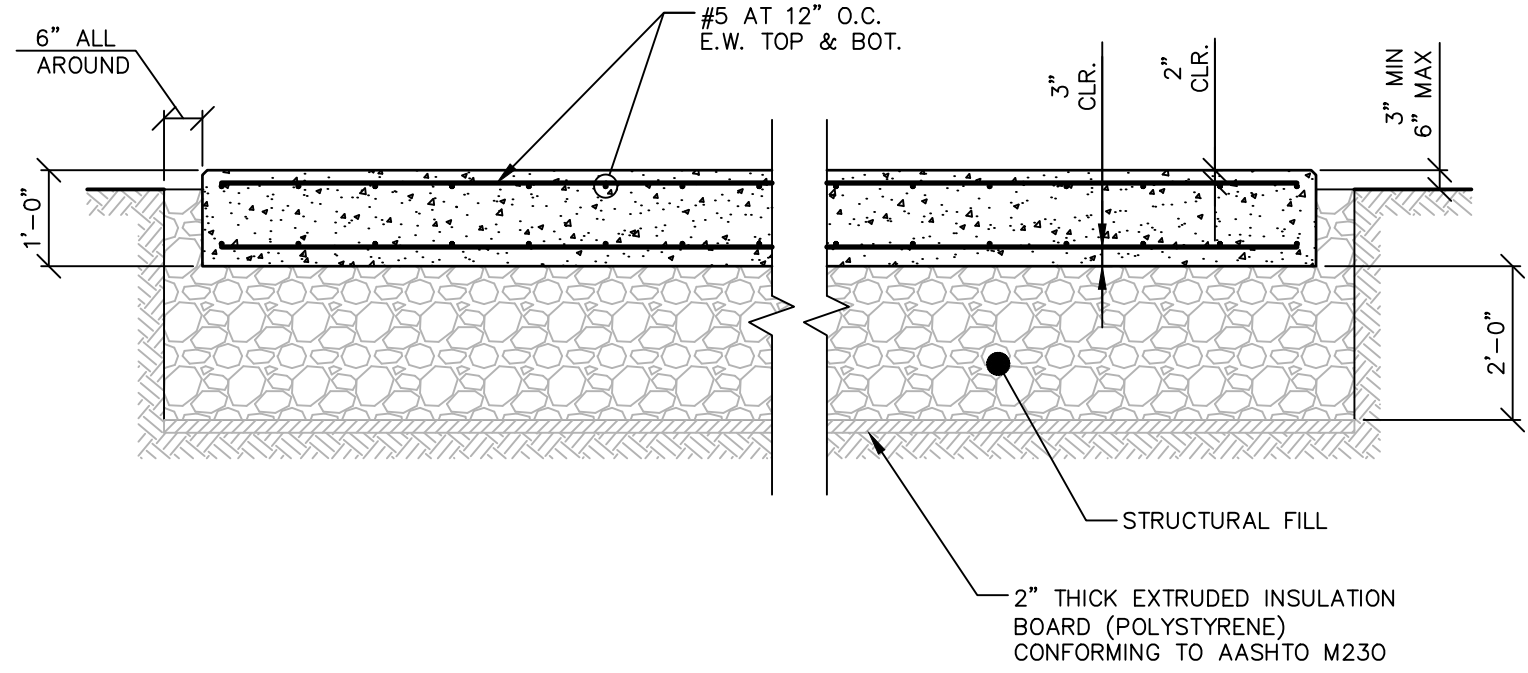
1 RCP CULVERT TRENCH
SCALE: N.T.S.



