Date: **July 7, 2025**

To: **All Proposers**

Subject: **Addendum No. 2**
Consisting of nineteen (19) Pages

RFP No.: **Bid 25-06-3737LE**

Project Name: **N13(3-3)1,4 Red Valley Chapter**

Owner: **Navajo Division of Transportation**

Proposer shall make note of and/or incorporate all changes listed below into the requested Request for Proposal (RFP):

1. Plans:

    a. Sheet 3: SUMMARY OF QUANTITIES, FP-14 ITEM NO. "40702-1100 CHIP SEAL, TYPE 2A" has been updated to "41901-0000 ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL".

    b. Sheet 4: ESTIMATED QUANTITIES, FP-14 ITEM NO. "40702-1100 CHIP SEAL, TYPE 2A" has been updated to "41901-0000 ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL" in surfacing schedule.

    c. Sheet 4: ESTIMATED QUANTITIES, BASIS OF ESTIMATED QUANTITIES ITEM NO. "40702-1100 CHIP SEAL, TYPE 2A" has been updated to "41901-0000 ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL". The supplemental specification "table 703-7" for aggregate gradation has been updated to "table 703-7a".

    d. Sheet 7: ROADWAY TYPICAL SECTION, "7/8" CHIP SEAL, TYPE 2A" description in detail B1 has been updated to "ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL".

    e. Sheet 7: ROADWAY TYPICAL SECTION, "7/8" CHIP SEAL, TYPE 2A" description in SEQUENCE OF PAVEMENT RECONSTRUCTION, 2, TYPICAL SECTION B, D, has been updated to "ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL".

2. Contract Book, Exhibit F:

    a. Replace "SECTION 419 - CHIP SEAL" with the attached new sheet "SECTION 419. – ASPHALT RUBBER SURFACE TREATMENT".

    b. Add "SECTION 702. – ASPHALT MATERIAL".

    c. Replace "SECTION 703.09 – Chip Seal Aggregate." and "SECTION 703.12 – Blotter." with attached new sheet "SECTION 703.09 – Asphalt Surface Treatment Aggregate" and "SECTION 703.12 – Blotter.".

3. Bid Schedule: FP-14 ITEM NO. "40702-1100 CHIP SEAL, TYPE 2A" has been updated to "41901-0000 ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL" in bid schedule.

END OF ADDENDUM NO. 2

Thank you for your interest!

Ardaniel Begay, Principal Contract Analyst
Project Contact Person

STATE	PROJECT	SHEET NUMBER
NM	N13	3

SUMMARY OF QUANTITIES

FP-14 ITEM NO.	ITEM DESCRIPTION	UNIT	ROADWAY		CONSTRUCTION ENGINEERING		PERMANENT SIGNING & STRIPING		BRIDGE		PROJECT TOTAL	
			USE	FINAL	USE	FINAL	USE	FINAL	USE	FINAL	USE	FINAL
15101-0000	MOBILIZATION	LS			LS						LS	
15201-0000	CONSTRUCTION SURVEY AND STAKING	LS			LS						LS	
20302-0100	REMOVAL OF BOX CULVERT	LF							10		10	
20304-1000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS			LS						LS	
20402-0000	SUBEXCAVATION	CUYD	3200								3200	
20419-0000	EMBANKMENT CONSTRUCTION (SUBGRADE PREPARATION)	SQYD	6,100								6100	
20801-0000	STRUCTURE EXCAVATION	CUYD							168		168	
20803-0000	STRUCTURE BACKFILL	CUYD							168		168	
25101-0300	PLACED RIPRAP, METHOD A, CLASS 3	CUYD							86		86	
25101-0700	PLACED RIPRAP, METHOD A, CLASS 7	CUYD							1500		1500	
30102-2000	AGGREGATE BASE GRADING D, 6-INCH DEPTH	SQYD	6,100								6100	
31002-1000	CONTINUOUS COLD RECYCLED ASPHALT COURSE (CCRAC) 2-1/2", TYPE A	SQYD	107,100								107100	
31002-1100	CONTINUOUS COLD RECYCLED ASPHALT COURSE (CCRAC) 3", TYPE A	SQYD	111,000								111000	
40301-0100	ASPHALT CONCRETE PAVEMENT, TYPE 1 (HMA SP IV)	TON	29,500								29500	
40302-0100	ASPHALT CONCRETE PAVEMENT, TYPE 1 (2.5" DEPTH FOR TURNOUTS)	SQYD	6,100								6100	
41101-1000	PRIME COAT, METHOD 1	TON	230								230	
41201-0000	TACK COAT	TON	37								37	
41402-3000	CRACKS, CLEANING AND FILLING	MILE	10.9								10.9	
41901-0000	ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL 1	SQYD	111,000								111000	
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)	CUYD							333		333	
55220-0000	REPAIR CONCRETE	SQYD							36		36	
55401-1000	REINFORCING STEEL	LB							60875		60875	
56101-0000	STRUCTURAL CONCRETE INJECTION AND CRACK REPAIR	LINFT							120		120	
60704-0000	CLEANING CULVERT IN PLACE	EACH	22								22	
61701-5000	GUARDRAIL	LINFT	1,800								1,800	
61703-0000	TERMINAL END	EACH	10								10	
61707-0000	STRUCTURE TRANSITION RAILING	EACH	8								8	
61801-0000	CONCRETE BARRIER	LINFT							195		195	
61901-1000	FENCE, BARBED WIRE, 5 STRAND	LINFT	100								100	
61902-1400	GATE, METAL, 16 FEET WIDTH	EACH	2								2	
61903-0300	CATTLE GUARD 16 FEET (WITH TYPE 2 GATE)	EACH	9								9	
63309-0000	DELINEATOR, TYPE 1	EACH	245								245	
63316-1100	REMOVE SIGN AND REPLACE WITH NEW SIGN SYSTEM	SQ FT					350				350	
63318-1000	MILEPOST	EACH	22								22	
63401-1500	PAVEMENT MARKINGS, TYPE H THERMOPLASTIC, SOLID	LINFT					171700				171,700	
63405-3101	PAVEMENT MARKINGS, TYPE H, "STOP BAR", 24" SOLID WHITE	LINFT					230				230	
63501-0000	TEMPORARY TRAFFIC CONTROL	LS					LS				LS	
15701-0000	SOIL EROSION CONTROL, TEMPORARY	LS			LS						LS	

WILSON & COMPANY
4401 MASTHEAD ST. NE., SUITE 150
ALBUQUERQUE, NM 87109
PHONE: 505-348-4000
FAX: 505-348-4055
www.wilsonco.com

MYRA K. CANDELARIA
NEW MEXICO
25660
PROFESSIONAL ENGINEER
07/07/2025

1	REVISED ITEM NUMBER/DESCRIPTION	MKC	7/7/2025
	REVISION	BY	DATE

NAVAJO NATION
DIVISION OF TRANSPORTATION

N13(3-3)1,4

SUMMARY OF QUANTITIES

PROJECT MANAGER: MKC	DATE: 5/25	DRAWING	SHEET
LEAD DESIGNER: KAN	DATE: 5/25		
AS-BUILT BY:	DATE:		3 OF 74
SCALE: 1"=100' H 1"=20' V			

