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| QUALITY ASSURANCE REPORT (QAR) DAILY LOG OF CONSTRUCTION | | | | | REPORT NUMBER 505 | | Page 1 of 1 | |
| | | | | | DATE 06 May 2020 - Wednesday | | | |
| PROJECT Durham Meadows Waterline Remedial Design | | | | | CONTRACT NUMBER W912WJ19C0002 | | | |
| CONTRACTOR Ludlow Construction Co., Inc. | | | | | WEATHER Weather Caused No Delay Temperature Min 40 °F Max 53 °F No Precipitation 16 MPH Wind | | | |
| PORTION OF SCHEDULED DAY SUITABLE FOR OPERATIONS | | | | | TEMPERATURE | | WIND | |
| STRUCTURAL EXCA- VATION 0 % | BORROW EXCA- VATION 0 % | EMBANKMENT 0 % | CONCRETE 0 % | STRUCTURE 0 % | MINIMUM 40 °F | MAXIMUM 53 °F | 16 MPH | |
| HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING FO FACT? <div style="float: right;"> <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES (Explain) </div> | | | | | 24 HOUR PRECIPITATION | | | |
| | | | | | INCHES 0.00 | | ENDING M | |
| NUMBER OF GOVERNMENT EMPLOYEES | | | | | RIVER STAGE | | | |
| SUPERVISORY 0 | OFFICE 0 | LAYOUT 0 | INSPECTION 2 | TOTAL 2 | LABOR 0 | FEET 0.0 | | TIME M |
| NUMBER OF CONTRACTOR'S EMPLOYEES | | | | NUMBER OF SHIFTS | | | | |
| | | | | <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 | | | | |
| SUPERVISORY 0 | SKILLED 0 | LABORERS 0 | TOTAL 0 | FROM 0700 | TO 1530 M | FROM M | TO M | FROM M |
| | | | | TO M | FROM M | TO M | FROM M | TO M |
| Attach a list of the following. (a) Major items of equipment either idle or working, and (b) Number and classification of contractor personnel onsite. NOTE: if the contractor's Quality Control Report (QCR) contains the information it need not be repeated. | | | | | | | | |
| QA NARRATIVES | | | | | | | | |
| Contractor/Subcontractor & Area of Responsibility for Work: | | | | | Unresolved Issue: No | | Shift: 1 | |
| Robert Christie Project involves installing water main from a new Middletown Water Tank into Durham and tying into homes & businesses: Prime Contractor: Ludlow - Installing watermain & associated components. Subcontractor: ACE Consulting - SSHO Rob Peddicord & CQC Jerry Brandon Subcontractor: Connecticut Traffic Control - 0 Subcontractor: John Turner Consulting - YES (Steve) Subcontractor Vellieux - 0 Middletown Police - 0 State Police -2 | | | | | | | | |
| Work Performed Today: | | | | | Unresolved Issue: No | | Shift: 1 | |
| Robert Christie Water Tank Site and Access Road: No Work Continued to excavate out the material from the tank access road and replace it with 12" of processed gravel. Whenever a homeowner needs to pass by they accommodated them with no issues. State/Town Roads: 2 State Police directing traffic Continued installing the 16" Non-Restrained water from station 178+10 to 180+ 52 Installed 5 - 1" Corporations at stations 178+55, 178+75, 179+50, 180+10 and 180+41 Installed 1 - 1.5" Corporation at station 179+13.5 Installed 1 - Hydrant assembly 179+07 JTC conducted compaction tests. *** From station 178+10 to 179+00 contractor used native material. From station 179+00 to 180+52 they used bank run gravel due to unsuitable material. *** 1- Pete from Ludlow to pressurized more of sections of the water line. Pay Items: 1. 8" Restrained Pipe - 0 2. Fire Hydrant Assembly - 1 3. Police - 2 State Police 4. Illuminated Signs - yes 5. Sawcut Town Roads - 0 Feet 6. Sawcut State Roads - 484 Feet 7. 16" Restrained Pipe - 0 Feet 8. 16" Non-Restrained Pipe - 242 Feet 9. 20 inch pipe at access road - 0 10. 20 inch pipe Restrained - NA 11. Ledge Removal - No 0 Cubic Yards 12. Trailer cleaned - Not today 13. 8 inch Gate Valve - 0 14. Bank Run Gravel- 43.12 CY 15. Manual Drain Assembly - 0 | | | | | | | | |

