



COLORADO
Department of Transportation

Local Agency Project Documentation Example

Prepared 6/2021 by CDOT Geotechnical and
Materials Branch

***Note: This document shall be used only as a reference.
All project documentation shall meet all guidelines as
outlined in the Field Materials Manual.***



Introduction

This document is intended to provide an example of a CDOT Local Agency project materials documentation that conforms to the documentation requirements outlined in the Field Materials Manual. This is also an example of how an electronic project book is set up for an audit; your specific project may differ in types of items to include at which time refer to the Field Materials Manual.

If you have any Local Agency documentation questions or concerns, please contact Cathy Cole

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Melody Perkins

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Edward Trujillo

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COLORADO DEPARTMENT OF TRANSPORTATION LETTER OF FINAL MATERIALS CERTIFICATION FOR A LOCAL AGENCY PROJECT	Project No. STE C480-008	Page 1 of 8
	Contract ID 19219	Acceptance date 11/15/2017
	Project Location Pinon Causeway to Aspen Village Dr - S.U.P.	
	Contractor Crossfire, LLC	

This is to Certify that:

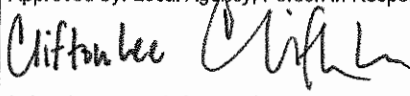
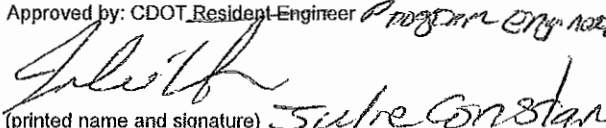
The results of the tests on the acceptance samples indicate that the material incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications; and such results compare favorably with the results of the Independent Assurance sampling and testing.

All results from the Independent Assurance sampling and testing are within tolerance limits of the results of sampling and testing that are used in the acceptance program.

Exceptions to the plans and specifications are explained on page 2 of 2 of this Form #473-LA. A CDOT Form #473-LA Page 2 is required to be attached to Page 1.

The referenced documents below are attached with applicable signatures to this form in the order indicated.

- Yes No Explanation(s) of Exceptions, Form # 473-LA Page 2, (as many pages as required.)
- Yes No Explanation of Exceptions, Supplemental Documents.
- Yes No Materials Documentation Record, Form #250.
- Yes No Project Independent Assurance Sampling & Testing Schedule, Form #379.
- Yes No Finals Materials Documentation Checklist, (Project Closure) Form #1199, page 1.
- Yes No Finals Materials Documentation Checklist, (Review or Audit) Form #1199, page 2.

Approved by: Local Agency, Person in Responsible Charge  (printed name and signature)	Title: Project Engineer Davis Engineering Service, Inc. (LA)	Date: 3/30/2018
Approved by: CDOT Resident Engineer  (printed name and signature)	Title: Traffic Engineer	Date: 7/2/18

Distribution:

- o: CDOT Resident Engineer
- xc: LA Project Engineer / Project Manager
- CDOT Region Materials Engineer
- CDOT Local Agency Coordinator
- Documentation Unit, Staff Materials & Geotechnical Branch

Form 474 has replaced page 2 of Form 473

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Explanation of Change Order No. 1

Change Order 01 (dated 07/24/2017) was put together to substitute boring of electrical conduit under US Highway 160 instead of performing overhead work for placement of the accessible pedestrian system crossing. Also, a line item was added to relocate a utility line south of US Highway 160. Change Order 01 was formatted to show a no cost change for inclusion of boring under US Highway 160. One pay item was added (613-00206 2 Inch Electrical Conduit (Bored)) and the Contractor provided a COC for the 259 lineal feet of 2 Inch Schedule 80 Conduit placed. A quantity of 392 lineal feet of pay item 613-00200 2 Inch Electrical Conduit was removed, 1 each of pay item 613-50106 Lighting Control Center (Special - Pedestrian) was removed, 34 lineal feet of pay item 1-1/2" Inch Electrical Conduit was removed, 1 each of pay item 613-07023 Pull Box (24"x36"x24") was increased, and 32 lineal feet of pay item 613-01100 1 Inch Electrical Conduit (Plastic) was increased through Change Order No. 01. Reductions to lump sum pay items 613-10010 Wiring (Special - Pedestrian X-Walk) and 630-XXXXX Construction Zone Traffic Control were also included in Change Order No. 01.

For the pay item 613-00206 2 Inch Electrical Conduit (Bored) this was an added item and included within the CDOT Form 250. All other pay items were existing items with quantities paid, or reduced, as indicated on the pay estimates.

Explanation of Force Account - Wal-Mart Utilities & Irrigation

The force account method was utilized to pay for necessary work to relocate irrigation and utility lines near the roadside Wal-Mart sign area, where the Contractor's Subcontractor performed this work. A tabbed section is included and labeled "Force Account - Wal-Mart Utilities & Irrigation". The manufacturer's COC's for electrical conduit, a pull box, 1" PVC, and 2" PVC pipe are included. The Force Account package summarizing payment for this work is also included.

Explanation of Force Account - Trail Lighting Luminaire Swap

The force account method was utilized to pay for swapping out of the trail lighting luminaires by the Contractor's Subcontractor. The Town of Pagosa Springs purchased and supplied the luminaires, and during shipment were damaged. The Subcontractor replaced damaged luminaires with new luminaries provided by the Town of Pagosa Springs. No other material was incorporated into the project for this force account work.

Explanation of Force Account - Culvert Repair

The force account method was utilized to pay for the Contractor to excavate, locate, repair, and replace US Highway 160 crossing culverts. The Contractor potholed in the area where the culverts crossed US Highway 160 and the trail, with deteriorated culverts encountered. A plan was developed to repair one culvert and abandon the other culvert (see Speed Memo 02). The Town of Pagosa Springs purchased and provided to the Contractor the culvert pipe and culvert connection materials. The supplier (Winwater) provided test results for this material and is included for reference. The Contractor also placed flow-fill material around the CMP coupling area. The Contractor provided the mix design and batch ticket. Due to minimal quantities no testing on the flow-fill material was performed and placement was approved by the Project Engineer. A tabbed section is included and labeled "Force Account - Culvert Repair". The Force Account package summarizing payment for this work is also included.

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Materials Certificate of Conformance & Test Results

The Project Engineer requested from the Contractor COC's & CTR's in accordance with the 2017 CDOT FMM OA Frequency Guide Schedule (FMM). For the pay items the CDOT Form 157 summarizes the documentation provided. For respective pay items the required FMM documentation is provided (e.g. COC, CTR, Buy America, APL/QML). For various line items, not indicated within the FMM to be provided, the manufacturer or supplier "COC's", "test results", "Buy America" statements have been included additionally and will not have the Contractor's CCS for a COC or CTR in accordance with CDOT Specification 106.12 and 106.13.

Item 203-00010 Unclassified Excavation (CIP)

A section of density tests is labeled "Density Tests - Info Only" and contains materials testing on prepared subgrade for the bottom of retaining wall from STA 24+26 to 25+03. The Contractor placed covered protection of this excavation but a large rain storm caused this area to become wet then soft. The Project Engineer discussed with the Contractor utilizing the pay item 203-00100 Muck Excavation in conjunction with the pay item 304-02005 Aggregate Base Course (Class 2) and pay item 506-01020 Geogrid Reinforcement (Special) to correct this soft area.

Item 208-00007 Erosion Log (8 Inch)

The Contractor provided submittals for 9" diameter aspen excelsior erosion logs and for a rock aggregate bag for the drain inlet along Alpha Drive. The submittals were approved by the Project Engineer and indicated payment to be provided by the pay item 208-00007 Erosion Log (8 Inch). The manufacturer and supplier provided COC's for the 9" diameter aspen excelsior erosion log and rock aggregate bag.

Item 208-00070 Vehicle Tracking Pad

The aggregate portion of the vehicle tracking pad was not tested for gradation. The Project Engineer field inspected the aggregate size brought on to the project site. However, the Contractor provided aggregate material that was not entirely comprised of material having two fractured faces and the Project Engineer notified the Contractor of this. The Contractor requested if this material could be remain as-is. The Project Engineer and CDOT-Environmental Staff, during an environmental walk through, reviewed the tracking pad locations and approved leaving the material in place for use. The vehicle tracking pad was inspected during the project and the aggregate material was observed to function as a BMP.

Item 212-00006 Seeding (Native), 212-00011 (Lawn) & Seeding (Wetland)

The Contractor provided Certified Test Reports for each seeding pay item. During review of the CTR's, the Project Engineer observed a few test dates, related to purity, outside the 13 month window. In discussions with the seed supplier all test dates, related to germination, were within the 13 month window. The seed supplier indicated that purity test results are not updated for a lot of seed mix stored beyond a 13 month window, however, the same lot of seed mix is tested for germination to demonstrate seed success.

Item 212-00011 Seeding (Lawn)

The Contractor's seed supplier requested a substitution of the Lawn Seed Mix, as indicated on Plan Sheet 10. The seed supplier provided a letter proposing the use of a "Centennial Mix" for the Lawn Seed Mix. In discussions with the seed supplier they indicated their being hundreds of bluegrass seed varieties. The Project Engineer reviewed and approved the use of the "Centennial Mix".

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Item 213-00012 Spray-On Mulching Blanket

The Project Engineer reviewed the Contractor's proposed Spray-On Mulching Blanket with CDOT-Environmental Staff and CDOT Specification 213. CDOT-Environmental indicated approval to the project to use this product.

Item 304-02005 Aggregate Base Course (Class 2) & 304-06007 Aggregate Base Course (Class 6)

The existing subgrade material at the retaining wall footing location was found to be at a high nature moisture content, thus low density results. The existing subgrade material was reworked, dried, and retested. Unfortunately a rain event occurred overnight, filling the footing excavation with rainwater and resulting again in a high moisture content and low density after the water was removed. Ultimately, muck excavation of the existing subgrade material took place with the footing grade elevation re-established, stabilized, and paid as pay item 304-02005 ABC Class 2 (ABC Class 6 in lieu of ABC Class 2). All the density tests performed on the native subgrade material are filed under item 203 - Embankment "Info Only".

The Contractor initially proposed using ABC Class 6 material from their Piedra Pit location. At the beginning of the project a submittal was provided by the Contractor showing gradation test results meeting the 703 specifications. During the first placement of ABC Class 6 (in lieu of ABC Class 2) on 07-20-2017, the Contractor was notified by CDOT Form 626 the Piedra Pit ABC Class 6 material being out of specification on the #200 sieve. The Contractor indicated to the Project Engineer recent testing showing their material being in specification. The Project Engineer discussed with the Contractor paying the placed ABC Class 6 on 07-20-2017 as the pay item 304-02005 ABC Class 2 with future test results of ABC Class 6 material documented under the pay item 304-06007 ABC Class 6.

Testing of placed ABC Class 6 material for the trail portion was performed on 09-01-2017, with this material again being out of specification on the #200 sieve. The Contractor was notified of these test results by CDOT Form 626. At this point in the project the Project Engineer discussed preliminary pay reduction amounts with the Contractor by using the test results to date for the total estimated ABC Class 6 quantity for the project. The Contractor proposed switching to their La Boca Pit for ABC Class 6 material for the duration of the project and indicated this pit material meeting the 703 specifications.

Testing of placed ABC Class 6 material, from the La Boca Pit, for the trail portion was performed on 09-25-2017, with this material again being out of specification on the #200 sieve. The Contractor was notified of these test results by CDOT Form 626. The Project Engineer discussed the ABC Class 6 test results for the project and notified the Contractor of how price reductions will be applied for material incorporated into the project based on no additional testing to be performed for the project. A price reduction for ABC Class 2 for the month of July was established and applied, a price reduction for ABC Class 6 material for the months of July, August, September, and October were established and applied.

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304-02005 Aggregate Base Course (Class 2)

50.5 cubic yards of ABC Class 6 was placed in lieu of ABC Class 2 as stabilization for the subgrade of the footing for the retaining wall section from St. 24+26 to St. 25+04. This material was out of specification on the #200 sieve (17.1%, spec = 3 to 15%). The ABC Class 6 material met density specifications, with the #200 sieve out of specification, the ABC Class 6 material was accepted to remain in place and approved by the Project Engineer. With the high #200 sieve values the Project Engineer reminded the Contractor of ensuring positive drainage is configured throughout the project to reduce long term concerns. The Project Total "P" = 9.576, for the month of July, established a price reduction amount of \$120.99 and was applied in Pay Request 04.

No LA Abrasion or R-Value tests were performed for ABC Class 6 material from Crossfire's Piedra Pit. This pit has been used on multiple CDOT projects over the years, with numerous aggregate properties tested performed. The results have always been in specification. No gradation tests were performed or documented for the ABC Class 2 material line item. As previously discussed, ABC Class 6 material was placed and paid as ABC Class 2. Gradation tests were performed for ABC Class 6 and these results also represent material paid as ABC Class 2.

304-06007 Aggregate Base Course (Class 6)

1,402.40 cubic yards were paid as pay item 304-06007 ABC Class 6 for the trail, sidewalk, curb and gutter, curb ramps, and other approved areas. This material was out of specification on the #200 sieve (17.1%, 15.4%, and %13.3, spec = 3 to 12%). The ABC Class 6 material met density specifications, with the #200 sieve out of specification, the ABC Class 6 material was accepted to remain in place and approved by the Project Engineer. With the high #200 sieve values the Project Engineer reminded the Contractor of ensuring positive drainage is configured throughout the project to reduce long term concerns. The Project Total "P" = 23.256, for the month of July, established a price reduction amount of \$1,291.83 and was finalized in Pay Request 07. The Project Total "P" = 15.504, for the month of August, established a price reduction amount of \$1,558.94 and was finalized in Pay Request 07. The Project Total "P" = 5.928, for the month of September, established a price reduction amount of \$977.85 and was finalized in Pay Request 07. The Project Total "P" = 5.928, for the month of October, established a price reduction amount of \$179.31 and was finalized in Pay Request 07.

No LA Abrasion or R-Value tests were performed for ABC Class 6 material from Crossfire's Piedra Pit. This pit has been used on multiple CDOT projects over the years, with numerous aggregate properties tested performed. The results have always been in specification.

No LA Abrasion test was performed for ABC Class 6 material from Crossfire's La Boca Pit. R-Value testing was performed on ABC material from Crossfire's La Boca Pit with a reported R-Value of 76 being below the specification R-Value of 78. This pit has been used on multiple CDOT projects over the years, with numerous aggregate properties tested performed. The results have always been in specification.

Item 411 Emulsified Asphalt

The Contractor damaged the surface of the trail during the project. Speed Memo 05 & 06 were issued discussing the path forward to perform a 1-1/2" thick overlay. An emulsified asphalt product (SS-1h) was used as a tack coat between the original HMA placement with the 1-1/2" thick overlay. Additional payment was not provided for the work associated with surface damage by the Contractor. This same emulsion product was used during HMA (Patching) of tying new concrete curb and gutter to the existing HMA roadway.

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Item 601-01000 Concrete Class B

Truck Inspections - Four Corners Materials Truck #56921 does not appear within the project's CDOT Form 46. In 2018 FCM was contacted and a request was made to provide this truck's inspection form. FCM indicated they did not have any copies of 2017 Truck #56921 inspection. FCM indicated this truck may not have been available during the dates of inspection and was left out in 2017. This truck was inspected in 2015 and a copy of this truck inspection document from a previous project is included for reference.

Class P Concrete (in lieu of Class B)

For concrete placed on 10-03-2017 for Curb Ramp #7 and Curb & Gutter Type 2 along Alpha Drive and Aspen Village Drive, the reported air content was documented as 4.8%, not meeting the Class B specification for air content (5% to 8%). The reported air content did meet the Class P specification for air (4% to 8%) and was accepted and approved for placement by the Project Engineer. No price reduction was calculated for the reported air content value. Initial concrete testing on this day showed a low, out of specification, air content value. Adjustments to the concrete within the truck were made to increase the air content. For this concrete placed, the 28-day compressive strength average of 6810 psi met specifications.

Class BZ Concrete (in lieu of Class B or D)

Class BZ concrete was approved by the Project Engineer for the pay item 613-40012 Light Standard Foundation (Special), see letter dated 09-08-2017. This material was paid incidental to this pay item number. The slump tests for placements 09-06-17, 09-12-17, and 09-14-17 were higher than the specification range of 5 inches to 8 inches. The approved high range water reducer, MasterGlenium 7500, was added on-site. The slump for concrete placed on 09-22-17 was below the specification range. The water/cementitious materials ratio calculated to 0.46 for loads placed on 08-31-17, 09-11-17, and 09-12-17. The maximum water/cementitious material ratio is 0.45. In spite of all these items, the compressive strength for each load exceeded the project specifications. No price reductions were calculated or applied. The materials were determined to perform as intended for the design, accepted, and approved by the Project Engineer.

The most recent version of the CDOT Form 82 was not used for this Local Agency Project due to old copies of this form available for use. All of the required information is recorded on a summary form and copies of the field worksheets and laboratory worksheets are filed herein which contain the same information as required on the Form 82. The worksheets and test results have been approved by the Project Engineer.

Item 602-00000 Reinforcing Steel

A total quantity of 5,230 lbs of reinforcing steel was estimated for the project, being comprised of 1,700 lbs for the pay item 613-40012 Light Standard Foundation (Special) in the Additive Items - Preparation for Trail Lighting section, and 3,530 lbs for pay items 601, 604, 608, and 609 in the Base Bid Schedule. The installed quantity for pay item 613 was 1,666 lbs and the installed quantity for pay items 601, 604, 608, 609 was 3,561 lbs, producing a total of 5,227 lbs of reinforcing steel for the project. The installed quantity was evaluated in accordance with the 602.07 Specification and no adjustments were made to the estimated quantities.

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Item 608-01500 Bituminous Bikeway (Special)

Prior to start of HMA placement activities for the project, check testing took place with QA for samples of HMA material provided by Subcontractor (Strohecker Asphalt & Paving). The sections labeled "Verification Testing" & "Binder Ignition/Gradation Correction Factors" includes worksheets and documentation to determine correction factors related to testing of the project's HMA material.

QA Testing was performed for three days of placement: 09-19-17, 10-23-17, and 10-24-2017. A summary of each day's out of specification item is provided:

Placement on 09-19-17

For the HMA placed the Asphalt Content of 6.36% exceeded the approved range (5.70% to 6.30%), the density of 96.20% exceeded the approved range (92% to 96%), the aggregate sieve gradation for #200 of 7.0% exceeded the approved range (1.1% to 5.1%).

Placement on 10-23-17

For the HMA placed the Asphalt Content of 5.53% exceeded the approved range (5.70% to 6.30%), the aggregate sieve gradation for 3/8" of 79%, #4 of 37%, #8 of 26% and #200 of 6.7% exceeded the approved respective ranges.

Placement on 10-24-17

For the HMA placed the Asphalt Content of 6.52% exceeded the approved range (5.70% to 6.30%), the density of 97% exceeded the approved range (92% to 96%), the aggregate sieve gradation for #200 of 7.8% exceeded the approved range (1.1% to 5.1%).

The QA data was reviewed for the HMA placed on the project with the Owner, CDOT-Materials, QA Test Management, and the Project Engineer. It was determined the HMA would function for the trail/pedestrian walkway and the Project Engineer accepted to leave the HMA material in place and notified the Contractor a price reduction would be calculated for various HMA items not meeting the approved mix design specifications/ranges.

A QPM report, dated 03-20-18, was calculated, finalized, and resulting in a project disincentive payment of \$22,497.22. The QPM report includes test dummy input data (QA #4 dated 10/30/2018) for program calculations. The Contractor and Subcontractor were notified of this amount, through Speed Memo 08, and was applied as a price reduction in the form of a lump sum in Pay Request 07.

Various 613 & 614 Items

During the submittal and review process of the accessible pedestrian system pay items, these were reviewed with CDOT Traffic & Safety, for synchronization into the existing US Highway 160 and Village Drive intersection. CDOT Traffic & Safety also provided guidance to the Contractor's Subcontractor for procurement of approved items previously used in other accessible pedestrian system intersection locations. The Project Engineer coordinated this review process.

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Item 613-20000 Light Standard & Luminaire (Special - Install Only)

The Town of Pagosa Springs purchased and provided light standard poles, arms, luminaires, for the Contractor to install only, for the pay item 613-20000 Light Standard & Luminaire (Special - Install Only). The lighting manufacturer provided a material certificate of conformance for these items and have been included for reference.

Item 613-40012 Light Standard Foundation (Special)

The Town of Pagosa Springs purchased and provided the anchor bolts for the Contractor to install for the pay item 613-40012 Light Standard Foundation (Special). The lighting manufacturer (on behalf of the anchor bolt manufacturer) provided material test reports, mill certificates for the anchor bolts, and associated components and have been included for reference.

Item 614-01502 Steel Sign Support (2-Inch Round) (Post & Socket)

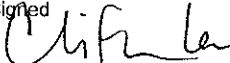
The Contractor proposed the use of the product Quikrete 5000 for the pay item 614-01502 Steel Sign Support (2-Inch Round) (Post & Socket). The Project Engineer reviewed and approved use of this product through Speed Memo 04. Within this speed memo, the Contractor was to provide additional concrete material for QA acceptance. The QA tester broke the concrete cylinders at 21-days with an average compressive strength of 3,170 psi. The 21-day break data indicated the placed concrete not meeting the specification strength of Class B concrete (4,500 psi at 28-days). With compressive strength testing values at 21-days a price reductions was not calculated or applied. The concrete material placed was determined to perform as intended for the sign post design, accepted, and approved by the Project Engineer. The Quikrete 5000 concrete test results are included in the section "614: Signal Panel & Steel Sign Support".

COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST	Project No. STE C480-008	Project Code (SA#) 19219
	Region 5	Date 11/28/2017
	Proj. location Pinon Causeway to Aspen Village Drive SUP	

To: Paul Martin Address: Crossfire LLC
820 Airport Road
Durango, CO 81303

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by 12/05/2017.
 Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017.

Item	Description	Materials documentation needed	Date received
208-00007	Erosion Log (8 Inch)	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/25/2018 (email)
208-00007	Erosion Log (gravel bag)	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). &	2/5/2018 (email)
		Crossfire to have Triton Environmental provide a Certificate of Test Results in accordance with CDOT Specification 106.13 (1-11).	2/26/2018 (email)
208-00020	Silt Fence	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/25/2018 (email)
212-00006	Seeding (Native)	Crossfire to have Southwest Seed provide a Certificate of Test Results cover letter summarizing seed lot numbers in accordance with CDOT Specification 106.13 (1-11).	Dec. 5, 2017
212-00011	Seeding (Lawn)	Crossfire to have Southwest Seed provide a Certificate of Test Results cover letter summarizing seed lot numbers in accordance with CDOT Specification 106.13 (1-11).	Dec. 5, 2017
212-00028	Seeding (Wetland)	Crossfire to have Southwest Seed provide a Certificate of Test Results cover letter summarizing seed lot numbers in accordance with CDOT Specification 106.13 (1-11).	DEC-5, 2017

Signed 	Title Project Engineer	Date 11/28/2017
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- Distribution:**
- Resident Engineer
 - Project Engineer
 - Project Tester
 - Materials Project Files

CDOT Form #211 3/04

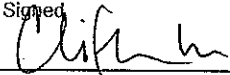
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Item	Description	Materials documentation needed	Date received
212-00032	Soil Conditioner (Mesa Verde)	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	2/5/2018 (email)
212-000322	Soil Conditioner (Richlawn 5-3-2)	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/25/2018 (email)
213-00012	Spray-On Mulch Blanket	Crossfire (or EcoFelx) to provide a Certificate of Test Results in accordance with CDOT Specification 106.13 (1-11). Also needs to state meeting the Revision of 213 Subsection 213.02.	2/5/2018 (email)
506-01020	Geogrid Reinforcement (TerraGrid RX1200)	Crossfire to have Triton Environmental or Winwater provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). [Winwater provided a "COC" but needs to address 106.12 (1-11)]	2/2/2018 (email)
506-01020	Geogrid Reinforcement (Tensar TX140)	Crossfire to have Triton Environmental or Winwater provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). [Winwater provided a "COC" but needs to address 106.12 (1-11)]	2/9/2018 (email)
607-11525	Fence (Plastic)	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/24/2018 (email)
613-40012	Concrete Class BZ	Crossfire to provide an APL/QML Selection Letter for Class BZ Concrete (summary for cement, pozzolan, and admixtures).	1/16/2018 (email)

Signed 	Title Project Engineer	Date 11/28/2017
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- Distribution:
- Resident Engineer
 - Project Engineer
 - Project Tester
 - Materials Project Files

CDOT Form #211 3/04

COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST	Project No. STE C480-008	Project Code (SA#) 19219
	Region 5	Date 11/28/2017
	Proj. location Pinon Causeway to Aspen Village Drive SUP	

To: Paul Martin Address: Crossfire LLC
820 Airport Road
Durango, CO 81303

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by 12/05/2017

Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017

Item	Description	Materials documentation needed	Date received
612-00043	Delineator (Flexible)	Crossfire to provide an APL/QML Selection Letter for the flexible delineators and provide a COC and BAC for the flexible delineators.	BAC-12/5/2017 AAPL/QML-12/5/2017
613-00100	1 Inch Electrical Conduit	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	12/13/2017
613-10010	Wiring (Special - Pedestrian, Cross-Walk)	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	PAC-1/2/2017 Falcon COC 3/2/2018 email
613-10010	Wiring (Special - Trail Lighting)	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	COC/BAC (encl) 1/2/2018 COC 3/2/2018, email
613-50106	Lighting Control Center	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	COC (TIB) 2/5/2018 email COC Hoffman Enclosure 2/26/2018
614-70150	Pedestrian Signal Face (16) (Countdown)	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	COC (Mabrey) email, 2/26/2018 COC GE 3/2/2018 email
614-70200	Accessible Pedestrian Signal	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	2/5/2018 (email) Guardian
614-72863	Pedestrian Push Button Assembly	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	COC, TIPS GPs email, 2/26/2018

* BAR is Buy America Certification

Signed <i>C. Fisher</i>	Title Project Engineer	Date 11/28/2017
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- Distribution:
- Resident Engineer
 - Project Engineer
 - Project Tester
 - Materials Project Files

★ COC Square D, 3/2/2018 email


CDOT Form #211 3/04

COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST	Project No. STE C480-008	Project Code (SA#) 19219
	Region 5	Date 11/28/2017
	Proj. location Pinon Causeway to Aspen Village Drive SUP	

To: Paul Martin Address: Crossfire LLC
820 Airport Road
Durango, CO 81303

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by 12/05/2017.
Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017.

Item	Description	Materials documentation needed	Date received
627-30405	Preformed Thermo Pavement Mrk. (Word-Symbol)	Crossfire to provide an APL/QML selection letter and Crossfire or Supplier to provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	11/30/2017 (email)
627-30410	Preformed Thermo Pavement Mrk. (Crosswalk)	Crossfire to provide an APL/QML selection letter and Crossfire or Supplier to provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/16/2017 (email)
608-00012	Concrete Curb Ramp (Special)	Crossfire or supplier to provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11) for the 1107 Advantage Grout.	11/30/2017 (email)
614-00011	Sign Panel (Class 1)	Crossfire to provide an APL/QML selection letter for the reflective sheeting material.	12/18/2017 (email)

Signed 	Title Project Engineer	Date 11-28-2017
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- Distribution:**
- Resident Engineer
 - Project Engineer
 - Project Tester
 - Materials Project Files

CDOT Form #211 3/04

COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST	Project No. STE C480-008	Project Code (SA#) 19219
	Region 5	Date 11/29/2017
	Proj. location Pinon Causeway to Aspen Village Drive SUP	

To: Paul Martin Address: Crossfire LLC
820 Airport Road
Durango, CO 81303

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by 12/05/2017. Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017.

Item	Description	Materials documentation needed	Date received
212-00006	Seeding (Native)	Crossfire or Southwest Seed to provide a signed statement certifying that seed is from a lot that has been tested by a recognized laboratory for seeding testing within 13 months prior to the date of seeding.	Dec. 5, 2017 (email)
212-00011	Seeding (Lawn)	Crossfire or Southwest Seed to provide a signed statement certifying that seed is from a lot that has been tested by a recognized laboratory for seeding testing within 13 months prior to the date of seeding.	Dec. 5, 2017 (email)
212-00028	Seeding (Wetland)	Crossfire or Southwest Seed to provide a signed statement certifying that seed is from a lot that has been tested by a recognized laboratory for seeding testing within 13 months prior to the date of seeding.	Dec. 5, 2017 (email)
603-steel items	Corrugated Steel Pipes & Steel End Sections	Crossfire to have Winwater provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). ["COC" has been provided but missing items related to 106.12 (1-11)]	7/19/2017 reviewed and okay.
603-plastic items	Plastic Pipe	Crossfire to have Winwater provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). ["COC" has been provided but missing items related to 106.12 (1-11)]	7/19/2017 reviewed and okay.

Signed <i>Cliff</i>	Title Project Engineer	Date 11/29/2017
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- Distribution:**
- Resident Engineer
 - Project Engineer
 - Project Tester
 - Materials Project Files

COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST	Project No. STE C480-008	Project Code (SA#) 19219
	Region 5	Date 11/29/2017
	Proj. location Pinon Causeway to Aspen Village Drive SUP	

To: Paul Martin Address: Crossfire LLC
820 Airport Road
Durango, CO 81303

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by 12/05/2017.
Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017

Item	Description	Materials documentation needed	Date received
602-00000	Reinforcing Steel	Crossfire or concrete products supplier to provide a Certificate of Conformance & BAC in accordance with CDOT Specification 106.12 (1-11) for steel chairs (bolsters).	2/20/2018 (email)
608-00012	Concrete Curb Ramp (Special)	Crossfire or concrete products supplier to provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11) for steel dowels.	2/20/2018 (email)
612-00043	Delineators (Flexible) (Type III)	Crossfire to provide a Certificate of Conformance and APL/QML selection letter in accordance with CDOT Specification 106.12 (1-11) for the delineator reflectors.	12/5/2017, 12/12/2017 (email)
614-72863	Pedestrian Push Button Assembly	Crossfire or One Touch Electric to provide a Certificate of Test Results in accordance with CDOT Specification 106.13 (1-11) for the epoxy adhesive (Hilti HIT-RE 500 V3).	1/2/2018 (email)
614-72863	Pedestrian Push Button Assembly	Crossfire or One Touch Electric to provide a Certificate of Test Results in accordance with CDOT Specification 106.13 (1-11) for concrete anchors. * BAC is Buy America Certification	3/22/2018 (email) CTR on anchor bolts

Signed <i>Cliff</i>	Title Project Engineer	Date 11/29/2017
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- Distribution:**
- Resident Engineer
 - Project Engineer
 - Project Tester
 - Materials Project Files

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
Sampling, Testing, and Inspection and Record of Field
and Central Laboratory Documentation of Materials.

Contract ID: 19219
Project Number: STE-C480-008
Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
Region: 5
Date Developed: 3/21/2017
Contractor: Crossfire LLC

PROJECT TO BE TESTED AND DOCUMENTED PER THE 2017 CDOT FIELD MATERIALS MANUAL

Comply with the Buy America requirements in Section 4 of the Special Notice to Contractors in the Field Materials Manual.

Forward to the Staff Bridge Fabrication Inspectors Unit the list of materials suppliers and subcontractors upon receipt from the contractor.

Attach additional sheets to this form if more space is needed for documentation.

All samples are to be selected using a stratified random sampling schedule. See Colorado Procedure 75 for details on stratified random sampling. Generate and print all random sampling schedules needed before the work begins. Use the random schedule program contained in the Asphalt03 or Voids03 computer programs to generate schedules. Contact the Pavement Design Program at the Materials and Geotechnical Branch if you have questions, 303 398-6563.

Tests designated for the Central Lab can be performed in the Field Lab or the Region Lab if adequate facilities and equipment are available.

All CDOT Forms referenced on the Form #250 are to be the most current versions. Verify the revision dates with those listed in the Appendix to the Field Materials Manual and with those listed on the CDOT Form Catalog at www.dot.state.co.us/FormsMgmt/, and then use the most recent.

The CDOT Form #250 is to be used in conjunction with the QA Frequency Guide Schedule of the CDOT Field Materials Manual and all referenced Sections or Subsections of the Standard Specifications for Road and Bridge Construction.

Please reference page 40 and 41 of the QA Schedule of the CDOT Field Materials Manual for guidance on small quantities.

LOCAL AGENCY PROJECTS

All documentation issues should be directed to your CDOT Local Agency Coordinator.

All Local Agency Projects shall use the CDOT Form #250 as developed by the Documentation Unit of CDOT's Materials and Geotechnical Branch.

All Local Agency Projects shall use the CDOT Form #379 as developed by the applicable CDOT Region Materials Engineer.

All Local Agency Projects shall use the CDOT Field Materials Manual referenced on the Form #250 for specific guidance on documentation of project files.

The Field Materials Manual is available for viewing at the CDOT External Web Address: <http://www.dot.state.co.us/DesignSupport/> (see Manuals). The QA Procedures Chapter, the Documentation Chapter, and the Special Notice to Contractors Chapter provide guidance and justification.

The Item Number, Description, Type of Tests, Plan Quantity, Test Required and Central Laboratory (CL) Test Frequency in this Materials Documentation Record, Colorado Department of Transportation Form #250, shall not be altered in any form or by any means.

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL LABORATORY TEST FREQUENCY	FORM # & FS# or S/N
203	Unclassified Excavation		PLAN 1,362 cubic yard			1362 ✓ cubic yard		Construction Shear Tests
			TESTABLE 1,362 ✓	1 required	Form # 212 FS# 31228	728 ✓ cubic yard		
		In-Place Density CDOT Form #212		1 reported				
		Moist-Den Curve CDOT Form #24 (Date)	1 per soil type		11-6-17 ✓			
		Soil Survey (Classification)	CDOT Form #219	Date Submitted: N/A				

Form #157 FS# 19219-203-1 ✓

ITEM NUMBER	DESCRIPTION	PLAN QUANTITY	FINAL QUANTITY	
207	Topsoil	650 cubic yard	650 ✓ cubic yard	Certified Test Report Required CTR and CDOT Form #157 FS# 19219-207 ✓
				Imported Topsoil: Each source, document compliance with 106.02 (b) N/A (used Topsoil onsite) ✓

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	PLAN QUANTITY	FINAL QUANTITY	
208	Erosion Control			Field Inspect.
	Erosion Log:	1,027	<u>1989</u>	CDOT Form #157 FS# <u>19219-208-2</u> - SEE FORM 473.
		lin ft	lin ft	
	Sediment Trap and/or Basin	each	each	CDOT Form #157 FS# _____
	Erosion Bales:	each	each	COC and CDOT Form #157 FS# _____ COC must state "Weed Free"
	Silt Fence:	3,361	<u>2530</u>	CDOT Form #157 FS# <u>19219-208-3</u>
		lin ft	lin ft	
	Silt Berm:	1,009	<u>125</u> LF	CDOT Form #157 FS# <u>19219-208-1</u>
		each	each	
	Storm Drain Inlet Protect.	each	each	CDOT Form #157 FS# _____
	Storm Drain Inlet Protect.	lin ft	lin ft	CDOT Form #157 FS# _____
	Outlet Protection	each	each	CDOT Form #157 FS# _____
	Gravel Bag:	lin ft	lin ft	CDOT Form #157 FS# _____

209 CONCRETE WASHOUT STRUCTURE 1 EA 1 EA CDOT Form FS# 19219-208-4
 #157

208 VEHICLE TRACKING PAD 2 EA 2 EA CDOT Form FS# 19219-208-5 - SEE FORM 473
 #157

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
Sampling, Testing, and Inspection and Record of Field
and Central Laboratory Documentation of Materials.

Contract ID: 19219
Project Number: STE-C480-008
Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
Region: 5
Date Developed: 3/21/2017
Contractor: Crossfire LLC

ITEM
NUMBER DESCRIPTION

212 Seeding & Sodding Seed: COC and CDOT Form #157 FS# 19219-212-1 (NATIVE) / FS# 19219-212-2 (LAWN) / FS# 19219-212-3 (WETLAND)
Soil Conditioner: COC and CDOT Form #157 FS# 19219-212-5 SEE FORM 473
Sod: COC and CDOT Form #157 FS# _____
Contractor shall submit to the Project Engineer a sample of sod 6 1/2 ft x 2 ft for comparison standard.
Fertilizer: COC and CDOT Form #157 FS# 19219-212-4

ITEM
NUMBER DESCRIPTION

213 Mulching Mulch (All types): COC and CDOT Form #157 FS# 19219-213-1
COC must state "Weed Free"
Mulch Tackifier: COC and CDOT Form #157 FS# _____
Landscape Borders: COC and CDOT Form #157 FS# _____
Soil Binder: COC and CDOT Form #157 FS# _____
SPRAY-ON MULCHING BLANKET COC and CDOT Form #157 FS# 19219-213-2 SEE FORM 473

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL LABORATORY TEST FREQUENCY	FORM # & FS# or S/N
304	Aggregate Base Course Class 2 Cubic Yards	Gradation and Atterberg Limits CDOT Form #6	350 cubic yard	1 required	101922	50.5 cubic yard	1 per source per project	
		In-Place Density CDOT Form #6		1 required	101923			
		Moist-Den Curve CDOT Form #24 (Date)		1 per source	7-20-17		1 per source	CDOT Form #38 (Date)
		LA Abrasion (Class 4, 5, 6, & 7) CDOT Form #157		>>>	>>>		N/A required	
		R-Value: Min. Required	70	Reported	N/A - SEE FORM 473			
		Designated Source? (Y/N)	N	Location				

FORM #157 FS# 19219-304-1

Colorado Department of Transportation
 CDOT Form #250, 7/16
 Version 17.0

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL LABORATORY	
							TEST FREQUENCY	FORM # & FS# or S/N
304	Aggregate Base Course Class 6 Cubic Yards	Gradation and Atterberg Limits CDOT Form #6	1,115 cubic yard	2	<u>Form #6 - FS# 101912-2</u>	1402.4 cubic yard	1 per source	
				3 required			per project	
				reported			required	
				2				
		In-Place Density CDOT Form #6		2	<u>Form 6 - FS# 101912-1</u>			
				14 required				
				reported				
		Molst-Den Curve CDOT Form #24 (Date)		1 per source	<u>7-20-17 - Piedra Pit - Class 6 Curve 1</u> <u>8-8-17 - Laboca Pit - Class 6 Curve 2</u>		1 per source	CDOT Form #38 (Date)
		LA Abrasion (Class 4, 5, 6, & 7) CDOT Form #157		>>>	>>>		2 required	<u>TRAINED GEOTECH FORM</u> <u>DATED: 7/20/17 FOR LA BOCA PIT</u>
		R-Value: Min. Required 78		Reported 76 - LABOCA PIT / N/A - PIEDRA PIT - SEE FORM 473				N/A FOR PIEDRA PIT - SEE FORM 473
		Designated Source? (Y/N) N		Location				

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	FINAL QUANTITY	PROJECT ACCEPTANCE TEST REPORTED	CENTRAL LABORATORY	
						TEST FREQUENCY REQUIRED	FORM # & FS# or S/N
403	Hot Mix Asphalt Grading Patching		4 ton	4 ✓ ton		each 10k or fraction thereof 0	
Form # 157 FS# 19219-403-1		Asphalt Content **, Theoretical Max SpG*** CDOT Form #58	Tests Required 0	Tests Taken 0			
		In-Place Density CDOT Form #69 **	0	0			
		Gradation **, Aggregate Percent Moisture CDOT Form #6	0	0			
		Fractured Faces, Voids Fine Aggregate CDOT Form #58	0	0			
		Longitudinal Joint Density 1 : 5000 lin ft of joint Per Lift CDOT Form #1290 **		0			
		Hydrated Lime, min 1% Gradation	Plan Quantity 0 ton	Final Quantity 0.00 ton	CTR for Chemical and CDOT Form #157 FS#	19219-403-2 ^{GO}	0

CDOT Form #38

Check testing per CP 13 completed, Date: N/A
 CTS and CDOT Form #469 completed, Date: N/A
 Submit a copy of the complete QC/QA report when reviewed and finalized to: HQ Pavement Design Program, Date submitted N/A
 ** QC/QA Computer Test Reports are acceptable documentation.
 *** 1 per 1000 ton, min 1 per day.

RELEASE AGENT FORM #157 FS# 19219-403-2

Mix verification testing per 106.05 (d) and (e) completed, Date: N/A

411 ASPHALT BINDER Form #157 FS# 19219-411-1

411 EMULSIFIED ASPHALT Form #157 FS# 266293 / SEE FORM 473

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL LABORATORY TEST FREQUENCY	FORM # & FS# or S/N
601	Structural Concrete Class B	Compressive Strength, Slump, Unit Weight CDOT Form #82, #156	36 cubic yard	1 2 required reported	CDOT Form #82 FS#: 165911 120587	36 cubic yard	SEE FORM 473	Other Report FS#: _____ _____ _____ _____ _____ _____ _____ _____
		Air Content * CDOT Form #156		4 reported				

Form #157 FS# 19219-601-1
 (FOR ITEMS 601)

Mix Design approval is required before concrete placement begins. CDOT Concrete Mix Design No. 2017069
 See Materials Manual, Chapter 600 for details.

* One per set of cylinders and test each batch at beginning of production, when three tests are within specifications reduce testing to one random test per five batches.

INCIDENTAL ITEMS. See Item 601 in the Schedule for details.
 Portland Cement: CDOT Form #157 FS# 19219-601-2
 Reinforcing Steel: Follow instructions in Item 602 of Schedule.
 Water: Follow instructions in Item 601 of Schedule. CDOT Form #157 FS# 19219-601-5
 Air Entraining Agents and Chemical Admixtures: CDOT Form #157 FS# 19219-601-2
 Curing Materials Liquid: CDOT Form #157 FS# 19219-601-3
 Epoxy Adhesive: CDOT Form #157 FS# _____
 Expansion Joint Material: CDOT Form #157 FS# _____
 Cementitious Grout: CDOT Form #157 FS# _____
 Class 5 Masonry Finish: CDOT Form #157 FS# _____
 Structural Concrete Coating: CDOT Form #157 FS# _____
 Bridge Deck Forms, Permanent (left in-place) Steel: CTR and CDOT Form #157 _____
 Miscellaneous: SLAB BOL STEELS CDOT Form #157 FS# 19219-601-6

REPORT TESTS RESULTS ON CDOT Form #156 UPON COMPLETION OF EACH CLASS OF CONCRETE.

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL LABORATORY	
							TEST FREQUENCY	FORM # & FS# or S/N
601	Structural Concrete Class B- Class P	Compressive Strength, Slump, Unit Weight CDOT Form #82, #156	36 cubic yard	4 5 required reported	CDOT Form #82 FS#: 120591 120592 120595 166001 166003	36 cubic yard	SEE FORM 473	Other Report FS#: _____ _____ _____ _____ _____ _____ _____ _____
		Air Content* CDOT Form #156		5 reported				

Form #157 FS# 19219-601-2
 (For items: 604, 608, 609)

Mix Design approval is required before concrete placement begins. CDOT Concrete Mix Design No. 2017069
 See Materials Manual, Chapter 600 for details.

* One per set of cylinders and test each batch at beginning of production, when three tests are within specifications reduce testing to one random test per five batches.

- INCIDENTAL ITEMS. See Item 601 in the Schedule for details.
- Portland Cement: CDOT Form #157 FS# 19219-601-2
 - Reinforcing Steel: Follow instructions in Item 602 of Schedule.
 - Water: Follow instructions in Item 601 of Schedule. CDOT Form #157 FS# 19219-601-5
 - Air Entraining Agents and Chemical Admixtures: CDOT Form #157 FS# 19219-601-2
 - Curing Materials Liquid: CDOT Form #157 FS# 19219-601-3
 - Epoxy Adhesive: CDOT Form #157 FS# _____
 - Expansion Joint Material: CDOT Form #157 FS# _____
 - Cementitious Grout: CDOT Form #157 FS# _____
 - Class 5 Masonry Finish: CDOT Form #157 FS# _____
 - Structural Concrete Coating: CDOT Form #157 FS# _____
 - Bridge Deck Forms, Permanent (left in-place) Steel: CTR and CDOT Form #157 _____
 - Miscellaneous: SLAB BOLSTERS CDOT Form #157 FS# 19219-601-6

REPORT TESTS RESULTS ON CDOT Form #156 UPON COMPLETION OF EACH CLASS OF CONCRETE.

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE	PLAN QUANTITY (cu yd or ton)	FINAL QUANTITY (cu yd or ton)	DOCUMENTATION	FORM # & FS# or S/N
506	Riprap				Field inspect and/or test according to instructions in Item 506 of Schedule. Determine Specific Gravity.	CDOT Form #157 FS#
<p>Bed Course Material: Follow instructions in Item 206 of Schedule. CDOT Form #6 _____</p>						
			cubic yard	cubic yard		
	Gabions and Slope Mattress				Material Represented: WIRE MESH: Follow instructions in Item 506 of the Schedule. STONE: Follow instructions in Item 506 of the Schedule.	CDOT Form #157 FS#
		Type	square yard	square yard		
	Geosynthetics	Geogrid	1,050	962	Submit CTR and CDOT Form #157 showing compliance with Subsection 712.08 of Standard Specifications.	CDOT Form #157 FS# 19219-506-1

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL LABORATORY	
							TEST FREQUENCY	FORM # & FS# or S/N
601	Structural Concrete Class B Class BZ	Compressive Strength, Slump, Unit Weight CDOT Form #82, #156	N/A 36 cubic yard	1 required 7 reported	CDOT Form #82 FS#: 120546 120547 120548 120549 120600 165458 165459	30.5 cubic yard		Other Report FS#
		Air Content* CDOT Form #156		7 reported				

Form #157 FS# 19219-601-4
 (For item 6.13)

Mix Design approval is required before concrete placement begins. CDOT Concrete Mix Design No. 2017173
 See Materials Manual, Chapter 600 for details.

* One per set of cylinders and test each batch at beginning of production, when three tests are within specifications reduce testing to one random test per five batches.

INCIDENTAL ITEMS. See Item 601 in the Schedule for details.
 Portland Cement: CDOT Form #157 FS# 19219-601-4
 Reinforcing Steel: Follow instructions in Item 602 of Schedule.
 Water: Follow instructions in Item 601 of Schedule. CDOT Form #157 FS# 19219-601-5
 Air Entraining Agents and Chemical Admixtures: CDOT Form #157 FS# 19219-601-4
 Curing Materials Liquid: CDOT Form #157 FS# _____
 Epoxy Adhesive: CDOT Form #157 FS# _____
 Expansion Joint Material: CDOT Form #157 FS# _____
 Cementitious Grout: CDOT Form #157 FS# _____
 Class 5 Masonry Finish: CDOT Form #157 FS# _____
 Structural Concrete Coating: CDOT Form #157 FS# _____
 Bridge Deck Forms, Permanent (left in-place) Steel: CTR and CDOT Form #157 _____
 Miscellaneous: _____ CDOT Form #157 FS# _____

REPORT TESTS RESULTS ON CDOT Form #156 UPON COMPLETION OF EACH CLASS OF CONCRETE.

Colorado Department of Transportation
 CDOT Form #250, 7/16
 Version 17.0

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	PLAN QUANTITY	FINAL QUANTITY	CENTRAL LABORATORY	
				TEST FREQUENCY	FORM # & FS# or S/N
602	Reinforcing Steel			Obtain copies of CTR (mill test reports) and file with CDOT Form #157. CDOT Form #157 FS#	1 sample per source required. See Schedule
	Item 602:	5,230 lb	_____ lb	_____	_____
	From Item 413 :	1700 lb	1700 lb	_____	_____
	From Item _____ :	_____ lb	_____ lb	_____	_____
	From Item _____ :	_____ lb	_____ lb	_____	_____
	TOTALS:	_____ lb	_____ lb	_____	_____

THIS PAGE MOVED. NOW FOLLOWING PAGE "9c".

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	PLAN QUANTITY	FINAL QUANTITY	CENTRAL LABORATORY	
				TEST FREQUENCY	FORM # & FS# or S/N
602	Reinforcing Steel				
		5,230 lb	5,230 lb	1 sample per source required. See Schedule	
	From Item 603	1,700 lb	1,700 lb		
	From Item 601	2,917 lb	2,917 lb		
	From Item 604	80 lb	80 lb		
	From Item 600	492 lb	492 lb		
	From Item 609	41 lb	41 lb		
	TOTALS:	5,230 lb	5,230 lb		

Obtain copies of CTR (mill test reports)
 and file with CDOT Form #157.
 CDOT Form #157 FS#

19219-602-1 ✓ see Form 473
 ↓

AMEC FW LAB NO:
 31001 & 31002 ✓
 8/29/17 ✓

602 REINFORCING STEEL
 SMOOTH DOWELS

FORM #157 FS# 19219-602-2 ✓

PAID INCIDENTAL TO ITEMS:
 608 Concrete Curb Ramp (Special)
 609 CURB & GUTTER TYPE 2 (12 INCH)
 609 CURB & GUTTER TYPE 2 (18 INCH)

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE	SIZE	PLAN QUANTITY (Lin Ft or each)	FINAL QUANTITY (Lin Ft or each)	COC and CDOT Form #157 FS#
603	Culverts	CSP	8"	58.5	58.5 ✓	19219-603-1 ✓
		CSP	12"	57	57.0 ✓	
		CSP	18"	43	43.0 ✓	
		SES	8"	5 ea	5 ✓	
		SES	12"	6 ea	6 ✓	

See Item 603 in Schedule for acceptance procedure for each type.
 Total reported quantity must meet or exceed final project quantities.
 Backfill Material: Follow instructions in Item 206 of Schedule.
 Gaskets and pipe joint-sealing compounds: COC and CDOT Form #157 FS# _____

ITEM NUMBER	DESCRIPTION	TYPE	SIZE	PLAN QUANTITY (Lin Ft or each)	FINAL QUANTITY (Lin Ft or each)	COC and CDOT Form #157 FS#
603	Culverts	SES	15"	1 ea	1 ✓	19219-603-1 ✓
		SES	18"	4 ea	4 ✓	
		Plastic Pipe	15"	4	4 ✓	19219-603-2 ✓
		Plastic Pipe	18"	-55 5.5	5 ✓	

See Item 603 in Schedule for acceptance procedure for each type.
 Total reported quantity must meet or exceed final project quantities.
 Backfill Material: Follow instructions in Item 206 of Schedule.
 Gaskets and pipe joint-sealing compounds: COC and CDOT Form #157 FS# _____

Colorado Department of Transportation
 CDOT Form #250, 7/16
 Version 17.0

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	PAY ITEM	TYPE	SIZE	PLAN QUANTITY	FINAL QUANTITY
604	Manholes & Inlets	Inlet	Special	PER PLAN	3 ea	3 EA.

COC and CDOT
 Form #157 FS#
 19219-604-1

See Item 604 in Schedule for acceptance procedure.
 Backfill Material: Follow instructions in Item 206 of Schedule.

607 FENCE (PLASTIC) 2,736 LF 3309.5 LF ✓ 19219-607-1 ✓
 PLAN QTY FINAL QTY COOT FORM #157 FS#

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	PROJECT ACCEPTANCE TEST REPORTED		CENTRAL LABORATORY TEST FREQUENCY	
		TEST REPORTED	TEST REPORTED	TEST FREQUENCY	FORM # & FS# or S/N

ITEM NUMBER	DESCRIPTION	Type	Plan Quantity	Final Quantity	FS# or S/N	Other Report FS#
608	Concrete Sidewalk:	Curb Ramp	128	133.25		
Form #157 FS# 19219-608-1						
			128	133.25		
		Total:	sq. yard	sq. yard		
	Compressive Strength, Slump, & Air Content	TESTS	TESTS			
	CDOT Form #82 #1375	required	required	reported		

ALL TEST RESULTS FILED UNDER ITEM 601-CLASS P CONCRETE

ITEM NUMBER	DESCRIPTION	Type	Plan Quantity	Final Quantity	FS# or S/N	Other Report FS#
609	Curb & Gutter:	C & G Type 2 Special	44	25.50		
Form #157 FS# 19219-609-1		C & G Type 2 Special	22	50.50		
		Total:	66	76.00		
			lin ft	lin ft		
	Compressive Strength, Slump, & Air Content	TESTS	TESTS			
	CDOT Form #82 #1375	required	required	reported		

ALL TEST RESULTS FILED UNDER ITEM 601-CLASS P CONCRETE

Mix Design approval is required before concrete placement begins. CDOT Concrete Mix Design No. 2017069

INCIDENTAL ITEMS. See Item 601 in the Schedule for details.
 Water: CDOT Form #157 FS# 19219-601-5
 Miscellaneous: CURING COMPOUND CDOT Form #157 FS# 19219-601-3

* Curb Ty 6 M, if Bituminous see Schedule for testing requirements: asphalt content and gradation _____

REPORT TESTS RESULTS ON CDOT Form #156 UPON COMPLETION OF EACH CLASS OF CONCRETE.

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS	PROJECT ACCEPTANCE TEST REPORTED	CENTRAL LABORATORY TEST FREQUENCY	FORM # & FS# or S/N
608	Sidewalks (Bitimous)	In-Place Density CDOT Form #69	.680 ton	1. required	59378		SEE FORM 473
		Asphalt Content CDOT Form #58		1 required	56162		Other Report FS#
		Gradation CDOT Form #6		1 required	101914		
OTHER: RELEASE AGENT: FORM #157 FS# 19219-403-2							

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
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 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	PAY ITEM	PLAN QUANTITY	FINAL QUANTITY	
612	Delineators & Reflectors		(each)	(each)	See Schedule for details. CDOT Form #157 FS#
		Delineator Posts Steel (Type I)			
		Delineator Posts Steel (Type II)			
		Delineator Posts Steel (Type III)			
		Delineator Reflectors (All Types)			
		Delineator Posts Flexible (All Types)	6	6	19219-612-1
		Median Barrier Reflectors			

613 LIGHTING

1 INCH ELECTRICAL CONDUIT	16 LF	16 LF	19219-613-1
1.5 INCH ELECTRICAL CONDUIT	34 LF	0	19219-613-1
1 INCH ELECTRICAL CONDUIT (PLASTIC)	18 LF	18 LF	19219-613-2 (BASE BID)
2 INCH ELECTRICAL CONDUIT (PLASTIC)	21 LF	52 LF	19219-613-2
3 INCH ELECTRICAL CONDUIT (PLASTIC)	42 LF	84 LF	19219-613-2
PULL BOX (24 IN X 36 IN X 24 IN)	3 EA	3 EA	19219-613-3
WIRING SPECIAL - PED. CROSS-WALK	1 LS	1 LS	19219-613-4
1 INCH ELECTRICAL CONDUIT (PLASTIC)	32 LF	32 LF	19219-613-2 (CO #1)

613-ADDITIVE ITEM PREPARATION FOR TRAIL LIGHTING

2 INCH ELECTRICAL CONDUIT	4,460 LF	4022 LF	19219-613-5
WIRING (SPECIAL - TRAIL LIGHTING)	1 LS	1 LS	19219-613-6
LIGHT STANDARD & LUMINAIRE (INSTALL ONLY)	34 EA	34 EA	19219-613-7 SEE FORM 473
LIGHT STANDARD FOUNDATION	34 EA	34 EA	19219-613-8 SEE FORM 473
LIGHT CONTROL CENTER (PED/SPECIAL)	3 EA	3 EA	19219-613-9

2 EA

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	PAY ITEM	PLAN QUANTITY	FINAL QUANTITY	COC or CTR required CDOT Form #157 FS#	If inspected CDOT Form #193 Report #
614	Traffic Control Devices					
	Sign Panels (Class I)		72.25 sq ft	72.25 sq ft	19219-614-1	
	Sign Panels (Class II)		sq ft	sq ft		
	Sign Panels (Class III)		sq ft	sq ft		
	Timber Sign Posts (All Sizes)		lin ft	lin ft		
	Steel Sign Posts (U-2 Type)		lin ft	lin ft		
	Steel Sign Posts		lin ft	lin ft		
	Steel Sign Posts (All S)		lin ft	lin ft		
	Steel Sign Posts (All W)		lin ft	lin ft		
	Steel Sign Support		each	each		
	Concrete Footing		each	each		
	Overpass Mtd Sign Bracket		each	each		
	Sign Bridge Structure		each	each		
	Variable Message Sign		each	each		
	Monotube Overhead Sign Cant.		each	each		
	Pedestal Pole		each	each		
	Traffic Signal-Light Pole S		each	each		
	Traffic Signal Pole S		each	each		
	Traffic Signal Pedestal Pole S		each	each		
	Impact Attenuator (Quadguard)		each	each		
	Impact Attenuator		each	each		
	Traffic Signal Span Wire Pole		each	each		
	Traffic Signal-Light Span Wire Pole		each	each		
	Steel Sign Supp 2 in R (Post/Socket)		165 lin ft	165 lin ft	19219-614-1	
	Steel Sign Supp 2.5 in R (Slipbase)		each	each		
	Cantilever Structure					
	PEO. SIGNAL FACE (16) (COUNTDOWN)		2 EA	2 EA	19219-614-2	
	ACCESSIBLE PEDESTRIAN SIGNAL		2 EA	2 EA	19219-614-3	
	ANCHOR BOLTS: CTR and CDOT Form #157 FS# 260291		1 EA	1 EA	260291	
	PEO. PUSH BUTTON POST ASSEMBLY		1 EA	1 EA		
	See Item 614 in the Schedule for acceptance procedure on each type.					
	CONCRETE: Test according to Item 601 of Schedule.					
	REINFORCING STEEL: Report under Item 602 of CDOT Form #250.					
	NOTE: The following items are to be field inspected and documented in the project records; no report needed: Lighting Fixtures, Flashing Yellow beacons, Traffic Control Systems, Messenger Cables, Electrical Conduit, Pull Boxes, Direct Buried Cable, Vehicle Detector Wire Loop, Grounding & Bonding, Miscellaneous Hardware.					

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
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 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

ITEM NUMBER	DESCRIPTION	PAY ITEM	PLAN QUANTITY	FINAL QUANTITY	
627	Pavement Marking				
	Pavement Marking Paint				CDOT Form #157 FS#
	Glass Beads (CTR required)		_____ gal	_____ gal	_____
			_____ lbs	_____ lb	_____
	Thermoplastic Pavement Marking				
	Glass Beads (CTR required)		_____ sq ft	_____ sq ft	_____
			_____ lbs	_____ lb	_____
	Epoxy Pavement Marking				
	Glass Beads (CTR required)		_____ gal	_____ gal	_____
			_____ lbs	_____ lb	_____
	Pavement Marking Paint (Low VOC)				
	Glass Beads (CTR required)		_____ gal	_____ gal	_____
			_____ lbs	_____ lb	_____
	Preformed Thermoplastic Pvmt Mkg (Word - Symbol)		16 _____ sq ft	15.5 / _____ sq ft	266292 / _____
	Preformed Thermoplastic Pvmt Mkg (Cross-walk)		957 _____ sq ft	912 / _____ sq ft	266292 / _____
	Preform Plastic Pvmt Mkg (Ty II)		_____ sq ft	_____ sq ft	_____

See Item 627 in Schedule for Certification procedure for each item.
 Document that material is on the pre-approved list and tabulate final quantities on CDOT Form #157.

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
 Sampling, Testing, and Inspection and Record of Field
 and Central Laboratory Documentation of Materials.

Contract ID: 19219
 Project Number: STE-C480-008
 Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
 Region: 5
 Date Developed: 3/21/2017
 Contractor: Crossfire LLC

DOCUMENTATION FOR ADDED MATERIALS ITEMS:

Attach additional sheets to this form if more space is needed for documentation.

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	FINAL QUANTITY	TESTS REPORTED	PROJECT ACCEPTANCE TEST REPORTED	# OF CHECK TESTS REQUIRED AND SUBMITTED
							CDOT Form #s, FS#s	CDOT Form #s, FS#s
7FAa.	FORCE ACCOUNT - CULVERT REPAIR	NONE	N/A	0	N/A	0	FORM #157 - FS # 266294-1 ✓	
7FAD.	FORCE ACCOUNT - WAL-MART	NONE	N/A	0	N/A	0	FORM #157 - FS # 266294-2 ✓	
1b, 1d, 1h.	CHANGE ORDER (2 INCH ELECT. CONDUIT BORED)	NONE	N/A	0	259 L.F. ✓	0	FORM #157 - FS # 266289 ✓	

DELETED MATERIALS ITEMS, DOCUMENTATION FOR:

Attach additional sheets to this form if more space is needed for documentation.

CMO/MCR NUMBER	DATE	ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	EXPLANATION
FORM #105-#09	3-20-18	213-00002	MULCHING (W/WEED FREE)	CTR	A SPRAY-ON MULCHING BLANKET WAS USED AND PAID AS 213-00002
FORM #105-#09	3-20-18	211-03005	DEWATERING	0	WAS INCLUDED AS A LINE ITEM IF NEEDED AND WAS NOT USED.
FORM #105-#09	3-20-18	613-00100	1 INCH ELECT. CONDUIT COE		ADDITIONAL AMOUNT WAS INCLUDED IN CD#1 AND WAS NOT USED.
FORM #105-#09	3-20-18	613-00200	2 INCH ELECT. CONDUIT COE		ADDITIONAL AMOUNT WAS INCLUDED IN CD#1 AND WAS NOT USED.
CD#01-1K	7-24-18	613-00150	1 1/2 INCH ELECT. CONDUIT COE		REMOVED THIS ITEM AS BORING WAS COMPLETED UNDER US HWY 160

MATERIALS DOCUMENTATION RECORD

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Contract ID: 19219
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 Region: 5
 Date Developed: 3/21/2017
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SUMMARY OF PROJECT PRICE REDUCTION DOCUMENTATION
 Fully document and explain all price reductions on CDOT Form #473 Explanation of Exceptions (page 2)

ITEM NUMBER	DESCRIPTION	PRICE REDUCTION AMOUNT	CALCULATIONS #266 / #105 DATES	CMO / MCR NUMBERS	LINE ITEM NO. ON FINAL ESTIMATE
304	CLASS 2 ABC	\$120.99			4PRC.
304	CLASS 6 ABC	\$3582.00			4PRd, 4PRe, 4PRF.
608	HMA FOR BITUMINIOUS BIKEWAY	\$22,497.42			7PRa
304	CLASS 6 ABC	\$425.83 \$425.93			7PRb, 7PRc, 7PRd, 7PRe.

SUMMARY OF SAMPLING AND TESTING DEVIATIONS
 Deviations from sampling and testing requirements must be fully documented on the CDOT Form #473 Explanation of Exceptions (page 2).

ITEM NUMBER	TEST ELEMENT OR ACCEPTANCE	EXPLANATION
608	ASPHALT CONTENT	THE BINDER IGNITION OVEN CORRECTION FACTOR WAS DEVELOPED FOLLOWING PROCEDURES IN CP-LS120 APPROVED IN 2014, BUT REVISED IN 2017. SEE FORM 473 FOR MORE INFORMATION.

SUMMARY OF LABORATORY CHECK TEST DEVIATIONS
 Fully document and explain all laboratory check test deviations on CDOT Form #473 Explanation of Exceptions (page 2)

ITEM NUMBER	DESCRIPTION	MEMO DATE	CDOT Form #157 FS#

Document Significant Independent Assurance differences as per 11.4 of the QA Procedures in the Field Materials Manual.

Colorado Department of Transportation
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Version 17.0

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials
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Project Location: Pinon Causeway to Aspen Village/Archuleta Co.
Region: 5
Date Developed: 3/21/2017
Contractor: Crossfire LLC

Isolated relatively small quantities of concrete, reinforcing steel, wire mesh, bolts etc. which are paid for incidentally shall be field inspected to determine conformance with specifications and Document in Project Records. If any questions arise concerning the proper documentation of materials during construction, contact the Documentation Unit of the Central Laboratory in Denver @ 303-398-6563.

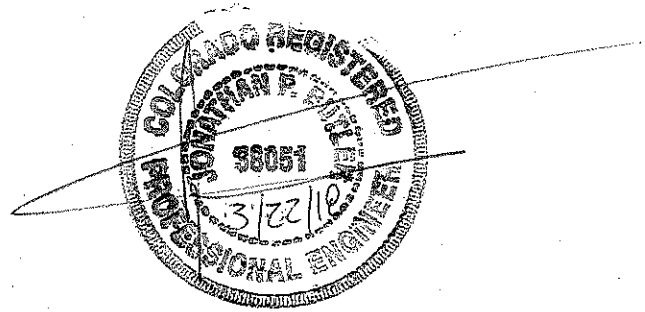
FIELD DOCUMENTATION ENTERED BY: DATE:
GINA DENTEN TRAMTNER GEOTECH 3-20-18



PROJECT ENGINEER / Title: DATE
Cliff / Project Engineer 3/28/2018

Distribution: (includes the entire and completed CDOT Form #250)
Resident Engineer
Region Materials Engineer
Region Finals Engineer
Documentation Unit (Materials and Geotechnical Branch)
FHWA (Oversight Projects only)

End Ref # IT18R686-12wB588



Pinon Causeway to Aspen Village Drive Shared Use Path
 Archuleta County, CO
 Project No. STE C-180-008, Project Code: 19219

Pay Estimate No.7 & Final Quantities for period 12/01/2017 to 3/9/2018

For: Crossfire LLC
 826 Airport Road
 Durango, CO 81303

Page 1 of 2

Item No.	Description of Item	BID SCHEDULE				THIS PAY REQUEST		COMPLETE TO DATE		
		Quantity	Unit	Unit Price	Extension	Quantity	Extension	Quantity	Extension	Percent Complete
Base Bid Schedule										
201-00001	Clearing & Grubbing	1.63	acre	\$ 3,896.00	\$ 6,293.78			1.63	\$ 6,293.78	100
202-00012	Removal of Tree Stump	8	ea.	\$ 256.00	\$ 2,048.00			8.00	\$ 2,048.00	100
202-00204	Removal of Curb, Gutter, & Sidewalk	66	lf.	\$ 12.80	\$ 844.80			77.00	\$ 985.60	117
202-00229	Removal of Asphalt Mat	60	sq.	\$ 19.75	\$ 1,185.00			66.00	\$ 1,185.00	100
202-00250	Removal of Pavement Marking	117	sf.	\$ 6.50	\$ 760.50			164.00	\$ 1,066.00	140
202-00750	Removal of Luminaires	2	ea.	\$ 607.00	\$ 1,214.00			2.00	\$ 1,214.00	100
202-00810	Removal of Ground Sign	1	ea.	\$ 218.00	\$ 218.00			1.00	\$ 218.00	100
202-04002	Clean Culvert	3	ca.	\$ 1,350.00	\$ 4,050.00			3.00	\$ 4,050.00	100
203-00100	Muck Excavation	350	c.y.	\$ 18.00	\$ 6,300.00	12.00	\$ 216.00	365.00	\$ 6,576.00	104
203-01597	Potholing	20	hr.	\$ 252.00	\$ 5,040.00	13.50	\$ 3,402.00	33.50	\$ 8,442.00	168
207-00205	Topsoil	650	c.y.	\$ 24.50	\$ 15,925.00			650.00	\$ 15,925.00	100
207-00210	Stockpile Topsoil	650	c.y.	\$ 16.25	\$ 10,562.50			650.00	\$ 10,562.50	100
208-00004	Silt Berm	1,000	lf.	\$ 8.00	\$ 8,072.00			125.00	\$ 1,000.00	12
208-00007	Erosion Log (8 Inch)	1,027	lf.	\$ 5.50	\$ 5,648.50			1,989.00	\$ 10,939.50	194
208-00020	Silt Fence	3,361	lf.	\$ 2.25	\$ 7,562.25			2,580.00	\$ 5,805.00	77
208-00045	Concrete Washout Structure	1	ea.	\$ 1,306.00	\$ 1,306.00			1.00	\$ 1,306.00	100
208-00070	Vehicle Tracking Pad	2	ea.	\$ 1,240.00	\$ 2,480.00			2.00	\$ 2,480.00	100
208-00103	Removal & Disposal of Sediment (Labor)	25	hr.	\$ 64.00	\$ 1,600.00			47.00	\$ 3,008.00	188
208-00206	Invasive Control Management	25	days	\$ 278.00	\$ 7,225.00	3.00	\$ 834.00	38.00	\$ 10,564.00	146
210-00040	Reset Water Line	1	ls.	\$ 590.00	\$ 590.00			1.00	\$ 590.00	100
210-00810	Reset Ground Sign	2	ea.	\$ 223.00	\$ 446.00			2.00	\$ 446.00	100
210-04050	Adjust Valve Box	2	ea.	\$ 315.00	\$ 630.00			2.00	\$ 630.00	100
211-03005	Drivewaying	1	ls.	\$ 6,805.00	\$ 6,805.00				\$ -	0
212-00006	Seeding (Native)	0.70	acres	\$ 2,003.00	\$ 1,402.10			2.37	\$ 4,742.11	339
212-00011	Seeding (Lawn)	0.12	acres	\$ 3,406.50	\$ 408.78			0.20	\$ 681.30	167
212-00028	Seeding (Wetland)	0.008	acres	\$ 64,310.00	\$ 514.48			0.008	\$ 514.48	100
212-00032	Soil Conditioning	0.82	acres	\$ 6,940.00	\$ 5,690.80			2.57	\$ 17,835.80	313
213-00002	Mulching (Weed Free Hay)	0.70	acres	\$ 2,512.00	\$ 1,758.40				\$ -	0
213-00012	Spray-On Mulching Blanket	0.82	acres	\$ 2,275.00	\$ 1,865.50			2.57	\$ 5,846.75	313
240-00000	Wildlife Biologist	10	hr.	\$ 111.00	\$ 1,110.00			4.00	\$ 444.00	40
304-02005	Aggregate Base Course (Class 2)	350	c.y.	\$ 41.70	\$ 14,595.00			50.50	\$ 2,105.85	14
402-09120	Hot Mix Asphalt (Patching) (Asphalt)	4	tons	\$ 341.00	\$ 1,364.00			4.00	\$ 1,364.00	100
506-01020	Geogrid Reinforcement (Special)	1,050	sq.	\$ 3.60	\$ 3,780.00			962.00	\$ 3,463.20	92
601-01005	Concrete Class B	36	c.y.	\$ 1,045.00	\$ 37,620.00			36.00	\$ 37,620.00	100
603-10080	8 Inch Corrugated Steel Pipe	58.5	lf.	\$ 34.00	\$ 1,989.00			58.50	\$ 1,989.00	100
603-10120	12 Inch Corrugated Steel Pipe	57	lf.	\$ 39.00	\$ 2,223.00			57.00	\$ 2,223.00	100
603-10180	18 Inch Corrugated Steel Pipe	43	lf.	\$ 48.50	\$ 2,084.50			43.00	\$ 2,084.50	100
603-XXXXX	8 Inch Steel End Section	5	ea.	\$ 423.00	\$ 2,115.00			5.00	\$ 2,115.00	100
603-30012	12 Inch Steel End Section	6	ea.	\$ 425.00	\$ 2,550.00			6.00	\$ 2,550.00	100
603-30015	15 Inch Steel End Section	1	ea.	\$ 442.00	\$ 442.00			1.00	\$ 442.00	100
603-30018	18 Inch Steel End Section	4	ea.	\$ 556.00	\$ 2,224.00			4.00	\$ 2,224.00	100
603-50015	15 Inch Plastic Pipe	4	lf.	\$ 116.40	\$ 465.60			4.00	\$ 465.60	100
603-50018	18 Inch Plastic Pipe	5.5	lf.	\$ 72.00	\$ 396.00			3.00	\$ 360.00	91
604-19000	Inlet (Special)	3	ea.	\$ 4,188.00	\$ 12,564.00			3.00	\$ 12,564.00	100
607-11525	Fence (Plastic)	2,736	lf.	\$ 4.00	\$ 10,944.00			3,309.50	\$ 13,238.00	121
608-00012	Concrete Curb Ramp (Special)	128	sq.	\$ 120.00	\$ 15,360.00			131.25	\$ 15,990.00	104
609-21900	Curb & Gutter Type 2 (12 Inch Pan) (Special)	44	lf.	\$ 32.74	\$ 1,440.56			25.50	\$ 834.87	58
609-21905	Curb & Gutter Type 2 (18 Inch Pan) (Special)	22	lf.	\$ 73.50	\$ 1,617.00			50.50	\$ 1,691.75	230
612-00043	Delinicator (Flexible) (Type III)	6	ea.	\$ 61.50	\$ 369.00			6.00	\$ 369.00	100
613-00100	1 Inch Electrical Conduit	16	lf.	\$ 76.50	\$ 1,224.00	16.00	\$ 1,224.00	16.00	\$ 1,224.00	100
613-00150	1-1/2 Inch Electrical Conduit	34	lf.	\$ 81.00	\$ 2,754.00	34.00	\$ 2,754.00	34.00	\$ 2,754.00	100
613-01100	1 Inch Electrical Conduit (Plastic)	18	lf.	\$ 29.50	\$ 531.00			18.00	\$ 531.00	100
613-01200	2 Inch Electrical Conduit (Plastic)	21	lf.	\$ 21.00	\$ 441.00			52.00	\$ 1,092.00	248
613-01300	3 Inch Electrical Conduit (Plastic)	42	lf.	\$ 26.00	\$ 1,092.00			84.00	\$ 2,184.00	200
613-02023	Post Box (24"x36"x24")	3	ea.	\$ 1,990.00	\$ 5,970.00			3.00	\$ 5,970.00	100

COLORADO DEPARTMENT OF TRANSPORTATION
PROJECT INDEPENDENT ASSURANCE SAMPLING SCHEDULE

Project Code: 19219	Project No. : STE C480-008	Page: 1 of 1	System Basis ? NO
Project Engineer Local Agency		Resident Engineer Robert Shanks	
Project Location: Pinon Causeway to Aspen Village/Archuleta Cnty			

Item # Quantity	Identification & Test Performed	#of Samples		CDOT Form #	Field Sheet #	Date M / D / Y	Field Tester (QA)	Indep. Assur. Tester (IA)
		Req.	Actual					
	No IA tests required due to minimal quantities of IA materials items.							


Project Mats Lab Inspected By: **LOCAL AGENCY CONTROL** Date: _____ (In accordance with 620.03 & CP-10)
 Developed By: Patrick Murphy Date: 2/2/2018

The above schedule is an estimate of CDOT Independent Assurance samples required on this project. The number of samples recommended is also the number of each type of test for the specific item in the *Frequency Schedule for Independent Assurance Evaluation* unless otherwise noted.
 All equipment was independent except as noted:

Initial Review By: Lisa Wisner	Date: 2/2/2018	Approved By: Tim Webb	Date: 2/2/2018
--	--------------------------	---------------------------------	--------------------------

Distribution:	
PRE:	POST:
<input type="checkbox"/> Region Materials Engineer	<input checked="" type="checkbox"/>
<input type="checkbox"/> Resident Engineer	<input checked="" type="checkbox"/>
<input type="checkbox"/> Project Engineer	<input type="checkbox"/>
<input type="checkbox"/> Project Tester	<input type="checkbox"/>
Doc. Unit, Central Lab	

The independent assurance sampling schedule for this project has been substantially followed and the test results of the IA samples are in reasonably close agreement with the project acceptance sample test results. (Exceptions to this statement have been previously commented on and documented when the test results were reported or are explained on this form or on an attached sheet.)

Final Review By: (Region Materials Engineer)  **Date:** 2-2-18

This form is region specific. Most regions use Form 1199 in lieu of this example.

Colorado Department of Transportation, Region 5

Final Materials Documentation Checklist - Residency Review

Project Number: STE CABO-008	Contract I.D. 19219	Project Location: PINON LAUSEMAN TO ASPEN VILLAGE SHARED USE PATH	Acceptance Date: 11/15/2017
Contractor: CROSSFIRE, LLC TRAUTNER GEOTECH.	Project Engineer: CLIFTON LEE	Resident Engineer: ROBERT SHANKS	Project Tester: TRAUTNER
Date Region Materials (R5 Lab) was contacted to initiate the Form 473:			3/22/2018

Yes	No	NA	
✓			Form 473 completed with all signatures except the Final Materials Documentation Coordinator.
✓			Form 473 exceptions are attached, including exceptions to the 250 (CAR) reports.
✓			The final Form 379 is retained in the file.
✓			Most recent versions of the 250 (CAR) reports and progress estimate are retained the file.
✓			If required, Consultant Testing Supervisor has stamped the 250 (CAR) reports.
✓			All original testing source documents are retained in the 250 file.
✓			All testing worksheets are signed/initialed per the Field Materials Manual.
✓			Testing worksheets have been checked for completeness and calculations verified.
✓			Most recent versions of all applicable CDOT testing forms were used.
✓			Materials certifications reviewed for Contractor original signature.
✓			Pay item codes and quantities are complete in the Contractor's Certification Statement.
✓			Testing and certification documentation is filed in the correct order.
✓			Copies of materials related Form 211 are retained in the file.
✓			Copies of materials related Form 105 and Change Orders are retained in the file.
✓			Buy America Letters have been reviewed for compliance and are retained in the file.
			Price reduction calculations have been verified and the reports are retained in the file.
	✓	✓	Form 219, if applicable, has been reviewed and signed by the RME P.E. & LOCAL AGENCY ENGINEER
✓			Form 1324, if applicable, has been reviewed and signed by the RME.
✓			The QA QPM has been reviewed and signed for Item No: 608
	✓	✓	Copy of the email showing the QPM has been received by HQ is filed with the QPM. (LIMS dependent).
✓			Project random testing schedules are retained in the file.
	✓	✓	If applicable, the Contractor's QC Notebook has been reviewed and is acceptable.
	✓	✓	If applicable, the Pavement Structural Design Data Window in SiteManager has been completed.

Review Notes: **SEE 1199 page 1, PROJECT CLOSURE, FOR ADDITIONAL INFORMATION.**

By signing below, the reviewer certifies that the project materials testing and certification documentation is complete and accurate.

Name (Printed) Jessica Eber	Name (Signed) <i>Jessica Eber</i>	Title: EPST#1	Date: 6/28/18
---------------------------------------	--------------------------------------	-------------------------	-------------------------

This form is region specific. Most regions use Form 1199 in lieu of this example

Colorado Department of Transportation, Region 5

Final Materials Documentation Checklist - Project Closure

Project Number: STENABD-008	Contract I.D. 19219	Project Location: Puycosa Springs, CO	Acceptance Date: 11/15/2017
Contractor: Crossfire, LLC	Project Engineer: Clifton Lee	Resident Engineer: Thomas Humphrey	Project Tester: Trantner - Geotech

Trantner Geotech
 Date Region Materials (RS Lab) was contacted to initiate the Form 473: 3/22/2018
 Project Certification and QA Assurance Checklists (250/CAR) run date: 3/21/2017

Yes	No	NA	Estimate number retained in the file: 7
✓			Form 473 completed with all signatures affixed.
✓			Form 473 exceptions are attached, including exceptions to the 250 (CAR) reports.
✓			The final Form 379 is retained in the file.
✓			Most recent versions of the 250 (CAR) reports and progress estimate are retained the file.
✓			If required, Consultant Testing Supervisor has stamped the 250 (CAR) reports.
✓			All original testing source documents are retained in the 250 file.
✓			All testing worksheets are signed/initialed per the Field Materials Manual. ★ 1
✓			Testing worksheets have been checked for completeness and calculations verified. ★ 1
✓			Most recent versions of all applicable CDOT testing forms were used. ★ 2
✓			Materials certifications reviewed for Contractor original signature.
✓			Pay Item codes and quantities are complete in the Contractor's Certification Statement.
✓			Testing and certification documentation is filed in the correct order.
✓			Copies of materials related Form 211 are retained in the file.
✓			Copies of materials related Form 105 and Change Orders are retained in the file.
✓			Buy America Letters have been reviewed for compliance and are retained in the file.
✓			Price reduction calculations have been verified and the reports are retained in the file.
	✓	✓	Form 219, if applicable, has been reviewed and signed by the RME. Project Engineer & Local Agency Off Systems Engineer
✓			Form 1324, if applicable, has been reviewed and signed by the RME.
✓			The QA QPM has been reviewed and signed for Item No: 608 Bituminous Biking
	✓	✓	Copy of the email showing the QPM has been received by HQ is filed with the QPM. (LIMS dependent).
✓			Project random testing schedules are retained in the file.
	✓	✓	If applicable, the Contractor's QC Notebook has been reviewed and is acceptable.
	✓	✓	If applicable, the Pavement Structural Design Data Window in SiteManager has been completed.

Review Notes:
★ 1 The final materials documentation was assembled and review by Trantner Geotech (Gina Denton) and Davis Engineering Service, Inc. (Clifton Lee).
 All testing worksheets have a tester's name.
★ 2 The most recent versions of all applicable CDOT testing forms and/or previously approved testing forms were used with the exception of Form 02 as explained in the Form 473.

By signing below, the reviewer certifies that the project materials testing and certification documentation is complete and accurate.

Name (Printed) Clifton Lee	Name (Signed) 	Title: Project Engineer	Date: 3/20/2018
--------------------------------------	--	-----------------------------------	---------------------------

**Colorado Department of Transportation
Calculations for Price Reduction**

Project Number: STE-C480-008
 Project Code (SA): 19219
 Proj. Description: PC to AVD SUP
 Region: 5

Date: 2/15/2018
 Data from
 CDOT Form No.: 565
 Field Sheet No.: 3977-A

One test price reduction calculation

Item: 304 Aggregate Base Course Class 2
 Lot No.: Piedra Pit (Cross fire)
 Element Name: No. 200 sieve

Upper Spec Limit:	15	To	(17.1) Test Result Value
Lower Spec Limit:	3	Tu	15 Upper Tolerance of Spec
		TL	3 Lower Tolerance of Spec
Test Results	17.1	F	6.00 Price reduction factor from F factor table



Test Result Above Specification

P =	9.576	$0.76 \times (To - Tu) \times F$
Multiplier	0.6	
P * Multiplier	5.7456	
Unit Price	\$41.70	
Price Adjustment	\$2.40	
Quantity in Lot	50.5	
Price Reduction	\$120.99	

Total P = 9.576

Total Price Reduction = \$120.99

Notes: Sampled by Eric Howes for Piedra Pit ABC Class 6 material placed beneath the retaining wall at STA 24+48 on 7/20/2017. SD.S C.V. was paid for as Item # 304 - 02005 Aggregate Base Course Class 2 for subgrade stabilization in Pay Request No. 02. This price reduction is based on the CDOT Standard Special Provision, dated October 20, 2016.

	3-20-18
Calculations by: Trautner Geotech (QA)	Date:
REVIEWED	
	3/28/2018
Resident Engineer/Project Engineer	Date:

Colorado Department of Transportation
Calculations for Price Reduction

Project Number: STE-C480-008
 Project Code (SA): 19219
 Proj. Description: PC to AVD SUP
 Region: 5

Date: 3/13/2018
 Data from
 CDOT Form No.: 565
 Field Sheet No.: 3977-A (LAB NO.)
 QA # 1

One test price reduction calculation

Item: 304 Aggregate Base Course Class 6
 Lot No.: Piedra Pit (Crossfire)
 Element Name: No. 200 sieve

Upper Spec Limit:	12	To	17 Test Value that Deviates
Lower Spec Limit:	3	Tu	12 Upper Tolerance of Spec
		TL	3 Lower Tolerance of Spec
Test Results	17.1	F	6.00 Price reduction factor from F factor table

Test Result Above Specification

P =	23.256	$0.76 * (To - Tu) * F$
Multiplier	0.6	
P * Multiplier	13.9536	
Unit Price	\$41.75	
Price Adjustment	\$5.83	
Quantity in Lot	221.75	
Price Recuction	\$1,291.83	

Total P = 23.256

Total Price Reduction = \$1,291.83

Notes: Sampled by Eric Howes for Piedra Pit ABC Class 6 material placed beneath the retaining wall at STA 24+40 on 7/20/2017. This price reduction is based on the CDOT SSP, dated October 20, 2016. This price reduction of \$1,291.83 applies to July 2017 truck tickets, from Piedra Pit, for the item # 304-06007 Aggregate Base Course Class 6.

Calculations by: Trautner Geotech (QA)

Date:

REVIEWED

Cliff
 Resident Engineer/Project Engineer

3/20/2018

Date:

**Colorado Department of Transportation
Calculations for Price Reduction**

Project Number: STE-C480-008
 Project Code (SA): 19219
 Proj. Description: PC to AVD SUP
 Region: 5

Date: 3/9/2018
 Data from
 CDOT Form No.: 565
 Field Sheet No.: QA #1 60
 # 2

One test price reduction calculation

Item: 304 Aggregate Base Course Class 6
 Lot No.: Piedra Pit (crossfire)
 Element Name: No. 200 sieve

Upper Spec Limit:	12	To	15 Test Value that Deviates
Lower Spec Limit:	3	Tu	12 Upper Tolerance of Spec
		TL	3 Lower Tolerance of Spec
Test Results	15.4	F	6.00 Price reduction factor from F factor table

Test Result Above Specification

P =	15.504	$0.76 * (To - Tu) * F$
Multiplier	0.6	
P * Multiplier	9.3024	
Unit Price	\$41.75	
Price Adjustment	\$3.88	
Quantity in Lot	401.4	
Price Reduction	\$1,558.94	

Total P = 15.504

Total Price Reduction = \$1,558.94

Notes: Sampled by Eric Howes for Piedra Pit ABC Class 6 material placed on the trail at STA 25+32. This price reduction is based on the CDOT SSP, dated October 20, 2016. This price reduction of \$1,558.94 applies to August 2017 truck tickets, from Piedra Pit, for the item # 304-06007 Aggregate Base Course Class 6.

	3-20-18
Calculations by: Trautner Geotech (QA) Reviewed	Date:
	3/29/2018
Resident Engineer/Project Engineer	Date:

Colorado Department of Transportation
Calculations for Price Reduction

Project Number: STE-C480-008 A
 Project Code (SA): 19219
 Proj. Description: PC to AVD SUP
 Region: 5

Date: 3/13/2018
 Data from
 CDOT Form No.: 565
 Field Sheet No.: QA #2 60
 #3

One test price reduction calculation

Item: 304 Aggregate Base Course Class 6
 Lot No.: La Boca Pit (Cross five)
 Element Name: No. 200 sieve

Upper Spec Limit:	12	To	13 Test Value that Deviates
Lower Spec Limit:	3	Tu	12 Upper Tolerance of Spec
		TL	3 Lower Tolerance of Spec
Test Results	13.3	F	6.00 Price reduction factor from F factor table

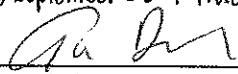
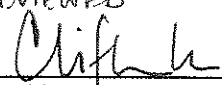
Test Result Above Specification

P =	5.928	$0.76 \cdot (To - Tu) \cdot F$
Multiplier	0.6	
P * Multiplier	3.5568	
Unit Price	\$41.75	
Price Adjustment	\$1.48	
Quantity in Lot	658.5	
Price Recuction	\$977.85	

Total P = 5.928

Total Price Reduction = \$977.85

Notes: Sampled by Eric Howes for La Boca Pit ABC Class 6 material placed on the trail at STA 11+00. This price reduction is based on the CDOT SSP, dated October 20, 2016. This price reduction of \$977.85 applies to September 2017 truck tickets, from La Boca Pit, for the item # 304-06007 Aggregate Base Course Class 6.

	3-20-18
Calculations by: Trautner Geotech (QA)	Date:
REVIEWED	
	3/28/2018
Resident Engineer/Project Engineer	Date:

**Colorado Department of Transportation
Calculations for Price Reduction**

Project Number: STE-C480-008
 Project Code (SA): 19219
 Proj. Description: PC to AVD SUP
 Region: 5

Date: 3/9/2018
 Data from
 CDOT Form No.: 565
 Field Sheet No.: QA #2-60
 #3

One test price reduction calculation

Item: 304 Aggregate Base Course Class 6
 Lot No.: La Boca Pit (Cross fire)
 Element Name: No. 200 sieve

Upper Spec Limit:	12	To	13 Test Value that Deviates
Lower Spec Limit:	3	Tu	12 Upper Tolerance of Spec
		TL	3 Lower Tolerance of Spec
Test Results	13.3	F	6.00 Price reduction factor from F factor table

Test Result Above Specification

P =	5.928	$0.76 \cdot (To - Tu) \cdot F$
Multiplier	0.6	
P * Multiplier	3.5568	
Unit Price	\$41.75	
Price Adjustment	\$1.48	
Quantity in Lot	120.75	
Price Reduction	\$179.31	


Total P = 5.928

Total Price Reduction = \$179.31

Notes: Sampled by Eric Howes for La Boca Pit ABC Class 6 material placed on the trail at STA 11+00. This price reduction is based on the CDOT SSP, dated October 20, 2016. This price reduction of \$179.31 applies to October 2017 truck tickets, from La Boca Pit, for the item # 304-06007. Aggregate Base Course Class 6.


 Calculations by: Trautner Geotech (QA)

3-20-18
 Date:

REVIEWED

 Resident Engineer/Project Engineer

3/23/2018
 Date:

Gina Denten

From: Clifton Lee <clifton@daveng.com>
Int: Tuesday, March 13, 2018 12:44 PM
To: Gina Denten
Subject: Re: 19219 PC to AVD SUP - Item 304-06007 ABC Class 6
Attachments: 19219 PC to AVD SUP - Price Reduction ABC Class 6 La Boca Pit FINAL October.pdf; 19219 PC to AVD SUP - Price Reduction ABC Class 6 La Boca Pit FINAL October.xls; 19219 PC to AVD SUP - Price Reduction ABC Class 6 La Boca Pit FINAL Sept.pdf; 19219 PC to AVD SUP - Price Reduction ABC Class 6 La Boca Pit FINAL Sept.xls; 19219 PC to AVD SUP - Price Reduction ABC Class 6 Piedra Pit FINAL August.pdf; 19219 PC to AVD SUP - Price Reduction ABC Class 6 Piedra Pit FINAL August.xls; 19219 PC to AVD SUP - Price Reduction ABC Class 6 Piedra Pit FINAL July.pdf; 19219 PC to AVD SUP - Price Reduction ABC Class 6 Piedra Pit FINAL July.xls

Good Afternoon Gina

Please find attached the updated price reduction calculations files in Excel and PDF formats for the line Item 304-06007 ABC Class 6 material paid to date. Below is a summary of each file.

July

- Total amount of ABC Class 6 material provided is 286.75 cubic yards
- 14.0 cubic yards of the total amount was overweight material and not paid
- 50.5 cubic yards of the total amount was paid as line Item 304-02005
- 221.75 cubic yards is the adjusted amount (less overweight material and material paid as ABC Class 2) and paid as line Item 304-06007 in Pay Request No. 04 and 07
- price reduction calculations are based on the Trautner Lab No. 3977-A
- material is from Crossfire's Piedra Pit

August

- Total amount of ABC Class 6 material provided is 401.55 cubic yards
- 0.1 cubic yards of the total amount was overweight material and not paid
- 401.4 cubic yards is the adjusted amount (less overweight material) and paid as line Item 304-06007 in Pay Request No. 04 and 07
- price reduction calculations are based on the Trautner Lab No. QA #1
- material is from Crossfire's Piedra Pit

September

- Total amount of ABC Class 6 material is 658.50 cubic yards
- There was no overweight material during this month
- 658.50 cubic yards is the adjusted amount and paid as line item 304-06007 in Pay Request No. 04 and 07
- price reduction calculations are based on the Trautner Lab No. QA #2
- material is from Crossfire's La Boca Pit

October

- Total amount of ABC Class 6 material is 379.75 cubic yards
- 1.5 cubic yards of the total amount was overweight material (this overweight material is for trucks that was part of excess material)

September

- Adjusted amount of ABC Class 6 material for payment 539.50 cubic yards
- 539.50 cubic yards of the adjusted amount was paid as line item 304-06007 in Pay Request No. 04 price reduction calculations are based on the Trautner Lab No. QA #2
- material is from Crossfire's La Boca Pit

Total of the above, 1,148.40 cubic yards of Item 304-06007 paid to date (Pay Request No.06)

The Contractor did have overweight trucks that was revealed during my review of the truck tickets for payment. I reviewed the following method with CDOT, first a quantity was determined for overweight material weight and was not paid, second the overweight penalty was applied based on the overweight material weight, third the price reduction for the 200 sieve was applied on the adjusted weight (not including the overweight material weight) and withheld in the pay requests. In the notes sections of Pay Request No. 04 I explained the total weight of truck tickets provided, the overweight material weight not paid, the adjusted weight of ABC Class 6 material paid.

I have not paid for material delivered in October or November. These are currently under review as the tickets were provided to me recently. I will update this email thread with price reduction calculations that will be based on QA #2 test results for October and November.

Regards,

Clifton Lee



Davis Engineering Service, Inc.
188 S. 8th Street - P.O. Box 1208
Pagosa Springs, Colorado 8147

Phone: (970) 264-5055x105
Fax: (970) 264-9210
E-mail: cliffron@daveng.com

Gina Denten

From: Clifton Lee <clifton@daveng.com>
Int: Wednesday, October 04, 2017 7:51 AM
To: Gina Denten
Cc: Eric Howes
Subject: 19219 PC to AVD SUP - Concrete Pour 10/3/2017

Good Morning Gina

I wanted to share notes about yesterday's concrete pour.

The concrete truck arrived onsite and the QA initial test for air showed 3.5%. A decision was made to add a bag of air to bring it up. The QA initial test after mixing in one bag of air showed it rising to 4.9%. I told Crossfire and FCM this was acceptable to pour. I know we discussed keeping the Class D specification air range (5-8%). I would explain that this was a Class P mix and meets the Class P air range (4-8%) but does not meet the Class D air range (5-8%). The documented air value, if I remember correctly, was 4.8%.

Regards,

Clifton Lee



Davis Engineering Service, Inc.
188 S. 8th Street - P.O. Box 1208
Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105
Fax: (970) 264-9210
E-mail: clifton@daveng.com



Attn: Project Engineer

Date: August 18, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification - June

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

1.) No steel was incorporated during the month of June

Respectfully,

A handwritten signature in black ink, appearing to read 'Paul Martin', written over a horizontal line.

Paul Martin
Project Manager
Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.

Note 2: The delivery date and/or the incorporation date may be included in the letter.



Attn: Project Engineer

Date: November 28, 2017

Re: CDOT Contract ID: 19219

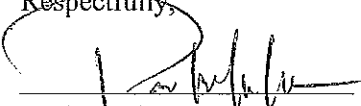
Re: CDOT Project No. STE C480-008

Subject: Buy America Certification – July 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 2,700 pounds reinforcing steel – Bid Item 602-00000
- 2.) Metal wall ties, tie-wire, bolsters – Bid Item 601-01000

Respectfully,



Paul Martin
Project Manager
Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.

Note 2: The delivery date and/or the incorporation date may be included in the letter.



Attn: Project Engineer

Date: November 28, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification – August 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 571 pounds reinforcing steel – Bid Item 602-00000
- 2.) 245 pounds reinforcing steel – Bid Item 602-00000 (Light Bases)
- 3.) Metal wall ties, tie-wire, bolsters – Bid Item 601-01000
- 4.) 43 lf - 8 Inch Corrugated Steel Pipe – 603-10080
- 5.) 41 lf - 12 Inch Corrugated Steel Pipe – 603-10120
- 6.) 43 lf - 18 Inch Corrugated Steel Pipe – 603-10180
- 7.) 3 ea - 8 Inch Steel End Section - 603-XXXXX
- 8.) 4 ea - 12 Inch Steel End Section - 603-30012
- 9.) 1 ea - 15 Inch Steel End Section - 603-30015
- 10.) 4 ea - 18 Inch Steel End Section - 603-30018
- 11.) 3 ea - Inlet (Special) - 604-19000
- 12.) 5 ea - Light Standard Foundation (Special) - 613-40012 (Anchor Bolts)
- 13.) 117 sf – Truncated Domes – 608-00012
- 14.) Force Account 1 ea – 1” Rigid 90
- 15.) Tie Wire 608-00012, 609-21900, 604-19000, 613-40012
- 16.) Steel rebar dowels - 608-00012

Respectfully,

Paul Martin

Project Manager

Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.

Note 2: The delivery date and/or the incorporation date may be included in the letter.



Attn: Project Engineer

Date: November 28, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification – September 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 1,455 pounds reinforcing steel – Bid Item 602-00000 (Light Bases)
- 2.) 16 lf - 12 Inch Corrugated Steel Pipe – 603-10120
- 3.) 2 ea - 12 Inch Steel End Section - 603-30012
- 4.) 29 ea - Light Standard Foundation (Special) - 613-40012 (Anchor Bolts)
- 5.) Tie Wire – 602-00000, 613-40012

Respectfully,

Paul Martin
Project Manager
Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.

Note 2: The delivery date and/or the incorporation date may be included in the letter.



Attn: Project Engineer

Date: November 28, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification – October 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 259 pounds reinforcing steel – Bid Item 602-00000
- 2.) 15.5 lf - 8 Inch Corrugated Steel Pipe – 603-10080
- 3.) 2 ea - 8 Inch Steel End Section - 603-XXXXX
- 4.) 165 lf - Steel Sign Support (2-Inch Round) (Post & Socket) - 614-01502
- 5.) 6 ea – Delineator (Flexible)(Type III) – 612-00043
- 6.) 60 SF – Truncated Domes – 608-00012
- 7.) Tie Wire – 608-00012, 609-21900
- 8.) Steel rebar dowels - 608-00012

Respectfully,

Paul Martin
Project Manager
Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.

Note 2: The delivery date and/or the incorporation date may be included in the letter.



Attn: Project Engineer

Date: 1/10/2018

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification -- November 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 613-10010 – 1 LS Wiring (Special – Pedestrian, Crosswalk)
- 2.) 613-10010 – 1 LS Wiring (Special – Trail Lighting)
- 3.) 614-70200 – 2 EA Accessible Pedestrian Signal
- 4.) 614-72863 – 1 EA Pedestrian Push Button Post Assembly
- 5.) 614-72863 – 1 EA Pedestrian Push Button Post Assembly (Anchor Bolts)
- 6.) 614-70150 – 2 EA Pedestrian Signal Face (16) (Countdown)

Respectfully,

A handwritten signature in black ink, appearing to read 'Paul Martin', written over a horizontal line.

Paul Martin
Project Manager
Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.

Note 2: The delivery date and/or the incorporation date may be included in the letter.

COLORADO DEPARTMENT OF TRANSPORTATION CP 16, EVALUATION OF MATERIALS TESTING The contractor, consultant and head tester should be interviewed prior to completing this form. There should be a final meeting with the consultant to review strengths and weaknesses.	Region: 5	Residency: Pagosa Springs, CO (DSE)
	Contract ID: 19219	Date: 3/28/2018
	Project No.: STE C480-00B	
	Proj. Location: Pagosa Springs, CO	

Name of Consultant Company: Trautner Geotech	Name of Consultant Tester: Eric Howes	Quality of Work/Total Rating: Very Good (Management) & Average (Field Tester) &
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PROJECT TESTER (A)

Evaluation Factors:	Ratings: (5) very good, (4) good, (3) average, (2) below average, (1) poor
1. Knowledge of test procedures	3 1/2
2. Following test procedures	3 R
3. Knowledge of project specifications	3 R
4. Following project specifications	3 R
5. Test result distribution	4
6. Following protocol for failing tests	4
7. Following instructions / directions of CDOT management staff	3 R
8. Paperwork / documentation (during construction)	4
9. Final paperwork / documentation (after construction)	4
10. Time management	3 R
11. Scheduling I.A. testing	N/A
12. Attendance at weekly / required meetings	N/A
13. Housekeeping / field lab organization	5
14. Test equipment maintenance	5
Subtotal:	44.056 (12 values)
Average:	3.67 R

CONSULTANT MANAGEMENT SUPPORT (B)

Evaluation Factors: For Eric Denton	Ratings: (5) above standard, (3) standard, (1) below standard
Note: Description of the factors can be found in CP 16, Subsection 3.3.3.	
1. Quality	5
2. Timeliness	5
3. Price / Budget	5
4. Business Relations / Customer Service	5
5. Deliverables / Requirements	5
Subtotal:	25
Average:	5

CUMULATIVE RATING

Weighted average total score (sections A and B):	4.84
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Comments on referenced evaluation factors: Eric improved from the last local Agency Project where I worked with him. He is responsive and schedules his support very well.	
Rater: (Project Engineer) Clifton Lee Clifton	Date: 3/28/2018
Reviewer: (Region Materials Engineer) J. Webb	Date: 6-1-18

Copy distribution: Project Engineer (Original), Consultant, Region Materials Engineer, Central Laboratory (Documentation Unit)

CONTRACT CHANGE ORDER

ORDER NO.: 1	
DATE: 7/24/2017	
STATE: Colorado	
COUNTY: Archuleta	
OWNER: Archuleta County	Proj. #: STE M016-025 Proj. Code: 19219
PROJECT: Pinon Causeway to Aspen Village Dr. S.U.P.	FEDERAL OVERSIGHT: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
PROJECT LOCATION: Pagosa Springs, Colorado, adjacent to US highway 160, between MP. 139.72 to 140.2	

TO: Crossfire, LLC
820 Airport Road
Durango, CO 81303

You are hereby requested to comply with the following changes from the contract plans and specifications.

All work shall be done in accordance with the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction, project plans, project special provisions, and as directed by the Project Engineer.

The Contractor shall provide additional bonding to cover the cost of this work at no additional cost to the project.

By signing below, the Contractor hereby waives any and all claims or rights to claim which it now has or may have in the future relating to this change order.

Should federal funds not be available to cover these additional costs, or the FHWA decides not to participate, Archuleta County agrees to provide the required funds.

Archuleta County approves this Change Order by signing below.

	DESCRIPTION OF CHANGES	Contract DECREASE	Contract INCREASE
Boring Substitution for Village Drive/Pinon Causeway			
a.	Remove Item 613-00200 2 Inch Electrical Conduit	\$ (1,044.00)	
b.	New Item 613-00206 2 Inch Electrical Conduit (Bored)		\$ 2,610.00
Boring Substitution for Alpha Drive			
c.	Remove Item 613-00200 2 Inch Electrical Conduit	\$ (1,098.00)	
d.	New Item 613-00206 2 Inch Electrical Conduit (Bored)		\$ 2,745.00
Boring Substitution for US Highway 160 Crossing			
e.	Remove Item 613-00200 2 Inch Electrical Conduit	\$ (4,914.00)	
f.	Remove Item 613-50106 Light. Ctrl. Cen. (Pedest. Spec.)	\$ (1,765.00)	
g.	Increase Item 613-01100 1 Inch Electrical Conduit (Plastic)		\$ 1,239.00
h.	New Item 613-00206 2 Inch Electrical Conduit (Bored)		\$ 6,300.00
i.	Increase Item 613-00200 2 Inch Electrical Conduit		\$ 522.00
j.	Increase Item 613-00100 1 Inch Electrical Conduit		\$ 1,071.00
k.	Remove Item 613-00150 1-1/2 Inch Electrical Conduit	\$ (2,754.00)	
l.	Increase Item 613-07023 Pull Box (24"x36"x24")		\$ 1,990.00
Modification of Existing Line Items for Placement of 2" Electrical Conduit (Boring)			
m.	New Item 613-10010 Wiring (Spec.-Pedest. X-Walk)	\$ (1,923.53)	
n.	New Item 630-XXXXX Const. Zone Traffic Control	\$ (1,693.33)	
Adjust Communications Utility Lines			
o.	New Item 900-00012 Added Item (Foot)		\$ 8,683.50
TOTALS		\$ (15,191.86)	\$ 25,160.50
NET CHANGE IN CONTRACT PRICE			\$ 9,968.64

Electrical Conduit Boring, Trenching and Backfilling of Utilities, Reduction of Lump Sum Items (Traffic Control & Wiring)
DISCUSSION OF CHANGES:
a. Remove a portion of the original contract quantity of 2" electrical conduit for an estimated length of 1,044 FT.

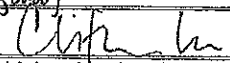
Local Agency - Archuleta County; Davis Engineering Service, Inc.

COLORADO DEPARTMENT OF TRANSPORTATION SPEED MEMO	Project No.: STE C480-008	Project Code (SA#): 19219
	Location: Pinon Causeway to Aspen Village Drive Shared Use Path, Archuleta County, Colorado	

MESSAGE	Date: 10/17/2017
To: Crossfire, LLC (Paul Martin)	
Subject: Speed Memo #3 - Excavator Tracking on HMA Trail Surface	

Starting on October 2, 2017, Crossfire began topsoil work with a John Deere 60G excavator along the trail between STA 28+50 to STA 36+50. On October 4, 2017, Jason Vavrina (Crossfire) notified me about seeing excavator tracking marks on the HMA trail surface. Jason and myself walked the portion of the trail driven on by the excavator. From trail STA 28+50 to STA 33+50 the excavator tracks noticeably deformed the surface of the trail. From trail STA 33+50 to STA 36+50 the excavator tracks deformed the surface of the trail to a lesser extent. Jason showed me a location where the HMA surface was damaged by a rock driven on by the excavator. I notified Jason to stop driving this excavator on the trail surface. On October 5, 2017, I met with you and Jason to review the excavator tracking marks and discussed options in moving forward in this area. We discussed using plywood or steel plates for protection of the HMA surface, a smaller excavator to which you expressed space, time and personnel constraints for these. Also on this day I brought Scott Lewandowski (Town of Pagosa Springs) to review the excavator tracking marks. On October 6, 2017, I met with Jessica Ebel (Colorado Department of Transportation) to also review the excavator tracking marks and topsoil work performed in this area. On October 10, 2017 Jon Butler (Trautner Geotech), Russell Ebel and Jessica Ebel (CDOT), you, and Jason Vavrina (Crossfire, LLC) met on site to walk through the section of trail driven on by the excavator. We discussed topsoil work performed in the area, protection of the HMA surface, HMA QC/QA results to date, and best practices in driving equipment on new HMA surfaces. On 10/16/2017, longitudinal tears were observed within the tracking.

The HMA QC/QA test results, HMA structural section design, and approved HMA mix design were reviewed. The HMA QC/QA test results show the 200 sieve percentage and asphalt cement content at and slightly above the specified maximum with HMA density achieved. With the asphalt cement content and 200 sieve percentages on the higher end the HMA will tend to have elastic behavior. With the placed HMA material being characterized as "soft"/elastic, the Contractor is to use care and be cautious driving or moving equipment on the HMA trail surface. It is recommended smooth track tires be utilized on equipment, protection of the HMA surface (i.e. plywood), and no loads be placed within 18 inches from the edge of the HMA trail section. The excavator track marks are unacceptable and the HMA trail surface shall be corrected at the expense of the Contractor. The Contractor is requested to provide correction methods for review to remove excavator track marks and reestablish a smooth surface on the HMA trail surface.

Signed (CDOT): 	Title: Project Engineer
--	--------------------------------

By Signing Below I Acknowledge Receipt of This Document

Signed:	Title:
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REPLY	Date: 11/02/17
To: Clifton Lee	

Crossfire to contact Sealmaster and schedule a representative to visit the site and provide recommendations. Ideally getting a test sample down this year to verify viable option.

Signed: 	Title: Project Manager
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Distribution:
Contractor
Resident Engineer
Project Engineer

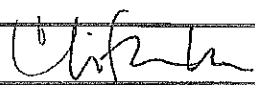
ARCHULETA COUNTY & DAVIS ENGINEERING SERVICE, INC. SPEED MEMO	Project No:	STE C480-008	Project Code (SA #):	19219
	Location:	Archuleta County – Pinon Causeway to Apsen Village Drive		

MESSAGE	
To: Crossfire, LLC 820 Airport Road, Durango, Colorado 81303	Date:
Attention: Paul Martin	10/23/2017
Subject: Use of Quikrete 5000 Concrete Mix for Sign Foundations	FORM NO. 105-#04

Crossfire provided a preliminary submittal for the traffic and pedestrian control sign foundations. For the foundation concrete material the submittal consisted of using the product Quikrete 5000 concrete mix (Product No. 1007) in lieu of CDOT Class B concrete per the CDOT Standard S-614-8. Quikrete 5000 concrete mix is currently not on the CDOT Approved Products List and is not a CDOT Class B mix design.

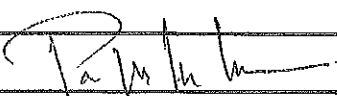
Inclusion of the product Quikrete 5000 concrete mix (Product No. 1007) will be approved given the Contractor agrees to the following:

- The Contractor shall mix the Quikrete 5000 concrete mix product per the manufacturer's instructions for every bag used for placement of sign foundations.
- The Contractor shall mix and provide an additional amount for sampling of the Quikrete 5000 concrete mix product for Quality Assurance testing (by Trautner), enough for 3 cylinders.
- Acceptance of Quikrete 5000 concrete mix shall be based on meeting the CDOT Class B compressive strength requirement at 28 days. Quality Assurance shall perform compressive strength testing at 28 days.
- The Contractor shall provide the Project Engineer the foundation dimensions to be installed in accordance with the CDOT Standard S-614-8 details.

Signed: 	Title: Project Engineer
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REPLY	To: CLIFTON LEE	Date: 10/24/17
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Agreed.

Signed: 	Title: Project Manager
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ARCHULETA COUNTY & DAVIS ENGINEERING SERVICE, INC. SPEED MEMO	Project No:	STE C480-008	Project Code (SA #):	19219
	Location:	Archuleta County – Pinon Causeway to Apsen Village Drive		

MESSAGE		
To: Crossfire, LLC 820 Airport Road, Durango, Colorado 81303	Attention: Paul Martin	Date: 10/24/2017
Subject: Repair of HMA Surface Damage		FORM NO. 105-#05

At plus/minus STA 33+50, a rock was driven on by Crossfire's John Deere 60G excavator during topsoil work on the adjacent trail slopes damaging the HMA trail surface. The damage was repaired by using an unapproved HMA filler product. The location is on the right hand side of the HMA trail. At plus/minus STA 33+00, where coring operations were performed by Quality Control (Western Technologies), Crossfire filled the cored openings with an unapproved HMA filler product.

At plus/minus STA 33+00 (cored holes) and STA 33+50 (rock damage) the Project Engineer shall mark out the HMA trail surface to be saw cut and replaced with an approved HMA filler product. This damage by the Contractor and/or use of unapproved material shall be corrected at the Contractor's expense using an approved HMA filler material. HMA material from the approved Strohecker Asphalt & Paving mix design may be utilized as HMA filler material in these areas for repair as paving operations continue.

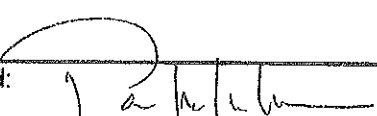
At plus/minus STA 31+50 and STA 32+00, small longitudinal tears are starting to form at the HMA trail surface. These tears appear to be growing in length and require sealing maintenance during the project.

The Contractor shall apply an approved crack sealing product at these approximate station locations. With the location of the longitudinal tears occurring at the excavator tracking mark locations, damage to the HMA surface, this shall be corrected and managed at the Contractor's expense using an approved crack sealing product. Areas driven on by the excavator shall be watched and crack sealing applied to prevent integration of moisture into the asphalt and subsurface.

Signed: 	Title: Project Engineer
---	-------------------------

REPLY		
To: Clifton Lee		Date: 11/02/17

Crossfire will sawcut the damaged areas and patch back with hot mix asphalt that is being utilized on the final mat placement. Crossfire has directed Strohecker to apply crack sealer in the visible cracks.

Signed: 	Title: Project Manager
---	------------------------



Clifton Lee <clifton@daveng.com>

19219 PC to AVD SUP - CDOT Speed Memo 02 Culvert Repair

Clifton Lee <clifton@daveng.com>

Thu, Aug 31, 2017 at 12:14 PM

To: Paul Martin <paul.martin@crossfire-llc.com>

Good Afternoon Paul

Will you review the attached CDOT Speed Memo 02? If you do not have any questions will you return a signed copy to me? This speed memo addressed the path forward utilizing the Force Account - Minor Credit Revisions to repair the damaged culvert and abandon the other culvert.

Regards,

Clifton Lee



Davis Engineering Service, Inc.
188 S. 8th Street - P.O. Box 1208
Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105

Fax: (970) 264-9210

E-mail: clifton@daveng.com



19219 PC to AVD SUP - Speed Memo 02 (part signed).pdf

676K



DAVIS
ENGINEERING
SERVICE, INC.

September 8, 2017

Paul Martin
Crossfire, LLC
820 Airport Road
Durango, CO 81303

Re: Pinon Causeway to Aspen Village Shared Use Path Project
CDOT No.: STE C480-008, CDOT Project Code: 19219
Substitution of CDOT Class P Concrete for CDOT Class B Concrete

Dear Mr. Martin:

The purpose of this correspondence is to document substitution of CDOT Class P concrete, for the subject project, for the items indicating use of CDOT Class B concrete.

The Contract Documents indicate a line item # 601-01000 Concrete Class B with a quantity of 36 c.y. estimated for the project. As discussed at the Pre-Pour Conference on July 18, 2017, since the CDOT Class B specifications have a narrower air content range (5-8%) and maximum water cement ratio of 0.45, these values for the CDOT Class B concrete will apply to the CDOT Class P concrete.

Please find attached the CDOT Form 1373 - Concrete Mix Design Report approving the Four Corners Materials Class P, Supplier Mix ID: 37523344, CDOT Mix Number: 2017069 for the subject project.

Sincerely,

Clifton Lee
970-264-5055 ext. 105

Encl.: CDOT Form 1373 Concrete Mix Design Report (dated 7/18/2017)

C.C.: Robert Shanks, Colorado Department of Transportation, Region 5
Mike Davis, Davis Engineering Service, Inc.

COLORADO DEPARTMENT OF TRANSPORTATION

Approved for use on SA 19219 by
CDOT CPP Unit on 7/18/17.

Concrete Mix Design Report

R. Ebel

Concrete Supplier: Four Corners Materials	CDOT Mix Number : 2017069
Supplier Mix ID : 37523344	Item 601 Class P Concrete
Field Compressive Strength: 4500 psi	Class 2 Sulfate Resistance and lower*
	<i>*Class 3 Sulfate resistance requires a w/cm ratio ≤0.40</i>

Concrete Mix Proportions (SSD Batch Weights for 1 Cubic Yard)

Cement:	565	Pounds	GCC (Pueblo) Type I/II Cement
Fly Ash:	141	Pounds	SRMG (4-Corners) Class F Fly Ash
Silica Fume		Pounds	
Coarse Aggregate 1	1682	Pounds	Animas Glacier Pit; #67
Coarse Aggregate 2		Pounds	
Coarse Aggregate 3		Pounds	
Fine Aggregate	1077	Pounds	Animas Glacier Pit
Admixture	7.0	Ounces	BASF - MasterAir AE 200
Admixture	56.0	Ounces	BASF - MasterPolyheed 997
Admixture		Ounces	
Admixture		Ounces	
Water	295.9	Pounds	

Trial Batch Properties

Unit Weight :	140.8	PCF	7-Day Compressive Strength :	4485	psi
W / Cm Ratio :	0.42		14-Day Compressive Strength :	5255	psi
Slump :	2.25	Inches	28-Day Compressive Strength :	6950	psi
Air Content :	4.70	%	56-Day Compressive Strength :		psi
Relative Yield :	0.99		7-Day Flexural Strength :	723	psi
			28-Day Flexural Strength :	770	psi

Aggregate Test Results

	Specific Gravity (SSD)	Absorption
Coarse Aggregate 1 :	2.66	1.2 %
Coarse Aggregate 2 :		%
Coarse Aggregate 3 :		%
Fine Aggregate :	2.66	1.3 %

Comments:

Reviewed by: Val Niculae

Review date: 3/17/2017

Please contact CDOT Concrete and Physical Properties Lab at 303-398-6549 with any questions.

COLORADO DEPARTMENT OF TRANSPORTATION SPEED MEMO	Project No.: STE C480-008	Project Code (SA#): 19219
	Location: Archuleta County	

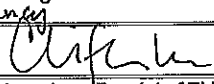
MESSAGE	Date: 8/30/2017
To: Crossfire, LLC	

Subject: **Speed Memo #2 - Culvert Repair work at STA 16+21 & STA 16+89**

During potholing of two existing highway crossing culverts by the Contractor, at trail STA 16+21 and STA 16+89, it was found that existing CMP were deteriorating and in poor condition. The related potholing took place on August 14, 2017 where the top of the CMP's caved in. On August 22, 2017 it was determined a Black Hills Energy gas line was trenched into the culvert at STA 16+21 with additional damage to the north. A meeting was conducted onsite (with representatives from Crossfire LLC, Black Hills Energy, CDOT-Utilities, Town of Pagosa Springs, and Davis Engineering Service, Inc.) on August 25, 2017 to determine the path forward. Following the meeting it was discussed that the Town of Pagosa Springs would provide the new 30 inch diameter conduit material (with the invoice sent to Black Hills Energy for reimbursement) and the Contractor would utilize the Force Account - Minor Credit Revision for this work; excavate, remove and replace the existing culvert at STA 16+21, and excavate, remove, not replace and backfill the existing culvert at STA 16+89.

The method of payment for installation of a new 30 inch diameter culvert at STA 16+21 will utilize the Force Account Item Minor Credit Revisions. The Contractor will need to maintain documentation in accordance with the CDOT Standard Specification 109.04 for materials incorporated, Contractor personnel work, and Contractor equipment utilized with installation of the culvert.

The method of payment for excavation and embankment for the removal of the existing culvert at STA 16+89 will utilize the Force Account Item Minor Credit Revisions. The Contractor will need to maintain documentation in accordance with the CDOT Standard Specification 109.04 for Contractor personnel work and Contractor equipment utilized with removal of subsurface material to locate and removal the existing culvert and then backfill with onsite native material. The culvert will be abandoned at STA 16+89.

Signed (CDOT) <i>Local Agencies</i> 	Title: Project Engineer
--	--------------------------------

By Signing Below I Acknowledge Receipt of This Document

Signed:	Title:
---------	--------

REPLY	Date:
To:	

Signed:	Title:
---------	--------

Distribution:
Contractor
Resident Engineer
Project Engineer

COLORADO DEPARTMENT OF TRANSPORTATION SPEED MEMO	Project No.: STE C480-008	Project Code (SA#): 19219
	Location: Archuleta County	

MESSAGE To: Crossfire, LLC	Date: 7/27/2017
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Subject: **Speed Memo #1 - Boring at the Intersections of US Highway 160 and Pinon Causeway, Village Drive and Pinon Causeway, and across Alpha Drive**

The design plans reflect installation of an accessible pedestrian signal (APS) at the intersection of US Highway 160 and Pinon Causeway for the shared use path. To include the APS at this intersection, conduit and wiring line items were provided for routing of wiring on the bottom span wire to cross US Highway 160. The design plans also indicated providing an electrical service at the southwest corner of the King Capital Lot. Based on the electrical loading of the trail lighting system, two electrical circuits could be configured for all 34 trail lights, 3 trail lights are located north of US Highway 160 and wiring for this will need to cross US Highway 160 to maintain two electrical circuits. Boring of conduit for trail lighting underneath US Highway 160, Village Drive and Alpha Drive was discussed in addition to boring for the APS modifications at the intersection of US Highway 160 and Pinon Causeway.

The method of payment for boring at the intersections of US Highway 160 and Pinon Causeway, Village Drive and Pinon Causeway, and across Alpha Drive will utilize the Force Account Item Adjust Utilities and Minor Contract Revisions. The Contractor will need to maintain documentation in accordance with the CDOT Standard Specification 109.04 for materials incorporated, Contractor personnel work, and subcontractor work associated with boring. It is anticipated the electrical service at the southwest corner of the King Capital Lot will be eliminated, adding one pull box for the boring conduit locations at US Highway 160, and adjustment of quantities for 1", 1-1/2", and 2" electrical conduit.

Discussions to date included two 2" electrical conduit borings for boring at the intersection of US Highway 160 and Pinon Causeway, one conduit for the trail lighting and one conduit for the traffic intersection improvements. Based on standard electrical practice, for the trail lighting and traffic intersection wiring placed, one boring conduit may be elected for placement. No other wiring will be run inside this boring conduit. Borings at the intersection of Village Drive and Pinon Causeway and across Alpha Drive will utilize 2" electrical conduit and are for the trail lighting.

Lack of documentation provided for this work will result in delay or no payment.

Signed (CDOT) 	Title: Project Engineer
---	--------------------------------

By Signing Below I Acknowledge Receipt of This Document

Signed: 	Title: PROJECT MANAGER / CROSSFIRE
---	---

REPLY To:	Date:
---------------------	-------

(Empty space for reply content)

Signed:	Title:
---------	--------

Distribution:
 Contractor
 Resident Engineer
 Project Engineer

COLORADO DEPARTMENT OF TRANSPORTATION

Concrete Mix Design Report

This report was issued by and approved for use on SA 19219 by CDOT CPP Unit on 08/11/17. R. Ebel

Concrete Supplier: Four Corners CDOT Mix Number : 2017173
 Supplier Mix ID : 36923344 Item 601 Class BZ Concrete
 Field Compressive Strength: 4000 psi Class 2 Sulfate Resistance and lower*
 *Class 3 Sulfate resistance requires a w/cm ratio ≤0.40

Concrete Mix Proportions (SSD Batch Weights for 1 Cubic Yard)

Cement:	490	Pounds	GCC (Pueblo) Type I/II Cement
Fly Ash:	125	Pounds	SRMG (Four Corners) Class F Fly Ash
Silica Fume		Pounds	
Coarse Aggregate 1	1798	Pounds	4Corners - Animas Glacier Pit; #67
Coarse Aggregate 2		Pounds	
Coarse Aggregate 3		Pounds	
Fine Aggregate	1302	Pounds	4Corners - Animas Glacier Pit
Admixture	66.0	Ounces	BASF - MasterGlenium 7500
Admixture		Ounces	
Admixture		Ounces	
Admixture		Ounces	
Water	275	Pounds	

Trial Batch Properties

Unit Weight :	146.9	PCF	7-Day Compressive Strength :	6470	psi
W / Cm Ratio :	0.45		14-Day Compressive Strength :	7145	psi
Slump :	8.00	Inches	28-Day Compressive Strength :	7340	psi
Air Content :	2.40	%	56-Day Compressive Strength :		psi
Relative Yield :	1.01		7-Day Flexural Strength :		psi
			28-Day Flexural Strength :		psi

Aggregate Test Results

	Specific Gravity (SSD)	Absorption
Coarse Aggregate 1 :	2.66	1.2 %
Coarse Aggregate 2 :		%
Coarse Aggregate 3 :		%
Fine Aggregate :	2.66	1.3 %

Comments:

Reviewed by: Val Niculae Review date: 7/31/2017

Please contact CDOT Concrete and Physical Properties Lab at 303-398-6549 with any questions.



Clifton Lee <clifton@daveng.com>

19219 PC to AVD SUP - Speed Memo #06 Repair of HMA Surface Damage

Clifton Lee <clifton@daveng.com>

Tue, Nov 7, 2017 at 4:43 PM

To: Paul Martin <paul.martin@crossfire-llc.com>


Cc: Jason D Vavrina <Jason.Vavrina@crossfire-llc.com>

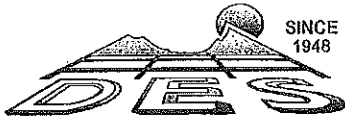
Good Afternoon Paul

Please find attached speed memo #6 providing direction for an overlay for HMA surface damage on the section of trail paved several weeks ago.

Please review, sign, and return to me for acknowledge and your response.

Regards,

 **19219 PC to AVD SUP - Speed Memo 06 (part signed).pdf**
795K



DAVIS
ENGINEERING
SERVICE, INC.

September 8, 2017

Paul Martin
Crossfire, LLC
820 Airport Road
Durango, CO 81303

Re: Pinon Causeway to Aspen Village Shared Use Path Project
CDOT No.: STE C480-008, CDOT Project Code: 19219
Use of CDOT Class BZ Mix Design for Light Base Standard Foundations

Dear Mr. Martin:

The purpose of this correspondence is to document the use of CDOT Class BZ concrete, for the subject project, for the item # 613-40012 Light Standard Foundation (Special).

The Contract Documents CDOT Project Special Provisions – Revision of Section 613 Light Standard Foundation (Special) indicates the class of concrete to be used (CDOT Class B or D) and the electrical subcontractor (One Touch Electric) requested using the CDOT Class BZ concrete. The light base foundation design was reviewed for material requirements (e.g. compressive strength) and the CDOT Class BZ concrete will meet the design requirements.

Please find attached the CDOT Form 1373 - Concrete Mix Design Report approving the Four Corners Materials Class BZ, Supplier Mix ID: 36923344, CDOT Mix Number: 2017173 for the subject project.

Sincerely,

Clifton Lee
970-264-5055 ext. 105

Encl.: CDOT Form 1373 Concrete Mix Design Report (dated 8/11/2017)

C.C.: Robert Shanks, Colorado Department of Transportation, Region 5
Mike Davis, Davis Engineering Service, Inc.

ARCHULETA COUNTY & DAVIS ENGINEERING SERVICE, INC. SPEED MEMO	Project No:	STE C480-008	Project Code (SA #):	19219
	Location:	Archuleta County – Pinon Causeway to Aspen Village Drive		

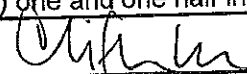
MESSAGE	
To: Crossfire, LLC 820 Airport Road, Durango, Colorado 81303	Date:
Attention: Paul Martin	11/07/2017
Subject: Excavator Tracking on HMA Trail Surface (Update #1)	FORM NO. 105-#06

Following Speed Memo #3 (dated 10/17/2017), Crossfire proposed the use of a product by SealMaster, LiquidRoad, and was reviewed with the Owner and CDOT. Various factors were discussed related to the LiquidRoad product (e.g. ability of the product to correct tracking marks, longevity of the product, waiting until spring 2017 to apply this temperature sensitive product). Following this review and the desire to complete the project, a (1-1/2") one and one half inch hot mix asphalt (HMA) overlay solution has been determined as the path forward.

Inclusion of the (1-1/2") one and one half inch HMA overlay is approved given the Contractor agrees to the following:

- The Contractor shall use an approved HMA mix design (Strohecker Asphalt & Paving Mix Design - 52017A19219BP review dated 06-26-2017 is an approved mix design).
- The Contractor shall overlay the trail with HMA from trail STA 28+75 to STA 36+47.29.
- The Contractor shall grind the existing HMA trail surface down (1-1/2") one and one half inch and then taper for the HMA overlay from STA 28+75 to STA 29+28.05 (tapered transition length of 53.05 feet).
- The Contractor shall grind the existing HMA trail surface down (1-1/2") one and one half inch and then taper for the HMA overlay from STA 36+00 to Curb Ramp 09 (tapered transition length of 47.29 feet). Alternatively, a tapered full depth section removal can also take place up to Curb Ramp 09.
- The Contractor shall prepare/clean the existing HMA trail surface prior to HMA overlay (e.g. removal of dirt clods on the surface, removal of tracked dirt material, sweeping and removal of sediment)
- The Contractor shall place an approved tack coat at an application rate of 0.1 gallons/square yard (diluted) on the existing HMA surface prior to the HMA overlay.
- The Contractor shall have HMA quality control personnel onsite performing testing of HMA material (in-place density by nuclear gauge, asphalt content, and gradation).
- The Contractor and the HMA supplier shall select a warm day to place the HMA overlay material with the prior approval of the Project Engineer.
- The Contractor is reminded to use care and protect work during this activity (e.g. driving of equipment, protecting other work items in the adjacent area).

The above items are to address the unacceptable HMA trail surface due to excavator tracking marks and place a (1-1/2") one and one half inch HMA overlay. This work shall be performed at the expense of the Contractor.

Signed: 	Title: Project Engineer
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REPLY	
To:	Date:
Signed:	Title:

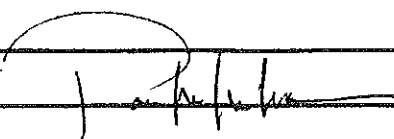
ARCHULETA COUNTY & DAVIS ENGINEERING SERVICE, INC. SPEED MEMO	Project No: STE C480-008	Project Code (SA #): 19219
	Location: Archuleta County – Pinon Causeway to Aspen Village Drive	

MESSAGE	
To: Crossfire, LLC 820 Airport Road, Durango, Colorado 81303 Attention: Paul Martin	Date: 02/09/2018
Subject: Hot Mix Asphalt (HMA) Incentive/Disincentive	FORM NO. 105-#08

Quality Assurance (QA) (Trautner Geotech) performed testing of the HMA material placed for the 19219 Pinon Causeway to Aspen Village Drive Shared Use Path project. The QA test results are summarized in the attached Asphalt03 report summary with Quality Levels, Pay Factors, Incentive/Disincentive amounts reflected for the mix design. The Asphalt03 report is based on the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction Section 105.03.

The report summary reflects installation of 650 tons (this tonnage based on truck tickets collected and reviewed for September 19, 2017, October 23, 2017, October 24, 2017, and October 30, 2017) of HMA provided by Strohecker Asphalt & Paving, Inc. Based on the HMA test results the disincentive to be applied on the next pay request will be a lump sum amount of (-)\$22,497.42.

Signed: 	Title: Project Engineer
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REPLY	
To: LIFTON LEE	Date: 2/20/18
Signed: 	Title: 2/20/18

ARCHULETA COUNTY & DAVIS ENGINEERING SERVICE, INC. SPEED MEMO	Project No:	STE C480-008	Project Code (SA #):	19219
	Location:	Archuleta County – Pinon Causeway to Aspen Village Drive		

MESSAGE	
To: Crossfire, LLC 820 Airport Road, Durango, Colorado 81303 Attention: Paul Martin	Date: 03/19/2018
Subject: Final Quantities	FORM NO. 105-#09

The project is complete. A revised spreadsheet (see attached, dated 3/14/2018) has been assembled showing final project quantities and costs to date, including all project over and under runs, change orders, and price reductions. Over and under runs of original project items have been tracked and balanced in Pay Request No. 07 & Final Quantities. All change orders were approved by the Owner, Contractor, Project Engineer, and CDOT, as required.

Following Pay Request No. 07 & Final Quantities (period of performance 12/01/2017 through 03/09/2018) the following line items from the original contract were not installed, or used, and will not be paid:

- **Item 211-03005 Dewatering**
The original contract included a dewatering item for unit pricing if dewatering was required during the project. A dewatering permit was not obtained during the project and will not be paid.
- **Item 213-00002 Mulching (Weed Free Hay)**
The original contract included a Mulching (Weed Free Hay) quantity for unit pricing. The item 213-00012 Spray-On Mulching Blanket was used for the reseeding work on the project. No mulching, using the Mulching (Weed Free Hay) item, was installed during the project and will not be paid.
- **Item 613-00200 2 Inch Electrical Conduit (Change Order 1i.)**
Change Order No. 01 included an additional quantity of 2 inch electrical conduit for the pedestrian accessible system wiring transition to the pull box and for adjacent trail lights. A configuration of 2 inch electrical conduit was installed and did not require additional lengths for payment and will not be paid.
- **Item 613-00100 1 Inch Electrical Conduit (Change Order 1j.)**
Change Order No. 01 included an additional quantity of 1 inch electrical conduit for the NW and SW traffic light poles for the accessible pedestrian system interface. Payment was provided for 1 inch electrical conduit installed during the project and this additional amount was not installed and will not be paid.

Signed: 	Title: Project Engineer
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REPLY To: Clifton Lee (via email)	Date: 3/20/2018 (via email)
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Signed: 	Title: PROJECT MANAGER
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Pinon Causeway to Aspen Village Drive Shared Use Path
 Archuleta County, CO
 Project No. STE C480-008, Project Code: 19219

Final Quantities 03/14/2018

For: Crossfire LLC
 820 Airport Road
 Durango, CO 81303

Item No.	Description of Item	FINAL QUANTITIES/PRICES				
		Quantity	Unit	Unit Price	Extension	
Base Bid Schedule						
201-00001	Clearing & Grubbing	1.63	acre	\$ 3,806.00	\$ 6,203.78	
202-00012	Removal of Tree Stump	8.00	ea.	\$ 256.00	\$ 2,048.00	
202-00204	Removal of Curb, Gutter, & Sidewalk	77.00	lf.	\$ 12.80	\$ 985.60	
202-00220	Removal of Asphalt Mat	60.00	s.y.	\$ 19.75	\$ 1,185.00	
202-00250	Removal of Pavement Marking	164.00	s.f.	\$ 6.50	\$ 1,066.00	
202-00750	Removal of Luminaire	2.00	ea.	\$ 607.00	\$ 1,214.00	
202-00810	Removal of Ground Sign	1.00	ea.	\$ 218.00	\$ 218.00	
202-04002	Clean Culvert	3.00	ea.	\$ 1,350.00	\$ 4,050.00	
203-00100	Muck Excavation	365.00	c.y.	\$ 18.00	\$ 6,570.00	
203-01597	Potholing	33.50	hr.	\$ 252.00	\$ 8,442.00	
207-00205	Topsoil	650.00	c.y.	\$ 24.50	\$ 15,925.00	
207-00210	Stockpile Topsoil	650.00	c.y.	\$ 16.25	\$ 10,562.50	
208-00004	Silt Berm	125.00	lf.	\$ 8.00	\$ 1,000.00	
208-00007	Erosion Log (8 Inch)	1,989.00	lf.	\$ 5.50	\$ 10,939.50	
208-00020	Silt Fence	2,580.00	lf.	\$ 2.25	\$ 5,805.00	
208-00045	Concrete Washout Structure	1.00	ea.	\$ 1,306.00	\$ 1,306.00	
208-00070	Vehicle Tracking Pad	2.00	ea.	\$ 1,240.00	\$ 2,480.00	
208-00103	Removal & Disposal of Sediment (Labor)	47.00	hr.	\$ 64.00	\$ 3,008.00	
208-00206	Erosion Control Management	38.00	days	\$ 278.00	\$ 10,564.00	
210-00040	Reset Water Line	1.00	ls.	\$ 590.00	\$ 590.00	
210-00810	Reset Ground Sign	2.00	ea.	\$ 223.00	\$ 446.00	
210-04050	Adjust Valve Box	2.00	ea.	\$ 315.00	\$ 630.00	
211-03005	Dewatering	-	ls.	\$ 6,805.00	\$ -	
212-00006	Seeding (Native)	2.37	acres	\$ 2,003.00	\$ 4,747.11	
212-00011	Seeding (Lawn)	0.20	acres	\$ 3,406.50	\$ 681.30	
212-00028	Seeding (Wetland)	0.01	acres	\$ 64,310.00	\$ 514.48	
212-00032	Soil Conditioning	2.57	acres	\$ 6,940.00	\$ 17,835.80	
213-00002	Mulching (Weed Free Hay)	-	acres	\$ 2,512.00	\$ -	
213-00012	Spray-On Mulching Blanket	2.57	acres	\$ 2,275.00	\$ 5,846.75	
240-00000	Wildlife Biologist	4.00	hr.	\$ 111.00	\$ 444.00	
304-02005	Aggregate Base Course (Class 2)	50.50	c.y.	\$ 41.70	\$ 2,105.85	
403-00720	Hot Mix Asphalt (Patching) (Asphalt)	4.00	tons	\$ 341.00	\$ 1,364.00	
506-01020	Geogrid Reinforcement (Special)	962.00	s.y.	\$ 3.60	\$ 3,463.20	
601-01000	Concrete Class B	36.00	c.y.	\$ 1,045.00	\$ 37,620.00	
603-10080	8 Inch Corrugated Steel Pipe	58.50	lf.	\$ 34.00	\$ 1,989.00	
603-10120	12 Inch Corrugated Steel Pipe	57.00	lf.	\$ 39.00	\$ 2,223.00	
603-10180	18 Inch Corrugated Steel Pipe	43.00	lf.	\$ 48.50	\$ 2,085.50	
603-XXXXX	8 Inch Steel End Section	5.00	ea.	\$ 423.00	\$ 2,115.00	
603-30012	12 Inch Steel End Section	6.00	ea.	\$ 425.00	\$ 2,550.00	
603-30015	15 Inch Steel End Section	1.00	ea.	\$ 442.00	\$ 442.00	
603-30018	18 Inch Steel End Section	4.00	ea.	\$ 556.00	\$ 2,224.00	
603-50015	15 Inch Plastic Pipe	4.00	lf.	\$ 116.40	\$ 465.60	
603-50018	18 Inch Plastic Pipe	5.00	lf.	\$ 72.00	\$ 360.00	
604-19000	Inlet (Special)	3.00	ea.	\$ 4,188.00	\$ 12,564.00	
607-11525	Fence (Plastic)	3,309.50	lf.	\$ 4.00	\$ 13,238.00	
608-00012	Concrete Curb Ramp (Special)	133.25	s.y.	\$ 120.00	\$ 15,990.00	
609-21900	Curb & Gutter Type 2 (12 Inch Pan) (Special)	25.50	lf.	\$ 32.74	\$ 834.87	
609-21900	Curb & Gutter Type 2 (18 Inch Pan) (Special)	50.50	lf.	\$ 33.50	\$ 1,691.75	
612-00043	Deflector (Flexible) (Type III)	6.00	ea.	\$ 61.50	\$ 369.00	
613-00100	1 Inch Electrical Conduit	16.00	lf.	\$ 76.50	\$ 1,224.00	
613-00150	1-1/2 Inch Electrical Conduit	34.00	lf.	\$ 81.00	\$ 2,754.00	
613-01100	1 Inch Electrical Conduit (Plastic)	18.00	lf.	\$ 29.50	\$ 531.00	
613-01200	2 Inch Electrical Conduit (Plastic)	52.00	lf.	\$ 21.00	\$ 1,092.00	
613-01300	3 Inch Electrical Conduit (Plastic)	84.00	lf.	\$ 26.00	\$ 2,184.00	
613-07023	Pull Box (24"x36"x24")	3.00	ea.	\$ 1,990.00	\$ 5,970.00	
613-10010	Wiring (Special - Pedestrian, Cross-Walk)	1.00	ls.	\$ 3,850.00	\$ 3,850.00	
614-00011	Sign Panel (Class I)	72.25	s.f.	\$ 27.00	\$ 1,950.75	
614-01502	Steel Sign Support (2-Inch Round) (Post & Socket)	165.00	lf.	\$ 46.00	\$ 7,590.00	
614-70150	Pedestrian Signal Face (16) (Countdown)	2.00	ea.	\$ 905.00	\$ 1,810.00	
614-70200	Accessible Pedestrian Signal	2.00	ea.	\$ 2,765.00	\$ 5,530.00	
614-72863	Pedestrian Push Button Post Assembly	1.00	ea.	\$ 1,706.00	\$ 1,706.00	
625-00000	Construction Surveying	1.00	ls.	\$ 13,650.00	\$ 13,650.00	
626-01000	Public Information Services	1.00	ls.	\$ 4,412.00	\$ 4,412.00	
627-30405	Preformed Thermoplastic Pymt. Mtk. (Word-Symbol)	15.50	s.f.	\$ 25.30	\$ 392.15	
627-30410	Preformed Thermoplastic Pymt. Mtk. (Crosswalk)	912.00	s.f.	\$ 14.60	\$ 13,315.20	
Alternate 1 - Asphalt Trail						
203-00010	Unclassified Excavation (CIP)	1,362.00	c.y.	\$ 17.70	\$ 24,107.40	
304-06007	Aggregate Base Course (Class 6)	1,402.40	c.y.	\$ 41.75	\$ 58,550.20	
602-00000	Reinforcing Steel	3,530.00	lbs.	\$ 1.35	\$ 4,765.50	
608-01500	Bituminous Bikeway (Special)	650.00	tons	\$ 177.85	\$ 115,602.50	
626-00000	Mobilization	1.00	ls.	\$ 74,000.00	\$ 74,000.00	
630-XXXXX	Construction Zone Traffic Control	1.00	ls.	\$ 25,400.00	\$ 25,400.00	
Additive Items - Preparation for Trail Lighting						
602-00000	Reinforcing Steel	1,700.00	lbs.	\$ 1.50	\$ 2,550.00	
613-00200	2 Inch Electrical Conduit	4,414.00	lf.	\$ 18.00	\$ 79,452.00	
613-10010	Wiring (Special - Trail Lighting)	1.00	ls.	\$ 10,000.00	\$ 10,000.00	
613-20000	Light Standard & Luminaire (Special - Install Only)	34.00	ea.	\$ 495.00	\$ 16,830.00	
613-40012	Light Standard Foundation (Special)	34.00	ea.	\$ 1,412.00	\$ 48,008.00	
613-50106	Light Control Center (Pedestrian) (Special)	3.00	ea.	\$ 1,765.00	\$ 5,295.00	
625-00001	Construction Surveying	9.00	hr.	\$ 125.30	\$ 1,127.70	
Minor Contract Revisions, Price Reductions, Force Account Items						
Change Order	CO No. 01 - Boring and Electrical Adjustments (used items)	1.00	ls.	\$ 8,080.64	\$ 8,080.64	
Force Acct.	F/A - Walmart Utilities & Irrigation	1.00	ls.	\$ 2,340.41	\$ 2,340.41	
Force Acct.	F/A - Trail Lighting Luminaire Swap	1.00	ls.	\$ 589.79	\$ 589.79	
Force Acct.	F/A - Culvert Repair	1.00	ls.	\$ 18,828.20	\$ 18,828.20	
Price Reduct.	Price Reduction - Overweight Trucks (July 2017)	1.00	ls.	\$ (1,026.00)	\$ (1,026.00)	
Price Reduct.	Price Reduction - Overweight Trucks (August 2017)	1.00	ls.	\$ (20.00)	\$ (20.00)	
Price Reduct.	Price Reduction - ABC Class 2 Piedra Pit (July 2017)	1.00	ls.	\$ (120.99)	\$ (120.99)	
Price Reduct.	Price Reduction - ABC Class 6 Piedra Pit (July 2017)	1.00	ls.	\$ (1,291.83)	\$ (1,291.83)	
Price Reduct.	Price Reduction - ABC Class 6 Piedra Pit (Aug. 2017)	1.00	ls.	\$ (1,558.94)	\$ (1,558.94)	
Price Reduct.	Price Reduction - ABC Class 6 La Boca Pit (Sept. 2017)	1.00	ls.	\$ (977.85)	\$ (977.85)	
Price Reduct.	Price Reduction - ABC Class 6 La Boca Pit (Oct. 2017)	1.00	ls.	\$ (179.31)	\$ (179.31)	
Price Reduct.	Price Reduction - Out of Spec. HMA	1.00	ls.	\$ (22,497.42)	\$ (22,497.42)	
					TOTAL PRICE	\$764,818.60

TRAUTNER GEOTECH

GEOTECHNICAL ENGINEERING, MATERIAL TESTING
AND ENGINEERING GEOLOGY

August 1, 2017

Mr. Clifton Lee, PE
Project Engineer
Davis Engineering Services, Inc.


Re: Pinon Causeway to Aspen Village Shared Use Path – STE C480-008 / 19219

Mr. Lee,

Materials testing and documentation for the above referenced project has been performed in general accordance with CDOT Field Materials Manual 2017 and the CDOT Standard Specifications for Road and Bridge Construction 2011. Our technicians performing testing services on this project are certified as required, or they are monitored and supervised by a certified technician and/or Gina Denten, Trautner Geotech Materials Testing Manager and/or Don Manchester, Trautner Geotech Durango Material Testing Manager.

A list of certified technicians is attached. Please feel free to contact us if you have any questions.

Thank you,



Gina Denten
Trautner Geotech
Materials Testing Manager
Cortez and Durango



Don Manchester
Trautner Geotech
Materials Testing Manager
Durango

Trautner Geotech Certified Engineering Technicians

	Nuclear Gauge User Safety Training (HAZMAT)	WAQTC	ACI Field Testing Tech. Grade I	ACI Strength Testing Tech.	ACI Agg. Testing Tech. Level I	ACI Agg. Testing Tech. Level II	ACI Concrete Lab Testing Tech. Level I	CRMCA Concrete Pavement Inspector Level I	RMAEC CAPA Cert Level A,B	RMAEC CAPA Certified Level I Asphalt Inspector	NICET	ICC – Reinforced Concrete Inspector	Years of Experience
Craig E. Campbell	3/2018	3/2/2022	2/18/2022	4/10/2021	4/10/2021		4/10/2021		3/2018				9.0
Jason W. Center	2/2020	4/30/2018	4/18/2019	4/11/2020	4/11/2020		4/11/2020		3/2018	3/2018			3.0
Steven D. Chiarito	3/2020	Pending	4/20/2022	Pending	Pending		Pending		Pending				1.0*
Connor DeLeon	5/2019	Pending	5/13/2022	Pending	Pending		Pending		Pending				1.0
Gina K. Denten	3/2018	3/26/2020	2/21/2020	4/13/2018	4/13/2018	3/06/2017	4/13/2018	March 2020	4/25/2020	4/2015	Level 2		20.0
Reed Tsosie	4/2019	3/31/2022	2/18/2022	4/8/2022	4/8/2022	RMAEC Level E 4/1/19	4/8/2022		3/2018	3/2018			30.5
Gregory A. Jadrych	N/A			4/11/2020	4/11/2020		4/11/2020						9.0
Jordan Townsend, EI	4/2019	4/8/2017	5/11/2018									Received 2014	4.0
Don J. Manchester	3/2018		2/21/2020						4/2017	3/2018			35.5
Phillip Kibel	7/2019	3/31/2020	9/10/2021	Pending	Pending		Pending		Pending				15.5*
Dillon Hughes, EI	5/2020	Pending	5/24/2022										1.0*
Eric Howes	4/2019	9/22/19	5/14/2021	4/8/2022	4/8/2022		4/8/2022		Pending				10.5*
Andrew Ramsey	5/2020	Pending	5/13/2022	Pending	Pending		Pending		Pending				1.0*
Kevin Uptain	8/2019	3/2/2020	4/20/2022	Pending	Pending		Pending		Pending				2.0*
Scott Vandervert	5/2019	8/25/19	5/14/2021	Pending	Pending		Pending		Pending				10.5*

* NOTE: New Hires to Trautner Geotech, experience is within the construction industry.

Updated 6/05/2017 - certification expiration dates are listed above
 CDOT-Colorado Department of Transportation
 WAQTC – Western Alliance for Quality Transportation Construction
 RMAEC – Rocky Mountain Asphalt Education Center
 NICET – National Institute of Certification in Engineering Technologies

ACI – American Concrete Institute
 CRMCA – Colorado Ready Mix Concrete Association
 CAPA – Colorado Asphalt Pavement Association

AMERICAN CONCRETE INSTITUTE

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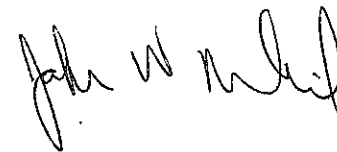
STEVEN D CHIARITO

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 04/20/2017 **Expires:** 04/20/2022

Examiner of Record: James F Mesite III



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

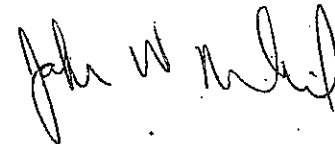
ERIC HOWES

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/14/2016 **Expires:** 05/14/2021

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

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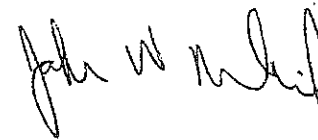
ERIC HOWES

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/08/2017 **Expires:** 04/08/2022

Examiner of Record: John W Nehasil



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

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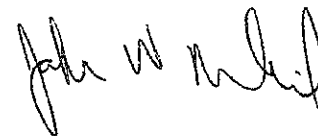
ERIC HOWES

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/08/2017 **Expires:** 04/08/2022

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

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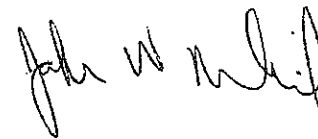
ERIC HOWES

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Strength Testing Technician

Certified Date: 04/08/2017 **Expires:** 04/08/2022

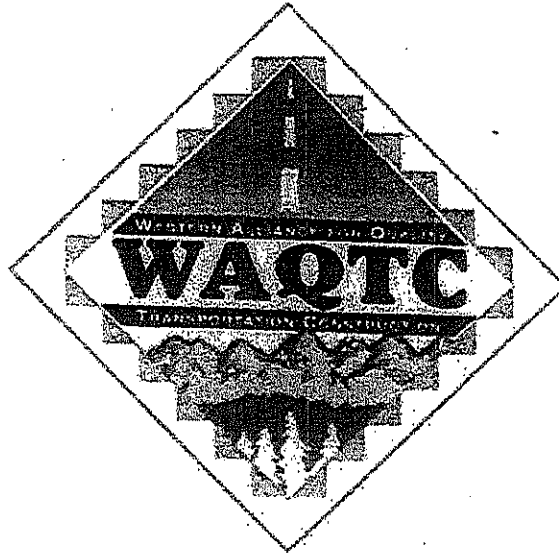
Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at [www. ACICertification .org/verify](http://www.ACICertification.org/verify)

Western Alliance For Quality Transportation Construction



Qualification Certificate

Eric Howes

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 9/22/2016

AUTHORITY

Christopher P. Russell

See the WAQTC web site at <http://www.waqtc.org> for information on this qualification.
Qualification Expires 3 Years from Date

AMERICAN CONCRETE INSTITUTE

This is to certify that

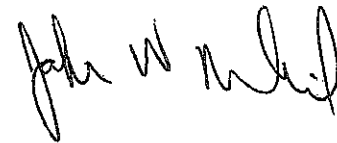
KEVIN F UPTAIN

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 04/20/2017 Expires: 04/20/2022

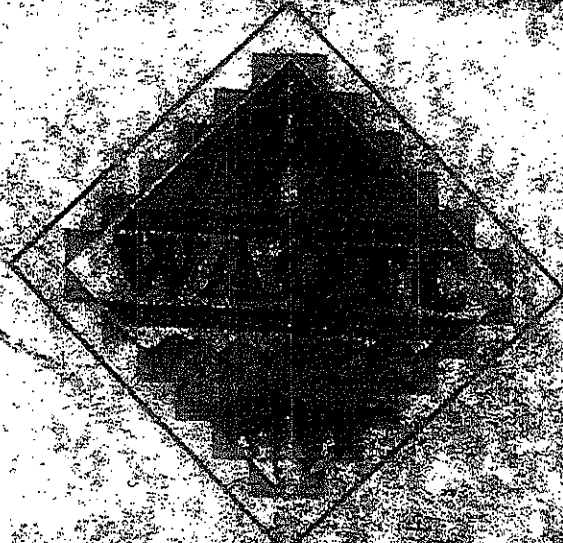
Examiner of Record: James F Mesite III



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

Western Alliance For Quality Transportation Construction



Qualification Certificate

Kevin Uptain

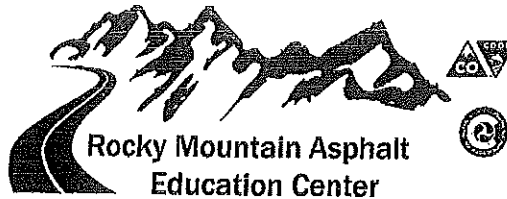
has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 3/2/2017

AUTHORITY

See the WAQTC website at <http://www.waqtc.org> for information on this qualification.
Qualifications are not transferable from one state to another.



6880 South Yosemite Court, Suite 110, Centennial, Colorado 80112
PHONE (303) 741-6148 ext 154, FAX (303) 741-6146, EMAIL: rmaec@co-asphalt.com

April 26, 2017

Gina Denten
Trautner Geotech
649 Tech Center Drive
Durango, CO 81301

Dear Gina,

You have successfully completed the LabCAT Program. Please remove the wallet card from the perforated section of this document and retain for your records.

Levels of Certification: AB
Certification Issue and Expiration Date: 4/25/2017 to 4/25/2020

It is your responsibility to keep your certification current. To prepare for your re-certification the RMAEC recommends scheduling 3-4 months prior to the expiration date. As per CDOT specifications, Technicians are required to have current certification for CDOT Projects.

Thank you for attending.

Sincerely,

Tom Clayton
Director of Training and Member Services
Enclosures

Gina Denten

LabCAT Certification: Level AB

Expiration Date: 4/25/2020

LABCAT CERTIFIED



AMERICAN CONCRETE INSTITUTE

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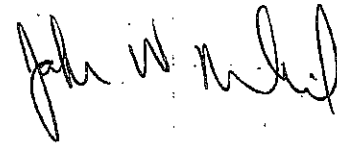
GINA K DENTEN

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 02/21/2015 **Expires:** 02/21/2020

Examiner of Record: Mr George A Madrid



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

GINA KIDENTEN

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/13/2013

Expires: 04/13/2018

Examiner of Record: John W. Nehasil

CERTIFICATION

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.aci-certification.org

AMERICAN CONCRETE INSTITUTE

This is to certify that

GINA K DENTEN

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/13/2013 Expires: 04/13/2018

Examiner of Record: Mr. William L. Barringer

ACI Managing Director of Certification

CERTIFICATION

The Authenticity of this certification can be verified at www.aci.org/certification and verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

GINA K DENTEN

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Strength Testing Technician

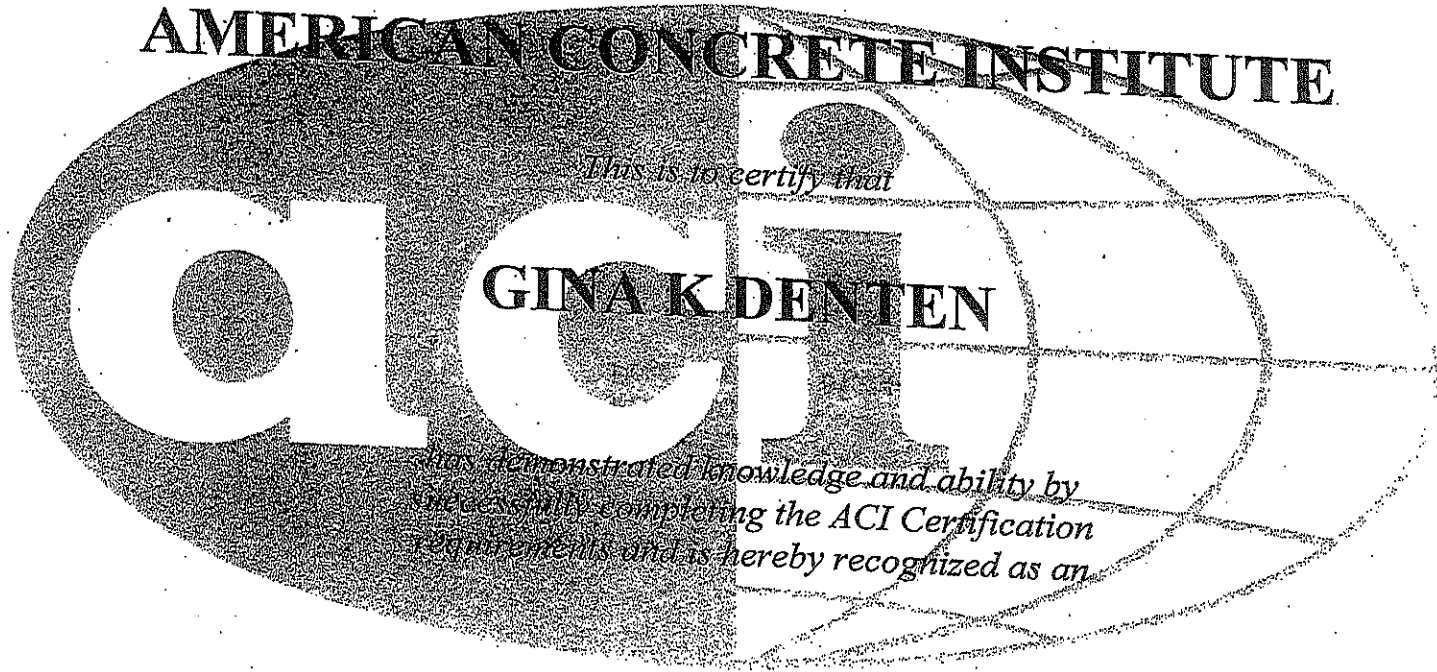
Certified Date: 04/13/2013 **Expires:** 04/13/2018

Examiner of Record: Mr. William L. Barringer

[Signature]
ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.aci-certification.org/Verify

AMERICAN CONCRETE INSTITUTE



This is to certify that

GINA K DENTEN

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Aggregate Testing Technician - Level 2

Certified Date: 05/06/2012 Expires: 05/06/2017

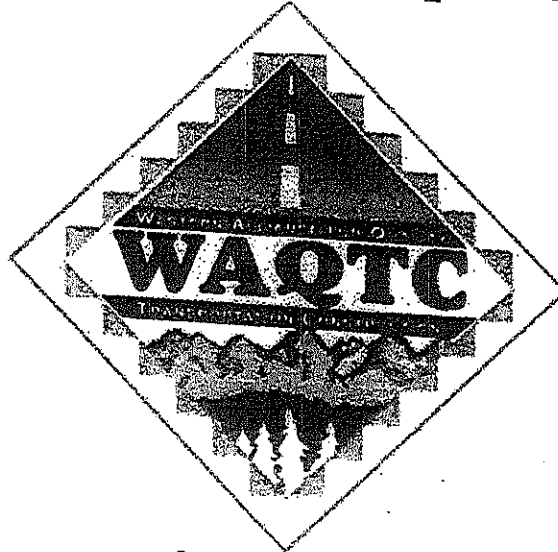
Examiner of Record: Ms. Janet O. White

[Signature]
ACI Managing Director of Certification

CERTIFICATION

The Authenticity of this certification can be verified at www.ACICertification.org

Western Alliance For Quality Transportation Construction



Qualification Certificate

Gina Denten

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 3/26/2015

AUTHORITY

Christopher P. Russell

See the WAQTC web site at <http://www.waqtc.org> for information on this qualification.
Qualification Expires Five Years from Date

AMERICAN CONCRETE INSTITUTE

This is to certify that

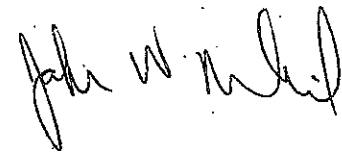
CRAIG E CAMPBELL

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 02/18/2017 **Expires:** 02/18/2022

Examiner of Record: Mr George A Madrid



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

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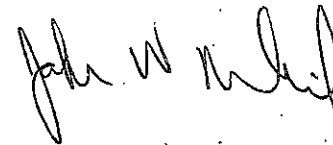
CRAIG E CAMPBELL

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Strength Testing Technician

Certified Date: 04/09/2016 Expires: 04/09/2021

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

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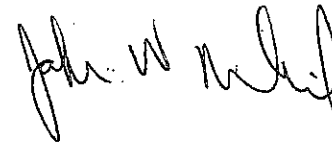
CRAIG E CAMPBELL

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/09/2016 Expires: 04/09/2021

Examiner of Record: John W Nehasil



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

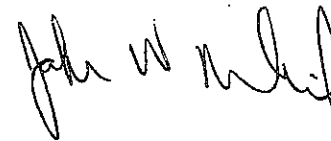
CRAIG E CAMPBELL

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/09/2016 Expires: 04/09/2021

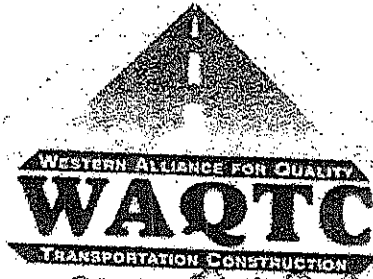
Examiner of Record: Mr. William L. Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

Western Alliance For Quality Transportation Construction



Qualification Certificate

Craig Campbell

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation


DATE 3/2/2017

AUTHORITY

A handwritten signature in cursive script, appearing to read 'Christopher P. Russell'.

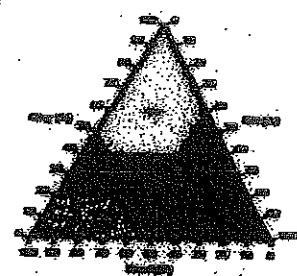
See the WAQTC web site at <http://www.waqtc.org> for information on this qualification.
Qualification Expires Five Years from Date

STATE OF COLORADO Water & Soils Inspector



Craig Campb
Cert#: 187
Date: 04/13/2
Expires: 04/01/21

Craig Campbell
WAQTC/CDOT Coordinator



CDOT Soil Inspector



Soils Technician

Rocky Mountain Asphalt Education Center

Asphalt Technician Certification Program

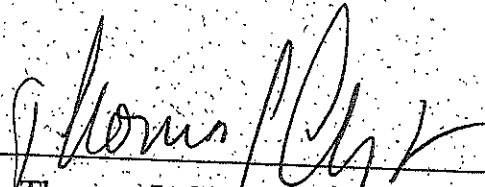
This certifies that

Craig Campbell

has successfully completed.

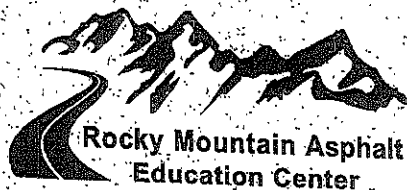
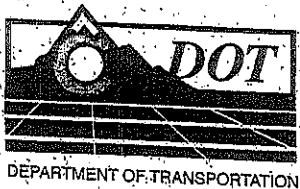
Certification Level A – Laydown

Certification Level B – Plant Materials Control



Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018



U.S. Department
of Transportation

Federal Highway
Administration

Western Alliance For Quality Transportation Construction



Qualification Certificate

Michael Scott Vandervert

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 8/25/2016

AUTHORITY

Christopher P. Russell

See the WAQTC web site at <http://www.waqtc.org> for information on this qualification.
Qualification Expires 3 Years from Date

AMERICAN CONCRETE INSTITUTE

This is to certify that

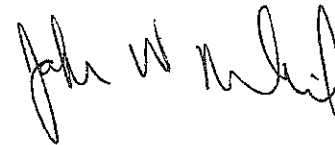
MICHAEL S VANDERVERT

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/14/2016 **Expires:** 05/14/2021

Examiner of Record: Mr William L Barringer



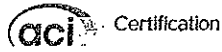
ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

**ACI Concrete Field Testing Technician -
Grade I**

MICHAEL S VANDERVERT

**Certification ID #01366660
Expires on: 05/14/2021**



Verify at CheckACI.org



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Verify A Certification

SEARCH RESULTS

Name: manchester

Your search returned 1 record.