2 CONCRETE CULVERT END
SCALE: N.T.S.

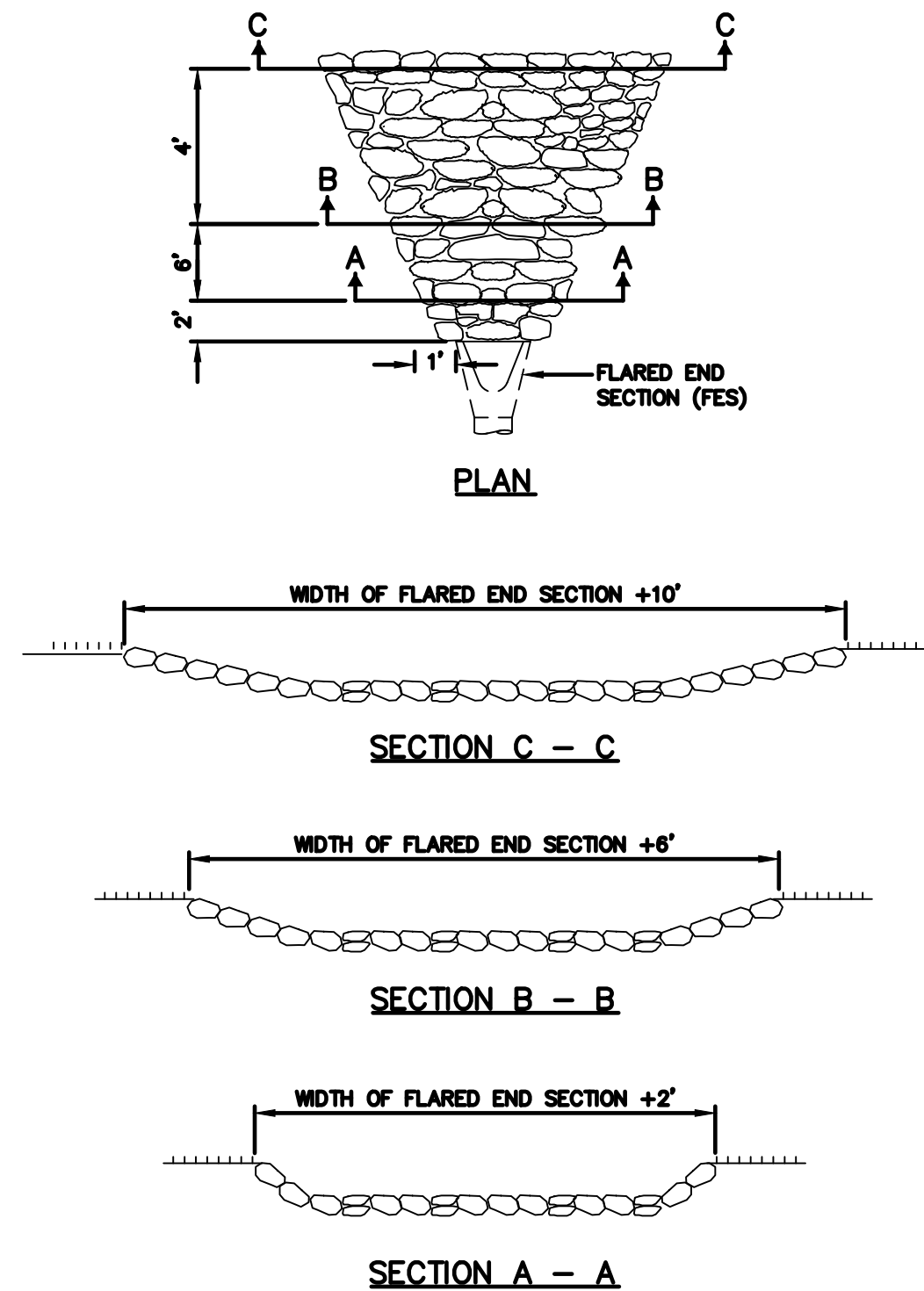


4 BOLLARD
SCALE: N.T.S.



- NOTES:
- ALL CONCRETE WORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
 - ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 AND BE DETAILED IN ACCORDANCE WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
 - REBARS SHALL HAVE A MINIMUM CONCRETE COVER AS FOLLOWS:
 - CONCRETE DEPOSITED AGAINST GROUND.....3 IN.
 - CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
 - FOR BARS #5 AND LARGER.....2 IN.
 - FOR BARS SMALLER THAN #5.....1 1/2 IN.
 - CONCRETE NOT EXPOSED TO THE WEATHER OR THE GROUND:
 - SLABS AND WALLS.....3/4 IN.
 - ALL REINFORCING BARS SHALL BE CONTINUOUS AND LAPPED A MINIMUM OF 48 BAR DIAMETERS AT ALL SPLICES, CORNERS, AND INTERSECTIONS UNLESS NOTED OTHERWISE.
 - ALL REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPOSED LOCATION PRIOR TO AND DURING PLACEMENT OF CONCRETE USING APPROVED CHAIRS, SPACERS AND TIE WIRE AS REQUIRED. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER.
 - CONCRETE PROTECTION FOR REINFORCEMENT SHALL IN ALL CASES BE AT LEAST EQUAL TO THE DIAMETER OF THE BAR EXCEPT FOR CONCRETE SLABS.
 - ALL CONCRETE SHALL BE CAST-IN-PLACE, NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 3/4 INCH, A MINIMUM CEMENT CONTENT OF 560 LBS/CU. YD., AND A MAXIMUM SLUMP OF 4 INCHES.
 - ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4 INCH CHAMFER UNLESS NOTED.
 - ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED.
 - SIZES AND LOCATIONS OF ALL REQUIRED EMBEDDED ITEMS FOR ALL TRADES SUCH AS ANCHOR BOLTS, PIPING SLEEVES, HOLDOWN ANCHORS, ETC., SHALL BE COORDINATED BY THE CONTRACTOR WITH OTHER TRADES.

5 CONCRETE EQUIPMENT PAD
SCALE: N.T.S.



NOTES:

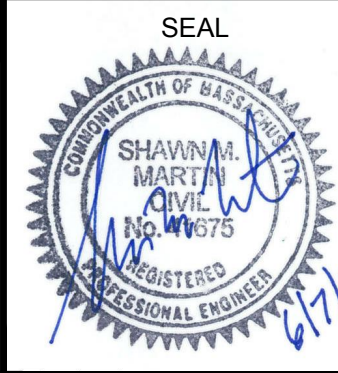
- NATIONAL STONE ASSOCIATION (NSA) NO. "R-4" RIP-RAP, IN ACCORDANCE WITH THE FOLLOWING GRADATION FROM THE NSA MANUAL: QUARRIED STONE FOR EROSION AND SEDIMENT CONTROL.

