



1/24/2018

**NOTICE OF VIOLATION**

Failure to Comply with Permit Conditions under 18 AAC 83 – Alaska Pollutant Discharge Elimination System Construction General Permit Authorization Number AKR10FN16 & AKR10FN17.

David Kemp  
ADOT&PF Central Region  
PO Box 196900  
Anchorage, AK 99519

Todd Porter  
QAP  
240 W. 68th Avenue  
Anchorage, AK 99518

Complaint No. 2018-R0034

The Department alleges that beginning on or about March 10, 2017 and continuing up until December 14, 2017, in Anchorage, Alaska, the Alaska Department of Transportation (ADOT) and QAP did unlawfully fail to comply with the conditions of the Alaska Pollutant Discharge Elimination System (APDES) permit.

On December 14, 2017, the Alaska Department of Environmental Conservation (DEC) performed an announced inspection of the Seward Highway: Dimond Boulevard to Dowling Road Reconstruction, Phase 1 construction project for compliance with the APDES, Construction General Permit, Permit Authorization Numbers AKR10FN16 and AKR10FN17. Permit violations identified during the facility inspection and on-site records review include: failure to maintain records, failure to submit required permit application information, failure to properly install/implement BMPs, narrative effluent violation and are enumerated below:

- 1) ADOT did not file a NOI modification to include the use of treatment chemicals (EarthGuard) when QAP did on October 18, 2017. A modification was filed by ADOT on December 13, 2017, 56 days after QAP. More notably, NOIs were not filed by either permittee in April 2017 when ADOT approved the use of the treatment chemicals to be used on the site.
  - a) Permit part **2.7.1.5** states “A permittee must file an NOI modification form to DEC (see Part 2.3) to update or correct the following information on the original NOI within 30 calendar days of the change:... Change in decision to use or not use treatment chemicals...”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records
- 2) The NOI modifications were not posted on the entrance boards to the site.
  - a) Permit part **5.10.2.1** states “...The sign or other notice must contain the following information: A copy of the completed NOI (and NOI modification) as submitted to DEC;..”

- b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records
- 3) The SWPPP amendment log does not show that the SWPPP was updated to include required items for the use of treatment chemicals on the project site. Therefore, the required treatment chemical documentation was not included in the SWPPP.
  - a) Permit part 4.6.2.3 states “Document the following in the SWPPP: Specific chemicals and chemical treatment systems used; Names and titles of person(s) who handle and apply treatment chemicals; Title of training conducted, date, instructor name, and attendees. A permittee must train employees who handle treatment chemicals to comply with the information required by Part 4.6.1...”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records
- 4) EarthGuard was not documented as a stabilization measure on the grading and stabilization log, however, DEC was told during the inspection that it was applied as a temporary stabilization measure on the site for winter shutdown.
  - a) Permit part 5.8.2.1.5 states “Summaries of the following information, or copies of the reports, must be maintained with the SWPPP by the permittee following authorization under this permit: Grading and Stabilization Activities Log... Description of Stabilization Measure”.
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records
- 5) During the inspection, treatment chemicals (EarthGuard) and mulch were observed sprayed on a gravel bar of North Fork Little Campbell Creek. Since the gravel bar is within the stream channel and below the ordinary high water mark (OHWM), treatment chemicals were therefore observed sprayed into waters of the United States (U.S.).
  - a) Permit part 4.6.3.2.3 states “Treatment chemicals shall not be applied directly to a waters of the U.S.”.
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(e) Duty to mitigate
- 6) Down-slope sediment controls were not observed adjacent to waterways. EarthGuard was observed sprayed on streambank slopes immediately adjacent to waterways without the use of any physical control measures.
  - a) Permit part 4.3.3 states “A permittee must establish and use down-slope sediment controls...for any portion of the down-slope and side-slope perimeter where storm water will be discharged from disturbed areas of the site.”, permit part 4.6.2.2 states “Prior to and after use, install appropriate physical control measures...to ensure effectiveness of the treatment chemical;”, permit part 4.6.3 states “The application of treatment chemicals shall be in combination with appropriate physical control measures...to ensure effectiveness of the treatment chemical. The use of treatment chemicals is not considered a substitute for appropriate physical control measures and does not preclude any other requirement of this permit.” and permit part 4.6.3.2.4 states “...Application through the use of manufactured products...shall be used in combination with adequate ditch check dams, settling basins, or other physical control measures designed to settle out chemically treated soils and minimize the presence of treatment chemicals before discharges reach waters of the U.S....”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(e) Duty to mitigate
- 7) Employee training logs for ADOT and QAP in the SWPPP did not include treatment chemical training documentation.
  - a) Permit part 4.6.1.7 states “All person(s) who handle and apply treatment chemicals at the construction site must receive training in the proper handling and application of treatment chemicals. The names and titles of persons who receive training and the date(s) training occurred must be documented in the SWPPP in accordance with Part 5.8.2.7.” and permit part 4.6.2.3.3-4 states “Document the following in the SWPPP:...Title of training conducted, date, instructor name, and attendees. A permittee must train employees who handle treatment chemicals to comply with the information required by Part 4.6.1.”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records

Such inaction is in violation of your permit.

To address the violation(s) described above, the Department requires that you do the following:

1. Explain why ADOT and QAP's modifications weren't submitted to DEC within 30 days of the decision to use treatment chemicals and describe how ADOT and QAP will ensure that NOI modifications are submitted to DEC within the required timeframe in the future.
2. Post both ADOT's and QAP's NOI modifications to the SWPPP entrance board and submit a photo to DEC showing the posted documentation.
3. Explain why the SWPPP was not updated to include the use of treatment chemicals. Update the SWPPP to include the requirements listed in permit part 4.6 and submit the documentation that was added to the SWPPP to DEC. Describe how ADOT and QAP will ensure that the SWPPP is updated appropriately in the future.
4. Explain why EarthGuard was not on the grading and stabilization log. Update the log appropriately and submit a copy of the updated log to DEC.
5. Explain why treatment chemicals were sprayed into Waters of the US and how ADOT and QAP will ensure that such action is prevented in the future.
6. Install appropriate down-slope sediment controls and physical control measures to ensure effectiveness of the treatment chemical and protect water bodies. Provide DEC with photos demonstrating how the corrective actions were made in the field at the locations identified in photo numbers 12, 16, 23, 24, 25 and 26 in the inspection report.
7. Conduct an appropriate handling and application of treatment chemicals training and update the SWPPP with the training documentation. Submit the training log to DEC with a synopsis of what the training covered. Describe how ADOT and QAP will ensure that the training is conducted appropriately in the future.

Please respond to this request by no later than **5/31/2018**. Deliverables can be submitted via mail, email, or fax:

**Attention:**

**Catherine Beatty**

**555 Cordova Street, 3<sup>rd</sup> Floor**

**Anchorage, AK 99501**

**catherine.beatty@alaska.gov**

**Fax: 907. 269.4604**

Penalties for violation of State statutes and regulations can be quite serious. In a civil action, a person who violates or causes or permits to be violated a provision of this statute, may be liable to the State for substantial monetary damages under AS 46.03.760. Depending on the nature of the violation, you may also be liable for the State's response costs under AS 46.03.822, for spill penalties under AS 46.03.758-759, for administrative penalties under AS 46.03.761, or for other kinds of damages or penalties under other statutes.

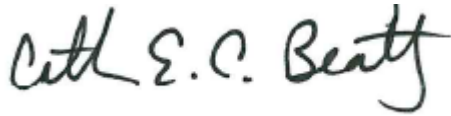
In a criminal violation, a person who acts with criminal negligence may be guilty of a Class A misdemeanor. AS 46.03.790. Upon conviction, a defendant who is not an organization may be sentenced to pay a fine not exceeding \$10,000.00 and/or sentenced to a definite term of imprisonment of not more than one year. Upon conviction, a defendant that is an organization may be sentenced to pay a fine not exceeding the greater of \$500,000.00 or an amount which is three times the pecuniary damage or loss caused by the defendant to another or property of another. AS 12.55.035; each day of violation may be considered a separate violation. Alaska laws allow the State to pursue both civil and criminal actions concurrently.

Nothing in this notice shall be construed as a waiver of the State's authority or as an agreement on the part of the State to forego judicial or administrative enforcement of the above-described violation(s) or to seek recovery

January 24, 2018

of damages, cost and penalties as prescribed by law. In addition, nothing herein shall be construed as a waiver of enforcement for past, present, or future violations not specifically set forth herein.

If you have additional questions, I may be contacted at (907) 269-7560, or via e-mail: catherine.beatty@alaska.gov.



Catherine Beatty, Enforcement Officer  
Credential No. R-0308

Check One:

Personally Served

Sent by Certified Mail

# 7016 2070 0000 6899 1084 (ADOT)

# 7016 2070 0000 6899 1091 (QAP)

on the 24th day of January, 2018

Enclosure: APDES Inspection Report

cc: Amber Bennett, Environmental Program Specialist, DEC, w/enclosure  
Katrina Chambon, Acting Environmental Program Manager, DEC, w/enclosure  
Lisa Hart, Program Coordinator, DEC, w/enclosure  
Rick Cool, NPDES Inspector, USEPA, w/enclosure  
Mary Nan Cunningham, Regional Erosion and Sediment Control Advisor, ADOT, w/enclosure



# APDES INSPECTION REPORT

Alaska Department of Environmental Conservation  
 Division of Water  
 555 Cordova Street, Anchorage, AK 99501

## Section 1: General Data

Permit Number	Announced / Unannounced	Receiving Waters	Inspection Date
Number: AKR10FN16 & AKR10FN17	Announced	North and South Fork Little Campbell Creek Anchorage MS4	Date: 12/14/2017
Effective: 3/7/2017 & 3/10/2017			Entry Time: 9:30 AM
Expiration: 1/31/2021			Exit Time: 1:40 PM

## Section 2: Facility Data

Name of Facility: Seward Highway: Dimond Boulevard to Dowling Road Reconstruction, Phase 1

On-Site Representative/Physical Address:

Name: Chong Kim  
 Title: Project Engineer  
 Address: 8200 Homer Drive, Anchorage, AK 99518  
 Phone: (907) 244-8521 (cell)  
 Email: chong.kim@alaska.gov

Name: Ray Butcher  
 Title: Project Superintendent  
 Address: 8200 Homer Drive, Anchorage, AK 99518  
 Phone: (907) 522-2211  
 Email: rbutcher@colaska.com

Latitude/Longitude at the outfall: 61.15584 N, -149.85560 W (Taken from NOI)

Responsible Party/Mailing Address:

Name: David Kemp  
 Title: Regional Director ADOT&PF Central Region  
 Address: PO Box 196900, Anchorage, AK 99519  
 Phone: (907) 269-0770  
 Email: david.kemp@alaska.gov

Name: Todd Porter  
 Title: QAP General Manager  
 Address: 240 W. 68<sup>th</sup> Avenue, Anchorage, AK 99518  
 Phone: (907) 522-2211  
 Email: cortega@colaska.com

Additional Inspection Participants:

Joshua James, ADOT  
 Mary Nan Cunningham, ADOT  
 Spencer Newins, QAP  
 Jessica Farrell, EMC (ADOT subcontractor)  
 Mike Fizette, QAP

*For internal use only:*

*SIC: 1611 (Highway and Street Construction, Except Elevated Highways) and 1622 (Bridge, Tunnel and Elevated Highway Construction)*

*SEV: B0N41 Failure to maintain records*

*SEV: D0R12 Failure to submit required permit application information*

*SEV: BR19A Failure to properly install / implement BMPs*

*SEV: A0M22 Narrative effluent violation*

## Section 3: Findings

### Background/Regulatory Status/Compliance History

This construction project expands the Seward Highway from Dimond Boulevard to Dowling Road in Anchorage from four to six lanes, reconfigures highway ramps and frontage roads, constructs a new grade separation, builds a bridge and installs three new box culvert crossings.

No previous Alaska Department of Environmental Conservation (DEC) Division of Water inspections have been conducted for this project prior to the December 14, 2017 inspection.

This was an announced routine inspection that covers the time period of March 10, 2017-December 14, 2017.

### Field Inspection

Upon arrival at Seward Highway: Dimond Boulevard to Dowling Road Reconstruction, Phase 1, introductions were exchanged and inspector credentials were presented.

The following information was provided verbally by onsite representatives:

- The purpose of this project is to improve safety and operating conditions and add capacity and connectivity to the stretch of the Seward Highway between Dowling Road and Dimond Boulevard.
- Construction began on March 14, 2017 and is expected to end in June 2019.
- The project had 24 hour coverage, with day and night shifts during the summer.
- The project went into winter shutdown on November 2, 2017.
- The middle portion of the project has been completed which includes the construction of a bridge, two box culverts installed at North Fork Little Campbell Creek and South Fork Little Campbell Creek, widening of the main line and lifting the highway 26 feet for the bridge installation. The remaining sections to be constructed include: the north and south ends of the project, ramps, frontage roads and a South Fork Little Campbell Creek box culvert.
- The project's acreage of land disturbance is 85 acres.
- Erosion and sediment control measures installed on-site at one time or another include: star wattles (inlets and check dams), witches hats, mud mats, silt fence, duck ponds under porta-potties and wash out areas, boars hair (inlet filter fabric), mulch for temporary stabilization and EarthGuard with mulch for winter shutdown's temporary stabilization.
- EarthGuard (polyacrylamide (PAM)) is mixed with hydroseed mulch so that it acts like a tracer to see where it has been applied. It will stabilize the soil for six months.
- Erosion and sediment controls currently still installed on-site include: silt fence, straw wattles for check dams, EarthGuard/hydroseed mulch, and riprap for down flumes.
- QAP's storm water pollution prevention plan (SWPPP) management staff are responsible for maintaining all control measures. Ms. Kysha Mallo was responsible from March 6, 2017 to March 29, 2017. Ms. Brittani Motoyama was responsible from March 29, 2017 to October 18, 2017. Mr. Spencer Newins has been responsible from October 19, 2017 to the present.
- There have been no reportable spills or leaks on-site during construction.
- On-site inspectors include Ms. Jessica Farrell (ADOT's representative) and a QAP representative. Ms. Farrell has been on the project since the start of construction. Ms. Mallo, Ms. Motoyama and Mr. Newins have split the time inspecting for QAP.
- Inspections were completed once every seven days, either on a Monday or Tuesday, but the designated inspection day was eventually changed to a Wednesday.
- Mr. Kim and Mr. Butcher sign the inspection reports for ADOT and QAP.
- The site was stabilized for winter shutdown by applying EarthGuard and mulch, installing rock flumes, check dams, asphalt and recycled asphalt pavement (RAP).
- There is a topsoil stockpile off of Abbott Road where the old north bound ramp used to be and it has been stabilized with EarthGuard and mulch.
- Fueling was done on-site, with a contractor coming to the site one to two times per day. The hazardous materials control plan states that fueling has to be done more than 100 meters away from a water source.
- No equipment washing was conducted on-site.
- The concrete washout was lined and moved around the project site quite a bit.

- The project had a stabilized entrance and exit that moved throughout the life of the project depending on where it was needed.
- The staging and material storage area is off of 74<sup>th</sup> and Brayton Drive and held traffic control devices, tools, pipe, best management practices (BMPs) and insulation board.
- Fertilizer has not been used on the project site yet, as there hasn't been any permanent stabilization applied. Vegetated mat was placed around the relocated portion of South Fork Little Campbell Creek.
- Excavation and dewatering occurred on-site. Water was pumped using silt bags into contained settling ponds before it was discharged to land. The project has excavation and dewatering permit coverage under authorization number AKG002074.
- A rain gauge is used to monitor rainfall.
- Two oil and grit (OGS) separators have been installed at 80<sup>th</sup> and Homer Drive and 70<sup>th</sup> and Homer Drive. Three more OGSs will be installed in 2018.

The following information was provided post-inspection:

- EarthGuard applicators included Cody Butcher (Operator/Nozzle Man) and Jordan Finke (Operator/Driver) under the direction of trained and AK-CESCL certified SWPPP Manager and SWPPP inspector.
- The mixing of EarthGuard and mulch was administered by the SWPPP Manager and SWPPP Inspector on-site based on the application and slope as indicated in the cut sheets.
- Equipment used to apply EarthGuard included a 3000 gallon capacity hydro mulch truck for half acre coverage.
- EarthGuard MSDS sheets and application rates were provided.
- EarthGuard was stored on-site in a secured material storage area connex.
- The EarthGuard (five gallon container) was purchased at Polar Supply on an as needed basis.

The following observations were made by ADEC inspectors:

- The project is currently in winter shutdown.
- There was no active discharge from the site observed during the inspection.
- NOIs and the SWPPP location were posted at the project entrances, however the most recently modified NOIs for both permittees were not posted on the SWPPP boards.
- The majority of the site was sprayed with EarthGuard and mulch to provide temporary stabilization for winter shutdown.
- Treatment chemicals (EarthGuard) and mulch were sprayed on a gravel bar of the North Fork of Little Campbell Creek, which is an anadromous stream.
- Down-slope sediment controls were not installed adjacent to waterways.
- EarthGuard was observed sprayed on streambank slopes immediately adjacent to waterways without the use of any physical control measures.

<b>Sampling</b>	<b>YES</b>	<input type="checkbox"/>	<b>NO</b>	<input checked="" type="checkbox"/>
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<b>Records Review</b>				
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The following records were reviewed as part of the inspection and are considered complete:

- Copy of the Construction General Permit (CGP)
- Copy of signed Notices of Intent (NOIs) and modifications (ADOT filed a modification on 12/13/17 for the use of treatment chemicals (EarthGuard) and updated the list of receiving waters; QAP filed a modification on 10/18/17 for the use of treatment chemicals (EarthGuard) and on 12/13/17 to update the list of receiving waters).
- DEC Authorizations for ADOT and QAP
- Inspection reports were completed at least once every seven days from 3/16/17 to 11/2/17.

- Site map
- Corrective Action Log- All corrective actions were completed within the time frame required and all items listed on inspection forms were on the log. The last entry was made on 9/20/17.
- Alaska Certified Erosion and Sediment Control Lead (AK-CESCL) and Certified Inspector of Sediment and Erosion Control (CISEC) certifications for all storm water staff were up to date.
- Rainfall monitoring data is entered on the daily record of rainfall log and on inspection reports.

The following records were reviewed as part of the inspection and are considered incomplete:

- SWPPP Modification Log- The log was last modified on 12/14/17, when NOI modifications were added to the SWPPP. The log does not show that the SWPPP was updated to include required items for the use of treatment chemicals on the project site.
- Grading and Stabilization Log – The only two stabilization measures listed on the log were “paved” and “mulched”. EarthGuard was not documented as a stabilization measure on the log, however, DEC was verbally told during the inspection that it was applied as a temporary stabilization measure on the site for winter shutdown.
- Employee training logs for ADOT and QAP in the SWPPP did not include treatment chemical training documentation.

#### Section 4: Compliance

##### Violations

- 1) ADOT did not file a NOI modification to include the use of treatment chemicals (EarthGuard) when QAP did on October 18, 2017. A modification was filed by ADOT on December 13, 2017, 56 days after QAP. More notably, NOIs were not filed by either permittee in April 2017 when ADOT approved the use of the treatment chemicals to be used on the site.
  - a) Permit part **2.7.1.5** states “A permittee must file an NOI modification form to DEC (see Part 2.3) to update or correct the following information on the original NOI within 30 calendar days of the change:... Change in decision to use or not use treatment chemicals...”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records
  - c) Reference Document: Photo 10
  
- 2) The NOI modifications were not posted on the entrance boards to the site.
  - a) Permit part **5.10.2.1** states “...The sign or other notice must contain the following information: A copy of the completed NOI (and NOI modification) as submitted to DEC;..”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records
  - c) Reference Document: Photo 28
  
- 3) The SWPPP amendment log does not show that the SWPPP was updated to include required items for the use of treatment chemicals on the project site. Therefore, the required treatment chemical documentation was not included in the SWPPP.
  - a) Permit part **4.6.2.3** states “Document the following in the SWPPP: Specific chemicals and chemical treatment systems used; Names and titles of person(s) who handle and apply treatment chemicals; Title of training conducted, date, instructor name, and attendees. A permittee must train employees who handle treatment chemicals to comply with the information required by Part 4.6.1...”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records
  - c) Reference Document: Photo 04
  
- 4) EarthGuard was not documented as a stabilization measure on the grading and stabilization log, however, DEC was told during the inspection that it was applied as a temporary stabilization measure on the site for winter shutdown.



- a) Permit part 5.8.2.1.5 states “Summaries of the following information, or copies of the reports, must be maintained with the SWPPP by the permittee following authorization under this permit: Grading and Stabilization Activities Log... Description of Stabilization Measure”.
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records
  - c) Reference Document: Photo 06
- 5) During the inspection, treatment chemicals (EarthGuard) and mulch were observed sprayed on a gravel bar of North Fork Little Campbell Creek. Since the gravel bar is within the stream channel and below the ordinary high water mark (OHWM), treatment chemicals were therefore observed sprayed into waters of the United States (U.S.).
- a) Permit part 4.6.3.2.3 states “Treatment chemicals shall not be applied directly to a waters of the U.S.”.
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(e) Duty to mitigate
  - c) Reference Document: Photo 25
- 6) Down-slope sediment controls were not observed adjacent to waterways. EarthGuard was observed sprayed on streambank slopes immediately adjacent to waterways without the use of any physical control measures.
- a) Permit part 4.3.3 states “A permittee must establish and use down-slope sediment controls...for any portion of the down-slope and side-slope perimeter where storm water will be discharged from disturbed areas of the site.”, permit part 4.6.2.2 states “Prior to and after use, install appropriate physical control measures...to ensure effectiveness of the treatment chemical;”, permit part 4.6.3 states “The application of treatment chemicals shall be in combination with appropriate physical control measures...to ensure effectiveness of the treatment chemical. The use of treatment chemicals is not considered a substitute for appropriate physical control measures and does not preclude any other requirement of this permit.” and permit part 4.6.3.2.4 states “...Application through the use of manufactured products...shall be used in combination with adequate ditch check dams, settling basins, or other physical control measures designed to settle out chemically treated soils and minimize the presence of treatment chemicals before discharges reach waters of the U.S....”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(e) Duty to mitigate
  - c) Reference Documents: Photos 12, 16, 23-25
- 7) Employee training logs for ADOT and QAP in the SWPPP did not include treatment chemical training documentation.
- a) Permit part 4.6.1.7 states “All person(s) who handle and apply treatment chemicals at the construction site must receive training in the proper handling and application of treatment chemicals. The names and titles of persons who receive training and the date(s) training occurred must be documented in the SWPPP in accordance with Part 5.8.2.7.” and permit part 4.6.2.3.3-4 states “Document the following in the SWPPP:...Title of training conducted, date, instructor name, and attendees. A permittee must train employees who handle treatment chemicals to comply with the information required by Part 4.6.1.”
  - b) Regulatory Citation: 18 AAC 83.405(b) Duty to comply; 18 AAC 83.405(k) Monitoring and records

### Areas of Concern

A few SWPPP modifications were made after DEC contacted the permittees for an announced compliance inspection. While DEC acknowledges that the documentation was brought back into compliance prior to the inspection, DEC is concerned the announced inspection initiated the updates and the permittees would have been out of compliance had an inspection not occurred.

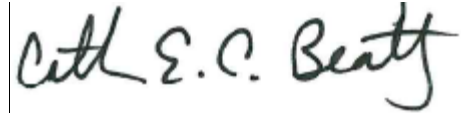
While DEC recognizes that the project site is currently inactive and in winter shutdown, silt fence was observed requiring maintenance on a few areas of the site (photos 15 and 21). These areas should be addressed prior to spring breakup so they function as intended.