- 16. 16x16x8 TEE - 0
- 17. 16x16x16 TEE - 0
- 18. 16" Butterfly valve - 0
- 19. 1" Corporation - 5
- 20. 1.5" Corporation - 1
- 21. 1" Curb stop - 0
- 22. 1" Cooper pipe - 0

Results of QA Inspections and Tests, Deficiencies Observed, Actions Taken: Unresolved Issue: No Shift: 1

Robert Christie

Observed the installation of the 16" Restrained pipe. At approximately 0730 they began excavating. Fabric was placed in the bottom of the excavation followed by 6" of 3/4" stone. Then the stone was covered with fabric. They then placed 3" of sand, installed the pipe and placed 12" of sand over the pipe followed by 3 - 12" lifts of native material or processed gravel where they encountered unsuitable material and compacted each lift. Placed 2 - 8" lifts of processed gravel and compacted each lift. Finally placed 4" of HMA in two 2" compacted lifts.

No water was encountered in the trench today.

Compaction Tests today - Yes, Observed Steve from John Turner Consulting performing the compaction tests. All of the tests were above the required 95%.

Drove by the storage yard twice during my shift. Observation made both times was no material was spilled on the ground and no damage to asphalt. The catch basin did have sediment control fabric in it and did not appear to be clogged.

Observed the tank access road crew removing the existing road base material and replacing it with 12" of processed gravel. The material was excavated with caterpillar 336 excavator and loaded into a 10 wheel dump truck. The material was then transported to the top and side of the tank road to be used as backfill. Then 10 wheel dump trucks delivered and dump the processed gravel on the tank access road. The material was then spread and graded with the bulldozer. Finally the roller compacted the gravel.

Observed 2 Ludlow employee's working on Pickett lane. One employee was flagging traffic well the other was performing the saw cutting of the road. Proper signage was out and visible to traffic.

Verbal Instructions Given to Contractor: Unresolved Issue: No Shift: 1

Robert Christie

I spoke to QC Jerry about the backfilling of the trench of route 17. I saw a couple of rocks over the allotted 5" so I asked Jerry to remind them of the requirement to not backfill with any rocks over 5". Kurt also reminded John as well.

Miscellaneous Remarks and Visitors to Project: Unresolved Issue: No Shift: 1

Robert Christie

Water encountered while excavating:
No water was encountered today.

PR Comments, encounters or issues:
None today.

CT DOT onsite or communication:

Jose Torres was onsite to pick up the compaction test results. He said he had no issues with anything.

Miscellaneous Remarks and Visitors to Project: Unresolved Issue: No Shift: 1

Robert Christie

Jerry - QC
Rob P - SSHO
John Pio - Superintendent
Mike Pio - onsite
USACE - Kurt Mintell
AECOM - Joel was onsite providing extra oversight of the contractor.
Mike Cunningham
Steve - JTC Consulting

Safety: Unresolved Issue: No Shift: 1

Robert Christie

Noted portable hand wash station on back of tool truck, cleaning supplies nitrile gloves, face masks.
Workers fill out daily forms indicating they are not demonstrating any symptoms of COVID 19 and turning into SSHO.

Daily Safety Inspections:

1. Noted proper PPE while cutting Steel pipe with cut off saw.
2. Traffic Control: 3 State Police and cones on 17 - while installing the new water line
3. Discussed situational awareness while working around heavy equipment, and while allowing residents to use the shared driveway while under construction
4. Situational awareness not to work in close proximity to each other (COVID PREVENTION)
5. Trench box being used for all excavations while working in trench.

QA VERIFICATIONS (Verification of QC requirements reported completed by the Contractor)

The following QC Requirement(s) were verified today:

| Requirement # | | Results |
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| CT-00006 | Rt 17 at Talcott Ridge intersection, Compaction Tests were performed as layers of fill were placed | Awaiting Results |