STATE	PROJECT	SHEET NUMBER
NM	N13	4

SURFACING SCHEDULE

STATION	TO	STATION	LENGTH	DESCRIPTION	41101-1000 PRIME COAT, METHOD 1			31002-1000 CONTINUOUS COLD RECYCLED ASPHALT COURSE (CCRAC) 2-1/2", TYPE A			31002-1100 CONTINUOUS COLD RECYCLED ASPHALT COURSE (CCRAC) 3", TYPE A			40301-0100 ASPHALT CONCRETE PAVEMENT, TYPE 1 (HMA SP IV)				41201-0000 TACK COAT			41901-0000 ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL 1	
					WIDTH (FT)	S.Y.	TON	WIDTH (FT)	DEPTH (IN)	S.Y.	WIDTH (FT)	DEPTH (IN)	S.Y.	WIDTH (FT)	DEPTH (IN)	S.Y.	TONS	WIDTH (FT)	S.Y.	TON	WIDTH (FT)	S.Y.
N13																						
10+00.00		79+06.72	6906.72	2-11' Driving Lanes, 2 - 6' Shoulders	34.00	26,092.05	48.92	34.00	2.50	26,092.05	-	-	-	36.00	4.50	27,626.88	7,174.36	35.00	26859.47	8.95	-	-
79+06.72		86+94.59	787.87	4-11' Driving Lanes, 2 - 4' Shoulders	52.00	4,552.14	8.54	52.00	2.50	4,552.14	-	-	-	54.00	4.50	4,727.22	1,227.60	53.00	4639.68	1.55	-	-
86+94.59		289+20.00	20225.41	2-11' Driving Lanes, 2 - 6' Shoulders	34.00	76,407.10	143.26	34.00	2.50	76,407.10	-	-	-	36.00	4.50	80,901.64	21,009.14	35.00	78654.37	26.22	-	-
289+20.00		583+00.00	29380.00	2-11' Driving Lanes, 2- 6' Shoulders	-	-	-	-	-	-	34.00	3.00	110,991.11	-	-	-	-	-	-	-	34.00	110,991.11
				PROJECT TOTAL			201			107,051			110,991				29,411			36.72		110,991
				PROJECT USE			**210**			**107,100**			**111,000**				**29,500**			**37**		**111,000**

TURNOUT SCHEDULE

TURNOUT NUMBER	LOCATION		PAVED WIDTH (Wd1) [FT]	RADIUS (R) [FT]	PAVED LENGTH (LP) [FT]	PS NO 1 AREA (SF)	DESCRIPTION	20419-0000 EMBANKMENT CONSTRUCTION (SUBGRADE PREPARATION)	30102-2000 AGGREGATE BASE GRADING D, 6-INCH DEPTH		41101-1000 PRIME COAT, METHOD 1		40302-0100 ASPHALT CONCRETE PAVEMENT, TYPE 1 (2.5" DEPTH FOR TURNOUTS)	
								S.Y.	DEPTH (IN)	S.Y.	S.Y.	TON	DEPTH (IN)	S.Y.
TO-01	11+24.07	RT	12.00	30	80.60	1360.36	Turnout on Unmarked Road	151.15	6.00	151.15	151.15	0.28	2.50	151.15
TO-02	11+29.09	LT	16.00	30	74.00	1570.23	Turnout on Unmarked Road	174.47	6.00	174.47	174.47	0.33	2.50	174.47
TO-03	20+96.25	RT	28.00	40	85.49	3066.18	Turnout at Southern Entrance to Red-Rock School	340.69	6.00	340.69	340.69	0.64	2.50	340.69
TO-04	25+67.78	LT	16.00	30	79.68	1661.18	Turnout to Unmarked Road	184.58	6.00	184.58	184.58	0.35	2.50	184.58
TO-05	27+53.03	LT	16.00	30	80.18	1669.19	Turnout to residence/buisiness	185.47	6.00	185.47	185.47	0.35	2.50	185.47
TO-06	35+33.50	RT	24.00	40	87.55	2788.01	Turnout at Northern Entrance to Red-Rock School	309.78	6.00	309.78	309.78	0.58	2.50	309.78
TO-07	49+59.11	LT	30.00	35	25.13	1199.09	Turnout South of Trading Post	133.23	6.00	133.23	133.23	0.25	2.50	133.23
TO-08	52+04.41	LT	28.00	30	32.33	1296.14	Turnout North of Trading Post	144.02	6.00	144.02	144.02	0.27	2.50	144.02
TO-09	83+02.06	LT	28.00	40	82.93	3015.00	Turnout at N33	335.00	6.00	335.00	335.00	0.63	2.50	335.00
TO-10	99+59.56	LT	12.00	30	79.61	1360.10	Turnout at private property	151.12	6.00	151.12	151.12	0.28	2.50	151.12
TO-11	127+10.13	RT	16.00	35	78.43	1780.59	Turnout at Unmarked Road	197.84	6.00	197.84	197.84	0.37	2.50	197.84
TO-12	127+10.40	LT	18.00	30	77.40	1779.45	Turnout at Unmarked Road	197.72	6.00	197.72	197.72	0.37	2.50	197.72
TO-13	176+11.55	LT	16.00	30	77.35	1623.90	Turnout at Unmaked Road	180.43	6.00	180.43	180.43	0.34	2.50	180.43
TO-14	188+12.85	RT	16.00	30	81.18	1685.66	Turnout at Unmarked Road	187.30	6.00	187.30	187.30	0.35	2.50	187.30
TO-15	216+37.80	LT	16.00	30	78.59	1646.19	Turnout at Unmaked Road	182.91	6.00	182.91	182.91	0.34	2.50	182.91
TO-16	260+14.28	LT	16.00	30	77.31	1648.21	Turnout at Unmaked Road	183.13	6.00	183.13	183.13	0.34	2.50	183.13
TO-17	260+14.45	RT	16.00	30	77.71	1612.51	Turnout at Unmarked Road	179.17	6.00	179.17	179.17	0.34	2.50	179.17
TO-18	285+13.74	LT	16.00	30	79.55	1659.08	Turnout at Unmaked Road	184.34	6.00	184.34	184.34	0.35	2.50	184.34
TO-19	356+72.63	RT	28.00	40	78.60	2887.42	Turnout at Indian Service Road 5012	320.82	6.00	320.82	320.82	0.60	2.50	320.82
TO-20	375+22.96	LT	16.00	30	78.04	1629.50	Turnout at Unmaked Road	181.06	6.00	181.06	181.06	0.34	2.50	181.06
TO-21	405+23.13	RT	16.00	30	77.58	1628.34	Turnout at Indian Service Road 5021	180.93	6.00	180.93	180.93	0.34	2.50	180.93
TO-22	405+23.42	LT	16.00	35	79.40	1796.08	Turnout at Indian Service Road 5021	199.56	6.00	199.56	199.56	0.37	2.50	199.56
TO-23	437+95.50	RT	16.00	35	79.70	1764.59	Turnout at Unmarked Road	196.07	6.00	196.07	196.07	0.37	2.50	196.07
TO-24	452+24.04	RT	16.00	30	77.23	1622.00	Turnout at Mitten Rock Road	180.22	6.00	180.22	180.22	0.34	2.50	180.22
TO-25	452+24.47	LT	16.00	30	78.60	1643.85	Turnout at Mitten Rock Road	182.65	6.00	182.65	182.65	0.34	2.50	182.65
TO-26	462+57.26	LT	24.00	30	77.27	2240.66	Turnout at Unmaked Road	248.96	6.00	248.96	248.96	0.47	2.50	248.96
TO-27	479+73.98	RT	20.00	30	79.49	1976.23	Turnout at Indian Service Road 5021	219.58	6.00	219.58	219.58	0.41	2.50	219.58
TO-28	526+59.50	LT	20.00	30	78.27	1944.15	Turnout at Unmaked Road	216.02	6.00	216.02	216.02	0.41	2.50	216.02
TO-29	547+23.20	LT	16.00	30	77.92	1632.50	Turnout at Unmarked Road	181.39	6.00	181.39	181.39	0.34	2.50	181.39
TO-30	554+25.08	RT	16.00	30	78.26	1638.44	Turnout at Unmarked Road	182.05	6.00	182.05	182.05	0.34	2.50	182.05
							PROJECT TOTAL	6,092		6,092		11		6,092
							PROJECT USE	**6,100**		**6,100**		**20**		**6,100**

