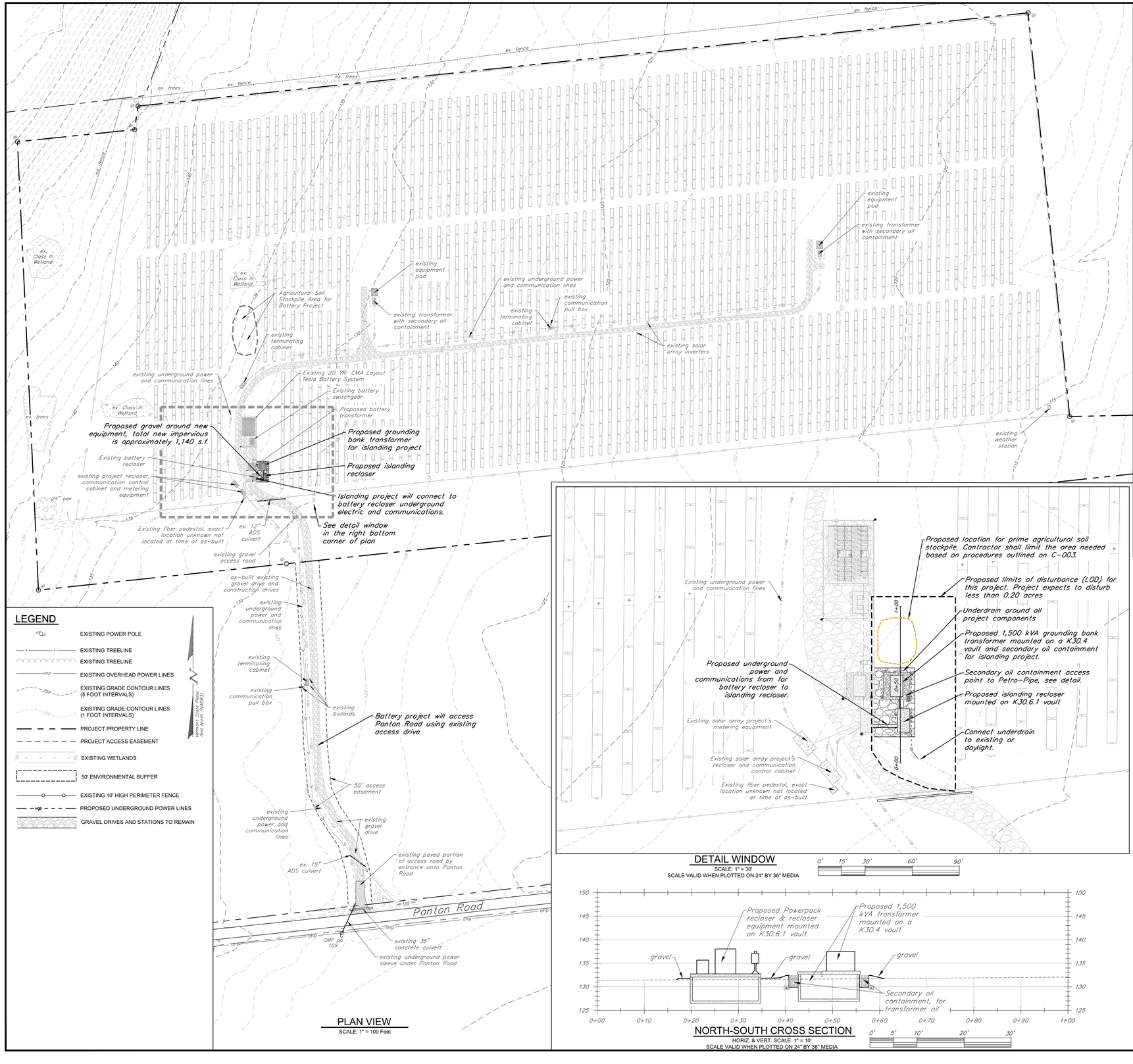
Attachment 1




## LEGEND

- EXISTING POWER POLE
- EXISTING TREELINE
- EXISTING TREELINE
- EXISTING OVERHEAD POWER LINES
- EXISTING GRADE CONTOUR LINES (5 FOOT INTERVALS)
- EXISTING GRADE CONTOUR LINES (1 FOOT INTERVALS)
- PROJECT PROPERTY LINE
- PROJECT ACCESS EASEMENT
- EXISTING WETLANDS
- 50' ENVIRONMENTAL BUFFER
- EXISTING 10' HIGH PERIMETER FENCE
- PROPOSED UNDERGROUND POWER LINES
- GRAVEL DRIVES AND STATIONS TO REMAIN

Vermont State Plane Grid North (NAD83)

## PLAN VIEW

SCALE: 1" = 100 Feet




## DETAIL WINDOW

SCALE: 1" = 30'

SCALE VALID WHEN PLOTTED ON 24" BY 36" MEDIA

0' 15' 30' 60' 90'

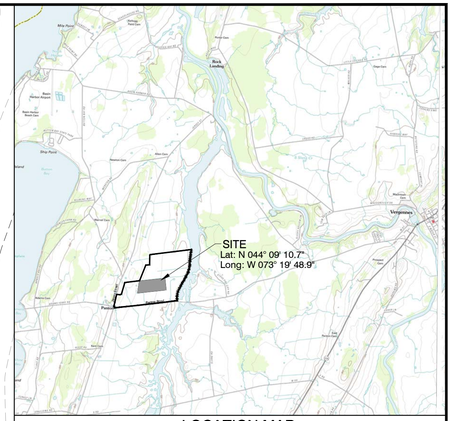



## NORTH-SOUTH CROSS SECTION

HORIZ. & VERT. SCALE: 1" = 10'

