

North Carolina Department of Transportation Roadside Environmental Unit Erosion & Sedimentation / Stormwater Report

ICA

Immediate Corrective Action

This project does not comply with the North Carolina Erosion and Sedimentation Control laws. Immediate Corrective Action is needed to resolve the situation to full compliance with the Law: (T15A: 04B.0000).

Project Information

Inspection Date: 02/10/2021	Evaluator: Josh Young
Project #: 50118.1.FS1	TIP #: I-5700 Contract #: C-204351
Division #: 5	County: Wake
Project Type: Contract	Engineer: Beryl Road Resident
Project Length: 0.80	Disturbed Acres: 0
River Basin: Neuse	HQW Zone: NO Trout Zone: NO
Location Description: JY- I-40 Interchange wth Airport Blvd	

Project Evaluation

Report Type: Routine ICA ICA Ex 1st ICA Ex 2nd CICA - SWO
 PCN ECPAR

Length	Section	Installation of BMPs	Maintenance of BMPs	Effectiveness of BMPs	Plan Implementation	Overall Project Evaluation
0.8	The Entire Project	6	6	6	6	6

Grading Scale: 0 - 6 = Immediate Corrective Action Required, 7 = Fair, 8 = Good, 9 = Very Good, 10 = Excellent

Remarks and Recommendations:

I performed my monthly EC site review for I-5700 yesterday Wednesday, February 10, 2021. I spoke with both NCDOT and Zachry personnel while I was onsite and addressed project concerns at that time. While performing my EC site review I found several locations throughout the project where sediment loss had occurred and where there was high potential for more loss to occur during the next storm event due to inadequate routine cleanout of EC measures. It appeared that no effort was being made to these problem areas until I arrived onsite and brought it to the attention of the responsible personnel onsite. It is very concerning that these areas were not discovered during the weekly walkthroughs by responsible field staff. At this current time, the project is out of compliance and requires an extensive amount of effort to return the project back to compliance. An ICA is being issued today based on my below findings. I will revisit the site in five days to ensure that these project concerns have been addressed and that the project is back in compliance. NPDES records were not reviewed at the time of my site visit, however I was informed by project personnel that they were not up to date. Ensure that these forms are up to date and reflect project concerns. I also noticed that several areas throughout the project were outside of the 14 day soil stabilization timeframes. I addressed my concerns onsite and was informed that the seeding sub was contacted on Monday, February 8, 2021 and were unable to perform seeding operation before rain event this week. I highly recommend that seeding subs be scheduled way in advance to prevent any laps in soil stabilization timeframes since groundcover is our best EC measure.

Project Concerns and Recommendations:

Ramp A:

STA 15+00 RT: Several wattles were more than half full of sediment and require cleaning out. Special sediment control outlet has extensive amount of silt built up along device and requires cleaning out. Groundcover is also needed. I also noticed that some of the silt has migrated under perimeter silt fence and is very close to adjacent stream. This material will need to be retrieved and area will need to be returned to original site conditions.

-Y3-

STA 20+00 LT: Roadway is being graded in a manner to prevent roadway runoff to enter designated ditch that has EC measures in place. Weep sections should be installed along shoulder berms to allow roadway runoff to shed into designated EC measures.

STA 23+00 RT: Drainage Inlets have been installed and do not have appropriate Type C protection in place. I was informed that these boxes were dead at this time, however they will need to be cleaned out before becoming active.

STA 28+00 RT: Slope drain needs to be extended further down grade to discharge directly into Special sediment control outlet. Currently, the slope drain will be discharging upland roadway runoff into ditch with non-keyed in plastic which creates the potential for runoff to mix with additional disturbed ground before existing project limits.

STA 25+00: Metal plate crossing over TD is not allowing project runoff to exit project. I recommend removing metal sheet crossing and maintaining TD at the end of each day.

STA 27+00: Stockpile in center of roadway needs perimeter containment.

