



NEW BEDFORD REGIONAL AIRPORT  
RUNWAY 5-23 – PHASE 4

Reconstruct, Mark and Grove

Weekly Environmental Report

WEEK 1

2014 April 28, May 2

**April 28, 2014**

Observer: Joe Rogers

Time: 7:00 AM – 5:00 PM

Today's weather:

Morning Sun/afternoon clouds, upper 50's, 10 – 20 mph winds,

Observed conditions:

- Installation of silt fence starting at the last bend before the ILS road continued to where the fence comes up to Taxiway A. About half of the area covered today was back filled. Adjustments were made to the silt fence survey line to move it further away from the wetland boundary and closer to the road bed when possible.
- Temporary turtle exclusion barriers were installed at the end of the ILS road.
- A turtle sweep was executed by Oxbow Associates in the area between the end of Runway 5-23 and the ILS road. One long dead turtle skeleton was found. Likely a box turtle, but cause and location of its death were undetermined.





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- An access road was excavated between the service road and the runway near the contractor staging area. The material was piled adjacent to the site. The excavator was unable to find a stable substrate because of a large layer of peat. This road cut was then filled back in with the excavated material and a second attempt was made 50 ft further up the road. This cut was successful and they started to lay till down.
- Electricians removed some lighting from the runway and disconnected power.
- Lighted “X” signs were installed at the runway ends.
- Runway barriers were erected at the junctions of Runway 14-32.
- Fill was delivered to the work zone IV access gate and stockpiled at the base of the new access road.
- Four box turtles were found using the radio transmitter in the scrub area adjacent to the contractor staging area.
- Equipment arrived and was delivered to each work site.



Compliance issues: None



**April 29, 2014**

Observer: Joe Rogers

Time: 7:00 AM – 5:00 PM

Today's weather:

**Weather: Overcast, lower 40's, 15 – 25 mph winds**

- Work continued on the runway access road connecting the runway to the gravel access road. Fill was added to the road as well as the widened curve in the gravel access road due to the shift in crossing placement.
- A large hay delivery was made and bale were placed starting opposite the contractor staging area and moving toward the ILS road. Bales were placed and staked per plan.
- New end of runway lighting was installed on 5 end of the runway.



- Holes were drilled at intervals along the center of the runway to meet waypoint markings on the grading plan.
- An issue came up with how to end the silt fence/turtle barrier behind the hangar near taxi ramp A off the 5-23. The surveyed stakes took the silt fence behind a series of planes and then over a couple concrete obstructions and through some junked trucks before ending at the drainage ditch. A solution to this problem was to angle the silt fence toward the tip of a pond attached to the drainage ditch. Effectively reaching the same water barrier as originally planned about 200' sooner. It was suggested that hay bales extend into the water to provide a barrier at lower water levels. Scott Smyers was consulted on the adjustment and will check out the area on Wednesday.





- Unaffiliated contractors arrived to start excavation of an area adjacent to the contractor staging area to build a new airplane hangar. They mostly striped and removed topsoil.
- Resident Engineer ASG (Frank Chase) requested that I look at a section of newly installed silt fence near Taxiway A and the AV Gas hangar. The fence was installed according to plan, but left some lights and associated electrical lines on the wrong side of the fence. He wanted to know if environmentally, it was okay to move the fence back ~10 ft toward the wetland. This seemed possible to me and I relayed the information to Julia, Randall, Dan, and the silt fence crew.



- A connecting road was put in between the Old Plainville Gate access road terminus and the end of Runway 23. Two pipes were laid in gravel through the drainage swale and the covered with 2- 4" rock. Top dressing was added and compressed.



- Drilling on the 23 side of the runway started following the similar pattern as on the 5 side.
- ET&L swept Old Plainville Rd leading to project area.



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**April 30, 2014**

Observer: Randall Shuey

Time: 7:00 AM – 5:00 PM

Today's weather:

**Weather: Overcast, lower 40's, 10 – 20 mph winds**

Observations –

- ET&L stripping loam from 5 end RSA area.
- Stockpiling loam at end of runway in area marked as being 100 ft. plus to any wetland.