SCALE VALID WHEN PLOTTED ON 24" BY 36" MEDIA

0' 5' 10' 20' 30'




## LOCATION MAP

SCALE: 1" = ½ Mile

## PROJECT AREA CALCULATIONS:

PROPOSED EXCAVATED SOIL

- PROJECT PROPOSES LESS THAN 0.20 ACRES OF DISTURBANCE FOR INSTALLATION OF THE PROPOSED ISLANDING PROJECT. THERE IS NO OTHER ACTIVE DISTURBANCE ON THE SITE SO THERE IS NO NEED FOR A CONSTRUCTION STORMWATER PERMIT. CONTRACTORS WILL FOLLOW THE STATE OF VERMONT LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR PROJECT INSTALLATION.

EXISTING GMP SOLAR PANTON PROJECT SOLAR ARRAY

- EXISTING IMPERVIOUS FROM BATTERY PROJECT CALCULATIONS, FROM C-001 DATED 4/6/17
  = 41,610 S.F. (0.96 ACRES)

PROPOSED ISLANDING PROJECT IMPERVIOUS AREA

- GRAVEL AREA THAT WILL CONTAIN NEW TRANSFORMER, SECONDARY OIL CONTAINMENT AND RECLOSER VAULT = ±1,140 S.F. (0.03 ACRES)

TOTAL IMPERVIOUS ON SITE AFTER COMPLETION OF ISLANDING SYSTEM

- ±41,610 S.F. + ±1,140 S.F. = ±42,750 S.F. (±0.98 ACRES)

## NOTES:

1. ASPECTS OF PLAN ARE APPROXIMATE AND DERIVED FROM AERIAL PHOTOGRAPHY.
2. THE HORIZONTAL COORDINATE SYSTEM IS BASED ON NAD83 VERMONT STATE PLANE 4400 (US SURVEY FEET). ELEVATIONS ARE BASED ON THE NAVD88 (US SURVEY FEET).
3. GROUND CONTOURS ARE BASED ON A TOPOGRAPHICAL SURVEY PERFORMED BY KREBS AND LANSING CONSULTING ENGINEERS, INC. IN OCTOBER 2015.
4. KREBS AND LANSING CONSULTING ENGINEERS, INC. PERFORMED AS-CONSTRUCTED SURVEY OF THE PROJECT POST CONSTRUCTION IN NOVEMBER 2016. EXISTING CONDITIONS OUTSIDE OF PROJECT AREA ARE BASED ON SURVEYS PERFORMED BY KREBS & LANSING CONSULTING ENGINEERS IN OCTOBER 2015.
5. UTILITIES ARE NOT WARRANTED TO BE COMPLETE OR ACCURATE. CONTRACTOR SHALL CONTACT DIG SAFE BEFORE BEGINNING ANY EXCAVATION.
6. THIS IS IN NO WAY A BOUNDARY SURVEY. PROJECT PROPERTY LINES SHOWN ON THIS PLAN ARE BASED ON AN ALTA/ACSM TITLE SURVEY ENTITLED "NEW LEASE PREMISES FOR SOLAR ARRAY PROJECT LOCATED ON VORSTEVELD FARM, LLP PROPERTY, PANTON ROAD, PANTON, VERMONT" BY KREBS AND LANSING CONSULTING ENGINEERS, INC. DATED APRIL 19, 2016 AND LAST REVISED NOV. 21, 2016. OTHER PROPERTY LINES ARE FROM TAX MAP INFORMATION PROVIDED BY THE TOWN OF PANTON.
7. SOLAR ARRAY AND BATTERY SYSTEM HAS BEEN COMPLETED AND IS IN OPERATION.
8. THIS IS A PRELIMINARY DESIGN PLAN. FINAL DESIGN WILL BE MODIFIED TO MATCH EQUIPMENT PURCHASED AND POSSIBLE PERMIT CONSTRAINTS REVEALED DURING PROJECT'S REVIEW.

# GMP PANTON ISLANDING PROJECT

3796 Panton Road
Panton, Vermont

GREEN MOUNTAIN POWER

KREBS & LANSING CONSULTING ENGINEERS
164 Main Street, Suite 201
Colchester, Vermont 05446
P: (802) 878-0375
www.krebsandlansing.com

ISSUED FOR PERMIT REVIEW
NOT FOR CONSTRUCTION

CIVIL ENGINEER:
Krebs and Lansing Consulting Engineers, Inc.
164 Main Street, Suite. 201
Colchester, Vermont 05446

ENVIRONMENTAL:
Vanasse Hangen Brustlin, Inc. (VHB)
40 IDX Drive
South Burlington, Vermont 05403

STAMP:

DRAFT
June 29, 2020

0' 50' 100' 200' 300'
0" 1" 2" 3"
STANDARD GRAPHIC SCALE (1" = 100')
VALID WHEN PLOTTED ON 24" BY 36" MEDIA

0' 113.64' 227.27' 284.09'
0" 0.5" 1" 1.25"
REDUCED GRAPHIC SCALE (1" = 227.27')
VALID WHEN PLOTTED ON 11" BY 17" MEDIA

| REV. NO. | REVISIONS/COMMENTS | DATE |
|---|---|---|

DRAWING TITLE:

PROPOSED SITE PLAN
REVISIONS FOR
ISLANDING PROJECT

DATE ISSUED: 06/29/20

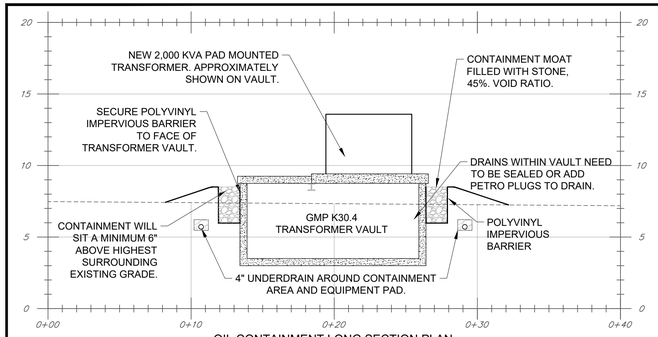
DRAWN BY: GTD CHECKED BY:

PROJECT NO.: 17100.1 SCALE: 1" = 100'

DRAWING NO.: C-001

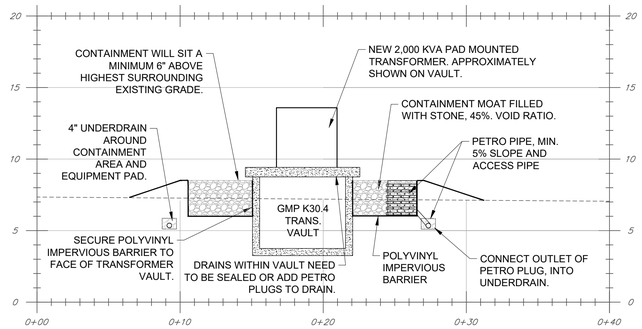
REV. NO.:

DWG NAME: GMPSolar-Panton-Project_REV_For-Islanding.dwg



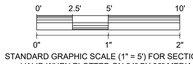

OIL CONTAINMENT LONG SECTION PLAN

HORIZONTAL SCALE: 1" = 5'
VERTICAL SCALE: 1" = 5'



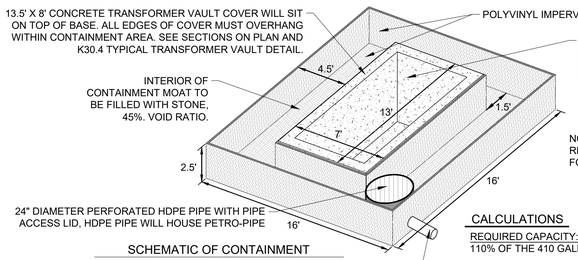

OIL CONTAINMENT SHORT SECTION PLAN

HORIZONTAL SCALE: 1" = 5'
VERTICAL SCALE: 1" = 5'




STANDARD GRAPHIC SCALE (1" = 5') FOR SECTIONS VALID WHEN PLOTTED ON 24" BY 36" MEDIA

13.5' X 8' CONCRETE TRANSFORMER VAULT COVER WILL SIT ON TOP OF BASE. ALL EDGES OF COVER MUST OVERHANG WITHIN CONTAINMENT AREA. SEE SECTIONS ON PLAN AND K30.4 TYPICAL TRANSFORMER VAULT DETAIL.




SCHEMATIC OF CONTAINMENT

N.T.S.

NOTE: REFER TO MANUFACTURER FINAL DESIGN FOR SPECIFICATIONS AND DETAILS

## CALCULATIONS

REQUIRED CAPACITY:
110% OF THE 410 GALLONS OF TRANSFORMER OIL = 451 GAL. = 60.3 C.F.

REQUIRED MINIMUM FREEBOARD (5" OR 0.42')
CONTAINMENT AREA & PAD = 16' X 16' = 256 S.F.
VOLUME OF FREEBOARD REQUIRED = 256 S.F. X 0.42 FT. = 107.5 C.F.

TOTAL CAPACITY REQUIRED = 60.3 C.F. + 107.5 C.F. = 167.8 C.F.

CAPACITY PROVIDED IN SECONDARY OIL CONTAINMENT SYSTEM:
AREA OF CONTAINMENT = (16'X16') - (7'X13') = 165.0 S.F.
VOLUME OF CONTAINMENT = 165.0 S.F. X 2.5' OF DEPTH = 412.5 C.F.
WHEN FILLED WITH STONE WITH 45% VOID RATIO = 412.5 C.F. * 0.45 = 185.6 C.F.
TOTAL CAPACITY PROVIDED = 185.6 C.F. > 167.8 C.F. REQUIRED

