

Clean Capital/Inovateus Liner Repair QA/QC Report

Location:

503 Elk Street
Buffalo, New York 14210
Elk Street Commerce Park
Elk Street Solar
NYSDEC Site No. C915201D

Prepared for:

Todd P. Collins Sr.
Inovateus Solar
19890 State Line Rd.
South Bend, IN 46637

LaBella Project No. 2211232

February 6, 2024



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1.0 INTRODUCTION

LaBella Associates, D.P.C. (“LaBella”), completed a geomembrane inspection at the property located at 503 Elk Street, Buffalo, New York, hereinafter referred to as the “Site” on December 26th and December 27th. The Site is listed as a part of the NYSDEC Brownfield Cleanup Program (Site No. C915201D) with various environmental controls including a cover system. The geomembrane liner on the Site is located under an average of one foot of clean stone cover.

2.0 BACKGROUND

Between December 7th and December 8th GPI, an Inovateous Solar sub-contractor, was on site to complete a survey mark out for the solar ballast placement in the northeast corner of the Site. On Friday, December 8th, 2023, a LaBella representative at the Site observed GPI surveyors placing stakes into the subsurface of the Site. The LaBella representative approached the GPI survey team to discuss their work and learned that three-foot wooden stakes and ten-inch metal stakes were being placed and that the depths of the stake advancement into the subsurface of the Site were unknown. The GPI survey team also stated that they were not made aware of the geomembrane liner located at the Site that could not be punctured or damaged. A total of 306 metal and wood stakes were installed to unknown depths, with the potential to have damaged or penetrated the geomembrane barrier at numerous locations.

On January 9th, 2024, GPI was back on-site with a LaBella representative to complete an evaluation of the geomembrane to determine if any damage had occurred. The stakes were grouped into sets of four based on the distance between each stake. Each set of four stakes included two wooden and two metal stakes and was referred to as a Stake Group. To assess the potential for damage to the geomembrane/liner a hole was dug down to the geomembrane proximate to each stake group. The depth of the geomembrane was measured along with the visible height of the wooden stakes. The depth of the wooden stakes was determined by subtracting the visible height of the stake from three feet, the overall stake length. The depths of the wooden and metal stakes were then compared to the depth of the geomembrane. Areas, where the stake depths were within 1 inch of the geomembrane depth, had each stake location dug up for visual inspection of the geomembrane. A total of twenty-two stake groups were determined to be within 1 inch of the geomembrane. Damage including punctures and dimples was identified at seventeen of the twenty-two stake groups. Refer to Figure 2 for damaged Stake Group locations.

3.0 SUMMARY OF WORK

On Thursday, January 25, 2024, work was completed to prepare the known, damaged locations for geomembrane repair work scheduled to begin on January 30, 2024. The work involved removing additional gravel from each stake location to create approximately 1.5 feet of space between the damage in the geomembrane and the stone cover. The work was completed by GPI and Inovateous with a LaBella representative documenting the work. Additional damage to the geomembrane was noted during the gravel removal at three locations, Row 51 Ballast A4, Row 55 Ballast B2, and Row 55 Ballast A10. Photographs of the additional damage and the completed repairs are included in the Photo Log in Attachment 1.

Chenango Contracting Inc. was on Site on January 30, 2024, to complete the geomembrane repair



work per the Chenango Contracting Repair Procedure that was provided prior to repair work commencing. The geomembrane repair scope included peel and shear strength testing using a field tensiometer, the use of a seam welder for patching, and vacuum testing at each repair location. A copy of the procedure is included in Attachment 2.

A trial seam weld was completed using the welding gun and tensiometer to complete peel and shear strength testing before the geomembrane repairs began. A copy of the trial seam log is included in Attachment 3. A total of 55 repairs were completed by Chenango Contracting, 52 of the repairs were completed via the use of a welding rod and placing a bead of geomembrane-like material over the damaged area. Three locations were repaired by seam welding a patch of geomembrane material over the damaged area. Vacuum testing was performed at each repair location to ensure a proper seal, and all repair locations passed the vacuum testing.

A LaBella representative completed a repair log documenting each repair location, including the approximate size of the repair and vacuum test results. A copy of the repair log is included in Attachment 4. Representative photographs of repairs were also taken and are included in the photo log in Attachment 1.