Manchester, Don J

ACI CONCRETE FIELD TESTING TECHNICIAN - GRADE I

Expires: February 21, 2020

Farmington, NM 87401-2306

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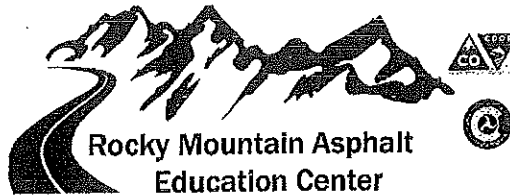
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6880 South Yosemite Court, Suite 110, Centennial, Colorado 80112
PHONE (303) 741-6148 ext 154, FAX (303) 741-6146, EMAIL: rmaec@co-asphalt.com

September 27, 2017

Don J. Manchester
Trautner Geotech
649 Tech Center Drive Suite A
Durango, CO 81301

Dear Don J.,

You have successfully completed the LabCAT Program. Please remove the wallet card from the perforated section of this document and retain for your records.

Levels of Certification: AB
Certification Issue and Expiration Date: 9/27/2017 to 9/27/2020

It is your responsibility to keep your certification current. To prepare for your re-certification the RMAEC recommends scheduling 3-4 months prior to the expiration date. As per CDOT specifications, Technicians are required to have current certification for CDOT Projects.

Thank you for attending.

Sincerely,

Tom Clayton
Director of Training and Member Services
Enclosures

Don J. Manchester

LabCAT Certification: Level AB

Expiration Date: **9/27/2020**



Rocky Mountain Asphalt Education Center

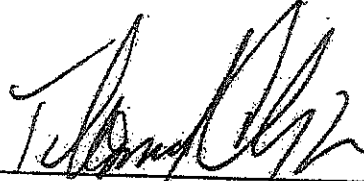
Asphalt Inspector Certification Program

This certifies that

Don J. Manchester

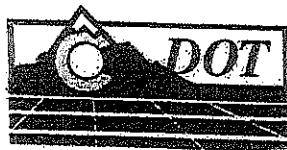
has successfully completed

Certification Level I



Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018



DEPARTMENT OF TRANSPORTATION



Rocky Mountain Asphalt
Education Center



U.S. Department
of Transportation

Federal Highway
Administration

AMERICAN CONCRETE INSTITUTE

This is to certify that

GREGORY A JADRYCH

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/11/2015

Expires: 04/11/2020

Examiner of Record: Mr William L Barringer

John W. White
ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

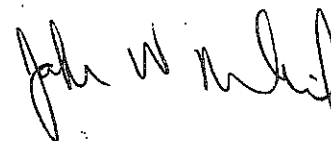
GREGORY A JADRYCH

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Strength Testing Technician

Certified Date: 04/11/2015 Expires: 04/11/2020

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

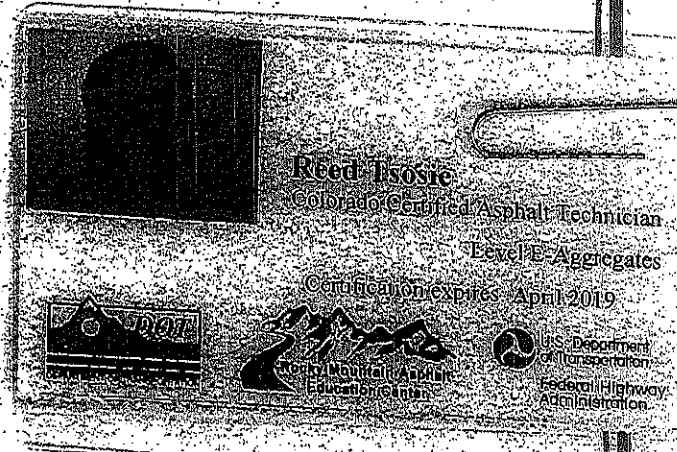
Rocky Mountain Asphalt Education Center

Asphalt Technician Certification Program

This certifies that

Reed Tsoisie

has successfully completed

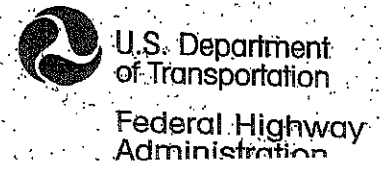
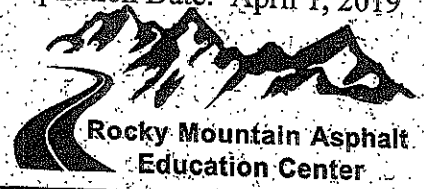
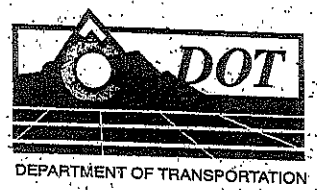


Certification Level E – Aggregates

Handwritten signature of Thomas J. Clayton, SET.

Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: April 1, 2019



Rocky Mountain Asphalt Education Center

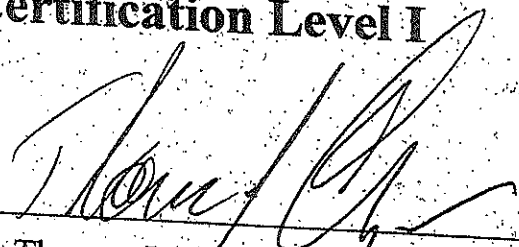
Asphalt Inspector Certification Program

This certifies that

Reed Tsosie

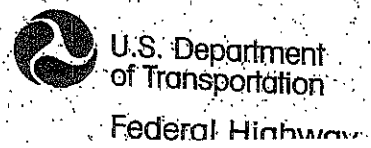
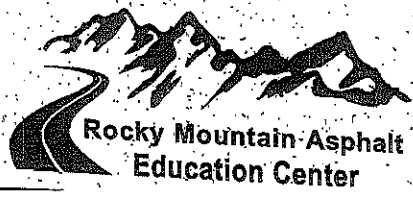
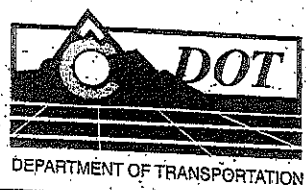
has successfully completed

Certification Level I



Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018



Rocky Mountain Asphalt Education Center

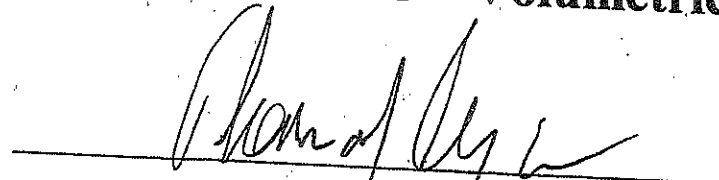
Asphalt Technician Certification Program

This certifies that

Reed Tsosie

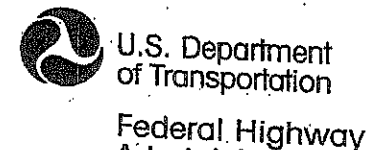
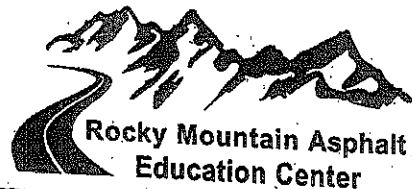
has successfully completed

Certification Level A – Laydown
Certification Level B – Plant Materials Control
Certification Level C – Volumetrics and Stability

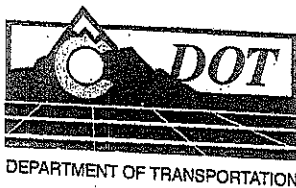
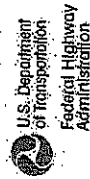


Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018



Reed Tsosie
Colorado Certified Asphalt Technician
Level A – Laydown
Level B – Plant Materials Control
Level C – Volumetrics & Stability
Certification expires: March 2018



Western Alliance For Quality Transportation Construction



WAQTC/Soils Inspector



Herbert R. Tsosie
Cert# 180,368
Date: 03/02/2017
Expires: 03/31/2022

Christopher P. Russell
CDOT/WAQTC Coordinator

Qualification Certificate

Herbert R. Tsosie

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 3/2/2017

AUTHORITY

Christopher P. Russell

See the WAQTC web site at <http://www.waqtc.org> for information on this qualification.
Qualification Expires Five Years from Date

AMERICAN CONCRETE INSTITUTE

This is to certify that

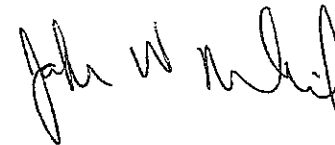
REED TSOSIE

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 02/18/2017 **Expires:** 02/18/2022

Examiner of Record: Mr George A Madrid



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

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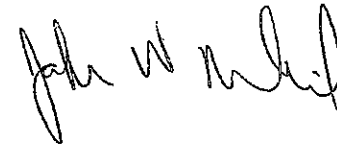
REED TSOSIE

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/08/2017 **Expires:** 04/08/2022

Examiner of Record: John W Nehasil



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

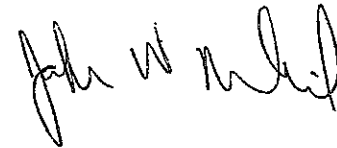
REED TSOSIE

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/08/2017 **Expires:** 04/08/2022

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

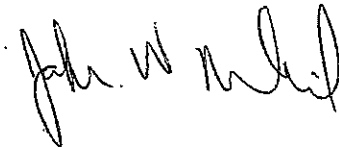
REED TSOSIE

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Strength Testing Technician

Certified Date: 04/08/2017 **Expires:** 04/08/2022

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

COPY



Reinforced Concrete Special Inspector



Candidate ID: ICC00227441

Name: Jordan Townsend

Date: 4/23/2014

Address: 649 Tech Center Drive

Durango CO 81301

EXAMINATION RESULT: Pass

Congratulations! You have passed the Reinforced Concrete Special Inspector examination. When all requirements have been met, ICC will forward you the certificate and wallet card.

You may request a certificate of completion from ICC. This certificate of completion will be provided at no cost to you, if you request it within 90 days of your exam. Only one certificate of completion will be provided to you at no charge. For more information on requirements to obtain your wallet card and to request a certificate of completion, go to www.iccsafe.org/inspector.

It is extremely important that you notify Pearson VUE and ICC of any changes in name and/or address to avoid the possibility of your certificate not being received. Please contact Pearson VUE at 800-275-8301 and ICC at cortexam@iccsafe.org with changes to your name and address. There may be an additional fee if a certification is re-issued due to a misspelled name or incorrect address.

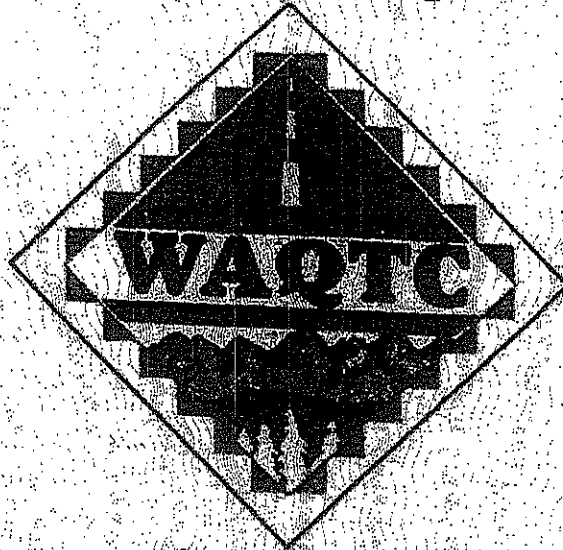
The authenticity of this score report can be validated by using Pearson VUE's Online Score Report Authentication found at: www.PearsonVUE.com/authenticate

Digital embossing eliminates the possibility of unauthorized embossing of counterfeit score reports.

Registration Number: 268047301

Validation Number: 1043754261

Western Alliance For Quality Transportation Construction



Qualification Certificate

Jordan Townsend

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 4/8/2014

AUTHORITY

Christopher P. Russell

See the WAQTC web site at <http://www.waqtc.org> for information on this qualification.
Qualification Expires 3 Years from Date

AMERICAN CONCRETE INSTITUTE

This is to certify that

JORDAN M TOWNSEND

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/11/2013 Expires: 05/11/2018

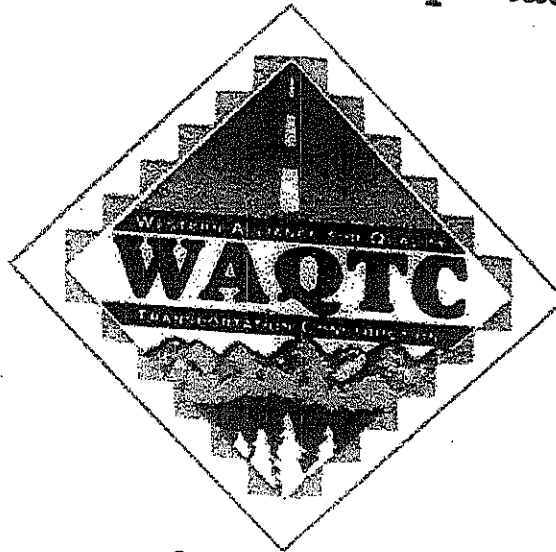
Examiner of Record: Mr. William L. Barringer

ACI Managing Director of Certification

CERTIFICATION

The Authenticity of this certification can be verified at www.ACICertification.org/verify

Western Alliance For Quality Transportation Construction



Qualification Certificate

Jason Center

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 4/30/2015

AUTHORITY

C. Christopher P. Rowell

See the WAQTC web site at <http://www.waqtc.org> for information on this qualification.
Qualification Expires 3 Years from Date.

AMERICAN CONCRETE INSTITUTE

This is to certify that

JASON W CENTER

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 04/18/2014

Expires: 04/18/2019

Examiner of Record: Michael Berry

John W. ...
ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

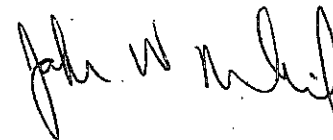
JASON W CENTER

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/11/2015 Expires: 04/11/2020

Examiner of Record: John W Nehasil



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

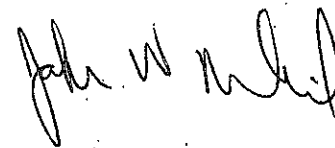
JASON W CENTER

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/11/2015 Expires: 04/11/2020

Examiner of Record: Mr William E Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

JASON W CENTER

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Strength Testing Technician

Certified Date: 04/11/2015 Expires: 04/11/2020

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

Rocky Mountain Asphalt Education Center

Asphalt Technician Certification Program

This certifies that

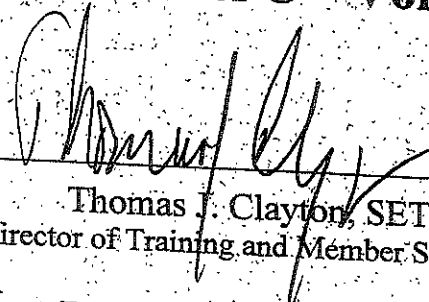
Jason Center

has successfully completed

Certification Level A – Laydown

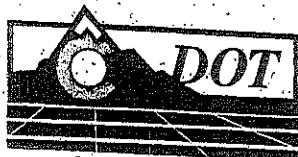
Certification Level B – Plant Materials Control

Certification Level C – Volumetrics and Stability

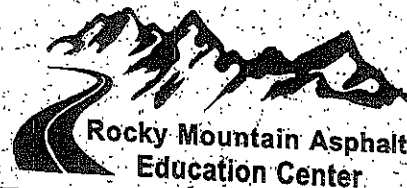


Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018



DEPARTMENT OF TRANSPORTATION



Rocky Mountain Asphalt
Education Center



U.S. Department
of Transportation

Federal Highway

Rocky Mountain Asphalt Education Center

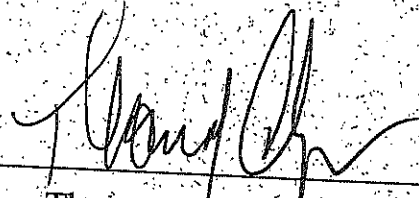
Asphalt Inspector Certification Program

This certifies that

Jason Center

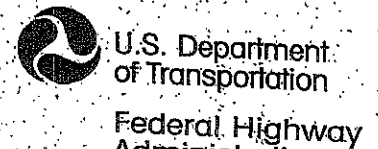
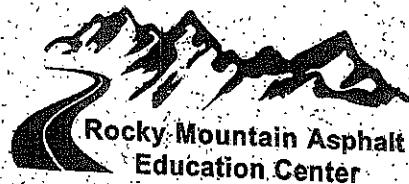
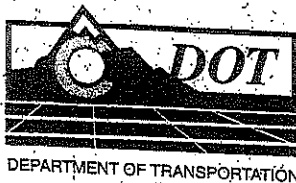
has successfully completed

Certification Level I



Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018



AMERICAN CONCRETE INSTITUTE

This is to certify that

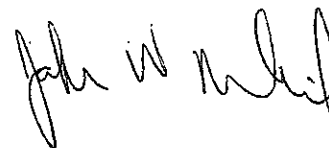
PHILLIP M KIBEL

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 09/10/2016 **Expires:** 09/10/2021

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

Western Alliance For Quality Transportation Construction



Qualification Certificate

Phillip Kibel

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 3/2/2017

AUTHORITY

Christopher P. Russell

See the WAQTC web site at <http://www.waqtc.org> for information on this qualification.
Qualification Expires 3 Years from Date

AMERICAN CONCRETE INSTITUTE

This is to certify that

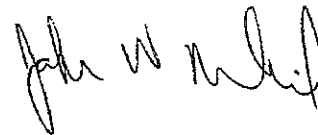
CONNOR S DELEON

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/13/2017 Expires: 05/13/2022

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

AMERICAN CONCRETE INSTITUTE

This is to certify that

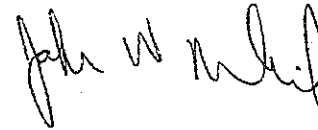
ANDREW M RAMSEY

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/13/2017 Expires: 05/13/2022

Examiner of Record: Mr William L Barringer



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

19219-203-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266294
	Contract ID 19219	Date Submitted 3-20-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type EMBANKMENT	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 203	Class
	Grading	Special Provisions <input type="checkbox"/> yes
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

1362 CY OF UNCLASSIFIED EXCAVATION WAS REQUIRED, 607 CY OF EMBANKMENT WAS REQUIRED FOR THE TRAIL. AT A 1.20 COMPACTION FACTOR, 728 CY OF EMBANKMENT WAS REQUIRED. (SEE SHEET 3 OF PLANS. Earthwork Notes)

SEE FORM 473 FOR DISCUSSION OF DENSITY TESTS FOR THE WALL FILED AS "INFO ONLY" IN THIS SECTION.

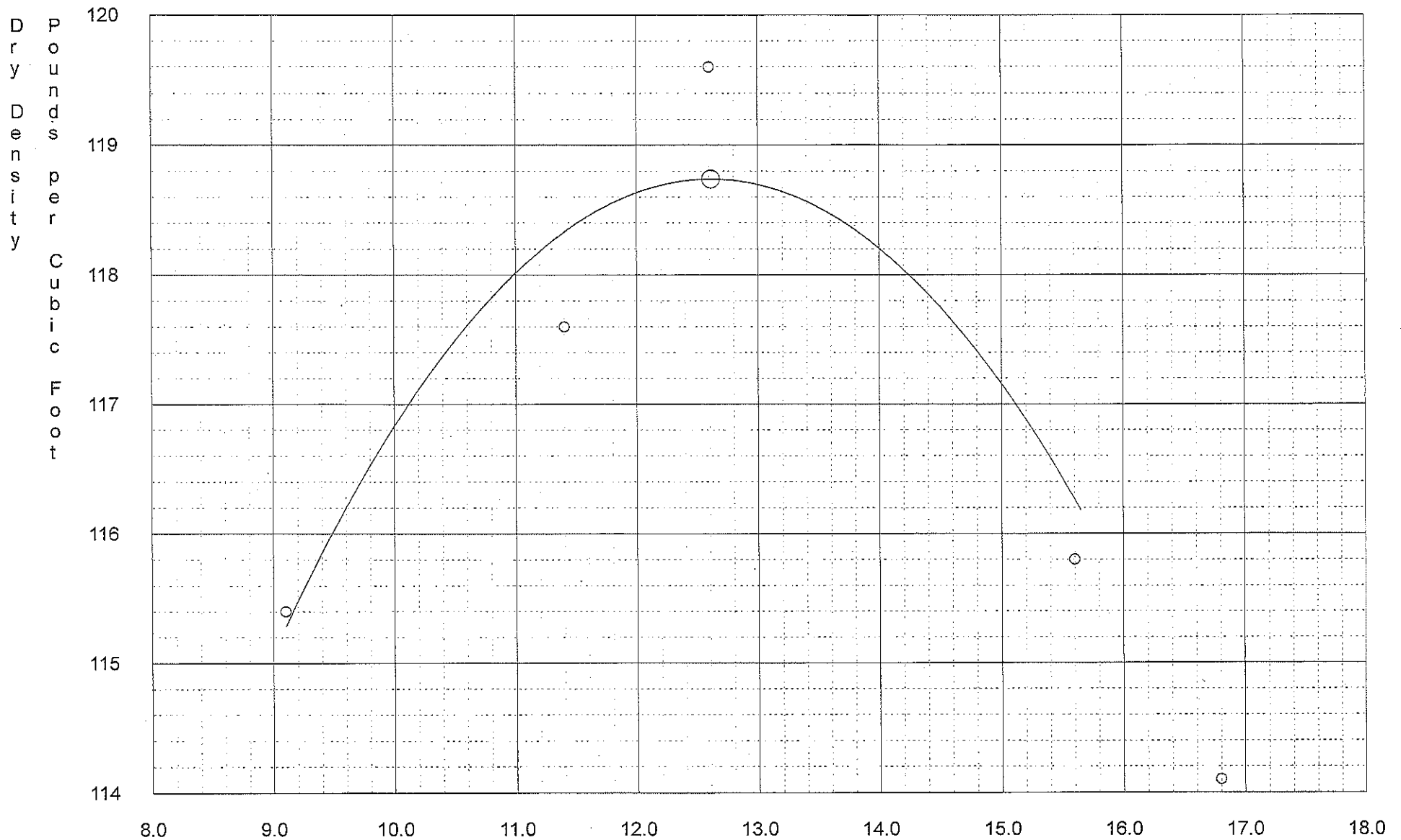
User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
	Emergency <input type="checkbox"/>	Date needed

Contractor CROSSFIRE, LLC	Supplier CROSSFIRE LLC
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner
Quantity represented 728 cy	Previous quantity 0
	Total quantity to date 728 cy

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
Sampled or Inspected by (print name) TRAINER-CLIFTON UEE, PE / GEOTECH	Title PROJECT ENGINEER / QA TESTERS	E-mail	
Supervisor (Pro./Res./Mails. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT-DES	Residency	

Moisture Density Curve



19219 - Pinon Causeway to Aspen Village Drive SUP

native soil - bottom of footing for retaining wall - St. 24+50 - *EMBANKMENT - CURVE 1* / *LAB NO. 3962-A*

Optimum Moisture = 12.6

Maximum Dry Density = 118.7

Compaction = T180

Soils Curve Program Version 1.10

19219 - Pinon Causeway to Aspen Village Drive SUP
native soil - bottom of footing for retaining wall - St. 24+50

Percent #10	92.0	Liquid Limit	43
Percent #40	88.0	Plastic Index	24
Percent #200	81.00	Bulk Sp. Gr.	
Compaction	T180	Absorption	

Soil Classification A-7-6(19)

COLORADO DEPARTMENT OF TRANSPORTATION
MOISTURE - DENSITY RELATION

Pinon Causeway
3962-A

Lab No. 3962-A Station ST. 24+60 Contract ID 19219 Region 5 Date Tested 7-6-17

Field Sheet No. 3962-A Project No. STE C480-008

Sample ID 203-EMBANKMENT-CURVE1 Project Location PC TO AVD SLP, PAGOSA SPRINGS

Type of Compaction Standard AASHTO T 99 Method AD % Soil 95 % Rock 5 Soil class. total sample A-7-6(19)

Modified AASHTO T 180 Method AD Maximum dry density 118.7 lb/ft³ Kg/m³ Optimum moisture 12.6 %

Trial No.	Sample mass	Water added	Moisture samples	Percent moisture	Compacted wet mass	Density, <input checked="" type="checkbox"/> lb/ft ³ <input checked="" type="checkbox"/> Kg/m ³	
						Wet	Dry
1	5200	100	Wet <u>2150.3</u> Dry <u>1970.3</u> Loss <u>180.0</u>	<u>9.1</u> ✓	<u>9.43</u>	<u>125.9</u> ✓	<u>115.4</u> ✓
2	5200	200	Wet <u>1914.2</u> Dry <u>1718.4</u> Loss <u>195.8</u>	<u>11.4</u> ✓	<u>9.83</u>	<u>131.2</u> ✓	<u>117.8</u> ✓
3	5200	300	Wet <u>1941.5</u> Dry <u>1721.5</u> Loss <u>119.4</u>	<u>12.8</u> ✓	<u>10.09</u>	<u>134.7</u> ✓	<u>119.4</u> ✓
4	5200	400	Wet <u>1735.8</u> Dry <u>1521.7</u> Loss <u>234.2</u>	<u>15.4</u> ✓	<u>10.03</u>	<u>133.9</u> ✓	<u>115.8</u> ✓
5	5200	500	Wet <u>1729.5</u> Dry <u>1479.3</u> Loss <u>249.2</u>	<u>16.8</u> ✓	<u>9.98</u>	<u>133.2</u> ✓	<u>114.8</u> ✓
6			Wet _____ Dry _____ Loss _____				

Sieve analysis of - #4

Sieve	Mass	Indiv. %	% Pass.
#4			
#10			
#40			
#200			
- #200			
Total			
Liquid limit			
Plastic index			
- #4 Soil classification			

Bulk sp. gr. and absorption of rock

A₁ = Oven dry Mass in air
 B₁ = S. S. D. Mass in air
 Mass H₂O & beaker
 Mass of beaker
 M = Mass of H₂O

$\frac{A_1}{M} =$

Sp. Gr. X 62.4 = lb/ft³ Kg/m³

Pcf X .9 = Pcf X .95 =

Absorption = $\frac{B_1 - A_1}{A_1} \times 100 =$ %

Remarks 6 IN MOLD - VOL = 0.0749 TARE = 12.54 lbs

Tested by (Print name) GREG JADRYCH Title SOILS LAB SUPERVISOR

Trentner Geotech Project No.: 54748 mt

COLORADO DEPARTMENT OF TRANSPORTATION SIEVE ANALYSIS FOR AGGREGATES NOT SPLIT ON THE NO. 4 SIEVE <i>Pinon CAUSEWAY</i> <i>7/16/17 3962-A</i>	Project No. <i>STE C480-000</i>	Contract ID <i>19219</i>
	Project Location: <i>Panoso Springs - PC TO AVD SUP</i>	
	Pit Name: <i>native - ST. 24+60</i>	
	Item <i>203</i>	Class <i>N1A</i>

Sampled Location <i>ST. 24+60 - RETAINING WALL FOOTING</i>					Sampled Location				
Sample ID <i>203 - EMBANKMENT - CURVE 1</i>					Sample ID				
Specimen Dry Weight B		Date <i>7-16-17</i>	# of Classification <i>10N</i>		Specimen Dry Weight B		Date	# of Classification	
Sieve	Weight	Percent Retained	Percent Passing	Specs	Sieve	Weight	Percent Retained	Percent Passing	Specs
3"					3"				
2"					2"				
1 1/2"					1 1/2"				
1"					1"				
3/4"	<i>0</i>	<i>0</i>	<i>100</i>		3/4"				
1/2"	<i>9.7</i>	<i>0.5</i>	<i>99.5</i>		1/2"				
3/8"	<i>26.9</i>	<i>1.4</i>	<i>98.6</i>		3/8"				
#4	<i>106.5</i>	<i>5.4</i>	<i>94.6</i>	<i>2 1/2</i>	#4				
#8 / #10	<i>153.4</i> <i>165.3</i>	<i>8.4</i>	<i>91.6</i>		#8 / #10				
#16	<i>200.3</i>	<i>10.2</i>	<i>89.8</i>		#16				
#30 / #40	<i>240.1</i> <i>256.8</i>	<i>13.1</i>	<i>86.9</i>		#30 / #40				
#50	<i>275.7</i>	<i>14.9</i>	<i>85.1</i>		#50				
#100	<i>329.8</i>	<i>16.8</i>	<i>83.2</i>		#100				
#200	<i>394.4</i>	<i>20.1</i>	<i>79.9</i>		#200				
Pan	<i>438.7</i>	(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash] $(438.7 - 438.7) \div (438.7 \times 100) = 0.068\%$			Pan	(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash] (____ - ____) ÷ (____ x 100) = ____ %			
- #200	<i>1526.3</i>				- #200				
TSW	<i>438.7</i>				TSW				
Gradation Sample					Moisture Sample				
Pan ID:					Pan ID:				
Wet Wt. + Pan: <i>2612.4</i>					Wet Wt. + Pan: <i>2620.7</i>				
Dry Wt. + Pan: <i>2465.0</i>					Dry Wt. + Pan: <i>2471.9</i>				
Pan Wt: <i>500.3</i>					Pan Wt: <i>497.5</i>				
Wet Wt. A: <i>2112.1</i>					Wet Wt. A: _____				
Dry Wt. B: <i>1964.7</i>					Dry Wt. B: <i>1924.4</i>				
Washed Dry Wt. and pan: <i>938.7</i>					Washed Dry Wt. and pan: <i>148.8</i>				
- #200 Lost Mat'l Sieved: <i>1526.3</i> <i>438.4</i>					- #200 Lost Mat'l Sieved: _____				
% H ₂ O: <i>7.5</i>					% H ₂ O: _____				
Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight					Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight				
A <i>2112.1</i> ÷ (100 + <i>7.5</i>) x 100 = B <i>1964.7</i>					A ÷ (100 + _____) x 100 = B				
Sampled By: <i>Eric Howes</i>		Tested By: <i>Geo Tadeych</i>		Sampled By: _____		Tested By: _____		_____	

Note: Save all material until calculations are complete in case a retest is necessary.

Previous editions are obsolete and may not be used.

CDOT Form #565 5/14

TRAUTNER GEOTECH LLC

COOT Project No. STE-C400-009/
19219

Atterberg Limits - ASTM 4318

PROJECT: Pinon CAUSEWAY PROJECT#: 51748 at mt Date: July 07, 2017

SAMPLE DESCRIPTION: Brown clay SOURCE: INSITU Lab Number: 3962-A
ST. 2460

LOCATION: Belt Sample, On-site Stockpile, Stockpile at Pit,

Sample Prep : Wet or Dry (see ASTM)

Windrow, Loose In-place, Test Bore, Other: 1

Moisture Condition By: Greg Judy ch Date: 07/10/17

Tested By: Greg Judy ch

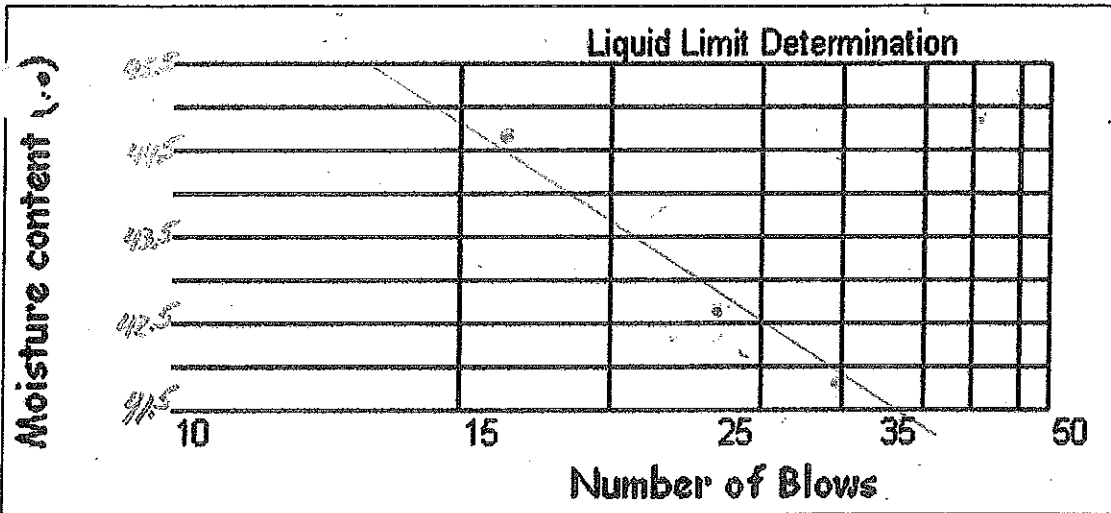
Liquid Limit Determination	Minimum 3 Trials		
Required Blows	15 - 25	20 - 30	25 - 35
Can Number	<u>C</u>	<u>L</u>	<u>U</u>
Wt. of Wet Soil + Can	<u>26.58</u>	<u>25.85</u>	<u>25.99</u>
Wt. of Dry Soil + Can	<u>22.83</u>	<u>22.39</u>	<u>22.63</u>
Wt. of Can	<u>14.60</u>	<u>14.27</u>	<u>14.60</u>
Wt. of Dry Soil	<u>8.23</u>	<u>8.12</u>	<u>8.03</u>
Wt. of Moisture	<u>3.72</u>	<u>3.46</u>	<u>3.36</u>
Water Content, w%	<u>45.2</u>	<u>42.6</u>	<u>41.8</u>
No. of Blows, N	<u>18</u>	<u>23</u>	<u>29</u>

$$LL = W\% \left(\frac{N}{25} \right)^{.121}$$

Liquid Limit: 43

Plastic Limit: 19

Plasticity Index: 24



Plastic Limit Determination	Minimum 3 Trials	
Can Number:	<u>B</u>	<u>P</u>
Wt. of Wet Soil + Can	<u>26.06</u>	<u>25.43</u>
Wt. of Dry Soil + Can	<u>24.24</u>	<u>23.72</u>
Wt. of Can	<u>14.55</u>	<u>14.61</u>
Wt. of Dry Soil	<u>9.89</u>	<u>9.12</u>
Wt. of Moisture	<u>1.82</u>	<u>1.70</u>
Water Content, w%	<u>18.8</u>	<u>18.6</u>

Classification
A-7-6(19)

Remarks: calcs. ✓ by Craig Campbell

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT ON COMPACTION OF EARTHWORK

Region 5 Field sheet # 31228-
 Contract ID 19219 Date Submitted 10-9-17
 Project No. STE 480-008
 Project Location PAGOSA SPRINGS - ASPEN VILLAGE DRIVE - S.U.P
PINON CAUSEWAY TO

Item # 203 Standard (AASHTO T 99)
 User ID Modified (AASHTO T 180)

SMM/LIMS Sample ID (or Test # [Date])	Station or Location	IA	Sulfate % or class	Chloride	Resistivity	pH	AASHTO Classification	Plus #4 matl. %	Relative compaction %	Moisture %		*Cubic yards (m³) represented
										Opt.	In-place	
QA#1	8-11-17						A-7-6(19)	≤5%	93 94	12.6	15.6	1000

Remarks
 4 PER PROJECT PLAN SET SHEET 3, EMBANKMENT NOTES 1) -
 MIN. RELATIVE COMPACTION 90% MODIFIED PROCTOR -

Sheet Total 1000
 Final report yes no Total quantity tested (final report only) 1000 CY
 Project Tester (print name) ERIC HOWES TRAUTNER GEOTECH Title QA TESTER
 Distribution: White - Region project file Yellow - Region Materials Engineer
 * Cubic yards (m³) represented are estimated (use linear feet (m) or square yards (m²) for item 306).

517-18 nt

COLORADO DEPARTMENT OF TRANSPORTATION				Project No. SIE 480-008	Region 5	Contract ID 192.19
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION				Project Location Pinar Canyon		
Pit Name N/A	Material EMBANKMENT ~ ON-SITE MATERIAL	Class N/A	Item 203	Date 8-11-17		
Sample ID (Test #) QA 1	Tested by (print name) Eric Howes		Station/offset 24+58	Elevation / Depth 1' below sub grade		
Gauge ID 28771	Moisture Standard Count 699	Density Standard Count 2189	Transmission Depth, in. 8"	Soil Classification A-7-6(19)		
Curve No. EMB-CURVE 1	Maximum Dry Density 120.3 118.7	Optimum Moisture Content 12.4 12.6	AASHTO T99 or T180 180	Method A of B METHOD C		

Gauge Reading	Moisture	Field Test Data		Density	M/D Gauge Moisture Check	
(1) % Moisture	15.4	Wet Dens.	128.2	Dry Dens.	111.1	Wet Soil wt. + pan _____ Dry Soil wt. + pan _____
(2) % Moisture	14.8	Wet Dens.	128.1	Dry Dens.	111.6	Pan wt. _____
(3) % Moisture	14.9	Wet Dens.	128.0	Dry Dens.	111.4	Dry soil wt. _____
(4) % Moisture	14.9	Wet Dens.	127.9	Dry Dens.	111.3	Water wt. _____
Average	15.0%	Average	128.1	Average	111.4	% Moisture = _____

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock
Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil
Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

$$[(\% \text{ Soil} \times \text{Max dry density of Soil}) + (\% \text{ Rock} \times \text{CF} \times 62.4 \times \text{Sp Gr Rock})] \div 100$$

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____
% Rock X _____ X _____ Specific Gravity of Rock = _____
Sum = _____ ÷ 100 = _____

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

$$[(\% \text{ Soil} \times \text{OMC of Soil}) + (\% \text{ Rock} \times \text{Absorption of Rock})] \div 100$$

% Soil X _____ Optimum MC of Soil = _____
% Rock X _____ Absorption of Rock = _____
Sum = _____ ÷ 100 = _____

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan _____
Dry Soil wt. + pan _____
Pan wt. _____
Dry soil wt. _____
Water wt. _____
% Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____ Volume of Mold _____ Wet Density _____ Moisture Content _____ Dry Density _____
- Tare wt. _____
Net wt. _____ ÷ _____ = _____ ÷ (100 + _____ %H₂O)x100= _____

Field Dry Density 111.4 ÷ 120.3 = 92.6 % Relative Compaction
Specifications: Moisture 12.6% AND 93.9 % Relative Compaction
Minimum 95.0 %

Remarks:

Transect Geotech Project No. 54748 mt

COLORADO DEPARTMENT OF TRANSPORTATION			Project No. STE C400-008	Region 5	Contract ID 19219
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION			Project Location Pavement Causeway TO AND SUP		
Pit Name N/A	Material EMBANKMENT - NATIVE	Class N/A	Item INCIDENTAL TO BOI-WALK	Date 7-10-17	
Sample ID (Test #) X INFO ONLY		Tested by (print name) ERIC HOWES		Station/offset 24+47	Elevation / Depth 5' below grade
Gauge ID 28771	Moisture Standard Count 710	Density Standard Count 2802	Transmission Depth, in. 8	Soil Classification A-7-6(19)	
Curve No. 3962-A	Maximum Dry Density 118.7	Optimum Moisture Content 12.9 12.6	AASHTO T99 or T180 T180	Method A of D	

EMBANKMENT - CURVE 1		Field Test Data				M/D Gauge Moisture Check	
Gauge Reading	Moisture	Density					
(1) % Moisture	20.7	Wet Dens.	125.1	Dry Dens.	103.6	Wet Soil wt. + pan	
(2) % Moisture	21.4	Wet Dens.	125.3	Dry Dens.	103.2	Dry Soil wt. + pan	
(3) % Moisture	21.2	Wet Dens.	125.9	Dry Dens.	103.7	Pan wt.	
(4) % Moisture	21.5	Wet Dens.	125.6	Dry Dens.	103.4	Dry soil wt.	
Average	21.2 ✓	Average	125.5 ✓	Average	103.5 ✓	Water wt.	
						% Moisture =	

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ + 100 = _____

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

[[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100

% Soil X _____ Optimum MC of Soil = _____

% Rock X _____ Absorption of Rock = _____

Sum = _____

÷ 100 = _____

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan _____

Dry Soil wt. + pan _____

Pan wt. _____

Dry soil wt. _____

Water wt. _____

% Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____ Volume of _____

- Tare wt. _____ Mold _____ Wet Density _____ Moisture Content _____ Dry Density _____

Net wt. _____ ÷ _____ = _____ ÷ (100 + _____ %H₂O)x100= _____

Field Dry Density 103.5 ÷ 118.7 = 87.2 % Relative Compaction 60

Specifications: Moisture 12.6 or TO 15.6% Compaction 87.2 Minimum 95.0%

Remarks: calcs. ✓ by Craig Campbell

- BOTTOM OF FOOTING FOR RETAINING WALL - SEE FORM 473 ✓

Transtar Geotech Project No: 54748 mt

COLORADO DEPARTMENT OF TRANSPORTATION			Project No. STE C400-008	Region 5	Contract ID 19219
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION			Project Location P. Iron Causeway TO AVO SUP		
Pit Name N/A	Material EMBANKMENT-NATIVE	Class N/A	Item INCIDENTAL TO ITEM 601-WALL	Date 7-10-17	
Sample ID (Test #) + (A)	INFO ONLY	Tested by (print name) ERK HAYES	Station/offset 2A+47	Elevation / Depth 5' below grade	
Gauge ID 28771	Moisture Standard Count 710	Density Standard Count 2202	Transmission Depth, in. 8	Soil Classification A-7-6(19)	
Curve No. 3962-A	Maximum Dry Density 118.7	Optimum Moisture Content 12.6	AASHTO T99 or T180 T180	Method A or B B	

Field Test Data				M/D Gauge Moisture Check	
Gauge Reading	Moisture	Density		Wet Soil wt. + pan	
(1) % Moisture	18.4	Wet Dens. 119.2	Dry Dens. 100.6		
(2) % Moisture	19.9	Wet Dens. 119.0	Dry Dens. 99.2		
(3) % Moisture	18.5	Wet Dens. 119.1	Dry Dens. 100.5		
(4) % Moisture	19.6	Wet Dens. 118.6	Dry Dens. 99.8		
Average	19.1 ✓	Average 119.0 ✓	Average 99.9 ✓		

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock + Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100

% Soil X _____ Optimum MC of Soil = _____

% Rock X _____ Absorption of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan _____

Dry Soil wt. + pan _____

Pan wt. _____

Dry soil wt. _____

Water wt. _____

% Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____ Volume of Mold _____ Wet Density _____ Moisture Content _____ Dry Density _____

- Tare wt. _____

Net wt. _____ ÷ _____ = _____ ÷ (100 + _____ %H₂O)x100= _____

Field Dry Density 99.9 ÷ 118.7 = 84.2

Specifications: Moisture 12.6% to 15.6% Compaction 83

Percent Compaction calculation (Corrected Maximum dry density) x 100 or (Curve Maximum Dry Dens) x 100 = 83 % Relative Compaction CC 90.0

Minimum 95.0%

Remarks: calcs. ✓ by Craig Campbell

- BOTTOM OF FOOTING FOR RETAINING WALL - SEE FORM 473

Panther Geotech Project No. 54748 mt

COLORADO DEPARTMENT OF TRANSPORTATION			Project No. STE-C400-000	Region 5	Contract ID 19219
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION			Project Location Pinon Causway TO AND SUP		
Pit Name N/A	Material EMBANKMENT-NATIVE	Class N/A	Item INCIDENTAL TO ITEM 601-WALL	Date 7-11-17	
Sample ID (Test #) 18 INFO ONLY	Tested by (print name) ERIC HOWES		Station/offset 24+47	Elevation / Depth 5' below Grade	
Gauge ID 28771	Moisture Standard Count 701	Density Standard Count 2201	Transmission Depth, in. 8	Soil Classification A-7-6(19)	
Curve No. 3962-A	Maximum Dry Density 120.3 118.7	Optimum Moisture Content 12.9 12.6	AASHTO T99 or T180 (T180)	Method A or D (D)	

Field Test Data				M/D Gauge Moisture Check	
Gauge Reading	Moisture	Density		Wet Soil wt. + pan	
(1) % Moisture	<u>13.2</u>	Wet Dens. <u>122.8</u> Dry Dens. <u>108.5</u>			
(2) % Moisture	<u>12.4</u>	Wet Dens. <u>123.1</u> Dry Dens. <u>109.6</u>			
(3) % Moisture	<u>12.6</u>	Wet Dens. <u>123.2</u> Dry Dens. <u>109.4</u>			
(4) % Moisture	<u>11.9</u>	Wet Dens. <u>122.9</u> Dry Dens. <u>109.9</u>			
Average	<u>12.5</u> ✓	Average <u>123.0</u> ✓	Average <u>109.4</u> ✓		

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil	X	Maximum Dry Density of soil =		Corrected Maximum Dry Density
% Rock	X	Specific Gravity of Rock =		
Sum =			÷ 100 =	

<p align="center">Optimum Moisture Correction Calculations</p> <p align="center">[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100</p> <p>% Soil X Optimum MC of Soil =</p> <p>% Rock X Absorption of Rock =</p> <p>Sum =</p> <p>÷ 100 =</p> <p align="center">Corrected Optimum Moisture Content, %</p>	<p align="center">1 Point Moisture Determination</p> <p>Wet Soil wt. + pan</p> <p>Dry Soil wt. + pan</p> <p>Pan wt.</p> <p>Dry soil wt.</p> <p>Water wt.</p> <p>% Moisture =</p>
--	---

1 Point Check Compaction Cylinder Density Data

Gross wt.	Volume of	Wet Density	Moisture Content	Dry Density
- Tare wt.	Mold			
Net wt.	÷	=	÷ (100 + %H ₂ O) x 100 =	

Field Dry Density	<u>109.4</u>	Percent Compaction calculation	<u>92.2</u>	% Relative Compaction
	÷ <u>120.3</u>	(Corrected Maximum dry density) x 100	<u>90.9</u>	
Specifications: Moisture	<u>12.6 To 15.6%</u>	or (Curve Maximum Dry Dens) x 100 =		<u>90.0</u>
		Compaction		Minimum 95.0%

Remarks: *notes. ✓ by C. Campbell*

BOTTOM OF FOOTING FOR RETAINING WALL - SEE FORM 473

13004

COLORADO DEPARTMENT OF TRANSPORTATION			Project No. STE 0400-000	Region 5	Contract ID 19219
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION			Project Location Pima Causeway TO AVO SUP		
Pit Name N/A	Material Brown Clay	Class _____	Item INCIDENTAL TO ITEM 601 ^{UP}	Date 7-11-17	
Sample ID (Test #) 2 INFO ONLY	Tested by (print name) Eric Hawes		Station/offset 24+69	Elevation / Depth bottom of footer for	
Gauge ID 28771	Moisture Standard Count 706	Density Standard Count 2237	Transmission Depth, in. 8	Soil Classification (ASTM) A-7-6(19) wall	
Curve No. 3962-A	Maximum Dry Density 120.3 110.7	Optimum Moisture Content 12.9 12.6	AASHTO T99 or T180 T180	Method A or D D	

EMBANKMENT - CURVE 1		Field Test Data				M/D Gauge Moisture Check	
Gauge Reading	Moisture	Density					
(1) % Moisture	19.7	Wet Dens.	122.0	Dry Dens.	102.5	Wet Soil wt. + pan	_____
(2) % Moisture	19.7	Wet Dens.	122.9	Dry Dens.	102.6	Dry Soil wt. + pan	_____
(3) % Moisture	18.5	Wet Dens.	123.5	Dry Dens.	104.1	Pan wt.	_____
(4) % Moisture	18.9	Wet Dens.	122.7	Dry Dens.	103.2	Dry soil wt.	_____
Average	19.2	Average	122.9	Average	103.1	Water wt.	_____
						% Moisture =	_____

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ + 100 = _____

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations				1 Point Moisture Determination	
[[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100				Wet Soil wt. + pan	_____
% Soil	X	Optimum MC of Soil =	_____	Dry Soil wt. + pan	_____
% Rock	X	Absorption of Rock =	_____	Pan wt.	_____
		Sum =	_____	Dry soil wt.	_____
		÷ 100 =	_____	Water wt.	_____
		Corrected Optimum Moisture Content, %	_____	% Moisture =	_____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____ Volume of _____

- Tare wt. _____ Mold _____ Wet Density _____ Moisture Content _____ Dry Density _____

Net wt. _____ ÷ _____ = _____ ÷ (100 + _____ %H₂O)x100= _____

Field Dry Density 103.1 ÷ 120.3 = 85.7 % Relative Compaction

Specifications: Moisture 12.6 TO 15.6 Compaction _____ Minimum 95.0 %

Remarks: *Fasting for momentum wall. Calcs. by Craig Campbell*

SEE FORM 473

19219-207

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type TOPSOIL	Field Lab phone	Cell Phone SUP
Material Code (LIMS)	Item 207	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

TOPSOIL WAS GENERATED ON-SITE AND APPROVED FOR USE ON THE PROJECT BY THE PROJECT ENGINEER.

TOPSOIL GENERATED ONSITE WAS PAID AS 207-00210 STOCKPILE TOPSOIL (650 C.Y.).

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)
Sample ID (#6)	

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>		Date needed

Contractor CROSSFIRE, LLC	Supplier CROSSFIRE, LLC
Sampled from (Pit, roadway, window, stock, etc.)	Pit name or owner

Quantity represented 650 CY	Previous quantity 0	Total quantity to date 650 CY
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via
		Date

Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT	Residency

19219-208-1

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region 5	Field sheet # 266288
Contract ID 19219	Date Submitted 3-9-18
Project No. PINON CAUSEWAY TO ASPEN VILLAGE DR. SUP	
Project Location STE C400-000	

Metric units yes no

Material Type SILT BERM	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 208	Class
	Grading	Special Provisions <input type="checkbox"/> yes
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

EMBANKMENT

A SILT BERM WAS CONSTRUCTED OF ON-SITE MATERIALS APPROVED BY THE PROJECT ENGINEER. THE SILT BERM WAS CONSTRUCTED IN THE STAGING AREA AROUND STOCKPILES. (TOPSOIL, EMBANKMENT, & ABC CLASS 6). ONLY 125 LF. OF SILT BERM WAS CONSTRUCTED AND PAID

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
	Emergency <input type="checkbox"/>	Date needed

Contractor CROSSFIRE, LLC	Supplier CROSSFIRE, LLC
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 1009-LF 125 LF	Previous quantity 0	Total quantity to date 125 LF
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Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
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Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title DAVIS Eng. SVC. - PRESIDENT	Residency

19219-208-2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-10
	Project No. STE C400-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. SUP	

Metric units yes no

Material Type EROSION LOGS (8 INCH)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 208	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

FOR PAY ITEM 208-00007, TWO MATERIALS WERE INSTALLED AS FOLLOWS: 1969 LF OF ^{9"} ASPEN EXCELSIOR LOG & 20 LF OF ROCK AGGREGATE BAG FOR A TOTAL OF 1989 LF. THE 9" ASPEN EXCELSIOR LOG & ROCK AGGREGATE BAG WERE PAID AS 208-00007 EROSION LOG (8 INCH) ^{2 SUPPLIERS}. THE MANUFACTURER'S COC IS ATTACHED FOR BOTH MATERIALS.

BOTH MATERIALS WERE FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. SEE FORM 473.

User ID	PROJECT ENGINEER. SEE FORM 473.	
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed
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Contractor CROSSFIRE LLC	Supplier PATRIOT ENVIRONMENTAL PRODUCTS & EST, TRITON
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Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner
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Quantity represented 1989 LF	Previous quantity 0	Total quantity to date 1989 LF
-------------------------------------	----------------------------	---------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) LIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
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Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MILCE DAVIS, PE	Title PRESIDENT - DAVIS ENGINEERING SERVICES	Residency
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Gina Denten

From: Clifton Lee <clifton@daveng.com>
Sent: Thursday, February 15, 2018 1:44 PM
To: Gina Denten
Subject: 19219 PC to AVD SUP - Item 208-00007 Erosion Log (8 inch)

Good Morning Gina

I reviewed pay requests during the project and show that 20 lineal feet of the rock aggregate bag was installed on the project.

In summary:

- 1,989 lineal feet of the line Item 208-00007 was paid in the project to date
- of this 20 lineal feet was the rock aggregate bag
- of this 1,969 lineal feet was the aspen excelsior log

Regards,

Clifton Lee



Davis Engineering Service, Inc.
108 S. 8th Street - P.O. Box 1208
Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105
Fax: (970) 264-9210
E-mail: clifton@daveng.com

TRITON

ENVIRONMENTAL

5433 NEWPORT STREET • COMMERCE CITY, CO 80022 • (303) 945-7588 OFFICE • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK.

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219

MANUFACTURER: SUPERIOR EXCELSIOR, LLC/PATRIOT ENVIRONMENTAL PRODUCTS; 11430 2ND AVE., HOOPER, CO 81136

LABORATORY NAME/ADDRESS: N/A

TYPE OF MATERIAL: 9"X25' EXCELSIOR LOG

- THIS PRODUCT IS AN EROSION CONTROL SEDIMENT LOG. MATERIAL COMPOSITION: ASPEN EXCELSIOR FIBERS ENCASED IN UV STABILIZED HIGH-DENSITY POLYETHYLENE NETTING.

LOT/BATCH NUMBER: 9305

DATE OF TEST: N/A

SPECIFICATIONS: SEE ATTACHED SPECIFICATION SHEET

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC 208.02 (H) EROSION LOGS. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ⁶⁹ <u>1969 LF</u> (quantity and units) of pay item <u>208-00007 EROSION LOGS</u> (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number <u>19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008</u> .	
	<u>01/26/18</u>
Contractor Rep. Signature	Date

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item number and Description) that will be installed on project number <u>STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE</u>

TRITON

ENVIRONMENTAL

5433 NEWPORT STREET • COMMERCE CITY, CO 80022 • (303) 945-7588 OFFICE • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 -- PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK.

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219

MANUFACTURER: EROSION SOLUTIONS INC; 960 98TH STREET, OAKLAND, CA 94603

LABORATORY NAME/ADDRESS: TRI ENVIRONMENTAL, INC.; 9063 BEE CAVES ROAD, AUSTIN, TX 78733

TYPE OF MATERIAL: GRAVEL SNAKE BAG ROLL 11" X 750L

- GEO-SYNTHETIC MATERIAL, WOVEN SEAMS, UV RATED FOR 5 YEARS SEE ATTACHED DATA SHEET.
- PRODUCT TO BE USED AS A WATTLE, PIPE SOCK, DROP INLET PROTECTION, CHECK DAM OR GRAVEL BAG BERM FOR EROSION CONTROL, FILTRATION, SEDIMENTATION PER SWPPP GUIDELINES.

LOT/BATCH NUMBER: N/A

DATE OF TEST: N/A

SPECIFICATIONS: SEE ATTACHED SPECIFICATION SHEET

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC 208 AGGREGATE BAG. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Laura Deid Campbell

Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 20 LF (quantity and units) of pay item 208-00007 EROSION LOGS (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.

[Signature]
Contractor Rep. Signature

2/14/18
Date

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item number and Description) that will be installed on project number STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



ESI RESOURCE SERVICES

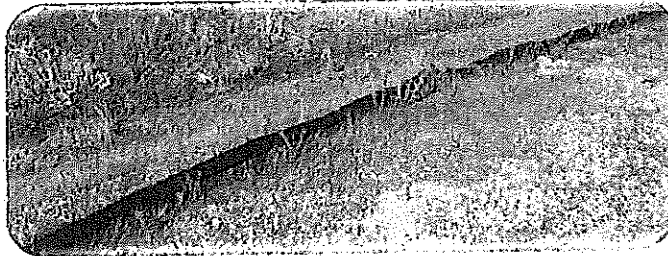
ESI Resource Services LLC
11854 Larisa Way
Rancho Cordova, CA 95742
Tel 916-985-7787 Fax 916-985-7887



Chris A. Marr CPESC #2211

Certificate of Compliance

DATE: 12-28-17



As a manufacture representative of "Woven Snake Bag Roll", we certify that the material to be supplied will meet or exceed the following Physical specifications.

Property	Test Method	Woven (Typical:)
Fabric Weight	ASTM D-5261	5 oz./sq./yd.
Wide Width Tensile (MD/TD)	ASTM D-4595	2400/1680 lbs
Grab Tensile (MD/TD)	ASTM D-4632	365/200 lbs.
Trapezoid Tear (MD/TD)	ASTM D-4533	115/75 lbs.
Puncture	ASTM D-4833	112 lbs.
Apparent Opening Size	ASTM D-4751	40 US Sieve (0.425mm).
Mullen Burst	ASTM D-3786	450 psi.
Permittivity	ASTM D-4491	2.1 sec ⁻¹
Permeability	ASTM D-4491	0.14 cm/sec
Water Flow	ASTM D-4491	145 gal/min per sq. ft.
UV Resistance (500hrs)	ASTM D-4355	90%
Material	High Density Polyethylene (HDPE)	

We at ESI Resource Services look forward for future business with your company.

Chris A. Marr Aff.M.ASCE CPESC #2211
ESI Resource Services LLC
WCIECA Board Member
Tel# 623-386-5666 cell# 209-712-2616



International Erosion Control Association



ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS



9" Excelsior Wattle

Are made of curled wood excelsior with a consistent width of fibers evenly distributed throughout the log

SPECIFICATIONS

LENGTH:	25' STANDARD (OTHER LENGTHS CAN BE SPECIAL ORDERED)
DIAMETER:	9" (+/- 10%)
CORE: AT LEAST 6" LONG	ASPEN WOOD EXCELSIOR WITH INTERLOCKING BARBS, 80% OF FIBERS
NETTING TYPE:	UV STABILIZED/PHOTODEGRADABLE
NETTING WEIGHT: INHIBITOR	HEAVY DUTY: 94% HIGH-DENSITY POLYETHYLENE WITH 6% UV
NETTING THICKNESS:	STRAND THICKNESS OF 0.03", KNOT THICKNESS OF 0.055"
NETTING WEIGHT:	0.35-OUNCE PER FOOT (+/- 10%)
NETTING COLOR:	BLACK (OTHER COLORS CAN BE SPECIAL ORDERED)
ROLL WEIGHT:	AVERAGE 40 LBS. (+/- 10%)
WEIGHT PER LF:	NO LESS THAN 1.6 LBS (+/- 10%)

Our Sediment Control Products are used in a multitude of applications, providing benefits such as:

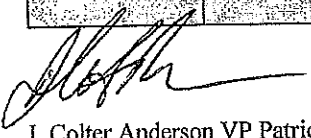
- Better filtering of runoff waters
- Preventing check dam blowouts
- Protecting water from going around check dams
- Preventing the spread of non-native vegetation
- Ease of use: easier to handle and install than straw bales
- Safe to use around livestock: Non-food source for animals

DISTRIBUTED BY:
TRITON ENVIROMENTAL
5433 NEWPORT STREET
COMMERCE CITY, CO 80022
O: 303.945.7588 F: 303.945.7579

- (1) Patriot certifies the curled aspen wood excelsior is fungus free, resin free, and free of growth or germination inhibiting substances. Patriot follows the CDOT table below and weighs multiple wattles per truckload to insure the weights are in tolerance and Patriot measures the diameter per CDOT Spec table 208-1
- (2) We also get a Phyto cert done about 3 times a year which gives our plant certification that the plant is bug free.

**Table208-1
NOMINAL DIMENSIONS OF EROSION LOGS**

Diameter Type 1 (Inches)	Diameter Type 2 (Inches)	Length (feet)		Weight (minimum) (pounds/foot)	Stake Dimensions (Inches)
		Min.	Max.		
9	8	10	180	1.6	1.5 by 1.5 (nominal) by 18
12	12	10	180	2.5	1.5 by 1.5 (nominal) by 24
20	18	10	100	4.0	2 by 2 (nominal) by 30



J. Colter Anderson VP Patriot Environmental Products

12-13-17

Date

19219-208-3

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type SILT FENCE	Field Lab phone	Cell Phone SUP
Material Code (LIMS)	Item 208	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE SILT FENCE INSTALLED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. POSTS WERE MEASURED TO BE 42 INCHES IN LENGTH AND 1.5 INCHES X 1.5 INCHES. THE MANUFACTURER'S ^{CTR} COC IS ATTACHED. AND THE SUPPLIER/MANUFACTURERS COC'S IS ATTACHED.

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
Emergency <input type="checkbox"/>	Date needed	

Contractor CROSSFIRE LLC	Supplier TRITON WILLACOOCHEE INDUSTRIAL FABRICS
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 2580 LF	Previous quantity 0	Total quantity to date 2580 LF
-------------------------------------	----------------------------	---------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS PE	Title PRESIDENT, DAVIS ENGINEERING SERVICE	Residency

TRITON ENVIRONMENTAL

5433 NEWPORT STREET • COMMERCE CITY, CO 80022 • (303) 945-7588 OFFICE • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219

MANUFACTURER: WILLACOOCHEE INDUSTRIAL FABRICS, INC. PO BOX 599- 769 WEST MAIN STREET, WILLACOOCHEE, GA 31650

LABORATORY NAME/ADDRESS: N/A

TYPE OF MATERIAL: SILT FENCE WINFAB 105SF

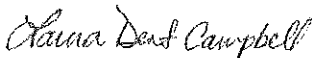
THIS PRODUCT IS A SEDIMENT CONTROL DEVICE CONSISTING OF A WOVEN GEOTEXTILE FABRIC MANUFACTURED USING HIGH TENACITY POLYPROPYLENE YARNS THAT ARE WOVEN TO FORM A DIMENSIONALLY STABLE NETWORK, WHICH ALLOWS THE YARNS TO MAINTAIN THEIR RELATIVE POSITION. THIS POLYPROPELENE WOVEN FABRIC RESISTS ULTRAVILOT DETERIORATION, ROTTING, AND BIOLOGICAL DEGRADATION AND IS INERT TO COMMONLY ENCOUNTERED SOIL CHEMICALS.

LOT/BATCH NUMBER: 9090

SPECIFICATIONS: SEE ATTACHED DATA SHEET AND TESTING DATA FROM WILLACOOCHEE INDUSTRIAL FABRICS

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC SECTION 208.02 (B) EROSION CONTROL. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL



Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2,500 L.F. (quantity and units) of pay item 208-00020 Silt Fence (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.


Contractor Rep. Signature

01/28/18
Date

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item number and Description) that will be installed on project number STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



PRODUCT DATA SHEET

WINFAB 105SF

WINFAB 105SF is manufactured using high tenacity polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position.

WINFAB 105SF resists ultraviolet deterioration, rotting, and biological degradation and is inert to commonly encountered soil chemicals.

PROPERTY	TEST METHOD	MARV English	MARV Metric
Tensile Strength (Grab)	ASTM D-4632	124 x 124 lbs	551.6 x 551.6 N
Elongation	ASTM D-4632	15%	15%
CBR Puncture	ASTM D-6241	325 lbs	1445.7 N
Trapezoidal Tear	ASTM D-4533	65 x 65 lbs	289.1 x 289.1 N
UV Resistance (500 hrs)	ASTM D-4355	70%	70%
Apparent Opening Size (AOS)*	ASTM D-4751	30 US Std. Sieve	0.60 mm
Permittivity	ASTM D-4491	0.05 sec ⁻¹	0.05 sec ⁻¹
Water Flow Rate	ASTM D-4491	10 gpm/ft ²	407.4 lpm/m ²

*Maximum Average Roll Valve

Notes:

- Mullen Burst ASTM D-3786 has been removed. It is not recognized by ASTM D-35 on Geosynthetics.
- Puncture ASTM D-4833 has been removed. It is not recognized by AASHTO M288 and has been replaced with CBR Puncture ASTM D-6241

PROPERTY	Typical English	Typical Metric
Roll Dimensions	36 in x 2600 yds	.91 m x 2377 m
	36 in x Custom	.91 m x Custom
	42 in x 2600 yds	1.07 m x 2377 m
	42 in x Custom	1.07 m x Custom
	48 in x 2600 yds	1.22 m x 2377 m
	48 in x Custom	1.22 m x Custom

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Willacoochee Industrial Fabrics, Inc.
 PO Box 599 • 769 West Main Street • Willacoochee, GA 31650
 Ph: (912) 534-5757 • Fax: (912) 534-5533





**WILLACOOCHEE INDUSTRIAL FABRICS
CERTIFICATE OF ANALYSIS**

PO Number 9090

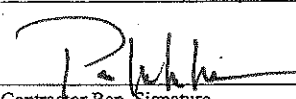
Style WINFAB 105SF

Roll Number	Warp Tenile (Crab) ASTM D4533 lbs	Warp Elongation (Crab) ASTM D4533 %	Fill Tenile (Crab) ASTM D4533 lbs	Fill Elongation (Crab) ASTM D4533 %	Warp Trap Tear ASTM D4533 lbs	Fill Trap Tear ASTM D4533 lbs	CEP Procedure ASTM D5341 lbs	APC ASTM D4751 lb/in	Plymouth/ ASTM D4611 lb/dec	Water Flow Rate ASTM D4461 gpm
1N10081152	168	20	152	23	85	99	564	0.6	0.157	11.7
1N10081589	150	20	140	22	85	98	553	0.6	0.166	12.4
1N10081894	150	20	140	22	85	98	553	0.6	0.166	12.4
1N10240030	172	22	159	26	72	76	553	0.22	0.067	5
1N10240056	172	22	159	26	72	76	553	0.22	0.067	5
1N10240082	172	22	159	26	72	76	553	0.22	0.067	5
1N10240108	172	22	159	26	72	76	553	0.22	0.067	5
1N10240134	172	22	159	26	72	76	553	0.22	0.067	5
1N10240160	172	22	159	26	72	76	553	0.22	0.067	5
1N10240212	172	22	159	26	72	76	553	0.22	0.067	5
1N10240230	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240316	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240342	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240388	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240394	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240420	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240446	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240472	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240498	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240524	178	23	163	26	73	87	559	0.255	0.09	6.7

*Actual roll tested. All rolls in between tested rolls are assumed to have the same value. All Testing is done in accordance to ASTM D-4354. Property values at time of manufacturing. Handling may change these properties.


Jason Booth, Quality Manager

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 2,580 L.F. (quantity and units) of pay item 208-000210 Sil Fence (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

01/26/18
Date



WILLACOOCHEE INDUSTRIAL FABRICS
 CERTIFICATE OF ANALYSIS

PO Number 9090

Style WINFAB 105SF

Roll Number	Warp Tensile (Grab) ASTM D4932 lbs	Warp Elongation ASTM D4932 %	Fill Tensile (Grab) ASTM D4932 lbs	Fill Elongation (Grab) ASTM D4932 %	Warp Trap Tear ASTM D4933 lbs	Fil Ten Test ASTM D4933 lbs	CER Pendure ASTM D5231 lbs	AOS ASTM D1751 mm	Permeability ASTM D4851 1/100 in-sec	Water Flow Rate ASTM D1431 gpm
1N10240550	178	23	163	26	73	67	559	0.256	0.08	6.7
1N10240576	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240602	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240628	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240654	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240680	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240706	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240732	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240758	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240784	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240810	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240836	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240862	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10240888	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10240914	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10240940	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10240966	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10240992	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10241018	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10241044	182	23	163	25	71	79	561	0.207	0.086	6.4

*Actual roll tested. All rolls in between tested rolls are assumed to have the same value. All Testing is done in accordance to ASTM D-4354. Property values at time of manufacturing. Handling may change these properties.

Jason Booth, Quality Manager



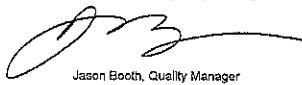
WILLACOOCHEE INDUSTRIAL FABRICS
 CERTIFICATE OF ANALYSIS

PO Number 9090

Style WINFAB 105SF

Roll Number	Warp Tenacity (Grab) ASTM D4932 PS	Warp Elongation (Grab) ASTM D4932 %	Fill Tenacity (Grab) ASTM D4932 PS	Fill Elongation (Grab) ASTM D4932 %	Warp Tear Test ASTM D4633 PS	Fall Trap Test ASTM D4593 PS	CBR Puncture ASTM D2241 PS	APL ASTM D4751 mm	Permeability ASTM D4491 1/sec	Water Vapor Rate ASTM D4481 g/cm
1N10241070	182	23	163	25	71	79	581	0.207	0.086	6.4
1N10241096	182	23	163	25	71	79	581	0.207	0.086	6.4
1N10241122	182	23	163	25	71	79	581	0.207	0.086	6.4
1N10241148	182	23	163	25	71	79	581	0.207	0.086	6.4
1N10241174	182	23	163	25	71	79	581	0.207	0.086	6.4

*Actual roll tested. All rolls in between tested rolls are assumed to have the same value. All Testing is done in accordance to ASTM D-4354. Property values at time of manufacturing. Handling may change these properties.


 Jason Booth, Quality Manager

19219-208-4

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region <u>5</u>	Field sheet # <u>266289</u>
	Contract ID <u>19219</u>	Date Submitted <u>3-9-18</u>
	Project No. <u>STE C400-008</u>	
	Project Location <u>PINON CAUSEWAY TO ASPEN VILLAGE DR</u>	

Metric units yes no

Material Type <u>CONCRETE WASHOUT STRUCTURE</u>	Field Lab phone	Cell Phone <u>SUP.</u>
Material Code (LIMS)	Item <u>208</u>	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE CONCRETE WASHOUT STRUCTURE WAS FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE STRUCTURE WAS COMPLIANT WITH ^{THE} M&S STANDARDS.

User ID					
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)			
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)			
APL/QML Acceptance: APL Ref. No.	Product name:				Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:				Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed	
Contractor <u>CROSSFIRE, LLC</u>	Supplier <u>CROSSFIRE, LLC</u>				
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner				
Quantity represented <u>1 EACH</u>	Previous quantity <u>0</u>	Total quantity to date <u>1 EACH</u>			
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date		
Sampled or inspected by (print name) <u>CLIFTON LEE, PE</u>	Title <u>PROJECT ENGINEER</u>	E-mail			
Supervisor (Pro./Res./Mats. Engr./Malnt. Supt.) (print name) <u>MICHAEL DAVIS, PE</u>	Title <u>PRESIDENT - DAVIS ENGINEERING, INC.</u>	Residency			

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

Previous editions are obsolete and may not be used.

19219-208-5

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region <u>S</u>	Field sheet # <u>266289</u>
	Contract ID <u>19219</u>	Date Submitted <u>3-9-18</u>
	Project No. <u>STE C480-008</u>	
	Project Location <u>PINON CAUSEWAY TO ASPEN VILLAGE DR-</u>	
	Metric units <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	

Material Type <u>VEHICLE TRACKING PAD</u>	Field Lab phone	Cell Phone <u>SUP.</u>
Material Code (LIMS)	Item <u>ZOB</u>	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE VEHICLE TRACKING PAD WAS FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE GEOTEXTILE INSTALLED IS ON THE NYDOT APL. MATERIAL DOCUMENTATION IS ATTACHED FROM THE APL/QML DOCUMENTATION IS ATTACHED MANUFACTURER: SUPPLIER

SEE FORM 473 REGARDING AGGREGATE INSTALLED.

User ID		
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
Emergency <input type="checkbox"/>	Date needed	
Contractor <u>CROSSFIRE, LLC</u>	Supplier <u>TRITON CROSSFIRE, LLC & SICAPS INDUSTRIES</u>	
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner	
Quantity represented <u>2 EA.</u>	Previous quantity <u>0</u>	Total quantity to date <u>2 EA.</u>
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via
Date		
Sampled or inspected by (print name) <u>CLIFTON LEE, PE</u>	Title <u>PROJECT ENGINEER</u>	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) <u>MIKE DAVIS, PE</u>	Title <u>PRESIDENT- DAVIS ENGINEERING SERVICE</u>	Residency



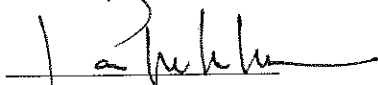
CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 07/26/2017
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

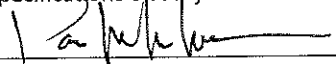
The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 208-00070
APL Category: Materials and Equipment
APL Sub-Category: Geosynthetics for Highway Construction
APL Base Category: Geotextiles
APL Reference No.: Found on the NYDOT – Approved Products List Website
Product Name: Skaps GT-160
Manufacturer: Skaps Industries
Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC


Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2 Each (quantity and units) of pay item: 208-00070 Skaps GT-160 Vehicle Tracking Pad (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219


Contractor

01/26/18
Date

TRITON ENVIRONMENTAL

SUPPLIER: TRITON ENVIRONMENTAL, LLC.; 5433 NEWPORT STREET, COMMERCE CITY, CO 80022

CONTRACTOR: CROSSFIRE, LLC.

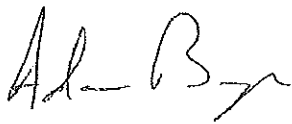
PROJECT: PINON CAUSEWAY TO ASPEN VILLAGE; CDOT PROJECT: STE C480-008

THIS LETTER IS TO VERIFY THAT THE CLASS II GEOTEXTILE SUBMITTED (SKAPS GT 160) IS IN FACT ON THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCTS LIST FOR GEOTEXTILES. NTPEP CODE: 2015-01-135

- GT 160 NON WOVEN CLASS II GEOTEXTILE
 - MANUFACTURER: SKAPS INDUSTRIES; ATHENS, GA

<https://www.dot.ny.gov/divisions/engineering/technical-services/technical-services-repository/alme/pages/470-1a.html>

Please let us know if any additional information is required.



ADAM BAPPE

TECHNICAL SALES

TRITON ENVIRONMENTAL, LLC.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2 Each (quantity and units) of pay item 20B-00070 Vehicle Trk. Pad (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

8/01/17
Date

Corporate: 5433 Newport St * Commerce City, CO 80022 * Phone 303-945-7588 * Fax 303-945-7579
Western Slope: 3017 Hwy 50 * Grand Junction, CO 81503 * 970-985-2984 * Fax 303-945-7589
East Coast: 4750 Steubenville Pike * Pittsburgh, PA 15205 * 412-458-0360 * Fax 412-458-0422

Providing Educated Solutions for your Environmental Concerns



Sales Office:
 Engineered Synthetic Products, Inc.
 Tel (770) 564-1857
 Fax (770) 564-1818
 www.espgeosynthetics.com

Geotextile Product Description Sheet

SKAPS GT-160 Nonwoven Geotextile

SKAPS GT-160 is a needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, which are formed into a random network for dimensional stability. SKAPS GT-160 resists ultraviolet deterioration, rotting, biological degradation, naturally encountered basics and acids. Polypropylene is stable within a pH range of 2 to 13. SKAPS GT-160 conforms to the physical property values listed below:

PROPERTY	TEST METHOD	UNIT	M.A.R.V. (Minimum Average Roll Value)
Weight (Typical)	ASTM D 5261	oz/yd ² (g/m ²)	6.0 (203)
Grab Tensile	ASTM D 4632	lbs (kN)	160 (0.711)
Grab Elongation	ASTM D 4632	%	50
Trapezoid Tear Strength	ASTM D 4533	lbs (kN)	60 (0.267)
CBR Puncture Resistance	ASTM D 6241	lbs (kN)	410 (1.82)
Permittivity*	ASTM D 4491	sec ⁻¹	1.5
Water Flow*	ASTM D 4491	gpm/ft ² (l/min/m ²)	110 (4480)
AOS*	ASTM D 4751	US Sieve (mm)	70 (0.212)
UV Resistance	ASTM D 4355	%/hrs	70/500

PACKAGING	
Roll Dimensions (W x L) – ft	12.5 x 360 / 15 x 300
Square Yards Per Roll	500
Estimated Roll Weight – lbs	195


* At the time of manufacturing. Handling may change these properties.

This information is provided for reference purposes only and is not intended as a warranty or guarantee. SKAPS assumes no liability in connection with the use of this information.

SKAPS Industries,
 335 Athena Drive, Athens GA 30601
 Phone:(706)354-3700, Fax(706)354-3737,
www.skaps.com

Made in U.S.A.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 7 each (quantity and units) of pay item 200-00070 Vehicle Truck Bed (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

8/01/17
Date

19219-212-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type SEEDING - NATIVE	Field Lab phone	Cell Phone SUP.
Material Code (LIMS)	Item 212-	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

^{NATIVE}
 THE SEED MIX PLACED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. CERTIFIED TEST REPORTS ARE ATTACHED. A COC FROM THE MANUFACTURER IS ATTACHED. ALL SEEDS WERE TESTED WITHIN 13 MONTHS PRIOR TO THE DATE OF SEEDING. SEE FORM 473.

Jser ID			
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>			Date needed
Contractor CROSSFIRE LLC		Supplier SOUTHWEST SEED	
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name or owner	
Quantity represented 2.37 ACRES	Previous quantity 0	Total quantity to date 2.37 ACRES	
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
Sampled or inspected by (print name) CLIFTON LEE PE		Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Matis. Engr./Maint. Supt.) (print name) MIKE DAVIS PE		Title PRESIDENT- DAVIS ENGINEERING SERVICE	Residency

November 30, 2017

TO WHOM IT MAY CONCERN:

RE: Certificate of Compliance and Certified Test Report

CDOT Project No. STE C480-008
CDOT Project Code: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Contractor: Crossfire, LLC
Supplier: Southwest Seed Inc.
Quantity: Three Seed Mixes – Details included with these documents.

Seed Mixes:

Lot No # 2017.0755	Upland Pinon Causeway
Lot No # 2015.0632	Centennial Turf Mix
Lot No # 18330	Wetlands Pinon Causeway

Greetings;

This letter is to certify that all seed provided by Southwest Seed Inc. and used in the above referenced seed mixtures for Crossfire LLC have been tested at a Certified Seed Lab. Included with this letter is a copy of the seed tag showing seed quality and test dates. Also included are copies of the test analysis to validate each species of seed's viability within the last 13 months prior to the mixing of the seed mix. Questions can be directed to us at 970-565-8722.

Additionally, the following information is provided to complete a Certificate of Compliance as requested by CDOT.

- | | | |
|---|--|--|
| 1). CDOT Project No. | STE C480-008 | |
| 2). Manufacturer's Name | Suppliers Name: Southwest Seed Inc. | |
| 3). Address of Manufacturing facility | 13514 Road 29, Dolores, CO 81323 | |
| 4). Laboratory name & address | Multiple Labs used. See individual tests | |
| 5). Name of product or assembly | Custom Mixes requested by Crossfire | |
| 6). Complete description of the material | See attached Seed Mix tags | |
| 7). Model No. | Not Applicable | |
| 8). Lot, heat, or batch number identifying the material delivered | See attached | |
| 9). Date(s) of laboratory testing | See attached | |
| 10). Applicable CDOT specifications | Not applicable | |

**SOUTHWEST
SEED**

13514 RD 29 • DOLORES • COLORADO • 81323

(970) 565-8722
FAX (970) 565-2576

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents the contents of the three seed mixes

Lot No # 2017.0755	Upland Pinon Causeway (45 PLS lbs)
Lot No # 2015.0632	Centennial Turf Mix (56 BLK lbs)
Lot No # 18330	Wetlands Pinon Causeway (.21 PLS lbs)

Of seed, that will be installed on project number STE C480-008.

Robby Henes
Supplier

11/30/17
Date

Robby Henes
Southwest Seed Inc.
13514 Rd. 29
Dolores, Colorado
81323

970-565-8722
swseed@southwestseed.com

Cc: Crossfire

**SOUTHWEST
SEED**

13514 RD 29 > DOLORES-COLORADO-81323

Southwest Seed, Inc.
 135 129
 Dolores, CO 81323
 Phone: 970-565-8722

Custom Fertilizer Seed Mixture Analysis

LOT NO: 2017.0755

Variety: UPLAND PINYON CAUSEWAY

Species: CROSSFIRE

Lot No	Species	Variety	CL	OR	PURE	INERT	CROP	WEED	Rstr	Nox	Live	PLS	Test Date	Bulk LBS	PLS LBS	Pure %
2014.1018	JUNEGRASS	PRAIRIE		CAN	80.15	19.07	0.63	0.15	NF	NF	87	66.73	04/18/17	2.58	1.8	4.11
2015.0816	LITTLE BLUESTEM	PASTURA	C	CO	87.95	11.81	0.11	0.13	NF	NF	91	80.03	12/14/16	4.5	3.6	7.86
2016.0080	LEWIS FLAX	APPAR	C	WA	98.77	0.99	0.24	0.00	NF	NF	94	92.84	11/09/16	1.94	1.8	3.81
2016.0081	WESTERN YARROW	EAGLE	S	WA	97.68	2.32	0.00	0.00	NF	NF	93	90.84	11/22/16	.99	.9	1.92
2016.0082	SQUIRRELTAIL BOTTLEBRUSH	BOTTLEBRUSH	S	WA	94.50	2.58	2.92	0.00	NF	NF	89	84.11	03/24/17	1.61	1.35	3.01
2016.0335	MUTTONGRASS	RUIN CANYON	S	CO	96.68	3.30	0.00	0.02	NF	NF	90	87.01	07/13/17	2.07	1.8	3.97
2016.0471	INDIAN RICEGRASS	RIMROCK	C	CO	99.04	0.88	0.00	0.08	NF	NF	96	95.08	01/06/17	9.47	9	18.63
2016.0522	BLANKET FLOWER (GALLARDA)	VNS		CO	98.90	1.10	0.00	0.00	NF	NF	94	92.97	05/31/17	.97	.9	1.90
2016.0860	WESTERN WHEATGRASS	ARRIBA	C	CO	97.89	2.11	0.00	0.00	NF	NF	94	92.02	03/31/17	9.78	9	19.02
2017.0388	BLUE GRAMA	ALMA	C	CO	79.06	20.94	0.00	0.01	NF	NF	93	73.52	01/24/17	1.84	1.35	2.88
2017.0755	SLENDER WHEATGRASS	FIRSTSTRIKE	C	WA	96.55	3.41	0.03	0.01	NF	NF	97	93.65	04/28/17	9.61	9	18.44
	BIG BLUEGRASS	SHERMAN	C	CO	99.18	0.82	0.00	0.00	NF	NF	91	90.25	09/06/17	4.99	4.5	9.83
													Grand Total	50.33	45.00	

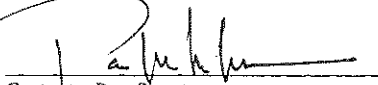
Pure: 95.38% Inert: 4.43% Crop: 0.15% Weed: 0.04% Total: 100.00%

REMARK: 1 BAG CONTAINING 5.329 BULK #'S (45 PLS #'S) TO SEED 3 ACRES

Noxious Weeds (seeds/lb):

NOTICE TO BUYER - EXCLUSION OF WARRANTY AND LIMITATION. We warrant that the seed sold has been labeled as required in the State and Federal Seed Laws, and that it conforms to the label description within tolerances recognized by law. NO OTHER WARRANTY IS MADE, expressed or implied, INCLUDING WITHOUT LIMITATION, THE MERCHANTABILITY, THE PERFORMANCE OF THE CROP AS TO YIELD OR QUALITY, OR THE FITNESS FOR PARTICULAR PURPOSES. It is expressly agreed that the liability to the buyer or others from any type of loss shall be limited solely to the amount of the purchase price of the seed. Seed not accepted on the above terms and conditions may be returned to the place of purchase in the unopened containers within 10 days. Under the "Colorado Seed Act" arbitration is required as a prerequisite to certain legal actions, communications, or detentions against a seller of seed. Information about this requirement may be obtained from the Colorado Commissioner of Agriculture.

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 2.37 acres (quantity and units) of pay item 212-100006 Seeding (Native) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


 Contractor Rep. Signature

01/26/18
 Date

Wyoming Seed Analysis Laboratory

749 Road 9

Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No. 168	Date Received 03/08/17	Date Completed 04/18/17	Lab Number 16-2096
--------------------	---------------------------	----------------------------	-----------------------

Information Provided by Sender

Product	VNS
Kind	Junegrass, prairie
Genus/Species	Koeleria macrantha
Lot Number	2014.1018
Class	Service

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Junegrass, prairie <i>Koeleria macrantha</i>	-N-	04/18/17	87	0	-N-	87

Other Determinations

Status: Completed

Tests Requested: Germination. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: 
Registered Seed Technologist Seal #45



Report of Seed Analysis
CFIA Accredited Laboratory No. 1215

101, 5905-50 Street
Leduc, Alberta T9E 0R6
Phone: (780) 980-8324
Fax: (780) 980-8375
www.seedcheck.net

LAB#: 13-50373

2014.10.18

Customer:	Sender Information:	
	Seed Type:	Junegrass
	Scientific Name:	(Koeleria macrantha)
	Variety:	—
	Lot#:	A1212
	Reference#:	Lot size: 10,000 lbs.
	APHIS:	SL-12-1820
Grower:	Anderson	

Analyzed According to AOSA Rules and Regulations

Tests: Germination, (Non-Tabled), AOSA Purity, Tetrazolium,			
Date Received: Jan 03, 2013		Purity Date: Jan 03, 2013	
APHIS Federal Noxious Weeds:	Per 10.11g	Other Crop Seeds:	Per 1.043g
		(hard/line leaved/sheeps) Festuca sp.	7
		(Phleum pratense) Timothy	1
		(Poa palustris) Fowl Bluegrass	1
		(Poa pratensis) Kentucky Bluegrass	1
		(Poa compressa) Canada Bluegrass	4
Total Federal Noxious Weeds:	0		
Other Weed Seeds:			
Other Weeds found in:	1.043g		
(Hordeum jubatum) Wild barley	1		
ALL STATES NOXIOUS Except UGS and Hawaii in:	10.11g		
None found		Total Other Crop Seeds	14
		Percentage Test:	1.043g
		Pure seed %	90.15
		Other crop %	0.83
		Weed Seed %	0.15
		Inert matter%	19.07
		Germination	—

Advisory Tests & Remarks:

Tetrazolium % Viable: 90 /
In 200 seeds tested Jan 04, 2013

SENIOR MEMBER
OF



124
Lisa Greenari

Wyoming Seed Analysis Laboratory

749 Road 9

Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No. 168	Date Received 11/16/16	Date Completed 12/14/16	Lab Number 16-0855
---------------------------	----------------------------------	-----------------------------------	------------------------------

Information Provided by Sender	
Product	Pastura
Kind	Bluestem, little
Genus/Species	Schizachyrium scoparium
Lot Number	2015.0816
Class	Certified

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Bluestem, little <i>Schizachyrium scoparium</i>	-N-	12/14/16	90	1	-N-	91

Other Determinations

Status: Completed

Tests Requested: Germination. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: *R. W. Henry, III*
Registered Seed Technologist Seal #45

Wyoming Seed Analysis Laboratory

749 Road 9

Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No.	Date Received	Date Completed	Lab Number
168	12/14/15	12/16/15	15-1197

Information Provided by Sender

Product	Pastura
Kind	Bluestem, little
Genus/Species	Schizachyrium scoparium
Lot Number	2015.0816
Class	Certified

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
in 5.3429 grams						
Bluestem, little <i>Schizachyrium scoparium</i>	87.95%	-N-	-N-	-N-	-N-	-N-
Weed seed	0.13%					
Crop seed	0.11%					
Inert matter	11.81%					

Other Crop Seeds	# Seeds	# per lb	Noxious Weed Seeds	# Seeds	# per lb
in 5.3429 grams			in 50 grams		
Galleta grass <i>Pleuraphis jamesii</i>	2	170	For: All States*		
Grama, blue <i>Bouteloua gracilis</i>	1	85	Barnyardgrass <i>Echinochloa crus-galli</i> (R)	7	64
			(P)Prohibited Noxious (R)Restricted Noxious		

Weed Seeds	None Found
-------------------	------------

Other Determinations	
TZ test <i>Bluestem, little</i>	93 %
Bulk Exam for Annual Weedy Bromes: None found in 50 grams worked.	

Remarks

*All States Noxious Exam: All States (except Alaska and Hawaii) as found in the State Noxious-Weed Seed Requirements recognized in the Federal Seed Act.

Status: Completed

Tests Requested: Noxious exam, Purity, TZ test, Weedy Brome Bulk Exam. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: R. Danny Hall
Registered Seed Technologist Seal #45



NST LABS
 340 N. Main Ave
 PO Box 100
 Bridgewater, SD 57319

Phone: (605) 729-2000
 Fax: (605) 729-2001

Sender Information

Boise RSW-BLM
 1962 Commerce Ave
 Boise, ID 83705

Date Received: 11/08/2016
 Date Completed: 11/09/2016
 Date of Report: 11/09/2016
 Sample Number: 74944

Kind of Seed: Blue Flax
 Variety: Appar
 Lot Number: NBS-RR5-APP-1

2016.0080

Purity Results in Blue Flax (Linum spp.) 98.77 % Other Crops: 0.24 % Inert Material: 0.99 % Weed Seeds: 0.00 % 6.20 grams tested 100.00 %	Other Crops Tall Fescue (Festuca arundinacea) # Found Per Pound 7 506
Weed Seeds # Found Per Pound * NONE FOUND	

	Germ%	Hard%	Dorm%	Viable%	# Tested	Test Days	Temp	%PLS	TZ%
Blue Flax (Linum spp.)									94

Noxious Weeds (All States Noxious) # Found* Per Pound Not Requested	Additional Comments SSID: 3296,3297 VENDOR: WESTERN RECLAMATION, INC.
---	--

Special Noxious Weeds # Found Per Pound * NONE FOUND 61.30 grams tested Western States Noxious	UGS # Found Per Pound Not Requested
--	---

ALL TESTS CONDUCTED ACCORDING TO AOSA RULES UNLESS OTHERWISE STATED.
 VIABILITY OF UNGERMINATED SEEDS NOT DETERMINED.
 DORMANCY DETERMINED BY SUBTRACTING GERM FROM TZ.

Kevin Stahl
 Kevin Stahl, RST
 NST LABS





Washington State Department of Agriculture

21 North First Avenue

Yakima, WA 98902

Laboratory Report of Analysis

2016.0080

North Basin Seed
3984 SR 21 North
Odessa, WA 99159

Account No.	Received Date	Date Completed	Lab Number
2174	11/02/15	11/17/15	15-2931

Information Provided by Sender

Variety/Germplasm Appar
Kind Flax, blue
Genus/Species *Linum lewisii*
Lot Number NBS-RR5-APP-1
Class Certified 40500 lbs

Purity Analysis			Viability Analysis				
Component	In 4.021 grams	Purity	Germ Date	Germ	Dormant	Hard	Viable
Flax, blue <i>Linum lewisii</i>		99.26%	11/16/15	85	-N-	-N-	85
	Weed seed	0.00%					
	Crop seed	0.12%					
	Inert matter	0.62%					
Other Crop Seeds in 4.021 grams			Noxious Weed Seeds in 40.17 grams		None Found		
	# per lb		For: Western States				
Fescue, tall <i>Festuca arundinacea</i>	113		(P)Prohibited Noxious in WA (R)Restricted Noxious in WA				
Ryegrass <i>Lolium spp.</i>	113						
Weed Seeds None Found			Other Determinations				
			TZ test <i>Flax, blue</i> 83 %				
			Inert matter: Empty florets, leaves, stems, chaff, other plant material				

Remarks

Flax, blue - AOSA:Requirements (Purity: 4 grams; Noxious: 40 grams) Submitted: 371 grams
206 seed TZ test completed on November 04 2015.

Analyzed using AOSA rules as a guideline.

TZ - Flaccid, dead, light embryos. Broken or fractured embryos. Essential parts of embryo unstained. Damage to radical or cotyledons.

Germ-Missing hypocotyls, weak, stubby or missing primary root with weak secondary roots, dead seed

Additional Sender's Information*

Renegade Ranches: 14-1845-2174

Status: Passed - Meets purity standards for the certified class. Meets the viability standards for the certified class.

Tests Requested: Germination, Noxious exam - Western states, Purity, TZ test. No other tests requested.

Services Requested: Rush

WARRANTY: We warrant that the test results reported on this form have been carried out with AOSA rules used as a guideline unless otherwise specified. Test results reflect the condition of a submitted sample and may not reflect the condition of the seed lot from which the sample was taken. Officially drawn samples represent the condition of the lot at the time of sampling.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: *Victor L. Shaw*

WASHINGTON STATE DEPARTMENT OF AGRICULTURE
SEED PROGRAM, AN ISO 9001 CERTIFIED ORGANIZATION

Wyoming Seed Analysis Laboratory

749 Road 9

Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No. 168	Date Received 11/16/16	Date Completed 11/22/16	Lab Number 16-0856
---------------------------	----------------------------------	-----------------------------------	------------------------------

Information Provided by Sender

Product	Eagle
Kind	Yarrow, western
Genus/Species	Achillea millefolium
Lot Number	2016.0081
Class	Service

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Yarrow, western <i>Achillea millefolium</i>	-N-	-N-	-N-	-N-	-N-	-N-
Other Determinations						
TZ test <i>Yarrow, western</i>						93 %

Status: Completed

Tests Requested: TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: *R. Henry Hall*
Registered Seed Technologist Seal #45

Page 2



Washington State Department of Agriculture

21 North First Avenue

Yakima, WA 98902

Laboratory Report of Analysis

2016.0081

North Basin Seed
3984 SR 21 North
Odessa, WA 99159

Account No.	Received Date	Date Completed	Lab Number
2174	10/12/15	10/28/15	15-2515

Information Provided by Sender	
Variety/Germplasm	Eagle
Kind	Yarrow; western
Genus/Species	Achillea millefolium var. occidentalis
Lot Number	NBS-CF5-EAG-2
Class	Select Generation 4

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Yarrow, western <i>Achillea millefolium</i> var. <i>occidentalis</i>	97.68%	10/28/15	95	-N-	-N-	95
Weed seed	0.00%					
Crop seed	0.00%					
Inert matter	2.32%					

Other Crop Seeds	None Found	Noxious Weed Seeds in 4.982 grams	None Found
		For: Western States	
		(P) Prohibited; Noxious in WA (R) Restricted; Noxious in WA	

Weed Seeds	None Found	Other Determinations:	
		TZ test: Yarrow, western	93%
		Inert matter: Broken seed, stems, chaff, other plant material	

Remarks
Yarrow, western - AOSA Requirements (Purity: 0.4 grams; Noxious: 4 grams) Submitted: 166 grams
206 seed TZ test completed on October 16 2015.
Analyzed using AOSA rules as a guideline.

Additional Sender's Information*
Cooper Farms: 14-1842-2174

Status: Completed

Tests Requested: Germination; Noxious exam - Western states; Purity, TZ test. No other tests requested.

Services Requested: Rush

WARRANTY: We warrant that the test results reported on this form have been carried out with AOSA rules used as a guideline unless otherwise specified. Test results reflect the condition of a submitted sample and may not reflect the condition of the seed lot from which the sample was taken. Officially drawn samples represent the condition of the lot at the time of sampling.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: _____
WASHINGTON STATE DEPARTMENT OF AGRICULTURE
SEED PROGRAM, AN ISO 9001 CERTIFIED ORGANIZATION

Wyoming Seed Analysis Laboratory

749 Road 9

Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No. 168	Date Received 03/08/17	Date Completed 03/24/17	Lab Number 16-2082
--------------------	---------------------------	----------------------------	-----------------------

Information Provided by Sender

Product	VNS
Kind	Squirreltail, bottlebrush
Genus/Species	Elymus elymoides
Lot Number	2016.0082
Class	Service

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Squirreltail, bottlebrush <i>Elymus elymoides</i>	-N-	03/24/17	74	0	-N-	74
Other Determinations						
TZ test <i>Squirreltail, bottlebrush</i>						89 %

Status: Completed

Tests Requested: Germination, TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: R. Henry Hall
Registered Seed Technologist Seal #45

Page 3



Washington State Department of Agriculture

21 North First Avenue

Yakima, WA 98902

Laboratory Report of Analysis

2016.0082

North Basin Seed
3984 SR 21 North
Odessa, WA 99159

Account No. 2174	Received Date 10/25/15	Date Completed 11/10/15	Lab Number 15-2774
---------------------	---------------------------	----------------------------	-----------------------

Information Provided by Sender	
Variety/Germplasm	VNS
Kind	Bottlebrush-squirreltail*
Genus/Species	Elymus elymoides spp. elymoides
Lot Number	NBS-LH5-SQU-1
Class	Service

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Bottlebrush-squirreltail* <i>Elymus elymoides</i> spp. <i>elymoides</i>	94.50%	11/10/15	87	-N-	-N-	87
Weed seed	0.00%					
Crop seed	2.92%					
Inert matter	2.58%					

Other Crop Seeds	%	Noxious Weed Seeds in 90.10 grams	None Found
Wheatgrass, slender <i>Elymus trachycaulus</i>	1.80	For: Western States	
Wildrye, Canada <i>Elymus canadensis</i>	1.12	(P) Prohibited Noxious in WA (R) Restricted Noxious in WA	

Weed Seeds	None Found	Other Determinations:	
		TZ test Bottlebrush-squirreltail*	91 %
		Inert matter: Empty florets, staminate seed, stems, chaff, <1/3 caryopsis	
		No firm ungerminated seed observed at end of germination test.	

Remarks
 Bottlebrush-squirreltail* - AOSA Requirements (Purity: 9 grams; Noxious: 90 grams) Submitted: 194 grams
 206 seed TZ test completed on October 29 2015.
 Analyzed using AOSA rules as a guideline.
 Germ-Soft dead moldy seed, insufficient roots and shoots

Status: Completed

Tests Requested: Germination, Noxious exam - Western states, Purity, TZ test. No other tests requested.

Services Requested: Rush

WARRANTY: We warrant that the test results reported on this form have been carried out with AOSA rules used as a guideline unless otherwise specified. Test results reflect the condition of a submitted sample and may not reflect the condition of the seed lot from which the sample was taken. Officially drawn samples represent the condition of the lot at the time of sampling.
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Signature: _____
 WASHINGTON STATE DEPARTMENT OF AGRICULTURE
 SEED PROGRAM, AN ISO 9001 CERTIFIED ORGANIZATION

Wyoming Seed Analysis Laboratory

749 Road 9

Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No. 168	Date Received 06/20/17	Date Completed 07/13/17	Lab Number 16-2927
---------------------------	----------------------------------	-----------------------------------	------------------------------

Information Provided by Sender

Product	Ruin Canyon
Kind	Muttongrass
Genus/Species	Poa fendleriana
Lot Number	2016.0335
Class	Sel Gen 2

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Muttongrass <i>Poa fendleriana</i>	-N-	07/13/17	81	2	-N-	83

Other Determinations

TZ test <i>Muttongrass</i>	90 %
----------------------------	------

Status: Completed

Tests Requested: Germination, TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

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Signature: 
Registered Seed Technologist Seal #45

Wyoming Seed Analysis Laboratory

749 Road 9
Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No. 168	Date Received 06/07/16	Date Completed 06/09/16	Lab Number 15-2652
---------------------------	----------------------------------	-----------------------------------	------------------------------

Information Provided by Sender

Product Ruin Canyon
Kind Muttongrass
Genus/Species *Poa fendleriana*
Lot Number 2016.0335
Class Sel Gen 2

Purity Analysis			Viability Analysis				
Component		Purity	Germ Date	Germ	Dormant	Hard	Viable
in 1.7399 grams							
Muttongrass	<i>Poa fendleriana</i>	96.68%	-N-	-N-	-N-	-N-	-N-
	Weed seed	0.02%					
	Crop seed	0.00%					
	Inert matter	3.30%					

Other Crop Seeds	None Found	Noxious Weed Seeds in 15 grams	None Found
		For: All States* (P)Prohibited Noxious (R)Restricted Noxious	

Weed Seeds in 1.7399 grams	# Seeds	# per lb	Other Determinations
Pigweed <i>Amaranthus spp.</i>	1	261	TZ test <i>Muttongrass</i> 91%

Remarks
Inert Matter: Chaff and floral parts.
*All States Noxious Exam: All States (except Alaska and Hawaii) as found in the State Noxious-Weed Seed Requirements recognized in the Federal Seed Act.

Status: Completed

Tests Requested: Noxious exam, Purity, TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: 
Registered Seed Technologist Seal #45

Wyoming Seed Analysis Laboratory

749 Road 9

Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No. 168	Date Received 12/09/16	Date Completed 01/06/17	Lab Number 16-1053
---------------------------	----------------------------------	-----------------------------------	------------------------------

Information Provided by Sender

Product	Rimrock
Kind	Ricegrass, Indian
Genus/Species	Achnatherum hymenoides
Lot Number	2016.0435
Class	Certified

Purity Analysis		Viability Analysis					
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable	PLS
in 7.0233 grams							
Ricegrass, Indian <i>Achnatherum hymenoides</i>	99.04%	01/06/17	1	91	-N-	92	91.12
Weed seed	0.08%						
Crop seed	0.00%						
Inert matter	0.88%						

Other Crop Seeds	None Found
-------------------------	------------

Noxious Weed Seeds in 70 grams	None Found
For: All States*	
(P)Prohibited Noxious (R)Restricted Noxious	

Weed Seeds in 7.0233 grams	# Seeds	# per lb
Pigweed, redroot <i>Amaranthus retroflexus</i>	4	258

Other Determinations	
TZ test <i>Ricegrass, Indian</i>	96 %

Remarks
Inert Matter: Chaff and floral parts.
*All States Noxious Exam: All States (except Alaska and Hawaii) as found in the State Noxious-Weed Seed Requirements recognized in the Federal Seed Act.

Status: Completed

Tests Requested: Germination, Noxious exam, Purity, TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: *R. Henry Hall*
Registered Seed Technologist Seal #45

Colorado Seed Laboratory

Dept of Soil & Crop Sciences, CSU

Fort Collins, CO 80523

Laboratory Report Of Analysis

Southwest Seed Inc.
13514 Road 29
Dolores, CO 81323

Account No. 4	Date Received 05/17/17	Date Completed 05/31/17	Lab Number 17-3670
------------------	---------------------------	----------------------------	-----------------------

Information Provided by Sender

Variety/Product	VNS
Kind	Blanket-flower
Genus/Species	Gaillardia aristata
Lot Number	2016.0471
Class	Service

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Blanket-flower <i>Gaillardia aristata</i>	-N-	-N-	-N-	-N-	-N-	-N-

Other Determinations

TZ test <i>Blanket-flower</i>	94 %
-------------------------------	------

Status: Completed

Tests Requested: TZ test. No other tests requested.

WARRANTY: The Association warrants that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: THE ASSOCIATION MAKES NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: *Samela Bulgeron*

Page 4

Precision Seed Testing

P.O. Box 693 - Wheat Ridge, CO 80034-0693 - USA
Telephone (303) 431-9502 - FAX (303) 467-7886

2016.0471

Report of Seed Analysis

2016.0471

SAMPLE IDENTIFICATION

RECEIVED FROM

Lot Number ZG11144
Common Name Blanketflower
Scientific Name Gaillardia aristata

Date Received _____
Date Reported 8/4/2017

PURITY ANALYSIS

Pure Seed 98.90%
Crop Seed 0.00%
Inert Matter 1.10%
Weed Seed 0.00%
No. of Grams Analyzed 7.3383

VIABILITY REPORT

Germination 95%
Hard Seed 0%
Dormant Seed 0%
Total Viable Seed 95%
Test Date 01/18/2017

Other Crop Seeds PER POUND
NONE FOUND 0

Tetrazolium Test _____

Weed Seeds PER POUND
NONE FOUND 0

TESTING METHOD
No. of Seeds Germinated 400
Germ. Temp. 20-30C
No. of Days Prechill 0
No. of Days Tested 10

Inert Matter _____
flowerheads, stem and pappuses

Comments _____
No dormant seed found at end of test.

ALL STATES NOXIOUS WEED EXAM

No. of Grams Analyzed 70.8583
NONE FOUND 0/LB

Page 5



SIGNATURE _____

Mary Loring
Mary Loring

R.S.T.

REGISTERED SEED TECHNOLOGIST - SEAL NO. 128
Registered Member
SOCIETY OF COMMERCIAL SEED TECHNOLOGISTS

RULES FOLLOWED: AOSA

The purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified.
Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

Colorado Seed Laboratory
 ARDEC Headquarters Building
 Fort Collins, CO 80523
 Regulatory Report

Inspection No. 4528	Date Collected 03/22/17	Date Received 03/21/17	Date Reported 03/21/17	Lab Number R17-0050
------------------------	----------------------------	---------------------------	---------------------------	------------------------

Collected At Southwest Seed Inc.: Dolores, CO	Kind Wheatgrass, western <i>Pascopyrum smithii</i>
Labelled By Southwest Seed Inc.: Dolores, CO	Class Service
Variety/Name Arriba	Bag Weight 50lb
Lot Number 2016.0522	Amount Seed in Bulk
# of Bags 299	Origin CO
# of Bags Sampled 30	
Labelled Germ Date 09/01/16	

Components in 9.95 grams	Purity Analysis		Viability Analysis							
	Stated %	Found %	% Stated				% Found			
			Germ	Dormant	Hard	Viable	Germ	Dormant	Hard	Viable
Wheatgrass, western <i>Pascopyrum smithii</i>	98.23	97.89	91	-N-	-N-	91	94	-N-	-N-	94
Weed Seed	.01	0.00								
Other Crop Seed	0	0.00								
Inert Matter	1.76	2.11								

Noxious Weed Seeds in 100 grams	Type	Stated per lb.	Found per lb.
None Labeled		0	0
None Found			

(F) Prohibited Noxious (R) Restricted Noxious

Tests Requested: Germination, Purity. No other tests requested.

Yes No Purity FOUND complies with that of GIVEN
 Yes No Live Seed FOUND complies with that of GIVEN

Signed: *Rudy C...*

Wyoming Seed Analysis Laboratory

749 Road 9

2016.0860

Powell, WY 82435

Laboratory Report Of Analysis

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Account No. 168	Date Received 01/06/17	Date Completed 01/24/17	Lab Number 16-1285
---------------------------	----------------------------------	-----------------------------------	------------------------------

Information Provided by Sender	
Product	Alma
Kind	Gramma, blue
Genus/Species	Bouteloua gracilis
Lot Number	2016.0860
Class	Certified

Purity Analysis		Viability Analysis					
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable	PLS
in 2.1571 grams		01/24/17	79	14	-N-	93	73.52
Gramma, blue <i>Bouteloua gracilis</i>	79.05%						
	Weed seed 0.01%						
	Crop seed 0.00%						
	Inert matter 20.94%						

Other Crop Seeds None Found	Noxious Weed Seeds in 20 grams None Found
	For: All States* (P)Prohibited Noxious (R)Restricted Noxious

Weed Seeds in 2.1571 grams	# Seeds	# per lb	Other Determinations
Stinkgrass <i>Eragrostis ciliaris</i>	4	841	TZ test <i>Gramma, blue</i> 95 %

Remarks
Inert Matter: Chaff and floral parts.
*All States Noxious Exam: All States (except Alaska and Hawaii) as found in the State Noxious-Weed Seed Requirements recognized in the Federal Seed Act.

Status: Completed

Tests Requested: Germination, Noxious exam, Purity, TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: *R. W. Hanning*
Registered Seed Technologist Seal #45

Page 6



NST LABS
 340 N. Main Ave
 PO Box 100
 Bridgewater, SD 57319

Phone: (605) 729-2000
 Fax: (605) 729-2001

Sender Information

North Basin Seed
 3984 SR 21 N
 Odessa, WA 99159

Date Received: 04/26/2017
 Date Completed: 04/28/2017
 Date of Report: 04/28/2017
 Sample Number: 81860

Kind of Seed: Slender wheatgrass
 Variety: First Strike
 Lot Number: NBS:LH3-1STR-1

2017.0388

Purity Results In: Not Requested	Other Crops Not Requested	# Found Per Pound
	Weed Seeds Not Requested	# Found Per Pound

	Germ%	Hard%	Dom%	Viable%	# Tested	Test Days	Temp	%PLS	TZ%
Slender wheatgrass (Elymus trachycaulus)									97

Noxious Weeds (All States Noxious) Not Requested	# Found Per Pound	Additional Comments
---	-------------------	---------------------

Special Noxious Weeds Not Requested	# Found Per Pound	UGS Not Requested	# Found Per Pound
--	-------------------	----------------------	-------------------

Dormancy determination was not conducted in accordance with the AOSA rules for testing seeds. Viability of un-germinated seed is to be determined at the end of the prescribed test period. Dormancy on this report was determined as the difference between the Viable Tetrazolium percentage and the Normal germination percentage.

Kevin Stahl
 Kevin Stahl, RST
 NST LABS





Washington State Department of Agriculture

21 North First Avenue

Yakima, WA 98902

Laboratory Report of Analysis

2017.0388

North Basin Seed
3984 SR 21 North
Odessa, WA 99159

Account No.	Received Date	Date Completed	Lab Number
2174	02/05/15	02/27/15	14-4484

Information Provided by Sender

Variety/Germplasm	FirstSinke
Kind	Wheatgrass, slender
Genus/Species	Elymus trachycaulus
Lot Number	NBS-LH3-1STR-1
Class	Certified 11950 lbs

Purity Analysis		Viability Analysis				
Component in 7,000 grams	Purity	Germ Date	Germ	Dormant	Hard	Viable
Wheatgrass, slender <i>Elymus trachycaulus</i>	96.55%	02/27/15	96	-N-	-N-	96
Weed seed	0.01%					
Crop Seed	0.03%					
Inert Matter	3.41%					

Other Crop Seeds in 7,000 grams	# per lb	Noxious Weed Seeds in 70.12 grams	None Found
Fescue, tall <i>Festuca arundinacea</i>	65	For Western States	(P) Prohibited Noxious in WA (R) Restricted Noxious in WA

Weed Seeds in 7,000 grams	# per lb	Other Determinations
Henbit <i>Lamium amplexicaule</i>	65	TZ test <i>Wheatgrass, slender</i> 95% Inert matter: Empty florets, staminate seed, stems, chaff, less than 1/3 caryopsis, ergot sclerotia and similar matter, other seed material.

Remarks

Wheatgrass, slender - AOSA Requirements (Purity: 7grams, Noxious: 70 grams) Submitted: 184 grams
 206 seed TZ test completed on February 10, 2015.
 Previous lab number: 13-5956
 Prechilled 4 days.
 No firm ungerminated seed observed at end of germination test.

Additional Sender's Information*

Lucky H Farms: 12-0439-2174

Status: Passed - Meets purity standards for the certified class. Meets the viability standards for the certified class.

Tests Requested: Germination, Noxious exam - Western states, Purity, TZ test. No other tests requested.

Services Requested: Rush

WARRANTY: We warrant that the test results reported on this form have been carried out with AOSA rules, used as a guideline unless otherwise specified. Test results reflect the condition of a submitted sample and may not reflect the condition of the seed lot from which the sample was taken. Officially drawn samples represent the condition of the lot at the time of sampling.
 DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: Victor L. Shaul
 WASHINGTON STATE DEPARTMENT OF AGRICULTURE
 SEED PROGRAM - ISO 9001:2008 CERTIFIED

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Washington State Department of Agriculture

21 North First Avenue
Yakima, WA 98902

2017.0758

Laboratory Report of Analysis

2017.0758

Account No. 414	Received Date 08/01/17	Date Completed 09/06/17	Lab Number 17-0403
--------------------	---------------------------	----------------------------	-----------------------

Rainier Seed Company
P O Box 1064
Davenport, WA 99122

Information Provided by Sender

Variety/Germplasm Sherman
Kind Bluegrass, big
Genus/Species Poa secunda
Lot Number 442-211-721A
Class Registered

Purity Analysis			Viability Analysis				
Component	In	Purity	Germ Date	Germ	Dormant	Hard	Viable
Bluegrass, big	1.217 grams	99.18%	09/05/17	91	-N-	-N-	91
		Weed seed 0.00%					
		Crop seed 0.00%					
		Inert matter 0.82%					

Other Crop Seeds in 12.22 grams	# per lb	Noxious Weed Seeds in 12.22 grams	None Found
Bluegrass, Kentucky <i>Poa pratensis</i>	37	For: Western States	
		(P)Prohibited Noxious in WA (R)Restricted Noxious in WA	

Weed Seeds	None Found
-------------------	------------

Other Determinations	
Crop exam	12.22 Grams
TZ test <i>Bluegrass, big</i>	95 %
Inert matter: Stems, soil, ergot/similar matter, non-seed inert matter	
No firm ungerminated seed observed at end of germination test.	

Remarks
 Bluegrass, big - AOSA:Requirements (Purity: 1.2 grams; Noxious: 12 grams) Submitted: 650 grams
 206 seed TZ test completed on August 03 2017.
 Analyzed using AOSA rules as a guideline.
 Bulk examination not reported according to AOSA Rules, results not reported under Other Determinations.
 Prechilled 5 days
Additional Sender's Information*
 Victory Farms: 16-0321-414

Status: Passed - Meets purity standards for the registered class. Meets the viability standards for the registered class.

Tests Requested: Crop exam, Germination, Noxious exam - Western states, Purity, TZ test. No other tests requested.
Services Requested: Rush

WARRANTY: We warrant that the test results reported on this form have been carried out with AOSA rules used as a guideline unless otherwise specified. Test results reflect the condition of a submitted sample and may not reflect the condition of the seed lot from which the sample was taken. Officially drawn samples represent the condition of the lot at the time of sampling.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: Victor L. Shaul
WASHINGTON STATE DEPARTMENT OF AGRICULTURE
SEED PROGRAM, AN ISO CERTIFIED ORGANIZATION

Page 7

19219-212-2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type SEEDING - LAWN	Field Lab phone	Cell Phone SUP.
-------------------------------------	-----------------	------------------------

Material Code (LIMS)	Item 212	Class	Grading	Special Provisions <input type="checkbox"/> yes
----------------------	-----------------	-------	---------	---

Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack)	<input type="checkbox"/> CDOT Form #634 (can)
---------------------------------	-------------------------------------	--	---

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

^{LAWN} THE SEED MIX PLACED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. CERTIFIED TEST REPORTS ARE ATTACHED. A COC FROM THE MANUFACTURER IS ATTACHED. ALL SEEDS WERE TESTED WITHIN 13 MONTHS PRIOR TO THE DATE OF SEEDING. THE SUPPLIER PROVIDED AN ALTERNATE LAWN SEED MIX. WAS REVIEWED. SEE CDOT FORM 473 FOR AN EXPLANATION. & ATTACHED LETTER

User ID	
---------	--

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
----------------------------------	---------------	---------------

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
----------------------------------	---------------	---------------

Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed
---	-------------

Contractor CROSSFIRE LLC	Supplier SOUTHWEST SEED
---------------------------------	--------------------------------

Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner
---	-------------------

Quantity represented 0.20 ACRES	Previous quantity 0	Total quantity to date 0.20 ACRES
--	----------------------------	--

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or Inspected by (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	E-mail
--	-------------------------------	--------

Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MICHAEL DAVIS PE	Title PRESIDENT- DAVIS ENGINEERING SERVICE	Residency
--	---	-----------

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

November 30, 2017

TO WHOM IT MAY CONCERN:

RE: Certificate of Compliance and Certified Test Report

CDOT Project No. STE C480-008
CDOT Project Code: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Contractor: Crossfire, LLC
Supplier: Southwest Seed Inc.
Quantity: Three Seed Mixes – Details included with these documents.

Seed Mixes:

Lot No # 2017.0755	Upland Pinon Causeway
Lot No # 2015.0632	Centennial Turf Mix
Lot No # 18330	Wetlands Pinon Causeway

Greetings;

This letter is to certify that all seed provided by Southwest Seed Inc. and used in the above referenced seed mixtures for Crossfire LLC have been tested at a Certified Seed Lab. Included with this letter is a copy of the seed tag showing seed quality and test dates. Also included are copies of the test analysis to validate each species of seed's viability within the last 13 months prior to the mixing of the seed mix. Questions can be directed to us at 970-565-8722.

Additionally, the following information is provided to complete a Certificate of Compliance as requested by CDOT.

- | | | |
|---|--|--|
| 1). CDOT Project No. | STE C480-008 | |
| 2). Manufacturer's Name | Suppliers Name: Southwest Seed Inc. | |
| 3). Address of Manufacturing facility | 13514 Road 29, Dolores, CO 81323 | |
| 4). Laboratory name & address | Multiple Labs used. See individual tests | |
| 5). Name of product or assembly | Custom Mixes requested by Crossfire | |
| 6). Complete description of the material | See attached Seed Mix tags | |
| 7). Model No. | Not Applicable | |
| 8). Lot, heat, or batch number identifying the material delivered | See attached | |
| 9). Date(s) of laboratory testing | See attached | |
| 10). Applicable CDOT specifications | Not applicable | |



13514 RD 29 • DOLORES • COLORADO • 81323

(970) 565-8722
FAX (970) 565-2576

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents the contents of the three seed mixes

Lot No # 2017.0755	Upland Pinon Causeway (45 PLS lbs)
Lot No # 2015.0632	Centennial Turf Mix (56 BLK lbs)
Lot No # 18330	Wetlands Pinon Causeway (.21 PLS lbs)

Of seed, that will be installed on project number STE C480-008.

Robby Henes
Supplier

11/30/17
Date

Robby Henes
Southwest Seed Inc.
13514 Rd. 29
Dolores, Colorado
81323

970-565-8722
swseed@southwestseed.com

Cc: Crossfire

**SOUTHWEST
SEED**

13514 RD 29 • DOLORES • COLORADO • 81323

Wyoming Seed Analysis Laboratory

749 Road 9

Powell, WY 82435

Laboratory Report Of Analysis

Account No. 168	Date Received 06/20/17	Date Completed 07/27/17	Lab Number 16-2936
---------------------------	----------------------------------	-----------------------------------	------------------------------

Southwest Seed, Inc.
13514 Road 29
Dolores, CO 81323

Information Provided by Sender	
Product	CENTENNIAL MIX
Kind	Mixture
Genus/Species	Mixture
Lot Number	2015.0632
Class	Service

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Bluegrass, Kentucky turf type <i>Poa pratensis</i>	-N-	07/27/17	86	-N-	-N-	86
Ryegrass, perennial <i>Lolium perenne</i>	-N-	07/19/17	95	-N-	-N-	95

Other Determinations

Status: Completed

Tests Requested: Germination. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: *R. Danny Hull*
Registered Seed Technologist Seal #45

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 0.20 acres (quantity and units) of pay item 2.12 - 00011 Seeding (Lawn) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

[Signature]
Contractor Rep. Signature

01/26/18
Date

(970) 565-8722
FAX (970) 565-2576

October 6, 2017

RE: Lawn Seed Mix for Pinion Causeway

Southwest Seed Inc. proposes to provide "Centennial Mix" as a premium turf seed mix for the Pinion Causeway project. We created the Centennial Mix for the City of Cortez Parks and Recreation programs. This turf mix needs to be beautiful, very traffic tolerant, and have excellent growth potential so that the city parks are always at peak performance. This has been the mix for the City of Cortez for more than 30 years. Having said that – the state of Kentucky Bluegrasses has progressed dramatically since the early days of turf grasses, so the mix has remained true to a superior turf blend but the components themselves have changed over the years to take advantage of new releases and advances in KY Bluegrass development.

Currently, there are hundreds of turf-type Kentucky Bluegrasses on the market. There are not nearly that many with distinct differences and advantages – however, the nature of the turf industry dictates that each major turf grass producer has their own brands of Kentucky Bluegrass which makes comparing different Kentucky Bluegrasses difficult. There are obvious 'average' quality KY Bluegrasses and then there are superior types. Our Centennial mix is designed to be economical and still provide the most beautiful and durable turf for golf courses, and other administrative entities that have limited budgets. We purchase this mix from Mountain View Seeds in Oregon. I contacted Mountain View to make sure that our Centennial is a premium blend. They can make a blend that is even more premium if that is necessary. Please contact Robby Henes 970-565-8722.


Sincerely

Robby Henes, V. Pres

Southwest Seed Inc.


13514 RD 29 • DOLORES • COLORADO • 81323

2015.0632

MIXTURE STD: CENTENNIAL MIX



SWS

SEED INC

	Species	Variety	Pure %	Germ %	Origin
40	KENTUCKY BLUEGRASS	CORSAIR	29.73	86	OR
30	KENTUCKY BLUEGRASS	VOLT	29.54	86	WA
15	KENTUCKY BLUEGRASS	ARC	14.94	86	WA
15	PERENNIAL RYEGRASS	GRAND SLAM	14.81	95	WA
10	KENTUCKY BLUEGRASS	ARROWHEAD	9.87	86	WA

Test Results:	Pure: 98.89%	Inert: 1.11%	Crop: 0%	Weed: 0%
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Noxious Weeds (seeds/lb): NF Net Wt (lbs): 50 Test Date: 7/27/17

Southwest Seed, Inc., 13514 Road 29, Dolores, CO 81323

BUYER - EXCLUSION OF WARRANTY AND LIMITATION. We warrant that the seed sold has been labeled as such in accordance with the State and Federal Seed Laws, and that it conforms to the label description within tolerances recognized by the State and Federal Seed Laws. **NO OTHER WARRANTY IS MADE, expressed or implied, INCLUDING without limitation, THE MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES, OR THE FITNESS FOR PARTICULAR PURPOSES.** It is agreed that the liability to the buyer or others from any type of loss shall be limited solely to the amount of the purchase price of the seed. **Seed not accepted on the above terms and conditions may be returned to the place of purchase in the unopened containers within 10 days.** Under the "Colorado Seed Act" arbitration is required as a condition to certain legal actions, counterclaims, or defenses against a seller of seed. Information about this requirement is available from the Colorado Commissioner of Agriculture.

19219-212-3

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region <u>5</u>	Field sheet # <u>266289</u>
	Contract ID <u>19219</u>	Date Submitted <u>3-9-10</u>
	Project No. <u>STE C480-008</u>	
	Project Location <u>PINON CAUSEWAY TO ASPEN VILLAGE DR.</u>	

Metric units yes no

Material Type <u>SEEDING - WETLAND</u>	Field Lab phone	Cell Phone <u>SUP.</u>
Material Code (LIMS)	Item <u>212</u>	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

^{WETLAND}
 THE SEED MIX PLACED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. CERTIFIED TEST REPORTS ARE ATTACHED. A COC FROM THE MANUFACTURER IS ATTACHED. ALL SEEDS WERE TESTED WITHIN 13 MONTHS PRIOR TO THE DATE OF SEEDING. SEE FORM 473.

User ID			
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>
Date needed			
Contractor <u>CROSSFIRE LLC</u>	Supplier <u>SOUTHWEST SEED</u>		
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner		
Quantity represented <u>0.008 ACRES</u>	Previous quantity <u>0</u>	Total quantity to date <u>0.008 ACRES</u> 0.008 ACRES	
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
Sampled or inspected by (print name) <u>CLIFTON LEE PE</u>	Title <u>PROJECT ENGINEER</u>	E-mail	
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) <u>MIKE DAVIS PE</u>	Title <u>PRESIDENT-DAVIS ENGINEERING SERVICE</u>	Residency	

November 30, 2017

TO WHOM IT MAY CONCERN:

RE: Certificate of Compliance and Certified Test Report

CDOT Project No. STE C480-008
CDOT Project Code: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Contractor: Crossfire, LLC
Supplier: Southwest Seed Inc.
Quantity: Three Seed Mixes – Details included with these documents.

Seed Mixes:

Lot No # 2017.0755	Upland Pinon Causeway
Lot No # 2015.0632	Centennial Turf Mix
Lot No # 18330	Wetlands Pinon Causeway

Greetings;

This letter is to certify that all seed provided by Southwest Seed Inc. and used in the above referenced seed mixtures for Crossfire LLC have been tested at a Certified Seed Lab. Included with this letter is a copy of the seed tag showing seed quality and test dates. Also included are copies of the test analysis to validate each species of seed's viability within the last 13 months prior to the mixing of the seed mix. Questions can be directed to us at 970-565-8722.

Additionally, the following information is provided to complete a Certificate of Compliance as requested by CDOT.

- | | |
|---|--|
| 1). CDOT Project No. | STE C480-008 |
| 2). Manufacturer's Name | Suppliers Name: Southwest Seed Inc. |
| 3). Address of Manufacturing facility | 13514 Road 29, Dolores, CO 81323 |
| 4). Laboratory name & address | Multiple Labs used. See individual tests |
| 5). Name of product or assembly | Custom Mixes requested by Crossfire |
| 6). Complete description of the material | See attached Seed Mix tags |
| 7). Model No. | Not Applicable |
| 8). Lot, heat, or batch number identifying the material delivered | See attached |
| 9). Date(s) of laboratory testing | See attached |
| 10). Applicable CDOT specifications | Not applicable |



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(970) 565-8722
FAX (970) 565-2576

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents the contents of the three seed mixes

Lot No # 2017.0755	Upland Pinon Causeway (45 PLS lbs)
Lot No # 2015.0632	Centennial Turf Mix (56 BLK lbs)
Lot No # 18330	Wetlands Pinon Causeway (.21 PLS lbs)

Of seed, that will be installed on project number STE C480-008.

Robby Henes
Supplier

11/30/17
Date

Robby Henes
Southwest Seed Inc.
13514 Rd. 29
Dolores, Colorado
81323

970-565-8722
swseed@southwestseed.com

Cc: Crossfire



13514 RD 29 • DOLORES • COLORADO • 81323



Western Native Seed

P.O. Box 188 Coaldale CO 81222 - info@westernnativeseed.com - 719-942-3935

Wetlands Pinon Causeway

Lot # 18330

0.21 PLS lb

% Pure	Species	Common Name	Lot #	% Germ	% Dorm	Orig	Date
64.91%	Carex utriculata	Beaked Sedge	CARROS-16		83	UT	9/17
11.14%	Deschampsia cespitosa	Tufted Hairgrass	017-8463 / 94			Can	3/17
13.78%	Calamagrostis canadensis	Blue Joint Reedgrass	WSBJ2014A 76			Can	10/16

0.28 Bulk lbs

Noxious: None

Inert 9.92%

Crop 0.13%

Weed 0.11%

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 0.003 acre (quantity and units) of pay item 212-000020 Seeding (Wetland) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.


Contractor Rep. Signature

01/26/18
Date



Idaho State Seed Lab
P. O. Box 790
Boise, ID 83701-0790
Laboratory Report Of Analysis

C.L. "Butch" Otter
Governor

Celia R. Gould
Director

Account No. 5675	Date Received 09/22/17	Date Completed 09/27/17	Lab Number S18-1065
----------------------------	----------------------------------	-----------------------------------	-------------------------------

Information Provided by Sender	
Variety	VNS
Kind	Sedge, beaked
Genus/Species	Carex rostrata
Lot Number	CARROS-16
Class	Service
Weight: 250 lbs	

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Sedge, beaked <i>Carex rostrata</i>	-N-	-N-	-N-	-N-	-N-	-N-

Other Determinations	
TZ test <i>Sedge, beaked</i>	83 %

Tests Requested: TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the lot from which the sample was taken.
DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: 
Stacy LaMastra, Principal Seed Analyst
Idaho State Seed Testing Laboratory



Idaho State Seed Lab
 2240 Kellogg Lane
 Boise, ID 83712
 Laboratory Report Of Analysis

C.L. "Butch" Otter
 Governor

Celja R. Gould
 Director

Account No. 5675	Date Received 09/08/16	Date Completed 09/12/16	Lab Number S17-0708
---------------------	---------------------------	----------------------------	------------------------

Information Provided by Sender	
Variety	VNS
Kind	Sedge, beaked
Genus/Species	Carex rostrata
Lot Number	CARROS-16
Class	Service

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
in 3.358 grams						
Sedge, beaked <i>Carex rostrata</i>	95.83%	-N-	-N-	-N-	-N-	-N-
Weed seed	0.09%					
Crop seed	0.03%					
Inert matter	4.05%					

Other Crop Seeds in 3.358 grams	# Seeds	# per lb	Noxious Weed Seeds in 30.858 grams	None Found
Juncus spp.	29	3917	For: All States	
Spikerush, Common <i>Eleocharis palustris</i>	4	540		
Sedge, Analogue <i>Carex simulata</i>	2	270		

Weed Seeds	None Found	Other Determinations	
		TZ test <i>Sedge, beaked</i>	82 %

Remarks
 Inert Matter: Chaff, plant debris
 All States Noxious examination excludes species declared undesirable grass seed by DE, MD, NJ, NH, PA, VA and WV.

Tests Requested: All States Noxious, Purity, Purity - Other, TZ test. No other tests requested.
Services Requested: Rush

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the lot from which the sample was taken.
 DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: Stacy LaMastra
 Stacy LaMastra, Principal Seed Analyst
 Idaho State Seed Testing Laboratory

017-8463



Report of Seed Analysis
CFIA Accredited Laboratory No. 1215

101, 5906-50 Street
Leduc, Alberta T9E 0R6
Phone: (780) 980-8324
Fax: (780) 980-8375
www.seedcheck.net

LAB#: 17-78238

Customer:	Sender Information:	
	Seed Type:	Tufted Hairgrass
	Scientific Name:	(Deschampsia cespitosa)
	Variety:	Uncertified Nortran
	Lot Size:	7500 lbs
	Sampler:	Terry Andersen
	Lot#:	A1608
	APHIS:	SL-17-2960

Analyzed According to AOSA Rules and Regulations

Tests: 400 Seed AOSA Germination, (Non-Tabled), AOSA Purity, Tetrazolium.

Date Received: Mar 03, 2017		Purity Date: Mar 03, 2017	
APHIS Federal Noxious Weeds:	Per 10.04g	Other Crop Seeds:	Per 1.011g
		(Koeleria macrantha) Junegrass:	2
		(Poa pratensis) Kentucky Bluegrass:	5
Total Federal Noxious Weeds:	--		
Other Weed Seeds:			
Other Weeds found in:	1 gram		
(Poa palustris) Fowl bluegrass:	25		
ALL STATES NOXIOUS Except UGS and Hawaii in:	10 grams		
None found	0		
		Total Other Crop Seeds:	7
		Percentage Test:	1.011g
		Pure seed %	98.15
		Other crop %	0.28
		Weed Seed %	0.46
		Inert matter%	1.11
		Date of Germination:	3/16/17
		% Germination Result:	94
		% Abnormal Seedlings:	1
		% Dead Seed:	5
		In 400 seeds tested	

Advisory Tests & Remarks:

Tetrazolium % Viable: 95 Mar 06, 2017

SENIOR MEMBER OF



124
Lisa Greenan

Responsibility of the manufacturer is to ensure the seed is free from any weed seeds. The seed analyst is responsible for the detection of weed seeds in the sample. The seed analyst is not responsible for the detection of weed seeds in the sample. The seed analyst is not responsible for the detection of weed seeds in the sample. The seed analyst is not responsible for the detection of weed seeds in the sample.



Report of Seed Analysis
 CFIA Accredited Laboratory No. 1215

101, 5906-50 Street
 Leduc, Alberta T9E 0R6
 Phone: (780) 980-8324
 Fax: (780) 980-8375
 www.seedcheck.net

LAB#: 16-73584 Am(21/09/2016)

Customer:	Sender Information:	
	SeedType:	Bluejoint Reedgrass
	Scientific Name:	(Calamagrostis canadensis)
	Lot#:	WSBJ2014A
Tests: Germination , Tetrazolium,		
Test Results According to Canadian Methods & Procedures		
Date Received	Sep 09, 2016	
Date of Germination	Oct 12, 2016	
% GERMINATION	76	
Abnormal Seedlings%	1	
Dead Seed%	23	
Fresh Seed%	0	
Advisory Test / Remarks		
Tetrazolium % Viable: 74 Sep 12, 2016		

SENIOR MEMBER
 OF



124
 Lisa Greenan



NST LABS
 340 N. Main Ave
 PO Box 100
 Bridgewater, SD 57319

Phone: (605) 729-2000
 Fax: (605) 729-2001

Sender Information

Date Received: 03/02/2015
 Date Completed: 03/23/2015
 Date of Report: 03/23/2015
 Sample Number: 55985

Kind of Seed: Bluejoint
 Variety: VNS
 Lot Number: WSBJ2014-A

Purity Results in Bluejoint (<i>Calamagrostis canadensis</i>) 65.91 % Other Crops: 0.38 % Inert Material: 33.71 % Weed Seeds: 0.00 % 100.00 % 0.50 grams tested	Other Crops Kentucky bluegrass (<i>Poa pratensis</i>) 1 1718
	Weed Seeds * NONE FOUND

	Germ%	Hard%	Dorm%	Viable%	# Tested	Test Days	Temp	%PLS	TZ%
Bluejoint (<i>Calamagrostis canadensis</i>)									89

Noxious Weeds (All States Noxious) # Found Per Pound * NONE FOUND 5.40 grams tested	Additional Comments Canada Standards: Canadian Standards: (5.4g search. Listed as per 25g) No (0) Brassica crops including S. Alba in 25g. No (0) Sweetclover in 25g. Found (28) Ergot bodies (0.042g) in 25g. No (0) Soil in 25g. No (0) Canadian Prohibited Noxious in 25g. No (0) Canadian Primary Noxious in 25g. No (0) Canadian Secondary Noxious in 25g. Found (56) Other crop in 25g; (5) Slender wheatgrass, (51) Kentucky bluegrass. No (0) Other weed in 25g. Seed count= 3,780,000 seeds/lb. Origin= Washington.
--	---

Special Noxious Weeds # Found Per Pound Not Requested	UGS # Found Per Pound Not Requested
---	---

ALL TESTS CONDUCTED ACCORDING TO AOSA RULES UNLESS OTHERWISE STATED.
 VIABILITY OF UNGERMINATED SEEDS NOT DETERMINED.
 DORMANCY DETERMINED BY SUBTRACTING GERM FROM TZ.

Kevin Stahl
 Kevin Stahl, RST
 NST LABS



19219-212-4

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type SOIL CONDITIONING - FERTILIZER	Field Lab phone	Cell Phone S.U.P.
Material Code (LIMS)	Item 212	Class
Grading	Special Provisions	<input type="checkbox"/> yes
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

FERTILIZER USED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER.
 THE MANUFACTURER'S ^{CTR}COE IS ATTACHED, A ^{COC}CTR IS ALSO ATTACHED, FROM THE SUPPLIER

User ID		
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
	Emergency <input type="checkbox"/>	Date needed

Contractor CROSSFIRE, LLC	Supplier TRITON ORGANIX SUPPLY
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 2.57 ACRES	Previous quantity 0	Total quantity to date 2.57 ACRES
---	-------------------------------	---

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
--	--	-----	------

Sampled or inspected by (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT- DAVIS ENGINEERING SERVICE	Residency

TRITON

ENVIRONMENTAL

5433 NEWPORT STREET • COMMERCE CITY, CO 80022 • (303) 945-7588 OFFICE • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219

MANUFACTURER: ORGANIX SUPPLYL, LLC; 15121 WELD COUNTY ROAD 32 PLATTEVILLE, CO 80651

LABORATORY NAME/ADDRESS: MIDWEST LABORATORIES, INC.; 13611 B STREET OMAHA, NEBRASKA

TYPE OF MATERIAL: SILT RICHLAWN ORGANIC 5-3-2 - 40 LB BAG

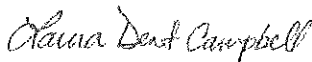
THIS PRODUCT IS AN ALL NATURAL, ORGANIC FERTILIZER CONTAINING A SLOW RELEASE INTROGEN AND ORGANIC PHOSPHORUS. RICHLAWN 5-3-2 RESTORES DEPLETED SOILS BY AADDING ESSENTIAL NURTIENTS TO BUILD A SUSTAINABLE ENVIRONMENT IN WHICH TO ESTABLISH VEGETATION QUICKLY.

LOT/BATCH NUMBER: 10203

SPECIFICATIONS: SEE ATTACHED DATA SHEET AND TESTING DATA FROM RICHLAWN ORGANIX

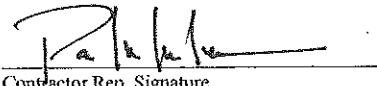
WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC SECTION 212 SEEDING, FERTILIZER, SOIL CONDITIONER AND SODDING. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL



Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2.57 acres (quantity and units) of pay item 212-00032 Soil Conditioning (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.



Contractor Rep. Signature

01/26/18
Date

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item number and Description) that will be installed on project number STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE

Soil Amendments



TRITON

ENVIRONMENTAL

RICHLAWN FERTILIZER

5-3-2

Richlawn 5-3-2 is a CDOT Approved Natural, Organic Fertilizer containing a slow release Nitrogen and organic phosphorus. Richlawn 5-3-2 restores depleted soils by adding essential nutrients to build a sustainable environment in which to establish vegetation quickly.

Manufactured by Richlawn Turf Food, LLC
15121 WCR 32, Platteville, CO 80651
Net Weight 50 Lbs (22.68 Kg.)

Guaranteed Analysis

Total Nitrogen(N)	5.0%
4.60% Water Insoluble Nitrogen*	
.40% Water Soluble Organic Nitrogen	
Available Phosphate	
(P ₂ O ₅)	3.0%
Soluble Potash (K ₂ O)	2.0%
Calcium (Ca)	4.0%

Plant Nutrient Sources: Dried Poultry Manure.

*4.60% Slowly Available Nitrogen from Poultry Manure.

The Benefits of Richlawn 5-3-2

- Increases the Nutrient and water holding capacity of the existing soil.
- Increases Soil Porosity which promotes superior Root Establishment.
- Extended release nutrients allow for fertilization over a longer period of time.

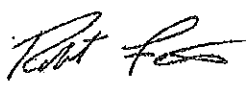


DISTRIBUTED BY:
TRITON ENVIRONMENTAL
5433 NEWPORT STREET
COMMERCE CITY, CO 80022
303.945.7588 (O) 303.945.7579 (F)



13611 B Street Omaha, Nebraska 68144-3693 (402) 334-7770 FAX (402) 334-9121 www.midwestlabs.com

Lab # 2733113 **Report of Analysis** Report Number: 17-293-4044 V2

Account: 26060	MIKE HOOPS ORGANIX SUPPLY 15121 COUNTY ROAD 32 PLATTEVILLE CO 80651	 Robert Ferris Account Manager 402-829-9871
Date Sampled: Date Received: Sample ID:	2017-10-09 2017-10-13 5-3-2	
		DEHYDRATED POULTRY MANUR

		Analysis (as rec'd)	Analysis (dry weight)	Total content, lbs per ton (as rec'd)
NUTRIENTS				
Nitrogen				
Total Nitrogen	%	4.96	5.19	99.2
Organic Nitrogen	%	4.66	4.87	93.2
Ammonium Nitrogen	%	0.301	0.315	6.0
Nitrate Nitrogen	%	< 0.01		
Major and Secondary Nutrients				
Phosphorus as P ₂ O ₅	%	3.92	4.10	78.4
Potassium as K ₂ O	%	2.61	2.76	52.8
Sulfur	%	0.52	0.54	10.4
Calcium	%	7.44	7.78	149.8
Magnesium	%	0.60	0.63	12.0
Sodium	%	0.280	0.293	5.6
Micronutrients				
Zinc	ppm	533	558	1.1
Iron	ppm	1120	1172	2.2
Manganese	ppm	539	564	1.1
Copper	ppm	111	116	0.2
Boron	ppm	< 100		
OTHER PROPERTIES				
Moisture	%	4.40		
Total Solids	%	95.60		1912.0
Organic Matter	%	64.60	67.57	1292.0
Ash	%	31.10	32.53	622.0
C:N Ratio		7 : 1		
Total Carbon	%	34.27	35.85	
Chloride	%	0.45	0.47	
pH		6.8		

*Crossfire's Certified Test Report
Certification Statement on Back*

19219-212-5

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 200289
	Contract ID 19219	Date Submitted 3-9-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type SOIL CONDITIONING - HUMATES	Field Lab phone	Cell Phone S.U.P.
Material Code (LIMS)	Item 212	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

HUMATES USED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER.
THE ^{SUPPLIERS} ~~MANUFACTURERS~~ COC IS ATTACHED, A ^{TEST REPORT} CTR IS ALSO ATTACHED FROM THE MANUFACTURER.

Jser ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)
Sample ID (#6)	

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed	

Contractor CROSSFILE, LLC	Supplier TRITON MESA VERDE RESOURCES	
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner	
Quantity represented 2.57 ACRES	Previous quantity 0	Total quantity to date 2.57 ACRES

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail	
Supervisor (Pro./Res./Matts. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT- DAVIS ENGINEERING SERVICE	Residency	

TRITON

ENVIRONMENTAL

5433 NEWPORT STREET • COMMERCE CITY, CO 80022 • (303) 945-7588 OFFICE • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219

MANUFACTURER: MESA VERDE RESOURCES; P.O. BOX 1368 PLACITAS, NM 87043

LABORATORY NAME/ADDRESS: TEXAS PLANT & SOIL LAB; 4915 W. MONTE CRISTO EDINBRUG, TX

TYPE OF MATERIAL: HUMATE; 50 LB BAG

THIS PRODUCT IS A TYPE OF SOIL AMENDMENT COMPRISED OF HUMIC ACID AND FULVIC ACID WHICH ADDS ORGANIC MATTER TO THE SOIL IN ADDITION TO PROMOTING SOIL POROSITY.

LOT/BATCH NUMBER: 10061

DATE OF TEST: N/A

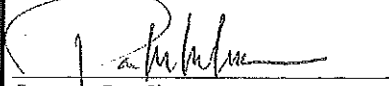
SPECIFICATIONS: SEE ATTACHED SPECIFICATION SHEET

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC 212 SOIL CONDITIONER. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

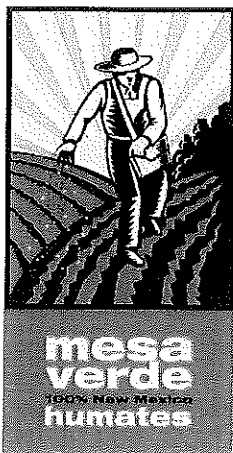
Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2.57 acres (quantity and units) of pay item 212-00032 Soil Conditioning (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

2/4/18
Date

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item number and Description) that will be installed on project number STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



MESA VERDE RESOURCES

PO Box 1368
Placitas, NM 87043

Jan 23, 2018

Triton Environmental
5433 Newport Street
Commerce City, CO 80022

RE: Mesa Verde Humates – Certificate of Compliance

We hereby certify that Mesa Verde Humates comply with the following specifications:

Oxidized lignite (leonardite):	100%
Bulk density:	47-55 lbs./cu. ft.
Moisture:	17-20%
Particle size:	-1/4"
Carbon Content:	38-54% (dry wt. basis)
Organic Matter:	80% minimum (dry wt. basis)
Inert Ingredients:	20% maximum (dry wt. basis)
pH:	3.7
Humic acid content:	55% minimum (dry wt. basis)

All components are naturally-occurring materials

Sincerely,

Joel C. Reid
Sales Manager

Mesa Verde Resources
info@humates.com · humates.com
P.O. Box 1368 · Placitas, NM 87043
Phone: 505-771-4444 · Fax: 505-771-4452
Advancing Sustainable Agriculture Naturally



www.tpsl.biz

TEXAS PLANT & SOIL LAB

4915 W. Monte Cristo ♦ Edinburg, TX 78541-8852 ♦
 (956) 383-0739 ♦ FX (956) 383-0730

TOTAL NUTRIENT ANALYSIS				
Date Sampled	Received	Reported	Lab #	
	4/10/2017	4/21/2017	37587	

Mesa Verde Resources
 41 Cabezon Rd
 San Ysidro, NM 87053

janelle@humates.com; jeff@humates.com

Sample ID: 55 Chip

ANALYSIS RESULTS

VARIABLE MEASURED	As Sent	Dry Wt.	lbs/ton Dry Wt.	Notations
Moisture (%)		!!!!!!!		TMECC 03.09-A
Dry Matter (%)	100	!!!!!!!		TMECC 03.09-A
Humic Acid (% HA)		65.19		
pH (Std Unit)		3.70		
Nitrogen (%N)	0.92	0.92	18.30	TMECC 04.02-A
Nitrate (ppm NO ₃)	8	8.018	0.02	
Phosphorous (%P)	0.10	0.10	2.08	TMECC 04.12-B
Total Phosphate(% P ₂ O ₅)	0.24	0.24	4.76	
Phosphate (ppm PO ₄)	166	165.7143	0.33	
Potassium (% K)	0.01	0.01	0.19	TMECC 04.12-B
Total Potash(% K ₂ O)	0.01	0.01	0.23	
Sodium (% Na)	0.18	0.18	3.66	TMECC 04.12-B
Calcium (% Ca)	0.59	0.59	11.76	TMECC 04.12-B
Magnesium (% Mg)	0.10	0.10	2.02	TMECC 04.12-B
Zinc (ppm Zn)	33	33	0.07	TMECC 04.12-B
Iron (ppm Fe)	5357	5357	10.71	TMECC 04.12-B
Manganese (ppm Mn)	28	28	0.06	TMECC 04.12-B
Copper (ppm Cu)	30	30	0.06	TMECC 04.12-B
Boron (ppm B)	33	33	0.07	TMECC 04.12-B
Sulfur (% S)	0.40	0.40	7.92	TMECC 04.12-B

Interpretations & Recommendations:

Humic Acid (% HA)	65.19
pH (Std Unit)	3.70
Nitrogen (% N)	0.92
Phosphate (% P ₂ O ₅)	0.24
Potash (% K ₂ O)	0.01

TPSL results and reports are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any publications or other public announcements without obtaining our prior written authorization.

© Reg. U.S. Pat. & Tm. Off.

19219-213-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-10
	Project No. STE C430-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type MULCHING (WEED FREE HAY)	Field Lab phone	Cell Phone S.U.P.
Material Code (LIMS)	Item 213	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THIS ITEM WAS DELETED FROM THE PROJECT BY SPEED MEMO #09

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)
Sample ID (#6)	

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>		Date needed

Contractor CROSSFIRE, LLC	Supplier	
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner	
Quantity represented 0	Previous quantity 0	Total quantity to date 0

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail	
Supervisor (Pro./Res./Matts. Engr./Maint. Supt.) (print name) NICE DAVIS, PE	Title PRESIDENT - DAVIS ENGINEERING	Residency	

19219-213-2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type SPRAY-ON MULCHING BLANKET	Field Lab phone	Cell Phone S.U.P.
Material Code (LIMS)	Item 213	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE SPRAY-ON MULCHING BLANKET WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE ^{SUPPLIER'S} MANUFACTURER'S COC IS ATTACHED.

THIS PRODUCT WAS REVIEWED & APPROVED WITH CDOT-ENVIRONMENTAL STAFF AND WITH THE PROJECT ENGINEER. SEE FORM 473

ser ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	Sample ID (#4)
Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed
---	-------------

Contractor CROSSFIRE, LLC	Supplier TRITON PROFILE PRODUCTS LLC
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 2.57 ACRES	Previous quantity 0	Total quantity to date 2.57 ACRES
--	----------------------------	--

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MICHAEL DAVIS, PE	Title PRESIDENT - DAVIS ENGINEERING	Residency

TRITON ENVIRONMENTAL

5433 NEWPORT STREET • COMMERCE CITY, CO 80022 • (303) 945-7588 OFFICE • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 -- PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219

MANUFACTURER: PROFILE; P.O. BOX 842365 BOSTON, MA 02284

LABORATORY NAME/ADDRESS: TEXAS PLANT & SOIL LAB; 4915 W. MONTE CRISTO EDINBRUG, TX

TYPE OF MATERIAL: ECOFLEX; 50 LB BALE

THIS PRODUCT IS A HYDROMULCH WHICH CLASSIFIES AS A SPRAY ON MULCH BLANKET PER CDOT SPECIFICATION. IT IS A HYDRAULICALLY APPLIED MATRIX CONTAINING FIBERS, WATER SOLUBLE CROSS-LINKING TACKIFIERS, REINFORCING NATURAL AND/OR SYNTHETIC INTERLOCKING FIBERS.

LOT/BATCH NUMBER: 10413

DATE OF TEST: N/A

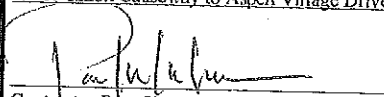
SPECIFICATIONS: SEE ATTACHED SPECIFICATION SHEET

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC 213 MULCHING. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2.57 acres (quantity and units) of pay item 213 - 00012 Spray-On Mulch BIK (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

2/14/18
Date

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item number and Description) that will be

installed on project number STE C480-008 - PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



Solutions for your Environment

February 19, 2018

Clifton Lee
Davis Engineering Service, Inc.
188 S. 8th Street
P.O. Box 1208
Pagosa Springs, CO 81147

Re: Letter of Certification, Profile EcoFlex High Performance Flexible Growth Medium (HP-FGM) for Project: CDOT STE C480-008

Mr. Lee,

This letter is to certify that Profile Products, LLC manufactures the product marketed as EcoFlex HP-FGM. EcoFlex HP-FGM is made in the U.S.A. and has been subjected to Profile Product's Quality Assurance and Quality Control program and is manufactured to meet or exceed all technical and packaging requirements listed on the product datasheet.

Additionally, EcoFlex HP-FGM properties fall within the following 2017 CDOT section 213.02(f) Spray-on Mulch Blanket (Type 1) requirements:

- A hydraulically applied matrix containing organic fibers, water soluble cross-linked tackifier, reinforcing natural and/or synthetic interlocking fibers.
Organic Fibers 71% Min. per ASTM D2974*
Cross linked Tackifiers 10% +/- 2% Min.
Reinforcing Interlocking Fibers 10% +/- 1% Min.
Biodegradability 100% per ASTM D5338*
Ground Cover @ Application Rate 90% Min. per ASTM D6567
Functional Longevity 12 Months Min.
Cure Time < 8 hours
Does not contain lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, or chlorine bleach.
Organic fibers and reinforcing interlocking fibers are not produced from sawdust, cardboard, paper, or paper by-products.

*Water Tech Labs (P.O. Box 1056 Granite Falls, NC 28630) is utilized for Third-Party certifications. Testing conducted annually, most recent analysis Jan 20, 2018. Contact Profile for further information.

Please contact me at (847) 353-2164 or rhiggins@profileproducts.com if you need additional information or have questions regarding this product.

Sincerely,

Rachel Higgins (handwritten signature)

Rachel Higgins, CESSWI
Technical Services Associate
Profile Products LLC

This letter of certification or compliance has been specifically developed for the above referenced project or general specification. This document is not to be reproduced, modified, or used otherwise without the expressed written consent of Profile Products LLC.

19219-304-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-9-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.	

Metric units yes no

Material Type CLASS 2 ABC	Field Lab phone	Cell Phone S.U.P.
Material Code (LIMS)	Item 304	Class 2
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

CLASS 6 ABC WAS PLACED IN LIEU OF CLASS 2 AND APPROVED BY THE PROJECT ENGINEER. THE MATERIAL WAS PLACED AS SUBGRADE STABILIZATION IN AREAS OF MUCK-EXCAVATION.

SEE THE FORM 473 FOR ADDITIONAL INFORMATION.

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFIRE LLC	Supplier CROSSFIRE LLC
---------------------------------	-------------------------------

Sampled from (Pit, roadway, windrow, stock, etc.) IN-PLACE (LOOSE LIFT)	Pit name or owner LA BOCA PIEDRA PIT
--	---

Quantity represented 50.5 CY	Previous quantity 0	Total quantity to date 50.5 CY
-------------------------------------	----------------------------	---------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) ERIC HOWES, TRAUTNER GEOTECH.	Title QA TESTER	E-mail
---	------------------------	--------

Supervisor (Pro./Res./Mats. Engr./Maint. Supl.) (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	Residency
--	-------------------------------	-----------

**COLORADO DEPARTMENT OF TRANSPORTATION
FIELD TESTS OF BASE AGGREGATES, FILLERS,
PAVING AND MISCELLANEOUS AGGREGATES**

Contract ID 19219	Region 5	Field sheet # 101923
Project No. STE C430-008		Date Submitted 7-20-17
Project Location PINON CAUSEWAY TO AVD-S.U.P.		Item 304

User ID:

SMM/LIMS Sampler ID (or Test # [Date])	Station	Tons (t) or Yards (m)	Field density	Lab max density	% Rel. Comp.	Total moist.					#4	#8	#30	#50	#100	#200	L.L.	P.I.	
QA#1 7-20-17	24+54	1000	135.2	137.8	98	6.5													
QA#2 7-27-17	24+69	1000	133.2	137.8	97	7.7													
7-25-17																			

Sheet Total	2000	Specifications: $\geq 95\%$ 5.0 to 9.0%	Final report: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Previous Total	0		
Total to Date	2000		

Spec. deviations: yes no P= _____ % for lot # _____

Items:
 206 Structure Backfill Class 1 _____
 206 Filter Material Class _____
 304 ABC Class 2
 307 Treated Subgrade _____
 403 HMA Grading _____
 403 SMA _____
 409 Cover Coat _____
 Other Material: _____

Remarks
 CLASS 6 PLACED IN LIEU OF CLASS 2 FOR
 MUCK-EX FOR WALL FOOTING

Action taken

Source (pit): CROSSFIRE PIEDRA PIT

Project Tester (print name) ERIC HOWES, TRAINING GEOTECH	Title QA TESTER
PE Approved by (print name) Clifton Lee Davis Engineering Service (LA)	Title Project Engineer

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE-0400-003 Region 5 Contract ID 19219
 Project Location Pinon Causeway TO AUD SUP

Pit Name Piedra Material embankment Class CLASS 6/2 Item # CP 80 Date 7-20-17
MUCK EX TO BE MOVED FOR EMB.

Sample ID (Test #) 81 Tested by (print name) Eric Hayes Station/offset 24+34 Elevation / Depth Top of grade

Gauge ID 28771 Moisture Standard Count 710 Density Standard Count 280 Transmission Depth, in. 6 Soil Classification A-1-A(0)

Curve No. 3961-A Maximum Dry Density 137.8 Optimum Moisture Content 7.0 AASHTO T99 of T180 180 Method A of D 1

Class 6 - CURVE 1		Field Test Data		Density		M/D Gauge Moisture Check	
Gauge Reading	Moisture					Wet Soil wt. + pan	
(1) % Moisture	<u>6.4</u>	Wet Dens.	<u>144.2</u>	Dry Dens.	<u>135.5</u>		
(2) % Moisture	<u>6.5</u>	Wet Dens.	<u>144.0</u>	Dry Dens.	<u>135.2</u>		
(3) % Moisture	<u>6.4</u>	Wet Dens.	<u>143.6</u>	Dry Dens.	<u>135.0</u>		
(4) % Moisture	<u>6.6</u>	Wet Dens.	<u>143.9</u>	Dry Dens.	<u>135.0</u>		
Average	<u>6.5</u>	Average	<u>143.9</u>	Average	<u>135.2</u>		

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried
 Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC
 Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock
 Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil
 Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

$$[(\% \text{ Soil} \times \text{Max dry density of Soil}) + (\% \text{ Rock} \times \text{CF} \times 62.4 \times \text{Sp Gr Rock})] \div 100$$
 For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95
 % Soil X _____ Maximum Dry Density of soil = _____
 % Rock X _____ Specific Gravity of Rock = _____
 Sum = _____ ÷ 100 = _____
 Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

$$[(\% \text{ Soil} \times \text{OMC of Soil}) + (\% \text{ Rock} \times \text{Absorption of Rock})] \div 100$$
 % Soil X _____ Optimum MC of Soil = _____
 % Rock X _____ Absorption of Rock = _____
 Sum = _____ ÷ 100 = _____
 Corrected Optimum Moisture Content, %

1 Point Moisture Determination
 Wet Soil wt. + pan _____
 Dry Soil wt. + pan _____
 Pan wt. _____
 Dry soil wt. _____
 Water wt. _____
 % Moisture = _____

1 Point Check Compaction Cylinder Density Data
 Gross wt. _____ Volume of _____
 - Tare wt. _____ Mold _____ Wet Density _____ Moisture Content _____ Dry Density _____
 Net wt. _____ ÷ _____ = _____ ÷ (100 + _____ %H₂O)x100= _____

Percent Compaction calculation
 Field Dry Density 135.2 ÷ 137.8 (Corrected Maximum dry density) x 100 = 98.1 % Relative Compaction
 Specifications: Moisture 5.0% to 9.0% Compaction _____ Minimum 95.0 %

Remarks: notes by Craig Campbell FOR THE WALL AT ST. 24+26 TO 25+03
 NOTE: THE FOOTING EXCAVATION WAS MUCKED OUT AFTER MONSOON RAINS AND THE ELEVATION FOR BOTTOM OF FOOTING WAS RE-ESTABLISHED WITH CLASS 6/2

54748 mt

COLORADO DEPARTMENT OF TRANSPORTATION				Project No.	Region	Contract ID
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION				Ste 480-007	5	19219
				Project Location		
				Pinar Trail TO AVO SUP		
Pit Name	Material	Class	Item	Date		
Piedra	MUCK EX FOR EMBANKMENT	CLASS 6-2 FOR EMBANKMENT	INCIDENTAL TO ITEM 601-wall	7-25-17		
Sample ID (Test #)		Tested by (print name)		Station/offset	Elevation / Depth	
202		Eric Howes		#169	Bottom of Footing	
Gauge ID	Moisture Standard Count	Density Standard Count	Transmission Depth, in.	Soil Classification		
2771	701	2232	Y	A-1-a(0)		
Curve No.	Maximum Dry Density	Optimum Moisture Content	AASHTO T99 or T180	Method A or D		
3901-A	137.8	7.0	(T180)	D		

CLASS 6-CURVE 1

Gauge Reading	Field Test Data				M/D Gauge Moisture Check	
	Moisture	Wet Density		Density	Wet Soil wt. + pan	Dry Soil wt. + pan
(1) % Moisture	7.6	Wet Dens.	143.2	Dry Dens.	133.6	
(2) % Moisture	7.6	Wet Dens.	143.4	Dry Dens.	133.3	
(3) % Moisture	7.5	Wet Dens.	143.6	Dry Dens.	133.5	
(4) % Moisture	7.7	Wet Dens.	143.2	Dry Dens.	132.9	
Average	7.7	Average	143.4	Average	133.2	

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil	X	Maximum Dry Density of soil =		Corrected Maximum Dry Density
% Rock	X	Specific Gravity of Rock =		
Sum =			+ 100 =	

Optimum Moisture Correction Calculations				1 Point Moisture Determination	
[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100				Wet Soil wt. + pan	
% Soil	X	Optimum MC of Soil =		Dry Soil wt. + pan	
% Rock	X	Absorption of Rock =		Pan wt.	
Sum =				Dry soil wt.	
Corrected Optimum Moisture Content, %			÷ 100 =	Water wt.	
				% Moisture =	

1 Point Check Compaction Cylinder Density Data

Gross wt.	Volume of	Wet Density	Moisture Content	Dry Density
- Tare wt.	Mold			
Net wt.	÷	=	÷ (100 + %H ₂ O)x100=	

Percent Compaction calculation

Field Dry Density 133.2 ÷ 137.8 (Corrected Maximum dry density) x 100 = 96.7% Relative Compaction

Specifications: Moisture 5.0 TO 9.0 Compaction Minimum 95.0 %

Remarks: NATIVE MATERIAL TESTED AT BOTTOM OF FOOTING ON 7-14-17 WAS REMOVED AS "MUCK EX" AND REPLACED WITH CLASS 6-2

J BY G. DEJEN

**COLORADO DEPARTMENT OF TRANSPORTATION
FIELD TESTS OF BASE AGGREGATES, FILLERS,
PAVING AND MISCELLANEOUS AGGREGATES**

Contract ID: 19219
Region: 5
Field sheet #: 101922
Project No.: STE 0400-008
Date Submitted: 3-9-18
Project Location: PINON CAUSEWAY TO ASPEN VILLAGE DR., S.U.P.
Item 304 - CLASS 2 ABC

User ID: 4'' 3'' 2'' 1.5''

SMM/LIMS Sampler ID (or Test # [Date])	Station	Tons (t) or Yards (m)	Field density	Lab max density	% Rel. Comp.	Total moist.	1"	3/4"	1/2"	3/8"	#4	#8	#30	#50	#100	#200	L.L.	P.I.
QA#1 7-20-17	24+40	1000	100	100	100	100	100	100	92	81	60	50	37	30	21	17.1	22	5

Sheet Total: 1000
Previous Total: 0
Total to Date: 1000
Specifications: 100-100 / 95-100
Final report: yes no

Spec. deviations: yes no
Items:
206 Structure Backfill Class 1 _____
206 Filter Material Class _____
304 ABC Class 2
307 Treated Subgrade _____
403 HMA Grading _____
403 SMA _____
409 Cover Coat _____
Other Material: _____

P = 5.7456 % for lot # 1
Remarks: MATERIAL OUT OF SPEC ON THE #200 SIEVE
Action taken: PRICE REDUCTION APPLIED - SEE FORM 473

Source (pit): PIEDRA PIT - CROSSFIRE
Project Tester (print name): ERIC HOWES
Title: QA TESTER
PE Approved by (print name): Clifton Lee
Title: Project Engineer

**COLORADO DEPARTMENT OF TRANSPORTATION
SIEVE ANALYSIS FOR AGGREGATES
NOT SPLIT ON THE NO. 4 SIEVE**

Pinon CAUSEWAY Lab No. **3977-A**
54748 mt

Project No. **STE-0400-008** Contract ID **19219**
Project Location: *to PLACE PC TO AND SUP Pagoda SPRING*
Pit Name: *Piedra Pit* 3
Item **304** Class **2/8** Material **3/4 abc**

Sampled Location 24748 (REINFORCING WALL)					Sampled Location				
Sample ID 3/4 abc, lab number QA#1					Sample ID				
Specimen Dry Weight B 2098.6		Date 7/20/17		# OF VERIFIED SAMPLES	Specimen Dry Weight B		Date		Test #
Sieve 4"	Weight 0	Percent Retained 0	Percent Passing 100	Specs 100	Sieve	Weight	Percent Retained	Percent Passing	Specs
3"	0	0	100	95-100	3"				
2"	0	0	100		2"				
1 1/2"	0	0	100		1 1/2"				
1"	0	0	100		1"				
3/4"	0	0	100	100	3/4"				
1/2"	168.3	8.1%	91.9%		1/2"				
3/8"	392.5	18.7%	81.3%		3/8"				
#4	831.7	39.6%	60.4%	30-65	#4				
#8 / #10	1043.2 1091.2	49.7% 52.9%	50.3% 48.0%	25-55	#8 / #10				
#16	1192.8	57.3%	42.8%		#16				
#30 / #40	1301.2 1381.7	63.0% 65.8%	37.0% 34.2%		#30 / #40				
#50	1460.4	69.6%	30.4%		#50				
#100	1655.4	78.9%	21.1%		#100				
#200	1738.7	82.9%	17.1%	3-15	#200				
Pan	1784.0	(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash]			Pan	(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash]			
- #200	314.5	(1784.0 - 1784.0) ÷ (1784.0) x 100 = 0.00%			- #200	() ÷ () x 100 = %			
TSW	2098.6				TSW				
Gradation Sample					Moisture Sample				
Pan ID:					Pan ID:				
Wet Wt. + Pan: 2619.4					Wet Wt. + Pan: 2686.2				
Dry Wt. + Pan: 2495.6					Dry Wt. + Pan:				
Pan Wt: 397.0					Pan Wt: 619.4				
Wet Wt. A: 2222.4					Wet Wt. A:				
Dry Wt. B: 2098.6					Dry Wt. B:				
Washed Dry Wt. and pan: 2181.1					Washed Dry Wt. and pan:				
- #200 Lost: 314.5					- #200 Lost:				
Mat'l Seived: 1784.0					Mat'l Seived:				
% H ₂ O: 5.9					% H ₂ O:				
Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight					Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight				
A 2222.4 ÷ (100 + 5.9) x 100 = B 2098.6					A ÷ (100 +) x 100 = B				
Sampled By: Eric Howes					Sampled By:				
Tested By: Gabe Julevich					Tested By:				

Note: Save all material until calculations are complete in case a retest is necessary. Previous editions are obsolete and may not be used. CDOT Form #565 5/14

SEE FORM 473

PROJECT NO: STE-C490-000/19219

TRAUTNER GEOTECHNICAL

Atterberg Limits - ASTM 4318

PROJECT: Pinon Creek Hwy TO AND SUP PROJECT#: 54748 mt Date: 7-20-17

SAMPLE DESCRIPTION: 3/4" - ABC PROPOSED CLASS 6/2 SOURCE: Predra Pit Lab Number: 3977-A GO

LOCATION: Belt Sample, On-site Stockpile, Stockpile at Pit,

Windrow, Loose In-place, Test Bore, Other:

Sample Prep : Wet or Dry (see ASTM)

Moisture Condition By: Greg Jadrnych Date: 07/20/17

Tested By: Greg Jadrnych 07/21

VERIFICATION SAMPLE 1/QA#1

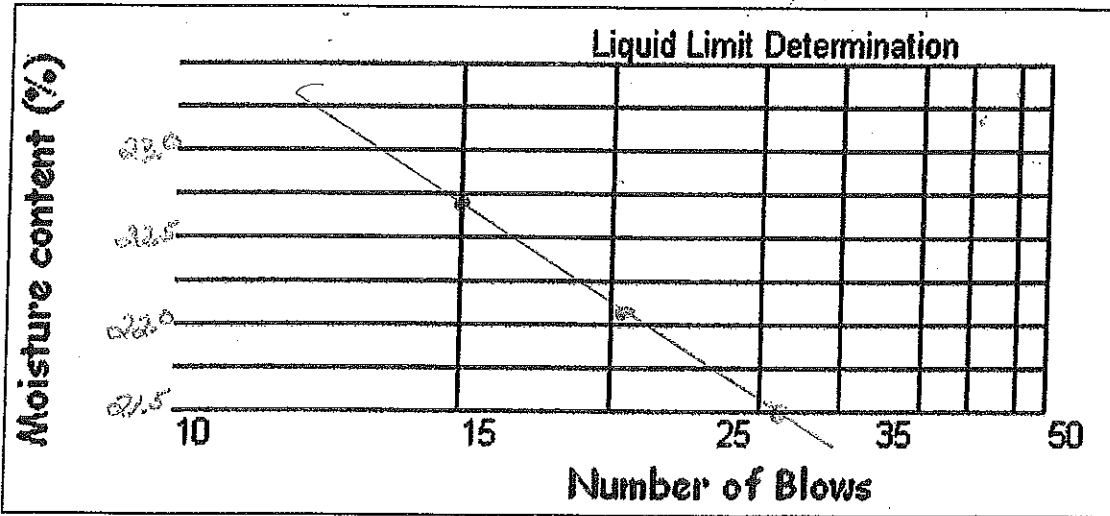
Liquid Limit Determination	Minimum 3 Trials		
Required Blows	15 - 25	20 - 30	25 - 35
Can Number	<u>B</u>	<u>P</u>	<u>R</u>
Wt. of Wet Soil + Can	<u>28.75</u>	<u>27.79</u>	<u>30.00</u>
Wt. of Dry Soil + Can	<u>26.12</u>	<u>25.41</u>	<u>27.26</u>
Wt. of Can	<u>14.54</u>	<u>14.62</u>	<u>14.51</u>
Wt. of Dry Soil	<u>11.58</u>	<u>10.79</u>	<u>12.75</u>
Wt. of Moisture	<u>2.63</u>	<u>2.38</u>	<u>2.74</u>
Water Content, w%	<u>22.7</u>	<u>22.5</u>	<u>21.5</u>
No. of Blows, N	<u>15</u>	<u>21</u>	<u>26</u>

$$LL = W\% \left(\frac{N}{25} \right)^{-1.21}$$

Liquid Limit: 22

Plastic Limit: 17

Plasticity Index: 5



Plastic Limit Determination	Minimum 3 Trials		
Can Number:	<u>C</u>	<u>E</u>	
Wt. of Wet Soil + Can	<u>24.57</u>	<u>23.92</u>	
Wt. of Dry Soil + Can	<u>23.10</u>	<u>22.55</u>	
Wt. of Can	<u>14.59</u>	<u>14.55</u>	
Wt. of Dry Soil	<u>8.51</u>	<u>8.00</u>	
Wt. of Moisture	<u>1.47</u>	<u>1.37</u>	
Water Content, w%	<u>17.3</u>	<u>17.0</u>	

Remarks: calcs. & by Corin Campbell

19219-304-2

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region 5	Field sheet # 266289
Contract ID 19219	Date Submitted 3-10-18
Project No. STE C480-008	
Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. S.U.P.	

