

PLANTMIX AND RECYCLED SURFACE ITEMS

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OVERVIEW

All Plantmix and Recycled Bituminous Surfacing Items must be measured. Documentation examples for a few selected Plantmix and Recycled Bituminous Surfacing Items are illustrated in this chapter. If there are items which cannot be documented according to the following examples, contact the Construction Admin Services Section for assistance.

When material samples are taken for the Materials Division labs, refer to the [AWP Sample Records](#) document for details.

Forms change periodically, go to the NDOT Website [Construction Forms](#) Area for the latest form available.

HOT PLANT/MARINATION INSPECTOR'S RESPONSIBILITIES – PLANTMIX SURFACING ITEMS

- Receive a copy of the current Jobmix Formula from the Office Engineer.
- Complete the Daily Plant Inspector spreadsheet (Form No. 040-011A) and attach to the Mobile Inspector Report Details. Refer to Part 3, Forms, in the [Field Testing Guide](#) for details. Contact Construction Division Quality Assurance for assistance.
 - Make sure to record ALL Plantmix Wasted in the Report of Asphalt Quantities section of the 040-011A form.
- Collect a Bill of Lading (B/L) (Figure 10-1) for each delivery of asphalt cement and/or mineral filler.
 - Record the contract ID in the upper right-hand corner.
 - Check and initial all weight calculations.
 - Turn into the Office Engineer each day.

3608

 VVVVVV
 VVVVVV
 VVVVVV

Sold To: **GRAYMONT**
 Sierra Nevada Construction Inc.
 P.O. BOX 50760
 Sparks NV 89435

Graymont Western US Inc.
 Pilot Peak Plant
 13 Miles W of West Wendover, Exit 398
 P.O. Box 2520
 West Wendover NV 89883

Ship To: 204650
 Sierra Nevada Construction Inc.
 Mustang Hot Plant
 Mustang NV 89434

Lead # 8/21/15

BILL OF LADING - Not Negotiable

Customer#: 187173	S/L Number: 4007049	Page: 1
Customer FCB: Mustang	Ship Date: 20-Aug-2015	
Our Order No: 178607 80	Broker #: 172957 FCA-COLLECT	
Related Ord No:	Broker Name: Customer's Truck	
Order Date: 31-Aug-2015	Zone: Blank	
Terms: Net 30	Delivery: 21-Aug-2015	
Shipment#: S6449C26	CTO/NIR:	172957

Gross: 128940 lb 22.0"	Scale ID:	
Tare: 46180 lb 22.0"	Car/Truck #: 130	
Net: 82760 lb MAX WT	Carrier: Customer's Truck	

Item	Quantity	Description
2000	41.380 TN	Chem Hydrate, Bulk, High Calcium Hydrated Lime

This is to certify that Hydrated Lime produced at Pilot Peak, NV by Graymont Western US Inc. for the above named project identified and covered by this BL conforms to the chemical and physical requirements of ASTM C1697 and AASHTO M303 Type 1 Hydrate.

EMERGENCY TEL. NO. WHMIS: (800) 424-9300 CHEMTREC (US)
 (613) 596-6666 CANUTEC (CANADA)

Delivery Instructions:
 MUSTANG HOT PLANT

Shipper/Deputy: _____ per *SA*
 Carrier: _____ per *[Signature]*
 Consignee: _____ per *[Signature]*

S/L Number 4007049

SHIPPING NOTICE-Customer Copy

Figure 10-1: Bill of Lading

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR (PLANTMIX SURFACE)

1. Create a DWR in Mobile Inspector (Details only) daily to document the activity being monitored at the plant. Refer to the [Mobile Inspector User Guide](#) for details on using this application.
2. Record the following required information in the Report Details window (Figure 10-2):
 - **Date**
 - **Weather**
 - **Low Temp and High Temp**
 - **Attachments** : Attach the completed Daily Plant Inspector spreadsheet (Form No. 040-011A)
 - **Remarks**: Record the following information:
 - Checks every hour to determine bit ratio
 - Average daily bitumen ratio, calculated from daily totals of mix, aggregate, and asphalt.
 - Quantities of material delivered to the plant, plant settings, and moisture corrections.
 - Plant production rate and plant operation times, noting any time the plant is not in operation and the reason why.
3. Complete a final review of the DWR, lock the report, and Sync Data.

Note: When a Mobile Inspector DWR is completed and locked the information is uploaded into an AWP DWR where it is reviewed and generated.

The screenshot shows a 'Report Details' window with the following fields and content:

- Date:** Tue, 11/19/2019
- Weather:** 02
- Low Temp:** 65
- High Temp:** 99
- Rainfall Amt:** (empty field)
- Attachments:** (Camera and Paperclip icons)
- Remarks:** GENERAL

Remarks Content:

```
Hot Plant Inspector: daytime
Production of type 2C plantmix from mix
design #BF 16-48, JMF #02. Started plant
at 1:25pm. Stopped plant at 3:13pm (silo
full). Loaded last truck at 3:35pm.
Cleaned out drum at 3:45pm.
8 trucks with double belly dump trailers
hauled the material.
14 loads were sent to jobsite.
Total RAP used= 84.00 tons
Total oil used = 19.43 tons
(tank stick showed 18.59 tons)
bitumen ratio= 3.81%.
Total baghouse fines= 9.29 tons
Baghouse fines percentage was 1.82%.
3504 remaining
```

Figure 10-2: DWR Report Detail Window (Hot Plant/Marination Inspector)

DAILY WORK REPORT (DWR) – AWP EDITS

The Officer Engineer reviews each Inspector's DWRs for required entries and accuracy. If edits are needed on a DWR, the Inspector who created it may be required to log into the AWP program on a computer (not the iPad) and complete the edits. Refer to Chapter 5, Daily Work Reports, Section, Editing a Mobile Inspector DWR, in the [AWP User Guide With Materials](#) for details.