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| CT-00007 | Heat tests were done on the asphalt off the truck. 290% 1st layer after compaction 213% 2nd layer 224% All tests were good | Awaiting Results |
| CT-00008 | Rt 17 at Talcott Ridge intersection, Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00009 | Heat tests were done on the asphalt off the truck. 290% 1st layer after compaction 213% 2nd layer 224% All tests were good | Awaiting Results |
| CT-00010 | Rt 17 at Talcott Ridge intersection, Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00011 | Heat tests were done on the asphalt off the truck. 280% 1st layer after compaction 224% 2nd layer 224% All tests were good | Awaiting Results |
| CT-00012 | Rt 17 at Talcott Ridge intersection, Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00013 | Heat tests were done on the asphalt off the truck. 278% 1st layer after compaction 225% 2nd layer 220% All tests were good | Awaiting Results |
| CT-00014 | Rt 17 going North toward Durham. Compaction Tests were performed as layers of fill were placed. | Awaiting Results |
| CT-00015 | Heat tests were done on the asphalt off the truck. 290 % 1st layer after compaction 245 % 2nd layer 224 % All tests were good | Awaiting Results |
| CT-00016 | Rt 17 going North toward Durham. Compaction Tests were performed as layers of fill were placed. | Awaiting Results |
| CT-00017 | Heat tests were done on the asphalt off the truck. 290 % 1st layer after compaction 240 % 2nd layer 224 % All tests were good | Awaiting Results |
| CT-00018 | Rt 17 going North toward Durham. Compaction Tests were performed as layers of fill were placed. | Awaiting Results |
| CT-00020 | Heat tests were done on the asphalt off the truck. 295 % 1st layer after compaction 240 % 2nd layer 224 % All tests were good | Awaiting Results |
| CT-00021 | Rt 17 at Talcott Ridge intersection, Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00022 | Heat tests were done on the asphalt off the truck. 295 % 1st layer after compaction 240 % 2nd layer 224 % All tests were good | Awaiting Results |
| CT-00023 | Heat tests were done on the asphalt off the truck. 295% 1st layer after compaction 224% 2nd layer 224% All tests were good | Awaiting Results |
| CT-00024 | Rt 17 going North toward Durham. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00025 | Heat tests were done on the asphalt off the truck. 290-310% 1st layer after compaction 235% 2nd layer 270% out of truck, 220% after compaction All tests were good | Awaiting Results |
| CT-00026 | Compaction Tests on Talbott Road Sta 48+75133 | Awaiting Results |
| CT-00027 | Rt 17 going North toward Durham. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00028 | Heat tests were done on the asphalt off the truck. 290-310% 1st layer after compaction 230% 2nd layer 265% out of truck, 215% after compaction All tests were good | Awaiting Results |
| CT-00029 | Heat Test showed 185% off truck. | Awaiting Results |
| CT-00030 | Rt 17 going North toward Durham. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00031 | Heat tests were done on the asphalt off the truck. 295-305% 1st layer after compaction 200-230% 2nd layer 245-265% out of truck, 170% after compaction All tests were good | Awaiting Results |

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| CT-00032 | Heat Test Good 197 Degrees off truck. | Awaiting Results |
| CT-00033 | Rt 17 going South toward Durham. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00034 | Heat tests were done on the asphalt off the truck. 295-315% 1st layer after compaction 200-225% 2nd layer 280-300% out of truck, 230-220% after compaction All tests were good | Awaiting Results |
| CT-00035 | The asphalt temperature was measured off the truck. Temp passed. 290 Degrees. | Awaiting Results |
| CT-00036 | Rt 17 going toward Durham. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00037 | Heat tests were done on the asphalt off the truck. 285-300% 1st layer after compaction 195-220% 2nd layer 275-295% out of truck, 190-210% after compaction | Awaiting Results |
| CT-00038 | Five layers of trench was ran. Average 96. 2.3 Moisture. | Awaiting Results |
| CT-00039 | Heat Test performed. (* Degrees off the truck) | Awaiting Results |
| CT-00040 | Rt 17 going North toward Durham. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00041 | 1st layer 290% out of truck 2nd layer 260-290% out of truck, | Awaiting Results |
| CT-00042 | Rt 17 going North toward Durham. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00043 | 1st layer 290% out of truck 2nd layer 260-280% out of truck, | Awaiting Results |
| CT-00044 | Rt 17 going SOUTH toward Durham. Compaction Tests were performed as layers of fill were placed. (NOTE: All previous Rt 17 North should read South) | Awaiting Results |
| CT-00045 | 1st layer 310-280% out of truck 2nd layer 300-260% out of truck, | Awaiting Results |
| CT-00046 | Compaction Tests were performed in Lifts as required. All Tests passed. | Awaiting Results |
| CT-00047 | Heat tests were done on the hot asphalt. 298% of the truck. Good | Awaiting Results |
| CT-00048 | Rt 17 going South toward Durham. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00049 | 1st layer 310-290% out of truck. 2nd layer 305-275% out of truck | Awaiting Results |
| CT-00050 | Heat tests was done off the truck and after being rolled. Test Results Good | Awaiting Results |
| CT-00051 | Rt 17 South just inside Durham northern border. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00052 | 1st layer 310-290% out of truck. 2nd layer 305-275% out of truck | Awaiting Results |
| CT-00053 | Heat tests was done off the truck and after being rolled. Test Results Good | Awaiting Results |
| CT-00054 | Rt 17 South just inside Durham northern border. Compaction Tests were performed as layers of fill were placed | Awaiting Results |
| CT-00055 | 1st layer 285-260% out of truck. 2nd layer 275-250% out of truck | Awaiting Results |
| CT-00056 | Rt 17 South, across from Royal Oak Drive. Compaction Tests were performed as layers of fill were placed. No failing tests | Awaiting Results |
| CT-00057 | 1st layer 280-300% out of truck. 2nd layer 295-315% out of truck | Awaiting Results |
| CT-00058 | Rt 17 South, across from Royal Oak Drive. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00059 | 1st layer 290-315% out of truck. 2nd layer 285-310% out of truck | Awaiting Results |
| CT-00060 | Heat Test's were performed. Off Truck Temp was 288 Degrees. | Awaiting Results |
| CT-00061 | Heat Test's were performed. Off Truck Temp was 294 Degrees. | Awaiting Results |
| CT-00062 | Rt 17 South, Between Royal Oak Drive and Oak Terrace. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00063 | 1st Truckload at 290-325% out of truck. 2nd Truckload at 280-300% out of truck | Awaiting Results |