Metric units yes no

Material Type ABC	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 304	Class 6
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

CLASS 6 ABC INSTALLED ON THE PROJECT WAS TESTED BY
QA TESTERS AND FIELD INSPECTED BY THE PROJECT ENGINEER.

SEE THE FORM 473 FOR ADDITIONAL INFORMATION.

.ser ID		
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFIRE, LLC	Supplier CROSSFIRE LLC
----------------------------------	-------------------------------

Sampled from (Pit, roadway, windrow, stock, etc.) IN-PLACE UNCOMPACTED LIFT	Pit name or owner PIEDRA PIT & LA BORA PIT
--	---

Quantity represented 1402.4 cy	Previous quantity 0	Total quantity to date 1402.4 cy
---------------------------------------	----------------------------	---

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) TRAUTNER GEOTECH	Title QA TESTERS	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	Residency

PROJECT: PINON CAUSEWAY TO ASPEN VILLAGE	SUBMITTAL NO: 304-06007.1
CLIENT'S PROJECT NO. STE C480-008	DATE: 6/22/2017
Project Code (SA) 19219	DATES OF PREVIOUS SUBMISSIONS:
CONTRACTOR: Crossfire, LLC	
SUPPLIER: Crossfire	MANUFACTURER: Crossfire
SPECIFICATION NO.: 304-06007	DRAWING NO.:
IS THIS A LONG LEAD TIME ITEM? YES NO X	
IS THIS ITEM ON THE APPROVED PRODUCTS LIST? YES X NO <input type="checkbox"/>	
ARE THERE ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS? YES <input type="checkbox"/> NO X	

Explain:

PRODUCT DESCRIPTION:

Aggregate Base Class 6

CONTRACTOR'S COMMENTS

SIGNATURE:



DATE: 6/22/2017

SUBMITTAL REVIEW

- FURNISH AS SUBMITTED REJECTED/RESUBMIT
 FURNISH AS CORRECTED SEE ATTACHED COMMENTS *

Corrections or comments made to the submitted documents during this review do not relieve the Contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

Davis Engineering Service, Inc.

By:  Date: 7/3/2017

Engineer's Stamp and Review Comments

* Comments - Liquid limit results not shown on provided data sheets. Liquid limit shall not be greater than 30.

I hereby certify under perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number STE C480-008

Contractor _____ Date _____

TRAUTNER GEOTECH LLC

Project: Crossfire Aggregates - Piedra Pit
 Project No: 54589MT

sieve analysis of aggregates - Class 6 ABC						
date	3/28/2017	3/30/2017				Specs
P. O. Number						
sieve size						% passing
3/4"	100	100				100 95-100%*
1/2"	90	93				
3/8"	78	84				
#4	57	62				30-65
#8	44	47				25-55
#10	41	44				
#16	35	38				
#30	28	31				
#40	25	28				
#50	21	25				
#100	14	16				
#200	9.7	11.0				3-12 5-15*
Liquid Limit	NV	NV				30 max
Plastic Limit						
PI	NP	NP				6 max
2 Fractured Faces + #4						
Lab No.	3874-A	3874-B				
location	Belt	Belt				

* Per CDOT Standard Special Provision of Section 703, dated October 20, 2016

FOR HV REFERENCE ONLY

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents _____ (quantity and units) of pay item _____ (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

Date

8/01/17

L.A. ABRASION ASTM C131

Grading B

After 500 total revolutions percent (R500) loss = 19%

Sample Identification: **Class 6 ABC**
Crossfire Aggregate Services—La Boca Pit

Project: Crossfire La Boca Gravel Pit
Engineer Technician: G. Jadrych
Project Number: 54590MT
Date: 7/28/17
Laboratory Number: 3990-A

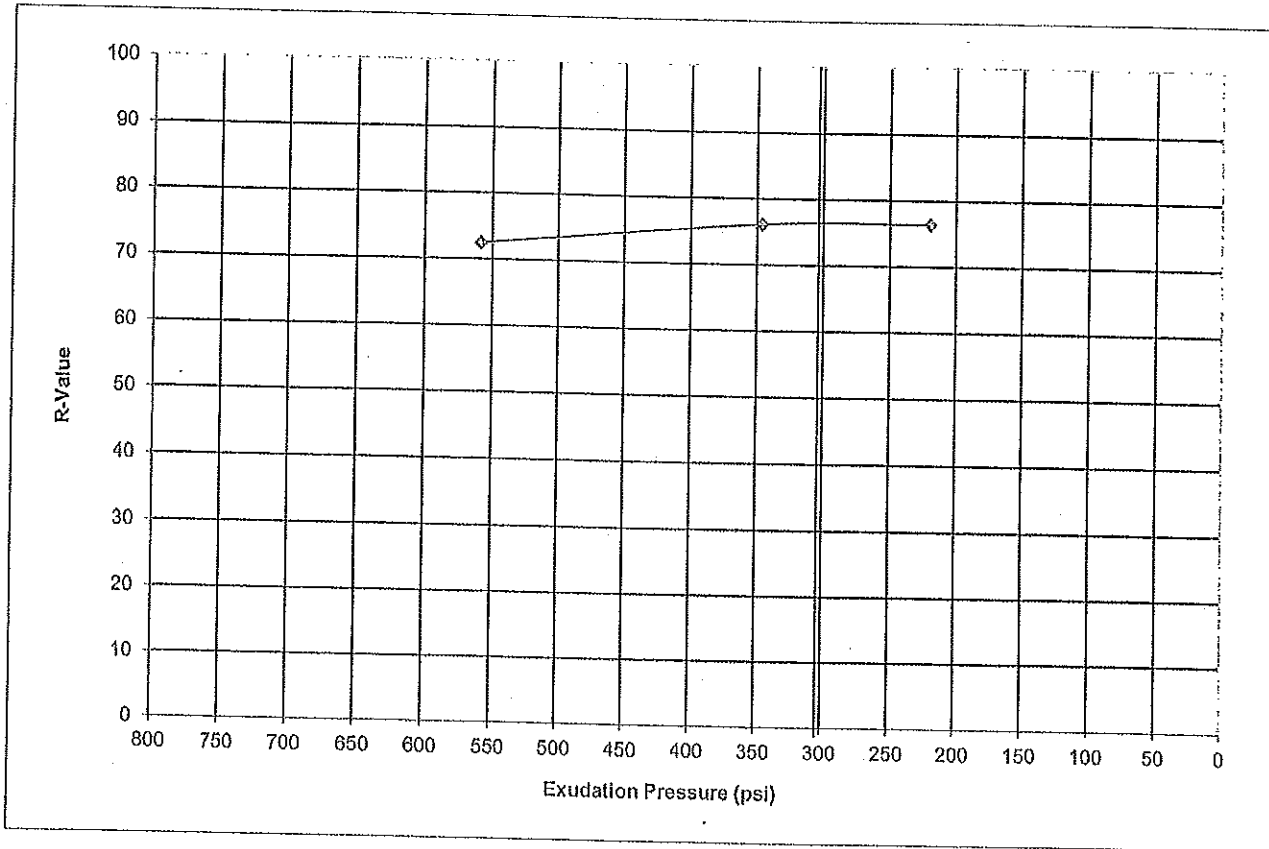


PROJECT: Crossfire Aggregate Services, LLC
 LOCATION: Durango, CO
 MATERIAL: CDOT Class 6
 SAMPLE SOURCE: La Boca Pit

JOB NO: 16-519-01325
 WORK ORDER NO: 1
 LAB NO: 17-2121
 DATE SAMPLED: 03/28/17

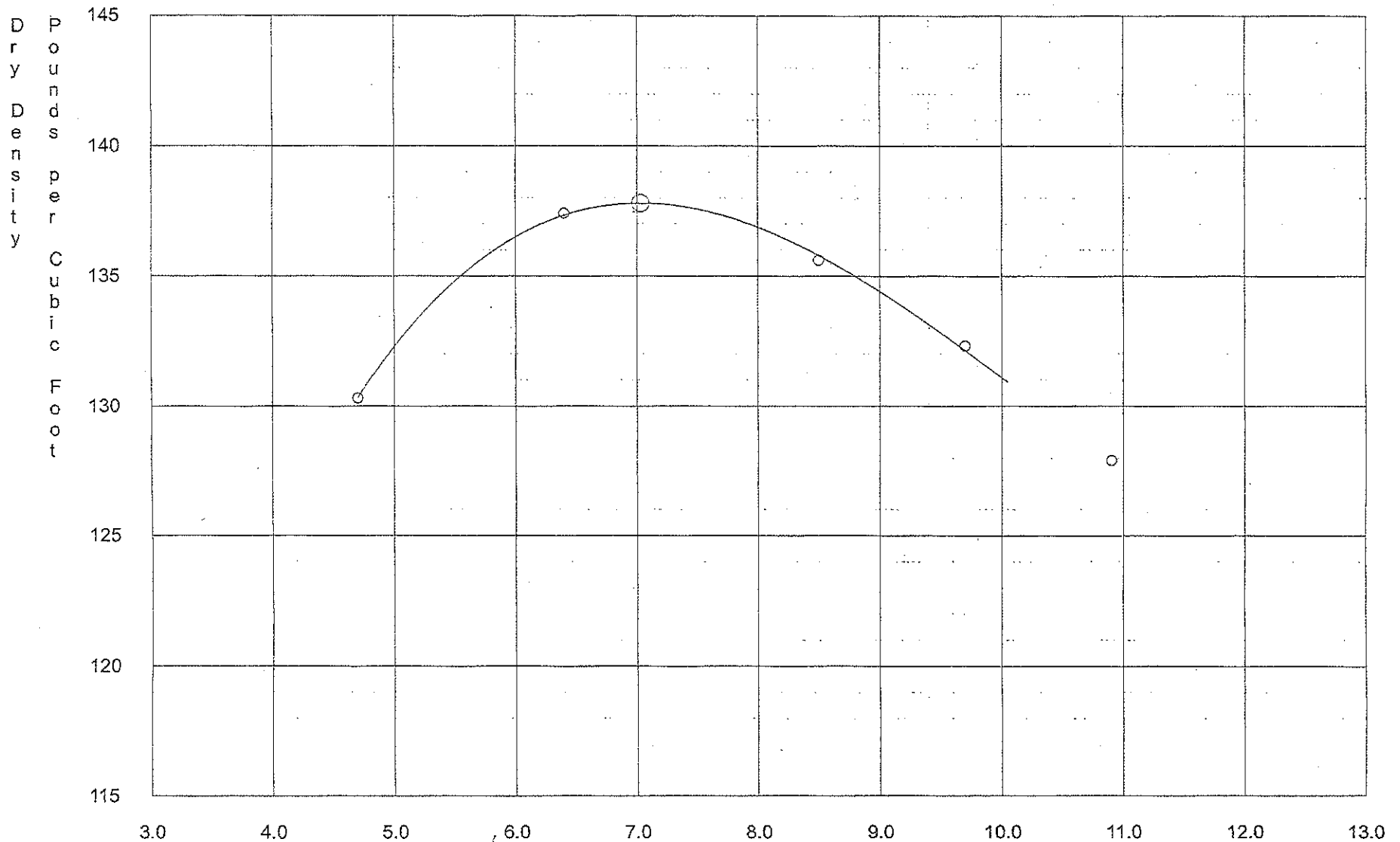
RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (AASTHO T190)

SPECIMEN ID	A	B	C
Moisture Content	8.5%	7.5%	5.8%
Compaction Pressure (psi)	275	350	350
Specimen Height (Inches)	2.47	2.58	2.30
Dry Density (pcf)	136.1	134.4	133.1
Horiz. Pres. @ 1000lbs (psi)	11.0	10.0	12.0
Horiz. Pres. @ 2000lbs (psi)	20.0	20.0	20.0
Displacement	5.45	6.01	5.53
Expansion Pressure (psi)	0.0	0.0	0.0
Exudation Pressure (psi)	219	346	558
R Value	76	76	72



R Value at 300 PSI = 76

Moisture Density Curve



PC to AVE SUP - STE-480-000/19219
Piedra Pit Class 6 3/4" ABC - Class 6 - CURVE 1 - LAB NO. 3961-A
Optimum Moisture = 7.0 Maximum Dry Density = 137.8 Compaction = T180

**COLORADO DEPARTMENT OF TRANSPORTATION
MOISTURE - DENSITY RELATION**

Lab No. 3961-A Station ST. 24+40 Contract ID 19219 Region 5 Date Tested 7-20-17
 Field Sheet No. 3961-A Project No. STE C480-008
 Sample ID Class 6 - CURVE 1 Project Location PC TO AND SUP - PARDOSA SPRINGS

Prison Campway 3961-A / PIEDRA PIT

Type of Compaction Standard AASHTO T 99 Method _____ % Soil 60 % Rock 40 Soil class. total sample A-2-4 (0)
 Modified AASHTO T 180 Method D Maximum dry density 137.8 lb/ft³ Kg/m³ Optimum moisture 7.0 %

Trial No.	Sample mass	Water added	Moisture samples	Percent moisture	Compacted wet mass	Density, <input checked="" type="checkbox"/> lb/ft ³ <input checked="" type="checkbox"/> Kg/m ³	
						Wet	Dry
1	5600	0	Wet <u>1877.2</u> Dry <u>1792.9</u> Loss <u>84.3</u> ✓	4.7 ✓	10.22	136.4 ✓	130.3 ✓
2	5600	100	Wet <u>1633.2</u> Dry <u>1534.2</u> Loss <u>99.0</u> ✓	6.4 ✓	10.95	146.2 ✓	137.4 ✓
3	5600	200	Wet <u>1841.1</u> Dry <u>1696.9</u> Loss <u>144.2</u> ✓	8.5 ✓	11.02	147.1 ✓	135.6 ✓
4	5600	300	Wet <u>2062.4</u> Dry <u>1879.4</u> Loss <u>183.0</u> ✓	9.7 ✓	10.87	145.1 ✓	132.3 ✓
5	5600	375	Wet <u>1431.6</u> Dry <u>1290.4</u> Loss <u>141.2</u> ✓	10.9 ✓	10.62	141.8 ✓	127.9 ✓
6			Wet _____ Dry _____ Loss _____				

Sieve analysis of - #4

Sieve	Mass	Indiv. %	% Pass.
#4			
#10			
#40			
#200			
- #200			
Total			
Liquid limit			
Plastic index			
- #4 Soil classification			

Bulk sp. gr. and absorption of rock

A₁ = Oven dry Mass in air
 B₁ = S. S. D. Mass in air
 Mass H₂O & beaker
 Mass of beaker
 M = Mass of H₂O

Sp. Gr. X 62.4 = $\frac{A_1}{M}$ lb/ft³ Kg/m³
 Pcf X .95 = $\frac{A_1}{M}$
 Absorption = $\frac{B_1 - A_1}{A_1} \times 100 =$ %

Remarks 12.54 lbs 6" Dia. MOLD
.0749 v.
 ✓ GINA DEATED
 ✓ Jc

Tested by (Print name) GREG TADARIH Title SOILS LAB SUPERVISOR

Previous editions are obsolete and may not be used.

COLORADO DEPARTMENT OF TRANSPORTATION SIEVE ANALYSIS FOR AGGREGATES NOT SPLIT ON THE NO. 4 SIEVE	Project No. STEC480-008	Contract ID 19219
	Project Location: Praon Causeway to AVD - SUP	
	Pit Name: Piedra Pit	
	Lot # 304	Class 6

Sampled Location Stockpile on site					Sampled Location				
Sample ID LAB NO. 3977-B					Sample ID				
Specimen Dry Weight	B	Date	07/26/17	# VERIFIED SAMPLES	2	Specimen Dry Weight	B	Date	
Sieve	Weight	Percent Retained	Percent Passing	Specs	Sieve	Weight	Percent Retained	Percent Passing	Specs
3"					3"				
2"					2"				
1 1/2"					1 1/2"				
1"					1"				
3/4"	0	0	100	100	3/4"				
1/2"	255.8	12.7	87.3	✓	1/2"				
3/8"	510.4	25.3	74.7		3/8"				
#4	900.3	44.6	55.4	✓	#4				
(#8) #10	1092.2 131.9	54.2 56.0	45.8 44.0	25-55	#8 / #10				
#16	1230.0	60.9	39.1		#16				
#30 / #40	1336.7 1389.6	66.2 66.8	33.8 31.2		#30 / #40				
#50	1460.4	72.3	27.7		#50				
#100	1637.6	81.1	18.9		#100				
#200	1707.2	84.5	15.5	3-12	#200				
Pan	1755.4	(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash]			Pan		(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash]		
- #200	264.7	$(1755.4 - 1755.3) \div (1755.3 \times 100) = .006\%$			- #200				
TSW	1755.4				TSW				

Gradation Sample				Moisture Sample				Gradation Sample				Moisture Sample			
Pan ID:							Pan ID:								
Wet Wt. + Pan:	2621.2			2756.4			Wet Wt. + Pan:								
Dry Wt. + Pan:	2520.2 ✓			2649.2			Dry Wt. + Pan:								
Pan Wt:	500.2			497.8			Pan Wt:								
Wet Wt. A	2181.0 ✓						Wet Wt. A								
Dry Wt. B	2020.0 ✓			2151.4 ✓			Dry Wt. B								
Washed Dry Wt. and pan	2255.6			H2O Loss	107.2 ✓			Washed Dry Wt. and pan				H2O Loss			
- #200 Lost	Mat'l Seived	264.7		1755.4	% H2O	5.0 ✓		- #200 Lost	Mat'l Seived			% H2O			
Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight								Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight							
A 2181.0 ÷ (100 + 5.0) x 100 = B 2020.0								A ÷ (100 +) x 100 = B							
Sampled By	ERIC HOWES			Tested By	GREG JADRYCH			Sampled By				Tested By			

TRAUTNER GEOTECHNICAL

COOT NO: STE.6480-008
SA: 19219

Atterberg Limits - ASTM 4318

PROJECT: Piñon Canyon TO AVO PROJECT#: 54748 mt Date: 7-26-17

SAMPLE DESCRIPTION: 314" - ARC proposed Class 6 SOURCE: Piedra pit Lab Number: 3977-B

LOCATION: Bell Sample, On-site Stockpile, Stockpile at Pit, Windrow, Loose In-place, Test Bore, Other:

Sample Prep : Wet or Dry (see ASTM)

Moisture Condition By: Greg Gledhill Date: 07/26/17

Tested By: R. [Signature] 7/27

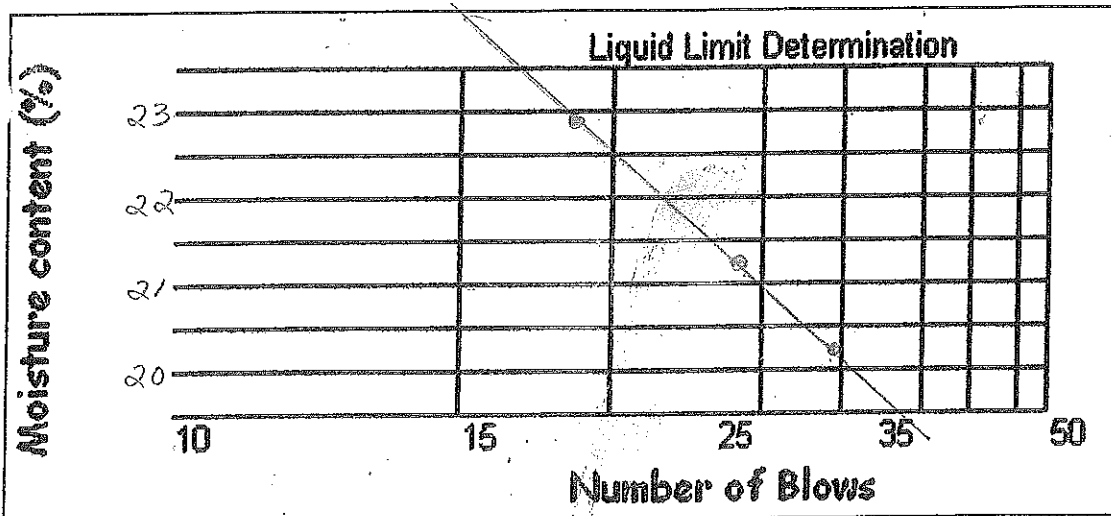
Liquid Limit Determination	Minimum 3 Trials		
Required Blows	15 - 25	20 - 30	25 - 35
Can Number	<u>Z</u>	<u>K</u>	<u>X</u>
Wt. of Wet Soil + Can	<u>26.72</u>	<u>25.74</u>	<u>30.73</u>
Wt. of Dry Soil + Can	<u>24.40</u>	<u>23.78</u>	<u>28.02</u>
Wt. of Can	<u>14.26</u>	<u>14.57</u>	<u>14.67</u>
Wt. of Dry Soil	<u>10.14</u> ✓	<u>9.21</u> ✓	<u>13.35</u>
Wt. of Moisture	<u>2.32</u> ✓	<u>1.96</u> ✓	<u>2.71</u> ✓
Water Content, w%	<u>22.9</u> ✓	<u>21.23</u> ✓	<u>20.3</u> ✓
No. of Blows, N	<u>18</u>	<u>24</u>	<u>29</u>

$$LL = W\% \left(\frac{N}{25} \right)^{-1.21}$$

Liquid Limit: 21 ✓

Plastic Limit: 18 ✓

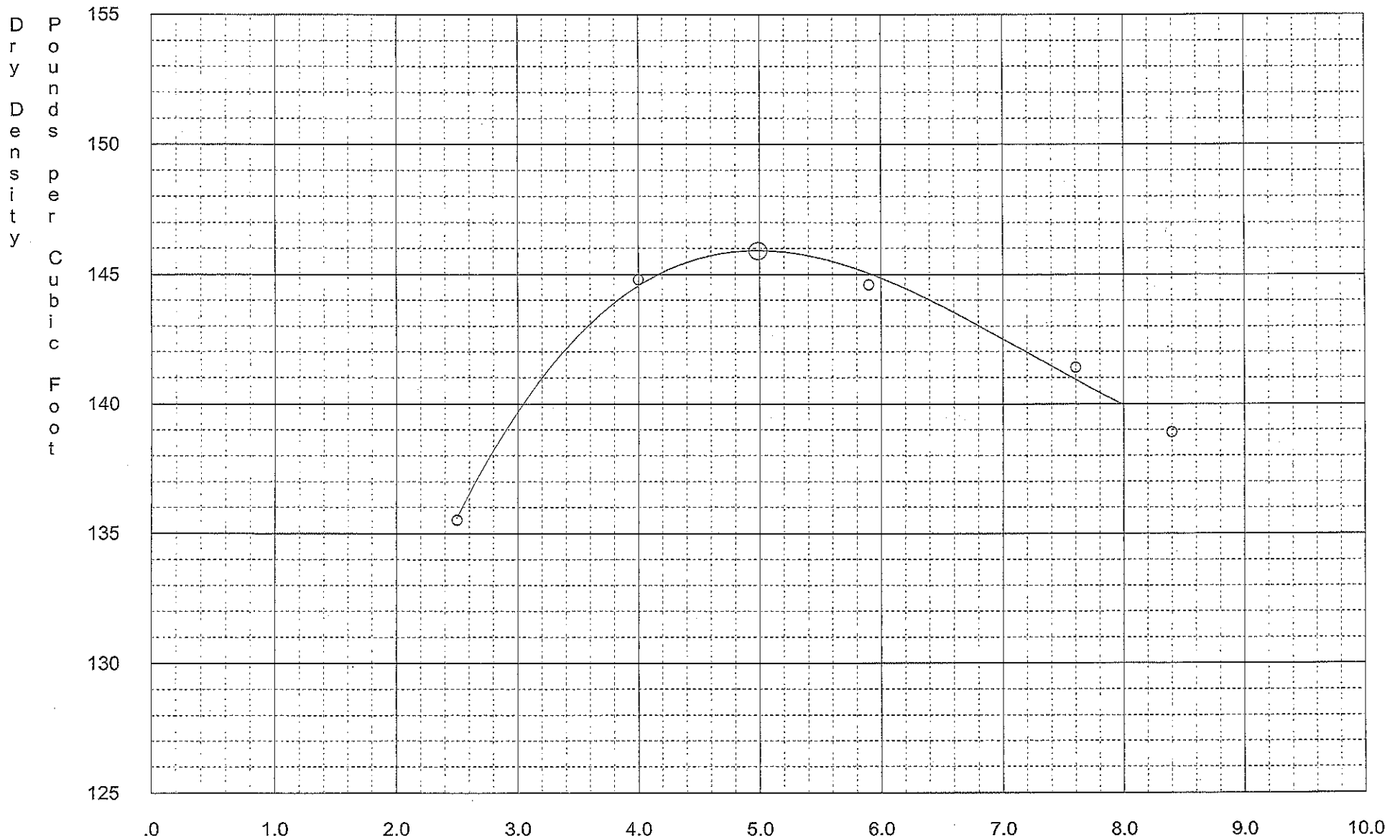
Plasticity Index: 3 ✓



Plastic Limit Determination	Minimum 3 Trials	
Can Number:	<u>E</u>	<u>W</u>
Wt. of Wet Soil + Can	<u>26.65</u>	<u>26.02</u>
Wt. of Dry Soil + Can	<u>24.82</u>	<u>24.28</u>
Wt. of Can	<u>14.53</u>	<u>14.55</u>
Wt. of Dry Soil	<u>10.29</u> ✓	<u>9.73</u> ✓
Wt. of Moisture	<u>1.83</u> ✓	<u>1.74</u> ✓
Water Content, w%	<u>17.8</u> ✓	<u>17.9</u> ✓

Remarks: ✓ By G. DENTEN

Moisture Density Curve



SH 172 CR ^{S17} 501 Intersection of PC TO AVO SUP - STE C400-000/19219
 La Boca Class 6 - CURVE 2 - LAB NO. 3998-B

Optimum Moisture = 5.0 Maximum Dry Density = 145.9 Compaction = T180

**COLORADO DEPARTMENT OF TRANSPORTATION
MOISTURE - DENSITY RELATION**

Lab No. 3998-B Station NIA Contract ID 19219 Region 5 Date Tested 08-08-2017

Field Sheet No. 3998-B Project No. STE C480-000

Sample ID La Boca Class 6-CURVE 2 Project Location 9 Pinned Causeway to A110 - S.U.P. Ignacio, Colorado Hwy 172 CRS17

Type of Compaction: Standard AASHTO T 99 Method _____ % Soil 89 % Rock 41 Soil class. total sample A-1-a(0)

Modified AASHTO T 180 Method D Maximum dry density 145.9 lb/ft³ Kg/m³ Optimum moisture 5.0 %

Trial No.	Sample mass	Water added	Moisture samples	Percent moisture	Compacted wet mass	Density	
						Wet	Dry
1	5600	0	Wet <u>1777.1</u> Dry <u>1734.1</u> Loss <u>43.01</u>	<u>2.5</u> ✓	<u>10.40</u>	<u>138.9</u> ✓	<u>135.5</u> ✓
2	5600	100	Wet <u>1982.5</u> Dry <u>1905.3</u> Loss <u>77.01</u>	<u>4.0</u> ✓	<u>11.28</u>	<u>150.6</u> ✓	<u>144.8</u> ✓
3	5600	200	Wet <u>1589.2</u> Dry <u>1500.8</u> Loss <u>88.4</u>	<u>5.9</u> ✓	<u>11.47</u>	<u>153.1</u> ✓	<u>144.6</u> ✓
4	5600	300	Wet <u>2259.9</u> Dry <u>2100.5</u> Loss <u>159.4</u>	<u>7.6</u> ✓	<u>11.39</u>	<u>152.1</u> ✓	<u>141.4</u> ✓
5	5600	400	Wet <u>2325.7</u> Dry <u>2145.2</u> Loss <u>180.5</u>	<u>8.4</u> ✓	<u>11.28</u>	<u>150.6</u> ✓	<u>138.9</u> ✓
6			Wet _____ Dry _____ Loss _____				

Sieve analysis of - #4

Sieve	Mass	Indiv. %	% Pass.
#4			
#10			
#40			
#200			
- #200			
Total			
Liquid limit			
Plastic index			
- #4 Soil classification			

Bulk sp. gr. and absorption of rock

A₁ = Oven dry Mass in air

B₁ = S. S. D. Mass in air

Mass H₂O & beaker

Mass of beaker

M = Mass of H₂O

$\frac{A_1}{M} =$

Sp. Gr. X 62.4 = lb/ft³ Kg/m³

Pcf X .95 = Pcf X .95 =

Absorption = $\frac{B_1 - A_1}{A_1} \times 100 =$ %

Remarks 6" Diameter mold JRY G. DENTEN
12.54 lbs .0749 v.

Tested by (Print name) Greg Johnson Title Soils lab supervisor

Previous editions are obsolete and may not be used.

**COLORADO DEPARTMENT OF TRANSPORTATION
FIELD TESTS OF BASE AGGREGATES, FILLERS,
PAVING AND MISCELLANEOUS AGGREGATES**

Contract ID 19219	Region 5	Field sheet # 101912-
Project No. STE C480-008		Date Submitted 9-14-17
Project Location PINON CANYON HWY TO ASPEN VILLAGE DR.		Item 304

User ID:

SMM/LIMS Sampler ID (or Test # [Date])	Station	Tons (t) or Yards (m)	Field density	Lab max density	% Rel. Comp.	Total moist.				#4	#8	#30	#50	#100	#200	L.L.	P.I.
QA#1 8-11-17	4+60	1000	132.4	137.8	96	5.7											
QA#2 9-1-17	25+86	1000	130.7	137.8	95	6.3											
QA#3 9-11-17	34+23	1000	131.9	137.8	96	6.5											
QA#4 9-27-17	11+10	1000	142.7	145.9	98	3.1											
QA#5 10-12-17	6+00	1000	145.4	145.9	100	3.7											
QA#6 10-12-17	12+25	1000	140.7	145.9	96	3.9											
QA#7 10-12-17	17+25	1000	140.0	145.9	96	3.4											
QA#8 10-12-17	22+25	1000	141.9	145.9	97	4.1											
QA#9 10-24-17	1+91	1000	144.8	145.9	100	4.7											
QA#10 10-24-17	3+12	1000	144.8	145.9	100	4.3											
QA#11 10-26-17	0+11	1000	138.7	145.9	95	4.4											
QA#12 10-26-17	0+25	1000	139.3	145.9	96	4.6											
QA#13 10-26-17	0+58	1000	138.5	145.9	95	5.0											
QA#14 10-26-17	0+75	1000	139.8	145.9	96	4.7											

Sheet Total	14,000
Previous Total	0
Total to Date	14,000

Specifications: $\geq 95\%$ *# SEE REMARKS*

Final report: yes no

Spec. deviations: yes no P= _____ % for lot # _____

Items:
 206 Structure Backfill Class 1 _____
 206 Filter Material Class _____
 304 ABC Class 6
 307 Treated Subgrade _____
 403 HMA Grading _____
 403 SMA _____
 409 Cover Coat _____
 Other Material: _____

Remarks
 * TEST #1-3 - 5.0% TO 9.0%
 * TEST #4-14 - 3.0% TO 7.0%

Action taken

Source (pit): TEST #1-3 - PIEDRA PIT
 TEST #4 - LA BOCA PIT

Project Tester (print name) ERIC HOWES	Title QA TESTER
PE Approved by (print name) Clifton Lee Davis Engineering Service, Inc. (LA)	Title Project Engineer

54748

COLORADO DEPARTMENT OF TRANSPORTATION			Project No. STE-480-007	Region 5	Contract ID 19219
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION			Project Location Pinar Canyon TO AVO-SUP		
Pit Name Piedra	Material 3/4" - ABC	Class 6	Item 304	Date 8-11-17	
Sample ID (Test #) QA #1	Tested by (print name) Eric Howes		Station/offset 4+60	Elevation / Depth 10.6	
Gauge ID 27771	Moisture Standard Count 699	Density Standard Count 2189	Transmission Depth, in. 8	Soil Classification A-2-4 (0)	
Curve No. Class 6 - Curve 1	Maximum Dry Density 137.8	Optimum Moisture Content 7.0	AASHTO T99 or T180	Method A of (D)	

Gauge Reading	Moisture	Field Test Data		Density	M/D Gauge Moisture Check	
(1) % Moisture	5.7	Wet Dens.	139.9	Dry Dens.	132.4	Wet Soil wt. + pan 1419.4
(2) % Moisture	5.9	Wet Dens.	140.0	Dry Dens.	132.2	Dry Soil wt. + pan 1407.0
(3) % Moisture	5.7	Wet Dens.	139.7	Dry Dens.	132.2	Pan wt. 495.7
(4) % Moisture	5.6	Wet Dens.	140.1	Dry Dens.	132.7	Dry soil wt. 911.3
Average	5.7	Average	139.9	Average	132.4	Water wt. 42.4
						% Moisture = 4.7

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock + (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil + (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100

% Soil X _____ Optimum MC of Soil = _____

% Rock X _____ Absorption of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan 2630.6

Dry Soil wt. + pan 2493.4

Pan wt. 424.9

Dry soil wt. 2068.5

Water wt. 137.9

% Moisture = 6.6

1 Point Check Compaction Cylinder Density Data

Gross wt. 23.55

- Tare wt. 12.54

Net wt. 11.01 ÷ 0.0749 = 147.0

Volume of Mold

Wet Density

Moisture Content 6.6

Dry Density 137.9

Percent Compaction calculation

Field Dry Density 132.4 = 137.8

(Corrected Maximum dry density) x 100 = 96.1

or (Curve Maximum Dry Dens) x 100 =

Specifications: Moisture 3.7 to 7.7 Compaction

Minimum 95.0 %

Remarks: 5.0 to 9.0% J G. DENTEN

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE 480-008 Region 5 Contract ID 19219
 Project Location PC-AVD SUP

Pit Name <u>PIEDRA</u>	Material <u>3/4" ABC</u>	Class <u>6</u>	Item <u>304</u>	Date <u>9-1-17</u>
Sample ID (Test #) <u>DA#2</u>	Tested by (print name) <u>ERIC HOWES</u>		Station/offset <u>25+82</u>	Elevation / Depth <u>TOG</u>
Gauge ID <u>28771</u>	Moisture Standard Count <u>771</u>	Density Standard Count <u>2180</u>	Transmission Depth, in. <u>8</u>	Soil Classification <u>A-2-U(0)</u>
Curve No. <u>Class 6</u>	Maximum Dry Density <u>137.8</u>	Optimum Moisture Content <u>7.0</u>	AASHTO T99 or T180 <u>T180</u>	Method A of D

Gauge Reading	Moisture	Field Test Data		Density		M/D Gauge Moisture Check	
(1) % Moisture	<u>6.1</u>	Wet Dens.	<u>138.9</u>	Dry Dens.	<u>131.0</u>	Wet Soil wt. + pan	<u>1528.3</u>
(2) % Moisture	<u>6.6</u>	Wet Dens.	<u>139.6</u>	Dry Dens.	<u>131.9</u>	Dry Soil wt. + pan	<u>1470.8</u>
(3) % Moisture	<u>6.2</u>	Wet Dens.	<u>138.9</u>	Dry Dens.	<u>130.7</u>	Pan wt.	<u>497.6</u>
(4) % Moisture	<u>6.3</u>	Wet Dens.	<u>138.4</u>	Dry Dens.	<u>130.2</u>	Dry soil wt.	<u>973.2</u>
Average	<u>6.3</u>	Average	<u>139.9</u>	Average	<u>130.7</u>	Water wt.	<u>57.5</u>
						% Moisture =	<u>5.9</u>

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

$[(\% \text{ Soil} \times \text{Max dry density of Soil}) + (\% \text{ Rock} \times \text{CF} \times 62.4 \times \text{Sp Gr Rock})] \div 100$

% Soil	X	For AASHTO T99, CF = 0.90	For AASHTO T180, CF = 0.95	Corrected Maximum Dry Density
% Rock	X	Maximum Dry Density of soil =	Specific Gravity of Rock =	
Sum =			÷ 100 =	

Optimum Moisture Correction Calculations

$[(\% \text{ Soil} \times \text{OMC of Soil}) + (\% \text{ Rock} \times \text{Absorption of Rock})] \div 100$

% Soil X Optimum MC of Soil =

% Rock X Absorption of Rock =

Sum =

÷ 100 =

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan 2458.7

Dry Soil wt. + pan 2337.8

Pan wt. 436.3

Dry soil wt. 1901.5

Water wt. 118.9

% Moisture = 6.3

1 Point Check Compaction Cylinder Density Data

Gross wt. <u>23.59</u>	Volume of Mold	Wet Density	Moisture Content	Dry Density
- Tare wt. <u>12.54</u>				
Net wt. <u>11.05</u>	$\div .0749 =$	<u>147.5</u>	$\div (100 + 6.3$	$\% \text{H}_2\text{O}) \times 100 =$
				<u>138.8</u>

Percent Compaction calculation

Field Dry Density 130.7 ÷ 137.8 (Corrected Maximum dry density) x 100 = 94.8 % Relative Compaction
 Specifications: Moisture 5.0 TO 9.0 Compaction Minimum 95.0 %

Remarks: J G. DENTEN

7/16

COLORADO DEPARTMENT OF TRANSPORTATION				Project No.	Region	Contract ID
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION				5TE C189-008	5	19219
Project Location PC-AVE SUP						
Pit Name	Material	Class	Item	Date		
PIEDRA	3/4"-ABC	6	301	9-11-17		
Sample ID (Test #)	Tested by (print name)		Station/offset	Elevation / Depth		
QA#3	ERIC HOWES		34+12	84+23 TOG		
Gauge ID	Moisture Standard Count	Density Standard Count	Transmission Depth, In.	Soil Classification		
28771	708	2173	6	A-2-4(0)		
Curve No.	Maximum Dry Density	Optimum Moisture Content	AASHTO T99 or (T180)	Method A or D		
3961-A	137.8	7.0	(T180)	D		
Class 6 - CURVE #1				M/D Gauge Moisture Check		
Gauge Reading		Field Test Data		Wet Soil wt. + pan		
Moisture		Density		Dry Soil wt. + pan		
(1) % Moisture	6.5	Wet Dens.	140.3	Dry Dens.	131.7	Pan wt.
(2) % Moisture	6.6	Wet Dens.	140.7	Dry Dens.	132.0	Dry soil wt.
(3) % Moisture	6.4	Wet Dens.	140.6	Dry Dens.	132.2	Water wt.
(4) % Moisture	6.5	Wet Dens.	140.3	Dry Dens.	131.8	% Moisture =
Average	6.5	Average	140.5	Average	131.9	
Calculations for Percent Rock (Plus #4 (Method A) or 3/4 Inch (Method D))						
Method A - Oven Dried						
Dry wt. of rock	+	Dry wt. total sample	=	% Rock	&	% Soil
Method B - Using Gauge MC						
Wet weight of rock	+	(1 + _____ absorption ÷ 100)	=	dry weight rock		
Wet weight of soil	+	(1 + _____ M/D Gauge MC ÷ 100)	=	dry wt. soil		
Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100%			=	% Rock	&	% Soil
Rock Correction Formula and Calculations						
[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100						
For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95						
% Soil	X	_____	Maximum Dry Density of soil =	Corrected Maximum Dry Density		
% Rock	X	_____ X	Specific Gravity of Rock =			
				Sum =	÷ 100 =	
Optimum Moisture Correction Calculations				1 Point Moisture Determination		
[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100				Wet Soil wt. + pan		
				Dry Soil wt. + pan		
% Soil	X	_____	Optimum MC of Soil =	Pan wt.		
% Rock	X	_____	Absorption of Rock =	Dry soil wt.		
				Sum =	Water wt.	
				÷ 100 =		
Corrected Optimum Moisture Content, %				% Moisture =		
1 Point Check Compaction Cylinder Density Data						
Gross wt.	_____	Volume of	Wet Density	Moisture Content	Dry Density	
- Tare wt.	_____	Mold				
Net wt.	_____ ÷		=	÷ (100 + _____ %H ₂ O)x100=		
Field Dry Density	131.9	÷	137.8	Percent Compaction calculation		
Specifications: Moisture	5.0 TO 9.0		(Corrected Maximum dry density) x 100		95.7 % Relative Compaction	
			or (Curve Maximum Dry Dens) x 100 =			
			Compaction		Minimum 95.0 %	
Remarks:						

151.7

COLORADO DEPARTMENT OF TRANSPORTATION				Project No.	Region	Contract ID
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND CP 25 PERCENT RELATIVE COMPACTION				3TE-480-008	5	19219
Project Location: PC 10 AVE						
Pit Name	Material	Class	Item	Date		
LA BOCA	3/4" ABC	6	304	9-27-17		
Sample ID (Test #)	Tested by (print name)		Station/offset	Elevation / Depth		
QA#4	ERIC HOWES		11+10	106		
Gauge ID	Moisture Standard Count	Density Standard Count	Transmission Depth, in.	Soil Classification		
28771	704	2179	4	A-1-a (C)		
Curve No.	Maximum Dry Density	Optimum Moisture Content	AASHTO T99 or T180	Method A or B		
3998-B	145.9	5.0	(C)	Method A (C)		

CLASS 6 - CURVE 2		Field Test Data				M/D Gauge Moisture Check	
Gauge Reading	Moisture			Density			
(1) % Moisture	4.2	Wet Dens.	147.1	Dry Dens.	141.1	Wet Soil wt. + pan	1781.4
(2) % Moisture	4.2	Wet Dens.	147.6	Dry Dens.	141.6	Dry Soil wt. + pan	1740.8
(3) % Moisture	4.1	Wet Dens.	146.9	Dry Dens.	141.1	Pan wt.	436.5
(4) % Moisture	4.2	Wet Dens.	146.8	Dry Dens.	140.9	Dry soil wt.	1304.3
Average	4.2	Average	147.1	Average	141.2	Water wt.	40.6
						AT 3.1% Moisture =	3.1

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100

% Soil X _____ Optimum MC of Soil = _____

% Rock X _____ Absorption of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan 2052.0

Dry Soil wt. + pan 1989.5

Pan wt. 519.0

Dry soil wt. 1470.5

Water wt. 62.5

% Moisture = 4.3

1 Point Check Compaction Cylinder Density Data

Gross wt. 23.97

Tare wt. 12.54

Net wt. 11.43

Volume of Mold 0.0749

Wet Density 152.6

Moisture Content 4.3

Dry Density 146.3

÷ (100 + 4.3) % H₂O x 100 =

Field Dry Density 142.7

Specifications: Moisture 3.0 TO 7.0 %

Percent Compaction calculation

(Corrected Maximum dry density) x 100 = 97.8 % Relative Compaction

or (Curve Maximum Dry Dens) x 100 =

Minimum 95.0 %

Remarks: * corrected H2O with oven check / OVEN MOISTURE CONTENT

280

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE 480-008 Region 5 Contract ID 19219
 Project Location PC to A11D SUP

Pit Name La Boca Material 3/4" - ABC Class 6 Item 304 Date 10-12-17
 Sample ID (Test #) QA#5 Tested by (print name) Eric Howes Station/offset 6+00 Elevation / Depth TOG
 Gauge ID 28771 Moisture Standard Count 713 Density Standard Count 2172 Transmission Depth, in. 6 Soil Classification A-1-a (G)
 Curve No. 399B-B Maximum Dry Density 145.9 Optimum Moisture Content 5.0 AASHTO T99 or T180 (G) Method A or (D) (D)

Class 6 - Curve 2		Field Test Data				M/D Gauge Moisture Check	
Gauge Reading	Moisture	Wet Density		Dry Density		Wet Soil wt. + pan	
(1) % Moisture	<u>3.7</u>	Wet Dens.	<u>150.8</u>	Dry Dens.	<u>145.5</u>	Dry Soil wt. + pan	
(2) % Moisture	<u>3.7</u>	Wet Dens.	<u>150.6</u>	Dry Dens.	<u>145.2</u>	Pan wt.	
(3) % Moisture	<u>3.7</u>	Wet Dens.	<u>150.4</u>	Dry Dens.	<u>145.1</u>	Dry soil wt.	
(4) % Moisture	<u>3.5</u>	Wet Dens.	<u>150.9</u>	Dry Dens.	<u>145.8</u>	Water wt.	
Average	<u>3.7</u>	Average	<u>150.7</u>	Average	<u>145.4</u>	% Moisture =	

Calculations for Percent Rock (Plus #4 (Method A) or 3/4 inch (Method D))

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

$$\left[\left(\frac{\% \text{ Soil} \times \text{Max dry density of Soil}}{\text{Specific Gravity of Rock}} \right) + (\% \text{ Rock} \times \text{CF} \times 62.4 \times \text{Sp Gr Rock}) \right] \div 100$$

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____ Corrected Maximum Dry Density

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ + 100 = _____

Optimum Moisture Correction Calculations

$$\left[(\% \text{ Soil} \times \text{OMC of Soil}) + (\% \text{ Rock} \times \text{Absorption of Rock}) \right] \div 100$$

% Soil X _____ Optimum MC of Soil = _____

% Rock X _____ Absorption of Rock = _____

Sum = _____

Corrected Optimum Moisture Content, % ÷ 100 = _____

1 Point Moisture Determination

Wet Soil wt. + pan _____

Dry Soil wt. + pan _____

Pan wt. _____

Dry soil wt. _____

Water wt. _____

% Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____ Volume of Mold _____ Wet Density _____ Moisture Content _____ Dry Density _____

- Tare wt. _____

Net wt. ÷ _____ = _____ ÷ (100 + _____ %H₂O) x 100 = _____

Field Dry Density 145.4 ÷ 145.9 (Corrected Maximum dry density) x 100 = 99.7 % Relative Compaction

Specifications: Moisture 3.0 TO 7.0 % Compaction _____ Minimum 95.0 %

Remarks: 4 J By G. DENIED

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE 480-008 Region 5 Contract ID 197-19
 Project Location PC to AVD SUP

Pit Name <u>La Boca</u>	Material <u>31411-ABC</u>	Class <u>6</u>	Item <u>304</u>	Date <u>10-12-17</u>
Sample ID (Test #) <u>QA #6</u>	Tested by (print name) <u>ERIC HOWES</u>		Station/offset <u>12+25</u>	Elevation / Depth <u>TOG</u>
Gauge ID <u>28771</u>	Moisture Standard Count <u>713</u>	Density Standard Count <u>2172</u>	Transmission Depth, in. <u>6</u>	Soil Classification <u>A-1-a(0)</u>
Curve No. <u>3990-A</u>	Maximum Dry Density <u>145.9</u>	Optimum Moisture Content <u>5.0</u>	AASHTO T99 or (T180)	Method A of (D)

Class 6 - Curve 2		Field Test Data			M/D Gauge Moisture Check	
Gauge Reading	Moisture	Density		Wet Soil wt. + pan		
(1) % Moisture	<u>3.9</u>	Wet Dens.	<u>146.6</u>	Dry Dens.	<u>141.0</u>	Dry Soil wt. + pan
(2) % Moisture	<u>3.7</u>	Wet Dens.	<u>146.4</u>	Dry Dens.	<u>141.1</u>	Pan wt.
(3) % Moisture	<u>4.0</u>	Wet Dens.	<u>145.7</u>	Dry Dens.	<u>140.1</u>	Dry soil wt.
(4) % Moisture	<u>3.9</u>	Wet Dens.	<u>145.9</u>	Dry Dens.	<u>140.5</u>	Water wt.
Average	<u>3.9</u> ✓	Average	<u>146.2</u>	Average	<u>140.7</u> ✓	% Moisture =

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

$$[(\% \text{ Soil} \times \text{Max dry density of Soil}) + (\% \text{ Rock} \times \text{CF} \times 62.4 \times \text{Sp Gr Rock})] \div 100$$

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ + 100 = _____

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

$$[(\% \text{ Soil} \times \text{OMC of Soil}) + (\% \text{ Rock} \times \text{Absorption of Rock})] \div 100$$

% Soil X _____ Optimum MC of Soil = _____

% Rock X _____ Absorption of Rock = _____

Sum = _____

Corrected Optimum Moisture Content, % ÷ 100 = _____

1 Point Moisture Determination

Wet Soil wt. + pan _____

Dry Soil wt. + pan _____

Pan wt. _____

Dry soil wt. _____

Water wt. _____

% Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____ Volume of _____ Wet Density _____ Moisture Content _____ Dry Density _____

- Tare wt. _____ Mold _____

Net wt. _____ ÷ _____ = _____ ÷ (100 + _____ %H₂O)x100= _____

Field Dry Density 140.7 ÷ 145.9 (Corrected Maximum dry density) x 100 = 96.4 ✓ % Relative Compaction

Specifications: Moisture 3.0 to 7.0 % Compaction _____ Minimum 95.0 %

Remarks:

3

✓ By G. DENTEN

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE 480-008	Region 5	Contract ID 19219
Project Location PC to AVO SUP		
Pit Name La Boca	Material 3/4" - ABC	Class 6
Item 304	Date 10-12-17	
Sample ID (Test #) QA#7	Tested by (print name) Eric Howes	Station/offset 17+25
Gauge ID 28771	Moisture Standard Count 713	Density Standard Count 2172
Curve No. 399B-a	Maximum Dry Density 145.9	Optimum Moisture Content 5.0
Transmission Depth, in. 6		Soil Classification A-1-a(0)
AASHTO T99 or T180		Method A or D

Class 6 - Curve 2

Gauge Reading	Moisture	Field Test Data		Density
(1) % Moisture	3.6	Wet Dens.	144.6	Dry Dens.
(2) % Moisture	3.3	Wet Dens.	144.5	Dry Dens.
(3) % Moisture	3.2	Wet Dens.	145.0	Dry Dens.
(4) % Moisture	3.3	Wet Dens.	144.7	Dry Dens.
Average	3.4 ✓	Average	144.7	Average

M/D Gauge Moisture Check

Wet Soil wt. + pan	_____
Dry Soil wt. + pan	_____
Pan wt.	_____
Dry soil wt.	_____
Water wt.	_____
% Moisture =	_____

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil	X	_____	Maximum Dry Density of soil =	_____
% Rock	X	_____	Specific Gravity of Rock =	_____
Sum =				_____ ÷ 100 =

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100

% Soil	X	_____	Optimum MC of Soil =	_____
% Rock	X	_____	Absorption of Rock =	_____
Sum =				_____ ÷ 100 =

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan	_____
Dry Soil wt. + pan	_____
Pan wt.	_____
Dry soil wt.	_____
Water wt.	_____
% Moisture =	_____

1 Point Check Compaction Cylinder Density Data

Gross wt.	_____	Volume of	_____	Wet Density	_____	Moisture Content	_____	Dry Density	_____
- Tare wt.	_____	Mold	_____						
Net wt.	_____	÷	_____	=	_____	÷ (100 + _____	%H ₂ O)x100=	_____	

Percent Compaction calculation

Field Dry Density 140.0 ÷ 145.9 (Corrected Maximum dry density) x 100 = 96.0 ✓ % Relative Compaction

Specifications: Moisture 3.0 to 7.0 Compaction _____ Minimum 95.0 %

Remarks: 2 ✓ By G. DENSTEN

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE 480-007	Region 5	Contract ID 19219
Project Location PC to AVD SUP		
Pit Name La Brea	Material 3/4" - ABC	Class 6
Item 304	Date 10-12-17	
Sample ID (Test #) QA#8	Tested by (print name) ERIC HOWES	Station/offset 22+25
		Elevation / Depth 70.6
Gauge ID 28771	Moisture Standard Count 713	Density Standard Count 2172
		Transmission Depth, in. 6
Curve No. 399B-A	Maximum Dry Density 145.9	Optimum Moisture Content 5.0
		AASHTO T99 or T180 ()
		Soil Classification A-1-a(0)
		Method A or D ()

Class 6 - curve 2				M/D Gauge Moisture Check	
Gauge Reading	Moisture	Field Test Data		Density	Wet Soil wt. + pan
(1) % Moisture	3.9	Wet Dens.	147.4	Dry Dens.	141.7
(2) % Moisture	4.2	Wet Dens.	147.7	Dry Dens.	141.7
(3) % Moisture	4.3	Wet Dens.	147.9	Dry Dens.	141.8
(4) % Moisture	4.0	Wet Dens.	148.1	Dry Dens.	142.4
Average	4.1 ✓	Average	147.8	Average	141.9 ✓
					Dry Soil wt. + pan
					Pan wt.
					Dry soil wt.
					Water wt.
					% Moisture =

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil	X	Maximum Dry Density of soil =		Corrected Maximum Dry Density
% Rock	X	Specific Gravity of Rock =		
Sum =			÷ 100 =	

Optimum Moisture Correction Calculations

[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100

% Soil X Optimum MC of Soil =

% Rock X Absorption of Rock =

Sum =

÷ 100 =

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan

Dry Soil wt. + pan

Pan wt.

Dry soil wt.

Water wt.

% Moisture =

1 Point Check Compaction Cylinder Density Data

Gross wt.	Volume of	Wet Density	Moisture Content	Dry Density
- Tare wt.	Mold			
Net wt.	÷	=	÷ (100 + %H ₂ O)x100=	

Percent Compaction calculation

Field Dry Density	141.9	÷	145.9	(Corrected Maximum dry density) x 100	97.3 ✓	% Relative Compaction
Specifications:	Moisture	3.0 to 7.0%	Compaction			Minimum 95.0 %

Remarks:

✓ By: G. DENTON

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. 57E 480-0008 Region 5 Contract ID 19219
 Project Location PC 40 AVD SUP

Pit Name La Boca Material 3/4" ABC Class 6 Item 304 Date 10-24-17

Sample ID (Test #) QA#9 Tested by (print name) ERIC HOWES Station/offset 1+91 Elevation / Depth TOG

Gauge ID 28771 Moisture Standard Count 705 Density Standard Count 2174 Transmission Depth, in. 4 Soil Classification A-1-a(0)

Curve No. 3990-a Maximum Dry Density 145.9 Optimum Moisture Content 3.0 AASHTO T99 or T180 (180) Method A or D (D)

CLASS 6 - CURVE 2		Field Test Data			M/D Gauge Moisture Check	
Gauge Reading	Moisture	Wet Dens.	Density	Dry Dens.	Wet Soil wt. + pan	
(1) % Moisture	<u>4.7</u>	<u>151.8</u>		<u>144.9</u>		
(2) % Moisture	<u>4.6</u>	<u>152.0</u>		<u>145.4</u>		
(3) % Moisture	<u>4.8</u>	<u>151.3</u>		<u>144.4</u>		
(4) % Moisture	<u>4.8</u>	<u>151.5</u>		<u>144.6</u>		
Average	<u>4.7</u>	Average <u>151.7</u>		Average <u>144.8</u>		

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[[% Soil x Max dry density of Soil] + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ Maximum Dry Density of soil = _____

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ ÷ 100 = _____

Optimum Moisture Correction Calculations		1 Point Moisture Determination	
[[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100		Wet Soil wt. + pan	
% Soil X _____	Optimum MC of Soil = _____	Dry Soil wt. + pan	
% Rock X _____	Absorption of Rock = _____	Pan wt.	
	Sum = _____	Dry soil wt.	
	÷ 100 = _____	Water wt.	
	Corrected Optimum Moisture Content, %	% Moisture = _____	

1 Point Check Compaction Cylinder Density Data

Gross wt. _____ Volume of _____

- Tare wt. _____ Mold _____ Wet Density _____ Moisture Content _____ Dry Density _____

Net wt. _____ ÷ _____ = _____ ÷ (100 + _____ %H₂O) x 100 = _____

Field Dry Density 144.8 ÷ 145.9 (Corrected Maximum dry density) x 100 = 99.2 % Relative Compaction

Specifications: Moisture 3.0 to 7.0 Compaction _____ Minimum 95.0 %

Remarks: ✓ BY G. DENVER

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE 480-008 Region 5 Contract ID 19219
 Project Location PE to AVD SUP

Pit Name <u>La Booga</u>	Material <u>3/4" ABC</u>	Class <u>6</u>	Item <u>304</u>	Date <u>10-24-17</u>
Sample ID (Test #) <u>GA #10</u>	Tested by (print name) <u>Eric Howes</u>		Station/offset <u>3+12</u>	Elevation / Depth <u>TOG</u>
Gauge ID <u>28771</u>	Moisture Standard Count <u>705</u>	Density Standard Count <u>2174</u>	Transmission Depth, in. <u>4</u>	Soil Classification <u>A-1-a(0)</u>
Curve No. <u>3990-A</u>	Maximum Dry Density <u>145.9</u>	Optimum Moisture Content <u>5.0</u>	AASHTO T99 or T180 <u>(T99)</u>	Method A or D <u>(D)</u>

Class 6 - Curve 2

Gauge Reading	Moisture	Field Test Data		Density	M/D Gauge Moisture Check	
(1) % Moisture	<u>4.2</u>	Wet Dens.	<u>151.3</u>	Dry Dens.	<u>145.1</u>	Wet Soil wt. + pan _____
(2) % Moisture	<u>4.5</u>	Wet Dens.	<u>151.0</u>	Dry Dens.	<u>144.6</u>	Dry Soil wt. + pan _____
(3) % Moisture	<u>4.3</u>	Wet Dens.	<u>150.6</u>	Dry Dens.	<u>144.1</u>	Pan wt. _____
(4) % Moisture	<u>4.2</u>	Wet Dens.	<u>151.0</u>	Dry Dens.	<u>145.0</u>	Dry soil wt. _____
Average	<u>4.3</u>	Average	<u>151.0</u>	Average	<u>144.8</u>	Water wt. _____
						% Moisture = _____

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock _____ ÷ Dry wt. total sample _____ = _____ % Rock & _____ % Soil

Method B - Using Gauge MC

Wet weight of rock _____ ÷ (1 + _____ absorption ÷ 100) = dry weight rock _____

Wet weight of soil _____ ÷ (1 + _____ M/D Gauge MC ÷ 100) = dry wt. soil _____

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = _____ % Rock & _____ % Soil

Rock Correction Formula and Calculations

$[(\% \text{ Soil} \times \text{Max dry density of Soil}) + (\% \text{ Rock} \times \text{CF} \times 62.4 \times \text{Sp Gr Rock})] \div 100$

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil _____ X _____ Maximum Dry Density of soil = _____

% Rock _____ X _____ Specific Gravity of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected
Maximum
Dry Density

Optimum Moisture Correction Calculations

$[(\% \text{ Soil} \times \text{OMC of Soil}) + (\% \text{ Rock} \times \text{Absorption of Rock})] \div 100$

% Soil _____ X _____ Optimum MC of Soil = _____

% Rock _____ X _____ Absorption of Rock = _____

Sum = _____

÷ 100 = _____

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan _____

Dry Soil wt. + pan _____

Pan wt. _____

Dry soil wt. _____

Water wt. _____

% Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____

- Tare wt. _____

Net wt. _____

Volume of
Mold

Wet Density

Moisture Content

Dry Density

_____ ÷ _____ = _____ ÷ (100 + _____ %H₂O)x100= _____

Field Dry Density 144.8 ÷ 145.9 (Corrected Maximum dry density) x 100 = 99.2 % Relative Compaction
 or (Curve Maximum Dry Dens) x 100 = _____
 Specifications: Moisture 3.0 to 7.0 Compaction _____ Minimum 95.0 %

Remarks:

✓ By G. DEWITT

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE 480-008	Region 5	Contract ID 19219
Project Location PC to AVD SUP		
Pit Name La Boca	Material ABC	Class 6
Item 304	Date 10-26-17	
Sample ID (Test #) 0A#11	Tested by (print name) ERIC HOWES	Station/offset 0+11
Elevation / Depth 6" under grade		
Gauge ID 28771	Moisture Standard Count 699	Density Standard Count 2153
Transmission Depth, in. 4	Soil Classification A-1-a(0)	
Curve No. 3990-a	Maximum Dry Density 145.9	Optimum Moisture Content 5.0
AASHTO T99 or T180		Method A or D

Class to core 2		Field Test Data			M/D Gauge Moisture Check	
Gauge Reading	Moisture	Density				
(1) % Moisture	4.2	Wet Dens.	144.6	Dry Dens.	138.8	Wet Soil wt. + pan
(2) % Moisture	4.7	Wet Dens.	144.6	Dry Dens.	138.2	Dry Soil wt. + pan
(3) % Moisture	4.1	Wet Dens.	145.0	Dry Dens.	139.3	Pan wt.
(4) % Moisture	4.5	Wet Dens.	144.5	Dry Dens.	138.3	Dry soil wt.
Average	4.4 ✓	Average	144.7	Average	138.7 ✓	Water wt.
						% Moisture =

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil	X	Maximum Dry Density of soil =		Corrected Maximum Dry Density
% Rock	X	Specific Gravity of Rock =		
Sum =			÷ 100 =	

Optimum Moisture Correction Calculations

[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100

% Soil	X	Optimum MC of Soil =		1 Point Moisture Determination
% Rock	X	Absorption of Rock =		
Sum =			÷ 100 =	

Corrected Optimum Moisture Content, %

1 Point Check Compaction Cylinder Density Data

Gross wt.	Volume of Mold	Wet Density	Moisture Content	Dry Density
- Tare wt.				
Net wt.	÷	=	÷ (100 + %H ₂ O) x 100 =	

Field Dry Density 138.7 ÷ 145.9 = 95.1% Relative Compaction

Specifications: Moisture 3.0 to 7.0% Compaction Minimum 95.0 %

Remarks: ✓ By G.D. [Signature]

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE 480-008 Region 5 Contract ID 19219
 Project Location PC to AVD SUP

Pit Name <u>La Doca</u>	Material <u>3/4" ABC</u>	Class <u>6</u>	Item <u>304</u>	Date <u>10-26-17</u>
Sample ID (Test #) <u>QA #12</u>	Tested by (print name) <u>Eric Howes</u>		Station/offset <u>0+25</u>	Elevation / Depth <u>1' under grade</u>
Gauge ID <u>28771</u>	Moisture Standard Count <u>699</u>	Density Standard Count <u>2163</u>	Transmission Depth, in. <u>4</u>	Soil Classification <u>A-1-a(1)</u>
Curve No. <u>3990-a</u>	Maximum Dry Density <u>145.9</u>	Optimum Moisture Content <u>5.0</u>	AASHTO T99 or T180 <u>T180</u>	Method A or D <u>D</u>

Class 6 - Curve 2

Gauge Reading	Moisture	Field Test Data		Density		M/D Gauge Moisture Check	
(1) % Moisture	<u>4.8</u>	Wet Dens.	<u>145.9</u>	Dry Dens.	<u>139.3</u>	Wet Soil wt. + pan	<u>1330.5</u>
(2) % Moisture	<u>4.3</u>	Wet Dens.	<u>145.7</u>	Dry Dens.	<u>139.6</u>	Dry Soil wt. + pan	<u>1295.3</u>
(3) % Moisture	<u>4.7</u>	Wet Dens.	<u>145.9</u>	Dry Dens.	<u>139.4</u>	Pan wt.	<u>497.4</u>
(4) % Moisture	<u>4.7</u>	Wet Dens.	<u>145.4</u>	Dry Dens.	<u>139.0</u>	Dry soil wt.	<u>797.9</u>
Average	<u>4.6</u>	Average	<u>145.7</u>	Average	<u>139.3</u>	Water wt.	<u>35.2</u>
						% Moisture =	<u>4.4</u>

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock

Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

[[(% Soil x Max dry density of Soil) + (% Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil X _____ X _____ Maximum Dry Density of soil = _____

% Rock X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ + 100 = _____

Corrected Maximum Dry Density

Optimum Moisture Correction Calculations

[[(% Soil x OMC of Soil) + (% Rock x Absorption of Rock)] ÷ 100

% Soil X _____ X _____ Optimum MC of Soil = _____

% Rock X _____ X _____ Absorption of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Optimum Moisture Content, %

1 Point Moisture Determination

Wet Soil wt. + pan _____

Dry Soil wt. + pan _____

Pan wt. _____

Dry soil wt. _____

Water wt. _____

% Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____

- Tare wt. _____

Net wt. _____ ÷ _____ = _____

Volume of Mold _____

Wet Density _____

Moisture Content _____

Dry Density _____

÷ (100 + _____ %H₂O) x 100 = _____

Field Dry Density 139.3 ÷ 145.9 = 95.5 % Relative Compaction

Specifications: Moisture 3.0 to 7.0 Compaction _____

Minimum 95.0 %

Remarks: ✓ By G. ORTIZ

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. STE-480-008 Region 5 Contract ID 19219
 Project Location PC to ADA SUP

Pit Name <u>La Boca</u>	Material <u>ABC</u>	Class <u>6</u>	Item <u>304</u>	Date <u>10/26/17</u>
Sample ID (Test #) <u>0A#13</u>	Tested by (print name) <u>Eric Howes</u>		Station/offset <u>0+58</u>	Elevation / Depth <u>18" under grade</u>
Gauge ID <u>28771</u>	Moisture Standard Count <u>699</u>	Density Standard Count <u>2163</u>	Transmission Depth, in. <u>4</u>	Soil Classification <u>A-1-a(0)</u>
Curve No. <u>2998-a</u>	Maximum Dry Density <u>145.4</u>	Optimum Moisture Content <u>5.0</u>	AASHTO T99 or T180	Method A of D

Field Test Data				M/D Gauge Moisture Check	
Gauge Reading	Moisture	Density	Wet Soil wt. + pan	Dry Soil wt. + pan	
(1) % Moisture	<u>5.1</u>	Wet Dens. <u>145.0</u>	Dry Dens. <u>138.0</u>		
(2) % Moisture	<u>5.0</u>	Wet Dens. <u>145.3</u>	Dry Dens. <u>138.4</u>		Pan wt.
(3) % Moisture	<u>5.0</u>	Wet Dens. <u>145.9</u>	Dry Dens. <u>138.4</u>		Dry soil wt.
(4) % Moisture	<u>4.7</u>	Wet Dens. <u>145.0</u>	Dry Dens. <u>138.5</u>		Water wt.
Average	<u>5.0</u>	Average <u>145.3</u>	Average <u>138.5</u>		% Moisture =

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried
 Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC
 Wet weight of rock ÷ (1 + absorption ÷ 100) = dry weight rock
 Wet weight of soil ÷ (1 + M/D Gauge MC ÷ 100) = dry wt. soil
 Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = % Rock & % Soil

Rock Correction Formula and Calculations

$$\frac{[(\% \text{ Soil} \times \text{Max dry density of Soil}) + (\% \text{ Rock} \times \text{CF} \times 62.4 \times \text{Sp Gr Rock})] \div 100}{\text{Corrected Maximum Dry Density}}$$
 For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95
 % Soil X _____ Maximum Dry Density of soil = _____
 % Rock X _____ Specific Gravity of Rock = _____
 Sum = _____ ÷ 100 = _____

Optimum Moisture Correction Calculations

$$\frac{[(\% \text{ Soil} \times \text{OMC of Soil}) + (\% \text{ Rock} \times \text{Absorption of Rock})] \div 100}{\text{Corrected Optimum Moisture Content, \%}}$$
 % Soil X _____ Optimum MC of Soil = _____
 % Rock X _____ Absorption of Rock = _____
 Sum = _____ ÷ 100 = _____

1 Point Moisture Determination
 Wet Soil wt. + pan _____
 Dry Soil wt. + pan _____
 Pan wt. _____
 Dry soil wt. _____
 Water wt. _____
 % Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____	Volume of Mold _____	Wet Density _____	Moisture Content _____	Dry Density _____
- Tare wt. _____				
Net wt. _____	÷ _____ = _____		÷ (300 + _____ %H ₂ O)x100= _____	

Percent Compaction calculation
 Field Dry Density 138.5 ÷ 145.9 (Corrected Maximum dry density) x 100 = 94.9 % Relative Compaction
 Specifications: Moisture 3.0 to 7.0 Compaction _____ Minimum 95.0 %

Remarks: ✓ By G. DENTON

COLORADO DEPARTMENT OF TRANSPORTATION
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND
CP 25 PERCENT RELATIVE COMPACTION

Project No. 5TG 480-008 Region 5 Contract ID 19219
 Project Location PC to AVD SUP

Pit Name <u>La Bolla</u>	Material <u>ABC</u>	Class <u>6</u>	Item	Date <u>10-26-17</u>
Sample ID (Test #) <u>QA#14</u>	Tested by (print name) <u>ERIC HOWES</u>		Station/offset <u>0+75</u>	Elevation / Depth <u>TOG</u>
Gauge ID <u>28771</u>	Moisture Standard Count <u>699</u>	Density Standard Count <u>2163</u>	Transmission Depth, in. <u>4</u>	Soil Classification <u>A-1-a(0)</u>
Curve No. <u>3498-a</u>	Maximum Dry Density <u>145.9</u>	Optimum Moisture Content <u>5.0</u>	AASHTO T99 or T180 <u>T180</u>	Method A or D <u>D</u>

Class 6 - curve 2

Gauge Reading	Moisture	Field Test Data		Density	M/D Gauge Moisture Check	
(1) % Moisture	<u>4.6</u>	Wet Dens.	<u>146.1</u>	Dry Dens.	<u>139.7</u>	Wet Soil wt. + pan _____
(2) % Moisture	<u>4.7</u>	Wet Dens.	<u>146.6</u>	Dry Dens.	<u>140.0</u>	* Dry Soil wt. + pan _____
(3) % Moisture	<u>4.9</u>	Wet Dens.	<u>146.4</u>	Dry Dens.	<u>139.5</u>	Pan wt. _____
(4) % Moisture	<u>4.7</u>	Wet Dens.	<u>146.7</u>	Dry Dens.	<u>140.0</u>	Dry soil wt. _____
Average	<u>4.7</u> ✓	Average	<u>146.5</u>	Average	<u>139.8</u> ✓	Water wt. _____
						% Moisture = _____

Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)]

Method A - Oven Dried

Dry wt. of rock ÷ Dry wt. total sample = % Rock & % Soil

Method B - Using Gauge MC

Wet weight of rock ÷ (1 + _____ absorption ÷ 100) = dry weight rock _____

Wet weight of soil ÷ (1 + _____ M/D Gauge MC ÷ 100) = dry wt. soil _____

Dry wt. of rock ÷ (Dry wt. of rock + Dry wt. of soil) X 100% = _____ % Rock & _____ % Soil

Rock Correction Formula and Calculations

$$\left[\left(\% \text{ Soil} \times \text{Max dry density of Soil} \right) + \left(\% \text{ Rock} \times \text{CF} \times 62.4 \times \text{Sp Gr Rock} \right) \right] \div 100$$

For AASHTO T99, CF = 0.90 For AASHTO T180, CF = 0.95

% Soil _____ X _____ Maximum Dry Density of soil = _____

% Rock _____ X _____ X _____ Specific Gravity of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Maximum Dry Density _____

Optimum Moisture Correction Calculations

$$\left[\left(\% \text{ Soil} \times \text{OMC of Soil} \right) + \left(\% \text{ Rock} \times \text{Absorption of Rock} \right) \right] \div 100$$

% Soil _____ X _____ Optimum MC of Soil = _____

% Rock _____ X _____ Absorption of Rock = _____

Sum = _____ ÷ 100 = _____

Corrected Optimum Moisture Content, % _____

1 Point Moisture Determination

Wet Soil wt. + pan _____

Dry Soil wt. + pan _____

Pan wt. _____

Dry soil wt. _____

Water wt. _____

% Moisture = _____

1 Point Check Compaction Cylinder Density Data

Gross wt. _____ Volume of _____

- Tare wt. _____ Mold _____ Wet Density _____ Moisture Content _____ Dry Density _____

Net wt. ÷ _____ = _____ ÷ (100 + _____ %H₂O)x100= _____

Field Dry Density 139.8 ÷ 145.9 Percent Compaction calculation 95.8 % Relative Compaction

Specifications: Moisture 3.0 to 7.0 Compaction _____ Minimum 95.0 %

Remarks: ✓ By G. ORTIZ

COLORADO DEPARTMENT OF TRANSPORTATION FIELD LABORATORY TEST RESULTS	Project No.	Contract ID
	STE C480-008	19219
	Project Location PAQUOSA - PG TO AVO - SUP	

Contractor/Supplier: CROSSFIRE LLC / CROSSFIRE AGGREGATES	Item 609/ 304	Class 6	Lot 192 93
Attention: JASON VAURINA			

TEST NO.	QA #2	QA #3	QA #1	Item Description	
DATE	9-1-17	9-25-17	7-20-17	Class 6 FOR ITEM 609	
STATION	23+52	11+00	24+48		
LOCATION	CL	CL	CL		
QUANTITY	1000 cy	1000 cy	1000 cy	Specs	Falling Test #
Sieve 1"	100	100	100	100	
Sieve 3/4"	100	100	100	95-100	
Sieve 1/2"	98	91	92		
Sieve 3/8"	77	81	81		
Sieve #4	61	59	60	30-65	
Sieve #8	51	46	50	25-55	
Sieve #16	43	37	43		
Sieve #30	37	31	57		
Sieve #50	30	24	30		
Sieve #100	20	17	21		
Sieve #200	15.4	13.3	17.1	3-12	QA #1/#2
L.L.	NLL	NLL	22	≤ 30	9#3
P.I.	NON-PLASTIC	NON-PLASTIC	5	≤ 6	
% Bitumen					
Max SpG					
Voids					
VMA					
% Rel. Comp.					
% Moisture					
Slump					
% Air					
Flex/Cyl PSI					
Other:					

Note: Record "Test No." of the corresponding Sample ID (SM/LIMS). Remarks (below):

Local Agency	Local Agency	Date	Time
DOT (print name) Clifton Lee	DOT (sign name) Clifton Lee	9/6/2017	2:36 PM
Contractor's Representative (print name) JD VAURINA	Contractor's Representative (sign name) [Signature]	Date 9-6-17	Time 2:29:37

Colorado Department of Transportation
Calculations for Price Reduction

Project Number: STE C480-008
 Project Code (SA): 19219
 Proj. Description: Pagosa PC to AVD Shared Use Path
 Region: 5

Date: 5/16/2018
 Data from
 CDOT Form No.: 626
 Field Sheet No.:

Item 304
 Lot No. 1
 Element Name No. 200 sieve
 Number of Tests 3
 Upper Spec Limit 12
 Lower Spec Limit 3

Test Results	17.10	Xn	15.27	Average of the samples
	15.40	a	0.45	Variable factor for "n" samples
	13.30	R	3.8	Difference between the high and low values
		Tu	12	Upper Tolerance of Spec
		TL	3	Lower Tolerance of Spec
		F	6.00	Price reduction factor for Item

P =	29.860	(Xn+aR-Tu)*F
Multiplier	0.6	
P * Multiplier	17.916	
Unit Price	\$41.75	
Price Adjustment	\$7.48	
Quantity in Lot	1500	
Price Reduction	\$11,219.90	

Total P = 29.860

Total Price Reduction = \$11,219.90

Notes:

Calculations by: Jessica Ebel

Date:

Resident Engineer/Project Engineer

Date:

**COLORADO DEPARTMENT OF TRANSPORTATION
SIEVE ANALYSIS FOR AGGREGATES
NOT SPLIT ON THE NO. 4 SIEVE**

*Pinon Causeway
54748 mt*

3977-A

Project No. <i>STE-0400-008</i>	Contract ID <i>19219</i>
Project Location: <i>to place PC to AVD SUP Pagosa Springs</i>	
Pit Name: <i>PIEDRA PIT</i>	
Item <i>304</i>	Class <i>2/6</i>
Material <i>3/4" abc</i>	

Sampled Location <i>24748 (RETAINING WALL)</i>					Sampled Location				
Sample ID <i>3/4" abc, lab number 3977-A</i>					Sample ID				
Specimen Dry Weight B <i>2098.6</i>		Date <i>7/20/17</i>		VERIFICATION SAMPLE	Specimen Dry Weight B		Date		# test
Sieve	Weight	Percent Retained	Percent Passing		Specs	Sieve	Weight	Percent Retained	
3"					3"				
2"					2"				
1 1/2"					1 1/2"				
1"	<i>0</i>	<i>0</i>	<i>100</i>	<i>100</i>	1"				
3/4"	<i>0</i>	<i>0</i>	<i>100</i>	<i>100</i>	3/4"				
1/2"	<i>169.3</i>	<i>8.1</i>	<i>91.9</i>		1/2"				
3/8"	<i>392.5</i>	<i>18.7</i>	<i>81.3</i>		3/8"				
#4	<i>831.9</i>	<i>39.6</i>	<i>60.4</i>	<i>30-65</i>	#4				
#8 / #10	<i>1043.7</i>	<i>49.7</i>	<i>50.3</i>	<i>25-55</i>	#8 / #10				
#16	<i>1199.8</i>	<i>57.2</i>	<i>42.8</i>		#16				
#30 / #40	<i>1321.3</i>	<i>63.0</i>	<i>37.0</i>		#30 / #40				
#50	<i>1460.4</i>	<i>69.6</i>	<i>30.4</i>		#50				
#100	<i>1655.4</i>	<i>78.9</i>	<i>21.1</i>		#100				
#200	<i>1738.7</i>	<i>82.9</i>	<i>17.1</i>	<i>3-12</i>	#200				
Pan	<i>1784.0</i>	$(\text{Dry Wt.} - \text{TSW}) \div (\text{Dry Wt.}) = \% \text{ Diff. [after wash]}$			Pan		$(\text{Dry Wt.} - \text{TSW}) \div (\text{Dry Wt.}) = \% \text{ Diff. [after wash]}$		
- #200	<i>314.5</i>	$(1784.0 - 1784.0) \div (1784.0 \times 100) = .006\%$			- #200		$(\text{---} - \text{---}) \div (\text{---} \times 100) = \text{---}\%$		
TSW	<i>1784.0</i>				TSW				

Gradation Sample		Moisture Sample		Gradation Sample		Moisture Sample	
Pan ID:				Pan ID:			
Wet Wt. + Pan:	<i>2619.4</i>	<i>2686.2</i>		Wet Wt. + Pan:			
Dry Wt. + Pan:	<i>2495.6</i>	<i>2565.5</i>		Dry Wt. + Pan:			
Pan Wt:	<i>397.0</i>	<i>519.4</i>		Pan Wt:			
Wet Wt. A:	<i>2222.4</i>			Wet Wt. A:			
Dry Wt. B:	<i>2098.6</i>	<i>2046.1</i>		Dry Wt. B:			
Washed Dry Wt. and pan:	<i>2181.1</i>	<i>120.7</i>	H ₂ O Loss	Washed Dry Wt. and pan:			H ₂ O Loss
- #200 Lost:	<i>314.5</i>	<i>1784.0</i>	% H ₂ O	- #200 Lost:			% H ₂ O
Wet Weight $\div (100 + \% \text{ H}_2\text{O}) \times 100 = \text{Dry Weight}$				Wet Weight $\div (100 + \% \text{ H}_2\text{O}) \times 100 = \text{Dry Weight}$			
A $2222.4 \div (100 + 5.9) \times 100 = B$ <i>2098.6</i>				A $\div (100 +) \times 100 = B$			
Sampled By <i>Eric Howes</i>	Tested By <i>Garco Joderob</i>	in <i>Garco Campbell</i>		Sampled By	Tested By	By	

PROJECT NO: STE-C400-000/19219

TRAUTNER GEOTECHNICAL

Atterberg Limits - ASTM 4318

PROJECT: Pinon Causway TO AVO SUP PROJECT#: 54748 mt Date: 7-20-17

SAMPLE DESCRIPTION: 3/4" - ABC PROPOSED CLASS 6/2 SOURCE: Piedra Pit Lab Number: 3977-A

VERIFICATION SAMPLE 1/21

LOCATION: Belt Sample, On-site Stockpile, Stockpile at Pit, Windrow, Loose In-place, Test Bore, Other:

Sample Prep : Wet or Dry (see ASTM)

Moisture Condition By: Greg Jodrych Date: 07/20/17

Tested By: Greg Jodrych 07/21

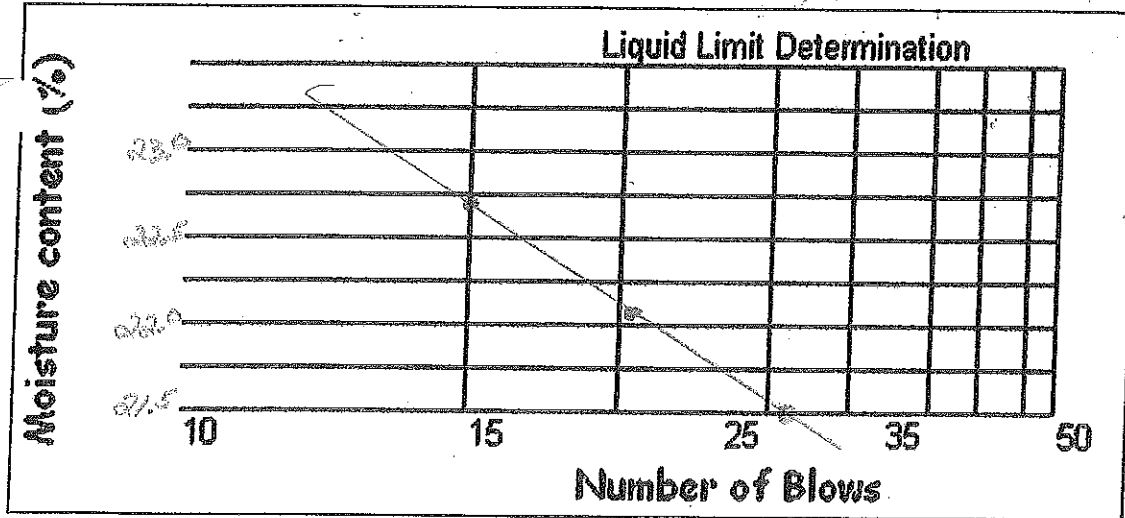
Liquid Limit Determination	Minimum 3 Trials		
	15 - 25	20 - 30	25 - 35
Required Blows	15 - 25	20 - 30	25 - 35
Can Number	<u>B</u>	<u>P</u>	<u>R</u>
Wt. of Wet Soil + Can	<u>28.75</u>	<u>27.79</u>	<u>30.00</u>
Wt. of Dry Soil + Can	<u>26.12</u>	<u>25.41</u>	<u>27.26</u>
Wt. of Can	<u>14.54</u>	<u>14.62</u>	<u>14.51</u>
Wt. of Dry Soil	<u>11.581</u>	<u>10.791</u>	<u>12.751</u>
Wt. of Moisture	<u>2.631</u>	<u>2.381</u>	<u>2.741</u>
Water Content, w%	<u>22.71</u>	<u>22.11</u>	<u>21.51</u>
No. of Blows, N	<u>15</u>	<u>21</u>	<u>26</u>

$$LL = W\% \left(\frac{N}{25} \right)^{-1.21}$$

Liquid Limit: 22

Plastic Limit: 19

Plasticity Index: 5



Plastic Limit Determination	Minimum 3 Trials	
	C	E
Can Number:	<u>C</u>	<u>E</u>
Wt. of Wet Soil + Can	<u>24.57</u>	<u>23.92</u>
Wt. of Dry Soil + Can	<u>23.10</u>	<u>22.55</u>
Wt. of Can	<u>14.59</u>	<u>14.55</u>
Wt. of Dry Soil	<u>8.511</u>	<u>8.001</u>
Wt. of Moisture	<u>1.471</u>	<u>1.371</u>
Water Content, w%	<u>17.21</u>	<u>17.01</u>

Remarks: calcs. & by Craig Campbell

4016-A

COLORADO DEPARTMENT OF TRANSPORTATION SIEVE ANALYSIS FOR AGGREGATES NOT SPLIT ON THE NO. 4 SIEVE	Project No. <u>STE 480-008</u>	Contract ID <u>19219</u>
	Project Location: <u>PC-AVD SUP</u>	
	Pit Name: <u>PIEDRA</u>	
	Item <u>304</u>	Class <u>6</u>

Sampled Location <u>23+56 25132</u>					Sampled Location				
Sample ID <u>LAB No. 4016-A</u>					Sample ID				
Specimen Dry Weight B <u>1983.6</u>		Date <u>9-1-17</u>		# of Tests <u>QA7</u>	Specimen Dry Weight B		Date		Test#
Sieve	Weight	Percent Retained	Percent Passing	Specs	Sieve	Weight	Percent Retained	Percent Passing	Specs
3"					3"				
2"					2"				
1 1/2"					1 1/2"				
1"	<u>0</u>	<u>0</u>	<u>100</u>	<u>100</u>	1"				
3/4"	<u>0</u>	<u>0</u>	<u>100</u>	<u>9-100</u>	3/4"				
1/2"	<u>239.5</u>	<u>12.1</u>	<u>87.9</u>		1/2"				
3/8"	<u>454.3</u>	<u>22.9</u>	<u>77.1</u>		3/8"				
#4	<u>782.0</u>	<u>39.5</u>	<u>60.5</u>	<u>30-65</u>	#4				
#8 / #10	<u>976.1</u> <u>1021.1</u>	<u>49.2</u> <u>51.5</u>	<u>50.8</u> <u>48.5</u>	<u>25-55</u>	#8 / #10				
#16	<u>1135.5</u>	<u>57.2</u>	<u>42.8</u>		#16				
#30 / #40	<u>1257.3</u> <u>1314.5</u>	<u>63.4</u> <u>66.4</u>	<u>36.6</u> <u>33.6</u>		#30 / #40				
#50	<u>1377.6</u>	<u>70.5</u>	<u>29.5</u>		#50				
#100	<u>1595.3</u>	<u>80.4</u>	<u>19.6</u>		#100				
#200	<u>1678.7</u>	<u>84.6</u>	<u>15.4</u>	<u>3-12</u>	#200				
Pan	<u>1718.5</u>	(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash] _____ ÷ _____ x 100 = <u>0.0</u> %			Pan	(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash] (____ - ____) ÷ (____ x 100) = ____%			
- #200	<u>269.1</u>				Pan				
TSW	<u>1493.2</u> <u>1718.5</u>				TSW				
Gradation Sample					Moisture Sample				
Pan ID:					Pan ID:				
Wet Wt. + Pan: <u>2539.0</u>					Wet Wt. + Pan: <u>2720.1</u>				
Dry Wt. + Pan: <u>2420.0</u>					Dry Wt. + Pan: <u>2590.0</u>				
Pan Wt: <u>436.4</u>					Pan Wt: <u>436.8</u>				
Wet Wt. A: <u>2102.6</u> ✓					Wet Wt. A: _____				
Dry Wt. B: <u>1983.6</u> ✓					Dry Wt. B: <u>2153.62</u> ✓				
Washed Dry Wt. and pan: <u>2154.9</u>					Washed Dry Wt. and pan: _____				
-#200 Mat'l Lost: <u>265.1</u>					-#200 Mat'l Lost: _____				
Mat'l Seived: <u>1718.5</u>					Mat'l Seived: _____				
% H ₂ O: <u>6.0</u> ✓					% H ₂ O: _____				
Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight					Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight				
A <u>2102.6</u> ÷ (100 + <u>6.0</u>) x 100 = B <u>1983.6</u>					A _____ ÷ (100 + _____) x 100 = B _____				
Sampled By: <u>ERIC HOWES</u>					Sampled By: _____				
Tested By: <u>GREG JADRYCH</u>					Tested By: _____				
By: <u>G. DANEN</u>					By: _____				

COOT PROJECT #: STE 400-008/19279

TRAUTNER GEOTECH LLC

QA#2

Atterberg Limits - ASTM 4318

PROJECT: PC-AVD SUP PROJECT#: 54748 mt Date: 9-1-17

SAMPLE DESCRIPTION: 3/4" ABC SOURCE: Pindra Lab Number: 4016-A

ST. 25+32

LOCATION: Belt Sample, On-site Stockpile, Stockpile at Pit,

Windrow, Loose In-place, Test Bore, Other:

Sample Prep : Wet or Dry (see ASTM)

Moisture Condition By: Greg Glendyck Date: 09/01/17

Tested By: S. Chiarita 9/5/17

↓ BY G. DENTEN

Liquid Limit Determination	Minimum 3 Trials		
	15 - 25	20 - 30	25 - 35
Required Blows			
Can Number	<u>R1</u>	<u>U1</u>	<u>N1</u>
Wt. of Wet Soil + Can	<u>28.75</u>		
Wt. of Dry Soil + Can			
Wt. of Can	<u>11.03</u>	<u>11.10</u>	<u>11.26</u>
Wt. of Dry Soil			
Wt. of Moisture			
Water Content, w%			
No. of Blows, N	<u>15</u>	<u>15</u>	<u>17</u>

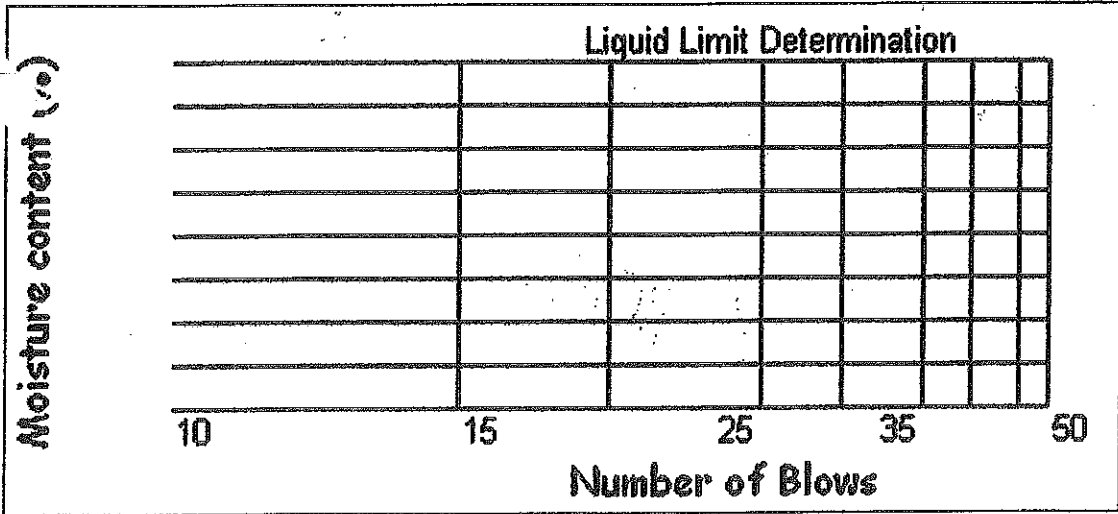
$$LL = W\% \left(\frac{N}{25} \right)^{.121}$$

Liquid Limit: NO LL

Plastic Limit: NO PL

Plasticity Index: Non Plastic

*NOTE: TESTER COULD NOT DEVELOP SOIL PAT WITH DRIER MATERIAL. DETERMINED MATERIAL TO BE NP.



Plastic Limit Determination	Minimum 3 Trials		
	F	C	
Can Number:			
Wt. of Wet Soil + Can			
Wt. of Dry Soil + Can			
Wt. of Can	<u>14.90</u>	<u>14.59</u>	
Wt. of Dry Soil			
Wt. of Moisture			
Water Content, w%			

Remarks: _____

4034-A

COLORADO DEPARTMENT OF TRANSPORTATION SIEVE ANALYSIS FOR AGGREGATES NOT SPLIT ON THE NO. 4 SIEVE	Project No. <u>STE 480-008</u>	Contract ID <u>192A</u>
	Project Location: <u>PC to AVE SUP</u>	
	Pit Name: <u>LA BOCA</u>	
	Item <u>304</u>	Class <u>6</u>

Sampled Location <u>11+00</u>					Sampled Location				
Sample ID <u>LAB NO. 4034-A</u>					Sample ID <u>3</u>				
Specimen Dry Weight B <u>2278.6</u>		Date <u>09/25/17</u>	Test # <u>QA 2</u>			Specimen Dry Weight B		Date	Test #
Sieve	Weight	Percent Retained	Percent Passing	Specs	Sieve	Weight	Percent Retained	Percent Passing	Specs
3"					3"				
2"					2"				
1 1/2"					1 1/2"				
1"	<u>6</u>	<u>0</u>	<u>100</u>	<u>100</u>	1"				
3/4"	<u>0</u>	<u>0</u>	<u>100</u>	<u>95-100</u>	3/4"				
1/2"	<u>216.8</u>	<u>9.5</u>	<u>90.5</u>		1/2"				
3/8"	<u>433.3</u>	<u>19.0</u>	<u>81.0</u>		3/8"				
#4	<u>943.5</u>	<u>41.4</u>	<u>58.6</u>	<u>30-65</u>	#4				
#8 / #10	<u>1236.8</u> <u>287.5</u>	<u>53.8</u> <u>56.5</u>	<u>46.2</u> <u>43.5</u>	<u>25-55</u>	#8 / #10				
#16	<u>1426.5</u>	<u>62.6</u>	<u>37.4</u>		#16				
#30 / #40	<u>1576.7</u> <u>646.4</u>	<u>69.2</u> <u>28.3</u>	<u>30.8</u> <u>71.7</u>		#30 / #40				
#50	<u>1724.7</u>	<u>75.7</u>	<u>24.3</u>		#50				
#100	<u>1897.6</u>	<u>83.3</u>	<u>16.7</u>		#100				
#200	<u>1975.3</u>	<u>86.7</u>	<u>13.3</u>	<u>3-12</u>	#200				
Pan	<u>2020.1</u>	(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash]			Pan		(Dry Wt. - TSW) ÷ (Dry Wt.) = % Diff. [after wash]		
- #200	<u>259.1</u>	$(2019.5 - 2020.1) \div (2019.5) \times 100 = -0.1\%$			- #200		$(\quad - \quad) \div (\quad \times 100) = \quad\% \quad$		
TSW	<u>2020.1</u>				TSW				

Gradation Sample		Moisture Sample		Gradation Sample		Moisture Sample	
Pan ID:				Pan ID:			
Wet Wt. + Pan:	<u>2798.9</u>	<u>2855.2</u>		Wet Wt. + Pan:			
Dry Wt. + Pan:	<u>2705.5</u>	<u>2762.9</u>		Dry Wt. + Pan:			
Pan Wt:	<u>426.9</u>	<u>494.1</u>		Pan Wt:			
Wet Wt. A:	<u>2372.0</u>			Wet Wt. A:			
Dry Wt. B:	<u>2278.6</u>	<u>2268.8</u>		Dry Wt. B:			
Washed Dry Wt. and pan:	<u>2446.4</u>	H ₂ O Loss <u>92.3</u>		Washed Dry Wt. and pan:		H ₂ O Loss	
- #200 Lost	<u>259.1</u>	Mat'l Seived <u>2019.5</u>	H ₂ O <u>4.1</u>	- #200 Lost		Mat'l Seived	H ₂ O
Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight				Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight			
A <u>2372.0</u> ÷ (100 + <u>4.1</u>) x 100 = B <u>2278.6</u>				A ÷ (100 +) x 100 = B			
Sampled By	<u>ERIC HOWES</u>	Tested By	<u>GREG JAORYCH</u>	Sampled By		Tested By	

CDOT PROJECT NO: STE 480-008/19219

TRAUTNER GEOTECHNICAL

QA#3

Atterberg Limits - ASTM 4318

PROJECT: PC to AVE SUP PROJECT#: 54748 Date: 9-25-17

SAMPLE DESCRIPTION: 3/4" ABC SOURCE: La Boca Lab Number: 4034-A

LOCATION: Belt Sample, On-site Stockpile, Stockpile at Pit,

Sample Prep: Wet or Dry (see ASTM)

Windrow, Loose In-place, Test Bore, Other: _____

Moisture Condition By: GJ GREG JADRYCH Date: 9/26/17

Tested By: EH, 9/27/17

ERIC HOWES

Liquid Limit Determination	Minimum 3 Trials		
	15 - 25	20 - 30	25 - 35
Required Blows	15 - 25	20 - 30	25 - 35
Can Number	<u>U1</u>	<u>P2</u>	<u>P2</u>
Wt. of Wet Soil + Can			
Wt. of Dry Soil + Can			
Wt. of Can	<u>11.12</u>	<u>11.24</u>	<u>10.63</u>
Wt. of Dry Soil			
Wt. of Moisture			
Water Content, w%			
No. of Blows, N			

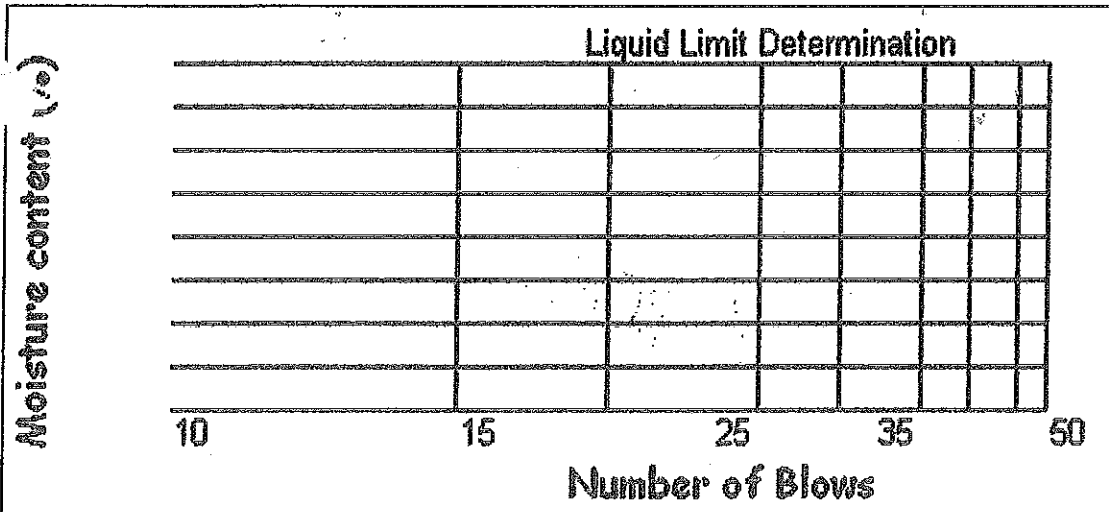
$$LL = W\% \left(\frac{N}{25} \right)^{.121}$$

Liquid Limit: no LL

Plastic Limit: no PL

Plasticity

Index: non plastic



Plastic Limit Determination	Minimum 3 Trials		
Can Number:	<u>P1</u>	<u>P2</u>	
Wt. of Wet Soil + Can			
Wt. of Dry Soil + Can			
Wt. of Can	<u>11.26</u>	<u>11.15</u>	
Wt. of Dry Soil			
Wt. of Moisture			
Water Content, w%			

Remarks: _____

Commissioner of Agriculture
Don Brown

STATE OF COLORADO
MEASUREMENT STANDARDS LICENSE

License Number
3-46809-17

Department of Agriculture - Division of Inspection and Consumer Services
3125 Wyandot * Denver, Co 80211 * 303-477-4220

- | | | |
|--|---------------------------------------|--|
| (A) <u>1</u> 80,001 LBS AND UP | (F) <u> </u> 76 THRU 450 LBS | (K) <u> </u> FABRIC METER |
| (B) <u> </u> 30,001 THRU 80,000 LBS | (G) <u> </u> 4 THRU 75 LBS | (L) <u> </u> CORDAGE METER |
| (C) <u> </u> 10,001 THRU 30,000 LBS | (H) <u> </u> LESS THAN 4 LBS | (M) <u> </u> GRAIN MOISTURE METER /
PROTEIN ANALYZER |
| (D) <u> </u> 1,001 THRU 10,000 LBS | (I) <u> </u> BELT CONVEYOR | (N) <u> </u> MASS FLOW METER |
| (E) <u> </u> 451 THRU 1,000 LBS | (J) <u> </u> IN-MOTION R.R. SCALES | |

LA BOCA PIT CROSSFIRE LLC@LA BOCA PIT
MILE MARKER 4 STATE HWY 17
IGNACIO, CO 81137

THIS LICENSE EXPIRES
12/31/2017

Issued:	1/3/2017
License Fees:	\$200.00
Penalty Fees:	\$0.00
Total Fees:	\$200.00
	PAID

Notice: This license is not transferable

Commissioner of Agriculture
Don Brown

STATE OF COLORADO
MEASUREMENT STANDARDS LICENSE

License Number
3-49500-17

Department of Agriculture - Division of Inspection and Consumer Services
3125 Wyandot * Denver, Co 80211 * 303-477-4220

- | | | |
|--|---|--|
| (A) <u> 1 </u> 80,001 LBS AND UP | (F) <u> </u> 76 THRU 450 LBS | (K) <u> </u> FABRIC METER |
| (B) <u> </u> 30,001 THRU 80,000 LBS | (G) <u> </u> 4 THRU 75 LBS | (L) <u> </u> CORDAGE METER |
| (C) <u> </u> 10,001 THRU 30,000 LBS | (H) <u> </u> LESS THAN 4 LBS | (M) <u> </u> GRAIN MOISTURE METER /
PROTEIN ANALYZER |
| (D) <u> </u> 1,001 THRU 10,000 LBS | (I) <u> </u> BELT CONVEYOR | (N) <u> </u> MASS FLOW METER |
| (E) <u> </u> 451 THRU 1,000 LBS | (J) <u> </u> IN-MOTION R.R. SCALES | |

CROSSFIRE AGGREGATE SERVICES LLC@PIEDRA PIT
12577 US HWY 151
PAGOSA SPRINGS, CO 81147

THIS LICENSE EXPIRES
12/31/2017

Issued: 1/3/2017
License Fees: \$200.00
Penalty Fees: \$0.00
Total Fees: \$200.00
PAID

Notice: This license is not transferable



Certified Weigher Certificate

THIS Certificate IS NOT TRANSFERABLE

Coy, Shawndris

Doing Business As Name(s) (DBA)

Coy, Shawndris

PO Box 5405

Pagosa Springs CO 81147

Effective Date

Expires Date

Apr 14, 2017

Dec 31, 2017

Certified Weigher Certificate AgLicense ID # 00200F

Established by the 14th Amendment to the U.S. Constitution and the Colorado Constitution. The Colorado Department of Agriculture is a public body created by the Colorado Constitution. It is the responsibility of the Department to protect and promote the interests of the agricultural industry in the State of Colorado.

Don Brown

Commissioner of Agriculture

April 14, 2017

Print Date





Certified Weigher Certificate

THIS Certificate IS NOT TRANSFERABLE

GUILLIAMS, KYLE

Doing Business As Name(s) (DBA)

GUILLIAMS, KYLE

148 SPRUCE WAY
BAYFIELD CO 81122

Effective Date

Expires Date

Jan 01, 2017

Dec 31, 2017

Certified Weigher Certificate AgLicense ID # 001G32

As authorized by §§ 10-601 through 10-614, C.R.S. the Commissioner authorizes the above named person to engage in the following activity:

Don Brown

Commissioner of Agriculture

December 09, 2016

Print Date





Certified Weigher Certificate

THIS Certificate IS NOT TRANSFERABLE

Arnold, Alexandria M

Doing Business As Name(s) (DBA)

Arnold, Alexandria

PO Box 6342

Navajo Dam NM 87419

Effective Date

Expires Date

Certified Weigher Certificate AgLicense ID # 002H0H

Sep 27, 2017

Dec 31, 2017

Pursuant to § 35-14-101 through 134, C.R.S., the Commissioner authorizes the above-named person to act as a certified weigher.

Don Brown

Commissioner of Agriculture

September 27, 2017

Print Date





Certified Weigher Certificate

THIS Certificate IS NOT TRANSFERABLE

HOTT, RICHARD

Doing Business As Name(s) (DBA)

HOTT, RICHARD

962 East Oak
Bayfield CO 81122

Certified Weigher Certificate AgLicense ID # 001C94

Effective Date

Expires Date

Jan 01, 2017

Dec 31, 2017

Pursuant to § 35-14-101 through 134, C.R.S., the Commissioner authorizes the above-named person to act as a certified weigher.

Don Brown

Commissioner of Agriculture

January 19, 2017

Print Date



19219-403-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-10-10
	Project No. STE C480-000	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.-S.U.P.	

Metric units yes no

Material Type HMA - PATCHING	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 403	Class
	Grading SX	Special Provisions <input type="checkbox"/> yes
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

HOT MIX ASPHALT PLACED AS PATCHING WAS FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE SAME APPROVED HMA WAS PLACED AS ITEM 60B - BITUMINOUS BIKEWAY (SPECIAL). ALL INFORMATION IS FILED IN ITEM 60B.

User ID	
---------	--

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFILE LLC	Supplier STROHECKER PAVING
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 4 TONS	Previous quantity 0	Total quantity to date 4 TONS
------------------------------------	----------------------------	--------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Matis. Engr./Maint. Supt.) (print name) MIKE DAVIS PE	Title PRESIDENT - DAVIS ENGR. SVCS.	Residency

19219-403-2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region S	Field sheet # 206293
	Contract ID 19219	Date Submitted 3-10-18
	Project No. STE 480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-SUP	

Metric units yes no

Material Type RELEASE AGENT	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 403/608	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE RELEASE AGENT USED ON THE PROJECT WAS INSPECTED AND APPROVED BY THE PROJECT ENGINEER.

A COC IS ATTACHED, ALONG WITH A DELIVERY TICKET.

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed	

Contractor CROSSFIRE LLC	Supplier CHEM STATION
---------------------------------	------------------------------

Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner
---	-------------------

Quantity represented AS NEEDED	Previous quantity 0	Total quantity to date AS NEEDED
---------------------------------------	----------------------------	---

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) LIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MICHAEL DAVIS, PE	Title PRESIDENT, OES	Residency



Certificate of Compliance Letter

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date: 2/20/2018

Project Number: STE C480-008

Project Code & Name: 19219 Pinon Causeway to Aspen Village

Manufacturer's Name: ChemStation

Manufacturing facility Address: 4800 Lima St, Denver CO 80239

Laboratory Name and Address: 5015 Paris St, Denver CO 80239

Product Name or Assembly: 2217-B

Description of Material: Asphalt Release Agent

Model, Catalog, Stock Number: 3501088-4

Lot / batch number: 8227-01

Date or Frequency of Lab Testing: NTPEP's ARA program. This work plan consists of three test procedures: a stripping test, a mixture slide test and an asphalt performance test.

Applicable Specifications: The material above has been reviewed according to subsection 608 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

Item 403-00720 Hot Mix Asphalt (Patching)(Asph.), 4 tons
Item 608-01500 Bituminous Bikeway (Special), 650 tons

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Needed (quantity and units) of pay item see to the right left (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.

Contractor Rep. Signature

3/16/18
Date



ChemStation of the Rockies - 4800 Lima St - Denver CO 80239
Phone: (303)288-8500 - Fax: (303)288-5449 - E-mail: gbabb@chemstation.net

SOLD TO: 8227
Strohecker Asphalt Paving
37801 HWY, 160
Bayfield, CO 81122

SHIP TO: Strohecker Asphalt Paving
300 County Road 302
Pagosa Springs, CO 81147

Delivery Ticket

Number: 7872
Date Printed: 07/30/2008
Terms: Net 30
Route: I-25 SOUTH

Purchase Order: _____

Customer Signature: _____

Salesperson	Tank No.	Product	Additives	Gallons	Unf	Office Use
8010	8227-01	2217-B	Fl Green	213		3501088-4

Delivered By: *[Signature]*

Date: 7/31/08

YOUR SERVICE REPRESENTATIVE ALSO CHECKED OR SERVICED THE FOLLOWING

- Container Stand Label Cap or Bung Ball Valve Tank Cleaned
 Drum Pump Foot Valve Hose(s) Proportioner MSDS

Thank you for your business

19219-411-1

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region	5	Field sheet #	266289
Contract ID	19219	Date Submitted	3-10-18
Project No.	STE C 400-008		
Project Location	PINON CAUSEWAY TO ASPEN VILLAGE DR. S.W.P.		

Metric units yes no

Material Type	BINDER			Field Lab phone	Cell Phone
Material Code (LIMS)	Item	Class	Grading	Special Provisions <input type="checkbox"/> yes	
	608/403		5B-28		
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):			<input type="checkbox"/> CDOT Form #633 (sack)	<input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE ASPHALT CEMENT BINDER USED ON THE PROJECT FOR ITEM 608 WAS APPROVED BY THE PROJECT ENGINEER. THE MATERIAL IS ON THE APL. THE MANUFACTURER'S ^{CTR} COC FOR EACH DELIVERY IS ATTACHED. NO INDEPENDENT VERIFICATION SAMPLE WAS COLLECTED FOR TESTING DUE TO MINIMUM QUANTITIES AND USE ON ITEM 608. SEE FORM 473.

User ID			
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)	

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
4128-17	PG 5B-28 (2017)	11-3-17	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
4153-17	PG 5B-28 (2017)	11-3-17	
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>
			Date needed

Contractor	Supplier	
CROSSFIRE LLC	STROHECKER PAVING	
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner	
Quantity represented	Previous quantity	Total quantity to date
650 608 TONS	0	650 608 TONS

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
Sampled or inspected by (print name)	Title	E-mail	
CLIFTON LEE, PE	PROJECT ENGINEER		
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name)	Title	Residency	
MARICE DAVIS, PE	PRESIDENT - DAVIS ENG.		

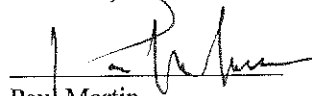


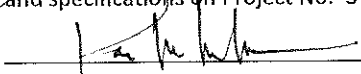
CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 11/30/2017
 CDOT Project No: STE C480-008
 CDOT Project Location: Pinon Causeway to Aspen Village
 CDOT Project Code 19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:	702-01.01.01 Asphalt Cement, Binder	702-01.01.01 Asphalt Cement, Binder
APL Category:	Asphalt	Asphalt
APL Sub-Category:	Binder	Binder
APL Base Category:	PG 58-28	PG 58-28
APL Reference No.:	4128-17	4153-17
Product Name:	PG 58-28 (2017)	PG 58-28 (2017)
Manufacturer:	Suncor Energy Grand Junction	Suncor Energy Fruita
Date of Web Site Review & Selection:	11/03/17	11/03/17

Crossfire, LLC

 Paul Martin,
 Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents <u>650 tons</u> (quantity and units) of pay item: <u>608-01500 Bituminous Bikeway (Special) & 4 tons 403-00720 HMA (patch.) (asph.)</u> (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219	
 Contractor	<u>01/26/18</u> Date

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 4128-17
--	-------------------------------------

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 702.01.01.01 <hr/> Material code description full name: Asphalt Cement, Binder, PG58-28
--	---

PART 1

Product name: PG 58-28 (2017)	Product category: Asphalt\Binder\PG 58-28
Product Representative (name & address): Attn: Jim Hazell Suncor Energy (USA) Inc. 717 17th Street; Suite 2900 Denver, CO 80202 Phone: (303) 793-8009 E-mail: jhazell@suncor.com	Manufacturer (name & address): Attn: Jake Neitsch Suncor Energy - BKEP 202 Fourth Avenue Grand Junction, CO 81501 Phone: (970) 241-1135 E-mail: jneitsch@bkep.com
Web-site address: www.suncor.com	Web-site address: www.suncor.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 Performance Grade asphalt cement designated as PG 58-28.

Source Facility: Manufacturing Terminal

Blue Knight Energy Partners LP (BKEP) manufactures and stores products on behalf of Suncor Energy (USA) Inc.

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):
 HMA

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

- Specifications:** (listing those applicable is required)
- CDOT : Standard Specifications; Section 702; Table 702-1
 - ASTM :
 - AASHTO:
 - FHWA :
 - other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report (CTR)** provided to validate all claims.

- NTPEP-AASHTO:
- FHWA :
- other : CDOT Bituminous Laboratory
- other :
- other :

State DOT Approvals, (current documentation required): Re-submittal Cycle: Expires on 2-01-2018

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:
 Additional Comments:

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 4153-17 /
--	---------------------------------------

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 702.01.01.01 <hr/> Material code description full name: Asphalt Cement, Binder, PG58-28
--	---

PART 1

Product name: PG 58-28 (2017)	Product category: Asphalt\Binder\PG 58-28
Product Representative (name & address): Attn: Jim Hazell Suncor Energy (USA) Inc. 717 17th Street; Suite 2900 Denver, CO 80202 Phone: (303) 793-8009 E-mail: jhazell@suncor.com	Manufacturer (name & address): Attn: Doug Pumphrey Suncor Energy (USA) Inc. 1493 Hwy 6 & 50 Fruita, CO 81521 Phone: (970) 245-0880 E-mail: dpumphrey@suncor.com
Web-site address: www.suncor.com	Web-site address: www.suncor.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

Performance Grade asphalt cement designated as PG 58-28.

Source facility: Storage Terminal

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):

HMA

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):

Specifications: (listing those applicable is required)

CDOT : Standard Specifications; Section 702; Table 702-1

ASTM :

AASHTO:

FHWA :

other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report (CTR)** provided to validate all claims.

NTPEP-AASHTO:

FHWA :

other : CDOT Bituminous Laboratory

other :

other :

State DOT Approvals, (current documentation required): **Re-submittal Cycle: Expires 2-01-2018**

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:

Additional Comments:

BOL for final placement
on 08/19/2017

STRAIGHT BILL OF LADING
26060

Suncor Energy (U.S.A.) Inc.
1493 Hwy 6 & 50
Fruita, CO 81521
(970) 245-0880

In Emergency call Chemtrec at : (800) 424-9300
Reference ERG for Emergency Response Information

This is to certify that the below named materials are properly classified, described, packaged, marked, and
() and are in proper condition for transportation according to the
regulations of the Department of Transportation.

Signature By _____

If this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign
the following statement: The carrier shall not make delivery of this
shipment without payment of freight and other lawful charges.

Signature of Consignor _____

Cargo Tank Supplied By Carrier/Carrier Compliance to Laws - Where the cargo tank is supplied by the carrier,
the carrier hereby certifies that the cargo tank supplied for this shipment
is a proper container for the transportation of this commodity. This is to acknowledge that the carrier has in his
possession or has been offered and accepted the required hazard
materials placards and/or emergency response information.

The property described herein in apparent good order is received by the carrier shown on this Bill of Lading and
the carrier agrees to transport the property to the consignee and the destination set forth herein subject to the
classifications and tariffs, and the terms and conditions of the Uniform Domestic Straight Bill of Lading found in
National Motor Freight Classification; in effect on the date of issuance of this Bill of Lading or the applicable
contract with shipper. It is further agreed by the carrier that the transportation of this shipment
will be performed in compliance with all applicable rules, regulations and laws.

Signature of Motor Carrier David John Daniel Nelson

ID 1905

GROSS 31160 lb INBOUND

~~RECALL~~
ID 1905

GROSS 84260 lb

TARE 31160 lb RECALLED

NET 53100 lb

01:59PM 08/09/2017

ORIGIN **FRUITA, CO** SHIPPER **SUNCOR ENERGY (U.S.A.) INC.** CARRIER **FTI**

SOLD TO: Strohecker CONSIGNEE/DESTINATION Pagosa Springs, (CO)

Product: PG 64-22 PG 58-28 300/400 PEN
 NTISTRIP .3% ANTISTRIP .5% EVOTHERM WMA %

TRACTOR #: 1905 TRAILER #: 8276
TEMP: 300 LOADING #: 2007589

This is to certify that the materials provided under this bill of lading shall meet the standards of and were tested in accord with the Quality
Control Plan that Company or it's affiliates provided to the State and thereby conforms to either CDOT, FAA, FHWA or applicable project spec-
ifications. Per the Agency Plan provided to the State, "We will follow procedures that make a reasonable attempt to prevent contamination of
materials, and inquire as to the contents of our customers' tank trucks or cars." The densities and Specific Gravity denoted are typical results.
Product densities can vary through the processes of manufacturing, shipping and handling.

Authorized Signature: _____

CONTAINER PROPER SHIPPING DESCRIPTION

UN3257, Elevated Temperature Liquid, N.O.S. (Asphalt), 9, PGIII

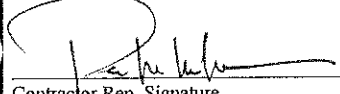
	Calculated lbs/gal @ 60F	Calculated API @ 60F	Measured Sp Gr @ 60F
PG 64-22	8.66	4.82	1.038
PG 58-28	8.62	5.35	1.034
300/400 PEN	8.50	7.29	1.020

Crossfire's Certified Test Report
Certification Statement on Back
→

To request a current MSDS in non-emergency situations, please call (970) 245-0880

ORIGINAL/NOT NEGOTIABLE

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 650 tons (quantity and units) of pay item 600-P1500 Bituminous Blank (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

01/26/18
Date

24 tons 403-00720 HMA (patch) (asph.)

BOL for final placement XXXXXXXX
 on 10/23 & 10/24 & 11/01

CONTROL STRAIGHT BILL OF LADING
 NOT A BILL OF LADING NUMBER

In Emergency call Chemtrec at: (800) 424-9300
 Reference ERG Guide #128 for emergency response information

It is to certify that the below named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Signature By _____

It is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and other lawful charges.

Signature of Consignor _____

Cargo Tank Supplied by Carrier/Carrier Compliance to Laws - Where the cargo tank is supplied by the carrier, the carrier hereby certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this commodity. This is to acknowledge that the carrier has in his possession or has been offered and accepted the required hazard materials placards and/or emergency response information.

The property described herein in apparent good order is received by the carrier shown on this Bill of Lading and the carrier agrees to transport the property to the consignee and the destination set forth herein subject to the classifications of tariffs, and the terms and conditions of the Uniform Domestic Straight Bill of Lading found in National Motor Freight Classification, in effect on the date of issuance of this Bill of Lading or the applicable contract with shipper. It is further agreed by the carrier that the transportation of this shipment will be performed in compliance with all applicable rules, regulations and laws.

Signature of Motor Carrier _____

ORIGIN Grand Junction FLT, CO	SHIPPER Suncor Energy (U.S.A.) Inc.	CARRIER Common Carrier
----------------------------------	--	---------------------------

BLD TO Strohecker	CONSIGNEE/DESTINATION Strohecker Grand Jet FLT, CO State: CO
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BILL OF LADING S4013-17-000926	SHIP DATE 10/20/2017	FREIGHT
-----------------------------------	-------------------------	---------

Original BOL: GRTT Time In: 04:01 Agreement #: 32
 Detail Ref: Time Out: 04:29 Customer NO #: 2007584
 Order Level Comments: CHEMTREC ACN:

Tank #: 107 Trailer #: 683330 Truck #: 1889

Prod #	Prod Name	Reference	Product/Aliaa	Temp	Gross Vol	Net Vol	Gross	Weights
PG 58-28	38		PG 58-28	305 F	6455.31 GAL	5920.96 GAL	84040 LBS	38119.9 KG
ADD				152 C	24435.7 LT	22410.31 LT	32800 LBS	14870 KG
							Net 51200 LBS	23202.07 KG
							25.62 TON	23.24 MT

Proper Shipping Description

UN3251, Elevated Temperature Liquid, n.o.s., (Asphalt), 9, III T/T

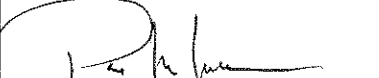
Pounds per Gallon: 8.654 Kilograms per Liter: 1.037 Specific Gravity @ 60°F: 1.038

This is to certify that the materials provided under this bill of lading shall meet the standards of and were tested in accord with the Quality Control Plan that Company or its affiliates provided to the State and thereby conform to the State of Colorado's specifications. For the Agency Plan provided to the State: "We will follow procedures that make a reasonable attempt to prevent contamination of materials, and inquire as to the contents of our customers's tank trucks or cars". The densities and Specific Gravity denoted are typical results. Product densities can vary through the processes of manufacturing, shipping and handling.

Authorized Signature: Mike Rosebly

Crossfire Certified Test Report
 Certification Statement on Back

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 650 tons (quantity and units) of pay item 60B-01500 Bituminous Bkwa (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

01/26/18
Date

? 4 tons 403-00720 HMA (patch.) (asph.)

**COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION**

Region 5	Field sheet # 266293/
Contract ID 19219	Date Submitted 3-18-18
Project No. STE C400-008	
Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-S.U.P.	

Metric units yes no

Material Type EMULSIFIED ASPHALT	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 411	Class
Grading	Special Provisions	<input type="checkbox"/> yes
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

EMULSION WAS APPROVED FOR USE ON THE PROJECT BY THE PROJECT ENGINEER. THE MATERIAL IS ON THE APL. THIS MATERIAL WAS ALSO USED FOR ITEM 603; BITUMINOUS BIKEWAY. SEE FORM 473.

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No. 4145-17	Product name: SS-1A (2017)	Date checked: 2/20/18
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFIRE LLC	Supplier SUNCOR ENERGY
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented: AS NEEDED	Previous quantity 0	Total quantity to date AS NEEDED
---	-------------------------------	--

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
--	--	-----	------

Sampled or inspected by (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	E-mail
VISOR (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MICHAEL DAVIS PE	Title PRESIDENT-DES	Residency



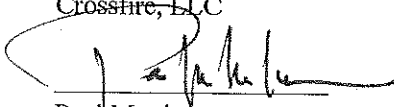
CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 2/20/2018
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code: 19219

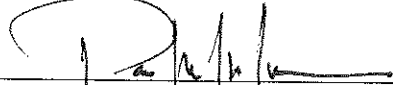
The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 608-01500
APL Category: Asphalt
APL Sub-Category: Emulsion
APL Base Category: Emulsion SS-1h
APL Reference No.: 4145-17
Product Name: SS-1h
Manufacturer: Suncor Energy - BKEP
Date of Web Site Review & Selection: 2/20/18

Crossfire, LLC


Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As Needed (quantity and units) of pay item: 608-01500 Bituminous Bikeway (Special), 650 tons & 403-00720 HMA (Patching) (Asphalt), 4 tons (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219


Contractor

3/16/18
Date

**COLORADO DEPARTMENT OF TRANSPORTATION
PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY**

APL Reference No.
4145-17 ✓

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code:
702.03.12.00
Material code description full name:
Emulsion SS-1h

PART 1

Product name: SS-1h (2017)	Product category: Asphalt\Emulsion\SS-1h
Product Representative (name & address): Attn: Jim Hazell Suncor Energy (USA) Inc. 717 17th Street; Suite 2900 Denver, CO 80202 Phone: (303) 796-2683 E-mail: jwilkins@suncor.com Web-site address: www.suncor.com	Manufacturer (name & address): Attn: Jake Neitsch Suncor Energy - BKEP 204 Fourth Avenue Grand Junction, CO 81501 Phone: (970) 241-1135 E-mail: jneitsch@bkep.com Web-site address: www.suncor.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
Emulsified asphalt cement designated as SS-1h.

Source Facility: Manufacturing Terminal

Blue Knight Energy Partners LP (BKEP) manufacturers and stores product on behalf of Suncor Energy (USA) Inc.

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):
Black Coat, Fog Seal

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):

- Specifications: (listing those applicable is required)**
- CDOT : Standard Specifications; Section 702; Table 702-2
 - ASTM :
 - AASHTO:
 - FHWA :
 - other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

- Product Testing: (National/independent laboratories or universities with Report Date.) Certified Test Report (CTR) provided to validate all claims.**
- NTPEP-AASHTO:
 - FHWA :
 - other : CDOT Bituminous Laboratory
 - other :
 - other :

State DOT Approvals, (current documentation required): Re-submittal Cycle: Expires on 2-01-2018

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:
Additional Comments:

19219-506-1

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region <u>5</u>	Field sheet # <u>260289</u>
Contract ID <u>19219</u>	Date Submitted <u>3-10-18</u>
Project No. <u>STE- C400-008</u>	
Project Location <u>PINON CAUSEWAY TO ASPEN VILLAGE DR-S.U.A</u>	

Metric units yes no

Material Type <u>GEOGRID REINFORCEMENT (SPECIAL)</u>	Field Lab phone	Cell Phone
Material Code (LIMS)	Item <u>506</u>	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

GEOGRID PLACED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE CONTRACTORS & SUPPLIERS MANUFACTURER'S COC'S ARE ATTACHED. FOR TENSAR TRIAX TX140 & HANES TERRAGRID RX1200

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)
Sample ID (#6)	

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor <u>CROSSFIRE, LLC</u>	Supplier <u>WAWATON/TENSAR HANES GEO COMPONENTS/TENSAR</u>
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented <u>962 SY</u>	Previous quantity <u>0</u>	Total quantity to date <u>962 SY</u>
------------------------------------	----------------------------	--------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) <u>CLIFTON LEE, PE</u>	Title <u>PROJECT ENGINEER</u>	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) <u>MIKE DAVIS, PE</u>	Title <u>PRESIDENT- DAVIS ENG. SVC.</u>	Residency

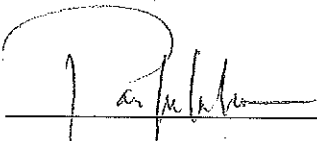


Certificate of Compliance Letter

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date: 1/17/2018
Project Number: STE C480-008
Project Code & Name: 19219 Pinon Causeway to Aspen Village
Manufacturer's Name: Tensar TriAx TX140
Manufacturing facility Address: 2500 Northwinds Parkway, Suite 500 Alpharetta, Georgia 30009
Laboratory Name and Address: 2500 Northwinds Parkway, Suite 500 Alpharetta, Georgia 30009
Product Name or Assembly: TriAx TX140
Description of Material: Subgrade and pavement stabilization are their primary mechanisms, are predetermined by ground or foundation support.
Model, Catalog, Stock Number: 300889
Lot / batch number: 436
Date or Frequency of Lab Testing: Monthly
Applicable Specifications: The material above has been reviewed according to subsection 506 of the CDOT Specifications for Road and Bridge Construction

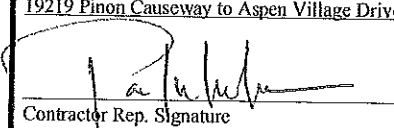
The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.



Paul Martin, Project Manager

* - 962 s.g. is the total quantity paid for the line item 506-01020 geogrid reinforcement (special).

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 962 S.G. R (quantity and units) of pay item 506-01020 Geogrid Rein. (Spec.) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.



Contractor Rep. Signature

2/14/18
Date

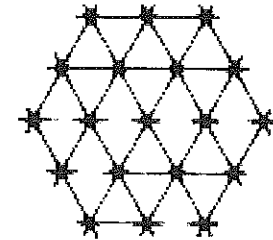


Tensor
INTERNATIONAL

Product Specification - TriAx™ TX140 Geogrid

Tensor International Corporation reserves the right to change its product specifications at any time. It is the responsibility of the person specifying the use of this product and of the purchaser to ensure that product specifications relied upon for design or procurement purposes are current and that the product is suitable for its intended use in each instance.

Tensor TriAx™ Geogrid



General

- The geogrid is manufactured from a punched polypropylene sheet, which is then oriented in three substantially equilateral directions so that the resulting ribs shall have a high degree of molecular orientation, which continues at least in part through the mass of the integral node.
- The properties contributing to the performance of a mechanically stabilized layer include the following:

Index Properties	Longitudinal	Diagonal	Transverse	General
▪ Rib pitch ⁽²⁾ , mm (in)	40 (1.60)	40 (1.60)	-	
▪ Mid-rib depth ⁽²⁾ , mm (in)	-	1.2 (0.05)	1.2 (0.05)	
▪ Mid-rib width ⁽²⁾ , mm (in)	-	1.1 (0.04)	1.1 (0.04)	
▪ Nodal thickness ⁽²⁾ , mm (in)				3.1 (0.12)
▪ Rib shape				rectangular
▪ Aperture shape				triangular

Structural Integrity

▪ Junction efficiency ⁽³⁾ , %	93
▪ Aperture stability ⁽⁴⁾ , kg-cm/deg @ 5.0kg-cm	3.0
▪ Radial stiffness at low strain ⁽⁵⁾ , kN/m @ 0.5% strain (lb/ft @ 0.5% strain)	225 (15,430)

Durability

▪ Resistance to chemical degradation ⁽⁶⁾	100%
▪ Resistance to ultra-violet light and weathering ⁽⁷⁾	100%

Dimensions and Delivery

The TX geogrid shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring 3.8 meters (12.5 feet) and/or 4.0 meters (13.1 feet) in width and 75 meters (246 feet) in length.

Notes

- Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-02. Brief descriptions of test procedures are given in the following notes.
- Nominal dimensions.
- Load transfer capability determined in accordance with GRI-GG2-87 and GRI-GG1-87 and expressed as a percentage of ultimate tensile strength.
- In-plane torsional rigidity measured by applying a moment to the central junction of a 225mm x 225mm specimen restrained at its perimeter in accordance with U.S. Army Corps of Engineers Methodology for measurement of Torsional Rigidity, (Kinney, T.C. Aperture stability Modulus ref 3, 3.1.2000).
- Radial stiffness is determined from tensile stiffness measured in any in-plane axis from testing in accordance with ASTM D6637-01.
- Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
- Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-05.

Tensor International Corporation
5883 Glenridge Drive, Suite 200
Atlanta, Georgia 30328-5363
Phone: 800-TENSAR-1
www.tensor-international.com

This specification supersedes any and all prior specifications for the product designated above and is not applicable to any product shipped prior to November 13, 2009. Tensor and TriAx are trademarks of Tensor International Corporation or its affiliates in the US and many other countries. TriAx™ geogrid and the use thereof are protected by U.S. Patent No. 7,001,112. Patents or patent applications also exist in other countries. Final determination of the suitability of the above-mentioned information or product for the use contemplated, and its manner of use are the sole responsibility of the user. Tensor International Corporation disclaims any and all express, implied or statutory warranties, including but not limited to, any warranty of merchantability or fitness for a particular purpose regarding this product or the Company's other products, technologies or services. The information contained herein does not constitute engineering advice.

GRAND JUNCTION
Winwater
COMPANY

7/19/2017

Contractor: Crossfire LLC
Project: Pinon Causeway to Aspen Village Shared Use Path Project
Project #: STE C480-008
Reference Order #: 044606-00

This letter is to certify that we supplied Crossfire LLC TerraGrid RX1200 Geogrid on the above referenced project. The TerraGrid RX1200 Geogrid was manufactured in accordance to the attached materials data sheet.

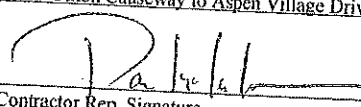
TerraGrid RX1200 Geogrid
Quantity - 1 roll (13.1 x 164', 238sy)
Item Number - RX1200

Please contact me with any questions.

Casey Kenney

Sales Manager
Grand Junction Winwater
819 21 1/2 Road
Grand Junction CO, 81505
Ph: 970-255-9015

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 962 S.Y. * (quantity and units) of pay item 506-01020 Geogrid Reinf. (Special) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

8/01/17
Date

* 962 S.Y. is the total quantity paid for the line item 506-01020 Geogrid Reinforcement (Special).

GRAND JUNCTION
Winwater
COMPANY

11/14/2017

Contractor: Crossfire LLC
Project: Pinon Causeway to Aspen Village Shared Use Path Project
Project #: STE C480-008
Reference Order #: 045498-00

This letter is to certify that we supplied Crossfire LLC with TerraGrid RX1200 on the above referenced project. The geogrid was manufactured to meet the properties listed in the attached materials data sheet.

TerraGrid RX1200 Geogrid
Quantity - 2 Roll (13.1'x164')
Item Number - RX1200 (458738377)

Please contact me with any questions.

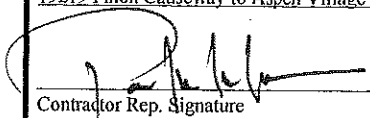
Casey Kenney

Grand Junction Winwater

Grand Junction CO, 81505
Ph: 970-255-9015
Fax: 970-255-9018

* - 962 sq. is the total quantity paid for the line
item 506-01020 Geogrid Reinforcement (special).

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 962 S.Y. R (quantity and units) of pay item 506-01020 Geogrid Reinf. (Spec.) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

3/16/18
Date



February 1, 2018

TO: Grand Junction Winwater Works

REF: TerraGrid® RX1200 Certificate of Compliance Lot: 94970 Ticket: 41706123192 3 rolls (13'x164')
 CDOT Project No. STE C480-008 Address of Manufacturing facility: 1210 Citizens Parkway Morrow, GA
 Date(s) of laboratory testing: 04/2017 :

This is to certify that the TerraGrid RX1200 meets the standards for 'Type 2' biaxial geogrids. Produced in an ISO9002 certified facility, RX1200 is composed of quality polypropylene resin without post-consumer recycled resin inclusion. This certifies that TerraGrid RX1200 meets or exceeds the following interrelated performance characteristics.

PROPERTY	PROCEDURE	U.S. Standard		Metric	
		MD	XMD	MD	XMD
Geometric¹					
Aperture Dimensions	Measured	1.0 inch	1.5 inch	25 mm	37 mm
Open Area	Measured	%			
Rib Thickness	Measured	0.07 inch	0.05 inch	1.9 mm	1.2 mm
Mechanical^{2,3}					
Tensile Strength - Ultimate	ASTM D6637-09 Procedure B	1310 lbs/ft	2000 lbs/ft	19.2 kN/m	29.1 kN/m
Tensile Load @ 2% Strain		410 lbs/ft	616 lbs/ft	6.0 kN/m	9.0 kN/m
Tensile Load @ 5% Strain		808 lbs/ft	1340 lbs/ft	11.8 kN/m	19.6 kN/m
Junction Efficiency ⁴	GRI-GG2-05	93 %			
Flexural Rigidity	ASTM D1388 mod	1,200,000 mg-cm			
Aperture Stability ⁵	US COE	6.5 cm-kg/degree			
Durability¹					
UV Degradation Resistance	ASTM D4355/D6637	100 %			
Chemical Damage Resistance ⁷	EPA 9090A	100 %			
Installation Damage Resistance ^{1,8,9}	ASTM D5818/D6637	SM ≥95%, GP ₁ ≥95%, GP ₂ ≥90 %			

⁹ SM – Silty sand, GP1 – Poorly graded gravel with sand, GP2 – Course, poorly graded gravel

Packaging	Width	Length	Width	Length
		13 ft (+ 0.16) (- 0.00)	164 ft	3.95 m (+ 0.05) (- 0.00)

Note: TerraGrid RX1200 is produced with a Carbon Black content ≥ 0.5%

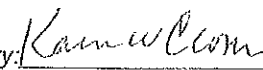
Footnotes:

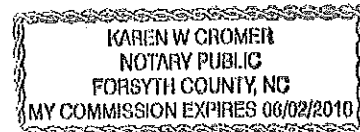
- ¹ Nominal Values
- ² All Mechanical properties are based on the manufacturer's laboratory test results at 20 ± 1° C
- ³ All Mechanical properties are calculated as the lower 95% confidence limit in accordance with ISO 2602-198
- ⁴ Expressed as a percentage of Ultimate Tensile Strength
- ⁵ Resistance to in-plane rotational moment of 20 kg-cm
- ⁶ 500 hour exposure, value expressed as a percentage of Ultimate Tensile Strength
- ⁷ Micro-Biological for 16 weeks, Chemical Method A: Inorganic Acid, Method B: Inorganic Base (% of Ultimate Tensile Strength)
- ⁸ Expressed as a percentage of Ultimate Tensile Strength
- ⁹ SM – Silty sand, GP1 – Poorly graded gravel with sand, GP2 – Course, poorly graded gravel

Sincerely,


 Keith Harris
 Technical Director

I, Karen W Cromer, Notary, hereby acknowledge that Keith Harris personally appeared before me this day and signed the foregoing instrument.

Notary:  Expiration: June 2, 2018



19219-601-1

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region 5	Field sheet # 266289
Contract ID 19219	Date Submitted 3-10-18
Project No. STE C480-008	
Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-S	

Metric units yes no

Material Type CONCRETE - CLASS B	Field Lab phone	Cell Phone
Material Code (LIMS) 601	Item 601	Class B
Grading	Special Provisions	<input type="checkbox"/> yes
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

CLASS P CONCRETE WAS PLACED IN LIEU OF CLASS B CONCRETE AND APPROVED BY THE PROJECT ENGINEER. SEE LETTER DATED 09/10/2017 IN THE 105 CHANGE ORDERS/INSTR. SECTION.

ALL INFORMATION IS FILED UNDER CLASS P.

SEE FORM 473

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
	Emergency <input type="checkbox"/>	Date needed

Contractor CROSSFIRE, LLC	Supplier FCM
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner ANIMAS GLACIER

Quantity represented 36 cy	Previous quantity 0	Total quantity to date 36 cy
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via _____ Date _____

Sampled or inspected by (print name) TRAMNER GEOTECH	Title QA TESTERS	E-mail
Supervisor (Pro./Res./Mails. Engr./Maint. Supt.) (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	Residency

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

19219-601-2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-10-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.W.P.	

Metric units yes no

Material Type CLASS P CONCRETE	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 601 604, 608, 609	Class P
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

CLASS P CONCRETE WAS FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE MIX IS ON THE PRE-APPROVED CONCRETE MIX DESIGNS LIST. ALL COMPONENTS OF THE MIX ARE ON THE APL AND ARE FILED UNDER THIS SECTION. THE RESULTS ARE ATTACHED. SEE FORM 473.

SEE LETTER DATED 09-08-2017 IN THE CHANGE ORDERS/ISS SECTION

User ID		
Sample ID (#1) APL/QML ACCEPT./REF. NO./ 3192-16	Sample ID (#2) PRODUCT NAME/ MASTER FIBER F 70	Sample ID (#3) DATE CHECKED/ 7-14-17
Sample ID (#4) APL/QML ACCEPT./REF. NO./ 2302-16 / 2949-16	Sample ID (#5) PRODUCT NAME/ FOUR CORNERS CL F.F.A. / PUEBLO PLANT 19TH	Sample ID (#6) DATE CHECKED/ 7-14-17 / 7-14-17
APL/QML Acceptance: APL Ref. No. 2095-14 / 2067-14	Product name: MASTER POLYHECO 997 / MASTER AIR AE 200	Date checked: 7-14-17 / 7-14-17
APL/QML Acceptance: APL Ref. No. 2003-14 / 2091-14	Product name: MASTER SET DELVO / MASTER SET AC 534	Date checked: 7-14-17 / 7-14-17
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>		Date needed
Contractor CROSSFIRE LLC	Supplier FCM	
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner ANIMAS GLACIER	
Quantity represented ITEM 601 - 36 cy ITEM 604-3 EA / 608-133.25 SY / 609-76 LF	Previous quantity 0	Total quantity to date ITEM 601 - 36 cy ITEM 604-3 EA / 608-133.25 SY / 609-76 LF
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via
Date		
Sampled or inspected by (print name) TRAUTNER GEOTECH	Title QA TESTERS	E-mail
Supervisor (Pro./Res./Malls. Engr./Maint. Supt.) (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	Residency

COLORADO DEPARTMENT OF TRANSPORTATION

Pre-Approved Concrete Mix Designs

These concrete mix designs meet the requirements of CDOT Standard Specifications and the CDOT Field Materials Manual CP 62. Inclusion on the APL does not guarantee that a mix will be approved for use on a project.

Please contact the Concrete & Physical Properties Unit at 303-398-6549 for more information on these mix designs.

Updated: 8/7/2017

Everist Materials, LLC

CDOT Mix Number	Supplier Mix ID			Expiration Date
2016123	645109D	Concrete, Class D/P	Class 1 Sulfate Resistance	11/01/2017

Four Corners Materials

CDOT Mix Number	Supplier Mix ID			Expiration Date
2016106	37023347	Concrete, Class D	Class 2 Sulfate Resistance	01/20/2018
2016107	36923347	Concrete, Class BZ	Class 2 Sulfate Resistance	01/20/2018
2017069	37523344	Concrete, Class P	Class 2 Sulfate Resistance	11/24/2018
2017094	38023344	Concrete, Class E	Class 2 Sulfate Resistance	10/10/2018
2017122	38023347	Concrete, Class E	Class 2 Sulfate Resistance	11/24/2018
2017123	37523347	Concrete, Class P	Class 2 Sulfate Resistance	11/24/2018
2017125	38023347	Concrete, Class E	Class 2 Sulfate Resistance	11/24/2018
2017130	38523605	Shotcrete	Class 2 Sulfate Resistance	11/24/2018
2017173	36923344	Concrete, Class BZ	Class 2 Sulfate Resistance	11/24/2018

Four Corners Materials Animas-Glacier pit

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017174	37023344	Concrete, Class D	Class 2 Sulfate Resistance	11/24/2018

Fremont Paving And Redi-Mix, Inc.

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017139	CCDP20F16	Concrete, Class D/P	Class 2 Sulfate Resistance	06/01/2018
2017162	PWDP20F17	Concrete, Class D/P	Class 2 Sulfate Resistance	02/01/2019
2017163	PWDP20F17AC	Concrete, Class D/P	Class 2 Sulfate Resistance	11/01/2018
2017164	PWBZ20F17	Concrete, Class BZ	Class 2 Sulfate Resistance	11/01/2018

Green Brothers Ready Mix

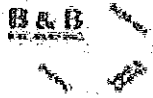
CDOT Mix Number	Supplier Mix ID			Expiration Date
2017041	3165002E	Concrete, Class D	Class 2 Sulfate Resistance	01/15/2018
2017042	3165002F	Concrete, Class E	Class 2 Sulfate Resistance	01/12/2018

Halde Redi-Mix, Inc.

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017150	T16062-425	Concrete, Class D	Class 0 Sulfate Resistance	12/13/2017

Hard Rock Concrete

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017170	HRDP20F17	Concrete, Class D/P	Class 2 Sulfate Resistance	02/01/2019
2017171	HRBZ20F17	Concrete, Class BZ	Class 2 Sulfate Resistance	02/01/2019



OLDCASTLE SW GROUP, INC.

Submittal # 17-355-002

Version 1

6/22/2017

CROSSFIRE LLC
1800 Hughes Landing Blvd Ste 500
THE WOODLANDS TX 77380

Job: CDOT STE C480-008
Job Description: Pinion Causeway & Aspen Village, Pagosa Springs CO

Attn: Paul Martin

All materials and concrete delivered to this project conform to ASTM C-94, ACI 301 and ACI 318 Specifications for Ready Mixed Concrete. Four Corners Materials will not be responsible for concrete compromised by the addition of water, improper placing, finishing or curing techniques.

This submission contains the following mix designs:

Mix Code	Mix Description	Usage
37523344	CLASS P GCC FC	CONCRETE PAVEMENT

Please have your personnel place the order for concrete using the designated mix number. The concrete will come from Plant 355. The phone number is (505) 324-3900.

PLEASE NOTIFY THIS OFFICE AS TO THE ACCEPTANCE OR REJECTION OF THIS MIX SUBMITTAL. LACK OF RESPONSE PRIOR TO FIRST POUR SHALL RESULT IN ACCEPTANCE.

NOTE: ALL CONCRETE MUST BE ORDERED BY THE APPROVED MIX DESIGN NUMBER. EVALUATION OF THIS CONCRETE MUST BE CONDUCTED ACCORDING TO ASTM AND ACI STANDARDS.

Thank you for giving us this opportunity to be of service to you, feel free to contact me if you should need any further assistance.

Sincerely yours,

Ray Taulli



OLDCASTLE SW GROUP, INC.

Concrete Mix Design Submittal

Date : 06/22/2017 No. 17-355-002 Version 1
 Mix Code : 37523344 Description : CLASS P GCC FC

Customer	CROSSFIRE LLC	<u>Design</u>	<u>Tolerance</u>
Contact	Paul Martin	Air Content	6
Office Phone	970-828-2864	Slump	3
Project Name	CDOT STE C480-008	Design Strength	4200 psi
Project Description	Pinion Causeway & Aspen Village, Pagosa Springs	Unit Weight	139.3 lb/ft ³
Usage/ Placement	CONCRETE PAVEMENT	W/C Ratio	0.42

Material Code	Material Description	Material Supplier	Material Source	Standard	Design Quantity	Specific Gravity	Volume (ft ³)
AG-#67	ANIMAS GLACIER # 67	FCM	ANIMAS GLACIER	C-33	1682 lb	2.66	10.14
AG-SND	ANIMAS GLACIER SAND	FCM	ANIMAS GLACIER	C-33	1077 lb	2.66	6.49
GCC-V II	GCC CEMENT	GCC	PUEBLO	C-150	565 lb	3.15	2.87
4-CRNRS	FOUR CORNERS FLYASH	SRMG	4 CORNERS	C-618	141 lb	1.99	1.14
AE200	MasterAir AE200	BASF	BASF DENVER		7 lq oz	-	-
POLY-997	MIDRANGE WATER REDUCER	BASF	BASF DENVER	C-494	56 lq oz	-	-
WATER	WATER	WATER	WATER	C-1602	35.5 gal	1.00	4.75
				Air Content	6.00 %	-	1.62
				Yield	3761 lb	-	27.01

NOTES

Prepared By :

Paul Appel

Concrete Aggregate Test Report



Project: <u>Supplier Information</u>	Report Date: <u>3/9/17</u>
Client: <u>Four Corners Materials</u>	
Address: <u>PO Box 16</u>	Sampled By: <u>Client</u>
<u>Farmington, NM 87499</u>	Material Tested: <u>Concrete Sand</u>
	Date Tested: <u>12/2-12/16/16</u>
Sample Date: <u>11/24/2016</u>	Tested By: <u>Mary /Annikah</u>
Sample received: <u>11/24/2016</u>	Sample Location: <u>Stockpile</u>
Laboratory #: <u>ALB 269-16</u>	Sample Source: <u>Animas Glacier Pit</u>

Sieve Analysis

C-117 & C136/T-11 & T-27 ASTM C33

Sieve Size	% Passing	Specs
1/2" (12.5mm)		
3/8" (9mm)	100	100
#4 (4.75mm)	100	95-100
#8 (2.36mm)	90	80-100
#10 (2mm)		
#16 (1.18mm)	73	50-85
#30 (0.6mm)	54	25-60
#40 (0.425mm)		
#50 (0.3mm)	27	5-30
#80 (0.18mm)		
#100 (0.15mm)	8	0-10
#200 (0.075mm)	2.4	0-3
Fineness Modulus	2.49	

Test Results

ASTM C33

Standard	Physical Properties	Results	Specs
C-128	Fine Bulk Specific Gravity	2.626	
	Specific Bulk Specific Gravity, SSD	2.661	
T-84	Gravity & Apparent Specific Gravity	2.721	
	Absorption	Absorption, %	
CP37	Sand Equiv.	Sand Equivalent, %	90 > 80
C-142	Clay/Friable	Fine Aggregate, %	0.2 < 3.0
T-112	Particles		
C40	Organic Impurities	Organic Impurities	N/A
C-88	Soundness	Fine Soundness Loss, %	6.3 < 15
T-104	5 cycles	MgSO ₄	
C-29	Unit Weight	Unit Weight, (lbs/ft ³)	105.7
T-19	& Voids	Voids, %	35.4
	shoveling		

Respectfully Submitted,

Reports to: fax/email
 Paul Appel Paul.Appel@oldcastle-materials.com
 Rick Morris rmorris@4cornersmaterials.com

Lea Ann Marquez
 Lea Ann Marquez, PE
 45

414 Bibb Industrial Dr.
 P.O.Box 1228
 Las Vegas, NM 87701
 505-718-3030

Concrete, Aggregate and Asphalt Testing, LLC

9430 San Mateo Blvd. NE
 Unit H
 Albuquerque, NM 87113
 505-503-6670

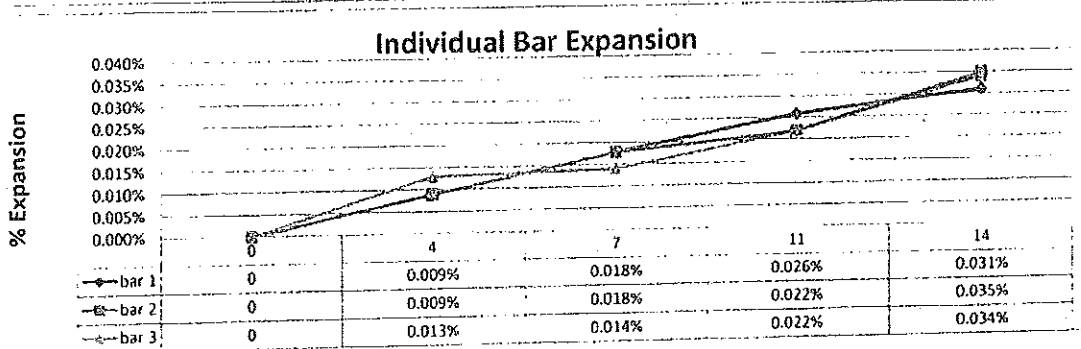
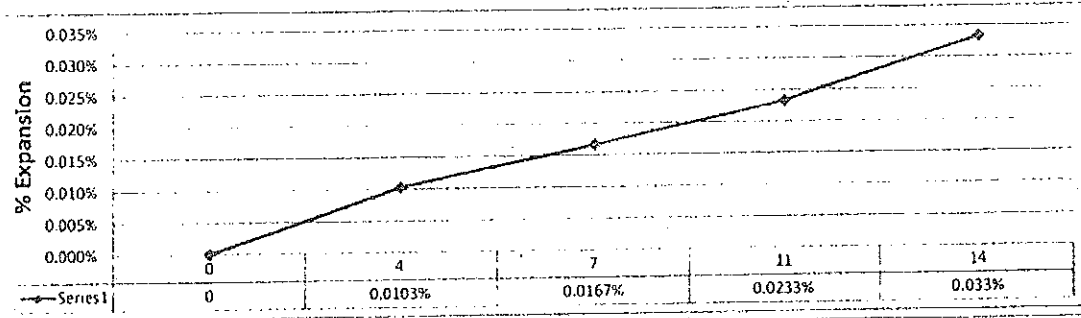
Alkali-Silica Reaction Analysis Report



Client: <u>Four Corners Materials</u>	Date Reported: <u>1/2/2017</u> <input type="checkbox"/> Revised
Address: <u>PO Box 16</u>	Project: <u>Various</u>
<u>Farmington, NM 87499</u>	Project #: <u>Various</u>
	Aggregate Source(s): <u>Animas Glacier, Concrete Sand</u>
	Cement Source: <u>GCC Pueblo III</u>
Test requested by: <u>Rick/Paul</u>	Admixture Source: <u>SRM Four Corners Cl. F Flyash</u>
Samples Received: <u>11/24/2016</u>	Admixture Percentage: <u>25%</u> by wt of cement or
Laboratory #: <u>742-16</u>	<u>20%</u> by wt of cementitious

Standard Test Method for Determining the Potential Alkali Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar Bar Method) ASTM C1567-13

Batch date	11/29/2017	Reading	Bar A	Bar B	Bar C	Calibration	Avg Bar	% expansion	Specs
Test Date:	11/30/17	Initial	0.3561	0.3123	0.2995	0.0713	0.3226		
	12/1/17	Zero	0.3614	0.3177	0.3048	0.0712	0.3280		
	12/5/17	4	0.3625	0.3188	0.3063	0.0714	0.3292	0.0103%	
			0.009%	0.009%	0.013%				
	12/8/17	7	0.3632	0.3195	0.3062	0.0712	0.3296	0.0167%	
			0.018%	0.018%	0.014%				
	12/12/17	11	0.3638	0.3197	0.3068	0.071	0.3301	0.0233%	
			0.026%	0.022%	0.022%				
	12/15/17	14	0.3645	0.3212	0.3082	0.0712	0.3313	0.033%	< 0.10
			0.031%	0.035%	0.034%				effectively mitigated



Respectfully Submitted,

Lea Ann Marquez
Lea Ann Marquez, PE

3-2-17



Concrete Aggregate Test Report



Project: <u>Supplier Information</u>	Report Date: <u>3/9/17</u>
Client: <u>Four Corners Materials</u>	Sampled By: <u>Client</u>
Address: <u>PO Box 16</u>	Material Tested: <u>#67 Stone</u>
<u>Farmington, NM 87499</u>	Date Tested: <u>12/2-12/16/16</u>
Sample Date: <u>11/24/2016</u>	Tested By: <u>Pedro</u>
Sample received: <u>11/24/2016</u>	Sample Location: <u>Stockpile</u>
Laboratory #: <u>LL659-16</u>	Sample Source: <u>Animas Glacier Pit</u>

Sieve Analysis

Test Results

C-117 & C136/T-11 & T-27 ASTM C33, Size #67

ASTM C33

Sieve Size	% Passing	Specs
2" (50mm)		
1.5" (37.5mm)		
1" (25mm)	100	100
3/4" (19mm)	95	90-100
1/2" (12.5mm)	58	
3/8" (9mm)	36	20-55
#4 (4.75mm)	6	0-10
#8 (2.36mm)	2	0-5
#10 (2mm)		
#16 (1.18mm)	2	
#30 (0.6mm)	1	
#40 (0.425mm)		
#50 (0.3mm)	1	
#80 (0.18mm)		
#100 (0.15mm)	1	
#200 (0.075mm)	0.8	0-1.5
Fineness Modulus	4.99	

Standard	Physical Properties	Results	Specs
C-127	Coarse Bulk Specific Gravity	2.625	
	Specific Bulk Specific Gravity, SSD	2.657	
T-85	Gravity & Apparent Specific Gravity	2.711	
	Absorption Absorption, %	1.2	
C-142	Clay/Friable Coarse Aggregate, %	0.5	< 3.0
T-112	Particles		
D5821	Fractured 1 face	94	No req
	Faces 2 faces	90	
C-131	L.A. LA Wear, %	21	< 50
T-96	Abrasion Grading	B	
C-88	Soundness Coarse Soundness Loss, %	1.7	< 18
T-104	5 cycles MgSO ₄		
C-123	Lightweight Light Wt Pieces %	N/T	< 0.5
	Pieces Type of Solution		Zinc Chloride - coal/lignite
C-123	Lightweight Light Wt Pieces %	1.6	< 3.0
	Pieces Type of Solution		Zinc Bromide - Chert
Total Deleterious		2.9	< 3.0
C-29	Unit Weight Unit Weight, (lbs/ft ³)	99.5	
T-19	& Voids Voids, %	39.2	
Rodded			

Reports to:
Paul Appel
Rick Morris

fax/email
Paul.Appel@oldcastle-materials.com
rmorris@4cornersmaterials.com

Respectfully Submitted,

Lea Ann Marquez
Lea Ann Marquez, PE
4-5-17



414 Bibb Industrial Dr.
P.O. Box 1228
Las Vegas, NM 87701
505-718-3030

Concrete, Aggregate and Asphalt Testing, LLC

9430 San Mateo Blvd. NE
Unit H
Albuquerque, NM 87113
505-503-6670

Alkali-Silica Reaction Analysis Report



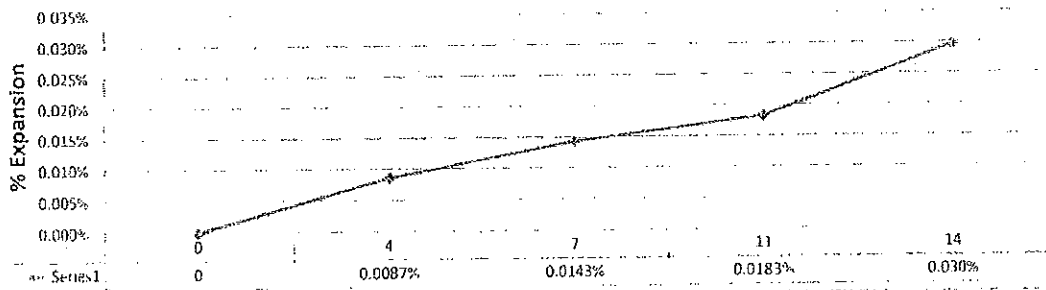
Client: Four Corners Materials
 Address: PO Box 16
Farmington, NM 87499
 Test requested by: Rick/Paul
 Samples Received: 11/24/2016
 Laboratory #: 743-16

Date Reported: 1/2/2017 Revised
 Project: Various
 Project #: Various
 Aggregate Source(s): Animas Glacier, Coarse Aggregate
 Cement Source: GCC Pueblo III
 Admixture Source: SRM Four Corners CI F Flyash
 Admixture Percentage: 25% by wt of cement or
20% by wt of cementitious

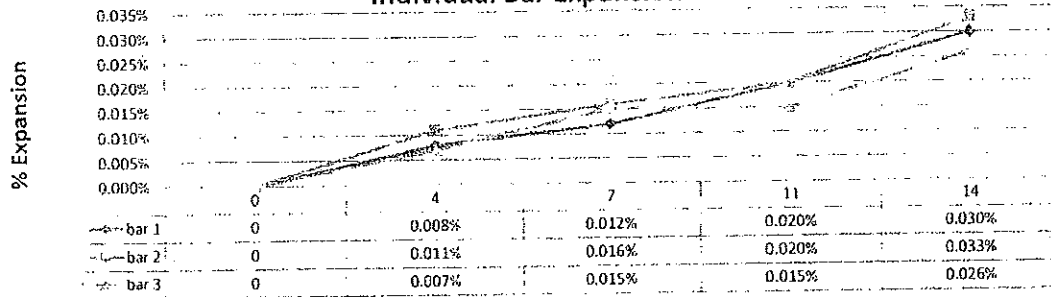
Standard Test Method for Determining the Potential Alkali Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar Bar Method) ASTM C1567-13

Batch date:	11/29/2017	Reading	Bar A	Bar B	Bar C	Calibration	Avg Bar	% expansion	Specs
Test Date	11/30/17	Initial	0.3645	0.3155	0.2966	0.0713	0.3255		
	12/1/17	Zero	0.3704	0.3210	0.3025	0.0712	0.3313		
	12/5/17	4	0.3713	0.3222	0.3033	0.0713	0.3323		
			0.008%	0.011%	0.007%			0.0087%	
	12/8/17	7	0.3727	0.3237	0.3051	0.0723	0.3338		
			0.012%	0.016%	0.015%			0.0143%	
	12/12/17	11	0.3722	0.3228	0.3038	0.071	0.3329		
			0.020%	0.020%	0.015%			0.0183%	
	12/15/17	14	0.3735	0.3244	0.3052	0.0713	0.3344		
			0.030%	0.033%	0.026%			0.03%	< 0.10

effectively mitigated



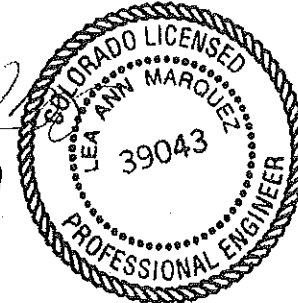
Individual Bar Expansion



Respectfully Submitted,

Lea Ann Marquez, PE

3-2-17





GCC of America
 Cherry Creek Plaza 1, 600 S. Cherry Street, 10th Floor, Glendale, CO 80246
 Sales (303) 739-5900 Customer Service (800) CALL GCC

MATERIAL CERTIFICATION REPORT

Plant: Pueblo
 Address: 3372 Lime Road
 Pueblo, CO 81004
 Contact: Urs Fuchs
 Phone: (719) 647-6821

Cement Type: I/II, Low Alkali, GU
 Date Issued: 19-Dec-16
 Production Period: 1-Nov-16
 To: 30-Nov-16

STANDARD REQUIREMENTS ASTM C150/AASHTO M85/ASTM C1157

CHEMICAL		
Item	ASTM C150 Spec. Limit	Test Result
SiO ₂ (%)	A	20.1
Al ₂ O ₃ (%)	6.0 max	4.4
Fe ₂ O ₃ (%)	6.0 max	3.3
CaO (%)	A	63.2
MgO (%)	6.0 max	1.1
SO ₃ (%)	3.0 max ^B	3.3
Loss On Ignition (%)	3.5 max	2.9
Na ₂ O (%)	A	0.22
K ₂ O (%)	A	0.53
Insoluble Residue (%)	1.5 max	0.9
CO ₂ (%)	A	1.5
Limestone (%)	5.0 max	3.9
CaCO ₃ in Limestone (%)	70.0 min	89
Potential Phase Composition ^C		
C ₃ S (%)	A	55
C ₂ S (%)	A	15
C ₃ A (%)	8.0 max	6
C ₄ AF (%)	A	10

PHYSICAL			
Item	ASTM C150 Spec. Limit	ASTM C1157 Spec. Limit	Test Result
Air Content (% vol)	12 max	12 max	8
Blaine Fineness (m ² /kg)	260 min	A	402
Residue 45 µm (No.325) Sieve (%)	A	D	2.1
Autoclave Expansion (%)	0.80 max	0.80 max	-0.02
Compressive Strength			
3 days, MPa (psi)	12.0 (1740) min	13.0 (1890) min	30.0 (4360)
7 days, MPa (psi)	19.0 (2760) min	20.0 (2900) min	36.5 (5290)
28 days, MPa (psi) ^E	A	28.0 (4060) min	43.9 (6360)
Time of Setting, Initial Vicat (min)	45min / 375 max	45 min / 420 max	111
Mortar Bar Expansion C-1038 (%)	0.020 max ^B	0.020 max	-0.002

ADDITIONAL DATA				
Type	Limestone	Inorganic Processing Addition	Base Phase Cement Composition	
SiO ₂ (%)	5.5	N / A	C ₃ S (%)	58
Al ₂ O ₃ (%)	1.2	N / A	C ₂ S (%)	16
Fe ₂ O ₃ (%)	0.9	N / A	C ₃ A (%)	6
CaO (%)	50.2	N / A	C ₄ AF (%)	10
SO ₃ (%)	0.2	N / A		

OPTIONAL REQUIREMENTS ASTM C150/AASHTO M85/ASTM C1157

CHEMICAL		
Item	ASTM C150 Spec. Limit	Test Result
Equivalent Alkalies (%)	0.60 max	0.57

PHYSICAL			
Item	ASTM C150 Spec. Limit	ASTM C1157 Spec. Limit	Test Result
False Set (%)	50.0 min	50.0 min	71

^A Not applicable

^B It is permissible to exceed the specification limit provided that ASTM 1038 Mortar Bar Expansion does not exceed 0.020 % at 14 days.