- ET&L laying out silt fence on 23 end of project.
- Ramco installing silt fence on 23 end of runway.



- Reviewed access road and cross pipe locations with silt fence.



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**May 1, 2014**

Observer: Randall Shuey

Time: 7:00 AM – 5:00 PM

Today's weather:

**Weather: Rain began late on April 30 and continued through morning of May 1. Total accumulation 1.79 inches. Overcast, lower 60's, 10 – 20 mph winds**

Observations –

- Conducted a site inspection of RSA 5 end to view conditions during rain storm. Identified a T&L stripping loam from 5 end RSA area. See attached report on issue, resolution and recommendations.

PHOTO – View of active silt fence failure into West Ditch.



PHOTO (right) – View of same area with hay bales and additional fencing installed.





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- Grinding of Runway 5 end commenced.
- Stripping of loam along the edge of runway 5. Loam is windrowed and will be moved off site beginning next week.
- Access road off Old Plainville Road inspected. Pipes in low sections working as planned and relieving water build-up on uphill side of road.



Sediment laden water is trapped upslope between silt fence and access road, keeping clean water clean and separating the clean from the dirty water.



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**May 2, 2014**

Observer: Randall Shuey

Time: 7:00 AM – 5:00 PM

Today's weather:

**Weather: Sunny to partly cloudy. Light winds**

- RAMCO installed a truckload of hay bales along the 5 end OLS road.