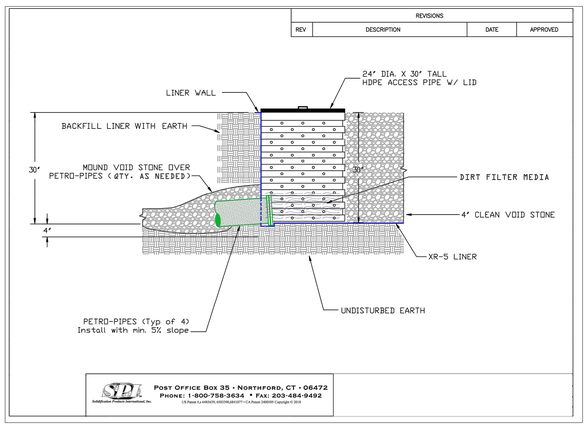
## NOTES

1. THE O&M FIRM WILL REVIEW THE INSTALLATION FOR SAFETY AND CODE COMPLIANCE (BY THE APPROPRIATE QUALIFIED LICENSED MECHANICAL AND ELECTRICAL PROFESSIONALS), ACCURATE AND UP TO DATE REPORTING INFORMATION AND UPDATES REQUIRED. PLEASE NOTE THAT KREBS AND LANSING CONSULTING ENGINEERS, INC. WORK PERTAINS TO THE STORMWATER CONTROLS ONLY. THE SAFETY AND CODE COMPLIANCE PORTION OF THE DESIGN AND REVIEW SHALL BE COMPLETED BY THE APPROPRIATE LICENSED MECHANICAL AND ELECTRICAL PROFESSIONALS (ENGINEERS) HIRED BY THE O&M FIRM PRIOR TO CONSTRUCTION OF THE PROJECT. ANY APPROPRIATE CODE OR SAFETY MODIFICATIONS DICTATED BY THAT REVIEW SHALL BE INCORPORATED INTO O&M PROTOCOLS FOR THE SITE PRIOR TO CONSTRUCTION COMMENCING.
2. THIS DESIGN ASSUMES THAT ALL PENETRATIONS THROUGH THE CONCRETE BASE OF THE TRANSFORMER VAULT COVER WILL BE SEALED. IF PENETRATIONS ARE NOT SEALED CONTRACTOR MUST MAKE BOTTOM OF THE TRANSFORMER VAULT SUMP WATER TIGHT OR INSTALL AN OIL REACTIVE PLUG IN ALL VAULT DRAINS, "PETRO PLUG" OR APPROVED EQUAL.
3. THIS DESIGN IS FOR A 1,500 KVA PAD MOUNTED TRANSFORMER BY COOPER POWER SYSTEMS, FILLED WITH 410 GALLONS OF FLUID.
4. SECONDARY OIL CONTAINMENT WILL BE REVIEWED PRIOR TO INSTALLATION AND DESIGNED SPECIFICALLY FOR THE EQUIPMENT BEING INSTALLED. EQUIPMENT MANUFACTURER MAY PROVIDE THEIR OWN SECONDARY OIL CONTAINMENT. CONTAINMENT DESIGN WILL NEED TO BE REVIEWED BY THE ENGINEER AND FIT THE STATE SPECIFIED VOLUME.

TYPICAL SECONDARY OIL CONTAINMENT DESIGN FOR 2,000 KVA TRANSFORMER

N.T.S.

| REVISIONS | | | |
|---|---|---|---|
| REV | DESCRIPTION | DATE | APPROVED |

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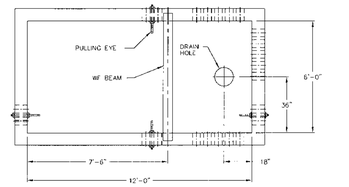
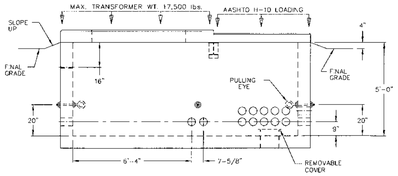
13 Rope Ferry Rd. | 06403 | 800-243-4377 | © Software 1999-09 Copyright © 2015

2142pg1.dgn

### K30.4/ 3-PHASE PAD TRANSFORMER 35KV & BELOW 750 & 1000 KVA (208V) & 1500 THRU 2500 KVA (480V)




TOP VIEW (BOX ONLY)




FRONT VIEW (BOX & COVERS)

NOTE: Refer to Std. No. K30.0, GENERAL REQUIREMENTS, for design certification, documentation and conditions for APPROVAL.

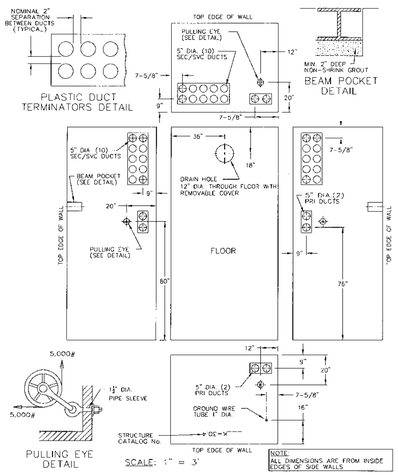
SCALE: 1" = 3'

| GREEN MOUNTAIN POWER | DISTRIBUTION STANDARD | App'd: RJS | STANDARD NUMBER |
|---|---|---|---|
| | | DATE: 12/12 | 2142 Page 1 |

2142pg2.dgn

### K30.4/ 3-PHASE PAD TRANSFORMER 35KV & BELOW 750 & 1000 KVA (208V) & 1500 THRU 2500 KVA (480V)

WALL PENETRATIONS & ACCESSORY LOCATIONS




PULLING EYE DETAIL

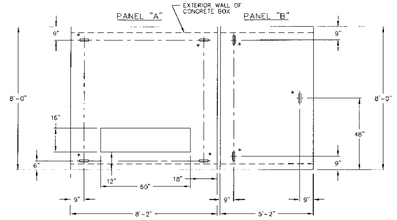
SCALE: 1" = 3'

NOTE: ALL DIMENSIONS ARE FROM INSIDE EDGES OF SIDE WALLS

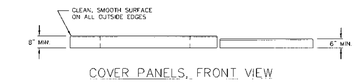
| GREEN MOUNTAIN POWER | DISTRIBUTION STANDARD | App'd: RJS | STANDARD NUMBER |
|---|---|---|---|
| | | DATE: 12/12 | 2142 Page 2 |

2142pg3.dgn

### K30.4/ 3-PHASE PAD TRANSFORMER 35KV & BELOW 750 & 1000 KVA (208V) & 1500 THRU 2500 KVA (480V)




COVER PANELS, TOP VIEW




COVER PANELS, FRONT VIEW

* RECESSED LIFTING EYES, #6 REBAR IN APPROX 2.5" x 6" SLOT (TOTAL 7 EYES)

NOTES:
1. PANEL "A" DESIGN LOAD 17,500 lbs.
2. PANEL "B" DESIGN LOAD AASHTO H-10.