**Section 5: Appendixes**

1. Photo Addendum

**Signature**

**Inspector** – Catherine Beatty  
Credential Number: R-0308  
Phone: (907) 269-7560  
E-mail: [catherine.beatty@alaska.gov](mailto:catherine.beatty@alaska.gov)



X

**Reviewed By** – Paul Winter  
Credential Number: R-0152  
Phone: (907)269-8117  
E-mail: [paul.winter@alaska.gov](mailto:paul.winter@alaska.gov)

Date: 1/22/2018



X

Date: 1/23/2018

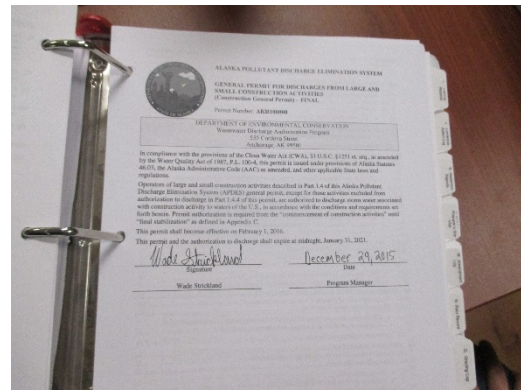
Photo Addendum

Photo 01



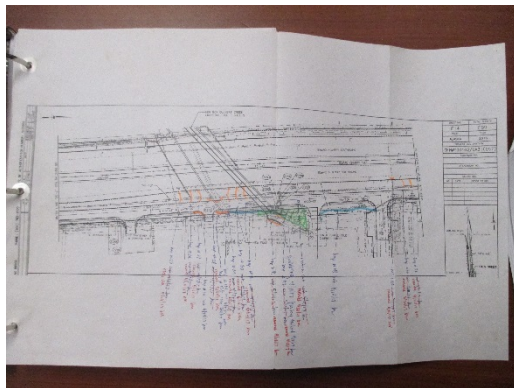
Project site map

Photo 02



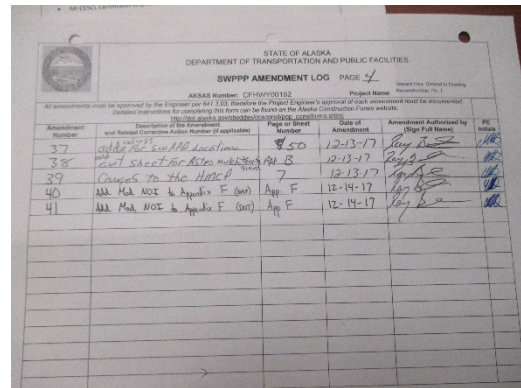
Copy of CGP on-site

Photo 03



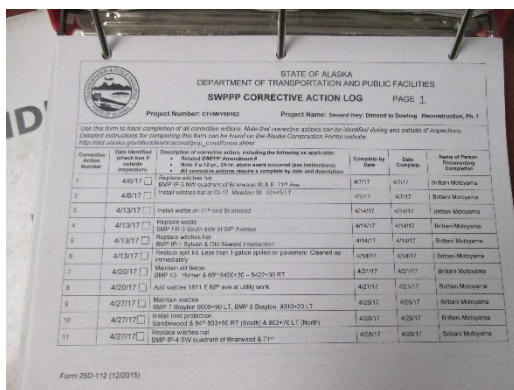
Project site map (page 10 of 38)

Photo 04



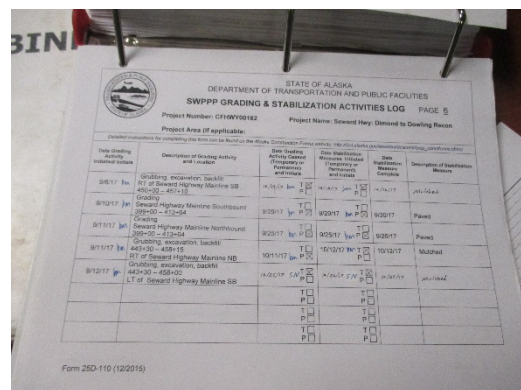
SWPPP amendment log (page 4 of 4) for amendments made on 12/13/2017 and 12/14/2017

Photo 05



SWPPP corrective action log (page 1 of 4)

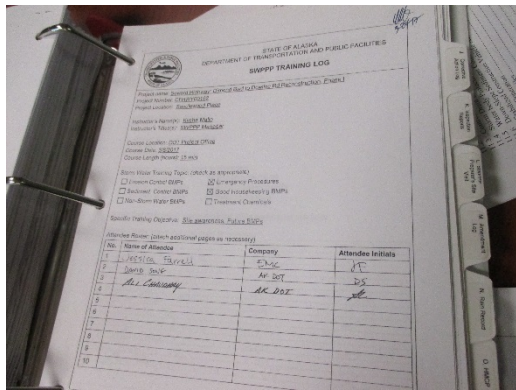
Photo 06



SWPPP grading and stabilization log (page 6 of 6) for activities ending 10/27/17

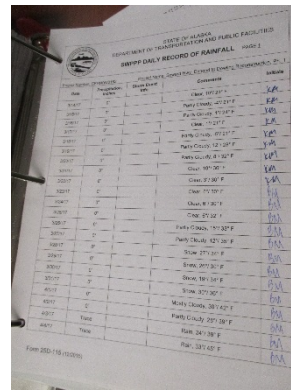
Photo Addendum

Photo 07



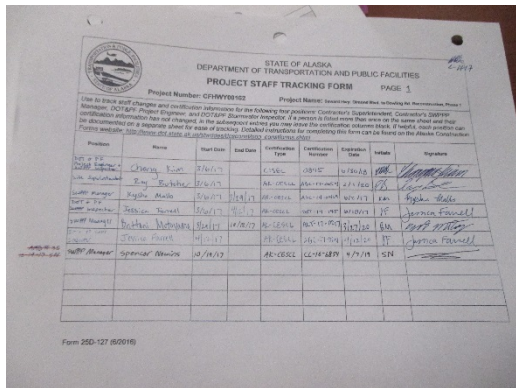
SWPPP training log

Photo 08



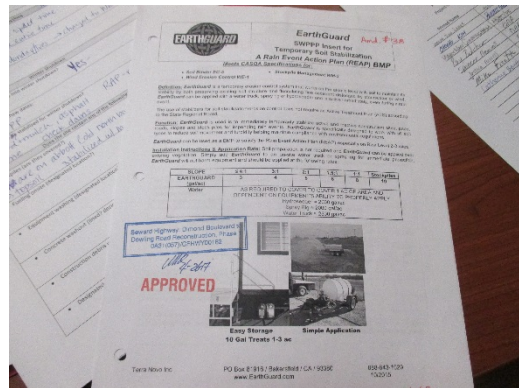
SWPPP daily record of rainfall log

Photo 09



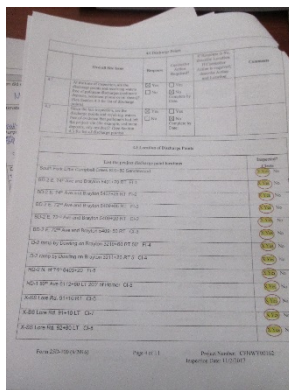
Project staff tracking form

Photo 10



SWPPP insert for EarthGuard approved for use on 4/27/17

Photo 11



Inspection report

Photo 12



South Fork Little Campbell Creek box culvert outlet lacking down-slope sediment control measures/physical controls

<b>Photo Addendum</b>	
<b>Photo 13</b>	<b>Photo 14</b>
	
EarthGuard (PAM) and mulch stabilization	OGS at 80 <sup>th</sup> and Homer Drive
<b>Photo 15</b>	<b>Photo 16</b>
	
South Fork Little Campbell Creek perimeter control requiring maintenance	South Fork Little Campbell Creek reconstruction area lacking down-slope sediment control measures/physical controls
<b>Photo 17</b>	<b>Photo 18</b>
	
Straw wattles along South Fork Little Campbell Creek as it enters the site	Topsoil stockpile hydroseeded with EarthGuard (PAM)

<b>Photo Addendum</b>	
<b>Photo 19</b>	<b>Photo 20</b>
	
Material storage area	Lore Road and Brayton Road drainage
<b>Photo 21</b>	<b>Photo 22</b>
	
74 <sup>th</sup> and Brayton staging areas with silt fence requiring maintenance	72 <sup>nd</sup> and Brayton drainage with wattles
<b>Photo 23</b>	<b>Photo 24</b>
	
North Fork Little Campbell Creek box culvert with EarthGuard application and lacking down-slope sediment control measures/physical controls	North Fork Little Campbell Creek box culvert with EarthGuard (PAM) application and lacking down-slope sediment control measures/physical controls

Photo Addendum	
<b>Photo 25</b>	<b>Photo 26</b>
<p>EarthGuard (PAM) sprayed on gravel bar near inlet of North Fork Little Campbell Creek</p>	<p>Outlet of North Fork Little Campbell Creek</p>

<b>Photo 27</b>	<b>Photo 28</b>
<p>Old temporary bypass of North Fork Little Campbell Creek</p>	<p>SWPPP location and NOIs posted at Sandewood Place and 84<sup>th</sup> without NOI modifications posted</p>



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

## Department of Transportation and Public Facilities

CENTRAL REGION  
Construction Section

4111 Aviation Avenue  
P.O. Box 196900  
Anchorage, Alaska 99519-6900  
Main: (907) 269-0450  
Fax: (907) 243-5092  
dot.alaska.gov

June 22, 2018

Re: Seward Highway: Dimond Boulevard to Dowling Road  
Reconstruction, Phase I, 0A31(057)/CFHWY00162  
CGP Authorization Number AKR10FN16 & AKR10FN17  
**Response to ADEC Notice of Violation dated January  
24, 2018**  
**Complaint No. 2018-R0034**

Alaska Department of Environmental Conservation  
Division of Water Compliance Program  
555 Cordova Street  
Anchorage, AK 99501

Attn: Willow Weimar, Enforcement Officer

This letter is in response to the Notice of Violation dated January 24, 2018 based on the site inspection conducted on December 14, 2017 for ADOT/PF Central Region Construction Section and QAP.

Based on the clarification letter sent to ADEC on March 15<sup>th</sup>, 2018 and the response email sent by DEC on April 9<sup>th</sup>, 2018, below is the project team's response:

- 1.) The Directive authorizing EarthGuard Liquid Soil Stabilizer, to be added to AstroMulch, was based on the manufacturers recommended use. ADOT and QAP's staff did not submit NOI Modifications indicating a treatment chemical was used on site, because it was not used by itself. At the time of the Directive, the project staff's understanding was that applying a blended product did not constitute use of a treatment chemical.

During an internal SWPPP documentation review, project staff was informed of an ongoing deliberation within the ADOT on this product, and whether its use in this manner met the criteria for a treatment chemical triggering a NOI Modification. QAP was recommended to submit a NOI Modification, and the ADOT would submit a NOI Modification after QAP provided their approved document. A miscommunication between co-permittees resulted in the ADOT only becoming aware of the deficiency on 12/13/2017, and immediately filed for a NOI Modification.

To ensure prompt submission of permit coverage documentation and required modifications, the Central Region ADOT has delegated this responsibility to the Regional Assistant Erosion and Sediment Control Advisor. The Regional Assistant Erosion and Sediment Control Advisor will



submit to ADEC the initial NOI application, NOI modifications, and NOT submissions for the ADOT. The Regional Assistant Erosion and Sediment Control Advisor will monitor the process for obtaining and maintaining permit coverage documentation for both co-permittees on all Central Region projects.

Similarly, QAP has delegated permit coverage and modification responsibilities to its Health Safety & Environmental (HSE) officer. The HSE officer will review all NOI, NOI modifications, and NOT submissions prior to online filing to ensure accuracy and timeliness.

- 2.) ADOT and QAP NOI modifications on SWPPP entrance boards were posted on 12/16/2017. The required photographs of the entrance signage containing the NOI Modifications can be found in Attachment A. All documents have been placed in a pocket located on the SWPPP Entrance Boards, as required per 2016 ACGP Part 5.10.2.
- 3.) The SWPPP was not updated to include the use of treatment chemicals, because the permittees were operating with the understanding a treatment chemical used as a tackifying agent in a hydro-mulch should be noted in the BMP description for a Hydraulic Erosion Control Product (HECP). Since EarthGuard Liquid Soil Stabilizer was not used as a stand-alone product for erosion control, the collective understanding was that the requirements in the 2016 ACGP Part 4.6 did not apply. Clarification from the ADEC about the documentation requirements for treatment chemicals added to an HECP as a tackifier was provided on April 09, 2018.

The SWPPP was amended on March 9, 2018 to include the permit requirements listed in Part 4.6. Refer to Attachment B for documentation added to the SWPPP. ADOT is currently developing a guide for Central Region Construction staff and contractors for treatment chemical(s) that may be used for erosion and sediment control.

The packet will be available at the project office when published.

ADOT and QAP will continue to update the SWPPP weekly after the site inspection.

- 4.) BMP 51.00 in Appendix B of the SWPPP is described as a Hydraulic Erosion Control Product (HECP, Attachment C) and has other acceptable name variations. The co-permittees were using the term "mulch" as a collective descriptor for all HECPs. A project-level directive was issued to direct the contractor to use EarthGuard Liquid Soil Stabilizer and mulch, because of this, the assumption was made that "BMP 51.00" would be an accurate representation which the project referred to as "mulch".

The SWPPP, Grading and Stabilization Logs, and site maps have been updated to distinguish where AstroMulch + EarthGuard Liquid Soil Stabilizer (BMP 51.00 A), AstroMulch (BMP 51.00 B), and pre-mixed EarthGuard (BMP 51.00 C) were used, refer to Attachment D.

- 5.) Records indicate the pre-mixed product EarthGuard Fiber Matrix (BMP 51.00 C) was used to temporarily stabilize for the winter. EarthGuard Liquid Soil Stabilizer was not mixed in the field, or used near the creeks during the winter stabilization procedure. EarthGuard Fiber Matrix was used for temporary stabilization on the construction at the North and South Fork Little Campbell Creek inlets and outlets. During the December 14, 2018 compliance inspection, the report documented a recollection by the Project Engineer who made a mistake in remembering which product was used in the specified locations.

ADOT will address the training needs for designers and engineers, as well as contractors, when treatment chemicals could potentially be used. ADOT and QAP will continue to provide training at the annual Spring Training, CESCL training, and other Environmental Trainings.

- 6.) Compost socks have been installed for water body protection and down-slope sediment controls. Corrective actions in the field at the requested locations can be seen in Attachment E (Date stamp on pictures does not reflect date of installation. All compost socks for both North and South Fork inlets were installed on 4/19/2018. All compost socks for both North and South Fork outlets were installed on 4/20/2018.).
- 7.) The SWPPP has been updated to include SDS information for the various hydro-mulch products, the training log (Attachment F) has been updated to include the proper training.

In the future, additional training will be provided to the designers and engineers as well as contractors for use of treatment chemicals during ADOT Spring Trainings, CESCL trainings, and other Environmental Trainings.

The inspection and comments were productive tools for highlighting areas of improvement found on the project by the ADEC. The Department and QAP will pass on the findings of the ADEC report to make sure other projects stay in compliance with ACGP requirements.

The response to Complaint No. 2018-R0034 is considered to be answered in full. If additional information is required, please contact Chong M. Kim at 770-2612 or [chong.kim@alaska.gov](mailto:chong.kim@alaska.gov).

Thank you,



Chong M. Kim, P.E.  
Project Engineer  
AKDOT/PF Construction

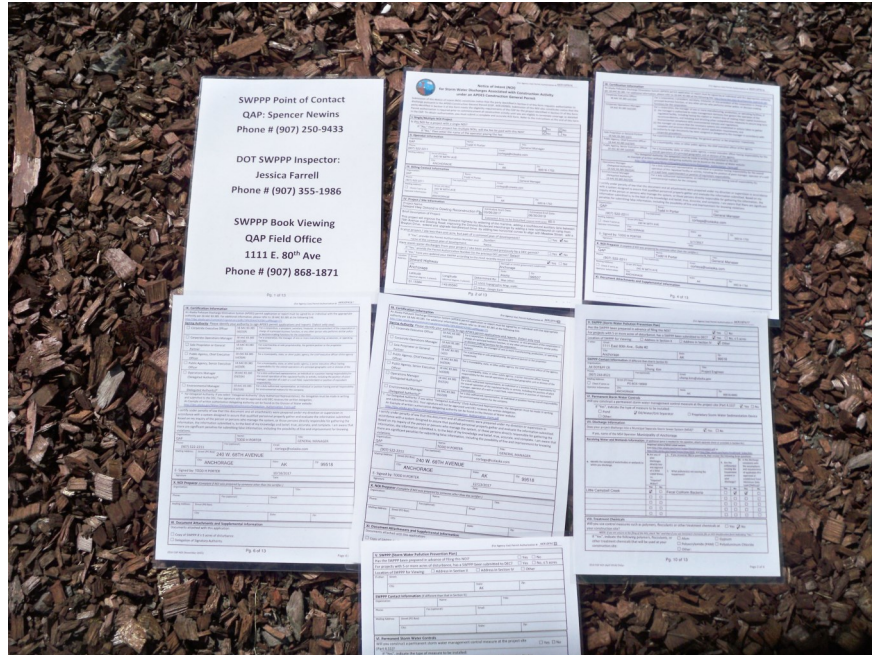


Ray Butcher  
Superintendent  
QAP

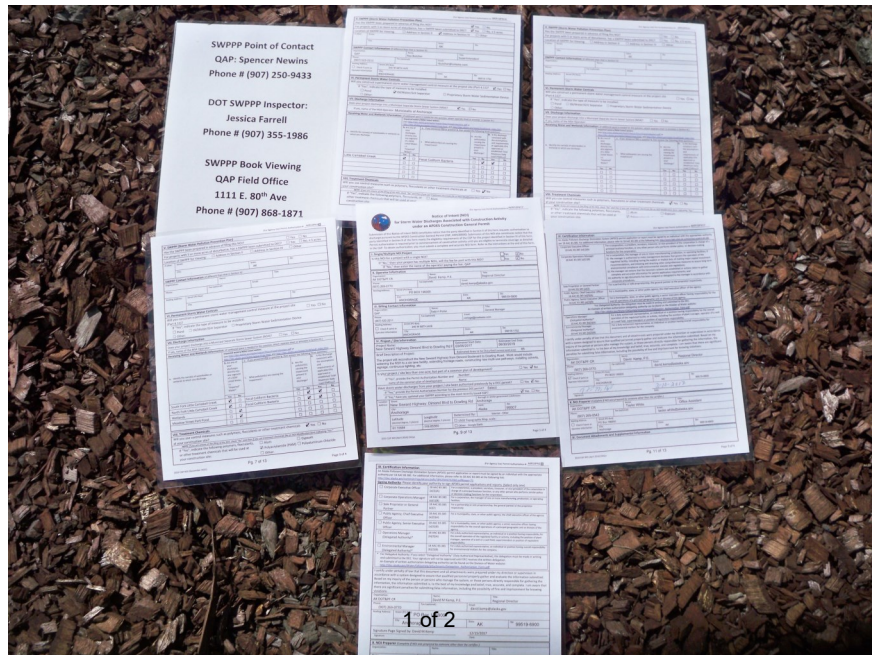
**ATTACHMENTS:**

- Attachment A: Pictures of SWPPP Entrance Boards with NOI Modifications
- Attachment B: SWPPP Amendment for Part 4.6, Amended Section 11.13, SWPPP Amendment Log, PAM-Mulch Mix
- Attachment C: BMP 51.00 detail (HECP)
- Attachment D: Map & Grading log differentiating where AstroMulch / EarthGuard was used
- Attachment E: Pictures of compost socks as down-slop sediment controls
- Attachment F: MSDS Information for AstroMulch and EarthGuard, SWPPP PAM Tailgate Training, Training Log

Attachment A  
Seward Hwy: D2D  
DEC Complaint:  
2018-R0034

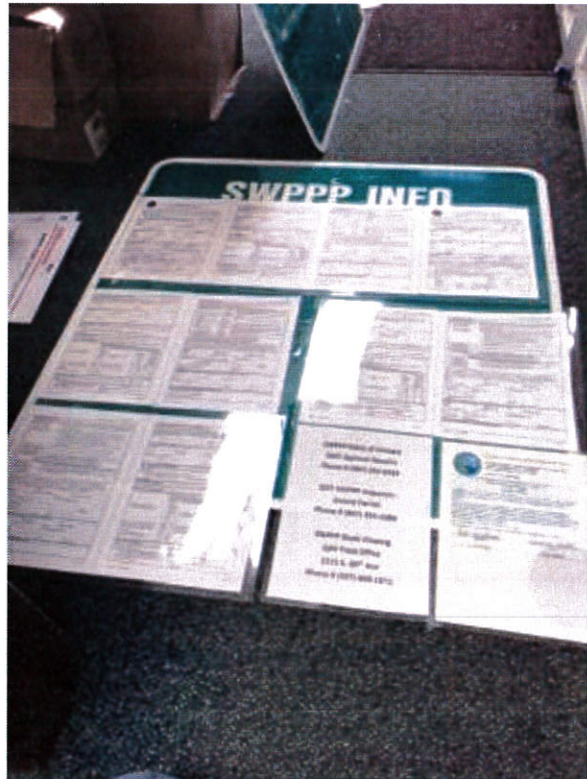


Even  
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Pages



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Pages

Installed: 12/16/2017





ENVIRONMENTAL  
PRODUCTS, LLC™

## EarthGuard Soil Stabilizer Certificate of Compliance to Alaska's Construction General Permit

- 1) (4.6.1.1) EarthGuard soil stabilizer is effective and can be used on all soil types.
- 2) (4.6.1.2) EarthGuard Safety Data Sheet included below
- 3) (4.6.1.3) All components in EarthGuard are NSF certified and G.R.A.S affirmed
- 4) (4.6.1.4) EarthGuard is approved for use for controlling erosion and sediment runoff from agricultural land and/or construction projects in CA, MM, OR, WA, WI (and many more states).
- 5) (4.6.1.5) EarthGuard is non-toxic to aquatic organisms when applied following manufacturers recommended method of use and rate applications:
  - US EPA 96 hr Acute Toxicity Test: Rainbow Trout *Non-Toxic*
  - US EPA 96 hr Acute Toxicity Test: Pimephales, Promelas and Ceriodaphnia Dubia *Non-Toxic*
  - California Title 22 Acute Bioassay Test Fat Head Minnow *Non-Toxic*
  - EPA SW 846 Method 6010b Metal and Solvents *Non-toxic*
- 6) (4.6.1.6) EarthGuard in an anionic polyacrylamide
- 7) (4.6.1.7, 4.6.2.3.3) Use and applying of EarthGuard requires no special training. See attached application chart.

2183 Pennsylvania Avenue, Apalachin, NY 13732



607-625-3050



800-800-7671

1 of 12



607-625-2689



www.LSCenv.com



## EarthGuard: Eco-Guardian and Eco-Friendly

**EarthGuard®** is a spray-on erosion control/re-vegetation product designed to work on the atomic level with soil to maintain its stability by both preserving its structure and conjoining individual aggregates along the surface. **EarthGuard** prevents the damaging effects of erosion from impacting watersheds downstream while being non-toxic and eco-friendly to the environment.

Various studies on the efficacy and eco-friendliness have been conducted on **EarthGuard**. These studies include:

Study	Results
Texas DOT Erosion Control Testing	99.8% Effective after 5.25" of rain in 90 min. C Factor = 0.002
AASHTO Large Scale Erosion Control Testing	99.9% Effective after 20 min 2" rain event followed by 20 min of a 4" rain event and then by 20 min of a 6" rain event. C Factor = .001
California DOT Erosion Control Testing	99.5% Effective after 4" of rain in 200 min. C Factor = 0.005
Germination Enhancement: ASTM D 7322	657% in growth over bare soil plot.
California DOT Environmental Field Study	No product related export found in effluent.
California DOT Water Quality Handbook	EarthGuard does not discharge pollutants and water quality sampling and analysis is <b>not</b> required.
Water Holding Capacity: ASTM D 7367	1349
US EPA 2012 Construction General Permit	The use of PAM (EarthGuard) has shown minimal toxicity even at 10 times the normal erosion control concentration, 10 ppm or 100 ppm. EarthGuard at its heaviest application rate is 1 ppm
US EPA 96-hr Acute Toxicity Test: Rainbow Trout	Non-toxic
US EPA 96-hr Acute Toxicity Test: Pimephales Promelas and Ceriodaphnia Dubia	Non-toxic
California Title 22 Acute Bioassay Test: Fathead Minnow	Non-toxic
EPA SW 846 Method 6010b Metals and Solvents	Non-toxic
NSF Drinking Water Standards	All components of EarthGuard meet the National Sanitation Foundation Standards for use in drinking water clarification.
Cure Time	Active Immediately
Biodegradability	100% Biodegradable
USDA Application Recommendations	The use of PAM (EarthGuard) should be limited to 200 lb/ac/yr. EarthGuard at its heaviest application rate is equates to 25 lb/ac/yr.



# Terra Novo, Inc. EarthGuard

## MATERIAL SAFETY DATA

Revision Date: 10/3/2012

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

**PRODUCT NAME:** EarthGuard

**COMPANY:** Terra Novo, Inc.,  
2930 Patton Way  
BAKERSFIELD, CA 93308, USA

**TELEPHONE:** 661.587.5716

**EMERGENCY PHONE:** CHEMTREC 800.424.9300

**PRODUCT USE:** Processing aid for industrial application

### 2. HAZARDS IDENTIFICATION

**Appearance and Odor:**

**Form:** Viscous liquid

**Color:** Milky

**Odor:** Aliphatic

**Potential Health Effects:**

**Eye:** May cause eye irritation with susceptible persons.

**Skin:** Slightly irritating.

**Potential Physical/Chemical Effects:** Spills produce extremely slippery surfaces.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Identification:** Anionic water-soluble polymer in emulsion.

**Regulated Components:** None.

### 4. FIRST AID MEASURES

**Inhalation:** Move to fresh air immediately. No hazards which require special first aid measures.

**Skin contact:** Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

**Eye contact:** Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.





# Terra Novo, Inc. EarthGuard

## MATERIAL SAFETY DATA

Revision Date: 10/3/2012

**Ingestion:** Rinse mouth with water. Do not induce vomiting. Get medical attention immediately.

### **5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** Water. Water spray. Foam. Carbon dioxide (CO<sub>2</sub>). Dry powder.

**Precautions:** Spills produce extremely slippery surfaces.

**Special protective equipment for firefighters:** No special protective equipment required.

**Flash point (°C):** Does not flash.

**Autoignition temperature (°C):** Does not ignite.

**Flash point :** Not applicable.

**Autoignition temperature (°C):** Not applicable.

### **6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions :** No special precautions required. Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection). Keep people away from spill/leak.

**Environmental precautions :** As with all chemical products, do not flush into surface water.

**Methods for cleaning up :** Do not flush with water. Dam up. Soak up with inert absorbent material. If liquid has been spilled in large quantities, clean up promptly by scoop or vacuum. Keep is suitable and closed containers for disposal. After cleaning, flush away traces with water.

### **7. HANDLING AND STORAGE**

#### **Handling**

**Safe handling advice :** Avoid contact with skin and eyes. When preparing the working solutions ensure there is adequate ventilation. When using do not smoke.

#### **Storage**

Keep in a cool, dry place (0 - 30 °C). Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material.

### **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering measures**



# Terra Novo, Inc. EarthGuard

## MATERIAL SAFETY DATA

Revision Date: 10/3/2012

Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

### Personal protective equipment

**Respiratory protection** : Not required ; except in case of aerosol formation

**Hand protection** : PVC or other plastic material gloves

**Eye protection** : Safety glasses with side-shields. Do not wear contact lenses where this product is used.

**Skin and body protection** : Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form** : Viscous liquid

**Color** : Milky

**Odor** : Aliphatic

**pH**: 6 - 8 @ 5 g/l

**Specific Gravity**: 1.05

**Melting point/range** : Not applicable

**Flash point** : Not applicable

**Autoignition temperature (°C)**: Not applicable

**Vapor pressure (mm Hg)**: 0,002 @ 20°C

**Bulk viscosity (cps)**: 1200

**Kinematic viscosity @ 40°C (mm<sup>2</sup>/s)**: >>20.5

## 10. STABILITY AND REACTIVITY

**Stability** : Hazardous polymerization does not occur. Stable.



# Terra Novo, Inc. EarthGuard

## MATERIAL SAFETY DATA

Revision Date: 10/3/2012

**Materials to avoid :** Oxidizing agents may cause exothermic reactions.

**Hazardous decomposition products :** Thermal decomposition may produce. Nitrogen oxides (NO<sub>x</sub>).

Carbon oxides (CO<sub>x</sub>).

### **11. TOXICOLOGICAL INFORMATION**

#### **Acute toxicity**

**Oral :** LD50/oral/rat > 5000 mg/kg.

**Dermal :** LD50/dermal/rat > 5000 mg/kg.

**Inhalation :** The product is not expected to be toxic by inhalation.

#### **Irritation**

**Skin :** Slightly irritating

**Eyes :** May cause eye irritation with susceptible persons

#### **Sensitization :**

Not sensitizing.