4.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Report Prepared By:

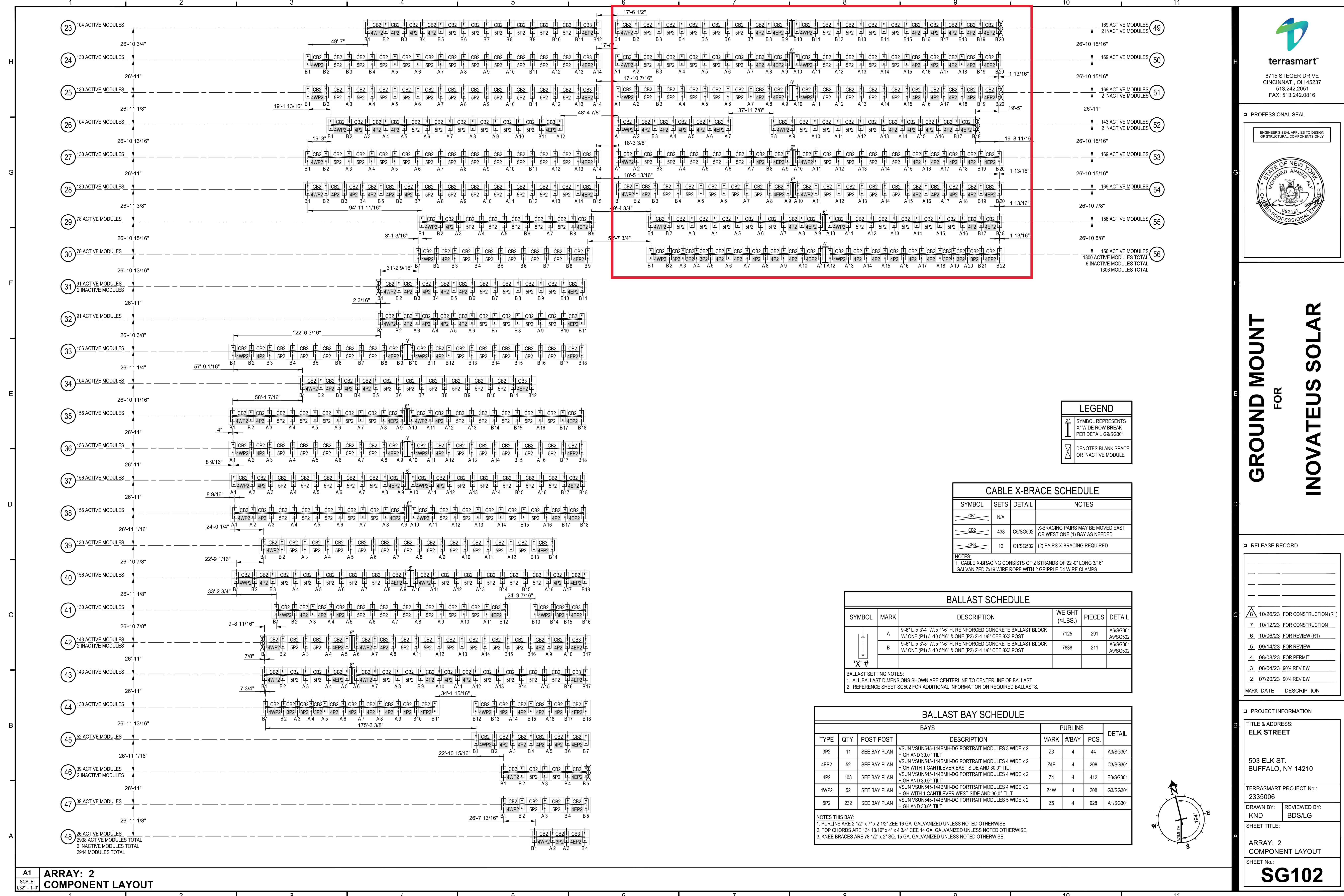
Christopher Finn
Environmental Scientist

Report Reviewed By:

Andrew Janik
Project Manager



FIGURES



A1
ARRAY: 2
SCALE:
1/32" = 1'-0"
COMPONENT LAYOUT

terrasmart
 6715 STEGER DRIVE
 CINCINNATI, OH 45237
 513.242.2051
 FAX: 513.242.0816

PROFESSIONAL SEAL
 ENGINEERS SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY

GROUND MOUNT FOR INOVATEUS SOLAR

LEGEND

| | |
|--|--|
| | SYMBOL REPRESENTS "X" WIDE ROW BREAK PER DETAIL G9/SG301 |
| | DENOTES BLANK SPACE OR INACTIVE MODULE |

CABLE X-BRACE SCHEDULE

| SYMBOL | SETS | DETAIL | NOTES |
|--------|------|----------|---|
| CB1 | N/A | | |
| CB2 | 438 | C5/SG502 | X-BRACING PAIRS MAY BE MOVED EAST OR WEST ONE (1) BAY AS NEEDED |
| CB3 | 12 | C1/SG502 | (2) PAIRS X-BRACING REQUIRED |

NOTES:
 1. CABLE X-BRACING CONSISTS OF 2 STRANDS OF 22'-0" LONG 3/16" GALVANIZED 7x19 WIRE ROPE WITH 2 GRIPPLE D4 WIRE CLAMPS.

