Project Documentation/ Inspection

Session 12

WisDOT Project Engineer Perspective

- Review Mix Design Information
- Inspect Stockpiles to be used at Plant Site
- Ensure that each load of mix is satisfactory
- Collect Truck Tickets
  - Verify yield
- Observe paving operation
  - Identify / notify operational concerns
- Check Pavement Thickness
- Project Diary Entry
- Pay Item Measurement

Mat Inspection Tools

- Proper PPE
- 10’ Straightedge
  - Ensure surface layers show no variation greater than 1/8” between any 2 surface contacts
  - Ensure lower layers, shoulder surfacing, temp. connections, and bypasses show no more than ¼”
  - Remove and replace or correct all humps or depressions exceeding specified tolerance
- Level
  - Check manholes, water/sewer boxes, inlets, etc…

Mat Inspection Tools

- Thermometers
  - Mat temp. of pavement surface
  - Mixture temp in/out of paver
  - Compaction temps.
- Measuring Wheel
- String line
- Paint
- Wooden Rulers
  - Verify mix thickness (or witness)
- Field Diary

Other Inspection Tools

- Infrared Camera

- Smart Level
  - Do not set on hot mat

Yield Calculation

Calculate the number of tons of HMA it will take to go one foot. Then multiply that value by the number of laid feet and compare to the cumulative tons on the truck tickets.

(Unit weight estimated at 110 lb/SY/1")

$$\frac{110\text{lb}}{\text{sy}} \times \frac{1\text{ sy}}{9\text{ sf}} \times \frac{\text{lane (ft)}}{\text{width}} \times \frac{\text{lift (in)}}{\text{thick}} \times \frac{1\text{ ton}}{2000\text{ lb}}$$

1" thick

Determine average actual thickness of a surface layer, compare against theoretical thickness and adjust as needed.

Density by test = 146.1 lbs/cubic foot

Plan depth = 3" (lower layer)

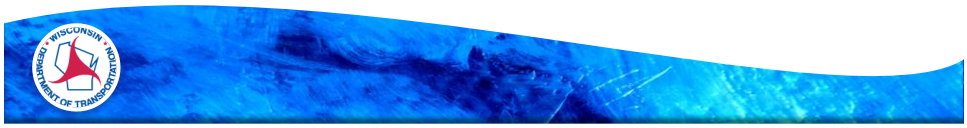
Width placed = 12'

Length placed = 3,250' in 4 hours (measured)

Tons placed = 650 tons (by ticket)

$$\text{Weight/S.Y./Inch depth} = 146.1 \times \frac{27}{36} = 109.58 \text{ lbs.}$$

$$\text{Theoretical mass} = \frac{3{,}250' \times 12' \times 3'' \times 109.58}{9 \text{ S.F./S.Y} \times 2{,}000} = 712.27 \text{ tons}$$



Determine new required distance per truckload.

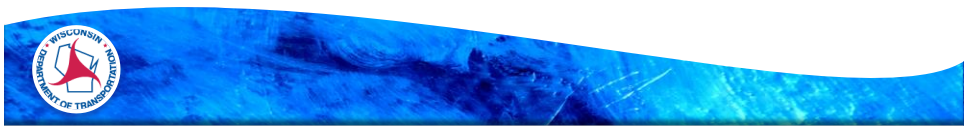
$$146.1 \times \frac{1}{12} \times 3'' \times 12' = 438.3 \text{ lbs./ft. is currently placed.}$$

$$438.3 \times \frac{712.27 \text{ Tons}}{650 \text{ Tons}} = 480.3 \text{ lbs./ft. should be placed.}$$

$$\text{Length paved per truck should be} = \frac{\text{Net Weight of Load (lbs.)}}{480.3}$$

Example using 30,000 lbs. load:

$$\text{Length paved should be} = \frac{30{,}000}{480.3} = 63 \text{ ft.}$$



Say ¾ inch was allowed for consolidation, so 3¾ inches were being placed (un-compacted depth), but it has been shown to be insufficient from Example 1.

$$\left(\frac{712.27}{650} \times 3\right) + .75 \text{ inch} = 4.04; \text{ say } 4 \text{ inches}$$

Example of HMA Paving Diary Worksheet

HMA Paving Diary Worksheet

DATE:	9/18/2014		
PROJECT ID:	1022-09-80	DESCRIPTION:	Eau Claire to Osseo - USH 53 to Mallard Road
ROADWAY:	IH 94	COUNTY:	Eau Claire

General Information

Location:	IH WB passing lane station 646+00 to station 603+91 IH EB passing lane station 604+00 to station 725+00

Lift #	2	Target Yield (tons/sta):	16.18
ift thickness:	2"	Paving thickness (in):	2
tal thickness:	4.5"	Paving width (ft):	13
Start time:	Paver start at 8:00 AM	Design Mix ID:	87-14-725-SMA-12.5(R
Stop time:	Paver off at 6:30 PM	Mix Type:	SMA
	Rollers off at 7:15 PM	AC type:	PG70-28
		RAP %	0

HMA Yield

Location		Stations	Cummulative Stations	Tons	Cummulative Tons	Yield (Tons / Sta)	Cummulative Yield (Tons / Sta)
EB	646+00	0.0	0.0	0.0	0.0	0.0	0.0
EB	603+91	42.1	42.1	861.38	861.38	20.5	20.5
EB	425+00	178.9	221.0	3538.62	4400.00	19.8	19.9
EB	300+00	125.0	346.0	2000.00	6400.00	16.0	18.5
EB	220+00	80.0	426.0	2800.00	9200.00	35.0	21.6
							2.67 inches

HMA Temperatures

Time	Temperature Behind Paver	Temperature at Truck Bed
8:20 AM	291° F	287° F
1:45 PM	286° F	288° F