RECORD OF DELIVERY – ASPHALT CEMENT, MINERAL FILLER SPREADSHEET

The Record of Delivery – Asphalt Cement, Mineral Filler spreadsheet (Figure 10-3) is used to track the asphalt cement and mineral filler that was delivered to the project. A separate spreadsheet is used for each type of material. The spreadsheets are used as part of the source documents for payment.

1. Open the Record of Delivery – Asphalt Cement, Mineral Filler spreadsheet received in an email from the Office Engineer. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Record the following information from the B/L into the spreadsheet (Figure 10-3):

- **Contract Number**
 - **Description:** Material type
 - **Inspector:** Initials or name
 - **Date**
 - **Bill of Lading No.**
 - **Truck No.**
 - **Trailer No.** (if applicable)
 - **Tons**
3. Email the completed spreadsheet to the Office Engineer at the end of each day.

Record of Delivery -- Asphalt Cement, Mineral Filler							
Contract No.:		3583		Total Tons:		154.78	
Description:		PG 76-NV					
Inspector	Date	Bill of Lading No.	Truck No.	Trailer No.	Tons	Cumulative Tons	Remarks
NPW	08/06/2016	56007	12380	125	22.55	22.55	
NPW	08/06/2016	56015	1952520	1295	23.72	46.27	
TJL	08/07/2016	56020	12380	125	22.89	69.16	
TJL	08/07/2016	56028	2340	4852	23.09	92.25	
TJL	08/07/2016	56040	1952520	1295	24.66	116.91	
NPW	08/08/2016	56045	1952520	1295	13.96	130.87	
NPW	08/08/2016	56549	12380	125	23.91	154.78	

Figure 10-3: Record of Delivery – Asphalt Cement, Mineral Filler

PLANT RECORD SPREADSHEET

The Plant Record spreadsheet (Figure 10-4) is used to track the materials samples taken each day. Refer to Subsection 106.04, (*Control of Material) Samples and Tests*, in the Standard Specifications for details.

1. Open the Plant Record spreadsheet received in an email from the Office Engineer. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Record the following information (Figure 10-4):
 - **Sample No.**
 - **Date**
 - **Time:** Mandatory on Plant Record spreadsheet
 - **Tons Represented**
 - **Inspector's initials**
 - **Remarks:** Add the daily total of wet tons placed
3. Email completed spreadsheet to the Office Engineer or the Crew Lab's Supervisor/Lead Tester at the end of each day. Each crew will

Plant Record

Contract No.:	3583	Total Tons:	127.00
Asphalt Type:	PG 76-22NV		

Sample No.	Date (mm/dd/yyyy)	Time	Tons Represented	Inspector (initials)	Remarks
1	08/04/2016	6:00 AM	21.00	TMH	
2	08/04/2016	2:00 PM	21.00	TMH	8/4 - 1078 wet tons placed
3	08/05/2016	6:05 AM	25.00	TMH	8/5 - 900 wet tons placed
4	08/06/2016	6:00 AM	25.00	TMH	8/6 - 850 wet tons placed
5	08/07/2016	5:30 AM	17.50	TMH	
6	08/07/2016	12:00 PM	17.50	TMH	8/7 - 998 wet tons placed

Figure 10-4: Plant Record Spreadsheet

INSPECTOR'S RESPONSIBILITIES – PLANTMIX SURFACING ITEMS

- Obtain a copy of the Agreement Estimate report to use as a reference to ensure that items and quantities are paid in the correct category (AEB).
- To help identify paving items, use the Summary of Quantities located in the Contract plans.
- Review the following for accuracy:
 - Special Provisions
 - Supplemental Notices
 - Change Orders

Note: When any changes are made to an item, reference the Change Order number in the DWR item posting remarks.

- Complete the Daily Paving Inspector spreadsheet (Form No. 040-011B) and attach to the Mobile Inspector Report Details. It is important that all information is accurate to what is shown in the Record of Delivery – Plantmix Surface spreadsheet for that day. Refer to Part 3, Forms, in the [Field Testing Guide](#) for details. Contact Construction Division Quality Assurance for assistance.

Note: Make sure to record ALL Plantmix Wasted on the 040-011B form.

- Retrieve all computerized load tickets and review for the following information:
 - Date
 - Material source
 - Material type
 - Gross, tare, net weights, and tons
 - Cumulative total tons
 - Time
 - Contract Number
 - Pit Number
- Turn in ALL computerized load tickets into the Office Engineer each day.

RECORD OF DELIVERY – PLANTMIX SURFACE SPREADSHEET

The Record of Delivery – Plantmix Surface spreadsheet is used to track daily material delivered to the job site. The spreadsheet is used as part of the source documents for payment.

1. Open the Record of Delivery – Plantmix Surface spreadsheet received in an email from the Office Engineer. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Record the following information from the computerized load tickets onto the appropriate day tab in the spreadsheet (Figure 10-5):
 - **Date**
 - **Contract Number**
 - **Item Number**
 - **Description:** Item
 - **Tickets Taken By:** Initials or name
 - **Ticket Number**
 - **Truck Number**
 - **Time:** Every fifth load (Optional)
 - **Station:** Beginning and Ending Station for the day and every change in Line Designation. Each station listed must have a line designation and LT, RT, or CL.
 - **Temperature**
 - **Tons Delivered:** From computerized load ticket, indicate any waste at the end of the day.
 - **Remarks:** Explanations of waste. State the total tons per AEB (category).
3. Email the completed spreadsheet to the Office Engineer at the end of each day.