^C Adjusted per Annex A1.6

^D No limit specified, data reported for information purpose only.

^E Test result of prior month

GCC of America Cement is warranted to conform at the time of shipment with current ASTM C150/AASHTO M85/ASTM C1157. No other warranty is made or implied. Having no control over the use of its cements, GCC of America does not guarantee finished work. GCC is not responsible for any additives not stated in the Certificate of Compliance. GCC of America certifies that the data described above under "Processing Addition" represents the materials in the cement manufactured during the production period indicated.



Bryan Patterson, Technical Services Manager

600 S. Cherry Street • Suite 1000 • Denver, CO 80246
Desk Phone: 303 • 739 • 5916

Email: bpatterson@gcc.com
Cell Phone: 720 • 413 • 8077

www.gccusa.com
Fax: 303 • 739 • 5940

July 7, 2016

GCC Pueblo Plant Type I/II Portland Cement, Pueblo, CO.

COMPLIANCE AFFIDAVIT

Portland Cement, Type I/II, Low-Alkali as manufactured by GCC, at Pueblo, Colorado is warranted to conform at the time of shipment to current ASTM Specification C-150.

No other warranty is made or to be implied.

Sincerely,

A handwritten signature in cursive script that reads "Bryan Patterson".

Bryan Patterson
Technical Services Manager
GCC
303-739-5916



Salt River Materials Group

100% AMERICAN

Four Corners Materials
Attn: Rick Morris
PO Box 2707
Durango, CO 81302-2707

Clarkdale Cement Plant
601 N. Cement Plant Rd
Clarkdale, AZ 86324

19th Ave. Terminal
1802 W. Lower Buckeye Rd
Phoenix, AZ 85007

Lower Buckeye Terminal
1941 W. Lower Buckeye Rd
Phoenix, AZ 85007

21st Ave. Terminal
1325 N. 21st Ave.
Phoenix, AZ 85009

54th Ave. Terminal
5402 W Buchanan St.
Phoenix, AZ 85043

Dobson Storage
5955 E. McKellips Rd.
Scottsdale, AZ 85250

Cholla Fly Ash Plant
4801 Frontage Rd.
Joseph City, AZ 86032

Four Corners Fly Ash Plant
End of County Road 6675
Fruitland, NM 87416

San Juan Fly Ash Plant
End of County Road 6800
Waterflow, NM 87421

Escalante Fly Ash Plant
County Road 19
Prewitt, NM 87405

Gallup Transfer Terminal
900 N 9th St.
Gallup, NM 87301

San Diego Terminal
920 Bay Marina Dr.
National City, CA 91950

Fontana Budway Terminal
13600 Napa St.
Fontana, Ca 92335

Bakersfield Terminal
32535 7th Standard Rd.
Bakersfield, CA 93314

Stockton Terminal
1300 N. Gertrude Ave.
Stockton, CA 95215

Sacramento Terminal
4520 50th St.
McClellan Park, CA 95652

Panaca Pozzolan Plant
333 Hansen St.
Panaca, NV 89042

Denver Terminal
220 East 54th Avenue
Denver, CO 80216

Product: ASTM C618 Class F, Four Corners Fly Ash
AASHTO M295

2-22-17 POZZOLAN TEST REPORT Ctl#: 127966

Lot: 6443 Results Specifications

Table with 3 columns: Test Name, Results, Specifications. Includes Chemical Analysis (Silicon Dioxide, Aluminum Oxide, etc.) and Physical Analysis (Fineness, Density, etc.).

All tests have been made in strict accordance with the current standards of the American Society for Testing and Materials covering the type of material specified.

Signature of Lee Gorby
Lee Gorby, Quality Assurance Manager
03 APR 2017



PHOENIX CEMENT



Salt River Materials Group

100% AMERICAN™

December 27, 2016

Four Corners Materials
PO Box 16
Farmington, NM 87499

PRODUCT: **Four Corners Class F Fly Ash** from Fruitland, New Mexico

This letter serves as certification that all **Four Corners Class F Fly Ash** (pozzolan) sold by Salt River Materials Group to Four Corners Materials meets the requirements of the latest revision of ASTM Specification C618 for Class F Fly Ash (pozzolan).

We appreciate your interest in our product. If we can provide additional information or technical assistance, please contact us.


Respectfully,

A handwritten signature in cursive script that reads "Jeff Hearne".

Jeff Hearne
Director of Quality Assurance

PHOENIX CEMENT

SR SALT RIVER™
SAND & ROCK


FOUR CORNERS
MATERIALS
Post Office Box 1969
Bayfield, Colorado

May 24, 2017

Four Corners Materials, Inc.
PO Box 1969
Bayfield, CO 81122

Attn: Mr. Ray Tauli

Re: Redi-Mix Concrete Additives
Four Corners Materials

This letter serves as a review of the additives listed below to be added to the approved concrete mix designs for Cortez Plant 347, Animas Glacier Plant 344, and Pagosa Springs Plant 355 operated by Four Corners Materials.

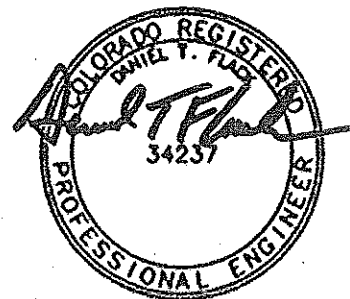
- BASF MasterFiber F70
- BASF MasterFiber F100
- BASF MasterSet Delvo
- BASF MasterGlenium 3030
- BASF MasterGlenium 7500
- BASF MasterGlenium 7700
- BASF MasterAir AE 200
- BASF MasterRheobuild 1000
- BASF MasterColor
- BASF MasterSet AC 534
- BASF MasterPolyHeed 997

These products are intended to enhance concrete performance and strength. The compatibility of the additives are listed on the technical data sheets for use in the concrete mix designs at the recommended dosages. The dosage rate, dispensing and mixing procedures shall be closely adhered to during production as stated on the technical data sheets.

Reviewed By:



Paul Appel
Quality Control Manager
Four Corners Materials



Daniel T. Flack
DTF Engineering
Principal Engineer



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03 40 00	Precast Concrete
03 70 00	Mass Concrete

3

MasterAir[®] AE 200

Air-Entraining Admixture

Formerly Micro Air*

Description

MasterAir AE 200 air-entraining admixture provides concrete with extra protection by creating air bubbles that are ultrastable, small and closely spaced – a characteristic especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired.

Even when used at a lower dosage than standard air-entraining admixtures, MasterAir AE 200 admixture meets the requirements of ASTM C 260, AASHTO M 154, and CRD-C 13.

Applications

Recommended for use in:

- ☑ Concrete exposed to cyclic freezing and thawing
- ☑ Production of high-quality normal or lightweight concrete (heavyweight concrete normally does not contain entrained air)

Features

- ☑ Ready-to-use in the proper concentration for rapid, accurate dispensing
- ☑ Greatly improved stability of air-entrainment
- ☑ Ultra stable air bubbles

Benefits

- ☑ Increased resistance to damage from cyclic freezing and thawing
- ☑ Increased resistance to scaling from deicing salts
- ☑ Improved plasticity and workability
- ☑ Improved air-void system in hardened concrete
- ☑ Improved ability to entrain and retain air in low-slump concrete, concrete containing high-carbon content fly ash, concrete using large amounts of fine materials, concrete using high-alkali cements, high-temperature concrete, and concrete with extended mixing times
- ☑ Reduced permeability – increased watertightness
- ☑ Reduced segregation and bleeding

Performance Characteristics

Concrete durability research has established that the best protection for concrete from the adverse effects of freezing and thawing cycles and deicing salts results from: proper air content in the hardened concrete, a suitable air-void system in terms of bubble size and spacing and adequate concrete strength, assuming the use of sound aggregates and proper mixing, transporting, placing, consolidation, finishing and curing techniques. MasterAir AE 200 admixture can be used to obtain adequate freezing and thawing durability in a properly proportioned concrete mixture, if standard industry practices are followed.

Air Content Determination: The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method" or ASTM C 173/C 173M, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method."

The air content of lightweight concrete should only be determined using the Volumetric Method. The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138/C 138M, "Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete." If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1.5%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.

Guidelines for Use

Dosage: There is no standard dosage for MasterAir AE 200 admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete varies because of differences in concrete making materials and ambient conditions. Typical factors that might influence the amount of air entrained include: temperature, cementitious materials, sand gradation, sand-aggregate ratio, mixture proportions, slump, means of conveying and placement, consolidation and finishing technique.

The amount of MasterAir AE 200 admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mixture, use 0.125 to 1.5 fl oz/cwt (8-98 mL/100 kg) of cement. In mixtures containing water-reducing or set-control admixtures, the amount of MasterAir AE 200 admixture needed is somewhat less than the amount required in plain concrete. Due to possible changes in the factors that can affect the dosage of MasterAir AE 200 admixture, frequent air content checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air required in the mixture at the point of placement. If an unusually high or low dosage of MasterAir AE 200 admixture is required to obtain the desired air content, consult your Local sales representative. In such cases, it may be necessary to determine that, in addition to a proper air content in the fresh concrete, a suitable air-void system is achieved in the hardened concrete.

Dispensing and Mixing: Add MasterAir AE 200 admixture to the concrete mixture using a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount. For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate or with the initial batch water. If the concrete mixture contains lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

Precaution

In a 2005 publication from the Portland Cement Association (PCA R&D Serial No. 2789), it was reported that problematic air-void clustering that can potentially lead to above normal decreases in strength was found to coincide with late additions of water to air-entrained concretes. Late additions of water include the conventional practice of holding back water during batching for addition at the jobsite. Therefore, caution should be exercised with delayed additions to air-entrained concrete. Furthermore, an air content check should be performed after post-batching addition of any other materials to an air-entrained concrete mixture.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterAir AE 200 admixture will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. No calcium chloride or other chloride-based ingredients are used in the manufacture of this admixture.

Compatibility: MasterAir AE 200 admixture may be used in combination with any BASF admixture, unless stated otherwise on the data sheet for the other product. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mixture.

Storage and Handling

Storage Temperature: MasterAir AE 200 admixture should be stored and dispensed at 35 °F (2 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If it freezes, thaw and reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life: MasterAir AE 200 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your Local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterAir AE 200 admixture has been exceeded.

Safety: MasterAir AE 200 admixture is a caustic solution. Chemical goggles and gloves are recommended when transferring or handling this material. (See SDS and/or product label for complete information.)

Packaging

MasterAir AE 200 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterAir AE 200 admixture

Additional Information

For suggested specification information or for additional product data on MasterAir AE 200 admixture, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

* Micro Air became MasterAir AE 200 under the Master Builders Solutions brand, effective January 1, 2014.

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BASF Corporation
Admixture Systems
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Brampton, Ontario L6T 4M7
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Certified to
NSF/ANSI 61



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03 40 00	Precast Concrete
03 70 00	Mass Concrete

3

MasterPolyheed® 997

Mid-Range Water-Reducing Admixture

Formerly PolyHeed 997*

Description

MasterPolyheed 997 admixture is a patented multi-component, mid-range water-reducing admixture. MasterPolyheed 997 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

Applications

Recommended for use in:

- All concrete applications where superior workability, pumpability and finishability qualities are desired, in particular, flatwork, pumped concrete and pervious concrete
- Concrete containing manufactured sand and harsh concrete mixtures

Features

- True mid-range water reduction (5-15%) and excellent performance across a wide slump range, especially the difficult slump range of 5-8 in. (125-200 mm)
- Superior workability, pumpability and finishability qualities even in concrete mixtures containing low amounts of cementitious materials
- Superior finishing characteristics for residential/commercial flatwork and formed surfaces

Benefits

- Significantly reduced placement and finishing time resulting in lower in-place concrete costs
- Higher strength at all ages
- Enhanced concrete durability
- Increased service life of concrete structures

Performance Characteristics

Mixture Data: 500 lb/yc³ (295 kg/m³) of Type I cement; slump 6-7 in. (150-180 mm); 5-6% air; concrete temperature 70 °F (21 °C); ambient temperature, 70 °F (21 °C).

Setting Time Performance¹

Mixture	Initial Set (h:min)	Difference (h:min)
Reference	6:01	—
MasterPolyheed 997 admixture @		
5 fl oz/cwt (325 mL/100 kg)	6:22	+0:21
10 fl oz/cwt (650 mL/100 kg)	6:57	+0:56
15 fl oz/cwt (980 mL/100 kg)	7:31	+1:30

Compressive Strength, psi (MPa)

Mixture	7-Day	28-Day
Plain	2360 (16.3)	3320 (22.9)
MasterPolyheed 997 admixture @		
5 fl oz/cwt (325 mL/100 kg)	3060 (21.1)	3930 (27.1)
10 fl oz/cwt (650 mL/100 kg)	3740 (25.8)	4610 (31.8)
15 fl oz/cwt (980 mL/100 kg)	4620 (31.9)	5460 (37.7)

Note: The data shown are based on controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete making materials and jobsite conditions.

Guidelines for Use

Dosage: MasterPolyheed 997 admixture has a recommended dosage range of 3-15 fl oz /cwt (195-980 mL/100 kg) of cementitious material for most concrete mixes.

As the dosage of MasterPolyheed 997 admixture increases to 15 fl oz/cwt (980 mL/100 kg) of cementitious materials, normal concrete setting characteristics are maintained and early and ultimate compressive strengths increase.

BASF does not recommend the use of dosages outside the recommended range without trial testing. Consult your local sales representative for assistance in determining the dosage for optimum performance.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterPolyheed 997 admixture will neither initiate nor promote corrosion of reinforcing or prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. MasterPolyheed 997 admixture does not contain intentionally added calcium chloride or other chloride-based ingredients.

Compatibility: MasterPolyheed 997 admixture may be used in combination with any BASF admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

Storage and Handling

Storage Temperature: If MasterPolyheed 997 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

Shelf Life: MasterPolyheed 997 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterPolyheed 997 admixture has been exceeded.

Packaging

MasterPolyheed 997 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterPolyheed 997 admixture

Additional Information

For additional information on MasterPolyheed 997 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

* Polyheed 997 became MasterPolyheed 997 under the Master Builders Solutions brand, effective January 1, 2014.

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Admixture Systems
www.master-builders-solutions.basf.us

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Canada
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Brampton, Ontario L6T 4M7
Tel: 800 387-5862 ☐ Fax: 905 792-0651





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3	03 30 00	Cast-in-Place Concrete
	03 40 00	Precast Concrete
	03 70 00	Mass Concrete

MasterFiber® F 70

Fibrillated Microsynthetic Fiber

Description

MasterFiber F 70 product, a microsynthetic fiber, is a fibrillated polypropylene fiber manufactured from 100% virgin homopolymer polypropylene resins. MasterFiber F 70 product meets the requirements of ASTM C 1116/C 1116M, Section 4.1.3, Type III, and Note 2 and the requirements of ICC ES AC32 Sections 3.1.1 (plastic shrinkage reinforcement) and 3.1.2 (shrinkage and temperature reinforcement).

Applications

Recommended for use in:

- ▣ Residential and commercial slabs-on-ground
- ▣ Ultra-thin whitetopping
- ▣ Bonded overlays
- ▣ Architectural precast products and ornamental elements
- ▣ Slope stabilization
- ▣ Water treatment plants
- ▣ Irrigation ditches/channels

Features

- ▣ Excellent distribution
- ▣ Excellent shrinkage and temperature reinforcement

Benefits

- ▣ Replacement for typical light gauge welded-wire reinforcement [6 x 6 W1.4 x W1.4 (152 x 152 MW9.1 x MW9.1)], depending on the application
- ▣ Modifies macro-cracking and micro-cracking mechanisms
- ▣ Reduces plastic settlement
- ▣ Extends service life with reduced maintenance
- ▣ Enhances fatigue strength
- ▣ Enhances impact, pullout and surface abrasion resistance
- ▣ Reduces permeability

Performance Characteristics

Physical Properties

Specific Gravity	0.91
Melting Point	320 °F (160 °C)
Ignition Point	1,094 °F (590 °C)
Absorption	Nil
Alkali Resistance	Excellent
Tensile Strength	44,000 psi (300 MPa)
Modulus of Elasticity	780 ksi (5.38 GPa)
Available Lengths	0.75 in. (19 mm) and 1.5 in. (38 mm)
Equivalent Diameter	0.026 in. (0.66 mm)

Guidelines for Use

Dosage: The recommended dosage of MasterFiber F 70 product is 1.5 lb/yc³ (0.9 kg/m³).

In accordance with the recommendations of the Steel Deck Institute, fibrillated microsynthetic fibers, including MasterFiber F 70 product, should not be used to replace welded-wire reinforcement in composite metal decks.

Mixing: The bags can be introduced at any time during the mixing cycle, except at the same time as the cement. Three to five minutes of mixing will be required to disperse the fibers depending on when the product is added to the mixer.

Engineering Specifications

MasterFiber F 70 product, at 1.5 lb/yc³ (0.9 kg/m³), is an option to conventional secondary reinforcement in structural plain concrete. MasterFiber F 70 product outperforms other microsynthetic fibers in providing an optimum three-dimensional shrinkage and temperature reinforcement system in concrete.

MasterFiber F 70 product meets the requirements of ASTM C 1116/ C 1116M, Section 4.1.3, Type III, and Note 2, and ICC ES AC32 , Sections 3.1.1 and 3.1.2.

Product Notes

MasterFiber F 70 product is not a replacement for structural steel reinforcement and therefore, should not be used to replace any of the load-carrying steel reinforcement in a concrete element.

Packaging

MasterFiber F 70 product is packaged in pre-weighed degradable 1.0 lb (0.45 kg), 1.5 lb (0.7 kg) and 7.5 lb (3.4 kg) bags that can be added directly to the mixing system.

Related Documents

Safety Data Sheets: MasterFiber F 70 product

Additional Information

For additional information on MasterFiber F 70 product, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.



We create chemistry

03 30 00	Cast-in-Place Concrete
03 40 00	Precast Concrete
03 70 00	Mass Concrete

3

MasterSet® DELVO

Hydration Controlling Admixture

Formerly DELVO Stabilizer*

Description

MasterSet DELVO ready-to-use, liquid admixture is used for making more uniform and predictable high-performance concrete. MasterSet DELVO admixture retards setting time by controlling the hydration of portland cement and other cementitious materials while facilitating placing and finishing operations. MasterSet DELVO admixture meets ASTM C 494/C 494M requirements for Type B, retarding, and Type D, water-reducing and retarding, admixtures.

Applications

Recommended for use in:

- Stabilization of concrete washwater
- Stabilization of returned plastic concrete
- Stabilization of freshly batched concrete for long hauls
- 4x4™ Concrete
- Pumped concrete, shotcrete (wet mix) and conventionally-placed concrete
- Plain, reinforced, precast, prestressed, lightweight and normal weight concrete
- Pervious concrete

Features

- Reduced water content required for a given workability
- Retarded setting time characteristics
- Improved workability

Benefits

- Provides flexibility in the scheduling of placing and finishing operations
- Offsets the effects of slump loss during extended delays between mixing and placing
- Reduces waste associated with concrete washwater and returned concrete
- Increased strength – compressive and flexural

Performance Characteristics

Rate of Hardening: The temperature of a concrete mixture and the ambient temperature (forms, earth, air, etc.) affect the hardening rate of concrete. At higher temperatures, concrete hardens more rapidly which may cause problems with placing and finishing.

One of the functions of MasterSet DELVO admixture is to retard the set of concrete. Within the normal dosage range, it will generally extend the working and setting times of concrete containing normal portland cement, fly ash, slag cement and silica fume approximately 1 hour to 5 hours compared to a plain concrete mixture. This depends on job materials and temperatures. Trial mixtures should be made under approximate job conditions to determine the dosage required.

Compressive Strength: Concrete produced with MasterSet DELVO admixture will develop higher early (within 24 hours) and higher ultimate strengths than plain concrete when used within the recommended dosage range and under normal, comparable curing conditions. When MasterSet DELVO admixture is used in heat-cured concrete, the length of the preheating period should be increased until the initial set of the concrete is achieved. The actual heat-curing period is then reduced accordingly to maintain existing production cycles without sacrificing early or ultimate strengths.

Guidelines for Use

Dosage: MasterSet DELVO admixture is recommended for use at a dosage of 4 ± 1 fl oz/cwt (260 ± 65 mL/100 kg) of cementitious materials for most concrete mixtures using average concrete ingredients. Because of variations in job conditions and concrete materials, dosages other than the recommended amounts may be required. In such cases, contact your local sales representative. For concrete washwater and returned concrete stabilization, utilize MasterSet DELVO charts to determine the appropriate dosage rates.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterSet DELVO admixture will neither initiate nor promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally-added calcium chloride or other chloride-based ingredients.

Compatibility: MasterSet DELVO admixture may be used in combination with any BASF admixture. When used in conjunction with another admixture, each admixture must be dispensed separately into the mixture.

Storage and Handling

Storage Temperature: MasterSet DELVO admixture should be stored above freezing temperatures. If MasterSet DELVO admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life: MasterSet DELVO admixture has a minimum shelf life of 12 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterSet DELVO admixture has been exceeded.

Packaging

MasterSet DELVO admixture is supplied in specially designed 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterSet DELVO admixture

Additional Information

For more information on MasterSet DELVO admixture, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

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* Delvo Stabilizer became MasterSet DELVO under the Master Builders Solutions brand, effective January 1, 2014.

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Certified to
NSF/ANSI 61

BASF Corporation
Admixture Systems

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We create chemistry

3

03 30 00

Cast-in-Place Concrete

03 40 00

Precast Concrete

MasterSet® AC 534

Accelerating Admixture

Formerly Pozzolith NC 534*

Description

MasterSet AC 534 patented, ready-to-use, liquid admixture is formulated to accelerate time of setting and to increase early concrete strengths. MasterSet AC 534 admixture does not contain calcium chloride and is formulated to comply with ASTM C 494/C 494M Type C, accelerating, admixture requirements.

Applications

Recommended for use in:

- ☑ Reinforced, precast, pumped, flowable, lightweight or normal weight concrete and shotcrete (wet mix)
- ☑ Concrete placed on galvanized steel floor and roof systems which are left in place
- ☑ Prestressed concrete
- ☑ Fast-track concrete construction
- ☑ Concrete subject to chloride ion constraints
- ☑ 4x4™ Concrete
- ☑ Self-consolidating concrete (SCC)
- ☑ Pervious concrete

Features

- ☑ Accelerated setting time across a wide range of temperatures
- ☑ Increased early compressive and flexural strengths

Benefits

- ☑ Earlier finishing of slabs — reduced labor costs
- ☑ Reduced in-place concrete costs
- ☑ Reduced or eliminated heating and protection time in cold weather
- ☑ Earlier stripping and reuse of forms
- ☑ Superior finishing characteristics for flatwork and cast surfaces

Performance Characteristics

Mixture Data: 453 lb/yc³ (269 kg/m³) of Type I cement; 3-4 in. (75-100 mm) slump; concrete temperature 74 °F (23 °C); ambient temperature 50 and 75 °F (10 and 24 °C); non-air-entrained concrete.

Setting time

@ 50 °F (10 °C)

	Initial Set (h:min)	Difference (h:min)
Plain	13:44	REF
MasterSet AC 534 admixture @		
› 20 fl oz/cwt (1,300 mL/100 kg)	7:11	- 6:33
› 40 fl oz/cwt (2,600 mL/100 kg)	6:05	- 7:39

Setting time

@ 75 °F (24 °C)

	Initial Set (h:min)	Difference (h:min)
Plain	8:18	REF
MasterSet AC 534 admixture @		
› 20 fl oz/cwt (1,300 mL/100 kg)	4:59	- 3:19
› 40 fl oz/cwt (2,600 mL/100 kg)	4:18	- 4:00

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Guidelines for Use

Dosage: The recommended dosage range for MasterSet AC 534 admixture is 10-45 fl oz/cwt (0.65 – 2.9 L/100 kg) of cementitious materials for most concrete mixtures using average concrete ingredients. Because of variations in job conditions and concrete materials, dosage rates other than the recommended amounts may be required. In such cases, contact your local sales representative.

The maximum dosage of MasterSet AC 534 in potable water applications that require the use of NSF Certified products is 30 fl oz/cwt (2.0 L/kg) of cementitious materials. For specialty concrete mixtures such as 4x4 Concrete, dosages up to 100 fl oz/cwt (6.5 L/100 kg) may be required.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterSet AC 534 admixture will neither initiate nor promote corrosion of reinforcing steel in concrete.

Compatibility: MasterSet AC 534 admixture may be used in combination with any BASF admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mixture.

Storage and Handling

Storage Temperature: MasterSet AC 534 admixture should be stored above freezing temperatures. If MasterSet AC 534 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

Shelf Life: MasterSet AC 534 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterSet AC 534 admixture has been exceeded.

Packaging

This product is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterSet AC 534 admixture

Additional Information

For additional information on MasterSet AC 534 admixture or its use in developing a concrete mixture with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

* Pozzolith NC 534 became MasterSet AC 534 under the Master Builders Solutions brand, effective January 1, 2014.

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Certificate of Contractor's Compliance for APL/QML Selection



Date: 07-14-2017
CDOT Contract ID: STE C480-008
CDOT Project Number: 19219
CDOT Project Location: Archuleta, County

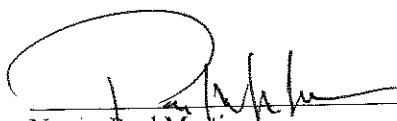
The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specifications for Road and Bridge Construction, and the 2017 Field Materials Manual.


Four Corners Materials Class P – Material List

QML Part/Sub Part:	709.04.02.00	701.02.02.00	711.02.01.00	711.02.01.00
APL Category:	Concrete	Concrete	Concrete	Concrete
APL Sub Category:	Reinforcing Fiber	Pozzolan	Admixture	Admixture
APL Base Category:	Plastic	Fly Ash, Class F	Water Reducing, HR	Air Entraining
APL Reference Number:	3192-16	2302-16	2085-14	2067-14
Product Name:	MasterFiber F 70	Four Corners Class F Fly Ash	MasterPolyheed 997 [Type F]	MasterAir AE200
Manufacturer:	BASF Corporation	SRMG [Four Corners]	BASF Corporation	BASF Corporation
Date of Website Review & Selection:	7/14/2017	7/14/2017	7/14/2017	7/14/2017

QML Part/Sub Part:	711.02.01.00	711.02.01.00	701.01.01.00	
APL Category:	Concrete	Concrete	Concrete	
APL Sub Category:	Admixture	Admixture	Cement	
APL Base Category:	Water-Reducing	Accelerating	Portland Cement (ASTM C150)	
APL Reference Number:	2083-14	2091-14	2949-16	
Product Name:	MasterSet DELVO	MasterSet AC 534	Pueblo Plant, Type I/II, Low Alkali	
Manufacturer:	BASF Corporation	BASF Corporation	GCC of America (Pueblo)	
Date of Website Review & Selection:	7/14/2017	7/14/2017	7/14/2017	

Crossfire, LLC.


Name: Paul Martin
Title: Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 36 c.m. (quantity and units) of pay item 601-01000 Concrete Class B (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature 07/26/18
Date

**COLORADO DEPARTMENT OF TRANSPORTATION
PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY**

APL Reference No.
3192-16

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code:
709.04.02.00
Material code description full name:
Concrete, Reinforcing Fiber, Plastic

PART 1

Product name: MasterFiber F 70	Product category: Concrete\Fiber\Micro Fiber
Product Representative (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 Phone: (216) 839-7072 E-mail: mark.piechuta@basf.com	Manufacturer (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 Phone: (216) 839-7072 E-mail: mark.piechuta@basf.com
Web-site address: www.master-builders-solutions.basf.us/en-us	Web-site address: www.master-builders-solutions.basf.us/en-us

Description of the product: (include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
MasterFiber F 70, a microsynthetic fiber for concrete, is a fibrillated polypropylene fiber, manufactured from 100% virgin homopolymer polypropylene resins. MasterFiber F 70 meets the requirements of ASTM C 1116, "Standard Specification for Fiber-Reinforced Concrete and Shotcrete", Section 4.1.3, Type III and Note 2. It is available in lengths of 0.75" and 1.5". It provides excellent shrinkage and temperature reinforcement and has excellent distribution properties in concrete. The recommended dosage for MasterFiber F 70 is 1.5 lb./cu.yd. MasterFiber F 70 is packaged in 1.0 lb., 1.5 lb. and 7.5 lb. degradable bags designed to be introduced directly to the mixing system. The fibrillated design of MasterFiber F 70 optimizes the mechanical bond between the mortar matrix and the fiber.

Restrictions, (installation and/or use):
None known

Use of the product, (be specific to CDOT highway activities only):
Use in white topping and overlays, waterway channels, architectural precast concrete products, and shotcrete applications, such as slope stabilization.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):
MasterFiber F 70 provides optimum three-dimensional shrinkage and temperature reinforcement, reduces plastic settlement, extends service life, reduces permeability, and enhances impact and surface abrasion resistance of concrete.

- Specifications: (listing those applicable is required)**
- CDOT : Standard Specification, Section 601
 - ASTM : C 1116; D 7508
 - AASHTO :
 - FHWA :
 - other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report (CTR)** provided to validate all claims.

- NTPEP-AASHTO :
- FHWA :
- other : TEC Services (February 15, 2016)
- other : Fabpro Polymers (September 29, 2016)
- other :

State DOT Approvals, (current documentation required): Re-submittal Cycle: **4 years**

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:
Additional Comments:

A sample can be submitted upon request. State DOT Approvals referenced without documentation: PennDOT, IL DOT, TX DOT
Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-3849

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2302-16
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 701.02.02.00 Material code description full name: Fly Ash, Class F
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PART 1

Product name: Four Corners Class F Fly Ash	Product category: Concrete\Pozzolan\Fly Ash, Class F
Product Representative (name & address): Attn: Jeff Hearne, Vice President of Quality Assurance Salt River Materials Group 8800 East Chaparral Road Suite 155 Scottsdale, Arizona 85250 Phone: (480) 850-5757 E-mail: jhearne@srmaterials.com	Manufacturer (name & address): Attn: APS Four Corners Power Plant Four Corners Fly Ash Facility End of County Road #6675 / P.O. Box 1007 Fruitland, New Mexico 87416 Phone: (505) 598-8557 E-mail:
Web-site address: www.srmaterials.com	Web-site address:

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 Four Corners Fly Ash is a by-product from the burning of pulverized coal to produce electricity at the APS Power Plant in Fruitland, New Mexico.

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):
 Used in Portland cement concrete and concrete products. It is also used in soil cement bases, subgrade stabilization, and asphalt.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
 It is an effective means of providing improved concrete properties such as mitigation of alkali aggregate reactivity, improved long term durability, improved strengths, improved sulfate resistance and reduced permeability.

- Specifications: (listing those applicable is required)**
- CDOT : Standard Specification 701.2
 - ASTM : C618
 - AASHTO : M295
 - FHWA :
 - other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report (CTR)** provided to validate all claims.

- NTPEP-AASHTO:
- FHWA :
- other : CTR - Phoenix Cement - Salt River Materials Group AAP(CCRL/AMRL) accredited laboratory (7-19-2016)
- other :
- other :

State DOT Approvals, (current documentation required): AZ, CA, NM, TX Re-submittal Cycle: 4 years

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:
 Additional Comments:

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2085-14
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 711.02.01.00 Material code description full name: Concrete, Admixture
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PART 1

Product name: MasterPolyheed 997 (previously: PolyHeed® 997)	Product category: Concrete\Admixture\Water Reducing\ Water Reducing, High Range
Product representative (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 Phone: (216) 839-7072 FAX: (216) 839-8821	Manufacturer (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 Phone: (216) 839-7072 FAX: (216) 839-8821 Web-site address: www.masterbuilders.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 MasterPolyheed 997 admixture is a patented multi-component, non-chloride, mid-range water reducing admixture. MasterPolyheed 997 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing admixtures.

New product name became effective January 15, 2014. There is absolutely no change to the formulation of the product.

Restrictions, (installation and/or use):
 None known.

Use of the product, (be specific to CDOT highway activities only):
 Water-Reducing or High-Range Water-Reducing admixture.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

- 1) Provides superior pumping and finishing characteristics.
- 2) Provides improved durability.
- 3) Will not initiate or promote corrosion of reinforcing steel.

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

- CDOT : Standard Specifications 711.03
- ASTM : C 494, Type A & Type F
- AASHTO : M 194, Type A & Type F
- FHWA :
- other : CRD-C 87

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

- NTPEP-AASHTO : CADD (2006)-08-14
- FHWA :
- other : TEC Services (June 9, 2011) (October 15, 2012)
- other :

State DOT Approvals, (current documentation required):

Sample submitted: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> n/a	Materials Safety Data Sheets (MSDS): <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a
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Notes/Additional Comments
 A sample can be provided upon request at no cost. Technical data sheets are included which outline specific dosage information.
 APPROVED BY 39 OTHER STATE DOT'S, INCLUDING AZ DOT, MO DOT, OR DOT.
 Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-3849

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2067-14
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 711.02.01.00 <hr/> Material code description full name: Concrete, Admixture
--	---

PART 1

Product name: MasterAir AE 200 (previously: Micro Air)	Product category: Concrete\Admixture\Air Entraining
Product representative (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 <hr/> Phone: (216) 839-7072 FAX: (216) 839-8821	Manufacturer (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 <hr/> Phone: (216) 839-7072 FAX: (216) 839-8821 <hr/> Web-site address: www.masterbuilders.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 MasterAir AE 200 is an Air-Entraining Admixture for concrete exposed to cyclic freezing and thawing.

New product name became effective January 15, 2014. There is absolutely no change to the formulation of the product.

Restrictions, (installation and/or use):
 none known

Use of the product, (be specific to CDOT highway activities only):
 MasterAir AE 200 is recommended for production of high-quality normal or lightweight concrete exposed to cyclic freezing and thawing.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):
 MasterAir AE 200 can be used to obtain improved freeze/thaw resistance, improved resistance to scaling from de-icing salts, and increased durability.

- Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):**
- CDOT : Standard Specifications 711.02
 - ASTM : C 260
 - AASHTO : M 154
 - FHWA :
 - other : CRD-C 13

- Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):**
- NTPEP-AASHTO : CADD 06-10
 - FHWA :
 - other :
 - other : TEC Services (June 25, 2012)

State DOT Approvals, (current documentation required):

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments
 A sample can be provided upon request at no cost. Technical data sheets outline specific dosage information.
 APPROVED BY 40 OTHER STATE DOTs.
 Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-3849

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2083-14
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 711.02.01.00 Material code description full name: Concrete, Admixture
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PART 1

Product name: MasterSet DELVO (previously: Delvo Stabilizer)	Product category: Concrete\Admixture\Water-Reducing & Retarding
Product representative (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 Phone: (216) 839-7072 FAX: (216) 839-8821	Manufacturer (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 Phone: (216) 839-7072 FAX: (216) 839-8821
Web-site address: www.masterbuilders.com	Web-site address: www.masterbuilders.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 MasterSet DELVO ready-to-use, liquid admixture is used for making more uniform and predictable high-performance concrete. MasterSet DELVO admixture retards setting time by controlling the hydration of portland cement and other cementitious materials while facilitating placing and finishing operations. It can be used to stabilize returned plastic concrete and concrete washwater to reduce waste. MasterSet DELVO admixture meets ASTM C 494/C 494M requirements for Type B, retarding, and Type D, water-reducing and retarding, admixtures.

New product name became effective January 15, 2014. There is absolutely no change to the formulation of the product.

Restrictions, (installation and/or use):
 none known

Use of the product, (be specific to CDOT highway activities only):
 4x4™ Concrete, Pumped concrete, shotcrete (wet mix) and conventionally-placed concrete.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):

1. Provides flexibility in the scheduling of placing and finishing operations.
2. Offsets the effects of slump loss during extended delays between mixing and placing.
3. Reduces waste associated with concrete washwater and returned concrete.

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

CDOT : Standard Specifications 711.03
 ASTM : C 494, Type B & Type D
 AASHTO : M 194, Type B & Type D
 FHWA :
 other :

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

NTPEP-AASHTO : CADD (2008) -18
 FHWA :
 other : TEC Services (August 25, 2011) (Interim Report - December 10, 2014)
 other :

State DOT Approvals, (current documentation required):

Sample submitted: yes no n/a
 Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments
 A sample can be provided upon request at no cost. Technical data sheets are included which outline specific dosage information.
 APPROVED BY 39 OTHER STATE DOTs.
 Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-3849

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2091-14
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 711.02.01.00 <hr/> Material code description full name: Concrete, Admixture
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PART 1

Product name: MasterSet AC 534 (previously: Pozzolith NC 534)	Product category: Concrete\Admixture\Accelerating
Product representative (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 <hr/> Phone: (216) 839-7072 FAX: (216) 839-8821	Manufacturer (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554 <hr/> Phone: (216) 839-7072 FAX: (216) 839-8821 <hr/> Web-site address: www.masterbuilders.com
Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.) MasterSet AC 534 patented, ready-to-use, liquid admixture is formulated to accelerate time of setting and to increase early concrete strengths. MasterSet AC 534 admixture does not contain calcium chloride and complies with ASTM C 494/C 494M Type C, accelerating, admixture requirements. New product name became effective January 15, 2014. There is absolutely no change to the formulation of the product.	
Restrictions, (installation and/or use): none known	
Use of the product, (be specific to CDOT highway activities only): Accelerating admixture for concrete.	
Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products): *Earlier finishing of slabs --- reduced labor costs *Reduced in-place concrete costs *Reduced or eliminated heating and protection time in cold weather *Earlier stripping and reuse of forms	
Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications): <input checked="" type="checkbox"/> CDOT : Standard Specifications 711.03 <input checked="" type="checkbox"/> ASTM : C 494 Type C <input checked="" type="checkbox"/> AASHTO : M 194 Type C <input type="checkbox"/> FHWA : <input checked="" type="checkbox"/> other : CRD-C 87	
Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims): <input checked="" type="checkbox"/> NTPEP-AASHTO : CADD (2006)-08-13 <input type="checkbox"/> FHWA : <input checked="" type="checkbox"/> other : TEC Services (October 9, 2012) <input type="checkbox"/> other :	
State DOT Approvals, (current documentation required): Sample submitted: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> n/a Materials Safety Data Sheets (MSDS): <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a	
Notes/Additional Comments A sample can be provided upon request at no cost. Technical data sheets outline specific dosage information. APPROVED BY 35 OTHER STATE DOT'S, INCLUDING CALTRANS, MO DOT, MI DOT Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-3849	

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2949-16
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 701.01.01.00 Material code description full name: Cement, Portland
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PART 1

Product name: Pueblo Plant, Type I/II, Low Alkali	Product category: Concrete\Cement\Portland Cement [ASTM C 150]
Product Representative (name & address): Attn: Bryan Patterson GCC of America 600 S Cherry St, Suite 1000 Glendale, CO 80246 Phone: (303) 739-5900 E-mail: bpatterson@gcc.com	Manufacturer (name & address): Attn: Joe Finnegan GCC of America 3372 Lime Road Pueblo, CO 81004 Phone: (303) 739-5900 E-mail: jfinnegan@gcc.com
Web-site address: www.gccusa.com	Web-site address: www.gccusa.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

Pueblo Plant, Type I/II, Low Alkali is a Hydraulic, low alkali (<0.60%) cement conforming to the requirement specified in ASTM C-150 for Type I/II cement. This cement meets the optional sulfate resistance of ASTM C-150 Table 4, "Optional Physical Requirements" with an expansion of less than 0.04% when tested in accordance with ASTM C-452. Other than being a low alkali portland cement and meeting the optional sulfate resistance criteria, there is no product differentiation.

Restrictions, (installation and/or use):
 Provide adequate protection from extreme conditions.

Use of the product, (be specific to CDOT highway activities only):
 General use cement for all cement concrete and paving applications.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
 A portland cement manufactured in Colorado, meeting low alkali and optional sulfate resistance requirements and competitively priced.

- Specifications: (listing those applicable is required)**
- CDOT : Standard Specifications, Section 701.01
 - ASTM : C-150
 - AASHTO: M85
 - FHWA :
 - other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/Independent laboratories or universities with Report Date.) Certified Test Report (CTR) provided to validate all claims.

- NTPEP-AASHTO:
- FHWA :
- other : CTL Group (April 23, 2015 - ASTM C-452)
- other : GCC of America, Internal Material Certification Reports (February 15, 2015 - January 15, 2016)
- other :

State DOT Approvals, (current documentation required): IA, MN, NM, OK, TX Re-submittal Cycle: 4 years

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:
Additional Comments:
 N/A

**COLORADO DEPARTMENT OF TRANSPORTATION
CONCRETE SPECIMEN TRANSMITTAL**

English Metric

Ready Mix Supplier: FCM	Suppliers ticket #: 3551994	Contract ID 19219	Region 5	Field Sheet # 185911
Project Location Pinon Causeway			Date Submitted 7-25-17	
Station 24+26-25+03		Resident Engineer Robert Shanks		Item & Description 601- Footing
				CDOT Mix # 2017069

Slump 3 1/2 inches (mm)	Entrained air 6.7 %	Unit weight 139.4 lbs/ft ³ (kg/m ³)	Yield 1.00	Concrete temperature 74 °F (°C)
Cylinders for design adequacy	Date molded 7-25-17	Time 12:23	Cured hrs. 24	Days in molds 1
Cylinders for structural strength information	Date molded	Time	Cured hrs.	Days in molds
			Days at structure site	
			Shipped to	
			<input type="checkbox"/> Central lab	
			<input type="checkbox"/> Region lab	

Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results				
						Age	Diameter (beam - H x W)	Total load	PSI/MPa	Break Type
Sample ID	1p	P	7	8-1	2	7	8" x 4" ^{12.81}	50,730	3960	5
Sample ID	1p	P	28	8-22	3	7	8" x 4" ^{12.81}	48,860	3810	4
Specified strength (PSI/MPa)	QA/QC specification (broke @ 28 days) <input type="checkbox"/> yes <input type="checkbox"/> no		4200			28	4.03	65600	5120	4
Specimen type:						28	4.03	64470	5030	4
						28	4.07	63690	4970	4
Quantity represented cubic yards/meters	Previous	This placement	To date							
	0	100	100							

Field Comments: W/CM = 0.42	Lab comments:
A m o l T = 7.52 V = 0.249 cf, TARE + SAMPLE = 42.24 lbs CURE BOX TEMP - NOT RECORDED	

I.A.T./Remarks:

Cast by: (print name) Eric Howes	Title Tester	Transported by: (Name/Title/Company) Eric Howes/Tester/Trautner	Phone number 970-749-4241	E-mail address Gdenten@trautnergeotech.com
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL <input type="checkbox"/> English <input type="checkbox"/> Metric		Project No. STE 480-008	Project code (SA#) 19219	Proj. location Piñon Causeway
		Date 7-28-17	Region 5	Resident Engineer ROBERT SHANKS
Ready Mix Supplier: FCM/Pagos A	Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35519935	Station WALL- 24+25-25+05 3+69⁵²-3+81⁵²	CDOT Mix # 2017069	Item & Description 601-Structural

Slump 3 1/2 inches (mm)	Entrained air 6.2%	Unit weight 139.9 lbs/ft³ (kg/m³)
Cylinders for design adequacy	Date molded 7-28-17	Time 12:08
Cylinders for structural strength information	Date molded	Time
	Cured hrs. 24	Days in molds 1
	Days in molds	Days at structure site
	Days at structure site	Shipped to
		<input type="checkbox"/> Central lab <input type="checkbox"/> Region lab

Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results			
						Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	2	P	7	8-4	2	7	4.03	54380	4250
Specimen Identification	2	P	28	8-25	3	7	4.03	54070	4220
Specimen Identification						28	4.03	69630	5440
Required strength (PSI/MPa)	QA/QC specification (broke @ 28 days) <input type="checkbox"/> yes <input type="checkbox"/> no					28	4.03	69070	5390
Specimen type:	<input checked="" type="checkbox"/> 4 x 8 cylinder <input type="checkbox"/> Beam <input type="checkbox"/> Splitting <input type="checkbox"/> Cube <input type="checkbox"/> 6 x 12 cylinder Tensile:								
Quantity represented cubic yards/meters	Previous 100	This placement 100	To date 200						

Field Comments: W/cm = 0.41 RY = 1.00 CONCRETE TEMP = 75°F AM01 T=7.52 V=0.249 W=42.35 CURE BOX TEMP: MIN: 66°F MAX: 76°F	Lab comments:
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I.A.T./Remarks:

Cast by: Eric Howes	Transported by: (Name/Title/Company) ERIC HOWES / TESTER / TRAUTNER	Phone number 970-749-2428	FAX number gclenton@trautner.com
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL <input type="checkbox"/> English <input type="checkbox"/> Metric	Project No. STE 480-008	Project code (SA#) 19219	Proj. location Pinon Causeway
	Date 8-16-17	Region 5	Resident Engineer Robert Shanks
Ready Mix Supplier: FCM/Pagosa	Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35519969		CDOT Mix # 2017069
Station 369.52-391.52 / 443.25-444.60 / 377.00			Item & Description 608-curb ramp

Slump 2 3/4 inches (mm)	Entrained air 5.5%	Unit weight 139.8 lbs/ft ³ (kg/m ³)		
Cylinders for design adequacy	Date molded 8-16-17	Time 11:42AM	Cured hrs. 24	Days in molds 1
Cylinders for structural strength information	Date molded	Time	Cured hrs.	Days in molds
		Days at structure site		Days in <input type="checkbox"/> Damp sand <input checked="" type="checkbox"/> Water
		Shipped to		at Temp. 73 °F (°C)
				<input type="checkbox"/> Central lab <input type="checkbox"/> Region lab

Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results			
Specimen Identification	3	P	7	8-23-17	2	Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	3	P	28	9-13-17	3	7	4.03	54230	4230
Specimen Identification						7	4.03	55030	4300
Required strength (PSI/MPa)	QA/QC specification (broke @ 28 days) <input type="checkbox"/> yes <input type="checkbox"/> no					28	4.03	73270	5720
Specimen type:	<input checked="" type="checkbox"/> 4 x 8 cylinder <input type="checkbox"/> Beam <input type="checkbox"/> Splitting <input type="checkbox"/> Cube <input type="checkbox"/> 6 x 12 cylinder Tensile:					28	4.03	72300	5640
						28	4.03	76310	5960
Quantity represented cubic yards/meters	Previous 200	This placement 100	To date 300						

Field Comments: CONCRETE TEMP = 85°F w/cm=0.45 RY=1.01 AMOS T=7.64 V=0.248 W=42.30 16 g water added per stone ketzer via phone w/ driver	Lab comments: Lab # 4844
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I.A.T./Remarks:

Cast by: ERIC HOWES	Transported by: (Name/Title/Company) ERIC HOWES, QA TESTER, TRAINING GEOTECH	Phone number	FAX number
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#4865

FIELD SHEET NO. 120592

COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL		Project No. STE 480-008	Project code (SA#) 19219	Proj. location PC-AVD SUP
<input type="checkbox"/> English <input type="checkbox"/> Metric		Date 8-24-17	Region 5	Resident Engineer Robert Shanks
Ready Mix Supplier: FCM/ Paqosa	Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35520013	Station curb ramp - 1+52.09 culvert 31+53.51/31+54.52	CDOT Mix # 2017069	
		Item & Description -35+76.8		

Slump 3 1/4 inches (mm)	Entrained air 5.8 %	Unit weight 138.8 lbs/ft ³ (kg/m ³)
Cylinders for design adequacy	Date molded 8-24-17	Time 3:00 PM
	Cured hrs. 24	Days in molds 1
	Days in molds 27	<input type="checkbox"/> Damp sand <input checked="" type="checkbox"/> Water
Cylinders for structural strength information	Date molded	Time
	Cured hrs.	Days in molds
	Days at structure site	Shipped to <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab

Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results			
Specimen Identification	4	P	7	8-31-17	2	Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	4	P	28	9-21-17	3	7	4.03	56600	4420
Specimen Identification						7	4.03	58600	4530
Required strength (PSI/MPa)	QA/QC specification (broke @ 28 days) <input type="checkbox"/> yes <input type="checkbox"/> no					28	4.03	73220	5720
Specimen type:	<input checked="" type="checkbox"/> 4 x 8 cylinder <input type="checkbox"/> Beam <input type="checkbox"/> Splitting <input type="checkbox"/> Cube					28	4.03	74190	5790
	<input type="checkbox"/> 6 x 12 cylinder Tensile:					28	4.03	71880	5610
Quantity represented cubic yards/meters	Previous 300	This placement 100	To date 400						

Field Comments: CONCRETE TEMP = 82°F w/cm = 0.42 RY = 1.00	Lab comments: #4865 54746 mt
AMol T = 7.64 V = 0.248 W = 42.05	
CURE BOX: MIN = 74°F MAX = 90°F	

I.A.T./Remarks:

Cast by: ERIC HOWES	Transported by: (Name/Title/Company) Eric Howes / Tester / Trautner	Phone number 970-749-4241	FAX number Gdenten@Trautnergeotech.com
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL		Project No. STE 480-008	Project code (SA#) 19219	Proj. location PC TO AVD 50P
<input checked="" type="checkbox"/> English <input type="checkbox"/> Metric	Date 8-30-17	Region 5	Resident Engineer ROBERT SHANKS	CDOT Mix # 2017069
Ready Mix Supplier: FCM/PAGOSA	Applicable CDOT Form #281 Field Sheet #	Station curb ramp 10-36+94.00	Item & Description 608-CURB RAMP	
	OR Suppliers ticket #: 35520046	Station curb ramp 01-0+81.97		

Slump 2 1/2 inches (mm)	Entrained air 5.7 %	Unit weight 140.2 lbs/ft ³ (kg/m ³)
Cylinders for design adequacy	Date molded 8-30-17	Time 2:03 PM
	Cured hrs. 24	Days in molds 1
	Days in molds 27	<input type="checkbox"/> Damp sand <input checked="" type="checkbox"/> Water
	at Temp. 74 °F (°C)	
Cylinders for structural strength information	Date molded	Time
	Cured hrs.	Days in molds
	Days at structure site	Shipped to
	<input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	

Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results			
						Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	5	P	7	9-6	2	7	4.03	61116	4770
Specimen Identification	5	P	28	9-27	3	7	4.03	59050	4616
Specimen Identification						28	4.03	77040	6010
Required strength (PSI/MPa)	QA/QC specification (broke @ 28 days) <input type="checkbox"/> yes <input type="checkbox"/> no					28	4.03	76650	5980
Specimen type:	<input checked="" type="checkbox"/> 4 x 8 cylinder <input type="checkbox"/> Beam <input type="checkbox"/> Splitting <input type="checkbox"/> Cube <input type="checkbox"/> 6 x 12 cylinder <input type="checkbox"/> Tensile:								
Quantity represented cubic yards/meters	Previous 400	This placement 100	To date 500						

Field Comments: w/cm = 0.43 ry = 0.98 ₉	Lab comments: lab # 4886
AMOI T = 7.50 V = 0.249 WT = 42.40	
1 st TRUCK REJECTED QC AIR = 9.5%	
CURE BOX: 76°-80°	

I.A.T./Remarks:

Cast by: ERIC HOWES	Transported by: (Name/Title/Company) ERIC HOWES / QA TESTER / TRANTNER GEOTECH	Phone number	FAX number
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL			Contract ID	19219	Region	5	Field Sheet #	168001					
			Project No.		STE 480-008		Date Submitted		10-3-17				
Ready Mix Supplier:		Suppliers ticket #:		Project Location		Item & Description							
FCM / Pagosa		35520156		PC to AVE SUP		608 - CURB RAMP & 609 - GUTTER <small>CURB &</small>							
		Station curb ramp #7 816 st. 24-20 & 36-53		Resident Engineer		CDOT Mix #							
				Robert Shanks		2017069							
Slump	2 1/2 inches (mm)	Entrained air	4.8 %	Unit weight	142.0 lbs/ft ³ (kg/m ³)	Yield	0.98	Concrete temperature	77 °F (°C)				
Cylinders for design adequacy		Date molded	10-03-17	Time	4:35	Cured hrs.	24	Days in molds	1				
						Days in	27	<input type="checkbox"/> Damp sand	at Temp.				
						<input checked="" type="checkbox"/> Water			74 °F (°C)				
Cylinders for structural strength information		Date molded		Time		Cured hrs.		Days at structure site					
						Days in molds		Shipped to	<input type="checkbox"/> Central lab				
									<input type="checkbox"/> Region lab				
Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results							
Sample ID	6	P	7	10/10	2	Age	Diameter (beam - H x W)	Total load	PSI/MPa	Break Type			
Sample ID	6	P	28	10/31	3	7	4.03	74920	5850	5			
Sample ID						7	4.03	73070	5700	4			
Specified strength (PSI/MPa)	QA/QC specification (broke @ 28 days)				<input type="checkbox"/> yes <input type="checkbox"/> no	28	4.03	87660	6840	5			
Specimen type:	<input checked="" type="checkbox"/> 4 x 8 cylinder		<input type="checkbox"/> Beam		<input type="checkbox"/> Splitting		<input type="checkbox"/> Cube		28	4.03	88100	6880	5
	<input type="checkbox"/> 6 x 12 cylinder		<input type="checkbox"/> Core		Tensile				28	4.03	86060	6720	4
Quantity represented cubic yards/meters	Previous	This placement	To date										
	500	100	600										
Field Comments: w/cm = 0.42					blue A2		Lab comments: # 5014 - TRAUTNER GEOTECH						
AMO1 T = 7.50 Ue = 0.249 w = 42.85					cw = box 64-72		LAB NO.						
Clifton w/ Davis Eng. accepted the mix w/ ^{2nd} initial of 4.9													
1 bag added after 1st initial of 3.5 - SEE FORM 473													
I.A.T./Remarks:													
Cast by: (print name)	Title	Transported by: (Name/Title/Company)			Phone number	E-mail address							
ERIC HOWES	TESTER	ERIC HOWES / TESTER / TRAUTNER			970-749-4241	Gdenton@TrautnerGeotech.com							

Concrete Mix Design Report

Concrete Supplier: Four Corners Materials	CDOT Mix Number : 2017069
Supplier Mix ID : 37523344	Item 601 Class P Concrete
Field Compressive Strength: 4500 psi	Class 2 Sulfate Resistance and lower*
*Class 3 Sulfate resistance requires a w/cm ratio ≤0.40	

Concrete Mix Proportions (SSD Batch Weights for 1 Cubic Yard)

Cement:	565	Pounds	GCC (Pueblo) Type I/II Cement
Fly Ash:	141	Pounds	SRMG (4-Corners) Class F Fly Ash
Silica Fume		Pounds	
Coarse Aggregate 1	1682	Pounds	Animas Glacier Pit; #67
Coarse Aggregate 2		Pounds	
Coarse Aggregate 3		Pounds	
Fine Aggregate	1077	Pounds	Animas Glacier Pit
Admixture	7.0	Ounces	BASF - MasterAir AE 200
Admixture	56.0	Ounces	BASF - MasterPolyheed 997
Admixture		Ounces	
Admixture		Ounces	
Water	295.9	Pounds	

Trial Batch Properties

Unit Weight :	140.8	PCF	7-Day Compressive Strength :	4485	psi
W / Cm Ratio :	0.42		14-Day Compressive Strength :	5255	psi
Slump :	2.25	Inches	28-Day Compressive Strength :	6950	psi
Air Content :	4.70	%	56-Day Compressive Strength :		psi
Relative Yield :	0.99		7-Day Flexural Strength :	723	psi
			28-Day Flexural Strength :	770	psi

Aggregate Test Results

	Specific Gravity (SSD)	Absorption
Coarse Aggregate 1 :	2.66	1.2 %
Coarse Aggregate 2 :		%
Coarse Aggregate 3 :		%
Fine Aggregate :	2.66	1.3 %

Comments:

Reviewed by: Val Niculae

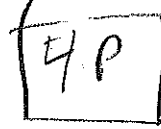
Review date: 3/17/2017

Please contact CDOT Concrete and Physical Properties Lab at 303-398-6549 with any questions.

Gina Denten

From: Clifton Lee <clifton@daveng.com>
Sent: Thursday, August 24, 2017 4:59 PM
To: Eric Howes; Gina Denten
Subject: 19219 PC to AVD SUP - 08-24-2017 Concrete Placement

Good Afternoon Eric & Gina



Here's a summary of line items associated with today's concrete placement for the subject project:

Item 604-19000 Inlet (Special) - 3 each

-STA 31+53.61
-STA 34+08.54
-STA 35+76.18

Item 608-00012 Curb Ramp (Special) - 27.51 square feet

-STA 1+62.09

Item 609-21900 C&G Type 2 (18 inch Pan Special) - 22 lineal feet

- STA 36+92 (plus/minus)

Let me know if you have any questions regarding today's placement and associated line items.

Regards,

Clifton Lee



Davis Engineering Service, Inc.
188 S. 8th Street - P.O. Box 1208
Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105
Fax: (970) 264-9210
E-mail: clifton@daveng.com

STE 480-008

19219

Truck 1 of 2 sta. 24+26-25+03



FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

601

BATCH PLANT: 970-731-5194

FAX: 970-731-5197

P.O. BOX 1969

BAYFIELD, CO 81122

No. 053209

AMOUNT = 7.52 V = 0.249 W = 42.24 UG = 139.4

TEST RESULTS

SLUMP 3 1/2

CONC. TEMP. 74 AIR % 6.7

CYLINDERS TAKEN x 5 YES NO

TESTED BY Eric Howes

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

WATER ADDED AT CUSTOMER'S REQUEST 0 GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
-------------	-------------	------	------	------	--------

SOLD TO	DELIVER TO	DRIVER
---------	------------	--------

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL		
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER	STATE TAX	
DELIVERY INSTRUCTIONS						COUNTY TAX	
SPECIAL INSTRUCTIONS						CITY TAX	
						TOTAL	

TEAR HERE

No. 053209

W/c/m = 0.42
R4 = 1.00

STE 480-008

19219

Truck 2 of 2 sta 24+26
-25+03

FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

601

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

(bag of air added) No. 053211

AMOI T: 7.52
Visual
SLUMP: 4 IN

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

CONC. TEMP: 72
AIR %: 5.4

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

CYLINDERS TAKEN: YES NO

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

TESTED BY: Eric Howes

WATER ADDED AT CUSTOMER'S REQUEST: 1/4 gallon GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
SOLD TO			DELIVER TO		DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL		
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER	STATE TAX	
DELIVERY INSTRUCTIONS						COUNTY TAX	
SPECIAL INSTRUCTIONS						CITY TAX	
						TOTAL	

TEAR HERE

No. 053211

W/cm = 0.424/
RY = 0.98
②

STE 480-008

19219

Truck 1 of 2 sta: 24+26 -25+03



FOUR CORNERS MATERIALS

DELIVERY INVOICE

PAGOSA

601

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053229

Amol To 7.52 V=0.249 W=42.28 UW=139.3

TEST RESULTS
SLUMP 31/4

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

LEAVE PLANT 9:37

CONC. TEMP. 76 AIR % 6.3

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

ARRIVE JOB 9:50

CYLINDERS TAKEN YES NO

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

FINISH POURING

TESTED BY Eric Hovras

LEAVE JOB

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

ARRIVE PLANT

CUSTOMER ID

P.O. NUMBER

ZONE

TIME

DATE

TICKET

TICKET

SOLD TO: 1500 Hughes Landing Blvd Ste 0001 STE 0400-000 PINION CAU

DELIVER TO: AIR SPEC WILL FOLLOW

DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
1.00	0.00						

TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL		
					STATE TAX	COUNTY TAX	CITY TAX
					TOTAL		

DELIVERY INSTRUCTIONS

SPECIAL INSTRUCTIONS

TEAR HERE

Truck 56261 Driver 02120 User 33019033 Disp (In) 4000 Time 9:16 7/50/11 No. 053229

Load Size Mix Code Returned Qty H : Age Set Load TO

8.00 CROS 37522341

Material	Design Qty	Required	Batched	% Moisture	Actual Qty
AG-627	1682 lb	13456 lb	13420 lb		
AG-630	1077 lb	8814 lb	8790 lb	2.30% N	24 gal
CC-1-11	965.0 lb	420.0 lb	400.0 lb		
4-CORNS	141.0 lb	112.0 lb	115.0 lb		
SECON	7.00 gal	57.00 gal	58.00 gal		
POLY-397	22.00 gal	140.00 gal	142.00 gal		
WATER	25.00 gal	260.25 gal	264.00 gal		264.00 gal
WATER	00 gal	00 gal	00 gal		

Actual Max Batched: 3

Design 0.420 Water Content 0.426 0 Design 287.0 gal Actual 287.0 gal to Add: 0.0 gal

Water in Trucks 0.0 gal Adjust Water 0.0 gal / Load 0.0 gal / CYD Water (Known) Prod in

W/cm = 0.425
Ry = Ry = 1.00

STE 480-008

19219

Truck 2 of 2 Sta. 24+26

-25+05
Sta: 3+09.52
-3+81.52

FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA 601

BATCH PLANT: 970-731-5194

FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053230

Amal T=7.52 V=0.249 W=N/A

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

TEST RESULTS

SLUMP

CONC. TEMP. AIR %

CYLINDERS TAKEN

TESTED BY

WATER ADDED AT
CUSTOMER'S REQUEST

GALLONS

BY: *[Signature]*
CUSTOMER SIGNATURE

ALLOWABLE UNLOADING
TIME: 7 MINUTES PER
CUBIC YARD.

CUSTOMER ID

P.O. NUMBER

ZONE

TIME

DATE

SOLD TO

DELIVER TO

DRIVER

QUANTITY
THIS LOAD

QUANTITY
ORDERED

QUANTITY
DELIVERED

PRODUCT
CODE

PRODUCT
DESCRIPTION

UNIT OF
MEASURE

UNIT
PRICE

EXTENDED
PRICE

TRUCK

PLANT

SLUMP

DUE AT JOB

USE OF CONCRETE

SUB TOTAL
STATE TAX
COUNTY TAX
CITY TAX
TOTAL

ACCEL

AIR ENTRAIN

SUPER PLAS.

CAL. CHLORIDE

HOT WATER

RETARDER

DELIVERY INSTRUCTIONS

SPECIAL INSTRUCTIONS

TEAR HERE

No. 053230

REJECTED

STE 480-008

19219

Truck 2 of 2 sta: 24+26-25+09
will 3:59 PM
348152



FOUR CORNERS MATERIALS

DELIVERY INVOICE

PAGOSA

601-STRUCTURAL

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053231

AMOI T=75.2 V=0.249 W=42.35 CW=139.9

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

TEST RESULTS

SLUMP: 3 1/2

CONC. TEMP: 75 AIR %: 6.2

CYLINDERS TAKEN YES NO

TESTED BY: Eric Howes

LEAVE PLANT: 11:39

ARRIVE JOB: 11:46

FINISH POURING

LEAVE JOB

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: _____
CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

ARRIVE PLANT

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
SOLD TO			DELIVER TO		DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
RUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE		SUB TOTAL	
COEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER	STATE TAX	
						COUNTY TAX	
						CITY TAX	
						TOTAL	

DELIVERY INSTRUCTIONS

SPECIAL INSTRUCTIONS

TEAR HERE

No. 053231

w/um = 0.409 ✓
RY = 1.00



FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

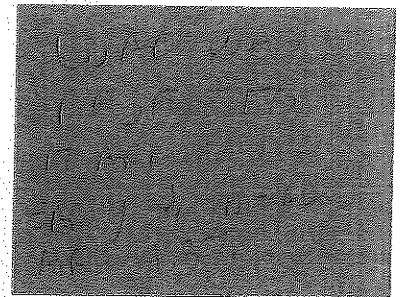
No. 053263

TEST RESULTS		<p>In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.</p> <p>This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.</p> <p>TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.</p>					LEAVE PLANT 8:51	
SLUMP							ARRIVE JOB 7:02	
CONC. TEMP.	AIR %						FINISH POURING	
CYLINDERS TAKEN <input type="checkbox"/> YES <input type="checkbox"/> NO							LEAVE JOB	
TESTED BY							ARRIVE PLANT	
WATER ADDED AT CUSTOMER'S REQUEST			BY: CUSTOMER SIGNATURE			ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.		
CUSTOMER ID	P.O. NUMBER	GALLONS	ZONE	TIME	DATE	TICKET		
SOLD TO			DELIVER TO			DRIVER		
QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE	
TRUCK					SUB TOTAL			
ACCEL					STATE TAX			
					COUNTY TAX			
					CITY TAX			
DELIVERY INSTRUCTIONS					TOTAL			

SPECIAL INSTRUCTIONS

TEAR HERE

No. 053263



STE 480-008 19219

Truck 1 of 1 sta: 364052 39152
243866-4646
3700

FOUR CORNERS

MATERIALS

PAGOSA

DELIVERY INVOICE

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053265

AMOS T=7.64 V=0.248 W=42.30 UW=139.8

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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TEST RESULTS

SLUMP 23H

CONC. TEMP. 85 AIR % 5.5

CYLINDERS TAKEN YES NO

TESTED BY ERIC HOWES

LEAVE PLANT 10:43

ARRIVE JOB 10:31

FINISH POURING

LEAVE JOB

ARRIVE PLANT

TICKET

WATER ADDED AT CUSTOMER'S REQUEST 16 GALLONS

BY: _____
CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
OLD TO	DELIVER TO			DRIVER	

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE			
CEMENT	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER	SUB TOTAL	
DELIVERY INSTRUCTIONS						STATE TAX	
SPECIAL INSTRUCTIONS						COUNTY TAX	
						CITY TAX	
						TOTAL	

TEAR HERE

No. 053265

w/crm = 0.4501
Ry = 1.01

STE 480-008

19219

Truck lot 1

ramp 1+62.09
colvert 31+53.61/34+08.54

35+76.18

FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

BATCH PLANT: 970-731-5194

FAX: 970-731-5197

P.O. BOX 1969

BAYFIELD, CO 81122

No. 053315

AMOI T=7.64

V=0.248 W=42.05 UW=138.8

TEST RESULTS

SLUMP

3 1/4

CONC. TEMP.

82

AIR %

5.8

CYLINDERS TAKEN

YES

NO

TESTED BY

ERIC HOWES

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

WATER ADDED AT CUSTOMER'S REQUEST

0 GALLONS

BY:

CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

LEAVE PLANT
ARRIVE JOB
FINISH POURING
LEAVE JOB
ARRIVE PLANT
TICKET

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
SOLD TO		DELIVER TO		DRIVER	

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE		SUB TOTAL	
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER	STATE TAX	
DELIVERY INSTRUCTIONS						COUNTY TAX	
SPECIAL INSTRUCTIONS						CITY TAX	
						TOTAL	

TEAR HERE

No. 053315

w/cm = 0.420
Ry = 100

STE 480-008

19219

Truck 1 of 1

curb ramp 10 - 3679408
Curb ramp 01 - 0187997



REJECTED!!!

FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

608

BATCH PLANT: 970-731-5194

P.O. BOX 1969

FAX: 970-731-5197

BAYFIELD, CO 81122

No. 053346

AMO 1 T = 30 V = 0.249 W =

TEST RESULTS
SLUMP

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

LEAVE PLANT

CONC. TEMP. AIR %

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

ARRIVE JOB

CYLINDERS TAKEN YES NO

FINISH POURING

TESTED BY
ERIC HOWES

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

LEAVE JOB

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

ARRIVE PLANT

CUSTOMER ID

P.O. NUMBER

ZONE

TIME

DATE

TICKET

SOLD TO

DELIVER TO

DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE

TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL	STATE TAX	COUNTY TAX	CITY TAX
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE %	HOT WATER %				

DELIVERY INSTRUCTIONS TOTAL

SPECIAL INSTRUCTIONS

TEAR HERE

No. 053346

STE-480-008

19219

TRUCK 1 of 1 curb ramp 10.36.1108
curb ramp 01.0.8199



FOUR CORNERS MATERIALS

DELIVERY INVOICE

PAGOSA

608

BATCH PLANT: 970-731-5194

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053348

FAX: 970-731-5197

AMOI T=7.50 V=0.249 W=42.40 OW=140.2

TEST RESULTS

SLUMP: 2 1/2

CONC. TEMP: 86 AIR %: 5.7

CYLINDERS TAKEN: 5 YES NO

TESTED BY: ERIC HOWES

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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LEAVE PLANT

ARRIVE JOB

FINISH POURING

LEAVE JOB

ARRIVE PLANT

WATER ADDED AT CUSTOMER'S REQUEST: 0 GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
-------------	-------------	------	------	------	--------

SOLD TO	DELIVER TO	DRIVER
---------	------------	--------

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL		
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER	STATE TAX	
DELIVERY INSTRUCTIONS						CITY TAX	
SPECIAL INSTRUCTIONS						TOTAL	

TEAR HERE

No. 053348

w/cm = 0.420
Ry = 0.99

STE 480-008

19219

truck 1 of 1

curb ramp #7
CEG sta: 24+20
\$36453

FOUR CORNERS MATERIALS

DELIVERY INVOICE

PAGOSA

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053458

TEST RESULTS

SLUMP *2 1/2*

CONC. TEMP. *77* AIR % *4.8*

CYLINDERS TAKEN *5* YES NO

TESTED BY *Eric Howes*

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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LEAVE PLANT
ARRIVE JOB
FINISH POURING
LEAVE JOB
ARRIVE PLANT
TICKET

WATER ADDED AT CUSTOMER'S REQUEST _____ GALLONS

BY: _____ CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE
SOLD TO	DELIVER TO			DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE			
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER		
DELIVERY INSTRUCTIONS						SUB TOTAL	
SPECIAL INSTRUCTIONS						STATE TAX	
						COUNTY TAX	
						CITY TAX	
						TOTAL	

TEAR HERE

No. 053458

w/cm = 0.42
RY = 0.99

1 bag of air added

STE 480-008

19219

Truck 1 of 1 curb ramp 8-24-2015
9:36 AM, 3/1



FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

608 curb ramp

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053475

TEST RESULTS
SLUMP 2 1/2
CONC. TEMP. 60
AIR % 5.7
CYLINDERS TAKEN 5
YES NO
TESTED BY Eric Howes

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

LEAVE PLANT
7:50
ARRIVE JOB
7:45
FINISH POURING
LEAVE JOB
ARRIVE PLANT

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
SOLD TO	DELIVER TO	DRIVER			

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE		SUB TOTAL	
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER	STATE TAX	
DELIVERY INSTRUCTIONS						COUNTY TAX	
SPECIAL INSTRUCTIONS						CITY TAX	
						TOTAL	

TEAR HERE

No. 053475

w/cm = 0.42
Ry = 0.95

19219-601-4

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region <u>5</u>	Field sheet # <u>266289</u>
	Contract ID <u>19219</u>	Date Submitted <u>3-10-18</u>
	Project No. <u>STE C400-008</u>	
	Project Location <u>PINON CAUSEWAY TO ASPEN VILLAGE DR. S.W.P</u>	

Metric units yes no

Material Type <u>CLASS B2 CONCRETE</u>	Field Lab phone	Cell Phone
Material Code (LIMS)	Item <u>613</u>	Class <u>B2</u>
	Grading	Special Provisions <input type="checkbox"/> yes
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

CLASS B2 CONCRETE WAS INSTALLED ON THE PROJECT AND APPROVED BY THE PROJECT ENGINEER. THE CONCRETE WAS PAID INCIDENTAL TO ITEM 613 LIGHT STANDARD FOUNDATIONS, THIS MIX IS ON THE PRE-APPROVED CONCRETE MIX DESIGNS LIST. ALL COMPONENTS OF THE MIX ARE ON THE APL AND DOCUMENTATION IS ATTACHED. THE TEST RESULTS ARE ATTACHED. SEE FORM 473 FOR MORE INFORMATION.

User ID	SEE LETTER DATED 09-08-2017 IN THE CHANGE ORDERS/ISS SECTION. SEE FORM 473.
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Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No. <u>2949-16 / 2302-16</u>	Product name: <u>PUEBLO PLANT 1/ I/II LA / FOUR CORNERS CL F FLY ASH</u>	Date checked: <u>1-16-18 / 1-16-18</u>
APL/QML Acceptance: APL Ref. No. <u>2914-14 / 2003-14</u>	Product name: <u>MASTER GLENIUM 7500 / MASTERSET DELVO</u>	Date checked: <u>1-16-18 / 2003-14</u>

Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed
---	-------------

Contractor <u>CROSSFIRE, LLC</u>	Supplier <u>FCM</u>
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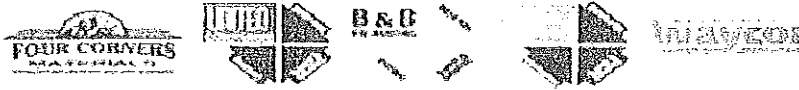
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner <u>ANIMAS GLACIER</u>
---	---

Quantity represented <u>30.5 cy / 34 EA</u>	Previous quantity <u>0</u>	Total quantity to date <u>30.5 cy / 34 EA</u>
---	----------------------------	---

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) <u>TRAUTNER GEOTECH</u>	Title <u>QA TESTERS</u>	E-mail
--	-------------------------	--------

Supervisor (Pro./Res./Matis. Engr./Maint. Supt.) (print name) <u>CLIFTON LEE PE</u>	Title <u>PROJECT ENGINEER</u>	Residency
---	-------------------------------	-----------



OLDCASTLE SW GROUP, INC.

Submittal # 17-355-003 Version 1

8/4/2017

ONE TOUCH ELECTRIC, INC
3228 RD 21
CORTEZ CO 81321

Job: CDOT STE C480-008
Job Description: Pinion Causeway & Aspen Village, Pag Sprgs CO

Attn: Dick Giesler

All materials and concrete delivered to this project conform to ASTM C-94, ACI 301 and ACI 318 Specifications for Ready Mixed Concrete. Four Corners Materials will not be responsible for concrete compromised by the addition of water, improper placing, finishing or curing techniques.

This submission contains the following mix designs:

Mix Code	Mix Description	Usage
37023344	CLASS D AG GCC	VARIOUS USES
36923344	CLASS BZ AG GCC	VARIOUS USES
30023344	AG CDOT FLOW FILL GCCP	FLOW FILL

Please have your personnel place the order for concrete using the designated mix number. The concrete will come from Plant 355. The phone number is (505) 324-3900.

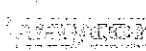
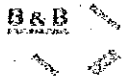
PLEASE NOTIFY THIS OFFICE AS TO THE ACCEPTANCE OR REJECTION OF THIS MIX SUBMITTAL. LACK OF RESPONSE PRIOR TO FIRST POUR SHALL RESULT IN ACCEPTANCE.

NOTE: ALL CONCRETE MUST BE ORDERED BY THE APPROVED MIX DESIGN NUMBER. EVALUATION OF THIS CONCRETE MUST BE CONDUCTED ACCORDING TO ASTM AND ACI STANDARDS.

Thank you for giving us this opportunity to be of service to you, feel free to contact me if you should need any further assistance.

Sincerely yours,

Ray Taulli



OLDCASTLE SW GROUP, INC.

Concrete Mix Design Submittal

Date: 08/04/2017 No. 17-355-003 Version 1
 Mix Code: 36923344 Description: CLASS BZ AG GCC

Customer	ONE TOUCH ELECTRIC, INC	Design	Tolerance
Contact	Dick Gesler	Air Content	1.5
Office Phone	970-565-9684	Slump	7
Project Name	CDOT STE C480-008	Design Strength	4200 psi
Project Description	Pinion Causeway & Aspen Village, Pag Sprgs CO	Unit Weight	147.8 lb/ft3
Usage/ Placement	VARIOUS USES	W/C Ratio	0.45

Material Code	Material Description	Material Supplier	Material Source	Standard	Design Quantity	Specific Gravity	Volume (ft3)
AG-#67	ANIMAS GLACIER # 67	FCM	ANIMAS GLACIER	C-33	1800 lb	2.66	10.86
AG-SND	ANIMAS GLACIER SAND	FCM	ANIMAS GLACIER	C-33	1301 lb	2.66	7.84
GCC-VII	GCC CEMENT	GCC	PUEBLO	C-150	490 lb	3.15	2.49
4-CRNRS	FOUR CORNERS FLYASH	SRMG	4 CORNERS	C-618	125 lb	1.99	1.01
GLEN7500	GLENIUM 7500 HRWR	BASF	BASF DENVER	C 494	0 lq oz	-	-
WATER	WATER	WATER	WATER	C-1602	33.0 gal	1.00	4.41
Air Content					1.50 %	-	0.41
Yield					3991 lb	-	27.01

NOTES

Prepared By :

Paul Appel

Pre-Approved Concrete Mix Designs

These concrete mix designs meet the requirements of CDOT Standard Specifications and the CDOT Field Materials Manual CP 62. Inclusion on the APL does not guarantee that a mix will be approved for use on a project.

Please contact the Concrete & Physical Properties Unit at 303-398-6549 for more information on these mix designs.

Updated: 8/7/2017

Everist Materials, LLC

CDOT Mix Number	Supplier Mix ID			Expiration Date
2016123	645109D	Concrete, Class D/P	Class 1 Sulfate Resistance	11/01/2017

Four Corners Materials

CDOT Mix Number	Supplier Mix ID			Expiration Date
2016106	37023347	Concrete, Class D	Class 2 Sulfate Resistance	01/20/2018
2016107	36923347	Concrete, Class BZ	Class 2 Sulfate Resistance	01/20/2018
2017069	37523344	Concrete, Class P	Class 2 Sulfate Resistance	11/24/2018
2017094	38023344	Concrete, Class E	Class 2 Sulfate Resistance	10/10/2018
2017122	38023347	Concrete, Class E	Class 2 Sulfate Resistance	11/24/2018
2017123	37523347	Concrete, Class P	Class 2 Sulfate Resistance	11/24/2018
2017125	38023347	Concrete, Class E	Class 2 Sulfate Resistance	11/24/2018
2017130	38523605	Shotcrete	Class 2 Sulfate Resistance	11/24/2018
2017173	36923344	Concrete, Class BZ	Class 2 Sulfate Resistance	11/24/2018

Four Corners Materials Animas-Glacier pit

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017174	37023344	Concrete, Class D	Class 2 Sulfate Resistance	11/24/2018

Fremont Paving And Redi-Mix, Inc.

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017139	CCDP20F16	Concrete, Class D/P	Class 2 Sulfate Resistance	06/01/2018
2017162	PWDP20F17	Concrete, Class D/P	Class 2 Sulfate Resistance	02/01/2019
2017163	PWDP20F17AC	Concrete, Class D/P	Class 2 Sulfate Resistance	11/01/2018
2017164	PWBZ20F17	Concrete, Class BZ	Class 2 Sulfate Resistance	11/01/2018

Green Brothers Ready Mix

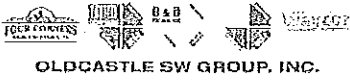
CDOT Mix Number	Supplier Mix ID			Expiration Date
2017041	3165002E	Concrete, Class D	Class 2 Sulfate Resistance	01/15/2018
2017042	3165002F	Concrete, Class E	Class 2 Sulfate Resistance	01/12/2018

Halde Read-Mix, Inc.

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017150	T16062-425	Concrete, Class D	Class 0 Sulfate Resistance	12/13/2017

Hard Rock Concrete

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017170	HRDP20F17	Concrete, Class D/P	Class 2 Sulfate Resistance	02/01/2019
2017171	HRBZ20F17	Concrete, Class BZ	Class 2 Sulfate Resistance	02/01/2019



FOUR CORNERS
 MATERIALS
 PO Box 16
 Farmington, New Mexico
 87499
 Tel: 505 324 3910

Mix : 36923344 - CLASS BZ AG GCC
 Period : 05/23/2017 to 05/23/2017

Specified Strength	4200	Strength Type	Compressive Test	28 Day	
Number of Tests	1	Over Design Type		Within Test CofV Factor	1.693
Average Strength	7420	SD Correction Factor	0.000	Within Test SD	140
Standard Deviation		Corrected SD		Within Test CofV	1.89
Degree of Control		Corrected CofV		Within Test CofV Control	EXCELLENT
Coefficient of Variation		f'c + 1200	5400	Batch-to-Batch SD	
		f'c + 1200	5400	Batch-to-Batch CofV	
		Required Strength	5400	Cementitious Content	615
Maximum f'c for Mix	6220	Safety Factor	2020	Cementitious Efficiency	12.1

Date	Sample	Strength28 psi	Air Content %	Slump in	Concrete Temp deg F
05/23/2017	34407140	7420	1.50	7.75	74

Concrete Aggregate Test Report



Project	Supplier Information	Report Date	3/9/17
Client	Four Corners Materials	Sampled By	Client
Address	PO Box 16 Farmington, NM 87499	Material Tested	Concrete Sand
Sample Date	11/24/2016	Date Tested	12/2-12/16/16
Sample received	11/24/2016	Tested By	Mary Annikah
Laboratory #	ALB 269-16	Sample Location	Stockpile
		Sample Source	Animas Glacier Pit

Sieve Analysis

C-117 & C136/T-11 & T-27 ASTM C33

Sieve Size	% Passing	Specs
1/2" (12.5mm)		
3/8" (9mm)	100	100
#4 (4.75mm)	100	95-100
#8 (2.36mm)	90	80-100
#10 (2mm)		
#16 (1.18mm)	73	50-85
#30 (0.6mm)	54	25-60
#40 (0.425mm)		
#50 (0.3mm)	27	5-30
#80 (0.18mm)		
#100 (0.15mm)	8	0-10
#200 (0.075mm)	2.4	0-3
Fineness Modulus	2.49	

Test Results

ASTM C33

Standard	Physical Properties	Results	Specs
C-128	Fine Bulk Specific Gravity	2.626	
	Specific Bulk Specific Gravity, SSD	2.661	
T-84	Gravity & Apparent Specific Gravity	2.721	
	Absorption	Absorption, %	1.3
CP3.7	Sand Equiv.	Sand Equivalent, %	90 > 80
C-142	Clay/Friable	Fine Aggregate, %	0.2 < 3.0
T-112	Particles		
C-40	Organic Impurities	Organic Impurities	N/A
C-83	Soundness	Fine Soundness Loss, %	6.3 < 15
T-104		5 cycles MgSO ₄	
C-29	Unit Weight	Unit Weight, (lbs/ft ³)	105.7
T-19	& Voids	Voids, %	35.4
	shoveling		

Respectfully Submitted,

Reports to
Paul Appel
Rick Morris

fax/email
Paul.Appel@oldcastle-materials.com
morris@4cornersmaterials.com

Lea Ann Marquez, PE
 45

414 Bibb Industrial Dr.
P.O. Box 1228
Las Vegas, NM 87701
505-718-3030

Concrete, Aggregate and Asphalt Testing, LLC

9430 San Mateo Blvd. NE
Unit H
Albuquerque, NM 87113
505-503-6570

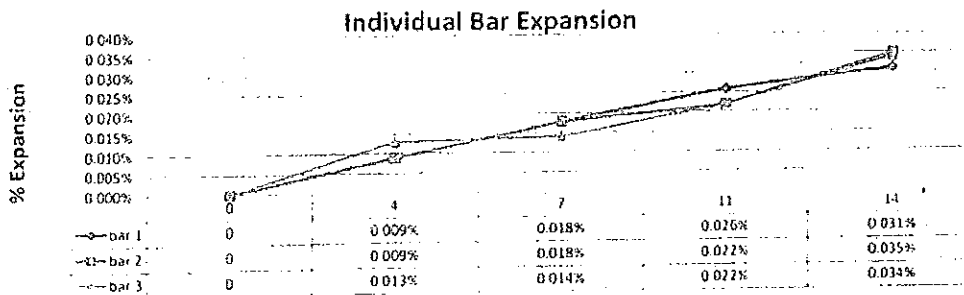
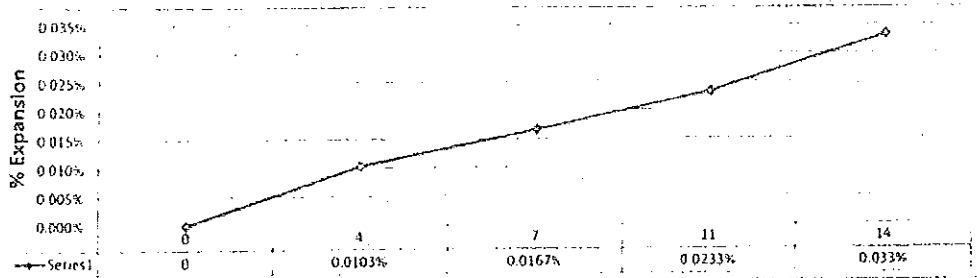
Alkali-Silica Reaction Analysis Report



Client: <u>Four Corners Materials</u>	Date Reported: <u>1/2/2017</u> <input type="checkbox"/> Revised
Address: <u>PO Box 16</u>	Project: <u>Various</u>
<u>Farmington, NM 87499</u>	Project #: <u>Various</u>
	Aggregate Source(s): <u>Animas Glacier, Concrete Sand</u>
	Cement Source: <u>GCC Pueblo III</u>
Test requested by: <u>Rick/Paul</u>	Admixture Source: <u>SRM Four Corners CI F Flyash</u>
Samples Received: <u>11/24/2016</u>	Admixture Percentage: <u>25%</u> <i>by wt of cement or</i>
Laboratory #: <u>742-16</u>	<u>20%</u> <i>by wt of cementitious</i>

Standard Test Method for Determining the Potential Alkali Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar Bar Method) ASTM C1567-13

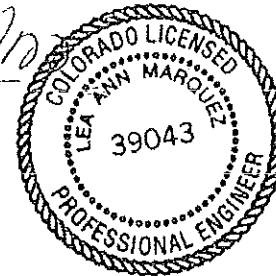
Batch date	11/29/2017	Reading	Bar A	Bar B	Bar C	Calibration	Avg Bar	% expansion	Specs
Test Date	11/30/17	Initial	0.3561	0.3123	0.2995	0.0713	0.3226		
	12/1/17	Zero	0.3614	0.3177	0.3048	0.0712	0.3280		
	12/5/17	4	0.3625	0.3188	0.3063	0.0714	0.3292	0.0103%	
			0.009%	0.009%	0.013%				
	12/8/17	7	0.3632	0.3195	0.3062	0.0712	0.3296	0.0167%	
			0.018%	0.018%	0.014%				
	12/12/17	11	0.3638	0.3197	0.3068	0.071	0.3301	0.0233%	
			0.026%	0.022%	0.022%				
	12/15/17	14	0.3645	0.3212	0.3082	0.0712	0.3313	0.03%	< 0.10
			0.031%	0.035%	0.034%				effectively mitigated



Respectfully Submitted

Lea Ann Marquez
Lea Ann Marquez PE

3-2-17



Concrete Aggregate Test Report



Project: <u>Supplier Information</u>	Report Date: <u>3/9/17</u>
Client: <u>Four Corners Materials</u>	Sampled By: <u>Client</u>
Address: <u>PO Box 16</u>	Material Tested: <u>#67 Stone</u>
<u>Farmington, NM 87499</u>	Date Tested: <u>12/2-12/16/16</u>
Sample Date: <u>11/24/2016</u>	Tested By: <u>Pedro</u>
Sample received: <u>11/24/2016</u>	Sample Location: <u>Stockpile</u>
Laboratory #: <u>LL659-16</u>	Sample Source: <u>Animas Glacier Pit</u>

Sieve Analysis

Test Results

C-117 & C136/T-11 & T-27 ASTM C33, Size #67

ASTM C33

Sieve Size	% Passing	Specs
2" (50mm)		
1.5" (37.5mm)		
1" (25mm)	100	100
3/4" (19mm)	95	90-100
1/2" (12.5mm)	58	
3/8" (9mm)	35	20-55
#4 (4.75mm)	6	0-10
#8 (2.36mm)	2	0-5
#10 (2mm)		
#16 (1.18mm)	2	
#30 (0.6mm)	1	
#40 (0.425mm)		
#50 (0.3mm)	1	
#80 (0.18mm)		
#100 (0.15mm)	1	
#200 (0.075mm)	0.8	0-1.5
Fineness Modulus	4.99	

Standard	Physical Properties	Results	Specs
C-127	Coarse Bulk Specific Gravity	2.625	
	Specific Bulk Specific Gravity, SSD	2.657	
	T-85 Gravity & Apparent Specific Gravity	2.711	
	Absorption Absorption %	1.2	
C-142	Clay/Friable Coarse Aggregate, %	0.5	< 3.0
T-112	Particles		
D5821	Fractured 1 face	94	No req
	Faces 2 faces	90	
C-131	LA LA Wear %	21	< 50
T-96	Abrasion Grading	B	
C-88	Soundness Coarse Soundness Loss %	1.7	< 18
T-104	5 cycles MgSO ₄		
C-123	Lightweight Light Wt Pieces %	N/T	< 0.5
	Pieces Type of Solution	Zinc Chloride - coal/nignite	
C-123	Lightweight Light Wt Pieces %	1.6	< 3.0
	Pieces Type of Solution	Zinc Bromide - Chert	
Total Deleterious		2.9	< 3.0
C-29	Unit Weight Unit Weight, (lbs./ft ³)	99.5	
T-19	& Voids Voids %	39.2	
Rodded			

Reports to Paul Appel
Rick Morris

fax/email
Paul.Appel@oldcastle-materials.com
rmorris@4cornersmaterials.com

Respectfully Submitted,

Lea Ann Marquez
Lea Ann Marquez, PE
4-5-17

414 Bibb Industrial Dr
P O Box 1228
Las Vegas NM 87701
505-718-3030

Concrete, Aggregate and Asphalt Testing, LLC

9430 San Mateo Blvd. NE
Unit H
Albuquerque, NM 87113
505-503-6670

Alkali-Silica Reaction Analysis Report



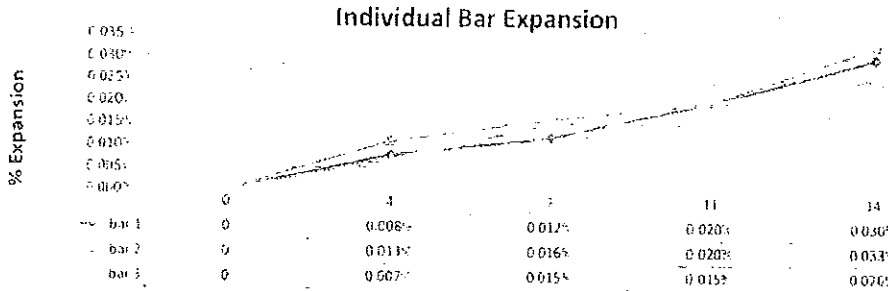
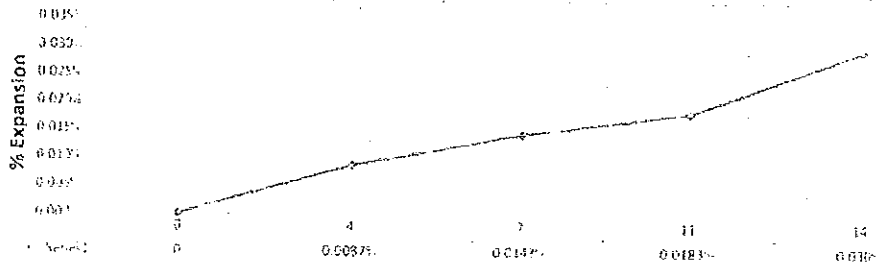
Client: Four Corners Materials
 Address: PO Box 18
Farmington, NM 87499
 Test requested by: Rick Paul
 Samples Received: 11/24/2016
 Laboratory #: 743-16

Date Reported: 1/2/2017 Revised
 Project: Various
 Project #: Various
 Aggregate Source(s): Animas Glacier, Coarse Aggregate
 Cement Source: GCC Pueblo III
 Admixture Source: SRM Four Corners Cl F Flyash
 Admixture Percentage: 25% by wt of cement or
20% by wt of cementitious

Standard Test Method for Determining the Potential Alkali Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar Bar Method) ASTM C1567-12

Batch date	11/29/2017	Reading	Bar A	Bar B	Bar C	Calibration	Avg Bar	expansion	Specs
Test Date	11/30/17	Initial	0.3645	0.3155	0.2965	0.0713	0.3255		
	12-1-17	Zero	0.3704	0.3210	0.3025	0.0712	0.3313		
	12-5-17	4	0.3713	0.3222	0.3033	0.0713	0.3323		
			0.008%	0.011%	0.007%			0.0087%	
	12-8-17	7	0.3727	0.3237	0.3051	0.0723	0.3338		
			0.012%	0.016%	0.015%			0.0143%	
	12-12-17	11	0.3722	0.3228	0.3038	0.071	0.3329		
			0.020%	0.020%	0.015%			0.0183%	
	12-15-17	14	0.3735	0.3244	0.3052	0.0713	0.3344		
			0.030%	0.033%	0.022%			0.03%	< 0.10

effectively mitigated



Respectfully Submitted

Lea Ann Marquez PE

3-2-17





GCC of America
 Cherry Creek Plaza 1, 600 S. Cherry Street, 10th Floor, Glendale, CO 80246
 Sales (303) 739-5900 Customer Service (800) CALL GCC

MATERIAL CERTIFICATION REPORT

Plant: Pueblo
 Address: 3372 Lime Road
 Pueblo, CO 81004
 Contact: Urs Fuchs
 Phone: (719) 647-6821

Cement Type: I/II, Low Alkali, GU
 Date Issued: 10-Jul-17
 Production Period: 1-Jun-17
 To: 30-Jun-17

STANDARD REQUIREMENTS ASTM C150/AASHTO M85/ASTM C1157

CHEMICAL		
Item	ASTM C150 Spec. Limit	Test Result
SiO ₂ (%)	A	19.9
Al ₂ O ₃ (%)	6.0 max	4.6
Fe ₂ O ₃ (%)	6.0 max	3.1
CaO (%)	A	63.3
MgO (%)	6.0 max	1.0
SO ₃ (%)	3.0 max ^a	3.3
Loss On Ignition (%)	3.5 max	3.1
Na ₂ O (%)	A	0.20
K ₂ O (%)	A	0.61
Insoluble Residue (%)	1.5 max	1.0
CO ₂ (%)	A	1.7
Limestone (%)	5.0 max	4.2
CaCO ₃ in Limestone (%)	70.0 min	90
Potential Phase Composition		
C ₃ S (%)	A	56
C ₂ S (%)	A	14
C ₄ A (%)	8.0 max	7
C ₄ AF (%)	A	9

PHYSICAL			
Item	ASTM C150 Spec. Limit	ASTM C1157 Spec. Limit	Test Result
Air Content (% vol)	12 max	12 max	8
Blaine Fineness (m ² /kg)	260 min	A	401
Residue 45 μm (No.325) Sieve (%)	A	D	2.9
Autoclave Expansion (%)	0.80 max	0.80 max	0.01
Compressive Strength			
3 days, MPa (psi)	12.0 (1740) min	13.0 (1890) min	31.3 (4540)
7 days, MPa (psi)	19.0 (2760) min	20.0 (2900) min	36.8 (5330)
28 days, MPa (psi) ^f	A	28.0 (4060) min	43.8 (6350)
Time of Setting, Initial Vicat (min)	45 min / 375 max	45 min / 420 max	105
Mortar Bar Expansion C-1038 (%)	0.020 max ^g	0.020 max	0.005

ADDITIONAL DATA				
Type	Limestone	Inorganic Processing Addition	Base Phase Cement Composition	
SiO ₂ (%)	5.2	N / A	C ₂ S (%)	58
Al ₂ O ₃ (%)	1.2	N / A	C ₃ S (%)	15
Fe ₂ O ₃ (%)	0.9	N / A	C ₄ A (%)	7
CaO (%)	50.5	N / A	C ₄ AF (%)	10
SO ₃ (%)	0.1	N / A		

OPTIONAL REQUIREMENTS ASTM C150/AASHTO M85/ASTM C1157

CHEMICAL		
Item	ASTM C150 Spec. Limit	Test Result
Equivalent Alkalies (%)	0.60 max	0.60

PHYSICAL			
Item	ASTM C150 Spec. Limit	ASTM C1157 Spec. Limit	Test Result
False Set (%)	50.0 min	50.0 min	69

^a Not applicable
^b It is permissible to exceed the specification limit provided that ASTM 1038 Mortar Bar Expansion does not exceed 0.020 % at 14 days.
^c Adjusted per Annex A1.6
^d No limit specified, data reported for information purpose only.
^e Test result of prior month

GCC of America Cement is warranted to conform at the time of shipment with current ASTM C150/AASHTO M85/ASTM C1157. No other warranty is made or implied. Having no control over the use of its cements, GCC of America does not guarantee finished work. GCC is not responsible for any additives not stated in the Certificate of Compliance. GCC of America certifies that the data described above under "Processing Addition" represents the materials in the cement manufactured during the production period indicated.



July 27, 2017

GCC Pueblo I/II LA Portland Cement, Pueblo, CO

COMPLIANCE AFFIDAVIT

Portland Cement, Type I/II, Low-Alkali as manufactured by GCC, at Pueblo, Colorado is warranted to conform at the time of shipment to current ASTM Specification C-150.

No other warranty is made or to be implied.

Sincerely,

A handwritten signature in cursive script that reads "Bryan Patterson".

Bryan Patterson
Bryan Patterson
Technical Services Manager
GCC
303-739-5916

Bryan Patterson, Technical Services Manager
600 S. Cherry Street • Suite 1000
Denver, CO 80246
Email: bpatterson@gcc.com

Desk: 303-739-5916
Cell Phone: 720-413-8077
Fax: 303-739-5940
www.gccusa.com



Four Corners Materials
 Attn: Rick Morris
 PO Box 2707
 Durango, CO 81302-2707

100% AMERICAN

Product: ASTM C618 Class F, Four Corners Fly Ash
 AASHTO M295

5-19-17 POZZOLAN TEST REPORT C0#: 131214

Lot: 6452 **Results** **Specifications**

Chemical Analysis (C311 / C114 / D4326)

Silicon Dioxide, SiO ₂	62.77 %	---
Aluminum Oxide, Al ₂ O ₃	23.15 %	---
Ferric Oxide, Fe ₂ O ₃	4.03 %	---
SiO ₂ + Al ₂ O ₃ + Fe ₂ O ₃	89.95 %	70.00 Min
Calcium Oxide, CaO	1.21 %	---
Magnesium Oxide, MgO	1.20 %	---
Sulfur Trioxide, SO ₃	0.23 %	5.00 Max
Moisture Content	0.05 %	3.00 Max
Loss on Ignition	0.30 %	6.00 Max
Sodium Oxide, Na ₂ O	1.63 %	---
Potassium Oxide, K ₂ O	1.42 %	---
Total Alkalis (%Na ₂ O + 0.658% K ₂ O)	2.56 %	---
Available Alkalis as Na ₂ O Equivalent	0.81 %	---

Physical Analysis

Fineness, amount retained on		
#325 sieve, % (C430)	25.70	34.00 Max
variation, points from average	2.47	5.00 Max
Density, g/cm ³ (C188)	1.92	---
Variation from average, %	0.03	5.00 Max
Strength Activity Index		
with Portland Cement (C311 / C109)		
at 7 days, % of cement control	76.14	---
at 28 days, % of cement control	83.26	75.00 Min
Water Requirement (C311)		
% of cement control	96.69	105.00 Max
Soundness, autoclave expansion (C311 / C151)		
or contraction, %	-0.03	0.80 Max

All tests have been made in strict accordance with the current standards of the American Society for Testing and Materials covering the type of material specified.

Lee Gorby
 Lee Gorby, Quality Assurance Manager
 05 JUL 2017



PHOENIXCEMENT

- Clarkdale Cement Plant
601 N. Cement Plant Rd
Clarkdale, AZ 86324
- 19th Ave. Terminal
1802 W. Lower Buckeye Rd
Phoenix, AZ 85007
- Lower Buckeye Terminal
1941 W. Lower Buckeye Rd
Phoenix, AZ 85007
- 21st Ave. Terminal
1325 N. 21st Ave
Phoenix, AZ 85009
- 54th Ave. Terminal
5402 W. Buchanan St.
Phoenix, AZ 85043
- Dobson Storage
9595 E. McKellips Rd.
Scottsdale, AZ 85250
- Cholla Fly Ash Plant
4801 Frontage Rd
Joseph City, AZ 86032
- Four Corners Fly Ash Plant
End of County Road 6675
Fruitland, NM 87416
- San Juan Fly Ash Plant
End of County Road 6800
Waterflow, NM 87421
- Escalante Fly Ash Plant
County Road 19
Prewitt, NM 87465
- Gallup Transfer Terminal
900 N 9th St
Gallup, NM 87301
- San Diego Terminal
920 Bay Marina Dr
National City, CA 91950
- Fontana Budway Terminal
13600 Napa St
Fontana, Ca 92335
- Bakersfield Terminal
32535 7th Standard Rd
Bakersfield, CA 93314
- Stockton Terminal
1300 N Gertrude Ave.
Stockton, CA 95215
- Sacramento Terminal
4520 50th St
McClellan Park, CA 95652
- Panaca Pozzolan Plant
333 Hansen St
Panaca, NV 89042
- Denver Terminal
220 East 54th Avenue
Denver, CO 80216



100% AMERICAN

July 25, 2017

Four Corners Materials
PO Box 16
Farmington, NM 87499

PRODUCT: **Four Corners Class F Fly Ash** from Fruitland, New Mexico

This letter serves as certification that all **Four Corners Class F Fly Ash** (pozzolan) sold by Salt River Materials Group – Phoenix Cement Company to Four Corners Materials meets the requirements of the latest revision of ASTM C618 for Class F Fly Ash (pozzolan).

We appreciate your interest in our product. If we can provide additional information or technical assistance, please contact us.

Respectfully,

A handwritten signature in cursive script that reads 'Jeff Hearne'.

Jeff Hearne
Vice President of Quality Assurance

PHOENIXCEMENT

SR SALT RIVER
SAND & ROCK



We create chemistry

03 30 00	Cast-In-Place Concrete
03 40 00	Precast Concrete
03 70 00	Mass Concrete

3

MasterAir® AE 200

Air-Entraining Admixture

Formerly Micro Air*

Description

MasterAir AE 200 air-entraining admixture provides concrete with extra protection by creating air bubbles that are ultrastable, small and closely spaced – a characteristic especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired.

Even when used at a lower dosage than standard air-entraining admixtures, MasterAir AE 200 admixture meets the requirements of ASTM C 260, AASHTO M 154, and CRD-C 13.

Applications

Recommended for use in:

- ☑ Concrete exposed to cyclic freezing and thawing
- ☑ Production of high-quality normal or lightweight concrete (heavyweight concrete normally does not contain entrained air)

Features

- ☑ Ready-to-use in the proper concentration for rapid, accurate dispensing
- ☑ Greatly improved stability of air-entrainment
- ☑ Ultra stable air bubbles

Benefits

- ☑ Increased resistance to damage from cyclic freezing and thawing
- ☑ Increased resistance to scaling from deicing salts
- ☑ Improved plasticity and workability
- ☑ Improved air-void system in hardened concrete
- ☑ Improved ability to entrain and retain air in low-slump concrete, concrete containing high-carbon content fly ash, concrete using large amounts of fine materials, concrete using high-alkali cements, high-temperature concrete, and concrete with extended mixing times
- ☑ Reduced permeability – increased watertightness
- ☑ Reduced segregation and bleeding

Performance Characteristics

Concrete durability research has established that the best protection for concrete from the adverse effects of freezing and thawing cycles and deicing salts results from: proper air content in the hardened concrete, a suitable air-void system in terms of bubble size and spacing and adequate concrete strength, assuming the use of sound aggregates and proper mixing, transporting, placing, consolidation, finishing and curing techniques. MasterAir AE 200 admixture can be used to obtain adequate freezing and thawing durability in a properly proportioned concrete mixture, if standard industry practices are followed.

Air Content Determination: The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method" or ASTM C 173/C 173M, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method."

The air content of lightweight concrete should only be determined using the Volumetric Method. The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138/C 138M, "Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete." If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1.5%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.

Guidelines for Use

Dosage: There is no standard dosage for MasterAir AE 200 admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete varies because of differences in concrete making materials and ambient conditions. Typical factors that might influence the amount of air entrained include: temperature, cementitious materials, sand gradation, sand-aggregate ratio, mixture proportions, slump, means of conveying and placement, consolidation and finishing technique.

The amount of MasterAir AE 200 admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mixture, use 0.125 to 1.5 fl oz/cwt (8-98 mL/100 kg) of cement. In mixtures containing water-reducing or set-control admixtures, the amount of MasterAir AE 200 admixture needed is somewhat less than the amount required in plain concrete. Due to possible changes in the factors that can affect the dosage of MasterAir AE 200 admixture, frequent air content checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air required in the mixture at the point of placement. If an unusually high or low dosage of MasterAir AE 200 admixture is required to obtain the desired air content, consult your Local sales representative. In such cases, it may be necessary to determine that, in addition to a proper air content in the fresh concrete, a suitable air-void system is achieved in the hardened concrete.

Dispensing and Mixing: Add MasterAir AE 200 admixture to the concrete mixture using a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount. For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate or with the initial batch water. If the concrete mixture contains lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

Precaution

In a 2005 publication from the Portland Cement Association (PCA R&D Serial No. 2789), it was reported that problematic air-void clustering that can potentially lead to above normal decreases in strength was found to coincide with late additions of water to air-entrained concretes. Late additions of water include the conventional practice of holding back water during batching for addition at the jobsite. Therefore, caution should be exercised with delayed additions to air-entrained concrete. Furthermore, an air content check should be performed after post-batching addition of any other materials to an air-entrained concrete mixture.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterAir AE 200 admixture will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. No calcium chloride or other chloride-based ingredients are used in the manufacture of this admixture.

Compatibility: MasterAir AE 200 admixture may be used in combination with any BASF admixture, unless stated otherwise on the data sheet for the other product. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mixture.

Storage and Handling

Storage Temperature: MasterAir AE 200 admixture should be stored and dispensed at 35 °F (2 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If it freezes, thaw and reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life: MasterAir AE 200 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your Local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterAir AE 200 admixture has been exceeded.

Safety: MasterAir AE 200 admixture is a caustic solution. Chemical goggles and gloves are recommended when transferring or handling this material. (See SDS and/or product label for complete information.)

Packaging

MasterAir AE 200 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterAir AE 200 admixture

Additional Information

For suggested specification information or for additional product data on MasterAir AE 200 admixture, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. **BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS.** The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. **BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.**

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* Micro Air became MasterAir AE 200 under the Master Builders Solutions brand, effective January 1, 2014.

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Admixture Systems
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Canada
1870 Carleton Boulevard
Brampton, Ontario, L7 4W7
Tel: 800 387 6062 F: Fax: 905 792 0551



We create chemistry

03 30 00 Cast-in-Place Concrete

03 40 00 Precast Concrete

03 70 00 Mass Concrete

3

MasterPolyheed® 997

Mid-Range Water-Reducing Admixture

Formerly PolyHeed 997*

Description

MasterPolyheed 997 admixture is a patented multi-component, mid-range water-reducing admixture. MasterPolyheed 997 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

Applications

Recommended for use in:

- ☑ All concrete applications where superior workability, pumpability and finishability qualities are desired, in particular, flatwork, pumped concrete and pervious concrete
- ☑ Concrete containing manufactured sand and harsh concrete mixtures

Features

- ☑ True mid-range water reduction (5-15%) and excellent performance across a wide slump range, especially the difficult slump range of 5-8 in. (125-200 mm)
- ☑ Superior workability, pumpability and finishability qualities even in concrete mixtures containing low amounts of cementitious materials
- ☑ Superior finishing characteristics for residential/commercial flatwork and formed surfaces

Benefits

- ☑ Significantly reduced placement and finishing time resulting in lower in-place concrete costs
- ☑ Higher strength at all ages
- ☑ Enhanced concrete durability
- ☑ Increased service life of concrete structures

Performance Characteristics

Mixture Data: 500 lb/yd³ (295 kg/m³) of Type I cement; slump 6-7 in. (150-180 mm); 5-6% air; concrete temperature 70 °F (21 °C); ambient temperature, 70 °F (21 °C).

Setting Time Performance¹

Mixture	Initial Set (h:min)	Difference (h:min)
Reference	6:01	—
MasterPolyheed 997 admixture @		
5 fl oz/cwt (325 mL/100 kg)	6:22	+0:21
10 fl oz/cwt (650 mL/100 kg)	6:57	+0:56
15 fl oz/cwt (980 mL/100 kg)	7:31	+1:30

Compressive Strength, psi (MPa)

Mixture	7-Day	28-Day
Plain	2360 (16.3)	3320 (22.9)
MasterPolyheed 997 admixture @		
5 fl oz/cwt (325 mL/100 kg)	3060 (21.1)	3930 (27.1)
10 fl oz/cwt (650 mL/100 kg)	3740 (25.8)	4610 (31.8)
15 fl oz/cwt (980 mL/100 kg)	4620 (31.9)	5460 (37.7)

Note: The data shown are based on controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete making materials and jobsite conditions.

Guidelines for Use

Dosage: MasterPolyheed 997 admixture has a recommended dosage range of 3-15 fl oz /cwt (195-980 mL/100 kg) of cementitious material for most concrete mixes.

As the dosage of MasterPolyheed 997 admixture increases to 15 fl oz/cwt (980 mL/100 kg) of cementitious materials, normal concrete setting characteristics are maintained and early and ultimate compressive strengths increase.

BASF does not recommend the use of dosages outside the recommended range without trial testing. Consult your local sales representative for assistance in determining the dosage for optimum performance.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterPolyheed 997 admixture will neither initiate nor promote corrosion of reinforcing or prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. MasterPolyheed 997 admixture does not contain intentionally added calcium chloride or other chloride-based ingredients.

Compatibility: MasterPolyheed 997 admixture may be used in combination with any BASF admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

Storage and Handling

Storage Temperature: If MasterPolyheed 997 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

Shelf Life: MasterPolyheed 997 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterPolyheed 997 admixture has been exceeded.

Packaging

MasterPolyheed 997 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterPolyheed 997 admixture

Additional Information

For additional information on MasterPolyheed 997 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

* Polyheed 997 became MasterPolyheed 997 under the Master Builders Solutions brand, effective January 1, 2014.

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BASF Corporation
Admixture Systems
www.master-builders-solutions.basf.us

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Canada
1800 Clark Boulevard
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Tel: 800.387.5802 • Fax: 905.782.0861



We create chemistry

3	03 30 00	Cast-in-Place Concrete
	03 40 00	Precast Concrete
	03 70 00	Mass Concrete
4	04 05 16	Masonry Grouting

MasterGlenium® 7500

Full-Range Water-Reducing Admixture

Formerly GLENIUM 7500*

Description

MasterGlenium 7500 full-range water-reducing admixture is very effective in producing concrete mixtures with different levels of workability including applications that require self-consolidating concrete (SCC). MasterGlenium 7500 admixture meets ASTM C 494/C 494M compliance requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

Applications

Recommended for use in:

- ☐ Concrete with varying water reduction requirements (5-40%)
- ☐ Concrete where control of workability and setting time is critical
- ☐ Concrete where high flowability, increased stability, high-early and ultimate strengths, and improved durability are needed
- ☐ Producing self-consolidating concrete (SCC)
- ☐ Strength-on-demand concrete, such as 4x4™ Concrete
- ☐ Pervious concrete

Features

MasterGlenium 7500 full-range water-reducing admixture is based on the next generation of polycarboxylate technology found in all of the MasterGlenium 7000 series products. This technology combines state-of-the-art molecular engineering with a precise understanding of regional cements to provide specific and exceptional value to all phases of the concrete construction process.

- ☐ Dosage flexibility for normal, mid-range and high-range applications
- ☐ Excellent early strength development
- ☐ Controls setting characteristics
- ☐ Optimizes slump retention/setting relationship
- ☐ Consistent air entrainment

Benefits

- ☐ Faster turnover of forms due to accelerated early strength development
- ☐ Reduces finishing labor costs due to optimized set times
- ☐ Use in fast track construction
- ☐ Minimizes the need for slump adjustments at the jobsite
- ☐ Less jobsite QC support required
- ☐ Fewer rejected loads
- ☐ Optimizes concrete mixture costs

Performance Characteristics

Concrete produced with MasterGlenium 7500 admixture achieves significantly higher early age strength than first generation polycarboxylate high-range water-reducing admixtures. MasterGlenium 7500 admixture also strikes the perfect balance between workability retention and setting characteristics in order to provide efficiency in placing and finishing concrete. The dosage flexibility of MasterGlenium 7500 allows it to be used as a normal, mid-range, and high-range water reducer.

MASTER®
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SOLUTIONS

Guidelines for Use

Dosage: MasterGlenium 7500 admixture has a recommended dosage range of 2-15 fl oz/cwt (130-975 mL/100 kg) of cementitious materials. For most mid- to high-range applications, dosages in the range of 5-8 fl oz/cwt (325-520 mL/100 kg) will provide excellent performance. For high performance and producing self-consolidating concrete mixtures, dosages of up to 12 fl oz/cwt (780 mL/100 kg) of cementitious materials can be utilized. Because of variations in concrete materials, jobsite conditions and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local sales representative.

Mixing: MasterGlenium 7500 admixture can be added with the initial batch water or as a delayed addition. However, optimum water reduction is generally obtained with a delayed addition.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterGlenium 7500 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressing steel or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterGlenium 7500 admixture.

Compatibility: MasterGlenium 7500 admixture is compatible with most admixtures used in the production of quality concrete, including normal, mid-range and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

Do not use MasterGlenium 7500 admixture with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced.

Storage and Handling

Storage Temperature: MasterGlenium 7500 admixture must be stored at temperatures above 40 °F (5 °C). If MasterGlenium 7500 admixture freezes, thaw and reconstitute by mechanical agitation.

Shelf Life: MasterGlenium 7500 admixture has a minimum shelf life of 9 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterGlenium 7500 admixture has been exceeded.

Packaging

MasterGlenium 7500 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterGlenium 7500 admixture

Additional Information

For additional information on MasterGlenium 7500 admixture or on its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. **BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS.** The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. **BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.**

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.



* GLENIUM 7500 became MasterGlenium 7500 under the Master Builders Solutions brand, effective January 1, 2014

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BASF Corporation
Admixture Systems
www.master-builders-solutions.basf.us

United States
23700 Chagrin Boulevard
Cleveland, Ohio 44122-5591
Tel: 800-828-9990 U Fax: 216-839-8821

Canada
1800 Clark Boulevard
Brampton, Ontario L6T 4K7
Tel: 877-387-5562 U Fax: 905-762-0881

Certificate of Contractor's Compliance for APL/QML Selection



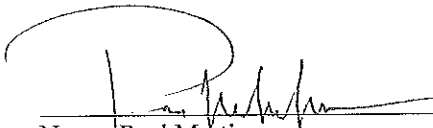
Date: 01-16-2018
CDOT Contract ID: STE C480-008
CDOT Project Number: 19219
CDOT Project Location: Archuleta, County

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specifications for Road and Bridge Construction, and the 2017 Field Materials Manual.

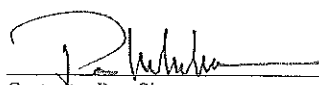
**Four Corners Materials Class BZ
 Supplier Mix ID: 36923344
 CDOT Mix Number: 2017173
 Material List**

QML Part/Sub Part:	701.01.01.00	701.02.02.00	711.02.01.00	711.02.01.00
APL Category:	Concrete	Concrete	Concrete	Concrete
APL Sub Category:	Cement	Pozzolan	Admixture	Admixture
APL Base Category:	Portland Cement	Fly Ash, Class F	Water Reducing, High Range	Water Reducing & Retarding
APL Reference Number:	2949-16	2302-16	2914-14	2083-14
Product Name:	Pueblo Plant, Type I-II, LA	Four Corners Class F Fly Ash	BASF MasterGlenium 7500	MasterSet DELVO
Manufacturer:	GCC of America [Pueblo]	SRMG APS Four Corners Power Plant, Four Corners Fly Ash Facility	BASF Corporation	BASF Corporation
Date of Website Review & Selection:	1/16/2018	1/16/2018	1/16/2018	1/16/2018

Crossfire, LLC.


 Name: Paul Martin
 Title: Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 34 each (quantity and units) of pay item 613-40012 Light Standard Edm. (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


 Contractor Rep. Signature

01/26/18
 Date

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2949-16
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 701.01.01.00 Material code description full name: Cement, Portland
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PART 1

Product name: Pueblo Plant, Type I/II, Low Alkali	Product category: Concrete\Cement\Portland Cement [ASTM C 150]
Product Representative (name & address): Attn: Bryan Patterson GCC of America 600 S Cherry St, Suite 1000 Glendale, CO 80246 Phone: (303) 739-5900 E-mail: bpatterson@gcc.com	Manufacturer (name & address): Attn: Joe Finnegan GCC of America 3372 Lime Road Pueblo, CO 81004 Phone: (303) 739-5900 E-mail: jfinnegan@gcc.com
Web-site address: www.gccusa.com	Web-site address: www.gccusa.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

Pueblo Plant, Type I/II, Low Alkali is a Hydraulic, low alkali (<0.60%) cement conforming to the requirement specified in ASTM C-150 for Type I/II cement. This cement meets the optional sulfate resistance of ASTM C-150 Table 4, "Optional Physical Requirements" with an expansion of less than 0.04% when tested in accordance with ASTM C-452. Other than being a low alkali portland cement and meeting the optional sulfate resistance criteria, there is no product differentiation.

Restrictions, (installation and/or use):
 Provide adequate protection from extreme conditions.

Use of the product, (be specific to CDOT highway activities only):
 General use cement for all cement concrete and paving applications.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):
 A portland cement manufactured in Colorado, meeting low alkali and optional sulfate resistance requirements and competitively priced.

- Specifications:** (listing those applicable is required)
- CDOT : Standard Specifications, Section 701.01
 - ASTM : C-150
 - AASHTO: M85
 - FHWA :
 - other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report (CTR)** provided to validate all claims.

- NTPEP-AASHTO:
- FHWA :
- other : CTL Group (April 23, 2015 - ASTM C-452)
- other : GCC of America, Internal Material Certification Reports (February 15, 2015 - January 15, 2016)
- other :

State DOT Approvals, (current documentation required): IA, MN, NM, OK, TX Re-submittal Cycle: 4 years

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:
 Additional Comments:
 N/A

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2302-16
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 701.02.02.00 <hr/> Material code description full name: Fly Ash, Class F
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PART 1

Product name: Four Corners Class F Fly Ash	Product category: Concrete\Pozzolan\Fly Ash, Class F
Product Representative (name & address): Attn: Jeff Hearne, Vice President of Quality Assurance Salt River Materials Group 8800 East Chaparral Road Suite 155 Scottsdale, Arizona 85250 Phone: (480) 850-5757 E-mail: jhearne@srmaterials.com	Manufacturer (name & address): Attn: APS Four Corners Power Plant Four Corners Fly Ash Facility End of County Road #6675 / P.O. Box 1007 Fruiland, New Mexico 87416 Phone: (505) 598-8557 E-mail:
Web-site address: www.srmaterials.com	Web-site address:

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 Four Corners Fly Ash is a by-product from the burning of pulverized coal to produce electricity at the APS Power Plant in Fruiland, New Mexico.

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):
 Used in Portland cement concrete and concrete products. It is also used in soil cement bases, subgrade stabilization, and asphalt.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):
 It is an effective means of providing improved concrete properties such as mitigation of alkali aggregate reactivity, improved long term durability, improved strengths, improved sulfate resistance and reduced permeability.

Specifications: (listing those applicable is required)

CDOT : Standard Specification 701.2
 ASTM : C618
 AASHTO : M295
 FHWA :
 other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) Certified Test Report (CTR) provided to validate all claims.

NTPEP-AASHTO:
 FHWA :
 other : CTR - Phoenix Cement - Salt River Materials Group AAP(CCRL/AMRL) accredited laboratory (7-19-2016)
 other :
 other :

State DOT Approvals, (current documentation required): AZ, CA, NM, TX **Re-submittal Cycle:** 4 years
Sample submitted: yes no n/a **Safety Data Sheets (SDS):** yes no n/a

Alternate Product Category:
Additional Comments:

**COLORADO DEPARTMENT OF TRANSPORTATION
PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY**

APL Reference No.
2914-14

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 711.02.01.00
	Material code description full name: Concrete, Admixture

PART 1

Product name: MasterGlenium 7500 (previously: Glenium 7500)	Product category: Concrete\Admixture\Water-Reducing\Water-Reducing, High Range
Product representative (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554	Manufacturer (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554
Phone: (216) 839-7072 FAX: (216) 839-8821	Phone: (216) 839-7072 FAX: (216) 839-8821
Web-site address: www.masterbuilders.com	Web-site address: www.masterbuilders.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
MasterGlenium 7500 is a ready-to-use full-range water-reducing admixture based on polycarboxylate technology. It is very effective in producing concrete with different levels of workability including applications that require Self-Consolidating Concrete (SCC), 4 x 4 Concrete, and Pervious Concrete. Meets the provisional qualification of ASTM C 494 (AASHTO M 194) Type A, water-reducing and Type F, water-reducing, high-range admixtures based on the 6 month compressive strength criteria established in ASTM C494-05.

New product name became effective January 15, 2014. There is absolutely no change to the formulation of the product.

Restrictions, (installation and/or use):
Do not use in combination with naphthalene based water-reducing admixtures.

Use of the product, (be specific to CDOT highway activities only):
Recommended for use in ready-mix applications and precast concrete structures where it provides optimum slump retention and consistent air entrainment.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):
Reduced water content for a given slump. Dosage flexibility for normal, mid and high-range water reduction. Excellent strength development leads to faster turnover of forms. Controlled setting characteristics reduces finishing labor costs. Optimum slump retention minimizes the need for slump adjustments at the job site. Consistent air entrainment results in fewer rejected loads.

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

- CDOT : Standard Specifications 711.03
- ASTM : C 494, Type A & Type F
- AASHTO : M 194, Type A & Type F
- FHWA :
- other : CRD-C 87

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

- NTPEP-AASHTO : CADD(2007)-08-11 (submitted Fall 2007)
- FHWA :
- other : TEC Services (October 20, 2011) (November 16, 2011)
- other :

State DOT Approvals, (current documentation required):

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments
A sample can be provided upon request at no cost. Technical data sheets outline specific dosage information.
APPROVED BY 40 OTHER STATE DOTs.
Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-3849

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2083-14
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Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 711.02.01.00 Material code description full name: Concrete, Admixture
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PART 1

Product name: MasterSet DELVO (previously: Delvo Stabilizer)	Product category: Concrete\Admixture\Water-Reducing & Retarding
Product representative (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554	Manufacturer (name & address): Attn: Mark Piechuta BASF Corporation 23700 Chagrin Blvd. Cleveland, OH 44122-5554
Phone: (216) 839-7072 FAX: (216) 839-8821	Phone: (216) 839-7072 FAX: (216) 839-8821
Web-site address: www.masterbuilders.com	Web-site address: www.masterbuilders.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 MasterSet DELVO ready-to-use, liquid admixture is used for making more uniform and predictable high-performance concrete. MasterSet DELVO admixture retards setting time by controlling the hydration of portland cement and other cementitious materials while facilitating placing and finishing operations. It can be used to stabilize returned plastic concrete and concrete washwater to reduce waste. MasterSet DELVO admixture meets ASTM C 494/C 494M requirements for Type B, retarding, and Type D, water-reducing and retarding, admixtures.

New product name became effective January 15, 2014. There is absolutely no change to the formulation of the product.

Restrictions, (installation and/or use):
 none known

Use of the product, (be specific to CDOT highway activities only):
 4x4™ Concrete, Pumped concrete, shotcrete (wet mix) and conventionally-placed concrete.

- Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):**
1. Provides flexibility in the scheduling of placing and finishing operations.
 2. Offsets the effects of slump loss during extended delays between mixing and placing.
 3. Reduces waste associated with concrete washwater and returned concrete.

- Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):**
- CDOT : Standard Specifications 711.03
 - ASTM : C 494, Type B & Type D
 - AASHTO : M 194, Type B & Type D
 - FHWA :
 - other :

- Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):**
- NTPEP-AASHTO : CADD (2008) -18
 - FHWA :
 - other : TEC Services (August 25, 2011) (Interim Report - December 10, 2014)
 - other :

State DOT Approvals, (current documentation required):

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments
 A sample can be provided upon request at no cost. Technical data sheets are included which outline specific dosage information.
 APPROVED BY 39 OTHER STATE DOT's.
 Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-3849

#48

FIELD SHEET NO. 120596

COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL		Project No. STE 480-008	Project code (SA#) 19219	Proj. location PC to AVP SUP
<input checked="" type="checkbox"/> English <input type="checkbox"/> Metric		Date 8-31-17	Region 5	Resident Engineer ROBERT SHANKS
Ready Mix Supplier: FCM/PAGOSA	Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35520053	Station 29-31+14/30-32+40 31-32+36/33-34+31	CDOT Mix # 2017173	
Item & Description 613 LIGHT BASE				

Slump 5 1/2 inches (mm)	Entrained air 1.9 %	Unit weight 147.6 lbs/ft³ (kg/m³)
Cylinders for design adequacy	Date molded 8-31-17	Time 2:20
Cylinders for structural strength information	Date molded	Time
Mark Cylinders as indicated	Cured hrs. 24	Days in molds 1
	Days in molds	Days at structure site
	Days at structure site	Shipped to <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab

Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results			
Specimen Identification 1	BZ	7	9-7-17	2	Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification 1	BZ	28	9-28-17	3	7	4.03	70140	5480
Specimen Identification					7	4.03	69000	5390
Required strength (PSI/MPa) 4000	QA/QC specification (broke @ 28 days)	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			28	4.03	44300	7360
Specimen type: <input checked="" type="checkbox"/> 4 x 8 cylinder <input type="checkbox"/> Beam <input type="checkbox"/> Splitting <input type="checkbox"/> Cube	Tensile:				28	4.03	40800	7090
<input type="checkbox"/> 6 x 12 cylinder					28	4.03	86120	6880
Quantity represented cubic yards/meters	Previous 100	This placement 0	To date 100					

Field Comments: w/cm = 0.46 RY = 1.00	Lab comments: Lab # 4887
AMOI T=7.50 V=0.249 W=44.25	
concrete red 007 cure box = 72°-80°	

I.A.T./Remarks:

Cast by: ERIC HOWES	Transported by: (Name/Title/Company) ERIC HOWES / TESTER / TRAUTNER	Phone number 970-749-4241	FAX number golentem@trautner.com
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL		Project No. STE 480 - 008	Project code (SA#) 19219	Proj. location PC to AVP SOP
		Date 9-6-17	Region 5	Resident Engineer ROBERT SHANKS
<input checked="" type="checkbox"/> English <input type="checkbox"/> Metric		Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35520064	Station 27=29+51/25+27+39 24=28+41 23=25+45	CDOT Mix # 2017173
Ready Mix Supplier: FCM/PAGOSA		Item & Description 613 LIGHT BASE		

Slump 8 1/4 inches (mm)	Entrained air 1.7 %	Unit weight 146.6 lbs/ft ³ (kg/m ³)
Cylinders for design adequacy	Date molded 9-6-17	Time 3:40 pm
	Cured hrs. 24	Days in molds 1
Cylinders for structural strength information	Date molded	Time
	Cured hrs.	Days in molds
	Days at structure site	Shipped to
	<input type="checkbox"/> Damp sand	<input type="checkbox"/> Central lab
	<input checked="" type="checkbox"/> Water	<input type="checkbox"/> Region lab
	at Temp. 73 °F (°C)	

Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results			
Specimen Identification						Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
	2	BZ	7	9-13-17	2	7	4.03	60710	4740
	2	BZ	28	10-4-17	3	7	4.03	58740	4590
Required strength (PSI/MPa)	4000 PSI <i>KL</i>		QA/QC specification (broke @ 28 days)		<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	28	4.03	79970	6240
Specimen type:	<input checked="" type="checkbox"/> 4 x 8 cylinder <input type="checkbox"/> Beam <input type="checkbox"/> Splitting <input type="checkbox"/> Cube <input type="checkbox"/> 6 x 12 cylinder Tensile:								
Quantity represented cubic yards/meters	Previous 100	This placement 100 <i>KL</i>	To date 200						
									3
									4
									4
									4

Field Comments: w/cm = 0.45 RY = 1.01 Red OAT	Lab comments: LAB#4907
AM 01 T=7.50 V=0.249 W=44.00	
cure box 64-72°	

I.A.T./Remarks:

Cast by: ERIC HOWES	Transported by: (Name/Title/Company) ERIC HOWES / QA TESTER / TRANTECH GEOTECH	Phone number	FAX number
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL <input checked="" type="checkbox"/> English <input type="checkbox"/> Metric		Project No. STE 480-008	Project code (SA#) 19219	Proj. location PC-40 AVP SUP
		Date 9-11-17	Region 5	Resident Engineer ROBERT SHANKS
Ready Mix Supplier: FCM/PAGOSA	Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35520083	Station 20-21+64/21-22+61 22-23+53/22-30+48 34-36+57	CDOT Mix # 20171731	Item & Description 613 LIGHT BASES

Slump 7" inches (mm)	Entrained air 2.1 %	Unit weight 147.2 lbs/ft ³ (kg/m ³)
Cylinders for design adequacy	Date molded 9-11-17	Time 9:30
Cylinders for structural strength information	Date molded	Time
	Cured hrs. 24	Days in molds 1
	Days in molds	Days in <input type="checkbox"/> Damp sand <input checked="" type="checkbox"/> Water
	Days at structure site	Shipped to <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab
		at Temp. 74 °F (°C)

Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results			
Specimen Identification	3	BZ	7	9-18-17	2	Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	3	BZ	28	10-9-17	3	7	4.03	67540	5270 ⁴
Specimen Identification						7	4.03	68370	5340 ⁴
Required strength (PSI/MPa) 4000 ^{ksi}	QA/QC specification (broke @ 28 days) <input type="checkbox"/> yes <input checked="" type="checkbox"/> no					28	4.03	86750	6770 ⁴
Specimen type: <input checked="" type="checkbox"/> 4 x 8 cylinder <input type="checkbox"/> Beam <input type="checkbox"/> Splitting <input type="checkbox"/> Cube						28	4.03	86640	6760 ⁴
<input type="checkbox"/> 6 x 12 cylinder						28	4.03	90670	7080 ⁴
Quantity represented cubic yards/meters	Previous 200	This placement 100	To date 300						

Field Comments: w/cm = 0.46 RY = 1.02	Lab comments: LAB # 4923
AMOI T = 7.50 V = 0.249 W = 44.5	
2.5 gallons of super	
cure box temp 72°-78°	

I.A.T./Remarks:

Cast by: ERIK HOWES	Transported by: (Name/Title/Company) ERIK HOWES / QA TESTER / TRANINER GEOTECH	Phone number	FAX number
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL <input checked="" type="checkbox"/> English <input type="checkbox"/> Metric		Project No. STE 480-008	Project code (SA#) 19219	Proj. location PC to AVE SUP
		Date 9-12-17	Region 5	Resident Engineer ROBERT SHANKS
Ready Mix Supplier: FCM/PAGOSA	Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35520091	Station LA 19, 18, 17, 16, 15	Item & Description 613 LIGHT BASES	

Slump 9 inches (mm)	Entrained air 2.0 %	Unit weight 146.4 lbs/ft ³ (kg/m ³)
Cylinders for design adequacy	Date molded 9-12-17	Time 12:30
Cylinders for structural strength information	Date molded	Time
	Cured hrs. 24	Days in molds 1-27
		Days in molds
		Days at structure site
		Shipped to
		<input type="checkbox"/> Central lab <input type="checkbox"/> Region lab
		at Temp. 74 °F (°C)

Mark Cylinders as indicated						Laboratory test results			
Specimen Identification	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	4	BZ	7	9-19-17	2	7	4.03	59010	4610 ⁴
Specimen Identification	4	BZ	28	10-10-17	3	7	4.03	60700	4740 ⁴
Specimen Identification						25	4.03	83300	6500 ⁵
Specimen Identification						25	4.03	83690	6530 ⁴
Specimen Identification						28	4.03	83100	6487 ⁵

Required strength (PSI/MPa) 4500 PSI / 31.2 MPa QA/QC specification (broke @ 28 days) yes no

Specimen type: 4 x 8 cylinder Beam Splitting Cube
 6 x 12 cylinder Tensile:

Quantity represented cubic yards/meters	Previous 300	This placement 100	To date 400
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Field Comments: $w/c = 0.46$ $R_y = 1.02$ $A_{M01} T = 7.50$ $V = 0.249$ $W = 43.95$ 2 gal. super CURE BOX - code - 101- ⁰³¹ 77F	Lab comments: LAB # 4928
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I.A.T./Remarks:

Cast by: ERIC HOWES	Transported by: (Name/Title/Company)	Phone number	FAX number
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL <input checked="" type="checkbox"/> English <input type="checkbox"/> Metric	Project No. STE-480-008	Project code (SA#) 19219	Proj. location PC TO AVE SUP
	Date 9-14-17	Region 5	Resident Engineer ROBERT SHANKS
Ready Mix Supplier: FCM/PACOSA	Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35520099		CDOT Mix # 20171731
	Station 63-14, 12, 11, 8, 7	Item & Description 613 LIGHT BASES	

Slump 10 inches (mm)	Entrained air 1.0 %	Unit weight 152.0 lbs/ft ³ (kg/m ³)	
Cylinders for design adequacy	Date molded 9-14-17	Time 2:30	Cured hrs. 24
Cylinders for structural strength information	Date molded	Time	Cured hrs.
		Days in molds 1	Days in <input type="checkbox"/> Damp sand <input checked="" type="checkbox"/> Water
		Days at structure site	Shipped to <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab
		at Temp. 74 °F (°C)	

Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results			
						Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	5	BZ	7	9-21	2				
Specimen Identification	5	BZ	28	10-12	28	7	4.03	66240	5170
Specimen Identification						7	4.03	64290	3020
Required strength (PSI/MPa) 4000 PSI R	QA/QC specification (broke @ 28 days) <input type="checkbox"/> yes <input checked="" type="checkbox"/> no					28	4.03	88480	6710
Specimen type: <input checked="" type="checkbox"/> 4 x 8 cylinder <input type="checkbox"/> Beam <input type="checkbox"/> Splitting <input type="checkbox"/> Cube <input type="checkbox"/> 6 x 12 cylinder Tensile:						28	4.03	85780	6700
						28	4.03	85110	6640
Quantity represented cubic yards/meters	Previous 400	This placement 100	To date 500						

Field Comments: w/cm = 0.45 RY = 0.97 AM01 T = 7.50 V = 0.249 W = 45.35 2.75 gallons of super added green 002	Lab comments: 4952 #7950 54749ml TRAVNER GEOFFER LAB NO. 4 PROJECT NO.
--	---

I.A.T./Remarks:

Cast by: ERIC HOWES	Transported by: (Name/Title/Company) ERIC HOWES / QA TESTER / TRAVNER GEOFFER	Phone number	FAX number
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COLORADO DEPARTMENT OF TRANSPORTATION
CONCRETE SPECIMEN TRANSMITTAL

English Metric

Contract ID: 19219 Region: 5 Field Sheet #: 108958-
 Project No.: STE 480-008 Date Submitted: 9-22-17
 Ready Mix Supplier: FCM/PAGOSA Suppliers ticket #: 35520124
 Project Location: PC to AVE 50P Item & Description: 613 light Bases
 Station: LB 4, 5, 6, 9, 10, L Resident Engineer: ROBERT SHANKS CDOT Mix #: 2017173

Slump: 2 3/4 inches (mm) Entrained air: 1.9 % Unit weight: 148.0 lbs/ft³ (kg/m³) Yield: 1.00 Concrete temperature: 78 °F (°C)

Cylinders for design adequacy: Date molded: 9-22-17 Time: 10:50 AM Cured hrs.: 24 Days in molds: 27 Days in Damp sand at Temp. 74 °F (°C)
 Water

Cylinders for structural strength information: Date molded: Time: Cured hrs.: Days in molds: Days at structure site: Shipped to: Central lab Region lab

Mark Cylinders as indicated						Laboratory test results				
Sample ID	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Age	Diameter (beam - H x W)	Total load	PSI/MPa	Break Type
	6	BZ	7	9-29	2					
	6	BZ	28	10-20	3	7	4.03	77460	6050	5
						7	11	77539	6050	5
						28	4.03	96210	7510	5
						28	4.03	94760	7400	4
						28	4.03	94990	7420	4

Specified strength (PSI/MPa): 4500 PSI QA/QC specification (broke @ 28 days) yes no

Specimen type: 4 x 8 cylinder Beam Splitting Cube
 6 x 12 cylinder Core Tensile

Quantity represented cubic yards/meters: Previous: 500 This placement: 100 To date: 600

Field Comments: W/CM RATIO = 0.45 Lab comments: TRAUTNER = #41980
 AM 01 T=7.50 V=0.249 W=446.35 GEOTECH LAB NO
 Cure box temp = 64-70°F

I.A.T./Remarks:

Cast by: (print name) ERIC HOWES Title: Tester Transported by: (Name/Title/Company) Eric Howes / Tester / Trautner Phone number: 970-749-4241 E-mail address: gcbenton@trautnergeotech.com

**COLORADO DEPARTMENT OF TRANSPORTATION
CONCRETE SPECIMEN TRANSMITTAL**

English Metric

Contract ID: 19219 Region: 5 Field Sheet #: 165859-

Project No.: STE 480-008 Date Submitted: 9-25-17

Ready Mix Supplier: FCM/Payosa Suppliers ticket #: 35520130

Project Location: PC to Ave Sup Item & Description: 613 - light Bases

Station: LB-1,2,3 Resident Engineer: Robert Shanks CDOT Mix #: 2017173

Slump: 7 3/4 inches (mm) Entrained air: 2.1 % Unit weight: 140.4 lbs/ft³ (kg/m³) Yield: 1.01 Concrete temperature: 74 °F (°C)

Cylinders for design adequacy: Date molded: 9-25-17 Time: 4:30 Cured hrs.: 24 Days in molds: 1 Days in: 27 Damp sand Water at Temp.: 74 °F (°C)

Cylinders for structural strength information: Date molded: Time: Cured hrs.: Days in molds: Days at structure site: Shipped to: Central lab Region lab

Mark Cylinders as indicated						Laboratory test results				
Sample ID	Set no.	Conc. class	Days cured	Break date	No. of cylinders	Age	Diameter (beam - H x W)	Total load	PSI/MPa	Break Type
	7	BZ	7	10-2	2					
	7	BZ	28	10-23	3	7	8" x 4 1/2"	59690	4660	4
						7	4.03	61140	5010	4

Specified strength (PSI/MPa): 4000 psi QA/QC specification (broke @ 28 days) yes no

Specimen type: 4 x 8 cylinder Beam Splitting Cube
 6 x 12 cylinder Core Tensile

Quantity represented cubic yards/meters	Previous	This placement	To date
	600	100	700

Field Comments: w/cm = 0.45
AM01 T=7.60 V=0.249 W=43.95
CURE BOX - red 112-78 F

Lab comments: #4992 54748 mt
(TRAUTNER GEOTECH LAB NO.)

I.A.T./Remarks:

Cast by: (print name) Eric Howes Title: Tester Transported by: (Name/Title/Company) ERIC HOWES TRAUTNER GEOTECH Phone number: 970-259-5095 E-mail address:

Concrete Mix Design Report

Concrete Supplier: Four Corners CDOT Mix Number : 2017173
 Supplier Mix ID : 36923344 Item 601 Class BZ Concrete
 Field Compressive Strength: 4000 psi Class 2 Sulfate Resistance and lower*
 *Class 3 Sulfate resistance requires a w/cm ratio ≤0.40

Concrete Mix Proportions (SSD Batch Weights for 1 Cubic Yard)

Cement:	490	Pounds	GCC (Pueblo) Type I/II Cement
Fly Ash:	125	Pounds	SRMG (Four Corners) Class F Fly Ash
Silica Fume		Pounds	
Coarse Aggregate 1	1798	Pounds	4Corners - Animas Glacier Pit; #67
Coarse Aggregate 2		Pounds	
Coarse Aggregate 3		Pounds	
Fine Aggregate	1302	Pounds	4Corners - Animas Glacier Pit
Admixture	66.0	Ounces	BASF - MasterGlenium 7500
Admixture		Ounces	
Admixture		Ounces	
Admixture		Ounces	
Water	275	Pounds	

Trial Batch Properties

Unit Weight :	146.9	PCF	7-Day Compressive Strength :	6470	psi
W / Cm Ratio :	0.45		14-Day Compressive Strength :	7145	psi
Slump :	8.00	Inches	28-Day Compressive Strength :	7340	psi
Air Content :	2.40	%	56-Day Compressive Strength :		psi
Relative Yield :	1.01		7-Day Flexural Strength :		psi
			28-Day Flexural Strength :		psi

Aggregate Test Results

	Specific Gravity (SSD)	Absorption
Coarse Aggregate 1 :	2.66	1.2 %
Coarse Aggregate 2 :		%
Coarse Aggregate 3 :		%
Fine Aggregate :	2.66	1.3 %

Comments:

Reviewed by: Val Niculae

Review date: 7/31/2017

Please contact CDOT Concrete and Physical Properties Lab at 303-398-6549 with any questions.

placement date	Item No.	placement location	QA No.	CDOT Form 82	Lab no. / truck #	concrete temp. (°F)	slump (in.)	air content (%)	unit weight (pcf)	Cal'd W/C ratio	cal'd yield	field cures (psi)	avg. 7 day break (psi)	avg. 28 day breaks (psi)	Ticket No.
8/31/2017	613	light standard foundations: No. 29, 30, 31, 32, 33	1BZ	120596	4887/truck #1	89	*5.5	1.9	147.6	0.46	1.00		5440	7110	35520053
9/6/2017	613	light standard foundations: No. 27, 26, 25, 24, 23	2BZ	120597	4907/truck #1	88	*8.25	1.7	146.6	0.45	1.01		4670	6170	35520064
9/11/2017	613	light standard foundations: No. 20, 21, 22, 28, 34	3BZ	120598	4923/truck #1	81	*7.0	2.1	147.2	0.46	1.02		5310	6870	35520083
9/12/2017	613	light standard foundations: No. 19, 18, 17, 16, 15	4BZ	120599	4928/truck #1	84	*9.0	2.0	146.4	0.46	1.02		4680	6510	35520091
9/14/2017	613	light standard foundations: No. 14, 12, 11, 8, 7	5BZ	120600	4952/truck #1	79	*10.0	1.0	152.0	0.45	0.97		5100	6750	35520099
9/22/2017	613	light standard foundations: No. 4, 5, 6, 9, 10, 13	6BZ	165958	4980/truck #1	78	*2.75	1.9	148.0	0.45	1.00		6050	7440	35520124
9/25/2017	613	light standard foundations: No. 1, 2, 3	7BZ	165959	4992/truck #1	74	*7.75	2.1	146.4	0.45	1.01		4840	6440	35520130
		SEE FORM 473													
		*high range water reducer added to the batch													

TRAUTNER

note: this spreadsheet displays the pertinent data from the concrete tested in general accordance with ASTM procedures. Additional information is available upon request for compressive strength results per ASTM C 39.

STE 480-008

19219

right base 29.31/4
30.32+40
31.33+36
32.34+21
33.35+28

FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

813-410

BATCH PLANT: 970-731-5194

P.O. BOX 1969

FAX: 970-731-5197

BAYFIELD, CO 81122

No. 053355

AMOI T=7.50 V=0.249 W=44.25 UW=147.6

TEST RESULTS

SLUMP 5 1/2

CONC. TEMP. 89 AIR % 1.9

CYLINDERS TAKEN 5 YES NO

TESTED BY ERIC HOWE S

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: *[Signature]*

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

LEAVE PLANT
ARRIVE JOB
FINISH POURING
LEAVE JOB
ARRIVE PLANT
TICKET

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
-------------	-------------	------	------	------	--------

WORLD TO	DELIVER TO	DRIVER
	G-O	

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
				CONC MIX TO: 2017173			

TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL STATE TAX COUNTY TAX CITY TAX TOTAL
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER RETARDER	
			%	%	

DELIVERY INSTRUCTIONS

SPECIAL INSTRUCTIONS

TEAR HERE

No. 053355

456
w/can = 6.467
Ry = 1.00

2 gal super

STE 480-208

19219

Truck 1 of 1 Sta. 21=29+51 24=26+41
25=27+39 23=25+41.5
26=28+36



FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA 613 Light Base

BATCH PLANT: 970-731-5194

P.O. BOX 1969

FAX: 970-731-5197

BAYFIELD, CO 81122

No. 053368

AMCI T=7.50 V=0.249 W=44.00 CW=146.6

TEST RESULTS
SLUMP 8 1/4

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

LEAVE PLANT
8:40

CONC. TEMP. 88 AIR % 1.7

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

ARRIVE JOB
8:52

CYLINDERS TAKEN 5 YES NO

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

FINISH POURING

TESTED BY
Eric Howes

LEAVE JOB

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: _____
CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

ARRIVE PLANT

CUSTOMER ID P.O. NUMBER ZONE TIME DATE TICKET

SOLD TO _____ DELIVER TO _____ DRIVER _____

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK					SUB TOTAL		
PLANT					STATE TAX		
SLUMP					COUNTY TAX		
DUE AT JOB					CITY TAX		
USE OF CONCRETE					TOTAL		
COEL							
AIR ENTRAIN							
SUPER PLAS.							
CAL. CHLORIDE							
HOT WATER							
RETARDER							

DELIVERY INSTRUCTIONS

SPECIAL INSTRUCTIONS

TEAR HERE

No. 053368

W/CAM = 0.452
R/C = 101

2 1/2 gallons Super

STE 480-008

19219

TRUCK 1 OF 1

STA 80-21164/21-22+61/22-23+53

28-30+48/34-38+21

FOUR CORNERS MATERIALS

DELIVERY INVOICE

PAGOSA

613 LIGHT BASE'S

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053388

AMOI T: 7.50 V=0.219 W=44.15 UW=147.2

TEST RESULTS
SLUMP 7"
CONC. TEMP. 81 AIR % 2.1
CYLINDERS TAKEN 5 YES NO

TESTED BY
ERIC HOWES

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

LEAVE PLANT
ARRIVE JOB
FINISH POURING
LEAVE JOB
ARRIVE PLANT

WATER ADDED AT CUSTOMER'S REQUEST 0 GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
SOLD TO			DELIVER TO		DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL		
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER RETARDER	STATE TAX		
DELIVERY INSTRUCTIONS						COUNTY TAX	
SPECIAL INSTRUCTIONS						CITY TAX	
						TOTAL	

TEAR HERE

No. 053388

W/SLUMP = 0.46
RW = 1.02

2 1/2 gallons of Super added

1474
4
2007
2007

STE 480-008

19219

TRUCK 1051

LB, 19, 18, 17, 16, 15



FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

613 LIGHT BASES

BATCH PLANT: 970-731-5194

P.O. BOX 1969

No. 053392

FAX: 970-731-5197

BAYFIELD, CO 81122

AMOI To 7.50 V=0.249 W=43.95 CW=146.4

TEST RESULTS 9

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

LEAVE PLANT 11:10

SLUMP 84

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

ARRIVE JOB 11:15

CONC. TEMP. 84 AIR % 2.0

CYLINDERS TAKEN 5 YES NO

FINISH POURING

TESTED BY ERIC HOWES

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

LEAVE JOB

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

ARRIVE PLANT

CUSTOMER ID

P.O. NUMBER

ZONE

TIME

DATE

TICKET

SOLD TO

DELIVER TO

DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE

TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE			SUB TOTAL STATE TAX COUNTY TAX CITY TAX TOTAL
CCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER		

DELIVERY INSTRUCTIONS
SPECIAL INSTRUCTIONS

TEAR HERE

No. 053392

w/cm: 0.46

Ry= 1.02

2 gal. super added

STE 480-008

19219

TRUCK 1042

LB-14,12,11,8,7



FOUR CORNERS MATERIALS

DELIVERY INVOICE

PAGOSA

613 LIGHT BASES

BATCH PLANT: 970-731-5194

FAX: 970-731-5197

P.O. BOX 1969

BAYFIELD, CO 81122

No. 053399

AMOI T3750 ve 0.249 W=45.36 UW=152.0

TEST RESULTS
SLUMP 10"

CONC. TEMP. 70 AIR % 1.0

CYLINDERS TAKEN 3 YES NO

TESTED BY ERIC HOWES

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

LEAVE PLANT
ARRIVE JOB
FINISH POURING
LEAVE JOB
ARRIVE PLANT

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
-------------	-------------	------	------	------	--------

LOAD TO	DELIVER TO	DRIVER
---------	------------	--------

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE

RUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL STATE TAX COUNTY TAX CITY TAX TOTAL	
CCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER		RETARDER
DELIVERY INSTRUCTIONS						
SPECIAL INSTRUCTIONS						

TEAR HERE

No. 053399

w/corr = 0.45
Rq = 0.97

2.75 gal. super

STE 480-008

19219

truck 1 of 1

LB-4,5,6,9,10,13

FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

613 light bases

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053425

AMQ1 T=7.50 V=0.249 W=44.35 UNIT WT=140.0 kg

TEST RESULTS

SLUMP 23/4

CONC. TEMP. AIR % 1.9

CYLINDERS TAKEN 5 YES NO

TESTED BY ERIC HOWES

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

LEAVE PLANT
ARRIVE JOB
FINISH POURING
LEAVE JOB
ARRIVE PLANT

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID	P.O. NUMBER	ZONE	TIME	DATE	TICKET
-------------	-------------	------	------	------	--------

SOLD TO	DELIVER TO	DRIVER
---------	------------	--------

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE	
TRUCK				PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	
ACCEL				AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE %	HOT WATER %	RETARDER
DELIVERY INSTRUCTIONS						SUB TOTAL		
SPECIAL INSTRUCTIONS						STATE TAX		
						COUNTY TAX		
						CITY TAX		
						TOTAL		

TEAR HERE

No. 053425

W/COR = 0.45
P-1 = 1.00

283/402 super

STE 480-008

19219

+truck 1 of 1

LB 1213



FOUR CORNERS MATERIALS

DELIVERY INVOICE

PAGOSA

613 Light Dept

BATCH PLANT: 970-731-5194

FAX: 970-731-5197

P.O. BOX 1969

BAYFIELD, CO 81122

No. 053431

AMPI T=7.50 V=0.219 W=43.95 UW=1454

TEST RESULTS
SLUMP 73K

CONC. TEMP. 74 AIR % 2.1

CYLINDERS TAKEN 5 YES NO

TESTED BY ERIC HOWES

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

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TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

WATER ADDED AT CUSTOMER'S REQUEST GALLONS

BY: CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID P.O. NUMBER ZONE TIME DATE TICKET

SOLD TO DELIVER TO DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE

TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE			SUB TOTAL STATE TAX COUNTY TAX CITY TAX TOTAL
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER		

DELIVERY INSTRUCTIONS
SPECIAL INSTRUCTIONS

TEAR HERE

No. 053431

w/cm = 0.45
R/F = 1.01

196 oz super

19219-601-3

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-10-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-SUP	

Metric units yes no

Material Type CURING COMPOUND	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 601, 604, 608, 609	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE CONCRETE CURING COMPOUND, WHITE WAX CURE J9A, MANUFACTURED BY DAYTON SUPERIOR CORP, WAS APPROVED FOR USE ON THE PROJECT BY THE PROJECT ENGINEER. THE MATERIAL IS ON THE APL. DOCUMENTATION IS ATTACHED.

Jser ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No. 2271-16	Product name: WHITE WAX CURE J9A	Date checked: 7-26-17
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFIRE, LLC	Supplier DAYTON SUPERIOR CORP.
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented AS REQUIRED FOR ITEMS LISTED	Previous quantity 0	Total quantity to date AS REQUIRED FOR ITEM LISTED
--	----------------------------	---

Sample submitted: <input type="checkbox"/> Yes <input type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
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Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MICHAEL DAVIS, PE	Title PRESIDENT, DAVIS ENG SVC	Residency

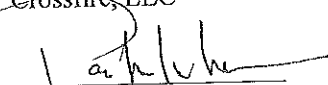


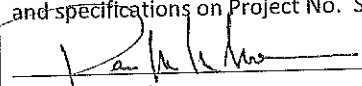
CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 07/26/2017
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 601-01000
APL Category: Concrete
APL Sub-Category: Curing
APL Base Category: Type 2 (White, Wax Based)
APL Reference No.: 2271-16
Product Name: White Wax Cure J9A
Manufacturer: Dayton Superior Corporation
Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC

Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As Needed (quantity and units) of pay item: 601-01000 White Wax Cure J9A, 601, 608, 609 (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219

Contractor 07/26/18
Date

**COLORADO DEPARTMENT OF TRANSPORTATION
PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY**

APL Reference No.

2271-16

Product Evaluation Coordinator
Colorado Department of Transportation
100 North Holly Street, Unit A
Denver, Colorado 80216

Material code:
711.01.01.00

Material code description full name:
Concrete, Curing

PART 1

Product name: White Wax Cure J9A	Product category: Concrete\Curing Compound\Type 2, Class A
Product Representative (name & address): Attn: Todd Fraker, Senior Chemical Sales Manager Dayton Superior Corporation 23655 E. 19th Ave., Bldg 2, Suite 100 Aurora, CO 80019 Phone: (303) 289-4808 E-mail: toddfraker@daytonsuperior.com	Manufacturer (name & address): Attn: Matt Carter Dayton Superior Corporation 4226 Kansas Ave Kansas City, KS 66106 Phone: (877) 266-7732 E-mail: Web-site address: www.daytonsuperior.com
Web-site address: www.daytonsuperior.com	Web-site address: www.daytonsuperior.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
White Wax Cure J9A is a water-based, wax, curing compound containing white pigments and other solids in suspension. White Wax Cure J9A is a water based formulation that contains no organic solvents and is environmentally safe and is VOC compliant. It meets or exceeds the maximum water loss allowed out of a hydrating concrete sample according to ASTM C-309. Dry time is approximately 2 hours at 70°F.

Restrictions, (installation and/or use):
Do not apply at temperatures below 40°F.

Uses of the product, (be specific to CDOT highway activities only):
and cement concrete curing of new bridge/highway construction or cementitious based mortar repair.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):
Ready to use in pails, drums, and reusable totes. Locally available. Product exhibits excellent water retention when tested according to ASTM C-309 thus dramatically lowering/eliminating the defects in concrete that result from inadequate curing. It is white pigmented and reflects 60% of the available sunlight to keep the concrete surface cool while hydration is taking place. It is safe to work with and is not combustible.

- Specifications: (listing those applicable is required)**
- CDOT : Standard Specification 711.01; 601.16; 601.13(b)
 - ASTM : C-309, Type 2, Class A
 - AASHTO :
 - FHWA :
 - other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report (CTR)** provided to validate all claims.

- NTPEP-AASHTO:
- FHWA :
- other : Nelson Testing Laboratories (February 2, 2016)
- other :
- other :

State DOT Approvals, (current documentation required):

Re-submittal Cycle: 3 years

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:
Additional Comments:

TECHNICAL DATA SHEET
DESCRIPTION

A water-based, liquid membrane forming, wax curing compound for freshly finished concrete. The White Wax Cure J9A is white pigmented to reflect the heat of the sun.

USE

White Wax Cure J9A is a curing compound formulated to retain moisture in freshly finished concrete to ensure full hydration of the cement. Specifically designed for use on exterior projects such as highway pavements, residential paving, airport runways, parking lots and other pavement projects.