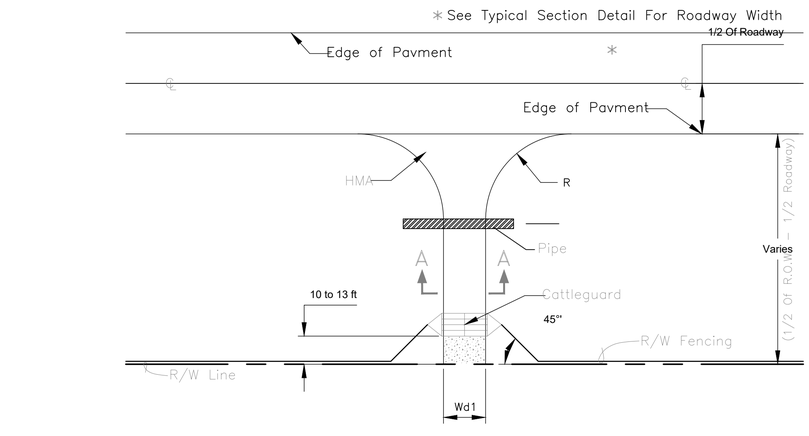
ITEM NO. 41402-3000 - CRACKS, CLEANING AND FILLING

STATION	TO	STATION	LENGTH (FT)	LENGTH (mi)	COMMENTS	REMARKS
N13						
10+00.00	-	583+00.00	57300	10.852		
		PROJECT TOTAL		10.852		
		PROJECT USE		**10.9**		

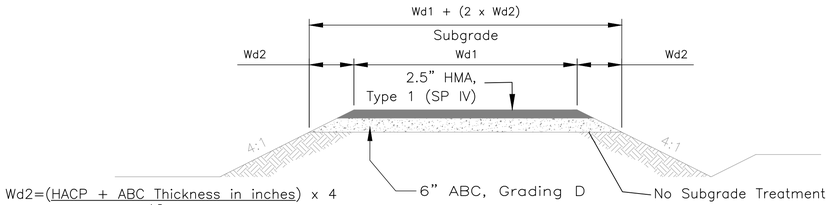
ITEM NO. 20402-0000 - SUBEXCAVATION

STATION	ASSUMED LENGTH (FT)	DEPTH (FT)	WIDTH (FT)	VOLUME (CY³)	COMMENTS	REMARKS
N13						
10+00.00	75	0.583	42	34	BOP PAVEMENT TRANSITION	
277+00.00	500	2	42	1556	SEE GEOTECH REPORT BORING B-06	
299+00.00	500	2	42	1556	SEE GEOTECH REPORT BORING B-02	
			PROJECT TOTAL	3145		
			PROJECT USE	**3200**		

NOTE: NEW SUITABLE BACKFILL MATERIAL COST AND PLACEMENT SHALL BE INCLUDED IN THE COST OF THE SUBEXCAVATION BID ITEM.



TYPICAL TYPE "A" TURNOUT



Wd2=(HACP + ABC Thickness in inches) x 4
12

SECTION A-A

BASIS OF ESTIMATED QUANTITIES

ITEM No.	DESCRIPTION	GRADE	UNITS	APPLICATION
30102-2000	Aggregate Base Grading D, 6-Inch Depth	"D"	3850 lbs/yd³	Place on Turnouts at 6" Depth; Quantity is paid by Square Yard
40301-0100	Asphalt Concrete Pavement, Type 1 (HMA SP IV)	SP IV	4155 lbs/yd³	Place on N13 mainline per Typical Section A
40302-0100	Asphalt Concrete Pavement, Type 1 (2.5" Depth for Turnouts)	SP IV	4155 lbs/yd³	Place on Turnouts at 2.5" Depth per Typical Section A
	Binder Grade for the HMA SP IV Mix	PG 64-22	5.6%	To be used on the 40301-0100 & 40302-0100 Bid Items
41901-0000	Asphalt Rubber Surface Treatment, Chip Seal	"Special"	yd²	Typical Section B Only; Apply on top of CCRAC. See Supp. Spec. Section 703.09, Table 703.7a for Aggregate Gradation. 1
	Fog Seal, Emulsified Asphalt	CQS-1h		Apply on Top of Rubberized Asphalt Chip Seal. See FP-14 Table 407-2 for application rates.
	Fog Seal, Recycling Agent (Diluted 2:1)	Diluted 2:1		Apply On Top of Continuous Cold Recycled Asphalt Course. See FP-14 Table for 407-2 for application rates
41101-1000	Prime Coat, Method 1	AE-P	240gal/tons	Apply on top of Continuous Cold Recycled Asphalt Course. (Typical Section A) at rate of 0.45 gal/yd²
41201-0000	Tack Coat	EA	240gal/tons	Apply on top of Bottom HMA SP IV Lift (Typical Section A) at rate of 0.08 gal/yd²

WILSON & COMPANY
4401 MASTHEAD ST. NE., SUITE 150
ALBUQUERQUE, NM 87109
PHONE: 505-348-4000
FAX: 505-348-4055
www.wilsonco.com

NYRA K. CANDELARIA
NEW MEXICO
25660
PROFESSIONAL ENGINEER
07/07/2025

	REVISION	BY	DATE
1	REVISED ITEM NUMBER/DESCRIPTION	MKC	7/7/2025

NAVAJO NATION
DIVISION OF TRANSPORTATION

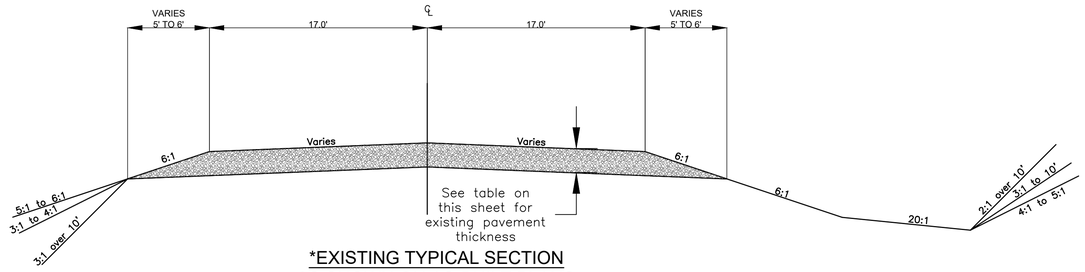
N13(3-3)1,4

ESTIMATED QUANTITIES

PROJECT MANAGER: MKC	DATE: 5/25	DRAWING	SHEET
LEAD DESIGNER: KAN	DATE: 5/25		
AS-BUILT BY:	DATE:		4 OF 74
SCALE: 1"=100' H 1"=20' V			