STA 28+00 LT: Rock checks leading towards culvert are more than half full and need to be cleaned out ASAP.

STA 30+00 LT: Silt from slope failure upland of rip rap has deposited at toe of bank stabilization. Material will need to be removed and will require dike and pump around operations to perform work in dry.

Ramp B:

STA 17+00 to 21+00 RT: Rock checks shown on EC plans are needed since disturbance has occurred at this location.

STA 17+00 LT: Additional rock checks appear to be needed in ditch line since vegetated slopes and ditch have been recently disturbed. Ensure that slopes are tracked in correctly so that cleat marks are horizontal to slope to prevent further rilling of slopes.

-Y2-

I noticed an excessive amount of concrete that needs to be cleaned up from recent culvert pouring operation. Also, ensure that all concrete washout structures are removed since they are full and have potential to overtop and wash into stream. Concrete is prohibited to come in contact with live streams due to the potential of changing the PH of the water which can lead to fish kills.

Ensure that concrete is removed ASAP to prevent any material from entering adjacent live stream.

Ramp C:

STA 15+00 +/- RT: An excessive amount of silt has undermined perimeter silt fence. All the excess silt will need to be retrieved and the area will need to be returned to original site conditions. I recommend repairing any damaged silt fence and adding additional outlets since there appears to be an excessive amount of water draining to this location.

Plastic lined ditch has not been keyed in and has potential to allow runoff to undermine plastic.

-Y-

STA 88+00 to 89+00 RT: Earth berm along haul rd. has failed which in return has allow sediment to overwhelm perimeter silt fence and enter wetland. Sediment needs to be retrieved and area needs to be returned to original site conditions. I recommend adding several slope drains along haul road to prevent this from happening again.

North Carolina Department of Transportation
Roadside Environmental Unit
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ICA EX 1st

Immediate Corrective Action Extension (First Issuance)

This project does not comply with the North Carolina Erosion and Sedimentation Control laws. Immediate Corrective Action is needed to resolve the situation to full compliance with the Law: (T15A: 04B.0000).

Project Information

Inspection Date: 02/17/2021 Evaluator: Josh Young
 Project #: 50118.1.FS1 TIP #: I-5700 Contract #: C-204351
 Division #: 5 County: Wake
 Project Type: Contract Engineer: Beryl Road Resident
 Project Length: 0.80 Disturbed Acres: 0
 River Basin: Neuse HQW Zone: NO Trout Zone: NO
 Location JY- I-40 Interchange wth Airport Blvd
 Description:

Project Evaluation

Report Type: Routine ICA ICA Ex 1st ICA Ex 2nd CICA - SWO
 PCN ECPAR

Length	Section	Installation of BMPs	Maintenance of BMPs	Effectiveness of BMPs	Plan Implementation	Overall Project Evaluation
0.8	The Entire Project	6	7	6	7	6

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Remarks and Recommendations:

I performed my follow up site today, February 17,2021. At this current time, I am extending the ICA based on my findings today. I walked the entire project with Anthony from Zachry and NCDOT Residents office and field staff. The contractor was still in the process of performing EC maintenance to the project when I arrived onsite. However, there remains several EC concerns listed in the Project Concerns and Recommendations section below that need to be addressed to get the project back in compliance. I also reviewed the NPDES records today and for the most part they are up to date, however the As-Built Plans need to show when and where seeding and groundcover operations are taking place onsite. Ensure that NPDES forms are filled out completely and no items are left blank which could give the impression that inspections are not taking place. Seeding sub was onsite at time of site review performing mulching and tacking operation. Efforts appreciated. I will make a follow up site visit on February 24, 2021 to ensure that site is back in compliance and to verify that the ICA can be lifted

If you have any questions or concerns please feel free to email or call.

Project Concerns and Recommendations:

Ramp A:

Silt needs to be cleaned out in front of last SSCF outlet while also extending 57 stone to cover wire mesh on both sides to prevent potential silt from washing around EC measure.