FEATURES

- Water-based
- Meets ASTM and AASHTO Standards
- Approved by numerous state highway departments
- Clean-up with water
- White pigments to reflect the heat of the sun

PROPERTIES

ASTM C-309 Type 2, Class A
 AASHTO M-148 Type 2, Class A

Drying time:

Approximately 2 hrs. at 70° F (21°C)

VOC

Less than 100 g/L. Compliant with all Canadian and U.S VOC regulations for Concrete Curing Compounds including Federal EPA, OTC, LADCO, SCAQMD & CARB.

Estimating Guide

Coverage: 200 sq. ft./gal. (4.9 sq. M/L)

Packaging

PRODUCT CODE	PACKAGE	SIZE	
		Gallons	Liters
69165	Pail	5	18.93
69164	Drum	55	208.20
69144	Tote	275	1040.99

STORAGE

The White Wax Cure J9A should be stored in tightly sealed original factory containers. Store in a horizontal position to prevent moisture accumulation on the drum head. Avoid prolonged exposure to sunlight and/or constant heat in excess of 100°F (37.8°C). Do not allow to freeze. Shelf life of properly stored, unopened containers is 12 months.

Mixing:

White Wax Cure J9A should be thoroughly stirred prior to each days use. Do not over-agitate or use high speed mixing equipment.

Placement:

Apply immediately after all surface water has disappeared and the surface cannot be marred. DO NOT delay in applying the curing compound. Use low pressure sprayer. All application equipment and tools should be thoroughly cleaned prior to use to avoid contamination. Do not thin. Apply uniformly without puddling.

CLEAN UP

Clean tools and equipment with water while wet. After the product dries, Dayton Superior Citrus Cleaner J48 or organic solvents such as xylene may be necessary to remove the product.

LIMITATIONS
FOR PROFESSIONAL USE ONLY

The White Wax Cure J9A should be thoroughly stirred prior to each use. White Wax Cure J9A should not be used on surfaces that will subsequently receive paint, tile, grout, sealers, or other coatings unless it is completely removed. Not recommended for interior use. Do not apply at temperature below 40°F (4°C). Cool, damp conditions and/or over-application may extend drying and dissipation time.

PRECAUTIONS
READ SDS PRIOR TO USING PRODUCT

- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

MANUFACTURER

Dayton Superior Corporation
 1125 Byers Road
 Miamisburg, OH 45342
 Customer Service: 888-977-9600
 Technical Services: 877-266-7732
 Website: www.daytonsuperior.com

CROSSFIRE'S LOG
 ON BACK →

TECHNICAL DATA SHEET**WARRANTY**

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. **THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.**

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.

19219-601-57

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-10-10
	Project No. STE C400-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR- S.W.	

Metric units yes no

Material Type CONCRETE BATCH WATER	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 601, 604 608, 609, 613	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field Inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE WATER USED TO BATCH CONCRETE AT FCRA Pagosa BATCH PLANT IS SUPPLIED BY PAWSO. THE WATER IS TESTED AS LISTED IN THE ATTACHED LETTER PROVIDED BY THE SUPPLIER.

User ID	
---------	--

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
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Contractor CROSSFIRE, LLC	Supplier PAWSO
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented AS REQUIRED	Previous quantity 0	Total quantity to date AS REQUIRED
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Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
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Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MICHAEL DAVIS, PE	Title PRESIDENT- DAVIS ENG. SVC.	Residency

Jim Smith, President/Chairman
Blake Brueckner, Vice President
Gordon McIver, Secretary



Paul Hansen, Treasurer
Michael Church, Director

January 5, 2018

Re: CDOT Project No.: STE C480-008

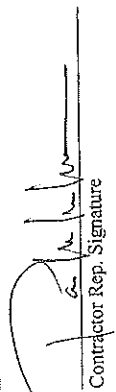
CDOT Project Code: 19219

Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC.

Supplier: Four Corners Material - Pagosa Springs Batch Facility

Product: Four Corners Materials Class BZ & Class P Concrete

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number _____.	01/24/18
	Date
	Contractor Rep. Signature

Dear Mr. Lee,

Four Corners Material is provided water by Pagosa Area Water and Sanitation District's Micro Filtration Plant off Hatcher Lake. The Lake water runs through Micro Fiber filters and is tested daily for PH, Turbidity, Chlorine, Temp, Alkalinity, and Chlorite. Every month the water is tested for E.coli and sent to a state certified lab in Durango CO. Quarterly the water is tested for disinfection byproducts and Cryptosporidium. Annually the water is sent off to a state certified lab in Indiana to be tested for multiple heavy metals and contaminants.

If you have any questions or comments please do not hesitate to call or write.

Sincerely,

Andrew Conner
Pagosa Area Water and Sanitation District Water
Operator in Responsible Charge

100 Lyn Avenue
P.O. Box 4610

www.pawsd.org
Pagosa springs, Colorado 81157

(970) 731-2691
FAX (970) 731-2693

19219-601-61

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region 5	Field sheet # 266294
Contract ID 19219	Date Submitted 3-21-18
Project No. STE C480-008	
Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type SLAB BOLSTERS	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 601	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE SLAB BOLSTERS INSTALLED ON THE PROJECT WERE FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE COC IS ATTACHED. THIS MATERIAL WAS PAID INCIDENTAL TO ITEM 601 - CLASS B.

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
		Emergency <input type="checkbox"/>
		Date needed

Contractor CROSSFIRE, LLC	Supplier LANE MYER CO., INC.
Sampled from (Pit, roadway, windrow, stock, etc.)	PI name or owner

Quantity represented AS NEEDED	Previous quantity 0	Total quantity to date AS NEEDED
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via
Date		

Sampled or inspected by (print name) CLIFTON UEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT-DES	Residency

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

Previous editions are obsolete and may not be used.

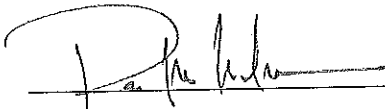


Certificate of Compliance Letter

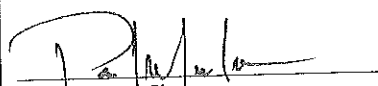
Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date: 2/20/2018
Project Number: STE C480-008
Project Code & Name: 19219 Pinon Causeway to Aspen Village
Manufacturer's Name: Lane Myers Co., Inc.
Manufacturing facility Address: 415 North Broadway Street Protection, KS 67127
Laboratory Name and Address: 415 North Broadway Street Protection, KS 67127
Product Name or Assembly: 4" Upper Continuous High Chair
Description of Material: 4" Slab Bolster
Model, Catalog, Stock Number: Invoice # 15832
Lot / batch number: PO # 3593
Date or Frequency of Lab Testing: Testing done based on ACI SP-66
Applicable Specifications: The material above has been reviewed according to subsection 601 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.



Paul Martin, Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents <u>AS Needed</u> (quantity and units) of pay item <u>601-01000 concrete class B</u> (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number <u>19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008</u> .	
 _____ Contractor Rep. Signature	<u>3/16/18</u> Date

LANE MYERS CO., INC
PO BOX 538
PROTECTION, KS 67127

To Whom It May Concern:

Our reinforcing bar supports are made from the best grade of steel. Wire sizes used will not be less than those jointly recommended by the Concrete Reinforcing Steel Institute (C.R.S.I.) and the American Concrete Institute (A.C.I.). All products are manufactured according to the specifications published by the C.R.S.I. and will pass the ACI SP-66 publications code. All legs are turned up a minimum of 1/8" unless otherwise specified. Our wire is purchased from King Steel in Norfolk, NE.

Plastisol baked on to the product helps prevent rust spots. Plastisol will not chip, crack, or deform under normal job conditions. We coat our wire in no less than 5 mil., as referenced by CRSI 3-1-V, class one maximum protection. Our plastisol is purchased from PolyOne Corp, Sullivan, Missouri.

Our Slab Bolster is made from #4 wire with legs spaced on 5" centers. Corrugations in top wire are vertically spaced on 1" centers, with a maximum height of 3". On 3/23/2017, Invoice #15832, PO #3593, H & H Bolt and Supply purchased 2,700 lf of our 4" Upper Continuous High Chair.

All of our products are manufactured in Protection, KS, USA.

Sincerely,



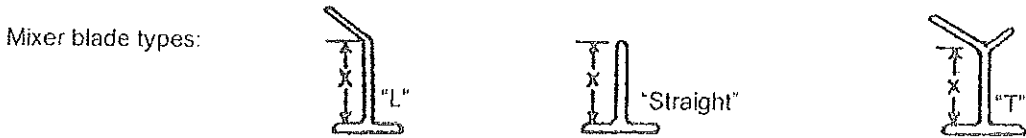
Tom Murphy, Pres.
Lane Myers Co., Inc.

**COLORADO DEPARTMENT OF TRANSPORTATION
CONCRETE TRUCK MIXER
INSPECTION CERTIFICATION**

Contract ID	1A2101	Date Submitted	7/31/2017
Project No	STECASO-008		
Project location	Archuleta County, CO		
Concrete company	Four Corners Materials		

Unit number	56950	56981	56957	56956	56955	56954	56952
Rated mixing capacity (1)	11	10.5	11	11	11	11	11
Blade wear (2)	ok	ok	ok	ok	ok	ok	ok
Free of Hardened concrete (3)	ok	ok	ok	ok	ok	ok	ok
Revolution counter	ok	ok	ok	ok	ok	ok	ok
Water gauges	ok	ok	ok	ok	ok	ok	ok
Meets operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017
INSPECTED BY (company employee)	Thompson	Thompson	Thompson	Thompson	Thompson	Thompson	Thompson

- (1) Rated mixing capacity cannot exceed 63% of gross volume of drum
- (2) Blade wear cannot exceed more than 25 mm (one inch) of the original height. For typical blade configurations see "x" dimensions below



- (3) The drum cannot have an appreciable accumulation of hardened concrete inside.

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title
 Richard Morris Concrete QC Manager *[Signature]*

Completed and checked by CDOT personnel

Batch plant scale certification (Certifiers name and date)		Batch plant water meter certification date	
Print name	Signed	Title	
Remarks:			

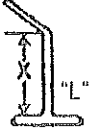
COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE TRUCK MIXER INSPECTION CERTIFICATION	Contract ID 19219	Date Submitted 7/31/2017
	Project No. STE C480-000	
	Project location Archuleta County, CO	
	Concrete company Four Corners Materials	

Unit number	56941	56964	56958	560017	560012	560010	560019
Rated mixing capacity (1)	11	11	11	10.5	11	11	11
Blade wear (2)	ok	ok	ok	ok	ok	ok	ok
Free of Hardened concrete (3)	ok	ok	ok	ok	ok	ok	ok
Revolution counter	ok	ok	ok	ok	ok	ok	ok
Water gauges	ok	ok	ok	ok	ok	ok	ok
Meets operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017
INSPECTED BY (company employee)	Thompson	Thompson	Thompson	Thompson	Thompson	Thompson	Thompson

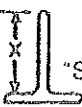
(1) Rated mixing capacity cannot exceed 63% of gross volume of drum

(2) Blade wear cannot exceed more than 25 mm (one inch) of the original height. For typical blade configurations see "x" dimensions below.

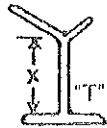
Mixer blade types:



"L"



"Straight"



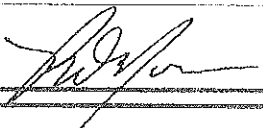
"T"

(3) The drum cannot have an appreciable accumulation of hardened concrete inside.

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title

Richard Morris Concrete QC Manager 

Completed and checked by CDOT personnel

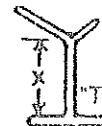
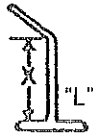
Batch plant scale certification (Certifiers name and date)		Batch plant water meter certification date
Print name	Signed	Title
Remarks:		

COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE TRUCK MIXER INSPECTION CERTIFICATION	Contract ID	19219	Date Submitted	7/31/2017
	Project No.	STE CABD-008		
	Project location	Archuleta County, CO		
	Concrete company	Four Corners Materials		

Unit number	560015	560011	560020	560016	560018	56926	56924
Rated mixing capacity (1)	11	11	11	11	11	11	11
Blade wear (2)	ok	ok	ok	ok	ok	ok	ok
Free of Hardened concrete (3)	ok	ok	ok	ok	ok	ok	ok
Revolution counter	ok	ok	ok	ok	ok	ok	ok
Water gauges	ok	ok	ok	ok	ok	ok	ok
Meets operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/13/2017	3/1/2017
INSPECTED BY (company employee)	Thompson	Thompson	Thompson	Thompson	Thompson	Ayers	Ayers

- Rated mixing capacity cannot exceed 63% of gross volume of drum
- Blade wear cannot exceed more than 25 mm (one inch) of the original height. For typical blade configurations see "x" dimensions below.

Mixer blade types:



- The drum cannot have an appreciable accumulation of hardened concrete inside.

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title

Richard Morris Concrete QC Manager

Completed and checked by CDOT personnel

Batch plant scale certification (Certifiers name and date)		Batch plant water meter certification date	
Print name	Signed	Title	
Remarks:			

- Distribution:
- original - Region Materials Engineer
 - 1st copy - Resident/Project Engineer
 - 2nd copy - Concrete company

Previous editions are obsolete and may not be used

CDOT Form #46 3/14

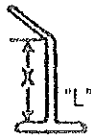
COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE TRUCK MIXER INSPECTION CERTIFICATION	Contract ID	19219	Date Submitted	3/31/2017
	Project No.	STE CABD-000		
	Project location	Archuleta County, CO		
	Concrete company	Four Corners Materials		

Unit number	56943	56953	56949	56980	56965	56921	56948
Rated mixing capacity (1)	11	11	11	10.5	11	10.5	11
Blade wear (2)	ok	ok	ok	ok	ok	ok	ok
Free of Hardened concrete (3)	ok	ok	ok	ok	ok	ok	ok
Revolution counter	ok	ok	ok	ok	ok	ok	ok
Water gauges	ok	ok	ok	ok	ok	ok	ok
Meets operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/13/2017	3/13/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017
INSPECTED BY (company employee)	Ayers	Ayers	Katzer	Katzer	Katzer	Katzer	Katzer

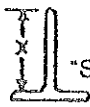
(1) Rated mixing capacity cannot exceed 63% of gross volume of drum

(2) Blade wear cannot exceed more than 25 mm (one inch) of the original height. For typical blade configurations see "x" dimensions below.


Mixer blade types:



"L"



"Straight"



"T"

(3) The drum cannot have an appreciable accumulation of hardened concrete inside.

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title

Richard Morris Concrete QC Manager

Completed and checked by CDOT personnel

Batch plant scale certification (Certifiers name and date)		Batch plant water meter certification date	
Print name	Signed	Title	
Remarks:			

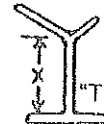
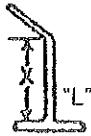
**COLORADO DEPARTMENT OF TRANSPORTATION
CONCRETE TRUCK MIXER
INSPECTION CERTIFICATION**

Contract ID: 19219 Date Submitted: 7/31/2017
 Project No.: STE CABO-000
 Project location: Archuleta County, CO
 Concrete company: Four Corners Materials

Unit number	56928	56961	56931	G-89	DM-057	999216	999033
Rated mixing capacity (1)	11	11	11	11	11	11	11
Blade wear (2)	ok	ok	ok	ok	ok	ok	ok
Free of Hardened concrete (3)	ok	ok	ok	ok	ok	ok	ok
Revolution counter	ok	ok	ok	ok	ok	ok	ok
Water gauges	ok	ok	ok	ok	ok	ok	ok
Meets operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/13/2017	3/22/2017	3/22/2017	6/2/17	6/5/17	7/28/17	7/28/17
INSPECTED BY (company employee)	Katzer	Katzer	Katzer	Katzer	Katzer	Katzer	Katzer

- (1) Rated mixing capacity cannot exceed 63% of gross volume of drum
- (2) Blade wear cannot exceed more than 25 mm (one inch) of the original height. For typical blade configurations see "x" dimensions below.

Mixer blade types:



- (3) The drum cannot have an appreciable accumulation of hardened concrete inside.

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title

Richard Morris Concrete QC Manager

Completed and checked by CDOT personnel

Batch plant scale certification (Certifiers name and date)		Batch plant water meter certification date	
Print name	Signed	Title	
Remarks:			

- Distribution
- original - Region Materials Engineer
 - 1st copy - Resident/Project Engineer
 - 2nd copy - Concrete company

Previous editions are obsolete and may not be used.

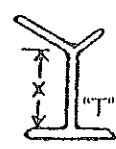
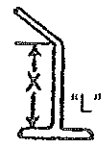
**COLORADO DEPARTMENT OF TRANSPORTATION
CONCRETE TRUCK MIXER
INSPECTION CERTIFICATION**

Project code (SA#) 19219	Date 7/31/2017
Project No. STE CABD-000	
Proj. location Archuleta County, CO	
Concrete company Four Corners Materials	

Unit number	56984						
Rated mixing capacity (1)	11						
Blade wear (2)	OK						
Free of Hardened concrete (3)	OK						
Revolution counter	OK						
Water gauges	OK						
Meets operating speed requirements	OK						
Date inspected	7/28/17						
INSPECTED BY (company employee)	<i>[Signature]</i>						

- (1) Rated mixing capacity cannot exceed 63% of gross volume of drum
- (2) Blade wear cannot exceed more than 25 mm (one inch) of the original height. For typical blade configurations see "x" dimensions below.

Mixer blade types:



- (3) The drum cannot have an appreciable accumulation of hardened concrete inside.

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title
Richard Morris Concrete Co Manager *[Signature]*

Completed and checked by CDOT personnel

Batch plant scale certification (Certifiers name and date)	Batch plant water meter certification date
Signed	Title
Remarks:	

- Distribution:
- original - Region laboratory
 - 1st copy - Resident/Project Engineer
 - 2nd copy - Concrete company

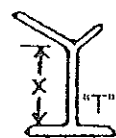
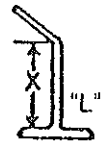
Included to show truck # 56-951 previously inspected in 2015

COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE TRUCK MIXER INSPECTION CERTIFICATION	Project code (SA#)	18884	Date	04/30/2015
	Project No.	BRO C480-007		
	Proj. location	CR 337A Rio Blanco Bridge Replacement		
	Concrete company	Four Corners Materials, Pagosa		

Unit number	56-921	56-922	56-941	56-942	56-948	56-963	56-951
Rated mixing capacity (1)	11	11	10.5	10.5	10.5	10.5	10.5
Blade wear (2)	OK	OK	OK	OK	OK	OK	OK
Free of Hardened concrete (3)	OK	OK	OK	OK	OK	OK	OK
Revolution counter	OK	OK	OK	OK	OK	OK	OK
Water gauges	OK	OK	OK	OK	OK	OK	OK
Meets operating speed requirements	yes	yes	yes	yes	yes	yes	yes
Date inspected	1-26-15	1-26-15	1-26-15	1-26-15	1-26-15	1-26-15	1-26-15
INSPECTED BY (company employee)	Roy	Roy	Roy	Roy	Roy	Roy	Roy

- (1) Rated mixing capacity cannot exceed 63% of gross volume of drum
- (2) Blade wear cannot exceed more than 25 mm (one inch) of the original height. For typical blade configurations see "x" dimensions below.

Mixer blade types:



- (3) The drum cannot have an appreciable accumulation of hardened concrete inside.

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title

Richard D. Morris Concrete QC

Completed and checked by CDOT personnel

Batch plant scale certification (Certifiers name and date)	Batch plant water meter certification date
Colorado Department of Agriculture #352-19877-14	Verified on 4/30/15
Signed	Title
Russ Ebel	EPST III

Remarks:

- Distribution:
- original - Region laboratory
 - 1st copy - Resident/Project Engineer
 - 2nd copy - Concrete company

HOPPER OR FLOOR SCALE INSPECTION REPORT

Date 4-20 2012

This is to certify, that in accordance with the law, I have tested the scale herein reported, said to be the property of, or operated by, or leused by Fox Concrete Materials

ADDRESS _____ CITY Bayo Springs

COUNTY Smith MAKE Command Alkon

TYPE Batch Plant Control CAPACITY 10000 MIN. GRADS 5/16 (LBS. OZ.)

INDICATION: F.C. T.R. BEAM _____ DIGITAL DIAL _____ ELECTRONIC DIAL _____

SER. NO. CB123779 SR EMPTY NA LBS. SR LOADED _____ LBS.

NEW INSTALLATION _____ REPAIRED DEVICE _____ ANNUAL TEST SEMI-ANNUAL TEST _____ QUARTERLY TEST _____

Remarks

TEST WEIGHT APPLIED TO SCALE			
Lbs. Strain Load Applied	Amount Test Wts.	Weighed	Error
Cement	2000	2000	0
	10	10	0
App	2000	2000	0
	4000	4000	0
	0	0	0

WESTERN SLOPE SCALE SERVICE

965 27 1/2 Road
Grand Junction, CO 81501
970/243-1548

REGISTRATION NO. _____

79

SPECTOR _____

Colorado Department of Agriculture
Measurement Standards Section
3125 Wyandot Street, Denver, CO 80211
303-477-4220

Date: 4-23-12

Owner or User: Four Corners Materials

Address: P.O. Box

City: Bayfield Zip Code: 81122

Contact Name: Ray Phone: 287-2122

Physical Location of Device: 3750 Tyler Rd

Peoria Springs

Check all methods of Placing-In-Service that apply:

Sell Ship Deliver Install Service

Device meets NIST HB 44 Requirements: X

Install and/or Service meets NIST HB 44 Requirements: X

MANUFACTURER SERIAL NUMBER CAPACITY

Command Alkon CB123779 10000 lb

Note: If scales are all the same type at the same location, S/N's may be listed on a separate attached sheet.

Digital: Mechanical: Status Report:
(Scales 5000 lb & up)

NTEP CC Number: 97-124-H1

New Device: _____ Used Device: _____

Bench/Counter Platform Livestock

Vehicle _____

Other Device (specify type)

[Signature] Western Slope Scale Svc. 79
Serviceperson Signature Company Name Colorado License #

NOTICE TO SERVICE COMPANY: Enclose Work Order tag or Condemned tag with this report if the device was rejected for repair. This notice must be submitted to the Measurement Standards Office within 10 days of placing-in-service.

NOTICE TO OWNER/USER: This form will allow the temporary commercial use of the device pending its official state inspection, when countersigned below by the owner or user of the device.

Steven Boyd [Signature]
Owner or User Print Signature



Certified Weigher Certificate

THIS Certificate IS NOT TRANSFERABLE

BOYD, STEVEN W

Doing Business As Name(s) (DBA)

BOYD, STEVEN W

PO BOX 195

PAGOSA SPRINGS CO 81157

Effective Date

Expires Date

Certified Weigher Certificate AgLicense ID # **001C8Q**

Jan 01, 2017

Dec 31, 2017

Colorado Department of Agriculture, 1465 S. Lincoln Avenue, Suite 100, Fort Collins, CO 80526-1100
Phone: 970-725-1410 Fax: 970-725-1411 Email: info@coloradoagriculture.com Website: www.coloradoagriculture.com

Don Brown

Commissioner of Agriculture

February 23, 2017

Print Date



National Ready Mixed Concrete Association



Certificate of Conformance For Concrete Production Facilities

THIS IS TO CERTIFY THAT

Pagosa Springs Plant No. 355, Pagosa Springs, CO

Four Corners Materials

has been inspected by the undersigned licensed professional engineer for conformance with the requirements of the *Check List for Ready Mixed Concrete Production Facilities*. As of the inspection date, the facilities met the requirements for production by

*Truck Mixing with Automatic Batching and Recordings of
Cementitious Materials, Aggregate, Water, and Chemical Admixtures*



(Seal)

Signature of Licensed Professional Engineer

March 16, 2017

Inspection Date

March 16, 2019

Certification Expiration Date

This company will maintain these facilities in compliance with the *Check List* requirements and will correct promptly any deficiencies which develop.

Signature of Company Official

Production Manager

Title of Company Official

NOTICE: The Check List indicates only that plant facilities are satisfactory for the production of concrete when properly operated. Conformance of the concrete itself with specification requirements must be verified by usual inspection methods in accordance with sales agreements.

This certificate is issued by the National Ready Mixed Concrete Association on verification that the production facility conforms to the requirements of the NRMCA Certification of Ready Mixed Concrete Production Facilities, QC3. Unauthorized reproduction or misuse of this certificate may result in legal action.

Plant ID #: 839790

Certification ID #: 21111

© 1965, 1992, 2001, 2002, 2006, 2007, 2012

National Ready Mixed Concrete Association 900 Spring Street • Silver Spring • Maryland 20910



INSPECTION REPORT - CONCRETE PLACING BOOM

Report No.

Serial No. 1550

Hours: 439

Company: Kong Shot

Address: Durango CO

Type of Boom: JXZ 37-4-16

Customer Unit No.: 37

Mfg. Year: 2015

Verification - Result of the Inspection

No Defects

Defects

Re-inspection Required

STOP Operation

Code of Faults:

- | | | | |
|------------------|---------------|----------------------|---------------------------|
| 00 No Objections | 08 Deformed | 16 Lubrication | 24 Scored |
| 01 Adjusted | 09 Dirty | 17 Missing Parts | 25 Shavings |
| 02 Bearings | 10 Electric | 18 Modified | 26 Stuck |
| 03 Bent | 11 Fasteners | 19 No Function | 27 Temperature |
| 04 Broken | 12 Hydraulic | 20 Noise | 28 Vibration |
| 05 Burned | 13 Leaking | 21 Out of Adjustment | 29 Welds |
| 06 Corrosion | 14 Legibility | 22 Paint Damage | 30 Worn |
| 07 Cracks | 15 Loose | 23 Other | 31 Re-inspection Required |

100 Machine Documents

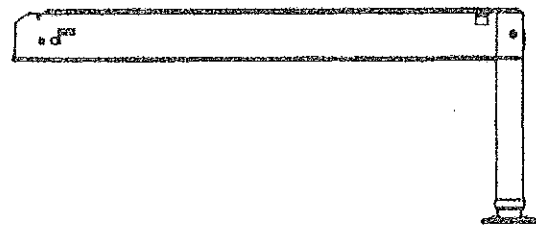
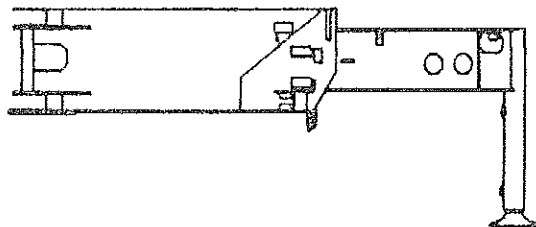
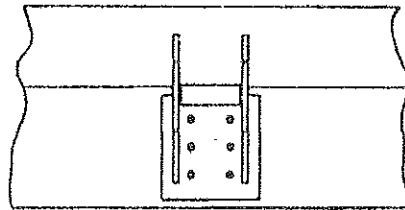
- | | | |
|----------------------------|----|---------------|
| 101 Operating Instructions | 00 | 31 |
| 102 Spare Parts List | 00 | 31 |

200 Chassis Frame

- | | | |
|----------------------|----|---------------|
| 201 Frame Attachment | 00 | 31 |
|----------------------|----|---------------|

300 Right Front Outrigger

- | | | |
|------------------------------|----|---------------|
| 301 Transport Safety Device | 00 | 31 |
| 302 Support Arms | 00 | 31 |
| 303 Extension Box | 00 | 31 |
| 304 Extension Safeguard | 00 | 31 |
| 305 Slewing Bearing | 00 | 31 |
| 306 Slewing Safeguard | 00 | 31 |
| 307 Support Safeguard | 00 | 31 |
| 308 Support Blocks | 00 | 31 |
| 309 Support Cylinder Attach. | 00 | 31 |
| 310 Support Cylinder | 00 | 31 |
| 311 Swivel Cylinder | 00 | 31 |
| 312 Extension Hydraulics | 00 | 31 |
| 313 Pressure Settings | 00 | 31 |



01 Fill in Corresponding Fault Code (Crack)

~~31~~ Cross Out Fault Code That Does Not Apply (00, 31)



INSPECTION REPORT - CONCRETE PLACING BOOM

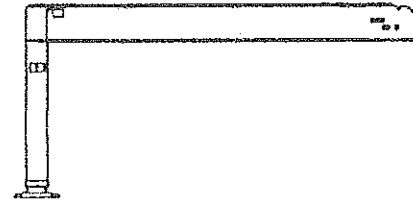
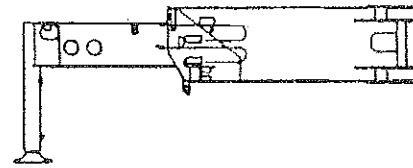
Report No.

Serial No. 1550

Date: 3-20-17

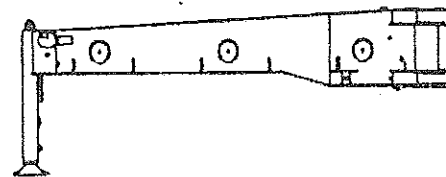
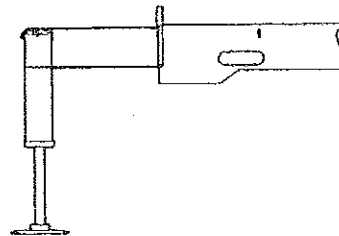
350 Left Front Outrigger

351 Transport Safety Device	00			31
352 Support Arms	00			31
353 Extension Box	00			31
354 Extension Safeguard	00			31
355 Slewing Bearing	00			31
356 Slewing Safeguard	00			31
357 Support Safeguard	00			31
358 Support Blocks	00			31
359 Support Cylinder Attach.	00			31
360 Support Cylinder	00			31
361 Swivel Cylinder	00			31
362 Extension Hydraulics	00			31
363 Pressure Settings	00			31



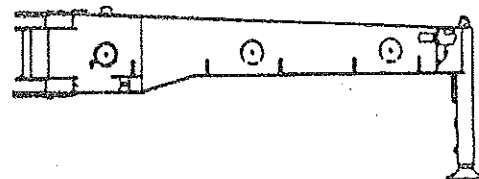
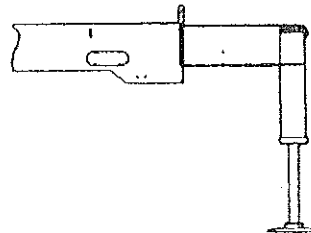
400 Right Rear Outrigger

401 Transport Safety Device	00			31
402 Support Arms	00			31
403 Extension Box	00			31
404 Mounting Frame (extn. box)	00			31
405 Extension Safeguard	00			31
406 Slewing Bearing	00			31
407 Slewing Safeguard	00			31
408 Support Safeguard	00			31
409 Support Blocks	00			31
410 Support Cylinder Attach.	00			31
411 Support Cylinder	00			31
412 Swivel Cylinder	00			31
413 Extension Hydraulics	00			31



450 Left Rear Outrigger

451 Transport Safety Device	00			31
452 Support Arms	00			31
453 Extension Box	00			31
454 Mounting Frame (extn. box)	00			31
455 Extension Safeguard	00			31
456 Slewing Bearing	00			31
457 Slewing Safeguard	00			31
458 Support Safeguard	00			31
459 Support Blocks	00			31
460 Support Cylinder Attach.	00			31
461 Support Cylinder	00			31
462 Swivel Cylinder	00			31
463 Extension Hydraulics	00			31



01 Fill in Corresponding Fault Code (Crack)

~~31~~ Cross Out Fault Code That Does Not Apply (00, 31)

WHITE - Customer

YELLOW - File



Report No.

Serial No.

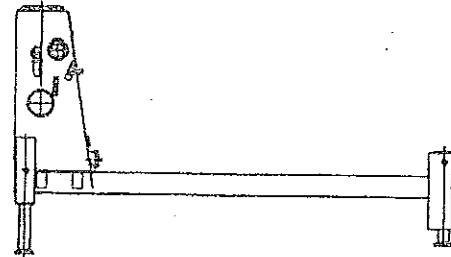
1550

Date:

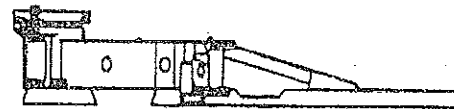
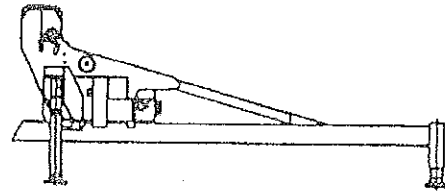
3-20-17

500 Boom Pedestal

501 Boom Pedestal Attach.	00			31
502 Mounting Frame	00			31
503 Vehicle Frame	00			31
504 Boom Pedestal (steel constr.)	00			31
505 Leaks	00			31
506 Transport Safety Device	00			31
507 Hydraulic Lines	00			31

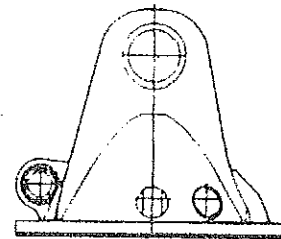


Remarks:



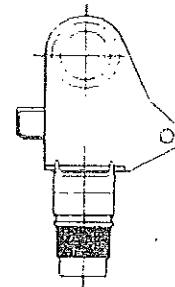
600 Slewing Head w/ Ball Pivot Connection

601 Slewing Head	00			31
602 Ball Pivot Ring	00			31
603 Ball Pivot Ring Attach.	00			31
604 Drive Pinion	00			31
605 Slewing Drive Attach.	00			31
606 Slewing Limits	00			31
607 Slewing Drive (gear lash)	00			31
608 Slewing Drive	00			31
609 Brake	00			31
610 Slewing Speed	00			31
611 Pressure Setting	00			31
612 Hydraulic Lines	00			31



700 Slewing Head w/ Slewing Column

701 Slewing Head	00			31
702 Slewing Column Bearing	00			31
703 Slewing Drive (gear lash)	00			31
704 Slewing Speed	00			31
705 Pressure Setting	00			31
706 Hydraulic Lines	00			31
707 Slewing Cylinder	00			31



01 Fill in Corresponding Fault Code (Crack)

~~31~~ Cross Out Fault Code That Does Not Apply (00, 31)



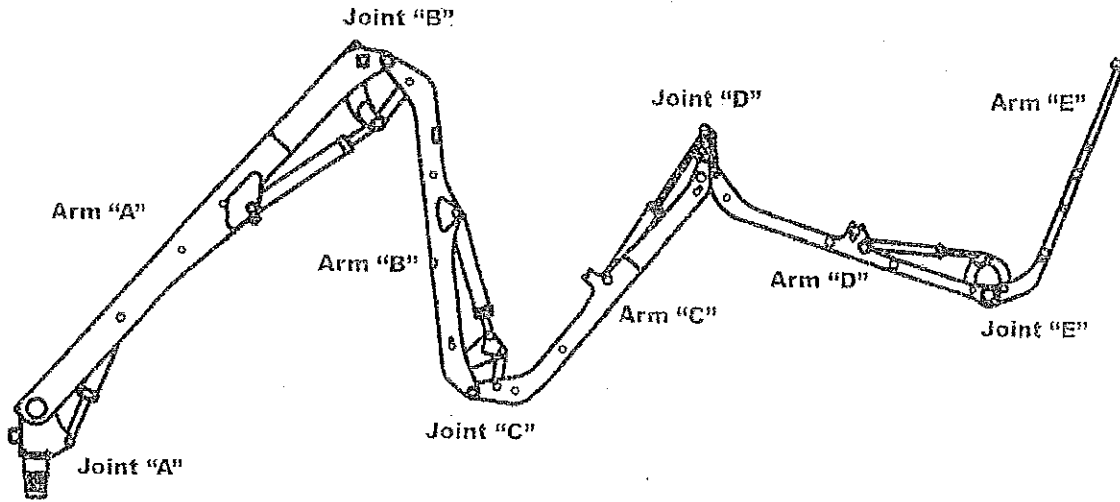
Report No.

Serial No.

1550

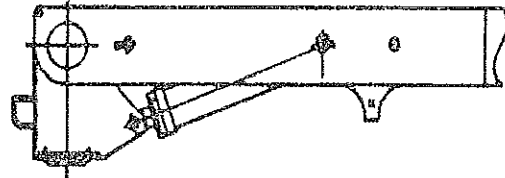
Date:

3-20-17



900 Joint "A" (Arm "A")

901 Joint Bolt	00			31
902 Hyd. Cyl. "A"	00			31
903 Speed	00			31
905 Hydraulic Lines	00			31
906 Monoblock (head)	00			31
907 Monoblock (rod)	00			31
908 Synchronous Cyls.	00			31



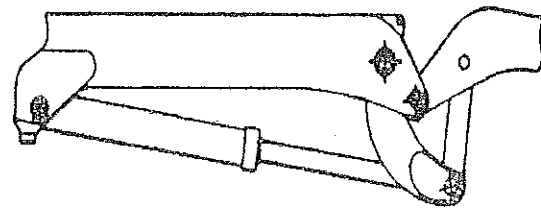
950 Concrete Placing Boom

951 Arm "A"	00			31
952 Guide/Catch	00			31
953 Delivery Line Support	00			31
954 Hook Catch	00			31



1000 Joint "B" (Arm "A" + Arm "B")

1001 Reversing Lever	00			31
1002 Pressure Rod	00			31
1003 Joint Bolt	00			31
1004 Hyd. Cyl. "B"	00			31
1005 Speed	00			31
1007 Hydraulic Lines	00			31
1008 Monoblock (head)	00			31
1009 Monoblock (rod)	00			31
1010 Synchronous Cyl.	00			31



01 Fill in Corresponding Fault Code (Crack)

~~31~~ Cross Out Fault Code That Does Not Apply (00, 31)



INSPECTION REPORT - CONCRETE PLACING BOOM

Report No.

Serial No. **1550**

Date: **3-20-17**

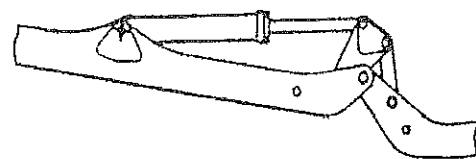
1050 Concrete Placing Boom

1055 Arm "B"	00			31
1056 Guide/Catch	00			31
1057 Delivery Line Support	00			31
1058 Hook Catch	00			31



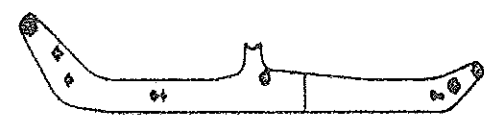
1100 Joint "C" (Arm "B": + Arm "C")

1101 Reversing Lever	00			31
1102 Pressure Rod	00			31
1103 Joint Bolt	00			31
1104 Hyd. Cyl. "C"	00			31
1105 Speed	00			31
1107 Hydraulic Lines	00			31
1108 Monoblock (head)	00			31
1109 Monoblock (rod)	00			31



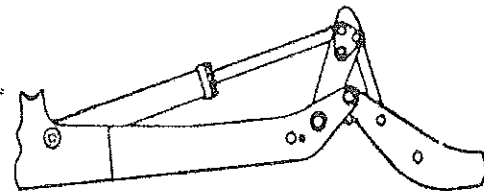
1150 Concrete Placing Boom

1159 Arm "C"	00			31
1160 Guide/Catch	00			31
1161 Delivery Line Support	00			31



1200 Joint "D" (Arm "C": + Arm "D")

1201 Reversing Lever	00			31
1202 Pressure Rod	00			31
1203 Joint Bolt	00			31
1204 Hyd. Cyl. "D"	00			31
1205 Speed	00			31
1207 Hydraulic Lines	00			31
1208 Monoblock (head)	00			31
1209 Monoblock (rod)	00			31



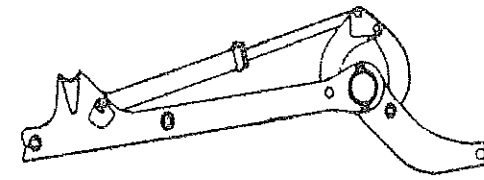
1250 Concrete Placing Boom

1252 Arm "D"	00			31
1253 Guide/Catch	00			31
1254 Delivery Line Support	00			31



1300 Joint "E" (Arm "D": + Arm "E")

1301 Reversing Lever	00			31
1302 Pressure Rod	00			31
1303 Joint Bolt	00			31
1304 Hyd. Cyl. "E"	00			31
1305 Speed	00			31
1307 Hydraulic Lines	00			31
1308 Monoblock (head)	00			31
1309 Monoblock (rod)	00			31



01 Fill in Corresponding Fault Code (Crack) ~~31~~ Cross Out Fault Code That Does Not Apply (00, 31)

WHITE - Customer

YELLOW - File



INSPECTION REPORT - CONCRETE PLACING BOOM

Report No. _____ Serial No. 1550 Date: 3-20-17

1350 Concrete Placing Boom

1355 Arm "E"	00	<u>A</u>	<u>31</u>
1356 Guide/Catch	00		<u>31</u>
1357 Delivery Line Support	00		<u>31</u>



1500 Hydraulics, Control, & Hydraulic Valves

1501 Pressure Limiting Valve	00		<u>31</u>
1502 Pressure Setting	00		<u>31</u>
1503 Hydraulic Lines	00		<u>31</u>
1504 Manual Operation	00		<u>31</u>
1505 Boom Control Block	00		<u>31</u>
1506 Hydraulic Pumps	00		<u>31</u>

Remarks:

1600 Hydraulics, Control, & Hydraulic Valves

1601 Remote Controls	00		<u>31</u>
1602 Emergency Stop	00		<u>31</u>
1603 Elec. Selector Sw. (outgrgs)	00		<u>31</u>
1604 Elec. Selector Sw. (bm func)	00		<u>31</u>
1605 Electric Cables Harness	00		<u>31</u>
1606 Central Lubrication	00		<u>31</u>

1700 Signs and Placards

1701 Danger Signs	00		<u>31</u>
1702 Information Signs	00		<u>31</u>
1703 Operation Signs	00		<u>31</u>
1704 Signs - Abbreviated	00		<u>31</u>
1705 Information Sign	00		<u>31</u>
1706 Information Sign	00		<u>31</u>
1707 Model Data Plate	00		<u>31</u>
1708 Danger Sign	00		<u>31</u>

4000 Vacuum Pump Unit

00		<u>31</u>
----	--	-----------

4100 Hyd. Pump Frame

00		<u>31</u>
----	--	-----------

4200 Water Tank

00		<u>31</u>
----	--	-----------

4300 Truck Chassis

4301 Axle Stops	00		<u>31</u>
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4400 Flushing Water Pump

00		<u>31</u>
----	--	-----------

01 Fill in Corresponding Fault Code (Crack) ~~31~~ Cross Out Fault Code That Does Not Apply (00, 31)



INSPECTION REPORT - CONCRETE PLACING BOOM

Report No.	Serial No. <u>1550</u>	Date: <u>3-20-17</u>
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<u>4500 Vibrator</u>	00	31	Remarks:
<u>4600 Protection Equipment</u>			
4601 Ladder Assembly	00	31	
4602 Ladder Steps	00	31	
4603 Handrails	00	31	
4604 Hopper Grate	00	31	
4605 Hopper Grate Bolts	00	31	
4606 Hopper Grate Spacing	00	31	
4607 Hopper Grt. Grille (crush pt.)	00	31	
4608 Hopper Grate Hinges	00	31	
4609 Hop. Saf. Sw. (agitator stops)	00	31	
4610 Hop. Saf. Sw. (accum dischrg)	00	31	
4611 Hop. Grt. Saf. (hold open dev)	00	31	
4612 Hopper Cleanout	00	31	
4613 Rotor Housing Cover	00	31	
4614 Shaft Cover(s)	00	31	
4616 Chain Cover(s)	00	31	
4617 Shift Cylinder Cover	00	31	
4618 Misc. Covers	00	31	
4619 Heat Shields	00	31	
<u>4700 Electrical Equipment</u>			
4701 Proper Operation (oper. ctrls)	00	31	
4702 Proper Operation (emer stps)	00	31	
4703 Ground Connections	00	31	
4704 Cables, Cable Harness	00	31	
4705 Temperature Indicator	00	31	
<u>4800 Pump Supports</u>			
4801 Transport Safeguards	00	31	
4802 Extension Safeguards	00	31	
4803 Support Blocks	00	31	
4804 Support Cylinder Attach.	00	31	
4805 Support Cylinder Pressure	00	31	
<u>4900 Modifications Made By Owner</u>			
4901 Extensions/Repairs	00	31	
4902 Alterations	00	31	

01 Fill in Corresponding Fault Code (Crack) ~~31~~ Cross Out Fault Code That Does Not Apply (00, 31)



INSPECTION REPORT - CONCRETE PLACING BOOM

Report No.

Serial No.

1550

Date:

3-20-17

Remarks:

VIN #:

FEUNK4CY2FHGL8830

VERIFICATION OF CERTIFIED INSPECTOR

INSPECTION DATE:

3-20-17

NAME:

Joe Sweetser
(please print)

CERTIFIED INSPECTOR'S SIGNATURE:

CUSTOMER'S SIGNATURE:

RE-INSPECTION DATE:

CERTIFIED INSPECTOR'S SIGNATURE:


CUSTOMERS SIGNATURE:



Boom Inspection & Repair, Inc.
2530 Highland Road
Greeley, CO 80634
ph. 303-885-6845 / fax 970-330-5373

01 Fill in Corresponding Fault Code (Crack)

~~31~~ Cross Out Fault Code That Does Not Apply (00, 31)

 Crossfire LLC 820 Airport Road, Durango CO 81303	Document Source: CROSSFIRE CONSTRUCTION QUALITY PLAN	
	Document Title: Crossfire Quality Control Plan	Job Number: 501-170093
	Document No. CF-CCQP	Document Revision Date: 7/14/17
Project No.: CDOT Project No: STE C480-008 Project Code: 19219	Other:	Approved By: (CF QA/QC Manager)

Crossfire Quality Control Plan

Archuleta County, Town of Pagosa Springs,

CDOT Road & Bridge Department

PE. Clifton Lee, Davis Eng. Service Inc.

Pinon Causeway Multi-use Trail

CDOT Project No: STE C480-008 Project Code: 19219

Personnel: QC Officer: (Jason Vavrina), CROSSFIRE LLC

Clifton Lee



Davis Engineering Service, Inc.
 188 S. 8th Street - P.O. Box 1208
 Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105
 Fax: (970) 264-9210
 E-mail: clifton@daveng.com

1. SCOPE

This Construction Quality Control Plan is to ensure compliance to project specifications, code requirements, engineered drawings, scope of work, and fit for purpose construction.

2. PURPOSE

The purpose of the Quality Control Plan (QCP) is to outline procedures to be utilized in establishing reasonable assurances that equipment, materials and workmanship meet the level of quality in accordance with the project design requirements, and to ensure safety and reliability of operation. This plan illustrates the tools, procedures, inspection reports and checklist that will be used during the Placing, Consolidating and Finishing phases of the project (CDOT Spec 601). Included in the QCP will be the following items:

1. **Concrete Mix Ingredients and Proportions (Appendix A)**
2. **Work Schedule (Appendix B)**
3. **Applicable Specifications and Special Notes (Appendix C)**
4. **Delivery Details (Appendix D)**
5. **Planned Construction Joint Locations (Appendix E)**
6. **Role of All Personnel (Section 5)**
7. **Construction Details - surface preparation, finish, joint locations, etc. (Appendix F)**
8. **Testing Requirements (Section 6)**
9. **Acceptance Criteria (Section 9)**
10. **Contingency Plans for Wind, Rain, Breakdown, etc. (Section 10)**
11. **Curing Details (Section 11)**

3. METHODOLOGY

This QCP has been designed with a proactive approach to quality. The Methodology of this approach emphasizes training/qualification along with a team approach towards quality during the project production.

4. REFERENCES

- Contract Documents and Special Provisions
- ASTM – American Society for Testing and Materials
- AASHTO – American Association of State Highway Transportation Officials
- Colorado Department of Transportation Standard Specifications for Road and Bridge Construction (2011) , PSP,PSR
- Crossfire LLC Policies and Procedures as applicable

5. ROLES AND RESPONSIBILITIES

CROSSFIRE personnel are responsible for the implementation and management of the CROSSFIRE Quality Control Plan.

CROSSFIRE is to determine and define the roles and responsibilities for production personnel as they pertain to Quality Control and to the placement of the work.

Quality work is the responsibility of "ALL" CROSSFIRE personnel. All those involved with execution should bear in mind that poor quality work is a potential safety incident waiting to happen.

- 5.1. **The CROSSFIRE QC designee shall be in direct contact with a Customer Quality Assurance (QA) representative to assure that the proper program, governing codes, and specific project designs and specifications are complied with for every aspect of the work.**
- 5.2. **Whenever a conflict exists between the Quality Control Plan and contract documents, the conflict shall be raised to the attention of the QA Manager and Project Engineering for determination of whether a specific project addendum is required or not.**
- 5.3. **It is the responsibility of CROSSFIRE's group or discipline referenced in this plan to ensure that their personnel are familiar with this program and other referencing documents, and that all requirements are properly executed.**
- 5.4. **CROSSFIRE Onsite QC Manager Core Responsibilities:**
 - Manage all CROSSFIRE onsite quality control including:
 - Assuring adequate staffing for the work.
 - Ensuring personnel are trained and have the skills necessary to perform the task efficiently.
 - Providing the necessary forms, procedures, and tools to monitor quality effectively.
 - Collecting all QC documentation from the project.
 - Review and address any Non-Conformance as they arise.
 - Consider and address any Continual Improvement observations made by onsite Customer or CROSSFIRE personnel.
 - Fully understands the Quality requirements and their responsibilities within the Quality Control Plan.
 - Verify inspection of material at intervals outlined for acceptance or rejection based upon the requirements of the project specifications, engineering drawings, and/or code requirements.
 - Witnesses the inspection of hold points as established.
 - Ensures that CROSSFIRE supervision is aware of all inspection points.
 - Monitors work activities and quality performance to ensure the requirements of the Quality Control Plan, project specifications, and procedures are met.
 - Produces and circulates all test and inspection reports pertinent to the Quality Plan.
 - Documents, reports, and initiates any Quality, Observation or Non-Conformance reports required due to non-conforming items.
 - During inspection, shall utilize checklists, included in the contract documents, and/or checklists created by CROSSFIRE, if approved, to meet Customer Quality compliance.
 - Items to be verified include but are not limited to the following:
 - Verify pre placement/pour release has been completed and approved.
 - Verify intended mix design has been approved
 - Verify testing is scheduled appropriately
 - Proper sampling and testing is performed and tracked
- 5.5. **CROSSFIRE Craft Personnel Responsibilities:**
 - Informs the CROSSFIRE Supervisor when a "Hold Point" or a specific inspection point or test is required in the inspection plan.

- Informs the CROSSFIRE Supervisor of any circumstance existing or anticipated that could result in a non-conformance.
- Consults with the CROSSFIRE Supervisor if there is any part of the Field Installation Work Package and/or the Quality Control requirements that they do not fully understand.

6. TESTING FIRM AND LABORATORIES

A third party materials testing firm will be retained to provide Quality Assurance periodically during concrete placements of construction.

6.1. Production Sampling and Testing

The material testing reports generated from 3rd party sampling will be documented on forms in compliance with industry standards. Quality Control TBD will consist of sampling and testing the first three truckloads of a day's production for air content, slump, and temperature. Molding of 6 - 4"X8" compressive strength cylinders for each day of testing will be performed. A sample test slab is not scheduled for this job.

Additional cylinders will be taken for determination of removing falsework if needed and loading the Concrete with future pours.

7. DESIGN CHANGE CONTROL

All communication between CROSSFIRE and Customer that alter the Project Scope of Work, engineered drawings, code and/or specifications, shall be documented and approved via Customer's Request for Information (RFI) and Change Order procedure prior to commencement of such work.

CROSSFIRE procedure to document any changed conditions to the Scope of Work shall include the following requirements:

- Identify the change in Scope of Work and relay that information back to CROSSFIRE Project Management, including the rationale for the change in scope
- Allow Project Management sufficient time to create and submit RFI to Customer.
- Written approval from Customer shall be provided back to CROSSFIRE Project Management and relayed back to CROSSFIRE personnel in the field.

8. QUALITY DOCUMENTATION

8.1. Inspection and Test Plans

Inspection and Test Plan shall be developed by CROSSFIRE for placement. The Inspection and Test Plan will be a reference document used to establish the Quality Control Requirements for the work.

CROSSFIRE's inspections and test plans will include the following:

- A description of inspections and tests to be performed as required by code, standard or specification, and when they occur during production.
- Level of inspection required
- Hold, witness and review columns for CROSSFIRE QC representatives with a place to initial.
- Material Control measures

- Installation, Inspection and Test procedures with acceptance criteria
- Safety related documents

8.2. Concrete Pre-Placement / Pour Release

The pre-placement / pour release document completed prior to pour and will provide signoff for all components of the concrete forming and rebar placement. Additional information will be logged in association to the concrete site conditions upon placing.

9. ACCEPTANCE CRITERIA

CROSSFIRE shall have a system for managing all material within their control. Materials shall be strictly controlled to ensure physical traceability (Batch tickets, Bill of Lading, MTR's, etc.)

10. CONTINGENCY PLAN

The weather will be monitored the day before to confirm that a storm is not in line with our pour schedule. If it is determined that a weather event will align with the pour schedule, the pour date will be shifted by one day.

Plastic will be purchased in the case of a wind storm. A plastic cover / blanket or tent will be constructed to protect wet concrete from blowing debris and unexpected rain. This will be removed at the appropriate finishing time and then put back in place after the finishes have been applied if needed.

11. CURING DETAILS

Before placing plastic cover sheeting, surface shall receive the necessary curing compound

As a contingency the water truck has fire hose sprayer that could be used to spray water on the concrete as needed for this curing task.

After managing for needed days the cover system will be removed.

Applicable Specifications and Special Notes

202-00204 REMOVAL OF CURB, GUTTER & SIDEWALK 66 L.F.
208-00045 CONCRETE WASHOUT STRUCTURE
608-00012 CONCRETE CURB RAMP (SPECIAL) 128 S.Y.
609-21900 CURB AND GUTTER TYPE 2 (12 INCH PAN) (SPECIAL) 44 L.F.
609-21900 CURB AND GUTTER TYPE 2 (18 INCH PAN) (SPECIAL) 22 L.F.
602-00000 REINFORCING STEEL 3,530 LBS.(Alt 1)
601-01000 CONCRETE CLASS B 36 C.Y. footings and walls sub Class D or P

October 29, 2015
Project Number STE C480-008 January 25, 2016
Project Code 19219

REVISION OF SECTION 106 CONTROL OF MATERIAL (SAMPLING)

Section 106 of the Standard Specifications is hereby revised for this project as follows:

In subsection 106.03 delete the fifth paragraph and replace with the following:

Samples will be taken by the Department except that the Contractor shall sample the following:

1. Asphalt cement, asphalt rejuvenating agent and emulsified asphalt in accordance with AASHTO T 40.
2. Hot mix asphalt items 403 in accordance with Colorado Procedure 41, Method B
3. A composite of aggregates for hot mix asphalt in accordance with Colorado Procedure 30.
4. Plastic Portland cement concrete in accordance with AASHTO T 141 and Colorado Procedure 61.

The Contractor shall transport the concrete sample to the place of testing.

The Engineer will designate the sampling time, location, and sample size. The sampling will be conducted in the presence of the Engineer.

1

REVISION OF SECTION 601 CONCRETE SLUMP ACCEPTANCE

Section 601 of the Standard Specifications is hereby revised for this project as follows:

Delete the fifth paragraph of Subsection 601.05 and replace with the following:

Except for Class BZ concrete, the slump of the delivered concrete shall be the slump of the approved concrete mix design plus or minus 2.0 inch. The laboratory trial mix must produce an average compressive strength at least 115 percent of the required field compressive strength specified in Table 601-1. When entrained air is specified in the Contract for Class BZ concrete, the trial mix shall be run with the required air content.

Delete Subsection 601.17 (b), 601.17 (d) and Table 601-3 and replace with the following:

(b) Slump. Slump acceptance, but not rejection, may be visually determined by the Engineer. Any batch that exceeds the slump of the approved concrete mix design by 2.0 inches will be retested. If the slump is

exceeded a second time, that load is rejected. If the slump is greater than 2 inches lower than the approved concrete mix design, the load can be adjusted with a water reducer, or by adding water (if the w/cm allows) and retested.

Portions of loads incorporated into structures prior to determining test results which indicate rejection as the correct course of action shall be subject to reduced payment or removal as determined by the Engineer.

(d) Pay Factors. The pay factor for concrete which is allowed to remain in place at a reduced price shall be according to Table 601-3 and shall be applied to the unit price bid for Item 601, Structural Concrete.

If deviations occur in air content and strength within the same batch, the pay factor for the batch shall be the product of the individual pay factors.

Table 601-3

PAY FACTORS

Percent Total Air Strength

Deviations

From

Specified

Air

(Percent)

Pay

Factor

(Percent)

Below

Specified

Strength (psi)

[< 4500 psi

Concrete]

Pay

Factor

(Percent)

Below

Specified

Strength (psi)

[≥ 4500 psi

Concrete]

0.0-0.2 98 1-100 98 1-100

0.3-0.4 96 101-200 96 101-200

0.5-0.6 92 201-300 92 201-300

0.7-0.8 84 301-400 84 301-400

0.9-1.0 75 401-500 75 401-500

Over 1.0 Reject Over 500 Reject

65 501-600

54 601-700

42 701-800

29 801-900

15 901-1000

Reject Over 1000

February 3, 2011

**REVISION OF SECTION 712
WATER FOR MIXING OR CURING CONCRETE**

Section 712 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 712.01 and replace it with the following:

712.01 Water. Water used in mixing or curing concrete shall be reasonably clean and free of oil, salt, acid, alkali, sugar, vegetation, or other substance injurious to the finished product. Concrete mixing water shall meet the requirements of ASTM C1602. The Contractor shall perform and submit tests to the Engineer at the frequencies listed in ASTM C1602. Potable water may be used without testing. Where the source of water is relatively shallow, the intake shall be so enclosed as to exclude silt, mud, grass, and other foreign materials.

Delivery Details

Concrete Delivery

Concrete will be provided by Four Corners Materials. Approximately 34 yards will be delivered to the site with an average of 10 yards per truck. Concrete will be batched at the Four Corners Materials concrete batch plant located at 3157 Co Rd 600, Pagosa Springs, CO 81147.

Concrete Trucks will be highway 160. Trucks will access the site through the main Arterty roads. Trucks will be staged at the Site until they are flagged to back up to the concrete pump truck.

The first 2 concrete trucks will be loaded and dispatched to the site per the work schedule. Each additional truck will be released on 20 minute intervals. If adjustment to the delivery time needs to be adjusted (i.e. slowed down or sped up).

Contingency

In the event that the Four Corners Materials Batch Plant in Pagosa Springs is unable to produce the necessary concrete, concrete will be batched from Four Corners Materials Batch Plant in Bayfield 6699 Co Rd 521, Bayfield, CO 81122.

Plan Detail Narrative Appendix F

Pinion Causeway Multi-use Trail CDOT Project No: STE C480-008 Project Code: 19219

Placing, Consolidating and Finishing Concrete pay items

Detailing procedures for concrete placing, consolidating and finishing and associated tooling -- vibrators, screed information, and Boom pump.

Starting at scheduled time we will be setting up the pour, getting tools out and calling batch plant for confirmation, delivery of cement will start from the FCM batch plant. The batches will be made to arrive starting on site at TBD time on pour day. The ¼ yard pump test will occur and the QA will be done as scheduled though out the pours.

Pumping and vibrating while the concrete is being placed with the boom pump the stinger vibrators will be used per 601.15 (d) on the lower layer of placed concrete as needed. As the pour proceeds finishing crew will start floating the previously struck areas following

Finishing: Following consolidation, the concrete shall be struck off and finished by mechanical longitudinal floating, mechanical rolling, surface vibration, or a combination of any of these methods. Surface vibrators will be used.

Only minimum hand finishing will be done, planned at the edges and screed lines. If the surface of the deck slab appears to become dry immediately following finishing operations, due to an excessive evaporation rate, it shall be covered with wet burlap or fogged with water covering the dry areas surface using pneumatic atomizing nozzles on the hand held Hudson type sprayers.

Sprayed curing compound J10W will be applied after the finishing surface is complete by sprayer method.

During periods of excessive drying, a cover of wet burlap or plastic sheeting shall be maintained on the slab at appropriate times until final cure is placed.

Pump contingency Longshot has several other pumps that can be used. The 80 / 10 temp anemometer monitoring will be on site if needed.



Crossfire LLC
820 Airport Road, Durango CO 81303

Document Source:
CROSSFIRE CONSTRUCTION QUALITY MANUAL

Document Title:
CONCRETE PLACEMENT CARD

Document Revision Date:

5 - August - 15

Document - Page 1 of 1

Document No.

CF-QC-CPC

Approved By:

Quality Control Team

Project Name:

Project #:

POUR CARD #	DATE PLACED	ITEM	TEST CYLINDER # (IF TAKEN)	CYLINDER AGE AND STRENGTH AT BREAK						LAB CONTROL NUMBER	QUANTITY OF CONCRETE PLACED (cu. yd)
				3 DAY	7 DAY	14 DAY	28 DAY	28 DAY	HOLD		

Responsible Supervisor:	Signature:	Date:
Crossfire QC Inspector:	Signature:	Date:
FINAL REVIEW Client QA:	Signature:	Date:



Crossfire LLC
820 Airport Road, Durango CO 81303

Document Source:
CROSSFIRE CONSTRUCTION QUALITY MANUAL

Document Title
**CONCRETE PRE-PLACEMENT / POUR
RELEASE**

Document Revision Date:
5 – August – 15

Document - Page 1 of 1

Document No.
CF-QC-CPP/PR

Approved By:
Quality Control Team

Project Name:		Project #:
LOCATION / UNIT:	ITEM:	DRAWING NO.:
I.D. OF BENCH MARK USED:	ELEV. OF BM:	BM REF. DRWG No.

PRE-PLACEMENT ACTIVITIES	RESPONSIBLE PERSON SIGN/DATE	QC INSPECTOR SIGN/DATE	Client QA * INSPECTOR SIGN/DATE
EXCAVATION:			
BACKFILL - COMPLETE AND SIGNED OFF:			
FORMWORK:			
REINFORCEMENT:			
ANCHOR BOLTS LOCATION / PROJECTION VERIFIED			
KEYWAYS:			
MISC. IRON:			
EXPANSION JOINTS:			
WATER STOPS:			
EMBEDMENTS: CIVIL / STRUCTURAL			
ANCHOR BOLTS			
UP-LIFT CONNECTORS			
ELECT. / INSTRUMENTATION:			
PIPING:			


RELEASED FOR CONCRETE: <input type="checkbox"/> YES <input type="checkbox"/> NO	DATE:
Supervisor:	DATE:
SURVEY:	DATE:
QC Inspector:	DATE:
Client QA Inspector: *	DATE:
* Notified of Pending placement?	DATE/TIME

Concrete Placement Notes / Parameters

PLACEMENT DATE:
START / FINISH PLACEMENT TIME:
WEATHER CONDITIONS / AMBIENT TEMP:
METHOD OF PLACING:
CONCRETE PROVIDER / MIX NUMBER:

SPECIFICATION REQUIREMENTS:	CONCRETE SLUMP:	MAX TEMPERATURE:	AIR:
-----------------------------	-----------------	------------------	------

NUMBER OF SAMPLE SETS / CYLINDERS REQUIRED:
FINISH SURFACE REQUIRED:
CURING REQUIREMENTS:

 Crossfire LLC 820 Airport Road, Durango CO 81303	Document Source: CROSSFIRE CONSTRUCTION QUALITY MANUAL	
	Document Title: QUALITY NON-CONFORMANCE REPORT	Document Revision Date: 5 August 2015
	Document No. CFQC-QNCR	Approved By: QUALITY CONTROL

To be completed by Originator – Submit Report to Corporate Quality Control Manager

Job Number:		Client/ Job	
Originator:		Title:	
Date of Non-Conformance:		Date Submitted:	
Non-Conforming Item			

Describe Root Cause(s) of Non-Conformance(s) or Potential Quality Problem(s):

Immediate Actions taken:

Safety Concerns (if any) Associated with Quality Problem(s):

Suggested Action(s) to be taken:

To be completed by Corporate Quality Control Manager

Non-Conformance Quality Report #:	Date Opened:	
Action Form #:	Assigned To:	
	Date Actions Form Submitted:	
Action Type Assigned: Corrective <input type="checkbox"/> Preventive <input type="checkbox"/> No Action Taken <input type="checkbox"/>		
<small>Corrective is when a problem has occurred. Preventive is before a problem happens. Improvement makes a process more efficient or improves product or service.</small>		

To be completed by Corporate Management Representative

Corporate Quality Control Manager:		Date Closed:	
------------------------------------	--	--------------	--

19219-602-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-11-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR - S.U.P.	

Metric units yes no

Material Type REINFORCING STEEL	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 602	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

REINFORCING STEEL INSTALLED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE STEEL MILLS ARE ON THE QML. ALL MILL TEST REPORTS ARE ATTACHED. REINFORCING STEEL WAS INSTALLED AND PAID AS FOLLOWS:

ITEM	PLAN QTY	FINAL QTY	
613	1700 lbs	1666	PAID AS ORIGINAL AMOUNT OF 1700LBS
601	2917	2749	
604	80	105	PAID AS ORIGINAL AMOUNT OF 3,530 LBS
608	492	643	
609	41	56	

APL/QML Acceptance: APL Ref. No. QML Report Dated 7/23/2017	Product name: REINFORCING STEEL (CMC Steel Group MISC)	Date checked: 7/26/2017
APL/QML Acceptance: APL Ref. No. QML Report Dated 7/23/2017	Product name: REINFORCING STEEL (NUCOR STEEL PLYMOUTH)	Date checked: 7/26/2017

Preliminary Construction Maintenance Emergency Date needed

Contractor CROSSFIRE, LLC	Supplier NUCOR & CMC
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented **SEE ABOVE** Previous quantity **0** Total quantity to date **SEE ABOVE**

Sample submitted: Yes No Shipped specified quantity to: Central lab Region lab Via Date

Sampled or inspected by (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro/Res./Mails. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT - DAVIS EN. SVC.	Residency



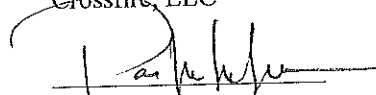
CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

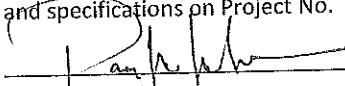
Date: 07/26/2017
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code: 19219

The following material was selected from the CDOT Qualified Manufacturers List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 602-00000
QML Fabricated Structural Materials: Steel Reinforcing Bars & Steel Dowel Bars
Qualified Manufacturer:
1. CMC Steel Group Mesa
11444 E. German Road
Mesa, AZ 85212
2. Nucor Steel Plymouth
P.O. Box 100
Plymouth, UT 84330

Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC

Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 3,530 LBS (quantity and units) of pay item: 602-00000 Reinforcing Steel ALTERNATE 1 AMOUNT (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219

Contractor
Date 01/26/18

CERTIFICATE OF COMPLIANCE
BUY AMERICA ACT & AMERICAN IRON & STEEL

NIMTHOR, INC.
dba H&H BOLT / ROCKY MOUNTAIN REBAR
686 INDUSTRIAL BLVD., DELTA, CO 81416
PHONE # (970) 874-8001 or (970) 874-8443 / FAX # (970) 874-8002

RMR JOB #: 5648

CONTROL CODE(S): 41X, 434

JOB NAME: PINON CAUSEWAY RET WALLS, PAGOSA SPRINGS, CO

CONTRACTOR: CROSSFIRE LLC

REBAR PRODUCER: BLACK REBAR - NUCOR STEEL OR CMC STEEL

Size:	Heat Numbers:	CMC:
	NUCOR: ✓	
#3/10 Bar	16207389, 17202996 ✓	
#4/13 Bar	17104183, 17101255, 17200506, 17104192 ✓	
#5/16 Bar	171200716 ✓	4067162 ✓
#6/19 Bar		
#7/22 Bar		
#8/25 Bar		
#9/29 Bar		
#10/32 Bar		
#11/36 Bar		

Rocky Mountain Rebar certifies that this material has been produced and fabricated in accordance with applicable specifications unless otherwise noted below. All manufacturing & fabrication processes occurred in the USA and in accordance with the Buy America Act. The above products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

AUTHORIZED SIGNATURE:


Detrie A. Young / Office Manager

DATE: 07/17/17

CERTIFICATE OF COMPLIANCE
BUY AMERICA ACT & AMERICAN IRON & STEEL

NIMTHOR, INC.
dba H&H BOLT / ROCKY MOUNTAIN REBAR
686 INDUSTRIAL BLVD., DELTA, CO 81416
PHONE # (970) 874-8001 or (970) 874-8443 / FAX # (970) 874-8002

RMR JOB #: 5648

CONTROL CODE(S): 44L

JOB NAME: PINON CAUSEWAY RET WALLS, PAGOSA SPRINGS, CO

CONTRACTOR: CROSSFIRE LLC

REBAR PRODUCER: BLACK REBAR - NUCOR STEEL OR CMC STEEL

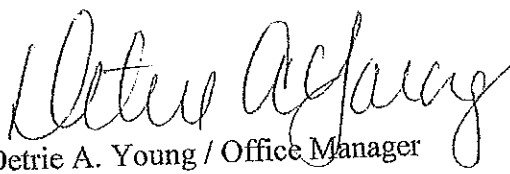
Size: Heat Numbers: CMC:
NUCOR:

#3/10 Bar
#4/13 Bar
#5/16 Bar
#6/19 Bar
#7/22 Bar
#8/25 Bar
#9/29 Bar
#10/32 Bar
#11/36 Bar

4066591 ✓

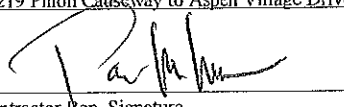
Rocky Mountain Rebar certifies that this material has been produced and fabricated in accordance with applicable specifications unless otherwise noted below. All manufacturing & fabrication processes occurred in the USA and in accordance with the Buy America Act. The above products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

AUTHORIZED SIGNATURE:


Detrie A. Young / Office Manager

DATE: 07/21/17

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 3,530 lbs (quantity and units) of pay item 002-0000 Reinforcing Steel (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.


Contractor Rep. Signature

8/1/17
Date

CERTIFICATE OF COMPLIANCE
BUY AMERICA ACT & AMERICAN IRON & STEEL

NIMTHOR, INC.
dba H&H BOLT / ROCKY MOUNTAIN REBAR
686 INDUSTRIAL BLVD., DELTA, CO 81416
PHONE # (970) 874-8001 or (970) 874-8443 / FAX # (970) 874-8002

RMR JOB #: 5600

CONTROL CODE(S): 3YF

JOB NAME: PAGOSA CAGES, CDOT STE C480-008

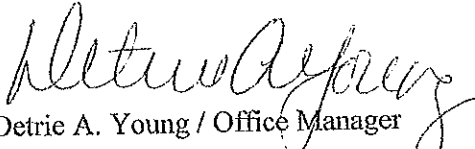
CONTRACTOR: ONE TOUCH ELECTRIC

REBAR PRODUCER: BLACK REBAR - NUCOR STEEL OR CMC STEEL

Size:	Heat Numbers: NUCOR:	CMC:
#3/10 Bar		
#4/13 Bar	17101255 ✓	4065117 ✓
#5/16 Bar		
#6/19 Bar		
#7/22 Bar		
#8/25 Bar	16028763 ✓	
#9/29 Bar		
#10/32 Bar		
#11/36 Bar		

Rocky Mountain Rebar certifies that this material has been produced and fabricated in accordance with applicable specifications unless otherwise noted below. All manufacturing & fabrication processes occurred in the USA and in accordance with the Buy America Act. The above products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

AUTHORIZED SIGNATURE:

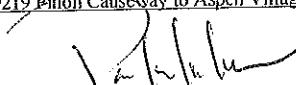

Detrie A. Young / Office Manager

DATE: 08/04/17

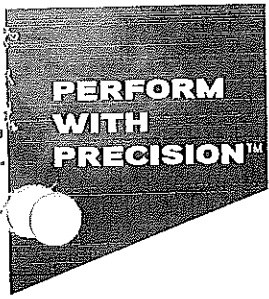
For 613-4-0012 Light Standard Foundation (Special)

Additive Items Amount →

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 1,700 lbs (quantity and units) of pay item 602-00000 Reinforcing Steel (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

Date 8/8/17



August 31, 2017

RE: Item #13208 - A21-X Flat Tie 8" Wall (Standard)
Item #13212 - A21-X Flat Tie 12" Wall (Standard)

Dear Sir/Madam,

This is to certify that the above referenced product(s) are Melted and Manufactured in the U.S.A. out of domestic material, and produced by Dayton Superior Corporation, in accordance with Dayton Superior's standard specifications.

These products meet the Buy American criterion.

All materials will conform to the load values and physical dimensions as published in the appropriate Dayton Superior Handbook.

The product(s) were produced in Elk Grove Village, Illinois, a Dayton Superior manufacturing facility.

Please let us know if we can be of further service.

Sincerely,

Jonathan D Southgate-Sands
Director of Quality & Operational Excellence
Dayton Superior Corporation

TL

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents <u>AS Needed</u> (quantity and units) of pay item <u>602-0000 Reinforcement Steel</u> (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number <u>19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008</u> .	
	<u>01/26/18</u>
Contractor Rep. Signature	Date



Dear Sir or madam:

Please accept this letter as certification that all of the coil wire produced at Mar-Mac Wire out of black annealed wire is drawn, annealed and produced in the USA, and also meets ASTM 510 and ASTM 853.

14 Gauge	.079" to .081" in Diameter	C1006
15 Gauge	.071" to .073" in Diameter	C1006
16 Gauge	.062" to .064" in Diameter	C1006
16.5 Gauge	.057" to .059" in Diameter	C1006
18 Gauge	.046" to .049" in Diameter	C1006

Dead Soft Annealed

Tensile Range 43,000 psi. to 53,000 psi.

Note: C1006 is a technical reference to the chemical make up of the basic steel and specifically refers to the carbon content.

Sincerely,

Gene Player
Quality Manager



PREMIUM

WHEN YOU DEMAND THE BEST.

Premium Annealed Bar Tie Data Sheet

Standard Requirements:

Mar-Mac Wire Premium Annealed Bar Ties are produced from wire that is drawn, annealed, formed, and packaged in the USA. Premium Bar Ties meet "Buy American" standards. The wire used to produce Mar-Mac Wire Premium Annealed Bar Ties conforms to the ASTM A853 specification. Premium Bar Ties are produced in 14, 15, 16, 16.5, and 17 gauge wire sizes.

Chemical Requirements:

The wire used to produce Mar-Mac Premium Annealed Bar Ties is produced using a C1006 or C1008 grade of steel as specified in ASTM A510 and ASTM A1040.

Physical Requirements:

The wire used to produce the Premium Annealed Bar Ties is annealed in a "dead soft" annealing cycle. The wire used will be annealed to a tensile range of 40,000psi to 54,000psi.

Wire Diameter:

14 Gauge		15 Gauge		16 Gauge		16.5 Gauge		17 Gauge	
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
.079"	.081"	.071"	.073"	.060"	.064"	.057"	.059"	.053"	.055"

Packaging Requirements:

Mar-Mac Wire Premium Annealed Bar Ties are supplied in poly fiber bags and in some cases can be supplied in boxes for 1,000 count products. Premium Annealed Bar Tie products are supplied in 5,000 count bundles, 2,500 count bundles, 4 X 1,000 count bundles, and 5 X 1,000 count bundles.

Mar-Mac Wire, Inc.

229 Mar-Mac Wire Road, McBee, SC 29101 (800) 541-2461 • FAX: (843) 335-6131

Colorado Department of Transportation

Qualified Manufacturers List

Steel Mills Producing Uncoated Reinforcing Steel and Dowel Bars

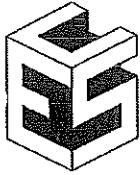
Alton Steel Inc.	#5 Cut Street	Alton	IL	62002
Bayou Steel Group Vinton	I-10 & Vinton Rd.	Vinton	TX	79835
CMC Steel Group Cayce	310 New State Road	Cayce	SC	29033
CMC Steel Group Magnolia	100 Columbia 7-B	Magnolia	AR	71753
→ CMC Steel Group Mesa	11444 E. Germann Rd	Mesa	AZ	85212
CMC Steel Group Seguin	1 Steel Mill Drive	Seguin	TX	78155
Cascade Rolling Mills, Inc.	3200 NE Highway 99W	McMinnville	OR	97128
Evraz Rocky Mountain Steel	1612 East Abriendo Avenue	Pueblo	CO	81004
Gerdau Ameristeel Beaumont	Old Hwy 90	Beaumont	TX	77704
Gerdau Ameristeel Charlotte	6601 Lakeview Road	Charlotte	NC	28269
Gerdau Ameristeel Jackson	801 Gerdau Ameristeel Road	Jackson	TN	38305
Gerdau Ameristeel Jacksonville	Hwy. 217 Yellow Water Road	Baldwin	FL	32234
Gerdau Ameristeel Knoxville	1919 Tennessee Avenue N. W.	Knoxville	TN	37921-2696
Gerdau Ameristeel Midlothian	300 Ward Road	Midlothian	TX	76065
Gerdau Ameristeel Sayreville	North Crossman Road	Sayreville	NJ	08872
Gerdau Ameristeel St. Paul	1678 Red Rock Road	St. Paul	MN	55119
Keystone Steel & Wire Co.	7000 S W Adams St.	Peoria	IL	61641
Mid American Steel and Wire	1327 Smiley Road	Madill	OK	73446
Nucor Steel - Norfolk, Nebraska	2911 E Nucor Rd	Norfolk	NE	68701
Nucor Steel Auburn	25 Quarry Road	Auburn	NY	13021
Nucor Steel Birmingham	2301 F. L. Shuttlesworth Drive	Birmingham	AL	35234
Nucor Steel Connecticut	35 Toelles Road	Wallingford	CT	06492
Nucor Steel Jackson	3630 Fourth Street	Jackson	MS	39232
Nucor Steel Jewett	P.O. Box 126	Jewett	TX	75846
Nucor Steel Kankakee	One Nucor Way	Bourbonnais	IL	60914
Nucor Steel Kingman	3000 West Old Highway 66	Kingman	AZ	86413
Nucor Steel Marion	912 Cheney Avenue	Marion	OH	43302
→ Nucor Steel Plymouth-Utah	PO Box 100	Plymouth	UT	84330
Nucor Steel Seattle	2424 SW Andover	Seattle	WA	98106
Nucor Steel South Carolina	300 Steel Mill Road	Darlington	SC	29540

Note 1: The listed steel mills are the only qualified manufacturers that are approved to supply non-coated deformed and plain bar stock to the field, epoxy coaters, galvanizers, or fabricators.

Note 2: In accordance with the Special Notice to Contractors, a Certified Test Report (CTR) will be required for all reinforcing steel and dowel bars, coated or not, delivered to a CDOT project.

Note 3: Specific information on the current qualification process, guidance in the certification, and annual re-certification is located in CP 11, Part II, Sub-Part 1 of the CDOT Field Materials Manual.

PICK TICKET



**CONCRETE
EQUIPMENT &
SUPPLY, LLC**

107 Parker Ave.
Durango, CO 81303-7919
Phone: (970)375-0900
Phone: Fax: (970)375-7762

Customer Copy	
Number	158764
Date	07/17/2017
Page	1

Ship To: TEMP	CROSSFIRE, LLC 1800 HUGHES LANDING BLVD. SUITE 500 THE WOODLANDS, TX 77380	Bill To: 31800	CROSSFIRE, LLC 1800 HUGHES LANDING BLVD. SUITE 500 THE WOODLANDS, TX 77380
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REFERENCE #	ORDERED	REQUESTED	SLSP	TERMS	WH	FREIGHT	SHIP VIA
PINON	07/17/17	ASAP	DKH	DUE IN 30 DAYS	02	BILLED	CPU

ITEM	DESCRIPTION	ORDERED	SHIP	BACK	UM	WEIGHT	LOC
Ordered By 6613102-D	PAUL MARTIN DGO 2" X 4" X 16' WOOD - FI Price: 7.850 EA Ext: 235.50	30	30		EA	512.1	
6613098	DGO 2" X 8" X 16' WOOD - FI Price: 14.660 EA Ext: 146.60	10	10		EA	341.4	
60M16DUP	16D BRIGHT DUPLEX NAIL 50 LB Price: 62.082 BX Ext: 62.08	1	1		BX	50.0	
60-C1006	#9X 3 CONST SCREW T25 10LB 10 LB GRIP-RITE Price: 33.375 EA Ext: 33.38	1	1		EA	10.0	
571111	16GA TIE WIRE 3.5# MAR MAC MAR MAC Price: 6.093 RL Ext: 243.72	40	40		RL	140.0	
7710000	3/4" X 10' WOOD CHAMFER Price: .155 FT Ext: 46.50	300	300		FT	10.5	
60B4F5	4D BRIGHT FINISH NAIL 5 LB Price: 11.362 BX Ext: 11.36	1	1		BX	5.0	
0452208	8" STD X-FLAT TIES Price: .374 EA Ext: 56.10	150	150		EA	43.2	
6974116	20' X 100' CLEAR POLY 4 MIL Price: 82.160 RL Ext: 82.16	1	1		RL	38.0	

XTENSION TOT: 917.40 (LESS TAX + FRT) TOTAL WEIGHT: 1150.2
 *****NO RETURNS ON SPECIAL ORDER ITEMS*****

Rocky Mountain Rebar

686 Industrial Blvd.
Delta, CO 81416
(970) 874-8443 - FAX (970) 874-8002

23172 13348
07-Jul-17 15:41

PAK
16
100

JOB NUMBER 5648	RELEASE NUMBER 1	PAGE 1
JOB NAME PINON CAUSEWAY RET WALLS		CC 41X
CUSTOMER CROSSFIRE LLC		BY PAK

GRADE 60	REFERENCE	DRAWING NUMBER 1	DESCRIPTION RETAINING WALLS
-------------	-----------	---------------------	--------------------------------

ITEM	QTY	SIZE	LENGTH	MARK	TYPE	WEIGHT	A	B	C	D	E	F/R	G	H	J	K	O	BC	
1	CROSSFIRE LLC (PAUL MARTIN) paul.martin@crossfire-llc.com																		
2	cell 970-749-6474 office 970-828-2864																		
3																			
4	50 ea 3" Dohies																		
5	Description																		
6	WALL W/ MOMENT SLAB																		
7																			
8	2	5	3-02	508	17			0-10	2-04										H03
9	4	5	3-01	507	17			0-10	2-03										H03
10	4	5	3-00	506	17			0-10	2-02										H03
11	2	5	2-11	505	17			0-10	2-01										H03
12																			
13	12	5	3-02																
14	24																		
15																			
16	2	4	3-00	404	17			0-08	2-04										H02
17	4	4	2-11	403	17			0-08	2-03										H02
18	4	4	2-10	402	17			0-08	2-02										H02
19	2	4	2-09	401	17			0-08	2-01										H02
20																			
21	14	4	10-00																
22	12	4	3-02																
23	38																		
24																			
25	Description																		
26	WALL W/ W SPREAD FOOTING																		
27																			
28	84	5	5-11	509	17			0-10	5-01										H03
29																			
30	84	5	4-02																
31	168																		
32																			
33	84	4	5-09	410	17			0-08	5-01										H02
34																			
35	54	4	30-00																
36	84	4	4-02																
37	222																		
38																			
39																			
40	TOTAL WEIGHT:						2,751 LBS												
41																			
42																			
43	LONGEST LENGTH:						30-00												
44																			
45																			
46	v16.02.074																		
47																			
48																			
49																			
50																			
51																			
52																			
53																			

← THIS BAR WAS #4 INSTEAD OF #5 THE CORRECT BAR IS LISTED ON BAR LIST 7-21-17 #5

JD VIRTUA
7-4-17 AM
7-13-17
ROEIO

© 1987 ASA & UNLICENSED REPRODUCTION PROHIBITED

Rocky Mountain Rebar

686 Industrial Blvd.
Delta, CO 81416
(970) 874-8443 - FAX (970) 874-8002
3487 Pinon 133490

Pinon

7

JOB NUMBER 5648	RELEASE NUMBER 2	PAGE 1
JOB NAME PINON CAUSEWAY RET WALLS		CC 434
CUSTOMER CROSSFIRE LLC		BY PAK

12-Jul-17 11:41 GRADE 60 REFERENCE DRAWING NUMBER DESCRIPTION MISC ITEMS (ADDED 7-12-17)

ITEM	QTY	SIZE	LENGTH	MARK	TYPE	WEIGHT	A	B	C	D	E	FIR	G	H	J	K	O	BC		
1		Description																		
2		MISC ADDED ITEMS																		
3																				
4	3	4	10-06	4003	F2		0-042	2-02	2-082	2-02	2-082		0-042						L11	
5	9	4	4-09	4001	17			0-10	2-072	1-04									H05	
6	12	4	3-09	4002	17			0-10	2-01	0-10									H05	
7																				
8	6	4	7-08																	
9	18	4	1-04																	
10	48																			
11																				
12	98	3	20-00																	
13	20	3	1-02																	
14	110																			
15																				
16																				
17	TOTAL WEIGHT:						873	LBS												
18	-----																			
19																				
20	LONGEST LENGTH:						20-00													
21	-----																			
22	v16.02.074																			
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JD VAVRENA
7-13-17
20810

Rocky Mountain Rebar

686 Industrial Blvd.

Delta, CO 81416

(970) 874-8443 - FAX (970) 874-8002

4 3/8

JOB NUMBER

5648

RELEASE NUMBER

3

PAGE

1

JOB NAME

PINON CAUSEWAY RET WALLS

CC

44L

CUSTOMER

CROSSFIRE LLC

BY

MSB

003520 133528

-Jul-17 08:43

GRADE
60

REFERENCE

DRAWING NUMBER

DESCRIPTION

REPLACEMENT BARS

M	QTY	SIZE	LENGTH	MARK	TYPE	WEIGHT	A	B	C	D	E	F/R	G	H	J	K	O	BC	
1	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2	PAUL	970	-828	-2864															
3	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
5	84	5	5-11	509	17			0-10	5-01										NO
10	LONGEST LENGTH: 5-11																		
21	02.070																		
6	4	5	5-11	509															
7																			
8																			
9																			
10	4	5	4-2																
11																			
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33																			

They cut up #5

They used tying formula work

3 5 4-0 best bars

*7-1-17
7-21-12
CF White Ford*

Rocky Mountain Rebar

686 Industrial Blvd.
Delta, CO 81416
(970) 874-8443 - FAX (970) 874-8002

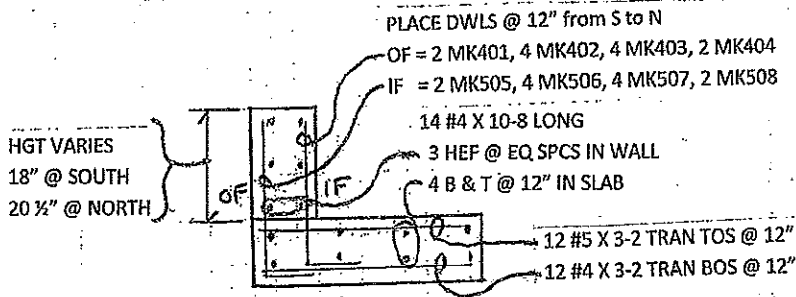
BB
4/11

JOB NUMBER 5600	RELEASE NUMBER 1	PAGE 1
JOB NAME PAGONA CAGES (34 EA)		CC JYP
CUSTOMER ONE TOUCH ELECTRIC, INC		BY MSB

GRADE 60	REFERENCE	DRAWING NUMBER	DESCRIPTION 34 EA CAGES
-------------	-----------	----------------	----------------------------

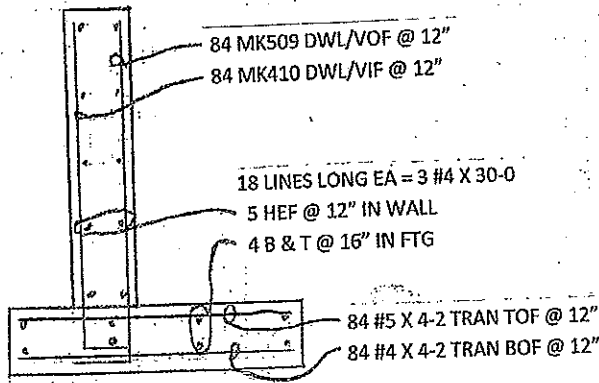
ITEM	QTY	SIZE	LENGTH	MARK	TYPE	WEIGHT	A	B	C	D	E	F/R	G	H	J	K	O	BC
1	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2	DICK	970-560	5041															
3	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
4	240	EA	2.0/4.0	PS	PLASTIC	SPACE	WHEELS	2.0"	CLEAR									
5	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
6																		
7																		
8	272	5	4-04															
9	3	5	4-00	SAMPLE														
10	275																	
11																		
12	204	3	6-09	300	TS				5-023				1-06				1-02	
13																		
14																		
15	BEST LENGTH:		083															
16																		
17																		
18	02.075																	
19																		
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8'95"
08 04 11
ET 15



WALL W/ MOMENT SLAB

11 LF REQD



WALL W/ SPREAD FOOTING

83 LF REQD

FIELD TRIM WALL REINF AS NEEDED IF WALL HGT < 4-6

BENT BAR LIST

Size	Left EP	Right EP	Length	Bar Mark	V	Bend Shape	A	B	C
5			5-11	509		17		0-10	5-01
6			3-02	508		17		0-10	2-04
5			3-01	507		17		0-10	2-03
5			3-00	506		17		0-10	2-02
5			2-11	505		17		0-10	2-01
4			5-08	410		17		0-08	5-01
4			3-00	404		17		0-08	2-04
4			2-11	403		17		0-08	2-03
4			2-10	402		17		0-08	2-02
4			2-08	401		17		0-08	2-01

C TYPE 17
 B

Rocky Mountain Rebar
 686 Industrial Blvd, Delta, CO 81416
 (970) 874 - 8443

Job: PINON CAUSEWAY

Contractor: CROSSFIRE LLC

Location: PAGOSA SPRINGS, CO

Part: RETAINING WALLS

By: PAK

Date: 7-5-17

Job #: 5648

DWG #: 1

NUCOR

**NUCOR CORPORATION
NUCOR STEEL UTAH**

**Mill Certification
12/15/2016**

MTR #: U1-3629
PO Box 1
7285 West 21200 Nor
PLYMOUTH, UT 843
(435) 458-23
Fax: (435) 458-23

Sold To: H&H BOLT & SUPPLY
DBA ROCKY MOUNTAIN REBAR
686 INDUSTRIAL BLVD
DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY
686 INDUSTRIAL BLVD
686 INDUSTRIAL BLVD
DELTA, CO 81416
(970) 874-8001
Fax: (970) 874-8002

Customer P.O.	25969	Sales Order	270251.1
Product Group	Rebar	Part Number	900000107204200
Grade	ASTM A615/A615M-14 GR 60[420] AASHTO M31-07	Lot #	PL1620738951
Size	10/#3 Rebar	Heat #	PL16207389 ✓
Product	10/#3 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-555555
Description	A615M GR 420 (Gr60)	Load Number	U1-362963
Customer Spec		Customer Part #	MULTJOB

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 10/30/2016 Melt Date: 10/20/2016 Qty Shipped LBS: 15,792 Qty Shipped Pcs: 700

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.39%	0.90%	0.010%	0.048%	0.20%	0.26%	0.08%	0.12%	0.024%	0.0022%	0.001%

Yield 1: 64,798psi

Tensile 1: 99,648psi

Elongation: 15% in 8"(% in 203.3mm)

Bend OK

Weight Variation -003.5%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
TR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL.
2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

Ryan Pennington
Division Metallurgist

Sold To: H&H BOLT & SUPPLY INC
 DBA ROCKY MOUNTAIN REBAR
 686 INDUSTRIAL BLVD
 DELTA, CO 81416

Ship To: H&H BOLT & SUPPLY INC
 686 INDUSTRIAL BLVD
 DELTA, CO 81416
 (970) 874-8001
 Fax: (970) 874-8002

Customer P.O.	26107	Sales Order	280423.1
Product Group	Rebar	Part Number	900000102404202
Grade	ASTM A615/A615M-16 GR 60 AASHTO M31-15	Lot #	PL1720299651
Size	10/#3 Rebar	Heat #	PL17202996 ✓
Product	10/#3 Rebar 2K 20' A615M GR420 (Gr60)	B.L. Number	U1-568540
Description	A615M GR 420 (Gr60)	Load Number	U1-376191
Customer Spec		Customer Part #	RB3 20 4202

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 4/30/2017 Melt Date: 4/21/2017 Qty Shipped LBS: 46,690 Qty Shipped Pcs: 6,210

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.40%	0.94%	0.011%	0.047%	0.22%	0.30%	0.09%	0.20%	0.032%	0.0022%	0.001%

Elongation: 16% in 8" (% in 203.3mm)

Yield 1: 69,637psi

Tensile 1: 107,819psi

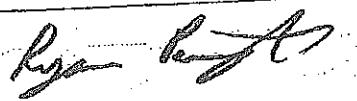
Bend OK

Weight Variation -002.7%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
 MTR COMPLIES WITH DIN EN 10204 - 3.1

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Ryan Pennington
 Division Metallurgist

NUCOR
NUCOR CORPORATION
NUCOR STEEL UTAH

Mill Certification
6/15/2017

MTR #: U1-379
 PO Box
 7285 West 21200 N
 PLYMOUTH, UT 84
 (435) 458-2
 Fax: (435) 458-2

Sold To: H&H BOLT & SUPPLY INC
 DBA ROCKY MOUNTAIN REBAR
 686 INDUSTRIAL BLVD
 DELTA, CO 81416

Ship To: H&H BOLT & SUPPLY INC
 686 INDUSTRIAL BLVD
 DELTA, CO 81416
 (970) 874-8001
 Fax: (970) 874-8002

Customer P.O.	26092	Sales Order	282684.1
Product Group	Rebar	Part Number	900000137204200
Grade	ASTM A615/A615M-16 GR 60 AASHTO M31-15	Lot #	PL1710418351
Size	13/#4 Rebar	Heat #	PL17104183 ✓
Product	13/#4 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-572407
Description	A615M GR 420 (Gr60)	Load Number	U1-379728
Customer Spec		Customer Part #	RB4 60 4200

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 6/3/2017 Melt Date: 5/29/2017 Qty Shipped LBS: 7,936 Qty Shipped Pcs: 198

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.39%	1.14%	0.019%	0.032%	0.22%	0.29%	0.08%	0.21%	0.020%	0.0024%	0.001%

Elongation: 12% in 8" (% in 203.3mm)

Yield 1: 66,896psi

Tensile 1: 103,259psi

Bend OK

Weight Variation 000.0%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL.
 MTR COMPLIES WITH DIN EN 10204 - 3.1

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Bryden Morris
 Division Metallurgist

Sold To: H&H BOLT & SUPPLY
 DBA ROCKY MOUNTAIN REBAR
 DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY
 686 INDUSTRIAL BLVD
 686 INDUSTRIAL BLVD
 DELTA, CO 81416
 (970) 874-8001
 Fax: (970) 874-8002

Customer P.O.	25969	Sales Order	273919.2
Product Group	Rebar	Part Number	900000137204200
Grade	ASTM A615/A615M-14 GR 60[420] AASHTO M31-07	Lot #	PL1710125551
Size	13/#4 Rebar	Heat #	PL17101255 ✓
Product	13/#4 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-561636
Description	A615M GR 420 (Gr60)	Load Number	U1-369037
Customer Spec		Customer Part #	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 2/19/2017 Melt Date: 2/17/2017 Qty Shipped LBS: 31,744 Qty Shipped Pcs: 792

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.39%	1.20%	0.012%	0.044%	0.17%	0.25%	0.11%	0.16%	0.029%	0.0022%	0.000%

Yield 1: 78,020psi

Tensile 1: 113,742psi

Elongation: 13% in 8" (% in 203.3mm)

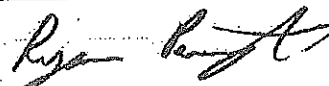
Bend OK

Weight Variation -005.2%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
 MTR COMPLIES WITH DIN EN 10204 - 3.1

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Ryan Pennington
 Division Metallurgist

Sold To: H&H BOLT & SUPPLY
 DBA ROCKY MOUNTAIN REBAR
 686 INDUSTRIAL BLVD
 DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY
 686 INDUSTRIAL BLVD
 686 INDUSTRIAL BLVD
 DELTA, CO 81416
 (970) 874-8001
 Fax: (970) 874-8002

Customer P.O.	25969	Sales Order	272285.3
Product Group	Rebar	Part Number	900000133604200
Grade	ASTM A615/A615M-14 GR 60[420] AASHTO M31-07	Lot #	PL1720050651
Size	13/#4 Rebar	Heat #	PL17200506 ✓
Product	13/#4 Rebar 30' A615M GR420 (Gr60)	B.L. Number	U1-559627
Description	A615M GR 420 (Gr60)	Load Number	U1-363928
Customer Spec		Customer Part #	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 1/23/2017 Melt Date: 1/20/2017 Qty Shipped LBS: 35,712 Qty Shipped Pcs: 1,782

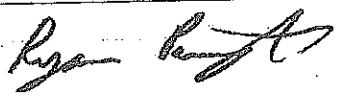
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.41%	1.13%	0.011%	0.046%	0.22%	0.26%	0.08%	0.11%	0.018%	0.0028%	0.000%

Yield 1: 68,139psi Tensile 1: 105,538psi Elongation: 15% in 8"(% in 203.3mm)
 Bend OK Weight Variation 000.0%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
 MTR COMPLIES WITH DIN EN 10204 - 3.1

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Ryan Pennington
 Division Metallurgist

Sold To: H&H BOLT & SUPPLY INC
DBA ROCKY MOUNTAIN REBAR
686 INDUSTRIAL BLVD
DELTA, CO 81416Ship To: H&H BOLT & SUPPLY INC
686 INDUSTRIAL BLVD
DELTA, CO 81416
(970) 874-8001
Fax: (970) 874-8002

Customer P.O.	26092	Sales Order	282684.1
Product Group	Rebar	Part Number	900000137204200
Grade	ASTM A615/A615M-16 GR 60 AASHTO M31-15	Lot #	PL1710419251
Size	13/#4 Rebar	Heat #	PL17104192 ✓
Product	13/#4 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-573121
Description	A615M GR 420 (Gr60)	Load Number	U1-379729
Customer Spec		Customer Part #	RB4 60 4200

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 6/3/2017 Melt Date: 5/29/2017 Qty Shipped LBS: 15,872 Qty Shipped Pcs: 396

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.40%	1.13%	0.012%	0.034%	0.22%	0.33%	0.11%	0.19%	0.034%	0.0021%	0.001%

Yield 1: 72,998psi

Tensile 1: 110,348psi

Elongation: 12% in 8"(% in 203.3mm)

Bend OK

Weight Variation -004.5%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
CMTR COMPLIES WITH DIN EN 10204 - 3.1

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Bryden Morris

Division Metallurgist

Sold To: H&H BOLT & SUPPLY
 DBA ROCKY MOUNTAIN REBAR
 DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY
 686 INDUSTRIAL BLVD
 686 INDUSTRIAL BLVD
 DELTA, CO 81416
 (970) 874-8001
 Fax: (970) 874-8002

Customer P.O.	25969	Sales Order	273919.2
Product Group	Rebar	Part Number	900000137204200
Grade	ASTM A615/A615M-14 GR 60[420] AASHTO M31-07	Lot #	PL1710125551
Size	13/#4 Rebar	Heat #	PL17101255 ✓
Product	13/#4 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-561636
Description	A615M GR 420 (Gr60)	Load Number	U1-369037
Customer Spec		Customer Part #	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 2/19/2017 Melt Date: 2/17/2017 Qty Shipped LBS: 31,744 Qty Shipped Pcs: 792

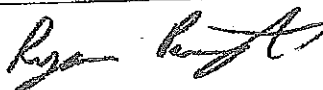
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.39%	1.20%	0.012%	0.044%	0.17%	0.25%	0.11%	0.16%	0.029%	0.0022%	0.000%

Yield 1: 78,020psi Tensile 1: 113,742psi Elongation: 13% in 8"(% in 203.3mm)
 Bend OK Weight Variation -005.2%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
 OR COMPLIES WITH DIN EN 10204 - 3.1

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Ryan Pennington
 Division Metallurgist

NUCOR
NUCOR CORPORATION
NUCOR STEEL UTAH

Mill Certification
1/30/2017

MTR #: U1-36-
 PO Box
 7285 West 21200 N
 PLYMOUTH, UT 84-
 (435) 458-
 Fax: (435) 458-

Sold To: H&H BOLT & SUPPLY
 DBA ROCKY MOUNTAIN REBAR
 686 INDUSTRIAL BLVD
 DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY
 686 INDUSTRIAL BLVD
 686 INDUSTRIAL BLVD
 DELTA, CO 81416
 (970) 874-8001
 Fax: (970) 874-8002

Customer P.O.	25969	Sales Order	272285.6
Product Group	Rebar	Part Number	900000167204200
Grade	ASTM A615/A615M-15 GR 60[420] AASHTO M31-07	Lot #	PL1720071651
Size	16/#5 Rebar	Heat #	PL17200716 ✓
Product	16/#5 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-559149
Description	A615M GR 420 (Gr60)	Load Number	U1-364604
Customer Spec		Customer Part #	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 1/30/2017 Melt Date: 1/28/2017 Qty Shipped LBS: 8,010 Qty Shipped Pcs: 128

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.41%	1.12%	0.014%	0.043%	0.18%	0.30%	0.09%	0.15%	0.021%	0.0033%	0.001%

Elongation: 16% in 8" (% in 203.3mm)

Yield 1: 63,234psi

Tensile 1: 100,922psi

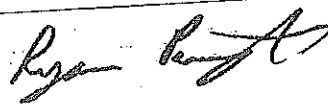
Bend OK

Weight Variation 000.0%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
 MTR COMPLIES WITH DIN EN 10204 - 3.1

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Ryan Pennington
 Division Metallurgist

Sold To: H&H BOLT & SUPPLY
 DBA ROCKY MOUNTAIN REBAR
 686 INDUSTRIAL BLVD
 DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY
 686 INDUSTRIAL BLVD
 686 INDUSTRIAL BLVD
 DELTA, CO 81416
 (970) 874-8001
 Fax: (970) 874-8002

Customer P.O.	25969	Sales Order	270888.4
Product Group	Rebar	Part Number	900000257204200
Grade	ASTM A615/A615M-14 GR 60[420] AASHTO M31-07	Lot #	PL1620876301
Size	25/#8 Rebar	Heat #	PL16208763 ✓
Product	25/#8 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-555419
Description	A615M GR 420 (Gr60)	Load Number	U1-361728
Customer Spec		Customer Part #	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 12/14/2016 Melt Date: 12/12/2016 Qty Shipped LBS: 16,020 Qty Shipped Pcs: 100

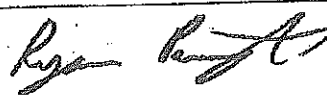
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.41%	1.16%	0.011%	0.037%	0.21%	0.21%	0.09%	0.10%	0.023%	0.0027%	0.000%

Yield 1: 63,948psi Tensile 1: 102,239psi Elongation: 16% in 8"(% in 203.3mm)
 Bend OK Weight Variation -004.9%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
 MILL COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL.
 2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.



Ryan Pennington
 Division Metallurgist



CMC STEEL ARIZONA
11444 E. GERMANN RD.
MESA AZ 85212-9700

CERTIFIED MILL TEST REPORT

For additional copies call
830-372-8771

We hereby certify that the test results presented here
are accurate and conform to the reported grade specification

Jacob Selzer
Jacob Selzer - CMC Steel AZ

Quality Assurance Manager

HEAT NO.: 4067162 ✓ SECTION: REBAR 16MM (#5) 60'0" 420/60 GRADE: ASTM A615-16 Gr 420/60 ROLL DATE: 06/14/2017 MELT DATE: 06/14/2017 Cert. No.: 82108605 / 067162F002	S Rocky Mountain Rebar O L 686 Industrial Blvd D Delta CO US 81416-2812 T 9708748001 O 9708748002	S CPU Mesa Non Taxable H I 11444 E Germann Rd P Mesa AZ US 85212-9700 T 999 999 9999 O	Delivery#: 82108605 BOL#: 1522552 CUST PO#: 26091 CUST P/N: DLVRY LBS / HEAT: 24532.000 LB DLVRY PCS / HEAT: 392 EA
---	---	--	--

Characteristic	Value	Characteristic	Value	Characteristic	Value
C	0.32%	Elongation test 1	14%		
Mn	0.92%	Elongation Gage Lgth test 1	8IN		
P	0.013%	Bend Test Diameter	2.188IN		
S	0.029%	Bend Test 1	Passed		
Si	0.20%	Rebar Deformation Avg. Spaci	0.398IN		
Cu	0.31%	Rebar Deformation Avg. Heigh	0.038IN		
Cr	0.18%	Rebar Deformation Max. Gap	0.129IN		
Ni	0.20%	Uniform Elongation	9.2%		
Mo	0.040%				
V	0.001%				
Cb	0.000%				
Sn	0.012%				
Al	0.000%				
N	0.0000%				
Carbon Eq A6	0.55%				
Yield Strength test 1	87.8ksi				
Yield Strength test 1 (metri	606MPa				
Tensile Strength test 1	109.0ksi				
Tensile Strength 1 (metric)	752MPa				
				The Following is true of the material represented by this MTR: *Material is fully killed *100% melted and rolled in the USA *EN10204:2004 3.1 complaint *Contains no weld repair *Contains no Mercury contamination *Manufactured in accordance with the latest version of the plant quality manual *Meets the "Buy America" requirements of 23 CFR635.410	

REMARKS :
THIS MATERIAL WAS TESTED ACCORDING TO ASTM A370 METHOD A9



CMC STEEL ARIZONA
 11444 E. GERMANN RD.
 MESA AZ 85212-9700

CERTIFIED MILL REPORT

For additional copies call
 830-372-8771

We hereby certify that the test results presented here are accurate and conform to the reported grade specification

Jacob Selzer
 Jacob Selzer - CMC Steel AZ

Quality Assurance Manager

HEAT NO.: 4066591 ✓ SECTION: REBAR 16MM (#5) 60'0" 420/60 GRADE: ASTM A615-16 Gr 420/60 ROLL DATE: 05/25/2017 MELT DATE: 05/25/2017 Cert. No.: 82108604 / 066591F002	S Rocky Mountain Rebar O L 686 Industrial Blvd D Delta CO US 81416-2812 T 9708748001 O 9708748002	S CPU Mesa Non Taxable H I 11444 E Germann Rd. P Mesa AZ US 85212-9700 T 999 999 9999 O	Delivery#: 82108604 BOL#: 1522551 CUST PO#: 26091 CUST P/N: DLVRY LBS / HEAT: 12266.000 LB DLVRY PCS / HEAT: 196 EA
---	---	---	--

Characteristic	Value	Characteristic	Value	Characteristic	Value
C	0.32%	Elongation test 1	11%		
Mn	0.91%	Elongation Gage Lgth test 1	8IN		
P	0.011%	Bend Test Diameter	2.188IN		
S	0.030%	Bend Test 1	Passed		
Si	0.20%	Rebar Deformation Avg. Spaci	0.401IN		
Cu	0.31%	Rebar Deformation Avg. Heigh	0.037IN		
Cr	0.11%	Rebar Deformation Max. Gap	0.131IN		
Ni	0.10%	Uniform Elongation	7.9%		
Mo	0.028%				
V	0.001%				
Cb	0.000%				
Sn	0.011%				
Al	0.001%				
N	0.0128%				
Carbon Eq A6	0.52%				
Yield Strength test 1	94.0ksi				
Yield Strength test 1 (metri	649MPa				
Tensile Strength test 1	112.0ksi				
Tensile Strength 1 (metric)	773MPa				
				The Following is true of the material represented by this MTR: *Material is fully killed *100% melted and rolled in the USA *EN10204:2004 3.1 complaint *Contains no weld repair *Contains no Mercury contamination *Manufactured in accordance with the latest version .of the plant quality manual *Meets the "Buy America" requirements of 23 CFR635.410	

REMARKS :
 THIS MATERIAL WAS TESTED ACCORDING TO ASTM A370 METHOD A9



CMC STEEL ARIZONA
11444 E. GERMANN RD.
MESA AZ 85212-9700

CERTIFIED MILL TEST REPORT
For additional copies call
830-372-8771

We hereby certify that the test results presented here are accurate and conform to the reported grade specification

Jacob Selzer
Jacob Selzer - CMC Steel AZ

Quality Assurance Manager

HEAT NO.:4065117 ✓ SECTION: REBAR 13MM (#4) 60'0" 420/60 GRADE: ASTM A615-16 Gr 420/60 ROLL DATE: 03/31/2017 MELT DATE: 03/31/2017 Cert. No.: 82107564 / 065117F265	S Rocky Mountain Rebar O L 686 Industrial Blvd D Delta CO US 81416-2812 T 9708748001 O 9708748002	S CPU Mesa Non Taxable H I 11444 E Germann Rd P Mesa AZ US 85212-9700 T 999 999 9999 O	Delivery#: 82107564 BOL#: 1522102 CUST PO#: 26091 CUST P/N: DLVRY LBS / HEAT: 37032.000 LB DLVRY PCS / HEAT: 924 EA
--	---	--	--

Characteristic	Value	Characteristic	Value	Characteristic	Value
C	0.25%	Elongation test 1	15%	The Following is true of the material represented by this MTR: *Material is fully killed *100% melted and rolled in the USA *EN10204:2004 3.1 complaint *Contains no weld repair *Contains no Mercury contamination *Manufactured in accordance with the latest version of the plant quality manual *Meets the "Buy America" requirements of 23 CFR635.410	
Mn	0.84%	Elongation Gage Lgth test 1	8IN		
P	0.011%	Bend Test Diameter	1.750IN		
S	0.025%	Bend Test 1	Passed		
Si	0.19%	Rebar Deformation Avg. Spaci	0.334IN		
Cu	0.28%	Rebar Deformation Avg. Heigh	0.025IN		
Cr	0.11%	Rebar Deformation Max. Gap	0.144IN		
Ni	0.12%	Uniform Elongation	8.3%		
Mo	0.037%				
V	0.000%				
Cb	0.000%				
Sn	0.013%				
Al	0.000%				
N	0.0172%				
Carbon Eq A6	0.44%				
Yield Strength test 1	92.1ksi				
Yield Strength test 1 (metri	635MPa				
Tensile Strength test 1	106.0ksi				
Tensile Strength 1 (metric)	731MPa				

EMARKS :
THIS MATERIAL WAS TESTED ACCORDING TO ASTM A370 METHOD A9

19219-602-2

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region 5	Field sheet # 266294
Contract ID 19219	Date Submitted 3-21-18
Project No. STE C480-008	
Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type REINFORCING STEEL - SMOOTH ^{BAR} DOWELS	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 602	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

SMOOTH DOWEL BARS WERE INSTALLED AND FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE STEEL IS FROM AN APPROVED MANUFACTURER LISTED ON THE QML, THE MILL TEST REPORT IS ATTACHED. THE MATERIAL WAS PAID INCIDENTAL TO ITEMS 608 & 609.

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)
Sample ID (#6)	

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
Emergency <input type="checkbox"/>	Date needed	

Contractor CROSSFIRE, LLC	Supplier NUCOR
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented AS NEEDED	Previous quantity 0	Total quantity to date AS NEEDED
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via
		Date

Sampled or inspected by (print name) CUFTON UEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MICHAEL DAVIS, PE	Title PRESIDENT - DES	Residency

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer



Certificate of Compliance Letter

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date: 2/20/2018
Project Number: STE C480-008
Project Code & Name: 19219 Pinon Causeway to Aspen Village
Manufacturer's Name: R&S Steel
Manufacturing facility Address: 2189 River Rd, Grand Junction, CO 81505
Laboratory Name and Address: 2189 River Rd, Grand Junction, CO 81505
Product Name or Assembly: Hot Rolled Round Smooth Bar
Description of Material: 1/2" Smooth Bar
Model, Catalog, Stock Number: Heat # 16200987
Lot / batch number: Lot # 1620098751
Date or Frequency of Lab Testing: Testing done based on ASTM A36
Applicable Specifications: The material above has been reviewed according to subsection 608 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

Item 609-219012 Concrete Curb Ramp (Special), 133.25 S.F.
Item 609-219010 Curb & Gutter Type 2 (2in) (Special), 25.5 L.F.
Item 609-219010 Curb & Gutter Type 2 (2in) (Special), 50.5 L.F.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Needed (quantity and units) of pay item See to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

3/16/18
Date

CERTIFICATE OF COMPLIANCE

BUY AMERICAN ACT & AMERICAN IRON & STEEL

NIMTHOR, INC.

dba H&H BOLT / ROCKY MOUNTAIN REBAR

686 INDUSTRIAL BLVD., DELTA, CO 81416

PHONE # (970) 874-8001 or (970) 874-8443 / FAX # (970) 874-8002

RMR JOB #: 4861

CONTROL CODE(S): 2V6

JOB NAME: STOCK


CONTRACTOR: CONCRETE EQUIPMENT & SUPPLY, DURANGO, CO

HOT ROLLED ROUND SMOOTH BAR SUPPLIER: R&S STEEL, GJ, CO

SIZE	PRODUCER:	HEAT #:	PRODUCER:	HEAT #:
1/4				
3/8				
1/2	NUCOR	16200987		
5/8				
3/4				
7/8				
1				

Rocky Mountain Rebar certifies that this material has been produced and fabricated in accordance with applicable specifications unless otherwise noted below. All manufacturing & fabrication processes occurred in the USA and in accordance with the Buy American Act. The above products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

AUTHORIZED SIGNATURE:


Detrie A. Young / Office Manager

DATE: 10/12/16

Item 608-00012 Concrete Curb Ramp (Special), 133.25 S.F.
Item 609-21900 Curb & Gutter Type 2 (12 in) (Special), 25.5 L.F.
Item 609-21900 Curb & Gutter Type 2 (18 in) (Special), 50.5 L.F.

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents AS Needed (quantity and units) of pay item See to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

3/16/18
Date

ROUND BAR A-36/A 529 GR50
1/2 X 20

PO/REL GJC-25860/
HEAT: PL16200987

BL GJC-14312-1 7/18/2016
Order GJC-21636-1 Page:1

NUCOR
NUCOR CORPORATION
NUCOR STEEL TITAN

Mill Certification
5/18/2016

MTR #: U1-344817
PO BOX 2300
7285 West 21200 North
PLYMOUTH UT 84302
435-458-2300
Fax: (435) 458-2309

Sold To: R&S STEEL INC
PO BOX 21119
HOUSTON, TX 77228-1119

Ship To: R & S STEEL INC
UP ROYDALE TRACK 706
TRUCKS DELIVER TO 3811 JOLIET
DENVER 303-321-9860
ROYDALE, CO 80221
(877) 421-9660
Fax: (303) 227-3347

Customer P.O.	DEN-11295	Sales Order	258906.12
Product Group	Merchant Bar Quality	Part Number	3000050024004WD
Grade	A36/A529GR50/CSA44W/50W	Lot #	PL1620098751
Size	1/2" (.5000) Round	Heat #	PL16200987
Product	1/2" (.5000) Round 20' A36/A529-50/44W/50W	B.L. Number	U1-536268
Description	A36/A529-50/44W/50W	Load Number	U1-344817
Customer Spec		Customer Part #	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 3/10/2016 Mill Date: 2/18/2016 Qty Shipped LBS: 8,230 Qty Shipped Pcs: 616

ASTM A36/A36M-12, A709/709M-13 GR36, ASME SA36-10 Ed '11 Ad,
ASME SA36-2010 EDITION-2011 ADDENDA
ASTM A709/A709M-13 GR 36 [250]

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.18%	0.74%	0.013%	0.030%	0.18%	0.23%	0.08%	0.11%	0.025%	0.0018%	0.000%

Yield 1: 53,333psi

Tensile 1: 73,642psi

Elongation: 24% in 8" (% in 203.3mm)

Yield 2: 52,816psi

Tensile 2: 73,234psi

Elongation 25% in 8" (% in 203.3mm)

Weight Variation 000.0%

Specification Comments: MEETS THE REQUIREMENTS OF: ASTM A36/A36M-12, A529/A529-05 GR50, CSA G40.21-04
GR44W(300W)&GR50W(350W) AASHTO M270/M270M-12 GR36(270), ASME SA36/SA36M-07

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL
CMTR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL.
2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

DDA

Ryan Pennington
Division Metallurgist

TRAUTNER GEOTECH

GEOTECHNICAL ENGINEERING, MATERIAL TESTING
AND ENGINEERING GEOLOGY

August 23, 2017

Ms. Liz Collins
AMEC Foster Wheeler
9177 Sky Park Court
San Diego, CA 92123-4341

Phone: 858-514-6427

Ms. Collins,

Please find enclosed the following samples:

- 3 pieces of reinforcing steel - #5 bar from CMC Steel Arizona
- 3 pieces of reinforcing steel - #4 bar from Nucor Steel Utah

Please test at least 2 bars from each set in accordance with ASTM A 370. Please include the following information on your report.

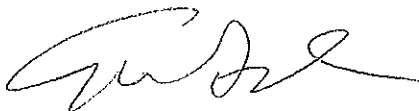
Project Name: PCW to AV - SUP
Project No: CDOT Project No: STE C480-008 / 19219

The invoice and test results shall be sent to the following address attention Gina Denten.

Trautner Geotech
95 Henry Street
Cortez, CO 81321
gdenten@trautnergeotech.com

If you have any questions or concerns, please do not hesitate to call me at 970-259-5095.

Thank you,



Gina Denten
Materials Testing Manager



9177 Sky Park Court, San Diego, CA 92123
 Phone: 858-278-3600 Fax: 858-278-5300

PHYSICAL PROPERTIES OF REINFORCING STEEL
ASTM A615/A615M A706/A706M

PROJECT: PCW to AV-SUP	LAB NO.: 31001 & 31002	JOB NO.: 5015-15-0037.01
CDOT Project # STE C480-008 / 19219	SAMPLED BY:	DATE:
	SUBMITTED BY:	DATE:
	AUTHORIZED BY: G. Denten	DATE: 08/23/17
	TESTED BY: J. Iacovera	DATE: 08/29/17
SOURCE: Nucor & CMC	REVIEWED BY: L. Collins	REPORT DATE: 08/29/17
FABRICATOR:		

SPECIFICATIONS

Specifications	ASTM A615/A615M Grade 60	ASTM A706/A706M
Tensile Strength, min. psi	90,000	80,000
Yield Strength, min. psi	60,000	60,000
Yield Strength, max. psi	--	78,000
Elongation in 8 in., min %		
Bar No. 3	9	14
4, 5, 6	9	14
7, 8	8	12
9, 10	7	12
11	7	12
14, 18	7	10

Bar designation No.	Nominal Cross-Sectional Area Per ASTM A615/A615M and A706/A706M (in. ²)
3	0.11
4	0.20
5	0.31
6	0.44
7	0.60
8	0.79
9	1.00
10	1.27
11	1.56
14	2.25
18	4.00

TEST RESULTS

Lab No.	31001	31002							
Heat No.	*	*							
Type	A615	A615							
Size of bar	5	4							
Grade	60	60							
Wt. lbs.	*	*							
Mill	CMC	Nucor							
Elongation	13	14							
Yield, lbs.	21,670	13,610							
Yield, PSI	69,900	68,100							
Tensile, lbs.	34,375	21,425							
Tensile, PSI	110,900	107,100							
Bend T285	OK	OK							
Pass / Fail	Pass	Pass							
Unit Wt. (lb/ft)	0.99	0.63							

REMARKS: *Indicates information was not submitted with test samples
 Distribution:

Reviewed by:

David C. Wilson,
 Senior Professional

19219-603-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region	5	Field sheet #	266289
	Contract ID	19219	Date Submitted	3-11-18
	Project No.	STE C480-008		
	Project Location	PINON CAUSEWAY TO ASPEN VILLAGE DR.-S.U.P.		
	Metric units	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no	

Material Type	CSP & SEG		Field Lab phone	Cell Phone
Material Code (LIMS)	Item	Class	Grading	Special Provisions <input type="checkbox"/> yes
	603			
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):		<input type="checkbox"/> CDOT Form #633 (sack)	<input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

CORRUGATED STEEL PIPE & STEEL END SECTIONS INSTALLED IN THE PROJECT WERE FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE MANUFACTURER'S COC AND CERTIFIED TEST REPORTS FOR EACH HEAT NUMBER ARE ATTACHED; THE FOLLOWING ITEMS WERE INSTALLED:

TYPE	SIZE	PLAN QUANTITY	FINAL QUANTITY
CSP	8 IN	58.5 LF	58.5 LF
CSP	12 IN.	57 LF	57 LF
CSP	18 IN.	43 LF	43 LF
SES	8 IN.	5 EA	5 EA
SES	12 IN.	6 EA	6 EA
User ID	SES	15 IN	4 EA
	SES	10 IN	4 EA

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
	Emergency <input type="checkbox"/>	Date needed

Contractor	CROSSFIRE, LLC	Supplier	CONTECH/WINWATER
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name or owner	

Quantity represented	SEE TABLE ABOVE	Previous quantity	0	Total quantity to date	SEE TABLE ABOVE
----------------------	-----------------	-------------------	---	------------------------	-----------------

Sample submitted:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to:	<input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
-------------------	---	--------------------------------	--	-----	------

Sampled or Inspected by (print name)	CLIFTON LEE, PE	Title	PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supl.) (print name)	MIKE DAVIS PE	Title	PRESIDENT- DAVIS ENG. SVC.	Residency



Date: 7/17/2017

BOL# 12274804

SUPPLIERS CERTIFICATE OF COMPLIANCE

FOR

MATERIALS FURNISHED FOR STATE AND FEDERAL AID HIGHWAY PROJECTS

PROJECT NO: STE C480-008

PROJECT LOCATION: Pagosa Springs Colorado

CONTRACTOR: Grand Junction Winwater Works Co.

MANUFACTURER: CONTECH ENGINEERED SOLUTIONS

Item	Type	Coating	Gage	Diameter	Length	QTY	Total	Unit	Manufacturer	Heat #	Notes
Pipe	1 1/4"x1/2"	Galvanized	16	8"	20	4	80	EA	AK Steel	565536	
End Sections	2 2/3"x1/2"	Galvanized	16	12"		4	4	EA	Steel Dynamics	B603543	
Pipe	2 2-3"x1/2"	Galvanized	16	12"	20	2	40	EA	USS/Posco	067764	
Pipe	2 2-3"x1/2"	Galvanized	16	12"	20	1	20	EA	USS/Posco	067719	
Pipe	2 2-3"x1/2"	Galvanized	16	18"	20	2	40	EA	USS/Posco	067719	
Pipe	2 2-3"x1/2"	Galvanized	16	18"	10	1	10	EA	USS/Posco	067737	
End Section	2 2-3"x1/2"	Galvanized	16	15"		1	1	EA	Steel Dynamics	B515727	
End Section	2 2-3"x1/2"	Galvanized	16	18"		4	4	EA	Steel Dynamics	41619540	
Dimple Band	2 2-3"x1/2"	Galvanized	16	12"		1	1	EA	AK Steel		
Dimple Band	2 2-3"x1/2"	Galvanized	16	18"		1	1	EA	AK Steel	7592410	
End Section	2 2-3"x1/2"	Galvanized	16	12"		2	2	EA	Worthington Steel	11430367	

WE HEREBY CERTIFY THAT THE ABOVE MATERIAL(S) FURNISHED TO: Grand Junction Winwater Works Co.
 MEET THE REQUIREMENTS OF AASHTO M218 M36 AND NMDOT 570 AS INDICATED
 BY THE ATTACHED TEST DATA. BY SIGNING THIS CERTIFICATE OF COMPLIANCE, IT CERTIFIES THAT
 THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I AM IN A POSITION TO
 LEGALLY BIND THE MANUFACTURER OR SUPPLIER OF THE MATERIAL.

MADE IN THE U.S.A. WITH AMERICAN MADE STEEL. (23 CFR 635.410) "BUY AMERICA"

SIGNED: Don Kohler

POSITION: Plant Manager

Date: 7/17/2017

Crossfire's Certificate of Test Report
Certification statement on Back
→

GRAND JUNCTION
Winwater
COMPANY

7/19/2017

Contractor: Crossfire LLC
Project: Pinon Causeway to Aspen Village Shared Use Path Project
Project #: STE C480-008
Reference Order #: 044606-00

This letter is to certify that we supplied Crossfire LLC 8" through 18" CMP Pipe, End Sections and Bands on the above referenced project. The 8" through 18" CMP Pipe, End Sections and Bands was manufactured in accordance to the attached certification of compliance.

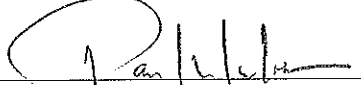
- 8" 16 Gage Galvanized Coated Corrugated Metal Pipe
Quantity - 80'
- 12" 16 Gage Galvanized Coated Corrugated Metal Pipe
Quantity - 60'
- 18" 16 Gage Galvanized Coated Corrugated Metal Pipe
Quantity - 50'
- 12" 16 Gage Galvanized Coated Corrugated Metal Pipe End Section
Quantity - 6ea
- 15" 16 Gage Galvanized Coated Corrugated Metal Pipe End Section
Quantity - 1ea
- 18" 16 Gage Galvanized Coated Corrugated Metal Pipe End Section
Quantity - 4ea
- 12" 16 Gage Galvanized Coated Corrugated Metal Pipe Band
Quantity - 1ea
- 18" 16 Gage Galvanized Coated Corrugated Metal Pipe End Sections
Quantity - 1ea

Please contact me with any questions.

Casey Kenney

Sales Manager
Grand Junction Winwater
819 21 1/2 Road
Grand Junction CO, 81505
Ph: 970-255-9015
Fax: 970-255-9018

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents see to the right (quantity and units) of pay item see to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

8/01/17
Date

603-10080, 8 inch, CSP, 58.5 L.F.
603-10120, 12 inch, CSP, 57.0 L.F.
603-10180, 18 inch, CSP, 43.0 L.F.
603-XXXXX, 8 inch, E.S., 5 each
603-30012, 12 inch, E.S., 6 each
603-30015, 15 inch, E.S., 1 each
603-30018, 18 inch, E.S., 4 each

819 21-1/2 ROAD BLDG A
GRAND JUNCTION, CO 81505

Fax: 970-255-9018

To - CROSSFIRE LLC
820 AIRPORT RD
DURANGO, CO 81303-8854
970-884-4869

Ship To - CROSSFIRE LLC
HIGHWAY 160 AND ALPHA DRIVE
JD 970-442-1318
PAGOSA SPRINGS, CO 81147

PACKING LIST

CKENNE

Date - 7/18/17
Page - 1
Time - 15.03.39
Customer No. - 1749

Order No. - 044606-00

THANKS FOR YOUR BUSINESS! * NON-STOCK ITEMS ARE NON RETURNABLE

Shipped - 7/18/17 Date Ordered - 7/13/17 Date Requested - 7/13/17 Date Printed - 7/18/17
ed By - Ordered By - GABE Cust. Order # - 501401447
Via - GJWW Salesman # - 050 Job Name - PINON CAUSEWAY SHARED USE PATH
ght - .00 Taken By - CASEY

Original Order	Shipped	In On B/O	Hold	UM	Description/Stock Number	Line No.	Bin Location	Extended Weight	Freight Class	No. of Packages
80	80				FT 8X20 CMP 16GA 466800820	1.0				
60	60				FT 12X20 CMP 16GA 466801220	2.0	A10-A04			
40	40				FT 18X20 CMP 16GA 466801820	3.0	A10-A03			
10	10				FT 18X10 CMP 16GA 0651181016	4.0	A10-A01			
20	20				FT 15X20' SOLID N-12 WT/IB PIPE 0674N15650020IB	5.0	A08-A06			
20	20				FT 18X20' SOLID N-12 WT/IB PIPE 0674N18650020IB	6.0	A08-A07			
		5			EA 8 CMP FLARED END SECTION *00305016577	7.0				
6	6				EA 12 CMP FLARED END SECTION 466800012	8.0	A10-A06			
1	1				EA 15 CMP FLARED END SECTION 466800015	9.0	A10-A06			
4	4				EA 18 CMP FLARED END SECTION 466800018	10.0	A10-A06			
1	1				EA 12 CMP DIMPLE BAND 466801012	11.0	A10-A05			
1	1				EA 18 CMP DIMPLE BAND 466801018	12.0	A10-A05			
1		1			EA 1515AA 15 N-12 WT BELL CPLG 0674AA1515	13.0				
1	1				EA 1815AA 18 ADS WT CPLG 0674AA1815	14.0	A07-A04			
3		3			EA NEENAH R-4216-B BEEHIVE GRATE *00305016578	15.0				
1	1				EA RX1200 13.1'X164' GEOGRID RX1200 236.16 SY PER ROLL 458738377	16.0				

END OF PACKING LIST

: You agree that the sale of these products/services is subject to all of our standard terms and conditions of sale located at www.winsupplyinc.com/tcsale

Customer Signature: _____

** MATERIAL RECEIVED IN GOOD CONDITION **

Received, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading



Steel Dynamics®
Flat Roll Group
Columbus Division

400 N STEEL RD COLUMBUS, MS 39701

SHIP TO: CONTECH C/O OLYMPIC STEEL
625 XENIUM LANE NORTH
PLYMOUTH, MN 55441

LOAD #: **S588526** DATE: **04/18/16**
CARRIER (SCAC): **CPUT**
(NAME): **CUSTOMER PICK UP**
VEHICLE I.D.

SOLD TO: CONTECH ENGINEERED SOLUTIONS LL
9025 CENTRE POINTE DRIVE
WEST CHESTER, OH 45069

Pcs	PRODUCT TYPE	ORDERED		P.O. No.	TAG ID.	WEIGHT
		GAUGE	WIDTH			
1	HOT DIPPED GALVANIZED	.0570	38.0000	000344274-1	187381-A01 6S01989002	30,260
Heat: B515727 LFT: 4354 OD: 64 C: .03 Mn: .22 P: .010 S: .001 Si: .02 Material Spec: AASHTO M218-3 ASTM 929-07 Cu: .07 Sn: .0030 Ni: .04 Cr: .04 Mo: .010 Part #: COESGV1638 Al: .028 N: .0073 V: .001 Nb: <.001 Ti: .001 Alt Prt PKCD: C130 B: <.0001 Ca: .0020 Cust Ref: 301037 Type: P Y: 47.2 T: 58.1 R: 34 Loc: UKN 01 Coat Wgt: G200						

1	TOTALS	Page 1 of 1	30,260
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DELIVERY INSTRUCTIONS:

FREIGHT: PREPAID EXCEPT WHEN INDICATED HERE COLLECT

SHIPPER: MSP

per: _____

LOADING INSTRUCTIONS:

OMS:

CUSTOMER PICK UP

Received in good condition, EXCEPT AS NOTED. Shortages or damaged material must be clearly noted on this page and signed for by the customer and the driver at time of delivery.

LOADED BY: _____

Subject to Section 1 of the Conditions of Applicable Bill of Lading, if this shipment is to be delivered to the consignee without recourse on the consignor, he shall sign the following statement. The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

Per: MSP

Consignee Signature: _____

Consignee Printed Name: _____

EXCEPTIONS: _____

Permanent Post Office address of shipper:
MSP
400 N STEEL RD
COLUMBUS, MS 39701

MELTED AND MANUFACTURED IN THE USA

White - Original-Not Negotiable Yellow - Consignee Copy Pink - Carrier Copy



AK Steel Corporation
Metallurgical Test Report
Middletown Works
1801 Crawford St.
Middletown, OH 45043 U.S.A.

Page 1

Load No. 9813260
 Srm No. 9813260

C
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CONTECH ENGINEERED SOLUTIONS
 9025 CENTRE POINTE DR
 S1E 400
 WEST CHESTER, OH 45069

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P

CONTECH ENGINEERED SOLUTIONS
 C/O PRECISION STRIP
 4400 OXFORD STATE ROAD
 MIDDLETOWN, OH 45044

MILL ORDER NO. 241331-4809 PROCESSOR ORDER NO. PO000366097-1 BUYERS ORDER NO. PO000366097-1

PART NO.
 CO2GVL16M

ENGLISH UNITS --PRODUCT-- METRIC UNITS
 .0570 MIN 54.9060 X COIL

LIFT ID	PIECE	HEAT	PARENT LIFT ID	NET WEIGHT	OUTSIDE PROCESSOR ID
435511-04	1	565536	435511-04	56,530 LBS. 25,642 KG.	423129300
TOTAL LIFTS	TOTAL PIECES			TOTAL NET WEIGHT	
1	1			56,530 LBS. 25,642 KG.	

L=Ladle Analysis of Heat P=Product Analysis of Parent Coil

CHEMICAL ANALYSIS

ID	C	MN	P	S	SI	CU	AL	CB	V	NI	CR	TI	N	MO	SN	B
L 565536	.039	.18	.011	.010	.004	.026	.042	.001	.001	.010	.025	.000	.0015	.003	.006	.0001
ID	CA															
L 565536	.0002															

SHIPPING DATE: 02/08/2017

REMARKS

MELTED AND MANUFACTURED IN THE USA

ALL MANUFACTURING PROCESSES FOR THIS STEEL HAVE OCCURED IN THE UNITED STATES THIS STEEL WAS MELTED AT MIDDLETOWN,OH

PRODUCT DESCRIPTION

ZINGGRIP(R) GALV SHT FLAT CULV MIN SPANGLE CHEM TREATED DRY TEST REPORTS AASHTO M218-03 ASTM A929/929M-01 (AKS CODE V93)

PARENT LIFT ID	POS	DIR (L, T, D)	COND	YIELD STRENGTH (KSI)	TENSILE STRENGTH (KSI)	% ELONG	ELONG METHOD	ELONG GAUGE LENGTH
435511-04	T	L	A.S.T.M	40.2	52.4	38	CALC	2 Inch



AK Steel Corporation
Metallurgical Test Report
Middletown Works
1801 Crawford St.
Middletown, OH 45043 U.S.A.

Page 2

Load No. 9813260
 Srm No. 9813260

C U S T O M E R	CONTECH ENGINEERED SOLUTIONS 9025 CENTRE POINTE DR STE 400 WEST CHESTER OH 45069	S H I P T O	CONTECH ENGINEERED SOLUTIONS C/O PRECISION STRIP 4400 OXFORD STAFF ROAD MIDDLETOWN OH 45044	MILL. ORDER NO. 241331-4809	PROCESSOR ORDER NO. PO000366097-1	BUYERS ORDER NO. PO000366097-1
				PART NO. CO2GV1.16M	ENGLISH UNITS --PRODUCT-- METRIC UNITS .0570 MIN 54.9060 X COIL.	

PARENT LIFT ID	POS	DIR (L, T, D)	COND	CTG WGT TOP E1 (OZ/SQ FT)	CTG WGT TOP E1 (GM/SQ M)	CTG WGT TOP CT (OZ/SQ FT)	CTG WGT TOP CT (GM/SQ M)	CTG WGT TOP E2 (OZ/SQ FT)	CTG WGT TOP E2 (GM/SQ M)	CTG WGT BOT E1 (OZ/SQ FT)	CTG WGT BOT E1 (GM/SQ M)
435511-04	T		A.S.T.M 1.08		331.00	1.05	319.00	1.04	316.00	1.08	331.00
PARENT LIFT ID	POS	DIR (L, T, D)	COND	CTG WGT BOT CT (OZ/SQ FT)	CTG WGT BOT CT (GM/SQ M)	CTG WGT BOT E2 (OZ/SQ FT)	CTG WGT BOT E2 (GM/SQ M)	CTG WGT AVG (OZ/SQ FT)	CTG WGT AVG (GM/SQ M)		
435511-04	T		A.S.T.M 1.05		319.00	1.04	316.00	2.11	644.00		

SIGNED Christopher Carney BY 11182 TRP 05/2/04



Steel Dynamics®
Flat Roll Group
 Columbus Division

1945 Airport Road
 Columbus, MS 39701
 Phone: 662-245-4200
 Fax: 662-245-4297

Metallurgical Certification

Order Number: 312390 Sold To: CONTECH ENGINEERED SOLUTIONS L Ship To: OLYMPIC STEEL
 Order Dimensions: 0.0570X38.0000 (in) (MIN) WEST CHESTER, OH 45069 PLYMOUTH, MN 55441
 Ordered Product: AASHTO M218-3 ASTM 929-07
 PRIME GALV COLD ROLLED SHEET - PRIME
 Part Number: COESGV1638/32
 Alt Part#: Customer PO #: 000345598-1 Load #: S617402 Ship Date: 06/24/2016

Chemical Analysis:

Coil Number:	Heat:	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Ca	C(eq)
214575-A01	B603543	.03	.17	.015	.002	.04	.09	.0050	.04	.07	.010	.044	.0064	.003	.001	.001	<.0001	.0025	.088
16S602513AA	Weight: 9,640 lb.																		

Mechanical Properties:

	English	Metric
Yield Strength	44.0 ksi	304 MPa
Tensile Strength	54.9 ksi	378 MPa
Elongation	39 %	39 %
N-Value	Not Reported	
Hardness - HRBW	Not Reported	
Direction	Longitudinal	
Linear Footage	1,553 ft	473 m
Actual Gauge	.0570 in	1.45 mm
Coating Weight	G200	

We hereby certify the above is correct as contained in the records of the company. All tests performed according to ASTM standard E8, A370, E18, E415, E1019, E646, E517 and E23 (yield strength determined using 0.2% offset method) or JIS Z2241 or DIN EN10325. All heats are Al-killed and Ca treated.

THIS PRODUCT WAS MELTED AND MANUFACTURED IN THE USA

Certified by:	<i>Shobhit</i>
	Shobhit Bhartiya
Certificate Date:	06/24/2016 Galvanize Line Metallurgical Engineer



USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER P0000355618
VEHICLE ID CDS TRANSPORT

MILL ORDER NUMBER NS1153501 TALLY TF038624
SHIP DATE 07-25-2016

SOLD TO: 0036415 022
CONTECH ENGINEERED SOLUTIONS LLC
ATTN ACCOUNTS PAYABLE
9025 CENTRE POINTE DRIVE
SUITE 400
WEST CHESTER, OH 45069-9700

SHIP TO:
CONTECH ENGINEERED SOLUTIONS LLCC
6290 CLERMONT ST
COMMERCE CITY, CO 80022-0000

PREPARED BY MANAGER OF QA

USS-POSCO INDUSTRIES

PREPARED BY THE OFFICE OF:
ERIC BONAVENTURE
MANAGER QA

ON:
DATE 07-22-2016
TIME 10:27:30

SPEC: GALVANIZED SHEETS, ASTM A929-01 ZN/AASHTO M218-03,
REGULAR SPANGLE, CULVERT 2.00 OZ COATING, CHEM
TREAT, NO OIL, THICKNESS TOLERANCE IS BASED ON
ASTM SUPPLEMENTARY REQUIREMENTS,
.0610 NOM BASE METAL THICKNESS
DOMESTIC STEEL ONLY

CERT: THIS IS TO CERTIFY AND GUARANTEE THAT THE MATERIAL
DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED,
AND/OR INSPECTED BY UPI AND MEETS THE REQUIREMENTS
OF THE STATED SPECIFICATION.

NOTE: THE MATERIAL DESCRIBED HEREIN IS BRANDED
ACCORDING TO STATED SPECIFICATIONS INCLUDING:
NAME OF MANUFACTURER, BRAND NAME, SPECIFIED
THICKNESS, COATING TYPE, SPECIFIED COATING WEIGHT,
HEAT NUMBER AND COATING LOT NUMBER.

MATERIAL DESCRIPTION: .0640 NOM X 27.2500
1.63MM NOM X 692MM

HEAT NUMBER	TEST PIECE IDENT	YIELD TENSILE			ELONG.% IN 2 IN 20%MIN	AVG.	
		33KSI MIN.	45KSI MIN.			COAT'G WEIGHT	HRB
087763	LCDC79	40	51	40	2.176	55	
		276MPA	352MPA		664G/M		
087764	074GEH	34	49	39	1.603	56	
		234MPA	338MPA		489G/M		
087768	090GEH	42	52	38	2.041	55	
		290MPA	359MPA		622G/M		
087771	044GFE	47	56	30	2.000	64	
		324MPA	386MPA		610G/M		

HEAT# 087763 SOURCE HEAT# F04956-2015
C=.032, MN=.19, P=.008, S=.007, SI=.007, CU=.03, NI=.01, CR=.03,
MO=.002, AL=.034, N=.004, V=.001, TI=.001, B=.0050

HEAT# 087764 SOURCE HEAT# F04962-2015
C=.038, MN=.20, P=.010, S=.008, SI=.008, CU=.05, NI=.02, CR=.04,
MO=.006, AL=.034, N=.004, V=.001, TI=.001, B=.0040

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER P0000355618

MILL ORDER NUMBER NS1153501 TALLY TF038624



HEAT# 087768 SOURCE HEAT# F05043-2015
C=.038, MN=.20, P=.008, S=.007, SI=.008, CU=.02, NI=.01, CR=.03,
MO=.003, AL=.035, N=.004, V=.001, TI=.001, B=.0040

HEAT# 087771 SOURCE HEAT# R06409-2015
C=.035, MN=.20, P=.008, S=.007, SI=.009, CU=.04, NI=.01, CR=.03,
MO=.003, AL=.033, N=.003, V=.001, TI=.001, B=.0040

PREPARED BY MANAGER OF QA

USS-POSCO INDUSTRIES

MELTED, Poured AND MANUFACTURED IN THE UNITED STATES.

HEAT	SOURCE HEAT
087763	F04956-2015
087764	F04962-2015
087768	F05043-2015
087771	R06409-2015



USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER P0000352214
 VEHICLE ID HUDDY TRANSPORTATION LLC

MILL ORDER NUMBER NS1071801 TALLY TF027748
 SHIP DATE 05-31-2016

SOLD TO: 0036415 035
 CONTECH ENGINEERED SOLUTIONS LLC
 ATTN ACCOUNTS PAYABLE
 9025 CENTRE POINTE DRIVE
 SUITE 400
 WEST CHESTER, OH 45069-9700

SHIP TO:
 CONTECH ENGINEERED SOLUTIONS LLCC
 1224 W. STOCK RD.
 OGDEN, UT 84401-0000

PREPARED BY THE OFFICE OF:
 ERIC BONAVENTURE
 MANAGER QA

ON:
 DATE 05-27-2016
 TIME 14:02:53

PREPARED BY MANAGER OF QA

USS-POSCO INDUSTRIES

SPEC: GALVANIZED SHEETS ASTM A929-01 ZN/AASHTO M218-03,
 REGULAR SPANGLE CULVERT 2.00 OZ COATING, CHEM
 TREAT, NO OIL
 .0760 NOM BASE METAL THICKNESS
 DOMESTIC STEEL ONLY

CERT: THIS IS TO CERTIFY AND GUARANTEE THAT THE MATERIAL
 DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED,
 AND/OR INSPECTED BY UPI AND MEETS THE REQUIREMENTS
 OF THE STATED SPECIFICATION.

NOTE: THE MATERIAL DESCRIBED HEREIN IS BRANDED
 ACCORDING TO STATED SPECIFICATIONS INCLUDING:
 NAME OF MANUFACTURER, BRAND NAME, SPECIFIED
 THICKNESS, COATING TYPE, SPECIFIED COATING WEIGHT,
 HEAT NUMBER AND COATING LOT NUMBER.

MATERIAL DESCRIPTION: .0790 NOM X 27.1250
 2.01MM NOM X 689MM

HEAT NUMBER	TEST PIECE IDENT	YIELD TENSILE ELONG.%			AVG.	
		33KSI MIN.	45KSI MIN.	IN 2 IN 20%MIN	COAT'G WEIGHT	HRB
087719	105GDE	47	53	36	2.438	56
		324MPA	365MPA		744G/M	
087727	106GDE	47	52	35	2.598	56
		324MPA	359MPA		792G/M	
	061GB8	46	52	33	2.247	59
		317MPA	359MPA		685G/M	

HEAT#
 087719 C=.036, MN=.21, P=.008, S=.007, SI=.010, CU=.03, NI=.01, CR=.04,
 MO=.004, AL=.034, N=.004, V=.001, TI=.001, B=.0050

HEAT#
 087727 C=.039, MN=.20, P=.009, S=.008, SI=.008, CU=.04, NI=.02, CR=.03,
 MO=.005, AL=.040, N=.003, V=.001, TI=.001, B=.0040

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER P0000352214

MILL ORDER NUMBER NS1071801 TALLY TF027748



POURED AND MANUFACTURED IN THE UNITED STATES.

HEAT SOURCE HEAT
087719 F04950-2015

087727 F04960-2015

PREPARED BY MANAGER OF QA

A handwritten signature in dark ink, appearing to read 'E. B. A.', is written over the printed name.

USS-POSCO INDUSTRIES



USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER P0000356568
VEHICLE ID A & M TRANSPORT

MILL ORDER NUMBER NS1171601 TALLY TF042499
SHIP DATE 08-10-2016

SOLD TO: 0036415 003
CONTECH ENGINEERED SOLUTIONS LLC
ATTN ACCOUNTS PAYABLE
9025 CENTRE POINTE DRIVE
SUITE 400
WEST CHESTER, OH 45069-9700

SHIP TO:
CONTECH ENGINEERED SOLUTIONS LLCC
C/O SPAN-ALASKA TRANSPORTATION, INC
3815 W. VALLEY HWY N.
AUBURN, WA 98001-0000

PREPARED BY THE OFFICE OF:
REBECCA ZIMBRA
MANAGER QA

ON:
DATE 08-09-2016
TIME 13:24:50

PREPARED BY TAPALE UP SA
Rebecca Zimbra
USS-POSCO INDUSTRIES

SPEC: GALVANIZED SHEETS, ASTM A929-01 ZN/AASHTO M218-03,
REGULAR SPANGLE, CULVERT 2.00 OZ COATING, CHEM
TREAT, NO OIL, THICKNESS TOLERANCE IS BASED ON
ASTM SUPPLEMENTARY REQUIREMENTS,
.1060 NOM BASE METAL THICKNESS
DOMESTIC STEEL ONLY

CERT: THIS IS TO CERTIFY AND GUARANTEE THAT THE MATERIAL
DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED,
AND/OR INSPECTED BY UPI AND MEETS THE REQUIREMENTS
OF THE STATED SPECIFICATION.

NOTE: THE MATERIAL DESCRIBED HEREIN IS BRANDED
ACCORDING TO STATED SPECIFICATIONS INCLUDING:
NAME OF MANUFACTURER, BRAND NAME, SPECIFIED
THICKNESS, COATING TYPE, SPECIFIED COATING WEIGHT,
HEAT NUMBER AND COATING LOT NUMBER.

MATERIAL DESCRIPTION: .1090 NOM X 26.7500
2.77MM NOM X 679MM

HEAT NUMBER	TEST PIECE IDENT	YIELD TENSILE ELONG.%			AVG.	
		33KSI MIN.	45KSI MIN.	IN 2 IN 20%MIN	COAT'G WEIGHT	HRB
087737	052GEH	39	49	37	2.608	55
		269MPA	338MPA		795G/M	
087743	GMHL48	45	56	26	2.720	68
		310MPA	386MPA		830G/M	
087777	103GGC	44	54	31	3.321	67
		303MPA	372MPA		1013G/M	

HEAT# 087737 SOURCE HEAT# F05041-2015
C=.040, MN=.20, P=.007, S=.006, SI=.009, CU=.02, NI=.01, CR=.03,
MO=.003, AL=.036, N=.005, V=.001, TI=.001, B=.0050

HEAT# 087743 SOURCE HEAT# R06412-2015
C=.038, MN=.20, P=.006, S=.007, SI=.012, CU=.04, NI=.01, CR=.02,
MO=.003, AL=.037, N=.004, V=.001, TI=.001, B=.0040

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER P0000356568

MILL ORDER NUMBER NS1171601 TALLY TF042499



HEAT# 087777 SOURCE HEAT# R06466-2015
C=.046, MN=.21, P=.008, S=.008, SI=.007, CU=.03, NI=.01, CR=.03,
MO=.003, AL=.036, N=.004, V=.001, TI=.001, B=.0050

MELTED, Poured AND MANUFACTURED IN THE UNITED STATES.

HEAT	SOURCE HEAT
087737	F05041-2015
087743	R06412-2015
087777	R06466-2015

PREPARED BY MANAGER OF QA
[Signature]
USS POSCO INDUSTRIES



1945 Airport Road
 Columbus, MS 39701
 Phone: 662-245-4200
 Fax: 662-245-4297

Metallurgical Certification

Order Number: 301037
 Order Dimensions: 0.0570X38.0000 (in)
 Ordered Product: AASHTO M218-3 ASTM 929-07
 HOT DIPPED GALVANIZED - PRIME
 Part Number: COESGV1638

Sold To: CONTECH ENGINEERED SOLUTIONS L Ship To: CONTECH C/O OLYMPIC STEEL
 WEST CHESTER, OH 45069 PLYMOUTH, MN 55441

Alt Part#: Customer PO #: 000344274-1 Load #: S588526 Ship Date: 04/18/2016

Chemical Analysis:

Coil Number:	Heat:	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Ca	C(eq)
187381-A01	B515727	.03	.22	.010	.001	.02	.07	.0030	.04	.04	.010	.028	.0073	.001	<.001	.001	<.0001	.0020	.090
6S01989002	Weight: 30,260 lb.																		

Mechanical Properties:	English	Metric
Yield Strength	47.2 ksi	325 MPa
Tensile Strength	58.1 ksi	400 MPa
Elongation	34 %	34 %
N-Value	Not Reported	
Hardness - HRBW	Not Reported	
Direction	Longitudinal	
Linear Footage	4,354 ft	1,327 m
Actual Gauge	.0538 in	1 mm
Coating Weight	G200	
Coating W. Triple S.	2.04 OZ/SqFt	623 g/m2

We hereby certify the above is correct as contained in the records of the company. All tests performed according to ASTM standard E8, A370, E18, E415, E1019, E646, E517 and E23 (yield strength determined using 0.2% offset method) or JIS Z2241 or DIN EN10325. All heats are Al-killed and Ca treated.

THIS PRODUCT WAS MELTED AND MANUFACTURED IN THE USA

Certified by:	
	Shobhit Bhartiya
Certificate Date:	04/18/2016 Galvanize Line Metallurgical Engineer



CHEMICAL/PHYSICAL CERTIFICATION

4500 County Road 59
Butler, IN 46721 USA
Telephone (260) 868-8000
Fax (260) 868-8955

S
H
I
P
T
O

Olympic Steel Inc. - T - MN
625 Xenium Lane North
Minneapolis, MN 55441 United States

S
O
L
D
T
O

Contech Engineered Solutions
LLC
9025 Centre Pointe Drive
Suite 400
West Chester, OH 45069 United States
EDI Contact

Order #	Line Item #	Coil #	Heat #	PO #	Part #	Material Specification
573899	2	16G389947	41619540	P000351542	COESGV1646	ASTM A 929 - 01(1)
Width	Gauge	Length	Coil Weight	Product Description		
46.000 in	0.0570 in - Min	4,682 ft	44,380 lbs	Prime Galv Hot Rolled Sheet		
1,168.4 mm	1.448 mm - Min	1,428 m	20,149 kg	G210/G210		
Chem Treat: Yes		Oiled: No				
				Operator	Center	Drive
				2.0996771	2.3741989	2.1956291

Ladle Chemical Analysis %

C	Mn	P	S	Si	Al	Cu	Ni	Cr	Mo	Sn	N	V	Nb	Ti	B	Ca	Pb	Zr
0.03	0.22	0.010	0.002	0.03	0.029	0.11	0.04	0.05	0.01	0.006	0.008	0.000	0.000	0.000	0.0047	0.002	0.00	0.0004

Mechanical Properties

Testing Direction	Yield Strength (KSI)	Yield Strength (MPa)	Tensile Strength (KSI)	Tensile Strength (MPa)	Elongation (percent)	Rockwell (Rb)
Longitudinal	41.3	285	54.3	374	33.00	55

Made in the USA
Melted, thin slab cast and rolled by proud Americans in Butler, IN.

All tests were performed according to applicable standards and are correct as contained in the records of the company.

Quality Assurance

Stanley J. Saffner
Metallurgist



The Worthington Steel Company
Delta
6303 County Road 10
Delta, OH 43515

Contech Construction Products Inc
Olympic Steel
625 Xenium Lane North
Plymouth, MN 55441
US

CERTIFICATE OF CHEMICAL ANALYSES AND TESTS	
Certificate Number 5188726	Revision No. 0
Customer Order No. PO000335477	Date 2015-09-23
Sales Order No. 1698213 1.1	Mill Order No.
B/L No. WSC1627066	Weight 44741 lbs
OSP/Warehouse Bol	Customer Reference
Alloy / Grade 1006	Part No. COBSGV1632
Specification No. ASTM A929 & AASHTO M218 Curr Rev	
Description Hot Dipped Galvanized Chem Treat Dry 1006 G200 0.0640 in X 32.0000 in X COIL	

Melted, Cast, Hot Rolled and Galvanized in the USA

Heat Number 11430367 Supplier Name Steel Dynamics Inc - Steel Dynamics
Supplier Heat 21526010

Chemical Analysis

C	.030
MN	.160
P	.011
S	.002

Heat Number 11430367 Coil No. 3585784

Mechanical Analysis

RBW Hardness	65.0
Tensile (KSI)	60.3
Yield (KSI)	45.6
Percent Elongation 2 in	25.0
Customer Test	1

Coating Analysis

Triple Spot Total (oz/ft2)	2.077
----------------------------	-------

Heat Number 11430367 Coil No. 3586441

Mechanical Analysis

RBW Hardness	63.0
Tensile (KSI)	59.6
Yield (KSI)	45.5
Percent Elongation 2 in	29.0
Customer Test	1

I hereby certify the chemical analyses and mechanical properties are correct as contained in the records of the Corporation. All mechanical tests were performed to the current ASTM Standards unless otherwise noted.

Eric Hodges

J Eric Hodges, Quality Manager, Phone 419.822.2590
eric.hodges@worthingtonindustries.com



**WORTHINGTON
INDUSTRIES**

The Worthington Steel Company
Delta
6303 County Road 10
Delta, OH 43515

Contech Construction Products Inc
Olympic Steel
625 Xenium Lane North
Plymouth, MN 55441
US

**CERTIFICATE OF CHEMICAL
ANALYSES AND TESTS**

Certificate Number 5188726	Revision No. 0
Customer Order No. PO000335477	Date 2015-09-23
Sales Order No. 1698213 1.1	Mill Order No.
B/L No. WSC1627066	Weight 44741 lbs
OSP/Warehouse BoL	Customer Reference
Alloy / Grade 1006	Part No. COESGV1632
Specification No. ASTM A929 & AASHTO M218 Curr Rev	
Description	
Hot Dipped Galvanized Chem Treat Dry 1006 G200 0.0640 in X 32.0000 in X COIL	

Coating Analysis

Triple Spot Total (oz/ft2) 2.056

I hereby certify the chemical analyses and mechanical properties are correct as contained in the records of the Corporation. All mechanical tests were performed to the current ASTM Standards unless otherwise noted

J Eric Hodges

19219-603-2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region <u>5</u>	Field sheet # <u>266289</u>
	Contract ID <u>19219</u>	Date Submitted <u>3-11-18</u>
	Project No. <u>STE C480-008</u>	
	Project Location <u>PINON CAUSEWAY TO ASPEN VILLAGE DR. S.U.P.</u>	

Metric units yes no

Material Type <u>PLASTIC PIPE</u>	Field Lab phone	Cell Phone
Material Code (LIMS)	Item <u>603</u>	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

PLASTIC PIPE INSTALLED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE MANUFACTURER & PRODUCT TYPE ARE LISTED ON THE APL. THE MANUFACTURING FACILITY PROVIDED A COC FROM NTPEP. ALL DOCUMENTS ARE ATTACHED. CERTIFICATE

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No. <u>3434-12</u>	Product name: <u>N-12 HP [12-60 INCH PIPE]</u>	Date checked: <u>7-26-17</u>
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor <u>CROSSFIRE LLC</u>	Supplier <u>ADS, INC.</u>
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented <u>15 INCH PIPE = 4 CF / 18 IN. PIPE = 5 CF</u>	Previous quantity <u>0</u>	Total quantity to date <u>15 IN. PIPE = 4 CF / 18 IN PIPE = 5 CF</u>
--	----------------------------	--

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) <u>CLIFTON LEE, PE</u>	Title <u>PROJECT ENGINEER</u>	E-mail
Supervisor (Pro./Res./Malls. Engr./Maint. Supt.) (print name) <u>MICHAEL DAVIS, PE</u>	Title <u>PRESIDENT - DAVIS ENG. SVC.</u>	Residency

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

Crossfire LLC



Integrated Energy Services

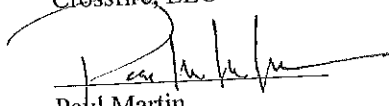
CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 07/26/2017
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

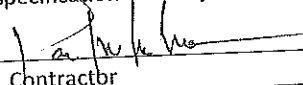
The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 603-50018
APL Category: Drainage
APL Sub-Category: Culvert Pipe
APL Base Category: Open Cut / Direct Bury
APL Reference No.: 3434-12
Product Name: 18" Plastic Pipe
Manufacturer: ADS N-12
Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC


Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 5 L.F. (quantity and units) of pay item: 603-50018 18" Plastic Pipe (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219


Contractor

07/26/18
Date

820 Airport Rd, Durango, CO 81137
p(970) 884-4869 f(970) 403-1129

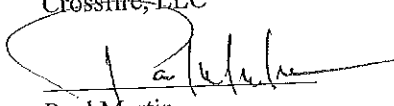


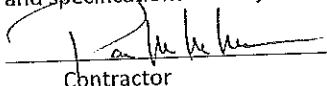
CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 07/26/2017
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 603-50015
APL Category: Drainage
APL Sub-Category: Culvert Pipe
APL Base Category: Open Cut / Direct Bury
APL Reference No.: 3434-12
Product Name: 15" Plastic Pipe
Manufacturer: ADS N-12
Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC

Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 4 L.F. (quantity and units) of pay item: 603-50015 15" Plastic Pipe
(Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219

Contractor
Date 07/26/17

GRAND JUNCTION
Winwater
COMPANY

7/19/2017

Contractor: Crossfire LLC
Project: Pinon Causeway to Aspen Village Shared Use Path Project
Project #: STE C480-008
Reference Order #: 044606-00

This letter is to certify that we supplied Crossfire LLC 15" and 18" ADS N-12 WTIB Solid Pipe on the above referenced project. The 15" and 18" ADS N-12 WTIB Solid Pipe was manufactured in accordance to the attached materials data sheet.

15" ADS N-12 WTIB Solid Pipe
Quantity - 20'
Item Number - 15650020IB ✓

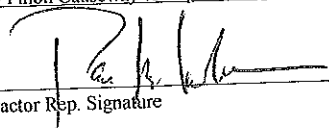
18" ADS N-12 STIB Solid Pipe
Quantity - 20'
Item Number - 18650020IB ✓

Please contact me with any questions.

Casey Kenney

Sales Manager
Grand Junction Winwater
819 21 1/2 Road
Grand Junction CO, 81505
Ph: 970-255-9015
Fax: 970-255-9018

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents see to the right (quantity and units) of pay item see to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.


Contractor Rep. Signature

8/01/17
Date

603-50015 15 inch plas. pipe, 4 L.F.
603-50018 18 inch plas. pipe, 5 L.F.

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 3434-12
--	-------------------------------------

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 712.13.02.00 Material code description full name: Pipe, Plastic, Corrugated
--	---

PART 1

Product name: N-12 HP [12 - 60 Inch Pipe]	Product category: Drainage\Culvert Pipe\Open-Cut/Direct-Bury
Product representative (name & address): Attn: Peggy B. Graham, P.E., CFM Advanced Drainage Systems, Inc. 9830 Niwot Road Longmont, CO 80504	Manufacturer (name & address): Attn: Advanced Drainage Systems, Inc. 4640 Trueman Blvd. Hilliard, Ohio 43026
Phone: (720) 982-6303 FAX:	Phone: (614) 658-0050 FAX:
Web-site address: www.ads-pipe.com	Web-site address: www.ads-pipe.com

Description of the product: (include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 N-12 HP is a high performance polypropylene pipe for gravity flow storm drain applications. N-12 HP uses advanced polypropylene resin technology with a dual wall profile design (smooth interior and annular corrugated exterior). Pipe diameters: 12" - 60". Manning's n = 0.012
 Pipe stiffness: Is variable with greater stiffness than other thermoplastic pipes ranging from 40 to 115% including PVC.
 Brittleness: A impact co-polymer is added to the resin making it less brittle than PVC.
 Joints: Pipe is joined with a gasketed integral bell and spigot meeting the requirements of ASTM D 3212 or ASTM F 2881. 3rd party testing has been completed demonstrating that the pipe joints will hold a 15 psi pressure.
 Corrosion and abrasion: Polypropylene has a pH range of 1.5 - 14 and same abrasion resistance as High Density Polyethylene Pipe.
 Ultra violet protection: Titanium dioxide, a UV retardant is added to the resin.