- Grinding of runway 5 occurred from 7:00 to 3:30



- Millings were placed on top of access road off Old Plainville Road

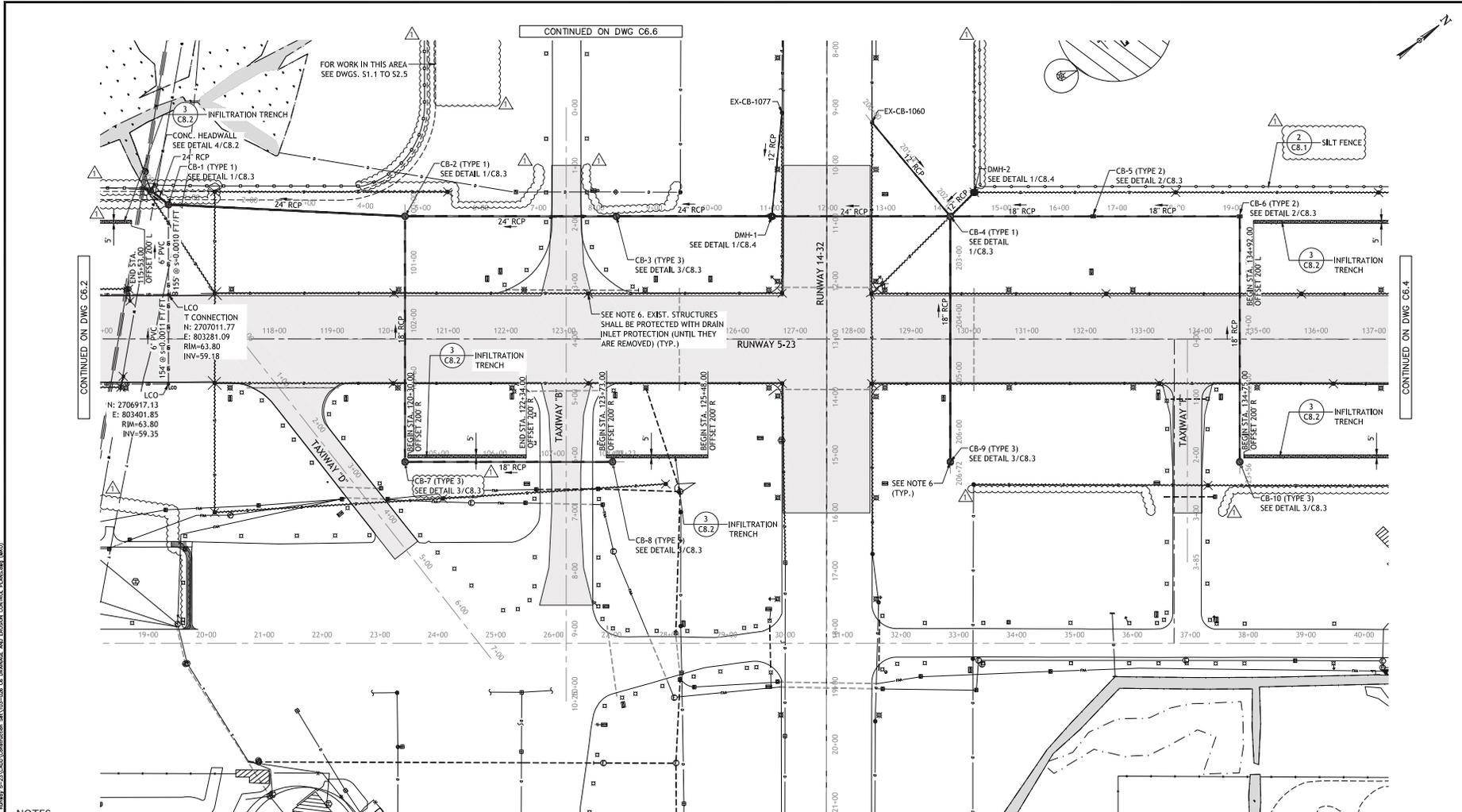


- In conjunction with resident engineer, Ed Clark, revised location of silt fence at bottom of slope so that silt fence does not cross the drainage swale. Added straw wattles across the drainage swale to provide some energy dissipation during higher flows. Will need to add stone to outfall of twin pipe drain in swale.

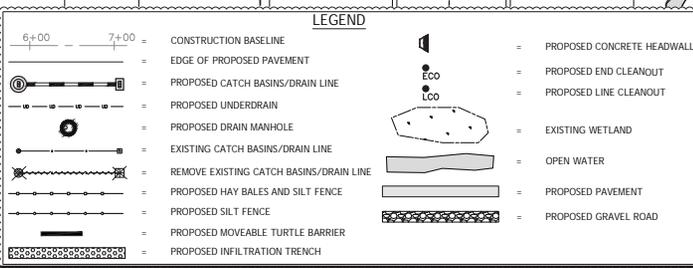








- NOTES:**
1. FOR DEMOLITION AND REMOVAL OF EXISTING DRAINAGE STRUCTURES AND PIPES SEE DRAWINGS D1.1 TO D1.6
  2. FOR EROSION CONTROL AND DRAINAGE DETAILS SEE DRAWINGS C8.1 TO C8.4.
  3. FOR DRAINAGE PROFILES SEE DRAWINGS C7.1 TO C7.4.
  4. RETAIN, AND MAINTAIN FUNCTION, OF ALL EXISTING DRAINAGE PIPES AND STRUCTURES UNLESS OTHERWISE NOTED.
  5. CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF ALL EXCAVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING CODES AND REGULATIONS.
  6. CONTRACTOR SHALL PROVIDE EROSION CONTROLS AS NOTED ON THIS PLAN AND AS DIRECTED BY THE ENGINEER. HAYBALE INLET PROTECTION SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS WITHIN THE LIMITS OF WORK.
  7. THE CONTRACTOR SHALL COMPLY WITH "DIG SAFE" REQUIREMENTS.
  8. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ETC., OF ALL FACILITIES AND UTILITIES THAT THE PROPOSED WORK WILL IMPACT OR INTERFACE WITH. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER.
  9. CONTRACTOR SHALL VERIFY INVERTS OF PIPES AT EXISTING CATCH BASINS THAT ARE BEING MODIFIED AND TIED INTO PROPOSED DRAINAGE SYSTEM. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER.
  10. ALL EXISTING PIPING AND STRUCTURES EXPOSED DURING EXCAVATION SHALL BE ADEQUATELY SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
  11. ADDITIONAL UNDERGROUND UTILITIES MAY BE PRESENT AND NOT SHOWN ON THIS PLAN.
  12. CONTOURS NOT SHOWN FOR CLARITY. FOR GRADING PLAN SEE DRAWINGS C4.1 TO C4.6.
  13. ALL UNDERDRAINS SHALL BE INSTALLED TO ACHIEVE POSITIVE DRAINAGE WITH A MINIMUM SLOPE OF 0.0010 FT/FT.