BALLAST SCHEDULE

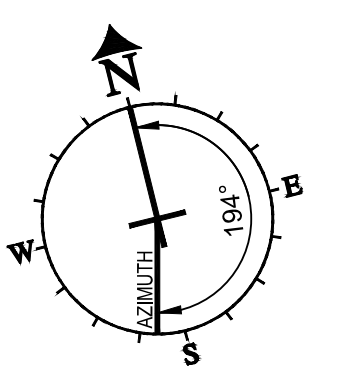
| SYMBOL | MARK | DESCRIPTION | WEIGHT (≈LBS.) | PIECES | DETAIL |
|--------|------|---|----------------|--------|----------------------|
| | A | 9'-6" L. x 3'-4" W. x 1'-6" H. REINFORCED CONCRETE BALLAST BLOCK W/ ONE (P1) 5-10 5/16" & ONE (P2) 2'-1 1/8" CEE 8X3 POST | 7125 | 291 | A6/SG301 A9/SG502 |
| | B | 9'-6" L. x 3'-8" W. x 1'-6" H. REINFORCED CONCRETE BALLAST BLOCK W/ ONE (P1) 5-10 5/16" & ONE (P2) 2'-1 1/8" CEE 8X3 POST | 7838 | 211 | A6/SG301 A9/SG502 |

BALLAST SETTING NOTES:
 1. ALL BALLAST DIMENSIONS SHOWN ARE CENTERLINE TO CENTERLINE OF BALLAST.
 2. REFERENCE SHEET SG502 FOR ADDITIONAL INFORMATION ON REQUIRED BALLASTS.

BALLAST BAY SCHEDULE

| TYPE | QTY. | POST-POST | DESCRIPTION | PURLINS | | | DETAIL |
|------|------|--------------|--|---------|-------|------|----------|
| | | | | MARK | #/BAY | PCS. | |
| 3P2 | 11 | SEE BAY PLAN | VSUN VSUN545-144BMH-DG PORTRAIT MODULES 3 WIDE x 2 HIGH AND 30.0° TILT | Z3 | 4 | 44 | A3/SG301 |
| 4EP2 | 52 | SEE BAY PLAN | VSUN VSUN545-144BMH-DG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 30.0° TILT | Z4E | 4 | 208 | C3/SG301 |
| 4P2 | 103 | SEE BAY PLAN | VSUN VSUN545-144BMH-DG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 30.0° TLT | Z4 | 4 | 412 | E3/SG301 |
| 4WP2 | 52 | SEE BAY PLAN | VSUN VSUN545-144BMH-DG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 30.0° TILT | Z4W | 4 | 208 | G3/SG301 |
| 5P2 | 232 | SEE BAY PLAN | VSUN VSUN545-144BMH-DG PORTRAIT MODULES 5 WIDE x 2 HIGH AND 30.0° TILT | Z5 | 4 | 928 | A1/SG301 |

NOTES THIS BAY:
 1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 2. TOP CHORDS ARE 134 13/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 3. KNEE BRACES ARE 78 1/2" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.



RELEASE RECORD

| MARK | DATE | DESCRIPTION |
|------|----------|-----------------------|
| 8 | 10/26/23 | FOR CONSTRUCTION (R1) |
| 7 | 10/12/23 | FOR CONSTRUCTION |
| 6 | 10/06/23 | FOR REVIEW (R1) |
| 5 | 09/14/23 | FOR REVIEW |
| 4 | 08/08/23 | FOR PERMIT |
| 3 | 08/04/23 | 90% REVIEW |
| 2 | 07/20/23 | 90% REVIEW |

PROJECT INFORMATION

TITLE & ADDRESS:
ELK STREET

503 ELK ST.
 BUFFALO, NY 14210

TERRASMT PROJECT No.:
 2335006

DRAWN BY: **KND** REVIEWED BY: **BDS/LG**

SHEET TITLE:
ARRAY: 2
COMPONENT LAYOUT

SHEET No.:
SG102

S:\REI_SolarDesign\2023_Job\2335006 - Inovateus Solar - Elk Street Buffalo, NY Drawings\2335006-R3.dwg, 10/26/2023 9:58:51 AM, kncvzof

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Geomembrane Stake Investigation

503 Elk Street Buffalo, NY



LaBella Representative : C. Finn

Date: December 26, 2023

| Row | Ballast No. | Liner Depth | Metal 1 | Metal 2 | Wood 1 | Wood 2 |
|------------|--------------------|--------------------|----------------|----------------|---------------|---------------|
| 49 | B1 | 13.0 | 10 | 10 | 10.0 | 10.0 |
| 49 | B2 | 13.0 | 10 | 10 | 9.5 | 9.5 |
| 49 | B3 | 12.5 | 10.25 | 10 | 9.0 | 9.5 |
| 49 | B4 | 12.0 | 10.25 | 10 | 9.0 | 8.0 |
| 49 | B5 | 12.0 | 10 | 10 | 9.0 | 9.5 |
| 49 | B6 | 10.0 | 10 | 10 | 9.0 | 9.5 |
| 49 | B7 | 11.0 | 10.25 | 10 | 9.0 | 10.0 |
| 49 | B8 | 11.0 | 10 | 10 | 8.5 | 9.5 |
| 49 | B9 | 11.0 | 10 | 10 | 8.5 | 10.0 |
| 49 | B10 | 13.0 | 10 | 10 | 10.5 | 9.5 |
| 49 | B11 | 12.0 | 10 | 10 | 8.5 | 9.0 |
| 49 | B12 | 11.0 | 10 | 10 | 9.5 | 9.5 |
| 49 | B13 | 13.0 | 10 | 10 | 9.5 | 9.5 |
| 49 | B14 | 14.0 | 10 | 10 | 8.0 | 8.0 |
| 49 | B15 | 13.0 | 10 | 10 | 8.0 | 8.5 |
| 49 | B16 | 13.5 | 10 | 10 | 8.0 | 8.0 |
| 49 | B17 | 14.5 | 10 | 10 | 8.5 | 9.0 |
| 49 | B18 | 13.5 | 10 | 10 | 8.0 | 7.5 |
| 49 | B19 | 11.5 | 10 | 10 | 8.0 | 8.0 |
| 49 | B20 | 13.0 | 10 | 10 | 9.0 | 8.0 |