#### **Chronic toxicity :**

No Chronic effects

### **12. ECOLOGICAL INFORMATION**

#### **Aquatic toxicity**

**Toxicity to fish :** LC50/Danio rerio (Zebra fish)/96 hours > 100 mg/L (OECD 203)./96 hours > 100 mg/l, (OECD 203).

**Toxicity to daphnia :** EC50/Daphnia magna (Water flea)/48 hours > 100 mg/L (OECD 202).

**Toxicity to algae :** EC50/Scenedesmus subspicatus (Green algae)/72 hours > 100 mg/L (OECD 201).

**Persistence and degradability :** Not readily biodegradable.

**Hydrolysis :** Does not hydrolyze.



# Terra Novo, Inc. EarthGuard

## MATERIAL SAFETY DATA

Revision Date: 10/3/2012

### 13. DISPOSAL CONSIDERATIONS

**Disposal :** Dispose of in accordance with local, state and federal regulations.

**Container :** Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local, state and federal regulations.

### 14. TRANSPORT INFORMATION

#### DOT

**Remarks :** Not classified as dangerous in the meaning of DOT regulations.

#### IMDG/IMO

**Remarks :** Not classified as dangerous in the meaning of IMO/IMDG regulations.

#### ICAO/IATA

**Remarks :** Not classified as dangerous in the meaning of ICAO/IATA regulations

### 15. REGULATORY INFORMATION

#### US SARA Reporting Requirements:

**SARA (Section 311/312) hazard class:** Not concerned.

**International Inventories USA (TSCA):** All components of this product are either listed on the inventory or are exempt from listing.

**Canada (DSL) :** All components of this product are either listed on the inventory or are exempt from listing.



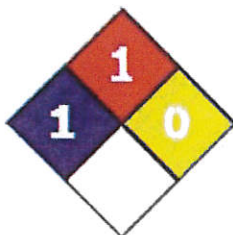
# Terra Novo, Inc. EarthGuard

## MATERIAL SAFETY DATA

Revision Date: 10/3/2012

### 16. OTHER INFORMATION

NFPA and HMIS Ratings :



**NFPA :**

Health : 1 Flammability : 1 Instability : 0

**HMIS :**

Health : 1 Flammability : 1 Physical Hazard : 0 **MSDS was prepared in accordance with the following :**

ISO 11014-1: Material Safety Data Sheet for Chemical Products ANSI Z400.1-2004; Material Safety Data Sheets - Preparation

**Contact :** 661.587.5716

The data in this Material Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

**BMP Manual:** No manual was used to select or design the BMP.

**Installation Schedule:** Install according to the project specifications.

**Maintenance and Inspection:** Inspect according to the frequency discussed in Section 12.1. Inspect to make sure the concrete is installed according to the project plans and specifications.

**Responsible Staff:** Superintendent or SWPPP Manager/Storm Water Lead for QAP

**Seeding**

**BMP Description:** Seeding involves preparing the ground, either broadcast seeding or hydroseeding, applying mulch and watering to get vegetation established. Vegetative cover is the stabilization method and the areas are not considered stabilized until vegetation has been established with a density of 70 percent, which means you shouldn't see any bare spots.

**BMP Manual:** DOT Alaska SWPPP Guide BMP 52.00 and 53.00, October 2016.

**Installation Schedule:** Seed immediately after work is finished.

**Maintenance and Inspection:** Inspect according to the frequency discussed in Section 12.1. Inspect to make sure the area is not eroding, make sure the right seed mix is used, make sure the soil is staying moist during germination and make sure people and vehicles are not travelling over the area. Reseed areas of insufficient growth.

**Responsible Staff:** Superintendent or SWPPP Manager/Storm Water Lead for QAP

**Low Erodible Material**

**BMP Description:** Low erodible material is porous backfill that resists erosion, drains well and has little fines that can be washed away.

**BMP Manual:** No manual was used to select or design the BMP.

**Installation Schedule:** Install once the ground has been prepared according to the project plans and specifications.

**Maintenance and Inspection:** Inspect according to the frequency discussed in Section 12.1. Inspect to make sure the material is placed according to the project plans and specifications.

**Responsible Staff:** Superintendent or SWPPP Manager/Storm Water Lead for QAP.

**11.13 Treatment Chemicals**

Will treatment chemicals be used to control erosion and/or sediment during construction?

Yes       ~~No~~

- Polyacrylamide (PAM) to be used in conjunction with a tackifier and called "BMP 51.00A" to stabilize slopes.  
- PAM will be stored in the manufacturer's container and in an on-site container.  
- DOT developed training for PAM products on-site will be completed as available.

**11.14 Active Treatment System Information**

An active treatment system will not be used on this project.

end #28  
11/17/18

Amend #58  
6/12/18  
BT



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SWPPP AMENDMENT LOG PAGE 5

AKSAS Number: CFHWY00162

Project Name: Seward Hwy: Dimond to Dowling Reconstruction,  
Ph. 1

All amendments must be approved by the Engineer per 641.3.03, therefore the Project Engineer's approval of each amendment must be documented.  
Detailed instructions for completing this form can be found on the Alaska Construction Forms website:  
[http://dot.alaska.gov/stwddes/dcscnst/pop\\_constforms.shtm](http://dot.alaska.gov/stwddes/dcscnst/pop_constforms.shtm)

Amendment Number	Description of the Amendment and Related Corrective Action Number (if applicable)	Page or Sheet Number	Date of Amendment	Amendment Authorized by (Sign Full Name)	PE Initials
53	BMP 173, 174, and 175 - Admin Change (5/1/18 Inspection)	App. K (5/1/18 Inspection)	5/15/18		
54	BMP 223 and 224 - Admin Change (5/1/18 Inspection)	App. K (5/1/18 Inspection)	5/15/18		
55	Add Benjamin Turner AK-CESCL Certification	App. E	5/19/18		
56	Add Benjamin Turner as SWPPP Manager	2.0 - pg. 6	5/19/18		
57	Fish and Game Letter for Campbell Creek Culvert Replacement, Water Diversion Approval	App. Q	5/29/18		
58	Update treatment chemical section	P.g. 35, 11.13	6/12/18		
59	Add SWPPP Binder 2A for Inspection Reports	App. K	6/12/18		



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SWPPP AMENDMENT LOG PAGE 4

Seward Hwy: Dimond to Dowling  
Reconstruction, Ph. 1

AKSAS Number: CFHWY00162

Project Name:

All amendments must be approved by the Engineer per 641.3.03, therefore the Project Engineer's approval of each amendment must be documented.  
Detailed instructions for completing this form can be found on the Alaska Construction Forms website:  
[http://dot.alaska.gov/stwddes/dcsconst/pop\\_constforms.shtml](http://dot.alaska.gov/stwddes/dcsconst/pop_constforms.shtml)

Amendment Number	Description of the Amendment and Related Corrective Action Number (if applicable)	Page or Sheet Number	Date of Amendment	Amendment Authorized by (Sign Full Name)	PE Initials
37	add <sup>address</sup> for SWAPP Location	50	12-13-17	Ray B. [Signature]	[Initials]
38	add cut sheet for Astoria Muck <sup>Earth</sup> APP B	7	12-13-17	Ray B. [Signature]	[Initials]
39	Changes to the HMCP	7	12-13-17	Ray B. [Signature]	[Initials]
40	Add Mod NOIs to Appendix F (GAP)	App. F	12-14-17	Ray B. [Signature]	[Initials]
41	Add Mod NOI to Appendix F (DOT)	App F	12-14-17	Ray B. [Signature]	[Initials]
42	Add EarthGuard MSDS and application rate sheet	App. B	3-9-18	[Signature]	[Initials]
43	Add NOV from DEC ✓	App. Q	3-9-18	[Signature]	[Initials]
44	Add compost sock BMP detail ✓	App. B / Pg. 28A	3-9-18	[Signature]	[Initials]
45	Add EcoFibre Mulch BMP detail (BMP 51.00D) ✓	App B	4-24-18	[Signature]	[Initials]
46	Update BMP Details Table of Contents ✓	App B	4-24-18	[Signature]	[Initials]
47	Add 2018 MOA Noise Permit ✓	App D	4-24-18	[Signature]	[Initials]
48	Insert 2018 site maps (BMP & Stabilization maps)	App A	4-24-18	[Signature]	[Initials]
49	Insert Justin Wood CESCL Certification	App E	5-2-18	[Signature]	[Initials]
50	Insert additional 2018 BMP site maps	App A	5-2-18	[Signature]	[Initials]



Seward Highway: Dimond Boulevard to  
Dowling Road Reconstruction, Phase 1 State of Alaska  
0A31(057)/CFHWY00162

DEPARTMENT OF TRANSPORTATION  
& PUBLIC FACILITIES

Item No. \_\_\_\_\_

Date 4/26/2017

Project No. CFHWY00162

Project Name D2D Reconst.

Calc. By J. Farrell

Checked By \_\_\_\_\_

### COMPUTATIONS

FOR TESPC MULCH (041(2))

PRICE PER LOAD CALCULATION:

THIS APPLIES TO  
BMP 51.00

LABOR: (1) NOZZELMAN & (1) DRIVER = \$150/hr  
COST OF TRUCK = \$150/hr

TOTAL CYCLE TIME FOR 3,000 GAL = 2 hrs

MULCH: \$30/50lb bag x 7 bags/load = \$210 for 350lb

→ Earthguard REAP: 3gal/load at ~ \$160/gal = \$480 for 3gal

Liquid soil stabilizer (PAM) \* Product sold in 5gal containers = \$800

~~WJF~~ 6-2018

$$\text{TOTAL LOAD (1/2 ACRE)} = (\$150/\text{hr} + \$150/\text{hr}) \times 2\text{hr} + \$210 + \$480 \\ = \$1290$$

$$\text{COST PER ACRE} = \$1290 \times 2 = \$2580$$

$$\text{ENGINEER ESTIMATE} = \$2580 + 25\% = \$3225$$

OR OTHER MULCH MIXTURE APPROVED BY THE ENGINEER AND FABRICATED PER THE MANUFACTURER'S RECOMMENDATION, UNLESS NOTED BY THE ENGINEER.

**\$ 3225 PER ACRE**

OR TWO LOADS

SAY \$1600 PER LOAD

~~WJF~~

5-08-18

RS 5-8-18

~~WJF~~

4-26-17

end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased. The requirement to immediately initiate stabilization is triggered as soon as you know with reasonable certainty that work will be stopped for 14 days or longer.

The deadline to complete temporary stabilization activities is as soon as practicable, but no later than 14 calendar days after the initiation of soil stabilization measures. The following are required to be completed:

- For vegetative stabilization, all activities necessary to initially seed or plant the area to be stabilized; and/or
- For non-vegetative stabilization, the installation or application of all such nonvegetative measures

The temporary stabilization measure that would be used at this project is a mulch.

### Hydraulic Erosion Control Products

**BMP Description:** Hydraulic Erosion Control Products reduce soil erosion by the application of a uniform, protective layer of wood fiber, paper, recycled paper, tackifier, bonded fiber matrix (BFM) or other material to protect soil from rain and overland flow to foster the growth of vegetation, increase infiltration, reduce evaporation, insulate the soil, suppress weed growth, and hold fertilizer, water and seed. Hydraulic Erosion Control Products are further described in Appendix B. *BMP 51.00 (A, B, C, D) from Alaska Mill & Feed*

BMP Manual: DOT Alaska SWPPP Guide BMP 51.00, October 2016.

AMD# 38 12/13/17 }  
AMD# 42 3/9/18 } STN  
AMD# 45 4/24/18 }

**Installation Schedule:** Apply during seeding or apply after grading is complete according to manufacturer's specifications.

**Maintenance and Inspection:** Inspect according to the frequency discussed in Section 12.1. Inspect to check for rill erosion, dislocation or failure. Grade again and re-apply if area erodes and flatten the slope if possible or add fiber rolls along the contours.

**Responsible Staff:** Superintendent or SWPPP Manager/Storm Water Lead for QAP.

### **Final Stabilization**

Stabilization of disturbed areas must, at a minimum, be initiated **immediately** whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site.

Immediately means no later than the end of the next work day, following the day when the earth-disturbing activities have permanently ceased.

The deadline to complete final stabilization activities must be within seven (7) calendar days of initiating final stabilization. Complete or continue maintenance for the following on any portion of the site that has reached final grading and for areas where clearing, grading, excavating, or other earth disturbing activities have permanently ceased:

- All soil conditioning, seeding, watering, mulching, and any other required activities for the establishment of vegetative cover;

## **BMP 51.00. Hydraulic Erosion Control Products (HECP)**

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### DESIGN CONSIDERATIONS

#### *Objectives*

Hydraulic Erosion Control Products (HECPs) are designed to reduce soil erosion and assist in the establishment and growth of vegetation. The HECP forms a protective layer that controls erosion and allows for enhanced seed germination and accelerated plant growth.

HECPs are often used in combination with seed and fertilizer for revegetation but can be used alone for temporary stabilization of bare soils.

#### *Description*

A HECP is a manufactured, temporary, degradable, pre-packaged fibrous material that is mixed with water and hydraulically applied as a slurry.

When applied, the HECP creates a continuous, porous, absorbent, moisture retaining, flexible blanket/mat/mulch/covering making intimate contact with, and adhering to, the sloped soil surface. The applied HECP permits water infiltration, resists erosion, and promotes rapid germination and accelerated plant growth.

The HECP will achieve maximum performance after a sufficient curing period, which will vary based upon the manufacturer's recommendations and site specific conditions.

Tackifiers are chemical compounds used in formulating adhesives to increase the stickiness of the surface. They are used to glue the fibrous HECP material to itself and the soil surface.

#### *Other Names*

Hydromulch, Bonded Fiber Matrix (BFM), Flexible Growth Medium (FGM), Fiber Reinforced Matrix (FRM), and many others. Some terms may be trademarked and describe a single product as opposed to a product category.

#### *Applicability*

HECPs vary in their functional performance longevity, strength to resist shear stress, and fiber types. Wood, straw, cotton, flax, and hemp fibers have all been used in the production of HECPs.

Many HECPs contain a tackifier to bind the fibers together and form a mat over the soil. Others do not.

HECPs without tackifiers are limited to flat or low slopes and infrequent or low amounts of rainfall. HECPs with tackifiers are more expensive, but have better performance in areas with moderate to steep slopes and frequent or moderate to heavy rainfall. They are applicable for any site where there is sufficient time for the tackifiers to cure. Some tackifiers will be able to cure in some precipitation, but none can cure during significant precipitation. Availability of water to mix with the product and site access constraints must be considered when specifying HECPs.

By themselves, HECPs are not applicable in areas with concentrated flow.

#### *Selection Considerations*

HECPs must be selected based on expected rainfall, prior performance, the length of time the product is needed to perform (i.e., the functional longevity), and the shear stress (a factor of the slope length and gradient) that the HECP will be exposed to. If site conditions require an expensive product because of harsh environmental conditions, then specify it or consider using a rolled product instead.

The Erosion Control Technology Council (ECTC) provides designers with selection information based on independent testing to supplement manufacturer's design standards

#### *Design*

The following table provides guidance on terms used in describing HECPs for typical applications:

Hydraulic Erosion Control Design				
Term	Functional Longevity	Typical Application Rates	Slope Gradient (H:V)	Slope Length
	months	lb/acre	< or =	feet
Moderate	3	2000-3000	4:1	25
Extended Moderate	6	2000-3500	3:1	50
Long	12	2500-4000	2:1	75
Extended Long	18	3000-4500	0.5:1	100

*This table is for general guidelines only and is adapted from the Erosion Control Technology Council. Refer to manufacturer for application rates, instructions, gradients, maximum continuous slope lengths and other site specific recommendations*

When estimating quantities needed, account for the increased surface area created as a result of surface roughening and due to the slope length, rather than horizontal length, on sloped sites. Surface roughening alone may require 30 percent more surface area to which the HECP must be applied. This 30 percent increase should be added to the planned seeding quantity too.

If a diversion is required at the top of the slope to handle run-on, then include the diversion details in the plans.

*Relationship to Other Erosion and Sediment Control Measures*

HECPs are most commonly used in conjunction with seed and fertilizer mixes to vegetate bare soil areas. The HECP is mixed into an homogenous slurry to carry the seed and fertilizer mixture. The HECP must last long enough to provide erosion control while the seed germinates and the vegetation establishes. In order to provide effective erosion control, the HECP must cover all the roughened bare soils to prevent raindrop erosion and the HECP must stay in place to prevent seed creep or migration.

*Common Failures or Misuses*

- The most common problem with the use of HECPs is a lack of adequate coverage. Without 100 percent of the soil covered, or with a thinner than specified coverage, raindrop erosion can

occur, leading to inadequate seed and fertilizer distribution, seed migration, and vegetation establishment failures. Without proper coverage of desired vegetation, weed species are likely to take root and crowd out the specified plants.

- Inadequate coverage may result from only applying the HECP from one direction.
- Areas to be seeded are frequently underestimated and actual disturbed areas are much larger than anticipated. Strict adherence to bid items based on under-estimated quantities may lead to inadequate coverage, erosion, and failed revegetation.
- Another leading cause of inadequate coverage is lack of accounting for the increased surface area created as a result of surface roughening, which can add 30 percent more surface area to the soils. Combined with take-off measurements on flat plan sheets for sloped sites, field crews often under-apply HECPs compared with the specified rate.

SPECIFICATIONS

Standard Specifications

- 651 and 751 Hydraulic Erosion Control Products



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**SWPPP GRADING & STABILIZATION ACTIVITIES LOG** PAGE 1

Project Number: CFHWY00162

Project Name: Seward Hwy: Dimond to Dowling Recon

Project Area (if applicable):

Detailed instructions for completing this form can be found on the Alaska Construction Forms website: [http://dot.alaska.gov/stwddes/dcsconst/pop\\_constforms.shtml](http://dot.alaska.gov/stwddes/dcsconst/pop_constforms.shtml)

Date Grading Activity Initiated/ Initials	Description of Grading Activity and Location	Date Grading Activity Ceased (Temporary or Permanent) and Initials	Date Stabilization Measures Initiated (Temporary or Permanent) and Initials	Date Stabilization Measure Complete	Description of Stabilization Measure
3/14/17 km	Grubbing, excavation, backfill 819+50 - 826+51 SW	4/3/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/3/17 km T <input checked="" type="checkbox"/> 5/9/17 km P <input checked="" type="checkbox"/>	4/10/17 5/9/17	RAM Paved Slopes mulched BMP 51.00 A,B,C
3/16/17 km	Grubbing, excavation, backfill 10000+00 - 10006+55 TA-1	3/30/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/3/17 km T <input checked="" type="checkbox"/> 5/10/17 km P <input checked="" type="checkbox"/>	4/3/17 5/10/17	RAM Paved
3/16/17 km	Grubbing, excavation, backfill 1101+60 - 1105+85 TA-2	3/30/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/3/17 km T <input checked="" type="checkbox"/> 5/9/17 km P <input checked="" type="checkbox"/>	4/10/17 5/9/17	RAM Paved
3/20/17 km	Excavation, backfill 9500+50 - 9505+50 TCP-SS-1	4/3/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/3/17 km T <input checked="" type="checkbox"/> 6/3/17 km P <input checked="" type="checkbox"/>	4/10/17 6/3/17	RAM Paved
3/23/17 km	Grubbing, excavation, backfill 69+50 - 71+45 TA-69	3/31/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/3/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	4/3/17	RAM
3/24/17 km	Excavation, backfill 754+72 - 752+00 75C	4/1/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/3/17 km T <input checked="" type="checkbox"/> 5/10/17 km P <input checked="" type="checkbox"/>	4/3/17 5/10/17	RAM Paved
4/3/17 km	Grubbing, excavation, backfill 8096+95 - 8116+60 TCP-ML-SB-2 RT	5/19/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/20/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/20/17	Mulched BMP 51.00 A,B
4/3/17 km	Grubbing, excavation, backfill 9005+00 - 9010+00 TCP-ML-NB-1 RT	5/2/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/3/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/3/17	Mulched BMP 51.00 A
4/3/17 km	Grubbing, excavation, backfill 8102+00 - 8103+50 TCP-ML-SB-2 LT	9/6/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	9/7/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	9/7/17	Mulched BMP 51.00 C

BMP 51 A EARTHGUARD SOIL STABILIZATION (READY)

BMP 51 B ASTRO MULCH

Form 25D-110 (12/2015) BMP 51 C EARTHGUARD ECO FRIENDLY

BMP 51 D ECOFIBRE



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**SWPPP GRADING & STABILIZATION ACTIVITIES LOG**      PAGE 2

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**Project Name:** Seward Hwy: Dimond to Dowling Recon

**Project Area (if applicable):**

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Date Grading Activity Initiated/ Initials	Description of Grading Activity and Location	Date Grading Activity Ceased (Temporary or Permanent) and Initials	Date Stabilization Measures Initiated (Temporary or Permanent) and Initials	Date Stabilization Measure Complete	Description of Stabilization Measure
4/7/17 <i>km</i>	Grubbing, excavation, backfill 9029+00 – 9106+00 Brayton TCP-ML-NB-1 LT	4/28/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/29/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	4/29/17	Mulched <i>BMP 51.00 A, B</i>
4/7/17 <i>km</i>	Grubbing, excavation, backfill 6113+70 – 6114+40 Homer & 80 <sup>th</sup> LT	5/19/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/20/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/20/17	Mulched <i>BMP 51.00 A, B</i>
4/12/17 <i>km</i>	Grubbing, excavation, backfill 6402+30 – 6403+20 Homer LT	5/19/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/20/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/22/17	Mulched <i>BMP 51.00 A, B</i>
4/13/17 <i>km</i>	Grubbing 81+70 – 82+40 76 <sup>th</sup> X-SS LT	5/19/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/20/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/20/17	Mulched <i>BMP 51.00 A, B</i>
4/13/17 <i>km</i>	Grubbing 10003+50 – 10006+50 Homer & 76 <sup>th</sup> TA-1 LT	4/28/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/29/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	4/29/17	Mulched <i>BMP 51.00 A</i>
4/15/17 <i>km</i>	Milling, grading 9008+00 – 9103+00 Brayton Mainline	6/5/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	6/6/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	6/7/17	Paved
4/16/17 <i>km</i>	Milling, grading 8001+50 – 8112+00 Homer Mainline	5/18/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/18/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/20/17	Paved
4/19/17 <i>km</i>	Grubbing 5418+25 – 5419+80 Brayton RT BD-2	9/6/17 <i>km</i> T <input type="checkbox"/> P <input checked="" type="checkbox"/>	9/7/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	9/7/17	Mulched <i>BMP 51.00 C</i>



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**SWPPP GRADING & STABILIZATION ACTIVITIES LOG** PAGE 3

Project Number: CFHWY00162

Project Name: Seward Hwy: Dimond to Dowling Recon

Project Area (if applicable):

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Date Grading Activity Initiated/ Initials	Description of Grading Activity and Location	Date Grading Activity Ceased (Temporary or Permanent) and Initials	Date Stabilization Measures Initiated (Temporary or Permanent) and Initials	Date Stabilization Measure Complete	Description of Stabilization Measure
4/26/17 km	Excavation, backfill 9010+40 - 9012+00 TCP-ML-NB-1 RT	8/2/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	8/3/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	8/3/17	BMP 51.00 C Mulched & Seeded
4/27/17 km	Grading 9002+90 - 9005+00 TCP-ML-NB-1 RT	5/2/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/3/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/3/17	Mulched BMP 51.00 A, B, C
4/27/17 km	Grading 9006+75 - 9008+00 TCP-ML-NB-1 LT	5/3/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/3/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/3/17	Mulched BMP 51.00 A
4/27/17 km	Excavation, backfill 9008+00 - 9015+25 TCP-ML-NB-1 LT	5/2/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/3/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/3/17	Mulched BMP 51.00 A
4/28/17 km	Excavation, backfill 1101+60 - 1105+85 TA-2 LT	5/1/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/1/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/1/17	Mulched BMP 51.00 A
4/28/17 km	Excavation, backfill 8091+75 - 8099+75 TCP-ML-SB-2 RT	5/1/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/1/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/1/17	Mulched BMP 51.00 A, B
4/29/17 km	Excavation, backfill 9025+10 - 9030+50 TCP-ML-NB-1 RT	5/2/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/3/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/3/17	Mulched BMP 51.00 A
4/27/17 km	Excavation, backfill 9100+10 - 9104+20 Brayton LT	5/1/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	5/2/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/2/17	Mulched BMP 51.00 A
4/27/17 km	Excavation, backfill 9104+50 - 9106+00 Brayton RT	4/28/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	4/29/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	4/29/17	Mulched BMP 51.00 A, B



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**SWPPP GRADING & STABILIZATION ACTIVITIES LOG**      PAGE 4

**Project Number:** CFHWY00162

**Project Name:** Seward Hwy: Dimond to Dowling Recon

**Project Area (if applicable):**

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Date Grading Activity Initiated/ Initials	Description of Grading Activity and Location	Date Grading Activity Ceased (Temporary or Permanent) and Initials	Date Stabilization Measures Initiated (Temporary or Permanent) and Initials	Date Stabilization Measure Complete	Description of Stabilization Measure
4/28/17 <i>km</i>	Grading 740+50 – 743+80 74-E LT	T <input type="checkbox"/> 5/2/17 <i>km</i> P <input checked="" type="checkbox"/>	5/2/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/2/17	Mulched <i>BMP \$1.00 A</i>
5/5/17 <i>km</i>	Grubbing, excavation, backfill 819+50 - 826+51 RT & LT of Mainline SW	T <input type="checkbox"/> 5/8/17 <i>km</i> P <input checked="" type="checkbox"/>	5/9/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/9/17	Mulched <i>BMP \$1.00 A, B</i>
5/8/17 <i>km</i>	Milling, grading 808+90 – 819+50 SW	T <input type="checkbox"/> 5/9/17 <i>km</i> P <input checked="" type="checkbox"/>	T <input type="checkbox"/> 5/9/17 <i>km</i> P <input checked="" type="checkbox"/>	5/9/17	Paved
5/10/17 <i>km</i>	Excavation, backfill 10003+50 – 10006+50 Homer & 76 <sup>th</sup> TA-1 LT	T <input type="checkbox"/> 5/19/17 <i>km</i> P <input checked="" type="checkbox"/>	5/20/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/20/17	Mulched <i>BMP \$1.00 A</i>
5/5/17 <i>km</i>	Excavation, backfill 9015+25 – 9021+90 TCP-ML-NB-1 LT	T <input type="checkbox"/> 5/8/17 <i>km</i> P <input checked="" type="checkbox"/>	5/9/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	5/9/17	Mulched <i>BMP \$1.00 A</i>
5/18/17 <i>km</i>	Excavation, backfill 8112+00 – 8116+55 TCP-ML-SB-2	T <input type="checkbox"/> 5/19/17 <i>km</i> P <input checked="" type="checkbox"/>	T <input type="checkbox"/> 5/20/17 <i>km</i> P <input checked="" type="checkbox"/>	5/20/17	Paved
5/18/17 <i>km</i>	Excavation, backfill 8000+00 – 8008+20 TCP-ML-SB-1	T <input type="checkbox"/> 5/19/17 <i>km</i> P <input checked="" type="checkbox"/>	T <input type="checkbox"/> 5/20/17 <i>km</i> P <input checked="" type="checkbox"/>	5/20/17	Paved
5/22/17 <i>km</i>	Milling, excavation, backfill 399+00 – 443+30 Seward Highway Mainline Southbound	T <input type="checkbox"/> 9/10/17 <i>km</i> P <input checked="" type="checkbox"/>	T <input type="checkbox"/> 9/10/17 <i>km</i> P <input checked="" type="checkbox"/>	9/11/17	Paved from 413+64 -446+80 399+00 – 413+64 Restarted 9/10/17
5/24/17 <i>km</i>	Grubbing, excavation, backfill 399+00 – 443+30 RT of Seward Highway Mainline Southbound	T <input type="checkbox"/> 10/9/17 <i>km</i> P <input checked="" type="checkbox"/>	10/10/17 <i>km</i> T <input checked="" type="checkbox"/> P <input type="checkbox"/>	10/11/17	Mulched <i>BMP \$1.00 C</i>