Record of Delivery -- Plantmix Surface							
Date:	02/20/2017	(mm/dd/yyyy)	Total Tons	153.46			
Contract No.:	3583						
Item No. / Description:	4020190 - PBS TYPE 2C (WET)						
Tickets taken by:	REW	(initials)					
Checked against scale sheet:		(initials)					
Ticket No.	Truck No.	Time	Station	Temperature (°F)	Tons Delivered	Cumulative Tons	Remarks
5172	192333	11:00 AM	"TJ" 17+70 RT	340	21.99	21.99	
5173	192346			335	16.06	38.05	
5174	192333			340	18.41	56.46	
5175	192346			336	19.57	76.03	
5776	192333	12:30 PM	"TJ" 15+90 RT	335	21.10	97.13	AEB # 1 total = 97.13 tons
5177	192346	1:05 PM	"NP" 10+12RT	330	20.40	117.53	
5178	192333			335	20.60	138.13	
5179	192346	1:45 PM	"NP" 8+10 RT	335	20.33	158.46	AEB # 2 total = 56.33 tons
					-5.00	153.46	Excess material at the end of shift
<div style="display: flex; justify-content: space-between; align-items: center;"> ← ... Day 83 Day 84 Day 85 Day 86 Day 87 Day 88 Day 89 Day90 (+) </div>							

Figure 10-5: Record of Delivery – Plantmix Surface

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR (PLANTMIX SURFACE)

1. Create a DWR in Mobile Inspector daily to document the activity being monitored. Refer to the [Mobile Inspector User Guide](#) for details on using this application.
 - Report Details – daily activities
 - Item Postings – N/A for Plantmix Ton Items. The item posting will be completed by the Office Engineer in AWP.
 - Equipment – type, number and hours used
 - Personnel – title and hours
2. Record the following required information in the Report Details window (Figure 10-6):
 - **Date**
 - **Weather**
 - **Low Temp and High Temp**

- **Attachments:** Attach the completed Daily Paving Inspector spreadsheet (Form No. 040-011B)
- **Remarks:** Select the appropriate Remark Type. Verify with the Resident Engineer on what information is required.

Figure 10-6: DWR Report Detail Window

- Record the following required information in the New Equipment window (10-7 and 10-8):
 - **Contractor:** Actual contractor performing the work (include subs).
 - **Type:** Select from the Equipment list
 - **Used:** How many of each type.
 - **Hours Used:** Total hours in use.
 - **Comments:** Details of the type of equipment (e.g., diesel, HP, model, make). Include equipment attachment information if applicable.

Figure 10-7: DWR Equipment Entry



Add Equipment

Contractor: LAS VEGAS PAVING CORPORATION
Type: LOADER / BACKHOE / WHEEL LOADER / SKID STEER
Used: 1
Hours Used: 8.000
Comments:
 Bobcat 256C, Skid Steer, Diesel, 82HP, 1350lbs with an Auger Loader, attachment, 15C w/12" bit


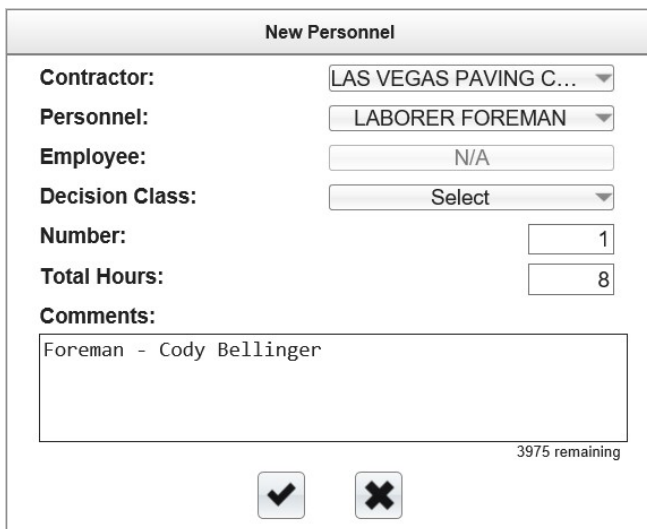
 

Figure 10-8: DWR Equipment List

4. Record the following required information in the New Personnel window (Figure 10-9 and Figure 10-10):
- **Contractor:** Actual contractor performing the work (include subs).
 - **Type:** Select from the Personnel list.
 - **Number:** How many of each title.
 - **Total Hours:** Total hours worked.
 - **Comments:** Details of personnel type (e.g., foreman w/name, laborer, truck driver).



New Personnel

Contractor: LAS VEGAS PAVING C...
Personnel: LABORER FOREMAN
Employee: N/A
Decision Class: Select
Number: 1
Total Hours: 8
Comments:
 Foreman - Cody Bellinger

3975 remaining



 

Figure 10-9: DWR Personnel Entry







Add Personnel	
Contractor: LAS VEGAS PAVING CORPORATION Description: LABORER Number: 3 Total Hours: 8.000	 
Contractor: LAS VEGAS PAVING CORPORATION Description: OPERATING ENGINEER Number: 2 Total Hours: 8.000	 
Contractor: LAS VEGAS PAVING CORPORATION Description: LABORER FOREMAN Number: 1 Total Hours: 8.000 Comments: Foreman - Cody Bellinger	 

Figure 10-10: DWR Personnel List

- Complete a final review of the DWR, lock the report, and Sync Data.

Note: When a Mobile Inspector DWR is completed, locked and Synd Data is completed, the information is uploaded into an AWP DWR, where it is reviewed and Approved for processing progress payments.

DAILY WORK REPORT (DWR) – AWP EDITS

The Officer Engineer reviews each Inspector's DWRs for required entries and accuracy. If edits are needed on a DWR, the Inspector who created it may be required to log into the AWP program on a computer (not the iPad) and complete the edits. Refer to Chapter 5, Daily Work Reports, Section, Editing a Mobile Inspector DWR, in the [AWP User Guide With Materials](#) for details.

OFFICE ENGINEER'S RESPONSIBILITIES – PLANTMIX SURFACING ITEMS

- Save and file the Mix Design(s) to the appropriate Contract Files\Contract\08 Scale Weights\8.# MD directory.
- Collect all Bill of Ladings (B/Ls). Scan and save them to the appropriate Contract Files\Contract\08 Scale Weights\8.# BL directory.
 - If the marination is being done for more than one contract make copies of the B/Ls and send them to the other Resident Engineers for the remainder of the project.

Note: Each contract will be listing the same B/Ls. Communicate with the other office personnel and compare what has been used on each contract to assure no B/L is being used more than once.