Metal 1 and Wood 1 are Western Stakes

Metal 2 and Wood 2 are Eastern Stakes

 Stake depth within 1" of liner
 Stake depth exceeds liner depth

Geomembrane Stake Investigation

503 Elk Street Buffalo, NY



LaBella Representative : C. Finn

Date: December 26, 2023

| Row | Ballast No. | Liner Depth | Metal 1 | Metal 2 | Wood 1 | Wood 2 |
|------------|--------------------|--------------------|----------------|----------------|---------------|---------------|
| 50 | A1 | 15.5 | 10 | 10 | 9.5 | 10.5 |
| 50 | A2 | 12.5 | 10 | 10 | 9.5 | 9.5 |
| 50 | B3 | 12.5 | 10 | 10 | 9.0 | 10.0 |
| 50 | A4 | 13.0 | 10 | 10 | 11.5 | 10.0 |
| 50 | A5 | 12.5 | 10 | 10 | 11.0 | 10.5 |
| 50 | A6 | 13.0 | 10 | 10 | 11.0 | 10.0 |
| 50 | A7 | 12.0 | 10 | 10 | 10.0 | 10.5 |
| 50 | A8 | 12.5 | 10 | 10 | 10.5 | 10.0 |
| 50 | A9 | 11.5 | 10 | 10 | 10.5 | 10.5 |
| 50 | A10 | 13.0 | 10 | 10 | 11.0 | 10.5 |
| 50 | A11 | 12.0 | 10 | 10 | 10.5 | 10.5 |
| 50 | A12 | 12.5 | 10 | 10 | 10.5 | 10.5 |
| 50 | A13 | 12.0 | 10 | 10 | 10.0 | 10.0 |
| 50 | A14 | 11.5 | 10 | 10 | 10.0 | 11.0 |
| 50 | A15 | 12.5 | 10 | 10.25 | 8.0 | 10.0 |
| 50 | A16 | 13.0 | 10 | 10 | 9.0 | 9.5 |
| 50 | A17 | 12.0 | 10 | 10 | 10.0 | 10.5 |
| 50 | A18 | 13.0 | 10 | 10 | 11.0 | 11.5 |
| 50 | B19 | 14.0 | 10 | 10 | 11.0 | 10.5 |
| 50 | B20 | 14.5 | 10 | 10 | 10.5 | 12.5 |

Metal 1 and Wood 1 are Western Stakes

Metal 2 and Wood 2 are Eastern Stakes

 Stake depth within 1" of liner
 Stake depth exceeds liner depth

Geomembrane Stake Investigation

503 Elk Street Buffalo, NY



LaBella Representative : C. Finn

Date: December 26, 2023

| Row | Ballast No. | Liner Depth | Metal 1 | Metal 2 | Wood 1 | Wood 2 |
|------------|--------------------|--------------------|----------------|----------------|---------------|---------------|
| 51 | A1 | 13.0 | 10 | 10 | 11.0 | 11.0 |
| 51 | A2 | 13.5 | 10 | 10 | 11.0 | 11.5 |
| 51 | B3 | 13.5 | 10 | 10 | 11.0 | 11.5 |
| 51 | A4 | 12.5 | 10 | 10 | 12.0 | 10.5 |
| 51 | A5 | 13.0 | 10 | 10 | 10.5 | 12.5 |
| 51 | A6 | 13.5 | 10 | 10 | 10.5 | 11.0 |
| 51 | A7 | 13.5 | 10 | 10 | 11.0 | 12.0 |
| 51 | A8 | 13.0 | 10 | 10 | 11.0 | 10.0 |
| 51 | A9 | 13.5 | 10 | 10 | 12.0 | 13.0 |
| 51 | A10 | 13.5 | 10 | 10 | 11.5 | 11.5 |
| 51 | A11 | 13.0 | 10 | 10 | 11.0 | 11.5 |
| 51 | A12 | 12.0 | 10 | 10 | 11.5 | 11.5 |
| 51 | A13 | 12.0 | 10 | 10 | 10.5 | 12.0 |
| 51 | A14 | 12.0 | 10 | 10 | 11.0 | 11.0 |
| 51 | A15 | 12.5 | 10 | 10 | 11.0 | 11.0 |
| 51 | A16 | 13.0 | 10 | 10 | 10.5 | 9.5 |
| 51 | A17 | 12.0 | 10 | 10 | 11.5 | 11.5 |
| 51 | A18 | 12.5 | 10 | 10 | 11.5 | 10.5 |
| 51 | B19 | 12.0 | 10 | 10.25 | 10.5 | 11.0 |
| 51 | B20 | 15.0 | 10 | 10 | 10.5 | 11.0 |