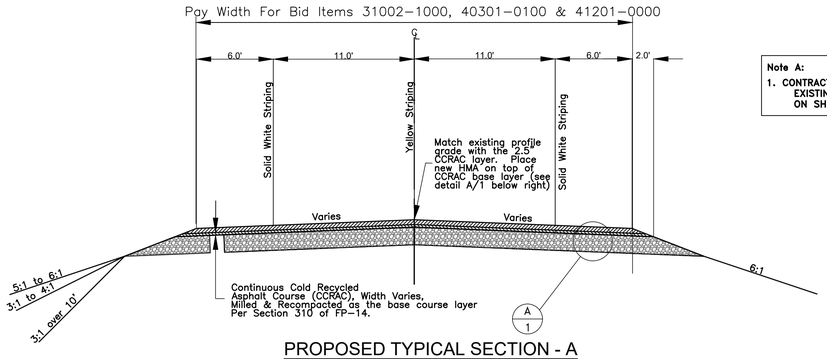
STATE	PROJECT	SHEET NUMBER
NM	N13	7

PROJECT: N13(3-3)1,4



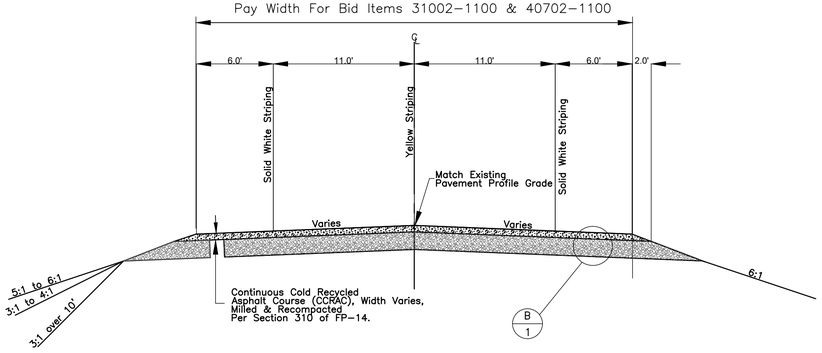
*EXISTING TYPICAL SECTION
AS SHOWN ON AS-BUILT PLANS
FROM Sta. 10+00.00 to 583+00.00

Pay Width For Bid Items 31002–1000, 40301–0100 & 41201–0000



PROPOSED TYPICAL SECTION - A
BOP Sta. 10+00.00 to 289+20.00

Pay Width For Bid Items 31002–1100 & 40702–1100



PROPOSED TYPICAL SECTION - B
Sta. 289+20.00 to 583+00.00 - EOP

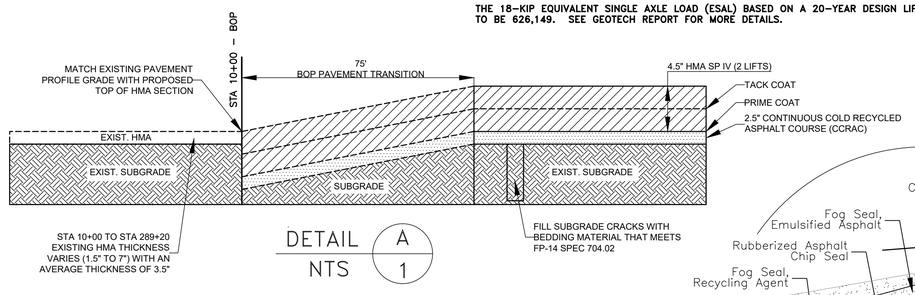
Note A:
1. CONTRACTOR SHALL MATCH THE CENTERLINE PROFILE. EXISTING POINT PROFILE DATA AND SUPER ELEVATION IS PROVIDED ON SHEETS 8 TO 11.

PAVEMENT THICKNESS AT BORING LOCATIONS

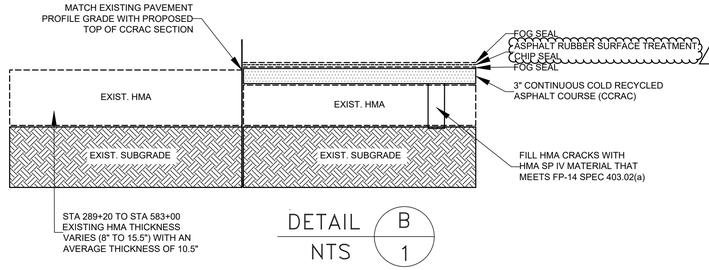
STATION	BORING	EXISTING ASPHALT PAVEMENT THICKNESS (IN)
11+00	B-53	2.5
16+00	B-52	1.5
19+00	B-51	3.5
23+00	B-50	3.5
28+00	B-49	3.5
34+00	B-48	3
39+00	B-47	3.5
44+00	B-46	3
50+00	B-45	3.5
55+00	B-44	2.5
61+00	B-43	3
66+00	B-42	3
72+00	B-41	3
77+00	B-40	2.5
85+00	B-39	3
92+00	B-38	3.5
97+00	B-37	3
105+00	B-36	4
112+00	B-35	5
117+00	B-34	4
125+00	B-33	4
132+00	B-32	4
136+00	B-31	4.5
141+00	B-30	3
145+00	B-29	4
150+00	B-28	2.5
154+00	B-27	3
158+00	B-26	3.5
163+00	B-25	3
172+00	B-24	3.5
173+00	B-23	2
181+00	B-22	4
186+00	B-21	3
189+00	B-20	4
193+00	B-19	7
198+00	B-18	3.5
206+00	B-17	3.5
217+00	B-16	3.5
223+00	B-15	2
226+00	B-14	6

STATION	BORING	EXISTING ASPHALT PAVEMENT THICKNESS (IN)
234+00	B-13	6
239+00	B-12	2
250+00	B-11	4.5
256+00	B-10	4.5
263+00	B-09	4.5
267+00	B-08	3.5
272+00	B-07	6
277+00	B-06	2.5
283+00	B-05	5
289+00	B-04	13.5
294+00	B-03	15.5
299+00	B-02	10
305+00	B-01	10
316+00	B-54	10
326+00	B-55	10
337+00	B-56	11
347+00	B-57	10
358+00	B-58	9.5
368+00	B-59	8
380+00	B-60	9
386+00	HA-02	0
387+00	HA-01	0
391+00	B-61	9
401+00	B-62	11
411+00	B-63	9
421+00	B-64	10
433+00	B-65	10
442+00	B-66	12
452+00	B-67	14
462+00	B-68	11
473+00	B-69	9.5
484+00	B-70	10
494+00	B-71	9.5
505+00	B-72	12
515+00	B-73	9
526+00	B-74	8.5
537+00	B-75	9.5
549+00	B-76	9
582+00	B-78	14

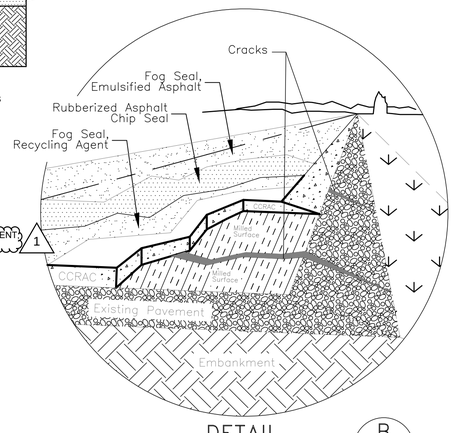
THE 18–KIP EQUIVALENT SINGLE AXLE LOAD (ESAL) BASED ON A 20–YEAR DESIGN LIFE IS CALCULATED TO BE 626,149. SEE GEOTECH REPORT FOR MORE DETAILS.



DETAIL A / NTS / 1



DETAIL B / NTS / 1



DETAIL Perspective View B / 1

SEQUENCE OF PAVEMENT RECONSTRUCTION

1. COMPLETE CRACK SEALING OPERATIONS PER BOTH TYPICAL SECTIONS, A & B. LIMIT THE CONSTRUCTION AREA TO 2 MILE LENGTHS.

   TYPICAL SECTION A (STA 10+00 TO 289+20):
   FILL SUBGRADE CRACKS WITH BEDDING MATERIAL THAT MEETS FP-14 SPEC 704.02

   TYPICAL SECTION B (STA 289+20 TO 583+00):
   FILL HMA CRACKS WITH HMA SP IV MATERIAL THAT MEETS FP-14 SPEC 403.02(a)

2. COMPLETE FINAL CCRAC AND/OR HMA OVERLAY OPERATIONS PER BOTH TYPICAL SECTIONS. LIMIT THE CONSTRUCTION AREA TO 2 MILE LENGTHS.