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):
 Culvert and storm drainage applications.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
 Polypropylene pipe enhances quality by providing greater pipe stiffness using a polypropylene resin making the stiffness values equal or greater than polyvinyl chloride; less brittle than polyvinyl chloride due to the impact co-polymer added to the resin; superior joint performance as compared to single gasketed plastic pipe and reinforced concrete pipe by providing a joint that tests to 15psi by 3rd party testing; superior Manning's coefficient of 0.012 as compared to reinforced concrete and corrugated metal pipe. Polypropylene pipe provides cost savings compared to reinforced concrete pipe due to ease of installation and polyvinyl chloride due to material pricing.

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

CDOT :
 ASTM : F 2736, F 2881, D 3212, F 477, F 2487, F 2321
 AASHTO: MP 21-11
 FHWA :
 Other :

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

NTPEP-AASHTO: [Currently NTPEP only audits manufacturing facilities producing polyethylene pipe]
 FHWA :
 Other : Infrastructure & Development Engineering, Inc. (November 29, 2011)
 Other :

State DOT Approvals, (current documentation required):
 Oregon, Virginia, Washington

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 3434-12
--	-------------------------------------

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 712.13.02.00 <hr/> Material code description full name: Pipe, Plastic, Corrugated
--	---

PART 1

Product name: N-12 HP [12 - 60 Inch Pipe]	Product category: Drainage\Culvert Pipe\Open-Cut/Direct-Bury
Product representative (name & address): Attn: Peggy B. Graham, P.E., CFM Advanced Drainage Systems, Inc. 9830 Niwot Road Longmont, CO 80504	Manufacturer (name & address): Attn: Advanced Drainage Systems, Inc. 4640 Trueman Blvd. Hilliard, Ohio 43026
Phone: (720) 982-6303 FAX:	Phone: (614) 658-0050 FAX:
Web-site address: www.ads-pipe.com	Web-site address: www.ads-pipe.com
Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.) N-12 HP is a high performance polypropylene pipe for gravity flow storm drain applications. N-12 HP uses advanced polypropylene resin technology with a dual wall profile design (smooth interior and annular corrugated exterior). Pipe diameters: 12" - 60". Manning's n = 0.012 Pipe stiffness: Is variable with greater stiffness than other thermoplastic pipes ranging from 40 to 115% including PVC. Brittleness: A impact co-polymer is added to the resin making it less brittle than PVC. Joints: Pipe is joined with a gasketed integral bell and spigot meeting the requirements of ASTM D 3212 or ASTM F 2881. 3rd party testing has been completed demonstrating that the pipe joints will hold a 15 psi pressure. Corrosion and abrasion: Polypropylene has a pH range of 1.5 - 14 and same abrasion resistance as High Density Polyethylene Pipe. Ultra violet protection: Titanium dioxide, a UV retardant is added to the resin.	
Restrictions, (installation and/or use):	
Use of the product, (be specific to CDOT highway activities only): Culvert and storm drainage applications.	

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
 Polypropylene pipe enhances quality by providing greater pipe stiffness using a polypropylene resin making the stiffness values equal or greater than polyvinyl chloride; less brittle than polyvinyl chloride due to the impact co-polymer added to the resin; superior joint performance as compared to single gasketed plastic pipe and reinforced concrete pipe by providing a joint that tests to 15psi by 3rd party testing; superior Manning's coefficient of 0.012 as compared to reinforced concrete and corrugated metal pipe. Polypropylene pipe provides cost savings compared to reinforced concrete pipe due to ease of installation and polyvinyl chloride due to material pricing.

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

CDOT :
 ASTM : F 2736, F 2881, D 3212, F 477, F 2487, F 2321
 AASHTO: MP 21-11
 FHWA :
 Other :

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

NTPEP-AASHTO: [Currently NTPEP only audits manufacturing facilities producing polyethylene pipe]
 FHWA :
 Other : Infrastructure & Development Engineering, Inc. (November 29, 2011)
 Other :

State DOT Approvals, (current documentation required):
 Oregon, Virginia, Washington

Sample submitted: yes no n/a
 Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments

From - GRAND JUNCTION WINWATER
819 21-1/2 ROAD BLDG A
GRAND JUNCTION, CO 81505

To Reorder Dial: 970-255-9015
Fax: 970-255-9018

REPRINT

Sold To - CROSSFIRE LLC
820 AIRPORT RD

DURANGO, CO 81303-8854
970-884-4869

Ship To - CROSSFIRE LLC
HIGHWAY 160 AND ALPHA DRIVE
JD 970-442-1318
PAGOSA SPRINGS, CO 81147

PACKING LIST

CKENNE

Date - 7/18/17
Page - 1
Time - 15.03.39
Customer No. - 1749

Order No. - 044606-00

THANKS FOR YOUR BUSINESS! * NON-STOCK ITEMS ARE NON RETURNABLE

Date Shipped - 7/18/17 Date Ordered - 7/13/17 Date Requested - 7/13/17 Date Printed - 7/18/17
Filled By - Ordered By - GABE Cust. Order # - 501401447
Ship Via - GJWW Salesman # - 050 Job Name - PINON CAUSEWAY SHARED USE PATH
Freight - .00 Taken By - CASEY

Original Order	Shipped	In On B/O	Hold UM	Description/Stock Number	Line No.	Bin Location	Extended Weight	Freight Class	No. of Packages
80	80			FT 8X20 CMP 16GA 466800820	1.0				
60	60			FT 12X20 CMP 16GA 466801220	2.0	A10-A04			
40	40			FT 18X20 CMP 16GA 466801820	3.0	A10-A03			
10	10			FT 18X10 CMP 16GA 0651181016	4.0	A10-A01			
20	20			FT 15X20' SOLID N-12 WT/IB PIPE 0674N15650020IB	5.0	A08-A06			
20	20			FT 18X20' SOLID N-12 WT/IB PIPE 0674N18650020IB	6.0	A08-A07			
5		5		EA 8 CMP FLARED END SECTION *00305016577	7.0				
6	6			EA 12 CMP FLARED END SECTION 466800012	8.0	A10-A06			
1	1			EA 15 CMP FLARED END SECTION 466800015	9.0	A10-A06			
4	4			EA 18 CMP FLARED END SECTION 466800018	10.0	A10-A06			
1	1			EA 12 CMP DIMPLE BAND 466801012	11.0	A10-A05			
1	1			EA 18 CMP DIMPLE BAND 466801018	12.0	A10-A05			
1		1		EA 1515AA 15 N-12 WT BELL CPLG 0674AA1515	13.0				
1	1			EA 1815AA 18 ADS WT CPLG 0674AA1815	14.0	A07-A04			
3		3		EA NEENAH R-4216-B BEEHIVE GRATE *00305016578	15.0				
1	1			EA RX1200 13.1'X164' GEOGRID RX1200 236.16 SY PER ROLL 458738377	16.0				

END OF PACKING LIST

T&C: You agree that the sale of these products/services is subject to all of our standard terms and conditions of sale located at www.winsupplyinc.com/tcsale

Customer Signature: _____

** MATERIAL RECEIVED IN GOOD CONDITION **

19219-604-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-11-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. S.U.P	

Metric units yes no

Material Type INLET (SPECIAL)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 604	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE INLET (SPECIAL) WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE COC FOR THE CAST IRON EARTH DITCH DRAIN^{GRATE} IS ATTACHED. CLASS P CONCRETE WAS APPROVED FOR USE. ALL INFORMATION REGARDING CONCRETE IS FILED UNDER ITEM 601 CLASS P. THE REINFORCING STEEL INFORMATION IS FILED UNDER ITEM 602.

ser ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary
 Construction
 Maintenance
 Emergency
 Date needed

Contractor CROSSFIRE, LLC	Supplier CAST IRON - NEENAH FOUNDRY
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner CONCRETE-FCM; REINFORCING STEEL-NUCOR/CMC

Quantity represented 3 EA	Previous quantity 0	Total quantity to date 3 EA
----------------------------------	----------------------------	------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) TRILLICE DAVIS, PE	Title DAVIS ENG. SVC. - PRESIDENT	Residency



Municipal Products Group • PO Box 729, Neenah, WI 54597 • P: (920) 725-7000 • F: (920) 729-3661 • www.nfco.com

CASTING CERTIFICATION

Project: Colorado Department of Transportation (CDOT)
Project No. STE C480-008

Manufacturer: Neenah Foundry Company
2121 Brooks Avenue
Neenah, WI 54901

Laboratory: Neenah Foundry Company utilizes its on-site laboratory for material testing.
Laboratory Test Date – Typically within 24 hours of casting.

Product Info: R-4216-B, Cast Iron Earth Ditch Drain
Part No. 4916-8000

Material: Cast Gray Iron Complying with ASTM A48 Class 35B

Batch No.: 219K7, Cast Date: August 7, 2017

CDOT Spec: Complies with CDOT Standard Specification 712.06 with the exception of the load capacity requirements of AASHTO M306. This casting is not a load rated casting and is not intended to be driven over.

Neenah Foundry Company hereby certifies that the castings supplied for the project listed below comply with the specifications identified herein and were manufactured entirely in the United States of America.

Sincerely,
Neenah Foundry Company

Joseph J. Falle IV, P.E. (Licensed in IA and WI)
Product Support Engineer

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents Incidental (quantity and units) of pay item 604-19000 Inlet (Special) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/26/18
Date

19219-607-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-11-10
	Project No. STE C400-000	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type FENCE (PLASTIC)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 607	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

PLASTIC FENCE INSTALLED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE ^{SUPPLIER'S} MANUFACTURER'S COC IS ATTACHED.

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)
Sample ID (#6)	

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
	Emergency <input type="checkbox"/>	Date needed

Contractor CROSSFIRE, LLC	Supplier COOW ENTERPRISES/TRITON
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 3309.50 LF	Previous quantity 0	Total quantity to date 3309.50 LF
--	----------------------------	--

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
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Sampled or inspected by (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mails. Engr./Maint. Supt.) (print name) MICHAEL DAVIS, PE	Title PRESIDENT-DAVIS ENG SVC.	Residency

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

TRITON ENVIRONMENTAL

5433 NEWPORT STREET • COMMERCE CITY, CO 80022 • (303) 945-7588 OFFICE • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

MANUFACTURER: CDOW ENTERPRISES, INC; 4005 CHIMNEY ROCK FLOWER MOUN, TX

TYPE OF MATERIAL: ORANGE DIAMOND SAFETY FENCE- 4' X 100'

TEST PERFORMED: NA

DATE OF TEST: NA

LOTS REPRESENTED: NA

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC SECTION 607 FENCES. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Laura Dea Campbell

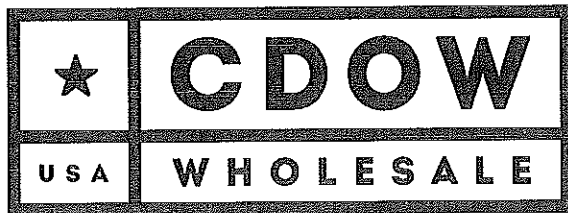
Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 3,309.5 L.F. (quantity and units) of pay item 607-11525 Fence (Plastic) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

[Signature]
Contractor Rep. Signature

6/26/18
Date

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item number and Description) that will be installed on project number STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



**NATIONWIDE
CONSTRUCTION +
EROSION SUPPLY**
WWW.CDOWWHOLESALE.COM

January 15, 2018

To whom it may concern,

I certify that the orange safety fence that we have sold to Triton Environmental that they sold to their customer is indeed orange and 4 feet tall and 100 feet long. I have also attached the specification sheet for the product.

Thank you,

A handwritten signature in black ink, appearing to read 'Eric Peacock'.

Eric Peacock
CDOW Wholesale

MODEL: DIAMOND FENCE 20
COLOR: ORANGE, GREEN
MATERIAL: HIGH DENSITY POLYETHYLENE

TRITON

ENVIRONMENTAL

5433 Newport St. • Commerce City, CO 80022
 303-945-7588 • www.TritonEnviro.com

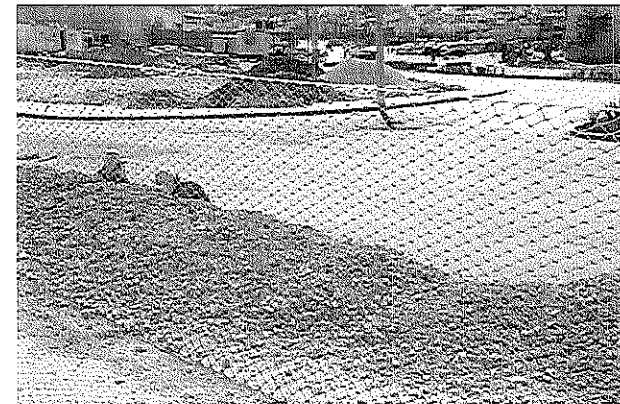
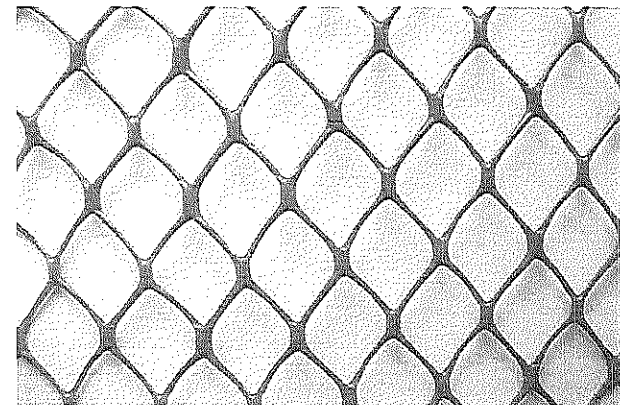
PROPERTY	UNIT	VALUE		RANGE	METHOD
STANDARD HEIGHT	cm (ft)	122 (4.0)		± 2%	ICE - 05
STANDARD LENGTHS	m (ft)	30.5 (100)	15.2 (50)	Standard	ICE - 05
	m (ft)	32 (105)	16 (52.5)	Max.	ICE - 05
WEIGHT PER ROLL	kg (lb)	9.09 (20.0)	4.54 (10)	Standard	ICE - 05
	kg (lb)	8.78 (19.3)	4.38 (9.64)	Min	ICE - 05
WEIGHT PER LINEAL METER	g (lb)	298 (0.656)		Standard	ICE - 05
	g (lb)	288 (0.634)		Min	ICE - 05
TENSILE STRENGTH	kgf (lbf)	7.1 (15.62)		Mínimo	MPE - 04

(*) Units in English System
 NA - Not Apply

UV RESISTANCE: 1 YEAR

20 Rolls Per Pallet
 48 Pallets Per Truck
 960 Rolls Per Truck

NOTE: Information here is proposed as a result of our experience based on real information obtained in a laboratory and does not provide warranty, implicit or explicit, of the results obtained by the user who in all cases needs to prove use of the product in their own plant to determine the application parameters according to his particular requirements of experience and process conditions.



19219-608-1/

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region 5	Field sheet # 266289
Contract ID 19219	Date Submitted 3-11-18
Project No. STE C400-00B	
Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-S. U.P.	

Metric units yes no

Material Type CONCRETE CURB RAMP (SPECIAL)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 60B	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE CONCRETE CURB RAMP (SPECIAL) WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. CLASS P CONCRETE WAS APPROVED FOR USE. ALL INFORMATION IS FILED UNDER 601 CLASS P.

THE TRUNCATED DOWELS INSTALLED ^(NONE) ON THE APL. THE MANUFACTURER'S COC IS ATTACHED. CONTRACTOR'S

THE SMOOTH ^{BAR} DOWELS DOCUMENTATION IS FILED UNDER ITEM 602 REINFORCING STEEL.

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No. 2673-13	Product name: DURALAST	Date checked: 7-26-17
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFIRE, LLC	Supplier EJ USA - TRUNCATED DOWELS / FCM - CONCRETE / DOWELS - NUCOR
-------------------------------------	--

Sampled from (P/I, roadway, windrow, stock, etc.)	Pit name or owner
--	-------------------

Quantity represented 133.25 SY	Previous quantity 0	Total quantity to date 133.25 SY
--	-------------------------------	--

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
--	--	-----	------

Sampled or Inspected by (print name) TRAUTNER GEOTECH	Title QA TESTER	E-mail
Supervisor (Pro./Res./Malls. Engr./Maint. Supt.) (print name) CIFTON LEE, PE	Title PROJECT ENGINEER	Residency



CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 07/26/2017
CDOT Project No: 19219
CDOT Project Location: Archuleta, County
CDOT Project Code: STE C480-008

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 608-00012
APL Category: Pedestrian Safety
APL Sub-Category: ADA Truncated Dome
APL Base Category: Embedded
APL Reference No.: 2673-13
Product Name: Duralast DWS 24 x 24
Manufacturer: EJ USA, INC
Date of Web Site Review & Selection: 7/26/2017 and 7/26/2017

Crossfire, LLC

Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents Incidental (quantity and units) of pay item 608-00012 Duralast DWS 24" x 24" (Pay item # and description) that will be installed in conformance with the plans and specifications on Project No. STC C480-008, 19219

Contractor

8/01/17
Date



EJ
301 Spring Street
PO Box 439
East Jordan, MI 49727-0439

+1 231 536 2261
800 874 4100
ejco.com

Material Certification

October 14, 2017

Davis Engineering Service, Inc.
188 S 8th St
Pagosa Springs, CO 81147
Attn: Clifton Lee
Fax #:

RE: Job Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Project #: STE C480-008
Job Number: 19219
Order Type.: Distributor

<u>QUANTITY</u>	<u>DESCRIPTION</u>
45	00700571 DURALAST DWP 24X24 UND Cast Dates: 6/28/2017
2	00700721 DURALAST DWP 30X24 UND Cast Dates: 6/28/2017

Dear Valued Partner:

We hereby certify that the iron used to make the construction castings manufactured by EJ for the above referenced project is in full compliance with ASTM A48, Class 35B and AASHTO M105 for gray iron castings and ASTM A536, Grade 70-50-05 for ductile iron castings. Thank you for specifying and using products manufactured by EJ.

The above listed castings are melted and manufactured 100% in the United States of America at our foundries in Ardmore, OK and East Jordan, MI. These castings comply with the applicable provisions of the Code of Federal Regulations 23 CFR 635.410 BUY AMERICA Requirements.

We also certify that the above listed products supplied to the subject project are in full compliance with the American Iron and Steel (AIS) requirement as mandated in EPA's State Revolving Fund Programs.

Cast Dates: Tensile (PSI):
6/28/2017 41,470

EJ USA, Inc.

Scott B. Beal
Product Testing & Compliance Manager



EJ
301 Spring Street
PO Box 439
East Jordan, MI 49727-0439

+1 231 536 2261
800 874 4100
ejco.com

Material Certification

October 14, 2017

Davis Engineering Service, Inc.
188 S 8th St
Pagosa Springs, CO 81147
Attn: Clifton Lee
Fax #:

RE: Pinon Causeway to Aspen Village Drive Shared Use Path
Job Number: 19219
Project #: STE C480-008
Order Type.: Distributor

Dear Valued Partner:

EJ USA has contracted ABIC Laboratories to perform testing on the EJ truncated dome product line. Please see the attached test report from ABIC. Thank you for specifying and using products manufactured by EJ.

<u>QUANTITY</u>	<u>DESCRIPTION</u>
45	00700571 DURALAST DWP 24X24 UND
2	00700721 DURALAST DWP 30X24 UND

EJ USA, Inc.

Scott B. Beal
Product Testing & Compliance Manager

ABIC TESTING LABORATORIES, INC.

24 Spielman Road
Fairfield, NJ 07004

973-227-7060
Fax: 973-227-0172

To: East Jordan Iron works
Mr. John Synder

From: Leonard Mackowiak

Subject: Static Coefficient Of Friction Testing
Project No 5260-02

October 31, 2006

Introduction

ABIC Testing Laboratories, Inc. was authorized to test samples of cast iron skid plate for the following tests.

- ASTM D-482 (Bond Strength)
- ASTM C-1028 (Static Coefficient of Friction)
- ASTM C-501 (Abrasion Resistance)

Results

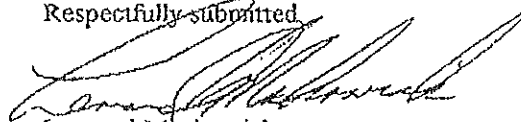
Our results are shown in Exhibit I attached.

Discussion

The American with Disabilities Act requires that a walking surface must produce a Static Coefficient of Friction (SCOF) of 0.6 or greater. In our study the cast iron skid plates meet this standard dry and wet when tested according to ASTM C-1028.

The Wear Index values of the cast iron plates are approximately 8800. As point of reference, typical ceramic paver tiles have wear index values in the 300-500 range.

Respectfully submitted,



Leonard Mackowiak
Vice President

Division of ABIC INTERNATIONAL CONSULTANTS, INC.

**COLORADO DEPARTMENT OF TRANSPORTATION
PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY**

APL Reference No.

2673-13

Product Evaluation Coordinator
Colorado Department of Transportation
100 North Holly Street, Unit A
Denver, Colorado 80216

Material code:
608.02.03.00

Material code description full name:
ADA Truncated Dome

PART 1

Product name: DURALAST	Product category: Pedestrian Safety\ADA Truncated Dome\Embedded
Product representative (name & address): Attn: Kirk Stoltzner / Brian Thomas EJ USA, Inc. 2577 East 79th Street Denver, CO 80229	Manufacturer (name & address): Attn: Kirk Stoltzner EJ USA, Inc. 301 Spring Street East Jordan, MI 49727
Phone: (303) 286-8014 FAX: (303) 286-0051	Phone: (800) 626-4653 FAX: (231) 536-4593
Web-site address: www.ejco.com	Web-site address: www.ejco.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
DURALAST is a cast iron detectable warning plate (truncated dome). These castings are made of gray cast iron that meets the requirements of ASTM A48 Class 35B. Standard sizes are 18" x 24", 24" x 24", and 30" x 24". Slip Resistance is 1.10 dry / 1.06 wet. Wear Resistance (abrasion) 7333. Impact Resistance >238 Newtons. Adhesion to Concrete (Bond Strength) is >5,000 lbs. Tensile Strength is 35,000 PSI. It is available in a Natural Finish (uncoated) and in a Black Asphaltic Dip Finish (coated).

EJ USA, Inc. was previously East Jordan Iron Works, Inc. (EJIW). DURALAST was previously marketed as Truncated Dome Plates.

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):
Sidewalk Ramps.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):
Long lasting, impervious to vehicular and snow plow traffic, corrosion resistant, permanently embedded product. Available in multiple colors and sizing including radius to meet most required installations. Meets current and past ADA requirements.

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

CDOT : M-608-1
 ASTM : C 501
 AASHTO:
 FHWA :
 other :

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

NTPEP-AASHTO:
 FHWA :
 other : ABIC Testing Laboratory (October 31, 2006) (May 4, 2010)
 other :

State DOT Approvals, (current documentation required):
Idaho, Montana

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Additional Comments
Sample product available upon request. Samples previously submitted as part of the original submittal.

Exhibit I
 East Jordan Iron Works
 Product: Cast Iron Skid Plates

Tests:

I. ASTM D-482 (Bond Strength to Concrete)

Sample No.	Force	Comments
1	>5,000 lbs	Concrete did not shear off of metal plate
2	>5,000 lbs	Concrete did not shear off of metal plate
3	>5,000 lbs	Concrete did not shear off of metal plate

II. ASTM C-1028 (Static Coefficient of Friction): (SCOF)

Material: Dry Neolite

Force Values (Pounds)												Calibration Factor	SCOF Value *
52.1	54.3	53.2	53.2	52.1	52.0	54.3	53.2	53.4	55.2	54.2	52.1	0.07	1.1

Material: Wet Neolite

Force Values (Pounds)												Calibration Factor	SCOF Value **
51.2	51.8	52.3	49.2	49.7	51.2	52.1	52.1	52.2	49.2	48.2	49.8	0.08	1.1

* Dry SCOF Calculation : SCOF = (Sum of 12 force values / number of pulls (12) x assembly weight (52 lbs)) + dry calibration factor (.07)
 ** Wet SCOF Calculation : SCOF = (Sum of 12 force values / number of pulls (12) x assembly weight (52 lbs)) + dry calibration factor (.08)

III. ASTM C-501 (Abrasion Resistance)

Sample No.	Test Cycles	Wt Loss (.gr)	Wear Index
1	1000	0.01	8800
2	1000	0.01	8800
3	1000	0.01	8800

Source: ABIC Testing Laboratories, Inc.

19219-608-2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-12-19
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type GROUT	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 608	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

NON-SHRINK GROUT WAS USED TO FILL THE WEED HOLES IN THE WARNING PLATES. THE MATERIAL WAS APPROVED BY THE PROJECT ENGINEER. THE MATERIAL IS ON THE APL. DOCUMENTATION IS ATTACHED. THIS MATERIAL WAS PAID INCIDENTAL TO ITEM 608 - CONCRETE CURB RAMP SPECIAL.

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)
Sample ID (#6)	

APL/QML Acceptance: APL Ref. No. 3272-11	Product name: 1107 ADVANTAGE GROUT	Date checked: 1/26/19
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed
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Contractor CROSSFIRE, LLC	Supplier DAYTON SUPERIOR
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented AS NEEDED	Previous quantity 0	Total quantity to date AS NEEDED
---------------------------------------	----------------------------	---

Sample submitted: <input type="checkbox"/> Yes <input type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
--	---	-----	------

Sampled or inspected by (print name) CUPTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mails. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT - DAVIS ENG. SVC.	Residency




CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 11/03/2017
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to Aspen Village
CDOT Project Code 19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: (601.02.14.00)
APL Category: Concrete
APL Sub-Category: Grout
APL Base Category: General Purpose non shrink
APL Reference No.: 3272-11
Product Name: 1107 Advantage Grout
Manufacturer: Dayton Superior
Date of Web Site Review & Selection: 11/03/17

Crossfire, LLC


Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As Needed (quantity and units) of pay item GROUT 601-0012 Concrete Curb Ramp Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219


Contractor
Date 01/26/18

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 3272-11✓
--	-------------------------------

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 601.02.14.00 Material code description full name: Concrete, Grout
--	---

PART 1

Product name: 1107 Advantage Grout	Product category: Concrete\Grout\General Purpose [Non-Shrink]
Product representative (name & address): Attn: Todd Fraker, Senior Regional Manager Dayton Superior 4950 Olive Street Commerce City, CO 80022	Manufacturer (name & address): Attn: John Hukey Dayton Superior 4226 Kansas Avenue Kansas City, KS 66106
Phone: (303) 289-4808 FAX: (303) 289-3451	Phone: (913) 279-0264 FAX: (913) 371-3330
Web-site address: www.DaytonSuperior.com	Web-site address: www.DaytonSuperior.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 1107 Advantage Grout is a ready to use, high strength, non-shrink grout according to ASTM C-827, non-corrosive, non-metallic precision grout that rapidly gains initial strength of 2500 psi in flowable condition. Its key advantage is that it can be used in fluid, flowable, and dry pack condition just by varying the water added. It achieves 10,000 psi at 28 days when dry packed and tested according to ASTM C-1107.

Restrictions, (installation and/or use):
 Maintain the temperature of the grout and the contain area at 45°F to 90°F for a minimum of 24 hours.

Use of the product, (be specific to CDOT highway activities only):
 Structural load transfer for girders, bearing seats, cable anchorages, etc.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
 This is a very cost competitive general purpose grout. It is stocked at multiple dealer locations throughout the state.

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

CDOT :
 ASTM : C-1107
 AASHTO :
 FHWA :
 other : Corps of Engineers CRD C-621

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

NTPEP-AASHTO :
 FHWA :
 other :
 other : Nelson Testing Laboratories (Flowable & Fluid)(October 27, 2010)

State DOT Approvals, (current documentation required):
 AZ, OR, ME, MD, MI, MA, OH, AR, LA, NC, TN, IL, KS, MO, NE, WI

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments
 Sample available upon request.

TECHNICAL DATA SHEET

DESCRIPTION

The 1107 Advantage Grout is a non-shrink, non-metallic, non-corrosive, cementitious grout that is designed to provide a controlled, positive expansion to ensure an excellent bearing area. The 1107 Advantage Grout can be mixed from a fluid to a dry pack consistency.

USE

Exterior grouting of structural column base plates, pump and machinery bases, anchoring bolts, dowels, bearing pads and keyway joints. It finds applications in paper mills, oil refineries, food plants, chemical plants, sewage and water treatment plants etc.

FEATURES

- Controlled, net positive expansion
- Non shrink
- Non metallic/non corrosive
- Pourable, pumpable or dry pack consistency
- Interior/exterior applications

PROPERTIES

Corps of Engineers Specification for non-shrink grout:

CRD-C 621 Grades A, B, C

ASTM C-1107 Grades A, B, C

ASTM C-827 - 1107 Advantage Grout yielded a controlled positive expansion

Expansion - ASTM C-1090:

1 day: 0.10%

3 days: 0.11%

14 days: 0.11%

28 days: 0.11%

Test Results

	@ 1 Day		@ 3 Days		@ 7 Days		@ 28 Days	
	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa
Fluidity								
Dry-Pack	5000	34.5	7000	48.2	9000	62.0	10000	68.9
Flowable	2500	17.2	5000	34.5	6000	41.4	8000	55.1
Fluid	2000	13.8	4000	27.6	5000	34.5	7500	51.7

Note:

The data shown is typical for controlled laboratory conditions. Reasonable variation from these results can be expected due to interlaboratory precision and bias. When testing the field mixed material, other factors such as variations in mixing, water content, temperature and curing conditions should be considered.

Estimating Guide

Yield (Flowable Consistency):

0.43 cu. ft./50 lbs. (0.0122 cu. m/22.7 kg) bag

0.59 cu. ft./50 lbs. (0.017 cu. m/22.7 kg) bag extended with 25 lbs. (11.34 kg) of washed 3/8 in. (1cm) pea gravel

Packaging

PRODUCT CODE	PACKAGE	SIZE	
		lbs	kg
67435	Bag	50	22.67
67437	Supersack	3,000	1,360.78

STORAGE

Store in a cool, dry area free from direct sunlight. Shelf life of unopened bags, when stored in a dry facility, is 12 months. Excessive temperature differential and /or high humidity can shorten the shelf life expectancy.

APPLICATION

Surface Preparation:

Thoroughly clean all contact surfaces. Existing concrete should be strong and sound. Surface should be roughened to insure bond. Metal base plates should be clean and free of oil and other contaminants. Maintain contact areas between 45°F (7°C) and 90°F (32°C) before grouting and during curing period.

Thoroughly wet concrete contact area 24 hours prior to grouting, keep wet and remove all surface water just prior to placement. If 24 hours is not possible, then saturate with water for at least 4 hours. Seal forms to prevent water or grout loss. On the placement side, provide an angle in the form high enough to assist in grouting and to maintain head pressure on the grout during the entire grouting process. Forms should be at least 1 in. (2.5 cm) higher than the bottom of the base plate.

Water Requirements:

Desired Mix Water / 50 lbs. (22.67 kg) Bag

Dry Pack: 5 pints (2.4 L)

Flowable: 8 pints (3.8 L)

Fluid: 9 pints (4.2 L)

Mixing:

A mechanical mixer with rotating blades like a mortar mixer is best. Small quantities can be mixed with a drill and paddle. When mixing less than a full bag, always first agitate the bag thoroughly so that a representative sample is obtained.

TECHNICAL DATA SHEET

Place approximately 3/4 of the anticipated mix water into the mixer and add the grout mix, adding the minimum additional water necessary to achieve desired consistency.

Mix for a total of five minutes ensuring uniform consistency. For placements greater in depth than 3 in. (7.6 cm), up to 25 lbs. (11.34 kg) of washed 3/8 in. (1 cm) pea gravel must be added to each 50 lbs. (22.7 kg) bag of grout. The approximate working time (pot life) is 30 minutes but will vary somewhat with ambient conditions.

For hot weather conditions, greater than 85°F (29°C), mix with cold water approximately 40°F (4°C). For cold weather conditions, less than 50°F (10°C), mix with warm water, approximately 90°F (29°C). For additional hot and cold weather applications, contact Dayton Superior.

Placement:

Grout should be placed preferably from one side using a grout box to avoid entrapping air. Grout should not be over-worked or over-watered causing segregation or bleeding. Vent holes should be provided where necessary.

When possible, grout bolt holes first. Placement and consolidation should be continuous for any one section of the grout. When nearby equipment causes vibration of the grout, such equipment should be shut down for a period of 24 hours. Forms may be removed when grout is completely self-supporting. For best results, grout should extend downward at a 45 degree angle from the lower edge of the steel base plates or similar structures.

CLEAN UP

Use clean water. Hardened material will require mechanical removal methods.

CURING

Exposed grout surfaces must be cured. Dayton Superior recommends using a Dayton Superior curing compound, cure & seal or a wet cure for 3 days. Maintain the temperature of the grout and contact area at 45°F (7°C) to 90°F (32°C) for a minimum of 24 hours.

LIMITATIONS**FOR PROFESSIONAL USE ONLY**

Do not re-temper after initial mixing
Do not add other cements or additives

Setting time for the 1107 Advantage Grout will slow during cooler weather, less than 50°F (10°C) and speed up during hot weather, greater than 80°F (27°C)
Prepackaged material segregates while in the bag, thus when mixing less than a full bag it is recommended to first agitate the bag to assure it is blended prior to sampling.

PRECAUTIONS**READ SDS PRIOR TO USING PRODUCT**

- Product contains Crystalline Silica and Portland Cement Avoid breathing dust Silica may cause serious lung problems
- Use with adequate ventilation
n Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

MANUFACTURER

Dayton Superior Corporation
1125 Byers Road
Miamisburg, OH 45342
Customer Service: 888-977-9600
Technical Services: 877-266-7732
Website: www.daytonsuperior.com

WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

TECHNICAL DATA SHEET

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.

19219-608-3

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region 5	Field sheet # 266289
Contract ID 19219	Date Submitted 3-11-10
Project No. STE C480-008	
Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-S.U.1	

Metric units yes no

Material Type BITUMINOUS BIKEWAY (SPECIAL)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 608	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE BITUMINOUS BIKEWAY (SPECIAL) WAS FIELD INSPECTED & APPROVED BY THE PROJECT ENGINEER. ALL COMPONENTS OF THE HMA ARE USED ON THE APL. DOCUMENTATION IS ATTACHED, TEST RESULTS ARE ATTACHED.

SEE THE FORM 473 FOR ADDITIONAL INFORMATION.

ser ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFIRE LLC	Supplier STROHECKER PAVING
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 650 TONS	Previous quantity 0	Total quantity to date 650 TONS
--------------------------------------	----------------------------	--

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) TRAMER GEOTECH	Title QA TESTERS	E-mail
Supervisor (Pro./Res./Mails. Engr./Maint. Supt.) (print name) CUPTON LEE, PE	Title PROJECT ENGINEER	Residency

608-01500

PROJECT: PINON CAUSEWAY TO ASPEN VILLAGE	SUBMITTAL NO: 403-00720.1 REV1
CLIENT'S PROJECT NO. STE C480-008	DATE: 6/21/2017
Project Code (SA) 19219	DATES OF PREVIOUS SUBMISSIONS:
CONTRACTOR: Crossfire, LLC	6/15/2017

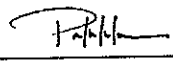
SUPPLIER: Strohecker Asphalt and Paving	MANUFACTURER: Strohecker Asphalt and Paving
SPECIFICATION NO.: 403-00720	DRAWING NO.:
IS THIS A LONG LEAD TIME ITEM? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
IS THIS ITEM ON THE APPROVED PRODUCTS LIST? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
ARE THERE ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	

Explain:

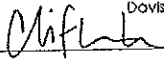
PRODUCT DESCRIPTION:
 Material Testing for asphalt mix

 Resubmittal

CONTRACTOR'S COMMENTS

SIGNATURE: 

DATE: 6/21/2017

SUBMITTAL REVIEW
 FURNISH AS SUBMITTED REJECTED/RESUBMIT
 FURNISH AS CORRECTED SEE ATTACHED COMMENTS *
 Corrections or comments made to the submitted documents during this review do not relieve the Contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.
 Davis Engineering Service, Inc.
 By:  Date: 7/3/2017

Engineer's Stamp and Review Comments

* Please review the signed CDOT Form #43 with Strohecker Asphalt & Paving. The CDOT Form #43 requires an AC of 6% ± 0.3.
 Also, a 50lb sample shall be submitted to me two weeks prior to paving, 2 "asphalt" cans/samples shall be submitted as well.

I hereby certify under perjury that the material listed in this Certificate of Compliance represents _____ (quantity and units) of pay item _____ (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number STE C480-008

Contractor _____ Date _____

**COLORADO DEPARTMENT OF TRANSPORTATION
PROJECT PRODUCED JOB MIX FORMULA**

Project: STE C480-008
 Location: ARCHULETA CNTY PINON TO ASPEN
 Region: 05 Project Code (SA#): 19219
 From Project No: _____
 From Project SA#: _____

Mix Design: 52017A19219BP
 Date: 6/26/2017

This Job Mix Formula defines the specified gradation, asphalt cement content, and admixture dosage for the grading and project shown.

Components:

1. 25 Coarse Aggregate
2. 25 Intermediate Aggregate
3. 50 Crusher Fines
4. _____
5. _____
6. _____
7. _____
8. _____

Contractor: Crossfire Construction
 Supplier: Strohecker Asphalt
 Plant: Pagosa Springs
 Pli: C&J Gravel

Grading & Compaction: SX (75)
 % RAP: 0.00 % Lime: 0.00

Remarks: Design ONLY for shared-use path and ONLY this project (STE C480-008) 3% EVOTHERM for liquid anti-strip

Gradation (% Passing)

Specification Voids Acceptance

Sieve mm (in)	% Pass Min	% Pass Max
37.5 (1 1/2):		
25.0 (1):		
19.0 (3/4):	100	
12.5 (1/2):	90	100
9.5 (3/8):	82	94
4.75 - #4:	46	56
2.36 - #8:	27	37
1.18 - #16:		
600 mic - #30:	11	19
300 mic - #50:		
150 mic - #100:		
75 mic - #200:	1.10	5.10

% AC: 6.00 +/- .3
 Grade of AC: PG 58-28
 Source of AC: SUNCOR
 Max. Sp. Gr. at % AC: 2.444 +/- .01
 Bulk Sp. Gr. of Combined Agg: 2.604
 Bulk Sp. Gr. of Fine Agg: 2.596
 Angularity (T 304): 48.5
 % Agg Absorp (SSD): 1.2

Property	Voids Data at Nds Target Value	Tolerance
Stability	28	Minimum
% Voids	3.00	+/- 1.2
% VMA	min 13.3	max 15.7
% VFA	min 65	max 80

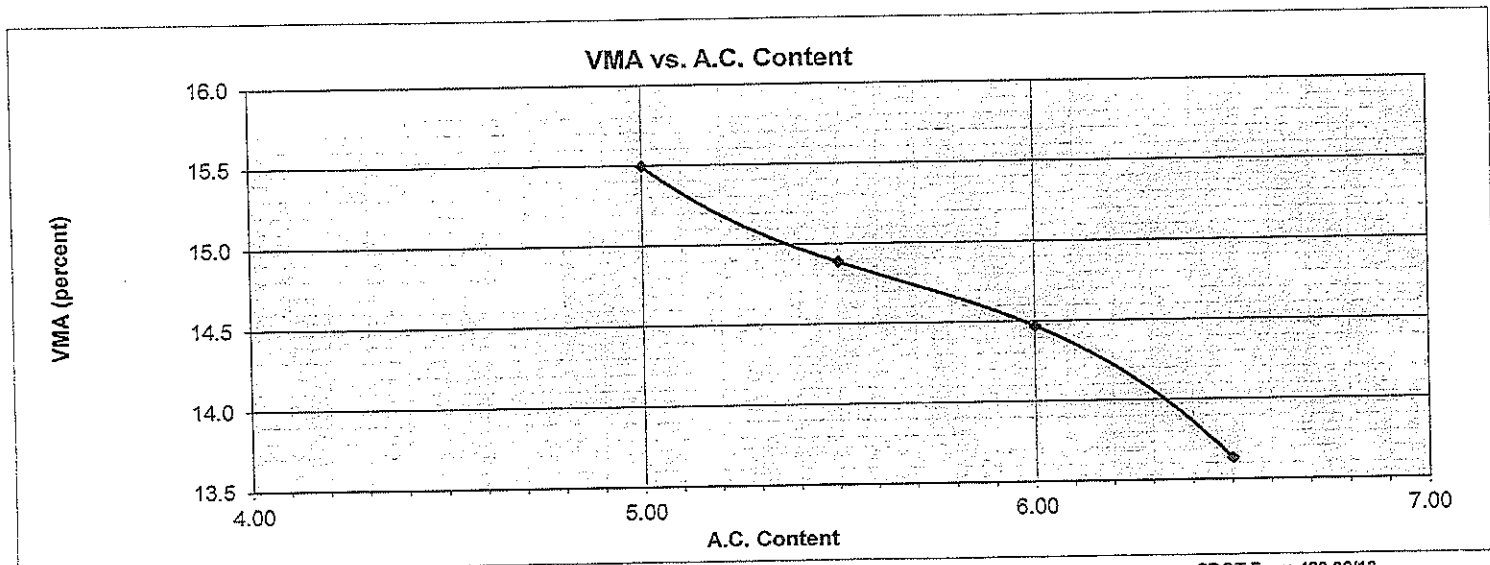
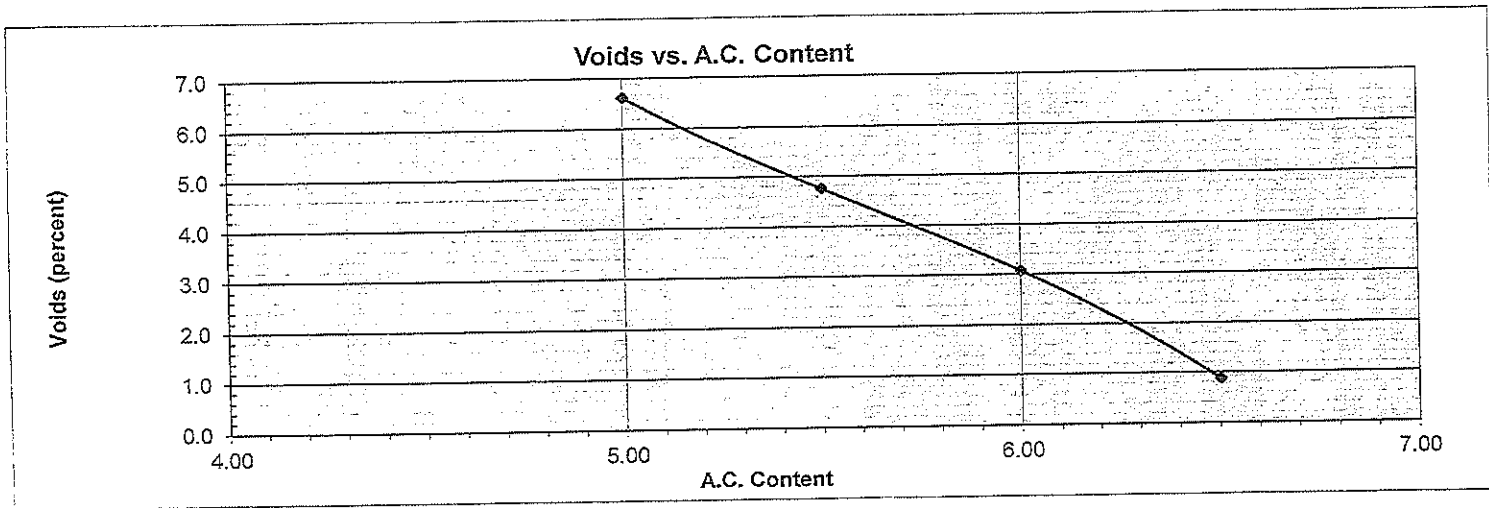
- New Mix Design With Changes
 Mix Design Modified
 New Mix design with no change

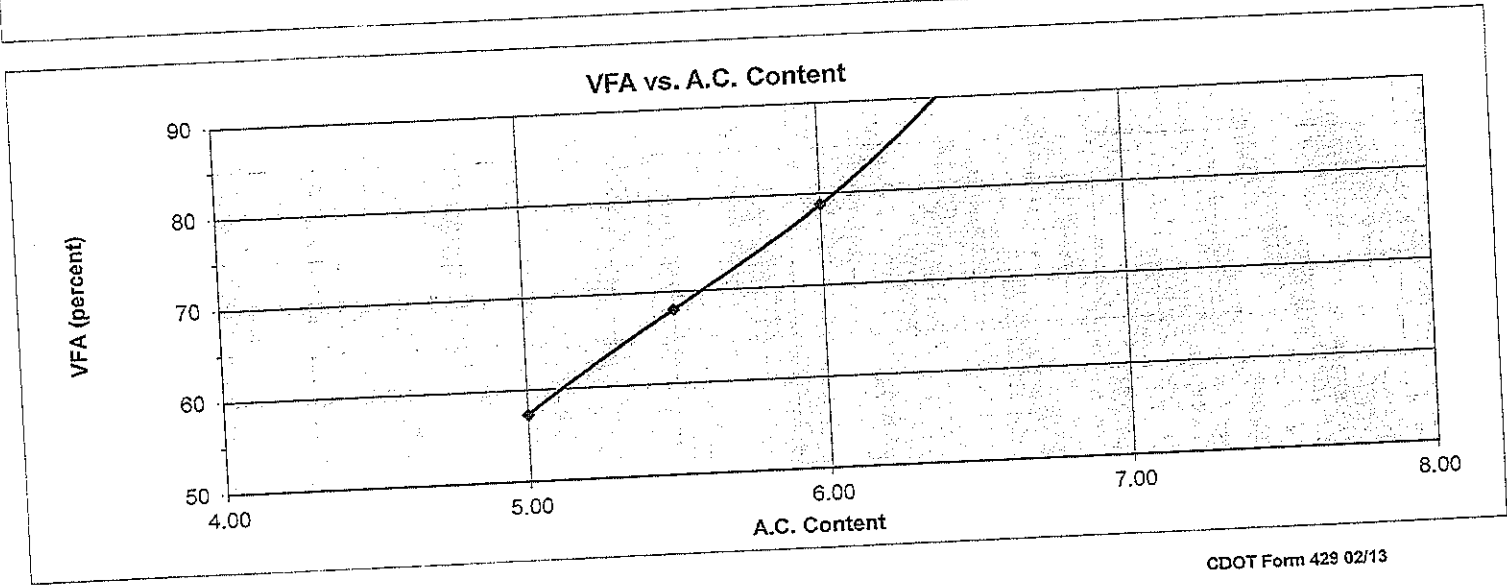
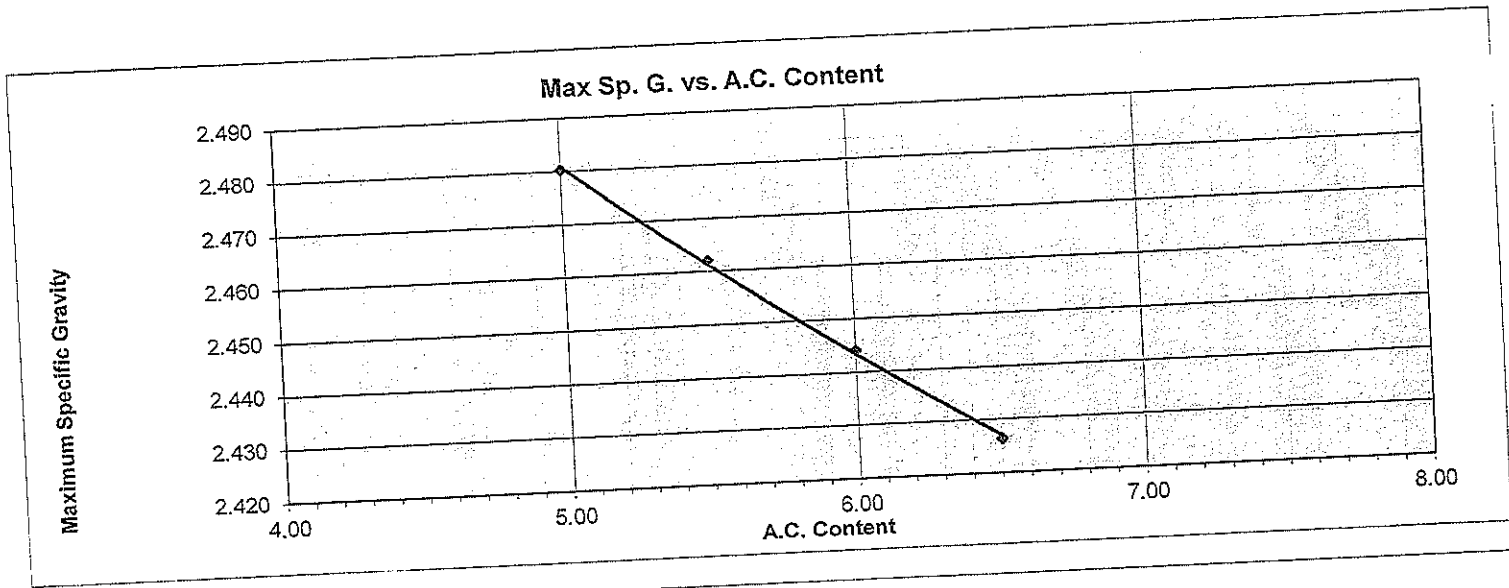
Distribution:
 Staff Materials
 Region Materials Engineer
 Resident Engineer (2)
 Contractor

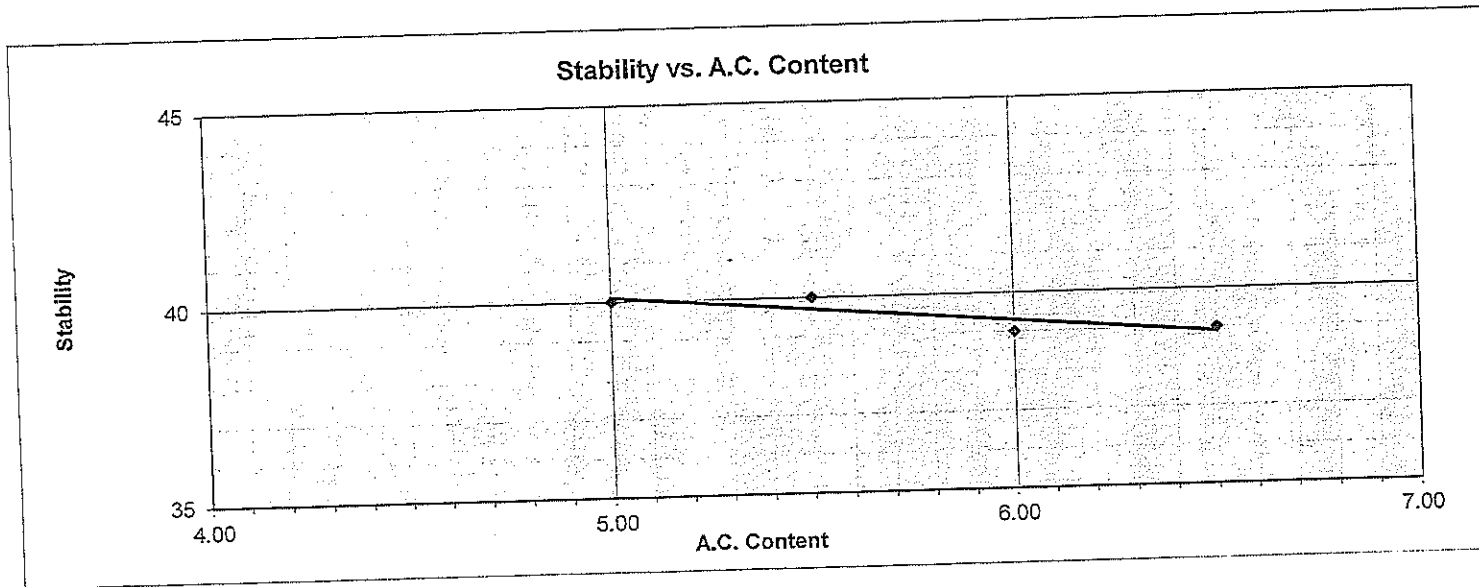
Signed Lee Clifton Date 7/3/2017
 Project Engineer: Lee, Clifton
 Signed Tim Webb Date 6-26-17
 Regional Materials Engineer: Webb, Tim
 Signed Contractor Rep Date 6/01/17
 Contractors Representative:

Strohcker Asphalt and Paving Laboratory Design for Asphalt						Lab Mix No.: 3155JH052									
Sample Identification:						Date Received	8/21/2015								
Field Sheet No.						Project	STE C480-008 Pinon Causway to Aspen Village								
Subaccount No. SA 19219						Location	Archuleta County								
Item 403:						Contractor/Supplier	/ Strohecker A&P								
Pit Name						C&J Gravel	Grading								
Antistrip Additive (other than lime if used), %						3	AC source								
						SX	Nominal Max Agg. Size								
						3/4	Gyr. (N _{design})								
						75	WMA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								
						Suncor Ener	Grade								
						58-28	% Fibers (SMA, if used)								
						Antistrip Additive Material	Evotherm								
Aggregate Data (CP-31 A & B):						Aggregate Sampled by (CP-30)									
						Natural Products			Recycled Products			Control Points			
Type of Aggregate						CF	IA	CA				Minimum	Maximum		
Aggregate Source						C&J Garvel	C&J Gravel	C&J Gravel	AC Content	AC Content	AC Content				
									Virgin	Gradation	Gradation	Gradation	Combined		
									Gradation				Gradation		
Percent in Mix						50	25	25	100			100			
Passing 1 1/2 (37.5)						100	100	100	100			100			
Passing 1 (25.0)						100	100	100	100			100			
Passing 3/4 (19.0)						100	100	100	100			100			
Passing 1/2 (12.5)						100	100	96	99			99		90	100
Passing 3/8 (9.5)						100	100	52	88			88			
Passing #4 (4.75)						96	9	2	51			51			
Passing #8 (2.36)						63	2	1	32			32		28	58
Passing #16 (1.18)						42	2	1	22			22			
Passing #30 (0.60)						29	2	1	15			15			
Passing #50 (0.30)						19	1	1	10			10			
Passing #100 (0.15)						11	1	1	6			6			
Passing #200 (0.075)						5.2	1.1	0.8	3.1			3.1		2.0	10.0
												Specs:			
Plastic or Non-Plastic (T-90)						NP	NP	NP				2.604			
Aggregate Bulk SpG(T-84 & T-85)						2.586	2.614	2.629				2.688			
Aggregate App. SpG(T-84 & T85))						2.678	2.645	2.655				1.190			
Agg Water Abs (%) (T-84 & T85)						1.3%	1.2%	1.0%				2.678			
Aggregate Eff. SpG(T-84 & T-85)												2.586			
Fine Agg. Bulk SpG. (T-84)												2.600			
Coarse Agg. Bulk SpG. (T-85)												1.031			
Binder SpG.												95%		60 min.	
Fractured Faces (CP-45)												55		For Info 45 min	
Sand Equivalent (T-176) WMA/HMA Only														45 max	
LA Abrasion (T-96)						28								45.0 min	
Fine Aggregate Angularity (T-304) WMA/HMA Only														12 max.	
Sodium Sulfate Soundness (T 104) SMA Only														18 max.	
Micro Deval (CP-L 4211)												12			

Strohcker Asphalt and Paving Laboratory Design for Asphalt						Lab No.	3155JH052	
Mix Design A.C. Content Determination Results: Rice = 2.453 @ 5.75 %AC A.C. Content (percent) 5.00 5.50 6.00 6.50 % Rice Data (CP-51) 2.480 2.462 2.444 2.426							Optimum Point Data 5.75 A.C. 2.453 Rice 2.355 Bulk S.G.	
Specimen SpG. Data (CP-L 5115 & CP-L 5106): Bults at Ndes 2.316 2.345 2.369 2.405 Height at Ndes 64.9 63.5 64.1 63.1								
Voids Data: Voids at Ndes 6.6 4.8 3.1 0.9 %							Voids Specs: 3% to 4% 4 Voids	
Other Data: VMA at Ndes (CP-48) 15.5 14.9 14.5 13.6 % VFA at Ndes (percent) 57 68 79 94 % Aggregate Eff. SpG(T-84 & T-85) 2.678 2.678 2.678 2.678 Effective Asphalt Content 3.95 4.46 4.96 5.47 Dust to A.C. Ratio (CP-50) 0.53 0.47 0.42 0.38 Stability (CP-L 5106)(Grade S and SX Only) 40 40 39 39							Specs: >14.5 14.8 VMA 65-80% 73 VFA 0.7 4.71 Effective AC 28 0.44 D/A Ratio 40 Stability	
Total Binder Replaced 0.0 0.0 0.0 0.0							≤30% RAS ≤23% RAP ≤30% RAS 0.0 ≤23% RAP	
Lottman Moisture Sensitivity Results (CP-L 5109, Method B) Asphalt Content (percent) 5.75 Tensile Strength Retained 82 % Avg. Dry Tensile Strength (psi) 73.9 (372KPa) Avg. Cond. Tensile Strength (psi) 60.4 (291KPa) Avg. Specimen Voids (percent) 6.5 Avg. Saturation (percent) 87.2							Lottman Specs: >80% > 30 6.0% - 8.0%	
SMA Specific Input and Calculations Bulk Specific Gravity at Optimum AC (Gmb) 2.355 Bulk Specific Gravity of Coarse Agg (Gca) 2.600 Percent of Coarse Agg (Pca) #N/A Voids Coarse Agg (VCAmix) #N/A Unit Weight of Stone (γs) Voids Coarse Agg DRC (VCAadc) 100.0							Break Point Sieve Percent Aggregate retained on the breakpoint Sieve #N/A VCAmix < VCAadc to ensure stone on stone contact VCA Ratio Check #N/A Yes passes, No fails	
Plasticity of Mineral Filler (T-90) 4% max. Calcium Oxide Content (ASTM C25) 22% max. Modified Rigden Voids (NAPS IS-101) ≤50								
Distribution: RME HQ						Report Date	8/21/2015	
Asphalt Pavement Engineer						CDOT Form 429 02/13		
						Page 2		

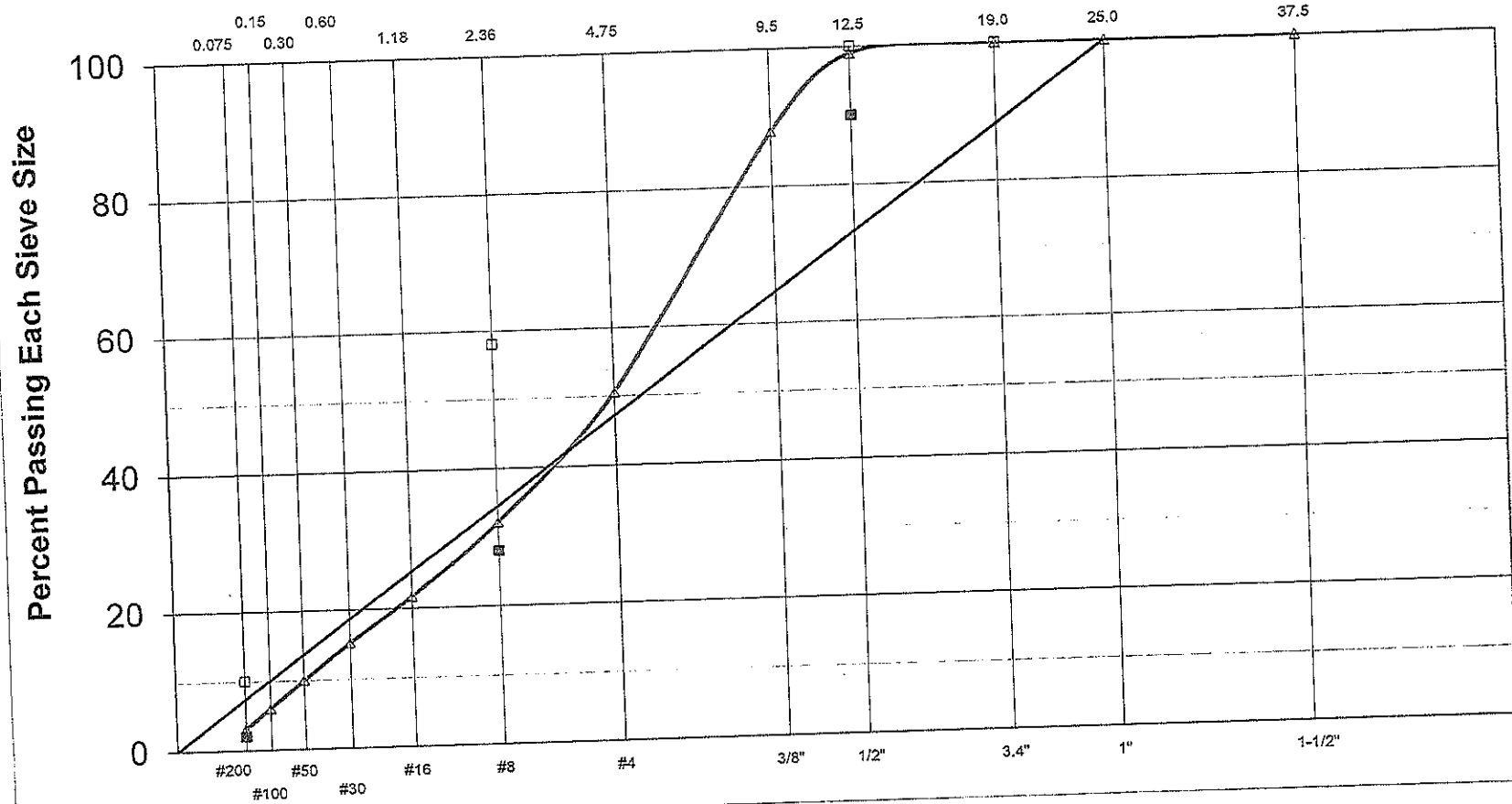






Strohcker Asphalt and Paving
Lab Mix No.: 3155JH052

Aggregate Gradation



Strohcker Asphalt and Paving
 Lab Mix No.: 3155JH052

Sieve Size Raised to the .45 Power



**Western
Technologies
Inc.**
The Quality People
Since 1955

278 Sawyer Drive, No. 2
Durango, Colorado 81303-7904
(970) 375-9033 • fax 375-9034

August 31, 2015

Strohecker Asphalt and Paving,
37801 Highway 160
Durango, Colorado 81122

Attn: Mr. Kip Strohecker

Re: CDOT SX 75 Asphalt Concrete Mix Design
Various Locations
SW Colorado

Reference No. 3155JH052

Pursuant to your request and authorization, Western Technologies, Inc. (WT) has completed a series of tests on aggregates and asphalt cement. The purpose of our testing was to provide an asphalt concrete mixture design for the above-referenced application.

Aggregate stockpile samples were obtained by WT on July 23, 2015 from C&J Gravel. Suncor Energy submitted the performance graded asphalt cement and liquid anti-stripping agent to WT's Farmington laboratory. The material sources are listed in the table below:

MATERIAL	SOURCE/SUPPLIER	SOURCE LOCATION
Mineral Aggregate	C&J Gravel	Durango, Colorado
PG 58 - 28 Asphalt Cement	Suncor Energy	Denver, Colorado
Liquid Antistrip	Evotherm	Richmond, Virginia

SAMPLE PREPARATION/TESTING

A sieve analysis was performed on each of the as-received aggregate stockpile samples. The individual aggregates were then proportioned and based upon the client's quality control data, combined to fall within the CDOT SX 75 gradation limits.

As indicated by CP-L 5115 Table 1 for PG 58-28, the combined aggregates and asphalt cement were heated to 310°F prior to mixing. The specimens were mixed at 5.0, 5.5, 6.0, and 6.5 percent asphalt cement (by weight of total mixture). Specimens were compacted at a temperature of 280°F using the SHRP Gyratory Compactor per CP-L 5115, utilizing gyrations consisting of 7 for Nini and 75 for Ndes.

Testing was performed in accordance with test procedures contained in the *Colorado Procedure – Laboratory Manual, Flexible Pavement Unit*. Unit weight, percent air voids, percent voids in the mineral aggregate (VMA), and percent voids filled with asphalt were determined for the trial specimens. Moisture sensitivity testing was performed on the mixture utilizing the Tensile Strength Ratio Method. The results are attached.

Tests for aggregate specific gravities, Los Angeles abrasion, plasticity index, fractured faces, fine aggregate angularity, and sand equivalent value were performed in accordance with applicable test methods.

RESULTS

Results of the above testing are presented in the attached mix design summary and supporting laboratory documents.


RECOMMENDATIONS/COMMENTS

Based on the data provided herein, an asphalt cement content of 5.75 percent (by total weight of mixture) for the CDOT SX 75 Grading with the PG 58-28 asphalt mix is appropriate for general project application.

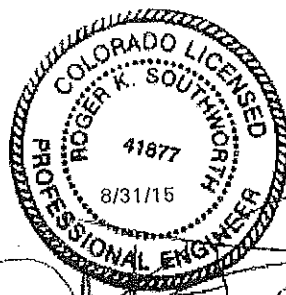
The asphalt concrete mix design presented herein is based upon aggregate samples provided by C&J Gravel. The mix design results are representative of overall material only to the extent that the samples are representative of the aggregate quality and uniformity obtained during production and handling operations, which are the client's responsibilities. Normal variations from the mixture design results due to normal plant crushing and handling operations are to be expected. However, should the source or physical characteristics of the aggregates substantially change, the development of a new or revised mix design is recommended. The mix design set forth in this report may be relied upon only for the referenced project or application, and is subject to timely verification.

If you have any questions regarding this information, or if we may be of additional assistance, please do not hesitate to contact us.

Respectfully Submitted,
WESTERN TECHNOLOGIES INC.


Fred Hampton
Project Manager

Attachments



Roger K. Southworth, P.E.
Managing Director

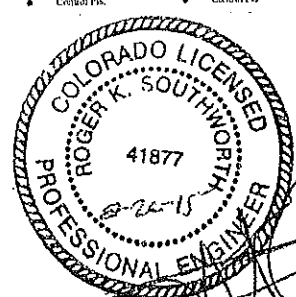
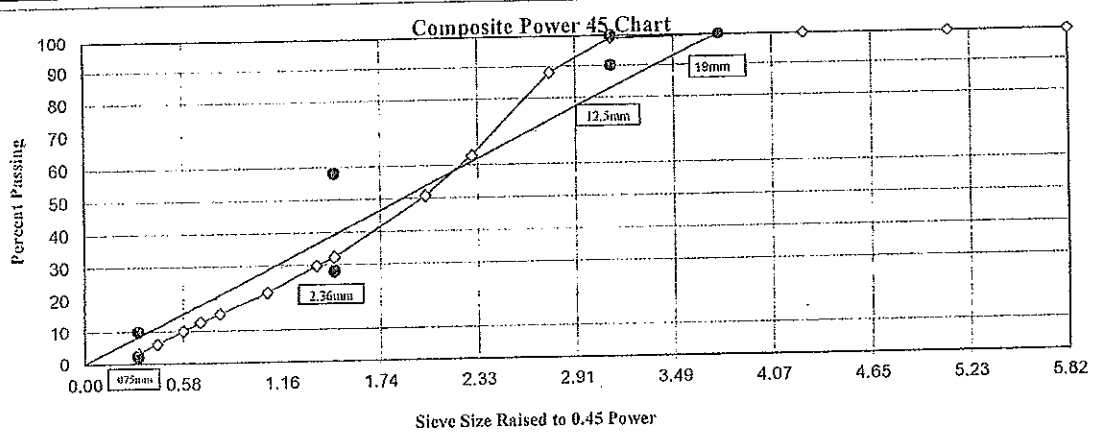
Aggregate Composite Grading

Western Technologies Inc.

WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: General Submittal	Type of Mix: CDOT SX (75)
Project Name: 2015 Various Quality Control	Traffic Type: ESAL's = 0.3 to < 3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%

Lab No.	Aggregate Name	Percentage	Location
CF	Aggregate #1: Crusher Fines	50.0	C&J Gravel Home Pit
IA	Aggregate #2: Intermediate Aggregate 3/8"	25.0	C&J Gravel Home Pit
CA	Aggregate #3: Coarse Aggregate 5/8"	25.0	C&J Gravel Home Pit
	Aggregate #4:		
	Aggregate #5:		
	Aggregate #6:		
	Admixture:		
Total:		100.0	
Difference:		0.0	

CF	IA	CA	Lab No.	Specs	Production
50.0	25.0	25.0	Percent Sieve	Control Points	Specs
Agg. #1	Agg. #2	Agg. #3	(US/mm)	Composite	Specs
Percent Passing					
100	100	100	2" / 50	100	
100	100	100	1.5" / 37.5	100	
100	100	100	1" / 25	100	
100	100	100	3/4" / 19	100	100
100	100	96	1/2" / 12.5	99	90-100
100	100	52	3/8" / 9.5	88	82-94
100	47	4	1/4" / 6.3	63	
96	9	3	#4 / 4.75	51	46-56
63	2	1	#8 / 2.36	32	28-58
58	2	1	#10 / 2.00	30	
42	2	1	#16 / 1.18	22	
29	2	1	#30 / .600	15	11-19
24	2	1	#40 / .425	13	
19	1	1	#50 / .300	10	
11	1	1	#100 / .150	6	
5.2	1.1	0.8	#200 / .075	3.1	2-10



WT Job No.: 3155JH052

WT Lab No.: TRIAL #2

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING

Project No.: C&J Gravel Home Pit

Source of Aggregate:

Date: 08-21-15

Mix Type: CDOT SX (75)

Contractor: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR

Asphalt Grade: PG 58-28

Type of Admix.: EVOTHERM 3%

Weigh-up weight (g):				2000	2200	3300		1000	1100	1100	600	
Aggregate Lab #	Sieve Size	Indiv % Ret	Accum. % Ret	Rice	Gyratory	TSR	Flat & Elongated	Fractured Faces	SE	FAA	Make up	
0.000	1.5" / 37.5	0.0	0.0									
	1" / 25	0.0	0.0									
	3/4" / 19	0.0	0.0									
	Percentage	1.2" / 12.5	0.0									
	0.0	3/8" / 9.5	0.0	0.0								
		1/4" / 6.3	0.0	0.0								
Min #8 / 2.36		0.0	0.0									
0.000	1.5" / 37.5	0.0	0.0									
	1" / 25	0.0	0.0									
	3/4" / 19	0.0	0.0									
	Percentage	1.2" / 12.5	0.0									
	0.0	3/8" / 9.5	0.0	0.0								
		1/4" / 6.3	0.0	0.0								
Min #8 / 2.36		0.0	0.0									
CA Course Aggregate	1.5" / 37.5	0.0	0.0									
	1" / 25	0.0	0.0									
	3/4" / 19	0.0	0.0									
	Percentage	1.2" / 12.5	1.0	20	22	33	0	20				
	25.0	3/8" / 9.5	11.0	12.0	240	264	396	0	244			
		1/4" / 6.3	12.0	24.0	480	528	792		487			
Min #8 / 2.36		0.3	25.0	500	550	825		497	5	9	5	
IA Intermediate Aggr.	1.5" / 37.5	0.0	25.0									
	1" / 25	0.0	25.0									
	3/4" / 19	0.0	25.0									
	Percentage	1.2" / 12.5	0.0	25.0								
	25.0	3/8" / 9.5	0.0	25.0					766			
		1/4" / 6.3	13.3	38.3	765	842	1262		959			
Min #8 / 2.36		0.5	50.0	1000	1100	1650			49	26	14	
0.000	1.5" / 37.5	0.0	50.0									
	1" / 25	0.0	50.0									
	3/4" / 19	0.0	50.0									
	Percentage	1.2" / 12.5	0.0	50.0								
	0.0	3/8" / 9.5	0.0	50.0								
		1/4" / 6.3	0.0	50.0								
Min #8 / 2.36		0.0	50.0									
CF Crusher Fines	1.5" / 37.5	0.0	50.0									
	1" / 25	0.0	50.0									
	3/4" / 19	0.0	50.0									
	Percentage	1.2" / 12.5	0.0	50.0								
	50.0	3/8" / 9.5	0.0	50.0								
		1/4" / 6.3	0.0	50.0					1000			
Min #8 / 2.36		31.5	100.0	1040	1144	1716			417	1100	600	
0.000	Admixture	0.0	100.0	2000	2200	3300						

Superpave Design Summary

Western Technologies Inc.

WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: TRIAL #2	Mix Type: CDOT SX (75)
Project Name: 2015 Various Quality Control	Traffic Type: ESAL's = 0.3 to < 3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%

Composite Aggregate Gradation			
Aggregate	Lab No.	Percentage	
Crusher Fines	CF	50.0	
Intermediate Aggregate 3/8"	IA	25.0	
Coarse Aggregate 5/8"	CA	25.0	
Sieve (US/mm)	Composite	Control Points	Production Specs
2" 50	100		
1.5" 37.5	160		
1" 25	100		
3/4" 19	100	100	100
1/2" 12.5	99	90-100	
3/8" 9.5	88		82-94
1/4" 6.3	63		
#4 4.75	51		46-56
#8 2.36	32	28-58	27-37
#10 2.00	30		
#16 1.18	22		
#30 .600	15		11-19
#40 .425	13		
#50 .300	10		
#100 .150	6		
#200 .075	3.1	2-10	1.1-5.1

Tensile Strength Ratio (AASHTO T283)			
Dry (psi)	Wet (psi)	Ratio	% Asphalt
73.9	60.4	0.82	5.8
		0.80 Min	

Design Data at Selected % Asphalt			
Property	Value	Spec.	
Percent of Asphalt:	5.75		
Bulk Specific Gravity @ Ndesign:	2.356		
Hveem Stability @ Ndesign:	35	28 Min	
Theor. Max. Sp. Gr. (Gmm):	2.453		
Bulk Density @ Nd (kg/m ³):	2356		
Percent Gmm @ Ndesign:	96.0	96.0 - 98.0	
Dry Split Tensile Strength (psi)	73.9	30 Min	
Percent Air Voids @ Ndesign:	4.0	3.0 - 5.0	
Percent VMA @ Ndesign:	14.7	14.5 Min	
Percent Voids Filled @ Ndesign:	73.2	65-80	
Percent Effective Asphalt:	4.713		
Dust to Eff. Asphalt Ratio:	0.7	0.6 - 1.2	
Asphalt Specific Gr.:	1.031		
Effective Sp. Gravity:	2.678		
Film Thickness (microns):	12.0		
Aggregate / Admix Properties			
Property	Coarse	Fine	Combined
Bulk (Dry) Sp. Gravity:	2.621	2.586	2.604
"SSD" Sp. Gravity:	2.650	2.621	2.635
Apparent Sp. Gravity:	2.698	2.678	2.688
Water Absorption(%):	1.09	1.32	1.19
Admixture Specific Gravity:			1.000
AASHTO T176 Sand Equivalent value:			55
Fractured Face Two (CP 45) (%):			85.0
Liquid Limit (AASHTO T89):			NP
Plastic Limit (AASHTO T90):			NP
L.A. Abr. (AASHTO T 96) @500 Rev.(%):			28
Uncompacted Voids (AASHTO TP 33) (%):			48.5
Micro Deval (CPL 4211) Combined Grading:			12.0
			Info

Max Theor Gravity (Rice) Test & Aggregate Data
 WT Job No.: 3155JH052
 CDOT Project No.: TRIAL #2
 Project Name: 2015 Various Quality Control
 Client: STROHECKER PAVING
 Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15
 Mix Type: CDOT SX (75)
 Traffic Type: ESAL's = 0.3 to < 3.0 Million
 Asphalt Source: SUNCOR
 Asphalt Grade: PG 58-28
 Type of Admix.: EVOTHERM 3%

Maximum Theoretical Gravity (Rice) Test		
Test Method: CP 51		
Percent of binder in Sample:		6.0
Weight of Container:	1	0.0
	2	0.0
Weight of Sample and Container:	1	1119.9
	2	991.1
Wt. of Sample, Container, Water, & Lid:	1	4056.9
	2	3963.3
Weight of Sample in Air:	1	1119.9
	2	991.1
Wt. Of Container, Water and Lid:	1	3395.9
	2	3377.0
Wt. of Container, Sample, & Water, (C):	1	4056.9
	2	3963.3
Volume of Voidless Mix ("V _{vm} "): :	1	458.9
	2	404.8
Maximum Sp. Gravity ("G _{mm} "): :	1	2.440
	2	2.448
Average Maximum Sp. Gravity ("G _{mm} "): :		2.444
Average Maximum Density (PCF):		152.5
"G _{mm} " Range:		0.008

All Weights in Grams.

0.0 = item was tared

Coarse Aggregate Specific Gravity (AASHTO T85)		
	Coarse Aggregate 5/8"	Intermediate Aggregate 3/8"
Oven-Dry Weight(g):	3034.5	2485.1
"SSD" Weight(g):	3063.9	2515.2
Weight in Water(g):	1909.7	1564.4
Bulk (Dry) Sp. Gravity:	2.629	2.614
"SSD" Sp. Gravity:	2.655	2.645
Apparent Sp. Gravity:	2.698	2.699
Water Absorption(%):	0.97	1.21

Fine Aggregate Specific Gravity (AASHTO T84)	
	Crusher Fines
Oven-Dry Weight(g):	493.5
"SSD" Weight(g):	500.0
Weight of Flask & Water(g):	663.6
Wt. of Flask, Water & Sample(g):	972.8
Bulk (Dry) Sp. Gravity:	2.586
"SSD" Sp. Gravity:	2.621
Apparent Sp. Gravity:	2.678
Water Absorption(%):	1.32

Combined Specific Gravity	
Combined Bulk (Dry):	2.604
Combined "SSD":	2.635
Combined Apparent:	2.688
Combined Water Absorption (%)	1.19

Composite Mineral Aggregate Properties		
Property	Value	Spec
AASHTO T176 Sand Equivalent value:	55	
Fractured Face Two (CP 45) (%):	95.0	60 Min
Liquid Limit (AASHTO T89):	NV	
Plastic Limit (AASHTO T90):	NP	NP
L.A. Abr. (AASHTO T 96) @500 Rev.(%):	28	45 Max
Uncompacted Voids (AASHTO TP 33) (%):	48.5	45 Min
Micro Deval (CPL 4211) Combined Grading	12.0	Info

Maximum Theoretical Gravity (Rice) Test Design Calculations	
Asphalt Specific Gravity @ 77°F:	1.031
Effective Specific Gravity:	2.678
Asphalt Absorbed (%):	1.10

WT Job No.: 3155JH052
 CDOT Project No.: TRIAL #2
 Project Name: 2015 Various Quality Control
 Client: STROHECKER PAVING
 Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15
 Mix Type: CDOT SX (75)
 Traffic Type: ESAL's = 0.3 to < 3.0 Million
 Asphalt Source: SUNCOR
 Asphalt Grade: PG 58-28
 Type of Admix.: EVOATHERM 3%

Specimen No. 1		Comp / Mixing Temps: 300 F / 325 F		Asphalt %= 5.00	
Gmm = 2.480		Total Air Dry Mass, g = 1151.2		Gmb (measured) = 2.314	
Total Mass "SSD", g = 1157.0		Immersed Wt., g = 659.4		% Water Absorp. (by Vol.) = 1.2	
No. of Gyration	Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
5	73.1	2.005	2.051	82.7	17.3
7	71.9	2.039	2.085	84.1	15.9
15	69.5	2.109	2.157	87.0	13.0
20	68.6	2.137	2.185	88.1	11.9
25	67.9	2.159	2.208	89.8	11.0
30	67.3	2.178	2.228	89.8	10.2
35	66.9	2.191	2.241	90.4	9.6
40	66.5	2.204	2.254	90.9	9.1
45	66.2	2.214	2.265	91.3	8.7
50	66.2	2.214	2.275	91.7	8.3
55	65.9	2.224	2.275	92.1	7.9
65	65.6	2.234	2.285	92.7	7.3
75	64.8	2.248	2.299	93.3	6.7

Specimen No. 2		Comp / Mixing Temps: 300 F / 325 F		Asphalt %= 5.00	
Gmm = 2.480		Total Mass = 1149.5		Gmb (measured) = 2.318	
Total Mass "SSD", g = 1154.4		Immersed Wt., g = 658.5		% Water Absorp. (by Vol.) = 1.0	
No. of Gyration	Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
5	73.4	1.997	2.050	82.6	17.4
7	72.2	2.030	2.084	84.0	16.0
15	69.7	2.103	2.158	87.0	13.0
20	68.8	2.130	2.187	88.2	11.8
25	68.1	2.152	2.209	89.1	10.9
30	67.5	2.171	2.229	89.9	10.1
35	67.0	2.188	2.245	90.5	9.5
40	66.6	2.201	2.259	91.1	8.9
45	66.3	2.211	2.269	91.5	8.5
50	66.0	2.221	2.279	91.9	8.1
55	66.0	2.221	2.279	91.9	8.1
58	66.0	2.221	2.279	91.9	8.1
65	65.7	2.231	2.290	92.3	7.7
65	65.3	2.231	2.290	92.3	7.7
65	65.3	2.245	2.304	92.9	7.1
75	64.9	2.258	2.318	93.5	6.5

Average Values for Specimen No. 1 & 2			Asphalt %= 5.00		
No. of Gyration	Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
7	72.1	2.034	2.084	84.0	16.0
75	64.9	2.260	2.316	93.4	6.6

Gyratory Compaction Data

WT Job No.: 3155JH052 Date: 08-21-15
 CDOT Project No.: TRIAL #2 Mix Type: CDOT SX (75)
 Project Name: 2015 Various Quality Control Traffic Type: ESAL's = 0.3 to < 3.0 Million
 Client: STROHECKER PAVING Asphalt Source: SUNCOR
 Project No: C&J Gravel Home Pit Asphalt Grade: PG 58-28
 Source of Aggregate: Type of Admix.: EVOTHERM 3%

Specimen No. 1		Comp / Mixing Temps: 300 F / 325 F		Asphalt %= 5.50	
Gmm = 2.462		Total Mass = 1166.5		Gmb (measured)= 2.349	
Total Mass "SSD", g = 1167.3		Immersed Wt., g = 670.7		% Water Absorp. (by Vol.)= 0.2	
No. of Gyrations	Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
5	72.5	2.049	2.077	84.4	15.6
7	71.2	2.086	2.115	85.9	14.1
15	68.7	2.162	2.192	89.0	11.0
20	67.8	2.191	2.221	90.2	9.8
25	67.1	2.213	2.244	91.1	8.9
30	66.6	2.230	2.261	91.8	8.2
35	66.1	2.247	2.278	92.5	7.5
40	65.8	2.257	2.288	92.9	7.1
45	65.4	2.271	2.302	93.5	6.5
50	65.1	2.281	2.313	93.9	6.1
55	64.9	2.288	2.320	94.2	5.8
65	64.5	2.303	2.334	94.8	5.2
75	64.1	2.317	2.349	95.4	4.6

Specimen No. 2		Comp / Mixing Temps: 300 F / 325 F		Asphalt %= 5.50	
Gmm = 2.462		Total Mass = 1166.4		Gmb (measured)= 2.342	
Total Mass "SSD", g = 1167.7		Immersed Wt., g = 669.6		% Water Absorp. (by Vol.)= 0.3	
No. of Gyrations	Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
5	70.9	2.095	2.074	84.2	15.8
7	69.8	2.128	2.107	85.6	14.4
15	67.3	2.207	2.185	88.8	11.2
20	66.4	2.237	2.215	90.0	10.0
25	65.7	2.261	2.238	90.9	9.1
30	65.2	2.278	2.256	91.6	8.4
35	64.8	2.292	2.269	92.2	7.8
40	64.4	2.306	2.284	92.8	7.2
45	64.1	2.317	2.294	93.2	6.8
50	63.8	2.328	2.305	93.6	6.4
55	63.6	2.335	2.312	93.9	6.1
65	63.2	2.350	2.327	94.5	5.5
75	62.8	2.365	2.342	95.1	4.9

Average Values for Specimen No. 1 & 2			Asphalt %= 5.50		
No. of Gyrations	Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
7	70.5	2.107	2.111	85.7	14.3
75	63.5	2.341	2.345	95.3	4.7

WT Job No.: 3155JH052
 CDOT Project No: TRIAL #2
 Project Name: 2015 Various Quality Control
 Client: STROHECKER PAVING
 Project No: C&J Gravel Home Pit
 Source of Aggregate:

Date: 08-21-15
 Mix Type: CDOT SX (75)
 Traffic Type: ESAL's = 0.3 to < 3.0 Million
 Asphalt Source: SUNCOR
 Asphalt Grade: PG 58-28
 Type of Admix.: EVOTHERM 3%

Specimen No. 1		Comp / Mixing Temps: 300 F / 325 F		Asphalt %= 6.00	
Gmm = 2.444		Total Mass = 1156.5		Gmb (measured)= 2.366	
Total Mass "SSD", g = 1158.0		Immersed Wt., g = 669.1		% Water Absorp. (by Vol.)= 0.3	
No. of Gyration	488.9 Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
5	72.5	2.031	2.082	85.2	14.8
7	71.2	2.068	2.120	86.7	13.3
15	68.6	2.146	2.200	90.0	10.0
20	67.6	2.178	2.233	91.3	8.7
25	66.9	2.201	2.256	92.3	7.7
30	66.3	2.221	2.276	93.1	6.9
35	65.9	2.234	2.290	93.7	6.3
40	65.5	2.248	2.304	94.3	5.7
45	65.1	2.262	2.318	94.9	5.1
50	64.8	2.272	2.329	95.3	4.7
55	64.6	2.279	2.336	95.6	4.4
65	64.1	2.297	2.354	96.3	3.7
75	63.8	2.308	2.366	96.8	3.2

Specimen No. 2		Comp / Mixing Temps:		Asphalt %= 6.00	
Gmm = 2.444		Total Mass = 1158.1		Gmb (measured)= 2.372	
Total Mass "SSD", g = 1158.5		Immersed Wt., g = 670.3		% Water Absorp. (by Vol.)= 0.1	
No. of Gyration	488.2 Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
5	73.6	2.001	2.076	84.9	15.1
7	72.3	2.037	2.113	86.5	13.5
15	69.5	2.119	2.198	89.9	10.1
20	68.5	2.150	2.230	91.3	8.7
25	67.7	2.175	2.257	92.3	7.7
30	67.1	2.194	2.277	93.2	6.8
35	66.6	2.211	2.294	93.9	6.1
40	66.2	2.224	2.308	94.4	5.6
45	65.8	2.238	2.322	95.0	5.0
50	65.5	2.248	2.332	95.4	4.6
55	65.2	2.258	2.343	95.9	4.1
65	64.7	2.276	2.361	96.6	3.4
75	64.4	2.286	2.372	97.1	2.9

Average Values for Specimen No. 1 & 2				Asphalt %= 6.00	
No. of Gyration	Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
7	71.8	2.052	2.116	86.6	13.4
75	64.1	2.297	2.369	96.9	3.1

WT Job No.: 3155JH052 CDOT Project No.: TRIAL #2 Project Name: 2015 Various Quality Control Client: STROHECKER PAVING Project No: C&J Gravel Home Pit Source of Aggregate:	Date: 08-21-15 Mix Type: CDOT SX (75) Traffic Type: ESAL's = 0.3 to <3.0 Million Asphalt Source: SUNCOR Asphalt Grade: PG 58-28 Type of Admix.: EVOTHERM 3%
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Specimen No. 1		Comp / Mixing Temps: 300 F / 325 F		Asphalt %= 6.50	
Gmm = 2.426		Total Mass = 1165.8		Gmb (measured) = 2.404	
Total Mass "SSD", g = 1166.0		Immersed Wt., g = 681.1		% Water Absorp. (by Vol.) = 0.0	
No. of Gyration	484.9 Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
5	71.4	2.079	2.121	87.4	12.6
7	70.1	2.117	2.161	89.1	10.9
15	67.6	2.196	2.241	92.3	7.7
20	66.6	2.229	2.274	93.7	6.3
25	65.9	2.252	2.298	94.7	5.3
30	65.4	2.270	2.316	95.5	4.5
35	64.9	2.287	2.334	96.2	3.8
40	64.6	2.298	2.345	96.6	3.4
45	64.2	2.312	2.359	97.2	2.8
50	64.0	2.319	2.367	97.5	2.5
55	63.7	2.330	2.378	98.0	2.0
65	63.3	2.345	2.393	98.6	1.4
75	63.0	2.356	2.404	99.1	0.9

Specimen No. 2		Comp / Mixing Temps: 300 F / 325 F		Asphalt %= 6.50	
Gmm = 2.426		Total Mass = 1168.8		Gmb (measured) = 2.405	
Total Mass "SSD", g = 1169.3		Immersed Wt., g = 683.3		% Water Absorp. (by Vol.) = 0.1	
No. of Gyration	486.0 Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
5	71.9	2.064	2.111	87.0	13.0
7	70.6	2.102	2.149	88.6	11.4
15	67.9	2.186	2.235	92.1	7.9
20	66.9	2.219	2.268	93.5	6.5
25	66.1	2.246	2.296	94.6	5.4
30	65.5	2.266	2.317	95.5	4.5
35	65.1	2.280	2.331	96.1	3.9
40	64.7	2.294	2.345	96.7	3.3
45	64.4	2.305	2.356	97.1	2.9
50	64.1	2.316	2.367	97.6	2.4
55	63.9	2.323	2.375	97.9	2.1
65	63.4	2.341	2.394	98.7	1.3
75	63.1	2.352	2.405	99.1	0.9

Average Values for Specimen No. 1 & 2			Asphalt %= 6.50		
No. of Gyration	Height, mm	Gmb (estimated)	Gmb (corrected)	% Gmm (corrected)	% Air Voids
7	70.4	2.110	2.155	88.8	11.2
75	63.1	2.354	2.405	99.1	0.9

Volumetric Calculations

WT Job No.: 3155JH052
 CDOT Project No.: TRIAL #2
 Project Name: 2015 Various Quality Control
 Client: STROHECKER PAVING
 Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15
 Mix Type: CDOT SX (75)
 Traffic Type: ESAL's = 0.3 to < 3.0 Million
 Asphalt Source: SUNCOR
 Asphalt Grade: PG 58-28
 Type of Admix.: EVOTHERM 3%

Calculation Method: A.I. SP-2

Volumetric Calculations for N ini

Gyraton Level	Gyraton Number	% Asph. (Tot Wt.)	Sp. Gr. (Gmb)	Agg. & Admix Vol. (%)	Admix Vol. (%)	Eff Asph Vol. (%)	Eff% Asph (Tot Wt.)	Dust to Eff. Asph Ratio	VMA (%)	Voids Filled (%)	Eff. Voids (%)	% Gmm Corrected	Gmm
Nini	7	5.00	2.084	76.042	0.000	7.998	3.955	0.8	24.0	33.4	16.0	84.0	2.480
Nini	7	5.50	2.111	76.601	0.000	9.135	4.461	0.7	23.4	39.0	14.3	85.7	2.462
Nini	7	6.00	2.116	76.396	0.000	10.197	4.966	0.6	23.6	43.2	13.4	86.6	2.444
Nini	7	6.50	2.155	77.381	0.000	11.441	5.472	0.6	22.6	50.6	11.2	88.8	2.426
Nini	7	5.75	2.114	76.515	0.000	9.667	4.713	0.7	23.5	41.2	13.8	86.2	2.453
Specs:													

Calculation Method: A.I. SP-2

Volumetric Calculations for N design

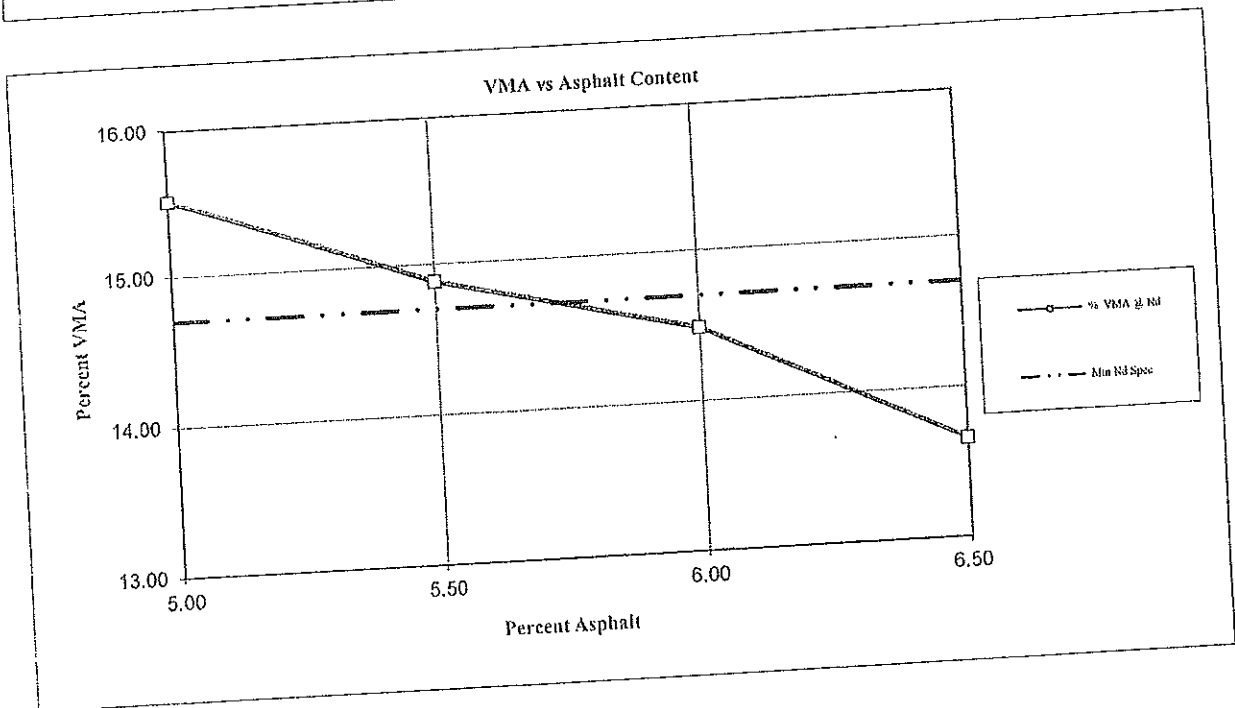
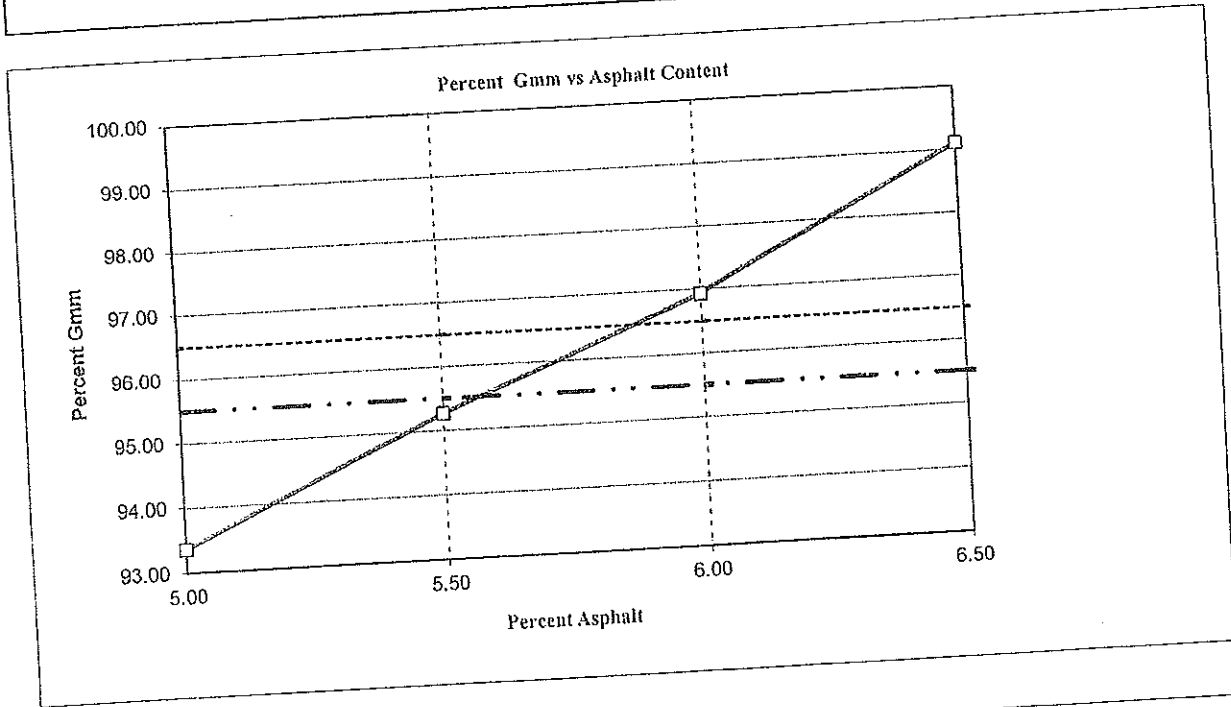
Gyraton Level	Gyraton Number	% Asph. (Tot Wt.)	Sp. Gr. (Gmb)	Agg. & Admix Vol. (%)	Admix Vol. (%)	Eff Asph Vol. (%)	Eff% Asph (Tot Wt.)	Dust to Eff. Asph Ratio	VMA (%)	Voids Filled (%)	Eff. Voids (%)	% Gmm Corrected	Gmm
Nd	75	5.00	2.316	84.484	0.000	8.886	3.955	0.8	15.5	57.3	6.6	93.4	2.480
Nd	75	5.50	2.345	85.113	0.000	10.150	4.461	0.7	14.9	68.2	4.7	95.3	2.462
Nd	75	6.00	2.369	85.511	0.000	11.414	4.966	0.6	14.5	78.8	3.1	96.9	2.444
Nd	75	6.50	2.405	86.339	0.000	12.765	5.472	0.6	13.7	93.4	0.9	99.1	2.426
Nd	75	5.75	2.356	85.274	0.000	10.774	4.713	0.7	14.7	73.2	4.0	96.0	2.453
Specs: 0.6 - 1.2 14.5 Min 65-80 3.0 - 5.0 96.0 - 98.0													

Gyraton Level	Gyraton Number	% Asph. (Tot Wt.)	Stability Measurements		Average Stability
Nd	75	5.00	40	40	40
Nd	75	5.50	41	40	40
Nd	75	6.00	39	39	39
Nd	75	6.50	39	40	39

VMA & % Gmm Graphs

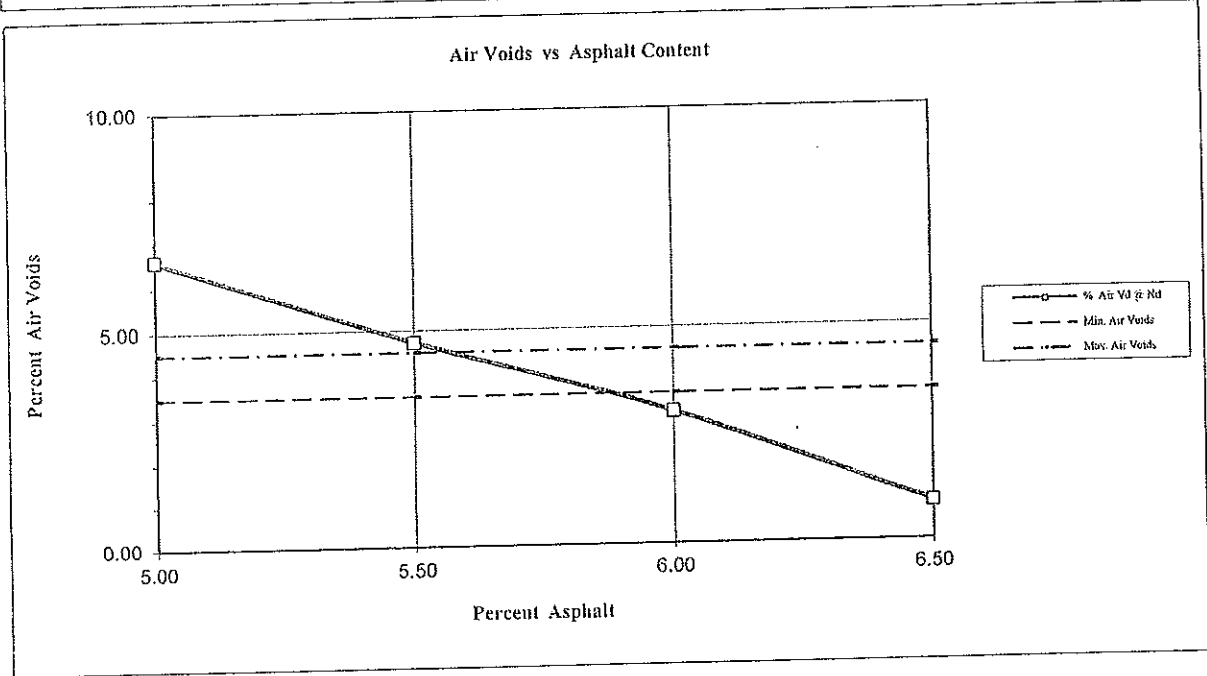
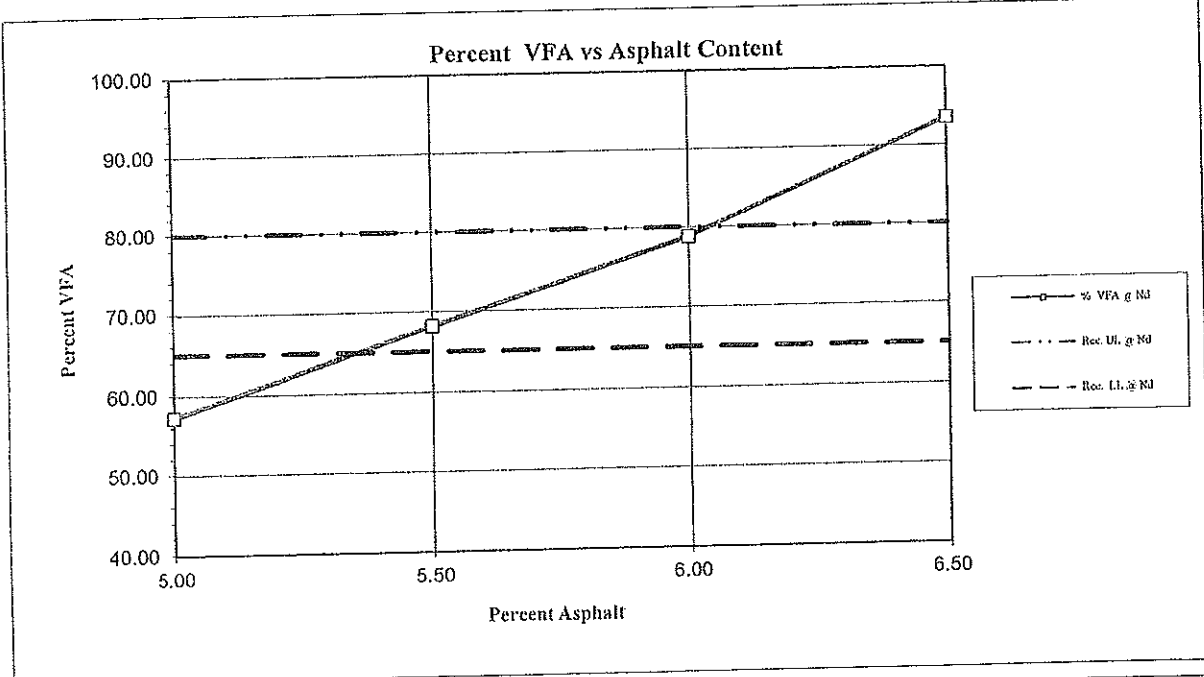
WT Job No.: 3155JH052
 CDOT Project No.: TRIAL #2
 Project Name: 2015 Various Quality Control
 Client: STROHECKER PAVING
 Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15
 Mix Type: CDOT SX (75)
 Traffic Type: ESAL's = 0.3 to < 3.0 Million
 Asphalt Source: SUNCOR
 Asphalt Grade: PG 58-28
 Type of Admix.: EVOTHERM 3%



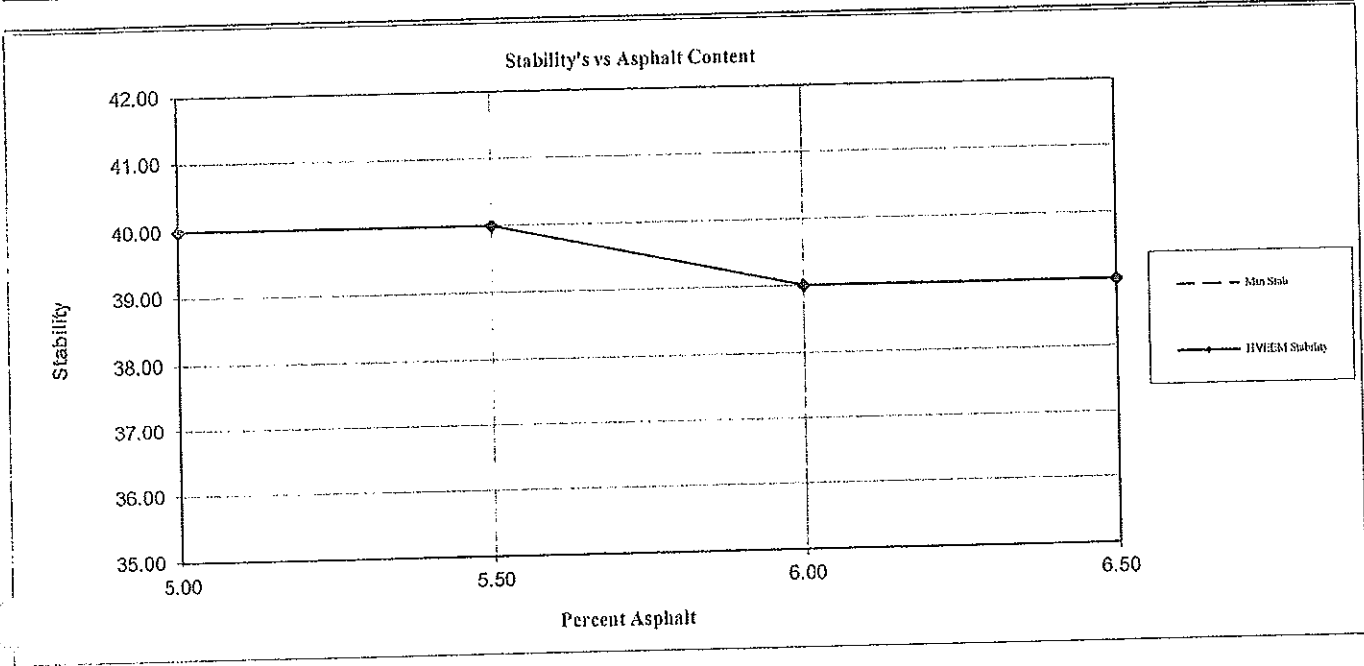
VFA & Air Voids Graphs

WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: TRIAL #2	Mix Type: CDOT SX (75)
Project Name: 2015 Various Quality Control	Traffic Type: ESAL's = 0.3 to < 3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%



ability Graph

WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: TRIAL #2	Mix Type: CDOT SX (75)
Project Name: 2015 Various Quality Control	Traffic Type: ESAL's = 0.3 to < 3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%



Tensile Strength Ratio

WESTERN TECHNOLOGIES INC.

WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: TRIAL #2	Mix Type: CDOT SX (75)
Project Name: 2015 Various Quality Control	Client: ESAL's = 0.3 to < 3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%

Resistance of Compacted Bituminous Mixture to Moisture Damage

Test Method: CPL 5106

Specimen Identification	1	3	5	2	4	6
	Gyratory	Gyratory	Gyratory	Gyratory	Gyratory	Gyratory
Compaction Effort						
Specimen Use	Dry	Dry	Dry	Wet	Wet	Wet
Diameter (in.)	3.937	3.937	3.937	3.937	3.937	3.937
Height (in.)	2.614	2.614	2.614	2.614	2.614	2.614
Diameter (mm)	100.0	100.0	100.0	100.0	100.0	100.0
Height (mm)	66.4	66.4	66.4	66.4	66.4	66.4
Dry Weight in Air (g)	1158.8	1157.3	1155.5	1162.3	1156.0	1158.5
S.S.D. Weight (g)	1160.5	1161.0	1159.2	1166.9	1159.8	1161.9
Weight in Water (g)	654.9	656.7	653.0	660.1	656.4	658.8
Volume (cm ³)	505.6	504.3	506.2	506.8	503.4	503.1
Bulk Specific Gravity	2.292	2.295	2.283	2.293	2.296	2.303
Bulk Density (pcf)	143.0	143.2	142.4	143.1	143.3	143.7
Maximum Density (Rice Value)	2.453	2.453	2.453	2.453	2.453	2.453
Percent Air Voids (%)	6.6	6.4	6.9	6.5	6.4	6.1
Air Void Volume (cm ³)	33.19	32.50	35.13	32.96	32.13	30.81
LOAD (lb.)	1225	1090	1270			
Load (N)	5449	4849	5649			
DRY TENSILE STRENGTH (psi)	75.8	67.4	78.6			
DRY TENSILE STRENGTH (kPa)	522.8	465.2	542.0			
Average Dry Tensile Strength (psi)		73.9				
Average Dry Tensile Strength (kPa)		510.0				
Amount of Vacuum (mm of Mercury)				28	28	28
S.S.D. Weight (g) (After Saturation)				1187.7	1180.8	1182.0
Weight in Water (g) (After Saturation)				682.2	680.5	681.9
Volume (cm ³)				505.5	500.3	500.1
Volume of Absorbed Water (cm ³)				25.4	24.8	23.5
Percent Saturation (%)				77.1	77.2	76.3
Percent Swell (%)				-0.3	-0.6	-0.6
Thickness, (in) [After 24h Condition]				2.649	2.368	2.638
S.S.D. Weight (g) (After Condition)				1190.5	1184.3	1185.6
Weight in Water (g) (After Condition)				686.0	680.0	682.3
Volume (cm ³) (After Condition)				504.5	504.3	503.3
Volume of Absorbed Water (cm ³) (Af C)				28.2	28.3	27.1
Percent Saturation (%) (After Condition)				85.6	88.1	88.0
Percent Swell (%) (After Condition)				-0.5	0.2	0.0
LOAD (lb.) (After Conditioning)				975	985	970
WET TENSILE STRENGTH (psi)				60.3	60.9	60.0
WET TENSILE STRENGTH (kPa)				416.1	420.4	414.0
Average Wet Tensile Strength (psi)					60.4	
Average Wet Tensile Strength (kPa)					416.8	
TENSILE STRENGTH RATIO						0.82

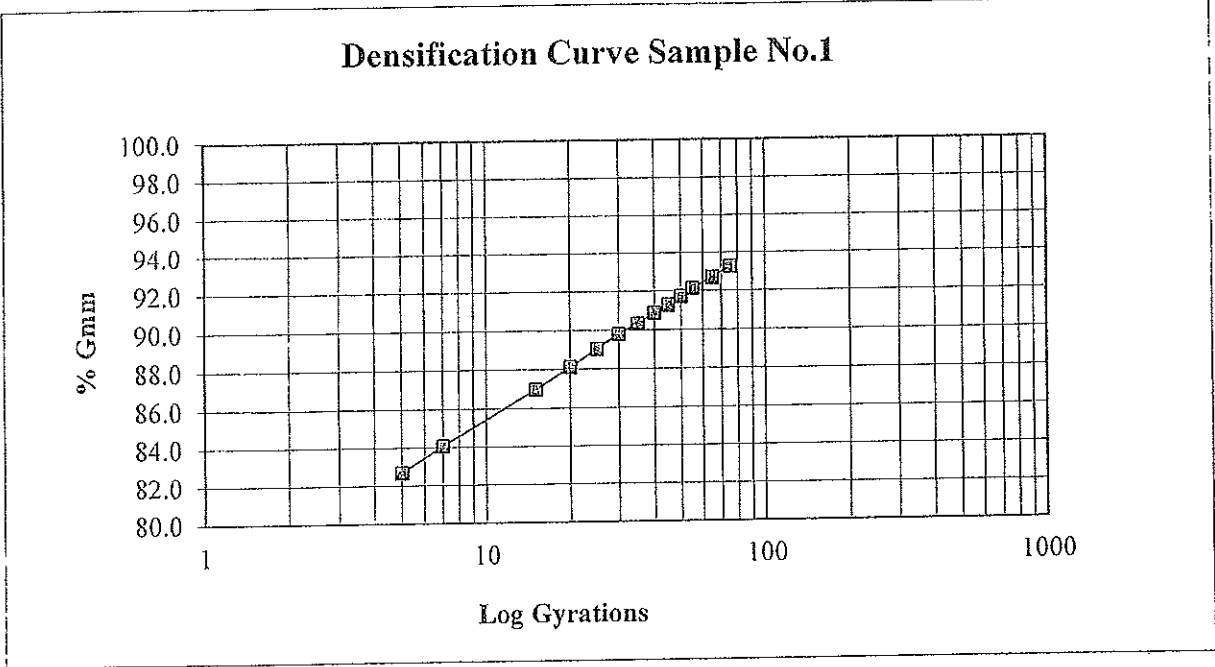
Gyratory Compaction Data

Western Technologies Inc.

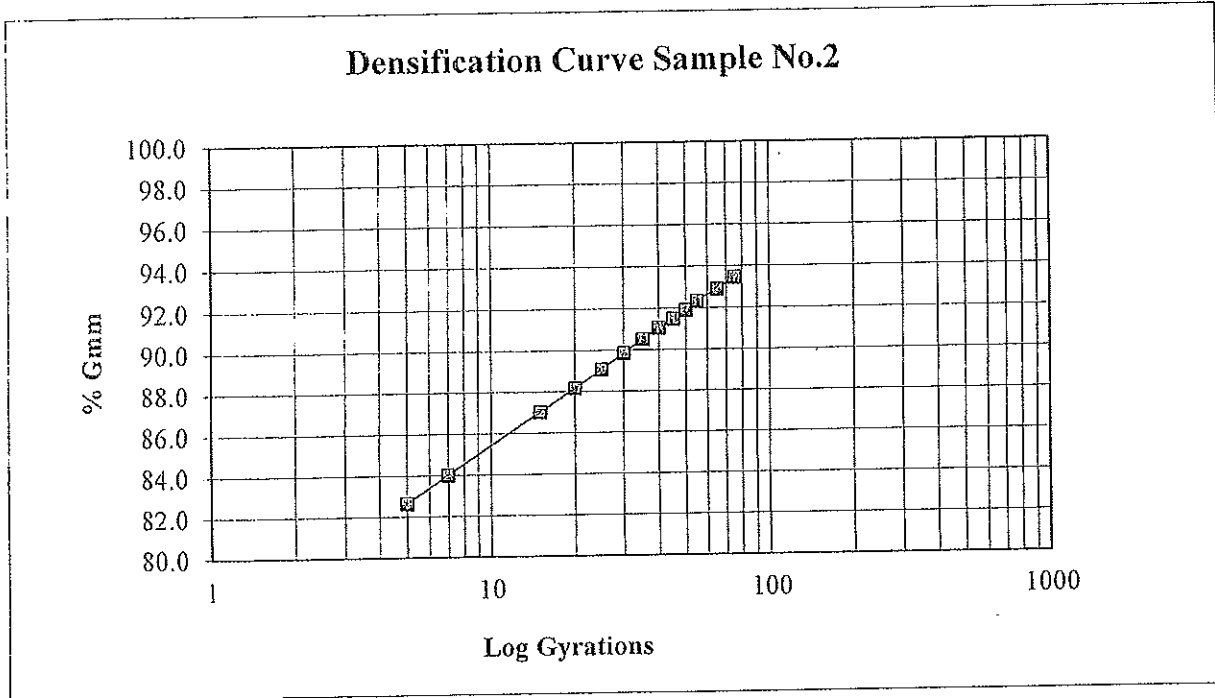
WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: TRIAL #2	Mix Type: CDOT SX (75)
Project Name: 2015 Various Quality Control	Traffic Type: ESAL's = 0.3 to < 3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%

Asphalt Content (%) = 5.00

Densification Curve Sample No.1



Densification Curve Sample No.2



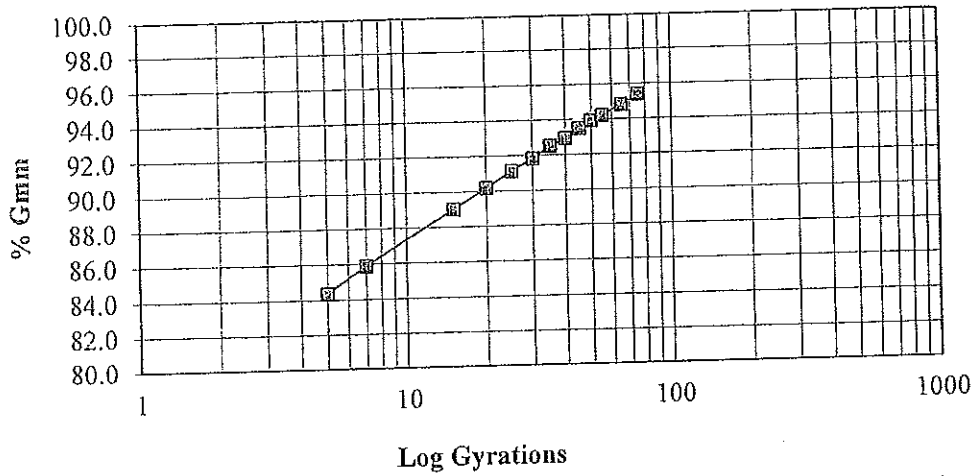
Gyratory Compaction Data

Western Technologies Inc.

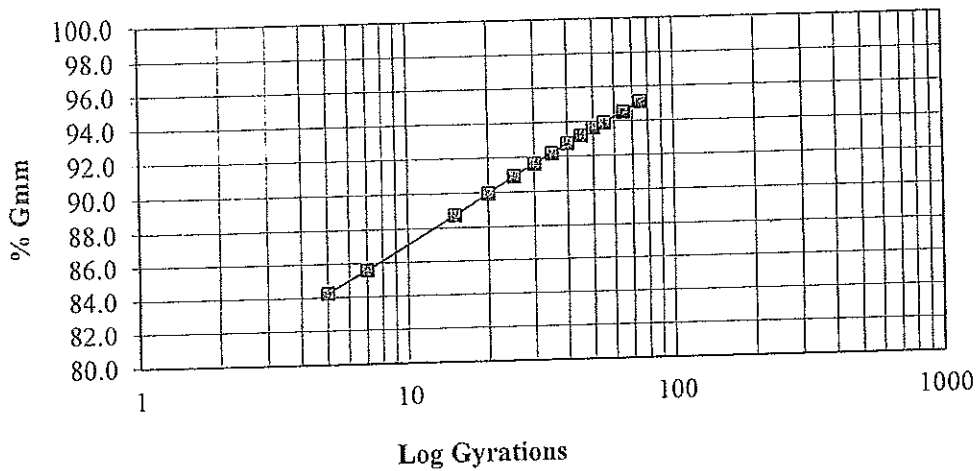
WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: TRIAL #2	Mix Type: CDOT SX (75)
Project Name: 2015 Various Quality Control	Traffic Type: ESAL's = 0.3 to <3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%

Asphalt Content (%) = 5.50

Densification Curve Sample No.1



Densification Curve Sample No.2

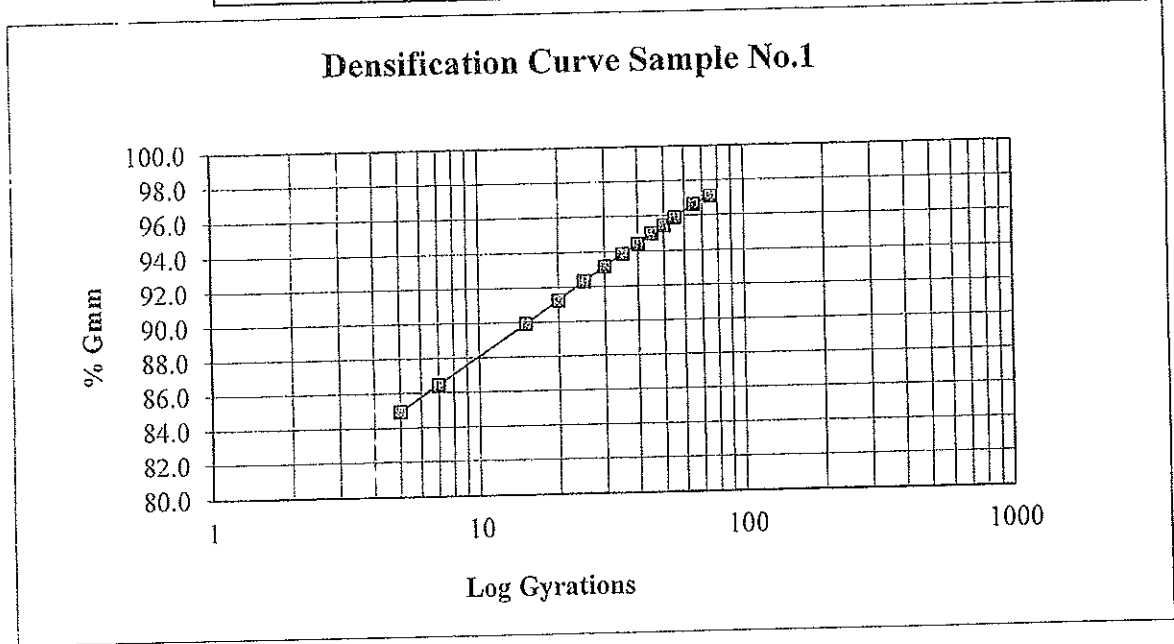


Gyratory Compaction Data

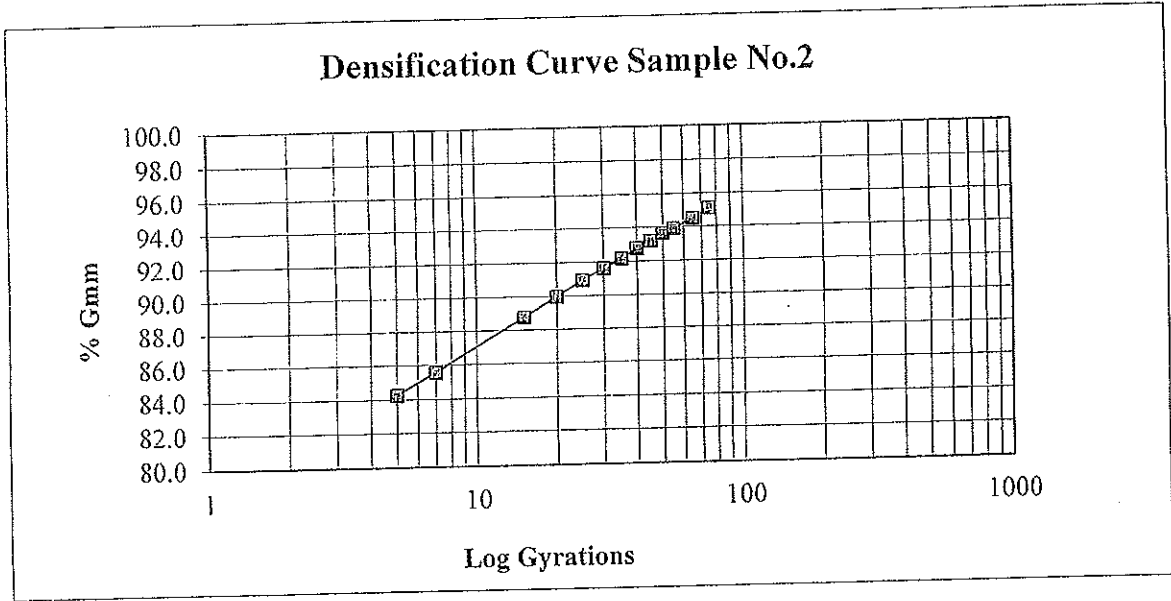
WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: TRIAL #2	Mix Type: CDOT SX (75)
Project Name: 2015 Various Quality Control	Traffic Type: ESAL's = 0.3 to <3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%

Asphalt Content (%) = 6.00

Densification Curve Sample No.1



Densification Curve Sample No.2

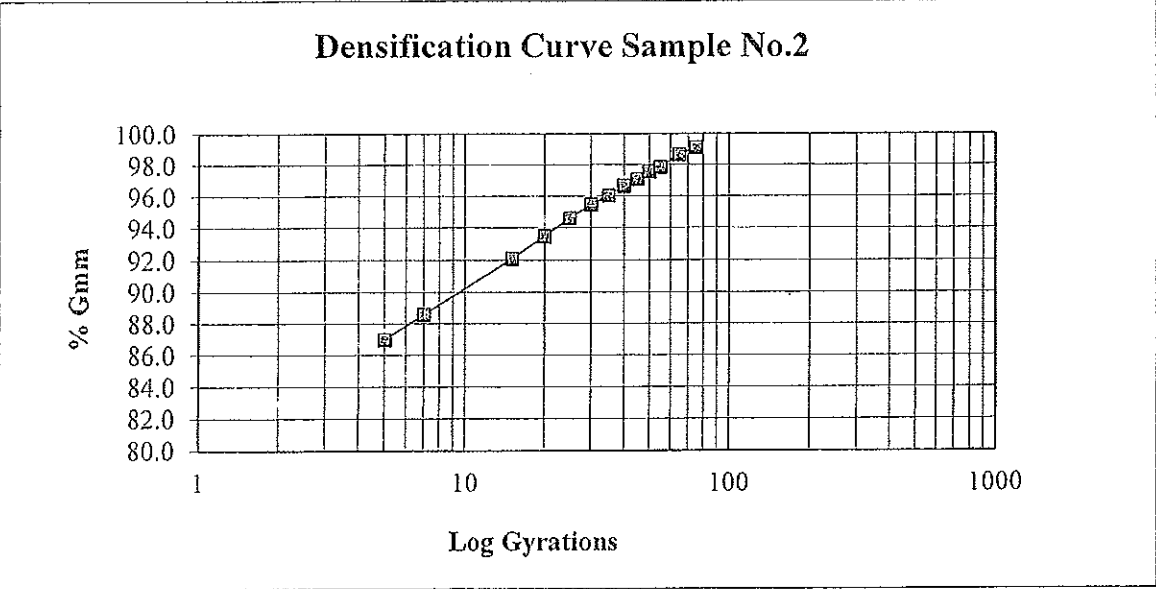
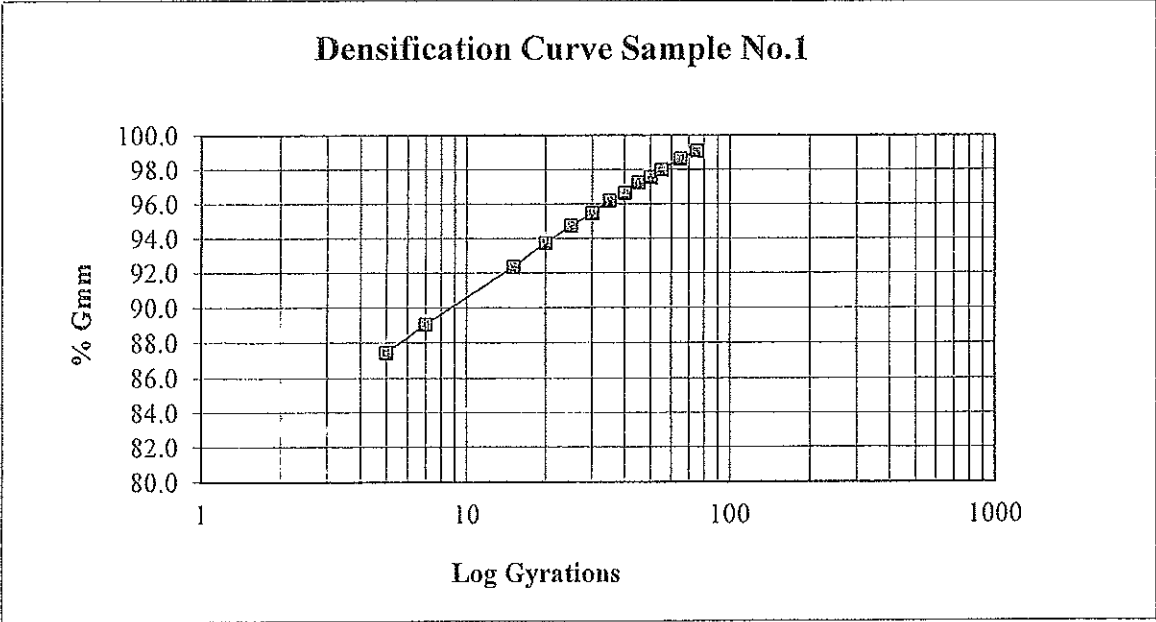


Gyratory Compaction Data

Western Technologies Inc.

WT Job No.: 3155JH052	Date: 08-21-15
CDOT Project No.: TRIAL #2	Mix Type: CDOT SX (75)
Project Name: 2015 Various Quality Control	Traffic Type: ESAL's = 0.3 to < 3.0 Million
Client: STROHECKER PAVING	Asphalt Source: SUNCOR
Source of Aggregate: C&J Gravel Home Pit	Asphalt Grade: PG 58-28
	Type of Admix.: EVOTHERM 3%

Asphalt Content (%) = 6.50



SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

Project: <u>STE C400-008</u>		SA No: <u>19219</u>	Location: <u>PAGOSA-PC TO AVD SUP</u>
Sample Date: <u>8-9-17</u>	Station: <u>SAMPLED AT HOT PLANT</u>	Tonnage: <u>N/A</u>	
Samp By: <u>KIP STROHECKER</u>	Date: <u>8-9-17</u>	Sample No: <u>VERIFICATION #1</u>	Item No: <u>60B HMA</u>
Grading: <u>SA</u>	Form 43#: <u>52017A19219BP</u>	Supplier: <u>STROHECKER PAVING</u>	
Test Date: <u>8-9-17</u>	Tested By: <u>GREG JADRYCH</u>	Checked By: <u>GINA DENTEN</u>	
IA #: <u>10K</u>	Rep/Verif:		

ASPHALT GRADATION TEST NO: VERIFICATION #1

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	<u>0</u>	<u>0</u>	<u>100%</u>	<u>100</u>
1/2"	<u>59.0</u>	<u>4.0</u>	<u>96.0</u>	<u>90-100</u>
3/8"	<u>235.5</u>	<u>15.9</u>	<u>84.1</u>	<u>82-94</u>
No. 4	<u>704.7</u>	<u>53.1</u>	<u>46.9</u>	<u>46-56</u>
No. 8	<u>1008.0</u>	<u>68.2</u>	<u>31.8</u>	<u>27-37</u>
No. 16	<u>1134.3</u>	<u>76.8</u>	<u>23.2</u>	
No. 30	<u>1213.2</u>	<u>82.1</u>	<u>17.9</u>	<u>11-19</u>
No. 50	<u>1276.4</u>	<u>86.4</u>	<u>13.6</u>	
No. 100	<u>1346.8</u>	<u>91.2</u>	<u>8.8</u>	
No. 200	<u>1374.1</u>	<u>93.03</u>	<u>6.97</u>	<u>1.10-5.10</u>
PAN	<u>37.0</u>			
WASH	<u>65.1</u>			
TOTAL	<u>1476.1</u>			

ASPHALT CEMENT CONTENT AND MOISTURE

Test No: VERIFICATION #1

Test Temperature: _____

Basket Weight: 2845.2

Basket and Sample Wt: 4428.5

Sample Weight: 1583.3

After Ignition

Basket and Sample Wt: 4322.2

A/C Loss (Weight): 106.3

% A/C External: 6.71

Calibration Factor: -0.33

Corrected Percent A/C: 6.38

MOISTURE IN MIX: -0.00 = 6.38%

AC MOISTURE SAMPLE:

Pan Tare: _____

Wet Weight of Sample: _____

Dry Weight of Sample: _____

Weight Loss: _____

Percent Moisture: _____

GRADATION WASH TEST

Original Wet Weight:	<u>N/A</u>
Corrected Dry Weight:	<u>1477.0</u>
Dry Wt. After Wash:	<u>1411.9</u>
Weight Loss:	<u>65.1</u>
Percent Loss:	<u>4.41%</u>

GRADATION MOISTURE TEST

Original Wet Weight:	
Final Dry Weight:	
Weight Loss:	
Percent Moisture:	

Weight Check Before and After Sieving

Dry Wt. After Wash:	<u>1411.9</u>
Dry Wt. After Sieving:	<u>1411.0</u>
Difference (grams):	<u>0.9</u>
Percent Difference:	<u>0.06</u>

Fractured Faces

Dry Weight of Sample:	
Weight of FF:	
Percent FF:	

MAXIMUM SPECIFIC GRAVITY

	Flask 1	Flask 2
Flask weight (empty):	_____	_____
Flask and Sample Weight:	_____	_____
(A) Weight of Sample:	_____	_____
(B) Weight of Flask, H2O and Lid:	_____	_____
(C) Weight of Flask, Sample, H2O and Lid:	_____	_____
Temperature of Water:	_____	_____
Uncorr. Maximum Specific Gravity:	_____	_____
Avg. Maximum Specific Gravity:	_____	_____
Corrected Maximum Specific Gravity:	_____	_____

Max. SPG = A / (A + B - C)

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

#547UA in 4001-G

286° F

Project: STE R400-008		SA No: 19219	Location: PAGOSA - PCW TO AVD - SUP	
Sample Date: 08-23-2017	Station: NIA	Offset: SAMPLE FROM 10TH STREET	Tonnage: 14,98	
Samp By: B. Fields, WTI	Date: 8-23-17	Sample No: VERIFICATION #2	Item No: 608 (HMA)	
Grading: SX	Form 43#: 52017A19219BP	Supplier: STROHECKER PAVING		
Test Date: 08/24/2017	Tested By: GREG JADRYCH	Checked By: GINA DENTEN		
IA #:	10K:	Rep/Verif:		

ASPHALT GRADATION TEST NO: VERIFICATION #2

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0	0	100	100
1/2"	24.5	4.5	95.5	90-100
3/8"	246.4	17.1	82.9	82-94
No. 4	754.3	52.2	47.8	46-56
No. 8	966.5	67.1	32.9	27-37
No. 16	1088.3	75.5	24.5	
No. 30	1165.3	80.9	19.1	11-19
No. 50	1224.4	85.0	15.0	
No. 100	1296.5	89.9	10.1	
No. 200	1322.5	92.2	(7.76)	1.1-5.1
PAN	1367.9			
WASH	73.4			
TOTAL	1446.3			

Test No: VERIFICATION SAMPLE #2

Test Temperature: 53.8° C

Basket Weight: 2855.7

Basket and Sample Wt: 4394.1

Sample Weight: 1538.4 ✓

After Ignition

Basket and Sample Wt: 4297.0

A/C Loss (Weight): 97.1 ✓✓

% A/C External: 6.31 ✓

Calibration Factor: -0.33

Corrected Percent A/C: 5.98

MOISTURE IN MIX: -0.02 = 5.96%

AC MOISTURE SAMPLE:

Pan Tare: 1545.1

Wet Weight of Sample: 2102.8

Dry Weight of Sample: 2102.1

Weight Loss: 0.1 ✓

Percent Moisture: -0.02 ✓

MAXIMUM SPECIFIC GRAVITY:

GRADATION WASH TEST

Original Wet Weight: _____

Corrected Dry Weight: _____

Dry Wt. After Wash: _____

Weight Loss: _____

Percent Loss: _____

	Flask 1	Flask 2
Flask weight (empty):	<u>1002.1</u>	<u>1000.7</u>
Flask and Sample Weight:	<u>2578.1</u>	<u>2577.1</u>
(A) Weight of Sample:	<u>1576.0</u>	<u>1576.4</u>
(B) Weight of Flask, H2O and Lid:	<u>3293.6</u>	<u>3298.4</u>
(C) Weight of Flask, Sample, H2O and Lid:	<u>4223.4</u>	<u>4229.5</u>
Temperature of Water:	<u>78.0</u>	<u>78.0</u>
Uncorr. Maximum Specific Gravity:	<u>2.439 ✓</u>	<u>2.443 ✓ .004</u>
Avg. Maximum Specific Gravity:	<u>2.441 ✓</u>	
Corrected Maximum Specific Gravity:	_____	
Max. SPG = A / (A + B - C)	<u>646.2</u>	<u>645.8</u>

GRADATION MOISTURE TEST

Original Wet Weight: _____

Final Dry Weight: _____

Weight Loss: _____

Percent Moisture: _____

Weight Check Before and After Sieving

Dry Wt. After Wash: _____

Dry Wt. After Sieving: _____

Difference (grams): _____

Percent Difference: _____

Fractured Faces

Dry Weight of Sample: _____

Weight of FF: _____

Percent FF: _____

54748 m³

403-B

"HMA SAMPLE PLANT MIX"

Strohecker
From Hot Plant

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

STE 0480-008

Project: PC-AVD SUP	SA No: 19219	Location: PAGOSA SPRINGS CO
Sample Date: 9/10/17	Station: N/A	Offset: N/A
Tonnage: N/A	Sample No: VERIFICATION# 3	Item No: 403/608
Samp By: check QC	Date: 9-11-17	Supplier: STROHECKER
Grading: 3A	Form 43#	Tested By: D. MANCHESTER / G. JORDEN
Test Date: 9/12/17	Checked By: G. DENTEN	Rep/Verif: VERIFICATION# 3

ASPHALT GRADATION TEST NO: VERIFICATION# 3

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0	0	100	100
1/2"	45.7	3.0	97.0	90-100
3/8"	285.4	18.5	81.5	82-94
No. 4	837.4	54.2	45.8	46-56
No. 8	1067.0	69.0	31.0	27-37
No. 16	1196.0	77.4	22.6	
No. 30	1256.0	82.6	17.4	11-19
No. 50	1338.2	86.6	13.4	
No. 100	1411.7	91.3	8.7	
No. 200	1427.1	92.33	7.67	1.10-5.10
PAN	1426.3		-0.01	CORRECTION FACTOR
WASH	69.0		6.96	
TOTAL	1545.3			

ASPHALT CEMENT CONTENT AND MOISTURE

Test No: VERIFICATION# 3

Test Temperature: ~~55.2~~ 57.2

Basket Weight: 2856.3

Basket and Sample Wt: 4513.3

Sample Weight: 1657.0 ✓

After Ignition

Basket and Sample Wt: 4401.9

A/C Loss (Weight): 111.4 ✓

% A/C External: 6.72 ✓

Calibration Factor: -0.44

Corrected Percent A/C: 6.28 ✓

AC MOISTURE SAMPLE:

Pan Tare: 1544.9

Wet Weight of Sample: (5023.2) 5483 ✓

Dry Weight of Sample: 2023.2 / 548.3 ✓

Weight Loss: 0.0

Percent Moisture: 0.0%

GRADATION WASH TEST

Original Wet Weight:	---
Corrected Dry Weight:	1545.6
Dry Wt. After Wash:	1476.6
Weight Loss:	69.0
Percent Loss:	4.46

GRADATION MOISTURE TEST

Original Wet Weight:	1545.6
Final Dry Weight:	1545.6
Weight Loss:	0
Percent Moisture:	0

Weight Check Before and After Sieving

Dry Wt. After Wash:	1476.6
Dry Wt. After Sieving:	1476.3
Difference (grams):	0.3
Percent Difference:	0.0221

Fractured Faces

Dry Weight of Sample:	
Weight of FF:	
Percent FF:	

MAXIMUM SPECIFIC GRAVITY:

	Flask 1	Flask 2
Flask weight (empty):		
Flask and Sample Weight:		
(A) Weight of Sample:		
(B) Weight of Flask, H2O and Lid:		
(C) Weight of Flask, Sample, H2O and Lid:		
Temperature of Water:		
Uncorr. Maximum Specific Gravity:		
Avg. Maximum Specific Gravity:		
Corrected Maximum Specific Gravity:		

Max. SPG = A / (A + B - C)

Random Sampling Schedule

Project: STE C480-008
Location: PC to AVD SUP
Project Code: 19219

Item: 403 - Hot Bituminous Pavement
Grading: SX
Element: AC

Plan Quantity: 700
 Frequency, 1: 190
 Start Value: 0
 Start Test Number: 1

AC

Test No.	ton	Offset Rand No.	Taken At
1	85	0.491	<u>93.82</u> 9-19-17 PAVING
2	240	0.516	<u>266</u> 10-23-17 PAVING
3	420	0.787	<u>440</u> 10-24-17 PAVING
4	676	0.802	_____
5	907	0.319	_____
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			

Random Sampling Schedule

Project: STE C480-008
Location: PC to AVD SUP
Project Code: 19219

Item: 403 - Hot Bituminous Pavement
Grading: SX
Element: density

Plan Quantity: 700
 Frequency, 1: 190
 Start Value: 0
 Start Test Number: 1

density

Test No.	ton	Offset Rand No.	Taken At
1	114	0.391	<u>114</u> 9-19-17 PAVING (STA. 29+85)
2	199	0.121	<u>199</u> 9-19-17 PAVING
3	440	0.314	<u>440</u> 10-24-17 PAVING
4	711	0.914	_____
5	839	0.014	_____
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			

Note: Use the offset number to find the transverse location for the test, Offset Rand No. times width of paving.

Department of Transportation
State of Colorado
Report Date: 03/20/18
Special: Standard Specifications 2005
Program: Asphalt03, v4.0.1.501(915054865)

Project No: STE C480-008
Project Code: 19219
Region No: 5
Location: PC to AVD - SUP
Supplier: Strohecker Paving

Mix Design: 52017A19219B
Item: 403SX
Cost/ton: \$177.85

HBP Cost/ton: \$177.85
AC Cost/ton: \$ 0.00

*** FINAL REPORT ***

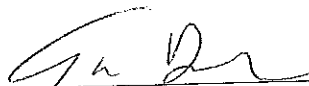
Asphalt Content

Upper Test Limit: 6.30 V Factor: 0.20
Lower Test Limit: 5.70 W Factor: 0.25
MaxSpG @ Optimum %AC: 2.444

Test No.	Test Date	Test Quant	Total Quant	%AC	MaxSpG	MQL
1	09/19/17	237	237	6.36	2.433	
2	10/23/17	134	371	5.53	2.466	
3	10/24/17	259	630	6.52	2.420	
4	10/30/17	20	650	6.00	2.444	34 *Red

Asphalt Content Process Summary

Process 1, Test 1-4, 650 tons QL=45.530 PF=0.81607 I/DP=\$-5,315.58
Mean: 6.103
Std Dev: 0.439


Data Entered By _____
Date 11-10-17


Data Checked By _____
Date 3-20-18

Department of Transportation
 State of Colorado
 Report Date: 03/20/18
 Special: Standard Specifications 2005
 Program: Asphalt03, v4.0.1.501(915054865)

Project No: STE C480-008
 Project Code: 19219
 Region No: 5
 Location: PC to AVD - SUP
 Supplier: Strohecker Paving

Mix Design: 52017A19219B
 Item: 403SX
 Cost/ton: \$177.85

HBP Cost/ton: \$177.85
 AC Cost/ton: \$ 0.00

*** FINAL REPORT ***

Mat Density

Upper Test Limit: 96.00 V Factor: 1.10
 Lower Test Limit: 92.00 W Factor: 0.45

Test No.	Test Date	Test Quant	Total Quant	Density	MQL
1	09/19/17	119	119	95.00	
2	09/19/17	118	237	96.20	77
3	10/23/17	134	371	94.90	57 *Red
4	10/24/17	259	630	97.00	
*P 5	10/30/17	20	650	---	

Mat Density Process Summary

Process 1, Test 1-4, 630 tons QL=57.441 PF=0.90628 I/DP=\$-4,725.36
 Mean: 95.775
 Std Dev: 1.008

Process 1PF, Test 5, 20 tons QL=--- PF=1.00000 I/DP=\$0.00
 Mean: ---
 Std Dev: ---

*p 1.0 Pay Factor: Item 403-09500 Furnish HBP

GD

 Data Entered By

11-10-17

 Date

Reed J. J. J.

 Data Checked By 3-20-18
 Date

Department of Transportation
 State of Colorado
 Report Date: 03/20/18
 Special: Standard Specifications 2005
 Program: Asphalt03, v4.0.1.501(915054865)

Project No: STE C480-008
 Project Code: 19219
 Region No: 5
 Location: PC to AVD - SUP
 Supplier: Strohecker Paving

Mix Design: 52017A19219B
 Item: 403SX
 Cost/ton: \$177.85

HBP Cost/ton: \$177.85
 AC Cost/ton: \$ 0.00

*** FINAL REPORT ***

Gradation											
Test No.	Test Date	Test Quant	Total Quant	3/4"	1/2"	3/8"	#4	#8	#30	#200	MQL
		Upper Test Limit:		100	100	94	56	37	19	5.1	
		Lower Test Limit:		*100	90	82	46	27	11	1.1	
		V Factors:		2.8	2.8	2.8	2.8	2.8	1.8	0.8	
		W Factor:		0.15							

* Calculations are not done for 100% passing sieves.

*V	1	09/19/17	237	237	100	96	84	48	32	18	7.0	
*V	2	10/23/17	134	371	100	95	79	37	26	16	6.7	0 *Red
*V	3	10/24/17	259	630	100	98	89	53	35	19	7.8	
	4	10/30/17	20	650	100	95	88	51	32	15	3.1	

Gradation Process Summary

Process 1, Test 4-4, 20 tons	QL=0.000	PF=1.00000	I/DP=\$0.00
Mean:	95.0	88.0	51.0 32.0 15.0 3.1
Std Dev:	0.0	0.0	0.0 0.0 0.0 0.0
QL:	0.0	0.0	0.0 0.0 0.0 0.0

Separate Gradation Processes per 105.03

Process 1D, Test 1, 237 tons	PF=0.40625	I/DP=\$-3,754.02
Mean:	96.0	84.0 48.0 32.0 18.0 7.0
Std Dev:	0.0	0.0 0.0 0.0 0.0 0.0
QL:	0.0	0.0 0.0 0.0 0.0 0.0
Process 1A, Test 2, 134 tons	PF=0.19643	I/DP=\$-2,872.59
Mean:	95.0	79.0 37.0 26.0 16.0 6.7
Std Dev:	0.0	0.0 0.0 0.0 0.0 0.0
QL:	0.0	0.0 0.0 0.0 0.0 0.0
Process 1C, Test 3, 259 tons	PF=0.15625	I/DP=\$-5,829.87
Mean:	98.0	89.0 53.0 35.0 19.0 7.8
Std Dev:	0.0	0.0 0.0 0.0 0.0 0.0
QL:	0.0	0.0 0.0 0.0 0.0 0.0

*V Sample outside 2V made into separate process.

GD
 Data Entered By

11-10-17
 Date

Reed Janie
 Data Checked By

3-20-18
 Date

Department of Transportation
State of Colorado
Report Date: 03/20/18
Special: Standard Specifications 2005
Program: Asphalt03, v4.0.1.501(915054865)

Project No: STE C480-008
Project Code: 19219
Region No: 5
Location: PC to AVD - SUP
Supplier: Strohecker Paving

*** FINAL REPORT ***

=====
Joint Density - Process 1

Unit Price: \$ 177.85

Comment: no longitudinal joints constructed

Upper Test Limit: 96.00 V Factor: 1.60
Lower Test Limit: 88.00 W Factor: 0.15

Test No.	Test Date	Test Quant	Total Quant	Density	MQL
1	09/19/17	650	650	94.00	

Joint Density - Process 1 Summary

Process 1, Test 1-1, 650 tons QL=0.000 PF=1.00000 I/DP=\$0.00
Mean: 94.00
Std Dev: 0.000

GD 11-10-17
Data Entered By Date

Reed Jansie 3-20-18
Data Checked By Date

Department of Transportation
 State of Colorado
 Report Date: 03/20/18
 Special: Standard Specifications 2005
 Program: Asphalt03, v4.0.1.501(915054865)

Project No: STE C480-008
 Project Code: 19219
 Region No: 5
 Location: PC to AVD - SUP
 Supplier: Strohecker Paving

Mix Design: 52017A19219B
 Item: 403SX
 Cost/ton: \$177.85

HBP Cost/ton: \$177.85
 AC Cost/ton: \$ 0.00

*** FINAL REPORT ***

Final Tabulation for Mix Design 52017A19219B
 Material under 105.03 (e)

Asphalt Content	Mat Density	Gradation
4 tests	4 tests	1 tests
650 tons	630 tons	20 tons
QL=45.530	QL=57.441	QL=0.000
PF=0.81607	PF=0.90628	PF=1.00000
I/DP=\$-5,315.58	I/DP=\$-4,725.36	I/DP=\$0.00
	1 tests	
	20 tons	
	QL=0.000	
	PF=1.00000	
	I/DP=\$0.00	

Separated material per 105.03

Asphalt Content	Mat Density	Gradation
		Process 1D
		237 tons
		PF=0.40625
		I/DP=\$-3,754.02
		Process 1A
		134 tons
		PF=0.19643
		I/DP=\$-2,872.59
		Process 1C
		259 tons
		PF=0.15625
		I/DP=\$-5,829.87

GO
 Data Entered By

11-10-17
 Date

Reed Jones
 Data Checked By

3-20-18
 Date

Department of Transportation
State of Colorado
Report Date: 03/20/18
Special: Standard Specifications 2005
Program: Asphalt03, v4.0.1.501(915054865)

Project No: STE C480-008
Project Code: 19219
Region No: 5
Location: PC to AVD - SUP
Supplier: Strohecker Paving

Mix Design: 52017A19219B
Item: 403SX
Cost/ton: \$177.85

HBP Cost/ton: \$177.85
AC Cost/ton: \$ 0.00

*** FINAL REPORT ***

=====

Totals for Mix Design 52017A19219B		
Asphalt Content	Mat Density	Gradation
4 tests	5 tests	4 tests
650 tons	650 tons	650 tons
I/DP=\$-5,315.58	I/DP=\$-4,725.36	I/DP=\$-12,456.48

I/DP for Mix Design 52017A19219B = \$-22,497.42

GD
Data Entered By

11-10-17
Date

Reed Jovani
Data Checked By

3-20-18
Date

Department of Transportation
State of Colorado
Report Date: 03/20/18
Special: Standard Specifications 2005
Program: Asphalt03, v4.0.1.501(915054865)

Project No: STE C480-008
Project Code: 19219
Region No: 5
Location: PC to AVD - SUP
Supplier: Strohecker Paving

*** FINAL REPORT ***

Final Tabulation for Joint Density
Material under 105.03 (e)

Process 1	QL = 0.000
1 test	PF = 1.00000
650 tons	I/DP = \$0.00

Comment: no longitudinal joints constructed

Totals for Joint Density

1 process	Qty = 650 tons
1 test	I/DP = \$0.00

GD
Data Entered By

11-10-17
Date

Reed Jossin
Data Checked By

3-20-18
Date

Department of Transportation
State of Colorado
Report Date: 03/20/18
Special: Standard Specifications 2005
Program: Asphalt03, v4.0.1.501(915054865)

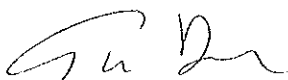
Project No: STE C480-008
Project Code: 19219
Region No: 5
Location: PC to AVD - SUP
Supplier: Strohecker Paving

*** FINAL REPORT ***

=====
Project Totals

Mix Design	I/DP
52017A19219B	\$-22,497.42
Joint Density Process	I/DP
1	\$0.00

Project I/DP = \$-22,497.42


Data Entered By

11-10-17
Date


Data Checked By

3-20-18
Date

**COLORADO DEPARTMENT OF TRANSPORTATION
Ignition Oven Gradation Correction/Degradation**

Project #: STE C480-008
 Location: Pagosa - PC to AV - SUP
 Supplier/Pit Name: Strohecker Paving - C&J Gravel
 Asphalt/Grading: HMA SX (75) PG 58-28

SA#: 19219
 43#: 52017A19219BP
 43 Date: 6/26/2017
 % RAP: 0

Date: 09/11/17
 Lab #: Binder Ign Oven CF#2
 Tester: D. Manchester/G. Jadrych
 Oven: Dgo - BO#2

		UNBURNED SAMPLES #	
		1	2
PAN ID:			
PAN WT:	A	0	0
GROSS WT BEFORE WASH:	B	2183.1	2066.6
NET WT BW: (B-A)	C	2183.1	2066.6
GROSS WT AFTER WASH:	D	2062.6	1949.8
NET WT AW: (D-A)	E	2062.6	1949.8
WT -200: (C-E)	F	120.5	116.8

		BURNED SAMPLES #	
		3	4
PAN ID:			
PAN WT:	A	0	0
GROSS WT BEFORE WASH:	B	1753	1733.2
NET WT BW: (B-A)	C	1753	1733.2
GROSS WT AFTER WASH:	D	1649.2	1633
NET WT AW: (D-A)	E	1649.2	1633
WT -200: (C-E)	F	103.8	100.2

SAMPLE #	PERCENT PASSING	1		2		UNBURNED AVE (1&2) G	3		4		BURNED AV (3&4) H	UNBURN - BURN (G-H)
		WEIGHT RETAINED	PERCENT PASSING	WEIGHT RETAINED	PERCENT PASSING		WEIGHT RETAINED	PERCENT PASSING	WEIGHT RETAINED	PERCENT PASSING		
1-1/2"		0		0			0		0			
1"		0		0			0		0			
3/4"		0		0			0		0			
1/2"		86.9	96.0	47.5	97.7	96.9	42.8	97.6	57.6	96.7	97.1	-0.3
3/8"		444.7	79.6	363.9	82.4	81.0	269.7	84.6	337.2	80.5	82.6	-1.6
#4		1201.3	45.0	1054.7	49.0	47.0	862.4	50.8	900.5	48.0	49.4	-2.5
#8		1514.6	30.6	1386.3	32.9	31.8	1141.4	34.9	1156.5	33.3	34.1	-2.3
#16		1702.5	22.0	1444.4	30.1	26.1	1303.4	25.6	1309.9	24.4	25.0	1.0
#30		1810.3	17.1	1688.6	18.3	17.7	1400	20.1	1398.9	19.3	19.7	-2.0
#50		1888.4	13.5	1770.8	14.3	13.9	1472.1	16.0	1466.1	15.4	15.7	-1.8
#100		1978.4	9.4	1864.2	9.8	9.6	1561.5	10.9	1549.6	10.6	10.8	-1.2
#200		2007.5	8.04	1904.5	7.84	7.94	1599.5	8.76	1581.6	8.75	8.8	-0.81
PAN		2062.6	5.5196739	1949.9	5.816062		1648.7	5.9498	1632.5	5.816062	6	
TOTAL OF ALL SIEVES		2062.6	% DIFF 0.00	1949.9	% DIFF -0.01		1648.7	% DIFF 0.03	1632.5	% DIFF 0.03		
TOTAL -200 (F+PAN)		175.6		162.2			153		151.1			

* Gradation correction to be applied to ALL screens for difference between unburned and burned for any >.5% (#200), >3% (#100-#16), & >5% (#8 & above).
 * Gradation correction to be applied ONLY to #200 for difference between unburned and burned >.5% (#200) if only screen applicable.

54748 mt 4016-C "COLD FEED" - CORRECTION FACTOR #2

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

Project: PC-AVD SUP SA No: 19219 Project No: STE C480-008
 Location: _____
 Sample Date: 9/12/17 Station: _____ Offset: _____ Tonnage: _____
 Samp By: chew QC Date: 9/12/17 Sample No: CF#2 Item No: 608
 Grading: SX Form 43#: 2017 A 19219 BP Supplier: STROHECKER PAVING
 Test Date: 9/12/17 Tested By: Case JADRYCH Checked By: G. DENTEN
 IA #: _____ 10K: _____ Rep/Verif: _____

ASPHALT GRADATION TEST NO: COLD FEED #1

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0	0	100	
1/2"	86.9	4.0	96.0	✓
3/8"	446.7	20.9	79.6	✓
No. 4	1201.3	55.0	45.0	✓
No. 8	1514.6	69.4	30.6	✓
No. 16	1742.5	78.0	22.0	✓
No. 30	1810.3	82.9	17.1	✓
No. 50	1888.4	86.5	13.5	✓
No. 100	1922.3	90.6	9.4	✓
No. 200	2007.5	97.6	2.4	✓
PAN	2062.6			
WASH	120.5			
TOTAL	2183.1			

ASPHALT CEMENT CONTENT AND MOISTURE

Test No: _____
 Test Temperature: _____
 Basket Weight: _____
 Basket and Sample Wt: _____
 Sample Weight: _____
 After Ignition
 Basket and Sample Wt: _____
 A/C Loss (Weight): _____
 % A/C External: _____
 Calibration Factor: _____
 Corrected Percent A/C: _____

AC MOISTURE SAMPLE:

Pan Tare: _____
 Wet Weight of Sample: _____
 Dry Weight of Sample: _____
 Weight Loss: _____
 Percent Moisture: _____

MAXIMUM SPECIFIC GRAVITY:

	Flask 1	Flask 2
Flask weight (empty):	_____	_____
Flask and Sample Weight:	_____	_____
(A) Weight of Sample:	_____	_____
(B) Weight of Flask, H2O and Lid:	_____	_____
(C) Weight of Flask, Sample, H2O and Lid:	_____	_____
Temperature of Water:	_____	_____
Uncorr. Maximum Specific Gravity:	_____	_____
Avg. Maximum Specific Gravity:	_____	_____
Corrected Maximum Specific Gravity:	_____	_____

Max. SPG = A / (A + B - C)

GRADATION WASH TEST

Original Wet Weight: 2202.7
 Corrected Dry Weight: 2183.1
 Dry Wt. After Wash: 2062.6
 Weight Loss: 120.5
 Percent Loss: 5.52

GRADATION MOISTURE TEST

Original Wet Weight: 2397.5
 Final Dry Weight: 2375.9
 Weight Loss: 21.6
 Percent Moisture: 0.9

Weight Check Before and After Sieving

Dry Wt. After Wash: 2062.6
 Dry Wt. After Sieving: 2062.6
 Difference (grams): 0.0
 Percent Difference: 0

Fractured Faces

Dry Weight of Sample: _____
 Weight of FF: _____
 Percent FF: _____

54748 mt 4016-C CORRECTION FACTOR #2
 SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

Project: PC-AVD SUP SA No: 19219 Project Location: NO: STE C480-008
 Sample Date: 09/11/17 Station: _____ Offset: _____ Tonnage: _____
 Samp By: CLIENT QC Date: 9/14/17 Sample No: CPH2 Item No: 608
 Grading: SX Form 43# 52017A 19219 BP Supplier: STROHECKER PAVING
 Test Date: 09/14/17 Tested By: GREG JADOVICH Checked By: G. DENTEN
 IA #: _____ 10K: _____ Rep/Verif: _____

ASPHALT GRADATION TEST NO: Cold Feed #2

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V.I RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0	0	100	
1/2"	47.5	2.3%	97.7%	
3/8"	968.9	12.6	82.4%	
No. 4	1054.7	56.0	49.0%	
No. 8	1386.3	67.1	32.9%	
No. 16	1444.4	69.7	30.3%	
No. 30	1682.6	81.7	18.3%	
No. 50	1770.8	85.7	14.3%	
No. 100	1864.2	90.2	9.8%	
No. 200	1944.5	92.6	7.4%	
PAN	1949.9			
WASH	116.8			
TOTAL	2066.7			

ASPHALT CEMENT CONTENT AND MOISTURE

Test No: _____
 Test Temperature: _____
 Basket Weight: _____
 Basket and Sample Wt: _____
 Sample Weight: _____
 Basket and Sample Wt: _____
 After Ignition
 A/C Loss (Weight): _____
 % A/C External: _____
 Calibration Factor: _____
 Corrected Percent A/C: _____

AC MOISTURE SAMPLE:

Pan Tare: _____
 Wet Weight of Sample: _____
 Dry Weight of Sample: _____
 Weight Loss: _____
 Percent Moisture: _____

GRADATION WASH TEST

Original Wet Weight: 2081.1
 Corrected Dry Weight: 2066.6 ✓
 Dry Wt. After Wash: 1949.8
 Weight Loss: 116.8 ✓
 Percent Loss: 5.7
5.65

GRADATION MOISTURE TEST

Original Wet Weight: 1621.3
 Final Dry Weight: 1609.5 ✓
 Weight Loss: 11.8 ✓
 Percent Moisture: 0.73
 Weight Check Before and After Sieving
 Dry Wt. After Wash: 1949.8
 Dry Wt. After Sieving: 1949.9
 Difference (grams): .1
 Percent Difference: .005

Fractured Faces

Dry Weight of Sample: _____
 Weight of FF: _____
 Percent FF: _____

MAXIMUM SPECIFIC GRAVITY:

	Flask 1	Flask 2
Flask weight (empty):	_____	_____
Flask and Sample Weight:	_____	_____
(A) Weight of Sample:	_____	_____
(B) Weight of Flask, H2O and Lid:	_____	_____
(C) Weight of Flask, Sample, H2O and Lid:	_____	_____
Temperature of Water:	_____	_____
Uncorr. Maximum Specific Gravity:	_____	_____
Avg. Maximum Specific Gravity:	_____	_____
Corrected Maximum Specific Gravity:	_____	_____

Max. SPG = A / (A + B - C)

54740 mt 4016-D

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

BURN OFF TEST # ONE FOR CORRECTION FACTOR #2

Project: PC-AVD SUP SA No: 19219 PROJECT Location: STE C401-008

Sample Date: 9/11/17 Station: _____ Offset: _____ Tonnage: _____

Samp By: client QC Date: 9/13/17 Sample No: CF#2 Item No: 603

Grading: SX Form 43#: 52017A19219BP Supplier: STROHECKER PAVING

Test Date: 9/13/17 Tested By: GREG JADRYCH Checked By: G. DENTEN

IA #: 10K Rep/Verif: _____

ASPHALT GRADATION TEST NO: #2

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0	0	100	✓
1/2"	80.8	4.6	95.4	✓
3/8"	384.7	22.0	78.0	✓
No. 4	987.5	56.4	43.6	✓
No. 8	1244.4	71.0	29.0	✓
No. 16	1379.0	78.7	21.3	✓
No. 30	1456.0	83.1	16.9	✓
No. 50	1514.7	86.5	13.5	✓
No. 100	1582.9	90.6	9.4	✓
No. 200	1613.1	92.07	7.93	✓
PAN	1660.0			
WASH	91.7			
TOTAL	1751.7			

Test No: _____

Test Temperature: 53.0 - 54.0

Basket Weight: 2856.0

Basket and Sample Wt: 4727.1

Sample Weight: 1871.1

After Ignition

Basket and Sample Wt: 4608.1 (1752.1)

A/C Loss (Weight): 119.0

% A/C External: 6.36

Calibration Factor: (-0.36)

Corrected Percent A/C: 6.00

AC MOISTURE SAMPLE:

Pan Tare: _____

Wet Weight of Sample: _____

Dry Weight of Sample: _____

Weight Loss: _____

Percent Moisture: _____

GRADATION WASH TEST

Original Wet Weight: _____

Corrected Dry Weight: 1752.1

Dry Wt. After Wash: 1660.4

Weight Loss: 91.7

Percent Loss: 5.23

GRADATION MOISTURE TEST

Original Wet Weight: _____

Final Dry Weight: _____

Weight Loss: _____

Percent Moisture: _____

Weight Check Before and After Sieving

Dry Wt. After Wash: 1660.4

Dry Wt. After Sieving: 1660.0

Difference (grams): .4

Percent Difference: .024

MAXIMUM SPECIFIC GRAVITY

	Flask 1	Flask 2
Flask weight (empty):	_____	_____
Flask and Sample Weight:	_____	_____
(A) Weight of Sample:	_____	_____
(B) Weight of Flask, H2O and Lid:	_____	_____
(C) Weight of Flask, Sample, H2O and Lid:	_____	_____
Temperature of Water:	_____	_____
Uncorr. Maximum Specific Gravity:	_____	_____
Avg. Maximum Specific Gravity:	_____	_____
Corrected Maximum Specific Gravity:	_____	_____

Max. SPG = A / (A + B - C)

USED FOR AGGREGATE CF

B.O.#1	B0#2	B0#3	B0#4
-0.36	-0.59	-0.27	-0.52
	Highest	Lowest	

Following C.P.L. S120

AVERAGE = -0.44

CORRECTION FACTOR

SEE FORM 473 FOR DISCUSSION

Fractured Faces

Dry Weight of Sample: _____

Weight of FF: _____

Percent FF: _____

54740 mt 4016-D

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

BURN OFF TEST # TWO FOR CORRECTION FACTOR #2

Project: PC-AVD SUP SA No: 19219 Project No: STE C480-008
 Sample Date: 9/11/17 Station: 0 Offset: _____ Tonnage: _____
 Samp By: client QC Date: 9/13/17 Sample No: CP#2 Item No: 608
 Grading: SX Form 43# 32017A 19219BP Supplier: STROTECKER PAVING
 Test Date: 9/13/17 Tested By: GREG JADRYCH Checked By: G. DENTEN
 IA #: _____ 10K: _____ Rep/Verif: _____

ASPHALT GRADATION TEST NO: #2

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0	0	100	
1/2"	23.8	2.4	97.6	✓
3/8"	269.7	13.4	84.6	✓
No. 4	862.4	49.2	50.8	✓
No. 8	1141.4	65.1	34.9	✓
No. 16	1308.4	74.4	25.6	✓
No. 30	1400.0	79.9	20.1	✓
No. 50	1472.1	84.0	16.0	✓
No. 100	1561.5	89.1	10.9	✓
No. 200	1599.5	91.24	8.76	✓
PAN	1648.7			
WASH	103.8			
TOTAL	1752.5			

Test No: _____
 Test Temperature: _____
 Basket Weight: 2856.1
 Basket and Sample Wt: 4732.7
 Sample Weight: 1876.6 ✓
 After Ignition
 Basket and Sample Wt: 4609.1
 A/C Loss (Weight): 123.6 ✓
 % A/C External: 6.59 ✓
 Calibration Factor: (-0.59) ✓
 Corrected Percent A/C: _____

AC MOISTURE SAMPLE:

Pan Tare: _____
 Wet Weight of Sample: _____
 Dry Weight of Sample: _____
 Weight Loss: _____
 Percent Moisture: _____

GRADATION WASH TEST

Original Wet Weight: _____
 Corrected Dry Weight: 1753.0
 Dry Wt. After Wash: 1649.2
 Weight Loss: 103.8
 Percent Loss: 5.92

GRADATION MOISTURE TEST

Original Wet Weight: _____
 Final Dry Weight: _____
 Weight Loss: _____
 Percent Moisture: _____

Weight Check Before and After Sieving

Dry Wt. After Wash: 1649.2
 Dry Wt. After Sieving: 1648.7
 Difference (grams): 0.5
 Percent Difference: 0.03

Fractured Faces

Dry Weight of Sample: _____
 Weight of FF: _____
 Percent FF: _____

MAXIMUM SPECIFIC GRAVITY

	Flask 1	Flask 2
Flask weight (empty):	_____	_____
Flask and Sample Weight:	_____	_____
(A) Weight of Sample:	_____	_____
(B) Weight of Flask, H2O and Lid:	_____	_____
(C) Weight of Flask, Sample, H2O and Lid:	_____	_____
Temperature of Water:	_____	_____
Uncorr. Maximum Specific Gravity:	_____	_____
Avg. Maximum Specific Gravity:	_____	_____
Corrected Maximum Specific Gravity:	_____	_____

Max. SPG = A / (A + B - C)

USED FOR AGGREGATE C.F.