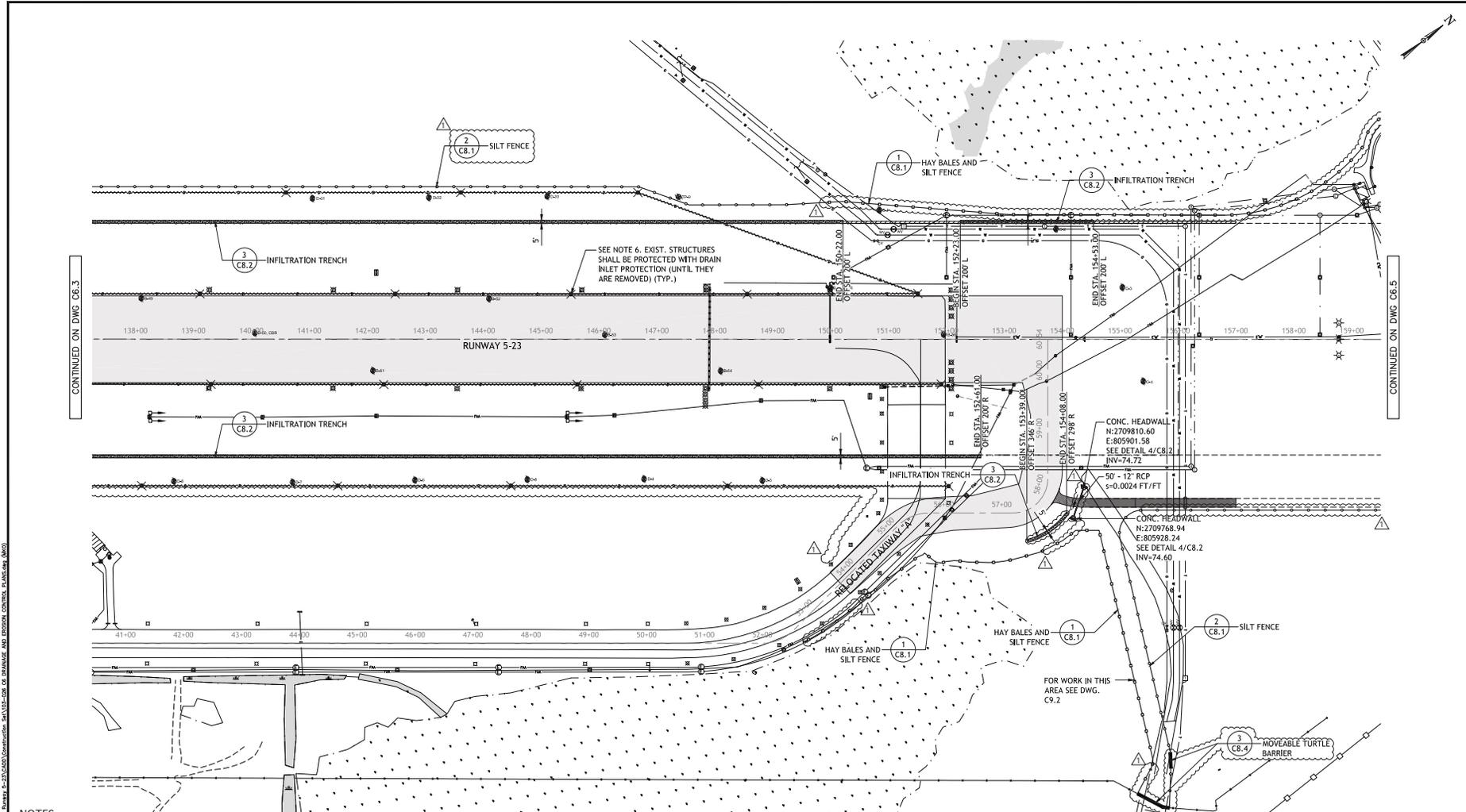
**AIRPORT SOLUTIONS GROUP**  
 1000 WASHINGTON STREET, SUITE 200  
 NEW BEDFORD, MASSACHUSETTS 01909  
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NO.	DATE	DESCRIPTION	BY
1	4/13	ADDendum NO. 2	MKO