   TYPICAL SECTION A (STA 10+00 TO 289+20):
   A. CLEAN ROADWAY SURFACE OF DEBRIS AND DIRT.
   B. COLD MILL 75 FEET AT BOP AND EXCAVATE SUBGRADE TO ACCOUNT FOR PAVEMENT THICKNESS TRANSITION.
   C. 2.5" COLD MILL, MIX, PLACE AND COMPACT CCRAC BASE COURSE LAYER.
   D. PLACE PRIME COAT.
   E. PLACE AND COMPACT 2.5" HMA SP IV BOTTOM LIFT.
   F. PLACE TACK COAT.
   G. PLACE AND COMPACT 2" HMA SP IV TOP LIFT.

   TYPICAL SECTION B (STA 289+20 TO 583+00):
   A. CLEAN ROADWAY SURFACE OF DEBRIS AND DIRT.
   B. 3" COLD MILL, MIX, PLACE AND COMPACT CCRAC.
   C. PLACE FOG SEAL.
   D. PLACE ASPHALT RUBBER SURFACE TREATMENT, CHIP SEAL (1)
   E. PLACE FOG SEAL.

3. COMPLETE STRIPING OPERATIONS. CONDUCT USING A MOBILE TRAFFIC CONTROL OPERATION.

WILSON & COMPANY
4401 MASTHEAD ST. NE., SUITE 150
ALBUQUERQUE, NM 87109
PHONE: 505-348-4000
FAX: 505-348-4055
www.wilsonco.com

MYRA K. CANDELARIA NEW MEXICO 25660 PROFESSIONAL ENGINEER
07/07/2025

	REVISION	BY	DATE
1	REVISED CHIP SEAL DESCRIPTION	MKC	7/7/2025

NAVAJO NATION
DIVISION OF TRANSPORTATION
NAVAJO D.O.T

N13(3-3)1,4

ROADWAY TYPICAL SECTION

PROJECT MANAGER: MKC	DATE: 5/25	DRAWING	SHEET
LEAD DESIGNER: KAN	DATE: 5/25		
AS-BUILT BY:	DATE:		7 OF 74
SCALE: 1"=100' H 1"=20' V			

Section 419. − ASPHALT RUBBER SURFACE TREATMENT

Description

419.01 This work consists of a single application of asphalt rubber binder, pre-coated cover aggregate and a fog seal coat.

Material

419.02 Conform to the following Subsections:

Aggregate	703.10
Asphalt binder	702.01
Blotter	703.13
Emulsified asphalt	702.03
Antistrip	702.08

The asphalt binder shall be **PG 64-22**. Material Certificate of Compliance shall be provided with each tanker load.

Crumb rubber modifier (CRM) shall be produced primarily from the processing of automobile and truck tires by ambient temperature grinding methods.

The gradation of the CRM shall meet the following when tested in accordance with ASTM C-136 (dry sieve only) and using a 50 gram sample:

Table 419-1

Sieve Size	Percent Passing
2.36 mm (No.8)	100
2.00 mm (No.10)	95 – 100
1.18 mm (No.16)	40 – 100
600 µm (No.30)	0 – 60
300 µm (No.50)	0 – 20
75 µm (No.200)	0 – 5

The use of rubber from multiple sources is acceptable, except the overall blend of rubber shall meet the above gradation requirements.

The individual CRM particles, irrespective of diameter, shall not be greater in length than 5 mm ($^{3}/_{16}$-inch).

CRM shall have a specific gravity of 1.15 ± 0.05 (ASTM D 297) and shall be substantially free of contaminants, including loose fabric, metal, mineral and other non-rubber substances.

No more than four (4) percent (by weight of rubber) calcium carbonate or talc may be added to prevent rubber particles from sticking together. The rubber shall be sufficiently dry, free flowing and non-foaming when added to hot asphalt cement.

Fiber content in the rubber shall be less than 0.1% by weight. The moisture content in the rubber shall be less than 0.75% by weight. Mineral contaminant in the rubber shall not be

greater than 0.25% by weight, as determined after water separating a 50 gram rubber sample in a one (1) liter glass beaker filled with water. The rubber shall contain no visible metal particles, as indicated by thoroughly stirring of a 50 gram sample with a magnet.

The Contractor shall provide material Certificates of Compliance for the rubber which certifies that all requirements of this specification are complied with for each production lot number or shipment.

Construction Requirements

419.03 Composition of Asphalt Rubber Binder.

The asphalt rubber binder shall consist of a properly proportioned mixture of paving grade asphalt cement, crumb rubber modifier (CRM) and other additives, if required. The percentage of CRM shall be between 18 to 22 percent by weight of the asphalt rubber mixture. The exact percentages for the asphalt cement, CRM, and anti-strip additive (if required) will be determined by the CM based upon the Contractor's mix design as submitted by the Contractor. The asphalt rubber binder shall meet the following physical parameters when reacted at 177 ºC (350 ºF) for 60 minutes:

Table 419-2
Asphalt-Rubber Properties

[(1)] Rotational Viscosity, 177 ºC (350 ºF), Pascal seconds	1.5 – 4.0
Penetration, 4 ºC (39 ºF), 200 g, 60 sec (ASTM D 5); 1/10 mm	10 min.
Penetration, 25 ºC (77 ºF), 100 g, 5 sec (ASTM D 5); 1/10 mm	25 – 75
Resilience, 25 ºC (77 ºF) (ASTM D 3407); %	20 min.
Softening Point, (ASTM D 36); ºC (ºF)	55 (131) min.
Ductility, 4 ºC (39 ºF), (ASTM D 113); 1 CPM	5 min.

[(1)] The viscometer used must be correlated to the Rion Viscometer (formerly Haake), Model VT-04, Rotor No.1.

419.04 Asphalt-Rubber Binder Mix Design. Submit three (3) copies of the asphalt rubber binder mix design to the CM for review and approval at least **21 days before production**. The mix design shall be prepared by the Contractor's independent testing laboratory. The mix design shall include the following:

(a) The design parameters listed in **Table 419-2** for the interaction periods of 60, 90, 135, 360 and 1440 minutes.

(b) Aggregate.

(1) Target values for percent passing each sieve size. Designate target values within the gradation band in the specified grading.

(2) Source of aggregate.

(3) Results of aggregate quality tests.

(4) Coating and stripping of bitumen-aggregate mixtures, AASHTO T 182

(c) Asphalt Binder.

(1) Source of asphalt binder.

(2) Grade of asphalt binder.

(3) Percentage of asphalt binder (by total weight of the asphalt rubber mixture).

(4) Material safety data sheets.

(d) Crumb Rubber Modifier.

(1) Source of CRM.

(2) Gradation of CRM.

(3) Percentage of CRM (by total weight of the asphalt rubber mixture).

(4) If CRM from more than one source is to be used, the above information shall be required for each source.

The CM will evaluate the proposed mix design. If approved, the CM will issue **Job-Mix Formula No.1 (with an effective date)** which will include target values for the cover aggregate application rate, asphalt rubber binder application rate and percent passing each sieve size for the cover aggregate.

Changes to an approved job-mix formula or target value(s) require approval before production. Up to **5 working days** will be required to evaluate a change.

Approved changes in the target value(s) or job-mix formula will result in the issuance of a new **Job-Mix Formula Number with an effective date.** The maximum number of changes in target value(s) or job-mix formula is **3**. Any requested changes above 3 shall require submittal of a complete new mix design as described under **Subsection 419.03**.

If the proposed mix design is disapproved, submit a new mix design.

419.05 Qualification of Asphalt-Rubber Applicator. The Contractor shall be required to pre-qualify with the CM the asphalt-rubber applicator process and/or subcontractor and supplier. The data required to be submitted for qualification approval shall include experience records and equipment list indicating the ability to comply with the specification. The asphalt-rubber applicator must have constructed a minimum of three asphalt-rubber surface treatments over existing pavements that have been in place at least three years under traffic.