- Collect all Material Certifications. Scan a copy of the Bill of Lading and the Material Certification and save them to the appropriate Contract Files\Materials\03 Cert & Test Reports\3.# directory. Each Material Certification must have the contract ID, bid item and represented quantity entered. Hand-written entries are acceptable for the contract ID, bid item and quantity.

- Name the scanned certificate file(s) with the contract ID, Material Code Name and description, load number (if applicable) - CERT (e.g., 03904 M3020130 Type 2 Class A Aggregate Base (CUYD) Load 1 - 25 - CERT.pdf). The Material Code Name and description is found in the NDOT Power BI, AWP Reports, Certification Tracking report.
- If the marination is being done for more than one contract make copies of Material Certifications and send them to the other Resident Engineers for the remainder of the project.
- Create an AWP Materials Cert Sample Record for each Material Certification received. Refer to the [AWP Cert Sample Record Creation](#) document and Chapter 24, Progress Payments, in this Manual for details.
- Collect all computerized load tickets from the Inspector(s). Only the last ticket is required for documentation.
- The Transmittal for Test Samples and Certifications (Form No. 020-018) shall be completed by the Office Engineer for the Materials Certifications. If there are any questions concerning this form, contact the Materials Division.
- Save plantmix surfacing item photos in the appropriate Contract Files\Contract\03 Multimedia\3.# Photos directory.
- Distribute executed copies of Change Orders to Inspectors.

RECORD OF DELIVERY – ASPHALT CEMENT, MINERAL FILLER SPREADSHEET

The Record of Delivery – Asphalt Cement, Mineral Filler spreadsheet (Figure 10-4) is used to track the asphalt cement and mineral filler that was delivered to the project. A separate spreadsheet is used for each type of material. The spreadsheet is used as part of the source documents for payment.

1. Email the Record of Delivery –Asphalt Cement, Mineral Filler spreadsheet to Hotplant/Marination Inspector daily. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Review the entries against the B/Ls.
3. Save the updated Record of Delivery –Asphalt Cement, Mineral Filler spreadsheet to the appropriate Contract Files\Contract\08 Scale Weights\8.# directory.

PLANT RECORD SPREADSHEET

The Plant Record spreadsheet (Figure 10-4) is used to track the materials samples taken each day. Refer to Subsection 106.04, (*Control of Material) Samples and Tests*, in the Standard Specifications for details.

1. Email the Plant Record spreadsheet to the Hotplant/Marination Inspector daily. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Coordinate with the individual(s) who created the AWP Sample Records for each sample taken to obtain the Sample Record IDs. Enter the Sample Record IDs into the appropriate Sample No. (Figure 10-11) This is important when calculating liquidated damages.
3. Save the updated Plant Record spreadsheet to the appropriate Contract Files\Contract\08 Scale Weights\8.# directory.

Plant Record

Contract No.:	3583	Total Tons:	127.00
Asphalt Type:	PG 76-22NV		

Sample No.	Date (mm/dd/yyyy)	Time	Tons Represented	Inspector (initials)	Remarks
1- KMcDan20160805091026	08/04/2016	6:00 AM	21.00	TMH	
2- KMcDan20160805091135	08/04/2016	2:00 PM	21.00	TMH	8/4 - 1078 wet tons placed
3- KMcDan20160806073029	08/05/2016	6:05 AM	25.00	TMH	8/5 - 900 wet tons placed
4- KMcDan20160807092854	08/06/2016	6:00 AM	25.00	TMH	8/6 - 850 wet tons placed
5- KMcDan20160808103817	08/07/2016	5:30 AM	17.50	TMH	
6- KMcDan20160808110528	08/07/2016	12:00 PM	17.50	TMH	8/7 - 998 wet tons placed

Figure 10-11: Plant Record Spreadsheet

RECORD OF DELIVERY – PLANTMIX SURFACE SPREADSHEET

The Record of Delivery – Plantmix Surface spreadsheet (Figure 10-12) is used to track daily material delivered to the job site. The spreadsheet is used as part of the source documents for payment.

1. Email the Record of Delivery – Plantmix Surface spreadsheet to the Inspector daily. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Save the updated Record of Delivery – Plantmix Surface spreadsheet to the appropriate Contract Files\Contract\08 Scale Weights\8.# directory.
3. Review the entries in the appropriate day tabs against the computerized load tickets. Ensure that all waste is explained in the Remarks.
4. Enter the Plant Inspectors waste from the Report of Asphalt Quantities on Form No. 040-011A. Provide an explanation for any waste in the remarks section.
5. Enter initials in the Checked against scale sheet box and save the file.
6. Save the completed spreadsheet (Figure 10-12) to the appropriate Contract Files\Contract\08 Scale Weights\8.# directory and email a copy back to the inspector.

Record of Delivery -- Plantmix Surface							
Date:	02/20/2017		(mm/dd/yyyy)	Total Tons	153.46		
Contract No.:	3583						
Item No. / Description:	4020190 - PBS TYPE 2C (WET)						
Tickets taken by:	REW		(initials)				
Checked against scale sheet:	KMM		(initials)				
Ticket No.	Truck No.	Time	Station	Temperature (°F)	Tons Delivered	Cumulative Tons	Remarks
5172	192333	11:00 AM	"TJ" 17+70 RT	340	21.99	21.99	
5173	192346			335	16.06	38.05	
5174	192333			340	18.41	56.46	
5175	192346			336	19.57	76.03	
5776	192333	12:30 PM	"TJ" 15+90 RT	335	21.10	97.13	AEB # 1 total = 97.13 tons
5177	192346	1:05 PM	"NP" 10+12RT	330	20.40	117.53	
5178	192333			335	20.60	138.13	
5179	192346	1:45 PM	"NP" 8+10 RT	335	20.33	158.46	AEB # 2 total = 56.33 tons
					-5.00	153.46	Excess material at the end of shift
<div style="display: flex; justify-content: space-between; align-items: center;"> ← ... Day 83 Day 84 Day 85 Day 86 Day 87 Day 88 Day 89 Day 90 → </div>							

Figure 10-12: Record of Delivery – Plantmix Surface

DAILY PLANT REPORT OF ASPHALT MIXTURES FORMS

The Daily Plant Inspector form (Form No. 040-011A) and the Daily Paving Inspector form (Form No. 040-011B) are filled out by the Hotplant and Street Inspectors and are attached to their DWRs for review. Refer to Part 3, Forms, in the [Field Testing Guide](#) for details. Contact Construction Division Quality Assurance for assistance with this form.