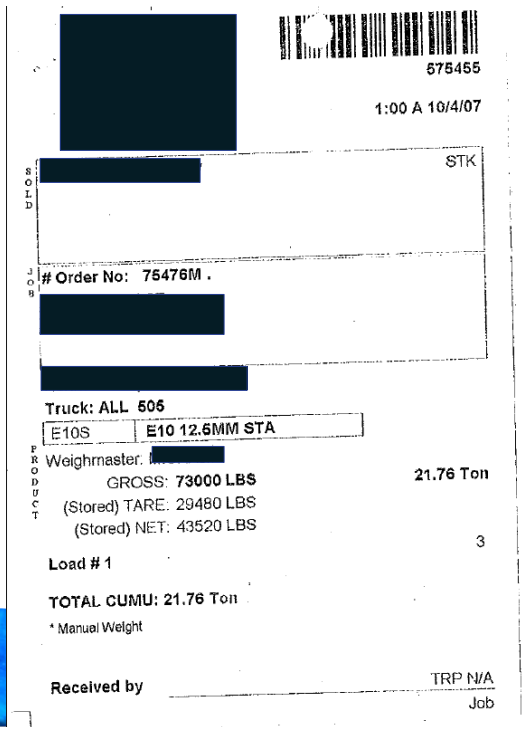
Tack Coat Yield

Approx. Gal Tack Used:	2100
Tack Yield (Gal/SY):	0.0341

Inspection Observations

Rolling Pattern:	One tandem steel drum roller (Dresser 17128) followed by two vibratory steel drum rollers (Dynapac CC 624 HH)
Using Automatics:	NA
Underlying Surface:	E-10 Lower Layer
Factors affecting yield:	Pulled in to 11 feet for ramp taper at CTH B
Other noteworthy inspection items:	Paver stopped at 645+35 for 30 min. due to paver breakdown

Mix Tickets



[redacted]

575455

1:00 A 10/4/07

STK

SOLD

[redacted]

JOB # Order No: 75476M .

[redacted]

[redacted]

Truck: ALL 505

E10S	E10 12.5MM STA

PRODUCT

Weighmaster: [redacted]

GROSS: 73000 LBS

21.76 Ton

(Stored) TARE: 29480 LBS

(Stored) NET: 43520 LBS

3

Load # 1

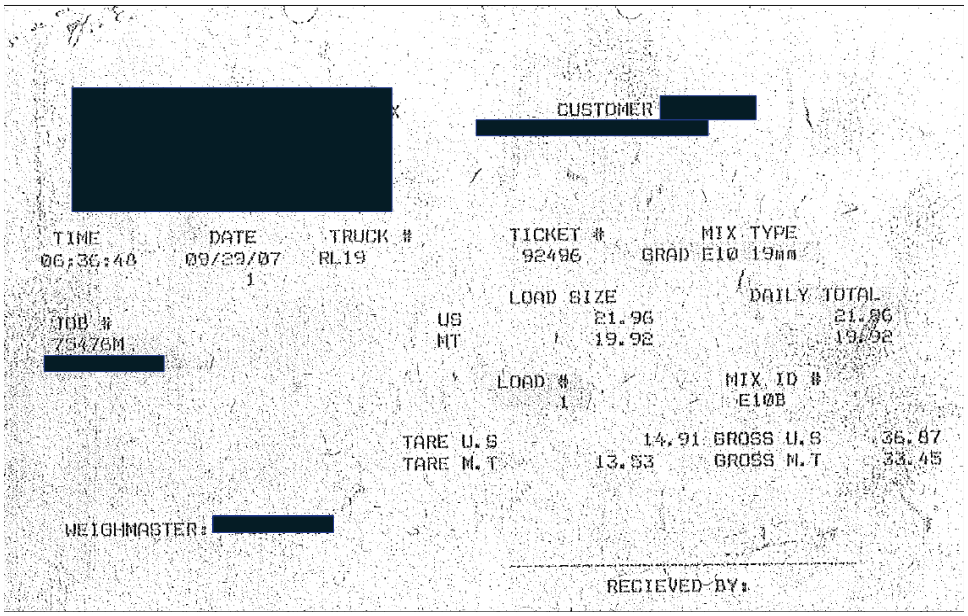
TOTAL CUMU: 21.76 Ton

* Manual Weight

Received by

TRP N/A

Job



[redacted]

CUSTOMER [redacted]

TIME	DATE	TRUCK #	TICKET #	MIX TYPE
06:36:40	09/22/07	RL19	92496	GRAD E10 19mm
	1			

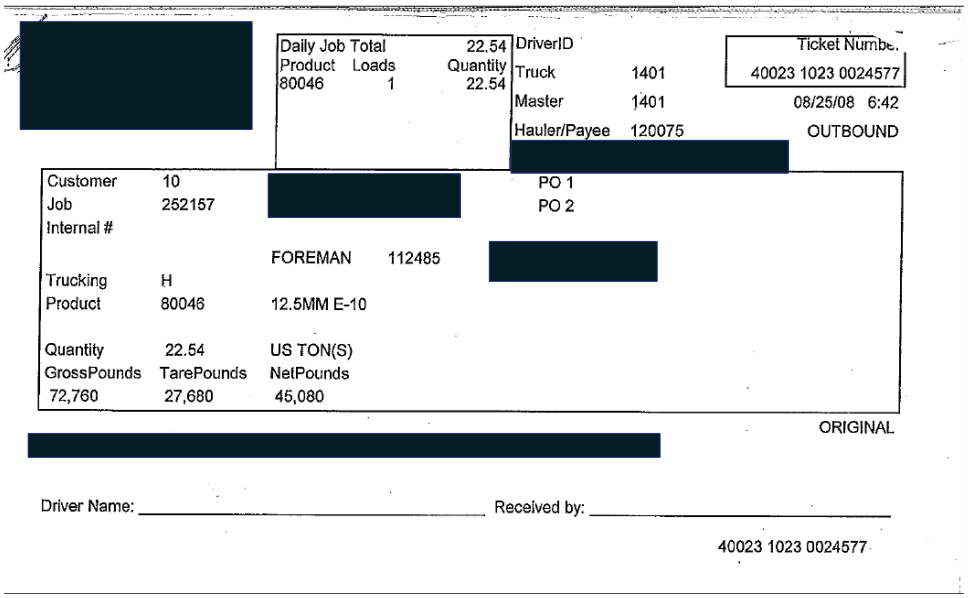
		LOAD SIZE	DAILY TOTAL
JOB #	US	21.96	21.96
75476M [redacted]	MT	19.92	19.92