Metal 1 and Wood 1 are Western Stakes

Metal 2 and Wood 2 are Eastern Stakes

 Stake depth within 1" of liner
 Stake depth exceeds liner depth

Geomembrane Stake Investigation

503 Elk Street Buffalo, NY



LaBella Representative : C. Finn

Date: December 26, 2023

| Row | Ballast No. | Liner Depth | Metal 1 | Metal 2 | Wood 1 | Wood 2 |
|------------|--------------------|--------------------|----------------|----------------|---------------|---------------|
| 52 | A1 | 12.0 | 10 | 10 | 11.0 | 10.5 |
| 52 | A2 | 13.0 | 10 | 10 | 10.5 | 11.0 |
| 52 | B3 | 12.5 | 10 | 10 | 12.0 | 11.5 |
| 52 | A4 | 12.5 | 10 | 10 | 10.0 | 9.5 |
| 52 | A5 | 11.5 | 10 | 10 | 10.0 | 10.5 |
| 52 | A6 | 13.5 | 10 | 10 | 10.5 | 11.0 |
| 52 | A7 | 13.0 | 10 | 10 | 10.5 | 11.0 |
| 52 | B8 | 13.0 | 10 | 10 | 10.5 | 12.0 |
| 52 | A9 | 13.5 | 10 | 10 | 10.5 | 11.0 |
| 52 | A10 | 14.0 | 10 | 10 | 11.0 | 11.0 |
| 52 | A11 | 14.0 | 10 | 10 | 11.0 | 11.0 |
| 52 | A12 | 13.5 | 10 | 10 | 10.0 | 9.5 |
| 52 | A13 | 12.0 | 10 | 10 | 8.5 | 8.5 |
| 52 | A14 | 12.5 | 10 | 10 | 10.0 | 8.5 |
| 52 | A15 | 13.5 | 10 | 10 | 10.0 | 10.5 |
| 52 | A16 | 13.5 | 10 | 10 | 10.5 | 11.0 |
| 52 | B17 | 13.0 | 10.25 | 10 | 9.5 | 11.0 |
| 52 | B18 | 12.0 | 10 | 10 | 10.5 | 8.5 |

Metal 1 and Wood 1 are Western Stakes

Metal 2 and Wood 2 are Eastern Stakes

-  Stake depth within 1" of liner
-  Stake depth exceeds liner depth

Geomembrane Stake Investigation

503 Elk Street Buffalo, NY



LaBella Representative : C. Finn

Date: December 27, 2023

| Row | Ballast No. | Liner Depth | Metal 1 | Metal 2 | Wood 1 | Wood 2 |
|------------|--------------------|--------------------|----------------|----------------|---------------|---------------|
| 53 | A1 | 12.0 | 10 | 10 | - | - |
| 53 | A2 | 12.0 | 9.5 | 10 | 11.0 | 8.0 |
| 53 | B3 | 12.5 | 10 | 10 | 11.0 | 9.0 |
| 53 | A4 | 12.0 | 10 | 10 | 8.0 | 11.0 |
| 53 | A5 | 12.0 | 10 | 10 | 9.5 | 10.0 |
| 53 | A6 | 13.0 | 10 | 10 | 10.0 | 10.0 |
| 53 | A7 | 13.0 | 10 | 10 | 9.0 | 10.0 |
| 53 | B8 | 12.0 | 10 | 10 | 9.5 | 10.5 |
| 53 | A9 | 12.5 | 10 | 10 | 9.0 | 9.5 |
| 53 | A10 | 12.0 | 10 | 10 | 9.5 | 10.5 |
| 53 | A11 | 13.0 | 10 | 10 | 10.0 | 10.5 |
| 53 | A12 | 12.5 | 10 | 10 | 10.0 | 10.5 |
| 53 | A13 | 13.0 | 10 | 10 | 9.0 | 10.5 |
| 53 | A14 | 12.5 | 10 | 10 | 9.0 | 9.0 |
| 53 | A15 | 13.0 | 10 | 10 | 9.5 | 9.0 |
| 53 | A16 | 12.0 | 10 | 10 | 8.5 | 9.0 |
| 53 | A17 | 14.0 | 10 | 10 | 8.5 | 11.5 |
| 53 | A18 | 12.0 | 10 | 10 | 10.0 | 10.5 |
| 53 | B19 | 13.0 | 10 | 10 | 10.0 | 10.5 |
| 53 | B20 | 13.0 | 10 | 10.25 | 10.0 | 9.0 |