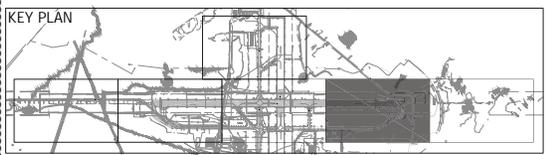
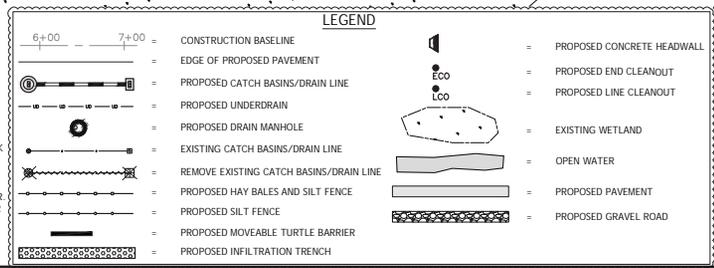
PROJECT	RECONSTRUCT, MARK AND GROOVE RUNWAY 5-23 CITY OF NEW BEDFORD BID NO. 1382904
OWNER	NEW BEDFORD AIRPORT COMMISSION NEW BEDFORD, MASSACHUSETTS

PROJECT NO.	108-026
CADD FILE	C6 DRAINAGE & ESC
DESIGNED BY	MKO
DRAWN BY	MKO
CHECKED BY	DWR
DATE	MARCH 2013
DRAWING SCALE	1" = 80'

SHEET TITLE	DRAWING NO.
<b>DRAINAGE AND EROSION CONTROL PLAN-3</b>	<b>C6.3</b>
GRAPHIC SCALE 0 40 80 160	51 OF 117



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**AIROPORT SOLUTIONS GROUP, INC.**  
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 WWW.AIROPORTSOLUTIONSGROUP.COM

NO.	DATE	DESCRIPTION	BY
1	4/13	ADDendum NO. 2	MMO

PROJECT	RECONSTRUCT, MARK AND GROOVE RUNWAY 5-23 CITY OF NEW BEDFORD BID NO. 1382804
OWNER	NEW BEDFORD AIRPORT COMMISSION 100 STATE ST., SUITE 200 NEW BEDFORD, MASSACHUSETTS 01960

PROJECT NO.	103-026	DATE	MARCH 2013
CADD FILE	MMO	DRAWN BY	DWR
DESIGNED BY	MMO	CHECKED BY	
DRAWING SCALE	1" = 80'	GRAPHIC SCALE	