LOAD # 1 MIX ID # E10B

TARE U.S	14.91	GROSS U.S	36.87
TARE M.T	13.53	GROSS M.T	33.45

WEIGHMASTER: [redacted]

RECIEVED BY:



[redacted]

Daily Job Total		22.54
Product	Loads	Quantity
80046	1	22.54

DriverID
Truck 1401
Master 1401
Hauler/Payee 120075 [redacted]

Ticket Numbe.
40023 1023 0024577
08/25/08 6:42
OUTBOUND

Customer	10	[redacted]	PO 1
Job	252157		PO 2
Internal #			
		FOREMAN 112485	[redacted]
Trucking	H		
Product	80046	12.5MM E-10	

Quantity		US TON(S)
GrossPounds	TarePounds	NetPounds
72,760	27,680	45,080

ORIGINAL

[redacted]

Driver Name: _____ Received by: _____

40023 1023 0024577

ITEM:	ASPHALT SURFACE DRIVEWAYS AND FIELD ENTRANCES		PROJECT I.D.	[redacted]	
ITEM #:	465.0120		ROADWAY		
CATEGORY:	0010		DESCRIPTION		
ENTERED BY:	[redacted]		COUNTY		
CHECKED BY:					
		TONS			
DATE	LOCATION		TONS	SUBTOTAL	REMARKS
	SEE SHEET 0220.01 A		15.0	15.0	SEE SHEET 0220.01
	SEE SHEET 0220.02 A		40.1	55.1	SEE SHEET 0220.02
	SEE SHEET 0220.03 A		8.0	63.1	Final Quantity

WisDOT Standard Specification 450

- Measurement
  - Measure by the ton
  - Provide the engineer with weigh tickets showing net weight of each load of material
    - Field Inspection Visual (Document Findings)
    - Enter data on tonnage spreadsheets during placement
  - The Dept. or Dept.-authorized testing firms or agencies will test the contractor's truck, storage silo, or plant scales
    - Field Inspection None

WisDOT Standard Specification 450

- Payment
  - All costs for scaling of material is incidental
  - Nonconforming material allowed to remain in place is subject to price adjustment under 105.3.2

WisDOT Standard Specification 455

- Measurement
  - The dept. will not measure nonconforming asphaltic materials unless the engineer allows those materials to remain in place.
  - Deduct for material wasted or not actually incorporated into the work.
  - Measurement volume calculations

Field Inspection Visual and/or verify calculations (Document Findings)

WisDOT Standard Specification 455

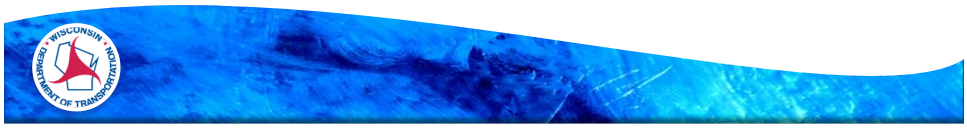
- Asphaltic Material Bid Items
  - Measure by ton or gallon (3 ways)
  - Calculations
  - Conversions
- For combined bid, will no longer pay, still need to measure for records
- Tack Coat
  - Measure by ton or gallon based on shipment net weights

Field Inspection Visual and/or verify calculations (Document Findings)

WisDOT Standard Specification 455

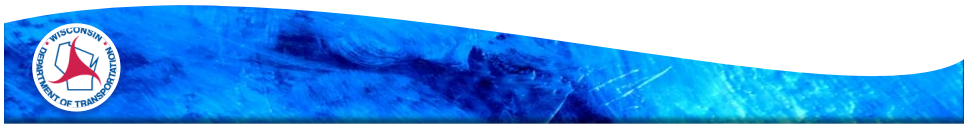
- Payment
  - Basis of payment full compensation
  - If PG binder is nonconforming, pay at 75% if material remains in place
  - For combined bid, if PG binder is nonconforming, mix will paid at 75% if material remains in place
  - If tack is nonconforming see pay table
  - For any nonconforming nuclear density or QMP HMA material items both mix and PG binder prices are affected

Field Inspection Visual and/or verify calculations (Document Findings)



PG Binder/Tack Tickets

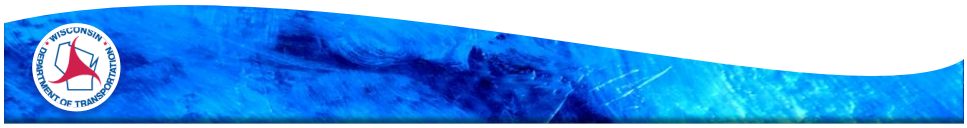
- April 2016 Let and after –M332 (New)
- Anything prior to April 2016 Let– M320 (Old)
- Make sure that you put the correct information on the sample card
- Know which spec. applies to your project. M332 vs. M320
- PG 58-28H is the same as PG 58H-28
- (See examples)



- Sample card MUST PROPERLY LIST THE PLAN DESIGNATED GRADE
- Most of the program is going to fall under M320 testing (old program) vs M332 (new program).
- BOL – The Bill of Ladings may list both systems: M320: PG 64-28 or M332: PG 58-28 S or 58S-28

- For polymer blends consider a no cost change order to the new system. The BOL on those may look something like this:

  M320: PG 64-28P or M332: PG 58-28V or 58V-28.