Metal 1 and Wood 1 are Western Stakes

Metal 2 and Wood 2 are Eastern Stakes

| | |
|---|---------------------------------|
|  | Stake depth within 1" of liner |
|  | Stake depth exceeds liner depth |

Wooden stakes were removed from location A1 prior to investigation

Geomembrane Stake Investigation

503 Elk Street Buffalo, NY



LaBella Representative : C. Finn

Date: December 27, 2023

| Row | Ballast No. | Liner Depth | Metal 1 | Metal 2 | Wood 1 | Wood 2 |
|------------|--------------------|--------------------|----------------|----------------|---------------|---------------|
| 54 | B1 | 14.5 | 10 | 10 | 10.0 | 11.0 |
| 54 | B2 | 12.0 | 10 | 10 | 10.0 | 10.0 |
| 54 | B3 | 11.0 | 10 | 10 | 8.5 | 9.0 |
| 54 | B4 | 10.5 | 10 | 10 | 8.5 | 10.5 |
| 54 | A5 | 14.5 | 10 | 10 | 8.5 | 8.0 |
| 54 | A6 | 12.5 | 10 | 10 | 8.5 | 8.0 |
| 54 | A7 | 13.5 | 10 | 10 | 8.5 | 9.5 |
| 54 | A8 | 13.5 | 10 | 10 | 9.0 | 9.0 |
| 54 | A9 | 11.5 | 10 | 10 | 9.0 | 9.5 |
| 54 | A10 | 12.0 | 10 | 10 | 8.0 | 9.0 |
| 54 | A11 | 11.5 | 10 | 10 | 9.5 | 8.5 |
| 54 | A12 | 12.0 | 10 | 10 | 9.5 | 10.5 |
| 54 | A13 | 13.0 | 10 | 10 | 11.0 | 12.0 |
| 54 | A14 | 12.0 | 10 | 10 | 11.0 | 11.0 |
| 54 | A15 | 14.0 | 10 | 10 | 12.0 | 11.0 |
| 54 | A16 | 13.0 | 10 | 10 | 13.0 | 13.0 |
| 54 | A17 | 13.0 | 10 | 10 | 11.5 | 9.5 |
| 54 | B18 | 14.0 | 10 | 10 | 10.5 | 9.5 |
| 54 | B19 | 14.5 | 10 | 10 | 10.5 | 12.5 |
| 54 | B20 | 13.0 | 10 | 10 | 11.0 | 12.0 |

Metal 1 and Wood 1 are Western Stakes

Metal 2 and Wood 2 are Eastern Stakes

 Stake depth within 1" of liner
 Stake depth exceeds liner depth

Geomembrane Stake Investigation

503 Elk Street Buffalo, NY



LaBella Representative : C. Finn

Date: December 27, 2023

| Row | Ballast No. | Liner Depth | Metal 1 | Metal 2 | Wood 1 | Wood 2 |
|-----|-------------|-------------|---------|---------|--------|--------|
| 55 | B1 | 11.0 | 10 | 10 | 13.0 | 8.0 |
| 55 | B2 | 11.5 | 10 | 10 | 10.0 | 12.0 |
| 55 | A3 | 11.5 | 10 | 10 | 11.0 | 9.0 |
| 55 | A4 | 14.0 | 10 | 10 | 9.0 | 8.5 |
| 55 | A5 | 13.0 | 10 | 10 | 10.5 | 9.0 |
| 55 | A6 | 12.0 | 10 | 10 | 9.0 | 9.0 |
| 55 | A7 | 9.5 | 10 | 10 | 9.5 | 9.0 |
| 55 | A8 | 8.0 | 10 | 10 | 10.0 | 9.5 |
| 55 | A9 | 9.0 | 10 | 10 | 9.0 | 9.0 |
| 55 | A10 | 8.5 | 10 | 10 | 9.0 | 8.5 |
| 55 | A11 | 10.0 | 10 | 10 | 9.5 | 8.5 |
| 55 | A12 | 10.0 | 10 | 10 | 8.5 | 10.0 |
| 55 | A13 | 11.0 | 10 | 10 | 9.5 | 9.5 |
| 55 | A14 | 13.0 | 10 | 10 | 9.5 | 9.5 |
| 55 | A15 | 12.5 | 10 | 10 | 9.5 | 11.5 |
| 55 | A16 | 13.0 | 10 | 10 | 11.0 | 11.0 |
| 55 | B17 | 11.0 | 10 | 10 | 11.0 | 9.5 |
| 55 | B18 | 12.5 | 10 | 10 | 10.5 | 10.5 |