SHEET TITLE	DRAWING NO.
<b>DRAINAGE AND EROSION CONTROL PLAN-4</b>	<b>C6.4</b>

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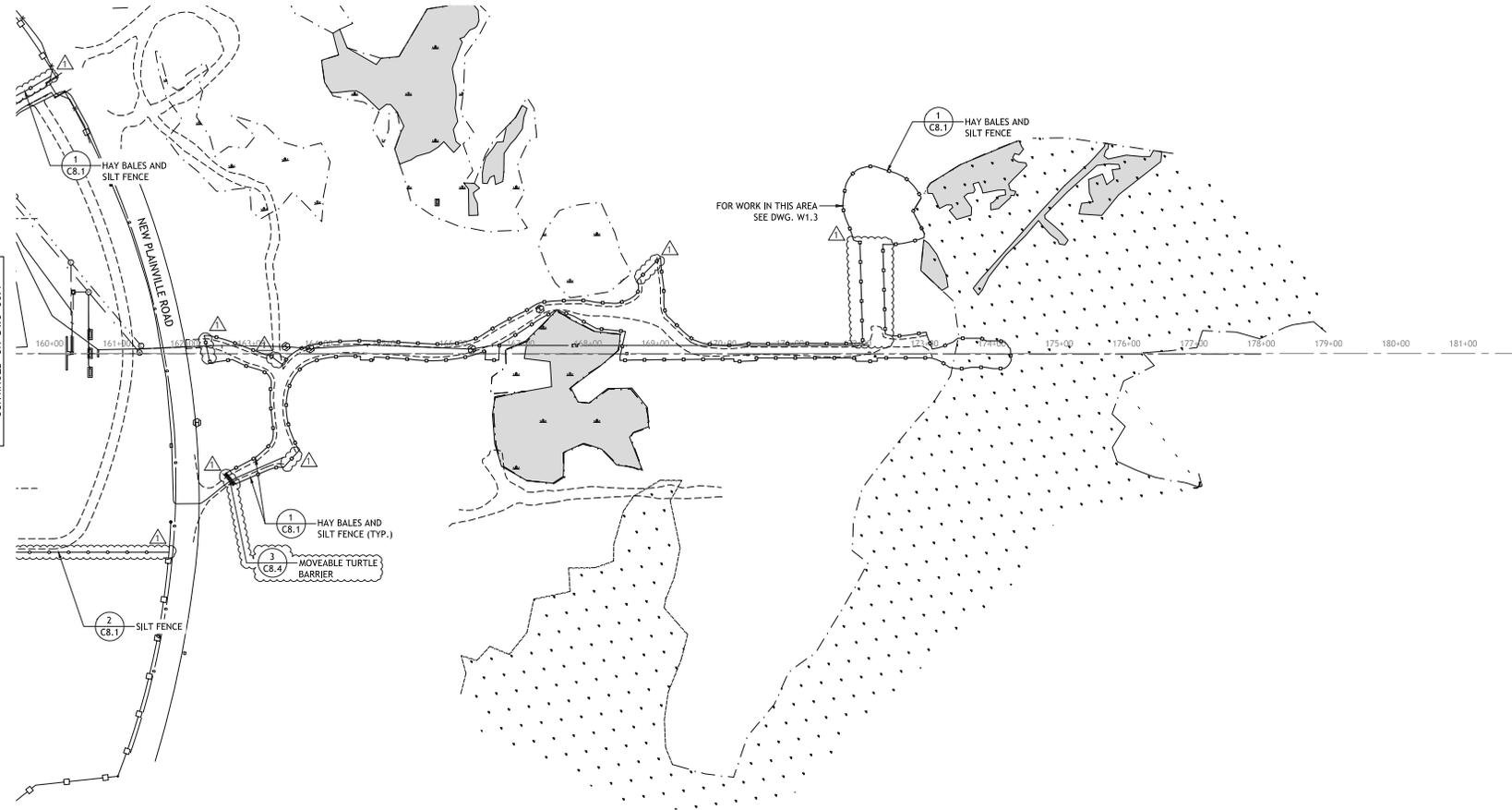
NO.	DATE	DESCRIPTION	BY
1	4/13	ADDENDUM NO. 2	MKO

PROJECT	RECONSTRUCT, MARK AND GROOVE RUNWAY 5-23 CITY OF NEW BEDFORD BID NO. 1348204
OWNER	NEW BEDFORD AIRPORT COMMISSION NEW BEDFORD, MASSACHUSETTS

PROJECT NO.	103-026
CAAD FILE	C6 DRAINAGE & ESC
DESIGNED BY	MKO
DRAWN BY	MKO
CHECKED BY	DWR
DATE	MARCH 2013
DRAWING SCALE	1" = 80'