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| CT-00064 | Compaction Testing was done by JTC. Tests were Good | Awaiting Results |
| CT-00065 | Asphalt 286 Degrees of the Truck. | Awaiting Results |
| CT-00066 | Rt 17 South, Beginning between Oak Terrace and Little lane. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00067 | 1st Truckload at 280-305% out of truck. 2nd Truckload at 280-315% out of truck | Awaiting Results |
| CT-00068 | Compaction Good Today | Awaiting Results |
| CT-00069 | Heat test off Truck 325% Rolled 265% Tests Good | Awaiting Results |
| CT-00070 | Rt 17 South, Beginning approx 145ft S of Little lane. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00071 | 1st Truckload at 270-300% out of truck. 2nd Truckload at 260-290% out of truck | Awaiting Results |
| CT-00072 | 298% off the Truck. | Awaiting Results |
| CT-00073 | 296% off the truck. Good | Awaiting Results |
| CT-00074 | Rt 17 South, Beginning Sta 145+38, in front of Lino's Market. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00075 | 1st Truckload at 290-325% out of truck. 2nd Truckload at 280-315% out of truck | Awaiting Results |
| CT-00076 | 305 Degrees off the truck. Test Good. | Awaiting Results |
| CT-00077 | Rt 17 South, Beginning Sta 147+63, just South of Lino's Market. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00078 | 1st Truckload at 280-320% out of truck. 2nd Truckload at 270-305% out of truck | Awaiting Results |
| CT-00079 | Rt 17 South, Beginning Sta 149+65, just South of Lino's Market. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00080 | 1st Truckload at 290-310% out of truck. 2nd Truckload at 270-295% out of truck | Awaiting Results |
| CT-00081 | 1st Truckload at 280-320% out of truck. 2nd Truckload at 270-305% out of truck | Awaiting Results |
| CT-00082 | Asphalt was 354 Degrees off the truck. Good results. | Awaiting Results |
| CT-00083 | Rt 17 South, Beginning Sta 151+50, Parsons road and in front of Durham Auto. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00084 | 1st Truckload at 270-310% out of truck. 2nd Truckload at 275-320% out of truck | Awaiting Results |
| CT-00085 | Asphalt 321 Degrees off Truck. 281 Spread 155 after roll. Asphalt Passed. | Awaiting Results |
| CT-00086 | 98.1% Comp. 7.7 Moisture 97.9% Comp 8.2 Moisture 97.4% Comp 7.8 Moisture | Awaiting Results |
| CT-00087 | Off Truck 314 Degrees | Awaiting Results |
| CT-00088 | Rt 17 South, Beginning Sta 153+47, In front of Durham Auto Center. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00089 | 1st Truckload at 290-325% out of truck. 2nd Truckload at 270-300% out of truck | Awaiting Results |
| CT-00090 | Rt 17 South, Beginning Sta 155+10, In front of Torrison Stone & Garden. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00091 | 1st Truckload at 290-325% out of truck. 2nd Truckload at 270-300% out of truck | Awaiting Results |
| CT-00092 | 301 Degrees off the truck. | Awaiting Results |
| CT-00093 | Rt 17 South, Beginning Sta 157+08, In front of Torrison Stone & Garden. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00094 | 1st Truckload at 280-325% out of truck. 2nd Truckload at 280-325% out of truck | Awaiting Results |