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**SWPPP GRADING & STABILIZATION ACTIVITIES LOG**      PAGE 5

**Project Number:** CFHWY00162

**Project Name:** Seward Hwy: Dimond to Dowling Recon

**Project Area (if applicable):**

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Date Grading Activity Initiated/ Initials	Description of Grading Activity and Location	Date Grading Activity Ceased (Temporary or Permanent) and Initials	Date Stabilization Measures Initiated (Temporary or Permanent) and Initials	Date Stabilization Measure Complete	Description of Stabilization Measure
5/25/17 km	Grubbing, excavation, backfill 399+00 – 443+30 LT of Seward Highway Mainline Southbound	8/22/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	8/23/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	8/23/17	Mulched <b>BMP SI.00 C</b>
5/31/17 km	Excavation, backfill Brayton Mainline 9005+00 – 9008+00	6/3/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	6/3/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	6/3/17	Paved
5/31/17 km	Excavation, backfill Brayton Mainline 9103+00 – 9106+00	6/3/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	6/3/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	6/3/17	Paved
6/10/17 km	Milling, excavation, backfill 399+00 – 443+30 Seward Highway Mainline Northbound	9/11/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	9/11/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	9/12/17	Paved from 413+64 – 446+80 399+00 – 413+64 Restarted 9/11/17
6/11/17 km	Grubbing, excavation, backfill 399+00 – 443+30 RT of Seward Highway Mainline Northbound	8/21/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	8/22/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	8/22/17	Mulched <b>BMP SI.00 C</b>
8/15/17 km	Grubbing, excavation, backfill 443+30 – 450+00 RT of Seward Highway Mainline Southbound	10/13/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	10/13/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	10/13/17	mulched <b>BMP SI.00 C</b>



STATE OF ALASKA  
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SWPPP GRADING & STABILIZATION ACTIVITIES LOG PAGE 6

Project Number: CFHWY00162

Project Name: Seward Hwy: Dimond to Dowling Recon

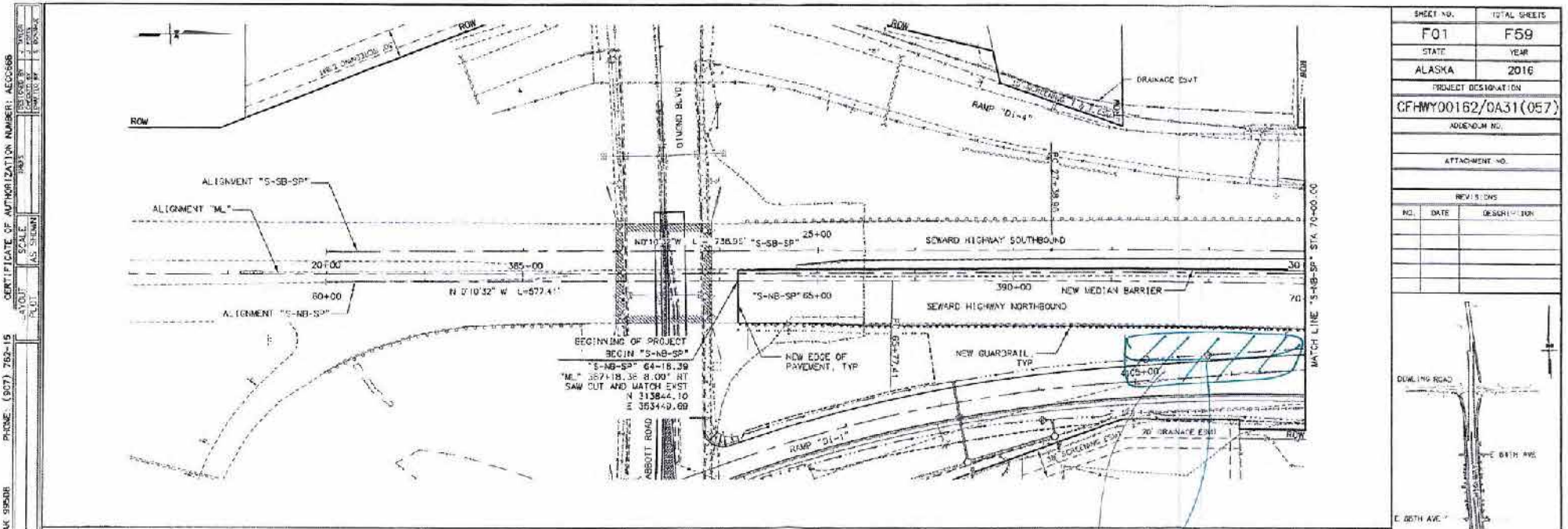
Project Area (if applicable):

Detailed instructions for completing this form can be found on the Alaska Construction Forms website: [http://dot.alaska.gov/stwddes/dcscconst/pop\\_constforms.shtml](http://dot.alaska.gov/stwddes/dcscconst/pop_constforms.shtml)

Date Grading Activity Initiated/ Initials	Description of Grading Activity and Location	Date Grading Activity Ceased (Temporary or Permanent) and Initials	Date Stabilization Measures Initiated (Temporary or Permanent) and Initials	Date Stabilization Measure Complete	Description of Stabilization Measure
9/6/17 km	Grubbing, excavation, backfill RT of Seward Highway Mainline SB 450+00 – 457+10	10/15/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	10/16/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	10/16/17	Mulched BMP 51.00 c
9/10/17 km	Grading Seward Highway Mainline Southbound 399+00 – 413+64	9/29/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	9/29/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	9/30/17	Paved
9/11/17 km	Grading Seward Highway Mainline Northbound 399+00 – 413+64	9/25/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	9/25/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	9/26/17	Paved
9/11/17 km	Grubbing, excavation, backfill 443+30 – 458+15 RT of Seward Highway Mainline NB	10/11/17 km T <input type="checkbox"/> P <input checked="" type="checkbox"/>	10/12/17 km T <input checked="" type="checkbox"/> P <input type="checkbox"/>	10/12/17	Mulched BMP 51.00 c
9/12/17 km	Grubbing, excavation, backfill 443+30 – 458+00 LT of Seward Highway Mainline SB	10/25/17 SN T <input checked="" type="checkbox"/> P <input type="checkbox"/>	10/26/17 SN T <input checked="" type="checkbox"/> P <input type="checkbox"/>	10/27/17	Mulched BMP 51.00 c
		T <input type="checkbox"/> P <input type="checkbox"/>	T <input type="checkbox"/> P <input type="checkbox"/>		
		T <input type="checkbox"/> P <input type="checkbox"/>	T <input type="checkbox"/> P <input type="checkbox"/>		
		T <input type="checkbox"/> P <input type="checkbox"/>	T <input type="checkbox"/> P <input type="checkbox"/>		

2018 Stabilization Map

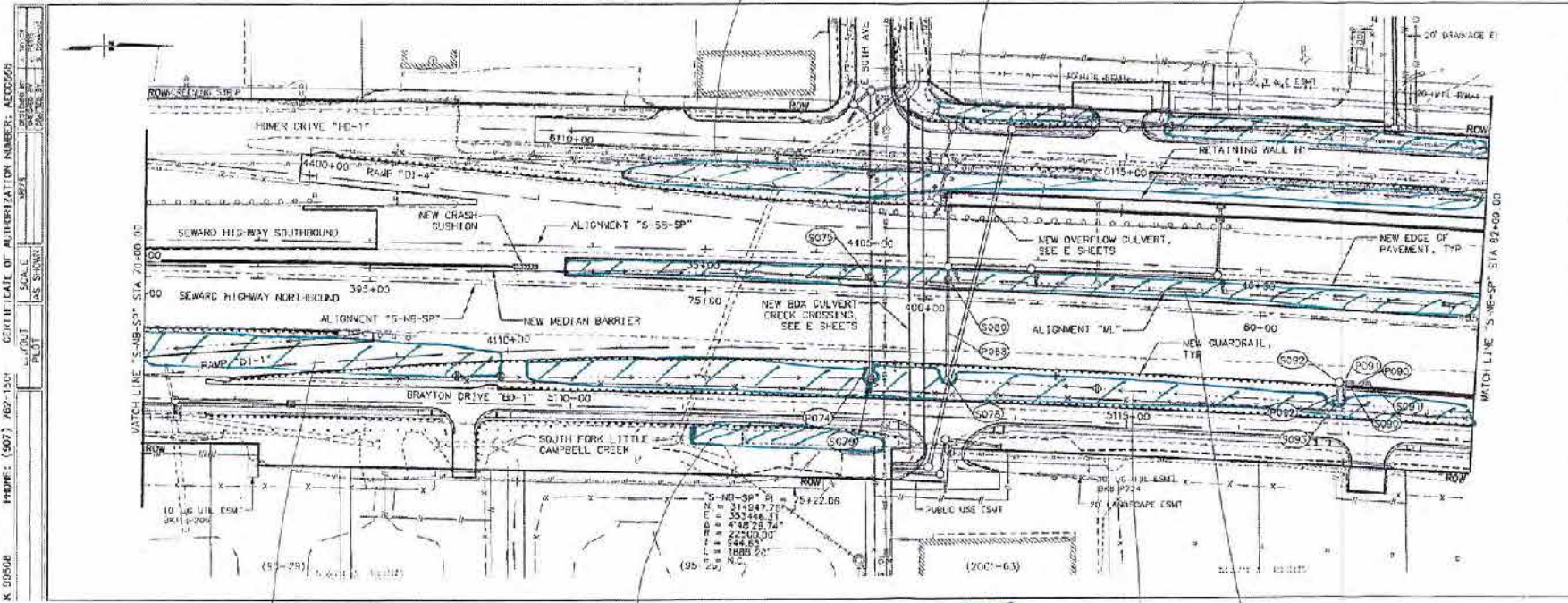
AMD# 48  
4-24-18 STN



SHEET NO.		TOTAL SHEETS	
F01		F59	
STATE		YEAR	
ALASKA		2016	
PROJECT DESIGNATION			
CFHWY00162/0A31(057)			
ADDENDUM NO.			
ATTACHMENT NO.			
REV'S/DWS			
NO.	DATE	DESIGNER	CHK

8/22/2017  
10/18/2017  
11/3/2017  
STOCKPILE  
MULCHED BMP SIC  
winter shutdown

AK 9908B PHONE: (907) 762-15 CERTIFICATE OF AUTHORIZATION NUMBER: AEC068  
 SCALE: AS SHOWN  
 DATE: 11/3/2017  
 DRAWN BY: J. BOWEN  
 CHECKED BY: J. BOWEN



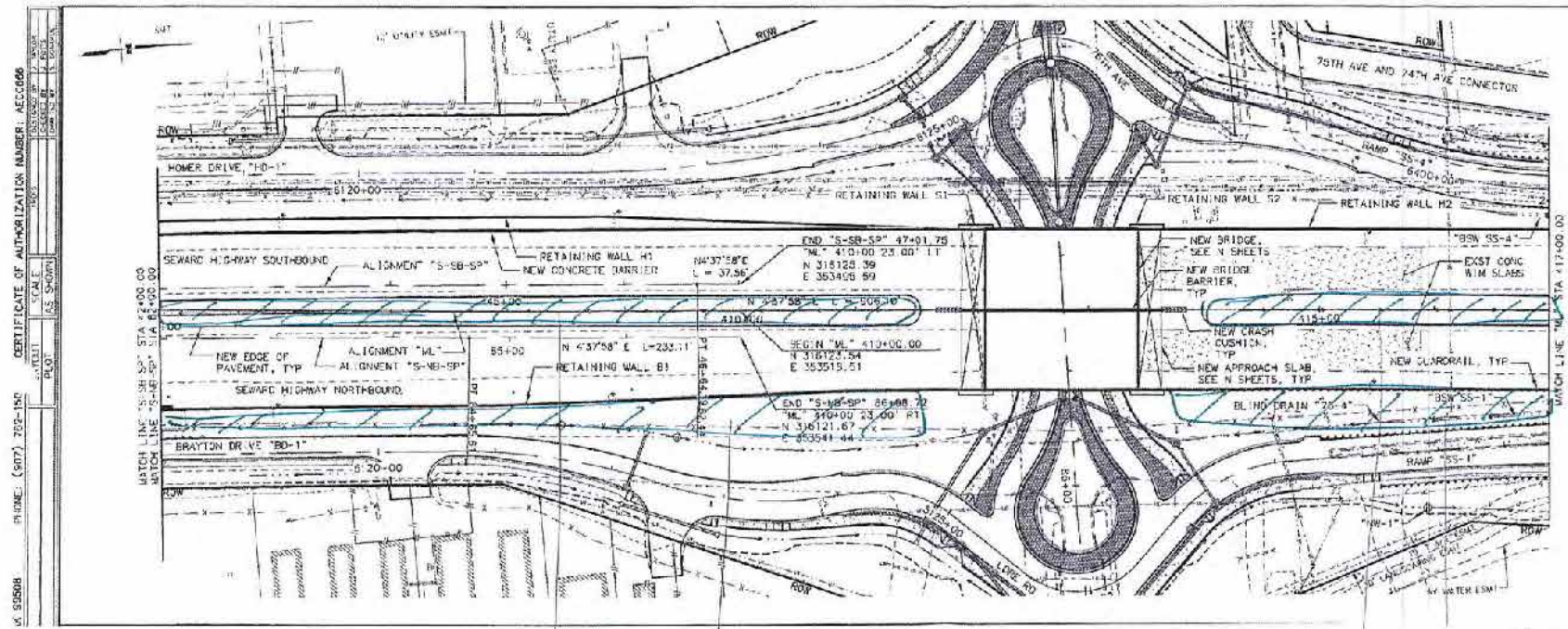
SHEET NO.	TOTAL SHEETS
F02	F59
STATE	YEAR
ALASKA	2018
PROJECT DESCRIPTION	
CFHWY00162/0A31(057)	
ADDENDUM NO.	
ATTACHMENT NO.	

REVISIONS		
NO.	DATE	DESCRIPTION

K. 00568  
 MAPS & SURVEYING  
 1000 W. 10TH AVENUE  
 ANCHORAGE, ALASKA 99501  
 PHONE: (907) 462-1500  
 FAX: (907) 462-1501  
 WWW.MAPSANDSURVEYING.COM

8/22/2017  
 10/26/2017  
 Mulch BMP SIC  
 Winter shutdown  
 10/10/2017  
 10/11/2017  
 10/12/2017  
 10/20/2017

2018 Stabilization Map



SHEET NO.	TOTAL SHEETS	
F04	F59	
STATE	YEAR	
ALASKA	2018	
PROJECT DESIGNATION		
CFHWY00182/0A31(057)		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION
DRAWING ROAD		
E 84TH AVE		
C 80TH AVE		

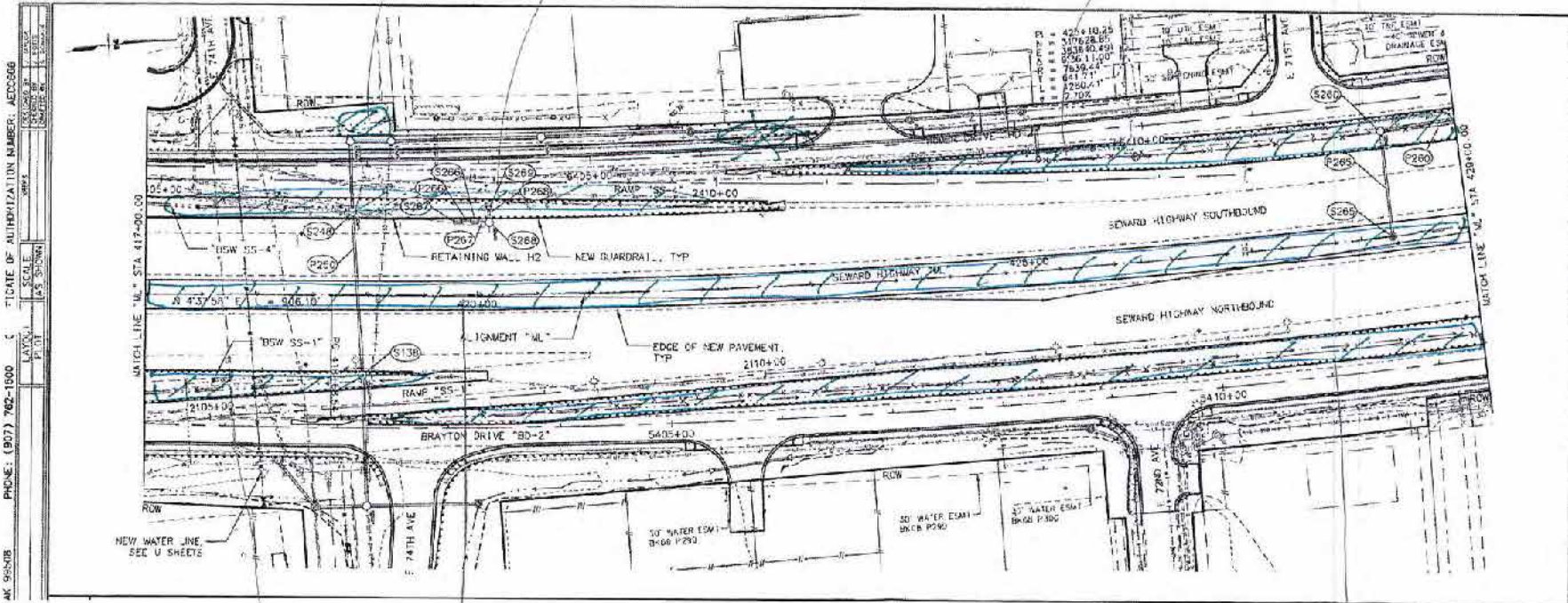
10/11/2017  
10/12/2017  
10/13/2017

11/3/2017

MUCH BMP SIC  
Winter shutdown

8/27/2017  
8/23/2017  
10/16/2017  
11/3/2017  
10/11/2017  
10/12/2017  
10/13/2017

U.S. 505266  
 PHONE: (907) 762-150  
 CERTIFICATE OF AUTHORIZATION NUMBER: AEC066  
 SCALE  
 AS SHOWN  
 TEST  
 PLOT



SHEET NO.		TOTAL SHEETS	
F05		F59	
STATE		YEAR	
ALASKA		2018	
PROJECT DESIGNATION			
CFHWY00182/0A31(057)			
ACCORD. IN NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

11/1/2017

8/22/2017  
10/16/2017

10/20/2017

8/23/2017  
11/3/2017

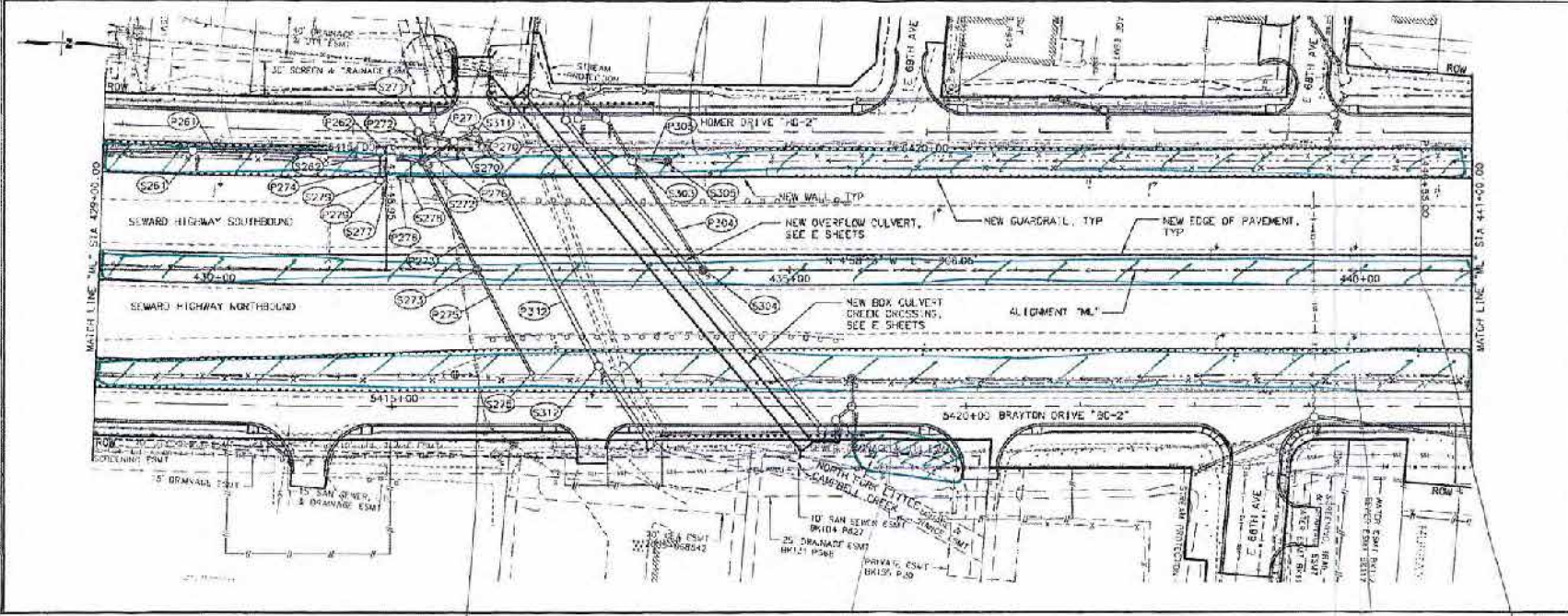
10/10/2017  
10/19/2017

Mulch BMP ST C  
Winter shutdown

6/6/2017  
6/8/2017  
8/29/2017  
8/23/2017  
10/13/2017

AL 959208 PHONE: (907) 762-1000 STATE OF AUTHORIZATION NUMBER: AEC0566  
 SCALE: 1" = 40' LAYOUT: 1" = 80' PLOT: 1" = 80'

U-89508 PHONE: (907) 762-1800 CE DATE OF AUTHORIZATION NUMBER: AEC0665  
 SCALE: AS SHOWN  
 LAYOUT: PLOT



*8/23/2017  
10/13/2017*

*8/23/2017  
10/13/2017  
11/1/2017*

*6/13/2017  
6/8/2017  
8/23/2017  
10/11/2017*

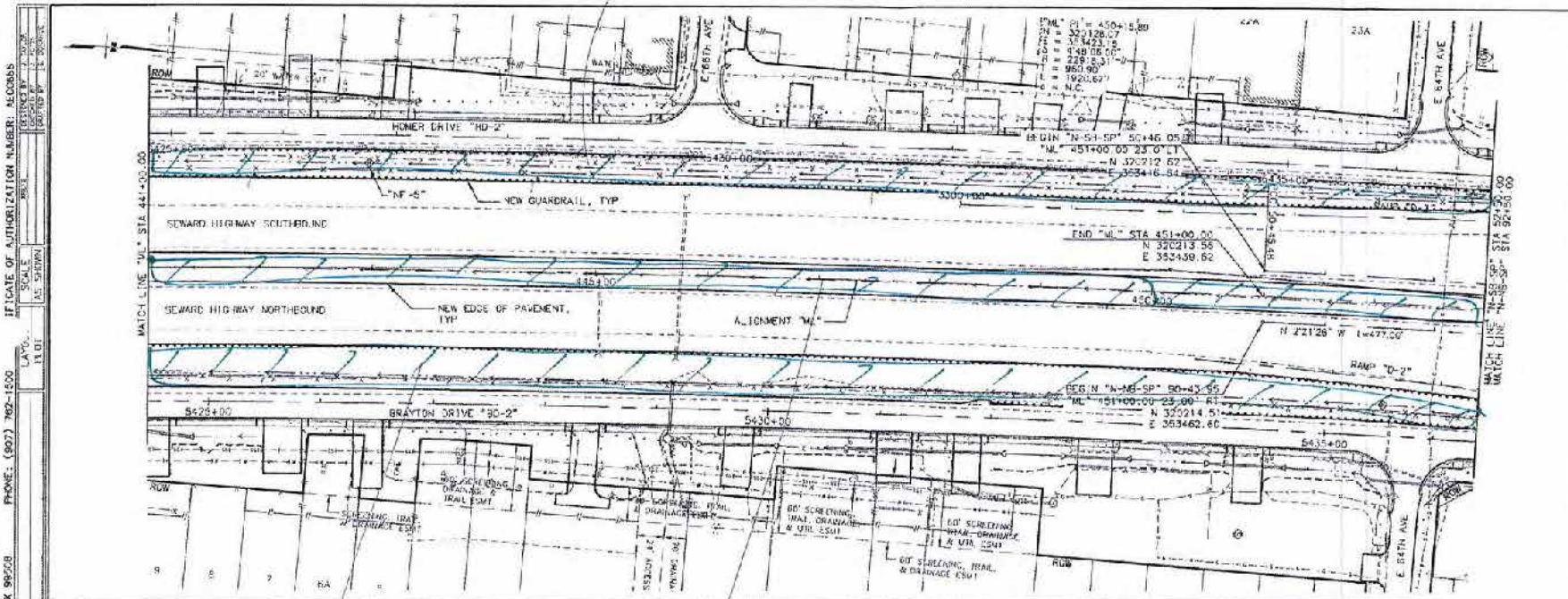
*6/13/2017  
10/11/2017*

*Much BMP SIC  
Wintershutdown*

*10/13/2017  
10/13/2017*

*10/11/2017  
10/10/2017  
10/12/2017*

SHEET NO.	TOTAL SHEETS	
F06	F59	
STATE	YEAR	
ALASKA	2015	
PROJECT DESIGNATION		
CFHWY00162/0A31(057)		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION
THIS SHEET		



SHEET NO.		TOTAL SHEETS	
F07		F59	
STATE		YEAR	
ALASKA		2016	
PROJECT DESIGNATION			
CFHWY00162/CA31(057)			
AGENCY/M NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