419.06 Equipment. Furnish equipment as follows:

(a) Asphalt distributor.

(1) Heating unit and an internal mixing device capable of maintaining a uniform mixture of the asphalt rubber binder.

(2) Adjustable full circulating spray bar to 4.6 m (15 ft) width. Bar extensions shall be full circulating. Test spray bar height at various heights. The spray bar shall maintain the set height 20 mm (13/16 in.) during each spray run.

(3) Apply uniform unbroken spread of asphalt rubber binder and positive acting control valves that quickly open and close in one operation. Uniformly apply asphalt rubber binder over the full width within 0.09 L/m² (0.02 gal/yd²) of the target spread rate.

The distributor shall be equipped with hand hose and nozzle attachment to be used for inaccessible spotting areas.

(4) Thermometer for measuring the asphalt rubber binder temperature in the tank.

(5) Bitumeter that registers rate of travel in feet per minute, trip and total distance in feet.

(6) Pump for circulating the asphalt rubber material in the spray bar, tank and for pumping the material through the spray bar or hand spray.

(7) Pressure gage, pump, tachometer or other approved device for controlling the application rate of asphalt rubber material.

(8) Gage or other approved means of accurately determining the quantity of asphalt rubber material in the tank.

(9) Boot board on the rear of the vehicle for a boot man to accompany the distributor. The boot man shall ride in a position so that all spray bar tips are in full view and readily accessible for unplugging if a plugged tip should occur.

(10) Maintenance of distributor and booster tanks such that no dripping of asphalt rubber material shall occur from any part of the equipment.

The CM will order the use of any distributor truck discontinued that does not comply with the above requirements or that fails to produce a satisfactory application of asphalt rubber material as specified herein.

(b) Rotary power broom or mobile pickup broom.

(1) Self-propelled.

(2) For pavement cleaning and excess cover material removal.

(c) Pneumatic-tire rollers.

(1) Minimum 3 pneumatic-tire rollers.

(2) Self-propelled.

(3) Minimum of 3 pneumatic tires on front axle; minimum of 4 pneumatic tires on rear axle. Means of increasing or decreasing the air pressure in the tires while the rollers are in operation. Tires staggered to produce a slight overlap of the tire tracks. Adequate scraping device or cleaning device to prevent the accumulation of material on the tires.

(4) Copy of roller manufacturer's chart or tables showing the contact areas and average ground contact pressure for the full range of wheel loadings for each roller.

(5) Copy of calibration table or chart for the ballast box that indicates the volume of the ballast box in cubic yards, each 150 mm (6 in.) increase in the depth of ballast and the empty or tare weight of the roller.

(6) Minimum ground contact pressure ---- 550 kPa (80 psi).

(7) Minimum compacting width ---- 1.5 m (5 ft).

(d) Aggregate spreader.

(1) Self-propelled.

(2) Minimum of 4 pneumatic tires on 2 axles.

(3) Positive controls to uniformly deposit the aggregate over the full width of asphalt within 10% by mass of the required rates.

(4) Good mechanical condition.

(5) Adjustable aggregate spreader up to a minimum of 3.5 m (11.5 ft) width.

(e) Hauling units.

(1) Trucks with tailgate discharge and equipped with a device to lock onto the hitch at the rear of the aggregate spreader.

(2) Trucks compatible with the aggregate spreader such that the dump bed shall not push down on the aggregate spreader when fully raised nor have a short bed that would result in aggregate spillage while dumping into the receiving hopper.

(f) Asphalt-rubber equipment. Equipment used in the production and application of the asphalt-rubber shall be described as follows:

(1) **Heat tank.** An asphalt heating tank with a hot oil heat transfer system or retort heating system capable of heating asphalt cement to the necessary temperature for blending with CRM. This unit shall be capable of heating a minimum of 9,500 liters (2,500 gallons) of asphalt cement.

(2) **Blender.** The asphalt-rubber mechanical blender shall have a two-stage continuous mixing process capable of producing a homogenous mixture of asphalt cement and granulated rubber at the specified mix design ratios. This unit shall be equipped with a granulated rubber feed system capable of supplying the asphalt cement without interruption to the continuous blending process. The maximum capacity of the primary blending vessel shall be 2,000 liters (500 gallons). The blending unit shall be capable of fully blending the individual rubber particles with the asphalt cement. A separate asphalt cement feed pump and finished product pump are required. This unit shall have an asphalt cement totalizing meter in liters and a flow rate meter in liters per minute.

(g) Other equipment. Provide two-way communication between the asphalt-rubber distributor and the aggregate spreader if the roadway alignment does not permit visual contact.

419.07 Asphalt Rubber Mixing and Reaction. The percentage of CRM shall be as approved in the mix design and the issuance of Job-Mix Formula No. 1. The temperature of the asphalt cement shall be between 190 ºC (375 ºF) to 232 ºC (450 ºF) at the addition of the CRM. The asphalt and rubber shall be combined and mixed together in the asphalt rubber blending unit and reacted in the distributor for a minimum period of 30 minutes from the time the CRM is added to the asphalt cement. The temperature of the asphalt rubber mixture shall be above 177 ºC (350 ºF) during the reaction period but shall not exceed 232 ºC (450 ºF) at any time. Exceeding the 232 ºC (450 ºF) temperature limit shall be grounds for rejection.

When a job delay occurs after full reaction, the asphalt rubber mixture may be allowed to cool. The mixture shall be reheated slowly (just before application) to a temperature between 177 ºC (350 ºF) and 204 ºC (400 ºF). Additional quantity of asphalt cement and/or CRM may be

added (as required) to produce a mixture that meets the specification viscosity requirement.

419.08 Surface Preparation. Clean the existing pavement surface of all loose material, vegetation, dirt, or other foreign material by approved methods. The material removed from the pavement surface shall not be windrowed along the roadway shoulder or fore slope in such a manner to impede drainage nor be unsightly. The existing road surface shall be approved by the CM before application of the asphalt rubber binder or any other work can begin.

419.09 Weather Limitations. Place hot asphalt rubber surface treatment **only** when the air temperature in the shade and the pavement surface temperature are at least 24ºC (75ºF) or higher. Place fog seal when the air temperature in the shade is at least 4ºC (40ºF). The wind condition shall not exceed 16 km/h (10 mph) nor shall rain be imminent. The pavement surface shall be clean and dry.

419.10 Traffic Control. Do not begin work without an approved and accepted Temporary Traffic Control Plan (TCP). Use a pilot car according to **Section 635** to limit traffic speeds.

419.11 Production Start-Up Procedures. Provide **7 days' advance notice** before constructing a control strip. Also use these start-up procedures when resuming production after termination due to nonconforming work.

On the first day of production, construct a 305 m (1,000 ft) control strip that is one-lane wide. Locate the control strip on the project as designated. Construct the control strip using the hot coated aggregate/asphalt material, aggregate spreader, asphalt rubber binder distributor and all pneumatic rollers that shall be used during production. Cease production after construction of the control strip.

(a) Aggregate Gradation. The Contractor's testing laboratory shall take **3 acceptance samples**, test and evaluate the test results according to **Subsection 106.04**. The aggregate gradation upper and lower specification limits are the approved job-mix formula target values plus or minus the allowable deviations shown in **Table 703-7a**.

(b) Aggregate Application Rate. The **3** aggregate acceptance samples taken for the gradation test shall be evaluated for application rate compliance according to **Subsection 106.04**. The application rate upper and lower specification limits are the approved job-mix formula target value plus or minus 0.54 kg/m² (1 lb/yd²).

(c) Asphalt Rubber Binder Application Rate. The asphalt rubber binder application rate is based upon the distributor's automatic read-out unit inside the cab. The application rate upper and lower specification limits are the approved job-mix formula target value plus or minus 0.09 L/m² (0.02 gal/yd²).