Metal 1 and Wood 1 are Western Stakes

Metal 2 and Wood 2 are Eastern Stakes

 Stake depth within 1" of liner
 Stake depth exceeds liner depth



Attachment 1

Photo Log



Photo 1 : Additional damage to geomembrane



Photo 2 : Additional geomembrane damage



Photo 3 : Completed gravel removal



Photo 4 : Completed gravel removal



Photo 5 : Completed gravel removal



Photo 6 : Completed gravel removal



Photo 7 : Completed gravel removal with additional damage



Photo 8 : Lath stuck in hole



Photo 9 : Peel and Shear testing



Photo 10 : Representative bead repairs



Photo 11 : Representative patch repairs



Photo 12 : Representative repair work



Photo 13 : Representative repair work



Photo 14 : Representative repair work



Attachment 2

Chenango Repair
Procedures



29 Arbutus Rd.
Johnson City, NY 13790
T: (607) 729-8500
F: (607) 729-2415
www.chenangocontracting.com

January 15, 2024

Ms. Megan Drean
Inovateus Solar
19890 State Line Rd.
South Bend IN 46637

Subject: Elk St Geomembrane Repairs
Geomembrane Repair Procedure Submittal

Dear Ms. Drean:

Megan,

Our procedure for the repairs will generally be as follows:

- Technician will perform a startup trial weld using the same type material and welding rod as the existing liner.
- The sample will then be cut into 1" wide samples and get tested for peel & shear strength using a field tensiometer.
- After verifying the trial seam meets the strength requirements for the material, the technicians will ensure geomembrane surfaces are clean and dry.
- Technicians will cut a patch from similar LLDPE material and heat weld it to the existing geomembrane, ensuring that it extends at least 6 inches beyond the edge of the defect.
- Once patch is tacked down, the liner surface around the patch will be lightly abraded using a grinder.
- After the area to be welded has been prepped, the technician will use the extruder to permanently weld the patch to the existing geomembrane.
- After the weld has been performed and cooled, the technician will non-destructively test the patch using a vacuum box to verify there are no leaks.
- Finally, the technician will label and document the patch in a repair log.

If you have any questions please do not hesitate to contact me.

Sincerely,
CHENANGO CONTRACTING, INC.



Nicholas S. Brechko



Attachment 3

Trial Seam Log



Attachment 4

Repair Log

CHENANGO CONTRACTING, INC.

29 ARBUTUS RD, JOHNSON CITY, NY 13790

TEL. (607) 729-8500 FAX (607) 729-2415

REPAIR LOG

PROJECT NAME: EIK Street Solar Liner Repair
 PROJECT NUMBER: 7211232

QC REP.: _____
 MATERIAL: _____

| REPAIR # | DEFECT CODE* | REPAIR DATE | TECH ID | LOCATION | | | REPAIR TYPE* | SIZE (inches) (#xH) | VACUUM TEST | |
|----------|--------------|-------------|---------|------------|-----------|-----------|--------------|---------------------|-------------|------|
| | | | | Seam/Panel | Offset #1 | Offset #2 | | | P/F | DATE |
| R1 | | 1/30 | | 49 B6 | | | R | 1x3 | P | 1/30 |
| R2 | | 1/30 | | 49 B8 | | | R | 1x3 | P | 1/30 |
| R3 | | 1/30 | | 49 B8 | | | R | 1x3 | P | 1/30 |
| R4 | | 1/30 | | 51 A4 | | | R | 1x4 | P | 1/30 |
| R5 | | 1/30 | | 51 A4 | | | R | 1x4 | P | 1/30 |
| R6 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| R7 | | 1/30 | | 51 A4 | | | R | 1x4 | P | 1/30 |
| R8 | | 1/30 | | 51 A4 | | | R | 2x2 | P | 1/30 |
| R9 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| R10 | | 1/30 | | 51 A4 | | | R | 2x6 | P | 1/30 |
| R11 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| R12 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| R13 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| R14 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| R15 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| R16 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| R17 | | 1/30 | | 51 A4 | | | R | 1x3 | P | 1/30 |
| P1 | | 1/30 | | 51 A4 | | | P | 8x8 | P | 1/30 |
| R18 | | 1/30 | | 51 A5 | | | R | 1x5 | P | 1/30 |
| R19 | | 1/30 | | 51 A12 | | | R | 1x4 | P | 1/30 |
| R20 | | 1/30 | | 50 A14 | | | R | 1x4 | P | 1/30 |
| R21 | | 1/30 | | 51 A13 | | | R | 1x5 | P | 1/30 |
| R22 | | 1/30 | | 55 B17 | | | R | 1x5 | P | 1/30 |
| R23 | | 1/30 | | 55 B17 | | | R | 1x3 | P | 1/30 |
| R24 | | 1/30 | | 55 B17 | | | R | 1x3 | P | 1/30 |
| R25 | | 1/30 | | 55 B17 | | | R | 1x3 | P | 1/30 |
| R26 | | 1/30 | | 55 A12 | | | R | 3x3 | P | 1/30 |
| R27 | | 1/30 | | 55 A12 | | | R | 1x3 | P | 1/30 |
| R28 | | 1/30 | | 55 A12 | | | R | 1x3 | P | 1/30 |
| R29 | | 1/30 | | 55 A11 | | | R | 1x6 | P | 1/30 |
| R30 | | 1/30 | | 55 A11 | | | R | 1x3 | P | 1/30 |
| R31 | | 1/30 | | 55 A11 | | | R | 1x3 | P | 1/30 |
| R32 | | 1/30 | | 55 A10 | | | R | 2x5 | P | 1/30 |
| R33 | | 1/30 | | 55 A10 | | | R | 1x4 | P | 1/30 |
| R34 | | 1/30 | | 55 A10 | | | R | 1x3 | P | 1/30 |
| R35 | | 1/30 | | 55 A10 | | | R | 1x3 | P | 1/30 |
| R36 | | 1/30 | | 55 A10 | | | R | 1x3 | P | 1/30 |
| R37 | | 1/30 | | 55 A9 | | | R | 2x6 | P | 1/30 |
| R38 | | 1/30 | | 55 A9 | | | R | 2x6 | P | 1/30 |
| P2 | | 1/30 | | 55 A8 | | | P | 8x8 | P | 1/30 |
| P3 | | 1/30 | | 55 A8 | | | P | 7x7 | P | 1/30 |