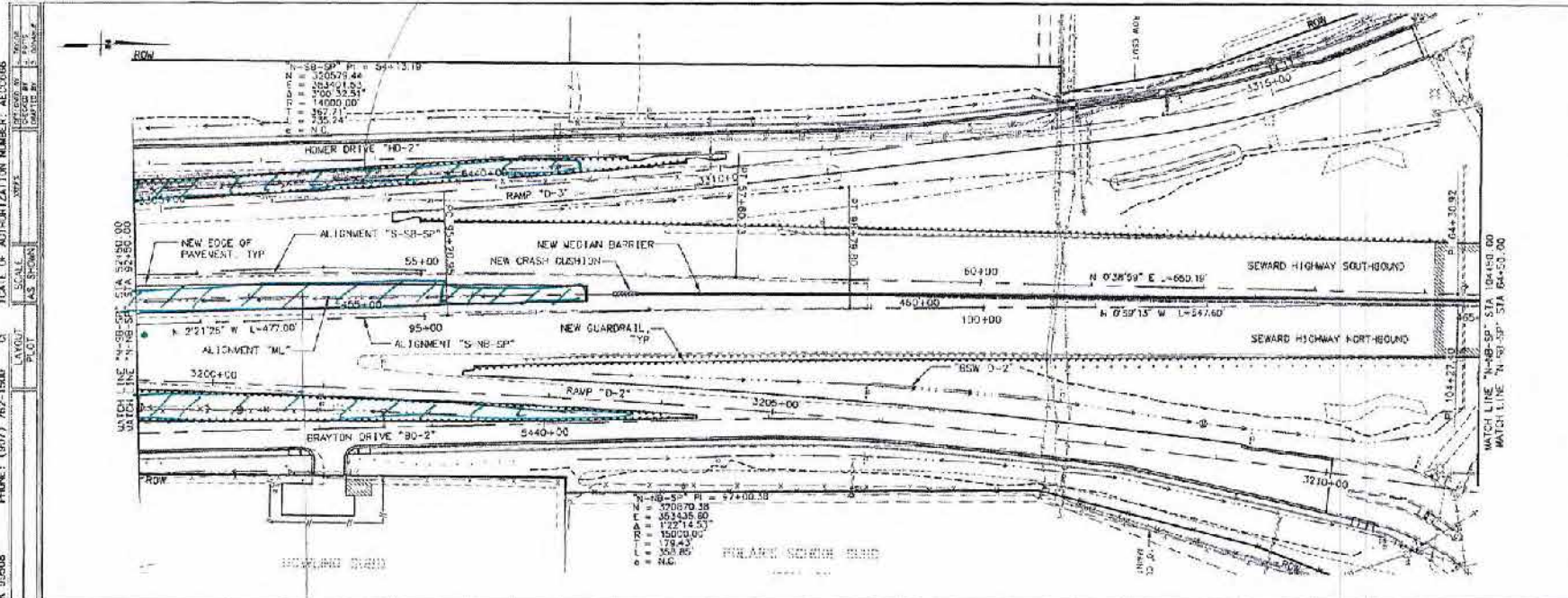
10/12/2017  
10/13/2017

10/16/2017  
10/11/2017  
10/20/2017

BMP SIC Mulch  
Winter shutdown

M 99558 PHONE: (907) 762-1500  
 IF DATE OF AUTHORIZATION NUMBER RECORDS  
 SCALE 1" = 100'  
 L.A.V. 11.01  
 DISTRICT 2007  
 AS SHOWN  
 10/12/2017





10/27/2017

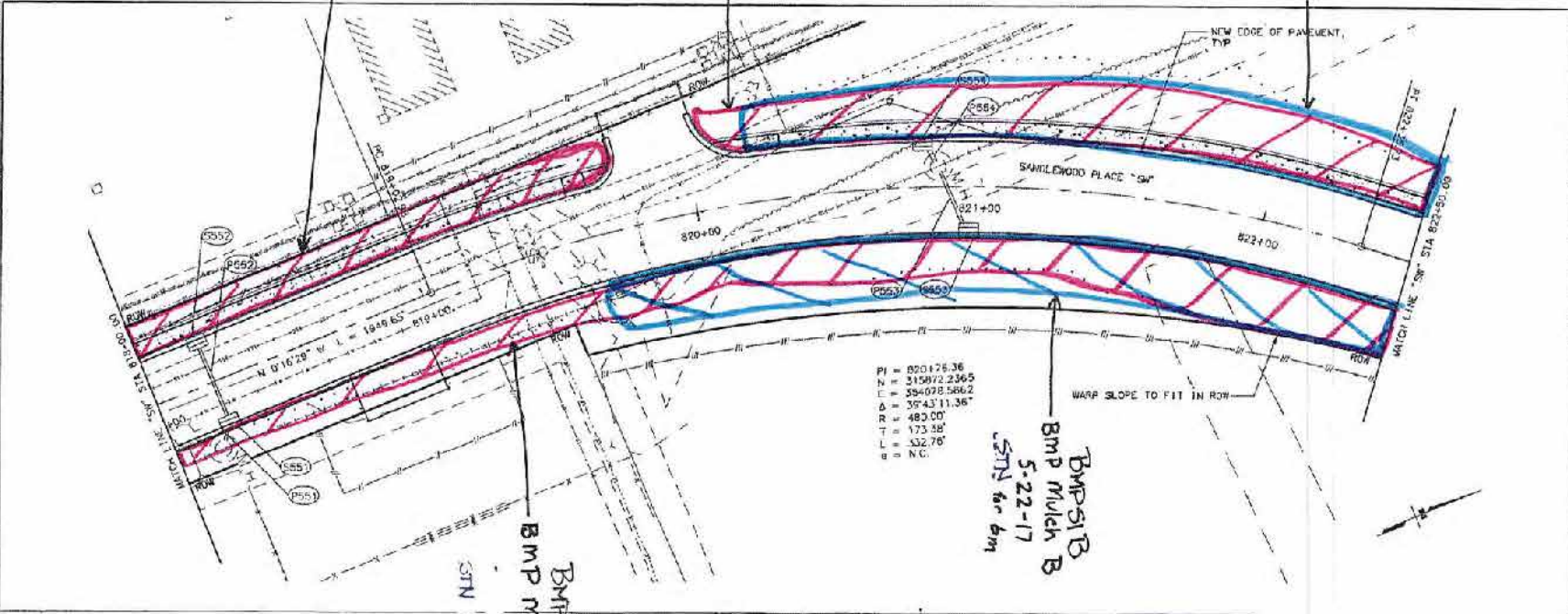
10/10/2017  
10/11/2017  
10/26/2017

Mulch BMP SIC  
Winter shutdown

SHEET NO.	TOTAL SHEETS	
F08	F59	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFHWY00162/0A31(057)		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION
THIS SHEET		

PHONE: (907) 762-1500 CERTIFICATE OF AUTHORIZATION NUMBER: ACE035E

SCALE	DATE
LAYOUT	AS SHOWN
AS SHOWN	AS SHOWN



PI = 820+75.36  
 TV = 2150+2.2365  
 TV = 284078.5862  
 Δ = 35°43'11.36"  
 TR = 483.00'  
 LR = 173.58'  
 LR = 132.70'  
 N.C.

BMP S1B  
 BMP Mulch B  
 5-22-17  
 STN for bin

BMP S1A  
 BMP Mulch A  
 4-29-17  
 STN for bin

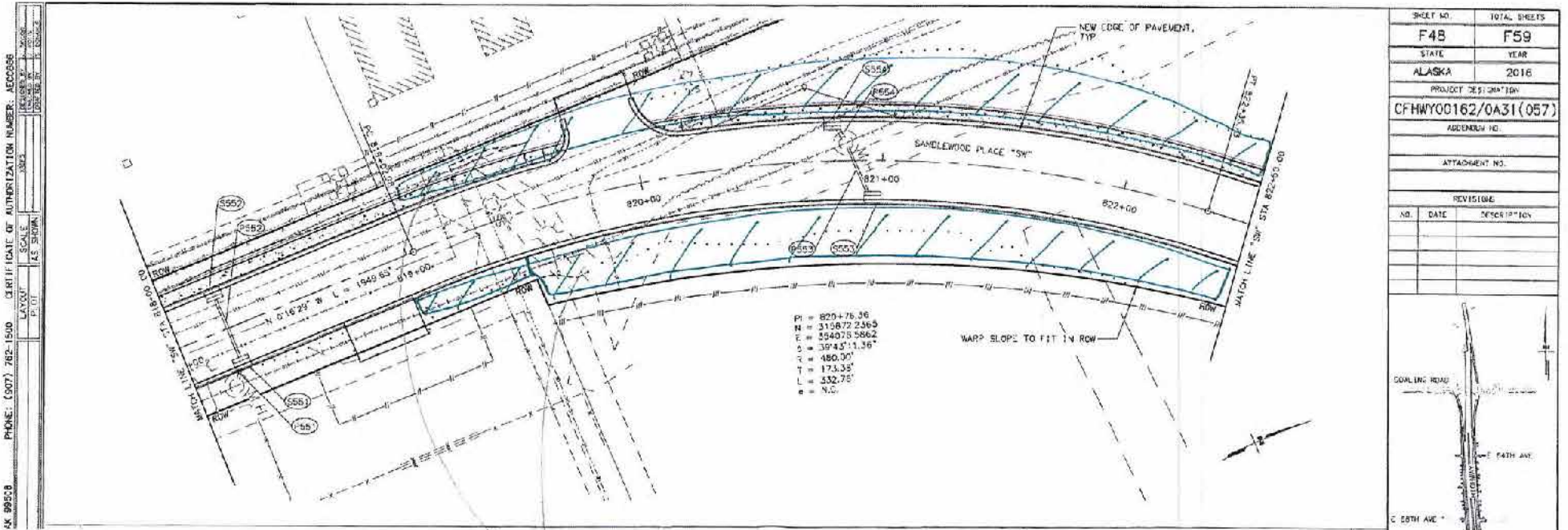
BMP S1A  
 BMP Mulch A  
 4-29-17  
 STN for bin

BMP S1A  
 BMP Mulch A  
 4-29-17  
 STN for bin

BMP S1B  
 BMP Mulch B  
 5-22-17  
 STN for bin

SHEET NO.	TOTAL SHEETS	
F48	F59	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFHWY00162/OA31(057)		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

# Mulch BMP STC Winter Shutdown



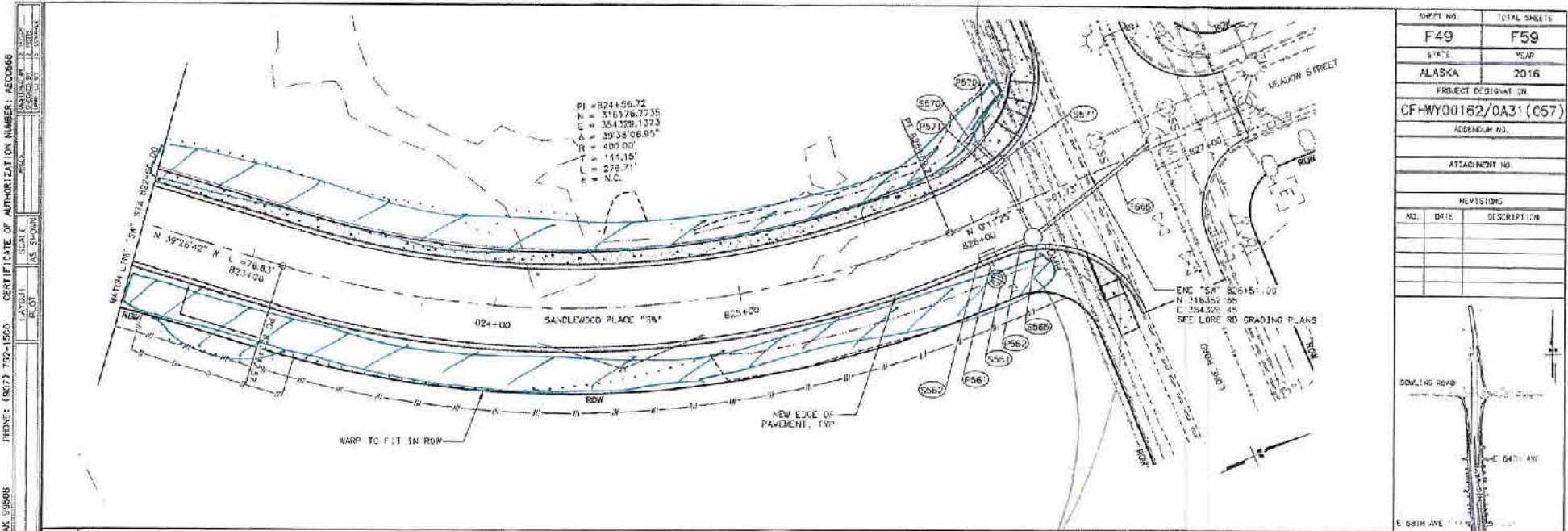
AK 09558 PHONE: (907) 762-1500 CERTIFICATE OF AUTHORIZATION NUMBER: AEC0006  
 LAYOUT SCALE AS SHOWN  
 DATE: 8/15/2017  
 DRAWN BY: [illegible]

8/15/2017  
 10/16/2017

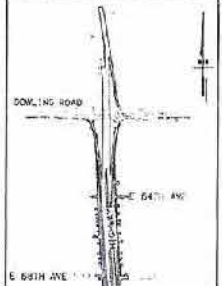


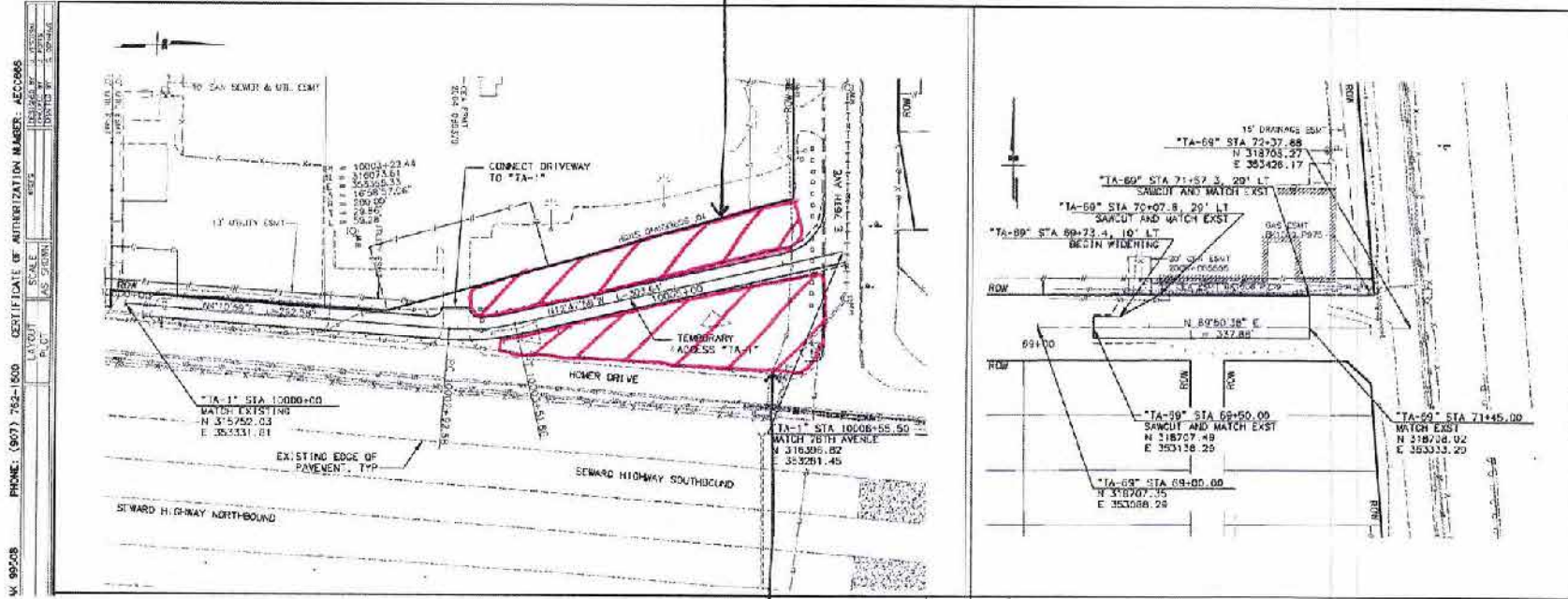
Mulch  
BMP SIC  
Winter shutdown

6/25/2017  
10/26/2017



SHEET NO.	TOTAL SHEETS	
F49	F59	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFHWY00182/OA31 (057)		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION





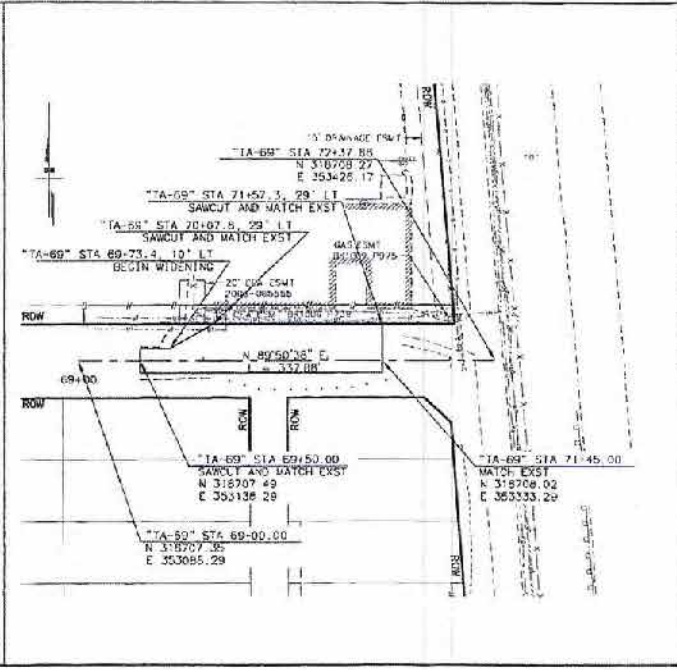
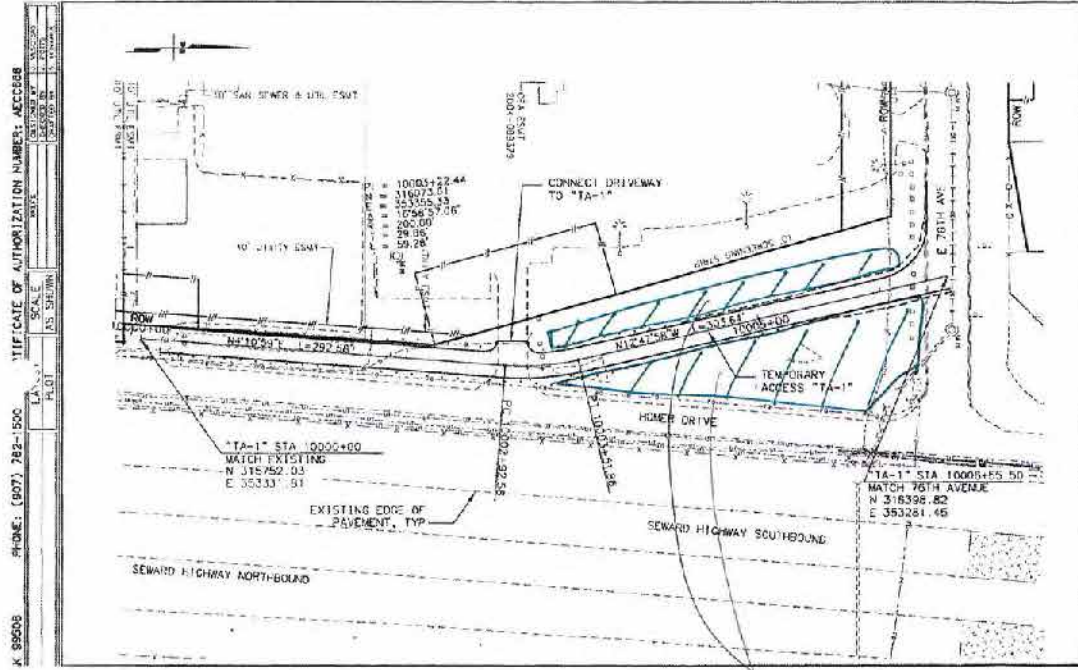
BMP 51A  
BMP Mulch A  
5-1-17  
STN for bm

BMP 51A  
BMP Mulch A  
4-29-17  
STN for bm

SHEET NO.	TOTAL SHEETS	
J05	J24	
STATE	YEAR	
ALASKA	2010	
PROJECT DESIGNATION		
CFHWY00162/0A31(057)		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

AK 89208 PHONE: (907) 762-1800 CERTIFICATE OF AUTHORIZATION NUMBER: ACC0865  
 DRAWN BY: J. ALSTON  
 CHECKED BY: J. ALSTON  
 DATE: 11/11/10  
 SCALE: AS SHOWN  
 LAYOUT PLOT

Mulch BMP SIC  
Winter shutdown



SHEET NO	TOTAL SHEETS	
J05	J24	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFHWY00162/0A31(057)		
ADDRESS NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

K. 99008 PHONE: (907) 282-1500 TITLE: CASE OF AUTHORIZATION NUMBER: AS0068  
 SCALE: AS SHOWN  
 DATE: 11/1/2017  
 DRAWN BY: J. J. JENSEN  
 CHECKED BY: J. J. JENSEN  
 PROJECT NO.: 162-0A31(057)

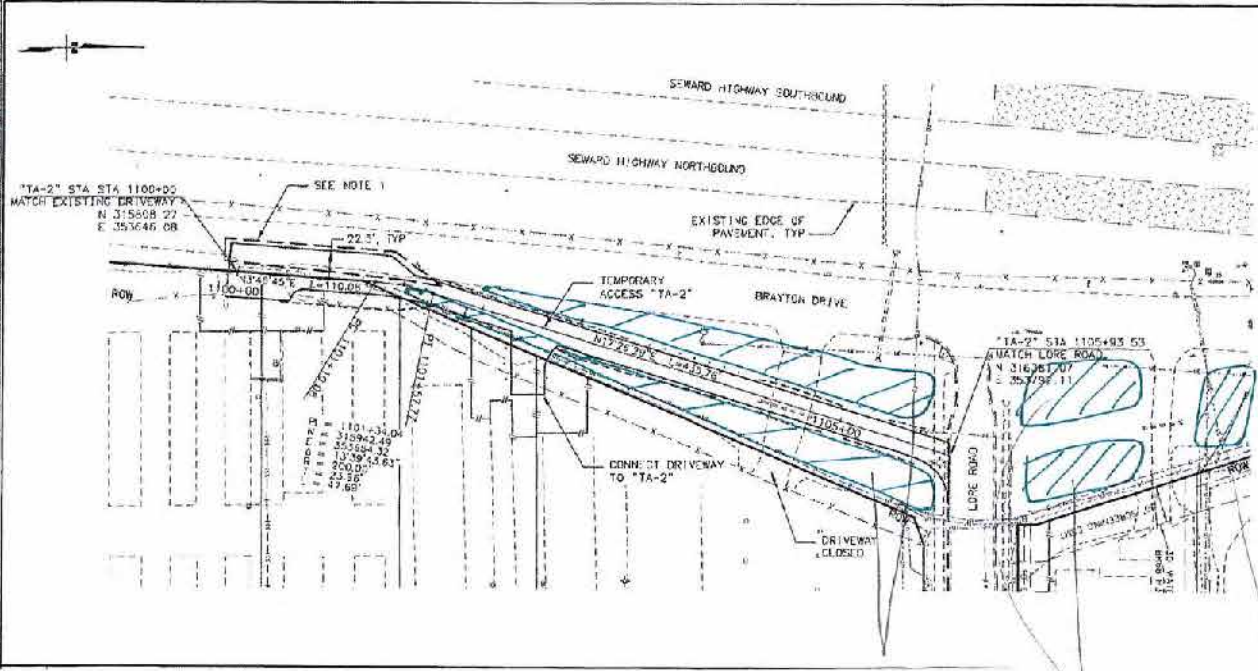
11/1/2017





Mulch & BMP SIC  
WINTER SHUTDOWN

CERTIFICATE OF AUTHORIZATION NUMBER: ACC0665  
 W. D360B PHONE: (907) 762-15  
 SCALE: AS SHOWN  
 DRAWN BY: J.S. SHOWN



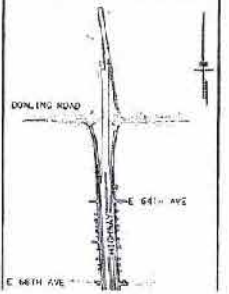
SHEET NO.	TOTAL SHEETS
J06	J24
STATE	YEAR
ALASKA	2016

PROJECT DESIGNATION  
 CFHWY00162/OA31(057)  
 ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

NO.	DATE	DESCRIPTION



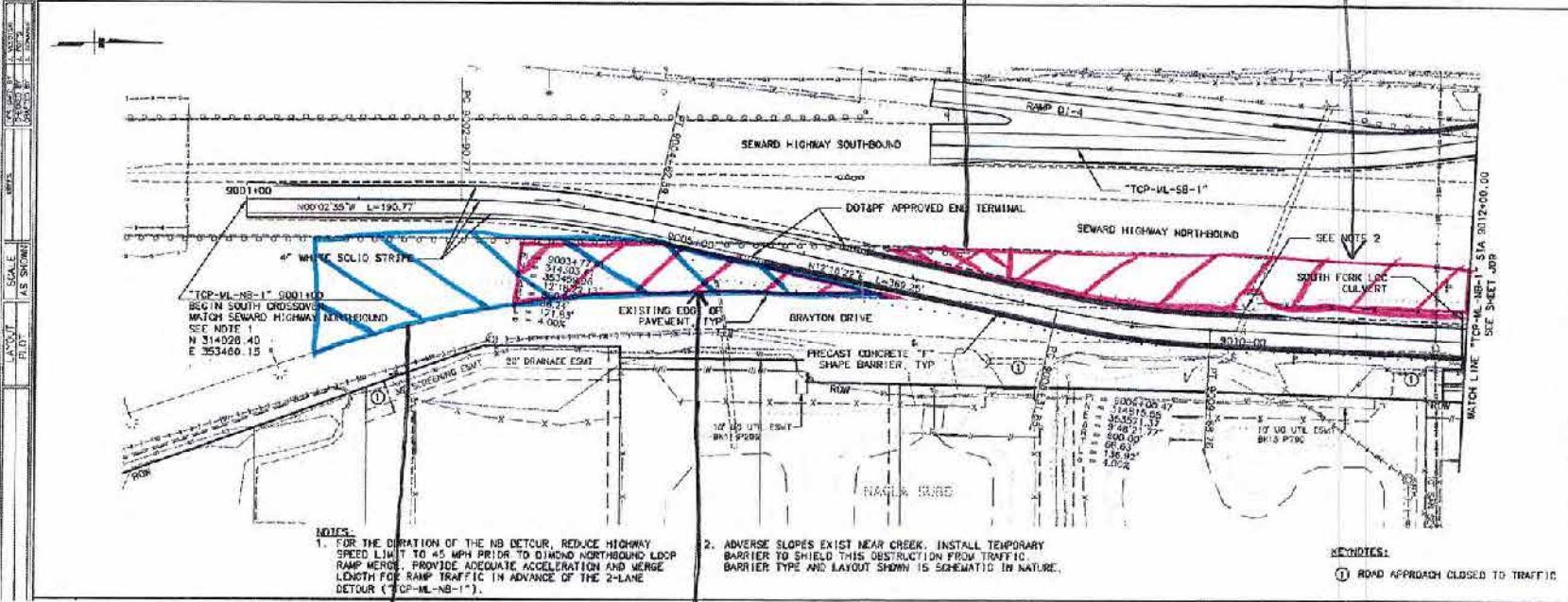
NOTES:  
 1. CONSTRUCT PORTION OF TEMPORARY ACCESS AFTER BRAYTON DRIVE IS CLOSED TO FRONTAGE ROAD TRAFFIC.