SCALE: 1" = 3'

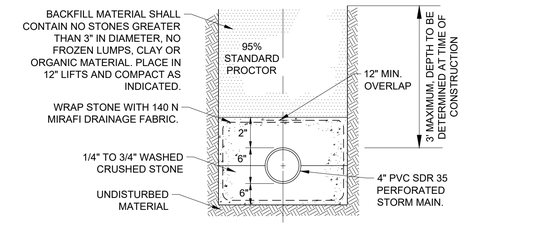
| GREEN MOUNTAIN POWER | DISTRIBUTION STANDARD | App'd: RJS | STANDARD NUMBERS |
|---|---|---|---|
| | | DATE: 12/12 | 2142 Page 3 |

K30.4 THREE PHASE TRANSFORMER VAULT DETAIL FOR TRANSFORMERS FROM 750 kVA TO 2,500 kVA

N.T.S.

TYPICAL ACCESS DRIVE, TURNAROUND DETAIL AND GRAVEL APRON

N.T.S.

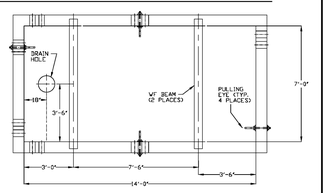



TYPICAL PERFORATED STORM TRENCH DETAIL

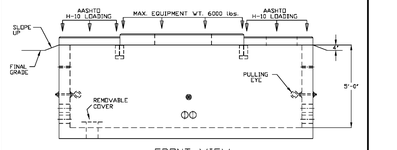
N.T.S.

2147pg1.dgn

### K30.6.1 / FOR USE WITH PADMOUNTED VIPER RECLOSER




TOP VIEW (BOX ONLY)




FRONT VIEW (BOX & COVERS)

NOTE: Refer to Std. No. K30.0, GENERAL REQUIREMENTS, for design certification, documentation and conditions for APPROVAL.

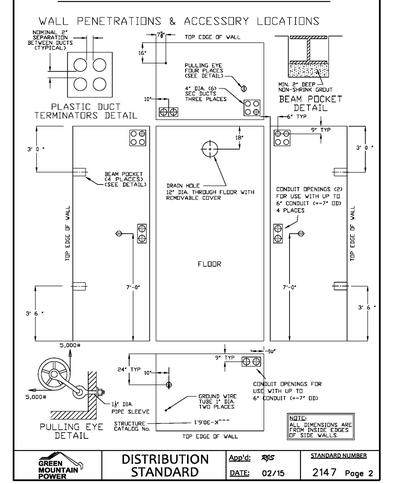
NOTES: 1. THIS DESIGN UTILIZES THE SAME VAULT BOX AS THE K30.6 ROTATED GRAPHICALLY 180 DEGREES.
2. TAKE CARE WHEN SETTING THE VAULT. THE VAULT MUST BE POSITIONED WITH THE FRONT VIEW ABOVE AS THE FEED IN SIDE FROM GMP. THE SECONDARY PEDESTAL OR PAD TRANSFORMER WILL BE ON THE RIGHT WITH BACK TO THE GMP SOURCE SIDE.

| GREEN MOUNTAIN POWER | DISTRIBUTION STANDARD | App'd: RJS | STANDARD NUMBER |
|---|---|---|---|
| | | DATE: 07/15 | 2147 Page 1 |

2147pg2.dgn

### K30.6.1 / FOR USE WITH PADMOUNTED VIPER RECLOSER

WALL PENETRATIONS & ACCESSORY LOCATIONS



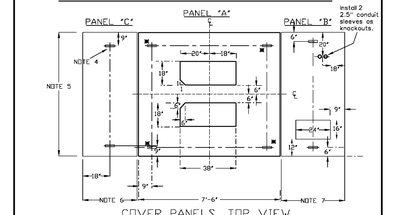

PULLING EYE DETAIL

NOTE: ALL DIMENSIONS ARE FROM INSIDE EDGES OF SIDE WALLS

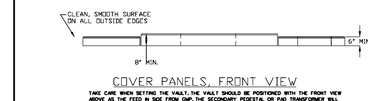
| GREEN MOUNTAIN POWER | DISTRIBUTION STANDARD | App'd: RJS | STANDARD NUMBER |
|---|---|---|---|
| | | DATE: 02/15 | 2147 Page 2 |

2147pg3.dgn

### K30.6.1 / FOR USE WITH PADMOUNTED VIPER RECLOSER




COVER PANELS, TOP VIEW




COVER PANELS, FRONT VIEW

TAKE CARE WHEN SETTING THE VAULT. THE VAULT SHOULD BE POSITIONED WITH THE FRONT VIEW ABOVE AS THE FEED IN SIDE FROM GMP. THE SECONDARY PEDESTAL OR PAD TRANSFORMER WILL BE ON THE RIGHT WITH BACK TO THE GMP SOURCE SIDE.