* See Abbreviation Sheet

R = Bead
 P = Patch

Observation Non-Conformance #4: Elk Street Solar Liner Inspection

| | | | |
|-------------------------------|--|------------------------------|---|
| Origin | Inspection - Brownfield Routine Inspection #2> Section #1: Untitled Section> Item #4: No visible evidence of cap penetration (i.e. no steel pins, grade stakes or other marking devices installed in the cap area). | Status | Initiated |
| Created By | Joaquin Corona (Inovateus Solar LLC) | Date Created | Dec 29, 2023 |
| Assignee | Mark Andrews (GPI / Greenman- Pedersen, Inc.) | Distribution | Sierra Haney (CleanCapital) Alyssa Hartigan (CleanCapital) Mike Haga (Inovateus Solar LLC) Aaron Leyva (Inovateus Solar LLC) Andrew Proctor (Inovateus Solar LLC) George Boyd (Inovateus Solar LLC) Todd P. Collins Sr. (Inovateus Solar LLC) Emily Molnar (Inovateus Solar LLC) Joaquin Corona (Inovateus Solar LLC) Mark Andrews (GPI / Greenman- Pedersen, Inc.) Megan Drean (Inovateus Solar LLC) William Leffew (Inovateus Solar LLC) |
| Notification Date | Jan 26, 2024 | Priority | |
| Location | Sitewide | Trade | Survey |
| Due Date | Feb 2, 2024 | Private | Yes |
| Contributing Condition | Ground Conditions | Contributing Behavior | |
| Hazard | Exposure | | |
| Spec Section | | | |
| Description | Geomembrane Study Per Construction Document "C - 5.3 Misc Civil Details, A Concrete Pad Detail" shows and calls out for 12 inch thick washed stone cap layer on top of existing GSL liner. Upon completing our (Inovateus Solar) inspection of the existing GSL liner. A LaBella Associates representative with the assistance from GPI (surveyor-subcontracted through Inovateus Solar) discovered 33 areas of concern, damaged or punctured by the metal pins (10"). Please reference "Exhibit A - Inovateus Solar Stake Check Spreadsheet" for all pass and fails. Locations are as followed in photos. LaBellas full report and Exhibit A to be used as reference for exact location and stake check sheet. Frequency : Pre-construction survey required, followed by inspections at intervals defined by customer. Repair : Repairs have been made to liner on all damaged locations. | | |
| Part/Item | Pile | Resolution | Repair |
| Units Affected | 33.0 | Non-Conformance Type | Damaged (Installation) |
| Linked Drawings | | | |

Attachments

[2211232 Supplemental Elk Street Stake Investigation Report FINAL.pdf](#), [Elk St Cap Liner Repairs 1_30_2024.pdf](#), [2211232 Elk Street Solar Stake Investigation Letter Report \(3\).pdf](#)



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Activity (5)

Megan Drean
02/02/2024 at 11:47 AM EST

Comment: Brownfield cap liner repairs completed by Chenango Contracting on 1/30/2024. Labeled photos of each repair in PDF titled "Elk St Cap Liner Repairs 1_30_2024"

Todd P. Collins Sr.
01/12/2024 at 09:44 AM EST

Comment: Labella Report attached.
Attachments:



[2211232 Elk Street Solar Stake Investigation Letter Report.pdf](#)

Megan Drean
01/03/2024 at 10:37 AM EST

Status Changed: Initiated

Megan Drean
01/03/2024 at 10:34 AM EST

Status Changed: Closed

Todd P. Collins Sr.
12/29/2023 at 11:19 AM EST

Comment: Labella will have the full report of inspection along with spreadsheet by end of business 01/02/2024. Inovateus in conversation with Solmax to start repairs, potential start date week of 01/02/2024, will update when finalized. Inovateus also in process of starting construction in areas not affected by failures of liner inspection as they were isolated to a small area.