8/23/2017  
 11/12/2017

11/12/2017

11/12/2017

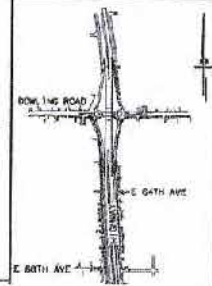
PHONE: (907) 762-1500 CERTIFICATE OF AUTHORIZATION NUMBER: AEC00668



NOTES:  
1. FOR THE DURATION OF THE NB DETOUR, REDUCE HIGHWAY SPEED LIMIT TO 45 MPH PRIOR TO DITCHED NORTHBOUND LOOP RAMP HEREIN. PROVIDE ADEQUATE ACCELERATION AND MERGE LENGTH FOR RAMP TRAFFIC IN ADVANCE OF THE 2-LANE DETOUR ("TCP-ML-NB-1").  
2. ADVERSE SLOPES EXIST NEAR CREEK. INSTALL TEMPORARY BARRIER TO SHIELD THIS OBSTRUCTION FROM TRAFFIC. BARRIER TYPE AND LAYOUT SHOWN IS SCHEMATIC IN NATURE.

REVISIONS:  
① ROAD APPROACH CLOSED TO TRAFFIC

SHEET NO.	TOTAL SHEETS	
JOB	J24	
STATE	YEAR	
ALASKA	2018	
PROJECT DESIGNATION		
CFHWY00162/0A31(057)		
PROGRAM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

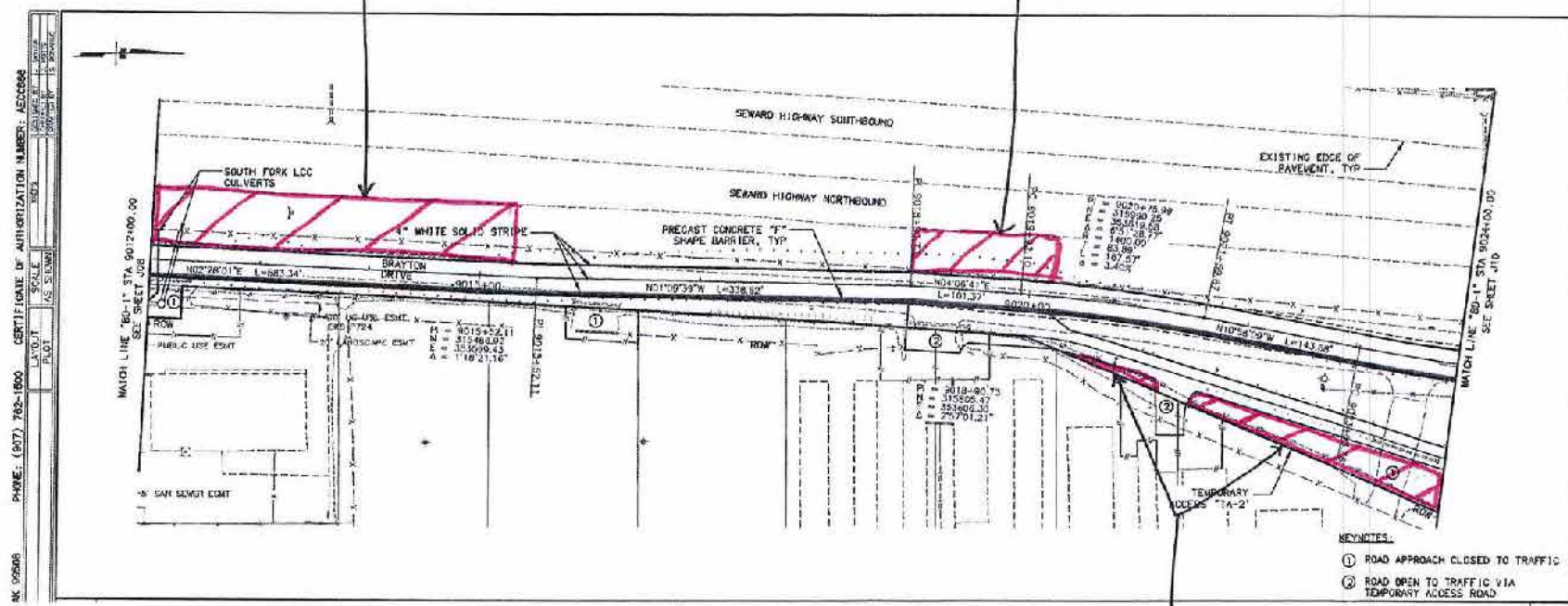


BMP51A  
BMP Mulch A  
5-3-17  
STN for bm

BMP51A  
BMP Mulch A  
5/3/17  
STN for bm

BMP 51B  
BMP Mulch B  
5-22-17  
STN for bm

BMP 51A  
BMP Mulch A  
5-3-17  
STN for bm

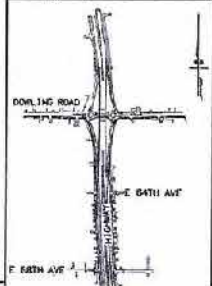


BMP SIA  
BMP Mulch A  
5/3/17  
STN. for bm

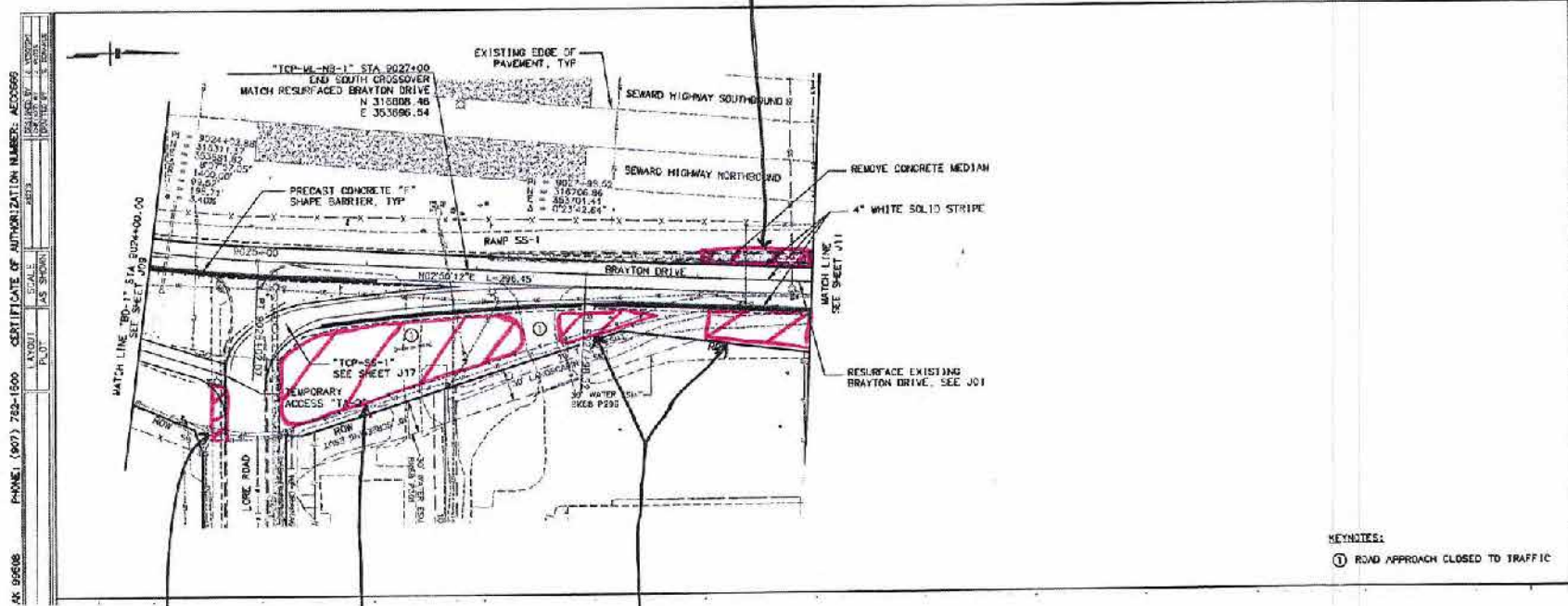
STOCK PILE  
BMP Mulch A  
5/3/17  
STN. for bm

BMP Mulch A  
4-29-17  
STN. for bm

SHEET NO.	TOTAL SHEETS	
J09	J24	
STATE	YEAR	
ALASKA	2018	
PROJECT DESIGNATION		
CF-MY00162/0A31 (057)		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION



- KEYNOTES:
- ① ROAD APPROACH CLOSED TO TRAFFIC
  - ② ROAD OPEN TO TRAFFIC VIA TEMPORARY ACCESS ROAD



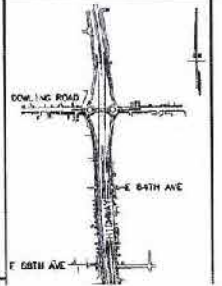
BMP S1A  
 BMP Mulch A  
 4-29-17  
 STN. for bm

BMP S1A  
 BMP Mulch A  
 5-3-17  
 STN. for bm

BMP S1A  
 BMP Mulch A  
 5-3-17  
 STN. for bm

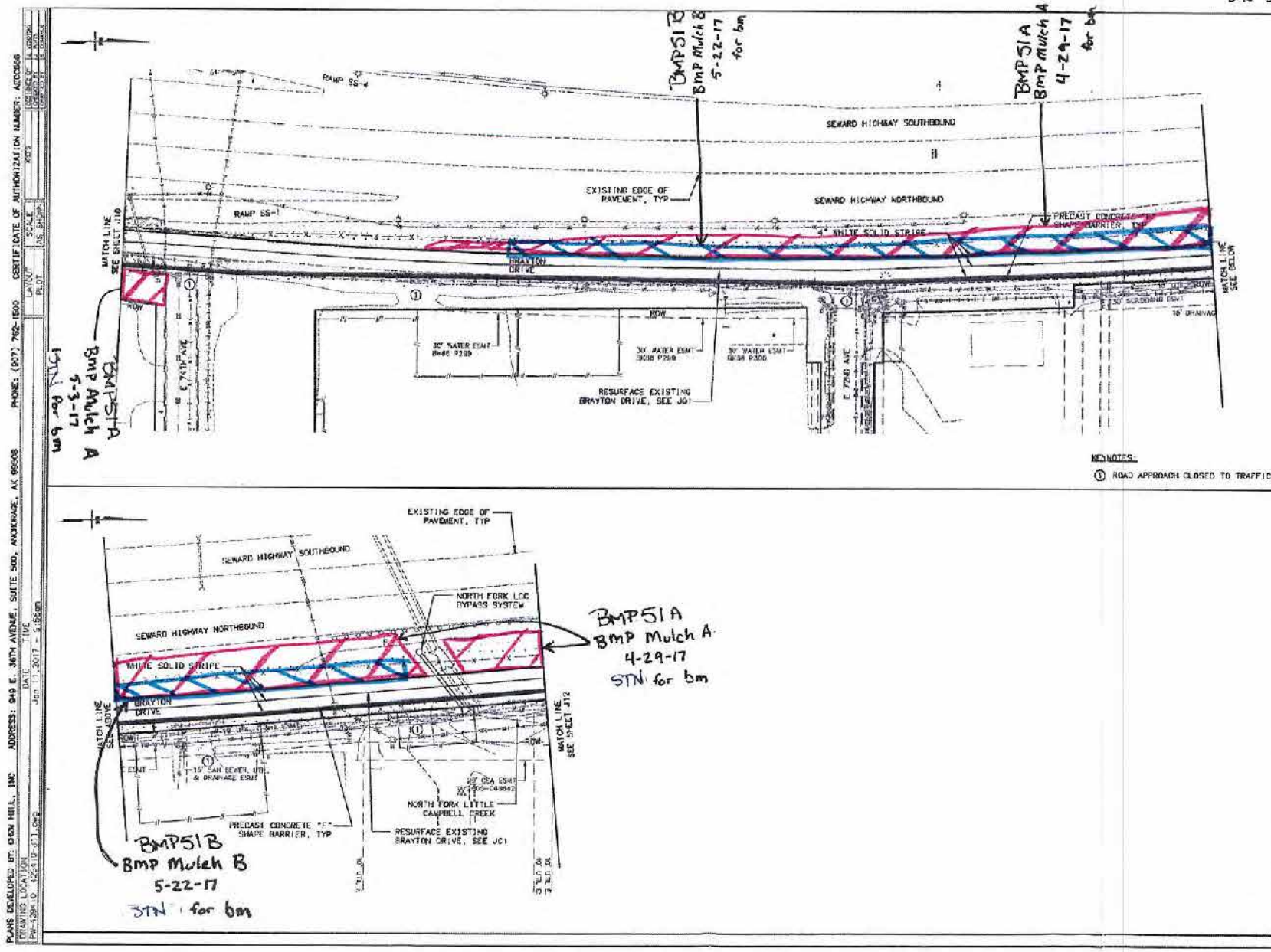
BMP S1A  
 BMP Mulch A  
 5-3-17  
 STN. for bm

SHEET NO.	TOTAL SHEETS	
J10	J24	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFHWY00162/0A31(057)		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

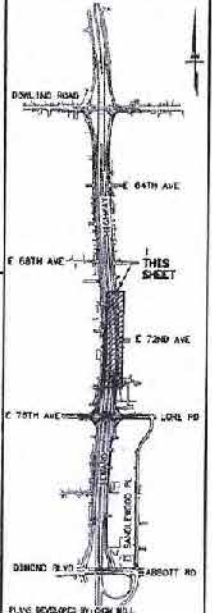


KEYNOTES:  
 ① ROAD APPROACH CLOSED TO TRAFFIC

2018 Stabilization Map



SHEET NO.	TOTAL SHEETS	
J11	J24	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFHMY00162/0A31(057)		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

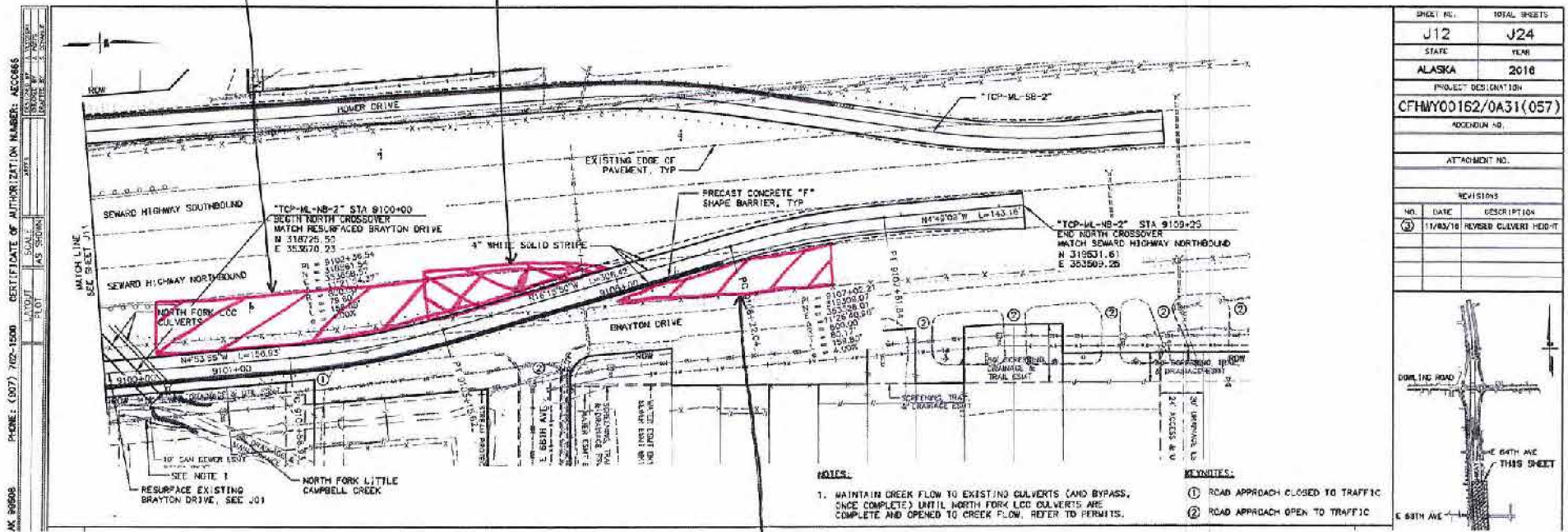


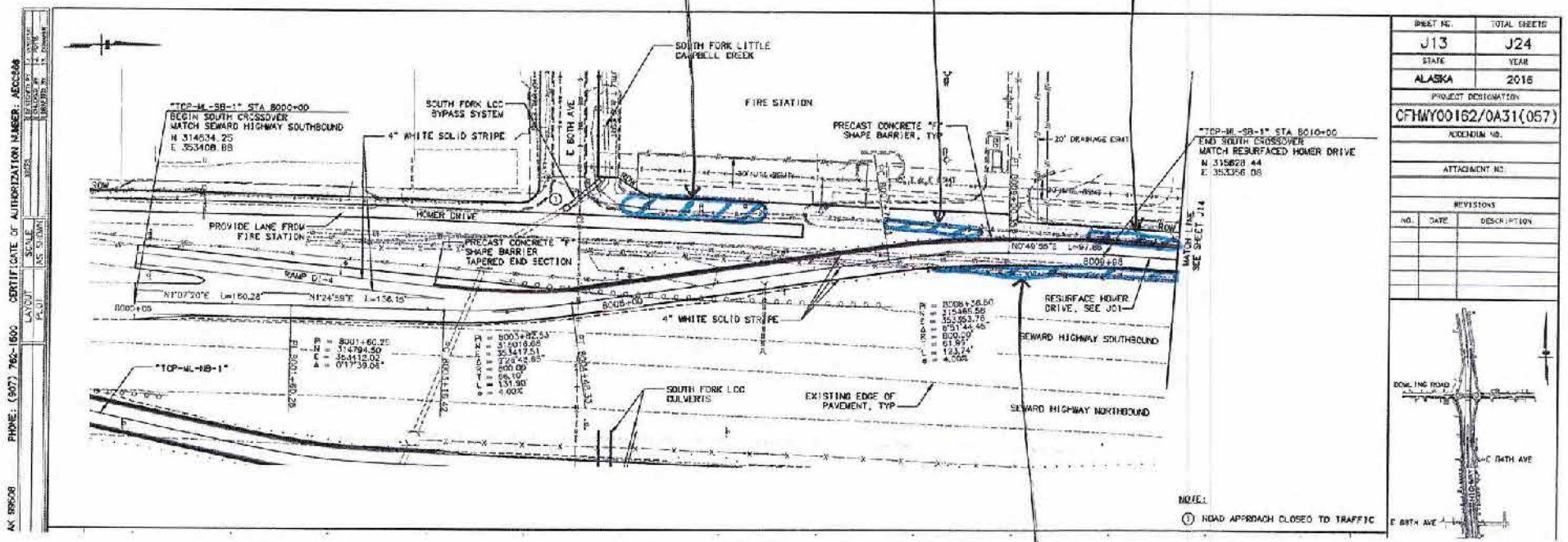
PLANS DEVELOPED BY: DEN HILL, INC.

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC SAFETY  
 SEWARD HIGHWAY  
 DIVISION TO DOWLING, PHASE 1  
 TRAFFIC ROUTING PLAN  
 PLAN AND PROFILE

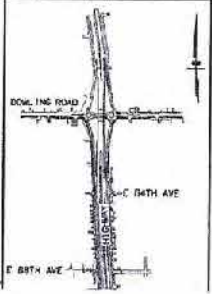
DETOUR "TOP-16-NB-1" 0027+00  
 TO "TOP-16-NB-2" 9100+00

PLANS DEVELOPED BY: DEN HILL, INC. ADDRESS: 610 E. 36TH AVENUE, SUITE 500, ANCHORAGE, AK 99508 PHONE: (907) 762-1800  
 PROJECT NO.: 2016-00162-0A31(057) DATE: JUL 11, 2017 SCALE: AS SHOWN  
 DRAWING NO.: 2016-00162-0A31(057) SHEET NO.: J11 OF J24



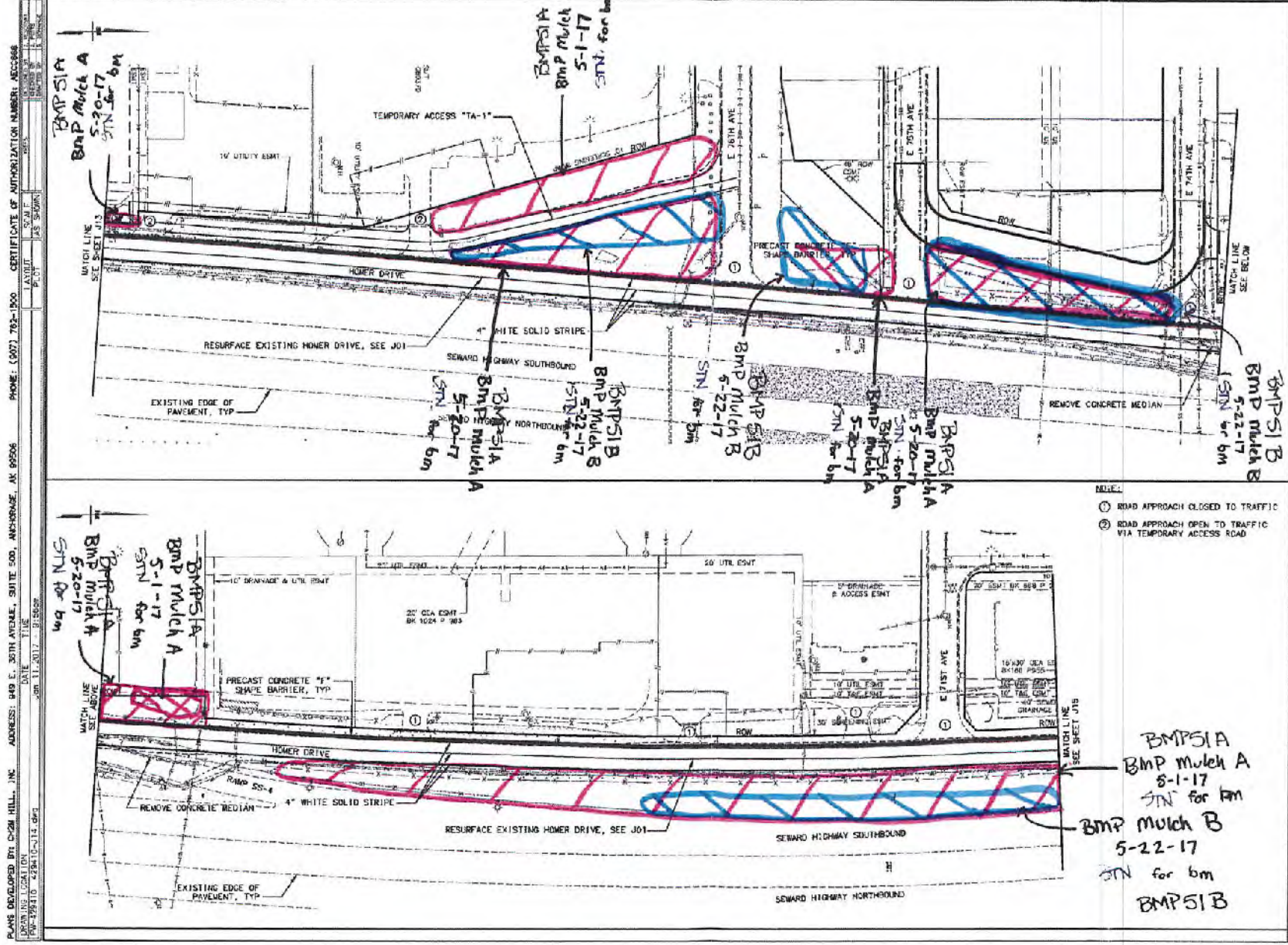


SHEET NO.	TOTAL SHEETS	
J13	J24	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFHWY00162/0A31(057)		
REVISIONS		
NO.	DATE	DESCRIPTION



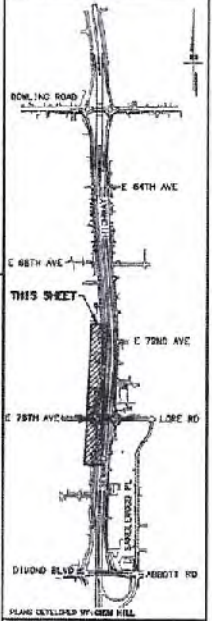
NOTE: 1 ROAD APPROACH CLOSED TO TRAFFIC

AK 89608 PHONE: (907) 762-1600 CERTIFICATE OF AUTHORIZATION NUMBER: ACC0048



- NOTE:
- ① ROAD APPROACH CLOSED TO TRAFFIC
  - ② ROAD APPROACH OPEN TO TRAFFIC VIA TEMPORARY ACCESS ROAD

SHEET NO.	TOTAL SHEETS	
J14	J24	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFHWY00162/OA31(057)		
APPENDIX NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION



THIS SHEET

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
SEWARD HIGHWAY  
DIWOND TO DOWLING, PHASE 1  
TRAFFIC ROUTING PLAN AND PROFILE  
RETURN "TOP-AL-SB-1" 8010-00 TO "TOP-AL-SB-2" 8100-00

PLANS DEVELOPED BY: GDM HILL, INC. ADDRESS: 849 E. 30TH AVENUE, SUITE 500, ANCHORAGE, AK 99506  
 PHONE: (907) 762-1900 CERTIFICATE OF AUTHORIZATION NUMBER: A62-948  
 DATE: 11/20/17  
 DRAWN BY: JAS/SPM/ML  
 CHECKED BY: JAS/SPM/ML  
 SCALE: AS SHOWN  
 SHEET NO. J14 OF 24