Sampling/Testing

- PG binder sampling (DOT responsibility)
  - Per binder grade, plant & source per contract
  - One sample per 900 liquid ton of binder
  - Do not accept samples from truck drivers
- Tack sampling (DOT responsibility)
  - One per contract only if over 2500 gallons
- HMA sampling & testing (DOT responsibility)
  - One per 5,000 tons per mix design
  - Disputes sent to Madison for Resolution

Sampling Asphalt Binder

455.2.2.1 PG Asphalts

(1) Sample according to the department's "Combined State Binder Group Certification Method of Acceptance for Asphalt Binders".

Latest version is dated January 2016

- Changes effective with January 2016 Lets

Sampling Asphalt Binder

- For projects greater than 1,000 ton of mix
  - Truck transport sample per 15,000 mix tons for each supplier and grade of asphalt binder, or fraction thereof, per contract
  - Additionally, one random sample, by In-line sample, of the binder is required per project
- For contracts with 1,000 ton or less of mix
  - one random sample of the binder by In-line sample may be required per project, at the discretion of the project engineer

Sampling (cont.)

A. Truck Transport:
Sampling shall be accomplished by taking a one-liter (one-quart) sample of material representing the middle third of the load from a sample valve attached to the transport in accordance with AASHTO Designation R66 section 13 paragraph 13.3.2.

B. In-Line:
Sampling shall be accomplished by taking a one-liter (one-quart) sample of material from an in-line sample port between the storage tank and mixer as described in AASHTO Designation R66 section 8 paragraph 8.2.2.

In addition, supplier or contractor personnel, under the observation of Department representative, will obtain samples as directed by the project engineer to adequately monitor material quality at the HMA plant for alterations made to the site storage, HMA plant handling process, or if modification is occurring at the HMA plant.

[redacted]

Daily Job Total		51.31	
Product	Loads	Quantity	
806422	1	51.31	

DriverID
Truck 99999
Master AGGPAD
Hauler/Payee 117190

Ticket Number
40023 1023 0024686
08/25/08 6:31
OUTBOUND

[redacted]

Customer	10		PO 1
Job	252157		PO 2
Internal #			
		FOREMAN 112485	[redacted]
Trucking	H		
Product	806422	LIQUID AC 6422 INVENTORY	
Quantity	51.31	US TON(S)	
GrossPounds	TarePounds	NetPounds	
102,620	1	102,619	

Manual ORIGINAL

968.08 TONS @ 5.3% ADDED AC = 51.31 TONS AC

Driver Name: _____ Received by: _____

AC TICKET

40023 1023 0024686

DAILY PROJECT LOG / RANDOM TONNAGE

DATE 11-15-07 STATE ID [redacted]

TYPE OF MATERIAL E-10 12.5 mm MIX DESIGN NO. 167 DOT #250-0129-2005

LOCATION [redacted] 5.1 % BINDER DIALED IN AT PLANT

ASPHALT PLANT [redacted] START OF DAY

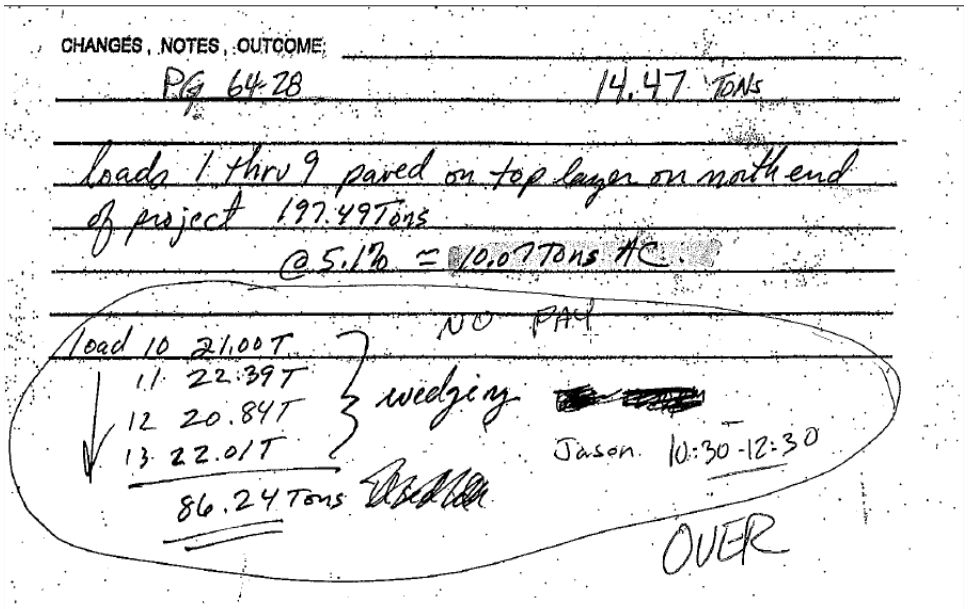
ACTUAL TONS PRODUCED 487.38 TONS END OF DAY

DENSITY NUMBER MIX DESIGN TARGET % BINDER
(Density = Gmm 62.24)

ANTICIPATED DAILY TONS	DAILY SAMPLE NUMBER	DAILY RANDOM NUMBERS	DAILY SAMPLE TONNAGE	TONS	MEGAGRAMS
				50 - 600	46 - 550
				601 - 1500	551 - 1360
				1501 - 2700	1361 - 2450
				2701 - 4200	2451 - 3810
				4201 + (every 1500 tons	3811 + (every 1360 mg)

CHANGES , NOTES , OUTCOME:

PG 64-28 24.86 TONS



CHANGES, NOTES, OUTCOME:

PG 64-28 14.47 TONS

loads 1 thru 9 paved on top layer on north end of project 197.49Tons

@5.1% = 10.07Tons AC.