(d) Acceptance of Control Strip. The control strip is accepted at a pay factor of 1.00 if the average of the 3 tests for the aggregate gradation and aggregate application rate are within the above specification limits and the asphalt rubber binder application rate is within its specification limit.

Repeat the control strip process until an acceptable control strip is produced. A maximum of **3 control strips** are permitted. If 3 control strips have been constructed and have not been accepted, cease operation. Submit a corrective plan for review and approval. Repeat the control strip process again after approval of corrective plan.

The Contractor shall follow the procedures under **Subsection 106.01** for control strip(s) that

have not been accepted.

419.12 Asphalt Rubber Binder Application. Protect the surfaces of nearby objects to prevent spattering or marring. Spread building paper on the surface for a sufficient distance from the beginning and end of each application so the flow through the distributor nozzles may be started and stopped on the paper.

The asphalt rubber binder shall be applied between 2.26 kg/m² (0.55 gal/yd²) to 3.16 kg/m² (0.70 gal/yd²) at a temperature between 163 ºC (325 ºF) to 204 ºC (400 ºF). The CM will determine the exact application rate, temperature and area to be sealed before application. Apply the asphalt rubber uniformly with the distributor. Move the distributor forward at the proper application speed at the time the spray bar is opened. Use care not to apply excess material at the junction of spreads. All longitudinal joints shall be overlapped but the overlaps shall not exceed 150 mm (6 in).

Correct skipped areas or deficiencies. Remove and dispose of paper and unused asphalt rubber material at an approved landfill site. Furnish copies of receipts for the disposal to CM.

Traffic shall not be allowed on the asphalt rubber material until the cover aggregate has been applied and rolled in accordance with these specifications.

419.13 Aggregate Application. The cover aggregate shall be **hot pre-coated** with 0.50%±0.25% paving asphalt cement by dry weight of aggregate. The pre-coated cover aggregate should have a "salt and pepper" appearance. At the time of application, the hot pre-coated cover aggregate shall be at a temperature between 110 ºC (250 ºF) to 163 ºC (325 ºF). The cover aggregate shall be applied between 14 kg/m² (25 lbs/yd²) to 19 kg/m² (35 lbs/yd²). The CM will set the exact application rate and approve area to be sealed before application. Immediately apply the hot pre-coated aggregate uniformly with an aggregate spreader after the asphalt rubber binder is applied. Maintain a constant speed of the aggregate spreader within a distance of 30 m (100 ft) of the distributor. In no case shall the aggregate spreader lag more than 45 m (150 ft) behind the distributor.

Immediately correct excesses and deficiencies by careful means to insure no permanent ridges, bumps or depressions in the completed surface and that a uniform texture is achieved. Use hand methods in areas not accessible to power equipment.

Make first roller pass immediately to seat the aggregate after the aggregate is applied. Operate rollers at a maximum speed of 8 km/h (5 mph). If directed by the CM, a steel tandem roller shall also be used at speeds not to exceed 4.8 km/h (3 mph). Furnish sufficient rollers to cover the entire width of the treated surface in one pass.

If the aggregate spreader is stopped for any reason, the spreader shall be moved ahead so all aggregate spread shall be rolled immediately. Rolling shall be continuous until a minimum of 4 complete coverage rolls have been made while the asphalt rubber binder is still tacky enough for the aggregate to adhere. Final rolling shall be completed within one (1) hour after the application of the pre-coated aggregate.

Hauling units shall not exceed 16 km/h (10 mph) when traveling over the sections of roadway where rolling has not been completed.

419.14 Brooming and Maintenance. Lightly broom the aggregate surface in not less than 3 hours nor more than 48 hours after application; however, if the CM determines that conditions are not conducive to obtaining the best results by brooming during this period he will designate

another time period. Maintain the final surface by distributing blotter or cover aggregate according to **Section 411** to absorb any free asphalt rubber and by repairing areas deficient in aggregate. Sweep excess material from the final surface using a rotary power broom. Do not displace embedded material.

419.15 **Fog Seal.** When necessary, the Contractor shall furnish a separate temporary traffic control before the fog seal operations begin. NO WORK shall be allowed until the temporary traffic control is in place and accepted by the CM. A fog seal consists of applying emulsified asphalt diluted with water onto the finished asphalt-rubber chip seal surface. The emulsified asphalt is diluted 1:1 with water. The diluted emulsified asphalt shall be applied to the completed asphalt-rubber sealed areas in accordance with Subsection 409.10, Fog Seal at a rate of 0.45 to 0.68 L/m² (0.10 to 0.15 gal/yd²) for both the first and second application. The fog seal can be cured for a minimum of 5 days and a maximum period of 14 days. After this curing period, the permanent pavement markings must be applied to the completed asphalt rubber sealed areas.

419.16 **Acceptance.** Asphalt binder and emulsified asphalt will be evaluated and accepted under **Subsections 106.04, 702.01, 702.03** and **702.09**. Pre-coated aggregate will be evaluated and accepted under **Subsection 106.02 Visual Inspection**. Asphalt-rubber binder mixture will be evaluated and accepted under **Subsection 106.04**.

Construction of asphalt rubber surface treatment will be evaluated and accepted under **Subsections 106.02, 106.04,** and **106.05**. The cover aggregate application rate allowable deviation is plus or minus 0.54 kg/m² (1 lb/yd²) from the approved target value. The asphalt rubber binder application rate allowable deviation is plus or minus 0.09 L/m² (0.02 gal/yd²) from the approved target value.

Aggregate gradation will be evaluated and accepted under **Subsection 106.05**. See **Table 419-3** for minimum sampling and testing requirements.

(a) Aggregate gradation. The upper and lower specification limits are the approved job-mix formula target value plus or minus the allowable deviations shown in **Table 703-7**. See **Table 419-3** for the acceptance quality characteristic categories.

Measurement

419.17 Measure asphalt rubber surface treatment by the square yard (square meter) which excludes any overlaps of longitudinal or transverse joints. Asphalt binder, blotter material, crumb rubber modifier (CRM), hot coated cover aggregate and fog seal applications shall not be measured for payment separately but is included in the asphalt rubber surface treatment item.

Payment

419.18 The accepted quantities, measured as provided above, will be paid at the contract price per unit of measurement for the **Section 419** pay items listed in the bid schedule, except the asphalt rubber surface treatment contract unit bid price will be adjusted according to **Subsection 106.05**. Payment will be full compensation for the work prescribed in this Section. See **Subsection 109.05**.

Payment for asphalt rubber surface treatment will be made at a price determined by multiplying the contract unit bid price by the material pay factor. The material pay factor is the lowest single pay factor determined for cover aggregate gradation only.