NSA No.	100%	PERCENT PASSING	0-50%	0-15%
R-4	14"	7"	4"	
- RIPRAP THICKNESS SHALL BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.
- DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS.
- UNLESS OTHERWISE SPECIFIED, RIPRAP SHALL BE PLACED.

3 RIPRAP ENERGY DISSIPATOR
SCALE: N.T.S.

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DETAILS

CHERRY VALLEY 1.0 MW PV ARRAY

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MASSACHUSETTS

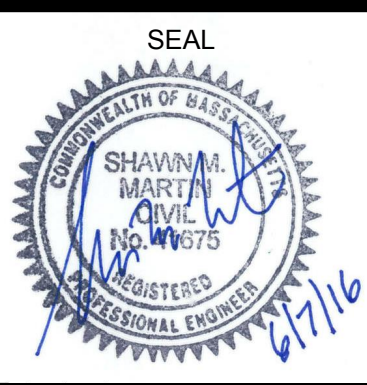
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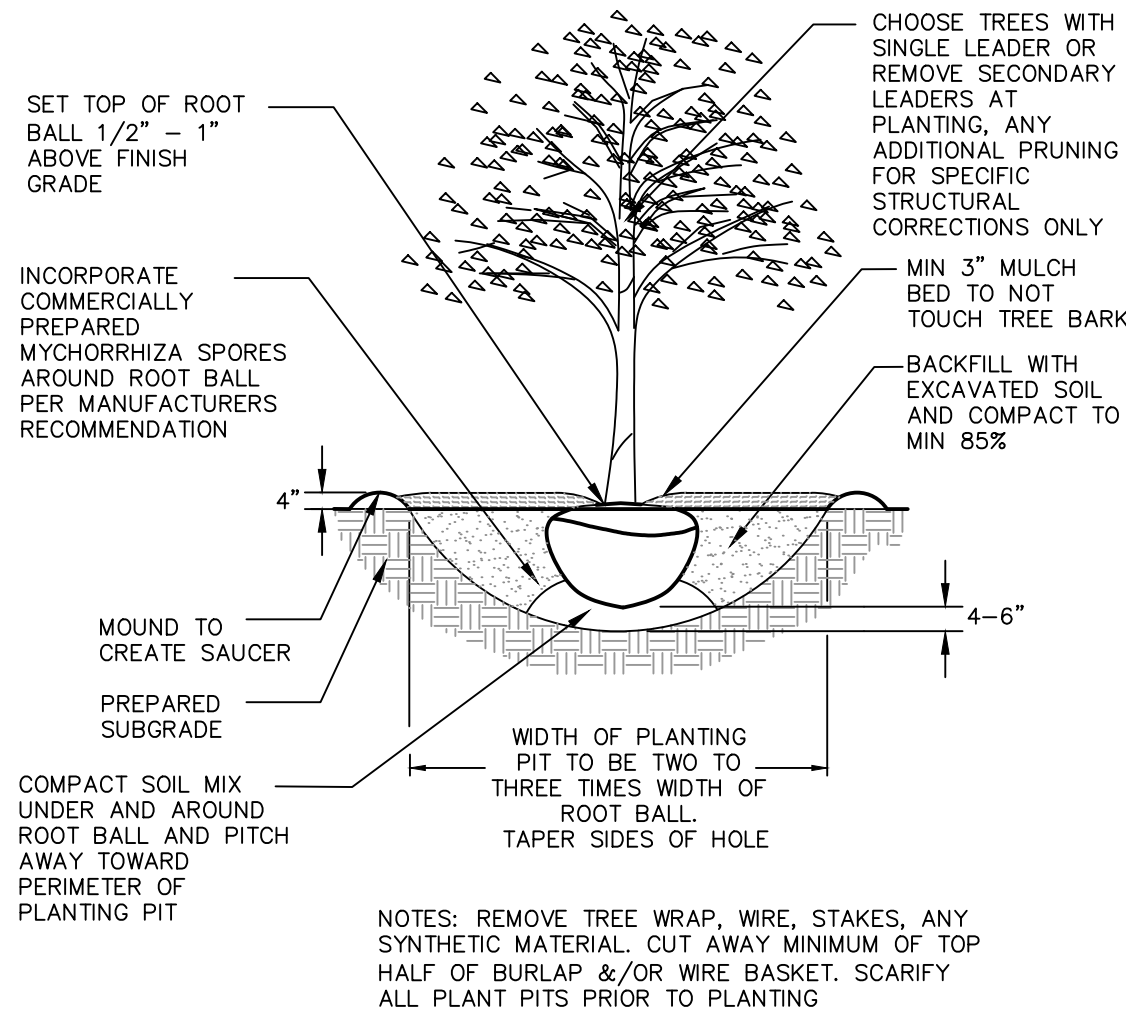
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LEICESTERMASSACHUSETTS

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CD-504

1 TREE PLANTING
SCALE: N.T.S.



2 SHRUBS IN CONTAINER
SCALE: N.T.S.