1. Email the Daily Plant Inspector form (Form No. 040-011A) to the Hotplant/Marination Inspector daily.
2. Email the Daily Paving Inspector form (Form No. 040-11B) to the Paving Inspector daily.
3. Confirm that all the information is correct by viewing the forms in the DWR Attachments.
4. Compare the stations on the Daily Paving Inspector form with those on the Record of Delivery – Plantmix spreadsheet.

Note: If the jobmix formula is being used on multiple contracts for different Resident Engineers, copies of the completed Daily Plant Inspector forms must be made and emailed to the other Resident Engineers for the remainder of the contracts. This does not relieve any of the other documentation requirements.

LAST COMPUTERIZED LOAD TICKET OF THE DAY

The last computerized load ticket is part of the official contract documentation record for payment.

1. Copy the following information from the appropriate day tab in the Record of Delivery – Plantmix Surface spreadsheet (Figure 10-12) onto the last computerized load ticket of the day:
 - Beginning and Ending stations, making sure all stations are represented and match the spreadsheet.
 - Indicate line designation left, right or center line.
 - AEB (category) number and total tonnage
 - Waste from the Hotplant/Marination Inspector and the Street Inspector, even if it is zero, and circle in red.
2. Have the Resident Engineer sign the ticket.
3. Have the person checking the information on the ticket initial it.
4. Scan and save the ticket into the appropriate Contract Files\Contract\08 Scale Weights\8.# Scale Tic MD directory.

BILL OF LADING CALCULATION SHEET

The Bill of Lading Calculation Sheet (Figure 10-13) verifies there are enough Bill of Ladings (B/Ls) to cover the quantities placed on the contract based off the mix design (only). Go to the NDOT website Construction Forms, [Area: Construction Admin - Payment Forms](#) Area for the latest form available.

1. Complete the areas in Blue every two weeks, after Bill of Lading (B/Ls) are collected and recorded on the Record of Delivery Asphalt Cement spreadsheet, and the computerized load tickets are collected and recorded on day tabs of the Record of Delivery – Plantmix Surface spreadsheet.
2. Save the completed Bill of Lading Calculation Sheet to the appropriate Contract Files\Contract\08 Scale Weights\8.# Scale Tic MD directory.

State of Nevada
Department of Transportation
BILL OF LADING CALCULATION SHEET

CONTRACT NO. DATE MATERIAL

MIX DESIGN NO. %RAP The %RAP, %OIL and %M.F. are taken from the applicable mix design.

(% OIL + % M.F.) + 1 = COMBINED % FOR CALCULATING NOTE: When adding in RAP, use the Bin Percentage from the bottom of the mix design sheet.

TOTAL WET TONS PRODUCED: The Total Wet Tons Delivered amount comes from the Record of Delivery – Plantmix Surface spreadsheet. Add up the Total Tons from each of the day tabs for the two-week period. Do not deduct Waste.

TOTAL WET TONS PRODUCED: + = DRY TONS

X = TOTAL ASPHALT TONS

X (1 -) X = MINERAL FILLER TONS

TOTAL BILL OF LADINGS DELIVERED FOR ASPHALT CEMENT: TONS The Total B/Ls Delivered for Asphalt Cement and Mineral Filler come from the Record of Delivery Asphalt Cement spreadsheet. Add up the Cumulative Tones for the two-week period.

TOTAL BILL OF LADINGS DELIVERED FOR MINERAL FILLER: TONS

IN THE BOXES ABOVE, PLACE THE ACCUM. TOTAL SHOWN ON THE RECORD OF DELIVERY FOR THE ASPHALT CEMENT AND MINERAL FILLER.
COMPARE THESE TOTALS TO THE CALCULATED ASPHALT AND MINERAL FILLER SHOWN ON THIS FORM.

THIS SHEET IS USED TO ASSURE THAT ENOUGH ASPHALT AND MINERAL FILLER BILL OF LADINGS ARE COLLECTED TO COVER WHAT WAS DELIVERED. DO NOT DEDUCT WASTE OR STORAGE.

* If this mix design does not contain RAP, enter 0 in the box next to "%RAP".
* When RAP is included use the bitumen ratio added as shown on the mix design. Do not use the bitumen ratio total.
* The percentage of RAP is taken from the Bin Percentages total RAP %, not the Bitumen Ratio From RAP %.

ENTERED BY:

CHECKED BY:

Figure 10-13: Bill of Lading Calculation Sheet

Note: It is the responsibility of the Resident Engineer to work with the contractor to have extra and/or missing B/Ls submitted. These B/Ls must be entered into the Record of Delivery Asphalt Cement spreadsheet.

DAILY WORK REPORT (DWR) – AWP

When a Mobile Inspector DWR is locked by an Inspector, the information is uploaded into an AWP DWR. Refer to Chapter 5, Daily Work Reports, in the [AWP User Guide With Materials](#) for details.

INSPECTOR'S DWR

- Verify the following:
 - Information in the Remarks
 - Information in the Contractor On Site tab
 - Information in the Contractor Equipment tab
 - Information in the Contractor Personnel tab
- Approve the DWR if everything is correct.

- If there are edits required, the Office Engineer may complete them and add a DWR Note with their name, date, and details of the correction. The DWR can then be Approved.
- If there are edits which need to be completed by the Inspector who created the DWR, the Inspector will be required to log into the AWP program on a computer (not the iPad) to complete the edits.
- Review the edited DWR and Approve.