NOTES:
1. PANEL "A" DESIGN LOAD 6,000 lbs.
2. PANEL "B" DESIGN LOAD AASHTO H-10.
3. PANEL "C" DESIGN LOAD AASHTO H-10.
4. RECESSED LIFTING EYES, #6 REBAR IN APPROX. 2.5"x6" SLOT (TYP. 8 PLACES).
5. DIMENSION TO BE 7' PLUS 2 TIMES WALL THICKNESS.
6. DIMENSION TO BE 3' PLUS WALL THICKNESS.
7. DIMENSION TO BE 3' 6" PLUS WALL THICKNESS.

| GREEN MOUNTAIN POWER | DISTRIBUTION STANDARD | App'd: RJS | STANDARD NUMBER |
|---|---|---|---|
| | | DATE: 07/15 | 2147 Page 3 |

K30.6.1 THREE PHASE VAULT DETAIL

N.T.S.

NOTES

1. PRIOR TO ORDERING CONCRETE CONTRACTOR SHALL VERIFY THAT WEIGHT OF TRANSFORMER DELIVERED BY THE POWER COMPANY DOES NOT EXCEED THE DESIGN LOAD FOR VAULT.

# GMP PANTON ISLANDING PROJECT

3796 Panton Road
Panton, Vermont

GREEN MOUNTAIN POWER

KREBS & LANSING CONSULTING ENGINEERS
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40 IDX Drive
South Burlington, Vermont 05403

STAMP:

DRAFT
June 29, 2020

| REV. NO. | REVISIONS/COMMENTS | DATE |
|---|---|---|

DRAWING TITLE:

DETAILS

DATE ISSUED: 06/29/20

DRAWN BY: GTD CHECKED BY:

PROJECT NO.: 17100.1 SCALE: varies

DRAWING NO.: C-002 REV. NO.:

DWG NAME: GMPSolar-Panton-Project_REV_For-Islanding.dwg

VERMONT

**AGENCY OF AGRICULTURE, FOOD & MARKETS**
**116 State Street**
**Montpelier, VT 05620-2901**

## Act 250 Procedure:

## Reclamation of Vermont Agricultural Soils

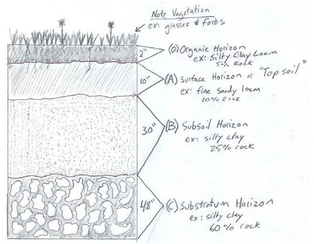
Revised 10/30/2014 by the Vermont Agency of Agriculture, Food and Markets, with assistance from USDA Natural Resources Conservation Service (NRCS) and Ben Waterman, soils consultant

The reclamation of Agricultural Soils is technically feasible from the Agency of Agriculture's perspective. However, to ensure that the soil is returned to a physical and biological state that is comparable to the soil quality prior to activities of potential adverse impact, the following parameters should be addressed in the site reclamation plan.

**Part 1. Pre-disturbance phase:**

1) **Prepare a pre-disturbance General Site Characteristics report, including:**
   a) Maps: 1) a map showing the existing site topography, 2) an NRCS soil map showing the distribution of all NRCS soil survey map units and their acreage, 3) an NRCS soil map showing areas with a farmland classification rating of prime, statewide importance or local importance on the site and their acreage, 4) a map showing the extent of the proposed disturbance. For purposes of this document a "disturbance" is any activity that involves excavation, modification of soils or potential compaction of soils with heavy equipment. The NRCS soil maps can be either GIS-generated or from Web Soil Survey. Scale should be a minimum 1:12,000 or as large as necessary to delineate all soil map units.
   b) An additional map (labeled "Agricultural Soil Reclamation Map") that identifies the proposed location of the soil stockpiles, the area to be reclaimed, and the final topography if it will be different than existing. A narrative that outlines the proposed reclamation map should be provided. Scale should be large enough to delineate all relevant areas.
   c) Information on the existing on-site soil conditions:
      i) For areas to be excavated: One on-site soil profile description representing the area to be disturbed. If the area to be disturbed spans more than one NRCS soil survey map unit, at least one profile description should be completed for every map unit to represent all impacted areas. The description(s) should include depths to and thickness of A, E, B and/or C horizons, USDA texture class, soil structure and moist consistency ratings for samples within each horizon. Soil profiles should be at least 48" deep. For profile description protocols, refer to: The Field Book for Describing and Sampling Soils, version 3.0 (*Schoenberger, Wysocki, Benham, and Soil Survey Staff, 2012*), available online and in print at USDA-NRCS service centers.
      Note: soil profile descriptions are not necessary for areas whose only potential disturbance is soil compaction..
      ii) For areas to be excavated and/or compacted, one representative soil sample from each map unit impacted and subject to reclamation shall be submitted to measure








pre-disturbance soil productivity using the Cornell Soil Health Assessment Package testing service (http://soilhealth.cals.cornell.edu/extension/test.htm)
      iii) For areas to be excavated and/or potentially compacted with heavy equipment: Soil compaction status should be measured for impacted areas, with at least one measurement for each NRCS soil map unit. Compaction can be measured by performing a soil bulk density test for the topsoil (A horizon). Alternatively, to measure surface and subsurface hardness, penetrometer readings can be taken using a field penetrometer with field penetration resistance measured in psi.
      iii) For areas to be excavated, soil pH should be measured before disturbance with at least one test for each NRCS soil map unit using University of Vermont or other Cooperative Extension or professional soil testing kits and protocols.