NO PAY

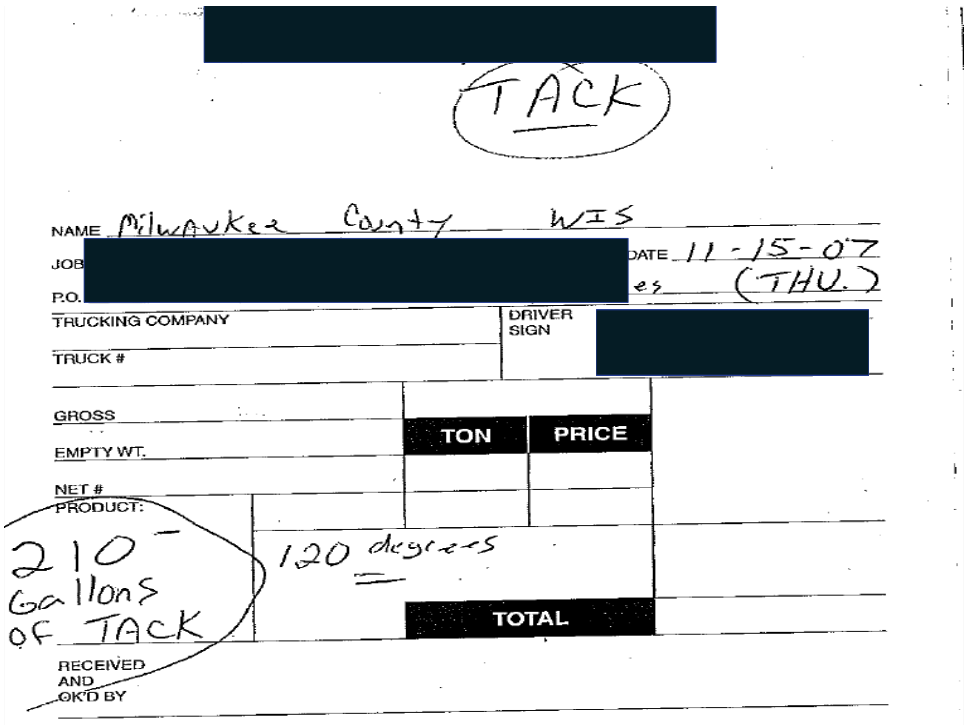
load 10 21.00T
11 22.39T
12 20.84T
13 22.01T
86.24Tons

wedging

[redacted]

Jason 10:30-12:30

OVER



[redacted]

TACK

NAME Milwaukee County WIS

JOB [redacted] DATE 11-15-07

P.O. es (THU.)

TRUCKING COMPANY

DRIVER SIGN [redacted]

TRUCK #

GROSS

EMPTY WT.

NET #

PRODUCT:

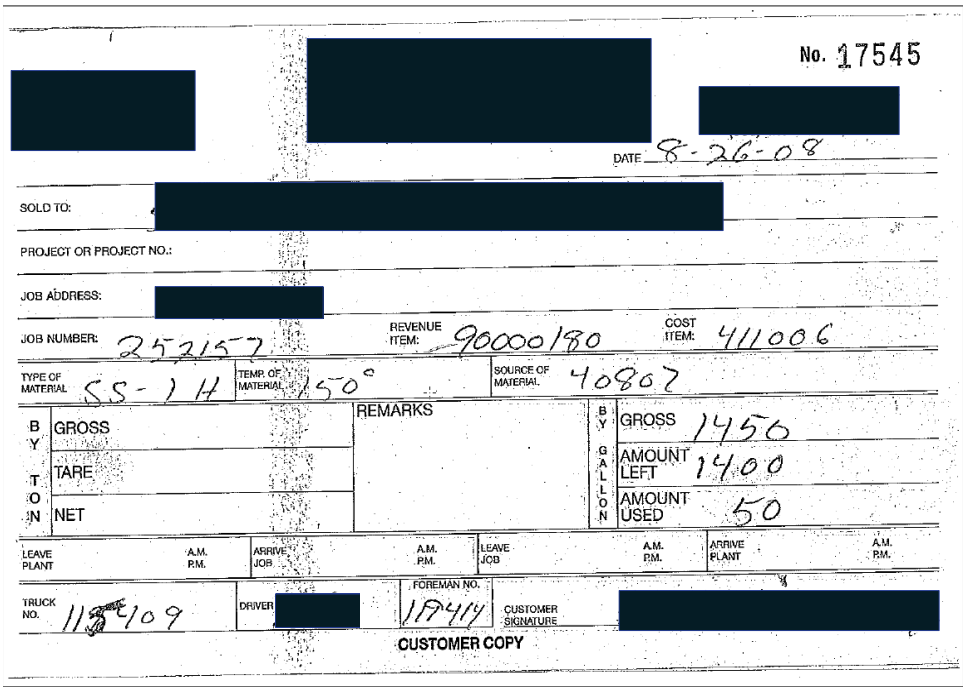
TON PRICE

210 Gallons OF TACK

120 degrees

TOTAL

RECEIVED AND O.K'D BY



[redacted]

No. 17545

DATE 8-26-08

SOLD TO: [redacted]

PROJECT OR PROJECT NO.:

JOB ADDRESS: [redacted]

JOB NUMBER: 252157 REVENUE ITEM: 90000180 COST ITEM: 411006

TYPE OF MATERIAL SS-1H TEMP. OF MATERIAL 150° SOURCE OF MATERIAL 40807

BY TON		REMARKS	BY GALLON	
	GROSS			GROSS 1450
	TARE			AMOUNT LEFT 1400
	NET			AMOUNT USED 50

LEAVE PLANT A.M. P.M. ARRIVE JOB A.M. P.M. LEAVE JOB A.M. P.M. ARRIVE PLANT A.M. P.M.