ITEM POSTING DWR

1. Create a DWR in AWP to document the item postings for the ton items:
 - In the General tab, enter a Comment related to the item posting.
 - Enter an item posting (Figure 10-14) for the ton item based on the Total Tons for each AEB (category) from the appropriate day tab(s) in the Record of Delivery – Plantmix Surface spreadsheet.

Note: These DWRs can be completed daily, weekly or bi-weekly within the two-week pay period.

Item ID	Item Description	Current Qua...	Project	Category
4030120	PLANTMIX OPEN-GRADED SURFACING (1/2-INCH	5,480.000	UG136C1C	01
Supplemental Description	Attention	Tot Qty Posted	Tot Qty Posted to Dt	Records
No		4,373.760	4,373.760	1

Item Posting Num	Contractor	Station/Location	Quantity Posted
1	PUR0003792 - SIERRA NEVADA CONSTRUC	1) "RNT" 20+55 to "RNT" 45+14 RT.2) "TW	4,373.760

Contractor ▼ SIERRA NEVADA CONSTRUCTION INC (Prime)	Attention 0
Quantity Posted ▼ 4,373.760	Units TON
Station From ▼ []	Agency Views None
Station From Plus ▼ []	Location ▼ 1) "RNT" 20+55 to "RNT" 45+14 RT. 2) "TW" 56+10 to "TW" 69+20.21 RT. 3) "NW" 10+12 to "NW" 25+16 10.1 T
Offset Type ▼ []	Measured ▼ <input type="checkbox"/>
Offset Distance ▼ []	Material Set ▼ Plantmix
Station To ▼ []	Plan Sheet Page Number ▼ []
Station To Plus ▼ []	Comments ▼ 1) 3/13/17 = 2459.00 2) 3/14/17 = 410.21 3) 3/15/17 = 1504.55. See Record of Delivery Spreadsheet-Plantmix Surface
Offset Type ▼ []	
Offset Distance ▼ []	

Figure 10-14: Office Engineer's DWR Item Posting (Plantmix Ton Item)

NOTES for Plantmix TON (Figure 10-14):

- **Location:** Enter the Line Designation and LT, RT, or CL.
 - **Comments:** Reference the Record of Delivery spreadsheet amounts.
 - **Material Set:** Select appropriate value.
 - **Sig. Fig.** = .01
2. Approve the DWR.

TONNAGE ITEM SPREADSHEET BY CUTOFF DATE

The Tonnage Item Spreadsheet by Cutoff Date spreadsheet (Figure 10-15) was created as a useful tool to aid in the tracking and payment of ton items. The use of this spreadsheet is not required for ton item documentation. The spreadsheet is found in the NDOT website Construction Forms, [Area: Construction Admin - Payment Forms](#) Area. Refer to the [Tonnage Items Spreadsheet by Cutoff Date Instructions](#) for details on using this spreadsheet.

1. Open the Tonnage Item Spreadsheet by Cutoff Date spreadsheet.
2. Complete the spreadsheet information for the two-week period prior to the cutoff date.
3. Save the spreadsheet to the appropriate Contract Files\Contract\07 Estimates directory.

CONTRACT NO:			
BID ITEM NO:			
PLAN QTY:			
Accum Daily Total Placed/Paid - CATG #	0	0.00	
Accum Daily Total Placed/Paid - CATG #	0	0.00	
Accum Daily Total Placed/Paid - CATG #	0	0.00	
Accum Total PAID ALL CATG's =		0.00	
Accum Daily Total WASTE ALL CATG's =		0.00	
Accum Daily Total DELIVERED ALL CATG's =		0.00	

CUTOFF DATE	CATG #	CATG #	CATG #	Daily Total Waste (all catg)	DAILY TOTAL PLACED/PAID	ACCUM. TOTAL PLACED/PAID	PMT #	DAILY TOTAL DELIVERED	MIX DESIGN #	COMMENTS
	TOTAL PLACED/PAID	TOTAL PLACED/PAID	TOTAL PLACED/PAID							
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		

Figure 10-15: Tonnage Item Spreadsheet by Cutoff Date Spreadsheet

INSPECTOR'S RESPONSIBILITIES – RECYCLED BITUMINOUS SURFACE ITEMS

- Obtain a copy of the Agreement Estimate report to use as a reference to ensure that items and quantities are paid in the correct category (AEB).
- To help identify paving items use the Summary of Quantities located in the Contract plans.
- Review the following for accuracy:
 - Special Provisions
 - Supplemental Notices
 - Change Orders

Note: When any changes are made to an item reference the Change Order number in the DWR item posting remarks.

- Collect a Bill of Lading (B/L) for each delivery of Lime (Cold Recycle).
 - Record the contract ID in the upper right-hand corner.
 - Check and initial all weight calculations.
 - Turn into the Office Engineer each day.

RECORD OF DELIVERY AND PAYMENT – PORTLAND CEMENT, LIME (COLD RECYCLE) SPREADSHEET

The Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet (Figure 10-16) is used to track the Bill of Ladings (B/Ls) for daily material delivered to the job site. The spreadsheet is used as part of the source documents for payment.

1. Open the Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet received in an email from the Office Engineer. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Record the following (Figure 10-16):
 - **Contract Number**
 - **Item Number**
 - **Description:** Item
 - **Plan Qty.:** (tons)
 - **Inspector:** Initials
 - **Date**
 - **Truck No.**
 - **Trailer No.**
 - **Bill of Lading No.**
 - **Tons Delivered**
 - **Tons Wasted**
 - **Tons Left in Storage:** at the end of the day.

Note: The amounts in Tons Left in Storage will automatically be added to the next day's Tons Used value. If there are any Tons Left in Storage at the end of the contract, they are considered waste and will be subtracted from the total Tons Used.

- **AEB No:** category
 - **Remarks:** leave blank for Office Engineer comments for payment.
3. Email the completed spreadsheet to the Office Engineer.