	BO#1	BO#2	BO#3	BO#4
	-0.36	-0.59	-0.27	-0.52
		Highest	Lowest	

Following CP-L 5120
 AVERAGE = -0.44

CORRECTION FACTOR

SEE FORM 473 FOR DISCUSSION

54740 mt 4016-D

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

BURN OFF TEST # THREE FOR CORRECTION FACTOR #2

Project: **PC-AVD SUP** SA No: **19219** PROJECT Location: **NO: STE C480-008**
 Sample Date: **9/11/17** Station: _____ Offset: _____ Tonnage: _____
 Samp By: **client OC** Date: **9/13/17** Sample No: **CP# 2** Item No: **608**
 Grading: **SX** Form 43#: **52017A 19219 BP** Supplier: **STROHECKER PAVING**
 Test Date: **9/13/17** Tested By: **GREG JADRYCH** Checked By: **G. DENTEN**

IA #: **10K** Rep/Verif: _____
 ASPHALT GRADATION TEST NO: **#3**

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V.I. RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"			100 ✓	
1/2"	57.6	3.3	96.7 ✓	
3/8"	337.2	19.5	80.5 ✓	
No. 4	900.5	52.0	48.0 ✓	
No. 8	1156.5	66.7	33.3 ✓	
No. 16	1309.9	75.6	24.4 ✓	
No. 30	1398.9	80.7	19.3 ✓	
No. 50	1466.1	84.86	15.14 ✓	
No. 100	1549.6	89.4	10.6 ✓	
No. 200	1581.6	91.28	8.72 ✓	
PAN	1632.5	5		
WASH	100.2			
TOTAL	1732.7			

ASPHALT CEMENT CONTENT AND MOISTURE

Test No: _____
 Test Temperature: **200 217.66**
 Basket Weight: **605.8**
 Basket and Sample Wt: **4705.0**
 Sample Weight: **1049.2 ✓**
 After Ignition
 Basket and Sample Wt: **4589.0**
 A/C Loss (Weight): **116.0**
 % A/C External: **6.27 ✓**
 Calibration Factor: **(-0.27)**
 Corrected Percent A/C: _____

AC MOISTURE SAMPLE:

Pan Tare: _____
 Wet Weight of Sample: _____
 Dry Weight of Sample: _____
 Weight Loss: _____
 Percent Moisture: _____

GRADATION WASH TEST

Original Wet Weight: _____
 Corrected Dry Weight: **1733.2**
 Dry Wt. After Wash: **1633.0**
 Weight Loss: **100.2**
 Percent Loss: **5.78**

GRADATION MOISTURE TEST

Original Wet Weight: _____
 Final Dry Weight: _____
 Weight Loss: _____
 Percent Moisture: _____

Weight Check Before and After Sieving

Dry Wt. After Wash: **1633.0**
 Dry Wt. After Sieving: **1632.5**
 Difference (grams): **0.5**
 Percent Difference: **0.03 - 0.09**

Fractured Faces

Dry Weight of Sample: _____
 Weight of FF: _____
 Percent FF: _____

MAXIMUM SPECIFIC GRAVITY

	Flask 1	Flask 2
Flask weight (empty):	_____	_____
Flask and Sample Weight:	_____	_____
(A) Weight of Sample:	_____	_____
(B) Weight of Flask, H2O and Lid:	_____	_____
(C) Weight of Flask, Sample, H2O and Lid:	_____	_____
Temperature of Water:	_____	_____
Uncorr. Maximum Specific Gravity:	_____	_____
Avg. Maximum Specific Gravity:	_____	_____
Corrected Maximum Specific Gravity:	_____	_____

Max. SPG = A / (A + B - C)

used for Aggregate C.F.

	BO # 1	BO # 2	BO # 3	BO # 4
	0.36	-0.59	-0.27	-0.52
		Highest	Lowest	

following CP-L 5120
 AVERAGE = **-0.44**
 CORRECTION FACTOR

SEE form 493 FOR DISCUSSION

54740 mt 4016-D

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

BURN OFF TEST # FOUR FULL CORRECTION FACTOR #2

Project: PC-AVD SUP SA No: 19219 PROJECT No.: STE. 0400-008
 Sample Date: 9/11/17 Station: _____ Offset: _____ Tonnage: _____
 Samp By: client OC Date: 9/13/17 Sample No: CP#2 Item No: 608
 Grading: SK Form 43#: 52017A 19219 BP Supplier: STROHECKER PAVING
 Test Date: 9/13/17 Tested By: GREG JADRYCH Checked By: G. DENTEN ✓
 IA #: 10K Rep/Verif: _____

ASPHALT GRADATION TEST NO: #4

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V. RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0	0	100	✓
1/2"	70.3	4.0	96.0	✓
3/8"	301.8	17.3	82.7	✓
No. 4	896.7	51.5	48.5	✓
No. 8	1161.2	66.7	33.3	✓
No. 16	1321.5	75.9	24.1	✓
No. 30	1412.8	81.1	18.9	✓
No. 50	1480.4	85.0	15.0	✓
No. 100	1562.6	89.7	10.3	✓
No. 200	1591.6	91.38	8.62	✓
PAN	1641.3			
WASH	99.8			
TOTAL	1741.1			

Test No: _____
 Test Temperature: 23.0
 Basket Weight: 2855.0
 Basket and Sample Wt: 4718.9
 Sample Weight: 1863.9 ✓
 After Ignition
 Basket and Sample Wt: 4596.7
 A/C Loss (Weight): 121.5 ✓
 % A/C External: 6.53 ✓
 Calibration Factor: (-0.52)
 Corrected Percent A/C: _____

AC MOISTURE SAMPLE:

Pan Tare: _____
 Wet Weight of Sample: _____
 Dry Weight of Sample: _____
 Weight Loss: _____
 Percent Moisture: _____

GRADATION WASH TEST

Original Wet Weight: _____
 Corrected Dry Weight: 1746.7
 Dry Wt. After Wash: 1641.9
 Weight Loss: 99.8
 Percent Loss: 5.73

GRADATION MOISTURE TEST

Original Wet Weight: _____
 Final Dry Weight: _____
 Weight Loss: _____
 Percent Moisture: _____

Weight Check Before and After Sieving

Dry Wt. After Wash: 1641.9
 Dry Wt. After Sieving: 1691.3
 Difference (grams): .6
 Percent Difference: .036

Fractured Faces

Dry Weight of Sample: _____
 Weight of FF: _____
 Percent FF: _____

MAXIMUM SPECIFIC GRAVITY

	Flask 1	Flask 2
Flask weight (empty):	_____	_____
Flask and Sample Weight:	_____	_____
(A) Weight of Sample:	_____	_____
(B) Weight of Flask, H2O and Lid:	_____	_____
(C) Weight of Flask, Sample, H2O and Lid:	_____	_____
Temperature of Water:	_____	_____
Uncorr. Maximum Specific Gravity:	_____	_____
Avg. Maximum Specific Gravity:	_____	_____
Corrected Maximum Specific Gravity:	_____	_____

Max SPG = A / (A + B - C)

USE FOR AGGREGATE C.F.

	BO#1	BO#2	BO#3	BO#4
	-0.36	-0.59	-0.27	-0.52
		Highest		Lowest

Following CP-L 5120
 AVERAGE = -0.44/
 CORRECTION FACTOR

SEE FORM 473 FOR DISCUSSION

56162

Field Sheet #

56162

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT OF ASPHALT CONTENT AND MAXIMUM SPECIFIC GRAVITY (RICE) OF HOT MIX ASPHALT	Contract ID 19219	Date Submitted 10-11-17
	Project No. STE C400-008	
	Project Location PINON CAUSEWAY LAGOSA SPRINGS- TO ASPEN VILLAGE DR- S.U.P.	

CDOT Form #43 number: 52017A19219BP	CDOT Form #43 date: 6/26/2017	Asphalt mix formula reference: STROHECKER
Report #/ Page # 1/1	Region S	Item # 608
Grading SX	% recycled 0	
CP 85 (nuclear)	CP-L 5120 (ignition) <input checked="" type="checkbox"/>	Other
Job mix formula percent AC 6.00	Range 5.70 to 6.30	Final report <input checked="" type="checkbox"/> yes <input type="checkbox"/> no

User ID	SMM/LIMS Sample ID (or Test # [Date])	Station or location	Fractured faces	Max Specific Gravity (RICE - CP 51)	Percent asphalt
N/A	QA#1 9/19/17	STA. 28+35	N/A	2.433	6.36
N/A	QA#2 10/23/17	STA. 6+08	N/A	2.466	5.53
N/A	QA#3 10/24/17	STA. 15+50	N/A	2.420	6.52
QA#4 10/30/17 = 6.00% Dummy Test for PE = 1.00 ✓ FOR LAST 20 TONS IN QPM					

	QA Test	IA Test	Specification deviation <input type="checkbox"/> no <input checked="" type="checkbox"/> yes
% Voids			P= \uparrow % for tests QA#1 thru QA#3 SEE QPM
VMA			
VFA			
Stability			
Action taken: SEE FORM 473			

QA Tester (print name) CRAIG CAMPBELL TRAUTNER GEOTECH	Title QA TESTER
IA Tester (print name)	Title
Approved by (sign name) <i>[Signature]</i>	Title Project Engineer

Distribution: Original: Project file

Canary: Region Materials Engineer

Previous editions are obsolete and may not be used

CDOT Form #58 4/14

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

Pagosa Springs PC to AVD SUP

Project: <i>STE C480-008</i>		SA No: <i>19219</i>	Location: <i>Pagosa Springs, Colorado</i>	
Sample Date: <i>9/19/17</i>	Station: <i>28+35</i>	Offset: _____	Tonnage: <i>93.82</i>	
Samp By: <i>Western Tech. (A.C.)</i>	Date: <i>9/19/17</i>	Sample No: <i>QA #1</i>	Item No: <i>403</i>	
Grading: <i>5X</i>	Form 43#: <i>BP</i>	Supplier: <i>Strohecker Paving</i>		
Test Date: <i>9/20/17</i>	Tested By: <i>Craig Campbell</i>	Checked By: <i>GINA DENTEN</i>		
IA #: _____	10K: _____	Rep/Verif: _____	<i>lab # 4029-A</i>	

ASPHALT GRADATION TEST NO: *QA #1*

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V.I RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	<i>0.0</i>	<i>0.0</i>	<i>100.0</i>	<i>100-100</i>
1/2"	<i>67.2</i>	<i>37</i>	<i>96.3</i>	<i>90-100</i>
3/8"	<i>300.0</i>	<i>77.5</i>	<i>82.5</i>	<i>82-94</i>
No. 4	<i>948.6</i>	<i>52.0</i>	<i>48.0</i>	<i>46-56</i>
No. 8	<i>1233.6</i>	<i>67.6</i>	<i>32.4</i>	<i>27-37</i>
No. 16	<i>1396.1</i>	<i>76.5</i>	<i>23.5</i>	
No. 30	<i>1489.2</i>	<i>81.6</i>	<i>18.4</i>	<i>11-19</i>
No. 50	<i>1559.7</i>	<i>85.5</i>	<i>14.5</i>	
No. 100	<i>1645.7</i>	<i>90.2</i>	<i>9.8</i>	
No. 200	<i>1681.1</i>	<i>92.2</i>	<i>7.85</i>	<i>110-510</i>
PAN	<i>1733.2</i>		<i>0.81</i>	<i>Corr. Factor</i>
WASH	<i>90.7</i>		<i>=(7.04)</i>	
TOTAL	<i>1823.9</i>			

ASPHALT CEMENT CONTENT AND MOISTURE

Test No: *QA #1*

Test Temperature: _____

Basket Weight: *2857.8*

Basket and Sample Wt: *4816.4*

Sample Weight: *1958.6*

After Ignition

Basket and Sample Wt: *4682.1* *net = 1824.3*

A/C Loss (Weight): *134.3*

% A/C External: *6.86*

Calibration Factor: *-0.44*

Corrected Percent A/C: *6.37* **(6.3%)**

- moisture content 0.05

AC MOISTURE SAMPLE:

Pan Tare: *1544.8*

Wet Weight of Sample: *541.8*

Dry Weight of Sample: *511.5*

Weight Loss: *0.3*

Percent Moisture: *0.055 = 0.06*

GRADATION WASH TEST

Original Wet Weight:	_____
Corrected Dry Weight:	<i>1824.3</i>
Dry Wt. After Wash:	<i>1733.6</i>
Weight Loss:	<i>90.7</i>
Percent Loss:	<i>5.0</i>

GRADATION MOISTURE TEST

Original Wet Weight:	_____
Final Dry Weight:	_____
Weight Loss:	_____
Percent Moisture:	_____
Weight Check Before and After Sieving	
Dry Wt. After Wash:	<i>1733.6</i>
Dry Wt. After Sieving:	<i>1733.2</i>
Difference (grams):	<i>0.4</i>
Percent Difference:	<i>0.02</i>

Fractured Faces

Dry Weight of Sample:	_____
Weight of FF:	_____
Percent FF:	_____

MAXIMUM SPECIFIC GRAVITY

	Flask 1	Flask 2
Flask weight (empty):	<i>1002.0</i>	<i>1000.8</i>
Flask and Sample Weight:	<i>2573.4</i>	<i>2593.0</i>
(A) Weight of Sample:	<i>1571.4</i>	<i>1594.2</i>
(B) Weight of Flask, H2O and Lid:	<i>3293.5</i>	<i>3298.4</i>
(C) Weight of Flask, Sample, H2O and Lid:	<i>4218.8</i>	<i>4237.6</i>
Temperature of Water:	<i>77 1/2 °F</i>	<i>77 1/2 °F</i>
Uncorr. Maximum Specific Gravity:	<i>2.432</i>	<i>2.434</i>
Avg. Maximum Specific Gravity:	<i>2.433</i>	
Corrected Maximum Specific Gravity:	_____	_____
Max. SPG = A / (A + B - C)		
F1	<i>1571.4 ÷ 646.1 = 2.432</i>	
F2	<i>1594.2 ÷ 655.0 = 2.434</i>	

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

Project: PC to AVD SUP, STE 1480-MR SA No: 19219 Location: Pagosa Springs

Sample Date: 10/23/17 Station: 6+08 Offset: N/A Tonnage: 44.52 DAILY

Samp By: D.C. WTI Date: 10/23/17 Sample No: QA 2 Item No: 608

Grading: EX Form 43#: 52017 A Supplier: Strohecker Asphalt
19219 BP

Test Date: 10/24/17 Tested By: Lois Campbell Checked By: G. DENTEN ✓

IA #: 10K Rep/Verif: Lab # 4071-A (re-do)

ASPHALT GRADATION TEST NO: QA # 2

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	<u>2.0</u>	<u>2.0</u>	<u>100</u>	<u>100</u>
1/2"	<u>87.8</u>	<u>5.0</u>	<u>95.0</u>	<u>90-100</u>
3/8"	<u>364.1</u>	<u>20.7</u>	<u>79.3</u>	<u>82-91</u>
No. 4	<u>1104.7</u>	<u>62.8</u>	<u>37.2</u>	<u>46-56</u>
No. 8	<u>1799.9</u>	<u>73.9</u>	<u>26.1</u>	<u>27-37</u>
No. 16	<u>1103.2</u>	<u>71.8</u>	<u>20.2</u>	
No. 30	<u>1473.1</u>	<u>83.7</u>	<u>16.3</u>	<u>11-19</u>
No. 50	<u>1532.5</u>	<u>87.1</u>	<u>12.9</u>	
No. 100	<u>1606.8</u>	<u>91.3</u>	<u>8.7</u>	
No. 200	<u>1626.8</u>	<u>92.48</u>	<u>7.52</u>	<u>140-310</u>
PAN	<u>1673.1</u>		<u>2.81</u>	<u>CORRECTION factor</u>
WASH	<u>84.9</u>		<u>6.71</u>	
TOTAL	<u>1758.0</u>			

Test No: QA # 2
 Test Temperature: 53.8°C
 Basket Weight: 2868.3
 Basket and Sample Wt: 4739.0
 Sample Weight: 1870.7 ✓
 After Ignition
 Basket and Sample Wt: 4677.3
 A/C Loss (Weight): 111.7 ✓
 % A/C External: 5.97 ✓
 Calibration Factor: -0.44
 Corrected Percent A/C: 5.53
 moisture cont. corr. fact.: 0.00
AC MOISTURE SAMPLE:

Pan Tare: 1544.8
 Wet Weight of Sample: _____
 Dry Weight of Sample: _____
 Weight Loss: _____
 Percent Moisture: _____

GRADATION WASH TEST

Original Wet Weight:	<u>N/A</u>
Corrected Dry Weight:	<u>1759.0</u> ✓
Dry Wt. After Wash:	<u>1674.1</u>
Weight Loss:	<u>84.9</u> ✓
Percent Loss:	<u>4.8</u>

MAXIMUM SPECIFIC GRAVITY

	1052.5	Flask 1	Flask 2	1001.3
Flask weight (empty):	<u>1007.8</u>	<u>1000.7</u>		
Flask and Sample Weight:	<u>2277.9</u>	<u>2441.6</u>		
(A) Weight of Sample:	<u>1275.5</u> ✓	<u>1440.3</u> ✓		
(B) Weight of Flask, H2O and Lid:	<u>3298.5</u>	<u>3278.5</u>		
(C) Weight of Flask, Sample, H2O and Lid:	<u>4052.4</u>	<u>4153.7</u>		
Temperature of Water:	<u>77 1/2°F</u>	<u>77 1/2°F</u>		
Uncorr. Maximum Specific Gravity:	<u>2.469</u> ✓	<u>2.462</u> ✓		
Avg. Maximum Specific Gravity:	<u>2.466</u> ✓			
Corrected Maximum Specific Gravity:				

GRADATION MOISTURE TEST

Original Wet Weight:	_____
Final Dry Weight:	_____
Weight Loss:	_____
Percent Moisture:	_____

Max. SPG = A / (A + B - C)
 Flask 1 = 576.6 ✓
 Flask 2 = 585.1 ✓

Weight Check Before and After Sieving

Dry Wt. After Wash:	<u>1674.1</u>
Dry Wt. After Sieving:	<u>1673.1</u>
Difference (grams):	<u>1.0</u>
Percent Difference:	<u>0.06</u>

Fractured Faces

Dry Weight of Sample:	_____
Weight of FF:	_____
Percent FF:	_____

11/11

11

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

STE C480-008

Project: PC to AVD SUP	SA No: 1929	Location: Pagosa Springs
Sample Date: 10-24-17	Station: 15+50	Offset: N/A
Samp By: Western QC	Date: 10-24-17	Sample No: 3
Grading: SX	Form 43#: 52017A 19819 B0	Supplier: Strohecker
Test Date: 10/24/17	Tested By: Craig Campbell	Checked By: J.G. DENTEN
IA #: 10K	Rep/Verif:	Lab # 4071-B

ASPHALT GRADATION TEST NO: QA#3

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0.0	0.0	100	100
1/2"	37.7	2.2	97.8	90-100
3/8"	193.3	11.1	88.9	80-94
No. 4	818.6	47.1	52.9	46-56
No. 8	1127.0	64.9	35.1	27-37
No. 16	1304.6	75.1	24.9	
No. 30	1404.1	80.9	19.1	11-19
No. 50	1475.8	85.0	15.0	
No. 100	1561.5	89.9	10.1	
No. 200	1587.9	91.44	8.56	110-510
PAN	1636.3		0.01	Collection Pan
WASH	98.4		7.75	
TOTAL	1734.7			

Test No: QA#3

Test Temperature: 538°C

Basket Weight: 2844.9

Basket and Sample Wt: 4712.4

Sample Weight: 1867.5 ✓

After Ignition

Basket and Sample Wt: 4581.5

A/C Loss (Weight): 130.9 ✓

% A/C External: 7.01 ✓

Calibration Factor: -0.44

Corrected Percent A/C: 6.52 ✓

moisture content corr: -0.05

AC MOISTURE SAMPLE:

Pan Tare: 1544.9

Wet Weight of Sample: 578.3 ✓ 2093.2

Dry Weight of Sample: 578.0 2092.9

Weight Loss: 0.3

Percent Moisture: 0.05 ✓

GRADATION WASH TEST

Original Wet Weight: N/A

Corrected Dry Weight: 1736.6 ✓

Dry Wt. After Wash: 1638.2

Weight Loss: 98.4 ✓

Percent Loss: 5.7

GRADATION MOISTURE TEST

Original Wet Weight:

Final Dry Weight:

Weight Loss:

Percent Moisture:

Weight Check Before and After Sieving

Dry Wt. After Wash: 1638.2

Dry Wt. After Sieving: 1638.3

Difference (grams): 1.9

Percent Difference: 0.1

Fractured Faces

Dry Weight of Sample:

Weight of FF:

Percent FF:

MAXIMUM SPECIFIC GRAVITY:

	Flask 1	Flask 2
Flask weight (empty):	1001.8	1000.6
Flask and Sample Weight:	2589.0	2576.6
(A) Weight of Sample:	1587.2 ✓	1576.0 ✓
(B) Weight of Flask, H2O and Lid:	3293.5	3298.5
(C) Weight of Flask, Sample, H2O and Lid:	4222.30	4223.0
Temperature of Water:	77°F	77°F
Uncorr. Maximum Specific Gravity:	2.421 ✓	2.419 ✓
Avg. Maximum Specific Gravity:	2.420 ✓	
Corrected Maximum Specific Gravity:		

Max. SPG = A / (A + B - C)

Flask 1 653.4 ✓
Flask 2 651.5 ✓

COLORADO DEPARTMENT OF TRANSPORTATION		Project no. STECH80-008	Region 5	Contract ID 19219
BULK SPECIFIC GRAVITY TEST OF		Project Location Pinnon Causeway to Azusa Village Drive SUP		
User ID	HMA / SMA (CP 44)	Form #43 No. 52017A19219 BP	Grading SK	

Sample ID	lab# 4029-B		
Test number	QA#1	QA#2	QA#3
Station	29+85	34+36	8+50
Distance rt. or lt. CL	1.5 ft.	2' Lt.	1' Lt.
Course	SINGLE only, 3"	SINGLE only, 3"	SINGLE only, 3"
Date placed	9/20, 9/19/17	9/19/17	10/23/17
Date retrieved (sampled)	9/20/17	10/25/17	10/24/17
Pan Number			
Pan Weight	381.7	266.5	182.7
Pan + Dry Core	508.9 557.6	1509.6	1605.4
Dry weight in air (A)	1175.9 ✓	1243.1 ✓	1422.7 ✓
Sat. surf. dry wt. (B)	1178.3	1245.6	1424.0
Weight in H ₂ O (C)	669.4	714.7	816.2
Bulk Specific Gravity	2.433 ✓	$1243.1 / 530.9 = 2.341 ✓$	$1422.7 / 607.8 = 2.341 ✓$
Lab Specific Gravity*	2.311 ✓	2.433	2.466
% Relative Compaction	95.0 ✓	96.2 ✓	94.9 ✓
Sample ID (for IAT)			
IA Test #			

Sample ID	QA#4		
Test number			
Station	15+50		
Distance rt. or lt. CL	3' Lt.		
Course	SINGLE only, 3"		
Date placed	10/24/17		
Date retrieved (sampled)	10/25/17		
Pan Number			
Pan Weight	249.1		
Pan + Dry Core	1310.8		
Dry weight in air (A)	1061.7 ✓		
Sat. surf. dry wt. (B)	1062.8		
Weight in H ₂ O (C)	610.5		
Bulk Specific Gravity	$1061.7 / 452.3 = 2.347 ✓$		
Lab Specific Gravity*	2.420		
% Relative Compaction	97.0 ✓		
Sample ID (for IAT)			
IA Test #			

Bulk Specific Gravity = $\frac{A}{B-C}$ = (Wt. of displaced H₂O). Note: Report % Relative Compaction on the CDOT Form #69.

Sampled by (print name) W.T.L., QC TESTER	Tested by (print name) Craig Campbell	Date 10/26/17
--	--	------------------

**COLORADO DEPARTMENT OF TRANSPORTATION
FIELD TESTS OF BASE AGGREGATES, FILLERS,
PAVING AND MISCELLANEOUS AGGREGATES**

Contract ID 19219	Region 5	Field sheet # 101914
Project No. STE C490-008		Date Submitted 10-11-2017
Project Location PINON CAUSEWAY TO PAGOSA SPRINGS- ASPEN VILLAGE DR.- SUP		Item 608

User ID: NA

SMM/LIMS Sampler ID (or Test # [Date])	Station	Cons (lb) Yards (m)	Field density	Lab max density	% Rel. Comp.	Total moist.	3/4"	1/2"	3/8"	#4	#8	#30	#50	#100	#200	L.L.	P.I.
QA#1 9/19/17	29+35	2000 500					100	96	84	48	32	18	15	10	7.0	N/A	N/A
QA#2 10/23/17	6+08	2000 500					100	95 93	79 76	37 36	26	16 14	13	9 8	6.7 6.5	N/A	N/A
QA#3 10/24/17	15+50	2000 500					100	98	89	53	35	19	15	10	7.8	N/A	N/A
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> QA#4 - IN Q.P.M. AS A DUMMY TESTS WITH TARGET SIEVE RESULTS </div>																	

Sheet Total	6000	Specifications:	100	90-100	82-94	46-56	27.37	11-19	1.10-5.10
Previous Total	0								
Total to Date	6000								
								Final report: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	

Spec. deviations: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	P= _____ % for lot # _____	Source (pit): STROHECKER ASPHALT
Items: 206 Structure Backfill Class 1 _____ 206 Filter Material Class _____ 304 ABC Class _____ 307 Treated Subgrade _____ 403 HMA Grading <input checked="" type="checkbox"/> 403 SMA _____ 409 Cover Coat _____ Other Material: _____	Remarks: SEE FORM 473 Action taken:	Project Tester (print name) TRAUTNER CRAIG CAMPBELL, GEOTECH Title QA TESTER PE Approved by (print name) Clifton Lee Davis Engineering Service, Inc. (LPA) Title Project Engineer

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

Pagosa Springs PC to AVD SUP

Project: <i>STE C480-008</i>		SA No: <i>19219</i>	Location: <i>Pagosa Springs, Colorado</i>	
Sample Date: <i>9/19/17</i>	Station: <i>28+35</i>	Offset: _____	Tonnage: <i>93.82</i>	
Samp By: <i>Western Tech. (Q.C.)</i>	Date: <i>9/19/17</i>	Sample No: <i>QA #1</i>	Item No: <i>403</i>	
Grading: <i>SX</i>	Form 43#: <i>52017A 19219 BP</i>	Supplier: <i>Stoepchecker Paving</i>		
Test Date: <i>9/20/17</i>	Tested By: <i>Craig Campbell</i>	Checked By: <i>GINA DENTEN</i>		
IA #: _____	10K: _____	Rep/Verif: _____	<i>lab # 4029-A</i>	

ASPHALT GRADATION TEST NO: *QA #1*

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V.I RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	<i>0.0</i>	<i>0.0</i>	<i>100.0</i>	<i>100-100</i>
1/2"	<i>67.2</i>	<i>3.7</i>	<i>96.3</i>	<i>90-100</i>
3/8"	<i>300.0</i>	<i>77.5</i>	<i>82.5</i>	<i>82-94</i>
No. 4	<i>948.6</i>	<i>52.0</i>	<i>48.0</i>	<i>46-56</i>
No. 8	<i>1233.6</i>	<i>67.6</i>	<i>32.4</i>	<i>27-37</i>
No. 16	<i>1396.1</i>	<i>76.5</i>	<i>23.5</i>	
No. 30	<i>1489.2</i>	<i>81.6</i>	<i>18.4</i>	<i>11-19</i>
No. 50	<i>1559.7</i>	<i>85.5</i>	<i>14.5</i>	
No. 100	<i>1645.7</i>	<i>90.2</i>	<i>9.8</i>	
No. 200	<i>1681.1</i>	<i>92.2</i>	<i>7.85</i>	<i>110-510</i>
PAN	<i>1733.2</i>		<i>0.81</i>	<i>(CORRECTION FACTOR)</i>
WASH	<i>90.7</i>		<i>17.04</i>	
TOTAL	<i>1823.9</i>			

Test No: *QA #1*

Test Temperature: _____

Basket Weight: *2857.8*

Basket and Sample Wt: *4816.4*

Sample Weight: *1958.6*

After Ignition

Basket and Sample Wt: *4682.1* *net = 1824.3*

A/C Loss (Weight): *134.3* ✓

% A/C External: *6.86* ✓

Calibration Factor: *-0.44* ✓

Corrected Percent A/C: *0.05* *6.37* *(6.36)*

- moisture content 0.05 0.06

AC MOISTURE SAMPLE:

Pan Tare: *1544.8*

Wet Weight of Sample: *541.8*

Dry Weight of Sample: *541.5*

Weight Loss: *0.3*

Percent Moisture: *0.055 = 0.06* ✓

GRADATION WASH TEST

Original Wet Weight:	_____
Corrected Dry Weight:	<i>1824.3</i>
Dry Wt. After Wash:	<i>1733.6</i>
Weight Loss:	<i>20.7</i> ✓
Percent Loss:	<i>5.0</i> ✓

GRADATION MOISTURE TEST

Original Wet Weight:	_____
Final Dry Weight:	_____
Weight Loss:	_____
Percent Moisture:	_____

Weight Check Before and After Sieving

Dry Wt. After Wash:	<i>1733.6</i>
Dry Wt. After Sieving:	<i>1733.2</i>
Difference (grams):	<i>0.4</i>
Percent Difference:	<i>0.02</i>

Fractured Faces

Dry Weight of Sample:	_____
Weight of FF:	_____
Percent FF:	_____

MAXIMUM SPECIFIC GRAVITY

	Flask 1	Flask 2
Flask weight (empty):	<i>1002.0</i>	<i>1000.8</i>
Flask and Sample Weight:	<i>2573.4</i>	<i>2595.0</i>
(A) Weight of Sample:	<i>1571.4</i> ✓	<i>1594.2</i> ✓
(B) Weight of Flask, H2O and Lid:	<i>3293.5</i>	<i>3298.4</i>
(C) Weight of Flask, Sample, H2O and Lid:	<i>4218.8</i> ✓	<i>4237.6</i>
Temperature of Water:	<i>77 1/2 °F</i>	<i>77 1/2 °F</i>
Uncorr. Maximum Specific Gravity:	<i>2.432</i>	<i>2.434</i>
Avg. Maximum Specific Gravity:	<i>2.433</i> ✓	
Corrected Maximum Specific Gravity:	_____	

Max. SPG = A / (A + B - C) ✓

F1 $1571.4 \div 646.1 = 2.432$ ✓

F2 $1594.2 \div 655.0 = 2.434$ ✓

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

Project: PC to AVD SUP, STE 1480-MB SA No: 19219 Location: Pagosa Springs
 Sample Date: 10/23/17 Station: 6+08 Offset: N/A Tonnage: 49.52 DAILY
 Samp By: R.C. WTI Date: 10/23/17 Sample No: QA 2 Item No: 608
 Grading: EX Form 43#: 52017A Supplier: Stochecker Asphalt
 Test Date: 10/24/17 Tested By: Coig Campbell Checked By: G. DENTEN ✓
 IA #: 10K Rep/Verif: Lab # 4071-A (re-do)

ASPHALT GRADATION TEST NO: QA # 2

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	<u>0.0</u>	<u>0.0</u>	<u>100</u>	<u>100</u>
1/2"	<u>87.8</u>	<u>5.0</u>	<u>95.0</u> ✓	<u>90-100</u>
3/8"	<u>364.1</u>	<u>20.7</u>	<u>79.3</u> ✓	<u>82-94</u>
No. 4	<u>1101.7</u>	<u>62.8</u>	<u>37.2</u> ✓	<u>46-56</u>
No. 8	<u>1292.9</u>	<u>73.9</u>	<u>26.1</u> ✓	<u>27-37</u>
No. 16	<u>1903.2</u>	<u>78.8</u>	<u>20.2</u> ✓	
No. 30	<u>1473.1</u>	<u>83.7</u>	<u>16.3</u> ✓	<u>11-19</u>
No. 50	<u>1532.5</u>	<u>87.1</u>	<u>12.9</u>	
No. 100	<u>1605.8</u>	<u>91.3</u>	<u>8.7</u>	
No. 200	<u>1626.8</u>	<u>92.48</u>	<u>7.52</u> ✓	<u>4.0-5.10</u>
PAN	<u>1673.1</u>		<u>2.81</u>	<u>CORRECTION factor</u>
WASH	<u>84.9</u>		<u>6.71</u>	
TOTAL	<u>1758.0</u>			

Test No: QA # 2
 Test Temperature: 53.8 C
 Basket Weight: 2068.3
 Basket and Sample Wt: 4739.0
 Sample Weight: 1870.7 ✓
 After Ignition
 Basket and Sample Wt: 4677.3
 A/C Loss (Weight): 111.7 ✓
 % A/C External: 5.97 ✓
 Calibration Factor: -0.44
 Corrected Percent A/C: 5.53
 moisture cont. corr. fact: 0.00

AC MOISTURE SAMPLE:

Pan Tare: 1544.8
 Wet Weight of Sample: _____
 Dry Weight of Sample: _____
 Weight Loss: _____
 Percent Moisture: _____

GRADATION WASH TEST

Original Wet Weight: N/A
 Corrected Dry Weight: 1759.0 ✓
 Dry Wt. After Wash: 1674.1
 Weight Loss: 84.9 ✓
 Percent Loss: 4.8

GRADATION MOISTURE TEST

Original Wet Weight: _____
 Final Dry Weight: _____
 Weight Loss: _____
 Percent Moisture: _____

Weight Check Before and After Sieving

Dry Wt. After Wash: 1674.1
 Dry Wt. After Sieving: 1673.1
 Difference (grams): 1.0
 Percent Difference: 0.06

Fractured Faces

Dry Weight of Sample: _____
 Weight of FF: _____
 Percent FF: _____

MAXIMUM SPECIFIC GRAVITY

	1002.3 Flask 1	Flask 2	1001.3
Flask weight (empty):	<u>1007.8</u>	<u>1000.7</u>	
Flask and Sample Weight:	<u>2177.8</u>	<u>2441.6</u>	
(A) Weight of Sample:	<u>1275.5</u> ✓	<u>1440.3</u> ✓	
(B) Weight of Flask, H2O and Lid:	<u>3298.5</u>	<u>3298.5</u>	
(C) Weight of Flask, Sample, H2O and Lid:	<u>4052.4</u>	<u>4153.7</u>	
Temperature of Water:	<u>77 1/2 F</u>	<u>77 1/2 F</u>	
Uncorr. Maximum Specific Gravity:	<u>2.469</u> ✓	<u>2.462</u> ✓	
Avg. Maximum Specific Gravity:	<u>2.466</u> ✓		
Corrected Maximum Specific Gravity:			

Max. SPG = A / (A + B - C)
 Flask 1 = 576.6 ✓
 Flask 2 = 585.1 ✓

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET

STE C480-008

Project: PC to AVD SUP		SA No: 1929	Location: Payson Springs	
Sample Date: 10-24-17	Station: 15+50	Offset: N/A	Tonnage: 90.78 tons	
Samp By: Western QC	Date: 10-24-17	Sample No: 3	Item No: 608	
Grading: SX	Form 43#: 52017A 19219 BP	Supplier: Strohecker		
Test Date: 10/24/17	Tested By: Craig Campbell	Checked By: J G. DENTEN		
IA #: 10K:	Rep/Verif:	Lab # 4071-B		

ASPHALT GRADATION TEST NO: QA#3

ASPHALT CEMENT CONTENT AND MOISTURE

Sieve Size	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	T.V./ RANGE
3"				
2 1/2"				
2"				
1 1/2"				
1"				
3/4"	0.0	0.0	100	100
1/2"	37.7	2.2	97.8	90-100
3/8"	193.3	11.1	88.9	80-94
No. 4	218.6	47.1	52.9	46-56
No. 8	1127.0	64.9	35.1	27-37
No. 16	1304.6	75.1	24.9	
No. 30	1404.1	80.9	19.1	11-19
No. 50	1475.8	85.0	15.0	
No. 100	1561.5	89.9	10.1	
No. 200	1587.9	91.44	8.56	1.10-5.10
PAN	1636.3		-0.01	CORRECTION FACTOR
WASH	984		7.75	
TOTAL	1734.7			

Test No: QA#3

Test Temperature: 53.8°C

Basket Weight: 2844.9

Basket and Sample Wt: 4712.4

Sample Weight: 1867.5 ✓

After Ignition

Basket and Sample Wt: 4581.5

A/C Loss (Weight): 130.9 ✓

% A/C External: 7.01 ✓

Calibration Factor: -0.44

Corrected Percent A/C: 6.52 ✓

moisture content corr: -0.05

AC MOISTURE SAMPLE:

Pan Tare: 1544.9

Wet Weight of Sample: 578.3 ✓ 2093.2

Dry Weight of Sample: 578.0 2092.9

Weight Loss: 0.3

Percent Moisture: 0.05 ✓

GRADATION WASH TEST

Original Wet Weight:	N/A
Corrected Dry Weight:	1736.6 ✓
Dry Wt. After Wash:	1638.2
Weight Loss:	98.4 ✓
Percent Loss:	5.7

GRADATION MOISTURE TEST

Original Wet Weight:	
Final Dry Weight:	
Weight Loss:	
Percent Moisture:	

Weight Check Before and After Sieving

Dry Wt. After Wash:	1638.2
Dry Wt. After Sieving:	1638.3
Difference (grams):	1.1
Percent Difference:	0.1

Fractured Faces

Dry Weight of Sample:	
Weight of FF:	
Percent FF:	

MAXIMUM SPECIFIC GRAVITY

	Flask 1	Flask 2
Flask weight (empty):	1001.8	1000.6
Flask and Sample Weight:	2584.0	2576.6
(A) Weight of Sample:	1582.2 ✓	1576.0 ✓
(B) Weight of Flask, H2O and Lid:	3293.5	3298.5
(C) Weight of Flask, Sample, H2O and Lid:	4222.30	4223.0
Temperature of Water:	77°F	77°F
Uncorr. Maximum Specific Gravity:	2.421 ✓	2.419 ✓
Avg. Maximum Specific Gravity:	2.420 ✓	
Corrected Maximum Specific Gravity:		

Max. SPG = A / (A + B - C)

Flask 1 653.4 ✓
Flask 2 651.5 ✓

19219-403-2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION

Region S	Field sheet # 205295
Contract ID 19217	Date Submitted 3-13-13
Project No. STE 430-003	
Project Location PARKWAY CAUSEWAY TO ASPEN VALLEY LA SUE	

Metric units yes no

Material Type RELEASE AGENT			Field Lab phone		Cell Phone
Material Code (LIMS)	Item 403/603	Class	Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:		Previous CDOT Form #157 F/S No.(s):		<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)	

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE RELEASE AGENT USED ON THE PROJECT WAS INSPECTED AND APPROVED BY THE PROJECT ENGINEER.

A COC IS ATTACHED, WHICH IS FOR A DRIVE OFF TRUCK

ID					
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)	Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSBREE LLC	Supplier CROSSBREE LLC
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented AS NEEDED	Previous quantity 0	Total quantity to date AS NEEDED
-----------------------------------	------------------------	-------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
--	--	-----	------

Sampled or inspected by (print name) LIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
/ISOR (Pro./Res./Mats. Engr./Maint. Supt.) (print name) VINCE DAVIS, PE	Title PROJECT ENGINEER	Residency

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer



Certificate of Compliance Letter

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date: 2/20/2018

Project Number: STE C480-008

Project Code & Name: 19219 Pinon Causeway to Aspen Village

Manufacturer's Name: ChemStation

Manufacturing facility Address: 4800 Lima St, Denver CO 80239

Laboratory Name and Address: 5015 Paris St, Denver CO 80239

Product Name or Assembly: 2217-B

Description of Material: Asphalt Release Agent

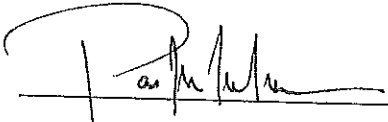
Model, Catalog, Stock Number: 3501088-4

Lot / batch number: 8227-01

Date or Frequency of Lab Testing: NTPEP's ARA program. This work plan consists of three test procedures: a stripping test, a mixture slide test and an asphalt performance test.

Applicable Specifications: The material above has been reviewed according to subsection 608 of the *CDOT Specifications for Road and Bridge Construction*

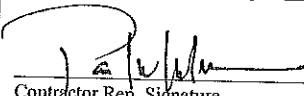
The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.



Paul Martin, Project Manager

Item 403-00720 Hot Mix Asphalt (Patching) (Asph.), 4 tons
 Item 608-01500 Bituminous Bikeway (Special), 650 tons

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Needed (quantity and units) of pay item see to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.



Contractor Rep. Signature

3/16/18
Date



ChemStation of the Rockies - 4800 Lima St - Denver CO 80239
Phone: (303)288-8500 - Fax: (303)288-5449 - E-mail: gbabb@chemstation.net

SOLD TO: 8227
Strohecker Asphalt Paving
37801 HWY, 160
Bayfield, CO 81122

SHIP TO: Strohecker Asphalt Paving
300 County Road 302
Pagosa Springs, CO 81147

Delivery Ticket

Number: 7872
Date Printed: 07/30/2008
Terms: Net 30
Route: I-25 SOUTH

Purchase Order: _____

Customer Signature: _____

Salesperson	Tank No.	Product	Additives	Gallons	Unf.	Office Use
8010	8227-01	2217-B	Fl Green	213		3501088-4

Delivered By: [Signature]

Date: 7/31/08

YOUR SERVICE REPRESENTATIVE ALSO CHECKED OR SERVICED THE FOLLOWING

- Container Stand Label Cap or Bung Ball Valve Tank Cleaned
 Drum Pump Foot Valve Hose(s) Proportioner MSDS

Thank you for your business



TRUCK SCALE TEST RECORD: 117761

Fairbanks Scales, Inc., 4850 Broadway, Denver, CO. 80216 Phone:(800) 435-4660

STROCHECKER ASPHALT - 163270003
300 COUNTY RD 302
PAGOSA SPRINGS, CO 81147
Contact: CARL STROHECKER
LVIDAURRI@FAIRBANKS.COM

Task #: 1330361 Date: 6/21/2017 10:49:21 AM
Scale location: LOADOUT SCALE

FINAL TEST In tolerance: Yes
Truck No: 1107
Truck Class: 2

Test equipment used
NIST Traceable Certified Test Weights

Procedure used
NIST Handbook 44
Next Inspection Due
0518

Load Receiver / Platform

Manufacturer	Model No.	Type	Serial No.	Capacity	Platform Size	Sections
CMI	3FT7010	Truck	500	120000	10X70	4
CLC: 70000 Deck Composition: Steel					Stand#/LC Cap: 60000	

Indicator / Instrumentation

Manufacturer	Model No.	Style	Serial No.	Division Size	Units Type	# of div
FAIRBANKS	R2500F1	Elect	043240100081	20	Lb	6000

Shift Test Results

Tolerance Used: Acceptance

Weight Applied: 17000

AS FOUND	Sec. 1	Sec. 2	Sec. 3	Sec. 4	Sec. 5	Sec. 6	Sec. 7	Sec. 8	Sec. 9	Sec. 10
Indicated	17000	17000	17020	17180						
Error	0	0	20	180						
Tolerance	20	20	20	20						
AS LEFT										
Indicated	17000	17000	17000	17000						
Error	0	0	0	0						
Tolerance	20	20	20	20						

Load Test - Known Weights

	AS FOUND					AS LEFT			
	Applied	Indicated	Error	Tolerance		Applied	Indicated	Error	Tolerance
0 ZERO	0	0	0	0	0 ZERO	0	0	0	0
1	3000	3000	0	0	1	3000	3000	0	0
2	8000	8000	0	0	2	8000	8000	0	0
3	13000	13000	0	20	3	13000	13000	0	20
4	15000	15000	0	20	4	15000	15000	0	20
5	17000	17000	0	20	5	17000	17000	0	20
0 rtn to zero	0	0	0	0	0 rtn to zero	0	0	0	0

Strain Test

Test/Tare Load	Test Weights	Total Combined	Instrument Reading	Error
32680	17000	49680	49680	0

Actions taken and comments:
CHECKED AND ADJUSTED.

Conditions of approaches, decks, pit, bearings, etc.:
FAIR

Marvin Romino
Customer Signature
MARVIN ROMINO

Arnold Otterstetter
Inspectors Signature
Arnold Otterstetter

PlaceID#: 163270003
Access Test Reports Online





Certified Weigher Certificate

THIS Certificate IS NOT TRANSFERABLE

ROMINE, MARVIN

Doing Business As Name(s) (DBA)

ROMINE, MARVIN

PO BOX 696

PAGOSA SPRINGS CO 81147

Effective Date

Expires Date

Certified Weigher Certificate AgLicense ID # 0017VX

Aug 15, 2017

Dec 31, 2017

Pursuant to § 35-14-101 through 134, C.R.S., the Commissioner authorizes the above-named person to act as a certified weigher.

Don Brown

Commissioner of Agriculture

August 15, 2017

Print Date



19219-609-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-11-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.-S.U.P.	

Metric units yes no

Material Type CURB & GUTTER TYPE 2 (SPECIAL)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 609	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE CURB & GUTTER INSTALLED ON THE PROJECT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. CLASS P CONCRETE WAS APPROVED FOR USE. ALL INFORMATION IS FILED UNDER ITEM 601 CLASS P.

INFORMATION FOR REINFORCING STEEL INSTALLED AND INSPECTED BY THE PROJECT ENGINEER IS FILED UNDER ITEM 602 REINFORCING STEEL.

ser ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	Sample ID (#4)
Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFILE, LLC	Supplier FCM - CONCRETE NUCOR - REINFORCING STEEL
----------------------------------	--

Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner
---	-------------------

Quantity represented C&G Type II (10 in) = 50.5 LF C&G TYPE II (12 in Pav) = 25.5 LF	Previous quantity 0	Total quantity to date C&G TY 2 (10 in) = 50.5 LF C&G TYPE II (12 in Pav) = 25.5 LF
---	----------------------------	--

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) TROUTNER GEOTECH	Title QA TESTERS	E-mail
--	-------------------------	--------

Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	Residency
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Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

19219-612-1

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region	5	Field sheet #	266289
Contract ID	19219	Date Submitted	3-11-18
Project No.	STE C400-008		
Project Location	PINON CAUSEWAY TO ASPEN VILLAGE DR-SU.P.		

Metric units yes no

Material Type	DELINEATOR (FLEXIBLE) (TYPE III)			Field Lab phone	Cell Phone
Material Code (LIMS)	Item	Class	Grading	Special Provisions <input type="checkbox"/> yes	
	612				
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):			<input type="checkbox"/> CDOT Form #633 (sack)	<input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE FLEXIBLE POST DELINEATORS WERE FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER.

THE MATERIAL IS ON THE APL. THE SUPPLIER'S COC IS ATTACHED, A CTR FOR THE DELINEATOR POSTS IS ATTACHED

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No. 3125-10	Product name: SHUR-FLEX DRIVEABLE DELINEATOR (ITEM #500031)	Date checked: 12-6-17
APL/QML Acceptance: APL Ref. No. 2640-11	Product name: 3M HIGH INTENSITY PRISMATIC (#3930)	Date checked: 12-6-17

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor CROSSFIRE LLC	Supplier 3M & SHUR-TITE PRODUCTS
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 6 EACH	Previous quantity 0	Total quantity to date 6 EACH
--------------------------------	------------------------	----------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
--	--	-----	------

Sampled or inspected by (print name) LIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
visor (Pro/Res./Mats. Engr./Maint. Supt.) (print name) MICE DAVIS, PE	Title PRESIDENT-DAVIS ENG SVC	Residency

ROADWAY SUPPLY

CERTIFICATE OF COMPLIANCE

TO: ACM Construction, LLC

ORDER: Posts, Signs, and Delineators for Ste 480-008

DATE: 12/6/17

SIGNS

Manufacturer: Lyle Signs Date ordered: 06/12/17
6294 Bury Drive
Eden Prairie, MN 55346

Aluminum: .080 Thickness: Vulcan Aluminum mill See attached Mill
Certs
900 Vulcan St, Foley, AL 36535
PO# 2554-1

Sheeting: High Intensity Prismatic 3M 3930
APL Reference # 2648-11

POSTS

Manufacturer: RM Components : See attached Mill Certs

Post Type: 2" POZ LOC post with wedge
PO# 2012490

DELINEATORS

Manufacturer: Shur-Flex:

Post Type: Surface mount 36", 42" or 48" round post, flattened for the upper 3
1/2" or 13". APL Reference # 3125-10

Manufacturer: 3M : Maplewood MN

Reflectors: 3"X3" Yellow High Intensity Prismatic 3M 3930 Sheeting Tab
APL Rererence #2648-11

This letter is to certify that all the above material meets the specifications of the Colorado Department of Transportation. All steel incorporated into materials originated within the United States of America.

Signature: _____

President, Roadway

Date: 12/7/17

Cross fire's Certified Test R2, of
Compliance on Back →



CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 3/16/2018
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

APL Category: Traffic Control
APL Sub-Category: Delineator
APL Base Category: Flexible, Multiple Hit
APL Reference No.: ^{cm} 2648-11 3125-10 ✓
Product Name: Shur-Flex Driveable Delineator (Item #SD0031)
Manufacturer: SHUR-TITE Products
Date of Web Site Review & Selection: 3/16/18

Crossfire, LLC

Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 6 each (quantity and units) of pay item: 612-00043 Delineator (Flexible) (Type III) (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219

Contractor

3/16/18
Date



CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 3/16/2018
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

APL Category: Traffic Control
APL Sub-Category: Sign Sheeting
APL Base Category: ASTM D 4956, Type IV
APL Reference No.: 2648-11
Product Name: 3M High Intensity Prismatic (#3930)
Manufacturer: 3M Company
Date of Web Site Review & Selection: 3/16/18

Crossfire, LLC
Paul Martin,
Project Manager

60
6 EACH
I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 72.25 S.F. (quantity and units) of pay item: 60 total - 00011 Sign Panel (Class I) 612-006 43 DELINEATOR (FLEX) (TD) (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219
Contractor
Date 3/16/18

Square Base Anchors
for Shur-Tite Delineators

Ultimate Highway Solutions, Inc.
Ulti-Mate Division



The Ultimate Sign Support System

Physical, Chemical Test Report and Material Certification
Ulti-Mate Perforated Square Steel Sign Posts

ROAD SIDE SUPPLIES LLC
Order #1726; Invoice #48782; Shipped 7/27/2017

These posts have been accepted by the FHWA as meeting the breakaway requirement. This product meets the requirements for crashworthiness (NCHRP 350) as adopted by the FHWA.

The steel used in manufacturing was made and melted in the United States and fabrication was done at our plant in Florence, AL.

Materials provided comply with current "Buy America" requirements of 23 CFR 635.410.

All tube products are galvanized and conform to ASTM A653, Coating designation G90.

Chemical and physical properties were in accordance and listed below:

Heat Number	C	Mn	P	S	SI
NE5701	.200	.830	.009	.003	.015
SE3154	.180	.820	.007	.003	.027
SE5997	.200	.850	.006	.001	.029
SF1476	.200	.860	.010	.002	.020

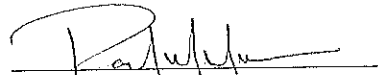
Heat Number	Yield psi	TSN psi	ELN%	Size /Gauge
NE5701	72100	79000	19	1.75sq x 12ga x 240"
SE3154	68600	74900	19	1.75sq x 12ga x 288"
SE5997	66100	77500	16	2sq x 12ga x 240"
SF1476	68400	76200	19	2.25sq x 12ga x 288"

Kalbe Davis

Test Certification Representative

Corporate Office
11095 W. Olive Rd.
Grand Haven, MI 49417
Phone: 888-366-9220

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 6 each (quantity and units) of pay item 612-00043 Delineator (Flex)(M) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

01/26/18
Date

**COLORADO DEPARTMENT OF TRANSPORTATION
PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY**

APL Reference No.

3125-10/

Product Evaluation Coordinator
Colorado Department of Transportation
10 North Holly Street, Unit A
Denver, Colorado 80216

Material code:
612.02.02.00

Material code description full name:
Delineator, Flexible Post

PART 1

Product name: Shur-Flex Driveable Delineator (Item #SD0031)	Product category: Traffic Control\Delineator\Flexible, Multiple Hit
Product representative (name & address): Attn: David Riker SHUR-TITE Products PO Box 2283 Round Rock, TX 78680	Manufacturer (name & address): Attn: David Riker SHUR-TITE Products PO Box 2283 Round Rock, TX 78680
Phone: (512) 218-9500 FAX: (512) 388-0417	Phone: (512) 218-9500 FAX: (512) 388-0417
Web-site address: www.shur-tite.com	Web-site address: www.shur-tite.com

Description of the product: (include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
Shur-Flex Driveable Delineator has an omni-directional impact design which is self-righting, will take multiple hits, and can be impacted in any direction. It is a 48" round post that is flattened for the upper 12". The reflector is 3" x 9" of sign sheeting. Anchor is 2" x 12 ga. square perforated tubing; post can be replaced in less than a minute; non-mechanical design. Made from 90% post consumer recycled materials. Maintenance cost savings due to durability minimizing change-outs.

Restrictions, (installation and/or use):

Uses of the product, (be specific to CDOT highway activities only):
Delineators, Object Markers, and Traffic Channelization

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value than other manufacturer's products):
Will take multiple hits, self-righting, post can be replaced in less than a minute. Can be impacted in any direction. Made from 90% post consumer recycled materials. Maintenance cost savings due to durability minimizing change-outs.

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

- CDOT : Section 612.02 & 713.10
- ASTM :
- AASHTO:
- FHWA : Certification of FHWA Compliance. Category I Device
- other :

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

- NTPEP-AASHTO:
- FHWA : FHWA considers SHUR-TITE Driveable Delineator (Item #SD0031) a Category I, "self-certify" device
- other :
- other :

State DOT Approvals, (current documentation required):
AL, AZ, CA, KS, MS, NE, NM, NV, OK, TX

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments
Shur-Flex Delineator has been submitted to NTPEP for inclusion in the "Winter 2009 - Summer 2009 Cycle of Testing. The report has yet to be completed.

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 2648-11 /
--	--------------------------------

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 713.04.01.00 <hr/> Material code description full name: Traffic Control, Reflective Sheeting
--	--

PART 1

Product name: 3M High Intensity Prismatic (#3930)	Product category: Traffic Control\Sign Sheeting\ASTM D 4956, Type IV
Product representative (name & address): Attn: Ted Denisuk 3M Traffic Safety Systems Division 1370 Quentin Street Aurora, CO 80011	Manufacturer (name & address): Attn: 3M Customer Service 3M Company - Traffic Safety Systems Division 3M Center, Building 235-03-A-09 St. Paul, MN 55144
Phone: (303) 520-6754 FAX: (303) 344-2161	Phone: (800) 553-1380 FAX: (800) 592-9293
Web-site address: www.3M.com/tss email: tdenisuk@mmm.com	Web-site address: www.3M.com/tss

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
 Series 3930 is a non-metallized micro-prismatic lens reflective sheeting designed for production of reflective durable traffic control signs that are exposed vertically in service.

Series 3930 meets and exceed ASTM D 4956-09e1, Type IV.

Series 3930 is comprised of micro-prismatic lens in a transparent resin, sealed and backed by a pressure sensitive adhesive protected by a liner.

Restrictions, (installation and/or use):
 Application is recommended for room temperature 65°F or higher.

Use of the product, (be specific to CDOT highway activities only):
 Series 3930 is designed for the production of durable traffic control signs exposed vertically in service.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
 * Series 3930 is a more efficient retro-reflective sheeting than encapsulated lens sheeting
 * Unique prismatic construction provides a high level of retro-reflectivity and nighttime visibility

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):

CDOT : Standard Specifications, Section 713(b), 2011. Currently on the CDOT Approved Products List (form #2648)

ASTM : D 4956-09 e1, Type IV

AASHTO:

FHWA :

other :

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):

NTPEP-AASHTO: 2008 SSM-08-1306

FHWA :

other :

other :

State DOT Approvals, (current documentation required):

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments
 State DOT approvals referenced but not documented: SC, TX, LA, IN, GA, FL, CT, AL, NC, WY

19219-613-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-18-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type 1 INCH & 1.5 INCH ELECTRIC CONDUIT	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 613	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

1 INCH ELECTRIC CONDUIT (METAL-RIGID) WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE MANUFACTURER'S COC FOR THE CONDUIT, ELBOWS, & COUPLINGS ARE ATTACHED. THE BUY AMERICA CERTIFICATION ALSO IS ATTACHED.

1.5 INCH ELECTRIC CONDUIT WAS DELETED FROM THE PROJECT BY ~~CO#11~~ CD#1

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)
Sample ID (#6)	

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
	Emergency <input type="checkbox"/>	Date needed

Contractor CROSSFIRE, LLC	Supplier REPUBLIC CONDUIT & CONDUIT PIPE PRODUCTS
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 16 LF (BASE BID)	Previous quantity 0	Total quantity to date 16 LF (BASE BID)
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via
		Date

Sampled or inspected by (print name) CLIPTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT - DAVIS ENG. SVC.	Residency

Republic Conduit

a **NUCOR** company

December 13, 2017
Manufactured By: Republic Conduit™

Certificate of Compliance

This Certificate of Compliance is produced by Republic Conduit for

Customer: Davis Engineering Services, INC.
Supplier: Border States Electric Supply

C-DOT Project No: STE C480-008
C-DOT Project Code: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Contractor: Crossfire, LLC
Manufacture Name: Republic Conduit
Address: 7301 Logistics Drive, Louisville, KY 40258
Laboratory Name & Address: Underwriters Laboratories
(testing takes place at the Louisville plant)
Name of the Product: 1" Rigid
Complete Description of Material: Electrical Rigid Metal Conduit
Quantity: 30 ft
Model No: UPC # 70785416001030
Lot/Heat/Batch No: N/A
Date of Laboratory Testing: Monthly (last test date: 11/09/2017)
Applicable C-DOT specifications: 613.07

This letter certifies that electrical steel conduit labeled as Republic Conduit is manufactured in the United States. The conduit is formed from U.S. melted; high percentage recycled flat rolled steel and is either Hot-Dip Galvanized or Electro-galvanized. After Galvanizing, all material receives a passivation coating to prevent white rust. The material labeled as Republic Conduit complies with the ARRA 2009 Buy America clause and conforms to the following specifications:

Galvite® Electrical Rigid Metal Conduit-Steel (Galvite® ERMC-S)

- UL Standard -- UL 6 Fourteenth Edition, the common ANCE, CSA and UL (tri-national) standard for Electrical Rigid Metal Conduit-Steel, covering requirements for Mexico, Canada, and the United States.
- cUL listing for CSA C22.2 No. 45.1-07
- ANSI Standard -- C80.1.
- All sizes are manufactured in the U.S. at our facility in Louisville, KY
- Trade sizes range from ½" to 6".
- National Electrical Code Article 344

All Republic Conduit products are made from steel which is melted and rolled in the United States.

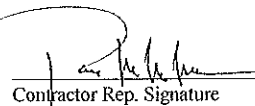
For more information, visit www.republicconduit.com.

Gustavo Fuentes
Quality Manager
Republic Conduit
gustaves@republicconduit.com

About Republic Conduit

Republic Conduit is a U.S. manufacturer of quality electrical steel conduit of multiple sizes and types. As a result of our eighty-year history in the electrical conduit industry, Republic has achieved strong name recognition. Over the years, Republic Conduit, as a domestic brand, has undergone several name changes: from Republic Steel, to LTV Steel Tubular Products, to LTV Copperweld, to Maverick Tube Corporation, and, finally, to Republic Conduit. Throughout this time, the company remained solely focused on delivering solid, quality conduit, which customers ask for by name time and time again.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 16 L.F. of (quantity and units) of pay item 613-00100 1 inch elect. conduit (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

01/24/18
Date

January 1, 2017
Manufactured By: Republic Conduit™

Certificate of Origin and Material Test Report

This letter certifies that electrical steel conduit labeled as Republic Conduit is manufactured in the United States. The conduit is formed from U.S. melted; high percentage recycled flat rolled steel and is either Hot-Dip Galvanized or Electro-galvanized. After Galvanizing, all material receives a passivation coating to prevent white rust. The material labeled as Republic Conduit complies with the ARRA 2009 Buy America clause and conforms to the following specifications:

Galvite® Electrical Rigid Metal Conduit-Steel (Galvite® ERM-C-S)

- UL Standard -- UL 6 Fourteenth Edition, the common ANCE, CSA and UL (tri-national) standard for Electrical Rigid Metal Conduit-Steel, covering requirements for Mexico, Canada, and the United States.
- cUL listing for CSA C22.2 No. 45.1-07
- ANSI Standard -- C80.1.
- All sizes are manufactured in the U.S. at our facility in Louisville, KY.
- Trade sizes range from ½" to 6".
- National Electrical Code Article 344

Electrunite® Electrical Metallic Tubing (EMT)

- UL Standard -- UL 797 Ninth Edition, the common ANCE, CSA and UL (tri-national) standard for Electrical Metallic Tubing-Steel, covering requirements for Mexico, Canada, and the United States.
- cUL listing for CSA C22.2 No. 83.1-07
- ANSI Standard -- C80.3
- All sizes are manufactured in the U.S. in either our Cedar Springs, GA or our Louisville, KY plant.
- Trade sizes range from ½" to 4".
- National Electrical Code Article 358

Intermediate Metal Conduit (IMC)

- UL Standard -- UL 1242 Fourth Edition, for Electrical Intermediate Metal Conduit-Steel.
- ANSI Standard -- C80.6
- All sizes are manufactured in the U.S. in either our Cedar Springs, GA or our Louisville, KY plant. Trade sizes range from ½" to 4".
- National Electrical Code Article 342

All of the above Republic Conduit products are made from steel which is melted and rolled in the United States.

Our manufacturing facilities are ISO 9001:2015 certified.

For more information, visit www.republicconduit.com.



Gustavo Fuentes
Quality Manager
Republic Conduit

About Republic Conduit

Republic Conduit is a U.S. manufacturer of quality electrical steel conduit of multiple sizes and types. As a result of our eighty-year history in the electrical conduit industry, Republic has achieved strong name recognition. Over the years, Republic Conduit, as a domestic brand, has undergone several name changes: from Republic Steel, to LTV Steel Tubular Products, to LTV Copperweld, to Maverick Tube Corporation, and, finally, to Republic Conduit. Throughout this time, the company remained solely focused on delivering solid, quality conduit, which customers ask for by name time and time again. In October of 2008, Republic Conduit became part of the Tenaris Group.

613-00100: 1 Inch Electrical Conduit

CONDUIT
pipe products, co.

A Member of THE PHOENIX FORGE GROUP

1501 W. Main Street
West Jefferson, OH 43162
Telephone: 614.879.9114
Fax: 614.879.5185
614.879.7785
Web: www.conduitpipe.com

December 6, 2017

Clifton Lee
Davis Engineering
Ref: CDDT Project STE C480-008

Mr. Lee:

We certify that the following rigid conduit fittings purchased from Border States and manufactured by Conduit Pipe Products Company were manufactured, sampled, tested, and inspected in accordance with the latest applicable specifications of Underwriters Laboratories UL6. These inspections also include random quarterly in-plant inspections by UL field representatives.

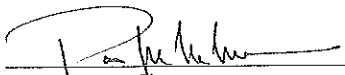
<u>Mfg Item No</u>	<u>Mfg Item Description</u>
22021000	1" 90° Galv Elbows
22022000	2" 90° Galv Elbows
22023000	3" 90° Galv Elbows
25020501	1/2" x CL (1-1/8") Galv Nipples

The rigid conduit elbows were manufactured at our Ohio facility, 1501 West Main St, West Jefferson, OH. The rigid conduit nipples were manufactured at our Ontario facility, 25 Winnipeg St, Vanastra, ON, Canada. All rigid conduit elbows and nipples are manufactured from hot dip galvanized rigid conduit supplied by the Wheatland Tube steel mill in Wheatland, PA.

UL listing marks are supplied on all conduit elbows as specified by UL. Close nipples, with no unthreaded outside diameter, are marked on full quantity cartons as specified by UL. I have included with this letter a copy of the UL Certificate of Compliance, Cert No. 20150812. Further details can be found by searching the UL Online Certification Directory at UL.com, reference our UL file E14120 for the Conduit Pipe Products rigid conduit listing.

The quality system for the Conduit Pipe Products Company is certified to the ISO 9001:2008 standard.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AE NEEDED (quantity and units) of pay item see to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.


Contractor Rep. Signature

01/26/18
Date

Approved by:


Richard Blickley
Quality Manager

- ★ 613-00100 1 inch Electrical Conduit
- 613-01100 1 inch Electrical Conduit (Plash)
- 613-01200 2 inch Electrical Conduit (Plash)
- 613-01300 3 inch Electrical Conduit (Plash)

CAP PRODUCTS LTD

CAPITOL
MANUFACTURING

CAMCO
/ ELECTRICAL

CERTIFICATE OF COMPLIANCE

Certificate Number 20150812 - E14120
Report Reference E14120 - 20010705
Issue Date 2015-AUGUST-12

Issued to: CONDUIT PIPE PRODUCTS CO
1501 W MAIN ST
WEST JEFFERSON, OH 43162 USA

This is to certify that representative samples of Rigid Ferrous Metal Conduit
USL, CNL Rigid steel conduit, 1/2 to 6 in. Trade Size.

USL, CNL Rigid steel conduit couplings and elbows, 1/2 to 6 in. Trade Size.

USL, CNL Rigid steel conduit nipples and bends, 1/2 to 6 in. Trade Size.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: ANSI/UL 6, "Electrical Rigid Metal Conduit - Steel."
CSA-C22.2 No. 45.1, "Electrical Rigid Metal Conduit - Steel."

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

AS NEEDED OF:

- 16 L.F., 613-00100 1 inch electrical conduit (BASE B10)
- 18 L.F., 613-01100 1 inch electrical conduit (plastic)
- 52 L.F., 613-01200 2 inch electrical conduit (plastic)
- 84 L.F., 613-01300 3 inch electrical conduit (plastic)
- 32 L.F., 613-01400 1 inch electrical conduit (plastic) CO#1

01100

B. Mahrentz

Bruce Mahrentz, Assistant Chief Engineer, Global Inspection and Field Services
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/contactus

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 20% of pay item 613-00100, 1 Inch Electrical conduit, that was installed on project number STE C480-008, 19219.

Anta Glesdor 12-30-17
One Touch Electric, Inc. Date



[Signature]
Contractor Rep. Signature

3/16/18
Date

613-00100: 1 Inch Electrical Conduit

CONDUIT
pipe products, co.

A Member of THE PHOENIX FORGE GROUP

1501 W. Main Street
West Jefferson, OH 43162
Telephone: 614.879.9114
Fax: 614.879.5185
614.879.7785
Web: www.capitolcanco.com

March 15, 2017

BUY AMERICA CERTIFICATION of COMPLIANCE

We certify that conduit elbows, couplings, and nipples sold by the Conduit Pipe Products Company were manufactured, sampled, tested, and inspected in accordance with the latest applicable specifications of Underwriters Laboratories and the Canadian Standards Association. UL listing marks are supplied on all of our conduit products.

Furthermore, for orders specifying Meets Buy America, we certify that conduit elbows, couplings, and nipples are manufactured in the United States from pipe and tube supplied by steel mills located in the United States. Orders with Buy America requirements must be stated at the time of purchase.

The quality system for the Conduit Pipe Products Company is certified to the latest ISO 9001 standard.

Approved by:

Tom Costello
Tom Costello
Plant Manager

★ 613-00100 1 inch electrical conduit, 16 L.F. ↘ BASE BID
613-01100 1 inch Electrical Conduit (Plastic), 18 L.F.
613-01200 2 inch Electrical Conduit (Plastic), 52 L.F.
613-01300 3 inch Electrical conduit (Plastic), 84 L.F.
613-01100 1 inch Electrical Conduit (Plastic), 32 L.F. ↑ CO#1

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS NEEDED (quantity and units) of pay item * see to the left (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

[Signature]
Contractor Rep. Signature

01/26/18
Date

19219-613-2 ✓

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-18-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type 1 IN, 2 IN, 3 IN. ELECTRIC CONDUIT	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 613	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

1 INCH, 2 INCH, & 3 INCH ELECTRIC CONDUIT (PLASTIC) WAS INSPECTED AND APPROVED BY THE PROJECT ENGINEER.

THE MANUFACTURER'S COC FOR CONDUIT, ELBOWS, & COUPLINGS ARE ATTACHED. THE BUY AMERICA CERTIFICATION IS ALSO ATTACHED. THE FOLLOWING WERE INSTALLED:

ITEM	PLAN QTY CO#1	FINAC QTY CO#1
1 IN. ELECTRIC CONDUIT (PLASTIC)	10 LF / 32 LF	10 LF / 32 LF
2 IN ELECTRIC CONDUIT (PLASTIC)	21 LF	52 LF
3 IN ELECTRIC CONDUIT (PLASTIC)	42 LF	84 LF

User ID	Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
	Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>
		Emergency <input type="checkbox"/>
Date needed		

Contractor CROSSFIRE, LLC	Supplier CANTEX INC. & CONDUIT PIPE PRODUCTS
----------------------------------	---

Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner
---	-------------------

Quantity represented SEE TABLE ABOVE	Previous quantity 0	Total quantity to date SEE TABLE ABOVE
---	----------------------------	---

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) CUFTON LEE, PE	Title PROJECT ENGINEER	E-mail
--	-------------------------------	--------

Supervisor (Pro./Res./Malls. Engr./Maht. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT - DAVIS ENG. SVC.	Residency
--	--	-----------

613-00100: 1 Inch Electrical Conduit



CANTEX INC, INC.
 301 Commerce Street, Ste. 2700
 Fort Worth, TX 76102-4127
 817-215-7000
 Fax: 817-215-7001

December 5, 2017

Certificate of Compliance

Distributor: Border States Electric Supply, Farmington NM
 PO#: Various - See Below
 Project Name: CDOT Project No. STE C480-008
 Manufacturer Name: Cantex, Inc.
 Manufacturer Address: 2407 Martin Luther King Blvd, Mineral Wells, TX;
 4045 Bonanza Drive, Kingman, AZ

Products:

6141628	2 UL CPLG CC	10	5501540528
5140045	1 UL ADAPT F CT	16	5501540528
5140048	2 UL ADAPT F CT	194	5501540528
5140050	3 UL ADAPT F CT	12	5501540528
5140103	1/2 UL ADAPT M CT	3	-
5140108	2 UL ADAPT M CT	6	-
A52AE12	1/2 PVC TC-40 10'BE	130	4503419759
A52BA12	1 PVC TC-40 10'BE	80	4503552619
A52CA12	2 PVC TC-40 10'BE	4500	4503507983
A53BA12	1 UL SCH-80 10'BE	90	4503552619
A53CA12	2 UL SCH-80 10'BE	90	5501540528
A53DA12	3 UL SCH-80 10'BE	90	4503552619

To Whom It May Concern:

CANTEX rigid schedule 40 (TC-40) and schedule 80 (TC-80) Polyvinyl Chloride (PVC) electrical conduit, elbows, and fittings are produced, inspected, sampled, and tested in accordance with Underwriters Laboratories (UL) Standard UL 651 and American National Standards Institute (ANSI) Standard ANSI/UL 651-2011. We also comply with NEMA Standard TC-2. The conduit meets the requirements for the UL "Sunlight Resistant" rating and is listed by UL for use in direct sunlight. These items are approved for listing by Underwriters Laboratories and representative samples are routinely examined and tested by Underwriters Laboratories for continuing compliance with UL specifications.

CANTEX rigid schedule 40 and 80 conduit, fittings, Spacers and elbows are listed by Underwriters Laboratories for use with 90 degree centigrade rated conductors. CANTEX conduit may be used in any application where the ambient temperature allows the use of conductors which are rated for 90 degree C (194 degree F), subject only to the limitations listed in Article 347-3 of the National Electrical Code. The conduit is listed by UL for burial with or without concrete encasement and is applicable for use as "Rigid Nonmetallic Conduit" as described in Article 347 of the National Electrical Code, including direct burial in underground installations as defined in Sections 300-5 (d) and 710 (b).

All items manufactured by CANTEX are made in the United States of America.

Sincerely,

Vice President - Sales & Marketing
 CANTEX INC

I have the legal authority to bind the manufacture or the supplier of the material.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 20-1 (quantity and units) of pay item 613-00100 1 Inch Electrical Conduit that was installed on project STE C480-008, 19219.

Anita Guesler
 One Touch Electric, Inc.

12-30-17
 Date

Distributor Rep Signature

3/16/18
 Date

32 L.F. of item 613-01100 1 inch elect. conduit (pls CD #1)



* - 16 L.F. of item 613-00100 1 inch elect. conduit
 34 L.F. of item 613-00150 1 1/2 inch elect. conduit
 (not paid, under)
 BASE BID
 18 L.F. of item 613-01100 1 inch elect. conduit (plastic)
 52 L.F. of item 613-01200 2 inch elect. conduit (plastic)
 84 L.F. of item 613-01300 3 inch elect. conduit (plastic)
 4,414 L.F. of item 613-01200 2 inch elect. conduit (plastic)
 Additive Items - Prep for Trail Lighting
 4,022 L.F. of item 613-01200 2 inch elect. conduit (plastic)
 was actually placed on the project

613-00100: 1 Inch Electrical Conduit

CONDUIT
pipe products, co.

A Member of THE PHOENIX FORGE GROUP

1501 W. Main Street
West Jefferson, OH 43162
Telephone: 614.879.9114
Fax: 614.879.5185
614.879.7785
Web: www.conduitpipe.com

December 6, 2017

Clifton Lee
Davis Engineering
Ref: CDOT Project STE C480-008

Mr. Lee:

We certify that the following rigid conduit fittings purchased from Border States and manufactured by Conduit Pipe Products Company were manufactured, sampled, tested, and inspected in accordance with the latest applicable specifications of Underwriters Laboratories UL6. These inspections also include random quarterly in-plant inspections by UL field representatives.

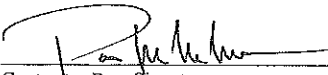
<u>Mfg Item No</u>	<u>Mfg Item Description</u>
22021000	1" 90° Galv Elbows
22022000	2" 90° Galv Elbows
22023000	3" 90° Galv Elbows
25020501	½" x CL (1-1/8") Galv Nipples

The rigid conduit elbows were manufactured at our Ohio facility, 1501 West Main St, West Jefferson, OH. The rigid conduit nipples were manufactured at our Ontario facility, 25 Winnipeg St, Vanastra, ON, Canada. All rigid conduit elbows and nipples are manufactured from hot dip galvanized rigid conduit supplied by the Wheatland Tube steel mill in Wheatland, PA.

UL listing marks are supplied on all conduit elbows as specified by UL. Close nipples, with no unthreaded outside diameter, are marked on full quantity cartons as specified by UL. I have included with this letter a copy of the UL Certificate of Compliance, Cert No. 20150812. Further details can be found by searching the UL Online Certification Directory at UL.com, reference our UL file E14120 for the Conduit Pipe Products rigid conduit listing.

The quality system for the Conduit Pipe Products Company is certified to the ISO 9001:2008 standard.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS NEEDED (quantity and units) of pay item see to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

01/26/18
Date

Approved by:


Richard Blickley
Quality Manager

★ 613-00100 1 inch Electrical Conduit
613-01100 1 inch Electrical Conduit (Plus)
613-01200 2 inch Electrical Conduit (Plus)
613-01300 3 inch Electrical Conduit (Plus)

CAP PRODUCTS LTD

CAPITOL
MANUFACTURING

CAMCO
ELECTRICAL

CERTIFICATE OF COMPLIANCE

Certificate Number 20150812 - E14120
Report Reference E14120 - 20010705
Issue Date 2015-AUGUST-12

Issued to: CONDUIT PIPE PRODUCTS CO
1501 W MAIN ST
WEST JEFFERSON, OH 43162 USA

This is to certify that representative samples of Rigid Ferrous Metal Conduit
USL, CNL Rigid steel conduit, 1/2 to 6 in. Trade Size.

USL, CNL Rigid steel conduit couplings and elbows, 1/2 to 6 in. Trade Size.

USL, CNL Rigid steel conduit nipples and bends, 1/2 to 6 in. Trade Size.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: ANSI/UL 6, "Electrical Rigid Metal Conduit - Steel."
CSA-C22.2 No. 45.1, "Electrical Rigid Metal Conduit - Steel."

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Services.

Look for the UL Certification Mark on the product.

AS NEEDED

- ★ 16 L.F., 613-00100 1 inch electrical conduit ^{PASE}
- 18 L.F., 613-01100 1 inch electrical conduit (plastic) ^{of BID}
- 52 L.F., 613-01200 2 inch electrical conduit (plastic)
- 84 L.F., 613-01300 3 inch electrical conduit (plastic)
- 32 L.F., 613-01100 1 inch electrical conduit (plastic) ^{CO# 1}

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 20%* of pay item 613-00100, 1 Inch Electrical conduit, that was installed on project number STE C480-008, 19219.

Anta Suslow 12-30-17
One Touch Electric, Inc. Date

B. Mahrenhoff
Bruce Mahrenhoff, Assistant Chief Engineer, Global Inspection and Field Services
UL LLC



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/products

[Signature]
Contractor Rep. Signature

3/16/18
Date

613-00100: 1 Inch Electrical Conduit

CONDUIT
pipe products, CO.

A Member of THE PHOENIX FORGE GROUP

1501 W. Main Street
West Jefferson, OH 43162
Telephone: 614.879.8114
Fax: 614.879.5185
614.879.7785
Web: www.capitolcamco.com

March 15, 2017

BUY AMERICA CERTIFICATION OF COMPLIANCE

We certify that conduit elbows, couplings, and nipples sold by the Conduit Pipe Products Company were manufactured, sampled, tested, and inspected in accordance with the latest applicable specifications of Underwriters Laboratories and the Canadian Standards Association. UL listing marks are supplied on all of our conduit products.

Furthermore, for orders specifying Meets Buy America, we certify that conduit elbows, couplings, and nipples are manufactured in the United States from pipe and tube supplied by steel mills located in the United States. Orders with Buy America requirements must be stated at the time of purchase.

The quality system for the Conduit Pipe Products Company is certified to the latest ISO 9001 standard.

Approved by:

Tom Costello
Tom Costello
Plant Manager

★ 613-00100 1 inch Electrical Conduit, 16 L.F. ^{BASE BID}
613-01100 1 inch Electrical Conduit (Plastic), 10 L.F.
613-01200 2 inch Electrical Conduit (Plastic), 52 L.F.
613-01300 3 inch Electrical Conduit (Plastic), 84 L.F.
613-01400 1 inch Electrical Conduit (Plastic), 32 L.F. ^{CO #1}

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS NEEDED (quantity and units) of pay item * see to the left (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pimon Causeway to Aspen Village Drive SUP, STE C480-008.

[Signature]
Contractor Rep. Signature

01/26/18
Date

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-18-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type 2 IN. ELECTRIC CONDUIT (BORED)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 613	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

2 IN. ELECTRIC CONDUIT WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THIS ITEM WAS ADDED BY CO# 1 b, # 1 d, # 1 h.

THE MANUFACTURER'S COC IS ATTACHED.

User ID			
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>
Date needed			
Contractor CROSSFIRE, LLC	Supplier SOUTHWIRE COMPANY, LLC		
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner		
Quantity represented 259 LF	Previous quantity 0	Total quantity to date 259 LF	
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail	
Supervisor (Pro./Res./Malls. Engr./Malnt. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT - DAVIS ENG. SVC.	Residency	

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer



Southwire[®]
Energy Division

Certificate of Compliance

Carrollton Utility Products Plant
Phone: 770-832-4972
Fax: 770-832-4937

Border States Electric Supply

One Touch Electric, Inc.
3228 CR 21
Cortez, CO 81321-8613

Project No:	CDOT STE C480-008
Company and Manufacturer Name:	Southwire Carrollton Utility Products Plant
Company and Manufacturer Address:	1 Southwire Drive, Carrollton, GA 30119
Product Name:	SIMPull CABLE-IN-CONDUIT
Product Description:	2" GRAY HDPE DUCT SCHEDULE 80 UL CIC
Stock No:	63302699
Southwire Order No:	959939
Manufacture Date:	6/03/17
Laboratory Testing Date:	6/03/17
Laboratory Testing Name:	Southwire Carrollton Utility Products Plant
Laboratory Testing Address:	1 Southwire Drive, Carrollton, GA 30119

We certify that the material described above has been manufactured and tested in accordance with CDOT 613.07 and 715.06

Inspection Manager _____

Danny Henry

* - Used in Change Order No. 01. For conduit placed after boring under US Highway 160, Village Drive/Pinon Causeway, and Alpha Drive.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 259 L.F. ⁸ ~~(boxed)~~ (quantity and units) of pay item 613-00206 2" HDPE Elect. Conduit (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/26/18
Date

Coupling Option

SIMPull[®] Cable-in-Conduit

Custom cut lengths of Aluminum 600v UD Secondary and Copper CIC for lighting, now available and in stock!

- SIMPull[®] Cable-in-Conduit is now offering aluminum 600v UD pre-installed in schedule 40 conduit.
- All stocking product for residential is black conduit with three red stripes and is UL Listed.
- Order as much or as little as you need for your job with little to no wait!
- Stocking product for lighting is black conduit and is UL Listed.



Residential Aluminum 600v UD Secondary									
Triplex					Quadplex				
Code Name	Stock Number	Description	Conduit	Max Length	Code Name	Stock Number	Description	Conduit	Max Length
Stephens	63216999	2-2-4	1.25" Schedule 40	6000'	Tulsa	63216899	4-4-4-4	1.25" Schedule 40	6000'
Bronau	63006699	1/0-1/0-2	1.5" Schedule 40	6000'	Dyke	63216599	2-2-2-4	1.25" Schedule 40	6000'
Sweetbriar	63012499	4/0-4/0-2/0	2" Schedule 40	3500'	Notro Damo	63217099	1/0-1/0-1/0-2	1.5" Schedule 40	5000'
Wesleyan	63019699	350-350-4/0	2.5" Schedule 40	2500'	Wake Forest	63021699	4/0-4/0-4/0-2/0	2" Schedule 40	2500'
					Slippery Rock	63217199	350-350-350-4/0	2.5" Schedule 40	2000'

Street Lighting, Path Lighting, DOT, Parking Lots and Parking Decks			
Stock Number	Description	Color Combination	Max Put-ups
63115999	10-10-10 STR CU THHN installed in 0.75" Schedule 40 Black Duct	Black/Red/Green	10,000'
63126399	10-10-10-10 STR CU THHN installed in 0.75" Schedule 40 Black Duct	Black/Red/White/Green	10,000'
63237499	10-10-10 STR CU THHN installed in 0.75" Schedule 40 Black Duct	Black/White/Green	10,000'
63259499	8-8-10 CU THHN installed in 0.75" Schedule 40 Black Duct	Black/White/Green	10,000'
63182299	6-6-6-8 CU USE installed in 1" Schedule 40 Black Duct	Black/Red/White/Green	10,000'
63263999	6-6-6 CU THHN installed in 1" Schedule 40 Black Duct	Black/White/Green	10,000'
63118599	6-6-6 CU USE installed in 1" Schedule 40 Black Duct	Black/White/Green	10,000'
63233899	6-6-6 CU THHN installed in 1" Schedule 40 Black Duct	Black/Red/Green	10,000'
63126899	4-4-4-6 CU USE installed in 1.25" Schedule 40 Black Duct	Black/Red/White/Green	6,900'
63125199	4-4-4 CU USE installed in 1" Schedule 40 Black Duct	Black/Red/Green	10,000'

UL Listed SIMPull[™] Couplers for HDPE and PVC Conduit



SIMPull[™] Couplers provide a quick and easy method to connect two lengths SIMPull[®] Cable-in-Conduit or connect to PVC conduit. Great for transitioning to PVC elbows to stub up in any application.

- Couplers HDPE to PVC or HDPE to HDPE
- For use in underground applications



Pull Tape



UL Listed SIMPull [™] Couplers for HDPE and PVC Conduit			
Part Number	Stock Number	Size	Qty per Box
SW-DEL-105	59714001	.75"	60
SW-DEL-131	64970501	1"	50
SW-DEL-166	64970601	1.25"	50
SW-DEL-190	64970701	1.5"	25
SW-DEL-237	62052701	2"	25
SW-DEL-287	69714101	2.5"	10
SW-DEL-350	59714201	3"	10
SW-DEL-450	59714301	4"	5

Pull Tape			
Stock Number	Description	Length	Pulling Strength
61883602	1/2" polyester pull tape	3000'	1,250 lbs
61883603	1/2" polyester pull tape	6000'	1,250 lbs
63064202	5/8" polyester pull tape	3000'	1,800 lbs
63064203	5/8" polyester pull tape	6000'	1,800 lbs
61829002	7/8" polyester pull tape	3000'	2,500 lbs
61829003	7/8" polyester pull tape	6000'	2,500 lbs

The Power of Connections[™]



Southwire

Visit cic.southwire.com for more information

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 *Registered Trademark and [™]Trademark of Southwire Company, LLC.

PRE-CONSTRUCTION

POWER DISTRIBUTION

BRANCH CIRCUIT

LOW VOLTAGE

19219-613-3

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region	5	Field sheet #	266289
Contract ID	19219	Date Submitted	3/21/2018
Project No.	STE C480-008		
Project Location	PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.		

Metric units yes no

Material Type	PULL BOX (24" X 26" X 24")		Field Lab phone	Cell Phone
Material Code (LIMS)	Item	Class	Grading	Special Provisions <input type="checkbox"/> yes
	613			
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):		<input type="checkbox"/> CDOT Form #633 (sack)	<input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

PULL BOXES INSTALLED WERE FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE MANUFACTURERS COC# IS ATTACHED.

3 EACH PAID FOR ORIGINAL CONTRACT & 1 EACH PAID FOR CO# 1, FOR A TOTAL OF 4 EACH.

ser ID		
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
--------------------------------------	--	--------------------------------------	------------------------------------	-------------

Contractor	CROSSFIRE LLC	Supplier	BORDER STATES ELECTRIC/HUBBELL
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Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner
---	-------------------

Quantity represented	Previous quantity	Total quantity to date
4 EACH		4 EACH

Sample submitted: <input type="checkbox"/> Yes <input type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
--	---	-----	------

Sampled or inspected by (print name)	Title	E-mail
CLIFTON LEE, PE	PROJECT ENGINEER	
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name)	Title	Residency
MIKE DAVIS, PE	PRESIDENT - DAVIS ENG. SVC.	



Lenoir City, TN 37771
Tel: 865-635-2135
Fax: 865-635-2160
E-Mail:mfisher@hubbell.com

September 22, 2017

Mr. Clifton Lee
Davis Engineering Service, Inc.
188 S. 8th Street
Pagosa Springs, CO 81147

Subject: Enclosure Materials Data

Dear Mr. Lee,

I have been asked to provide you documentation on two of our enclosure sizes. The two sizes provided are:
PG1324BA12 (J091716JH1) / PG1324HH00
PG2436BA24 (J072015OA2) / PG2436HH00

These products are going to be used for:
Project No.: STE C480-008
Project Code: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Contractor: Crossfire, LLC
Subcontractor: One Touch Electric, Inc.
Supplier: Border States Electric to One Touch Electric, Inc.

These product sizes are made in two of our manufacturing plants. The manufacturing plants are located in
Hubbell Lenoir City
2911 Industrial Park Drive
Lenoir City, TN 37771

BEL. Manufacturera, S.A. de C.V.
Boulevard Juan Pablo II #2554
Col. Fray Garcia de San Francisco
Cd. Juarez Chih. 32575

These two products are tested at both facilities by Underwriters Laboratories (UL) and our Quality Control Technicians. UL comes to each of the plants quarterly, where they pull random parts from our inventory and test them to the loading we state in our literature. The materials used our products are also verified by UL to make sure we offer what we state in our literature. If you have any additional questions on our products, please call me to discuss.

We appreciate your business.

Sincerely,
Hubbell Lenoir City, Inc.

Michael Fisher
Senior Product Engineer

- ★ Force Account - Walmart Utilities ? Irrigation
- (1) 13" x 24" x 24" Pull Box
- (3) each, item 613-07023 Pull Box (24" x 36" x 24")
- (1) each, item 613-07023 Pull Box (24" x 36" x 24")
for Change Order No. 1

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ~~see to the right~~ see to the right left (quantity and units) of pay item ~~see to the right left~~ see (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/26/18
Date

19219-613-41

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region 5	Field sheet # 266289
Contract ID 19219	Date Submitted 3-18-18
Project No. STE C480-008	
Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type WIRING (SPECIAL-PEDESTAL X-WALK)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 613	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

WIRING INSTALLED AS "SPECIAL-PEDESTALIAN CROSSWALK"
 WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER.
 THE MANUFACTURER'S COC AND TEST RESULTS ARE ATTACHED.
 ALSO THE MANUFACTURER'S BUY AMERICA LETTER IS ATTACHED.

Jser ID			
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>
Contractor CROSSFIRE, LLC	Supplier FALCON FINE WIRE & WIRE PRODUCTS, INC.	Date needed	
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner		
Quantity represented 1 LUMI SUM	Previous quantity 0	Total quantity to date 1 LS /	
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail	
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT - DAVIS ENG. SVC.	Residency	

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

FALCON FINE WIRE
 2401 DISCOVERY BLVD
 ROCKWALL, TX 75087
 214-771-3441 - OFFICE
 972-722-9168 - FAX

CERTIFIED TEST REPORT

CUSTOMER NAME: TW Cable, LLC FALCON PART #: 980214X19-1-00
 WO#: 278753 DESCRIPTION: 14/2 IMSA 19-1 STR BC
 PO#: 095072 OTY: 5,200'

TEST CONDITIONS

	REQUIREMENT	ACTUAL
Conductor Type:	14 AWG 7/0242 BC	14 AWG 7/0242 BC
Primary Insulation:	POLYETHYLENE	POLYETHYLENE
Wall thickness	.025	.025
Overall O.D.:	.123	.123
Color	BLK-WHT	BLK-WHT
Filler:	YES	1 @ .125
Tape:	CLEAR MYLAR	CLEAR MYLAR
Diameter:	.270	.250
Drain:	N/A	N/A
Jacket Insulation:	PVC	PVC
Wall Thickness	.045	.045
Overall O.D.:	.360	.350
Color	BLK	BLK
Print:	INDENT	INDENT
Spark Test:	7500	7500
Continuity	YES	YES
Dielectric Strength	2500 AC	2500 AC

We hereby certify that the material covered by this report is in accordance with the following applicable specifications: IMSA Specification 19-1

FALCON FINE WIRE
 2401 DISCOVERY BLVD
 ROCKWALL, TX 75087
 214-771-3441 - OFFICE
 972-722-9168 - FAX

CERTIFIED TEST REPORT

CUSTOMER NAME: TW Cable, LLC FALCON PART # 980514X19-1-00
 WO#: 313870 DESCRIPTION: 14/5 IMSA 19-1 STR BC BLK
 PO#: 099698 QTY: 10,460'

TEST CONDITIONS

	REQUIREMENT	ACTUAL
Conductor Type:	14 AWG 7/0242 BC	14 AWG 7/0242 BC
Primary Insulation:	POLYETHYLENE	POLYETHYLENE
Wall thickness	.025	.025
Overall O.D.:	.123	.123
Color	BLK-WHT-RED-ORG-GRN	BLK-WHT-RED-ORG-GRN
Filler:	N/A	N/A
Tape:	CLEAR MYLAR	CLEAR MYLAR
Diameter:	.325	.325
Drain:	N/A	N/A
Jacket Insulation:	PVC	PVC
Wall Thickness	.045	.045
Overall O.D.:	.415	.425
Color	BLK	BLK
Print:	INDENT	INDENT
Spark Test:	7500	7500
Continuity	YES	YES
Dielectric Strength	2500 AC	2500 AC

We hereby certify that the material covered by this report is in accordance with the following applicable specifications: IMSA Specification 19-1



Certificate of Compliance

Seller hereby certifies that the material(s) manufactured and processes used in the fabrication of this material have been made in accordance with applicable specifications as referred in the below description

The following material is made in the USA at Falcon Fine Wire, 2401 Discovery Blvd., Rockwall, Texas 75032 and complies with Buy America Act, North America Free Trade Agreement and Conflict Minerals Requirement.

Date: 3/2/18
 Customer: TW Cable LLC
 Purchase Order: 095072

Part Number	Description	Production Number	Ship Date
980214X19-1-00	14/2 19-1 IMSA Stranded Bare Copper	278753	11/30/15

Supplied to: Gades Sales
 CDOT Project No. STE C480-008
 350 feet

J McKinney
 Jennifer McKinney
 Sales Manager
 Falcon Fine Wire

XCS

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 350 ^{350*} of pay item 613-10010, Wiring (Special Pedestrian Cross-Walk), that was installed on project number STE C480-008.	
<i>Anita Gueslar</i> One Touch Electric, Inc.	<u>3-2-18</u> Date

** I temp sum AG*

<i>[Signature]</i> Contractor Rep. Signature	<u>3/16/18</u> Date
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Certificate of Compliance

Seller hereby certifies that the material(s) manufactured and processes used in the fabrication of this material have been made in accordance with applicable specifications as referred in the below description

The following material is made in the USA at Falcon Fine Wire, 2401 Discovery Blvd., Rockwall, Texas 75032 and complies with Buy America Act, North America Free Trade Agreement and Conflict Minerals Requirement.

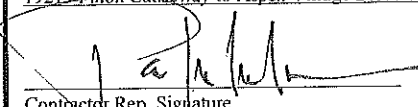
Date: 3/2/18
Customer: TW Cable LLC
Purchase Order: 099698

Part Number	Description	Production Number	Ship Date
980514X19-1-00	14/5 19-1 IMSA Stranded Bare Copper	313870	1/24/17

Supplied to: Gades Sales
CDOT Project No. STE C480-008
350 feet

J McKinney
Jennifer McKinney
Sales Manager
Falcon Fine Wire

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 lump sum (quantity and units) of pay item 612-1010 Wires (Spec. Cross-Walk) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon-Causeway to Aspen Village Drive SUP. STE C480-008.


Contractor Rep. Signature

3/16/18
Date

2401 DISCOVERY BLVD • ROCKWALL, TEXAS 75032
214-771-3441 • 972-722-9168 • falconwire@aol.com



613-10010: Wiring (Special - Pedestrian Cross-Walk)



January 2017

Falcon Fine Wire and Wire Products, Inc. products are manufactured in the United States of America and are in compliance with guidelines established under the Buy America Act, North America Free Trade Agreement and Conflict Minerals Requirement.

Thank you,

Jennifer McKinney
Sales Manager
Falcon Fine Wire
214-771-3441

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 lump sum of pay item 613-10010, Wiring (Special - Pedestrian Cross-Walk), that will be installed on project number STE C480-008, 19219.

Anita Guesler
One Touch Electric, Inc.

12-30-17
Date

[Signature]
Contractor Rep. Signature

3/16/18
Date



2401 DISCOVERY BLVD • ROCKWALL, TEXAS 75032
214-771-3441 • 972-722-9168 • falconwire@aol.com



19219-613-5

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-10-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type 2 IN. ELECTRIC CONDUIT - TRAIL LIGHTING	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 613	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

2 IN. ELECTRIC CONDUIT INSTALLED AS AN ADDITIVE ITEM - TRAIL LIGHTING WAS FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE MANUFACTURER'S COC FOR CONDUIT, ELBOWS, & COUPLINGS ARE ATTACHED.

User ID	
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Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
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Contractor CROSSFIRE, LLC	Supplier CANTEX
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Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner
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Quantity represented 4022 LF	Previous quantity 0	Total quantity to date 4022 LF
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Sample submitted: <input type="checkbox"/> Yes <input type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
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Sampled or Inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
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Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT - DAVIS ENG. SVC.	Residency
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613-00100: 1 Inch Electrical Conduit



CANTEX INC, INC.
 301 Commerce Street, Ste. 2700
 Fort Worth, TX 76102-4127
 817-215-7000
 Fax: 817-215-7001

December 5, 2017

Certificate of Compliance

Distributor: Border States Electric Supply, Farmington NM
 PO#: Various - See Below
 Project Name: CDOT Project No. STE C480-008
 Manufacturer Name: Cantex, inc.
 Manufacturer Address: 2407 Martin Luther King Blvd, Mineral Wells, TX;
 4045 Bonanza Drive, Kingman, AZ

Products:

6141628	2 UL CPLG CC	10	5501540528
5140045	1 UL ADAPT F CT	16	5501540528
5140048	2 UL ADAPT F CT	194	5501540528
5140050	3 UL ADAPT F CT	12	5501540528
5140103	1/2 UL ADAPT M CT	3	-
5140108	2 UL ADAPT M CT	6	-
A52AE12	1/2 PVC TC-40 10'BE	130	4503419759
A52BA12	1 PVC TC-40 10'BE	80	4503552619
A52CA12	2 PVC TC-40 10'BE	4500	4503507983
A53BA12	1 UL SCH-80 10'BE	90	4503552619
A53CA12	2 UL SCH-80 10'BE	90	5501540528
A53DA12	3 UL SCH-80 10'BE	90	4503552619

To Whom It May Concern:

CANTEX rigid schedule 40 (TC-40) and schedule 80 (TC-80) Polyvinyl Chloride (PVC) electrical conduit, elbows, and fittings are produced, inspected, sampled, and tested in accordance with Underwriters Laboratories (UL) Standard UL 651 and American National Standards Institute (ANSI) Standard ANSI/UL 651-2011. We also comply with NEMA Standard TC-2. The conduit meets the requirements for the UL "Sunlight Resistant" rating and is listed by UL for use in direct sunlight. These items are approved for listing by Underwriters Laboratories and representative samples are routinely examined and tested by Underwriters Laboratories for continuing compliance with UL specifications.

CANTEX rigid schedule 40 and 80 conduit, fittings, Spacers and elbows are listed by Underwriters Laboratories for use with 90 degree centigrade rated conductors. CANTEX conduit may be used in any application where the ambient temperature allows the use of conductors which are rated for 90 degree C (194 degree F), subject only to the limitations listed in Article 347-3 of the National Electrical Code. The conduit is listed by UL for burial with or without concrete encasement and is applicable for use as "Rigid Nonmetallic Conduit" as described in Article 347 of the National Electrical Code, including direct burial in underground installations as defined in Sections 300-5 (d) and 710 (b).

All items manufactured by CANTEX are made in the United States of America.

Sincerely,

Vice President - Sales & Marketing
 CANTEX INC

I have the legal authority to bind the manufacture or the supplier of the material.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ~~20~~ ~~20~~ ~~20~~ (quantity and units) of pay item 613-00100 1 Inch Electrical Conduit that was installed on project STE C480-008, 19219.

Anita Guesler
 One Touch Electric, Inc.

12-30-17
 Date

Contractor Rep. Signature

3/16/18
 Date



★ - 16 L.F. of item 613-00100 1 inch elect. conduit
 34 L.F. of item 613-00150 1 1/2 inch elect. conduit
 (not paid, under)
 18 L.F. of item 613-01100 1 inch elect. conduit (plast
 52 L.F. of item 613-01200 2 inch elect. conduit (plast
 84 L.F. of item 613-01300 3 inch elect. conduit (plast
 4,414 L.F. of item 613-01200 2 inch elect. conduit (plast
 Additive Items - Prep. for Trail Lighting
 4,022 L.F. of item 613-01200 2 inch elect. conduit (plast
 was actually placed on the project

19219-613-6

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266289
	Contract ID 19219	Date Submitted 3-10-10
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type WIRING - (SPECIAL TRAIL LIGHTING)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 613	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE WIRING USED FOR SPECIAL-TRAIL LIGHTING WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE COCS ARE ATTACHED ALONG WITH THE MANUFACTURER'S SPECIFICATION SHEETS & BUY AMERICA CERTIFICATION.

A COPY OF THE VOLTAGE DROP MEASUREMENTS IS INCLUDED/ATTACHED. PERFORMED BY THE CONTRACTORS ELECTRICAL SUBCONTRACTOR

Iser ID		
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed	

Contractor CROSSFIRE, LLC	Supplier SOUTH WIRE & ENCORE WIRE
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 1 LS	Previous quantity 0	Total quantity to date 1 LS
----------------------------------	----------------------------	------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or Inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Malls. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT - DAVIS ENG. SVC.	Residency

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 16, 2018

Re: CDOT Project # STE C480-008

CERTIFICATE OF COMPLIANCE


One Touch Electric, Inc. certifies that the wire manufactured by Southwire and installed on the above-referenced project meets or exceeds the standards and project specifications.

2. Southwire
3. One Southwire Drive, Carrollton, GA 30119
4. Underwriters Laboratories, Inc., various locations in the USA
5. THHN wire
6. #12 THHN wire, #6 THHN wire, #10 THHN wire
7. S.A.A.
8. Invoice #914055593, Invoice #913802533
9. See attached spec sheet with UL standards identified
10. Meets or exceeds CDOT spec

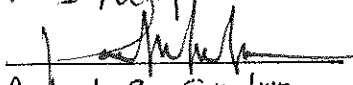
One Touch Electric, Inc.



Anita Giesler
Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2,040 of pay item 613-10010 Wiring (Special - Trail Lighting), that was installed on project number STE C480-008.	
 One Touch Electric, Inc.	<u>3-1-18</u> Date

This for wire

** I temp sum AS*

Contractor Rep. Signature

3/15/18
Date



MANUFACTURER'S CERTIFICATE OF COMPLIANCE

Encore Wire Corporation's type THHN, THWN-2 insulated 600-volt building wire is produced 100% in the United States of America using accepted practices and quality assurance procedures to comply with specifications and testing of regulatory agencies.

CDOT Project #: STE C480-008

Manufacturer: Encore Wire Corporation
1329 Millwood Road, McKinney, TX 75069

Laboratory: Encore Wire UL DAP Laboratory
1324 Millwood Road, McKinney, TX 75069

Products Description (Name): Thermoplastic Insulated Conductors, known as Type THHN/THWN-2 – UL Listed E123774

Specific Product Model:(3 AWG THHN/THWN-2 [2500R] & 12 AWG THHN/THWN-2 [R500]

ANSI/UL Compliance Initiation Date: 9/1/1999 - Latest UL FUS Date: 6/26/2017
FUS Testing Facility - Millville NY- Underwriters Laboratory

Specifications:

- American Society for Testing & Materials ASTM B-3, B-8, B-787
- Underwriters Laboratories UL-83, UL-1581, UL-1063 C-UL UL 1685 FT4/IEEE 1202 (70,000 Btu/hr.) Flame Test (1/0 AWG and larger)
- NEMA WC70/ICEA S-95-658
- ICEA T-29-520 (210,000 Btu/hr.) Flame Test
- Canadian Standards C-UL C22.2 No. 75
- American National Standards Institute
- Federal Specification A-A-59544
- NFPA 70: National Electrical Code 2017
- NFPA 79 AWM 600V 105C (75C in oil)
- AWM Spec 1316, 1317, 1318, 1319, 1320, 1321
- New York State DOS-16120-87-1222-1048
- RoHS Compliant
- ARRA 2009 Buy American Compliant

I certify that the above listed material complies with requirements including all applicable standards set forth in this certification. If you have any question or comments, please contact me at (800) 962-9473, Ext.637

Best regards,

Paul W. Abernathy, CMI, CPI
Manager of Codes and Standards
Encore Wire Corporation
1-972-562-9473 ext. 637

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 lump sum of pay item 613-10010, Wiring (Special Trail Lighting), that was installed on project number STE C480-008.

Anita Glesler 12-30-17
One Touch Electric, Inc. Date

[Signature]
Contractor Rep. Signature

3/16/18
Date



January 3, 2016

RE: Buy American Act / ARRA / Made in America

Dear Customer:

Encore Wire Corporation produces a broad range of electrical building wire and cable at its sole manufacturing location in McKinney, Texas. All Encore products are manufactured 100% in the United States of America.

We are pleased to inform you that all Encore products meet the Buy American Act's provisions in Section 1605 in the American Recovery and Reinvestment Act of 2009 (ARRA). Additionally, all Encore's products conform to the Federal Acquisition Regulation (FAR), subpart 25.6.

We appreciate your interest. Please call if you need additional information.

Sincerely,

Troy Skidmore
Director of Technical Operations and Product Engineering
Encore Wire Corporation
1324 Millwood Rd,
McKinney, TX 75069

972.562.9473 Ext.610
troy.skidmore@encorewire.com

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 lump sum of pay item 613-10010, Wiring (Special Trail Lighting), that was installed on project number STE C480-008.

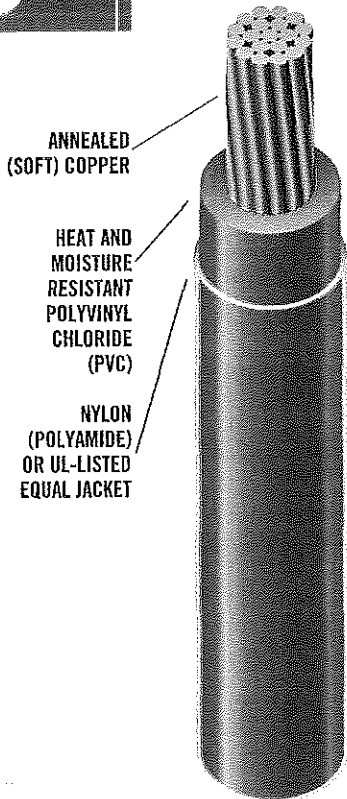
One Touch Electric, Inc.

12-30-17
Date

Contractor Rep. Signature

3/16/18
Date

THHN/THWN/TWN75/T90



600 Volts

Copper Conductor

Thermoplastic Insulation/Nylon Sheath Heat, Moisture, Gasoline, and Oil Resistant¹

Sizes 8 AWG and Larger Rated THWN-2 All Stranded Sizes Rated MTW and THWN

Sizes 14 Through 6 AWG Rated AWM (105°C) Sizes 14 Through 1 AWG Rated VW-1

Size 1/0 AWG and Larger Listed for CT Use Black Size 2 AWG and Larger Listed Sunlight-Resistant

APPLICATIONS Suitable for use as follows:

- Southwire Type THHN or THWN-2* conductors are primarily used in conduit and cable trays for services, feeders, and branch circuits in commercial or industrial applications as specified in the National Electrical Code²
- When used as Type THHN, conductor is suitable for use in dry locations at temperatures not to exceed 90°C
- When used as Type THWN-2*, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90°C or not to exceed 75°C when exposed to oil or coolant
- When used as Type MTW, conductor is suitable for use in wet locations or when exposed to oil or coolant at temperatures not to exceed 60°C or dry locations at temperatures not to exceed 90°C (with ampacity limited to that for 75°C conductor temperature per NFPA 79)
- Conductor temperatures not to exceed 105°C in dry locations when rated AWM and used as appliance wiring material. Voltage for all applications is 600 volts

STANDARDS & REFERENCES

Southwire Type THHN or THWN-2* or MTW (also AWM) meets or exceeds all applicable ASTM specifications, UL Standard 83, UL Standard 1063 (MTW), Federal Specification A-A-59544, and requirements of the National Electrical Code.

CONSTRUCTION

- Southwire Type THHN or THWN-2* or MTW copper conductors are annealed (soft) copper, insulated with a tough heat and moisture resistant polyvinyl chloride (PVC), over which a nylon (polyamide) or UL-listed equal jacket is applied
- Available in black, white, red, blue, green, yellow, brown, orange, and gray; some colors standard, some subject to economic order quantity
- Conductor sizes 2 AWG and larger listed and marked sunlight-resistant in black only

SPECIFICATIONS

- **MTW or THHN or THWN-2**

Conductors shall be UL-listed Type MTW or THHN or THWN-2* gasoline and oil resistant II, suitable for operations at 600 volts as specified in the National Electrical Code. Sizes 14 through 1 AWG shall be rated VW-1, larger sizes shall be listed for CT use. Sizes 2 AWG and larger listed and marked sunlight-resistant in black only. Conductors shall be annealed copper, insulated with high-heat and moisture resistant PVC, jacketed with abrasion, moisture, gasoline, and oil resistant nylon or listed equivalent, as manufactured by Southwire Company or approved equal.

- **AWM**

Conductors shall be UL-listed Type THHN or THWN-2* or MTW or AWM, suitable for operation at 600 volts at conductor temperatures not to exceed 105°C.

*rated -2 for 8 AWG and larger only

¹Oil and gasoline resistant II as defined by Underwriters Laboratories

²2005 Edition



greenSpec[®]
RoHS Compliant



COPPER CONDUCTORS

WEIGHTS, MEASUREMENTS AND PACKAGING

CONDUCTOR		INSULATION THICKNESS (mils)	JACKET THICKNESS (mils)	NOMINAL O.D. (mils)		APPROX. NET WEIGHT PER 1000 FT. (lbs)		ALLOWABLE AMPACITIES†			STANDARD PACKAGE
SIZE (AWG or kcmil)	NUMBER OF STRANDS			SOL.	STR.	SOL.	STR.	60°C	75°C	90°C	
14	19	15	4	102	109	15	16	15	15	15	DNFP
12	19	15	4	119	128	23	24	20	20	20	DNFP
10	19	20	4	150	161	37	38	30	30	30	DQFP
8	19	30	5	--	213	--	62	40	50	55	FP
6	19	30	5	--	249	--	95	55	65	75	EP
4	19	40	6	--	318	--	152	70	85	95	C
3	19	40	6	--	346	--	188	85	100	110	BC
2	19	40	6	--	378	--	234	95	115	130	C
1	19	50	7	--	435	--	299	110	130	150	B
1/0	19	50	7	--	474	--	371	125	150	170	B
2/0	19	50	7	--	518	--	461	145	175	195	B
3/0	19	50	7	--	568	--	574	165	200	225	B
4/0	19	50	7	--	624	--	717	195	230	260	B
250	37	60	8	--	694	--	850	215	255	290	B
300	37	60	8	--	747	--	1011	240	285	320	B
350	37	60	8	--	797	--	1173	260	310	350	B
400	37	60	8	--	842	--	1333	280	335	380	B
500	37	60	8	--	926	--	1653	320	380	430	B
600	61	70	9	--	1024	--	1985	355	420	475	C
750	61	70	9	--	1126	--	2462	400	475	535	C
1000	61	70	9	--	1275	--	3254	455	545	615	C

Solid construction available in sizes 14 through 10 AWG as Types THHN or THWN or AWM only. Sizes 14 through 6 AWG also suitable for 105°C appliance wiring material (AWM). Sizes 14 and 12 AWG contain four 500 ft. spools per carton. Size 10 AWG contains two 500 ft. spools per carton.

†Allowable ampacities shown are for general use as specified by the National Electrical Code, 2005 Edition, section 310.15 unless the equipment is marked for use at higher temperatures the conductor ampacity shall be limited to the following:
 60°C - When terminated to equipment for circuits rated 100 amperes or less or marked for size 14 through 1 AWG conductors. MTW wet locations or when exposed to oil or coolant.
 75°C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than size 1 AWG. THWN-2 when exposed to oil or coolant. MTW dry locations.
 90°C - THHN dry locations. THWN-2 wet or dry locations. For ampacity derating purposes.

STANDARD PACKAGE CODES

- B - 1000 ft. reel
- C - 500 ft. reel
- D - 2500 ft. spool
- E - 1000 ft. spool
- F - 500 ft. spool
- N - 2000 ft. carton
- Q - 350 ft. carton
- P - Drum

THHN/THWN/TWN75/T90



BORDER STATES
Supply Chain Solutions™

Border States Electric Supply
Shealy Electrical Wholesalers | Kriz-Davis
K-D Chapman Metering

INVOICE

BSE Invoice: 914055593
Cust Acct#: 51935
P.O.#: Pagosa CDOT
Sales Order#: 19288921
Sales Doc Type: Sales Order
Packing Slip#: 8021671107
Ship Condition: Our Truck
Payment Terms: 1.0 % 10th prox net 25th (25)

Date: 10/27/2017

Border States Electric - FRM
865 South Browning Parkway
Farmington NM 87401-1007
Phone: 505-324-8800

One Touch Electric Inc
3228 CR 21
Cortez CO 81321-8613

Please remit to:
Border States Electric Supply
PO Box 911105
Denver CO 80291-1105

Ship to:
One Touch Electric Inc
3228 CR 21
Cortez CO 81321-8613

Cust Item	BSE Item	Material MFG - Description	Order Qty	Ship Qty	Back Ordered	Price	Per	UoM	Total Value
	000150	156029 THHN - THHN-12-WHT-19STR-CU-4@500CTN	500 FT	500		138.13	/1,000	FT	69.07
	000160	127996 IDE - 30-652 452 RED WING CONNECTOR 500/BAG	500 EA	500		79.04	/1,000	EA	39.52
	000170	127962 IDE - 30-454 454 BLUE WING CONNECTOR 25/BOX	50 EA	50		286.08	/1,000	EA	14.30
Shipping and Handling \$ 0.00 Total \$ 122.89 State Tax \$ 2.900 % 3.56 County Tax \$ 0.000 % 0.00 Local Tax \$ 0.000 % 0.00 Other Tax1 \$ 0.000 % 0.00 Other Tax2 \$ 0.000 % 0.00 Other Tax3 \$ 0.000 % 0.00 Tax Subtotal \$ 3.56 Net Invoice Amount \$ 126.45									

1.23 discount of 1.23 by 12/10/2017
Total due by 12/25/2017
Mail at least 7 business days before due date.

Please return invoice with your remittance noting all adjustments.

A finance charge of 1.5% per month or the maximum allowable by law whichever is greater, will be assessed if payment is not received by invoice due date.

To access BSE's Terms and Conditions of Sale, please go to
<https://www.borderstateselectric.com>

Delivery: 8021671107 Received by:

*Del. 10/27/17
Drop off per
customer*

Drop off per customer request
10/27/2017 12:28:50

We appreciate your business

ORIGINAL



BORDER STATES
Supply Chain Solutions™

Border States Electric Supply
Shealy Electrical Wholesalers | Kriz-Davis
K-D Chapman Metering

INVOICE

BSE Invoice: 913802533
Cust Acct#: 203315
P.O.#: CDOT WIRE
Sales Order#: 19088151
Sales Doc Type: Sales Order
Packing Slip#: 8021480357
Ship Condition: Our Truck
Payment Terms: 1.0 % 10th prox net 25th (25)

Date: 09/20/2017

Border States Electric - FRM
865 South Browning Parkway
Farmington NM 87401-1007
Phone: 505-324-8800

One Touch Elec-CDOT STE C480-008
Job-CDOT STE C480-008 Pinion
Causeway Multi-use Trail
3228 CR 21
Cortez CO 81321-8613

Please remit to:
Border States Electric Supply
PO Box 911105
Denver CO 80291-1105

Ship to:
One Touch Electric Inc
3228 CR 21
Cortez CO 81321-8613

Cust Item	BSE Item	Material MFG - Description	Order Qty	Ship Qty	Back Ordered	Price	Per	UoM	Total Value
	000010	2251656	5,000						
		THHN - SS-THHN-6-BLK-19STR-CU-2500R							
		Batch: R2500		5,000					
		Batch Total:	5,000	FT	5,000	520.87	/1,000	FT	2,604.35
	000020	2251675	5,000						
		THHN - SS-THHN-6-RED-19STR-CU-2500R							
		Batch: R2500		5,000					
		Batch Total:	5,000	FT	5,000	520.87	/1,000	FT	2,604.35
	000030	2251679	5,000						
		THHN - SS-THHN-6-WHT-19STR-CU-2500R							
		Batch: R2500		5,000					
		Batch Total:	5,000	FT	5,000	520.87	/1,000	FT	2,604.35
	000040	157010	5,000						
		THHN - THHN-10-GRN-19STR-CU-2500R							
		Batch: R2500		5,000					
		Batch Total:	5,000	FT	5,000	211.25	/1,000	FT	1,056.25

Cash discount of 88.68 by 10/10/2017	Shipping and Handling \$	0.00
Total due by 10/25/2017	Total \$	8,869.30
Mail at least 7 business days before due date.	State Tax \$	0.000 % 0.00
	County Tax \$	0.000 % 0.00
	Local Tax \$	0.000 % 0.00
	Other Tax1 \$	0.000 % 0.00
	Other Tax2 \$	0.000 % 0.00
	Other Tax3 \$	0.000 % 0.00
	Tax Subtotal \$	0.00
Please return invoice with your remittance noting all adjustments.	Net Invoice Amount \$	8,869.30

A finance charge of 1.5% per month or the maximum allowable by law whichever is greater, will be assessed if payment is not received by invoice due date.

To access BSE's Terms and Conditions of Sale, please go to
<https://www.borderstateselectric.com>

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005
otelectric1001@qwestoffice.net

Crossfire, LLC
820 Airport Road
Durango, CO 81303
Attn: Paul Martin

via e-mail: Paul.Martin@crossfire-llc.com

Re: CDOT Project STE C480-008
Voltage drop testing

Paul,

On Saturday, December 2, 2017, the testing for voltage drop was done. The test results as are follows:

1. LPEA service voltage at the meter for poles 1 – 17: 250V. At pole #17, the voltage drop is 248V – 4.8A.
2. LPEA service voltage at the mter for poles 18 - 34: 250V. At pole #18, the voltage drop is 248V – 4.6A.

Sincerely,

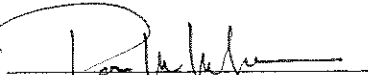
One Touch Electric, Inc.

Dick Giesler

Dick Giesler
President

cc: clifton@daveng.com

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 1 lump sum (quantity and units) of pay item 613-1001@ Wiring Spec. Trail Light. (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

01/26/18
Date

19219-013-7

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region	5	Field sheet #	266289
Contract ID	19219	Date Submitted	3-18-18
Project No.	STE C480-008		
Project Location	PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.		

Metric units yes no

Material Type	LIGHT STANDARDS & LUMINAIRE - INSTALL ONLY		Field Lab phone	Cell Phone
Material Code (LIMS)	Item	Class	Grading	Special Provisions <input type="checkbox"/> yes
	613			
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):		<input type="checkbox"/> CDOT Form #633 (sack)	<input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE LIGHT FIXTURES, POLES, AND LUMINAIRE WERE PROVIDED BY THE TOWN OF PAGOSA SPRINGS. THE CONTRACTOR INSTALLED THE PROVIDED ITEMS. THE PROJECT PAID FOR THE ITEMS TO BE INSTALLED. THE MANUFACTURER'S COC IS PROVIDED FOR REFERENCE.

SEE FORM 475.

User ID		
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
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Contractor	CROSSFIRE, LLC	Supplier	MOUNTAIN STATES LIGHTING
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name or owner	

Quantity represented	34 EA	Previous quantity	0	Total quantity to date	34 EA
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Sample submitted:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to:	<input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
-------------------	---	--------------------------------	--	-----	------

Sampled or Inspected by (print name)	CLIFTON LEE, PE	Title	PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Matts. Engr./Maint. Supt.) (print name)	MIKE DAVIS, PE	Title	PRESIDENT - DAVIS ENG. SVC.	Residency

For information only. The Town of Pagosa Springs provided the light fixtures, poles, and luminaire for the Contractor to install only. Rev. 10/2013

MANUFACTURER'S CERTIFICATE OF COMPLIANCE
FOR
MATERIALS FURNISHED FOR STATE AND FEDERAL AID HIGHWAY PROJECTS

Project No: CDOT Project # STE-C480-008
Pinion to Aspen Village Shared use Path Project

Project Location: Pagosa Springs, CO 81147

Contractor: Crossfire, LLC- One Touch Electric – Bought by City of Pagosa Springs

Manufacturer: Mountain States Lighting

Type and Grade of Materials: Aluminum Decorative Pole Assembly with Elastomer Bases

Quantity: 43 each pole assemblies

Tests Performed: Quality Control Test based on Aluminum Association "Specifications for Aluminum Structures" Section 8

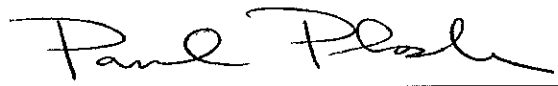
Date of Tests: 9-30-17

Lot(s) Represented: 1 Lot Pole assemblies as outlined above

We hereby certify that the above material(s) furnished to: City of Pagosa Springs

conform(s) with all the specified
Project Plans and Specification & City
requirements of of Pagosa Springs Standards as indicated by the performed test.

Signing this certificate of compliance certifies that the above information is a true and correct statement and that the undersigned is in a position to legally bind the manufacturer.

Name: Paul Plasha - Mountain States Lighting 

Position: President/Owner of Mountain States Lighting Date: 11-1-17



10001 Prosperity Rd, West Jordan, UT 84081-7500
 Phone: (801) 965-9532 Fax: (801) 965-9632
 Email: Randy@Teamnsc.com

Delivery Memo

DATE	INVOICE #
10/4/2017	11323

BILL TO
Mountain States Lighting / Paul Plasha PO Box 449 Conifer CO 80433

SHIP TO
Town of Pagosa Springs c/o Crossfire 140 Aspen Village Dr Pagosa Springs CO 81147 24hr B4: Scott Lewandowski 303-808-6462

P.O. NUMBER	SHIP DATE	SHIP VIA	JOB NAME
SCOTT062017NWP	10/8/2017	NSC Truck	Pagosa Springs W & E PH Trail

QUANTITY	ITEM CODE	DESCRIPTION
9	12SRA	12SRA-4.5-OT-SGLExtAm Bk 12' pole height/16' overall height w/arm
34	16SRA-4.5	16SRA-4.5-OT-SGLExtAm Bk 16' pole height/20' overall height w/arm
43	Ext-arm	Pole extension type top mounted arm assembly Bk 48" extension w/2' straight arm w/plumbizer
43	Top Cap	4.5" Top Cap matching Light pole
43	42Utah	42" Std Utah elastomer wrap-around base Bk
	A/B 3/4 x 18	Anchor Bolt (set) 3/4" X 18" ***Anchor bolts shipped separately to customer on 07/28/17
1	Freight	Freight Charges from NSC Plant

Thank You! Sylvia

Recipient signature, printed name, and date of receipt required above.

All items have been checked for quality and correct quantities prior to shipment. Damages must be reported to carrier within 48 hours of receipt. Shortages must be reported to the shipper within 48 hours of receipt.

19219-613-9

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region	5	Field sheet #	266290
Contract ID	19219	Date Submitted	3-18-18
Project No.	STE-C400-008		
Project Location	PINON CAUSEWAY TO ASPEN VILLAGE DR-S.U.P.		

Metric units yes no

Material Type	LIGHT CONTROL CENTER (PED-SPECIAL)			Field Lab phone	Cell Phone
Material Code (LIMS)	Item	Class	Grading	Special Provisions	<input type="checkbox"/> yes
	613				
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):		<input type="checkbox"/>	CDOT Form #633 (sack)	
			<input type="checkbox"/>	CDOT Form #634 (can)	

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE MATERIALS INSTALLED FOR THE LIGHT CONTROL CENTER WERE FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE CONTRACTOR'S MANUFACTURER'S COCs ARE ATTACHED.

3 EACH WERE ESTIMATED IN THE ORIGINAL QUANTITIES WITH 1 EACH REMOVED IN CO#1. 2 EACH WAS INSTALLED ✓

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
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Contractor	Supplier
CROSSFIRE, LLC	HOFFMAN ENCLOSURES, INC. & SQUARD D Co./BORDER STATES ELECTRIC
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented	Previous quantity	Total quantity to date
2 EA.	6	2 EA ✓

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name)	Title	E-mail
CLIFTON LEE, PE	PROJECT ENGINEER	
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name)	Title	Residency
MANCE DAVIS, PE	PRESIDENT-DES	

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 23, 2018

Re: CDOT Project # STE C480-008

CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the box manufactured by Hoffman Enclosures, Inc. and installed on the above-referenced project meets or exceeds the standards and project specifications.

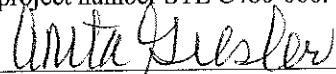
2. Hoffman Enclosures, Inc.
3. 2100 Hoffman Way, Anoka, MN 55303
4. N/A
5. Continuous Hinge Enclosure
6. 12 x 12 x 6 Continuous Hinge Enclosure
7. Model #55480, A1212CHNF
8. Invoice #913773451
9. N/A
10. meets or exceeds CDOT spec

One Touch Electric, Inc.



Anita Giesler
Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ~~of~~ pay item 613-50106, Lighting Control Center (Pedestrian) (Special) that was installed on project number STE C480-008.


One Touch Electric, Inc.

2-23-18
Date


Contractor Rep. Signature

3/16/18
Date



Jill Othoudt
 Compliance Specialist
 EQUIPMENT PROTECTION
 +1.763.422.2240 main
 Declaration.requests@pentair.com
 2100 Hoffman Way
 Anoka, MN 55303
 www.pentairprotect.com

RoHS Declaration

Date: December 13, 2017
 Requestor: CDOT Pagosa Springs Project
 Reference: CDOT Project # STE C480-008

Product:

Catalog #	Description
MODEL # 55480	A1212CHNF, CONTINUOUS HINGE ENCLOSURE, 12.00 X 12.00 X 6.00

Hoffman Enclosures Inc. declares that as of this declaration date, the product(s) identified above does not contain any restricted substances above the homogeneous material concentration threshold level per the Directive 2011/65/EU (Restriction of Hazardous Substances).

This certifies that Hoffman Enclosures has done due diligence and to the best of Hoffman Enclosures' knowledge, this statement is accurate and the information is true and correct. If the product is labeled RoHS, the product can be considered compliant and no declaration is needed.

Please note that we are making these representations solely to you and not to, or for reliance by, your customers or any third party. If such a representation is needed, please let us know.

Sincerely,

Jill Othoudt
 Jill Othoudt
 Global Product Compliance

** 3 each 2 EACH*

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ~~1 lump sum~~ of pay item 613-50106, Lighting Control Center, that was installed on project number STE C480-008.

Anita Guesler _____ 12-30-17
 One Touch Electric, Inc. Date

[Signature] _____ 3/16/18
 Contractor Rep. Signature Date

Hoffman

** (2) each of item # 613-50106 Lighting Control Center was installed in the project
 (1) each of item # 615-50106 Lighting Control Center was paid and then removed
 in Change Order No. 1*

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 16, 2018

Re: CDOT Project # STE C480-008

CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the load center manufactured by Square D/Homeline and installed on the above-referenced project meets or exceeds the standards and project specifications.


2. Square D Co
3. 1601 Mercer Rd, Lexington, KY 40511
4. Underwriters Laboratories, Inc., various locations in the USA
5. Homeline panel board
6. SQD HOM612L100RB Load Center
7. S.A.A.
8. Invoice #1932-689131
9. See attached UL certificates
10. Meets or exceeds CDOT spec


One Touch Electric, Inc.




Anita Giesler
Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ~~1~~ of pay item 613-10010 Wiring (Special - Trail Lighting), that was installed on project number STE C480-008.


One Touch Electric, Inc.


3-1-18
Date

* 2 each AS


Contractor Rep. Signature

3/16/18
Date

CERTIFICATE OF COMPLIANCE

Certificate Number 20131206 – E215117
Report Reference E215117 - 20010607
Issue Date 2013-December-06

Issued to: SCHNEIDER ELECTRIC INDUSTRIES S A S
ELECTROPOLE/EYBENS, POWER / FD
31 RUE PIERRE MENDES FRANCE
38050 GRENOBLE CEDEX 9, FRANCE


This is to certify that representative samples of Circuit Breakers, Molded Case and Circuit-breaker Enclosures
Branch circuit breaker, Type C60 , rated 0.5, 0.75, 1, 1.2, 1.5, 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 20, 25, 30, 35A , 1P, 2P, 3P.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

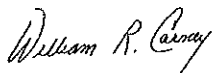
Standard(s) for Safety: ANSI/UL 489, "Molded-Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures."

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Listing Mark should be considered as being covered by UL's Listing and Follow-Up Service.

The UL Listing Mark generally includes the following elements: the symbol UL in a circle:  with the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.



William R. Carney, Director, North American Certification Programs

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/contactus



Certificate of Compliance

Certificate Number 20090306 – E6294A
Report Reference E6294, 1988 January 08
Issue Date 2009 March 06

Page 1 of 1



**Underwriters
Laboratories Inc.**

Issued to: **SQUARE D CO**
1601 MERCER RD
LEXINGTON, KY 40511 USA

*This is to certify that
representative samples of*

Panelboards

Model Descriptions: Panelboards and enclosed panelboards, Type HOM.

Standard(s) for Safety:

*Have been investigated by Underwriters Laboratories Inc.® in accordance
with the Standard(s) indicated on this Certificate.*

The basic standards used to investigate products in this category are ANSI/UL 67, "Panelboards" and CSA-C22.2 No. 29, "Panelboards and Enclosed Panelboards."

Additional Information:

Ratings:

Main lug - 225 maximum amperes, 120/240 maximum volts.

Main breaker - 225 maximum amperes, 120/240 maximum volts.

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers; "UL" with the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product

Issued by: *Jim Larin*
Jim Larin, Customer Service Specialist
Underwriters Laboratories Inc.

Reviewed by: *Thomas Skibbs*
Thomas Skibbs, Staff Engineering Associate
Underwriters Laboratories Inc.

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.
For questions in The United States of America you may call 1-877-UL-HELPS.

AMERICAN ELECTRIC
 1197 COLORADO HWY. 3
 DURANGO CO 81301
 TEL: (970)259-2885 FAX: (970)259-5616

Order Acknowledgement

ORDER NO. 1932-689131	ORDER DATE 10/24/2017
*** ORDER *** *** ACKNOWLEDGEMENT ***	

SOLD TO: ONE TOUCH ELECTRIC
 3228 ROAD 21
 CORTEZ, CO 81321

SHIP TO: ONE TOUCH ELECTRIC
 3228 ROAD 21
 CORTEZ, CO 81321

ACCOUNT NO. G7-64100	JOB NAME AND ADDRESS	CUSTOMER ORDER NO. PAGOSA CDOT	
SALESPERSON 0979 CTR	SHIPPING INFORMATION PREPAID	SHIP VIA OUR TRUCK	WHEN SHIP 10/24/2017

QUANTITY ORDERED	PRODUCT CODE	DESCRIPTION	QUANTITY SHIPPED	PRICE	PER DISC.	EXTENSION	C/D	T T Y A P X E
1	IDEAL 31315	1300FT BUCKET MULE TAPE	1	202.47	E	202.47	2.0	T
1	SQD HOM612L100RB	LD-CNTR BOX&INT	1	38.10	E	38.10		T
2	SQD HOM250	2P-120/240V-50A CB	2	8.23	E	16.46		T
1	SQD QO250	2P-120/240V-50A CB	1	16.10	E	16.10		T

TITLE AND RISK OF LOSS OR DAMAGE TO MERCHANDISE PASSES AT POINT OF SHIPMENT. CLAIMS FOR SHORT OR DAMAGED MERCHANDISE SHOULD BE MADE TO CARRIER. MERCHANDISE RETURNED WITHOUT OUR CONSENT WILL NOT BE ACCEPTED. A RESTOCKING CHARGE WILL BE MADE ON RETURNED GOODS UNLESS DEFECTIVE OR THRU ERROR ON OUR PART. A SERVICE CHARGE OF 1 1/2% PER MONTH, BUT NOT TO EXCEED THE HIGHEST AMOUNT LAWFULLY ALLOWED BY CONTRACT IN THIS STATE, WILL BE MADE ON ALL PAST DUE ACCOUNTS. THIS SALE IS SUBJECT TO OUR TERMS LOCATED AT SALES.OUR-TERMS.COM, WHICH WE MAY CHANGE FROM TIME TO TIME WITHOUT PRIOR NOTICE.	CODE: TO ADVISE YOU PROMPTLY CONCERNING YOUR ORDER, THIS CODE IS USED ON OUR INVOICES. B - BACK ORDERED. WILL SHIP AS SOON AS RECEIVED UNLESS INSTRUCTED TO CANCEL. C - CANCELLED. NOT IN STOCK. UNABLE TO PURCHASE LOCALLY.	MERCHANDISE SALES TAX SHIPPING CHARGE	273.13 7.92 0.00
		TOTAL DUE	281.05

613-50106 Light Control Center (Pedestrian) (Special)

Thomas & Betts

A Member of the ABB Group
442 East Stonewall Rd.
Byhalia, MS 38611
(901) 435-7500

CERTIFICATE OF COMPLIANCE

DATE: December 19, 2017

Consumer Name & Address:
BORDER STATES #41-FARMINGTON
865 S BROWNING PKWY
FARMINGTON, NM 87401

Consumer P.O. _____

Attention: PROJECT # CDOT STE C480-008

CC: Distributor - Name & Address:
BORDER STATES
ATTN: ACCTS PAYABLE
PO BOX 2767
FARGO, ND 58108-2767
Attention: _____

RE: Distributor P.O. 4503491131

Thomas & Betts Order: 0005-0358719 27368076

T&B Part Number	Mil. Spec. Number	Quantity	Date Code
<u>A1200HS 10EG</u>	_____	<u>1000</u>	<u>N/A</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

This is to certify that the material listed above and shipped against Thomas & Betts sales order number above were made in strict accordance with Thomas & Betts drawings, specifications and quality systems.

No certification is made with regard to any other specifications or requirements not specifically contained within this document.

AS NEEDED

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ~~1 lamp~~ sum of pay item 613-50106, Light Control Center (Pedestrian)(Special), that was installed on project number STE C480-008.

Anta Gueslar *2418*
One Touch Electric, Inc. Date

Regards,
James Aldridge
Thomas & Betts Quality Representative

[Signature] *3/16/18*
Contractor Rep. Signature Date

19219-613-8

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region <u>S</u>	Field sheet # <u>266289</u>
	Contract ID <u>19219</u>	Date Submitted <u>3-18-10</u>
	Project No. <u>STE C480-008</u>	
	Project Location <u>PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.</u>	

Metric units yes no

Material Type <u>LIGHT STANDARD FOUNDATION (SPECIAL)</u>	Field Lab phone	Cell Phone
Material Code (LIMS)	Item <u>613</u>	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE LIGHT STANDARD FOUNDATIONS CAST IN-PLACE BY THE CONTRACTOR WERE FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER, BZ CONCRETE WAS USED AND APPROVED. ALL INFORMATION REGARDING IS FILED UNDER 601-BZ CONCRETE. ALL INFORMATION REGARDING REINFORCING STEEL IS FILED UNDER ITEM 602. ALL INFORMATION REGARDING THE 2 IN. ELECTRIC CONDUIT IS FILED UNDER 613. COCS FOR THE ELBOWS ARE ATTACHED. THE COCS AND CTRs FOR THE ANCHOR BOLTS AND ASSOCIATED COMPONENTS ARE ATTACHED. THE TIPS PROVIDED THE ANCHOR BOLTS & ASSOCIATED COMPONENTS, THESE ARE INCLUDED FOR

Sample ID (#1) <u>SEE FORM 475.</u>	Sample ID (#2)	Sample ID (#3) <u>REFERENCE</u>
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed
---	-------------

Contractor <u>CROSSFIRE, LLC</u>	Supplier <u>PICOMA INDUSTRIES & NORTHWEST STANDARD CORP.</u>
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented <u>34 EA</u>	Previous quantity <u>0</u>	Total quantity to date <u>34 EA</u>
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Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) <u>CLIFTON LEE, PE</u>	Title <u>PROJECT ENGINEER</u>	E-mail
Supervisor (Pro./Res./Matis. Engr./Maint. Supt.) (print name) <u>WINNIE DAVIS, PE</u>	Title <u>PRESIDENT - DAVIS ENG. SVC.</u>	Residency



2/8/2018

Picoma Industries
9208 Jeffrey Drive
Cambridge, OH 43725
740-432-2146 ext. 7106

Sold To:
Border States Elect Supply
PO Box 2767
Fargo, ND 58103

Ship To:
Border States Elect Supply
865 S Browning Pky
Farmington, NM 87401

<u>PO No:</u>	<u>Quantity</u>
4503526753	30
4503557139	20
4503631352	20

<u>SAP No: / Delivery No:</u>
821370 / 81506673
829489 / 81520652
849737 / 81556945

Material: 2 ELBOW RIGID 90 DEG STD RAD
Ref: Made in the USA

Dear Valued Customer:

Please let this letter serve as documentation that all of Picoma's galvanized rigid conduit elbows are manufactured in the United States of America.

If I can be of any further assistance, please do not hesitate to contact me.

Sincerely,

Jay D. Burris
Quality Assurance Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS NEEDED (quantity and units) of pay item 612-00200 2 inch elect. conduit (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

2/14/18
Date



10001 Prosperity Rd. West Jordan, UT 84081-7500
Ph: (801) 965-9532 Fax: (801) 965-9632 Email: Randy@Teamnsc.net

ANCHOR BOLTS & ASSOCIATED COMPONENTS
PURCHASED & PROVIDED BY THE TOWN OF
PAGOSA SPRINGS.
FOR REFERENCE ONLY.

Certificate of Origin

RE: Purchase Order SCOTT062017NWP - Pagosa Springs W & E PH Trail

We do hereby certify under penalty of law that products manufactured by Northwest Standard Corp for the above referenced purchase order are Made in the USA. Further, all materials used, as required, do conform and comply with the Buy America requirements of the Surface Transportation Act of 1982 (S.T.A.A) and the American Recovery and Reinvestment Act of 2009 (A.R.R.A.) Any documents contained herein do further testify to this fact.

A handwritten signature in black ink, appearing to read 'Randal D. Orban', is written in a cursive style.

By Randal D Orban for Northwest Standard Corporation – a United States of America Corporation



CERTIFICATE OF COMPLIANCE

Picoma Industries
9208 Jeffrey Drive
Cambridge, OH 43725

SOLD TO:

BORDER STATES ELECT SUPPLY (AD)
PO Box 2767
FARGO ND 58103

SHIP TO:

BORDER STATES ELECT SUPPLY
865 S BROWNING PKY
FARMINGTON NM 87401-4411

CUSTOMER PO # 4503631352
SALES ORDER # 849737
DELIVERY # 81556945
DATE OF CREATION 01/23/2018
PLANT Allied Group Sales - Phoenix , AZ


CDOT Project No.: STE C480-008
CDOT Project Code: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Contractor: Crossfire, LLC.
Electrical Subcontractor: One Touch Electric, Inc.

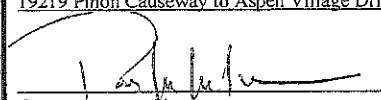
Item Description	Quantity	Unit
2 ELBOW RIGID 90 DEG STD RAD	20	EA

COMMENTS:

This is to certify the Rigid Steel Conduit, Conduit Couplings and Elbows produced by the WHEATLAND TUBE COMPANY and its affiliated divisions are manufactured in the U.S.A. All items have been tested and inspected in accordance with normal manufacturing processes and inspections as outlined in the applicable standards U.L. 6 and ANSI C80.1 to assure acceptable quality levels consistent with the specification requirements. Rigid Steel Conduit is supplied in nominal lengths as required by the U.L. 6 and ANSI C80.1 standards.

Rigid Steel Conduit manufactured by Wheatland Tube Company is registered and listed by Underwriter's Laboratory, listing number E32152.


Jay D. Burris
Quality Assurance Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents <u>AS Needed</u> (quantity and units) of pay item <u>613-00200 2inch elect conduit</u> (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number <u>19219 Pinon Causeway to Aspen Village Drive SUP STE C480-008</u> .	
 Contractor Rep. Signature	<u>2/4/18</u> Date



Zekelman Industries
Wheatland Tube Division
4435 South Western Boulevard
Chicago, IL 60609 USA

CERTIFICATE OF COMPLIANCE

Picoma Industries
9208 Jeffrey Drive
Cambridge, OH 43725

SOLD TO:

BORDER STATES ELECT SUPPLY (AD)
PO Box 2767
FARGO ND 58103

SHIP TO:

BORDER STATES ELECT SUPPLY
865 S BROWNING PKY
FARMINGTON NM 87401-4411

CUSTOMER PO # 4503526753, 4503557139, 4503631352
SALES ORDER # 821370, 829489, 849737
DELIVERY # 81506673, 8152065281556945
DATE OF CREATION 01/31/2018
PLANT Allied Group Sales - Phoenix , AZ

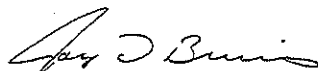
CDOT Project No.: STE C480-008
CDOT Project Code: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Contractor: Crossfire, LLC.
Electrical Subcontractor: One Touch Electric, Inc.

Item Description	PO	Quantity	Unit
2 ELBOW RIGID 90 DEG STD RAD	4503526753	30	EA
2 ELBOW RIGID 90 DEG STD RAD	4503557139	10	EA
2 ELBOW RIGID 90 DEG STD RAD	4503631352	10	EA

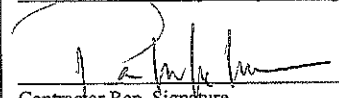
COMMENTS:

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Rigid Steel Conduit manufactured by Wheatland Tube Company is registered and listed by Underwriter's Laboratory, listing number E32152.

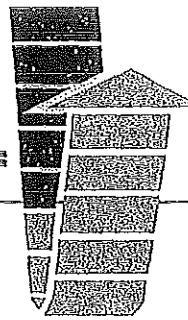

Jay D. Burris
Quality Assurance Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As needed (quantity and units) of pay item 613-00100 2 inch elect. conduit (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon-Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

2/14/18
Date

ROGERS BROTHERS INC.



HOT DIP
GALVANIZING

March 11, 2016

Unytite, Inc.
Unytite Quality Department
One Unytite Drive
Peru, IL 61354

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following material on your Purchase Order number 6004 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications. The hot dip galvanizing is ROHS compliant. The galvanizing process was conducted in a temperature range of 830F to 850F.

79,778 Pieces	3/4"-10 A563 DH HHN	Lot#22685-166188	4.00 Avg. Mils.
117,729 Pieces	3/4"-10 A563 DH HHN	Lot#22684-166188	4.20 Avg. Mils.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

This product was galvanized in Rockford, IL USA

Yours very truly,

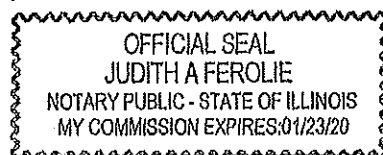
ROGERS BROTHERS INC.

Lorraine P. Shelburne
Vice President

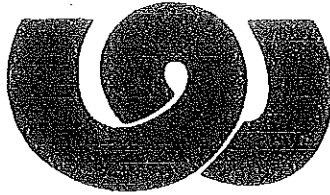
LPS:pd

SUBSCRIBED AND SWORN
BEFORE ME THIS 11TH DAY
OF MARCH 2016, AD

NOTARY PUBLIC



STAMPING THE FUTURE
WROUGHT WASHER MFG., INC.



June 3, 2016

Certification of Compliance

011767
PLATTE ANCHOR BOLT
4950 JACKSON ST.
DENVER, CO 80216

Wrought Washer
Ordr/Lot Number
294692

HT ORDER 293082

Heat Number	Chemical Analysis				
	C	Mn	P	S	Si
158681	0.330	0.840	0.010	0.002	0.260

Purchase Order Number	Part Description	Date Shipped	Quantity Shipped
136097	3/4 F436 S MARK HDG	06/03/2016	40,800

We hereby certify that the subject parts conform to the requirements of the applicable specification indicated for the subject parts and are in complete conformance to F436-11. We hereby certify that the subject parts were hardened to RC 26-45. We hereby certify that the subject parts were hot dip galvanized in accordance with specification ASTM A153 CLASS D.

We hereby certify that all statutory requirements as to American Production and Labor Standards and all conditions of purchase applicable to the transaction have been complied with and that the subject parts were melted and manufactured in the U.S.A. No weld repairs were made to the material.

Truly yours,
Wrought Washer Mfg., Inc.

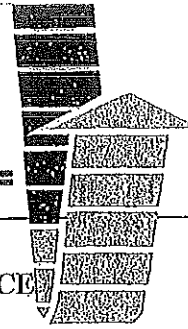
Paul Schaefer
Q.C. Manager

Sworn and subscribed before me on June 3, 2016
My commission expires April 24, 2017.



(032) SMARK, HT, HDG, F436
WW INTERNAL USE : 63611301/002/017295/55745

ROGERS BROTHERS INC.



HOT DIP GALVANIZING

CERTIFICATE OF COMPLIANCE FOR HOT DIP GALVANIZING

CUSTOMER: WROUGHT WASHER MFG., INC.
DATE: DECEMBER 11, 2015
PO#: 294692-01
ROGERS ORDER#: 105331
DESCRIPTION: (1.468 OD - .828 ID - .128 THK) 3/4" S MARK
WWIC#: 017295

COATING THICKNESS

<u>TAG#</u>	<u>QTY.</u>	<u>AVERAGE</u>	<u>HIGH</u>	<u>LOW</u>
691193	148,806	5.30	11.90	2.60

WE HEREBY CERTIFY THAT THE ABOVE SIZE AND LOT NUMBER WHICH WAS HOT DIP GALVANIZED IN OUR PLANT MEETS THE SPECIFICATIONS OF ASTM A153, CLASS D.

THE ABOVE SIZES AND LOT NUMBERS COMPLY WITH THE COATING, WORKMANSHIP, FINISH, AND APPEARANCE REQUIREMENTS OF ASTM F2329.

THE HOT DIP GALVANIZING IS ROHS COMPLIANT. THE GALVANIZING PROCESS WAS CONDUCTED IN A TEMPERATURE RANGE OF 830F TO 850F.

THIS PRODUCT WAS GALVANIZED IN ROCKFORD, IL USA.

ROGERS BROTHERS INC.

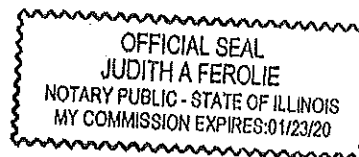
Lorraine P. Shelburne

Lorraine P. Shelburne
Vice President

LPS:pd

SUBSCRIBED AND SWORN
BEFORE ME THIS 11TH DAY
OF DECEMBER 2015, AD

Judith A. Ferolie
NOTARY PUBLIC



Anchor Bolts



Anchor Bolt, Inc.
Manufacturing & Distributing Since 1954

4950 Jackson Street, Denver, CO 80216
Office: (303) 321-5100 Fax: (303) 321-5110

CERTIFICATE OF COMPLIANCE

This is to certify that the indicated items on your
PO# scott062017nwp , our Invoice # 144498
comply with the stated specifications

Customer : Northwest Standard
Attn: Sylvia

ITEM NO.	QUANTITY	HEAT / LOT #	DESCRIPTION	SPECIFICATION
1	172	3070747	3/4 x 18 + 4 Anchor Bolt HDG	F1554 Grade 55
2	344	22684-166188	Hex Nut HDG	DH
3	344	294692	Flat Washer HDG	F436
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
19				
19				
20				
21				
22				
23				
24				
25				

I certify that the information herein is true and correct to the best of my knowledge

Signature: *Jordan Winograd*

Date: 7/26/2017

Jordan Winograd



Test Certificate

Form TC1: Revision 2: Date 23 Apr 2014

1770 Bill Sharp Boulevard, Muscatine, IA 52781-9412, US

Customer: RELIANCE STEEL & ALUM CO -DIV 10 RELIANCE METALCENTER PO BOX 27556 SALT LAKE CITY UT 84127		Customer P.O.No.:10-80484		Mill Order No. 41-502085-07		Shipping Manifest: MR319587															
		Product Description: CSA G40.21(2013)35W/260W / ASTM A36(14) A709(10A)36/ASME SA36(15) MANGANESE .80-1.20%				Ship Date: 30 Jun 17 Cert Date: 30 Jun 17		Cert No: 061851977 (Page 1 of 1)													
Size: 0.025 X 96.00 X 240.0 (IN)																					
Tested Places:			Tensiles:				Charpy Impact Tests														
Heat Id	Piece Id	Tested Thickness	Test Loc	YS (KSI)	UTS (KSI)	%RA	Elong % 2in 8in	Test Dir	Hardness	Abs. Energy(FTLB)				% Shear			Test Temp	Test Dir	Test Siz (mm)	BDWTT Temp %Shr	
A7E340	D25	0.489 (DISCRT)	L 54	68			45	T		1	2	3	Avg	1	2	3	Avg				
A7E340	D28	0.371 (DISCRT)	L 50	66			43	T													
A7E340	D27	0.632 (DISCRT)	L 47	63			46	T													
Chemical Analysis																					
Heat Id	C	Mn	P	S	Si	Tot Al	Sol Al	Cu	Ni	Cr	Mo	Cb	V	Ti	B	N	ORGN				
A7E340	.08	1.09	.012	.003	.27	.033	.031	.31	.16	1.18	.05	.003	.006	.007	.0003	.0085	USA				
KILLED STEEL. MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE OF THIS PRODUCT. KILLED STEEL, PRODUCED TO A FINE GRAIN PRACTICE MTR EN 10204:2004 INSPECTION CERTIFICATE 3.1 COMPLIANT 100% MELTED AND MANUFACTURED IN THE USA. PRODUCTS SHIPPED: A7E340 D28 PCS: 7, LBS: 26588																					
WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH, AND MEETS THE REQUIREMENTS OF, THE APPROPRIATE SPECIFICATION										Brian Wales SENIOR METALLURGIST - PRODUCT											
Cust Part #:																					



CMC STEEL TEXAS
 1 STEEL MILL DRIVE
 SEGUIN TX 78155-7510

CERTIFIED MILL TEST REPORT

For additional copies call
 830-372-8771

We hereby certify that the test results reported here
 are accurate and conform to the reported grade specification

TOMMY HEWITT

Quality Assurance Manager

HEAT NO.:3070747 SECTION: ROUND 3/4 x 20'0" A529-55 GRADE: ASTM A529-14 Grade 55 ROLL DATE: 04/22/2017 MELT DATE: 04/19/2017 Cert. No.: 82067338 / 070747A244	S Platte Anchor Bolt Co O L 4950 Jackson St D Denver CO US 80216-3018 T 3033215100 O 3033215110	S Platte Anchor Bolt Co H I 4950 Jackson St P Denver CO US 80216-3018 T 3033215100 O 3033215110	Delivery#: 82067338 BOL#: 72022864 CUST PO#: 143291 CUST P/N: DLVRY LBS / HEAT: 4566.000 LB DLVRY PCS / HEAT: 152 EA
--	---	---	---

Characteristic	Value	Characteristic	Value	Characteristic	Value
C	0.19%	Reduction of Area test 1	49%		
Mn	1.09%	Yield Strength test 2	65.9ksi		
P	0.008%	Tensile Strength test 2	90.1ksi		
S	0.028%	Elongation test 2	28%		
Si	0.25%	Elongation Gage Lgth test 2	2IN		
Cu	0.27%	BHN @ Surface test 1	193BHN		
Cr	0.13%				
Ni	0.09%				
Mo	0.039%				
V	0.026%				
Cb	0.003%				
Sn	0.011%				
Al	0.002%				
Carbon Eq F1554	0.39%				
Carbon Eq A529	0.48%				
Yield Strength test 1	66.2ksi				
Tensile Strength test 1	91.2ksi				
Elongation test 1	22%				
Elongation Gage Lgth test 1	8IN				

The Following is true of the material represented by this MTR:

- *Material is fully killed
- *100% melted and rolled in the USA
- *EN10204:2004 3.1 complaint
- *Contains no weld repair
- *Contains no Mercury contamination
- *Manufactured in accordance with the latest version of the plant quality manual
- *Meets the "Buy America" requirements of 23 CFR635.410

REMARKS :
 ALSO MEETS THE REQUIREMENTS OF SPECIFICATION ASTM F1554 GRADE 55 SUPPLEMENT 1, INCLUSIVE MEETS THE REQUIREMENTS OF AASHTO M314 GRADE 55; SUPPLEMENT S1 INCLUSIVE



UNYTITE INC.
 INNOVATIVE FASTENING SYSTEMS

Unylite, Inc.
 One Unylite Drive
 Peru, IL 61354
 Tel 815-224-2221
 Fax 815-224-3434

INSPECTION CERTIFICATE

Job No: 22684

Job Information

Certified Date: 3/17/16

Customer: PLATTE ANCHOR BOLT

SHIP TO: PLATTE ANCHOR

Customer PO No: 137135

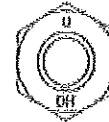
Shipped Qty: 26,972

Lot Number: 22684-166188

Part Information

Part No: A563 3/4-10 +0.020 DH HHN HDG BLUE DYE

Name: ASTM A563 Heavy Hex Nut, Grade DH, Hot Dipped Galv, Blue Dye



Manufactured Quantity: 117,729

Applicable Specifications

Specification	Amend	Specification	Amend
ASME B1.1	2003	ASME B18.2.2	2015
ASME B18.2.6	2010	ASTM A563	2015
ASTM F2329	2013	ASTM F806/606M	2014
ASTM F812/F812M	2012		

Test Results

Test No: 10711 Test: A563 DH Mechanical Properties

Description	Hardness (HRC)	Tempering Temp (800 degree F Min)	Proof Load (Pass/Fail) (ASTM Min)	Shape & Dimension ASME B18.2.2	Thread Precision ASME B18.1.1	Visual ASTM F812
Sample Inspection	27.9	1,202	50,100	Pass	Pass	Pass

Certified Chemical Analysis

Heat No	Grade	Manufacturer	Origin	C	Mn	P	S	Si	Cr	Ni	Cu
166188	1045	Allon Steel Inc.	USA	0.4500	0.7400	0.008	0.0300	0.2100	0.1990	0.0760	0.1900

Notes

All tests are in accordance with the latest revisions of the methods prescribed in the applicable SAE and ASTM Specifications.

The samples tested conform the specifications as described/listed above and were manufactured free of mercury contamination and there is no welding performed in the production of the products. No heats to which Bismuth, Selenium, Tellurium, or Lead was intentionally added have been used to produce products.

The steel was melted and manufactured in the U.S.A. and the product was manufactured and tested in the U.S.A.

We certify that this data is true representation of information provided by the material supplier and our testing laboratory. This certified material test report relates only to the items listed on this document and may not be reproduced except in full.



Savage, Dan - Supervisor, Quality

3/17/16

Date

CERTIFIED MILL TEST REPORT



Alton Steel Test Lab
 #5 Cut Street
 Alton, IL, 62002-9011
 (618) 463-4490 EXT 2486
 (618) 463-4491 (Fax)

BILL TO

Unytile, Inc.
 One Unytile Drive
 Peru, IL 61354

SHIP TO

Unytile, Inc.
 325 Civic Road
 LaSalle, IL 61301

Date	03/08/2016	Customer PO	P005861-9	Specifications
ASI Ord No.	78774	Customer PT.	B1045SC1.0000	SAE 1045
ASI Ord Line Item	1			

Item Description

Steel Bar, Hot Rolled, 1,0000, 25' 0"

Strand Cast, RR =62.39:1

Heat Number	Yield PSI	Tensile PSI	% Elongation	% ROA	Bend Test
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CHEMICAL ANALYSIS TEST METHODS ASTM E-415 & E-1019

Heat Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al	Nb/Cb	V	B	Ti	N	Ca
156125	0.46	0.79	0.008	0.034	0.23	0.16	0.067	0.128	0.021	0.008	0.003	0.025	0.006	0.0005	0.0014	0.0107	0.0019
166188	0.45	0.74	0.006	0.030	0.21	0.19	0.076	0.199	0.037	0.009	0.003	0.023	0.005	0.0004	0.0012	0.0138	0.0007

JOMINY HARDENABILITY USING ASTM A-255 CALCULATED FROM CHEMICAL DI

Heat Number	GS	DI
156125	7	1.45
166188	7	1.59

SPECIAL TEST RESULTS

Heat Number	ASTM E-45 Method A:								ASTM E-45 Method C:		SAE J422	ASTM E-381			Charpy	Hardness			
	TA	TB	TC	TD	HA	HB	HC	HD	S	O	S	O	S	R	C	RC	RB	BHN	
156125											2	1	1	1	1				
											Decarb: .004								
166188											3	3	1	2	1				
											Decarb: .005								

ADDITIONAL COMMENTS

RMS 021

No mercury, lead, radium, or alpha containing material or equipment is used or deliberately added in the production of this steel. No weld or weld repairs were performed on this material. This Steel is 100% Electric Arc Furnace Melted and Rolled in the U.S.A. Material qualifies as NAFTA origination.