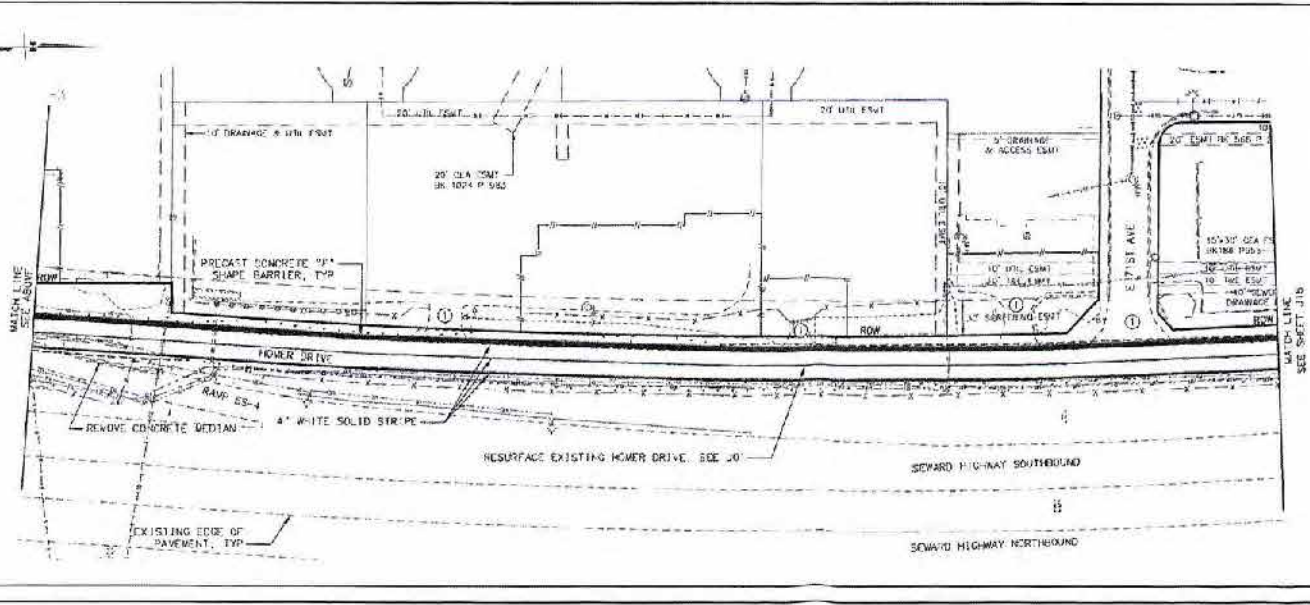
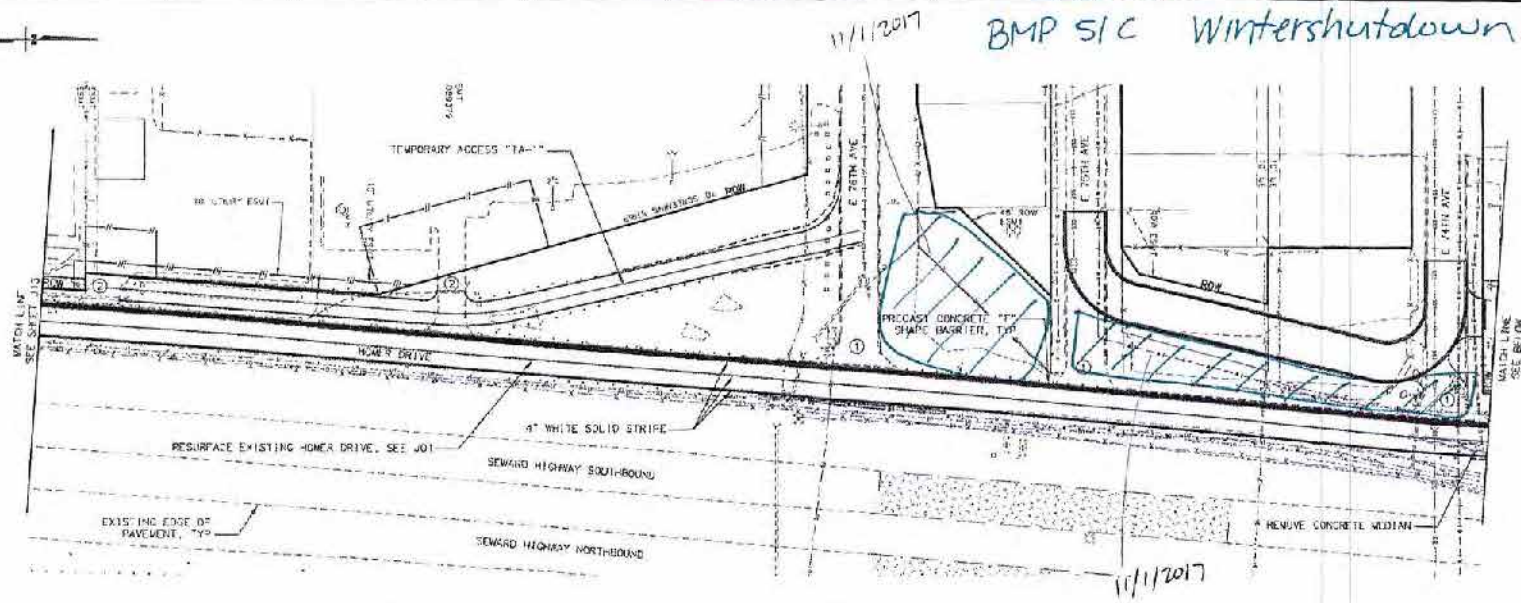


PLANS DEVELOPED BY: CH2M HILL, INC. ADDRESS: 549 E. 56TH AVENUE, SUITE 530, ANCHORAGE, AK 99508 PHONE: (907) 762-1800 CERTIFICATE OF AUTHORIZATION NUMBER: 660688  
 DRAWING LOCATION: DATE: 11/11/2017  
 FILE: 425410-14.dwg DATE: 02/20/15 - 7:48am

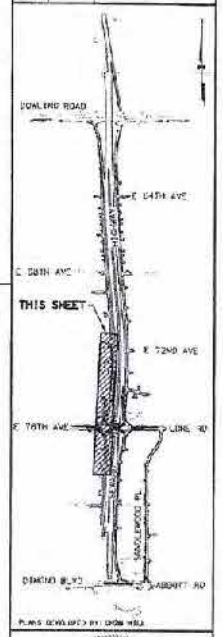
Mulch  
 BMP SIC Wintershutdown

2018 Stabilization Map

SHEET NO.	TOTAL SHEETS	
J14	J24	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
CFH-WY00162/OA31(057)		
ADDRESS NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION



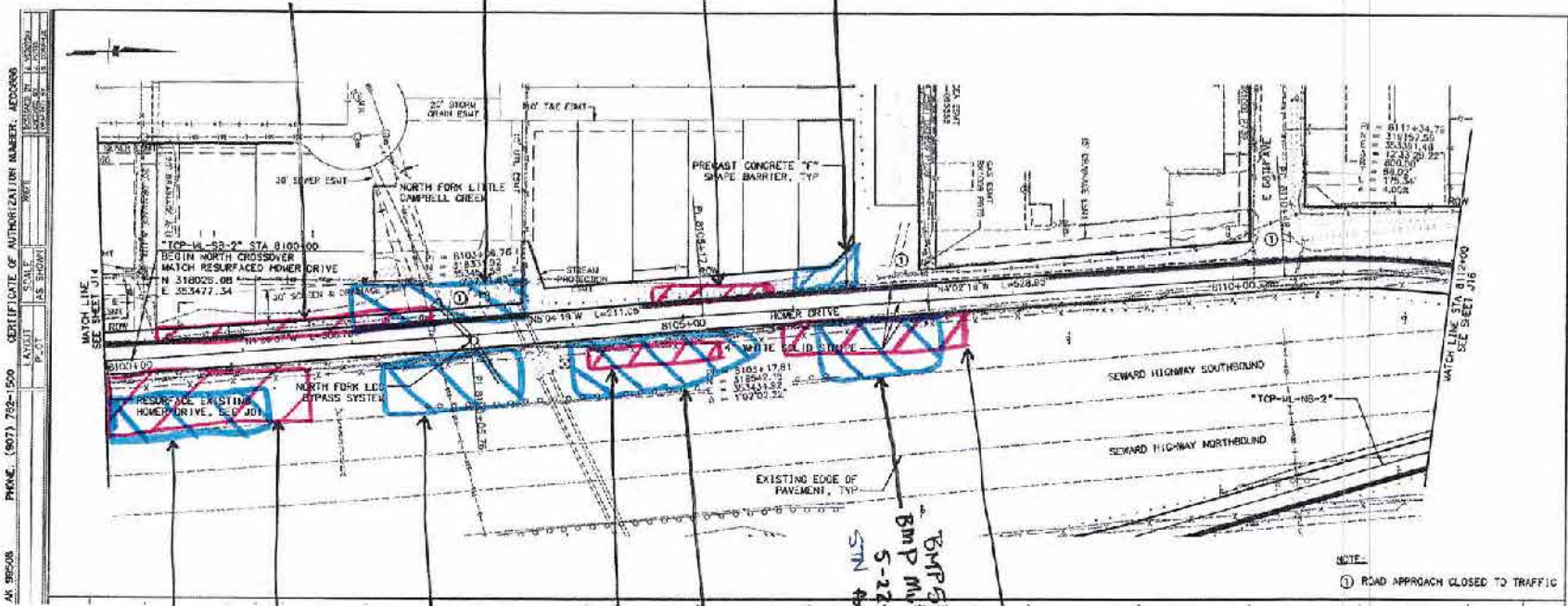
- NOTE:
- ROAD APPROACH CLOSED TO TRAFFIC
  - ROAD APPROACH OPEN TO TRAFFIC VIA TEMPORARY ACCESS ROAD



PLANS DEVELOPED BY: CH2M HILL

STATE OF ALASKA  
 DEPARTMENT OF PROFESSIONAL REGULATION  
 AND PUBLIC SAFETY  
 ENGINEERING  
 DAVID L. HILL  
 LICENSE NO. 85116  
 EXPIRES 12/12/2017

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC SAFETY  
 SEWARD HIGHWAY  
 01 MONROE TO DOWLING, PHASE 1  
 TRAFFIC ROUTING PLAN  
 AND PROFILE  
 DETOUR "TOP-ML-SB-1" 6210+00  
 TO "TOP-ML-SB-2" 8155+00



SHEET NO.	TOTAL SHEETS	
J15	J24	
STATE	YEAR	
ALASKA	2018	
PROJECT DESIGNATION		
CFHMY00162/0A31(057)		
ADDRESS NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

BMP S1A  
BMP Mulch A  
5-20-17  
STN for 6m

BMP S1B  
BMP Mulch B  
5-22-17  
STN for 6m

BMP S1A  
BMP Mulch A  
5-20-17  
STN for 6m

BMP S1B  
BMP Mulch B  
5-22-17  
STN for 6m

BMP S1A  
BMP Mulch A  
5-20-17  
STN for 6m

BMP S1B  
BMP Mulch B  
5-22-17  
STN for 6m

BMP S1A  
BMP Mulch A  
5-20-17  
STN for 6m

BMP S1B  
BMP Mulch B  
5-22-17  
STN for 6m

BMP S1A  
BMP Mulch A  
5-20-17  
STN for 6m

BMP S1B  
BMP Mulch B  
5-22-17  
STN for 6m

BMP S1A  
BMP Mulch A  
5-20-17  
STN for 6m

BMP S1B  
BMP Mulch B  
5-22-17  
STN for 6m



South Fork Little Campbell Creek box culvert outlet with down-slope sediment control measures installed prior to start of construction and spring thaw. (DEC Photo 12)



North Fork Little Campbell creek with down-slope sediment control measures installed prior to start of construction within proximity. (DEC Photo 23)



South Fork Little Campbell Creek reconstruction area with down-slope sediment control measures installed prior to start of construction and spring thaw. (DEC Photo 16)



North Fork Little Campbell Creek box culvert with down-slope sediment control measures. (DEC Photo 24)



Compost sock installed by edge of creek near inlet of North Fork Little Campbell Creek. (DEC Photo 25)



North Fork Little Campbell Creek box culvert with down-slope sediment control measures. (DEC Photo 26)

BMP 51.00A&B



Amd. # 38  
 RB 12/13/17

Description

A MULCH AND SOIL STABILIZER USED IN HYDRAULIC SEEDING AND EROSION CONTROL CONSISTING OF A SPECIAL BLEND OF WOOD BASED KRAFT FIBERS MIXED WITH SELECTED CELLULOSIC FIBERS. THE FIBERS ARE PROCESSED THROUGH SPECIAL GRINDING AND SCREENING EQUIPMENT TO PRODUCE THE FIBER LENGTHS REQUIRED FOR REINFORCING AND STABILIZING THE MULCH. SPECIAL CHEMICALS ARE ADDED DURING MANUFACTURE TO PRODUCE A GREEN COLOR AND RAPID FIBER DISPERSION WHEN ADDED TO WATER TO PRODUCE A UNIFORM SLURRY HAVING GOOD SPRAYING AND PUMPING CHARACTERISTICS.

Physical

PERCENT MOISTURE	12% MAXIMUM
PH	7.0 TYPICAL
DENSITY	1.5 TO 2.0 LBS/CUBIC FT.
COLOR	DARK GREEN (when mixed with water)

Performance

1 WATER HOLDING CAPACITY	1442.5% +/- 100% PER CAL TRANS TEST METHOD
2 WATER HOLDING CAPACITY DYE	11:1 RATIO PER USDA FOREST SERVICE TEST METHOD
3 SOIL STABILITY TEST	WATER SOLUBLE, NON-TOXIC, 48 HOUR FADE NO MOVEMENT UNDER 6" RAINFALL/HR @ 45 DEGREE ANGLE
4 GRASS GROWTH INDEX	SUPERIOR TO COMPETITIVE WOOD FIBER & STRAW

Uses

- FLAT SURFACES
  - SLOPES
- USE AS IS  
 2:1 OR GREATER  
 (IF NEEDED, USE TACKIFIER)

Packaging

CONSULT YOUR NEAREST MANUFACTURER FOR ASTRO-MULCH, OR CALL 907-563-3644

References

1. TESTS CONDUCTED BY PITTSBURGH TESTING LABORATORY PER STATE OF CALIFORNIA DEPT. OF TRANSPORTATION (CAL TRANS) REPORT NO. CA-DOT-TL-2167-1-76-36
2. TESTS CONDUCTED BY PITTSBURGH TESTING LABORATORY PER U.S.D.A. FOREST SERVICE SPECIFICATION R-2 CALLING FOR 9:1 OR GREATER RATIO
3. TESTS CONDUCTED AT UNIVERSITY OF CALIFORNIA DAVIS. COPY AVAILABLE.
4. TESTS CONDUCTED AT VIRGINIA POLYTECHNIC INSTITUTE, COLLEGE OF AGRICULTURE & LIFE SCIENCE COPY AVAILABLE.

Manufactured & Distributed  
 Thermo-Kool of Alaska, Inc.  
 6348 Quinhagak  
 Anchorage, AK. 99507  
 907-563-3644

1 of 7

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Seward Highway: Dimond Boulevard to  
Dowling Road Reconstruction, Phase 1  
0A31(057)/CFHWY00162

MATERIAL SAFETY DATA SHEET

TURF TRAX® GREEN

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED FOR:

LOVELAND PRODUCTS, INC.  
P.O. Box 1286 • Greeley, CO 80632-1286

APPROVED

FOR 641 (2) DIRECTIVE "E"  
24-Hour Emergency Phone: 1-800-424-9300  
Medical Emergencies: 1-800-301-7976  
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: TURF TRAX® GREEN SPRAY INDICATOR FOR TURF  
CHEMICAL NAME: Mixture  
CHEMICAL FAMILY: Mixture  
EPA REG. NO.: not applicable  
MSDS Number: .171433-07b-LPI

MSDS Revisions: Section 1

Date of Issue: 07/24/07

Supersedes: 01/10/07

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN - CAUTION - May cause temporary eye and skin irritation. In case of contact, flush with large amounts of water. If irritation persists, get medical attention. In case of skin contact, flush with water. Prolonged inhalation may lead to respiratory tract irritation. Prolonged or repeated contact with eyes or skin may result in irritation. Exposure to unprotected skin areas may cause temporary staining. May provoke asthmatic response in persons with asthma who are sensitive to airway irritants. Ingestion of large quantities may be harmful.

This product is blue liquid with slight odor.

3. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients:	Percentage by Weight:	CAS No.	TLV (Units)
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Contains no reportable quantities of hazardous ingredients

4. FIRST AID MEASURES

If in swallowed: Have person drink large amounts of water and induce vomiting. Do not give anything by mouth to an unconscious person.  
If in eyes: Flush with large amounts of water of water. If irritation persists, get medical attention.  
If on skin: Flush with water.  
If inhaled: Remove person to fresh air, get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

FLASH POINT (\*F/Test Method): >200°F; >93.3°C (TCC)  
FLAMMABLE LIMITS (LFL & UFL): Not established  
EXTINGUISHING MEDIA: Dry chemical or carbon dioxide (CO<sub>2</sub>), alcohol foam, foam or water spray/foam.  
HAZARDOUS COMBUSTION PRODUCTS: May emit noxious fumes including, but not limited to, oxides of carbon, oxides of nitrogen, acetic acid, free aromatic amines, or other toxic compounds in a fire situation.  
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and full protective gear.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Use water spray to cool containers.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Control and contain the leak or spill. Pick up the material with absorbent and place in a container for proper disposal in accordance with local, state and federal regulations.

ENVIRONMENTAL PRECAUTIONS: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Keep out of reach of children. Avoid unnecessary skin contact. Do not breathe fumes. Wash thoroughly after handling.  
STORAGE: Store in original container only. Keep container tightly closed. Do not allow product to freeze. Do not store near heat or open flame. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Work in well-ventilated area. Local exhaust may be required if working in confined spaces.  
RESPIRATORY PROTECTION: If excessive vapors or mists are generated, wear a NIOSH/MSHA approved organic vapor/mist respirator.  
EYE PROTECTION: Chemical goggles or safety glasses or a face shield if a splash hazard exists. An emergency eyewash station should be available.  
SKIN PROTECTION: Wear protective clothing: coveralls, apron, boots and gloves. A safety shower should be available.

For product

OSHA PEL 8 hr TWA  
not listed

ACGIH TLV-TWA  
not listed

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MATERIAL SAFETY DATA SHEET

TURF TRAX® GREEN

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Green liquid with slight odor.  
 SPECIFIC GRAVITY (Water = 1): ±1.1 g/ml  
 VAPOR PRESSURE: Not applicable  
 PERCENT VOLATILE (by volume): Not established  
 Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

BULK DENSITY: ±9.18 lbs/gal.  
 BOILING POINT: Not established  
 EVAPORATION RATE: Slower than ether

SOLUBILITY: Soluble  
 pH: 7.74-9.74 (neat)

10. STABILITY AND REACTIVITY

STABILITY: Stable  
 CONDITIONS TO AVOID: Extremes in temperature and high humidity.  
 INCOMPATIBILITY: Long term storage in direct contact with reactive metals such as aluminum, zinc, copper, nickel, magnesium, etc., strong reducing agents and strong oxidizing agents.  
 HAZARDOUS DECOMPOSITION PRODUCTS: May emit noxious fumes including, but not limited to, oxides of carbon, oxides of nitrogen, acetic acid, or other toxic compounds in a fire situation.  
 HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD<sub>50</sub> (rat): Not established  
 Eye Irritation (rabbit): Irritation may occur  
 Inhalation LC<sub>50</sub> (rat): Not established  
 Carcinogenic Potential: Not listed by OSHA, NTP, IARC, or ACGIH as a known human carcinogen

Acute Dermal LD<sub>50</sub> (rat): Not established  
 Skin Irritation (rabbit): Irritation will occur on prolonged contact.  
 Skin Sensitization (guinea pig): Not established.

12. ECOLOGICAL INFORMATION

Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

13. DISPOSAL CONSIDERATIONS

Do not reuse container. Triple rinse (or equivalent) and add rinsate to spray tank, then offer for recycling at an ACRC site or by reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not contaminate water sources by runoff from cleaning of equipment, disposal of equipment wash waters, or spray waste. Do not contaminate water, food or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT Shipping Description: NOT REGULATED BY USDOT.  
 Freight Classification: ADHESIVES, ADJUVANTS, SPREADERS OR STICKERS (NMFC 4810; CLASS: 60)  
 Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:	NFPA		HMIS	
	1 Health	0 Least	1 Health	
	1 Flammability	1 Slight	1 Flammability	
	0 Instability	2 Moderate	0 Reactivity	
		3 High	X PPE	
		4 Severe		

SARA Hazard Notification/Reporting  
 SARA Title III Hazard Category: Immediate N Fire N Sudden Release of Pressure N  
 Delayed N Reactive N

Reportable Quantity (RQ) under U.S. CERCLA: Not listed  
 SARA, Title III, Section 313: Not listed  
 RCRA Waste Code: Not listed  
 CA Proposition 65: Not listed

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MATERIAL SAFETY DATA SHEET

TURF TRAX® GREEN

16. OTHER INFORMATION

MSDS STATUS: Section 1 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/Regulatory Services

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# MATERIAL SAFETY DATA SHEET

TURF TRAX® BLUE

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### MANUFACTURED FOR:

LOVELAND PRODUCTS, INC.  
P.O. Box 1288 • Greeley, CO 80632-1288

24-Hour Emergency Phone: 1-800-424-9300  
Medical Emergencies: 1-866-944-8565  
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: TURF TRAX® BLUE SPRAY INDICATOR FOR TURF  
CHEMICAL NAME: Mixture  
CHEMICAL FAMILY: Mixture  
EPA REG. NO.: not applicable  
MSDS Number: 8201310-10-LPI

MSDS Revisions: Sections 1 and 4

Date of Issue: 07/21/10

Supersedes: 07/24/07

## 2. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN - CAUTION** - May cause temporary eye and skin irritation. In case of contact, flush with large amounts of water. If irritation persists, get medical attention. In case of skin contact, flush with water. Prolonged inhalation may lead to respiratory tract irritation. Prolonged or repeated contact with eyes or skin may result in irritation. Exposure to unprotected skin areas may cause temporary staining. May provoke asthmatic response in persons with asthma who are sensitive to airway irritants. Ingestion of large quantities may be harmful.

This product is blue liquid with slight odor.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients:	Percentage by Weight:	CAS No.	TLV (Units)
Contains no reportable quantities of hazardous ingredients			

## 4. FIRST AID MEASURES

If in eyes: Flush with large amounts of water of water. If irritation persists, get medical attention.  
If on skin: Flush with water.  
If inhaled: Not anticipated to cause any inhalation concerns.  
FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.

## 5. FIRE FIGHTING MEASURES

FLASH POINT (\*F/Test Method): >200°F/>93.3°C (TCC)  
FLAMMABLE LIMITS (LFL & UFL): Not established  
EXTINGUISHING MEDIA: Dry chemical or carbon dioxide (CO<sub>2</sub>), alcohol foam, foam or water spray/fog.  
HAZARDOUS COMBUSTION PRODUCTS: May emit noxious fumes including, but not limited to, oxides of carbon, oxides of nitrogen, acetic acid, free aromatic amines, or other toxic compounds in a fire situation.  
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and full protective gear.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Use water spray to cool containers.

## 6. ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Control and contain the leak or spill. Pick up the material with absorbent and place in a container for proper disposal in accordance with local, state and federal regulations.

ENVIRONMENTAL PRECAUTIONS: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

## 7. HANDLING AND STORAGE

HANDLING: Keep out of reach of children. Avoid unnecessary skin contact. Do not breathe fumes. Wash thoroughly after handling.  
STORAGE: Store in original container only. Keep container tightly closed. Do not allow product to freeze. Do not store near heat or open flame. Do not contaminate water, food or feed by storage or disposal.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Work in well-ventilated area. Local exhaust may be required if working in confined spaces.  
**RESPIRATORY PROTECTION:** If excessive vapors or mists are generated, wear a NIOSH/MSHA approved organic vapor/mist respirator.  
**EYE PROTECTION:** Chemical goggles or safety glasses or a face shield if a splash hazard exists. An emergency eyewash station should be available.  
**SKIN PROTECTION:** Wear protective clothing: coveralls, apron, boots and gloves. A safety shower should be available.

For product	OSHA PEL 8 hr TWA not listed	ACGIH TLV-TWA not listed
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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE AND ODOR:** Blue liquid with slight odor.  
**SPECIFIC GRAVITY (Water = 1):** ±1.1 g/ml  
**VAPOR PRESSURE:** Not applicable  
**PERCENT VOLATILE (by volume):** Not established  
**Note:** These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

<b>BULK DENSITY:</b> ±9.18 lbs/gal	<b>SOLUBILITY:</b> Soluble pH: 7.74-9.74 (neat)
<b>BOILING POINT:</b> Not established	
<b>EVAPORATION RATE:</b> Slower than ether	

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable  
**CONDITIONS TO AVOID:** Extremes in temperature and high humidity.  
**INCOMPATIBILITY:** Long term storage in direct contact with reactive metals such as aluminum, zinc, copper, nickel, magnesium, etc., strong reducing agents and strong oxidizing agents.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** May emit noxious fumes including, but not limited to, oxides of carbon, oxides of nitrogen, acetic acid, or other toxic compounds in a fire situation.  
**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

<b>Acute Oral LD<sub>50</sub> (rat):</b> Not established	<b>Acute Dermal LD<sub>50</sub> (rat):</b> Not established
<b>Eye Irritation (rabbit):</b> Irritation may occur	<b>Skin Irritation (rabbit):</b> Irritation will occur on prolonged contact.
<b>Inhalation LC<sub>50</sub> (rat):</b> Not established.	<b>Skin Sensitization (guinea pig):</b> Not established.
<b>Carcinogenic Potential:</b> Not listed by OSHA, NTP, IARC, or ACGIH as a known human carcinogen	

**12. ECOLOGICAL INFORMATION**

Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**13. DISPOSAL CONSIDERATIONS**

Do not reuse container. Triple rinse (or equivalent) and add rinseate to spray tank, then offer for recycling at an ACRC site or by reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not contaminate water sources by runoff from cleaning of equipment, disposal of equipment wash waters, or spray waste. Do not contaminate water, food or feed by storage or disposal.