TRUCK NO. 11[redacted]09 DRIVER [redacted] FOREMAN NO. 11941 CUSTOMER SIGNATURE [redacted]

CUSTOMER COPY

ITEM DESC: TACK COAT

ITEM #: 455.0605

CATEGORY: 0010

ENTERED BY: [redacted]

CHECKED BY:

PROJECT I.D.: [redacted]

ROADWAY:

DESCRIPTION:

COUNTY:

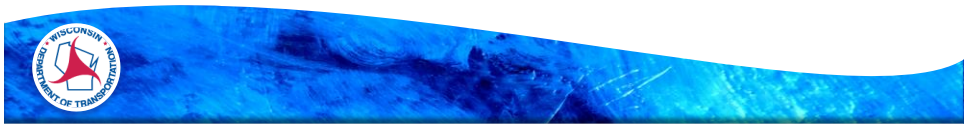
TACK CONVERSION

			Total	Unit of Measure
	1325	<===TOTALS===>	1295.84	Gallons

DATE PLACED	VOLUME OF TACK USED (IN GALS)	TEMPERATURE OF TACK (F)	CORRECTED VOLUME (IN GALS)	REMARKS
8/25/08	400	150	391.20	
8/25/08	50	150	48.90	
8/26/08	50	150	48.90	
8/26/08	25	150	24.45	
8/26/08	350	150	342.30	
9/16/08	350	150	342.30	
9/17/08	100	150	97.80	Final Quantity

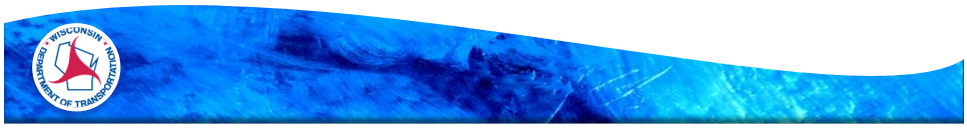
Compaction

- Things to look for:
  - Appropriate number of rollers
    - Ensure compacted surface is smooth and true to the established crown and grade
  - Proper rolling pattern
    - To the extent possible, eliminate roller marks
    - Roller drums need to stay moistened, but no excessive water usage
  - Proper rolling temperature
  - Uniform mat temperature
  - Proper mat thicknesses



CMM 4-58

- Pre-Pave Meeting requirements
- Best Practices
- Joint construction
- Weigh Ticket requirements
- Paver operations
- Etc…



Project Leader

- Hold Pre Con Meeting
- Schedule Pre-Pave Meeting
- Inspection/Acceptance
- Contract Mods
- Project Control/ Authority
- Administrative Items

Materials Section

- Hold Pre-Pave Meeting
- Collect/Review QC data daily
- Payment recommendations
- Contact you if there are any QMP concerns
- Plant/lab/source inspection, sampling, and testing

PREPAVE MEETING

Project Information & Contacts

I.D. Number: 1411-03-70
Roadway Name: STH 33
County: Washington
Project Leader: Jeanne Marchant
Office Phone: 262-278-7256
Field Office Fax: 262-278-6056
Leader's Cell: 414-750-1621
Leader's E-mail: Jeanne.Marchant@dot.wi.gov

Paving Contractor: Payne & Dolan, Inc.
Contr. Lead worker: Ted Hellecksson
Lead Worker E-mail: Thellecksson@payneanddolan.com
Phone Number: 920-579-1605
QC Testing by: Troy Humes
Plant Name: C-8 Cedar Lake
Lab Phone: 262-664-2548
Plant Foreman: Bobby Ostrowski 920-349-3366

Mix Types: 19.0mm (32,571 Tons)
12.5mm (18,966 Tons)
ESAL's: E-3 (51,537 Tons)
AC Types: PG 64-22 (1996.9 Tons)
PG 64-28 (1037.8 Tons)

Meeting Check List

- ☑ Contractors Plant Calibrated
- ☑ Verified Mix Design(s)
- ☑ Verifications to Project Engineer
- ☑ Aggregate Sources Approved
- ☑ AC Source on Approved List
- ☑ Review Surface Preparation
- ☑ Review Construction of Joints
- ☑ VMA tolerance increase
- ☑ Procedure for Unsatisfactory Results
- ☑ Q.C. Lab/Personnel on Approved Lists
- ☑ Notify Asphalt Unit of CA Samples
- ☐ ~~Letter needed for May 1 Oct 15 paving~~

Assigned Responsibilities

1. Expected starting date for paving: June 22nd bottom two layers (re-construct area) +/- 3 days possibility of nights
2. Densities will be determined by: ☑ Nuclear Method or ☐ Pavement Cores
3. Asphalt Cement Quantities computed by what method: ☐ Theoretical Method (SS 455.4.2) or ☐ Tank Sticking
4. Person who will compute the AC quantities? The Engineer *(AC tickets will be provided daily during production)*
5. Person responsible for requesting JMF changes: The Contractor
6. Agency responsible for obtaining PG Graded binder & tack samples: The Department
7. Person responsible for QA/QV HMA testing and monitoring the control charts: Debbie Schwerman
8. Person responsible for QV Nuclear density testing and monitoring: Carrie Markley

Points of Emphasis

9. If a mix running average enters a warning band, notify the HMA Coordinator that day. If mix running average exceeds the warning band notify the Project Engineer and the HMA Coordinator as soon as practical. If two consecutive running averages enter the warning band, there is a required stop in production and both the engineer and the HMA Coordinator must be notified and made aware of process adjustments prior to production start up. This can be done via phone but preferably e-mail so there is written documentation for all parties.
10. Please notify the Project Engineer and Newhall Lab Coordinators at least one business day before paving.
11. Forward all QC test data to the Project Engineer within ten days after paving is completed.
12. Fax/e-mail running average charts to Debbie Schwerman, and nuclear density testing to Carrie Markley on a daily basis during production.