Subscribed and sworn to before me, a Notary Public, in and for the county of Madison, State of Illinois

this _____ Day of _____

My commission expires _____

(Notary Public)

Alteration or reproduction of this report, except in full, is not allowed without written approval by a representative of Alton Steel Incorporated.

I hereby certify that the above tests are correct as contained in the records of ALTON STEEL INCORPORATED

Quality Leader: Josh Levi

Josh Levi

METALLURGICAL TESTING CERTIFICATION

D043012



Certificate Number: 627224
Date Issued: 08/18/2015

Nucor Steel-Crawfordsville
4537 South Nucor Road
Crawfordsville, IN 47933-0907

Page: 1 of 3

Order Number: 266145 - 0013
Order Dimensions: 0.1240 in X 49.0000 in
HRPO, MILL, 1035

Customer Name: WROUGHT WASHER MFG INC
Customer Address: 2100 S BAY ST

MILWAUKEE WI 53207

ASTM A568-14
SAE J403 1035

Cust PO Number: H3120

Coil Number 2014320.000
Rockwell B: 85
TAIL

Part Number 842122-120 TONS
Weight: 42,260 LBS

CHEMICAL ANALYSIS

Heat	Slab	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Sb
158681	03	0.33	0.840	0.010	0.002	0.260	0.145	0.009	0.050	0.087	0.017	0.034	0.009	0.001	<0.001	0.004	<0.0005	0.003

Coil Number 2014321.000
Rockwell B: 85
TAIL

Part Number 842122-120 TONS
Weight: 42,610 LBS

CHEMICAL ANALYSIS

Heat	Slab	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Sb
158681	04	0.33	0.840	0.010	0.002	0.260	0.145	0.009	0.050	0.087	0.017	0.034	0.009	0.001	<0.001	0.004	<0.0005	0.003

WE HEREBY CERTIFY THE ABOVE IS CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION
MELTED AND ROLLED IN THE USA

Eric E. Gallo
Eric E. Gallo

Standard Heat Treating, LLC

Certification

Order No.: 191044

Date: 11/03/2015

Entry Date: 10/31/2015

Page: 1 of 1

To:

Wrought Washer Mfg., Inc
2100 South Bay Street

Purchase Order No.: 293082

Packing List No.:

Milwaukee WI 53207

Material: 1033

Standard Heat Treating certifies the listed results of inspection and testing to accurately reflect the processes performed and data obtained as a result of our heat treatment of the specified product.

Quantity	Part Number / Part Name / Part Description	Pounds
407,083	017290 416262	16206

Insp. Type	Scale	Minimum	Maximum	Number	Other
Customer Requirements:					
Test	RC	38.	45.		38-45 HRC

Austentized, quenched and tempered to obtain a hardness of 40-43 HRC.

Alternate signature may include James Perkne (Dir., Customer Service)
or Efrain Santoyo (Dir., Production) or Walter Santoyo (Plant Manager).



John Christ
Quality Manager
Standard Heat Treating, LLC



10001 Prosperity Rd. West Jordan, UT 84081-7500
 (801) 965-9532 Fax: (801) 965-9632
 il: Randy@Teamnsc.com

Delivery Memo

DATE	INVOICE #
10/4/2017	11323

BILL TO
Mountain States Lighting / Paul Plasha PO Box 449 Conifer CO 80433

SHIP TO
Town of Pagosa Springs c/o Crossfire 140 Aspen Village Dr Pagosa Springs CO 81147 24hr B4: Scott Lewandowski 303-808-6462

P.O. NUMBER	SHIP DATE	SHIP VIA	JOB NAME
SCOTT062017NWP	10/8/2017	NSC Truck	Pagosa Springs W & E PH Trail

QUANTITY	ITEM CODE	DESCRIPTION
9	12SRA	12SRA-4.5-OT-SGLExtAm Bk 12' pole height/16' overall height w/arm
34	16SRA-4.5	16SRA-4.5-OT-SGLExtAm Bk 16' pole height/20' overall height w/arm
43	Ext-arm	Pole extension type top mounted arm assembly Bk 48" extension w/2' straight arm w/plumbizer
43	Top Cap	4.5" Top Cap matching Light pole
43	42Utah	42" Std Utah elastomer wrap-around base Bk
	A/B 3/4 x 18	Anchor Bolt (set) 3/4" X 18" ***Anchor bolts shipped separately to customer on 07/28/17
1	Freight	Freight Charges from NSC Plant

: You! Sylvia

Recipient signature, printed name, and date of receipt required above.

All items have been checked for quality and correct quantities prior to shipment. Damages must be reported to carrier within 48 hours of receipt. Shortages must be reported to the shipper within 48 hours of receipt.

19219-614-3

**COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION**

Region 5	Field sheet # 19219-614-3
Contract ID 19219	Date Submitted 3-18-18
Project No. STE C480-008	
Project Location ANON CAUSEWAY TO ASPEN VILLAGE M-SUP	

Metric units yes no

Material Type ACCESSIBLE PEDESTRIAN SIGNAL		Field Lab phone	Cell Phone
Material Code (LIMS)	Item 614	Class	Grading
Previously used on Project No.:		Special Provisions <input type="checkbox"/> yes	
Previous CDOT Form #157 F/S No.(s):		<input type="checkbox"/> CDOT Form #633 (sack)	<input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE ACCESSIBLE PEDESTRIAN SIGNAL WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER.

THE MANUFACTURER'S COC IS ATTACHED.

User ID	
---------	--

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/>	Construction <input checked="" type="checkbox"/>	Maintenance <input type="checkbox"/>	Emergency <input type="checkbox"/>	Date needed
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Contractor CROSSFIRE, LLC	Supplier CAMPBELL COMPANY
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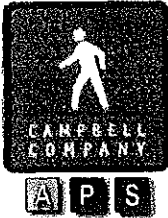
Sampled from (Pit, roadway, window, stock, etc.)	Pit name or owner
---	-------------------

Quantity represented 2 EA	Previous quantity 0	Total quantity to date 2 EA
-------------------------------------	-------------------------------	---------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
--	--	-----	------

Sampled or inspected by (print name) LIFTON LEE PE	Title PROJECT ENGINEER	E-mail
--	----------------------------------	--------

Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT-DES	Residency
---	-------------------------------	-----------



450 W. MCGREGOR
BOISE, ID 83705
WWW.PEDSAFETY.COM

614-70200 Accessible Pedestrian Signal

January 2018

RE: Certificate of Compliance

CDOT Project No. STE C480-008
Gades PO: 0052592

Campbell Company
450 W. McGregor St., Boise, ID 83705

Guardian APS
Machined aluminum pedestrian notification push button system
502-0801/512

Campbell Company hereby certifies that its Guardian stations meet the requirements set forth in accordance with CDOT specification section 614 – ACCESSIBLE PEDESTRIAN SIGNALS. This certification is valid for the Guardian and all of its components and accessories.

Additionally, Campbell Company hereby certifies that all of its products, including the Guardian station, meet all applicable Buy America requirements.

Please contact us with any further questions.

Respectfully,

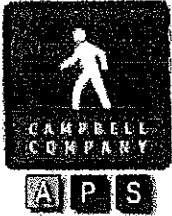
Dakota Reed
Customer Solutions Coordinator
Campbell Company

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ^{2 each cm} ~~1 lump sum~~ of pay item 614-70200, Accessible Pedestrian Signal, that was installed on project number STE C480-008.

Anita Giesler 2-4-18
One Touch Electric, Inc. Date

[Signature]
Contractor Rep. Signature

3/16/18
Date



450 W. MCGREGOR
BOISE, ID 83705
WWW.PEDSAFETY.COM

BUY AMERICA CERTIFICATION

Manufacturer: Campbell Company, 450 W. McGregor Drive, Boise, ID 83705

Campbell Company hereby certifies on behalf of itself that it complies with 49 U.S.C. 5323(j) and 49 CFR Part 661, which state that federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver.

Campbell Company certifies that all of its products meet the guidelines and requirements set forth in the American Recovery and Reinvestment Act to be considered Made in America.

If you need further information, please contact us.

Respectfully,

Karen Swofford
Operations Manager

I hereby certify under penalty of perjury that ^{2 each} the material listed in this Certificate of Compliance represents ~~1~~ lump-sum of pay item 614-72863, Pedestrian Push Button Assembly, that was installed on project number STE C480-008.

Anita Guesler
One Touch Electric, Inc.

12-30-17
Date

[Signature]
Contractor Rep. Signature

3/16/18
Date

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266291
	Contract ID 19219	Date Submitted 3-18-18
	Project No. STE C400-008	
	Project Location PINON CRUISEWAY TO ASPEN VILLAGE DR-S, U.P.	
Metric units <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		

Material Type PEDESTRIAN PUSH BUTTON POST ASSEMBLY	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 614	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE PEDESTRIAN PUSH BUTTON POST ASSEMBLY WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE CONTRACTORS COC IS ATTACHED FOR THE PEDESTRIAN PUSH BUTTON. THE MANUFACTURER'S CTR FOR IS ATTACHED FOR THE ANCHOR BOLTS.

THE CONTRACTOR USES EPOXY ANCHORING MATERIAL ON THE AP. THE CONTRACTOR'S SELECTION LETTER IS ATTACHED.

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No. 4092-16	Product name: HILTI HIT RE500V3	Date checked: 2/5/2018
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed
---	-------------

Contractor CROSSFIRE, LLC	Supplier TIPS INDICATIONS
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 1 EA	Previous quantity 0	Total quantity to date 1 EA
----------------------------------	----------------------------	------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) LIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MICHAEL DAVIS, PE	Title PRESIDENT-DES	Residency

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 23, 2018

Re: CDOT Project # STE C480-008

CERTIFICATE OF COMPLIANCE

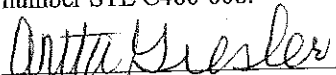
One Touch Electric, Inc. certifies that the housing manufactured by TIPS Indications and installed on the above-referenced project meets or exceeds the standards and project specifications.

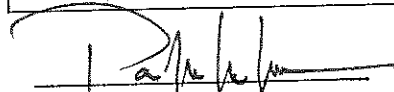
2. Manufacturer: TIPS Indications
3. 22480 Co Rd 75, St. Cloud, MN 56301
4. Laboratory – N/A
5. Pedestrian Push Button Station
6. GP3 APS Pedestrian Push Button Station
7. S.A.A.
8. Invoice #0072465-IN
9. Meets or exceeds project specifications
10. N/A

One Touch Electric, Inc.



Anita Giesler
Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ^{all} of pay item 614-72863, Pedestrian Push Button Assembly that was installed on project number STE C480-008.	
 One Touch Electric, Inc.	<u>2-23-18</u> Date

 Contractor Rep. Signature	<u>3/16/18</u> Date
--	------------------------

TIP INDICATIONS
22480 CO ROAD 75
ST. CLOUD, MN 56301

10/12/2017

MADE IN AMERICA

All products designed and manufactured are designed and
manufactured in St. Cloud, Minnesota.

Our products meets buy American requirments within the 2009 ARRA.

THANK YOU:

Darrell Bruestle
Sales Manager
Tip Indications

I hereby certify under penalty of perjury that ^{1 each one} the material listed in this
Certificate of Compliance represents ~~1 lamp sum~~ of pay item 614-72863,
Pedestrian Push Button Assembly, that was installed on project number STE C480-008.

Anita Giesler
One Touch Electric, Inc.

12-30-17
Date

[Signature]
Contractor Rep. Signature

3/16/18
Date

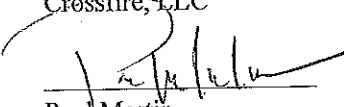


CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

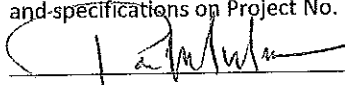
Date: 2/7/2018
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 614-72863
APL Category: Adhesive\Anchoring
APL Sub-Category: Lateral\Epoxy
APL Base Category: Adhesive, Concrete Anchoring Agent
APL Reference No.: 4092-16
Product Name: HIT RE500v3
Manufacturer: Hilti, Inc.
Date of Web Site Review & Selection: 2/05/18

Crossfire, LLC

Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As needed (quantity and units) of pay item: 614-72863 Pedestrian Push Button Post Assembly (Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219


Contractor

2/14/18
Date

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No.

4092-16 ✓

Product Evaluation Coordinator
 Colorado Department of Transportation
 4670 North Holly Street, Unit A
 Denver, Colorado 80216

Material code:
 712.10.02.00

Material code description full name:
 Adhesive, Concrete Anchoring Agent

PART 1

Product name:
 HIT RE500v3

Product category:
 Adhesive\Anchoring, Lateral\Epoxy

Product Representative (name & address):
 Attn: Pete Anderson

Manufacturer (name & address):
 Attn: Pete Anderson

Hilti, Inc.
 7250 Dallas Parkway, Suite 1000
 Plano, Texas 75024

Hilti, Inc.
 7250 Dallas Parkway, Suite 1000
 Plano, Texas 75024

Phone: (972) 403-5948 E-mail: Peter.Anderson@hilti.com

Phone: (972) 403-5948 E-mail: Peter.Anderson@hilti.com

Web-site address: www.us.hilti.com

Web-site address: www.us.hilti.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

HIT RE500v3 is a two component 100% solids, high modulus, structural epoxy paste. It is a solvent free, high strength, high modulus, moisture insensitive non-sag paste epoxy system. Base material temperature range from 41°F to 104°F. Bond strength 2146 psi @ 14 days (for Class C at 50° F). Compressive Strength 12,000 psi @ 7 days (for Class B at 50°F). Gel Time 300 minutes @ 35°F, 36 minutes @ 50°F, and 16 minutes @ 75°F. Technical data available for both rebar and threaded rod installations. Product is available in 11.1 oz, 16.9 oz. and 47.3 oz. cartridges. The 11.1oz. and 16.9 oz. cartridge uses a manual or battery operated dispenser. The 47.3 oz. cartridge uses a pneumatic dispenser.

Restrictions, (Installation and/or use):

Base material temperature from 41°F to 110°F.

Use of the product, (be specific to CDOT highway activities only):

Primary uses: rebar dowels for concrete repair, road widening and renovations. Secondary uses: safety barriers, sound barriers, and safety railings.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

HIT RE500v3 is an economical and versatile adhesive anchoring system. The three sizes of cartridges allow usage from a few anchoring or dowelling uses to large sizes with large volume. The mixing nozzle provides consistent mixing and injection with little waste. The system can be used for rebar or solid bar dowelling or attachment of threaded rods in a variety of applications.

Specifications: (listing those applicable is required)

- CDOT :
- ASTM : C881: Types I, II, IV, & V, Grade 3, Classes A, B & C
- AASHTO:
- FHWA :
- other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) Certified Test Report (CTR) provided to validate all claims.

- NTPEP-AASHTO:
- FHWA :
- other : Element Materials Technology - ASTM C881 (March 7, 2016)
- other : ICC-ES [ESR-3814] (1-01-2016)
- other :

State DOT Approvals, (current documentation required):

Re-submittal Cycle: 4 years

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:

Additional Comments:

Hilti has over 10 manufacturer representatives in Colorado that are available for job site installation training of the HIT RE 100 adhesive system. Hilti is the only manufacturer that will train and certify installer with a Hilti certification card after completion of the training. A Hilti field engineer is available in Colorado that can be available for job site technical assistance and can assist with any technical anchoring questions. Contact the Product Rep. at 800-879-8000.



P.O. Box 21148
 Tulsa, OK 74121
 P: 800-879-8000
 F: 800-879-7000



Date: 12/28/2017
 Customer: COLORADO CONCRETE ACCESSORIES
 Customer PO: 833

Subject: Certificate of Conformance - HIT RE-500 V3 Adhesive

Quantity: 40 PCS / 2123404 / Injectable mortar HIT-RE 500 V3/500/1

To Whom it May Concern:

This is to certify that the HIT-RE 500 V3 provided on the above referenced order is a high-strength, slow cure two-part epoxy adhesive contained in two cartridges separating the resin from the hardener.

Additionally, this certifies that the product has been seismically and cracked concrete qualified as represented in ICC-ES report ESR- 3814.

Sincerely,

B. Mitchell

B. Mitchell, Certification Specialist

HILTI, Inc.
 cocRE500 V3

as needed
 I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents ~~1-1/2~~ of pay item 614-72863 Pedestrian Push Button Assembly that was installed on project number STE C480-008.

Anita Giesler
 One Touch Electric, Inc.

12-30-17
 Date

[Signature]
 Contractor Rep. Signature

3/16/18
 Date



ALL AMERICA
THREADED PRODUCTS

All America Threaded Products, Inc.

MID-ATLANTIC DIVISION

731 Martha Avenue

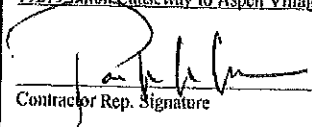
Lancaster, Pennsylvania 17601

Phone: (717) 283-4344 Fax: (717) 283-4677

www.AATProd.com

614-72863 PED,
PUSH BUTTON POST
ASSEMBLY

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents AS REQUIRED (quantity and units) of pay item 615-1002 LIGHT STEEL RODS (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C180-008.


Contractor Rep. Signature

3/29/18
Date

Oil Wash, Electro-Zinc-Plated, and Hot-Dipped Galvanized Steel Specifications

- 1 Low carbon steel specification ranges from AATP's steel mills are as below. AATP uses the steel for plain oil finish products (oil wash) for general purpose applications, electro-zinc plated products for applications that require excellent corrosion resistance, and hot-dipped galvanized products that provide corrosion resistance for harsh environments.
 - Products will meet the chemical and physical requirements for SAE J429 Grade 1 and metric Property Class 4.6 (ASTM F568 1979), but AATP does not provide the mechanical testing results. Products 3/4-10 and larger will meet the tensile requirements of SAE J429 Grade 2.
 - Products will meet specifications for ASTM A108 and for the tensile of ASTM A307 grade A only.
 - AATP relies upon the steel mills and suppliers to provide tensile and chemical tests only.
 - AATP will not sell products certified to SAE Grade 1, metric Property Class 4.6 or A307.
 - Steel designations are 1008 through 1022 and may vary depending on product diameter. AATP may use other grades upon customer requirement or approval or general industry standards.
- 2 Rod sizes: range from 1/4-20 through 3/4-10 pitch diameter sizes cold-drawn from hot-rolled coil
- 3 Bar sizes: above 3/4-16 through 2-4 1/2 pitch diameter sizes
- 4 Wire diameter sizes: sizes 4-40 through 12-24
- 5 Low carbon non-resulfurized steel chemistry and minimum tensile varies on material designation and amount of cold-drawing in the process. Raw material melt specifications are as follows (restricted within AISI specifications).
- 6 Chemical and physical information per IFI manual (except C1008-C1022 which AATP determined with its suppliers).
- 7 Chemical Analysis for C, MN, P, and S required to be in spec.

Grade 1008:

	C	MN	P	S	SI	CU	NI	CR	MO	SN	N	B	AL	V	CB
Min	.050	0.30	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Max	.100	0.50	.040	.050	.200	.400	.400	.400	.200	.060	.020	.000	.000	.000	.000

Grade 1018

	C	MN	P	S	SI	CU	NI	CR	MO	SN	N	B	AL	V	CB
Min	.150	0.60	.000	.000	.150	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Max	.200	0.90	.040	.050	.250	.270	.150	.150	.100	.025	.010	.000	.000	.000	.000

Grade 1038

	C	MN	P	S	SI	CU	NI	CR	MO	SN	N	B	AL	V	CB
Min	.350	0.60	.000	.000	.000										
Max	.420	0.90	.040	.050	.300										

Grade 1040

	C	MN	P	S	SI	CU	NI	CR	MO	SN	N	B	AL	V	CB
Min	.370	0.60	.000	.000											
Max	.440	0.90	.040	.050											

Grade 1045

	C	MN	P	S	SI	CU	NI	CR	MO	SN	N	B	AL	V	CB
Min	.430	0.60	.000	.000											
Max	.500	0.90	.040	.050											

Grade 4140

	C	MN	P	S	SI	CU	NI	CR	MO	SN	N	B	AL	V	CB
Min	.380	0.75	.000	.000	.150			.080							
Max	.430	1.00	.035	.040	.350			1.10							

Grade	C1008-C1022 low carbon	ASTM A193 B7 (Chromium Molybdenum)	304 Stainless	316 Stainless
Tensile Strength (psi)	60,000 minimum APPROX. max. depends on area reduction in drawing	125,000 minimum 1,100 deg. F tempering temp	70,000 minimum	75,000 minimum
Yield Strength (psi)	50,000 minimum APPROX. max. depends on area reduction in drawing	105,000 minimum	30,000 minimum	30,000 minimum
C		0.37-0.49	0.08 max.	0.08 max.
Mn		0.65-1.10	2.00 max.	2.00 max.
P max.		0.035	.045 max.	.045 max.
S max.		0.040	.030 max.	.030 max.
Silicon		0.15-0.35	1.00 max.	1.00 max.
Chromium		0.75-1.20	18.00-20.00	16.00-18.00
Nickel			8.00-10.50	10.00-14.00
Molybdenum		0.15-0.25		2.00-3.00
Hardness	Rockwell B mid 80's to upper 90's *	Rockwell C26-32 through-hardened		

* ESTIMATES ONLY - hardness in low carbon varies by product diameter, drawn raw material diameter, and depth of test.

Additional Comparison Information

Steel	Proof Load (minimum lbs.)	Yield (minimum lbs.)	Tensile (minimum lbs.)	Rockwell Hardness
1045			92,000	
4140			110,000	
Grade 5		92,000	120,000	C25-C34
4140 heat-treated quenched and tempered to ASTM A193B7		105,000	125,000	C26-C32
Grade 8 (heat treated after threading)	120,000	130,000	150,000	C33-C39



All America Threaded Products, Inc.
MID-ATLANTIC DIVISION
731 Martha Avenue | Lancaster, Pennsylvania 17601
1-717-283-4344 FAX 1-717-283-4677
www.aatprod.com

Date: April 2, 2018

Customer Name and Address: Norther States Supply
600 Industrial Drive
Willmar, MN 56201

Customer Purchase Order Number: 00077445
INVOICE NUMBER: 478340

To Whom It May Concern:

This letter certifies that All America Threaded Products, Inc., Mid-Atlantic Division has supplied to you 304/18-8 stainless steel material on the above order number(s), consisting of the domestically produced products below, in our manufacturing facility located either in Lancaster, PA, from 304 stainless steel in accordance with AISI 304. As such, we comply with the Buy American Requirements for Construction Material, OPCO Regulatory Advisory 09-16 Revision 1, dated May 19, 2009.

611 pieces of SKU 61479 – 5/8"-11 x 7-1/2" All Thread Stud Stainless 304

Kindest Regards,


Melody Keown
Senior Account Manager
4661 Monaco Street
Denver, CO 80216
303-285-3282 DIRECT
303-355-1499 FAX
mkeown@aatprod.com

19219-614.2

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 205200
	Contract ID 19219	Date Submitted 3-10-18
	Project No. STE C490-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-SUP	

Metric units yes no

Material Type PEDESTRIAN SIGNAL FACE (16) (COUNTDOWN)	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 614	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE PEDESTRIAN SIGNAL FACE COUNTDOWN HARDWARE & MATERIALS WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE CONTRACTOR'S MANUFACTURER'S COCS ARE ATTACHED.

User ID	
Sample ID (#1)	Sample ID (#2)
Sample ID (#4)	Sample ID (#5)
Sample ID (#3)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>		Date needed

Contractor CROSSFIRE LLC	Supplier GE & MOBOTREX
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented 2 EA	Previous quantity 0	Total quantity to date 2 EA
----------------------------------	----------------------------	------------------------------------

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) CLIFTON LEE PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS PE	Title PRESIDENT DES	Residency

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 16, 2018

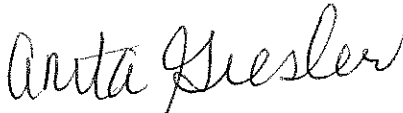
Re: CDOT Project # STE C480-008

CERTIFICATE OF COMPLIANCE

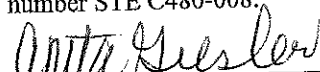
One Touch Electric, Inc. certifies that the housing manufactured by GTX and installed on the above-referenced project meets or exceeds the standards and project specifications.

2. Manufacturer: GE/GTX
3. 1975 Noble Road 338E, E. Cleveland, OH 44112
4. Intertek ETL verified compliant/compliant with ITE PTCSI LED Signal Modules
5. 16" Countdown Insert
6. S.A.A.
7. UPS7-CFF1-VLA
8. Invoice #0072172-IN
9. Meets or exceeds ITE specifications
10. N/A

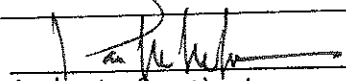
One Touch Electric, Inc.


Anita Giesler
Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2 of pay item 614-70150, Pedestrian Signal Face (16)(Countdown) that was installed on project number STE C480-008.


One Touch Electric, Inc.

3-1-18
Date


Contractor Rep. Signature

3/16/18
Date



Lighting

1975 Noble Road
338E
East Cleveland, OH 44112-6300
USA

T +1 216 266 4800
F +1 216 266 2158
www.led.com

October 20, 2017

RE: CDOT Project # STE C480□008

GE Certifies that all equipment listed below, being supplied by Gades Sales Co., Inc. to One Touch Electric on the above referenced project complies with the Buy America Act and meets or exceed the standards and project specifications.

- QTY 2 - U PS7-CFF1-VLA 16IN - 16inch Countdown Insert

Sincerely,

A handwritten signature in black ink, appearing to read 'Patrick Rossetti', written over a horizontal line.

Patrick Rossetti
Sales Manager
617-817-1555
patrick.rossetti@ge.com

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 16, 2018

Re: CDOT Project # STE C480-008

CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the housing manufactured by Eagle Traffic control Systems and installed on the above-referenced project meets or exceeds the standards and project specifications.

2. Manufacturer: Mobotrex
3. 301 West Howard Lane, Suite 200, Austin, TX 78753
4. Laboratory - N/A
5. 16" aluminum pedestrian housing with clam shells
6. 16" aluminum pedestrian housing with clam shells
7. SG7MZ21C0BB010-49, right housing & SG7MZ22C0BB010-49, left housing
8. Invoice #0072172-IN
9. Meets or exceeds ITE specifications
10. N/A

One Touch Electric, Inc.

Anita Giesler
Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ~~of~~ pay item 614-70150, Pedestrian Signal Face (16)(Countdown) that was installed on project number STE C480-008.

One Touch Electric, Inc.

2-23-18
Date

Contractor Rep. Signature

3/20/18
Date

614-70150 Pedestrian Signal Face (16) (Countdown)



Buy America Act Certification

January 3, 2018

RE: CDOT Project # STE C480-008

To whom it may concern:

We certify that Mobotrex complies with the Buy America Act with the following exceptions: The content of foreign steel consists of miscellaneous hardware (nuts, bolts washers, etc.). See the table below for details by part number. The manufacturing process of the finished product is completed in the United States of America.

SG7MZ21C0BB010-49	PED,16",ALM,NOVSR,M-R	\$ 1.27
SG7MZ22C0BB010-49	PED,16",ALM,NOVSR,M-L	\$ 1.27

Please let me know if you have any questions.

Bret Di Giovanni

Bret Di Giovanni
Channel Sales Representative
MoboTrex
301 West Howard Lane, Suite 200
Austin, TX 78753
P: (512)521-3073
bdigiovanni@mobotrex.com

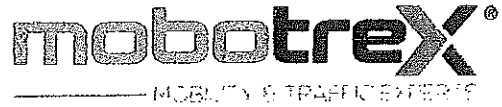
I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ^{2 each} ~~1 lump sum~~ of pay item 614-70150, Pedestrian Signal Face (16) (Countdown), that was installed on project number STE C480-008.

Anta Guesler 1-6-18
One Touch Electric, Inc. Date

[Signature] 3/16/18
Contractor Rep. Signature Date

301 W. Howard Lane, Suite 200, Austin, TX 78753 | MoboTrex.com

614-70150 Pedestrian Signal Face (16) (Countdown)



Buy America Act Certification

January 3, 2018

RE: CDOT Project # STE C480-008

To whom it may concern:

We certify that Mobotrex complies with the Buy America Act with the following exceptions: The content of foreign steel consists of miscellaneous hardware (nuts, bolts washers, etc.). See the table below for details by part number. The manufacturing process of the finished product is completed in the United States of America.

SG7MZ21C0BB010-49	PED,16",ALM,NOVSR,M-R	\$ 1.27
SG7MZ22C0BB010-49	PED,16",ALM,NOVSR,M-L	\$ 1.27

Please let me know if you have any questions.

Bret Di Giovanni

Bret Di Giovanni
Channel Sales Representative
MoboTrex
301 West Howard Lane, Suite 200
Austin, TX 78753
P: (512)521-3073
bdigiovanni@mobotrex.com

I hereby certify under penalty of perjury that ^{2 each} the material listed in this Certificate of Compliance represents ^{each} ~~1~~ ^{each} ~~sum~~ of pay item 614-70150, Pedestrian Signal Face (16) (Countdown), that was installed on project number STE C480-008.

Anita Kuesler
One Touch Electric, Inc. 1-10-18
Date

[Signature]
Contractor Rep. Signature 3/16/18
Date

ROADWAY SUPPLY

CERTIFICATE OF COMPLIANCE

TO: ACM Construction, LLC
ORDER: Posts, Signs, and Delineators for Ste 480-008
DATE: 12/6/17

SIGNS

Manufacturer: Lyle Signs Date ordered: 06/12/17
6294 Bury Drive
Eden Prairie, MN 55346
Aluminum: .080 Thickness: Vulcan Aluminum mill See attached Mill
Certs
900 Vulcan St, Foley, AL 36535
PO# 2554-1
Sheeting: High Intensity Prismatic 3M 3930
APL Reference # 2648-11

POSTS

Manufacturer: RM Components : See attached Mill Certs
Post Type: 2" POZ LOC post with wedge
PO# 2012490

DELINEATORS

Manufacturer: Shur-Flex:
Post Type: Surface mount 36", 42" or 48" round post, flattened for the upper 3
1/2" or 13". APL Reference # 3125-10
Manufacturer: 3M : Maplewood MN
Reflectors: 3"X3" Yellow High Intensity Prismatic 3M 3930 Sheeting Tab
APL Rererence #2648-11

This letter is to certify that all the above material meets the specifications of the Colorado Department of Transportation. All steel incorporated into materials originated within the United States of America.

Signature: 
President, Roadway

Date: 12/7/17

Cross fire's Certified Test Rt. of
Compliance on Back →

3M Brownwood Plant

4501 Hwy 377 South
Brownwood, TX 76801-5907
325-646-3551



CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN
COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M High Intensity Prismatic Reflective Sheeting 3930
Series

<u>MATERIAL:</u>	<u>QUANTITY</u>	<u>SIZE - IN X YD</u>	<u>LOT NO</u>
3930 White	8 Rolls	17.9687 X 100	MAC2-1

PURCHASE ORDER NO: 000002585

INVOICE NO: SS56309

SPECIFICATIONS:

ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for
Traffic Control", TYPE III/IV

April 4, 2017

Document Received From:

FACTORY QUALITY ASSURANCE
TRAFFIC SAFETY SYSTEMS DIVISION
BROWNWOOD, TEXAS 76801

3M Brownwood Plant

4501 Hwy 377 South
Brownwood, TX 76801-5907
325-646-3551



CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN
COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M High Intensity Prismatic Reflective Sheeting 3930
Series

<u>MATERIAL:</u>	<u>QUANTITY</u>	<u>SIZE - IN X YD</u>	<u>LOT NO</u>
3930 White	12 Rolls	23.9687 X 100	2BIE31
3932 Red	4 Rolls	18 X 50	BIE2

PURCHASE ORDER NO: 000002594

INVOICE NO: SS57051

SPECIFICATIONS:

ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for
Traffic Control", TYPE III/IV

April 13, 2017
Document Received From:

FACTORY QUALITY ASSURANCE
TRAFFIC SAFETY SYSTEMS DIVISION
BROWNWOOD, TEXAS 76801

3M Brownwood Plant

4501 Hwy 377 South
Brownwood, TX 76801-5907
325-646-3551



CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN
COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M High Intensity Prismatic Reflective Sheeting 3930
Series

<u>MATERIAL:</u>	<u>QUANTITY</u>	<u>SIZE - IN X YD</u>	<u>LOT NO</u>
3930 White	6 Rolls	36 X 50	BI01

PURCHASE ORDER NO: 000002792

INVOICE NO: SS63679

SPECIFICATIONS:

ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for
Traffic Control", TYPE III/IV

May 23, 2017

Document Received From:

FACTORY QUALITY ASSURANCE
TRAFFIC SAFETY SYSTEMS DIVISION
BROWNWOOD, TEXAS 76801

3M Brownwood Plant

4501 Hwy 377 South
Brownwood, TX 76801-5907
325-646-3551



CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN
COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M Brand Reflective Sheeting Diamond Grade Series

<u>MATERIAL:</u>	<u>QUANTITY</u>	<u>SIZE - IN X YD</u>	<u>LOT NO</u>
4081 Fluor Yellow	3 Rolls	24 X 50	BIE5
4083 Fluor Ylw/Grn	2 Rolls	24 X 50	BIE5
4090 White	6 Rolls	24 X 50	BIE5
4090 White	6 Rolls	30 X 50	BIN1
4090 White	5 Rolls	36 X 50	BIN1
4090 White	1 Roll	36 X 50	BINI1

PURCHASE ORDER NO: 000002715

INVOICE NO: SS60689

SPECIFICATIONS:

3M Company Specifications for Prismatic Full Cubed Reflective Sheeting
ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for
Traffic Control", TYPE XI

May 3, 2017

Document Received From:

Cody W. Golson
FACTORY QUALITY ASSURANCE
TRAFFIC SAFETY SYSTEMS DIVISION
BROWNWOOD, TEXAS 76801

3M Brownwood Plant

4501 Hwy 377 South
Brownwood, TX 76801-5907
325-646-3551



CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN
COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M Brand Reflective Sheeting Diamond Grade Series

<u>MATERIAL:</u>	<u>QUANTITY</u>	<u>SIZE - IN X YD</u>	<u>LOT NO</u>
4083 Fluor Ylw/Grn	2 Rolls	36 X 50	BIN3
4083 Fluor Ylw/Grn	1 Roll	30 X 50	BIN4

PURCHASE ORDER NO: 000002907

INVOICE NO: SS67531

SPECIFICATIONS:

3M Company Specifications for Prismatic Full Cubed Reflective Sheeting
ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for
Traffic Control", TYPE XI

June 13, 2017

Document Received From:

Cody W. Golson
FACTORY QUALITY ASSURANCE
TRAFFIC SAFETY SYSTEMS DIVISION
BROWNWOOD, TEXAS 76801



Vulcan Aluminum Mill
 A PART OF Vulcan, Inc.

CERTIFICATE OF ANALYSIS

CUSTOMER: Lyle Signs
 CUSTOMER PO NO.: 000002554-1
 VA ORDER NO.: 382333
 ALLOY: 5052

COIL NUMBER	ITEM NO.	GAUGE (IN)	WIDTH (IN)	TEMPER	MECHANICAL PROPERTIES (ACTUAL)			CHEMICAL COMPOSITION (ACTUAL)					BEND TEST				
					ULTIMATE YIELD IN PSI	IN 2" IN 2"	EL %	Si	Fe	Cu	Mn	Mg		Cr	Zn	Others Each	Total Max
5318-13	1	0.080	12	H38	43,103	38,328	7.880	0.055	0.366	0.033	0.017	2.409	0.167	0.007	0.05	0.15	PASS
5318-15	2	0.080	9	H38	42,789	34,987	6.200	0.056	0.371	0.034	0.017	2.434	0.165	0.007	0.05	0.15	PASS

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 72.25 S.F. (quantity and units) of pay item 014-0001 Sign Panel (Class 1) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pipon Causeway to Aspen Village Drive SUP. SITE C480-008.

[Signature]
 Contractor Rep. Signature
 Date 3/16/18

MELTED AND MANUFACTURED IN THE USA
 COMPLIES WITH THE LATEST REVISION OF ASTM B209, ASME SB-209, AMS QQ-A-250/8C and SAE AMS 4015 (O), 4016 (H32), and 4017 (H34) STANDARDS WHERE APPLICABLE
 RoHS COMPLIANT

AUTHORIZED BY: *[Signature]*
 MARK STROBEL
 METALLURGICAL & QUALITY MANAGER
 DATE ISSUED: May 26th 2017



Vulcan Aluminum Mill



A PART OF Vulcan, Inc.

CERTIFICATE OF ANALYSIS

CUSTOMER: Lyle Signs, Inc.
CUSTOMER PO NO.: 000002354-1
VA ORDER NO.: 379516

ALLOY: 5052

COIL NUMBER	ITEM NO.	GAUGE (IN)	WIDTH (IN)	TEMPER	MECHANICAL PROPERTIES (ACTUAL)			CHEMICAL COMPOSITION (ACTUAL)					BEND TEST				
					ULTIMATE YIELD IN PSI	EL %	IN 2"	Si	Fe	Cu	Mn	Mg		Cr	Zn	Others Each	Total Max
5282-21	1	0.080	24	H38	40,494	5.890	5.890	0.063	0.335	0.004	0.028	2.450	0.175	0.008	0.05	0.15	PASS

MELTED AND MANUFACTURED IN THE USA
COMPLIES WITH THE LATEST REVISION OF ASTM B209, ASME SB-209, AMS QQ-A-250/8C and SAE AMS 4015 (O), 4016 (H32), and 4017 (H34) STANDARDS WHERE APPLICABLE
ROHS COMPLIANT

Mark Strobel
MARK STROBEL
METALLURGICAL & QUALITY MANAGER

AUTHORIZED BY: DATE ISSUED: April 18th 2017



Vulcan Aluminum Mill



A PART OF Vulcan, Inc.

CERTIFICATE OF ANALYSIS

CUSTOMER: Lyle Signs, Inc.
 CUSTOMER PO NO.: 000002267-1
 VA ORDER NO.: 378109

ALLOY: 5052

COIL NUMBER	ITEM NO.	GAUGE (IN)	WIDTH (IN)	TEMPER	MECHANICAL PROPERTIES (ACTUAL)			CHEMICAL COMPOSITION (ACTUAL)							BEND TEST		
					ULTIMATE YIELD IN PSI	IN 2"	EL %	Si	Fe	Cu	Mn	Mg	Cr	Zn		Others Each	Total Max
5262-8	1	0.080	30	H38	41,857	36,650	9.020	0.116	0.306	0.022	0.033	2.418	0.197	0.015	0.05	0.15	PASS
5262-9	1	0.080	30	H38	43,267	39,035	5.960	0.074	0.296	0.011	0.048	2.379	0.197	0.019	0.05	0.15	PASS
5262-16	1	0.080	30	H38	41,171	36,238	9.120	0.115	0.305	0.022	0.034	2.402	0.197	0.015	0.05	0.15	PASS
5270-5	2	0.100	36	H38	40,533	37,096	6.620	0.057	0.377	0.004	0.031	2.315	0.167	0.008	0.05	0.15	PASS

MELTED AND MANUFACTURED IN THE USA
 COMPLIES WITH THE LATEST REVISION OF ASTM B209, ASME SB-209, AMS QQ-A-250/8C and AMS 4015 (O), 4016 (H32), and 4017 (H34) STANDARDS WHERE APPLICABLE
 RoHS COMPLIANT

Mark Strobel
 MARK STROBEL
 METALLURGICAL & QUALITY MANAGER

DATE ISSUED: March 29th 2017

AUTHORIZED BY:



Vulcan Aluminum Mill

A PART OF Vulcan, Inc.

CERTIFICATE OF ANALYSIS

CUSTOMER: Lyle Signs, Inc.
 CUSTOMER PO NO.: 000002517-1
 VA ORDER NO.: 384674
 ALLOY: 5052

COIL NUMBER	ITEM NO.	ORDERED GAUGE (IN)	WIDTH (IN)	TEMPER	MECHANICAL PROPERTIES (ACTUAL)			CHEMICAL COMPOSITION (ACTUAL)					BEND TEST				
					ULTIMATE YIELD (IN PSI)	YIELD (IN PSI)	EL %	Si	Fe	Cu	Mn	Mg		Cr	Zn	Others Each	Total Max
5311-6	1	0.080	36	H38	43,256	39,308	5.510	0.070	0.331	0.035	0.080	2.515	0.163	0.019	0.05	0.15	PASS
5311-5	2	0.080	9	H38	44,224	39,964	7.000	0.069	0.327	0.035	0.079	2.486	0.163	0.018	0.05	0.15	PASS

MELTED AND MANUFACTURED IN THE USA
 COMPLIES WITH THE LATEST REVISION OF ASTM B209, ASME SB-209, AMS QQ-A-250/8C and SAE AMS 4015 (O), 4016 (H32), and 4017 (H34) STANDARDS WHERE APPLICABLE
 RoHS COMPLIANT

Mark Strobel
 MARK STROBEL

METALLURGICAL & QUALITY MANAGER

AUTHORIZED BY:

DATE ISSUED: May 22nd 2017

Supplier: RM Components
505 Woodland Park
Georgetown, Texas 78633

RM Components hereby certifies that all material required to produce the below listed products were melted and manufactured in the USA. All of the below listed material meets or exceeds the minimum listed requirements as noted and conforms to the specifications listed.

**THE BELOW LISTED MATERIAL WAS MELTED AND MANUFACTURED IN THE USA
AND COMPLIES WITH THE BUY AMERICAN ACT.**

Item description: 2.375" x 14ga. G210 P-Posts with 15 hole pattern
Produced to Specification ASTM A-513
Heat # A78734

Slab Mill:
Nucor Steel Gallatin - Ghent, KY.

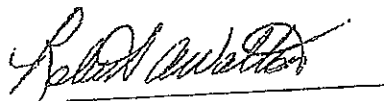
Slitting:
Monarch steel - Cleveland, OH>

Pipe Rolling Mill:
Tapco Tube Meadville, PA.

Hole Punching/Fabrication
Regal Machine - Tyler, Texas

Supplier:
RM Components/Regal Machine - Tyler, Tx.

I hereby certify and warrant the statements listed hereon to be true and correct as listed in the company records.



Robert A. Walton
Sec./Treasurer
RM Components, Inc.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ~~INCIDENTAL~~ 165 L.F. (quantity and units) of pay item 614-01502 Steel Slab Support (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.

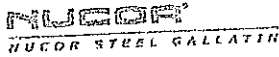


Contractor Rep. Signature

Date

3/16/18

2012490



Nucor Steel Gallatin
4831 U.S. Highway 42 West
Ghent, KY 41045-9704
Phone: 1(800)581-3863 Fax: (859)567-3165



METALLURGICAL TEST REPORT

Invoice To: Monarch Steel Company
4650 Johnston Parkway
Cleveland, OH 44128

Ship To: Monarch Steel Company
Monarch Steel Co.
4650 Johnston Pkwy
Cleveland, OH 44128

Date: 3/4/2016
Customer No: 766
Customer P.O. No: 1160169

Mill Order No: 196086-5 Customer Reference No: NA Load No: 652704

This product was melted and manufactured in the USA to meet the requirements of: AISI/SAE C1010 with S and P max of 0.035 wt% HR P&O Galv G90

Coil Number(s): 1333530

Ordered Size: Nom 0.089 (In) X 45.10 (In) X Coil
Nom 2.261 (mm) X 1146 (mm) X Coil

CHEMICAL ANALYSIS (Weight %)

Heat No	C	Mn	P	S	Si	Cu	NI	Cr	Mo
A78734	0.09	0.36	0.010	0.002	0.03	0.15	0.05	0.08	0.01
	Al	Ca	Nb	V	B	Ti	N	Sn	
	0.028	0.0017	0.002	0.002	0.0001	0.001	0.0083	0.007	

MECHANICAL PROPERTIES

Coil Tested									
Yield Strength(ksi)									
Yield Strength(mpa)									
Tensile Strength(ksi)									
Tensile Strength(mpa)									
% Elongation									
N-Value									
N-Value Range									
Hardness(HRBW)									
Test Section									
Orientation									
Test Method									

BEND TEST RESULTS

Coil ID #	Orientation	Diameter/radius of mandrel	No. of cracks	Size of cracks	Pass/Fail

Hot rolled coils manufactured through Nucor Steel Gallatin do not contain welds or weld repairs at the time of shipment (for mill). Mercury was not added during production of this material. The material was produced using a fully killed fine grain practice.

This product is in compliance with DFARS 252.226, the Buy American Act.

Above tests performed in accordance to ASTM standards E8 (yield strength determined using 0.2% offset method and elongation determined using after fracture method) or JIS Z2241, E19, E415, and E1015 and are correct as contained in the records of the company.

The elongation original gauge length is 2 inches for ASTM test method and 97 inches for JIS test method. Above test results were performed in accordance to EN 10204 3.1

Bend tests were conducted in accordance with ISO 7439, ASTM E290, or JIS Z2248 using the press, gauge, two support and a mandrel bend method at a 180 degree bend. Bend test specimen is longer than 6" and wider than 0.5"

This report shall not be reproduced, except in full, without written approval of the undersigned laboratory managers. This mechanical property has been tested at a subcontractor's laboratory.

Stephen S. Sipple

Stephen S. Sipple
Chemical Laboratory
Mechanical Laboratory
steve.sipple@nucor.com

The information contained in this report may be confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and destroy the original message. Thank You. Page 1 of 1

CERTIFICATE OF CONFORMANCE

4/28/16

MONARCH STEEL COMPANY
4650 JOHNSTON PARKWAY
CLEVELAND, OH 44128

Page# 1

TO: TAPCO TUBE CO.
P.O. BOX 457
SHARON CENTER, OH 44274

SHIP TO: TAPCO TUBE CO.
10748 S. WATER ST. EXT
MEADVILLE, PA 16335

SIZE: .086 MIN X 5.18400 X COIL
GRADE: HDGAL SLIT COIL MELTED & MFG'D IN THE USA
HSLA 050 MIN TUBE

Bill/Lading# 080135	B/L	Date 4/28/16	Sales Order 856605	01	
Cust. P/Ord: BPO-000234	8878	Part No.: 5.184-.095-G90			
Tag# 3055164	01	Heat# A78734	MasterTag# 2012490	01	
C : .09	Mn: .36	P : .01	S : .002	Al: .028	Si: .03
Ni: .05	Co: .000	Mo: .01	Cu: .15	V : .002	Cr: .08
			N : .0083	B : .0001	Ti: .001
		Tens: 64.50		Yld: 51.50	Elong: 28.0
Tag# 3055166	01	Heat# A78734	MasterTag# 1012490	01	
C : .09	Mn: .36	P : .01	S : .002	Al: .028	Si: .03
Ni: .05	Co: .000	Mo: .01	Cu: .15	V : .002	Cr: .08
			N : .0083	B : .0001	Ti: .001
		Tens: 64.50		Yld: 51.50	Elong: 28.0
Tag# 3055167	01	Heat# C77071	MasterTag# 2012505	01	
C : .08	Mn: .35	P : .008	S : .002	Al: .024	Si: .04
Ni: .05	Co: .000	Mo: .01	Cu: .12	V : .001	Cr: .06
	Sn: .007	Ca: .002	N : .0079	B : .0001	Ti: .001
		Tens: 61.50		Yld: 49.30	Elong: 33.0%
Tag# 3055168	01	Heat# C77071	MasterTag# 2012505	01	
C : .08	Mn: .35	P : .008	S : .002	Al: .024	Si: .04
Ni: .05	Co: .000	Mo: .01	Cu: .12	V : .001	Cr: .06
	Sn: .007	Ca: .002	N : .0079	B : .0001	Ti: .001
		Tens: 61.50		Yld: 49.30	Elong: 33.0%
Tag# 3055169	01	Heat# C77071	MasterTag# 2012505	01	
C : .08	Mn: .35	P : .008	S : .002	Al: .024	Si: .04
Ni: .05	Co: .000	Mo: .01	Cu: .12	V : .001	Cr: .06
	Sn: .007	Ca: .002	N : .0079	B : .0001	Ti: .001
		Tens: 61.50		Yld: 49.30	Elong: 33.0%
Tag# 3055170	01	Heat# C77071	MasterTag# 2012505	01	
C : .08	Mn: .35	P : .008	S : .002	Al: .024	Si: .04
Ni: .05	Co: .000	Mo: .01	Cu: .12	V : .001	Cr: .06
	Sn: .007	Ca: .002	N : .0079	B : .0001	Ti: .001
		Tens: 61.50		Yld: 49.30	Elong: 33.0%

continued...

CERTIFICATE OF CONFORMANCE

4/28/16

MONARCH STEEL COMPANY
4650 JOHNSTON PARKWAY
CLEVELAND, OH 44128

Page# 2

TO: TAPCO TUBE CO.
P.O. BOX 457
SHARON CENTER, OH 44274

SHIP TO: TAPCO TUBE CO.
10748 S. WATER ST. EXT
MEADVILLE, PA 16335

SIZE: .086 MIN X 5.18400 X COIL
GRADE: HDGAL SLIT COIL MELTED & MFG'D IN THE USA
HSLA 050 MIN TUBE

Bill/Ladng# 080135 H/L Date 4/28/16 Sales Ord# 856605 01
Cust. P/O# BPO-000234 8878 Part No.: 5.184-.095-090

Tag# 3055171 01 Heat# C77071 MasterTag# 2012505 01
C : .08 Mn: .35 P : .008 S : .002 Al: .024 Si: .04
Ni: .05 Sn: .007 Mo: .01 Cu: .13 V : .001 Cr: .06
Ca: .002 N : .0079 B : .0001 Ti: .001
Tens: 63.50 Yld: 49.30 Elng: 33.0%

Tag# 3055175 01 Heat# C77071 MasterTag# 2012505 01
C : .08 Mn: .35 P : .008 S : .002 Al: .024 Si: .04
Ni: .05 Sn: .007 Mo: .01 Cu: .13 V : .001 Cr: .06
Ca: .002 N : .0079 B : .0001 Ti: .001
Tens: 63.50 Yld: 49.30 Elng: 33.0%

THIS REPORT CERTIFIES THAT THE ABOVE TEST RESULTS REPRESENT THOSE CONTAINED IN THE RECORDS OF MONARCH STEEL AND CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION CITED. THE MATERIAL WAS TESTED IN ACCORDANCE WITH APPLICABLE STANDARDS. TESTING WAS PERFORMED BY MONARCH, ITS RAW MATERIAL SUPPLIER, AND/OR AN INDEPENDENT TESTING LABORATORY. THE MATERIAL IS NOT GUARANTEED OR WARRANTED TO MEET A SPECIFIC PRODUCT APPLICATION UNLESS STATED IN THE CUSTOMER'S PURCHASE ORDER AND AGREED TO IN ADVANCE BY MONARCH. ANY MODIFICATION MADE TO THIS REPORT SUBSEQUENT TO ITS PROVISION BY MONARCH TO ITS CUSTOMER NEGATES ITS VALIDITY.

Crystal Morrow
QUALITY MANAGER

Crystal D. Morrow

Supplier: RM Components
505 Woodland Park
Georgetown, Texas 78633

RM Components hereby certifies that all material required to produce the below listed products were melted and manufactured in the USA. All of the below listed material meets or exceeds the minimum listed requirements as noted and conforms to the specifications listed.

**THE BELOW LISTED MATERIAL WAS MELTED AND MANUFACTURED IN THE USA
AND COMPLIES WITH THE BUY AMERICAN ACT.**

Item description: 27" & 33" Sockets
Produced to Specification ASTM A-1011 Grade 55
Heat # C76807

Sheet:
Nucor Steel Gallatin - Ghent, KY.

Galvanizing:
Great Lakes Coil - Adrian, MI>

Pipe Rolling Mill:
Tapco Tube Meadville, PA.

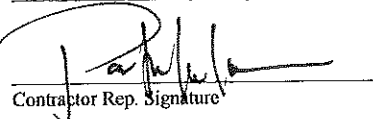
Fabrication/Hole Punching
Regal Machine Tyler, Texas

I hereby certify and warrant the statements listed hereon to be true and correct as listed in the company records.





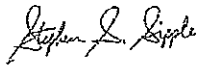
Robert A. Walton
Sec./Treasurer
RM Components, Inc.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents INCIDENTAL (quantity and units) of pay item 614-01502 Steel Sign Support (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP. STE C480-008.


Contractor Rep. Signature

3/16/18
Date

Tapco PO # 8907

	Nucor Steel Gallatin 4831 U.S. Highway 42 West Ghent, KY 41045-9704 Phone: 1(800)581-3853 Fax: (859)667-3165								
METALLURGICAL TEST REPORT									
Invoice To: Great Lakes Coils 4650 West US 223 Adrian, MI 49221	Ship To: Great Lakes Coils Worthington Steel Company 8303 County Road 10 Delta, OH 43515								
Mill Order No: 200619-1	Customer Reference No: NA	Load No: 668695							
This product was melted and manufactured in the USA to meet the requirements of: <table style="float: right; margin-left: 20px;"> <tr><td>Excess</td></tr> <tr><td>Excess HR Sheet Steel Bands</td></tr> </table>			Excess	Excess HR Sheet Steel Bands					
Excess									
Excess HR Sheet Steel Bands									
Coil Number(s): 1329445									
CHEMICAL ANALYSIS (Weight %)									
Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo
C76807	0.06	0.84	0.008	0.003	0.03	0.12	0.04	0.05	0.02
	Al	Ca	Nb	V	B	Ti	N	Sn	
	0.027	0.0017	0.000	0.074	0.0001	0.002	0.0137	0.009	
MECHANICAL PROPERTIES									
Coil Tested									
Yield Strength(ksi)									
Yield Strength(mpa)									
Tensile Strength(ksi)									
Tensile Strength(mpa)									
% Elongation									
N-Value									
N-Value Range									
Hardness(HRB)									
Test Section									
Orientation									
Test Method									
BEND TEST RESULTS									
Coil ID #	Orientation	Diameter/radius of mandrel	No. of cracks	Size of cracks	Pass/Fail				
<p>Hot rolled coils manufactured through Nucor Steel Gallatin do not contain welds or weld repairs at the time of shipment (see mill). Mercury was not added during production of this material. The material was produced using a fully killed fine grain practice.</p> <p>This product is in compliance with DFARS 252.225, the Buy American Act.</p> <p>Above tests performed in accordance to ASTM standards E8 (yield strength determined using 0.2% offset method and elongation determined using after fracture method) or JIS Z2241, E18, E415, and E1019 and are correct as contained in the records of the company.</p> <p>The elongation original gauge length is 2 inches for ASTM test method and 1.97 inches for JIS test method.</p> <p>Above test results were performed in accordance to EN 10204 3.1</p> <p>Bend tests were conducted in accordance with ISO 7438, ASTM E290, or JIS Z2248 using the press, guided, two support and a mandrel band method at a 180 degree bend. Bend test specimen is longer than 6" and wider than 0.3"</p> <p>This report shall not be reproduced, except in full, without written approval of the undersigned laboratory managers.</p> <p>* This mechanical property has been tested at a subcontractor's laboratory.</p>									
						 Stephen S. Sipple Chemical Laboratory Mechanical Laboratory steve.sipple@nucor.com			
<p>The information contained in this report may be confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and destroy the original message. Thank You.</p>									

534699

GREAT LAKES COIL, LLC
4650 W. US 223
ADRIAN, MI 49221

TAPCO

Page# 1
SHIP DATE 7/19/16

SOLE TO: TAPCO TUBE
PO BOX 457
SHARON CENTER, OH 44274

SHIP TO: TAPCO TUBE COMPANY
10748 SOUTH WATER STREET EXT
MEADVILLE, PA 16335

TAG#	SKIDS	PIECES	WEIGHT	TARE	GROSS	HEATH	MASTER TAG#	
PO# 8907		PART#	8.982	.109	G210	SO# 312824	01	
			CV55	.098	MIN	8.98200 X COIL		
			G210 CHEM TREAT, MIN SPANGLE, NO OIL					
8000055486-0101		1	7980		C76807		3754545-03	
		ID: 20.00000	OD: 51.50000					
8000055486-0201		1	8055		C76807		3754545-03	
8000055486-0301		1	8040		C76807		3754545-03	
8000055486-0401		1	8015		C76807		3754545-03	
8000055486-0501		1	8005		C76807		3754545-03	
8000055486-0601		1	8000		C76807		3754545-03	
SUBTOTAL >	6	6	48095		48095			
TOTAL >	6	6	48095		48095			

CERTIFICATE OF CONFORMANCE

DATE: 7/19/16

GREAT LAKES COIL, LLC
4650 W. US 223
ADRIAN, MI 49221
(517)264-2222

SOLD TO: TAPCO TUBE
PO BOX 457
SHARON CENTER, OH 44274

SHIP TO: TAPCO TUBE COMPANY
10748 SOUTH WATER STREET EXT
MEADVILLE, PA 16335

Cust. P/O#: 8907 Part No.: 8.982-.109-G210

SIZE: .098 MIN X 8.98200 X COIL

GRADE: GALVANIZED 55 MIN YIELD G210

DATE SHPPD: 7/19/16

Bill/Ladng# 534699

WT.SHIPPED: 48095

Sales Ord# 312824 01

CHEMICAL ANALYSIS

Heat Number C76807

C : .06	Mn: .84	P : .008	S : .003
Si: .030	Ti: .002	Cr: .050	Mo: .020
Cu: .120	Al: .027	Cb: .000	V : .074

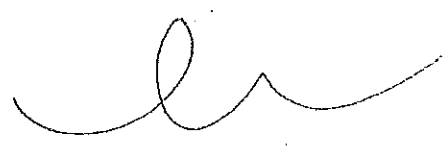
PHYSICAL PROPERTIES

Rockwell: 77

Tensile: 78290

Yield: 67156

Elongation: 23.15



QUALITY ASSURANCE MANAGER



2611 Arroyo Dr, Durango, CO 81301

Office# 970-459-4455 Fax# 888-505-3039 Email: acmconstruction@hotmail.com

BUY AMERICA CERTIFICATION

Date: 11/29/17

CERTIFICATE OF CONTRACTOR'S COMPLIANCE TO BUY AMERICA CLAUSE

All steel and/or iron products to be permanently incorporated into the CDOT Project Number **STE C480-008**, by ACM Construction have been produced or manufactured in the United States of America, Puerto Rico, District of Columbia, or in any of the territories and possessions of the United States of America, except as listed below:

No Exceptions

Our actions were in full compliance with Colorado DOT's Standard Specifications for Road and Bridge Construction, Section 106.11

Signature: _____

Dated: _____

11/29/17

Title: _____

President

I, Crickett Holme, as Office Administrator of ACM Construction, LLC hereby affirm that the foregoing certificate was signed this 29th day of November, 2017 by Jennifer Helmes, who is duly constituted as President of ACM Construction, LLC and who is authorized to bind the Corporation to this Certificate.



Certificate of Compliance Letter

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date: 1/17/2018
Project Number: STE C480-008
Project Code & Name: 19219 Pinon Causeway to Aspen Village
Manufacturer's Name: Quikrete
Manufacturing facility Address: 2462 1/2 Highway 6 And 50, Grand Junction, CO 81505
Laboratory Name and Address: 2462 Highway 6 And 50, Grand Junction, CO 81505
Product Name or Assembly: Quikrete 5000 Concrete Mix
Description of Material: Concrete Mix is a commercial grade blend of stone or grave sand and cement specially designed for higher early strength
Model, Catalog, Stock Number: 1007
Lot / batch number: ACM PO# 506654
Date or Frequency of Lab Testing: Sieve analysis is done on every 5th pallet (pallet weighs 3,360#). Cylinder strength testing is conducted on a weekly cycle.
Applicable Specifications: The material above has been reviewed according to subsection 601 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Needed (quantity and units) of pay item 614-01502 Steel Sign Support (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/20/18
Date

19219-614-1

COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION

Region	S	Field sheet #	266289
Contract ID	19219	Date Submitted	3-12-18
Project No.	STE C480-008		
Project Location	PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.		

Metric units yes no

Material Type	SIGN PANEL & STEEL SIGN SUPPORT			Field Lab phone	Cell Phone
Material Code (LIMS)	Item	Class	Grading	Special Provisions	<input type="checkbox"/> yes
	614				
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):			<input type="checkbox"/> CDOT Form #633 (sack)	<input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE SIGN PANELS WERE FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE ^{CONTRACTOR'S} MANUFACTURER'S COC IS ATTACHED FOR ALUMINUM, THE RETROREFLECTIVE SHEETING IS ON THE APL.
ALSO ATTACHED ARE THE MILL TEST REPORTS.

THE STEEL SIGN SUPPORT (2 IN ROUND) (POST & SOCKET) WERE FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE MANUFACTURER'S COC IS ATTACHED.
SEE FORM 473 FOR CONCRETE INFO. ON QUIKRETE 5000 TESTING & APPROVAL

User ID			
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	
2648-11	3M HIGH INTENSITY PRISMATIC (#3930)	12-7-17	
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:	

Preliminary	Construction	Maintenance	Emergency	Date needed
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Contractor	Supplier
CROSSFIRE, LLC	LYLE SIGNS, 3M, & RM COMPONENTS
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented	STEEL SIGN	Previous quantity	Total quantity to date	STEEL SIGN
Sign Panel (Class 1) = 7225 SF	SUPPORT = 165 LF	0	Sign Panel (Class 1) = 7225 SF	SUPPORT = 165 LF
Sample submitted:	Shipped specified quantity to:	Via	Date	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Central lab <input type="checkbox"/> Region lab			

Sampled or inspected by (print name)	Title	E-mail
CLIPTON LEE, PE	PROJECT ENGINEER	
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name)	Title	Residency
MIKE DAVIS, PE	PRESIDENT - DAVIS ENG. SVC.	

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer

Previous editions are obsolete and may not be used.



CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

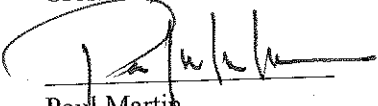
Date: 3/16/2018
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

APL Category: Traffic Control
APL Sub-Category: Sign Sheeting
APL Base Category: ASTM D 4956, Type IV
APL Reference No.: 2648-11
Product Name: 3M High Intensity Prismatic (#3930)
Manufacturer: 3M Company
Date of Web Site Review & Selection: 3/16/18

Crossfire, LLC


Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 72.25 S.F. (quantity and units) of pay item:
614-00011 Sign Panel (Class I)
(Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219


Contractor

3/16/18
Date

**COLORADO DEPARTMENT OF TRANSPORTATION
PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY**

APL Reference No.
2648-11

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code:
713.04.01.00
Material code description full name:
Traffic Control, Reflective Sheeting

PART 1

Product name: 3M High Intensity Prismatic (#3930)	Product category: Traffic Control\Sign Sheeting\ASTM D 4956, Type IV
Product representative (name & address): Attn: Ted Denisuk 3M Traffic Safety Systems Division 1370 Quentin Street Aurora, CO 80011	Manufacturer (name & address): Attn: 3M Customer Service 3M Company - Traffic Safety Systems Division 3M Center, Building 235-03-A-09 St. Paul, MN 55144
Phone: (303) 520-6754 FAX: (303) 344-2161	Phone: (800) 553-1380 FAX: (800) 592-9293
Web-site address: www.3M.com/tss email: tdenisuk@mmm.com	Web-site address: www.3M.com/tss

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
Series 3930 is a non-metallized micro-prismatic lens reflective sheeting designed for production of reflective durable traffic control signs that are exposed vertically in service.

Series 3930 meets and exceed ASTM D 4956-09e1, Type IV.

Series 3930 is comprised of micro-prismatic lens in a transparent resin, sealed and backed by a pressure sensitive adhesive protected by a liner.

Restrictions, (installation and/or use):
Application is recommended for room temperature 65°F or higher.

Use of the product, (be specific to CDOT highway activities only):
Series 3930 is designed for the production of durable traffic control signs exposed vertically in service.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
* Series 3930 is a more efficient retro-reflective sheeting than encapsulated lens sheeting
* Unique prismatic construction provides a high level of retro-reflectivity and nighttime visibility

Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications):
 CDOT : Standard Specifications, Section 713(b), 2011. Currently on the CDOT Approved Products List (form #2648)
 ASTM : D 4956-09 e1, Type IV
 AASHTO:
 FHWA :
 other :

Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims):
 NTPEP-AASHTO: 2008 SSM-08-1306
 FHWA :
 other :
 other :

State DOT Approvals, (current documentation required):

Sample submitted: yes no n/a Materials Safety Data Sheets (MSDS): yes no n/a

Notes/Additional Comments
State DOT approvals referenced but not documented: SC, TX, LA, IN, GA, FL, CT, AL, NC, WY

COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL <input type="checkbox"/> English <input type="checkbox"/> Metric			Contract ID 19219	Region 5	Field Sheet # 166006									
			Project No. STE 480-008		Date Submitted 10-24-17									
Ready Mix Supplier: quikrete 5000		Suppliers ticket #: NA	Project Location PC to AVD SUP		Item & Description 614 - sign bases									
		Station	Resident Engineer Robert Shanks	CDOT Mix # NA										
Slump NA inches (mm)	Entrained air NA %	Unitweight NA lbs/ft ³ (kg/m ³)	Yield NA	Concrete temperature NA °F (°C)										
Cylinders for design adequacy		Date molded 10-24-17	Time 10:20	Cured hrs. 24	Days in molds 1	Days in <input type="checkbox"/> Damp sand <input checked="" type="checkbox"/> Water	at Temp. 74 °F (°C)							
Cylinders for structural strength information		Date molded	Time	Cured hrs.	Days in molds	Days at structure site	Shipped to <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab							
Mark Cylinders as indicated		Set no.	Conc. class	Days cured	Break date	No. of cylinders	Laboratory test results							
Sample ID		1	B	28	11-11-17	3	Age	Diameter (beam - H x W)	Total load	PSI/MPa	Break Type			
Sample ID							28	4.03"	41360	3230	5			
Sample ID							28	4.03"	39820	3110	4			
Specified strength (PSI/MPa)		QA/QC specification (broke @ 28 days)		<input type="checkbox"/> yes <input type="checkbox"/> no			28	4.03	40560	3170	4			
Specimen type:		<input checked="" type="checkbox"/> 4 x 8 cylinder		<input type="checkbox"/> Beam		<input type="checkbox"/> Splitting		<input type="checkbox"/> Cube						
		<input type="checkbox"/> 6 x 12 cylinder		<input type="checkbox"/> Core		Tensile								
Quantity represented cubic yards/meters	Previous	This placement	To date											
Field Comments:						Lab comments: TRAINING LAB NO: #5085								
CURE BOX: blue 101 temp = 54-58°														
I.A.T./Remarks: SEE FORM 473														
Cast by: (print name) ERIC HOWES			Title Tester			Transported by: (Name/Title/Company) ERIC HOWES (TESTER/ TRAINER)			Phone number 970-749-4241			E-mail address ehowes@traintec.com		

**COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION**

Metric units yes no

Region <u>5</u>	Field sheet # <u>266292</u> ✓
Contract ID <u>19219</u>	Date Submitted <u>3-10-18</u>
Project No. <u>STE C400-008</u>	
Project Location <u>PINON CAUSEWAY TO ASPEN VILLAGE DR-S U.P.</u>	

Material Type <u>PRE FORMED THERMOPLASTIC PAVT MRLK.</u>	Field Lab phone	Cell Phone
Material Code (LIMS)	Item <u>627</u>	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

THE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WERE FIELD INSPECTED AND APPROVED FOR USE BY PROJECT ENGINEER.

THE MATERIAL IS ON THE APL. THE CONTRACTOR'S COC/~~CTR~~^{APL} SELECTION LETTERS & FORM 5955 ARE ATTACHED. THE FOLLOWING ITEMS WERE INSTALLED:

ITEM	PLAN QTY	FINAL QTY
1. PREFORMED THERMO PAVT MRLK. (WORD - SYMBOL)	16 SF	15.5 SF
2. PREFORMED THERMO PAVT MRLK (CROSS-WALK)	957 SF	912 SF

Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)

APL/QML Acceptance: APL Ref. No. <u>4010-10</u> ✓	Product name: <u>PREMARK, WHITE</u>	Date checked: <u>4/26/18</u> 11/3/17
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:

Preliminary Construction Maintenance Emergency Date needed

Contractor <u>CROSSFIRE, LLC</u>	Supplier <u>ENNIS-FLINT</u>
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner

Quantity represented <u>SEE ABOVE</u>	Previous quantity <u>0</u>	Total quantity to date <u>SEE ABOVE</u>
---------------------------------------	----------------------------	---

Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via	Date
---	---	-----	------

Sampled or inspected by (print name) <u>CLYTON LEE PE</u>	Title <u>PROJECT ENGINEER</u>	E-mail
Supervisor (Pro./Res./Malls. Engr./Maint. Supt.) (print name) <u>TRUCE DAVIS, PE</u>	Title <u>PRESIDENT - DES</u>	Residency

Crossfire LLC



Integrated Energy Services

CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date: 11/03/2017
CDOT Project No: STE C480-008
CDOT Project Location: Pinon Causeway to aspen Village
CDOT Project Code 19219

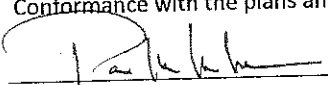
The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part: 627-30405 (713.14.01.00)
APL Category: Traffic Control
APL Sub-Category: Pavement Marking
APL Base Category: Thermo Plastic Preformed No Heat
APL Reference No.: 4010-16
Product Name: Pre Mark White
Manufacturer: Ennis Flint
Date of Web Site Review & Selection: 11/03/17

Crossfire, LLC

Paul Martin,
Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 15.5 S.F. (quantity and units) of pay item 627-30405 ~~Pvmt Marking Words~~ Pay item # and description) that will be installed in conformance with the plans and specifications on Project No. STE C480-008, 19219


Contractor

01/26/18
Date

Preformed Thermoplastic Pavement Marking (Word-Symbol)

820 Airport Rd, Durango, CO 81137
p(970) 884-4869 f(970) 403-1129

COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY	APL Reference No. 4010-16 /
--	---------------------------------------

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 713.14.01.00 Material code description full name: Traffic Control, Preformed Thermoplastic
--	--

PART 1

Product name: PreMark®, White	Product category: TCIPMM\Thermoplastic, Preformed, No Preheat
Product Representative (name & address): Attn: Mark Lamar Ennis-Flint 115 Todd Court Thomasville, NC 27360 Phone: (800) 331-8118 E-mail: mlamar@ennisflint.com	Manufacturer (name & address): Attn: QPL Administration Ennis-Flint 115 Todd Court Thomasville, NC 27360 Phone: (800) 331-8118 E-mail: qpladmin@ennisflint.com
Web-site address: www.ennisflint.com	Web-site address: www.ennisflint.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

PreMark®, White is a durable, retroreflective pavement marking material suitable for use as roadway, intersection, commercial or private pavement delineation and markings. The markings are a resilient white preformed thermoplastic product with uniformly distributed glass beads throughout the entire cross sectional area. The markings are resistant to the detrimental effects of motor fuels, lubricants, hydraulic fluids, antifreeze, etc. Lines, legends and symbols may be applied to bituminous and/or portland cement concrete pavements by the use of the normal heat of a propane torch. The material can be applied without minimum requirements for ambient and road temperatures and without any preheating of the pavement to a specific temperature. The material is manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.

Restrictions, (installation and/or use):
 Pavement should be clean and dry. Application on non-bituminous surfaces requires a compatible primer sealer.

Use of the product, (be specific to CDOT highway activities only):
 Primary use-intersection grade pavement marking: crosswalks: stop bars; turn arrows; pavement legends; use on asphalt or non-bituminous surfaces.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
 Durable retroreflective pavement marking that does not require specialized equipment for application. The top surface of the material (same side as the factory applied surface beads) has regularly spaced indents that act as a visual cue during application that the material has reached a molten state so satisfactory adhesion and proper bead embedment has been achieved, and a post-application visual cue that the installation procedures have been followed. Material produced in an ISO 9001:2008 certified facility.

- Specifications: (listing those applicable is required)**
- CDOT : Standard Specification, Section 713.14
 - ASTM : E 303
 - AASHTO : M249, M247
 - FHWA : FHWA 99-6190 Color
 - other :

Certificate of Compliance (COC) provided Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report (CTR)** provided to validate all claims.

- NTPEP-AASHTO:
- FHWA :
- other : Future Labs, LLC (May 22, 2015)
- other :
- other :

State DOT Approvals, (current documentation required): Re-submittal Cycle: 5 years

Sample submitted: yes no n/a Safety Data Sheets (SDS): yes no n/a

Alternate Product Category:
 Additional Comments:

**COLORADO DEPARTMENT OF TRANSPORTATION
FIELD REPORT FOR SAMPLE IDENTIFICATION
OR MATERIALS DOCUMENTATION**

Region 5 Field sheet # 266294-1
 Contract ID 19219 Date Submitted 3-21-18
 Project No. STE C480-008
 Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.

Metric units yes no

Material Type FORCE ACCOUNT - CULVERT REPAIR Field Lab phone _____ Cell Phone _____
 Material Code (LIMS) _____ Item NIA Class _____ Grading _____ Special Provisions yes
 Previously used on Project No.: _____ Previous CDOT Form #157 F/S No.(s): CDOT Form #633 (sack) CDOT Form #634 (can)

● Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
 ● Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.
A FORCE ACCOUNT WAS UTILIZED TO PAY FOR THE CULVERT REPAIR WORK AT ST. 16+21. THE TOWN OF PAGOSA SPRINGS PAID FOR THE CMP AND CONNECTIONS. THE MANUFACTURER'S COC IS ATTACHED. ^{FOR REFERENCE} FLOWFILL WAS APPROVED FOR USE. THE FLOWFILL MIX DESIGN IS ATTACHED, AS WELL AS THE BATCH TICKET. ALL COMPONENTS OF THE MIX ARE ON THE APL. 3 CY WERE PLACED AND INSPECTED BY THE PROJECT ENGINEER. NO TEST WAS PERFORMED.

User ID _____
 Sample ID (#1) _____ Sample ID (#2) _____ Sample ID (#3) _____
 Sample ID (#4) _____ Sample ID (#5) _____ Sample ID (#6) _____

APL/QML Acceptance: APL Ref. No. _____ Product name: _____ Date checked: _____
 APL/QML Acceptance: APL Ref. No. _____ Product name: _____ Date checked: _____

Preliminary Construction Maintenance Emergency Date needed _____

Contractor CROSSFIRE, LLC Supplier CONTECH & FCM
 Sampled from (Pit, roadway, windrow, stock, etc.) _____ Pit name or owner _____

Quantity represented 1 LS. Previous quantity 0 Total quantity to date 1 L.S.

Sample submitted: Yes No Shipped specified quantity to: _____ Via _____ Date _____
 Central lab Region lab

Sampled or inspected by (print name) CLYTON LEE, PE Title PROJECT ENGINEER E-mail _____
 Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE Title PRESIDENT-DES Residency _____

819 21-1/2 ROAD BLDG A
GRAND JUNCTION, CO 81505

Fax: 970-255-9018

*Additional Material ordered for the culvert
repair at STA 16+21. Purchased by T.P.S.
and B.H.E. to reimburse.*

To - CASH SALE
DO NOT MAIL

Ship To - PAGOSA SPRINGS
HIGHWAY 160 AND ALPHA DRIVE
JD 970-442-1318
PAGOSA SPRINGS, CO 81147

PACKING LIST

CKENNE

Date - 8/28/17
Page - 1
Time - 16.42.18
Customer No. - 300

GRAND JUNCTION, CO 81505
970-255-9015

Order No. - 044989-00
Check # *****0370

THANKS FOR YOUR BUSINESS! * NON-STOCK ITEMS ARE NON RETURNABLE

Shipped - 8/28/17	Date Ordered - 8/28/17	Date Requested - 8/28/17	Date Printed - 8/28/17
ed By -	Ordered By - CLIFTON	Cust. Order # - CLIFTON-PINON CAUSEW	
Via - GJWW	Salesman # - 010	Job Name - PINON CAUSEWAY SHARED USE PATH	
ght - .00	Taken By - CASEY	Payment Terms - CASH, CHECK, CREDIT CARD	

Original rder	Shipped	In On B/O	Hold UM	Description/Stock Number	Line No.	Bin Location	Unit Price	Extended Price	Extended Freight Weight	No. of Class Packages
60	60			FT 30X20 CMP 16GA 466803020	1.0	A10-A01	32.7500	1965.00		
1	1			EA 30 CMP DIMPLE BAND 466801030	2.0	A10-A05	50.6400	50.64		
2	2			EA 30 CMP BANDS 16GA 466800130	3.0	A10-A05	49.1200	98.24		

te Tax\$--> 2.900	Total Tax\$--> 56.99	Subtotal---> 2,113.88
	State Tax\$--> 56.99	Order Total--> 2,170.87
		Cash \$ Paid--> 2,170.87
		Cash Difference--> .00

END OF PACKING LIST

: You agree that the sale of these products/services is subject to all of our standard terms and conditions of sale located at www.winsupplyinc.com/tcsale

Customer Signature: _____

** MATERIAL RECEIVED IN GOOD CONDITION **

===== TRANSACTION RECORD =====
 CARD TYPE: VI
 CARD NUMBER: *****0370
 EXP DATE: **/**
 REFERENCE #: W00014398725 M
 AUTH #: 028985 \$ 2,170.87
 SIGNATURE: _____

*CMP material and connections were purchased by
the Town of Pagosa Springs and the Contractor
installed this in the Force Account Culvert Repair
work.*

GRAND JUNCTION
Winwater
COMPANY

8/31/2017

Contractor: Pagosa Springs, CO
Project: Pinon Causeway to Aspen Village Shared Use Path Project
Project #: STE C480-008
Reference Order #: 044989-00

This letter is to certify that we supplied Pagosa Springs, CO 30 CMP Pipe, and Bands on the above referenced project. The 30" CMP Pipe, and Bands was manufactured in accordance to the attached certification of compliance.

30" 16 Gage Galvanized Coated Corrugated Metal Pipe
Quantity - 60'
30" 16 Gage Galvanized Coated Corrugated Metal Pipe Annular Band
Quantity - 2ea
30" 16 Gage Galvanized Coated Corrugated Metal Pipe Dimple Band
Quantity - 1ea

Please contact me with any questions.

Casey Kenney

Sales Manager
Grand Junction Winwater
819 21 1/2 Road
Grand Junction CO, 81505
Ph: 970-255-9015
Fax: 970-255-9018



Steel Dynamics
 Steel Dynamics Sales North America, Inc.
 For Roll Goods
 Hot Strip

4500 County Road 59
 Butler, IN 46721 USA
 Telephone (260) 868-8000
 Fax (260) 868-8955

CHEMICAL/PHYSICAL CERTIFICATION

S H I P T O

Precision An Store-T
 3518 West 73rd Street
 Anderson, IN 46013
 United States

S O L D T O

Contech Engineered Solutions LLC
 9025 Centre Pointe Drive
 Suite 400
 West Chester, OH 45069
 United States
 EDI Contact

Order # 543938 Line Item # 1 Coil # 15G264846BB Heat # 11516680 Po # 20000332709 Part # CO2GVL16M
 Width 54.906 in Gauge 0.0570 in - Min Length 1,731 ft Coil Weight 19,600 lbs
1,394.6 mm 1.448 mm - Min 528 m 8,898 kg

Material Specification ASTM A 929 - 01(0)
 Product Description Prime Galv Hot Rolled Sheet
G210/G210

Chem Treat: Yes Oil Type: No

Coil Alias 724396900

Act Ct. Wt. (oz/in²) 2.02

Operator 2.30

Center 2.13

Drive 2.13

Ladle Chemical Analysis %																		
C	Mn	P	S	Si	Al	Cu	Ni	Cr	Mo	Sn	N	V	Nb	Ti	B	Ca	Pb	Zr
0.04	0.22	0.007	0.003	0.03	0.037	0.10	0.05	0.06	0.03	0.006	0.008	0.002	0.001	0.001	0.0051	0.002	0.00	0.0002

Testing Direction Longitudinal
 Yield Strength (KSI) 38.4 (MPa) 265

Mechanical Properties
 Tensile Strength (KSI) 54.7 (MPa) 377
 Elongation (percent) 33

Rockwell (Rb) 63

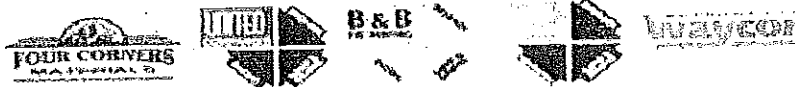
Made in USA
 Melted, thin slab cast and rolled by proud Americans in Butler, IN.

Andrew J. [Signature]
 Metallurgist

All tests were performed according to applicable standards and are correct as contained in the records of the company.
 Quality Assurance

Retrieved 7/28/2016 14:54:15

Steel Dynamics, Inc. Rev. Level 4.5 [602] - coil



OLDCASTLE SW GROUP, INC.

Submittal # 17-355-003 Version 1

8/4/2017

ONE TOUCH ELECTRIC, INC
 3228 RD 21
 CORTEZ CO 81321

Job: CDOT STE C480-008
 Job Description: Pinion Causeway & Aspen Village, Pag Sprgs CO

Attn: Dick Giesler

All materials and concrete delivered to this project conform to ASTM C-94, ACI 301 and ACI 318 Specifications for Ready Mixed Concrete. Four Corners Materials will not be responsible for concrete compromised by the addition of water, improper placing, finishing or curing techniques.

This submission contains the following mix designs:

Mix Code	Mix Description	Usage
37023344	CLASS D AG GCC	VARIOUS USES
36923344	CLASS BZ AG GCC	VARIOUS USES
30023344	AG CDOT FLOW FILL GCCP	FLOW FILL

Please have your personnel place the order for concrete using the designated mix number. The concrete will come from Plant 355. The phone number is (505) 324-3900.

PLEASE NOTIFY THIS OFFICE AS TO THE ACCEPTANCE OR REJECTION OF THIS MIX SUBMITTAL. LACK OF RESPONSE PRIOR TO FIRST POUR SHALL RESULT IN ACCEPTANCE.

NOTE: ALL CONCRETE MUST BE ORDERED BY THE APPROVED MIX DESIGN NUMBER. EVALUATION OF THIS CONCRETE MUST BE CONDUCTED ACCORDING TO ASTM AND ACI STANDARDS.

Thank you for giving us this opportunity to be of service to you, feel free to contact me if you should need any further assistance.

Sincerely yours,

Ray Taulli



OLDCASTLE SW GROUP, INC.

Concrete Mix Design Submittal

Date: 08/04/2017
 Mix Code : 30023344

No. 17-355-003 Version 1
 Description : AG CDOT FLOW FILL GCCP

		<u>Design</u>	<u>Tolerance</u>
Customer	ONE TOUCH ELECTRIC, INC	Air Content	2
Contact	Dick Giesler	Slump	8
Office Phone	970-565-9684	Design Strength	60 psi
Project Name	CDOT STE C480-008	Unit Weight	136.7 lb/ft ³
Project Description	Pinion Causeway & Aspen Village, Pag Sprgs CO	W/C Ratio	3.79
Usage/ Placement	FLOW FILL		

Material Code	Material Description	Material Supplier	Material Source	Standard	Design Quantity	Specific Gravity	Volume (ft ³)
AG-#67	ANIMAS GLACIER # 67	FCM	ANIMAS GLACIER	C-33	1632 lb	2.66	9.84
AG-SND	ANIMAS GLACIER SAND	FCM	ANIMAS GLACIER	C-33	1532 lb	2.66	9.23
GCC-VII	GCC CEMENT	GCC	PUEBLO	C-150	60 lb	3.15	0.31
4-CRNRS	FOUR CORNERS FLYASH	SRMG	4 CORNERS	C-618	50 lb	1.99	0.40
WATER	WATER	WATER	WATER	C-1602	50.0 gal	1.00	6.68
				Air Content	2.00 %	-	0.54
				Yield	3691 lb	-	27.00

NOTES

Prepared By :

Paul Appel



FOUR CORNERS

MATERIALS

DELIVERY INVOICE

PAGOSA

BATCH PLANT: 970-731-5194
FAX: 970-731-5197

P.O. BOX 1969
BAYFIELD, CO 81122

No. 053388

TEST RESULTS

SLUMP

CONC. TEMP. AIR %

CYLINDERS TAKEN YES
 NO

TESTED BY

In the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR CORNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.

This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant. Any sampling and testing of this concrete must be in strict accordance with ASTM procedures.

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect any outstanding balance.

LEAVE PLANT
8:04

ARRIVE JOB
8:22

FINISH POURING

LEAVE JOB

ARRIVE PLANT

TICKET

WATER ADDED AT CUSTOMER'S REQUEST GALLONS BY: *[Signature]* CUSTOMER SIGNATURE

ALLOWABLE UNLOADING TIME: 7 MINUTES PER CUBIC YARD.

CUSTOMER ID P.O. NUMBER ZONE TIME DATE

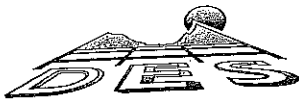
SOLD TO DELIVER TO DRIVER

QUANTITY THIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
TRUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONCRETE	SUB TOTAL		
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE %	HOT WATER % RETARDER	STATE TAX		
DELIVERY INSTRUCTIONS					CITY TAX		
SPECIAL INSTRUCTIONS					TOTAL		

TEAR HERE

No. 053388

[Faint background text and bleed-through from the reverse side of the page, including terms and conditions and company information.]



DAVIS
ENGINEERING
SERVICE, INC.

COPY

Date: 8/28/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 01

The work performed on 8/28/2017 was to use an excavator and compactor to locate an abandon culvert outlet.

Subcontractor Estimated Labor

Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
	No Labor for the Subcontractor Required				\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
Total Direct Compensation						\$ -
Subcontractor Administrative/Overhead @ 67%						\$ -
*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017						\$ -
Estimated Labor Total:						\$ -

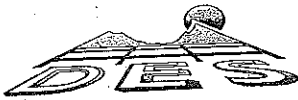
Subcontractor Estimated Materials

Description	Estimated Quantity	Unit Price	Total
No Material for the Subcontractor Required		\$ -	\$ -
			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ -
Subcontractor Mark-Up @ 15%			\$ -
Estimated Materials Total:			\$ -

Subcontractor Estimated Equipment

Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
	No equipment for the Subcontractor Required			\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ -
Rental Equipment - Subcontractor Related Overhead Costs @ 10%				\$ -
*Shift rate per hour based on blue book rental rate sheet dated November 28, 2017				\$ -
Estimated Equipment Total:				\$ -

Total Estimated Cost to Furnish and Install (Subcontractor) \$ -



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SERVICE, INC.

Date: 8/28/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 01

The work performed on 8/28/2017 was to use an excavator and compactor to locate an abandon culvert outlet.

<u>Estimated Labor</u>	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
Work Classification Code						
1511	Common Laborer (Juan Morales)	0.5	\$ 14.48	\$ 3.53	\$ 18.01	\$ 9.01
1535	Backhoe/Trackhoe Oper. (Juan Morales)	5	\$ 20.21	\$ 3.75	\$ 23.96	\$ 119.80
1511	Common Laborer (Castor Morales)	5	\$ 13.70	\$ 3.53	\$ 17.23	\$ 86.15
1568	Roller/Compactor Oper. (Castor Morales)	0.5	\$ 19.24	\$ 4.96	\$ 24.20	\$ 12.10
N/A	Superintendent (Jason Vavrina)	2	\$ 33.50	\$ -	\$ 33.50	\$ 67.00
Total Direct Compensation						\$ 294.06
Contractor Administrative/Overhead @ 67%						\$ 197.02
<i>*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017</i>						\$ 491.08
Estimated Labor Total:						

<u>Estimated Materials</u>	Description	Estimated Quantity	Unit Price	Total
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total Material Cost				\$ -
Contractor Mark-Up @ 15%				\$ -
Estimated Materials Total:				\$ -

<u>Estimated Equipment</u>	Description	Estimated Hours	Shift Rate Per Hour	Total
Leased	2011 Caterpillar Vib. Soil Compactor CS44	0.5	\$ 53.84	\$ 26.92
Leased	2005 Caterpillar Hydr. Excavator 314C LCR	5	\$ 71.44	\$ 357.20
	Equipment used on 08-28-2017.			\$ -
				\$ -
Total Direct Compensation				\$ 384.12
Rental Equipment - Contractor Related Overhead Costs @ 10% (Owned Equipment)				\$ -
Estimated Equipment Total:				\$ 384.12

Total Estimated Cost to Furnish and Install (Contractor) \$ 875.20
 Total Estimated Cost to Furnish and Install (Subcontractor) \$ -
 Contractor Administration Compensation for Subcontractor \$ -
Total Estimated Cost \$ 875.20

**COLORADO DEPARTMENT OF TRANSPORTATION
INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK**

Project No.: STE C480-008
Project Code (SA#): 19219
CMO or F/A No.: FA03 - Culvert

Contractor's Name: Crossfire, LLC

Subcontractor's Name: No subcontractor participated with this force account

Description of Work: Use of Crossfire equipment and personnel to locate abandoned culvert. Packet 01.

LABOR Employee Name	Occupation	Hours										Total Hours	
		8-28-17/ 7141021		8-28-17/ 7109573								ST	OT
		ST	OT	ST	OT	ST	OT	ST	OT				
JUAN MORALES	1511- LABOR	0.5										0.5	0
CASTOR MORALES	1511- LABOR	5										5	0
JASON VAVRINA	SUPERINTENDENT			2								2	0
JUAN MORALES	1535- OPERATOR			5								5	0
CASTOR MORALES	1568- OPERATOR			.5								0.5	0
												0	0
												0	0
												0	0
												0	0

The hours shown here were checked against the certified payrolls.

Checked By: *[Signature]*

Date: 3/7/2018

EQUIPMENT Code No.	Shift		Rate	Number of Hours						Total Hours			
	1 st	SB		8-28-17/ 7141021		8-28-17/ 7109573				ST	OT		
2011 CAT CS44			53.84			0.5							
2005 CAT 314C LCR			71.44			5						5	0
												0	0
												0	0
												0	0
												0	0
												0	0

MATERIAL Type	Unit	Number of Units						Total Units		
		8-28-17/ 7141021		8-28-17/ 7109573				ST	OT	
									0	0
									0	0
									0	0
									0	0
									0	0
									0	0

Note: A Certified Invoice for Materials is required as part of billing.

Billing procedures shall conform to applicable project specifications.
I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the above modification order or agreement.
Signed: *[Signature]* Title: Project Engineer Date: 3/7/2018

Distribution: Region Finals Engineer (original)
Project File
Contractor

Previous editions may be used until supplies are exhausted



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Date: 8/30/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 02

The work performed on 8/30/2017 was to use a hydrovac truck to locate the SourceGas gas line and then remove material below the gas line and slope the trench back.

Subcontractor Estimated Labor

Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
No Labor for the Subcontractor Required						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
Total Direct Compensation						\$ -
Subcontractor Administrative/Overhead @ 67%						\$ -
<i>*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017</i>						\$ -
Estimated Labor Total:						\$ -

Subcontractor Estimated Materials

Description	Estimated Quantity	Unit Price	Total
No Material for the Subcontractor Required			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ -
Subcontractor Mark-Up @ 15%			\$ -
Estimated Materials Total:			\$ -

Subcontractor Estimated Equipment

Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
No equipment for the Subcontractor Required				\$ -
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ -
Rental Equipment - Subcontractor Related Overhead Costs @ 10%				\$ -
<i>*Shift rate per hour based on blue book rental rate sheet dated November 28, 2017</i>				\$ -
Estimated Equipment Total:				\$ -
Total Estimated Cost to Furnish and Install (Subcontractor)				\$ -



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Date: 8/30/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 02

The work performed on 8/30/2017 was to use a hydrovac truck to locate the SourceGas gas line and then remove material below the gas line and slope the trench back.

<u>Estimated Labor</u>		Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
Work Classification Code							
1594	Water Truck (Jared Benally)		12.5	\$ 20.25	\$ 3.75	\$ 24.00	\$ 300.00
1511	Common Laborer (Latarua Porambo)		12.5	\$ 13.70	\$ 3.53	\$ 17.23	\$ 215.38
						\$ -	\$ -
						\$ -	\$ -
						\$ -	\$ -
Total Direct Compensation							\$ 515.38
Contractor Administrative/Overhead @ 67%							\$ 345.30
*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017							\$ 860.68
Estimated Labor Total:							

<u>Estimated Materials</u>		Description	Estimated Quantity	Unit Price	Total
		No Material for the Contractor Required			\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
Total Material Cost					\$ -
Contractor Mark-Up @ 15%					\$ -
Estimated Materials Total:					\$ -

<u>Estimated Equipment</u>		Description	Estimated Hours	Shift Rate Per Hour	Total
Ownership					
Owned	Crossfire Hydrovac Truck		12.5	\$ 124.11	\$ 1,551.38
					\$ -
					\$ -
					\$ -
					\$ -
Total Direct Compensation					\$ 1,551.38
Rental Equipment - Contractor Related Overhead Costs @ 10% (Owned Equipment)					\$ -
Estimated Equipment Total:					\$ 1,551.38

Total Estimated Cost to Furnish and Install (Contractor) \$ 2,412.05
 Total Estimated Cost to Furnish and Install (Subcontractor) \$ -
 Contractor Administration Compensation for Subcontractor \$ -
Total Estimated Cost \$ 2,412.05

**COLORADO DEPARTMENT OF TRANSPORTATION
INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK**

Project No.: STE C480-008
Project Code (SA#): 19219
CMO or F/A No.: FA 03 - Culvert

Contractor's Name: Crossfire, LLC

Subcontractor's Name: No subcontractor participated with this force account.

Description of Work: Use of Hydrovac truck to locate and exposed gas line at culvert. Packet 02.

LABOR Employee Name	Occupation	Date: 8-30-17		Hours										Total Hours			
		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT		
																ST	OT
JARED BENALLY	1594-WATER TRUCK	12.5														12.5	0
LATAURA PORAMBO	1511-LABOR	12.5														0	0
																0	0
																0	0
																0	0
																0	0
																0	0
																0	0
																0	0
																0	0
																0	0

The hours shown here were checked against the certified payrolls.

Checked By: *Chh*

Date: 3/7/13

EQUIPMENT Code No.	Shift		Date: 8-30-17		Number of Hours										Total Hours		
	1 st	SB	Rate		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	
																	ST
HYDROVAC (C12-HV25)			124.11		12.5												12.5
																	0
																	0
																	0
																	0
																	0
																	0
																	0
																	0
																	0
																	0

MATERIAL Type	Date: 8-30-17		Number of Units										Total Units				
	Unit		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	
																	ST
Note: A Certified Invoice for Materials is required as part of billing.																	
																	0
																	0
																	0
																	0
																	0
																	0
																	0
																	0
																	0
																	0

Contractor/Subcontractor Initials *Chh*

Billing procedures shall conform to applicable project specifications.

I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the above modification order or agreement.

Signed: *Chh*

Title: Project Engineer

Date: 3/7/13

Distribution: Region Fihals Engineer (original)
Project File
Contractor

Previous editions may be used until supplies are exhausted



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Date: 8/28/2017
8/31/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 03
The work performed on 8/29/2017 was to remove material around the potholed area. The work performed on 8/31/2017 was for removing material in preparation for work by Black Hills Energy.

<u>Subcontractor Estimated Labor</u>		Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
Work Classification Code	Description					
	No Labor for the Subcontractor Required				\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
Total Direct Compensation						\$ -
Subcontractor Administrative/Overhead @ 67%						\$ -
*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017						\$ -
Estimated Labor Total:						\$ -

<u>Subcontractor Estimated Materials</u>		Estimated Quantity	Unit Price	Total
Description				
	No Material for the Subcontractor Required		\$ -	\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total Material Cost				\$ -
Subcontractor Mark-Up @ 15%				\$ -
Estimated Materials Total:				\$ -

<u>Subcontractor Estimated Equipment</u>		Estimated Hours	Shift Rate Per Hour	Total
Ownership	Description			
	No equipment for the Subcontractor Required			\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ -
Rental Equipment - Subcontractor Related Overhead Costs @ 10%				\$ -
*Shift rate per hour based on blue book rental rate sheet dated November 28, 2017				\$ -
Estimated Equipment Total:				\$ -
Total Estimated Cost to Furnish and Install (Subcontractor)				\$ -



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SERVICE, INC.

Date: 8/28/2017
8/31/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 03

The work performed on 8/29/2017 was to remove material around the potholed area. The work performed on 8/31/2017 was for removing material in preparation for work by Black Hills Energy.

<u>Estimated Labor</u>		Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
Work Classification Code							
N/A	8/29, 8/31	Superintendent (Jason Vavrina)	2	\$ 33.50	\$ -	\$ 33.50	\$ 67.00
1557	8/29	Loader (Michael Bales)	1.5	\$ 23.38	\$ 8.22	\$ 31.60	\$ 47.40
1511	8/31	Common Laborer (Edmund Watson)	1	\$ 13.70	\$ 3.53	\$ 17.23	\$ 17.23
1511	8/31	Common Laborer (Nicholas Begaye)	1	\$ 13.70	\$ 3.53	\$ 17.23	\$ 17.23
1535	8/31	Backhoe (Michael Bales)	1	\$ 19.75	\$ 3.75	\$ 23.50	\$ 23.50
Total Direct Compensation							\$ 172.36
Contractor Administrative/Overhead @ 67%							\$ 115.48
*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017							\$ 287.84
Estimated Labor Total:							

<u>Estimated Materials</u>		Description	Estimated Quantity	Unit Price	Total
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
Total Material Cost					\$ -
Contractor Mark-Up @ 15%					\$ -
Estimated Materials Total:					\$ -

<u>Estimated Equipment</u>		Description	Estimated Hours	Shift Rate Per Hour	Total
Ownership					
Leased	2004 Caterpillar Frnt. End Loader 928G	1.5	8/28	\$ 45.92	\$ 68.88
Leased	2005 Caterpillar Hydr. Excavator 314C LCR	1	8/31	\$ 71.44	\$ 71.44
					\$ -
					\$ -
					\$ -
Total Direct Compensation					\$ 140.32
Rental Equipment - Contractor Related Overhead Costs @ 10% (Owned Equipment)					\$ -
Estimated Equipment Total:					\$ 140.32

Total Estimated Cost to Furnish and Install (Contractor)	\$ 428.16
Total Estimated Cost to Furnish and Install (Subcontractor)	\$ -
Contractor Administration Compensation for Subcontractor	\$ -
Total Estimated Cost	\$ 428.16

**COLORADO DEPARTMENT OF TRANSPORTATION
INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK**

Project No.: STE C480-008
Project Code (SA#): 19219
CMO or F/A No.: FA 03 - Culvert

Contractor's Name: Crossfire, LLC
Subcontractor's Name: No subcontractor participated with this force account.
Description of Work: Use of Crossfire equipment and personnel to locate gas line/culvert conflict. Packet 03.

LABOR Employee Name	Occupation	Date: 8-29-17/ 7109577		8-31-17/ 7109585		Hours						Total Hours		
		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	
		JASON VAVRINA	SUPERINTENDENT	1		1								
MICHAEL BALES	1557-LOADER	1.5											1.5	0
EDMUND WATSON	1511-LABOR			1									1	0
NICHOLAS BEGAYE	1511-LABOR			1									1	0
MICHAEL BALES	1535-BACKHOE			1									1	0
													0	0
													0	0
													0	0
													0	0

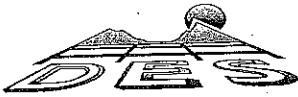
The hours shown here were checked against the certified payrolls. Checked By: *[Signature]* Date: 3/7/18

EQUIPMENT Code No.	Shift		Date: 8-29-17/ 7109577		8-31-17/ 7109585		Number of Hours						Total Hours	
	1 st	SB	Rate											
2004 CAT 928G			45.92	1.5										1.5
2005 CAT 314C LCR			71.44		1									1
														0
														0
														0
														0
														0
														0

MATERIAL Type	Date: 8-29-17/ 7109577		8-31-17/ 7109585		Number of Units						Total Units			
	Unit													
														0
														0
														0
														0
														0
														0
														0
														0

Contractor/Subcontractor Initials: *[Signatures]*

Billing procedures shall conform to applicable project specifications.
I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the above modification order or agreement.
Signed: *[Signature]* Title: Project Engineer Date: 3/7/18



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CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date: 9/5/2017
9/7/2017
9/8/2017

Force Account 03 - Culvert Repair Packet 04

The work performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

Subcontractor Estimated Labor

Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
No Labor for the Subcontractor Required						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
Total Direct Compensation						\$ -
Subcontractor Administrative/Overhead @ 67%						\$ -
<i>*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017</i>						\$ -
Estimated Labor Total:						\$ -

Subcontractor Estimated Materials

Description	Estimated Quantity	Unit Price	Total
No Material for the Subcontractor Required			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ -
Subcontractor Mark-Up @ 15%			\$ -
Estimated Materials Total:			\$ -

Subcontractor Estimated Equipment

Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
No equipment for the Subcontractor Required				\$ -
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ -
Rental Equipment - Subcontractor Related Overhead Costs @ 10%				\$ -
<i>*Shift rate per hour based on blue book rental rate sheet dated November 28, 2017</i>				\$ -
Estimated Equipment Total:				\$ -
Total Estimated Cost to Furnish and Install (Subcontractor)				\$ -



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CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date: 9/1/2017
9/5/2017
9/7/2017
9/8/2017

Force Account 03 - Culvert Repair Packet 04

The work performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

<u>Estimated Labor</u>							
Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total	Total
1582	9/5, Water Truck (Jesus Holguin)	9	\$ 20.25	\$ 3.75	\$ 24.00	\$ 216.00	\$ 216.00
1511	9/5, Common Laborer (Thomas Chee)	14	\$ 13.70	\$ 3.53	\$ 17.23	\$ 241.22	\$ 241.22
1582	9/7, Water Truck (Jesus Holguin)	10	\$ 20.25	\$ 3.75	\$ 24.00	\$ 240.00	\$ 240.00
1511	9/7, Common Laborer (Joel Archuleta)	10	\$ 14.47	\$ 3.53	\$ 18.00	\$ 180.00	\$ 180.00
						\$ -	\$ -
Total Direct Compensation						\$ 877.22	\$ 877.22
Contractor Administrative/Overhead @ 67%						\$ 587.74	\$ 587.74
*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017						\$ 1,464.96	\$ 1,464.96
Estimated Labor Total:							

<u>Estimated Materials</u>	Description	Estimated Quantity	Unit Price	Total
9/1/2017	Rental of Jersey Barrier Lift	1	\$ 150.00	\$ 150.00
9/1/2017	Purchase of Pond Liner for Inlet Protection	1	\$ 463.97	\$ 463.97
				\$ -
				\$ -
				\$ -
				\$ 613.97
Total Material Cost				\$ 92.10
Contractor Mark-Up @ 15%				\$ 706.07
Estimated Materials Total:				

<u>Estimated Equipment</u>	Description	Estimated Hours	Shift Rate Per Hour	Total
Owned	9/5, Crossfire Hydrovac Truck (C13-HV35)	14	\$ 124.11	\$ 1,737.54
Owned	9/7, Crossfire Hydrovac Truck (C13-HV35)	10	\$ 124.11	\$ 1,241.10
				\$ -
				\$ -
				\$ -
				\$ 2,978.64
Total Direct Compensation				\$ -
Rental Equipment - Contractor Related Overhead Costs @ 10% (Owned Equipment)				\$ 2,978.64
Estimated Equipment Total:				

Total Estimated Cost to Furnish and Install (Contractor) \$ 5,149.67

Total Estimated Cost to Furnish and Install (Subcontractor) \$ -

Contractor Administration Compensation for Subcontractor \$ -

Total Estimated Cost \$ 5,149.67



Grand Junction Pipe & Supply Durango Branch

133 KayCee Lane Durango, CO. 81303 970-385-6733
Remit To: P.O. Box 849 Magna, UT 84044 USA

INVOICE

*** REPRINT ***

Terms: All Charge Accounts are due and payable 30 days after date of the invoice. All Cash Accounts are due and payable on the date of invoice. Discounts as shown in the discount column are allowed only if accounts are paid in full, by the date below, and if there is no balance past due. No discounts are allowed on sales tax or delivery charges. Finance Charges: All Past Due Accounts are subject to INTEREST at the RATE of 1 1/2 PERCENT PER MONTH (18% PER ANNUM) applied to the principal monthly plus any costs of collection, including reasonable attorney's fees. Returned Checks: All checks returned to the company for non-payment upon presentation shall be subject to a return check charge of \$20.00 and/or other damages provided by § 13-21-109 of the Colorado Revised Statutes, and such returned check shall be treated as a cash account subject to the Finance Charges described above.

Bill To: Crossfire, LLC
1800 Hughes Landing Blvd
Suite 500
The Woodlands, TX 77380

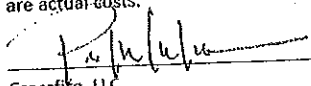
Ship To: Crossfire, LLC
820 Airport Road
Durango, CO 81303

Attn: Trina Kitzman

Ordered By: Mr. PAUL MARTIN

CUSTOMER NO.	INVOICE NO.	INVOICE DATE	DUE DATE	SALESMAN	ORDER DATE	ORDER NUMBER
100757	3535283	9/1/2017 15:12:02	10/1/2017	Ken Thorson	9/1/2017 15:11:45	1572990

PO NUMBER	JOB ID	ORDER TAKER	PICK TICKET NO.	PAGE NO.
501414123		Ed Hallam	2527754	1 of 1

LINE	ITEM DESCRIPTION	ITEM ID	QTY SHIP	QTY B/O	UOM	PRICE	EXTD PRICE
001	Carrier: C.P.U. Customer Pick Up PONDGARD 45MIL EPDM 10' X 50' "We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."  Crossfire, LLC. 10/13/17 Date	11280	500.00		SF	0.86	430.00
Total Lines: 1						SUB-TOTAL: 430.00 State of Colorado 12.47 LaPlata County 8.60 Durango 12.90 AMOUNT DUE: 463.97	
Net 30							

Branson Traffic Control Company, Inc.

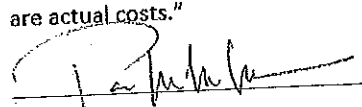
74 County Road 231
Durango, CO 81303
Ph. 970-382-8761
Email: dbtcci@bresnan.net

Invoice

Date	Invoice #
9/14/17	2017074

Bill To
Crossfire - LLC 820 Airport Road Durango, CO 81303

Project Ref.	Pagosa Springs
--------------	----------------

Svc Date	Description	Unit	Unit Price	Qty	Amount
9/1/17	Rental of Concrete Barrier Lifter NOTE: Customer picked-up equipment on 9/1/17 and returned it on 9/12/17. BTC charging only 2 days rental. "We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."  _____ Crossfire, LLC. 10/16/17 _____ Date	DAY	75.00	2	150.00
				Total	\$150.00
				Terms	Due on receipt



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CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date: 9/1/2017
9/5/2017
9/7/2017
9/8/2017

Force Account 03 - Culvert Repair Packet 06

The work performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

Subcontractor Estimated Labor

Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
No Labor for the Subcontractor Required						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
Total Direct Compensation						\$ -
Subcontractor Administrative/Overhead @ 67%						\$ -
<i>*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017</i>						\$ -
Estimated Labor Total:						\$ -

Subcontractor Estimated Materials

Description	Estimated Quantity	Unit Price	Total
No Material for the Subcontractor Required			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ -
Subcontractor Mark-Up @ 15%			\$ -
Estimated Materials Total:			\$ -

Subcontractor Estimated Equipment

Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
No equipment for the Subcontractor Required				\$ -
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ -
Rental Equipment - Subcontractor Related Overhead Costs @ 10%				\$ -
<i>*Shift rate per hour based on blue book rental rate sheet dated November 28, 2017</i>				\$ -
Estimated Equipment Total:				\$ -
Total Estimated Cost to Furnish and Install (Subcontractor)				\$ -



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CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project.

Date: 9/1/2017
9/5/2017
9/7/2017
9/8/2017

Force Account 03 - Culvert Repair Packet 06
The work performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

<u>Estimated Labor</u>		Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
Work Classification	Code						
			3	\$ 33.50	\$ -	\$ 33.50	\$ 100.50
N/A		9/8, Superintendent (Jason Vavrina)	4	\$ 19.75	\$ 3.75	\$ 23.50	\$ 94.00
1535		9/8, Operator (Juan Morales)	4	\$ 13.70	\$ 3.53	\$ 17.23	\$ 68.92
1511		9/8, Common Laborer (Castor Morales)	5	\$ 20.25	\$ 3.75	\$ 24.00	\$ 120.00
1582		9/8, Water Truck (Jesus Holguin)	9	\$ 30.38	\$ -	\$ 30.38	\$ 273.42
1582		9/8, Water Truck (Jesus Holguin)	14	\$ 13.70	\$ 3.53	\$ 17.23	\$ 241.22
1511		9/8, Common Laborer (Thomas Chee)		\$ -	\$ -	\$ -	\$ -
Total Direct Compensation							\$ 898.06
Contractor Administrative/Overhead @ 67%							\$ 601.70
*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017							\$ 1,499.76
Estimated Labor Total:							

<u>Estimated Materials</u>		Description	Estimated Quantity	Unit Price	Total
No Material for the Contractor Required					
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
Total Material Cost					\$ -
Contractor Mark-Up @ 15%					\$ -
Estimated Materials Total:					\$ -

<u>Estimated Equipment</u>		Description	Estimated Hours	Shift Rate Per Hour	Total
Ownership					
Leased		9/7, 2005 Caterpillar Hydr. Excav. 314C LCR	3	\$ 71.44	\$ 214.32
Owned		9/8, Crossfire Hydrovac Truck (C13-HV35)	14	\$ 124.11	\$ 1,737.54
					\$ -
					\$ -
					\$ -
					\$ 1,951.86
Total Direct Compensation					\$ -
Rental Equipment - Contractor Related Overhead Costs @ 10% (Owned Equipment)					\$ 1,951.86
Estimated Equipment Total:					

Total Estimated Cost to Furnish and Install (Contractor) \$ 3,451.62

Total Estimated Cost to Furnish and Install (Subcontractor) \$ -

Contractor Administration Compensation for Subcontractor \$ -

Total Estimated Cost \$ 3,451.62

**COLORADO DEPARTMENT OF TRANSPORTATION
INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK**

Project No.: STE C480-008
Project Code (SA#): 19219
CMO or F/A No.: FA 03 - Culvert

Contractor's Name: Crossfire, LLC

Subcontractor's Name: No subcontractor participated with this force account.

Description of Work: Use of Crossfire equipment and personnel to excavate material around the existing gas line and culvert.

LABOR Employee Name	Occupation	Date:										Total Hours					
		9/1/2017		9/5/2017		9/7/2017		9/7/2017		9/8/2017		ST	OT				
		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT						
JASON VAVRINA	SUPERINTENDENT									4				3		7	0
EDMUND WATSON	1511-LABOR									2						2	0
CHRISTOPHER GRANO	1511-LABOR									9						9	0
MIKE BALES	1535- OPERATOR									3						3	0
JUAN MORALES	1535- OPERATOR									6				4		10	0
CASTOR MORALES	1511-LABOR									9				4		13	0
JESUS HOLGIN	1511-LABOR				14			10						5	9	29	9
THOMAS CHEE	1511-LABOR				14									14		28	0
JOEL ARCHULETA	1511-LABOR							10								10	0

The hours shown here were checked against the certified payrolls. Checked By: *Cliff* Date: 3/7/18

EQUIPMENT Code No.	Shift		Date:	Date:										Total Hours			
	1 st	SB		9/1/2017		9/5/2017		9/7/2017		9/7/2017		9/8/2017		ST	OT		
	Rate			Number of Hours													
2005 CAT 314C LCR			\$71.44											9		3	12
HYDROVAC (C13-HV35)			\$124.11			14		10								14	38
																	0
																	0
																	0
																	0
																	0

MATERIAL Type	Unit	Date:										Total Units					
		9/1/2017		9/5/2017		9/7/2017		9/7/2017		9/8/2017		ST	OT				
		Number of Units															
Note: A Certified Invoice for Materials is required as part of billing.																	
BARRIER LIFTER (\$150.00)	EACH	1															1
POND LINER (\$463.97)	EACH	1															1
																	0
																	0
																	0
																	0
																	0
																	0
																	0

Contractor/Subcontractor Initials: *Paul Paul Paul Paul Paul*

Billing procedures shall conform to applicable project specifications.
I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the above modification order or agreement.
Signed: *Cliff* Title: Project Engineer Date: 3/7/18

**COLORADO DEPARTMENT OF TRANSPORTATION
INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK**

Project No.: STE C480-008

Project Code (SA#): 19219

CMO or F/A No.: FA 03 - Culvert

Contractor's Name: Crossfire, LLC

Subcontractor's Name: No subcontractor participated with this force account.

Description of Work: Use of Crossfire equipment and personnel to excavate material around the existing gas line and culvert.

LABOR Employee Name	Occupation	Hours										Total Hours			
		Date: 9/1/2017		9/5/2017		9/7/2017		9/7/2017		9/8/2017		ST	OT		
		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT				
JUAN MORALES	1511-LABOR							3						3	0
														0	0
														0	0
														0	0
														0	0
														0	0
														0	0
														0	0
The hours shown here were checked against the certified payrolls.												Checked By: <i>Cliff</i>		Date: 3/7/18	

EQUIPMENT Code No.	Shift		Date:	Number of Hours										Total Hours		
	1 st	SB		Rate	9/1/2017		9/5/2017		9/7/2017		9/7/2017		9/8/2017			
																0
																0
																0
																0
																0
																0
																0

MATERIAL Type	Unit	Date:	Number of Units					Total Units								
			9/1/2017		9/5/2017		9/7/2017		9/7/2017		9/8/2017					
Note: A Certified Invoice for Materials is required as part of billing.																
																0
																0
																0
																0
																0
																0
																0

Billing procedures shall conform to applicable project specifications.
 I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the above modification order or agreement.
 Signed: *Cliff* Title: Project Engineer Date: 3/7/2018
 Contractor/Subcontractor Initials: / / / / /



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CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date: 9/11/2017

Force Account 03 - Culvert Repair Packet 07

The work on 9/11 was for excavation of culvert trench in the north-south direction. The trench excavation was prepared for placement of gravel bedding and then setting of the culvert banding and new culvert section.

Subcontractor Estimated Labor

Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
No Labor for the Subcontractor Required						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
Total Direct Compensation						\$ -
Subcontractor Administrative/Overhead @ 67%						\$ -
<i>*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017</i>						
Estimated Labor Total:						\$ -

Subcontractor Estimated Materials

Description	Estimated Quantity	Unit Price	Total
No Material for the Subcontractor Required			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ -
Subcontractor Mark-Up @ 15%			\$ -
Estimated Materials Total:			\$ -

Subcontractor Estimated Equipment

Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
No equipment for the Subcontractor Required				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ -
Rental Equipment - Subcontractor Related Overhead Costs @ 10%				\$ -
<i>*Shift rate per hour based on blue book rental rate sheet dated November 28, 2017</i>				
Estimated Equipment Total:				\$ -

Total Estimated Cost to Furnish and Install (Subcontractor) \$ -



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Date: 9/11/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 07

The work on 9/11 was for excavation of culvert trench in the north-south direction. The trench excavation was prepared for placement of gravel bedding and then setting of the culvert banding and new culvert section.

Estimated Labor Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
N/A	Superintendent (Jason Vavrina)	6	\$ 33.50	\$ -	\$ 33.50	\$ 201.00
1511	Common Laborer (Nicholas Begaye)	6	\$ 13.70	\$ 3.53	\$ 17.23	\$ 103.38
1557	Loader (Nicholas Begaye)	4	\$ 23.38	\$ 8.22	\$ 31.60	\$ 126.40
1535	Operator (Juan Morales)	10	\$ 19.75	\$ 3.75	\$ 23.50	\$ 235.00
1511	Common Laborer (Castor Morales)	10	\$ 13.70	\$ 3.53	\$ 17.23	\$ 172.30
			\$ -	\$ -	\$ -	\$ -
			\$ -	\$ -	\$ -	\$ -
Total Direct Compensation						\$ 838.08
Contractor Administrative/Overhead @ 67%						\$ 561.51
*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017						\$ 1,399.59
Estimated Labor Total:						

Estimated Materials Description	Estimated Quantity	Unit Price	Total
No Material for the Contractor Required			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ -
Contractor Mark-Up @ 15%			\$ -
Estimated Materials Total:			\$ -

Estimated Equipment Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
Leased	2005 Caterpillar Hydr. Excav. 314C LCR	7	\$ 71.44	\$ 500.08
Leased	2004 Caterpillar Frt. End Loader 928 G	3	\$ 45.92	\$ 137.76
			\$ -	\$ -
			\$ -	\$ -
Total Direct Compensation				\$ 637.84
Rental Equipment - Contractor Related Overhead Costs @ 10% (Owned Equipment)				\$ -
Estimated Equipment Total:				\$ 637.84

Total Estimated Cost to Furnish and Install (Contractor) \$ 2,037.43
 Total Estimated Cost to Furnish and Install (Subcontractor) \$ -
 Contractor Administration Compensation for Subcontractor \$ -
Total Estimated Cost \$ 2,037.43



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Date: 9/12/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 08

The work performed on 9/11/2017 consisted of placing flow-fill around the culvert coupling location, placement of backfill along the culvert, removal of the pond liner/cofferdam.

Subcontractor Estimated Labor

Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
	No Labor for the Subcontractor Required				\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
Total Direct Compensation						\$ -
Subcontractor Administrative/Overhead @ 67%						\$ -
<i>*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017</i>						
Estimated Labor Total:						\$ -

Subcontractor Estimated Materials

Description	Estimated Quantity	Unit Price	Total
No Material for the Subcontractor Required		\$ -	\$ -
			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ -
Subcontractor Mark-Up @ 15%			\$ -
Estimated Materials Total:			\$ -

Subcontractor Estimated Equipment

Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
	No equipment for the Subcontractor Required			\$ -
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ -
Rental Equipment - Subcontractor Related Overhead Costs @ 10%				\$ -
<i>*Shift rate per hour based on blue book rental rate sheet dated November 28, 2017</i>				
Estimated Equipment Total:				\$ -

Total Estimated Cost to Furnish and Install (Subcontractor) \$ -



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ENGINEERING
SERVICE, INC.

Date: 9/12/2017

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 08
The work performed on 9/11/2017 consisted of placing flow-fill around the culvert coupling location, placement of backfill along the culvert, removal of the pond liner/cofferdam.

<u>Estimated Labor</u>							
Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total	Total
N/A	Superintendent (Jason Vavrina)	6	\$ 33.50	\$ -	\$ 33.50	\$ -	\$ 201.00
1511	Common Laborer (Nicholas Begaye)	10	\$ 13.70	\$ 3.53	\$ 17.23	\$ -	\$ 172.30
1535	Operator (Juan Morales)	10	\$ 19.75	\$ 3.75	\$ 23.50	\$ -	\$ 235.00
1511	Common Laborer (Castor Morales)	10	\$ 13.70	\$ 3.53	\$ 17.23	\$ -	\$ 172.30
1511	Common Laborer (Christopher Grano)	8	\$ 13.70	\$ 3.53	\$ 17.23	\$ -	\$ 137.84
			\$ -	\$ -	\$ -	\$ -	\$ -
			\$ -	\$ -	\$ -	\$ -	\$ -
						\$ 918.44	
Total Direct Compensation						\$ 615.35	
Contractor Administrative/Overhead @ 67%							
*Work classification codes used based on the Minimum Wage Decision dated 01-27-2017							
Estimated Labor Total:						\$ 1,533.79	

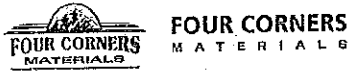
<u>Estimated Materials</u>	Description	Estimated Quantity	Unit Price	Total
	Four Corners Materials Flow-Fill (3 C.Y.)	1	\$ 482.25	\$ 482.25
			\$ -	\$ -
			\$ -	\$ -
			\$ -	\$ -
			\$ -	\$ -
Total Material Cost				\$ 482.25
Contractor Mark-Up @ 15%				\$ 72.34
Estimated Materials Total:				\$ 554.59

<u>Estimated Equipment</u>	Description	Estimated Hours	Shift Rate Per Hour	Total
Leased	2005 Caterpillar Hydr. Excav. 314C-LCR	7	\$ 71.44	\$ 500.08
			\$ -	\$ -
			\$ -	\$ -
			\$ -	\$ -
			\$ -	\$ -
Total Direct Compensation				\$ 500.08
Rental Equipment - Contractor Related Overhead Costs @ 10% (Owned Equipment)				\$ -
Estimated Equipment Total:				\$ 500.08

Total Estimated Cost to Furnish and Install (Contractor) \$ 2,588.46
 Total Estimated Cost to Furnish and Install (Subcontractor) \$ -
 Contractor Administration Compensation for Subcontractor \$ -
Total Estimated Cost \$ 2,588.46

Date Received: 9/18/2017 / Division: / Vendor#: C00864 / PO#: / Rebill#:

LORDS



P O Box 1969
Bayfield, CO 81122

Customer No: 9945
Invoice No: 1201726
Inv Date: 09/12/17
Page: Page 1 of 1
Customer PO: STEC480-008
Customer Job: 2017069 Pinion Cause

Crossfire LLC
1800 Hughes Landing Blvd Ste 500
The Woodlands TX 77380

Four Corners Materials
P O Box 1969
Bayfield, CO 81122
(505) 324-3910

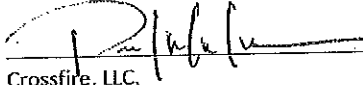
ap@crossfire-llc.com

Delivered To: 2017069 Pinion Causeway

Date	Item	Description	Quantity	UM	Unit Price	MatlTotal	TaxCode	TaxTotal	Total
									From: 05120 Pagosa Ready-Mix
Ticket #: 35520085									
09/12/17	35520085	30023344 AG CDOT FLOW FILL GCCP	3.00	CY	160.75	482.25	CO06	0.00	482.25
09/12/17	35520085	901.EC ENVIRONMENTAL FEE	1.00	EA	0.00	0.00	CO06	0.00	0.00
	Total	Cubic Yards of Readymix	3.00			482.25		0.00	482.25
Total Invoice:						482.25		0.00	482.25

"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."

Total Cubic Yards of Readymix for this Invoice 3.00


Crossfire, LLC.
10/16/17
Date

Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount: 482.25

Amount Paid: _____

Customer Name: Crossfire LLC
Customer No: 9945
Invoice #: 1201726
Date: 09/12/17
Customer Job: 2017069 Pinion Cause
Customer PO: STEC480-008
Due Date: 10/12/17

If you have any questions about your invoice please call (505) 324-3910

Remit Payment To: Oldcastle SW Group Inc
2350 S 1900 W Ste. 200
Ogden, UT 84401

Please provide your email address below if you would like to start receiving your invoices via email

**COLORADO DEPARTMENT OF TRANSPORTATION
INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK**

Project No.: STE C480-008
Project Code (SA#): 19219
CMO or F/A No.: FA 03 - Culvert

Contractor's Name: Crossfire, LLC

Subcontractor's Name: No subcontractor participated with this force account.

Description of Work: Use of Crossfire equipment and personnel to excavate and backfill new culvert section.

LABOR Employee Name	Occupation	Date: 9-11-17/ 7109594		9-12-17/ 7109597		Hours						Total Hours			
		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT		
		JASON VAVRINA	SUPERINTENDENT	6		6									
NICHOLAS BEGAYE	1511-LABOR	6		10										16	0
NICHOLAS BEGAYE	1557- LOADER	4												4	0
JUAN MORALES	1535- OPERATOR	10		10										20	0
CASTOR MORALES	1511-LABOR	10		10										20	0
CHRISTOPHER GRANO	1511-LABOR			8										8	0
														0	0
														0	0
														0	0

The hours shown here were checked against the certified payrolls.

Checked By: *[Signature]*

Date: 3/7/18

EQUIPMENT Code No.	Shift		Date: 9-11-17/ 7109594		9-12-17/ 7109597		Number of Hours						Total Hours		
	1 st	SB	Rate												
2004 CAT 928G			\$45.92	3											3
2005 CAT 314C LCR			\$71.44	7	7										14
															0
															0
															0
															0
															0
															0

MATERIAL Type	Unit	Date: 9-11-17/ 7109594		9-12-17/ 7109597		Number of Units						Total Units			
FCM Flow Fill	C.Y.			3											3
															0
															0
															0
															0
															0
															0
															0

Contractor/Subcontractor Initials *[Initials]* *[Initials]* *[Initials]* *[Initials]* *[Initials]*

Billing procedures shall conform to applicable project specifications.
I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the above modification order or agreement.
Signed: *[Signature]* Title: Project Engineer Date: 3/7/18



www.equipmentwatch.com

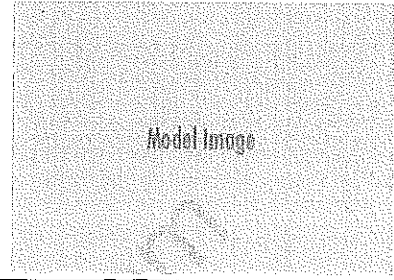
All prices shown in US\$

Rental Rate Blue Book®

September 11, 2017

Dynapac CS142 N
3-Wheel Compactors

Size Class:
9.0 MTons & Over
Weight:
23,815 lbs.



Configuration for CS142 N

Horsepower **73** Power Mode **Diesel**
Transmission **Hydrostatic**

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs Hourly	FHWA Rate** Hourly
	Monthly	Weekly	Daily	Hourly		
Published Rates	\$6,800.00	\$1,905.00	\$475.00	\$71.00	\$14.20	\$52.84
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2011: 96.8%)	(\$217.60)	(\$60.96)	(\$15.20)	(\$2.27)		
Ownership (106%)	\$394.94	\$110.64	\$27.59	\$4.12		
Operating (100%)						
Total:	\$6,977.34	\$1,954.68	\$487.39	\$72.85	\$14.20	\$53.84

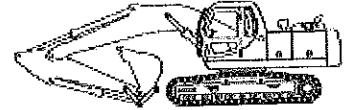
Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	18%	\$1,224.00/mo
Overhaul (ownership)	64%	\$4,352.00/mo
CFC (ownership)	7%	\$476.00/mo
Indirect (ownership)	11%	\$748.00/mo
Fuel (operating) @ 2.53	33%	\$4.71/hr

Revised Date: 2nd Half 2017

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for THOMAS BOVEE (thomas.bovee@state.co.us)

Adjustments for THOMASBOVEE2 in All Saved Models

Caterpillar 314CL CR (disc. 2008)
 Crawler Mounted Hydraulic Excavators

 Size Class:
 14.1 - 16.0 MTons
 Weight:
 32,590 lbs.

Configuration for 314CL CR (disc. 2008)

Operating Weight	14.81 mt	Net Horsepower	90 hp
Power Mode	Diesel	Bucket Capacity - Heaped	.68 cu yd

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs Hourly	FHWA Rate** Hourly
	Monthly	Weekly	Daily	Hourly		
Published Rates	\$6,650.00	\$1,860.00	\$465.00	\$70.00	\$32.75	\$70.53
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2005: 96.6%)	(\$226.10)	(\$63.24)	(\$15.81)	(\$2.38)		
Ownership (106%)	\$385.43	\$107.81	\$26.95	\$4.06		
Operating (100%)					\$32.75	\$71.44
Total:	\$6,809.33	\$1,904.57	\$476.14	\$71.68		

Rate Element Allocation

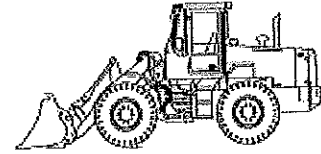
Element	Percentage	Value
Depreciation (ownership)	36%	\$2,394.00/mo
Overhaul (ownership)	49%	\$3,258.50/mo
CFC (ownership)	7%	\$465.50/mo
Indirect (ownership)	8%	\$532.00/mo
Fuel (operating) @ 2.53	25%	\$8.20/hr

Revised Date: 2nd Half 2017

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for THOMAS BOVEE (thomas.bovee@state.co.us)

Rental Rate Blue Book®
Caterpillar 928GZ (disc. 2007)
 4-Wd Articulated Wheel Loaders

 Size Class:
 135 - 149 HP
 Weight:
 27,140 lbs.

Configuration for 928GZ (disc. 2007)

Bucket Capacity - Heaped	2.6 cu yd	Operator Protection	BROPS
Net Horsepower	143 hp	Power Mode	Diesel

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs Hourly	FHWA Rate** Hourly
	Monthly	Weekly	Daily	Hourly		
Published Rates	\$3,580.00	\$1,000.00	\$250.00	\$38.00	\$25.05	\$45.39
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2004: 96.8%)	(\$114.56)	(\$32.00)	(\$8.00)	(\$1.22)		
Ownership (106%)	\$207.93	\$58.08	\$14.52	\$2.21		
Operating (100%)						
Total:	\$3,673.37	\$1,026.08	\$256.52	\$38.99	\$25.05	\$45.92

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	41%	\$1,467.80/mo
Overhaul (ownership)	39%	\$1,396.20/mo
CFC (ownership)	8%	\$286.40/mo
Indirect (ownership)	12%	\$429.60/mo
Fuel (operating) @ 2.53	47%	\$11.65/hr

Revised Date: 2nd Half 2017

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for THOMAS BOVEE (thomas.bovee@state.co.us)

COLORADO DEPARTMENT OF TRANSPORTATION EQUIPMENT RENTAL RATE DETERMINATION REQUEST		Project No.:	STE CABO-008		Project Code (PCN):	19219
		Contractor:				
		Crossfire, LLC				
FIA, CMO, MCR No.:					FIA Culvert Repair	
Equipment Description:		Year:	Make:	Model:		
Crossfire Hydrovac Truck (Fleet of trucks)		2012 2013 2014	Western Star Peterbilt	Vary		
Series:	Serial No.	HP:	GVW (Loaded weight):	<input checked="" type="checkbox"/> EROPS <input type="checkbox"/> ROPS <input type="checkbox"/> None		
Vary	Vary	Vary	72,000 lb			
Trucks: Wheel Combination:	Fuel Type:	Trailers: Not Applicable				
<input type="checkbox"/> 4x2 <input type="checkbox"/> 4x4 <input checked="" type="checkbox"/> 4x6 <input type="checkbox"/> Other	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Other:	Length: _____ ft. # Axles: _____ <input type="checkbox"/> Tilt Deck <input type="checkbox"/> Non-Tilt Deck Hitch type: <input type="checkbox"/> Gooseneck <input type="checkbox"/> Folding Gooseneck <input type="checkbox"/> Other				
Cab Type:	Dump Trucks & Dump Trailers:		Capacity (cubic yards, gallons, PSI, lift height, extension, # lights on tower, etc)			
<input checked="" type="checkbox"/> Conventional <input type="checkbox"/> Crew	<input type="checkbox"/> Rear Dump <input type="checkbox"/> Single axle <input type="checkbox"/> Bottom Dump <input checked="" type="checkbox"/> Double axle <input type="checkbox"/> Side Dump <input type="checkbox"/> Triple axle		Debris Tank: 13.5 yards 8" inlet at Truck, 6" inlet at attachment			
Equipment Owner Name:	Owner Phone No.	Owner Equipment ID (if available):				
Crossfire (Steve Houge)	970-903-7371	Varies				
Remarks: (any additional information that should be considered?)						
Submitted By:		Region No.:	Date:			
Milton Lee		5	September 11, 2017			


RATE DETERMINATION

Equipment No. (Assigned by CDOT and may be used on CDOT Form 10 – Inspector's Report for Force Account Work):

BLUE BOOK REFERENCE	Volume:	Section:	Page:	Date (Blue Book Section):
SHIFT RATE PER HOUR				
Bare Rate (Federal Participating):				\$ 54.91
Operating Cost (Federal Participating):				\$ 69.20
TOTAL				\$ 124.11
STANDBY RATE PER HOUR				
Adjusted Bare Rate (Federal Participating):				\$ 27.46
TOTAL				\$ 27.46

These rates will apply to the above entire F/A, CMO or MCR Line situation. If used on any other force account situation, new rates will be needed to determine if rates have changed per Blue Book Revisions.

The Colorado Department of Transportation maintains procedures for determining equipment rental costs which are reimbursable to contractors performing force account work on CDOT construction projects. These rates do not include profit or operator's wages or fringe benefits. These rates have no legal status beyond CDOT contracts.

Signed:	 COLORADO Department of Transportation Region 5	Digitally signed by Jeremy McDonald Date: 2017.10.27 12:45:51 -06'00'	Title: Finals Administrator	Date: 10/27/17
---------	--	--	--------------------------------	-------------------

Distribution: Project Engineer (copy)
Contractor (copy)
Finals Administrator File (original)

Previous editions are obsolete and should not be used

CDOT Form 580 05/17

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region 5	Field sheet # 266294-2
	Contract ID 19219	Date Submitted 3-21-18
	Project No. STE C480-008	
	Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P.	

Metric units yes no

Material Type FORCE ACCOUNT - WAL-MART UTILITIES & IRRIGATION	Field Lab phone	Cell Phone
Material Code (LIMS)	Item N/A	Class
Grading	Special Provisions <input type="checkbox"/> yes	
Previously used on Project No.:	Previous CDOT Form #157 F/S No.(s):	<input type="checkbox"/> CDOT Form #633 (sack) <input type="checkbox"/> CDOT Form #634 (can)

- Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from (stationing), etc.
- Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided , etc.

A FORCE ACCOUNT WAS UTILIZED TO PAY FOR RELOCATION OF THE WAL-MART SIGN ELECTRICAL WIRING AND THE IRRIGATION PIPING NEAR THE SIGN. THE MANUFACTURER'S COC ARE ATTACHED, FOR A PULL BOX (13"X24"X24"), 1" SCH 80 PLASTIC CONDUIT ELECTRICAL. 2" & 1" PVC WATER PIPING.

ser ID		
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample ID (#6)
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	Date checked:
Preliminary <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Emergency <input type="checkbox"/>	Date needed	
Contractor CROSSFIRE, LLC	Supplier HUBBELL PRIME CONDUIT CHARLOTTE PIPE & FOUNDRY COMPANY	
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or owner	
Quantity represented 1 LS	Previous quantity 0	Total quantity to date 1 LS
Sample submitted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipped specified quantity to: <input type="checkbox"/> Central lab <input type="checkbox"/> Region lab	Via
Date		
Sampled or inspected by (print name) CLIFTON LEE, PE	Title PROJECT ENGINEER	E-mail
Supervisor (Pro./Res./Mats. Engr./Maint. Supt.) (print name) MIKE DAVIS, PE	Title PRESIDENT-DES	Residency

Distribution: White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)
 Canary copy - Region Materials Engineer
 Pink copy - Resident Engineer

Previous editions are obsolete and may not be used.



Lenoir City, TN 37771
Tel: 865-635-2135
Fax: 865-635-2160
E-Mail:mfisher@hubbell.com

September 22, 2017

Mr. Clifton Lee
Davis Engineering Service, Inc.
188 S. 8th Street
Pagosa Springs, CO 81147

Subject: Enclosure Materials Data

Dear Mr. Lee,

I have been asked to provide you documentation on two of our enclosure sizes. The two sizes provided are:
PG1324BA12 (J091716JH1) / PG1324HH00
PG2436BA24 (J072015OA2) / PG2436HH00

These products are going to be used for:
Project No.: STE C480-008
Project Code: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path
Contractor: Crossfire, LLC
Subcontractor: One Touch Electric, Inc.
Supplier: Border States Electric to One Touch Electric, Inc.

These product sizes are made in two of our manufacturing plants. The manufacturing plants are located in
Hubbell Lenoir City
2911 Industrial Park Drive
Lenoir City, TN 37771

BEL Manufacturera, S.A. de C.V.
Boulevard Juan Pablo II #2554
Col. Fray Garcia de San Francisco
Cd. Juarez Chih. 32575

These two products are tested at both facilities by Underwriters Laboratories (UL) and our Quality Control Technicians. UL comes to each of the plants quarterly, where they pull random parts from our inventory and test them to the loading we state in our literature. The materials used our products are also verified by UL to make sure we offer what we state in our literature. If you have any additional questions on our products, please call me to discuss.

We appreciate your business.

Sincerely,
Hubbell Lenoir City, Inc.

Michael Fisher
Senior Product Engineer

** Force Account - Walmart Utilities & Irrigation*

(1) 13"x24"x24" Pull Box

(3) each, item 613-07023 Pull Box (24"x36"x24")

*(1) each, item 613-07023 Pull Box (24"x36"x24")
for Change Order No. 1*

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ** see to the right* (quantity and units) of pay item ** see to the right* (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

[Signature]
Contractor Rep. Signature

01/26/18
Date

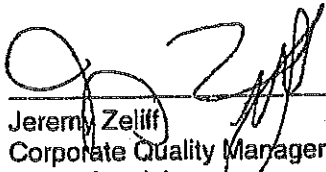
Prime Conduit

CERTIFICATE OF CONFORMITY

DATE: 09-22-17

WE HEREBY CERTIFY THAT: (description of the material)	1" Schedule 80 Nonmetallic Electrical PVC Conduit Dated 04/04/17 Line 8E 08:12
MANUFACTURED BY:	Prime Conduit, Inc.
FURNISHED TO:	One Touch Electric, Inc.
SALES ORDER/CUSTOMER PO/PROJECT:	CDOT Project No.: STE C480-008 CDOT Code; 19219
CERTIFICATE ID NUMBER:	JZOKC092217-1
APPLICABLE STANDARDS:	ETL Listed, Conforms to UL651 NEMA TC-2 Prime Conduit's Product Specification

The 1" Schedule 80 product listed above was produced, inspected, and tested per the UL 651 standard at Prime Conduit's manufacturing facility located in Oklahoma City, Ok. This Schedule 80 product conforms to UL651 per ETL listing, NEMA TC-2, and Prime Conduit's product specification.



 Jeremy Zeiff
 Corporate Quality Manager
 Prime Conduit
 C: (405) 588-2745

★ - Used in the Force Account Work to relocate the Walmart sign electrical wiring. Approximate by 35 lineal feet was used and paid.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS NEEDED & 35 L.F. (quantity and units) of pay item F/A-Walmart Utilities & Irrigation (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.



 Contractor Rep. Signature

01/26/18
 Date

CHARLOTTE
PIPE AND FOUNDRY COMPANY

4210 Old Charlotte Highway
Monroe, North Carolina 28110

Phone No.: 800-438-6091

Sales Order No.:

Customer PO No.:

Delivery No.:

ExPlant Date:

Delivery Point:

Transportation ID:

Compartment/Seals:

Sold-To:

Physical and Dimensional Testing

Short term rupture

Wall Thickness

Out of Roundness

Outside Diameter

CERTIFICATE OF ANALYSIS

Date: 09/18/17

Page: 1 of 1

Certificate Recipient:

Richard Giesler

One Touch Electrical

Hwy 160 Pagosa Springs, CO 81147

Material:

Run Date:

PVC 7200 2"x 10' Pipe

05/28/17

Inspection Lot No:

Sold-To:

**Product Specifications
ASTM D1785**

ASTM Requirements

Results

890 min psi

Pass @ 890 psi

.154" min - .174" max

.159" avg.

.024 max

0.014

2.375" nom +/- 0.006"

2.380"

We guarantee that the above analytical results are in conformity with the agreed upon specifications.

Approved by Charlotte Pipe and Foundry
Quality Assurance Department

QC 91 - 11/13

* - Used in the Force Account work to relocate the irrigation piping near the Walmart sign. Approximately 40 lineal feet was used and paid.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As needed @ 40 L.F. (quantity and units) of pay item F/A - Walmart Utilities & Irrigation (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

Date

01/26/18

CHARLOTTE
PIPE AND FOUNDRY COMPANY

4210 Old Charlotte Highway
Monroe, North Carolina 28110

Phone No.: 800-438-6091

Sales Order No.: N/A

Customer PO No.:

Delivery No.:

ExPlant Date:

Delivery Point:

Transportation ID:

Compartment/Seals:

Manufactured and Tested at:

Charlotte Pipe and Foundry - Cedar City
1177 North 5300 West
Cedar City, UT 84721

CERTIFICATE OF ANALYSIS

Date: 09/19/17

Page: 1 of 1

Certificate Recipient:

CDOT Project No: STE C480-008

CDOT Project Code: 19219

Richard Giesler

One Touch Electrical

Hwy 160 Pagosa Springs, CO 81147

Material: PVC Run Date: 5/15/2017

4010 1" PVC sch40 Solid Wall pipe

Inspection Lot No:

Sold-To:

Product Specifications
ASTM D1785


Physical and Dimensional Testing

	Requirements	Results
Pipe Wall Thickness	.133" min - .153" max	.138" avg
Pipe OD	1.315" + 0.005" / - 0.005"	1.317"
Pipe out-of-roundness	0.020"	0.006"
Flattening	>/= 25% inner OD	Pass

We guarantee that the above analytical results are in conformity with the agreed upon specifications.

Approved by Charlotte Pipe and Foundry
Quality Assurance Department

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As needed, 55 L.F. (quantity and units) of pay item FIA-Walmart Utilities & Irrigation (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.


Contractor Rep. Signature

01/26/18
Date

* - Used in the Force Account work to relocate the irrigation piping near the Walmart sign. Approximate by 55 linear feet was used and paid.



DAVIS
ENGINEERING
SERVICE, INC.

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date: 9/12/2017

Force Account - Walmart Utilities & Irrigation Relocation

Subcontractor Estimated Labor

Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
1501	Electrician	9	\$ 28.06	\$ 8.76	\$ 36.82	\$ 331.38
1511	Laborer (Arch. County)	12	\$ 13.70	\$ 3.53	\$ 17.23	\$ 206.76
1535	Backhoe/Trackhoe	13	\$ 19.75	\$ 3.75	\$ 23.50	\$ 305.50
					\$ -	\$ -
					\$ -	\$ -
Total Direct Compensation						\$ 843.64
Subcontractor Administrative/Overhead @ 67%						\$ 565.24
<i>*Work classification codes used based on the Minimum Wage Decision dated 01-06-2017</i>						
Estimated Labor Total:						\$ 1,408.88

Subcontractor Estimated Materials

Description	Estimated Quantity	Unit Price	Total
Invoiced Materials	1	\$ 562.60	\$ 562.60
			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ 562.60
Subcontractor Mark-Up @ 15%			\$ 84.39
Estimated Materials Total:			\$ 646.99

Subcontractor Estimated Equipment

Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
Rental	Deere 35D - Crawler Mounted Comp. Excavator	6	\$ 19.01	\$ 114.06
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ 114.06
Rental Equipment - Subcontractor Related Overhead Costs @ 10%				\$ 11.41
<i>*Shift rate per hour based on blue book rental rate sheet dated September 11, 2017</i>				
Estimated Equipment Total:				\$ 125.47

Total Estimated Cost to Furnish and Install (Subcontractor) \$ 2,181.34



DAVIS
ENGINEERING
SERVICE, INC.

CDOT No.: STE C480-008
CDOT Project Code: 19219
Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date: 9/12/2017

Force Account - Walmart Utilities & Irrigation Relocation

Estimated Labor

Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	Total
No Labor for the Contractor Estimated						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
Total Direct Compensation						\$ -
Contractor Administrative/Overhead @ 67%						\$ -
<i>*Work classification codes used based on the Minimum Wage Decision dated 01-06-2017</i>						
Estimated Labor Total:						\$ -

Estimated Materials

Description	Estimated Quantity	Unit Price	Total
No Material for the Contractor Estimated			\$ -
			\$ -
			\$ -
			\$ -
Total Material Cost			\$ -
Contractor Mark-Up @ 15%			\$ -
Estimated Materials Total:			\$ -

Estimated Equipment

Ownership	Description	Estimated Hours	Shift Rate Per Hour	Total
No Equipment for the Contractor Estimated				\$ -
				\$ -
				\$ -
				\$ -
Total Direct Compensation				\$ -
Rental Equipment - Contractor Related Overhead Costs @ 10%				\$ -
<i>*Shift rate per hour based on blue book rental rate sheet dated September 11, 2017</i>				
Estimated Equipment Total:				\$ -

Total Estimated Cost to Furnish and Install (Contractor) \$ -

Total Estimated Cost to Furnish and Install (Subcontractor) \$ 2,185.10

Contractor Administration Compensation for Subcontractor \$ 159.25

Total Estimated Cost	\$ 2,344.35
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**COLORADO DEPARTMENT OF TRANSPORTATION
INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK**

Project No.: STE C480-008

Project Code (SA#): 19219

CMO or F/A No.:
F/A 01-Walmart Sign Installation

Contractor's Name: CROSSFIRE, LLC

Subcontractor's Name: ONE TOUCH ELECTRIC, INC.

Description of Work: REPAIR TO SPRINKLER SYSTEM & WIRE WALMART SIGN

LABOR Employee Name	Occupation	Date:										Total Hours	
		8/9/2017		8/10/2017		8/14/2017		8/21/2017				ST	OT
		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT		
TALLBROTHER, HIRAM	OPERATOR	6		5		1		1				13	0
BEGAY, TYLER	C. LABORER	6		5		1						12	0
GIESLER, DICK	M. ELECTRICIAN/OWNER	4		4				1				9	0
												0	0
												0	0
												0	0
												0	0
												0	0

The hours shown here were checked against the certified payrolls. Checked By: *Cliff* Date: 9/12/2017

EQUIPMENT Code No.	Shift		Date:	Number of Hours										Total Hours
	1 st	SB		Rate	8/9/2017		8/10/2017		8/14/2017		8/21/2017			
35D MINI-EX			19.01	6										6
														0
														0
														0
														0
														0
														0

MATERIAL Type	Unit	Date:										Total Units	
		8/9/2017		8/10/2017		8/14/2017		8/21/2017					
Note: A Certified Invoice for Materials is required as part of billing.													
		Number of Units											
1" SCH. 40 PVC		55 FEET										55	
1" RIGID 90 ELBOW		1										1	
1" PVC F.A		2										2	
TIER 15 J BOX & LID		1										1	
12-2 UFB WIRE		50										50	
1" SCH. 80 PVC		35										35	
2" SCH. 40 PVC		40										40	
2" PVC COUPLING		5										5	
Contractor/Subcontractor Initials		<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>	<i>Sm</i>

Billing procedures shall conform to applicable project specifications.
I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the above modification order or agreement.
Signed: *Cliff* Title: Project Engineer Date: 9/15/2017

COLORADO DEPARTMENT OF TRANSPORTATION INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK	Project No.: STE C480-008
	Project Code (SA#): 19219
	CMO or F/A No.: F/A 01 - Wal-Mart Sign Irrigation

Contractor's Name: CROSSFIRE, LLC
Subcontractor's Name: ONE TOUCH ELECTRIC, INC.
Description of Work: REPAIR TO SPRINKLER SYSTEM & WIRE WALMART SING

LABOR Employee Name	Occupation	Date:												Total Hours		
		8/9/17		8/10/17		8/14/17		8/21/17						ST	OT	
		ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT			
															0	0
															0	0
															0	0
															0	0
															0	0
															0	0
															0	0
															0	0
															0	0
															0	0
															0	0

The hours shown here were checked against the certified payrolls. Checked By: *Chifera* Date: 9/12/2017

EQUIPMENT Code No.	Shift		Date:		Number of Hours								Total Hours		
	1 st	SB	8/9/17	8/10/17	8/14/17	8/21/17									
															0
															0
															0
															0
															0
															0
															0
															0

MATERIAL Type	Date:		Number of Units								Total Units		
	Unit	8/9/17	8/10/17	8/14/17	8/21/17								
Note: A Certified Invoice for Materials is required as part of billing.													
2" PVC 90					2								2
2" PVC 45					2								2
1" SCH 40 PVC WATER CONDUIT					40								40
1" PVC COUPLING					10								10
1" PVC 90					2								2
PVC GLUE					1								1
#10 THHN WIRE					460								460
													.0

Contractor/Subcontractor Initials *Pr 10 Pr 10 Pr 10 Pr 10*

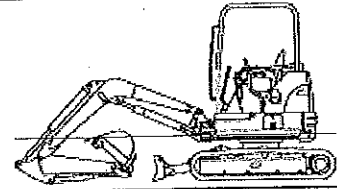
Billing procedures shall conform to applicable project specifications.

I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the above modification order or agreement.

Signed: *Chifera* Title: *Project Engineer* Date: *9/15/2017*

Rental Rate Blue Book®
Deere 35D

Crawler Mounted Compact Excavators

 Size Class:
 3.1 - 4.0 MTons
 Weight:
 7,672 lbs.

Configuration for 35D

Operator Protection	EROPS	Bucket Capacity - Heaped	4 cu ft
Operating Weight	3.48 mt	Net Horsepower	28.6 hp
Power Mode	Diesel		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs Hourly	FHWA Rate** Hourly
	Monthly	Weekly	Daily	Hourly		
Published Rates	\$1,795.00	\$505.00	\$125.00	\$19.00	\$8.50	\$18.70
Adjustments						
Region (100%)						
Model Year (2012: 97.2%)	(\$50.26)	(\$14.14)	(\$3.50)	(\$0.53)		
Ownership (106%)	\$104.68	\$29.45	\$7.29	\$1.11		
Operating (100%)						
Total:	\$1,849.42	\$520.31	\$128.79	\$19.58	\$8.50	\$19.01

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	43%	\$771.85/mo
Overhaul (ownership)	37%	\$664.15/mo
CFC (ownership)	8%	\$143.60/mo
Indirect (ownership)	12%	\$215.40/mo
Fuel (operating) @ 2.53	32%	\$2.68/hr

Revised Date: 2nd Half 2017

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for THOMAS BOVEE (thomas.bovee@state.co.us)

COLORADO DEPARTMENT OF TRANSPORTATION EQUIPMENT RENTAL RATE DETERMINATION REQUEST		Project No.:		Project Code (PCN):	
		STE CABO-008		19219	
		Contractor:			
		Cross Fire, LLC			
		F/A, CMO, MCR No.:			
		F/A - Walmart Utilities			
Equipment Description:		Year:	Make:	Model:	
Hydraulic Excavator (Mini)		July 2012	John Deere	35D	
Series:	Serial No.	HP:	GVW (Loaded weight):	<input checked="" type="checkbox"/> EROPS <input type="checkbox"/> ROPS <input type="checkbox"/> None	
Compact Excavator	*1FFD35DXLCG269319*	29.9	6358LB		
Trucks: Wheel Combination:	Fuel Type:	Trailers: NOT Applicable			
<input type="checkbox"/> 4x2 <input type="checkbox"/> 4x4 <input type="checkbox"/> 4x6 <input checked="" type="checkbox"/> Other	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Other:	Length: _____ ft. # Axles: _____ <input type="checkbox"/> Tilt Deck <input type="checkbox"/> Non-Tilt Deck Hitch type: <input type="checkbox"/> Gooseneck <input type="checkbox"/> Folding Gooseneck <input type="checkbox"/> Other			
Cab Type:	Dump Trucks & Dump Trailers: NOT Applicable		Capacity (cubic yards, gallons, PSI, lift height, extension, # lights on tower, etc)		
<input checked="" type="checkbox"/> Conventional <input type="checkbox"/> Crew	<input type="checkbox"/> Rear Dump <input type="checkbox"/> Single axle <input type="checkbox"/> Bottom Dump <input type="checkbox"/> Double axle <input type="checkbox"/> Side Dump <input type="checkbox"/> Triple axle		20" wide x 16" bucket		
Equipment Owner Name:	Owner Phone No.	Owner Equipment ID (if available):			
Rent All Rentals	970-565-4487	None indicated			
Remarks: (any additional information that should be considered?)					
Submitted By:		Region No.:	Date:		
Chilton Lee (Local Agency)		5	August 29, 2017		

RATE DETERMINATION

Equipment No. (Assigned by CDOT and may be used on CDOT Form 10 - Inspector's Report for Force Account Work):

BLUE BOOK REFERENCE	Volume:	Section:	Page:	Date (Blue Book Section):
SHIFT RATE PER HOUR				
Bare Rate (Federal Participating):			\$ _____	
Operating Cost (Federal Participating):			\$ _____	
TOTAL			\$ _____	
STANDBY RATE PER HOUR				
Adjusted Bare Rate (Federal Participating):			\$ _____	
TOTAL			\$ _____	

These rates will apply to the above entire F/A, CMO or MCR Line situation. If used on any other force account situation, new rates will be needed to determine if rates have changed per Blue Book Revisions.

The Colorado Department of Transportation maintains procedures for determining equipment rental costs which are reimbursable to contractors performing force account work on CDOT construction projects. These rates do not include profit or operator's wages or fringe benefits. These rates have no legal status beyond CDOT contracts.

Signed:	Title:	Date:
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More saving.
More doing.™

1301 S CAMINO DEL RIO
DURANGO, CO 81303 (970)2597954

1534 00002 94348 08/07/17 05:06 PM
CASHIER CHELSEA

611942066643 PVC40 PEPIPE <A>	
1" X 10' PVC40 PE PIPE	44.10 ✓
1094.41	
611942039494 DWV PIPE <A>	
2" X 10' PVC40-DWV PE PIPE	46.90
599.38	
049081137663 2 PVC CPLG <A>	
2" PVC COUPLING SXS	5.45 ✓
5@1.09	5.96 ✓
038753307565 PURPL PRIMER <A>	
80Z PURPLE PRIMER NSF/UPC	
049081637545 1" 10PK CPLG <A>	3.90 ✓
1" PVC COUPLING SXS 10 PACK	
051411641108 1 IN RIGID <A>	
1IN RIGID 90 DEGREE ELBOW	17.08 ✓
2@8.54	35.97 ✓
032886266089 12-2 UF 50' <A>	
12-2 UF W/G 50 FT	

7.9%
 SUBTOTAL 159.39
 SALES TAX 12.59
 TOTAL \$171.98
 XXXXXXXXXXXX3299 HOME DEPOT 171.98
 AUTH CODE 007043/4025013 TA

ONE TOUCH ELECTRIC
GIESLER DICK
P.O.#/JOB NAME: PAGSA



1534 02 94348 08/07/2017 7115

RETURN POLICY DEFINITIONS
 POLICY ID: 11 DAYS: 365 POLICY EXPIRES ON: 08/07/2018
 A. THE HOME DEPOT RESERVES THE RIGHT TO LIMIT / DENY RETURNS. PLEASE SEE THE RETURN POLICY SIGN IN STORES FOR DETAILS.

PONDEROSA LUMBER COMPANY

08/10/17 JBE 06000001
09:35:48 ps2
Ord#: 60153729 Inv#: 60141598 ✓

30620 PVC 45DEG ELBOW ZIN SLIP(6112866)
1 EA @ 1.990 1.99

SUB TOTAL	1.99
TAX	0.14
TOTAL	2.13
CASH	-2.13

NO RETURNS WITHOUT RECEIPT
THANK YOU FOR SHOPPING

"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."

Anta Giesler
One Touch Electric/Inc.

9-1-17
Date



Border States Electric Supply
 Electrical Wholesale Supply of Utah | Western Extralife
 Shealy Electrical Wholesalers

INVOICE

BSE Invoice#: 913416413
 Cust Acct#: 203315
 P.O.#: Pagosa CDOT
 Sales Order#: 18790563
 Sales Doc Type: Sales Order
 Packing Slip#: 8020909107
 Ship Condition: Our Truck
 Payment Terms: 1.0 % 10th prox.net 25th (25)

Date: 07/20/2017

Border States Electric - FRM
 865 South Browning Parkway
 Farmington NM 87401-1007
 Phone: 505-324-8800

One Touch Elec-CDOT STE C480-008
 Job-CDOT STE C480-008 Pinion
 Causeway Multi-use Trail
 3228 CR 21
 Cortez CO 81321-8613

Please remit to:
 Border States Electric Supply
 PO Box 911105
 Denver CO 80291-1105

Ship to:
 One Touch Electric Inc
 3228 CR 21
 Cortez CO 81321-8613

Cust Item	BSE Item	Material MFG - Description	Order Qty	Ship Qty	Back Ordered	Price	Per	UoM	Total Value
	000010	104909 EPVC - FEM-ADPT-2IN-PVC In Stock	4 EA	4		48.86	/100	EA	1.95
	000020	109107 PIC - 2IN-90DEG-GALV-ELBOW In Stock	2 EA	2		1,138.10	/100	EA	22.76
	000030	114978 MMM - 1100-PRINTED-2X100FT TAPE In Stock	3 EA	3		7.27	/1	EA	21.81
	000060	103185 QUC - PG1324BA12 BOX OB 13X24X12 CORE ITEM	1 EA	1		138.72	/1	EA	138.72
	000070	103253 QUC - PG1324HA0017 CVR BD HD /HW-ELECTRIC CORE	1 EA	1		157.05	/1	EA	157.05
	000080	106381 EPVC - ELB-BL-1IN-90DEG-STD-SCH40	1 EA	1		64.56	/100	EA	0.65
	000090	2243871 EPVC - SCH40-1IN-10FT-PVC-CONDUIT	30 FT	30		28.69	/100	FT	8.61
	000100	2243884 EPVC - SCH80-1IN-10FT-PVC-CONDUIT	40 FT	40		45.70	/100	FT	18.28
	000110	2243886 EPVC - SCH80-2IN-10FT-PVC-CONDUIT	50 FT	50		93.04	/100	FT	46.52
	000120	2243888 EPVC - SCH80-3IN-10FT-PVC-CONDUIT	50 FT	50		166.53	/100	FT	83.27
	000130	109115 PIC - 3IN-90DEG-GALV-ELBOW	4 EA	4		2,762.66	/100	EA	110.51
	000140	105012 EPVC - FEM-ADPT-3IN-PVC	8 EA	8		135.13	/100	EA	10.81
	000150	162387 GRC - 1IN-GALV-STEEL CONDUIT	20 FT	20		237.53	/100	FT	47.51
	000160	109098 PIC - 1IN-90DEG-GALV-ELBOW	2 EA	2		446.84	/100	EA	8.94
	000170	104876 EPVC - FEM-ADPT-1IN-PVC	4 EA	4		25.32	/100	EA	1.01
	000171	103186 QUC - PG2436BA24 BOX OB 24X36X24 040 Packing Slip No: 8021004842	3 EA	3		485.00	/1	EA	1,455.00

INVOICE

BSE Invoice: 913416413

Date: 07/20/2017

Cust Acct:
203315 One Touch Elec-CDOT STE C480-008

Cust Item	BSE Item	Material MFG - Description	Order Qty	Ship Qty	Back Ordered	Price	Per	UoM	Total Value
	000172	2359437 QUC - PG2436HH0017-CVR BD HD X3/HW-ELECTR.CORE 040 Packing Slip No: 8021004842	1	EA	1	420.58	/1	EA	420.58

Cash discount of 25.57 by 08/10/2017	Shipping and Handling \$	146.10
Total due by 08/25/2017	Total \$	2,700.08
Mail at least 7 business days before due date.	State Tax \$ 2.900 %	74.09
Please return invoice with your remittance noting all adjustments.	County Tax \$ 0.000 %	0.00
	Local Tax \$ 0.000 %	0.00
	Other Tax1 \$ 0.400 %	10.20
	Other Tax2 \$ 0.000 %	0.00
	Other Tax3 \$ 0.000 %	0.00
	Tax Subtotal \$	84.29
	Net Invoice Amount \$	2,784.37

A finance charge of 1.5% per month or the maximum allowable by law whichever is greater, will be assessed if payment is not received by invoice due date.

To access BSE's Terms and Conditions of Sale, please go to <https://www.borderstateselectric.com>

Delivery: 8020909107 Received by:

Anita Giesler

Anita Giesler
07/13/2017 15:57:29

The customer signature certifies the materials described herein are being used in construction of the improvements for the above referenced project.

Delivery: 8021004842 Received by:

Kathy Stone

Kathy Stone
07/13/2017 15:57:29

The customer signature certifies the materials described herein are being used in construction of the improvements for the above referenced project.

"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."

Anita Giesler
One Touch Electric, Inc.

9-1-17
Date

PONDEROSA LUMBER COMPANY

08/08/17 JRE 06000001
15:06:59 ps1
Ord#: 60152919 Inv#: 60140869

30710 1 SXS 90 PVC ELBOW(6151500)
1 EA @ 0.990 0.99
30710 1 SXS 90 PVC ELBOW(6151500)
1 EA @ 0.990 0.99
30720 PVC 90DEG ELBOW 2IN SLIP(6121420)
1 EA @ 2.790 2.79

SUB TOTAL 4.77
TAX 0.33
TOTAL 5.10

CASH -5.10

NO RETURNS WITHOUT RECEIPT
THANK YOU FOR SHOPPING

PONDEROSA LUMBER COMPANY

08/10/17 JBE 06000001
09:05:18 ps3
Ord#: 60153700 Inv#: 60141568

30620 PVC 45DEG ELBOW 2IN SLIP(6112866)
1 EA @ 1.990 1.99
30620 PVC 45DEG ELBOW 2IN SLIP(6112866)
1 EA @ 1.990 1.99

SUB TOTAL 3.98
TAX 0.27
TOTAL 4.25

CASH -5.00
CHANGE -0.75

NO RETURNS WITHOUT RECEIPT
THANK YOU FOR SHOPPING

"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."

Arita Guesler
One Touch Electric, Inc.

9-1-17
Date

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

September 9, 2017

Crossfire, LLC
820 Airport Road
Durango, CO 81303

Attn: Paul Martin

Re: CDOT STE C480-008/Force Account invoice #2017-5317

Paul,

One Touch Electric, Inc. hereby certifies that 460 linear feet of #10 THHN stranded wire and 25 linear feet of 1" Schedule 40 PVC conduit was taken from stock owned by One Touch Electric, Inc., and that the price shown accurately reflects the price (less sales tax) that was paid, and that the material was installed on the WalMart Sign force account work done under the above-referenced CDOT project.

Thank you,



Anita Giesler
Sec/Treas