**14. TRANSPORT INFORMATION**

**DOT Shipping Description:** NOT REGULATED BY USDOT.  
**Freight Classification:** ADHESIVES, ADJUVANTS, SPREADERS OR STICKERS (NMFC 4610; CLASS: 60)  
 Consult appropriate ICAOMATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

**15. REGULATORY INFORMATION**

NFPA & HMIS Hazard Ratings:	NFPA		HMIS
	1 Health	0 Least	1 Health
	1 Flammability	1 Slight	1 Flammability
	0 Instability	2 Moderate	0 Reactivity
		3 High	X PPE
		4 Severe	

# MATERIAL SAFETY DATA SHEET

TURF TRAX® BLUE

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:

Immediate   N    
Delayed   N  

Fire   N    
Reactive   N  

Sudden Release of Pressure   N  

Reportable Quantity (RQ) under U.S. CERCLA: Not listed  
SARA, Title III, Section 313: Not listed  
RCRA Waste Code: Not listed  
CA Proposition 65: Not listed

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## 16. OTHER INFORMATION

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MSDS STATUS: Sections 1 and 4 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/Regulatory Services

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	<p><b>EarthGuard</b> <span style="color: red; font-size: 1.2em;">Amd. #38</span></p> <p>SWPPP Insert for  <b>Temporary Soil Stabilization</b>  <b>A Rain Event Action Plan (REAP) BMP</b></p> <p style="text-align: right;">RB 12/13/17</p>
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Meets CASQA Specifications for:

- Soil Binder EC-5
- Stockpile Management WM-3
- Wind Erosion Control WE-1

**Definition:** *EarthGuard* is a temporary erosion control system that works on the atomic level with soil to maintain its stability by both preserving existing soil structure and flocculating fine sediment dislodged by stormwater or wind. *EarthGuard* can be applied with a water truck, spray rig or hydroseeder and is active immediately, even during a rain event.

The use of stabilizers for soil stabilization/erosion control does not require an Active Treatment Plan (ATS) according to the State Regional Board.

**Function:** *EarthGuard* is used is to immediately temporarily stabilize active and inactive construction sites, pads, roads, slopes and stock piles for impending rain events. *EarthGuard* is specifically designed to work with all soil types to reduce soil movement and turbidity helping maintain compliance with environmental regulations.

*EarthGuard* can be used as a BMP to satisfy the Rain Event Action Plan (REAP) especially on Risk Level 2-3 sites.

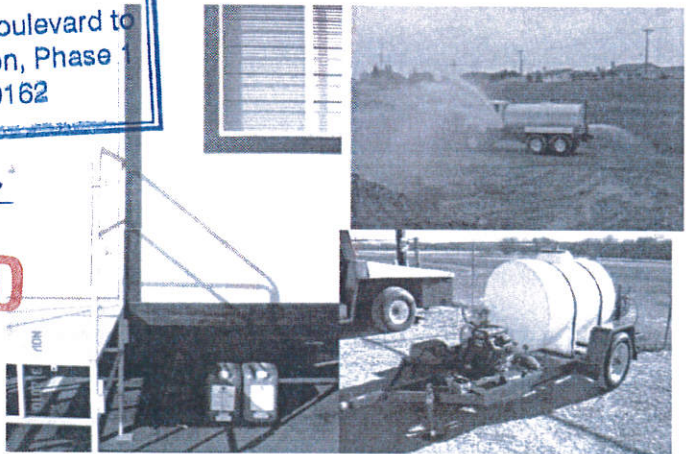
**Installation Instructions & Application Rate:** Soil preparation is not required and *EarthGuard* can be applied over existing vegetation. Simply add *EarthGuard* to an on-site water truck or spray rig for immediate protection. *EarthGuard* will not harm equipment and should be applied at the following rates:

SLOPE	≤ 4:1	3:1	2:1	1.5:1	1:1	Stockpiles
<b>EARTHGUARD (gal/ac)</b>	3	4	5	6	8	10
<b>Water</b>	AS REQUIRED TO COVER TO COVER 1 AC OF AREA AND DEPENDENT ON EQUIPMENT'S ABILITY TO PROPERLY APPLY Hydroseeder ≈ 2000 gal/ac Spray Rig ≈ 2000 gal/ac Water Truck ≈ 2500 gal/ac					

Seward Highway: Dimond Boulevard to  
 Dowling Road Reconstruction, Phase 1  
 0A31(057)/CFHWY00162

UMR  
 4-2617

APPROVED



**Easy Storage**                      **Simple Application**  
**10 Gal Treats 1-3 ac**

1 of 3

**APPROVED**



Seward Highway: Diamond Boulevard to  
 Bowling Road Reconstruction, Phase 1  
 0A31(057)/C.FHWY00162

*FOR 341 ITEMS  
 CUB  
 4-26-17*

**EarthGuard: Eco-Guardian and Eco-Friendly**

*EarthGuard® is a spray-on erosion control/re-vegetation product designed to work on the atomic level with soil to maintain its stability by both preserving its structure and conjoining individual aggregates along the surface. EarthGuard prevents the damaging effects of erosion from impacting watersheds downstream while being non-toxic and eco-friendly to the environment.*

*Various studies on the efficacy and eco-friendliness have been conducted on EarthGuard. These studies include:*

Study	Results
Texas DOT Erosion Control Testing	99.8% Effective after 5.25" of rain in 90 min. * C Factor @3000 lbs/acre = 0.002 *
California DOT Erosion Control Testing	99.5% Effective after 4" of rain in 200 min. * C Factor @2250 lbs/acre = 0.005 *
ASTM 6459 Large Scale Slope Testing	99.8% Effective after rainfall intensities of 2", 4" and 6" rain events applied in 20 minute consecutive intervals. Total 4" of rain in 60 min. * C-Factor EGFM@3000 lbs/acre = 0.002 *
Meets or Exceeds ECTC Standards for <b>STANDARD SPECIFICATION FOR HYDRAULIC EROSION CONTROL PRODUCTS</b> Range: Ultra Short to Long Term	<a href="http://www.ectc.org/specifications.asp">http://www.ectc.org/specifications.asp</a>
Germination Enhancement: ASTM D 7322	466% in growth over bare soil plot.
California DOT Environmental Field Study	No product related export found in effluent.
California DOT Water Quality Handbook	EarthGuard does not discharge pollutants and water quality sampling and analysis is <b>not</b> required.
US EPA 2012 Construction General Permit	The use of PAM (EarthGuard) has shown minimal toxicity even at 10 times the normal erosion control concentration, 10 ppm or 100 ppm. EarthGuard at its heaviest application rate is 1 ppm
US EPA 96-hr Acute Toxicity Test: Rainbow Trout	Non-toxic
US EPA 96-hr Acute Toxicity Test: Pimephales Promelas and Ceriodaphnia Dubia	Non-toxic
California Title 22 Acute Bioassay Test: Fathead Minnow	Non-toxic
EPA SW 846 Method 6010b Metals and Solvents	Non-toxic
NSF Drinking Water Standards	All components of EarthGuard meet the National Sanitation Foundation Standards for use in drinking water clarification.



Seward Highway: Dimond Boulevard  
Dowling Road Reconstruction, Phase 1  
0A31(057)/CFHWY00162

*UMM 4-28-17*

USDA Application Recommendations	The use of PAM (EarthGuard) should be limited to 200 lb./ac/yr. EarthGuard at its heaviest application rate is equates to 25 lb./ac/yr.
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For further information, please visit the following web sites:

- Short 10 min. Video: [www.earthguard.com/video.php](http://www.earthguard.com/video.php)
- Product Brochure: [www.earthguard.com/pdf/SalesBrochure.pdf](http://www.earthguard.com/pdf/SalesBrochure.pdf)
- Web Site: [www.EarthGuard.com](http://www.EarthGuard.com)

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# Terra Novo, Inc. EarthGuard

## MATERIAL SAFETY DATA

Revision Date: 10/3/2012

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

**PRODUCT NAME:** EarthGuard

**COMPANY:** Terra Novo, Inc.,  
2930 Patton Way  
BAKERSFIELD, CA 93308, USA

**TELEPHONE:** 661.587.5716

**EMERGENCY PHONE:** CHEMTREC 800.424.9300

**PRODUCT USE:** Processing aid for industrial application

### 2. HAZARDS IDENTIFICATION

**Appearance and Odor:**

**Form:** Viscous liquid

**Color:** Milky

**Odor:** Aliphatic

**Potential Health Effects:**

**Eye:** May cause eye irritation with susceptible persons.

**Skin:** Slightly irritating.

**Potential Physical/Chemical Effects:** Spills produce extremely slippery surfaces.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Identification:** Anionic water-soluble polymer in emulsion.

**Regulated Components:** None.

### 4. FIRST AID MEASURES

**Inhalation:** Move to fresh air immediately. No hazards which require special first aid measures.

**Skin contact:** Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

**Eye contact:** Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.



# Terra Novo, Inc. EarthGuard

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**Ingestion:** Rinse mouth with water. Do not induce vomiting. Get medical attention immediately.

### **5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** Water. Water spray. Foam. Carbon dioxide (CO<sub>2</sub>). Dry powder.

**Precautions:** Spills produce extremely slippery surfaces.

**Special protective equipment for firefighters:** No special protective equipment required.

**Flash point (°C):** Does not flash.

**Autoignition temperature (°C):** Does not ignite.

**Flash point :** Not applicable.

**Autoignition temperature (°C):** Not applicable.

### **6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions :** No special precautions required. Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection). Keep people away from spill/leak.

**Environmental precautions :** As with all chemical products, do not flush into surface water.

**Methods for cleaning up :** Do not flush with water. Dam up. Soak up with inert absorbent material. If liquid has been spilled in large quantities, clean up promptly by scoop or vacuum. Keep is suitable and closed containers for disposal. After cleaning, flush away traces with water.

### **7. HANDLING AND STORAGE**

#### **Handling**

**Safe handling advice :** Avoid contact with skin and eyes. When preparing the working solutions ensure there is adequate ventilation. When using do not smoke.

#### **Storage**

Keep in a cool, dry place (0 - 30 °C). Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material.

### **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering measures**





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Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

### Personal protective equipment

**Respiratory protection** : Not required ; except in case of aerosol formation

**Hand protection** : PVC or other plastic material gloves

**Eye protection** : Safety glasses with side-shields. Do not wear contact lenses where this product is used.

**Skin and body protection** : Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form** : Viscous liquid

**Color** : Milky

**Odor** : Aliphatic

**pH**: 6 - 8 @ 5 g/l

**Specific Gravity**: 1.05

**Melting point/range** : Not applicable

**Flash point** : Not applicable

**Autoignition temperature (°C)**: Not applicable

**Vapor pressure (mm Hg)**: 0,002 @ 20°C

**Bulk viscosity (cps)**: 1200

**Kinematic viscosity @ 40°C (mm<sup>2</sup>/s)**: >>20.5

## 10. STABILITY AND REACTIVITY

**Stability** : Hazardous polymerization does not occur. Stable.



# Terra Novo, Inc. EarthGuard

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**Materials to avoid :** Oxidizing agents may cause exothermic reactions.

**Hazardous decomposition products :** Thermal decomposition may produce. Nitrogen oxides (NO<sub>x</sub>).

Carbon oxides (CO<sub>x</sub>).

### **11. TOXICOLOGICAL INFORMATION**

#### **Acute toxicity**

**Oral :** LD50/oral/rat > 5000 mg/kg.

**Dermal :** LD50/dermal/rat > 5000 mg/kg.

**Inhalation :** The product is not expected to be toxic by inhalation.

#### **Irritation**

**Skin :** Slightly irritating

**Eyes :** May cause eye irritation with susceptible persons

#### **Sensitization :**

Not sensitizing.

#### **Chronic toxicity :**

No Chronic effects

### **12. ECOLOGICAL INFORMATION**

#### **Aquatic toxicity**

**Toxicity to fish :** LC50/Danio rerio (Zebra fish)/96 hours > 100 mg/L (OECD 203)./96 hours > 100 mg/l, (OECD 203).

**Toxicity to daphnia :** EC50/Daphnia magna (Water flea)/48 hours > 100 mg/L (OECD 202).

**Toxicity to algae :** EC50/Scenedesmus subspicatus (Green algae)/72 hours > 100 mg/L (OECD 201).

**Persistence and degradability :** Not readily biodegradable.

**Hydrolysis :** Does not hydrolyze.



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### 13. DISPOSAL CONSIDERATIONS

**Disposal :** Dispose of in accordance with local, state and federal regulations.

**Container :** Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local, state and federal regulations.

### 14. TRANSPORT INFORMATION

#### DOT

**Remarks :** Not classified as dangerous in the meaning of DOT regulations.

#### IMDG/IMO

**Remarks :** Not classified as dangerous in the meaning of IMO/IMDG regulations.

#### ICAO/IATA

**Remarks :** Not classified as dangerous in the meaning of ICAO/IATA regulations

### 15. REGULATORY INFORMATION

#### US SARA Reporting Requirements:

**SARA (Section 311/312) hazard class:** Not concerned.

**International Inventories USA (TSCA):** All components of this product are either listed on the inventory or are exempt from listing.

**Canada (DSL) :** All components of this product are either listed on the inventory or are exempt from listing.



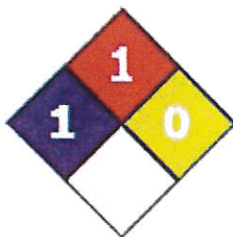
# Terra Novo, Inc. EarthGuard

## MATERIAL SAFETY DATA

Revision Date: 10/3/2012

### 16. OTHER INFORMATION

NFPA and HMIS Ratings :



**NFPA :**

Health : 1 Flammability : 1 Instability : 0

**HMIS :**

Health : 1 Flammability : 1 Physical Hazard : 0 **MSDS was prepared in accordance with the following :**

ISO 11014-1: Material Safety Data Sheet for Chemical Products ANSI Z400.1-2004; Material Safety Data Sheets - Preparation

**Contact :** 661.587.5716

The data in this Material Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.



## SAFETY MEETING TOPIC:

### Use of PAM Products for Soil Stabilization

#### Introduction

Polyacrylamide (PAM) is a non-toxic chemical material that is being marketed nationwide for controlling soil erosion and sedimentation on construction sites. Current research has indicated that application of PAM in conjunction with conventional erosion and sediment controls (seed, mulch, perimeter controls, sediment basins, etc.) can be a safe, effective, and economical best management practice.

#### Background

PAM is a generic term for long-chain organic polymers that have been used in flocculating agents, wastewater treatment, active treatment chemicals, and food processing plants. Research and testing on the product PAM has demonstrated that occupational exposure to PAM is NON-TOXIC when used as directed and is not a Federally listed hazardous compound. PAM degrades safely into harmless organic molecules.

- This training is for the application of anionic or nonionic PAM products which are nontoxic to plant and animal life. **Cationic PAM is highly toxic to aquatic life and is not compliant with the Alaska DEC Construction General Permit (CGP).**

This training will reference “PAM” in two methods:

1. “PAM emulsions” indicating that a PAM media (e.g. dry granular, liquid emulsion, or premixed mulch bail packaged from the manufacturer) exists mixed in a mulch slurry
2. “PAM solo” representing the PAM media will be applied singly without a mulch.

This training is designed to discuss the land application of PAM for enhance performance with a mulch when applied directly to slopes, and other exposed soil surfaces for soil stabilization. However, there are PAM products available that may be applied solo with no mulch additive. This training is not intended for water application of a PAM product.

Document all names for this Tailgate Training in the project SWPPP Training Log 25D-125.

#### Application

Apply a PAM method to sites with problem soils in accordance with manufacturer’s guidance and to comply with the Alaska CGP & MSGP

PAM emulsion application is intended for practice on areas with high amounts of fine silt, clay, or colloidal soils. PAM emulsions are generally applicable where the timely establishment of vegetation may not be feasible, is absent or inadequate, or where topographic conditions, construction activities, or other forces limit the utility of conventional temporary sediment control practices alone. PAM emulsion may be beneficial to the following activities/areas:

- Slopes
- Sites for winter shutdown (only when mixed with a mulch to enhance performance)

- Soil stockpiles
- Temporary or permanent stabilization
- All disturbed areas that have not been adequately stabilized with vegetation

PAM solo application is intended for practice on areas with high amounts of fine silt, clay, or colloidal soils. PAM solo is generally applicable for short-term stabilization. PAM solo may be beneficial to the following activities/areas:

- Soil stockpiles
- Temporary stabilization not to exceed 90 days (depending on PAM product)
- Slopes for temporary stabilization
- Staging areas
- Final graded soils before application of final stabilization (e.g. paving, planting, mulching)

#### **Application and Loading Instructions:**

- Comply with permit requirements prior to application (CGP Section 4.6 and MSGP Section 11.G.4.5)
- Remove any pre-existing rills and gullies before applying a PAM mulch slurry.
- Track-walking or some other soil imprinting device is recommended to roughen the slope before application.
- Slope Interruption Devices, such as fiber rolls, should be applied prior to the application, if selected, and should be installed on steep slope contour perpendicular to the flow of water.
- Caution should be taken to avoid creating puddles or runoff. It is recommended for the slurry to be sprayed from multiple directions and angles to ensure proper coverage.
- When applying a PAM product to soil ensure the product is not applied into nearby waters.
- A polyacrylamide PAM additive (granular or liquid) shall not be applied to frozen soils or soils that have ice present.
- Treated areas shall not be disturbed after application.

#### **Additional resources**

Use with this training the following: product SWPPP Insert, Safety Data Sheet (SDS), product Manufactures recommendation, and the DOT&PF BMP 51.00 (Hydraulic Erosion Control Products (HECP)) to assist with this training.

Additional information can be found at:

<https://content.ces.ncsu.edu/using-polyacrylamide-pam-to-reduce-erosion-on-construction-sites>

#### **Safety Data Sheet (SDS) Information**

- Anionic or nonionic PAM products are nontoxic to plant and animal life.
- A polyacrylamide PAM additive either granular or liquid can be stored for 12 months and must be stored in a dry insulated location to avoid moisture and freezing.
- The SDS can be found in the SWPPP Appendix P-*Treatment Chemical/Active Systems*.

**PAM Safety Data Sheet** (Note to Trainer: Hold up the SDS to explain the safety sections)

Section numbers to point out and discuss with group:

- #1 Phone numbers (Company and Emergency)
- #4 First Aid Measures (Skin and Eye contact)
- #5 Fire-Fighting Measures (No flash point add will not ignite)
- #7 Handling and Storage (Safe handling and secondary storage)

- #8 Exposure Controls / Personal Protection (Eye Protection, Skin Protection, and Hygiene measures)
- #9 Physical and Chemical Properties (Color, Odor, pH)
- #14 Transport Information (Not classified as dangerous)
- #16 How to read the Chemical Label

Color	
Blue	Health hazard
Red	Fire hazard
Yellow	Reactivity hazard
White	Special hazard

0 = minimal hazard
1 = slight hazard
2 = moderate hazard
3 = serious hazard
4 = severe hazard



DRAFT



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

**SWPPP TRAINING LOG**

Project name: Seward Hwy: Dimond to Dowling Reconstruction, Ph. 1

Project Number: CFHWY00162

Project Location: Anchorage, AK

Instructor's Name(s): Spencer Newins, Ben Turner

Instructor's Titles(s): Project Engineer, SWPPP Manager

Course Location: Jobsite, Lore Rd.

Course Date: 6.18.2018

Course Length (hours): 0.25

Storm Water Training Topic: (check as appropriate)

- |  |   |
|--|---|
| <input type="checkbox"/> Erosion Control BMPs  | <input type="checkbox"/> Emergency Procedures           |
| <input type="checkbox"/> Sediment Control BMPs | <input type="checkbox"/> Good Housekeeping BMPs         |
| <input type="checkbox"/> Non-Storm Water BMPs  | <input checked="" type="checkbox"/> Treatment Chemicals |

Specific Training Objective: Use of PAM Products for Soil Stabilization (See Amend #60)

Attendee Roster: (see attached Safety Meeting Roster)

No.	Name of Attendee	Company	Attendee Initials
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



# Safety Meeting Report

Date: 06/18/2018 06:30:18 AM  
Job: 10187380 - SEWARD HWY: DIMOND TO DOWLING  
Recorder: Spencer Newins  
Duration: 30 minutes  
Total training hours: 14.00

Meeting Type: Tool Box Safety Talks

4. Stretch & Flex - Stretch and Flex

PPE Personal Protection Equipment - Respirators and Proper Fit

3 Colaska Topics - 2018 silica anch plans, OSHA silica fact sheet

1 Colaska Flash Reports - 2018.06.15 Flash Report

## ATTENDANCE

Employees: 100.00% (28 on site, 28 attended)

Code	Name	On-site	Attended
BUTCHER, RAY	Butcher, Raymond D	X	X
NEWINS, SPE	Newins, Spencer T.	X	X
POTTER, DON	Potter, Donald D	X	X
NOYES, BYR	Noyes, Byron S	X	X
WILEY, LAN	Wiley, Lance T	X	X
TAYLOR, AMA	Taylor, Amanda N	X	X
PLUMB, JOS	Plumb, Joshua R	X	X
LARSON, CHR	Larson, Christopher A	X	X
WOOD, STE	Wood, Steven	X	X
KORYNTA, HEA	Korynta, Heather J		
TOYUKAK, HIL	Toyukak, Hilary D	X	X
BUTCHER, COD	Butcher, Cody R	X	X
FINKE, JOR	Finke, Jordan A	X	X
GWASH, MAT	Gwash, Matthew T	X	X
PARRISH, JAM	Parrish, James E	X	X
ZELLERS, MIC	Zellers, Michelle P	X	X
TURNER, BEN	Turner, Benjamin Clay	X	X
STENEHJ, RAY	Stenehjem, Raymond J	X	X
BECKMAN, BEN	Beckman-Arneson, Benjamin M	X	X
THOMPSON, MAR	Thompson, Mark L	X	X
HALL, NIC	Hall, Nichole M	X	X
THOMAS, LOG	Thomas, Logan B	X	X
JONES, RYA	Jones, Ryan Michael	X	X
SMITH, JAR	Smith, Jarrett E	X	X
TAYLOR, BRI	Taylor, Brittany E	X	X
THOMPSON, ROB	Thompson, Robin M	X	X

BUTCHER,DAR	Butcher, Dara L	X	X
MITCHEL,DAN	Mitchell, Daniel R	X	X
ZMERZLI,VEA	Zmerzliuc, Veaceslav M	X	X

Visitors:

Name	Notes	On-site	Attended
Kim, Chong		X	X

**DOCUMENTS**

[Respirators and Proper Fit.pdf](#)

[2018 Sillica Control Plans.pdf](#)

[silica\\_fact\\_sheets.pdf](#)

[Flash Report 061518\\_CI Teams.pdf](#)

Butcher, Raymond D - BUTCHER, RAY

A handwritten signature in black ink, appearing to read 'Ray D. Butcher', written in a cursive style.

Newins, Spencer T. - NEWINS, SPE

A handwritten signature in black ink, appearing to read 'Spencer T. Newins', written in a cursive style.

Potter, Donald D - POTTER, DON

A handwritten signature in black ink, appearing to read 'Donald D. Potter', written in a cursive style.

Noyes, Byron S - NOYES, BYR

A handwritten signature in black ink, appearing to read 'Byron S. Noyes', written in a cursive style.

Wiley, Lance T - WILEY, LAN

A handwritten signature in black ink, appearing to read 'Lance T. Wiley', written in a cursive style.

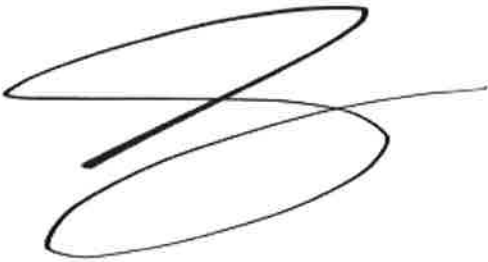
Taylor, Amanda N - TAYLOR,AMA

A handwritten signature in black ink, consisting of a large, stylized initial 'A' followed by a surname that is partially obscured by a horizontal line.

Plumb, Joshua R - PLUMB,JOS

A handwritten signature in black ink, featuring a large, stylized initial 'J' followed by a surname.

Larson, Christopher A - LARSON,CHR

A handwritten signature in black ink, consisting of a large, stylized initial 'C' followed by a surname.

Wood, Steven - WOOD,STE

A handwritten signature in black ink, featuring a large, stylized initial 'S' followed by a surname.

Korynta, Heather J - KORYNTA,HEA - Did Not Sign

Toyukak, Hilary D - TOYUKAK,HIL

A handwritten signature in black ink, appearing to read "Hilary D. Toyukak". The letters are cursive and somewhat stylized.

Butcher, Cody R - BUTCHER,COD

A handwritten signature in black ink, appearing to read "Cody R. Butcher". The signature is cursive and fluid.

Finke, Jordan A - FINKE,JOR

A handwritten signature in black ink, appearing to read "Jordan A. Finke". The signature is highly stylized and cursive.

Gwash, Matthew T - GWASH,MAT

A handwritten signature in black ink, appearing to read "Matthew T. Gwash". The signature is cursive and somewhat abstract.

Parrish, James E - PARRISH,JAM

A handwritten signature in black ink, appearing to read "James E. Parrish". The signature is cursive and clearly legible.

Zellers, Michelle P - ZELLERS.MIC

A stylized handwritten signature in black ink, featuring a large, sweeping initial 'M' followed by a horizontal line extending to the right.

Turner, Benjamin Clay - TURNER,BEN

A handwritten signature in black ink, starting with a large, circular initial 'B' and ending with a long horizontal line.

Stenejem, Raymond J - STENEHJ.RAY

A handwritten signature in black ink, consisting of a large, stylized initial 'R' followed by the letters 'S' and 'A'.

Beckman-Arneson, Benjamin M - BECKMAN,BEN

A handwritten signature in black ink, featuring the word 'Benjamin' written in a cursive style, followed by a large, stylized initial 'B'.

Thompson, Mark L - THOMPSON.MAR

A handwritten signature in black ink, starting with the name 'Mark' and ending with a large, stylized initial 'M'.

Hall, Nichole M - HALL,NIC

A handwritten signature in black ink, appearing to read 'Nichole M. Hall', written in a cursive style.

Thomas, Logan B - THOMAS,LOG

A handwritten signature in black ink, appearing to read 'Logan B. Thomas', written in a cursive style.

Jones, Ryan Michael - JONES,RYA

A handwritten signature in black ink, appearing to read 'Ryan Michael Jones', written in a cursive style.

Smith, Jarrett E - SMITH,JAR

A handwritten signature in black ink, appearing to read 'Jarrett E. Smith', written in a cursive style.

Taylor, Brittany E - TAYLOR,BRI

A handwritten signature in black ink, appearing to read 'Brittany E. Taylor', written in a cursive style.

Thompson, Robin M - THOMPSON,ROB

A stylized, cursive handwritten signature in black ink, appearing to read 'Rob Thompson'.

Butcher, Dara L - BUTCHER,DAR

A cursive handwritten signature in black ink, appearing to read 'Dara Butcher'.

Mitchell, Daniel R - MITCHELL,DAN

A highly stylized, cursive handwritten signature in black ink, appearing to read 'Dan Mitchell'.

Zmerzline, Veaceslav M - ZMERZLI,VEA

A cursive handwritten signature in black ink, appearing to read 'V. Zmerzline'.

Visitor309Kim, Chong - Kim, Chong

A cursive handwritten signature in black ink, appearing to read 'Chong Kim'.