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| CT-00095 | 323 off the Truck. Asphalt was even and looked good. | Awaiting Results |
| CT-00096 | Rt 17 South, Beginning Sta 159+02, In front of Torrison Stone & Garden. Compaction Tests were performed as layers of fill were placed. No failing tests. | Awaiting Results |
| CT-00097 | 1st Truckload at 290-325% out of truck. 2nd Truckload at 270-310% out of truck | Awaiting Results |
| CT-00098 | 305 Degrees off Truck. Looks Good Smooth Finish. | Awaiting Results |
| CT-00099 | Rt 17 and Winsome Rd intersection; 8" pipe and hydrant assembly. Sta 157+56 of Rt 17. Asphalt temp checked off of truck. High temp of 310 degrees | Awaiting Results |
| CT-00100 | Rt 17 and Parsons Lane intersection; 25.67 ft of restrained 8" pipe . Sta 151+50 of Rt 17. Asphalt temp checked off of 2 trucks; High temps of 260 and 310 degrees | Awaiting Results |
| CT-00101 | 305 off the Truck | Awaiting Results |
| CT-00102 | Five tests were made as follows; 1; Compaction 96.0 Moisture was 4.8 2: Compaction 96.8 Moisture was 5.0 3: Compaction 96.2 Moisture was 5.3 4: Compaction 97.4 Moisture was 3.3 5: Compaction 96.9 Moisture was 4.0 | Awaiting Results |
| CT-00103 | Compaction Testing on Rt 17 and Talbott at STA 100+05 Results as follows: 96.8, 97.5, and 97.9 | Awaiting Results |
| CT-00104 | 3rd house driveway: STA 15+84: 95.6/M 13.4, 96.2/M 4.4, 99.74M 4.4, and 96.2/M 5.1 Talcott at 17: STA 751+63: 97.0/M 4.5, 96.2/M 4.4, 97.0/M 4.2, and 97.4M 3.8 | Awaiting Results |
| CT-00105 | Compaction Testing starting at 751+65 ending at 750+59: 1. 95.9% - 7.0% 2. 97.3% - 6.1% 3. 95.7% - 4.3% 4. 97.4% - 5.5% 5. 98.1% - 5.2% 1. 96.3% - 5.8% 2. 97.1% - 5.9% 3. 98.0% - 5.9% 4. 97.0% - 4.9% 5. 96.6% - 5.3% 1. 97.3% - 5.3% 2. 97.0% - 5.0% 3. 96.8% - 5.9% 4. 96.5% - 6.2% 5. 97.7% - 6.6% | Awaiting Results |
| CT-00106 | The compaction tests took place over the distance from Station number 160+00 to 161+15. | Awaiting Results |
| CT-00107 | The compaction tests took place over the distance from Station number 161+17 to 163+17, 200 ft total working distance. Following the specs I took 5 test per 25 feet (1 test per each lift of "bank run" (3.5" or natural spoils from on site, this varied based on the moisture content of the natural material and the ability to reach compaction) totaling 3 tests, and 1 per each lift of "process" (1.5") totaling 2 tests, again per 25 linear feet. Totaling 40 test over 200 feet. | Awaiting Results |
| CT-00108 | All the silt fences were checked as well as the storm drains. Silt fences were repaired by Ludlow where needed. | Awaiting Results |
| CT-00109 | SWWP inspection for 4/21-20 | Awaiting Results |
| CT-00110 | The compaction tests took place over the distance from Station number 164+19 to 165+69, 150 ft total working distance. Following the specs I took 5 test per 25 feet (1 test per each lift of "bank run" (3.5" or natural on site material) totaling 3 tests, and 1 per each lift of "process" (1.5") totaling 2 tests, again per 25 linear feet. Totaling 30 test over 150 feet. | Awaiting Results |
| CT-00111 | The compaction tests took place over the distance from Station number 165+69 to 166+94, 125 ft total working distance. Following the specs I took 5 test per 25 feet (1 test per each lift of "bank run" (3.5" totaling 3 tests, and 1 per each lift of "process" (1.5") totaling 2 tests, again per 25 linear feet. Totaling 25 test over 125 feet. | Awaiting Results |