Record of Delivery & Payment -- Portland Cement, Lime (Cold Recycle)										
Contract No.:		3585			Total Tons Delivered:		98.60			
Item No.:		4040140								
Item Description:		Lime (Cold Recycle)								
Plan Qty. (tons):		420.00			Total Tons Used:		79.60			
Inspector	Date	Truck No.	Trailer No.	Bill of Lading No.	Tons Delivered	Tons Wasted	Tons Left in Storage	Tons Used & Paid	AEB No.	Remarks
CAW	02/14/2017	45	492	11017	25.15	2.00	0.00	23.15	9	
CAW	02/15/2017	390	391	11121	26.05	5.00	0.00	21.05	9	
CAW	02/18/2017	65	65A	11128	24.15	0.00	0.00	24.15	9	
CAW	02/19/2017	4	4A	11129	23.25	2.00	10.00	11.25	9	

Figure 10-16: Record of Delivery & Payment – Lime (Inspector’s Entries)

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR (LIME - TON)

- Create a DWR in Mobile Inspector daily to document the activity being monitored. Refer to the [Mobile Inspector User Guide](#) for details on using this application.

Note: Refer to Steps 1 through 3 in the Daily Work Report (DWR) – Mobile Inspector (Plantmix Surface) section, in this chapter, for details on completing the Report Details, Equipment and Personnel for the lime item. The Office Engineer will complete these item postings.

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR (RECYLED BITUMINOUS - SQYD)

1. Create a DWR in Mobile Inspector daily to document the activity being monitored. to the [Mobile Inspector User Guide](#) for details on using this application.

Note: Refer to Steps 1 through 4 in the Daily Work Report (DWR) – Mobile Inspector (Plantmix Surface) section, in this chapter, for details on completing the Report Details, Equipment and Personnel for the recycled bituminous items.

2. Record the following required information in the New Item Postings window (Figure 10-17):
 - **Item:** Select the appropriate Project/Catg., if item is in more than one Project/Catg. – Refer to the AEB report.
 - **Contractor:** ALWAYS the Prime Contractor (Subs are not allowed).
 - **Qty:** Based on plan, measurements and calculations
 - **Material Set:** Select appropriate value (if applicable)
 - **Location:** Line Designation
 - **Station From/To:** Refer to Contract plans.
 - **Offset Type:** Enter the LT, RT, or CL.
 - **Offset Dist.:** Enter if known.
 - **Comments:** Must show calculations when appropriate, refer to Calculation Sheet when appropriate (refer to Appendix B, Calculation Formulas, in this Manual for a Calculation Sheet example), other information relevant to item posting, and explanations when Attention Flag is checked.
 - **Attention Flag:** Use to bring attention to Resident Engineer and Office Engineer for overruns and plan errors. Must enter Attention Comments.

New Item Posting	
Item:	RECYCLED BITUMINO...
Contractor:	SIERRA NEVADA CON...
Qty:	5539.60 SQYD
Authorized:	8,765.430 SQYD
Total Posted:	0.000 SQYD
Location:	"TW"
Station From:	116 + 30
Offset Type:	RT
Offset Dist:	
Station To:	156 + 75
Offset Type:	RT
Offset Dist:	
Measured:	<input type="checkbox"/>
Comments:	<p>3561.2 X 14 / 9 = 5539.60 sqyd.</p> <p style="text-align: right;">3968 remaining</p>
Attention:	<input checked="" type="checkbox"/>
Attention Comments:	<p>Length does not equal distance between stations due to an Island at "TW" 125 + 10 to "TW" 129 + 93.80</p> <p style="text-align: right;">154 remaining</p>

NOTES for Recycled Bituminous SQYD (Figure 10-17):

- Payment for SQYD items will be based on field measurements and calculations.
- Calculation for SQYD = $L \times W \div 9$
- Location: Enter the Line Designation
- Station From/To: Refer to Contract plans
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01

Figure 10-17: DWR Item Posting – Recycled Bituminous SQYD

3. Complete a final review of the DWR, lock the report, and Sync Data.

Note: When a Mobile Inspector DWR is completed, locked and Synd Data is completed, the information is uploaded into an AWP DWR, where it is reviewed and Approved for processing progress payments.

DAILY WORK REPORT (DWR) – AWP EDITS

The Officer Engineer reviews each Inspector's DWRs for required entries and accuracy. If edits are needed on a DWR, the Inspector who created it may be required to log into the AWP program on a computer (not the iPad) and complete the edits. Refer to Chapter 5, Daily Work Reports, Section, Editing a Mobile Inspector DWR, in the [AWP User Guide With Materials](#) for details.

OFFICE ENGINEER'S RESPONSIBILITY – RECYCLED BITUMINOUS SURFACE ITEMS

- Collect all Bill of Ladings. Scan and save them to the Contract Files\Contract\08 Scale Weights\8.# Lime BL directory.
- Collect all Material Certifications. Scan a copy of the Bill of Lading and the Material Certification and save them to the appropriate Contract Files\Materials\03 Cert & Test Reports\3.# directory. Each Material Certification must have the contract ID, bid item and represented quantity entered. Hand-written entries are acceptable for the contract ID, bid item and quantity.

- Name the scanned certificate file(s) with the contract ID, Material Code Name and description, load number (if applicable) - CERT (e.g., 03904 M4040140 Lime (Cold Recycle) - CERT.pdf). The Material Code Name and description is found in the NDOT Power BI, AWP Reports, Certification Tracking report.
- Create an AWP Materials Cert Sample Record for each Material Certification received. Refer to the [AWP Cert Sample Record Creation](#) document and Chapter 24, Progress Payments, in this Manual for details.
- Save item photos in the appropriate Contract Files\Contract\03 Multimedia\3.# Photos directory.
- Review item calculation sheets for accuracy and save electronically in the appropriate Contract Files\Contract\07 Estimates\7.# Calc Sheets directory using this naming convention: DWR YYYY-MM-DD Inspectors Initials, (e.g. DWR 2017-03-19 KMM).
- Distribute executed copies of Change Ordersto Inspectors.