Recommend installing additional rock checks in existing TD that runs the length of ramp A.

-Y3-

STA 25+00 LT: Slope drain needs to be reworked when area has dried out. Runoff is washing under inlet of slope drain and has potential to washout slope.

Seeding and mulching is needed.

Silt fence around spoil piles need maintenance. Excess material is pushing up against silt fence.

Clean out clogged up skimmer in basin 14.1.

Ramp B:

STA 14+00LT: Silt needs to be cleaned out in front of all outlets before entering inlet pipe that crosses under Interstate 40. I also recommend incorporating pam to EC measures before entering pipe system to reduce turbidity that is being discharged at ramp C.

-RBP- STA 14+00: Excess silt has built up on section of silt fence at bottom of ramp B. Excess material needs to be removed from silt fence and any damaged silt fence needs to be repaired.

Groundcover is needed on entire slope and shoulders from recent grading operation.

Tracking of slopes need to be up and down so cleat marks are horizontal to prevent further rilling of slopes.

-Y2-

Plastic needs to be keyed in on top side to prevent runoff from washing under plastic and mixing with disturbed soil.

Excess concrete washout stations should be removed.

Ramp C:

Plastic being utilized to direct runoff from Ramp B outlet needs to be keyed in properly.

Two Spoil piles at bottom of ramp C need perimeter containment. I recommend installing perimeter silt fence around both stockpiles for added protection. I also recommend providing groundcover to the disturbed areas on Ramp C.

-Y-

STA 88+00 to 89+00 RT: STA 80+00 RT +/- Last slope drain appears to have silt built up in front of 57 stone.

Recommend cleaning out excess material. I also recommend providing groundcover to all bare areas on slopes and haul road. Ensure that straw truck does not spray straw into adjacent stream.

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Project Information

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0.8	The Entire Project	8	8	8	8	8

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Remarks and Recommendations:

I met for the third time onsite today Wednesday, February 24, 2021 for a follow up site visit. I visited the entire project with Kimberly Summers (DEQ), Rob Ridings (DWR), Mitch Wimberley (DEO), NC DOT Residents office and Zachry Construction personnel. Kimberly reviewed the NPDES records and they appear to be up to date. The purpose of this site visit was to ensure that all EC concerns from the last two previous EC reports have been addressed and that the site was back in compliance in order for the ICA to be lifted. Upon arrival I noticed that the contractor had performed seeding, mulching, and tacking operation throughout the entire project. Overall the project is in good shape and all the EC concerns have been addressed. Based on current site conditions I am lifting the ICA.

Future Concerns and Recommendations:

-Y2-
 Pumps were turned off at time of site visit and live stream was flowing over sand bags. Kimberly and Rob voiced their concerns about the site conditions at the time of their site visit. They insisted that all the pumps be turned back on so that the work could be dewatered and performed in the dry. Once construction begins at the culvert extension, work will need to be performed in a continuous manner until completed to limit any potential violation at this sensitive area.

-Y3-
 STA 30+00 RT: Dissipater stone is needed at outlet of slope drain per DEQ.

Ramp A:
 It appears that there is over one acre of drainage discharging to slope drain and outlet near culvert at bottom of grade. Kimberly suggested that an additional basin may be needed at this location to prevent potential sediment from overwhelming last outlet. I contacted Wes Chandler with Roadside Environmental to calculate basin dimension and skimmer size based on current drainage area. Once basin size has been confirmed I will pass it along to Residents office for onsite implementation.

Ramp B:
 Ensure that contractor is tracking in slopes up and down so cleat marks dont cause additional slope scouring.

Ramp C:
 No additional issues found at time of site review.

During the site visit both DEQ and DWR continually addressed their concerns to both the contractor and residents office about the need of ground-cover onsite so that soil stabilization timeframes found in the NCG01 permit are continually met.

If you have any questions or concerns please feel free to email or call.
Thank you