**Part 2. Soil removal and stockpiling phase:**

   a) Soil material and woody material, if present, should be stockpiled into several distinct piles:
      i) Surface organic soil material (if present) and the dark topsoil material (A horizon) in one pile.
      ii) Loamy brownish subsoil material (B horizon) in a separate pile.
      iii) Unconsolidated bedrock, such as bank-run gravel or un-weathered soil parent material (BC or C horizon) in a separate pile. (*Note: In Vermont aside from recently-formed floodplain soils, it is uncommon in shallow disturbances to reach the C horizon; however, in the event this layer is disturbed, it should not be mixed with other subsoil. This will enable subsoil layers to be restored to their original order in the soil profile to the extent possible.*)
      iv) Woody stumps (where present) should be removed and stockpiled in a separate pile. If woody stumps have not been chipped, soil that is attached to the roots will eventually dry out and fall off the roots. To speed up this process, use an excavator to shake the roots clean. This is some of the best topsoil and should be added to the stockpiled topsoil. The stumps can then be chipped or ground and added to the woody stockpile, or used in the re-sloping process.
   b) Stockpiling of the soil and woody material is to be in predetermined locations that can be monitored over the life of the excavation and reclamation.
   c) To minimize potential for erosion, soil stockpiles should be seeded or temporarily stabilized with application of straw mulch or other erosion control matting to maintain a uniform cover until soil is backfilled and restored. If stockpiles are to be kept in place throughout the winter and soil disturbance is completed by October 15, they should be stabilized with seeding of winter rye. Additional cover such as hay/straw mulch or erosion control matting should be installed if seeding of rye can't be accomplished before September 15. For sites with earth disturbance occurring after October 15th, Vermont Agency of Natural Resources guidelines for winter erosion control on construction sites should be followed. (see http://www.anr.state.vt.us/dec/waterq/stormwater/docs/construction/sw_low_risk_site_handbook.pdf )

**Part 3. Reclamation phase:**

1) In areas where soils with a NRCS farmland classification of prime, statewide or local importance are to be reclaimed, the final site topography should have slopes less than 15 percent. It is preferred that level to slightly convex areas, with slopes between 0% and 8% slopes, are created, with no concave areas where water may pool.

For this profile: surface organic material and loamy dark brown topsoil (A horizon) go to about 8 inches, brownish loamy subsoil (B horizon) goes to about 30 inches or so, then lighter colored gravelly substratum (C horizon) starting at 30 inches…



2) Soil stockpiles should be layered in the following sequence:
   a) Soil that was originally deepest in the soil profile should be placed first, directly above the re-graded base material and graded to the final slope contours
   b) Soil that was originally shallow layers of subsoil replaced before topsoil and re-graded
   c) The topsoil material is then placed on top of the re-graded subsoil material
   d) The thickness of topsoil material overlying subsoil layer(s) should approximate the pre-disturbance thickness.
   e) One representative soil sample from each map unit subject to reclamation shall be submitted to measure post-reclamation soil productivity using the Cornell Soil Health Assessment Package testing service to verify that soils have been effectively reclaimed in all impacted areas (http://soilhealth.cals.cornell.edu/extension/test.htm).
   f) Exposed soil should be seeded and mulched as soon as possible after final grading to prevent erosion and allow for the establishment of vegetation. In cases where a farmer or landowner intends to cultivate or plow the area within two weeks of completion of the soil reclamation and final grading, the area does not need to be seeded. The selection of the seed cover can include input of the landowner based on pre-construction land use and land cover to ensure that introduced grass or vegetative species do not adversely impact future soils productivity for hay, pasture or crops. Seed can be selected for soil stabilization qualities, its likelihood for successful establishment given soils and time of year, and its compatibility with adjacent land uses. For guidelines and information on erosion control and seed stabilization practices see http://efotg.nrcs.usda.gov/references/public/VT/VTSiaside.pdf or http://www.anr.state.vt.us/dec/waterq/stormwater/docs/construction/sw_low_risk_site_handbook.pdf or ftp://ftp-fc.sc.egov.usda.gov/VT/E-FOTG/Technical_References/ConsPlanning/Vea_Gray_Pits.pdf.

3) Final soil productivity testing should be performed on the same areas tested prior to soil disturbance. Results should be similar to the original, pre-disturbance measured readings. If bulk density is higher than tested originally, subsoiling, plowing or other methods of decompaction should be employed to alleviate soil compaction. Soil material should not be spread or driven on by heavy machinery when it is very wet, otherwise, soil compaction could be severe. Reclaimed topsoil layers should have a pH within 0.5 points of the pre-disturbance reading(s). Lime can be applied at rates recommended by soil test labs to raise soil pH if necessary. If soil tests indicate the pH is lower than 6.0, in most cases unless specifically requested by a farmer, lime can be applied at the recommended rate to bring the pH up to within the range of 6.0-7.0.

ATTACHMENT A

Examples of a Soil Profiles:



## VT AGENCY OF AGRICULTURE, FOOD AND MARKETS - ACT 250 PROCEDURE FOR RECLAMATION OF VERMONT AGRICULTURAL SOILS

## ADDITIONAL NOTES FOR RECLAMATION OF AGRICULTURAL SOILS

1. DISTURBANCES TO PAS INCLUDE THE INSTALLATION OF ACCESS DRIVES AND OTHER ASSOCIATED ELECTRICAL COMPONENTS. THE DISTURBED PAS SOILS ASSOCIATED WITH THESE ASPECTS OF THE PROJECT WILL BE STOCKPILED IN THE PRIMARY AGRICULTURAL STORAGE AREAS DEPICTED ON SHEET C-001.

2. SOIL EXCAVATION FOR CONDUIT TRENCHING WILL BE EXCAVATED AND BACKFILLED IN THE SAME SOIL LAYERS, AND WILL NOT REQUIRE SOIL STORAGE STOCKPILES.