RECORD OF DELIVERY AND PAYMENT – PORTLAND CEMENT, LIME (COLD RECYCLE) SPREADSHEET

The Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet (Figure 10-18) is used to track the Bill of Ladings (B/Ls) for daily material delivered to the job site. The spreadsheet is used as part of the source documents for payment.

1. Email the Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet to the Inspector daily. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Save the updated Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet, received in an email from the Inspector, to the appropriate Contract Files\Contract\08 Scale Weights\8.# Lime directory.
3. Verify the following:
 - Entries match the information on the Bill of Ladings (B/Ls).
 - Plan Qty. (tons)
 - Waste and storage was recorded.
 - Correct AEB (category)
4. Enter the total Tons Used for each AEB (category) and the payment number in the Remarks section.
5. Save the completed Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet, to the appropriate Contract Files\Contract\08 Scale Weights\8.# Lime directory.

Record of Delivery & Payment -- Portland Cement, Lime (Cold Recycle)										
Contract No.:		3585			Total Tons Delivered:		98.60			
Item No.:		4040140								
Item Description:		Lime (Cold Recycle)								
Plan Qty. (tons):		420.00			Total Tons Used:		79.60			
Inspector	Date	Truck No.	Trailer No.	Bill of Lading No.	Tons Delivered	Tons Wasted	Tons Left in Storage	Tons Used & Paid	AEB No.	Remarks
CAW	02/14/2017	45	492	11017	25.15	2.00	0.00	23.15	9	
CAW	02/15/2017	390	391	11121	26.05	5.00	0.00	21.05	9	
CAW	02/18/2017	65	65A	11128	24.15	0.00	0.00	24.15	9	
CAW	02/19/2017	4	4A	11129	23.25	2.00	10.00	11.25	9	Pmt. 12 = 79.60 AEB # 9

Figure 10-18: Record of Delivery & Payment – Lime (Cold Recycle) (Office Engineer’s Entries)

DAILY WORK REPORT (DWR) AWP (LIME - TON)

When a Mobile Inspector DWR is locked by an Inspector, the information is uploaded into an AWP DWR. Refer to Chapter 5, Daily Work Reports, in the [AWP User Guide With Materials](#) for details.

INSPECTOR'S DWR

- Verify the following:
 - Information in the Remarks
 - Information in the Contractor On Site tab
 - Information in the Contractor Equipment tab
 - Information in the Contractor Personnel tab
- Approve the DWR if everything is correct.
- If there are edits required, the Office Engineer may complete them and add a DWR Note with their name, date, and details of the correction. The DWR can then be Approved.
- If there are edits which need to be completed by the Inspector who created the DWR, the Inspector will be required to log into the AWP program on a computer (not the iPad) to complete the edits.
- Review the edited DWR and Approve.

ITEM POSTING DWR

1. Create a DWR in AWP to document the item postings for Portland Cement and Lime ton items:
 - In the General tab, enter a Comment related to the item posting.
 - Enter an item posting (Figure 10-19) for the lime (cold recycle) item based on the Tons Used for each AEB (category) from the Record of Delivery & Payment – Portland Cement, Lime (Cold Recycle) spreadsheet.

Note: *These DWRs can be completed daily, weekly or bi-weekly within the two-week pay period.*

2. Approve the DWR.

Item ID	Item Description	Current Qua...	Project	Category
4040140	LIME (COLD RECYCLE)	654.560	UG136C1C	01
Supplemental Description	Attention	Tot Qty Posted	Tot Qty Posted to Dt	Records
No		79.600	79.600	1

Item Posting Num	Contractor	Station/Location	Quantity Posted
1	PUR0003792 - SIERRA NEVADA CONSTRUC	Sta "TW" 116 + 30 to Sta "TW" 117 + 00	79.600

Contractor ▼
 SIERRA NEVADA CONSTRUCTION INC (Prime)

Attention
0

Quantity Posted
79.600

Units
TON

Station From
"TW" 116

Station From Plus
30

Offset Type
RT

Offset Distance

Station To
"TW" 117

Station To Plus
00

Offset Type
RT

Offset Distance

Agency Views
None

Location ▼

Measured ▼

Material Set ▼
 Cold Recycle

Plan Sheet Page Number ▼

Comments ▼
 See Record of Delivery and Payment-Portland Cement, Lime (Cold Recycle) 2/14/17 through 2/19/17

Figure 10-19: Office Engineer’s DWR Item Posting (Lime (Cold Recycle) Ton Item)

NOTES for Lime (Cold Recycle) TON (Figure 10-19):

- **Station From/To:** Refer to Contract plans
- **Offset Type:** Enter the LT, RT, or CL.
- **Offset Dist:** Enter if known
- **Material Set:** Select appropriate value (if applicable)
- **Comments:** Reference the Record of Delivery spreadsheet.
- **Sig. Fig. = .01**

DAILY WORK REPORT (DWR) AWP (RECYCLED BITUMINOUS - SQYD)

When a Mobile Inspector DWR is locked by an Inspector, the information is uploaded into an AWP DWR. Refer to Chapter 5, Daily Work Reports, in the [AWP User Guide With Materials](#) for details.

1. Verify the following:
 - Information in the Remarks
 - Information in the Contractor On Site tab
 - Information in the Contractor Equipment tab
 - Information in the Contractor Personnel tab
 - Items are paid correctly according to the contract documents (e.g., plans, supplemental notices, Change Orders).
 - Item quantities
 - Quantities in postings are documented to the correct Significant Figure (.01)
 - Material Set is correct.

- Stations and Line Designations in the Locations
- Calculations are correct.
- Comments reference calculation sheets, if applicable.

Note: Length does not always equal the difference between the beginning and ending station. Sometimes there is a curve or an obstacle that will affect the distance. Always check with the Inspector before assuming the calculations are incorrect.

2. Approve the DWR if everything is correct.
3. If there are edits required in the DWR, Reject it.
4. Notify the Inspector who created the DWR there are edits to be completed. The Inspector will be required to log into the AWP program on a computer (not the iPad) to complete the edits.
5. Review the corrected DWR and Approve.