SE Region Phone Listing/Important Numbers

Deborah Schwerman
Regional HMA Coordinator
E-mail: deborah.schwerman@dot.wi.gov
Phone: (262) 548-5698
Cell: (414) 750-2937
Fax: (262) 548-6465

Carrieann Markley
Nuclear Density Coordinator
E-mail: carrieann.markley@dot.wi.gov
Phone: (262) 548-8774
Cell: (414) 750-1494
Fax: (262) 524-0695

Brian Pluemer
Project Manager
E-mail: brian.pluemer@dot.wi.gov
Phone: (262) 548-6721
Cell: (414) 750-2271

Pre-Pave discussion (prior to paving)

Total Pavement Thickness: 2" Mill & Overlay (STH 33/Park & Ride)
2" 12.5mm E-3 PG 64-28

Total Pavement Thickness: 4.25" Shoulders
2.25" 19.0mm E-3 PG 64-22
2" 12.5mm E-3 PG 64-28

Total Pavement Thickness: 5" Park & Ride
3" 19.0mm E-3 PG 64-22 **General Notes has this listed as 3.5"**
2" 12.5mm E-3 PG 64-28

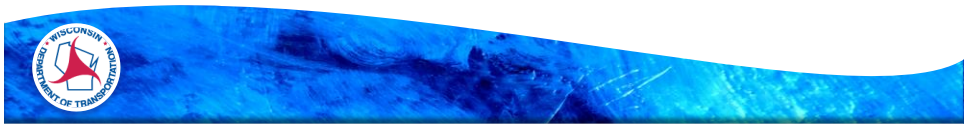
Total Pavement Thickness: 5.5" STH 33 Re-construct
3.5" 19.0mm E-3 PG 64-22
2" 12.5mm E-3 PG 64-28

*QMP HMA versus Asphaltic Surface

Pre-pave Discussion Items

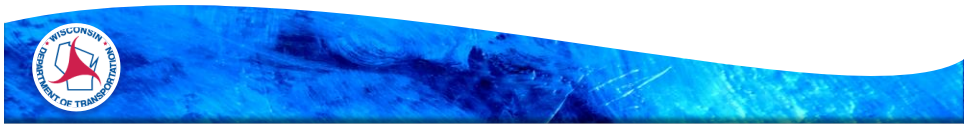
- Mix Designs
  - Make sure you check for approved mix design
  - Eligibility of design
  - PG binder use
- Density Targets
  - Per layer
- IRI
  - Category
  - Station limits
  - Exemptions

Specification Updates



Specification Updates

- Combined Bid
  - Fractured faces
  - TSR
  - LT, MT, HT (500? combinations to 45?)
  - M332 New, M334 Old



Specification Updates

- 460.2.2.3 Aggregate Gradation Master Range
  - New numbering system

Gradations (Nmas)	
1	37.5 mm
2	25.0 mm
3	19.0 mm
4	12.5 mm
5	9.5 mm
6	4.75 mm

Pantry Software

- State-wide Spreadsheets
  - Nuclear Density Incentives/disincentives
- State-wide Forms
  - Paving Letter templates
  - Conversions
  - Calculations
- Regional Specific
  - Pre-Pave Forms

Field Note Diaries

CMM 4-59

- Inspector duties
- Documentation CMM 4-61
- Visual inspection guidance
- Problem/Causes checklist
- Yield calculations
- Etc…

Diary Date	Diary Author				
07/12/13	Sunrise	Sunset	Temperatures		Weather
64	00:00	00:00	High: 80	Low: 70	Sun

Site Information

Site	Description	Comment	Charge	Controlling Item	Reason for D
00	Working Day		1	Asphalt Pavement, Binder	

Remarks Expanded View

[redacted] onsite started to pave at station 264+25. The binder layer was placed today. Paving started at 7:30am. The final grading crew was approximately 1000¿ in front of the paving crew.

Between stations 244+00 and 225+00 three loads of asphalt were rejected and sent back to the plant due to not having enough oil in the mixture. The plant was notified of the issue and corrected. Work continued and S[redacted] completed the binder west bound layer at station 168+93. Barrels were pulled and contractor left the site at 7:30pm.

IDR Information Subid FM00001 Vendor ST11

Vendor Name [redacted]

Workers Description	Number	Hours
Flagger	3	12
Foreman	1	12
Laborer	4	12
Operator	5	12

Equipment Description	Number	Hours
Hamm Drum Roller HD120	1	12
Hamm Drum Roller HD90	1	12
Hamm Tire Roller GRW18	1	12
New Holland 168 Skid Steer	1	3
Paver Terex 352	1	6
Paver Terex CR452	1	12
Road Tech SB2500 Shuttle	1	12
Wirtgen 50DC mini mill	1	2

[redacted] on site started to pave at station 286+50 at 8:30am. Paving continued through the day. An average surface depth of 2.25¿ was being placed. Field engineer spoke to Foreman [redacted] and Foreman [redacted] about paving near intersection [redacted] Field engineer suggested to them to place a flagger near the round a bout suggesting to traffic to travel north or south on [redacted] Project Manager [redacted] stated that [redacted] would not allow his second paving crew to pave the intersection at [redacted] He said he will now pave the intersection 1st thing tomorrow morning.