SHEET TITLE	DRAINAGE AND EROSION CONTROL PLAN-5
GRAPHIC SCALE	0 40 80 160

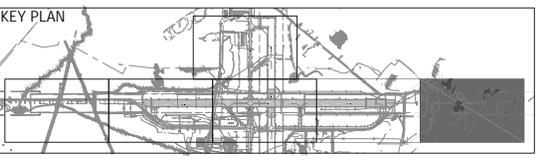
DRAWING NO.	C6.5
53 OF 117	



**NOTES:**

- FOR WORK IN THIS AREA SEE DRAWINGS W1.3 AND FAA PLANS - VOLUME 2. COORDINATE EROSION CONTROLS WITH LIMITS OF WORK.
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LEGEND	
	CONSTRUCTION BASELINE
	EDGE OF PROPOSED PAVEMENT
	PROPOSED CATCH BASINS/DRAIN LINE
	PROPOSED UNDERDRAIN
	PROPOSED DRAIN MANHOLE
	EXISTING CATCH BASINS/DRAIN LINE
	REMOVE EXISTING CATCH BASINS/DRAIN LINE
	PROPOSED HAY BALES AND SILT FENCE
	PROPOSED SILT FENCE
	PROPOSED TURTLE GATE
	PROPOSED INFILTRATION TRENCH
	PROPOSED CONCRETE HEADWALL
	PROPOSED END CLEANOUT
	PROPOSED LINE CLEANOUT
	EXISTING WETLAND
	OPEN WATER
	PROPOSED PAVEMENT
	PROPOSED GRAVEL ROAD









**NEW BEDFORD REGIONAL AIRPORT  
RUNWAY 5-23 – PHASE 4  
Reconstruct, Mark and Grove  
Report on RSA 5 – ILS Road / West Ditch silt fence failure**

On the morning of May 1 after overnight rain, a site inspection of the 5 end of the runway was conducted. At that time, it was noted that a section silt fence had failed. This fence was located at a low point in the ILS road and collected drainage from approximately 4 acres of area. This failure occurred in the same area as where the banking between the ILS road and the west ditch had been disturbed on April 24.





The silt fence along the ILS road in this section was older fencing placed in a previous phase. The bottom of the fence was ripped and may have already had a toe kick hole in it. The volume of water going through the hole in the bottom of the fence undercut the bank and eroded the material around the toe of the fence creating a larger hole. This increased volume the most likely overwhelmed the lower new fence and created a direct discharge to the west ditch mitigation. In addition, another hole was discovered in the bottom of the old fence. While this hole allowed water to get through the fence, the lower new fence protected the bank and did not cause a complete blow out.



The failure was discovered at 7:30 AM and ET&L was immediately contacted. ET&L remobilized their silt fence contractor from the 23 end of the site to the 5 end.

At around 8:30 AM RAMCO began to install a silt fence along the south side of the ILS road to capture some of the storm water and prevent it from reaching the ILS road. In addition, RAMCO re-staked the new silt fence line and added hay bale for support. At this point most of the direct flow into the west ditch was stopped. RAMCO then began to install a new silt fence immediately adjacent to the older fence along the edge of the ILS road.



The photo below shows the area of concern after RAMCO installed hay bales along the new silt fence line.



The photo above shows the new silt fence on the south side of the RSA as well as RAMCO installing silt fence adjacent to the old fence.

On May 2, 2014, a truck load of hay bales arrived and the entire length silt fence along the ILS road was backed with the bales.



## Recommendations:

The north side of the 5 runway RSA is approximately 4-5 acres in size. Typically, silt fence is design at a rate of 100 feet of fence per ¼ acre of drainage. In the current design, it appear the plan of backing with hay bales is to increase the amount of water it will hold. However, the design forces all of the water against what is supposed to be a single hay bale/silt fence protection on an active travel path, with an unstable buffer between the edge of the ILS road and the newly constructed West Ditch.

To alleviate some of the issues with this, JM Fiske is recommending an additional section of silt fence protection is added to the south side of the ILS road. This section would consist of 200 foot lengths of silt fence with ends turned up slope. This fence would trap some of the water that is currently reaching the ILS road and reduce the amount of ponding and pressure on the ILS road and its existing protection.

In addition, it is recommended that the design team evaluate the long term stability of the buffer slopes. At the end of the project with the entire silt fence removed, there will be concentration of storm water on the ILS road and because the road will not remain level, there will always be discharge points over the short steep buffer banking. Some type of chute should be used for long term discharge of storm water. If a short rock chute is not permitted, the design team may want to consider shallow vegetated swales reinforced with a turf reinforcement mat that will allow vegetation to grow up through it.



View of repaired silt fence and added hay bales on May 2 2014