3. PRIOR TO CONSTRUCTION, THE CONTRACTOR WILL CONDUCT SOIL BULK DENSITY TESTING OR PENETROMETER TESTING OF THE PAS WITHIN THE PROJECT DISTURBANCE AREAS. ALL COMPACTED SOILS WILL BE RESTORED. AT A MINIMUM, ALL TESTING AND RESTORATION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE AGENCY OF AGRICULTURE, FOOD AND MARKETS GUIDELINES, "ACT 250 PROCEDURE: RECLAMATION OF VERMONT AGRICULTURAL SOILS".

## STAGING INSTALLATION AND RESTORATION REQUIREMENTS FOR AREAS WITHIN PRIME AGRICULTURAL SOILS

WITHIN THE PAS SOILS THAT WILL BE TEMPORARILY DISTURBED BY THE USE OF THE STAGING AREA, AT A MINIMUM, THE FOLLOWING CONSTRUCTION AVOIDANCE, MINIMIZATION, AND MITIGATION METHODS WILL BE EMPLOYED:

TEMPORARY STAGING AREA INSTALLATION METHODS AND STANDARDS

1. EXCAVATION WITHIN THE LAYDOWN AREA WILL NOT BE PERMITTED.

2. IF THE USE OF THIS TEMPORARY STAGING AREA IS LIMITED TO LAYDOWN OF LIGHT COMPONENTS, NO SITE PREPARATION IS NEEDED. "LIGHT COMPONENTS" ARE THOSE THAT CAN BE MOVED BY HAND, SUCH AS METAL BRACING AND SOLAR MODULES. ITEMS THAT ARE HEAVY ENOUGH TO BREAK THE SOIL SURFACE OR REQUIRE MACHINERY TO PLACE ARE NOT CONSIDERED LIGHT COMPONENTS.

3. FOR ALL OTHER STAGING USES, THE CONSTRUCTION SEQUENCE SHALL BE AS FOLLOWS:

A) PRIOR TO CONSTRUCTION, THE TOPSOIL ("A" HORIZON) WILL BE SAMPLED AND TESTED TO DETERMINE THE EXISTING BULK DENSITY AT TWO LOCATIONS WITHIN THE PROPOSED TEMPORARY STAGING AREA. THIS TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE AAFM GUIDELINES.

B) THE PERIMETER OF THE LAYDOWN AREA WILL BE MARKED WITH CONSTRUCTION LIMIT BARRIER FENCING.

C) THE DOWNHILL PERIMETER OF THE LAYDOWN AREA WILL BE PROTECTED WITH SILT FENCE OR FILTER ROLL (E.G., FILTREXX SILTSOXX OR APPROVED EQUIVALENT).

D) THE EXISTING GROUND SURFACE IN THE LAYDOWN AREA WILL BE COVERED WITH GEOTEXTILE FABRIC (E.G., MIRAFI 500X OR APPROVED EQUIVALENT).

E) CLEAN ROAD GRAVEL WILL BE SPREAD OVER THE GEOTEXTILE FABRIC WORKING OUT FROM THE PROJECT ACCESS DRIVES. AT ALL TIMES CONSTRUCTION MACHINERY SHALL WORK FROM THE GRAVEL SURFACE. THE GRAVEL WILL BE A MINIMUM OF 6" THICK AND ADHERE TO VAOT 704.05A SPECIFICATION FOR CRUSHED GRAVEL SUBBASE. NO EXCAVATION OF THE EXISTING SOIL IS TO BE PERFORMED.

F) WHEN THE TEMPORARY STAGING AREAS ARE REMOVED AT THE END OF CONSTRUCTION, ALL IMPORTED MATERIALS, INCLUDING THE GRAVEL AND GEOTEXTILE FABRIC, WILL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF OFFSITE. THE REMOVAL WILL PROCEED FROM THE FURTHEST POINT AWAY FROM THE PROJECT ACCESS DRIVE TO THE PROJECT ACCESS DRIVE. AT ALL TIMES CONSTRUCTION MACHINERY WILL WORK FROM THE GRAVEL SURFACE.

G) AFTER THE TEMPORARY LAYDOWN AREAS HAVE BEEN REMOVED, THE SOIL BULK DENSITY TESTING WILL BE REPLICATED TO ALLOW COMPARISON TO THE PRE-CONSTRUCTION BULK DENSITY RESULTS. IF THE POST-CONSTRUCTION BULK SOIL DENSITY TESTING INDICATES THAT SOIL COMPRESSION IS GREATER THAN 10% OF THE AVERAGE PRE-CONSTRUCTION VALUES, SUBSOILING WILL BE EMPLOYED TO ALLEVIATE CONDITIONS. THE SITE WILL THEN BE RETESTED AND DECOMPACTION METHODS WILL BE REEMPLOYED UNTIL THE TESTED POST-CONSTRUCTION BULK DENSITY VALUES ARE 10% OR LESS OF THE AVERAGE PRE-CONSTRUCTION BULK DENSITY TESTING VALUES.

H) THE FOOTPRINT OF THE PROPOSED TEMPORARY LAYDOWN AREAS WILL BE SEEDED WITH NATIVE GRASS SPECIES, MULCHED, AND STABILIZED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION STORMWATER PERMIT.

# GMP PANTON ISLANDING PROJECT

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DRAFT
June 29, 2020

| REV. NO. | REVISIONS/COMMENTS | DATE |
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DRAWING TITLE:

DETAILS

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PROJECT NO.: 17100.1 SCALE: varies

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