Table 419-3
Sampling and Testing Requirements

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Aggregate surface treatment source quality (703.10)	Measured and tested for conformance (106.04 & 106.05)	LA abrasion	---	AASHTO T 96	1 per type & source of material	Source of material	Yes, when requested	Before using in work
		Sodium sulfate soundness loss (course & fine)	---	AASHTO T 104	"	"	"	"
		Fractured faces	---	ASTM D 5821	"	"	"	"
		Flat & elongated particles		ASTM D 4791	"	"	"	"
		Durability index (course & fine)	---	AASHTO T 210	"	"	"	"
		Clay lumps & friable particles	---	AASHTO T 112	"	"	"	"
Aggregate surface treatment aggregate	Statistical (106.05)	Gradation. See Table 703-7 for applicable sieves	**II**	AASHTO T 27 & T 11	1 per 680 t	**See Note 3**	Yes, when requested	24 hours
	Measured and tested for conformance (106.04)	Fractured faces	__	ASTM D 5821	1 per 680 t	**See Note 3**	Yes, when requested	24 hours
		Application rate	__	____	3 per day	Spreader discharge	___	Upon completing test
		Liquid limit [1]	__	AASHTO T 89	1 per 680 t	Spreader discharge	Yes, when requested	24 hours

Table 419-3
Sampling and Testing Requirements

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Asphalt-rubber binder	Measured and tested for conformance (106.04)	Application rate	___	____	3 per day	Distributor	___	Upon completing test
Asphalt-rubber binder	Measured and tested for conformance (106.04)	Quality	----	**Table 419-2**	All trucks sampled each day; test 1 sample each day	Distributor	-----	Upon completing test
Asphalt binder [2] (702.01) or emulsified asphalt [2] (702.03)	Measured and tested for conformance (106.04)	Quality	___	Subsection 419.16	1 per tanker truck including trailer	Point of shipment delivery	2 – 1 liter samples	Upon completing test

1. For blotter material only.

2. Applies to each asphalt material furnished.

3. The aggregate samples shall be taken at the hot plant cold-feed belt before coated with asphalt.

702.09 Evaluation Procedures for Asphalt.

(c) Sampling procedures.

Delete paragraph **(2)** and insert the following:

(2) Asphalt initially discharged into storage tanks on the project.

Take one 4-liter sample from the line between shipping container (tanker) and the storage tank to be tested under **(d)** below only.

Add the following items **(d)** and **(e)**:

(d) Testing. The testing of performance grade asphalt binder shall be under AASHTO M320.

(1) The first **four (4) delivery loads** and for **each 25th load thereafter** shall be tested for **all of the properties** and reported to the CM within 14 days after the sample date.

(e) Acceptance. Acceptance of the asphalt binder is when all the specified properties for the asphalt binder in AASHTO M 320 are met.

703.09 Asphalt Surface Treatment Aggregate.

Delete **Table 703-7** and insert the following new **Table 703-7a**:

Table 703-7a
Target Value Ranges for
Single and Multiple Course Surface Treatment Aggregate Gradation

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 & T 11)
	Grading Special
½ inch	100(1)
⅜ inch	70 – 85(3)
No. 4	0 – 15(5)
No. 8	0 – 5(3)
No. 200	0 – 1(1)

(1) Statistical procedures do not apply.
( ) The value in the parentheses is the allowable deviation (±) from the target values.

703.12 Blotter.

Delete item **(b)** and insert the following new item **(b)**:

(b) Plastic limit, AASHTO T 90 Non-plastic

BID SCHEDULE
NAVAJO NATION DIVISION OF TRANSPORTATION

PROJECT: N13(3-3)1,4 **Date:** July 07, 2025

LENGTH: 10.825 miles

ITEM	DESCRIPTION	Quantity	Units	Unit Bid Price	Total Price
10901-0000	Extra & Miscellaneous Work - Authorized under Suppl. Spec. 109.02(s) of Exhibit F	All Required	Lump Sum	$ 300,000.00	$ 300,000.00
15101-0000	MOBILIZATION	LS	1	$	$
15201-0000	CONSTRUCTION SURVEY AND STAKING	LS	1	$	$
15701-0000	SOIL EROSION CONTROL, TEMPORARY	LS	1	$	$
20302-0100	REMOVAL OF BOX CULVERT	LINFT	10	$	$
20304-1000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	$	$
20402-0000	SUBEXCAVATION	CUYD	3200	$	$
20419-0000	EMBANKMENT CONSTRUCTION (SUBGRADE PREPARATION)	SQYD	6,100	$	$
20801-0000	STRUCTURE EXCAVATION	CUYD	168	$	$
20803-0000	STRUCTURE BACKFILL	CUYD	168	$	$
25101-0300	PLACED RIPRAP, METHOD A, CLASS 3	CUYD	86	$	$
25101-0700	PLACED RIPRAP, METHOD A, CLASS 7	CUYD	1,500	$	$
30102-2000	AGGREGATE BASE GRADING D, 6-INCH DEPTH	SQYD	6,100	$	$
31002-1000	CONTINUOUS COLD RECYCLED ASPHALT COURSE (CCRAC) 2-1/2", TYPE A	SQYD	107,100	$	$
31002-1100	CONTINUOUS COLD RECYCLED ASPHALT COURSE (CCRAC) 3", TYPE A	SQYD	111,000	$	$
40301-0100	ASPHALT CONCRETE PAVEMENT, TYPE 1 (HMA SP IV)	TON	29,500	$	$
40302-0100	ASPHALT CONCRETE PAVEMENT, TYPE 1 (2.5" DEPTH FOR TURNOUTS)	SQYD	6,100	$	$
41101-1000	PRIME COAT, METHOD 1	TON	230.0	$	$
41201-0000	TACK COAT	TON	37.0	$	$
41402-3000	CRACKS, CLEANING AND FILLING	MILE	10.9	$	$
41901-0000	ASPHALT RUBBER SURFACE TREATMENT, SHIP SEAL	SQYD	111,000	$	$
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)	CUYD	333	$	$
55220-0000	REPAIR CONCRETE	SQYD	36	$	$
55401-1000	REINFORCING STEEL	LB	60,875	$	$
56101-0000	STRUCTURAL CONCRETE INJECTION AND CRACK REPAIR	LINFT	120	$	$
60704-0000	CLEANING CULVERT IN PLACE	EACH	22	$	$
61701-5000	GUARDRAIL	LINFT	1,800	$	$
61703-0000	TERMINAL END	EACH	10	$	$
61707-0000	STRUCTURE TRANSITION RAILING	EACH	8	$	$
61801-0000	CONCRETE BARRIER	LINFT	195	$	$
61901-1000	FENCE, BARBED WIRE, 5 STRAND	LINFT	100	$	$
61902-1400	GATE, METAL, 16 FEET WIDTH	EACH	2	$	$
61903-0300	CATTLE GUARD 16 FEET (WITH TYPE 2 GATE)	EACH	9	$	$
63309-0000	DELINEATOR, TYPE 1	EACH	245	$	$
63316-1100	REMOVE SIGN AND REPLACE WITH NEW SIGN SYSTEM	SQ FT	350	$	$
63318-1000	MILEPOST	EACH	22	$	$

BID SCHEDULE
NAVAJO NATION DIVISION OF TRANSPORTATION

PROJECT: N13(3-3)1,4 **Date:** July 07, 2025

LENGTH: 10.825 miles

ITEM	DESCRIPTION	Quantity	Units	Unit Bid Price	Total Price
63401-1500	PAVEMENT MARKINGS, TYPE H THERMOPLASTIC, SOLID	LINFT	171,700	$	$
63405-3101	PAVEMENT MARKINGS, TYPE H, "STOP BAR", 24" SOLID WHITE	LINFT	230	$	$
63501-0000	TEMPORARY TRAFFIC CONTROL	LS	1	$	$
			Subtotal:	$	
			Navajo Nation Tax (6%):	$	
	Contractor Name		**Total Bid Price:**	$	

SCOPE-OF-WORK

The proposed work consists of furnishing all labor, material, equipment and incidentals necessary for construction of 10.825 miles of roadway rehabilitation and reconstruction; crack cleaning/sealing of existing pavement surface; continuous cold recycled asphalt course pavement and/or asphalt pavement overlay; bridge and concrete box culvert rehabilitation, striping, and other miscellaneous construction in accordance with the specification and design drawings for this project. The quantities listed for each item is estimated and the unit price is applicable to each as given in the bid schedule above. The final pay quantity measurements shall be rounded to the significant figures given in this bid schedule for the final pay estimate. Payment for work performed on items furnished will be made in accordance with Sub-Section 109.05, Scope of Payment of FP-14. **The Unit Bid Price must include all overhead, profit, and bonding.**