Near the end of the day at 170+00 a dump truck broke down in front of the shuttle buggy. The truck was removed and the ticket was discarded because it was not unloaded. This was ticket 97. Paving was completed at 5:15pm at station 168+93. Notified the contractor of a resident that needed a better ramp to enter and exit their driveway. Foreman [redacted] had a laborer take gravel to the property at [redacted] and ramp the entrance.

Diary Date	Diary Author			
07/12/13	Sunrise	Sunset	Temperatures	
62	00:00	00:00	High:	Low:

Site Information

Site	Description	Comment	C
00	Completion Date		

Remarks Expanded View

[redacted]

[redacted] asphalt lab broke down. They will only be able to pave 1500 ton today. Due to noise restrictions, the plant will only be online until 1pm tomorrow for paving.

Diary Date	Diary Author			
09/18/13	Sunrise	Sunset	Temperatures	
147	06:36	18:57	High: 80	Low: 57

Site Information

Site	Description	Comment
00	Completion Date	

Remarks Expanded View

0.01" rain recorded at Muskego weather station. [redacted] completed storm sewer installation for Stage 3, except for Inlet 1.2.

[redacted]

[redacted] paved binder (E-1) on Villa Drive and Abbey Court.

[redacted] worked on pavement markings in Stage 1 areas.

Contractor on site to pave binder and surface on NB lane 1 and the median shoulder from 665+57 to 673+37. Binder is 19mm E10 HMA and surface is 12.5mm E10 HMA from [redacted] will also resurface lane 1 and the median shoulder from 673+37 to 192+14 to repair the area between 676+00 and 191+63 where water has been ponding. The paving foreman is [redacted] Milling began at 665+57 at 10 pm. Milling inspected by [redacted] see his IDR for details.

12:20 am first truck arrived on site and lane 1 binder paving began. Paving depth is 2.5¿ loose, 2.25" after rolling. Contractor is paving to depth with 1 Blaw Knox paver without skis or a shuttle buggy. Hypac C778B steel drum hot roller follows immediately behind the paver with 3 vibratory passes. A Bomag BW138AD and another Hypac C778B steel drum cold roller followed after allowing the mat to cool sufficiently.

12:55 am binder paving completed at 673+37. Calculated yield = 129 T, actual yield = 130.20 T. Contractor waited for cold rolling to be completed and nuclear density readings before setting back to begin surfacing.

1:35 am Surfacing begins with 2 pavers. The median shoulder paver leads, paving to depth of 2" loose for 1.75" after rolling. [redacted] string lined off the inlet at 191+63 back to 677+25 and paved to depth to remove the belly in the shoulder. I checked this area with a 6' level for drainage during paving.

3:30 am paving ended at 192+14. Contractor off site at 4:00 am.

Contractor on site to pave binder and surface on NB lane 2 and 3 from 665+57 to 673+37. Binder is 19mm E10 HMA and surface is 12.5mm E10 HMA from [redacted] The paving foreman is [redacted] Milling began at 665+57 at 10:10 pm. Mill depth is 4". Layout at the lane 1/2 joint provided by [redacted] and I. Milling inspected by [redacted] see his IDR for details.

10:45 pm Paving crew arrives on site and unloads and stages equipment for paving.

12:30 am First truck arrived on site and binder paving began. Binder depth is 2.5¿ loose, 2.25" after rolling. Contractor is paving to depth with 2 Blaw Knox pavers without skis or a shuttle buggy. Hypac C778B steel drum hot roller follows immediately behind the paver with 3 vibratory passes. A Bomag BW138AD and another Hypac C778B steel drum cold roller followed after allowing the mat to cool sufficiently.

1:45 am Binder paving completed at 673+37. Bill adjusted the last binder ticket to reflect 10 tons waste. Calculated yield = 257 T, actual yield = 250.52 T. Contractor waited for cold rolling to be completed and nuclear density readings before setting back to begin surfacing.

2:10 am Surfacing begins with 2 pavers. Surface depth is 2" loose for 1.75" after rolling.

2:50 am Surface paving ended at 673+37. Calculated yield = 200 T, actual yield = 190 T. [redacted] adjusted the last surface ticket to reflect 5.7 tons waste. Contractor off site at 3:30 am.

Proposal/Contract 20130108008 I 43 NORTH SOUTH

Project Manager [redacted]

Project Leader (PM pre - 2006) [redacted]

Prime Contractor [redacted]

Diary Date	Diary Author			
06/14/13		Sunrise	Sunset	Temperatures
145		05:12	20:33	High: 66 Low: 55

Remarks Expanded View

No Remarks

Workers Description	Number	Hours
Foreman	1	8
Operator	12	8
Truck Drivers	24	6

Equipment Description	Number	Hours
Blaw Knox PF-3200 Paver	2	8
Bomag BW138 Roller	1	8
Dump: K&B Trucking	2	6
Dump: Patriot	4	6
Dump: Rodriguez Trucking	3	6
Dump: Sobczyk Trucking	3	6
Dump: South Star	7	6
Dump: WTS	5	6
F250 Pickup	1	8
Hamm HD120 Roller	1	8
Hypac C778B Roller	1	8
IR PT240 Rubber Tire Roller	1	8
New Holland C190 Skid Stee	1	8
RoadTec Shuttle Buggy	1	8
Sakai SW850 Roller	1	8
Street Sweeper	1	7
Supply Truck w/ Trailer	1	8
Tack Truck	1	7

Getting Paid

- Document daily production
  - Mix types and quantities
- Document placement locations
- Prompt payments
- Retainers